



# Full wwPDB X-ray Structure Validation Report ⓘ

May 13, 2020 – 05:09 pm BST

PDB ID : 4V49  
Title : Crystal Structure of a Streptomycin Dependent Ribosome from E. Coli 70S Ribosome.  
Authors : Vila-Sanjurjo, A.; Ridgeway, W.K.; Seymaner, V.; Zhang, W.; Santoso, S.; Yu, K.; Cate, J.H.D.  
Deposited on : 2003-06-13  
Resolution : 8.70 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

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

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

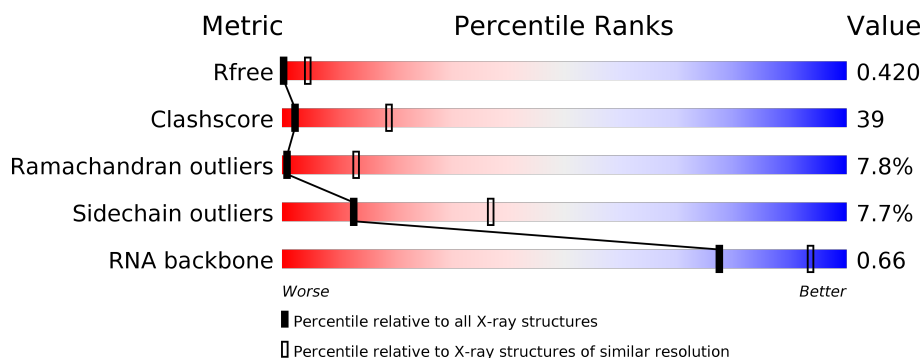
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 8.70 Å.

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



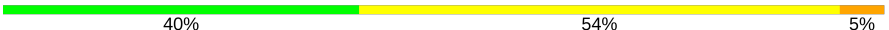

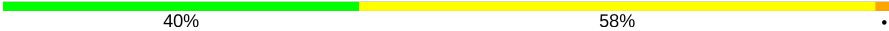



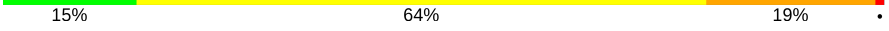









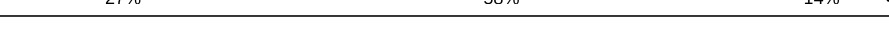

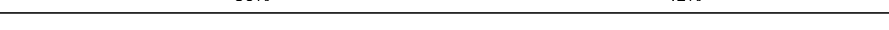
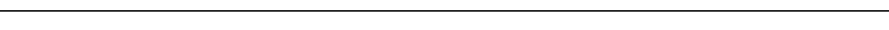
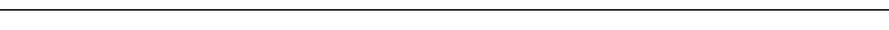
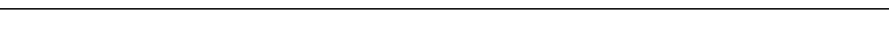
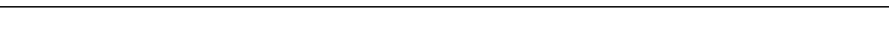
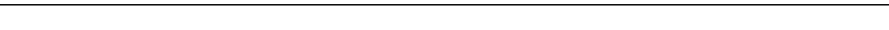

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	130704	1005 (11.50-3.90)
Clashscore	141614	1070 (11.50-3.90)
Ramachandran outliers	138981	1003 (11.50-3.90)
Sidechain outliers	138945	1003 (11.50-3.86)
RNA backbone	3102	1079 (11.50-3.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ .

Mol	Chain	Length	Quality of chain
1	AA	1527	<div> <div>23%</div> <div>57%</div> <div>16%</div> <div>.</div> </div>
2	AV	76	<div> <div>36%</div> <div>39%</div> <div>14%</div> <div>11%</div> </div>
2	AW	76	<div> <div>39%</div> <div>39%</div> <div>13%</div> <div>8%</div> </div>
3	AU	18	<div> <div>44%</div> <div>6%</div> <div>50%</div> </div>
4	AB	234	<div> <div>27%</div> <div>57%</div> <div>13%</div> <div>.</div> </div>
5	AC	206	<div> <div>30%</div> <div>51%</div> <div>17%</div> <div>.</div> </div>



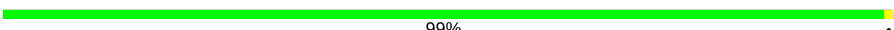


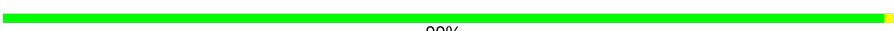






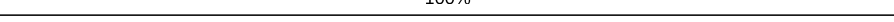
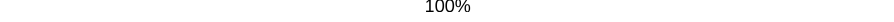
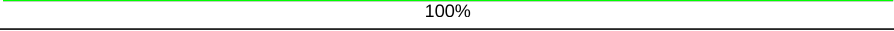
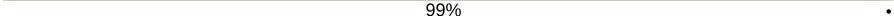
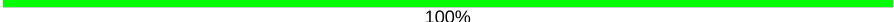






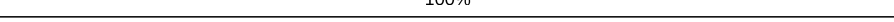
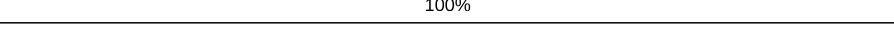
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Mol	Chain	Length	Quality of chain
6	AD	208	
7	AE	150	
8	AF	101	
9	AG	155	
10	AH	138	
11	AI	127	
12	AJ	98	
13	AK	119	
14	AL	124	
15	AM	125	
16	AN	60	
17	AO	88	
18	AP	83	
19	AQ	104	
20	AR	73	
21	AS	80	
22	AT	99	
23	B0	2887	
24	B9	118	
25	BA	270	
26	BB	205	
27	BC	197	
28	BD	178	
29	BE	177	
30	BF	52	

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Mol	Chain	Length	Quality of chain
31	BG	143	 98%
32	BH	143	 100%
33	BI	132	 99%
34	BJ	141	 99%
35	BK	124	 100%
36	BL	114	 99%
37	BM	111	 100%
38	BN	125	 99%
39	BO	117	 100%
40	BP	100	 100%
41	BQ	130	 100%
42	BR	93	 100%
43	BS	113	 100%
44	BT	173	 100%
45	BU	86	 99%
46	BV	16	 100%
47	BW	65	 100%
48	BX	55	 100%
49	BY	73	 100%
50	BZ	58	 100%
51	B1	53	 100%
52	B2	46	 100%
53	B3	63	 100%
54	B4	35	 100%
55	B5	217	 94% 6%

## 2 Entry composition

There are 55 unique types of molecules in this entry. The entry contains 122017 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1527	Total	C	N	O	P	0	0	0
			32819	14610	6085	10597	1527			

- Molecule 2 is a RNA chain called tRNA-Phe.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AV	76	Total	C	N	O	P	0	0	0
			1625	725	293	531	76			
2	AW	76	Total	C	N	O	P	0	0	0
			1625	725	293	531	76			

- Molecule 3 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AU	9	Total	C	N	O	P	0	0	0
			176	81	24	62	9			

- Molecule 4 is a protein called 30S ribosomal protein S2.

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

- Molecule 5 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AC	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			

- Molecule 6 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AD	208	Total	C	N	O	S	0	0	0
			1702	1066	339	290	7			

- Molecule 7 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AE	150	Total	C	N	O	S	0	0	0
			1146	724	217	201	4			

- Molecule 8 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AF	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			

- Molecule 9 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AG	155	Total	C	N	O	S	0	0	0
			1256	781	252	217	6			

- Molecule 10 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AH	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			

- Molecule 11 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AI	127	Total	C	N	O		0	0	0
			1010	639	198	173				

- Molecule 12 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AJ	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			

- Molecule 13 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AK	119	Total	C	N	O	S	0	0	0
			884	549	168	164	3			

- Molecule 14 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AL	124	Total	C	N	O	S	0	0	0
			970	611	195	163	1			

- Molecule 15 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AM	125	Total	C	N	O	S	0	0	0
			996	617	207	170	2			

- Molecule 16 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AN	60	Total	C	N	O	S	0	0	0
			491	312	104	71	4			

- Molecule 17 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AO	88	Total	C	N	O	S	0	0	0
			733	459	147	125	2			

- Molecule 18 is a protein called 30S ribosomal protein S16.

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

- Molecule 19 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AQ	104	Total	C	N	O	S	0	0	0
			856	547	161	146	2			

- Molecule 20 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
20	AR	73	Total	C	N	O	0	0	0
			596	380	118	98			

- Molecule 21 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AS	80	Total	C	N	O	S	0	0	0
			647	414	119	112	2			

- Molecule 22 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AT	99	Total	C	N	O	S	0	0	0
			762	469	162	129	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	B0	2825	Total	C	N	O	P	0	0	0
			60636	27047	11191	19573	2825			

- Molecule 24 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	B9	118	Total	C	N	O	P	0	0	0
			2519	1124	464	813	118			

- Molecule 25 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
25	BA	270	Total C	0	0	270
			270 270			

- Molecule 26 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
26	BB	205	Total C	0	0	205
			205 205			

- Molecule 27 is a protein called 50S ribosomal protein L4.



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
27	BC	197	Total C 197 197	0	0	197

- Molecule 28 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
28	BD	178	Total C 178 178	0	0	178

- Molecule 29 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
29	BE	177	Total C 177 177	0	0	177

- Molecule 30 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
30	BF	52	Total C 52 52	0	0	52

- Molecule 31 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
31	BG	143	Total C 143 143	0	0	143

- Molecule 32 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
32	BH	143	Total C 143 143	0	0	143

- Molecule 33 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
33	BI	132	Total C 132 132	0	0	132

- Molecule 34 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
34	BJ	141	Total C 141 141	0	0	141

- Molecule 35 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
35	BK	124	Total C 124 124	0	0	124

- Molecule 36 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
36	BL	114	Total C 114 114	0	0	114

- Molecule 37 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
37	BM	111	Total C 111 111	0	0	111

- Molecule 38 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
38	BN	125	Total C 125 125	0	0	125

- Molecule 39 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
39	BO	117	Total C 117 117	0	0	117

- Molecule 40 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
40	BP	100	Total C 100 100	0	0	100

- Molecule 41 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
41	BQ	130	Total C 130 130	0	0	130

- Molecule 42 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
42	BR	93	Total C 93 93	0	0	93

- Molecule 43 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
43	BS	113	Total C 113 113	0	0	113

- Molecule 44 is a protein called general stress protein Ctc.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
44	BT	173	Total C 173 173	0	0	173

- Molecule 45 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
45	BU	86	Total C 86 86	0	0	86

- Molecule 46 is a protein called 50S RIBOSOMAL PROTEIN L28.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
46	BV	16	Total C 16 16	0	0	16

- Molecule 47 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
47	BW	65	Total C 65 65	0	0	65

- Molecule 48 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
48	BX	55	Total C 55 55	0	0	55

- Molecule 49 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
49	BY	73	Total C 73 73	0	0	73

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
50	BZ	58	Total C 58 58	0	0	58

- Molecule 51 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
51	B1	53	Total C 53 53	0	0	53

- Molecule 52 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
52	B2	46	Total C 46 46	0	0	46

- Molecule 53 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
53	B3	63	Total C 63 63	0	0	63

- Molecule 54 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
54	B4	35	Total C 35 35	0	0	35

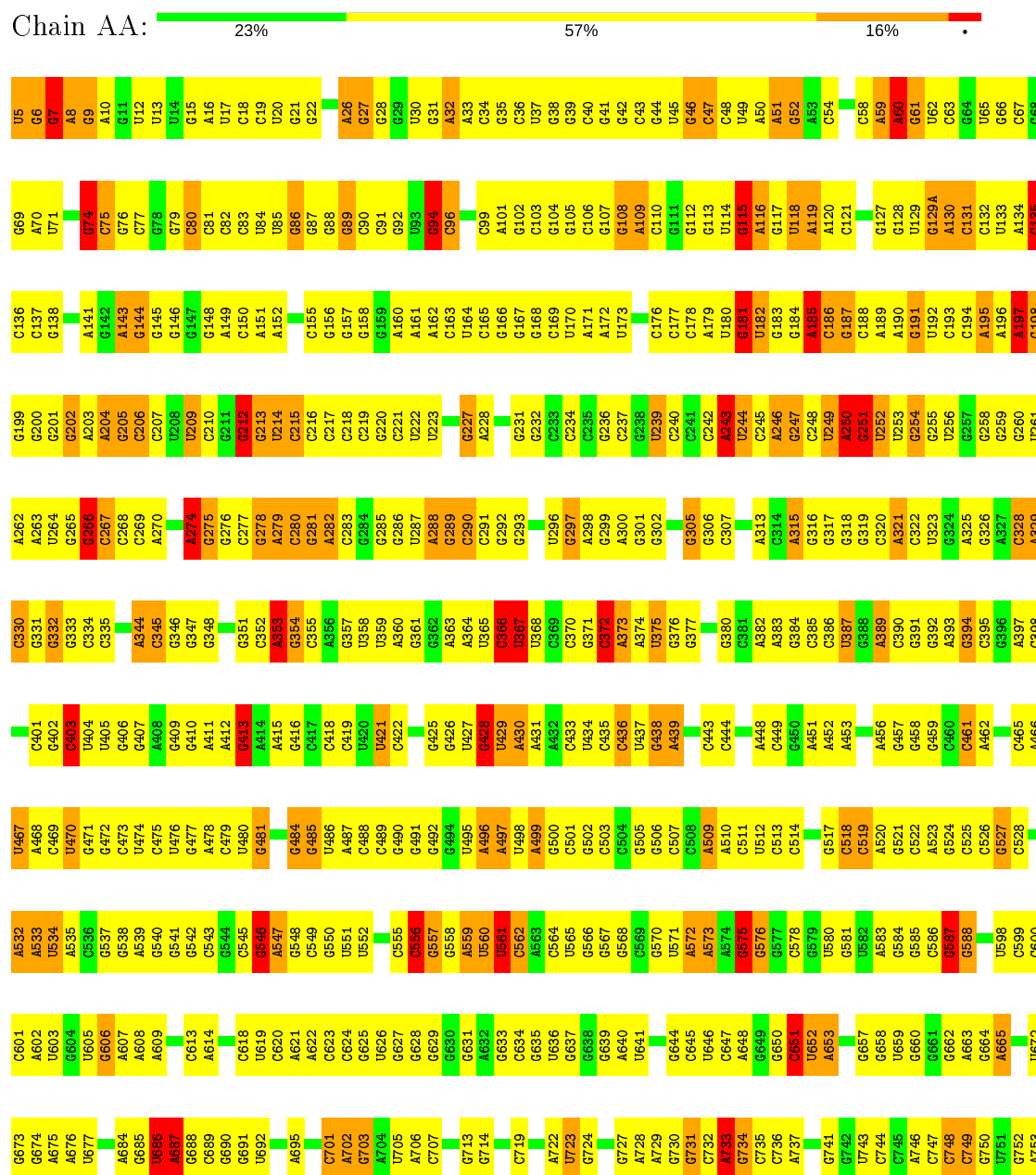
- Molecule 55 is a protein called 50S ribosomal protein L1P.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
55	B5	217	Total 217	C 217	0	0	217

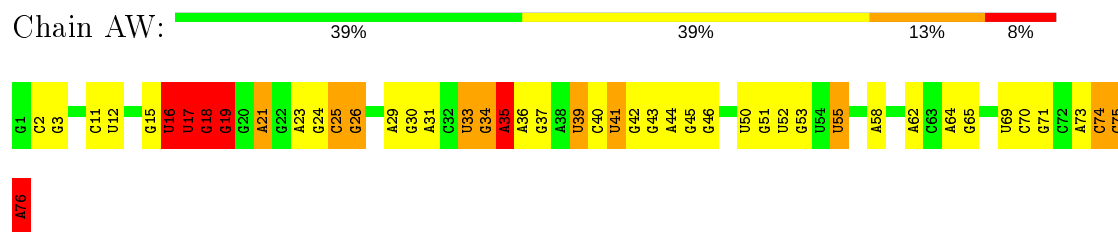
### 3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. 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. Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

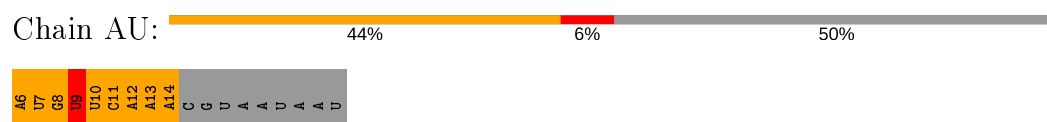
#### • Molecule 1: 16S RIBOSOMAL RNA



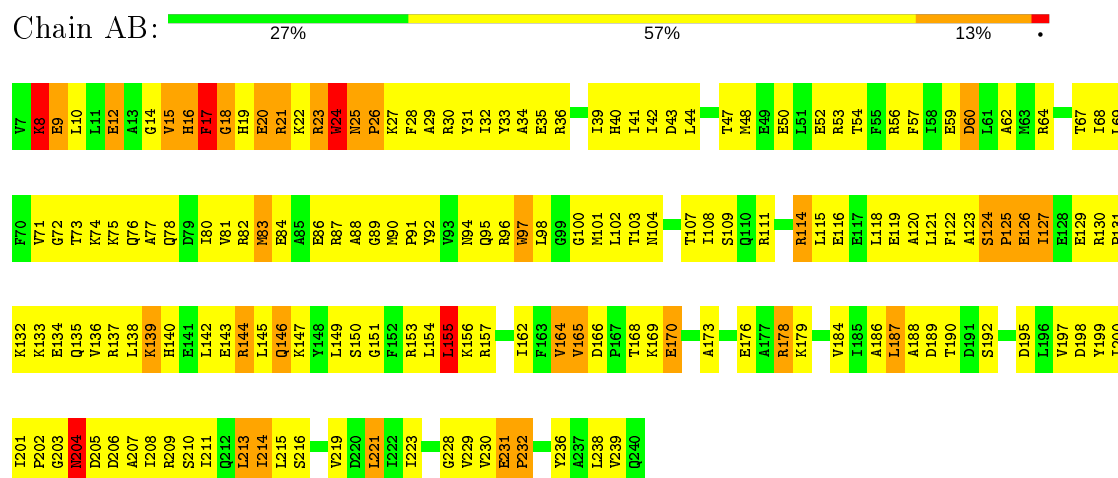




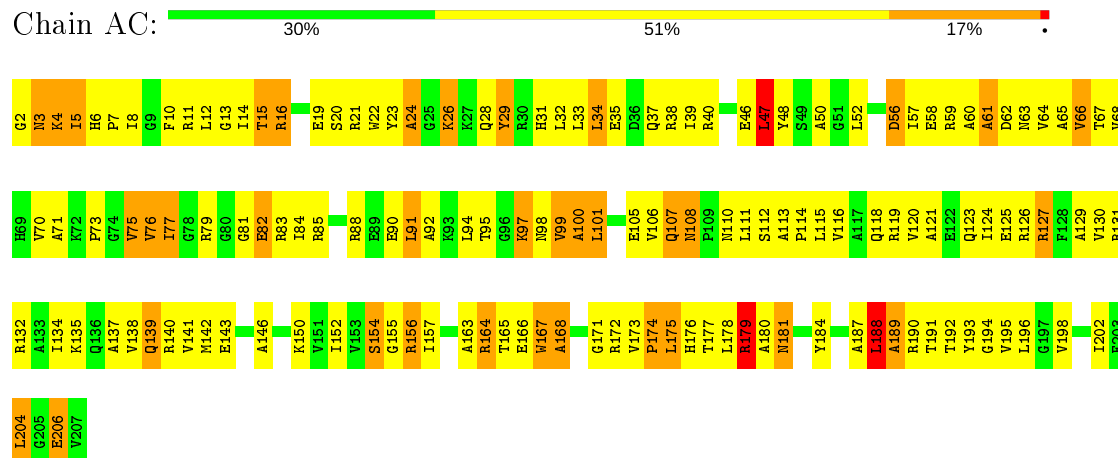
- Molecule 3: mRNA



- Molecule 4: 30S ribosomal protein S2



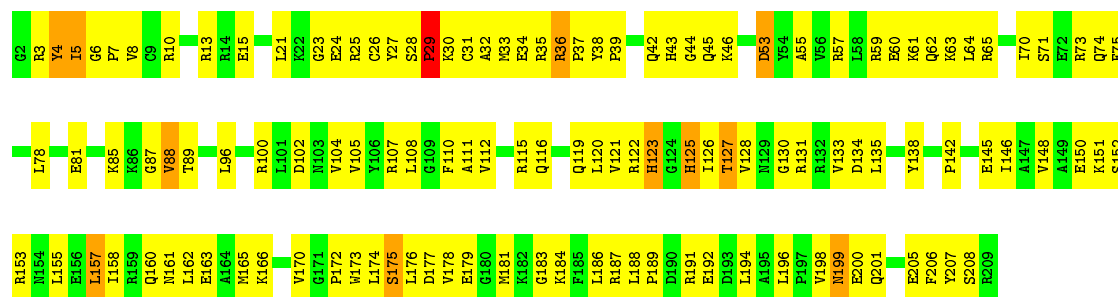
- Molecule 5: 30S ribosomal protein S3



- Molecule 6: 30S ribosomal protein S4

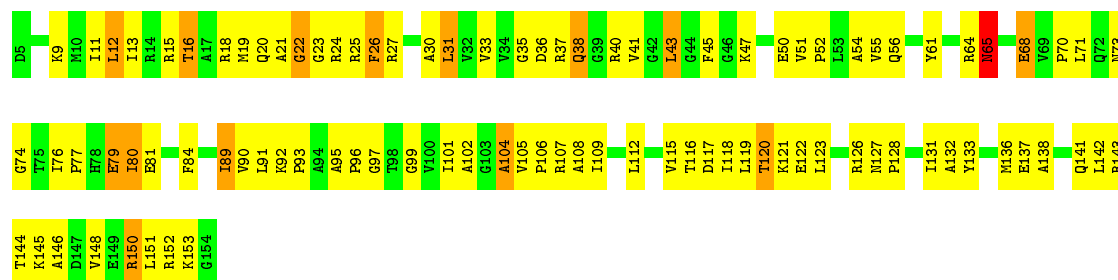






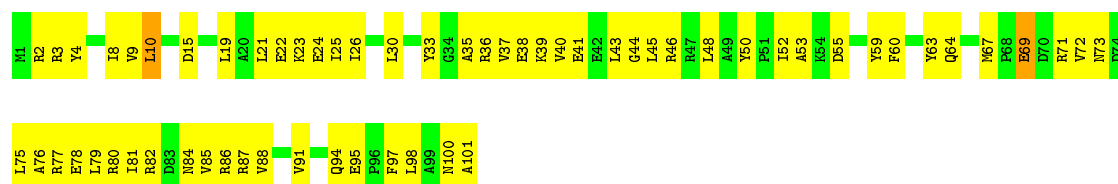
• Molecule 7: 30S ribosomal protein S5

Chain AE: 37% 53% 9%



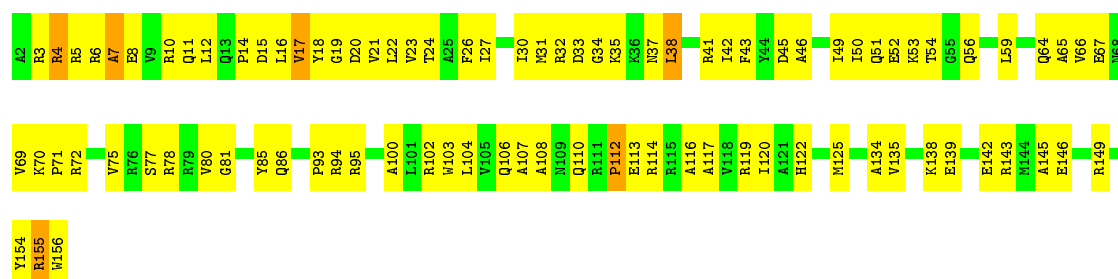
• Molecule 8: 30S ribosomal protein S6

Chain AF: 40% 58%



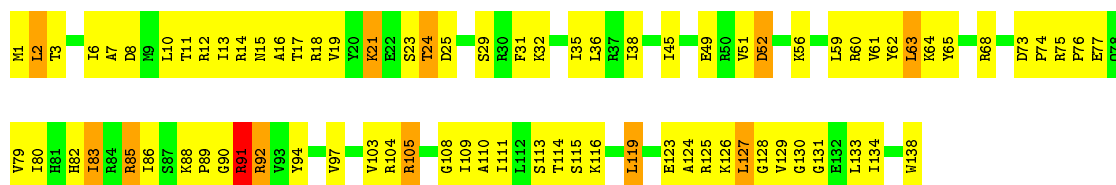
• Molecule 9: 30S ribosomal protein S7

Chain AG: 42% 54%



• Molecule 10: 30S ribosomal protein S8

Chain AH: 41% 50% 8%



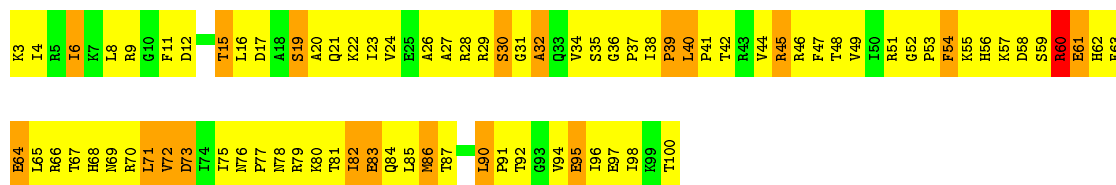
- Molecule 11: 30S ribosomal protein S9

Chain AI: 31% 60% 8%



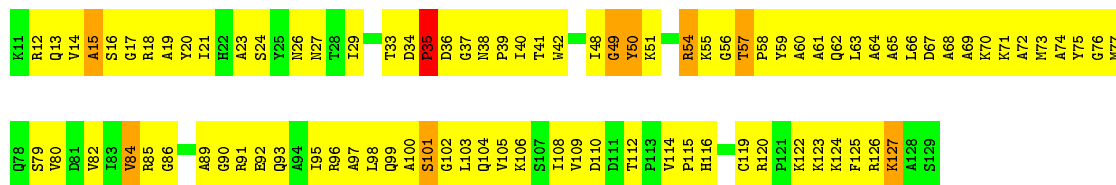
- Molecule 12: 30S ribosomal protein S10

Chain AJ: 15% 64% 19%



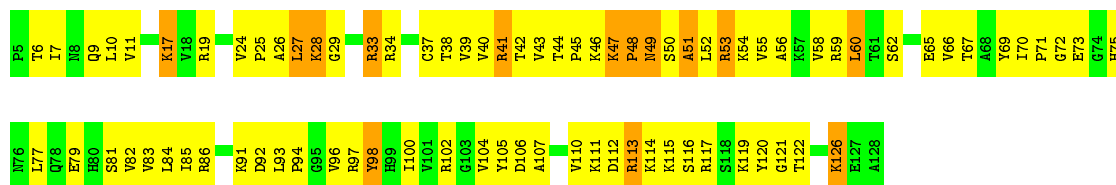
- Molecule 13: 30S ribosomal protein S11

Chain AK: 24% 69% 7%



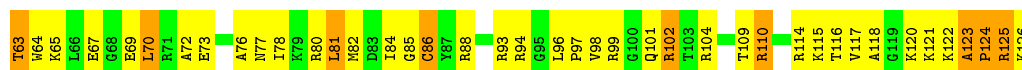
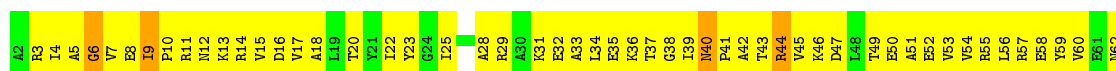
- Molecule 14: 30S ribosomal protein S12

Chain AL: 34% 55% 11%



- Molecule 15: 30S ribosomal protein S13

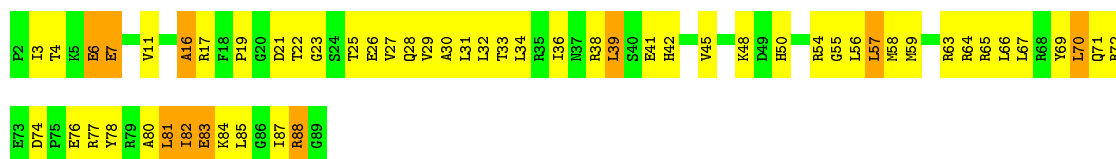
Chain AM: 26% 64% 10%



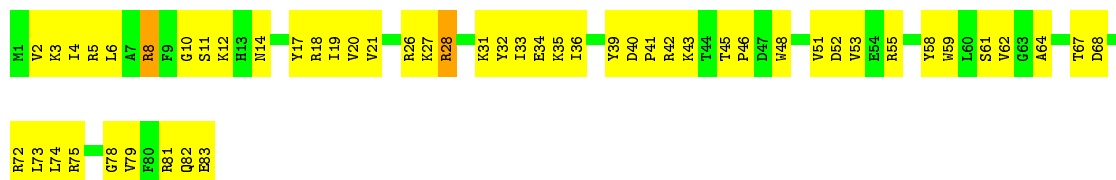
• Molecule 16: 30S ribosomal protein S14



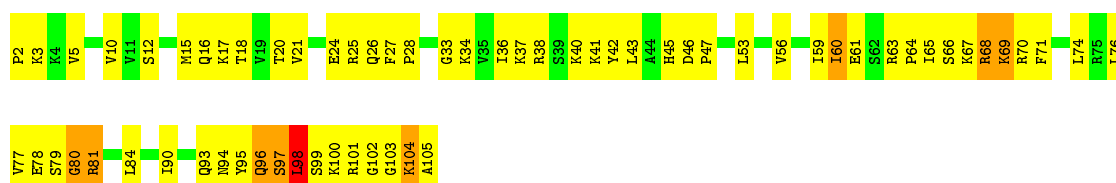
• Molecule 17: 30S ribosomal protein S15



• Molecule 18: 30S ribosomal protein S16



• Molecule 19: 30S ribosomal protein S17



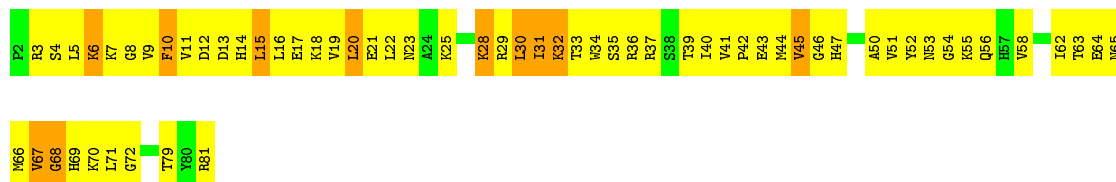
• Molecule 20: 30S ribosomal protein S18





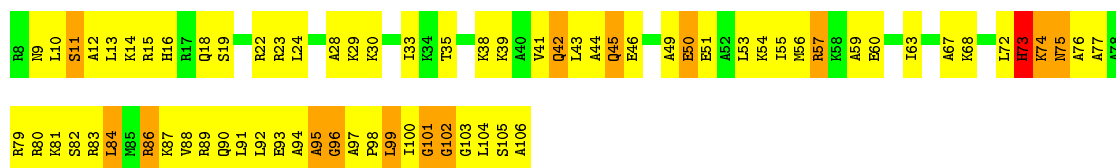
- Molecule 21: 30S ribosomal protein S19

Chain AS: 



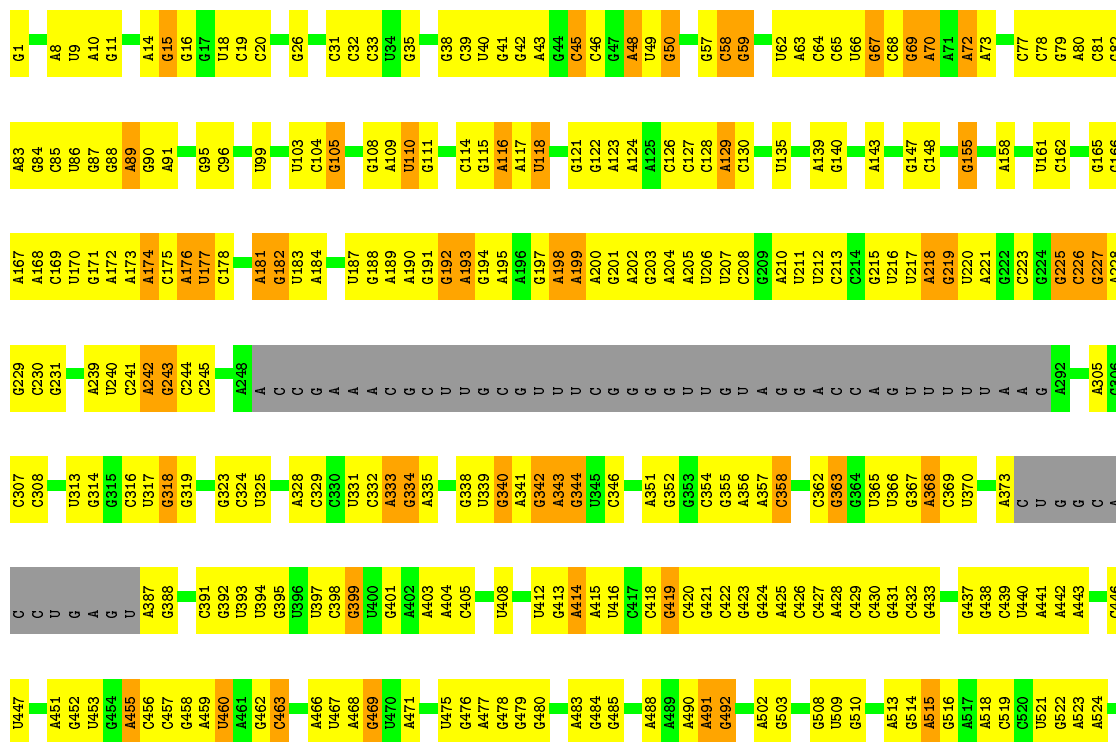
- Molecule 22: 30S ribosomal protein S20

Chain AT:  27% 58% 14%



- Molecule 23: 23S RIBOSOMAL RNA

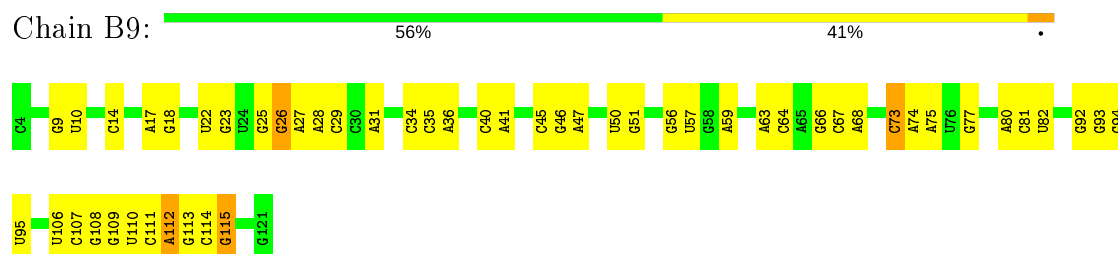
Chain B0: 





A2858	C2769	C2674	U2572	G2503	U2428	C2358	A2266	A2194	A3119	A2031	G1958	G1890	A1807	G1719
U2869	C2770	U2675	C2573	G2504	A2429	C2362	A2267	C2195	G3120	G2032	G1961	C1891	C1808	G1720
A2861	C2771	U2676	U2574	G2505	A2430	G2363	G2268	U2196	U3122	C2033	C1962	G1810	G1809	G1721
G2862	U2677	U2575	G2432	G2506	A2431	C2364	G2269	U2197	G3123	G2034	G1963	A1895	U1812	U1723
U2863	U2678	A2576	G2433	A2508	A2432	G2365	C2270	C2198	G3124	G2035	G1964	A1896	U1813	C1724
C2864	U2679	U2577	G2434	G2509	A2433	G2366	A2271	G2200	G3125	A2036	U1965	C1897	C1725	C1726
U2865	U2680	U2578	C2435	G2510	A2434	U2369	C2272	A2204	G3126	C2037	C1966	U1898	G1818	G1727
A2866	A2681	C2682	G2436	A2511	C2436	U2370	C2273	C2205	A3131	A2040	G1970	A1899	U1819	G1730
G2867	C2683	G2582	G2437	A2512	G2437	A2371	U2275	C2206	A3132	A2041	C1971	U1900	G1820	U1731
			U2438	A2513	A2438	A2372	C2276		G3133	A2042	G1972	A1901	A1821	U1732
			U2439		U2439	C2373	A2277	U2211	A3134	A2043	C1973	A1902	U1733	
			U2440		C2440	G2376	A2278	U2212	A3135	G2044	U1974	G1905	C1825	
			C2445		C2445	U2377	U2285	G2213	G3141	A2045	G1975	U1906	U1826	
			G2446		G2446	G2378	U2286	G2214		C2046	U1976	C1907	C1745	
			G2447		G2447	G2379	A2287		A3146	C2047	G1977	U1908	G1829	A1746
			G2448		G2448	U2380	A2288	G2217	C3147	C2048	U1978	U1909	C1830	G1747
			G2449		G2449	A2381	U2298	G2218	G3148	C2049	C1979	A1910	G1831	U1748
			G2450		G2450	C2382	U2299	U2219	G3149	C2050	A1980	A1911	C1836	G1749
			G2451		G2451	C2383	A2299	U2220	C3150	U2051	A1981	G1912	G1837	A1750
			C2454		C2454	G2384	G2300	G2221	U3151	G2052	G1982	G1913	G1838	G1754
			A2455		A2455	U2385	A2301	U2222	G3152		G1983	U1914	G1839	G1755
			U2456		U2456	G2386	G2302	U2223	G3153	G2055	G1983	A1915	A1840	
			G2388		G2388	U2387	U2224	U2224		C2056	U1994	G1916	A1840	
			G2389		G2389	G2388	G2225		G3168	U2057	G1995	C1917	G1841	
			A2390		A2390	U2389	A2226			U2058		G1918		
			G2391		G2391	C2227	C2227		A3171	U2059	A1998	U1919	G1855	
			G2392		G2392	G2228	G2228		U3172	A2060	A1999	A1920	A1856	
			G2393		G2393	U2229	U2229		A3173	C2061	U1922	A1921	A3865	
			G2394		G2394	G2230	G2230		C3174	U2062	U2000	U1923	A3866	
			C2395		C2395	G2231	G2231		G3175	A2065	G2001	G1924	G3867	
			G2396		G2396	G2232	G2232		A3176	C2066	U2004	U1925	G3868	
			U2397		U2397	G2233	G2233		C3177	G2067	U2005	U1926	G3869	
			G2398		G2398	G2234	G2234		C3178	U2069	G2006	U1927	A3871	
			A2401		A2401	U2318	U2235			G2070	G2007	U1928	A3872	
			U2402		U2402	G2238	G2238		C3181	U2075	C2008	U1929	G3873	
			C2403		C2403	G2239	G2239		U3182	C3093	U2009	C1930	C3874	
			A2404		A2404	C2240	C2240		A3183	A3094	G2010	G1931	A1776	
			A2405		A2405	U2241	U2241		C3184		U2011	G1932	A3875	
			G2406		G2406	C2242	C2242		U3185		A2012	G1933	A3876	
			G2407		G2407	G2243	G2243		C3186	U3093	A2013	A2013	A3877	
			U2408		U2408	A2245	A2245		U3187	U3099	A2014	U1938	G1861	
			A2409		A2409	A2246	A2246		U3188	G3100	G2015	U1939	C1862	
			A2412		A2412	A2247	A2247		U3189	G3101	A2016	A1943	C1865	
			A2413		A2413	U2248	U2248		G3190	G3102	U2017	C1944	G1866	
			G2414		G2414	G2250	G2250		A3191	A3103	G2018		U1787	
			A2418		A2418	G2255	G2255		G3196	U3106	G2019	G1947	G1871	
			C2419		C2419	U2256	U2256		U3197	G3107	G2021	C1948	G1880	
			G2420		G2420	A2257	A2257		A2181	G3108	C2022	C1949	U1881	
			C2421		C2421	G2258	G2258		A2182	U3109	G2023	A1950	C1792	
			G2422		G2422	C2259	C2259		U2185	G3111	U2024	G1951	A1883	
			C2423		C2423	G2260	G2260		U2186	G3112	A2025	A1952	A1884	
			G2424		G2424	G2261	G2261		C2186		C2026	A1953	C1885	
			G2425		G2425	G2262	G2262		A2191	G3116	C2027	A1954	G1886	
			A2426		A2426	C2262	C2262		U2192	A3117	G2028	G1955	G1887	
			G2427		G2427	A2265	A2265		U2193	U3118	G2029	G1956	C1888	
											U2030	C1957	G1889	

- Molecule 24: 5S RIBOSOMAL RNA



- Molecule 25: 50S ribosomal protein L2



There are no outlier residues recorded for this chain.

- Molecule 26: 50S ribosomal protein L3



There are no outlier residues recorded for this chain.

- Molecule 27: 50S ribosomal protein L4



There are no outlier residues recorded for this chain.

- Molecule 28: 50S ribosomal protein L5



- Molecule 29: 50S ribosomal protein L6



There are no outlier residues recorded for this chain.

- Molecule 30: 50S ribosomal protein L9



There are no outlier residues recorded for this chain.

- Molecule 31: 50S ribosomal protein L11





- Molecule 32: 50S ribosomal protein L13

Chain BH:  100%

There are no outlier residues recorded for this chain.

- Molecule 33: 50S ribosomal protein L14

Chain BI:  99%



- Molecule 34: 50S ribosomal protein L15

Chain BJ:  99%



- Molecule 35: 50S ribosomal protein L16

Chain BK:  100%

There are no outlier residues recorded for this chain.

- Molecule 36: 50S ribosomal protein L17

Chain BL:  99%



- Molecule 37: 50S ribosomal protein L18

Chain BM:  100%

There are no outlier residues recorded for this chain.

- Molecule 38: 50S ribosomal protein L19

Chain BN:  99%



- Molecule 39: 50S ribosomal protein L20



Chain BO:  100%

There are no outlier residues recorded for this chain.

- Molecule 40: 50S ribosomal protein L21

Chain BP:  100%

There are no outlier residues recorded for this chain.

- Molecule 41: 50S ribosomal protein L22

Chain BQ:  100%

There are no outlier residues recorded for this chain.

- Molecule 42: 50S ribosomal protein L23

Chain BR:  100%

There are no outlier residues recorded for this chain.

- Molecule 43: 50S ribosomal protein L24

Chain BS:  100%

There are no outlier residues recorded for this chain.

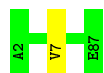
- Molecule 44: general stress protein Ctc

Chain BT:  100%

There are no outlier residues recorded for this chain.

- Molecule 45: 50S ribosomal protein L27

Chain BU:  99%



- Molecule 46: 50S RIBOSOMAL PROTEIN L28

Chain BV:  100%

There are no outlier residues recorded for this chain.

- Molecule 47: 50S ribosomal protein L29

Chain BW:  100%

There are no outlier residues recorded for this chain.

- Molecule 48: 50S ribosomal protein L30

Chain BX:  100%

There are no outlier residues recorded for this chain.

- Molecule 49: 50S ribosomal protein L31

Chain BY:  100%

There are no outlier residues recorded for this chain.

- Molecule 50: 50S ribosomal protein L32

Chain BZ:  100%

There are no outlier residues recorded for this chain.

- Molecule 51: 50S ribosomal protein L33

Chain B1:  100%

There are no outlier residues recorded for this chain.

- Molecule 52: 50S ribosomal protein L34

Chain B2:  100%

There are no outlier residues recorded for this chain.

- Molecule 53: 50S ribosomal protein L35

Chain B3:  100%

There are no outlier residues recorded for this chain.

- Molecule 54: 50S ribosomal protein L36

Chain B4:  100%

There are no outlier residues recorded for this chain.

- Molecule 55: 50S ribosomal protein L1P

Chain B5:  94% 6%



## 4 Data and refinement statistics

Property	Value	Source
Space group	I 4 2 2	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	682.32Å 682.32Å 386.36Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	70.00 – 8.70 241.24 – 8.70	Depositor EDS
% Data completeness (in resolution range)	98.5 (70.00-8.70) 93.0 (241.24-8.70)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	0.15	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.97 (at 8.45Å)	Xtriage
Refinement program	CNS	Depositor
R, $R_{free}$	0.394 , 0.415 0.384 , 0.420	Depositor DCC
$R_{free}$ test set	1966 reflections (5.23%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	443.4	Xtriage
Anisotropy	0.381	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	1.30 , -10.0	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.46$ , $\langle L^2 \rangle = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
$F_o, F_c$ correlation	0.83	EDS
Total number of atoms	122017	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	641.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 7.48% of the height of the origin peak. No significant pseudotranslation is detected.*

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

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

## 5 Model quality

### 5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z  > 5$	RMSZ	# $ Z  > 5$
1	AA	1.53	69/36688 (0.2%)	1.32	264/57135 (0.5%)
2	AV	2.23	23/1817 (1.3%)	1.84	42/2831 (1.5%)
2	AW	1.75	19/1816 (1.0%)	1.94	32/2827 (1.1%)
3	AU	45.18	35/188 (18.6%)	20.47	49/274 (17.9%)
4	AB	0.37	0/1935	0.68	1/2609 (0.0%)
5	AC	0.38	0/1636	0.66	0/2205
6	AD	0.37	0/1732	0.63	0/2318
7	AE	0.48	0/1162	0.79	0/1564
8	AF	0.34	0/855	0.63	0/1154
9	AG	0.35	0/1275	0.62	0/1709
10	AH	0.44	0/1135	0.74	0/1527
11	AI	0.36	0/1028	0.62	0/1378
12	AJ	0.36	0/807	0.71	0/1085
13	AK	0.39	0/899	0.70	0/1213
14	AL	0.70	1/986 (0.1%)	0.76	1/1320 (0.1%)
15	AM	0.44	1/1007 (0.1%)	1.11	3/1347 (0.2%)
16	AN	0.40	0/500	0.78	0/664
17	AO	0.36	0/744	0.63	1/992 (0.1%)
18	AP	0.43	0/716	0.76	0/963
19	AQ	0.44	0/869	0.75	0/1159
20	AR	0.36	0/602	0.63	0/799
21	AS	0.35	0/661	0.72	1/890 (0.1%)
22	AT	0.39	0/764	0.73	0/1006
23	B0	0.49	17/67885 (0.0%)	0.75	49/105852 (0.0%)
24	B9	0.68	1/2815 (0.0%)	0.76	3/4384 (0.1%)
All	All	1.97	166/130522 (0.1%)	1.25	446/199205 (0.2%)

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.

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Mol	Chain	#Chirality outliers	#Planarity outliers
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Mol	Chain	#Chirality outliers	#Planarity outliers
1	AA	2	40
2	AV	0	7
2	AW	0	7
23	B0	0	5
All	All	2	59

All (166) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	AU	14	A	C6-N6	279.73	3.57	1.33
3	AU	13	A	C6-N6	279.69	3.57	1.33
3	AU	6	A	C6-N6	279.55	3.57	1.33
3	AU	12	A	C6-N6	279.29	3.57	1.33
3	AU	8	G	C6-O6	259.50	3.57	1.24
1	AA	135	C	O3'-P	-83.90	0.60	1.61
1	AA	214	U	O3'-P	-73.46	0.72	1.61
1	AA	893	C	O3'-P	-61.19	0.87	1.61
1	AA	436	C	O3'-P	-60.64	0.88	1.61
1	AA	905	U	O3'-P	-53.63	0.96	1.61
1	AA	556	C	O3'-P	-49.20	1.02	1.61
1	AA	733	A	O3'-P	47.43	2.18	1.61
1	AA	115	G	O3'-P	47.32	2.17	1.61
1	AA	1331	G	O3'-P	47.30	2.17	1.61
1	AA	1393	U	O3'-P	-46.70	1.05	1.61
23	B0	3107	G	O3'-P	44.35	2.14	1.61
1	AA	367	U	O3'-P	44.09	2.14	1.61
1	AA	1034	G	O3'-P	43.46	2.13	1.61
1	AA	212	G	O3'-P	43.06	2.12	1.61
2	AV	25	C	O3'-P	42.67	2.12	1.61
23	B0	3098	U	O3'-P	42.58	2.12	1.61
1	AA	94	G	O3'-P	-40.86	1.12	1.61
23	B0	3106	U	O3'-P	-40.56	1.12	1.61
1	AA	288	A	O3'-P	39.52	2.08	1.61
1	AA	827	U	O3'-P	38.98	2.08	1.61
1	AA	1211	U	O3'-P	38.81	2.07	1.61
1	AA	118	U	O3'-P	37.95	2.06	1.61
3	AU	11	C	O3'-P	36.67	2.05	1.61
1	AA	239	U	O3'-P	-36.19	1.17	1.61
1	AA	403	C	O3'-P	-35.34	1.18	1.61
2	AV	36	A	O3'-P	-35.27	1.18	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1409	C	O3'-P	-34.67	1.19	1.61
23	B0	3183	A	O3'-P	34.42	2.02	1.61
24	B9	73	C	O3'-P	33.99	2.02	1.61
1	AA	375	U	O3'-P	33.88	2.01	1.61
1	AA	74	G	O3'-P	-33.76	1.20	1.61
1	AA	576	G	O3'-P	-33.51	1.21	1.61
1	AA	1155	G	O3'-P	33.18	2.00	1.61
23	B0	3149	G	O3'-P	31.47	1.99	1.61
1	AA	89	G	O3'-P	31.38	1.98	1.61
1	AA	1490	C	O3'-P	-31.15	1.23	1.61
1	AA	651	C	O3'-P	-30.60	1.24	1.61
1	AA	1398	A	O3'-P	30.38	1.97	1.61
1	AA	804	U	O3'-P	-29.69	1.25	1.61
1	AA	546	G	O3'-P	29.19	1.96	1.61
23	B0	3102	G	O3'-P	-28.88	1.26	1.61
1	AA	59	A	O3'-P	-28.52	1.26	1.61
1	AA	776	G	O3'-P	-28.42	1.27	1.61
1	AA	1297	C	O3'-P	28.30	1.95	1.61
1	AA	606	G	O3'-P	28.21	1.95	1.61
23	B0	1856	U	O3'-P	27.18	1.93	1.61
2	AV	74	C	O3'-P	-26.99	1.28	1.61
1	AA	1335	C	O3'-P	26.83	1.93	1.61
2	AW	75	C	O3'-P	-26.74	1.29	1.61
1	AA	387	U	O3'-P	26.51	1.93	1.61
1	AA	1110	A	O3'-P	-25.86	1.30	1.61
1	AA	394	G	O3'-P	-25.66	1.30	1.61
2	AV	75	C	O3'-P	-25.65	1.30	1.61
1	AA	26	A	O3'-P	-25.59	1.30	1.61
1	AA	206	C	O3'-P	25.11	1.91	1.61
1	AA	1383	C	O3'-P	-24.75	1.31	1.61
1	AA	461	C	O3'-P	-24.70	1.31	1.61
23	B0	3188	U	O3'-P	24.59	1.90	1.61
2	AW	33	U	O3'-P	-24.01	1.32	1.61
1	AA	227	G	O3'-P	-23.32	1.33	1.61
1	AA	1457	A	O3'-P	-22.16	1.34	1.61
1	AA	1455	G	O3'-P	-22.11	1.34	1.61
23	B0	3141	G	O3'-P	21.50	1.86	1.61
1	AA	1182	G	O3'-P	21.35	1.86	1.61
1	AA	631	G	O3'-P	21.17	1.86	1.61
23	B0	3101	G	O3'-P	20.97	1.86	1.61
1	AA	278	G	O3'-P	20.68	1.85	1.61
1	AA	1345	U	O3'-P	-20.45	1.36	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1374	A	O3'-P	20.11	1.85	1.61
1	AA	1237	C	O3'-P	20.05	1.85	1.61
2	AW	34	G	O3'-P	19.74	1.84	1.61
2	AW	46	G	C8-N7	19.74	1.42	1.30
1	AA	274	A	O3'-P	-19.61	1.37	1.61
2	AV	46	G	C8-N7	19.60	1.42	1.30
1	AA	1067	A	O3'-P	-18.95	1.38	1.61
2	AV	16	U	C5-C6	18.71	1.50	1.34
2	AW	16	U	C5-C6	18.61	1.50	1.34
23	B0	3190	G	O3'-P	18.37	1.83	1.61
1	AA	587	G	O3'-P	18.18	1.82	1.61
2	AV	58	A	C6-N6	17.93	1.48	1.33
2	AW	58	A	C6-N6	17.83	1.48	1.33
14	AL	19	ARG	C-N	-17.39	0.94	1.34
2	AW	17	U	C5-C6	17.21	1.49	1.34
2	AV	17	U	C5-C6	17.11	1.49	1.34
23	B0	3874	C	O3'-P	16.97	1.81	1.61
2	AV	44	A	O3'-P	-16.81	1.41	1.61
2	AV	33	U	O3'-P	-16.73	1.41	1.61
2	AV	72	C	O3'-P	-15.79	1.42	1.61
1	AA	1445	U	O3'-P	-15.56	1.42	1.61
23	B0	3186	C	O3'-P	-15.43	1.42	1.61
1	AA	754	C	O3'-P	14.57	1.78	1.61
1	AA	470	U	O3'-P	-14.49	1.43	1.61
2	AV	58	A	C6-N1	13.84	1.45	1.35
2	AW	58	A	C6-N1	13.84	1.45	1.35
1	AA	944	G	O3'-P	-13.66	1.44	1.61
2	AW	25	C	O3'-P	-13.19	1.45	1.61
1	AA	499	A	O3'-P	12.94	1.76	1.61
3	AU	9	U	O3'-P	-12.28	1.46	1.61
3	AU	10	U	O3'-P	-12.23	1.46	1.61
3	AU	13	A	O3'-P	-12.21	1.46	1.61
3	AU	6	A	O3'-P	-12.20	1.46	1.61
3	AU	12	A	O3'-P	-12.18	1.46	1.61
3	AU	7	U	O3'-P	-12.09	1.46	1.61
3	AU	8	G	C2-N2	-12.06	1.22	1.34
1	AA	869	G	O3'-P	-12.01	1.46	1.61
3	AU	11	C	C4-N4	-11.43	1.23	1.33
2	AW	16	U	N1-C6	11.24	1.48	1.38
2	AV	16	U	N1-C6	11.19	1.48	1.38
2	AW	17	U	N1-C6	10.88	1.47	1.38
2	AV	17	U	N1-C6	10.83	1.47	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AV	46	G	N9-C8	10.66	1.45	1.37
2	AW	46	G	N9-C8	10.63	1.45	1.37
1	AA	1033	G	O3'-P	10.61	1.73	1.61
23	B0	3866	A	O3'-P	10.58	1.73	1.61
1	AA	1505	G	O3'-P	-10.26	1.48	1.61
2	AV	17	U	C4-C5	10.19	1.52	1.43
1	AA	109	A	O3'-P	10.17	1.73	1.61
2	AW	17	U	C4-C5	9.84	1.52	1.43
1	AA	46	G	O3'-P	9.19	1.72	1.61
3	AU	8	G	C5-C4	9.16	1.44	1.38
3	AU	13	A	C5-C4	8.94	1.45	1.38
3	AU	8	G	O3'-P	-8.90	1.50	1.61
3	AU	12	A	C5-C4	8.88	1.45	1.38
3	AU	6	A	C5-C4	8.80	1.45	1.38
3	AU	14	A	C5-C4	8.67	1.44	1.38
15	AM	86	CYS	C-N	8.39	1.53	1.34
2	AV	16	U	C4-C5	8.32	1.51	1.43
2	AW	16	U	C4-C5	8.30	1.51	1.43
1	AA	933	G	O3'-P	8.17	1.71	1.61
1	AA	79	G	O3'-P	-8.14	1.51	1.61
2	AV	35	A	O3'-P	8.07	1.70	1.61
3	AU	8	G	C5-C6	-7.50	1.34	1.42
3	AU	8	G	C2-N3	7.04	1.38	1.32
3	AU	12	A	C5-C6	-6.99	1.34	1.41
3	AU	6	A	C5-C6	-6.89	1.34	1.41
3	AU	14	A	C5-C6	-6.87	1.34	1.41
2	AV	39	U	C4-C5	-6.83	1.37	1.43
3	AU	13	A	C5-C6	-6.78	1.34	1.41
1	AA	143	A	O3'-P	6.75	1.69	1.61
2	AW	55	U	C4-C5	-6.72	1.37	1.43
2	AV	39	U	N1-C2	6.69	1.44	1.38
2	AV	58	A	C5-C6	6.65	1.47	1.41
2	AW	39	U	C4-C5	-6.63	1.37	1.43
2	AV	55	U	C4-C5	-6.60	1.37	1.43
2	AW	58	A	C5-C6	6.55	1.47	1.41
2	AV	76	A	C2'-O2'	6.53	1.50	1.41
2	AW	39	U	N1-C2	6.49	1.44	1.38
3	AU	11	C	N3-C4	6.36	1.38	1.33
23	B0	1113	C	P-OP2	6.17	1.59	1.49
2	AW	73	A	O3'-P	6.16	1.68	1.61
3	AU	14	A	N3-C4	6.07	1.38	1.34
3	AU	13	A	N3-C4	5.83	1.38	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	AU	6	A	N3-C4	5.78	1.38	1.34
1	AA	884	U	O3'-P	5.64	1.68	1.61
3	AU	12	A	N3-C4	5.61	1.38	1.34
3	AU	12	A	C2-N3	5.51	1.38	1.33
3	AU	6	A	C2-N3	5.43	1.38	1.33
23	B0	1113	C	C3'-O3'	-5.30	1.34	1.42
3	AU	14	A	C2-N3	5.29	1.38	1.33
3	AU	13	A	C2-N3	5.28	1.38	1.33
23	B0	1112	U	C3'-O3'	-5.17	1.34	1.42

All (446) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	AU	8	G	C5-C6-O6	-177.72	21.96	128.60
3	AU	6	A	C5-C6-N6	-127.11	22.02	123.70
3	AU	14	A	C5-C6-N6	-127.08	22.03	123.70
3	AU	12	A	C5-C6-N6	-127.07	22.05	123.70
3	AU	13	A	C5-C6-N6	-127.04	22.07	123.70
1	AA	884	U	P-O3'-C3'	-47.92	62.19	119.70
23	B0	3098	U	P-O3'-C3'	42.74	170.98	119.70
1	AA	274	A	OP1-P-O3'	-41.13	14.71	105.20
2	AW	35	A	P-O3'-C3'	41.11	169.03	119.70
23	B0	3190	G	P-O3'-C3'	38.30	165.66	119.70
1	AA	239	U	P-O3'-C3'	-38.09	73.99	119.70
1	AA	733	A	P-O3'-C3'	38.03	165.33	119.70
1	AA	576	G	P-O3'-C3'	-37.90	74.22	119.70
1	AA	26	A	P-O3'-C3'	-37.85	74.27	119.70
1	AA	436	C	P-O3'-C3'	-36.35	76.08	119.70
2	AW	25	C	P-O3'-C3'	-35.33	77.31	119.70
1	AA	246	A	P-O3'-C3'	-34.91	77.80	119.70
3	AU	8	G	N1-C6-O6	-34.47	99.22	119.90
1	AA	1297	C	P-O3'-C3'	34.38	160.96	119.70
1	AA	1398	A	OP2-P-O3'	-34.17	30.02	105.20
1	AA	74	G	P-O3'-C3'	32.90	159.18	119.70
2	AW	25	C	OP1-P-O3'	32.69	177.13	105.20
1	AA	1183	A	P-O3'-C3'	-32.55	80.63	119.70
3	AU	14	A	N1-C6-N6	-32.43	99.14	118.60
3	AU	6	A	N1-C6-N6	-32.38	99.17	118.60
1	AA	499	A	O3'-P-O5'	-32.34	42.55	104.00
3	AU	13	A	N1-C6-N6	-32.26	99.25	118.60
3	AU	12	A	N1-C6-N6	-32.26	99.25	118.60
3	AU	13	A	C2-N3-C4	31.89	126.55	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	AU	12	A	C2-N3-C4	31.86	126.53	110.60
3	AU	6	A	C2-N3-C4	31.60	126.40	110.60
3	AU	14	A	C2-N3-C4	31.56	126.38	110.60
1	AA	185	A	OP2-P-O3'	-31.07	36.84	105.20
1	AA	115	G	P-O3'-C3'	-30.96	82.55	119.70
1	AA	499	A	P-O3'-C3'	-29.13	84.74	119.70
3	AU	8	G	N3-C4-C5	-29.07	114.07	128.60
3	AU	8	G	C2-N3-C4	28.99	126.39	111.90
1	AA	556	C	O3'-P-O5'	28.88	158.87	104.00
1	AA	1335	C	P-O3'-C3'	28.61	154.03	119.70
1	AA	1398	A	P-O3'-C3'	-28.26	85.79	119.70
3	AU	12	A	N1-C2-N3	-27.85	115.38	129.30
1	AA	239	U	O3'-P-O5'	-27.73	51.30	104.00
1	AA	884	U	O3'-P-O5'	-27.66	51.44	104.00
3	AU	6	A	N1-C2-N3	-27.65	115.48	129.30
3	AU	8	G	P-O3'-C3'	27.62	152.85	119.70
3	AU	13	A	N1-C2-N3	-27.61	115.49	129.30
3	AU	14	A	N1-C2-N3	-27.58	115.51	129.30
2	AV	33	U	P-O3'-C3'	27.26	152.41	119.70
2	AV	35	A	P-O3'-C3'	27.11	152.24	119.70
23	B0	3107	G	P-O3'-C3'	27.07	152.18	119.70
23	B0	1856	U	OP2-P-O3'	26.51	163.52	105.20
1	AA	278	G	P-O3'-C3'	-26.49	87.91	119.70
1	AA	587	G	O3'-P-O5'	26.39	154.13	104.00
1	AA	1345	U	P-O3'-C3'	26.21	151.15	119.70
23	B0	1856	U	P-O3'-C3'	25.98	150.87	119.70
1	AA	288	A	O3'-P-O5'	-25.94	54.71	104.00
1	AA	387	U	P-O3'-C3'	25.47	150.26	119.70
1	AA	546	G	OP2-P-O3'	-25.30	49.54	105.20
23	B0	3098	U	OP1-P-O3'	25.30	160.85	105.20
23	B0	3190	G	OP2-P-O3'	-25.08	50.03	105.20
1	AA	587	G	P-O3'-C3'	24.60	149.22	119.70
2	AV	74	C	O3'-P-O5'	24.47	150.49	104.00
1	AA	115	G	OP2-P-O3'	24.16	158.36	105.20
1	AA	884	U	OP1-P-O3'	23.92	157.82	105.20
1	AA	246	A	O3'-P-O5'	-23.50	59.35	104.00
1	AA	403	C	P-O3'-C3'	-23.26	91.78	119.70
1	AA	26	A	OP2-P-O3'	23.17	156.17	105.20
2	AW	17	U	C5-C6-N1	-23.09	111.15	122.70
15	AM	86	CYS	O-C-N	-23.06	85.80	122.70
2	AV	17	U	C5-C6-N1	-23.01	111.19	122.70
1	AA	1505	G	OP2-P-O3'	23.00	155.79	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	B0	1072	U	O5'-P-OP1	-22.93	83.19	110.70
1	AA	143	A	P-O3'-C3'	-22.85	92.28	119.70
1	AA	1374	A	P-O3'-C3'	-22.82	92.32	119.70
1	AA	46	G	P-O3'-C3'	-22.78	92.36	119.70
23	B0	1856	U	OP1-P-O3'	-22.54	55.60	105.20
1	AA	1409	C	P-O3'-C3'	-22.43	92.79	119.70
1	AA	1183	A	OP1-P-O3'	22.38	154.44	105.20
1	AA	1505	G	P-O3'-C3'	-21.56	93.83	119.70
1	AA	631	G	P-O3'-C3'	-21.51	93.88	119.70
1	AA	1393	U	O3'-P-O5'	-21.48	63.19	104.00
1	AA	1455	G	P-O3'-C3'	21.41	145.39	119.70
1	AA	94	G	P-O3'-C3'	21.18	145.11	119.70
2	AW	25	C	OP2-P-O3'	-21.16	58.65	105.20
2	AW	16	U	C5-C6-N1	-21.09	112.15	122.70
23	B0	3874	C	P-O3'-C3'	-20.98	94.52	119.70
2	AV	16	U	C5-C6-N1	-20.97	112.22	122.70
23	B0	1071	U	OP1-P-O3'	-20.80	59.44	105.20
23	B0	3190	G	OP1-P-O3'	20.78	150.92	105.20
23	B0	3106	U	O3'-P-O5'	-20.48	65.09	104.00
23	B0	1856	U	O3'-P-O5'	-20.38	65.28	104.00
1	AA	546	G	P-O3'-C3'	20.11	143.84	119.70
1	AA	26	A	OP1-P-O3'	-20.04	61.11	105.20
23	B0	3106	U	P-O3'-C3'	20.03	143.74	119.70
1	AA	576	G	OP1-P-O3'	-19.89	61.43	105.20
1	AA	1305	G	P-O3'-C3'	-19.78	95.97	119.70
2	AW	34	G	O3'-P-O5'	19.77	141.57	104.00
3	AU	11	C	N3-C4-C5	-19.69	114.03	121.90
1	AA	202	G	P-O3'-C3'	-19.54	96.25	119.70
1	AA	1155	G	P-O3'-C3'	-19.38	96.44	119.70
1	AA	869	G	P-O3'-C3'	19.38	142.95	119.70
3	AU	8	G	C5-C6-N1	19.37	121.19	111.50
2	AV	36	A	OP2-P-O3'	-19.29	62.76	105.20
1	AA	1409	C	OP2-P-O3'	19.23	147.51	105.20
1	AA	561	U	O3'-P-O5'	19.19	140.47	104.00
1	AA	436	C	OP1-P-O3'	-19.11	63.16	105.20
1	AA	556	C	OP2-P-O3'	-18.60	64.29	105.20
1	AA	1398	A	OP1-P-O3'	18.55	146.00	105.20
1	AA	461	C	P-O3'-C3'	18.53	141.94	119.70
1	AA	274	A	P-O3'-C3'	18.35	141.72	119.70
24	B9	73	C	O3'-P-O5'	18.34	138.85	104.00
1	AA	46	G	OP1-P-O3'	18.29	145.44	105.20
3	AU	13	A	N3-C4-C5	-18.29	114.00	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	556	C	P-O3'-C3'	-18.23	97.82	119.70
3	AU	12	A	N3-C4-C5	-18.20	114.06	126.80
3	AU	14	A	N3-C4-C5	-18.14	114.10	126.80
3	AU	6	A	N3-C4-C5	-18.08	114.14	126.80
24	B9	73	C	P-O3'-C3'	-18.05	98.04	119.70
1	AA	733	A	OP2-P-O3'	-18.04	65.51	105.20
1	AA	576	G	O3'-P-O5'	17.99	138.18	104.00
23	B0	3101	G	O3'-P-O5'	-17.90	69.99	104.00
1	AA	1182	G	P-O3'-C3'	-17.89	98.23	119.70
1	AA	606	G	O3'-P-O5'	-17.85	70.08	104.00
1	AA	631	G	OP2-P-O3'	17.84	144.44	105.20
1	AA	115	G	OP1-P-O3'	-17.74	66.17	105.20
1	AA	1393	U	OP1-P-O3'	17.66	144.05	105.20
1	AA	109	A	P-O3'-C3'	17.62	140.84	119.70
23	B0	3101	G	OP2-P-O3'	17.45	143.59	105.20
1	AA	59	A	OP1-P-O3'	-17.43	66.85	105.20
1	AA	546	G	O3'-P-O5'	17.30	136.87	104.00
1	AA	905	U	P-O3'-C3'	17.30	140.46	119.70
1	AA	1490	C	OP2-P-O3'	-17.20	67.36	105.20
1	AA	212	G	OP2-P-O3'	-17.10	67.58	105.20
1	AA	46	G	O3'-P-O5'	-17.09	71.54	104.00
23	B0	3107	G	OP1-P-O3'	16.93	142.45	105.20
1	AA	214	U	O3'-P-O5'	-16.90	71.89	104.00
1	AA	1033	G	P-O3'-C3'	16.89	139.97	119.70
1	AA	1182	G	OP2-P-O3'	16.86	142.30	105.20
23	B0	3107	G	O3'-P-O5'	-16.78	72.11	104.00
1	AA	893	C	P-O3'-C3'	-16.62	99.75	119.70
15	AM	86	CYS	CA-C-N	16.55	153.60	117.20
1	AA	394	G	O3'-P-O5'	16.37	135.11	104.00
1	AA	499	A	OP2-P-O3'	16.14	140.72	105.20
23	B0	3149	G	O3'-P-O5'	16.00	134.40	104.00
1	AA	1305	G	O3'-P-O5'	-15.96	73.67	104.00
15	AM	86	CYS	C-N-CA	15.89	161.41	121.70
2	AV	36	A	O3'-P-O5'	15.83	134.08	104.00
1	AA	185	A	O3'-P-O5'	15.70	133.84	104.00
23	B0	3098	U	OP2-P-O3'	-15.60	70.89	105.20
1	AA	893	C	OP2-P-O3'	15.58	139.47	105.20
1	AA	278	G	OP2-P-O3'	15.56	139.43	105.20
1	AA	214	U	P-O3'-C3'	15.49	138.29	119.70
2	AW	25	C	O3'-P-O5'	-15.43	74.68	104.00
23	B0	3866	A	P-O3'-C3'	15.31	138.07	119.70
23	B0	1072	U	O5'-P-OP2	-15.20	92.02	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	109	A	O3'-P-O5'	-15.19	75.13	104.00
1	AA	1297	C	OP1-P-O3'	-15.17	71.82	105.20
1	AA	1490	C	P-O3'-C3'	15.14	137.87	119.70
1	AA	1297	C	O3'-P-O5'	15.08	132.65	104.00
1	AA	1110	A	OP2-P-O3'	14.94	138.07	105.20
1	AA	1183	A	OP2-P-O3'	-14.80	72.64	105.20
1	AA	651	C	O3'-P-O5'	14.77	132.06	104.00
1	AA	1237	C	O3'-P-O5'	-14.71	76.06	104.00
1	AA	1211	U	O3'-P-O5'	14.60	131.73	104.00
2	AV	35	A	OP1-P-O3'	14.56	137.24	105.20
1	AA	1034	G	P-O3'-C3'	-14.49	102.31	119.70
1	AA	118	U	OP2-P-O3'	14.45	136.98	105.20
1	AA	1393	U	P-O3'-C3'	-14.39	102.44	119.70
1	AA	1345	U	OP1-P-O3'	-14.38	73.55	105.20
1	AA	74	G	OP2-P-O3'	-14.35	73.64	105.20
1	AA	278	G	O3'-P-O5'	-14.33	76.77	104.00
1	AA	1237	C	OP2-P-O3'	14.24	136.53	105.20
1	AA	606	G	P-O3'-C3'	-14.19	102.67	119.70
1	AA	1067	A	P-O3'-C3'	-14.05	102.84	119.70
1	AA	375	U	O3'-P-O5'	-14.03	77.34	104.00
1	AA	288	A	OP1-P-O3'	13.98	135.95	105.20
1	AA	212	G	OP1-P-O3'	13.95	135.89	105.20
2	AV	72	C	O3'-P-O5'	13.95	130.50	104.00
3	AU	8	G	N1-C2-N3	-13.90	115.56	123.90
1	AA	239	U	OP1-P-O3'	13.89	135.76	105.20
1	AA	315	A	OP2-P-O3'	13.79	135.55	105.20
1	AA	387	U	O3'-P-O5'	13.70	130.03	104.00
1	AA	436	C	O3'-P-O5'	13.69	130.01	104.00
2	AW	33	U	P-O3'-C3'	13.64	136.07	119.70
1	AA	1505	G	OP1-P-O3'	-13.55	75.39	105.20
2	AW	75	C	P-O3'-C3'	13.54	135.95	119.70
1	AA	143	A	OP1-P-O3'	13.52	134.94	105.20
3	AU	8	G	O3'-P-O5'	13.44	129.53	104.00
1	AA	1110	A	P-O3'-C3'	-13.43	103.58	119.70
1	AA	74	G	OP1-P-O3'	13.43	134.74	105.20
2	AV	58	A	N1-C6-N6	13.39	126.63	118.60
1	AA	1331	G	P-O3'-C3'	13.37	135.75	119.70
1	AA	315	A	O3'-P-O5'	-13.33	78.67	104.00
1	AA	79	G	P-O3'-C3'	-13.32	103.72	119.70
1	AA	1457	A	O3'-P-O5'	13.31	129.29	104.00
23	B0	1071	U	OP2-P-O3'	-13.30	75.94	105.20
1	AA	1335	C	OP1-P-O3'	-13.15	76.26	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AW	58	A	N1-C6-N6	13.15	126.49	118.60
1	AA	631	G	OP1-P-O3'	-13.02	76.55	105.20
3	AU	11	C	C2-N3-C4	12.95	126.37	119.90
1	AA	1305	G	OP2-P-O3'	12.90	133.58	105.20
1	AA	118	U	O3'-P-O5'	-12.85	79.59	104.00
1	AA	227	G	P-O3'-C3'	12.83	135.10	119.70
1	AA	587	G	OP1-P-O3'	-12.83	76.98	105.20
2	AV	33	U	OP1-P-O3'	12.73	133.20	105.20
2	AV	75	C	P-O3'-C3'	12.71	134.95	119.70
23	B0	3098	U	O3'-P-O5'	-12.59	80.08	104.00
2	AW	73	A	P-O3'-C3'	-12.57	104.62	119.70
23	B0	3866	A	OP1-P-O3'	12.55	132.80	105.20
2	AV	76	A	O5'-P-OP2	-12.54	94.42	105.70
1	AA	1337	G	OP1-P-O3'	12.53	132.77	105.20
1	AA	754	C	P-O3'-C3'	12.34	134.51	119.70
2	AW	58	A	C4-C5-C6	12.31	123.16	117.00
1	AA	89	G	P-O3'-C3'	-12.30	104.93	119.70
2	AV	58	A	C4-C5-C6	12.25	123.12	117.00
1	AA	143	A	O3'-P-O5'	-12.22	80.79	104.00
1	AA	1110	A	O3'-P-O5'	-12.19	80.84	104.00
2	AV	17	U	C4-C5-C6	-12.13	112.42	119.70
1	AA	59	A	P-O3'-C3'	12.03	134.13	119.70
2	AW	17	U	C4-C5-C6	-11.95	112.53	119.70
1	AA	1182	G	OP1-P-O3'	-11.94	78.94	105.20
1	AA	884	U	OP2-P-O3'	-11.87	79.08	105.20
1	AA	89	G	O3'-P-O5'	11.77	126.37	104.00
1	AA	202	G	OP2-P-O3'	11.73	131.02	105.20
2	AV	25	C	O3'-P-O5'	-11.70	81.77	104.00
2	AV	46	G	N7-C8-N9	-11.59	107.31	113.10
2	AW	35	A	OP1-P-O3'	11.48	130.46	105.20
2	AW	46	G	N7-C8-N9	-11.48	107.36	113.10
1	AA	1409	C	O3'-P-O5'	-11.45	82.25	104.00
2	AW	75	C	OP2-P-O3'	11.36	130.19	105.20
1	AA	944	G	P-O3'-C3'	11.31	133.27	119.70
1	AA	403	C	OP1-P-O3'	-11.30	80.33	105.20
1	AA	1505	G	O3'-P-O5'	-11.23	82.66	104.00
23	B0	3106	U	OP1-P-O3'	11.23	129.92	105.20
1	AA	59	A	OP2-P-O3'	11.21	129.86	105.20
1	AA	94	G	OP2-P-O3'	-11.20	80.56	105.20
2	AV	1	G	P-O3'-C3'	11.13	133.06	119.70
23	B0	3186	C	P-O3'-C3'	11.08	133.00	119.70
2	AV	25	C	OP1-P-O3'	11.00	129.40	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	651	C	OP2-P-O3'	-10.94	81.13	105.20
1	AA	869	G	O3'-P-O5'	10.90	124.70	104.00
1	AA	893	C	O3'-P-O5'	-10.87	83.35	104.00
1	AA	1374	A	OP1-P-O3'	-10.85	81.33	105.20
23	B0	3101	G	P-O3'-C3'	-10.77	106.78	119.70
1	AA	1033	G	OP2-P-O3'	-10.67	81.72	105.20
1	AA	1374	A	OP2-P-O3'	10.64	128.61	105.20
2	AV	58	A	C5-C6-N1	-10.57	112.41	117.70
1	AA	227	G	O3'-P-O5'	-10.56	83.93	104.00
2	AW	58	A	C5-C6-N1	-10.54	112.43	117.70
2	AV	33	U	O3'-P-O5'	-10.53	83.99	104.00
1	AA	1455	G	O3'-P-O5'	-10.45	84.15	104.00
1	AA	202	G	O3'-P-O5'	-10.38	84.28	104.00
23	B0	3102	G	P-O3'-C3'	-10.35	107.28	119.70
1	AA	94	G	OP1-P-O3'	10.34	127.95	105.20
1	AA	561	U	P-O3'-C3'	-10.32	107.32	119.70
1	AA	606	G	OP1-P-O3'	10.27	127.80	105.20
1	AA	905	U	OP1-P-O3'	10.25	127.75	105.20
1	AA	754	C	OP2-P-O3'	10.22	127.69	105.20
2	AV	74	C	OP2-P-O3'	-10.22	82.71	105.20
23	B0	3149	G	OP2-P-O3'	-10.21	82.73	105.20
1	AA	944	G	OP1-P-O3'	10.18	127.59	105.20
23	B0	3874	C	O3'-P-O5'	10.16	123.31	104.00
2	AW	34	G	OP2-P-O3'	-10.16	82.85	105.20
1	AA	733	A	O3'-P-O5'	10.15	123.28	104.00
1	AA	1490	C	OP1-P-O3'	10.12	127.46	105.20
1	AA	403	C	OP2-P-O3'	10.12	127.45	105.20
2	AW	16	U	C4-C5-C6	-10.00	113.70	119.70
1	AA	387	U	OP2-P-O3'	-9.97	83.26	105.20
1	AA	1498	U	C2'-C3'-O3'	9.95	131.38	109.50
1	AA	1409	C	OP1-P-O3'	-9.93	83.36	105.20
23	B0	3866	A	O3'-P-O5'	-9.93	85.14	104.00
2	AV	16	U	C4-C5-C6	-9.91	113.75	119.70
1	AA	461	C	OP2-P-O3'	-9.81	83.62	105.20
2	AV	35	A	OP2-P-O3'	-9.66	83.95	105.20
2	AV	34	G	O3'-P-O5'	9.61	122.25	104.00
2	AV	44	A	OP2-P-O3'	9.54	126.20	105.20
1	AA	1237	C	P-O3'-C3'	9.50	131.10	119.70
1	AA	243	A	C2'-C3'-O3'	9.47	130.33	109.50
1	AA	1067	A	OP2-P-O3'	9.46	126.01	105.20
1	AA	1155	G	OP1-P-O3'	-9.33	84.68	105.20
2	AV	34	G	OP2-P-O3'	-9.29	84.77	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	79	G	O3'-P-O5'	9.28	121.63	104.00
23	B0	3149	G	P-O3'-C3'	-9.21	108.65	119.70
1	AA	181	G	C2'-C3'-O3'	9.13	129.58	109.50
23	B0	3183	A	O3'-P-O5'	9.12	121.32	104.00
1	AA	827	U	P-O3'-C3'	9.10	130.62	119.70
1	AA	559	A	C2'-C3'-O3'	9.10	129.52	109.50
2	AV	72	C	OP1-P-O3'	-9.01	85.37	105.20
1	AA	733	A	OP1-P-O3'	8.99	124.98	105.20
1	AA	118	U	P-O3'-C3'	-8.98	108.92	119.70
2	AW	35	A	O3'-P-O5'	-8.90	87.09	104.00
1	AA	1190	G	O3'-P-O5'	8.89	120.89	104.00
1	AA	394	G	OP2-P-O3'	-8.89	85.65	105.20
1	AA	561	U	OP2-P-O3'	-8.88	85.65	105.20
1	AA	1345	U	O3'-P-O5'	8.87	120.85	104.00
2	AW	76	A	P-O5'-C5'	-8.80	106.83	120.90
1	AA	79	G	OP1-P-O3'	-8.79	85.86	105.20
1	AA	227	G	OP1-P-O3'	8.78	124.52	105.20
1	AA	315	A	P-O3'-C3'	8.65	130.08	119.70
1	AA	1299	A	N9-C1'-C2'	8.55	125.12	114.00
1	AA	375	U	OP2-P-O3'	8.55	124.00	105.20
1	AA	1183	A	O3'-P-O5'	-8.54	87.77	104.00
1	AA	214	U	OP1-P-O3'	8.45	123.79	105.20
2	AV	18	G	C5'-C4'-O4'	-8.45	98.96	109.10
2	AW	18	G	C5'-C4'-O4'	-8.44	98.97	109.10
1	AA	1155	G	OP2-P-O3'	8.36	123.58	105.20
1	AA	1457	A	OP2-P-O3'	-8.23	87.09	105.20
1	AA	1335	C	OP2-P-O3'	8.16	123.15	105.20
2	AV	74	C	P-O3'-C3'	-8.13	109.94	119.70
1	AA	246	A	OP2-P-O3'	8.09	123.00	105.20
1	AA	1528	U	C2'-C3'-O3'	8.03	127.16	109.50
2	AW	33	U	O3'-P-O5'	-7.96	88.87	104.00
2	AV	72	C	P-O3'-C3'	-7.89	110.23	119.70
1	AA	366	C	C2'-C3'-O3'	7.87	126.81	109.50
2	AV	44	A	O3'-P-O5'	-7.85	89.08	104.00
2	AW	58	A	C6-C5-N7	-7.82	126.83	132.30
23	B0	3135	A	O3'-P-O5'	-7.80	89.17	104.00
2	AV	58	A	C6-C5-N7	-7.80	126.84	132.30
1	AA	197	A	N9-C1'-C2'	7.74	124.06	114.00
1	AA	687	A	C2'-C3'-O3'	7.71	126.45	109.50
1	AA	804	U	OP2-P-O3'	-7.69	88.28	105.20
1	AA	575	G	C2'-C3'-O3'	7.67	126.39	109.50
24	B9	73	C	OP1-P-O3'	-7.67	88.33	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	754	C	OP1-P-O3'	-7.64	88.38	105.20
2	AV	75	C	O3'-P-O5'	7.61	118.46	104.00
1	AA	266	G	C2'-C3'-O3'	7.61	126.24	109.50
1	AA	115	G	O3'-P-O5'	-7.59	89.58	104.00
1	AA	461	C	OP1-P-O3'	7.57	121.85	105.20
1	AA	274	A	O3'-P-O5'	7.56	118.37	104.00
1	AA	1490	C	O3'-P-O5'	7.56	118.37	104.00
1	AA	1455	G	OP1-P-O3'	7.55	121.80	105.20
1	AA	60	A	C2'-C3'-O3'	7.52	126.05	109.50
3	AU	6	A	C4-C5-C6	7.46	120.73	117.00
3	AU	12	A	C4-C5-C6	7.45	120.72	117.00
3	AU	14	A	C4-C5-C6	7.45	120.72	117.00
1	AA	587	G	OP2-P-O3'	-7.40	88.92	105.20
3	AU	13	A	C4-C5-C6	7.38	120.69	117.00
1	AA	1337	G	P-O3'-C3'	-7.35	110.88	119.70
1	AA	776	G	O3'-P-O5'	-7.33	90.07	104.00
2	AV	75	C	O5'-P-OP1	-7.29	99.14	105.70
3	AU	8	G	N1-C2-N2	7.28	122.75	116.20
3	AU	11	C	C5-C4-N4	7.28	125.30	120.20
3	AU	13	A	C5-C6-N1	7.23	121.31	117.70
1	AA	792	A	C2'-C3'-O3'	7.19	125.32	109.50
3	AU	12	A	C5-C6-N1	7.18	121.29	117.70
1	AA	1345	U	OP2-P-O3'	7.09	120.79	105.20
23	B0	3186	C	OP2-P-O3'	-7.07	89.64	105.20
1	AA	869	G	OP2-P-O3'	-7.07	89.66	105.20
1	AA	1034	G	OP1-P-O3'	-7.04	89.71	105.20
1	AA	1033	G	OP1-P-O3'	6.99	120.57	105.20
3	AU	6	A	C5-C6-N1	6.98	121.19	117.70
1	AA	115	G	N9-C1'-C2'	6.95	123.04	114.00
3	AU	14	A	C5-C6-N1	6.95	121.17	117.70
1	AA	59	A	O3'-P-O5'	6.94	117.18	104.00
2	AW	55	U	C4-C5-C6	6.90	123.84	119.70
1	AA	108	G	P-O3'-C3'	6.89	127.97	119.70
23	B0	1113	C	C5'-C4'-C3'	-6.89	104.97	116.00
23	B0	3117	A	N9-C1'-C2'	6.88	122.94	114.00
23	B0	3135	A	OP2-P-O3'	6.83	120.24	105.20
1	AA	1335	C	O3'-P-O5'	6.82	116.96	104.00
3	AU	11	C	C4-C5-C6	6.79	120.80	117.40
2	AV	39	U	C4-C5-C6	6.79	123.77	119.70
3	AU	11	C	N1-C2-O2	6.75	122.95	118.90
2	AW	39	U	C4-C5-C6	6.72	123.73	119.70
1	AA	1505	G	C2'-C3'-O3'	6.66	124.35	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AV	55	U	C4-C5-C6	6.64	123.68	119.70
1	AA	1067	A	C2'-C3'-O3'	6.56	124.19	113.70
1	AA	1502	A	N9-C1'-C2'	6.55	122.52	114.00
1	AA	367	U	OP2-P-O3'	6.49	119.48	105.20
1	AA	1067	A	OP1-P-O3'	-6.49	90.93	105.20
23	B0	3188	U	OP1-P-O3'	6.49	119.47	105.20
1	AA	1033	G	O3'-P-O5'	6.48	116.31	104.00
1	AA	115	G	C2'-C3'-O3'	6.47	124.06	113.70
1	AA	893	C	OP1-P-O3'	-6.42	91.08	105.20
23	B0	903	G	O3'-P-O5'	-6.41	91.82	104.00
1	AA	1211	U	OP2-P-O3'	-6.39	91.14	105.20
1	AA	7	G	C2'-C3'-O3'	6.38	123.90	113.70
1	AA	372	C	C2'-C3'-O3'	6.37	123.90	113.70
23	B0	3183	A	P-O3'-C3'	-6.34	112.09	119.70
1	AA	1337	G	O3'-P-O5'	-6.31	92.01	104.00
1	AA	509	A	C2'-C3'-O3'	6.30	123.77	113.70
1	AA	556	C	OP1-P-O3'	-6.25	91.45	105.20
1	AA	1331	G	O3'-P-O5'	6.23	115.84	104.00
23	B0	3186	C	O3'-P-O5'	6.21	115.80	104.00
1	AA	1528	U	C4'-C3'-O3'	6.19	125.37	113.00
1	AA	905	U	O3'-P-O5'	-6.14	92.34	104.00
14	AL	19	ARG	O-C-N	-6.13	112.89	122.70
1	AA	46	G	OP2-P-O3'	-6.12	91.73	105.20
1	AA	367	U	O3'-P-O5'	-6.04	92.52	104.00
21	AS	54	GLY	N-CA-C	-6.03	98.02	113.10
2	AV	15	G	N9-C1'-C2'	-5.97	105.43	112.00
2	AW	15	G	N9-C1'-C2'	-5.95	105.45	112.00
3	AU	8	G	OP2-P-O3'	-5.95	92.11	105.20
1	AA	804	U	O3'-P-O5'	5.95	115.30	104.00
2	AW	76	A	O5'-P-OP2	-5.94	100.35	105.70
1	AA	274	A	OP2-P-O3'	5.87	118.11	105.20
3	AU	14	A	C6-N1-C2	5.85	122.11	118.60
1	AA	428	G	C2'-C3'-O3'	5.84	123.05	113.70
1	AA	436	C	OP2-P-O3'	5.81	117.98	105.20
1	AA	944	G	O3'-P-O5'	-5.80	92.97	104.00
3	AU	6	A	C6-N1-C2	5.78	122.07	118.60
1	AA	109	A	OP2-P-O3'	5.74	117.84	105.20
1	AA	63	C	C5'-C4'-C3'	-5.71	106.86	116.00
1	AA	394	G	P-O3'-C3'	-5.71	112.85	119.70
3	AU	12	A	C6-N1-C2	5.70	122.02	118.60
2	AV	74	C	N1-C1'-C2'	5.69	121.40	114.00
1	AA	1124	G	N9-C1'-C2'	5.68	121.39	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	26	A	O3'-P-O5'	-5.67	93.23	104.00
1	AA	266	G	C5'-C4'-C3'	-5.66	106.95	116.00
23	B0	1071	U	O3'-P-O5'	5.64	114.73	104.00
23	B0	3874	C	OP1-P-O3'	-5.64	92.80	105.20
1	AA	108	G	OP2-P-O3'	5.63	117.59	105.20
23	B0	1112	U	C4'-C3'-O3'	-5.60	97.63	109.40
1	AA	1337	G	OP2-P-O3'	-5.60	92.89	105.20
3	AU	13	A	C6-N1-C2	5.59	121.95	118.60
1	AA	1380	U	C2'-C3'-O3'	5.55	122.57	113.70
1	AA	353	A	C5'-C4'-O4'	-5.53	102.47	109.10
1	AA	1445	U	OP2-P-O3'	5.49	117.28	105.20
2	AW	33	U	OP1-P-O3'	5.48	117.26	105.20
1	AA	108	G	OP1-P-O3'	-5.46	93.20	105.20
1	AA	1034	G	O3'-P-O5'	5.45	114.34	104.00
1	AA	1065	U	C1'-O4'-C4'	-5.44	105.55	109.90
17	AO	45	VAL	N-CA-C	-5.41	96.40	111.00
4	AB	187	LEU	N-CA-C	-5.39	96.46	111.00
1	AA	1085	U	N1-C1'-C2'	5.33	120.92	114.00
2	AV	46	G	C5-N7-C8	5.30	106.95	104.30
1	AA	108	G	O4'-C1'-N9	5.29	112.43	108.20
1	AA	109	A	OP1-P-O3'	5.28	116.82	105.20
1	AA	389	A	C5'-C4'-C3'	5.28	124.45	116.00
1	AA	1383	C	O3'-P-O5'	5.28	114.03	104.00
1	AA	484	G	C2'-C3'-O3'	5.28	122.14	113.70
3	AU	11	C	N1-C2-N3	-5.24	115.53	119.20
1	AA	181	G	C4'-C3'-O3'	5.23	123.46	113.00
1	AA	89	G	OP1-P-O3'	-5.22	93.72	105.20
3	AU	8	G	C6-N1-C2	-5.20	121.98	125.10
2	AV	55	U	C5-C4-O4	-5.20	122.78	125.90
1	AA	686	U	C5'-C4'-C3'	-5.11	107.82	116.00
1	AA	804	U	OP1-P-O3'	5.10	116.43	105.20
2	AW	46	G	C5-N7-C8	5.10	106.85	104.30
1	AA	470	U	P-O3'-C3'	5.08	125.80	119.70
23	B0	3101	G	OP1-P-O3'	-5.08	94.02	105.20
1	AA	993	G	N9-C1'-C2'	5.07	120.58	114.00
23	B0	1072	U	OP1-P-OP2	5.06	127.19	119.60
2	AV	21	A	C5'-C4'-C3'	5.05	124.08	116.00
1	AA	976	G	C5'-C4'-O4'	5.04	115.15	109.10
2	AW	21	A	C5'-C4'-C3'	5.02	124.03	116.00

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	AA	181	G	C3'
1	AA	1528	U	C3'

All (59) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1048	G	Sidechain
1	AA	1073	U	Sidechain
1	AA	1079	G	Sidechain
1	AA	1085	U	Sidechain
1	AA	1092	A	Sidechain
1	AA	1139	G	Sidechain
1	AA	12	U	Sidechain
1	AA	1281	U	Sidechain
1	AA	1289	A	Sidechain
1	AA	1293	G	Sidechain
1	AA	1299	A	Sidechain
1	AA	1301	U	Sidechain
1	AA	1305	G	Sidechain
1	AA	1340	A	Sidechain
1	AA	1360	A	Sidechain
1	AA	1506	U	Sidechain
1	AA	1525	G	Sidechain
1	AA	187	G	Sidechain
1	AA	191	G	Sidechain
1	AA	197	A	Sidechain
1	AA	231	G	Sidechain
1	AA	249	U	Sidechain
1	AA	250	A	Sidechain
1	AA	251	G	Sidechain
1	AA	254	G	Sidechain
1	AA	266	G	Sidechain
1	AA	274	A	Sidechain
1	AA	290	C	Sidechain
1	AA	297	G	Sidechain
1	AA	305	G	Sidechain
1	AA	380	G	Sidechain
1	AA	413	G	Sidechain
1	AA	481	G	Sidechain
1	AA	573	A	Sidechain
1	AA	575	G	Sidechain
1	AA	603	U	Sidechain
1	AA	727	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	879	C	Sidechain
1	AA	898	G	Sidechain
1	AA	982	U	Sidechain
2	AV	16	U	Sidechain
2	AV	17	U	Sidechain
2	AV	18	G	Sidechain
2	AV	19	G	Sidechain
2	AV	39	U	Sidechain
2	AV	55	U	Sidechain
2	AV	62	A	Sidechain
2	AW	16	U	Sidechain
2	AW	17	U	Sidechain
2	AW	18	G	Sidechain
2	AW	19	G	Sidechain
2	AW	39	U	Sidechain
2	AW	55	U	Sidechain
2	AW	62	A	Sidechain
23	B0	1071	U	Sidechain
23	B0	1099	A	Sidechain
23	B0	3117	A	Sidechain
23	B0	3168	G	Sidechain
23	B0	873	U	Sidechain

## 5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32819	0	16577	3629	5
2	AV	1625	0	821	141	0
2	AW	1625	0	819	141	0
3	AU	176	0	79	11	0
4	AB	1900	0	1951	231	0
5	AC	1612	0	1676	292	0
6	AD	1702	0	1767	227	4
7	AE	1146	0	1207	233	0
8	AF	842	0	857	81	4
9	AG	1256	0	1294	119	0
10	AH	1115	0	1177	122	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	AI	1010	0	1043	172	0
12	AJ	794	0	838	216	0
13	AK	884	0	903	187	0
14	AL	970	0	1055	157	0
15	AM	996	0	1071	145	0
16	AN	491	0	531	160	0
17	AO	733	0	771	55	0
18	AP	700	0	720	96	0
19	AQ	856	0	926	355	0
20	AR	596	0	667	83	0
21	AS	647	0	673	129	0
22	AT	762	0	848	259	0
23	B0	60636	0	30552	1930	8
24	B9	2519	0	1287	43	0
25	BA	270	0	0	0	0
26	BB	205	0	0	0	0
27	BC	197	0	0	0	0
28	BD	178	0	0	12	0
29	BE	177	0	0	0	0
30	BF	52	0	0	0	0
31	BG	143	0	0	7	0
32	BH	143	0	0	0	0
33	BI	132	0	0	3	0
34	BJ	141	0	0	1	0
35	BK	124	0	0	0	0
36	BL	114	0	0	1	0
37	BM	111	0	0	0	0
38	BN	125	0	0	1	0
39	BO	117	0	0	0	0
40	BP	100	0	0	0	0
41	BQ	130	0	0	0	0
42	BR	93	0	0	0	0
43	BS	113	0	0	0	0
44	BT	173	0	0	0	0
45	BU	86	0	0	1	0
46	BV	16	0	0	0	0
47	BW	65	0	0	0	0
48	BX	55	0	0	0	0
49	BY	73	0	0	0	0
50	BZ	58	0	0	0	0
51	B1	53	0	0	0	0
52	B2	46	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
53	B3	63	0	0	0	0
54	B4	35	0	0	0	0
55	B5	217	0	0	36	0
All	All	122017	0	70110	7429	12

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 39.

All (7429) 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)
1:AA:293:G:H4'	1:AA:609:A:C2	1.16	1.69
1:AA:675:A:H1'	13:AK:116:HIS:CD2	1.26	1.66
1:AA:21:G:C1'	1:AA:914:A:H62	1.08	1.65
6:AD:88:VAL:CA	7:AE:97:GLY:HA3	1.24	1.64
23:B0:3128:G:H4'	23:B0:3174:C:C4'	1.23	1.64
1:AA:1458:G:C8	1:AA:1459:C:H2'	1.27	1.63
1:AA:1398:A:H5'	1:AA:1399:C:P	1.39	1.62
1:AA:1342:C:H5''	11:AI:125:TYR:CE1	1.21	1.62
2:AV:76:A:H5''	23:B0:2564:U:C6	1.12	1.61
2:AW:74:C:C4	23:B0:2534:U:C5	1.85	1.61
1:AA:256:U:C5'	19:AQ:17:LYS:HZ3	0.99	1.59
1:AA:191:G:C6	1:AA:192:U:C2	1.90	1.59
12:AJ:62:HIS:HB3	16:AN:59:ALA:CB	1.28	1.59
12:AJ:62:HIS:CB	16:AN:59:ALA:HB3	1.16	1.58
23:B0:1856:U:C5	23:B0:3865:A:N6	1.69	1.56
1:AA:779:C:H4'	13:AK:120:ARG:CG	1.23	1.56
1:AA:1416:G:C3'	1:AA:1417:G:C5'	1.78	1.56
1:AA:216:C:C4'	1:AA:466:A:H61	1.20	1.54
23:B0:891:A:C2	23:B0:892:A:C6	1.91	1.53
19:AQ:105:ALA:H	23:B0:727:U:C1'	0.95	1.53
6:AD:88:VAL:CG1	7:AE:97:GLY:HA2	1.36	1.52
1:AA:6:G:C4	7:AE:119:LEU:CD1	1.93	1.51
1:AA:828:A:C2	4:AB:26:PRO:HG2	1.45	1.51
1:AA:130:A:C4'	1:AA:264:U:H5'	1.39	1.50
1:AA:161:A:C2	1:AA:348:G:O2'	1.64	1.50
23:B0:3867:G:N2	55:B5:44:GLY:CA	1.75	1.50
1:AA:323:U:C5'	22:AT:22:ARG:HB2	1.42	1.50
1:AA:923:A:C1'	1:AA:1398:A:N3	1.75	1.50
1:AA:94:G:O3'	1:AA:96:C:P	1.12	1.50
1:AA:189:A:C6	22:AT:104:LEU:O	1.65	1.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:538:G:H5''	14:AL:114:LYS:CB	1.06	1.49
1:AA:21:G:H1'	1:AA:914:A:N6	1.28	1.48
1:AA:22:G:H1'	1:AA:913:A:C2	1.45	1.48
1:AA:538:G:C5'	14:AL:114:LYS:HB2	1.02	1.48
19:AQ:104:LYS:HB3	23:B0:727:U:C1'	1.14	1.48
1:AA:684:A:C1'	13:AK:38:ASN:HD22	1.24	1.48
1:AA:38:G:H5'	1:AA:547:A:N6	1.29	1.47
1:AA:456:A:N1	1:AA:477:G:H1'	1.25	1.47
1:AA:1342:C:C5'	11:AI:125:TYR:CE1	1.98	1.47
1:AA:835:U:C5'	20:AR:64:ARG:NH2	1.72	1.47
2:AV:56:C:C4'	28:BD:74:ILE:CA	1.89	1.47
1:AA:262:A:H5'	22:AT:74:LYS:CB	1.42	1.47
1:AA:255:G:C1'	19:AQ:16:GLN:HE21	1.28	1.46
1:AA:293:G:H4'	1:AA:609:A:N1	1.26	1.46
1:AA:322:C:H4'	22:AT:23:ARG:CD	1.39	1.46
1:AA:1060:C:C4'	12:AJ:52:GLY:HA3	1.44	1.46
1:AA:1342:C:O3'	11:AI:125:TYR:CE2	1.69	1.46
2:AV:56:C:H4'	28:BD:74:ILE:CA	0.98	1.45
1:AA:189:A:C5	22:AT:104:LEU:O	1.66	1.45
1:AA:1416:G:H3'	1:AA:1417:G:C5'	1.33	1.45
1:AA:255:G:H1'	19:AQ:16:GLN:NE2	1.21	1.45
1:AA:191:G:N1	1:AA:192:U:C2	1.85	1.45
1:AA:130:A:H5'	19:AQ:63:ARG:NE	1.31	1.45
1:AA:923:A:H1'	1:AA:1398:A:N3	1.21	1.45
1:AA:779:C:C4'	13:AK:120:ARG:HG2	1.47	1.45
1:AA:131:C:O2'	1:AA:262:A:C4	1.68	1.44
1:AA:762:C:H4'	23:B0:729:A:N1	1.12	1.44
1:AA:265:G:C5'	19:AQ:65:ILE:HA	1.46	1.44
1:AA:476:U:N1	1:AA:477:G:H5'	1.26	1.44
1:AA:322:C:C4'	22:AT:23:ARG:HD2	1.48	1.44
1:AA:21:G:C1'	1:AA:914:A:N6	1.79	1.43
2:AW:76:A:C1'	23:B0:2486:C:O4'	1.64	1.43
23:B0:3877:A:C8	23:B0:1861:G:C8	2.06	1.43
1:AA:1014:A:H5''	21:AS:14:HIS:CG	1.53	1.43
15:AM:7:VAL:HG12	28:BD:111:ILE:CA	1.49	1.43
1:AA:131:C:H1'	1:AA:262:A:C2	1.53	1.42
1:AA:262:A:O3'	22:AT:75:ASN:CB	1.64	1.42
1:AA:131:C:H1'	1:AA:262:A:N3	1.32	1.42
1:AA:333:G:H1'	22:AT:16:HIS:CD2	1.55	1.42
1:AA:619:U:N3	6:AD:135:LEU:HG	1.29	1.42
1:AA:332:G:OP2	22:AT:10:LEU:CB	1.66	1.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1060:C:O2'	12:AJ:56:HIS:CD2	1.70	1.41
1:AA:131:C:O2'	1:AA:262:A:C1'	1.67	1.41
1:AA:6:G:C4	7:AE:119:LEU:HD11	1.49	1.41
1:AA:677:U:H1'	13:AK:119:CYS:SG	1.57	1.41
1:AA:265:G:H4'	19:AQ:65:ILE:C	1.41	1.41
1:AA:190:A:H61	22:AT:104:LEU:N	1.13	1.40
1:AA:38:G:O4'	1:AA:547:A:C6	1.74	1.40
1:AA:1015:A:H1'	1:AA:1219:U:C5'	1.52	1.39
1:AA:190:A:N6	22:AT:104:LEU:H	1.17	1.39
1:AA:675:A:N3	13:AK:116:HIS:HB2	1.34	1.39
6:AD:57:ARG:NH2	7:AE:107:ARG:CD	1.86	1.39
23:B0:891:A:N1	23:B0:892:A:N6	1.70	1.39
1:AA:6:G:C5	7:AE:119:LEU:CD1	2.06	1.38
1:AA:333:G:C1'	22:AT:16:HIS:CD2	2.06	1.38
1:AA:256:U:H5'	19:AQ:17:LYS:NZ	1.07	1.38
1:AA:320:C:O4'	1:AA:1434:A:C2	1.76	1.38
1:AA:6:G:C2	7:AE:119:LEU:HD11	1.57	1.38
1:AA:116:A:N6	1:AA:313:A:H1'	1.36	1.38
19:AQ:105:ALA:N	23:B0:727:U:H1'	1.30	1.37
1:AA:1484:C:H4'	23:B0:1943:A:C1'	1.53	1.37
2:AV:76:A:C5'	23:B0:2564:U:C6	2.05	1.37
1:AA:1416:G:C3'	1:AA:1417:G:H5'	0.90	1.37
6:AD:88:VAL:HA	7:AE:97:GLY:CA	1.51	1.37
2:AW:76:A:N3	23:B0:2486:C:H1'	1.35	1.37
1:AA:675:A:C1'	13:AK:116:HIS:CD2	2.07	1.36
6:AD:88:VAL:HG13	7:AE:97:GLY:CA	1.51	1.36
1:AA:293:G:C4'	1:AA:609:A:N1	1.87	1.36
23:B0:3865:A:P	23:B0:2388:G:H21	1.48	1.36
1:AA:923:A:H1'	1:AA:1398:A:C4	1.59	1.36
1:AA:905:U:O3'	1:AA:906:G:P	0.96	1.36
1:AA:131:C:C1'	1:AA:262:A:N3	1.87	1.35
1:AA:116:A:H61	1:AA:313:A:C1'	1.40	1.35
23:B0:1072:U:H3	31:BG:10:LEU:CA	1.38	1.35
1:AA:707:C:OP1	13:AK:85:ARG:NH1	1.56	1.35
1:AA:191:G:C6	1:AA:192:U:N3	1.94	1.34
1:AA:216:C:H4'	1:AA:466:A:N6	1.03	1.34
2:AW:76:A:C4	23:B0:2562:G:N2	1.94	1.34
1:AA:323:U:H5''	22:AT:22:ARG:CB	1.58	1.34
2:AV:1:G:N2	2:AV:2:C:H41	1.22	1.34
1:AA:835:U:H5''	20:AR:64:ARG:NH2	1.03	1.34
1:AA:131:C:C2'	1:AA:262:A:N3	1.89	1.34

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:397:A:N6	1:AA:547:A:N3	1.75	1.34
1:AA:1474:G:O2'	23:B0:1705:U:H4'	1.27	1.33
23:B0:3128:G:C4'	23:B0:3174:C:H4'	1.56	1.33
23:B0:2075:U:O3'	23:B0:3093:C:H5'	1.18	1.33
1:AA:265:G:C5'	19:AQ:65:ILE:CA	2.04	1.33
1:AA:1190:G:OP1	5:AC:4:LYS:HA	1.15	1.33
1:AA:131:C:O2'	1:AA:262:A:N3	1.57	1.33
23:B0:1098:G:H22	23:B0:1113:C:N4	1.25	1.32
1:AA:27:G:C6	1:AA:557:G:C6	2.15	1.32
1:AA:103:C:O2'	1:AA:171:A:N1	1.60	1.32
1:AA:265:G:H4'	19:AQ:65:ILE:CA	1.58	1.32
1:AA:1298:C:H2'	9:AG:114:ARG:NH1	1.44	1.32
1:AA:994:A:C6	16:AN:5:ALA:HA	1.62	1.32
1:AA:1060:C:H4'	12:AJ:52:GLY:CA	1.59	1.32
2:AV:76:A:C5'	23:B0:2564:U:N1	1.76	1.32
1:AA:923:A:C1'	1:AA:1398:A:C4	2.09	1.31
2:AV:1:G:N2	2:AV:2:C:N4	1.77	1.31
23:B0:3128:G:O2'	23:B0:3174:C:C5'	1.75	1.31
1:AA:323:U:P	22:AT:23:ARG:HA	1.69	1.31
23:B0:1856:U:C5	23:B0:3865:A:C6	2.17	1.31
1:AA:619:U:C4	6:AD:135:LEU:HD11	1.63	1.31
1:AA:836:G:OP1	20:AR:61:LYS:CD	1.76	1.31
1:AA:191:G:C5	1:AA:192:U:C6	2.17	1.31
1:AA:253:U:C1'	1:AA:275:G:O2'	1.77	1.31
1:AA:619:U:N3	6:AD:135:LEU:CG	1.94	1.31
1:AA:1498:U:H4'	1:AA:1519:A:C2	1.63	1.31
1:AA:322:C:O3'	22:AT:23:ARG:HB2	1.20	1.31
12:AJ:61:GLU:HG3	16:AN:58:LYS:NZ	1.43	1.30
1:AA:131:C:O2	1:AA:262:A:C2	1.83	1.30
1:AA:191:G:O6	1:AA:192:U:N3	1.62	1.30
1:AA:828:A:N3	4:AB:26:PRO:HG2	1.44	1.30
1:AA:249:U:H2'	1:AA:250:A:P	1.69	1.30
23:B0:3866:A:O2'	55:B5:194:ALA:CA	1.79	1.30
2:AW:75:C:N4	23:B0:2532:G:O6	1.64	1.30
1:AA:779:C:H5'	13:AK:120:ARG:O	1.22	1.30
1:AA:836:G:OP1	20:AR:61:LYS:HD2	1.21	1.30
1:AA:1458:G:O3'	22:AT:24:LEU:CD1	1.80	1.30
1:AA:1504:G:OP1	1:AA:1507:A:H4'	1.13	1.30
19:AQ:101:ARG:HD3	23:B0:731:A:N1	1.46	1.30
1:AA:323:U:C4'	22:AT:19:SER:HA	1.61	1.30
1:AA:1298:C:H2'	9:AG:114:ARG:CZ	1.61	1.29

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:38:G:C5'	1:AA:547:A:N6	1.93	1.29
1:AA:522:C:OP1	14:AL:120:TYR:CE2	1.84	1.29
19:AQ:105:ALA:N	23:B0:727:U:C1'	1.80	1.29
1:AA:293:G:C5'	1:AA:609:A:N1	1.94	1.29
1:AA:914:A:C2'	1:AA:915:A:O4'	1.77	1.29
19:AQ:101:ARG:NH1	23:B0:731:A:C2	2.00	1.29
1:AA:323:U:O4'	22:AT:19:SER:HA	1.12	1.29
1:AA:619:U:C5	6:AD:135:LEU:HD11	1.64	1.29
1:AA:130:A:OP1	19:AQ:63:ARG:HB2	1.25	1.29
1:AA:236:G:OP1	19:AQ:40:LYS:NZ	1.63	1.29
1:AA:323:U:OP1	22:AT:23:ARG:CA	1.81	1.29
23:B0:891:A:C2	23:B0:892:A:C5	2.21	1.29
1:AA:1416:G:C2'	1:AA:1417:G:H5'	1.59	1.29
1:AA:261:U:C6	22:AT:79:ARG:NH1	2.01	1.29
1:AA:403:C:O2'	1:AA:404:U:H5'	1.20	1.28
1:AA:933:G:OP2	9:AG:3:ARG:HD2	1.14	1.28
1:AA:499:A:H1'	1:AA:500:G:O4'	1.30	1.28
1:AA:332:G:OP1	22:AT:10:LEU:HG	1.19	1.28
1:AA:1398:A:C5'	1:AA:1399:C:P	2.19	1.28
1:AA:323:U:OP1	22:AT:23:ARG:HA	1.28	1.28
1:AA:293:G:C4'	1:AA:609:A:C2	2.13	1.28
1:AA:322:C:O3'	22:AT:23:ARG:CB	1.81	1.28
1:AA:1499:A:C1'	1:AA:1520:G:H5'	1.62	1.28
2:AW:71:G:H5''	23:B0:1925:C:O2	1.23	1.28
1:AA:1394:A:C4	1:AA:1501:C:H4'	1.66	1.27
1:AA:191:G:C2	1:AA:192:U:H1'	1.68	1.27
1:AA:619:U:O2	6:AD:133:VAL:HG13	1.26	1.27
1:AA:22:G:N2	1:AA:913:A:H2'	1.49	1.27
1:AA:994:A:C5	16:AN:5:ALA:HA	1.68	1.27
1:AA:1459:C:OP1	22:AT:28:ALA:C	1.73	1.27
1:AA:836:G:P	20:AR:61:LYS:HD2	1.72	1.27
1:AA:131:C:P	1:AA:263:A:H4'	1.74	1.27
1:AA:923:A:C2	1:AA:1395:C:O2	1.87	1.27
1:AA:1495:U:O2'	23:B0:1902:A:C2	1.87	1.26
19:AQ:93:GLN:C	23:B0:726:G:O4'	1.65	1.26
1:AA:255:G:C5'	19:AQ:17:LYS:HB2	1.64	1.26
1:AA:1393:U:C2	1:AA:1395:C:C4	2.23	1.26
1:AA:9:G:OP1	7:AE:122:GLU:HB2	1.10	1.26
1:AA:265:G:H5'	19:AQ:64:PRO:O	1.09	1.26
1:AA:108:G:N2	22:AT:15:ARG:HH21	1.32	1.26
1:AA:376:G:OP2	18:AP:67:THR:HG21	1.36	1.26

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:265:G:H4'	19:AQ:65:ILE:N	1.51	1.26
1:AA:128:G:H1'	19:AQ:61:GLU:OE1	1.21	1.26
1:AA:265:G:C4'	19:AQ:65:ILE:C	2.02	1.26
1:AA:128:G:OP1	19:AQ:2:PRO:N	1.69	1.26
1:AA:232:G:N2	1:AA:263:A:C2	2.03	1.26
1:AA:6:G:N3	7:AE:119:LEU:HD11	1.50	1.25
1:AA:397:A:N6	1:AA:547:A:H1'	1.50	1.25
1:AA:1484:C:O3'	23:B0:1943:A:O2'	1.52	1.25
1:AA:190:A:C6	22:AT:104:LEU:O	1.88	1.25
1:AA:333:G:H1'	22:AT:16:HIS:NE2	1.51	1.25
23:B0:1098:G:N2	23:B0:1113:C:H42	1.33	1.25
1:AA:762:C:C4'	23:B0:729:A:N1	2.00	1.25
1:AA:1342:C:O3'	11:AI:125:TYR:CZ	1.88	1.25
1:AA:161:A:H2	1:AA:348:G:O2'	0.90	1.25
2:AV:75:C:OP2	23:B0:2581:A:C5'	1.83	1.25
2:AW:74:C:C4	23:B0:2534:U:C4	1.93	1.25
1:AA:707:C:C5'	13:AK:85:ARG:HH12	1.48	1.25
1:AA:994:A:N1	16:AN:5:ALA:N	1.82	1.25
1:AA:46:G:O2'	1:AA:365:U:H1'	1.20	1.25
1:AA:323:U:C4'	22:AT:22:ARG:HB2	1.64	1.24
1:AA:994:A:C2	16:AN:5:ALA:HA	1.72	1.24
1:AA:905:U:C3'	1:AA:906:G:P	2.24	1.24
2:AV:75:C:OP2	23:B0:2581:A:H5'	1.36	1.24
1:AA:619:U:O4	6:AD:135:LEU:CD2	1.85	1.24
1:AA:779:C:C4'	13:AK:120:ARG:CG	2.06	1.24
1:AA:265:G:O3'	19:AQ:65:ILE:O	1.55	1.24
2:AW:71:G:H3'	23:B0:1925:C:O2'	1.28	1.24
1:AA:262:A:C5'	22:AT:74:LYS:HB2	1.66	1.24
1:AA:994:A:C2	16:AN:4:LYS:C	2.10	1.24
1:AA:675:A:H1'	13:AK:116:HIS:CG	1.73	1.24
1:AA:994:A:C6	16:AN:5:ALA:CA	2.21	1.23
1:AA:130:A:O4'	1:AA:264:U:H5'	1.32	1.23
1:AA:236:G:P	19:AQ:40:LYS:NZ	2.11	1.23
1:AA:265:G:C5'	19:AQ:64:PRO:O	1.86	1.23
1:AA:1457:A:C8	1:AA:1459:C:C2	2.27	1.23
1:AA:923:A:O4'	1:AA:1398:A:C2	1.89	1.23
1:AA:131:C:O2'	1:AA:262:A:N9	1.71	1.23
1:AA:22:G:O2'	1:AA:913:A:C6	1.86	1.23
2:AW:75:C:N4	23:B0:2532:G:C6	2.03	1.23
23:B0:1856:U:H3'	23:B0:3865:A:C8	1.73	1.23
23:B0:1912:G:H4'	23:B0:1913:G:C8	1.72	1.23

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:237:C:H5''	19:AQ:25:ARG:NH2	1.50	1.22
1:AA:1298:C:C2'	9:AG:114:ARG:NH1	2.01	1.22
1:AA:1234:C:C5'	1:AA:1365:G:OP1	1.88	1.22
1:AA:323:U:O4'	22:AT:19:SER:CA	1.87	1.22
1:AA:1256:A:H5'	1:AA:1258:G:C1'	1.70	1.22
1:AA:255:G:H5''	19:AQ:17:LYS:CB	1.69	1.22
1:AA:922:G:C2	1:AA:1396:A:C4	2.28	1.22
1:AA:323:U:H5'	22:AT:19:SER:O	1.09	1.22
1:AA:1458:G:C8	1:AA:1459:C:C2'	2.22	1.21
23:B0:3110:G:OP1	23:B0:3148:G:C2'	1.88	1.21
1:AA:19:C:C1'	1:AA:916:G:H22	1.49	1.21
1:AA:1044:A:H3'	1:AA:1045:C:C1'	1.54	1.21
1:AA:247:G:N2	1:AA:282:A:N3	1.88	1.21
1:AA:191:G:N3	1:AA:192:U:H1'	1.56	1.21
1:AA:619:U:O4	6:AD:135:LEU:HD21	1.06	1.21
1:AA:255:G:O4'	19:AQ:16:GLN:HB2	1.38	1.21
2:AW:76:A:O2'	23:B0:2485:U:H2'	1.07	1.21
23:B0:1856:U:C4	23:B0:3865:A:C6	2.29	1.21
1:AA:249:U:C2'	1:AA:250:A:P	2.29	1.21
6:AD:88:VAL:HG22	7:AE:96:PRO:C	1.59	1.21
15:AM:93:ARG:HD3	23:B0:900:U:O3'	1.35	1.21
1:AA:264:U:C1'	19:AQ:64:PRO:HD2	1.68	1.21
23:B0:3149:G:O3'	23:B0:3150:C:P	1.98	1.21
6:AD:88:VAL:HG22	7:AE:97:GLY:N	1.53	1.20
2:AW:74:C:N3	23:B0:2534:U:C6	1.84	1.20
1:AA:815:A:H1'	1:AA:1527:C:O2'	1.36	1.20
1:AA:476:U:C6	1:AA:477:G:H5'	1.75	1.20
1:AA:189:A:C6	22:AT:104:LEU:C	2.03	1.20
1:AA:202:G:C4'	1:AA:469:C:OP1	1.88	1.20
1:AA:89:G:O3'	1:AA:90:C:P	1.98	1.20
1:AA:38:G:O4'	1:AA:547:A:C5	1.94	1.20
2:AV:76:A:H2'	23:B0:2046:C:O2	1.40	1.20
1:AA:1054:C:N4	2:AW:34:G:O2'	1.73	1.20
1:AA:1261:A:O4'	1:AA:1283:G:H4'	1.41	1.20
1:AA:476:U:C2	1:AA:477:G:H5'	1.73	1.20
19:AQ:104:LYS:CB	23:B0:727:U:C1'	2.10	1.20
1:AA:202:G:H4'	1:AA:469:C:OP1	1.02	1.20
4:AB:77:ALA:HB2	4:AB:211:ILE:HD13	1.22	1.20
5:AC:59:ARG:O	12:AJ:92:THR:O	1.59	1.20
1:AA:1501:C:OP1	1:AA:1508:G:H4'	1.42	1.19
1:AA:456:A:C6	1:AA:477:G:H1'	1.76	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:436:C:N3	1:AA:437:U:C5	2.10	1.19
23:B0:3867:G:C2	55:B5:44:GLY:CA	2.25	1.19
1:AA:1305:G:O2'	1:AA:1306:A:H8	1.23	1.19
1:AA:262:A:OP2	22:AT:76:ALA:HB2	1.39	1.19
1:AA:816:A:P	1:AA:1527:C:H5'	1.82	1.19
1:AA:397:A:H62	1:AA:547:A:C1'	1.55	1.19
1:AA:521:G:H5'	14:AL:72:GLY:O	1.42	1.19
1:AA:538:G:H5''	14:AL:114:LYS:HB3	1.21	1.19
23:B0:3110:G:OP1	23:B0:3148:G:O2'	1.58	1.19
1:AA:675:A:HO2'	13:AK:116:HIS:CE1	1.58	1.19
1:AA:264:U:O2'	19:AQ:64:PRO:O	1.58	1.19
23:B0:891:A:C2	23:B0:892:A:N6	2.04	1.19
1:AA:1422:G:H5''	33:BI:60:PRO:CA	1.71	1.19
1:AA:119:A:N7	1:AA:287:U:N3	1.89	1.19
1:AA:1155:G:O3'	1:AA:1156:G:P	2.01	1.18
24:B9:73:C:O3'	24:B9:74:A:P	2.01	1.18
1:AA:265:G:C4'	19:AQ:65:ILE:CA	2.21	1.18
1:AA:619:U:C4	6:AD:135:LEU:CG	2.27	1.18
1:AA:6:G:H8	7:AE:92:LYS:NZ	1.41	1.18
2:AW:33:U:C2	2:AW:35:A:H5'	1.77	1.18
1:AA:1278:U:H5''	1:AA:1279:A:P	1.82	1.18
1:AA:1458:G:O3'	22:AT:24:LEU:HD11	1.01	1.18
23:B0:3128:G:C4'	23:B0:3174:C:C4'	2.16	1.18
1:AA:923:A:C1'	1:AA:1398:A:C2	2.27	1.18
1:AA:994:A:C4	16:AN:5:ALA:HA	1.77	1.18
23:B0:3875:A:H5'	55:B5:42:LYS:CA	1.72	1.18
1:AA:865:A:N3	1:AA:918:A:H4'	1.57	1.18
1:AA:994:A:N1	16:AN:5:ALA:CA	2.07	1.18
6:AD:57:ARG:NH2	7:AE:107:ARG:HD3	1.45	1.18
1:AA:292:G:C2'	1:AA:608:A:N6	2.07	1.17
23:B0:3183:A:O3'	23:B0:3184:C:P	2.02	1.17
1:AA:923:A:H2	1:AA:1395:C:O2	1.23	1.17
1:AA:619:U:C4	6:AD:135:LEU:CD1	2.26	1.17
1:AA:1015:A:H1'	1:AA:1219:U:C4'	1.74	1.17
1:AA:1394:A:N3	1:AA:1501:C:H4'	1.60	1.17
1:AA:994:A:O2'	16:AN:11:LYS:HE3	1.43	1.17
19:AQ:96:GLN:NE2	23:B0:725:C:O2	1.75	1.17
1:AA:375:U:O3'	1:AA:376:G:P	2.01	1.17
1:AA:300:A:O2'	1:AA:564:C:N3	1.73	1.17
12:AJ:62:HIS:O	16:AN:59:ALA:N	1.77	1.17
1:AA:27:G:C5	1:AA:557:G:N1	2.13	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:191:G:N1	1:AA:192:U:O2	1.78	1.17
1:AA:191:G:N3	1:AA:192:U:C1'	2.08	1.16
1:AA:994:A:C2	16:AN:5:ALA:CA	2.26	1.16
1:AA:130:A:OP1	19:AQ:63:ARG:CB	1.94	1.16
1:AA:43:C:OP1	18:AP:12:LYS:HD2	1.46	1.16
1:AA:6:G:C5	7:AE:119:LEU:HD12	1.70	1.16
1:AA:108:G:H22	22:AT:15:ARG:NH2	1.42	1.16
2:AV:75:C:P	23:B0:2581:A:H5''	1.84	1.16
2:AV:74:C:O3'	23:B0:2581:A:P	2.03	1.16
1:AA:38:G:C4'	1:AA:547:A:N6	2.07	1.16
1:AA:456:A:N6	1:AA:477:G:C4	2.14	1.16
1:AA:755:G:H1'	10:AH:1:MET:CE	1.74	1.16
1:AA:236:G:OP1	19:AQ:40:LYS:CE	1.94	1.16
1:AA:1473:A:H4'	23:B0:1719:G:O4'	1.44	1.16
1:AA:815:A:N9	1:AA:1527:C:H1'	1.61	1.16
1:AA:256:U:C5'	19:AQ:17:LYS:NZ	1.74	1.16
1:AA:1261:A:C4'	1:AA:1283:G:H4'	1.75	1.16
1:AA:1473:A:H5'	23:B0:1719:G:H4'	1.19	1.16
2:AV:76:A:H5'	23:B0:2564:U:C1'	1.76	1.16
1:AA:865:A:H1'	1:AA:918:A:O2'	1.43	1.16
6:AD:57:ARG:HH22	7:AE:107:ARG:CD	1.50	1.16
19:AQ:94:ASN:HA	23:B0:726:G:C1'	1.76	1.16
1:AA:914:A:H2'	1:AA:915:A:O4'	0.99	1.15
23:B0:1098:G:N2	23:B0:1113:C:N4	1.89	1.15
2:AW:74:C:C5	23:B0:2533:U:N3	2.05	1.15
1:AA:323:U:C5'	22:AT:19:SER:O	1.93	1.15
1:AA:9:G:H8	7:AE:126:ARG:NH1	1.44	1.15
6:AD:57:ARG:HH21	7:AE:107:ARG:NE	1.43	1.15
1:AA:261:U:C6	22:AT:79:ARG:CZ	2.24	1.15
1:AA:456:A:N1	1:AA:477:G:C1'	2.10	1.15
1:AA:1014:A:C2	21:AS:34:TRP:CD1	2.34	1.15
6:AD:88:VAL:CA	7:AE:97:GLY:CA	2.15	1.15
19:AQ:93:GLN:O	23:B0:726:G:O4'	1.64	1.15
1:AA:1498:U:C4'	1:AA:1519:A:H2	1.59	1.15
2:AV:76:A:C5'	23:B0:2564:U:C1'	2.25	1.15
1:AA:922:G:N2	1:AA:1396:A:C4	2.14	1.15
1:AA:1416:G:O3'	1:AA:1417:G:H5'	1.41	1.14
1:AA:265:G:O3'	19:AQ:66:SER:HA	1.44	1.14
19:AQ:94:ASN:HA	23:B0:726:G:H1'	1.25	1.14
1:AA:1194:U:H4'	7:AE:22:GLY:HA2	1.15	1.14
1:AA:1081:G:OP1	7:AE:18:ARG:HB2	1.47	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1112:C:N3	5:AC:178:LEU:N	1.95	1.14
3:AU:11:C:O3'	3:AU:12:A:P	2.05	1.14
1:AA:236:G:P	19:AQ:40:LYS:HZ3	1.68	1.14
1:AA:1434:A:OP2	1:AA:1435:G:C8	2.00	1.14
1:AA:248:C:O2'	1:AA:283:C:H4'	1.47	1.14
1:AA:779:C:C1'	13:AK:120:ARG:HD2	1.77	1.14
1:AA:1394:A:C2	1:AA:1501:C:C4'	2.30	1.13
1:AA:994:A:C2	16:AN:5:ALA:N	2.16	1.13
1:AA:943:U:C1'	11:AI:124:GLN:HE22	1.60	1.13
2:AW:76:A:H4'	23:B0:2486:C:H5'	1.28	1.13
1:AA:118:U:O3'	1:AA:119:A:P	2.06	1.13
1:AA:421:U:C6	5:AC:127:ARG:NH2	2.11	1.13
1:AA:37:U:C2'	1:AA:547:A:N1	2.11	1.13
23:B0:3866:A:H61	55:B5:44:GLY:CA	1.60	1.13
1:AA:1434:A:OP1	1:AA:1435:G:P	2.07	1.13
1:AA:1458:G:H8	1:AA:1459:C:C2'	1.57	1.13
1:AA:264:U:H1'	19:AQ:64:PRO:CD	1.76	1.13
1:AA:1255:G:H1'	1:AA:1259:C:H1'	1.23	1.13
1:AA:1234:C:H5'	1:AA:1365:G:OP1	1.46	1.13
1:AA:403:C:O2'	1:AA:404:U:C5'	1.95	1.13
1:AA:684:A:C1'	13:AK:38:ASN:ND2	2.10	1.13
1:AA:108:G:N2	22:AT:15:ARG:NH2	1.96	1.13
2:AW:76:A:H1'	23:B0:2486:C:C1'	1.78	1.13
1:AA:27:G:C4	1:AA:557:G:C2	2.37	1.13
23:B0:1861:G:OP2	55:B5:38:GLY:CA	1.97	1.13
1:AA:436:C:C2	1:AA:437:U:C6	2.36	1.13
7:AE:79:GLU:OE2	10:AH:105:ARG:HD3	1.48	1.13
1:AA:521:G:H5'	14:AL:72:GLY:C	1.52	1.13
1:AA:1346:A:H2'	9:AG:10:ARG:HH22	1.05	1.13
23:B0:1861:G:OP1	55:B5:37:LYS:CA	1.96	1.13
1:AA:131:C:OP1	1:AA:263:A:H4'	1.47	1.13
1:AA:684:A:O4'	13:AK:38:ASN:ND2	1.81	1.13
1:AA:707:C:H5''	13:AK:85:ARG:NH1	1.62	1.13
1:AA:236:G:C5'	19:AQ:40:LYS:HZ3	1.62	1.13
1:AA:1342:C:H5''	11:AI:125:TYR:CZ	1.83	1.12
1:AA:216:C:H4'	1:AA:466:A:C6	1.83	1.12
2:AW:25:C:C2'	2:AW:26:G:H5'	1.72	1.12
23:B0:1072:U:N3	31:BG:10:LEU:CA	2.12	1.12
1:AA:333:G:O4'	22:AT:16:HIS:CD2	2.01	1.12
1:AA:26:A:C2'	1:AA:27:G:H5'	1.77	1.12
1:AA:436:C:C2	1:AA:437:U:C5	2.36	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AJ:62:HIS:C	16:AN:59:ALA:H	1.52	1.12
1:AA:129:U:OP1	19:AQ:3:LYS:NZ	1.82	1.12
1:AA:1211:U:O3'	1:AA:1212:U:P	2.07	1.12
1:AA:323:U:P	22:AT:23:ARG:CA	2.37	1.12
23:B0:1066:G:N2	23:B0:1115:C:N3	1.96	1.12
1:AA:836:G:OP1	20:AR:61:LYS:CE	1.98	1.12
1:AA:943:U:H1'	11:AI:124:GLN:HE22	1.08	1.12
2:AW:76:A:H1'	23:B0:2486:C:C4'	1.79	1.12
1:AA:1416:G:H3'	1:AA:1417:G:O5'	1.47	1.12
1:AA:1416:G:O3'	1:AA:1417:G:C5'	1.92	1.12
1:AA:131:C:O2'	1:AA:262:A:H1'	1.29	1.12
1:AA:288:A:O3'	1:AA:289:G:P	2.08	1.12
23:B0:3128:G:O2'	23:B0:3174:C:H5'	0.97	1.12
23:B0:891:A:H2	23:B0:892:A:C6	1.46	1.12
1:AA:335:C:O4'	1:AA:1434:A:H4'	1.48	1.12
1:AA:619:U:N3	6:AD:135:LEU:CD1	2.11	1.12
1:AA:187:G:O2'	22:AT:105:SER:N	1.83	1.12
1:AA:130:A:O4'	1:AA:264:U:C5'	1.99	1.11
1:AA:27:G:C5	1:AA:557:G:C2	2.38	1.11
1:AA:684:A:H1'	13:AK:38:ASN:HD22	1.05	1.11
1:AA:292:G:C2'	1:AA:608:A:H62	1.63	1.11
1:AA:19:C:H1'	1:AA:916:G:H22	1.10	1.11
23:B0:3110:G:OP1	23:B0:3148:G:H2'	1.48	1.11
1:AA:1392:G:H4'	1:AA:1531:A:H5'	1.25	1.11
1:AA:827:U:O3'	1:AA:828:A:P	2.07	1.11
2:AW:76:A:C2	23:B0:2532:G:N2	2.18	1.11
1:AA:1499:A:H1'	1:AA:1520:G:C5'	1.78	1.11
1:AA:1394:A:C2	1:AA:1501:C:H5'	1.85	1.11
1:AA:828:A:C2	4:AB:26:PRO:CG	2.33	1.11
9:AG:149:ARG:NH1	13:AK:59:TYR:CE1	2.18	1.11
14:AL:41:ARG:HG2	14:AL:42:THR:H	1.03	1.11
1:AA:1060:C:C4'	12:AJ:52:GLY:CA	2.23	1.11
1:AA:191:G:O6	1:AA:192:U:C4	2.02	1.11
2:AW:76:A:O2'	23:B0:2485:U:C2'	1.97	1.11
23:B0:1067:G:H5'	23:B0:1068:A:H5'	1.26	1.11
1:AA:1484:C:O2'	23:B0:1943:A:H4'	1.51	1.11
23:B0:1098:G:N2	23:B0:1113:C:N3	1.97	1.11
1:AA:1499:A:C1'	1:AA:1520:G:C5'	2.29	1.10
12:AJ:51:ARG:O	16:AN:45:ARG:NE	1.83	1.10
1:AA:130:A:H4'	1:AA:264:U:H5'	1.24	1.10
23:B0:1856:U:C4	23:B0:3865:A:N6	2.19	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:292:G:O2'	1:AA:608:A:N6	1.82	1.10
1:AA:319:G:H5'	1:AA:1468:A:H4'	1.16	1.10
2:AV:12:U:OP1	23:B0:1891:C:O2'	1.68	1.10
1:AA:1483:A:H2'	1:AA:1484:C:C6	1.87	1.10
1:AA:253:U:O2'	19:AQ:15:MET:SD	2.09	1.10
1:AA:186:C:H1'	22:AT:60:GLU:OE1	1.50	1.10
1:AA:1182:G:O2'	1:AA:1183:A:P	2.09	1.10
1:AA:22:G:C1'	1:AA:913:A:C2	2.34	1.10
1:AA:131:C:OP1	1:AA:263:A:C5'	1.99	1.10
11:AI:8:GLY:HA2	11:AI:79:LEU:HD12	1.32	1.10
1:AA:322:C:C3'	22:AT:23:ARG:HB2	1.82	1.10
1:AA:1190:G:OP1	5:AC:4:LYS:CA	2.00	1.09
1:AA:267:C:OP2	19:AQ:67:LYS:CD	1.84	1.09
1:AA:249:U:C3'	1:AA:250:A:P	2.39	1.09
23:B0:940:G:H3'	23:B0:941:U:H5''	1.19	1.09
1:AA:1014:A:H1'	21:AS:34:TRP:HB2	1.30	1.09
1:AA:798:G:OP1	13:AK:122:LYS:NZ	1.84	1.09
1:AA:265:G:C4'	19:AQ:65:ILE:N	2.12	1.09
12:AJ:51:ARG:HB2	12:AJ:59:SER:HB3	1.34	1.09
1:AA:815:A:C1'	1:AA:1527:C:C1'	2.26	1.09
1:AA:263:A:P	22:AT:75:ASN:HB2	1.91	1.09
1:AA:815:A:C1'	1:AA:1527:C:H1'	1.70	1.09
6:AD:57:ARG:HH21	7:AE:107:ARG:CZ	1.66	1.09
1:AA:1504:G:OP1	1:AA:1507:A:C4'	2.00	1.09
1:AA:1194:U:C4'	7:AE:22:GLY:HA2	1.82	1.09
1:AA:130:A:C4'	1:AA:264:U:C5'	2.31	1.09
15:AM:93:ARG:CD	23:B0:900:U:O3'	2.01	1.09
2:AW:74:C:H42	23:B0:2533:U:C2'	1.48	1.09
1:AA:320:C:H5'	1:AA:1434:A:N1	1.66	1.08
1:AA:619:U:C4	6:AD:135:LEU:HD21	1.87	1.08
2:AW:76:A:N3	23:B0:2562:G:N2	2.01	1.08
1:AA:191:G:C4	1:AA:192:U:C1'	2.36	1.08
1:AA:191:G:C5	1:AA:192:U:N1	2.20	1.08
1:AA:406:G:N2	1:AA:437:U:C2	2.22	1.08
1:AA:923:A:O4'	1:AA:1398:A:C6	2.05	1.08
1:AA:264:U:C2'	19:AQ:64:PRO:O	2.00	1.08
23:B0:3875:A:C5'	55:B5:42:LYS:CA	2.32	1.08
1:AA:253:U:H1'	1:AA:275:G:O2'	0.91	1.08
23:B0:3865:A:P	23:B0:2388:G:N2	2.25	1.08
1:AA:797:C:OP1	13:AK:124:LYS:HG3	1.53	1.08
6:AD:150:GLU:HG3	6:AD:153:ARG:HH21	1.19	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1098:G:N2	23:B0:1113:C:C4	2.21	1.08
1:AA:1394:A:N1	1:AA:1501:C:H5'	1.68	1.08
2:AV:25:C:O3'	2:AV:26:G:P	2.12	1.08
1:AA:9:G:C5'	7:AE:126:ARG:HD3	1.82	1.08
1:AA:246:A:H4'	1:AA:247:G:H4'	1.36	1.07
1:AA:69:G:O4'	1:AA:102:G:C2	2.07	1.07
1:AA:778:G:O2'	13:AK:120:ARG:N	1.87	1.07
1:AA:265:G:H5''	19:AQ:65:ILE:CA	1.73	1.07
23:B0:1119:U:O4	23:B0:1120:C:N4	1.86	1.07
1:AA:1394:A:C2	1:AA:1501:C:C5'	2.36	1.07
1:AA:1054:C:N4	2:AW:34:G:HO2'	1.47	1.07
2:AW:75:C:N3	23:B0:2532:G:N1	2.01	1.07
23:B0:225:G:H3'	23:B0:226:C:H5'	1.30	1.07
23:B0:3109:U:H5'	23:B0:3150:C:H5'	1.34	1.07
5:AC:58:GLU:HB3	12:AJ:92:THR:HG21	1.30	1.07
1:AA:128:G:H4'	19:AQ:3:LYS:HA	1.36	1.07
1:AA:212:G:O3'	1:AA:213:G:P	2.12	1.07
1:AA:675:A:O2'	13:AK:116:HIS:CE1	2.05	1.07
1:AA:538:G:H5'	14:AL:114:LYS:HB2	1.26	1.07
1:AA:13:U:O4	1:AA:915:A:N7	1.87	1.07
1:AA:1484:C:H4'	23:B0:1943:A:H1'	1.29	1.07
1:AA:94:G:C3'	1:AA:96:C:P	2.41	1.07
1:AA:6:G:C4	7:AE:119:LEU:HD13	1.88	1.07
1:AA:877:C:H5''	10:AH:88:LYS:HD3	1.37	1.07
2:AW:75:C:N4	23:B0:2532:G:N1	2.01	1.07
6:AD:36:ARG:H	6:AD:37:PRO:HD3	1.19	1.07
12:AJ:61:GLU:CG	16:AN:58:LYS:HZ2	1.66	1.07
1:AA:1298:C:O2'	9:AG:114:ARG:NH1	1.86	1.07
1:AA:334:C:O2	1:AA:1434:A:O2'	1.70	1.07
1:AA:1044:A:H3'	1:AA:1045:C:H1'	1.34	1.06
6:AD:88:VAL:CB	7:AE:97:GLY:CA	2.33	1.06
2:AW:76:A:C4'	23:B0:2486:C:H5'	1.84	1.06
2:AV:76:A:H3'	23:B0:2046:C:O2'	1.54	1.06
23:B0:3128:G:H4'	23:B0:3174:C:O4'	1.53	1.06
1:AA:933:G:OP2	9:AG:3:ARG:CD	2.01	1.06
1:AA:9:G:H5''	7:AE:126:ARG:HD3	1.33	1.06
1:AA:265:G:H4'	19:AQ:66:SER:N	1.68	1.06
1:AA:26:A:H2'	1:AA:27:G:H5'	1.12	1.06
1:AA:1434:A:H3'	1:AA:1435:G:C4'	1.85	1.06
1:AA:265:G:H5'	19:AQ:64:PRO:C	1.73	1.06
1:AA:820:U:O2	1:AA:873:A:C8	2.08	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1476:G:OP1	23:B0:1707:A:OP1	1.73	1.06
23:B0:1912:G:C4'	23:B0:1913:G:H8	1.68	1.06
1:AA:1394:A:N1	1:AA:1501:C:C5'	2.18	1.06
1:AA:264:U:O2'	19:AQ:63:ARG:C	1.93	1.06
1:AA:1394:A:C2	1:AA:1501:C:H4'	1.90	1.06
1:AA:1498:U:C4'	1:AA:1519:A:C2	2.35	1.06
1:AA:15:G:H1'	7:AE:19:MET:HE2	1.12	1.06
1:AA:1014:A:C5'	21:AS:14:HIS:CG	2.38	1.06
23:B0:3098:U:O3'	23:B0:3099:U:P	2.12	1.06
1:AA:1393:U:O2	1:AA:1395:C:C4	2.05	1.05
1:AA:1474:G:H4'	23:B0:1717:A:H62	1.19	1.05
1:AA:262:A:C5'	22:AT:74:LYS:CB	2.28	1.05
1:AA:1489:G:H2'	1:AA:1490:C:H5''	1.37	1.05
1:AA:1034:G:O3'	1:AA:1035:A:P	2.13	1.05
1:AA:367:U:O3'	1:AA:368:U:P	2.14	1.05
1:AA:9:G:C8	7:AE:126:ARG:NH1	2.24	1.05
1:AA:104:G:H5'	1:AA:172:A:N1	1.72	1.05
1:AA:1499:A:H1'	1:AA:1520:G:H5'	1.10	1.05
1:AA:38:G:H4'	1:AA:498:U:O2	1.53	1.05
15:AM:7:VAL:CG1	28:BD:111:ILE:CA	2.33	1.05
1:AA:556:C:O2'	1:AA:557:G:H5'	1.54	1.05
1:AA:21:G:O2'	1:AA:914:A:N6	1.89	1.05
1:AA:779:C:H4'	13:AK:120:ARG:CD	1.84	1.05
1:AA:1182:G:O2'	1:AA:1183:A:OP2	1.74	1.05
1:AA:619:U:C2	6:AD:135:LEU:CD1	2.39	1.05
23:B0:3107:G:O3'	23:B0:3108:G:P	2.14	1.05
1:AA:1342:C:C4'	11:AI:125:TYR:CZ	2.40	1.05
1:AA:1474:G:O4'	23:B0:1718:A:N1	1.58	1.05
1:AA:923:A:O4'	1:AA:1398:A:C4	2.04	1.05
1:AA:1108:G:H5''	5:AC:176:HIS:CE1	1.92	1.05
1:AA:779:C:C5'	13:AK:120:ARG:O	2.05	1.05
2:AW:25:C:C2'	2:AW:26:G:C5'	2.34	1.05
1:AA:9:G:OP1	7:AE:122:GLU:CB	2.04	1.05
6:AD:205:GLU:CG	7:AE:107:ARG:HH21	1.67	1.05
15:AM:84:ILE:HG21	21:AS:65:ASN:HD22	1.17	1.05
1:AA:129:U:H5''	19:AQ:3:LYS:HZ1	1.18	1.05
1:AA:866:C:H5'	1:AA:919:A:H5'	1.37	1.04
1:AA:1459:C:OP1	22:AT:29:LYS:N	1.90	1.04
1:AA:322:C:O3'	22:AT:23:ARG:CA	2.03	1.04
2:AW:76:A:C1'	23:B0:2486:C:C4'	2.32	1.04
1:AA:234:C:O2'	19:AQ:70:ARG:HG2	1.57	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:3877:A:H3'	23:B0:1861:G:C8	1.91	1.04
1:AA:499:A:N3	1:AA:500:G:H1'	1.70	1.04
1:AA:994:A:C2	16:AN:4:LYS:O	2.10	1.04
1:AA:1015:A:H1'	1:AA:1219:U:H5'	1.34	1.04
7:AE:79:GLU:CD	10:AH:105:ARG:HD3	1.77	1.04
1:AA:132:C:H5'	1:AA:262:A:C1'	1.88	1.04
23:B0:3866:A:N6	55:B5:44:GLY:CA	2.18	1.04
1:AA:923:A:C2'	1:AA:1398:A:H2'	1.87	1.04
1:AA:1109:C:OP2	5:AC:176:HIS:CD2	2.10	1.04
1:AA:1393:U:N3	1:AA:1395:C:N4	2.04	1.04
1:AA:923:A:O4'	1:AA:1398:A:C5	2.10	1.04
1:AA:320:C:C4'	1:AA:1434:A:C2	2.38	1.04
23:B0:3107:G:HO3'	23:B0:3108:G:P	1.80	1.04
1:AA:246:A:O3'	1:AA:247:G:C4'	2.05	1.03
1:AA:130:A:C5'	19:AQ:63:ARG:HE	1.70	1.03
1:AA:1044:A:C3'	1:AA:1045:C:C1'	2.34	1.03
1:AA:834:C:OP1	20:AR:53:ARG:NH2	1.90	1.03
23:B0:3866:A:C6	55:B5:45:ASP:CA	2.41	1.03
1:AA:94:G:HO3'	1:AA:96:C:P	1.13	1.03
1:AA:265:G:O3'	19:AQ:65:ILE:C	1.96	1.03
1:AA:865:A:C2	1:AA:918:A:H4'	1.93	1.03
1:AA:319:G:H21	1:AA:1434:A:H1'	1.14	1.03
1:AA:22:G:H21	1:AA:913:A:H2'	1.08	1.03
1:AA:476:U:N1	1:AA:477:G:C5'	2.22	1.03
23:B0:1888:C:H4'	23:B0:1911:A:H2	1.23	1.03
4:AB:178:ARG:HH11	4:AB:178:ARG:HG3	1.21	1.03
1:AA:299:G:N2	1:AA:566:G:N7	2.06	1.03
23:B0:1119:U:C4	23:B0:1120:C:N4	2.26	1.03
1:AA:1015:A:H1'	1:AA:1219:U:H4'	1.38	1.03
6:AD:57:ARG:HH22	7:AE:107:ARG:HD3	0.88	1.03
14:AL:75:HIS:HD2	14:AL:77:LEU:H	1.05	1.03
1:AA:243:A:H4'	1:AA:244:U:H5'	1.37	1.03
1:AA:132:C:H5'	1:AA:262:A:O4'	1.58	1.03
6:AD:88:VAL:CB	7:AE:97:GLY:HA3	1.89	1.03
1:AA:994:A:N1	16:AN:5:ALA:HA	1.65	1.03
19:AQ:104:LYS:HG2	23:B0:726:G:C6	1.93	1.03
1:AA:190:A:N6	22:AT:104:LEU:C	2.12	1.03
1:AA:131:C:C1'	1:AA:262:A:C2	2.32	1.03
1:AA:1434:A:H3'	1:AA:1435:G:O4'	1.59	1.02
1:AA:707:C:H5''	13:AK:85:ARG:HH12	0.91	1.02
1:AA:473:C:OP1	18:AP:75:ARG:HD3	1.58	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AW:71:G:C3'	23:B0:1925:C:O2'	2.07	1.02
1:AA:1331:G:O3'	1:AA:1332:A:P	2.17	1.02
1:AA:332:G:OP2	22:AT:10:LEU:HB2	0.86	1.02
1:AA:923:A:H2	1:AA:1395:C:C2	1.75	1.02
1:AA:922:G:N3	1:AA:1398:A:C2	2.27	1.02
1:AA:187:G:C2'	22:AT:105:SER:H	1.73	1.02
1:AA:27:G:O6	1:AA:557:G:C6	2.10	1.02
1:AA:27:G:C6	1:AA:557:G:N1	2.27	1.02
1:AA:835:U:H5''	20:AR:64:ARG:CZ	1.89	1.02
23:B0:1096:A:O2'	23:B0:1115:C:H1'	1.56	1.02
23:B0:1572:C:H2'	23:B0:1573:G:H5''	1.39	1.02
1:AA:254:G:C1'	19:AQ:15:MET:HB3	1.90	1.02
1:AA:262:A:H5'	22:AT:74:LYS:HB3	1.41	1.02
1:AA:131:C:OP1	1:AA:263:A:C4'	2.06	1.02
1:AA:38:G:C1'	1:AA:547:A:C5	2.43	1.02
14:AL:60:LEU:HD11	14:AL:85:ILE:HD12	1.39	1.02
1:AA:265:G:C4'	19:AQ:64:PRO:C	2.28	1.02
1:AA:115:G:O3'	1:AA:116:A:P	2.17	1.02
1:AA:733:A:O3'	1:AA:734:G:P	2.18	1.02
1:AA:865:A:C1'	1:AA:918:A:O2'	2.07	1.02
1:AA:323:U:OP1	22:AT:23:ARG:N	1.93	1.02
1:AA:22:G:O2'	1:AA:913:A:N6	1.92	1.02
1:AA:922:G:C6	1:AA:1396:A:C6	2.48	1.02
1:AA:190:A:N6	22:AT:104:LEU:N	1.87	1.01
1:AA:1484:C:C4'	23:B0:1943:A:H1'	1.90	1.01
1:AA:254:G:H1'	19:AQ:15:MET:HB3	1.37	1.01
1:AA:254:G:H4'	19:AQ:18:THR:CB	1.89	1.01
1:AA:38:G:C4'	1:AA:547:A:C6	2.40	1.01
1:AA:173:U:H5'	1:AA:197:A:O4'	1.60	1.01
19:AQ:96:GLN:OE1	23:B0:725:C:H2'	1.59	1.01
1:AA:1458:G:HO3'	22:AT:24:LEU:CD1	1.62	1.01
22:AT:39:LYS:HD2	22:AT:55:ILE:HD13	1.41	1.01
1:AA:1484:C:C5'	23:B0:1943:A:H1'	1.89	1.01
1:AA:762:C:H4'	23:B0:729:A:C6	1.94	1.01
1:AA:779:C:C4'	13:AK:120:ARG:CD	2.38	1.01
19:AQ:94:ASN:N	23:B0:726:G:O4'	1.93	1.01
1:AA:332:G:P	22:AT:10:LEU:CB	2.48	1.01
1:AA:1393:U:O2	1:AA:1395:C:C5	2.13	1.01
1:AA:288:A:O2'	1:AA:289:G:O3'	1.77	1.01
1:AA:864:A:N1	1:AA:917:G:O2'	1.94	1.01
1:AA:905:U:C5	1:AA:906:G:C5	2.48	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AS:28:LYS:HG2	21:AS:29:ARG:H	1.26	1.01
1:AA:1086:U:H3	1:AA:1099:G:H22	1.08	1.01
1:AA:1014:A:H5''	21:AS:14:HIS:CB	1.90	1.01
1:AA:1256:A:C5'	1:AA:1258:G:H1'	1.90	1.01
1:AA:922:G:N3	1:AA:1396:A:C2	2.28	1.01
1:AA:1194:U:C5'	7:AE:22:GLY:CA	2.39	1.01
19:AQ:94:ASN:N	23:B0:726:G:C4'	2.16	1.01
23:B0:3877:A:P	23:B0:1861:G:OP2	2.19	1.01
1:AA:619:U:C6	6:AD:135:LEU:HD11	1.96	1.01
1:AA:865:A:O2'	1:AA:918:A:O2'	1.78	1.01
5:AC:5:ILE:HG23	12:AJ:51:ARG:HH12	1.26	1.01
1:AA:1014:A:H4'	21:AS:14:HIS:CD2	1.96	1.01
1:AA:815:A:N6	1:AA:1508:G:H21	1.56	1.01
1:AA:265:G:O3'	19:AQ:66:SER:CA	2.07	1.01
1:AA:322:C:H4'	22:AT:23:ARG:CG	1.90	1.01
1:AA:619:U:C2	6:AD:135:LEU:HD12	1.95	1.01
23:B0:3128:G:C3'	23:B0:3174:C:H4'	1.90	1.01
1:AA:815:A:H1'	1:AA:1527:C:C2'	1.91	1.00
1:AA:288:A:O3'	1:AA:289:G:O5'	1.74	1.00
1:AA:39:G:C5	1:AA:498:U:O4	2.15	1.00
1:AA:542:G:OP1	6:AD:10:ARG:NH2	1.94	1.00
1:AA:15:G:H1'	7:AE:19:MET:CE	1.90	1.00
1:AA:923:A:O4'	1:AA:1398:A:N1	1.95	1.00
1:AA:1015:A:C1'	1:AA:1219:U:C5'	2.39	1.00
1:AA:1340:A:H1'	2:AV:31:A:O2'	1.61	1.00
23:B0:2668:U:H4'	23:B0:2669:C:H5'	1.40	1.00
1:AA:866:C:H5'	1:AA:919:A:C5'	1.92	1.00
2:AW:75:C:N4	23:B0:2532:G:H1	1.58	1.00
19:AQ:105:ALA:N	23:B0:727:U:O4'	1.92	1.00
1:AA:1484:C:H4'	23:B0:1943:A:O4'	1.60	1.00
1:AA:104:G:H5'	1:AA:172:A:C2	1.97	1.00
23:B0:1252:C:H2'	23:B0:1253:C:H5''	1.43	1.00
24:B9:107:C:H3'	24:B9:108:G:P	2.01	1.00
1:AA:1014:A:N3	1:AA:1219:U:O2'	1.91	1.00
1:AA:922:G:C4	1:AA:1396:A:C2	2.48	1.00
1:AA:46:G:O2'	1:AA:365:U:C1'	2.08	1.00
1:AA:293:G:O5'	1:AA:609:A:N6	1.94	1.00
1:AA:1256:A:H5'	1:AA:1258:G:H1'	1.03	1.00
1:AA:1346:A:H2'	9:AG:10:ARG:NH2	1.74	1.00
1:AA:265:G:H5''	19:AQ:65:ILE:HA	1.02	1.00
6:AD:205:GLU:HB3	7:AE:107:ARG:NH2	1.75	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1497:G:O2'	1:AA:1518:A:N1	1.95	1.00
1:AA:191:G:C2	1:AA:192:U:C1'	2.45	1.00
1:AA:7:G:N2	7:AE:123:LEU:HD11	1.76	1.00
2:AW:75:C:O2	23:B0:2486:C:O2'	1.79	1.00
1:AA:191:G:C4	1:AA:192:U:N1	2.29	0.99
1:AA:205:G:N2	1:AA:207:C:C5	2.30	0.99
1:AA:130:A:C2	1:AA:264:U:C4	2.50	0.99
1:AA:59:A:H3'	1:AA:331:G:H22	1.26	0.99
1:AA:653:A:O4'	10:AH:56:LYS:HE2	1.61	0.99
2:AW:74:C:N4	23:B0:2533:U:C2'	2.23	0.99
2:AV:74:C:O3'	23:B0:2581:A:C5'	2.10	0.99
2:AW:74:C:N3	23:B0:2534:U:C5	1.88	0.99
23:B0:3110:G:OP1	23:B0:3149:G:H5'	1.62	0.99
12:AJ:62:HIS:ND1	16:AN:61:TRP:CZ3	2.30	0.99
15:AM:84:ILE:CG2	21:AS:65:ASN:HD22	1.74	0.99
1:AA:262:A:H5'	22:AT:74:LYS:HB2	1.00	0.99
1:AA:1474:G:O2'	23:B0:1705:U:C4'	2.10	0.99
1:AA:1061:G:C5'	12:AJ:56:HIS:HB3	1.93	0.99
1:AA:1484:C:C3'	23:B0:1943:A:O2'	2.11	0.99
23:B0:3877:A:N3	23:B0:1861:G:N3	2.09	0.99
1:AA:397:A:N6	1:AA:547:A:C4	2.30	0.99
2:AV:76:A:H5''	23:B0:2564:U:N1	1.02	0.99
2:AV:75:C:P	23:B0:2581:A:C5'	2.49	0.99
1:AA:6:G:C5	7:AE:119:LEU:HD11	1.82	0.99
24:B9:107:C:O3'	24:B9:108:G:P	2.21	0.99
2:AW:75:C:C4	23:B0:2532:G:N1	2.30	0.99
1:AA:599:C:H4'	10:AH:130:GLY:C	1.82	0.99
2:AW:76:A:C2'	23:B0:2562:G:H22	1.76	0.99
1:AA:1484:C:C4'	23:B0:1943:A:C1'	2.40	0.99
23:B0:3866:A:N1	55:B5:45:ASP:CA	2.25	0.99
1:AA:1069:C:O4'	1:AA:1191:A:H2	1.44	0.99
1:AA:391:G:H5'	18:AP:28:ARG:NH2	1.78	0.99
1:AA:1393:U:C2	1:AA:1395:C:N4	2.29	0.99
1:AA:1457:A:N9	1:AA:1459:C:C2	2.30	0.98
1:AA:21:G:C2'	1:AA:914:A:N6	2.25	0.98
1:AA:755:G:C1'	10:AH:1:MET:HE3	1.92	0.98
2:AW:25:C:H2'	2:AW:26:G:C5'	1.91	0.98
2:AW:74:C:H42	23:B0:2533:U:H2'	1.25	0.98
1:AA:189:A:OP2	22:AT:105:SER:CB	2.11	0.98
1:AA:255:G:O4'	19:AQ:16:GLN:CB	2.10	0.98
1:AA:318:G:N2	1:AA:1433:A:H2	1.62	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1498:U:H4'	1:AA:1519:A:N1	1.78	0.98
1:AA:161:A:H2	1:AA:348:G:C2'	1.75	0.98
1:AA:186:C:H4'	22:AT:81:LYS:CB	1.94	0.98
1:AA:188:C:O2	22:AT:106:ALA:O	1.79	0.98
1:AA:974:A:OP1	16:AN:31:ARG:HG2	1.62	0.98
1:AA:1261:A:O2'	1:AA:1283:G:H5''	1.62	0.98
1:AA:6:G:C6	7:AE:119:LEU:CD1	2.47	0.98
1:AA:1190:G:H3'	5:AC:3:ASN:HB2	1.46	0.98
1:AA:1292:U:OP2	9:AG:41:ARG:NH2	1.95	0.98
10:AH:113:SER:HB2	10:AH:134:ILE:HD11	1.43	0.98
1:AA:473:C:OP1	18:AP:75:ARG:NH1	1.97	0.98
1:AA:1060:C:H4'	12:AJ:52:GLY:HA3	1.00	0.98
1:AA:115:G:HO3'	1:AA:116:A:P	1.87	0.98
1:AA:191:G:C6	1:AA:192:U:C4	2.50	0.98
1:AA:323:U:OP1	22:AT:22:ARG:C	2.02	0.98
1:AA:397:A:H62	1:AA:547:A:H1'	0.85	0.98
1:AA:547:A:H4'	1:AA:548:G:P	2.04	0.98
2:AV:74:C:N4	23:B0:2231:G:N1	2.12	0.98
24:B9:114:C:H2'	24:B9:115:G:H5''	1.45	0.98
1:AA:1116:C:H2'	1:AA:1117:G:H5''	1.46	0.98
1:AA:677:U:C1'	13:AK:119:CYS:SG	2.52	0.97
23:B0:1199:U:H3'	23:B0:1200:G:H5''	1.44	0.97
1:AA:619:U:C4	6:AD:135:LEU:CD2	2.44	0.97
1:AA:38:G:O2'	1:AA:39:G:C8	2.17	0.97
1:AA:333:G:C1'	22:AT:16:HIS:HD2	1.78	0.97
1:AA:476:U:C2	1:AA:477:G:C5'	2.30	0.97
1:AA:755:G:H1'	10:AH:1:MET:HE3	0.99	0.97
2:AW:33:U:O2	2:AW:35:A:H5'	1.64	0.97
23:B0:1119:U:C4	23:B0:1120:C:C4	2.52	0.97
23:B0:2548:G:H2'	23:B0:2549:G:H5''	1.45	0.97
23:B0:1861:G:H4'	55:B5:198:THR:CA	1.94	0.97
1:AA:128:G:OP1	19:AQ:2:PRO:CD	2.12	0.97
1:AA:203:A:O4'	1:AA:468:A:H4'	1.62	0.97
1:AA:293:G:O5'	1:AA:609:A:N1	1.96	0.97
1:AA:319:G:H5'	1:AA:1468:A:C4'	1.95	0.97
1:AA:684:A:H1'	13:AK:38:ASN:ND2	1.75	0.97
1:AA:1069:C:O2'	1:AA:1192:C:H1'	1.64	0.97
1:AA:191:G:N7	1:AA:192:U:C5	2.33	0.97
1:AA:278:G:N2	1:AA:279:A:H62	1.61	0.97
23:B0:1856:U:C3'	23:B0:3865:A:C8	2.47	0.97
19:AQ:101:ARG:HD3	23:B0:731:A:C6	2.00	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:129:U:H5''	19:AQ:3:LYS:NZ	1.79	0.97
1:AA:1394:A:N3	1:AA:1501:C:C4'	2.27	0.97
1:AA:522:C:H5''	14:AL:120:TYR:OH	1.63	0.97
1:AA:1342:C:C3'	11:AI:125:TYR:CZ	2.48	0.97
1:AA:1194:U:H5'	7:AE:22:GLY:HA3	1.47	0.97
15:AM:94:ARG:NH2	21:AS:81:ARG:HD3	1.80	0.97
23:B0:3118:U:H3	23:B0:3149:G:H5'	1.26	0.97
1:AA:1194:U:C5'	7:AE:22:GLY:HA2	1.95	0.96
1:AA:1459:C:OP1	22:AT:28:ALA:O	1.82	0.96
1:AA:865:A:N3	1:AA:918:A:C4'	2.28	0.96
1:AA:923:A:C2	1:AA:1395:C:C2	2.51	0.96
1:AA:979:C:O2	16:AN:19:ARG:NE	1.97	0.96
1:AA:332:G:OP1	22:AT:10:LEU:CG	2.14	0.96
1:AA:264:U:H1'	19:AQ:64:PRO:HD2	0.98	0.96
1:AA:1392:G:H5'	1:AA:1531:A:H5''	1.44	0.96
1:AA:279:A:OP2	19:AQ:95:TYR:HE2	1.47	0.96
1:AA:837:G:HO3'	1:AA:838:C:H6	1.09	0.96
12:AJ:45:ARG:HH22	16:AN:36:PHE:HD2	1.01	0.96
12:AJ:61:GLU:CG	16:AN:58:LYS:NZ	2.24	0.96
13:AK:54:ARG:HH11	13:AK:54:ARG:HB3	1.26	0.96
1:AA:1392:G:H4'	1:AA:1531:A:C5'	1.95	0.96
1:AA:1434:A:O3'	1:AA:1435:G:H5'	1.64	0.96
1:AA:38:G:H1'	1:AA:547:A:C4	2.01	0.96
2:AV:75:C:N3	23:B0:2230:G:N2	2.13	0.96
1:AA:249:U:O3'	1:AA:250:A:OP1	1.84	0.96
19:AQ:104:LYS:HE3	23:B0:729:A:N7	1.79	0.96
1:AA:1256:A:N3	1:AA:1258:G:N1	2.14	0.96
1:AA:323:U:H5''	22:AT:22:ARG:HB2	0.97	0.96
2:AV:32:C:OP2	11:AI:127:LYS:HG3	1.63	0.96
2:AW:76:A:H2'	23:B0:2562:G:H22	1.27	0.96
23:B0:891:A:H2	23:B0:892:A:C5	1.67	0.96
1:AA:186:C:H4'	22:AT:81:LYS:HB3	1.48	0.96
1:AA:497:A:O2'	1:AA:498:U:P	2.23	0.96
1:AA:779:C:O2'	13:AK:120:ARG:CD	2.13	0.96
23:B0:2075:U:HO3'	23:B0:3093:C:H5'	1.23	0.96
1:AA:335:C:H1'	1:AA:1434:A:O4'	1.65	0.96
1:AA:521:G:C5'	14:AL:72:GLY:C	2.34	0.96
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.65	0.96
1:AA:1278:U:OP1	1:AA:1279:A:OP1	1.84	0.96
1:AA:837:G:O3'	1:AA:838:C:P	2.24	0.96
2:AV:74:C:N4	23:B0:2231:G:H1	1.64	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:3877:A:H8	23:B0:3877:A:O5'	1.47	0.96
1:AA:323:U:H5''	22:AT:22:ARG:CA	1.96	0.95
23:B0:1912:G:H4'	23:B0:1913:G:H8	1.11	0.95
1:AA:1044:A:H2'	1:AA:1045:C:O2'	1.66	0.95
12:AJ:31:GLY:HA2	12:AJ:78:ASN:HD22	1.32	0.95
1:AA:1473:A:C5'	23:B0:1719:G:H4'	1.97	0.95
23:B0:1747:G:H4'	23:B0:1749:G:H1'	1.47	0.95
23:B0:3867:G:H5'	55:B5:193:LYS:CA	1.95	0.95
1:AA:815:A:C1'	1:AA:1527:C:O2'	2.12	0.95
5:AC:14:ILE:HG22	5:AC:15:THR:H	1.32	0.95
1:AA:1060:C:H4'	12:AJ:52:GLY:N	1.81	0.95
12:AJ:63:PHE:HA	16:AN:57:ARG:O	1.66	0.95
23:B0:2075:U:O3'	23:B0:3093:C:C5'	2.12	0.95
1:AA:1489:G:C2'	1:AA:1490:C:H5''	1.96	0.95
1:AA:191:G:C6	1:AA:192:U:N1	2.34	0.95
5:AC:52:LEU:HD23	5:AC:52:LEU:H	1.26	0.95
2:AW:76:A:N3	23:B0:2486:C:C1'	2.29	0.95
23:B0:1066:G:N1	23:B0:1115:C:N4	2.14	0.95
1:AA:1409:C:O2'	1:AA:1410:G:H5'	1.66	0.95
1:AA:191:G:N7	1:AA:192:U:C6	2.34	0.95
1:AA:236:G:P	19:AQ:40:LYS:HZ1	1.83	0.95
1:AA:46:G:HO2'	1:AA:365:U:H1'	1.25	0.95
1:AA:401:C:HO2'	1:AA:621:A:H2	0.98	0.95
15:AM:49:THR:HG22	15:AM:51:ALA:H	1.26	0.95
1:AA:128:G:H5''	19:AQ:2:PRO:C	1.86	0.94
1:AA:675:A:H1'	13:AK:116:HIS:HD2	1.32	0.94
1:AA:825:G:H21	10:AH:11:THR:HG21	1.31	0.94
1:AA:1238:A:O3'	1:AA:1239:A:P	2.25	0.94
1:AA:130:A:O3'	1:AA:263:A:H4'	1.65	0.94
1:AA:1320:C:H41	21:AS:37:ARG:HD3	1.32	0.94
1:AA:279:A:OP2	19:AQ:95:TYR:CE2	2.19	0.94
1:AA:261:U:H6	22:AT:79:ARG:NH1	1.65	0.94
23:B0:3128:G:C5'	23:B0:3174:C:O2'	2.15	0.94
23:B0:367:G:H2'	23:B0:368:A:H5''	1.48	0.94
1:AA:191:G:C5	1:AA:192:U:C5	2.55	0.94
1:AA:288:A:O2'	1:AA:290:C:P	2.25	0.94
12:AJ:62:HIS:CE1	16:AN:61:TRP:CH2	2.55	0.94
1:AA:65:U:O4'	1:AA:200:G:H4'	1.67	0.94
1:AA:254:G:O2'	19:AQ:16:GLN:O	1.86	0.94
1:AA:922:G:N1	1:AA:1396:A:C5	2.36	0.94
4:AB:124:SER:HB2	4:AB:125:PRO:HD2	1.49	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:332:G:P	22:AT:10:LEU:HG	2.06	0.94
15:AM:93:ARG:CG	23:B0:900:U:O3'	2.16	0.94
23:B0:929:A:H3'	23:B0:930:A:H5''	1.47	0.94
8:AF:94:GLN:HE21	20:AR:32:ARG:HD3	1.32	0.94
1:AA:1416:G:H2'	1:AA:1417:G:C4'	1.98	0.94
1:AA:538:G:C5'	14:AL:114:LYS:CB	1.89	0.94
1:AA:905:U:O3'	1:AA:906:G:OP2	1.86	0.94
1:AA:9:G:O5'	7:AE:126:ARG:NH1	2.00	0.94
23:B0:3867:G:H21	55:B5:44:GLY:CA	1.59	0.94
4:AB:195:ASP:HB3	10:AH:74:PRO:CD	1.98	0.94
19:AQ:105:ALA:H	23:B0:727:U:H1'	0.80	0.94
1:AA:236:G:H5''	19:AQ:40:LYS:HZ3	1.32	0.94
23:B0:2607:C:H3'	23:B0:2608:A:H5'	1.49	0.94
1:AA:320:C:O4'	1:AA:1434:A:H2	1.33	0.93
1:AA:675:A:N3	13:AK:116:HIS:CB	2.28	0.93
23:B0:3128:G:H5''	23:B0:3174:C:O2'	1.68	0.93
1:AA:1305:G:N2	1:AA:1331:G:O2'	2.01	0.93
1:AA:130:A:C8	19:AQ:63:ARG:HG3	2.03	0.93
1:AA:815:A:H1'	1:AA:1527:C:C1'	1.91	0.93
1:AA:499:A:C1'	1:AA:500:G:O4'	2.17	0.93
1:AA:828:A:N3	4:AB:26:PRO:CG	2.28	0.93
1:AA:6:G:N1	7:AE:119:LEU:HD11	1.82	0.93
2:AW:75:C:O2'	23:B0:2486:C:H4'	1.67	0.93
1:AA:923:A:O2'	1:AA:1398:A:H2'	1.68	0.93
1:AA:22:G:H1'	1:AA:913:A:N1	1.83	0.93
1:AA:293:G:O5'	1:AA:609:A:C6	2.21	0.93
1:AA:397:A:C5	1:AA:547:A:O2'	2.18	0.93
1:AA:664:G:H22	1:AA:741:G:H1	1.16	0.93
1:AA:437:U:O2'	6:AD:123:HIS:HD2	1.52	0.93
13:AK:54:ARG:O	13:AK:57:THR:HG22	1.66	0.93
1:AA:522:C:OP1	14:AL:120:TYR:HE2	1.40	0.93
2:AV:75:C:N4	23:B0:2231:G:C2	2.37	0.93
1:AA:104:G:C4'	1:AA:172:A:C2	2.51	0.93
1:AA:33:A:OP2	1:AA:398:C:H4'	1.68	0.93
1:AA:202:G:H1'	1:AA:468:A:O2'	1.66	0.93
1:AA:37:U:H2'	1:AA:547:A:N1	1.83	0.93
1:AA:922:G:N3	1:AA:1398:A:H2	1.64	0.93
1:AA:190:A:N6	22:AT:102:GLY:O	2.01	0.93
1:AA:323:U:O2'	22:AT:22:ARG:HD2	1.65	0.93
1:AA:1224:G:O3'	1:AA:1225:A:P	2.27	0.93
1:AA:921:U:O4	1:AA:1396:A:N6	2.01	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:66:G:H5''	1:AA:199:G:O2'	1.69	0.93
12:AJ:62:HIS:HB2	16:AN:59:ALA:HB3	1.51	0.93
5:AC:91:LEU:HD21	5:AC:99:VAL:HG13	1.48	0.93
23:B0:1066:G:N2	23:B0:1115:C:C2	2.36	0.93
24:B9:107:C:C3'	24:B9:108:G:P	2.57	0.93
1:AA:994:A:C6	16:AN:5:ALA:CB	2.50	0.93
1:AA:265:G:C5'	19:AQ:64:PRO:C	2.34	0.93
5:AC:195:VAL:O	5:AC:196:LEU:HD23	1.69	0.92
14:AL:41:ARG:HG2	14:AL:42:THR:N	1.83	0.92
1:AA:128:G:H5'	19:AQ:2:PRO:O	1.68	0.92
1:AA:190:A:N6	22:AT:104:LEU:CA	2.31	0.92
1:AA:1016:A:C1'	1:AA:1218:C:H4'	1.99	0.92
1:AA:1483:A:H2'	1:AA:1484:C:H6	1.28	0.92
1:AA:319:G:N2	1:AA:1434:A:H1'	1.82	0.92
1:AA:707:C:P	13:AK:85:ARG:NH1	2.41	0.92
1:AA:1329:A:P	15:AM:28:ALA:HB3	2.09	0.92
15:AM:40:ASN:HD22	15:AM:41:PRO:CD	1.82	0.92
23:B0:104:C:H2'	23:B0:105:G:H5''	1.49	0.92
1:AA:6:G:C8	7:AE:92:LYS:NZ	2.25	0.92
1:AA:1392:G:C5'	1:AA:1531:A:H5''	2.00	0.92
1:AA:191:G:C2	1:AA:192:U:C2	2.56	0.92
1:AA:893:C:O2'	1:AA:894:G:H5'	1.69	0.92
23:B0:226:C:HO2'	23:B0:227:G:H8	0.97	0.92
19:AQ:104:LYS:HE3	23:B0:729:A:C5	2.05	0.92
1:AA:323:U:C5'	22:AT:22:ARG:CB	2.28	0.92
1:AA:619:U:O2	6:AD:133:VAL:CG1	2.15	0.92
1:AA:130:A:C5'	19:AQ:63:ARG:NE	2.28	0.92
23:B0:1656:U:H2'	23:B0:1657:A:H5''	1.52	0.92
1:AA:922:G:C2	1:AA:1396:A:N3	2.37	0.92
2:AV:76:A:H5''	23:B0:2564:U:C1'	1.96	0.92
23:B0:1096:A:HO2'	23:B0:1115:C:H1'	1.31	0.92
23:B0:1066:G:H1	23:B0:1115:C:N4	1.65	0.92
1:AA:619:U:H3	6:AD:135:LEU:HG	0.90	0.92
1:AA:848:G:O3'	1:AA:849:C:C5'	2.18	0.92
5:AC:131:ARG:HG2	5:AC:135:LYS:HE3	1.50	0.92
1:AA:232:G:N2	1:AA:263:A:H2	1.61	0.92
1:AA:291:C:O3'	1:AA:292:G:P	2.28	0.92
1:AA:994:A:C2'	16:AN:11:LYS:HE3	1.93	0.92
1:AA:264:U:O2'	19:AQ:64:PRO:N	2.02	0.92
1:AA:333:G:C1'	22:AT:16:HIS:NE2	2.22	0.92
1:AA:266:G:H5'	19:AQ:66:SER:HA	1.52	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:737:A:O2'	8:AF:73:ASN:ND2	2.03	0.92
1:AA:922:G:N2	1:AA:1396:A:N9	2.18	0.92
1:AA:128:G:C1'	19:AQ:61:GLU:OE1	2.15	0.92
1:AA:1393:U:H2'	1:AA:1395:C:H5	1.35	0.91
1:AA:1317:C:C6	16:AN:16:PHE:CD2	2.58	0.91
21:AS:31:ILE:HG22	21:AS:32:LYS:H	1.34	0.91
1:AA:247:G:N3	1:AA:282:A:C2	2.37	0.91
1:AA:779:C:O2'	13:AK:120:ARG:HD3	1.71	0.91
7:AE:81:GLU:HG2	7:AE:90:VAL:HG22	1.52	0.91
23:B0:1090:C:O2'	31:BG:129:GLY:CA	2.19	0.91
1:AA:26:A:H2'	1:AA:27:G:C5'	1.98	0.91
1:AA:921:U:N3	1:AA:1396:A:N1	2.18	0.91
19:AQ:94:ASN:N	23:B0:726:G:H4'	1.83	0.91
2:AV:1:G:H22	2:AV:2:C:N4	1.65	0.91
23:B0:1182:U:H2'	23:B0:1183:C:H5''	1.49	0.91
1:AA:865:A:C2'	1:AA:918:A:O2'	2.17	0.91
12:AJ:45:ARG:NH2	16:AN:36:PHE:CD2	2.37	0.91
1:AA:265:G:C3'	19:AQ:65:ILE:C	2.37	0.91
1:AA:1238:A:H2	1:AA:1241:G:HO2'	0.96	0.91
1:AA:320:C:C5'	1:AA:1434:A:N1	2.32	0.91
1:AA:932:C:H5''	9:AG:3:ARG:HD3	1.50	0.91
1:AA:94:G:C5	1:AA:96:C:C5	2.59	0.91
1:AA:816:A:OP1	1:AA:1527:C:H5'	1.70	0.91
1:AA:131:C:C2	1:AA:262:A:C2	2.58	0.91
1:AA:403:C:HO2'	1:AA:404:U:H5'	1.30	0.91
1:AA:1342:C:O3'	11:AI:125:TYR:HE2	1.41	0.91
1:AA:1473:A:C4'	23:B0:1719:G:O4'	2.19	0.91
23:B0:3128:G:H4'	23:B0:3174:C:H4'	0.92	0.91
1:AA:1305:G:O2'	1:AA:1306:A:C8	2.07	0.91
1:AA:173:U:C5'	1:AA:197:A:O4'	2.19	0.91
1:AA:256:U:H5'	19:AQ:17:LYS:HZ1	1.10	0.91
1:AA:606:G:H3'	1:AA:607:A:H5'	1.52	0.91
1:AA:6:G:C2	7:AE:119:LEU:CD1	2.52	0.91
18:AP:58:TYR:O	18:AP:61:SER:HB3	1.68	0.91
1:AA:15:G:O2'	7:AE:24:ARG:NH1	2.04	0.91
1:AA:191:G:C4	1:AA:192:U:C6	2.59	0.91
1:AA:19:C:H1'	1:AA:916:G:N2	1.85	0.91
1:AA:397:A:C6	1:AA:547:A:H1'	2.04	0.91
1:AA:6:G:C6	7:AE:119:LEU:HD11	2.04	0.91
2:AW:41:U:H6	2:AW:41:U:H5'	1.35	0.91
23:B0:1066:G:C2	23:B0:1115:C:N3	2.39	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:892:A:H5'	23:B0:892:A:H8	1.35	0.91
1:AA:1392:G:C4'	1:AA:1531:A:C5'	2.49	0.91
1:AA:191:G:C4	1:AA:192:U:O4'	2.18	0.91
1:AA:37:U:O2'	1:AA:547:A:N1	2.02	0.91
2:AW:76:A:O4'	23:B0:2486:C:C4'	2.19	0.91
1:AA:702:A:N1	23:B0:1838:G:H2'	1.86	0.91
23:B0:1912:G:C4'	23:B0:1913:G:C8	2.47	0.91
1:AA:1261:A:H4'	1:AA:1283:G:O3'	1.70	0.91
1:AA:1434:A:C3'	1:AA:1435:G:H5'	2.00	0.91
1:AA:1502:A:H2	1:AA:1505:G:H1	1.19	0.91
1:AA:299:G:N1	1:AA:566:G:O6	2.03	0.91
1:AA:262:A:C5'	22:AT:75:ASN:H	1.84	0.91
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.05	0.90
1:AA:8:A:N6	6:AD:205:GLU:O	2.04	0.90
1:AA:779:C:C2'	13:AK:120:ARG:HD2	2.01	0.90
1:AA:69:G:C1'	1:AA:102:G:C2	2.53	0.90
4:AB:59:GLU:HG2	4:AB:221:LEU:HD11	1.51	0.90
2:AV:41:U:H6	2:AV:41:U:H5'	1.34	0.90
1:AA:456:A:C2	1:AA:477:G:H1'	2.07	0.90
1:AA:1342:C:O3'	11:AI:125:TYR:OH	1.89	0.90
2:AV:75:C:C4	23:B0:2231:G:N2	2.39	0.90
1:AA:1430:C:H5''	23:B0:1721:G:H4'	1.54	0.90
1:AA:1497:G:O2'	1:AA:1498:U:H5'	1.71	0.90
1:AA:187:G:O2'	22:AT:104:LEU:HA	1.70	0.90
2:AV:33:U:C2	2:AV:35:A:H5'	2.06	0.90
2:AW:75:C:C4	23:B0:2533:U:O2	2.24	0.90
1:AA:797:C:OP1	13:AK:124:LYS:CG	2.18	0.90
1:AA:255:G:C1'	19:AQ:16:GLN:HB2	2.02	0.90
2:AW:76:A:H1'	23:B0:2486:C:O4'	0.72	0.90
1:AA:1061:G:H5'	12:AJ:56:HIS:HB3	1.52	0.90
1:AA:1155:G:C3'	1:AA:1156:G:P	2.58	0.90
1:AA:19:C:C1'	1:AA:916:G:N2	2.33	0.90
1:AA:278:G:H21	1:AA:279:A:H62	1.16	0.90
1:AA:1057:G:H5''	5:AC:154:SER:HB2	1.53	0.90
11:AI:70:LYS:O	11:AI:74:ILE:HG13	1.72	0.90
1:AA:267:C:OP2	19:AQ:67:LYS:HD2	1.08	0.90
23:B0:128:C:H2'	23:B0:129:A:H5''	1.51	0.90
1:AA:1342:C:H5''	11:AI:125:TYR:HE1	1.09	0.90
1:AA:104:G:C4'	1:AA:172:A:H2	1.83	0.90
1:AA:456:A:N6	1:AA:477:G:N3	2.19	0.90
12:AJ:8:LEU:HD21	12:AJ:96:ILE:HG12	1.54	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AV:76:A:C3'	23:B0:2046:C:O2'	2.20	0.90
1:AA:1342:C:H4'	11:AI:125:TYR:CE2	2.05	0.90
23:B0:1856:U:H5	23:B0:3865:A:N6	1.28	0.90
1:AA:1430:C:C5'	23:B0:1721:G:H4'	2.02	0.90
1:AA:1505:G:O2'	1:AA:1506:U:OP2	1.87	0.90
1:AA:22:G:O2'	1:AA:913:A:N1	1.95	0.90
1:AA:323:U:C4'	22:AT:19:SER:CA	2.46	0.90
1:AA:476:U:C6	1:AA:477:G:C5'	2.54	0.90
1:AA:13:U:C4	1:AA:915:A:N7	2.38	0.90
1:AA:292:G:HO2'	1:AA:608:A:H62	1.16	0.90
1:AA:733:A:HO3'	1:AA:734:G:P	1.91	0.90
1:AA:994:A:H2	16:AN:4:LYS:C	1.68	0.90
1:AA:1112:C:O2	5:AC:179:ARG:HB3	1.71	0.89
1:AA:1015:A:C1'	1:AA:1219:U:H5'	2.00	0.89
1:AA:905:U:O3'	1:AA:906:G:O5'	1.89	0.89
2:AW:71:G:C5'	23:B0:1925:C:O2	2.16	0.89
2:AV:75:C:OP2	23:B0:2581:A:H5''	1.62	0.89
19:AQ:105:ALA:C	23:B0:727:U:C4'	2.41	0.89
1:AA:236:G:H5''	19:AQ:40:LYS:NZ	1.87	0.89
1:AA:253:U:H1'	1:AA:275:G:C2'	2.02	0.89
1:AA:476:U:H2'	1:AA:477:G:H5''	1.54	0.89
19:AQ:104:LYS:HB3	23:B0:727:U:H1'	1.16	0.89
1:AA:236:G:C5'	19:AQ:40:LYS:NZ	2.35	0.89
1:AA:1497:G:H1'	1:AA:1518:A:C2	2.07	0.89
1:AA:1497:G:N2	1:AA:1519:A:H1'	1.87	0.89
2:AW:25:C:H2'	2:AW:26:G:O4'	1.71	0.89
1:AA:835:U:OP1	20:AR:64:ARG:NH2	2.04	0.89
1:AA:1190:G:P	5:AC:4:LYS:HA	2.12	0.89
1:AA:436:C:O2	1:AA:437:U:C6	2.25	0.89
7:AE:51:VAL:HB	7:AE:52:PRO:HD3	1.55	0.89
1:AA:1416:G:O5'	1:AA:1417:G:P	2.30	0.89
1:AA:1447:A:O3'	1:AA:1448:C:P	2.29	0.89
9:AG:149:ARG:CZ	13:AK:59:TYR:CE1	2.56	0.89
2:AV:57:G:H5''	28:BD:76:ASN:CA	2.03	0.89
1:AA:1474:G:H4'	23:B0:1717:A:N6	1.86	0.89
1:AA:1427:U:O2'	23:B0:1704:G:H5''	1.70	0.89
1:AA:113:G:H1'	1:AA:354:G:H5'	1.55	0.89
1:AA:1016:A:C5'	16:AN:15:LYS:HE3	2.02	0.88
1:AA:1261:A:H4'	1:AA:1283:G:C4'	2.02	0.88
1:AA:943:U:H1'	11:AI:124:GLN:NE2	1.88	0.88
1:AA:932:C:C5'	9:AG:3:ARG:HD3	2.02	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:702:A:H5'	23:B0:1840:A:H5'	1.54	0.88
23:B0:891:A:N1	23:B0:892:A:C6	2.25	0.88
1:AA:1255:G:H2'	1:AA:1258:G:H21	1.36	0.88
1:AA:1261:A:C4'	1:AA:1283:G:C4'	2.51	0.88
1:AA:1416:G:H3'	1:AA:1417:G:P	2.13	0.88
1:AA:202:G:N3	1:AA:468:A:O2'	2.04	0.88
23:B0:3111:C:H4'	23:B0:3112:G:OP1	1.73	0.88
1:AA:436:C:N3	1:AA:437:U:C4	2.41	0.88
1:AA:1109:C:P	5:AC:176:HIS:CD2	2.66	0.88
7:AE:79:GLU:OE2	10:AH:105:ARG:CD	2.21	0.88
19:AQ:104:LYS:CB	23:B0:727:U:H1'	1.92	0.88
2:AW:76:A:N9	23:B0:2562:G:N2	2.21	0.88
1:AA:1298:C:C5	9:AG:114:ARG:HD3	2.08	0.88
1:AA:130:A:H5'	19:AQ:63:ARG:CZ	2.04	0.88
4:AB:116:GLU:HG2	4:AB:153:ARG:HH12	1.39	0.88
12:AJ:65:LEU:HA	16:AN:55:GLY:O	1.73	0.88
19:AQ:97:SER:HB2	19:AQ:102:GLY:C	1.93	0.88
19:AQ:96:GLN:CD	23:B0:725:C:H1'	1.93	0.88
2:AW:74:C:H5	23:B0:2533:U:N3	1.23	0.88
1:AA:1495:U:O2'	23:B0:1902:A:H2	1.49	0.88
1:AA:1060:C:HO2'	12:AJ:56:HIS:CD2	1.70	0.88
1:AA:1015:A:N3	1:AA:1219:U:O4'	2.06	0.88
1:AA:994:A:N6	16:AN:5:ALA:HB2	1.88	0.88
1:AA:1342:C:C3'	11:AI:125:TYR:CE2	2.55	0.88
19:AQ:101:ARG:CZ	23:B0:731:A:C2	2.57	0.88
1:AA:191:G:H21	22:AT:103:GLY:HA2	1.38	0.88
1:AA:253:U:H4'	1:AA:276:G:H4'	1.56	0.88
1:AA:619:U:C4	6:AD:135:LEU:HG	2.02	0.88
19:AQ:105:ALA:C	23:B0:727:U:H4'	1.93	0.88
23:B0:3874:C:N4	23:B0:3875:A:C5	2.41	0.88
1:AA:1343:G:O3'	11:AI:122:ALA:HB3	1.73	0.88
1:AA:262:A:O3'	22:AT:75:ASN:HB2	1.06	0.88
8:AF:10:LEU:HD12	8:AF:59:TYR:HB3	1.55	0.88
23:B0:1888:C:H4'	23:B0:1911:A:C2	2.08	0.88
1:AA:1014:A:C1'	21:AS:34:TRP:HB2	2.02	0.88
6:AD:36:ARG:N	6:AD:37:PRO:HD3	1.88	0.88
2:AV:75:C:H4'	23:B0:2047:C:OP1	1.72	0.88
1:AA:588:G:C8	1:AA:753:A:C2	2.61	0.87
1:AA:893:C:C4	1:AA:894:G:N7	2.42	0.87
1:AA:922:G:N1	1:AA:1396:A:C6	2.42	0.87
6:AD:205:GLU:CG	7:AE:107:ARG:NH2	2.36	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AG:149:ARG:NH2	13:AK:59:TYR:OH	2.07	0.87
23:B0:1912:G:O3'	23:B0:1913:G:H3'	1.72	0.87
23:B0:665:A:H3'	23:B0:666:U:H5''	1.54	0.87
1:AA:254:G:H4'	19:AQ:18:THR:HB	1.52	0.87
23:B0:2633:A:H4'	23:B0:2634:G:H4'	1.54	0.87
23:B0:1856:U:H3'	23:B0:3865:A:H8	1.34	0.87
23:B0:3877:A:O2'	55:B5:198:THR:CA	2.22	0.87
1:AA:1112:C:O2	5:AC:178:LEU:C	2.12	0.87
1:AA:1131:G:H1	1:AA:1143:G:H21	1.22	0.87
1:AA:1458:G:C8	1:AA:1459:C:C2	2.61	0.87
1:AA:293:G:P	1:AA:609:A:H61	1.96	0.87
1:AA:587:G:OP1	10:AH:92:ARG:NH1	2.07	0.87
12:AJ:62:HIS:O	16:AN:58:LYS:HA	1.73	0.87
1:AA:1483:A:C5	1:AA:1484:C:C4	2.63	0.87
24:B9:73:C:C3'	24:B9:74:A:P	2.63	0.87
1:AA:1457:A:C8	1:AA:1459:C:N3	2.41	0.87
1:AA:820:U:C2	1:AA:873:A:N7	2.43	0.87
15:AM:3:ARG:HG2	15:AM:9:ILE:HG23	1.56	0.87
1:AA:835:U:H5'	20:AR:64:ARG:NH2	1.88	0.87
1:AA:1110:A:H2'	1:AA:1111:A:O4'	1.74	0.87
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.27	0.87
2:AW:76:A:O4'	23:B0:2486:C:H4'	1.74	0.87
1:AA:923:A:O2'	1:AA:1398:A:C2'	2.21	0.87
1:AA:9:G:H8	7:AE:126:ARG:HH12	0.87	0.87
19:AQ:96:GLN:OE1	23:B0:725:C:C2'	2.17	0.87
1:AA:1429:C:HO2'	23:B0:1720:G:HO2'	1.15	0.87
1:AA:1458:G:C8	1:AA:1459:C:O2	2.28	0.87
1:AA:19:C:C2'	1:AA:916:G:H22	1.87	0.87
1:AA:922:G:C2	1:AA:1396:A:C2	2.63	0.87
1:AA:922:G:C2	1:AA:1396:A:C5	2.62	0.87
4:AB:91:PRO:HG2	4:AB:155:LEU:HD23	1.54	0.87
23:B0:3877:A:H3'	23:B0:1861:G:H8	1.32	0.87
1:AA:232:G:H1'	1:AA:262:A:H61	1.39	0.86
1:AA:1340:A:O3'	2:AV:32:C:H4'	1.74	0.86
23:B0:1119:U:N3	23:B0:1120:C:C4	2.42	0.86
23:B0:3877:A:C2	23:B0:1861:G:N3	2.12	0.86
23:B0:918:A:H2'	23:B0:919:U:H5''	1.57	0.86
1:AA:250:A:H4'	1:AA:251:G:O5'	1.76	0.86
1:AA:651:C:N3	1:AA:652:U:C4	2.42	0.86
1:AA:5:U:O4	7:AE:95:ALA:HB2	1.74	0.86
1:AA:1342:C:H4'	11:AI:125:TYR:CD2	2.09	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:473:C:OP1	18:AP:75:ARG:CZ	2.23	0.86
23:B0:88:G:H3'	23:B0:89:A:H5''	1.57	0.86
1:AA:255:G:H5''	19:AQ:17:LYS:HB2	0.87	0.86
1:AA:538:G:H4'	14:AL:114:LYS:CE	2.04	0.86
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.10	0.86
1:AA:94:G:C6	1:AA:96:C:C4	2.63	0.86
1:AA:1318:A:H4'	21:AS:10:PHE:CD1	2.11	0.86
1:AA:130:A:O4'	1:AA:264:U:C4'	2.23	0.86
1:AA:38:G:O2'	1:AA:39:G:H8	1.55	0.86
1:AA:69:G:C4	1:AA:102:G:C6	2.63	0.86
1:AA:905:U:HO3'	1:AA:906:G:P	1.15	0.86
5:AC:58:GLU:HB3	12:AJ:92:THR:CG2	2.05	0.86
8:AF:30:LEU:HD23	8:AF:75:LEU:HD21	1.57	0.86
15:AM:10:PRO:HB2	15:AM:18:ALA:HB1	1.57	0.86
1:AA:994:A:C5	16:AN:5:ALA:CA	2.53	0.86
2:AV:75:C:N4	23:B0:2230:G:H1	1.72	0.86
1:AA:1256:A:O4'	1:AA:1258:G:C4	2.29	0.86
12:AJ:22:LYS:HE2	12:AJ:90:LEU:HD12	1.57	0.86
1:AA:265:G:O4'	19:AQ:64:PRO:C	2.14	0.86
1:AA:836:G:OP1	20:AR:61:LYS:HE3	1.76	0.86
1:AA:1298:C:C2'	9:AG:114:ARG:HH12	1.72	0.86
1:AA:588:G:C5	1:AA:753:A:C4	2.63	0.86
23:B0:3098:U:HO3'	23:B0:3099:U:P	1.95	0.86
1:AA:260:G:C8	22:AT:83:ARG:NH1	2.26	0.86
1:AA:473:C:OP1	18:AP:75:ARG:CD	2.23	0.86
1:AA:538:G:H4'	14:AL:114:LYS:HD3	1.58	0.86
1:AA:69:G:N9	1:AA:102:G:C6	2.44	0.86
9:AG:149:ARG:NH2	13:AK:59:TYR:CZ	2.44	0.86
1:AA:1064:G:H4'	1:AA:1065:U:H5'	1.58	0.86
1:AA:104:G:C5'	1:AA:172:A:C2	2.59	0.86
7:AE:115:VAL:HG11	7:AE:118:ILE:HG13	1.57	0.86
23:B0:1072:U:H4'	23:B0:1081:A:O2'	1.75	0.86
1:AA:288:A:O2'	1:AA:290:C:OP1	1.94	0.85
1:AA:651:C:C4	1:AA:652:U:O4	2.29	0.85
1:AA:778:G:H4'	13:AK:119:CYS:HB3	1.56	0.85
2:AW:74:C:N4	23:B0:2534:U:C5	2.42	0.85
23:B0:3098:U:H2'	23:B0:3099:U:C6	2.10	0.85
1:AA:1060:C:O4'	12:AJ:52:GLY:HA3	1.77	0.85
1:AA:958:A:C4	21:AS:55:LYS:HD2	2.10	0.85
1:AA:994:A:H2	16:AN:4:LYS:O	1.56	0.85
5:AC:52:LEU:HD21	5:AC:118:GLN:HE22	1.40	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:29:TYR:CE1	12:AJ:65:LEU:HD11	2.10	0.85
1:AA:237:C:C5'	19:AQ:25:ARG:NH2	2.37	0.85
1:AA:522:C:P	14:AL:72:GLY:H	1.99	0.85
1:AA:27:G:C6	1:AA:557:G:C5	2.64	0.85
1:AA:1459:C:OP1	22:AT:29:LYS:CA	2.24	0.85
1:AA:556:C:O2'	1:AA:557:G:C5'	2.24	0.85
1:AA:67:C:H2'	1:AA:69:G:P	2.17	0.85
1:AA:260:G:H8	22:AT:83:ARG:HH12	1.25	0.85
2:AW:75:C:N3	23:B0:2532:G:N2	2.23	0.85
2:AW:76:A:N1	23:B0:2532:G:C2	2.44	0.85
1:AA:1499:A:O4'	1:AA:1520:G:C5'	2.24	0.85
1:AA:191:G:C2	1:AA:192:U:O2	2.30	0.85
1:AA:130:A:O4'	1:AA:264:U:O4'	1.94	0.85
1:AA:297:G:H4'	1:AA:557:G:H4'	1.59	0.85
1:AA:588:G:C5	1:AA:753:A:C5	2.65	0.85
1:AA:292:G:H2'	1:AA:608:A:N6	1.90	0.85
1:AA:261:U:H6	22:AT:79:ARG:CZ	1.81	0.85
19:AQ:101:ARG:CD	23:B0:731:A:N1	2.36	0.85
1:AA:1181:G:O2'	1:AA:1184:G:H5'	1.75	0.85
1:AA:332:G:P	22:AT:10:LEU:CG	2.64	0.85
5:AC:110:ASN:HD21	5:AC:140:ARG:HB3	1.40	0.85
5:AC:70:VAL:HG21	5:AC:76:VAL:HG21	1.58	0.85
23:B0:1312:G:H5''	23:B0:1313:U:H5'	1.59	0.85
23:B0:3127:G:C4'	23:B0:3173:A:N1	2.33	0.85
23:B0:3103:A:H61	23:B0:3186:C:H42	1.24	0.85
23:B0:542:A:H2'	23:B0:543:G:H5'	1.59	0.85
1:AA:27:G:O6	1:AA:557:G:O6	1.95	0.85
12:AJ:62:HIS:ND1	16:AN:61:TRP:HZ3	1.74	0.85
2:AV:32:C:OP2	11:AI:127:LYS:CG	2.24	0.85
1:AA:247:G:OP2	19:AQ:100:LYS:HE2	1.77	0.85
1:AA:865:A:O2'	1:AA:919:A:H5'	1.76	0.85
6:AD:150:GLU:HG3	6:AD:153:ARG:NH2	1.90	0.85
1:AA:1255:G:C2'	1:AA:1258:G:H21	1.90	0.85
1:AA:1457:A:C4	1:AA:1459:C:O2	2.30	0.85
1:AA:588:G:C4	1:AA:753:A:C6	2.64	0.85
5:AC:64:VAL:HB	5:AC:99:VAL:HB	1.58	0.85
6:AD:205:GLU:CB	7:AE:107:ARG:NH2	2.39	0.85
14:AL:25:PRO:C	14:AL:27:LEU:H	1.79	0.85
1:AA:187:G:H2'	22:AT:105:SER:HB3	1.57	0.85
1:AA:1342:C:C4'	11:AI:125:TYR:CE1	2.56	0.84
1:AA:322:C:O2'	22:AT:19:SER:O	1.95	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:994:A:C6	16:AN:5:ALA:HB2	2.10	0.84
5:AC:190:ARG:NH1	5:AC:190:ARG:HB3	1.91	0.84
1:AA:1239:A:O2'	1:AA:1298:C:N4	2.08	0.84
1:AA:27:G:N1	1:AA:557:G:C5	2.45	0.84
4:AB:102:LEU:HD21	4:AB:162:ILE:HD11	1.57	0.84
5:AC:135:LYS:HE2	7:AE:50:GLU:OE2	1.77	0.84
1:AA:1319:A:H5''	21:AS:5:LEU:HD21	1.58	0.84
1:AA:865:A:C2	1:AA:918:A:C4'	2.60	0.84
1:AA:9:G:O5'	7:AE:126:ARG:HD3	1.77	0.84
6:AD:57:ARG:HH21	7:AE:107:ARG:CD	1.72	0.84
1:AA:1014:A:C5'	21:AS:14:HIS:CB	2.52	0.84
23:B0:3187:U:O3'	23:B0:3188:U:P	2.35	0.84
1:AA:1270:C:O2'	1:AA:1314:C:H5'	1.77	0.84
1:AA:1484:C:O3'	23:B0:1943:A:C2'	2.25	0.84
1:AA:21:G:C2'	1:AA:914:A:H62	1.88	0.84
23:B0:1098:G:H1	23:B0:1113:C:N4	1.75	0.84
23:B0:1953:A:H1'	23:B0:1955:G:H1'	1.58	0.84
1:AA:820:U:O2	1:AA:873:A:H8	1.59	0.84
1:AA:521:G:C5'	14:AL:72:GLY:O	2.25	0.84
1:AA:1238:A:C2	1:AA:1241:G:O2'	2.31	0.84
1:AA:1495:U:O2'	23:B0:1902:A:N3	1.92	0.84
1:AA:676:A:O4'	13:AK:115:PRO:HA	1.77	0.84
1:AA:779:C:H1'	13:AK:120:ARG:HD2	1.56	0.84
19:AQ:27:PHE:CZ	19:AQ:36:ILE:HD11	2.12	0.84
23:B0:1071:U:H3	23:B0:1099:A:H2	1.21	0.84
1:AA:69:G:H1'	1:AA:102:G:C4	2.13	0.84
5:AC:190:ARG:HH11	5:AC:190:ARG:HB3	1.43	0.84
6:AD:104:VAL:HG11	6:AD:146:ILE:HD12	1.58	0.84
6:AD:205:GLU:OE2	7:AE:107:ARG:NE	2.11	0.84
1:AA:1014:A:N3	21:AS:34:TRP:CD1	2.45	0.84
1:AA:1393:U:N3	1:AA:1395:C:C4	2.43	0.84
1:AA:1434:A:O3'	1:AA:1435:G:C5'	2.25	0.84
1:AA:323:U:C1'	22:AT:19:SER:HA	2.06	0.84
1:AA:1108:G:H5''	5:AC:176:HIS:ND1	1.93	0.84
1:AA:1238:A:C3'	1:AA:1239:A:P	2.66	0.84
1:AA:6:G:C6	7:AE:119:LEU:HD12	2.10	0.84
1:AA:848:G:C2'	1:AA:849:C:O4'	2.26	0.84
1:AA:323:U:H4'	22:AT:19:SER:HA	1.60	0.84
1:AA:259:G:OP1	22:AT:83:ARG:HB3	1.78	0.84
1:AA:1393:U:H2'	1:AA:1395:C:C5	2.12	0.84
1:AA:1505:G:H4'	1:AA:1506:U:O5'	1.76	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:26:A:C2'	1:AA:27:G:C5'	2.53	0.84
11:AI:8:GLY:HA2	11:AI:79:LEU:CD1	2.08	0.84
23:B0:2548:G:C2'	23:B0:2549:G:H5''	2.08	0.84
1:AA:130:A:H4'	1:AA:264:U:C5'	2.04	0.83
1:AA:1499:A:O4'	1:AA:1520:G:H5'	1.78	0.83
1:AA:131:C:O3'	1:AA:262:A:O2'	1.95	0.83
1:AA:436:C:C4	1:AA:437:U:C5	2.66	0.83
1:AA:27:G:C2	1:AA:557:G:C4	2.65	0.83
1:AA:779:C:O4'	13:AK:120:ARG:HB3	1.78	0.83
23:B0:2198:U:H3'	23:B0:2199:C:H5''	1.59	0.83
2:AW:75:C:N3	23:B0:2532:G:C2	2.46	0.83
23:B0:616:U:H2'	23:B0:617:U:H5''	1.59	0.83
23:B0:847:C:H41	23:B0:955:G:H21	1.25	0.83
1:AA:1234:C:H5''	1:AA:1365:G:OP1	1.77	0.83
1:AA:131:C:P	1:AA:263:A:C4'	2.64	0.83
1:AA:27:G:C4	1:AA:557:G:N2	2.46	0.83
12:AJ:19:SER:HB2	12:AJ:91:PRO:HG3	1.60	0.83
1:AA:1459:C:P	22:AT:28:ALA:O	2.36	0.83
1:AA:320:C:C4'	1:AA:1434:A:N1	2.40	0.83
1:AA:820:U:N3	1:AA:873:A:N7	2.27	0.83
5:AC:172:ARG:HH12	5:AC:174:PRO:HG3	1.43	0.83
6:AD:61:LYS:HD2	6:AD:207:TYR:OH	1.79	0.83
1:AA:7:G:H22	7:AE:123:LEU:HD11	1.37	0.83
23:B0:109:A:H3'	23:B0:110:U:H5''	1.60	0.83
1:AA:1393:U:C2	1:AA:1395:C:C5	2.66	0.83
1:AA:322:C:C5'	22:AT:23:ARG:HD2	2.09	0.83
19:AQ:94:ASN:CA	23:B0:726:G:O4'	2.27	0.83
1:AA:1194:U:H5'	7:AE:22:GLY:CA	2.07	0.83
1:AA:1126:U:OP2	1:AA:1281:U:O2	1.94	0.83
1:AA:1416:G:P	1:AA:1417:G:OP2	2.36	0.83
1:AA:116:A:C6	1:AA:313:A:H1'	2.10	0.83
1:AA:216:C:H5'	1:AA:465:C:N4	1.93	0.83
1:AA:737:A:C2'	8:AF:73:ASN:ND2	2.42	0.83
7:AE:105:VAL:HB	7:AE:106:PRO:HD3	1.60	0.83
15:AM:50:GLU:O	15:AM:54:VAL:HG23	1.77	0.83
1:AA:190:A:N6	22:AT:104:LEU:O	2.11	0.83
1:AA:1458:G:O3'	22:AT:24:LEU:CG	2.26	0.83
1:AA:1497:G:C2'	1:AA:1498:U:H5'	2.08	0.83
1:AA:37:U:O2'	1:AA:547:A:N6	2.11	0.83
1:AA:38:G:C4'	1:AA:547:A:H62	1.88	0.83
1:AA:436:C:O2'	1:AA:437:U:H5'	1.79	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:914:A:H2'	1:AA:915:A:C1'	2.07	0.83
1:AA:1473:A:O2'	23:B0:1718:A:C2	2.32	0.83
1:AA:69:G:O4'	1:AA:102:G:N2	2.12	0.83
1:AA:1015:A:O2'	1:AA:1219:U:H5'	1.79	0.83
1:AA:1342:C:C5'	11:AI:125:TYR:CZ	2.46	0.83
1:AA:131:C:C2	1:AA:262:A:H2	1.95	0.83
1:AA:653:A:N9	10:AH:56:LYS:HG2	1.93	0.83
1:AA:779:C:H5'	13:AK:120:ARG:C	1.98	0.83
21:AS:55:LYS:HG2	21:AS:56:GLN:HE21	1.42	0.83
1:AA:1060:C:HO2'	12:AJ:56:HIS:HD2	0.85	0.83
2:AW:74:C:N4	23:B0:2533:U:H2'	1.89	0.83
1:AA:1255:G:H21	1:AA:1276:G:N2	1.76	0.83
1:AA:264:U:H2'	19:AQ:64:PRO:O	1.78	0.83
1:AA:707:C:H4'	13:AK:20:TYR:CE2	2.13	0.83
8:AF:36:ARG:HH12	8:AF:38:GLU:HG2	1.44	0.83
1:AA:994:A:N3	16:AN:5:ALA:HA	1.92	0.83
23:B0:3877:A:N9	23:B0:1861:G:N9	2.26	0.83
19:AQ:104:LYS:C	23:B0:727:U:H1'	1.99	0.83
1:AA:36:C:O2	1:AA:501:C:H4'	1.79	0.82
23:B0:1181:C:H2'	23:B0:1182:U:H5''	1.60	0.82
1:AA:293:G:H4'	1:AA:609:A:H2	1.00	0.82
1:AA:323:U:H5''	22:AT:23:ARG:N	1.94	0.82
1:AA:333:G:O2'	22:AT:16:HIS:NE2	2.11	0.82
1:AA:38:G:H1'	1:AA:547:A:C5	2.11	0.82
1:AA:22:G:C1'	1:AA:913:A:N1	2.41	0.82
1:AA:572:A:N3	1:AA:917:G:H1'	1.94	0.82
2:AV:56:C:C3'	28:BD:74:ILE:CA	2.57	0.82
23:B0:1098:G:N1	23:B0:1113:C:N4	2.27	0.82
2:AV:11:C:H4'	23:B0:1892:C:O4'	1.78	0.82
1:AA:1061:G:H5'	12:AJ:56:HIS:CB	1.88	0.82
1:AA:112:G:N2	1:AA:354:G:H5'	1.94	0.82
1:AA:266:G:C5'	19:AQ:66:SER:HA	2.08	0.82
5:AC:91:LEU:HD23	5:AC:92:ALA:N	1.94	0.82
1:AA:323:U:C5'	22:AT:23:ARG:N	2.42	0.82
1:AA:815:A:C4	1:AA:1527:C:H1'	2.15	0.82
1:AA:865:A:HO2'	1:AA:918:A:HO2'	1.24	0.82
1:AA:1015:A:C1'	1:AA:1219:U:H4'	2.08	0.82
1:AA:816:A:P	1:AA:1527:C:C5'	2.65	0.82
1:AA:406:G:C4	1:AA:496:A:C5	2.67	0.82
1:AA:1014:A:C2	21:AS:34:TRP:NE1	2.48	0.82
2:AW:25:C:H2'	2:AW:26:G:C4'	2.10	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:653:G:H2'	23:B0:654:A:H4'	1.62	0.82
1:AA:1473:A:H5'	23:B0:1719:G:C4'	2.07	0.82
1:AA:1342:C:C5'	11:AI:125:TYR:CD1	2.62	0.82
23:B0:166:G:H21	23:B0:184:A:H62	1.27	0.82
1:AA:323:U:H4'	22:AT:22:ARG:HB2	1.60	0.82
1:AA:865:A:C2'	1:AA:918:A:HO2'	1.91	0.82
1:AA:1112:C:O2	5:AC:178:LEU:O	1.98	0.82
12:AJ:62:HIS:O	16:AN:58:LYS:CA	2.27	0.82
2:AV:33:U:O2	2:AV:35:A:H3'	1.80	0.82
2:AV:76:A:H5'	23:B0:2564:U:H1'	1.61	0.82
1:AA:116:A:H61	1:AA:313:A:H1'	0.66	0.82
1:AA:1459:C:OP1	22:AT:29:LYS:HA	1.80	0.82
1:AA:131:C:H4'	1:AA:262:A:O2'	1.78	0.82
1:AA:322:C:O2'	22:AT:19:SER:C	2.18	0.82
15:AM:78:ILE:HA	15:AM:81:LEU:HD21	1.62	0.82
2:AV:25:C:H2'	2:AV:26:G:O4'	1.80	0.82
23:B0:1964:A:H3'	23:B0:1965:U:H5'	1.60	0.82
1:AA:437:U:O2'	6:AD:123:HIS:CD2	2.32	0.82
6:AD:205:GLU:CD	7:AE:107:ARG:HH21	1.81	0.82
1:AA:128:G:C5'	19:AQ:2:PRO:C	2.48	0.82
19:AQ:104:LYS:CE	23:B0:729:A:N7	2.42	0.82
1:AA:1256:A:C5'	1:AA:1258:G:C1'	2.50	0.82
1:AA:1501:C:OP1	1:AA:1508:G:C4'	2.27	0.82
1:AA:212:G:HO3'	1:AA:213:G:P	1.99	0.82
1:AA:38:G:H4'	1:AA:547:A:H62	1.43	0.82
1:AA:406:G:C5	1:AA:496:A:N7	2.48	0.82
7:AE:118:ILE:HG22	7:AE:119:LEU:N	1.95	0.82
1:AA:376:G:P	18:AP:67:THR:HG21	2.19	0.82
1:AA:1190:G:O2'	1:AA:1191:A:P	2.39	0.81
1:AA:893:C:N4	1:AA:894:G:O6	2.13	0.81
1:AA:1298:C:H2'	9:AG:114:ARG:NH2	1.94	0.81
1:AA:653:A:O5'	10:AH:56:LYS:CE	2.27	0.81
12:AJ:62:HIS:CB	16:AN:59:ALA:CB	2.11	0.81
20:AR:55:ARG:NH1	20:AR:55:ARG:HB3	1.95	0.81
21:AS:29:ARG:O	21:AS:30:LEU:HB2	1.80	0.81
23:B0:1062:G:O3'	23:B0:1063:C:P	2.38	0.81
2:AW:76:A:N3	23:B0:2562:G:C2	2.47	0.81
23:B0:831:G:H21	23:B0:1203:A:H62	1.25	0.81
1:AA:335:C:O4'	1:AA:1434:A:C4'	2.26	0.81
1:AA:502:G:H1'	1:AA:550:G:H5'	1.63	0.81
6:AD:205:GLU:CD	7:AE:107:ARG:NH2	2.34	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1060:C:O2'	12:AJ:56:HIS:HD2	1.24	0.81
1:AA:1060:C:C5'	12:AJ:52:GLY:CA	2.59	0.81
1:AA:1069:C:O4'	1:AA:1191:A:C2	2.32	0.81
1:AA:1015:A:C2'	1:AA:1219:U:H5'	2.10	0.81
6:AD:205:GLU:CD	7:AE:107:ARG:HE	1.82	0.81
9:AG:75:VAL:CG1	9:AG:86:GLN:HB3	2.10	0.81
23:B0:1856:U:C5	23:B0:3865:A:C5	2.67	0.81
23:B0:789:G:H21	23:B0:806:A:H62	1.25	0.81
23:B0:3866:A:HO2'	55:B5:194:ALA:CA	1.93	0.81
1:AA:1194:U:H4'	7:AE:22:GLY:CA	2.07	0.81
1:AA:1416:G:C5'	1:AA:1417:G:P	2.68	0.81
1:AA:877:C:H5''	10:AH:88:LYS:CD	2.09	0.81
1:AA:108:G:C8	22:AT:12:ALA:HB1	2.15	0.81
23:B0:3118:U:N3	23:B0:3149:G:H5'	1.88	0.81
1:AA:1256:A:H4'	1:AA:1258:G:C8	2.16	0.81
1:AA:236:G:O5'	19:AQ:40:LYS:NZ	2.08	0.81
23:B0:3108:G:C2	23:B0:3109:U:C5	2.69	0.81
1:AA:264:U:O2'	19:AQ:64:PRO:C	2.18	0.81
1:AA:45:U:OP1	1:AA:307:C:O2'	1.98	0.81
1:AA:406:G:C5	1:AA:496:A:C5	2.69	0.81
1:AA:323:U:O4'	22:AT:19:SER:CB	2.29	0.81
23:B0:1034:U:H1'	23:B0:1133:G:H5''	1.61	0.81
2:AV:75:C:N4	23:B0:2231:G:N2	2.29	0.81
1:AA:319:G:O2'	1:AA:1434:A:N1	2.14	0.81
1:AA:69:G:O2'	1:AA:101:A:H2	1.63	0.81
4:AB:132:LYS:HA	4:AB:135:GLN:HB3	1.63	0.81
1:AA:323:U:OP1	22:AT:22:ARG:O	1.97	0.81
1:AA:919:A:C2	1:AA:1080:A:H2	1.97	0.81
1:AA:248:C:O2'	1:AA:283:C:C4'	2.28	0.81
1:AA:538:G:H4'	14:AL:114:LYS:CD	2.10	0.81
1:AA:69:G:C2'	1:AA:101:A:N1	2.44	0.81
5:AC:8:ILE:HG23	5:AC:16:ARG:HG2	1.60	0.81
6:AD:150:GLU:HA	6:AD:153:ARG:HE	1.44	0.81
17:AO:78:TYR:CZ	17:AO:82:ILE:HD11	2.15	0.81
1:AA:99:C:O2	1:AA:101:A:N7	2.14	0.81
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.15	0.81
1:AA:1394:A:C6	1:AA:1501:C:H5''	2.16	0.81
6:AD:88:VAL:CG1	7:AE:97:GLY:CA	2.17	0.81
22:AT:43:LEU:HD13	22:AT:51:GLU:HG3	1.62	0.81
23:B0:1807:A:H4'	23:B0:1808:C:H5'	1.61	0.81
2:AV:12:U:OP1	23:B0:1891:C:H1'	1.81	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:131:C:O2	1:AA:262:A:H2	1.61	0.81
1:AA:190:A:H61	22:AT:104:LEU:CA	1.90	0.81
1:AA:237:C:H5''	19:AQ:25:ARG:CZ	2.11	0.81
1:AA:131:C:C2'	1:AA:262:A:H1'	2.10	0.81
1:AA:376:G:OP1	18:AP:5:ARG:HB2	1.80	0.81
1:AA:866:C:C5'	1:AA:919:A:H5'	2.11	0.81
1:AA:1484:C:C4'	23:B0:1943:A:O2'	2.29	0.81
23:B0:2227:C:H2'	23:B0:2228:U:H5'	1.63	0.81
1:AA:1190:G:HO2'	1:AA:1191:A:P	2.04	0.80
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.44	0.80
1:AA:319:G:C5'	1:AA:1468:A:H4'	2.06	0.80
1:AA:1483:A:C4	1:AA:1484:C:C5	2.69	0.80
1:AA:1392:G:C4'	1:AA:1531:A:H5'	2.06	0.80
1:AA:619:U:O2'	6:AD:138:TYR:CE1	2.34	0.80
6:AD:205:GLU:HG2	7:AE:107:ARG:HH21	1.45	0.80
1:AA:1194:U:H5''	7:AE:22:GLY:O	1.81	0.80
2:AV:12:U:P	23:B0:1891:C:O2'	2.39	0.80
23:B0:878:C:H42	23:B0:921:A:H62	1.28	0.80
24:B9:73:C:HO3'	24:B9:74:A:P	2.03	0.80
1:AA:1015:A:O2'	1:AA:1219:U:C5'	2.28	0.80
1:AA:1499:A:H4'	1:AA:1520:G:O3'	1.81	0.80
4:AB:101:MET:HA	4:AB:108:ILE:HD12	1.63	0.80
4:AB:27:LYS:HD3	4:AB:195:ASP:OD2	1.82	0.80
1:AA:826:C:H1'	10:AH:15:ASN:ND2	1.96	0.80
1:AA:1014:A:C6	21:AS:34:TRP:CE2	2.70	0.80
1:AA:651:C:C4	1:AA:652:U:C4	2.69	0.80
1:AA:995:C:O2	16:AN:4:LYS:HD3	1.80	0.80
1:AA:262:A:H5''	22:AT:75:ASN:H	1.45	0.80
1:AA:1155:G:H3'	1:AA:1156:G:P	2.21	0.80
1:AA:1422:G:OP1	33:BI:60:PRO:CA	2.30	0.80
1:AA:66:G:H4'	1:AA:199:G:H4'	1.63	0.80
1:AA:976:G:OP1	16:AN:32:SER:HA	1.82	0.80
1:AA:113:G:H1'	1:AA:354:G:C5'	2.12	0.80
6:AD:205:GLU:CD	7:AE:107:ARG:NE	2.35	0.80
9:AG:75:VAL:HG11	9:AG:86:GLN:HB3	1.63	0.80
12:AJ:47:PHE:CE2	16:AN:37:PHE:CE1	2.70	0.80
1:AA:526:C:OP1	14:AL:91:LYS:HE2	1.81	0.80
1:AA:237:C:C5'	19:AQ:25:ARG:CZ	2.60	0.80
1:AA:38:G:H5'	1:AA:547:A:H61	0.98	0.80
1:AA:848:G:O2'	1:AA:849:C:O4'	1.99	0.80
6:AD:57:ARG:NH2	7:AE:107:ARG:HD2	1.94	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AM:94:ARG:HH22	21:AS:81:ARG:NH1	1.79	0.80
1:AA:1111:A:N1	5:AC:177:THR:HA	1.95	0.80
1:AA:13:U:H1'	1:AA:914:A:H5'	1.63	0.80
1:AA:262:A:OP2	22:AT:76:ALA:CB	2.28	0.80
1:AA:305:G:O3'	1:AA:306:G:P	2.40	0.80
1:AA:38:G:C5'	1:AA:547:A:H62	1.91	0.80
1:AA:59:A:H3'	1:AA:331:G:N2	1.94	0.80
1:AA:815:A:N6	1:AA:1508:G:N2	2.28	0.80
2:AV:32:C:OP2	11:AI:127:LYS:CE	2.29	0.80
14:AL:67:THR:HG22	14:AL:96:VAL:HG13	1.63	0.80
23:B0:225:G:H3'	23:B0:226:C:C5'	2.09	0.80
1:AA:1285:A:H4'	1:AA:1286:A:O5'	1.82	0.80
1:AA:128:G:H1'	19:AQ:61:GLU:CD	2.02	0.80
6:AD:88:VAL:CG2	7:AE:96:PRO:C	2.48	0.80
2:AV:1:G:H22	2:AV:2:C:H41	1.25	0.80
2:AV:74:C:N3	23:B0:2231:G:N2	2.30	0.80
1:AA:104:G:H4'	1:AA:172:A:C2	2.17	0.80
1:AA:1060:C:C2'	12:AJ:56:HIS:CD2	2.64	0.80
1:AA:322:C:H4'	22:AT:23:ARG:HD2	0.80	0.80
1:AA:376:G:H5''	18:AP:5:ARG:HD2	1.61	0.80
12:AJ:8:LEU:CD2	12:AJ:96:ILE:HG12	2.11	0.80
14:AL:28:LYS:HD2	14:AL:33:ARG:HH22	1.47	0.80
15:AM:22:ILE:HD12	15:AM:25:ILE:HD12	1.61	0.80
23:B0:1072:U:C4	31:BG:10:LEU:CA	2.64	0.80
1:AA:547:A:C4'	1:AA:548:G:P	2.70	0.80
1:AA:829:G:O2'	4:AB:24:TRP:NE1	2.14	0.80
8:AF:30:LEU:HB3	8:AF:35:ALA:HB3	1.62	0.80
7:AE:79:GLU:CD	10:AH:105:ARG:CD	2.50	0.80
1:AA:1016:A:H5'	16:AN:15:LYS:HE3	1.63	0.80
12:AJ:45:ARG:NH2	16:AN:36:PHE:CE2	2.50	0.80
1:AA:264:U:O2'	19:AQ:63:ARG:HD2	1.82	0.80
1:AA:1182:G:H5'	1:AA:1184:G:H5'	1.64	0.79
1:AA:128:G:C5'	19:AQ:2:PRO:O	2.29	0.79
1:AA:132:C:H5'	1:AA:262:A:H1'	1.63	0.79
1:AA:188:C:C2	22:AT:105:SER:O	2.35	0.79
1:AA:914:A:C3'	1:AA:915:A:O4'	2.29	0.79
1:AA:9:G:O5'	7:AE:126:ARG:CZ	2.30	0.79
9:AG:149:ARG:CZ	13:AK:59:TYR:CZ	2.65	0.79
2:AW:76:A:C2	23:B0:2486:C:O2	2.34	0.79
1:AA:1116:C:C2'	1:AA:1117:G:H5''	2.12	0.79
1:AA:1341:U:H5'	2:AV:32:C:H5''	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:255:G:C4'	19:AQ:17:LYS:HB2	2.12	0.79
10:AH:90:GLY:O	10:AH:91:ARG:HB2	1.83	0.79
1:AA:255:G:C1'	19:AQ:16:GLN:CB	2.60	0.79
1:AA:673:G:H2'	1:AA:674:G:C8	2.17	0.79
1:AA:588:G:C8	1:AA:753:A:N3	2.50	0.79
1:AA:835:U:OP1	20:AR:60:GLY:C	2.19	0.79
23:B0:3874:C:C4	23:B0:3875:A:C5	2.70	0.79
1:AA:323:U:C4'	22:AT:22:ARG:CB	2.53	0.79
5:AC:15:THR:O	5:AC:16:ARG:HB2	1.82	0.79
5:AC:191:THR:HG22	5:AC:193:TYR:H	1.44	0.79
4:AB:195:ASP:HB3	10:AH:74:PRO:HD2	1.64	0.79
13:AK:54:ARG:NH1	13:AK:54:ARG:HB3	1.97	0.79
2:AV:11:C:C5'	23:B0:1892:C:H4'	2.12	0.79
1:AA:1490:C:H6	1:AA:1490:C:H5'	1.47	0.79
1:AA:779:C:C5'	13:AK:120:ARG:HG2	2.11	0.79
19:AQ:96:GLN:CD	23:B0:725:C:C1'	2.38	0.79
23:B0:1098:G:C2	23:B0:1113:C:N4	2.41	0.79
23:B0:3877:A:N9	23:B0:1861:G:C8	2.51	0.79
1:AA:131:C:H1'	1:AA:262:A:H2	1.41	0.79
1:AA:707:C:C5'	13:AK:85:ARG:NH1	2.32	0.79
1:AA:266:G:H5'	19:AQ:66:SER:CA	2.13	0.79
2:AW:74:C:H5	23:B0:2533:U:H3	0.83	0.79
23:B0:1572:C:C2'	23:B0:1573:G:H5''	2.11	0.79
1:AA:185:A:O2'	1:AA:186:C:P	2.41	0.79
1:AA:1190:G:OP1	5:AC:5:ILE:N	2.16	0.79
1:AA:1342:C:C4'	11:AI:125:TYR:CE2	2.65	0.79
1:AA:1238:A:H2	1:AA:1241:G:O2'	1.64	0.79
1:AA:1416:G:O3'	1:AA:1417:G:H5''	1.81	0.79
1:AA:190:A:C5	22:AT:104:LEU:O	2.36	0.79
1:AA:265:G:C5'	19:AQ:65:ILE:N	2.42	0.79
19:AQ:93:GLN:NE2	23:B0:727:U:OP2	2.15	0.79
22:AT:54:LYS:HG3	22:AT:100:ILE:CD1	2.13	0.79
1:AA:265:G:O4'	19:AQ:64:PRO:CB	2.31	0.79
4:AB:84:GLU:OE1	4:AB:216:SER:HA	1.83	0.79
1:AA:1434:A:C3'	1:AA:1435:G:C4'	2.60	0.79
1:AA:1410:G:C2	1:AA:1491:G:N1	2.51	0.79
1:AA:1499:A:O4'	1:AA:1520:G:H4'	1.82	0.79
1:AA:160:A:N6	1:AA:347:G:H21	1.80	0.79
6:AD:25:ARG:C	6:AD:27:TYR:H	1.85	0.79
1:AA:779:C:C2'	13:AK:120:ARG:CD	2.59	0.79
1:AA:1484:C:O3'	23:B0:1943:A:C3'	2.31	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:653:A:C4'	10:AH:56:LYS:HE2	2.13	0.78
1:AA:322:C:O3'	22:AT:23:ARG:HA	1.74	0.78
1:AA:1416:G:C3'	1:AA:1417:G:P	2.69	0.78
1:AA:205:G:N2	1:AA:207:C:H5	1.80	0.78
12:AJ:47:PHE:CE2	16:AN:37:PHE:HE1	2.01	0.78
1:AA:815:A:C5	1:AA:1527:C:O2	2.36	0.78
1:AA:401:C:O2'	1:AA:621:A:C2	2.35	0.78
1:AA:651:C:H2'	1:AA:652:U:C6	2.17	0.78
1:AA:256:U:C5'	19:AQ:17:LYS:CE	2.61	0.78
1:AA:1014:A:C5'	21:AS:14:HIS:HB3	2.12	0.78
1:AA:189:A:OP2	22:AT:105:SER:HB2	1.83	0.78
23:B0:471:A:H62	23:B0:480:G:H21	1.31	0.78
1:AA:318:G:N2	1:AA:1433:A:C2	2.49	0.78
1:AA:212:G:O2'	1:AA:213:G:H5'	1.82	0.78
21:AS:31:ILE:HG22	21:AS:32:LYS:N	1.99	0.78
1:AA:236:G:OP1	19:AQ:40:LYS:HE2	1.82	0.78
1:AA:825:G:N2	10:AH:11:THR:HG21	1.97	0.78
1:AA:923:A:C4'	1:AA:1398:A:C6	2.66	0.78
1:AA:619:U:O2'	6:AD:138:TYR:HE1	1.66	0.78
6:AD:150:GLU:H	6:AD:150:GLU:CD	1.86	0.78
23:B0:895:G:H8	23:B0:895:G:H5'	1.48	0.78
1:AA:1483:A:H2'	1:AA:1484:C:C5	2.19	0.78
1:AA:264:U:O2'	19:AQ:63:ARG:CG	2.31	0.78
1:AA:377:G:P	18:AP:3:LYS:NZ	2.56	0.78
1:AA:406:G:C6	1:AA:496:A:C8	2.72	0.78
1:AA:893:C:H2'	1:AA:894:G:H8	1.49	0.78
6:AD:205:GLU:OE2	7:AE:107:ARG:CZ	2.32	0.78
7:AE:43:LEU:HD11	7:AE:132:ALA:HB1	1.64	0.78
9:AG:66:VAL:HG12	9:AG:70:LYS:HE3	1.65	0.78
14:AL:126:LYS:H	14:AL:126:LYS:HD2	1.48	0.78
1:AA:1090:U:O4'	1:AA:1169:A:H2	1.67	0.78
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.48	0.78
1:AA:1496:C:O2	1:AA:1517:G:N2	2.17	0.78
1:AA:1505:G:O2'	1:AA:1506:U:P	2.41	0.78
1:AA:43:C:OP1	18:AP:12:LYS:CD	2.30	0.78
1:AA:837:G:H2'	1:AA:838:C:C6	2.18	0.78
1:AA:9:G:OP2	7:AE:126:ARG:CZ	2.32	0.78
14:AL:70:ILE:HD13	14:AL:77:LEU:HD12	1.63	0.78
16:AN:14:PRO:C	16:AN:16:PHE:H	1.86	0.78
1:AA:129:U:P	19:AQ:3:LYS:HZ2	2.05	0.78
1:AA:1014:A:H5''	21:AS:14:HIS:HB3	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AM:84:ILE:CG2	21:AS:65:ASN:ND2	2.46	0.78
15:AM:93:ARG:HH11	23:B0:900:U:H5''	1.46	0.78
1:AA:191:G:C8	1:AA:192:U:C6	2.71	0.78
1:AA:22:G:N2	1:AA:913:A:C2'	2.42	0.78
1:AA:1343:G:P	11:AI:125:TYR:OH	2.41	0.78
22:AT:54:LYS:HG3	22:AT:100:ILE:HD13	1.65	0.78
23:B0:1252:C:C2'	23:B0:1253:C:H5''	2.13	0.78
23:B0:403:A:H4'	23:B0:425:A:H5'	1.63	0.78
2:AW:17:U:O4	23:B0:895:G:OP1	2.00	0.78
1:AA:1458:G:N7	1:AA:1459:C:C2	2.52	0.78
1:AA:262:A:H5''	22:AT:75:ASN:N	1.99	0.78
5:AC:150:LYS:HE2	5:AC:152:ILE:HD11	1.66	0.78
1:AA:1318:A:H4'	21:AS:10:PHE:CE1	2.19	0.78
1:AA:188:C:N1	22:AT:105:SER:O	2.17	0.78
23:B0:1679:U:H3'	23:B0:1680:U:H5''	1.66	0.78
23:B0:225:G:C3'	23:B0:226:C:H5'	2.13	0.78
1:AA:1271:G:H5'	1:AA:1314:C:H5''	1.66	0.78
1:AA:1483:A:C4	1:AA:1484:C:C6	2.72	0.78
1:AA:319:G:H21	1:AA:1434:A:C1'	1.93	0.78
4:AB:8:LYS:O	4:AB:9:GLU:HB2	1.81	0.78
1:AA:1014:A:C4	21:AS:34:TRP:CG	2.72	0.78
1:AA:1484:C:H5''	23:B0:1943:A:O2'	1.84	0.78
19:AQ:94:ASN:CA	23:B0:726:G:C1'	2.62	0.78
5:AC:5:ILE:CG2	12:AJ:51:ARG:HH12	1.96	0.77
6:AD:57:ARG:NH2	7:AE:107:ARG:CZ	2.47	0.77
14:AL:120:TYR:O	14:AL:122:THR:HG23	1.83	0.77
18:AP:21:VAL:HG21	18:AP:59:TRP:CD1	2.19	0.77
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.19	0.77
1:AA:13:U:H4'	1:AA:914:A:OP1	1.84	0.77
1:AA:923:A:N9	1:AA:1398:A:C2	2.52	0.77
4:AB:77:ALA:HB2	4:AB:211:ILE:CD1	2.10	0.77
1:AA:1342:C:H4'	11:AI:125:TYR:CZ	2.13	0.77
1:AA:1458:G:N9	1:AA:1459:C:H2'	1.95	0.77
1:AA:929:G:P	1:AA:1533:C:H41	2.07	0.77
1:AA:186:C:C1'	22:AT:60:GLU:OE1	2.31	0.77
1:AA:243:A:C4'	1:AA:244:U:H5'	2.14	0.77
5:AC:23:TYR:CE1	12:AJ:67:THR:HG23	2.19	0.77
5:AC:135:LYS:CE	7:AE:50:GLU:OE2	2.32	0.77
8:AF:95:GLU:H	8:AF:95:GLU:CD	1.85	0.77
7:AE:64:ARG:O	7:AE:65:ASN:HB3	1.84	0.77
7:AE:151:LEU:HD11	10:AH:77:GLU:OE2	1.83	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AL:41:ARG:CG	14:AL:42:THR:H	1.88	0.77
1:AA:254:G:H21	19:AQ:16:GLN:CD	1.87	0.77
1:AA:1340:A:C1'	2:AV:31:A:O2'	2.33	0.77
1:AA:1416:G:C2'	1:AA:1417:G:C5'	2.40	0.77
1:AA:1434:A:H3'	1:AA:1435:G:C5'	2.14	0.77
1:AA:130:A:C6	1:AA:264:U:C2	2.72	0.77
1:AA:161:A:N3	1:AA:348:G:O2'	2.16	0.77
1:AA:545:C:O2'	1:AA:549:C:OP1	2.03	0.77
1:AA:1305:G:C2'	1:AA:1306:A:H8	1.97	0.77
1:AA:9:G:P	7:AE:126:ARG:CZ	2.72	0.77
1:AA:234:C:HO2'	19:AQ:70:ARG:HG2	1.48	0.77
8:AF:100:ASN:HD22	20:AR:23:LYS:HG2	1.49	0.77
23:B0:2491:C:H2'	23:B0:2492:G:H5''	1.67	0.77
23:B0:3118:U:N3	23:B0:3148:G:O2'	2.08	0.77
1:AA:13:U:C4'	1:AA:914:A:OP1	2.33	0.77
1:AA:1498:U:O4'	1:AA:1519:A:H2	1.68	0.77
1:AA:923:A:O2'	1:AA:1398:A:H3'	1.85	0.77
23:B0:1067:G:H5'	23:B0:1068:A:C5'	2.11	0.77
2:AW:75:C:C2	23:B0:2532:G:N2	2.53	0.77
23:B0:3185:U:H5'	23:B0:3185:U:H6	1.49	0.77
1:AA:1014:A:C4'	21:AS:14:HIS:CD2	2.68	0.77
1:AA:397:A:C5	1:AA:547:A:H1'	2.19	0.77
1:AA:436:C:H2'	1:AA:437:U:H6	1.50	0.77
1:AA:89:G:C3'	1:AA:90:C:P	2.72	0.77
17:AO:16:ALA:HB1	17:AO:21:ASP:HB3	1.64	0.77
1:AA:69:G:O2'	1:AA:101:A:C2	2.37	0.77
1:AA:538:G:C4'	14:AL:114:LYS:HD3	2.15	0.77
1:AA:7:G:N3	7:AE:121:LYS:HG2	2.00	0.77
1:AA:958:A:C2	21:AS:55:LYS:HB2	2.19	0.77
9:AG:95:ARG:HH11	9:AG:95:ARG:HG3	1.50	0.77
14:AL:75:HIS:CD2	14:AL:77:LEU:H	1.97	0.77
2:AW:25:C:O2'	2:AW:26:G:H5'	1.85	0.77
23:B0:940:G:H3'	23:B0:941:U:C5'	2.07	0.77
1:AA:216:C:H5'	1:AA:465:C:H41	1.49	0.76
1:AA:848:G:O3'	1:AA:849:C:H5'	1.85	0.76
23:B0:2808:U:H3'	23:B0:2809:A:H5'	1.67	0.76
23:B0:894:G:H2'	23:B0:895:G:H5''	1.65	0.76
1:AA:421:U:N1	5:AC:127:ARG:NH2	2.33	0.76
4:AB:36:ARG:HD2	4:AB:41:ILE:HD12	1.68	0.76
23:B0:1856:U:C6	23:B0:3865:A:N7	2.53	0.76
23:B0:3128:G:C4'	23:B0:3174:C:O4'	2.29	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:762:C:H5'	23:B0:729:A:H61	1.51	0.76
8:AF:67:MET:HE1	8:AF:72:VAL:HA	1.66	0.76
14:AL:75:HIS:HD2	14:AL:77:LEU:N	1.82	0.76
23:B0:3109:U:C5'	23:B0:3150:C:H5'	2.15	0.76
1:AA:253:U:O2	1:AA:275:G:O2'	1.97	0.76
1:AA:264:U:HO2'	19:AQ:64:PRO:C	1.87	0.76
1:AA:893:C:H2'	1:AA:894:G:C8	2.21	0.76
14:AL:126:LYS:H	14:AL:126:LYS:CD	1.96	0.76
17:AO:17:ARG:HH11	17:AO:17:ARG:HG3	1.49	0.76
1:AA:265:G:O4'	19:AQ:64:PRO:HB2	1.85	0.76
2:AV:75:C:OP1	23:B0:2581:A:H5''	1.84	0.76
23:B0:1067:G:C5'	23:B0:1068:A:H5'	2.10	0.76
23:B0:3128:G:HO2'	23:B0:3174:C:C5'	1.76	0.76
1:AA:1409:C:C2	1:AA:1410:G:C8	2.74	0.76
1:AA:1483:A:O2'	1:AA:1484:C:P	2.43	0.76
4:AB:57:PHE:O	4:AB:60:ASP:HB3	1.85	0.76
2:AW:33:U:C2	2:AW:35:A:C5'	2.65	0.76
1:AA:1497:G:O2'	1:AA:1518:A:C2	2.36	0.76
1:AA:456:A:C6	1:AA:477:G:N3	2.54	0.76
1:AA:1014:A:N3	21:AS:34:TRP:CG	2.54	0.76
1:AA:333:G:HO2'	22:AT:16:HIS:CE1	2.03	0.76
1:AA:323:U:P	22:AT:23:ARG:N	2.56	0.76
1:AA:1428:A:O2'	23:B0:1703:C:H1'	1.86	0.76
1:AA:653:A:C8	10:AH:56:LYS:HG2	2.21	0.76
1:AA:588:G:C6	1:AA:753:A:C8	2.74	0.76
1:AA:452:A:H4'	18:AP:72:ARG:NH2	2.00	0.76
22:AT:14:LYS:O	22:AT:18:GLN:HG3	1.86	0.76
23:B0:1113:C:O3'	23:B0:1114:A:OP2	2.04	0.76
23:B0:1528:C:H2'	23:B0:1529:C:H5''	1.67	0.76
1:AA:1473:A:O2'	23:B0:1718:A:C6	2.39	0.76
1:AA:1226:C:H4'	1:AA:1227:A:OP1	1.84	0.76
1:AA:319:G:H2'	1:AA:1434:A:C2	2.21	0.76
1:AA:188:C:C2	22:AT:89:ARG:NH1	2.45	0.76
1:AA:893:C:C4	1:AA:894:G:C5	2.73	0.76
6:AD:162:LEU:HD13	6:AD:181:MET:HG2	1.68	0.76
11:AI:118:LYS:O	11:AI:119:ALA:HB3	1.85	0.76
19:AQ:94:ASN:HA	23:B0:726:G:O4'	1.83	0.76
20:AR:55:ARG:HH11	20:AR:55:ARG:HB3	1.50	0.76
1:AA:1014:A:C5'	21:AS:14:HIS:CD2	2.69	0.76
1:AA:1321:C:H42	21:AS:37:ARG:CZ	1.98	0.76
2:AW:76:A:C2	23:B0:2532:G:C2	2.74	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1505:G:HO2'	1:AA:1506:U:P	2.09	0.76
14:AL:59:ARG:HD3	14:AL:65:GLU:HG3	1.68	0.76
21:AS:40:ILE:HD13	21:AS:62:ILE:HD13	1.68	0.76
23:B0:357:A:H2'	23:B0:358:C:H5'	1.66	0.76
24:B9:107:C:H2'	24:B9:108:G:H5'	1.68	0.76
1:AA:1256:A:H5'	1:AA:1258:G:N9	2.00	0.75
1:AA:249:U:H3'	1:AA:250:A:P	2.26	0.75
5:AC:110:ASN:O	5:AC:111:LEU:HD23	1.85	0.75
5:AC:19:GLU:HB3	5:AC:40:ARG:HH21	1.50	0.75
19:AQ:97:SER:OG	19:AQ:103:GLY:HA2	1.85	0.75
2:AV:1:G:H21	2:AV:2:C:N4	1.81	0.75
23:B0:68:C:H1'	23:B0:72:A:H1'	1.68	0.75
1:AA:1473:A:O4'	23:B0:1719:G:H1'	1.85	0.75
1:AA:1392:G:C4'	1:AA:1531:A:H5''	2.15	0.75
1:AA:246:A:C4'	1:AA:247:G:H4'	2.16	0.75
1:AA:328:C:O2	1:AA:328:C:H2'	1.85	0.75
1:AA:866:C:H4'	1:AA:919:A:OP1	1.86	0.75
4:AB:139:LYS:O	4:AB:143:GLU:HG2	1.86	0.75
8:AF:86:ARG:O	8:AF:87:ARG:HG2	1.85	0.75
1:AA:826:C:H1'	10:AH:15:ASN:HD22	1.50	0.75
15:AM:4:ILE:HG22	15:AM:5:ALA:N	2.00	0.75
12:AJ:51:ARG:O	16:AN:45:ARG:CZ	2.34	0.75
23:B0:1919:A:H5''	23:B0:1920:A:O5'	1.86	0.75
23:B0:3874:C:N4	23:B0:3875:A:C6	2.54	0.75
23:B0:3874:C:C4	23:B0:3875:A:N7	2.54	0.75
1:AA:1405:G:N3	1:AA:1518:A:O2'	2.19	0.75
1:AA:556:C:C2	1:AA:557:G:C8	2.73	0.75
1:AA:992:U:H4'	1:AA:993:G:O5'	1.86	0.75
4:AB:16:HIS:NE2	4:AB:214:ILE:HG12	2.01	0.75
1:AA:1206:G:H4'	5:AC:192:THR:O	1.86	0.75
7:AE:79:GLU:OE1	10:AH:105:ARG:HD3	1.85	0.75
18:AP:74:LEU:O	18:AP:79:VAL:HG23	1.86	0.75
23:B0:3866:A:N6	55:B5:45:ASP:CA	2.49	0.75
1:AA:1025:U:H2'	1:AA:1026:G:C8	2.21	0.75
1:AA:1484:C:O2'	23:B0:1943:A:C4'	2.34	0.75
19:AQ:95:TYR:C	19:AQ:97:SER:H	1.89	0.75
2:AV:76:A:H5'	23:B0:2564:U:O4'	1.87	0.75
23:B0:2806:G:H1'	23:B0:2858:A:H2'	1.68	0.75
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.22	0.75
1:AA:1492:A:H2'	1:AA:1493:A:O4'	1.87	0.75
1:AA:653:A:C8	10:AH:56:LYS:HB3	2.22	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:820:U:O2	1:AA:873:A:N7	2.20	0.75
6:AD:88:VAL:CG2	7:AE:97:GLY:N	2.42	0.75
19:AQ:101:ARG:NH1	23:B0:731:A:N3	2.32	0.75
1:AA:265:G:O3'	19:AQ:66:SER:N	2.18	0.75
23:B0:1199:U:H3'	23:B0:1200:G:C5'	2.17	0.75
1:AA:69:G:C1'	1:AA:102:G:N1	2.50	0.75
1:AA:572:A:C2	1:AA:917:G:H1'	2.22	0.75
4:AB:197:VAL:HB	4:AB:200:ILE:HG12	1.66	0.75
1:AA:676:A:O2'	13:AK:115:PRO:HB3	1.86	0.75
23:B0:1094:C:HO2'	23:B0:1096:A:H2	1.32	0.75
2:AW:74:C:C4	23:B0:2534:U:C6	2.50	0.75
1:AA:292:G:C2'	1:AA:608:A:H61	1.98	0.75
5:AC:52:LEU:HD23	5:AC:52:LEU:N	2.02	0.75
6:AD:57:ARG:NH2	7:AE:107:ARG:NE	2.15	0.75
12:AJ:61:GLU:OE2	16:AN:58:LYS:NZ	2.19	0.75
1:AA:1075:C:OP1	4:AB:179:LYS:NZ	2.17	0.75
1:AA:1190:G:O2'	1:AA:1191:A:OP2	2.05	0.75
1:AA:27:G:N9	1:AA:557:G:N2	2.34	0.75
1:AA:651:C:N4	1:AA:652:U:O4	2.20	0.75
1:AA:757:U:O2'	1:AA:879:C:H1'	1.87	0.75
5:AC:50:ALA:HB1	5:AC:70:VAL:HG11	1.68	0.75
15:AM:49:THR:HG22	15:AM:51:ALA:N	2.02	0.75
1:AA:1342:C:H4'	11:AI:125:TYR:CG	2.22	0.75
1:AA:1398:A:H5'	1:AA:1399:C:OP1	1.86	0.75
1:AA:497:A:HO2'	1:AA:498:U:P	2.08	0.75
1:AA:893:C:C5	1:AA:894:G:N7	2.55	0.75
12:AJ:45:ARG:NH1	16:AN:36:PHE:CD2	2.54	0.75
24:B9:114:C:C2'	24:B9:115:G:H5''	2.17	0.75
1:AA:816:A:OP2	1:AA:1527:C:H5'	1.87	0.74
1:AA:1060:C:H5'	12:AJ:52:GLY:HA2	1.68	0.74
12:AJ:82:ILE:O	12:AJ:86:MET:HB2	1.86	0.74
19:AQ:95:TYR:O	19:AQ:97:SER:N	2.19	0.74
2:AW:75:C:C2'	23:B0:2486:C:O2'	2.34	0.74
1:AA:848:G:H2'	1:AA:849:C:C1'	2.18	0.74
5:AC:52:LEU:CD2	5:AC:52:LEU:H	2.00	0.74
13:AK:110:ASP:OD2	20:AR:88:LYS:NZ	2.20	0.74
23:B0:3877:A:C8	23:B0:1861:G:N7	2.23	0.74
1:AA:1256:A:O4'	1:AA:1258:G:C5	2.41	0.74
1:AA:274:A:H2	1:AA:275:G:H1'	1.52	0.74
1:AA:866:C:C5'	1:AA:919:A:C5'	2.65	0.74
4:AB:23:ARG:NH1	4:AB:24:TRP:N	2.35	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:116:VAL:HG21	5:AC:202:ILE:HD11	1.68	0.74
1:AA:421:U:C2	5:AC:127:ARG:NH2	2.42	0.74
23:B0:1856:U:H3'	23:B0:3865:A:N7	2.02	0.74
2:AV:76:A:C2'	23:B0:2046:C:O2	2.30	0.74
2:AW:76:A:C2'	23:B0:2485:U:H2'	2.17	0.74
1:AA:1255:G:C1'	1:AA:1259:C:H1'	2.13	0.74
14:AL:24:VAL:HG13	14:AL:98:TYR:HE2	1.50	0.74
23:B0:1029:C:H2'	23:B0:1030:U:H5''	1.68	0.74
23:B0:1915:A:H62	23:B0:1951:G:H21	1.35	0.74
23:B0:3128:G:O3'	23:B0:3174:C:H4'	1.86	0.74
15:AM:93:ARG:HD3	23:B0:900:U:C3'	2.18	0.74
1:AA:1497:G:H21	1:AA:1519:A:H1'	1.52	0.74
1:AA:66:G:C5'	1:AA:199:G:O2'	2.34	0.74
1:AA:9:G:O5'	7:AE:126:ARG:CD	2.35	0.74
4:AB:95:GLN:O	4:AB:96:ARG:HD2	1.88	0.74
5:AC:107:GLN:CD	5:AC:107:GLN:H	1.88	0.74
2:AW:76:A:C1'	23:B0:2562:G:H22	2.01	0.74
23:B0:221:A:H62	23:B0:231:G:H21	1.34	0.74
1:AA:1343:G:H4'	11:AI:122:ALA:HB3	1.70	0.74
1:AA:922:G:N3	1:AA:1396:A:N3	2.35	0.74
4:AB:23:ARG:HH11	4:AB:24:TRP:N	1.86	0.74
14:AL:27:LEU:O	14:AL:29:GLY:N	2.21	0.74
1:AA:188:C:H3'	22:AT:105:SER:OG	1.88	0.74
1:AA:323:U:C3'	22:AT:22:ARG:HB2	2.18	0.74
1:AA:1261:A:O2'	1:AA:1283:G:C5'	2.35	0.74
1:AA:1416:G:OP1	1:AA:1417:G:OP2	2.05	0.74
1:AA:476:U:H2'	1:AA:477:G:C5'	2.16	0.74
4:AB:91:PRO:HG3	4:AB:154:LEU:HB2	1.69	0.74
12:AJ:96:ILE:HG22	12:AJ:97:GLU:H	1.52	0.74
1:AA:323:U:H5''	22:AT:22:ARG:C	2.08	0.74
23:B0:67:G:N2	23:B0:72:A:H2'	2.02	0.74
1:AA:1075:C:OP1	4:AB:179:LYS:CD	2.35	0.74
1:AA:319:G:H2'	1:AA:1434:A:H2	1.52	0.74
1:AA:188:C:C3'	22:AT:105:SER:OG	2.35	0.74
1:AA:827:U:HO3'	1:AA:828:A:P	2.07	0.74
10:AH:91:ARG:HG2	14:AL:7:ILE:HG21	1.70	0.74
15:AM:3:ARG:HA	15:AM:8:GLU:O	1.86	0.74
21:AS:16:LEU:O	21:AS:19:VAL:HG12	1.87	0.74
21:AS:17:GLU:O	21:AS:21:GLU:HG3	1.87	0.74
23:B0:1856:U:C6	23:B0:3865:A:C5	2.75	0.74
1:AA:1393:U:O2'	1:AA:1394:A:H2'	1.88	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1409:C:C2'	1:AA:1410:G:H5'	2.18	0.74
1:AA:297:G:C4'	1:AA:557:G:H4'	2.17	0.74
1:AA:578:C:O2'	1:AA:728:A:H1'	1.88	0.74
1:AA:923:A:C4'	1:AA:1398:A:C5	2.71	0.74
4:AB:178:ARG:NH1	4:AB:178:ARG:HG3	1.92	0.74
4:AB:72:GLY:HA3	4:AB:81:VAL:HG21	1.69	0.74
6:AD:64:LEU:HD12	6:AD:75:PHE:HZ	1.53	0.74
8:AF:69:GLU:HA	8:AF:72:VAL:HG23	1.70	0.74
1:AA:319:G:O2'	1:AA:1434:A:C2	2.41	0.73
1:AA:161:A:H2'	1:AA:162:A:C8	2.23	0.73
1:AA:112:G:H21	1:AA:354:G:C5'	2.01	0.73
9:AG:23:VAL:HG12	9:AG:27:ILE:HD11	1.70	0.73
10:AH:108:GLY:HA3	10:AH:138:TRP:HB3	1.70	0.73
23:B0:2636:A:H62	23:B0:2643:G:H21	1.36	0.73
1:AA:1434:A:OP2	1:AA:1435:G:N7	2.19	0.73
1:AA:1321:C:N4	21:AS:37:ARG:NH1	2.35	0.73
23:B0:109:A:C3'	23:B0:110:U:H5''	2.18	0.73
2:AW:76:A:C4	23:B0:2486:C:H1'	2.20	0.73
1:AA:1256:A:N3	1:AA:1258:G:C6	2.57	0.73
1:AA:1279:A:H5''	1:AA:1280:A:OP1	1.88	0.73
1:AA:353:A:H5'	1:AA:353:A:H8	1.53	0.73
1:AA:792:A:H4'	1:AA:793:U:H5''	1.68	0.73
1:AA:1261:A:H4'	1:AA:1283:G:C3'	2.18	0.73
1:AA:848:G:O3'	1:AA:849:C:O5'	2.05	0.73
1:AA:893:C:C2	1:AA:894:G:C8	2.76	0.73
11:AI:44:VAL:HG13	11:AI:51:ARG:HH22	1.52	0.73
1:AA:538:G:C5'	14:AL:114:LYS:HD3	2.18	0.73
1:AA:266:G:P	19:AQ:66:SER:HA	2.27	0.73
2:AV:76:A:H5''	23:B0:2564:U:C5	2.10	0.73
1:AA:1270:C:O3'	1:AA:1314:C:C5'	2.37	0.73
1:AA:1270:C:O3'	1:AA:1314:C:H4'	1.88	0.73
1:AA:249:U:HO3'	1:AA:250:A:P	2.10	0.73
1:AA:406:G:C2	1:AA:437:U:C2	2.77	0.73
1:AA:522:C:OP1	14:AL:120:TYR:CZ	2.41	0.73
23:B0:1912:G:O3'	23:B0:1913:G:C3'	2.36	0.73
23:B0:2522:G:H21	23:B0:2625:U:H5''	1.53	0.73
23:B0:891:A:C6	23:B0:892:A:N6	2.56	0.73
1:AA:130:A:C8	19:AQ:63:ARG:CG	2.72	0.73
1:AA:406:G:C8	1:AA:496:A:C4	2.76	0.73
1:AA:828:A:H2	4:AB:26:PRO:HG2	1.44	0.73
5:AC:59:ARG:H	12:AJ:92:THR:HG22	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AL:27:LEU:HG	14:AL:28:LYS:H	1.53	0.73
1:AA:265:G:H1'	19:AQ:64:PRO:HB3	1.69	0.73
1:AA:292:G:C1'	1:AA:608:A:N6	2.50	0.73
1:AA:406:G:C5	1:AA:496:A:C8	2.77	0.73
1:AA:588:G:N9	1:AA:753:A:C2	2.56	0.73
11:AI:4:TYR:CE2	11:AI:88:TYR:HA	2.24	0.73
1:AA:1060:C:O2'	12:AJ:56:HIS:CG	2.41	0.73
1:AA:476:U:C1'	1:AA:477:G:H5'	2.19	0.73
5:AC:23:TYR:HE1	12:AJ:67:THR:HG23	1.52	0.73
12:AJ:62:HIS:CE1	16:AN:61:TRP:CZ3	2.77	0.73
1:AA:262:A:H5''	22:AT:74:LYS:HB2	1.68	0.73
1:AA:1064:G:H4'	1:AA:1065:U:C5'	2.18	0.73
1:AA:922:G:C5	1:AA:1396:A:N1	2.56	0.73
1:AA:246:A:O3'	1:AA:247:G:O4'	2.06	0.73
1:AA:434:U:H2'	1:AA:435:C:C6	2.24	0.73
1:AA:928:G:O3'	1:AA:1533:C:N4	2.21	0.73
12:AJ:45:ARG:CZ	16:AN:36:PHE:CE2	2.72	0.73
1:AA:254:G:C5'	19:AQ:18:THR:HG21	2.19	0.73
1:AA:27:G:C8	1:AA:557:G:N2	2.57	0.73
1:AA:397:A:N7	1:AA:547:A:C1'	2.39	0.73
1:AA:653:A:C1'	10:AH:56:LYS:HG2	2.19	0.73
12:AJ:61:GLU:OE2	16:AN:58:LYS:HD3	1.88	0.73
20:AR:26:LEU:HD12	20:AR:27:GLY:H	1.53	0.73
19:AQ:104:LYS:HG2	23:B0:726:G:C5	2.24	0.73
1:AA:1112:C:N3	5:AC:178:LEU:HB3	2.02	0.72
14:AL:48:PRO:HG2	14:AL:49:ASN:H	1.52	0.72
1:AA:391:G:H5'	18:AP:28:ARG:HH22	1.52	0.72
1:AA:130:A:C2	1:AA:263:A:C2	2.77	0.72
1:AA:1434:A:C3'	1:AA:1435:G:C5'	2.66	0.72
10:AH:1:MET:HG2	10:AH:2:LEU:N	2.04	0.72
2:AV:32:C:OP2	11:AI:127:LYS:HE3	1.89	0.72
17:AO:33:THR:HG23	17:AO:63:ARG:NH1	2.03	0.72
19:AQ:104:LYS:NZ	23:B0:730:C:N4	2.37	0.72
1:AA:735:C:H1'	20:AR:75:ILE:HD11	1.71	0.72
23:B0:3118:U:N3	23:B0:3149:G:C5'	2.51	0.72
19:AQ:104:LYS:HB2	23:B0:726:G:C4	2.24	0.72
1:AA:1483:A:N7	1:AA:1484:C:C4	2.57	0.72
1:AA:69:G:H1'	1:AA:102:G:C2	2.24	0.72
1:AA:819:A:C5	1:AA:1529:G:C2	2.77	0.72
1:AA:835:U:P	20:AR:64:ARG:HH21	2.11	0.72
23:B0:1119:U:H2'	23:B0:1120:C:O4'	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1908:C:H2'	23:B0:1909:U:H4'	1.71	0.72
23:B0:552:C:H2'	23:B0:553:C:H4'	1.72	0.72
1:AA:1503:A:C4	1:AA:1531:A:C2	2.77	0.72
1:AA:104:G:O4'	1:AA:172:A:H2	1.72	0.72
1:AA:588:G:C4	1:AA:753:A:C5	2.77	0.72
19:AQ:59:ILE:HG23	19:AQ:71:PHE:HB3	1.69	0.72
23:B0:367:G:C2'	23:B0:368:A:H5''	2.19	0.72
23:B0:951:G:H2'	23:B0:952:A:H5''	1.70	0.72
1:AA:1111:A:N1	5:AC:177:THR:CB	2.52	0.72
1:AA:1409:C:C2'	1:AA:1410:G:C5'	2.67	0.72
1:AA:748:C:H1'	1:AA:749:C:H5	1.53	0.72
8:AF:26:ILE:HG21	8:AF:63:TYR:HE2	1.54	0.72
10:AH:1:MET:HG2	10:AH:2:LEU:H	1.54	0.72
1:AA:685:G:OP1	13:AK:12:ARG:NH2	2.23	0.72
2:AV:32:C:P	11:AI:127:LYS:HE3	2.29	0.72
1:AA:1488:G:H2'	1:AA:1489:G:C8	2.24	0.72
1:AA:570:G:O2'	1:AA:819:A:H2'	1.89	0.72
12:AJ:61:GLU:CD	16:AN:58:LYS:HZ3	1.92	0.72
22:AT:10:LEU:O	22:AT:12:ALA:N	2.22	0.72
23:B0:3877:A:H2	23:B0:1861:G:N2	1.86	0.72
23:B0:2236:U:H2'	23:B0:2237:C:H5''	1.72	0.72
1:AA:216:C:O4'	1:AA:466:A:N1	2.22	0.72
1:AA:319:G:H4'	1:AA:1468:A:O4'	1.89	0.72
1:AA:501:C:H2'	1:AA:502:G:H8	1.53	0.72
1:AA:556:C:N3	1:AA:557:G:N7	2.38	0.72
1:AA:864:A:C2	1:AA:917:G:O2'	2.40	0.72
1:AA:914:A:C2'	1:AA:915:A:C4'	2.66	0.72
14:AL:24:VAL:HG13	14:AL:98:TYR:CE2	2.23	0.72
1:AA:132:C:H4'	22:AT:74:LYS:HD2	1.71	0.72
2:AW:71:G:H3'	23:B0:1925:C:C2'	2.19	0.72
1:AA:1398:A:C4'	1:AA:1399:C:P	2.60	0.72
1:AA:1483:A:N9	1:AA:1484:C:C5	2.58	0.72
1:AA:38:G:C4'	1:AA:547:A:C5	2.68	0.72
1:AA:27:G:N1	1:AA:557:G:C4	2.58	0.72
1:AA:9:G:OP2	7:AE:126:ARG:NH2	2.23	0.72
1:AA:779:C:C4'	13:AK:120:ARG:CB	2.67	0.72
23:B0:762:A:H5'	23:B0:1284:G:H1'	1.71	0.72
1:AA:1014:A:C2	1:AA:1219:U:H1'	2.25	0.72
1:AA:1281:U:H5'	1:AA:1282:C:C5	2.25	0.72
1:AA:1351:U:H2'	1:AA:1352:C:H6	1.55	0.72
1:AA:556:C:HO2'	1:AA:557:G:H5'	1.49	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AQ:96:GLN:NE2	23:B0:725:C:H1'	2.05	0.72
1:AA:1182:G:HO2'	1:AA:1183:A:P	2.00	0.72
1:AA:1256:A:C4'	1:AA:1258:G:C4	2.73	0.72
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.24	0.72
1:AA:37:U:O2'	1:AA:547:A:C6	2.39	0.72
1:AA:815:A:N9	1:AA:1527:C:C1'	2.48	0.72
5:AC:13:GLY:HA3	16:AN:57:ARG:HH21	1.54	0.72
2:AV:75:C:N4	23:B0:2230:G:N1	2.37	0.72
23:B0:2426:G:H5'	23:B0:2480:C:H41	1.55	0.72
23:B0:9:U:H3	23:B0:2608:A:H62	1.37	0.72
1:AA:1111:A:C6	5:AC:177:THR:HA	2.25	0.71
1:AA:376:G:OP2	18:AP:67:THR:CG2	2.28	0.71
1:AA:403:C:N3	1:AA:404:U:C5	2.58	0.71
1:AA:778:G:O2'	13:AK:120:ARG:O	2.07	0.71
23:B0:1141:U:N3	23:B0:2008:C:H5''	2.04	0.71
23:B0:1966:C:H4'	23:B0:2585:C:H4'	1.71	0.71
1:AA:46:G:O2'	1:AA:365:U:O2'	2.07	0.71
1:AA:456:A:C6	1:AA:477:G:C1'	2.61	0.71
5:AC:23:TYR:HA	12:AJ:11:PHE:CE1	2.24	0.71
12:AJ:39:PRO:O	12:AJ:40:LEU:HB2	1.89	0.71
13:AK:84:VAL:HG11	13:AK:95:ILE:HD11	1.70	0.71
19:AQ:101:ARG:NH1	23:B0:731:A:H2	1.84	0.71
19:AQ:45:HIS:HB2	19:AQ:65:ILE:HD13	1.71	0.71
23:B0:2503:G:C3'	23:B0:2504:G:H5''	2.21	0.71
23:B0:688:A:H62	23:B0:816:U:H3	1.38	0.71
23:B0:3123:G:O2'	55:B5:166:GLN:CA	2.38	0.71
1:AA:1065:U:H4'	1:AA:1066:C:O5'	1.89	0.71
1:AA:1238:A:H3'	1:AA:1239:A:P	2.30	0.71
1:AA:367:U:OP1	1:AA:395:C:O2	2.07	0.71
1:AA:21:G:O4'	1:AA:914:A:N6	2.22	0.71
4:AB:116:GLU:HG2	4:AB:153:ARG:NH1	2.04	0.71
1:AA:830:G:OP1	4:AB:22:LYS:HE2	1.90	0.71
1:AA:6:G:N3	7:AE:119:LEU:CD1	2.28	0.71
11:AI:97:LYS:HG2	11:AI:102:LEU:HD12	1.72	0.71
2:AW:44:A:O3'	2:AW:45:G:P	2.48	0.71
23:B0:2503:G:H3'	23:B0:2504:G:H5''	1.72	0.71
1:AA:923:A:O2'	1:AA:1398:A:C3'	2.38	0.71
1:AA:1416:G:C5	1:AA:1417:G:H1'	2.25	0.71
1:AA:1458:G:OP2	1:AA:1459:C:C6	2.36	0.71
1:AA:1499:A:O2'	1:AA:1520:G:H5''	1.91	0.71
1:AA:406:G:N9	1:AA:496:A:C6	2.58	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:293:G:H5'	1:AA:609:A:N1	2.01	0.71
1:AA:69:G:H2'	1:AA:101:A:N1	2.06	0.71
1:AA:977:A:H2'	1:AA:978:A:H5''	1.72	0.71
20:AR:33:ASP:OD2	20:AR:36:ASN:HB2	1.90	0.71
1:AA:332:G:P	22:AT:10:LEU:HB2	2.13	0.71
23:B0:202:A:H2'	23:B0:203:G:O4'	1.89	0.71
2:AW:76:A:H2	23:B0:2486:C:O2	1.71	0.71
1:AA:893:C:N4	1:AA:894:G:C6	2.59	0.71
23:B0:1487:C:H2'	23:B0:1488:G:H8	1.56	0.71
23:B0:3866:A:C2'	55:B5:194:ALA:CA	2.67	0.71
1:AA:1256:A:C4'	1:AA:1258:G:N9	2.53	0.71
1:AA:37:U:C1'	1:AA:547:A:N1	2.54	0.71
1:AA:829:G:HO2'	4:AB:24:TRP:HE1	1.35	0.71
11:AI:65:VAL:HG21	11:AI:73:GLN:HB3	1.72	0.71
1:AA:236:G:H5''	19:AQ:42:TYR:OH	1.91	0.71
1:AA:265:G:C3'	19:AQ:65:ILE:O	2.38	0.71
23:B0:3149:G:C3'	23:B0:3150:C:P	2.78	0.71
1:AA:1112:C:N3	5:AC:178:LEU:CB	2.54	0.71
1:AA:1411:C:H2'	1:AA:1412:C:C6	2.26	0.71
1:AA:278:G:H21	1:AA:279:A:N6	1.89	0.71
1:AA:46:G:C5	1:AA:366:C:C4	2.79	0.71
1:AA:1014:A:C4	21:AS:34:TRP:CD2	2.79	0.71
2:AW:75:C:O2'	23:B0:2486:C:C4'	2.38	0.71
1:AA:1394:A:C6	1:AA:1501:C:C5'	2.73	0.71
1:AA:1410:G:C2	1:AA:1491:G:C2	2.78	0.71
1:AA:1489:G:C3'	1:AA:1490:C:H5''	2.21	0.71
1:AA:197:A:H4'	1:AA:198:G:O5'	1.90	0.71
1:AA:262:A:H5'	22:AT:74:LYS:CG	2.20	0.71
1:AA:130:A:C2	1:AA:264:U:C5	2.78	0.71
1:AA:392:G:H2'	1:AA:393:A:H8	1.55	0.71
1:AA:914:A:H2'	1:AA:915:A:C4'	2.19	0.71
23:B0:2274:C:H2'	23:B0:2275:U:H5'	1.73	0.71
23:B0:57:G:H2'	23:B0:58:C:H5''	1.73	0.71
1:AA:1239:A:C2'	1:AA:1298:C:H42	2.03	0.71
1:AA:1430:C:H5'	23:B0:1721:G:C4'	2.21	0.71
1:AA:815:A:C6	1:AA:1508:G:N2	2.59	0.71
1:AA:815:A:C4	1:AA:1527:C:O2	2.43	0.71
1:AA:588:G:N7	1:AA:753:A:C4	2.59	0.71
12:AJ:45:ARG:NH1	16:AN:36:PHE:CE2	2.58	0.71
1:AA:263:A:P	22:AT:75:ASN:CB	2.66	0.71
2:AW:76:A:H2'	23:B0:2562:G:N2	2.02	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1473:A:C5'	23:B0:1719:G:C4'	2.65	0.71
1:AA:1491:G:H2'	1:AA:1492:A:C8	2.26	0.71
1:AA:195:A:O2'	1:AA:222:U:O2'	2.06	0.71
1:AA:651:C:C5	1:AA:752:G:O2'	2.43	0.71
6:AD:201:GLN:HE22	7:AE:99:GLY:HA2	1.56	0.71
11:AI:111:ARG:HD3	11:AI:112:LYS:N	2.06	0.71
12:AJ:65:LEU:O	12:AJ:65:LEU:HD23	1.91	0.71
15:AM:40:ASN:HB3	15:AM:43:THR:HG23	1.73	0.71
1:AA:223:U:H5''	22:AT:68:LYS:NZ	2.05	0.71
2:AW:75:C:O2'	23:B0:2486:C:O3'	2.08	0.71
23:B0:1182:U:C2'	23:B0:1183:C:H5''	2.20	0.71
23:B0:1746:A:H2'	23:B0:1747:G:H5'	1.72	0.71
1:AA:107:G:C2'	1:AA:108:G:H5'	2.21	0.70
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.26	0.70
1:AA:1499:A:C1'	1:AA:1520:G:H5''	2.18	0.70
1:AA:406:G:C6	1:AA:496:A:N7	2.59	0.70
1:AA:994:A:O2'	16:AN:8:GLU:HA	1.91	0.70
12:AJ:35:SER:HB2	12:AJ:72:VAL:O	1.90	0.70
12:AJ:78:ASN:O	12:AJ:80:LYS:N	2.24	0.70
1:AA:1148:U:H2'	1:AA:1149:C:O4'	1.90	0.70
1:AA:128:G:P	19:AQ:2:PRO:N	2.63	0.70
1:AA:254:G:H4'	19:AQ:18:THR:CG2	2.21	0.70
1:AA:779:C:O2'	13:AK:120:ARG:HD2	1.87	0.70
7:AE:102:ALA:HB1	7:AE:120:THR:HG21	1.73	0.70
20:AR:39:VAL:O	20:AR:42:ARG:HB2	1.90	0.70
23:B0:3877:A:C8	23:B0:1861:G:N9	2.59	0.70
1:AA:1483:A:C8	1:AA:1484:C:C5	2.79	0.70
1:AA:1484:C:C5'	23:B0:1943:A:O2'	2.39	0.70
1:AA:1413:A:H2	1:AA:1487:G:H22	1.39	0.70
1:AA:131:C:OP1	1:AA:263:A:H5''	1.88	0.70
1:AA:406:G:C4	1:AA:496:A:C6	2.79	0.70
1:AA:606:G:H3'	1:AA:607:A:C5'	2.21	0.70
1:AA:818:G:C3'	1:AA:819:A:H5''	2.21	0.70
21:AS:70:LYS:O	21:AS:72:GLY:N	2.24	0.70
23:B0:1002:C:H5'	23:B0:1200:G:OP2	1.90	0.70
23:B0:1077:U:O2'	23:B0:1079:G:N7	2.21	0.70
23:B0:2680:U:H3'	23:B0:2681:A:H5'	1.72	0.70
23:B0:3098:U:C5	23:B0:3099:U:O4	2.44	0.70
23:B0:3874:C:C5	23:B0:3875:A:N7	2.59	0.70
1:AA:1015:A:H1'	1:AA:1219:U:H5''	1.65	0.70
1:AA:1168:A:H2'	1:AA:1169:A:C8	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1309:G:P	15:AM:88:ARG:HH21	2.14	0.70
1:AA:1416:G:H2'	1:AA:1417:G:C5'	2.18	0.70
1:AA:438:G:H4'	1:AA:439:A:OP1	1.90	0.70
1:AA:46:G:H2'	1:AA:366:C:H5	1.56	0.70
1:AA:499:A:H1'	1:AA:500:G:C4'	2.21	0.70
1:AA:419:C:H5''	1:AA:513:C:O4'	1.90	0.70
15:AM:40:ASN:HD22	15:AM:41:PRO:HD2	1.55	0.70
18:AP:20:VAL:HG11	18:AP:32:TYR:HB3	1.74	0.70
23:B0:1073:G:H1'	23:B0:1099:A:C2	2.27	0.70
1:AA:1485:U:P	23:B0:1943:A:O2'	2.49	0.70
1:AA:249:U:O3'	1:AA:250:A:P	2.46	0.70
17:AO:17:ARG:NH1	17:AO:77:ARG:NH1	2.40	0.70
21:AS:15:LEU:HD12	21:AS:16:LEU:N	2.06	0.70
1:AA:1014:A:N1	21:AS:34:TRP:NE1	2.40	0.70
1:AA:1485:U:P	23:B0:1944:C:H5'	2.32	0.70
1:AA:1342:C:H4'	11:AI:125:TYR:CE1	2.25	0.70
1:AA:13:U:N3	1:AA:915:A:C8	2.60	0.70
1:AA:588:G:H1'	1:AA:753:A:N1	2.07	0.70
1:AA:293:G:C4'	1:AA:609:A:H2	1.78	0.70
1:AA:765:G:O3'	1:AA:766:A:P	2.50	0.70
5:AC:52:LEU:HD21	5:AC:118:GLN:NE2	2.07	0.70
6:AD:28:SER:O	6:AD:30:LYS:N	2.25	0.70
8:AF:10:LEU:HD11	8:AF:59:TYR:HD2	1.54	0.70
15:AM:11:ARG:HG2	15:AM:12:ASN:N	2.07	0.70
23:B0:874:A:H62	23:B0:928:G:H21	1.39	0.70
1:AA:1034:G:C3'	1:AA:1035:A:P	2.80	0.70
1:AA:115:G:N2	1:AA:116:A:H62	1.89	0.70
1:AA:352:C:H4'	1:AA:354:G:OP1	1.91	0.70
5:AC:6:HIS:CD2	5:AC:8:ILE:HB	2.27	0.70
1:AA:1151:A:C5'	12:AJ:41:PRO:HA	2.22	0.70
23:B0:104:C:C2'	23:B0:105:G:H5''	2.22	0.70
1:AA:477:G:H2'	1:AA:478:A:H8	1.56	0.70
1:AA:893:C:H2'	1:AA:894:G:O4'	1.90	0.70
6:AD:150:GLU:CG	6:AD:153:ARG:HH21	2.02	0.70
6:AD:158:ILE:HG22	6:AD:181:MET:HE2	1.71	0.70
19:AQ:96:GLN:CD	23:B0:725:C:O2	2.29	0.70
23:B0:3101:G:H2'	23:B0:3102:G:O4'	1.90	0.70
1:AA:112:G:H21	1:AA:354:G:C4'	2.05	0.70
1:AA:1256:A:H4'	1:AA:1258:G:N9	2.06	0.70
1:AA:1342:C:H1'	11:AI:124:GLN:HB2	1.73	0.70
1:AA:319:G:C2'	1:AA:1434:A:C2	2.75	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:538:G:C5'	14:AL:114:LYS:CG	2.69	0.70
1:AA:38:G:H4'	1:AA:547:A:N6	1.98	0.70
6:AD:88:VAL:HG22	7:AE:97:GLY:CA	2.21	0.70
11:AI:97:LYS:CG	11:AI:102:LEU:HD12	2.22	0.70
12:AJ:46:ARG:HH11	12:AJ:64:GLU:CB	2.05	0.70
15:AM:6:GLY:O	15:AM:7:VAL:HG22	1.91	0.70
19:AQ:24:GLU:OE2	19:AQ:37:LYS:HD3	1.92	0.70
2:AW:34:G:OP1	2:AW:34:G:H8	1.75	0.70
1:AA:1141:C:H2'	1:AA:1142:G:H8	1.57	0.70
1:AA:1181:G:H4'	1:AA:1184:G:O4'	1.92	0.70
1:AA:1255:G:N2	1:AA:1276:G:N2	2.39	0.70
1:AA:819:A:N7	1:AA:1529:G:N2	2.40	0.70
12:AJ:61:GLU:HG3	16:AN:58:LYS:HZ2	0.71	0.70
17:AO:39:LEU:HD13	17:AO:56:LEU:HB2	1.74	0.70
1:AA:391:G:C5'	18:AP:28:ARG:HH22	2.05	0.70
1:AA:1319:A:H5''	21:AS:5:LEU:CD2	2.22	0.70
23:B0:3128:G:H5'	23:B0:3174:C:O2'	1.91	0.70
1:AA:315:A:H5''	1:AA:317:G:OP2	1.91	0.69
15:AM:84:ILE:HG21	21:AS:65:ASN:ND2	2.01	0.69
1:AA:375:U:O2	18:AP:28:ARG:NE	2.24	0.69
21:AS:5:LEU:O	21:AS:6:LYS:HB2	1.92	0.69
22:AT:45:GLN:HA	22:AT:91:LEU:HD22	1.74	0.69
1:AA:1137:C:H4'	1:AA:1138:G:N2	2.06	0.69
1:AA:1430:C:H4'	23:B0:1721:G:C5'	2.22	0.69
1:AA:21:G:H1'	1:AA:914:A:C6	2.19	0.69
1:AA:344:A:H4'	1:AA:345:C:OP2	1.91	0.69
1:AA:499:A:O2'	1:AA:500:G:C8	2.44	0.69
7:AE:151:LEU:CD1	10:AH:77:GLU:OE2	2.40	0.69
12:AJ:32:ALA:HB2	12:AJ:76:ASN:HD22	1.57	0.69
1:AA:265:G:C5'	19:AQ:65:ILE:C	2.50	0.69
1:AA:1320:C:H41	21:AS:37:ARG:CD	2.02	0.69
23:B0:814:G:H3'	23:B0:815:A:H5'	1.73	0.69
23:B0:892:A:H5'	23:B0:892:A:C8	2.24	0.69
1:AA:130:A:OP1	19:AQ:63:ARG:HB3	1.90	0.69
1:AA:837:G:O3'	1:AA:838:C:O5'	2.09	0.69
1:AA:923:A:O4'	1:AA:1398:A:N3	2.05	0.69
14:AL:126:LYS:HD2	14:AL:126:LYS:N	2.08	0.69
15:AM:94:ARG:HH22	21:AS:81:ARG:CZ	2.05	0.69
23:B0:2607:C:H3'	23:B0:2608:A:C5'	2.23	0.69
23:B0:3146:A:H4'	23:B0:3147:C:OP2	1.92	0.69
1:AA:264:U:O2'	19:AQ:63:ARG:CD	2.37	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:837:G:C2'	1:AA:838:C:C6	2.75	0.69
1:AA:905:U:C5	1:AA:906:G:C6	2.81	0.69
1:AA:1190:G:C3'	5:AC:3:ASN:HB2	2.22	0.69
6:AD:70:ILE:HD11	6:AD:100:ARG:CZ	2.21	0.69
1:AA:186:C:O2	22:AT:60:GLU:OE1	2.09	0.69
2:AV:34:G:OP1	2:AV:34:G:H8	1.75	0.69
1:AA:115:G:O3'	1:AA:116:A:OP1	2.08	0.69
1:AA:1409:C:C4	1:AA:1410:G:N7	2.60	0.69
1:AA:216:C:C4'	1:AA:466:A:C6	2.65	0.69
1:AA:522:C:C5'	14:AL:120:TYR:OH	2.39	0.69
13:AK:77:MET:HE3	13:AK:80:VAL:HG22	1.74	0.69
1:AA:994:A:O3'	16:AN:11:LYS:HE2	1.92	0.69
1:AA:187:G:O2'	22:AT:104:LEU:CA	2.40	0.69
23:B0:1679:U:C3'	23:B0:1680:U:H5''	2.22	0.69
23:B0:1774:A:H1'	23:B0:2586:G:H21	1.58	0.69
1:AA:1255:G:H1'	1:AA:1259:C:C1'	2.14	0.69
1:AA:131:C:OP1	1:AA:263:A:H5'	1.89	0.69
1:AA:248:C:H4'	1:AA:283:C:O2'	1.92	0.69
1:AA:686:U:HO2'	1:AA:687:A:H8	1.39	0.69
1:AA:692:U:OP1	13:AK:124:LYS:HE3	1.92	0.69
5:AC:7:PRO:HG2	5:AC:184:TYR:HB2	1.73	0.69
1:AA:377:G:OP1	18:AP:3:LYS:CE	2.39	0.69
1:AA:254:G:H5''	19:AQ:18:THR:HG21	1.73	0.69
23:B0:1791:C:O2'	23:B0:1793:A:H5'	1.93	0.69
23:B0:226:C:O2'	23:B0:227:G:H8	1.73	0.69
1:AA:1149:C:O2'	1:AA:1280:A:N1	2.25	0.69
1:AA:1182:G:H4'	1:AA:1183:A:O5'	1.93	0.69
1:AA:323:U:C5'	22:AT:23:ARG:H	2.02	0.69
5:AC:38:ARG:HG3	5:AC:38:ARG:HH11	1.58	0.69
1:AA:675:A:C2	13:AK:116:HIS:HB2	2.25	0.69
15:AM:81:LEU:O	15:AM:86:CYS:HB3	1.92	0.69
2:AV:12:U:OP1	23:B0:1891:C:C1'	2.40	0.69
23:B0:1004:A:H2'	23:B0:1005:U:H5''	1.74	0.69
23:B0:2495:G:H2'	23:B0:2496:C:C6	2.27	0.69
2:AW:76:A:C2	23:B0:2562:G:N3	2.61	0.69
23:B0:3108:G:O2'	23:B0:3109:U:OP2	2.09	0.69
23:B0:3874:C:C4	23:B0:3875:A:C8	2.81	0.69
1:AA:1014:A:H5''	21:AS:14:HIS:CD2	2.19	0.69
1:AA:232:G:N2	1:AA:263:A:N3	2.24	0.69
1:AA:246:A:O3'	1:AA:247:G:H4'	1.92	0.69
5:AC:130:VAL:HG21	5:AC:157:ILE:HG23	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AJ:30:SER:O	12:AJ:78:ASN:HB2	1.92	0.69
1:AA:954:G:H5''	15:AM:120:LYS:HD3	1.73	0.69
19:AQ:104:LYS:HE3	23:B0:729:A:C6	2.27	0.69
23:B0:1428:G:H5''	23:B0:1429:A:H5'	1.73	0.69
23:B0:1749:G:O6	23:B0:2674:C:H4'	1.92	0.69
23:B0:1807:A:H4'	23:B0:1808:C:C5'	2.22	0.69
23:B0:2380:U:H2'	23:B0:2381:A:H5'	1.75	0.69
1:AA:1337:G:H5''	1:AA:1338:G:OP1	1.93	0.69
1:AA:19:C:C2'	1:AA:916:G:N2	2.54	0.69
1:AA:382:A:H2'	1:AA:383:A:C8	2.28	0.69
1:AA:427:U:H1'	1:AA:541:G:OP1	1.92	0.69
4:AB:22:LYS:HD2	4:AB:35:GLU:OE1	1.93	0.69
1:AA:828:A:H2	4:AB:26:PRO:CG	2.01	0.69
6:AD:151:LYS:HD2	6:AD:151:LYS:N	2.08	0.69
1:AA:1061:G:H5''	12:AJ:56:HIS:HB3	1.75	0.69
1:AA:187:G:N3	22:AT:105:SER:HB2	2.08	0.69
23:B0:2617:G:H22	23:B0:2755:A:H2'	1.57	0.69
1:AA:1270:C:O3'	1:AA:1314:C:H5''	1.93	0.69
1:AA:815:A:H62	1:AA:1508:G:H21	1.36	0.69
1:AA:939:G:H2'	1:AA:940:C:C6	2.28	0.69
6:AD:64:LEU:HD12	6:AD:75:PHE:CZ	2.28	0.69
15:AM:81:LEU:H	15:AM:81:LEU:HD23	1.56	0.69
23:B0:1223:G:H21	23:B0:1225:G:H21	1.40	0.69
23:B0:2245:A:H5'	23:B0:2246:A:C8	2.27	0.69
23:B0:588:G:H4'	23:B0:2001:G:H4'	1.73	0.69
1:AA:1394:A:N1	1:AA:1501:C:H5''	2.06	0.69
1:AA:22:G:H21	1:AA:913:A:C2'	1.96	0.69
1:AA:401:C:H4'	1:AA:622:A:H1'	1.73	0.69
1:AA:676:A:C4'	13:AK:115:PRO:HA	2.22	0.69
1:AA:905:U:C5	1:AA:906:G:N7	2.61	0.69
1:AA:1194:U:H5''	7:AE:22:GLY:CA	2.23	0.69
12:AJ:30:SER:HB2	12:AJ:80:LYS:HB3	1.74	0.69
14:AL:47:LYS:HB2	14:AL:48:PRO:CD	2.23	0.69
8:AF:100:ASN:ND2	20:AR:23:LYS:HG2	2.08	0.69
23:B0:3867:G:C5'	55:B5:193:LYS:CA	2.72	0.69
1:AA:131:C:O2'	1:AA:262:A:C2'	2.40	0.68
1:AA:179:A:N6	1:AA:196:A:OP2	2.23	0.68
1:AA:496:A:H4'	1:AA:497:A:OP1	1.91	0.68
5:AC:180:ALA:O	5:AC:181:ASN:HB3	1.92	0.68
6:AD:199:ASN:ND2	6:AD:201:GLN:HB2	2.08	0.68
16:AN:22:THR:HB	16:AN:33:VAL:HG21	1.73	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:377:G:OP1	18:AP:3:LYS:HD2	1.93	0.68
21:AS:41:VAL:HG23	21:AS:43:GLU:HG2	1.75	0.68
1:AA:922:G:C4	1:AA:1396:A:N1	2.62	0.68
6:AD:64:LEU:HD23	6:AD:198:VAL:HG21	1.75	0.68
1:AA:256:U:H5''	19:AQ:17:LYS:NZ	1.99	0.68
1:AA:1484:C:H4'	23:B0:1943:A:C2'	2.23	0.68
1:AA:943:U:C1'	11:AI:124:GLN:NE2	2.45	0.68
6:AD:157:LEU:CD2	6:AD:161:ASN:HD21	2.05	0.68
1:AA:1344:C:H4'	11:AI:120:ARG:HB3	1.74	0.68
14:AL:47:LYS:CB	14:AL:48:PRO:CD	2.71	0.68
14:AL:55:VAL:HG12	14:AL:56:ALA:H	1.57	0.68
2:AV:11:C:H5'	23:B0:1892:C:H4'	1.74	0.68
23:B0:1953:A:H1'	23:B0:1955:G:C1'	2.23	0.68
23:B0:2624:G:H4'	23:B0:2712:G:H2'	1.75	0.68
1:AA:1064:G:C4'	1:AA:1065:U:H5'	2.23	0.68
1:AA:1416:G:H2'	1:AA:1417:G:H4'	1.74	0.68
1:AA:1484:C:O3'	23:B0:1943:A:H4'	1.93	0.68
1:AA:216:C:C4'	1:AA:466:A:N1	2.57	0.68
1:AA:351:G:O3'	1:AA:352:C:P	2.51	0.68
1:AA:367:U:OP1	1:AA:395:C:H1'	1.93	0.68
1:AA:216:C:C4'	1:AA:466:A:N6	2.00	0.68
1:AA:948:C:OP1	15:AM:109:THR:HG22	1.94	0.68
5:AC:52:LEU:CD2	5:AC:118:GLN:HE22	2.05	0.68
1:AA:266:G:P	19:AQ:65:ILE:O	2.51	0.68
19:AQ:66:SER:O	19:AQ:70:ARG:NH1	2.26	0.68
20:AR:45:SER:C	20:AR:47:THR:H	1.97	0.68
2:AV:76:A:H3'	23:B0:2046:C:C2'	2.23	0.68
2:AW:75:C:O2	23:B0:2532:G:N2	2.27	0.68
23:B0:1838:G:H2'	23:B0:1839:A:H5'	1.75	0.68
23:B0:2058:U:H4'	23:B0:2575:U:H3	1.58	0.68
23:B0:2440:C:H1'	23:B0:2471:U:H3	1.56	0.68
23:B0:2691:C:H3'	23:B0:2692:A:H5''	1.74	0.68
23:B0:939:C:H2'	23:B0:940:G:C8	2.28	0.68
1:AA:105:G:H2'	1:AA:106:C:C6	2.29	0.68
1:AA:128:G:H4'	19:AQ:3:LYS:CA	2.20	0.68
1:AA:17:U:H2'	1:AA:18:C:C6	2.28	0.68
1:AA:397:A:N7	1:AA:547:A:O2'	1.94	0.68
1:AA:39:G:C4	1:AA:498:U:O4	2.46	0.68
6:AD:30:LYS:C	6:AD:32:ALA:H	1.97	0.68
6:AD:88:VAL:CG2	7:AE:97:GLY:CA	2.70	0.68
12:AJ:61:GLU:OE2	16:AN:58:LYS:CD	2.41	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:798:G:P	13:AK:122:LYS:NZ	2.66	0.68
1:AA:129:U:C5'	19:AQ:3:LYS:NZ	2.56	0.68
1:AA:266:G:C3'	19:AQ:67:LYS:H	2.06	0.68
1:AA:332:G:P	22:AT:10:LEU:HB3	2.33	0.68
23:B0:181:A:H4'	23:B0:182:G:H4'	1.76	0.68
2:AV:12:U:P	23:B0:1891:C:HO2'	2.13	0.68
23:B0:2377:U:H2'	23:B0:2378:G:C8	2.28	0.68
2:AV:57:G:C5'	28:BD:76:ASN:CA	2.72	0.68
1:AA:1281:U:H4'	1:AA:1282:C:OP2	1.92	0.68
1:AA:1342:C:H4'	11:AI:125:TYR:CD1	2.28	0.68
1:AA:104:G:C5'	1:AA:172:A:N1	2.55	0.68
1:AA:130:A:C2	1:AA:264:U:N3	2.61	0.68
1:AA:328:C:H4'	1:AA:329:A:O5'	1.94	0.68
1:AA:5:U:O4	7:AE:95:ALA:CB	2.40	0.68
1:AA:653:A:O5'	10:AH:56:LYS:HE2	1.93	0.68
6:AD:205:GLU:HB3	7:AE:107:ARG:HH22	1.57	0.68
1:AA:1342:C:H5'	11:AI:125:TYR:CE1	2.24	0.68
12:AJ:42:THR:HG23	12:AJ:67:THR:O	1.93	0.68
18:AP:34:GLU:OE2	18:AP:55:ARG:HD3	1.93	0.68
2:AV:12:U:O2'	23:B0:1907:C:O4'	2.12	0.68
23:B0:940:G:C3'	23:B0:941:U:H5''	2.11	0.68
1:AA:1068:G:N2	1:AA:1191:A:N3	2.34	0.68
1:AA:1339:A:C4	2:AV:31:A:O2'	2.44	0.68
1:AA:1503:A:C2	1:AA:1531:A:H2	2.12	0.68
1:AA:512:U:H1'	6:AD:42:GLN:OE1	1.92	0.68
1:AA:954:G:C5'	15:AM:120:LYS:HD3	2.23	0.68
1:AA:626:U:OP1	18:AP:35:LYS:NZ	2.27	0.68
1:AA:322:C:C4'	22:AT:23:ARG:HB2	2.23	0.68
2:AW:71:G:H5''	23:B0:1925:C:C2	2.23	0.68
1:AA:1427:U:O2'	23:B0:1704:G:C5'	2.42	0.68
1:AA:191:G:N3	1:AA:192:U:O4'	2.25	0.68
1:AA:265:G:C3'	19:AQ:66:SER:N	2.57	0.68
1:AA:701:C:H5'	1:AA:703:G:O4'	1.93	0.68
11:AI:114:TYR:CE2	12:AJ:60:ARG:HG2	2.29	0.68
23:B0:2381:A:H4'	23:B0:2382:C:C5	2.29	0.68
1:AA:1459:C:O3'	22:AT:28:ALA:HB2	1.92	0.68
1:AA:1504:G:P	1:AA:1507:A:H4'	2.32	0.68
1:AA:586:C:H5''	10:AH:90:GLY:H	1.59	0.68
1:AA:69:G:C1'	1:AA:101:A:N1	2.56	0.68
4:AB:187:LEU:HD12	4:AB:205:ASP:HA	1.74	0.68
6:AD:3:ARG:HH22	6:AD:74:GLN:CD	1.98	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AD:205:GLU:CD	7:AE:107:ARG:CZ	2.62	0.68
1:AA:1347:G:H3'	11:AI:108:VAL:O	1.93	0.68
23:B0:26:G:H21	23:B0:524:A:H62	1.41	0.68
1:AA:397:A:N7	1:AA:547:A:H1'	2.09	0.68
1:AA:436:C:C4	1:AA:437:U:C4	2.82	0.68
1:AA:915:A:H2'	1:AA:916:G:H5'	1.76	0.68
1:AA:865:A:H2	1:AA:918:A:H5'	1.58	0.68
1:AA:979:C:N3	16:AN:19:ARG:HG2	2.08	0.68
4:AB:124:SER:HB2	4:AB:125:PRO:CD	2.21	0.68
5:AC:190:ARG:HH11	5:AC:190:ARG:CB	2.07	0.68
23:B0:3101:G:H1	23:B0:3188:U:H3	1.41	0.68
23:B0:3877:A:C8	23:B0:3877:A:O5'	2.39	0.68
1:AA:1255:G:N2	1:AA:1276:G:H21	1.90	0.67
1:AA:1416:G:C5	1:AA:1417:G:C1'	2.76	0.67
1:AA:600:C:H5'	10:AH:129:VAL:HA	1.75	0.67
5:AC:59:ARG:N	12:AJ:92:THR:HG22	2.07	0.67
8:AF:75:LEU:O	8:AF:79:LEU:HG	1.94	0.67
1:AA:640:A:N3	10:AH:115:SER:CB	2.57	0.67
11:AI:93:ARG:HD3	11:AI:97:LYS:HE3	1.74	0.67
1:AA:265:G:C1'	19:AQ:64:PRO:CB	2.72	0.67
23:B0:1033:G:H22	23:B0:1150:C:H2'	1.58	0.67
23:B0:1955:G:H2'	23:B0:1956:G:H5'	1.76	0.67
1:AA:1502:A:H2	1:AA:1505:G:N1	1.90	0.67
1:AA:538:G:H5''	14:AL:114:LYS:CG	2.16	0.67
5:AC:26:LYS:H	5:AC:26:LYS:HD3	1.58	0.67
1:AA:375:U:O3'	1:AA:376:G:H5'	1.94	0.67
1:AA:653:A:C8	10:AH:56:LYS:CG	2.77	0.67
1:AA:778:G:C4'	13:AK:119:CYS:HB3	2.25	0.67
1:AA:960:U:O3'	1:AA:961:U:P	2.53	0.67
7:AE:51:VAL:O	7:AE:55:VAL:HG23	1.93	0.67
19:AQ:67:LYS:HA	19:AQ:70:ARG:HH12	1.60	0.67
23:B0:1021:A:H1'	23:B0:1164:C:H1'	1.76	0.67
23:B0:2261:G:H4'	23:B0:2262:C:OP2	1.94	0.67
23:B0:3875:A:C4'	55:B5:42:LYS:CA	2.73	0.67
1:AA:1278:U:C5'	1:AA:1279:A:P	2.73	0.67
1:AA:587:G:O2'	1:AA:588:G:OP2	2.10	0.67
1:AA:848:G:H2'	1:AA:849:C:N1	2.08	0.67
4:AB:25:ASN:C	4:AB:25:ASN:HD22	1.97	0.67
1:AA:538:G:O5'	14:AL:114:LYS:HB2	1.88	0.67
21:AS:33:THR:HG22	21:AS:35:SER:H	1.60	0.67
23:B0:1181:C:C2'	23:B0:1182:U:H5''	2.23	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:2381:A:H4'	23:B0:2382:C:H5	1.60	0.67
23:B0:998:C:H2'	23:B0:999:A:O4'	1.94	0.67
1:AA:69:G:C4	1:AA:102:G:O6	2.47	0.67
1:AA:130:A:C2	1:AA:263:A:N3	2.63	0.67
1:AA:650:G:O2'	1:AA:651:C:H5'	1.94	0.67
1:AA:691:G:C8	13:AK:26:ASN:ND2	2.63	0.67
5:AC:82:GLU:O	5:AC:85:ARG:HB3	1.94	0.67
8:AF:36:ARG:NH1	8:AF:38:GLU:HG2	2.08	0.67
15:AM:40:ASN:HD22	15:AM:41:PRO:N	1.91	0.67
15:AM:81:LEU:H	15:AM:81:LEU:CD2	2.08	0.67
21:AS:62:ILE:HD12	21:AS:66:MET:HG3	1.75	0.67
1:AA:1183:A:O2'	1:AA:1184:G:OP2	2.09	0.67
1:AA:212:G:O2'	1:AA:213:G:C5'	2.41	0.67
1:AA:320:C:H5'	1:AA:1434:A:C2	2.29	0.67
1:AA:797:C:OP1	13:AK:124:LYS:HB2	1.94	0.67
11:AI:93:ARG:NH1	11:AI:97:LYS:HZ1	1.93	0.67
23:B0:1112:U:C2'	23:B0:1113:C:H5''	2.24	0.67
23:B0:539:A:H62	23:B0:2024:U:H3	1.40	0.67
23:B0:2324:G:H4'	23:B0:2326:C:H5''	1.76	0.67
1:AA:322:C:HO2'	1:AA:323:U:H5'	1.59	0.67
1:AA:376:G:H5''	18:AP:5:ARG:CD	2.24	0.67
20:AR:26:LEU:HD21	20:AR:39:VAL:CG2	2.25	0.67
1:AA:1067:A:N3	1:AA:1068:G:H1'	2.09	0.67
1:AA:253:U:H4'	1:AA:276:G:C4'	2.25	0.67
1:AA:1113:C:H1'	5:AC:178:LEU:HD21	1.77	0.67
5:AC:179:ARG:HD3	5:AC:206:GLU:HG2	1.76	0.67
12:AJ:62:HIS:O	16:AN:58:LYS:C	2.33	0.67
23:B0:2508:G:H5''	23:B0:2509:A:H5''	1.76	0.67
23:B0:3875:A:H4'	55:B5:42:LYS:CA	2.24	0.67
1:AA:1455:G:H2'	1:AA:1456:A:O4'	1.95	0.67
9:AG:85:TYR:HD1	9:AG:154:TYR:HE1	1.42	0.67
13:AK:14:VAL:HG21	13:AK:40:ILE:HD11	1.77	0.67
15:AM:34:LEU:HD13	15:AM:41:PRO:HA	1.77	0.67
23:B0:1926:U:O2'	23:B0:1928:G:H5'	1.95	0.67
23:B0:3110:G:P	23:B0:3149:G:H4'	2.34	0.67
1:AA:1016:A:H2'	1:AA:1017:G:O4'	1.94	0.67
1:AA:394:G:C6	1:AA:395:C:N4	2.63	0.67
1:AA:403:C:C2'	1:AA:404:U:C5'	2.72	0.67
1:AA:436:C:N4	1:AA:437:U:O4	2.27	0.67
4:AB:18:GLY:HA2	4:AB:42:ILE:H	1.59	0.67
15:AM:33:ALA:HA	15:AM:59:TYR:HE2	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AN:14:PRO:HB2	16:AN:16:PHE:O	1.95	0.67
22:AT:56:MET:HE2	22:AT:88:VAL:HG11	1.76	0.67
23:B0:33:C:H42	23:B0:466:A:H61	1.41	0.67
23:B0:665:A:H3'	23:B0:666:U:C5'	2.24	0.67
1:AA:929:G:P	1:AA:1533:C:N4	2.68	0.66
1:AA:376:G:OP1	18:AP:67:THR:OG1	2.07	0.66
1:AA:865:A:O2'	1:AA:919:A:C5'	2.43	0.66
1:AA:994:A:C4	16:AN:5:ALA:CA	2.67	0.66
6:AD:36:ARG:H	6:AD:37:PRO:CD	2.02	0.66
13:AK:14:VAL:O	13:AK:15:ALA:HB3	1.95	0.66
17:AO:33:THR:HG23	17:AO:63:ARG:HH12	1.59	0.66
1:AA:265:G:H5''	19:AQ:65:ILE:C	2.14	0.66
23:B0:1112:U:H2'	23:B0:1113:C:H5''	1.75	0.66
23:B0:1473:U:H4'	23:B0:1474:A:C8	2.29	0.66
1:AA:1057:G:O2'	1:AA:1058:G:H5'	1.95	0.66
1:AA:1270:C:O2'	1:AA:1314:C:C5'	2.43	0.66
1:AA:130:A:H5'	19:AQ:63:ARG:HE	0.87	0.66
1:AA:662:G:H2'	1:AA:663:A:C8	2.30	0.66
12:AJ:49:VAL:O	12:AJ:60:ARG:HA	1.95	0.66
2:AV:44:A:C2'	2:AV:45:G:H5'	2.25	0.66
2:AW:19:G:N7	23:B0:895:G:O2'	2.28	0.66
23:B0:1223:G:H4'	23:B0:1224:A:O5'	1.96	0.66
23:B0:1312:G:H5'	23:B0:1314:A:H1'	1.77	0.66
23:B0:1856:U:C4	23:B0:3865:A:N1	2.62	0.66
1:AA:103:C:O2'	1:AA:171:A:C6	2.45	0.66
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.30	0.66
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.59	0.66
1:AA:606:G:C3'	1:AA:607:A:H5'	2.23	0.66
1:AA:292:G:N2	1:AA:608:A:C2	2.60	0.66
12:AJ:96:ILE:HG22	12:AJ:97:GLU:N	2.10	0.66
17:AO:55:GLY:O	17:AO:59:MET:HG3	1.94	0.66
19:AQ:97:SER:OG	19:AQ:103:GLY:CA	2.44	0.66
21:AS:28:LYS:HG2	21:AS:29:ARG:N	2.06	0.66
23:B0:1380:C:H2'	23:B0:1381:G:H5'	1.76	0.66
1:AA:1368:G:O2'	1:AA:1369:C:H5'	1.95	0.66
1:AA:1111:A:C2	5:AC:177:THR:OG1	2.48	0.66
1:AA:1346:A:C2'	9:AG:10:ARG:HH22	1.97	0.66
10:AH:6:ILE:HD11	10:AH:31:PHE:CD2	2.31	0.66
12:AJ:94:VAL:HG12	12:AJ:95:GLU:N	2.10	0.66
1:AA:835:U:P	20:AR:64:ARG:NH2	2.67	0.66
1:AA:320:C:C5'	1:AA:1434:A:C2	2.75	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:371:G:O2'	1:AA:372:C:H5'	1.94	0.66
6:AD:187:ARG:HH21	6:AD:188:LEU:HD12	1.60	0.66
1:AA:737:A:C2'	8:AF:73:ASN:HD21	2.09	0.66
11:AI:10:ARG:HG2	11:AI:75:ASP:HB2	1.76	0.66
14:AL:33:ARG:HD3	14:AL:62:SER:HB3	1.77	0.66
19:AQ:101:ARG:CZ	23:B0:731:A:H2	2.07	0.66
23:B0:1141:U:H3	23:B0:2008:C:H5''	1.61	0.66
23:B0:1529:C:H2'	23:B0:1530:U:O4'	1.94	0.66
1:AA:702:A:O4'	23:B0:1840:A:OP1	2.12	0.66
1:AA:1112:C:N3	5:AC:178:LEU:CA	2.59	0.66
1:AA:1484:C:O3'	23:B0:1943:A:C4'	2.44	0.66
1:AA:247:G:C2	1:AA:282:A:N3	2.63	0.66
1:AA:748:C:H1'	1:AA:749:C:C5	2.30	0.66
5:AC:107:GLN:NE2	5:AC:107:GLN:H	1.94	0.66
5:AC:172:ARG:HB3	5:AC:172:ARG:NH1	2.11	0.66
5:AC:188:LEU:O	5:AC:189:ALA:HB2	1.96	0.66
1:AA:254:G:N2	19:AQ:16:GLN:CD	2.49	0.66
23:B0:1066:G:N1	23:B0:1115:C:C4	2.64	0.66
1:AA:1476:G:OP1	23:B0:1707:A:P	2.54	0.66
1:AA:978:A:C6	1:AA:1318:A:C6	2.84	0.66
1:AA:375:U:H2'	1:AA:376:G:O4'	1.96	0.66
1:AA:377:G:P	18:AP:3:LYS:HZ1	2.18	0.66
1:AA:216:C:C3'	1:AA:466:A:H61	2.04	0.66
1:AA:427:U:O2'	1:AA:541:G:OP1	2.03	0.66
5:AC:195:VAL:C	5:AC:196:LEU:HD23	2.15	0.66
5:AC:59:ARG:N	12:AJ:92:THR:CG2	2.59	0.66
7:AE:150:ARG:HG3	7:AE:150:ARG:HH11	1.60	0.66
9:AG:16:LEU:HG	11:AI:41:VAL:O	1.95	0.66
19:AQ:105:ALA:CA	23:B0:727:U:H4'	2.25	0.66
23:B0:3149:G:O2'	23:B0:3150:C:H5'	1.96	0.66
23:B0:897:A:N6	23:B0:898:C:N4	2.43	0.66
1:AA:1016:A:O2'	1:AA:1218:C:H4'	1.96	0.66
1:AA:1340:A:H4'	2:AV:32:C:C4'	2.25	0.66
1:AA:1425:U:H2'	1:AA:1426:C:C6	2.31	0.66
1:AA:281:G:O2'	1:AA:282:A:OP2	2.12	0.66
6:AD:151:LYS:HD2	6:AD:151:LYS:H	1.60	0.66
13:AK:66:LEU:HB3	13:AK:70:LYS:HE3	1.77	0.66
20:AR:45:SER:OG	20:AR:49:LYS:HB2	1.94	0.66
23:B0:1978:U:H3'	23:B0:1979:C:H5''	1.77	0.66
1:AA:1319:A:C5'	21:AS:5:LEU:HD21	2.24	0.66
1:AA:586:C:H5''	10:AH:90:GLY:N	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:893:C:C2'	1:AA:894:G:C5'	2.74	0.66
22:AT:87:LYS:O	22:AT:91:LEU:HD12	1.96	0.66
23:B0:439:C:H2'	23:B0:440:U:O4'	1.95	0.66
23:B0:515:A:H2'	23:B0:516:G:H5'	1.77	0.66
1:AA:1317:C:C2	16:AN:16:PHE:CE2	2.84	0.66
1:AA:335:C:C1'	1:AA:1434:A:C4'	2.74	0.66
1:AA:394:G:C6	1:AA:395:C:C4	2.84	0.66
1:AA:427:U:OP1	6:AD:13:ARG:NH2	2.29	0.66
1:AA:538:G:C5'	14:AL:114:LYS:CD	2.74	0.66
1:AA:526:C:P	14:AL:91:LYS:HE2	2.36	0.66
1:AA:247:G:P	19:AQ:100:LYS:HE2	2.36	0.66
1:AA:719:C:H1'	20:AR:49:LYS:HG2	1.78	0.66
1:AA:186:C:C2	22:AT:60:GLU:OE1	2.49	0.66
1:AA:186:C:H5'	22:AT:81:LYS:HZ3	1.60	0.66
23:B0:1191:G:H2'	23:B0:1192:A:H8	1.61	0.66
1:AA:1473:A:O2'	23:B0:1718:A:N1	2.29	0.66
23:B0:3197:U:O2'	23:B0:2181:A:P	2.53	0.66
1:AA:474:U:H2'	1:AA:475:C:C6	2.31	0.65
1:AA:524:G:H2'	1:AA:525:C:C6	2.31	0.65
5:AC:155:GLY:O	5:AC:156:ARG:HB2	1.96	0.65
6:AD:187:ARG:NH2	6:AD:188:LEU:HD12	2.10	0.65
7:AE:80:ILE:HD11	7:AE:91:LEU:HD12	1.76	0.65
12:AJ:90:LEU:H	12:AJ:91:PRO:HD2	1.61	0.65
23:B0:128:C:C2'	23:B0:129:A:H5''	2.23	0.65
2:AV:75:C:O2'	23:B0:2047:C:O5'	2.10	0.65
19:AQ:104:LYS:HB2	23:B0:727:U:C6	2.29	0.65
1:AA:232:G:C2	1:AA:263:A:C2	2.83	0.65
1:AA:865:A:H2	1:AA:918:A:C5'	2.08	0.65
4:AB:18:GLY:HA3	4:AB:41:ILE:HA	1.79	0.65
5:AC:172:ARG:HH11	5:AC:172:ARG:HB3	1.61	0.65
7:AE:40:ARG:HG2	7:AE:68:GLU:OE2	1.96	0.65
11:AI:26:VAL:HB	11:AI:33:PHE:HB2	1.76	0.65
1:AA:779:C:O4'	13:AK:120:ARG:HD2	1.96	0.65
1:AA:685:G:O4'	13:AK:39:PRO:HG2	1.97	0.65
15:AM:33:ALA:HA	15:AM:59:TYR:CE2	2.32	0.65
15:AM:94:ARG:CZ	21:AS:81:ARG:HD3	2.26	0.65
21:AS:17:GLU:HA	21:AS:20:LEU:HD11	1.78	0.65
23:B0:1471:G:H1	23:B0:2682:C:H42	1.44	0.65
1:AA:1016:A:O2'	1:AA:1218:C:C4'	2.44	0.65
1:AA:112:G:H21	1:AA:354:G:H5'	1.57	0.65
1:AA:923:A:N9	1:AA:1398:A:N3	2.43	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1475:G:H2'	1:AA:1476:G:H8	1.62	0.65
1:AA:815:A:C4	1:AA:1527:C:C1'	2.72	0.65
1:AA:929:G:OP1	1:AA:1533:C:N4	2.28	0.65
1:AA:173:U:C6	1:AA:197:A:C2	2.85	0.65
1:AA:322:C:H4'	22:AT:23:ARG:CB	2.25	0.65
1:AA:778:G:H4'	13:AK:119:CYS:CB	2.26	0.65
1:AA:797:C:OP1	13:AK:124:LYS:CB	2.44	0.65
12:AJ:38:ILE:CG1	12:AJ:71:LEU:HB3	2.26	0.65
12:AJ:60:ARG:O	12:AJ:61:GLU:HB3	1.95	0.65
19:AQ:104:LYS:CE	23:B0:729:A:H62	2.10	0.65
1:AA:1430:C:H4'	23:B0:1721:G:H5'	1.76	0.65
23:B0:1856:U:C3'	23:B0:3865:A:H8	1.99	0.65
1:AA:923:A:N3	1:AA:1395:C:O2	2.28	0.65
1:AA:1402:C:H2'	1:AA:1403:C:O4'	1.97	0.65
1:AA:848:G:HO3'	1:AA:849:C:C5'	2.02	0.65
5:AC:64:VAL:HB	5:AC:99:VAL:CB	2.27	0.65
7:AE:12:LEU:HD13	7:AE:31:LEU:HB2	1.77	0.65
1:AA:1178:G:OP2	11:AI:97:LYS:NZ	2.28	0.65
23:B0:1098:G:H3'	23:B0:1099:A:H5''	1.79	0.65
23:B0:2794:G:H3'	23:B0:2796:A:H62	1.61	0.65
23:B0:3128:G:HO2'	23:B0:3174:C:H5'	0.79	0.65
1:AA:1111:A:N1	5:AC:177:THR:CA	2.59	0.65
1:AA:1182:G:H5'	1:AA:1184:G:C5'	2.26	0.65
1:AA:1495:U:H2'	1:AA:1496:C:C6	2.31	0.65
1:AA:1522:U:O2'	1:AA:1523:G:H5'	1.96	0.65
1:AA:39:G:C8	1:AA:498:U:C4	2.85	0.65
1:AA:94:G:C4	1:AA:96:C:C5	2.84	0.65
4:AB:84:GLU:HB3	4:AB:219:VAL:HG21	1.78	0.65
15:AM:65:LYS:HG3	15:AM:69:GLU:OE2	1.96	0.65
1:AA:1321:C:H42	21:AS:37:ARG:NH1	1.94	0.65
23:B0:1918:G:H4'	23:B0:1920:A:N3	2.10	0.65
23:B0:2236:U:C3'	23:B0:2237:C:H5''	2.26	0.65
23:B0:542:A:C2'	23:B0:543:G:H5'	2.26	0.65
1:AA:99:C:H1'	1:AA:101:A:OP2	1.96	0.65
1:AA:815:A:N6	1:AA:1529:G:O2'	2.29	0.65
1:AA:905:U:C4	1:AA:906:G:C5	2.84	0.65
4:AB:15:VAL:CG2	4:AB:209:ARG:HG3	2.26	0.65
4:AB:71:VAL:O	4:AB:165:VAL:HG23	1.96	0.65
6:AD:131:ARG:H	6:AD:131:ARG:HD2	1.62	0.65
13:AK:48:ILE:HG22	13:AK:49:GLY:H	1.61	0.65
1:AA:391:G:H5'	18:AP:28:ARG:HH21	1.57	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1472:C:C2'	23:B0:1473:U:H5'	2.27	0.65
23:B0:2822:U:H2'	23:B0:2823:G:O4'	1.97	0.65
23:B0:651:C:H2'	23:B0:652:C:H5''	1.78	0.65
1:AA:1430:C:C5'	23:B0:1721:G:C4'	2.73	0.65
1:AA:274:A:C2	1:AA:275:G:H1'	2.31	0.65
1:AA:33:A:OP2	1:AA:398:C:C4'	2.43	0.65
1:AA:393:A:OP2	18:AP:12:LYS:HE2	1.97	0.65
1:AA:677:U:H3	1:AA:713:G:H22	1.45	0.65
1:AA:918:A:H2'	1:AA:919:A:C8	2.32	0.65
4:AB:215:LEU:O	4:AB:219:VAL:HG23	1.97	0.65
4:AB:74:LYS:HZ1	4:AB:206:ASP:HA	1.61	0.65
14:AL:86:ARG:HH11	14:AL:86:ARG:HG3	1.61	0.65
20:AR:47:THR:HG23	20:AR:83:GLU:H	1.61	0.65
1:AA:186:C:H5'	22:AT:81:LYS:HD3	1.77	0.65
23:B0:2047:C:H42	23:B0:2425:G:H1	1.43	0.65
23:B0:3127:G:H4'	23:B0:3173:A:N1	2.10	0.65
1:AA:1422:G:C5'	33:BI:60:PRO:CA	2.63	0.65
1:AA:1393:U:O2	1:AA:1395:C:C6	2.49	0.65
1:AA:923:A:C1'	1:AA:1398:A:H2'	2.26	0.65
1:AA:1442:G:H2'	1:AA:1442:G:N3	2.11	0.65
1:AA:1497:G:H2'	1:AA:1498:U:H5'	1.78	0.65
1:AA:391:G:C5'	18:AP:28:ARG:NH2	2.57	0.65
1:AA:456:A:N6	1:AA:477:G:N9	2.45	0.65
1:AA:99:C:C1'	1:AA:101:A:OP2	2.17	0.65
7:AE:15:ARG:HD2	7:AE:15:ARG:O	1.96	0.65
8:AF:100:ASN:HD22	20:AR:23:LYS:CG	2.10	0.65
1:AA:1347:G:C4	11:AI:107:ARG:NH1	2.65	0.65
12:AJ:61:GLU:OE2	16:AN:49:HIS:HE1	1.79	0.65
23:B0:3875:A:H1'	55:B5:44:GLY:CA	2.26	0.65
1:AA:919:A:N3	1:AA:1080:A:H2	1.95	0.65
1:AA:130:A:N1	1:AA:264:U:N3	2.44	0.65
1:AA:619:U:C6	6:AD:135:LEU:CD1	2.76	0.65
9:AG:50:ILE:O	9:AG:54:THR:HB	1.96	0.65
19:AQ:104:LYS:HZ1	23:B0:730:C:N4	1.94	0.65
1:AA:261:U:H3'	22:AT:79:ARG:HH12	1.61	0.65
2:AV:76:A:C3'	23:B0:2046:C:HO2'	2.07	0.65
1:AA:1153:C:H2'	1:AA:1154:G:H8	1.62	0.65
1:AA:922:G:C4	1:AA:1398:A:H2	2.14	0.65
1:AA:1484:C:O3'	23:B0:1943:A:O3'	2.15	0.65
4:AB:95:GLN:HA	4:AB:95:GLN:OE1	1.97	0.65
8:AF:21:LEU:O	8:AF:24:GLU:HB3	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AL:110:VAL:O	14:AL:122:THR:HG21	1.97	0.65
14:AL:55:VAL:HG12	14:AL:56:ALA:N	2.12	0.65
15:AM:36:LYS:HD2	15:AM:59:TYR:CZ	2.32	0.65
2:AV:1:G:N2	2:AV:2:C:C4	2.61	0.65
23:B0:1119:U:H2'	23:B0:1120:C:C1'	2.27	0.65
23:B0:1656:U:C2'	23:B0:1657:A:H5''	2.25	0.65
1:AA:1474:G:C4'	23:B0:1717:A:N6	2.57	0.65
23:B0:727:U:H2'	23:B0:728:G:H5''	1.78	0.65
23:B0:927:C:H2'	23:B0:928:G:O4'	1.97	0.65
1:AA:458:G:H2'	1:AA:459:G:H8	1.62	0.64
1:AA:1075:C:P	4:AB:179:LYS:HZ2	2.20	0.64
7:AE:115:VAL:CG1	7:AE:118:ILE:HG13	2.25	0.64
19:AQ:101:ARG:HE	19:AQ:101:ARG:HA	1.62	0.64
22:AT:50:GLU:HG2	22:AT:100:ILE:HG13	1.79	0.64
23:B0:1472:C:H2'	23:B0:1473:U:H5'	1.79	0.64
23:B0:1811:A:O2'	23:B0:1812:U:H5''	1.97	0.64
1:AA:1393:U:C4	1:AA:1395:C:N4	2.66	0.64
1:AA:1410:G:N3	1:AA:1491:G:C2	2.65	0.64
1:AA:186:C:H1'	22:AT:60:GLU:CD	2.16	0.64
1:AA:287:U:O2'	1:AA:288:A:H5'	1.97	0.64
1:AA:353:A:C8	1:AA:353:A:H5'	2.31	0.64
1:AA:392:G:H2'	1:AA:393:A:C8	2.32	0.64
1:AA:443:C:H2'	1:AA:444:C:H6	1.61	0.64
19:AQ:105:ALA:CA	23:B0:727:U:C4'	2.74	0.64
23:B0:1432:G:H21	23:B0:1596:A:H62	1.45	0.64
1:AA:922:G:C6	1:AA:1396:A:N6	2.65	0.64
1:AA:1466:C:H2'	1:AA:1467:G:N7	2.13	0.64
1:AA:499:A:N3	1:AA:500:G:C1'	2.53	0.64
1:AA:651:C:O2'	1:AA:652:U:O5'	2.14	0.64
1:AA:15:G:C1'	7:AE:19:MET:HE2	2.07	0.64
23:B0:897:A:C6	23:B0:898:C:C4	2.85	0.64
1:AA:921:U:C4	1:AA:1396:A:N1	2.65	0.64
1:AA:69:G:N9	1:AA:102:G:N1	2.45	0.64
1:AA:974:A:P	16:AN:29:ARG:HH22	2.20	0.64
5:AC:177:THR:CG2	5:AC:180:ALA:HB2	2.28	0.64
5:AC:29:TYR:OH	16:AN:54:PRO:HG2	1.98	0.64
7:AE:79:GLU:HG3	7:AE:93:PRO:HD2	1.79	0.64
23:B0:2422:C:H2'	23:B0:2423:G:H8	1.62	0.64
1:AA:1141:C:H2'	1:AA:1142:G:C8	2.33	0.64
1:AA:1256:A:H5'	1:AA:1258:G:C4	2.33	0.64
1:AA:522:C:H5''	14:AL:120:TYR:CZ	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AI:114:TYR:CD2	12:AJ:60:ARG:HG2	2.32	0.64
13:AK:40:ILE:HG22	13:AK:41:THR:HG23	1.80	0.64
17:AO:17:ARG:CZ	17:AO:77:ARG:HH11	2.11	0.64
23:B0:1436:G:H1'	23:B0:1508:G:H21	1.60	0.64
1:AA:922:G:N2	1:AA:1396:A:C1'	2.60	0.64
1:AA:819:A:C8	1:AA:1529:G:N2	2.66	0.64
1:AA:828:A:H2	4:AB:26:PRO:CD	2.11	0.64
5:AC:135:LYS:NZ	7:AE:50:GLU:OE2	2.30	0.64
1:AA:438:G:OP1	6:AD:125:HIS:HE1	1.79	0.64
1:AA:1292:U:P	9:AG:41:ARG:NH2	2.70	0.64
9:AG:71:PRO:HD3	9:AG:103:TRP:CZ3	2.33	0.64
11:AI:49:PRO:O	11:AI:52:ALA:HB3	1.97	0.64
1:AA:236:G:C5'	19:AQ:42:TYR:OH	2.44	0.64
23:B0:1861:G:P	55:B5:37:LYS:CA	2.86	0.64
1:AA:1234:C:H1'	1:AA:1364:U:O2	1.97	0.64
1:AA:204:A:H5''	1:AA:205:G:OP1	1.98	0.64
1:AA:248:C:O4'	1:AA:282:A:H2	1.81	0.64
1:AA:37:U:O2'	1:AA:500:G:H4'	1.98	0.64
1:AA:818:G:H3'	1:AA:819:A:C5'	2.28	0.64
17:AO:29:VAL:HG12	17:AO:85:LEU:CD1	2.26	0.64
21:AS:64:GLU:O	21:AS:67:VAL:HG23	1.97	0.64
23:B0:1474:A:H2'	23:B0:1475:U:H5'	1.79	0.64
1:AA:702:A:C5'	23:B0:1840:A:H5'	2.27	0.64
23:B0:3184:C:O2'	23:B0:3185:U:H5''	1.98	0.64
1:AA:1040:U:H2'	1:AA:1041:A:C8	2.33	0.64
1:AA:255:G:O3'	19:AQ:17:LYS:NZ	2.22	0.64
1:AA:260:G:H8	22:AT:83:ARG:NH1	1.86	0.64
1:AA:588:G:C6	1:AA:753:A:N7	2.66	0.64
7:AE:115:VAL:HG11	7:AE:118:ILE:CG1	2.28	0.64
8:AF:9:VAL:HB	8:AF:87:ARG:HB2	1.80	0.64
13:AK:18:ARG:HB2	13:AK:33:THR:HG23	1.78	0.64
16:AN:22:THR:CB	16:AN:33:VAL:HG21	2.27	0.64
2:AW:11:C:O2'	23:B0:1898:U:C5'	2.45	0.64
23:B0:1047:G:H1	23:B0:1130:U:H3	1.46	0.64
23:B0:1072:U:O4	31:BG:10:LEU:CA	2.46	0.64
23:B0:891:A:N3	23:B0:892:A:C5	2.65	0.64
23:B0:894:G:C2'	23:B0:895:G:H5''	2.27	0.64
1:AA:1131:G:H1	1:AA:1143:G:N2	1.95	0.64
1:AA:187:G:C2	22:AT:105:SER:HB2	2.33	0.64
1:AA:188:C:H3'	22:AT:105:SER:CB	2.27	0.64
1:AA:191:G:C6	1:AA:192:U:C5	2.86	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:266:G:H3'	19:AQ:67:LYS:H	1.63	0.64
1:AA:393:A:O2'	1:AA:394:G:H5'	1.98	0.64
1:AA:292:G:N3	1:AA:608:A:N1	2.45	0.64
1:AA:922:G:H2'	1:AA:923:A:C8	2.32	0.64
5:AC:112:SER:HB2	5:AC:115:LEU:HD12	1.79	0.64
6:AD:70:ILE:HD11	6:AD:100:ARG:NE	2.13	0.64
16:AN:27:CYS:SG	16:AN:29:ARG:HB2	2.38	0.64
23:B0:2245:A:H5'	23:B0:2246:A:N7	2.12	0.64
23:B0:2690:A:OP2	23:B0:2694:G:H5'	1.98	0.64
1:AA:69:G:H1'	1:AA:102:G:C5	2.33	0.64
1:AA:118:U:C3'	1:AA:119:A:P	2.86	0.64
5:AC:155:GLY:O	5:AC:196:LEU:HD22	1.98	0.64
11:AI:48:GLU:N	11:AI:49:PRO:HD2	2.13	0.64
21:AS:40:ILE:HB	21:AS:67:VAL:O	1.98	0.64
21:AS:43:GLU:H	21:AS:43:GLU:CD	2.00	0.64
23:B0:65:C:H2'	23:B0:66:U:O4'	1.97	0.64
23:B0:3876:A:H1'	55:B5:46:LEU:CA	2.28	0.64
1:AA:1499:A:O4'	1:AA:1520:G:C4'	2.46	0.63
1:AA:262:A:C5'	22:AT:74:LYS:HB3	2.12	0.63
1:AA:816:A:OP2	1:AA:1527:C:C5'	2.45	0.63
1:AA:830:G:OP1	4:AB:22:LYS:CE	2.46	0.63
1:AA:837:G:O3'	1:AA:838:C:C6	2.49	0.63
5:AC:64:VAL:CB	5:AC:99:VAL:HB	2.27	0.63
9:AG:42:ILE:HG22	9:AG:120:ILE:HD12	1.79	0.63
18:AP:18:ARG:HD3	18:AP:35:LYS:HE3	1.79	0.63
1:AA:375:U:H1'	18:AP:28:ARG:NE	2.13	0.63
21:AS:44:MET:O	21:AS:47:HIS:HB2	1.97	0.63
23:B0:1075:C:H2'	23:B0:1076:U:O4'	1.99	0.63
23:B0:2510:A:H61	23:B0:2641:A:H61	1.46	0.63
1:AA:38:G:C1'	1:AA:547:A:C4	2.72	0.63
1:AA:375:U:C2'	18:AP:28:ARG:HD3	2.29	0.63
23:B0:1458:A:H3'	23:B0:1459:U:C5'	2.28	0.63
23:B0:1341:G:H22	23:B0:1664:G:H1	1.46	0.63
1:AA:1484:C:C2'	23:B0:1943:A:H4'	2.28	0.63
2:AW:76:A:N1	23:B0:2532:G:N2	2.42	0.63
2:AV:76:A:C5'	23:B0:2564:U:O4'	2.42	0.63
1:AA:1298:C:C4	9:AG:114:ARG:HD3	2.33	0.63
1:AA:1346:A:C4	9:AG:10:ARG:NH2	2.67	0.63
1:AA:322:C:C4'	22:AT:23:ARG:CG	2.73	0.63
1:AA:33:A:OP2	1:AA:398:C:H5'	1.97	0.63
1:AA:434:U:H2'	1:AA:435:C:H6	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:994:A:H1'	16:AN:8:GLU:HB3	1.80	0.63
7:AE:120:THR:CG2	7:AE:121:LYS:N	2.61	0.63
1:AA:877:C:OP1	10:AH:88:LYS:HE2	1.97	0.63
12:AJ:45:ARG:CZ	16:AN:36:PHE:CD2	2.81	0.63
19:AQ:104:LYS:HB3	23:B0:727:U:O4'	1.92	0.63
23:B0:1715:A:H1'	23:B0:1717:A:O4'	1.99	0.63
23:B0:2491:C:C2'	23:B0:2492:G:H5''	2.29	0.63
1:AA:762:C:C5'	23:B0:729:A:H61	2.12	0.63
1:AA:1015:A:N3	1:AA:1218:C:O2'	2.30	0.63
1:AA:1016:A:C2'	1:AA:1218:C:H4'	2.27	0.63
1:AA:1142:G:H2'	1:AA:1143:G:O4'	1.97	0.63
1:AA:1416:G:C4	1:AA:1417:G:O4'	2.52	0.63
1:AA:168:G:O2'	1:AA:169:C:H5'	1.97	0.63
1:AA:473:C:OP1	18:AP:75:ARG:NE	2.30	0.63
1:AA:1151:A:H5'	12:AJ:41:PRO:HA	1.81	0.63
13:AK:18:ARG:HB2	13:AK:33:THR:CG2	2.28	0.63
1:AA:685:G:H4'	13:AK:39:PRO:O	1.99	0.63
1:AA:188:C:N3	22:AT:106:ALA:HA	2.12	0.63
1:AA:130:A:N3	1:AA:264:U:C6	2.65	0.63
1:AA:255:G:H1'	19:AQ:16:GLN:CB	2.27	0.63
1:AA:202:G:C1'	1:AA:468:A:O2'	2.45	0.63
6:AD:148:VAL:HG11	6:AD:158:ILE:HG21	1.81	0.63
12:AJ:63:PHE:CA	16:AN:57:ARG:O	2.44	0.63
1:AA:377:G:P	18:AP:3:LYS:HZ2	2.21	0.63
19:AQ:102:GLY:O	23:B0:726:G:N1	2.32	0.63
1:AA:191:G:C2	1:AA:192:U:N1	2.66	0.63
1:AA:893:C:HO2'	1:AA:894:G:H5'	1.62	0.63
1:AA:21:G:H1'	1:AA:914:A:H62	0.46	0.63
7:AE:116:THR:HG23	7:AE:117:ASP:OD2	1.98	0.63
15:AM:93:ARG:HD3	23:B0:900:U:C4'	2.28	0.63
2:AV:11:C:H4'	23:B0:1892:C:C1'	2.28	0.63
23:B0:3149:G:C2'	23:B0:3150:C:P	2.87	0.63
1:AA:1229:A:OP2	15:AM:114:ARG:HD3	1.99	0.63
1:AA:212:G:O3'	1:AA:213:G:OP2	2.08	0.63
1:AA:274:A:H2	1:AA:275:G:C1'	2.11	0.63
1:AA:39:G:C4	1:AA:498:U:C4	2.87	0.63
1:AA:13:U:C1'	1:AA:914:A:H5'	2.29	0.63
5:AC:177:THR:HG23	5:AC:180:ALA:HB2	1.81	0.63
9:AG:114:ARG:HG2	9:AG:114:ARG:HH11	1.64	0.63
1:AA:237:C:H4'	19:AQ:25:ARG:NH1	2.14	0.63
23:B0:2198:U:C3'	23:B0:2199:C:H5''	2.27	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1347:G:O2'	1:AA:1348:U:OP2	2.16	0.63
1:AA:1483:A:C6	1:AA:1484:C:C2	2.87	0.63
1:AA:188:C:C6	22:AT:105:SER:O	2.51	0.63
1:AA:243:A:H4'	1:AA:244:U:C5'	2.22	0.63
4:AB:74:LYS:NZ	4:AB:206:ASP:HA	2.13	0.63
1:AA:1112:C:C2	5:AC:178:LEU:O	2.51	0.63
6:AD:152:SER:HB3	6:AD:155:LEU:HD12	1.80	0.63
9:AG:26:PHE:CE2	9:AG:30:ILE:HD11	2.33	0.63
11:AI:118:LYS:O	11:AI:119:ALA:CB	2.45	0.63
5:AC:58:GLU:CB	12:AJ:92:THR:HG21	2.19	0.63
1:AA:255:G:C4'	19:AQ:16:GLN:CB	2.76	0.63
23:B0:3183:A:C3'	23:B0:3184:C:P	2.87	0.63
1:AA:1278:U:OP1	1:AA:1279:A:P	2.56	0.63
1:AA:116:A:N6	1:AA:313:A:C4	2.67	0.63
1:AA:733:A:O3'	1:AA:734:G:OP2	2.06	0.63
7:AE:150:ARG:NH1	7:AE:150:ARG:HG3	2.14	0.63
12:AJ:30:SER:OG	12:AJ:81:THR:HA	1.99	0.63
18:AP:8:ARG:HB2	18:AP:28:ARG:NH1	2.14	0.63
1:AA:254:G:H1'	19:AQ:15:MET:CB	2.14	0.63
1:AA:836:G:OP2	20:AR:61:LYS:HD2	1.99	0.63
21:AS:52:TYR:HA	21:AS:56:GLN:O	1.99	0.63
23:B0:1464:A:H4'	23:B0:1545:G:H4'	1.81	0.63
23:B0:1711:C:H4'	23:B0:1712:G:C2	2.34	0.63
1:AA:1473:A:O4'	23:B0:1719:G:C1'	2.47	0.63
2:AW:11:C:O2'	23:B0:1898:U:H5'	1.98	0.63
23:B0:514:G:H2'	23:B0:514:G:N3	2.12	0.63
1:AA:1410:G:N1	1:AA:1491:G:C6	2.68	0.62
1:AA:1505:G:H4'	1:AA:1506:U:C5'	2.29	0.62
9:AG:155:ARG:O	9:AG:156:TRP:HB3	1.98	0.62
1:AA:265:G:C4'	19:AQ:66:SER:N	2.44	0.62
1:AA:262:A:C4'	22:AT:75:ASN:H	2.11	0.62
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.29	0.62
1:AA:1097:C:O2'	1:AA:1168:A:H1'	1.97	0.62
1:AA:191:G:C6	1:AA:192:U:C6	2.77	0.62
1:AA:69:G:C5	1:AA:102:G:O6	2.52	0.62
4:AB:73:THR:HB	4:AB:170:GLU:OE2	1.99	0.62
1:AA:546:G:OP1	6:AD:73:ARG:HB2	2.00	0.62
5:AC:13:GLY:HA3	16:AN:57:ARG:NH2	2.14	0.62
1:AA:375:U:O2'	18:AP:28:ARG:HD3	1.99	0.62
21:AS:39:THR:HA	21:AS:70:LYS:HG2	1.81	0.62
23:B0:3877:A:H5''	23:B0:1861:G:P	2.39	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1014:A:C5	21:AS:34:TRP:CE2	2.88	0.62
1:AA:1496:C:H1'	1:AA:1517:G:N2	2.14	0.62
4:AB:184:VAL:N	4:AB:198:ASP:OD2	2.32	0.62
19:AQ:21:VAL:HG21	19:AQ:59:ILE:HD11	1.82	0.62
1:AA:1067:A:H4'	1:AA:1068:G:O5'	1.99	0.62
1:AA:919:A:N3	1:AA:1080:A:C2	2.67	0.62
1:AA:119:A:N7	1:AA:287:U:C4	2.68	0.62
1:AA:264:U:O2'	19:AQ:64:PRO:CA	2.47	0.62
1:AA:248:C:HO2'	1:AA:283:C:H4'	1.64	0.62
1:AA:288:A:C2'	1:AA:289:G:O3'	2.48	0.62
5:AC:120:VAL:O	5:AC:124:ILE:HG13	1.99	0.62
5:AC:60:ALA:O	5:AC:61:ALA:HB2	2.00	0.62
7:AE:102:ALA:CB	7:AE:120:THR:HG21	2.29	0.62
9:AG:23:VAL:O	9:AG:27:ILE:HG13	1.99	0.62
18:AP:45:THR:HB	18:AP:46:PRO:HD2	1.80	0.62
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.64	0.62
1:AA:265:G:C1'	19:AQ:64:PRO:HB2	2.28	0.62
1:AA:675:A:O4'	13:AK:116:HIS:CD2	2.53	0.62
14:AL:33:ARG:CD	14:AL:62:SER:HB3	2.29	0.62
23:B0:1429:A:H62	23:B0:1601:U:H5''	1.65	0.62
1:AA:1420:C:H4'	23:B0:1933:G:OP1	2.00	0.62
23:B0:2236:U:C2'	23:B0:2237:C:H5''	2.29	0.62
23:B0:2607:C:H1'	23:B0:2761:A:H2'	1.79	0.62
23:B0:2756:A:H4'	23:B0:2758:A:OP1	1.98	0.62
1:AA:923:A:H5'	1:AA:1398:A:N6	2.15	0.62
1:AA:320:C:H4'	1:AA:1434:A:N1	2.14	0.62
1:AA:1483:A:N7	1:AA:1484:C:N4	2.48	0.62
1:AA:255:G:H5''	19:AQ:17:LYS:CA	2.30	0.62
1:AA:448:A:H2'	1:AA:449:C:H6	1.64	0.62
4:AB:82:ARG:O	4:AB:86:GLU:HG3	1.98	0.62
6:AD:57:ARG:NH2	7:AE:107:ARG:NH1	2.47	0.62
9:AG:139:GLU:O	9:AG:143:ARG:HG3	2.00	0.62
5:AC:23:TYR:CD1	12:AJ:11:PHE:CE2	2.87	0.62
22:AT:50:GLU:HG3	22:AT:99:LEU:HD12	1.82	0.62
1:AA:815:A:O3'	1:AA:1527:C:H4'	1.99	0.62
11:AI:19:LEU:O	11:AI:20:ARG:HG3	1.99	0.62
12:AJ:71:LEU:O	12:AJ:72:VAL:HB	2.00	0.62
14:AL:43:VAL:HG12	14:AL:44:THR:N	2.14	0.62
23:B0:1066:G:C6	23:B0:1115:C:N4	2.62	0.62
23:B0:1196:G:H2'	23:B0:1197:U:O4'	2.00	0.62
1:AA:113:G:C1'	1:AA:354:G:C5'	2.77	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1347:G:O2'	1:AA:1348:U:P	2.57	0.62
1:AA:1501:C:P	1:AA:1508:G:H4'	2.39	0.62
1:AA:186:C:H4'	22:AT:81:LYS:HB2	1.82	0.62
1:AA:292:G:H2'	1:AA:608:A:H61	1.58	0.62
4:AB:132:LYS:HG2	4:AB:135:GLN:OE1	1.99	0.62
4:AB:142:LEU:HD22	4:AB:146:GLN:NE2	2.15	0.62
16:AN:53:LEU:HB3	16:AN:56:VAL:HG21	1.81	0.62
8:AF:94:GLN:NE2	20:AR:32:ARG:HD3	2.09	0.62
1:AA:1106:G:OP1	5:AC:172:ARG:HG2	2.00	0.62
1:AA:187:G:H2'	22:AT:105:SER:CB	2.30	0.62
1:AA:333:G:O4'	22:AT:16:HIS:HD2	1.74	0.62
6:AD:61:LYS:NZ	6:AD:62:GLN:HE21	1.98	0.62
12:AJ:46:ARG:HH11	12:AJ:64:GLU:HB3	1.65	0.62
14:AL:40:VAL:O	14:AL:40:VAL:HG12	1.99	0.62
15:AM:84:ILE:O	15:AM:86:CYS:N	2.32	0.62
17:AO:29:VAL:HG12	17:AO:85:LEU:HD11	1.82	0.62
21:AS:31:ILE:CG2	21:AS:32:LYS:H	2.10	0.62
1:AA:1320:C:N4	21:AS:37:ARG:HD3	2.12	0.62
23:B0:1528:C:C2'	23:B0:1529:C:H5''	2.30	0.62
23:B0:2571:G:H2'	23:B0:2572:U:C6	2.34	0.62
1:AA:1020:U:H2'	1:AA:1021:G:H8	1.63	0.62
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.35	0.62
1:AA:13:U:O4'	1:AA:914:A:P	2.58	0.62
1:AA:1473:A:O2'	23:B0:1718:A:C5	2.53	0.62
1:AA:1487:G:O2'	1:AA:1488:G:H5'	1.99	0.62
1:AA:323:U:H5'	22:AT:23:ARG:H	1.65	0.62
1:AA:74:G:H2'	1:AA:75:C:C6	2.34	0.62
1:AA:905:U:C6	1:AA:906:G:N7	2.68	0.62
1:AA:932:C:H5'	9:AG:3:ARG:HD3	1.78	0.62
4:AB:186:ALA:HB3	4:AB:197:VAL:HG11	1.82	0.62
6:AD:148:VAL:CG1	6:AD:158:ILE:HD13	2.30	0.62
9:AG:78:ARG:HB2	9:AG:156:TRP:HZ3	1.65	0.62
1:AA:675:A:C1'	13:AK:116:HIS:CG	2.63	0.62
18:AP:67:THR:HG22	18:AP:68:ASP:N	2.15	0.62
19:AQ:76:LEU:HD23	19:AQ:77:VAL:N	2.15	0.62
2:AW:40:C:H2'	2:AW:41:U:H5'	1.82	0.62
23:B0:1580:C:H2'	23:B0:1581:C:C6	2.35	0.62
2:AW:76:A:C1'	23:B0:2562:G:N2	2.61	0.62
23:B0:2668:U:H4'	23:B0:2669:C:C5'	2.25	0.62
1:AA:1110:A:C2'	1:AA:1111:A:H5'	2.30	0.61
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1370:G:O2'	1:AA:1371:G:H5'	2.00	0.61
1:AA:1440:C:H2'	1:AA:1441:G:H5'	1.82	0.61
1:AA:1457:A:C5	1:AA:1459:C:O2	2.53	0.61
1:AA:254:G:O2'	19:AQ:15:MET:HB3	1.98	0.61
1:AA:837:G:O2'	1:AA:838:C:O4'	2.12	0.61
4:AB:115:LEU:HG	4:AB:153:ARG:NH2	2.14	0.61
6:AD:191:ARG:O	6:AD:191:ARG:HD2	2.00	0.61
1:AA:1342:C:O2'	11:AI:124:GLN:HA	2.00	0.61
22:AT:54:LYS:HE3	22:AT:100:ILE:HD11	1.82	0.61
23:B0:1250:A:O2'	23:B0:1251:G:H4'	2.00	0.61
23:B0:788:G:H5'	23:B0:790:A:H1'	1.81	0.61
1:AA:1225:A:N3	1:AA:1225:A:H2'	2.14	0.61
1:AA:193:C:H2'	1:AA:194:C:C6	2.36	0.61
1:AA:254:G:O2'	19:AQ:16:GLN:N	2.33	0.61
1:AA:386:C:O2'	1:AA:387:U:H5'	2.00	0.61
1:AA:653:A:O4'	10:AH:56:LYS:HG2	2.00	0.61
1:AA:812:C:O2'	1:AA:813:U:OP2	2.17	0.61
4:AB:69:LEU:HD12	4:AB:155:LEU:HD11	1.82	0.61
11:AI:4:TYR:CZ	11:AI:88:TYR:HD1	2.17	0.61
1:AA:675:A:C4	13:AK:116:HIS:HB2	2.29	0.61
1:AA:262:A:H4'	22:AT:75:ASN:H	1.64	0.61
2:AW:75:C:N3	23:B0:2533:U:O2	2.31	0.61
2:AW:75:C:O2'	23:B0:2486:C:C3'	2.48	0.61
23:B0:1147:G:H2'	23:B0:1148:G:C8	2.35	0.61
23:B0:2522:G:N2	23:B0:2625:U:H5''	2.15	0.61
23:B0:973:U:H2'	23:B0:974:U:C6	2.35	0.61
1:AA:128:G:OP1	19:AQ:2:PRO:HD3	1.96	0.61
1:AA:1425:U:H2'	1:AA:1426:C:H6	1.65	0.61
1:AA:246:A:H1'	1:AA:247:G:C1'	2.30	0.61
1:AA:116:A:N6	1:AA:313:A:C1'	2.21	0.61
1:AA:406:G:N7	1:AA:496:A:C4	2.68	0.61
4:AB:122:PHE:HE2	4:AB:139:LYS:HG2	1.65	0.61
4:AB:20:GLU:HG2	4:AB:189:ASP:OD2	1.99	0.61
7:AE:120:THR:HG23	7:AE:121:LYS:N	2.15	0.61
9:AG:149:ARG:NH1	13:AK:59:TYR:CD1	2.67	0.61
19:AQ:105:ALA:H	23:B0:727:U:C2'	1.99	0.61
2:AV:12:U:OP1	23:B0:1891:C:C2'	2.48	0.61
2:AW:76:A:N1	23:B0:2532:G:N1	2.48	0.61
23:B0:1920:A:H3'	23:B0:1920:A:OP2	2.01	0.61
1:AA:223:U:H5''	22:AT:68:LYS:HZ2	1.64	0.61
1:AA:403:C:C2	1:AA:404:U:C6	2.89	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:436:C:O2'	1:AA:437:U:C5'	2.47	0.61
1:AA:598:U:H4'	10:AH:94:TYR:CG	2.35	0.61
6:AD:23:GLY:HA3	6:AD:112:VAL:CG1	2.30	0.61
14:AL:27:LEU:C	14:AL:29:GLY:H	2.04	0.61
23:B0:1518:C:H2'	23:B0:1519:G:C8	2.35	0.61
23:B0:116:A:N3	23:B0:155:G:H1'	2.15	0.61
23:B0:2727:G:H1	23:B0:2735:C:H5''	1.64	0.61
1:AA:1067:A:N3	1:AA:1068:G:C1'	2.64	0.61
1:AA:1484:C:H2'	1:AA:1485:U:H6	1.65	0.61
1:AA:1490:C:H6	1:AA:1490:C:C5'	2.13	0.61
1:AA:551:U:H2'	1:AA:552:U:H6	1.64	0.61
4:AB:80:ILE:HD11	4:AB:208:ILE:HG23	1.81	0.61
1:AA:1112:C:C2	5:AC:178:LEU:N	2.68	0.61
13:AK:19:ALA:HB2	13:AK:80:VAL:HG11	1.82	0.61
1:AA:691:G:H3'	13:AK:26:ASN:HD21	1.65	0.61
19:AQ:104:LYS:CB	23:B0:726:G:C4	2.83	0.61
23:B0:2548:G:H2'	23:B0:2549:G:C5'	2.27	0.61
1:AA:954:G:H21	1:AA:1227:A:H62	1.49	0.61
1:AA:1269:A:C2	1:AA:1313:U:C1'	2.83	0.61
1:AA:837:G:C3'	1:AA:838:C:C6	2.83	0.61
5:AC:50:ALA:O	5:AC:70:VAL:HG12	1.99	0.61
5:AC:83:ARG:C	5:AC:85:ARG:H	2.04	0.61
13:AK:48:ILE:HG22	13:AK:49:GLY:N	2.16	0.61
13:AK:84:VAL:CG1	13:AK:95:ILE:HD11	2.31	0.61
1:AA:1226:C:N4	15:AM:104:ARG:HD2	2.16	0.61
19:AQ:76:LEU:C	19:AQ:76:LEU:HD23	2.20	0.61
20:AR:52:PRO:O	20:AR:56:THR:HG23	2.00	0.61
1:AA:1473:A:C1'	23:B0:1719:G:H1'	2.30	0.61
2:AV:74:C:C4	23:B0:2231:G:N1	2.69	0.61
1:AA:335:C:C1'	1:AA:1434:A:O4'	2.47	0.61
1:AA:253:U:N1	1:AA:275:G:O2'	2.32	0.61
1:AA:300:A:H1'	1:AA:565:U:C2	2.36	0.61
1:AA:905:U:H2'	1:AA:906:G:O4'	2.00	0.61
4:AB:97:TRP:HZ2	4:AB:102:LEU:HD13	1.66	0.61
9:AG:78:ARG:HB2	9:AG:156:TRP:CZ3	2.36	0.61
14:AL:27:LEU:C	14:AL:29:GLY:N	2.54	0.61
14:AL:46:LYS:HG2	14:AL:47:LYS:N	2.16	0.61
23:B0:3877:A:C3'	23:B0:1861:G:C8	2.76	0.61
1:AA:131:C:O3'	1:AA:262:A:H1'	2.01	0.61
1:AA:390:C:H2'	1:AA:391:G:H8	1.66	0.61
1:AA:501:C:H2'	1:AA:502:G:C8	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:779:C:O2'	13:AK:120:ARG:NH1	2.31	0.61
6:AD:61:LYS:NZ	6:AD:62:GLN:NE2	2.49	0.61
7:AE:80:ILE:CD1	7:AE:91:LEU:HB2	2.30	0.61
11:AI:44:VAL:HG12	11:AI:51:ARG:HH12	1.66	0.61
15:AM:10:PRO:O	15:AM:45:VAL:HG11	2.01	0.61
15:AM:54:VAL:O	15:AM:58:GLU:HG2	2.01	0.61
15:AM:84:ILE:HG22	21:AS:65:ASN:ND2	2.15	0.61
22:AT:96:GLY:O	22:AT:97:ALA:HB3	2.01	0.61
23:B0:1093:U:O4	23:B0:1094:C:C4	2.54	0.61
23:B0:2223:U:H2'	23:B0:2224:U:O4'	2.01	0.61
2:AW:76:A:O4'	23:B0:2486:C:C5'	2.48	0.61
1:AA:1255:G:H2'	1:AA:1258:G:N2	2.13	0.61
1:AA:179:A:N1	1:AA:196:A:N7	2.48	0.61
1:AA:265:G:H5'	19:AQ:65:ILE:N	2.10	0.61
1:AA:37:U:H5'	1:AA:501:C:OP1	2.00	0.61
5:AC:129:ALA:HB3	5:AC:132:ARG:HD2	1.82	0.61
1:AA:438:G:OP1	6:AD:125:HIS:CE1	2.54	0.61
1:AA:779:C:O4'	13:AK:120:ARG:CB	2.48	0.61
1:AA:796:C:OP1	13:AK:123:LYS:HE2	2.01	0.61
14:AL:28:LYS:HD2	14:AL:33:ARG:HH12	1.65	0.61
1:AA:333:G:O2'	22:AT:16:HIS:CE1	2.52	0.61
2:AV:44:A:O2'	2:AV:45:G:H5'	2.00	0.61
23:B0:1094:C:O2'	23:B0:1096:A:H2	1.83	0.61
23:B0:3184:C:C2'	23:B0:3185:U:H5''	2.31	0.61
23:B0:362:C:H2'	23:B0:363:G:H4'	1.82	0.61
23:B0:3874:C:H2'	23:B0:3875:A:C5'	2.30	0.61
1:AA:319:G:C5'	1:AA:1468:A:C4'	2.74	0.61
1:AA:266:G:H5'	19:AQ:67:LYS:N	2.15	0.61
1:AA:377:G:OP1	18:AP:3:LYS:NZ	2.34	0.61
1:AA:27:G:C2	1:AA:557:G:N3	2.69	0.61
1:AA:953:G:H1'	15:AM:125:ARG:CB	2.31	0.61
4:AB:114:ARG:NH1	4:AB:118:LEU:HD21	2.15	0.61
5:AC:47:LEU:HD23	5:AC:68:VAL:HG11	1.83	0.61
6:AD:25:ARG:O	6:AD:27:TYR:N	2.33	0.61
1:AA:1492:A:OP1	14:AL:47:LYS:HA	2.00	0.61
15:AM:40:ASN:ND2	15:AM:41:PRO:HD2	2.15	0.61
23:B0:1500:U:H3	23:B0:1520:G:H22	1.48	0.61
23:B0:181:A:H5''	23:B0:182:G:OP1	2.00	0.61
19:AQ:104:LYS:HE3	23:B0:729:A:N6	2.15	0.61
23:B0:891:A:N3	23:B0:892:A:N7	2.48	0.61
1:AA:102:G:N3	1:AA:151:A:H2	1.98	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:247:G:C2	1:AA:282:A:C2	2.89	0.60
1:AA:476:U:C2'	1:AA:477:G:C5'	2.79	0.60
1:AA:456:A:C6	1:AA:477:G:C4	2.86	0.60
1:AA:651:C:C2	1:AA:652:U:C5	2.89	0.60
19:AQ:104:LYS:O	19:AQ:105:ALA:HB2	2.01	0.60
22:AT:43:LEU:HD12	22:AT:55:ILE:HD12	1.81	0.60
23:B0:161:U:H4'	23:B0:194:G:H21	1.66	0.60
1:AA:1190:G:C2'	1:AA:1191:A:OP2	2.50	0.60
1:AA:1434:A:H3'	1:AA:1435:G:H5'	1.75	0.60
1:AA:1470:G:O2'	1:AA:1471:G:H5'	2.02	0.60
1:AA:1483:A:C2'	1:AA:1484:C:C5	2.85	0.60
1:AA:299:G:C2	1:AA:566:G:O6	2.55	0.60
4:AB:140:HIS:O	4:AB:143:GLU:HB2	2.01	0.60
5:AC:191:THR:CG2	5:AC:192:THR:N	2.64	0.60
23:B0:1427:G:H2'	23:B0:1428:G:H5'	1.82	0.60
1:AA:39:G:N1	1:AA:404:U:C4	2.69	0.60
1:AA:675:A:O2'	13:AK:116:HIS:ND1	2.33	0.60
1:AA:893:C:N3	1:AA:894:G:C5	2.69	0.60
5:AC:191:THR:HG22	5:AC:192:THR:N	2.15	0.60
6:AD:157:LEU:HD22	6:AD:161:ASN:ND2	2.16	0.60
12:AJ:30:SER:HB3	12:AJ:84:GLN:HE21	1.67	0.60
19:AQ:101:ARG:NE	19:AQ:101:ARG:HA	2.16	0.60
23:B0:1139:A:H1'	23:B0:2496:C:H5'	1.83	0.60
23:B0:317:U:C3'	23:B0:318:G:H5''	2.31	0.60
1:AA:1247:U:O2'	1:AA:1248:A:H5'	2.02	0.60
1:AA:1256:A:C5'	1:AA:1258:G:N9	2.63	0.60
1:AA:1475:G:H2'	1:AA:1476:G:C8	2.36	0.60
1:AA:293:G:C5'	1:AA:609:A:C6	2.81	0.60
1:AA:46:G:C6	1:AA:366:C:C2	2.89	0.60
1:AA:893:C:O2'	1:AA:894:G:C5'	2.47	0.60
4:AB:34:ALA:O	4:AB:41:ILE:N	2.31	0.60
5:AC:20:SER:HB3	5:AC:22:TRP:HE1	1.67	0.60
5:AC:26:LYS:N	5:AC:26:LYS:HD3	2.17	0.60
16:AN:11:LYS:O	16:AN:13:THR:N	2.35	0.60
1:AA:835:U:P	20:AR:60:GLY:HA3	2.40	0.60
23:B0:1352:G:H2'	23:B0:1353:A:H8	1.66	0.60
23:B0:1576:G:H8	23:B0:1576:G:OP2	1.85	0.60
23:B0:414:A:H2'	23:B0:415:A:O4'	2.01	0.60
23:B0:540:G:H2'	23:B0:541:C:H4'	1.82	0.60
19:AQ:104:LYS:CA	23:B0:727:U:H1'	2.30	0.60
1:AA:108:G:C8	22:AT:12:ALA:CB	2.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1416:G:H5''	1:AA:1417:G:P	2.41	0.60
1:AA:848:G:H2'	1:AA:849:C:C6	2.36	0.60
6:AD:32:ALA:C	6:AD:34:GLU:H	2.04	0.60
7:AE:76:ILE:HD13	7:AE:142:LEU:HD11	1.84	0.60
1:AA:1297:C:P	15:AM:44:ARG:NH2	2.75	0.60
18:AP:52:ASP:OD2	18:AP:55:ARG:HG3	2.00	0.60
1:AA:322:C:C4'	22:AT:23:ARG:CD	2.31	0.60
2:AV:40:C:H2'	2:AV:41:U:H5'	1.82	0.60
1:AA:1474:G:C2'	23:B0:1705:U:H4'	2.27	0.60
23:B0:1763:G:H2'	23:B0:1764:A:H4'	1.83	0.60
23:B0:3877:A:C2	23:B0:1861:G:N2	2.20	0.60
23:B0:941:U:H2'	23:B0:942:U:O4'	2.02	0.60
1:AA:1091:U:O2	1:AA:1093:A:C8	2.54	0.60
1:AA:1117:G:H8	1:AA:1117:G:H5'	1.66	0.60
1:AA:1434:A:OP1	1:AA:1435:G:OP2	2.19	0.60
1:AA:1003:G:H2'	1:AA:2003:G:C8	2.36	0.60
4:AB:143:GLU:O	4:AB:147:LYS:HG3	2.00	0.60
4:AB:33:TYR:O	4:AB:34:ALA:HB2	2.01	0.60
13:AK:69:ALA:O	13:AK:73:MET:HG2	2.02	0.60
23:B0:742:G:H2'	23:B0:1766:U:H1'	1.83	0.60
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.31	0.60
1:AA:1016:A:O4'	1:AA:1218:C:H4'	2.01	0.60
1:AA:18:C:O2	1:AA:918:A:C6	2.54	0.60
1:AA:227:G:H2'	1:AA:228:A:O4'	2.01	0.60
1:AA:377:G:OP2	18:AP:3:LYS:NZ	2.33	0.60
1:AA:991:U:O2'	1:AA:992:U:H5'	2.02	0.60
5:AC:33:LEU:HD11	16:AN:53:LEU:CD2	2.32	0.60
5:AC:79:ARG:HE	5:AC:82:GLU:HG2	1.66	0.60
9:AG:38:LEU:HD12	9:AG:38:LEU:O	2.01	0.60
16:AN:8:GLU:O	16:AN:11:LYS:HB2	2.02	0.60
1:AA:333:G:C2'	22:AT:16:HIS:NE2	2.64	0.60
23:B0:2783:U:H2'	23:B0:2785:A:N7	2.16	0.60
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.36	0.60
1:AA:923:A:C2	1:AA:1395:C:N3	2.69	0.60
1:AA:317:G:OP1	1:AA:353:A:N6	2.21	0.60
1:AA:375:U:O3'	1:AA:376:G:C5'	2.49	0.60
1:AA:905:U:C3'	1:AA:906:G:O5'	2.49	0.60
18:AP:4:ILE:HG13	18:AP:64:ALA:HB1	1.83	0.60
1:AA:323:U:C3'	22:AT:22:ARG:CB	2.67	0.60
1:AA:259:G:OP2	22:AT:83:ARG:HG2	2.01	0.60
23:B0:1073:G:H1'	23:B0:1099:A:N1	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1127:C:H2'	23:B0:1128:G:H8	1.66	0.60
23:B0:1337:G:H1'	23:B0:1632:A:N6	2.17	0.60
23:B0:83:A:H4'	23:B0:84:G:O4'	2.01	0.60
2:AV:56:C:O3'	28:BD:74:ILE:CA	2.49	0.60
1:AA:919:A:C2	1:AA:1080:A:C2	2.84	0.60
1:AA:1111:A:H61	5:AC:176:HIS:C	2.05	0.60
1:AA:28:G:O2'	1:AA:296:U:H5''	2.01	0.60
1:AA:425:G:O2'	1:AA:426:G:H5'	2.02	0.60
1:AA:293:G:P	1:AA:609:A:N6	2.68	0.60
4:AB:115:LEU:O	4:AB:119:GLU:HG3	2.00	0.60
14:AL:24:VAL:O	14:AL:24:VAL:HG12	2.02	0.60
1:AA:254:G:H4'	19:AQ:18:THR:HG21	1.83	0.60
1:AA:1014:A:C5	21:AS:34:TRP:CD2	2.89	0.60
23:B0:1194:U:H2'	23:B0:1195:U:C6	2.37	0.60
23:B0:1685:A:H1'	23:B0:1686:A:C5	2.36	0.60
23:B0:1686:A:N3	23:B0:1686:A:H2'	2.17	0.60
23:B0:1921:A:H2'	23:B0:1922:U:H5''	1.83	0.60
23:B0:317:U:H2'	23:B0:318:G:H5''	1.82	0.60
23:B0:3866:A:H1'	55:B5:194:ALA:CA	2.32	0.60
1:AA:1067:A:C4'	1:AA:1068:G:O5'	2.50	0.60
1:AA:1473:A:O2'	23:B0:1718:A:C4	2.55	0.60
1:AA:216:C:C5'	1:AA:465:C:H41	2.14	0.60
1:AA:246:A:H1'	1:AA:247:G:H1'	1.84	0.60
1:AA:292:G:C2	1:AA:608:A:N1	2.70	0.60
1:AA:323:U:O4'	22:AT:19:SER:HB2	2.02	0.60
1:AA:458:G:H2'	1:AA:459:G:C8	2.36	0.60
6:AD:23:GLY:HA3	6:AD:112:VAL:HG12	1.84	0.60
7:AE:24:ARG:HG2	7:AE:24:ARG:HH11	1.66	0.60
9:AG:72:ARG:HG2	9:AG:142:GLU:OE1	2.02	0.60
10:AH:64:LYS:HG2	10:AH:79:VAL:HG21	1.84	0.60
2:AW:44:A:H3'	2:AW:45:G:P	2.41	0.60
2:AW:75:C:HO2'	23:B0:2486:C:C3'	2.15	0.60
24:B9:67:C:H2'	24:B9:68:A:H5'	1.84	0.60
1:AA:345:C:OP1	38:BN:49:ALA:CA	2.50	0.60
1:AA:1016:A:H1'	1:AA:1218:C:H4'	1.79	0.59
1:AA:132:C:C5'	1:AA:262:A:O4'	2.43	0.59
1:AA:406:G:C8	1:AA:496:A:C5	2.90	0.59
5:AC:6:HIS:HD2	5:AC:8:ILE:HB	1.66	0.59
1:AA:537:G:H5''	14:AL:113:ARG:CZ	2.32	0.59
2:AV:74:C:N3	23:B0:2231:G:C2	2.70	0.59
23:B0:3127:G:N2	23:B0:3173:A:O2'	2.27	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:246:A:H4'	1:AA:247:G:C4'	2.23	0.59
1:AA:274:A:C2	1:AA:275:G:C1'	2.85	0.59
1:AA:397:A:C8	1:AA:547:A:O2'	2.54	0.59
1:AA:402:G:H5'	1:AA:621:A:N3	2.17	0.59
1:AA:474:U:H2'	1:AA:475:C:H6	1.65	0.59
1:AA:513:C:O2'	1:AA:514:C:H5'	2.03	0.59
1:AA:538:G:H5'	14:AL:114:LYS:HD3	1.83	0.59
1:AA:653:A:O4'	10:AH:56:LYS:CE	2.46	0.59
1:AA:959:A:H3'	1:AA:960:U:H5''	1.82	0.59
1:AA:996:A:H2'	1:AA:997:U:C6	2.37	0.59
6:AD:33:MET:O	6:AD:37:PRO:HG3	2.02	0.59
18:AP:81:ARG:HG3	18:AP:83:GLU:HG2	1.84	0.59
21:AS:13:ASP:HA	21:AS:16:LEU:HB3	1.83	0.59
23:B0:1066:G:H21	23:B0:1096:A:H8	1.50	0.59
23:B0:1119:U:C2'	23:B0:1120:C:O4'	2.50	0.59
23:B0:2691:C:H3'	23:B0:2692:A:C5'	2.32	0.59
23:B0:3148:G:C2'	23:B0:3149:G:H5'	2.33	0.59
23:B0:3128:G:C2'	23:B0:3174:C:H5'	2.22	0.59
23:B0:366:U:H2'	23:B0:367:G:H8	1.67	0.59
23:B0:766:A:H2'	23:B0:767:G:C8	2.37	0.59
1:AA:107:G:H2'	1:AA:108:G:H5'	1.83	0.59
1:AA:1430:C:C4'	23:B0:1721:G:H5'	2.31	0.59
1:AA:205:G:H21	1:AA:207:C:H5	1.44	0.59
1:AA:246:A:C2	1:AA:278:G:N3	2.71	0.59
1:AA:397:A:N6	1:AA:547:A:C1'	2.32	0.59
1:AA:815:A:O3'	1:AA:1527:C:C4'	2.50	0.59
5:AC:6:HIS:NE2	5:AC:8:ILE:HD12	2.17	0.59
6:AD:25:ARG:C	6:AD:27:TYR:N	2.55	0.59
7:AE:80:ILE:HD11	7:AE:91:LEU:HB2	1.83	0.59
12:AJ:15:THR:HG23	12:AJ:94:VAL:HG22	1.85	0.59
2:AW:41:U:H2'	2:AW:42:G:O4'	2.03	0.59
23:B0:2185:U:H2'	23:B0:2186:G:C8	2.37	0.59
23:B0:81:C:H2'	23:B0:82:G:O4'	2.02	0.59
1:AA:109:A:H2'	1:AA:326:G:N2	2.17	0.59
1:AA:1381:U:O2'	1:AA:1382:C:H5'	2.02	0.59
1:AA:253:U:C2	1:AA:275:G:O2'	2.37	0.59
1:AA:600:C:C5'	10:AH:129:VAL:HA	2.32	0.59
5:AC:91:LEU:CD2	5:AC:99:VAL:HG13	2.27	0.59
12:AJ:60:ARG:HD2	12:AJ:60:ARG:N	2.17	0.59
1:AA:393:A:OP1	18:AP:12:LYS:HD3	2.02	0.59
1:AA:265:G:H5'	19:AQ:65:ILE:HA	1.45	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AM:94:ARG:HH22	21:AS:81:ARG:HD3	1.65	0.59
23:B0:198:A:H5''	23:B0:199:A:H5'	1.82	0.59
23:B0:3127:G:O2'	23:B0:3174:C:H1'	2.03	0.59
23:B0:3128:G:O2'	23:B0:3174:C:H5''	1.93	0.59
23:B0:895:G:H5'	23:B0:895:G:C8	2.35	0.59
1:AA:69:G:C2'	1:AA:101:A:C2	2.85	0.59
1:AA:1473:A:H4'	23:B0:1719:G:C4'	2.31	0.59
1:AA:246:A:N3	1:AA:247:G:H1'	2.17	0.59
1:AA:619:U:C2	6:AD:135:LEU:HG	2.29	0.59
7:AE:118:ILE:HG22	7:AE:119:LEU:H	1.66	0.59
7:AE:65:ASN:O	7:AE:65:ASN:CG	2.40	0.59
1:AA:737:A:H1'	8:AF:73:ASN:ND2	2.17	0.59
11:AI:79:LEU:HD23	11:AI:101:PHE:O	2.02	0.59
12:AJ:46:ARG:NH1	12:AJ:64:GLU:HG2	2.18	0.59
2:AV:74:C:O3'	23:B0:2581:A:OP2	2.20	0.59
23:B0:1057:A:H3'	23:B0:1058:G:C5'	2.32	0.59
23:B0:1147:G:H2'	23:B0:1148:G:H8	1.67	0.59
23:B0:1455:C:O2'	23:B0:1644:G:H5''	2.03	0.59
1:AA:1484:C:H5''	23:B0:1943:A:H1'	1.81	0.59
23:B0:2217:G:H4'	23:B0:2219:U:H5	1.68	0.59
23:B0:860:U:C2'	23:B0:861:G:H5'	2.32	0.59
23:B0:918:A:C2'	23:B0:919:U:H5''	2.30	0.59
1:AA:69:G:C1'	1:AA:102:G:C6	2.85	0.59
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.38	0.59
1:AA:248:C:O4'	1:AA:282:A:C2	2.55	0.59
1:AA:254:G:HO2'	1:AA:255:G:H5'	1.63	0.59
1:AA:518:C:H5''	1:AA:519:C:C6	2.38	0.59
1:AA:757:U:H4'	1:AA:878:G:N2	2.17	0.59
4:AB:97:TRP:HH2	4:AB:176:GLU:CD	2.06	0.59
7:AE:122:GLU:O	7:AE:123:LEU:HD23	2.03	0.59
1:AA:1308:U:C5	15:AM:99:ARG:NH1	2.71	0.59
1:AA:1473:A:C4'	23:B0:1719:G:C4'	2.80	0.59
23:B0:2018:G:H3'	23:B0:2019:C:C5'	2.32	0.59
23:B0:241:C:O2'	23:B0:242:A:H5''	2.03	0.59
23:B0:3867:G:N3	55:B5:44:GLY:CA	2.62	0.59
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.17	0.59
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.37	0.59
1:AA:435:C:H2'	1:AA:436:C:H6	1.67	0.59
1:AA:735:C:O2'	20:AR:75:ILE:HD12	2.03	0.59
7:AE:118:ILE:CG2	7:AE:119:LEU:N	2.65	0.59
17:AO:11:VAL:HG21	17:AO:34:LEU:HD12	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:255:G:C1'	19:AQ:16:GLN:NE2	2.11	0.59
22:AT:57:ARG:HH21	22:AT:100:ILE:CG2	2.16	0.59
2:AV:74:C:O3'	23:B0:2581:A:H5'	1.90	0.59
1:AA:1064:G:H1'	1:AA:1190:G:H21	1.68	0.59
1:AA:1123:A:O2'	12:AJ:38:ILE:HG22	2.03	0.59
1:AA:1211:U:H5'	1:AA:1212:U:P	2.43	0.59
1:AA:1269:A:N1	1:AA:1313:U:O4'	2.35	0.59
1:AA:131:C:C4'	1:AA:262:A:O2'	2.49	0.59
1:AA:921:U:O4	1:AA:1396:A:C6	2.56	0.59
1:AA:1484:C:C5'	23:B0:1943:A:C1'	2.74	0.59
1:AA:377:G:OP1	18:AP:3:LYS:CD	2.51	0.59
1:AA:406:G:N2	1:AA:437:U:O2	2.33	0.59
1:AA:705:U:O3'	1:AA:706:A:P	2.60	0.59
1:AA:737:A:C1'	8:AF:73:ASN:ND2	2.65	0.59
1:AA:99:C:O2	1:AA:101:A:C8	2.56	0.59
4:AB:120:ALA:O	4:AB:124:SER:HB3	2.02	0.59
6:AD:151:LYS:CD	6:AD:151:LYS:H	2.16	0.59
9:AG:122:HIS:HA	9:AG:125:MET:HE3	1.85	0.59
9:AG:51:GLN:HA	9:AG:51:GLN:OE1	2.02	0.59
16:AN:12:ARG:O	16:AN:14:PRO:N	2.36	0.59
1:AA:254:G:H5'	19:AQ:43:LEU:HD13	1.85	0.59
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.38	0.59
1:AA:1069:C:HO2'	1:AA:1192:C:H1'	1.66	0.59
1:AA:1234:C:C4'	1:AA:1365:G:OP1	2.49	0.59
1:AA:21:G:O2'	1:AA:914:A:C6	2.55	0.59
1:AA:686:U:O2'	1:AA:687:A:H8	1.84	0.59
4:AB:98:LEU:O	4:AB:101:MET:HG3	2.01	0.59
4:AB:101:MET:CA	4:AB:108:ILE:HD12	2.33	0.59
5:AC:47:LEU:CD1	5:AC:47:LEU:H	2.15	0.59
5:AC:64:VAL:HB	5:AC:99:VAL:CG2	2.33	0.59
8:AF:10:LEU:CD1	8:AF:59:TYR:HB3	2.29	0.59
9:AG:42:ILE:HG23	9:AG:117:ALA:HA	1.84	0.59
10:AH:83:ILE:HG23	10:AH:83:ILE:O	2.03	0.59
1:AA:1345:U:H5''	11:AI:120:ARG:HH11	1.67	0.59
1:AA:258:G:O3'	22:AT:87:LYS:HE2	2.01	0.59
2:AV:41:U:H2'	2:AV:42:G:O4'	2.03	0.59
23:B0:1621:C:H4'	23:B0:1626:A:H61	1.68	0.59
23:B0:2181:A:H2'	23:B0:2182:A:H5'	1.85	0.59
23:B0:2368:G:H5''	23:B0:2369:U:O4'	2.02	0.59
23:B0:67:G:H21	23:B0:72:A:H2'	1.67	0.59
23:B0:830:C:O2'	23:B0:852:U:H5''	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B9:25:G:H2'	24:B9:26:G:H5'	1.84	0.59
24:B9:67:C:C2'	24:B9:68:A:H5'	2.32	0.59
1:AA:1110:A:N6	1:AA:1111:A:C6	2.71	0.59
1:AA:1255:G:O2'	1:AA:1258:G:N2	2.35	0.59
1:AA:332:G:OP2	22:AT:10:LEU:CG	2.47	0.59
1:AA:39:G:O2'	1:AA:40:C:H5'	2.03	0.59
1:AA:20:U:H3	1:AA:915:A:N6	1.85	0.59
5:AC:10:PHE:CZ	5:AC:178:LEU:HD13	2.38	0.59
12:AJ:62:HIS:C	16:AN:59:ALA:N	2.38	0.59
15:AM:81:LEU:HD23	15:AM:81:LEU:N	2.17	0.59
1:AA:265:G:C1'	19:AQ:64:PRO:HB3	2.33	0.59
21:AS:25:LYS:HD2	21:AS:25:LYS:H	1.68	0.59
23:B0:1088:A:H2'	23:B0:1089:C:O4'	2.03	0.59
2:AW:76:A:O4'	23:B0:2486:C:H5'	2.03	0.59
23:B0:576:A:H2	23:B0:580:A:H62	1.51	0.59
1:AA:1109:C:P	5:AC:176:HIS:NE2	2.76	0.58
1:AA:1392:G:O4'	1:AA:1531:A:H4'	2.02	0.58
1:AA:1497:G:H1'	1:AA:1518:A:H2	1.62	0.58
1:AA:104:G:C5'	1:AA:172:A:H2	2.09	0.58
1:AA:505:G:H2'	1:AA:506:G:C8	2.37	0.58
1:AA:547:A:P	1:AA:548:G:O5'	2.61	0.58
1:AA:736:C:H2'	1:AA:737:A:C8	2.38	0.58
1:AA:815:A:C2	1:AA:1528:U:C6	2.91	0.58
9:AG:95:ARG:NH1	9:AG:95:ARG:HG3	2.17	0.58
1:AA:1348:U:OP1	11:AI:110:GLU:HB3	2.03	0.58
16:AN:24:CYS:HB3	16:AN:28:GLY:H	1.66	0.58
18:AP:51:VAL:O	18:AP:51:VAL:HG12	2.02	0.58
23:B0:1029:C:C2'	23:B0:1030:U:H5''	2.33	0.58
23:B0:191:G:O2'	23:B0:192:G:H5'	2.03	0.58
23:B0:2547:C:H2'	23:B0:2548:G:C8	2.38	0.58
23:B0:2727:G:O2'	23:B0:2728:A:H5''	2.03	0.58
23:B0:3877:A:OP1	23:B0:1861:G:OP2	2.20	0.58
1:AA:1416:G:C2'	1:AA:1417:G:C4'	2.70	0.58
1:AA:1483:A:C8	1:AA:1484:C:C4	2.91	0.58
1:AA:651:C:H2'	1:AA:652:U:H6	1.67	0.58
4:AB:130:ARG:HD2	4:AB:131:PRO:HD2	1.85	0.58
6:AD:157:LEU:HD22	6:AD:161:ASN:HD21	1.67	0.58
12:AJ:45:ARG:O	12:AJ:64:GLU:HA	2.03	0.58
1:AA:1014:A:H5'	21:AS:14:HIS:CB	2.33	0.58
21:AS:5:LEU:O	21:AS:6:LYS:CB	2.52	0.58
2:AV:41:U:H5'	2:AV:41:U:C6	2.26	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AW:16:U:O2'	2:AW:17:U:OP2	2.21	0.58
23:B0:181:A:H4'	23:B0:182:G:C5'	2.33	0.58
23:B0:800:U:H3'	23:B0:804:C:N4	2.17	0.58
23:B0:877:G:H21	23:B0:926:C:H41	1.50	0.58
1:AA:1130:A:H3'	1:AA:1130:A:OP2	2.02	0.58
1:AA:1317:C:C5	16:AN:16:PHE:CG	2.91	0.58
1:AA:1441:G:H4'	1:AA:1442:G:N7	2.18	0.58
1:AA:1496:C:O2'	1:AA:1517:G:C6	2.56	0.58
1:AA:234:C:O2'	19:AQ:70:ARG:CG	2.43	0.58
1:AA:113:G:C1'	1:AA:354:G:H5'	2.32	0.58
1:AA:798:G:P	13:AK:122:LYS:HZ3	2.26	0.58
4:AB:133:LYS:O	4:AB:137:ARG:HG3	2.04	0.58
4:AB:156:LYS:O	4:AB:156:LYS:HD3	2.03	0.58
11:AI:93:ARG:NH1	11:AI:97:LYS:NZ	2.51	0.58
22:AT:10:LEU:HD12	22:AT:12:ALA:HB3	1.85	0.58
23:B0:1181:C:C3'	23:B0:1182:U:H5''	2.32	0.58
23:B0:45:C:H5''	23:B0:192:G:N7	2.19	0.58
23:B0:3098:U:C5	23:B0:3099:U:C4	2.90	0.58
1:AA:69:G:C8	1:AA:102:G:N1	2.72	0.58
1:AA:1231:G:H5''	11:AI:126:SER:OG	2.04	0.58
5:AC:3:ASN:C	5:AC:4:LYS:HG2	2.23	0.58
12:AJ:3:LYS:N	12:AJ:77:PRO:HD3	2.18	0.58
13:AK:74:ALA:C	13:AK:76:GLY:H	2.06	0.58
19:AQ:69:LYS:C	19:AQ:70:ARG:HD2	2.24	0.58
20:AR:47:THR:HG22	20:AR:48:GLY:N	2.18	0.58
1:AA:191:G:N2	22:AT:103:GLY:HA2	2.15	0.58
23:B0:2547:C:H2'	23:B0:2548:G:H8	1.67	0.58
23:B0:2668:U:C4'	23:B0:2669:C:H5'	2.25	0.58
23:B0:805:G:H5''	23:B0:806:A:O5'	2.03	0.58
1:AA:1054:C:OP1	1:AA:1197:G:OP1	2.21	0.58
1:AA:253:U:O4'	1:AA:276:G:O4'	2.21	0.58
1:AA:405:U:O3'	1:AA:406:G:P	2.62	0.58
1:AA:723:U:H2'	1:AA:723:U:O2	2.04	0.58
1:AA:651:C:C4	1:AA:752:G:O2'	2.56	0.58
4:AB:10:LEU:HD23	4:AB:48:MET:HG3	1.86	0.58
1:AA:676:A:O2'	13:AK:115:PRO:CB	2.52	0.58
14:AL:55:VAL:CG1	14:AL:67:THR:HG23	2.33	0.58
12:AJ:61:GLU:CD	16:AN:58:LYS:NZ	2.55	0.58
1:AA:130:A:O4'	19:AQ:63:ARG:HG3	2.02	0.58
1:AA:264:U:O2'	19:AQ:63:ARG:O	2.21	0.58
2:AV:74:C:N4	23:B0:2231:G:C6	2.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:175:C:H1'	23:B0:2413:A:H61	1.69	0.58
23:B0:2236:U:H3'	23:B0:2237:C:H5''	1.85	0.58
23:B0:2045:A:H4'	23:B0:2421:C:OP2	2.03	0.58
23:B0:2422:C:H2'	23:B0:2423:G:C8	2.37	0.58
1:AA:1504:G:H3'	1:AA:1504:G:OP2	2.04	0.58
1:AA:254:G:N2	19:AQ:16:GLN:NE2	2.51	0.58
1:AA:390:C:H2'	1:AA:391:G:C8	2.38	0.58
1:AA:66:G:H4'	1:AA:199:G:C4'	2.33	0.58
1:AA:707:C:OP1	13:AK:85:ARG:CZ	2.44	0.58
11:AI:111:ARG:HD3	11:AI:112:LYS:C	2.24	0.58
11:AI:11:LYS:O	11:AI:11:LYS:HG2	2.03	0.58
11:AI:5:TYR:O	11:AI:84:ALA:HA	2.03	0.58
1:AA:779:C:C3'	13:AK:120:ARG:CD	2.82	0.58
14:AL:92:ASP:O	14:AL:94:PRO:HD3	2.04	0.58
1:AA:322:C:H4'	22:AT:23:ARG:HB2	1.85	0.58
2:AV:57:G:H4'	28:BD:76:ASN:CA	2.33	0.58
2:AW:41:U:H6	2:AW:41:U:C5'	2.13	0.58
23:B0:1119:U:C4	23:B0:1120:C:C5	2.91	0.58
1:AA:1484:C:H4'	23:B0:1943:A:C4'	2.33	0.58
23:B0:3108:G:C2'	23:B0:3109:U:OP2	2.51	0.58
1:AA:46:G:C4	1:AA:366:C:C5	2.91	0.58
5:AC:14:ILE:O	5:AC:16:ARG:N	2.36	0.58
12:AJ:47:PHE:CD2	16:AN:37:PHE:HE1	2.21	0.58
1:AA:1484:C:C3'	23:B0:1943:A:H4'	2.34	0.58
23:B0:2329:C:H2'	23:B0:2330:G:H5'	1.84	0.58
1:AA:1060:C:C5	5:AC:2:GLY:HA3	2.39	0.58
1:AA:1256:A:C5'	1:AA:1258:G:C4	2.87	0.58
1:AA:265:G:C3'	19:AQ:66:SER:CA	2.82	0.58
1:AA:653:A:C8	10:AH:56:LYS:CB	2.87	0.58
4:AB:209:ARG:HE	4:AB:239:VAL:HG11	1.69	0.58
12:AJ:82:ILE:HG22	12:AJ:82:ILE:O	2.03	0.58
1:AA:1014:A:C6	21:AS:34:TRP:CZ2	2.92	0.58
21:AS:40:ILE:HG21	21:AS:62:ILE:CD1	2.33	0.58
2:AW:64:A:H2'	2:AW:65:G:O4'	2.04	0.58
23:B0:3110:G:OP1	23:B0:3149:G:C5'	2.44	0.58
1:AA:1261:A:C4'	1:AA:1283:G:O3'	2.48	0.58
1:AA:560:U:H4'	1:AA:561:U:H5''	1.83	0.58
1:AA:757:U:H2'	1:AA:758:G:O4'	2.03	0.58
1:AA:817:C:H42	1:AA:1529:G:H1	1.51	0.58
1:AA:878:G:H5'	10:AH:89:PRO:HG2	1.85	0.58
1:AA:18:C:H1'	1:AA:918:A:C2	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AL:25:PRO:C	14:AL:27:LEU:N	2.52	0.58
14:AL:28:LYS:HD2	14:AL:33:ARG:NH2	2.16	0.58
15:AM:15:VAL:HG23	15:AM:43:THR:O	2.04	0.58
23:B0:2434:G:H2'	23:B0:2435:C:C6	2.39	0.58
23:B0:2491:C:C3'	23:B0:2492:G:H5''	2.34	0.58
23:B0:2858:A:H3'	23:B0:2859:U:H5'	1.85	0.58
23:B0:3098:U:C4	23:B0:3099:U:O4	2.57	0.58
23:B0:653:G:H4'	23:B0:2328:G:H4'	1.86	0.58
23:B0:876:A:H2'	23:B0:877:G:C8	2.39	0.58
24:B9:14:C:H4'	24:B9:17:A:N6	2.19	0.58
1:AA:1075:C:OP1	4:AB:179:LYS:HD3	2.04	0.58
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.39	0.58
1:AA:1223:C:OP1	1:AA:1224:G:H3'	2.04	0.58
1:AA:1248:A:O2'	11:AI:70:LYS:CE	2.52	0.58
1:AA:1496:C:O2'	1:AA:1517:G:N1	2.31	0.58
1:AA:239:U:H5''	1:AA:240:C:OP1	2.02	0.58
1:AA:46:G:O2'	1:AA:365:U:C2'	2.52	0.58
1:AA:714:G:N3	1:AA:777:A:H1'	2.19	0.58
1:AA:812:C:O2'	1:AA:813:U:P	2.62	0.58
1:AA:6:G:N9	7:AE:119:LEU:HD13	2.19	0.58
12:AJ:24:VAL:HG12	12:AJ:28:ARG:HE	1.68	0.58
17:AO:17:ARG:NH1	17:AO:77:ARG:HH11	2.01	0.58
17:AO:87:ILE:O	17:AO:88:ARG:HB2	2.04	0.58
23:B0:2035:G:H2'	23:B0:2036:G:H8	1.69	0.58
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.39	0.57
1:AA:264:U:O2'	19:AQ:63:ARG:HG2	1.82	0.57
1:AA:46:G:C2'	1:AA:365:U:HO2'	2.16	0.57
6:AD:30:LYS:C	6:AD:32:ALA:N	2.58	0.57
1:AA:1194:U:H5''	7:AE:22:GLY:HA2	1.85	0.57
11:AI:114:TYR:CZ	12:AJ:60:ARG:HB2	2.39	0.57
15:AM:13:LYS:O	15:AM:45:VAL:HG23	2.04	0.57
15:AM:84:ILE:C	15:AM:86:CYS:H	2.07	0.57
16:AN:29:ARG:HG2	16:AN:29:ARG:HH11	1.69	0.57
17:AO:36:ILE:HA	17:AO:59:MET:HE3	1.86	0.57
19:AQ:95:TYR:C	19:AQ:97:SER:N	2.58	0.57
20:AR:25:THR:O	20:AR:26:LEU:HB2	2.04	0.57
20:AR:86:VAL:O	20:AR:87:ARG:HB2	2.03	0.57
22:AT:53:LEU:O	22:AT:57:ARG:HD2	2.04	0.57
23:B0:118:U:H1'	23:B0:143:A:C8	2.39	0.57
23:B0:2854:G:H4'	23:B0:2855:C:H5	1.69	0.57
23:B0:331:U:H2'	23:B0:332:C:H5''	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2003:G:C2	1:AA:1004:A:H1'	2.39	0.57
1:AA:119:A:C2	1:AA:240:C:C5	2.92	0.57
1:AA:1250:A:H4'	11:AI:68:GLY:H	1.68	0.57
1:AA:135:C:C2'	1:AA:136:C:H5'	2.34	0.57
1:AA:527:G:O2'	1:AA:535:A:N1	2.32	0.57
1:AA:702:A:N1	23:B0:1838:G:C2'	2.64	0.57
1:AA:22:G:C2'	1:AA:913:A:N1	2.67	0.57
4:AB:16:HIS:NE2	4:AB:214:ILE:CG1	2.66	0.57
11:AI:7:THR:HG21	11:AI:9:ARG:NH1	2.19	0.57
16:AN:36:PHE:CD1	16:AN:36:PHE:O	2.58	0.57
23:B0:1195:U:H2'	23:B0:1196:G:C8	2.38	0.57
23:B0:1856:U:C2'	23:B0:3865:A:C8	2.87	0.57
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.19	0.57
1:AA:1392:G:C5'	1:AA:1531:A:C5'	2.77	0.57
1:AA:160:A:H61	1:AA:348:G:H1'	1.69	0.57
1:AA:192:U:O2'	1:AA:193:C:H5'	2.05	0.57
1:AA:619:U:N1	6:AD:135:LEU:CD1	2.66	0.57
1:AA:60:A:H4'	1:AA:61:G:O5'	2.03	0.57
1:AA:66:G:O3'	1:AA:199:G:H4'	2.04	0.57
1:AA:1194:U:C4'	7:AE:22:GLY:CA	2.65	0.57
1:AA:779:C:C4'	13:AK:120:ARG:HD2	2.22	0.57
15:AM:120:LYS:HE2	15:AM:123:ALA:HB2	1.86	0.57
16:AN:24:CYS:HB3	16:AN:28:GLY:N	2.19	0.57
1:AA:995:C:C2	16:AN:4:LYS:HD3	2.39	0.57
21:AS:7:LYS:O	21:AS:7:LYS:HG3	2.04	0.57
23:B0:1188:A:H2'	23:B0:1189:G:O4'	2.02	0.57
23:B0:218:A:O2'	23:B0:219:G:H4'	2.05	0.57
1:AA:1416:G:C6	1:AA:1417:G:H1'	2.39	0.57
1:AA:67:C:H2'	1:AA:69:G:OP2	2.03	0.57
4:AB:76:GLN:HG3	4:AB:206:ASP:OD1	2.03	0.57
5:AC:10:PHE:CE2	5:AC:178:LEU:HD13	2.38	0.57
9:AG:15:ASP:OD1	9:AG:17:VAL:N	2.37	0.57
11:AI:46:ALA:HB1	11:AI:77:ILE:HG22	1.85	0.57
13:AK:40:ILE:HG23	13:AK:75:TYR:CD2	2.39	0.57
2:AV:36:A:H61	3:AU:6:A:N6	2.02	0.57
23:B0:521:U:H4'	23:B0:1248:G:O2'	2.04	0.57
23:B0:1916:G:H2'	23:B0:1917:C:C6	2.40	0.57
23:B0:2641:A:H2'	23:B0:2642:G:O4'	2.05	0.57
23:B0:3184:C:H2'	23:B0:3185:U:C5'	2.34	0.57
1:AA:1228:C:OP1	15:AM:115:LYS:HG3	2.03	0.57
1:AA:130:A:N9	1:AA:264:U:O4'	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:130:A:O3'	1:AA:263:A:C4'	2.48	0.57
1:AA:185:A:H2'	1:AA:186:C:C6	2.39	0.57
1:AA:547:A:H5'	1:AA:548:G:P	2.45	0.57
1:AA:69:G:H1'	1:AA:102:G:N3	2.20	0.57
1:AA:779:C:H4'	13:AK:120:ARG:HG2	0.60	0.57
1:AA:828:A:H2	4:AB:26:PRO:HD2	1.69	0.57
5:AC:121:ALA:O	5:AC:125:GLU:HG3	2.04	0.57
5:AC:191:THR:HG21	5:AC:193:TYR:CZ	2.39	0.57
5:AC:188:LEU:HD13	5:AC:195:VAL:HG13	1.86	0.57
6:AD:201:GLN:NE2	7:AE:99:GLY:HA2	2.18	0.57
9:AG:149:ARG:HH12	13:AK:59:TYR:HE1	1.48	0.57
11:AI:5:TYR:CD2	11:AI:6:GLY:N	2.71	0.57
1:AA:957:U:H4'	21:AS:79:THR:HB	1.86	0.57
2:AV:74:C:N4	23:B0:2232:G:C2	2.73	0.57
23:B0:1187:A:H2'	23:B0:1188:A:H8	1.69	0.57
23:B0:1001:A:H62	23:B0:1200:G:H1'	1.69	0.57
2:AV:75:C:C2	23:B0:2230:G:N2	2.70	0.57
23:B0:3877:A:C5'	23:B0:1861:G:P	2.92	0.57
23:B0:879:A:C2'	23:B0:880:C:H5'	2.35	0.57
1:AA:1317:C:H2'	1:AA:1318:A:O4'	2.04	0.57
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.19	0.57
1:AA:1503:A:C4	1:AA:1531:A:H2	2.22	0.57
1:AA:205:G:N2	1:AA:207:C:C4	2.71	0.57
1:AA:546:G:H4'	1:AA:548:G:O3'	2.04	0.57
1:AA:780:A:O2'	1:AA:781:A:H5''	2.05	0.57
1:AA:818:G:C3'	1:AA:819:A:C5'	2.83	0.57
4:AB:12:GLU:C	4:AB:14:GLY:H	2.07	0.57
4:AB:23:ARG:C	4:AB:23:ARG:NH1	2.58	0.57
6:AD:7:PRO:HG2	6:AD:10:ARG:HD2	1.87	0.57
8:AF:3:ARG:HH21	8:AF:64:GLN:NE2	2.01	0.57
1:AA:675:A:C2'	13:AK:116:HIS:CD2	2.87	0.57
14:AL:85:ILE:HG23	14:AL:98:TYR:HB3	1.86	0.57
1:AA:1297:C:OP1	15:AM:44:ARG:NH2	2.37	0.57
12:AJ:61:GLU:CG	16:AN:58:LYS:HD2	2.34	0.57
19:AQ:59:ILE:HG22	19:AQ:71:PHE:CD1	2.39	0.57
2:AV:44:A:H2'	2:AV:45:G:O4'	2.04	0.57
2:AW:76:A:C4'	23:B0:2486:C:C5'	2.71	0.57
23:B0:1458:A:H3'	23:B0:1459:U:H5'	1.86	0.57
23:B0:176:A:H5''	23:B0:177:U:H5	1.69	0.57
23:B0:1947:G:H3'	23:B0:1947:G:OP1	2.05	0.57
23:B0:2726:U:H2'	23:B0:2727:G:O4'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1861:G:C4'	55:B5:198:THR:CA	2.76	0.57
1:AA:119:A:C4	1:AA:240:C:C4	2.93	0.57
1:AA:1474:G:H5''	23:B0:1717:A:N6	2.19	0.57
1:AA:406:G:H1'	1:AA:496:A:C6	2.39	0.57
1:AA:411:A:N9	1:AA:413:G:H1'	2.19	0.57
1:AA:814:A:N6	1:AA:816:A:C2	2.73	0.57
1:AA:860:A:H2'	1:AA:861:G:O4'	2.03	0.57
1:AA:94:G:C5	1:AA:96:C:C4	2.91	0.57
4:AB:144:ARG:HG3	4:AB:145:LEU:N	2.19	0.57
5:AC:29:TYR:CZ	16:AN:54:PRO:HG2	2.40	0.57
1:AA:737:A:C1'	8:AF:73:ASN:HD21	2.18	0.57
11:AI:9:ARG:HA	11:AI:13:ALA:O	2.05	0.57
14:AL:50:SER:O	14:AL:51:ALA:HB2	2.05	0.57
19:AQ:104:LYS:NZ	23:B0:730:C:H42	2.02	0.57
2:AV:64:A:H2'	2:AV:65:G:O4'	2.04	0.57
2:AW:41:U:H5'	2:AW:41:U:C6	2.27	0.57
23:B0:1517:C:H2'	23:B0:1518:C:C6	2.40	0.57
1:AA:1109:C:OP2	5:AC:176:HIS:CG	2.57	0.57
1:AA:1340:A:H4'	2:AV:32:C:H4'	1.86	0.57
1:AA:538:G:H4'	14:AL:114:LYS:HE2	1.86	0.57
1:AA:818:G:C2'	1:AA:819:A:H5''	2.34	0.57
10:AH:17:THR:HG22	10:AH:63:LEU:HG	1.86	0.57
2:AW:33:U:O2'	2:AW:35:A:N7	2.36	0.57
2:AW:76:A:C2'	23:B0:2562:G:N2	2.60	0.57
23:B0:1791:C:H1'	23:B0:1793:A:O4'	2.05	0.57
23:B0:1807:A:H5'	23:B0:1809:G:O4'	2.05	0.57
23:B0:369:C:H2'	23:B0:370:U:O4'	2.05	0.57
23:B0:59:G:N2	23:B0:73:A:H61	2.03	0.57
23:B0:804:C:O2'	23:B0:806:A:H4'	2.05	0.57
1:AA:1014:A:H2'	1:AA:1015:A:C8	2.39	0.57
1:AA:1178:G:P	11:AI:97:LYS:HZ2	2.28	0.57
1:AA:1261:A:C2'	1:AA:1283:G:H5''	2.35	0.57
1:AA:131:C:H4'	1:AA:263:A:O4'	2.05	0.57
1:AA:1394:A:C2	1:AA:1501:C:O4'	2.57	0.57
1:AA:1499:A:C4'	1:AA:1520:G:H4'	2.35	0.57
1:AA:382:A:H2'	1:AA:383:A:H8	1.70	0.57
1:AA:893:C:O3'	1:AA:894:G:C5'	2.36	0.57
1:AA:958:A:C4	21:AS:55:LYS:CD	2.87	0.57
5:AC:33:LEU:HD11	16:AN:53:LEU:HD22	1.87	0.57
8:AF:2:ARG:CD	8:AF:69:GLU:HG2	2.35	0.57
8:AF:97:PHE:HB2	20:AR:32:ARG:CZ	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AH:60:ARG:HG3	10:AH:60:ARG:HH11	1.70	0.57
11:AI:17:VAL:HG21	11:AI:80:GLY:HA3	1.86	0.57
11:AI:97:LYS:O	11:AI:100:GLY:N	2.36	0.57
1:AA:128:G:C1'	19:AQ:61:GLU:CD	2.70	0.57
23:B0:1358:C:H2'	23:B0:1359:G:C5'	2.34	0.57
1:AA:762:C:O2'	23:B0:729:A:C2	2.53	0.57
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.40	0.57
1:AA:1255:G:C2'	1:AA:1258:G:N2	2.64	0.57
1:AA:346:G:C2'	1:AA:347:G:H5'	2.35	0.57
1:AA:505:G:H2'	1:AA:506:G:H8	1.69	0.57
8:AF:80:ARG:NH1	8:AF:88:VAL:HB	2.19	0.57
10:AH:29:SER:OG	10:AH:32:LYS:HB2	2.05	0.57
12:AJ:31:GLY:HA2	12:AJ:78:ASN:ND2	2.12	0.57
1:AA:376:G:H5''	18:AP:5:ARG:CG	2.34	0.57
21:AS:10:PHE:CD2	21:AS:11:VAL:N	2.73	0.57
1:AA:762:C:C4'	23:B0:729:A:H61	2.17	0.57
1:AA:1374:A:H2'	1:AA:1375:A:H5'	1.87	0.56
1:AA:1414:U:O2'	1:AA:1415:G:H5'	2.05	0.56
1:AA:406:G:C1'	1:AA:496:A:C6	2.88	0.56
1:AA:571:U:H5''	1:AA:819:A:C2	2.40	0.56
1:AA:923:A:H5'	1:AA:1398:A:C6	2.40	0.56
1:AA:828:A:C2	4:AB:26:PRO:CD	2.87	0.56
5:AC:33:LEU:O	5:AC:33:LEU:HD23	2.04	0.56
6:AD:88:VAL:HA	7:AE:97:GLY:HA3	0.57	0.56
10:AH:103:VAL:HG21	10:AH:110:ALA:HB2	1.87	0.56
14:AL:47:LYS:CB	14:AL:48:PRO:HD3	2.35	0.56
15:AM:13:LYS:HD3	15:AM:17:VAL:HG11	1.86	0.56
1:AA:657:G:H4'	17:AO:28:GLN:HG2	1.87	0.56
1:AA:375:U:H1'	18:AP:28:ARG:CD	2.35	0.56
23:B0:1289:A:H62	23:B0:1662:G:H1	1.53	0.56
23:B0:2268:G:H22	23:B0:2323:U:H4'	1.68	0.56
23:B0:317:U:H3'	23:B0:318:G:H5''	1.86	0.56
1:AA:1111:A:H61	5:AC:177:THR:N	2.03	0.56
1:AA:923:A:H2'	1:AA:1398:A:H2'	1.81	0.56
1:AA:1409:C:H2'	1:AA:1410:G:C5'	2.36	0.56
1:AA:1484:C:C4'	23:B0:1943:A:C2'	2.82	0.56
1:AA:130:A:N3	1:AA:264:U:C5	2.73	0.56
4:AB:12:GLU:C	4:AB:14:GLY:N	2.59	0.56
4:AB:115:LEU:HG	4:AB:153:ARG:HH21	1.69	0.56
6:AD:35:ARG:O	6:AD:36:ARG:HB2	2.04	0.56
6:AD:89:THR:N	7:AE:97:GLY:O	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AL:26:ALA:O	14:AL:27:LEU:O	2.22	0.56
15:AM:117:VAL:HG12	15:AM:118:ALA:H	1.70	0.56
16:AN:14:PRO:C	16:AN:16:PHE:N	2.56	0.56
16:AN:3:ARG:NH1	16:AN:6:LEU:HD11	2.20	0.56
23:B0:1971:C:H2'	23:B0:1972:G:C8	2.40	0.56
23:B0:1976:U:H2'	23:B0:1977:C:H5'	1.87	0.56
1:AA:335:C:H1'	1:AA:1434:A:C4'	2.35	0.56
1:AA:32:A:C5'	1:AA:398:C:O2'	2.53	0.56
11:AI:39:GLY:O	11:AI:40:LEU:HD23	2.05	0.56
14:AL:6:THR:OG1	14:AL:9:GLN:HG3	2.05	0.56
18:AP:17:TYR:HE1	18:AP:41:PRO:HG2	1.69	0.56
19:AQ:5:VAL:HG22	19:AQ:60:ILE:HG12	1.87	0.56
2:AV:25:C:HO2'	23:B0:1905:G:HO2'	1.47	0.56
2:AV:25:C:HO3'	2:AV:26:G:P	2.26	0.56
2:AW:75:C:H2'	23:B0:2486:C:O2'	2.05	0.56
23:B0:1923:U:H4'	23:B0:1948:C:H41	1.71	0.56
23:B0:2270:U:H2'	23:B0:2271:C:C6	2.40	0.56
23:B0:2402:U:H5'	23:B0:2404:A:C5	2.41	0.56
23:B0:2058:U:H4'	23:B0:2575:U:N3	2.20	0.56
23:B0:879:A:O2'	23:B0:880:C:H5'	2.05	0.56
23:B0:874:A:N6	23:B0:928:G:H21	2.03	0.56
1:AA:1016:A:C4'	1:AA:1218:C:H4'	2.36	0.56
1:AA:1230:C:H1'	15:AM:126:LYS:HA	1.86	0.56
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.06	0.56
1:AA:1458:G:N7	1:AA:1459:C:O2	2.38	0.56
1:AA:246:A:H1'	1:AA:247:G:O4'	2.05	0.56
1:AA:253:U:C4'	1:AA:276:G:C4'	2.83	0.56
1:AA:27:G:C6	1:AA:557:G:C2	2.87	0.56
1:AA:403:C:C2	1:AA:404:U:C5	2.93	0.56
1:AA:675:A:C1'	13:AK:116:HIS:HD2	1.97	0.56
1:AA:974:A:P	16:AN:31:ARG:HG2	2.46	0.56
5:AC:7:PRO:CG	5:AC:184:TYR:HB2	2.35	0.56
5:AC:32:LEU:HD23	5:AC:32:LEU:O	2.05	0.56
6:AD:107:ARG:HH21	6:AD:194:LEU:HD12	1.70	0.56
7:AE:79:GLU:OE1	10:AH:105:ARG:CD	2.53	0.56
10:AH:19:VAL:HG23	10:AH:21:LYS:HD3	1.86	0.56
15:AM:31:LYS:O	15:AM:35:GLU:HB2	2.05	0.56
22:AT:67:ALA:HA	22:AT:73:HIS:H	1.70	0.56
2:AV:11:C:H5'	23:B0:1892:C:H4'	1.87	0.56
23:B0:984:A:H2'	23:B0:1200:G:H22	1.71	0.56
2:AW:12:U:H5'	23:B0:1898:U:H4'	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1319:A:H5'	1:AA:1320:C:OP1	2.06	0.56
1:AA:1410:G:C2	1:AA:1491:G:C6	2.94	0.56
1:AA:676:A:C1'	13:AK:115:PRO:HA	2.34	0.56
4:AB:126:GLU:HG2	4:AB:129:GLU:OE1	2.05	0.56
4:AB:178:ARG:NH1	4:AB:178:ARG:CG	2.67	0.56
6:AD:24:GLU:H	6:AD:112:VAL:CG1	2.19	0.56
12:AJ:12:ASP:HB3	12:AJ:15:THR:HB	1.88	0.56
15:AM:49:THR:HB	15:AM:52:GLU:HG3	1.86	0.56
23:B0:1092:U:H2'	23:B0:1093:U:C6	2.41	0.56
23:B0:1093:U:C4	23:B0:1094:C:C4	2.94	0.56
23:B0:33:C:N4	23:B0:466:A:H61	2.03	0.56
1:AA:1329:A:OP1	15:AM:28:ALA:HB3	2.06	0.56
1:AA:1343:G:C4'	11:AI:122:ALA:HB3	2.35	0.56
1:AA:1351:U:H2'	1:AA:1352:C:C6	2.40	0.56
1:AA:173:U:O4'	1:AA:197:A:C4	2.59	0.56
8:AF:25:ILE:HD12	8:AF:82:ARG:HD2	1.88	0.56
10:AH:105:ARG:HH11	10:AH:105:ARG:HG3	1.71	0.56
17:AO:3:ILE:HG22	17:AO:7:GLU:HB3	1.86	0.56
22:AT:94:ALA:O	22:AT:95:ALA:HB3	2.06	0.56
23:B0:2466:G:H2'	23:B0:2467:A:C8	2.40	0.56
23:B0:368:A:H2'	23:B0:369:C:O4'	2.06	0.56
23:B0:891:A:C2	23:B0:892:A:N7	2.71	0.56
1:AA:1086:U:H3	1:AA:1099:G:N2	1.91	0.56
1:AA:1269:A:N3	1:AA:1313:U:H1'	2.20	0.56
1:AA:448:A:H2'	1:AA:449:C:C6	2.40	0.56
1:AA:89:G:C2'	1:AA:90:C:P	2.93	0.56
4:AB:88:ALA:C	4:AB:90:MET:H	2.09	0.56
18:AP:5:ARG:HB2	18:AP:67:THR:HG1	1.71	0.56
19:AQ:67:LYS:O	19:AQ:68:ARG:HB3	2.05	0.56
2:AV:74:C:C2	23:B0:2231:G:N2	2.74	0.56
23:B0:1103:C:OP1	23:B0:2454:C:O2'	2.23	0.56
23:B0:584:A:H4'	23:B0:2479:U:H5'	1.87	0.56
23:B0:689:A:H2'	23:B0:690:A:H5'	1.87	0.56
1:AA:1004:A:H5''	1:AA:1025:U:C5	2.40	0.56
1:AA:1195:C:H3'	1:AA:1196:U:C5'	2.35	0.56
1:AA:1250:A:H5'	11:AI:68:GLY:O	2.04	0.56
1:AA:8:A:H5''	7:AE:121:LYS:HD3	1.88	0.56
4:AB:124:SER:CB	4:AB:125:PRO:HD2	2.32	0.56
5:AC:84:ILE:O	5:AC:88:ARG:HB2	2.05	0.56
12:AJ:81:THR:O	12:AJ:85:LEU:HG	2.06	0.56
14:AL:47:LYS:HB2	14:AL:48:PRO:HD2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AM:8:GLU:OE1	15:AM:22:ILE:HG12	2.05	0.56
21:AS:63:THR:HG22	21:AS:64:GLU:H	1.71	0.56
23:B0:1057:A:H3'	23:B0:1058:G:H5'	1.87	0.56
23:B0:1669:A:H2'	23:B0:1670:G:H4'	1.87	0.56
23:B0:1825:C:O2'	23:B0:1826:U:H5'	2.06	0.56
23:B0:2503:G:H2'	23:B0:2504:G:H5''	1.88	0.56
23:B0:795:A:H4'	23:B0:796:A:N7	2.20	0.56
23:B0:813:A:O2'	23:B0:815:A:H5'	2.05	0.56
1:AA:1346:A:H4'	1:AA:1347:G:O5'	2.06	0.56
1:AA:1430:C:H5'	23:B0:1721:G:H4'	1.77	0.56
1:AA:547:A:OP1	1:AA:548:G:O5'	2.23	0.56
1:AA:837:G:H2'	1:AA:838:C:N1	2.19	0.56
1:AA:946:A:H2'	1:AA:947:G:C8	2.40	0.56
1:AA:983:A:H5'	1:AA:984:C:OP2	2.06	0.56
5:AC:46:GLU:O	5:AC:48:TYR:N	2.33	0.56
6:AD:6:GLY:O	6:AD:8:VAL:HG23	2.06	0.56
1:AA:1092:A:OP2	9:AG:4:ARG:NH1	2.39	0.56
15:AM:17:VAL:O	15:AM:20:THR:HB	2.05	0.56
19:AQ:103:GLY:O	19:AQ:104:LYS:O	2.24	0.56
22:AT:35:THR:O	22:AT:39:LYS:HB2	2.05	0.56
23:B0:1093:U:O4	23:B0:1094:C:N4	2.39	0.56
23:B0:1567:A:H2'	23:B0:1568:A:O4'	2.06	0.56
1:AA:1473:A:C4'	23:B0:1719:G:C1'	2.84	0.56
23:B0:3110:G:O2'	23:B0:3120:G:H5'	2.06	0.56
1:AA:1034:G:HO3'	1:AA:1035:A:P	2.28	0.56
1:AA:1255:G:O2'	1:AA:1258:G:C2	2.59	0.56
1:AA:1395:C:H4'	1:AA:1401:G:H21	1.70	0.56
1:AA:237:C:H5''	19:AQ:25:ARG:HH21	1.57	0.56
1:AA:401:C:H4'	1:AA:622:A:C1'	2.36	0.56
1:AA:915:A:C2'	1:AA:916:G:H5'	2.35	0.56
5:AC:91:LEU:HD11	5:AC:99:VAL:HG13	1.87	0.56
1:AA:619:U:C2	6:AD:135:LEU:CG	2.79	0.56
7:AE:80:ILE:O	7:AE:80:ILE:HD12	2.05	0.56
2:AW:25:C:C4	2:AW:26:G:C8	2.94	0.56
23:B0:1191:G:H2'	23:B0:1192:A:C8	2.41	0.56
23:B0:2402:U:H5'	23:B0:2404:A:N7	2.21	0.56
1:AA:1040:U:H2'	1:AA:1041:A:H8	1.70	0.56
1:AA:1042:G:O2'	1:AA:1043:C:H5'	2.06	0.56
1:AA:1147:C:H4'	11:AI:5:TYR:CE1	2.41	0.56
1:AA:1257:U:H4'	1:AA:1258:G:O5'	2.06	0.56
1:AA:866:C:C5'	1:AA:919:A:H5''	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AO:41:GLU:HA	17:AO:41:GLU:OE2	2.05	0.56
1:AA:254:G:C2'	19:AQ:15:MET:HB3	2.36	0.56
22:AT:86:ARG:O	22:AT:90:GLN:HG3	2.05	0.56
23:B0:1426:U:H2'	23:B0:1427:G:O4'	2.05	0.56
23:B0:533:C:H2'	23:B0:534:U:O4'	2.06	0.56
1:AA:1067:A:N3	1:AA:1068:G:N9	2.54	0.55
1:AA:1202:G:O2'	1:AA:1203:C:H5'	2.06	0.55
1:AA:135:C:H2'	1:AA:136:C:H5'	1.88	0.55
1:AA:319:G:C4'	1:AA:1468:A:O4'	2.54	0.55
1:AA:256:U:H5''	19:AQ:17:LYS:CE	2.33	0.55
1:AA:411:A:C4	1:AA:413:G:H1'	2.41	0.55
1:AA:476:U:C5	1:AA:477:G:C5'	2.89	0.55
1:AA:893:C:C2'	1:AA:894:G:H5'	2.34	0.55
4:AB:223:ILE:HG21	4:AB:230:VAL:CG2	2.35	0.55
4:AB:74:LYS:HZ1	4:AB:206:ASP:CA	2.18	0.55
8:AF:46:ARG:HB2	8:AF:60:PHE:HE1	1.71	0.55
12:AJ:51:ARG:HG2	16:AN:45:ARG:HH12	1.70	0.55
15:AM:40:ASN:ND2	15:AM:42:ALA:H	2.05	0.55
20:AR:53:ARG:HD3	20:AR:63:GLN:CB	2.36	0.55
21:AS:40:ILE:HG21	21:AS:62:ILE:HD11	1.88	0.55
23:B0:2299:A:N3	23:B0:2299:A:H2'	2.21	0.55
23:B0:68:C:H2'	23:B0:69:G:C8	2.40	0.55
1:AA:1006:C:H2'	1:AA:1007:C:H6	1.72	0.55
1:AA:1297:C:P	15:AM:44:ARG:HH22	2.29	0.55
1:AA:406:G:N1	1:AA:437:U:N3	2.54	0.55
1:AA:547:A:C5'	1:AA:548:G:P	2.94	0.55
1:AA:588:G:C6	1:AA:753:A:C5	2.94	0.55
1:AA:848:G:H2'	1:AA:849:C:O4'	2.04	0.55
1:AA:939:G:H2'	1:AA:940:C:H6	1.71	0.55
15:AM:29:ARG:HB3	15:AM:64:TRP:CH2	2.42	0.55
22:AT:82:SER:O	22:AT:86:ARG:HB2	2.07	0.55
23:B0:2549:G:H2'	23:B0:2550:C:O4'	2.06	0.55
23:B0:952:A:O2'	23:B0:1204:G:H4'	2.06	0.55
1:AA:1483:A:C5	1:AA:1484:C:C5	2.94	0.55
1:AA:477:G:H2'	1:AA:478:A:C8	2.40	0.55
1:AA:26:A:N6	1:AA:558:G:H1'	2.21	0.55
5:AC:3:ASN:ND2	5:AC:4:LYS:HE2	2.21	0.55
9:AG:116:ALA:HA	9:AG:119:ARG:NH2	2.21	0.55
9:AG:146:GLU:HA	9:AG:149:ARG:HB2	1.87	0.55
23:B0:1971:C:H2'	23:B0:1972:G:H8	1.70	0.55
23:B0:2755:A:O2'	23:B0:2756:A:H5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:2759:U:H4'	23:B0:2760:G:OP2	2.05	0.55
23:B0:3116:G:H4'	23:B0:3117:A:OP1	2.04	0.55
1:AA:128:G:H5''	19:AQ:2:PRO:N	2.21	0.55
1:AA:130:A:C5	1:AA:264:U:C2	2.94	0.55
1:AA:292:G:H1'	1:AA:608:A:N6	2.21	0.55
1:AA:737:A:N3	8:AF:73:ASN:ND2	2.54	0.55
1:AA:843:C:H2'	1:AA:844:A:O4'	2.07	0.55
12:AJ:4:ILE:HA	12:AJ:100:THR:HA	1.88	0.55
14:AL:43:VAL:HG12	14:AL:44:THR:H	1.72	0.55
1:AA:254:G:C4'	19:AQ:18:THR:HG21	2.36	0.55
23:B0:26:G:N2	23:B0:524:A:H62	2.03	0.55
1:AA:1090:U:O4'	1:AA:1169:A:C2	2.53	0.55
1:AA:335:C:C1'	1:AA:1434:A:H4'	2.33	0.55
1:AA:217:C:H4'	1:AA:469:C:O2	2.06	0.55
1:AA:551:U:H2'	1:AA:552:U:C6	2.41	0.55
1:AA:599:C:H4'	10:AH:131:GLY:N	2.22	0.55
1:AA:724:G:OP1	1:AA:854:G:O2'	2.24	0.55
4:AB:17:PHE:CD1	4:AB:18:GLY:N	2.75	0.55
1:AA:1111:A:N6	5:AC:177:THR:HA	2.21	0.55
6:AD:177:ASP:OD1	6:AD:179:GLU:HB2	2.07	0.55
6:AD:176:LEU:HA	6:AD:183:GLY:HA2	1.87	0.55
6:AD:24:GLU:HG2	6:AD:25:ARG:N	2.21	0.55
1:AA:129:U:H5''	19:AQ:3:LYS:CE	2.37	0.55
2:AW:25:C:C5	2:AW:26:G:C8	2.95	0.55
23:B0:1316:G:H2'	23:B0:1317:G:C8	2.41	0.55
23:B0:3874:C:C5	23:B0:3875:A:C8	2.94	0.55
23:B0:597:U:H3	23:B0:683:A:H2'	1.71	0.55
23:B0:611:C:H2'	23:B0:612:G:O4'	2.07	0.55
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.07	0.55
1:AA:923:A:C8	1:AA:1398:A:C2	2.94	0.55
1:AA:1416:G:HO3'	1:AA:1417:G:P	2.29	0.55
1:AA:187:G:O2'	22:AT:104:LEU:C	2.44	0.55
1:AA:227:G:H2'	1:AA:228:A:C8	2.41	0.55
1:AA:476:U:O2	1:AA:477:G:H4'	2.01	0.55
1:AA:6:G:N1	7:AE:119:LEU:CD1	2.59	0.55
5:AC:58:GLU:H	5:AC:65:ALA:HB3	1.72	0.55
7:AE:15:ARG:O	7:AE:27:ARG:O	2.25	0.55
17:AO:70:LEU:HD11	17:AO:77:ARG:HB2	1.89	0.55
19:AQ:59:ILE:CG2	19:AQ:71:PHE:HB3	2.36	0.55
23:B0:2261:G:H5''	23:B0:2262:C:O5'	2.06	0.55
23:B0:2727:G:C2'	23:B0:2728:A:H5''	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:784:U:H2'	23:B0:785:U:C6	2.41	0.55
23:B0:892:A:H2'	23:B0:893:G:O4'	2.07	0.55
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.41	0.55
1:AA:1270:C:HO2'	1:AA:1314:C:H5'	1.71	0.55
1:AA:394:G:N1	1:AA:395:C:C4	2.75	0.55
1:AA:397:A:N7	1:AA:547:A:HO2'	1.45	0.55
4:AB:17:PHE:HD1	4:AB:18:GLY:N	2.04	0.55
4:AB:15:VAL:HG22	4:AB:209:ARG:HG3	1.88	0.55
1:AA:1342:C:H5'	11:AI:125:TYR:CD1	2.42	0.55
1:AA:1059:C:O2'	12:AJ:53:PRO:HD3	2.06	0.55
17:AO:87:ILE:O	17:AO:88:ARG:CB	2.54	0.55
18:AP:81:ARG:CG	18:AP:83:GLU:HG2	2.36	0.55
19:AQ:18:THR:HG23	19:AQ:69:LYS:HE3	1.88	0.55
23:B0:1528:C:C3'	23:B0:1529:C:H5''	2.36	0.55
1:AA:1474:G:O2'	23:B0:1705:U:O3'	2.25	0.55
23:B0:2222:U:H2'	23:B0:2223:U:C6	2.41	0.55
2:AV:74:C:C4	23:B0:2232:G:C2	2.95	0.55
23:B0:223:C:H4'	23:B0:398:C:H1'	1.88	0.55
23:B0:582:G:H2'	23:B0:583:C:H3'	1.88	0.55
23:B0:805:G:H4'	23:B0:806:A:OP2	2.05	0.55
23:B0:951:G:C2'	23:B0:952:A:H5''	2.35	0.55
1:AA:1268:A:H2'	1:AA:1269:A:C8	2.42	0.55
1:AA:394:G:C4	1:AA:395:C:C5	2.95	0.55
1:AA:865:A:O2'	1:AA:919:A:C4'	2.54	0.55
1:AA:905:U:C6	1:AA:906:G:C8	2.95	0.55
1:AA:866:C:C4'	1:AA:919:A:H5'	2.36	0.55
1:AA:923:A:H1'	1:AA:1398:A:N9	2.18	0.55
8:AF:76:ALA:O	8:AF:80:ARG:HG3	2.06	0.55
15:AM:125:ARG:C	15:AM:125:ARG:HD2	2.27	0.55
18:AP:21:VAL:O	18:AP:33:ILE:HB	2.07	0.55
23:B0:3128:G:H4'	23:B0:3174:C:C1'	2.36	0.55
23:B0:64:C:H2'	23:B0:65:C:C6	2.42	0.55
1:AA:1234:C:H4'	1:AA:1364:U:H1'	1.89	0.55
1:AA:1271:G:H5'	1:AA:1314:C:OP1	2.07	0.55
1:AA:1409:C:H2'	1:AA:1410:G:H8	1.72	0.55
1:AA:166:G:O2'	1:AA:167:G:H5'	2.06	0.55
1:AA:212:G:O2'	1:AA:213:G:P	2.65	0.55
1:AA:255:G:C1'	19:AQ:16:GLN:HB3	2.37	0.55
1:AA:281:G:O2'	1:AA:282:A:P	2.65	0.55
1:AA:46:G:C6	1:AA:366:C:N3	2.75	0.55
4:AB:33:TYR:HB2	4:AB:43:ASP:HB2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AH:36:LEU:HD12	10:AH:59:LEU:HD13	1.88	0.55
12:AJ:51:ARG:H	12:AJ:59:SER:HB2	1.72	0.55
17:AO:27:VAL:O	17:AO:31:LEU:HD13	2.07	0.55
18:AP:26:ARG:HD2	18:AP:31:LYS:O	2.06	0.55
19:AQ:68:ARG:N	19:AQ:70:ARG:NH1	2.55	0.55
23:B0:103:U:H2'	23:B0:104:C:C6	2.41	0.55
23:B0:121:G:O2'	23:B0:1389:C:H4'	2.05	0.55
23:B0:1975:G:H4'	23:B0:1976:U:H5	1.72	0.55
23:B0:2544:A:H2'	23:B0:2545:A:H4'	1.88	0.55
23:B0:728:G:H2'	23:B0:729:A:O4'	2.06	0.55
24:B9:45:C:H3'	24:B9:46:G:H5'	1.89	0.55
1:AA:1044:A:C3'	1:AA:1045:C:H1'	2.18	0.55
1:AA:1110:A:O2'	1:AA:1111:A:H5'	2.07	0.55
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.41	0.55
1:AA:141:A:O4'	1:AA:182:U:O2	2.25	0.55
1:AA:1460:A:H2'	1:AA:1461:G:O4'	2.07	0.55
1:AA:429:U:H2'	6:AD:25:ARG:NH1	2.22	0.55
1:AA:438:G:C4'	1:AA:439:A:OP1	2.53	0.55
1:AA:490:G:H2'	1:AA:491:G:H8	1.72	0.55
1:AA:300:A:H1'	1:AA:565:U:N3	2.22	0.55
1:AA:588:G:C1'	1:AA:753:A:N1	2.69	0.55
1:AA:954:G:H2'	1:AA:955:U:C6	2.42	0.55
4:AB:23:ARG:HD3	4:AB:23:ARG:N	2.22	0.55
5:AC:116:VAL:O	5:AC:120:VAL:HG23	2.07	0.55
6:AD:57:ARG:HB3	6:AD:206:PHE:HB2	1.88	0.55
15:AM:65:LYS:HE3	15:AM:69:GLU:OE2	2.07	0.55
19:AQ:79:SER:O	19:AQ:80:GLY:O	2.25	0.55
23:B0:1994:U:H2'	23:B0:1995:G:O4'	2.07	0.55
2:AV:75:C:C4	23:B0:2231:G:C2	2.90	0.55
23:B0:2503:G:C2'	23:B0:2504:G:H5''	2.37	0.55
23:B0:942:U:C2'	23:B0:943:U:H5'	2.37	0.55
1:AA:101:A:O2'	1:AA:102:G:H5'	2.07	0.54
1:AA:115:G:N2	1:AA:116:A:N6	2.55	0.54
1:AA:1255:G:H21	1:AA:1276:G:H22	1.53	0.54
1:AA:1343:G:O3'	11:AI:122:ALA:CB	2.49	0.54
1:AA:54:C:H2'	1:AA:352:C:H41	1.71	0.54
1:AA:676:A:H1'	13:AK:115:PRO:HB3	1.89	0.54
1:AA:825:G:H21	10:AH:11:THR:CG2	2.14	0.54
1:AA:1112:C:C2	5:AC:178:LEU:C	2.80	0.54
1:AA:188:C:H3'	22:AT:105:SER:HB3	1.88	0.54
2:AW:44:A:C3'	2:AW:45:G:P	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1514:C:H2'	23:B0:1515:U:O4'	2.07	0.54
23:B0:3110:G:H4'	23:B0:3111:C:OP2	2.07	0.54
1:AA:1026:G:O3'	1:AA:1027:C:P	2.65	0.54
1:AA:1416:G:P	1:AA:1417:G:P	3.04	0.54
1:AA:46:G:C2'	1:AA:365:U:O2'	2.56	0.54
1:AA:522:C:P	14:AL:72:GLY:N	2.76	0.54
1:AA:302:G:O2'	1:AA:556:C:H5''	2.07	0.54
4:AB:47:THR:HA	4:AB:202:PRO:HG2	1.87	0.54
1:AA:425:G:H4'	6:AD:45:GLN:HE22	1.73	0.54
12:AJ:24:VAL:HG21	12:AJ:37:PRO:HD3	1.88	0.54
1:AA:779:C:O4'	13:AK:120:ARG:CG	2.56	0.54
1:AA:1060:C:OP1	16:AN:45:ARG:NH2	2.40	0.54
22:AT:72:LEU:HD21	22:AT:80:ARG:CZ	2.38	0.54
2:AV:29:A:O2'	2:AV:30:G:H5'	2.06	0.54
2:AW:29:A:O2'	2:AW:30:G:H5'	2.06	0.54
23:B0:798:G:O2'	23:B0:1770:U:H4'	2.07	0.54
23:B0:1976:U:C2'	23:B0:1977:C:H5'	2.38	0.54
23:B0:788:G:C5'	23:B0:790:A:H1'	2.37	0.54
1:AA:1147:C:H4'	11:AI:5:TYR:HE1	1.72	0.54
1:AA:1374:A:C2'	1:AA:1375:A:H5'	2.37	0.54
1:AA:161:A:H2	1:AA:348:G:C1'	2.19	0.54
1:AA:185:A:O2'	1:AA:186:C:O5'	2.24	0.54
1:AA:33:A:H2'	1:AA:34:C:H6	1.72	0.54
1:AA:429:U:H2'	6:AD:25:ARG:HH12	1.73	0.54
1:AA:9:G:H5''	7:AE:126:ARG:CD	2.22	0.54
1:AA:9:G:P	7:AE:126:ARG:NH1	2.80	0.54
4:AB:21:ARG:HG3	4:AB:23:ARG:HD2	1.88	0.54
5:AC:59:ARG:O	12:AJ:92:THR:HG22	2.06	0.54
11:AI:7:THR:HG22	11:AI:8:GLY:N	2.22	0.54
1:AA:779:C:C4'	13:AK:120:ARG:HB3	2.36	0.54
1:AA:755:G:OP2	17:AO:65:ARG:HD2	2.07	0.54
2:AW:33:U:O2	2:AW:35:A:H3'	2.07	0.54
23:B0:1187:A:H2'	23:B0:1188:A:C8	2.43	0.54
23:B0:1358:C:H2'	23:B0:1359:G:H5''	1.89	0.54
23:B0:3098:U:C2'	23:B0:3099:U:C6	2.89	0.54
1:AA:1232:U:OP1	11:AI:125:TYR:HA	2.06	0.54
1:AA:1305:G:C2'	1:AA:1306:A:C8	2.80	0.54
1:AA:1328:C:O3'	15:AM:28:ALA:HB3	2.08	0.54
1:AA:1434:A:C3'	1:AA:1435:G:H4'	2.38	0.54
1:AA:46:G:H2'	1:AA:366:C:C5	2.39	0.54
1:AA:651:C:C2	1:AA:652:U:C4	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:69:G:O2'	1:AA:70:A:H5'	2.08	0.54
1:AA:905:U:C4	1:AA:906:G:C4	2.94	0.54
1:AA:21:G:C4'	1:AA:914:A:H61	2.20	0.54
5:AC:174:PRO:HB2	5:AC:177:THR:HG22	1.89	0.54
5:AC:91:LEU:HD21	5:AC:99:VAL:CG1	2.30	0.54
6:AD:199:ASN:HD21	6:AD:201:GLN:HB2	1.71	0.54
7:AE:137:GLU:O	7:AE:141:GLN:HG3	2.07	0.54
10:AH:123:GLU:O	10:AH:127:LEU:HD23	2.05	0.54
12:AJ:4:ILE:HG12	12:AJ:100:THR:HB	1.90	0.54
12:AJ:51:ARG:O	16:AN:45:ARG:CD	2.55	0.54
15:AM:93:ARG:HH11	23:B0:900:U:C5'	2.19	0.54
19:AQ:26:GLN:HE21	19:AQ:37:LYS:HE2	1.71	0.54
20:AR:61:LYS:O	20:AR:65:ILE:HG13	2.08	0.54
2:AW:16:U:H1'	2:AW:17:U:OP2	2.08	0.54
23:B0:1496:G:H1	23:B0:1527:G:H1	1.55	0.54
23:B0:1356:G:H1'	23:B0:1613:G:C2	2.43	0.54
2:AW:76:A:C2'	23:B0:2486:C:O4'	2.50	0.54
23:B0:3098:U:C4	23:B0:3099:U:C4	2.96	0.54
23:B0:873:U:H1'	23:B0:2246:A:OP1	2.07	0.54
1:AA:1015:A:C1'	1:AA:1219:U:H5''	2.30	0.54
1:AA:1193:G:O2'	1:AA:1194:U:H5'	2.07	0.54
1:AA:1234:C:H4'	1:AA:1364:U:C1'	2.38	0.54
1:AA:39:G:C5	1:AA:498:U:C4	2.94	0.54
1:AA:407:G:O2'	6:AD:116:GLN:HG3	2.07	0.54
7:AE:21:ALA:O	7:AE:23:GLY:N	2.40	0.54
13:AK:13:GLN:HA	13:AK:75:TYR:O	2.08	0.54
15:AM:60:VAL:O	15:AM:63:THR:HG22	2.07	0.54
1:AA:1317:C:C5	16:AN:16:PHE:CD2	2.95	0.54
2:AV:16:U:H1'	2:AV:17:U:OP2	2.08	0.54
23:B0:1319:C:H41	23:B0:1622:G:H2'	1.73	0.54
23:B0:2437:G:H2'	23:B0:2469:G:C2	2.42	0.54
23:B0:2516:U:H2'	23:B0:2517:C:C6	2.42	0.54
23:B0:918:A:H2'	23:B0:919:U:C5'	2.35	0.54
1:AA:1497:G:C1'	1:AA:1518:A:C2	2.87	0.54
1:AA:173:U:H5''	1:AA:197:A:O4'	2.05	0.54
1:AA:278:G:N2	1:AA:279:A:N6	2.44	0.54
1:AA:300:A:H2'	1:AA:301:G:O4'	2.08	0.54
1:AA:86:G:H4'	1:AA:87:G:OP2	2.07	0.54
1:AA:893:C:N1	1:AA:894:G:C8	2.76	0.54
1:AA:22:G:C2	1:AA:913:A:H2'	2.35	0.54
4:AB:195:ASP:HB3	10:AH:74:PRO:HD3	1.85	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:130:VAL:O	5:AC:134:ILE:HG13	2.07	0.54
5:AC:38:ARG:HB3	5:AC:94:LEU:HD21	1.88	0.54
8:AF:4:TYR:OH	8:AF:69:GLU:HB3	2.07	0.54
1:AA:778:G:H4'	13:AK:119:CYS:SG	2.48	0.54
17:AO:32:LEU:O	17:AO:36:ILE:HG13	2.07	0.54
19:AQ:90:ILE:HG23	23:B0:727:U:OP1	2.08	0.54
23:B0:2677:U:H2'	23:B0:2678:C:C6	2.43	0.54
23:B0:357:A:C2'	23:B0:358:C:H5'	2.38	0.54
23:B0:635:C:H3'	23:B0:636:G:H5''	1.90	0.54
1:AA:1187:G:N3	16:AN:60:SER:OG	2.38	0.54
1:AA:1261:A:O4'	1:AA:1283:G:C4'	2.34	0.54
1:AA:1402:C:O2	1:AA:1500:A:N1	2.41	0.54
1:AA:1458:G:C5	1:AA:1459:C:O2	2.61	0.54
1:AA:1474:G:C5'	23:B0:1717:A:N6	2.70	0.54
1:AA:38:G:H1'	1:AA:547:A:C8	2.43	0.54
1:AA:38:G:C4'	1:AA:498:U:O2	2.42	0.54
1:AA:532:A:H2'	1:AA:533:A:H5''	1.89	0.54
1:AA:588:G:C1'	1:AA:753:A:C2	2.91	0.54
1:AA:639:G:O2'	1:AA:640:A:H5'	2.08	0.54
1:AA:735:C:H1'	20:AR:75:ILE:CD1	2.38	0.54
1:AA:818:G:O2'	1:AA:819:A:H5''	2.08	0.54
1:AA:864:A:C2	1:AA:917:G:C2'	2.90	0.54
1:AA:977:A:C2	1:AA:1224:G:C6	2.95	0.54
4:AB:33:TYR:HB3	4:AB:41:ILE:O	2.08	0.54
4:AB:67:THR:HG22	4:AB:68:ILE:N	2.21	0.54
6:AD:32:ALA:C	6:AD:34:GLU:N	2.60	0.54
23:B0:1615:C:H2'	23:B0:1616:C:C6	2.42	0.54
23:B0:1713:G:H2'	23:B0:1714:A:O4'	2.08	0.54
23:B0:2510:A:H61	23:B0:2641:A:N6	2.06	0.54
23:B0:317:U:C2'	23:B0:318:G:H5''	2.38	0.54
23:B0:857:U:H2'	23:B0:858:G:H5'	1.89	0.54
1:AA:1066:C:O2'	1:AA:1067:A:H5'	2.07	0.54
1:AA:1117:G:O3'	1:AA:1118:C:P	2.66	0.54
1:AA:128:G:H5''	19:AQ:2:PRO:CA	2.37	0.54
1:AA:1408:A:H4'	23:B0:1900:U:H3	1.73	0.54
1:AA:300:A:O2'	1:AA:564:C:C2	2.58	0.54
1:AA:403:C:C4	1:AA:404:U:C5	2.96	0.54
1:AA:403:C:C4	1:AA:404:U:H5	2.26	0.54
1:AA:438:G:H5'	6:AD:123:HIS:CG	2.43	0.54
1:AA:203:A:H4'	1:AA:468:A:H5'	1.88	0.54
1:AA:750:G:H1'	17:AO:22:THR:OG1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:37:GLN:NE2	16:AN:52:GLN:OE1	2.40	0.54
8:AF:69:GLU:HA	8:AF:72:VAL:CG2	2.37	0.54
1:AA:640:A:N3	10:AH:115:SER:HB2	2.23	0.54
1:AA:653:A:C5'	10:AH:56:LYS:HE2	2.38	0.54
11:AI:85:LEU:O	11:AI:92:TYR:HD1	1.91	0.54
20:AR:86:VAL:O	20:AR:87:ARG:CB	2.55	0.54
1:AA:323:U:C4'	22:AT:19:SER:O	2.56	0.54
23:B0:2227:C:C2'	23:B0:2228:U:H5'	2.35	0.54
23:B0:2446:C:H2'	23:B0:2447:G:C8	2.43	0.54
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.88	0.54
1:AA:1261:A:C5'	1:AA:1283:G:O3'	2.56	0.54
1:AA:1494:G:O2'	1:AA:1495:U:H5'	2.08	0.54
1:AA:299:G:N2	1:AA:566:G:C5	2.64	0.54
1:AA:35:G:H2'	1:AA:36:C:C6	2.43	0.54
1:AA:37:U:H2'	1:AA:547:A:C6	2.43	0.54
1:AA:476:U:C2'	1:AA:477:G:H5''	2.32	0.54
4:AB:187:LEU:HD23	4:AB:214:ILE:HG21	1.90	0.54
5:AC:139:GLN:O	5:AC:143:GLU:N	2.37	0.54
7:AE:80:ILE:HD13	7:AE:138:ALA:HB1	1.90	0.54
9:AG:113:GLU:HG2	9:AG:119:ARG:HG2	1.90	0.54
1:AA:685:G:C5'	13:AK:39:PRO:O	2.55	0.54
15:AM:8:GLU:OE1	15:AM:22:ILE:HA	2.08	0.54
18:AP:43:LYS:HB3	18:AP:48:TRP:CD1	2.43	0.54
23:B0:201:G:H2'	23:B0:202:A:C8	2.42	0.54
23:B0:2379:G:H2'	23:B0:2380:U:O4'	2.07	0.54
23:B0:3128:G:H5'	23:B0:3174:C:H1'	1.89	0.54
23:B0:3184:C:H2'	23:B0:3185:U:H5'	1.89	0.54
23:B0:319:G:H21	23:B0:340:G:H21	1.55	0.54
1:AA:1184:G:H2'	1:AA:1185:G:H8	1.73	0.54
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.42	0.54
1:AA:1340:A:C3'	2:AV:32:C:H4'	2.38	0.54
1:AA:476:U:H3'	1:AA:477:G:OP1	2.08	0.54
1:AA:905:U:O4	1:AA:906:G:C2	2.61	0.54
5:AC:14:ILE:HG22	5:AC:15:THR:N	2.12	0.54
6:AD:148:VAL:HG11	6:AD:158:ILE:HD13	1.89	0.54
9:AG:138:LYS:HE2	9:AG:142:GLU:OE1	2.08	0.54
9:AG:18:TYR:CE2	9:AG:59:LEU:HB2	2.42	0.54
1:AA:826:C:O2'	10:AH:15:ASN:CB	2.56	0.54
15:AM:37:THR:HG22	15:AM:37:THR:O	2.07	0.54
12:AJ:62:HIS:CE1	16:AN:61:TRP:HH2	2.16	0.54
18:AP:11:SER:OG	18:AP:14:ASN:HB3	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1068:G:OP2	1:AA:1068:G:H8	1.91	0.53
1:AA:1344:C:H5'	11:AI:120:ARG:O	2.09	0.53
1:AA:264:U:C1'	19:AQ:64:PRO:CD	2.55	0.53
1:AA:332:G:OP2	22:AT:10:LEU:HB3	1.91	0.53
1:AA:743:U:H2'	1:AA:744:C:C6	2.43	0.53
1:AA:905:U:C3'	1:AA:906:G:OP2	2.51	0.53
1:AA:866:C:C4'	1:AA:919:A:OP1	2.55	0.53
5:AC:112:SER:CB	5:AC:115:LEU:HD12	2.36	0.53
7:AE:101:ILE:O	7:AE:120:THR:HB	2.08	0.53
1:AA:7:G:O2'	7:AE:120:THR:O	2.12	0.53
7:AE:76:ILE:O	7:AE:93:PRO:HB3	2.07	0.53
9:AG:69:VAL:HG12	9:AG:100:ALA:HA	1.89	0.53
9:AG:116:ALA:HA	9:AG:119:ARG:CZ	2.37	0.53
10:AH:119:LEU:HD12	10:AH:124:ALA:HA	1.89	0.53
10:AH:8:ASP:O	10:AH:12:ARG:HG3	2.08	0.53
10:AH:56:LYS:N	10:AH:56:LYS:HD2	2.23	0.53
1:AA:1250:A:H4'	11:AI:68:GLY:N	2.23	0.53
12:AJ:3:LYS:N	12:AJ:75:ILE:HA	2.22	0.53
12:AJ:81:THR:C	12:AJ:83:GLU:H	2.10	0.53
19:AQ:27:PHE:CE1	19:AQ:36:ILE:HD11	2.42	0.53
21:AS:51:VAL:HG12	21:AS:52:TYR:N	2.23	0.53
23:B0:1137:A:H5''	23:B0:1138:A:H5''	1.90	0.53
23:B0:1316:G:H2'	23:B0:1317:G:H8	1.72	0.53
1:AA:1475:G:O3'	23:B0:1706:A:H5''	2.07	0.53
23:B0:2241:U:H1'	23:B0:2307:A:H1'	1.90	0.53
23:B0:2246:A:H2'	23:B0:2246:A:N3	2.23	0.53
23:B0:800:U:H3'	23:B0:804:C:H41	1.73	0.53
23:B0:968:C:H2'	23:B0:970:A:OP1	2.08	0.53
1:AA:1003:G:C2	1:AA:2003:G:C6	2.96	0.53
1:AA:1128:C:H2'	1:AA:1129:C:H5''	1.90	0.53
1:AA:193:C:H2'	1:AA:194:C:H6	1.72	0.53
1:AA:279:A:OP2	19:AQ:95:TYR:CZ	2.61	0.53
1:AA:620:C:H2'	1:AA:621:A:O4'	2.07	0.53
1:AA:818:G:H3'	1:AA:819:A:H5''	1.87	0.53
4:AB:18:GLY:CA	4:AB:42:ILE:H	2.20	0.53
5:AC:181:ASN:HD21	5:AC:204:LEU:HD12	1.72	0.53
7:AE:18:ARG:HG2	7:AE:19:MET:N	2.24	0.53
16:AN:44:LEU:HD12	16:AN:44:LEU:C	2.29	0.53
16:AN:9:LYS:HD3	16:AN:9:LYS:C	2.28	0.53
19:AQ:104:LYS:HD3	23:B0:729:A:H62	1.74	0.53
2:AV:16:U:O2'	2:AV:17:U:OP2	2.21	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:2316:G:H2'	23:B0:2317:G:H8	1.74	0.53
23:B0:3196:G:O2'	23:B0:3197:U:P	2.66	0.53
23:B0:45:C:H5''	23:B0:192:G:C8	2.43	0.53
1:AA:1038:C:H2'	1:AA:1039:C:C6	2.43	0.53
1:AA:1190:G:OP1	5:AC:4:LYS:C	2.47	0.53
1:AA:1298:C:C6	9:AG:114:ARG:HD3	2.43	0.53
1:AA:255:G:C4'	19:AQ:17:LYS:CB	2.86	0.53
1:AA:317:G:P	1:AA:353:A:H61	2.29	0.53
5:AC:33:LEU:C	5:AC:33:LEU:HD23	2.29	0.53
9:AG:71:PRO:HD3	9:AG:103:TRP:HZ3	1.74	0.53
14:AL:53:ARG:NH1	14:AL:92:ASP:OD2	2.42	0.53
1:AA:1315:U:H5	21:AS:6:LYS:HZ1	1.54	0.53
22:AT:67:ALA:HB2	22:AT:77:ALA:HB2	1.88	0.53
23:B0:1217:U:H2'	23:B0:1218:C:C6	2.43	0.53
23:B0:2392:G:H2'	23:B0:2393:G:C8	2.44	0.53
23:B0:239:A:H4'	23:B0:620:G:H5'	1.89	0.53
23:B0:2483:U:H2'	23:B0:2484:G:H5'	1.91	0.53
23:B0:2623:A:H2'	23:B0:2624:G:O4'	2.09	0.53
23:B0:658:G:H4'	23:B0:2331:A:H5'	1.90	0.53
1:AA:1015:A:C2'	1:AA:1219:U:C5'	2.81	0.53
1:AA:1457:A:C8	1:AA:1459:C:O2	2.60	0.53
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.08	0.53
1:AA:1405:G:H21	1:AA:1518:A:H1'	1.74	0.53
1:AA:397:A:N6	1:AA:547:A:N9	2.52	0.53
1:AA:588:G:N3	1:AA:753:A:C6	2.75	0.53
4:AB:75:LYS:HD3	4:AB:75:LYS:O	2.08	0.53
1:AA:1367:C:OP2	11:AI:112:LYS:NZ	2.41	0.53
12:AJ:22:LYS:CE	12:AJ:90:LEU:HD12	2.33	0.53
1:AA:685:G:C4'	13:AK:39:PRO:O	2.56	0.53
14:AL:53:ARG:HG2	14:AL:69:TYR:HE1	1.73	0.53
19:AQ:104:LYS:CD	23:B0:729:A:H62	2.21	0.53
21:AS:42:PRO:O	21:AS:45:VAL:HG23	2.09	0.53
23:B0:1141:U:H5'	23:B0:2549:G:N2	2.23	0.53
23:B0:412:U:H2'	23:B0:413:G:O4'	2.08	0.53
23:B0:757:U:O2'	23:B0:758:G:H5'	2.09	0.53
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.08	0.53
1:AA:319:G:N3	1:AA:1434:A:N3	2.57	0.53
1:AA:252:U:H2'	1:AA:253:U:C6	2.44	0.53
1:AA:130:A:C4	1:AA:264:U:N1	2.76	0.53
1:AA:300:A:H1'	1:AA:565:U:O2	2.09	0.53
1:AA:80:C:H2'	1:AA:81:C:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:960:U:H5'	1:AA:960:U:O2	2.08	0.53
4:AB:73:THR:HG23	4:AB:95:GLN:O	2.09	0.53
7:AE:31:LEU:HD22	7:AE:43:LEU:CD2	2.39	0.53
1:AA:737:A:H1'	8:AF:73:ASN:CG	2.29	0.53
11:AI:44:VAL:HG13	11:AI:51:ARG:NH2	2.23	0.53
15:AM:53:VAL:O	15:AM:57:ARG:HB2	2.08	0.53
1:AA:256:U:H5''	19:AQ:17:LYS:HE2	1.90	0.53
2:AW:76:A:C2	23:B0:2562:G:C2	2.96	0.53
23:B0:1298:G:N2	23:B0:1341:G:H5''	2.23	0.53
23:B0:1861:G:P	55:B5:38:GLY:CA	2.96	0.53
23:B0:2494:C:H2'	23:B0:2495:G:C8	2.44	0.53
23:B0:459:A:H1'	23:B0:466:A:N7	2.23	0.53
1:AA:1309:G:P	15:AM:88:ARG:NH2	2.80	0.53
1:AA:1503:A:C4	1:AA:1531:A:N3	2.77	0.53
1:AA:814:A:O3'	1:AA:815:A:P	2.67	0.53
1:AA:864:A:H2	1:AA:917:G:C2'	2.22	0.53
4:AB:124:SER:O	4:AB:127:ILE:HG13	2.08	0.53
4:AB:32:ILE:HD13	4:AB:40:HIS:CD2	2.44	0.53
5:AC:113:ALA:HB3	5:AC:114:PRO:HD3	1.90	0.53
5:AC:150:LYS:CE	5:AC:152:ILE:HD11	2.37	0.53
6:AD:160:GLN:O	6:AD:163:GLU:HB3	2.08	0.53
10:AH:80:ILE:O	10:AH:80:ILE:HG22	2.08	0.53
11:AI:81:ILE:O	11:AI:85:LEU:HB2	2.08	0.53
1:AA:677:U:O2	13:AK:119:CYS:SG	2.67	0.53
13:AK:14:VAL:O	13:AK:15:ALA:CB	2.57	0.53
14:AL:55:VAL:HG11	14:AL:67:THR:HG23	1.91	0.53
23:B0:1479:G:N2	23:B0:1543:G:H21	2.06	0.53
23:B0:1838:G:C2'	23:B0:1839:A:H5'	2.37	0.53
23:B0:2445:C:H2'	23:B0:2446:C:O4'	2.08	0.53
23:B0:394:U:H2'	23:B0:395:G:H8	1.74	0.53
1:AA:1075:C:H5''	4:AB:179:LYS:NZ	2.23	0.53
1:AA:1347:G:C2'	1:AA:1348:U:OP2	2.56	0.53
1:AA:922:G:C2	1:AA:1396:A:C6	2.95	0.53
1:AA:375:U:C3'	1:AA:376:G:P	2.96	0.53
1:AA:9:G:O5'	7:AE:126:ARG:NE	2.41	0.53
5:AC:32:LEU:HD21	5:AC:59:ARG:HD2	1.91	0.53
9:AG:69:VAL:HG21	9:AG:104:LEU:HD21	1.89	0.53
10:AH:25:ASP:OD1	10:AH:60:ARG:HD3	2.09	0.53
1:AA:1343:G:P	11:AI:125:TYR:CE2	2.99	0.53
12:AJ:44:VAL:HG22	12:AJ:66:ARG:HB3	1.91	0.53
14:AL:55:VAL:HG11	14:AL:67:THR:CG2	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AM:102:ARG:HB2	15:AM:102:ARG:NH1	2.24	0.53
23:B0:1288:A:O2'	23:B0:1289:A:H5'	2.08	0.53
23:B0:1746:A:C2'	23:B0:1747:G:H5'	2.36	0.53
23:B0:2322:U:O2'	23:B0:2323:U:H5'	2.09	0.53
23:B0:616:U:C2'	23:B0:617:U:H5''	2.35	0.53
23:B0:917:U:H2'	23:B0:918:A:O4'	2.09	0.53
1:AA:1015:A:O2'	1:AA:1219:U:H5''	2.06	0.53
1:AA:101:A:H2'	1:AA:102:G:H8	1.74	0.53
1:AA:1409:C:H2'	1:AA:1410:G:O4'	2.09	0.53
1:AA:191:G:O3'	1:AA:192:U:OP1	2.26	0.53
1:AA:66:G:C4'	1:AA:199:G:H4'	2.37	0.53
1:AA:7:G:H5'	1:AA:298:A:H5'	1.89	0.53
1:AA:94:G:C4	1:AA:96:C:C6	2.97	0.53
5:AC:138:VAL:HG21	5:AC:168:ALA:HB1	1.89	0.53
11:AI:17:VAL:HG11	11:AI:81:ILE:HA	1.90	0.53
14:AL:47:LYS:HB3	14:AL:48:PRO:HD3	1.91	0.53
16:AN:44:LEU:HD12	16:AN:44:LEU:O	2.08	0.53
23:B0:1791:C:H2'	23:B0:1792:C:H5''	1.91	0.53
23:B0:216:U:H5''	23:B0:601:A:N6	2.23	0.53
23:B0:2470:U:O2'	23:B0:2471:U:H5'	2.08	0.53
23:B0:3102:G:H2'	23:B0:3103:A:H8	1.74	0.53
23:B0:513:A:H4'	23:B0:515:A:H5'	1.90	0.53
1:AA:108:G:N7	22:AT:12:ALA:HB1	2.23	0.53
1:AA:1468:A:H2'	1:AA:1469:G:O4'	2.09	0.53
1:AA:1483:A:C6	1:AA:1484:C:N3	2.76	0.53
1:AA:1498:U:O4'	1:AA:1519:A:C2	2.55	0.53
1:AA:217:C:H1'	1:AA:469:C:O2'	2.09	0.53
1:AA:266:G:H5'	19:AQ:66:SER:C	2.28	0.53
1:AA:32:A:OP1	1:AA:398:C:H1'	2.08	0.53
1:AA:27:G:N7	1:AA:557:G:N1	2.54	0.53
1:AA:953:G:H2'	1:AA:954:G:O4'	2.09	0.53
1:AA:977:A:C2'	1:AA:978:A:H5''	2.38	0.53
5:AC:130:VAL:HG12	5:AC:134:ILE:HD11	1.91	0.53
8:AF:3:ARG:NH2	8:AF:64:GLN:NE2	2.57	0.53
11:AI:23:ASN:C	11:AI:23:ASN:HD22	2.12	0.53
14:AL:46:LYS:CG	14:AL:47:LYS:N	2.71	0.53
19:AQ:67:LYS:CA	19:AQ:70:ARG:HH12	2.21	0.53
20:AR:73:ALA:HB3	20:AR:79:LEU:HD12	1.91	0.53
15:AM:94:ARG:NH2	21:AS:81:ARG:NH1	2.55	0.53
22:AT:76:ALA:O	22:AT:80:ARG:HG2	2.09	0.53
23:B0:1286:U:H5''	23:B0:1663:C:H42	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1730:G:H2'	23:B0:1731:C:C6	2.43	0.53
23:B0:1789:U:C2'	23:B0:1790:G:H5'	2.39	0.53
23:B0:2057:U:H1'	23:B0:2577:A:H1'	1.90	0.53
23:B0:366:U:H2'	23:B0:367:G:C8	2.43	0.53
23:B0:605:G:H4'	23:B0:949:G:O2'	2.08	0.53
1:AA:1232:U:OP1	11:AI:126:SER:N	2.42	0.53
1:AA:1257:U:O2'	1:AA:1258:G:OP2	2.21	0.53
1:AA:1481:U:O2'	1:AA:1482:G:H5'	2.09	0.53
1:AA:150:C:C3'	1:AA:151:A:P	2.97	0.53
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.44	0.53
1:AA:33:A:H2'	1:AA:34:C:C6	2.44	0.53
1:AA:386:C:C2'	1:AA:387:U:H5'	2.39	0.53
1:AA:475:C:H2'	1:AA:476:U:C6	2.44	0.53
1:AA:623:C:O2'	1:AA:624:C:H5'	2.09	0.53
1:AA:791:G:H2'	1:AA:792:A:H5'	1.91	0.53
1:AA:835:U:OP2	20:AR:60:GLY:HA3	2.08	0.53
1:AA:9:G:C5'	7:AE:126:ARG:CD	2.71	0.53
1:AA:1113:C:N1	5:AC:178:LEU:HD23	2.24	0.53
6:AD:126:ILE:HG22	6:AD:127:THR:N	2.23	0.53
6:AD:57:ARG:HH21	7:AE:107:ARG:NH1	2.00	0.53
15:AM:11:ARG:CG	15:AM:12:ASN:N	2.72	0.53
23:B0:1474:A:H3'	23:B0:1474:A:N3	2.23	0.53
23:B0:192:G:C4'	23:B0:193:A:H4'	2.38	0.53
23:B0:2010:G:H2'	23:B0:2011:U:O4'	2.09	0.53
23:B0:2025:A:H2'	23:B0:2026:C:H5''	1.91	0.53
23:B0:665:A:OP2	23:B0:666:U:H5'	2.09	0.53
24:B9:81:C:H2'	24:B9:82:U:O4'	2.09	0.53
1:AA:1003:G:N2	1:AA:1039:C:C2	2.77	0.52
1:AA:1211:U:C3'	1:AA:1212:U:P	2.96	0.52
1:AA:13:U:O4'	1:AA:914:A:OP1	2.27	0.52
1:AA:21:G:C1'	1:AA:914:A:H61	2.05	0.52
1:AA:370:C:O2'	1:AA:371:G:H5'	2.09	0.52
1:AA:545:C:O2'	1:AA:549:C:H5''	2.09	0.52
1:AA:621:A:H2'	1:AA:622:A:C8	2.44	0.52
1:AA:13:U:C4	1:AA:915:A:C8	2.97	0.52
4:AB:134:GLU:C	4:AB:136:VAL:H	2.12	0.52
1:AA:1347:G:C5	11:AI:107:ARG:NH1	2.78	0.52
15:AM:88:ARG:HG3	15:AM:98:VAL:CG1	2.40	0.52
1:AA:1359:C:C5	16:AN:35:ARG:CZ	2.92	0.52
18:AP:19:ILE:HG22	18:AP:36:ILE:HG13	1.90	0.52
1:AA:835:U:O5'	20:AR:64:ARG:NH2	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AS:53:ASN:HB2	21:AS:56:GLN:H	1.73	0.52
1:AA:188:C:C2	22:AT:106:ALA:HA	2.44	0.52
23:B0:1289:A:O2'	23:B0:1290:A:H5'	2.09	0.52
23:B0:468:A:H2'	23:B0:469:G:H4'	1.90	0.52
23:B0:669:G:H2'	23:B0:670:U:C6	2.44	0.52
1:AA:1006:C:H2'	1:AA:1007:C:C6	2.44	0.52
1:AA:1121:U:H2'	1:AA:1122:U:H6	1.73	0.52
1:AA:247:G:N2	1:AA:282:A:C2	2.69	0.52
1:AA:357:G:O2'	1:AA:358:U:H5'	2.10	0.52
1:AA:762:C:C4'	23:B0:729:A:N6	2.71	0.52
1:AA:976:G:OP1	16:AN:31:ARG:O	2.27	0.52
4:AB:10:LEU:C	4:AB:12:GLU:H	2.12	0.52
5:AC:23:TYR:CD2	5:AC:24:ALA:N	2.78	0.52
5:AC:83:ARG:C	5:AC:85:ARG:N	2.62	0.52
7:AE:79:GLU:CD	10:AH:105:ARG:NE	2.62	0.52
14:AL:82:VAL:N	14:AL:106:ASP:OD1	2.34	0.52
23:B0:2860:C:H2'	23:B0:2861:A:O4'	2.09	0.52
23:B0:579:G:H2'	23:B0:2013:A:N6	2.24	0.52
1:AA:115:G:N2	1:AA:117:G:O6	2.42	0.52
1:AA:1393:U:O2	1:AA:1395:C:N3	2.42	0.52
1:AA:148:G:H2'	1:AA:149:A:H8	1.74	0.52
1:AA:186:C:C5'	22:AT:81:LYS:HZ3	2.21	0.52
1:AA:134:A:H1'	1:AA:325:A:C4	2.44	0.52
1:AA:828:A:N3	4:AB:26:PRO:CB	2.72	0.52
5:AC:22:TRP:CZ2	16:AN:54:PRO:HG3	2.44	0.52
5:AC:77:ILE:HG22	5:AC:81:GLY:HA2	1.90	0.52
7:AE:74:GLY:HA3	7:AE:116:THR:HG22	1.92	0.52
13:AK:17:GLY:O	13:AK:80:VAL:HA	2.09	0.52
14:AL:42:THR:HG21	14:AL:52:LEU:HB3	1.91	0.52
19:AQ:45:HIS:HB2	19:AQ:65:ILE:CD1	2.37	0.52
23:B0:1278:A:H4'	23:B0:1279:G:O5'	2.08	0.52
23:B0:2329:C:C2'	23:B0:2330:G:H5'	2.39	0.52
23:B0:490:A:O2'	23:B0:491:A:H5'	2.09	0.52
19:AQ:104:LYS:HE3	23:B0:729:A:H62	1.74	0.52
1:AA:1239:A:C2'	1:AA:1298:C:N4	2.68	0.52
1:AA:1234:C:C4'	1:AA:1364:U:H1'	2.40	0.52
1:AA:1424:C:O2'	1:AA:1425:U:H5'	2.09	0.52
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.44	0.52
1:AA:1435:G:H2'	1:AA:1436:U:H6	1.69	0.52
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.09	0.52
1:AA:299:G:H2'	1:AA:300:A:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:476:U:C2'	1:AA:477:G:H5'	2.39	0.52
5:AC:20:SER:HB3	5:AC:22:TRP:NE1	2.24	0.52
21:AS:10:PHE:C	21:AS:10:PHE:CD2	2.83	0.52
21:AS:13:ASP:O	21:AS:17:GLU:HG2	2.10	0.52
23:B0:2240:C:H2'	23:B0:2241:U:H5'	1.90	0.52
23:B0:2418:A:H4'	23:B0:2420:C:OP2	2.10	0.52
23:B0:3098:U:C6	23:B0:3099:U:C5	2.98	0.52
23:B0:3148:G:H2'	23:B0:3149:G:H5'	1.91	0.52
19:AQ:104:LYS:CG	23:B0:726:G:C5	2.91	0.52
23:B0:841:G:N3	23:B0:841:G:H3'	2.24	0.52
23:B0:839:U:H2'	23:B0:841:G:O4'	2.09	0.52
23:B0:3875:A:O2'	55:B5:44:GLY:CA	2.57	0.52
1:AA:1202:G:H2'	1:AA:1203:C:O4'	2.10	0.52
1:AA:134:A:H1'	1:AA:325:A:C5	2.44	0.52
1:AA:13:U:C1'	1:AA:914:A:C5'	2.87	0.52
1:AA:1409:C:N3	1:AA:1410:G:N7	2.57	0.52
1:AA:252:U:H1'	1:AA:275:G:C2	2.44	0.52
1:AA:216:C:C5'	1:AA:466:A:H61	2.10	0.52
1:AA:501:C:H1'	1:AA:549:C:H1'	1.91	0.52
1:AA:588:G:O6	1:AA:753:A:C8	2.62	0.52
1:AA:979:C:H2'	1:AA:980:C:H5'	1.91	0.52
4:AB:15:VAL:HG11	4:AB:209:ARG:C	2.30	0.52
4:AB:23:ARG:O	4:AB:24:TRP:O	2.27	0.52
15:AM:117:VAL:HG12	15:AM:118:ALA:N	2.24	0.52
1:AA:1317:C:N1	16:AN:16:PHE:CD2	2.77	0.52
1:AA:994:A:C5	16:AN:5:ALA:CB	2.89	0.52
1:AA:323:U:H4'	22:AT:19:SER:CA	2.30	0.52
23:B0:509:U:H3	23:B0:513:A:H62	1.58	0.52
23:B0:860:U:H2'	23:B0:861:G:H5'	1.90	0.52
23:B0:942:U:O2'	23:B0:943:U:H5'	2.09	0.52
24:B9:50:U:H2'	24:B9:51:G:C8	2.44	0.52
1:AA:1027:C:O3'	1:AA:1028:C:P	2.68	0.52
1:AA:1128:C:H1'	1:AA:1146:A:H61	1.75	0.52
1:AA:130:A:H2	1:AA:263:A:C2	2.25	0.52
1:AA:546:G:H5'	1:AA:549:C:OP1	2.09	0.52
1:AA:69:G:C8	1:AA:102:G:C6	2.96	0.52
8:AF:43:LEU:CD2	8:AF:43:LEU:H	2.23	0.52
9:AG:85:TYR:HD1	9:AG:154:TYR:CE1	2.27	0.52
11:AI:127:LYS:HD2	11:AI:127:LYS:N	2.25	0.52
11:AI:48:GLU:OE1	11:AI:51:ARG:HD2	2.09	0.52
1:AA:538:G:P	14:AL:114:LYS:HB2	2.49	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AR:19:LYS:O	20:AR:20:ALA:HB2	2.10	0.52
23:B0:176:A:H1'	23:B0:2221:G:H21	1.75	0.52
23:B0:1856:U:H2'	23:B0:3865:A:C8	2.45	0.52
23:B0:2533:U:H2'	23:B0:2534:U:C6	2.45	0.52
23:B0:2698:G:H2'	23:B0:2699:G:C8	2.45	0.52
1:AA:114:U:H1'	1:AA:353:A:H1'	1.91	0.52
1:AA:1296:C:C5'	15:AM:14:ARG:HD2	2.40	0.52
1:AA:131:C:N1	1:AA:262:A:C2	2.77	0.52
1:AA:373:A:O2'	1:AA:374:A:H5'	2.09	0.52
1:AA:476:U:C5	1:AA:477:G:O5'	2.62	0.52
1:AA:600:C:OP1	10:AH:97:VAL:HG12	2.10	0.52
1:AA:844:A:H2'	1:AA:845:A:C8	2.44	0.52
1:AA:921:U:O4	1:AA:1396:A:N1	2.43	0.52
4:AB:26:PRO:O	4:AB:29:ALA:HB2	2.10	0.52
5:AC:94:LEU:HD22	5:AC:95:THR:HG23	1.92	0.52
12:AJ:27:ALA:HB1	12:AJ:81:THR:HG23	1.92	0.52
16:AN:33:VAL:HA	16:AN:40:CYS:HA	1.91	0.52
1:AA:994:A:N1	16:AN:4:LYS:C	2.38	0.52
22:AT:50:GLU:O	22:AT:100:ILE:HD12	2.09	0.52
22:AT:93:GLU:HA	22:AT:93:GLU:OE2	2.09	0.52
23:B0:3128:G:H5'	23:B0:3174:C:C1'	2.39	0.52
23:B0:3866:A:N7	23:B0:3875:A:H2	2.07	0.52
23:B0:3877:A:C3'	23:B0:3877:A:C8	2.92	0.52
1:AA:1038:C:H2'	1:AA:1039:C:H6	1.75	0.52
1:AA:1426:C:H2'	1:AA:1427:U:C6	2.44	0.52
1:AA:1483:A:C5	1:AA:1484:C:N3	2.78	0.52
1:AA:819:A:N7	1:AA:1529:G:C2	2.77	0.52
1:AA:239:U:C5'	1:AA:240:C:OP1	2.58	0.52
1:AA:473:C:O2'	1:AA:474:U:H5'	2.09	0.52
1:AA:21:G:N3	1:AA:914:A:N7	2.57	0.52
8:AF:8:ILE:HD11	8:AF:79:LEU:HD13	1.92	0.52
10:AH:14:ARG:O	10:AH:18:ARG:HD3	2.10	0.52
1:AA:1367:C:H5''	11:AI:114:TYR:HB2	1.91	0.52
12:AJ:62:HIS:CB	16:AN:59:ALA:CA	2.87	0.52
15:AM:93:ARG:HD3	23:B0:900:U:H4'	1.92	0.52
23:B0:1018:C:H2'	23:B0:1019:U:C5	2.44	0.52
23:B0:2401:A:H2'	23:B0:2403:C:C5	2.45	0.52
23:B0:3877:A:H3'	23:B0:3877:A:C8	2.45	0.52
23:B0:929:A:H3'	23:B0:930:A:C5'	2.30	0.52
24:B9:107:C:C2'	24:B9:108:G:H5'	2.39	0.52
1:AA:1256:A:C4'	1:AA:1258:G:C8	2.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1397:C:H4'	1:AA:1398:A:OP2	2.09	0.52
1:AA:1505:G:C4'	1:AA:1506:U:O5'	2.41	0.52
4:AB:142:LEU:HD22	4:AB:146:GLN:HE22	1.73	0.52
6:AD:88:VAL:HG13	7:AE:97:GLY:HA2	0.59	0.52
9:AG:42:ILE:CG2	9:AG:120:ILE:HD12	2.39	0.52
10:AH:24:THR:HG23	10:AH:61:VAL:HB	1.92	0.52
12:AJ:69:ASN:O	12:AJ:70:ARG:HD3	2.10	0.52
1:AA:779:C:HO2'	13:AK:120:ARG:HH11	1.57	0.52
14:AL:119:LYS:O	14:AL:120:TYR:HB2	2.10	0.52
15:AM:73:GLU:O	15:AM:76:ALA:HB3	2.09	0.52
15:AM:77:ASN:O	15:AM:80:ARG:HB3	2.10	0.52
16:AN:3:ARG:O	16:AN:4:LYS:C	2.48	0.52
23:B0:1325:U:H4'	23:B0:1326:U:C5	2.45	0.52
23:B0:1686:A:H2'	23:B0:1687:C:H5'	1.92	0.52
23:B0:1856:U:O4	23:B0:3865:A:N6	2.39	0.52
23:B0:476:G:H2'	23:B0:477:A:C8	2.45	0.52
1:AA:1152:A:H2'	1:AA:1153:C:C6	2.45	0.52
1:AA:1428:A:C4'	23:B0:1704:G:H5'	2.40	0.52
1:AA:1518:A:H2'	1:AA:1519:A:C8	2.45	0.52
1:AA:163:C:O2'	1:AA:164:U:H5'	2.10	0.52
1:AA:170:U:C2'	1:AA:171:A:H5'	2.39	0.52
1:AA:406:G:H1'	1:AA:496:A:N6	2.25	0.52
1:AA:36:C:O2'	1:AA:501:C:H5''	2.10	0.52
1:AA:794:A:H2'	1:AA:795:C:C6	2.45	0.52
1:AA:853:G:O2'	1:AA:854:G:H5'	2.10	0.52
5:AC:108:ASN:C	5:AC:110:ASN:H	2.12	0.52
7:AE:12:LEU:HD22	7:AE:12:LEU:C	2.30	0.52
7:AE:13:ILE:HG22	7:AE:30:ALA:CB	2.40	0.52
10:AH:49:GLU:HG2	10:AH:62:TYR:HE2	1.75	0.52
1:AA:1251:A:H4'	11:AI:12:GLU:OE2	2.10	0.52
12:AJ:38:ILE:HG13	12:AJ:71:LEU:HB3	1.90	0.52
1:AA:684:A:C4'	13:AK:38:ASN:ND2	2.73	0.52
1:AA:1296:C:H5''	15:AM:14:ARG:HD2	1.91	0.52
16:AN:57:ARG:HG2	16:AN:58:LYS:H	1.75	0.52
1:AA:376:G:C5'	18:AP:5:ARG:HD2	2.36	0.52
19:AQ:45:HIS:CB	19:AQ:65:ILE:HD13	2.39	0.52
1:AA:1458:G:O3'	22:AT:24:LEU:HD21	2.10	0.52
23:B0:1029:C:C3'	23:B0:1030:U:H5''	2.40	0.52
23:B0:1140:A:H61	23:B0:2470:U:H6	1.58	0.52
23:B0:2245:A:H4'	23:B0:2246:A:O5'	2.10	0.52
23:B0:81:C:H4'	23:B0:307:C:H5'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:3093:C:C2	23:B0:2204:A:N6	2.78	0.52
23:B0:758:G:H2'	23:B0:759:C:H5'	1.92	0.52
23:B0:959:C:H5''	23:B0:972:C:O2'	2.10	0.52
23:B0:986:A:H2'	23:B0:987:G:H5'	1.92	0.52
24:B9:73:C:H3'	24:B9:74:A:P	2.48	0.52
1:AA:1129:C:O2'	1:AA:1130:A:OP2	2.24	0.51
1:AA:1241:G:H2'	1:AA:1242:C:H6	1.75	0.51
1:AA:277:C:OP1	19:AQ:41:LYS:HE3	2.10	0.51
1:AA:33:A:OP2	1:AA:398:C:C5'	2.57	0.51
1:AA:472:G:O2'	1:AA:473:C:H5'	2.10	0.51
5:AC:70:VAL:O	5:AC:106:VAL:HG23	2.09	0.51
7:AE:40:ARG:HG2	7:AE:40:ARG:HH11	1.76	0.51
8:AF:10:LEU:HD11	8:AF:59:TYR:CD2	2.41	0.51
12:AJ:22:LYS:NZ	12:AJ:91:PRO:HD3	2.25	0.51
2:AV:41:U:H6	2:AV:41:U:C5'	2.13	0.51
2:AV:76:A:OP1	23:B0:2564:U:O4'	2.28	0.51
23:B0:1431:U:H2'	23:B0:1432:G:O4'	2.09	0.51
2:AV:75:C:O2'	23:B0:2047:C:P	2.68	0.51
23:B0:1038:U:O2	23:B0:2466:G:H4'	2.10	0.51
23:B0:441:A:H2'	23:B0:442:A:O4'	2.10	0.51
23:B0:451:A:H2'	23:B0:452:G:C8	2.45	0.51
23:B0:77:C:H2'	23:B0:78:C:C6	2.45	0.51
23:B0:840:U:H4'	23:B0:841:G:C2	2.45	0.51
1:AA:1085:U:O3'	1:AA:1086:U:C6	2.64	0.51
1:AA:1191:A:H2'	1:AA:1192:C:C6	2.45	0.51
1:AA:1261:A:H4'	1:AA:1283:G:C5'	2.40	0.51
1:AA:1458:G:O5'	1:AA:1458:G:H8	1.91	0.51
1:AA:1457:A:C4	1:AA:1459:C:C2	2.89	0.51
1:AA:588:G:N9	1:AA:753:A:N1	2.58	0.51
1:AA:791:G:H2'	1:AA:792:A:C5'	2.40	0.51
5:AC:177:THR:O	5:AC:177:THR:HG23	2.10	0.51
5:AC:84:ILE:HG12	5:AC:84:ILE:O	2.10	0.51
6:AD:65:ARG:HB2	6:AD:75:PHE:CE1	2.45	0.51
11:AI:31:GLN:HB3	11:AI:35:GLU:HB3	1.92	0.51
13:AK:27:ASN:HA	13:AK:56:GLY:HA2	1.92	0.51
13:AK:62:GLN:HG3	13:AK:97:ALA:HB2	1.92	0.51
20:AR:46:GLU:H	20:AR:46:GLU:CD	2.13	0.51
23:B0:1029:C:OP1	23:B0:1047:G:H4'	2.10	0.51
23:B0:1031:C:H1'	23:B0:1151:U:O2	2.09	0.51
23:B0:2038:C:H5'	23:B0:2039:G:H5'	1.91	0.51
23:B0:230:C:H2'	23:B0:231:G:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:513:A:C4'	23:B0:515:A:H5'	2.40	0.51
23:B0:652:C:H42	23:B0:657:A:H61	1.56	0.51
23:B0:864:C:H2'	23:B0:865:A:C8	2.46	0.51
23:B0:925:U:H4'	23:B0:926:C:C6	2.45	0.51
1:AA:1021:G:C2	1:AA:1022:G:H1'	2.45	0.51
1:AA:1423:G:O2'	1:AA:1424:C:H5'	2.09	0.51
1:AA:148:G:H2'	1:AA:149:A:C8	2.45	0.51
1:AA:246:A:N6	1:AA:281:G:H1'	2.24	0.51
1:AA:375:U:O3'	1:AA:376:G:O5'	2.28	0.51
1:AA:37:U:C1'	1:AA:547:A:C2	2.94	0.51
1:AA:580:U:H2'	1:AA:581:G:O4'	2.11	0.51
1:AA:846:C:O2'	1:AA:847:C:H5'	2.10	0.51
7:AE:115:VAL:HG12	7:AE:116:THR:N	2.24	0.51
1:AA:911:U:P	14:AL:97:ARG:HH21	2.33	0.51
2:AW:25:C:H2'	2:AW:26:G:H5'	1.58	0.51
23:B0:1220:G:H2'	23:B0:1221:C:C6	2.45	0.51
23:B0:341:A:H1'	23:B0:1223:G:O6	2.10	0.51
1:AA:1473:A:C2'	23:B0:1718:A:C2	2.93	0.51
23:B0:1807:A:H5'	23:B0:1809:G:C1'	2.40	0.51
23:B0:2217:G:H4'	23:B0:2219:U:C5	2.46	0.51
23:B0:2841:U:O2	23:B0:2843:A:H1'	2.11	0.51
23:B0:215:G:H4'	23:B0:617:U:O2'	2.09	0.51
19:AQ:102:GLY:O	23:B0:726:G:C2	2.63	0.51
1:AA:1194:U:H5''	7:AE:22:GLY:C	2.31	0.51
1:AA:1305:G:C8	1:AA:1305:G:OP2	2.64	0.51
1:AA:572:A:H4'	1:AA:917:G:H5'	1.92	0.51
1:AA:605:U:O2'	1:AA:606:G:H5'	2.10	0.51
1:AA:80:C:H2'	1:AA:81:C:H6	1.76	0.51
1:AA:828:A:H2'	1:AA:829:G:O4'	2.10	0.51
1:AA:974:A:OP2	16:AN:29:ARG:NH2	2.42	0.51
1:AA:999:C:H2'	1:AA:1000:U:C6	2.46	0.51
4:AB:206:ASP:O	4:AB:207:ALA:HB3	2.11	0.51
5:AC:47:LEU:N	5:AC:47:LEU:CD1	2.74	0.51
1:AA:943:U:O4'	11:AI:124:GLN:NE2	2.43	0.51
11:AI:125:TYR:N	11:AI:125:TYR:CD2	2.78	0.51
12:AJ:39:PRO:O	12:AJ:40:LEU:CB	2.57	0.51
13:AK:126:ARG:O	13:AK:127:LYS:C	2.48	0.51
1:AA:707:C:H4'	13:AK:20:TYR:CD2	2.45	0.51
21:AS:50:ALA:HA	21:AS:58:VAL:O	2.10	0.51
2:AV:40:C:H2'	2:AV:41:U:C5'	2.40	0.51
2:AW:69:U:H2'	2:AW:70:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1712:G:H2'	23:B0:1713:G:H5'	1.91	0.51
23:B0:1818:G:H2'	23:B0:1819:U:C6	2.45	0.51
23:B0:2205:C:H2'	23:B0:2206:C:C6	2.46	0.51
1:AA:1113:C:C2	5:AC:178:LEU:CD2	2.94	0.51
1:AA:1167:A:H2'	1:AA:1168:A:C8	2.45	0.51
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.11	0.51
4:AB:166:ASP:OD2	4:AB:169:LYS:HB2	2.09	0.51
4:AB:17:PHE:HD1	4:AB:17:PHE:C	2.14	0.51
5:AC:154:SER:O	5:AC:165:THR:HA	2.09	0.51
5:AC:167:TRP:O	5:AC:168:ALA:HB3	2.11	0.51
5:AC:97:LYS:O	5:AC:98:ASN:HB3	2.10	0.51
6:AD:43:HIS:CE1	6:AD:46:LYS:HZ2	2.28	0.51
8:AF:69:GLU:OE1	8:AF:69:GLU:N	2.44	0.51
10:AH:126:LYS:C	10:AH:128:GLY:H	2.14	0.51
11:AI:44:VAL:CG1	11:AI:51:ARG:HH12	2.23	0.51
12:AJ:23:ILE:HD12	12:AJ:23:ILE:N	2.26	0.51
15:AM:49:THR:CG2	15:AM:51:ALA:H	2.13	0.51
1:AA:112:G:OP1	18:AP:27:LYS:HE3	2.11	0.51
1:AA:129:U:H5'	19:AQ:3:LYS:HE3	1.92	0.51
1:AA:322:C:C2'	22:AT:23:ARG:HB2	2.41	0.51
22:AT:39:LYS:HD2	22:AT:55:ILE:CD1	2.27	0.51
1:AA:261:U:H3'	22:AT:79:ARG:NH1	2.24	0.51
23:B0:1597:A:H2'	23:B0:1598:C:C6	2.46	0.51
23:B0:1625:A:H2'	23:B0:1625:A:N3	2.25	0.51
23:B0:192:G:H4'	23:B0:193:A:H4'	1.91	0.51
23:B0:1955:G:C2'	23:B0:1956:G:H5'	2.38	0.51
23:B0:2320:G:H2'	23:B0:2321:C:O4'	2.09	0.51
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.45	0.51
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.46	0.51
1:AA:1329:A:O2'	1:AA:1330:U:H5'	2.11	0.51
1:AA:588:G:C8	1:AA:753:A:C4	2.98	0.51
4:AB:121:LEU:O	4:AB:127:ILE:HG12	2.11	0.51
4:AB:126:GLU:O	4:AB:129:GLU:HB2	2.11	0.51
5:AC:34:LEU:O	5:AC:34:LEU:HD23	2.10	0.51
6:AD:8:VAL:HG13	6:AD:21:LEU:HD13	1.92	0.51
7:AE:15:ARG:O	7:AE:16:THR:O	2.28	0.51
12:AJ:51:ARG:HB2	12:AJ:59:SER:CB	2.23	0.51
12:AJ:62:HIS:HB2	16:AN:59:ALA:C	2.31	0.51
1:AA:760:G:H1	19:AQ:105:ALA:HB2	1.76	0.51
22:AT:41:VAL:O	22:AT:45:GLN:HB2	2.10	0.51
22:AT:43:LEU:CD1	22:AT:55:ILE:HD12	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1210:C:H2'	23:B0:1211:G:O4'	2.09	0.51
23:B0:1251:G:H2'	23:B0:1252:C:C6	2.46	0.51
23:B0:1373:G:H1	23:B0:2192:U:H3	1.58	0.51
23:B0:2245:A:O2'	23:B0:2246:A:OP2	2.24	0.51
2:AV:75:C:P	23:B0:2581:A:H5'	2.36	0.51
23:B0:484:G:O2'	23:B0:485:G:H5'	2.11	0.51
23:B0:630:G:H2'	23:B0:631:G:H5'	1.92	0.51
1:AA:1021:G:C2'	1:AA:1022:G:H5'	2.40	0.51
1:AA:1044:A:C2'	1:AA:1045:C:O2'	2.51	0.51
1:AA:1059:C:O2'	1:AA:1060:C:H5'	2.11	0.51
1:AA:1430:C:H4'	23:B0:1721:G:H5''	1.93	0.51
1:AA:1404:C:O2	1:AA:1519:A:O2'	2.29	0.51
1:AA:160:A:N6	1:AA:347:G:N2	2.55	0.51
1:AA:2003:G:N1	1:AA:1004:A:H1'	2.25	0.51
1:AA:38:G:H1'	1:AA:547:A:N9	2.25	0.51
1:AA:650:G:C2'	1:AA:651:C:H5'	2.40	0.51
1:AA:707:C:H5''	13:AK:85:ARG:CZ	2.36	0.51
1:AA:944:G:O6	1:AA:1337:G:H8	1.94	0.51
4:AB:186:ALA:HB3	4:AB:197:VAL:CG1	2.41	0.51
4:AB:33:TYR:HB3	4:AB:41:ILE:HG22	1.93	0.51
5:AC:134:ILE:HG21	5:AC:167:TRP:O	2.10	0.51
5:AC:188:LEU:CD1	5:AC:195:VAL:HG13	2.41	0.51
5:AC:79:ARG:HG2	5:AC:82:GLU:HG2	1.92	0.51
7:AE:12:LEU:CD1	7:AE:31:LEU:HB2	2.39	0.51
16:AN:22:THR:OG1	16:AN:33:VAL:HG21	2.11	0.51
1:AA:1014:A:H5'	21:AS:33:THR:HG23	1.93	0.51
2:AW:40:C:H2'	2:AW:41:U:C5'	2.40	0.51
23:B0:2404:A:H5''	23:B0:2405:A:H3'	1.93	0.51
23:B0:604:U:H2'	23:B0:605:G:C8	2.46	0.51
23:B0:66:U:H2'	23:B0:67:G:C8	2.46	0.51
1:AA:1057:G:H5''	5:AC:154:SER:CB	2.34	0.51
1:AA:1067:A:C2'	1:AA:1068:G:OP2	2.58	0.51
1:AA:1110:A:C2'	1:AA:1111:A:C5'	2.89	0.51
1:AA:113:G:H1'	1:AA:354:G:H5''	1.91	0.51
1:AA:1248:A:O2'	11:AI:70:LYS:NZ	2.44	0.51
1:AA:1314:C:C5	21:AS:6:LYS:HD3	2.45	0.51
1:AA:131:C:C4'	1:AA:263:A:O4'	2.58	0.51
1:AA:675:A:HO2'	13:AK:116:HIS:CD2	2.27	0.51
1:AA:922:G:C6	1:AA:1396:A:N1	2.73	0.51
7:AE:121:LYS:HE3	7:AE:123:LEU:HD21	1.93	0.51
1:AA:692:U:H5	13:AK:26:ASN:OD1	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AW:76:A:N3	23:B0:2486:C:O2	2.43	0.51
23:B0:1087:C:H2'	23:B0:1088:A:O4'	2.11	0.51
23:B0:1492:A:H2	23:B0:1531:C:H41	1.59	0.51
23:B0:1712:G:C2'	23:B0:1713:G:H5'	2.40	0.51
23:B0:2038:C:H5'	23:B0:2039:G:C5'	2.41	0.51
23:B0:333:A:H1'	23:B0:351:A:C4	2.45	0.51
23:B0:795:A:H4'	23:B0:796:A:C8	2.46	0.51
23:B0:832:A:H2'	23:B0:833:A:O4'	2.11	0.51
23:B0:841:G:H4'	23:B0:844:G:N1	2.26	0.51
15:AM:93:ARG:NH1	23:B0:900:U:H5''	2.22	0.51
1:AA:1094:G:H5''	1:AA:1095:U:H5	1.75	0.51
1:AA:203:A:O2'	1:AA:206:C:H4'	2.10	0.51
1:AA:130:A:N1	1:AA:264:U:C2	2.78	0.51
1:AA:497:A:O3'	1:AA:498:U:P	2.69	0.51
1:AA:848:G:O3'	1:AA:849:C:O4'	2.29	0.51
4:AB:53:ARG:NH1	4:AB:53:ARG:HG2	2.26	0.51
4:AB:96:ARG:O	4:AB:98:LEU:HD23	2.11	0.51
1:AA:619:U:C2	6:AD:135:LEU:HD11	2.29	0.51
6:AD:170:VAL:CG1	6:AD:174:LEU:HB2	2.39	0.51
7:AE:89:ILE:HD13	7:AE:90:VAL:H	1.75	0.51
9:AG:102:ARG:O	9:AG:106:GLN:HG3	2.10	0.51
9:AG:18:TYR:HD2	9:AG:59:LEU:HD22	1.76	0.51
11:AI:10:ARG:HG2	11:AI:75:ASP:CB	2.41	0.51
14:AL:45:PRO:HD3	14:AL:51:ALA:O	2.11	0.51
16:AN:28:GLY:O	16:AN:30:ALA:N	2.43	0.51
2:AV:69:U:H2'	2:AV:70:C:C6	2.46	0.51
23:B0:1181:C:H2'	23:B0:1182:U:C5'	2.38	0.51
23:B0:1532:A:H2'	23:B0:1533:G:C8	2.46	0.51
23:B0:1611:U:H2'	23:B0:1612:U:O4'	2.11	0.51
23:B0:18:U:H2'	23:B0:19:C:C6	2.46	0.51
23:B0:579:G:H2'	23:B0:2013:A:H62	1.75	0.51
23:B0:804:C:O2	23:B0:807:A:H5'	2.11	0.51
23:B0:80:A:H2'	23:B0:81:C:O4'	2.11	0.51
24:B9:111:C:H5''	24:B9:112:A:H5''	1.93	0.51
1:AA:1298:C:O5'	9:AG:114:ARG:NH2	2.44	0.51
1:AA:814:A:N7	1:AA:816:A:C6	2.79	0.51
4:AB:17:PHE:CD1	4:AB:17:PHE:C	2.85	0.51
5:AC:139:GLN:HA	5:AC:139:GLN:NE2	2.25	0.51
5:AC:38:ARG:HG3	5:AC:38:ARG:NH1	2.26	0.51
10:AH:38:ILE:N	10:AH:38:ILE:HD12	2.27	0.51
13:AK:65:ALA:HB3	13:AK:97:ALA:HB3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AO:3:ILE:CG2	17:AO:7:GLU:HB3	2.41	0.51
20:AR:87:ARG:HG2	20:AR:87:ARG:HH11	1.76	0.51
23:B0:2011:U:H2'	23:B0:2012:A:C8	2.46	0.51
23:B0:2565:C:O2'	23:B0:2566:A:H5'	2.11	0.51
23:B0:2795:A:N3	23:B0:2795:A:H2'	2.24	0.51
23:B0:394:U:H2'	23:B0:395:G:C8	2.45	0.51
23:B0:460:U:H3	23:B0:592:G:H1'	1.75	0.51
23:B0:942:U:H2'	23:B0:943:U:O4'	2.11	0.51
1:AA:1021:G:H2'	1:AA:1022:G:O4'	2.11	0.50
1:AA:130:A:N3	1:AA:263:A:N3	2.59	0.50
1:AA:130:A:C4	1:AA:264:U:C6	2.99	0.50
4:AB:19:HIS:NE2	4:AB:206:ASP:HB3	2.26	0.50
11:AI:27:THR:HG23	11:AI:30:GLY:O	2.11	0.50
11:AI:46:ALA:HA	11:AI:78:LYS:HB2	1.93	0.50
12:AJ:20:ALA:O	12:AJ:24:VAL:HG23	2.11	0.50
13:AK:48:ILE:HD13	13:AK:63:LEU:HB3	1.93	0.50
23:B0:1040:A:H2'	23:B0:1041:G:H5'	1.93	0.50
23:B0:1495:G:H2'	23:B0:1496:G:C8	2.47	0.50
23:B0:1586:A:H2'	23:B0:1587:A:C8	2.46	0.50
23:B0:1779:C:H2'	23:B0:1780:A:O4'	2.10	0.50
23:B0:1807:A:O2'	23:B0:1808:C:O5'	2.24	0.50
23:B0:2058:U:H5'	23:B0:2576:G:H1'	1.93	0.50
23:B0:2213:G:H2'	23:B0:2214:G:C8	2.46	0.50
23:B0:2321:C:O2'	23:B0:2353:G:H5''	2.11	0.50
23:B0:2769:C:O2'	23:B0:2770:A:H5'	2.11	0.50
23:B0:635:C:C3'	23:B0:636:G:H5''	2.41	0.50
19:AQ:104:LYS:CE	23:B0:729:A:N6	2.73	0.50
1:AA:1114:C:O2	16:AN:60:SER:OG	2.29	0.50
1:AA:1416:G:N9	1:AA:1417:G:O4'	2.44	0.50
1:AA:218:C:H2'	1:AA:219:C:H6	1.76	0.50
1:AA:470:U:H2'	1:AA:471:G:H8	1.77	0.50
1:AA:659:U:O2'	1:AA:660:G:H5'	2.11	0.50
1:AA:992:U:HO2'	1:AA:993:G:P	2.33	0.50
1:AA:1075:C:OP1	4:AB:179:LYS:HD2	2.10	0.50
4:AB:221:LEU:O	4:AB:221:LEU:HD13	2.11	0.50
5:AC:61:ALA:O	5:AC:63:ASN:N	2.44	0.50
6:AD:61:LYS:HZ1	6:AD:62:GLN:NE2	2.09	0.50
1:AA:779:C:C2'	13:AK:120:ARG:HD3	2.34	0.50
1:AA:685:G:H5'	13:AK:39:PRO:O	2.11	0.50
1:AA:1458:G:O3'	22:AT:24:LEU:CD2	2.58	0.50
23:B0:1661:C:O2'	23:B0:1662:G:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:2272:A:H2'	23:B0:2273:C:C6	2.46	0.50
15:AM:93:ARG:HA	23:B0:900(A):A:H8	1.76	0.50
1:AA:1102:A:H2'	1:AA:1103:C:C6	2.46	0.50
1:AA:1416:G:C4	1:AA:1417:G:C1'	2.94	0.50
1:AA:215:C:O2'	1:AA:216:C:H5'	2.12	0.50
1:AA:255:G:O6	1:AA:266:G:O6	2.29	0.50
1:AA:443:C:H2'	1:AA:444:C:C6	2.43	0.50
1:AA:824:C:H2'	1:AA:825:G:H8	1.76	0.50
5:AC:137:ALA:HA	5:AC:140:ARG:NH1	2.26	0.50
5:AC:139:GLN:CA	5:AC:139:GLN:HE21	2.23	0.50
5:AC:58:GLU:O	5:AC:59:ARG:HG2	2.11	0.50
6:AD:126:ILE:CG2	6:AD:127:THR:N	2.75	0.50
6:AD:24:GLU:O	6:AD:25:ARG:HB3	2.10	0.50
8:AF:26:ILE:HG21	8:AF:63:TYR:CE2	2.40	0.50
11:AI:17:VAL:CG2	11:AI:80:GLY:HA3	2.41	0.50
14:AL:46:LYS:HG2	14:AL:47:LYS:HG3	1.93	0.50
15:AM:102:ARG:HB2	15:AM:102:ARG:HH11	1.75	0.50
23:B0:2235:G:H2'	23:B0:2236:U:C6	2.46	0.50
23:B0:3874:C:H2'	23:B0:3875:A:H5'	1.91	0.50
23:B0:429:C:H2'	23:B0:430:C:O4'	2.11	0.50
23:B0:689:A:H61	23:B0:815:A:H61	1.59	0.50
23:B0:798:G:H2'	23:B0:799:C:H5'	1.93	0.50
23:B0:95:G:H2'	23:B0:96:C:C6	2.46	0.50
1:AA:992:U:H2'	1:AA:1043:C:H5	1.77	0.50
1:AA:1194:U:O2'	1:AA:1195:C:H5'	2.12	0.50
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.47	0.50
1:AA:1306:A:H2'	1:AA:1307:U:O4'	2.12	0.50
1:AA:1337:G:H5''	1:AA:1338:G:P	2.51	0.50
1:AA:1440:C:C2'	1:AA:1441:G:H5'	2.41	0.50
1:AA:222:U:H2'	1:AA:223:U:C6	2.47	0.50
1:AA:406:G:C2	1:AA:437:U:N3	2.80	0.50
4:AB:53:ARG:HH11	4:AB:53:ARG:HG2	1.75	0.50
5:AC:23:TYR:CE2	12:AJ:9:ARG:HD3	2.47	0.50
15:AM:81:LEU:HD12	15:AM:88:ARG:HD3	1.93	0.50
1:AA:375:U:O2'	18:AP:28:ARG:CD	2.59	0.50
18:AP:20:VAL:CG1	18:AP:32:TYR:HB3	2.40	0.50
18:AP:51:VAL:O	18:AP:51:VAL:CG1	2.60	0.50
19:AQ:78:GLU:O	19:AQ:78:GLU:HG3	2.12	0.50
23:B0:775:U:O2	23:B0:1445:A:H5''	2.11	0.50
24:B9:113:G:H2'	24:B9:114:C:C6	2.47	0.50
1:AA:113:G:C1'	1:AA:354:G:H5''	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:130:A:C1'	1:AA:264:U:O4'	2.59	0.50
1:AA:1447:A:N7	1:AA:1456:A:H2	2.09	0.50
1:AA:149:A:O2'	1:AA:150:C:H5'	2.11	0.50
1:AA:37:U:C2'	1:AA:547:A:C6	2.88	0.50
1:AA:39:G:C2	1:AA:404:U:C2	3.00	0.50
1:AA:556:C:H2'	1:AA:557:G:H8	1.77	0.50
1:AA:1343:G:C3'	11:AI:122:ALA:HB3	2.40	0.50
12:AJ:71:LEU:O	12:AJ:72:VAL:CB	2.60	0.50
1:AA:779:C:C3'	13:AK:120:ARG:HD3	2.42	0.50
13:AK:82:VAL:HG23	13:AK:105:VAL:HG13	1.93	0.50
2:AV:11:C:C5'	23:B0:1892:C:C4'	2.88	0.50
23:B0:1272:G:H2'	23:B0:1273:G:C8	2.46	0.50
23:B0:127:C:H2'	23:B0:128:C:C6	2.47	0.50
23:B0:1727:C:H4'	23:B0:2833:C:O2	2.12	0.50
23:B0:1865:C:H2'	23:B0:1866:G:O4'	2.12	0.50
23:B0:868:U:H2'	23:B0:869:C:C6	2.46	0.50
23:B0:897:A:C6	23:B0:898:C:N4	2.79	0.50
24:B9:107:C:O3'	24:B9:108:G:OP1	2.29	0.50
1:AA:1025:U:H4'	1:AA:1025:U:OP1	2.11	0.50
1:AA:1035:A:H2'	1:AA:1036:G:H8	1.76	0.50
1:AA:1367:C:OP1	11:AI:115:GLY:N	2.33	0.50
1:AA:185:A:H2'	1:AA:186:C:C5	2.47	0.50
1:AA:205:G:N2	1:AA:207:C:N4	2.60	0.50
1:AA:279:A:H5''	1:AA:280:C:H3'	1.94	0.50
1:AA:499:A:C2'	1:AA:500:G:O4'	2.60	0.50
1:AA:556:C:C4	1:AA:557:G:N7	2.79	0.50
5:AC:23:TYR:HA	12:AJ:11:PHE:CD1	2.47	0.50
6:AD:61:LYS:HZ2	6:AD:62:GLN:HE21	1.59	0.50
1:AA:1292:U:P	9:AG:41:ARG:HH22	2.24	0.50
10:AH:113:SER:HB2	10:AH:134:ILE:CD1	2.29	0.50
1:AA:653:A:O5'	10:AH:56:LYS:NZ	2.44	0.50
13:AK:23:ALA:CB	13:AK:91:ARG:HB2	2.42	0.50
1:AA:1458:G:HO3'	22:AT:24:LEU:HD11	0.67	0.50
2:AV:30:G:O2'	2:AV:31:A:H5'	2.12	0.50
2:AW:25:C:C5	2:AW:26:G:N7	2.80	0.50
23:B0:168:A:H2'	23:B0:169:C:C6	2.47	0.50
23:B0:1886:G:H2'	23:B0:1887:G:C8	2.46	0.50
23:B0:612:G:O3'	23:B0:613:A:H4'	2.11	0.50
23:B0:68:C:H2'	23:B0:69:G:H8	1.76	0.50
23:B0:791:G:H2'	23:B0:792:U:C6	2.47	0.50
23:B0:897:A:O3'	23:B0:898:C:P	2.70	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1014:A:H5''	21:AS:14:HIS:ND1	2.15	0.50
1:AA:1270:C:O3'	1:AA:1314:C:C4'	2.58	0.50
1:AA:1262:C:H42	1:AA:1273:G:H1	1.59	0.50
1:AA:1305:G:O2'	1:AA:1306:A:O4'	2.30	0.50
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.74	0.50
1:AA:1483:A:C2'	1:AA:1484:C:P	2.99	0.50
1:AA:619:U:N1	6:AD:135:LEU:HD11	2.25	0.50
11:AI:47:LEU:C	11:AI:49:PRO:HD2	2.32	0.50
1:AA:393:A:OP2	18:AP:12:LYS:CE	2.59	0.50
23:B0:1326:U:O2	23:B0:1326:U:H2'	2.10	0.50
23:B0:177:U:H2'	23:B0:178:C:C6	2.46	0.50
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.47	0.50
1:AA:220:G:O2'	1:AA:221:C:H5'	2.12	0.50
1:AA:323:U:C1'	22:AT:19:SER:CB	2.90	0.50
1:AA:393:A:C2	1:AA:394:G:C8	3.00	0.50
1:AA:46:G:H2'	1:AA:365:U:O2'	2.12	0.50
1:AA:478:A:O2'	1:AA:479:C:H5'	2.11	0.50
1:AA:625:G:H2'	1:AA:626:U:C6	2.47	0.50
4:AB:88:ALA:O	4:AB:90:MET:N	2.45	0.50
5:AC:171:GLY:O	5:AC:173:VAL:HG23	2.12	0.50
6:AD:8:VAL:HG11	6:AD:21:LEU:HB3	1.94	0.50
6:AD:78:LEU:HD22	6:AD:96:LEU:HB3	1.94	0.50
7:AE:92:LYS:HB3	7:AE:119:LEU:HB2	1.94	0.50
11:AI:9:ARG:HG2	11:AI:14:VAL:HG22	1.92	0.50
12:AJ:27:ALA:C	12:AJ:29:ARG:H	2.15	0.50
1:AA:1151:A:H5''	12:AJ:41:PRO:HA	1.93	0.50
15:AM:40:ASN:ND2	15:AM:41:PRO:CD	2.62	0.50
16:AN:29:ARG:O	16:AN:33:VAL:HG13	2.11	0.50
22:AT:101:GLY:O	22:AT:102:GLY:O	2.30	0.50
2:AW:30:G:O2'	2:AW:31:A:H5'	2.12	0.50
23:B0:1052:C:H2'	23:B0:1053:G:C8	2.46	0.50
23:B0:1571:G:H2'	23:B0:1572:C:C6	2.46	0.50
23:B0:2383:C:H2'	23:B0:2384:G:O4'	2.11	0.50
23:B0:899:G:O2'	23:B0:900:U:H5'	2.12	0.50
23:B0:847:C:N4	23:B0:955:G:H21	2.03	0.50
1:AA:1107:C:OP1	5:AC:173:VAL:N	2.37	0.50
1:AA:1136:U:H5''	1:AA:1137:C:OP2	2.12	0.50
1:AA:1416:G:H2'	1:AA:1417:G:O4'	2.12	0.50
1:AA:325:A:H2'	1:AA:326:G:O4'	2.12	0.50
1:AA:686:U:H1'	13:AK:42:TRP:HE1	1.76	0.50
1:AA:893:C:C2'	1:AA:894:G:H8	2.23	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:438:G:H5'	6:AD:123:HIS:CD2	2.46	0.50
9:AG:69:VAL:HG12	9:AG:69:VAL:O	2.12	0.50
14:AL:115:LYS:O	14:AL:117:ARG:N	2.37	0.50
19:AQ:27:PHE:HB2	19:AQ:28:PRO:HD2	1.94	0.50
23:B0:165:G:H2'	23:B0:166:G:O4'	2.12	0.50
23:B0:1747:G:H1'	23:B0:1749:G:N3	2.26	0.50
23:B0:192:G:H4'	23:B0:193:A:O5'	2.12	0.50
23:B0:212:U:H2'	23:B0:213:C:C6	2.47	0.50
23:B0:2301:A:H2'	23:B0:2302:G:O4'	2.11	0.50
23:B0:2357:A:H2'	23:B0:2358:C:O4'	2.12	0.50
23:B0:2426:G:O6	23:B0:2479:U:H2'	2.11	0.50
23:B0:638:A:O2'	23:B0:639:G:H5'	2.12	0.50
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.77	0.49
1:AA:1016:A:H1'	1:AA:1218:C:O2'	2.12	0.49
1:AA:1308:U:C5	15:AM:99:ARG:CZ	2.95	0.49
1:AA:1106:G:OP1	5:AC:172:ARG:CD	2.60	0.49
5:AC:23:TYR:HE1	12:AJ:67:THR:CG2	2.23	0.49
6:AD:81:GLU:O	6:AD:85:LYS:HG3	2.11	0.49
8:AF:9:VAL:HG22	8:AF:60:PHE:CE2	2.47	0.49
12:AJ:3:LYS:HA	12:AJ:75:ILE:HA	1.94	0.49
12:AJ:51:ARG:HG2	16:AN:45:ARG:NH1	2.27	0.49
13:AK:51:LYS:O	13:AK:55:LYS:HE3	2.11	0.49
13:AK:79:SER:OG	13:AK:106:LYS:HG2	2.12	0.49
21:AS:81:ARG:HG2	21:AS:81:ARG:O	2.11	0.49
23:B0:1323:G:H2'	23:B0:1324:G:H4'	1.94	0.49
23:B0:1386:A:H2'	23:B0:1387:G:O4'	2.12	0.49
23:B0:1391:A:H2'	23:B0:1392:U:C6	2.47	0.49
23:B0:2310:G:H2'	23:B0:2311:U:O4'	2.12	0.49
23:B0:2324:G:C4'	23:B0:2326:C:H5''	2.42	0.49
2:AW:64:A:C4'	23:B0:2461:G:O2'	2.60	0.49
23:B0:2658:A:H2'	23:B0:2659:C:C6	2.47	0.49
23:B0:521:U:H2'	23:B0:522:G:H5'	1.93	0.49
23:B0:618:A:H2'	23:B0:619:A:O4'	2.11	0.49
23:B0:775:U:H4'	23:B0:776:G:C8	2.46	0.49
1:AA:1172:C:O2'	1:AA:1173:G:H5'	2.11	0.49
1:AA:1230:C:O2'	1:AA:1231:G:H5'	2.12	0.49
1:AA:1283:G:O2'	1:AA:1284:C:H5'	2.11	0.49
1:AA:160:A:H61	1:AA:347:G:H21	1.58	0.49
1:AA:819:A:C5	1:AA:1529:G:N1	2.80	0.49
8:AF:48:LEU:HD13	8:AF:52:ILE:HG13	1.95	0.49
11:AI:36:TYR:HD2	11:AI:37:PHE:CE2	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AJ:38:ILE:HG13	12:AJ:71:LEU:CB	2.42	0.49
16:AN:21:TYR:HE2	16:AN:23:ARG:NE	2.09	0.49
1:AA:255:G:C4'	19:AQ:16:GLN:HB3	2.42	0.49
19:AQ:10:VAL:O	19:AQ:53:LEU:HD12	2.12	0.49
19:AQ:97:SER:HB2	19:AQ:103:GLY:N	2.26	0.49
23:B0:1111:C:C4	23:B0:1112:U:C5	3.00	0.49
23:B0:1286:U:H5''	23:B0:1663:C:N4	2.27	0.49
23:B0:1683:G:C2'	23:B0:1684:G:H5'	2.43	0.49
23:B0:2313:G:H2'	23:B0:2314:A:H5'	1.94	0.49
23:B0:2435:C:H2'	23:B0:2436:U:C6	2.47	0.49
23:B0:2459:C:H2'	23:B0:2460:G:H5'	1.94	0.49
23:B0:971:A:H2	23:B0:2475:C:H1'	1.77	0.49
23:B0:1949:A:H1'	23:B0:2572:U:C4'	2.42	0.49
23:B0:2858:A:H3'	23:B0:2859:U:C5'	2.42	0.49
23:B0:597:U:H2'	23:B0:598:U:C6	2.47	0.49
23:B0:693:A:H2'	23:B0:694:G:C8	2.46	0.49
1:AA:1458:G:C1'	1:AA:1459:C:H2'	2.41	0.49
1:AA:1503:A:N3	1:AA:1531:A:H2	2.09	0.49
1:AA:212:G:O2'	1:AA:213:G:O5'	2.30	0.49
1:AA:491:G:H2'	1:AA:492:G:H8	1.78	0.49
1:AA:61:G:H2'	1:AA:62:U:O4'	2.12	0.49
1:AA:836:G:P	20:AR:61:LYS:CD	2.65	0.49
1:AA:893:C:C4	1:AA:894:G:C6	2.99	0.49
1:AA:929:G:C5'	1:AA:1533:C:H41	2.25	0.49
4:AB:132:LYS:O	4:AB:136:VAL:HG23	2.12	0.49
12:AJ:63:PHE:HE2	16:AN:58:LYS:HG2	1.76	0.49
1:AA:675:A:O2'	13:AK:116:HIS:CD2	2.65	0.49
1:AA:538:G:C8	14:AL:115:LYS:HE3	2.47	0.49
14:AL:28:LYS:CD	14:AL:33:ARG:HH12	2.24	0.49
17:AO:36:ILE:HA	17:AO:59:MET:CE	2.42	0.49
2:AV:23:A:O2'	2:AV:24:G:H5'	2.12	0.49
2:AV:75:C:N4	23:B0:2231:G:N1	2.60	0.49
2:AW:23:A:O2'	2:AW:24:G:H5'	2.12	0.49
23:B0:1180:A:H2'	23:B0:1181:C:C6	2.47	0.49
23:B0:1223:G:O2'	23:B0:1224:A:OP2	2.26	0.49
23:B0:189:A:H2'	23:B0:190:A:C8	2.47	0.49
23:B0:2536:G:H2'	23:B0:2537:C:C6	2.47	0.49
23:B0:568:G:H5''	23:B0:1019:U:H5'	1.93	0.49
23:B0:652:C:H42	23:B0:657:A:N6	2.10	0.49
1:AA:245:C:O2	1:AA:283:C:N3	2.46	0.49
1:AA:430:A:C2'	1:AA:431:A:H5'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:46:G:C4	1:AA:366:C:C4	3.00	0.49
1:AA:722:A:H4'	1:AA:723:U:C5	2.48	0.49
1:AA:926:G:H22	3:AU:6:A:P	2.35	0.49
4:AB:168:THR:OG1	4:AB:192:SER:HB3	2.12	0.49
4:AB:97:TRP:CH2	4:AB:173:ALA:HA	2.48	0.49
4:AB:35:GLU:HA	4:AB:39:ILE:O	2.13	0.49
6:AD:36:ARG:N	6:AD:37:PRO:CD	2.66	0.49
7:AE:104:ALA:O	7:AE:105:VAL:C	2.49	0.49
12:AJ:32:ALA:HB2	12:AJ:76:ASN:HB2	1.94	0.49
15:AM:5:ALA:O	15:AM:6:GLY:C	2.51	0.49
2:AW:25:C:N4	2:AW:26:G:C5	2.80	0.49
23:B0:1268:U:H5''	23:B0:1269:G:H5''	1.95	0.49
23:B0:1715:A:H1'	23:B0:1717:A:C1'	2.42	0.49
23:B0:1923:U:H4'	23:B0:1948:C:N4	2.27	0.49
23:B0:1993:G:H2'	23:B0:1994:U:C6	2.47	0.49
23:B0:2312:A:H4'	23:B0:2313:G:N7	2.26	0.49
23:B0:2321:C:H2'	23:B0:2322:U:O4'	2.12	0.49
23:B0:2805:G:O2'	23:B0:2806:G:H5'	2.12	0.49
23:B0:601:A:H3'	23:B0:602:C:C5'	2.42	0.49
23:B0:960:U:H2'	23:B0:961:G:C8	2.48	0.49
1:AA:1367:C:H5''	11:AI:114:TYR:CB	2.43	0.49
1:AA:1430:C:C5'	23:B0:1721:G:C5'	2.90	0.49
1:AA:1500:A:H4'	1:AA:1509:C:OP1	2.12	0.49
1:AA:15:G:C8	1:AA:1396:A:O2'	2.64	0.49
1:AA:346:G:H2'	1:AA:347:G:H5'	1.94	0.49
1:AA:376:G:OP1	18:AP:67:THR:CB	2.60	0.49
1:AA:746:A:O2'	1:AA:747:C:H5'	2.11	0.49
1:AA:834:C:H2'	1:AA:835:U:C6	2.48	0.49
1:AA:847:C:O2'	1:AA:848:G:H5'	2.13	0.49
5:AC:47:LEU:N	5:AC:47:LEU:HD12	2.27	0.49
6:AD:7:PRO:HB2	6:AD:10:ARG:HD2	1.93	0.49
7:AE:84:PHE:CE2	7:AE:133:TYR:HD1	2.31	0.49
1:AA:129:U:C5'	19:AQ:3:LYS:HE3	2.43	0.49
8:AF:100:ASN:O	20:AR:28:GLU:HG3	2.13	0.49
20:AR:41:LYS:HG2	20:AR:41:LYS:O	2.13	0.49
23:B0:1007:A:H2'	23:B0:1008:G:C8	2.47	0.49
23:B0:1199:U:H2'	23:B0:1200:G:C8	2.46	0.49
23:B0:1218:C:H2'	23:B0:1219:C:C6	2.47	0.49
23:B0:2249:U:H2'	23:B0:2250:G:O4'	2.13	0.49
23:B0:2397:A:H2'	23:B0:2398:U:O4'	2.12	0.49
2:AW:75:C:O2'	23:B0:2486:C:O2'	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:2492:G:H2'	23:B0:2493:U:O4'	2.12	0.49
23:B0:2717:G:H2'	23:B0:2718:A:C8	2.48	0.49
23:B0:628:A:H2'	23:B0:629:C:C6	2.48	0.49
23:B0:703:A:H2'	23:B0:704:G:H8	1.77	0.49
1:AA:1102:A:H2'	1:AA:1103:C:H6	1.77	0.49
1:AA:1121:U:H2'	1:AA:1122:U:C6	2.48	0.49
1:AA:149:A:H2'	1:AA:150:C:C6	2.48	0.49
1:AA:255:G:C4	19:AQ:16:GLN:NE2	2.80	0.49
1:AA:322:C:C4'	22:AT:23:ARG:CB	2.88	0.49
1:AA:161:A:C2	1:AA:348:G:C1'	2.95	0.49
1:AA:489:C:H2'	1:AA:490:G:H8	1.77	0.49
1:AA:606:G:C3'	1:AA:607:A:C5'	2.88	0.49
1:AA:778:G:O2'	13:AK:119:CYS:C	2.47	0.49
1:AA:932:C:H5''	9:AG:3:ARG:CD	2.33	0.49
4:AB:12:GLU:HG2	4:AB:213:LEU:HD11	1.95	0.49
1:AA:826:C:C1'	10:AH:15:ASN:HD22	2.21	0.49
10:AH:13:ILE:O	10:AH:17:THR:HG23	2.13	0.49
1:AA:128:G:O3'	19:AQ:3:LYS:CG	2.61	0.49
23:B0:1164:C:H2'	23:B0:1165:G:O4'	2.12	0.49
23:B0:117:A:H4'	23:B0:118:U:C6	2.47	0.49
23:B0:1532:A:H2'	23:B0:1533:G:H8	1.77	0.49
23:B0:1949:A:O2'	23:B0:2572:U:H5'	2.12	0.49
23:B0:1998:A:H2'	23:B0:1999:U:H5'	1.94	0.49
23:B0:2274:C:C2'	23:B0:2275:U:H5'	2.40	0.49
1:AA:1110:A:C6	1:AA:1111:A:C5	3.00	0.49
1:AA:1126:U:H1'	1:AA:1280:A:C6	2.48	0.49
1:AA:923:A:H1'	1:AA:1398:A:H2'	1.93	0.49
1:AA:1413:A:O2'	1:AA:1414:U:H5'	2.12	0.49
1:AA:218:C:H2'	1:AA:219:C:C6	2.47	0.49
1:AA:261:U:O5'	22:AT:79:ARG:NH1	2.46	0.49
1:AA:269:C:H2'	1:AA:270:A:C8	2.48	0.49
1:AA:406:G:N9	1:AA:496:A:C5	2.81	0.49
1:AA:586:C:O2'	1:AA:587:G:H5'	2.12	0.49
1:AA:624:C:O2'	1:AA:625:G:H5'	2.13	0.49
1:AA:866:C:C4'	1:AA:919:A:C5'	2.90	0.49
1:AA:864:A:H2	1:AA:917:G:H2'	1.78	0.49
1:AA:958:A:O4'	21:AS:55:LYS:NZ	2.46	0.49
4:AB:230:VAL:HG13	4:AB:231:GLU:OE2	2.13	0.49
5:AC:112:SER:O	5:AC:116:VAL:HG23	2.11	0.49
12:AJ:65:LEU:CD2	12:AJ:65:LEU:O	2.59	0.49
14:AL:34:ARG:O	14:AL:34:ARG:HG3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AL:53:ARG:HB3	14:AL:93:LEU:HD11	1.94	0.49
16:AN:15:LYS:HB3	16:AN:16:PHE:CD1	2.47	0.49
17:AO:30:ALA:HA	17:AO:85:LEU:HD21	1.94	0.49
19:AQ:45:HIS:NE2	19:AQ:47:PRO:HG3	2.27	0.49
22:AT:38:LYS:O	22:AT:39:LYS:C	2.51	0.49
23:B0:1829:C:H2'	23:B0:1830:C:H5'	1.95	0.49
23:B0:2260:C:H4'	23:B0:2368:G:H21	1.77	0.49
23:B0:2821:G:H2'	23:B0:2822:U:C6	2.48	0.49
23:B0:2852:G:H2'	23:B0:2853:U:O4'	2.12	0.49
23:B0:3184:C:C2'	23:B0:3185:U:C5'	2.91	0.49
23:B0:427:C:H2'	23:B0:428:A:C8	2.47	0.49
23:B0:483:A:H2'	23:B0:484:G:H5'	1.93	0.49
23:B0:599:A:H2'	23:B0:600:G:C8	2.48	0.49
23:B0:879:A:H2'	23:B0:880:C:H5'	1.94	0.49
1:AA:1051:C:O2'	1:AA:1052:U:H5'	2.13	0.49
1:AA:1085:U:O3'	1:AA:1086:U:H6	1.95	0.49
1:AA:1238:A:N7	1:AA:1303:C:H1'	2.28	0.49
1:AA:1393:U:O2'	1:AA:1394:A:C2'	2.60	0.49
1:AA:1434:A:O3'	1:AA:1435:G:C4'	2.61	0.49
1:AA:1474:G:O2'	23:B0:1705:U:C3'	2.61	0.49
1:AA:184:G:H2'	1:AA:185:A:H8	1.77	0.49
1:AA:521:G:O2'	1:AA:522:C:H5'	2.12	0.49
1:AA:659:U:H2'	1:AA:660:G:O4'	2.13	0.49
1:AA:865:A:O2'	1:AA:919:A:O4'	2.29	0.49
5:AC:116:VAL:O	5:AC:119:ARG:HB3	2.13	0.49
9:AG:108:ALA:O	9:AG:119:ARG:HB3	2.12	0.49
11:AI:23:ASN:C	11:AI:23:ASN:ND2	2.66	0.49
15:AM:78:ILE:O	15:AM:82:MET:HB2	2.12	0.49
1:AA:979:C:C2	16:AN:19:ARG:HG2	2.48	0.49
23:B0:1223:G:H1'	23:B0:1225:G:C4	2.48	0.49
23:B0:1982:C:H2'	23:B0:1983:G:H8	1.78	0.49
23:B0:807:A:H2'	23:B0:808:C:C6	2.48	0.49
23:B0:3877:A:H1'	55:B5:196:VAL:CA	2.42	0.49
1:AA:109:A:OP2	1:AA:110:C:H5	1.96	0.49
1:AA:1310:G:O2'	1:AA:1311:G:H5'	2.12	0.49
1:AA:1365:G:O2'	1:AA:1366:C:H5'	2.12	0.49
1:AA:209:U:H5'	1:AA:210:C:C5	2.48	0.49
1:AA:236:G:H4'	19:AQ:42:TYR:OH	2.13	0.49
1:AA:255:G:C5'	19:AQ:17:LYS:CB	2.51	0.49
1:AA:397:A:C5	1:AA:547:A:C1'	2.89	0.49
4:AB:102:LEU:CD2	4:AB:162:ILE:HD11	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:44:LEU:HA	4:AB:47:THR:OG1	2.12	0.49
1:AA:1108:G:OP1	5:AC:175:LEU:HB2	2.12	0.49
5:AC:3:ASN:HD22	5:AC:4:LYS:HG2	1.78	0.49
12:AJ:16:LEU:HD23	12:AJ:94:VAL:HG22	1.95	0.49
17:AO:25:THR:HG21	17:AO:70:LEU:HD23	1.94	0.49
17:AO:4:THR:HB	17:AO:6:GLU:HG2	1.94	0.49
19:AQ:68:ARG:O	19:AQ:69:LYS:HB2	2.13	0.49
21:AS:5:LEU:HD11	21:AS:70:LYS:NZ	2.28	0.49
23:B0:114:C:O2'	23:B0:124:A:H1'	2.12	0.49
23:B0:1489:C:H3'	23:B0:1490:U:H5'	1.95	0.49
23:B0:1970:G:H2'	23:B0:1971:C:C6	2.48	0.49
2:AV:75:C:H1'	23:B0:2047:C:H4'	1.94	0.49
2:AW:74:C:C5	23:B0:2534:U:C5	2.55	0.49
23:B0:1856:U:O4	23:B0:3865:A:C6	2.63	0.49
23:B0:653:G:N2	23:B0:655:A:H1'	2.27	0.49
1:AA:136:C:H2'	1:AA:137:C:H6	1.77	0.49
1:AA:1396:A:H4'	1:AA:1397:C:H5''	1.93	0.49
1:AA:1416:G:O3'	1:AA:1417:G:P	2.69	0.49
1:AA:1497:G:C1'	1:AA:1518:A:H2	2.26	0.49
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.12	0.49
1:AA:15:G:N7	1:AA:1396:A:O2'	2.44	0.49
1:AA:237:C:H4'	19:AQ:25:ARG:CZ	2.43	0.49
1:AA:265:G:O2'	1:AA:266:G:H5'	2.13	0.49
1:AA:555:C:H2'	1:AA:556:C:C6	2.48	0.49
1:AA:942:G:O2'	1:AA:943:U:H5'	2.12	0.49
1:AA:959:A:H2'	1:AA:960:U:O4'	2.12	0.49
4:AB:30:ARG:HG3	4:AB:31:TYR:CD2	2.48	0.49
6:AD:105:VAL:HG13	6:AD:110:PHE:HB2	1.95	0.49
6:AD:38:TYR:CE1	6:AD:45:GLN:HG3	2.48	0.49
9:AG:38:LEU:O	9:AG:42:ILE:HG13	2.12	0.49
13:AK:124:LYS:HD2	13:AK:125:PHE:CE1	2.48	0.49
14:AL:83:VAL:HG22	14:AL:84:LEU:N	2.28	0.49
15:AM:94:ARG:NH2	21:AS:81:ARG:CD	2.65	0.49
18:AP:52:ASP:OD2	18:AP:55:ARG:HB2	2.13	0.49
19:AQ:26:GLN:O	19:AQ:27:PHE:HB3	2.12	0.49
19:AQ:56:VAL:HG12	19:AQ:77:VAL:HB	1.95	0.49
21:AS:45:VAL:HG12	21:AS:46:GLY:N	2.26	0.49
1:AA:262:A:C4'	22:AT:74:LYS:HB3	2.42	0.49
2:AW:76:A:C1'	23:B0:2486:C:H4'	2.29	0.49
23:B0:1380:C:C2'	23:B0:1381:G:H5'	2.41	0.49
23:B0:1617:G:H2'	23:B0:1618:U:H5'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:216:U:H2'	23:B0:217:U:O4'	2.12	0.49
23:B0:2380:U:C2'	23:B0:2381:A:H5'	2.42	0.49
23:B0:2392:G:H2'	23:B0:2393:G:H8	1.77	0.49
23:B0:3102:G:H2'	23:B0:3103:A:C8	2.48	0.49
23:B0:930:A:H4'	23:B0:930:A:OP1	2.11	0.49
1:AA:1068:G:N3	1:AA:1191:A:C2	2.81	0.48
1:AA:1329:A:C2'	1:AA:1330:U:H5'	2.43	0.48
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.48	0.48
1:AA:135:C:C5	1:AA:136:C:C5	3.01	0.48
1:AA:1497:G:H2'	1:AA:1498:U:C5'	2.42	0.48
1:AA:217:C:O2'	1:AA:218:C:H5'	2.12	0.48
1:AA:394:G:C5	1:AA:395:C:C5	3.01	0.48
1:AA:560:U:O2'	1:AA:561:U:OP2	2.27	0.48
1:AA:69:G:H1'	1:AA:102:G:C6	2.48	0.48
1:AA:651:C:N4	1:AA:752:G:O2'	2.46	0.48
1:AA:94:G:H2'	1:AA:96:C:H6	1.78	0.48
5:AC:180:ALA:O	5:AC:181:ASN:CB	2.61	0.48
6:AD:57:ARG:NH2	6:AD:205:GLU:OE2	2.46	0.48
7:AE:31:LEU:HD22	7:AE:43:LEU:HD21	1.94	0.48
8:AF:67:MET:CE	8:AF:72:VAL:HA	2.40	0.48
10:AH:60:ARG:HG3	10:AH:60:ARG:NH1	2.28	0.48
13:AK:58:PRO:HB2	13:AK:93:GLN:HG3	1.95	0.48
1:AA:707:C:P	13:AK:85:ARG:HH12	2.17	0.48
14:AL:119:LYS:O	14:AL:120:TYR:CB	2.61	0.48
20:AR:36:ASN:CG	20:AR:39:VAL:HG12	2.34	0.48
2:AW:75:C:C1'	23:B0:2486:C:O2'	2.61	0.48
23:B0:2809:A:C2'	23:B0:2810:A:H5'	2.43	0.48
23:B0:338:G:H1	23:B0:346:C:H42	1.60	0.48
23:B0:1090:C:HO2'	31:BG:129:GLY:CA	2.24	0.48
1:AA:1067:A:O2'	1:AA:1068:G:OP2	2.29	0.48
1:AA:1165:C:O2'	1:AA:1166:G:H5'	2.12	0.48
1:AA:1255:G:O2'	1:AA:1259:C:N1	2.45	0.48
1:AA:1268:A:H1'	1:AA:1326:C:O2'	2.13	0.48
1:AA:1279:A:O2'	1:AA:1282:C:N4	2.46	0.48
1:AA:1286:A:H2'	1:AA:1287:A:H4'	1.96	0.48
1:AA:135:C:H2'	1:AA:136:C:C5'	2.43	0.48
1:AA:923:A:C5'	1:AA:1398:A:C6	2.95	0.48
1:AA:419:C:OP1	1:AA:513:C:H1'	2.13	0.48
1:AA:826:C:O2'	10:AH:15:ASN:HB2	2.12	0.48
1:AA:959:A:H2	1:AA:1221:G:HO2'	1.58	0.48
4:AB:144:ARG:HG3	4:AB:145:LEU:H	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:144:ARG:O	4:AB:147:LYS:N	2.42	0.48
4:AB:188:ALA:O	4:AB:202:PRO:HA	2.13	0.48
4:AB:97:TRP:CH2	4:AB:176:GLU:CD	2.85	0.48
6:AD:174:LEU:O	6:AD:175:SER:HB3	2.13	0.48
6:AD:3:ARG:O	6:AD:5:ILE:HG13	2.13	0.48
6:AD:3:ARG:NH2	6:AD:74:GLN:OE1	2.44	0.48
7:AE:13:ILE:HG13	7:AE:13:ILE:O	2.11	0.48
8:AF:38:GLU:O	8:AF:39:LYS:HB3	2.12	0.48
8:AF:43:LEU:N	8:AF:43:LEU:HD22	2.27	0.48
8:AF:46:ARG:HB2	8:AF:60:PHE:CE1	2.48	0.48
9:AG:6:ARG:O	9:AG:7:ALA:C	2.52	0.48
11:AI:111:ARG:NH1	11:AI:111:ARG:HG3	2.28	0.48
12:AJ:94:VAL:HG12	12:AJ:95:GLU:H	1.76	0.48
20:AR:39:VAL:HG13	20:AR:40:LEU:N	2.28	0.48
21:AS:32:LYS:O	21:AS:32:LYS:HG3	2.13	0.48
1:AA:1319:A:P	21:AS:5:LEU:HD22	2.53	0.48
22:AT:29:LYS:O	22:AT:33:ILE:HG13	2.13	0.48
23:B0:1099:A:H3'	23:B0:1100:G:H5'	1.94	0.48
23:B0:1895:A:H2'	23:B0:1896:A:O4'	2.13	0.48
23:B0:1964:A:H5''	23:B0:1965:U:OP2	2.13	0.48
23:B0:1949:A:H1'	23:B0:2572:U:H4'	1.95	0.48
23:B0:58:C:H1'	23:B0:72:A:C8	2.48	0.48
23:B0:737:C:H2'	23:B0:738:G:O4'	2.14	0.48
15:AM:93:ARG:NH1	23:B0:900:U:C5'	2.77	0.48
24:B9:112:A:H2'	24:B9:113:G:C8	2.49	0.48
1:AA:1030:U:H5'	1:AA:1031:C:C5	2.48	0.48
1:AA:1270:C:H4'	1:AA:1314:C:H5'	1.95	0.48
1:AA:1346:A:H1'	1:AA:1348:U:C5	2.47	0.48
1:AA:131:C:C3'	1:AA:262:A:O2'	2.61	0.48
1:AA:27:G:C5	1:AA:557:G:N2	2.77	0.48
1:AA:46:G:N2	1:AA:366:C:O4'	2.45	0.48
1:AA:401:C:C4'	1:AA:622:A:H1'	2.42	0.48
1:AA:815:A:H1'	1:AA:1527:C:C4'	2.42	0.48
4:AB:108:ILE:HG22	4:AB:108:ILE:O	2.13	0.48
4:AB:204:ASN:ND2	4:AB:206:ASP:H	2.12	0.48
4:AB:25:ASN:O	4:AB:27:LYS:N	2.47	0.48
5:AC:135:LYS:NZ	7:AE:50:GLU:CD	2.67	0.48
1:AA:1112:C:C2	5:AC:178:LEU:HB3	2.48	0.48
5:AC:23:TYR:O	5:AC:24:ALA:HB2	2.14	0.48
6:AD:119:GLN:HG2	6:AD:123:HIS:CD2	2.47	0.48
7:AE:61:TYR:O	7:AE:64:ARG:O	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AO:34:LEU:O	17:AO:34:LEU:HD23	2.12	0.48
23:B0:1190:C:H2'	23:B0:1191:G:C8	2.48	0.48
23:B0:126:C:H2'	23:B0:127:C:C6	2.48	0.48
23:B0:1312:G:C5'	23:B0:1313:U:H5'	2.39	0.48
23:B0:1356:G:H5'	23:B0:1614:C:OP2	2.12	0.48
1:AA:1484:C:H5'	23:B0:1943:A:H1'	1.85	0.48
23:B0:2754:C:H2'	23:B0:2755:A:O4'	2.14	0.48
23:B0:742:G:H2'	23:B0:742:G:N3	2.29	0.48
1:AA:170:U:O2'	1:AA:171:A:H5'	2.14	0.48
1:AA:170:U:H3'	1:AA:171:A:P	2.54	0.48
1:AA:254:G:O2'	19:AQ:16:GLN:C	2.52	0.48
1:AA:265:G:H5'	19:AQ:65:ILE:CA	2.05	0.48
1:AA:421:U:H5'	1:AA:422:C:C5	2.48	0.48
1:AA:43:C:OP1	18:AP:12:LYS:HB3	2.13	0.48
1:AA:647:C:H2'	1:AA:648:A:H8	1.78	0.48
1:AA:18:C:C2	1:AA:918:A:C6	3.01	0.48
4:AB:97:TRP:CZ2	4:AB:102:LEU:HD13	2.45	0.48
4:AB:111:ARG:HB3	4:AB:149:LEU:HD11	1.95	0.48
6:AD:7:PRO:CG	6:AD:10:ARG:HD2	2.43	0.48
9:AG:64:GLN:O	9:AG:67:GLU:HB3	2.14	0.48
1:AA:1343:G:P	11:AI:125:TYR:HE2	2.37	0.48
14:AL:53:ARG:HG2	14:AL:93:LEU:HD11	1.95	0.48
15:AM:94:ARG:HH22	21:AS:81:ARG:CD	2.26	0.48
1:AA:266:G:HO2'	19:AQ:67:LYS:HD2	1.78	0.48
2:AV:32:C:OP2	11:AI:127:LYS:HE2	2.11	0.48
23:B0:1343:C:H2'	23:B0:1344:C:C6	2.48	0.48
23:B0:1930:C:H2'	23:B0:1931:G:H8	1.78	0.48
23:B0:3869:G:H2'	23:B0:3871:A:OP2	2.13	0.48
23:B0:422:C:H2'	23:B0:423:G:H8	1.78	0.48
1:AA:1016:A:H1'	1:AA:1218:C:C4'	2.41	0.48
1:AA:1339:A:N3	2:AV:31:A:O2'	2.46	0.48
1:AA:1342:C:O2'	1:AA:1343:G:H5'	2.13	0.48
1:AA:1366:C:C2	1:AA:1367:C:C5	3.00	0.48
1:AA:178:C:O2'	1:AA:179:A:H5'	2.13	0.48
6:AD:151:LYS:CD	6:AD:151:LYS:N	2.75	0.48
7:AE:51:VAL:O	7:AE:54:ALA:HB3	2.13	0.48
12:AJ:6:ILE:HG23	12:AJ:98:ILE:HG12	1.94	0.48
1:AA:128:G:P	19:AQ:2:PRO:CD	3.01	0.48
22:AT:67:ALA:O	22:AT:73:HIS:ND1	2.47	0.48
23:B0:1301:U:H2'	23:B0:1664:G:H21	1.79	0.48
23:B0:2437:G:N2	23:B0:2469:G:H2'	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:2504:G:H2'	23:B0:2505:G:C8	2.49	0.48
23:B0:2642:G:H2'	23:B0:2643:G:O4'	2.13	0.48
23:B0:2808:U:H3'	23:B0:2809:A:C5'	2.40	0.48
23:B0:31:C:H2'	23:B0:32:C:O4'	2.14	0.48
23:B0:703:A:H2'	23:B0:704:G:C8	2.49	0.48
23:B0:929:A:H2'	23:B0:930:A:H4'	1.95	0.48
1:AA:1067:A:H1'	1:AA:1068:G:OP2	2.13	0.48
1:AA:1111:A:N1	5:AC:177:THR:OG1	2.45	0.48
1:AA:1394:A:N3	1:AA:1501:C:O4'	2.47	0.48
1:AA:143:A:O3'	1:AA:144:G:H8	1.96	0.48
1:AA:38:G:C1'	1:AA:547:A:N7	2.76	0.48
1:AA:407:G:H5''	6:AD:115:ARG:HB3	1.95	0.48
1:AA:41:G:H2'	1:AA:42:G:C8	2.49	0.48
1:AA:476:U:C6	1:AA:477:G:P	3.07	0.48
5:AC:138:VAL:O	5:AC:142:MET:HB2	2.13	0.48
7:AE:107:ARG:HG2	7:AE:108:ALA:N	2.29	0.48
7:AE:11:ILE:HB	7:AE:31:LEU:HB3	1.93	0.48
7:AE:36:ASP:O	7:AE:37:ARG:HB2	2.13	0.48
8:AF:43:LEU:H	8:AF:43:LEU:HD22	1.77	0.48
10:AH:65:TYR:HA	10:AH:79:VAL:HG23	1.95	0.48
5:AC:23:TYR:HD1	12:AJ:11:PHE:CD2	2.30	0.48
14:AL:45:PRO:HB2	14:AL:49:ASN:O	2.13	0.48
19:AQ:12:SER:HB3	19:AQ:20:THR:HB	1.95	0.48
1:AA:255:G:N9	19:AQ:16:GLN:NE2	2.60	0.48
1:AA:1420:C:C4'	23:B0:1933:G:OP1	2.62	0.48
23:B0:2017:U:O2'	23:B0:2018:G:H5'	2.13	0.48
23:B0:340:G:H1'	23:B0:488:A:C4	2.49	0.48
23:B0:477:A:H2'	23:B0:478:G:H5'	1.95	0.48
23:B0:490:A:C5	23:B0:492:G:H1'	2.48	0.48
23:B0:634:G:H2'	23:B0:635:C:C6	2.49	0.48
1:AA:1106:G:OP1	5:AC:172:ARG:CG	2.62	0.48
1:AA:1126:U:OP2	1:AA:1281:U:C2	2.66	0.48
1:AA:1152:A:OP1	12:AJ:68:HIS:ND1	2.44	0.48
1:AA:150:C:O3'	1:AA:151:A:P	2.71	0.48
1:AA:170:U:C3'	1:AA:171:A:P	3.02	0.48
1:AA:119:A:C2	1:AA:240:C:C6	3.01	0.48
1:AA:38:G:O2'	1:AA:39:G:N7	2.46	0.48
1:AA:819:A:C6	1:AA:1529:G:C6	3.02	0.48
5:AC:130:VAL:CG2	5:AC:157:ILE:HG23	2.41	0.48
1:AA:1106:G:OP1	5:AC:172:ARG:HD3	2.14	0.48
10:AH:103:VAL:CG2	10:AH:110:ALA:HB2	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:798:G:P	13:AK:122:LYS:HZ2	2.30	0.48
20:AR:36:ASN:HD22	20:AR:38:GLU:HG2	1.78	0.48
20:AR:34:TYR:HA	20:AR:69:THR:HG23	1.93	0.48
22:AT:89:ARG:HE	22:AT:104:LEU:HD22	1.78	0.48
23:B0:1023:U:H1'	23:B0:1154:A:N7	2.28	0.48
23:B0:1231:A:H2'	23:B0:1232:U:O4'	2.13	0.48
23:B0:1418:C:H2'	23:B0:1419:G:H8	1.79	0.48
23:B0:2308:A:H2'	23:B0:2309:G:C8	2.48	0.48
1:AA:923:A:H4'	1:AA:1398:A:C5	2.49	0.48
1:AA:1418:A:H2'	1:AA:1419:G:O4'	2.12	0.48
1:AA:1505:G:H3'	1:AA:1505:G:C8	2.48	0.48
1:AA:1503:A:N3	1:AA:1531:A:C2	2.82	0.48
1:AA:427:U:C4'	1:AA:541:G:H5''	2.43	0.48
1:AA:556:C:C2'	1:AA:557:G:C5'	2.91	0.48
1:AA:69:G:O4'	1:AA:102:G:N1	2.43	0.48
1:AA:825:G:H2'	1:AA:826:C:H6	1.78	0.48
5:AC:173:VAL:N	5:AC:174:PRO:CD	2.76	0.48
5:AC:35:GLU:O	5:AC:38:ARG:N	2.47	0.48
11:AI:117:HIS:HB2	11:AI:121:ARG:HD2	1.94	0.48
14:AL:86:ARG:HG3	14:AL:86:ARG:NH1	2.28	0.48
1:AA:911:U:OP2	14:AL:97:ARG:NH2	2.46	0.48
18:AP:6:LEU:HB3	18:AP:17:TYR:CD2	2.49	0.48
23:B0:1130:U:H2'	23:B0:1131:G:C8	2.48	0.48
23:B0:2319:G:H2'	23:B0:2320:G:C8	2.49	0.48
23:B0:324:C:H2'	23:B0:325:U:O4'	2.14	0.48
23:B0:446:C:H2'	23:B0:447:U:C6	2.49	0.48
23:B0:951:G:C3'	23:B0:952:A:H5''	2.43	0.48
1:AA:1067:A:H1'	1:AA:1068:G:C8	2.49	0.48
1:AA:1162:C:H2'	1:AA:1163:C:H6	1.78	0.48
1:AA:1255:G:O2'	1:AA:1258:G:N3	2.46	0.48
1:AA:1533:C:O2'	1:AA:1534:A:H5'	2.14	0.48
1:AA:131:C:N1	1:AA:262:A:H2	2.09	0.48
1:AA:406:G:C1'	1:AA:496:A:N1	2.77	0.48
1:AA:538:G:O2'	1:AA:539:A:H5'	2.13	0.48
1:AA:6:G:C8	7:AE:92:LYS:CE	2.95	0.48
1:AA:865:A:C2	1:AA:918:A:C5'	2.90	0.48
1:AA:893:C:N3	1:AA:894:G:N7	2.62	0.48
4:AB:17:PHE:HA	4:AB:44:LEU:HD21	1.95	0.48
6:AD:111:ALA:HB1	6:AD:116:GLN:HB3	1.96	0.48
7:AE:71:LEU:HD21	7:AE:115:VAL:HG22	1.96	0.48
14:AL:110:VAL:O	14:AL:122:THR:CG2	2.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AN:12:ARG:O	16:AN:13:THR:C	2.52	0.48
21:AS:39:THR:HG22	21:AS:40:ILE:N	2.29	0.48
23:B0:1427:G:C2'	23:B0:1428:G:H5'	2.42	0.48
23:B0:974:U:H1'	23:B0:2229:G:N2	2.28	0.48
23:B0:2759:U:H5''	23:B0:2760:G:O5'	2.14	0.48
1:AA:119:A:C6	1:AA:240:C:C2	3.02	0.48
1:AA:37:U:HO2'	1:AA:547:A:N6	2.04	0.48
1:AA:436:C:C2'	1:AA:437:U:C5'	2.90	0.48
1:AA:662:G:H2'	1:AA:663:A:H8	1.79	0.48
4:AB:187:LEU:CD2	4:AB:214:ILE:HG13	2.43	0.48
7:AE:51:VAL:HB	7:AE:52:PRO:CD	2.37	0.48
14:AL:83:VAL:HG21	14:AL:100:ILE:HD13	1.95	0.48
19:AQ:17:LYS:HA	19:AQ:46:ASP:O	2.14	0.48
1:AA:719:C:O2'	20:AR:49:LYS:HB3	2.14	0.48
23:B0:1028:G:H2'	23:B0:1029:C:C6	2.49	0.48
23:B0:2321:C:C2'	23:B0:2322:U:H5'	2.44	0.48
23:B0:387:A:H2'	23:B0:388:G:O4'	2.14	0.48
1:AA:1488:G:H2'	1:AA:1489:G:H8	1.77	0.47
1:AA:131:C:C3'	1:AA:262:A:H1'	2.44	0.47
1:AA:322:C:H5''	22:AT:23:ARG:HG3	1.95	0.47
1:AA:684:A:O3'	1:AA:685:G:P	2.72	0.47
1:AA:729:A:H2	1:AA:765:G:O4'	1.97	0.47
1:AA:768:A:H2'	1:AA:769:G:O4'	2.14	0.47
4:AB:115:LEU:HD12	4:AB:115:LEU:O	2.13	0.47
5:AC:178:LEU:O	5:AC:179:ARG:CB	2.60	0.47
6:AD:127:THR:CG2	6:AD:128:VAL:N	2.75	0.47
11:AI:65:VAL:HG13	11:AI:65:VAL:O	2.13	0.47
12:AJ:27:ALA:HB2	12:AJ:85:LEU:HD21	1.96	0.47
17:AO:17:ARG:NH1	17:AO:17:ARG:HG3	2.23	0.47
1:AA:255:G:H1'	19:AQ:16:GLN:HE21	0.39	0.47
23:B0:1825:C:C2'	23:B0:1826:U:H5'	2.44	0.47
23:B0:3110:G:P	23:B0:3149:G:H5'	2.53	0.47
23:B0:3171:A:H4'	23:B0:3172:U:OP1	2.13	0.47
23:B0:3176:A:H2'	23:B0:3177:C:C6	2.48	0.47
23:B0:457:C:H2'	23:B0:458:G:O4'	2.13	0.47
1:AA:1014:A:H1'	21:AS:34:TRP:CB	2.22	0.47
1:AA:109:A:H5'	1:AA:110:C:C5	2.50	0.47
1:AA:1416:G:C8	1:AA:1417:G:C8	3.02	0.47
1:AA:319:G:H1'	1:AA:1433:A:N1	2.28	0.47
1:AA:170:U:O3'	1:AA:171:A:P	2.72	0.47
1:AA:209:U:H5'	1:AA:210:C:H5	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:236:G:H5''	19:AQ:40:LYS:CE	2.44	0.47
1:AA:119:A:C4	1:AA:240:C:N4	2.82	0.47
1:AA:518:C:H5''	1:AA:519:C:H6	1.78	0.47
1:AA:613:C:O2'	1:AA:614:A:H5'	2.14	0.47
1:AA:792:A:H4'	1:AA:793:U:C5'	2.40	0.47
1:AA:848:G:O3'	1:AA:849:C:P	2.72	0.47
1:AA:905:U:H3'	1:AA:906:G:P	2.42	0.47
1:AA:952:U:O2'	1:AA:953:G:H5'	2.14	0.47
4:AB:213:LEU:C	4:AB:213:LEU:CD2	2.83	0.47
6:AD:6:GLY:O	6:AD:7:PRO:C	2.50	0.47
8:AF:2:ARG:NE	8:AF:69:GLU:HG2	2.29	0.47
8:AF:75:LEU:HD13	8:AF:75:LEU:C	2.34	0.47
12:AJ:94:VAL:CG1	12:AJ:95:GLU:N	2.77	0.47
13:AK:86:GLY:H	13:AK:112:THR:HG23	1.79	0.47
12:AJ:63:PHE:CE2	16:AN:58:LYS:HG2	2.49	0.47
23:B0:1002:C:H2'	23:B0:1003:C:C6	2.49	0.47
23:B0:1182:U:C3'	23:B0:1183:C:H5''	2.45	0.47
23:B0:1260:A:N6	23:B0:1262:U:H1'	2.29	0.47
23:B0:1572:C:C3'	23:B0:1573:G:H5''	2.43	0.47
23:B0:2407:G:H4'	23:B0:2408:G:C8	2.49	0.47
2:AW:76:A:OP1	23:B0:2552:C:N3	2.47	0.47
23:B0:2794:G:H2'	23:B0:2796:A:N7	2.29	0.47
23:B0:3093:C:C4	23:B0:2204:A:N7	2.82	0.47
23:B0:611:C:O2'	23:B0:612:G:H5'	2.14	0.47
19:AQ:94:ASN:H	23:B0:726:G:H4'	1.73	0.47
23:B0:88:G:H3'	23:B0:89:A:C5'	2.37	0.47
23:B0:952:A:H2'	23:B0:953:G:O4'	2.14	0.47
1:AA:113:G:O4'	1:AA:354:G:H4'	2.14	0.47
1:AA:513:C:H2'	1:AA:514:C:C6	2.50	0.47
1:AA:826:C:O2'	10:AH:15:ASN:ND2	2.45	0.47
1:AA:913:A:O2'	1:AA:914:A:P	2.73	0.47
1:AA:914:A:H3'	1:AA:915:A:H8	1.79	0.47
4:AB:18:GLY:CA	4:AB:41:ILE:HA	2.44	0.47
4:AB:50:GLU:HB3	4:AB:200:ILE:O	2.15	0.47
6:AD:111:ALA:HB2	6:AD:120:LEU:HD12	1.96	0.47
9:AG:75:VAL:CG1	9:AG:86:GLN:HE21	2.27	0.47
9:AG:75:VAL:HG13	9:AG:86:GLN:HB3	1.95	0.47
13:AK:48:ILE:HD11	13:AK:64:ALA:HA	1.95	0.47
14:AL:28:LYS:O	14:AL:29:GLY:C	2.50	0.47
20:AR:47:THR:HA	20:AR:83:GLU:HB2	1.96	0.47
23:B0:831:G:N2	23:B0:1203:A:H62	2.01	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1313:U:C4	23:B0:1651:U:H5'	2.49	0.47
23:B0:1930:C:H2'	23:B0:1931:G:C8	2.49	0.47
23:B0:1938:U:C2'	23:B0:1939:U:H5'	2.44	0.47
23:B0:646:C:H2'	23:B0:647:G:O4'	2.14	0.47
17:AO:64:ARG:NH2	23:B0:728:G:OP1	2.48	0.47
1:AA:104:G:O4'	1:AA:172:A:C2	2.61	0.47
1:AA:1070:U:O2'	1:AA:1071:C:H5'	2.13	0.47
1:AA:1451:A:O2'	1:AA:1452:C:OP1	2.26	0.47
1:AA:180:U:H2'	1:AA:181:G:H5'	1.96	0.47
1:AA:204:A:H4'	1:AA:205:G:O5'	2.15	0.47
1:AA:258:G:O3'	22:AT:87:LYS:CE	2.62	0.47
1:AA:278:G:O4'	1:AA:282:A:H1'	2.14	0.47
1:AA:51:A:H4'	1:AA:52:G:C5'	2.45	0.47
1:AA:51:A:H4'	1:AA:52:G:O5'	2.15	0.47
1:AA:600:C:OP1	10:AH:97:VAL:N	2.33	0.47
1:AA:625:G:H2'	1:AA:626:U:H6	1.79	0.47
1:AA:657:G:O2'	1:AA:658:G:H5'	2.14	0.47
1:AA:819:A:N6	1:AA:1529:G:C4	2.82	0.47
9:AG:23:VAL:HG12	9:AG:27:ILE:CD1	2.41	0.47
10:AH:6:ILE:HD12	10:AH:35:ILE:HD12	1.96	0.47
12:AJ:39:PRO:HA	12:AJ:70:ARG:HH11	1.78	0.47
14:AL:27:LEU:HG	14:AL:28:LYS:N	2.25	0.47
14:AL:48:PRO:HG2	14:AL:49:ASN:N	2.25	0.47
15:AM:78:ILE:HA	15:AM:81:LEU:CD2	2.38	0.47
16:AN:21:TYR:HE2	16:AN:23:ARG:HE	1.63	0.47
20:AR:28:GLU:OE1	20:AR:28:GLU:N	2.46	0.47
20:AR:53:ARG:HD3	20:AR:63:GLN:HB3	1.95	0.47
1:AA:190:A:C6	22:AT:102:GLY:O	2.67	0.47
23:B0:1071:U:N3	23:B0:1099:A:H2	2.02	0.47
23:B0:109:A:C2'	23:B0:110:U:H5''	2.44	0.47
23:B0:1598:C:H2'	23:B0:1599:G:O4'	2.14	0.47
23:B0:2307:A:H2'	23:B0:2308:A:C8	2.49	0.47
23:B0:2437:G:C2	23:B0:2469:G:H2'	2.50	0.47
23:B0:3866:A:C1'	55:B5:194:ALA:CA	2.92	0.47
23:B0:393:U:H2'	23:B0:394:U:C6	2.49	0.47
23:B0:598:U:H2'	23:B0:599:A:C8	2.49	0.47
23:B0:636:G:H2'	23:B0:637:G:H5'	1.95	0.47
23:B0:910:U:H2'	23:B0:911:A:H5'	1.95	0.47
1:AA:1221:G:O2'	1:AA:1222:G:H5'	2.15	0.47
1:AA:1261:A:C4'	1:AA:1283:G:C5'	2.92	0.47
1:AA:1262:C:H2'	1:AA:1263:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1394:A:C4	1:AA:1501:C:C4'	2.62	0.47
1:AA:130:A:C2	1:AA:264:U:C2	3.03	0.47
1:AA:264:U:H2'	19:AQ:64:PRO:HB2	1.96	0.47
1:AA:403:C:H2'	1:AA:404:U:H6	1.79	0.47
1:AA:435:C:O2'	1:AA:436:C:H5'	2.15	0.47
1:AA:538:G:H4'	14:AL:114:LYS:NZ	2.27	0.47
1:AA:665:A:C2	1:AA:732:C:C2	3.03	0.47
1:AA:834:C:H2'	1:AA:835:U:H6	1.80	0.47
4:AB:15:VAL:HG12	4:AB:210:SER:HB2	1.97	0.47
5:AC:173:VAL:HG12	5:AC:173:VAL:O	2.14	0.47
8:AF:53:ALA:C	8:AF:55:ASP:H	2.18	0.47
8:AF:4:TYR:CZ	8:AF:72:VAL:HG21	2.49	0.47
9:AG:77:SER:O	9:AG:156:TRP:HZ3	1.97	0.47
15:AM:97:PRO:HB2	15:AM:101:GLN:OE1	2.14	0.47
15:AM:39:ILE:CD1	15:AM:56:LEU:HG	2.44	0.47
20:AR:47:THR:HG22	20:AR:48:GLY:H	1.79	0.47
22:AT:94:ALA:O	22:AT:95:ALA:CB	2.63	0.47
23:B0:1489:C:H3'	23:B0:1490:U:C5'	2.45	0.47
23:B0:1494:G:H2'	23:B0:1495:G:C8	2.50	0.47
23:B0:1365:U:H5'	23:B0:1587:A:H1'	1.96	0.47
2:AW:11:C:O2'	23:B0:1898:U:H5''	2.14	0.47
23:B0:2220:A:H2'	23:B0:2221:G:C8	2.48	0.47
23:B0:2062:U:H4'	23:B0:2412:A:H2	1.78	0.47
23:B0:242:A:O2'	23:B0:243:G:P	2.72	0.47
23:B0:2455:A:O2'	23:B0:2456:U:H5'	2.15	0.47
2:AW:64:A:O4'	23:B0:2461:G:O2'	2.32	0.47
23:B0:2799:C:H2'	23:B0:2800:C:O4'	2.14	0.47
23:B0:3181:C:H2'	23:B0:3182:U:C6	2.50	0.47
1:AA:762:C:C4'	23:B0:729:A:C6	2.74	0.47
1:AA:1057:G:C2'	1:AA:1058:G:H5'	2.44	0.47
1:AA:1127:G:N2	1:AA:1147:C:N4	2.62	0.47
1:AA:1158:C:N3	1:AA:1181:G:N2	2.61	0.47
1:AA:1515:C:H2'	1:AA:1516:G:C8	2.50	0.47
1:AA:528:C:H5'	1:AA:535:A:C6	2.49	0.47
1:AA:297:G:C5'	1:AA:557:G:H4'	2.44	0.47
1:AA:299:G:N2	1:AA:566:G:C6	2.78	0.47
7:AE:102:ALA:HB2	7:AE:120:THR:HB	1.97	0.47
7:AE:127:ASN:O	7:AE:128:PRO:C	2.53	0.47
7:AE:92:LYS:O	7:AE:118:ILE:HG23	2.15	0.47
9:AG:54:THR:HG22	9:AG:56:GLN:H	1.79	0.47
15:AM:94:ARG:HH22	21:AS:81:ARG:HH11	1.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AN:14:PRO:O	16:AN:16:PHE:N	2.44	0.47
20:AR:45:SER:C	20:AR:47:THR:N	2.65	0.47
8:AF:50:TYR:CE1	20:AR:77:GLY:HA2	2.49	0.47
23:B0:1074:G:O2'	23:B0:1075:C:H5'	2.15	0.47
23:B0:1101:U:O4	23:B0:1113:C:N4	2.48	0.47
23:B0:1279:G:HO2'	23:B0:1280:U:H6	1.62	0.47
23:B0:1286:U:H2'	23:B0:2692:A:H2	1.80	0.47
23:B0:1497:C:O2'	23:B0:1498:G:H5'	2.14	0.47
23:B0:1591:U:H2'	23:B0:1592:U:O4'	2.14	0.47
23:B0:1654:A:H2'	23:B0:1655:C:C6	2.49	0.47
23:B0:1918:G:H4'	23:B0:1920:A:C2	2.50	0.47
23:B0:1922:U:H1'	23:B0:2570:C:O2'	2.15	0.47
23:B0:404:A:H2'	23:B0:405:C:C6	2.50	0.47
19:AQ:104:LYS:CB	23:B0:726:G:C5	2.97	0.47
1:AA:155:C:H2'	1:AA:156:G:H8	1.79	0.47
1:AA:173:U:C2	1:AA:197:A:N1	2.82	0.47
1:AA:292:G:H21	1:AA:608:A:H2	1.51	0.47
1:AA:37:U:H1'	1:AA:500:G:O2'	2.13	0.47
1:AA:633:G:H2'	1:AA:634:C:C6	2.49	0.47
1:AA:707:C:H4'	13:AK:20:TYR:CZ	2.50	0.47
1:AA:780:A:C2	1:AA:801:U:C5	3.02	0.47
1:AA:893:C:C6	1:AA:894:G:N7	2.82	0.47
1:AA:947:G:H2'	1:AA:948:C:O4'	2.15	0.47
4:AB:215:LEU:O	4:AB:216:SER:C	2.52	0.47
5:AC:100:ALA:O	5:AC:101:LEU:HB2	2.14	0.47
7:AE:33:VAL:HG11	7:AE:109:ILE:HA	1.96	0.47
7:AE:148:VAL:O	7:AE:152:ARG:HG3	2.14	0.47
10:AH:75:ARG:HA	10:AH:76:PRO:HD3	1.70	0.47
1:AA:1060:C:H5'	12:AJ:52:GLY:CA	2.27	0.47
12:AJ:51:ARG:HA	16:AN:45:ARG:NH1	2.30	0.47
19:AQ:101:ARG:HD3	23:B0:731:A:C2	2.36	0.47
22:AT:50:GLU:HG3	22:AT:99:LEU:CD1	2.45	0.47
23:B0:1088:A:C2	23:B0:1099:A:C8	3.03	0.47
23:B0:1829:C:C2'	23:B0:1830:C:H5'	2.44	0.47
1:AA:702:A:C6	23:B0:1838:G:H2'	2.48	0.47
23:B0:367:G:C3'	23:B0:368:A:H5''	2.44	0.47
23:B0:930:A:H3'	23:B0:931:G:H8	1.79	0.47
24:B9:22:U:H2'	24:B9:23:G:H8	1.79	0.47
1:AA:1004:A:N6	1:AA:1035:A:H62	2.13	0.47
1:AA:1128:C:O2'	1:AA:1130:A:C8	2.62	0.47
1:AA:1393:U:C2'	1:AA:1395:C:C5	2.93	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:588:G:N7	1:AA:753:A:N3	2.63	0.47
1:AA:992:U:O2'	1:AA:993:G:OP2	2.26	0.47
4:AB:78:GLN:O	4:AB:94:ASN:OD1	2.33	0.47
5:AC:19:GLU:HB3	5:AC:40:ARG:NH2	2.25	0.47
6:AD:57:ARG:HH22	7:AE:107:ARG:HD2	1.60	0.47
11:AI:48:GLU:N	11:AI:49:PRO:CD	2.77	0.47
14:AL:28:LYS:HD2	14:AL:33:ARG:NH1	2.29	0.47
14:AL:42:THR:CG2	14:AL:52:LEU:HB3	2.44	0.47
2:AV:57:G:C4'	28:BD:76:ASN:CA	2.92	0.47
23:B0:9:U:H2'	23:B0:10:A:C8	2.49	0.47
23:B0:1189:G:O2'	23:B0:1190:C:H5'	2.14	0.47
23:B0:1886:G:H2'	23:B0:1887:G:H8	1.79	0.47
23:B0:2008:C:H2'	23:B0:2009:U:C6	2.49	0.47
23:B0:2376:G:H2'	23:B0:2377:U:C6	2.50	0.47
23:B0:619:A:H2'	23:B0:620:G:C8	2.49	0.47
24:B9:80:A:H2'	24:B9:81:C:O4'	2.15	0.47
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.50	0.47
1:AA:1255:G:N3	1:AA:1259:C:O2	2.48	0.47
1:AA:1391:U:H1'	1:AA:1532:U:OP1	2.15	0.47
1:AA:247:G:OP2	19:AQ:100:LYS:CE	2.56	0.47
1:AA:27:G:N3	1:AA:557:G:N3	2.63	0.47
1:AA:41:G:H2'	1:AA:42:G:H8	1.79	0.47
1:AA:572:A:N3	1:AA:917:G:C1'	2.72	0.47
1:AA:672:U:O3'	1:AA:673:G:P	2.72	0.47
1:AA:975:A:H4'	1:AA:976:G:H5'	1.97	0.47
5:AC:79:ARG:HG2	5:AC:82:GLU:CG	2.45	0.47
7:AE:20:GLN:C	7:AE:21:ALA:O	2.50	0.47
8:AF:67:MET:HE2	8:AF:72:VAL:HG22	1.97	0.47
13:AK:50:TYR:HD1	13:AK:60:ALA:HB2	1.80	0.47
1:AA:128:G:O3'	19:AQ:3:LYS:HG2	2.13	0.47
1:AA:264:U:C2'	19:AQ:64:PRO:N	2.77	0.47
23:B0:2238:G:H2'	23:B0:2239:C:C6	2.49	0.47
23:B0:3149:G:O3'	23:B0:3150:C:OP2	2.33	0.47
23:B0:38:G:H2'	23:B0:39:C:C6	2.49	0.47
23:B0:537:C:C6	23:B0:2759:U:H2'	2.50	0.47
23:B0:859:U:H4'	23:B0:860:U:C5	2.49	0.47
1:AA:1001:A:H2'	1:AA:1002:G:H8	1.79	0.47
1:AA:1074:G:O3'	4:AB:103:THR:CG2	2.63	0.47
1:AA:129(A):G:O2'	1:AA:130:A:OP2	2.28	0.47
1:AA:141:A:C1'	1:AA:182:U:O2	2.63	0.47
1:AA:300:A:H1'	1:AA:565:U:H3	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:457:G:O2'	1:AA:458:G:H5'	2.15	0.47
1:AA:215:C:O2'	1:AA:465:C:N4	2.45	0.47
1:AA:560:U:H6	1:AA:560:U:O5'	1.98	0.47
1:AA:88:G:O2'	1:AA:89:G:H5'	2.14	0.47
1:AA:944:G:H3'	1:AA:945:G:H5'	1.97	0.47
5:AC:174:PRO:O	5:AC:177:THR:HG22	2.15	0.47
10:AH:23:SER:OG	10:AH:60:ARG:HD2	2.15	0.47
1:AA:586:C:C5'	10:AH:90:GLY:N	2.78	0.47
12:AJ:8:LEU:HD12	12:AJ:20:ALA:HB2	1.97	0.47
1:AA:521:G:H4'	14:AL:73:GLU:CG	2.44	0.47
18:AP:20:VAL:CG1	18:AP:21:VAL:N	2.76	0.47
22:AT:42:GLN:O	22:AT:42:GLN:NE2	2.47	0.47
1:AA:1427:U:HO2'	23:B0:1704:G:H5''	1.77	0.47
1:AA:1428:A:O4'	23:B0:1704:G:H5'	2.15	0.47
23:B0:1789:U:H2'	23:B0:1790:G:H5'	1.95	0.47
23:B0:1974:U:H2'	23:B0:1975:G:H5''	1.95	0.47
23:B0:3098:U:H3'	23:B0:3099:U:C5	2.49	0.47
23:B0:3171:A:O2'	23:B0:3172:U:H6	1.98	0.47
23:B0:558:G:H5''	23:B0:559:C:C5	2.50	0.47
19:AQ:90:ILE:O	23:B0:726:G:H4'	2.15	0.47
23:B0:810:U:H2'	23:B0:811:G:C8	2.49	0.47
1:AA:517:G:H5'	1:AA:519:C:C2	2.50	0.47
1:AA:932:C:C5'	9:AG:3:ARG:CD	2.86	0.47
5:AC:188:LEU:O	5:AC:189:ALA:CB	2.59	0.47
6:AD:145:GLU:HG2	6:AD:184:LYS:HE2	1.96	0.47
6:AD:3:ARG:NE	6:AD:71:SER:HB3	2.30	0.47
8:AF:30:LEU:HB3	8:AF:35:ALA:CB	2.41	0.47
13:AK:80:VAL:HG21	13:AK:103:LEU:HD13	1.97	0.47
1:AA:1491:G:OP1	14:AL:46:LYS:NZ	2.48	0.47
19:AQ:80:GLY:O	19:AQ:81:ARG:HB3	2.15	0.47
21:AS:10:PHE:HE2	21:AS:12:ASP:OD1	1.97	0.47
2:AW:25:C:C4	2:AW:26:G:N7	2.83	0.47
23:B0:2199:C:H2'	23:B0:2200:G:C8	2.50	0.47
23:B0:2429:A:O2'	23:B0:2430:A:H5'	2.16	0.47
23:B0:3185:U:H5'	23:B0:3185:U:C6	2.40	0.47
23:B0:342:G:O2'	23:B0:343:A:OP1	2.27	0.47
23:B0:462:G:H2'	23:B0:463:C:H5'	1.97	0.47
23:B0:564:U:H2'	23:B0:565:A:C8	2.50	0.47
23:B0:85:C:O2'	23:B0:86:U:H5'	2.15	0.47
23:B0:1091:C:H4'	31:BG:126:THR:CA	2.44	0.47
1:AA:1110:A:C5	1:AA:1111:A:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1153:C:H2'	1:AA:1154:G:C8	2.46	0.46
1:AA:1300:G:O2'	1:AA:1301:U:P	2.73	0.46
1:AA:132:C:O2'	1:AA:133:U:H5'	2.15	0.46
1:AA:1410:G:N1	1:AA:1491:G:N1	2.63	0.46
1:AA:421:U:H5'	1:AA:422:C:H5	1.80	0.46
1:AA:521:G:H4'	14:AL:73:GLU:HG2	1.96	0.46
4:AB:53:ARG:NH1	4:AB:199:TYR:CD2	2.82	0.46
6:AD:29:PRO:C	6:AD:30:LYS:HG3	2.35	0.46
6:AD:87:GLY:O	6:AD:88:VAL:C	2.53	0.46
7:AE:118:ILE:CG2	7:AE:119:LEU:H	2.27	0.46
9:AG:135:VAL:O	9:AG:139:GLU:HG3	2.15	0.46
11:AI:33:PHE:CE2	11:AI:47:LEU:HD11	2.50	0.46
13:AK:59:TYR:O	13:AK:62:GLN:HB3	2.15	0.46
14:AL:38:THR:HG22	14:AL:39:VAL:HG23	1.97	0.46
17:AO:77:ARG:O	17:AO:80:ALA:HB3	2.15	0.46
18:AP:42:ARG:O	18:AP:43:LYS:C	2.51	0.46
19:AQ:104:LYS:HZ1	23:B0:730:C:H42	1.59	0.46
20:AR:59:SER:OG	20:AR:62:GLU:HG3	2.15	0.46
21:AS:15:LEU:HD12	21:AS:16:LEU:H	1.77	0.46
23:B0:1155:G:H2'	23:B0:1156:U:O4'	2.16	0.46
23:B0:1184:G:H2'	23:B0:1185:C:H5'	1.97	0.46
23:B0:1223:G:H5'	23:B0:1225:G:OP1	2.15	0.46
23:B0:2432:A:H4'	23:B0:2551:A:O2'	2.15	0.46
23:B0:3131:A:H5''	23:B0:3133:G:O4'	2.16	0.46
23:B0:3181:C:O3'	23:B0:3182:U:P	2.73	0.46
23:B0:351:A:H2'	23:B0:352:G:O4'	2.15	0.46
24:B9:34:C:H2'	24:B9:35:C:C6	2.50	0.46
1:AA:1190:G:H3'	5:AC:3:ASN:CB	2.33	0.46
1:AA:1195:C:H2'	1:AA:1197:G:H5'	1.96	0.46
1:AA:1445:U:O2'	1:AA:1446:A:H5'	2.15	0.46
1:AA:538:G:C8	14:AL:115:LYS:CE	2.98	0.46
1:AA:743:U:H2'	1:AA:744:C:H6	1.79	0.46
4:AB:75:LYS:HE3	4:AB:78:GLN:OE1	2.14	0.46
5:AC:167:TRP:O	5:AC:168:ALA:CB	2.63	0.46
5:AC:21:ARG:NH2	5:AC:56:ASP:OD2	2.49	0.46
5:AC:23:TYR:CE1	12:AJ:67:THR:CG2	2.96	0.46
8:AF:44:GLY:HA2	8:AF:59:TYR:CE1	2.51	0.46
9:AG:77:SER:O	9:AG:156:TRP:CZ3	2.69	0.46
14:AL:77:LEU:HD21	14:AL:107:ALA:HB2	1.97	0.46
18:AP:43:LYS:HG2	18:AP:48:TRP:CE2	2.50	0.46
1:AA:253:U:C2'	19:AQ:15:MET:SD	3.02	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1445:A:H2'	23:B0:1446:U:O4'	2.14	0.46
23:B0:1313:U:O4	23:B0:1651:U:H5'	2.15	0.46
23:B0:2560:G:N3	23:B0:2560:G:H3'	2.31	0.46
23:B0:566:U:H2'	23:B0:567:G:C8	2.50	0.46
19:AQ:105:ALA:C	23:B0:727:U:O3'	2.48	0.46
1:AA:1261:A:H4'	1:AA:1283:G:H5''	1.97	0.46
1:AA:1474:G:O2'	1:AA:1475:G:H5'	2.16	0.46
1:AA:1497:G:N2	1:AA:1519:A:N3	2.63	0.46
1:AA:214:U:H5'	1:AA:215:C:OP2	2.15	0.46
1:AA:321:A:O2'	1:AA:322:C:H5'	2.15	0.46
1:AA:542:G:H2'	1:AA:543:C:H6	1.80	0.46
7:AE:18:ARG:HG2	7:AE:19:MET:H	1.81	0.46
7:AE:79:GLU:CD	10:AH:105:ARG:HE	2.18	0.46
1:AA:599:C:H5'	10:AH:131:GLY:HA2	1.96	0.46
14:AL:54:LYS:N	14:AL:54:LYS:HD2	2.30	0.46
1:AA:521:G:O4'	14:AL:73:GLU:OE2	2.33	0.46
1:AA:265:G:C4'	19:AQ:64:PRO:O	2.46	0.46
23:B0:1280:U:O2'	23:B0:1281:A:H5'	2.15	0.46
23:B0:1333:G:N2	23:B0:1344:C:H41	2.13	0.46
23:B0:1840:A:H2'	23:B0:1841:G:H5'	1.98	0.46
23:B0:2277:A:H2'	23:B0:2278:A:O4'	2.16	0.46
23:B0:2498:U:H5''	23:B0:2499:C:OP1	2.15	0.46
23:B0:2512:A:H2'	23:B0:2513:A:O4'	2.15	0.46
23:B0:3093:C:O2'	23:B0:3094:A:H5'	2.15	0.46
23:B0:397:U:H2'	23:B0:398:C:C6	2.51	0.46
24:B9:22:U:H2'	24:B9:23:G:C8	2.50	0.46
1:AA:1234:C:H4'	1:AA:1365:G:OP1	2.13	0.46
1:AA:1256:A:C2	1:AA:1258:G:N1	2.72	0.46
1:AA:128:G:C5'	19:AQ:2:PRO:N	2.78	0.46
1:AA:1481:U:H2'	1:AA:1482:G:O4'	2.15	0.46
1:AA:1499:A:C2'	1:AA:1520:G:H5''	2.45	0.46
1:AA:406:G:C4	1:AA:496:A:N7	2.82	0.46
5:AC:139:GLN:CA	5:AC:139:GLN:NE2	2.78	0.46
1:AA:619:U:N1	6:AD:135:LEU:HD12	2.26	0.46
6:AD:24:GLU:CG	6:AD:25:ARG:N	2.77	0.46
9:AG:20:ASP:OD1	9:AG:22:LEU:HB3	2.15	0.46
9:AG:21:VAL:HG23	9:AG:22:LEU:N	2.29	0.46
1:AA:1342:C:C4'	11:AI:125:TYR:CD1	2.93	0.46
12:AJ:22:LYS:HE2	12:AJ:90:LEU:HB2	1.97	0.46
13:AK:72:ALA:HB1	13:AK:77:MET:HG3	1.97	0.46
13:AK:93:GLN:HE21	13:AK:96:ARG:NH2	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AL:82:VAL:O	14:AL:106:ASP:HB2	2.15	0.46
15:AM:59:TYR:O	15:AM:63:THR:HB	2.15	0.46
12:AJ:45:ARG:NH2	16:AN:36:PHE:HD2	1.84	0.46
17:AO:66:LEU:O	17:AO:69:TYR:HB3	2.15	0.46
1:AA:130:A:N9	19:AQ:63:ARG:HG3	2.28	0.46
2:AV:76:A:C5'	23:B0:2564:U:C5	2.85	0.46
23:B0:1947:G:P	23:B0:1947:G:H8	2.38	0.46
2:AV:76:A:C3'	23:B0:2046:C:C2'	2.91	0.46
23:B0:2061:C:H1'	23:B0:2413:A:H1'	1.97	0.46
23:B0:2784:A:H4'	23:B0:2786:G:OP2	2.15	0.46
23:B0:3109:U:H5'	23:B0:3150:C:C5'	2.24	0.46
23:B0:323:G:H2'	23:B0:324:C:C6	2.50	0.46
23:B0:584:A:H4'	23:B0:2479:U:C5'	2.45	0.46
1:AA:761:G:H4'	23:B0:726:G:H22	1.80	0.46
23:B0:2669:C:H41	36:BL:15:SER:CA	2.28	0.46
1:AA:1056:U:O2'	1:AA:1057:G:H5'	2.14	0.46
1:AA:1152:A:O2'	1:AA:1153:C:H5'	2.16	0.46
1:AA:1300:G:O2'	1:AA:1301:U:H6	1.98	0.46
1:AA:1320:C:N3	21:AS:36:ARG:HG3	2.30	0.46
1:AA:253:U:H5'	1:AA:276:G:C1'	2.46	0.46
1:AA:390:C:O5'	1:AA:390:C:H6	1.99	0.46
1:AA:419:C:H5''	1:AA:513:C:C1'	2.44	0.46
1:AA:476:U:C4	1:AA:477:G:C5'	2.97	0.46
1:AA:961:U:OP1	1:AA:1223:C:H4'	2.15	0.46
4:AB:129:GLU:O	4:AB:130:ARG:HB2	2.15	0.46
5:AC:129:ALA:HB3	5:AC:132:ARG:CD	2.45	0.46
5:AC:28:GLN:O	5:AC:31:HIS:N	2.46	0.46
9:AG:85:TYR:CD1	9:AG:154:TYR:HE1	2.28	0.46
9:AG:154:TYR:O	9:AG:156:TRP:N	2.49	0.46
9:AG:155:ARG:O	9:AG:156:TRP:CB	2.64	0.46
12:AJ:61:GLU:HG3	16:AN:58:LYS:CE	2.36	0.46
14:AL:46:LYS:O	14:AL:47:LYS:C	2.54	0.46
22:AT:63:ILE:HG23	22:AT:72:LEU:CD1	2.46	0.46
23:B0:1912:G:O4'	23:B0:1913:G:H8	1.95	0.46
23:B0:203:G:O2'	23:B0:204:A:H5'	2.15	0.46
23:B0:2321:C:H2'	23:B0:2322:U:H5'	1.97	0.46
23:B0:3108:G:N3	23:B0:3109:U:C5	2.84	0.46
23:B0:508:G:H22	23:B0:516:G:H22	1.63	0.46
23:B0:645:G:H2'	23:B0:646:C:C6	2.51	0.46
23:B0:670:U:H2'	23:B0:671:A:C8	2.50	0.46
23:B0:887:G:O2'	23:B0:888:G:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1064:G:H1'	1:AA:1190:G:N2	2.28	0.46
1:AA:1255:G:O2'	1:AA:1259:C:C2	2.58	0.46
1:AA:127:G:OP1	1:AA:635:G:H1'	2.15	0.46
1:AA:1466:C:H2'	1:AA:1467:G:C8	2.50	0.46
1:AA:201:G:H21	1:AA:469:C:H4'	1.81	0.46
1:AA:58:C:O2'	1:AA:59:A:H5'	2.16	0.46
4:AB:142:LEU:HB3	4:AB:146:GLN:HE22	1.80	0.46
4:AB:23:ARG:C	4:AB:23:ARG:HH11	2.16	0.46
5:AC:59:ARG:O	12:AJ:92:THR:CG2	2.64	0.46
7:AE:143:ARG:HD3	7:AE:143:ARG:HA	1.71	0.46
7:AE:35:GLY:HA3	7:AE:112:LEU:HB3	1.98	0.46
10:AH:92:ARG:HG2	10:AH:94:TYR:OH	2.16	0.46
15:AM:46:LYS:HG3	15:AM:47:ASP:N	2.30	0.46
15:AM:51:ALA:O	15:AM:55:ARG:HG3	2.16	0.46
1:AA:760:G:N1	19:AQ:105:ALA:HB2	2.31	0.46
19:AQ:105:ALA:N	23:B0:727:U:C4'	2.78	0.46
19:AQ:97:SER:O	19:AQ:98:LEU:C	2.54	0.46
21:AS:20:LEU:O	21:AS:23:ASN:HB2	2.15	0.46
22:AT:59:ALA:O	22:AT:63:ILE:HG13	2.14	0.46
23:B0:1036:G:H1'	23:B0:1145:C:C4'	2.45	0.46
23:B0:1226:A:N1	23:B0:1250:A:H1'	2.30	0.46
23:B0:1358:C:H2'	23:B0:1359:G:H5'	1.97	0.46
23:B0:1414:G:H2'	23:B0:1415:C:C6	2.50	0.46
23:B0:2825:A:H2'	23:B0:2826:C:C6	2.51	0.46
23:B0:753:U:H2'	23:B0:754:G:H5'	1.97	0.46
23:B0:831:G:H5'	23:B0:852:U:OP1	2.15	0.46
23:B0:84:G:H2'	23:B0:85:C:C6	2.50	0.46
24:B9:59:A:N3	24:B9:59:A:H2'	2.31	0.46
1:AA:1030:U:H5'	1:AA:1031:C:H5	1.80	0.46
1:AA:118:U:H3'	1:AA:119:A:P	2.56	0.46
1:AA:1245:A:H2'	1:AA:1246:C:C6	2.50	0.46
1:AA:1497:G:C2'	1:AA:1498:U:C5'	2.87	0.46
1:AA:411:A:C6	1:AA:429:U:C4	3.04	0.46
1:AA:815:A:N1	1:AA:1528:U:N1	2.55	0.46
1:AA:905:U:O4	1:AA:906:G:N1	2.49	0.46
1:AA:954:G:H2'	1:AA:955:U:H6	1.78	0.46
4:AB:15:VAL:CG1	4:AB:209:ARG:HG3	2.46	0.46
4:AB:25:ASN:C	4:AB:25:ASN:ND2	2.68	0.46
4:AB:69:LEU:HD23	4:AB:69:LEU:C	2.36	0.46
6:AD:104:VAL:HG11	6:AD:146:ILE:CD1	2.37	0.46
6:AD:121:VAL:O	6:AD:134:ASP:HA	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:7:G:O2'	7:AE:121:LYS:HB2	2.16	0.46
7:AE:68:GLU:O	7:AE:70:PRO:HD3	2.15	0.46
9:AG:15:ASP:O	9:AG:19:GLY:HA2	2.16	0.46
13:AK:84:VAL:HG23	13:AK:109:VAL:O	2.16	0.46
14:AL:60:LEU:HD21	14:AL:66:VAL:HG22	1.97	0.46
14:AL:71:PRO:O	14:AL:102:ARG:HD2	2.16	0.46
15:AM:39:ILE:HD12	15:AM:56:LEU:HG	1.98	0.46
18:AP:72:ARG:HG2	18:AP:72:ARG:O	2.16	0.46
8:AF:101:ALA:HB2	20:AR:28:GLU:HB3	1.97	0.46
2:AV:33:U:O2	2:AV:35:A:H5'	2.13	0.46
23:B0:1269:G:H2'	23:B0:1270:C:C6	2.50	0.46
23:B0:181:A:H4'	23:B0:182:G:C4'	2.44	0.46
23:B0:2021:G:H2'	23:B0:2022:C:C6	2.51	0.46
23:B0:575:U:H2'	23:B0:576:A:C8	2.51	0.46
23:B0:3876:A:H5''	55:B5:39:ILE:CA	2.45	0.46
1:AA:1314:C:C5	21:AS:6:LYS:CD	2.99	0.46
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.51	0.46
1:AA:322:C:C5'	22:AT:23:ARG:CD	2.86	0.46
1:AA:547:A:OP1	1:AA:548:G:P	2.74	0.46
1:AA:645:C:O2'	1:AA:646:U:H5'	2.16	0.46
1:AA:651:C:N4	1:AA:753:A:OP2	2.44	0.46
1:AA:778:G:HO2'	1:AA:779:C:H5'	1.80	0.46
5:AC:157:ILE:HD11	5:AC:166:GLU:HB2	1.97	0.46
6:AD:173:TRP:CD2	6:AD:189:PRO:HB3	2.51	0.46
9:AG:107:ALA:O	9:AG:110:GLN:HB2	2.16	0.46
9:AG:46:ALA:O	9:AG:50:ILE:HG13	2.15	0.46
14:AL:59:ARG:NH1	14:AL:65:GLU:HG2	2.30	0.46
1:AA:255:G:C5'	19:AQ:17:LYS:CA	2.91	0.46
21:AS:15:LEU:O	21:AS:19:VAL:N	2.48	0.46
21:AS:67:VAL:O	21:AS:69:HIS:N	2.49	0.46
23:B0:1921:A:C3'	23:B0:1922:U:H5''	2.46	0.46
23:B0:313:U:H2'	23:B0:314:G:C8	2.51	0.46
23:B0:317:U:H3'	23:B0:318:G:C5'	2.46	0.46
1:AA:1039:C:O2'	1:AA:1040:U:H5'	2.16	0.46
1:AA:1237:C:H2'	1:AA:1336:C:C5	2.51	0.46
1:AA:1483:A:N3	1:AA:1484:C:C6	2.84	0.46
1:AA:186:C:C5'	22:AT:81:LYS:NZ	2.69	0.46
1:AA:355:C:H5'	1:AA:389:A:OP2	2.16	0.46
1:AA:998:G:O2'	1:AA:999:C:H5'	2.15	0.46
4:AB:100:GLY:O	4:AB:104:ASN:N	2.45	0.46
5:AC:64:VAL:CG2	5:AC:99:VAL:HB	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AF:2:ARG:HD2	8:AF:69:GLU:HG2	1.96	0.46
11:AI:112:LYS:C	11:AI:112:LYS:HD3	2.37	0.46
11:AI:48:GLU:OE1	11:AI:48:GLU:HA	2.16	0.46
13:AK:34:ASP:O	13:AK:36:ASP:N	2.48	0.46
13:AK:16:SER:O	13:AK:35:PRO:HD3	2.16	0.46
19:AQ:66:SER:OG	19:AQ:69:LYS:HB3	2.15	0.46
19:AQ:96:GLN:O	19:AQ:96:GLN:CD	2.54	0.46
20:AR:48:GLY:O	20:AR:74:ARG:NH2	2.41	0.46
21:AS:18:LYS:HG2	21:AS:18:LYS:O	2.16	0.46
23:B0:1193:G:H2'	23:B0:1194:U:C6	2.50	0.46
23:B0:3877:A:OP2	23:B0:1861:G:OP2	2.34	0.46
23:B0:2800:C:H2'	23:B0:2801:A:O4'	2.15	0.46
23:B0:2809:A:C6	23:B0:2854:G:H2'	2.50	0.46
23:B0:42:G:H2'	23:B0:43:A:O4'	2.16	0.46
23:B0:471:A:H62	23:B0:480:G:N2	2.07	0.46
23:B0:502:A:H2'	23:B0:503:G:O4'	2.15	0.46
23:B0:644:A:H2'	23:B0:645:G:H5'	1.98	0.46
1:AA:1090:U:C4'	1:AA:1169:A:C2	2.99	0.46
1:AA:1277:C:C2'	1:AA:1278:U:H5'	2.46	0.46
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.16	0.46
1:AA:778:G:C4'	13:AK:119:CYS:SG	3.04	0.46
1:AA:847:C:H2'	1:AA:848:G:H8	1.81	0.46
1:AA:9:G:OP2	7:AE:126:ARG:NH1	2.48	0.46
4:AB:19:HIS:HD2	4:AB:189:ASP:OD2	1.99	0.46
4:AB:22:LYS:O	4:AB:23:ARG:HG3	2.16	0.46
5:AC:131:ARG:O	5:AC:135:LYS:HG3	2.16	0.46
5:AC:92:ALA:C	5:AC:94:LEU:H	2.17	0.46
6:AD:152:SER:HA	6:AD:155:LEU:HG	1.97	0.46
14:AL:37:CYS:O	14:AL:79:GLU:O	2.34	0.46
10:AH:91:ARG:HG3	14:AL:7:ILE:HG13	1.97	0.46
15:AM:49:THR:O	15:AM:53:VAL:HG23	2.16	0.46
15:AM:5:ALA:O	15:AM:8:GLU:N	2.45	0.46
20:AR:36:ASN:ND2	20:AR:38:GLU:HG2	2.29	0.46
23:B0:1312:G:H5''	23:B0:1313:U:C5'	2.39	0.46
23:B0:1352:G:H2'	23:B0:1353:A:C8	2.49	0.46
23:B0:1586:A:H2'	23:B0:1587:A:H8	1.81	0.46
23:B0:1750:A:H1'	23:B0:2690:A:C2	2.51	0.46
23:B0:2448:A:H2'	23:B0:2449:G:O4'	2.16	0.46
23:B0:3874:C:C2'	23:B0:3875:A:H5'	2.46	0.46
23:B0:556:A:H2'	23:B0:557:U:H5'	1.98	0.46
23:B0:590:C:H2'	23:B0:591:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:599:A:H2'	23:B0:600:G:H8	1.80	0.46
24:B9:74:A:H2'	24:B9:75:A:C8	2.51	0.46
1:AA:1049:U:H4'	1:AA:1050:G:OP2	2.16	0.45
1:AA:1230:C:H2'	1:AA:1231:G:H8	1.81	0.45
1:AA:135:C:C2'	1:AA:136:C:C5'	2.94	0.45
1:AA:1475:G:H5'	23:B0:1705:U:O3'	2.16	0.45
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.50	0.45
1:AA:151:A:H2'	1:AA:152:A:O4'	2.15	0.45
1:AA:1532:U:H6	1:AA:1532:U:O5'	2.00	0.45
1:AA:19:C:H2'	1:AA:20:U:H6	1.80	0.45
1:AA:39:G:N9	1:AA:498:U:C4	2.85	0.45
4:AB:97:TRP:CH2	4:AB:176:GLU:OE2	2.69	0.45
6:AD:4:TYR:O	6:AD:5:ILE:HB	2.16	0.45
7:AE:102:ALA:HB2	7:AE:120:THR:CB	2.46	0.45
1:AA:600:C:H4'	10:AH:128:GLY:O	2.16	0.45
11:AI:120:ARG:O	11:AI:121:ARG:C	2.55	0.45
15:AM:62:ASN:O	15:AM:63:THR:HB	2.16	0.45
16:AN:53:LEU:HB3	16:AN:56:VAL:CG2	2.45	0.45
23:B0:1203:A:H2'	23:B0:1204:G:H5'	1.98	0.45
23:B0:1223:G:H1'	23:B0:1225:G:N3	2.31	0.45
23:B0:1684:G:H2'	23:B0:1974:U:O4	2.16	0.45
23:B0:1683:G:H2'	23:B0:1684:G:O4'	2.16	0.45
1:AA:702:A:C2	23:B0:1838:G:C2'	2.99	0.45
23:B0:162:C:H4'	23:B0:195:A:O2'	2.16	0.45
23:B0:839:U:OP1	23:B0:2407:G:H3'	2.16	0.45
23:B0:2437:G:H2'	23:B0:2469:G:N2	2.31	0.45
23:B0:2429:A:H5''	23:B0:2476:A:C6	2.51	0.45
2:AW:76:A:H2	23:B0:2532:G:N2	1.98	0.45
23:B0:2640:G:H2'	23:B0:2641:A:O4'	2.16	0.45
23:B0:403:A:H4'	23:B0:425:A:C5'	2.39	0.45
23:B0:689:A:N3	23:B0:689:A:H3'	2.31	0.45
1:AA:112:G:H4'	1:AA:389:A:H5''	1.96	0.45
1:AA:1261:A:C4'	1:AA:1283:G:H5''	2.46	0.45
1:AA:934:C:C4	1:AA:1345:U:C5	3.04	0.45
1:AA:1515:C:H2'	1:AA:1516:G:H8	1.81	0.45
1:AA:928:G:O2'	1:AA:1533:C:H5	1.99	0.45
1:AA:119:A:C2	1:AA:240:C:C4	3.04	0.45
1:AA:556:C:C2	1:AA:557:G:N7	2.84	0.45
1:AA:599:C:H4'	10:AH:130:GLY:CA	2.45	0.45
1:AA:5:U:O2'	1:AA:6:G:P	2.73	0.45
1:AA:826:C:H2'	1:AA:827:U:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:82:C:H2'	1:AA:83:C:O4'	2.17	0.45
1:AA:8:A:H62	6:AD:208:SER:HB2	1.82	0.45
1:AA:905:U:C4	1:AA:906:G:C6	3.04	0.45
4:AB:23:ARG:HB2	4:AB:23:ARG:CZ	2.47	0.45
4:AB:83:MET:HG3	4:AB:238:LEU:CD1	2.46	0.45
5:AC:23:TYR:CG	5:AC:24:ALA:N	2.84	0.45
7:AE:80:ILE:CD1	7:AE:91:LEU:HD12	2.46	0.45
8:AF:19:LEU:C	8:AF:19:LEU:HD23	2.36	0.45
1:AA:1250:A:H5''	11:AI:68:GLY:N	2.32	0.45
21:AS:22:LEU:CD1	21:AS:31:ILE:HD11	2.46	0.45
1:AA:1401:G:OP1	3:AU:9:U:OP2	2.34	0.45
23:B0:1199:U:H2'	23:B0:1200:G:H8	1.80	0.45
1:AA:702:A:C1'	23:B0:1840:A:OP1	2.64	0.45
23:B0:2009:U:H2'	23:B0:2010:G:C8	2.51	0.45
23:B0:2610:G:C4'	23:B0:2866:A:H4'	2.47	0.45
23:B0:3872:A:H2'	23:B0:3873:G:O4'	2.16	0.45
23:B0:508:G:H2'	23:B0:509:U:C6	2.50	0.45
23:B0:523:A:H2	23:B0:591:G:H4'	1.81	0.45
23:B0:629:C:H2'	23:B0:630:G:H5'	1.98	0.45
23:B0:715:U:H2'	23:B0:716:U:C6	2.51	0.45
19:AQ:105:ALA:CA	23:B0:727:U:O4'	2.64	0.45
23:B0:831:G:C2'	23:B0:832:A:H5''	2.46	0.45
1:AA:1111:A:N1	5:AC:177:THR:HB	2.30	0.45
1:AA:1196:U:H4'	1:AA:1197:G:OP2	2.15	0.45
1:AA:1461:G:O2'	1:AA:1462:G:H5'	2.16	0.45
1:AA:260:G:O2'	1:AA:261:U:H5'	2.16	0.45
1:AA:248:C:H4'	1:AA:283:C:H1'	1.98	0.45
1:AA:624:C:H2'	1:AA:625:G:H8	1.81	0.45
1:AA:690:G:H2'	1:AA:691:G:O4'	2.16	0.45
1:AA:909:A:H2'	1:AA:910:C:O4'	2.16	0.45
4:AB:32:ILE:HG21	4:AB:40:HIS:HD2	1.80	0.45
5:AC:108:ASN:OD1	5:AC:110:ASN:HB2	2.16	0.45
6:AD:162:LEU:HD13	6:AD:181:MET:CE	2.46	0.45
9:AG:143:ARG:O	9:AG:145:ALA:O	2.34	0.45
10:AH:45:ILE:HG13	10:AH:45:ILE:O	2.16	0.45
12:AJ:53:PRO:O	12:AJ:54:PHE:O	2.34	0.45
12:AJ:48:THR:OG1	12:AJ:62:HIS:CD2	2.69	0.45
15:AM:37:THR:HG23	15:AM:55:ARG:CB	2.46	0.45
16:AN:26:ARG:NH1	16:AN:47:LEU:HD21	2.32	0.45
1:AA:132:C:O2'	22:AT:74:LYS:NZ	2.48	0.45
23:B0:129:A:H2'	23:B0:130:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1578:U:H2'	23:B0:1579:G:C8	2.51	0.45
23:B0:2451:G:H2'	23:B0:2508:G:N2	2.32	0.45
23:B0:3108:G:HO2'	23:B0:3109:U:P	2.39	0.45
23:B0:560:G:H2'	23:B0:561:U:C6	2.52	0.45
23:B0:666:U:H2'	23:B0:668:A:OP1	2.16	0.45
23:B0:930:A:H3'	23:B0:931:G:C8	2.51	0.45
1:AA:1171:G:H2'	1:AA:1172:C:C6	2.51	0.45
1:AA:1225:A:H5'	1:AA:1226:C:OP2	2.16	0.45
1:AA:1410:G:C4	1:AA:1491:G:N2	2.84	0.45
1:AA:1483:A:H3'	1:AA:1484:C:H5	1.82	0.45
1:AA:65:U:C1'	1:AA:200:G:H4'	2.47	0.45
1:AA:258:G:H2'	1:AA:259:G:H8	1.82	0.45
1:AA:882:C:O2'	1:AA:883:C:H5'	2.16	0.45
1:AA:91:C:O2'	1:AA:92:G:H5'	2.15	0.45
1:AA:951:G:O2'	1:AA:952:U:H5'	2.15	0.45
4:AB:52:GLU:O	4:AB:56:ARG:HB2	2.17	0.45
5:AC:99:VAL:CG2	5:AC:100:ALA:N	2.80	0.45
5:AC:11:ARG:NH1	5:AC:177:THR:O	2.50	0.45
5:AC:164:ARG:HB3	5:AC:164:ARG:HH11	1.80	0.45
6:AD:187:ARG:HD2	6:AD:187:ARG:HA	1.81	0.45
7:AE:144:THR:C	7:AE:146:ALA:N	2.67	0.45
8:AF:33:TYR:HB2	8:AF:75:LEU:HD23	1.98	0.45
11:AI:19:LEU:C	11:AI:20:ARG:HG3	2.37	0.45
11:AI:50:LEU:C	11:AI:52:ALA:N	2.69	0.45
12:AJ:24:VAL:CG1	12:AJ:28:ARG:HE	2.29	0.45
12:AJ:30:SER:CB	12:AJ:84:GLN:HE21	2.29	0.45
12:AJ:62:HIS:HB2	16:AN:59:ALA:CB	2.23	0.45
1:AA:237:C:H5'	19:AQ:25:ARG:CZ	2.45	0.45
22:AT:24:LEU:O	22:AT:24:LEU:HD12	2.17	0.45
23:B0:1349:A:H2'	23:B0:1350:G:C8	2.51	0.45
1:AA:702:A:C8	23:B0:1840:A:C8	3.04	0.45
23:B0:1861:G:O2'	23:B0:1862:C:H5'	2.17	0.45
23:B0:2421:C:O2'	23:B0:2422:C:H5'	2.16	0.45
23:B0:515:A:C2'	23:B0:516:G:H5'	2.43	0.45
23:B0:701:U:H2'	23:B0:702:A:O4'	2.15	0.45
23:B0:3875:A:H5''	55:B5:42:LYS:CA	2.39	0.45
1:AA:1305:G:N2	1:AA:1331:G:HO2'	2.10	0.45
1:AA:265:G:H5''	19:AQ:65:ILE:O	2.17	0.45
1:AA:521:G:H4'	14:AL:73:GLU:N	2.31	0.45
1:AA:627:G:O2'	1:AA:628:G:H5'	2.17	0.45
1:AA:953:G:H1'	15:AM:125:ARG:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AB:42:ILE:HD12	4:AB:203:GLY:HA2	1.97	0.45
5:AC:131:ARG:HA	5:AC:134:ILE:HD12	1.96	0.45
5:AC:154:SER:OG	5:AC:155:GLY:N	2.48	0.45
5:AC:60:ALA:O	5:AC:61:ALA:CB	2.63	0.45
7:AE:15:ARG:NE	7:AE:26:PHE:CD2	2.84	0.45
1:AA:1193:G:H4'	7:AE:25:ARG:HH21	1.80	0.45
7:AE:45:PHE:CD2	7:AE:47:LYS:HE3	2.51	0.45
11:AI:121:ARG:HG2	11:AI:121:ARG:HH11	1.81	0.45
1:AA:1233:G:OP1	11:AI:123:PRO:HB2	2.16	0.45
11:AI:36:TYR:CD2	11:AI:37:PHE:CE2	3.04	0.45
11:AI:40:LEU:O	11:AI:42:ARG:N	2.50	0.45
9:AG:16:LEU:CG	11:AI:41:VAL:O	2.64	0.45
12:AJ:51:ARG:HG3	12:AJ:60:ARG:O	2.17	0.45
13:AK:74:ALA:C	13:AK:76:GLY:N	2.69	0.45
16:AN:12:ARG:O	16:AN:14:PRO:HD3	2.16	0.45
23:B0:1119:U:C5	23:B0:1120:C:C5	3.04	0.45
23:B0:1119:U:N3	23:B0:1120:C:N3	2.64	0.45
23:B0:1678:G:H2'	23:B0:1679:U:C6	2.51	0.45
23:B0:1566:G:H4'	23:B0:1733:U:O4	2.16	0.45
23:B0:211:U:C2'	23:B0:212:U:H5'	2.46	0.45
23:B0:2348:A:H2'	23:B0:2349:G:C8	2.52	0.45
23:B0:688:A:O2'	23:B0:2422:C:H4'	2.17	0.45
23:B0:2708:U:H2'	23:B0:2709:C:C6	2.51	0.45
23:B0:307:C:H2'	23:B0:308:C:C6	2.51	0.45
23:B0:452:G:H2'	23:B0:453:U:O4'	2.16	0.45
1:AA:1110:A:C6	1:AA:1111:A:C6	3.04	0.45
1:AA:1278:U:OP1	1:AA:1279:A:H5'	2.17	0.45
1:AA:131:C:O2	1:AA:262:A:N1	2.38	0.45
1:AA:252:U:O2	1:AA:275:G:N3	2.50	0.45
1:AA:46:G:C2	1:AA:366:C:C6	3.05	0.45
1:AA:393:A:C2'	1:AA:394:G:H5'	2.47	0.45
1:AA:37:U:H1'	1:AA:547:A:N1	2.31	0.45
1:AA:644:G:O2'	1:AA:645:C:H5'	2.17	0.45
1:AA:542:G:P	6:AD:10:ARG:NH2	2.89	0.45
6:AD:8:VAL:HG21	6:AD:115:ARG:CZ	2.46	0.45
7:AE:21:ALA:C	7:AE:23:GLY:H	2.19	0.45
9:AG:75:VAL:HG12	9:AG:86:GLN:HE21	1.81	0.45
12:AJ:6:ILE:O	12:AJ:71:LEU:O	2.35	0.45
5:AC:23:TYR:CE2	12:AJ:9:ARG:CD	3.00	0.45
1:AA:675:A:O2'	13:AK:116:HIS:NE2	2.25	0.45
15:AM:120:LYS:HE2	15:AM:123:ALA:CB	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1230:C:O2'	15:AM:126:LYS:HA	2.16	0.45
16:AN:39:LEU:CD1	16:AN:47:LEU:HD12	2.46	0.45
21:AS:63:THR:HG22	21:AS:64:GLU:N	2.32	0.45
23:B0:1016:C:H2'	23:B0:1017:C:C6	2.52	0.45
23:B0:1278:A:O2'	23:B0:1279:G:P	2.75	0.45
23:B0:2370:G:HO2'	23:B0:2371:A:H2	1.62	0.45
23:B0:3171:A:O2'	23:B0:3172:U:C6	2.70	0.45
23:B0:419:G:O2'	23:B0:420:C:H5'	2.17	0.45
23:B0:604:U:H2'	23:B0:605:G:H8	1.82	0.45
23:B0:687:G:O2'	23:B0:688:A:H5'	2.17	0.45
23:B0:700:C:O2'	23:B0:801:A:H5'	2.17	0.45
23:B0:978:U:H2'	23:B0:979:A:C8	2.51	0.45
1:AA:105:G:H2'	1:AA:106:C:H6	1.81	0.45
1:AA:1202:G:C2'	1:AA:1203:C:H5'	2.46	0.45
1:AA:1484:C:H2'	1:AA:1485:U:C6	2.50	0.45
1:AA:1515:C:O2'	1:AA:1516:G:H5'	2.16	0.45
1:AA:439:A:C4	1:AA:497:A:C2	3.04	0.45
1:AA:470:U:H2'	1:AA:471:G:C8	2.51	0.45
1:AA:65:U:C2	1:AA:200:G:O2'	2.61	0.45
1:AA:735:C:O2'	1:AA:736:C:H5'	2.17	0.45
1:AA:782:A:H4'	1:AA:1514:C:O2'	2.16	0.45
1:AA:792:A:H1'	1:AA:794:A:N7	2.31	0.45
1:AA:893:C:HO2'	1:AA:894:G:C5'	2.26	0.45
4:AB:223:ILE:HG21	4:AB:230:VAL:HG23	1.99	0.45
11:AI:85:LEU:O	11:AI:92:TYR:CD1	2.69	0.45
1:AA:538:G:C4'	14:AL:114:LYS:CD	2.84	0.45
15:AM:34:LEU:HD13	15:AM:41:PRO:CA	2.45	0.45
17:AO:87:ILE:CG2	17:AO:88:ARG:N	2.79	0.45
18:AP:55:ARG:O	18:AP:58:TYR:HB3	2.17	0.45
20:AR:70:ILE:O	20:AR:74:ARG:HG3	2.17	0.45
23:B0:1373:G:H2'	23:B0:1374:G:H5'	1.99	0.45
23:B0:15:G:O2'	23:B0:16:G:H5'	2.17	0.45
23:B0:1685:A:H1'	23:B0:1686:A:N7	2.32	0.45
23:B0:1745:C:H2'	23:B0:1746:A:O4'	2.16	0.45
23:B0:1921:A:C2'	23:B0:1922:U:H5''	2.46	0.45
23:B0:316:C:H2'	23:B0:317:U:C6	2.52	0.45
23:B0:3873:G:O2'	23:B0:3874:C:H5'	2.17	0.45
23:B0:611:C:C2'	23:B0:612:G:H5'	2.47	0.45
1:AA:1019:C:O2'	1:AA:1020:U:H5'	2.17	0.45
1:AA:119:A:C8	1:AA:287:U:O4	2.70	0.45
1:AA:1342:C:C3'	11:AI:125:TYR:OH	2.58	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1394:A:C6	1:AA:1501:C:H4'	2.51	0.45
1:AA:191:G:N9	1:AA:192:U:C6	2.84	0.45
1:AA:242:C:H2'	1:AA:243:A:H5'	1.98	0.45
1:AA:265:G:O4'	19:AQ:64:PRO:CA	2.65	0.45
1:AA:321:A:H2'	1:AA:322:C:C6	2.52	0.45
1:AA:485:G:C2'	1:AA:486:U:OP2	2.65	0.45
1:AA:37:U:H1'	1:AA:547:A:C2	2.52	0.45
1:AA:828:A:H5''	1:AA:859:A:C2	2.51	0.45
1:AA:913:A:O2'	1:AA:914:A:O4'	2.26	0.45
1:AA:920:U:H2'	1:AA:921:U:C6	2.52	0.45
4:AB:8:LYS:O	4:AB:9:GLU:CB	2.60	0.45
6:AD:31:CYS:C	6:AD:33:MET:H	2.20	0.45
7:AE:121:LYS:HE3	7:AE:123:LEU:CD2	2.46	0.45
12:AJ:30:SER:HB3	12:AJ:84:GLN:NE2	2.31	0.45
12:AJ:54:PHE:O	12:AJ:55:LYS:HG2	2.17	0.45
12:AJ:60:ARG:O	12:AJ:61:GLU:CB	2.61	0.45
13:AK:51:LYS:O	13:AK:55:LYS:CE	2.65	0.45
14:AL:85:ILE:HG23	14:AL:98:TYR:CB	2.46	0.45
16:AN:25:VAL:O	16:AN:25:VAL:HG13	2.16	0.45
1:AA:129:U:C5'	19:AQ:3:LYS:CE	2.95	0.45
23:B0:109:A:H3'	23:B0:110:U:C5'	2.41	0.45
23:B0:1502:G:O2'	23:B0:1503:G:H5'	2.16	0.45
23:B0:221:A:H62	23:B0:231:G:N2	2.10	0.45
23:B0:2428:U:O2'	23:B0:2429:A:H5'	2.17	0.45
23:B0:2661:G:O2'	23:B0:2662:C:H5'	2.17	0.45
23:B0:926:C:C2'	23:B0:927:C:H5'	2.47	0.45
23:B0:852:U:H3	23:B0:950:G:H1	1.64	0.45
23:B0:959:C:H2'	23:B0:960:U:C6	2.52	0.45
24:B9:66:G:H2'	24:B9:67:C:C6	2.52	0.45
1:AA:1051:C:H2'	1:AA:1052:U:H6	1.80	0.45
1:AA:1206:G:C6	1:AA:1207:G:C5	3.04	0.45
1:AA:1301:U:O2'	1:AA:1302:U:OP1	2.30	0.45
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.16	0.45
1:AA:1503:A:O2'	1:AA:1504:G:OP1	2.29	0.45
1:AA:814:A:H5'	1:AA:1511:G:H4'	1.98	0.45
1:AA:185:A:H2'	1:AA:186:C:H6	1.82	0.45
1:AA:547:A:C3'	1:AA:548:G:P	3.05	0.45
1:AA:599:C:H4'	10:AH:130:GLY:O	2.16	0.45
1:AA:975:A:O5'	1:AA:976:G:H5'	2.17	0.45
4:AB:92:TYR:CE1	4:AB:151:GLY:HA3	2.51	0.45
12:AJ:85:LEU:O	12:AJ:87:THR:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AJ:8:LEU:HD23	12:AJ:96:ILE:HG12	1.97	0.45
18:AP:39:TYR:CZ	18:AP:41:PRO:HA	2.52	0.45
18:AP:75:ARG:O	18:AP:78:GLY:N	2.50	0.45
22:AT:42:GLN:O	22:AT:45:GLN:HB3	2.16	0.45
2:AV:16:U:C2'	2:AV:17:U:OP2	2.65	0.45
2:AW:16:U:C2'	2:AW:17:U:OP2	2.65	0.45
23:B0:1199:U:C3'	23:B0:1200:G:H5''	2.32	0.45
23:B0:1793:A:H2'	23:B0:1794:A:C8	2.52	0.45
23:B0:2026:C:H2'	23:B0:2027:C:C6	2.52	0.45
23:B0:2181:A:C2'	23:B0:2182:A:H5'	2.47	0.45
23:B0:2454:C:H42	23:B0:2508:G:H22	1.64	0.45
23:B0:2539:C:H2'	23:B0:2540:A:C8	2.52	0.45
23:B0:2703:C:H2'	23:B0:2704:U:C6	2.51	0.45
23:B0:2830:U:H2'	23:B0:2831:A:C8	2.52	0.45
23:B0:475:U:H2'	23:B0:476:G:O4'	2.17	0.45
23:B0:709:A:H2'	23:B0:710:C:C6	2.52	0.45
23:B0:874:A:H62	23:B0:928:G:N2	2.12	0.45
23:B0:8:A:H2'	23:B0:9:U:C6	2.52	0.45
23:B0:925:U:H4'	23:B0:926:C:C5	2.52	0.45
24:B9:40:C:H2'	24:B9:41:A:O4'	2.16	0.45
24:B9:94:G:O2'	24:B9:95:U:H5'	2.16	0.45
1:AA:102:G:O2'	1:AA:151:A:H2'	2.17	0.45
1:AA:1131:G:H2'	1:AA:1132:C:C6	2.51	0.45
1:AA:1261:A:H5'	1:AA:1283:G:O2'	2.17	0.45
1:AA:1300:G:O2'	1:AA:1301:U:C6	2.70	0.45
1:AA:15:G:H4'	7:AE:24:ARG:HH22	1.82	0.45
1:AA:173:U:C5	1:AA:198:G:N3	2.85	0.45
1:AA:227:G:C6	1:AA:228:A:C6	3.05	0.45
1:AA:397:A:N3	1:AA:397:A:H3'	2.32	0.45
1:AA:513:C:H2'	1:AA:514:C:H6	1.81	0.45
1:AA:402:G:O4'	1:AA:621:A:C2	2.71	0.45
1:AA:922:G:N2	1:AA:1396:A:N3	2.54	0.45
1:AA:974:A:C4	16:AN:31:ARG:NH2	2.85	0.45
7:AE:115:VAL:HG11	7:AE:118:ILE:CD1	2.46	0.45
7:AE:15:ARG:CD	7:AE:26:PHE:CD2	3.00	0.45
9:AG:12:LEU:N	9:AG:12:LEU:HD12	2.32	0.45
10:AH:116:LYS:NZ	10:AH:127:LEU:HD12	2.31	0.45
11:AI:111:ARG:HH11	11:AI:111:ARG:HG3	1.80	0.45
11:AI:114:TYR:HB2	12:AJ:60:ARG:NH1	2.31	0.45
5:AC:23:TYR:CD1	12:AJ:11:PHE:CD2	3.05	0.45
1:AA:538:G:H5'	14:AL:114:LYS:CG	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AM:110:ARG:HG2	15:AM:110:ARG:HH11	1.82	0.45
15:AM:9:ILE:N	15:AM:9:ILE:HD12	2.32	0.45
22:AT:72:LEU:O	22:AT:73:HIS:O	2.35	0.45
3:AU:7:U:H2'	3:AU:8:G:C6	2.52	0.45
23:B0:1089:C:H1'	23:B0:1099:A:H8	1.82	0.45
23:B0:116:A:C2	23:B0:155:G:H1'	2.51	0.45
23:B0:1504:G:O2'	23:B0:1505:U:H5'	2.17	0.45
23:B0:871:U:H1'	23:B0:2248:A:H5''	1.99	0.45
23:B0:241:C:C2'	23:B0:242:A:H5''	2.46	0.45
23:B0:2555:G:N3	23:B0:2555:G:H3'	2.32	0.45
23:B0:3108:G:H2'	23:B0:3109:U:OP2	2.16	0.45
23:B0:626:A:O2'	23:B0:627:A:H5'	2.17	0.45
23:B0:838:A:H2'	23:B0:839:U:C6	2.52	0.45
23:B0:843:G:O2'	23:B0:844:G:OP1	2.31	0.45
24:B9:36:A:H1'	24:B9:51:G:N2	2.32	0.45
1:AA:118:U:O3'	1:AA:119:A:C5'	2.65	0.44
1:AA:1301:U:O2'	1:AA:1302:U:P	2.74	0.44
1:AA:1484:C:H5''	23:B0:1943:A:C2'	2.47	0.44
1:AA:1503:A:O2'	1:AA:1504:G:P	2.75	0.44
1:AA:305:G:C3'	1:AA:306:G:P	3.05	0.44
1:AA:319:G:O2'	1:AA:320:C:H5'	2.16	0.44
1:AA:323:U:C4'	22:AT:19:SER:C	2.85	0.44
1:AA:39:G:C6	1:AA:404:U:C4	3.05	0.44
1:AA:533:A:O2'	1:AA:534:U:P	2.75	0.44
1:AA:76:G:O2'	1:AA:77:C:H5'	2.17	0.44
1:AA:781:A:H2'	1:AA:782:A:H5'	1.98	0.44
1:AA:807:A:H2'	1:AA:808:C:C6	2.52	0.44
1:AA:848:G:C2'	1:AA:849:C:C1'	2.86	0.44
6:AD:142:PRO:HG2	6:AD:187:ARG:NH1	2.32	0.44
11:AI:103:THR:HG22	11:AI:104:ARG:N	2.31	0.44
11:AI:46:ALA:O	11:AI:49:PRO:HD2	2.17	0.44
12:AJ:61:GLU:CD	16:AN:58:LYS:CD	2.86	0.44
12:AJ:75:ILE:HG22	12:AJ:76:ASN:N	2.32	0.44
19:AQ:18:THR:HG23	19:AQ:69:LYS:CE	2.47	0.44
19:AQ:81:ARG:O	19:AQ:81:ARG:HG3	2.17	0.44
20:AR:25:THR:HG22	20:AR:25:THR:O	2.17	0.44
20:AR:74:ARG:HB3	20:AR:81:PHE:CE1	2.51	0.44
3:AU:9:U:H2'	3:AU:10:U:C6	2.52	0.44
2:AV:74:C:O3'	23:B0:2581:A:O5'	2.34	0.44
23:B0:1055:A:C2	23:B0:1121:G:H2'	2.52	0.44
23:B0:1273:G:H2'	23:B0:1274:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1367:A:H2'	23:B0:1368:G:O4'	2.17	0.44
23:B0:2474:G:O2'	23:B0:2475:C:H5'	2.17	0.44
23:B0:2560:G:H4'	23:B0:2561:G:N7	2.32	0.44
23:B0:40:U:H2'	23:B0:41:G:C8	2.52	0.44
23:B0:857:U:C2'	23:B0:858:G:H5'	2.48	0.44
23:B0:926:C:H2'	23:B0:927:C:H5'	1.99	0.44
1:AA:1112:C:O2	5:AC:179:ARG:CB	2.56	0.44
1:AA:130:A:C8	1:AA:264:U:O4'	2.70	0.44
1:AA:1409:C:HO2'	1:AA:1410:G:H5'	1.78	0.44
1:AA:540:G:H2'	1:AA:541:G:O4'	2.18	0.44
4:AB:137:ARG:O	4:AB:140:HIS:HB2	2.16	0.44
4:AB:54:THR:O	4:AB:57:PHE:HB3	2.18	0.44
5:AC:123:GLN:HE22	5:AC:140:ARG:NH2	2.16	0.44
1:AA:1113:C:N1	5:AC:178:LEU:CD2	2.81	0.44
5:AC:179:ARG:C	5:AC:179:ARG:HD2	2.37	0.44
6:AD:162:LEU:HD13	6:AD:181:MET:CG	2.42	0.44
6:AD:24:GLU:CG	6:AD:25:ARG:H	2.31	0.44
6:AD:39:PRO:HG2	6:AD:44:GLY:HA2	1.97	0.44
1:AA:586:C:O3'	10:AH:89:PRO:CB	2.65	0.44
12:AJ:4:ILE:HG12	12:AJ:100:THR:CB	2.46	0.44
12:AJ:46:ARG:NH1	12:AJ:64:GLU:CG	2.80	0.44
12:AJ:8:LEU:CD1	12:AJ:20:ALA:HB2	2.48	0.44
18:AP:20:VAL:HG13	18:AP:21:VAL:N	2.32	0.44
18:AP:20:VAL:CG1	18:AP:32:TYR:CB	2.95	0.44
1:AA:254:G:C4'	19:AQ:18:THR:CB	2.73	0.44
2:AV:43:G:H2'	2:AV:44:A:C8	2.53	0.44
23:B0:455:A:H4'	23:B0:1214:C:O2'	2.17	0.44
23:B0:1436:G:H1'	23:B0:1508:G:N2	2.31	0.44
23:B0:2591:C:O2'	23:B0:2592:U:H5'	2.17	0.44
23:B0:2854:G:H3'	23:B0:2854:G:N3	2.33	0.44
23:B0:3108:G:C2	23:B0:3109:U:C4	3.05	0.44
23:B0:431:G:H2'	23:B0:432:C:C6	2.53	0.44
23:B0:438:G:H2'	23:B0:439:C:C6	2.51	0.44
23:B0:562:G:H2'	23:B0:563:U:O4'	2.17	0.44
1:AA:1049:U:H1'	1:AA:1201:A:N7	2.31	0.44
1:AA:1289:A:H2'	1:AA:1290:G:H5'	2.00	0.44
1:AA:1353:G:H2'	1:AA:1354:C:H6	1.82	0.44
1:AA:160:A:H61	1:AA:347:G:N2	2.15	0.44
1:AA:265:G:H1'	19:AQ:64:PRO:CB	2.35	0.44
1:AA:389:A:H2'	1:AA:390:C:C5'	2.48	0.44
1:AA:402:G:C4'	1:AA:621:A:C2	3.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AC:6:HIS:CD2	5:AC:8:ILE:H	2.35	0.44
7:AE:13:ILE:HG22	7:AE:30:ALA:HB2	1.99	0.44
8:AF:40:VAL:CG2	8:AF:41:GLU:N	2.80	0.44
10:AH:73:ASP:OD2	10:AH:75:ARG:HB2	2.18	0.44
20:AR:51:LEU:HA	20:AR:52:PRO:HD3	1.80	0.44
23:B0:1098:G:H22	23:B0:1113:C:N3	1.52	0.44
23:B0:1408:A:H1'	23:B0:1410:U:C5	2.52	0.44
23:B0:1436:G:H2'	23:B0:1437:A:C8	2.51	0.44
23:B0:1667:A:H2'	23:B0:1668:G:H8	1.83	0.44
23:B0:1708:C:H2'	23:B0:1709:U:O4'	2.18	0.44
23:B0:1785:A:H2'	23:B0:1786:C:C6	2.52	0.44
23:B0:1938:U:O2'	23:B0:1939:U:OP1	2.28	0.44
23:B0:1956:G:H2'	23:B0:1957:C:O4'	2.17	0.44
23:B0:457:C:O2'	23:B0:458:G:H5'	2.16	0.44
23:B0:763:A:H2'	23:B0:764:A:H5''	2.00	0.44
23:B0:788:G:H5'	23:B0:790:A:N3	2.32	0.44
1:AA:819:A:C6	1:AA:1529:G:C2	3.05	0.44
1:AA:173:U:H5'	1:AA:197:A:C1'	2.45	0.44
1:AA:262:A:H5''	22:AT:76:ALA:N	2.32	0.44
1:AA:267:C:H2'	1:AA:268:C:C6	2.53	0.44
1:AA:384:G:H2'	1:AA:385:C:C6	2.53	0.44
1:AA:651:C:O2'	1:AA:652:U:P	2.72	0.44
1:AA:8:A:H5''	7:AE:121:LYS:CD	2.47	0.44
1:AA:933:G:OP2	9:AG:3:ARG:NE	2.48	0.44
1:AA:950:U:H2'	1:AA:951:G:C8	2.52	0.44
1:AA:977:A:H2'	1:AA:978:A:C5'	2.45	0.44
4:AB:134:GLU:C	4:AB:136:VAL:N	2.71	0.44
5:AC:123:GLN:HE22	5:AC:140:ARG:HH22	1.65	0.44
5:AC:12:LEU:HD23	5:AC:12:LEU:HA	1.76	0.44
1:AA:401:C:P	6:AD:73:ARG:HH21	2.38	0.44
8:AF:30:LEU:CB	8:AF:35:ALA:HB3	2.41	0.44
1:AA:1178:G:P	11:AI:97:LYS:NZ	2.89	0.44
15:AM:84:ILE:C	15:AM:86:CYS:N	2.70	0.44
20:AR:26:LEU:HD21	20:AR:39:VAL:HG23	2.00	0.44
2:AV:44:A:C2'	2:AV:45:G:C5'	2.96	0.44
23:B0:1023:U:H1'	23:B0:1154:A:C8	2.52	0.44
23:B0:1118:G:O2'	23:B0:1119:U:H5'	2.17	0.44
23:B0:121:G:H2'	23:B0:122:G:O4'	2.18	0.44
23:B0:1331:G:H2'	23:B0:1332:G:C8	2.52	0.44
23:B0:1452:U:H5''	23:B0:1533:G:H5'	2.00	0.44
23:B0:1659:G:H2'	23:B0:1660:G:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:1679:U:C2'	23:B0:1680:U:H5''	2.47	0.44
23:B0:2204:A:O2'	23:B0:2205:C:OP2	2.35	0.44
23:B0:2204:A:O2'	23:B0:2205:C:P	2.76	0.44
23:B0:2211:U:H2'	23:B0:2212:U:C6	2.52	0.44
23:B0:2312:A:H1'	23:B0:2314:A:C4	2.52	0.44
1:AA:1005:A:H2'	1:AA:1006:C:O4'	2.17	0.44
1:AA:1483:A:C8	1:AA:1484:C:N4	2.86	0.44
1:AA:1501:C:OP2	1:AA:1504:G:H2'	2.17	0.44
1:AA:1503:A:C5	1:AA:1531:A:N3	2.86	0.44
1:AA:69:G:O2'	1:AA:152:A:O2'	2.36	0.44
1:AA:253:U:C1'	1:AA:275:G:C2'	2.79	0.44
1:AA:253:U:H2'	1:AA:254:G:C8	2.53	0.44
1:AA:253:U:C2	1:AA:275:G:H1'	2.52	0.44
1:AA:816:A:P	1:AA:1527:C:C4'	3.05	0.44
1:AA:962:C:H2'	1:AA:963:G:O4'	2.18	0.44
4:AB:213:LEU:C	4:AB:213:LEU:HD23	2.37	0.44
4:AB:25:ASN:HD22	4:AB:27:LYS:H	1.65	0.44
4:AB:17:PHE:H	4:AB:44:LEU:HD21	1.83	0.44
6:AD:200:GLU:OE1	6:AD:200:GLU:N	2.46	0.44
7:AE:105:VAL:HB	7:AE:106:PRO:CD	2.40	0.44
7:AE:36:ASP:OD2	7:AE:40:ARG:HD3	2.18	0.44
1:AA:675:A:O2'	13:AK:116:HIS:CG	2.71	0.44
13:AK:40:ILE:HG23	13:AK:75:TYR:CE2	2.51	0.44
15:AM:84:ILE:HG13	15:AM:86:CYS:HB2	2.00	0.44
16:AN:9:LYS:HG3	16:AN:21:TYR:O	2.17	0.44
16:AN:23:ARG:HD3	16:AN:30:ALA:HB2	2.00	0.44
18:AP:6:LEU:HB3	18:AP:17:TYR:HD2	1.81	0.44
3:AU:6:A:H2'	3:AU:7:U:C6	2.53	0.44
2:AW:23:A:H2'	2:AW:24:G:C8	2.52	0.44
23:B0:1226:A:C6	23:B0:1250:A:H1'	2.53	0.44
23:B0:1836:C:H2'	23:B0:1837:G:C8	2.53	0.44
23:B0:172:A:H4'	23:B0:228:A:H4'	2.00	0.44
24:B9:92:G:H2'	24:B9:93:G:H5'	1.99	0.44
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.52	0.44
1:AA:1430:C:C5'	23:B0:1721:G:H5'	2.48	0.44
1:AA:203:A:H4'	1:AA:468:A:C5'	2.47	0.44
1:AA:130:A:C5'	1:AA:264:U:C5'	2.94	0.44
1:AA:38:G:H4'	1:AA:547:A:N7	2.33	0.44
1:AA:600:C:O2'	1:AA:601:C:H5'	2.17	0.44
1:AA:686:U:O4	1:AA:703:G:H1'	2.17	0.44
1:AA:884:U:O2'	1:AA:885:G:OP2	2.22	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:913:A:O2'	1:AA:914:A:OP2	2.36	0.44
5:AC:99:VAL:HG22	5:AC:100:ALA:O	2.18	0.44
5:AC:113:ALA:N	5:AC:114:PRO:CD	2.80	0.44
6:AD:178:VAL:O	6:AD:178:VAL:HG12	2.18	0.44
6:AD:53:ASP:OD2	7:AE:104:ALA:HB1	2.18	0.44
7:AE:40:ARG:NH1	7:AE:68:GLU:OE2	2.49	0.44
1:AA:737:A:OP1	8:AF:91:VAL:HA	2.17	0.44
1:AA:1346:A:C2'	9:AG:10:ARG:NH2	2.63	0.44
9:AG:24:THR:HA	9:AG:27:ILE:HD12	2.00	0.44
9:AG:78:ARG:HG2	9:AG:80:VAL:HG23	1.99	0.44
10:AH:7:ALA:HB2	10:AH:85:ARG:HD2	1.99	0.44
11:AI:97:LYS:HG3	11:AI:102:LEU:HD12	1.96	0.44
12:AJ:68:HIS:CD2	12:AJ:68:HIS:N	2.85	0.44
12:AJ:3:LYS:CA	12:AJ:75:ILE:HA	2.48	0.44
12:AJ:22:LYS:HZ3	12:AJ:91:PRO:HD3	1.83	0.44
13:AK:60:ALA:O	13:AK:61:ALA:C	2.56	0.44
14:AL:117:ARG:HD2	14:AL:122:THR:OG1	2.17	0.44
14:AL:7:ILE:O	14:AL:11:VAL:HG23	2.18	0.44
16:AN:12:ARG:O	16:AN:14:PRO:CD	2.65	0.44
19:AQ:68:ARG:H	19:AQ:70:ARG:NH1	2.15	0.44
22:AT:30:LYS:O	22:AT:33:ILE:HB	2.18	0.44
22:AT:63:ILE:HD13	22:AT:80:ARG:CB	2.48	0.44
2:AV:23:A:H2'	2:AV:24:G:C8	2.52	0.44
2:AV:50:U:O2'	2:AV:51:G:H5'	2.17	0.44
2:AW:34:G:OP1	2:AW:34:G:C8	2.64	0.44
2:AW:43:G:H2'	2:AW:44:A:C8	2.52	0.44
23:B0:1119:U:C3'	23:B0:1120:C:O4'	2.65	0.44
23:B0:1373:G:H22	23:B0:2192:U:H3	1.65	0.44
23:B0:1856:U:O4	23:B0:3865:A:N1	2.50	0.44
23:B0:1927:U:H3'	23:B0:1928:G:H5'	2.00	0.44
1:AA:1420:C:H5'	23:B0:1933:G:OP1	2.17	0.44
23:B0:1999:U:H5''	23:B0:2041:A:OP1	2.18	0.44
23:B0:2316:G:H2'	23:B0:2317:G:C8	2.50	0.44
2:AW:64:A:H4'	23:B0:2461:G:O3'	2.17	0.44
23:B0:354:C:H2'	23:B0:355:G:O4'	2.17	0.44
23:B0:460:U:N3	23:B0:592:G:H1'	2.33	0.44
1:AA:1108:G:O3'	5:AC:176:HIS:NE2	2.51	0.44
1:AA:116:A:H2'	1:AA:117:G:O4'	2.17	0.44
1:AA:1279:A:O2'	1:AA:1281:U:OP2	2.33	0.44
1:AA:1299:A:C8	1:AA:1301:U:H1'	2.53	0.44
1:AA:1348:U:OP1	11:AI:110:GLU:CB	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1372:U:O2'	1:AA:1373:G:H5'	2.18	0.44
1:AA:383:A:H2'	1:AA:384:G:H5'	1.99	0.44
1:AA:433:C:O2'	1:AA:434:U:H5'	2.18	0.44
1:AA:456:A:C5	1:AA:477:G:N3	2.86	0.44
1:AA:39:G:C6	1:AA:498:U:O4	2.67	0.44
1:AA:499:A:C2	1:AA:500:G:H1'	2.46	0.44
1:AA:835:U:OP1	20:AR:60:GLY:CA	2.65	0.44
1:AA:942:G:H21	11:AI:124:GLN:CD	2.20	0.44
1:AA:975:A:H4'	1:AA:976:G:OP2	2.16	0.44
6:AD:8:VAL:HG11	6:AD:21:LEU:CB	2.47	0.44
15:AM:80:ARG:C	15:AM:82:MET:H	2.20	0.44
20:AR:37:VAL:O	20:AR:41:LYS:HB3	2.18	0.44
2:AW:50:U:C2'	2:AW:51:G:H5'	2.48	0.44
23:B0:117:A:O3'	23:B0:118:U:H3'	2.17	0.44
23:B0:1279:G:C2'	23:B0:1280:U:OP2	2.66	0.44
23:B0:1292:A:H2'	23:B0:1293:A:C8	2.53	0.44
23:B0:1459:U:H2'	23:B0:1475:U:O2'	2.16	0.44
23:B0:1604:A:H2'	23:B0:1605:A:O4'	2.18	0.44
23:B0:1724:C:H2'	23:B0:1725:C:C6	2.53	0.44
23:B0:1882:G:H21	23:B0:1885:C:N4	2.16	0.44
1:AA:1420:C:C5'	23:B0:1933:G:OP1	2.65	0.44
23:B0:2057:U:H2'	23:B0:2058:U:C6	2.52	0.44
23:B0:2242:C:H42	23:B0:2257:A:N6	2.16	0.44
23:B0:242:A:O2'	23:B0:243:G:O4'	2.34	0.44
23:B0:415:A:O2'	23:B0:416:U:H5'	2.17	0.44
23:B0:432:C:H2'	23:B0:433:G:H8	1.83	0.44
23:B0:956:A:H2'	23:B0:956:A:N3	2.32	0.44
1:AA:1064:G:H22	1:AA:1190:G:HO2'	1.66	0.44
1:AA:1305:G:H22	1:AA:1331:G:C2'	2.31	0.44
1:AA:137:C:O2'	1:AA:138:G:H5'	2.18	0.44
1:AA:1457:A:C4	1:AA:1459:C:H1'	2.53	0.44
1:AA:815:A:N1	1:AA:1528:U:C2	2.86	0.44
1:AA:176:C:H2'	1:AA:177:C:H6	1.83	0.44
1:AA:18:C:C2	1:AA:918:A:N1	2.86	0.44
1:AA:119:A:N1	1:AA:240:C:C2	2.86	0.44
1:AA:427:U:O4'	1:AA:541:G:H5''	2.17	0.44
1:AA:436:C:H2'	1:AA:437:U:C6	2.41	0.44
1:AA:45:U:H2'	1:AA:46:G:C8	2.53	0.44
1:AA:652:U:H2'	1:AA:752:G:N1	2.33	0.44
4:AB:88:ALA:C	4:AB:90:MET:N	2.71	0.44
6:AD:3:ARG:HD3	6:AD:3:ARG:HA	1.78	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AH:86:ILE:HD12	10:AH:133:LEU:HD22	2.00	0.44
1:AA:676:A:H4'	13:AK:115:PRO:HA	1.98	0.44
14:AL:46:LYS:CG	14:AL:47:LYS:H	2.29	0.44
18:AP:20:VAL:HG13	18:AP:32:TYR:HB2	2.00	0.44
1:AA:223:U:C5'	22:AT:68:LYS:NZ	2.79	0.44
23:B0:114:C:H4'	23:B0:124:A:O2'	2.17	0.44
23:B0:1288:A:H2'	23:B0:1289:A:O4'	2.17	0.44
23:B0:1326:U:H1'	23:B0:1626:A:N3	2.33	0.44
23:B0:1703:C:H2'	23:B0:1704:G:O4'	2.17	0.44
23:B0:1915:A:H62	23:B0:1951:G:N2	2.09	0.44
23:B0:539:A:N6	23:B0:2024:U:H3	2.11	0.44
23:B0:2193:C:H2'	23:B0:2194:A:O4'	2.18	0.44
23:B0:2439:U:H2'	23:B0:2440:C:H5'	1.99	0.44
23:B0:548:G:H2'	23:B0:549:G:C8	2.53	0.44
23:B0:736:G:H2'	23:B0:737:C:O4'	2.17	0.44
23:B0:875:G:H2'	23:B0:876:A:O4'	2.18	0.44
2:AV:56:C:C2'	28:BD:74:ILE:CA	2.96	0.44
1:AA:227:G:C5	1:AA:228:A:C5	3.06	0.44
1:AA:248:C:C4'	1:AA:283:C:H1'	2.48	0.44
1:AA:46:G:N1	1:AA:366:C:C2	2.85	0.44
1:AA:598:U:H4'	10:AH:94:TYR:CD1	2.53	0.44
1:AA:292:G:N3	1:AA:608:A:C6	2.86	0.44
1:AA:865:A:H2'	1:AA:866:C:C6	2.53	0.44
1:AA:905:U:H5	1:AA:906:G:C6	2.36	0.44
1:AA:94:G:C6	1:AA:96:C:N4	2.84	0.44
1:AA:974:A:P	16:AN:29:ARG:NH2	2.90	0.44
5:AC:134:ILE:HG22	5:AC:168:ALA:CB	2.48	0.44
5:AC:47:LEU:HD13	5:AC:47:LEU:H	1.83	0.44
9:AG:38:LEU:HD12	9:AG:42:ILE:HG13	2.00	0.44
13:AK:95:ILE:HD13	13:AK:108:ILE:HG21	1.99	0.44
17:AO:39:LEU:HD12	17:AO:59:MET:CE	2.48	0.44
18:AP:43:LYS:HA	18:AP:48:TRP:HB3	2.00	0.44
22:AT:100:ILE:O	22:AT:102:GLY:N	2.50	0.44
23:B0:1033:G:N2	23:B0:1150:C:H2'	2.30	0.44
23:B0:1188:A:H62	23:B0:1189:G:H21	1.66	0.44
23:B0:1313:U:H4'	23:B0:1314:A:O5'	2.18	0.44
23:B0:181:A:C4'	23:B0:182:G:H4'	2.44	0.44
23:B0:192:G:O2'	23:B0:193:A:OP2	2.33	0.44
23:B0:2022:C:H2'	23:B0:2023:C:C6	2.53	0.44
23:B0:2343:C:H2'	23:B0:2344:G:O4'	2.18	0.44
23:B0:3116:G:O3'	23:B0:3117:A:O4'	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:3872:A:H2'	23:B0:3873:G:H5'	2.00	0.44
23:B0:529:U:H2'	23:B0:530:G:C8	2.53	0.44
23:B0:839:U:H5'	23:B0:2407:G:H2'	2.00	0.44
1:AA:1004:A:H5''	1:AA:1025:U:C4	2.53	0.43
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.82	0.43
1:AA:1053:G:O2'	1:AA:1199:U:H5	2.01	0.43
1:AA:1269:A:C2	1:AA:1313:U:H1'	2.53	0.43
1:AA:1428:A:O2'	23:B0:1703:C:O2'	2.33	0.43
1:AA:318:G:H22	1:AA:1433:A:H2	1.57	0.43
1:AA:1496:C:H1'	1:AA:1517:G:H22	1.81	0.43
1:AA:157:G:O2'	1:AA:158:G:H5'	2.18	0.43
1:AA:38:G:C4'	1:AA:547:A:N7	2.81	0.43
1:AA:583:A:H2'	1:AA:584:G:O4'	2.17	0.43
4:AB:119:GLU:OE1	4:AB:153:ARG:NH2	2.51	0.43
6:AD:25:ARG:HH21	6:AD:30:LYS:HD3	1.82	0.43
7:AE:40:ARG:NH1	7:AE:68:GLU:OE1	2.51	0.43
10:AH:103:VAL:HG21	10:AH:109:ILE:O	2.18	0.43
12:AJ:46:ARG:HH11	12:AJ:64:GLU:CG	2.31	0.43
14:AL:111:LYS:O	14:AL:112:ASP:HB2	2.18	0.43
15:AM:110:ARG:CG	15:AM:110:ARG:HH11	2.31	0.43
15:AM:23:TYR:CE2	15:AM:70:LEU:HD13	2.53	0.43
15:AM:7:VAL:HG23	15:AM:7:VAL:O	2.18	0.43
17:AO:54:ARG:O	17:AO:58:MET:HG3	2.17	0.43
19:AQ:104:LYS:O	19:AQ:105:ALA:CB	2.65	0.43
1:AA:266:G:C5'	19:AQ:66:SER:CA	2.82	0.43
1:AA:266:G:C5'	19:AQ:67:LYS:H	2.31	0.43
22:AT:42:GLN:HA	22:AT:45:GLN:HB2	1.99	0.43
3:AU:12:A:H2'	3:AU:13:A:C6	2.52	0.43
2:AW:64:A:H4'	23:B0:2461:G:O2'	2.18	0.43
23:B0:10:A:O2'	23:B0:11:G:H5'	2.18	0.43
23:B0:1259:A:H2'	23:B0:1260:A:C8	2.53	0.43
23:B0:1664:G:O5'	23:B0:1665:C:OP1	2.36	0.43
1:AA:1474:G:P	23:B0:1718:A:N3	2.90	0.43
23:B0:198:A:H4'	23:B0:199:A:OP2	2.17	0.43
23:B0:2033:C:H2'	23:B0:2034:A:O4'	2.17	0.43
23:B0:2065:A:H2'	23:B0:2066:G:O4'	2.18	0.43
23:B0:207:U:H2'	23:B0:208:C:C6	2.52	0.43
23:B0:2265:A:H5''	23:B0:2266:A:O4'	2.18	0.43
23:B0:3871:A:H2'	23:B0:3872:A:C8	2.53	0.43
23:B0:197:G:N2	23:B0:440:U:H2'	2.33	0.43
23:B0:35:G:C1'	23:B0:466:A:H1'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:758:G:O2'	23:B0:761:G:H1'	2.18	0.43
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.52	0.43
1:AA:262:A:C5'	22:AT:75:ASN:N	2.60	0.43
1:AA:370:C:C2'	1:AA:371:G:H5'	2.48	0.43
4:AB:92:TYR:CD1	4:AB:151:GLY:HA3	2.53	0.43
5:AC:188:LEU:HD13	5:AC:189:ALA:H	1.83	0.43
8:AF:75:LEU:HD13	8:AF:75:LEU:O	2.18	0.43
9:AG:138:LYS:C	9:AG:138:LYS:HD3	2.39	0.43
9:AG:18:TYR:CD2	9:AG:59:LEU:HB2	2.52	0.43
10:AH:114:THR:C	10:AH:116:LYS:H	2.22	0.43
1:AA:1371:G:OP1	11:AI:11:LYS:O	2.36	0.43
16:AN:29:ARG:HB3	16:AN:40:CYS:HB3	1.99	0.43
18:AP:67:THR:CG2	18:AP:68:ASP:N	2.81	0.43
2:AW:50:U:O2'	2:AW:51:G:H5'	2.17	0.43
23:B0:1014:G:O2'	23:B0:1015:U:H5'	2.17	0.43
23:B0:1054:C:H2'	23:B0:1055:A:H5'	2.00	0.43
23:B0:109:A:H2'	23:B0:110:U:H5''	2.00	0.43
23:B0:1113:C:O3'	23:B0:1114:A:P	2.75	0.43
23:B0:1258:G:H2'	23:B0:1259:A:C8	2.52	0.43
23:B0:1283:C:OP1	23:B0:1284:G:H5'	2.17	0.43
23:B0:1358:C:C2'	23:B0:1359:G:H5''	2.48	0.43
23:B0:1429:A:H1'	23:B0:1603:A:C6	2.53	0.43
23:B0:1633:C:HO2'	23:B0:1634:A:P	2.40	0.43
23:B0:1819:U:H5''	23:B0:1954:A:O3'	2.18	0.43
23:B0:167:A:H62	23:B0:183:U:H3	1.66	0.43
23:B0:1871:G:N3	23:B0:1871:G:H2'	2.33	0.43
23:B0:583:C:N3	23:B0:2016:A:H4'	2.32	0.43
23:B0:2069:U:H2'	23:B0:2070:G:C8	2.53	0.43
23:B0:243:G:H2'	23:B0:244:C:O4'	2.18	0.43
23:B0:2469:G:H4'	23:B0:2470:U:C6	2.54	0.43
23:B0:2498:U:H3'	23:B0:2498:U:OP1	2.17	0.43
23:B0:2680:U:H3'	23:B0:2681:A:C5'	2.43	0.43
23:B0:2867:G:N3	23:B0:2867:G:H3'	2.32	0.43
23:B0:860:U:O2	23:B0:860:U:H2'	2.17	0.43
23:B0:925:U:H5''	23:B0:926:C:OP1	2.18	0.43
23:B0:944:A:H2'	23:B0:945:G:O4'	2.17	0.43
1:AA:1229:A:H2'	1:AA:1230:C:H6	1.83	0.43
1:AA:922:G:H21	1:AA:1396:A:C1'	2.29	0.43
1:AA:1503:A:C5	1:AA:1531:A:C2	3.06	0.43
1:AA:1533:C:O2	1:AA:1533:C:H2'	2.17	0.43
1:AA:189:A:OP2	22:AT:105:SER:HB3	2.13	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:277:C:OP2	19:AQ:41:LYS:NZ	2.42	0.43
1:AA:288:A:HO3'	1:AA:289:G:C5'	2.24	0.43
1:AA:315:A:C5'	1:AA:317:G:OP2	2.64	0.43
1:AA:489:C:H2'	1:AA:490:G:C8	2.54	0.43
1:AA:652:U:O4	1:AA:752:G:O2'	2.28	0.43
4:AB:187:LEU:HD21	4:AB:214:ILE:HG13	2.00	0.43
4:AB:83:MET:HG3	4:AB:238:LEU:HD11	2.00	0.43
5:AC:191:THR:HB	5:AC:194:GLY:O	2.18	0.43
5:AC:8:ILE:O	5:AC:11:ARG:N	2.47	0.43
7:AE:24:ARG:NH1	7:AE:24:ARG:HG2	2.33	0.43
8:AF:22:GLU:OE2	8:AF:84:ASN:HB2	2.18	0.43
9:AG:38:LEU:HD11	9:AG:42:ILE:HD11	1.99	0.43
15:AM:22:ILE:HD12	15:AM:25:ILE:CD1	2.41	0.43
17:AO:87:ILE:HG22	17:AO:88:ARG:N	2.34	0.43
1:AA:264:U:HO2'	19:AQ:63:ARG:HD2	1.81	0.43
21:AS:41:VAL:HG22	21:AS:44:MET:CE	2.49	0.43
3:AU:10:U:H2'	3:AU:11:C:C6	2.52	0.43
2:AV:34:G:H3'	2:AV:35:A:H5''	2.00	0.43
2:AV:74:C:N4	23:B0:2232:G:N1	2.66	0.43
23:B0:1065:A:O2'	23:B0:1066:G:H5'	2.18	0.43
23:B0:1482:U:H2'	23:B0:1483:G:C8	2.53	0.43
23:B0:1881:U:H2'	23:B0:1882:G:H5'	2.00	0.43
23:B0:1923:U:H1'	23:B0:1947:G:H4'	1.99	0.43
23:B0:2011:U:H2'	23:B0:2012:A:H8	1.83	0.43
23:B0:712:A:H61	23:B0:746:G:H1'	1.83	0.43
23:B0:792:U:H2'	23:B0:793:G:O4'	2.19	0.43
2:AV:56:C:O2'	28:BD:74:ILE:CA	2.66	0.43
1:AA:1263:C:H2'	1:AA:1264:C:H6	1.83	0.43
1:AA:1376:U:H2'	1:AA:1377:A:H8	1.80	0.43
1:AA:197:A:H1'	1:AA:198:G:O4'	2.17	0.43
1:AA:253:U:C4'	1:AA:276:G:O4'	2.66	0.43
1:AA:161:A:C2	1:AA:348:G:C2'	2.68	0.43
1:AA:46:G:C8	1:AA:366:C:N4	2.86	0.43
1:AA:665:A:C2	1:AA:732:C:H2'	2.53	0.43
1:AA:939:G:H5''	9:AG:102:ARG:NH2	2.34	0.43
4:AB:8:LYS:HB2	4:AB:9:GLU:H	1.58	0.43
5:AC:11:ARG:O	5:AC:14:ILE:O	2.36	0.43
6:AD:205:GLU:OE2	7:AE:107:ARG:NH2	2.48	0.43
6:AD:24:GLU:HG2	6:AD:25:ARG:H	1.82	0.43
6:AD:55:ALA:O	6:AD:59:ARG:HG2	2.19	0.43
7:AE:119:LEU:HA	7:AE:119:LEU:HD23	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AG:16:LEU:CB	11:AI:41:VAL:HG12	2.49	0.43
10:AH:16:ALA:O	10:AH:21:LYS:HG2	2.18	0.43
11:AI:69:GLY:O	11:AI:73:GLN:HG3	2.18	0.43
12:AJ:27:ALA:CB	12:AJ:81:THR:HG23	2.47	0.43
12:AJ:30:SER:CB	12:AJ:80:LYS:HB3	2.44	0.43
13:AK:100:ALA:O	13:AK:102:GLY:N	2.51	0.43
13:AK:23:ALA:HB2	13:AK:91:ARG:HB2	1.99	0.43
20:AR:58:LEU:HD22	20:AR:62:GLU:HB3	1.99	0.43
22:AT:63:ILE:HD13	22:AT:80:ARG:HB3	2.01	0.43
3:AU:13:A:H2'	3:AU:14:A:C6	2.53	0.43
23:B0:1196:G:C2'	23:B0:1197:U:H5'	2.48	0.43
23:B0:1257:U:H2'	23:B0:1258:G:C8	2.53	0.43
23:B0:1722:G:H2'	23:B0:1723:U:C6	2.54	0.43
23:B0:437:G:O2'	23:B0:438:G:H5'	2.19	0.43
19:AQ:104:LYS:CD	23:B0:729:A:N7	2.80	0.43
23:B0:826:U:H2'	23:B0:827:C:C6	2.53	0.43
1:AA:141:A:H1'	1:AA:182:U:O2	2.18	0.43
1:AA:430:A:H2'	1:AA:431:A:H5'	1.99	0.43
1:AA:10:A:O2'	1:AA:507:C:H4'	2.17	0.43
1:AA:19:C:O2'	1:AA:572:A:N1	2.52	0.43
1:AA:778:G:O2'	13:AK:120:ARG:CA	2.65	0.43
4:AB:137:ARG:HA	4:AB:140:HIS:HD2	1.84	0.43
4:AB:71:VAL:HB	4:AB:164:VAL:HG23	1.99	0.43
5:AC:191:THR:HG21	5:AC:193:TYR:CE1	2.54	0.43
5:AC:79:ARG:C	5:AC:81:GLY:H	2.21	0.43
7:AE:36:ASP:OD1	7:AE:38:GLN:N	2.39	0.43
12:AJ:45:ARG:NH2	16:AN:36:PHE:HE2	2.11	0.43
18:AP:40:ASP:HB3	18:AP:48:TRP:HB2	2.00	0.43
1:AA:376:G:H5''	18:AP:5:ARG:HB2	1.99	0.43
19:AQ:97:SER:O	19:AQ:98:LEU:HD12	2.19	0.43
21:AS:12:ASP:HB2	21:AS:35:SER:OG	2.19	0.43
23:B0:1482:U:H2'	23:B0:1483:G:H8	1.83	0.43
23:B0:2035:G:H2'	23:B0:2036:G:C8	2.52	0.43
23:B0:2259:G:H2'	23:B0:2260:C:C6	2.53	0.43
23:B0:2378:G:H2'	23:B0:2379:G:H8	1.83	0.43
23:B0:2559:U:C2'	23:B0:2560:G:H5'	2.49	0.43
23:B0:2636:A:H62	23:B0:2643:G:N2	2.09	0.43
23:B0:1310:C:OP1	23:B0:2689:C:H4'	2.18	0.43
23:B0:48:A:H4'	23:B0:50:G:O4'	2.18	0.43
23:B0:815:A:H8	23:B0:815:A:P	2.42	0.43
1:AA:1157:A:O4'	1:AA:1158:C:C2	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1458:G:C4	1:AA:1459:C:O2	2.72	0.43
1:AA:819:A:C6	1:AA:1529:G:N1	2.86	0.43
1:AA:205:G:N2	1:AA:207:C:H41	2.15	0.43
1:AA:243:A:N6	1:AA:281:G:O2'	2.51	0.43
1:AA:297:G:H5'	1:AA:557:G:O4'	2.19	0.43
1:AA:461:C:O2'	1:AA:462:A:H5'	2.19	0.43
1:AA:402:G:H5'	1:AA:621:A:C2	2.54	0.43
1:AA:961:U:C2'	1:AA:962:C:H5'	2.48	0.43
4:AB:124:SER:CB	4:AB:125:PRO:CD	2.90	0.43
4:AB:59:GLU:O	4:AB:60:ASP:C	2.57	0.43
6:AD:10:ARG:HH11	6:AD:10:ARG:HG3	1.83	0.43
11:AI:78:LYS:HE2	11:AI:78:LYS:HB3	1.87	0.43
1:AA:1459:C:H5''	22:AT:28:ALA:HB3	1.60	0.43
23:B0:1391:A:H2'	23:B0:1392:U:C5	2.54	0.43
23:B0:1424:U:H2'	23:B0:1425:G:C8	2.53	0.43
23:B0:1938:U:H3'	23:B0:2530:C:O2'	2.19	0.43
23:B0:931:G:N2	23:B0:2247:A:H5''	2.34	0.43
23:B0:2241:U:H4'	23:B0:2307:A:C2	2.54	0.43
23:B0:2436:U:H2'	23:B0:2437:G:O4'	2.18	0.43
23:B0:2586:G:H2'	23:B0:2587:G:O4'	2.19	0.43
23:B0:45:C:H2'	23:B0:46:C:C6	2.53	0.43
23:B0:491:A:N3	23:B0:491:A:H2'	2.34	0.43
23:B0:69:G:O2'	23:B0:70:A:H4'	2.17	0.43
23:B0:969:U:O2'	23:B0:970:A:H5''	2.18	0.43
1:AA:1060:C:O2'	1:AA:1061:G:H5'	2.18	0.43
1:AA:1131:G:H2'	1:AA:1132:C:H6	1.83	0.43
1:AA:118:U:O3'	1:AA:119:A:O5'	2.37	0.43
1:AA:1297:C:OP2	15:AM:44:ARG:NH2	2.51	0.43
1:AA:265:G:O4'	19:AQ:64:PRO:O	2.35	0.43
1:AA:27:G:C4	1:AA:557:G:N3	2.81	0.43
1:AA:50:A:N6	1:AA:361:G:H4'	2.33	0.43
1:AA:618:C:N3	1:AA:622:A:N6	2.67	0.43
1:AA:818:G:H3'	1:AA:819:A:H5'	2.01	0.43
4:AB:17:PHE:CA	4:AB:44:LEU:HD21	2.49	0.43
6:AD:8:VAL:CG1	6:AD:21:LEU:HD13	2.48	0.43
7:AE:80:ILE:HD12	7:AE:80:ILE:H	1.84	0.43
16:AN:29:ARG:CG	16:AN:29:ARG:HH11	2.32	0.43
18:AP:52:ASP:CG	18:AP:52:ASP:O	2.57	0.43
22:AT:50:GLU:HG2	22:AT:100:ILE:CG1	2.48	0.43
23:B0:1329:U:H2'	23:B0:1330:G:C8	2.54	0.43
23:B0:1401:G:H2'	23:B0:1402:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:540:G:N7	23:B0:2018:G:H4'	2.33	0.43
23:B0:2055:G:H2'	23:B0:2056:C:C6	2.54	0.43
23:B0:211:U:O2'	23:B0:212:U:H5'	2.19	0.43
23:B0:217:U:H5'	23:B0:633:G:O2'	2.18	0.43
23:B0:941:U:H2'	23:B0:942:U:C6	2.54	0.43
24:B9:35:C:H2'	24:B9:36:A:O4'	2.19	0.43
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.54	0.43
1:AA:130:A:C6	1:AA:264:U:O2	2.71	0.43
1:AA:130:A:O3'	1:AA:263:A:O2'	2.36	0.43
1:AA:1317:C:C6	16:AN:16:PHE:CG	3.06	0.43
1:AA:1327:C:O2'	1:AA:1328:C:H5'	2.19	0.43
1:AA:255:G:N3	19:AQ:16:GLN:NE2	2.62	0.43
1:AA:363:A:O2'	1:AA:364:A:H5'	2.18	0.43
1:AA:451:A:N6	1:AA:480:U:H2'	2.33	0.43
1:AA:762:C:H4'	23:B0:729:A:N6	2.28	0.43
1:AA:960:U:O2	1:AA:960:U:H2'	2.19	0.43
1:AA:991:U:O2	1:AA:993:G:H8	2.02	0.43
4:AB:204:ASN:HD22	4:AB:206:ASP:H	1.66	0.43
4:AB:74:LYS:HD2	4:AB:166:ASP:HB2	2.00	0.43
5:AC:26:LYS:N	5:AC:26:LYS:CD	2.78	0.43
6:AD:120:LEU:HD23	6:AD:125:HIS:CD2	2.54	0.43
6:AD:127:THR:HG23	6:AD:128:VAL:N	2.34	0.43
1:AA:409:G:OP1	6:AD:24:GLU:O	2.36	0.43
7:AE:118:ILE:HD13	7:AE:118:ILE:HG21	1.74	0.43
9:AG:108:ALA:O	9:AG:119:ARG:HD2	2.18	0.43
11:AI:78:LYS:HD3	11:AI:101:PHE:CD2	2.54	0.43
11:AI:106:ALA:O	11:AI:108:VAL:HG23	2.19	0.43
1:AA:1250:A:H4'	11:AI:68:GLY:CA	2.49	0.43
14:AL:41:ARG:HH11	14:AL:41:ARG:HB3	1.84	0.43
15:AM:33:ALA:HB2	15:AM:64:TRP:CH2	2.54	0.43
2:AV:50:U:C2'	2:AV:51:G:H5'	2.48	0.43
23:B0:1429:A:O2'	23:B0:1430:G:H4'	2.19	0.43
23:B0:1634:A:O2'	23:B0:1635:G:OP1	2.29	0.43
23:B0:2468:G:H2'	23:B0:2469:G:O4'	2.19	0.43
23:B0:2426:G:C5'	23:B0:2480:C:H41	2.28	0.43
23:B0:2728:A:H2'	23:B0:2729:A:O4'	2.18	0.43
23:B0:70:A:OP2	23:B0:111:G:H4'	2.19	0.43
23:B0:798:G:C2'	23:B0:799:C:H5'	2.48	0.43
1:AA:1010:G:O2'	1:AA:1011:G:H5'	2.18	0.43
1:AA:1125:U:H5''	1:AA:1126:U:H5	1.83	0.43
1:AA:1181:G:O2'	1:AA:1182:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:977:A:H2	1:AA:1224:G:C6	2.37	0.43
1:AA:1416:G:N7	1:AA:1417:G:N9	2.67	0.43
1:AA:1500:A:OP1	1:AA:1508:G:OP1	2.37	0.43
1:AA:191:G:N2	1:AA:192:U:H1'	2.23	0.43
1:AA:255:G:H4'	19:AQ:17:LYS:CB	2.48	0.43
1:AA:640:A:C2'	1:AA:641:U:H5'	2.48	0.43
1:AA:676:A:O2'	13:AK:115:PRO:HG3	2.19	0.43
1:AA:70:A:C2'	1:AA:71:U:H5'	2.48	0.43
1:AA:782:A:H2'	1:AA:783:C:O4'	2.19	0.43
1:AA:858:G:O2'	1:AA:859:A:H5'	2.18	0.43
5:AC:112:SER:HB2	5:AC:115:LEU:HB2	2.01	0.43
1:AA:779:C:C5'	13:AK:120:ARG:C	2.75	0.43
1:AA:564:C:H5'	14:AL:10:LEU:HD13	2.01	0.43
14:AL:41:ARG:NH1	14:AL:41:ARG:CB	2.82	0.43
14:AL:58:VAL:N	14:AL:66:VAL:O	2.47	0.43
17:AO:48:LYS:O	17:AO:50:HIS:N	2.50	0.43
22:AT:42:GLN:O	22:AT:46:GLU:HG3	2.19	0.43
2:AV:76:A:O3'	23:B0:2046:C:O2'	2.27	0.43
23:B0:1393:G:O2'	23:B0:1394:G:H5'	2.19	0.43
23:B0:1561:A:H2'	23:B0:1562:G:O4'	2.19	0.43
23:B0:873:U:O2	23:B0:2246:A:H5''	2.18	0.43
23:B0:2424:G:H2'	23:B0:2425:G:O4'	2.19	0.43
23:B0:3877:A:HO2'	55:B5:198:THR:CA	2.26	0.43
1:AA:1051:C:H2'	1:AA:1052:U:C6	2.53	0.43
1:AA:1075:C:H5''	4:AB:179:LYS:HZ1	1.82	0.43
1:AA:1126:U:H2'	1:AA:1127:G:O4'	2.19	0.43
1:AA:1181:G:H4'	1:AA:1184:G:C4'	2.49	0.43
1:AA:119:A:N3	1:AA:240:C:C4	2.87	0.43
1:AA:1287:A:C2	1:AA:1353:G:H1'	2.54	0.43
1:AA:1353:G:H2'	1:AA:1354:C:C6	2.54	0.43
1:AA:409:G:H2'	1:AA:410:G:O4'	2.18	0.43
4:AB:28:PHE:CD2	4:AB:190:THR:HA	2.54	0.43
5:AC:116:VAL:HG11	5:AC:141:VAL:HG21	2.01	0.43
6:AD:198:VAL:HG12	6:AD:199:ASN:N	2.34	0.43
6:AD:60:GLU:OE1	6:AD:60:GLU:HA	2.19	0.43
7:AE:43:LEU:HB2	7:AE:136:MET:HE2	2.00	0.43
1:AA:15:G:HO2'	7:AE:24:ARG:NH1	2.14	0.43
1:AA:737:A:H1'	8:AF:73:ASN:OD1	2.19	0.43
14:AL:70:ILE:CD1	14:AL:77:LEU:HD12	2.42	0.43
1:AA:1230:C:H1'	15:AM:125:ARG:O	2.19	0.43
17:AO:78:TYR:CE2	17:AO:82:ILE:HD11	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AQ:101:ARG:CD	23:B0:731:A:C2	3.00	0.43
1:AA:130:A:C5'	19:AQ:63:ARG:CZ	2.89	0.43
8:AF:100:ASN:ND2	20:AR:23:LYS:O	2.52	0.43
22:AT:11:SER:C	22:AT:13:LEU:H	2.22	0.43
2:AW:76:A:C1'	23:B0:2486:C:C5'	2.97	0.43
23:B0:1039:A:H2'	23:B0:1040:A:C8	2.54	0.43
23:B0:114:C:H2'	23:B0:115:G:O4'	2.19	0.43
23:B0:1411:C:H6	23:B0:1411:C:O5'	2.02	0.43
23:B0:1466:C:H2'	23:B0:1467:U:O4'	2.19	0.43
23:B0:170:U:H2'	23:B0:171:G:H8	1.84	0.43
23:B0:2204:A:H1'	23:B0:2205:C:C5	2.53	0.43
23:B0:2475:C:C2'	23:B0:2476:A:H5'	2.49	0.43
23:B0:2572:U:H2'	23:B0:2573:C:C6	2.54	0.43
23:B0:572:G:H2'	23:B0:573:C:C6	2.54	0.43
23:B0:635:C:H2'	23:B0:636:G:H5''	2.00	0.43
23:B0:738:G:H2'	23:B0:739:G:O4'	2.18	0.43
23:B0:765:C:O2'	23:B0:766:A:O4'	2.36	0.43
24:B9:108:G:O2'	24:B9:109:G:H5'	2.19	0.43
1:AA:1441:G:H4'	1:AA:1442:G:C8	2.54	0.42
1:AA:150:C:H2'	1:AA:151:A:P	2.58	0.42
1:AA:160:A:H2'	1:AA:161:A:O4'	2.18	0.42
1:AA:169:C:O2'	1:AA:170:U:H5'	2.19	0.42
1:AA:246:A:H2	1:AA:278:G:N3	2.13	0.42
1:AA:452:A:O2'	1:AA:453:A:O4'	2.34	0.42
1:AA:628:G:H2'	1:AA:629:G:H8	1.84	0.42
1:AA:677:U:O2	1:AA:777:A:O2'	2.36	0.42
1:AA:685:G:P	13:AK:12:ARG:HH22	2.42	0.42
5:AC:46:GLU:C	5:AC:48:TYR:H	2.22	0.42
6:AD:196:LEU:C	6:AD:198:VAL:H	2.21	0.42
12:AJ:17:ASP:O	12:AJ:21:GLN:HB2	2.19	0.42
14:AL:60:LEU:CD2	14:AL:66:VAL:HG22	2.49	0.42
15:AM:6:GLY:O	15:AM:7:VAL:CG2	2.65	0.42
17:AO:29:VAL:HG11	17:AO:67:LEU:HD21	2.00	0.42
19:AQ:45:HIS:CD2	19:AQ:47:PRO:HG3	2.54	0.42
19:AQ:60:ILE:HD13	19:AQ:61:GLU:N	2.34	0.42
23:B0:1307:U:H2'	23:B0:1308:C:O4'	2.19	0.42
23:B0:1429:A:N6	23:B0:1602:G:H5'	2.34	0.42
23:B0:3877:A:O5'	23:B0:1861:G:OP2	2.37	0.42
23:B0:2455:A:C2'	23:B0:2456:U:H5'	2.49	0.42
23:B0:2625:U:H2'	23:B0:2626:U:O4'	2.18	0.42
23:B0:3185:U:H2'	23:B0:3186:C:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:689:A:C2'	23:B0:690:A:H5'	2.48	0.42
23:B0:744:C:H2'	23:B0:745:C:C6	2.54	0.42
23:B0:842:A:H5'	23:B0:844:G:C5	2.54	0.42
1:AA:107:G:O2'	1:AA:108:G:H5'	2.19	0.42
1:AA:1269:A:H2	1:AA:1312:G:N3	2.17	0.42
1:AA:1434:A:O3'	1:AA:1435:G:H4'	2.19	0.42
1:AA:117:G:O6	1:AA:289:G:H1'	2.18	0.42
1:AA:418:C:H2'	1:AA:419:C:C6	2.54	0.42
1:AA:448:A:C4	1:AA:487:A:C2	3.07	0.42
4:AB:116:GLU:CG	4:AB:153:ARG:NH1	2.80	0.42
5:AC:50:ALA:O	5:AC:70:VAL:CG1	2.67	0.42
5:AC:70:VAL:O	5:AC:106:VAL:N	2.51	0.42
6:AD:157:LEU:CD2	6:AD:161:ASN:ND2	2.74	0.42
12:AJ:61:GLU:OE2	16:AN:58:LYS:CE	2.66	0.42
12:AJ:72:VAL:O	12:AJ:73:ASP:HB2	2.18	0.42
1:AA:1308:U:P	15:AM:99:ARG:HG3	2.59	0.42
19:AQ:59:ILE:CG2	19:AQ:71:PHE:CD1	3.02	0.42
20:AR:46:GLU:CD	20:AR:46:GLU:N	2.72	0.42
23:B0:1292:A:H2'	23:B0:1293:A:H8	1.84	0.42
23:B0:1626:A:H5''	23:B0:1627:C:OP2	2.19	0.42
23:B0:1788:C:H2'	23:B0:1789:U:C6	2.54	0.42
23:B0:1975:G:H4'	23:B0:1976:U:C5	2.53	0.42
23:B0:1982:C:H2'	23:B0:1983:G:C8	2.52	0.42
23:B0:2204:A:H4'	23:B0:2205:C:O4'	2.19	0.42
23:B0:220:U:H2'	23:B0:221:A:O4'	2.19	0.42
23:B0:2404:A:OP1	23:B0:2406:C:H5'	2.18	0.42
23:B0:2426:G:O2'	23:B0:2427:A:OP2	2.32	0.42
23:B0:2504:G:H2'	23:B0:2505:G:H8	1.83	0.42
23:B0:2639:A:H2'	23:B0:2640:G:O4'	2.20	0.42
23:B0:796:A:C2	23:B0:798:G:H1'	2.54	0.42
1:AA:1126:U:H2'	1:AA:1127:G:H8	1.84	0.42
1:AA:1397:C:O2'	1:AA:1398:A:P	2.77	0.42
1:AA:487:A:H2'	1:AA:488:C:O4'	2.19	0.42
1:AA:538:G:H5'	14:AL:114:LYS:CD	2.46	0.42
1:AA:778:G:O2'	1:AA:779:C:H5'	2.19	0.42
1:AA:796:C:OP2	13:AK:123:LYS:NZ	2.45	0.42
1:AA:926:G:H1	3:AU:6:A:P	2.43	0.42
1:AA:942:G:H2'	1:AA:943:U:H6	1.84	0.42
4:AB:125:PRO:C	4:AB:127:ILE:H	2.22	0.42
4:AB:146:GLN:O	4:AB:150:SER:HB3	2.18	0.42
7:AE:115:VAL:CG1	7:AE:116:THR:N	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AE:64:ARG:O	7:AE:65:ASN:CB	2.60	0.42
9:AG:112:PRO:O	9:AG:113:GLU:C	2.57	0.42
9:AG:95:ARG:NH1	9:AG:95:ARG:CG	2.80	0.42
12:AJ:15:THR:HG23	12:AJ:94:VAL:CG2	2.49	0.42
12:AJ:56:HIS:O	12:AJ:58:ASP:N	2.52	0.42
13:AK:33:THR:OG1	13:AK:37:GLY:C	2.58	0.42
14:AL:26:ALA:C	14:AL:27:LEU:O	2.57	0.42
21:AS:3:ARG:O	21:AS:4:SER:HB3	2.19	0.42
22:AT:57:ARG:HE	22:AT:100:ILE:HG21	1.85	0.42
23:B0:1764:A:H2'	23:B0:1765:C:O4'	2.19	0.42
23:B0:1811:A:H1'	23:B0:1813:A:C5	2.53	0.42
23:B0:1981:A:H4'	23:B0:2704:U:O2'	2.19	0.42
23:B0:338:G:O2'	23:B0:339:U:H5'	2.19	0.42
23:B0:3877:A:P	23:B0:1861:G:P	3.16	0.42
23:B0:569:C:H2'	23:B0:570:G:C8	2.53	0.42
23:B0:872:G:H2'	23:B0:928:G:N1	2.35	0.42
1:AA:1014:A:N6	21:AS:34:TRP:CZ2	2.87	0.42
1:AA:1074:G:O3'	4:AB:103:THR:HG21	2.19	0.42
1:AA:1107:C:OP1	5:AC:174:PRO:N	2.53	0.42
1:AA:1135:U:H6	1:AA:1135:U:O5'	2.01	0.42
1:AA:1137:C:H4'	1:AA:1138:G:N1	2.33	0.42
1:AA:1244:C:O2'	1:AA:1245:A:H5'	2.19	0.42
1:AA:1266:G:N2	1:AA:1269:A:OP2	2.49	0.42
1:AA:128:G:O4'	19:AQ:61:GLU:OE2	2.36	0.42
1:AA:1407:C:H2'	1:AA:1408:A:H8	1.85	0.42
1:AA:1446:A:C4	1:AA:1456:A:N1	2.87	0.42
1:AA:1458:G:N9	1:AA:1459:C:O2	2.52	0.42
1:AA:1505:G:H3'	1:AA:1505:G:H8	1.85	0.42
1:AA:418:C:H2'	1:AA:419:C:H6	1.84	0.42
1:AA:70:A:O2'	1:AA:71:U:H5'	2.19	0.42
1:AA:825:G:H2'	1:AA:826:C:C6	2.53	0.42
1:AA:244:U:C5	1:AA:894:G:C2	3.08	0.42
1:AA:974:A:OP1	1:AA:974:A:H8	2.03	0.42
4:AB:16:HIS:CE1	4:AB:210:SER:HG	2.37	0.42
4:AB:33:TYR:O	4:AB:34:ALA:CB	2.67	0.42
4:AB:41:ILE:O	4:AB:41:ILE:HG22	2.18	0.42
6:AD:163:GLU:C	6:AD:165:MET:N	2.72	0.42
6:AD:25:ARG:HA	6:AD:28:SER:OG	2.19	0.42
7:AE:16:THR:HG23	7:AE:27:ARG:O	2.19	0.42
8:AF:40:VAL:HG22	8:AF:41:GLU:N	2.34	0.42
9:AG:15:ASP:OD2	9:AG:23:VAL:HG11	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AG:31:MET:SD	9:AG:34:GLY:HA2	2.59	0.42
1:AA:875:C:O2'	10:AH:14:ARG:HD2	2.18	0.42
17:AO:41:GLU:O	17:AO:42:HIS:C	2.57	0.42
18:AP:51:VAL:O	18:AP:52:ASP:C	2.58	0.42
18:AP:4:ILE:CG1	18:AP:64:ALA:HB1	2.49	0.42
21:AS:17:GLU:HA	21:AS:20:LEU:CD1	2.49	0.42
21:AS:40:ILE:HG23	21:AS:44:MET:SD	2.59	0.42
23:B0:1017:C:H2'	23:B0:1018:C:O4'	2.19	0.42
23:B0:1223:G:H4'	23:B0:1224:A:C5'	2.49	0.42
23:B0:2492:G:H2'	23:B0:2493:U:C6	2.54	0.42
23:B0:2561:G:N3	23:B0:2561:G:H2'	2.35	0.42
23:B0:2771:C:H5	23:B0:2867:G:H22	1.66	0.42
23:B0:477:A:H2'	23:B0:478:G:O4'	2.20	0.42
23:B0:697:G:O2'	23:B0:698:A:H5'	2.20	0.42
23:B0:883:A:H2'	23:B0:884:C:O4'	2.19	0.42
1:AA:1319:A:OP1	21:AS:5:LEU:CD2	2.68	0.42
1:AA:1438:G:H2'	1:AA:1439:C:C6	2.54	0.42
1:AA:1399:C:C2	1:AA:1502:A:N6	2.86	0.42
1:AA:16:A:O2'	1:AA:17:U:H5'	2.18	0.42
1:AA:499:A:H1'	1:AA:500:G:C1'	2.40	0.42
1:AA:825:G:O2'	1:AA:826:C:H5'	2.20	0.42
1:AA:848:G:HO3'	1:AA:849:C:P	2.40	0.42
4:AB:187:LEU:HA	4:AB:201:ILE:HB	2.02	0.42
5:AC:193:TYR:HE1	5:AC:196:LEU:HD11	1.83	0.42
6:AD:8:VAL:CG1	6:AD:21:LEU:CD1	2.98	0.42
7:AE:131:ILE:HD13	7:AE:131:ILE:HA	1.93	0.42
8:AF:77:ARG:O	8:AF:81:ILE:HG13	2.18	0.42
1:AA:878:G:C5'	10:AH:89:PRO:HG2	2.48	0.42
1:AA:994:A:C4	16:AN:5:ALA:O	2.72	0.42
18:AP:4:ILE:HG23	18:AP:36:ILE:HD11	2.01	0.42
21:AS:41:VAL:HB	21:AS:43:GLU:OE2	2.20	0.42
23:B0:1313:U:O2'	23:B0:1314:A:P	2.78	0.42
23:B0:1480:G:C2'	23:B0:1481:U:H5'	2.49	0.42
1:AA:1476:G:P	23:B0:1706:A:O3'	2.77	0.42
23:B0:1775:A:H4'	23:B0:1776:A:C8	2.54	0.42
23:B0:1900:U:H3'	23:B0:1901:A:H8	1.85	0.42
23:B0:1957:C:O2'	23:B0:1958:G:H5'	2.20	0.42
23:B0:19:C:H2'	23:B0:20:C:C6	2.54	0.42
23:B0:2437:G:H4'	23:B0:2438:A:N7	2.35	0.42
23:B0:2523:G:O2'	23:B0:2524:G:H5'	2.20	0.42
23:B0:2559:U:H2'	23:B0:2560:G:H5'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:2564:U:H5''	23:B0:2565:C:H5'	2.01	0.42
23:B0:669:G:H2'	23:B0:670:U:O4'	2.20	0.42
24:B9:73:C:H3'	24:B9:74:A:OP2	2.20	0.42
1:AA:1195:C:H3'	1:AA:1196:U:H5''	2.02	0.42
1:AA:359:U:O2'	1:AA:360:A:H5'	2.18	0.42
1:AA:376:G:P	18:AP:67:THR:CG2	3.01	0.42
1:AA:38:G:H4'	1:AA:547:A:C5	2.54	0.42
5:AC:23:TYR:CZ	12:AJ:9:ARG:HD3	2.55	0.42
12:AJ:3:LYS:HG3	12:AJ:75:ILE:HG23	2.02	0.42
14:AL:60:LEU:HD21	14:AL:66:VAL:CG2	2.50	0.42
15:AM:80:ARG:C	15:AM:82:MET:N	2.72	0.42
1:AA:127:G:O3'	19:AQ:2:PRO:HD2	2.20	0.42
1:AA:322:C:HO2'	22:AT:23:ARG:HB2	1.84	0.42
23:B0:1672:A:H2'	23:B0:1673:C:O4'	2.20	0.42
23:B0:1679:U:H2'	23:B0:1680:U:H5''	2.02	0.42
23:B0:1855:G:H4'	23:B0:2390:A:H4'	2.00	0.42
23:B0:833:A:H2'	23:B0:834:A:C8	2.55	0.42
24:B9:50:U:H2'	24:B9:51:G:H8	1.83	0.42
1:AA:69:G:H1'	1:AA:101:A:N1	2.34	0.42
1:AA:1228:C:H4'	15:AM:116:THR:HA	2.02	0.42
1:AA:1264:C:H2'	1:AA:1265:G:C8	2.55	0.42
1:AA:1288:A:H1'	1:AA:1353:G:O4'	2.20	0.42
1:AA:1434:A:P	1:AA:1435:G:C8	3.09	0.42
1:AA:427:U:H4'	1:AA:541:G:H5''	2.01	0.42
1:AA:532:A:H2'	1:AA:533:A:C5'	2.48	0.42
1:AA:570:G:O2'	1:AA:819:A:C2'	2.63	0.42
1:AA:584:G:H2'	1:AA:585:G:C8	2.54	0.42
1:AA:647:C:H2'	1:AA:648:A:C8	2.54	0.42
1:AA:762:C:H5'	23:B0:729:A:N6	2.27	0.42
1:AA:835:U:C5'	20:AR:64:ARG:CZ	2.71	0.42
1:AA:811:C:H4'	1:AA:900:A:N6	2.34	0.42
1:AA:942:G:C2	1:AA:943:U:C6	3.07	0.42
5:AC:172:ARG:HH12	5:AC:174:PRO:CG	2.22	0.42
5:AC:57:ILE:HG22	5:AC:57:ILE:O	2.20	0.42
5:AC:64:VAL:HG12	5:AC:65:ALA:H	1.84	0.42
5:AC:70:VAL:HG12	5:AC:71:ALA:H	1.84	0.42
5:AC:79:ARG:NE	5:AC:82:GLU:HG2	2.34	0.42
6:AD:63:LYS:O	6:AD:64:LEU:C	2.58	0.42
7:AE:79:GLU:OE2	10:AH:105:ARG:NE	2.51	0.42
8:AF:45:LEU:O	8:AF:46:ARG:HG2	2.20	0.42
13:AK:86:GLY:H	13:AK:112:THR:CG2	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AK:85:ARG:NH1	13:AK:85:ARG:HG3	2.34	0.42
13:AK:93:GLN:NE2	13:AK:96:ARG:NH2	2.67	0.42
19:AQ:104:LYS:HD2	23:B0:729:A:N7	2.35	0.42
21:AS:51:VAL:HG12	21:AS:52:TYR:H	1.85	0.42
23:B0:1181:C:H3'	23:B0:1182:U:H5''	2.01	0.42
23:B0:1961:A:H2'	23:B0:1962:C:O4'	2.19	0.42
23:B0:2031:A:H2'	23:B0:2032:G:C8	2.54	0.42
2:AV:76:A:O5'	23:B0:2564:U:C6	2.66	0.42
23:B0:2864:C:H2'	23:B0:2865:G:O4'	2.20	0.42
23:B0:3110:G:C4'	23:B0:3111:C:OP2	2.67	0.42
23:B0:3110:G:P	23:B0:3149:G:C5'	3.08	0.42
23:B0:589:C:H2'	23:B0:590:C:C6	2.55	0.42
23:B0:69:G:O2'	23:B0:70:A:P	2.78	0.42
23:B0:738:G:C2'	23:B0:739:G:H5'	2.50	0.42
23:B0:841:G:N1	23:B0:2226:A:H4'	2.35	0.42
1:AA:1217:C:O2'	1:AA:1218:C:H5'	2.19	0.42
1:AA:232:G:C2	1:AA:263:A:H2	2.28	0.42
1:AA:438:G:O2'	1:AA:495:U:O4	2.24	0.42
1:AA:406:G:N7	1:AA:496:A:C5	2.88	0.42
1:AA:292:G:C1'	1:AA:608:A:H61	2.28	0.42
1:AA:767:A:H2'	1:AA:768:A:O4'	2.20	0.42
1:AA:893:C:C6	1:AA:894:G:C8	3.08	0.42
1:AA:965:A:O2'	1:AA:966:G:C5'	2.67	0.42
5:AC:77:ILE:CG2	5:AC:81:GLY:HA2	2.50	0.42
7:AE:120:THR:HG23	7:AE:121:LYS:H	1.84	0.42
9:AG:69:VAL:O	9:AG:69:VAL:CG1	2.68	0.42
10:AH:68:ARG:HH11	10:AH:68:ARG:HG2	1.84	0.42
1:AA:537:G:H5''	14:AL:113:ARG:NE	2.33	0.42
19:AQ:95:TYR:N	19:AQ:95:TYR:CD1	2.88	0.42
20:AR:26:LEU:CD1	20:AR:27:GLY:H	2.29	0.42
1:AA:1320:C:N4	21:AS:37:ARG:CD	2.77	0.42
23:B0:1112:U:O2	23:B0:1112:U:H2'	2.20	0.42
23:B0:2467:A:H2'	23:B0:2468:G:C8	2.55	0.42
2:AV:74:C:C3'	23:B0:2581:A:P	2.67	0.42
23:B0:2633:A:H4'	23:B0:2634:G:C4'	2.39	0.42
23:B0:3109:U:O3'	23:B0:3149:G:H4'	2.20	0.42
23:B0:509:U:H2'	23:B0:510:G:H5'	2.00	0.42
23:B0:583:C:H4'	23:B0:584:A:OP2	2.20	0.42
23:B0:903:G:C6	23:B0:904:U:C4	3.08	0.42
24:B9:9:G:H2'	24:B9:10:U:O4'	2.20	0.42
1:AA:113:G:H4'	1:AA:354:G:O3'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1288:A:O4'	1:AA:1353:G:H4'	2.19	0.42
1:AA:1398:A:C5'	1:AA:1399:C:OP1	2.55	0.42
1:AA:26:A:C5'	1:AA:27:G:OP2	2.67	0.42
1:AA:293:G:OP1	1:AA:609:A:N6	2.52	0.42
1:AA:203:A:C4'	1:AA:468:A:H4'	2.46	0.42
1:AA:456:A:C2	1:AA:477:G:C1'	2.87	0.42
1:AA:501:C:O4'	1:AA:548:G:N2	2.53	0.42
1:AA:628:G:O2'	1:AA:629:G:H5'	2.20	0.42
1:AA:841:C:N3	1:AA:845:A:N6	2.67	0.42
6:AD:70:ILE:HD11	6:AD:100:ARG:CD	2.49	0.42
6:AD:53:ASP:OD2	7:AE:104:ALA:CB	2.68	0.42
18:AP:39:TYR:CD2	18:AP:73:LEU:HD11	2.54	0.42
21:AS:20:LEU:HD12	21:AS:21:GLU:N	2.34	0.42
1:AA:1340:A:C4'	2:AV:32:C:H4'	2.50	0.42
23:B0:594:G:H21	23:B0:1267:A:H62	1.68	0.42
23:B0:1667:A:H2'	23:B0:1668:G:C8	2.55	0.42
23:B0:1912:G:OP1	23:B0:1913:G:H4'	2.19	0.42
23:B0:1938:U:O2'	23:B0:1939:U:H5'	2.20	0.42
23:B0:2393:G:H2'	23:B0:2394:G:H8	1.85	0.42
23:B0:2404:A:O2'	23:B0:2405:A:OP2	2.29	0.42
23:B0:2815:C:H2'	23:B0:2816:C:C6	2.55	0.42
23:B0:332:C:H2'	23:B0:333:A:H5'	2.02	0.42
23:B0:391:C:H2'	23:B0:392:G:C8	2.54	0.42
23:B0:571:U:H2'	23:B0:581:A:H1'	2.02	0.42
23:B0:814:G:H3'	23:B0:815:A:C5'	2.46	0.42
23:B0:877:G:N2	23:B0:926:C:H41	2.17	0.42
1:AA:1129:C:O2'	1:AA:1130:A:P	2.78	0.42
1:AA:1402:C:H2'	1:AA:1403:C:H6	1.85	0.42
1:AA:1473:A:O3'	23:B0:1718:A:N3	2.53	0.42
1:AA:246:A:C3'	1:AA:247:G:H4'	2.50	0.42
1:AA:602:A:C2	1:AA:637:G:C2	3.08	0.42
1:AA:640:A:O2'	1:AA:641:U:H5'	2.20	0.42
1:AA:692:U:O2	1:AA:695:A:C8	2.73	0.42
1:AA:730:G:C5	1:AA:731:G:H1'	2.54	0.42
1:AA:851:G:H2'	1:AA:852:G:H8	1.84	0.42
1:AA:18:C:O2	1:AA:918:A:N1	2.52	0.42
6:AD:148:VAL:HG13	6:AD:158:ILE:HD13	2.01	0.42
6:AD:24:GLU:H	6:AD:112:VAL:HG11	1.85	0.42
9:AG:65:ALA:O	9:AG:66:VAL:C	2.58	0.42
11:AI:104:ARG:O	11:AI:105:ASP:C	2.59	0.42
12:AJ:55:LYS:O	12:AJ:56:HIS:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:538:G:H5'	14:AL:114:LYS:CB	2.06	0.42
14:AL:43:VAL:CG1	14:AL:44:THR:N	2.81	0.42
14:AL:7:ILE:HA	14:AL:7:ILE:HD13	1.93	0.42
15:AM:32:GLU:O	15:AM:35:GLU:N	2.53	0.42
15:AM:96:LEU:HB3	15:AM:97:PRO:HD2	2.00	0.42
19:AQ:40:LYS:HD3	19:AQ:42:TYR:OH	2.20	0.42
19:AQ:95:TYR:N	19:AQ:95:TYR:HD1	2.18	0.42
22:AT:80:ARG:O	22:AT:84:LEU:HB2	2.20	0.42
22:AT:44:ALA:HB2	22:AT:88:VAL:HG13	2.02	0.42
23:B0:1040:A:C2'	23:B0:1041:G:H5'	2.49	0.42
23:B0:1080:A:H4'	23:B0:1081:A:C8	2.54	0.42
23:B0:1671:A:H2'	23:B0:1672:A:H8	1.85	0.42
23:B0:1747:G:H1'	23:B0:1749:G:C2	2.55	0.42
23:B0:334:G:N3	23:B0:344:G:H1'	2.35	0.42
1:AA:762:C:O2'	23:B0:729:A:H2	1.99	0.42
23:B0:869:C:O2'	23:B0:870:C:H5'	2.19	0.42
24:B9:106:U:O2'	24:B9:107:C:H5'	2.19	0.42
24:B9:25:G:C2'	24:B9:26:G:H5'	2.50	0.42
1:AA:1095:U:H2'	1:AA:1096:C:H6	1.83	0.41
1:AA:951:G:C6	1:AA:1231:G:C6	3.08	0.41
1:AA:1489:G:H2'	1:AA:1490:C:C5'	2.27	0.41
1:AA:413:G:N2	1:AA:428:G:H1'	2.34	0.41
1:AA:439:A:N6	1:AA:497:A:H1'	2.35	0.41
1:AA:39:G:C8	1:AA:498:U:N3	2.88	0.41
1:AA:977:A:C2	1:AA:1224:G:C5	3.08	0.41
4:AB:130:ARG:HB3	4:AB:134:GLU:OE1	2.20	0.41
5:AC:73:PRO:HD3	5:AC:105:GLU:HG3	2.03	0.41
7:AE:31:LEU:HA	7:AE:31:LEU:HD23	1.74	0.41
8:AF:19:LEU:HD21	8:AF:23:LYS:HD2	2.01	0.41
10:AH:111:ILE:O	10:AH:134:ILE:HB	2.20	0.41
1:AA:877:C:O2	10:AH:3:THR:HG21	2.20	0.41
23:B0:1188:A:H62	23:B0:1189:G:N2	2.17	0.41
23:B0:1762:C:H2'	23:B0:1763:G:C8	2.55	0.41
23:B0:2195:C:H2'	23:B0:2196:U:O4'	2.20	0.41
23:B0:2809:A:H2'	23:B0:2810:A:H5'	2.01	0.41
23:B0:425:A:H2'	23:B0:426:C:O4'	2.20	0.41
1:AA:1016:A:C5'	16:AN:15:LYS:CE	2.87	0.41
1:AA:1264:C:H2'	1:AA:1265:G:H8	1.85	0.41
1:AA:1311:G:H2'	1:AA:1312:G:O4'	2.20	0.41
1:AA:320:C:C1'	1:AA:1434:A:C2	2.93	0.41
1:AA:145:G:O2'	1:AA:146:G:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1531:A:O5'	1:AA:1531:A:H8	2.03	0.41
1:AA:546:G:H4'	1:AA:548:G:H4'	2.01	0.41
1:AA:586:C:H5'	10:AH:90:GLY:CA	2.51	0.41
1:AA:833:U:H2'	1:AA:834:C:C6	2.55	0.41
4:AB:62:ALA:C	4:AB:64:ARG:H	2.24	0.41
5:AC:134:ILE:HG22	5:AC:168:ALA:HB3	2.01	0.41
7:AE:144:THR:O	7:AE:145:LYS:C	2.59	0.41
8:AF:48:LEU:HD13	8:AF:52:ILE:CG1	2.50	0.41
8:AF:98:LEU:HD23	8:AF:98:LEU:HA	1.94	0.41
9:AG:23:VAL:HG13	9:AG:43:PHE:CE2	2.55	0.41
9:AG:93:PRO:HG2	9:AG:94:ARG:H	1.86	0.41
1:AA:1233:G:OP1	11:AI:123:PRO:CB	2.69	0.41
11:AI:56:LEU:O	11:AI:58:ARG:N	2.49	0.41
13:AK:100:ALA:O	13:AK:101:SER:C	2.57	0.41
1:AA:255:G:H4'	19:AQ:17:LYS:N	2.17	0.41
22:AT:53:LEU:HD13	22:AT:101:GLY:N	2.35	0.41
22:AT:100:ILE:C	22:AT:102:GLY:N	2.74	0.41
2:AV:52:U:O2'	2:AV:53:G:H5'	2.20	0.41
23:B0:1082:G:H1'	23:B0:1100:G:H2'	2.03	0.41
23:B0:1196:G:H2'	23:B0:1197:U:H5'	2.00	0.41
23:B0:1448:A:H2'	23:B0:1449:C:C6	2.55	0.41
23:B0:167:A:H2'	23:B0:168:A:C8	2.55	0.41
2:AV:74:C:C4	23:B0:2231:G:N2	2.88	0.41
23:B0:2242:C:N4	23:B0:2257:A:H61	2.18	0.41
23:B0:2604:G:H2'	23:B0:2605:C:C6	2.55	0.41
23:B0:2694:G:H2'	23:B0:2695:C:C6	2.55	0.41
23:B0:2721:A:H62	23:B0:2743:G:H21	1.68	0.41
23:B0:860:U:O2'	23:B0:861:G:H5'	2.20	0.41
1:AA:1067:A:C1'	1:AA:1068:G:OP2	2.69	0.41
1:AA:1262:C:N4	1:AA:1273:G:H1	2.18	0.41
1:AA:1405:G:H1'	1:AA:1519:A:C4'	2.50	0.41
1:AA:143:A:H2	1:AA:220:G:H22	1.66	0.41
1:AA:255:G:H4'	19:AQ:17:LYS:HG3	2.02	0.41
1:AA:625:G:O2'	1:AA:626:U:H5'	2.20	0.41
1:AA:636:U:H2'	1:AA:637:G:C8	2.55	0.41
1:AA:812:C:OP1	1:AA:903:G:H1'	2.20	0.41
1:AA:757:U:OP1	1:AA:823:G:C4'	2.68	0.41
1:AA:865:A:N3	1:AA:918:A:O4'	2.53	0.41
1:AA:866:C:H2'	1:AA:867:G:O4'	2.20	0.41
5:AC:38:ARG:CB	5:AC:94:LEU:HD21	2.50	0.41
6:AD:205:GLU:O	6:AD:208:SER:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AI:97:LYS:HB2	11:AI:98:PRO:HD3	2.01	0.41
12:AJ:32:ALA:HB2	12:AJ:75:ILE:O	2.19	0.41
12:AJ:63:PHE:CD2	16:AN:58:LYS:HA	2.55	0.41
13:AK:57:THR:OG1	13:AK:58:PRO:HD2	2.20	0.41
14:AL:104:VAL:HG12	14:AL:105:TYR:CD1	2.56	0.41
14:AL:33:ARG:HD2	14:AL:62:SER:HB3	2.01	0.41
14:AL:55:VAL:CG1	14:AL:56:ALA:N	2.83	0.41
12:AJ:63:PHE:CE1	16:AN:48:ALA:HB3	2.54	0.41
17:AO:26:GLU:HG3	17:AO:81:LEU:HG	2.02	0.41
17:AO:70:LEU:HD12	17:AO:78:TYR:HB2	2.01	0.41
17:AO:83:GLU:C	17:AO:83:GLU:OE1	2.58	0.41
18:AP:43:LYS:HA	18:AP:48:TRP:CB	2.50	0.41
20:AR:17:SER:HB2	20:AR:54:ARG:HH21	1.85	0.41
22:AT:23:ARG:NH1	22:AT:23:ARG:HG2	2.35	0.41
2:AW:52:U:O2'	2:AW:53:G:H5'	2.21	0.41
23:B0:1073:G:H2'	23:B0:1073:G:N3	2.35	0.41
23:B0:1447:U:H1'	23:B0:1577:G:H22	1.86	0.41
23:B0:1528:C:H3'	23:B0:1529:C:H5''	2.02	0.41
23:B0:1683:G:H2'	23:B0:1684:G:H5'	2.02	0.41
23:B0:1889:G:H2'	23:B0:1890:G:C8	2.55	0.41
23:B0:2459:C:C2'	23:B0:2460:G:H5'	2.51	0.41
23:B0:2676:G:H2'	23:B0:2677:U:C6	2.56	0.41
23:B0:328:A:O2'	23:B0:329:C:H5'	2.20	0.41
23:B0:3877:A:C1'	55:B5:196:VAL:CA	2.98	0.41
23:B0:895:G:H2'	23:B0:896:C:O4'	2.20	0.41
1:AA:1061:G:C2'	1:AA:1062:U:H5'	2.50	0.41
1:AA:1112:C:C2	5:AC:178:LEU:CA	3.04	0.41
1:AA:1138:G:N1	1:AA:1140:C:C2	2.89	0.41
1:AA:115:G:H1'	1:AA:116:A:C8	2.55	0.41
1:AA:162:A:H2'	1:AA:163:C:O4'	2.20	0.41
1:AA:19:C:O2'	1:AA:20:U:H5'	2.20	0.41
1:AA:522:C:O2'	1:AA:523:A:H5'	2.19	0.41
1:AA:550:G:O2'	1:AA:551:U:H5'	2.20	0.41
1:AA:588:G:C4	1:AA:753:A:N1	2.88	0.41
1:AA:21:G:C4'	1:AA:914:A:N6	2.81	0.41
1:AA:944:G:C3'	1:AA:945:G:H5'	2.50	0.41
9:AG:45:ASP:O	9:AG:49:ILE:HG13	2.20	0.41
10:AH:51:VAL:CG1	10:AH:52:ASP:N	2.83	0.41
11:AI:110:GLU:OE2	11:AI:113:LYS:NZ	2.53	0.41
13:AK:99:GLN:HG2	13:AK:105:VAL:HG21	2.02	0.41
13:AK:127:LYS:HD3	13:AK:127:LYS:HA	1.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AK:21:ILE:HD12	13:AK:95:ILE:HG12	2.01	0.41
13:AK:54:ARG:H	13:AK:54:ARG:HG2	1.47	0.41
14:AL:48:PRO:CG	14:AL:49:ASN:H	2.25	0.41
2:AV:34:G:OP1	2:AV:34:G:C8	2.64	0.41
23:B0:31:C:H5''	23:B0:1252:C:OP1	2.20	0.41
23:B0:1679:U:H3'	23:B0:1680:U:C5'	2.45	0.41
23:B0:1880:G:H2'	23:B0:1881:U:C6	2.55	0.41
23:B0:1912:G:O4'	23:B0:1913:G:C8	2.72	0.41
23:B0:2448:A:C2'	23:B0:2449:G:H5'	2.50	0.41
23:B0:3865:A:C4	23:B0:3875:A:N1	2.89	0.41
23:B0:601:A:H3'	23:B0:602:C:H5'	2.03	0.41
23:B0:773:G:H2'	23:B0:774:A:O4'	2.21	0.41
1:AA:1239:A:H2'	1:AA:1298:C:H42	1.83	0.41
1:AA:1453:G:H2'	1:AA:1454:G:O4'	2.21	0.41
1:AA:252:U:O2	1:AA:275:G:C4	2.74	0.41
1:AA:285:G:O2'	1:AA:286:G:H5'	2.21	0.41
1:AA:382:A:C2	1:AA:383:A:C4	3.09	0.41
1:AA:449:C:O2	18:AP:42:ARG:HD2	2.20	0.41
1:AA:653:A:N9	10:AH:56:LYS:CG	2.73	0.41
1:AA:692:U:OP1	13:AK:124:LYS:CE	2.63	0.41
1:AA:844:A:H2'	1:AA:845:A:H8	1.86	0.41
1:AA:848:G:C3'	1:AA:849:C:O4'	2.68	0.41
1:AA:923:A:H1'	1:AA:1398:A:C2'	2.51	0.41
4:AB:10:LEU:C	4:AB:12:GLU:N	2.72	0.41
4:AB:228:GLY:O	4:AB:229:VAL:C	2.58	0.41
10:AH:126:LYS:O	10:AH:128:GLY:N	2.54	0.41
13:AK:65:ALA:O	13:AK:68:ALA:HB3	2.20	0.41
16:AN:39:LEU:HD11	16:AN:47:LEU:HD12	2.02	0.41
18:AP:82:GLN:O	18:AP:83:GLU:C	2.59	0.41
1:AA:262:A:H5''	22:AT:76:ALA:H	1.85	0.41
23:B0:1055:A:H2	23:B0:1121:G:H2'	1.83	0.41
23:B0:1204:G:H2'	23:B0:1205:G:C8	2.55	0.41
23:B0:1579:G:H2'	23:B0:1580:C:C6	2.56	0.41
23:B0:1912:G:H3'	23:B0:1912:G:N3	2.35	0.41
23:B0:2440:C:H1'	23:B0:2471:U:N3	2.32	0.41
23:B0:2710:C:O2'	23:B0:2711:G:H5'	2.20	0.41
23:B0:2756:A:H1'	23:B0:2758:A:N7	2.36	0.41
23:B0:2796:A:H2'	23:B0:2797:G:O4'	2.20	0.41
23:B0:567:G:H2'	23:B0:568:G:C8	2.56	0.41
23:B0:59:G:O6	23:B0:62:U:H2'	2.19	0.41
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1430:C:H5'	23:B0:1721:G:C5'	2.49	0.41
1:AA:1431:C:H2'	1:AA:1432:G:O4'	2.21	0.41
1:AA:1497:G:H21	1:AA:1519:A:C1'	2.26	0.41
1:AA:165:C:H2'	1:AA:166:G:H8	1.86	0.41
1:AA:419:C:H5''	1:AA:513:C:C4'	2.49	0.41
1:AA:456:A:C6	1:AA:477:G:N9	2.88	0.41
1:AA:676:A:H4'	13:AK:114:VAL:C	2.41	0.41
1:AA:7:G:H5'	1:AA:298:A:O4'	2.20	0.41
1:AA:944:G:C3'	1:AA:945:G:C5'	2.98	0.41
4:AB:60:ASP:O	4:AB:64:ARG:HB2	2.20	0.41
5:AC:134:ILE:HD13	5:AC:166:GLU:HB3	2.01	0.41
5:AC:187:ALA:O	5:AC:198:VAL:N	2.52	0.41
6:AD:130:GLY:O	6:AD:131:ARG:C	2.58	0.41
6:AD:62:GLN:HE22	6:AD:65:ARG:NH1	2.18	0.41
7:AE:80:ILE:HD12	7:AE:91:LEU:HB2	2.00	0.41
10:AH:125:ARG:HE	10:AH:125:ARG:HB2	1.68	0.41
10:AH:126:LYS:C	10:AH:128:GLY:N	2.73	0.41
11:AI:110:GLU:HG2	11:AI:113:LYS:NZ	2.35	0.41
11:AI:120:ARG:O	11:AI:122:ALA:N	2.53	0.41
9:AG:16:LEU:HG	11:AI:41:VAL:HG12	2.01	0.41
13:AK:104:GLN:OE1	13:AK:106:LYS:HE2	2.19	0.41
13:AK:95:ILE:O	13:AK:95:ILE:HG22	2.20	0.41
16:AN:3:ARG:NH1	16:AN:6:LEU:CD1	2.84	0.41
19:AQ:104:LYS:HB2	23:B0:726:G:C5	2.55	0.41
19:AQ:95:TYR:HA	19:AQ:98:LEU:HD11	2.02	0.41
1:AA:322:C:O2'	22:AT:23:ARG:HB2	2.21	0.41
22:AT:54:LYS:HA	22:AT:57:ARG:HD3	2.02	0.41
23:B0:1007:A:H2'	23:B0:1008:G:H8	1.84	0.41
23:B0:1962:C:H2'	23:B0:1963:G:H8	1.84	0.41
23:B0:365:U:H2'	23:B0:366:U:C6	2.56	0.41
23:B0:643:A:H2'	23:B0:644:A:C8	2.56	0.41
23:B0:870:C:H2'	23:B0:871:U:C6	2.56	0.41
23:B0:974:U:H2'	23:B0:975:C:C6	2.55	0.41
2:AV:64:A:OP1	45:BU:7:VAL:CA	2.68	0.41
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.20	0.41
1:AA:115:G:H1'	1:AA:116:A:N7	2.35	0.41
1:AA:1108:G:H5'	1:AA:1191:A:H4'	2.03	0.41
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.21	0.41
1:AA:689:C:OP1	13:AK:27:ASN:ND2	2.48	0.41
1:AA:867:G:O2'	1:AA:868:C:H5'	2.20	0.41
5:AC:7:PRO:HG2	5:AC:184:TYR:CB	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AD:108:LEU:HD23	6:AD:108:LEU:HA	1.86	0.41
13:AK:86:GLY:N	13:AK:112:THR:HG23	2.35	0.41
15:AM:46:LYS:HE3	15:AM:46:LYS:HB2	1.86	0.41
17:AO:34:LEU:C	17:AO:34:LEU:HD23	2.40	0.41
17:AO:57:LEU:HD12	17:AO:57:LEU:HA	1.86	0.41
18:AP:19:ILE:HG22	18:AP:36:ILE:CG1	2.51	0.41
1:AA:259:G:H5''	22:AT:87:LYS:NZ	2.35	0.41
2:AV:75:C:N3	23:B0:2230:G:C2	2.86	0.41
23:B0:1018:C:H2'	23:B0:1019:U:H5	1.86	0.41
23:B0:128:C:C3'	23:B0:129:A:H5''	2.50	0.41
23:B0:1332:G:H2'	23:B0:1333:G:O4'	2.21	0.41
23:B0:1354:A:O2'	23:B0:1355:A:OP1	2.29	0.41
23:B0:178:C:H4'	23:B0:399:G:C2	2.56	0.41
23:B0:1915:A:H2'	23:B0:1916:G:O4'	2.21	0.41
23:B0:1948:C:H2'	23:B0:1949:A:N7	2.36	0.41
23:B0:909:C:H2'	23:B0:910:U:H6	1.85	0.41
1:AA:1263:C:H2'	1:AA:1264:C:C6	2.56	0.41
1:AA:182:U:OP2	1:AA:183:G:C8	2.74	0.41
1:AA:2003:G:H2'	1:AA:1004:A:H4'	2.02	0.41
1:AA:355:C:C5'	1:AA:389:A:OP2	2.69	0.41
1:AA:502:G:H2'	1:AA:503:C:C6	2.56	0.41
1:AA:948:C:O2'	1:AA:949:A:H5'	2.21	0.41
4:AB:165:VAL:O	4:AB:187:LEU:O	2.38	0.41
1:AA:1113:C:C1'	5:AC:178:LEU:HD21	2.46	0.41
7:AE:9:LYS:HG3	7:AE:112:LEU:HD11	2.03	0.41
10:AH:6:ILE:O	10:AH:10:LEU:HG	2.20	0.41
12:AJ:80:LYS:HA	12:AJ:83:GLU:HB2	2.03	0.41
14:AL:27:LEU:HB3	14:AL:62:SER:HB2	2.03	0.41
15:AM:36:LYS:C	15:AM:38:GLY:H	2.24	0.41
17:AO:74:ASP:OD1	17:AO:76:GLU:HB3	2.21	0.41
17:AO:81:LEU:HD22	17:AO:85:LEU:HD12	2.03	0.41
2:AV:11:C:H4'	23:B0:1892:C:C4'	2.50	0.41
23:B0:139:A:H2'	23:B0:140:G:C8	2.56	0.41
23:B0:1566:G:H2'	23:B0:1567:A:C8	2.56	0.41
23:B0:2395:C:H2'	23:B0:2396:C:C5'	2.51	0.41
23:B0:675:C:H5''	34:BJ:26:THR:CA	2.51	0.41
23:B0:753:U:C2'	23:B0:754:G:H5'	2.51	0.41
1:AA:1059:C:O2'	12:AJ:53:PRO:CD	2.69	0.41
1:AA:1278:U:H5''	1:AA:1279:A:O5'	2.17	0.41
1:AA:1390:U:H2'	1:AA:1391:U:H6	1.85	0.41
1:AA:1457:A:C8	1:AA:1459:C:C4	3.06	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:330:C:H5''	1:AA:330:C:H6	1.86	0.41
1:AA:367:U:C3'	1:AA:368:U:P	3.05	0.41
1:AA:371:G:C2'	1:AA:372:C:H5'	2.51	0.41
1:AA:37:U:H4'	1:AA:500:G:O3'	2.20	0.41
1:AA:47:C:C6	1:AA:365:U:H2'	2.56	0.41
1:AA:757:U:OP1	1:AA:823:G:H4'	2.21	0.41
1:AA:920:U:O4'	1:AA:1080:A:N1	2.54	0.41
1:AA:939:G:C6	1:AA:940:C:N4	2.89	0.41
4:AB:95:GLN:C	4:AB:96:ARG:HD2	2.40	0.41
15:AM:37:THR:HG23	15:AM:55:ARG:HB2	2.03	0.41
18:AP:6:LEU:HD12	18:AP:6:LEU:N	2.36	0.41
21:AS:25:LYS:N	21:AS:25:LYS:HD2	2.34	0.41
23:B0:1196:G:H2'	23:B0:1197:U:C5'	2.51	0.41
1:AA:1430:C:C4'	23:B0:1721:G:C5'	2.93	0.41
23:B0:1760:G:H2'	23:B0:1761:G:C8	2.56	0.41
23:B0:187:U:H2'	23:B0:188:G:C8	2.56	0.41
23:B0:2028:C:O2'	23:B0:2029:G:H5'	2.21	0.41
23:B0:2212:U:H2'	23:B0:2213:G:C8	2.55	0.41
23:B0:239:A:H2'	23:B0:240:U:O4'	2.20	0.41
23:B0:2491:C:H2'	23:B0:2492:G:C5'	2.45	0.41
23:B0:2811:G:H2'	23:B0:2812:A:C8	2.55	0.41
23:B0:477:A:C2'	23:B0:478:G:H5'	2.51	0.41
23:B0:478:G:O2'	23:B0:479:G:H5'	2.20	0.41
23:B0:644:A:C2'	23:B0:645:G:H5'	2.50	0.41
23:B0:810:U:H2'	23:B0:811:G:H8	1.85	0.41
23:B0:831:G:H21	23:B0:1203:A:N6	2.04	0.41
23:B0:967:G:H1'	23:B0:970:A:H62	1.86	0.41
1:AA:992:U:H2'	1:AA:1043:C:C5	2.54	0.41
1:AA:1126:U:H6	1:AA:1126:U:P	2.43	0.41
1:AA:1152:A:H2'	1:AA:1153:C:H6	1.83	0.41
1:AA:1184:G:H2'	1:AA:1185:G:C8	2.56	0.41
1:AA:1440:C:H2'	1:AA:1441:G:C5'	2.48	0.41
1:AA:406:G:C8	1:AA:496:A:C2	3.09	0.41
1:AA:824:C:H2'	1:AA:825:G:C8	2.56	0.41
1:AA:835:U:H5''	20:AR:64:ARG:NH1	2.30	0.41
1:AA:836:G:C6	1:AA:851:G:C6	3.09	0.41
4:AB:134:GLU:O	4:AB:138:LEU:HG	2.21	0.41
4:AB:15:VAL:HG11	4:AB:210:SER:N	2.36	0.41
5:AC:79:ARG:CG	5:AC:82:GLU:HG2	2.51	0.41
5:AC:77:ILE:O	5:AC:83:ARG:HB3	2.21	0.41
6:AD:7:PRO:CB	6:AD:10:ARG:HD2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AH:82:HIS:O	10:AH:83:ILE:HB	2.21	0.41
12:AJ:29:ARG:C	12:AJ:84:GLN:HE22	2.24	0.41
23:B0:1004:A:C2'	23:B0:1005:U:H5''	2.46	0.41
23:B0:1119:U:N3	23:B0:1120:C:N4	2.60	0.41
23:B0:147:G:C2	23:B0:148:C:H1'	2.56	0.41
23:B0:1542:G:H21	23:B0:1561:A:H62	1.69	0.41
23:B0:2018:G:H3'	23:B0:2019:C:H5'	2.03	0.41
23:B0:2239:C:O2'	23:B0:2240:C:H5'	2.21	0.41
23:B0:2526:U:H2'	23:B0:2527:G:C8	2.55	0.41
23:B0:2562:G:H2'	23:B0:2563:U:O4'	2.20	0.41
23:B0:2620:G:H2'	23:B0:2621:G:H8	1.86	0.41
23:B0:3177:C:O2'	23:B0:3178:C:H5'	2.19	0.41
23:B0:514:G:C2'	23:B0:514:G:N3	2.82	0.41
23:B0:658:G:H4'	23:B0:2331:A:C5'	2.50	0.41
23:B0:776:G:N3	23:B0:776:G:H3'	2.36	0.41
23:B0:811:G:O2'	23:B0:812:G:H5'	2.21	0.41
1:AA:1053:G:C3'	1:AA:1054:C:C5'	2.99	0.41
1:AA:1060:C:C5'	12:AJ:52:GLY:N	2.84	0.41
1:AA:1213:A:N1	1:AA:1215:G:H1'	2.35	0.41
1:AA:1250:A:C5'	11:AI:68:GLY:O	2.67	0.41
1:AA:1350:A:P	11:AI:121:ARG:HG3	2.61	0.41
1:AA:13:U:C2	1:AA:914:A:H3'	2.53	0.41
1:AA:38:G:H3'	1:AA:39:G:P	2.61	0.41
1:AA:562:C:O2'	14:AL:17:LYS:HE3	2.20	0.41
1:AA:930:C:O2'	1:AA:931:C:H5'	2.20	0.41
1:AA:952:U:H2'	1:AA:953:G:H8	1.85	0.41
4:AB:125:PRO:HG2	4:AB:126:GLU:H	1.86	0.41
4:AB:14:GLY:O	4:AB:15:VAL:CG2	2.69	0.41
4:AB:53:ARG:NH1	4:AB:199:TYR:HD2	2.19	0.41
5:AC:174:PRO:HB2	5:AC:177:THR:CG2	2.50	0.41
5:AC:191:THR:HG22	5:AC:193:TYR:N	2.23	0.41
8:AF:33:TYR:HA	8:AF:71:ARG:NH2	2.36	0.41
12:AJ:96:ILE:CG2	12:AJ:97:GLU:H	2.25	0.41
13:AK:50:TYR:N	13:AK:50:TYR:CD2	2.84	0.41
14:AL:28:LYS:CG	14:AL:33:ARG:HH12	2.34	0.41
15:AM:63:THR:HG23	15:AM:64:TRP:CD2	2.56	0.41
15:AM:69:GLU:O	15:AM:72:ALA:HB3	2.21	0.41
17:AO:26:GLU:HA	17:AO:81:LEU:HD11	2.03	0.41
17:AO:39:LEU:HD12	17:AO:59:MET:HE2	2.02	0.41
17:AO:38:ARG:O	17:AO:41:GLU:HB3	2.20	0.41
20:AR:39:VAL:CG1	20:AR:40:LEU:N	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AS:67:VAL:HG12	21:AS:68:GLY:N	2.35	0.41
1:AA:1314:C:H5	21:AS:6:LYS:HG3	1.85	0.41
2:AW:25:C:C4	2:AW:26:G:C5	3.09	0.41
23:B0:108:G:H2'	23:B0:109:A:C8	2.56	0.41
23:B0:1194:U:O2'	23:B0:1195:U:P	2.79	0.41
23:B0:1682:A:H2'	23:B0:1683:G:C8	2.56	0.41
23:B0:1906:U:H2'	23:B0:1907:C:C6	2.56	0.41
23:B0:2447:G:H2'	23:B0:2448:A:H5'	2.02	0.41
19:AQ:105:ALA:HA	23:B0:727:U:H4'	2.00	0.41
23:B0:769:C:H2'	23:B0:770:U:O4'	2.21	0.41
23:B0:819:C:H2'	23:B0:820:U:C6	2.56	0.41
23:B0:856:A:H2'	23:B0:857:U:O4'	2.21	0.41
23:B0:878:C:N4	23:B0:921:A:H62	2.07	0.41
1:AA:1124:G:C8	1:AA:1145:C:C5	3.09	0.40
1:AA:1091:U:OP1	1:AA:1172:C:H5'	2.20	0.40
1:AA:1285:A:O2'	1:AA:1286:A:OP2	2.36	0.40
1:AA:1315:U:H5	21:AS:6:LYS:NZ	2.19	0.40
1:AA:1350:A:C6	1:AA:1351:U:N3	2.89	0.40
1:AA:1372:U:OP1	11:AI:71:SER:HB3	2.21	0.40
1:AA:1426:C:H2'	1:AA:1427:U:H6	1.84	0.40
1:AA:1475:G:C3'	23:B0:1706:A:H4'	2.51	0.40
1:AA:246:A:C4'	1:AA:247:G:C4'	2.91	0.40
1:AA:373:A:H2'	1:AA:374:A:H8	1.85	0.40
1:AA:216:C:C5'	1:AA:466:A:N6	2.77	0.40
1:AA:502:G:H2'	1:AA:503:C:H6	1.84	0.40
1:AA:427:U:C1'	1:AA:541:G:OP1	2.65	0.40
1:AA:547:A:OP1	1:AA:548:G:OP1	2.39	0.40
1:AA:567:G:H2'	1:AA:568:G:O4'	2.21	0.40
1:AA:702:A:N7	23:B0:1839:A:O3'	2.51	0.40
1:AA:864:A:H2'	1:AA:865:A:C8	2.56	0.40
5:AC:108:ASN:C	5:AC:110:ASN:N	2.73	0.40
5:AC:191:THR:HG21	5:AC:193:TYR:CE2	2.56	0.40
5:AC:65:ALA:O	5:AC:66:VAL:HB	2.21	0.40
5:AC:67:THR:HG22	5:AC:67:THR:O	2.21	0.40
5:AC:95:THR:C	5:AC:97:LYS:N	2.73	0.40
7:AE:24:ARG:O	7:AE:25:ARG:HG2	2.20	0.40
8:AF:48:LEU:HD13	8:AF:52:ILE:CD1	2.51	0.40
8:AF:79:LEU:O	8:AF:85:VAL:HG11	2.22	0.40
9:AG:114:ARG:HH11	9:AG:114:ARG:CG	2.32	0.40
13:AK:98:LEU:HD23	13:AK:98:LEU:HA	1.82	0.40
14:AL:53:ARG:CB	14:AL:93:LEU:HD11	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AM:96:LEU:O	15:AM:110:ARG:NH1	2.54	0.40
1:AA:750:G:N3	17:AO:23:GLY:HA3	2.37	0.40
20:AR:44:LEU:HD22	20:AR:48:GLY:O	2.21	0.40
23:B0:1223:G:N2	23:B0:1225:G:H21	2.13	0.40
23:B0:1234:C:H2'	23:B0:1235:C:C6	2.57	0.40
23:B0:1686:A:C2'	23:B0:1687:C:H5'	2.52	0.40
1:AA:1474:G:C1'	23:B0:1705:U:H4'	2.51	0.40
23:B0:2023:C:H2'	23:B0:2024:U:C6	2.56	0.40
23:B0:2027:C:H2'	23:B0:2028:C:C6	2.55	0.40
23:B0:2240:C:H2'	23:B0:2241:U:C5'	2.50	0.40
23:B0:820:U:H5'	23:B0:2424:G:H4'	2.04	0.40
23:B0:2522:G:O2'	23:B0:2523:G:H5'	2.21	0.40
23:B0:2524:G:H2'	23:B0:2525:U:O4'	2.21	0.40
23:B0:3127:G:N3	23:B0:3173:A:N3	2.69	0.40
23:B0:930:A:H5'	23:B0:931:G:C8	2.57	0.40
1:AA:1014:A:C6	21:AS:34:TRP:NE1	2.87	0.40
1:AA:1020:U:H2'	1:AA:1021:G:C8	2.50	0.40
1:AA:1415:G:O2'	1:AA:1416:G:H5'	2.21	0.40
1:AA:359:U:H2'	1:AA:360:A:C8	2.57	0.40
1:AA:467:U:H2'	1:AA:467:U:O2	2.21	0.40
1:AA:476:U:C6	1:AA:477:G:O5'	2.73	0.40
1:AA:519:C:H2'	1:AA:520:A:C8	2.56	0.40
1:AA:883:C:O2'	1:AA:884:U:H5'	2.21	0.40
1:AA:893:C:C2	1:AA:894:G:N7	2.88	0.40
1:AA:913:A:H1'	1:AA:914:A:O4'	2.21	0.40
1:AA:94:G:O6	1:AA:96:C:N4	2.55	0.40
4:AB:107:THR:C	4:AB:109:SER:N	2.75	0.40
5:AC:110:ASN:ND2	5:AC:140:ARG:HB3	2.21	0.40
1:AA:1056:U:H5'	5:AC:163:ALA:HB2	2.02	0.40
6:AD:194:LEU:HD22	6:AD:194:LEU:N	2.37	0.40
7:AE:118:ILE:HG22	7:AE:119:LEU:O	2.21	0.40
1:AA:1346:A:C2	9:AG:10:ARG:CZ	3.03	0.40
1:AA:1241:G:OP1	9:AG:35:LYS:NZ	2.53	0.40
12:AJ:75:ILE:O	12:AJ:76:ASN:HB2	2.21	0.40
13:AK:48:ILE:O	13:AK:49:GLY:C	2.59	0.40
14:AL:46:LYS:NZ	14:AL:47:LYS:HE3	2.36	0.40
18:AP:17:TYR:N	18:AP:17:TYR:CD1	2.89	0.40
1:AA:1459:C:OP2	22:AT:28:ALA:O	2.40	0.40
22:AT:92:LEU:O	22:AT:96:GLY:HA3	2.21	0.40
23:B0:1474:A:C2'	23:B0:1475:U:H5'	2.47	0.40
1:AA:1473:A:H1'	23:B0:1719:G:H1'	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B0:174:A:H2'	23:B0:175:C:O4'	2.21	0.40
23:B0:1770:U:H2'	23:B0:1774:A:H62	1.86	0.40
23:B0:2048:C:H2'	23:B0:2049:C:C6	2.56	0.40
23:B0:2236:U:H2'	23:B0:2237:C:C5'	2.47	0.40
23:B0:3119:A:O2'	23:B0:3121:G:OP2	2.35	0.40
23:B0:420:C:H2'	23:B0:421:G:C8	2.57	0.40
23:B0:552:C:C2'	23:B0:553:C:H4'	2.46	0.40
23:B0:699:G:N3	23:B0:699:G:H3'	2.35	0.40
24:B9:56:G:H2'	24:B9:57:U:O4'	2.22	0.40
24:B9:63:A:H2'	24:B9:64:C:C6	2.55	0.40
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.50	0.40
1:AA:1129:C:OP1	11:AI:62:TYR:CE2	2.75	0.40
1:AA:1257:U:H4'	1:AA:1258:G:C5'	2.50	0.40
1:AA:1261:A:C1'	1:AA:1283:G:C5'	2.98	0.40
1:AA:1286:A:H2'	1:AA:1287:A:O5'	2.21	0.40
1:AA:131:C:H4'	1:AA:262:A:C2'	2.51	0.40
1:AA:1392:G:H2'	1:AA:1393:U:H6	1.86	0.40
1:AA:155:C:H2'	1:AA:156:G:C8	2.57	0.40
1:AA:43:C:H2'	1:AA:44:G:O4'	2.21	0.40
1:AA:475:C:H2'	1:AA:476:U:H6	1.84	0.40
1:AA:961:U:O2'	1:AA:962:C:H5'	2.20	0.40
4:AB:14:GLY:O	4:AB:15:VAL:HG22	2.21	0.40
4:AB:90:MET:HA	4:AB:91:PRO:HD3	1.70	0.40
6:AD:163:GLU:O	6:AD:166:LYS:HG3	2.22	0.40
10:AH:18:ARG:HD2	10:AH:18:ARG:N	2.36	0.40
11:AI:117:HIS:C	11:AI:118:LYS:HG3	2.42	0.40
17:AO:71:GLN:O	17:AO:72:ARG:C	2.59	0.40
1:AA:958:A:N9	21:AS:55:LYS:HD2	2.33	0.40
23:B0:1337:G:H1'	23:B0:1632:A:C6	2.56	0.40
23:B0:1354:A:C2	23:B0:1411:C:H4'	2.56	0.40
23:B0:2048:C:H2'	23:B0:2049:C:H6	1.87	0.40
23:B0:2370:G:H2'	23:B0:2371:A:H2	1.87	0.40
23:B0:2437:G:H2'	23:B0:2469:G:N1	2.37	0.40
23:B0:2532:G:H1'	23:B0:2561:G:N3	2.36	0.40
23:B0:521:U:C2'	23:B0:522:G:H5'	2.51	0.40
1:AA:1061:G:C5'	12:AJ:56:HIS:CB	2.47	0.40
1:AA:1094:G:OP2	1:AA:1095:U:C5	2.74	0.40
1:AA:1104:G:OP1	4:AB:111:ARG:HD2	2.22	0.40
1:AA:1300:G:C2'	1:AA:1301:U:OP2	2.69	0.40
1:AA:1346:A:N6	1:AA:1375:A:OP2	2.48	0.40
1:AA:1499:A:C4'	1:AA:1520:G:C4'	2.99	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:322:C:O2	22:AT:19:SER:CB	2.70	0.40
1:AA:599:C:O2'	1:AA:600:C:H5'	2.22	0.40
1:AA:965:A:O2'	1:AA:966:G:P	2.80	0.40
5:AC:126:ARG:O	5:AC:127:ARG:HB2	2.21	0.40
1:AA:1112:C:C4	5:AC:178:LEU:HB3	2.55	0.40
5:AC:91:LEU:HD11	5:AC:99:VAL:HG22	2.03	0.40
6:AD:100:ARG:HB3	6:AD:102:ASP:OD1	2.22	0.40
9:AG:104:LEU:HD23	9:AG:134:ALA:HB1	2.04	0.40
12:AJ:23:ILE:CD1	12:AJ:23:ILE:N	2.85	0.40
13:AK:67:ASP:OD2	13:AK:71:LYS:HE3	2.21	0.40
15:AM:40:ASN:ND2	15:AM:41:PRO:N	2.64	0.40
17:AO:17:ARG:CG	17:AO:17:ARG:NH1	2.84	0.40
19:AQ:93:GLN:O	19:AQ:96:GLN:HB3	2.22	0.40
2:AW:75:C:C4	23:B0:2533:U:C2	3.05	0.40
23:B0:1026:U:H2'	23:B0:1027:C:C6	2.56	0.40
23:B0:211:U:H2'	23:B0:212:U:O4'	2.22	0.40
23:B0:2372:A:H2'	23:B0:2373:C:C6	2.56	0.40
23:B0:2519:C:H2'	23:B0:2520:A:O4'	2.21	0.40
23:B0:1686:A:O2'	23:B0:2528:G:H5'	2.22	0.40
23:B0:3172:U:O2'	23:B0:3173:A:H5'	2.21	0.40
23:B0:3196:G:O3'	23:B0:3197:U:P	2.80	0.40
23:B0:340:G:O4'	23:B0:488:A:H1'	2.22	0.40
23:B0:35:G:H1'	23:B0:466:A:H1'	2.04	0.40
23:B0:69:G:HO2'	23:B0:70:A:P	2.45	0.40
23:B0:718:A:N6	23:B0:739:G:H4'	2.37	0.40
23:B0:738:G:H2'	23:B0:739:G:H5'	2.02	0.40
23:B0:79:G:H1'	23:B0:356:A:C2	2.57	0.40
23:B0:878:C:O2'	23:B0:879:A:P	2.80	0.40
24:B9:110:U:O2'	24:B9:111:C:H5'	2.21	0.40
1:AA:1021:G:H2'	1:AA:1022:G:H5'	2.04	0.40
1:AA:1380:U:O2'	1:AA:1381:U:OP2	2.36	0.40
1:AA:1437:C:H2'	1:AA:1438:G:H8	1.86	0.40
1:AA:202:G:C4'	1:AA:469:C:P	3.01	0.40
1:AA:264:U:H1'	19:AQ:64:PRO:N	2.33	0.40
1:AA:473:C:C2'	1:AA:474:U:H5'	2.52	0.40
1:AA:748:C:OP2	1:AA:748:C:H6	2.05	0.40
4:AB:47:THR:HG23	4:AB:202:PRO:O	2.21	0.40
4:AB:9:GLU:O	4:AB:48:MET:SD	2.80	0.40
7:AE:76:ILE:HG23	7:AE:77:PRO:HD2	2.04	0.40
8:AF:48:LEU:HD13	8:AF:52:ILE:HD12	2.03	0.40
8:AF:78:GLU:HA	8:AF:81:ILE:CD1	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AG:32:ARG:O	9:AG:33:ASP:HB2	2.22	0.40
11:AI:10:ARG:O	11:AI:11:LYS:C	2.60	0.40
11:AI:121:ARG:HD3	11:AI:121:ARG:C	2.42	0.40
12:AJ:44:VAL:HG11	12:AJ:46:ARG:NH1	2.37	0.40
12:AJ:59:SER:O	12:AJ:60:ARG:HB2	2.20	0.40
12:AJ:3:LYS:CG	12:AJ:75:ILE:HG23	2.50	0.40
18:AP:34:GLU:HG2	18:AP:35:LYS:N	2.36	0.40
19:AQ:84:LEU:HD23	19:AQ:84:LEU:HA	1.89	0.40
19:AQ:97:SER:O	19:AQ:99:SER:N	2.53	0.40
2:AW:16:U:O4'	2:AW:16:U:O2	2.40	0.40
23:B0:1197:U:H2'	23:B0:1198:C:O4'	2.21	0.40
23:B0:1452:U:H5'	23:B0:1532:A:O2'	2.21	0.40
23:B0:2809:A:N6	23:B0:2854:G:H2'	2.36	0.40
23:B0:2862:G:O2'	23:B0:2863:U:H5'	2.22	0.40
23:B0:3184:C:H2'	23:B0:3185:U:H5''	1.98	0.40
23:B0:3877:A:C8	23:B0:3877:A:C4'	3.04	0.40
23:B0:3877:A:O5'	23:B0:1861:G:P	2.80	0.40
23:B0:57:G:C2'	23:B0:58:C:H5''	2.47	0.40
23:B0:70:A:H4'	23:B0:72:A:OP1	2.22	0.40

All (12) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AD:172:PRO:O	8:AF:15:ASP:CB[3_555]	1.18	1.02
1:AA:416:G:C4'	23:B0:3153:G:O2'[3_555]	1.79	0.41
6:AD:172:PRO:O	8:AF:15:ASP:CA[3_555]	1.87	0.33
1:AA:416:G:O2'	23:B0:3153:G:O2'[3_555]	1.87	0.33
6:AD:186:LEU:CD1	8:AF:15:ASP:OD2[3_555]	1.91	0.29
23:B0:2769:C:C5	23:B0:2877:A:C6[16_555]	2.07	0.13
23:B0:2769:C:N4	23:B0:2877:A:N3[16_555]	2.08	0.12
1:AA:415:A:O2'	23:B0:3152:G:O2'[3_555]	2.13	0.07
23:B0:1:G:N3	23:B0:2770:A:N6[16_555]	2.14	0.06
6:AD:186:LEU:CD1	8:AF:15:ASP:CG[3_555]	2.17	0.03
1:AA:416:G:C3'	23:B0:3153:G:O2'[3_555]	2.17	0.03
1:AA:416:G:C4'	23:B0:3153:G:C1'[3_555]	2.19	0.01

## 5.3 Torsion angles

### 5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	AB	232/234 (99%)	174 (75%)	34 (15%)	24 (10%)	0	8
5	AC	204/206 (99%)	135 (66%)	40 (20%)	29 (14%)	0	4
6	AD	206/208 (99%)	166 (81%)	31 (15%)	9 (4%)	2	22
7	AE	148/150 (99%)	130 (88%)	13 (9%)	5 (3%)	3	26
8	AF	99/101 (98%)	79 (80%)	19 (19%)	1 (1%)	15	55
9	AG	153/155 (99%)	127 (83%)	16 (10%)	10 (6%)	1	16
10	AH	136/138 (99%)	125 (92%)	7 (5%)	4 (3%)	4	29
11	AI	125/127 (98%)	89 (71%)	26 (21%)	10 (8%)	1	12
12	AJ	96/98 (98%)	59 (62%)	20 (21%)	17 (18%)	0	3
13	AK	117/119 (98%)	88 (75%)	20 (17%)	9 (8%)	1	13
14	AL	122/124 (98%)	98 (80%)	15 (12%)	9 (7%)	1	14
15	AM	123/125 (98%)	88 (72%)	27 (22%)	8 (6%)	1	16
16	AN	58/60 (97%)	40 (69%)	11 (19%)	7 (12%)	0	6
17	AO	86/88 (98%)	70 (81%)	11 (13%)	5 (6%)	1	18
18	AP	81/83 (98%)	65 (80%)	15 (18%)	1 (1%)	13	50
19	AQ	102/104 (98%)	84 (82%)	10 (10%)	8 (8%)	1	13
20	AR	71/73 (97%)	62 (87%)	7 (10%)	2 (3%)	5	30
21	AS	78/80 (98%)	48 (62%)	19 (24%)	11 (14%)	0	4
22	AT	97/99 (98%)	65 (67%)	20 (21%)	12 (12%)	0	5
All	All	2334/2372 (98%)	1792 (77%)	361 (16%)	181 (8%)	1	13

All (181) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	AB	9	GLU
4	AB	15	VAL

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Mol	Chain	Res	Type
4	AB	16	HIS
4	AB	17	PHE
4	AB	21	ARG
4	AB	24	TRP
5	AC	4	LYS
5	AC	15	THR
5	AC	16	ARG
5	AC	26	LYS
5	AC	47	LEU
5	AC	61	ALA
5	AC	62	ASP
5	AC	97	LYS
5	AC	101	LEU
5	AC	146	ALA
5	AC	154	SER
5	AC	179	ARG
5	AC	189	ALA
6	AD	29	PRO
6	AD	36	ARG
7	AE	16	THR
7	AE	153	LYS
9	AG	7	ALA
9	AG	155	ARG
10	AH	24	THR
10	AH	83	ILE
10	AH	91	ARG
11	AI	88	TYR
12	AJ	32	ALA
12	AJ	39	PRO
12	AJ	54	PHE
12	AJ	57	LYS
12	AJ	79	ARG
12	AJ	86	MET
13	AK	57	THR
13	AK	127	LYS
14	AL	27	LEU
14	AL	28	LYS
14	AL	47	LYS
15	AM	63	THR
15	AM	67	GLU
15	AM	121	LYS
15	AM	122	LYS

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Mol	Chain	Res	Type
15	AM	124	PRO
16	AN	22	THR
16	AN	29	ARG
17	AO	88	ARG
19	AQ	69	LYS
19	AQ	80	GLY
19	AQ	81	ARG
19	AQ	96	GLN
19	AQ	98	LEU
19	AQ	104	LYS
20	AR	87	ARG
21	AS	6	LYS
21	AS	71	LEU
22	AT	11	SER
22	AT	73	HIS
4	AB	8	LYS
4	AB	18	GLY
4	AB	20	GLU
4	AB	97	TRP
4	AB	123	ALA
4	AB	232	PRO
5	AC	29	TYR
5	AC	156	ARG
5	AC	168	ALA
5	AC	181	ASN
5	AC	206	GLU
6	AD	4	TYR
6	AD	26	CYS
6	AD	88	VAL
6	AD	125	HIS
7	AE	22	GLY
7	AE	104	ALA
8	AF	37	VAL
9	AG	52	GLU
11	AI	41	VAL
11	AI	58	ARG
12	AJ	30	SER
12	AJ	34	VAL
12	AJ	40	LEU
12	AJ	72	VAL
13	AK	15	ALA
13	AK	49	GLY

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Mol	Chain	Res	Type
13	AK	50	TYR
13	AK	89	ALA
14	AL	41	ARG
14	AL	48	PRO
14	AL	51	ALA
14	AL	116	SER
14	AL	121	GLY
15	AM	6	GLY
15	AM	85	GLY
18	AP	10	GLY
20	AR	20	ALA
21	AS	9	VAL
21	AS	45	VAL
21	AS	67	VAL
21	AS	68	GLY
22	AT	9	ASN
22	AT	49	ALA
22	AT	95	ALA
22	AT	99	LEU
22	AT	102	GLY
4	AB	26	PRO
4	AB	60	ASP
4	AB	83	MET
4	AB	89	GLY
4	AB	204	ASN
6	AD	175	SER
7	AE	65	ASN
9	AG	5	ARG
10	AH	127	LEU
11	AI	56	LEU
12	AJ	19	SER
12	AJ	60	ARG
12	AJ	61	GLU
12	AJ	90	LEU
13	AK	35	PRO
13	AK	101	SER
14	AL	49	ASN
16	AN	13	THR
16	AN	23	ARG
19	AQ	97	SER
21	AS	28	LYS
21	AS	30	LEU

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Mol	Chain	Res	Type
21	AS	32	LYS
22	AT	74	LYS
4	AB	126	GLU
4	AB	165	VAL
5	AC	39	ILE
5	AC	100	ALA
5	AC	188	LEU
9	AG	4	ARG
9	AG	81	GLY
9	AG	112	PRO
11	AI	7	THR
11	AI	12	GLU
11	AI	119	ALA
15	AM	123	ALA
16	AN	12	ARG
16	AN	60	SER
17	AO	16	ALA
19	AQ	33	GLY
22	AT	50	GLU
4	AB	155	LEU
5	AC	24	ALA
5	AC	66	VAL
5	AC	127	ARG
6	AD	123	HIS
9	AG	53	LYS
11	AI	121	ARG
16	AN	36	PHE
17	AO	84	LYS
21	AS	31	ILE
4	AB	127	ILE
4	AB	214	ILE
5	AC	108	ASN
5	AC	174	PRO
6	AD	5	ILE
11	AI	43	ALA
12	AJ	26	ALA
4	AB	124	SER
9	AG	14	PRO
12	AJ	82	ILE
22	AT	98	PRO
4	AB	125	PRO
5	AC	76	VAL

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Mol	Chain	Res	Type
5	AC	77	ILE
9	AG	17	VAL
12	AJ	36	GLY
17	AO	82	ILE
21	AS	8	GLY
11	AI	44	VAL
17	AO	19	PRO
22	AT	96	GLY
22	AT	101	GLY
5	AC	75	VAL
13	AK	90	GLY

### 5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	AB	202/202 (100%)	180 (89%)	22 (11%)	6	23
5	AC	160/160 (100%)	142 (89%)	18 (11%)	6	21
6	AD	180/180 (100%)	172 (96%)	8 (4%)	28	53
7	AE	115/115 (100%)	100 (87%)	15 (13%)	4	18
8	AF	90/90 (100%)	88 (98%)	2 (2%)	52	71
9	AG	126/126 (100%)	122 (97%)	4 (3%)	39	61
10	AH	119/119 (100%)	109 (92%)	10 (8%)	11	33
11	AI	98/98 (100%)	90 (92%)	8 (8%)	11	34
12	AJ	88/88 (100%)	79 (90%)	9 (10%)	7	25
13	AK	90/90 (100%)	84 (93%)	6 (7%)	16	41
14	AL	104/104 (100%)	96 (92%)	8 (8%)	13	37
15	AM	100/100 (100%)	90 (90%)	10 (10%)	7	26
16	AN	49/49 (100%)	47 (96%)	2 (4%)	30	55
17	AO	79/79 (100%)	72 (91%)	7 (9%)	9	30
18	AP	72/72 (100%)	67 (93%)	5 (7%)	15	40

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
19	AQ	96/96 (100%)	90 (94%)	6 (6%)	18	43
20	AR	64/64 (100%)	61 (95%)	3 (5%)	26	51
21	AS	71/71 (100%)	68 (96%)	3 (4%)	30	54
22	AT	76/76 (100%)	69 (91%)	7 (9%)	9	29
All	All	1979/1979 (100%)	1826 (92%)	153 (8%)	13	37

All (153) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	AB	8	LYS
4	AB	12	GLU
4	AB	17	PHE
4	AB	23	ARG
4	AB	24	TRP
4	AB	25	ASN
4	AB	87	ARG
4	AB	114	ARG
4	AB	139	LYS
4	AB	144	ARG
4	AB	146	GLN
4	AB	155	LEU
4	AB	157	ARG
4	AB	164	VAL
4	AB	170	GLU
4	AB	178	ARG
4	AB	204	ASN
4	AB	213	LEU
4	AB	221	LEU
4	AB	231	GLU
4	AB	232	PRO
4	AB	236	TYR
5	AC	3	ASN
5	AC	5	ILE
5	AC	34	LEU
5	AC	47	LEU
5	AC	56	ASP
5	AC	75	VAL
5	AC	82	GLU
5	AC	90	GLU
5	AC	91	LEU
5	AC	99	VAL

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Mol	Chain	Res	Type
5	AC	107	GLN
5	AC	139	GLN
5	AC	164	ARG
5	AC	167	TRP
5	AC	175	LEU
5	AC	179	ARG
5	AC	188	LEU
5	AC	204	LEU
6	AD	15	GLU
6	AD	29	PRO
6	AD	53	ASP
6	AD	122	ARG
6	AD	127	THR
6	AD	157	LEU
6	AD	192	GLU
6	AD	199	ASN
7	AE	12	LEU
7	AE	26	PHE
7	AE	31	LEU
7	AE	38	GLN
7	AE	41	VAL
7	AE	43	LEU
7	AE	56	GLN
7	AE	65	ASN
7	AE	68	GLU
7	AE	73	ASN
7	AE	79	GLU
7	AE	80	ILE
7	AE	89	ILE
7	AE	120	THR
7	AE	150	ARG
8	AF	10	LEU
8	AF	69	GLU
9	AG	8	GLU
9	AG	11	GLN
9	AG	37	ASN
9	AG	38	LEU
10	AH	2	LEU
10	AH	21	LYS
10	AH	52	ASP
10	AH	63	LEU
10	AH	85	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
10	AH	91	ARG
10	AH	92	ARG
10	AH	104	ARG
10	AH	105	ARG
10	AH	119	LEU
11	AI	2	GLU
11	AI	23	ASN
11	AI	38	GLN
11	AI	53	VAL
11	AI	58	ARG
11	AI	79	LEU
11	AI	111	ARG
11	AI	121	ARG
12	AJ	6	ILE
12	AJ	15	THR
12	AJ	45	ARG
12	AJ	60	ARG
12	AJ	64	GLU
12	AJ	71	LEU
12	AJ	73	ASP
12	AJ	83	GLU
12	AJ	95	GLU
13	AK	24	SER
13	AK	29	ILE
13	AK	35	PRO
13	AK	54	ARG
13	AK	84	VAL
13	AK	92	GLU
14	AL	17	LYS
14	AL	33	ARG
14	AL	53	ARG
14	AL	60	LEU
14	AL	81	SER
14	AL	98	TYR
14	AL	113	ARG
14	AL	126	LYS
15	AM	9	ILE
15	AM	16	ASP
15	AM	40	ASN
15	AM	44	ARG
15	AM	70	LEU
15	AM	81	LEU

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Mol	Chain	Res	Type
15	AM	102	ARG
15	AM	110	ARG
15	AM	124	PRO
15	AM	125	ARG
16	AN	41	ARG
16	AN	44	LEU
17	AO	6	GLU
17	AO	7	GLU
17	AO	39	LEU
17	AO	57	LEU
17	AO	70	LEU
17	AO	81	LEU
17	AO	83	GLU
18	AP	2	VAL
18	AP	8	ARG
18	AP	28	ARG
18	AP	53	VAL
18	AP	62	VAL
19	AQ	34	LYS
19	AQ	38	ARG
19	AQ	60	ILE
19	AQ	68	ARG
19	AQ	74	LEU
19	AQ	98	LEU
20	AR	36	ASN
20	AR	38	GLU
20	AR	55	ARG
21	AS	10	PHE
21	AS	15	LEU
21	AS	20	LEU
22	AT	42	GLN
22	AT	45	GLN
22	AT	57	ARG
22	AT	73	HIS
22	AT	75	ASN
22	AT	84	LEU
22	AT	86	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (62) such sidechains are listed below:

Mol	Chain	Res	Type
4	AB	19	HIS

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Mol	Chain	Res	Type
4	AB	25	ASN
4	AB	40	HIS
4	AB	140	HIS
4	AB	146	GLN
4	AB	204	ASN
5	AC	3	ASN
5	AC	6	HIS
5	AC	31	HIS
5	AC	69	HIS
5	AC	110	ASN
5	AC	118	GLN
5	AC	123	GLN
5	AC	139	GLN
5	AC	181	ASN
6	AD	45	GLN
6	AD	62	GLN
6	AD	123	HIS
6	AD	125	HIS
6	AD	161	ASN
6	AD	199	ASN
6	AD	201	GLN
7	AE	73	ASN
8	AF	18	GLN
8	AF	27	GLN
8	AF	32	ASN
8	AF	57	GLN
8	AF	64	GLN
8	AF	73	ASN
8	AF	94	GLN
8	AF	100	ASN
9	AG	37	ASN
9	AG	86	GLN
10	AH	15	ASN
11	AI	23	ASN
11	AI	124	GLN
12	AJ	62	HIS
12	AJ	76	ASN
12	AJ	78	ASN
12	AJ	84	GLN
13	AK	22	HIS
13	AK	26	ASN
13	AK	38	ASN

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Mol	Chain	Res	Type
13	AK	62	GLN
13	AK	93	GLN
14	AL	49	ASN
14	AL	75	HIS
15	AM	12	ASN
15	AM	40	ASN
15	AM	62	ASN
16	AN	49	HIS
17	AO	13	GLN
17	AO	37	ASN
19	AQ	16	GLN
19	AQ	26	GLN
19	AQ	93	GLN
20	AR	36	ASN
21	AS	14	HIS
21	AS	53	ASN
21	AS	56	GLN
21	AS	65	ASN
22	AT	42	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1479/1527 (96%)	217 (14%)	92 (6%)
2	AV	75/76 (98%)	13 (17%)	3 (4%)
2	AW	74/76 (97%)	13 (17%)	3 (4%)
23	B0	2802/2887 (97%)	430 (15%)	56 (1%)
24	B9	116/118 (98%)	10 (8%)	0
3	AU	8/18 (44%)	1 (12%)	0
All	All	4554/4702 (96%)	684 (15%)	154 (3%)

All (684) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	6	G
1	AA	8	A
1	AA	9	G
1	AA	27	G
1	AA	31	G
1	AA	32	A
1	AA	47	C

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Mol	Chain	Res	Type
1	AA	48	C
1	AA	49	U
1	AA	51	A
1	AA	52	G
1	AA	60	A
1	AA	61	G
1	AA	75	C
1	AA	80	C
1	AA	84	U
1	AA	85	U
1	AA	86	G
1	AA	96	C
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	129(A)	G
1	AA	130	A
1	AA	131	C
1	AA	144	G
1	AA	182	U
1	AA	186	C
1	AA	195	A
1	AA	198	G
1	AA	205	G
1	AA	209	U
1	AA	213	G
1	AA	215	C
1	AA	244	U
1	AA	247	G
1	AA	251	G
1	AA	252	U
1	AA	266	G
1	AA	267	C
1	AA	275	G
1	AA	280	C
1	AA	282	A
1	AA	289	G
1	AA	316	G
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	330	C

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Mol	Chain	Res	Type
1	AA	332	G
1	AA	344	A
1	AA	345	C
1	AA	353	A
1	AA	354	G
1	AA	367	U
1	AA	373	A
1	AA	412	A
1	AA	413	G
1	AA	421	U
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	439	A
1	AA	467	U
1	AA	481	G
1	AA	484	G
1	AA	485	G
1	AA	497	A
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	518	C
1	AA	519	C
1	AA	527	G
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	547	A
1	AA	557	G
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	572	A
1	AA	573	A
1	AA	575	G
1	AA	576	G
1	AA	588	G
1	AA	652	U
1	AA	653	A
1	AA	665	A

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Mol	Chain	Res	Type
1	AA	686	U
1	AA	687	A
1	AA	688	G
1	AA	702	A
1	AA	703	G
1	AA	723	U
1	AA	731	G
1	AA	734	G
1	AA	749	C
1	AA	755	G
1	AA	777	A
1	AA	781	A
1	AA	782	A
1	AA	793	U
1	AA	794	A
1	AA	813	U
1	AA	817	C
1	AA	819	A
1	AA	828	A
1	AA	858	G
1	AA	885	G
1	AA	902	G
1	AA	913	A
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	945	G
1	AA	960	U
1	AA	966	G
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1004	A
1	AA	1005	A

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Mol	Chain	Res	Type
1	AA	1023	G
1	AA	1026	G
1	AA	1030	U
1	AA	1034	G
1	AA	1050	G
1	AA	1053	G
1	AA	1065	U
1	AA	1066	C
1	AA	1068	G
1	AA	1085	U
1	AA	1086	U
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1117	G
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1145	C
1	AA	1146	A
1	AA	1152	A
1	AA	1157	A
1	AA	1159	U
1	AA	1183	A
1	AA	1184	G
1	AA	1191	A
1	AA	1196	U
1	AA	1197	G
1	AA	1201	A
1	AA	1202	G
1	AA	1211	U
1	AA	1212	U
1	AA	1215	G
1	AA	1226	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	AA	1227	A
1	AA	1238	A
1	AA	1258	G
1	AA	1280	A
1	AA	1281	U
1	AA	1282	C
1	AA	1285	A
1	AA	1286	A
1	AA	1287	A
1	AA	1299	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1303	C
1	AA	1305	G
1	AA	1320	C
1	AA	1332	A
1	AA	1336	C
1	AA	1338	G
1	AA	1347	G
1	AA	1348	U
1	AA	1363	A
1	AA	1364	U
1	AA	1365	G
1	AA	1381	U
1	AA	1394	A
1	AA	1398	A
1	AA	1399	C
1	AA	1442	G
1	AA	1443	G
1	AA	1452	C
1	AA	1490	C
1	AA	1491	G
1	AA	1499	A
1	AA	1502	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G

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Mol	Chain	Res	Type
2	AV	2	C
2	AV	3	G
2	AV	17	U
2	AV	18	G
2	AV	19	G
2	AV	21	A
2	AV	34	G
2	AV	35	A
2	AV	36	A
2	AV	37	G
2	AV	41	U
2	AV	75	C
2	AV	76	A
3	AU	9	U
2	AW	2	C
2	AW	3	G
2	AW	17	U
2	AW	18	G
2	AW	19	G
2	AW	21	A
2	AW	26	G
2	AW	35	A
2	AW	36	A
2	AW	37	G
2	AW	41	U
2	AW	74	C
2	AW	76	A
23	B0	14	A
23	B0	15	G
23	B0	45	C
23	B0	48	A
23	B0	49	U
23	B0	50	G
23	B0	58	C
23	B0	59	G
23	B0	63	A
23	B0	67	G
23	B0	70	A
23	B0	72	A
23	B0	87	G
23	B0	89	A
23	B0	90	G

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Mol	Chain	Res	Type
23	B0	91	A
23	B0	99	U
23	B0	105	G
23	B0	110	U
23	B0	116	A
23	B0	118	U
23	B0	123	A
23	B0	129	A
23	B0	135	U
23	B0	155	G
23	B0	158	A
23	B0	173	A
23	B0	174	A
23	B0	176	A
23	B0	177	U
23	B0	181	A
23	B0	182	G
23	B0	193	A
23	B0	199	A
23	B0	200	A
23	B0	205	A
23	B0	206	U
23	B0	210	A
23	B0	218	A
23	B0	219	G
23	B0	225	G
23	B0	226	C
23	B0	227	G
23	B0	229	G
23	B0	242	A
23	B0	243	G
23	B0	245	C
23	B0	305	A
23	B0	318	G
23	B0	333	A
23	B0	334	G
23	B0	335	A
23	B0	340	G
23	B0	342	G
23	B0	343	A
23	B0	344	G
23	B0	358	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	B0	363	G
23	B0	368	A
23	B0	373	A
23	B0	399	G
23	B0	401	G
23	B0	408	U
23	B0	414	A
23	B0	418	C
23	B0	419	G
23	B0	424	G
23	B0	443	A
23	B0	455	A
23	B0	456	C
23	B0	460	U
23	B0	463	C
23	B0	467	U
23	B0	469	G
23	B0	491	A
23	B0	492	G
23	B0	515	A
23	B0	518	A
23	B0	519	C
23	B0	537	C
23	B0	541	C
23	B0	542	A
23	B0	554	U
23	B0	556	A
23	B0	558	G
23	B0	559	C
23	B0	572	G
23	B0	584	A
23	B0	602	C
23	B0	613	A
23	B0	617	U
23	B0	624	A
23	B0	632	A
23	B0	636	G
23	B0	638	A
23	B0	648	A
23	B0	652	C
23	B0	654	A
23	B0	657	A

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Mol	Chain	Res	Type
23	B0	665	A
23	B0	666	U
23	B0	667	U
23	B0	684	C
23	B0	697	G
23	B0	699	G
23	B0	700	C
23	B0	728	G
23	B0	742	G
23	B0	743	A
23	B0	753	U
23	B0	760	U
23	B0	761	G
23	B0	766	A
23	B0	776	G
23	B0	778	G
23	B0	789	G
23	B0	794	A
23	B0	796	A
23	B0	797	A
23	B0	798	G
23	B0	801	A
23	B0	802	A
23	B0	803	C
23	B0	806	A
23	B0	813	A
23	B0	818	G
23	B0	825	C
23	B0	832	A
23	B0	840	U
23	B0	841	G
23	B0	844	G
23	B0	873	U
23	B0	879	A
23	B0	895	G
23	B0	919	U
23	B0	922	A
23	B0	926	C
23	B0	930	A
23	B0	941	U
23	B0	944	A
23	B0	952	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	B0	957	G
23	B0	969	U
23	B0	970	A
23	B0	972	C
23	B0	984	A
23	B0	994	A
23	B0	996	C
23	B0	1005	U
23	B0	1006	C
23	B0	1023	U
23	B0	1024	G
23	B0	1030	U
23	B0	1032	A
23	B0	1033	G
23	B0	1036	G
23	B0	1037	U
23	B0	1044	U
23	B0	1055	A
23	B0	1056	U
23	B0	1057	A
23	B0	1068	A
23	B0	1069	G
23	B0	1071	U
23	B0	1072	U
23	B0	1073	G
23	B0	1078	A
23	B0	1081	A
23	B0	1082	G
23	B0	1084	A
23	B0	1092	U
23	B0	1099	A
23	B0	1100	G
23	B0	1113	C
23	B0	1122	A
23	B0	1137	A
23	B0	1138	A
23	B0	1142	G
23	B0	1145	C
23	B0	1146	G
23	B0	1153	A
23	B0	1167	A
23	B0	1182	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	B0	1183	C
23	B0	1185	C
23	B0	1188	A
23	B0	1194	U
23	B0	1195	U
23	B0	1199	U
23	B0	1200	G
23	B0	1224	A
23	B0	1253	C
23	B0	1262	U
23	B0	1264	C
23	B0	1266	G
23	B0	1269	G
23	B0	1278	A
23	B0	1279	G
23	B0	1280	U
23	B0	1284	G
23	B0	1285	A
23	B0	1288	A
23	B0	1314	A
23	B0	1327	C
23	B0	1334	A
23	B0	1338	G
23	B0	1342	U
23	B0	1343	C
23	B0	1355	A
23	B0	1356	G
23	B0	1359	G
23	B0	1391	A
23	B0	1392	U
23	B0	1397	A
23	B0	1398	G
23	B0	1433	A
23	B0	1441	A
23	B0	1442	C
23	B0	1443	G
23	B0	1459	U
23	B0	1465	G
23	B0	1468	A
23	B0	1469	U
23	B0	1470	G
23	B0	1475	U

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Mol	Chain	Res	Type
23	B0	1482	U
23	B0	1490	U
23	B0	1496	G
23	B0	1505	U
23	B0	1508	G
23	B0	1509	A
23	B0	1513	U
23	B0	1519	G
23	B0	1520	G
23	B0	1524	C
23	B0	1529	C
23	B0	1552	C
23	B0	1571	G
23	B0	1573	G
23	B0	1574	A
23	B0	1576	G
23	B0	1582	A
23	B0	1583	A
23	B0	1585	A
23	B0	1601	U
23	B0	1618	U
23	B0	1623	C
23	B0	1624	A
23	B0	1625	A
23	B0	1632	A
23	B0	1633	C
23	B0	1634	A
23	B0	1635	G
23	B0	1648	C
23	B0	1651	U
23	B0	1657	A
23	B0	1664	G
23	B0	1665	C
23	B0	1670	G
23	B0	1671	A
23	B0	1680	U
23	B0	1685	A
23	B0	1691	G
23	B0	1692	C
23	B0	1710	U
23	B0	1712	G
23	B0	1715	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	B0	1717	A
23	B0	1724	C
23	B0	1733	U
23	B0	1748	U
23	B0	1749	G
23	B0	1750	A
23	B0	1754	G
23	B0	1755	G
23	B0	1764	A
23	B0	1771	A
23	B0	1773	C
23	B0	1778	U
23	B0	1792	C
23	B0	1800	A
23	B0	1801	C
23	B0	1802	A
23	B0	1807	A
23	B0	1808	C
23	B0	1821	A
23	B0	1831	G
23	B0	3865	A
23	B0	1884	A
23	B0	1920	A
23	B0	1922	U
23	B0	1926	U
23	B0	1927	U
23	B0	1928	G
23	B0	1938	U
23	B0	1939	U
23	B0	1949	A
23	B0	1950	C
23	B0	1954	A
23	B0	1955	G
23	B0	1956	G
23	B0	1979	C
23	B0	1980	A
23	B0	2004	U
23	B0	2006	G
23	B0	2014	A
23	B0	2015	G
23	B0	2016	A
23	B0	2019	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	B0	2034	A
23	B0	2038	C
23	B0	2043	A
23	B0	2045	A
23	B0	2051	U
23	B0	2052	G
23	B0	2060	A
23	B0	3107	G
23	B0	3111	C
23	B0	3112	G
23	B0	3116	G
23	B0	3117	A
23	B0	3118	U
23	B0	3119	A
23	B0	3146	A
23	B0	3147	C
23	B0	3150	C
23	B0	3172	U
23	B0	3173	A
23	B0	3185	U
23	B0	3191	A
23	B0	2191	A
23	B0	2195	C
23	B0	2199	C
23	B0	2205	C
23	B0	2218	G
23	B0	2229	G
23	B0	2237	C
23	B0	2241	U
23	B0	2245	A
23	B0	2246	A
23	B0	2247	A
23	B0	2255	G
23	B0	2262	C
23	B0	2268	G
23	B0	2285	U
23	B0	2286	G
23	B0	2287	G
23	B0	2288	A
23	B0	2298	U
23	B0	2299	A
23	B0	2300	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	B0	2301	A
23	B0	2313	G
23	B0	2315	A
23	B0	2316	G
23	B0	2326	C
23	B0	2362	G
23	B0	2364	C
23	B0	2378	G
23	B0	2382	C
23	B0	2385	U
23	B0	2396	C
23	B0	2403	C
23	B0	2405	A
23	B0	2408	G
23	B0	2409	A
23	B0	2414	A
23	B0	2420	C
23	B0	2427	A
23	B0	2428	U
23	B0	2438	A
23	B0	2448	A
23	B0	2455	A
23	B0	2470	U
23	B0	2481	G
23	B0	2482	A
23	B0	2483	U
23	B0	2484	G
23	B0	2485	U
23	B0	2492	G
23	B0	2498	U
23	B0	2499	C
23	B0	2504	G
23	B0	2522	G
23	B0	2546	G
23	B0	2549	G
23	B0	2565	C
23	B0	2578	G
23	B0	2581	A
23	B0	2582	G
23	B0	2588	U
23	B0	2589	C
23	B0	2591	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	B0	2593	A
23	B0	2594	U
23	B0	2608	A
23	B0	2609	G
23	B0	2625	U
23	B0	2633	A
23	B0	2634	G
23	B0	2661	G
23	B0	2669	C
23	B0	2670	C
23	B0	2681	A
23	B0	2691	C
23	B0	2692	A
23	B0	2712	G
23	B0	2728	A
23	B0	2730	A
23	B0	2732	C
23	B0	2737	A
23	B0	2745	A
23	B0	2756	A
23	B0	2760	G
23	B0	2761	A
23	B0	2771	C
23	B0	2784	A
23	B0	2785	A
23	B0	2795	A
23	B0	2807	U
23	B0	2808	U
23	B0	2809	A
23	B0	2811	G
23	B0	2825	A
23	B0	2841	U
23	B0	2842	C
23	B0	2847	G
23	B0	2854	G
23	B0	2855	C
23	B0	2859	U
24	B9	18	G
24	B9	26	G
24	B9	27	A
24	B9	28	A
24	B9	29	C

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Mol	Chain	Res	Type
24	B9	31	A
24	B9	47	A
24	B9	77	G
24	B9	112	A
24	B9	115	G

All (154) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	5	U
1	AA	7	G
1	AA	30	U
1	AA	48	C
1	AA	51	A
1	AA	60	A
1	AA	74	G
1	AA	94	G
1	AA	115	G
1	AA	119	A
1	AA	129(A)	G
1	AA	135	C
1	AA	181	G
1	AA	185	A
1	AA	197	A
1	AA	204	A
1	AA	212	G
1	AA	243	A
1	AA	250	A
1	AA	251	G
1	AA	266	G
1	AA	274	A
1	AA	279	A
1	AA	281	G
1	AA	328	C
1	AA	329	A
1	AA	344	A
1	AA	353	A
1	AA	366	C
1	AA	372	C
1	AA	403	C
1	AA	428	G
1	AA	429	U

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Mol	Chain	Res	Type
1	AA	438	G
1	AA	484	G
1	AA	496	A
1	AA	509	A
1	AA	518	C
1	AA	533	A
1	AA	546	G
1	AA	556	C
1	AA	559	A
1	AA	560	U
1	AA	575	G
1	AA	587	G
1	AA	651	C
1	AA	687	A
1	AA	701	C
1	AA	733	A
1	AA	748	C
1	AA	792	A
1	AA	812	C
1	AA	905	U
1	AA	913	A
1	AA	965	A
1	AA	975	A
1	AA	976	G
1	AA	992	U
1	AA	1049	U
1	AA	1065	U
1	AA	1067	A
1	AA	1085	U
1	AA	1101	A
1	AA	1129	C
1	AA	1145	C
1	AA	1182	G
1	AA	1183	A
1	AA	1190	G
1	AA	1196	U
1	AA	1201	A
1	AA	1214	C
1	AA	1226	C
1	AA	1237	C
1	AA	1257	U
1	AA	1281	U

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Mol	Chain	Res	Type
1	AA	1285	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1319	A
1	AA	1346	A
1	AA	1347	G
1	AA	1364	U
1	AA	1380	U
1	AA	1397	C
1	AA	1409	C
1	AA	1451	A
1	AA	1498	U
1	AA	1503	A
1	AA	1504	G
1	AA	1505	G
1	AA	1528	U
2	AV	16	U
2	AV	18	G
2	AV	35	A
2	AW	16	U
2	AW	18	G
2	AW	35	A
23	B0	69	G
23	B0	173	A
23	B0	181	A
23	B0	192	G
23	B0	198	A
23	B0	242	A
23	B0	342	G
23	B0	583	C
23	B0	765	C
23	B0	801	A
23	B0	805	G
23	B0	824	U
23	B0	843	G
23	B0	878	C
23	B0	1071	U
23	B0	1141	U
23	B0	1187	A
23	B0	1193	G
23	B0	1194	U

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Mol	Chain	Res	Type
23	B0	1223	G
23	B0	1263	G
23	B0	1278	A
23	B0	1279	G
23	B0	1313	U
23	B0	1354	A
23	B0	1495	G
23	B0	1518	C
23	B0	1519	G
23	B0	1575	C
23	B0	1633	C
23	B0	1634	A
23	B0	1664	G
23	B0	1807	A
23	B0	1820	G
23	B0	1856	U
23	B0	1938	U
23	B0	2015	G
23	B0	3098	U
23	B0	3107	G
23	B0	3110	G
23	B0	3111	C
23	B0	3116	G
23	B0	3118	U
23	B0	3146	A
23	B0	3149	G
23	B0	3171	A
23	B0	3172	U
23	B0	2204	A
23	B0	2245	A
23	B0	2261	G
23	B0	2377	U
23	B0	2404	A
23	B0	2426	G
23	B0	2668	U
23	B0	2759	U
23	B0	2824	C

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

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](#)

There are no ligands in this entry.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	AA	108
23	B0	31
2	AV	4
2	AW	4
24	B9	2
3	AU	1
14	AL	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	1443:G	O3'	1445:U	P	10.46
1	AA	1459:C	O3'	1460:A	P	10.16
1	AA	1458:G	O3'	1459:C	P	8.01
1	B0	1888:C	O3'	1889:G	P	6.63
1	B0	3180:U	O3'	3181:C	P	5.39
1	AA	455:C	O3'	456:A	P	5.28
1	B0	891:A	O3'	892:A	P	4.99
1	B0	3197:U	O3'	2181:A	P	4.97
1	AA	993:G	O3'	994:A	P	4.72
1	B0	3161:C	O3'	3162:G	P	4.56
1	AA	68:G	O3'	69:G	P	4.50
1	B0	910:U	O3'	911:A	P	4.44
1	AA	476:U	O3'	477:G	P	4.41
1	AA	1434:A	O3'	1435:G	P	4.39

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	1044:A	O3'	1045:C	P	4.27
1	B0	3108:G	O3'	3109:U	P	4.23
1	B0	3126:A	O3'	3127:G	P	4.03
1	AA	1466:C	O3'	1467:G	P	3.96
1	AA	99:C	O3'	101:A	P	3.92
1	AA	1278:U	O3'	1279:A	P	3.65
1	AA	200:G	O3'	201:G	P	3.50
1	B0	2075:U	O3'	3093:C	P	3.50
1	AA	820:U	O3'	821:G	P	3.45
1	B0	1912:G	O3'	1913:G	P	3.36
1	AA	196:A	O3'	197:A	P	3.29
1	AA	397:A	O3'	398:C	P	3.28
1	AA	1256:A	O3'	1257:U	P	3.23
1	AA	337:C	O3'	338:A	P	3.13
1	B0	1116:U	O3'	1117:G	P	3.10
1	AA	919:A	O3'	920:U	P	3.05
1	AA	547:A	O3'	548:G	P	3.02
1	AA	396:G	O3'	397:A	P	3.00
1	AA	216:C	O3'	217:C	P	2.94
1	AA	717:C	O3'	718:G	P	2.91
1	AA	179:A	O3'	180:U	P	2.86
1	AA	38:G	O3'	39:G	P	2.81
1	B0	3877:A	O3'	1861:G	P	2.80
1	B0	3196:G	O3'	3197:U	P	2.80
1	B0	1113:C	O3'	1114:A	P	2.75
1	B0	3181:C	O3'	3182:U	P	2.73
1	AA	170:U	O3'	171:A	P	2.72
1	AA	672:U	O3'	673:G	P	2.72
1	AA	684:A	O3'	685:G	P	2.72
1	AA	848:G	O3'	849:C	P	2.72
1	AA	150:C	O3'	151:A	P	2.71
1	B0	897:A	O3'	898:C	P	2.70
1	AA	497:A	O3'	498:U	P	2.69
1	AA	1416:G	O3'	1417:G	P	2.69
1	AA	1027:C	O3'	1028:C	P	2.68
1	AA	814:A	O3'	815:A	P	2.67
1	AA	1117:G	O3'	1118:C	P	2.66
1	AA	1026:G	O3'	1027:C	P	2.65
1	AA	405:U	O3'	406:G	P	2.62
1	AA	705:U	O3'	706:A	P	2.60
1	AA	960:U	O3'	961:U	P	2.53
1	AA	351:G	O3'	352:C	P	2.51

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	765:G	O3'	766:A	P	2.50
1	AW	44:A	O3'	45:G	P	2.48
1	AA	249:U	O3'	250:A	P	2.46
1	AA	914:A	O3'	915:A	P	2.42
1	B0	1119:U	O3'	1120:C	P	2.42
1	AA	305:G	O3'	306:G	P	2.40
1	AA	1483:A	O3'	1484:C	P	2.39
1	B0	1062:G	O3'	1063:C	P	2.38
1	B0	3187:U	O3'	3188:U	P	2.35
1	AA	191:G	O3'	192:U	P	2.33
1	AA	1447:A	O3'	1448:C	P	2.29
1	AA	291:C	O3'	292:G	P	2.28
1	AA	1224:G	O3'	1225:A	P	2.27
1	AA	1238:A	O3'	1239:A	P	2.25
1	AA	837:G	O3'	838:C	P	2.24
1	B9	107:C	O3'	108:G	P	2.21
1	AA	733:A	O3'	734:G	P	2.18
1	AA	115:G	O3'	116:A	P	2.17
1	AA	1331:G	O3'	1332:A	P	2.17
1	AA	367:U	O3'	368:U	P	2.14
1	B0	3107:G	O3'	3108:G	P	2.14
1	AA	1034:G	O3'	1035:A	P	2.13
1	AA	212:G	O3'	213:G	P	2.12
1	AV	25:C	O3'	26:G	P	2.12
1	B0	3098:U	O3'	3099:U	P	2.12
1	AA	288:A	O3'	289:G	P	2.08
1	AA	827:U	O3'	828:A	P	2.07
1	AA	1211:U	O3'	1212:U	P	2.07
1	AA	118:U	O3'	119:A	P	2.06
1	AU	11:C	O3'	12:A	P	2.05
1	B0	3183:A	O3'	3184:C	P	2.02
1	AA	375:U	O3'	376:G	P	2.01
1	AA	1155:G	O3'	1156:G	P	2.01
1	B9	73:C	O3'	74:A	P	2.01
1	AA	89:G	O3'	90:C	P	1.98
1	B0	3149:G	O3'	3150:C	P	1.98
1	AA	1398:A	O3'	1399:C	P	1.97
1	AA	546:G	O3'	547:A	P	1.96
1	AA	606:G	O3'	607:A	P	1.95
1	AA	1297:C	O3'	1298:C	P	1.95
1	AA	387:U	O3'	388:G	P	1.93
1	AA	1335:C	O3'	1336:C	P	1.93

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B0	1856:U	O3'	3865:A	P	1.93
1	AA	206:C	O3'	207:C	P	1.91
1	B0	3188:U	O3'	3189:U	P	1.90
1	B0	3141:G	O3'	3142:C	P	1.87
1	AA	278:G	O3'	279:A	P	1.86
1	AA	631:G	O3'	632:A	P	1.86
1	AA	1182:G	O3'	1183:A	P	1.86
1	B0	3101:G	O3'	3102:G	P	1.86
1	AA	1237:C	O3'	1238:A	P	1.85
1	AA	1374:A	O3'	1375:A	P	1.85
1	AW	34:G	O3'	35:A	P	1.84
1	AA	587:G	O3'	588:G	P	1.83
1	B0	3190:G	O3'	3191:A	P	1.83
1	B0	3874:C	O3'	3875:A	P	1.81
1	AA	754:C	O3'	755:G	P	1.78
1	AA	499:A	O3'	500:G	P	1.76
1	AA	1067:A	O3'	1068:G	P	1.38
1	AA	274:A	O3'	275:G	P	1.37
1	AA	1345:U	O3'	1346:A	P	1.36
1	AA	1455:G	O3'	1456:A	P	1.34
1	AA	1457:A	O3'	1458:G	P	1.34
1	AA	227:G	O3'	228:A	P	1.33
1	AW	33:U	O3'	34:G	P	1.32
1	AA	461:C	O3'	462:A	P	1.31
1	AA	1383:C	O3'	1384:C	P	1.31
1	AA	26:A	O3'	27:G	P	1.30
1	AA	394:G	O3'	395:C	P	1.30
1	AA	1110:A	O3'	1111:A	P	1.30
1	AV	75:C	O3'	76:A	P	1.30
1	AW	75:C	O3'	76:A	P	1.29
1	AV	74:C	O3'	75:C	P	1.28
1	AA	776:G	O3'	777:A	P	1.27
1	AA	59:A	O3'	60:A	P	1.26
1	B0	3102:G	O3'	3103:A	P	1.26
1	AA	804:U	O3'	805:C	P	1.25
1	AA	651:C	O3'	652:U	P	1.24
1	AA	1490:C	O3'	1491:G	P	1.23
1	AA	74:G	O3'	75:C	P	1.20
1	AA	576:G	O3'	577:G	P	1.20
1	AA	1409:C	O3'	1410:G	P	1.19
1	AA	403:C	O3'	404:U	P	1.18
1	AV	36:A	O3'	37:G	P	1.18

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	239:U	O3'	240:C	P	1.17
1	AA	94:G	O3'	96:C	P	1.12
1	B0	3106:U	O3'	3107:G	P	1.12
1	AA	1393:U	O3'	1394:A	P	1.05
1	AA	556:C	O3'	557:G	P	1.02
1	AA	905:U	O3'	906:G	P	0.96
1	AL	19:ARG	C	20:LYS	N	0.94
1	AA	436:C	O3'	437:U	P	0.88
1	AA	893:C	O3'	894:G	P	0.87
1	AA	214:U	O3'	215:C	P	0.73
1	AA	135:C	O3'	136:C	P	0.60

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

Unable to reproduce the depositors R factor - this section is therefore empty.

### 6.2 Non-standard residues in protein, DNA, RNA chains ⓘ

Unable to reproduce the depositors R factor - this section is therefore empty.

### 6.3 Carbohydrates ⓘ

Unable to reproduce the depositors R factor - this section is therefore empty.

### 6.4 Ligands ⓘ

Unable to reproduce the depositors R factor - this section is therefore empty.

### 6.5 Other polymers ⓘ

Unable to reproduce the depositors R factor - this section is therefore empty.