



wwPDB EM Map/Model Validation Report ⓘ

Apr 10, 2016 – 03:27 PM BST

PDB ID : 3J78
EMDB ID: : EMD-5977
Title : Structures of yeast 80S ribosome-tRNA complexes in the rotated and non-rotated conformations (Class I - non-rotated ribosome with 2 tRNAs)
Authors : Svidritskiy, E.; Brilot, A.F.; Koh, C.S.; Grigorieff, N.; Korostelev, A.A.
Deposited on : 2014-05-29
Resolution : 6.30 Å(reported)
Based on PDB ID : 3U5E, 3U5D, 3U5C, 3U5B, 3J3B, 3I9B

This is a wwPDB EM Map/Model Validation Report for a publicly released PDB/EMDB entry.
For rigid body fitted models, validation errors reported here could stem from errors in the original structure(s) used in the fitting.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<http://wwpdb.org/validation/2016/EMValidationReportHelp>

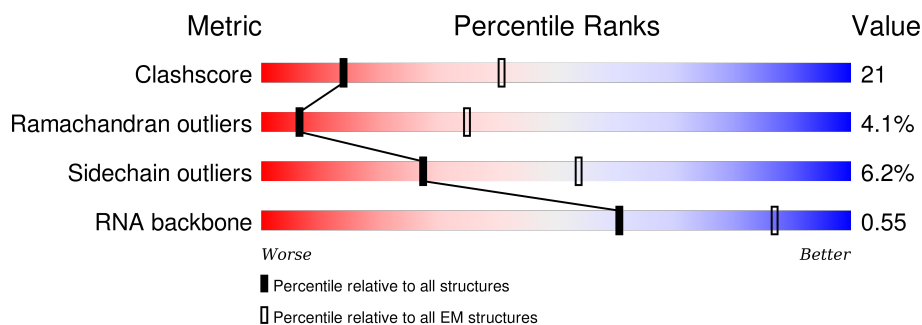
MolProbity : 4.02b-467
Mogul : unknown
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : trunk27241

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 6.30 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.









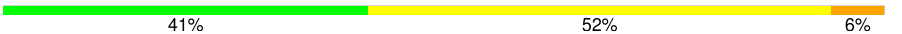
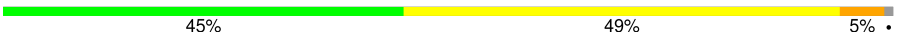

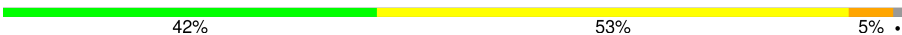

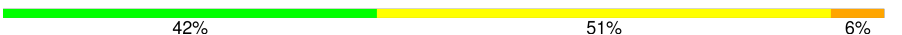













Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	114402	924
Ramachandran outliers	111179	726
Sidechain outliers	111093	686
RNA backbone	3027	244

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

Mol	Chain	Length	Quality of chain
1	L1	217	47% 39% 9% 6%
2	L2	254	43% 51% 5% .
3	L3	387	51% 46% .
4	L4	362	51% 44% .
5	L5	297	52% 44% .
6	L6	176	50% 35% . 11%
7	L7	244	42% 45% . . 9%
8	L8	256	42% 43% 6% 9%

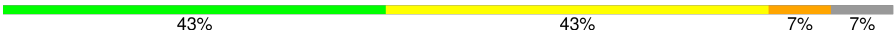

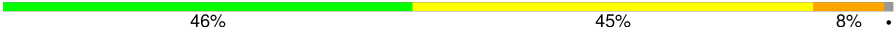








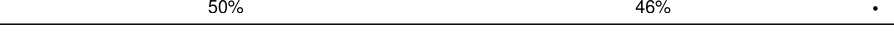

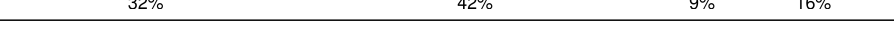





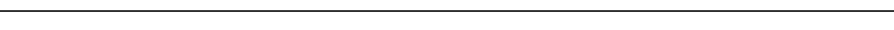

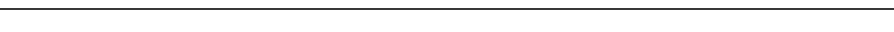
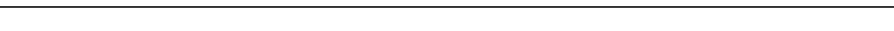


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Mol	Chain	Length	Quality of chain
9	L9	191	
10	60	221	
11	61	174	
12	62	165	
13	63	199	
14	64	138	
15	65	204	
16	66	199	
17	67	184	
18	68	186	
19	69	189	
20	70	172	
21	71	160	
22	72	121	
23	73	137	
24	74	155	
25	75	142	
26	76	127	
27	77	136	
28	78	149	
29	79	59	
30	80	105	
31	81	113	
32	82	130	
33	83	107	





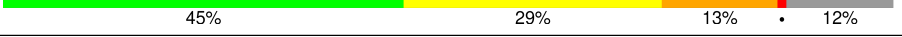



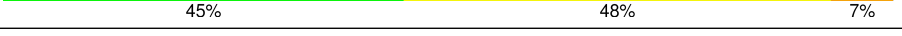

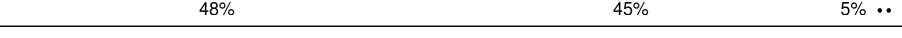
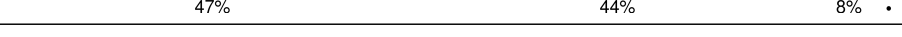

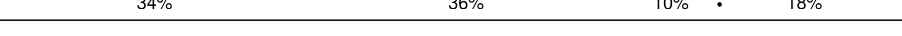


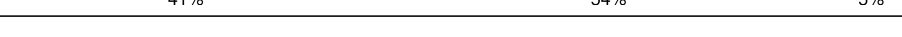

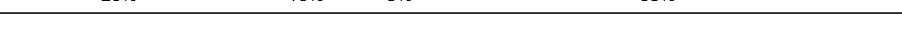






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Mol	Chain	Length	Quality of chain
34	84	121	
35	85	120	
36	86	100	
37	87	88	
38	88	78	
39	89	51	
40	90	128	
41	91	25	
42	92	106	
43	93	92	
44	P0	312	
45	RC	319	
46	S0	252	
47	S1	255	
48	S2	254	
49	S3	240	
50	S4	261	
51	S5	225	
52	S6	236	
53	S7	190	
54	S8	200	
55	S9	197	
56	10	105	
57	11	156	
58	12	143	

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Mol	Chain	Length	Quality of chain
59	13	151	
60	14	137	
61	15	142	
62	16	143	
63	17	136	
64	18	146	
65	19	144	
66	20	121	
67	21	87	
68	22	130	
69	23	145	
70	24	135	
71	25	108	
72	26	119	
73	27	82	
74	28	67	
75	29	56	
76	30	63	
77	31	152	
78	1S	1798	
79	2S	3395	
80	8S	158	
81	5S	121	
82	ET	77	
82	PT	77	

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Mol	Chain	Length	Quality of chain
83	MR	14	 <div> <div>36%</div> <div>21%</div> <div>7%</div> <div>36%</div> </div>

2 Entry composition

There are 83 unique types of molecules in this entry. The entry contains 209136 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 protein called 60S ribosomal protein L1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	L1	204	Total	C	N	O	S	0	0
			1609	1031	279	290	9		

- Molecule 2 is a protein called 60S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	L2	252	Total	C	N	O	S	0	0
			1918	1193	389	335	1		

- Molecule 3 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	L3	386	Total	C	N	O	S	0	0
			3082	1956	584	534	8		

- Molecule 4 is a protein called 60S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	L4	361	Total	C	N	O	S	0	0
			2750	1730	522	495	3		

- Molecule 5 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	L5	296	Total	C	N	O	S	0	0
			2376	1501	414	459	2		

- Molecule 6 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	L6	156	Total	C	N	O	S	0	0
			1240	800	222	217	1		

- Molecule 7 is a protein called 60S ribosomal protein L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	L7	222	Total	C	N	O	S	0	0
			1785	1151	324	309	1		

- Molecule 8 is a protein called 60S ribosomal protein L8.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	L8	233	Total	C	N	O	S	0	0
			1818	1159	326	330	3		

- Molecule 9 is a protein called 60S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	L9	191	Total	C	N	O	S	0	0
			1519	963	274	278	4		

- Molecule 10 is a protein called 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	60	211	Total	C	N	O	S	0	0
			1718	1089	325	298	6		

- Molecule 11 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	61	169	Total	C	N	O	S	0	0
			1354	847	253	250	4		

- Molecule 12 is a protein called 60S ribosomal protein L12.

Mol	Chain	Residues	Atoms				AltConf	Trace
12	62	143	Total	C	N	O	0	0
			703	417	143	143		

- Molecule 13 is a protein called 60S ribosomal protein L13.

Mol	Chain	Residues	Atoms				AltConf	Trace
13	63	193	Total	C	N	O	0	0
			1543	962	315	266		

- Molecule 14 is a protein called 60S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	64	136	Total	C	N	O	S	0	0
			1054	675	199	178	2		

- Molecule 15 is a protein called 60S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	65	203	Total	C	N	O	S	0	0
			1721	1077	361	282	1		

- Molecule 16 is a protein called 60S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	66	197	Total	C	N	O	S	0	0
			1556	1003	289	263	1		

- Molecule 17 is a protein called 60S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	67	183	Total	C	N	O		0	0
			1443	896	287	260			

- Molecule 18 is a protein called 60S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	68	185	Total	C	N	O	S	0	0
			1442	908	290	242	2		

- Molecule 19 is a protein called 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	69	188	Total	C	N	O		0	0
			1522	935	326	261			

- Molecule 20 is a protein called 60S ribosomal protein L20.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	70	172	Total	C	N	O	S	0	0
			1446	930	267	245	4		

- Molecule 21 is a protein called 60S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	71	159	Total	C	N	O	S	0	0
			1277	805	246	222	4		

- Molecule 22 is a protein called 60S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	72	100	Total	C	N	O		0	0
			796	516	131	149			

- Molecule 23 is a protein called 60S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	73	136	Total	C	N	O	S	0	0
			1004	628	189	180	7		

- Molecule 24 is a protein called 60S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	74	64	Total	C	N	O	S	0	0
			528	340	103	84	1		

- Molecule 25 is a protein called 60S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	75	121	Total	C	N	O	S	0	0
			969	623	170	174	2		

- Molecule 26 is a protein called 60S ribosomal protein L26.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	76	126	Total	C	N	O		0	0
			994	625	192	177			

- Molecule 27 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	77	135	Total	C	N	O		0	0
			1093	710	202	181			

- Molecule 28 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	78	148	Total	C	N	O	S	0	0
			1174	749	231	191	3		

- Molecule 29 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	79	58	Total	C	N	O		0	0
			463	289	100	74			

- Molecule 30 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	80	97	Total	C	N	O	S	0	0
			743	479	124	139	1		

- Molecule 31 is a protein called 60S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	81	109	Total	C	N	O	S	0	0
			890	565	168	156	1		

- Molecule 32 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	82	127	Total	C	N	O	S	0	0
			1020	647	205	167	1		

- Molecule 33 is a protein called 60S ribosomal protein L33.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	83	106	Total	C	N	O	S	0	0
			851	540	165	145	1		

- Molecule 34 is a protein called 60S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	84	112	Total	C	N	O	S	0	0
			881	546	179	152	4		

- Molecule 35 is a protein called 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	85	119	Total	C	N	O	S	0	0
			970	615	186	168	1		

- Molecule 36 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	86	99	Total	C	N	O	S	0	0
			772	481	156	133	2		

- Molecule 37 is a protein called 60S ribosomal protein L37.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	87	87	Total	C	N	O	S	0	0
			682	414	148	115	5		

- Molecule 38 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	88	77	Total	C	N	O		0	0
			613	391	115	107			

- Molecule 39 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	89	50	Total	C	N	O	S	0	0
			437	272	97	66	2		

- Molecule 40 is a protein called 60S ribosomal protein L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	90	52	Total	C	N	O	S	0	0
			418	259	86	68	5		

- Molecule 41 is a protein called 60S ribosomal protein L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	91	25	Total	C	N	O	S	0	0
			234	142	63	28	1		

- Molecule 42 is a protein called 60S ribosomal protein L42.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	92	105	Total	C	N	O	S	0	0
			848	534	170	139	5		

- Molecule 43 is a protein called 60S ribosomal protein L43.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	93	91	Total	C	N	O	S	0	0
			695	429	138	122	6		

- Molecule 44 is a protein called 60S acidic ribosomal protein P0.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	P0	125	Total	C	N	O	S	0	0
			987	633	174	177	3		

- Molecule 45 is a protein called Guanine nucleotide-binding protein subunit beta-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	RC	318	Total	C	N	O	S	0	0
			2445	1546	419	472	8		

- Molecule 46 is a protein called 40S ribosomal protein S0.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	S0	206	Total	C	N	O	S	0	0
			1612	1034	285	291	2		

- Molecule 47 is a protein called 40S ribosomal protein S1.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	S1	214	Total	C	N	O	S	0	0
			1709	1084	310	311	4		

- Molecule 48 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	S2	217	Total	C	N	O	S	0	0
			1635	1047	289	297	2		

- Molecule 49 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	S3	223	Total	C	N	O	S	0	0
			1734	1101	313	314	6		

- Molecule 50 is a protein called 40S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	S4	260	Total	C	N	O	S	0	0
			2069	1316	389	361	3		

- Molecule 51 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	S5	206	Total	C	N	O	S	0	0
			1610	1007	300	300	3		

- Molecule 52 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	S6	226	Total	C	N	O	S	0	0
			1820	1142	350	325	3		

- Molecule 53 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms				AltConf	Trace
53	S7	184	Total	C	N	O	0	0
			1481	951	265	265		

- Molecule 54 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	S8	188	Total	C	N	O	S	0	0
			1490	925	298	265	2		

- Molecule 55 is a protein called 40S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	S9	185	Total	C	N	O	S	0	0
			1494	943	289	261	1		

- Molecule 56 is a protein called 40S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	10	96	Total	C	N	O	S	0	0
			817	529	133	153	2		

- Molecule 57 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	11	155	Total	C	N	O	S	0	0
			1245	798	235	209	3		

- Molecule 58 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	12	124	Total	C	N	O	S	0	0
			935	587	165	181	2		

- Molecule 59 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	13	150	Total	C	N	O	S	0	0
			1193	759	224	208	2		

- Molecule 60 is a protein called 40S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	14	127	Total	C	N	O	S	0	0
			942	578	186	175	3		

- Molecule 61 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	15	124	Total	C	N	O	S	0	0
			991	631	187	166	7		

- Molecule 62 is a protein called 40S ribosomal protein S16.

Mol	Chain	Residues	Atoms				AltConf	Trace
62	16	141	Total	C	N	O	0	0
			1106	708	203	195		

- Molecule 63 is a protein called 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	17	120	Total	C	N	O	S	0	0
			965	603	183	177	2		

- Molecule 64 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	18	145	Total	C	N	O	S	0	0
			1193	743	237	211	2		

- Molecule 65 is a protein called 40S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	19	143	Total	C	N	O	S	0	0
			1113	694	208	209	2		

- Molecule 66 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	20	107	Total	C	N	O	S	0	0
			856	539	156	160	1		

- Molecule 67 is a protein called 40S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	21	87	Total	C	N	O	S	0	0
			685	420	125	138	2		

- Molecule 68 is a protein called 40S ribosomal protein S22.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	22	129	Total	C	N	O	S	0	0
			1022	650	188	181	3		

- Molecule 69 is a protein called 40S ribosomal protein S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	23	144	Total	C	N	O	S	0	0
			1122	708	220	192	2		

- Molecule 70 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms				AltConf	Trace
70	24	134	Total	C	N	O	0	0
			1074	676	208	190		

- Molecule 71 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms				AltConf	Trace
71	25	70	Total	C	N	O	0	0
			563	360	104	99		

- Molecule 72 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	26	97	Total	C	N	O	S	0	0
			769	475	160	129	5		

- Molecule 73 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	27	81	Total	C	N	O	S	0	0
			611	382	110	114	5		

- Molecule 74 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	28	63	Total	C	N	O	S	0	0
			498	306	99	92	1		

- Molecule 75 is a protein called 40S ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	29	53	Total	C	N	O	S	0	0
			444	275	92	73	4		

- Molecule 76 is a protein called 40S ribosomal protein S30.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	30	60	Total	C	N	O	S	0	0
			475	299	98	77	1		

- Molecule 77 is a protein called 40S ribosomal protein S31.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	31	71	Total	C	N	O	S	0	0
			498	309	93	92	4		

- Molecule 78 is a RNA chain called 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	1S	1781	Total	C	N	O	P	0	0
			37949	16965	6715	12488	1781		

- Molecule 79 is a RNA chain called 25S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	2S	3302	Total	C	N	O	P	0	0
			70616	31540	12710	23064	3302		

- Molecule 80 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	8S	158	Total	C	N	O	P	0	0
			3354	1500	586	1110	158		

- Molecule 81 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	5S	121	Total	C	N	O	P	0	0
			2580	1152	461	846	121		

- Molecule 82 is a RNA chain called P/E-site initiator transfer RNA^{fMet}.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	ET	77	Total	C	N	O	P	0	0
			1644	732	297	538	77		
82	PT	77	Total	C	N	O	P	0	0
			1644	732	297	538	77		

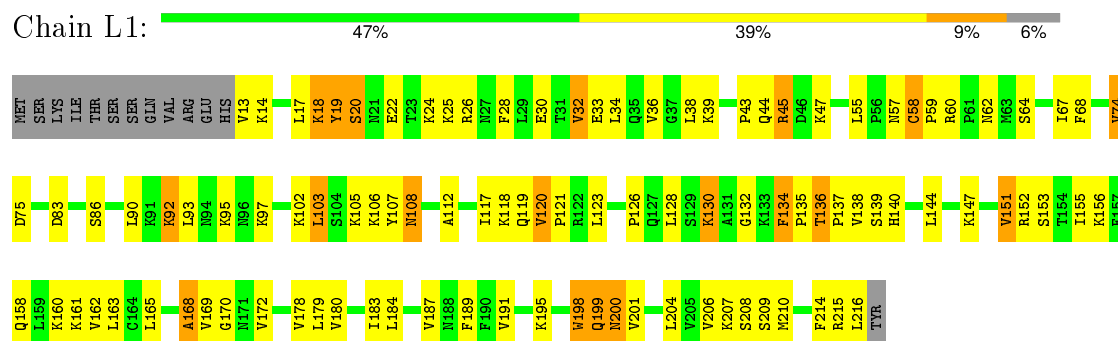
- Molecule 83 is a RNA chain called messenger RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	MR	9	Total	C	N	O	P	0	0
			195	88	39	59	9		

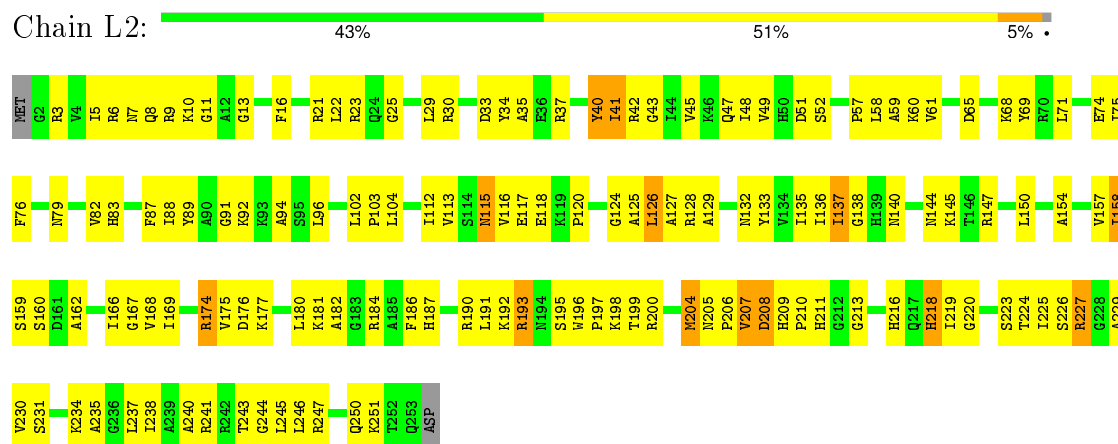
3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. 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.

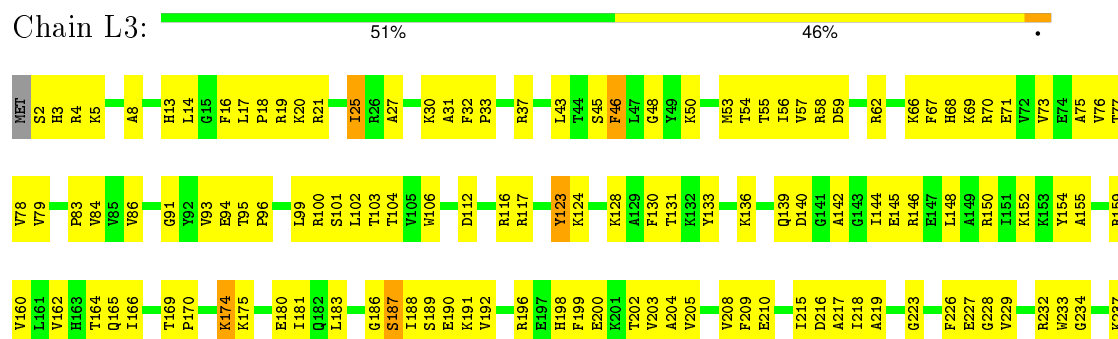
• Molecule 1: 60S ribosomal protein L1



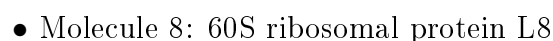
• Molecule 2: 60S ribosomal protein L2



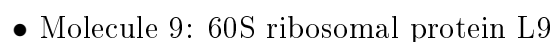
• Molecule 3: 60S ribosomal protein L3



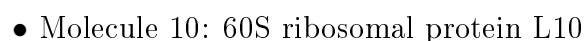
Response	Percentage
Yes	42%
No	45%
Don't know	9%



Response	Percentage
Yes, the U.S. should take action to address climate change	42%
No, the U.S. should focus on other issues	43%
Don't know	6%
Refuse to answer	9%

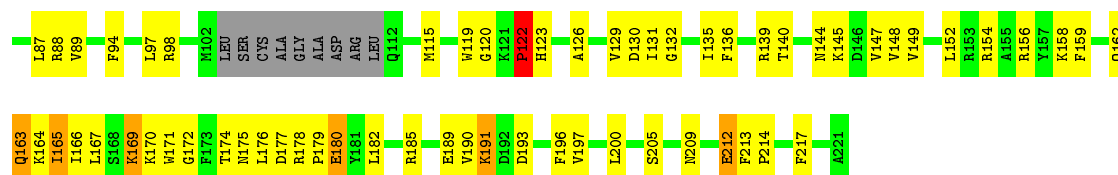


Response	Percentage
Yes	48%
No	48%
Don't know	5%



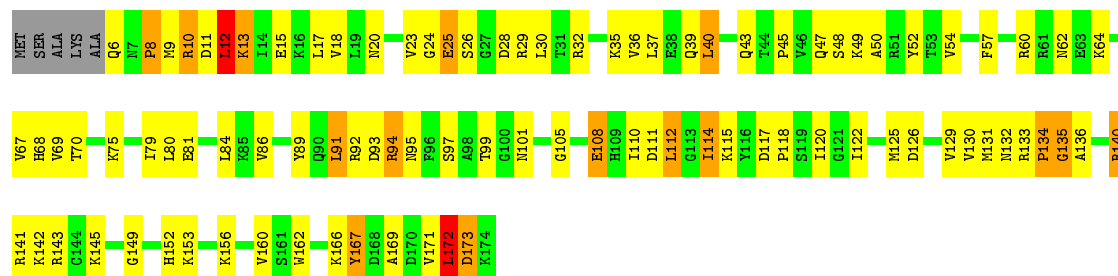
Response	Percentage
Yes	51%
No	40%
Don't know	5%
Other	5%





• Molecule 11: 60S ribosomal protein L11

Chain 61: 44% 44% 9% ..



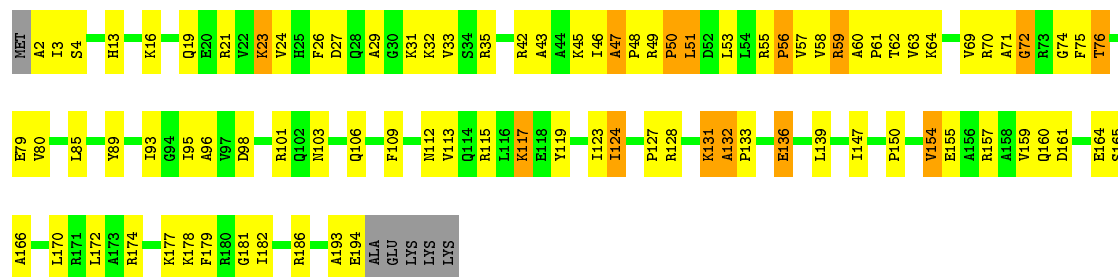
• Molecule 12: 60S ribosomal protein L12

Chain 62: 68% 13% 5% 13%



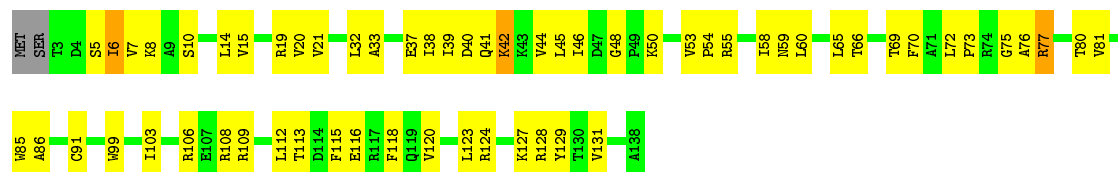
• Molecule 13: 60S ribosomal protein L13

Chain 63: 51% 39% 7% .



• Molecule 14: 60S ribosomal protein L14

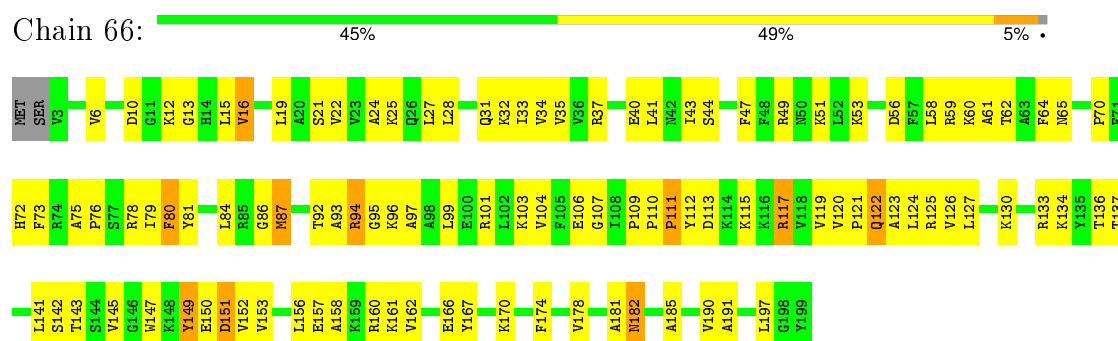
Chain 64: 55% 41% ..



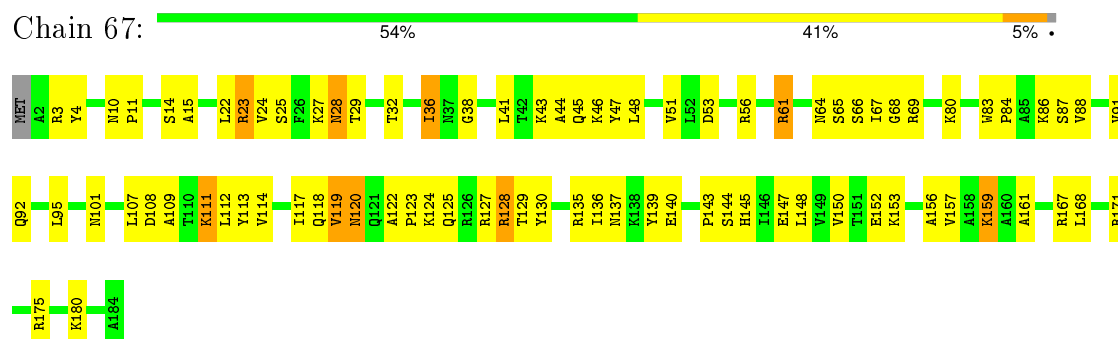
- Molecule 15: 60S ribosomal protein L15



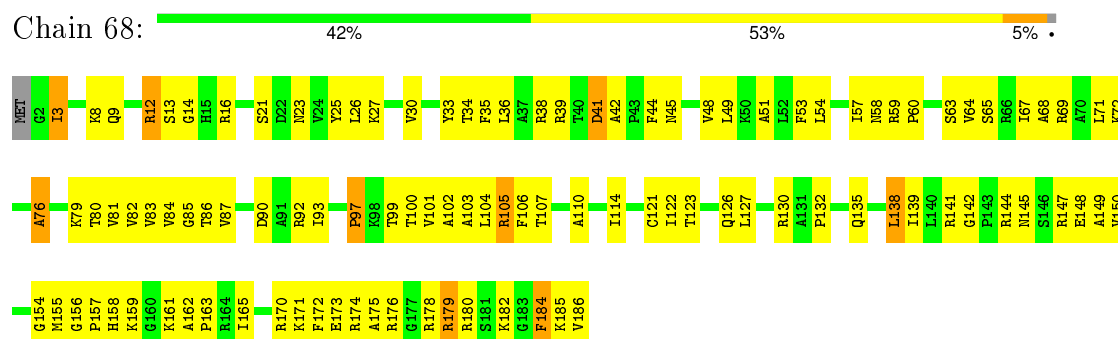
- Molecule 16: 60S ribosomal protein L16



- Molecule 17: 60S ribosomal protein L17



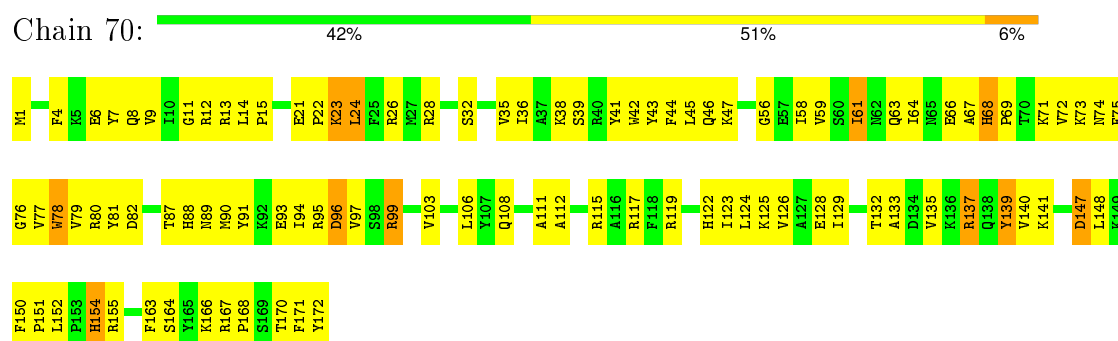
- Molecule 18: 60S ribosomal protein L18



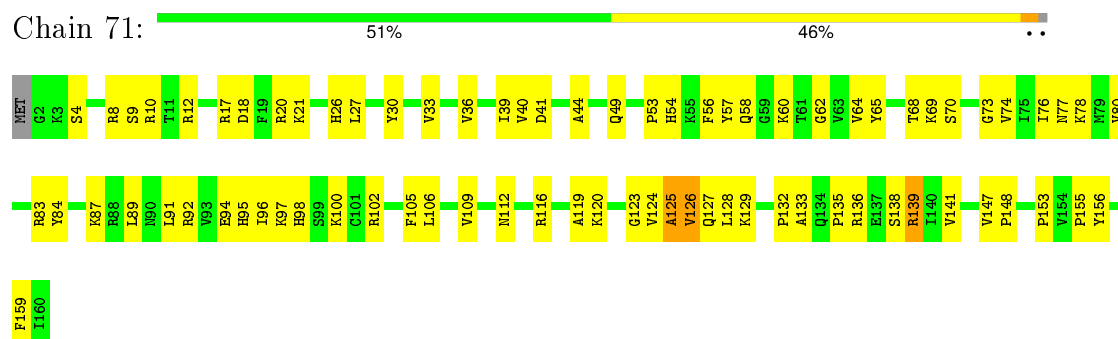
- Molecule 19: 60S ribosomal protein L19



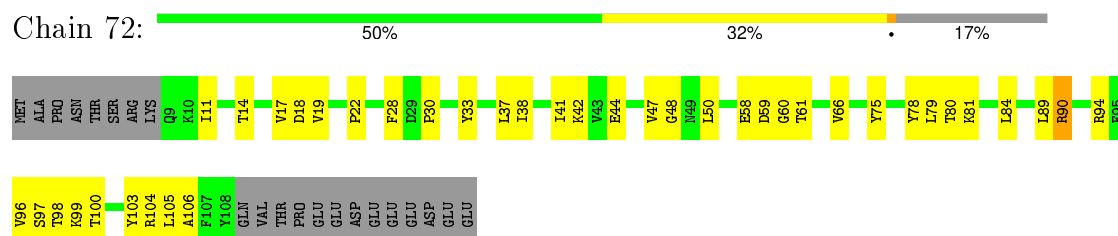
- Molecule 20: 60S ribosomal protein L20



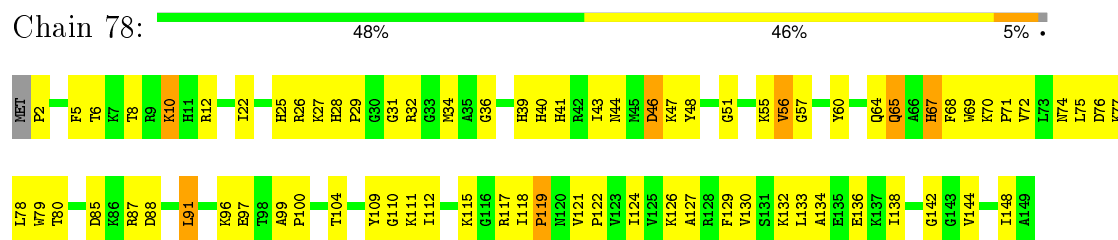
- Molecule 21: 60S ribosomal protein L21



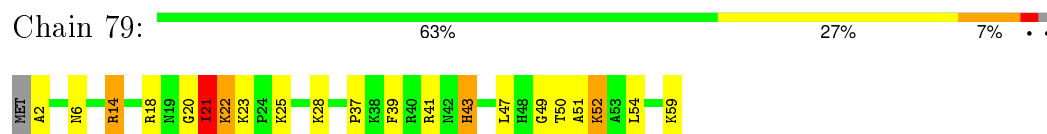
- Molecule 22: 60S ribosomal protein L22



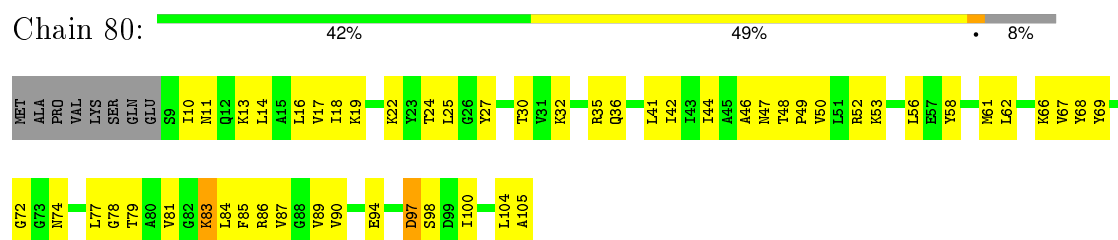
- Molecule 23: 60S ribosomal protein L23



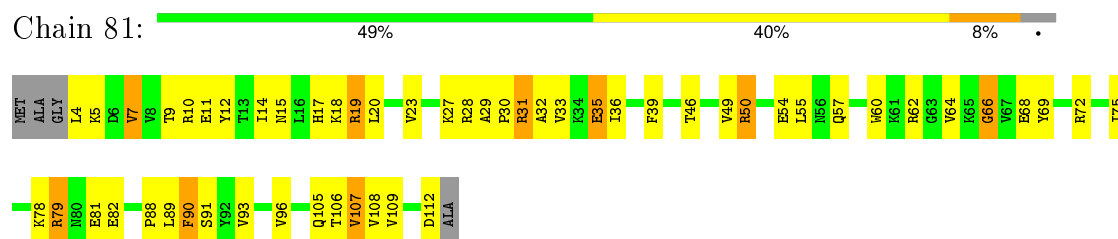
- Molecule 29: 60S ribosomal protein L29



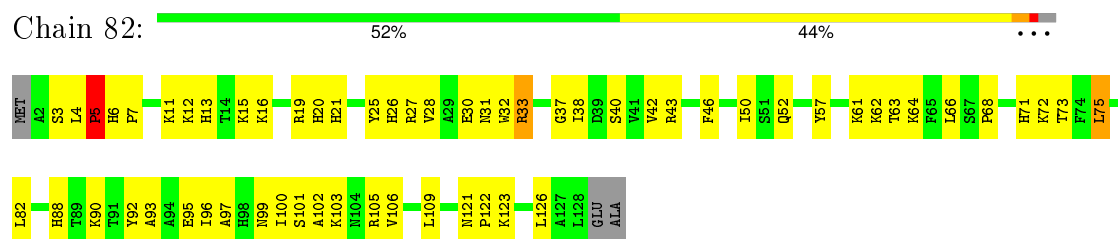
- Molecule 30: 60S ribosomal protein L30



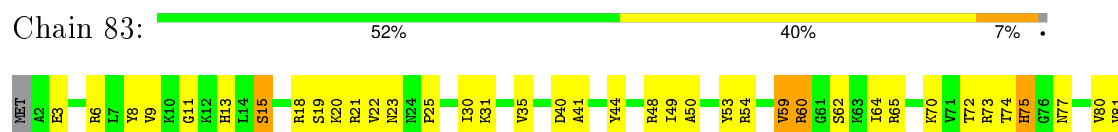
- Molecule 31: 60S ribosomal protein L31



- Molecule 32: 60S ribosomal protein L32



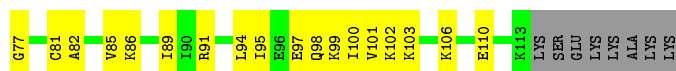
- Molecule 33: 60S ribosomal protein L33





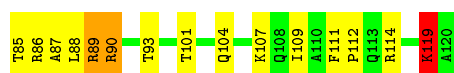
- Molecule 34: 60S ribosomal protein L34

Chain 84: 43% 43% 7% 7%



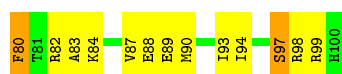
- Molecule 35: 60S ribosomal protein L35

Chain 85: 56% 39% ..



- Molecule 36: 60S ribosomal protein L36

Chain 86: 46% 45% 8% .



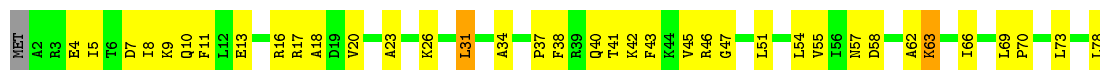
- Molecule 37: 60S ribosomal protein L37

Chain 87: 58% 38% ..



- Molecule 38: 60S ribosomal protein L38

Chain 88: 51% 45% ..



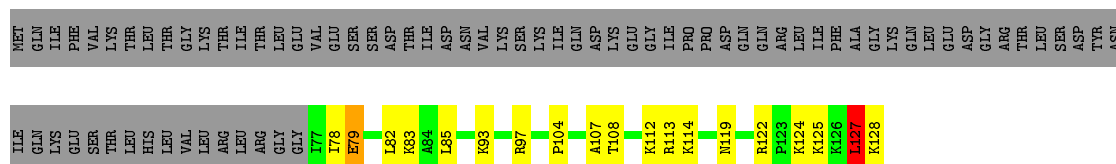
- Molecule 39: 60S ribosomal protein L39

Chain 89: 



- Molecule 40: 60S ribosomal protein L40

Chain 90: 



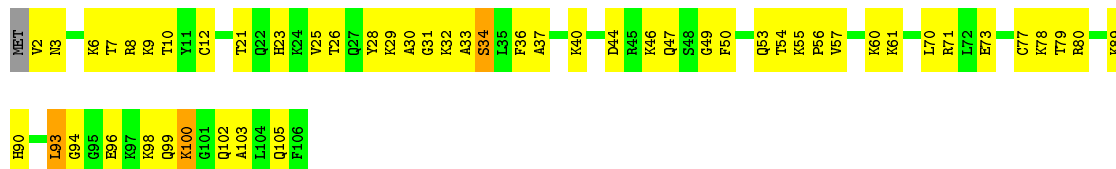
- Molecule 41: 60S ribosomal protein L41

Chain 91: 



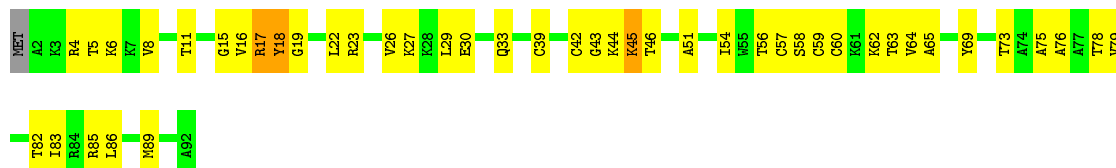
- Molecule 42: 60S ribosomal protein L42

Chain 92: 



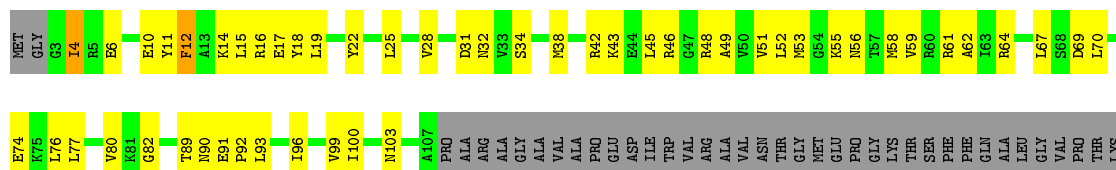
- Molecule 43: 60S ribosomal protein L43

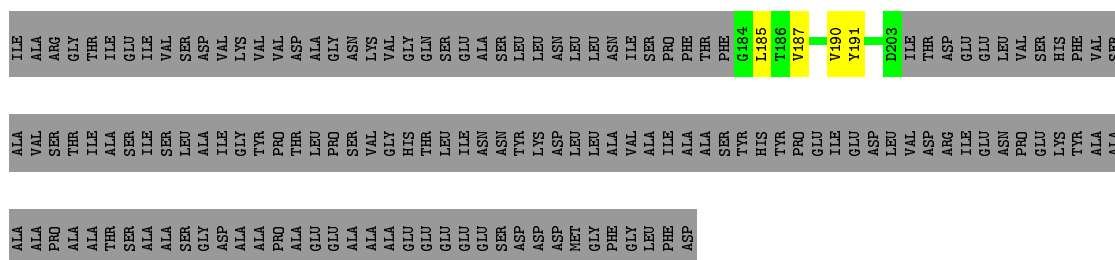
Chain 93: 



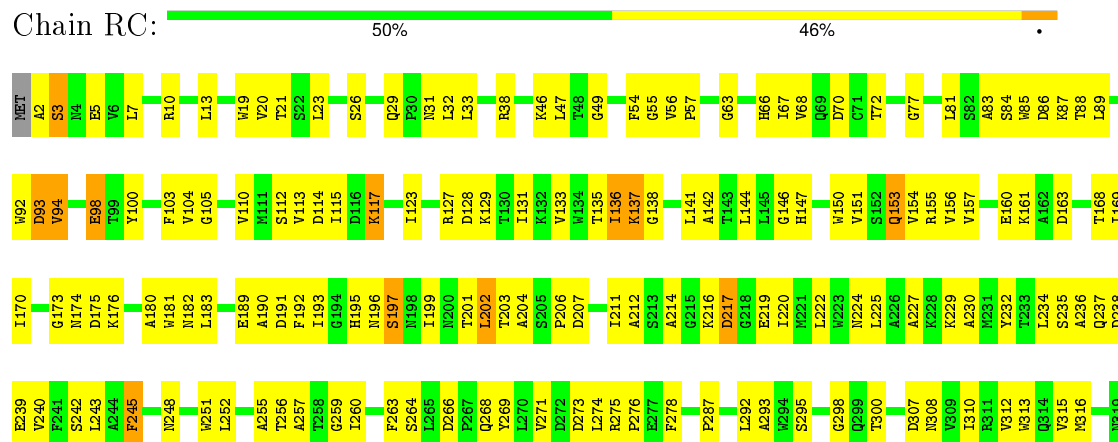
- Molecule 44: 60S acidic ribosomal protein P0

Chain P0: 

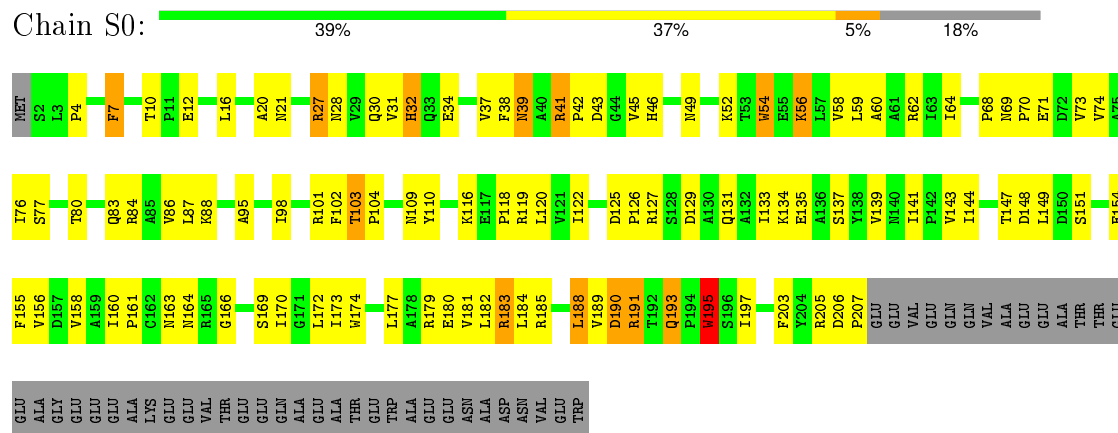




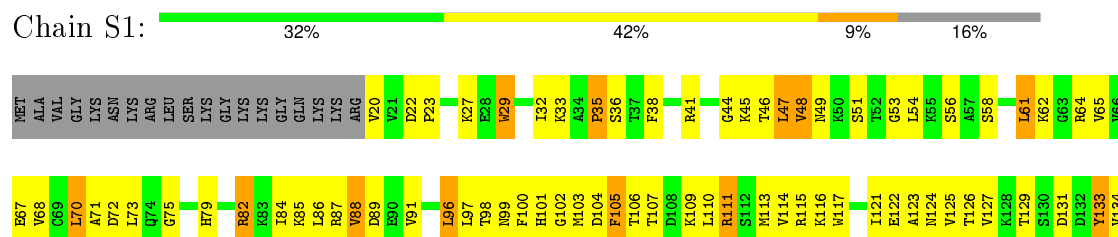
• Molecule 45: Guanine nucleotide-binding protein subunit beta-like protein

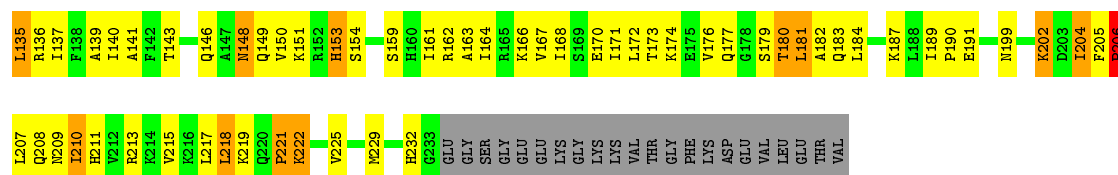


• Molecule 46: 40S ribosomal protein S0



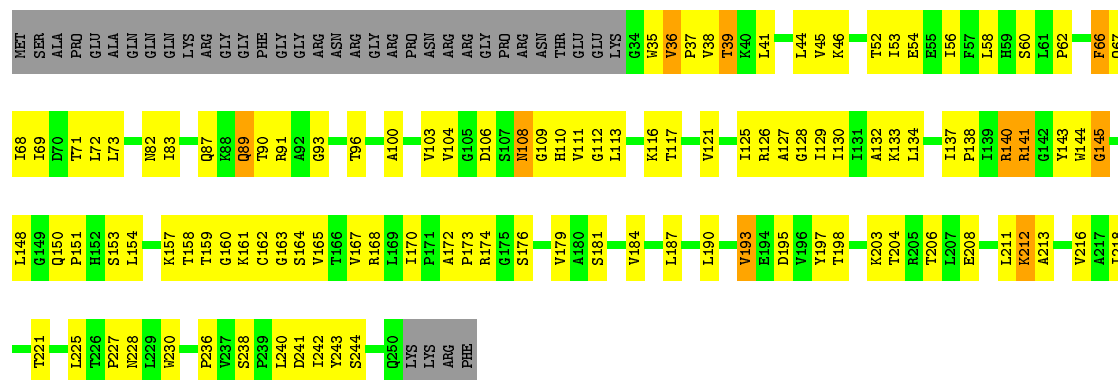
• Molecule 47: 40S ribosomal protein S1





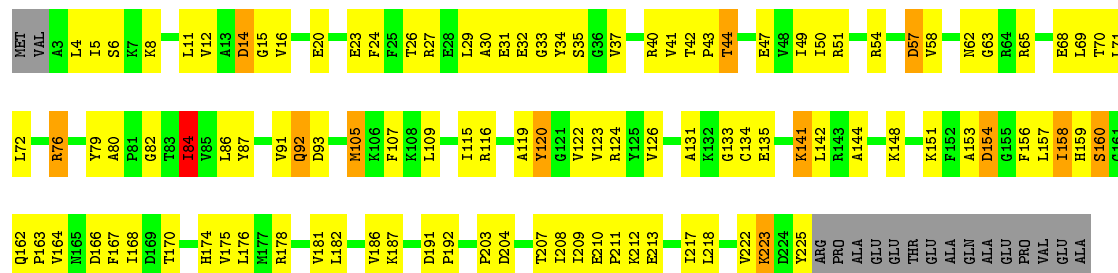
• Molecule 48: 40S ribosomal protein S2

Chain S2: 42% 40% 15%



• Molecule 49: 40S ribosomal protein S3

Chain S3: 47% 40% 5% 7%

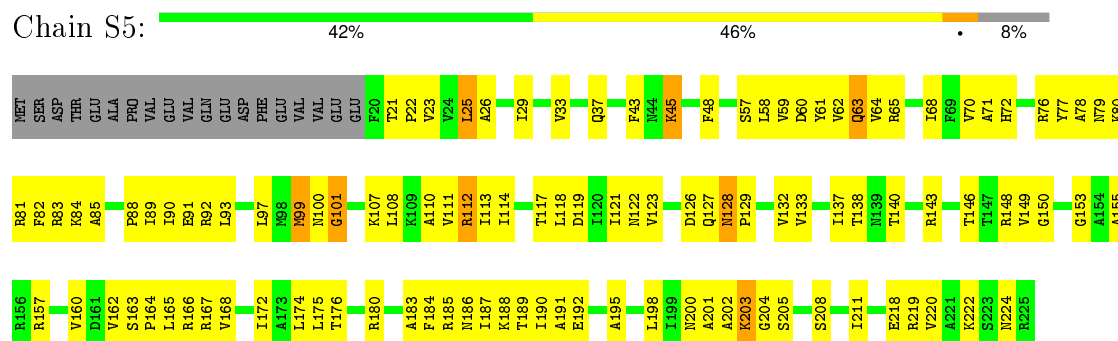


• Molecule 50: 40S ribosomal protein S4

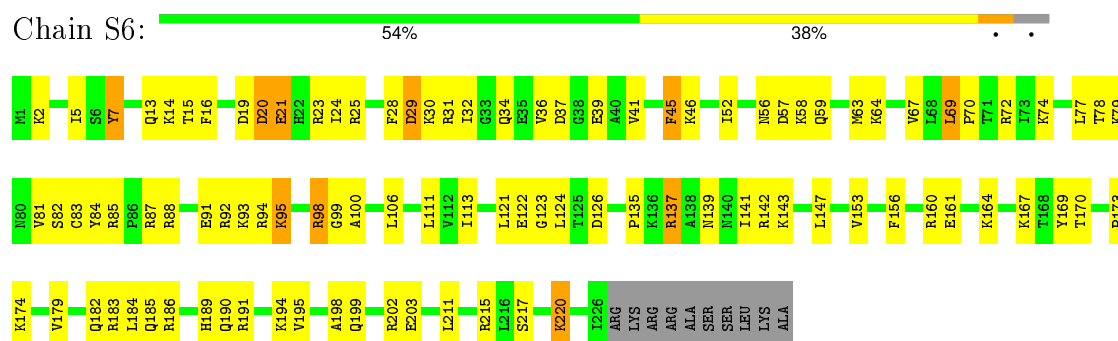
Chain S4: 49% 45% 5%



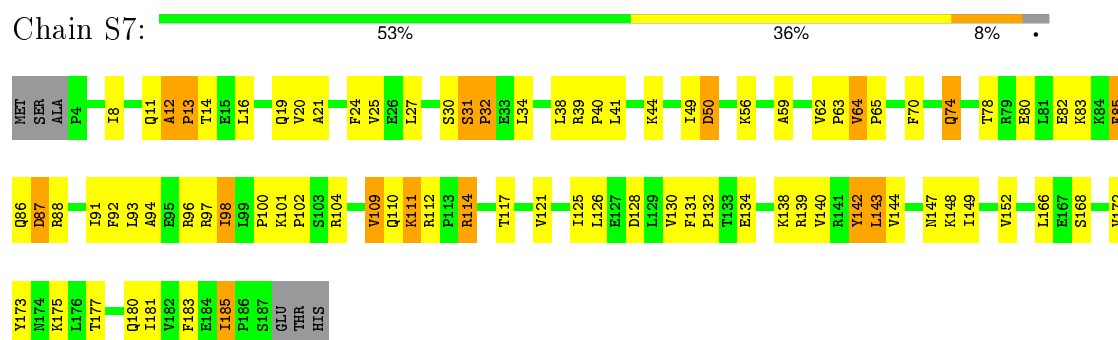
• Molecule 51: 40S ribosomal protein S5



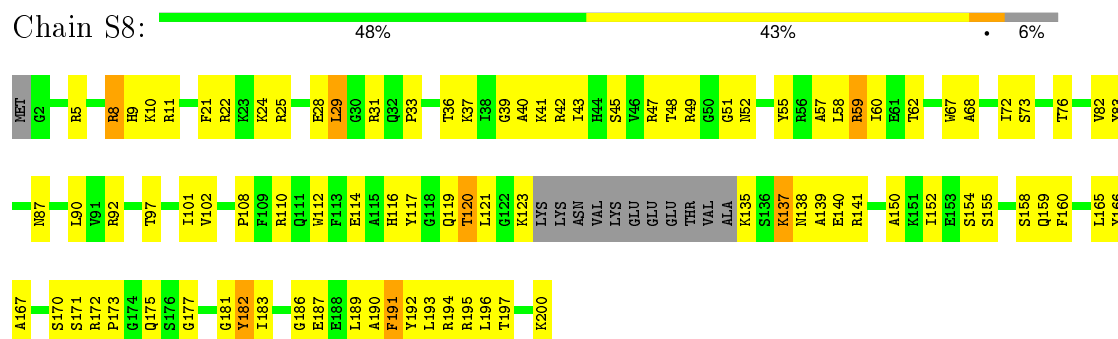
- Molecule 52: 40S ribosomal protein S6



- Molecule 53: 40S ribosomal protein S7

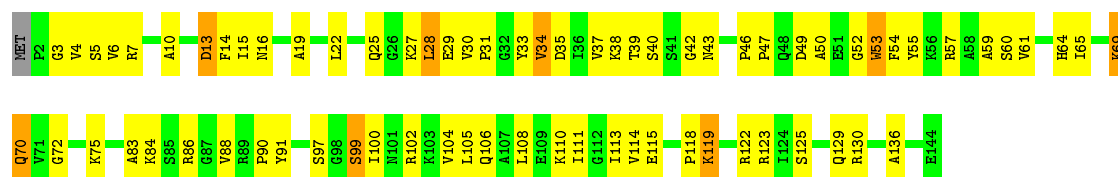


- Molecule 54: 40S ribosomal protein S8



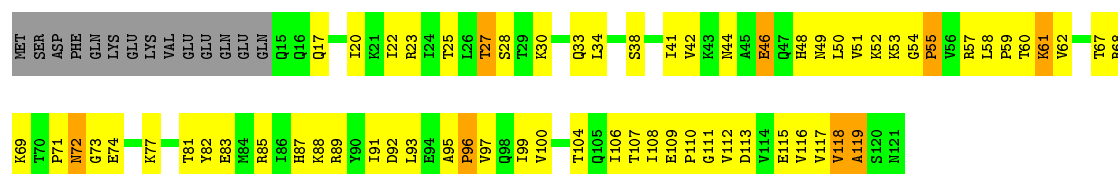
- Molecule 55: 40S ribosomal protein S9





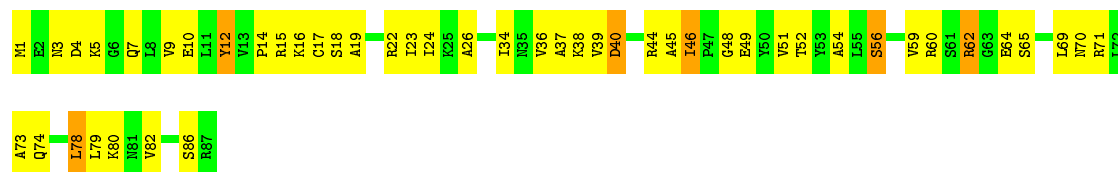
- Molecule 66: 40S ribosomal protein S20

Chain 20: 34% 48% 7% 12%



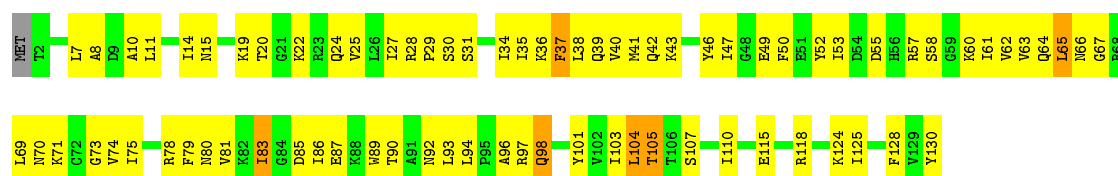
- Molecule 67: 40S ribosomal protein S21

Chain 21: 45% 48% 7%



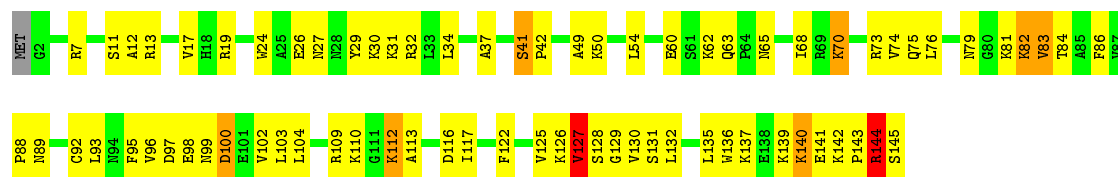
- Molecule 68: 40S ribosomal protein S22

Chain 22: 40% 55% 5%



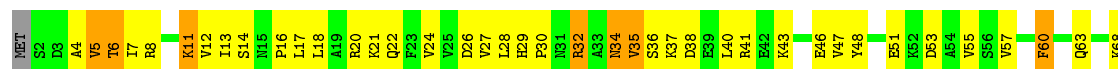
- Molecule 69: 40S ribosomal protein S23

Chain 23: 48% 45% 5%



- Molecule 70: 40S ribosomal protein S24

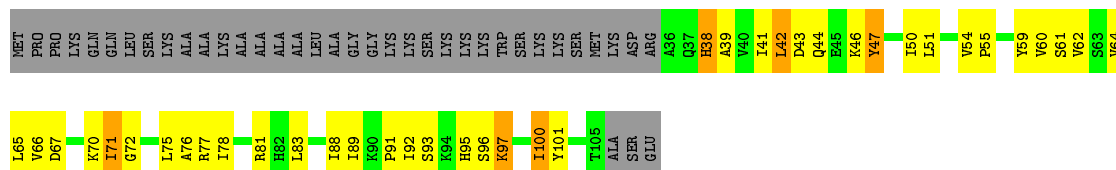
Chain 24: 47% 44% 8%





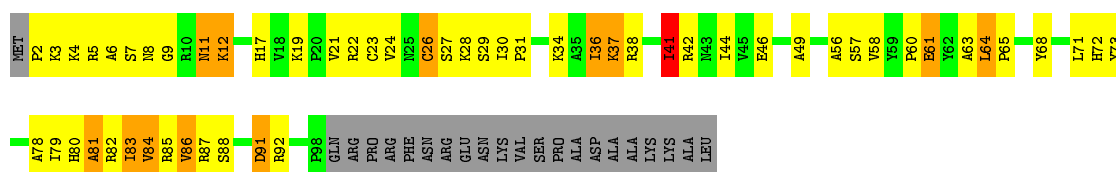
- Molecule 71: 40S ribosomal protein S25

Chain 25: 29% 31% 6% 35%



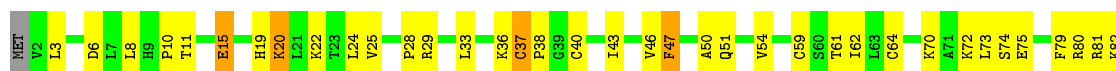
- Molecule 72: 40S ribosomal protein S26

Chain 26: 34% 36% 10% 18%



- Molecule 73: 40S ribosomal protein S27

Chain 27: 54% 40% 5%



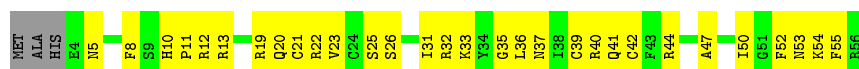
- Molecule 74: 40S ribosomal protein S28

Chain 28: 43% 43% 7% 6%



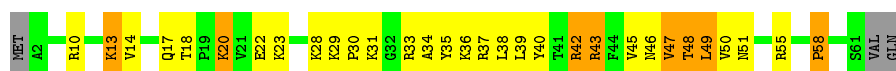
- Molecule 75: 40S ribosomal protein S29

Chain 29: 41% 54% 5%



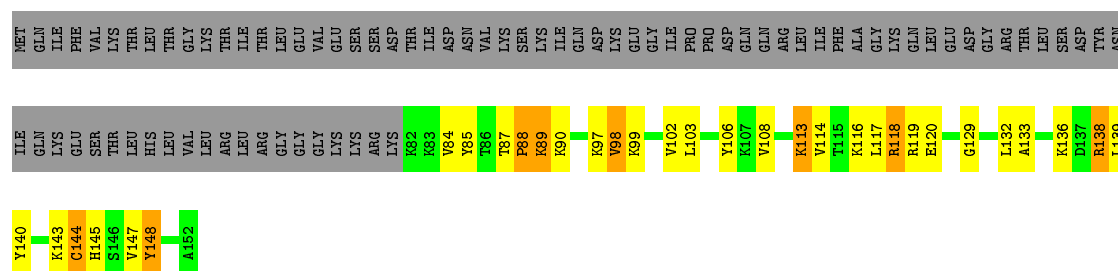
- Molecule 76: 40S ribosomal protein S30

Chain 30: 46% 37% 13% 5%



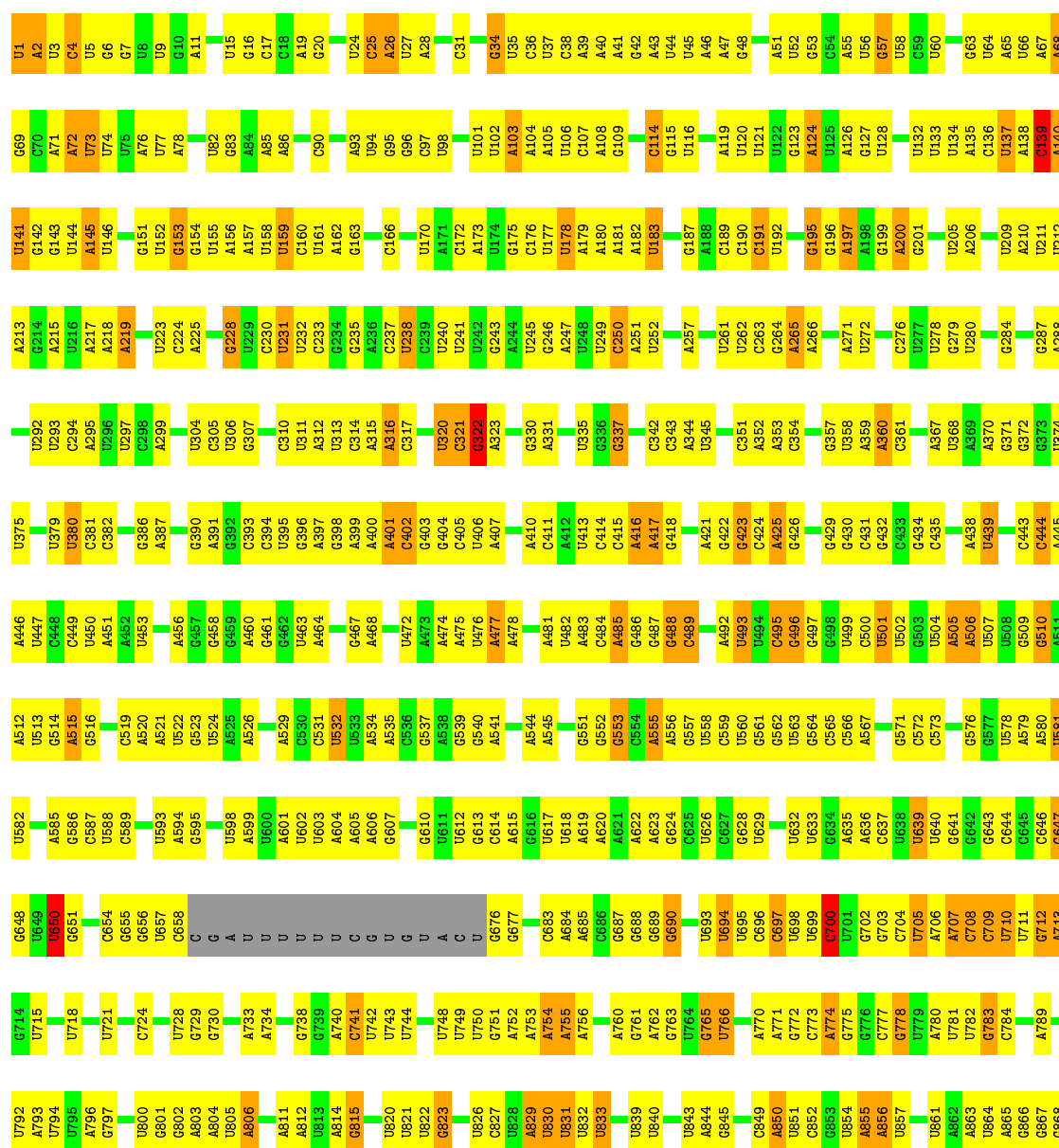
- Molecule 77: 40S ribosomal protein S31

Chain 31: 



• Molecule 78: 18S ribosomal RNA

Chain 1S: 

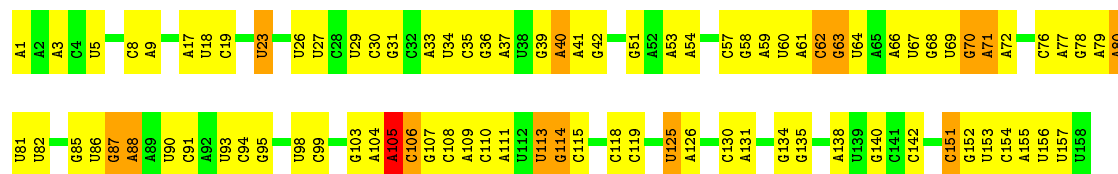
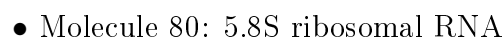


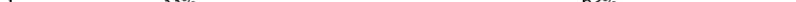
A1234	A1157	A1087	A940	A869
A1238	C1158	A1088	A941	C870
U1239	C1159	A1091	9942	6871
U1240	C1161	A1092	9944	6872
A1242	C1162	U1095	A1025	C873
U1243	A1163	U1096	A1026	6874
A1244	G1164	U1097	A1027	6875
U1245	G1165	U1098	C1028	6876
C1246	A1166	U1098	U1029	9877
U1247	G1167	U1099	A1030	6878
C1248	U1168	G1100	U1031	6879
U1249	G1169	U1104	G1032	C880
U1250	G1170	U1104	A1036	A881
U1251	G1171	C1105	C1037	9882
U1252	G1172	U1106	U1038	C883
U1253	C1173	A1039	U1039	A884
U1254	G1179	G1108	G1040	6885
G1255	C1180	G1109	G1041	6886
U1256	G1181	G1112	G1042	A887
U1257	U1182	A1113	A1043	9894
U1258	A1183	G1114	U1044	6895
U1259	A1184	U1115	C1045	
U1260	U1185	A1116	G1046	6898
G1261	U1186	U1117	G1047	6899
U1262	U1187	U1118	G1048	A900
G1263	U1187	G1119	U1049	6901
G1264	U1191	U1120	G1050	9902
U1269	A1194	C1121	G1051	U903
G1270	C1195	A1125	U1052	6904
G1271	A1196	G1126	G1053	A905
U1272	C1197	U1131	U1054	9908
G1273	G1198	A1132	U1055	9909
C1274	G1199	A1133	U1056	
U1279	G1201	C1134	A1061	6913
G1280	U1202	U1135	A1062	6914
U1282	C1207	U1136	U1063	A915
U1283	A1208	A1137		9916
C1284	C1209	U1138	C1066	U917
	C1210	G1140	C1067	U918
G1288	A1211	G1141	U1071	A919
U1289	A1217	A1142	C1072	9920
U1290	G1218	A1143	C1073	9922
G1291	G1218	U1144	G1074	A923
G1292	C1222	U1145	C1075	A924
U1293	A1223	G1146	A1076	6925
G1294	A1224	A1147	C1077	A926
U1298	U1225	C1148	C1078	9928
G1299	A1226	U1079	U1079	A929
	A1227	G1150	U1080	
U1303	G1228	A1151	A1081	9932
G1304	C1229	A1152	C1082	A933
U1305	U1231	G1153	G1083	6934
C1306		G1154	A1084	9935
		U1231	A1086	
U1310	A1382	U1311		A939
U1312	G1386	A1312		
U1314	G1387	U1315		
U1315	U1388	G1316		
U1316	C1389	C1317		
U1317	U1390	A1318		
U1318	A1391	U1319		
U1319	U1396	A1320		
U1320	U1397	A1321		
U1321	U1398	A1322		
U1322	C1399	C1323		
U1323	G1402	G1324		
U1324	C1403	C1327		
U1325	C1404	C1333		
U1326	G1405	U1334		
U1327	A1406	U1335		
U1328	U1407	A1408		
U1329	G1408	A1409		
U1330	A1410	C1410		
U1331	U1413	U1340		
U1332	U1414	A1341		
U1333	U1415	A1342		
U1334	G1419	A1343		
U1335	C1420	A1344		
U1336	U1423	U1347		
U1337	A1424	A1348		
U1338	A1425	G1349		
U1339	C1426	U1350		
U1340	A1427	G1351		
U1341	G1428	U1352		
U1342	U1430	U1353		
U1343	C1431	G1354		
U1344	U1432	A1357		
U1345	U1433	U1282		
U1346	U1434	U1283		
U1347	U1435	C1284		
U1348	A1436			
U1349	U1448	G1288		
U1350	U1449	U1289		
U1351	U1450	U1290		
U1352	C1457	G1291		
U1353	G1458	G1292		
U1354	C1459	U1293		
U1355	A1460	G1294		
U1356	U1461	U1298		
U1357	U1462	U1299		
U1358	U1463	U1303		
U1359	U1464	G1304		
U1360	U1465	U1305		
U1361	U1466	C1306		
U1362	U1467			
U1363	U1468			
U1364	U1469			
U1365	U1470			
U1366	U1471			
U1367	U1472			
U1368	U1473			
U1369				
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U1371				
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U1600				

G1371	A1301	G1222	A1150	U1067	A992	G924	G856	A784	U627	U536	C	U381	G297	A219	U153
G1372	A1302	A1223	U1151	U1081	G993	A925	G857	G785	A628	U540	U	U382	U298	G220	U154
G1377	U1305	C1224	G1152	U1081	A996	A926	A858	A786	A629	U541	U	G393	U299	A221	G155
U1378	G1306	G1225	A1153	A1085	A997	C927	G859	G787	A630	G542	U	A386	G301	U223	G156
G1382	G1307	G1226	A1154	A1085	A998	C928	G861	A789	U631	G543	U	A389	U305	C224	A157
U1308	G1308	C1228	G1155	C1086	G999	U930	U862	U790	C632	C544	G	A394	U306	C225	G158
U1309	G1309	G1229	C1156	U1086	C1000	C931	U863	U791	C634	U545	U	G397	A307	C226	A159
U1383	G1310	G1230	G1157	A1093	G1001	U932	G864	G792	G635	U546	U	G394	A308	G229	G160
C1385	G1311	A1231	A1158	U1094	A933	G934	U865	G793	C636	G547	A	A395	A308	U230	G161
A1386	C1312	C1232	A1159	U1095	A934	G935	U866	U794	C637	G548	G	A396	A309	U231	U168
G1387	G1313	G1233	U1096	U1096	U935	U935	G867	G795	C638	U549	G	A397	C311	G241	G170
U1388	G1314	G1234	U1097	A1006	A936	A936	U868	U796	C639	A550	G	A398	C312	G242	G171
G1389	U1315	U1235	U1162	U1007	A937	G937	U871	U797	U640			A399	C313	G243	G172
	C1316	G1236	A1165	U1008	G938	C938	U872	G797	U641			A400	C314		
G1392	G1322	G1237	G1166	U1009	U939	U939	U873	A801	C642	A557	A	A401	C315	G234	A165
A1393	U1323	C1238	A1170	A1102	G940	G940	U874	G802	U643	U558	A	A402	U314	G235	A166
A1394	U1324	A1240	A1171	A1103	G941	G941	U875	C803	U644	A559	U	A403	C315	U240	U169
U1398	U1325	U1241	G1174	G1104	U942	U942	A876	C804	A645	G560	C	C403	A319	G242	G170
A1399	G1326	G1242	C1175	A1105	U943	U943	C877	G805	A646	C561	U	G404	U322	G243	G171
G1400	C1327	A1244	G1176	U1107	C944	C944	C878	G806	U647	C562	C	A405	A323		
G1403	U1329	G1245	G1178	U1108	C1016	C1016	U879	A807	C648	U571	C	A406	U328	U250	U178
G1404	A1330	G1246	A1179	U1109	C1017	C1017	U880	A808	A649	U572		A412	U329	G251	C179
U1405	U1331	U1247	A1180	U1110	A952	A952	C886	G809	G652			U413	A338	U252	C180
A1406	G1332	G1250	A1181	A1112	U955	U955	C887	A810	A653			A418	C339	U257	U181
A1407	C1333	A1251	U1182	G1113	U956	U956	A888	G812	C654	C577		U419	C340	G258	G183
G1408	U1334	G1256	C1183	U1114	C957	C957	C890	G815	C655	A578		G421	C341	C259	U184
G1409	U1335	G1257	A1184	G1115	U1028	U1028	G891	A816	A656	G579		A422	C344	C260	C185
	U1336	C1258	C1185	U1116	G1029	G1029	U892	A817	A657				A344		U186
G1414	G1337	U1259	G1186	G1117	C959	C959	A895	C818	U662	A585		G426	C345	G267	A187
U1415	U1338	G1264	U1187	U1118	U960	U960	A896	C819	C663			C427	C346	A268	U188
C1416	C1339	A1269	A1190	A1119	C961	C961	A897	A820	U664	G590		U428	C347	G269	U189
G1417	G1340	G1261	U1191	G1120	A962	A962	U898	U821	C675	C591		U429	C350	U270	U190
A1418	U1341	G1262	G1192	U1121	G963	G963	U899	G822	U671	A592			A351	C271	U191
A1419	C1342	G1263	A1193	U1122	U1042	U1042	U900	C823	A672	C593		U434	A352	G272	C192
			G1194	U1123	G968	G968	G900	C824	U673	U594		C435	A353	A273	
U1427	U1348	U1264	C1195	U1124	C969	C969	U903	U829	C674	A598		G437	C353	G274	G196
A1428	G1349	G1265	U1125	A1046	A970	A970	A904	A830	C675	C599		U438	C359	U275	G197
			G1126	A1047	G971	G971	A905	G831	A677	G600		C439	C360	U276	A198
A1433	U1351	G1266	G1127	A1048	A972	A972	A906	U762	U681			U441	C361	U277	A199
G1434	A1352	A1274	U1128	U1049	A973	A973	G907	U763	U682	A603		U442	C362	U278	C200
U1353	U1353	C1275	A1129	U1050	G974	G974	G908	U764	U683	G604		G443	C363	U279	A201
G1437	G1354	U1276	A1202	U1051	C975	C975	G909	U765	U684				C364		G202
U1438	A1355		A1203	A1052	U976	U976	G910	U766	G685					G282	G203
U1439	U1356	C1279	A1204	A1053	U979	U979	C911	U767	G686	A608				A284	A204
G1440	G1357	G1280	A1054	A1054	A980	A980	C912	G768	G686	G610				A285	C205
G1441	C1358	G1281	U1055	U1056	U981	U981	A913	G769	U687	A611				U286	U207
			U1056	A1057	U982	U982	A914	G770	G688	U612				G287	C208
G1444	U1361	G1282	U1210	A1057	C982	C982	A915	A771	U689					C288	A209
U1445	A1212	A1286	U1211	A1136	A983	A983	A916	U772	A690	G616				U289	U210
A1446	G1213	A1287	G1213	C1137	G984	G984	A917	U773		G617				A290	A211
G1447	U1214	U1288	U1138	U1059	U985	U985	A918	G773	U698	A618				G291	G212
U1448	U1215	G1365	U1139	U1060	U986	U986	C918	U776	A699	C619				U292	G213
A1449	G1366	A1290	G1140	A1061	U987	U987	U919	U776	A699	U620				C293	G214
G1450	U1367	A1291	C1141	A1062	U988	U988	A920	U776	C700	A622				U294	G215
C1451	U1368	U1292	G1142	A1063	A989	A989	A921	A780	G701					A295	
			U1145	A1064	U990	U990	U922	U781	A705					A296	G218
A1453	G1370		G1146	C1146	G1066	G1066	C923								


WORLDWIDE PDB
 PROTEIN DATA BANK

EMDataBank
 Unified Data Resource for 3DEM



Chain 5S:  33% 62% 5%



- Molecule 82: P/E-site initiator transfer RNAfMet

Chain ET:  51% 39% 10%

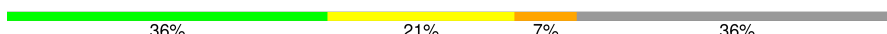


- Molecule 82: P/E-site initiator transfer RNAfMet

Chain PT:  53% 40% 6%



- Molecule 83: messenger RNA

Chain MR:  36% 21% 7% 36%



4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of images	23163	Depositor
Resolution determination method	FSC 0.143	Depositor
CTF correction method	CTFFIND3, FREALIGN per micrograph	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	30	Depositor
Minimum defocus (nm)	1159	Depositor
Maximum defocus (nm)	4844	Depositor
Magnification	133333	Depositor
Image detector	FEI FALCON I (4k x 4k)	Depositor

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	$\# Z > 2$	RMSZ	$\# Z > 2$
1	L1	0.61	0/1634	0.67	0/2195
10	60	0.49	0/1754	0.56	0/2350
11	61	0.51	0/1375	0.58	0/1842
12	62	0.52	0/700	0.72	7/968 (0.7%)
13	63	0.48	0/1568	0.60	0/2106
14	64	0.50	0/1069	0.56	0/1438
15	65	0.47	0/1758	0.54	0/2354
16	66	0.49	0/1586	0.57	0/2128
17	67	0.49	0/1466	0.56	0/1968
18	68	0.48	0/1466	0.57	0/1965
19	69	0.42	0/1539	0.56	0/2050
2	L2	0.43	0/1952	0.59	0/2622
20	70	0.52	0/1482	0.58	0/1990
21	71	0.50	0/1301	0.56	0/1743
22	72	0.57	0/812	0.57	0/1099
23	73	0.46	0/1019	0.57	0/1369
24	74	0.51	0/540	0.56	0/717
25	75	0.50	0/984	0.60	0/1325
26	76	0.46	0/1005	0.58	1/1341 (0.1%)
27	77	0.51	0/1119	0.53	0/1497
28	78	0.46	0/1205	0.59	0/1612
29	79	0.48	0/474	0.60	0/629
3	L3	0.48	0/3153	0.56	0/4239
30	80	0.52	0/751	0.55	0/1008
31	81	0.46	0/904	0.59	0/1213
32	82	0.46	0/1041	0.58	0/1394
33	83	0.51	0/869	0.56	0/1168
34	84	0.48	0/891	0.59	0/1191
35	85	0.45	0/979	0.57	0/1301
36	86	0.46	0/779	0.63	0/1034
37	87	0.48	0/697	0.54	0/923
38	88	0.52	0/619	0.55	0/826
39	89	0.46	0/444	0.54	0/588
4	L4	0.46	0/2802	0.58	0/3792

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >2	RMSZ	# Z >2
40	90	0.44	0/424	0.58	0/562
41	91	0.46	0/235	0.58	0/300
42	92	0.49	0/861	0.58	0/1136
43	93	0.44	0/702	0.55	0/934
44	P0	0.62	0/1002	0.65	0/1348
45	RC	0.54	0/2498	0.60	0/3398
46	S0	0.55	0/1653	0.60	0/2261
47	S1	0.50	0/1735	0.59	0/2335
48	S2	0.50	0/1665	0.59	0/2263
49	S3	0.52	0/1759	0.58	0/2368
5	L5	0.53	0/2426	0.58	0/3271
50	S4	0.50	0/2110	0.62	0/2839
51	S5	0.49	0/1630	0.59	0/2202
52	S6	0.51	0/1844	0.59	0/2464
53	S7	0.52	0/1506	0.62	0/2028
54	S8	0.49	0/1515	0.60	0/2021
55	S9	0.50	0/1519	0.62	0/2035
56	10	0.58	0/837	0.64	0/1131
57	11	0.53	0/1273	0.58	0/1712
58	12	0.56	0/943	0.68	0/1274
59	13	0.49	0/1216	0.59	0/1638
6	L6	0.52	0/1261	0.62	0/1694
60	14	0.48	0/953	0.58	0/1279
61	15	0.54	0/1012	0.65	0/1356
62	16	0.52	0/1126	0.63	0/1510
63	17	0.58	0/974	0.70	0/1304
64	18	0.50	0/1212	0.61	0/1628
65	19	0.52	0/1131	0.60	0/1517
66	20	0.54	0/866	0.57	0/1169
67	21	0.51	0/694	0.57	0/935
68	22	0.49	0/1039	0.60	0/1395
69	23	0.48	0/1140	0.59	0/1518
7	L7	0.50	0/1822	0.60	1/2451 (0.0%)
70	24	0.53	0/1088	0.58	0/1449
71	25	0.52	0/571	0.67	0/768
72	26	0.47	0/782	0.57	0/1047
73	27	0.51	0/621	0.57	0/838
74	28	0.50	0/500	0.59	0/670
75	29	0.55	0/454	0.59	0/602
76	30	0.51	0/483	0.63	0/643
77	31	0.56	0/505	0.72	2/682 (0.3%)
78	1S	0.76	3/42445 (0.0%)	0.74	18/66138 (0.0%)
79	2S	0.72	5/79038 (0.0%)	0.72	22/123226 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >2	RMSZ	# Z >2
8	L8	0.49	0/1850	0.60	0/2495
80	8S	0.72	1/3747 (0.0%)	0.71	0/5832
81	5S	0.73	1/2884 (0.0%)	0.70	0/4491
82	ET	0.83	1/1836 (0.1%)	0.73	0/2859
82	PT	0.76	1/1836 (0.1%)	0.73	0/2859
83	MR	0.93	1/219 (0.5%)	0.75	0/339
9	L9	0.50	0/1540	0.59	0/2073
All	All	0.65	13/224719 (0.0%)	0.68	51/330272 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
78	1S	0	23
79	2S	3	56
80	8S	0	6
All	All	3	85

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	8S	1	A	OP3-P	-7.03	1.52	1.61
78	1S	1	U	OP3-P	-6.96	1.52	1.61
81	5S	1	G	OP3-P	-6.89	1.52	1.61
79	2S	486	A	P-O5'	6.74	1.66	1.59
82	PT	1	C	OP3-P	-6.69	1.53	1.61
82	ET	1	C	OP3-P	-6.67	1.53	1.61
79	2S	489	U	N1-C2	6.42	1.44	1.38
79	2S	493	U	N1-C2	5.65	1.43	1.38
83	MR	2	A	P-O5'	5.39	1.65	1.59
78	1S	658	C	N1-C2	5.26	1.45	1.40
79	2S	2037	G	P-O5'	5.13	1.64	1.59
79	2S	451	U	N1-C2	5.03	1.43	1.38
78	1S	1	U	P-O5'	5.02	1.64	1.59

All (51) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
78	1S	829	A	C2'-C3'-O3'	9.04	129.39	109.50
79	2S	2065	U	C2'-C3'-O3'	8.72	128.69	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	2S	2512	C	C2'-C3'-O3'	8.22	127.58	109.50
79	2S	493	U	N1-C1'-C2'	7.81	124.15	114.00
77	31	144	CYS	N-CA-C	-6.92	92.32	111.00
79	2S	1953	G	O4'-C1'-N9	6.40	113.32	108.20
78	1S	861	U	N1-C1'-C2'	6.11	121.94	114.00
78	1S	453	U	N1-C1'-C2'	6.04	121.85	114.00
78	1S	1052	U	N1-C1'-C2'	6.00	121.80	114.00
78	1S	1754	A	N9-C1'-C2'	5.95	121.73	114.00
79	2S	1953	G	N9-C1'-C2'	5.91	121.68	114.00
12	62	30	PRO	N-CA-CB	5.86	110.33	103.30
78	1S	1051	G	C2'-C3'-O3'	5.86	123.07	113.70
12	62	148	PRO	N-CA-CB	5.80	110.26	103.30
78	1S	228	G	N9-C1'-C2'	5.79	121.53	114.00
12	62	89	PRO	N-CA-CB	5.77	110.23	103.30
79	2S	1481	A	N9-C1'-C2'	5.75	121.47	114.00
79	2S	2541	U	C2'-C3'-O3'	5.74	122.88	113.70
78	1S	1524	A	N9-C1'-C2'	5.73	121.44	114.00
78	1S	1768	G	N9-C1'-C2'	5.70	121.41	114.00
79	2S	282	G	C2'-C3'-O3'	5.70	122.82	113.70
78	1S	724	C	N1-C1'-C2'	5.66	121.35	114.00
79	2S	3170	A	N9-C1'-C2'	5.64	121.34	114.00
12	62	75	PRO	N-CA-CB	5.62	110.05	103.30
78	1S	139	C	C2'-C3'-O3'	5.61	122.68	113.70
12	62	34	PRO	N-CA-CB	5.58	110.00	103.30
79	2S	1307	G	C2'-C3'-O3'	5.58	122.62	113.70
79	2S	1246	G	N9-C1'-C2'	5.54	121.20	114.00
12	62	88	PRO	N-CA-CB	5.51	109.92	103.30
78	1S	1274	C	N1-C1'-C2'	5.51	121.16	114.00
79	2S	2512	C	C4'-C3'-O3'	5.47	123.94	113.00
12	62	39	PRO	N-CA-CB	5.47	109.86	103.30
78	1S	700	C	N1-C1'-C2'	5.47	121.11	114.00
79	2S	487	U	N1-C1'-C2'	5.46	121.10	114.00
78	1S	1344	A	C2'-C3'-O3'	5.44	122.41	113.70
79	2S	2037	G	OP1-P-OP2	-5.40	111.50	119.60
79	2S	2094	C	O4'-C1'-N1	5.35	112.48	108.20
79	2S	2635	A	N9-C1'-C2'	5.31	120.90	114.00
78	1S	1074	G	N9-C1'-C2'	5.24	120.81	114.00
7	L7	179	LEU	CA-CB-CG	5.24	127.34	115.30
77	31	88	PRO	N-CA-CB	5.23	109.58	103.30
78	1S	555	A	C2'-C3'-O3'	5.22	122.06	113.70
79	2S	3218	A	C2'-C3'-O3'	5.17	121.97	113.70
26	76	126	LEU	CA-CB-CG	5.15	127.15	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	2S	2554	A	C2'-C3'-O3'	5.08	121.83	113.70
79	2S	486	A	OP1-P-OP2	-5.06	112.01	119.60
78	1S	501	U	C2'-C3'-O3'	5.04	121.77	113.70
79	2S	439	C	N1-C1'-C2'	5.03	120.54	114.00
78	1S	650	U	N1-C1'-C2'	5.02	120.53	114.00
79	2S	959	C	N1-C1'-C2'	5.01	120.51	114.00
79	2S	770	G	N9-C1'-C2'	5.00	120.50	114.00

All (3) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
79	2S	65	A	C3'
79	2S	2065	U	C3'
79	2S	2512	C	C3'

All (85) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
78	1S	1074	G	Sidechain
78	1S	1085	G	Sidechain
78	1S	1160	A	Sidechain
78	1S	1229	G	Sidechain
78	1S	1230	A	Sidechain
78	1S	1251	U	Sidechain
78	1S	1255	G	Sidechain
78	1S	1524	A	Sidechain
78	1S	1542	G	Sidechain
78	1S	1553	G	Sidechain
78	1S	1680	G	Sidechain
78	1S	1754	A	Sidechain
78	1S	183	U	Sidechain
78	1S	199	G	Sidechain
78	1S	228	G	Sidechain
78	1S	287	G	Sidechain
78	1S	313	U	Sidechain
78	1S	322	G	Sidechain
78	1S	337	G	Sidechain
78	1S	447	U	Sidechain
78	1S	535	A	Sidechain
78	1S	553	G	Sidechain
78	1S	576	G	Sidechain
79	2S	1000	C	Sidechain

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Mol	Chain	Res	Type	Group
79	2S	1127	G	Sidechain
79	2S	1154	A	Sidechain
79	2S	1195	A	Sidechain
79	2S	1315	U	Sidechain
79	2S	1393	A	Sidechain
79	2S	1417	G	Sidechain
79	2S	1561	G	Sidechain
79	2S	1646	G	Sidechain
79	2S	1695	U	Sidechain
79	2S	1713	G	Sidechain
79	2S	1730	G	Sidechain
79	2S	1731	A	Sidechain
79	2S	1808	G	Sidechain
79	2S	1809	A	Sidechain
79	2S	1930	A	Sidechain
79	2S	196	G	Sidechain
79	2S	2376	G	Sidechain
79	2S	2403	G	Sidechain
79	2S	2541	U	Sidechain
79	2S	26	A	Sidechain
79	2S	2635	A	Sidechain
79	2S	2642	A	Sidechain
79	2S	2656	A	Sidechain
79	2S	2704	A	Sidechain
79	2S	2713	U	Sidechain
79	2S	2800	G	Sidechain
79	2S	2844	C	Sidechain
79	2S	2898	G	Sidechain
79	2S	2901	G	Sidechain
79	2S	3026	G	Sidechain
79	2S	3118	C	Sidechain
79	2S	3140	G	Sidechain
79	2S	3170	A	Sidechain
79	2S	322	U	Sidechain
79	2S	3333	G	Sidechain
79	2S	341	G	Sidechain
79	2S	371	G	Sidechain
79	2S	372	A	Sidechain
79	2S	383	G	Sidechain
79	2S	394	G	Sidechain
79	2S	395	A	Sidechain
79	2S	40	A	Sidechain

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Mol	Chain	Res	Type	Group
79	2S	400	G	Sidechain
79	2S	405	U	Sidechain
79	2S	489	U	Sidechain
79	2S	733	G	Sidechain
79	2S	736	A	Sidechain
79	2S	760	G	Sidechain
79	2S	770	G	Sidechain
79	2S	771	A	Sidechain
79	2S	835	G	Sidechain
79	2S	845	G	Sidechain
79	2S	857	G	Sidechain
79	2S	858	A	Sidechain
79	2S	907	G	Sidechain
80	8S	105	A	Sidechain
80	8S	40	A	Sidechain
80	8S	70	G	Sidechain
80	8S	71	A	Sidechain
80	8S	87	G	Sidechain
80	8S	88	A	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	L1	1609	0	1701	103	0
2	L2	1918	0	1987	162	0
3	L3	3082	0	3165	181	0
4	L4	2750	0	2863	153	0
5	L5	2376	0	2325	130	0
6	L6	1240	0	1326	77	0
7	L7	1785	0	1862	126	0
8	L8	1818	0	1908	129	0
9	L9	1519	0	1587	90	0
10	60	1718	0	1754	88	0
11	61	1354	0	1383	81	0
12	62	703	0	324	7	0
13	63	1543	0	1608	85	0
14	64	1054	0	1149	55	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
15	65	1721	0	1779	132	0
16	66	1556	0	1659	93	0
17	67	1443	0	1485	85	0
18	68	1442	0	1543	113	0
19	69	1522	0	1617	82	0
20	70	1446	0	1487	97	0
21	71	1277	0	1323	80	0
22	72	796	0	812	36	0
23	73	1004	0	1048	77	0
24	74	528	0	558	30	0
25	75	969	0	1036	56	0
26	76	994	0	1081	47	0
27	77	1093	0	1155	44	0
28	78	1174	0	1215	74	0
29	79	463	0	491	18	0
30	80	743	0	797	43	0
31	81	890	0	938	52	0
32	82	1020	0	1090	54	0
33	83	851	0	880	59	0
34	84	881	0	949	62	0
35	85	970	0	1078	42	0
36	86	772	0	849	50	0
37	87	682	0	687	46	0
38	88	613	0	682	37	0
39	89	437	0	475	16	0
40	90	418	0	459	18	0
41	91	234	0	284	16	0
42	92	848	0	918	46	0
43	93	695	0	738	46	0
44	P0	987	0	999	46	0
45	RC	2445	0	2401	115	0
46	S0	1612	0	1623	107	0
47	S1	1709	0	1784	141	0
48	S2	1635	0	1723	101	0
49	S3	1734	0	1817	95	0
50	S4	2069	0	2154	121	0
51	S5	1610	0	1675	112	0
52	S6	1820	0	1918	81	0
53	S7	1481	0	1572	82	0
54	S8	1490	0	1525	80	0
55	S9	1494	0	1573	105	0
56	10	817	0	804	55	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	11	1245	0	1314	64	0
58	12	935	0	975	45	0
59	13	1193	0	1255	67	0
60	14	942	0	979	63	0
61	15	991	0	1035	62	0
62	16	1106	0	1166	82	0
63	17	965	0	1026	68	0
64	18	1193	0	1222	72	0
65	19	1113	0	1124	65	0
66	20	856	0	917	72	0
67	21	685	0	672	39	0
68	22	1022	0	1060	77	0
69	23	1122	0	1196	84	0
70	24	1074	0	1132	55	0
71	25	563	0	603	41	0
72	26	769	0	818	66	0
73	27	611	0	633	33	0
74	28	498	0	535	33	0
75	29	444	0	436	27	0
76	30	475	0	525	32	0
77	31	498	0	441	22	0
78	1S	37949	0	19093	951	0
79	2S	70616	0	35486	1791	0
80	8S	3354	0	1695	74	0
81	5S	2580	0	1304	75	0
82	ET	1644	0	836	30	0
82	PT	1644	0	836	25	0
83	MR	195	0	98	3	0
All	All	209136	0	154035	7478	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 21.

All (7478) 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:L1:30:GLU:HB2	1:L1:34:LEU:HD11	1.32	1.10
78:1S:712:G:H2'	78:1S:713:A:H5''	1.34	1.09
79:2S:1604:G:H4'	79:2S:1835:A:H4'	1.35	1.08
1:L1:93:LEU:HD21	1:L1:118:LYS:HD2	1.35	1.08
79:2S:1971:C:H2'	79:2S:1972:A:H4'	1.27	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1844:C:H2'	79:2S:1845:G:H5''	1.37	1.07
79:2S:2476:C:H2'	79:2S:2477:G:H4'	1.35	1.06
79:2S:1626:U:H4'	79:2S:1632:A:H4'	1.39	1.04
56:10:87:VAL:H	56:10:88:PRO:HD2	1.21	1.04
17:67:36:ILE:HD11	17:67:44:ALA:HB1	1.35	1.04
78:1S:138:A:N6	78:1S:266:A:H61	1.56	1.03
72:26:82:ARG:HG3	72:26:83:ILE:H	1.22	1.03
79:2S:441:U:H3	79:2S:494:G:H4'	1.19	1.02
47:S1:71:ALA:HB2	47:S1:79:HIS:HB2	1.38	1.02
78:1S:1701:A:H3'	78:1S:1702:A:H5''	1.41	1.01
60:14:52:ARG:HD3	78:1S:905:A:H5''	1.42	1.00
54:S8:76:THR:HG22	54:S8:108:PRO:HG2	1.41	1.00
3:L3:53:MET:HG2	3:L3:77:THR:HG22	1.44	1.00
74:28:10:ALA:HA	74:28:32:PHE:HA	1.42	0.99
31:81:5:LYS:HA	31:81:89:LEU:HD21	1.45	0.99
5:L5:140:ARG:HG3	5:L5:141:PRO:HD2	1.42	0.99
53:S7:27:LEU:HD21	53:S7:80:GLU:HG2	1.46	0.98
78:1S:740:A:H3'	78:1S:741:C:H5''	1.42	0.98
68:22:40:VAL:HG21	68:22:103:ILE:HD12	1.45	0.98
31:81:62:ARG:HB2	31:81:66:GLY:HA3	1.46	0.98
37:87:25:ARG:HH21	79:2S:817:A:H61	1.10	0.98
79:2S:2513:U:H3	79:2S:2593:A:H62	1.13	0.97
79:2S:725:G:H2'	79:2S:726:G:H5''	1.46	0.97
25:75:117:ASN:HA	39:89:17:LYS:HD3	1.42	0.97
65:19:102:ARG:HD3	78:1S:1500:C:H5''	1.44	0.97
78:1S:515:A:H62	78:1S:537:G:H21	0.98	0.97
64:18:126:ARG:HG2	64:18:133:VAL:HB	1.43	0.96
44:P0:46:ARG:HH22	79:2S:1257:C:H4'	1.30	0.96
59:13:64:ARG:HH11	59:13:64:ARG:HB3	1.30	0.95
78:1S:593:U:H4'	78:1S:595:G:H4'	1.45	0.95
79:2S:1896:A:H61	79:2S:2339:C:H42	1.13	0.95
52:S6:72:ARG:HG2	52:S6:98:ARG:HG2	1.46	0.95
10:60:15:LYS:HE3	79:2S:1047:A:H5''	1.48	0.95
78:1S:237:C:H5''	78:1S:238:U:H5'	1.49	0.94
25:75:47:ALA:HB3	35:85:77:PRO:HG3	1.45	0.94
57:11:68:GLY:HA3	57:11:127:GLN:HB3	1.47	0.94
78:1S:707:A:H3'	78:1S:708:C:H5''	1.47	0.94
22:72:84:LEU:HB3	22:72:90:ARG:HG2	1.48	0.94
7:L7:25:GLN:HG2	7:L7:29:GLU:HB2	1.48	0.94
23:73:38:ALA:HB3	23:73:59:MET:HB2	1.48	0.94
78:1S:1657:U:H4'	78:1S:1658:G:H5''	1.50	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:31:144:CYS:HB3	77:31:147:VAL:HG13	1.50	0.94
23:73:66:LYS:HB2	23:73:69:LEU:HD13	1.49	0.94
79:2S:2493:U:H3'	79:2S:2494:A:H5''	1.46	0.94
4:L4:206:LEU:HG	4:L4:226:GLU:HB2	1.49	0.94
18:68:12:ARG:H	18:68:12:ARG:HE	1.11	0.93
60:14:85:ALA:H	60:14:119:THR:HG22	1.33	0.93
78:1S:1169:G:H21	78:1S:1576:A:H62	1.11	0.93
7:L7:63:ILE:HA	7:L7:66:LYS:HE3	1.48	0.93
49:S3:134:CYS:H	49:S3:157:LEU:HD11	1.34	0.93
79:2S:2068:U:H3'	79:2S:2069:G:H5'	1.47	0.93
79:2S:109:A:H4'	79:2S:110:G:H5'	1.48	0.93
79:2S:2798:C:H5''	79:2S:2800:G:H5'	1.50	0.93
79:2S:829:U:H3	79:2S:895:A:H62	1.09	0.92
44:P0:28:VAL:HG12	44:P0:187:VAL:HG22	1.49	0.92
21:71:128:LEU:HD11	79:2S:1096:U:H5'	1.50	0.92
36:86:94:ILE:HA	36:86:98:ARG:HD3	1.50	0.92
10:60:154:ARG:HH12	79:2S:2837:A:H5''	1.31	0.92
79:2S:1951:C:H6	79:2S:2095:G:H22	1.17	0.92
55:S9:148:VAL:HG12	55:S9:150:LEU:H	1.32	0.92
19:69:163:ARG:HG2	78:1S:815:G:H5''	1.51	0.92
2:L2:22:LEU:HB3	2:L2:52:SER:HB2	1.50	0.92
55:S9:39:LYS:HD3	55:S9:42:ILE:HD12	1.50	0.92
62:16:73:GLY:H	62:16:76:SER:HB3	1.32	0.92
59:13:71:ILE:HD12	59:13:71:ILE:H	1.33	0.91
21:71:78:LYS:HB2	21:71:87:LYS:HE2	1.50	0.91
39:89:43:ASN:HB3	39:89:46:ARG:HB2	1.52	0.91
30:80:13:LYS:HB3	30:80:100:ILE:HG12	1.52	0.91
50:S4:31:PRO:HG3	50:S4:43:PRO:HG3	1.49	0.91
79:2S:2361:A:H61	79:2S:2377:G:H1	1.13	0.91
4:L4:300:ARG:HB2	4:L4:301:PRO:HD2	1.53	0.91
25:75:113:LEU:HB3	79:2S:1523:U:H5'	1.51	0.91
81:5S:12:U:H4'	81:5S:110:G:H21	1.36	0.91
3:L3:94:GLU:HB3	16:66:152:VAL:HG13	1.53	0.91
78:1S:505:A:H3'	78:1S:506:A:H5''	1.53	0.90
66:20:62:VAL:HG22	66:20:85:ARG:HG3	1.53	0.90
78:1S:913:G:H3'	78:1S:914:G:H5''	1.50	0.90
79:2S:2536:A:H3'	79:2S:2537:U:H5''	1.51	0.90
47:S1:48:VAL:HG12	47:S1:49:ASN:H	1.35	0.90
55:S9:93:LEU:HD12	55:S9:96:VAL:HG21	1.52	0.90
79:2S:1565:G:H1	79:2S:1574:C:H42	1.14	0.90
79:2S:2530:G:H2'	79:2S:2531:C:H5''	1.54	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S3:203:PRO:HA	63:17:42:GLN:HG3	1.52	0.90
13:63:70:ARG:HG2	13:63:71:ALA:H	1.36	0.90
79:2S:3334:U:H4'	79:2S:3335:A:H5''	1.51	0.90
59:13:130:ARG:HD2	59:13:137:PRO:HA	1.52	0.90
49:S3:134:CYS:HB3	49:S3:154:ASP:HB3	1.52	0.89
69:23:11:SER:HB3	78:1S:632:U:H4'	1.54	0.89
4:L4:152:VAL:HG12	4:L4:153:SER:H	1.36	0.89
34:84:58:ARG:HG3	34:84:59:PRO:HD2	1.52	0.89
3:L3:43:LEU:HD23	3:L3:181:ILE:HB	1.52	0.89
11:61:35:LYS:HD2	11:61:120:ILE:HG12	1.55	0.89
28:78:65:GLN:HA	28:78:68:PHE:HD2	1.37	0.89
78:1S:1229:G:H21	78:1S:1256:A:H62	1.20	0.89
8:L8:186:LEU:HB3	8:L8:195:SER:HB3	1.53	0.89
9:L9:23:ARG:HD2	9:L9:39:LYS:HA	1.54	0.89
79:2S:153:U:H2'	79:2S:154:U:H5''	1.53	0.89
3:L3:25:ILE:H	3:L3:25:ILE:HD13	1.37	0.89
79:2S:2821:C:H42	79:2S:2869:U:H3	1.16	0.88
10:60:174:THR:HG22	10:60:176:LEU:H	1.38	0.88
79:2S:2346:C:H2'	79:2S:2347:U:H5''	1.55	0.88
2:L2:48:ILE:HD11	43:93:63:THR:HG22	1.55	0.88
12:62:122:GLY:HA2	44:P0:43:LYS:HD3	1.53	0.88
79:2S:1064:A:H62	79:2S:1096:U:H3	1.16	0.88
11:61:25:GLU:HG2	11:61:29:ARG:HD2	1.54	0.88
47:S1:218:LEU:H	47:S1:218:LEU:HD13	1.36	0.88
20:70:80:ARG:HB3	20:70:122:HIS:HB2	1.54	0.88
33:83:9:VAL:HB	33:83:100:ILE:HB	1.55	0.88
50:S4:145:ARG:HH22	50:S4:167:GLY:HA2	1.39	0.87
56:10:16:PHE:HE1	56:10:82:LEU:HD11	1.36	0.87
79:2S:2483:G:H2'	79:2S:2484:A:H2'	1.55	0.87
4:L4:42:VAL:HA	4:L4:45:ASN:HD22	1.38	0.87
53:S7:11:GLN:HG3	53:S7:13:PRO:HD2	1.55	0.87
58:12:45:LEU:HD22	77:31:103:LEU:HD12	1.56	0.87
48:S2:164:SER:HB2	78:1S:1086:A:H5'	1.57	0.87
50:S4:19:LEU:HD21	50:S4:108:ARG:HD2	1.57	0.86
5:L5:141:PRO:HB2	5:L5:172:TYR:HB2	1.56	0.86
36:86:26:ILE:HD12	36:86:26:ILE:H	1.38	0.86
18:68:145:ASN:HD22	79:2S:745:C:H5''	1.39	0.86
11:61:11:ASP:O	11:61:12:LEU:HB2	1.73	0.86
48:S2:90:THR:HG23	48:S2:93:GLY:H	1.40	0.86
61:15:78:THR:HA	78:1S:1241:G:H4'	1.57	0.86
71:25:93:SER:HB2	71:25:100:ILE:HG22	1.56	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:58:G:H2'	79:2S:59:G:C8	2.09	0.86
79:2S:2778:G:H2'	79:2S:2779:A:H5''	1.58	0.86
13:63:47:ALA:HB1	13:63:48:PRO:HD2	1.57	0.86
16:66:60:LYS:HE3	79:2S:1307:G:H5''	1.56	0.86
64:18:116:LEU:HD21	64:18:123:ARG:HB3	1.58	0.86
69:23:96:VAL:HG23	69:23:97:ASP:H	1.40	0.86
75:29:11:PRO:HB3	75:29:13:ARG:HH12	1.40	0.86
63:17:122:ILE:HG12	63:17:123:ASN:H	1.39	0.86
78:1S:1350:U:H2'	78:1S:1351:G:C8	2.11	0.86
68:22:81:VAL:HG13	68:22:85:ASP:HB2	1.55	0.86
3:L3:332:ARG:HD3	3:L3:332:ARG:H	1.39	0.86
78:1S:777:C:H2'	78:1S:778:G:H5''	1.58	0.86
57:11:155:LYS:HD3	59:13:83:GLU:HA	1.58	0.85
78:1S:1498:G:H2'	78:1S:1499:G:H5''	1.58	0.85
67:21:18:SER:H	67:21:54:ALA:HB3	1.41	0.85
2:L2:227:ARG:HH21	79:2S:2161:G:H5''	1.41	0.85
30:80:79:THR:HG23	59:13:148:ALA:HA	1.58	0.85
79:2S:1581:C:H2'	79:2S:1582:C:H5'	1.58	0.85
54:S8:47:ARG:NH1	78:1S:397:A:H5''	1.91	0.85
54:S8:47:ARG:HH12	78:1S:397:A:H5''	1.40	0.85
78:1S:1058:U:H5	78:1S:1061:A:N1	1.74	0.85
79:2S:1654:A:H2'	79:2S:1655:G:H5'	1.59	0.85
62:16:40:GLU:HA	62:16:42:GLU:H	1.41	0.85
79:2S:3242:G:H5'	79:2S:3245:A:H1'	1.57	0.85
10:60:36:LEU:HD13	10:60:87:LEU:HD22	1.59	0.84
47:S1:219:LYS:HE2	47:S1:219:LYS:HA	1.58	0.84
27:77:75:VAL:HG22	27:77:76:ASN:H	1.38	0.84
37:87:56:ARG:HH22	79:2S:362:U:H3'	1.40	0.84
79:2S:599:C:H2'	79:2S:600:G:H5''	1.59	0.84
28:78:112:ILE:HB	28:78:130:VAL:HG12	1.57	0.84
79:2S:726:G:H21	79:2S:744:A:H62	1.24	0.84
60:14:76:ILE:HD12	60:14:76:ILE:H	1.41	0.84
81:5S:85:G:H1	81:5S:95:A:H61	1.24	0.84
68:22:89:TRP:HA	68:22:92:ASN:HB2	1.59	0.84
18:68:179:ARG:NH1	18:68:179:ARG:HB3	1.93	0.84
20:70:94:ILE:HG22	20:70:95:ARG:H	1.41	0.84
48:S2:140:ARG:HB3	48:S2:221:THR:HB	1.59	0.84
54:S8:137:LYS:HD3	54:S8:137:LYS:H	1.43	0.84
45:RC:137:LYS:HE3	45:RC:137:LYS:HA	1.58	0.84
53:S7:98:ILE:HG12	53:S7:121:VAL:HG21	1.59	0.83
7:L7:121:LYS:HD2	21:71:133:ALA:HB3	1.61	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S0:10:THR:HG21	46:S0:191:ARG:HE	1.41	0.83
79:2S:250:U:H5'	79:2S:251:G:H5''	1.60	0.83
9:L9:135:GLU:O	9:L9:144:ILE:HG13	1.79	0.83
18:68:179:ARG:HH11	18:68:179:ARG:HB3	1.44	0.83
79:2S:2895:G:H2'	79:2S:2896:A:H5''	1.60	0.83
50:S4:137:PRO:HG2	50:S4:150:PRO:HD2	1.60	0.83
55:S9:38:ASN:HB2	55:S9:41:GLU:HG3	1.60	0.83
42:92:89:LYS:HE3	79:2S:2652:U:H4'	1.61	0.83
79:2S:915:A:H4'	79:2S:2957:G:H4'	1.60	0.83
51:S5:81:ARG:HH21	74:28:47:PRO:HA	1.42	0.83
69:23:50:LYS:HE2	78:1S:435:C:H5''	1.60	0.83
79:2S:405:U:H2'	79:2S:406:G:H5'	1.60	0.83
8:L8:185:ARG:HD3	80:8S:155:A:H5'	1.61	0.83
66:20:27:THR:HG23	66:20:113:ASP:HB3	1.61	0.83
10:60:185:ARG:HA	10:60:190:VAL:HB	1.60	0.83
25:75:81:ILE:HG12	25:75:125:ARG:HB2	1.61	0.83
62:16:115:THR:HA	62:16:118:ILE:HG22	1.60	0.83
55:S9:90:LYS:HB3	55:S9:95:TYR:HB2	1.59	0.83
61:15:14:THR:HB	61:15:22:LEU:HD21	1.61	0.83
13:63:161:ASP:HB2	28:78:144:VAL:HG12	1.61	0.82
26:76:17:LYS:HG2	80:8S:23:U:H4'	1.61	0.82
3:L3:100:ARG:HH22	79:2S:3242:G:H1'	1.44	0.82
5:L5:64:ILE:HD13	5:L5:76:ALA:HB3	1.59	0.82
13:63:70:ARG:HG2	13:63:71:ALA:N	1.93	0.82
13:63:59:ARG:HH22	13:63:150:PRO:HG2	1.44	0.82
79:2S:58:G:H2'	79:2S:59:G:H8	1.40	0.82
79:2S:627:U:H2'	79:2S:628:A:C8	2.14	0.82
68:22:24:GLN:HB3	68:22:64:GLN:HE22	1.43	0.82
23:73:20:GLY:H	23:73:36:ILE:HB	1.45	0.82
65:19:102:ARG:HH22	78:1S:1501:C:H41	1.23	0.82
64:18:110:ARG:O	64:18:114:GLU:HG2	1.80	0.82
72:26:86:VAL:HG22	72:26:87:ARG:H	1.42	0.82
63:17:33:ARG:O	63:17:37:GLU:HG2	1.79	0.82
8:L8:143:ILE:HG22	8:L8:173:MET:HG3	1.60	0.82
58:12:42:ALA:HB3	58:12:122:VAL:HB	1.61	0.82
62:16:97:VAL:HG12	62:16:98:ASP:H	1.43	0.82
2:L2:191:LEU:HD11	79:2S:1794:G:H4'	1.62	0.81
79:2S:160:G:H3'	79:2S:161:G:H5''	1.60	0.81
28:78:32:ARG:HD2	79:2S:38:U:H4'	1.60	0.81
47:S1:135:LEU:HB3	47:S1:217:LEU:HG	1.61	0.81
36:86:79:SER:HB2	36:86:82:ARG:HG3	1.60	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S1:33:LYS:HA	47:S1:41:ARG:O	1.80	0.81
64:18:115:ARG:HB3	64:18:115:ARG:HH21	1.45	0.81
79:2S:1257:C:H3'	79:2S:1258:U:H5''	1.62	0.81
69:23:102:VAL:HG12	69:23:127:VAL:HG12	1.60	0.81
44:P0:25:LEU:HB3	44:P0:191:TYR:HB3	1.62	0.81
66:20:106:ILE:HG13	66:20:107:THR:H	1.44	0.81
53:S7:138:LYS:HG3	53:S7:152:VAL:HG22	1.61	0.81
20:70:71:LYS:HD2	79:2S:562:C:H5''	1.60	0.81
2:L2:224:THR:HG21	79:2S:2201:G:H21	1.46	0.81
1:L1:169:VAL:HG12	1:L1:170:GLY:H	1.45	0.81
10:60:200:LEU:HD11	10:60:209:ASN:HD21	1.44	0.81
78:1S:1350:U:H2'	78:1S:1351:G:H8	1.45	0.81
31:81:106:THR:HG22	79:2S:3324:C:H1'	1.63	0.81
79:2S:4:U:H3	80:8S:155:A:H2	1.28	0.80
36:86:77:LEU:HD13	36:86:82:ARG:HB3	1.63	0.80
48:S2:66:PHE:HB2	48:S2:133:LYS:HD2	1.61	0.80
27:77:14:VAL:HG13	27:77:15:ARG:HG3	1.63	0.80
56:10:87:VAL:H	56:10:88:PRO:CD	1.92	0.80
11:61:110:ILE:HG13	64:18:16:ARG:HD2	1.62	0.80
72:26:78:ALA:HA	72:26:82:ARG:HB3	1.62	0.80
79:2S:516:A:H2'	79:2S:517:G:H5''	1.63	0.80
38:88:69:LEU:HD21	38:88:73:LEU:HD22	1.64	0.80
47:S1:148:ASN:H	47:S1:148:ASN:HD22	1.29	0.80
3:L3:84:VAL:HG22	3:L3:164:THR:HG22	1.63	0.80
73:27:33:LEU:HB2	73:27:79:PHE:HB2	1.62	0.80
2:L2:21:ARG:HD3	79:2S:824:C:H5''	1.64	0.80
79:2S:2971:A:H5''	79:2S:2972:G:H5''	1.62	0.80
25:75:82:LEU:HD21	25:75:132:ALA:HB1	1.63	0.80
16:66:119:VAL:HG23	20:70:164:SER:HB3	1.63	0.80
56:10:58:GLN:HB2	56:10:65:TYR:HB2	1.63	0.80
26:76:121:ARG:HG2	79:2S:185:C:H5'	1.63	0.80
1:L1:32:VAL:HG22	1:L1:33:GLU:H	1.44	0.80
78:1S:755:A:H2'	78:1S:756:A:O4'	1.81	0.80
51:S5:112:ARG:HA	51:S5:112:ARG:HE	1.47	0.79
5:L5:294:ALA:HB1	10:60:217:PHE:HB3	1.63	0.79
59:13:99:ARG:NH2	59:13:102:LEU:HD12	1.97	0.79
9:L9:23:ARG:HB2	9:L9:39:LYS:HG2	1.62	0.79
53:S7:185:ILE:H	53:S7:185:ILE:HD13	1.47	0.79
49:S3:70:THR:HG22	49:S3:86:LEU:HD13	1.63	0.79
74:28:12:VAL:HA	74:28:30:VAL:HG12	1.64	0.79
2:L2:68:LYS:HG2	2:L2:69:TYR:H	1.47	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L1:120:VAL:HG23	1:L1:121:PRO:HD3	1.65	0.79
79:2S:3299:A:H61	79:2S:3315:G:H1	1.30	0.79
1:L1:169:VAL:HB	1:L1:172:VAL:HG23	1.63	0.79
47:S1:134:VAL:HB	47:S1:219:LYS:HB2	1.63	0.79
79:2S:2356:A:H61	79:2S:2983:C:H41	1.30	0.79
79:2S:2356:A:N6	79:2S:2983:C:H5	1.79	0.79
7:L7:86:VAL:HG22	7:L7:136:TYR:HB3	1.65	0.79
39:89:22:PRO:HG3	79:2S:1517:G:H5''	1.63	0.79
4:L4:322:GLN:HB3	79:2S:608:A:H5'	1.65	0.79
42:92:36:PHE:HZ	79:2S:2225:U:H4'	1.46	0.79
79:2S:2501:U:H2'	79:2S:2502:A:H5'	1.65	0.79
36:86:89:GLU:O	36:86:93:ILE:HG12	1.82	0.79
79:2S:2700:G:H2'	79:2S:2701:U:C6	2.18	0.79
52:S6:14:LYS:HD2	52:S6:123:GLY:HA3	1.64	0.79
79:2S:618:C:H2'	79:2S:619:A:H5'	1.65	0.79
58:12:74:LEU:HD21	77:31:106:TYR:HB2	1.63	0.79
78:1S:1621:U:H3'	78:1S:1622:G:H5''	1.64	0.79
49:S3:49:ILE:HG13	49:S3:87:TYR:HB2	1.63	0.79
4:L4:52:VAL:HG22	4:L4:53:SER:H	1.47	0.79
70:24:132:ARG:HD3	70:24:132:ARG:O	1.83	0.79
79:2S:3348:G:H1	79:2S:3357:U:H3	1.27	0.79
79:2S:1238:C:H3'	79:2S:1239:C:H5''	1.63	0.79
78:1S:492:A:H5''	78:1S:493:U:H5'	1.65	0.79
45:RC:157:VAL:HG11	45:RC:225:LEU:CD2	2.13	0.79
19:69:106:LEU:HB3	19:69:120:TYR:HE1	1.48	0.79
24:74:13:ILE:HG12	24:74:32:GLN:HG2	1.65	0.78
79:2S:1488:G:H5''	79:2S:1838:G:O6	1.82	0.78
17:67:3:ARG:HE	17:67:3:ARG:HA	1.48	0.78
66:20:55:PRO:HB2	66:20:89:ARG:HG2	1.64	0.78
48:S2:225:LEU:HB3	48:S2:230:TRP:HE1	1.48	0.78
34:84:31:ARG:HG3	34:84:32:ALA:H	1.48	0.78
35:85:78:LYS:HA	35:85:81:ARG:HD3	1.64	0.78
9:L9:27:VAL:HG21	9:L9:78:MET:HB3	1.65	0.78
46:S0:76:ILE:HD13	46:S0:98:ILE:HB	1.63	0.78
17:67:135:ARG:HB2	17:67:135:ARG:HH11	1.46	0.78
2:L2:133:TYR:HB3	2:L2:168:VAL:HG12	1.64	0.78
35:85:71:LYS:HA	35:85:71:LYS:HE3	1.65	0.78
14:64:14:LEU:HD22	20:70:151:PRO:HD3	1.63	0.78
2:L2:219:ILE:HD12	79:2S:2245:C:H5''	1.66	0.78
18:68:3:ILE:HD13	79:2S:1364:C:H5''	1.65	0.78
54:S8:97:THR:HA	54:S8:173:PRO:HG2	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:868:G:H1	78:1S:960:U:H3	1.31	0.78
79:2S:1040:A:H3'	79:2S:1041:U:H5''	1.64	0.78
13:63:106:GLN:HB3	36:86:18:THR:HG23	1.64	0.78
79:2S:118:U:O2	79:2S:121:A:H5'	1.83	0.78
16:66:12:LYS:HA	16:66:40:GLU:HB3	1.64	0.78
79:2S:1844:C:C2'	79:2S:1845:G:H5''	2.13	0.78
1:L1:158:GLN:HG3	1:L1:162:VAL:HG12	1.65	0.78
79:2S:1016:C:H2'	79:2S:1017:C:H5'	1.66	0.78
48:S2:37:PRO:HD2	48:S2:46:LYS:HD2	1.65	0.78
52:S6:98:ARG:HD3	52:S6:99:GLY:H	1.49	0.78
42:92:44:ASP:HA	42:92:47:GLN:HB3	1.66	0.78
78:1S:391:A:H4'	78:1S:1730:A:H5''	1.65	0.77
59:13:136:PRO:HG2	59:13:139:TRP:HB2	1.66	0.77
64:18:105:VAL:HG13	64:18:106:GLU:H	1.49	0.77
23:73:67:PRO:HA	23:73:70:ARG:HD3	1.67	0.77
2:L2:246:LEU:HD22	2:L2:250:GLN:HG3	1.67	0.77
78:1S:689:G:H2'	78:1S:690:G:H5''	1.66	0.77
62:16:7:VAL:HG13	62:16:96:TYR:HE2	1.49	0.77
69:23:76:LEU:HD12	69:23:81:LYS:HB2	1.66	0.77
2:L2:206:PRO:HG3	2:L2:213:GLY:HA3	1.66	0.77
65:19:130:ARG:HA	78:1S:1358:G:H4'	1.64	0.77
53:S7:121:VAL:O	53:S7:125:ILE:HG13	1.84	0.77
26:76:12:ARG:HG3	79:2S:215:G:H5''	1.67	0.77
68:22:78:ARG:HB3	68:22:124:LYS:HD3	1.66	0.77
71:25:96:SER:O	71:25:97:LYS:HB3	1.85	0.77
54:S8:41:LYS:HA	54:S8:60:ILE:HG12	1.67	0.77
78:1S:138:A:H61	78:1S:266:A:H61	1.33	0.77
10:60:190:VAL:HG13	10:60:197:VAL:HG21	1.65	0.77
16:66:43:ILE:HG22	16:66:44:SER:H	1.49	0.77
11:61:140:ARG:HB3	81:5S:43:U:H4'	1.65	0.77
34:84:68:THR:HG21	79:2S:1644:C:H41	1.50	0.77
31:81:107:VAL:HG12	31:81:108:VAL:H	1.49	0.77
47:S1:176:VAL:HG12	47:S1:177:GLN:H	1.50	0.77
49:S3:15:GLY:HA3	75:29:50:ILE:HG23	1.67	0.77
59:13:22:ALA:HB1	59:13:23:PRO:HA	1.66	0.77
2:L2:117:GLU:HG2	2:L2:124:GLY:H	1.50	0.77
50:S4:198:LYS:HG2	50:S4:208:VAL:HG22	1.65	0.77
74:28:29:ARG:HG3	74:28:41:VAL:HG22	1.67	0.77
45:RC:157:VAL:HG11	45:RC:225:LEU:HD21	1.66	0.77
36:86:5:THR:HG23	36:86:12:ASN:HB2	1.65	0.77
79:2S:428:A:H2'	79:2S:429:U:C6	2.19	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:19:15:ILE:HG23	65:19:59:ALA:HB3	1.67	0.77
55:S9:65:LYS:HD3	55:S9:70:LEU:HD11	1.66	0.77
35:85:85:THR:HG22	35:85:87:ALA:H	1.50	0.77
2:L2:207:VAL:HG13	79:2S:2415:C:H5''	1.67	0.77
79:2S:1951:C:C5	79:2S:2095:G:N1	2.50	0.76
79:2S:2612:U:H2'	79:2S:2613:U:O4'	1.85	0.76
78:1S:1519:U:H2'	78:1S:1520:U:C5	2.19	0.76
27:77:25:ILE:HA	27:77:43:VAL:HG12	1.66	0.76
45:RC:123:ILE:HD12	45:RC:154:VAL:HB	1.68	0.76
75:29:54:LYS:HE3	78:1S:1419:G:H4'	1.65	0.76
3:L3:283:TYR:HE1	3:L3:325:LYS:HB2	1.50	0.76
2:L2:115:ASN:HA	2:L2:126:LEU:O	1.85	0.76
22:72:19:VAL:HG12	22:72:105:LEU:HD13	1.67	0.76
17:67:25:SER:HB3	17:67:28:ASN:ND2	1.98	0.76
13:63:57:VAL:HG22	13:63:147:ILE:HD12	1.67	0.76
17:67:135:ARG:HB2	17:67:135:ARG:NH1	2.00	0.76
60:14:87:GLY:HA3	60:14:120:PRO:HG2	1.66	0.76
52:S6:78:THR:HG22	52:S6:79:LYS:H	1.50	0.76
47:S1:96:LEU:HD23	47:S1:96:LEU:H	1.50	0.76
10:60:154:ARG:NH1	79:2S:2837:A:H5''	2.00	0.76
45:RC:196:ASN:ND2	45:RC:219:GLU:HG3	2.01	0.76
78:1S:515:A:N6	78:1S:537:G:H21	1.82	0.76
24:74:13:ILE:HA	24:74:32:GLN:HE21	1.51	0.76
10:60:165:ILE:H	10:60:165:ILE:HD13	1.50	0.76
70:24:7:ILE:HG23	70:24:27:VAL:HG22	1.68	0.76
78:1S:218:A:H3'	78:1S:219:A:H5''	1.67	0.76
79:2S:725:G:C2'	79:2S:726:G:H5''	2.16	0.76
21:71:40:VAL:HB	21:71:96:ILE:HG23	1.68	0.76
57:11:149:ALA:O	57:11:152:GLN:HG2	1.86	0.76
27:77:22:LYS:HE3	27:77:134:LEU:HD23	1.67	0.76
1:L1:201:VAL:HG13	1:L1:204:LEU:HD11	1.67	0.76
45:RC:89:LEU:HB2	45:RC:103:PHE:HB2	1.66	0.76
52:S6:179:VAL:HA	52:S6:183:ARG:HD3	1.68	0.76
78:1S:773:C:H4'	78:1S:774:A:H5'	1.66	0.76
81:5S:29:C:H2'	81:5S:30:G:H8	1.49	0.76
78:1S:1589:C:H2'	78:1S:1590:G:C8	2.20	0.76
5:L5:63:GLN:HG2	5:L5:77:ALA:HA	1.66	0.76
45:RC:10:ARG:HB3	45:RC:312:VAL:HG23	1.67	0.76
76:30:47:VAL:HG22	76:30:48:THR:H	1.50	0.76
31:81:79:ARG:HE	31:81:81:GLU:HG2	1.48	0.76
49:S3:134:CYS:N	49:S3:157:LEU:HD11	2.01	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:13:96:VAL:HA	59:13:99:ARG:HB2	1.66	0.76
71:25:70:LYS:HG3	71:25:71:ILE:H	1.49	0.76
36:86:84:LYS:O	36:86:88:GLU:HG2	1.86	0.76
79:2S:1312:C:H2'	79:2S:1313:G:O4'	1.85	0.75
45:RC:196:ASN:HD22	45:RC:219:GLU:HG3	1.50	0.75
60:14:30:VAL:HG12	60:14:40:ALA:HB3	1.67	0.75
60:14:70:LYS:HE2	60:14:70:LYS:HA	1.68	0.75
61:15:98:ASN:HB2	61:15:122:THR:HG22	1.66	0.75
62:16:40:GLU:HG3	62:16:41:PRO:HA	1.69	0.75
78:1S:1573:A:H4'	78:1S:1574:G:H5'	1.69	0.75
79:2S:3174:A:H2'	79:2S:3175:U:H5'	1.67	0.75
16:66:34:VAL:HG12	16:66:103:LYS:HB2	1.68	0.75
18:68:100:THR:HG23	18:68:122:ILE:HD13	1.68	0.75
70:24:35:VAL:HG13	70:24:36:SER:H	1.50	0.75
2:L2:140:ASN:HB3	2:L2:145:LYS:HB2	1.68	0.75
55:S9:59:LEU:HD22	55:S9:69:ARG:HA	1.66	0.75
72:26:36:ILE:HG23	72:26:73:TYR:HB2	1.66	0.75
62:16:31:VAL:HG13	62:16:67:VAL:HB	1.66	0.75
78:1S:386:G:H2'	78:1S:387:A:C8	2.22	0.75
56:10:16:PHE:CE1	56:10:82:LEU:HD11	2.22	0.75
79:2S:1951:C:C6	79:2S:2095:G:N1	2.54	0.75
11:61:49:LYS:HB3	11:61:62:ASN:HA	1.69	0.75
59:13:62:GLN:HB2	59:13:65:VAL:HG23	1.68	0.75
18:68:147:ARG:NH2	18:68:149:ALA:HB3	2.00	0.75
78:1S:1552:U:H2'	78:1S:1553:G:O4'	1.86	0.75
52:S6:93:LYS:HE3	78:1S:405:C:H5''	1.67	0.75
78:1S:1012:U:H6	78:1S:1012:U:H5'	1.50	0.75
79:2S:1565:G:H21	79:2S:1575:A:H62	1.35	0.75
46:S0:189:VAL:HG13	46:S0:190:ASP:H	1.50	0.75
78:1S:1158:C:C5	78:1S:1581:C:H2'	2.21	0.75
53:S7:91:ILE:HG13	53:S7:92:PHE:H	1.50	0.75
78:1S:189:C:H3'	78:1S:190:C:H5''	1.67	0.75
16:66:160:ARG:HB3	16:66:160:ARG:HH11	1.51	0.75
79:2S:2347:U:H2'	79:2S:2348:A:O4'	1.86	0.75
7:L7:118:LYS:HE2	7:L7:191:VAL:HG11	1.69	0.75
2:L2:104:LEU:HD22	2:L2:162:ALA:HB3	1.68	0.75
64:18:54:LEU:HD22	64:18:54:LEU:H	1.50	0.75
56:10:80:LEU:O	56:10:82:LEU:HG	1.87	0.75
79:2S:1951:C:H6	79:2S:2095:G:N2	1.83	0.75
36:86:26:ILE:HG22	79:2S:155:G:H21	1.52	0.75
59:13:121:ARG:HD3	78:1S:867:G:H4'	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L1:60:ARG:HB2	1:L1:180:VAL:HG21	1.69	0.75
72:26:84:VAL:HG13	72:26:85:ARG:H	1.48	0.75
45:RC:19:TRP:HB2	45:RC:38:ARG:HD2	1.68	0.75
79:2S:1238:C:C3'	79:2S:1239:C:H5''	2.17	0.75
51:S5:29:ILE:HA	62:16:37:THR:HG21	1.67	0.75
78:1S:1711:C:H2'	78:1S:1712:A:H4'	1.69	0.75
38:88:26:LYS:HZ1	79:2S:1750:A:H4'	1.50	0.75
20:70:6:GLU:O	20:70:63:GLN:HG3	1.87	0.75
28:78:118:ILE:HB	28:78:119:PRO:HD2	1.67	0.75
65:19:102:ARG:NH2	78:1S:1501:C:H41	1.85	0.74
2:L2:74:GLU:HB3	2:L2:76:PHE:HE1	1.52	0.74
78:1S:145:A:HO2'	78:1S:146:U:H6	1.32	0.74
3:L3:20:LYS:HB3	79:2S:2990:G:H5'	1.68	0.74
70:24:5:VAL:HG13	70:24:29:HIS:HB3	1.69	0.74
6:L6:82:ARG:HD2	33:83:104:PRO:HB3	1.68	0.74
58:12:24:ILE:H	58:12:24:ILE:HD13	1.51	0.74
25:75:74:LYS:HA	25:75:74:LYS:HE2	1.68	0.74
50:S4:31:PRO:HB3	50:S4:83:PRO:HB3	1.67	0.74
79:2S:3192:U:H2'	79:2S:3193:C:C6	2.22	0.74
22:72:17:VAL:HG22	22:72:103:TYR:HD2	1.50	0.74
79:2S:543:C:H42	79:2S:548:G:H1	1.31	0.74
46:S0:184:LEU:HD13	67:21:39:VAL:HG11	1.70	0.74
68:22:29:PRO:HB2	68:22:58:SER:HB2	1.68	0.74
79:2S:1764:U:H3'	79:2S:1765:U:H5''	1.70	0.74
3:L3:152:LYS:HG2	3:L3:192:VAL:HG11	1.69	0.74
78:1S:138:A:H8	78:1S:141:U:H4'	1.51	0.74
69:23:76:LEU:HD13	69:23:79:ASN:HD22	1.49	0.74
65:19:114:VAL:HG22	65:19:115:GLU:H	1.51	0.74
19:69:82:LYS:HD3	79:2S:1863:G:H4'	1.68	0.74
15:65:104:GLU:HG2	15:65:160:GLU:HG2	1.68	0.74
47:S1:180:THR:O	47:S1:184:LEU:HD23	1.87	0.74
78:1S:709:C:H2'	78:1S:710:U:H4'	1.70	0.74
3:L3:136:LYS:O	3:L3:144:ILE:HD11	1.86	0.74
25:75:51:VAL:HG11	35:85:62:GLN:HE21	1.50	0.74
44:P0:34:SER:O	44:P0:38:MET:HG2	1.88	0.74
8:L8:50:VAL:HG12	25:75:30:ALA:HA	1.69	0.74
78:1S:230:C:H3'	78:1S:231:U:H5''	1.68	0.74
78:1S:138:A:N6	78:1S:266:A:N6	2.35	0.74
78:1S:1701:A:H3'	78:1S:1702:A:C5'	2.17	0.74
33:83:59:VAL:HG23	33:83:60:ARG:H	1.52	0.74
72:26:12:LYS:HE3	78:1S:1790:A:H5''	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2271:A:H2'	79:2S:2272:G:H4'	1.70	0.74
78:1S:811:A:H2	78:1S:814:A:H62	1.35	0.74
19:69:90:PRO:HB2	19:69:93:VAL:HG23	1.69	0.74
8:L8:101:THR:HG22	8:L8:104:GLU:HG3	1.69	0.74
16:66:37:ARG:HG2	16:66:107:GLY:HA2	1.67	0.74
18:68:147:ARG:O	18:68:150:VAL:HG22	1.88	0.74
42:92:49:GLY:HA2	79:2S:277:G:H5''	1.70	0.74
65:19:49:ASP:HB3	65:19:53:TRP:HD1	1.52	0.74
20:70:79:VAL:HB	20:70:90:MET:HB2	1.68	0.74
3:L3:86:VAL:HA	3:L3:162:VAL:HG12	1.68	0.74
15:65:80:THR:HG21	15:65:87:GLN:HG2	1.69	0.74
43:93:51:ALA:HB3	43:93:54:ILE:HD12	1.68	0.74
68:22:96:ALA:HB1	68:22:98:GLN:HE21	1.51	0.74
48:S2:69:ILE:HG12	48:S2:133:LYS:HB3	1.67	0.74
78:1S:871:G:H2'	78:1S:872:G:C8	2.22	0.74
50:S4:102:VAL:HG22	50:S4:103:TYR:H	1.52	0.74
72:26:44:ILE:HD13	72:26:65:PRO:HG2	1.70	0.73
80:8S:107:G:H2'	80:8S:108:C:C6	2.22	0.73
45:RC:170:ILE:HD11	45:RC:204:ALA:HB2	1.70	0.73
55:S9:163:PRO:HG3	78:1S:512:A:H5''	1.68	0.73
57:11:21:ASN:HB3	57:11:31:THR:HG23	1.69	0.73
51:S5:77:TYR:HB3	51:S5:84:LYS:HA	1.69	0.73
79:2S:2346:C:C2'	79:2S:2347:U:H5''	2.19	0.73
2:L2:227:ARG:NH2	79:2S:2161:G:H5''	2.01	0.73
69:23:74:VAL:HG12	69:23:75:GLN:H	1.53	0.73
21:71:68:THR:HG23	21:71:69:LYS:H	1.52	0.73
76:30:14:VAL:HA	76:30:17:GLN:HG2	1.70	0.73
49:S3:212:LYS:HG2	49:S3:213:GLU:H	1.52	0.73
34:84:39:ALA:HB2	34:84:58:ARG:HD2	1.68	0.73
4:L4:29:PRO:HD2	4:L4:277:PRO:HB2	1.71	0.73
61:15:126:VAL:HG13	61:15:127:ARG:H	1.52	0.73
51:S5:160:VAL:HG21	74:28:45:LYS:HD2	1.70	0.73
1:L1:207:LYS:HD3	79:2S:2491:A:C1'	2.19	0.73
18:68:12:ARG:HG3	79:2S:1342:C:H5''	1.71	0.73
7:L7:196:LYS:HD3	7:L7:197:GLN:HE21	1.54	0.73
82:ET:21:U:H3'	82:ET:22:A:H5'	1.70	0.73
79:2S:763:G:C2	79:2S:764:U:H1'	2.22	0.73
13:63:3:ILE:HD11	28:78:34:MET:HA	1.70	0.73
8:L8:116:VAL:HA	8:L8:121:SER:HB2	1.71	0.73
79:2S:1472:U:H2'	79:2S:1473:G:C8	2.23	0.73
26:76:55:GLU:HB2	26:76:108:LYS:HB2	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:76:68:GLY:HA2	26:76:84:LYS:HD2	1.71	0.73
49:S3:92:GLN:NE2	49:S3:92:GLN:H	1.87	0.73
10:60:213:PHE:N	10:60:214:PRO:HD3	2.04	0.73
78:1S:1646:C:H42	78:1S:1754:A:H61	1.37	0.73
79:2S:257:U:H2'	79:2S:258:G:H8	1.54	0.73
35:85:84:LYS:HE3	35:85:88:LEU:HD13	1.69	0.73
71:25:55:PRO:HA	71:25:88:ILE:HG21	1.71	0.73
68:22:29:PRO:HB2	68:22:58:SER:CB	2.17	0.73
79:2S:2516:U:H1'	79:2S:2595:A:H62	1.54	0.73
60:14:14:PHE:HA	60:14:78:ALA:HB3	1.71	0.73
18:68:81:VAL:HG23	18:68:101:VAL:HA	1.69	0.73
21:71:129:LYS:HE3	79:2S:1096:U:H5''	1.70	0.73
15:65:204:LYS:HZ1	79:2S:82:C:H4'	1.53	0.73
79:2S:72:C:H1'	79:2S:74:G:H1'	1.71	0.73
33:83:35:VAL:HG13	33:83:40:ASP:HB2	1.70	0.73
5:L5:40:HIS:HA	21:71:69:LYS:HG3	1.68	0.72
14:64:85:TRP:HE1	14:64:91:CYS:HB3	1.54	0.72
4:L4:205:PRO:HG2	4:L4:225:VAL:HG22	1.70	0.72
79:2S:2536:A:H3'	79:2S:2537:U:C5'	2.18	0.72
19:69:106:LEU:HB3	19:69:120:TYR:CE1	2.24	0.72
1:L1:207:LYS:HD3	79:2S:2491:A:H1'	1.70	0.72
70:24:102:LYS:HB2	70:24:108:ARG:HH11	1.53	0.72
46:S0:30:GLN:HG2	46:S0:149:LEU:HD22	1.72	0.72
66:20:55:PRO:HB3	66:20:91:ILE:HG12	1.70	0.72
79:2S:2533:G:H5'	79:2S:2533:G:H8	1.54	0.72
18:68:16:ARG:HH22	79:2S:671:U:H5''	1.53	0.72
48:S2:228:ASN:HD22	67:21:1:MET:HG2	1.54	0.72
2:L2:150:LEU:HD13	79:2S:2157:G:C8	2.24	0.72
51:S5:60:ASP:O	51:S5:85:ALA:HB1	1.88	0.72
77:31:108:VAL:HB	77:31:114:VAL:HG22	1.71	0.72
78:1S:1158:C:H5	78:1S:1581:C:H2'	1.55	0.72
22:72:84:LEU:HD23	22:72:89:LEU:HB2	1.70	0.72
7:L7:123:THR:HA	7:L7:126:LEU:HD12	1.69	0.72
1:L1:59:PRO:HG2	1:L1:180:VAL:HG22	1.70	0.72
46:S0:45:VAL:HG12	46:S0:46:HIS:H	1.54	0.72
56:10:46:LEU:O	56:10:50:THR:HG23	1.90	0.72
18:68:86:THR:HG22	18:68:105:ARG:HB2	1.71	0.72
54:S8:37:LYS:HB2	54:S8:59:ARG:HG2	1.71	0.72
56:10:87:VAL:N	56:10:88:PRO:HD2	2.01	0.72
64:18:102:ALA:O	64:18:105:VAL:HG12	1.90	0.72
79:2S:2525:G:H5''	79:2S:2526:C:O5'	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:73:80:ARG:HD3	23:73:117:PRO:HG2	1.70	0.72
47:S1:106:THR:O	47:S1:110:LEU:HD13	1.89	0.72
79:2S:3317:U:H4'	79:2S:3318:G:H5'	1.71	0.72
78:1S:912:U:H5'	78:1S:913:G:H2'	1.70	0.72
78:1S:1058:U:C5	78:1S:1061:A:N1	2.57	0.72
48:S2:83:ILE:HG12	48:S2:100:ALA:HA	1.71	0.72
69:23:73:ARG:HG2	69:23:84:THR:HG22	1.71	0.72
24:74:17:ARG:CZ	79:2S:3050:U:H5''	2.19	0.72
73:27:61:THR:HG23	73:27:62:ILE:H	1.54	0.72
78:1S:395:U:H2'	78:1S:396:G:O4'	1.90	0.72
78:1S:1686:C:H6	78:1S:1686:C:H5'	1.55	0.72
79:2S:1291:A:H3'	79:2S:1292:C:H5''	1.72	0.72
78:1S:926:A:H2'	78:1S:927:C:C6	2.25	0.72
78:1S:1667:A:H2'	78:1S:1668:G:C8	2.25	0.72
4:L4:317:PRO:HG2	7:L7:149:TYR:HD2	1.54	0.72
79:2S:2094:C:H2'	79:2S:2095:G:H8	1.55	0.72
5:L5:236:LEU:HD12	5:L5:239:ILE:HD12	1.71	0.72
48:S2:38:VAL:HG22	48:S2:39:THR:H	1.52	0.72
46:S0:83:GLN:O	46:S0:87:LEU:HD13	1.90	0.72
78:1S:495:C:H5'	78:1S:496:G:H4'	1.72	0.72
5:L5:109:THR:O	5:L5:113:LEU:HB2	1.90	0.72
56:10:86:ILE:HD13	56:10:88:PRO:HD2	1.72	0.71
78:1S:913:G:H3'	78:1S:914:G:C5'	2.20	0.71
13:63:157:ARG:HH21	28:78:124:ILE:HG21	1.55	0.71
79:2S:920:A:H4'	79:2S:921:A:H5''	1.70	0.71
79:2S:2344:U:H2'	79:2S:2345:A:C8	2.24	0.71
68:22:97:ARG:HB3	68:22:97:ARG:NH1	2.04	0.71
3:L3:84:VAL:HG12	3:L3:162:VAL:HB	1.71	0.71
15:65:204:LYS:NZ	79:2S:82:C:H4'	2.04	0.71
6:L6:176:PHE:HD2	33:83:107:ILE:HG21	1.55	0.71
7:L7:30:ARG:O	7:L7:34:LYS:HB2	1.90	0.71
7:L7:142:SER:OG	79:2S:576:C:H5''	1.90	0.71
51:S5:128:ASN:O	51:S5:132:VAL:HG23	1.90	0.71
76:30:48:THR:HB	76:30:49:LEU:HD23	1.71	0.71
79:2S:1787:A:C3'	79:2S:1788:C:H5''	2.20	0.71
9:L9:111:PHE:HB3	9:L9:125:ASN:HB3	1.70	0.71
79:2S:3389:U:H5'	79:2S:3389:U:H6	1.55	0.71
72:26:42:ARG:HB2	72:26:42:ARG:NH1	2.06	0.71
51:S5:128:ASN:HD22	51:S5:129:PRO:HD2	1.55	0.71
2:L2:41:ILE:HG12	2:L2:42:ARG:H	1.55	0.71
7:L7:224:ILE:HD13	20:70:39:SER:HB2	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2207:A:H3'	79:2S:2208:A:H5'	1.72	0.71
76:30:55:ARG:HB3	76:30:58:PRO:HG3	1.72	0.71
78:1S:390:G:H8	78:1S:1731:A:H4'	1.55	0.71
14:64:21:VAL:HG12	14:64:65:LEU:HA	1.71	0.71
66:20:82:TYR:HB3	75:29:52:PHE:HB3	1.73	0.71
79:2S:1066:G:H2'	79:2S:1067:U:C6	2.26	0.71
5:L5:30:TYR:HA	5:L5:33:ARG:HB3	1.72	0.71
6:L6:130:ILE:H	6:L6:130:ILE:HD12	1.55	0.71
79:2S:1176:C:H3'	79:2S:1177:G:H2'	1.71	0.71
48:S2:240:LEU:O	48:S2:244:SER:HB2	1.91	0.71
78:1S:878:G:H2'	78:1S:879:G:C8	2.25	0.71
79:2S:2778:G:C2'	79:2S:2779:A:H5''	2.21	0.71
79:2S:2356:A:N6	79:2S:2983:C:C5	2.57	0.71
48:S2:187:LEU:HD22	48:S2:211:LEU:HD22	1.71	0.71
69:23:126:LYS:HE3	69:23:129:GLY:HA2	1.71	0.71
32:82:38:ILE:HA	32:82:43:ARG:HE	1.55	0.71
79:2S:153:U:C2'	79:2S:154:U:H5''	2.21	0.71
55:S9:101:VAL:O	55:S9:105:LEU:HD13	1.89	0.71
79:2S:2485:A:H2'	79:2S:2486:A:H5'	1.72	0.71
38:88:51:LEU:HD22	79:2S:1612:A:H5''	1.71	0.71
79:2S:2567:C:H3'	79:2S:2568:C:H5''	1.73	0.71
17:67:29:THR:HA	17:67:32:THR:HG22	1.73	0.71
79:2S:744:A:H2'	79:2S:745:C:H5'	1.72	0.71
30:80:24:THR:HG23	30:80:30:THR:HG22	1.70	0.71
79:2S:3079:U:H3'	79:2S:3080:G:H5''	1.71	0.71
66:20:23:ARG:HB3	66:20:117:VAL:HG13	1.73	0.71
64:18:105:VAL:HG13	64:18:106:GLU:N	2.06	0.71
7:L7:166:ASN:HA	7:L7:169:ILE:HD12	1.73	0.71
15:65:154:PRO:HA	15:65:157:LYS:HE3	1.71	0.71
10:60:87:LEU:HD23	10:60:88:ARG:N	2.05	0.71
48:S2:145:GLY:HA3	68:22:97:ARG:HH11	1.54	0.71
66:20:58:LEU:HD12	66:20:88:LYS:HG2	1.73	0.71
78:1S:992:A:H2'	78:1S:993:A:H5'	1.73	0.71
79:2S:2180:G:H2'	79:2S:2181:C:C6	2.25	0.71
45:RC:20:VAL:HG23	45:RC:308:ASN:HA	1.73	0.71
47:S1:68:VAL:HG22	47:S1:72:ASP:HB2	1.73	0.71
78:1S:920:U:H2'	78:1S:921:U:H5''	1.73	0.71
79:2S:1654:A:C2'	79:2S:1655:G:H5'	2.21	0.70
7:L7:126:LEU:HA	7:L7:129:LEU:HD12	1.71	0.70
34:84:99:LYS:O	34:84:103:LYS:HG2	1.91	0.70
72:26:36:ILE:HD12	72:26:73:TYR:HD2	1.55	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:11:80:MET:HB3	57:11:83:THR:HG23	1.73	0.70
3:L3:27:ALA:HB3	3:L3:218:ILE:HG22	1.72	0.70
33:83:19:SER:HB3	79:2S:1329:U:H4'	1.71	0.70
63:17:27:ASP:HB3	63:17:30:THR:HG22	1.73	0.70
4:L4:313:LEU:HD21	79:2S:1336:U:H5''	1.72	0.70
1:L1:13:VAL:HG22	1:L1:14:LYS:H	1.54	0.70
79:2S:2376:G:H2'	79:2S:2377:G:C8	2.26	0.70
7:L7:77:VAL:HG22	21:71:139:ARG:O	1.91	0.70
61:15:90:ILE:HD11	61:15:112:LEU:HD21	1.73	0.70
79:2S:1553:U:H4'	79:2S:1554:U:H5'	1.74	0.70
45:RC:136:ILE:H	45:RC:136:ILE:HD13	1.55	0.70
2:L2:132:ASN:HD21	79:2S:2179:C:H2'	1.55	0.70
79:2S:2356:A:H61	79:2S:2983:C:N4	1.88	0.70
54:S8:29:LEU:HD12	78:1S:400:A:H61	1.56	0.70
69:23:126:LYS:HA	69:23:131:SER:HA	1.74	0.70
57:11:91:LEU:HD23	57:11:102:LYS:HA	1.73	0.70
18:68:35:PHE:HA	18:68:38:ARG:HD3	1.72	0.70
53:S7:16:LEU:O	53:S7:20:VAL:HG23	1.91	0.70
23:73:12:ARG:HB2	79:2S:3040:A:H5''	1.73	0.70
69:23:83:VAL:HG12	69:23:84:THR:H	1.55	0.70
78:1S:805:U:H2'	78:1S:806:A:H5''	1.74	0.70
81:5S:75:G:H1'	81:5S:104:A:H61	1.56	0.70
78:1S:292:U:H2'	78:1S:293:U:O4'	1.92	0.70
79:2S:283:G:H21	79:2S:285:A:H5''	1.55	0.70
62:16:40:GLU:HA	62:16:42:GLU:N	2.07	0.70
6:L6:40:LEU:HD13	6:L6:84:VAL:HG11	1.73	0.70
78:1S:1340:U:H3'	78:1S:1341:A:C5'	2.21	0.70
6:L6:52:VAL:HG22	6:L6:53:VAL:H	1.56	0.70
15:65:49:ARG:HG2	79:2S:114:A:H4'	1.74	0.70
55:S9:133:HIS:NE2	55:S9:163:PRO:HG2	2.06	0.70
82:ET:21:U:H3'	82:ET:22:A:C5'	2.21	0.70
18:68:64:VAL:HG13	18:68:93:ILE:HD11	1.73	0.70
2:L2:150:LEU:HD12	2:L2:154:ALA:HB3	1.73	0.70
79:2S:1809:A:H2'	79:2S:1810:A:O4'	1.92	0.70
58:12:21:GLU:HG3	58:12:22:VAL:H	1.57	0.70
51:S5:71:ALA:HB1	51:S5:91:GLU:HA	1.74	0.70
72:26:36:ILE:CG2	72:26:73:TYR:HB2	2.22	0.70
3:L3:261:MET:O	3:L3:264:VAL:HG22	1.91	0.70
78:1S:754:A:H61	78:1S:793:A:H2'	1.57	0.70
34:84:97:GLU:O	34:84:101:VAL:HG23	1.91	0.70
48:S2:141:ARG:HB2	48:S2:153:SER:O	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S1:176:VAL:HG12	47:S1:177:GLN:N	2.06	0.70
54:S8:31:ARG:HH22	54:S8:48:THR:HG22	1.54	0.70
19:69:40:ALA:O	19:69:44:LEU:HD23	1.92	0.70
78:1S:751:G:H2'	78:1S:752:A:O4'	1.91	0.70
74:28:33:LEU:HD21	74:28:53:ILE:HG23	1.72	0.70
19:69:120:TYR:O	19:69:124:TYR:HB2	1.92	0.70
79:2S:3286:G:H2'	79:2S:3287:U:H5''	1.73	0.70
9:L9:156:GLN:HE22	79:2S:3109:G:H21	1.38	0.70
25:75:105:VAL:HG11	25:75:126:LEU:HD13	1.74	0.70
78:1S:5:U:H2'	78:1S:6:G:H8	1.57	0.70
28:78:55:LYS:HG3	79:2S:2764:C:H5''	1.74	0.69
28:78:124:ILE:HG12	28:78:144:VAL:HG22	1.74	0.69
16:66:160:ARG:HB3	16:66:160:ARG:NH1	2.07	0.69
8:L8:60:ARG:HG2	80:8S:152:G:H5'	1.73	0.69
54:S8:172:ARG:HD3	54:S8:175:GLN:HG3	1.72	0.69
80:8S:8:C:H2'	80:8S:9:A:C8	2.27	0.69
79:2S:2601:A:H2'	79:2S:2602:G:C8	2.27	0.69
69:23:26:GLU:HB2	69:23:29:TYR:HB3	1.74	0.69
79:2S:1564:U:H2'	79:2S:1565:G:O4'	1.91	0.69
70:24:5:VAL:HA	70:24:29:HIS:HA	1.73	0.69
49:S3:158:ILE:H	49:S3:158:ILE:HD13	1.57	0.69
38:88:43:PHE:HZ	38:88:62:ALA:HB1	1.57	0.69
4:L4:23:PRO:HD2	4:L4:26:PHE:HE2	1.57	0.69
15:65:122:ASN:HB3	15:65:129:TYR:CD2	2.28	0.69
28:78:133:LEU:HD13	79:2S:715:A:H5''	1.73	0.69
78:1S:1336:A:H3'	78:1S:1337:A:H5''	1.72	0.69
60:14:122:PRO:HA	78:1S:886:U:O2'	1.91	0.69
50:S4:62:LYS:O	50:S4:66:MET:HG2	1.93	0.69
82:ET:26:C:H2'	82:ET:27:G:H5'	1.73	0.69
6:L6:63:LEU:HB2	6:L6:79:VAL:HG23	1.75	0.69
50:S4:125:LYS:HA	50:S4:159:THR:HA	1.73	0.69
79:2S:2530:G:C2'	79:2S:2531:C:H5''	2.21	0.69
30:80:22:LYS:HB2	30:80:94:GLU:HB2	1.74	0.69
28:78:70:LYS:HD3	28:78:129:PHE:CD2	2.27	0.69
82:PT:54:G:H2'	82:PT:55:U:C6	2.27	0.69
79:2S:1460:A:H2'	79:2S:1461:A:C8	2.27	0.69
80:8S:41:A:H61	80:8S:103:G:H1'	1.57	0.69
15:65:188:ARG:HA	15:65:191:TRP:HB3	1.74	0.69
49:S3:211:PRO:HG3	63:17:20:TYR:HE1	1.58	0.69
37:87:58:THR:HB	37:87:61:THR:HG23	1.75	0.69
60:14:16:VAL:O	60:14:30:VAL:HG23	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1686:C:H2'	78:1S:1687:U:H5'	1.73	0.69
79:2S:1967:U:H5''	79:2S:1968:G:H5''	1.74	0.69
49:S3:176:LEU:HA	49:S3:181:VAL:HG12	1.74	0.69
20:70:74:ASN:HB3	20:70:129:ILE:HD12	1.74	0.69
14:64:50:LYS:NZ	14:64:86:ALA:HB2	2.07	0.69
9:L9:48:VAL:HG13	9:L9:49:ASN:H	1.58	0.69
49:S3:119:ALA:O	49:S3:123:VAL:HG23	1.92	0.69
20:70:94:ILE:HG22	20:70:95:ARG:N	2.06	0.69
33:83:72:THR:HG22	79:2S:585:A:H4'	1.73	0.69
32:82:33:ARG:HE	32:82:33:ARG:HA	1.58	0.69
45:RC:133:VAL:HB	45:RC:142:ALA:HB3	1.73	0.69
55:S9:175:ARG:O	55:S9:179:ARG:HG3	1.93	0.69
4:L4:280:ILE:HD11	18:68:25:TYR:HB2	1.73	0.69
56:10:68:LEU:HD11	56:10:72:GLY:HA3	1.75	0.69
8:L8:72:PRO:HD2	8:L8:75:ILE:HD12	1.74	0.69
79:2S:3121:U:H1'	79:2S:3122:A:H5''	1.75	0.69
34:84:41:ARG:HG2	34:84:56:THR:HG21	1.75	0.69
79:2S:1238:C:H2'	79:2S:1239:C:H5''	1.75	0.69
14:64:113:THR:HG22	14:64:115:PHE:H	1.58	0.69
69:23:24:TRP:HE3	69:23:30:LYS:HD2	1.56	0.69
80:8S:40:A:H2'	80:8S:41:A:C8	2.27	0.69
57:11:122:ILE:HB	57:11:143:SER:HB2	1.72	0.69
7:L7:88:ARG:HG2	7:L7:110:ARG:O	1.93	0.69
78:1S:524:U:H2'	78:1S:526:A:OP2	1.92	0.69
63:17:61:ILE:HG12	63:17:66:VAL:HG21	1.73	0.69
18:68:174:ARG:HA	18:68:178:ARG:HG3	1.74	0.69
51:S5:203:LYS:HE3	51:S5:203:LYS:HA	1.72	0.69
79:2S:1218:U:H2'	79:2S:1219:C:H5'	1.72	0.69
78:1S:822:U:H2'	78:1S:823:G:H5''	1.75	0.69
79:2S:2197:C:N4	79:2S:2241:U:H2'	2.08	0.69
79:2S:1787:A:H3'	79:2S:1788:C:H5''	1.73	0.69
69:23:103:LEU:HD12	69:23:125:VAL:HB	1.74	0.69
26:76:31:LEU:HD11	26:76:75:ARG:HG2	1.75	0.69
60:14:124:ASP:HB2	78:1S:929:A:C4'	2.22	0.69
78:1S:44:U:H2'	78:1S:45:U:H5	1.56	0.69
78:1S:477:A:H2'	78:1S:478:A:H8	1.55	0.69
47:S1:32:ILE:HD12	60:14:33:LEU:HD22	1.75	0.69
72:26:82:ARG:HG3	72:26:83:ILE:N	2.04	0.69
46:S0:102:PHE:HZ	46:S0:135:GLU:HG3	1.58	0.69
55:S9:134:ILE:HA	55:S9:158:PHE:HA	1.72	0.69
10:60:97:LEU:HD21	10:60:126:ALA:HB2	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:307:A:H2'	79:2S:308:A:C8	2.28	0.69
78:1S:5:U:H2'	78:1S:6:G:C8	2.29	0.68
9:L9:7:GLU:HB3	9:L9:56:ALA:HA	1.74	0.68
30:80:16:LEU:HD12	30:80:98:SER:HB2	1.73	0.68
27:77:50:PRO:HD3	27:77:68:ILE:HG12	1.75	0.68
42:92:98:LYS:HD2	79:2S:2656:A:H4'	1.74	0.68
78:1S:72:A:H3'	78:1S:73:U:H5''	1.73	0.68
21:71:41:ASP:O	21:71:96:ILE:HA	1.93	0.68
6:L6:63:LEU:HB2	6:L6:79:VAL:CG2	2.23	0.68
18:68:23:ASN:O	18:68:27:LYS:HG3	1.92	0.68
34:84:85:VAL:O	34:84:89:ILE:HG13	1.93	0.68
47:S1:111:ARG:HB3	72:26:68:TYR:HD2	1.58	0.68
45:RC:260:ILE:HB	45:RC:274:LEU:HB2	1.74	0.68
79:2S:443:G:H22	79:2S:493:U:H1'	1.58	0.68
33:83:88:ASN:HB2	79:2S:429:U:H5'	1.75	0.68
66:20:71:PRO:HB3	75:29:41:GLN:HG2	1.76	0.68
54:S8:159:GLN:HB3	54:S8:165:LEU:HD23	1.75	0.68
54:S8:116:HIS:HD1	54:S8:117:TYR:HD2	1.42	0.68
64:18:24:GLY:HA2	64:18:58:ALA:HB3	1.74	0.68
79:2S:2372:A:H5''	79:2S:2373:A:H5'	1.76	0.68
17:67:107:LEU:HD23	17:67:112:LEU:HD11	1.75	0.68
44:P0:45:LEU:HD13	44:P0:49:ALA:HB3	1.75	0.68
1:L1:178:VAL:HG13	1:L1:179:LEU:HG	1.75	0.68
79:2S:830:A:H2'	79:2S:831:G:O4'	1.93	0.68
46:S0:56:LYS:HG3	46:S0:161:PRO:HD2	1.75	0.68
79:2S:1605:A:HO2'	79:2S:1607:U:H6	1.41	0.68
4:L4:135:VAL:HG11	4:L4:142:VAL:HG11	1.75	0.68
79:2S:129:U:H2'	79:2S:130:A:C8	2.28	0.68
46:S0:30:GLN:HE21	46:S0:149:LEU:HD22	1.59	0.68
79:2S:3006:A:H2'	79:2S:3007:U:O4'	1.94	0.68
63:17:21:TYR:N	63:17:22:PRO:HD2	2.09	0.68
78:1S:1524:A:H2'	78:1S:1525:A:C8	2.28	0.68
26:76:115:ARG:O	26:76:119:ILE:HG13	1.94	0.68
79:2S:549:U:H2'	79:2S:550:A:C8	2.28	0.68
78:1S:1650:U:H2'	78:1S:1651:A:C8	2.29	0.68
27:77:24:VAL:HG22	27:77:130:PHE:HZ	1.59	0.68
48:S2:90:THR:CG2	48:S2:93:GLY:H	2.07	0.68
2:L2:61:VAL:O	2:L2:74:GLU:HB2	1.93	0.68
1:L1:62:ASN:HA	1:L1:168:ALA:HA	1.75	0.68
46:S0:56:LYS:HB2	46:S0:160:ILE:HG23	1.75	0.68
48:S2:170:ILE:HB	48:S2:197:TYR:HB2	1.73	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L2:216:HIS:HB2	2:L2:218:HIS:CD2	2.28	0.68
71:25:77:ARG:HB3	71:25:81:ARG:HH12	1.58	0.68
15:65:6:TYR:O	15:65:10:LEU:HB2	1.94	0.68
33:83:13:HIS:HA	33:83:30:ILE:HD13	1.76	0.68
47:S1:71:ALA:CB	47:S1:79:HIS:HB2	2.22	0.68
79:2S:516:A:C2'	79:2S:517:G:H5''	2.24	0.68
3:L3:66:LYS:HB3	23:73:88:ARG:NH1	2.09	0.68
79:2S:820:A:H2'	79:2S:821:U:C6	2.29	0.68
78:1S:1166:A:H2'	78:1S:1167:G:H4'	1.75	0.68
53:S7:49:ILE:HG21	53:S7:175:LYS:HG2	1.76	0.68
62:16:69:VAL:HG21	62:16:81:ILE:HG22	1.74	0.68
8:L8:46:LEU:O	8:L8:50:VAL:HG13	1.94	0.68
15:65:70:ASN:ND2	79:2S:2599:U:H5''	2.08	0.68
9:L9:96:HIS:O	9:L9:98:PRO:HD3	1.94	0.68
31:81:28:ARG:HB2	31:81:64:VAL:O	1.94	0.68
79:2S:3346:U:H3	79:2S:3359:A:H61	1.42	0.68
78:1S:1770:U:H2'	78:1S:1771:U:C6	2.29	0.68
79:2S:2060:A:H2'	79:2S:2061:G:H5'	1.76	0.68
71:25:92:ILE:HG13	71:25:100:ILE:HG23	1.76	0.68
79:2S:627:U:H2'	79:2S:628:A:H8	1.57	0.68
48:S2:165:VAL:HG13	48:S2:204:THR:HG22	1.73	0.68
61:15:28:MET:HG2	61:15:29:SER:H	1.58	0.68
1:L1:103:LEU:HD11	1:L1:128:LEU:HB3	1.76	0.68
35:85:119:LYS:HE2	35:85:119:LYS:HA	1.76	0.68
8:L8:193:LYS:HD2	79:2S:7:C:H5''	1.75	0.68
51:S5:78:ALA:HB3	78:1S:1583:A:N7	2.09	0.68
78:1S:1496:U:H4'	78:1S:1519:U:O2'	1.93	0.68
2:L2:104:LEU:HD13	2:L2:162:ALA:O	1.93	0.68
4:L4:23:PRO:HD2	4:L4:26:PHE:CE2	2.29	0.68
78:1S:44:U:H2'	78:1S:45:U:C5	2.28	0.68
30:80:78:GLY:O	30:80:81:VAL:HG22	1.93	0.68
57:11:14:GLN:HB3	57:11:54:ILE:HG12	1.74	0.68
70:24:53:ASP:HB3	70:24:79:VAL:HG13	1.76	0.68
78:1S:1320:U:O2	78:1S:1322:A:H5'	1.94	0.68
46:S0:170:ILE:H	46:S0:170:ILE:HD12	1.58	0.68
79:2S:66:A:N6	79:2S:76:G:H1'	2.09	0.68
37:87:25:ARG:HH21	79:2S:817:A:N6	1.88	0.67
79:2S:2515:A:C6	79:2S:2593:A:H1'	2.29	0.67
55:S9:90:LYS:HE3	55:S9:95:TYR:HB2	1.76	0.67
66:20:53:LYS:HB2	66:20:92:ASP:HB2	1.75	0.67
8:L8:181:LYS:HG2	80:8S:154:C:H5''	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L5:19:PRO:HB3	5:L5:23:ARG:HD3	1.74	0.67
34:84:60:ARG:NH2	79:2S:1616:U:H4'	2.08	0.67
47:S1:103:MET:HB3	47:S1:215:VAL:HG12	1.76	0.67
3:L3:142:ALA:O	3:L3:146:ARG:HB2	1.93	0.67
31:81:62:ARG:HB2	31:81:66:GLY:CA	2.22	0.67
79:2S:2501:U:C2'	79:2S:2502:A:H5'	2.24	0.67
79:2S:2775:U:H2'	79:2S:2776:C:C6	2.28	0.67
78:1S:519:C:H3'	78:1S:520:A:H8	1.58	0.67
78:1S:41:A:H2'	78:1S:438:A:N7	2.09	0.67
78:1S:16:G:H21	78:1S:1138:A:H62	1.40	0.67
47:S1:71:ALA:HB3	60:14:114:ARG:HH12	1.59	0.67
79:2S:3334:U:H4'	79:2S:3335:A:C5'	2.24	0.67
42:92:36:PHE:CZ	79:2S:2225:U:H4'	2.29	0.67
79:2S:3375:A:H5''	79:2S:3378:C:H5	1.58	0.67
4:L4:234:ASN:O	4:L4:238:LEU:HG	1.94	0.67
78:1S:1357:A:H2'	78:1S:1358:G:C8	2.30	0.67
16:66:73:PHE:HA	79:2S:3007:U:OP1	1.93	0.67
7:L7:146:GLN:HE22	7:L7:241:LYS:HG3	1.60	0.67
78:1S:1291:G:H2'	78:1S:1292:G:H8	1.58	0.67
65:19:40:SER:HB3	65:19:43:ASN:HB2	1.75	0.67
5:L5:83:LEU:HB3	5:L5:88:ILE:HB	1.76	0.67
25:75:115:ARG:HE	25:75:121:LYS:HB2	1.58	0.67
9:L9:24:ILE:HD11	9:L9:39:LYS:HD2	1.77	0.67
6:L6:82:ARG:HB3	33:83:104:PRO:HA	1.77	0.67
46:S0:59:LEU:HD11	67:21:78:LEU:HD12	1.77	0.67
48:S2:45:VAL:HG11	48:S2:68:ILE:HG23	1.77	0.67
78:1S:626:U:H5'	78:1S:939:A:H1'	1.75	0.67
79:2S:528:U:H2'	79:2S:529:A:C8	2.29	0.67
79:2S:2387:A:H3'	79:2S:2388:U:H5''	1.75	0.67
63:17:55:THR:O	63:17:59:LYS:HG3	1.94	0.67
44:P0:4:ILE:H	44:P0:4:ILE:HD13	1.58	0.67
9:L9:41:ILE:HD12	9:L9:43:VAL:HG13	1.77	0.67
79:2S:1040:A:C3'	79:2S:1041:U:H5''	2.23	0.67
14:64:85:TRP:NE1	14:64:91:CYS:HB3	2.08	0.67
16:66:76:PRO:HD2	16:66:106:GLU:OE2	1.95	0.67
45:RC:214:ALA:HB2	45:RC:220:ILE:HG12	1.75	0.67
17:67:24:VAL:HG22	17:67:86:LYS:HE2	1.75	0.67
78:1S:707:A:H3'	78:1S:708:C:C5'	2.22	0.67
79:2S:2798:C:C5'	79:2S:2800:G:H5'	2.21	0.67
62:16:82:ARG:HH22	62:16:116:LEU:HD11	1.59	0.67
53:S7:98:ILE:CG1	53:S7:121:VAL:HG21	2.23	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:69:86:GLU:HG2	19:69:90:PRO:HA	1.77	0.67
46:S0:38:PHE:O	46:S0:39:ASN:HB2	1.94	0.67
52:S6:135:PRO:HB2	52:S6:141:ILE:HG12	1.75	0.67
71:25:59:TYR:CE2	71:25:100:ILE:HG12	2.30	0.67
32:82:102:ALA:HA	32:82:105:ARG:HD3	1.77	0.67
79:2S:2076:G:H2'	79:2S:2077:U:H5''	1.77	0.67
79:2S:1236:G:H3'	79:2S:1237:G:C5'	2.25	0.67
79:2S:1054:A:H5''	79:2S:2637:A:H61	1.58	0.67
2:L2:35:ALA:HA	8:L8:36:ILE:HD13	1.77	0.67
47:S1:71:ALA:HB2	47:S1:79:HIS:CB	2.19	0.67
2:L2:33:ASP:O	2:L2:37:ARG:HG2	1.95	0.67
78:1S:1291:G:H1	78:1S:1324:G:H22	1.43	0.67
79:2S:2995:A:H2'	79:2S:2996:U:H5''	1.77	0.67
62:16:71:GLY:HA2	78:1S:1483:A:H4'	1.77	0.67
17:67:43:LYS:HA	17:67:46:LYS:HE2	1.77	0.67
79:2S:2688:U:H5'	79:2S:2689:A:C8	2.30	0.67
20:70:119:ARG:HB2	81:5S:96:U:H4'	1.75	0.67
11:61:40:LEU:HD22	11:61:114:ILE:HG12	1.76	0.67
79:2S:3079:U:H3'	79:2S:3080:G:C5'	2.24	0.67
50:S4:126:VAL:HA	50:S4:141:THR:HA	1.75	0.67
78:1S:602:U:H2'	78:1S:603:U:C6	2.31	0.67
78:1S:205:U:H2'	78:1S:206:A:H8	1.59	0.67
64:18:109:LEU:O	64:18:113:LEU:HG	1.95	0.67
50:S4:45:ILE:O	50:S4:49:ARG:HB3	1.95	0.67
18:68:34:THR:HA	18:68:49:LEU:HD11	1.77	0.66
47:S1:136:ARG:HD3	78:1S:884:A:H5''	1.76	0.66
53:S7:111:LYS:HG3	53:S7:112:ARG:N	2.10	0.66
47:S1:35:PRO:HA	47:S1:232:HIS:NE2	2.09	0.66
3:L3:210:GLU:HA	3:L3:285:VAL:HG21	1.77	0.66
16:66:92:THR:O	16:66:96:LYS:HG3	1.95	0.66
28:78:6:THR:HG22	28:78:8:THR:HG23	1.77	0.66
45:RC:131:ILE:HB	45:RC:144:LEU:HB2	1.77	0.66
53:S7:114:ARG:HB2	53:S7:114:ARG:HH11	1.59	0.66
15:65:176:LYS:NZ	79:2S:65:A:H5'	2.09	0.66
16:66:56:ASP:HB3	16:66:60:LYS:NZ	2.10	0.66
52:S6:137:ARG:HH12	78:1S:144:U:H5	1.43	0.66
79:2S:671:U:H2'	79:2S:672:A:C8	2.30	0.66
78:1S:71:A:H2'	78:1S:72:A:H4'	1.75	0.66
35:85:24:LEU:HB3	35:85:51:ILE:HG12	1.77	0.66
5:L5:260:PHE:HE2	81:5S:121:U:H5'	1.60	0.66
20:70:124:LEU:HA	21:71:153:PRO:HG2	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L1:169:VAL:HG12	1:L1:170:GLY:N	2.09	0.66
60:14:87:GLY:HA2	60:14:92:LYS:HB3	1.75	0.66
45:RC:21:THR:HG21	45:RC:38:ARG:HE	1.60	0.66
6:L6:136:GLU:O	6:L6:140:VAL:HG23	1.95	0.66
82:PT:58:A:H2'	82:PT:59:A:H5'	1.77	0.66
26:76:87:LYS:HE2	79:2S:375:A:O2'	1.95	0.66
52:S6:59:GLN:HE21	78:1S:156:A:H62	1.43	0.66
3:L3:100:ARG:NH2	79:2S:3242:G:H1'	2.08	0.66
79:2S:599:C:C2'	79:2S:600:G:H5''	2.24	0.66
2:L2:112:ILE:HG23	2:L2:133:TYR:HB2	1.78	0.66
47:S1:91:VAL:HB	47:S1:96:LEU:HB3	1.77	0.66
79:2S:235:A:H2'	79:2S:236:G:C8	2.30	0.66
61:15:68:PRO:HG2	61:15:71:GLU:HB3	1.77	0.66
17:67:122:ALA:HB3	17:67:143:PRO:HB2	1.77	0.66
55:S9:109:LEU:O	55:S9:113:VAL:HG23	1.95	0.66
4:L4:6:VAL:HG21	4:L4:22:LEU:HD21	1.78	0.66
69:23:7:ARG:HH12	78:1S:1100:G:H1'	1.60	0.66
57:11:74:THR:HG22	57:11:122:ILE:HG12	1.76	0.66
61:15:31:GLU:O	61:15:34:VAL:HG22	1.94	0.66
2:L2:51:ASP:HB2	2:L2:58:LEU:HG	1.76	0.66
18:68:51:ALA:HB1	18:68:84:VAL:HG11	1.78	0.66
30:80:11:ASN:HA	30:80:14:LEU:HD12	1.78	0.66
79:2S:571:U:H2'	79:2S:572:A:H8	1.59	0.66
1:L1:58:CYS:HB2	1:L1:152:ARG:HA	1.76	0.66
7:L7:121:LYS:HD2	21:71:133:ALA:CB	2.24	0.66
22:72:30:PRO:HG2	22:72:60:GLY:O	1.96	0.66
79:2S:3317:U:H1'	79:2S:3318:G:OP2	1.95	0.66
79:2S:1787:A:H2'	79:2S:1788:C:H5''	1.77	0.66
32:82:75:LEU:HG	32:82:95:GLU:OE1	1.96	0.66
78:1S:1738:U:H2'	78:1S:1739:C:C6	2.30	0.66
79:2S:178:U:H2'	79:2S:179:C:H6	1.58	0.66
60:14:17:ALA:HB3	60:14:81:VAL:HA	1.75	0.66
8:L8:26:LEU:HD11	27:77:123:GLN:HA	1.78	0.66
79:2S:1951:C:H5	79:2S:2095:G:H1	1.35	0.66
4:L4:39:PHE:HE1	4:L4:236:LEU:HA	1.60	0.66
27:77:25:ILE:CG2	27:77:28:PRO:HD3	2.26	0.66
79:2S:796:U:H2'	79:2S:797:U:C6	2.31	0.66
15:65:116:LEU:HB3	15:65:133:ILE:HG23	1.77	0.66
31:81:10:ARG:HD2	31:81:12:TYR:OH	1.96	0.66
30:80:32:LYS:HG3	30:80:36:GLN:HE21	1.61	0.66
55:S9:174:ARG:HE	55:S9:174:ARG:HA	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:S6:191:ARG:O	52:S6:195:VAL:HG23	1.96	0.66
30:80:42:ILE:HD11	30:80:67:VAL:HG22	1.77	0.66
4:L4:328:ASN:HD21	4:L4:330:TYR:HB3	1.61	0.66
66:20:118:VAL:HG13	66:20:119:ALA:H	1.59	0.66
75:29:10:HIS:ND1	75:29:11:PRO:HD2	2.11	0.66
79:2S:178:U:H2'	79:2S:179:C:C6	2.30	0.66
14:64:15:VAL:HG22	20:70:150:PHE:O	1.96	0.66
66:20:95:ALA:HB1	66:20:96:PRO:HD2	1.78	0.66
11:61:47:GLN:HB3	11:61:64:LYS:HD3	1.75	0.66
24:74:23:ARG:HG2	24:74:24:GLY:H	1.59	0.66
16:66:24:ALA:O	16:66:28:LEU:HG	1.96	0.66
51:S5:101:GLY:HA2	78:1S:1166:A:H5''	1.76	0.66
79:2S:1959:G:H2'	79:2S:1960:A:H5'	1.77	0.66
79:2S:1534:A:H2'	79:2S:1535:A:C8	2.30	0.66
15:65:71:ARG:O	15:65:92:LEU:HB2	1.96	0.66
5:L5:285:ARG:O	5:L5:289:LYS:HG3	1.96	0.66
72:26:7:SER:HB2	72:26:11:ASN:H	1.61	0.66
79:2S:2322:C:O2'	79:2S:2323:G:H5'	1.96	0.66
52:S6:139:ASN:O	52:S6:143:LYS:HD3	1.96	0.66
33:83:13:HIS:HA	33:83:30:ILE:CD1	2.26	0.66
79:2S:989:A:H2'	79:2S:990:U:C6	2.30	0.66
79:2S:2843:U:H5''	79:2S:2844:C:H5	1.61	0.66
79:2S:1454:A:H5''	79:2S:1455:U:H5'	1.78	0.66
72:26:41:ILE:HD13	72:26:41:ILE:H	1.59	0.66
78:1S:1681:A:C2'	78:1S:1682:U:H5'	2.26	0.66
79:2S:1594:A:H1'	79:2S:1615:C:H1'	1.77	0.66
7:L7:80:GLN:HB2	21:71:135:PRO:HB2	1.78	0.65
38:88:26:LYS:NZ	79:2S:1750:A:H4'	2.11	0.65
51:S5:79:ASN:HB2	51:S5:83:ARG:NH2	2.11	0.65
18:68:34:THR:HG22	18:68:49:LEU:HD21	1.77	0.65
17:67:117:ILE:HG13	17:67:148:LEU:HB3	1.78	0.65
49:S3:24:PHE:HZ	49:S3:72:LEU:HD13	1.60	0.65
79:2S:2374:C:H5	79:2S:2823:G:H1'	1.61	0.65
56:10:30:ALA:O	56:10:38:LYS:HA	1.95	0.65
79:2S:1913:A:N3	79:2S:2120:A:H2'	2.11	0.65
40:90:113:ARG:HH12	79:2S:1190:A:H4'	1.60	0.65
45:RC:189:GLU:HA	49:S3:225:TYR:HB2	1.76	0.65
65:19:28:LEU:HD21	65:19:30:VAL:HG13	1.78	0.65
78:1S:515:A:H62	78:1S:537:G:N2	1.82	0.65
79:2S:926:A:H2'	79:2S:927:C:C6	2.30	0.65
70:24:8:ARG:O	70:24:26:ASP:HB2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:84:66:SER:HB2	34:84:69:HIS:ND1	2.11	0.65
23:73:84:SER:HA	23:73:94:TYR:HB3	1.78	0.65
79:2S:1805:C:H2'	79:2S:1806:A:H8	1.61	0.65
48:S2:53:ILE:HG12	48:S2:72:LEU:HB3	1.77	0.65
78:1S:760:A:H2'	78:1S:761:G:O4'	1.97	0.65
51:S5:187:ILE:HA	78:1S:1534:G:N2	2.11	0.65
79:2S:751:A:H2'	79:2S:752:C:C6	2.31	0.65
31:81:54:GLU:HA	31:81:57:GLN:NE2	2.12	0.65
79:2S:442:G:O6	79:2S:493:U:H2'	1.96	0.65
59:13:64:ARG:NH1	59:13:64:ARG:HB3	2.08	0.65
36:86:26:ILE:N	36:86:26:ILE:HD12	2.10	0.65
4:L4:42:VAL:HA	4:L4:45:ASN:ND2	2.11	0.65
19:69:102:LEU:HD21	19:69:135:LYS:HA	1.77	0.65
72:26:84:VAL:HG13	72:26:85:ARG:N	2.11	0.65
13:63:63:VAL:HG13	79:2S:72:C:H5'	1.78	0.65
46:S0:56:LYS:HB3	46:S0:160:ILE:HG12	1.79	0.65
31:81:32:ALA:O	31:81:36:ILE:HG13	1.96	0.65
42:92:77:CYS:SG	42:92:79:THR:HG22	2.36	0.65
8:L8:178:ALA:HB2	8:L8:218:ILE:HG23	1.79	0.65
78:1S:1672:G:H2'	78:1S:1673:G:C8	2.31	0.65
17:67:129:THR:HB	17:67:137:ASN:HB2	1.77	0.65
11:61:97:SER:HB2	11:61:101:ASN:HB2	1.78	0.65
68:22:22:LYS:HD2	73:27:3:LEU:HD23	1.78	0.65
23:73:93:LEU:H	23:73:93:LEU:HD23	1.61	0.65
65:19:119:LYS:HE2	78:1S:1369:U:H5''	1.75	0.65
22:72:42:LYS:HE2	22:72:47:VAL:HG13	1.79	0.65
34:84:41:ARG:HB2	34:84:50:ALA:HB1	1.78	0.65
79:2S:598:A:H2'	79:2S:599:C:C6	2.31	0.65
6:L6:82:ARG:O	33:83:103:TYR:HB2	1.96	0.65
68:22:83:ILE:O	68:22:86:ILE:HG12	1.97	0.65
78:1S:989:U:H2'	78:1S:990:C:C6	2.31	0.65
25:75:63:ILE:HA	25:75:86:VAL:HG23	1.76	0.65
37:87:18:LEU:HD23	37:87:25:ARG:HB2	1.78	0.65
23:73:66:LYS:CB	23:73:69:LEU:HD13	2.26	0.65
4:L4:317:PRO:HG3	4:L4:323:VAL:HG13	1.77	0.65
69:23:103:LEU:HD13	69:23:104:LEU:N	2.12	0.65
78:1S:16:G:H2'	78:1S:17:C:C6	2.32	0.65
5:L5:84:PRO:HB3	5:L5:89:THR:HG22	1.78	0.65
78:1S:1171:A:H2'	78:1S:1172:G:C8	2.31	0.65
59:13:17:PRO:HG3	73:27:28:PRO:HG3	1.79	0.65
78:1S:1036:A:H2'	78:1S:1037:C:C6	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L6:56:LYS:HG2	6:L6:57:HIS:N	2.11	0.65
78:1S:1225:U:H2'	78:1S:1226:A:H5'	1.78	0.65
79:2S:209:A:H4'	79:2S:211:A:C8	2.32	0.65
2:L2:68:LYS:HG2	2:L2:69:TYR:N	2.11	0.65
47:S1:172:LEU:O	47:S1:176:VAL:HG23	1.96	0.65
53:S7:131:PHE:H	53:S7:132:PRO:HD2	1.61	0.65
74:28:8:THR:HB	74:28:56:LEU:HB2	1.77	0.65
79:2S:296:A:O2'	79:2S:297:G:H5'	1.96	0.65
63:17:97:ASN:ND2	63:17:97:ASN:H	1.95	0.65
56:10:25:LYS:HD3	56:10:62:GLN:NE2	2.12	0.65
28:78:36:GLY:HA3	28:78:40:HIS:CE1	2.32	0.65
47:S1:176:VAL:O	47:S1:177:GLN:HG2	1.97	0.65
78:1S:177:U:H3'	78:1S:178:U:H5''	1.79	0.65
33:83:73:ARG:O	33:83:81:VAL:HG13	1.96	0.65
55:S9:135:ALA:HB2	55:S9:159:ALA:HB2	1.77	0.65
78:1S:1107:G:O2'	78:1S:1108:G:H5'	1.97	0.65
79:2S:2346:C:C3'	79:2S:2347:U:H5''	2.27	0.65
78:1S:1060:U:H3'	78:1S:1061:A:H5''	1.78	0.65
8:L8:169:LEU:O	8:L8:173:MET:HG2	1.97	0.65
79:2S:3354:U:H5''	79:2S:3356:G:H5'	1.79	0.65
79:2S:1363:A:H2'	79:2S:1364:C:C6	2.31	0.65
18:68:147:ARG:HB3	18:68:150:VAL:HG13	1.79	0.65
53:S7:91:ILE:HG13	53:S7:92:PHE:N	2.11	0.65
1:L1:64:SER:H	1:L1:151:VAL:HG21	1.61	0.65
1:L1:144:LEU:HD13	1:L1:147:LYS:HD2	1.79	0.65
3:L3:187:SER:O	3:L3:191:LYS:HG3	1.95	0.65
50:S4:122:LYS:HG2	50:S4:164:LEU:HD21	1.78	0.65
81:5S:100:C:H2'	81:5S:101:G:O4'	1.97	0.65
52:S6:31:ARG:HD2	52:S6:34:GLN:HE22	1.62	0.65
78:1S:969:C:H4'	78:1S:1104:U:H4'	1.78	0.65
69:23:127:VAL:O	69:23:130:VAL:HG22	1.97	0.65
54:S8:29:LEU:HD21	54:S8:31:ARG:HG3	1.79	0.65
79:2S:2601:A:H2'	79:2S:2602:G:H8	1.62	0.65
79:2S:1605:A:O2'	79:2S:1607:U:H5'	1.97	0.65
79:2S:549:U:H2'	79:2S:550:A:H8	1.62	0.65
79:2S:2843:U:H5''	79:2S:2844:C:C5	2.32	0.65
78:1S:1425:A:H2'	78:1S:1426:C:C6	2.32	0.65
78:1S:484:C:H2'	78:1S:485:A:H5''	1.79	0.65
26:76:3:LYS:HE2	26:76:8:VAL:HG13	1.78	0.65
2:L2:251:LYS:HA	2:L2:251:LYS:HE2	1.78	0.65
47:S1:143:THR:HA	47:S1:207:LEU:HG	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1951:C:H6	79:2S:2095:G:H1	1.40	0.65
81:5S:85:G:H1	81:5S:95:A:N6	1.94	0.65
79:2S:1460:A:H2'	79:2S:1461:A:H8	1.62	0.65
79:2S:1190:A:H5'	79:2S:1191:U:OP1	1.96	0.65
2:L2:128:ARG:HB2	79:2S:2177:G:H2'	1.78	0.65
55:S9:48:GLN:HA	55:S9:51:LYS:HE2	1.78	0.65
59:13:134:VAL:HG23	59:13:135:LEU:HG	1.79	0.65
3:L3:3:HIS:HD2	79:2S:2938:G:H3'	1.62	0.65
79:2S:1814:A:H4'	79:2S:1815:U:O4'	1.97	0.65
10:60:65:LEU:HD23	10:60:159:PHE:CZ	2.32	0.65
69:23:13:ARG:O	69:23:17:VAL:HG23	1.97	0.65
79:2S:2050:C:H2'	79:2S:2051:G:C8	2.32	0.65
9:L9:63:LYS:HE3	79:2S:1210:U:H5'	1.78	0.65
79:2S:2821:C:N4	79:2S:2869:U:H3	1.92	0.64
79:2S:600:G:H1'	79:2S:603:A:N6	2.12	0.64
54:S8:137:LYS:HA	54:S8:140:GLU:HB2	1.78	0.64
1:L1:62:ASN:H	1:L1:151:VAL:HB	1.62	0.64
78:1S:886:U:H2'	78:1S:887:A:C8	2.32	0.64
27:77:24:VAL:HG22	27:77:130:PHE:CZ	2.32	0.64
22:72:33:TYR:O	22:72:37:LEU:HD13	1.97	0.64
36:86:9:ILE:HA	36:86:13:LYS:HG3	1.79	0.64
3:L3:159:ARG:HB3	3:L3:180:GLU:HB3	1.79	0.64
78:1S:1160:A:H2'	78:1S:1161:C:C6	2.32	0.64
16:66:124:LEU:HB3	16:66:127:LEU:HD12	1.79	0.64
78:1S:1561:U:H4'	78:1S:1599:C:H4'	1.77	0.64
79:2S:3163:A:H3'	79:2S:3164:C:H5''	1.77	0.64
62:16:73:GLY:N	62:16:76:SER:HB3	2.10	0.64
53:S7:139:ARG:HD2	68:22:53:ILE:HG22	1.80	0.64
32:82:95:GLU:HG2	32:82:96:ILE:H	1.62	0.64
25:75:63:ILE:HD13	25:75:64:GLU:H	1.61	0.64
79:2S:2635:A:H4'	79:2S:2636:A:O5'	1.96	0.64
3:L3:123:TYR:CE2	3:L3:124:LYS:HG3	2.33	0.64
48:S2:126:ARG:O	48:S2:130:ILE:HD13	1.98	0.64
16:66:153:VAL:O	16:66:157:GLU:HG2	1.96	0.64
78:1S:1310:U:H3	78:1S:1315:U:H3	1.45	0.64
78:1S:822:U:C3'	78:1S:823:G:H5''	2.28	0.64
34:84:65:VAL:HG12	34:84:66:SER:H	1.62	0.64
31:81:75:ILE:HG23	31:81:93:VAL:HG22	1.79	0.64
79:2S:3231:U:H2'	79:2S:3232:G:C8	2.32	0.64
78:1S:138:A:H62	78:1S:266:A:N6	1.94	0.64
3:L3:332:ARG:HD3	3:L3:332:ARG:N	2.10	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:76:122:LYS:HG2	79:2S:185:C:H5''	1.78	0.64
5:L5:52:VAL:HG13	5:L5:54:ARG:NH1	2.13	0.64
17:67:87:SER:O	17:67:91:VAL:HG23	1.98	0.64
14:64:39:ILE:HG23	20:70:72:VAL:HG11	1.78	0.64
46:S0:169:SER:O	46:S0:173:ILE:HG12	1.98	0.64
9:L9:168:ARG:HH12	79:2S:3034:C:H4'	1.62	0.64
10:60:17:TYR:HE2	79:2S:1047:A:H62	1.46	0.64
79:2S:1764:U:H3'	79:2S:1765:U:C5'	2.27	0.64
63:17:10:LYS:HG2	63:17:53:TYR:HE1	1.62	0.64
63:17:97:ASN:N	63:17:97:ASN:HD22	1.95	0.64
72:26:9:GLY:HA3	72:26:34:LYS:HE2	1.79	0.64
30:80:52:ARG:O	30:80:56:LEU:HG	1.97	0.64
51:S5:76:ARG:HD3	51:S5:76:ARG:N	2.12	0.64
20:70:66:GLU:O	20:70:69:PRO:HG3	1.97	0.64
21:71:20:ARG:NH1	21:71:20:ARG:HB3	2.12	0.64
18:68:154:GLY:O	18:68:161:LYS:HG3	1.97	0.64
79:2S:2953:U:H2'	79:2S:2954:U:H2'	1.79	0.64
43:93:16:VAL:HG22	79:2S:1927:G:C8	2.32	0.64
18:68:157:PRO:HD3	28:78:47:LYS:HE2	1.80	0.64
46:S0:118:PRO:HG2	46:S0:141:ILE:HD13	1.79	0.64
51:S5:29:ILE:HG12	62:16:37:THR:HG23	1.79	0.64
78:1S:941:A:H2'	78:1S:942:G:H5'	1.79	0.64
65:19:14:PHE:HE1	65:19:136:ALA:HA	1.62	0.64
43:93:22:LEU:HD11	79:2S:2189:U:H5''	1.78	0.64
79:2S:2186:U:H5''	79:2S:2315:G:OP2	1.97	0.64
47:S1:122:GLU:HG3	47:S1:139:ALA:O	1.98	0.64
19:69:77:GLY:O	19:69:81:ARG:HD3	1.98	0.64
13:63:109:PHE:O	13:63:113:VAL:HG23	1.97	0.64
79:2S:600:G:H1'	79:2S:603:A:H62	1.63	0.64
79:2S:1238:C:C2'	79:2S:1239:C:H5''	2.28	0.64
4:L4:334:PHE:CD2	79:2S:578:A:H2'	2.33	0.64
58:12:87:PRO:HA	58:12:140:PHE:HZ	1.62	0.64
40:90:127:LEU:HD22	40:90:128:LYS:HG2	1.78	0.64
79:2S:1601:U:H2'	79:2S:1603:A:OP2	1.97	0.64
76:30:36:LYS:N	76:30:36:LYS:HD2	2.12	0.64
36:86:36:ARG:HE	36:86:36:ARG:HA	1.61	0.64
79:2S:1212:A:H2'	79:2S:1213:G:C8	2.33	0.64
28:78:126:LYS:HB3	28:78:148:ILE:HG21	1.80	0.64
5:L5:141:PRO:HB2	5:L5:172:TYR:CB	2.27	0.64
45:RC:83:ALA:HB1	45:RC:110:VAL:HG12	1.79	0.64
32:82:95:GLU:HG2	32:82:96:ILE:N	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:S5:187:ILE:HA	78:1S:1534:G:H21	1.63	0.64
45:RC:29:GLN:HE21	45:RC:32:LEU:HB2	1.62	0.64
49:S3:40:ARG:HB2	49:S3:47:GLU:HB2	1.79	0.64
79:2S:1843:C:H2'	79:2S:1844:C:C6	2.32	0.64
31:81:79:ARG:NE	31:81:81:GLU:HG2	2.12	0.64
28:78:36:GLY:HA2	28:78:39:HIS:HD2	1.63	0.64
18:68:64:VAL:HA	18:68:67:ILE:HD12	1.80	0.64
2:L2:196:TRP:CG	2:L2:197:PRO:HA	2.33	0.64
6:L6:64:LEU:HD21	6:L6:106:PHE:HE2	1.62	0.64
11:61:105:GLY:HA3	79:2S:2674:A:H5'	1.80	0.64
65:19:88:VAL:HG21	78:1S:1173:C:O2'	1.98	0.64
79:2S:2493:U:H3'	79:2S:2494:A:C5'	2.23	0.64
79:2S:2094:C:H2'	79:2S:2095:G:C8	2.32	0.64
21:71:78:LYS:CB	21:71:87:LYS:HE2	2.25	0.64
38:88:63:LYS:HE3	38:88:66:ILE:HD12	1.78	0.64
63:17:66:VAL:HB	63:17:69:ILE:HG12	1.80	0.64
10:60:65:LEU:HD23	10:60:159:PHE:HZ	1.62	0.64
79:2S:1696:A:H2'	79:2S:1697:A:C8	2.32	0.64
19:69:38:ARG:HG3	79:2S:1602:A:H5'	1.80	0.64
22:72:14:THR:HG23	22:72:66:VAL:HG22	1.80	0.64
47:S1:67:GLU:HB2	47:S1:85:LYS:HD3	1.80	0.64
78:1S:190:C:O2'	78:1S:191:C:H5'	1.99	0.63
72:26:79:ILE:HA	72:26:84:VAL:HG11	1.79	0.63
70:24:5:VAL:H	70:24:30:PRO:HD2	1.63	0.63
32:82:25:TYR:HB3	32:82:27:ARG:HG2	1.79	0.63
15:65:21:PHE:O	15:65:25:VAL:HG23	1.98	0.63
36:86:36:ARG:HA	36:86:36:ARG:NE	2.13	0.63
34:84:6:THR:HG22	79:2S:1486:G:H21	1.62	0.63
53:S7:34:LEU:O	53:S7:38:LEU:HD13	1.98	0.63
7:L7:107:ARG:HB3	7:L7:204:PRO:HG2	1.79	0.63
60:14:18:ARG:HH12	60:14:35:GLY:HA3	1.61	0.63
78:1S:138:A:H62	78:1S:266:A:H61	1.38	0.63
8:L8:71:VAL:HG12	15:65:21:PHE:CE2	2.34	0.63
6:L6:56:LYS:HG2	6:L6:57:HIS:H	1.62	0.63
17:67:91:VAL:O	17:67:95:LEU:HG	1.99	0.63
79:2S:3392:U:H2'	79:2S:3393:U:C6	2.34	0.63
43:93:46:THR:HB	43:93:58:SER:HB2	1.78	0.63
78:1S:271:A:H2	78:1S:284:G:H22	1.45	0.63
79:2S:900:G:H1'	79:2S:1589:A:N6	2.13	0.63
66:20:41:ILE:HA	66:20:44:ASN:HB3	1.78	0.63
79:2S:1728:G:H5'	79:2S:1728:G:N3	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:64:106:ARG:HA	14:64:109:ARG:HD2	1.80	0.63
79:2S:760:G:H1'	79:2S:771:A:N6	2.12	0.63
16:66:152:VAL:O	16:66:156:LEU:HG	1.99	0.63
79:2S:2895:G:C2'	79:2S:2896:A:H5''	2.27	0.63
78:1S:772:G:H2'	78:1S:773:C:C6	2.34	0.63
72:26:36:ILE:HG12	72:26:38:ARG:NH1	2.13	0.63
44:P0:34:SER:HA	79:2S:1230:G:H4'	1.81	0.63
5:L5:113:LEU:HD23	5:L5:115:LEU:HD23	1.80	0.63
21:71:100:LYS:HB2	79:2S:990:U:H4'	1.80	0.63
6:L6:96:VAL:HG12	6:L6:97:ASN:H	1.62	0.63
40:90:125:LYS:HD2	79:2S:2897:A:H5''	1.79	0.63
2:L2:209:HIS:CD2	2:L2:211:HIS:HB2	2.33	0.63
69:23:142:LYS:HG2	69:23:143:PRO:HD2	1.80	0.63
79:2S:1911:A:H2'	79:2S:1912:U:C6	2.34	0.63
5:L5:7:ALA:C	5:L5:8:LYS:HD2	2.17	0.63
15:65:180:PHE:O	15:65:184:LYS:HG3	1.99	0.63
55:S9:24:LEU:O	55:S9:28:LEU:HG	1.97	0.63
2:L2:190:ARG:HH12	79:2S:1794:G:H1'	1.61	0.63
17:67:3:ARG:NE	17:67:3:ARG:HA	2.13	0.63
79:2S:374:A:H4'	79:2S:375:A:H5'	1.80	0.63
79:2S:1141:C:H2'	79:2S:1142:G:O4'	1.98	0.63
55:S9:3:ARG:HB2	55:S9:3:ARG:NH2	2.14	0.63
6:L6:19:LYS:H	79:2S:591:G:H1'	1.64	0.63
58:12:57:ALA:HB2	58:12:122:VAL:CG1	2.28	0.63
79:2S:1805:C:H2'	79:2S:1806:A:C8	2.34	0.63
50:S4:92:LEU:HD13	50:S4:97:GLU:HB2	1.80	0.63
68:22:8:ALA:HB2	68:22:74:VAL:HG11	1.80	0.63
63:17:5:ARG:HG3	63:17:9:VAL:HG11	1.79	0.63
55:S9:136:VAL:O	55:S9:155:HIS:HB3	1.98	0.63
8:L8:241:LYS:NZ	8:L8:241:LYS:HB3	2.14	0.63
7:L7:178:ILE:HG23	7:L7:183:ASP:HB2	1.80	0.63
57:11:67:ARG:HG2	57:11:67:ARG:O	1.99	0.63
79:2S:3075:G:H2'	79:2S:3076:C:C6	2.33	0.63
3:L3:243:HIS:HB3	79:2S:2948:C:H5''	1.80	0.63
3:L3:332:ARG:CD	3:L3:332:ARG:H	2.10	0.63
78:1S:689:G:C2'	78:1S:690:G:H5''	2.28	0.63
35:85:86:ARG:HD2	80:8S:36:G:H3'	1.81	0.63
52:S6:78:THR:HG23	52:S6:92:ARG:HG2	1.81	0.63
7:L7:119:VAL:O	21:71:135:PRO:HD3	1.99	0.63
33:83:30:ILE:HG22	33:83:31:LYS:N	2.14	0.63
79:2S:2722:U:H2'	79:2S:2723:U:C6	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L3:116:ARG:O	3:L3:175:LYS:HE2	1.98	0.63
4:L4:219:LEU:O	4:L4:222:VAL:HG12	1.98	0.63
51:S5:33:VAL:O	51:S5:37:GLN:HG3	1.99	0.63
79:2S:3269:U:H1'	79:2S:3270:U:OP2	1.98	0.63
50:S4:31:PRO:HD2	50:S4:38:LEU:HD11	1.79	0.63
4:L4:42:VAL:HB	4:L4:236:LEU:HD21	1.79	0.63
19:69:102:LEU:HD22	19:69:138:LEU:HD13	1.80	0.63
78:1S:805:U:C2'	78:1S:806:A:H5''	2.28	0.63
4:L4:6:VAL:CG2	4:L4:22:LEU:HD21	2.29	0.63
53:S7:131:PHE:N	53:S7:132:PRO:HD2	2.14	0.63
3:L3:32:PHE:HE2	3:L3:159:ARG:HH21	1.45	0.63
2:L2:209:HIS:ND1	2:L2:210:PRO:HD2	2.13	0.63
79:2S:3295:A:H2'	79:2S:3296:A:C8	2.34	0.63
78:1S:1273:G:N7	78:1S:1431:C:H5''	2.13	0.63
79:2S:1856:C:H2'	79:2S:1857:C:C6	2.33	0.63
19:69:5:ARG:HD3	79:2S:1471:U:H5''	1.81	0.63
46:S0:126:PRO:HG3	46:S0:147:THR:HG22	1.81	0.63
38:88:40:GLN:HG2	38:88:41:THR:N	2.13	0.63
51:S5:183:ALA:HB3	51:S5:190:ILE:HD13	1.80	0.63
16:66:86:GLY:O	16:66:87:MET:HG3	1.99	0.63
79:2S:440:A:H3'	79:2S:441:U:H4'	1.80	0.63
4:L4:203:ARG:HD2	4:L4:226:GLU:OE2	1.98	0.63
60:14:87:GLY:HA2	60:14:92:LYS:CB	2.28	0.63
45:RC:38:ARG:HG2	45:RC:67:ILE:HG23	1.81	0.63
47:S1:180:THR:HG22	47:S1:181:LEU:H	1.63	0.63
78:1S:924:A:H2'	78:1S:925:G:C8	2.34	0.63
49:S3:159:HIS:O	49:S3:160:SER:HB3	1.99	0.63
79:2S:727:G:H2'	79:2S:728:G:O4'	1.99	0.63
15:65:139:HIS:HB3	15:65:142:ILE:HD13	1.81	0.63
4:L4:192:GLY:HA2	4:L4:195:ARG:HB2	1.78	0.63
79:2S:1182:A:H2'	79:2S:1183:C:C6	2.34	0.63
47:S1:71:ALA:HB3	60:14:114:ARG:NH1	2.13	0.63
75:29:11:PRO:HB3	75:29:13:ARG:NH1	2.12	0.63
32:82:4:LEU:HD12	32:82:5:PRO:HD2	1.79	0.63
13:63:29:ALA:H	15:65:201:ARG:NH2	1.97	0.63
71:25:39:ALA:HB1	71:25:72:GLY:N	2.14	0.63
14:64:55:ARG:NH1	14:64:77:ARG:HG3	2.14	0.63
64:18:139:LYS:HE3	78:1S:1458:G:OP2	1.99	0.63
74:28:15:VAL:HG23	74:28:28:VAL:HG22	1.80	0.63
78:1S:304:U:H2'	78:1S:305:C:C6	2.33	0.63
10:60:182:LEU:HD23	10:60:185:ARG:NH1	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:78:28:HIS:HB3	28:78:31:GLY:O	1.99	0.62
19:69:138:LEU:O	19:69:142:ILE:HG13	1.99	0.62
48:S2:228:ASN:HD22	67:21:1:MET:CG	2.11	0.62
3:L3:14:LEU:HD21	3:L3:263:SER:HA	1.81	0.62
9:L9:47:LYS:HG3	9:L9:53:ILE:HG12	1.81	0.62
79:2S:656:A:H2'	79:2S:657:A:C8	2.34	0.62
2:L2:9:ARG:HH21	2:L2:9:ARG:HB2	1.62	0.62
79:2S:3197:G:H2'	79:2S:3198:U:H3'	1.81	0.62
4:L4:82:THR:C	4:L4:84:ARG:H	2.00	0.62
78:1S:82:U:H2'	78:1S:83:G:O4'	1.99	0.62
28:78:43:ILE:HD11	79:2S:957:C:H1'	1.81	0.62
23:73:21:ALA:HB3	23:73:36:ILE:HD12	1.80	0.62
34:84:29:ILE:HD13	34:84:29:ILE:H	1.64	0.62
52:S6:122:GLU:HA	52:S6:126:ASP:HB2	1.80	0.62
77:31:132:LEU:HD13	77:31:139:LEU:HB3	1.81	0.62
9:L9:118:LEU:HD21	9:L9:177:ASP:HB2	1.81	0.62
1:L1:47:LYS:HD2	1:L1:47:LYS:N	2.13	0.62
37:87:25:ARG:NH2	79:2S:817:A:H61	1.90	0.62
11:61:36:VAL:O	11:61:40:LEU:HB2	1.98	0.62
2:L2:219:ILE:CD1	79:2S:2245:C:H5''	2.29	0.62
69:23:76:LEU:HD13	69:23:79:ASN:ND2	2.13	0.62
53:S7:111:LYS:HG3	53:S7:112:ARG:H	1.64	0.62
31:81:10:ARG:NH2	79:2S:3386:G:H5''	2.15	0.62
20:70:13:ARG:HG2	20:70:14:LEU:H	1.65	0.62
5:L5:72:ASP:H	81:5S:115:G:H21	1.46	0.62
3:L3:46:PHE:HB2	3:L3:209:PHE:HE2	1.64	0.62
43:93:75:ALA:O	43:93:78:THR:HG22	1.99	0.62
70:24:89:TYR:O	70:24:93:ARG:HG3	1.98	0.62
78:1S:1519:U:H2'	78:1S:1520:U:H5	1.63	0.62
81:5S:92:A:H2'	81:5S:93:C:O4'	2.00	0.62
28:78:91:LEU:HD22	28:78:121:VAL:HG21	1.82	0.62
61:15:34:VAL:O	61:15:42:ARG:HG2	2.00	0.62
79:2S:288:C:H2'	79:2S:289:A:C8	2.33	0.62
57:11:94:ILE:HG21	57:11:97:TYR:HD2	1.64	0.62
28:78:5:PHE:O	79:2S:793:C:H5''	1.99	0.62
10:60:24:ARG:HB2	10:60:24:ARG:NH1	2.15	0.62
47:S1:61:LEU:CD2	47:S1:62:LYS:H	2.12	0.62
3:L3:62:ARG:HG3	3:L3:348:ARG:HH21	1.65	0.62
15:65:190:THR:O	15:65:194:GLN:HG2	2.00	0.62
79:2S:955:U:H2'	79:2S:956:U:C6	2.35	0.62
79:2S:1565:G:N2	79:2S:1575:A:H62	1.97	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:25:91:PRO:HB3	71:25:101:TYR:HE1	1.65	0.62
48:S2:66:PHE:HD1	48:S2:66:PHE:H	1.45	0.62
25:75:86:VAL:HG22	25:75:87:SER:H	1.64	0.62
46:S0:174:TRP:HA	46:S0:177:LEU:HD12	1.81	0.62
55:S9:3:ARG:HB2	55:S9:3:ARG:HH21	1.64	0.62
79:2S:1501:U:H3	79:2S:1515:A:H61	1.48	0.62
53:S7:177:THR:HA	78:1S:641:G:H21	1.64	0.62
17:67:88:VAL:O	17:67:92:GLN:HG2	1.98	0.62
2:L2:225:ILE:HG21	2:L2:234:LYS:HA	1.80	0.62
78:1S:481:A:H2'	78:1S:482:U:O4'	2.00	0.62
79:2S:861:C:H2'	79:2S:862:U:C6	2.35	0.62
79:2S:1126:G:H2'	79:2S:1127:G:O4'	2.00	0.62
79:2S:2536:A:C3'	79:2S:2537:U:H5''	2.28	0.62
64:18:115:ARG:HB3	64:18:115:ARG:NH2	2.15	0.62
1:L1:32:VAL:HG11	79:2S:2468:A:H5''	1.81	0.62
79:2S:2356:A:N6	79:2S:2983:C:H41	1.97	0.62
33:83:60:ARG:HB2	33:83:60:ARG:NH2	2.14	0.62
31:81:17:HIS:HB2	31:81:69:TYR:HB3	1.81	0.62
79:2S:311:C:H2'	79:2S:312:C:C6	2.34	0.62
78:1S:985:G:H2'	78:1S:986:G:O4'	1.99	0.62
79:2S:1322:U:H2'	79:2S:1323:G:C8	2.35	0.62
79:2S:1608:C:H2'	79:2S:1609:C:H6	1.64	0.62
19:69:41:ILE:O	19:69:45:VAL:HG23	2.00	0.62
79:2S:2922:G:H3'	79:2S:2923:U:H5''	1.81	0.62
17:67:113:TYR:CE2	17:67:153:LYS:HA	2.35	0.62
55:S9:123:HIS:HE1	76:30:37:ARG:HB2	1.64	0.62
3:L3:73:VAL:CG2	23:73:90:GLY:HA3	2.30	0.62
4:L4:111:VAL:HG12	4:L4:112:LYS:H	1.64	0.62
50:S4:42:LEU:HD23	50:S4:101:LEU:HD11	1.81	0.62
66:20:67:THR:HG21	75:29:40:ARG:HB2	1.81	0.62
37:87:18:LEU:HA	37:87:25:ARG:H	1.65	0.62
79:2S:2493:U:H2'	79:2S:2494:A:H4'	1.81	0.62
78:1S:505:A:C3'	78:1S:506:A:H5''	2.29	0.62
61:15:22:LEU:HD22	61:15:22:LEU:H	1.64	0.62
5:L5:33:ARG:HG3	5:L5:33:ARG:HH11	1.63	0.62
48:S2:130:ILE:O	48:S2:134:LEU:HD23	1.99	0.62
53:S7:21:ALA:O	53:S7:25:VAL:HG23	2.00	0.62
52:S6:137:ARG:HE	52:S6:139:ASN:HB2	1.65	0.62
47:S1:126:THR:HG22	47:S1:136:ARG:HG3	1.80	0.62
79:2S:903:U:H2'	79:2S:904:A:C8	2.35	0.62
3:L3:262:TRP:HH2	79:2S:3009:G:H4'	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:65:64:VAL:HG11	15:65:102:ALA:HB1	1.80	0.62
81:5S:13:A:OP1	81:5S:111:U:H1'	1.99	0.62
78:1S:196:G:HO2'	78:1S:197:A:H8	1.45	0.62
4:L4:114:ASN:O	4:L4:118:LYS:HG3	2.00	0.62
8:L8:24:ASN:N	8:L8:25:PRO:HD2	2.14	0.62
1:L1:28:PHE:HB2	1:L1:210:MET:HB3	1.80	0.62
78:1S:740:A:H3'	78:1S:741:C:C5'	2.25	0.62
15:65:154:PRO:HB2	79:2S:58:G:H5'	1.82	0.62
45:RC:10:ARG:HA	45:RC:10:ARG:HE	1.65	0.62
24:74:20:LEU:HD23	24:74:21:PHE:N	2.15	0.62
78:1S:979:A:H2'	78:1S:980:G:H8	1.64	0.62
41:91:23:ARG:HH11	79:2S:2277:C:H5''	1.64	0.62
78:1S:1081:A:H2'	78:1S:1083:G:C5	2.35	0.62
26:76:116:LYS:O	26:76:120:GLN:HG2	2.00	0.62
5:L5:107:ARG:HB3	5:L5:251:PRO:HB3	1.82	0.62
52:S6:36:VAL:HG12	52:S6:37:ASP:H	1.64	0.62
79:2S:1693:C:H2'	79:2S:1773:C:H5	1.64	0.62
25:75:113:LEU:CB	79:2S:1523:U:H5'	2.29	0.62
72:26:86:VAL:HG23	78:1S:1795:U:H5''	1.81	0.62
68:22:79:PHE:H	68:22:125:ILE:HG22	1.65	0.62
2:L2:207:VAL:HG13	79:2S:2415:C:C5'	2.29	0.62
57:11:80:MET:CB	57:11:83:THR:HG23	2.29	0.62
18:68:23:ASN:HB3	18:68:26:LEU:HB3	1.82	0.62
78:1S:1511:U:H2'	78:1S:1512:G:C8	2.34	0.62
71:25:41:ILE:HG13	71:25:42:LEU:H	1.64	0.62
25:75:67:ILE:HD12	25:75:83:VAL:HG12	1.82	0.62
5:L5:59:ASP:HA	5:L5:80:SER:HB3	1.82	0.62
13:63:59:ARG:HG2	13:63:60:ALA:H	1.65	0.61
50:S4:122:LYS:HG2	50:S4:164:LEU:CD2	2.29	0.61
53:S7:148:LYS:HE2	78:1S:641:G:H4'	1.82	0.61
23:73:120:LYS:HD2	23:73:137:VAL:HG22	1.81	0.61
79:2S:1246:G:O2'	79:2S:1264:G:H5''	1.99	0.61
49:S3:31:GLU:HA	49:S3:107:PHE:HZ	1.65	0.61
4:L4:188:ARG:NH2	4:L4:197:ARG:HB3	2.15	0.61
79:2S:3041:U:H2'	79:2S:3042:U:C6	2.35	0.61
49:S3:116:ARG:O	49:S3:120:TYR:HB2	2.00	0.61
1:L1:18:LYS:HE3	1:L1:20:SER:HA	1.82	0.61
79:2S:1662:G:H2'	79:2S:1663:C:H6	1.65	0.61
66:20:27:THR:HA	66:20:87:HIS:O	1.99	0.61
78:1S:922:G:H2'	78:1S:923:A:C8	2.35	0.61
69:23:24:TRP:CE3	69:23:30:LYS:HD2	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:82:105:ARG:O	32:82:109:LEU:HG	2.00	0.61
6:L6:58:LEU:HG	6:L6:64:LEU:HD23	1.82	0.61
79:2S:962:A:O2'	79:2S:963:G:H5'	2.00	0.61
79:2S:1060:U:H2'	79:2S:1061:A:C8	2.34	0.61
64:18:72:ILE:HG22	64:18:81:ILE:HD11	1.81	0.61
49:S3:135:GLU:HB3	49:S3:187:LYS:HB3	1.81	0.61
80:8S:79:A:H2'	80:8S:80:A:H4'	1.82	0.61
37:87:18:LEU:HD23	37:87:25:ARG:N	2.16	0.61
47:S1:48:VAL:HG12	47:S1:49:ASN:N	2.11	0.61
78:1S:144:U:HO2'	78:1S:145:A:H8	1.46	0.61
38:88:62:ALA:O	38:88:66:ILE:HG13	1.99	0.61
78:1S:1166:A:H2'	78:1S:1167:G:C4'	2.31	0.61
78:1S:1171:A:H2'	78:1S:1172:G:H8	1.65	0.61
18:68:44:PHE:HB2	79:2S:729:C:OP1	2.00	0.61
53:S7:109:VAL:HG22	53:S7:110:GLN:H	1.64	0.61
7:L7:131:GLU:HB2	7:L7:132:PRO:HD3	1.80	0.61
50:S4:10:LYS:HA	50:S4:27:TYR:HA	1.81	0.61
82:PT:24:C:H2'	82:PT:25:U:C6	2.35	0.61
64:18:38:VAL:HG12	64:18:42:TYR:CD2	2.35	0.61
19:69:53:LYS:HG2	19:69:54:ALA:H	1.66	0.61
79:2S:2496:C:H2'	79:2S:2497:U:C6	2.36	0.61
17:67:15:ALA:HB3	17:67:150:VAL:HG23	1.83	0.61
79:2S:105:C:H2'	79:2S:106:A:C8	2.35	0.61
30:80:58:TYR:O	30:80:62:LEU:HG	2.00	0.61
79:2S:2154:U:H2'	79:2S:2155:G:C8	2.35	0.61
7:L7:160:ARG:HH12	7:L7:206:LYS:HD3	1.64	0.61
60:14:85:ALA:H	60:14:119:THR:CG2	2.09	0.61
47:S1:148:ASN:ND2	47:S1:148:ASN:H	1.96	0.61
47:S1:96:LEU:HD23	47:S1:96:LEU:N	2.15	0.61
19:69:97:ARG:O	19:69:101:VAL:HG23	2.00	0.61
79:2S:1787:A:C2'	79:2S:1788:C:H5''	2.30	0.61
53:S7:20:VAL:HG22	53:S7:85:PHE:HE1	1.65	0.61
46:S0:131:GLN:O	46:S0:135:GLU:HG2	2.00	0.61
53:S7:114:ARG:NH1	53:S7:114:ARG:HB2	2.15	0.61
69:23:7:ARG:NH1	78:1S:1100:G:H1'	2.14	0.61
79:2S:2079:G:H2'	79:2S:2080:C:H5'	1.81	0.61
10:60:177:ASP:HB2	10:60:180:GLU:HB2	1.82	0.61
47:S1:187:LYS:O	47:S1:191:GLU:HA	2.00	0.61
53:S7:56:LYS:HB2	53:S7:88:ARG:CD	2.31	0.61
46:S0:205:ARG:HD3	63:17:82:ASP:HB3	1.81	0.61
7:L7:161:VAL:HG11	7:L7:168:ILE:HG21	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S8:92:ARG:NH1	79:2S:3345:G:H4'	2.15	0.61
79:2S:3225:C:H2'	79:2S:3226:A:C8	2.35	0.61
78:1S:1402:G:H2'	78:1S:1403:C:C6	2.35	0.61
79:2S:1921:A:H2'	79:2S:1922:A:C8	2.35	0.61
78:1S:1701:A:C3'	78:1S:1702:A:H5''	2.24	0.61
69:23:50:LYS:HG3	78:1S:435:C:H5'	1.82	0.61
2:L2:187:HIS:HA	2:L2:190:ARG:HD3	1.83	0.61
78:1S:689:G:C3'	78:1S:690:G:H5''	2.31	0.61
10:60:152:LEU:HD13	10:60:165:ILE:HG21	1.81	0.61
78:1S:1711:C:H2'	78:1S:1712:A:C4'	2.31	0.61
81:5S:105:C:H2'	81:5S:106:U:C6	2.36	0.61
79:2S:2076:G:C2'	79:2S:2077:U:H5''	2.29	0.61
79:2S:571:U:H2'	79:2S:572:A:C8	2.35	0.61
34:84:54:ILE:HD12	34:84:70:LYS:O	2.01	0.61
3:L3:83:PRO:HB3	3:L3:202:THR:OG1	2.00	0.61
34:84:22:VAL:HG12	34:84:30:LEU:HD22	1.81	0.61
41:91:1:MET:SD	78:1S:1642:G:H5'	2.40	0.61
79:2S:85:A:N1	79:2S:99:A:H5''	2.14	0.61
29:79:14:ARG:O	29:79:18:ARG:HG2	2.00	0.61
72:26:23:CYS:O	72:26:27:SER:HA	2.00	0.61
79:2S:634:C:H2'	79:2S:635:G:C8	2.35	0.61
7:L7:148:VAL:HG12	7:L7:181:ILE:HD11	1.83	0.61
13:63:85:LEU:H	13:63:85:LEU:HD23	1.65	0.61
78:1S:209:U:H2'	78:1S:210:A:C8	2.35	0.61
45:RC:191:ASP:O	49:S3:223:LYS:HD3	2.00	0.61
31:81:88:PRO:HG2	31:81:89:LEU:HD12	1.81	0.61
54:S8:47:ARG:HE	54:S8:51:GLY:HA2	1.66	0.61
52:S6:91:GLU:HG2	52:S6:92:ARG:N	2.14	0.61
70:24:7:ILE:HD11	70:24:40:LEU:HD22	1.82	0.61
55:S9:179:ARG:HA	55:S9:182:GLU:HG2	1.82	0.61
15:65:93:LYS:O	15:65:94:TYR:HB3	2.01	0.61
78:1S:628:G:H21	78:1S:971:A:H62	1.47	0.61
7:L7:51:TYR:HE2	7:L7:183:ASP:HA	1.65	0.61
79:2S:1662:G:H2'	79:2S:1663:C:C6	2.35	0.61
54:S8:73:SER:HB2	78:1S:257:A:H1'	1.82	0.61
46:S0:120:LEU:HD11	46:S0:144:ILE:HD11	1.83	0.61
79:2S:662:U:H2'	79:2S:663:C:C6	2.36	0.61
19:69:60:LYS:O	19:69:64:ARG:HG3	2.00	0.61
79:2S:2856:G:H2'	79:2S:2857:C:C6	2.35	0.61
31:81:11:GLU:HG3	31:81:109:VAL:CG2	2.30	0.61
79:2S:2068:U:H3'	79:2S:2069:G:C5'	2.24	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:13:10:GLY:HA2	78:1S:1073:G:H4'	1.82	0.61
79:2S:214:G:H2'	79:2S:215:G:C8	2.36	0.61
67:21:37:ALA:HA	67:21:49:GLU:O	2.01	0.61
78:1S:814:A:H61	78:1S:857:U:H3	1.49	0.61
8:L8:97:TYR:OH	8:L8:203:VAL:HG23	2.00	0.61
73:27:24:LEU:HG	73:27:25:VAL:HG23	1.83	0.61
37:87:31:LYS:NZ	79:2S:815:G:H5''	2.16	0.61
79:2S:218:G:H1'	79:2S:372:A:H1'	1.83	0.61
52:S6:57:ASP:HB3	52:S6:106:LEU:HD23	1.83	0.61
78:1S:413:U:H2'	78:1S:414:C:C6	2.36	0.61
13:63:57:VAL:HG12	13:63:69:VAL:HG22	1.83	0.61
34:84:58:ARG:CG	34:84:59:PRO:HD2	2.26	0.61
78:1S:1087:A:H5'	78:1S:1298:U:O4	2.00	0.61
18:68:30:VAL:O	18:68:34:THR:HG23	2.01	0.61
79:2S:2388:U:H2'	79:2S:2389:C:C6	2.35	0.61
50:S4:121:TYR:HA	50:S4:164:LEU:HD23	1.81	0.61
3:L3:226:PHE:CE1	3:L3:268:GLY:HA2	2.36	0.61
50:S4:132:GLY:O	78:1S:252:U:H4'	2.00	0.61
79:2S:643:U:H2'	79:2S:644:G:O4'	2.01	0.61
76:30:30:PRO:HB2	76:30:34:ALA:HB3	1.83	0.61
56:10:5:LYS:HD3	78:1S:1256:A:OP1	2.01	0.61
78:1S:1298:U:H2'	78:1S:1299:G:O4'	2.00	0.61
17:67:135:ARG:CB	17:67:135:ARG:HH11	2.14	0.61
79:2S:1786:G:H2'	79:2S:1787:A:C8	2.36	0.61
3:L3:66:LYS:HB3	23:73:88:ARG:HH11	1.65	0.61
47:S1:121:ILE:HD12	47:S1:207:LEU:HD21	1.82	0.61
53:S7:109:VAL:HG13	53:S7:110:GLN:N	2.16	0.61
67:21:12:TYR:CE2	67:21:14:PRO:HG3	2.36	0.61
78:1S:393:C:H2'	78:1S:394:C:C6	2.36	0.61
2:L2:230:VAL:HG11	79:2S:2424:A:H2	1.65	0.61
10:60:152:LEU:O	10:60:156:ARG:HG3	2.01	0.61
6:L6:65:ILE:H	6:L6:65:ILE:HD13	1.66	0.61
78:1S:1525:A:H2'	78:1S:1526:A:O4'	2.01	0.61
16:66:124:LEU:HG	16:66:126:VAL:HG12	1.83	0.61
79:2S:794:U:H2'	79:2S:795:G:H8	1.64	0.61
64:18:76:PRO:HA	64:18:81:ILE:HD12	1.82	0.61
52:S6:77:LEU:HD13	52:S6:84:TYR:HB2	1.83	0.61
78:1S:1522:U:H3'	78:1S:1523:G:C5'	2.30	0.61
11:61:156:LYS:O	11:61:160:VAL:HG23	2.00	0.61
57:11:90:TYR:CE1	57:11:103:ARG:HB3	2.36	0.61
48:S2:104:VAL:CG2	48:S2:112:GLY:HA3	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:81:60:TRP:O	79:2S:1476:G:H4'	2.01	0.61
18:68:79:LYS:HD3	18:68:138:LEU:HD23	1.83	0.61
36:86:59:ASP:O	36:86:63:ASN:HB3	2.01	0.61
39:89:48:LYS:N	39:89:48:LYS:HD2	2.15	0.61
79:2S:1203:A:H2'	79:2S:1204:A:C8	2.36	0.61
55:S9:108:ARG:O	55:S9:112:GLN:HG2	2.01	0.60
13:63:56:PRO:HB3	13:63:75:PHE:CE1	2.36	0.60
20:70:81:TYR:CE1	20:70:88:HIS:HB2	2.36	0.60
52:S6:164:LYS:HD2	78:1S:72:A:N7	2.15	0.60
78:1S:1304:G:H5'	78:1S:1322:A:OP2	2.00	0.60
18:68:42:ALA:HB3	18:68:45:ASN:ND2	2.16	0.60
21:71:105:PHE:O	21:71:109:VAL:HG23	2.00	0.60
68:22:42:GLN:HE21	68:22:49:GLU:HA	1.65	0.60
79:2S:250:U:C5'	79:2S:251:G:H5''	2.31	0.60
79:2S:822:G:H2'	79:2S:823:C:C6	2.35	0.60
48:S2:36:VAL:HA	48:S2:46:LYS:HE3	1.82	0.60
72:26:79:ILE:HG12	72:26:84:VAL:HG21	1.82	0.60
46:S0:45:VAL:HG12	46:S0:46:HIS:N	2.15	0.60
55:S9:126:ARG:O	55:S9:130:THR:HG22	2.01	0.60
17:67:45:GLN:HA	17:67:48:LEU:HD12	1.82	0.60
4:L4:111:VAL:HG12	4:L4:112:LYS:N	2.16	0.60
30:80:27:TYR:HB2	79:2S:1729:A:OP2	2.01	0.60
3:L3:311:PHE:CB	3:L3:314:TYR:HB3	2.31	0.60
73:27:10:PRO:HB2	73:27:15:GLU:OE1	2.01	0.60
81:5S:97:A:H2'	81:5S:98:C:C6	2.34	0.60
79:2S:1936:A:H2'	79:2S:1937:U:C6	2.36	0.60
56:10:54:TYR:HA	56:10:71:GLU:HG3	1.83	0.60
9:L9:20:ILE:HB	14:64:7:VAL:HG13	1.83	0.60
56:10:7:ASP:O	56:10:11:ILE:HG12	2.01	0.60
47:S1:110:LEU:O	47:S1:114:VAL:HG23	2.01	0.60
22:72:41:ILE:O	22:72:47:VAL:HA	2.01	0.60
79:2S:1055:A:H5''	81:5S:100:C:O2'	2.00	0.60
49:S3:40:ARG:HA	66:20:110:PRO:HB3	1.83	0.60
31:81:11:GLU:HG3	31:81:109:VAL:HG21	1.84	0.60
79:2S:1729:A:H3'	79:2S:1730:G:H5'	1.82	0.60
79:2S:1877:U:H5''	79:2S:1878:G:O4'	2.01	0.60
79:2S:878:G:H22	79:2S:2979:U:H5''	1.66	0.60
33:83:54:ARG:HG3	33:83:64:ILE:CG1	2.31	0.60
32:82:26:HIS:HB2	79:2S:655:C:H5''	1.83	0.60
70:24:70:VAL:HG12	70:24:71:GLY:H	1.67	0.60
17:67:23:ARG:HH21	17:67:125:GLN:HG3	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:736:A:H2'	79:2S:737:G:O4'	2.01	0.60
76:30:33:ARG:HB3	76:30:33:ARG:NH1	2.16	0.60
3:L3:95:THR:HG22	79:2S:3243:A:C5'	2.31	0.60
8:L8:42:PRO:HD2	8:L8:44:ARG:HH12	1.66	0.60
79:2S:1722:U:H2'	79:2S:1723:A:O4'	2.00	0.60
46:S0:188:LEU:CD1	46:S0:193:GLN:HG2	2.30	0.60
78:1S:1169:G:N2	78:1S:1576:A:H62	1.92	0.60
79:2S:1581:C:C2'	79:2S:1582:C:H5'	2.30	0.60
23:73:70:ARG:HH11	23:73:70:ARG:HB2	1.66	0.60
71:25:50:ILE:O	71:25:54:VAL:HG23	2.01	0.60
79:2S:2585:G:H22	80:8S:151:C:H3'	1.65	0.60
8:L8:136:LEU:O	8:L8:140:VAL:HG23	2.02	0.60
8:L8:200:LEU:HD13	8:L8:211:LEU:HD13	1.82	0.60
9:L9:106:LYS:O	9:L9:107:ASP:HB2	2.00	0.60
41:91:15:ARG:O	41:91:19:LYS:HD3	2.01	0.60
3:L3:277:SER:HB3	3:L3:280:HIS:NE2	2.16	0.60
79:2S:1829:G:H5''	79:2S:1830:G:H5'	1.83	0.60
78:1S:140:A:H4'	78:1S:141:U:H5'	1.82	0.60
77:31:147:VAL:O	77:31:148:TYR:HB2	2.01	0.60
28:78:28:HIS:CD2	28:78:32:ARG:HG2	2.36	0.60
59:13:3:ARG:H	78:1S:866:G:H5''	1.66	0.60
4:L4:334:PHE:HD2	79:2S:578:A:H2'	1.64	0.60
5:L5:22:ARG:HH12	81:5S:6:C:H5	1.48	0.60
2:L2:177:LYS:HD2	43:93:26:VAL:HG13	1.82	0.60
54:S8:167:ALA:HA	54:S8:183:ILE:HA	1.83	0.60
5:L5:266:ALA:HA	81:5S:1:G:H1'	1.84	0.60
78:1S:1680:G:H1'	78:1S:1721:A:N6	2.16	0.60
78:1S:854:U:H2'	78:1S:855:A:O4'	2.01	0.60
3:L3:215:ILE:HD12	3:L3:338:LEU:HD12	1.84	0.60
78:1S:108:A:H2'	78:1S:109:G:C8	2.36	0.60
51:S5:162:VAL:HG23	51:S5:166:ARG:HD3	1.82	0.60
78:1S:1695:G:H21	78:1S:1706:C:H41	1.49	0.60
14:64:127:LYS:O	14:64:131:VAL:HG23	2.02	0.60
63:17:122:ILE:HG12	63:17:123:ASN:N	2.13	0.60
8:L8:48:ARG:HG3	79:2S:2585:G:H8	1.66	0.60
78:1S:195:G:H2'	78:1S:196:G:H5''	1.82	0.60
46:S0:188:LEU:HD11	46:S0:193:GLN:HG2	1.82	0.60
48:S2:87:GLN:HG2	48:S2:96:THR:HB	1.84	0.60
3:L3:91:GLY:O	3:L3:101:SER:HA	2.02	0.60
69:23:32:ARG:NH1	78:1S:375:U:H5''	2.15	0.60
81:5S:79:A:H2'	81:5S:80:G:O4'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:487:G:H3'	78:1S:488:G:H5''	1.83	0.60
64:18:132:ARG:HB2	64:18:138:THR:HB	1.83	0.60
20:70:58:ILE:H	20:70:58:ILE:HD12	1.67	0.60
56:10:77:ARG:NH1	56:10:84:GLU:HG3	2.16	0.60
37:87:25:ARG:O	37:87:25:ARG:HD3	2.02	0.60
9:L9:23:ARG:CB	9:L9:39:LYS:HG2	2.31	0.60
60:14:23:PHE:HE2	60:14:91:THR:HG21	1.65	0.60
1:L1:62:ASN:HB3	1:L1:151:VAL:CG1	2.31	0.60
9:L9:156:GLN:HE22	79:2S:3109:G:N2	2.00	0.60
35:85:23:ASP:O	35:85:27:GLU:HG2	2.01	0.60
22:72:96:VAL:HG12	22:72:97:SER:H	1.67	0.60
62:16:143:ARG:HD2	78:1S:1191:U:H4'	1.83	0.60
67:21:15:ARG:HB2	67:21:24:ILE:HB	1.83	0.60
29:79:49:GLY:HA2	29:79:52:LYS:HE2	1.81	0.60
66:20:38:SER:O	66:20:42:VAL:HG23	2.02	0.60
65:19:111:ILE:HG23	65:19:113:ILE:HG13	1.83	0.60
33:83:20:LYS:NZ	33:83:20:LYS:HB3	2.16	0.60
62:16:118:ILE:HG13	62:16:119:ALA:H	1.67	0.60
78:1S:885:G:H2'	78:1S:886:U:C6	2.37	0.60
79:2S:1458:U:H2'	79:2S:1459:C:C6	2.36	0.60
79:2S:2371:G:H2'	79:2S:2373:A:OP1	2.02	0.60
79:2S:2995:A:C3'	79:2S:2996:U:H5''	2.30	0.60
16:66:28:LEU:HD22	16:66:94:ARG:NH2	2.17	0.60
10:60:61:SER:HB2	10:60:63:GLU:OE2	2.02	0.60
79:2S:641:C:H42	79:2S:645:A:H8	1.46	0.60
1:L1:44:GLN:HG3	1:L1:160:LYS:O	2.02	0.60
79:2S:835:G:H1'	79:2S:858:A:N6	2.17	0.60
78:1S:617:U:H2'	78:1S:618:U:C6	2.36	0.60
9:L9:74:LEU:HA	9:L9:77:ASN:ND2	2.16	0.60
46:S0:73:VAL:O	46:S0:95:ALA:HB1	2.02	0.60
79:2S:2210:G:H2'	79:2S:2211:U:C6	2.36	0.60
16:66:174:PHE:O	16:66:178:VAL:HG23	2.02	0.60
45:RC:180:ALA:HB3	45:RC:190:ALA:HB3	1.84	0.60
78:1S:1656:U:H3'	78:1S:1657:U:H5''	1.84	0.60
28:78:46:ASP:O	28:78:47:LYS:HB3	2.00	0.60
5:L5:53:VAL:HA	5:L5:61:ILE:O	2.02	0.60
59:13:21:ASN:O	59:13:65:VAL:HG13	2.01	0.60
26:76:51:ARG:HB3	26:76:115:ARG:NH2	2.17	0.60
32:82:100:ILE:HB	32:82:105:ARG:HH11	1.67	0.60
30:80:10:ILE:O	30:80:14:LEU:HG	2.01	0.60
25:75:63:ILE:HD13	25:75:64:GLU:N	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S7:86:GLN:O	53:S7:87:ASP:HB2	2.01	0.60
3:L3:21:ARG:HG3	3:L3:269:GLN:HG2	1.83	0.60
46:S0:42:PRO:O	46:S0:43:ASP:HB2	2.02	0.60
15:65:39:ALA:HB3	15:65:61:ILE:CG2	2.31	0.60
79:2S:653:A:H2'	79:2S:654:C:C6	2.37	0.60
79:2S:2097:U:H2'	79:2S:2098:C:C6	2.37	0.60
79:2S:3153:U:H3	79:2S:3293:U:H3	1.49	0.60
29:79:21:ILE:HG23	29:79:21:ILE:O	2.02	0.60
4:L4:51:ALA:HB2	4:L4:105:THR:HG23	1.84	0.60
79:2S:293:C:H2'	79:2S:294:U:O4'	2.02	0.60
54:S8:22:ARG:HB2	54:S8:25:ARG:HH21	1.66	0.60
64:18:16:ARG:HH12	64:18:19:ASN:HA	1.65	0.60
4:L4:344:ALA:HB3	79:2S:516:A:H5''	1.84	0.60
15:65:10:LEU:HD13	15:65:19:LEU:HD11	1.83	0.60
33:83:23:ASN:HD21	79:2S:633:C:H1'	1.67	0.60
38:88:40:GLN:HG3	38:88:57:ASN:HA	1.84	0.60
3:L3:262:TRP:CH2	79:2S:3009:G:H4'	2.36	0.60
67:21:65:SER:O	67:21:69:LEU:HB2	2.01	0.60
54:S8:72:ILE:HG21	54:S8:112:TRP:CZ3	2.36	0.60
44:P0:56:ASN:HB3	44:P0:80:VAL:CG2	2.32	0.60
81:5S:9:C:H2'	81:5S:10:C:H5'	1.83	0.60
16:66:143:THR:HG23	16:66:147:TRP:O	2.02	0.60
57:11:69:LYS:HD2	57:11:69:LYS:H	1.66	0.60
49:S3:105:MET:HG2	49:S3:122:VAL:HG21	1.82	0.60
50:S4:68:ARG:HB3	50:S4:76:VAL:HG21	1.83	0.60
14:64:58:ILE:HG12	14:64:59:ASN:H	1.66	0.60
69:23:93:LEU:HD12	69:23:96:VAL:HG21	1.84	0.59
79:2S:1655:G:H1'	79:2S:1800:A:H61	1.67	0.59
78:1S:294:C:H2'	78:1S:295:A:O4'	2.02	0.59
80:8S:93:U:H2'	80:8S:94:C:O4'	2.01	0.59
15:65:120:TRP:CE3	79:2S:269:G:H5'	2.37	0.59
49:S3:6:SER:HA	78:1S:1514:U:O2'	2.01	0.59
55:S9:11:THR:HG23	78:1S:472:U:H5''	1.84	0.59
15:65:179:LYS:HB3	79:2S:287:G:H5'	1.82	0.59
46:S0:12:GLU:O	46:S0:16:LEU:HG	2.02	0.59
3:L3:45:SER:HB2	3:L3:181:ILE:HG12	1.84	0.59
28:78:65:GLN:HA	28:78:68:PHE:CD2	2.28	0.59
79:2S:822:G:H2'	79:2S:823:C:H6	1.67	0.59
45:RC:155:ARG:HB2	45:RC:170:ILE:HG13	1.84	0.59
78:1S:754:A:N6	78:1S:793:A:H2'	2.17	0.59
28:78:56:VAL:HG23	28:78:57:GLY:H	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:30:31:LYS:HG2	78:1S:477:A:OP1	2.02	0.59
66:20:118:VAL:HG22	66:20:119:ALA:N	2.17	0.59
63:17:97:ASN:HD22	63:17:97:ASN:H	1.49	0.59
72:26:37:LYS:HA	72:26:71:LEU:O	2.02	0.59
15:65:50:ARG:HB3	15:65:50:ARG:NH1	2.17	0.59
79:2S:698:U:H2'	79:2S:699:A:O4'	2.02	0.59
51:S5:140:THR:HG21	51:S5:175:LEU:HD21	1.84	0.59
42:92:8:ARG:HD2	79:2S:2713:U:H2'	1.84	0.59
9:L9:67:ALA:O	9:L9:71:VAL:HG23	2.02	0.59
52:S6:190:GLN:HE22	78:1S:265:A:H8	1.49	0.59
44:P0:15:LEU:O	44:P0:19:LEU:HG	2.02	0.59
47:S1:23:PRO:O	47:S1:27:LYS:HG2	2.02	0.59
50:S4:214:LEU:HD23	50:S4:216:ASN:HD21	1.68	0.59
70:24:11:LYS:HB2	70:24:24:VAL:HG23	1.84	0.59
50:S4:95:THR:HG22	70:24:16:PRO:HB2	1.83	0.59
53:S7:13:PRO:O	53:S7:14:THR:HG22	2.03	0.59
53:S7:152:VAL:HG21	53:S7:181:ILE:HD11	1.84	0.59
8:L8:126:SER:HB3	8:L8:127:PRO:HD2	1.85	0.59
64:18:36:LYS:HB2	64:18:102:ALA:HA	1.84	0.59
5:L5:26:GLY:HA2	79:2S:2703:A:N1	2.17	0.59
79:2S:2349:U:H2'	79:2S:2350:C:C6	2.37	0.59
79:2S:1009:A:H2'	79:2S:1010:G:C8	2.37	0.59
7:L7:236:ILE:HD12	7:L7:239:LEU:HD12	1.84	0.59
3:L3:308:MET:HB2	3:L3:363:SER:HB2	1.84	0.59
50:S4:2:ALA:O	50:S4:3:ARG:HB2	2.02	0.59
20:70:139:TYR:H	20:70:139:TYR:HD1	1.49	0.59
37:87:66:TYR:O	37:87:70:VAL:HG23	2.02	0.59
79:2S:757:C:H2'	79:2S:758:C:C4'	2.32	0.59
21:71:116:ARG:O	21:71:120:LYS:HB2	2.02	0.59
79:2S:3091:A:H2'	79:2S:3094:A:N7	2.18	0.59
11:61:94:ARG:N	11:61:94:ARG:HD3	2.16	0.59
79:2S:2434:U:H5'	79:2S:2593:A:H2	1.67	0.59
62:16:40:GLU:CA	62:16:42:GLU:H	2.14	0.59
72:26:84:VAL:HG22	72:26:85:ARG:N	2.17	0.59
38:88:63:LYS:HE3	38:88:63:LYS:HA	1.83	0.59
6:L6:17:ALA:O	79:2S:592:A:H5'	2.03	0.59
42:92:37:ALA:HB1	79:2S:2766:U:H5''	1.84	0.59
41:91:16:LYS:O	41:91:20:VAL:HG23	2.02	0.59
25:75:100:LYS:NZ	25:75:107:VAL:H	2.01	0.59
31:81:78:LYS:HD2	31:81:90:PHE:CE1	2.37	0.59
61:15:72:LYS:H	61:15:72:LYS:HD2	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1265:U:H2'	79:2S:1266:G:C8	2.37	0.59
79:2S:19:U:H2'	79:2S:20:A:C8	2.36	0.59
79:2S:1818:U:H3'	79:2S:1819:U:H5''	1.83	0.59
63:17:72:LYS:NZ	63:17:72:LYS:HB3	2.18	0.59
56:10:81:ASN:HB3	58:12:37:VAL:HG12	1.84	0.59
36:86:58:ILE:HG23	36:86:90:MET:SD	2.42	0.59
62:16:101:SER:O	62:16:105:LEU:HD13	2.02	0.59
79:2S:2896:A:H5'	79:2S:2896:A:H8	1.66	0.59
80:8S:36:G:H2'	80:8S:37:A:H2	1.67	0.59
2:L2:230:VAL:HG21	79:2S:2424:A:N1	2.17	0.59
79:2S:522:A:H62	79:2S:570:A:H2	1.50	0.59
78:1S:1194:A:H2'	78:1S:1195:C:H5'	1.85	0.59
21:71:36:VAL:HG13	21:71:65:TYR:HA	1.83	0.59
14:64:38:ILE:HG13	14:64:44:VAL:HG12	1.84	0.59
16:66:22:VAL:HG21	16:66:120:VAL:HG11	1.84	0.59
79:2S:1869:C:H2'	79:2S:1870:C:C6	2.36	0.59
59:13:102:LEU:HD11	59:13:115:LEU:HG	1.84	0.59
78:1S:872:G:H22	78:1S:955:A:H2	1.50	0.59
57:11:8:GLN:HE22	57:11:14:GLN:H	1.51	0.59
53:S7:104:ARG:HG3	78:1S:803:A:C4	2.38	0.59
72:26:24:VAL:HG12	72:26:72:HIS:O	2.02	0.59
79:2S:968:G:H2'	79:2S:969:C:C6	2.37	0.59
79:2S:709:A:C8	79:2S:2788:C:H5'	2.37	0.59
79:2S:3275:U:H3'	79:2S:3276:G:C5'	2.32	0.59
79:2S:1951:C:H5	79:2S:2095:G:N1	1.95	0.59
51:S5:165:LEU:HD23	74:28:47:PRO:HB2	1.84	0.59
48:S2:66:PHE:O	48:S2:69:ILE:HG13	2.02	0.59
55:S9:76:LEU:HD13	55:S9:79:ARG:HH21	1.67	0.59
48:S2:212:LYS:O	48:S2:216:VAL:HG23	2.02	0.59
58:12:126:TRP:CZ2	58:12:129:GLU:HG3	2.37	0.59
13:63:50:PRO:HA	13:63:139:LEU:HA	1.84	0.59
2:L2:25:GLY:HA2	79:2S:2175:U:O2	2.02	0.59
26:76:99:LEU:HB3	26:76:104:LEU:HD11	1.85	0.59
10:60:196:PHE:CE2	79:2S:1042:U:H4'	2.37	0.59
25:75:134:ASP:HA	25:75:137:ASN:OD1	2.02	0.59
66:20:61:LYS:NZ	66:20:61:LYS:HB3	2.18	0.59
11:61:125:MET:HG2	11:61:126:ASP:N	2.18	0.59
35:85:77:PRO:HB2	35:85:80:LEU:HG	1.84	0.59
22:72:84:LEU:HB3	22:72:90:ARG:CG	2.28	0.59
23:73:38:ALA:O	23:73:58:VAL:HB	2.02	0.59
59:13:99:ARG:CZ	59:13:99:ARG:HA	2.31	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:75:51:VAL:HG11	35:85:62:GLN:NE2	2.18	0.59
51:S5:187:ILE:HD12	51:S5:187:ILE:H	1.68	0.59
43:93:79:VAL:O	43:93:83:ILE:HG12	2.03	0.59
79:2S:3029:A:H2'	79:2S:3030:G:O4'	2.02	0.59
63:17:110:VAL:HG11	63:17:117:LEU:O	2.01	0.59
76:30:20:LYS:HA	76:30:20:LYS:HE2	1.85	0.59
82:PT:57:C:H2'	82:PT:57:C:O2	2.03	0.59
78:1S:1118:G:H2'	78:1S:1119:G:O4'	2.02	0.59
36:86:26:ILE:HG12	79:2S:157:A:C8	2.38	0.59
79:2S:2456:A:O2'	79:2S:2457:G:H5'	2.03	0.59
79:2S:2995:A:C2'	79:2S:2996:U:H5''	2.33	0.59
33:83:18:ARG:HB3	33:83:23:ASN:HA	1.84	0.59
6:L6:96:VAL:HG11	6:L6:141:VAL:HG13	1.85	0.59
7:L7:48:ASN:HA	7:L7:51:TYR:HB2	1.85	0.59
3:L3:73:VAL:HG21	23:73:90:GLY:HA3	1.85	0.59
2:L2:240:ALA:CB	79:2S:2154:U:H4'	2.33	0.59
37:87:28:HIS:CD2	79:2S:815:G:H5'	2.38	0.59
79:2S:2907:G:O2'	79:2S:2908:G:H5'	2.02	0.59
49:S3:42:THR:HB	49:S3:43:PRO:HD2	1.84	0.59
78:1S:1474:G:H2'	78:1S:1475:A:C8	2.38	0.59
79:2S:1288:U:H2'	79:2S:1289:G:C8	2.37	0.59
50:S4:155:LYS:HE2	50:S4:155:LYS:HA	1.85	0.59
56:10:1:MET:HG3	56:10:44:LYS:HB3	1.84	0.59
78:1S:766:U:H3	78:1S:770:A:H62	1.51	0.59
52:S6:63:MET:HB3	52:S6:99:GLY:O	2.03	0.59
68:22:53:ILE:O	68:22:53:ILE:HG13	2.00	0.59
78:1S:391:A:O2'	78:1S:1730:A:H4'	2.03	0.59
51:S5:122:ASN:HD22	51:S5:129:PRO:HD3	1.66	0.59
34:84:19:LYS:NZ	34:84:38:LEU:HD12	2.17	0.59
22:72:33:TYR:OH	22:72:80:THR:HG22	2.03	0.59
50:S4:162:ILE:HG22	50:S4:163:ASP:H	1.66	0.59
78:1S:1641:C:H2'	78:1S:1642:G:C8	2.38	0.59
43:93:29:LEU:HD13	43:93:69:TYR:CD2	2.38	0.59
7:L7:74:SER:HB3	21:71:141:VAL:O	2.03	0.59
43:93:57:CYS:HB3	43:93:62:LYS:H	1.68	0.59
3:L3:295:ALA:HA	3:L3:299:ASP:HB2	1.84	0.59
8:L8:27:THR:CG2	79:2S:2563:G:H5''	2.33	0.59
78:1S:826:U:H2'	78:1S:827:C:C6	2.38	0.59
1:L1:22:GLU:HG2	1:L1:25:LYS:HE2	1.85	0.59
78:1S:320:U:O2'	78:1S:321:C:H2'	2.03	0.59
54:S8:45:SER:HB3	54:S8:55:TYR:CD1	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:66:119:VAL:CG2	20:70:164:SER:HB3	2.33	0.58
72:26:36:ILE:HG12	72:26:38:ARG:HH11	1.67	0.58
7:L7:82:LYS:HA	7:L7:119:VAL:HB	1.83	0.58
22:72:17:VAL:HG13	22:72:103:TYR:HB2	1.85	0.58
79:2S:3016:A:H2'	79:2S:3017:A:C8	2.38	0.58
78:1S:900:A:H3'	78:1S:901:G:H21	1.68	0.58
78:1S:1449:U:H2'	78:1S:1450:U:C6	2.38	0.58
38:88:23:ALA:HB2	38:88:45:VAL:HG12	1.85	0.58
7:L7:100:ARG:O	7:L7:104:GLN:HG3	2.02	0.58
60:14:31:THR:HG22	60:14:38:THR:CB	2.33	0.58
72:26:88:SER:O	72:26:92:ARG:HG3	2.03	0.58
38:88:26:LYS:HD2	38:88:78:LEU:HD13	1.84	0.58
49:S3:212:LYS:HG2	49:S3:213:GLU:N	2.18	0.58
79:2S:95:A:O5'	79:2S:95:A:H8	1.85	0.58
79:2S:1693:C:H2'	79:2S:1773:C:C5	2.38	0.58
29:79:20:GLY:O	29:79:21:ILE:HG22	2.03	0.58
79:2S:1818:U:H2'	79:2S:1819:U:C4'	2.33	0.58
79:2S:3374:U:H4'	79:2S:3376:A:H61	1.67	0.58
57:11:37:ASN:OD1	78:1S:247:A:H4'	2.03	0.58
4:L4:329:PRO:HG3	7:L7:41:ARG:O	2.03	0.58
47:S1:153:HIS:HE2	78:1S:1044:U:H5''	1.68	0.58
10:60:189:GLU:HG2	10:60:200:LEU:HD23	1.85	0.58
18:68:144:ARG:O	18:68:150:VAL:HG11	2.03	0.58
2:L2:57:PRO:HB3	43:93:54:ILE:HD11	1.85	0.58
31:81:20:LEU:HD23	31:81:23:VAL:HG21	1.84	0.58
34:84:65:VAL:HG12	34:84:66:SER:N	2.19	0.58
7:L7:181:ILE:HG23	7:L7:182:ASP:OD1	2.03	0.58
79:2S:2958:A:H2'	79:2S:2959:C:C6	2.38	0.58
78:1S:521:A:H2'	78:1S:522:U:O4'	2.02	0.58
45:RC:206:PRO:HD3	45:RC:245:PHE:HB3	1.85	0.58
54:S8:158:SER:HB3	79:2S:2067:U:C6	2.38	0.58
45:RC:248:ASN:HD21	45:RC:298:GLY:HA3	1.66	0.58
79:2S:757:C:H3'	79:2S:758:C:H5''	1.86	0.58
79:2S:3017:A:H2'	79:2S:3018:C:C6	2.38	0.58
79:2S:1556:C:H3'	79:2S:2169:G:N2	2.18	0.58
31:81:72:ARG:HG3	31:81:96:VAL:HG21	1.85	0.58
68:22:115:GLU:HG3	68:22:118:ARG:HH12	1.68	0.58
79:2S:2367:A:H2'	79:2S:2368:A:C8	2.39	0.58
78:1S:25:C:H4'	78:1S:26:A:H5'	1.85	0.58
68:22:31:SER:HB3	78:1S:636:A:H5''	1.84	0.58
45:RC:238:ASP:HB3	45:RC:257:ALA:H	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1221:A:H3'	79:2S:1222:G:H5''	1.85	0.58
78:1S:224:C:H2'	78:1S:225:A:C8	2.38	0.58
51:S5:189:THR:HB	71:25:97:LYS:NZ	2.19	0.58
18:68:147:ARG:HH21	18:68:149:ALA:HB3	1.69	0.58
79:2S:1472:U:H2'	79:2S:1473:G:H8	1.65	0.58
9:L9:111:PHE:HB2	9:L9:125:ASN:HD22	1.68	0.58
9:L9:111:PHE:CB	9:L9:125:ASN:HD22	2.16	0.58
1:L1:13:VAL:HG22	1:L1:14:LYS:N	2.17	0.58
78:1S:156:A:C2	78:1S:415:C:H1'	2.39	0.58
79:2S:1534:A:H1'	79:2S:1797:A:H2	1.68	0.58
10:60:19:LYS:HE3	10:60:24:ARG:O	2.04	0.58
78:1S:1334:U:H2'	78:1S:1335:U:O4'	2.03	0.58
55:S9:49:LEU:HD11	55:S9:53:ARG:HD3	1.84	0.58
79:2S:2626:A:H1'	79:2S:2644:C:H5'	1.85	0.58
33:83:75:HIS:HB3	33:83:80:VAL:CG1	2.34	0.58
79:2S:259:C:H2'	79:2S:260:C:C6	2.39	0.58
47:S1:221:PRO:HG2	47:S1:222:LYS:H	1.67	0.58
79:2S:2692:A:H2'	79:2S:2693:C:O4'	2.03	0.58
79:2S:2056:U:H2'	79:2S:2057:G:H5'	1.85	0.58
73:27:70:LYS:HE3	78:1S:1049:U:H5''	1.86	0.58
57:11:75:VAL:HG21	57:11:117:VAL:HG11	1.85	0.58
79:2S:1341:U:H2'	79:2S:1342:C:C6	2.37	0.58
4:L4:152:VAL:HG12	4:L4:153:SER:N	2.15	0.58
4:L4:52:VAL:HG22	4:L4:53:SER:N	2.15	0.58
55:S9:65:LYS:HA	55:S9:70:LEU:HD11	1.85	0.58
79:2S:1788:C:H2'	79:2S:1789:G:C8	2.37	0.58
48:S2:184:VAL:HG22	48:S2:211:LEU:HD23	1.85	0.58
78:1S:1681:A:H2'	78:1S:1682:U:O4'	2.02	0.58
50:S4:162:ILE:HG22	50:S4:164:LEU:H	1.69	0.58
81:5S:38:U:H2'	81:5S:40:C:OP2	2.04	0.58
79:2S:1231:A:H4'	79:2S:1261:G:C8	2.39	0.58
50:S4:23:LEU:HD13	55:S9:4:ALA:HB3	1.85	0.58
78:1S:1020:A:H3'	78:1S:1021:C:H5''	1.85	0.58
54:S8:83:TYR:H	54:S8:101:ILE:HB	1.67	0.58
78:1S:551:G:H5'	78:1S:581:U:H2'	1.84	0.58
79:2S:1887:A:C2	79:2S:2391:G:H4'	2.39	0.58
79:2S:54:C:H2'	79:2S:55:G:C8	2.38	0.58
3:L3:266:ARG:HE	3:L3:266:ARG:HA	1.69	0.58
51:S5:63:GLN:HG3	51:S5:88:PRO:HA	1.86	0.58
23:73:19:VAL:HG13	23:73:36:ILE:HG22	1.85	0.58
22:72:28:PHE:CE2	22:72:30:PRO:HG3	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1573:A:H4'	78:1S:1574:G:C5'	2.33	0.58
81:5S:104:A:H2'	81:5S:105:C:H5'	1.83	0.58
60:14:124:ASP:HB2	78:1S:929:A:H4'	1.85	0.58
15:65:176:LYS:HZ3	79:2S:65:A:H5'	1.69	0.58
20:70:58:ILE:N	20:70:58:ILE:HD12	2.19	0.58
50:S4:196:VAL:CG2	50:S4:211:LYS:HG2	2.34	0.58
35:85:22:VAL:HA	35:85:25:LYS:HD2	1.86	0.58
65:19:75:LYS:HD2	65:19:75:LYS:H	1.69	0.58
37:87:85:LYS:HB2	80:8S:67:U:H5''	1.85	0.58
79:2S:1653:G:H2'	79:2S:1654:A:C8	2.38	0.58
47:S1:146:GLN:HE21	47:S1:148:ASN:HD21	1.50	0.58
79:2S:2516:U:H2'	79:2S:2517:U:C6	2.39	0.58
4:L4:334:PHE:CD1	4:L4:339:LEU:HD12	2.39	0.58
25:75:58:ASP:O	25:75:62:VAL:HG23	2.04	0.58
51:S5:37:GLN:HB3	62:16:53:LEU:HD22	1.85	0.58
10:60:49:CYS:HB2	10:60:172:GLY:HA2	1.86	0.58
54:S8:87:ASN:HB3	54:S8:90:LEU:HG	1.85	0.58
79:2S:1448:U:H2'	79:2S:1449:A:C8	2.39	0.58
45:RC:81:LEU:HD13	45:RC:113:VAL:HG22	1.85	0.58
78:1S:832:U:H2'	78:1S:833:U:H5''	1.84	0.58
45:RC:93:ASP:HB2	45:RC:100:TYR:CE1	2.38	0.58
2:L2:147:ARG:HD2	2:L2:157:VAL:HB	1.85	0.58
64:18:28:ILE:O	64:18:28:ILE:HD13	2.03	0.58
41:91:2:ARG:HH22	78:1S:1773:C:H5	1.50	0.58
78:1S:1042:G:H22	78:1S:1076:A:H2	1.52	0.58
78:1S:138:A:C8	78:1S:141:U:H4'	2.36	0.58
36:86:93:ILE:O	36:86:97:SER:HB3	2.04	0.58
33:83:103:TYR:HA	33:83:104:PRO:C	2.24	0.58
78:1S:822:U:C2'	78:1S:823:G:H5''	2.33	0.58
17:67:117:ILE:HA	17:67:148:LEU:HA	1.86	0.58
33:83:20:LYS:HE2	33:83:21:ARG:NH1	2.19	0.58
14:64:19:ARG:HA	14:64:69:THR:HG22	1.84	0.58
45:RC:57:PRO:HG2	62:16:100:GLN:HB2	1.86	0.58
19:69:171:ASP:O	19:69:175:GLN:HB2	2.04	0.58
54:S8:114:GLU:HG3	54:S8:120:THR:HG22	1.85	0.58
45:RC:295:SER:HB2	45:RC:300:THR:HB	1.84	0.58
34:84:53:GLY:HA2	79:2S:1640:G:OP1	2.04	0.58
23:73:33:ASN:HD21	23:73:64:LYS:N	2.01	0.58
80:8S:62:C:H4'	80:8S:63:G:O5'	2.04	0.58
1:L1:162:VAL:HB	79:2S:2493:U:H4'	1.85	0.58
72:26:84:VAL:O	72:26:85:ARG:HB2	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L3:67:PHE:CD2	23:73:88:ARG:HD3	2.38	0.58
78:1S:1304:G:OP2	78:1S:1306:C:H5'	2.03	0.58
17:67:66:SER:HA	79:2S:2389:C:H5''	1.83	0.58
17:67:118:GLN:HG2	17:67:119:VAL:H	1.69	0.58
46:S0:122:ILE:HG12	46:S0:144:ILE:HD12	1.85	0.58
61:15:72:LYS:N	61:15:72:LYS:HD2	2.18	0.58
78:1S:844:A:H2'	78:1S:845:G:H8	1.69	0.58
79:2S:992:A:O2'	79:2S:993:G:H5'	2.04	0.58
79:2S:1200:A:H5'	79:2S:1201:C:H4'	1.84	0.58
79:2S:1951:C:H5	79:2S:2095:G:C6	2.22	0.57
3:L3:56:ILE:HG21	3:L3:356:LEU:HD22	1.85	0.57
54:S8:58:LEU:O	54:S8:59:ARG:HB2	2.04	0.57
78:1S:1323:C:H2'	78:1S:1324:G:O4'	2.03	0.57
78:1S:1273:G:O6	78:1S:1430:U:H2'	2.04	0.57
2:L2:204:MET:HB2	2:L2:208:ASP:HB2	1.86	0.57
9:L9:91:ARG:HD2	9:L9:143:GLU:HB2	1.86	0.57
21:71:27:LEU:HD22	21:71:27:LEU:N	2.18	0.57
75:29:36:LEU:HD12	75:29:37:ASN:N	2.19	0.57
78:1S:903:U:H2'	78:1S:905:A:OP2	2.05	0.57
45:RC:103:PHE:CE1	45:RC:138:GLY:HA2	2.39	0.57
2:L2:193:ARG:HD2	79:2S:2182:A:OP1	2.05	0.57
78:1S:920:U:C2'	78:1S:921:U:H5''	2.34	0.57
1:L1:14:LYS:HB3	1:L1:216:LEU:CD1	2.34	0.57
61:15:25:LEU:O	61:15:87:PRO:HB2	2.03	0.57
66:20:50:LEU:HD13	66:20:95:ALA:HB2	1.85	0.57
41:91:23:ARG:NH1	79:2S:2277:C:H5''	2.19	0.57
54:S8:171:SER:HB3	78:1S:209:U:H5'	1.86	0.57
3:L3:311:PHE:HB2	3:L3:314:TYR:HB3	1.86	0.57
79:2S:1287:A:O2'	79:2S:1288:U:H5'	2.04	0.57
3:L3:130:PHE:CE1	79:2S:3149:G:H4'	2.39	0.57
79:2S:2394:G:H2'	79:2S:2395:G:O4'	2.03	0.57
38:88:20:VAL:HG22	38:88:47:GLY:HA2	1.85	0.57
17:67:11:PRO:HA	17:67:14:SER:HB2	1.86	0.57
14:64:50:LYS:HZ2	14:64:86:ALA:HB2	1.68	0.57
78:1S:636:A:H2'	78:1S:637:C:H5'	1.86	0.57
79:2S:3297:U:H2'	79:2S:3298:C:O4'	2.04	0.57
42:92:25:VAL:HG13	42:92:70:LEU:HD13	1.84	0.57
79:2S:719:U:H3'	79:2S:720:A:H4'	1.86	0.57
38:88:31:LEU:HB3	38:88:37:PRO:HB3	1.85	0.57
78:1S:564:G:H4'	78:1S:566:C:N3	2.19	0.57
78:1S:1476:C:H2'	78:1S:1477:G:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S4:207:LEU:HB3	50:S4:219:VAL:CG1	2.34	0.57
78:1S:598:U:H2'	78:1S:599:A:C8	2.39	0.57
20:70:132:THR:O	20:70:133:ALA:HB3	2.04	0.57
62:16:105:LEU:O	62:16:109:PHE:HB2	2.04	0.57
20:70:94:ILE:CG2	20:70:95:ARG:H	2.16	0.57
79:2S:543:C:H2'	79:2S:544:C:H5'	1.87	0.57
49:S3:92:GLN:HE21	49:S3:92:GLN:H	1.52	0.57
79:2S:760:G:H1'	79:2S:771:A:H61	1.68	0.57
3:L3:348:ARG:O	3:L3:352:GLU:HB2	2.04	0.57
79:2S:2495:C:H3'	79:2S:2496:C:C5'	2.35	0.57
8:L8:61:GLN:O	8:L8:65:LEU:HB2	2.04	0.57
27:77:33:SER:HB3	27:77:36:HIS:HB2	1.84	0.57
4:L4:285:ASP:O	4:L4:289:ILE:HG13	2.04	0.57
45:RC:222:LEU:HD21	45:RC:234:LEU:HD13	1.86	0.57
78:1S:1662:G:H2'	78:1S:1663:G:H8	1.68	0.57
50:S4:64:ILE:HD13	70:24:17:LEU:HD13	1.86	0.57
31:81:81:GLU:O	31:81:82:GLU:HB3	2.05	0.57
68:22:53:ILE:HD11	68:22:60:LYS:HB2	1.87	0.57
48:S2:121:VAL:O	48:S2:125:ILE:HG13	2.04	0.57
3:L3:56:ILE:HD13	3:L3:76:VAL:HG21	1.85	0.57
2:L2:129:ALA:HB3	2:L2:132:ASN:HD22	1.69	0.57
80:8S:70:G:H1'	80:8S:88:A:N6	2.19	0.57
79:2S:2689:A:H1'	79:2S:2702:A:N6	2.20	0.57
25:75:86:VAL:HG22	25:75:87:SER:N	2.19	0.57
78:1S:1614:A:H2'	78:1S:1615:C:O4'	2.04	0.57
53:S7:94:ALA:HB3	53:S7:96:ARG:NH1	2.19	0.57
27:77:104:PRO:HA	27:77:107:ARG:HD2	1.87	0.57
47:S1:70:LEU:HA	47:S1:73:LEU:HG	1.87	0.57
78:1S:1562:G:H2'	78:1S:1563:C:C6	2.40	0.57
79:2S:2768:U:H2'	79:2S:2769:A:C8	2.39	0.57
78:1S:1541:G:H21	78:1S:1570:A:H62	1.52	0.57
26:76:70:ILE:HD12	26:76:70:ILE:N	2.19	0.57
62:16:12:LYS:HA	62:16:16:ALA:O	2.05	0.57
78:1S:410:A:H2'	78:1S:411:C:O4'	2.04	0.57
69:23:127:VAL:O	69:23:128:SER:HB2	2.05	0.57
79:2S:1038:C:H2'	79:2S:1039:U:C6	2.39	0.57
1:L1:36:VAL:HA	1:L1:208:SER:HA	1.86	0.57
46:S0:27:ARG:O	46:S0:46:HIS:HE1	1.87	0.57
69:23:126:LYS:CE	69:23:129:GLY:HA2	2.34	0.57
79:2S:637:C:H2'	79:2S:638:C:C6	2.40	0.57
66:20:118:VAL:HG13	66:20:119:ALA:N	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L2:234:LYS:HB3	2:L2:238:ILE:HD13	1.85	0.57
78:1S:487:G:H22	78:1S:500:C:N4	2.02	0.57
49:S3:43:PRO:O	49:S3:44:THR:HB	2.04	0.57
15:65:169:LYS:HA	15:65:174:ILE:HD12	1.85	0.57
79:2S:3199:G:H2'	79:2S:3200:G:C8	2.40	0.57
20:70:155:ARG:H	20:70:170:THR:HB	1.69	0.57
25:75:57:LEU:HA	25:75:61:LYS:HD2	1.86	0.57
79:2S:1348:U:H4'	79:2S:1349:G:C5'	2.35	0.57
16:66:51:LYS:HG3	16:66:141:LEU:HD11	1.85	0.57
76:30:10:ARG:HD2	76:30:13:LYS:HD2	1.86	0.57
64:18:92:ILE:HD13	64:18:92:ILE:O	2.05	0.57
12:62:66:ASN:H	12:62:69:ALA:HB3	1.69	0.57
20:70:78:TRP:CE3	20:70:125:LYS:HE3	2.39	0.57
79:2S:1903:U:H2'	79:2S:1905:G:OP2	2.03	0.57
79:2S:1689:U:H2'	79:2S:1690:C:C6	2.39	0.57
15:65:154:PRO:HB2	79:2S:58:G:C5'	2.35	0.57
16:66:43:ILE:HB	16:66:136:THR:HB	1.86	0.57
70:24:29:HIS:HB2	70:24:32:ARG:CB	2.35	0.57
70:24:102:LYS:N	70:24:102:LYS:HD2	2.19	0.57
57:11:94:ILE:HG12	69:23:12:ALA:HB1	1.87	0.57
4:L4:107:ARG:HG3	79:2S:663:C:O3'	2.05	0.57
79:2S:1828:A:H2'	79:2S:1829:G:C8	2.40	0.57
60:14:24:ASN:O	60:14:54:GLU:HB2	2.05	0.57
7:L7:134:VAL:O	7:L7:229:PHE:HB2	2.05	0.57
1:L1:55:LEU:HD23	1:L1:135:PRO:HD2	1.84	0.57
82:PT:76:C:H2'	82:PT:77:A:H4'	1.85	0.57
45:RC:88:THR:HG22	45:RC:104:VAL:HG13	1.85	0.57
19:69:62:ARG:HH21	19:69:62:ARG:HG3	1.68	0.57
78:1S:212:U:H2'	78:1S:213:A:C8	2.39	0.57
79:2S:2881:C:H2'	79:2S:2882:U:C6	2.40	0.57
19:69:63:THR:HA	19:69:66:HIS:HB3	1.85	0.57
5:L5:140:ARG:HG3	5:L5:141:PRO:CD	2.27	0.57
13:63:103:ASN:O	36:86:22:PRO:HD3	2.05	0.57
45:RC:83:ALA:HA	45:RC:89:LEU:HD23	1.86	0.57
7:L7:82:LYS:NZ	7:L7:191:VAL:HB	2.19	0.57
42:92:49:GLY:HA2	79:2S:277:G:C5'	2.34	0.57
2:L2:34:TYR:CD1	79:2S:2525:G:H2'	2.40	0.57
32:82:19:ARG:HG2	32:82:20:HIS:N	2.20	0.57
13:63:76:THR:O	13:63:80:VAL:HG23	2.04	0.57
14:64:55:ARG:HH12	14:64:77:ARG:HG3	1.70	0.57
6:L6:142:ASP:O	6:L6:146:ILE:HG12	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S0:206:ASP:HB2	46:S0:207:PRO:HA	1.86	0.57
79:2S:2927:C:H2'	79:2S:2928:C:C6	2.40	0.57
11:61:86:VAL:HG21	11:61:111:ASP:HB3	1.87	0.57
13:63:131:LYS:HB3	13:63:131:LYS:NZ	2.20	0.57
79:2S:1756:C:H2'	79:2S:1757:A:C8	2.40	0.57
79:2S:1568:U:H4'	79:2S:1570:U:H5	1.68	0.57
79:2S:1123:U:H2'	79:2S:1124:U:H5'	1.85	0.57
24:74:38:SER:O	24:74:42:GLN:HG3	2.04	0.57
58:12:63:VAL:HG23	58:12:66:VAL:HG23	1.86	0.57
13:63:46:ILE:HG22	13:63:49:ARG:HB2	1.87	0.57
64:18:115:ARG:O	64:18:119:ILE:HD13	2.05	0.57
51:S5:189:THR:HG21	71:25:97:LYS:HG3	1.87	0.57
44:P0:49:ALA:HB2	44:P0:89:THR:HB	1.85	0.57
46:S0:126:PRO:HG2	46:S0:151:SER:HB3	1.86	0.57
15:65:57:GLN:O	15:65:142:ILE:HD11	2.04	0.57
43:93:29:LEU:HD13	43:93:69:TYR:HD2	1.68	0.57
21:71:116:ARG:O	21:71:120:LYS:HE3	2.05	0.57
15:65:172:ARG:NE	15:65:174:ILE:HD11	2.20	0.57
80:8S:81:U:H4'	80:8S:82:U:H5'	1.87	0.57
50:S4:15:PRO:HD2	50:S4:18:TRP:HZ3	1.69	0.57
61:15:94:VAL:O	61:15:104:GLN:HA	2.04	0.57
79:2S:1702:U:H2'	79:2S:1703:U:C6	2.39	0.57
78:1S:1629:G:H2'	78:1S:1630:U:C6	2.40	0.57
47:S1:113:MET:HE3	47:S1:209:ASN:HD22	1.70	0.57
79:2S:2106:A:H2'	79:2S:2107:A:C8	2.39	0.57
79:2S:1545:A:H2'	79:2S:1547:G:OP2	2.05	0.57
48:S2:137:ILE:HG13	48:S2:138:PRO:HD2	1.85	0.57
1:L1:24:LYS:O	1:L1:24:LYS:HD2	2.04	0.57
35:85:76:GLN:HB2	35:85:77:PRO:CD	2.35	0.57
1:L1:162:VAL:HG22	1:L1:163:LEU:H	1.69	0.57
52:S6:14:LYS:HD2	52:S6:123:GLY:CA	2.33	0.57
78:1S:1733:C:H2'	78:1S:1734:U:C6	2.40	0.57
52:S6:137:ARG:HH21	52:S6:137:ARG:HG3	1.70	0.57
56:10:50:THR:HG21	56:10:57:THR:OG1	2.05	0.57
79:2S:1611:G:H2'	79:2S:1612:A:C8	2.39	0.57
50:S4:159:THR:HG21	50:S4:227:VAL:HB	1.87	0.57
30:80:48:THR:HG21	30:80:52:ARG:HD2	1.86	0.57
79:2S:1940:G:H21	79:2S:3362:A:H8	1.53	0.57
55:S9:152:SER:HB3	55:S9:155:HIS:HB2	1.86	0.57
13:63:29:ALA:O	13:63:33:VAL:HG23	2.03	0.57
79:2S:794:U:H2'	79:2S:795:G:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:209:U:H2'	78:1S:210:A:H8	1.70	0.57
33:83:54:ARG:HG3	33:83:64:ILE:HG13	1.87	0.57
79:2S:341:G:H4'	79:2S:344:A:H1'	1.87	0.57
5:L5:48:LYS:HG3	5:L5:145:PHE:CE2	2.40	0.57
82:PT:15:G:H22	82:PT:49:C:H42	1.53	0.57
52:S6:113:ILE:HD11	52:S6:124:LEU:HD22	1.86	0.57
52:S6:184:LEU:HD21	78:1S:140:A:H5'	1.86	0.56
7:L7:29:GLU:O	7:L7:33:ARG:HB3	2.05	0.56
2:L2:112:ILE:HG13	2:L2:135:ILE:HG12	1.86	0.56
16:66:136:THR:HG22	16:66:137:THR:N	2.20	0.56
80:8S:37:A:H5''	80:8S:39:G:O4'	2.05	0.56
28:78:74:ASN:HB3	28:78:115:LYS:HB2	1.87	0.56
50:S4:194:THR:O	50:S4:195:ILE:HB	2.05	0.56
79:2S:2387:A:C3'	79:2S:2388:U:H5''	2.35	0.56
78:1S:1513:G:O2'	78:1S:1515:A:H1'	2.05	0.56
9:L9:105:GLU:CG	9:L9:108:GLY:HA2	2.34	0.56
51:S5:146:THR:HB	51:S5:157:ARG:HB3	1.87	0.56
5:L5:269:SER:O	5:L5:273:ARG:HB2	2.05	0.56
65:19:100:ILE:O	65:19:104:VAL:HG23	2.05	0.56
79:2S:2328:U:H2'	79:2S:2329:C:C6	2.40	0.56
57:11:2:SER:HA	57:11:113:PRO:HA	1.87	0.56
54:S8:189:LEU:O	54:S8:193:LEU:HB2	2.05	0.56
23:73:57:MET:HB2	23:73:77:ILE:HG12	1.87	0.56
52:S6:67:VAL:HG23	52:S6:99:GLY:HA2	1.87	0.56
10:60:200:LEU:HD11	10:60:209:ASN:ND2	2.18	0.56
64:18:105:VAL:CG1	64:18:106:GLU:H	2.18	0.56
79:2S:2271:A:H3'	79:2S:2272:G:H5''	1.87	0.56
69:23:49:ALA:O	69:23:103:LEU:HD22	2.04	0.56
79:2S:2119:A:H2'	79:2S:2120:A:O4'	2.04	0.56
3:L3:223:GLY:HA2	3:L3:271:GLY:HA3	1.87	0.56
79:2S:3013:U:H2'	79:2S:3014:U:C6	2.40	0.56
4:L4:170:LYS:HE3	4:L4:178:LEU:HD12	1.87	0.56
79:2S:1718:G:H2'	79:2S:1719:G:H8	1.69	0.56
60:14:102:LEU:O	60:14:105:LEU:HG	2.05	0.56
79:2S:1274:A:H2'	79:2S:1275:C:C6	2.39	0.56
78:1S:381:C:H2'	78:1S:382:C:H6	1.68	0.56
25:75:135:ILE:HD13	25:75:135:ILE:O	2.04	0.56
5:L5:64:ILE:HD12	5:L5:64:ILE:N	2.21	0.56
78:1S:870:C:H2'	78:1S:871:G:C8	2.40	0.56
78:1S:401:A:O2'	78:1S:402:C:H4'	2.04	0.56
18:68:147:ARG:HG2	18:68:148:GLU:H	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:88:26:LYS:HD2	38:88:78:LEU:CD1	2.35	0.56
3:L3:189:SER:HA	3:L3:192:VAL:HG12	1.86	0.56
66:20:58:LEU:HB2	66:20:88:LYS:HB3	1.86	0.56
1:L1:14:LYS:HB3	1:L1:216:LEU:HD12	1.87	0.56
63:17:57:LEU:O	63:17:61:ILE:HG13	2.05	0.56
79:2S:2221:G:C2	79:2S:2223:A:H5''	2.40	0.56
78:1S:205:U:H2'	78:1S:206:A:C8	2.40	0.56
79:2S:1526:U:H1'	79:2S:1595:U:H5'	1.87	0.56
68:22:20:THR:OG1	68:22:22:LYS:HD3	2.04	0.56
45:RC:46:LYS:O	45:RC:55:GLY:HA2	2.06	0.56
79:2S:1174:G:H2'	79:2S:1175:C:C6	2.41	0.56
4:L4:107:ARG:HA	79:2S:664:U:H5'	1.86	0.56
78:1S:796:A:H2'	78:1S:797:G:H8	1.69	0.56
79:2S:87:U:H2'	79:2S:88:A:C8	2.40	0.56
78:1S:1269:U:H4'	78:1S:1270:G:H5''	1.85	0.56
38:88:5:ILE:HD12	38:88:11:PHE:CD2	2.40	0.56
26:76:60:ARG:HB2	26:76:103:LYS:HD2	1.86	0.56
28:78:72:VAL:HG12	28:78:111:LYS:HB3	1.86	0.56
79:2S:3146:G:H2'	79:2S:3147:G:H8	1.70	0.56
78:1S:51:A:H62	78:1S:429:G:H21	1.53	0.56
59:13:30:SER:O	59:13:33:VAL:HG22	2.05	0.56
14:64:41:GLN:HB3	14:64:42:LYS:HD3	1.88	0.56
78:1S:1227:A:H4'	78:1S:1228:G:H5''	1.87	0.56
20:70:82:ASP:HB3	20:70:87:THR:HG22	1.87	0.56
47:S1:189:ILE:HB	47:S1:190:PRO:HD3	1.87	0.56
79:2S:1658:G:H2'	79:2S:1659:U:C6	2.40	0.56
15:65:5:LYS:HG3	36:86:40:VAL:HG11	1.86	0.56
45:RC:85:TRP:CZ3	63:17:29:GLN:HB3	2.39	0.56
79:2S:2756:C:H2'	79:2S:2757:U:C6	2.40	0.56
78:1S:650:U:H2'	78:1S:651:G:C8	2.39	0.56
8:L8:158:ASP:HB2	8:L8:159:PRO:HD3	1.87	0.56
79:2S:912:G:H2'	79:2S:914:A:N7	2.20	0.56
63:17:85:VAL:N	63:17:86:PRO:HD2	2.20	0.56
79:2S:1260:A:H4'	79:2S:1280:C:H4'	1.86	0.56
34:84:91:ARG:O	34:84:95:ILE:HB	2.05	0.56
61:15:60:LEU:O	61:15:60:LEU:HD13	2.05	0.56
57:11:20:PHE:HB2	78:1S:211:U:H5''	1.86	0.56
19:69:136:ARG:O	19:69:140:GLU:HG3	2.06	0.56
58:12:49:THR:HG21	77:31:103:LEU:HD21	1.87	0.56
71:25:100:ILE:HD13	71:25:101:TYR:N	2.20	0.56
69:23:96:VAL:HG23	69:23:97:ASP:N	2.17	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RC:89:LEU:HD21	45:RC:110:VAL:HG11	1.88	0.56
79:2S:2271:A:H2'	79:2S:2272:G:C4'	2.35	0.56
50:S4:86:PHE:O	50:S4:87:MET:HB2	2.03	0.56
18:68:21:SER:HB2	79:2S:672:A:H5''	1.87	0.56
5:L5:19:PRO:HB2	5:L5:24:ARG:HG2	1.87	0.56
65:19:28:LEU:HG	65:19:55:TYR:HE1	1.69	0.56
47:S1:151:LYS:HD2	47:S1:153:HIS:CE1	2.41	0.56
32:82:15:LYS:HG2	32:82:16:LYS:H	1.70	0.56
38:88:42:LYS:HG2	38:88:55:VAL:HG13	1.88	0.56
35:85:59:ASN:O	35:85:63:ARG:HG3	2.05	0.56
79:2S:1620:U:H2'	79:2S:1621:A:C8	2.41	0.56
78:1S:1279:C:H2'	78:1S:1280:C:C6	2.40	0.56
2:L2:79:ASN:O	2:L2:82:VAL:HG22	2.06	0.56
79:2S:418:A:H2	80:8S:5:U:H3	1.51	0.56
78:1S:1003:A:H4'	78:1S:1004:U:H5''	1.88	0.56
6:L6:18:LEU:HD22	6:L6:18:LEU:H	1.70	0.56
10:60:98:ARG:HD2	10:60:120:GLY:O	2.05	0.56
79:2S:2216:G:H22	79:2S:2229:A:H2	1.53	0.56
81:5S:12:U:H4'	81:5S:110:G:N2	2.14	0.56
11:61:29:ARG:HG2	11:61:32:ARG:HH21	1.70	0.56
79:2S:495:G:H2'	79:2S:496:C:C6	2.39	0.56
46:S0:116:LYS:O	46:S0:118:PRO:HD3	2.05	0.56
32:82:37:GLY:HA3	79:2S:639:G:OP1	2.06	0.56
79:2S:2567:C:C3'	79:2S:2568:C:H5''	2.35	0.56
70:24:8:ARG:HD3	70:24:28:LEU:HG	1.87	0.56
10:60:61:SER:O	10:60:65:LEU:HG	2.06	0.56
4:L4:329:PRO:HG2	7:L7:45:LEU:HB2	1.88	0.56
65:19:47:PRO:HA	78:1S:1477:G:O2'	2.05	0.56
58:12:67:THR:O	58:12:68:GLU:HB2	2.03	0.56
78:1S:1150:G:H22	83:MR:4:A:H3'	1.71	0.56
79:2S:225:C:H2'	79:2S:226:C:C6	2.40	0.56
5:L5:224:LYS:HD2	81:5S:50:U:O2'	2.05	0.56
17:67:61:ARG:HH21	80:8S:3:A:H4'	1.71	0.56
18:68:9:GLN:HB3	79:2S:949:C:H5''	1.87	0.56
82:PT:20:G:H3'	82:PT:21:U:C5	2.41	0.56
78:1S:830:U:O2'	78:1S:831:U:H5''	2.05	0.56
52:S6:21:GLU:HA	52:S6:24:ILE:HB	1.86	0.56
19:69:69:SER:HB2	19:69:74:ARG:HB2	1.88	0.56
79:2S:2422:C:H2'	79:2S:2423:U:C6	2.40	0.56
59:13:71:ILE:HD12	59:13:71:ILE:N	2.12	0.56
11:61:25:GLU:CG	11:61:29:ARG:HD2	2.33	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:S2:225:LEU:HB2	68:22:70:ASN:HD21	1.71	0.56
79:2S:636:C:O4'	79:2S:2378:C:H5'	2.04	0.56
78:1S:1524:A:H2'	78:1S:1525:A:H8	1.70	0.56
34:84:60:ARG:HH21	79:2S:1616:U:H4'	1.70	0.56
79:2S:374:A:N3	79:2S:376:G:H5''	2.20	0.56
65:19:28:LEU:HD21	65:19:30:VAL:CG1	2.36	0.56
30:80:27:TYR:HA	30:80:89:VAL:HG11	1.86	0.56
79:2S:2349:U:H2'	79:2S:2350:C:H6	1.70	0.56
20:70:99:ARG:O	20:70:103:VAL:HG23	2.06	0.56
78:1S:1603:U:H2'	78:1S:1604:U:C6	2.40	0.56
79:2S:3387:U:H2'	79:2S:3388:C:C6	2.41	0.56
79:2S:3302:U:H2'	79:2S:3303:G:C8	2.40	0.56
78:1S:1757:G:N3	78:1S:1757:G:H2'	2.21	0.56
59:13:34:ILE:O	59:13:38:VAL:HG23	2.05	0.56
1:L1:32:VAL:HG22	1:L1:33:GLU:N	2.17	0.56
3:L3:369:ARG:HH22	24:74:11:ALA:HB1	1.70	0.56
18:68:3:ILE:H	18:68:3:ILE:HD12	1.70	0.56
47:S1:176:VAL:CG1	47:S1:177:GLN:H	2.18	0.56
50:S4:49:ARG:O	50:S4:53:LYS:HA	2.05	0.56
35:85:21:LEU:HD12	35:85:24:LEU:HD12	1.88	0.56
79:2S:845:G:H2'	79:2S:847:A:OP2	2.06	0.56
72:26:30:ILE:HD12	72:26:31:PRO:HD2	1.88	0.56
43:93:19:GLY:O	43:93:23:ARG:HG3	2.05	0.56
66:20:28:SER:HB3	66:20:34:LEU:HB2	1.86	0.56
78:1S:531:C:H2'	78:1S:532:U:H5''	1.87	0.56
45:RC:114:ASP:OD2	45:RC:156:VAL:HG23	2.06	0.56
63:17:45:ARG:HG2	63:17:49:LYS:HE2	1.87	0.56
59:13:84:ILE:HD11	59:13:150:VAL:HG23	1.88	0.56
1:L1:67:ILE:HD11	1:L1:86:SER:HB2	1.87	0.56
28:78:122:PRO:HB3	28:78:142:GLY:O	2.05	0.56
8:L8:45:ASN:HA	25:75:28:THR:HA	1.88	0.56
79:2S:1110:U:H2'	79:2S:1111:U:C6	2.41	0.56
56:10:82:LEU:HD13	56:10:86:ILE:HG12	1.88	0.56
36:86:58:ILE:HD12	36:86:98:ARG:HH22	1.71	0.56
79:2S:59:G:H2'	80:8S:33:A:O2'	2.06	0.56
3:L3:332:ARG:O	3:L3:333:LYS:HB2	2.06	0.56
79:2S:2207:A:H3'	79:2S:2208:A:C5'	2.36	0.56
60:14:88:GLY:HA2	60:14:122:PRO:HD3	1.87	0.56
32:82:101:SER:O	32:82:105:ARG:HG3	2.05	0.56
15:65:118:SER:HB2	15:65:131:GLU:O	2.06	0.56
58:12:87:PRO:HA	58:12:140:PHE:CZ	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L4:110:ASN:HB2	15:65:201:ARG:O	2.06	0.56
79:2S:1231:A:H4'	79:2S:1261:G:H8	1.69	0.56
6:L6:149:ILE:HG23	6:L6:155:LEU:HD12	1.88	0.56
78:1S:703:G:H2'	78:1S:704:C:H5'	1.88	0.56
11:61:17:LEU:HD13	11:61:129:VAL:HG22	1.87	0.56
78:1S:181:A:H2'	78:1S:182:A:O4'	2.05	0.56
49:S3:37:VAL:HG12	49:S3:50:ILE:CD1	2.35	0.56
10:60:30:LYS:N	10:60:30:LYS:HD2	2.21	0.56
64:18:86:LEU:HD22	64:18:97:ASP:HB3	1.88	0.56
58:12:103:LEU:HD22	58:12:103:LEU:H	1.70	0.56
7:L7:60:ARG:HA	7:L7:60:ARG:HE	1.71	0.56
79:2S:1308:A:C2	79:2S:1311:G:H5''	2.41	0.56
61:15:110:GLU:HB2	64:18:119:ILE:HD11	1.88	0.56
46:S0:41:ARG:HH11	46:S0:45:VAL:HG21	1.71	0.56
53:S7:168:SER:O	53:S7:172:VAL:HG23	2.05	0.56
50:S4:196:VAL:HG21	50:S4:211:LYS:HG2	1.87	0.56
7:L7:239:LEU:O	7:L7:243:MET:HG3	2.06	0.56
78:1S:1474:G:H2'	78:1S:1475:A:H8	1.70	0.56
79:2S:2527:G:H2'	79:2S:2528:G:C8	2.41	0.56
47:S1:179:SER:HB3	47:S1:183:GLN:HB2	1.87	0.56
4:L4:162:THR:O	4:L4:166:VAL:HG23	2.06	0.56
49:S3:164:VAL:HG13	49:S3:168:ILE:HD11	1.87	0.56
38:88:7:ASP:HB3	38:88:10:GLN:CB	2.36	0.56
79:2S:511:G:H2'	79:2S:512:U:O4'	2.05	0.56
16:66:109:PRO:HG2	16:66:112:TYR:HD2	1.71	0.56
57:11:129:ARG:HD3	78:1S:115:G:C8	2.41	0.56
19:69:23:TRP:HB3	19:69:51:VAL:CG2	2.36	0.56
79:2S:2581:U:H2'	79:2S:2582:C:C6	2.41	0.56
75:29:19:ARG:HH11	75:29:19:ARG:HG3	1.71	0.56
58:12:29:LYS:O	58:12:33:ARG:HG2	2.04	0.56
68:22:107:SER:HA	78:1S:804:A:C8	2.41	0.56
68:22:103:ILE:HD11	68:22:110:ILE:HG22	1.88	0.56
62:16:78:VAL:O	62:16:82:ARG:HG2	2.06	0.56
8:L8:186:LEU:CB	8:L8:195:SER:HB3	2.33	0.56
3:L3:25:ILE:H	3:L3:25:ILE:CD1	2.13	0.56
50:S4:145:ARG:NH2	50:S4:167:GLY:HA2	2.17	0.56
71:25:89:ILE:HB	71:25:101:TYR:HB3	1.88	0.56
79:2S:516:A:C3'	79:2S:517:G:H5''	2.36	0.56
79:2S:3314:A:H2'	79:2S:3315:G:C8	2.40	0.56
70:24:35:VAL:HG21	70:24:40:LEU:HD21	1.87	0.56
78:1S:219:A:OP1	78:1S:219:A:H4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L5:63:GLN:OE1	5:L5:74:VAL:HG11	2.06	0.56
61:15:18:ARG:HG3	61:15:36:LEU:HB2	1.87	0.56
65:19:118:PRO:O	65:19:119:LYS:HB2	2.06	0.56
33:83:74:THR:O	33:83:82:ARG:HG3	2.06	0.56
3:L3:57:VAL:O	3:L3:357:LYS:HB2	2.05	0.56
79:2S:757:C:C3'	79:2S:758:C:H5''	2.36	0.56
48:S2:160:GLY:HA3	48:S2:216:VAL:HB	1.88	0.56
78:1S:900:A:C2'	78:1S:901:G:H5'	2.35	0.56
13:63:42:ARG:HA	13:63:45:LYS:HB3	1.87	0.56
53:S7:149:ILE:HG12	53:S7:180:GLN:HB2	1.87	0.56
79:2S:2471:U:H2'	79:2S:2472:U:H5'	1.87	0.56
79:2S:1444:G:H2'	79:2S:1445:U:O4'	2.06	0.56
77:31:136:LYS:C	77:31:138:ARG:H	2.10	0.56
79:2S:350:C:N3	79:2S:367:A:H2'	2.21	0.56
5:L5:78:ALA:HB1	5:L5:101:THR:HG22	1.88	0.56
79:2S:1028:U:H3'	79:2S:1029:G:H5''	1.88	0.56
78:1S:312:A:C2	78:1S:314:C:H2'	2.41	0.56
78:1S:694:U:O2	78:1S:694:U:H2'	2.05	0.56
79:2S:2361:A:N6	79:2S:2377:G:H1	1.95	0.55
4:L4:39:PHE:CE1	4:L4:236:LEU:HA	2.40	0.55
78:1S:1621:U:C3'	78:1S:1622:G:H5''	2.35	0.55
9:L9:18:VAL:HG12	9:L9:27:VAL:HG22	1.88	0.55
81:5S:28:C:H2'	81:5S:29:C:O4'	2.06	0.55
5:L5:61:ILE:HG23	5:L5:63:GLN:HE21	1.70	0.55
7:L7:82:LYS:HZ1	7:L7:191:VAL:HB	1.71	0.55
63:17:53:TYR:O	63:17:57:LEU:HG	2.06	0.55
61:15:37:ALA:HB1	61:15:38:PRO:HD2	1.88	0.55
46:S0:166:GLY:HA2	46:S0:170:ILE:HD11	1.88	0.55
3:L3:95:THR:HB	79:2S:3243:A:H4'	1.87	0.55
35:85:63:ARG:O	35:85:67:ARG:HG3	2.07	0.55
20:70:89:ASN:ND2	21:71:156:TYR:HB3	2.21	0.55
59:13:86:GLU:HG3	59:13:87:ASP:N	2.22	0.55
79:2S:438:A:H2'	79:2S:439:C:O4'	2.05	0.55
79:2S:1808:G:H4'	79:2S:2559:U:O4	2.06	0.55
13:63:128:ARG:HG3	35:85:114:ARG:HH11	1.70	0.55
60:14:112:ILE:O	72:26:58:VAL:HG22	2.05	0.55
36:86:68:ARG:HA	36:86:71:LYS:HE2	1.88	0.55
5:L5:55:PHE:HE2	5:L5:159:VAL:HG22	1.72	0.55
11:61:115:LYS:HB2	11:61:115:LYS:NZ	2.21	0.55
65:19:27:LYS:HB3	65:19:27:LYS:NZ	2.21	0.55
38:88:46:ARG:HH11	38:88:46:ARG:HG2	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:S5:110:ALA:O	51:S5:114:ILE:HG12	2.06	0.55
79:2S:1024:G:H3'	79:2S:1025:A:C5'	2.35	0.55
4:L4:221:ASN:HD21	79:2S:212:G:H3'	1.70	0.55
10:60:205:SER:O	10:60:209:ASN:HB2	2.06	0.55
4:L4:29:PRO:HB3	18:68:25:TYR:HE2	1.71	0.55
79:2S:1966:U:H2'	79:2S:1967:U:H5'	1.89	0.55
79:2S:1250:G:H2'	79:2S:1251:A:C8	2.41	0.55
4:L4:82:THR:HG23	4:L4:85:SER:H	1.72	0.55
79:2S:2922:G:H2'	79:2S:2923:U:H4'	1.88	0.55
2:L2:23:ARG:HG3	2:L2:23:ARG:HH11	1.71	0.55
4:L4:329:PRO:HB3	7:L7:41:ARG:HH12	1.71	0.55
79:2S:87:U:H2'	79:2S:88:A:H8	1.72	0.55
13:63:177:LYS:HG3	36:86:11:LEU:HD13	1.88	0.55
68:22:25:VAL:HG22	68:22:63:VAL:O	2.06	0.55
20:70:152:LEU:HD12	20:70:172:TYR:HE2	1.72	0.55
62:16:51:PRO:HG2	62:16:52:LEU:HD23	1.87	0.55
68:22:71:LYS:HB3	68:22:130:TYR:CE2	2.42	0.55
80:8S:53:A:H2'	80:8S:54:A:C8	2.41	0.55
16:66:130:LYS:NZ	16:66:133:ARG:HH21	2.04	0.55
34:84:94:LEU:O	34:84:98:GLN:HG2	2.05	0.55
79:2S:2960:C:H2'	79:2S:2961:G:C8	2.41	0.55
79:2S:2226:U:H2'	79:2S:2227:C:C6	2.41	0.55
78:1S:1060:U:H3'	78:1S:1061:A:C5'	2.36	0.55
47:S1:87:ARG:NH2	47:S1:101:HIS:HA	2.21	0.55
59:13:98:VAL:O	59:13:102:LEU:HG	2.06	0.55
70:24:29:HIS:HB2	70:24:32:ARG:HB3	1.87	0.55
20:70:81:TYR:CD1	20:70:90:MET:HG3	2.41	0.55
79:2S:3121:U:C1'	79:2S:3122:A:H5''	2.35	0.55
78:1S:477:A:H2'	78:1S:478:A:C8	2.40	0.55
50:S4:162:ILE:HG22	50:S4:163:ASP:N	2.21	0.55
4:L4:185:LYS:HG2	4:L4:199:TRP:CE3	2.42	0.55
79:2S:1660:C:H2'	79:2S:1661:G:C8	2.41	0.55
78:1S:264:G:H5''	78:1S:265:A:H5'	1.89	0.55
26:76:79:ALA:HA	26:76:99:LEU:O	2.06	0.55
68:22:71:LYS:HD3	78:1S:1098:U:H1'	1.87	0.55
9:L9:87:LYS:HE3	9:L9:145:VAL:HG13	1.87	0.55
79:2S:1220:U:H5''	79:2S:1286:A:N6	2.22	0.55
79:2S:1130:A:H8	79:2S:1130:A:O5'	1.89	0.55
45:RC:13:LEU:HD21	45:RC:54:PHE:HB3	1.87	0.55
79:2S:2783:U:H2'	79:2S:2784:G:O4'	2.05	0.55
79:2S:3064:U:H2'	79:2S:3065:G:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1112:G:H2'	78:1S:1113:A:C8	2.41	0.55
79:2S:725:G:H2'	79:2S:726:G:C5'	2.28	0.55
79:2S:1951:C:H5	79:2S:2095:G:O6	1.90	0.55
7:L7:121:LYS:HB2	21:71:133:ALA:HB3	1.88	0.55
6:L6:40:LEU:HB3	6:L6:84:VAL:HG13	1.87	0.55
47:S1:100:PHE:HZ	47:S1:103:MET:HB2	1.71	0.55
40:90:97:ARG:NE	40:90:122:ARG:HB3	2.21	0.55
8:L8:48:ARG:HG3	79:2S:2585:G:C8	2.42	0.55
54:S8:68:ALA:HB2	78:1S:210:A:O2'	2.07	0.55
19:69:166:ASN:O	19:69:170:ARG:HB2	2.06	0.55
41:91:13:LEU:O	41:91:17:ARG:HG3	2.06	0.55
49:S3:209:ILE:HG22	63:17:38:ILE:HG13	1.88	0.55
3:L3:59:ASP:OD1	3:L3:71:GLU:HG2	2.06	0.55
60:14:103:ARG:HD2	72:26:49:ALA:HB2	1.87	0.55
78:1S:562:G:H2'	78:1S:563:U:C6	2.41	0.55
55:S9:50:SER:HB3	78:1S:1:U:H5	1.71	0.55
79:2S:371:G:H2'	79:2S:373:A:OP2	2.07	0.55
79:2S:191:U:H2'	79:2S:192:C:C6	2.42	0.55
27:77:121:ARG:NH1	27:77:126:LYS:HD3	2.21	0.55
79:2S:1115:G:H5"	79:2S:1116:G:C5'	2.36	0.55
51:S5:200:ASN:HA	51:S5:205:SER:HB2	1.88	0.55
2:L2:144:ASN:HB2	2:L2:160:SER:HB2	1.88	0.55
34:84:42:PRO:O	34:84:50:ALA:HA	2.07	0.55
60:14:71:CYS:SG	60:14:76:ILE:HB	2.47	0.55
20:70:71:LYS:NZ	79:2S:562:C:H4'	2.20	0.55
78:1S:1690:G:H2'	78:1S:1691:A:C8	2.42	0.55
78:1S:920:U:C3'	78:1S:921:U:H5"	2.35	0.55
48:S2:41:LEU:O	48:S2:45:VAL:HG23	2.07	0.55
44:P0:56:ASN:HB3	44:P0:80:VAL:HG23	1.87	0.55
21:71:27:LEU:HD22	21:71:27:LEU:H	1.71	0.55
78:1S:181:A:H2'	78:1S:182:A:C8	2.41	0.55
70:24:37:LYS:HG2	70:24:60:PHE:CE2	2.41	0.55
36:86:15:LYS:HG3	36:86:17:VAL:HG23	1.87	0.55
32:82:57:TYR:CE1	79:2S:1162:U:H4'	2.41	0.55
5:L5:184:ASP:HB3	5:L5:187:THR:HG23	1.87	0.55
74:28:50:GLU:O	74:28:51:ASN:HB2	2.07	0.55
67:21:16:LYS:HA	67:21:23:ILE:HA	1.88	0.55
78:1S:370:A:H2'	78:1S:371:G:O4'	2.06	0.55
59:13:14:SER:HB3	78:1S:959:U:H5"	1.88	0.55
78:1S:106:U:H2'	78:1S:107:C:C6	2.40	0.55
38:88:8:ILE:HD12	38:88:8:ILE:H	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L4:92:ASN:HA	4:L4:98:ARG:O	2.07	0.55
1:L1:155:ILE:HG23	1:L1:163:LEU:HD11	1.88	0.55
13:63:75:PHE:O	13:63:79:GLU:HB2	2.07	0.55
69:23:50:LYS:CE	78:1S:435:C:H5''	2.35	0.55
79:2S:1764:U:C3'	79:2S:1765:U:H5''	2.37	0.55
78:1S:310:C:H2'	78:1S:311:U:C6	2.42	0.55
1:L1:119:GLN:HB3	1:L1:123:LEU:HD12	1.87	0.55
52:S6:58:LYS:O	52:S6:59:GLN:HB2	2.07	0.55
79:2S:1718:G:H2'	79:2S:1719:G:C8	2.42	0.55
78:1S:1147:A:H2'	78:1S:1148:C:C6	2.41	0.55
11:61:141:ARG:O	11:61:145:LYS:HB2	2.06	0.55
81:5S:32:U:H1'	81:5S:33:U:H5	1.72	0.55
49:S3:12:VAL:O	49:S3:16:VAL:HG23	2.06	0.55
18:68:33:TYR:CD1	18:68:36:LEU:HD12	2.42	0.55
11:61:15:GLU:HB3	11:61:130:VAL:O	2.06	0.55
68:22:57:ARG:HG2	78:1S:864:U:OP2	2.06	0.55
78:1S:1725:U:H2'	78:1S:1726:G:C8	2.41	0.55
78:1S:446:A:N6	78:1S:461:G:H21	2.04	0.55
82:ET:17:C:H2'	82:ET:18(A):U:C5	2.41	0.55
13:63:57:VAL:HG13	13:63:147:ILE:HG23	1.89	0.55
79:2S:2971:A:H5''	79:2S:2972:G:C5'	2.34	0.55
35:85:86:ARG:O	35:85:90:ARG:HG2	2.07	0.55
1:L1:207:LYS:HD3	79:2S:2491:A:O4'	2.06	0.55
30:80:48:THR:CG2	30:80:52:ARG:HD2	2.36	0.55
78:1S:640:U:H2'	78:1S:641:G:C8	2.42	0.55
15:65:66:VAL:HG22	15:65:128:LYS:O	2.07	0.55
54:S8:138:ASN:ND2	78:1S:197:A:H61	2.04	0.55
2:L2:240:ALA:HB2	79:2S:2154:U:H4'	1.89	0.55
51:S5:143:ARG:O	51:S5:162:VAL:HG12	2.07	0.55
51:S5:58:LEU:O	51:S5:62:VAL:HG23	2.07	0.55
25:75:59:SER:HB3	25:75:102:LEU:HD11	1.89	0.55
63:17:3:ARG:HB2	78:1S:1414:U:H5'	1.88	0.55
13:63:27:ASP:HB3	80:8S:29:U:H5''	1.88	0.55
20:70:41:TYR:O	20:70:45:LEU:HD23	2.07	0.55
78:1S:1669:U:H2'	78:1S:1670:G:O4'	2.06	0.55
1:L1:38:LEU:HA	1:L1:206:VAL:HG22	1.88	0.55
51:S5:107:LYS:O	51:S5:111:VAL:HG23	2.06	0.55
78:1S:1485:C:H3'	78:1S:1486:G:H5''	1.89	0.55
79:2S:2761:G:H1	79:2S:2795:U:H3'	1.72	0.55
68:22:41:MET:HB3	68:22:46:TYR:HB2	1.87	0.55
52:S6:199:GLN:O	52:S6:203:GLU:HG2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2476:C:C2'	79:2S:2477:G:H4'	2.23	0.55
79:2S:2633:U:O2'	79:2S:2634:U:H5'	2.06	0.55
27:77:75:VAL:HG22	27:77:76:ASN:N	2.17	0.55
62:16:115:THR:HA	62:16:118:ILE:CG2	2.36	0.55
2:L2:112:ILE:HD12	2:L2:112:ILE:N	2.22	0.55
51:S5:189:THR:OG1	51:S5:192:GLU:HG3	2.07	0.55
60:14:30:VAL:CG1	60:14:40:ALA:HB3	2.34	0.55
14:64:21:VAL:CG1	14:64:65:LEU:HD23	2.36	0.55
63:17:24:LEU:HD23	63:17:34:LEU:HD13	1.87	0.55
6:L6:52:VAL:HG22	6:L6:53:VAL:N	2.20	0.55
82:PT:19:G:HO2'	82:PT:58:A:H2	1.53	0.55
81:5S:9:C:C2'	81:5S:10:C:H5'	2.37	0.55
44:P0:61:ARG:HA	44:P0:64:ARG:HD2	1.89	0.55
78:1S:381:C:H2'	78:1S:382:C:C6	2.41	0.55
79:2S:2794:G:H1'	79:2S:2795:U:C6	2.41	0.55
44:P0:6:GLU:O	44:P0:10:GLU:HB2	2.06	0.55
13:63:166:ALA:O	13:63:170:LEU:HG	2.07	0.55
78:1S:552:G:H2'	78:1S:553:G:O4'	2.07	0.55
73:27:20:LYS:HD3	73:27:20:LYS:H	1.72	0.55
79:2S:2407:C:H1'	79:2S:2818:U:O2	2.06	0.55
82:PT:70:C:H2'	82:PT:71:G:H8	1.71	0.55
79:2S:2898:G:OP2	79:2S:2899:C:H5'	2.06	0.55
11:61:32:ARG:O	11:61:36:VAL:HG23	2.07	0.55
79:2S:3193:C:H2'	79:2S:3194:C:C6	2.42	0.55
6:L6:176:PHE:CD2	33:83:107:ILE:HG21	2.40	0.55
34:84:19:LYS:NZ	34:84:37:LYS:HA	2.22	0.55
3:L3:27:ALA:CB	3:L3:218:ILE:HG22	2.37	0.55
5:L5:22:ARG:HG3	5:L5:27:LYS:HB2	1.89	0.55
34:84:25:THR:HG22	79:2S:1597:C:H5''	1.89	0.55
80:8S:26:U:H2'	80:8S:27:U:C6	2.42	0.55
42:92:37:ALA:HB3	42:92:40:LYS:HB2	1.88	0.55
45:RC:222:LEU:CD2	45:RC:234:LEU:HD13	2.37	0.55
78:1S:1488:G:H3'	78:1S:1515:A:H61	1.72	0.55
79:2S:1023:C:C2	79:2S:1024:G:H1'	2.42	0.55
78:1S:422:G:H2'	78:1S:423:G:C8	2.42	0.55
27:77:27:LYS:O	27:77:42:LEU:HB2	2.07	0.55
28:78:22:ILE:HB	79:2S:1114:U:OP1	2.06	0.55
30:80:44:ILE:HD13	30:80:53:LYS:HG3	1.89	0.55
5:L5:36:LEU:HD23	79:2S:2748:A:H1'	1.88	0.55
18:68:83:VAL:HB	18:68:103:ALA:HB2	1.88	0.55
73:27:36:LYS:HG2	73:27:43:ILE:HG22	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:84:81:CYS:O	34:84:82:ALA:HB3	2.07	0.55
13:63:124:ILE:N	13:63:124:ILE:HD13	2.22	0.55
43:93:45:LYS:HB2	43:93:45:LYS:NZ	2.22	0.55
64:18:144:ARG:O	64:18:145:ARG:HB2	2.07	0.55
31:81:62:ARG:CB	31:81:66:GLY:HA3	2.29	0.55
60:14:85:ALA:N	60:14:119:THR:HG22	2.13	0.55
9:L9:23:ARG:HH12	79:2S:3185:U:H5''	1.71	0.55
78:1S:941:A:C2'	78:1S:942:G:H5'	2.37	0.55
2:L2:209:HIS:HD2	2:L2:211:HIS:HB2	1.71	0.55
53:S7:56:LYS:HB2	53:S7:88:ARG:HD2	1.89	0.55
72:26:23:CYS:HB3	72:26:28:LYS:H	1.71	0.55
2:L2:230:VAL:HG12	2:L2:231:SER:N	2.21	0.55
44:P0:56:ASN:HD22	79:2S:1282:G:H5''	1.72	0.55
78:1S:564:G:H4'	78:1S:566:C:C2	2.42	0.55
25:75:53:HIS:CE1	25:75:56:ARG:HG2	2.41	0.55
45:RC:66:HIS:HB3	45:RC:85:TRP:HB2	1.88	0.55
79:2S:1647:A:N6	79:2S:1808:G:H1'	2.22	0.55
14:64:75:GLY:O	79:2S:561:C:H5''	2.07	0.55
6:L6:26:ARG:NH1	6:L6:26:ARG:HB2	2.22	0.55
34:84:75:ALA:O	34:84:76:TYR:HB2	2.07	0.55
5:L5:277:LEU:HB2	5:L5:282:ARG:HG3	1.88	0.55
79:2S:2873:U:O2'	79:2S:2874:G:H5'	2.06	0.55
79:2S:1583:A:H3'	79:2S:1584:U:H6	1.72	0.55
17:67:171:ARG:HD2	79:2S:3274:A:OP2	2.07	0.55
78:1S:1386:G:H2'	78:1S:1387:G:C8	2.42	0.55
44:P0:46:ARG:NH2	79:2S:1257:C:H4'	2.12	0.54
5:L5:64:ILE:H	5:L5:64:ILE:HD12	1.72	0.54
10:60:200:LEU:CD1	10:60:209:ASN:HD21	2.15	0.54
59:13:99:ARG:HH22	59:13:102:LEU:HD12	1.72	0.54
16:66:136:THR:HG22	16:66:137:THR:H	1.71	0.54
2:L2:247:ARG:HG2	2:L2:247:ARG:HH11	1.72	0.54
78:1S:1690:G:H21	78:1S:1712:A:N6	2.05	0.54
18:68:71:LEU:HD21	18:68:99:THR:HG21	1.89	0.54
47:S1:107:THR:HA	47:S1:110:LEU:HD22	1.89	0.54
79:2S:2344:U:H2'	79:2S:2345:A:H8	1.71	0.54
79:2S:3108:G:H2'	79:2S:3109:G:O4'	2.07	0.54
78:1S:822:U:H3'	78:1S:823:G:H5''	1.89	0.54
4:L4:135:VAL:HG12	4:L4:140:HIS:HB2	1.88	0.54
1:L1:136:THR:HB	1:L1:137:PRO:HD3	1.87	0.54
46:S0:183:ARG:HG3	46:S0:188:LEU:HG	1.88	0.54
79:2S:1138:U:H2'	79:2S:1139:G:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:434:U:H2'	79:2S:435:C:C6	2.41	0.54
50:S4:37:LYS:HD2	78:1S:297:U:H5''	1.89	0.54
49:S3:148:LYS:HB3	49:S3:148:LYS:NZ	2.22	0.54
10:60:23:ASN:N	10:60:23:ASN:HD22	2.05	0.54
46:S0:119:ARG:HA	46:S0:119:ARG:HE	1.72	0.54
21:71:39:ILE:HD12	21:71:102:ARG:HB2	1.88	0.54
39:89:6:SER:OG	39:89:9:ILE:HG12	2.07	0.54
10:60:145:LYS:O	10:60:149:VAL:HG23	2.07	0.54
78:1S:1692:G:H2'	78:1S:1693:A:C8	2.43	0.54
2:L2:74:GLU:HB3	2:L2:76:PHE:CE1	2.38	0.54
58:12:24:ILE:O	58:12:25:GLU:HB2	2.06	0.54
78:1S:1533:C:H4'	78:1S:1539:G:H1	1.71	0.54
79:2S:1813:A:H2'	79:2S:1814:A:H5'	1.89	0.54
69:23:142:LYS:HG2	69:23:143:PRO:CD	2.38	0.54
78:1S:1458:G:N3	78:1S:1458:G:H2'	2.22	0.54
15:65:66:VAL:O	15:65:127:TYR:HA	2.07	0.54
15:65:3:ALA:O	15:65:7:LEU:HD13	2.06	0.54
42:92:37:ALA:HB3	42:92:40:LYS:CB	2.37	0.54
63:17:100:LEU:HD22	63:17:117:LEU:HB3	1.88	0.54
49:S3:164:VAL:O	49:S3:168:ILE:HG13	2.07	0.54
68:22:73:GLY:HA3	68:22:128:PHE:CZ	2.42	0.54
69:23:109:ARG:HB3	69:23:112:LYS:HB2	1.88	0.54
18:68:60:PRO:HB2	18:68:142:GLY:HA3	1.89	0.54
72:26:4:LYS:HE3	72:26:5:ARG:HH21	1.71	0.54
78:1S:1151:A:H4'	78:1S:1766:A:N7	2.21	0.54
44:P0:99:VAL:HA	44:P0:103:ASN:HD22	1.72	0.54
5:L5:202:GLY:O	5:L5:206:GLN:HB2	2.08	0.54
51:S5:149:VAL:HG13	51:S5:149:VAL:O	2.07	0.54
8:L8:99:PRO:HB2	8:L8:190:VAL:HG23	1.89	0.54
78:1S:967:A:H2'	78:1S:968:U:C6	2.42	0.54
79:2S:599:C:C3'	79:2S:600:G:H5''	2.37	0.54
45:RC:157:VAL:HG11	45:RC:225:LEU:HD22	1.88	0.54
30:80:18:ILE:HG12	30:80:81:VAL:HA	1.88	0.54
79:2S:3163:A:C3'	79:2S:3164:C:H5''	2.36	0.54
28:78:2:PRO:HD2	28:78:5:PHE:HB2	1.90	0.54
51:S5:58:LEU:HD13	51:S5:138:THR:HG22	1.89	0.54
79:2S:2261:G:H21	79:2S:2262:A:N6	2.04	0.54
29:79:23:LYS:HG3	79:2S:982:C:H5''	1.89	0.54
49:S3:54:ARG:HD2	49:S3:57:ASP:HB2	1.88	0.54
78:1S:1723:U:H2'	78:1S:1724:U:C6	2.43	0.54
46:S0:129:ASP:O	46:S0:133:ILE:HD13	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:15:124:THR:HG21	78:1S:1182:U:H4'	1.90	0.54
4:L4:60:THR:HG22	4:L4:62:ALA:H	1.72	0.54
31:81:27:LYS:O	31:81:31:ARG:HB2	2.07	0.54
78:1S:406:U:H2'	78:1S:407:A:C8	2.42	0.54
9:L9:12:VAL:O	9:L9:51:GLN:HB3	2.07	0.54
8:L8:53:PRO:HB2	8:L8:55:TYR:CD2	2.43	0.54
78:1S:1506:G:H2'	78:1S:1507:G:C8	2.42	0.54
54:S8:76:THR:HG22	54:S8:108:PRO:CG	2.26	0.54
26:76:17:LYS:CG	80:8S:23:U:H4'	2.36	0.54
5:L5:64:ILE:HD11	5:L5:105:ILE:HG23	1.89	0.54
4:L4:322:GLN:CB	79:2S:608:A:H5'	2.37	0.54
17:67:3:ARG:HG3	79:2S:398:A:C5'	2.37	0.54
47:S1:127:VAL:HB	47:S1:173:THR:HG22	1.88	0.54
79:2S:2609:A:H2'	79:2S:2610:G:C8	2.41	0.54
45:RC:176:LYS:HE3	45:RC:197:SER:HA	1.90	0.54
65:19:49:ASP:O	65:19:50:ALA:HB3	2.07	0.54
2:L2:42:ARG:HD2	2:L2:87:PHE:HB3	1.89	0.54
7:L7:224:ILE:HD11	20:70:35:VAL:HG12	1.89	0.54
30:80:16:LEU:HA	30:80:19:LYS:HE2	1.89	0.54
77:31:119:ARG:HE	77:31:139:LEU:HD21	1.72	0.54
54:S8:10:LYS:HB2	54:S8:10:LYS:NZ	2.23	0.54
3:L3:362:ALA:HB1	3:L3:368:GLY:HA3	1.88	0.54
49:S3:170:THR:HA	49:S3:186:VAL:O	2.07	0.54
78:1S:1116:A:H2'	78:1S:1117:U:C6	2.43	0.54
69:23:144:ARG:HD2	69:23:145:SER:H	1.71	0.54
60:14:20:TYR:HB3	60:14:27:PHE:HB2	1.88	0.54
18:68:158:HIS:H	18:68:186:VAL:CG1	2.21	0.54
56:10:77:ARG:HH21	56:10:86:ILE:HD11	1.73	0.54
53:S7:97:ARG:O	53:S7:98:ILE:HB	2.08	0.54
79:2S:987:U:H2'	79:2S:988:U:C6	2.43	0.54
1:L1:120:VAL:H	1:L1:121:PRO:CD	2.20	0.54
59:13:90:TYR:CD2	78:1S:869:A:H5''	2.43	0.54
79:2S:1014:U:H2'	79:2S:1015:U:H5''	1.89	0.54
78:1S:1419:G:H2'	78:1S:1420:C:O4'	2.07	0.54
82:ET:9:G:H1'	82:ET:46:G:H2'	1.88	0.54
79:2S:2456:A:C2'	79:2S:2457:G:H5'	2.38	0.54
50:S4:192:ILE:HD13	50:S4:228:ILE:CD1	2.38	0.54
52:S6:59:GLN:HA	78:1S:155:U:H4'	1.88	0.54
79:2S:1913:A:C2	79:2S:2120:A:H2'	2.43	0.54
65:19:31:PRO:HD2	65:19:34:VAL:HB	1.90	0.54
25:75:62:VAL:HG13	25:75:90:ALA:HB2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:64:103:ILE:O	14:64:106:ARG:HG2	2.08	0.54
53:S7:109:VAL:HG13	53:S7:110:GLN:H	1.72	0.54
20:70:38:LYS:HE2	20:70:61:ILE:HG12	1.90	0.54
79:2S:1221:A:H3'	79:2S:1222:G:C5'	2.36	0.54
4:L4:35:VAL:HG21	4:L4:244:LEU:HD21	1.90	0.54
67:21:62:ARG:HB3	67:21:64:GLU:HG2	1.90	0.54
61:15:52:LYS:H	61:15:53:PRO:HD2	1.73	0.54
39:89:36:ARG:HG2	39:89:36:ARG:HH11	1.72	0.54
79:2S:2593:A:N3	79:2S:2593:A:H2'	2.21	0.54
27:77:17:ARG:C	27:77:19:ALA:H	2.10	0.54
78:1S:870:C:H2'	78:1S:871:G:H8	1.73	0.54
65:19:15:ILE:HD13	65:19:60:SER:HB2	1.90	0.54
3:L3:56:ILE:HD11	3:L3:359:ILE:HG23	1.89	0.54
10:60:56:GLU:HA	10:60:131:ILE:HG12	1.89	0.54
70:24:35:VAL:HG13	70:24:36:SER:N	2.22	0.54
50:S4:195:ILE:HA	50:S4:210:ILE:HD13	1.89	0.54
7:L7:88:ARG:HH21	7:L7:92:ILE:HA	1.73	0.54
78:1S:1525:A:H3'	78:1S:1526:A:H8	1.71	0.54
7:L7:140:SER:O	7:L7:144:ILE:HG13	2.08	0.54
79:2S:1818:U:C3'	79:2S:1819:U:H5''	2.38	0.54
23:73:33:ASN:HD21	23:73:64:LYS:H	1.54	0.54
79:2S:3199:G:H2'	79:2S:3200:G:H8	1.73	0.54
49:S3:209:ILE:HG22	63:17:38:ILE:CG1	2.38	0.54
78:1S:114:C:H42	78:1S:245:U:H1'	1.72	0.54
10:60:46:PHE:CD1	10:60:140:THR:HA	2.43	0.54
73:27:81:ARG:O	73:27:82:LYS:HB2	2.08	0.54
25:75:115:ARG:NE	25:75:121:LYS:HB2	2.23	0.54
76:30:49:LEU:HD12	76:30:51:ASN:HB2	1.88	0.54
79:2S:2181:C:H2'	79:2S:2182:A:C8	2.43	0.54
6:L6:52:VAL:CG2	6:L6:65:ILE:HB	2.38	0.54
69:23:26:GLU:O	69:23:30:LYS:HB2	2.08	0.54
49:S3:211:PRO:HG3	63:17:20:TYR:CE1	2.39	0.54
9:L9:48:VAL:HG13	9:L9:49:ASN:N	2.23	0.54
13:63:29:ALA:HB2	15:65:201:ARG:HH12	1.73	0.54
3:L3:232:ARG:HH11	3:L3:268:GLY:N	2.05	0.54
47:S1:29:TRP:CD1	47:S1:47:LEU:HD23	2.43	0.54
61:15:52:LYS:HB2	61:15:53:PRO:HD3	1.90	0.54
3:L3:16:PHE:CD2	79:2S:3045:G:H4'	2.43	0.54
14:64:108:ARG:HG2	14:64:108:ARG:HH21	1.73	0.54
21:71:53:PRO:HB3	21:71:91:LEU:CD1	2.38	0.54
78:1S:947:U:H2'	78:1S:948:G:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:30:38:LEU:O	76:30:42:ARG:HB2	2.07	0.54
48:S2:148:LEU:O	67:21:3:ASN:HB2	2.07	0.54
78:1S:316:A:H2'	78:1S:317:C:C6	2.43	0.54
78:1S:698:U:H2'	78:1S:699:U:O4'	2.07	0.54
79:2S:725:G:C3'	79:2S:726:G:H5''	2.38	0.54
78:1S:1656:U:H3'	78:1S:1657:U:C5'	2.35	0.54
35:85:85:THR:C	35:85:89:ARG:HE	2.10	0.54
7:L7:80:GLN:HB2	21:71:135:PRO:CB	2.37	0.54
55:S9:162:SER:HB2	55:S9:163:PRO:HD2	1.90	0.54
18:68:67:ILE:O	18:68:71:LEU:HG	2.08	0.54
18:68:16:ARG:HD2	18:68:53:PHE:O	2.08	0.54
55:S9:175:ARG:O	55:S9:175:ARG:HD2	2.07	0.54
7:L7:91:GLY:O	7:L7:92:ILE:HB	2.08	0.54
18:68:170:ARG:HB2	28:78:56:VAL:HG11	1.90	0.54
78:1S:1291:G:H2'	78:1S:1292:G:C8	2.41	0.54
51:S5:187:ILE:HD12	51:S5:187:ILE:N	2.21	0.54
45:RC:32:LEU:HD21	45:RC:94:VAL:HG11	1.90	0.54
37:87:31:LYS:HZ1	79:2S:815:G:H5''	1.73	0.54
32:82:26:HIS:HD2	79:2S:655:C:H5'	1.72	0.54
19:69:61:SER:HB3	79:2S:1689:U:H5''	1.90	0.54
3:L3:260:VAL:HG21	79:2S:2987:A:C2	2.43	0.54
79:2S:1240:A:H61	79:2S:1244:A:H5''	1.72	0.54
3:L3:50:LYS:HG3	3:L3:328:ILE:HD12	1.89	0.54
21:71:17:ARG:O	21:71:18:ASP:HB2	2.07	0.54
15:65:15:GLN:HG3	36:86:51:SER:HB2	1.90	0.54
45:RC:227:ALA:HB1	45:RC:229:LYS:NZ	2.23	0.54
13:63:174:ARG:O	13:63:178:LYS:HB2	2.07	0.54
78:1S:1746:A:H2'	78:1S:1747:G:O4'	2.08	0.54
64:18:57:ARG:O	64:18:61:LEU:HD23	2.08	0.54
45:RC:235:SER:HB3	45:RC:237:GLN:HE21	1.73	0.54
79:2S:1739:U:H2'	79:2S:1740:U:H5'	1.90	0.54
41:91:22:ALA:HA	41:91:25:LYS:HE2	1.89	0.54
68:22:10:ALA:O	68:22:14:ILE:HG13	2.07	0.54
59:13:45:LEU:HD12	59:13:49:GLN:HB3	1.90	0.54
79:2S:1653:G:H2'	79:2S:1654:A:H8	1.73	0.54
20:70:7:TYR:CE1	20:70:63:GLN:HB2	2.43	0.54
71:25:77:ARG:HB3	71:25:81:ARG:NH1	2.23	0.54
59:13:129:TYR:HA	59:13:132:VAL:HG22	1.90	0.54
79:2S:2056:U:C2'	79:2S:2057:G:H5'	2.38	0.54
54:S8:110:ARG:HE	54:S8:121:LEU:HD21	1.73	0.54
78:1S:843:U:H2'	78:1S:844:A:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:68:58:ASN:C	18:68:60:PRO:HD3	2.29	0.54
8:L8:99:PRO:HG2	8:L8:190:VAL:HG23	1.89	0.54
5:L5:11:ALA:HB1	79:2S:1003:A:H5'	1.89	0.54
78:1S:158:U:H3'	78:1S:159:U:H5''	1.89	0.54
35:85:29:ALA:O	35:85:33:VAL:HG23	2.08	0.54
79:2S:790:U:H2'	79:2S:791:A:C8	2.42	0.54
16:66:6:VAL:HG13	16:66:32:LYS:HB2	1.90	0.54
53:S7:143:LEU:HD13	53:S7:144:VAL:H	1.73	0.54
78:1S:849:C:H2'	78:1S:850:A:C8	2.43	0.54
17:67:64:ASN:O	17:67:80:LYS:HD2	2.08	0.54
54:S8:8:ARG:HD3	54:S8:21:PHE:HB3	1.90	0.54
75:29:5:ASN:HD22	75:29:8:PHE:HB2	1.72	0.54
52:S6:185:GLN:O	52:S6:189:HIS:HB2	2.08	0.54
79:2S:79:U:H2'	79:2S:80:G:C8	2.42	0.54
67:21:56:SER:OG	67:21:59:VAL:HG23	2.08	0.54
78:1S:712:G:H2'	78:1S:713:A:C5'	2.24	0.54
52:S6:63:MET:HG2	52:S6:98:ARG:HB3	1.90	0.54
23:73:39:VAL:O	79:2S:2931:C:H4'	2.08	0.54
61:15:22:LEU:H	61:15:22:LEU:CD2	2.21	0.54
79:2S:3317:U:H4'	79:2S:3318:G:C5'	2.37	0.54
18:68:170:ARG:HD2	28:78:56:VAL:HG21	1.90	0.54
32:82:4:LEU:CD1	32:82:5:PRO:HD2	2.38	0.54
10:60:40:LYS:HD2	10:60:40:LYS:N	2.22	0.54
55:S9:49:LEU:CD1	55:S9:53:ARG:HD3	2.37	0.54
21:71:49:GLN:HG2	79:2S:2755:C:O2'	2.08	0.54
68:22:41:MET:HB2	68:22:47:ILE:HG12	1.90	0.54
6:L6:80:ASN:HB3	6:L6:83:TYR:HD2	1.72	0.54
4:L4:210:ALA:HA	4:L4:230:VAL:HG23	1.90	0.54
51:S5:89:ILE:HD12	51:S5:90:ILE:HG12	1.88	0.54
79:2S:2904:U:H2'	79:2S:2905:U:C6	2.43	0.54
32:82:50:ILE:HG22	79:2S:426:G:H4'	1.89	0.54
37:87:21:ARG:NH2	37:87:39:TYR:HA	2.23	0.54
39:89:15:LYS:HE3	39:89:19:GLN:NE2	2.23	0.54
60:14:22:SER:HA	60:14:95:GLY:N	2.23	0.54
5:L5:286:VAL:HG11	81:5S:64:A:H1'	1.89	0.54
78:1S:572:C:H2'	78:1S:573:C:C6	2.42	0.54
78:1S:588:U:H2'	78:1S:589:C:C6	2.43	0.54
19:69:92:GLN:O	19:69:96:ILE:HG13	2.08	0.54
4:L4:350:LYS:CG	4:L4:351:PRO:HD2	2.37	0.53
14:64:32:LEU:O	14:64:48:GLY:HA3	2.08	0.53
56:10:4:PRO:HG2	56:10:7:ASP:OD1	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L2:34:TYR:HA	2:L2:37:ARG:NH2	2.22	0.53
68:22:83:ILE:HD13	78:1S:749:U:OP1	2.08	0.53
51:S5:183:ALA:CB	51:S5:190:ILE:HD13	2.38	0.53
79:2S:877:C:H2'	79:2S:878:G:O4'	2.07	0.53
78:1S:1569:A:H2'	78:1S:1570:A:C8	2.43	0.53
26:76:70:ILE:H	26:76:70:ILE:HD12	1.72	0.53
78:1S:694:U:H5''	78:1S:695:U:H5	1.73	0.53
79:2S:435:C:H2'	79:2S:436:A:C8	2.42	0.53
79:2S:1509:A:H2'	79:2S:1510:G:O4'	2.08	0.53
79:2S:380:U:H2'	79:2S:381:U:C6	2.43	0.53
27:77:72:ILE:H	27:77:111:LYS:HE2	1.73	0.53
73:27:50:ALA:O	73:27:51:GLN:HB2	2.07	0.53
29:79:47:LEU:O	29:79:50:THR:HG22	2.08	0.53
78:1S:586:G:H2'	78:1S:587:C:C6	2.43	0.53
9:L9:16:VAL:HG12	9:L9:29:GLY:HA2	1.89	0.53
42:92:12:CYS:HB2	42:92:23:HIS:CE1	2.43	0.53
71:25:93:SER:HB2	71:25:100:ILE:H	1.72	0.53
7:L7:125:GLU:HG3	79:2S:987:U:H5'	1.90	0.53
82:ET:9:G:H4'	82:ET:47:G:H5'	1.90	0.53
54:S8:172:ARG:HB3	54:S8:175:GLN:HB2	1.90	0.53
79:2S:1234:G:H2'	79:2S:1235:U:C5	2.42	0.53
79:2S:1055:A:H1'	81:5S:81:U:O2'	2.08	0.53
20:70:72:VAL:HA	20:70:97:VAL:HA	1.88	0.53
46:S0:144:ILE:HG23	46:S0:158:VAL:HG13	1.90	0.53
41:91:19:LYS:HD2	41:91:19:LYS:N	2.23	0.53
47:S1:29:TRP:HD1	47:S1:47:LEU:HD23	1.73	0.53
78:1S:1662:G:H2'	78:1S:1663:G:C8	2.43	0.53
79:2S:3302:U:H3	79:2S:3312:U:H3	1.55	0.53
49:S3:8:LYS:O	49:S3:12:VAL:HG23	2.09	0.53
51:S5:153:GLY:HA2	83:MR:2:A:C8	2.43	0.53
35:85:16:GLN:O	35:85:20:GLN:HB2	2.08	0.53
60:14:63:ALA:O	60:14:67:VAL:HG23	2.07	0.53
78:1S:1186:U:H2'	78:1S:1187:U:O4'	2.08	0.53
78:1S:1025:A:H5''	78:1S:1027:A:N7	2.23	0.53
5:L5:208:MET:HA	5:L5:219:PHE:HE2	1.73	0.53
80:8S:114:G:H2'	80:8S:115:C:C6	2.43	0.53
15:65:158:HIS:CG	79:2S:56:G:H4'	2.44	0.53
26:76:17:LYS:HG2	80:8S:23:U:C4'	2.35	0.53
59:13:23:PRO:O	59:13:24:ALA:HB3	2.08	0.53
78:1S:922:G:H2'	78:1S:923:A:H8	1.73	0.53
15:65:122:ASN:HB3	15:65:129:TYR:HD2	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S3:174:HIS:O	49:S3:176:LEU:HD12	2.09	0.53
33:83:70:LYS:HE2	79:2S:585:A:H5''	1.89	0.53
40:90:125:LYS:HD2	79:2S:2897:A:C5'	2.38	0.53
21:71:26:HIS:HB2	81:5S:9:C:OP1	2.08	0.53
26:76:56:VAL:HG22	26:76:57:LEU:H	1.72	0.53
68:22:31:SER:O	68:22:35:ILE:HG12	2.08	0.53
82:PT:70:C:H2'	82:PT:71:G:C8	2.43	0.53
78:1S:353:A:H2'	78:1S:354:C:O4'	2.07	0.53
61:15:83:MET:O	61:15:116:LEU:HG	2.08	0.53
74:28:36:THR:HG23	74:28:37:SER:H	1.73	0.53
37:87:51:ALA:O	37:87:55:ARG:HB2	2.08	0.53
73:27:72:LYS:HD3	73:27:73:LEU:N	2.23	0.53
54:S8:5:ARG:HH11	54:S8:5:ARG:HG3	1.73	0.53
79:2S:1951:C:H6	79:2S:2095:G:N1	2.02	0.53
63:17:103:ASP:OD1	63:17:122:ILE:HG21	2.08	0.53
65:19:72:GLY:HA3	78:1S:1498:G:OP1	2.09	0.53
78:1S:397:A:H2'	78:1S:398:G:O4'	2.07	0.53
19:69:102:LEU:HD13	19:69:138:LEU:HD12	1.90	0.53
51:S5:189:THR:HB	71:25:97:LYS:HZ3	1.72	0.53
18:68:170:ARG:NH1	28:78:56:VAL:HG21	2.23	0.53
66:20:118:VAL:HG22	66:20:119:ALA:H	1.72	0.53
79:2S:2949:U:C2'	79:2S:2950:G:H5'	2.37	0.53
5:L5:72:ASP:OD1	81:5S:7:G:H1'	2.08	0.53
52:S6:84:TYR:HD2	52:S6:95:LYS:HD2	1.73	0.53
79:2S:2173:U:H3'	79:2S:2174:G:H2'	1.90	0.53
79:2S:2882:U:H2'	79:2S:2883:U:C6	2.42	0.53
13:63:128:ARG:HG3	35:85:114:ARG:NH1	2.24	0.53
36:86:4:LYS:HG3	36:86:15:LYS:O	2.08	0.53
79:2S:1505:C:H2'	79:2S:1506:A:C8	2.43	0.53
67:21:86:SER:HA	73:27:6:ASP:CB	2.39	0.53
78:1S:1260:U:H2'	78:1S:1261:G:C8	2.43	0.53
80:8S:104:A:OP2	80:8S:105:A:H2'	2.09	0.53
55:S9:13:SER:HB2	55:S9:47:PHE:CD1	2.42	0.53
34:84:39:ALA:HB2	34:84:58:ARG:CD	2.38	0.53
33:83:59:VAL:HG23	33:83:60:ARG:N	2.22	0.53
10:60:131:ILE:HD11	81:5S:93:C:H4'	1.90	0.53
71:25:65:LEU:HB3	71:25:71:ILE:HD11	1.90	0.53
61:15:98:ASN:HB3	61:15:120:SER:OG	2.09	0.53
79:2S:2060:A:H2'	79:2S:2061:G:C5'	2.39	0.53
17:67:41:LEU:O	17:67:45:GLN:HG3	2.09	0.53
51:S5:76:ARG:HD2	62:16:122:ARG:NE	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:482:U:H2'	78:1S:483:A:H8	1.74	0.53
32:82:11:LYS:C	32:82:13:HIS:H	2.11	0.53
58:12:98:GLY:O	58:12:103:LEU:HD11	2.08	0.53
78:1S:1414:U:H2'	78:1S:1414:U:O2	2.09	0.53
78:1S:981:U:H2'	78:1S:982:U:H5'	1.91	0.53
79:2S:1158:A:H2'	79:2S:1159:A:H4'	1.90	0.53
79:2S:700:C:H2'	79:2S:701:G:C8	2.44	0.53
71:25:47:TYR:O	71:25:51:LEU:HD13	2.09	0.53
45:RC:128:ASP:O	45:RC:129:LYS:HG2	2.09	0.53
46:S0:84:ARG:O	46:S0:88:LYS:HD2	2.09	0.53
78:1S:560:U:H2'	78:1S:561:G:C8	2.43	0.53
51:S5:184:PHE:CD2	51:S5:185:ARG:HG3	2.44	0.53
30:80:66:LYS:HD3	30:80:66:LYS:N	2.24	0.53
20:70:171:PHE:HD1	20:70:171:PHE:H	1.57	0.53
79:2S:200:C:H5'	79:2S:221:A:C2	2.43	0.53
68:22:15:ASN:O	68:22:19:LYS:HG3	2.08	0.53
1:L1:169:VAL:CG1	1:L1:170:GLY:H	2.20	0.53
68:22:103:ILE:HD11	68:22:110:ILE:CG2	2.39	0.53
10:60:36:LEU:HD23	10:60:73:ASN:HD22	1.73	0.53
64:18:111:ASP:O	64:18:115:ARG:HB2	2.08	0.53
47:S1:148:ASN:N	47:S1:148:ASN:HD22	1.96	0.53
46:S0:184:LEU:O	46:S0:185:ARG:HB3	2.08	0.53
8:L8:101:THR:HG22	8:L8:104:GLU:CG	2.39	0.53
46:S0:148:ASP:HB2	46:S0:164:ASN:ND2	2.22	0.53
26:76:50:ILE:HD13	26:76:51:ARG:N	2.24	0.53
61:15:34:VAL:HG11	61:15:45:PHE:HB2	1.91	0.53
59:13:129:TYR:O	59:13:134:VAL:HG22	2.07	0.53
62:16:49:TYR:O	62:16:53:LEU:HG	2.09	0.53
47:S1:61:LEU:HD13	47:S1:61:LEU:N	2.23	0.53
69:23:32:ARG:HH12	78:1S:375:U:H5''	1.72	0.53
22:72:96:VAL:HG12	22:72:97:SER:N	2.22	0.53
44:P0:15:LEU:HD21	44:P0:52:LEU:HD12	1.91	0.53
79:2S:3017:A:H2'	79:2S:3018:C:H6	1.74	0.53
69:23:109:ARG:HH21	69:23:112:LYS:HG3	1.74	0.53
65:19:97:SER:HB2	78:1S:1504:G:OP1	2.09	0.53
79:2S:2812:C:H2'	79:2S:2813:A:C8	2.44	0.53
48:S2:54:GLU:O	48:S2:58:LEU:HB2	2.08	0.53
79:2S:1726:C:H2'	79:2S:1727:G:H8	1.73	0.53
79:2S:1548:C:C5	79:2S:1549:U:H1'	2.44	0.53
79:2S:2043:U:H2'	79:2S:2044:U:O4'	2.08	0.53
21:71:95:HIS:HB2	21:71:96:ILE:HD12	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:5S:75:G:H1'	81:5S:104:A:N6	2.22	0.53
55:S9:144:PRO:HD2	78:1S:474:A:H5''	1.91	0.53
24:74:23:ARG:HB2	24:74:29:PHE:HE2	1.74	0.53
65:19:29:GLU:OE2	65:19:110:LYS:HD2	2.09	0.53
6:L6:55:LEU:HD11	6:L6:66:SER:OG	2.09	0.53
53:S7:142:TYR:O	68:22:49:GLU:HB2	2.08	0.53
2:L2:177:LYS:HD3	43:93:29:LEU:HD12	1.90	0.53
78:1S:487:G:H22	78:1S:500:C:H42	1.55	0.53
38:88:8:ILE:HD12	38:88:8:ILE:N	2.23	0.53
39:89:6:SER:HB2	80:8S:113:U:OP2	2.08	0.53
8:L8:124:ASP:HA	79:2S:120:G:H22	1.72	0.53
11:61:166:LYS:O	11:61:167:TYR:HB2	2.09	0.53
61:15:97:TYR:HB2	61:15:102:PHE:CE1	2.44	0.53
79:2S:3203:U:H2'	79:2S:3204:C:C6	2.44	0.53
79:2S:2920:U:H2'	79:2S:2921:U:C6	2.44	0.53
81:5S:24:A:H2'	81:5S:25:G:O4'	2.09	0.53
29:79:39:PHE:O	29:79:43:HIS:HB2	2.08	0.53
78:1S:1760:G:O2'	78:1S:1761:U:H5'	2.08	0.53
79:2S:2809:C:H5''	79:2S:2956:A:H4'	1.91	0.53
22:72:84:LEU:HD13	22:72:90:ARG:CD	2.39	0.53
22:72:84:LEU:HD13	22:72:90:ARG:HD2	1.91	0.53
28:78:36:GLY:HA2	28:78:39:HIS:CD2	2.43	0.53
47:S1:164:ILE:O	47:S1:168:ILE:HG13	2.09	0.53
78:1S:1686:C:C2'	78:1S:1687:U:H5'	2.38	0.53
4:L4:317:PRO:HG2	7:L7:149:TYR:CD2	2.41	0.53
1:L1:17:LEU:HD13	1:L1:215:ARG:O	2.09	0.53
61:15:90:ILE:HG12	61:15:107:ILE:HG22	1.90	0.53
50:S4:210:ILE:HB	50:S4:218:PHE:CE1	2.44	0.53
50:S4:193:GLY:HA3	50:S4:210:ILE:HG22	1.90	0.53
28:78:56:VAL:HG23	28:78:57:GLY:N	2.24	0.53
79:2S:308:A:H5'	79:2S:2223:A:O2'	2.08	0.53
15:65:10:LEU:O	15:65:19:LEU:HD21	2.08	0.53
65:19:52:GLY:HA2	65:19:55:TYR:CE2	2.43	0.53
79:2S:1921:A:H2'	79:2S:1922:A:H8	1.74	0.53
79:2S:3016:A:H2'	79:2S:3017:A:H8	1.74	0.53
36:86:56:ARG:O	36:86:60:LEU:HB2	2.09	0.53
78:1S:1486:G:H8	78:1S:1593:A:H5'	1.73	0.53
5:L5:157:ALA:HA	81:5S:46:A:OP1	2.09	0.53
78:1S:705:U:H2'	78:1S:706:A:H8	1.74	0.53
81:5S:56:A:H2'	81:5S:57:G:H8	1.72	0.53
79:2S:1338:C:H2'	79:2S:1339:C:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:918:U:H2'	78:1S:919:A:C8	2.43	0.53
18:68:65:SER:HB3	18:68:90:ASP:OD2	2.08	0.53
3:L3:154:TYR:O	3:L3:155:ALA:HB3	2.08	0.53
73:27:54:VAL:O	73:27:62:ILE:HD12	2.09	0.53
60:14:124:ASP:O	60:14:125:SER:HB2	2.09	0.53
79:2S:85:A:H61	79:2S:99:A:H3'	1.74	0.53
51:S5:184:PHE:HD2	51:S5:185:ARG:HG3	1.73	0.53
80:8S:98:U:H2'	80:8S:99:C:H5'	1.91	0.53
79:2S:2279:A:H2	79:2S:2305:G:N7	2.07	0.53
79:2S:241:G:C2'	79:2S:242:C:H5'	2.39	0.53
31:81:46:THR:HG21	31:81:91:SER:OG	2.08	0.53
51:S5:172:ILE:O	51:S5:176:THR:HG23	2.09	0.53
4:L4:212:ASP:OD1	4:L4:216:VAL:HG13	2.09	0.53
15:65:150:TRP:HE3	15:65:156:HIS:NE2	2.07	0.53
79:2S:2675:C:O5'	79:2S:2675:C:H6	1.92	0.53
48:S2:238:SER:HB3	48:S2:241:ASP:OD2	2.08	0.53
79:2S:866:A:H3'	79:2S:867:G:H8	1.74	0.53
53:S7:11:GLN:HG3	53:S7:13:PRO:CD	2.35	0.53
79:2S:398:A:H1'	79:2S:1416:C:OP1	2.08	0.53
79:2S:2611:U:H2'	79:2S:2612:U:C6	2.44	0.53
80:8S:107:G:H2'	80:8S:108:C:H6	1.72	0.53
80:8S:41:A:N6	80:8S:103:G:H1'	2.21	0.53
44:P0:91:GLU:CD	44:P0:96:ILE:HD11	2.30	0.53
66:20:109:GLU:OE1	66:20:110:PRO:HD2	2.08	0.53
79:2S:2949:U:O2'	79:2S:2950:G:H5'	2.08	0.53
20:70:61:ILE:HG13	20:70:61:ILE:O	2.08	0.53
44:P0:82:GLY:O	79:2S:1282:G:H4'	2.08	0.53
15:65:165:THR:O	15:65:169:LYS:HG3	2.09	0.53
6:L6:155:LEU:O	6:L6:155:LEU:HD13	2.09	0.53
79:2S:1117:G:H2'	79:2S:1118:C:C6	2.44	0.53
21:71:53:PRO:HB3	21:71:91:LEU:HD13	1.91	0.53
4:L4:241:GLY:HA2	79:2S:1382:G:H21	1.72	0.53
79:2S:2444:C:H2'	79:2S:2445:A:O4'	2.09	0.53
17:67:47:TYR:O	17:67:51:VAL:HG23	2.08	0.53
78:1S:1164:G:H2'	78:1S:1165:G:C8	2.44	0.53
59:13:88:LEU:HA	59:13:91:LEU:HD12	1.91	0.53
79:2S:810:A:H2'	79:2S:811:U:C6	2.44	0.53
78:1S:1765:A:H8	78:1S:1768:G:H22	1.54	0.53
75:29:31:ILE:HG22	75:29:33:LYS:H	1.73	0.53
79:2S:2476:C:H2'	79:2S:2477:G:C4'	2.22	0.52
7:L7:60:ARG:HH21	7:L7:63:ILE:HD12	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:16:74:HIS:O	62:16:78:VAL:HG23	2.09	0.52
68:22:85:ASP:O	68:22:89:TRP:HD1	1.92	0.52
47:S1:148:ASN:CB	63:17:126:ALA:HB3	2.40	0.52
19:69:139:VAL:O	19:69:143:ILE:HG13	2.10	0.52
60:14:23:PHE:CE2	60:14:91:THR:HG21	2.42	0.52
79:2S:2590:A:H2'	79:2S:2591:A:C8	2.44	0.52
73:27:59:CYS:O	73:27:61:THR:HG22	2.07	0.52
28:78:126:LYS:HB3	28:78:148:ILE:HD13	1.89	0.52
15:65:35:VAL:O	15:65:64:VAL:HA	2.09	0.52
46:S0:71:GLU:HA	46:S0:95:ALA:HA	1.90	0.52
15:65:39:ALA:HB3	15:65:61:ILE:HG22	1.90	0.52
49:S3:5:ILE:HG22	49:S3:6:SER:H	1.72	0.52
43:93:59:CYS:O	43:93:60:CYS:HB3	2.09	0.52
47:S1:117:TRP:HB3	47:S1:153:HIS:HA	1.90	0.52
78:1S:223:U:H2'	78:1S:224:C:C6	2.44	0.52
79:2S:3146:G:H2'	79:2S:3147:G:C8	2.44	0.52
18:68:58:ASN:O	18:68:60:PRO:HD3	2.07	0.52
18:68:180:ARG:HD2	18:68:185:LYS:HB2	1.91	0.52
24:74:52:THR:O	24:74:56:ARG:HG2	2.09	0.52
23:73:61:THR:HG22	23:73:72:LYS:O	2.08	0.52
9:L9:8:GLN:HG2	9:L9:68:LEU:CD1	2.39	0.52
51:S5:150:GLY:HA2	51:S5:155:ALA:HA	1.91	0.52
51:S5:163:SER:O	51:S5:167:ARG:HG3	2.08	0.52
4:L4:304:GLN:O	4:L4:305:ALA:HB3	2.09	0.52
3:L3:68:HIS:O	3:L3:69:LYS:HB2	2.09	0.52
51:S5:186:ASN:ND2	51:S5:188:LYS:HB2	2.24	0.52
46:S0:197:ILE:HD12	46:S0:197:ILE:H	1.74	0.52
79:2S:1439:U:H6	79:2S:1439:U:O5'	1.91	0.52
70:24:20:ARG:HD2	70:24:74:LEU:HD22	1.91	0.52
68:22:24:GLN:HB3	68:22:64:GLN:NE2	2.21	0.52
59:13:99:ARG:NE	59:13:99:ARG:HA	2.25	0.52
17:67:22:LEU:C	17:67:24:VAL:H	2.13	0.52
48:S2:53:ILE:HG23	48:S2:56:ILE:HD12	1.90	0.52
21:71:20:ARG:HB3	21:71:20:ARG:HH11	1.74	0.52
32:82:4:LEU:HD13	32:82:90:LYS:HE3	1.92	0.52
79:2S:1525:G:N3	79:2S:1525:G:H2'	2.24	0.52
49:S3:105:MET:O	49:S3:109:LEU:HG	2.08	0.52
47:S1:45:LYS:HB2	60:14:13:VAL:HG23	1.91	0.52
5:L5:150:LEU:HB3	11:61:142:LYS:HD2	1.90	0.52
79:2S:3374:U:H5''	79:2S:3376:A:N1	2.23	0.52
79:2S:1886:A:H2'	79:2S:1887:A:H8	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L3:13:HIS:HB3	3:L3:16:PHE:HD1	1.73	0.52
78:1S:157:A:H2'	78:1S:158:U:H5''	1.91	0.52
82:ET:49:C:H2'	82:ET:60:A:H4'	1.91	0.52
25:75:52:PRO:HB3	80:8S:135:G:H5'	1.90	0.52
28:78:26:ARG:HB2	28:78:29:PRO:HG3	1.90	0.52
43:93:73:THR:HG23	43:93:76:ALA:H	1.74	0.52
79:2S:3169:U:H2'	79:2S:3170:A:O4'	2.09	0.52
79:2S:2144:A:H1'	79:2S:2281:A:N6	2.24	0.52
5:L5:57:ASN:ND2	81:5S:26:C:H3'	2.25	0.52
23:73:15:LEU:CD2	23:73:53:SER:HB3	2.39	0.52
65:19:102:ARG:O	65:19:106:GLN:HG3	2.10	0.52
62:16:18:ALA:CB	62:16:69:VAL:HG22	2.40	0.52
11:61:35:LYS:HD2	11:61:120:ILE:CG1	2.34	0.52
31:81:105:GLN:HA	79:2S:3324:C:O2'	2.08	0.52
79:2S:671:U:H2'	79:2S:672:A:H8	1.71	0.52
38:88:43:PHE:CZ	38:88:62:ALA:HB1	2.43	0.52
79:2S:3120:C:O2'	79:2S:3121:U:H2'	2.08	0.52
78:1S:941:A:H8	78:1S:941:A:O5'	1.92	0.52
53:S7:38:LEU:HD23	53:S7:38:LEU:O	2.09	0.52
78:1S:271:A:H2	78:1S:284:G:N2	2.07	0.52
79:2S:1598:G:H2'	79:2S:1599:G:C8	2.44	0.52
47:S1:61:LEU:HD23	47:S1:62:LYS:H	1.72	0.52
79:2S:992:A:C2'	79:2S:993:G:H5'	2.38	0.52
64:18:145:ARG:HA	64:18:145:ARG:HE	1.74	0.52
78:1S:1585:U:N3	78:1S:1611:A:H2	2.07	0.52
48:S2:172:ALA:HB3	48:S2:195:ASP:HB3	1.92	0.52
76:30:28:LYS:HD3	76:30:29:LYS:N	2.25	0.52
79:2S:421:G:C6	79:2S:2384:A:H4'	2.44	0.52
79:2S:359:U:H2'	79:2S:360:G:O4'	2.10	0.52
3:L3:2:SER:N	79:2S:2940:A:C8	2.77	0.52
42:92:99:GLN:NE2	42:92:102:GLN:HB2	2.25	0.52
46:S0:127:ARG:HH11	46:S0:127:ARG:HG3	1.75	0.52
62:16:128:LYS:HB2	62:16:137:ARG:NH2	2.25	0.52
20:70:112:ALA:HB1	79:2S:1186:G:N3	2.24	0.52
82:ET:6:G:O2'	82:ET:7:G:H5'	2.10	0.52
69:23:27:ASN:O	69:23:31:LYS:HG2	2.09	0.52
57:11:68:GLY:CA	57:11:127:GLN:HB3	2.32	0.52
62:16:39:VAL:HB	62:16:45:ARG:HD3	1.92	0.52
37:87:56:ARG:NH2	79:2S:362:U:H3'	2.17	0.52
10:60:57:LEU:HB2	10:60:131:ILE:HG13	1.90	0.52
76:30:14:VAL:HG21	78:1S:567:A:N3	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:25:55:PRO:CA	71:25:88:ILE:HG21	2.37	0.52
79:2S:3375:A:H2'	79:2S:3378:C:H6	1.74	0.52
79:2S:235:A:H2'	79:2S:236:G:H8	1.72	0.52
78:1S:1671:A:H2'	78:1S:1672:G:O4'	2.09	0.52
6:L6:36:PRO:HB3	6:L6:55:LEU:O	2.09	0.52
81:5S:11:A:O2'	81:5S:13:A:H5''	2.09	0.52
3:L3:95:THR:CB	79:2S:3243:A:H4'	2.39	0.52
50:S4:211:LYS:HB3	50:S4:217:THR:HG22	1.91	0.52
1:L1:24:LYS:HG3	1:L1:214:PHE:HE1	1.74	0.52
79:2S:421:G:H3'	79:2S:421:G:N3	2.24	0.52
68:22:7:LEU:O	68:22:11:LEU:HG	2.08	0.52
18:68:176:ARG:O	28:78:51:GLY:HA2	2.09	0.52
27:77:46:ILE:HA	27:77:70:PRO:HA	1.91	0.52
42:92:26:THR:OG1	42:92:71:ARG:HB3	2.09	0.52
78:1S:643:G:H2'	78:1S:644:C:C6	2.45	0.52
63:17:7:LYS:HG3	63:17:8:THR:N	2.24	0.52
69:23:137:LYS:HD2	69:23:139:LYS:HE2	1.90	0.52
79:2S:718:G:N2	79:2S:721:G:H1'	2.23	0.52
33:83:90:PRO:O	33:83:91:ALA:HB3	2.10	0.52
28:78:75:LEU:HA	28:78:78:LEU:HD23	1.91	0.52
37:87:5:THR:N	37:87:6:PRO:HD2	2.24	0.52
79:2S:1198:C:H2'	79:2S:1199:C:C5	2.44	0.52
3:L3:78:VAL:HG12	3:L3:79:VAL:H	1.72	0.52
78:1S:1058:U:H5	78:1S:1061:A:C6	2.28	0.52
1:L1:120:VAL:CG2	1:L1:121:PRO:HD3	2.35	0.52
79:2S:1039:U:H2'	79:2S:1040:A:C8	2.45	0.52
26:76:27:ARG:O	26:76:31:LEU:HG	2.09	0.52
79:2S:66:A:H61	79:2S:76:G:H1'	1.70	0.52
79:2S:207:U:H2'	79:2S:208:C:C6	2.45	0.52
50:S4:123:LEU:HG	50:S4:161:LYS:HG2	1.92	0.52
2:L2:9:ARG:NH2	2:L2:9:ARG:HB2	2.23	0.52
44:P0:12:PHE:HZ	44:P0:61:ARG:HG3	1.75	0.52
79:2S:1123:U:C2'	79:2S:1124:U:H5'	2.40	0.52
78:1S:1338:C:H1'	78:1S:1410:A:C4	2.45	0.52
54:S8:10:LYS:HG2	54:S8:11:ARG:H	1.74	0.52
79:2S:188:U:H2'	79:2S:223:U:O2'	2.09	0.52
42:92:53:GLN:HB2	79:2S:2421:U:H5''	1.92	0.52
19:69:173:ARG:O	19:69:177:VAL:HG23	2.09	0.52
69:23:63:GLN:HA	69:23:65:ASN:H	1.74	0.52
64:18:66:LEU:HA	64:18:69:ILE:HD12	1.91	0.52
11:61:20:ASN:OD1	11:61:68:HIS:HB3	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:10:24:LYS:NZ	56:10:29:GLN:HE22	2.07	0.52
2:L2:71:LEU:HD22	79:2S:1651:U:H4'	1.91	0.52
79:2S:3138:U:C3'	79:2S:3139:A:H5''	2.39	0.52
33:83:15:SER:HA	33:83:94:PHE:CE1	2.44	0.52
9:L9:162:GLN:OE1	9:L9:181:VAL:HG23	2.09	0.52
56:10:56:LYS:HE2	56:10:67:THR:HB	1.92	0.52
47:S1:87:ARG:N	47:S1:101:HIS:HB2	2.25	0.52
24:74:6:ASP:HB3	24:74:11:ALA:H	1.74	0.52
78:1S:1684:U:H2'	78:1S:1685:G:C8	2.44	0.52
1:L1:17:LEU:HD23	1:L1:17:LEU:H	1.73	0.52
33:83:30:ILE:CG2	33:83:31:LYS:N	2.72	0.52
9:L9:96:HIS:CD2	79:2S:3024:A:H5''	2.45	0.52
78:1S:195:G:C2'	78:1S:196:G:H5''	2.39	0.52
79:2S:2451:G:H22	79:2S:2495:C:H42	1.56	0.52
79:2S:1202:A:C2	79:2S:2857:C:H5'	2.45	0.52
11:61:94:ARG:O	11:61:95:ASN:HB2	2.10	0.52
79:2S:1445:U:H2'	79:2S:1446:A:C8	2.45	0.52
9:L9:16:VAL:HG12	9:L9:29:GLY:CA	2.40	0.52
51:S5:185:ARG:HA	78:1S:1472:C:OP2	2.10	0.52
79:2S:2809:C:C5'	79:2S:2956:A:H4'	2.39	0.52
63:17:7:LYS:HG3	63:17:8:THR:H	1.75	0.52
78:1S:1246:C:H2'	78:1S:1247:U:H6	1.74	0.52
58:12:90:LYS:O	58:12:91:VAL:HB	2.09	0.52
27:77:48:ARG:HB2	27:77:69:LYS:HB3	1.92	0.52
69:23:86:PHE:O	69:23:88:PRO:HD3	2.09	0.52
6:L6:2:SER:N	79:2S:1385:C:HO2'	2.07	0.52
79:2S:631:U:H4'	79:2S:3172:A:H61	1.75	0.52
78:1S:839:U:H2'	78:1S:840:U:H5''	1.90	0.52
78:1S:1516:A:O2'	78:1S:1517:U:H5'	2.09	0.52
38:88:16:ARG:HD3	38:88:70:PRO:HG2	1.92	0.52
79:2S:958:C:H5''	79:2S:2800:G:P	2.50	0.52
79:2S:2836:C:C2'	79:2S:2837:A:H5'	2.39	0.52
55:S9:149:ARG:O	55:S9:150:LEU:HB3	2.09	0.52
72:26:87:ARG:HD3	72:26:91:ASP:O	2.09	0.52
3:L3:369:ARG:NH2	24:74:11:ALA:HB1	2.25	0.52
54:S8:41:LYS:HB2	54:S8:60:ILE:HG23	1.92	0.52
46:S0:41:ARG:HG3	46:S0:41:ARG:HH21	1.74	0.52
79:2S:2181:C:H2'	79:2S:2182:A:H8	1.74	0.52
1:L1:103:LEU:CD1	1:L1:106:LYS:HG3	2.40	0.52
78:1S:1737:G:H2'	78:1S:1738:U:C6	2.44	0.52
11:61:47:GLN:CB	11:61:64:LYS:HD3	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:60:170:LYS:HA	10:60:177:ASP:HA	1.92	0.52
49:S3:5:ILE:HG22	49:S3:6:SER:N	2.24	0.52
78:1S:832:U:H2'	78:1S:833:U:C5'	2.40	0.52
18:68:92:ARG:HB3	79:2S:784:A:C2	2.45	0.52
79:2S:1756:C:H2'	79:2S:1757:A:H8	1.75	0.52
1:L1:24:LYS:HG3	1:L1:214:PHE:CE1	2.43	0.52
11:61:17:LEU:HD22	11:61:80:LEU:HG	1.91	0.52
8:L8:99:PRO:CB	8:L8:190:VAL:HG23	2.40	0.52
4:L4:230:VAL:HB	4:L4:257:LYS:HD3	1.92	0.52
56:10:94:GLU:HG3	56:10:95:ARG:H	1.75	0.52
53:S7:63:PRO:O	53:S7:64:VAL:HB	2.10	0.52
45:RC:7:LEU:HB3	45:RC:313:TRP:HB3	1.91	0.52
74:28:64:ARG:HG2	74:28:64:ARG:HH11	1.75	0.52
43:93:6:LYS:C	43:93:6:LYS:HD3	2.30	0.52
78:1S:306:U:H2'	78:1S:307:G:C8	2.44	0.52
79:2S:2124:G:H2'	79:2S:2125:A:C8	2.43	0.52
65:19:61:VAL:O	65:19:65:ILE:HG13	2.09	0.52
79:2S:2985:C:H2'	79:2S:2986:U:C6	2.44	0.52
79:2S:1686:U:O2	79:2S:1688:U:H1'	2.09	0.52
65:19:102:ARG:HD3	78:1S:1500:C:C5'	2.30	0.52
15:65:114:ARG:NH1	15:65:157:LYS:HG2	2.25	0.52
53:S7:117:THR:O	53:S7:121:VAL:HG23	2.10	0.52
7:L7:196:LYS:HD3	7:L7:197:GLN:NE2	2.21	0.52
32:82:38:ILE:HA	32:82:43:ARG:NE	2.24	0.52
78:1S:1482:C:H41	78:1S:1524:A:H3'	1.75	0.52
78:1S:1770:U:H2'	78:1S:1771:U:H6	1.74	0.52
79:2S:1235:U:H4'	79:2S:1236:G:C5'	2.39	0.52
55:S9:129:ILE:HD13	55:S9:144:PRO:HA	1.92	0.52
56:10:59:PHE:CZ	56:10:62:GLN:HA	2.44	0.52
78:1S:1426:C:H3'	78:1S:1427:A:H5''	1.92	0.52
60:14:18:ARG:HH12	60:14:35:GLY:CA	2.23	0.52
79:2S:1598:G:H2'	79:2S:1599:G:H8	1.75	0.52
55:S9:123:HIS:O	55:S9:127:VAL:HG23	2.10	0.52
54:S8:138:ASN:HD21	78:1S:197:A:H61	1.58	0.52
79:2S:2155:G:H2'	79:2S:2156:C:C6	2.44	0.52
78:1S:844:A:H2'	78:1S:845:G:C8	2.44	0.52
60:14:51:ASP:O	60:14:54:GLU:HG3	2.10	0.52
78:1S:1506:G:H2'	78:1S:1507:G:H8	1.75	0.52
64:18:62:THR:O	64:18:66:LEU:HG	2.10	0.52
62:16:93:HIS:HB3	62:16:102:LYS:HB2	1.92	0.52
78:1S:1567:U:H2'	78:1S:1568:C:H5'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1082:C:H2'	78:1S:1082:C:O2	2.10	0.52
4:L4:193:LYS:HB2	4:L4:193:LYS:NZ	2.25	0.52
78:1S:1779:U:H2'	78:1S:1781:A:OP2	2.09	0.52
79:2S:1682:U:H1'	79:2S:1685:C:H41	1.74	0.52
79:2S:2513:U:H3	79:2S:2593:A:N6	1.96	0.52
78:1S:1575:G:H2'	78:1S:1576:A:C8	2.45	0.52
13:63:103:ASN:HD22	13:63:109:PHE:HD2	1.57	0.52
20:70:71:LYS:HZ2	79:2S:562:C:H4'	1.73	0.52
9:L9:158:ALA:HA	9:L9:161:LEU:HD12	1.92	0.52
53:S7:19:GLN:HB3	53:S7:85:PHE:CZ	2.45	0.52
15:65:45:PRO:O	15:65:49:ARG:HB2	2.09	0.52
79:2S:2060:A:C2'	79:2S:2061:G:H5'	2.39	0.52
78:1S:416:A:H5'	78:1S:417:A:C8	2.45	0.52
55:S9:109:LEU:HD12	55:S9:146:PHE:HB3	1.91	0.52
55:S9:174:ARG:HA	55:S9:174:ARG:NE	2.25	0.52
66:20:109:GLU:HB3	66:20:112:VAL:HB	1.92	0.52
79:2S:1693:C:O2'	79:2S:1772:U:H4'	2.10	0.52
7:L7:233:GLU:O	7:L7:236:ILE:HG22	2.09	0.52
38:88:31:LEU:HA	38:88:37:PRO:HA	1.91	0.52
51:S5:107:LYS:HD2	78:1S:1610:G:H5''	1.91	0.52
37:87:55:ARG:HD2	79:2S:353:G:N7	2.25	0.52
58:12:61:VAL:HG23	58:12:90:LYS:O	2.10	0.52
23:73:125:LEU:HG	23:73:126:TRP:CD1	2.45	0.52
32:82:3:SER:HB3	32:82:71:HIS:CE1	2.45	0.52
6:L6:8:LYS:HE2	79:2S:1354:G:H4'	1.92	0.52
8:L8:197:VAL:HG23	8:L8:197:VAL:O	2.09	0.52
3:L3:219:ALA:HB2	3:L3:336:VAL:HG13	1.91	0.52
21:71:136:ARG:HG3	21:71:136:ARG:HH11	1.74	0.52
79:2S:3250:U:H2'	79:2S:3251:U:C6	2.45	0.52
79:2S:1104:G:H2'	79:2S:1105:A:C8	2.45	0.52
5:L5:134:ALA:HB2	5:L5:141:PRO:HD3	1.90	0.52
52:S6:64:LYS:HD3	52:S6:67:VAL:HG13	1.92	0.52
79:2S:428:A:H2'	79:2S:429:U:H6	1.69	0.52
78:1S:1336:A:H2'	78:1S:1337:A:C4'	2.40	0.52
79:2S:529:A:H2'	79:2S:530:G:C8	2.44	0.52
23:73:84:SER:HB3	23:73:94:TYR:CD2	2.45	0.52
6:L6:54:TYR:HD2	6:L6:55:LEU:H	1.58	0.52
79:2S:846:A:H2'	79:2S:847:A:C8	2.45	0.52
6:L6:58:LEU:CD2	6:L6:102:ASN:HA	2.39	0.52
79:2S:3295:A:H2'	79:2S:3296:A:H8	1.75	0.52
78:1S:979:A:H2'	78:1S:980:G:C8	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S3:105:MET:HE2	49:S3:105:MET:HA	1.91	0.52
56:10:1:MET:HG3	56:10:44:LYS:CB	2.40	0.52
25:75:60:TYR:CG	35:85:25:LYS:HB3	2.45	0.52
79:2S:3112:G:O6	79:2S:3119:U:H3'	2.10	0.52
79:2S:1006:A:H2'	79:2S:1007:U:O4'	2.10	0.52
5:L5:98:ALA:HB1	5:L5:162:ALA:HB2	1.92	0.52
69:23:89:ASN:HB3	69:23:136:TRP:CD1	2.45	0.52
55:S9:138:LYS:HB2	55:S9:138:LYS:NZ	2.24	0.52
79:2S:8:C:H2'	79:2S:9:U:O4'	2.10	0.52
79:2S:2666:C:H1'	79:2S:2691:A:C2	2.45	0.52
41:91:4:LYS:HE3	78:1S:1774:G:N7	2.25	0.52
75:29:32:ARG:HD3	78:1S:1596:C:OP2	2.09	0.52
28:78:134:ALA:O	28:78:138:ILE:HG13	2.10	0.52
56:10:77:ARG:NH2	56:10:86:ILE:HD11	2.25	0.51
72:26:82:ARG:CG	72:26:83:ILE:H	2.05	0.51
79:2S:1896:A:H61	79:2S:2339:C:N4	1.96	0.51
13:63:47:ALA:HB1	13:63:48:PRO:CD	2.33	0.51
44:P0:190:VAL:HG12	44:P0:191:TYR:N	2.25	0.51
5:L5:41:LYS:H	21:71:69:LYS:HA	1.74	0.51
71:25:88:ILE:N	71:25:88:ILE:HD12	2.24	0.51
61:15:25:LEU:HB3	61:15:87:PRO:CB	2.41	0.51
19:69:40:ALA:HA	19:69:43:LYS:HD2	1.92	0.51
15:65:97:SER:HB3	79:2S:289:A:H5''	1.93	0.51
31:81:54:GLU:HA	31:81:57:GLN:HE21	1.74	0.51
15:65:142:ILE:N	15:65:142:ILE:HD12	2.25	0.51
79:2S:1661:G:H2'	79:2S:1662:G:C8	2.45	0.51
31:81:50:ARG:HB2	31:81:90:PHE:HE2	1.75	0.51
79:2S:700:C:H2'	79:2S:701:G:H8	1.75	0.51
16:66:58:LEU:HA	16:66:72:HIS:CD2	2.45	0.51
1:L1:74:VAL:HG12	1:L1:75:ASP:N	2.25	0.51
9:L9:138:THR:O	9:L9:139:ASN:HB3	2.10	0.51
79:2S:801:A:H4'	79:2S:802:C:H5''	1.91	0.51
72:26:3:LYS:NZ	72:26:6:ALA:HA	2.24	0.51
4:L4:55:LYS:O	4:L4:59:GLN:HG3	2.09	0.51
45:RC:92:TRP:HA	45:RC:98:GLU:O	2.10	0.51
8:L8:41:GLN:HE21	8:L8:41:GLN:N	2.08	0.51
53:S7:166:LEU:HD11	53:S7:183:PHE:HB2	1.92	0.51
57:11:57:LYS:HD3	57:11:131:ILE:HG23	1.92	0.51
13:63:2:ALA:HB3	28:78:41:HIS:HE1	1.75	0.51
2:L2:113:VAL:HA	2:L2:167:GLY:O	2.10	0.51
3:L3:246:LEU:HD12	3:L3:247:ARG:N	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:S2:218:ILE:HA	48:S2:221:THR:HG23	1.93	0.51
46:S0:189:VAL:HG13	46:S0:190:ASP:N	2.21	0.51
51:S5:112:ARG:HD2	62:16:43:ILE:HD12	1.91	0.51
52:S6:2:LYS:HD3	52:S6:15:THR:HB	1.92	0.51
33:83:60:ARG:HB2	33:83:60:ARG:HH21	1.75	0.51
48:S2:227:PRO:HA	48:S2:230:TRP:CE3	2.46	0.51
78:1S:1553:G:H1'	78:1S:1597:A:H2	1.76	0.51
28:78:118:ILE:HB	28:78:119:PRO:CD	2.40	0.51
33:83:48:ARG:HG3	33:83:104:PRO:HD3	1.91	0.51
78:1S:230:C:H3'	78:1S:231:U:C5'	2.39	0.51
2:L2:42:ARG:HA	2:L2:88:ILE:O	2.10	0.51
75:29:47:ALA:HB1	75:29:52:PHE:HB2	1.91	0.51
5:L5:37:VAL:HG12	21:71:30:TYR:HB2	1.93	0.51
18:68:170:ARG:HH11	28:78:56:VAL:HG21	1.75	0.51
61:15:18:ARG:HD2	64:18:95:GLY:HA2	1.91	0.51
70:24:79:VAL:O	70:24:83:LYS:HG3	2.10	0.51
4:L4:121:ALA:HB3	4:L4:235:LEU:HD21	1.92	0.51
46:S0:60:ALA:O	46:S0:64:ILE:HG13	2.10	0.51
79:2S:1231:A:H5''	79:2S:1232:C:H5'	1.93	0.51
82:PT:16:C:O2	82:PT:61:U:H4'	2.10	0.51
68:22:50:PHE:HB3	68:22:63:VAL:HG22	1.91	0.51
4:L4:138:ARG:NH1	4:L4:246:ARG:HG2	2.25	0.51
79:2S:874:U:H5'	79:2S:875:G:H5'	1.91	0.51
79:2S:2719:U:H2'	79:2S:2720:G:C8	2.45	0.51
78:1S:610:G:H5'	78:1S:612:U:O4	2.10	0.51
17:67:27:LYS:HD2	79:2S:1447:G:C8	2.45	0.51
18:68:68:ALA:O	18:68:72:LYS:HG3	2.10	0.51
80:8S:109:A:H2'	80:8S:110:C:H5'	1.92	0.51
19:69:144:GLN:O	19:69:148:ASP:HB2	2.11	0.51
2:L2:22:LEU:CB	2:L2:52:SER:HB2	2.34	0.51
79:2S:2160:G:H2'	79:2S:2161:G:H8	1.75	0.51
34:84:73:SER:HB2	79:2S:1639:C:N4	2.25	0.51
77:31:108:VAL:HA	77:31:113:LYS:O	2.09	0.51
78:1S:1691:A:H61	78:1S:1711:C:H42	1.57	0.51
51:S5:77:TYR:HB3	51:S5:84:LYS:CA	2.39	0.51
78:1S:750:U:H2'	78:1S:751:G:O4'	2.11	0.51
8:L8:71:VAL:HG12	15:65:21:PHE:HE2	1.74	0.51
8:L8:160:ILE:HD12	15:65:22:LEU:HG	1.91	0.51
44:P0:45:LEU:HD22	44:P0:49:ALA:HB3	1.93	0.51
72:26:41:ILE:H	72:26:41:ILE:CD1	2.22	0.51
17:67:48:LEU:HD11	17:67:95:LEU:HD12	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:88:40:GLN:HG2	38:88:41:THR:H	1.74	0.51
34:84:25:THR:CG2	79:2S:1597:C:H5''	2.40	0.51
73:27:11:THR:O	73:27:15:GLU:HB2	2.10	0.51
79:2S:521:A:H2'	79:2S:522:A:O4'	2.10	0.51
58:12:66:VAL:HG12	58:12:67:THR:O	2.10	0.51
76:30:22:GLU:HG3	76:30:23:LYS:H	1.75	0.51
79:2S:2615:G:H2'	79:2S:2616:C:C6	2.45	0.51
5:L5:200:PHE:HB3	5:L5:237:GLU:HG3	1.92	0.51
22:72:78:TYR:HA	22:72:81:LYS:HE2	1.92	0.51
3:L3:186:GLY:O	3:L3:190:GLU:HB2	2.10	0.51
79:2S:368:G:H2'	79:2S:369:A:H5'	1.92	0.51
79:2S:856:G:H2'	79:2S:857:G:O4'	2.10	0.51
78:1S:1388:A:N6	78:1S:1409:G:H1'	2.25	0.51
11:61:132:ASN:ND2	11:61:136:ALA:HB2	2.25	0.51
25:75:50:ALA:HB2	35:85:77:PRO:HB3	1.90	0.51
78:1S:504:U:H2'	78:1S:505:A:H4'	1.92	0.51
10:60:179:PRO:HA	10:60:182:LEU:HD12	1.91	0.51
79:2S:618:C:C2'	79:2S:619:A:H5'	2.37	0.51
68:22:104:LEU:HB2	68:22:124:LYS:O	2.10	0.51
2:L2:49:VAL:HG13	2:L2:58:LEU:HB2	1.93	0.51
11:61:48:SER:O	11:61:64:LYS:HA	2.11	0.51
6:L6:19:LYS:HB2	79:2S:591:G:H1'	1.92	0.51
6:L6:19:LYS:HA	79:2S:592:A:H5''	1.92	0.51
7:L7:236:ILE:O	7:L7:240:VAL:HG23	2.11	0.51
63:17:84:TYR:O	63:17:85:VAL:HB	2.10	0.51
79:2S:1024:G:H3'	79:2S:1025:A:H5''	1.93	0.51
19:69:162:ARG:O	19:69:166:ASN:HB2	2.11	0.51
8:L8:99:PRO:HD2	8:L8:190:VAL:HA	1.92	0.51
54:S8:5:ARG:HH12	54:S8:28:GLU:C	2.14	0.51
3:L3:79:VAL:HG12	3:L3:322:ILE:HB	1.92	0.51
69:23:19:ARG:HA	69:23:19:ARG:HE	1.76	0.51
79:2S:924:G:H3'	79:2S:925:A:H5'	1.92	0.51
24:74:54:LEU:O	24:74:58:HIS:HB2	2.11	0.51
79:2S:2570:U:H1'	79:2S:2571:U:O2	2.10	0.51
26:76:6:LEU:H	26:76:6:LEU:HD23	1.75	0.51
72:26:80:HIS:O	72:26:81:ALA:HB2	2.10	0.51
45:RC:242:SER:HB3	45:RC:292:LEU:HD23	1.92	0.51
78:1S:120:U:H2'	78:1S:121:U:H6	1.75	0.51
79:2S:1944:U:H2'	79:2S:1945:A:C8	2.46	0.51
24:74:35:LYS:O	24:74:39:LEU:HD23	2.11	0.51
79:2S:1971:C:C2'	79:2S:1972:A:H4'	2.20	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L4:300:ARG:HG2	18:68:39:ARG:HB3	1.92	0.51
47:S1:218:LEU:H	47:S1:218:LEU:CD1	2.13	0.51
64:18:18:LEU:O	64:18:19:ASN:HB2	2.11	0.51
79:2S:214:G:H2'	79:2S:215:G:H8	1.74	0.51
2:L2:247:ARG:HB3	78:1S:1012:U:H4'	1.91	0.51
28:78:119:PRO:HG2	28:78:121:VAL:HG23	1.92	0.51
9:L9:157:ASN:O	9:L9:161:LEU:HG	2.09	0.51
8:L8:150:LEU:HD21	8:L8:218:ILE:HD13	1.93	0.51
13:63:29:ALA:CB	15:65:201:ARG:HH12	2.23	0.51
3:L3:217:ALA:HB3	3:L3:277:SER:HB2	1.93	0.51
78:1S:1679:G:O2'	78:1S:1680:G:H5'	2.10	0.51
78:1S:488:G:H2'	78:1S:489:C:H5'	1.93	0.51
19:69:23:TRP:HE3	19:69:51:VAL:HG22	1.75	0.51
79:2S:435:C:H3'	79:2S:621:A:H61	1.75	0.51
79:2S:2714:G:H4'	79:2S:2715:A:H5''	1.92	0.51
78:1S:1201:G:N2	78:1S:1600:A:H5'	2.26	0.51
78:1S:800:U:H2'	78:1S:801:G:C8	2.45	0.51
49:S3:26:THR:HA	49:S3:30:ALA:HB2	1.92	0.51
8:L8:139:VAL:HA	8:L8:142:LEU:HD12	1.93	0.51
79:2S:2298:U:O2'	79:2S:2299:A:H5'	2.11	0.51
78:1S:56:U:H4'	78:1S:57:G:H5'	1.93	0.51
55:S9:17:ARG:HG2	55:S9:17:ARG:HH21	1.76	0.51
13:63:19:GLN:H	13:63:19:GLN:CD	2.14	0.51
79:2S:1667:A:H2'	79:2S:1668:G:C8	2.46	0.51
2:L2:243:THR:OG1	79:2S:2244:A:H5''	2.11	0.51
16:66:56:ASP:O	16:66:59:ARG:HG2	2.10	0.51
78:1S:1498:G:H2'	78:1S:1499:G:C5'	2.37	0.51
66:20:55:PRO:CB	66:20:91:ILE:HG12	2.39	0.51
33:83:60:ARG:HH11	79:2S:622:A:H5'	1.75	0.51
79:2S:2611:U:H2'	79:2S:2612:U:H6	1.76	0.51
10:60:165:ILE:CD1	10:60:165:ILE:H	2.23	0.51
72:26:84:VAL:HG22	72:26:85:ARG:H	1.75	0.51
50:S4:185:GLY:H	50:S4:189:LEU:HD13	1.75	0.51
23:73:17:LEU:HB2	23:73:52:ALA:H	1.75	0.51
68:22:90:THR:O	68:22:94:LEU:HB2	2.11	0.51
9:L9:152:GLU:O	9:L9:156:GLN:HB3	2.10	0.51
82:ET:26:C:C2'	82:ET:27:G:H5'	2.40	0.51
50:S4:192:ILE:HG21	50:S4:228:ILE:HD11	1.93	0.51
32:82:19:ARG:HG3	32:82:33:ARG:H	1.76	0.51
8:L8:181:LYS:HD2	80:8S:154:C:OP1	2.11	0.51
3:L3:3:HIS:CD2	79:2S:2938:G:H5''	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:271:A:H2'	78:1S:272:U:H4'	1.91	0.51
57:11:94:ILE:HD12	57:11:94:ILE:N	2.26	0.51
79:2S:1608:C:H2'	79:2S:1609:C:C6	2.43	0.51
53:S7:50:ASP:HA	53:S7:56:LYS:HG2	1.93	0.51
78:1S:1041:G:H2'	78:1S:1042:G:C8	2.46	0.51
79:2S:1354:G:N1	79:2S:1358:C:H5'	2.26	0.51
41:91:4:LYS:HB2	41:91:4:LYS:NZ	2.25	0.51
78:1S:20:G:H5'	78:1S:571:G:C8	2.46	0.51
11:61:18:VAL:HG22	11:61:70:THR:HG22	1.92	0.51
79:2S:2465:G:H2'	79:2S:2466:G:O4'	2.10	0.51
20:70:4:PHE:HA	20:70:32:SER:HA	1.93	0.51
5:L5:127:GLY:HA3	5:L5:196:ARG:HB2	1.93	0.51
8:L8:77:GLN:HE22	8:L8:167:PRO:HG2	1.75	0.51
11:61:143:ARG:HH11	11:61:143:ARG:HG3	1.74	0.51
73:27:29:ARG:HG3	73:27:29:ARG:HH11	1.74	0.51
50:S4:9:LEU:HD21	50:S4:14:ALA:HB2	1.91	0.51
48:S2:157:LYS:HD3	48:S2:168:ARG:HH21	1.76	0.51
79:2S:3278:C:H3'	79:2S:3279:A:H5''	1.92	0.51
3:L3:45:SER:H	3:L3:181:ILE:HG21	1.75	0.51
13:63:47:ALA:HB3	13:63:49:ARG:HE	1.76	0.51
3:L3:333:LYS:HE2	79:2S:3304:U:C6	2.46	0.51
8:L8:169:LEU:O	8:L8:169:LEU:HD23	2.10	0.51
2:L2:187:HIS:O	2:L2:191:LEU:HG	2.11	0.51
53:S7:138:LYS:O	53:S7:139:ARG:HD3	2.11	0.51
2:L2:88:ILE:N	2:L2:88:ILE:HD12	2.26	0.51
79:2S:2457:G:N2	79:2S:2485:A:N7	2.59	0.51
6:L6:40:LEU:HB3	6:L6:84:VAL:CG1	2.39	0.51
50:S4:180:LEU:HB3	50:S4:228:ILE:HD11	1.92	0.51
8:L8:74:THR:HG21	15:65:18:VAL:HB	1.92	0.51
26:76:28:ARG:NH2	80:8S:70:G:H5''	2.26	0.51
55:S9:113:VAL:HG12	55:S9:119:ALA:HB2	1.92	0.51
36:86:31:GLY:HA3	79:2S:299:G:C4	2.45	0.51
79:2S:3231:U:H2'	79:2S:3232:G:H8	1.74	0.51
9:L9:117:PHE:O	9:L9:120:ASP:HB2	2.10	0.51
79:2S:1322:U:H2'	79:2S:1323:G:H8	1.75	0.51
79:2S:2422:C:H2'	79:2S:2423:U:H6	1.74	0.51
24:74:49:ILE:HG21	24:74:52:THR:HG23	1.93	0.51
4:L4:87:GLN:NE2	79:2S:1439:U:H5''	2.25	0.51
79:2S:3139:A:H2'	79:2S:3140:G:O4'	2.10	0.51
23:73:6:ALA:HB2	23:73:126:TRP:CZ2	2.46	0.51
36:86:57:LEU:O	36:86:61:ILE:HG13	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:196:G:H21	79:2S:219:A:H61	1.57	0.51
28:78:10:LYS:HD2	28:78:10:LYS:N	2.26	0.51
16:66:10:ASP:HB2	16:66:117:ARG:HG3	1.92	0.51
78:1S:1135:U:H2'	78:1S:1136:U:C6	2.46	0.51
43:93:8:VAL:O	43:93:11:THR:HG22	2.11	0.51
79:2S:2861:U:H2'	79:2S:2862:U:O4'	2.11	0.51
25:75:115:ARG:NH1	25:75:115:ARG:HG3	2.26	0.51
59:13:130:ARG:CD	59:13:137:PRO:HA	2.34	0.51
36:86:26:ILE:H	36:86:26:ILE:CD1	2.14	0.51
62:16:39:VAL:O	62:16:40:GLU:CB	2.59	0.51
78:1S:1667:A:H2'	78:1S:1668:G:H8	1.74	0.51
68:22:97:ARG:HB3	68:22:97:ARG:CZ	2.39	0.51
34:84:38:LEU:HD21	79:2S:1785:U:H4'	1.91	0.51
5:L5:33:ARG:O	5:L5:37:VAL:HG23	2.11	0.51
3:L3:146:ARG:HA	3:L3:146:ARG:HE	1.75	0.51
19:69:81:ARG:HG2	19:69:88:ARG:NH1	2.25	0.51
3:L3:83:PRO:HB2	3:L3:165:GLN:NE2	2.25	0.51
60:14:98:GLY:O	60:14:102:LEU:HB2	2.10	0.51
49:S3:16:VAL:O	49:S3:20:GLU:HB2	2.10	0.51
45:RC:129:LYS:HB2	45:RC:147:HIS:O	2.10	0.51
42:92:71:ARG:NH2	42:92:80:ARG:HH11	2.09	0.51
53:S7:63:PRO:C	53:S7:65:PRO:HD2	2.30	0.51
79:2S:1404:G:H2'	79:2S:1406:A:OP2	2.11	0.51
79:2S:1427:U:O2'	79:2S:1428:A:H5'	2.10	0.51
30:80:46:ALA:HB3	30:80:72:GLY:H	1.75	0.51
53:S7:59:ALA:HB1	53:S7:93:LEU:HD12	1.93	0.51
79:2S:1352:A:H1'	79:2S:1353:U:O5'	2.11	0.51
79:2S:1085:A:H2'	79:2S:1086:C:C6	2.46	0.51
79:2S:818:C:H2'	79:2S:819:U:O4'	2.11	0.51
8:L8:247:ASP:O	8:L8:251:LYS:HE3	2.11	0.51
78:1S:52:U:H2'	78:1S:53:G:C8	2.46	0.51
26:76:16:ARG:O	26:76:20:PHE:HD2	1.93	0.51
7:L7:25:GLN:HA	7:L7:29:GLU:H	1.76	0.51
23:73:39:VAL:HG13	23:73:58:VAL:HG12	1.93	0.51
55:S9:112:GLN:HG3	55:S9:148:VAL:HG21	1.92	0.51
21:71:78:LYS:O	21:71:84:TYR:HA	2.11	0.51
64:18:16:ARG:HH11	64:18:16:ARG:HG3	1.76	0.51
49:S3:49:ILE:N	49:S3:49:ILE:HD12	2.26	0.51
64:18:105:VAL:CG1	64:18:106:GLU:N	2.74	0.51
9:L9:112:ILE:HD11	9:L9:128:VAL:HG22	1.93	0.51
79:2S:1176:C:H2'	79:2S:1177:G:C2	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L3:67:PHE:CE1	3:L3:70:ARG:HD2	2.45	0.51
4:L4:122:THR:CG2	4:L4:235:LEU:HD13	2.41	0.51
15:65:71:ARG:CG	15:65:94:TYR:HB2	2.41	0.51
79:2S:858:A:H2'	79:2S:859:G:C8	2.46	0.51
42:92:8:ARG:HG2	42:92:8:ARG:HH11	1.74	0.51
78:1S:694:U:H3'	78:1S:695:U:H6	1.76	0.51
79:2S:1118:C:H2'	79:2S:1119:C:C6	2.45	0.51
60:14:22:SER:HA	60:14:95:GLY:H	1.76	0.51
58:12:31:VAL:HG13	58:12:133:LEU:HG	1.92	0.51
7:L7:221:LYS:HB2	7:L7:227:GLY:HA3	1.93	0.51
46:S0:155:PHE:HA	67:21:60:ARG:HB3	1.93	0.51
78:1S:1537:C:H4'	78:1S:1538:U:C5	2.45	0.51
56:10:14:TYR:CE2	56:10:21:VAL:HG22	2.45	0.51
49:S3:191:ASP:OD2	49:S3:192:PRO:HD2	2.11	0.51
62:16:27:GLY:HA2	62:16:63:ILE:O	2.10	0.51
78:1S:1196:A:H4'	78:1S:1197:C:H5''	1.92	0.51
79:2S:1128:U:O2	79:2S:2827:U:H4'	2.11	0.51
19:69:128:LYS:HE2	79:2S:1724:U:C5	2.46	0.51
10:60:115:MET:HB2	79:2S:2865:U:OP1	2.11	0.51
7:L7:151:ARG:HG3	7:L7:151:ARG:HH11	1.75	0.51
28:78:79:TRP:HB3	28:78:87:ARG:HG3	1.91	0.51
69:23:127:VAL:HG23	69:23:130:VAL:CG2	2.41	0.51
78:1S:1732:A:H2'	78:1S:1733:C:C6	2.46	0.51
1:L1:189:PHE:CE1	1:L1:200:ASN:HB2	2.46	0.51
72:26:42:ARG:HB2	72:26:42:ARG:HH11	1.76	0.51
32:82:37:GLY:HA2	79:2S:640:U:OP2	2.10	0.51
32:82:19:ARG:HB2	32:82:31:ASN:O	2.11	0.51
5:L5:20:PHE:HD1	5:L5:23:ARG:HG3	1.75	0.51
18:68:69:ARG:HH22	79:2S:720:A:H5''	1.76	0.51
19:69:23:TRP:HB3	19:69:51:VAL:HG23	1.93	0.51
16:66:130:LYS:O	16:66:133:ARG:HG2	2.11	0.51
51:S5:58:LEU:O	51:S5:61:TYR:HB2	2.11	0.51
54:S8:9:HIS:O	54:S8:10:LYS:HB3	2.11	0.51
79:2S:3138:U:H3'	79:2S:3139:A:H5''	1.93	0.51
78:1S:1246:C:H2'	78:1S:1247:U:C6	2.46	0.51
8:L8:152:LEU:O	8:L8:197:VAL:HA	2.11	0.51
79:2S:2719:U:H2'	79:2S:2720:G:H8	1.76	0.51
62:16:6:SER:HA	62:16:22:VAL:O	2.11	0.51
40:90:112:LYS:HB3	40:90:114:LYS:HG2	1.92	0.51
50:S4:152:PRO:HG2	52:S6:215:ARG:HG2	1.93	0.51
14:64:123:LEU:HD22	16:66:190:VAL:HG23	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:160:C:H2'	78:1S:161:U:O4'	2.10	0.51
81:5S:113:C:H2'	81:5S:114:U:C6	2.46	0.51
25:75:111:ASN:HB2	25:75:123:TYR:HB2	1.91	0.51
34:84:72:VAL:HG22	34:84:77:GLY:HA2	1.93	0.51
11:61:60:ARG:HH12	42:92:103:ALA:HB1	1.75	0.51
78:1S:1010:C:H2'	78:1S:1011:G:O4'	2.11	0.51
75:29:39:CYS:SG	75:29:42:CYS:HB2	2.51	0.51
17:67:159:LYS:HD3	17:67:159:LYS:N	2.26	0.51
3:L3:364:LYS:HD2	3:L3:364:LYS:N	2.26	0.51
50:S4:44:LEU:HD12	50:S4:79:ASP:O	2.10	0.51
79:2S:2126:A:H2'	79:2S:2127:U:C6	2.45	0.51
79:2S:957:C:H2'	79:2S:958:C:C6	2.46	0.50
79:2S:1238:C:H3'	79:2S:1239:C:C5'	2.38	0.50
22:72:19:VAL:HG21	22:72:28:PHE:HE2	1.76	0.50
79:2S:2533:G:H5'	79:2S:2533:G:C8	2.41	0.50
1:L1:14:LYS:HA	1:L1:17:LEU:HD21	1.92	0.50
50:S4:159:THR:CG2	50:S4:227:VAL:HB	2.41	0.50
78:1S:883:C:H2'	78:1S:884:A:C8	2.46	0.50
15:65:117:ASN:H	15:65:133:ILE:HG23	1.77	0.50
66:20:96:PRO:HG2	66:20:99:ILE:HG22	1.93	0.50
78:1S:970:A:H3'	78:1S:971:A:H8	1.77	0.50
72:26:31:PRO:HB2	72:26:34:LYS:HB3	1.93	0.50
79:2S:709:A:H2	79:2S:2787:G:H21	1.59	0.50
79:2S:1288:U:H2'	79:2S:1289:G:H8	1.75	0.50
8:L8:157:VAL:HG12	8:L8:159:PRO:HD2	1.92	0.50
79:2S:1647:A:O5'	79:2S:1647:A:H8	1.93	0.50
78:1S:7:G:H4'	78:1S:573:C:O2'	2.10	0.50
45:RC:192:PHE:CE1	49:S3:222:VAL:HG23	2.46	0.50
42:92:46:LYS:HG2	42:92:54:THR:HG21	1.93	0.50
4:L4:281:ILE:O	4:L4:281:ILE:HG23	2.11	0.50
78:1S:1470:C:O2'	78:1S:1572:G:H5'	2.11	0.50
79:2S:1841:A:O2'	79:2S:1842:A:H5''	2.12	0.50
73:27:74:SER:O	73:27:75:GLU:HB3	2.11	0.50
57:11:109:VAL:HG23	57:11:137:PHE:C	2.32	0.50
78:1S:515:A:H2'	78:1S:516:G:O4'	2.10	0.50
8:L8:126:SER:HB2	79:2S:121:A:H61	1.75	0.50
68:22:104:LEU:HD13	68:22:104:LEU:N	2.26	0.50
72:26:36:ILE:HD13	72:26:36:ILE:C	2.31	0.50
47:S1:181:LEU:HA	47:S1:184:LEU:HB2	1.93	0.50
50:S4:181:VAL:HG22	50:S4:227:VAL:HG22	1.94	0.50
78:1S:1681:A:O2'	78:1S:1682:U:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S3:24:PHE:CZ	49:S3:72:LEU:HD13	2.45	0.50
42:92:77:CYS:O	42:92:78:LYS:HB3	2.11	0.50
30:80:48:THR:CG2	30:80:49:PRO:HD2	2.42	0.50
53:S7:31:SER:O	53:S7:32:PRO:O	2.30	0.50
19:69:37:SER:O	19:69:41:ILE:HD13	2.10	0.50
79:2S:2079:G:C2'	79:2S:2080:C:H5'	2.41	0.50
26:76:79:ALA:HB1	26:76:98:ASN:HB3	1.93	0.50
6:L6:145:LEU:O	6:L6:149:ILE:HG13	2.11	0.50
32:82:103:LYS:O	32:82:106:VAL:HG12	2.10	0.50
4:L4:65:TRP:CZ3	4:L4:76:ARG:HD3	2.47	0.50
50:S4:131:LEU:HD21	78:1S:243:G:H1'	1.93	0.50
48:S2:174:ARG:HD2	55:S9:98:ALA:HB2	1.92	0.50
29:79:28:LYS:HG2	79:2S:1065:A:C4	2.47	0.50
23:73:86:ARG:HA	23:73:91:VAL:O	2.11	0.50
57:11:70:ILE:N	57:11:70:ILE:HD12	2.26	0.50
69:23:82:LYS:N	69:23:82:LYS:HD3	2.27	0.50
64:18:121:ALA:O	64:18:125:ILE:HG13	2.11	0.50
29:79:51:ALA:HA	29:79:54:LEU:HB2	1.94	0.50
51:S5:63:GLN:CG	51:S5:88:PRO:HA	2.40	0.50
1:L1:39:LYS:HA	1:L1:163:LEU:O	2.12	0.50
79:2S:1951:C:H6	79:2S:2095:G:C2	2.28	0.50
28:78:91:LEU:CD2	28:78:121:VAL:HG21	2.41	0.50
79:2S:973:A:H2'	79:2S:974:G:O4'	2.11	0.50
1:L1:103:LEU:CD1	1:L1:128:LEU:HB3	2.41	0.50
78:1S:601:A:H2'	78:1S:602:U:C6	2.46	0.50
53:S7:111:LYS:CG	53:S7:112:ARG:H	2.23	0.50
4:L4:3:ARG:HE	4:L4:22:LEU:HB2	1.77	0.50
30:80:32:LYS:O	30:80:36:GLN:HG3	2.11	0.50
43:93:19:GLY:HA3	79:2S:2189:U:H4'	1.91	0.50
72:26:23:CYS:HB3	72:26:28:LYS:N	2.26	0.50
57:11:103:ARG:HA	78:1S:351:C:O2	2.12	0.50
50:S4:211:LYS:HA	50:S4:216:ASN:O	2.12	0.50
70:24:14:SER:C	70:24:16:PRO:HD3	2.32	0.50
78:1S:693:U:H5''	78:1S:694:U:H5'	1.93	0.50
79:2S:2813:A:H2'	79:2S:2814:G:O4'	2.11	0.50
48:S2:52:THR:HB	48:S2:54:GLU:HG2	1.93	0.50
58:12:89:ILE:HG23	58:12:90:LYS:N	2.26	0.50
78:1S:372:G:H1'	78:1S:612:U:O2	2.11	0.50
79:2S:1666:G:H2'	79:2S:1667:A:C8	2.46	0.50
32:82:63:THR:HA	32:82:66:LEU:HD12	1.94	0.50
79:2S:975:C:H2'	79:2S:976:U:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2909:U:H2'	79:2S:2910:A:O4'	2.12	0.50
5:L5:177:GLU:HA	5:L5:180:PHE:CD2	2.45	0.50
20:70:26:ARG:HH22	20:70:28:ARG:HH21	1.58	0.50
64:18:134:ARG:HH11	64:18:134:ARG:HG3	1.75	0.50
24:74:34:SER:HB3	79:2S:3052:G:OP1	2.11	0.50
4:L4:74:ILE:HD12	4:L4:74:ILE:O	2.11	0.50
7:L7:52:GLN:HA	7:L7:55:TYR:CD2	2.47	0.50
79:2S:3096:C:H2'	79:2S:3097:C:C6	2.46	0.50
66:20:100:VAL:O	66:20:104:THR:HG23	2.11	0.50
15:65:157:LYS:O	15:65:158:HIS:HB2	2.11	0.50
62:16:39:VAL:HG22	62:16:48:VAL:HG11	1.93	0.50
19:69:139:VAL:HA	19:69:142:ILE:HD12	1.92	0.50
78:1S:391:A:O4'	78:1S:1731:A:H5'	2.11	0.50
35:85:86:ARG:HG2	35:85:89:ARG:NH2	2.26	0.50
10:60:55:ASN:ND2	10:60:164:LYS:HE2	2.27	0.50
2:L2:104:LEU:HD21	2:L2:116:VAL:HG21	1.93	0.50
10:60:213:PHE:N	10:60:214:PRO:CD	2.74	0.50
48:S2:228:ASN:ND2	67:21:1:MET:HG2	2.24	0.50
51:S5:198:LEU:O	51:S5:202:ALA:HB2	2.11	0.50
79:2S:1178:G:H1'	79:2S:1328:C:O2'	2.11	0.50
45:RC:240:VAL:HA	45:RC:255:ALA:O	2.11	0.50
78:1S:1739:C:H2'	78:1S:1740:A:C8	2.47	0.50
65:19:52:GLY:HA2	65:19:55:TYR:HE2	1.77	0.50
37:87:47:TYR:HB3	37:87:49:TRP:NE1	2.26	0.50
79:2S:751:A:H2'	79:2S:752:C:H6	1.75	0.50
16:66:157:GLU:O	16:66:161:LYS:HG3	2.11	0.50
7:L7:102:VAL:HG12	7:L7:106:LEU:HD11	1.94	0.50
6:L6:19:LYS:HE3	79:2S:590:G:H21	1.76	0.50
3:L3:243:HIS:O	3:L3:244:ARG:HG2	2.11	0.50
16:66:87:MET:HG2	79:2S:1175:C:O2	2.10	0.50
15:65:89:VAL:HG21	79:2S:2424:A:H5'	1.92	0.50
19:69:99:LEU:HD12	79:2S:1722:U:H5''	1.92	0.50
78:1S:1569:A:H2'	78:1S:1570:A:H8	1.76	0.50
47:S1:109:LYS:O	47:S1:113:MET:HG3	2.12	0.50
79:2S:1105:A:H2'	79:2S:1106:G:C8	2.47	0.50
33:83:49:ILE:HG22	33:83:50:ALA:H	1.77	0.50
1:L1:45:ARG:HD2	1:L1:195:LYS:HE3	1.93	0.50
15:65:67:ARG:NH2	79:2S:2168:A:H5''	2.27	0.50
19:69:168:ALA:O	19:69:172:ARG:HG3	2.11	0.50
79:2S:2726:C:O2'	79:2S:2727:A:H2'	2.11	0.50
18:68:82:VAL:HB	18:68:139:ILE:HA	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:65:124:ASP:CG	15:65:125:SER:H	2.15	0.50
51:S5:164:PRO:O	51:S5:168:VAL:HG23	2.11	0.50
20:70:106:LEU:HD23	20:70:106:LEU:O	2.11	0.50
42:92:61:LYS:NZ	42:92:61:LYS:HB3	2.26	0.50
50:S4:47:PHE:HE1	50:S4:111:VAL:HG22	1.76	0.50
59:13:71:ILE:O	59:13:75:LEU:HD13	2.12	0.50
13:63:59:ARG:HG2	13:63:60:ALA:N	2.24	0.50
79:2S:1532:C:H2'	79:2S:1533:U:C6	2.46	0.50
61:15:22:LEU:HD22	61:15:22:LEU:N	2.25	0.50
56:10:58:GLN:CB	56:10:65:TYR:HB2	2.38	0.50
60:14:87:GLY:H	60:14:92:LYS:HA	1.77	0.50
5:L5:33:ARG:NH1	5:L5:33:ARG:HG3	2.26	0.50
15:65:18:VAL:O	15:65:22:LEU:HD13	2.11	0.50
78:1S:17:C:H5'	78:1S:1109:G:H5'	1.94	0.50
20:70:117:ARG:HG3	20:70:119:ARG:HH12	1.76	0.50
55:S9:52:ILE:HG23	55:S9:76:LEU:HD11	1.93	0.50
79:2S:3376:A:H5'	79:2S:3377:G:H5''	1.94	0.50
11:61:86:VAL:CG2	11:61:111:ASP:HB3	2.42	0.50
50:S4:15:PRO:HD2	50:S4:18:TRP:CZ3	2.47	0.50
79:2S:2466:G:C2'	79:2S:2467:G:H5'	2.42	0.50
8:L8:68:ARG:HD3	8:L8:237:ILE:O	2.10	0.50
81:5S:58:C:H2'	81:5S:59:U:C6	2.47	0.50
79:2S:1334:U:H2'	79:2S:1335:C:C6	2.46	0.50
57:11:34:TRP:HH2	57:11:36:LYS:HD3	1.76	0.50
6:L6:42:LEU:O	6:L6:49:GLY:HA2	2.12	0.50
48:S2:117:THR:O	48:S2:117:THR:HG23	2.12	0.50
78:1S:1058:U:O2'	78:1S:1059:U:H2'	2.12	0.50
1:L1:199:GLN:C	1:L1:201:VAL:H	2.15	0.50
18:68:102:ALA:HA	18:68:122:ILE:O	2.12	0.50
56:10:50:THR:HG22	56:10:55:VAL:HG13	1.94	0.50
48:S2:38:VAL:HG22	48:S2:39:THR:N	2.23	0.50
6:L6:176:PHE:CE2	33:83:107:ILE:HD13	2.47	0.50
69:23:141:GLU:HG2	69:23:142:LYS:N	2.26	0.50
3:L3:117:ARG:HA	3:L3:175:LYS:HD3	1.92	0.50
78:1S:1459:C:OP2	78:1S:1459:C:H6	1.95	0.50
79:2S:3152:U:O2'	79:2S:3153:U:H5'	2.12	0.50
79:2S:757:C:H2'	79:2S:758:C:O4'	2.10	0.50
36:86:60:LEU:O	36:86:64:SER:HB3	2.11	0.50
59:13:14:SER:OG	78:1S:958:U:H2'	2.12	0.50
51:S5:148:ARG:HH12	82:ET:36:A:H62	1.60	0.50
82:ET:60:A:H3'	82:ET:61:U:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L4:138:ARG:HH12	4:L4:246:ARG:HG2	1.76	0.50
43:93:5:THR:HB	43:93:8:VAL:HG22	1.94	0.50
23:73:75:PRO:HG2	23:73:105:PRO:HD3	1.94	0.50
58:12:113:ARG:HG3	58:12:114:LYS:H	1.77	0.50
79:2S:741:U:C2	79:2S:742:G:H1'	2.47	0.50
79:2S:2267:C:H2'	79:2S:2268:U:O4'	2.12	0.50
42:92:57:VAL:HG22	82:ET:76:C:H4'	1.94	0.50
4:L4:169:LEU:O	4:L4:174:ALA:HB3	2.11	0.50
5:L5:44:TYR:CD1	21:71:33:VAL:HG13	2.47	0.50
71:25:64:VAL:HA	71:25:67:ASP:HB2	1.94	0.50
48:S2:242:ILE:N	48:S2:242:ILE:HD12	2.26	0.50
49:S3:141:LYS:O	49:S3:141:LYS:HD3	2.12	0.50
3:L3:166:ILE:O	3:L3:166:ILE:HG13	2.11	0.50
79:2S:2553:U:O2	79:2S:2553:U:H2'	2.10	0.50
4:L4:194:TYR:HD1	4:L4:194:TYR:H	1.58	0.50
62:16:114:ARG:H	62:16:116:LEU:CD2	2.24	0.50
79:2S:2529:A:H2'	79:2S:2530:G:O4'	2.11	0.50
15:65:114:ARG:HD2	15:65:157:LYS:HA	1.94	0.50
28:78:117:ARG:O	28:78:118:ILE:HG23	2.12	0.50
50:S4:86:PHE:HE2	50:S4:102:VAL:HA	1.75	0.50
80:8S:106:C:H4'	80:8S:107:G:H5''	1.93	0.50
8:L8:116:VAL:HG23	8:L8:125:ALA:HB2	1.93	0.50
26:76:82:VAL:HG12	26:76:84:LYS:H	1.75	0.50
47:S1:111:ARG:HH11	47:S1:111:ARG:HG2	1.77	0.50
64:18:38:VAL:HG12	64:18:42:TYR:HD2	1.74	0.50
46:S0:64:ILE:HG12	46:S0:120:LEU:HD21	1.92	0.50
57:11:69:LYS:HD2	57:11:69:LYS:N	2.27	0.50
79:2S:1812:G:O2'	79:2S:1818:U:H4'	2.12	0.50
65:19:104:VAL:O	65:19:108:LEU:HG	2.12	0.50
63:17:84:TYR:C	63:17:86:PRO:HD2	2.32	0.50
5:L5:55:PHE:CE2	5:L5:159:VAL:HG22	2.46	0.50
29:79:2:ALA:HB2	79:2S:2818:U:H5''	1.93	0.50
78:1S:699:U:H2'	78:1S:700:C:C6	2.47	0.50
32:82:71:HIS:HB2	32:82:93:ALA:HB2	1.93	0.50
79:2S:1881:A:H2'	79:2S:1882:G:H8	1.76	0.50
79:2S:2915:U:H5''	79:2S:2916:U:H5'	1.94	0.50
79:2S:2736:A:H2'	79:2S:2737:C:O4'	2.12	0.50
78:1S:38:C:O2'	78:1S:39:A:H5'	2.12	0.50
18:68:127:LEU:O	18:68:127:LEU:HD13	2.12	0.50
77:31:145:HIS:HB2	78:1S:1234:A:H4'	1.94	0.50
23:73:39:VAL:HA	23:73:58:VAL:HB	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:3356:G:H2'	79:2S:3357:U:C6	2.46	0.50
21:71:96:ILE:HD12	21:71:96:ILE:N	2.27	0.50
59:13:62:GLN:HB2	59:13:65:VAL:CG2	2.39	0.50
79:2S:72:C:C1'	79:2S:74:G:H1'	2.41	0.50
18:68:26:LEU:O	18:68:30:VAL:HG23	2.12	0.50
79:2S:1055:A:H2'	79:2S:1056:U:O4'	2.12	0.50
3:L3:3:HIS:NE2	79:2S:2938:G:H5''	2.26	0.50
20:70:67:ALA:C	20:70:69:PRO:HD3	2.32	0.50
64:18:72:ILE:CG2	64:18:81:ILE:HD11	2.42	0.50
78:1S:251:A:H2'	78:1S:252:U:O4'	2.11	0.50
48:S2:161:LYS:HG2	48:S2:162:CYS:N	2.26	0.50
45:RC:7:LEU:HD12	45:RC:7:LEU:N	2.27	0.50
56:10:15:LEU:HD13	56:10:21:VAL:HG23	1.94	0.50
12:62:105:GLN:HA	12:62:142:ARG:O	2.12	0.50
78:1S:1250:U:C2'	78:1S:1251:U:H5'	2.42	0.50
10:60:47:PRO:HB3	10:60:171:TRP:CZ2	2.46	0.50
11:61:172:LEU:O	11:61:173:ASP:HB2	2.11	0.50
70:24:57:VAL:HA	70:24:73:GLY:HA2	1.94	0.50
4:L4:295:ILE:O	4:L4:299:ILE:HG12	2.12	0.50
82:PT:1:C:H2'	82:PT:2:G:H8	1.76	0.50
54:S8:135:LYS:O	54:S8:135:LYS:HD3	2.12	0.50
82:ET:38:A:H2'	82:ET:39:A:O4'	2.11	0.50
36:86:83:ALA:O	36:86:87:VAL:HG23	2.12	0.50
57:11:6:THR:HB	57:11:9:SER:OG	2.12	0.50
56:10:13:GLN:HA	56:10:80:LEU:HD11	1.94	0.50
51:S5:59:VAL:O	51:S5:60:ASP:HB2	2.12	0.50
11:61:23:VAL:CG1	11:61:29:ARG:HD3	2.42	0.50
56:10:60:SER:HB3	56:10:65:TYR:HE2	1.76	0.50
46:S0:76:ILE:CD1	46:S0:98:ILE:HB	2.37	0.50
52:S6:78:THR:HG22	52:S6:79:LYS:N	2.24	0.50
57:11:8:GLN:OE1	57:11:14:GLN:HG2	2.12	0.50
57:11:99:ARG:HB3	69:23:12:ALA:HB2	1.93	0.50
2:L2:225:ILE:HB	2:L2:238:ILE:HG12	1.94	0.50
53:S7:83:LYS:O	53:S7:86:GLN:HB2	2.11	0.50
33:83:54:ARG:HG3	33:83:64:ILE:HG12	1.94	0.50
3:L3:95:THR:HG22	79:2S:3243:A:H5''	1.93	0.50
31:81:18:LYS:HB3	79:2S:3376:A:N3	2.26	0.50
4:L4:32:PRO:HG3	4:L4:244:LEU:HD12	1.94	0.50
78:1S:839:U:H2'	78:1S:840:U:C5'	2.41	0.50
78:1S:1567:U:C2'	78:1S:1568:C:H5'	2.42	0.50
79:2S:2466:G:H2'	79:2S:2467:G:H5'	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:L9:114:VAL:HB	9:L9:124:ARG:HB2	1.94	0.50
79:2S:839:C:O2'	79:2S:840:C:H5'	2.12	0.50
78:1S:162:A:H3'	78:1S:163:G:H21	1.77	0.50
78:1S:1713:G:H2'	78:1S:1714:A:H5'	1.92	0.50
55:S9:117:GLY:O	55:S9:118:LEU:HB3	2.10	0.50
2:L2:83:HIS:CB	43:93:64:VAL:HG22	2.42	0.50
35:85:66:VAL:HA	35:85:69:LEU:HG	1.93	0.50
16:66:158:ALA:O	16:66:162:VAL:HG23	2.12	0.50
78:1S:1210:C:H2'	78:1S:1211:A:C8	2.47	0.50
79:2S:300:G:H2'	79:2S:301:G:C8	2.47	0.50
42:92:32:LYS:HG2	42:92:34:SER:H	1.77	0.50
5:L5:134:ALA:HB2	5:L5:141:PRO:CD	2.42	0.49
79:2S:2095:G:H2'	79:2S:2096:A:C8	2.47	0.49
11:61:114:ILE:HD12	11:61:114:ILE:N	2.27	0.49
68:22:89:TRP:HA	68:22:92:ASN:HD22	1.77	0.49
7:L7:125:GLU:HG3	79:2S:987:U:C5'	2.42	0.49
79:2S:2152:A:H1'	79:2S:2243:A:C2	2.47	0.49
50:S4:86:PHE:CE2	50:S4:102:VAL:HA	2.47	0.49
63:17:21:TYR:C	63:17:23:LYS:H	2.16	0.49
30:80:74:ASN:HB2	30:80:87:VAL:O	2.12	0.49
9:L9:41:ILE:O	9:L9:42:ASP:HB2	2.11	0.49
78:1S:177:U:H3'	78:1S:178:U:C5'	2.42	0.49
21:71:116:ARG:HH11	21:71:116:ARG:HG3	1.77	0.49
78:1S:1044:U:H2'	78:1S:1045:C:C5	2.47	0.49
78:1S:224:C:H2'	78:1S:225:A:H8	1.77	0.49
54:S8:166:TYR:HD2	54:S8:189:LEU:HD21	1.77	0.49
21:71:8:ARG:HB2	79:2S:2757:U:O2'	2.12	0.49
21:71:102:ARG:HG2	21:71:102:ARG:HH11	1.77	0.49
21:71:17:ARG:HG3	21:71:21:LYS:O	2.12	0.49
46:S0:197:ILE:N	46:S0:197:ILE:HD12	2.26	0.49
64:18:65:GLU:O	64:18:69:ILE:HG13	2.12	0.49
5:L5:12:TYR:O	5:L5:16:PHE:HB2	2.12	0.49
20:70:15:PRO:HG3	20:70:22:PRO:CD	2.42	0.49
78:1S:1360:A:H2'	78:1S:1361:U:H4'	1.94	0.49
17:67:38:GLY:H	17:67:114:VAL:HG13	1.77	0.49
79:2S:3048:A:H4'	79:2S:3049:A:H5'	1.94	0.49
70:24:84:LYS:HE3	70:24:85:PHE:CE2	2.47	0.49
79:2S:2333:C:H2'	79:2S:2334:U:O4'	2.11	0.49
79:2S:1551:C:H2'	79:2S:1552:G:C8	2.47	0.49
5:L5:3:PHE:HB2	5:L5:6:ASP:HB2	1.93	0.49
3:L3:237:LYS:HD3	79:2S:2340:U:H5''	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:L9:28:VAL:HG22	9:L9:33:THR:HG22	1.94	0.49
78:1S:1785:U:H2'	78:1S:1786:G:H8	1.77	0.49
4:L4:350:LYS:HG2	4:L4:351:PRO:HD2	1.94	0.49
9:L9:23:ARG:CD	9:L9:39:LYS:HA	2.36	0.49
48:S2:125:ILE:O	48:S2:129:ILE:HG13	2.11	0.49
16:66:37:ARG:HB3	16:66:40:GLU:HG2	1.92	0.49
19:69:93:VAL:HG12	19:69:97:ARG:NE	2.27	0.49
51:S5:129:PRO:O	51:S5:133:VAL:HG23	2.12	0.49
8:L8:150:LEU:HD13	8:L8:151:VAL:N	2.27	0.49
79:2S:1627:U:HO2'	79:2S:1813:A:H8	1.59	0.49
63:17:5:ARG:CG	63:17:9:VAL:HG11	2.42	0.49
79:2S:861:C:H2'	79:2S:862:U:H6	1.74	0.49
53:S7:109:VAL:HG22	53:S7:110:GLN:N	2.26	0.49
7:L7:160:ARG:NH1	7:L7:206:LYS:HD3	2.26	0.49
78:1S:487:G:H1	78:1S:500:C:H41	1.61	0.49
78:1S:915:A:H3'	78:1S:916:U:C6	2.47	0.49
79:2S:436:A:H2'	79:2S:437:G:H5'	1.95	0.49
69:23:144:ARG:CD	69:23:145:SER:H	2.25	0.49
16:66:32:LYS:HA	16:66:101:ARG:HB3	1.94	0.49
48:S2:238:SER:O	48:S2:241:ASP:HB2	2.12	0.49
49:S3:167:PHE:CE1	49:S3:192:PRO:HA	2.46	0.49
79:2S:1910:A:O2'	79:2S:2334:U:H4'	2.11	0.49
19:69:153:LYS:O	19:69:157:GLU:HG3	2.12	0.49
30:80:86:ARG:HD2	43:93:44:LYS:HE2	1.95	0.49
10:60:27:PRO:HD2	10:60:122:PRO:HB3	1.94	0.49
48:S2:44:LEU:HD22	48:S2:243:TYR:HB3	1.95	0.49
34:84:106:LYS:O	34:84:110:GLU:HG3	2.12	0.49
4:L4:308:LYS:HG2	4:L4:309:ARG:H	1.77	0.49
47:S1:140:ILE:HG23	47:S1:211:HIS:HB2	1.95	0.49
51:S5:63:GLN:C	51:S5:65:ARG:H	2.16	0.49
79:2S:1655:G:H2'	79:2S:1656:A:C8	2.47	0.49
79:2S:405:U:C2'	79:2S:406:G:H5'	2.38	0.49
47:S1:87:ARG:HH22	47:S1:101:HIS:HA	1.76	0.49
73:27:33:LEU:HA	73:27:80:ARG:O	2.12	0.49
10:60:162:GLN:HG2	10:60:163:GLN:N	2.26	0.49
18:68:80:THR:HG22	18:68:100:THR:HB	1.94	0.49
50:S4:173:ILE:HD12	50:S4:173:ILE:N	2.27	0.49
80:8S:153:U:H2'	80:8S:154:C:C6	2.47	0.49
4:L4:235:LEU:HD12	4:L4:238:LEU:HD12	1.94	0.49
20:70:124:LEU:HD13	21:71:155:PRO:HG3	1.93	0.49
33:83:74:THR:HA	33:83:81:VAL:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1813:A:C3'	79:2S:1814:A:H5'	2.41	0.49
79:2S:3294:A:H2'	79:2S:3295:A:O4'	2.12	0.49
64:18:76:PRO:HB2	64:18:81:ILE:HB	1.93	0.49
79:2S:1525:G:O2'	79:2S:1829:G:H2'	2.12	0.49
54:S8:24:LYS:O	54:S8:25:ARG:HD3	2.12	0.49
33:83:75:HIS:HB3	33:83:80:VAL:HB	1.93	0.49
79:2S:2369:G:H2'	79:2S:2370:G:C8	2.48	0.49
79:2S:982:C:O2'	79:2S:983:A:H5'	2.12	0.49
67:21:86:SER:HA	73:27:6:ASP:HB3	1.93	0.49
79:2S:2998:U:H2'	79:2S:2999:U:C6	2.47	0.49
18:68:126:GLN:O	18:68:130:ARG:HG3	2.12	0.49
10:60:166:ILE:HG22	10:60:167:LEU:N	2.27	0.49
79:2S:2363:A:H2'	79:2S:2364:G:O4'	2.12	0.49
52:S6:142:ARG:HG2	52:S6:147:LEU:HB2	1.94	0.49
2:L2:118:GLU:HG3	2:L2:125:ALA:HB3	1.94	0.49
79:2S:1367:G:H2'	79:2S:1368:U:H5	1.77	0.49
79:2S:937:G:OP2	79:2S:938:C:H5	1.94	0.49
80:8S:68:G:H2'	80:8S:69:U:C6	2.48	0.49
79:2S:1694:U:O2'	79:2S:1695:U:H5'	2.13	0.49
28:78:47:LYS:O	28:78:48:TYR:HB2	2.13	0.49
36:86:26:ILE:CG2	79:2S:155:G:H21	2.22	0.49
79:2S:1311:G:H2'	79:2S:1312:C:C6	2.48	0.49
71:25:70:LYS:HG3	71:25:71:ILE:HG13	1.94	0.49
3:L3:146:ARG:HA	3:L3:146:ARG:NE	2.27	0.49
48:S2:104:VAL:HG22	48:S2:132:ALA:HB1	1.93	0.49
45:RC:72:THR:CG2	45:RC:81:LEU:HD12	2.42	0.49
79:2S:1348:U:H4'	79:2S:1349:G:H5'	1.94	0.49
36:86:40:VAL:O	36:86:44:VAL:HG23	2.12	0.49
79:2S:2731:U:H2'	79:2S:2732:G:C8	2.47	0.49
14:64:76:ALA:HB1	14:64:80:THR:HB	1.95	0.49
78:1S:1774:G:H2'	78:1S:1775:U:C6	2.47	0.49
52:S6:56:ASN:HD21	78:1S:153:G:N2	2.10	0.49
78:1S:431:C:H2'	78:1S:432:G:C8	2.48	0.49
7:L7:96:PRO:HB2	7:L7:99:PRO:HD2	1.93	0.49
18:68:85:GLY:N	18:68:104:LEU:HD12	2.28	0.49
79:2S:2379:U:H2'	79:2S:2380:U:C6	2.48	0.49
63:17:113:LEU:HD23	63:17:113:LEU:N	2.27	0.49
5:L5:226:TYR:HD2	5:L5:231:ILE:HB	1.77	0.49
45:RC:169:ILE:HD13	45:RC:183:LEU:HD21	1.95	0.49
52:S6:198:ALA:O	52:S6:202:ARG:HG2	2.12	0.49
79:2S:2799:A:H4'	79:2S:2800:G:C5	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L4:239:ALA:N	4:L4:240:PRO:HD3	2.28	0.49
63:17:122:ILE:HG23	63:17:123:ASN:N	2.28	0.49
10:60:36:LEU:HD12	10:60:36:LEU:N	2.28	0.49
69:23:50:LYS:HE2	78:1S:435:C:C5'	2.39	0.49
62:16:92:TYR:O	62:16:97:VAL:HG23	2.12	0.49
22:72:19:VAL:HG23	22:72:61:THR:HA	1.93	0.49
76:30:47:VAL:HG22	76:30:48:THR:N	2.23	0.49
78:1S:387:A:H4'	78:1S:425:A:H61	1.77	0.49
18:68:16:ARG:HG2	79:2S:974:G:OP1	2.12	0.49
78:1S:1340:U:H3'	78:1S:1341:A:H5''	1.91	0.49
46:S0:52:LYS:O	46:S0:56:LYS:HG2	2.13	0.49
79:2S:528:U:H2'	79:2S:529:A:H8	1.73	0.49
29:79:14:ARG:HD2	29:79:14:ARG:C	2.31	0.49
3:L3:128:LYS:NZ	79:2S:3293:U:H5'	2.27	0.49
78:1S:900:A:H2'	78:1S:901:G:H5'	1.93	0.49
23:73:33:ASN:ND2	23:73:64:LYS:H	2.11	0.49
79:2S:791:A:H2'	79:2S:792:G:C8	2.47	0.49
69:23:37:ALA:HA	69:23:41:SER:HB3	1.94	0.49
79:2S:2265:C:H2'	79:2S:2266:U:C6	2.47	0.49
13:63:89:TYR:O	13:63:93:ILE:HG12	2.13	0.49
3:L3:375:GLU:O	3:L3:379:PHE:HB2	2.13	0.49
79:2S:616:G:H2'	79:2S:617:G:C8	2.48	0.49
79:2S:165:A:H2'	79:2S:166:C:O4'	2.12	0.49
3:L3:385:LYS:C	3:L3:387:LEU:H	2.16	0.49
78:1S:34:G:H2'	78:1S:35:U:C6	2.47	0.49
70:24:22:GLN:HB2	70:24:72:PHE:CZ	2.47	0.49
79:2S:3319:U:OP1	79:2S:3320:A:H5'	2.13	0.49
47:S1:82:ARG:HA	47:S1:105:PHE:HA	1.94	0.49
80:8S:30:C:H2'	80:8S:31:G:C8	2.47	0.49
53:S7:130:VAL:HG23	53:S7:130:VAL:O	2.12	0.49
45:RC:112:SER:HB2	45:RC:153:GLN:HA	1.93	0.49
14:64:37:GLU:H	14:64:45:LEU:HB3	1.77	0.49
78:1S:97:C:H2'	78:1S:98:U:C6	2.47	0.49
46:S0:32:HIS:HB2	78:1S:1040:G:H4'	1.94	0.49
69:23:93:LEU:O	69:23:96:VAL:HG22	2.12	0.49
2:L2:21:ARG:CD	79:2S:824:C:H5''	2.38	0.49
64:18:36:LYS:HB3	64:18:105:VAL:HG21	1.94	0.49
69:23:79:ASN:HB3	69:23:81:LYS:HG3	1.95	0.49
6:L6:158:TYR:CE1	14:64:115:PHE:HA	2.47	0.49
17:67:29:THR:O	17:67:32:THR:HG22	2.13	0.49
78:1S:1340:U:H3'	78:1S:1341:A:H5'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:84:97:GLU:O	34:84:100:ILE:HG22	2.13	0.49
30:80:83:LYS:HD2	30:80:83:LYS:N	2.26	0.49
49:S3:40:ARG:HG2	66:20:110:PRO:HB3	1.94	0.49
66:20:41:ILE:HG22	66:20:41:ILE:O	2.13	0.49
79:2S:1878:G:N3	79:2S:1878:G:H3'	2.27	0.49
79:2S:970:A:H2'	79:2S:971:G:C8	2.48	0.49
79:2S:2882:U:H2'	79:2S:2883:U:H6	1.77	0.49
79:2S:1861:G:H21	79:2S:3066:U:H5'	1.77	0.49
57:11:20:PHE:CG	78:1S:211:U:H5''	2.47	0.49
79:2S:1158:A:H2'	79:2S:1159:A:C4'	2.43	0.49
31:81:49:VAL:HG22	31:81:91:SER:HB2	1.95	0.49
59:13:88:LEU:HD23	59:13:125:LEU:HD12	1.95	0.49
69:23:19:ARG:NE	69:23:19:ARG:HA	2.28	0.49
60:14:133:ARG:HB2	60:14:136:ARG:HH21	1.78	0.49
3:L3:99:LEU:HB2	79:2S:3004:C:H4'	1.94	0.49
78:1S:1071:U:H2'	78:1S:1072:C:C6	2.48	0.49
2:L2:91:GLY:O	2:L2:102:LEU:HG	2.13	0.49
2:L2:40:TYR:HA	2:L2:91:GLY:HA3	1.95	0.49
78:1S:467:G:H2'	78:1S:468:A:H5''	1.94	0.49
20:70:46:GLN:O	20:70:47:LYS:HG3	2.13	0.49
81:5S:90:U:H2'	81:5S:91:G:O4'	2.13	0.49
78:1S:95:G:H2'	78:1S:96:G:H8	1.77	0.49
55:S9:93:LEU:O	55:S9:96:VAL:HG22	2.13	0.49
2:L2:224:THR:HA	2:L2:237:LEU:HB2	1.94	0.49
56:10:60:SER:HB3	56:10:65:TYR:CE2	2.47	0.49
6:L6:22:ARG:NH1	79:2S:608:A:H2'	2.27	0.49
17:67:3:ARG:HG3	79:2S:398:A:H5''	1.95	0.49
17:67:29:THR:CA	17:67:32:THR:HG22	2.41	0.49
17:67:22:LEU:HB3	17:67:24:VAL:HG23	1.93	0.49
17:67:118:GLN:HG2	17:67:119:VAL:N	2.28	0.49
1:L1:58:CYS:CB	1:L1:152:ARG:HA	2.42	0.49
24:74:23:ARG:CG	24:74:24:GLY:H	2.25	0.49
78:1S:1682:U:O2'	78:1S:1683:C:H2'	2.13	0.49
22:72:37:LEU:O	22:72:41:ILE:HG13	2.13	0.49
69:23:140:LYS:HB2	69:23:140:LYS:NZ	2.26	0.49
3:L3:62:ARG:HD3	79:2S:3038:U:H5''	1.94	0.49
62:16:143:ARG:CD	78:1S:1191:U:H4'	2.43	0.49
16:66:22:VAL:HG11	16:66:122:GLN:CG	2.42	0.49
23:73:22:ILE:HG22	23:73:33:ASN:HB2	1.94	0.49
63:17:29:GLN:HA	63:17:32:LYS:HE2	1.93	0.49
79:2S:811:U:H2'	79:2S:812:G:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1250:U:H2'	78:1S:1251:U:H5'	1.94	0.49
79:2S:399:A:H2'	79:2S:400:G:H5'	1.95	0.49
78:1S:9:U:H2'	78:1S:11:A:OP2	2.12	0.49
13:63:43:ALA:HA	13:63:51:LEU:HD21	1.95	0.49
81:5S:71:G:H2'	81:5S:72:A:C8	2.48	0.49
59:13:26:PHE:HZ	59:13:28:LEU:HD12	1.78	0.49
8:L8:238:LEU:N	8:L8:238:LEU:HD22	2.28	0.49
62:16:107:LYS:O	62:16:111:SER:HB2	2.13	0.49
79:2S:3043:C:O2'	79:2S:3044:G:H5'	2.12	0.49
74:28:34:GLU:O	74:28:35:ASP:HB2	2.12	0.49
24:74:5:ILE:N	24:74:5:ILE:HD12	2.28	0.49
30:80:17:VAL:HG12	30:80:17:VAL:O	2.11	0.49
15:65:29:GLU:O	15:65:33:LYS:HG3	2.12	0.49
16:66:16:VAL:HA	16:66:41:LEU:HD21	1.94	0.49
58:12:51:ALA:HB2	58:12:124:LYS:HD2	1.94	0.49
78:1S:964:U:H4'	78:1S:965:U:O4'	2.13	0.49
78:1S:1139:A:C2'	78:1S:1140:G:H5'	2.42	0.49
78:1S:874:C:H2'	78:1S:875:G:C8	2.47	0.49
47:S1:163:ALA:O	47:S1:167:VAL:HG23	2.12	0.49
79:2S:2633:U:H2'	79:2S:2634:U:O4'	2.13	0.49
78:1S:913:G:C3'	78:1S:914:G:H5''	2.33	0.49
7:L7:136:TYR:CD1	7:L7:136:TYR:N	2.81	0.49
52:S6:14:LYS:HD3	52:S6:16:PHE:CE1	2.48	0.49
78:1S:390:G:O2'	78:1S:1731:A:H5''	2.12	0.49
78:1S:145:A:O2'	78:1S:146:U:H6	1.91	0.49
51:S5:77:TYR:HD2	51:S5:83:ARG:O	1.95	0.49
79:2S:1785:U:H2'	79:2S:1786:G:C8	2.46	0.49
63:17:27:ASP:HB3	63:17:30:THR:CG2	2.42	0.49
17:67:136:ILE:C	17:67:137:ASN:HD22	2.15	0.49
19:69:88:ARG:HG2	79:2S:1864:A:H5'	1.95	0.49
51:S5:166:ARG:HD2	74:28:46:GLY:CA	2.43	0.49
16:66:147:TRP:CZ2	16:66:149:TYR:HB2	2.48	0.49
38:88:31:LEU:N	38:88:31:LEU:HD23	2.28	0.49
79:2S:1902:G:H2'	79:2S:1903:U:O4'	2.12	0.49
79:2S:225:C:H2'	79:2S:226:C:H6	1.78	0.49
80:8S:53:A:H2'	80:8S:54:A:H8	1.76	0.49
79:2S:1002:A:H2'	79:2S:1003:A:H8	1.78	0.49
79:2S:79:U:H2'	79:2S:80:G:H8	1.78	0.49
34:84:26:PRO:HB3	79:2S:1695:U:O2	2.13	0.49
66:20:74:GLU:HG2	78:1S:1428:G:H21	1.77	0.49
57:11:39:GLY:HA2	78:1S:246:G:O2'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2638:C:H2'	79:2S:2639:G:O4'	2.13	0.49
15:65:44:ARG:HB2	15:65:119:TYR:CE2	2.48	0.49
79:2S:3005:A:H2	79:2S:3141:A:N7	2.11	0.49
67:21:34:ILE:HG22	67:21:36:VAL:HG23	1.94	0.49
5:L5:128:GLU:HG3	5:L5:129:TYR:H	1.78	0.49
3:L3:240:ARG:NH2	3:L3:241:LYS:HB2	2.28	0.49
12:62:124:THR:O	12:62:125:LEU:CB	2.60	0.49
13:63:112:ASN:HA	13:63:115:ARG:HB3	1.95	0.49
79:2S:2816:G:C8	79:2S:2869:U:H3'	2.47	0.49
62:16:7:VAL:HG13	62:16:96:TYR:CE2	2.38	0.49
2:L2:30:ARG:HG2	2:L2:76:PHE:HZ	1.78	0.49
79:2S:2591:A:C2'	79:2S:2592:G:H5'	2.43	0.49
5:L5:109:THR:HG23	5:L5:110:LEU:HD12	1.94	0.49
68:22:86:ILE:HG13	68:22:87:GLU:N	2.27	0.49
42:92:3:ASN:HD22	79:2S:2655:U:H3'	1.77	0.49
1:L1:106:LYS:O	1:L1:136:THR:HG23	2.12	0.49
24:74:23:ARG:HB2	24:74:29:PHE:CE2	2.47	0.49
79:2S:2635:A:N6	79:2S:2641:U:H2'	2.27	0.49
45:RC:46:LYS:HB3	45:RC:56:VAL:HG22	1.94	0.49
17:67:125:GLN:O	17:67:140:GLU:HA	2.13	0.49
38:88:7:ASP:HB3	38:88:10:GLN:HB3	1.94	0.49
59:13:85:PRO:HB2	59:13:88:LEU:HB3	1.94	0.49
3:L3:78:VAL:HG12	3:L3:79:VAL:N	2.27	0.49
50:S4:47:PHE:CE1	50:S4:111:VAL:HG22	2.48	0.49
79:2S:838:G:H2'	79:2S:839:C:C6	2.48	0.49
60:14:133:ARG:HG2	60:14:133:ARG:HH11	1.78	0.49
44:P0:55:LYS:HG3	79:2S:1281:G:H5'	1.94	0.49
69:23:113:ALA:HB1	69:23:117:ILE:HB	1.94	0.49
15:65:83:LYS:HE2	79:2S:46:U:O4	2.13	0.49
5:L5:183:TRP:HA	5:L5:189:GLU:O	2.13	0.49
79:2S:3211:C:H2'	79:2S:3212:C:H6	1.78	0.49
79:2S:3158:G:H21	79:2S:3395:G:H1	1.60	0.49
65:19:42:GLY:HA2	65:19:84:LYS:HD2	1.95	0.49
54:S8:196:LEU:HG	54:S8:200:LYS:NZ	2.28	0.49
37:87:18:LEU:CD2	37:87:25:ARG:HB2	2.43	0.49
66:20:62:VAL:CG1	66:20:83:GLU:HB2	2.41	0.49
16:66:119:VAL:O	20:70:163:PHE:HD1	1.95	0.49
45:RC:10:ARG:HA	45:RC:10:ARG:NE	2.27	0.49
67:21:37:ALA:CB	67:21:45:ALA:HB1	2.43	0.49
19:69:93:VAL:O	19:69:97:ARG:HG3	2.13	0.49
46:S0:30:GLN:NE2	46:S0:149:LEU:HD22	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:68:14:GLY:O	79:2S:974:G:H5''	2.13	0.49
79:2S:2208:A:H4'	79:2S:2209:U:H5'	1.94	0.49
78:1S:1525:A:H3'	78:1S:1526:A:C8	2.48	0.49
79:2S:1729:A:H3'	79:2S:1730:G:C5'	2.41	0.49
55:S9:11:THR:CG2	78:1S:472:U:H5''	2.42	0.49
3:L3:295:ALA:HB2	3:L3:303:LYS:HE2	1.94	0.49
78:1S:915:A:H3'	78:1S:916:U:H6	1.77	0.49
47:S1:151:LYS:HE3	47:S1:154:SER:HA	1.94	0.49
79:2S:1567:U:H2'	79:2S:1568:U:H5''	1.95	0.49
58:12:43:ARG:HB3	58:12:121:VAL:HG12	1.95	0.49
79:2S:631:U:H4'	79:2S:3172:A:N6	2.28	0.49
78:1S:19:A:O2'	78:1S:571:G:H8	1.96	0.49
10:60:4:ARG:NH2	79:2S:1128:U:H5'	2.28	0.49
57:11:36:LYS:HG2	57:11:60:PHE:O	2.13	0.49
79:2S:3211:C:H2'	79:2S:3212:C:C6	2.48	0.49
59:13:54:LEU:O	59:13:58:HIS:HB2	2.13	0.49
79:2S:138:U:H2'	79:2S:139:G:C8	2.48	0.49
18:68:184:PHE:N	18:68:184:PHE:CD1	2.80	0.49
79:2S:1748:G:H2'	79:2S:1749:A:C8	2.47	0.49
16:66:15:LEU:HG	16:66:125:ARG:HA	1.94	0.49
79:2S:807:A:N7	79:2S:2412:G:H1'	2.27	0.49
79:2S:1195:A:H2'	79:2S:1309:U:O2	2.13	0.49
16:66:170:LYS:NZ	16:66:170:LYS:HB3	2.28	0.49
3:L3:145:GLU:HA	3:L3:148:LEU:HB2	1.94	0.49
79:2S:395:A:H2'	79:2S:396:A:C8	2.48	0.49
79:2S:1941:C:H2'	79:2S:1942:U:C6	2.48	0.49
50:S4:127:LYS:O	50:S4:156:VAL:HG13	2.13	0.49
45:RC:150:TRP:CZ2	63:17:37:GLU:HG3	2.48	0.48
8:L8:126:SER:HB2	79:2S:121:A:N6	2.28	0.48
21:71:44:ALA:HA	21:71:95:HIS:ND1	2.28	0.48
54:S8:37:LYS:HB2	54:S8:59:ARG:HE	1.78	0.48
6:L6:176:PHE:O	14:64:113:THR:HG23	2.13	0.48
32:82:40:SER:HB2	79:2S:639:G:OP1	2.13	0.48
7:L7:77:VAL:HG12	20:70:59:VAL:HA	1.93	0.48
48:S2:141:ARG:HB2	48:S2:154:LEU:HA	1.94	0.48
57:11:54:ILE:N	57:11:54:ILE:HD12	2.27	0.48
30:80:67:VAL:HG12	30:80:68:TYR:N	2.27	0.48
7:L7:51:TYR:CE2	7:L7:183:ASP:HA	2.47	0.48
19:69:99:LEU:O	19:69:103:ARG:HB2	2.13	0.48
19:69:63:THR:HG21	79:2S:1861:G:H4'	1.95	0.48
38:88:7:ASP:HB3	38:88:10:GLN:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1118:C:H2'	79:2S:1119:C:H6	1.78	0.48
51:S5:58:LEU:CD1	51:S5:138:THR:HG22	2.42	0.48
78:1S:1693:A:H2'	78:1S:1694:A:O4'	2.13	0.48
82:ET:16:C:H5'	82:ET:60:A:C2	2.48	0.48
79:2S:1357:G:H2'	79:2S:1358:C:C6	2.48	0.48
78:1S:1595:U:H5	78:1S:1596:C:C4	2.31	0.48
79:2S:2615:G:H2'	79:2S:2616:C:O4'	2.13	0.48
34:84:71:THR:HG22	34:84:72:VAL:H	1.77	0.48
78:1S:1139:A:H2'	78:1S:1140:G:H5'	1.94	0.48
67:21:36:VAL:O	67:21:51:VAL:HG23	2.13	0.48
3:L3:17:LEU:HG	3:L3:18:PRO:HA	1.95	0.48
7:L7:214:TRP:CE3	7:L7:219:LYS:HD2	2.47	0.48
79:2S:3380:U:O2'	79:2S:3381:U:H5'	2.13	0.48
79:2S:1563:C:H42	79:2S:1577:G:H1	1.61	0.48
79:2S:1153:A:O2'	79:2S:1154:A:H5'	2.13	0.48
52:S6:13:GLN:HE22	78:1S:151:G:H21	1.60	0.48
66:20:25:THR:HB	66:20:115:GLU:HB2	1.95	0.48
78:1S:1665:U:H2'	78:1S:1666:U:C5	2.49	0.48
1:L1:191:VAL:HG12	1:L1:191:VAL:O	2.12	0.48
9:L9:90:MET:HB3	9:L9:179:ILE:HG22	1.94	0.48
21:71:70:SER:O	21:71:92:ARG:HG2	2.12	0.48
79:2S:2419:A:H2'	79:2S:2420:C:C6	2.47	0.48
16:66:35:VAL:HB	16:66:104:VAL:HG13	1.95	0.48
78:1S:237:C:H4'	78:1S:238:U:C6	2.48	0.48
45:RC:150:TRP:HZ2	63:17:37:GLU:HG3	1.78	0.48
79:2S:2970:C:H2'	79:2S:2972:G:C8	2.48	0.48
9:L9:34:LEU:HD13	9:L9:78:MET:HA	1.95	0.48
78:1S:1519:U:H2'	78:1S:1520:U:C6	2.47	0.48
69:23:62:LYS:H	69:23:116:ASP:HB2	1.77	0.48
60:14:78:ALA:HB1	60:14:111:ARG:O	2.13	0.48
53:S7:111:LYS:CG	53:S7:112:ARG:N	2.75	0.48
15:65:73:ARG:HB2	15:65:92:LEU:CD2	2.43	0.48
9:L9:26:LYS:HB2	79:2S:3198:U:O4	2.13	0.48
48:S2:104:VAL:HG23	48:S2:112:GLY:HA3	1.94	0.48
9:L9:71:VAL:O	9:L9:75:VAL:HG23	2.13	0.48
79:2S:1261:G:H5'	79:2S:1279:C:O2'	2.13	0.48
78:1S:832:U:H2'	78:1S:833:U:C4'	2.43	0.48
65:19:57:ARG:O	65:19:61:VAL:HG23	2.13	0.48
79:2S:1356:U:H3'	79:2S:1357:G:H5'	1.94	0.48
61:15:99:GLY:O	78:1S:1211:A:H1'	2.13	0.48
19:69:19:LYS:O	19:69:22:VAL:HG22	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:27:C:H4'	79:2S:328:U:H4'	1.95	0.48
78:1S:1435:G:H4'	78:1S:1436:A:H5'	1.94	0.48
79:2S:3228:C:H4'	79:2S:3229:G:O5'	2.14	0.48
78:1S:55:A:N1	78:1S:403:G:H1'	2.27	0.48
21:71:12:ARG:HG2	21:71:12:ARG:HH11	1.77	0.48
82:ET:44:A:H2'	82:ET:45:A:C8	2.48	0.48
55:S9:29:LYS:HD3	76:30:40:TYR:CE2	2.47	0.48
79:2S:1951:C:O4'	79:2S:1951:C:O2	2.31	0.48
34:84:39:ALA:HB1	34:84:57:LEU:O	2.14	0.48
28:78:28:HIS:CG	28:78:32:ARG:HG2	2.49	0.48
79:2S:495:G:H2'	79:2S:496:C:H6	1.78	0.48
24:74:13:ILE:HA	24:74:32:GLN:NE2	2.23	0.48
25:75:74:LYS:HA	25:75:74:LYS:CE	2.39	0.48
79:2S:2591:A:H2'	79:2S:2592:G:H5'	1.95	0.48
48:S2:83:ILE:HG12	48:S2:100:ALA:CA	2.43	0.48
30:80:32:LYS:HD3	30:80:35:ARG:HH21	1.78	0.48
50:S4:163:ASP:O	50:S4:164:LEU:HB2	2.13	0.48
50:S4:64:ILE:HD11	70:24:18:LEU:HD21	1.95	0.48
1:L1:55:LEU:HD11	1:L1:153:SER:O	2.13	0.48
79:2S:2748:A:C5	79:2S:2749:G:H1'	2.48	0.48
79:2S:3047:U:O2'	79:2S:3048:A:H5'	2.14	0.48
79:2S:1150:A:H3'	79:2S:1151:U:C6	2.48	0.48
71:25:95:HIS:HB3	78:1S:1530:C:P	2.53	0.48
79:2S:1891:A:O2'	79:2S:1892:G:H5'	2.14	0.48
2:L2:7:ASN:HB3	79:2S:2183:A:H5''	1.95	0.48
1:L1:90:LEU:HD11	1:L1:112:ALA:CB	2.42	0.48
80:8S:118:C:H2'	80:8S:119:C:C6	2.48	0.48
1:L1:30:GLU:CB	1:L1:34:LEU:HD11	2.24	0.48
72:26:78:ALA:CA	72:26:82:ARG:HB3	2.38	0.48
74:28:13:ILE:HD11	74:28:29:ARG:HG2	1.94	0.48
51:S5:128:ASN:ND2	51:S5:129:PRO:HD2	2.27	0.48
45:RC:201:THR:CG2	45:RC:243:LEU:HG	2.43	0.48
33:83:18:ARG:CB	33:83:23:ASN:HA	2.42	0.48
65:19:34:VAL:HG22	65:19:34:VAL:O	2.13	0.48
78:1S:393:C:H2'	78:1S:394:C:H6	1.78	0.48
54:S8:110:ARG:O	54:S8:114:GLU:HB2	2.13	0.48
25:75:53:HIS:O	80:8S:134:G:H5''	2.12	0.48
21:71:102:ARG:O	21:71:106:LEU:HD23	2.13	0.48
79:2S:241:G:H2'	79:2S:242:C:H5'	1.96	0.48
57:11:109:VAL:HA	57:11:135:VAL:HG13	1.95	0.48
52:S6:160:ARG:HD2	78:1S:68:A:C2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:64:120:VAL:HG22	16:66:197:LEU:HD13	1.95	0.48
15:65:85:THR:HA	42:92:50:PHE:HB3	1.95	0.48
8:L8:225:LYS:O	8:L8:229:VAL:HG23	2.13	0.48
78:1S:1618:C:H1'	78:1S:1619:C:H5	1.79	0.48
79:2S:186:U:H3	79:2S:230:U:H3	1.62	0.48
79:2S:3326:G:H2'	79:2S:3327:G:H8	1.77	0.48
79:2S:1263:A:N3	79:2S:1263:A:H2'	2.28	0.48
55:S9:12:TYR:HA	55:S9:44:ARG:HA	1.94	0.48
22:72:48:GLY:O	22:72:50:LEU:HG	2.13	0.48
79:2S:201:A:H2'	79:2S:202:G:C8	2.48	0.48
13:63:159:VAL:HG22	28:78:99:ALA:HB2	1.96	0.48
68:22:105:THR:HB	78:1S:804:A:N3	2.29	0.48
3:L3:332:ARG:O	3:L3:333:LYS:CB	2.61	0.48
79:2S:603:A:H2'	79:2S:604:G:C4'	2.43	0.48
38:88:69:LEU:HD11	38:88:73:LEU:HD13	1.95	0.48
3:L3:283:TYR:HB3	3:L3:356:LEU:HD21	1.95	0.48
10:60:57:LEU:N	10:60:131:ILE:HG12	2.28	0.48
71:25:70:LYS:HG3	71:25:71:ILE:N	2.25	0.48
2:L2:245:LEU:O	2:L2:247:ARG:NH1	2.46	0.48
47:S1:206:PRO:O	47:S1:207:LEU:HB2	2.14	0.48
79:2S:2495:C:H3'	79:2S:2496:C:H5''	1.96	0.48
48:S2:208:GLU:O	48:S2:212:LYS:HB2	2.13	0.48
78:1S:636:A:C2'	78:1S:637:C:H5'	2.43	0.48
79:2S:2768:U:H2'	79:2S:2769:A:H8	1.77	0.48
78:1S:315:A:O3'	78:1S:316:A:H4'	2.14	0.48
23:73:6:ALA:HB2	23:73:126:TRP:CE2	2.48	0.48
56:10:15:LEU:HD13	56:10:21:VAL:CG2	2.43	0.48
5:L5:181:PRO:HG2	5:L5:195:LEU:HA	1.95	0.48
5:L5:44:TYR:HD2	79:2S:1084:A:H4'	1.79	0.48
79:2S:3320:A:H2'	79:2S:3321:C:C6	2.49	0.48
79:2S:2258:U:H2'	79:2S:2259:A:O4'	2.12	0.48
51:S5:25:LEU:H	51:S5:25:LEU:HD22	1.78	0.48
39:89:44:TRP:CE3	39:89:45:ARG:HB2	2.49	0.48
79:2S:2664:C:O2'	79:2S:2665:U:H5'	2.13	0.48
43:93:82:THR:HG22	43:93:86:LEU:HD12	1.95	0.48
44:P0:48:ARG:NE	44:P0:90:ASN:HB3	2.28	0.48
49:S3:62:ASN:O	56:10:92:ILE:HB	2.12	0.48
49:S3:208:ILE:HA	63:17:39:ALA:HB2	1.96	0.48
79:2S:849:C:H2'	79:2S:850:U:C6	2.48	0.48
79:2S:2143:A:H2'	79:2S:2145:A:N7	2.28	0.48
2:L2:11:GLY:HA3	79:2S:2163:C:O2'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:S5:57:SER:HB3	74:28:53:ILE:HD12	1.95	0.48
5:L5:41:LYS:HB2	21:71:69:LYS:O	2.13	0.48
2:L2:41:ILE:O	2:L2:89:TYR:HA	2.14	0.48
79:2S:1178:G:O2'	79:2S:1328:C:H4'	2.14	0.48
79:2S:1329:U:H1'	79:2S:1330:A:OP1	2.13	0.48
3:L3:261:MET:HG2	16:66:64:PHE:HA	1.96	0.48
78:1S:752:A:H2'	78:1S:753:A:O4'	2.13	0.48
44:P0:89:THR:HG21	44:P0:96:ILE:HG21	1.94	0.48
61:15:28:MET:HG2	61:15:32:ASP:HB2	1.95	0.48
5:L5:19:PRO:HB2	5:L5:24:ARG:CG	2.43	0.48
79:2S:1237:G:H1	79:2S:1251:A:H61	1.61	0.48
47:S1:65:VAL:HB	47:S1:85:LYS:HE2	1.95	0.48
43:93:26:VAL:O	43:93:30:GLU:HG3	2.14	0.48
15:65:47:LYS:HD2	15:65:50:ARG:HE	1.79	0.48
9:L9:67:ALA:O	9:L9:70:THR:HG22	2.13	0.48
70:24:20:ARG:HA	70:24:76:TYR:HA	1.95	0.48
79:2S:3138:U:H2'	79:2S:3139:A:H5''	1.94	0.48
78:1S:1530:C:H6	78:1S:1530:C:O5'	1.97	0.48
79:2S:1964:C:H2'	79:2S:1965:C:O4'	2.12	0.48
79:2S:891:G:H2'	79:2S:892:U:O4'	2.13	0.48
78:1S:1199:G:OP1	78:1S:1200:G:H8	1.96	0.48
79:2S:1907:C:H3'	79:2S:1908:A:C8	2.49	0.48
78:1S:1157:A:H5'	78:1S:1157:A:H8	1.77	0.48
58:12:48:SER:O	58:12:52:LEU:HD23	2.13	0.48
13:63:55:ARG:HG3	13:63:72:GLY:O	2.13	0.48
47:S1:159:SER:HA	47:S1:162:ARG:HD2	1.96	0.48
7:L7:58:ALA:O	7:L7:62:ILE:HG13	2.13	0.48
54:S8:191:PHE:O	54:S8:195:ARG:HG2	2.13	0.48
78:1S:740:A:C3'	78:1S:741:C:H5''	2.31	0.48
18:68:12:ARG:H	18:68:12:ARG:NE	1.94	0.48
13:63:113:VAL:O	13:63:117:LYS:HD3	2.13	0.48
79:2S:2346:C:H3'	79:2S:2347:U:H5''	1.95	0.48
73:27:33:LEU:HD13	73:27:79:PHE:HB3	1.96	0.48
46:S0:41:ARG:NH1	46:S0:45:VAL:HG21	2.28	0.48
68:22:86:ILE:O	68:22:90:THR:HG23	2.13	0.48
78:1S:476:U:H5''	78:1S:477:A:O4'	2.13	0.48
18:68:59:ARG:HD2	18:68:84:VAL:HG12	1.95	0.48
34:84:29:ILE:N	34:84:29:ILE:HD13	2.27	0.48
54:S8:170:SER:O	78:1S:209:U:H5''	2.13	0.48
31:81:18:LYS:HG3	31:81:19:ARG:HD2	1.94	0.48
47:S1:153:HIS:ND1	47:S1:154:SER:N	2.55	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:65:174:ILE:HG21	79:2S:63:A:H5''	1.94	0.48
78:1S:1486:G:H2'	78:1S:1487:A:O4'	2.14	0.48
79:2S:1002:A:H61	79:2S:1050:U:H1'	1.78	0.48
68:22:7:LEU:HD23	68:22:34:ILE:HG12	1.96	0.48
78:1S:1201:G:H21	78:1S:1600:A:H5'	1.79	0.48
20:70:15:PRO:HG3	20:70:22:PRO:HD3	1.96	0.48
79:2S:1259:A:H2	79:2S:1281:G:H1'	1.78	0.48
16:66:35:VAL:CG2	16:66:104:VAL:HG22	2.44	0.48
78:1S:1345:A:H2'	78:1S:1348:A:N7	2.28	0.48
28:78:71:PRO:HB2	28:78:109:TYR:HA	1.96	0.48
65:19:37:VAL:HG22	65:19:39:THR:H	1.78	0.48
79:2S:32:U:H2'	79:2S:33:G:O4'	2.14	0.48
78:1S:1677:C:H2'	78:1S:1678:A:O4'	2.13	0.48
14:64:128:ARG:O	14:64:128:ARG:HG2	2.13	0.48
13:63:186:ARG:HG3	13:63:186:ARG:HH11	1.78	0.48
82:ET:34:U:H5'	82:ET:35:C:OP2	2.14	0.48
79:2S:3252:G:H2'	79:2S:3253:G:O4'	2.13	0.48
79:2S:1108:U:H2'	79:2S:1109:U:C6	2.48	0.48
34:84:15:THR:H	34:84:18:ASN:HB2	1.78	0.48
47:S1:71:ALA:CB	60:14:114:ARG:HH12	2.24	0.48
78:1S:1655:A:H2'	78:1S:1656:U:H5'	1.94	0.48
4:L4:39:PHE:CZ	4:L4:240:PRO:HA	2.49	0.48
10:60:178:ARG:N	10:60:179:PRO:HD2	2.29	0.48
18:68:170:ARG:HA	18:68:174:ARG:HD2	1.95	0.48
15:65:70:ASN:HD22	79:2S:2599:U:H5''	1.75	0.48
79:2S:1526:U:H5'	79:2S:1594:A:C2	2.48	0.48
65:19:75:LYS:HD2	65:19:75:LYS:N	2.28	0.48
23:73:33:ASN:ND2	23:73:64:LYS:HB2	2.27	0.48
79:2S:3066:U:H2'	79:2S:3067:C:C6	2.49	0.48
79:2S:2942:C:OP1	79:2S:2943:G:H5''	2.13	0.48
69:23:139:LYS:HE3	78:1S:31:C:H4'	1.95	0.48
8:L8:64:ILE:HG23	8:L8:68:ARG:CZ	2.44	0.48
79:2S:1366:A:H2'	79:2S:1367:G:O4'	2.14	0.48
79:2S:2265:C:H2'	79:2S:2266:U:H6	1.78	0.48
47:S1:174:LYS:NZ	47:S1:174:LYS:HB2	2.28	0.48
2:L2:11:GLY:HA3	79:2S:2163:C:H1'	1.96	0.48
58:12:71:ILE:O	58:12:75:VAL:HG23	2.14	0.48
3:L3:169:THR:HG23	3:L3:170:PRO:HD2	1.95	0.48
82:ET:14:A:H2'	82:ET:15:G:O4'	2.13	0.48
62:16:135:ARG:NE	78:1S:1582:U:H5''	2.29	0.48
13:63:64:LYS:HG3	28:78:69:TRP:CG	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S3:76:ARG:HD3	49:S3:76:ARG:O	2.12	0.48
31:81:4:LEU:N	31:81:4:LEU:HD23	2.29	0.48
5:L5:131:LEU:H	5:L5:131:LEU:HD13	1.78	0.48
37:87:9:GLY:HA2	79:2S:1852:G:H21	1.79	0.48
28:78:40:HIS:HB3	79:2S:958:C:H1'	1.95	0.48
62:16:18:ALA:HB2	62:16:69:VAL:HG22	1.94	0.48
79:2S:603:A:H2'	79:2S:604:G:O4'	2.14	0.48
55:S9:90:LYS:HB3	55:S9:95:TYR:CB	2.36	0.48
61:15:13:LYS:HG3	61:15:14:THR:H	1.79	0.48
44:P0:190:VAL:HG12	44:P0:191:TYR:H	1.79	0.48
52:S6:88:ARG:HB3	52:S6:91:GLU:HB2	1.96	0.48
78:1S:387:A:H2'	78:1S:402:C:H5'	1.96	0.48
65:19:49:ASP:HB3	65:19:53:TRP:CD1	2.40	0.48
78:1S:887:A:H2	78:1S:925:G:H22	1.61	0.48
37:87:60:GLY:HA2	37:87:64:MET:SD	2.54	0.48
47:S1:32:ILE:CD1	60:14:33:LEU:HD22	2.43	0.48
55:S9:140:ILE:HG12	55:S9:159:ALA:CB	2.44	0.48
8:L8:48:ARG:HG3	79:2S:2585:G:H1'	1.96	0.48
5:L5:65:ILE:CG2	5:L5:72:ASP:HB3	2.44	0.48
43:93:17:ARG:NH1	79:2S:861:C:H5'	2.28	0.48
46:S0:64:ILE:HA	46:S0:120:LEU:HD22	1.95	0.48
66:20:108:ILE:HD12	66:20:108:ILE:O	2.14	0.48
4:L4:329:PRO:HB3	7:L7:41:ARG:NH1	2.29	0.48
73:27:36:LYS:HG2	73:27:43:ILE:CG2	2.44	0.48
79:2S:1932:A:H2'	79:2S:1933:A:H5'	1.95	0.48
23:73:89:ASP:OD1	23:73:91:VAL:HG22	2.13	0.48
9:L9:102:ASN:O	9:L9:113:GLU:HB3	2.14	0.48
16:66:162:VAL:HG12	16:66:166:GLU:OE2	2.14	0.48
79:2S:3281:U:H2'	79:2S:3282:U:C6	2.48	0.48
20:70:135:VAL:O	20:70:141:LYS:HE3	2.14	0.48
79:2S:2263:C:H2'	79:2S:2264:U:C6	2.48	0.48
70:24:51:GLU:O	70:24:55:VAL:HG23	2.14	0.48
79:2S:996:A:H2'	79:2S:997:A:O4'	2.14	0.48
54:S8:139:ALA:HB2	78:1S:187:G:OP1	2.14	0.48
61:15:85:ILE:HD12	61:15:111:MET:O	2.13	0.48
31:81:29:ALA:HB3	31:81:30:PRO:HD3	1.94	0.48
61:15:9:LYS:HB3	61:15:9:LYS:NZ	2.29	0.48
21:71:119:ALA:HB1	21:71:125:ALA:HB3	1.95	0.48
36:86:98:ARG:HD2	36:86:98:ARG:N	2.29	0.48
25:75:113:LEU:O	25:75:120:LYS:HG3	2.14	0.48
5:L5:64:ILE:CD1	5:L5:76:ALA:HB3	2.37	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:20:106:ILE:HG23	66:20:107:THR:HG23	1.95	0.48
65:19:15:ILE:O	65:19:19:ALA:HB2	2.14	0.48
35:85:58:ILE:O	35:85:62:GLN:HG3	2.13	0.48
69:23:70:LYS:NZ	78:1S:567:A:H5''	2.29	0.48
7:L7:224:ILE:HG23	20:70:36:ILE:HG23	1.95	0.48
78:1S:879:G:H2'	78:1S:880:C:C6	2.49	0.48
79:2S:1218:U:C2'	79:2S:1219:C:H5'	2.44	0.48
61:15:34:VAL:HG12	61:15:41:VAL:HG12	1.95	0.48
1:L1:103:LEU:HD13	1:L1:106:LYS:HG3	1.95	0.48
30:80:83:LYS:HB3	30:80:85:PHE:CE2	2.49	0.48
79:2S:2822:U:H2'	79:2S:2823:G:O4'	2.13	0.48
6:L6:98:VAL:O	6:L6:98:VAL:HG12	2.14	0.48
64:18:32:LEU:O	64:18:38:VAL:HG23	2.13	0.48
46:S0:182:LEU:O	46:S0:188:LEU:HB2	2.14	0.48
78:1S:1695:G:H21	78:1S:1706:C:N4	2.12	0.48
78:1S:374:U:H2'	78:1S:375:U:C6	2.49	0.48
15:65:112:ASN:HB3	79:2S:19:U:O2'	2.13	0.48
79:2S:2563:G:H2'	79:2S:2564:G:H8	1.78	0.48
32:82:13:HIS:CE1	32:82:15:LYS:HB3	2.49	0.48
79:2S:2945:G:H5'	79:2S:2947:G:N7	2.29	0.48
3:L3:205:VAL:HG21	3:L3:322:ILE:HD11	1.95	0.48
79:2S:1666:G:H2'	79:2S:1667:A:H8	1.78	0.48
79:2S:1906:G:H1'	79:2S:1908:A:N6	2.29	0.48
78:1S:357:G:H2'	78:1S:358:U:O4'	2.14	0.48
1:L1:102:LYS:HG2	79:2S:2480:A:OP1	2.13	0.48
27:77:61:LYS:O	27:77:65:ARG:HG2	2.13	0.48
79:2S:2500:A:N3	79:2S:2500:A:H3'	2.29	0.48
35:85:10:ARG:HG2	35:85:10:ARG:HH11	1.79	0.48
3:L3:354:VAL:O	3:L3:354:VAL:HG23	2.14	0.48
44:P0:43:LYS:HA	44:P0:46:ARG:HG2	1.96	0.47
2:L2:48:ILE:HG13	2:L2:48:ILE:O	2.13	0.47
66:20:27:THR:CG2	66:20:113:ASP:HB3	2.40	0.47
79:2S:3355:U:O2'	79:2S:3356:G:H5''	2.14	0.47
47:S1:176:VAL:CG1	47:S1:177:GLN:N	2.75	0.47
4:L4:29:PRO:HB3	18:68:25:TYR:CE2	2.49	0.47
56:10:3:MET:HB2	56:10:4:PRO:HD2	1.96	0.47
4:L4:122:THR:HG22	4:L4:235:LEU:HD13	1.96	0.47
5:L5:83:LEU:HB2	5:L5:84:PRO:HD3	1.96	0.47
12:62:77:ALA:HB1	79:2S:1235:U:OP1	2.13	0.47
78:1S:1414:U:H3'	78:1S:1415:U:H5''	1.96	0.47
45:RC:147:HIS:CD2	45:RC:151:VAL:HG22	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2860:U:O2'	79:2S:2861:U:H5'	2.14	0.47
19:69:8:LYS:HG3	19:69:19:LYS:HE3	1.95	0.47
51:S5:25:LEU:HG	62:16:60:PHE:HB3	1.96	0.47
13:63:64:LYS:HE3	28:78:69:TRP:CD1	2.48	0.47
17:67:4:TYR:CE1	17:67:147:GLU:HB2	2.49	0.47
19:69:20:ARG:HD2	79:2S:1875:G:OP2	2.14	0.47
15:65:60:VAL:HG21	80:8S:142:C:H4'	1.95	0.47
78:1S:249:U:H3'	78:1S:250:C:C5'	2.43	0.47
16:66:61:ALA:HA	16:66:70:PRO:HD2	1.96	0.47
79:2S:2288:G:H2'	79:2S:2289:U:C6	2.49	0.47
82:PT:38:A:H2'	82:PT:39:A:O4'	2.14	0.47
35:85:70:TYR:HD1	35:85:73:LYS:HD2	1.79	0.47
68:22:65:LEU:H	68:22:65:LEU:CD1	2.27	0.47
9:L9:134:ILE:N	9:L9:134:ILE:HD12	2.29	0.47
60:14:70:LYS:HA	60:14:70:LYS:CE	2.41	0.47
70:24:5:VAL:HG12	70:24:6:THR:N	2.29	0.47
18:68:16:ARG:NH2	79:2S:671:U:H5''	2.24	0.47
23:73:17:LEU:HD21	23:73:81:GLN:HG3	1.95	0.47
20:70:75:PHE:HA	20:70:128:GLU:HA	1.95	0.47
1:L1:126:PRO:HG2	1:L1:128:LEU:HG	1.96	0.47
5:L5:20:PHE:HB2	5:L5:23:ARG:HB2	1.96	0.47
17:67:119:VAL:HA	17:67:145:HIS:O	2.14	0.47
7:L7:174:GLY:HA2	7:L7:178:ILE:O	2.13	0.47
55:S9:127:VAL:O	55:S9:131:GLN:HB2	2.14	0.47
64:18:76:PRO:CB	64:18:81:ILE:HB	2.44	0.47
79:2S:1525:G:H1'	79:2S:1829:G:H2'	1.96	0.47
79:2S:834:U:C2'	79:2S:835:G:H5'	2.44	0.47
79:2S:757:C:H2'	79:2S:758:C:H5''	1.95	0.47
26:76:57:LEU:HD23	26:76:67:GLU:HB3	1.94	0.47
49:S3:43:PRO:HD3	66:20:108:ILE:HG21	1.96	0.47
49:S3:37:VAL:HG12	49:S3:50:ILE:HD13	1.96	0.47
64:18:57:ARG:NH1	71:25:75:LEU:HD21	2.29	0.47
82:ET:36:A:H2'	82:ET:37:U:C5	2.49	0.47
64:18:134:ARG:HG3	64:18:134:ARG:NH1	2.28	0.47
50:S4:138:TYR:HB2	50:S4:146:THR:OG1	2.14	0.47
52:S6:85:ARG:HH21	52:S6:87:ARG:HG2	1.80	0.47
79:2S:1052:U:O2	81:5S:103:A:H4'	2.14	0.47
6:L6:100:LYS:HG2	6:L6:100:LYS:O	2.14	0.47
4:L4:343:LYS:H	4:L4:343:LYS:HD3	1.78	0.47
48:S2:116:LYS:HE2	48:S2:127:ALA:HB3	1.96	0.47
18:68:156:GLY:HA2	28:78:47:LYS:HG3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:S9:93:LEU:CD1	55:S9:96:VAL:HG21	2.33	0.47
13:63:46:ILE:O	13:63:46:ILE:HG22	2.15	0.47
7:L7:121:LYS:O	7:L7:125:GLU:HG2	2.14	0.47
55:S9:41:GLU:O	55:S9:45:ILE:HG12	2.14	0.47
79:2S:1638:A:H2'	79:2S:1639:C:H5'	1.95	0.47
79:2S:1040:A:H2'	79:2S:1041:U:C4'	2.44	0.47
7:L7:232:ARG:O	7:L7:235:PHE:HB2	2.14	0.47
78:1S:749:U:H2'	78:1S:750:U:C6	2.50	0.47
82:PT:58:A:C2'	82:PT:59:A:H5'	2.42	0.47
49:S3:120:TYR:O	49:S3:124:ARG:HG3	2.14	0.47
8:L8:149:LYS:HB2	8:L8:200:LEU:O	2.13	0.47
51:S5:166:ARG:HD2	74:28:46:GLY:HA3	1.97	0.47
78:1S:488:G:OP1	78:1S:488:G:H4'	2.14	0.47
82:ET:17:C:H2'	82:ET:18(A):U:H5	1.78	0.47
41:91:25:LYS:HD2	79:2S:1923:C:H5''	1.96	0.47
81:5S:112:G:H2'	81:5S:113:C:C6	2.49	0.47
15:65:103:GLU:O	15:65:106:VAL:HG22	2.13	0.47
47:S1:149:GLN:HE22	78:1S:1066:C:H4'	1.79	0.47
48:S2:91:ARG:NH2	78:1S:1624:C:H5'	2.30	0.47
79:2S:1165:A:H2'	79:2S:1166:G:C8	2.49	0.47
47:S1:210:ILE:HG22	47:S1:210:ILE:O	2.13	0.47
61:15:121:ILE:HG23	61:15:123:TYR:CE1	2.49	0.47
73:27:46:VAL:HG12	73:27:47:PHE:N	2.30	0.47
47:S1:124:ASN:HA	47:S1:137:ILE:O	2.14	0.47
14:64:20:VAL:HG23	14:64:33:ALA:O	2.15	0.47
79:2S:3217:C:O2	79:2S:3217:C:H2'	2.14	0.47
51:S5:23:VAL:HG13	51:S5:23:VAL:O	2.14	0.47
79:2S:2886:U:H4'	79:2S:2887:A:C2	2.50	0.47
2:L2:6:ARG:O	2:L2:10:LYS:HG2	2.14	0.47
65:19:6:VAL:HG13	65:19:7:ARG:HG3	1.96	0.47
68:22:36:LYS:O	68:22:40:VAL:HG23	2.14	0.47
50:S4:31:PRO:HG3	50:S4:43:PRO:CG	2.31	0.47
47:S1:218:LEU:HD23	47:S1:219:LYS:HG2	1.96	0.47
63:17:123:ASN:O	63:17:124:VAL:HG12	2.14	0.47
78:1S:778:G:H5'	78:1S:778:G:N3	2.29	0.47
27:77:75:VAL:HA	79:2S:1636:U:H4'	1.96	0.47
53:S7:98:ILE:CD1	53:S7:121:VAL:HG21	2.43	0.47
78:1S:425:A:N3	78:1S:425:A:H2'	2.29	0.47
7:L7:81:HIS:HB2	7:L7:138:TYR:CE1	2.48	0.47
73:27:54:VAL:O	73:27:62:ILE:HA	2.15	0.47
23:73:12:ARG:HG3	23:73:12:ARG:HH11	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:S2:170:ILE:HG21	78:1S:2:A:N1	2.29	0.47
15:65:39:ALA:HB3	15:65:61:ILE:HG21	1.95	0.47
51:S5:148:ARG:NH1	51:S5:155:ALA:HB3	2.30	0.47
82:ET:60:A:H3'	82:ET:61:U:H6	1.80	0.47
19:69:151:ARG:HD3	57:11:116:ARG:NH2	2.29	0.47
7:L7:218:ARG:NH1	79:2S:1170:A:H5''	2.29	0.47
7:L7:223:PHE:HD1	7:L7:228:SER:HA	1.80	0.47
26:76:59:VAL:O	26:76:64:LYS:HD3	2.14	0.47
77:31:133:ALA:HB2	78:1S:1252:C:O4'	2.14	0.47
78:1S:46:A:H4'	78:1S:48:G:OP1	2.13	0.47
2:L2:127:ALA:O	2:L2:169:ILE:HD11	2.14	0.47
79:2S:1193:A:H3'	79:2S:1194:G:C8	2.49	0.47
42:92:93:LEU:N	42:92:93:LEU:HD23	2.29	0.47
79:2S:3337:G:H2'	79:2S:3338:C:C6	2.49	0.47
10:60:135:ILE:HG22	10:60:136:PHE:CD1	2.49	0.47
51:S5:113:ILE:HG23	51:S5:191:ALA:HB2	1.96	0.47
68:22:105:THR:HG22	68:22:110:ILE:HG12	1.97	0.47
49:S3:133:GLY:HA3	49:S3:157:LEU:HG	1.96	0.47
68:22:89:TRP:CA	68:22:92:ASN:HB2	2.39	0.47
18:68:3:ILE:HD12	18:68:3:ILE:N	2.29	0.47
34:84:68:THR:HG21	79:2S:1644:C:N4	2.24	0.47
79:2S:2610:G:H2'	79:2S:2611:U:O4'	2.15	0.47
10:60:148:VAL:O	10:60:152:LEU:HG	2.15	0.47
46:S0:30:GLN:NE2	46:S0:34:GLU:HB2	2.30	0.47
54:S8:37:LYS:HB2	54:S8:59:ARG:CG	2.42	0.47
46:S0:80:THR:HA	46:S0:83:GLN:HG3	1.96	0.47
50:S4:159:THR:HG23	50:S4:173:ILE:HB	1.96	0.47
20:70:93:GLU:HB3	20:70:129:ILE:HD11	1.97	0.47
79:2S:3375:A:H5''	79:2S:3378:C:C5	2.45	0.47
78:1S:1483:A:H2	78:1S:1607:G:H1'	1.79	0.47
78:1S:990:C:H2'	78:1S:991:G:O4'	2.14	0.47
78:1S:176:C:C2'	78:1S:177:U:H5'	2.44	0.47
46:S0:173:ILE:O	46:S0:177:LEU:HG	2.15	0.47
9:L9:174:LYS:HD3	40:90:127:LEU:HD11	1.96	0.47
7:L7:181:ILE:O	7:L7:185:ILE:HG13	2.15	0.47
79:2S:1203:A:H2'	79:2S:1204:A:H8	1.79	0.47
3:L3:311:PHE:HB3	3:L3:314:TYR:HB3	1.95	0.47
20:70:38:LYS:HG3	20:70:61:ILE:HD13	1.95	0.47
62:16:143:ARG:CZ	78:1S:1191:U:H5'	2.44	0.47
79:2S:1223:A:H2'	79:2S:1224:C:O4'	2.14	0.47
8:L8:27:THR:HG23	79:2S:2563:G:H5''	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L3:58:ARG:NH1	3:L3:59:ASP:O	2.48	0.47
78:1S:1179:G:H2'	78:1S:1180:C:C6	2.50	0.47
2:L2:83:HIS:HB3	43:93:64:VAL:HG22	1.97	0.47
79:2S:3384:U:H2'	79:2S:3385:U:C6	2.49	0.47
4:L4:315:LYS:HG2	79:2S:505:G:H5'	1.96	0.47
6:L6:10:TYR:HB3	32:82:88:HIS:CE1	2.49	0.47
32:82:97:ALA:HB1	32:82:99:ASN:OD1	2.15	0.47
79:2S:268:A:O4'	79:2S:270:U:H1'	2.13	0.47
37:87:3:LYS:HG2	79:2S:2138:A:O2'	2.13	0.47
45:RC:269:TYR:CZ	45:RC:271:VAL:HG22	2.49	0.47
79:2S:127:G:H2'	79:2S:128:G:H8	1.79	0.47
79:2S:2346:C:H2'	79:2S:2347:U:C5'	2.36	0.47
66:20:23:ARG:HA	66:20:91:ILE:O	2.14	0.47
47:S1:86:LEU:HB3	47:S1:98:THR:OG1	2.15	0.47
78:1S:872:G:H21	78:1S:1047:G:H4'	1.80	0.47
79:2S:3174:A:H2'	79:2S:3175:U:C5'	2.41	0.47
71:25:88:ILE:H	71:25:88:ILE:HD12	1.79	0.47
45:RC:201:THR:HG23	45:RC:243:LEU:HG	1.97	0.47
49:S3:40:ARG:HA	66:20:110:PRO:CB	2.45	0.47
79:2S:311:C:H2'	79:2S:312:C:H6	1.76	0.47
64:18:82:PRO:O	64:18:83:ALA:HB2	2.15	0.47
42:92:8:ARG:HH12	42:92:10:THR:HB	1.80	0.47
79:2S:1731:A:H2'	79:2S:1732:U:C6	2.49	0.47
50:S4:12:LEU:HD13	78:1S:381:C:H5'	1.97	0.47
81:5S:32:U:H3	81:5S:45:A:H61	1.63	0.47
8:L8:190:VAL:HG22	8:L8:190:VAL:O	2.14	0.47
24:74:49:ILE:CG2	24:74:52:THR:HG23	2.44	0.47
16:66:93:ALA:HB3	79:2S:631:U:H5''	1.95	0.47
34:84:71:THR:HG22	34:84:72:VAL:N	2.30	0.47
49:S3:63:GLY:HA3	56:10:92:ILE:HD13	1.96	0.47
42:92:6:LYS:HE2	42:92:94:GLY:HA2	1.96	0.47
79:2S:2547:A:H2'	79:2S:2548:C:H5'	1.95	0.47
45:RC:68:VAL:HA	45:RC:84:SER:HA	1.97	0.47
65:19:38:LYS:HA	65:19:46:PRO:HA	1.96	0.47
72:26:2:PRO:HG3	78:1S:1142:A:H5''	1.97	0.47
70:24:125:LEU:HA	70:24:128:LYS:HB2	1.96	0.47
78:1S:1243:G:H2'	78:1S:1243:G:N3	2.29	0.47
62:16:110:THR:O	62:16:110:THR:HG22	2.15	0.47
1:L1:97:LYS:HG2	1:L1:97:LYS:O	2.13	0.47
79:2S:768:C:H2'	79:2S:769:G:O4'	2.14	0.47
79:2S:440:A:H5'	79:2S:493:U:O4	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:S5:92:ARG:HH11	51:S5:92:ARG:HG2	1.80	0.47
25:75:115:ARG:HH11	25:75:115:ARG:HG3	1.78	0.47
65:19:102:ARG:HD2	78:1S:1501:C:OP2	2.14	0.47
18:68:155:MET:HG2	28:78:48:TYR:HA	1.96	0.47
55:S9:112:GLN:HA	55:S9:112:GLN:NE2	2.30	0.47
55:S9:149:ARG:C	55:S9:151:ASP:H	2.17	0.47
36:86:25:LYS:HB3	79:2S:156:G:OP2	2.13	0.47
79:2S:1655:G:H1'	79:2S:1800:A:N6	2.28	0.47
79:2S:1361:U:H2'	79:2S:1362:G:C8	2.49	0.47
42:92:44:ASP:HA	42:92:47:GLN:CB	2.42	0.47
45:RC:89:LEU:CD2	45:RC:110:VAL:HG11	2.45	0.47
79:2S:3174:A:C2'	79:2S:3175:U:H5'	2.41	0.47
78:1S:144:U:O2'	78:1S:145:A:H8	1.97	0.47
3:L3:188:ILE:HD12	3:L3:189:SER:N	2.30	0.47
43:93:51:ALA:CB	43:93:54:ILE:HD12	2.42	0.47
76:30:14:VAL:CG2	78:1S:567:A:H1'	2.45	0.47
79:2S:1610:G:H2'	79:2S:1611:G:O4'	2.14	0.47
79:2S:1646:G:H1'	79:2S:1809:A:H61	1.80	0.47
50:S4:180:LEU:HD23	50:S4:194:THR:HG23	1.97	0.47
20:70:73:LYS:HE2	20:70:75:PHE:CE1	2.50	0.47
63:17:61:ILE:HA	63:17:66:VAL:HG22	1.97	0.47
17:67:112:LEU:HD12	17:67:152:GLU:N	2.29	0.47
78:1S:1651:A:H2'	78:1S:1652:C:H6	1.79	0.47
71:25:77:ARG:O	71:25:81:ARG:HG3	2.14	0.47
53:S7:49:ILE:CG2	53:S7:175:LYS:HG2	2.44	0.47
61:15:38:PRO:O	61:15:42:ARG:HG3	2.14	0.47
79:2S:66:A:N1	79:2S:77:A:H5''	2.30	0.47
79:2S:2388:U:H2'	79:2S:2389:C:C5	2.50	0.47
30:80:32:LYS:HG3	30:80:36:GLN:NE2	2.28	0.47
66:20:50:LEU:HD11	66:20:93:LEU:HD22	1.96	0.47
79:2S:1797:A:H2'	79:2S:1798:A:O4'	2.15	0.47
36:86:31:GLY:HA2	79:2S:297:G:H8	1.79	0.47
20:70:68:HIS:N	20:70:69:PRO:HD3	2.29	0.47
66:20:28:SER:HB2	66:20:112:VAL:HG22	1.95	0.47
7:L7:106:LEU:O	7:L7:107:ARG:HB2	2.14	0.47
52:S6:122:GLU:O	52:S6:126:ASP:HB3	2.14	0.47
20:70:1:MET:O	79:2S:1323:G:H5''	2.14	0.47
4:L4:107:ARG:NE	79:2S:663:C:H4'	2.29	0.47
20:70:9:VAL:HG22	20:70:61:ILE:HD12	1.96	0.47
79:2S:834:U:H2'	79:2S:835:G:H5'	1.97	0.47
81:5S:8:G:H2'	81:5S:9:C:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:64:38:ILE:HA	14:64:44:VAL:HG12	1.96	0.47
58:12:125:ASN:O	58:12:126:TRP:CD1	2.67	0.47
78:1S:1120:U:H2'	78:1S:1121:C:C6	2.49	0.47
38:88:45:VAL:O	38:88:45:VAL:HG23	2.15	0.47
7:L7:45:LEU:O	7:L7:45:LEU:HD23	2.15	0.47
78:1S:217:A:H61	78:1S:844:A:H2	1.61	0.47
21:71:58:GLN:HG3	79:2S:992:A:O2'	2.15	0.47
11:61:111:ASP:HB2	11:61:112:LEU:HD23	1.97	0.47
47:S1:113:MET:CE	47:S1:209:ASN:HD22	2.26	0.47
79:2S:1116:G:H3'	79:2S:1117:G:H5''	1.96	0.47
79:2S:2874:G:H3'	79:2S:2945:G:H1	1.79	0.47
78:1S:1507:G:H2'	78:1S:1508:U:O4'	2.15	0.47
54:S8:10:LYS:HG2	54:S8:11:ARG:N	2.29	0.47
45:RC:224:ASN:HB3	45:RC:229:LYS:H	1.79	0.47
74:28:36:THR:HG23	74:28:37:SER:N	2.30	0.47
78:1S:1611:A:H2'	78:1S:1612:U:H5'	1.96	0.47
16:66:93:ALA:CB	79:2S:631:U:H5''	2.44	0.47
78:1S:1781:A:H2'	78:1S:1782:A:C8	2.50	0.47
79:2S:936:A:H2'	79:2S:938:C:C5	2.49	0.47
15:65:11:GLN:HG2	15:65:44:ARG:CZ	2.45	0.47
78:1S:1344:A:H2'	78:1S:1345:A:C8	2.49	0.47
79:2S:97:U:H2'	79:2S:98:G:O4'	2.14	0.47
52:S6:74:LYS:HB3	52:S6:94:ARG:HD2	1.96	0.47
79:2S:90:C:H2'	79:2S:91:G:C8	2.49	0.47
7:L7:85:PHE:CE1	7:L7:87:VAL:HG22	2.49	0.47
79:2S:2902:A:H2'	79:2S:2903:A:O4'	2.14	0.47
79:2S:2894:C:O2'	79:2S:3107:U:H4'	2.14	0.47
33:83:11:GLY:O	33:83:98:VAL:HG12	2.15	0.47
78:1S:1038:U:H2'	78:1S:1039:A:H5''	1.97	0.47
4:L4:145:ILE:HD11	4:L4:148:ILE:HG12	1.97	0.47
58:12:105:LYS:HB3	58:12:107:ASP:OD1	2.15	0.47
8:L8:128:LYS:CG	8:L8:129:PRO:HD2	2.45	0.47
11:61:13:LYS:O	11:61:131:MET:HE3	2.15	0.47
78:1S:1262:U:H2'	78:1S:1263:G:C8	2.50	0.47
62:16:125:GLU:OE1	62:16:134:ALA:HB1	2.15	0.47
79:2S:1377:G:H2'	79:2S:1378:U:H6	1.79	0.47
79:2S:2309:A:H1'	79:2S:2962:U:H5'	1.95	0.47
54:S8:187:GLU:HA	54:S8:190:ALA:HB3	1.96	0.47
74:28:33:LEU:CD2	74:28:53:ILE:HG23	2.41	0.47
13:63:56:PRO:O	13:63:71:ALA:HA	2.15	0.47
79:2S:156:G:O2'	79:2S:157:A:H4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1060:U:H2'	78:1S:1061:A:H4'	1.95	0.47
7:L7:123:THR:O	7:L7:127:LEU:HG	2.15	0.47
64:18:16:ARG:HH12	64:18:19:ASN:CA	2.28	0.47
74:28:12:VAL:HG21	74:28:48:VAL:CG1	2.45	0.47
79:2S:1015:U:H4'	79:2S:1017:C:C5	2.50	0.47
4:L4:334:PHE:HB3	79:2S:578:A:H2'	1.97	0.47
49:S3:158:ILE:HG22	78:1S:1327:C:H5''	1.97	0.47
80:8S:41:A:H2'	80:8S:42:G:O4'	2.14	0.47
78:1S:1290:U:H2'	78:1S:1291:G:C8	2.50	0.47
16:66:76:PRO:HA	16:66:79:ILE:HD12	1.97	0.47
79:2S:374:A:HO2'	79:2S:376:G:H8	1.62	0.47
79:2S:1815:U:O3'	79:2S:1816:A:H4'	2.14	0.47
47:S1:67:GLU:HA	47:S1:84:ILE:O	2.15	0.47
7:L7:141:TYR:HB2	7:L7:189:ILE:CD1	2.44	0.47
33:83:64:ILE:HD12	33:83:64:ILE:N	2.30	0.47
72:26:71:LEU:N	72:26:71:LEU:HD22	2.29	0.47
3:L3:363:SER:C	3:L3:365:PHE:H	2.18	0.47
23:73:22:ILE:HA	23:73:34:LEU:O	2.15	0.47
25:75:49:LYS:HD2	25:75:52:PRO:HA	1.97	0.47
45:RC:5:GLU:HA	45:RC:316:MET:O	2.14	0.47
5:L5:21:ARG:HD3	81:5S:112:G:O6	2.14	0.47
78:1S:95:G:H2'	78:1S:96:G:C8	2.50	0.47
67:21:38:LYS:HE3	67:21:51:VAL:HG22	1.97	0.47
79:2S:2684:C:H2'	79:2S:2685:C:C6	2.49	0.47
54:S8:36:THR:HB	54:S8:57:ALA:O	2.14	0.47
25:75:54:TYR:HB2	25:75:55:ASN:H	1.61	0.47
78:1S:1353:U:H2'	78:1S:1354:G:H8	1.80	0.47
78:1S:1367:G:H2'	78:1S:1368:G:C8	2.50	0.47
8:L8:240:ASN:ND2	79:2S:2584:G:O2'	2.48	0.47
6:L6:77:ARG:HB3	6:L6:77:ARG:HH11	1.78	0.47
47:S1:204:ILE:HD13	47:S1:204:ILE:N	2.28	0.47
52:S6:25:ARG:NH1	52:S6:25:ARG:HB3	2.28	0.47
52:S6:25:ARG:HG2	52:S6:25:ARG:O	2.15	0.47
4:L4:310:THR:O	4:L4:311:HIS:HB3	2.15	0.47
16:66:27:LEU:HD21	16:66:33:ILE:HB	1.96	0.47
2:L2:52:SER:HB3	79:2S:1795:U:OP1	2.14	0.47
62:16:82:ARG:NH2	62:16:116:LEU:HD11	2.29	0.47
11:61:36:VAL:CG2	11:61:120:ILE:HG21	2.45	0.47
11:61:36:VAL:HG22	11:61:120:ILE:HG21	1.96	0.47
53:S7:11:GLN:HG3	53:S7:12:ALA:H	1.79	0.47
79:2S:2160:G:H2'	79:2S:2161:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:16:41:PRO:O	62:16:42:GLU:HB3	2.15	0.47
67:21:74:GLN:HA	67:21:79:LEU:HB2	1.95	0.47
15:65:71:ARG:HB2	15:65:94:TYR:HB2	1.97	0.47
37:87:49:TRP:CE3	79:2S:929:A:H1'	2.50	0.47
79:2S:771:A:H2'	79:2S:772:U:O4'	2.14	0.47
69:23:140:LYS:HG3	69:23:141:GLU:H	1.80	0.47
79:2S:312:C:H2'	79:2S:313:A:C8	2.49	0.47
3:L3:217:ALA:O	3:L3:276:THR:HA	2.15	0.47
44:P0:80:VAL:HG22	44:P0:80:VAL:O	2.15	0.47
2:L2:23:ARG:NH1	2:L2:23:ARG:HG3	2.30	0.47
79:2S:1223:A:H2	79:2S:1287:A:HO2'	1.61	0.47
79:2S:2951:G:O2'	79:2S:2952:G:H5'	2.14	0.47
78:1S:1227:A:H4'	78:1S:1228:G:C5'	2.45	0.47
19:69:69:SER:O	19:69:74:ARG:HB2	2.15	0.47
79:2S:1128:U:H1'	79:2S:2828:G:H5'	1.97	0.47
79:2S:939:U:H2'	79:2S:940:G:C8	2.50	0.47
47:S1:167:VAL:O	47:S1:171:ILE:HG13	2.15	0.47
22:72:94:ARG:HG2	22:72:106:ALA:HB3	1.95	0.47
9:L9:93:VAL:HG22	40:90:82:LEU:HD22	1.96	0.47
78:1S:1715:G:H2'	78:1S:1716:C:H5'	1.97	0.47
78:1S:262:U:H2'	78:1S:263:C:C6	2.49	0.47
16:66:110:PRO:HB2	16:66:111:PRO:HD3	1.97	0.47
53:S7:100:PRO:HA	78:1S:639:U:N3	2.30	0.47
69:23:42:PRO:HG2	69:23:122:PHE:CZ	2.50	0.47
35:85:101:THR:HG23	35:85:104:GLN:H	1.79	0.47
79:2S:1184:A:H2'	79:2S:1185:C:C6	2.50	0.47
8:L8:165:PHE:HA	36:86:47:ILE:HD13	1.96	0.47
40:90:83:LYS:HB3	40:90:83:LYS:NZ	2.29	0.47
30:80:104:LEU:HD12	30:80:105:ALA:N	2.30	0.47
79:2S:2426:U:H2'	79:2S:2427:U:C6	2.49	0.47
57:11:85:VAL:HA	57:11:108:PRO:HA	1.96	0.47
74:28:32:PHE:CD2	74:28:32:PHE:N	2.83	0.47
79:2S:1047:A:O2'	79:2S:2633:U:H4'	2.15	0.47
79:2S:517:G:H8	79:2S:517:G:H5'	1.80	0.47
46:S0:139:VAL:HG22	46:S0:139:VAL:O	2.15	0.47
60:14:70:LYS:O	60:14:74:VAL:HG23	2.15	0.47
18:68:63:SER:O	18:68:67:ILE:HG13	2.15	0.47
15:65:51:LEU:HD13	15:65:117:ASN:HB3	1.96	0.47
78:1S:1682:U:O2'	78:1S:1683:C:H5'	2.15	0.47
79:2S:209:A:H4'	79:2S:211:A:N7	2.30	0.47
59:13:132:VAL:HG23	59:13:134:VAL:HG13	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:65:68:ARG:HH11	15:65:68:ARG:HB3	1.80	0.47
2:L2:5:ILE:HG22	2:L2:208:ASP:O	2.15	0.47
50:S4:199:GLU:HB2	50:S4:207:LEU:O	2.15	0.47
70:24:37:LYS:O	70:24:41:ARG:HG3	2.14	0.47
45:RC:7:LEU:HG	45:RC:315:VAL:HG22	1.97	0.47
16:66:13:GLY:O	16:66:125:ARG:HB3	2.15	0.47
79:2S:2707:C:H2'	79:2S:2708:C:C6	2.50	0.47
49:S3:151:LYS:HE3	78:1S:1423:U:H5''	1.98	0.47
5:L5:155:THR:HG23	81:5S:36:C:H4'	1.96	0.47
9:L9:44:THR:O	9:L9:55:VAL:HA	2.15	0.47
9:L9:4:ILE:CD1	20:70:148:LEU:HD21	2.44	0.47
9:L9:4:ILE:HG23	9:L9:5:GLN:N	2.30	0.47
78:1S:604:A:H2'	78:1S:605:A:O4'	2.14	0.47
1:L1:68:PHE:HA	1:L1:105:LYS:O	2.14	0.47
38:88:17:ARG:O	38:88:18:ALA:HB3	2.15	0.47
79:2S:711:A:H2'	79:2S:712:G:H5'	1.97	0.47
2:L2:220:GLY:HA3	79:2S:2966:G:H5''	1.97	0.47
63:17:81:LYS:O	63:17:81:LYS:HG2	2.15	0.47
78:1S:712:G:C2'	78:1S:713:A:H5''	2.25	0.46
13:63:71:ALA:HB2	13:63:147:ILE:HG13	1.96	0.46
66:20:87:HIS:HB3	66:20:89:ARG:NH1	2.30	0.46
8:L8:143:ILE:HG22	8:L8:173:MET:CG	2.38	0.46
69:23:127:VAL:HG23	69:23:130:VAL:HG23	1.97	0.46
59:13:10:GLY:HA3	78:1S:955:A:H5''	1.97	0.46
54:S8:60:ILE:HG22	54:S8:62:THR:H	1.80	0.46
78:1S:1573:A:H1'	78:1S:1574:G:OP2	2.14	0.46
50:S4:194:THR:HG21	50:S4:231:GLN:OE1	2.15	0.46
1:L1:123:LEU:HD22	1:L1:128:LEU:HB2	1.97	0.46
57:11:93:TYR:C	57:11:94:ILE:HD12	2.35	0.46
82:PT:23:G:H2'	82:PT:24:C:H6	1.81	0.46
46:S0:188:LEU:HD21	46:S0:195:TRP:HE1	1.80	0.46
46:S0:193:GLN:HA	46:S0:193:GLN:HE21	1.80	0.46
41:91:12:ARG:HG2	41:91:15:ARG:HH21	1.81	0.46
49:S3:122:VAL:O	49:S3:126:VAL:HG23	2.15	0.46
79:2S:3275:U:H3'	79:2S:3276:G:H5''	1.96	0.46
11:61:125:MET:HG2	11:61:126:ASP:H	1.80	0.46
20:70:152:LEU:HB2	20:70:172:TYR:HD2	1.80	0.46
79:2S:2812:C:H2'	79:2S:2813:A:H8	1.79	0.46
78:1S:1163:A:O5'	78:1S:1163:A:H8	1.98	0.46
2:L2:71:LEU:HD22	79:2S:1651:U:C5'	2.45	0.46
23:73:46:LEU:HD12	79:2S:2917:G:OP1	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:68:184:PHE:CD2	79:2S:2730:G:H4'	2.50	0.46
51:S5:117:THR:O	51:S5:121:ILE:HG13	2.15	0.46
26:76:23:PRO:HB2	80:8S:91:C:O2'	2.14	0.46
78:1S:1637:C:H5'	83:MR:7:G:O6	2.15	0.46
79:2S:871:U:H2'	79:2S:872:U:C6	2.49	0.46
51:S5:93:LEU:O	51:S5:97:LEU:HG	2.15	0.46
78:1S:36:C:H2'	78:1S:37:U:C6	2.50	0.46
27:77:109:GLU:HA	27:77:112:LYS:HD2	1.96	0.46
63:17:102:VAL:HG23	63:17:120:SER:O	2.14	0.46
26:76:88:GLU:HA	26:76:93:ALA:O	2.15	0.46
7:L7:173:LEU:HD13	7:L7:184:LEU:HD12	1.96	0.46
9:L9:146:LEU:N	9:L9:146:LEU:HD12	2.30	0.46
21:71:60:LYS:NZ	79:2S:1059:G:H4'	2.29	0.46
79:2S:1121:U:H2'	79:2S:1122:U:C6	2.51	0.46
50:S4:31:PRO:HB2	50:S4:38:LEU:HD21	1.97	0.46
79:2S:116:A:H62	79:2S:153:U:H1'	1.80	0.46
79:2S:517:G:O2'	79:2S:518:G:H5'	2.15	0.46
59:13:139:TRP:CH2	59:13:141:TYR:HB2	2.50	0.46
27:77:23:VAL:HA	27:77:45:GLY:HA3	1.97	0.46
3:L3:284:ARG:HB2	3:L3:356:LEU:HD11	1.97	0.46
5:L5:110:LEU:HB3	5:L5:115:LEU:O	2.15	0.46
79:2S:989:A:H2'	79:2S:990:U:H6	1.80	0.46
65:19:28:LEU:HD22	65:19:29:GLU:N	2.30	0.46
78:1S:1107:G:C2'	78:1S:1108:G:H5'	2.46	0.46
82:PT:23:G:H2'	82:PT:24:C:C6	2.50	0.46
79:2S:642:U:H2'	79:2S:644:G:OP2	2.16	0.46
11:61:93:ASP:HB3	11:61:94:ARG:NH1	2.31	0.46
78:1S:916:U:H2'	78:1S:917:U:O4'	2.15	0.46
23:73:22:ILE:CG2	23:73:33:ASN:HB2	2.45	0.46
60:14:112:ILE:HB	72:26:57:SER:OG	2.15	0.46
78:1S:94:U:H2'	78:1S:95:G:H5'	1.97	0.46
15:65:141:ALA:HB2	79:2S:126:U:H5'	1.97	0.46
22:72:94:ARG:CG	22:72:106:ALA:HB3	2.45	0.46
13:63:119:TYR:O	13:63:123:ILE:HG23	2.14	0.46
60:14:37:GLU:HA	78:1S:895:G:H1'	1.98	0.46
47:S1:115:ARG:HG3	47:S1:116:LYS:H	1.79	0.46
48:S2:111:VAL:HG12	48:S2:190:LEU:O	2.15	0.46
79:2S:1916:U:H2'	79:2S:1917:C:C6	2.51	0.46
26:76:71:SER:HB3	26:76:83:ASP:OD2	2.15	0.46
79:2S:2403:G:OP1	79:2S:2403:G:H4'	2.15	0.46
78:1S:730:G:H2'	78:1S:730:G:N3	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:81:62:ARG:HG3	31:81:66:GLY:O	2.15	0.46
4:L4:302:ALA:HA	18:68:39:ARG:HH11	1.80	0.46
50:S4:4:GLY:HA3	78:1S:93:A:O2'	2.16	0.46
27:77:75:VAL:HG11	27:77:80:LEU:HD21	1.97	0.46
59:13:23:PRO:O	59:13:24:ALA:CB	2.63	0.46
72:26:36:ILE:HD11	72:26:38:ARG:HD3	1.96	0.46
18:68:147:ARG:NH1	18:68:147:ARG:HB3	2.30	0.46
4:L4:121:ALA:CB	4:L4:235:LEU:HD21	2.45	0.46
55:S9:113:VAL:HB	55:S9:125:ALA:HB1	1.97	0.46
69:23:141:GLU:HG2	69:23:142:LYS:H	1.81	0.46
68:22:74:VAL:HG22	68:22:75:ILE:N	2.31	0.46
77:31:119:ARG:NE	77:31:139:LEU:HD21	2.30	0.46
17:67:111:LYS:O	17:67:153:LYS:HB2	2.15	0.46
78:1S:487:G:C3'	78:1S:488:G:H5''	2.43	0.46
8:L8:152:LEU:HD12	8:L8:198:ALA:HB3	1.98	0.46
81:5S:66:A:H2'	81:5S:67:G:O4'	2.16	0.46
74:28:17:GLY:O	74:28:18:ARG:HD3	2.15	0.46
21:71:4:SER:HA	79:2S:2630:C:OP2	2.15	0.46
21:71:76:ILE:HG22	21:71:77:ASN:N	2.29	0.46
49:S3:142:LEU:C	49:S3:144:ALA:H	2.17	0.46
7:L7:66:LYS:O	7:L7:70:LYS:HG3	2.16	0.46
79:2S:577:C:H2'	79:2S:579:G:H5''	1.97	0.46
76:30:55:ARG:HH11	76:30:55:ARG:HG3	1.78	0.46
79:2S:129:U:H2'	79:2S:130:A:H8	1.79	0.46
4:L4:235:LEU:CD1	4:L4:238:LEU:HD12	2.46	0.46
2:L2:58:LEU:HD13	2:L2:75:ILE:CG2	2.46	0.46
11:61:26:SER:HB3	11:61:64:LYS:O	2.15	0.46
49:S3:72:LEU:HG	56:10:20:VAL:HG11	1.97	0.46
78:1S:1106:U:H2'	78:1S:1107:G:C8	2.51	0.46
78:1S:1679:G:H2'	78:1S:1680:G:O4'	2.15	0.46
79:2S:1887:A:H2'	79:2S:1888:U:H5'	1.98	0.46
78:1S:182:A:H2'	78:1S:183:U:C6	2.50	0.46
51:S5:114:ILE:O	51:S5:118:LEU:HG	2.15	0.46
13:63:165:SER:O	13:63:166:ALA:HB3	2.16	0.46
79:2S:1000:C:H42	79:2S:1046:A:H62	1.64	0.46
35:85:12:LYS:HG2	35:85:16:GLN:NE2	2.31	0.46
8:L8:238:LEU:HB2	8:L8:243:GLN:HG2	1.98	0.46
5:L5:128:GLU:HG3	5:L5:129:TYR:N	2.30	0.46
79:2S:848:A:C8	79:2S:849:C:H1'	2.51	0.46
80:8S:17:A:H2'	80:8S:18:U:O4'	2.15	0.46
20:70:167:ARG:HD2	20:70:168:PRO:HD2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L3:48:GLY:O	3:L3:335:ILE:HD12	2.16	0.46
70:24:63:GLN:HB2	70:24:68:LYS:HB3	1.98	0.46
18:68:110:ALA:O	18:68:114:ILE:HG13	2.15	0.46
15:65:96:ARG:HH11	79:2S:31:C:H5'	1.80	0.46
16:66:142:SER:O	16:66:145:VAL:HG22	2.16	0.46
14:64:73:PRO:HG3	79:2S:559:A:O2'	2.16	0.46
82:PT:6:G:O2'	82:PT:7:G:H5'	2.16	0.46
44:P0:16:ARG:HG2	44:P0:16:ARG:O	2.15	0.46
16:66:84:LEU:O	16:66:84:LEU:HD23	2.15	0.46
75:29:53:ASN:HB2	75:29:55:PHE:CE2	2.50	0.46
2:L2:180:LEU:HA	79:2S:2149:A:O2'	2.16	0.46
74:28:53:ILE:HG22	74:28:54:LEU:N	2.30	0.46
79:2S:154:U:OP1	79:2S:158:G:H5'	2.16	0.46
78:1S:93:A:C8	78:1S:398:G:H2'	2.49	0.46
69:23:60:GLU:HA	69:23:68:ILE:HA	1.97	0.46
78:1S:1686:C:H2'	78:1S:1687:U:C5'	2.44	0.46
79:2S:1330:A:C6	79:2S:1332:A:H1'	2.50	0.46
31:81:23:VAL:O	31:81:28:ARG:NH1	2.48	0.46
47:S1:35:PRO:HD2	47:S1:38:PHE:HE2	1.80	0.46
3:L3:3:HIS:CD2	79:2S:2938:G:H3'	2.47	0.46
14:64:77:ARG:O	14:64:81:VAL:HG23	2.15	0.46
71:25:41:ILE:HG13	71:25:42:LEU:N	2.29	0.46
3:L3:227:GLU:OE1	79:2S:1887:A:H5''	2.16	0.46
19:69:121:HIS:HE1	79:2S:1719:G:N7	2.14	0.46
59:13:86:GLU:HG3	59:13:87:ASP:H	1.80	0.46
53:S7:143:LEU:HD13	53:S7:144:VAL:HG22	1.98	0.46
8:L8:163:VAL:HA	8:L8:166:LEU:HG	1.97	0.46
57:11:34:TRP:CH2	57:11:36:LYS:HD3	2.51	0.46
42:92:55:LYS:HA	42:92:56:PRO:HD3	1.81	0.46
4:L4:145:ILE:CD1	4:L4:148:ILE:HG12	2.45	0.46
79:2S:2684:C:H2'	79:2S:2685:C:H6	1.80	0.46
2:L2:199:THR:HA	79:2S:2147:A:H5''	1.98	0.46
78:1S:379:U:C2'	78:1S:380:U:H5''	2.45	0.46
52:S6:23:ARG:HB3	52:S6:41:VAL:HA	1.98	0.46
9:L9:150:SER:O	9:L9:154:VAL:HG23	2.15	0.46
5:L5:218:ARG:HG2	5:L5:218:ARG:HH11	1.81	0.46
79:2S:932:U:H4'	79:2S:933:A:H2'	1.96	0.46
64:18:88:ARG:HG3	78:1S:1547:A:H4'	1.96	0.46
78:1S:1317:C:H2'	78:1S:1318:G:O4'	2.16	0.46
79:2S:1522:U:H5'	79:2S:1604:G:H1'	1.98	0.46
11:61:23:VAL:HG11	11:61:29:ARG:HD3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:16:97:VAL:HG12	62:16:98:ASP:N	2.20	0.46
47:S1:87:ARG:HB2	47:S1:101:HIS:CD2	2.50	0.46
70:24:35:VAL:HG22	70:24:36:SER:N	2.30	0.46
46:S0:31:VAL:HG23	46:S0:149:LEU:O	2.14	0.46
7:L7:88:ARG:CG	7:L7:111:ILE:HA	2.45	0.46
80:8S:70:G:H1'	80:8S:88:A:H61	1.79	0.46
46:S0:170:ILE:HD12	46:S0:170:ILE:N	2.25	0.46
15:65:176:LYS:HZ1	79:2S:65:A:H5'	1.79	0.46
17:67:117:ILE:CG1	17:67:148:LEU:HB3	2.46	0.46
46:S0:177:LEU:O	46:S0:181:VAL:HG13	2.16	0.46
79:2S:2948:C:H2'	79:2S:2949:U:C6	2.51	0.46
16:66:21:SER:HA	16:66:87:MET:SD	2.56	0.46
50:S4:10:LYS:HG2	50:S4:27:TYR:CD1	2.51	0.46
15:65:50:ARG:HH11	15:65:50:ARG:CB	2.28	0.46
79:2S:1818:U:H2'	79:2S:1819:U:C5'	2.45	0.46
47:S1:117:TRP:N	78:1S:932:U:OP2	2.48	0.46
34:84:91:ARG:HA	34:84:95:ILE:HD13	1.97	0.46
69:23:109:ARG:NH2	69:23:112:LYS:HG3	2.31	0.46
8:L8:99:PRO:CG	8:L8:190:VAL:HG23	2.46	0.46
79:2S:2809:C:H2'	79:2S:2810:C:H4'	1.96	0.46
79:2S:1338:C:H2'	79:2S:1339:C:H6	1.79	0.46
59:13:125:LEU:HD13	59:13:125:LEU:C	2.35	0.46
79:2S:1930:A:O4'	79:2S:1932:A:H4'	2.16	0.46
26:76:6:LEU:N	26:76:6:LEU:HD23	2.30	0.46
66:20:22:ILE:HD11	66:20:116:VAL:HG13	1.97	0.46
79:2S:127:G:H2'	79:2S:128:G:C8	2.50	0.46
53:S7:70:PHE:O	53:S7:74:GLN:HB2	2.15	0.46
70:24:43:LYS:O	70:24:46:GLU:HG2	2.15	0.46
67:21:80:LYS:HB3	67:21:80:LYS:NZ	2.30	0.46
78:1S:200:A:H2'	78:1S:201:G:O4'	2.16	0.46
79:2S:980:A:H2'	79:2S:981:U:O4'	2.16	0.46
78:1S:1659:A:H2'	78:1S:1660:A:C8	2.50	0.46
66:20:52:LYS:HG3	66:20:52:LYS:O	2.15	0.46
78:1S:1448:G:H5'	78:1S:1448:G:C8	2.51	0.46
79:2S:2941:A:H8	79:2S:2941:A:OP2	1.97	0.46
21:71:54:HIS:HB3	21:71:57:TYR:CD2	2.51	0.46
21:71:56:PHE:HD1	21:71:57:TYR:CE1	2.34	0.46
21:71:64:VAL:HA	21:71:73:GLY:O	2.16	0.46
51:S5:59:VAL:HG13	51:S5:65:ARG:HH11	1.79	0.46
3:L3:43:LEU:HB3	3:L3:181:ILE:HG21	1.97	0.46
28:78:124:ILE:HG12	28:78:144:VAL:CG2	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L2:184:ARG:HA	2:L2:187:HIS:CD2	2.50	0.46
2:L2:65:ASP:HB3	2:L2:68:LYS:O	2.16	0.46
66:20:81:THR:O	75:29:54:LYS:HD2	2.16	0.46
58:12:24:ILE:HD13	58:12:24:ILE:N	2.26	0.46
82:ET:24:C:H2'	82:ET:25:U:C6	2.51	0.46
61:15:45:PHE:HA	61:15:49:MET:SD	2.56	0.46
30:80:81:VAL:HG23	30:80:83:LYS:H	1.80	0.46
17:67:65:SER:O	17:67:66:SER:HB2	2.16	0.46
5:L5:285:ARG:NH1	81:5S:62:U:H4'	2.30	0.46
56:10:25:LYS:HD3	56:10:62:GLN:HE22	1.79	0.46
79:2S:757:C:H2'	79:2S:758:C:C5'	2.45	0.46
60:14:31:THR:HG22	60:14:38:THR:HA	1.98	0.46
54:S8:82:VAL:HB	54:S8:101:ILE:HG22	1.97	0.46
19:69:69:SER:HB2	19:69:74:ARG:CB	2.46	0.46
55:S9:50:SER:HB3	78:1S:1:U:C5	2.49	0.46
69:23:19:ARG:HH12	78:1S:610:G:N2	2.14	0.46
78:1S:1600:A:O2'	78:1S:1601:G:H5''	2.15	0.46
78:1S:1050:G:O2'	78:1S:1051:G:H5'	2.16	0.46
79:2S:1779:C:H2'	79:2S:1780:G:H5''	1.98	0.46
48:S2:144:TRP:CD2	48:S2:173:PRO:HG3	2.51	0.46
79:2S:1464:G:H21	79:2S:1511:U:H3	1.62	0.46
2:L2:92:LYS:HA	2:L2:103:PRO:HD2	1.98	0.46
27:77:87:LEU:HG	27:77:88:ASP:N	2.31	0.46
65:19:105:LEU:HB3	65:19:122:ARG:NH1	2.31	0.46
14:64:46:ILE:O	14:64:46:ILE:HG13	2.15	0.46
59:13:107:LYS:O	59:13:107:LYS:HG3	2.15	0.46
25:75:142:ILE:OXT	25:75:142:ILE:HD13	2.15	0.46
20:70:111:ALA:HA	20:70:115:ARG:HA	1.98	0.46
6:L6:67:GLY:HA3	6:L6:74:VAL:HB	1.97	0.46
28:78:132:LYS:O	28:78:136:GLU:HG3	2.16	0.46
65:19:125:SER:O	65:19:129:GLN:HG3	2.16	0.46
78:1S:1143:A:H2'	78:1S:1144:U:C6	2.51	0.46
24:74:48:ARG:HH22	79:2S:2110:G:H2'	1.81	0.46
66:20:85:ARG:N	66:20:85:ARG:HD2	2.29	0.46
62:16:118:ILE:HG23	62:16:119:ALA:N	2.31	0.46
72:26:87:ARG:HD3	72:26:92:ARG:HA	1.98	0.46
59:13:22:ALA:HB1	59:13:23:PRO:CA	2.43	0.46
45:RC:176:LYS:HE3	45:RC:196:ASN:O	2.15	0.46
4:L4:205:PRO:CG	4:L4:225:VAL:HG22	2.41	0.46
23:73:80:ARG:HA	23:73:95:PHE:CD2	2.51	0.46
7:L7:235:PHE:HE2	20:70:35:VAL:HG23	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:15:25:LEU:HD13	61:15:112:LEU:HD11	1.97	0.46
53:S7:85:PHE:HD2	53:S7:85:PHE:HA	1.70	0.46
79:2S:282:G:O2'	79:2S:283:G:OP2	2.21	0.46
1:L1:57:ASN:ND2	1:L1:147:LYS:HB3	2.31	0.46
2:L2:229:ALA:HB3	2:L2:234:LYS:CG	2.46	0.46
7:L7:141:TYR:HA	7:L7:144:ILE:HD12	1.96	0.46
15:65:39:ALA:O	15:65:61:ILE:HB	2.16	0.46
79:2S:2563:G:H2'	79:2S:2564:G:C8	2.50	0.46
79:2S:1449:A:H2'	79:2S:1450:G:O4'	2.16	0.46
23:73:33:ASN:O	23:73:34:LEU:HD23	2.15	0.46
79:2S:2819:A:H2'	79:2S:2820:A:H5'	1.98	0.46
58:12:67:THR:HG22	58:12:68:GLU:N	2.31	0.46
20:70:82:ASP:HA	20:70:87:THR:HA	1.97	0.46
18:68:83:VAL:HB	18:68:103:ALA:CB	2.45	0.46
79:2S:189:G:H5'	79:2S:223:U:O2'	2.16	0.46
20:70:23:LYS:O	20:70:24:LEU:HB2	2.16	0.46
62:16:135:ARG:HE	78:1S:1582:U:H5''	1.81	0.46
79:2S:2426:U:H2'	79:2S:2427:U:H6	1.81	0.46
57:11:45:PRO:HG2	57:11:48:ALA:HB2	1.97	0.46
52:S6:82:SER:O	52:S6:83:CYS:HB2	2.16	0.46
6:L6:171:PRO:HD2	33:83:44:TYR:OH	2.16	0.46
11:61:54:VAL:HG11	11:61:57:PHE:CE2	2.50	0.46
11:61:10:ARG:HG2	81:5S:55:A:H1'	1.98	0.46
79:2S:647:A:H8	79:2S:647:A:OP2	1.99	0.46
78:1S:1013:A:H2'	78:1S:1014:G:H5'	1.98	0.46
8:L8:109:LEU:O	8:L8:109:LEU:HD23	2.15	0.46
63:17:116:LYS:HB2	63:17:116:LYS:NZ	2.31	0.46
79:2S:1102:A:O3'	79:2S:1103:A:H3'	2.16	0.46
42:92:29:LYS:HD2	42:92:31:GLY:H	1.80	0.46
51:S5:72:HIS:HB3	62:16:47:LYS:HE2	1.96	0.46
79:2S:2336:U:H2'	79:2S:2337:C:O4'	2.15	0.46
79:2S:1867:A:H2'	79:2S:1868:G:C8	2.51	0.46
5:L5:95:TRP:CE3	5:L5:198:TYR:HB3	2.51	0.46
36:86:94:ILE:HG12	36:86:98:ARG:NH1	2.31	0.46
79:2S:157:A:H2'	79:2S:158:G:O4'	2.16	0.46
78:1S:878:G:H2'	78:1S:879:G:H8	1.74	0.46
79:2S:1328:C:O2'	79:2S:1329:U:H5'	2.16	0.46
78:1S:1336:A:C3'	78:1S:1337:A:H5''	2.44	0.46
18:68:170:ARG:O	18:68:171:LYS:HB2	2.15	0.46
67:21:70:ASN:HA	67:21:79:LEU:CD1	2.46	0.46
46:S0:59:LEU:HD22	67:21:79:LEU:HD21	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:67:120:ASN:ND2	17:67:145:HIS:HB2	2.31	0.46
72:26:41:ILE:N	72:26:41:ILE:HD13	2.30	0.46
2:L2:196:TRP:HD1	2:L2:198:LYS:HZ3	1.63	0.46
6:L6:58:LEU:HD21	6:L6:102:ASN:HA	1.98	0.46
47:S1:67:GLU:HG3	47:S1:84:ILE:O	2.16	0.46
77:31:119:ARG:HE	77:31:139:LEU:CD2	2.29	0.46
31:81:68:GLU:HG3	31:81:69:TYR:H	1.81	0.46
79:2S:105:C:H2'	79:2S:106:A:H8	1.79	0.46
79:2S:1658:G:H2'	79:2S:1659:U:H6	1.79	0.46
66:20:69:LYS:HB3	78:1S:1280:C:H4'	1.98	0.46
59:13:16:ILE:HA	78:1S:959:U:H5'	1.98	0.46
79:2S:3169:U:H2'	79:2S:3170:A:C4'	2.45	0.46
23:73:13:ILE:HD11	23:73:53:SER:HB2	1.98	0.46
78:1S:1082:C:C2'	78:1S:1082:C:O2	2.63	0.46
79:2S:2289:U:H2'	79:2S:2290:C:C6	2.50	0.46
78:1S:1263:G:H2'	78:1S:1264:G:O4'	2.16	0.46
79:2S:338:A:H3'	79:2S:339:C:C5'	2.46	0.46
79:2S:2832:C:H2'	79:2S:2833:A:H8	1.80	0.46
46:S0:77:SER:HB2	46:S0:86:VAL:HG11	1.97	0.46
55:S9:77:ILE:HG23	55:S9:86:LEU:HD21	1.98	0.46
54:S8:150:ALA:HB1	54:S8:152:ILE:HG12	1.97	0.46
78:1S:101:U:H2'	78:1S:102:U:O4'	2.16	0.46
44:P0:76:LEU:O	44:P0:76:LEU:HD13	2.15	0.46
46:S0:7:PHE:CD2	46:S0:7:PHE:N	2.84	0.46
53:S7:39:ARG:N	53:S7:40:PRO:HD2	2.31	0.46
79:2S:204:A:H2'	79:2S:205:C:O4'	2.15	0.46
44:P0:69:ASP:O	44:P0:70:LEU:HB2	2.15	0.46
61:15:16:SER:HB3	61:15:21:ASP:OD1	2.16	0.46
56:10:86:ILE:HB	56:10:88:PRO:HD2	1.97	0.46
74:28:32:PHE:HD2	74:28:32:PHE:N	2.13	0.46
55:S9:149:ARG:HA	78:1S:765:G:O6	2.16	0.46
47:S1:148:ASN:HB2	63:17:126:ALA:HB3	1.97	0.46
60:14:91:THR:O	60:14:92:LYS:HG2	2.16	0.46
64:18:54:LEU:CD2	64:18:54:LEU:H	2.25	0.46
55:S9:128:LEU:O	55:S9:133:HIS:HB2	2.16	0.46
79:2S:1292:C:H2'	79:2S:1293:U:O4'	2.16	0.46
79:2S:1398:U:H5''	80:8S:9:A:OP1	2.16	0.46
50:S4:194:THR:O	50:S4:195:ILE:CB	2.64	0.46
79:2S:1804:A:H2'	79:2S:1805:C:C6	2.51	0.46
5:L5:52:VAL:HG21	81:5S:6:C:H4'	1.97	0.46
2:L2:200:ARG:HD2	79:2S:2186:U:OP2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:67:15:ALA:HB3	17:67:150:VAL:CG2	2.45	0.46
79:2S:1827:C:H2'	79:2S:1828:A:C8	2.51	0.46
42:92:7:THR:O	42:92:8:ARG:HB2	2.15	0.46
52:S6:186:ARG:O	52:S6:190:GLN:HG2	2.15	0.46
79:2S:1869:C:H2'	79:2S:1870:C:H6	1.79	0.46
54:S8:158:SER:HB3	79:2S:2067:U:C5	2.51	0.46
23:73:33:ASN:HD22	23:73:33:ASN:N	2.14	0.46
78:1S:429:G:OP1	78:1S:439:U:H5''	2.16	0.46
62:16:136:SER:C	62:16:137:ARG:HE	2.19	0.46
69:23:137:LYS:CD	69:23:139:LYS:HE2	2.46	0.46
57:11:70:ILE:H	57:11:70:ILE:HD12	1.81	0.46
78:1S:38:C:C2'	78:1S:39:A:H5'	2.46	0.46
63:17:102:VAL:HB	63:17:106:THR:HB	1.97	0.46
79:2S:407:A:C2	80:8S:17:A:H1'	2.51	0.46
79:2S:1780:G:H2'	79:2S:1781:C:C6	2.51	0.46
32:82:42:VAL:HG12	32:82:52:GLN:NE2	2.31	0.46
78:1S:330:G:H2'	78:1S:331:A:O4'	2.15	0.46
79:2S:2539:C:H4'	79:2S:2540:A:O4'	2.16	0.46
32:82:46:PHE:CE1	79:2S:1145:G:H5'	2.51	0.46
1:L1:108:ASN:HB2	1:L1:130:LYS:HE2	1.98	0.46
8:L8:78:PHE:C	8:L8:80:TYR:H	2.18	0.46
64:18:39:GLY:H	78:1S:1566:U:H5''	1.81	0.46
79:2S:3237:U:H2'	79:2S:3238:G:O4'	2.16	0.46
5:L5:287:ALA:O	5:L5:290:ILE:HG12	2.16	0.46
19:69:109:TYR:HB3	19:69:115:ILE:HG22	1.97	0.46
8:L8:63:LYS:HA	8:L8:63:LYS:NZ	2.31	0.46
30:80:84:LEU:N	30:80:84:LEU:HD12	2.31	0.46
8:L8:92:LYS:NZ	8:L8:92:LYS:HB3	2.30	0.46
79:2S:3183:A:H2	79:2S:3188:G:H4'	1.81	0.46
35:85:76:GLN:HB2	35:85:77:PRO:HD2	1.98	0.45
61:15:98:ASN:HB2	61:15:122:THR:CG2	2.43	0.45
55:S9:163:PRO:C	55:S9:165:GLY:H	2.19	0.45
5:L5:115:LEU:HD22	5:L5:115:LEU:H	1.81	0.45
79:2S:638:C:H2'	79:2S:639:G:H8	1.81	0.45
82:ET:25:U:H2'	82:ET:26:C:C6	2.51	0.45
80:8S:40:A:H2'	80:8S:41:A:H8	1.79	0.45
13:63:101:ARG:HA	79:2S:76:G:C6	2.51	0.45
4:L4:125:ALA:HB1	4:L4:238:LEU:HB3	1.97	0.45
53:S7:112:ARG:HG2	53:S7:112:ARG:HH11	1.81	0.45
79:2S:904:A:H5'	79:2S:1536:G:O2'	2.16	0.45
8:L8:150:LEU:HD21	8:L8:218:ILE:CD1	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L3:116:ARG:HG2	3:L3:175:LYS:HA	1.98	0.45
79:2S:793:C:H2'	79:2S:794:U:O4'	2.16	0.45
55:S9:123:HIS:CE1	76:30:37:ARG:HB2	2.47	0.45
54:S8:102:VAL:HG23	54:S8:167:ALA:HB3	1.98	0.45
3:L3:128:LYS:O	3:L3:131:THR:HG23	2.17	0.45
17:67:67:ILE:CG2	17:67:68:GLY:N	2.78	0.45
79:2S:1818:U:H2'	79:2S:1819:U:H5''	1.98	0.45
16:66:22:VAL:HG11	16:66:122:GLN:HG3	1.97	0.45
78:1S:1043:A:H3'	78:1S:1044:U:C6	2.51	0.45
25:75:56:ARG:O	25:75:57:LEU:HB2	2.15	0.45
79:2S:1904:C:C2	79:2S:2951:G:H5'	2.51	0.45
52:S6:182:GLN:O	52:S6:185:GLN:HB3	2.15	0.45
78:1S:1163:A:H2'	78:1S:1164:G:O4'	2.16	0.45
73:27:74:SER:O	73:27:75:GLU:CB	2.65	0.45
5:L5:180:PHE:HB3	5:L5:181:PRO:HD2	1.98	0.45
79:2S:2916:U:H2'	79:2S:2917:G:H8	1.81	0.45
2:L2:83:HIS:HB3	43:93:64:VAL:HG13	1.98	0.45
47:S1:150:VAL:HB	78:1S:1067:C:H5''	1.97	0.45
5:L5:104:LEU:HA	5:L5:247:ILE:HG23	1.97	0.45
17:67:69:ARG:HD3	79:2S:3309:G:H1'	1.98	0.45
49:S3:41:VAL:HG12	66:20:111:GLY:H	1.81	0.45
79:2S:3277:U:O2	79:2S:3277:U:H2'	2.15	0.45
28:78:104:THR:OG1	28:78:127:ALA:HB2	2.16	0.45
50:S4:90:ILE:HB	50:S4:99:PHE:HB2	1.98	0.45
10:60:144:ASN:HA	10:60:147:VAL:HG23	1.98	0.45
42:92:9:LYS:HA	42:92:21:THR:O	2.16	0.45
68:22:39:GLN:O	68:22:43:LYS:HB2	2.16	0.45
79:2S:1257:C:H3'	79:2S:1258:U:C5'	2.39	0.45
11:61:40:LEU:CD2	11:61:114:ILE:HG12	2.44	0.45
58:12:74:LEU:HD11	77:31:106:TYR:HB3	1.98	0.45
19:69:143:ILE:HG23	19:69:146:LYS:HE3	1.98	0.45
78:1S:1358:G:H2'	78:1S:1359:C:C6	2.50	0.45
27:77:23:VAL:HG21	27:77:43:VAL:HG21	1.97	0.45
64:18:48:LYS:HE2	65:19:50:ALA:HB2	1.98	0.45
48:S2:228:ASN:HB2	67:21:1:MET:H1	1.80	0.45
48:S2:240:LEU:HD12	48:S2:240:LEU:N	2.32	0.45
54:S8:172:ARG:CB	54:S8:175:GLN:HB2	2.46	0.45
10:60:97:LEU:HD21	10:60:126:ALA:CB	2.45	0.45
9:L9:41:ILE:HG23	9:L9:42:ASP:N	2.31	0.45
17:67:122:ALA:HB1	17:67:123:PRO:CD	2.46	0.45
31:81:9:THR:HG22	31:81:10:ARG:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:208:C:H2'	79:2S:209:A:O4'	2.17	0.45
19:69:80:LYS:HE3	79:2S:1940:G:OP1	2.17	0.45
60:14:132:ARG:O	72:26:28:LYS:HG3	2.16	0.45
18:68:42:ALA:HB3	18:68:45:ASN:HD22	1.79	0.45
62:16:141:SER:O	62:16:143:ARG:N	2.46	0.45
4:L4:51:ALA:HB3	80:8S:27:U:H4'	1.99	0.45
21:71:27:LEU:CD2	21:71:27:LEU:H	2.28	0.45
65:19:27:LYS:HZ2	65:19:27:LYS:HB3	1.80	0.45
79:2S:1002:A:H2'	79:2S:1003:A:C8	2.52	0.45
37:87:34:CYS:HB3	37:87:39:TYR:H	1.81	0.45
79:2S:3326:G:H2'	79:2S:3327:G:C8	2.51	0.45
79:2S:2772:C:H1'	79:2S:2773:C:H5	1.81	0.45
14:64:70:PHE:HE2	14:64:72:LEU:HD23	1.81	0.45
78:1S:63:G:H4'	78:1S:170:U:H5	1.81	0.45
78:1S:647:G:H2'	78:1S:648:G:H8	1.82	0.45
79:2S:273:A:H2'	79:2S:274:G:C8	2.51	0.45
79:2S:1947:G:H1	79:2S:2101:C:H42	1.63	0.45
2:L2:13:GLY:HA2	2:L2:16:PHE:HB2	1.98	0.45
79:2S:686:G:H2'	79:2S:687:U:O4'	2.17	0.45
49:S3:123:VAL:HG13	49:S3:134:CYS:SG	2.57	0.45
79:2S:2836:C:H2'	79:2S:2837:A:H5'	1.97	0.45
18:68:179:ARG:HD2	18:68:182:LYS:HG2	1.98	0.45
18:68:182:LYS:HE3	79:2S:2764:C:OP1	2.16	0.45
72:26:87:ARG:HB2	72:26:92:ARG:HG2	1.98	0.45
79:2S:1516:C:H2'	79:2S:1517:G:C8	2.52	0.45
79:2S:3349:C:H2'	79:2S:3350:C:C6	2.52	0.45
78:1S:1074:G:H2'	78:1S:1075:C:C6	2.51	0.45
78:1S:386:G:H21	78:1S:425:A:H2	1.65	0.45
55:S9:163:PRO:CG	78:1S:512:A:H5''	2.40	0.45
3:L3:261:MET:HB2	3:L3:264:VAL:HG13	1.99	0.45
26:76:119:ILE:HG22	26:76:124:GLY:HA3	1.98	0.45
15:65:13:LYS:C	15:65:19:LEU:HD22	2.37	0.45
79:2S:1235:U:H4'	79:2S:1236:G:H5''	1.97	0.45
20:70:119:ARG:HB2	81:5S:96:U:C4'	2.46	0.45
79:2S:2117:A:H2'	79:2S:2118:C:O4'	2.16	0.45
7:L7:98:LYS:O	7:L7:102:VAL:HG23	2.16	0.45
2:L2:223:SER:O	2:L2:225:ILE:HD12	2.17	0.45
17:67:111:LYS:HB3	17:67:111:LYS:NZ	2.30	0.45
26:76:112:ASP:O	26:76:116:LYS:HG3	2.16	0.45
79:2S:2155:G:H2'	79:2S:2156:C:O4'	2.16	0.45
57:11:75:VAL:HG21	57:11:117:VAL:CG1	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:75:53:HIS:ND1	25:75:56:ARG:HG2	2.31	0.45
79:2S:1689:U:H2'	79:2S:1690:C:H6	1.80	0.45
57:11:129:ARG:HH11	57:11:129:ARG:HG2	1.81	0.45
78:1S:312:A:N3	78:1S:314:C:H2'	2.31	0.45
78:1S:422:G:H2'	78:1S:423:G:N7	2.32	0.45
79:2S:2945:G:H4'	79:2S:2947:G:C8	2.51	0.45
79:2S:1240:A:H3'	79:2S:1241:U:H5''	1.98	0.45
79:2S:1049:C:H2'	79:2S:1050:U:C6	2.51	0.45
81:5S:64:A:H5'	81:5S:65:G:H5''	1.97	0.45
78:1S:586:G:H2'	78:1S:587:C:H6	1.81	0.45
79:2S:856:G:O2'	79:2S:857:G:H5'	2.16	0.45
78:1S:1407:U:H2'	78:1S:1408:G:O4'	2.15	0.45
10:60:89:VAL:HG22	10:60:136:PHE:CE2	2.51	0.45
46:S0:143:VAL:HG12	46:S0:156:VAL:HG12	1.98	0.45
65:19:10:ALA:HB3	65:19:13:ASP:OD2	2.16	0.45
4:L4:181:VAL:O	4:L4:182:LEU:HB3	2.16	0.45
17:67:101:ASN:OD1	79:2S:389:A:H1'	2.15	0.45
13:63:179:PHE:HD1	13:63:182:ILE:HD12	1.81	0.45
11:61:108:GLU:HG3	11:61:122:ILE:HG21	1.98	0.45
66:20:46:GLU:OE1	66:20:46:GLU:HA	2.17	0.45
79:2S:2697:A:H2'	79:2S:2698:G:C8	2.51	0.45
50:S4:222:LEU:HA	50:S4:225:VAL:CG2	2.46	0.45
68:22:37:PHE:CZ	68:22:103:ILE:HG21	2.52	0.45
30:80:13:LYS:HD3	30:80:100:ILE:HG23	1.99	0.45
2:L2:245:LEU:HD12	79:2S:2152:A:O3'	2.16	0.45
78:1S:144:U:O2'	78:1S:145:A:H5'	2.16	0.45
4:L4:23:PRO:O	4:L4:24:ALA:HB3	2.16	0.45
78:1S:71:A:H2'	78:1S:72:A:C4'	2.45	0.45
17:67:112:LEU:HD12	17:67:152:GLU:HA	1.98	0.45
79:2S:1813:A:C2'	79:2S:1814:A:H5'	2.47	0.45
3:L3:160:VAL:O	3:L3:180:GLU:HA	2.16	0.45
80:8S:79:A:H2'	80:8S:80:A:C4'	2.47	0.45
79:2S:1818:U:H6	79:2S:1818:U:O5'	2.00	0.45
8:L8:157:VAL:CG1	8:L8:159:PRO:HD2	2.46	0.45
79:2S:2581:U:H2'	79:2S:2582:C:H6	1.81	0.45
46:S0:119:ARG:HA	46:S0:119:ARG:NE	2.31	0.45
44:P0:99:VAL:HG12	44:P0:99:VAL:O	2.16	0.45
4:L4:60:THR:HG22	4:L4:61:SER:N	2.31	0.45
14:64:108:ARG:O	14:64:112:LEU:HG	2.17	0.45
11:61:162:TRP:CZ2	11:61:166:LYS:HD2	2.51	0.45
79:2S:2124:G:H2'	79:2S:2125:A:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L2:113:VAL:HG12	2:L2:166:ILE:HA	1.98	0.45
78:1S:19:A:H2'	78:1S:20:G:O4'	2.16	0.45
80:8S:18:U:H2'	80:8S:19:C:C6	2.51	0.45
42:92:29:LYS:HD3	42:92:30:ALA:N	2.31	0.45
79:2S:1946:A:H2'	79:2S:1947:G:C8	2.52	0.45
79:2S:1741:A:H2'	79:2S:1742:U:O4'	2.17	0.45
9:L9:180:TYR:HB2	40:90:85:LEU:CD1	2.47	0.45
47:S1:53:GLY:O	47:S1:54:LEU:HB2	2.16	0.45
44:P0:18:TYR:HD1	44:P0:22:TYR:HE2	1.65	0.45
52:S6:167:LYS:HD3	52:S6:169:TYR:HE2	1.81	0.45
67:21:19:ALA:HA	67:21:71:ARG:NH1	2.30	0.45
47:S1:88:VAL:HG12	47:S1:89:ASP:N	2.32	0.45
80:8S:60:U:O2'	80:8S:61:A:H5'	2.16	0.45
56:10:82:LEU:O	56:10:82:LEU:HD12	2.16	0.45
78:1S:237:C:C5'	78:1S:238:U:H5'	2.33	0.45
23:73:62:VAL:HG21	23:73:69:LEU:HB3	1.99	0.45
79:2S:1307:G:H1'	79:2S:1308:A:C8	2.52	0.45
78:1S:777:C:C2'	78:1S:778:G:H5''	2.37	0.45
27:77:14:VAL:O	27:77:19:ALA:HB1	2.16	0.45
64:18:16:ARG:NH1	64:18:16:ARG:HG3	2.31	0.45
79:2S:823:C:H2'	79:2S:824:C:C6	2.52	0.45
78:1S:954:G:H2'	78:1S:955:A:C8	2.51	0.45
74:28:29:ARG:HA	74:28:41:VAL:HA	1.98	0.45
38:88:26:LYS:NZ	79:2S:1751:G:H5'	2.32	0.45
70:24:102:LYS:H	70:24:102:LYS:HD2	1.80	0.45
46:S0:37:VAL:HG12	46:S0:38:PHE:N	2.32	0.45
31:81:10:ARG:HH21	79:2S:3386:G:H5''	1.78	0.45
51:S5:76:ARG:HH21	62:16:122:ARG:HG3	1.81	0.45
17:67:108:ASP:HB3	17:67:111:LYS:HG2	1.97	0.45
79:2S:2819:A:C2'	79:2S:2820:A:H5'	2.46	0.45
52:S6:20:ASP:O	52:S6:24:ILE:HG13	2.17	0.45
73:27:22:LYS:HD3	78:1S:864:U:H5	1.80	0.45
68:22:46:TYR:HH	68:22:101:TYR:HD1	1.64	0.45
6:L6:80:ASN:HB3	6:L6:83:TYR:CD2	2.50	0.45
79:2S:2860:U:C2'	79:2S:2861:U:H5'	2.47	0.45
7:L7:184:LEU:O	7:L7:188:ILE:HG12	2.16	0.45
11:61:134:PRO:HB2	81:5S:55:A:C2	2.52	0.45
8:L8:78:PHE:O	8:L8:80:TYR:N	2.50	0.45
11:61:149:GLY:O	11:61:153:LYS:HG3	2.16	0.45
18:68:135:GLN:HA	79:2S:730:C:OP1	2.16	0.45
47:S1:199:ASN:O	47:S1:202:LYS:HG2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S3:175:VAL:HG13	49:S3:182:LEU:HB2	1.99	0.45
62:16:83:GLN:O	62:16:87:LYS:HG3	2.16	0.45
28:78:64:GLN:HB2	28:78:67:HIS:HE1	1.82	0.45
66:20:48:HIS:O	66:20:49:ASN:HB2	2.17	0.45
79:2S:2876:C:O5'	79:2S:2876:C:H6	2.00	0.45
71:25:78:ILE:N	71:25:78:ILE:HD12	2.32	0.45
79:2S:2405:C:C5	79:2S:2406:C:C5	3.05	0.45
79:2S:1301:A:H4'	79:2S:1302:A:H5''	1.97	0.45
79:2S:683:U:O5'	79:2S:683:U:H6	2.00	0.45
74:28:9:LEU:O	74:28:32:PHE:HB2	2.15	0.45
13:63:57:VAL:HG12	13:63:69:VAL:CG2	2.47	0.45
47:S1:218:LEU:HD22	47:S1:219:LYS:H	1.80	0.45
48:S2:218:ILE:HD12	48:S2:218:ILE:C	2.37	0.45
79:2S:2895:G:H2'	79:2S:2896:A:C5'	2.38	0.45
68:22:28:ARG:HD3	68:22:60:LYS:HE2	1.99	0.45
47:S1:148:ASN:HB3	63:17:126:ALA:HB3	1.98	0.45
27:77:23:VAL:HA	27:77:45:GLY:CA	2.46	0.45
45:RC:176:LYS:HB3	45:RC:195:HIS:HB2	1.99	0.45
71:25:65:LEU:HB3	71:25:71:ILE:CD1	2.46	0.45
79:2S:3191:G:H2'	79:2S:3192:U:O4'	2.17	0.45
4:L4:205:PRO:HB3	4:L4:247:PHE:CD2	2.51	0.45
46:S0:148:ASP:HB2	46:S0:164:ASN:HD21	1.82	0.45
78:1S:1685:G:H2'	78:1S:1686:C:H5'	1.98	0.45
34:84:38:LEU:H	34:84:38:LEU:HD12	1.81	0.45
2:L2:41:ILE:HG23	2:L2:42:ARG:N	2.30	0.45
9:L9:41:ILE:HD13	9:L9:41:ILE:O	2.17	0.45
45:RC:202:LEU:HA	45:RC:243:LEU:HD12	1.98	0.45
79:2S:632:G:H2'	79:2S:633:C:C6	2.52	0.45
78:1S:1681:A:H2'	78:1S:1682:U:H5'	1.99	0.45
2:L2:196:TRP:CD1	2:L2:197:PRO:HA	2.52	0.45
3:L3:46:PHE:CE1	3:L3:208:VAL:HG21	2.52	0.45
4:L4:187:LEU:CD2	4:L4:198:ARG:HG2	2.47	0.45
7:L7:141:TYR:HB2	7:L7:189:ILE:HD12	1.99	0.45
57:11:2:SER:CA	57:11:113:PRO:HA	2.46	0.45
54:S8:189:LEU:HA	54:S8:192:TYR:HB2	1.99	0.45
78:1S:1609:U:H2'	78:1S:1610:G:O4'	2.17	0.45
17:67:171:ARG:H	17:67:171:ARG:HG2	1.51	0.45
54:S8:8:ARG:HD3	54:S8:21:PHE:HD1	1.82	0.45
51:S5:117:THR:HG23	51:S5:195:ALA:HB2	1.99	0.45
16:66:27:LEU:HG	16:66:33:ILE:HD12	1.98	0.45
53:S7:41:LEU:HB3	53:S7:70:PHE:CE1	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:102:U:H3'	78:1S:360:A:H61	1.81	0.45
48:S2:89:GLN:HE21	48:S2:89:GLN:N	2.14	0.45
23:73:104:ASN:OD1	23:73:108:GLU:HB2	2.17	0.45
79:2S:2440:G:H2'	79:2S:2441:A:C8	2.52	0.45
68:22:62:VAL:HB	73:27:8:LEU:HD21	1.98	0.45
44:P0:42:ARG:NH1	44:P0:51:VAL:HG13	2.31	0.45
3:L3:31:ALA:CB	79:2S:3136:G:H5''	2.46	0.45
70:24:105:ARG:HD2	78:1S:443:C:H3'	1.99	0.45
49:S3:68:GLU:HA	49:S3:71:LEU:HD12	1.98	0.45
78:1S:1114:G:H1'	78:1S:1115:U:H5	1.82	0.45
78:1S:1184:A:H3'	78:1S:1185:U:H5''	1.98	0.45
79:2S:531:G:H2'	79:2S:532:A:C8	2.52	0.45
45:RC:86:ASP:O	45:RC:87:LYS:HB2	2.17	0.45
6:L6:28:GLN:HB2	79:2S:501:A:H4'	1.99	0.45
79:2S:2912:G:H1'	79:2S:3131:U:OP1	2.16	0.45
45:RC:135:THR:HG23	45:RC:141:LEU:HD21	1.99	0.45
64:18:13:HIS:H	64:18:13:HIS:HD1	1.65	0.45
79:2S:909:G:H2'	79:2S:910:G:O4'	2.17	0.45
42:92:33:ALA:HA	79:2S:2767:U:H5'	1.99	0.45
62:16:106:LYS:NZ	62:16:106:LYS:HB2	2.31	0.45
68:22:27:ILE:HD11	68:22:61:ILE:HD12	1.98	0.45
23:73:45:ARG:HB3	23:73:48:ARG:HD2	1.98	0.45
79:2S:2248:C:H3'	79:2S:2273:G:C8	2.51	0.45
1:L1:30:GLU:HG3	1:L1:210:MET:SD	2.56	0.45
3:L3:45:SER:O	3:L3:181:ILE:HD13	2.17	0.45
13:63:106:GLN:HB3	36:86:18:THR:CG2	2.42	0.45
71:25:61:SER:O	71:25:65:LEU:HG	2.17	0.45
76:30:14:VAL:HA	76:30:17:GLN:CG	2.42	0.45
4:L4:3:ARG:HD3	4:L4:22:LEU:N	2.32	0.45
72:26:41:ILE:O	72:26:41:ILE:HG12	2.17	0.45
56:10:59:PHE:HZ	56:10:62:GLN:NE2	2.15	0.45
20:70:13:ARG:HA	20:70:56:GLY:HA2	1.97	0.45
79:2S:312:C:H2'	79:2S:313:A:H8	1.81	0.45
78:1S:1522:U:H3'	78:1S:1523:G:H5''	1.96	0.45
45:RC:81:LEU:HD11	45:RC:115:ILE:HB	1.98	0.45
79:2S:2951:G:H2'	79:2S:2952:G:O4'	2.17	0.45
61:15:75:PRO:HB3	61:15:104:GLN:HG2	1.97	0.45
78:1S:1000:C:C5	78:1S:1003:A:H2'	2.52	0.45
73:27:19:HIS:HB3	73:27:22:LYS:HG2	1.99	0.45
37:87:21:ARG:HD2	37:87:37:CYS:SG	2.57	0.45
69:23:82:LYS:H	69:23:82:LYS:HD3	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2380:U:H2'	79:2S:2381:G:C8	2.52	0.45
65:19:13:ASP:HA	65:19:16:ASN:HB2	1.99	0.45
79:2S:1408:G:H2'	79:2S:1409:G:C8	2.52	0.45
51:S5:220:VAL:O	51:S5:224:ASN:HB2	2.16	0.45
78:1S:1062:A:H2'	78:1S:1063:U:O4'	2.16	0.45
79:2S:2549:G:O2'	79:2S:2550:U:H5'	2.17	0.45
78:1S:908:U:H2'	78:1S:909:U:O4'	2.16	0.45
13:63:4:SER:HA	28:78:44:ASN:HD21	1.81	0.45
49:S3:65:ARG:O	49:S3:69:LEU:HG	2.16	0.45
78:1S:1404:C:H2'	78:1S:1405:G:C8	2.52	0.45
60:14:84:ARG:HA	60:14:119:THR:HG22	1.98	0.45
59:13:71:ILE:CD1	59:13:71:ILE:H	2.06	0.45
71:25:92:ILE:HG13	71:25:100:ILE:CG2	2.46	0.45
2:L2:186:PHE:O	2:L2:190:ARG:HB3	2.17	0.45
33:83:59:VAL:HG22	33:83:62:SER:O	2.17	0.45
46:S0:74:VAL:HG12	46:S0:76:ILE:HG12	1.98	0.45
78:1S:868:G:O2'	78:1S:869:A:H5'	2.17	0.45
53:S7:91:ILE:CG1	53:S7:92:PHE:H	2.26	0.45
1:L1:180:VAL:O	1:L1:180:VAL:HG12	2.16	0.45
78:1S:495:C:H5'	78:1S:496:G:C4'	2.45	0.45
78:1S:822:U:H3'	78:1S:823:G:C5'	2.45	0.45
1:L1:103:LEU:HD13	1:L1:106:LYS:CG	2.47	0.45
79:2S:3375:A:H2'	79:2S:3378:C:C6	2.51	0.45
23:73:93:LEU:CB	24:74:20:LEU:HB3	2.47	0.45
25:75:62:VAL:HA	25:75:87:SER:HB2	1.99	0.45
78:1S:128:U:H5'	78:1S:178:U:O2'	2.17	0.45
53:S7:30:SER:HB3	53:S7:34:LEU:HD12	1.98	0.45
78:1S:640:U:H2'	78:1S:641:G:H8	1.82	0.45
15:65:65:ARG:HG3	15:65:127:TYR:HB3	1.97	0.45
2:L2:240:ALA:HB1	79:2S:2154:U:H4'	1.98	0.45
55:S9:54:ARG:HA	55:S9:57:ARG:HE	1.82	0.45
18:68:69:ARG:NE	79:2S:784:A:H8	2.15	0.45
50:S4:207:LEU:HB3	50:S4:219:VAL:HG12	1.98	0.45
52:S6:5:ILE:HG22	52:S6:124:LEU:HD21	1.97	0.45
4:L4:257:LYS:O	4:L4:261:VAL:HG23	2.17	0.45
5:L5:205:SER:HA	5:L5:208:MET:HB2	1.99	0.45
79:2S:3204:C:H2'	79:2S:3205:G:C8	2.52	0.45
68:22:34:ILE:O	68:22:38:LEU:HG	2.16	0.45
79:2S:1932:A:H3'	79:2S:1933:A:H8	1.81	0.45
78:1S:1353:U:H2'	78:1S:1354:G:C8	2.52	0.45
68:22:27:ILE:HG12	68:22:61:ILE:HB	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:142:G:O2'	78:1S:143:G:H5'	2.16	0.45
78:1S:1054:U:H2'	78:1S:1055:U:C6	2.52	0.45
5:L5:146:LEU:HD21	5:L5:173:VAL:HG11	1.99	0.45
26:76:86:THR:HG22	26:76:96:PRO:HG3	1.98	0.45
78:1S:342:C:H2'	78:1S:343:C:C6	2.51	0.45
35:85:50:SER:O	35:85:54:VAL:HG23	2.16	0.45
29:79:37:PRO:HB3	79:2S:776:U:H5''	1.99	0.45
62:16:72:GLY:HA2	78:1S:1608:U:OP1	2.16	0.45
78:1S:1396:U:H2'	78:1S:1397:U:C6	2.52	0.45
39:89:38:ASN:HD22	39:89:41:ARG:HD3	1.82	0.45
15:65:166:ALA:O	15:65:170:LYS:HG2	2.17	0.45
79:2S:2618:G:H5''	79:2S:2618:G:N3	2.32	0.45
42:92:100:LYS:HE3	42:92:100:LYS:HA	1.97	0.45
45:RC:117:LYS:HD2	45:RC:117:LYS:H	1.82	0.45
4:L4:325:LEU:HG	4:L4:331:ALA:HB3	1.99	0.45
48:S2:129:ILE:O	48:S2:133:LYS:HG3	2.17	0.45
17:67:167:ARG:O	33:83:60:ARG:HB3	2.17	0.45
19:69:102:LEU:O	19:69:106:LEU:HD13	2.17	0.45
46:S0:139:VAL:HA	48:S2:62:PRO:HG3	1.98	0.45
14:64:14:LEU:HD23	20:70:151:PRO:HB3	1.99	0.45
16:66:12:LYS:HA	16:66:40:GLU:CB	2.41	0.45
79:2S:1643:A:H2'	79:2S:1644:C:C2	2.52	0.45
22:72:98:THR:OG1	22:72:104:ARG:HG2	2.17	0.45
62:16:31:VAL:O	62:16:32:ASN:HB2	2.16	0.45
79:2S:576:C:H2'	79:2S:577:C:C6	2.52	0.45
2:L2:129:ALA:HB3	2:L2:132:ASN:ND2	2.32	0.45
37:87:59:THR:HA	80:8S:41:A:O2'	2.16	0.45
63:17:21:TYR:N	63:17:22:PRO:CD	2.77	0.45
46:S0:188:LEU:HD21	46:S0:195:TRP:NE1	2.31	0.45
20:70:8:GLN:O	20:70:61:ILE:HA	2.17	0.45
79:2S:835:G:H1'	79:2S:858:A:H61	1.82	0.45
15:65:38:ARG:HB2	15:65:62:TYR:CE2	2.51	0.45
11:61:142:LYS:HD3	11:61:142:LYS:O	2.16	0.45
61:15:72:LYS:H	61:15:72:LYS:CD	2.29	0.45
79:2S:1583:A:H3'	79:2S:1584:U:C6	2.52	0.45
79:2S:2904:U:H2'	79:2S:2905:U:H6	1.82	0.45
78:1S:643:G:H2'	78:1S:644:C:H6	1.82	0.45
3:L3:246:LEU:CD1	3:L3:247:ARG:HG3	2.47	0.45
48:S2:157:LYS:HD3	48:S2:168:ARG:NH2	2.31	0.45
66:20:20:ILE:HD13	66:20:22:ILE:HB	1.98	0.45
11:61:171:VAL:HG13	11:61:172:LEU:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:93:64:VAL:HG12	43:93:65:ALA:N	2.32	0.45
4:L4:308:LYS:HG2	4:L4:309:ARG:N	2.32	0.45
79:2S:938:C:O2'	79:2S:939:U:H5'	2.17	0.45
8:L8:78:PHE:C	8:L8:80:TYR:N	2.70	0.45
50:S4:222:LEU:HA	50:S4:225:VAL:HG23	1.99	0.45
52:S6:69:LEU:HA	52:S6:70:PRO:HD3	1.79	0.45
58:12:84:ASN:HB3	58:12:85:LYS:H	1.49	0.45
79:2S:876:A:H4'	79:2S:1890:U:H4'	1.99	0.45
79:2S:16:A:H2'	79:2S:17:G:C8	2.52	0.45
35:85:109:ILE:HG23	79:2S:170:G:H5''	1.99	0.45
48:S2:108:ASN:HD22	48:S2:110:HIS:CE1	2.35	0.45
25:75:91:ASN:O	25:75:95:ILE:HG13	2.17	0.45
49:S3:84:ILE:O	49:S3:84:ILE:HG23	2.17	0.45
65:19:86:ARG:HG3	65:19:86:ARG:HH11	1.82	0.45
70:24:100:VAL:HG13	70:24:100:VAL:O	2.17	0.45
45:RC:278:PHE:HE2	45:RC:287:PRO:HB2	1.81	0.45
1:L1:169:VAL:HB	1:L1:172:VAL:CG2	2.40	0.45
79:2S:1064:A:N7	79:2S:1096:U:O2	2.49	0.45
79:2S:3334:U:O4'	79:2S:3370:A:N1	2.50	0.45
6:L6:22:ARG:HH12	79:2S:608:A:H2'	1.82	0.45
78:1S:1073:G:H3'	78:1S:1074:G:H5''	1.98	0.45
48:S2:35:TRP:CZ3	48:S2:46:LYS:HG3	2.51	0.45
71:25:65:LEU:HD12	71:25:76:ALA:HB1	1.99	0.45
78:1S:866:G:H2'	78:1S:867:G:H8	1.82	0.45
47:S1:181:LEU:HD13	47:S1:181:LEU:H	1.81	0.45
50:S4:103:TYR:CE1	50:S4:189:LEU:HD11	2.52	0.45
79:2S:2516:U:H2'	79:2S:2517:U:O4'	2.18	0.45
47:S1:44:GLY:HA3	60:14:33:LEU:HD21	1.98	0.45
61:15:31:GLU:O	61:15:35:LYS:HD3	2.17	0.45
79:2S:1535:A:H2'	79:2S:1536:G:O4'	2.17	0.45
5:L5:289:LYS:NZ	81:5S:63:A:H4'	2.32	0.45
78:1S:1533:C:H4'	78:1S:1539:G:N1	2.32	0.45
78:1S:1313:A:H2'	78:1S:1315:U:OP1	2.17	0.45
9:L9:168:ARG:HH12	79:2S:3034:C:C4'	2.28	0.45
45:RC:31:ASN:O	45:RC:46:LYS:HA	2.16	0.45
64:18:38:VAL:O	64:18:38:VAL:HG23	2.17	0.45
79:2S:642:U:H6	79:2S:642:U:O5'	2.00	0.45
15:65:50:ARG:HD2	79:2S:319:A:OP1	2.16	0.45
26:76:56:VAL:HG22	26:76:57:LEU:N	2.32	0.45
78:1S:321:C:H3'	78:1S:322:G:C5'	2.47	0.45
4:L4:170:LYS:HE3	4:L4:178:LEU:CD1	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1112:G:H1'	78:1S:1133:A:H61	1.81	0.45
73:27:72:LYS:HD3	73:27:73:LEU:H	1.82	0.45
40:90:104:PRO:HG2	79:2S:3119:U:H4'	1.99	0.45
16:66:16:VAL:HG13	16:66:80:PHE:HE1	1.81	0.45
47:S1:141:ALA:HB2	47:S1:210:ILE:HA	1.98	0.45
7:L7:85:PHE:HE1	7:L7:87:VAL:HG22	1.81	0.45
78:1S:1405:G:H2'	78:1S:1406:A:C8	2.52	0.45
25:75:91:ASN:HD22	25:75:93:TYR:HD2	1.63	0.45
32:82:61:LYS:HA	32:82:64:LYS:HD2	1.99	0.45
8:L8:93:LEU:C	8:L8:95:ASN:H	2.20	0.45
79:2S:713:U:H2'	79:2S:714:G:O4'	2.16	0.45
79:2S:3322:A:H2'	79:2S:3323:A:C8	2.52	0.45
4:L4:68:GLY:HA2	79:2S:2401:A:O3'	2.17	0.45
19:69:160:GLU:O	19:69:160:GLU:HG2	2.17	0.45
79:2S:149:U:O5'	79:2S:149:U:H6	2.00	0.45
10:60:77:THR:HG22	10:60:82:ARG:HA	1.99	0.45
41:91:11:ARG:HE	78:1S:1126:G:H5'	1.81	0.45
79:2S:2974:U:H2'	79:2S:2975:U:C6	2.52	0.45
25:75:115:ARG:HB3	25:75:117:ASN:OD1	2.16	0.44
69:23:97:ASP:O	69:23:100:ASP:HB2	2.18	0.44
72:26:86:VAL:O	72:26:87:ARG:HG3	2.17	0.44
2:L2:181:LYS:NZ	2:L2:184:ARG:HG3	2.33	0.44
27:77:17:ARG:HH12	79:2S:1633:C:H5	1.65	0.44
80:8S:106:C:H5"	80:8S:108:C:OP2	2.17	0.44
69:23:74:VAL:HG12	69:23:75:GLN:N	2.26	0.44
79:2S:638:C:H2'	79:2S:639:G:C8	2.52	0.44
63:17:30:THR:O	63:17:34:LEU:HB2	2.16	0.44
1:L1:14:LYS:HD2	1:L1:19:TYR:CD2	2.52	0.44
45:RC:136:ILE:H	45:RC:136:ILE:CD1	2.27	0.44
45:RC:214:ALA:HB1	45:RC:240:VAL:HG21	1.99	0.44
15:65:93:LYS:HE2	79:2S:276:U:O2	2.17	0.44
79:2S:1939:G:H2'	79:2S:1940:G:O4'	2.18	0.44
2:L2:196:TRP:HZ2	79:2S:2148:U:H5"	1.82	0.44
79:2S:772:U:H2'	79:2S:773:G:O4'	2.16	0.44
51:S5:37:GLN:HB3	62:16:53:LEU:HD13	1.98	0.44
70:24:14:SER:HA	70:24:21:LYS:HD2	1.99	0.44
79:2S:2562:A:H2'	79:2S:2563:G:O4'	2.17	0.44
32:82:11:LYS:O	32:82:12:LYS:HB2	2.16	0.44
38:88:42:LYS:HE2	38:88:55:VAL:HG13	1.97	0.44
45:RC:23:LEU:HD21	45:RC:310:ILE:HD13	1.98	0.44
59:13:15:ALA:C	78:1S:959:U:H5'	2.37	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:460:A:N3	78:1S:460:A:H2'	2.32	0.44
79:2S:2841:G:H2'	79:2S:2898:G:N2	2.32	0.44
11:61:143:ARG:NH1	11:61:143:ARG:HG3	2.33	0.44
47:S1:171:ILE:HA	47:S1:174:LYS:HE3	1.99	0.44
5:L5:129:TYR:HE1	5:L5:175:HIS:CD2	2.35	0.44
79:2S:201:A:H2'	79:2S:202:G:H8	1.81	0.44
23:73:45:ARG:HH11	23:73:45:ARG:HG3	1.82	0.44
24:74:60:LYS:HD2	24:74:63:ILE:HD11	1.98	0.44
77:31:117:LEU:O	77:31:118:ARG:HB2	2.17	0.44
51:S5:70:VAL:HG11	62:16:46:PHE:CD2	2.52	0.44
48:S2:181:SER:HB3	78:1S:4:C:H4'	1.98	0.44
50:S4:242:LYS:N	50:S4:242:LYS:HD2	2.33	0.44
79:2S:3057:U:H2'	79:2S:3057:U:O2	2.15	0.44
51:S5:100:ASN:OD1	51:S5:180:ARG:HD3	2.17	0.44
79:2S:1498:A:H2'	79:2S:1499:C:C6	2.52	0.44
2:L2:244:GLY:O	79:2S:2153:U:H5''	2.17	0.44
8:L8:105:LYS:HE3	8:L8:108:ARG:HH22	1.81	0.44
10:60:15:LYS:HE3	79:2S:1047:A:C5'	2.34	0.44
62:16:81:ILE:HG13	62:16:82:ARG:N	2.32	0.44
47:S1:33:LYS:HB3	47:S1:97:LEU:HD13	1.99	0.44
53:S7:185:ILE:H	53:S7:185:ILE:CD1	2.23	0.44
19:69:104:ARG:HD3	19:69:105:LEU:N	2.32	0.44
31:81:107:VAL:HG12	31:81:108:VAL:N	2.25	0.44
36:86:80:PHE:O	36:86:84:LYS:HG3	2.17	0.44
7:L7:138:TYR:HB2	7:L7:234:GLU:HG2	1.98	0.44
1:L1:60:ARG:HD3	1:L1:60:ARG:HA	1.84	0.44
71:25:54:VAL:N	71:25:55:PRO:HD2	2.32	0.44
57:11:80:MET:HB3	57:11:83:THR:CG2	2.46	0.44
38:88:43:PHE:HB2	38:88:54:LEU:HB3	1.98	0.44
78:1S:17:C:H4'	78:1S:1109:G:C8	2.52	0.44
17:67:119:VAL:CG2	17:67:144:SER:HB3	2.47	0.44
15:65:117:ASN:O	15:65:118:SER:HB3	2.17	0.44
6:L6:102:ASN:HB2	6:L6:103:VAL:H	1.59	0.44
47:S1:58:SER:O	47:S1:61:LEU:HD22	2.17	0.44
50:S4:42:LEU:HD23	50:S4:101:LEU:CD1	2.47	0.44
32:82:26:HIS:CD2	79:2S:655:C:H5'	2.52	0.44
57:11:117:VAL:HG12	57:11:118:GLN:N	2.32	0.44
23:73:40:LYS:HB2	23:73:57:MET:O	2.17	0.44
78:1S:1269:U:H4'	78:1S:1270:G:C5'	2.46	0.44
14:64:42:LYS:HD3	14:64:42:LYS:N	2.31	0.44
1:L1:165:LEU:HD13	1:L1:184:LEU:HD11	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:16:131:GLY:HA3	62:16:136:SER:O	2.17	0.44
78:1S:851:U:H2'	78:1S:852:C:O4'	2.17	0.44
78:1S:120:U:H2'	78:1S:121:U:C6	2.53	0.44
78:1S:52:U:H2'	78:1S:53:G:H8	1.81	0.44
5:L5:180:PHE:HB2	5:L5:190:ILE:HD11	1.99	0.44
79:2S:840:C:H2'	79:2S:841:A:C8	2.51	0.44
45:RC:278:PHE:CE2	45:RC:287:PRO:HB2	2.52	0.44
57:11:123:VAL:HG22	57:11:124:THR:N	2.32	0.44
23:73:102:ILE:HG23	23:73:110:LYS:HB3	1.99	0.44
49:S3:23:GLU:O	49:S3:27:ARG:HB2	2.17	0.44
79:2S:35:A:O2'	79:2S:809:G:N3	2.50	0.44
67:21:9:VAL:HG22	67:21:10:GLU:H	1.82	0.44
2:L2:205:ASN:N	2:L2:205:ASN:ND2	2.65	0.44
79:2S:1393:A:H2'	79:2S:1394:A:O4'	2.16	0.44
5:L5:211:LEU:HD22	5:L5:215:ASP:HB3	1.98	0.44
4:L4:58:HIS:HA	4:L4:90:PHE:CE1	2.53	0.44
78:1S:66:U:O2'	78:1S:67:A:H5'	2.18	0.44
74:28:53:ILE:HG22	74:28:54:LEU:H	1.82	0.44
37:87:17:THR:HG22	37:87:18:LEU:N	2.32	0.44
52:S6:64:LYS:HD3	52:S6:67:VAL:CG1	2.48	0.44
13:63:59:ARG:HA	13:63:69:VAL:HA	1.97	0.44
66:20:23:ARG:HG3	66:20:91:ILE:O	2.18	0.44
72:26:87:ARG:HD2	78:1S:1796:C:OP1	2.17	0.44
79:2S:517:G:H8	79:2S:517:G:C5'	2.31	0.44
79:2S:2946:A:H2'	79:2S:2982:A:N7	2.33	0.44
22:72:18:ASP:O	22:72:104:ARG:HA	2.17	0.44
18:68:122:ILE:HG22	18:68:123:THR:O	2.17	0.44
7:L7:117:VAL:HG12	7:L7:118:LYS:H	1.82	0.44
79:2S:639:G:H2'	79:2S:640:U:O4'	2.18	0.44
6:L6:52:VAL:HG21	6:L6:65:ILE:HB	1.99	0.44
45:RC:201:THR:HG21	45:RC:240:VAL:HG12	1.99	0.44
65:19:31:PRO:HD2	65:19:34:VAL:CG1	2.48	0.44
6:L6:54:TYR:HE2	6:L6:56:LYS:O	1.99	0.44
6:L6:98:VAL:HA	6:L6:101:PHE:CE2	2.53	0.44
78:1S:176:C:H2'	78:1S:177:U:H5'	1.98	0.44
16:66:124:LEU:HG	16:66:126:VAL:CG1	2.45	0.44
78:1S:1313:A:C2	78:1S:1315:U:H5'	2.53	0.44
19:69:77:GLY:H	19:69:80:LYS:HB2	1.82	0.44
43:93:75:ALA:O	43:93:79:VAL:HG23	2.17	0.44
2:L2:225:ILE:HB	2:L2:238:ILE:HA	1.99	0.44
2:L2:225:ILE:HG12	2:L2:234:LYS:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:92:28:TYR:HE1	79:2S:2768:U:H4'	1.83	0.44
3:L3:16:PHE:CE2	79:2S:3045:G:H4'	2.52	0.44
62:16:128:LYS:HB2	62:16:137:ARG:HH22	1.83	0.44
79:2S:1334:U:H2'	79:2S:1335:C:H6	1.81	0.44
78:1S:430:G:H2'	78:1S:431:C:C6	2.53	0.44
50:S4:156:VAL:O	50:S4:157:ASN:HB2	2.17	0.44
79:2S:1151:U:H3'	79:2S:1152:G:H21	1.82	0.44
2:L2:92:LYS:HA	2:L2:103:PRO:CD	2.47	0.44
11:61:8:PRO:HD2	11:61:10:ARG:HG3	1.98	0.44
8:L8:80:TYR:HD2	8:L8:80:TYR:HA	1.74	0.44
46:S0:143:VAL:CG1	46:S0:156:VAL:HG12	2.47	0.44
79:2S:1156:C:H2'	79:2S:1157:G:O4'	2.17	0.44
3:L3:196:ARG:HD2	3:L3:199:PHE:CD2	2.52	0.44
63:17:87:GLU:O	63:17:88:VAL:HG12	2.18	0.44
34:84:102:LYS:HD2	34:84:102:LYS:N	2.31	0.44
32:82:82:LEU:HD13	32:82:82:LEU:O	2.17	0.44
80:8S:76:C:O2'	80:8S:77:A:H5'	2.18	0.44
8:L8:56:VAL:HA	8:L8:59:GLN:HG2	2.00	0.44
79:2S:1844:C:C3'	79:2S:1845:G:H5''	2.48	0.44
28:78:43:ILE:O	28:78:46:ASP:HB2	2.17	0.44
79:2S:1953:G:H2'	79:2S:2088:A:H61	1.83	0.44
62:16:109:PHE:CD1	62:16:116:LEU:HG	2.51	0.44
79:2S:649:A:H4'	79:2S:2869:U:H5'	2.00	0.44
4:L4:240:PRO:HB2	79:2S:1383:G:H4'	2.00	0.44
4:L4:34:ILE:O	4:L4:38:VAL:HG23	2.18	0.44
75:29:10:HIS:O	75:29:12:ARG:HD3	2.17	0.44
78:1S:872:G:N2	78:1S:1047:G:H4'	2.31	0.44
3:L3:55:THR:C	3:L3:56:ILE:HD12	2.38	0.44
52:S6:91:GLU:HG2	52:S6:92:ARG:H	1.83	0.44
68:22:97:ARG:HB3	68:22:97:ARG:HH11	1.80	0.44
32:82:19:ARG:HG2	32:82:20:HIS:H	1.82	0.44
60:14:33:LEU:HD12	60:14:33:LEU:H	1.81	0.44
53:S7:49:ILE:HD11	53:S7:172:VAL:HG22	1.98	0.44
1:L1:123:LEU:HD23	1:L1:128:LEU:HD12	1.99	0.44
66:20:53:LYS:CB	66:20:92:ASP:HB2	2.46	0.44
79:2S:1959:G:C2'	79:2S:1960:A:H5'	2.44	0.44
50:S4:122:LYS:C	50:S4:123:LEU:HD12	2.37	0.44
8:L8:241:LYS:HB2	79:2S:2586:G:C6	2.53	0.44
8:L8:241:LYS:HZ2	8:L8:241:LYS:HB3	1.82	0.44
9:L9:25:VAL:HG12	9:L9:26:LYS:N	2.32	0.44
50:S4:10:LYS:NZ	55:S9:2:PRO:HB3	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:65:14:LYS:HE2	79:2S:269:G:C5'	2.47	0.44
79:2S:1719:G:H4'	79:2S:1732:U:H4'	1.99	0.44
8:L8:159:PRO:HB2	8:L8:162:LEU:HD12	1.99	0.44
18:68:54:LEU:HB3	18:68:58:ASN:HB2	2.00	0.44
80:8S:57:C:H2'	80:8S:58:G:C8	2.52	0.44
79:2S:1650:G:H2'	79:2S:1651:U:C6	2.52	0.44
23:73:74:MET:HA	23:73:75:PRO:HD3	1.79	0.44
51:S5:26:ALA:HB3	62:16:28:LEU:HA	1.99	0.44
79:2S:126:U:H2'	79:2S:127:G:C8	2.53	0.44
79:2S:2427:U:H2'	79:2S:2428:U:C6	2.53	0.44
79:2S:2708:C:H2'	79:2S:2709:C:C6	2.52	0.44
79:2S:2251:G:H2'	79:2S:2252:A:O4'	2.16	0.44
23:73:23:MET:CB	23:73:98:ASN:HB3	2.48	0.44
5:L5:142:PHE:HB3	5:L5:171:LEU:HD23	2.00	0.44
6:L6:161:ALA:HB2	79:2S:3215:A:H1'	1.99	0.44
7:L7:39:GLU:O	7:L7:43:ILE:HG13	2.17	0.44
78:1S:1375:A:O2'	78:1S:1376:C:H5'	2.17	0.44
1:L1:138:VAL:HG12	1:L1:139:SER:N	2.32	0.44
17:67:83:TRP:O	79:2S:2352:A:H5''	2.17	0.44
78:1S:1125:A:H8	78:1S:1125:A:O5'	2.01	0.44
79:2S:28:C:H4'	79:2S:60:A:N1	2.31	0.44
45:RC:259:GLY:HA3	45:RC:275:ARG:HG2	1.99	0.44
79:2S:863:C:H2'	79:2S:864:G:O4'	2.17	0.44
66:20:85:ARG:HD2	66:20:85:ARG:H	1.82	0.44
3:L3:45:SER:H	3:L3:181:ILE:CG2	2.31	0.44
3:L3:43:LEU:HD12	3:L3:43:LEU:N	2.32	0.44
71:25:93:SER:CB	71:25:100:ILE:H	2.31	0.44
55:S9:90:LYS:O	55:S9:95:TYR:HB3	2.18	0.44
78:1S:400:A:H4'	78:1S:401:A:H5'	1.98	0.44
72:26:8:ASN:HD22	78:1S:1791:A:H3'	1.82	0.44
76:30:14:VAL:O	76:30:18:THR:HG23	2.17	0.44
56:10:11:ILE:HD12	56:10:42:VAL:HG22	2.00	0.44
79:2S:2206:G:O2'	79:2S:2207:A:H5'	2.17	0.44
50:S4:195:ILE:HA	50:S4:210:ILE:CD1	2.47	0.44
78:1S:475:A:H2'	78:1S:476:U:O4'	2.18	0.44
30:80:77:LEU:O	30:80:81:VAL:HG13	2.18	0.44
79:2S:1054:A:H5''	79:2S:2637:A:N6	2.29	0.44
50:S4:45:ILE:CG1	50:S4:49:ARG:HD3	2.47	0.44
33:83:23:ASN:HD21	79:2S:633:C:C1'	2.29	0.44
15:65:117:ASN:HB3	15:65:118:SER:H	1.56	0.44
4:L4:327:LEU:O	4:L4:328:ASN:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1597:C:H2'	79:2S:1598:G:C8	2.53	0.44
9:L9:120:ASP:OD2	79:2S:3033:A:H2	2.01	0.44
2:L2:225:ILE:HG22	2:L2:226:SER:N	2.31	0.44
78:1S:482:U:H2'	78:1S:483:A:C8	2.53	0.44
33:83:54:ARG:N	33:83:54:ARG:HD2	2.33	0.44
3:L3:96:PRO:HD3	79:2S:3243:A:O4'	2.17	0.44
78:1S:487:G:N2	78:1S:500:C:H42	2.15	0.44
78:1S:900:A:H1'	78:1S:915:A:H2	1.83	0.44
78:1S:900:A:O2'	78:1S:901:G:H5'	2.17	0.44
18:68:69:ARG:HE	79:2S:784:A:H2'	1.83	0.44
79:2S:1807:G:H2'	79:2S:1808:G:O4'	2.16	0.44
49:S3:32:GLU:HB3	49:S3:54:ARG:HB3	2.00	0.44
66:20:59:PRO:HG2	78:1S:1516:A:O4'	2.18	0.44
53:S7:62:VAL:HG12	53:S7:64:VAL:H	1.82	0.44
5:L5:99:TYR:HE1	5:L5:103:LEU:HD22	1.82	0.44
79:2S:1550:C:H2'	79:2S:1551:C:C6	2.52	0.44
68:22:65:LEU:HD13	68:22:65:LEU:H	1.81	0.44
79:2S:1779:C:H3'	79:2S:1780:G:C5'	2.48	0.44
48:S2:89:GLN:HB2	78:1S:1145:U:O2	2.18	0.44
11:61:118:PRO:HD3	64:18:13:HIS:NE2	2.33	0.44
78:1S:344:A:H2'	78:1S:345:U:H5'	1.99	0.44
78:1S:344:A:C2'	78:1S:345:U:H5'	2.48	0.44
79:2S:1499:C:H2'	79:2S:1500:G:C8	2.52	0.44
59:13:78:ASN:HB2	59:13:80:LEU:HD23	1.99	0.44
79:2S:898:U:H2'	79:2S:899:U:O4'	2.17	0.44
79:2S:1528:G:C2	79:2S:1529:A:H1'	2.52	0.44
33:83:77:ASN:HD22	79:2S:1180:A:H5''	1.83	0.44
56:10:27:PHE:HB3	56:10:40:LEU:HD23	1.99	0.44
2:L2:3:ARG:HH11	2:L2:3:ARG:HG3	1.82	0.44
51:S5:59:VAL:HG12	51:S5:60:ASP:N	2.33	0.44
47:S1:129:THR:OG1	47:S1:133:TYR:HB2	2.18	0.44
79:2S:496:C:H1'	79:2S:622:A:H2	1.82	0.44
19:69:138:LEU:HD23	19:69:138:LEU:O	2.18	0.44
1:L1:198:TRP:O	1:L1:199:GLN:C	2.56	0.44
79:2S:2592:G:H4'	79:2S:2594:C:N3	2.32	0.44
56:10:55:VAL:HB	56:10:68:LEU:CD1	2.48	0.44
23:73:81:GLN:H	23:73:95:PHE:HD2	1.66	0.44
48:S2:38:VAL:HG13	48:S2:39:THR:HG23	1.99	0.44
50:S4:192:ILE:HG22	50:S4:193:GLY:H	1.82	0.44
15:65:191:TRP:O	15:65:195:ASN:ND2	2.51	0.44
8:L8:71:VAL:HB	8:L8:75:ILE:HB	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S0:102:PHE:O	46:S0:103:THR:HB	2.18	0.44
61:15:32:ASP:O	61:15:35:LYS:HB2	2.17	0.44
3:L3:146:ARG:CA	3:L3:146:ARG:HE	2.29	0.44
78:1S:939:A:H2'	78:1S:940:A:C8	2.52	0.44
47:S1:121:ILE:HG23	47:S1:161:ILE:HG23	2.00	0.44
9:L9:63:LYS:CE	79:2S:1210:U:H5'	2.44	0.44
3:L3:32:PHE:HE2	3:L3:159:ARG:NH2	2.11	0.44
20:70:72:VAL:HG13	20:70:96:ASP:C	2.38	0.44
51:S5:37:GLN:HB3	62:16:53:LEU:CD2	2.46	0.44
64:18:33:THR:HA	64:18:38:VAL:O	2.17	0.44
37:87:28:HIS:HD2	79:2S:815:G:H5'	1.83	0.44
3:L3:21:ARG:HH12	79:2S:2991:A:H5'	1.81	0.44
31:81:60:TRP:HZ2	79:2S:1457:U:HO2'	1.66	0.44
20:70:8:GLN:HB2	20:70:64:ILE:HD11	1.99	0.44
49:S3:126:VAL:HG12	49:S3:131:ALA:CB	2.48	0.44
70:24:12:VAL:HG12	70:24:21:LYS:HE3	1.98	0.44
57:11:118:GLN:HG2	57:11:119:VAL:N	2.33	0.44
79:2S:1887:A:C2'	79:2S:1888:U:H5'	2.47	0.44
79:2S:1860:G:H2'	79:2S:1861:G:C8	2.52	0.44
9:L9:105:GLU:HG3	9:L9:108:GLY:HA2	1.97	0.44
79:2S:949:C:H2'	79:2S:950:G:O4'	2.18	0.44
45:RC:23:LEU:O	45:RC:293:ALA:HB2	2.17	0.44
27:77:121:ARG:HH11	27:77:126:LYS:HD3	1.83	0.44
78:1S:697:C:O2'	78:1S:698:U:H5''	2.18	0.44
41:91:4:LYS:HE3	78:1S:1774:G:C8	2.53	0.44
78:1S:801:G:H2'	78:1S:802:G:O4'	2.17	0.44
79:2S:1052:U:O2'	81:5S:103:A:H5''	2.18	0.44
18:68:107:THR:H	18:68:110:ALA:HB3	1.83	0.44
61:15:16:SER:HA	61:15:20:VAL:O	2.17	0.44
79:2S:1132:C:H2'	79:2S:1133:A:C8	2.53	0.44
79:2S:886:C:H2'	79:2S:887:G:C8	2.52	0.44
35:85:111:PHE:N	35:85:112:PRO:HD3	2.33	0.44
39:89:24:PRO:HB2	39:89:27:ILE:HD12	2.00	0.44
13:63:24:VAL:HB	13:63:26:PHE:CE2	2.52	0.44
69:23:98:GLU:O	69:23:99:ASN:HB2	2.18	0.44
6:L6:51:ARG:HH11	6:L6:51:ARG:HG2	1.82	0.44
19:69:158:GLU:HG2	19:69:158:GLU:H	1.66	0.44
79:2S:1011:A:H2'	79:2S:1012:G:C8	2.52	0.44
44:P0:59:VAL:HA	44:P0:62:ALA:HB3	2.00	0.44
28:78:77:LYS:HD2	28:78:80:THR:HG21	1.99	0.44
65:19:4:VAL:HG22	65:19:5:SER:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S1:36:SER:HB2	47:S1:41:ARG:NH2	2.33	0.44
46:S0:74:VAL:HG23	46:S0:118:PRO:HB3	2.00	0.44
47:S1:168:ILE:O	47:S1:172:LEU:HG	2.17	0.44
51:S5:29:ILE:HA	62:16:37:THR:CG2	2.41	0.44
4:L4:317:PRO:HG3	4:L4:323:VAL:HG22	2.00	0.44
50:S4:192:ILE:HG22	50:S4:193:GLY:N	2.32	0.44
79:2S:928:C:H2'	79:2S:929:A:C8	2.52	0.44
78:1S:1315:U:H2'	78:1S:1316:G:C8	2.53	0.44
79:2S:1926:C:H4'	79:2S:1927:G:C4	2.53	0.44
45:RC:29:GLN:C	45:RC:31:ASN:H	2.20	0.44
66:20:34:LEU:O	66:20:34:LEU:HD13	2.18	0.44
34:84:6:THR:HG21	79:2S:1487:G:H1'	2.00	0.44
70:24:21:LYS:HB3	70:24:75:VAL:CG1	2.48	0.44
50:S4:95:THR:O	50:S4:96:ASN:HB2	2.17	0.44
79:2S:1371:G:H2'	79:2S:1372:C:C6	2.53	0.44
14:64:42:LYS:O	14:64:60:LEU:HG	2.17	0.44
57:11:129:ARG:NH1	57:11:129:ARG:HG2	2.33	0.44
16:66:130:LYS:HB2	79:2S:1316:C:C5	2.53	0.44
4:L4:98:ARG:HD2	4:L4:99:MET:O	2.17	0.44
68:22:41:MET:CB	68:22:47:ILE:HG12	2.47	0.44
7:L7:94:LYS:HA	79:2S:1139:G:O3'	2.18	0.44
3:L3:2:SER:HA	79:2S:2939:G:OP2	2.18	0.44
8:L8:166:LEU:HB2	8:L8:167:PRO:HD3	2.00	0.44
79:2S:1128:U:H2'	79:2S:1129:A:O4'	2.17	0.44
10:60:3:ARG:HG2	10:60:123:HIS:CE1	2.52	0.44
40:90:79:GLU:HB3	40:90:82:LEU:HB2	2.00	0.44
51:S5:220:VAL:C	51:S5:222:LYS:H	2.21	0.44
19:69:6:THR:HG23	79:2S:1498:A:OP1	2.17	0.44
66:20:72:ASN:HB2	66:20:73:GLY:H	1.51	0.44
49:S3:162:GLN:HB3	49:S3:163:PRO:HD3	1.99	0.44
32:82:72:LYS:HB2	32:82:92:TYR:CD1	2.52	0.44
38:88:9:LYS:O	38:88:13:GLU:HG3	2.17	0.44
70:24:112:LYS:O	70:24:116:LYS:HG3	2.17	0.44
75:29:21:CYS:C	75:29:23:VAL:H	2.21	0.44
31:81:5:LYS:O	31:81:7:VAL:N	2.41	0.44
31:81:79:ARG:HA	31:81:89:LEU:HA	2.00	0.44
11:61:28:ASP:O	11:61:32:ARG:HG3	2.17	0.44
79:2S:1533:U:H5'	79:2S:1799:A:O2'	2.18	0.44
79:2S:1799:A:H2'	79:2S:1800:A:C8	2.52	0.44
2:L2:184:ARG:HA	2:L2:187:HIS:HD2	1.82	0.44
51:S5:80:LYS:HD2	51:S5:83:ARG:HD3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:95:A:H2'	79:2S:96:G:O4'	2.18	0.44
56:10:72:GLY:O	56:10:76:LEU:HD13	2.18	0.44
5:L5:115:LEU:HD22	5:L5:115:LEU:N	2.33	0.44
79:2S:2457:G:H1	79:2S:2461:A:N6	2.16	0.44
78:1S:920:U:H3'	78:1S:921:U:H5''	1.99	0.44
78:1S:921:U:H2'	78:1S:922:G:O4'	2.18	0.44
32:82:25:TYR:HD2	32:82:28:VAL:HG21	1.83	0.44
55:S9:134:ILE:HA	55:S9:157:ASP:O	2.18	0.44
79:2S:2598:G:H2'	79:2S:2599:U:C6	2.52	0.44
55:S9:126:ARG:HH11	55:S9:144:PRO:HG2	1.82	0.44
48:S2:53:ILE:CG2	48:S2:56:ILE:HD12	2.47	0.44
2:L2:200:ARG:NH2	2:L2:200:ARG:HB2	2.32	0.44
79:2S:641:C:H2'	79:2S:642:U:O4'	2.17	0.44
25:75:92:LYS:HG2	79:2S:1830:G:H5''	2.00	0.44
79:2S:653:A:H2'	79:2S:654:C:H6	1.82	0.44
44:P0:11:TYR:HE1	44:P0:15:LEU:HD11	1.82	0.44
59:13:146:ALA:O	59:13:150:VAL:HG12	2.18	0.44
79:2S:371:G:N2	79:2S:373:A:H3'	2.32	0.44
78:1S:1387:G:O5'	78:1S:1387:G:H8	2.01	0.44
9:L9:8:GLN:HG2	9:L9:68:LEU:HD13	1.99	0.44
78:1S:1542:G:N2	78:1S:1568:C:H1'	2.33	0.44
36:86:54:GLU:HA	36:86:57:LEU:HB2	2.00	0.44
32:82:68:PRO:HD3	79:2S:1403:C:OP1	2.18	0.44
10:60:3:ARG:HD2	10:60:4:ARG:O	2.16	0.44
50:S4:151:ASP:OD1	50:S4:152:PRO:HD2	2.17	0.44
9:L9:101:VAL:HG13	9:L9:113:GLU:O	2.17	0.44
20:70:12:ARG:HB3	20:70:24:LEU:HD23	2.00	0.44
78:1S:34:G:H2'	78:1S:35:U:H6	1.83	0.44
8:L8:221:ASN:HA	8:L8:225:LYS:HE2	2.00	0.44
53:S7:39:ARG:N	53:S7:40:PRO:CD	2.81	0.44
29:79:37:PRO:O	29:79:41:ARG:HB2	2.18	0.44
4:L4:89:ALA:O	4:L4:90:PHE:HB2	2.18	0.44
79:2S:787:G:H2'	79:2S:788:C:C6	2.53	0.44
79:2S:1414:G:H2'	79:2S:1415:U:O4'	2.17	0.44
30:80:50:VAL:HG11	79:2S:2552:C:O2'	2.18	0.44
78:1S:444:C:N4	78:1S:458:G:H2'	2.33	0.44
50:S4:57:ASN:HB2	50:S4:60:GLU:HG3	2.00	0.44
18:68:163:PRO:HB2	18:68:173:GLU:OE1	2.17	0.44
68:22:85:ASP:O	68:22:89:TRP:CD1	2.71	0.44
2:L2:190:ARG:HG2	2:L2:190:ARG:HH21	1.83	0.44
79:2S:619:A:H4'	79:2S:620:U:C5	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:3193:C:H2'	79:2S:3194:C:H6	1.83	0.44
67:21:39:VAL:HG12	67:21:45:ALA:HA	1.98	0.44
79:2S:764:U:H3	79:2S:767:U:H3	1.65	0.44
24:74:17:ARG:NH1	79:2S:3050:U:H5''	2.33	0.44
78:1S:880:C:H2'	78:1S:881:A:C8	2.53	0.44
61:15:25:LEU:HB3	61:15:87:PRO:HB3	1.99	0.44
48:S2:141:ARG:O	48:S2:151:PRO:HB3	2.18	0.44
69:23:30:LYS:HG3	69:23:34:LEU:HD12	2.00	0.44
32:82:20:HIS:O	32:82:21:HIS:HB2	2.18	0.44
32:82:19:ARG:NH1	32:82:28:VAL:HG13	2.33	0.44
46:S0:49:ASN:CB	46:S0:52:LYS:HE2	2.47	0.44
61:15:32:ASP:O	61:15:36:LEU:HD23	2.18	0.44
45:RC:203:THR:HB	45:RC:243:LEU:HB2	1.98	0.44
78:1S:416:A:H5'	78:1S:417:A:H8	1.82	0.44
79:2S:1927:G:N3	79:2S:1927:G:H3'	2.33	0.44
3:L3:112:ASP:O	3:L3:116:ARG:HB2	2.18	0.44
15:65:142:ILE:HA	15:65:145:ASP:HB2	2.00	0.44
4:L4:188:ARG:HB2	4:L4:198:ARG:O	2.18	0.44
16:66:143:THR:HG21	16:66:150:GLU:OE2	2.17	0.44
31:81:15:ASN:O	31:81:19:ARG:HD3	2.18	0.44
78:1S:24:U:H2'	78:1S:26:A:C8	2.52	0.44
63:17:29:GLN:H	63:17:29:GLN:NE2	2.15	0.44
49:S3:37:VAL:HG12	49:S3:50:ILE:HD12	1.99	0.44
57:11:129:ARG:HD2	78:1S:335:U:O2'	2.18	0.44
6:L6:26:ARG:HB3	79:2S:502:U:H4'	1.99	0.44
68:22:19:LYS:NZ	78:1S:1095:U:H4'	2.33	0.44
62:16:131:GLY:HA3	62:16:137:ARG:HA	1.98	0.44
5:L5:177:GLU:O	5:L5:190:ILE:HD13	2.18	0.44
36:86:43:LEU:O	36:86:47:ILE:HG13	2.18	0.44
6:L6:161:ALA:HB3	14:64:118:PHE:CE2	2.53	0.44
78:1S:1238:A:H2'	78:1S:1239:U:H5'	2.00	0.44
50:S4:247:SER:O	50:S4:251:GLU:HG3	2.18	0.44
78:1S:1254:U:H2'	78:1S:1255:G:O4'	2.18	0.44
79:2S:594:U:H2'	79:2S:609:G:O6	2.17	0.44
78:1S:172:C:H2'	78:1S:173:A:C8	2.53	0.44
79:2S:2554:A:H1'	79:2S:2555:G:OP1	2.18	0.44
73:27:37:CYS:HA	73:27:38:PRO:HD3	1.80	0.44
60:14:135:ARG:O	72:26:26:CYS:HB2	2.17	0.44
79:2S:2667:A:H2'	79:2S:2668:U:O4'	2.18	0.44
52:S6:28:PHE:O	52:S6:29:ASP:HB2	2.16	0.44
48:S2:67:GLN:O	48:S2:71:THR:HG23	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1112:A:O2'	79:2S:1370:G:H4'	2.17	0.44
79:2S:3078:U:O2	79:2S:3078:U:H2'	2.17	0.44
52:S6:45:PHE:HD1	52:S6:121:LEU:HD21	1.82	0.44
7:L7:105:LEU:CD2	79:2S:1101:G:H1'	2.48	0.44
17:67:36:ILE:HG12	17:67:36:ILE:O	2.18	0.43
37:87:17:THR:C	37:87:25:ARG:HA	2.38	0.43
79:2S:2069:G:OP1	79:2S:3351:U:H4'	2.18	0.43
79:2S:895:A:H2'	79:2S:897:U:C6	2.53	0.43
79:2S:652:G:C2	79:2S:2361:A:H1'	2.54	0.43
26:76:13:ARG:O	26:76:17:LYS:HB2	2.18	0.43
46:S0:139:VAL:HG13	46:S0:141:ILE:HG13	1.99	0.43
79:2S:2607:G:H2'	79:2S:2608:G:O4'	2.18	0.43
81:5S:29:C:H2'	81:5S:30:G:C8	2.39	0.43
45:RC:21:THR:HG21	45:RC:38:ARG:NE	2.31	0.43
52:S6:137:ARG:NH2	52:S6:137:ARG:HG3	2.33	0.43
82:ET:21:U:H6	82:ET:22:A:H5'	1.82	0.43
79:2S:2516:U:H2'	79:2S:2517:U:H6	1.82	0.43
30:80:16:LEU:C	30:80:16:LEU:HD13	2.37	0.43
15:65:13:LYS:O	15:65:19:LEU:HB2	2.17	0.43
9:L9:41:ILE:CD1	9:L9:43:VAL:HG13	2.47	0.43
79:2S:1526:U:H4'	79:2S:1594:A:C4	2.53	0.43
78:1S:1533:C:H2'	78:1S:1534:G:C8	2.52	0.43
66:20:67:THR:CG2	75:29:40:ARG:HB2	2.45	0.43
23:73:136:VAL:HG12	23:73:137:VAL:N	2.33	0.43
11:61:92:ARG:HH21	11:61:94:ARG:HH21	1.66	0.43
61:15:72:LYS:HB3	61:15:93:VAL:HG21	2.00	0.43
78:1S:635:A:H2'	78:1S:636:A:C8	2.53	0.43
19:69:62:ARG:NH2	19:69:62:ARG:HG3	2.32	0.43
52:S6:124:LEU:N	52:S6:124:LEU:HD12	2.33	0.43
20:70:89:ASN:HD21	21:71:156:TYR:HB3	1.83	0.43
78:1S:1485:C:H2'	78:1S:1486:G:H4'	2.00	0.43
61:15:80:MET:O	61:15:116:LEU:HD12	2.18	0.43
41:91:5:TRP:HD1	78:1S:1783:C:OP2	2.01	0.43
15:65:24:ARG:HH12	79:2S:2435:G:H4'	1.82	0.43
78:1S:513:U:H2'	78:1S:514:G:C8	2.53	0.43
78:1S:1433:G:H2'	78:1S:1434:U:O4'	2.18	0.43
2:L2:47:GLN:O	2:L2:60:LYS:HB2	2.18	0.43
13:63:95:ILE:HG22	13:63:96:ALA:N	2.33	0.43
75:29:20:GLN:HB2	75:29:25:SER:HA	2.00	0.43
13:63:32:LYS:HE3	79:2S:685:G:OP2	2.17	0.43
50:S4:70:VAL:O	50:S4:70:VAL:HG13	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L6:69:PHE:O	6:L6:73:GLY:HA2	2.18	0.43
52:S6:32:ILE:HG13	52:S6:100:ALA:O	2.17	0.43
61:15:11:VAL:O	61:15:12:PHE:CB	2.65	0.43
78:1S:90:C:O2'	78:1S:451:A:H5''	2.18	0.43
50:S4:229:GLY:HA2	50:S4:235:TYR:CD2	2.53	0.43
22:72:84:LEU:CB	22:72:90:ARG:HG2	2.35	0.43
77:31:144:CYS:HB3	77:31:147:VAL:CG1	2.33	0.43
78:1S:869:A:H2'	78:1S:870:C:C6	2.51	0.43
78:1S:218:A:H3'	78:1S:219:A:C5'	2.43	0.43
22:72:17:VAL:HG22	22:72:103:TYR:CD2	2.41	0.43
79:2S:3389:U:H5'	79:2S:3389:U:C6	2.44	0.43
37:87:63:ARG:O	37:87:64:MET:HB2	2.17	0.43
63:17:69:ILE:HD13	63:17:69:ILE:N	2.34	0.43
56:10:59:PHE:HA	56:10:64:TYR:HA	2.00	0.43
3:L3:242:THR:HB	79:2S:2948:C:H4'	2.00	0.43
3:L3:57:VAL:HG22	3:L3:73:VAL:HG12	2.00	0.43
4:L4:185:LYS:HA	4:L4:201:GLN:HB3	2.00	0.43
5:L5:26:GLY:O	5:L5:150:LEU:HD12	2.18	0.43
55:S9:53:ARG:O	55:S9:57:ARG:HG3	2.17	0.43
2:L2:204:MET:HB2	2:L2:208:ASP:CB	2.48	0.43
78:1S:1562:G:H2'	78:1S:1563:C:H6	1.81	0.43
5:L5:270:LYS:HA	5:L5:273:ARG:HB3	2.00	0.43
75:29:44:ARG:NH2	78:1S:1279:C:H5''	2.33	0.43
18:68:8:LYS:HG2	18:68:9:GLN:H	1.83	0.43
75:29:19:ARG:NH1	75:29:19:ARG:HG3	2.32	0.43
79:2S:435:C:H2'	79:2S:436:A:H8	1.83	0.43
79:2S:791:A:H2'	79:2S:792:G:H8	1.83	0.43
5:L5:44:TYR:CD2	79:2S:1084:A:H4'	2.53	0.43
78:1S:153:G:H2'	78:1S:154:G:C8	2.53	0.43
78:1S:1318:G:H2'	78:1S:1319:A:O4'	2.18	0.43
79:2S:1832:C:H2'	79:2S:1833:G:H8	1.83	0.43
82:ET:72:C:H2'	82:ET:73:A:C8	2.53	0.43
79:2S:1325:U:H2'	79:2S:1326:A:C8	2.52	0.43
79:2S:1146:C:H4'	79:2S:1331:U:C5	2.53	0.43
26:76:40:ARG:NH2	26:76:46:LYS:HG3	2.32	0.43
19:69:122:VAL:O	19:69:126:GLU:HG3	2.17	0.43
53:S7:140:VAL:HB	68:22:52:TYR:HB3	1.99	0.43
13:63:16:LYS:HB2	13:63:21:ARG:HH22	1.83	0.43
79:2S:761:A:H2'	79:2S:762:U:C6	2.54	0.43
78:1S:962:C:C2'	78:1S:963:A:H5'	2.48	0.43
64:18:89:GLN:O	64:18:90:ASN:HB2	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:509:G:H2'	78:1S:510:G:C8	2.53	0.43
36:86:58:ILE:HD12	36:86:98:ARG:NH2	2.33	0.43
79:2S:2531:C:H5'	79:2S:2532:U:H5	1.84	0.43
47:S1:133:TYR:CD1	47:S1:217:LEU:HD23	2.53	0.43
59:13:98:VAL:HA	59:13:101:HIS:HB3	2.00	0.43
46:S0:41:ARG:HB3	46:S0:45:VAL:HB	1.99	0.43
79:2S:920:A:H4'	79:2S:921:A:C5'	2.46	0.43
6:L6:52:VAL:HG22	6:L6:65:ILE:HB	1.99	0.43
19:69:44:LEU:O	19:69:49:THR:HB	2.18	0.43
20:70:117:ARG:HH21	20:70:117:ARG:HG3	1.83	0.43
35:85:21:LEU:CD2	35:85:55:LEU:HD21	2.49	0.43
8:L8:150:LEU:O	8:L8:199:ALA:HA	2.18	0.43
30:80:48:THR:HG23	30:80:49:PRO:HD2	1.99	0.43
50:S4:85:GLY:O	50:S4:101:LEU:HD12	2.19	0.43
52:S6:30:LYS:HE2	52:S6:36:VAL:CG2	2.48	0.43
64:18:46:VAL:HA	64:18:49:LYS:HB2	2.01	0.43
54:S8:92:ARG:HG3	79:2S:3345:G:OP1	2.18	0.43
15:65:50:ARG:HB2	79:2S:267:G:H21	1.83	0.43
61:15:67:ALA:CB	61:15:73:PRO:HG3	2.49	0.43
43:93:57:CYS:HB3	43:93:62:LYS:N	2.30	0.43
78:1S:564:G:C2	78:1S:578:U:H4'	2.54	0.43
79:2S:3064:U:H2'	79:2S:3065:G:H8	1.81	0.43
3:L3:260:VAL:HG21	79:2S:2987:A:H2	1.80	0.43
76:30:29:LYS:HE3	76:30:35:TYR:HE2	1.83	0.43
78:1S:607:G:H5'	78:1S:613:G:N2	2.33	0.43
79:2S:1150:A:H3'	79:2S:1151:U:H6	1.83	0.43
61:15:123:TYR:HD1	61:15:123:TYR:H	1.66	0.43
78:1S:1184:A:H2'	78:1S:1185:U:H4'	1.99	0.43
78:1S:1405:G:H2'	78:1S:1406:A:H8	1.83	0.43
8:L8:95:ASN:O	8:L8:98:ARG:HG2	2.18	0.43
57:11:66:ILE:HG12	57:11:128:CYS:SG	2.57	0.43
53:S7:78:THR:O	53:S7:82:GLU:HG3	2.18	0.43
79:2S:3021:A:H61	79:2S:3032:A:H3'	1.83	0.43
68:22:80:ASN:HB3	78:1S:748:U:OP1	2.18	0.43
16:66:19:LEU:HA	16:66:123:ALA:HB1	2.01	0.43
18:68:106:PHE:CE2	18:68:121:CYS:HB3	2.53	0.43
50:S4:35:PRO:HB3	50:S4:143:ASP:HB2	2.00	0.43
78:1S:1008:G:H2'	78:1S:1009:U:C6	2.52	0.43
79:2S:2130:G:H2'	79:2S:2131:A:H5'	2.00	0.43
79:2S:806:A:H8	79:2S:935:U:H3	1.63	0.43
5:L5:134:ALA:CB	5:L5:141:PRO:HD3	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:958:C:H5''	79:2S:2800:G:OP1	2.19	0.43
78:1S:912:U:H5'	78:1S:913:G:C8	2.54	0.43
62:16:41:PRO:HD2	62:16:44:LEU:HD23	2.00	0.43
79:2S:628:A:H5'	79:2S:1399:A:C2	2.53	0.43
79:2S:184:U:H2'	79:2S:185:C:C6	2.54	0.43
79:2S:2357:A:H2'	79:2S:2358:A:C8	2.54	0.43
65:19:130:ARG:CA	78:1S:1358:G:H4'	2.41	0.43
3:L3:136:LYS:HA	3:L3:139:GLN:HE21	1.83	0.43
51:S5:80:LYS:HB2	51:S5:83:ARG:HB2	2.00	0.43
78:1S:792:U:H2'	78:1S:793:A:O4'	2.18	0.43
28:78:74:ASN:C	28:78:76:ASP:N	2.72	0.43
50:S4:209:HIS:O	50:S4:210:ILE:HD13	2.18	0.43
78:1S:415:C:H2'	78:1S:417:A:C8	2.51	0.43
34:84:66:SER:O	34:84:70:LYS:HG3	2.18	0.43
8:L8:151:VAL:HG23	8:L8:175:VAL:HG11	2.00	0.43
55:S9:48:GLN:HA	55:S9:51:LYS:CE	2.48	0.43
3:L3:124:LYS:HG2	79:2S:3316:A:N1	2.34	0.43
18:68:76:ALA:HA	18:68:79:LYS:HB2	2.00	0.43
3:L3:307:PRO:HG2	3:L3:311:PHE:CE1	2.53	0.43
78:1S:1679:G:H1'	78:1S:1722:A:H61	1.83	0.43
48:S2:160:GLY:O	48:S2:213:ALA:HB1	2.18	0.43
8:L8:29:SER:HB2	79:2S:2563:G:H4'	2.01	0.43
76:30:10:ARG:HB3	76:30:13:LYS:HB2	2.00	0.43
79:2S:1732:U:H3'	79:2S:1733:G:H8	1.84	0.43
78:1S:1505:A:H8	78:1S:1505:A:O5'	2.02	0.43
8:L8:77:GLN:NE2	8:L8:167:PRO:HG2	2.33	0.43
79:2S:1881:A:H2'	79:2S:1882:G:C8	2.54	0.43
34:84:24:LYS:O	79:2S:1695:U:H4'	2.18	0.43
79:2S:1528:G:H2'	79:2S:1529:A:O4'	2.18	0.43
4:L4:71:VAL:HG22	4:L4:72:ALA:N	2.32	0.43
79:2S:1226:G:H5'	79:2S:3117:C:H1'	2.00	0.43
44:P0:14:LYS:O	44:P0:17:GLU:HB3	2.19	0.43
62:16:55:VAL:HG13	62:16:56:GLY:N	2.33	0.43
26:76:35:LEU:HD23	26:76:106:ILE:HB	2.00	0.43
10:60:129:VAL:HG12	10:60:130:ASP:N	2.33	0.43
79:2S:41:G:H3'	79:2S:42:C:C6	2.53	0.43
78:1S:1274:C:O2	78:1S:1274:C:H2'	2.19	0.43
51:S5:119:ASP:O	51:S5:123:VAL:HG23	2.17	0.43
4:L4:146:PRO:HG2	4:L4:147:GLU:H	1.82	0.43
8:L8:54:GLU:HA	8:L8:57:ARG:HD3	2.01	0.43
4:L4:351:PRO:HB3	7:L7:70:LYS:HB3	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:71:78:LYS:HE2	21:71:87:LYS:HE3	2.00	0.43
13:63:59:ARG:NH2	13:63:150:PRO:HG2	2.24	0.43
79:2S:2982:A:O3'	79:2S:2983:C:H2'	2.18	0.43
78:1S:689:G:H3'	78:1S:690:G:H5''	1.99	0.43
67:21:40:ASP:OD2	67:21:46:ILE:HD11	2.18	0.43
79:2S:1862:U:H2'	79:2S:1863:G:O4'	2.19	0.43
18:68:67:ILE:HG23	18:68:81:VAL:HG11	1.99	0.43
56:10:42:VAL:O	56:10:46:LEU:HB2	2.18	0.43
2:L2:193:ARG:HG2	2:L2:193:ARG:HH21	1.83	0.43
48:S2:141:ARG:HH22	48:S2:151:PRO:HB2	1.84	0.43
49:S3:158:ILE:H	49:S3:158:ILE:CD1	2.29	0.43
37:87:58:THR:C	37:87:60:GLY:H	2.21	0.43
15:65:71:ARG:HD3	15:65:94:TYR:HB2	1.99	0.43
22:72:42:LYS:HB3	79:2S:1687:U:C2	2.53	0.43
53:S7:131:PHE:N	53:S7:132:PRO:CD	2.81	0.43
64:18:139:LYS:HE2	78:1S:1459:C:N4	2.33	0.43
34:84:29:ILE:HD11	79:2S:1598:G:OP1	2.18	0.43
79:2S:286:U:H2'	79:2S:287:G:C8	2.54	0.43
25:75:134:ASP:O	25:75:138:ARG:HB2	2.18	0.43
79:2S:2880:U:H2'	79:2S:2881:C:C6	2.53	0.43
79:2S:1670:C:H4'	79:2S:1860:G:H5'	2.00	0.43
8:L8:157:VAL:HG13	79:2S:147:U:N3	2.34	0.43
36:86:60:LEU:HD11	36:86:68:ARG:HB2	2.01	0.43
68:22:50:PHE:CB	68:22:63:VAL:HG22	2.48	0.43
46:S0:127:ARG:HG3	46:S0:127:ARG:NH1	2.34	0.43
78:1S:1408:G:H2'	78:1S:1409:G:O4'	2.19	0.43
16:66:35:VAL:HB	16:66:104:VAL:HG22	2.00	0.43
48:S2:116:LYS:HB2	48:S2:128:GLY:HA2	2.00	0.43
79:2S:876:A:H5''	79:2S:1890:U:H5''	2.01	0.43
57:11:123:VAL:CG2	57:11:139:VAL:HG13	2.49	0.43
79:2S:1715:A:O4'	79:2S:1717:U:H4'	2.18	0.43
79:2S:1440:G:H2'	79:2S:1441:G:C8	2.54	0.43
11:61:69:VAL:HA	81:5S:39:C:O2	2.19	0.43
48:S2:60:SER:HA	67:21:26:ALA:HA	2.01	0.43
49:S3:35:SER:HB3	49:S3:51:ARG:O	2.19	0.43
47:S1:225:VAL:O	47:S1:229:MET:HB2	2.18	0.43
79:2S:172:G:N3	79:2S:172:G:H2'	2.34	0.43
82:PT:64:G:H2'	82:PT:65:G:H8	1.84	0.43
79:2S:2413:A:H2'	79:2S:2414:G:H8	1.83	0.43
78:1S:64:U:H3'	78:1S:65:A:H5''	1.99	0.43
62:16:77:GLN:O	62:16:81:ILE:HG23	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:652:G:H2'	79:2S:2361:A:H4'	2.01	0.43
66:20:23:ARG:HB3	66:20:117:VAL:CG1	2.46	0.43
64:18:17:LEU:O	64:18:18:LEU:HB2	2.19	0.43
76:30:14:VAL:HG23	78:1S:567:A:H1'	1.99	0.43
4:L4:316:ASN:HA	4:L4:317:PRO:HD3	1.93	0.43
63:17:61:ILE:HG12	63:17:66:VAL:CG2	2.46	0.43
45:RC:214:ALA:CB	45:RC:220:ILE:HG12	2.45	0.43
18:68:59:ARG:NH1	18:68:59:ARG:HB2	2.34	0.43
15:65:93:LYS:HD2	79:2S:289:A:H2	1.82	0.43
20:70:69:PRO:HG2	79:2S:523:A:H4'	2.01	0.43
19:69:88:ARG:HH21	79:2S:2102:U:H5'	1.84	0.43
4:L4:198:ARG:HD3	4:L4:199:TRP:CD1	2.54	0.43
29:79:14:ARG:HD3	29:79:18:ARG:HD3	2.00	0.43
8:L8:97:TYR:OH	8:L8:203:VAL:HA	2.19	0.43
48:S2:113:LEU:O	48:S2:132:ALA:HA	2.18	0.43
15:65:50:ARG:CB	15:65:50:ARG:NH1	2.82	0.43
48:S2:162:CYS:SG	48:S2:212:LYS:HB3	2.59	0.43
3:L3:227:GLU:HG3	3:L3:228:GLY:H	1.83	0.43
78:1S:1116:A:H1'	78:1S:1131:A:C6	2.54	0.43
9:L9:8:GLN:HG2	9:L9:68:LEU:HD11	2.00	0.43
78:1S:839:U:H2'	78:1S:840:U:C4'	2.49	0.43
79:2S:1357:G:H2'	79:2S:1358:C:H6	1.83	0.43
26:76:16:ARG:O	26:76:20:PHE:CD2	2.71	0.43
3:L3:8:ALA:HA	79:2S:2915:U:OP1	2.18	0.43
3:L3:75:ALA:HB2	79:2S:3049:A:C6	2.53	0.43
9:L9:134:ILE:H	9:L9:134:ILE:HD12	1.83	0.43
11:61:8:PRO:HB2	81:5S:53:U:O2'	2.18	0.43
79:2S:683:U:H2'	79:2S:684:G:O4'	2.18	0.43
45:RC:33:LEU:HD22	45:RC:47:LEU:HD21	2.00	0.43
33:83:53:TYR:CZ	33:83:65:ARG:HB2	2.54	0.43
46:S0:109:ASN:OD1	78:1S:1294:G:H1'	2.17	0.43
44:P0:31:ASP:O	44:P0:32:ASN:HB2	2.19	0.43
61:15:86:VAL:O	61:15:89:MET:HG2	2.18	0.43
50:S4:46:VAL:O	50:S4:50:ASN:HB2	2.19	0.43
39:89:50:ASN:HD22	39:89:50:ASN:HA	1.54	0.43
5:L5:118:THR:O	5:L5:119:TYR:HB2	2.18	0.43
21:71:9:SER:O	21:71:10:ARG:HB2	2.19	0.43
81:5S:16:U:H2'	81:5S:17:A:C8	2.53	0.43
82:ET:19:G:N2	82:ET:58:A:H2'	2.33	0.43
1:L1:169:VAL:CG1	1:L1:170:GLY:N	2.79	0.43
79:2S:744:A:C2'	79:2S:745:C:H5'	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:60:17:TYR:N	10:60:18:PRO:HD3	2.33	0.43
7:L7:67:ARG:HA	7:L7:70:LYS:HE2	2.00	0.43
43:93:56:THR:HG22	43:93:63:THR:HG23	2.00	0.43
79:2S:915:A:C5	79:2S:917:A:H1'	2.54	0.43
10:60:182:LEU:HD23	10:60:185:ARG:HH11	1.82	0.43
4:L4:52:VAL:CG2	4:L4:53:SER:H	2.26	0.43
4:L4:53:SER:HB3	4:L4:56:ALA:CB	2.49	0.43
68:22:79:PHE:O	68:22:124:LYS:HA	2.19	0.43
15:65:87:GLN:HE22	79:2S:2609:A:H1'	1.84	0.43
21:71:96:ILE:HD12	21:71:96:ILE:H	1.84	0.43
69:23:62:LYS:HE3	78:1S:1754:A:H5'	2.00	0.43
79:2S:3287:U:H6	79:2S:3287:U:H5'	1.83	0.43
79:2S:1459:C:H2'	79:2S:1460:A:C8	2.53	0.43
15:65:17:ASP:O	15:65:21:PHE:HB2	2.19	0.43
9:L9:41:ILE:HD13	9:L9:41:ILE:C	2.38	0.43
79:2S:634:C:H2'	79:2S:635:G:H8	1.80	0.43
18:68:83:VAL:HG11	18:68:87:VAL:HG22	2.00	0.43
79:2S:3205:G:H2'	79:2S:3206:C:C5	2.54	0.43
9:L9:8:GLN:HE21	9:L9:68:LEU:CD1	2.31	0.43
79:2S:2943:G:H2'	79:2S:2944:U:O4'	2.19	0.43
79:2S:3336:A:H3'	79:2S:3337:G:C8	2.54	0.43
11:61:10:ARG:HD3	11:61:10:ARG:O	2.18	0.43
79:2S:2832:C:H2'	79:2S:2833:A:C8	2.54	0.43
55:S9:81:VAL:CG2	55:S9:86:LEU:HD23	2.48	0.43
32:82:32:TRP:CH2	32:82:52:GLN:HG2	2.53	0.43
48:S2:89:GLN:HG2	78:1S:1633:A:H2	1.82	0.43
18:68:163:PRO:HG2	79:2S:780:A:C2	2.53	0.43
5:L5:93:THR:HG23	81:5S:48:U:OP2	2.19	0.43
4:L4:355:PHE:O	4:L4:359:LEU:HB2	2.18	0.43
32:82:121:ASN:C	32:82:123:LYS:H	2.22	0.43
78:1S:1557:U:O2'	78:1S:1558:U:H2'	2.19	0.43
79:2S:2849:C:OP1	79:2S:2906:C:H4'	2.18	0.43
4:L4:4:PRO:O	4:L4:5:GLN:HB2	2.19	0.43
78:1S:762:A:H2'	78:1S:763:G:O4'	2.18	0.43
79:2S:278:U:H2'	79:2S:279:U:C6	2.54	0.43
72:26:60:PRO:O	72:26:61:GLU:HG2	2.18	0.43
62:16:36:ILE:O	62:16:36:ILE:HG12	2.19	0.43
52:S6:52:ILE:HA	52:S6:111:LEU:HD23	2.01	0.43
76:30:39:LEU:HB3	76:30:43:ARG:HH21	1.83	0.43
51:S5:126:ASP:O	51:S5:127:GLN:HB2	2.19	0.43
24:74:45:ASN:HA	24:74:46:PRO:HD3	1.78	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:61:35:LYS:O	11:61:39:GLN:HG2	2.19	0.43
48:S2:163:GLY:O	78:1S:1086:A:H5''	2.18	0.43
64:18:116:LEU:HD21	64:18:123:ARG:CB	2.37	0.43
66:20:55:PRO:HB3	66:20:91:ILE:CG1	2.46	0.43
47:S1:148:ASN:ND2	47:S1:148:ASN:N	2.61	0.43
27:77:22:LYS:CE	27:77:134:LEU:HD23	2.44	0.43
78:1S:189:C:C3'	78:1S:190:C:H5''	2.43	0.43
79:2S:2595:A:H2'	79:2S:2596:U:H5'	2.00	0.43
72:26:42:ARG:HB2	72:26:42:ARG:CZ	2.49	0.43
48:S2:141:ARG:HG3	48:S2:193:VAL:HG13	2.01	0.43
18:68:170:ARG:C	18:68:172:PHE:H	2.21	0.43
79:2S:2775:U:H2'	79:2S:2776:C:H6	1.79	0.43
78:1S:15:U:H2'	78:1S:16:G:O4'	2.18	0.43
16:66:75:ALA:O	16:66:79:ILE:HG13	2.19	0.43
78:1S:1483:A:C2	78:1S:1607:G:H1'	2.53	0.43
25:75:62:VAL:HG12	25:75:86:VAL:CG2	2.49	0.43
7:L7:116:PHE:HZ	7:L7:144:ILE:HG12	1.83	0.43
37:87:28:HIS:O	37:87:32:LYS:HA	2.18	0.43
3:L3:280:HIS:HB3	3:L3:324:VAL:HG22	2.01	0.43
51:S5:143:ARG:HH11	51:S5:143:ARG:HG3	1.82	0.43
33:83:20:LYS:HZ3	33:83:20:LYS:HB3	1.83	0.43
79:2S:757:C:C2'	79:2S:758:C:H5''	2.49	0.43
78:1S:1194:A:C2'	78:1S:1195:C:H5'	2.48	0.43
79:2S:3029:A:H8	79:2S:3029:A:O5'	2.01	0.43
31:81:18:LYS:HA	79:2S:3376:A:H1'	2.01	0.43
36:86:53:TYR:HA	36:86:56:ARG:NH1	2.33	0.43
79:2S:1117:G:H2'	79:2S:1118:C:H6	1.83	0.43
11:61:141:ARG:HH12	81:5S:27:A:H5''	1.83	0.43
78:1S:460:A:H3'	78:1S:461:G:H8	1.84	0.43
78:1S:1768:G:H5''	78:1S:1769:U:H2'	2.01	0.43
78:1S:1611:A:C2'	78:1S:1612:U:H5'	2.49	0.43
42:92:73:GLU:HA	42:92:80:ARG:HA	2.01	0.43
79:2S:44:U:H2'	79:2S:45:A:O4'	2.18	0.43
18:68:141:ARG:HH12	79:2S:976:U:H5''	1.84	0.43
62:16:28:LEU:CD2	78:1S:1365:C:H5''	2.49	0.43
15:65:99:ARG:O	15:65:103:GLU:HG3	2.18	0.43
35:85:109:ILE:HG23	79:2S:170:G:C5'	2.48	0.43
20:70:137:ARG:HB3	20:70:140:VAL:HG23	2.00	0.43
10:60:94:PHE:CE2	79:2S:1045:C:H1'	2.54	0.43
59:13:66:ILE:HG23	59:13:67:THR:N	2.34	0.43
46:S0:58:VAL:O	46:S0:62:ARG:HG2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:63:154:VAL:HG23	13:63:155:GLU:H	1.83	0.43
15:65:138:GLN:HA	15:65:143:ARG:HD2	2.01	0.43
61:15:44:ARG:HG2	61:15:44:ARG:HH11	1.84	0.43
27:77:73:LYS:HD3	27:77:74:VAL:H	1.83	0.43
27:77:49:TYR:CB	27:77:133:LYS:HD3	2.49	0.43
79:2S:3060:C:H2'	79:2S:3061:G:C8	2.54	0.43
52:S6:39:GLU:HB2	52:S6:46:LYS:HG3	2.00	0.43
79:2S:2128:C:H2'	79:2S:2129:U:C6	2.52	0.43
1:L1:34:LEU:O	1:L1:169:VAL:HG13	2.19	0.43
4:L4:300:ARG:HG3	4:L4:300:ARG:HH11	1.84	0.43
55:S9:93:LEU:C	55:S9:96:VAL:HG22	2.39	0.43
16:66:56:ASP:O	16:66:60:LYS:HG3	2.18	0.43
51:S5:82:PHE:CE1	51:S5:165:LEU:HD22	2.54	0.43
79:2S:2356:A:C2'	79:2S:2357:A:H5'	2.49	0.43
52:S6:14:LYS:HG2	52:S6:15:THR:N	2.33	0.43
79:2S:3348:G:H2'	79:2S:3349:C:C6	2.54	0.43
19:69:105:LEU:HD23	19:69:105:LEU:C	2.39	0.43
16:66:37:ARG:HA	16:66:107:GLY:H	1.83	0.43
78:1S:1734:U:H2'	78:1S:1735:U:O4'	2.18	0.43
27:77:25:ILE:HG22	27:77:28:PRO:HD3	2.01	0.43
2:L2:245:LEU:HB3	2:L2:247:ARG:CZ	2.48	0.43
72:26:85:ARG:HD2	78:1S:1153:G:H5'	2.01	0.43
1:L1:62:ASN:HB3	1:L1:151:VAL:HG11	1.98	0.43
79:2S:1066:G:H2'	79:2S:1067:U:H6	1.82	0.43
78:1S:310:C:H2'	78:1S:311:U:H6	1.80	0.43
28:78:74:ASN:C	28:78:76:ASP:H	2.21	0.43
14:64:50:LYS:HZ1	14:64:86:ALA:HB2	1.83	0.43
32:82:27:ARG:HD2	79:2S:1433:A:H4'	1.99	0.43
63:17:66:VAL:HG12	63:17:69:ILE:HD11	2.00	0.43
16:66:92:THR:HB	79:2S:632:G:OP1	2.19	0.43
28:78:6:THR:CG2	28:78:8:THR:HG23	2.47	0.43
14:64:15:VAL:HG23	14:64:15:VAL:O	2.19	0.43
3:L3:123:TYR:CD2	3:L3:124:LYS:HG3	2.53	0.43
79:2S:2186:U:H2'	79:2S:2187:G:O4'	2.18	0.43
57:11:92:HIS:O	57:11:100:TYR:HA	2.19	0.43
3:L3:62:ARG:CG	3:L3:348:ARG:HH21	2.31	0.43
2:L2:229:ALA:HB3	2:L2:234:LYS:HG3	2.01	0.43
64:18:46:VAL:O	64:18:46:VAL:HG12	2.17	0.43
15:65:42:PRO:HG3	15:65:61:ILE:CD1	2.48	0.43
51:S5:140:THR:O	51:S5:174:LEU:HD12	2.18	0.43
55:S9:57:ARG:O	55:S9:61:THR:HG23	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:73:32:ARG:HD2	23:73:32:ARG:N	2.33	0.43
50:S4:207:LEU:HA	50:S4:220:THR:O	2.18	0.43
45:RC:5:GLU:HB2	45:RC:315:VAL:HG12	2.01	0.43
28:78:25:HIS:HB3	79:2S:802:C:H41	1.83	0.43
4:L4:281:ILE:HG12	4:L4:283:THR:O	2.18	0.43
57:11:109:VAL:HG23	57:11:137:PHE:O	2.19	0.43
45:RC:264:SER:HB2	45:RC:271:VAL:CG2	2.48	0.43
79:2S:531:G:H2'	79:2S:532:A:H8	1.84	0.43
80:8S:77:A:H2'	80:8S:78:G:O4'	2.19	0.43
12:62:135:THR:C	12:62:137:GLN:H	2.21	0.43
79:2S:785:G:H2'	79:2S:786:A:C8	2.53	0.43
34:84:8:ARG:HB3	79:2S:1606:U:C5	2.53	0.43
78:1S:367:A:H2'	78:1S:368:U:O4'	2.18	0.43
77:31:88:PRO:O	77:31:89:LYS:CB	2.66	0.43
79:2S:1859:A:H8	79:2S:1859:A:O5'	2.01	0.43
34:84:51:LEU:H	34:84:51:LEU:HD23	1.84	0.43
11:61:75:LYS:HE3	11:61:79:ILE:HD11	2.01	0.43
15:65:28:TRP:O	15:65:32:GLN:HG2	2.18	0.43
79:2S:3084:C:H2'	79:2S:3085:G:O4'	2.19	0.43
47:S1:46:THR:HG22	60:14:32:ASP:HB2	2.01	0.43
56:10:87:VAL:N	56:10:88:PRO:CD	2.65	0.43
28:78:46:ASP:O	28:78:47:LYS:CB	2.67	0.43
62:16:45:ARG:O	62:16:48:VAL:HG12	2.17	0.43
79:2S:1361:U:H2'	79:2S:1362:G:H8	1.83	0.43
78:1S:390:G:C8	78:1S:1731:A:H4'	2.43	0.43
47:S1:127:VAL:HG11	47:S1:176:VAL:HG21	2.01	0.43
65:19:15:ILE:HG22	65:19:15:ILE:O	2.18	0.43
22:72:22:PRO:HG3	22:72:105:LEU:HD22	2.01	0.43
21:71:41:ASP:HB2	21:71:97:LYS:HG3	2.00	0.43
59:13:118:ILE:HA	59:13:121:ARG:HH12	1.84	0.43
69:23:54:LEU:HD21	69:23:75:GLN:NE2	2.34	0.43
46:S0:27:ARG:HB3	46:S0:28:ASN:H	1.55	0.43
15:65:134:LEU:HD12	15:65:134:LEU:N	2.33	0.43
79:2S:904:A:H2'	79:2S:905:U:C6	2.54	0.43
70:24:8:ARG:HB3	78:1S:780:A:C8	2.54	0.43
17:67:130:TYR:CD2	17:67:136:ILE:HD12	2.53	0.43
6:L6:54:TYR:HD2	6:L6:55:LEU:N	2.16	0.43
18:68:154:GLY:C	18:68:161:LYS:HG3	2.38	0.43
53:S7:31:SER:N	53:S7:32:PRO:HD2	2.33	0.43
7:L7:102:VAL:O	7:L7:106:LEU:HG	2.19	0.43
7:L7:178:ILE:HG13	7:L7:178:ILE:H	1.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:L9:53:ILE:HG22	9:L9:54:LYS:N	2.34	0.43
4:L4:82:THR:C	4:L4:84:ARG:N	2.70	0.43
77:31:119:ARG:HH21	77:31:119:ARG:HG3	1.84	0.43
5:L5:72:ASP:O	81:5S:116:C:H1'	2.18	0.43
64:18:81:ILE:HG23	64:18:82:PRO:HD2	2.00	0.43
78:1S:1119:G:H2'	78:1S:1120:U:C6	2.54	0.43
79:2S:2366:C:H2'	79:2S:2367:A:C8	2.53	0.43
78:1S:1020:A:C3'	78:1S:1021:C:H5''	2.48	0.43
47:S1:208:GLN:HG3	47:S1:209:ASN:OD1	2.19	0.43
79:2S:341:G:H21	79:2S:349:A:H61	1.66	0.43
4:L4:57:GLY:HA3	4:L4:98:ARG:HB2	2.01	0.43
78:1S:585:A:H2'	78:1S:586:G:C8	2.54	0.43
19:69:177:VAL:O	19:69:177:VAL:HG12	2.19	0.43
3:L3:37:ARG:HA	3:L3:186:GLY:HA2	2.01	0.43
78:1S:94:U:C2'	78:1S:95:G:H5'	2.49	0.43
49:S3:207:THR:O	63:17:39:ALA:HB1	2.19	0.43
35:85:70:TYR:CD1	35:85:73:LYS:HD2	2.53	0.43
55:S9:73:GLY:O	55:S9:77:ILE:HG13	2.19	0.43
47:S1:64:ARG:H	47:S1:88:VAL:HB	1.84	0.43
76:30:39:LEU:HD12	76:30:43:ARG:NH2	2.34	0.43
79:2S:3001:C:O2'	79:2S:3002:C:H5'	2.18	0.43
19:69:182:ASP:O	19:69:186:LYS:HB3	2.19	0.43
78:1S:27:U:H2'	78:1S:28:A:C8	2.54	0.43
48:S2:179:VAL:HG12	78:1S:3:U:O4'	2.19	0.43
79:2S:540:U:H2'	79:2S:541:U:C6	2.53	0.43
66:20:30:LYS:HB2	66:20:33:GLN:HB2	2.01	0.43
29:79:22:LYS:HD2	29:79:22:LYS:H	1.83	0.43
65:19:69:LYS:HB2	65:19:70:GLN:H	1.61	0.43
79:2S:1214:U:H2'	79:2S:1215:U:C6	2.54	0.43
68:22:37:PHE:HD1	68:22:37:PHE:O	2.02	0.42
4:L4:300:ARG:HG2	18:68:39:ARG:O	2.18	0.42
34:84:58:ARG:HB3	34:84:61:GLN:NE2	2.34	0.42
79:2S:649:A:H4'	79:2S:2869:U:C5'	2.49	0.42
58:12:74:LEU:HD11	77:31:114:VAL:HG13	2.01	0.42
19:69:105:LEU:HD22	19:69:106:LEU:HD12	1.99	0.42
65:19:91:TYR:HB2	78:1S:1590:G:OP1	2.19	0.42
78:1S:400:A:H4'	78:1S:401:A:C5'	2.49	0.42
33:83:48:ARG:HH11	33:83:48:ARG:HG2	1.83	0.42
79:2S:3190:C:H2'	79:2S:3191:G:C8	2.54	0.42
50:S4:185:GLY:N	50:S4:189:LEU:HD13	2.33	0.42
28:78:34:MET:O	79:2S:95:A:H4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:S5:133:VAL:HG22	51:S5:198:LEU:HD13	2.00	0.42
79:2S:2208:A:OP2	79:2S:2208:A:H3'	2.18	0.42
54:S8:172:ARG:HH11	54:S8:172:ARG:HG3	1.83	0.42
78:1S:1303:U:H2'	78:1S:1304:G:O4'	2.19	0.42
16:66:49:ARG:HG2	16:66:53:LYS:HE3	2.01	0.42
78:1S:628:G:H2'	78:1S:629:U:C5	2.54	0.42
69:23:13:ARG:NH1	69:23:13:ARG:HB2	2.34	0.42
66:20:67:THR:HG22	66:20:68:ARG:N	2.34	0.42
61:15:72:LYS:HA	61:15:73:PRO:HD3	1.77	0.42
79:2S:1886:A:H2'	79:2S:1887:A:C8	2.53	0.42
78:1S:1476:C:H2'	78:1S:1477:G:H8	1.84	0.42
79:2S:2820:A:H4'	82:PT:77:A:C8	2.54	0.42
6:L6:68:PRO:HB3	6:L6:142:ASP:OD1	2.19	0.42
50:S4:12:LEU:CD1	78:1S:381:C:H5'	2.49	0.42
1:L1:38:LEU:O	1:L1:165:LEU:HG	2.19	0.42
69:23:63:GLN:HA	69:23:65:ASN:N	2.34	0.42
18:68:130:ARG:O	18:68:132:PRO:HD3	2.19	0.42
18:68:85:GLY:H	18:68:104:LEU:HD12	1.83	0.42
78:1S:874:C:H4'	78:1S:1046:G:H4'	2.01	0.42
79:2S:3157:U:H4'	79:2S:3158:G:H8	1.83	0.42
51:S5:25:LEU:N	51:S5:25:LEU:HD13	2.34	0.42
79:2S:848:A:H2'	79:2S:849:C:H4'	2.01	0.42
52:S6:81:VAL:HG22	52:S6:82:SER:N	2.34	0.42
42:92:29:LYS:CD	42:92:31:GLY:H	2.31	0.42
50:S4:57:ASN:O	50:S4:61:VAL:HG23	2.18	0.42
3:L3:316:GLU:O	3:L3:317:ILE:HB	2.18	0.42
16:66:115:LYS:CG	79:2S:3178:A:H2'	2.48	0.42
78:1S:449:C:H2'	78:1S:450:U:C6	2.54	0.42
60:14:110:LEU:O	72:26:56:ALA:HB1	2.19	0.42
52:S6:194:LYS:HD3	78:1S:127:G:H5'	2.01	0.42
10:60:191:LYS:O	10:60:197:VAL:HG23	2.19	0.42
72:26:86:VAL:HG22	72:26:87:ARG:N	2.21	0.42
27:77:17:ARG:HD3	34:84:73:SER:HB3	2.01	0.42
26:76:12:ARG:HA	79:2S:215:G:H5'	2.01	0.42
47:S1:125:VAL:HG12	47:S1:172:LEU:HD12	2.01	0.42
45:RC:10:ARG:CA	45:RC:10:ARG:HE	2.30	0.42
55:S9:163:PRO:HG3	78:1S:512:A:C5'	2.45	0.42
79:2S:763:G:N1	79:2S:764:U:H1'	2.34	0.42
17:67:109:ALA:HA	17:67:112:LEU:HB2	2.02	0.42
79:2S:3346:U:H3	79:2S:3359:A:N6	2.15	0.42
70:24:79:VAL:HG12	70:24:83:LYS:HE3	1.99	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:63:76:THR:HG21	13:63:101:ARG:HH11	1.83	0.42
81:5S:61:G:H2'	81:5S:62:U:C6	2.54	0.42
42:92:37:ALA:CB	79:2S:2766:U:H5''	2.47	0.42
26:76:56:VAL:HG21	26:76:104:LEU:HB3	2.02	0.42
10:60:193:ASP:HB3	10:60:196:PHE:C	2.40	0.42
55:S9:49:LEU:CD2	55:S9:99:LEU:HD23	2.49	0.42
55:S9:49:LEU:HD21	55:S9:99:LEU:HD23	2.01	0.42
2:L2:208:ASP:N	2:L2:208:ASP:OD2	2.52	0.42
78:1S:212:U:H2'	78:1S:213:A:H8	1.84	0.42
53:S7:143:LEU:HB2	53:S7:147:ASN:HB2	2.01	0.42
4:L4:216:VAL:HA	4:L4:227:THR:HG21	2.01	0.42
78:1S:1164:G:H2'	78:1S:1165:G:H8	1.83	0.42
75:29:33:LYS:C	75:29:35:GLY:H	2.22	0.42
22:72:81:LYS:HD2	79:2S:1681:U:O4	2.19	0.42
79:2S:2916:U:H2'	79:2S:2917:G:C8	2.54	0.42
11:61:171:VAL:HG13	11:61:172:LEU:H	1.83	0.42
48:S2:116:LYS:HE2	48:S2:127:ALA:CB	2.49	0.42
7:L7:218:ARG:HA	7:L7:218:ARG:HD2	1.86	0.42
7:L7:105:LEU:HD22	79:2S:1101:G:H1'	2.01	0.42
32:82:6:HIS:HA	32:82:7:PRO:HD3	1.80	0.42
3:L3:106:TRP:HB2	3:L3:133:TYR:CE2	2.54	0.42
9:L9:151:VAL:HG11	79:2S:3111:U:H4'	2.00	0.42
61:15:40:ARG:HE	61:15:40:ARG:HA	1.82	0.42
3:L3:229:VAL:HG23	3:L3:233:TRP:HD1	1.84	0.42
10:60:75:TYR:O	10:60:79:VAL:HG23	2.19	0.42
6:L6:78:ARG:HB2	79:2S:3272:C:H5'	2.00	0.42
16:66:65:ASN:HD22	79:2S:2988:C:H5''	1.83	0.42
51:S5:57:SER:C	51:S5:59:VAL:H	2.23	0.42
68:22:105:THR:CG2	68:22:110:ILE:HG12	2.48	0.42
79:2S:2799:A:H5''	79:2S:2800:G:O5'	2.19	0.42
79:2S:957:C:H5''	79:2S:2799:A:N7	2.34	0.42
7:L7:127:LEU:C	7:L7:129:LEU:H	2.22	0.42
79:2S:161:G:H2'	79:2S:162:G:C8	2.53	0.42
58:12:24:ILE:O	58:12:24:ILE:HG12	2.20	0.42
50:S4:102:VAL:HG11	50:S4:239:PRO:HB3	2.00	0.42
2:L2:42:ARG:HG2	2:L2:43:GLY:N	2.35	0.42
2:L2:174:ARG:NH1	2:L2:175:VAL:HG13	2.34	0.42
79:2S:283:G:N2	79:2S:285:A:H5''	2.30	0.42
50:S4:179:LYS:O	50:S4:181:VAL:HG23	2.19	0.42
46:S0:56:LYS:CB	46:S0:160:ILE:HG23	2.45	0.42
78:1S:940:A:H2'	78:1S:941:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:81:10:ARG:HB2	31:81:12:TYR:CE2	2.54	0.42
66:20:96:PRO:HB2	66:20:97:VAL:H	1.70	0.42
79:2S:3163:A:H3'	79:2S:3164:C:C5'	2.46	0.42
23:73:87:ARG:HH12	23:73:120:LYS:HD3	1.84	0.42
37:87:15:SER:O	37:87:28:HIS:HA	2.20	0.42
44:P0:61:ARG:HB2	79:2S:1221:A:OP2	2.19	0.42
20:70:132:THR:O	20:70:133:ALA:CB	2.66	0.42
79:2S:2820:A:H5''	82:PT:77:A:C5	2.54	0.42
27:77:121:ARG:HH11	27:77:121:ARG:HG3	1.85	0.42
82:ET:60:A:N3	82:ET:60:A:H2'	2.34	0.42
64:18:134:ARG:HD2	78:1S:1559:A:C8	2.54	0.42
79:2S:2547:A:C2'	79:2S:2548:C:H5'	2.49	0.42
2:L2:180:LEU:HD13	43:93:18:TYR:CE1	2.54	0.42
79:2S:338:A:H3'	79:2S:339:C:H5''	2.00	0.42
32:82:32:TRP:HH2	32:82:52:GLN:HG2	1.84	0.42
47:S1:202:LYS:NZ	47:S1:202:LYS:HB2	2.34	0.42
78:1S:523:G:H1'	78:1S:529:A:N6	2.34	0.42
70:24:47:VAL:HG23	70:24:48:TYR:CD2	2.54	0.42
50:S4:160:VAL:HG22	50:S4:172:PHE:HB2	2.01	0.42
62:16:5:PRO:HG2	62:16:24:ALA:HB2	2.01	0.42
7:L7:31:ALA:O	7:L7:35:ALA:HB3	2.19	0.42
59:13:76:LYS:HE3	59:13:76:LYS:HB3	1.91	0.42
2:L2:158:ILE:HG13	2:L2:159:SER:N	2.34	0.42
79:2S:674:G:H2'	79:2S:675:C:O4'	2.19	0.42
46:S0:20:ALA:O	46:S0:21:ASN:HB2	2.20	0.42
59:13:48:SER:O	59:13:52:VAL:HG23	2.20	0.42
3:L3:347:SER:C	3:L3:349:LYS:H	2.22	0.42
62:16:73:GLY:O	62:16:77:GLN:HG3	2.19	0.42
78:1S:1087:A:H2'	78:1S:1088:A:C8	2.53	0.42
55:S9:45:ILE:HG23	55:S9:104:PHE:CD1	2.55	0.42
80:8S:155:A:H2'	80:8S:156:U:O4'	2.19	0.42
78:1S:814:A:N3	78:1S:814:A:H2'	2.35	0.42
79:2S:2533:G:H2'	79:2S:2534:G:O4'	2.20	0.42
8:L8:74:THR:HG23	8:L8:75:ILE:HG13	2.01	0.42
47:S1:35:PRO:HA	47:S1:232:HIS:HE2	1.81	0.42
78:1S:175:G:N2	78:1S:176:C:H41	2.17	0.42
78:1S:1160:A:H2'	78:1S:1161:C:H6	1.82	0.42
16:66:153:VAL:HG12	16:66:157:GLU:HG2	2.00	0.42
79:2S:728:G:H2'	79:2S:729:C:C6	2.54	0.42
3:L3:203:VAL:HG12	3:L3:204:ALA:H	1.84	0.42
3:L3:203:VAL:HG12	3:L3:204:ALA:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:24:90:ARG:HA	70:24:93:ARG:HD2	2.01	0.42
2:L2:230:VAL:HG11	79:2S:2424:A:C2	2.51	0.42
79:2S:858:A:H2'	79:2S:859:G:O4'	2.20	0.42
43:93:57:CYS:SG	43:93:59:CYS:O	2.67	0.42
78:1S:832:U:C2'	78:1S:833:U:H5''	2.48	0.42
28:78:72:VAL:HG12	28:78:111:LYS:CG	2.50	0.42
14:64:108:ARG:NH2	14:64:108:ARG:HG2	2.34	0.42
79:2S:426:G:H2'	79:2S:427:C:C6	2.54	0.42
27:77:72:ILE:HG13	27:77:72:ILE:O	2.19	0.42
3:L3:2:SER:HB3	79:2S:2943:G:C8	2.55	0.42
46:S0:154:GLU:O	46:S0:155:PHE:HB2	2.20	0.42
66:20:20:ILE:HD11	66:20:100:VAL:HG21	2.01	0.42
11:61:8:PRO:HG2	11:61:9:MET:H	1.84	0.42
54:S8:152:ILE:HB	79:2S:2066:C:O2	2.20	0.42
8:L8:76:ALA:H	8:L8:78:PHE:HE1	1.68	0.42
8:L8:105:LYS:HG3	8:L8:108:ARG:CZ	2.50	0.42
61:15:44:ARG:HH21	61:15:82:ASN:HD22	1.67	0.42
79:2S:1227:C:H2'	79:2S:1228:C:C6	2.55	0.42
21:71:147:VAL:HA	21:71:148:PRO:HD3	1.88	0.42
13:63:193:ALA:O	13:63:194:GLU:HB3	2.19	0.42
78:1S:728:U:H2'	78:1S:729:G:H5'	2.00	0.42
81:5S:77:G:H1'	81:5S:78:U:H5	1.85	0.42
51:S5:45:LYS:HA	51:S5:45:LYS:HE3	2.00	0.42
16:66:151:ASP:N	16:66:151:ASP:OD2	2.51	0.42
70:24:13:ILE:HD12	70:24:13:ILE:N	2.34	0.42
11:61:81:GLU:HA	11:61:84:LEU:HD12	2.00	0.42
44:P0:74:GLU:HA	44:P0:77:LEU:HB2	2.00	0.42
13:63:58:VAL:HG12	79:2S:75:G:H5''	2.01	0.42
50:S4:104:ASP:HB3	50:S4:105:VAL:H	1.57	0.42
79:2S:1256:G:H2'	79:2S:1257:C:C6	2.54	0.42
46:S0:54:TRP:HH2	46:S0:191:ARG:HH22	1.66	0.42
58:12:57:ALA:HA	58:12:123:VAL:O	2.19	0.42
17:67:3:ARG:HG3	79:2S:398:A:H5'	2.02	0.42
9:L9:27:VAL:HG21	9:L9:78:MET:CB	2.42	0.42
14:64:32:LEU:HB3	14:64:85:TRP:CZ2	2.54	0.42
79:2S:1336:U:H2'	79:2S:1337:A:C8	2.54	0.42
61:15:90:ILE:HA	61:15:107:ILE:HB	2.01	0.42
46:S0:102:PHE:CZ	46:S0:135:GLU:HG3	2.47	0.42
79:2S:2655:U:H4'	79:2S:2656:A:O4'	2.19	0.42
44:P0:96:ILE:O	44:P0:100:ILE:HG13	2.19	0.42
4:L4:135:VAL:CG1	4:L4:142:VAL:HG11	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:65:71:ARG:CD	15:65:94:TYR:HB2	2.49	0.42
79:2S:2118:C:H2'	79:2S:2119:A:O4'	2.18	0.42
55:S9:48:GLN:O	55:S9:52:ILE:HG13	2.20	0.42
66:20:28:SER:HB2	66:20:34:LEU:HD23	2.01	0.42
49:S3:159:HIS:O	49:S3:160:SER:CB	2.67	0.42
79:2S:2451:G:N2	79:2S:2495:C:H42	2.18	0.42
3:L3:216:ASP:HA	3:L3:277:SER:O	2.20	0.42
16:66:147:TRP:CE2	16:66:149:TYR:HB2	2.54	0.42
79:2S:698:U:H2'	79:2S:699:A:C1'	2.50	0.42
47:S1:22:ASP:N	47:S1:23:PRO:HD3	2.33	0.42
47:S1:27:LYS:HD2	47:S1:47:LEU:HD13	2.02	0.42
21:71:112:ASN:O	21:71:116:ARG:HB2	2.19	0.42
2:L2:137:ILE:HG13	2:L2:138:GLY:H	1.84	0.42
2:L2:138:GLY:N	2:L2:147:ARG:HB3	2.35	0.42
11:61:112:LEU:N	11:61:112:LEU:HD23	2.34	0.42
24:74:42:GLN:O	24:74:43:ARG:HB2	2.20	0.42
79:2S:88:A:H2'	79:2S:89:A:O4'	2.19	0.42
79:2S:1658:G:H2'	79:2S:1659:U:O4'	2.19	0.42
78:1S:1133:A:H2'	78:1S:1134:C:O4'	2.18	0.42
37:87:21:ARG:HD2	37:87:37:CYS:HB2	2.01	0.42
3:L3:79:VAL:CG1	3:L3:322:ILE:HB	2.50	0.42
79:2S:1682:U:H1'	79:2S:1685:C:N4	2.34	0.42
16:66:58:LEU:HA	16:66:72:HIS:NE2	2.34	0.42
57:11:6:THR:O	57:11:7:VAL:HB	2.18	0.42
78:1S:162:A:H3'	78:1S:163:G:N2	2.34	0.42
79:2S:1909:A:H2'	79:2S:1910:A:O4'	2.19	0.42
79:2S:32:U:H3	79:2S:52:A:N6	2.17	0.42
31:81:29:ALA:O	31:81:33:VAL:HG23	2.19	0.42
11:61:134:PRO:HB2	81:5S:55:A:N1	2.34	0.42
50:S4:99:PHE:CE1	50:S4:113:ARG:HG2	2.55	0.42
8:L8:58:VAL:O	8:L8:62:LYS:N	2.52	0.42
19:69:118:HIS:O	19:69:122:VAL:HG23	2.19	0.42
52:S6:39:GLU:HG2	52:S6:39:GLU:O	2.19	0.42
62:16:5:PRO:HD2	62:16:24:ALA:HB2	2.02	0.42
79:2S:2084:C:H5	79:2S:2085:U:O2	2.02	0.42
78:1S:58:U:H4'	78:1S:456:A:C2	2.55	0.42
9:L9:92:TYR:OH	9:L9:136:PHE:HD1	2.02	0.42
78:1S:1001:A:H2'	78:1S:1002:G:C8	2.55	0.42
82:PT:34:U:H2'	82:PT:36:A:OP2	2.20	0.42
1:L1:92:LYS:HB3	1:L1:95:LYS:CE	2.49	0.42
10:60:43:VAL:HA	10:60:139:ARG:NH2	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:28:60:GLU:O	74:28:61:ARG:HB2	2.20	0.42
21:71:62:GLY:HA3	21:71:74:VAL:CG1	2.50	0.42
54:S8:181:GLY:O	54:S8:182:TYR:HB3	2.20	0.42
21:71:128:LEU:HD11	79:2S:1096:U:C5'	2.36	0.42
79:2S:1953:G:O6	79:2S:2094:C:O2	2.37	0.42
55:S9:93:LEU:HA	55:S9:96:VAL:HG22	2.02	0.42
10:60:156:ARG:HD2	10:60:163:GLN:O	2.19	0.42
69:23:68:ILE:HG22	69:23:70:LYS:H	1.83	0.42
18:68:57:ILE:HD12	79:2S:671:U:OP2	2.19	0.42
63:17:25:THR:OG1	63:17:30:THR:HG21	2.19	0.42
50:S4:177:ALA:HA	50:S4:195:ILE:HB	2.01	0.42
79:2S:1605:A:O2'	79:2S:1607:U:H6	1.99	0.42
55:S9:146:PHE:O	55:S9:147:MET:HB2	2.19	0.42
15:65:93:LYS:HD2	79:2S:289:A:C2	2.55	0.42
56:10:59:PHE:CE2	56:10:62:GLN:HA	2.54	0.42
47:S1:85:LYS:HB3	47:S1:102:GLY:O	2.20	0.42
66:20:41:ILE:O	66:20:41:ILE:CG2	2.67	0.42
34:84:4:ARG:HB3	79:2S:1857:C:O2	2.19	0.42
46:S0:126:PRO:HG3	46:S0:147:THR:CG2	2.47	0.42
9:L9:19:SER:HB2	9:L9:26:LYS:HB3	2.01	0.42
53:S7:87:ASP:HB3	53:S7:88:ARG:NH1	2.34	0.42
32:82:26:HIS:HB2	79:2S:655:C:C5'	2.47	0.42
78:1S:855:A:H3'	78:1S:856:A:H3'	2.02	0.42
49:S3:126:VAL:HG12	49:S3:131:ALA:HB2	2.01	0.42
50:S4:68:ARG:CB	50:S4:76:VAL:HG21	2.50	0.42
78:1S:1490:C:H2'	78:1S:1514:U:O4	2.18	0.42
23:73:32:ARG:HB2	23:73:64:LYS:HB3	2.01	0.42
20:70:77:VAL:HG13	20:70:125:LYS:O	2.19	0.42
79:2S:1275:C:H2'	79:2S:1276:U:O4'	2.19	0.42
18:68:8:LYS:O	18:68:9:GLN:HG2	2.20	0.42
79:2S:3063:C:H2'	79:2S:3064:U:C6	2.55	0.42
79:2S:53:G:H4'	79:2S:812:G:H4'	2.02	0.42
79:2S:801:A:H4'	79:2S:802:C:C5'	2.50	0.42
78:1S:1388:A:H61	78:1S:1409:G:H1'	1.84	0.42
78:1S:343:C:H2'	78:1S:344:A:C8	2.55	0.42
79:2S:2449:A:C2'	79:2S:2450:G:H5'	2.50	0.42
23:73:114:ILE:HG13	23:73:132:ASN:HB3	2.01	0.42
35:85:5:LYS:HD2	35:85:7:TYR:OH	2.20	0.42
46:S0:69:ASN:HA	46:S0:70:PRO:HD2	1.96	0.42
79:2S:2742:C:H2'	79:2S:2743:A:H8	1.85	0.42
79:2S:2742:C:H2'	79:2S:2743:A:C8	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:23:92:CYS:HA	69:23:95:PHE:CD2	2.54	0.42
79:2S:2875:U:H2'	79:2S:2875:U:O2	2.20	0.42
10:60:158:LYS:HA	10:60:158:LYS:HD3	1.92	0.42
79:2S:941:G:H2'	79:2S:942:U:O4'	2.20	0.42
78:1S:137:U:O2'	78:1S:138:A:H5'	2.19	0.42
78:1S:1169:G:H21	78:1S:1576:A:N6	1.95	0.42
8:L8:186:LEU:O	8:L8:189:LEU:HG	2.20	0.42
79:2S:113:C:H3'	79:2S:154:U:O4	2.19	0.42
4:L4:38:VAL:O	4:L4:42:VAL:HG23	2.19	0.42
50:S4:4:GLY:HA2	50:S4:5:PRO:HD3	1.89	0.42
79:2S:562:C:H2'	79:2S:563:U:C6	2.55	0.42
7:L7:86:VAL:HG22	7:L7:136:TYR:CB	2.43	0.42
3:L3:369:ARG:HH21	3:L3:369:ARG:HG2	1.83	0.42
2:L2:135:ILE:HG22	2:L2:136:ILE:N	2.35	0.42
23:73:70:ARG:NH1	23:73:70:ARG:HB2	2.33	0.42
3:L3:54:THR:HG23	3:L3:76:VAL:HG23	2.02	0.42
2:L2:45:VAL:O	2:L2:45:VAL:HG13	2.19	0.42
55:S9:124:HIS:O	55:S9:128:LEU:HG	2.19	0.42
17:67:29:THR:HA	17:67:32:THR:CG2	2.45	0.42
47:S1:68:VAL:HG22	47:S1:72:ASP:CB	2.48	0.42
38:88:63:LYS:CE	38:88:66:ILE:HD12	2.46	0.42
78:1S:1681:A:H2'	78:1S:1682:U:C4'	2.49	0.42
53:S7:30:SER:C	53:S7:32:PRO:HD2	2.40	0.42
15:65:35:VAL:HG13	15:65:65:ARG:O	2.19	0.42
4:L4:114:ASN:HB2	4:L4:117:GLU:HB2	2.00	0.42
78:1S:1511:U:H2'	78:1S:1512:G:H8	1.82	0.42
43:93:30:GLU:HA	43:93:33:GLN:HG2	2.00	0.42
15:65:179:LYS:HD3	79:2S:287:G:OP1	2.19	0.42
79:2S:971:G:O2'	79:2S:1371:G:H1'	2.20	0.42
54:S8:114:GLU:HA	54:S8:120:THR:HA	2.01	0.42
47:S1:179:SER:HB3	47:S1:183:GLN:CB	2.49	0.42
79:2S:2817:A:H3'	79:2S:2818:U:H5'	2.02	0.42
78:1S:560:U:H2'	78:1S:561:G:H8	1.85	0.42
17:67:114:VAL:HG13	17:67:114:VAL:O	2.20	0.42
60:14:133:ARG:NH2	78:1S:1786:G:OP2	2.52	0.42
47:S1:170:GLU:O	47:S1:174:LYS:HG3	2.20	0.42
3:L3:17:LEU:HD12	3:L3:19:ARG:N	2.34	0.42
14:64:129:TYR:HE1	79:2S:3229:G:N3	2.17	0.42
79:2S:268:A:H61	79:2S:295:A:H3'	1.85	0.42
51:S5:219:ARG:O	51:S5:222:LYS:HB3	2.20	0.42
7:L7:69:ALA:HB2	7:L7:76:TYR:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:8S:130:C:H2'	80:8S:131:A:C8	2.55	0.42
29:79:6:ASN:HB2	79:2S:1135:A:OP1	2.19	0.42
1:L1:43:PRO:HA	1:L1:161:LYS:HD2	2.00	0.42
65:19:22:LEU:HD13	65:19:25:GLN:OE1	2.20	0.42
78:1S:463:U:H2'	78:1S:464:A:O4'	2.19	0.42
52:S6:161:GLU:HG2	52:S6:170:THR:HB	2.02	0.42
64:18:127:HIS:HE1	78:1S:1545:A:H5''	1.84	0.42
78:1S:950:C:H2'	78:1S:951:A:O4'	2.20	0.42
4:L4:130:ALA:O	4:L4:131:VAL:HB	2.19	0.42
5:L5:223:PHE:O	5:L5:227:LEU:HD13	2.19	0.42
79:2S:2603:G:H2'	79:2S:2604:U:C6	2.54	0.42
45:RC:168:THR:HG23	45:RC:181:TRP:O	2.20	0.42
37:87:18:LEU:HD23	37:87:25:ARG:CA	2.48	0.42
79:2S:3335:A:C4	79:2S:3371:G:H4'	2.54	0.42
48:S2:140:ARG:HB3	48:S2:221:THR:CB	2.41	0.42
25:75:109:LYS:HG2	25:75:125:ARG:HB3	2.01	0.42
8:L8:169:LEU:HD23	8:L8:173:MET:HG2	2.01	0.42
47:S1:86:LEU:C	47:S1:101:HIS:HB2	2.39	0.42
69:23:127:VAL:HG13	69:23:132:LEU:HD21	2.01	0.42
10:60:55:ASN:OD1	10:60:163:GLN:HA	2.19	0.42
78:1S:1711:C:C2'	78:1S:1712:A:H4'	2.45	0.42
33:83:103:TYR:HA	33:83:105:SER:N	2.35	0.42
82:ET:22:A:H2'	82:ET:47:G:C6	2.54	0.42
78:1S:1645:G:H2'	78:1S:1646:C:C6	2.55	0.42
14:64:48:GLY:H	14:64:53:VAL:HG13	1.85	0.42
23:73:81:GLN:HE21	23:73:83:LYS:HB3	1.84	0.42
48:S2:145:GLY:CA	68:22:97:ARG:HB2	2.50	0.42
79:2S:1787:A:H2'	79:2S:1788:C:C5'	2.48	0.42
34:84:19:LYS:HZ3	34:84:38:LEU:HD12	1.82	0.42
3:L3:218:ILE:HB	3:L3:337:THR:HB	2.02	0.42
61:15:109:PRO:O	61:15:112:LEU:HG	2.19	0.42
48:S2:141:ARG:NH2	48:S2:151:PRO:HB2	2.33	0.42
69:23:24:TRP:HE1	78:1S:311:U:H5'	1.85	0.42
80:8S:71:A:C2	80:8S:88:A:H1'	2.55	0.42
30:80:78:GLY:HA2	30:80:87:VAL:HG12	2.02	0.42
8:L8:36:ILE:HG22	8:L8:37:GLY:N	2.34	0.42
79:2S:752:C:H2'	79:2S:753:C:H6	1.85	0.42
21:71:20:ARG:HH11	21:71:20:ARG:CB	2.32	0.42
8:L8:48:ARG:HA	79:2S:2585:G:C8	2.55	0.42
51:S5:140:THR:CG2	51:S5:201:ALA:HB1	2.50	0.42
78:1S:126:A:N1	78:1S:264:G:H4'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:75:100:LYS:HZ1	25:75:107:VAL:H	1.67	0.42
7:L7:37:ASN:O	7:L7:41:ARG:HG3	2.20	0.42
44:P0:61:ARG:HB2	79:2S:1221:A:H5'	2.01	0.42
78:1S:598:U:H2'	78:1S:599:A:H8	1.84	0.42
79:2S:1024:G:H2'	79:2S:1024:G:N3	2.35	0.42
76:30:23:LYS:HG3	78:1S:586:G:H5''	2.02	0.42
18:68:65:SER:HB3	18:68:90:ASP:CG	2.40	0.42
79:2S:718:G:C2	79:2S:721:G:H1'	2.55	0.42
78:1S:612:U:H2'	78:1S:613:G:C8	2.54	0.42
79:2S:2333:C:H2'	79:2S:2334:U:C6	2.54	0.42
79:2S:3210:A:H2'	79:2S:3211:C:H6	1.84	0.42
74:28:21:SER:HA	78:1S:1618:C:H4'	2.01	0.42
49:S3:115:ILE:HG21	49:S3:142:LEU:CD2	2.49	0.42
51:S5:99:MET:HG3	51:S5:100:ASN:N	2.35	0.42
78:1S:962:C:H2'	78:1S:963:A:O4'	2.19	0.42
45:RC:173:GLY:O	45:RC:199:ILE:HB	2.20	0.42
43:93:39:CYS:HB3	43:93:42:CYS:SG	2.60	0.42
30:80:25:LEU:HD23	30:80:90:VAL:HG13	2.01	0.42
58:12:130:THR:HG22	58:12:131:ASP:N	2.34	0.42
42:92:60:LYS:HD3	79:2S:2803:A:OP1	2.19	0.42
78:1S:179:A:H2'	78:1S:180:A:O4'	2.20	0.42
6:L6:170:LYS:O	6:L6:174:LEU:HG	2.19	0.42
28:78:12:ARG:HA	28:78:12:ARG:HD3	1.88	0.42
58:12:23:THR:HG23	58:12:23:THR:O	2.20	0.42
37:87:69:HIS:O	37:87:73:ARG:HG3	2.20	0.42
37:87:14:LYS:HE2	79:2S:1491:A:H5''	2.02	0.42
37:87:18:LEU:HD23	37:87:25:ARG:CB	2.47	0.42
23:73:39:VAL:HA	23:73:58:VAL:CB	2.49	0.42
78:1S:505:A:N1	78:1S:507:U:N3	2.67	0.42
55:S9:93:LEU:HA	55:S9:96:VAL:CG2	2.50	0.42
48:S2:158:THR:HG21	48:S2:221:THR:HA	2.01	0.42
79:2S:160:G:H3'	79:2S:161:G:C5'	2.41	0.42
1:L1:189:PHE:HE1	1:L1:201:VAL:HG23	1.85	0.42
18:68:147:ARG:NH1	18:68:150:VAL:CG1	2.83	0.42
6:L6:65:ILE:N	6:L6:65:ILE:HD13	2.34	0.42
50:S4:181:VAL:O	50:S4:192:ILE:HA	2.20	0.42
49:S3:210:GLU:HA	49:S3:211:PRO:HD3	1.90	0.42
20:70:128:GLU:HG2	20:70:129:ILE:N	2.34	0.42
30:80:16:LEU:CD1	30:80:98:SER:HB2	2.47	0.42
1:L1:103:LEU:HG	1:L1:128:LEU:HD13	2.01	0.42
67:21:78:LEU:HD23	67:21:78:LEU:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:L8:170:CYS:HB3	8:L8:175:VAL:O	2.19	0.42
23:73:93:LEU:HB2	24:74:20:LEU:HD22	2.02	0.42
7:L7:179:LEU:HD13	7:L7:179:LEU:H	1.83	0.42
3:L3:46:PHE:HZ	3:L3:204:ALA:HA	1.85	0.42
23:73:87:ARG:NH1	23:73:120:LYS:HD3	2.35	0.42
3:L3:226:PHE:HA	3:L3:269:GLN:HA	2.02	0.42
80:8S:66:A:H2'	80:8S:67:U:C6	2.55	0.42
54:S8:114:GLU:CG	54:S8:120:THR:HG22	2.49	0.42
79:2S:1904:C:H2'	79:2S:1905:G:C8	2.55	0.42
4:L4:175:HIS:O	4:L4:179:LEU:HG	2.20	0.42
15:65:15:GLN:CG	36:86:51:SER:HB2	2.50	0.42
78:1S:1758:U:H2'	78:1S:1759:C:C6	2.55	0.42
79:2S:2675:C:H2'	79:2S:2676:A:C8	2.55	0.42
82:ET:49:C:H2'	82:ET:60:A:C4'	2.49	0.42
78:1S:119:A:H2'	78:1S:120:U:H5'	2.01	0.42
79:2S:3096:C:H2'	79:2S:3097:C:H6	1.84	0.42
79:2S:841:A:H2'	79:2S:842:G:C8	2.55	0.42
81:5S:70:U:H2'	81:5S:71:G:C8	2.55	0.42
8:L8:165:PHE:H	8:L8:165:PHE:HD1	1.67	0.42
6:L6:70:LYS:NZ	6:L6:139:LYS:HE2	2.35	0.42
5:L5:258:LYS:O	5:L5:259:LYS:HB3	2.20	0.42
70:24:104:SER:HB3	70:24:107:GLN:HB2	2.01	0.42
27:77:41:ALA:HB2	27:77:77:TYR:CE1	2.55	0.42
72:26:19:LYS:HA	72:26:19:LYS:HE3	2.02	0.42
78:1S:534:A:H2'	78:1S:534:A:N3	2.35	0.42
79:2S:2318:U:H2'	79:2S:2319:U:O4'	2.20	0.42
74:28:9:LEU:HB3	74:28:33:LEU:HD23	2.02	0.42
5:L5:134:ALA:CA	5:L5:141:PRO:HD3	2.50	0.42
79:2S:2633:U:C2'	79:2S:2634:U:H5'	2.50	0.42
7:L7:25:GLN:O	7:L7:25:GLN:OE1	2.37	0.42
55:S9:149:ARG:HD2	78:1S:765:G:C5	2.54	0.42
36:86:26:ILE:HG22	79:2S:155:G:N2	2.28	0.42
55:S9:45:ILE:HG21	55:S9:105:LEU:CD1	2.50	0.42
52:S6:14:LYS:HD3	52:S6:16:PHE:CZ	2.55	0.42
79:2S:496:C:H1'	79:2S:622:A:C2	2.55	0.42
24:74:6:ASP:HA	24:74:13:ILE:HD11	2.01	0.42
65:19:83:ALA:HB1	65:19:91:TYR:HB3	2.02	0.42
31:81:20:LEU:HD11	31:81:32:ALA:HB2	2.01	0.42
48:S2:203:LYS:HB2	78:1S:15:U:OP2	2.20	0.42
37:87:49:TRP:HE3	79:2S:929:A:H1'	1.85	0.42
79:2S:207:U:H2'	79:2S:208:C:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L2:196:TRP:HD1	2:L2:198:LYS:NZ	2.18	0.42
57:11:101:GLU:HB3	69:23:12:ALA:HB3	2.01	0.42
79:2S:1125:U:H2'	79:2S:1126:G:O4'	2.19	0.42
54:S8:141:ARG:HD3	78:1S:195:G:O6	2.19	0.42
78:1S:1642:G:O2'	78:1S:1643:U:H5'	2.20	0.42
21:71:116:ARG:NH1	21:71:116:ARG:HG3	2.35	0.42
79:2S:2788:C:H2'	79:2S:2789:U:C6	2.54	0.42
48:S2:159:THR:HG22	48:S2:160:GLY:N	2.35	0.42
78:1S:1076:A:O2'	78:1S:1077:C:H5'	2.20	0.42
12:62:66:ASN:N	12:62:69:ALA:HB3	2.34	0.42
6:L6:146:ILE:O	6:L6:150:LYS:HG3	2.19	0.42
79:2S:439:C:O2	79:2S:439:C:H2'	2.19	0.42
19:69:162:ARG:HB2	19:69:162:ARG:NH1	2.35	0.42
15:65:150:TRP:O	15:65:153:ASP:HB2	2.20	0.42
5:L5:99:TYR:HA	5:L5:162:ALA:HA	2.01	0.42
2:L2:118:GLU:HG3	2:L2:125:ALA:CB	2.49	0.42
58:12:40:GLY:HA3	58:12:124:LYS:O	2.19	0.42
57:11:85:VAL:HG22	57:11:108:PRO:HB3	2.01	0.42
49:S3:175:VAL:CG1	49:S3:182:LEU:HB2	2.50	0.42
43:93:39:CYS:O	43:93:43:GLY:HA2	2.20	0.42
59:13:53:LEU:O	59:13:57:ALA:HB3	2.19	0.42
79:2S:412:G:H2'	79:2S:413:U:C6	2.54	0.42
32:82:122:PRO:O	32:82:126:LEU:HD11	2.20	0.42
79:2S:1520:G:H2'	79:2S:1521:G:O4'	2.19	0.42
79:2S:1623:G:H2'	79:2S:1624:G:O4'	2.20	0.42
16:66:78:ARG:HA	16:66:81:TYR:HB2	2.02	0.42
79:2S:1479:U:H2'	79:2S:1480:G:H5'	2.00	0.42
49:S3:29:LEU:HD13	49:S3:58:VAL:HG13	2.01	0.42
16:66:95:GLY:O	16:66:99:LEU:HG	2.20	0.42
45:RC:216:LYS:HA	45:RC:239:GLU:HG3	2.02	0.42
13:63:181:GLY:HA3	79:2S:2780:A:O2'	2.19	0.42
59:13:39:LYS:N	59:13:39:LYS:HE2	2.35	0.42
5:L5:232:ASP:N	5:L5:232:ASP:OD2	2.51	0.42
79:2S:3382:U:H2'	79:2S:3382:U:O2	2.20	0.42
8:L8:153:ILE:HD11	8:L8:177:TYR:HB2	2.02	0.42
79:2S:1753:G:H2'	79:2S:1754:G:O4'	2.20	0.42
8:L8:147:LYS:HD2	79:2S:117:U:O4	2.20	0.42
3:L3:93:VAL:HG22	3:L3:94:GLU:N	2.35	0.41
48:S2:66:PHE:N	48:S2:66:PHE:CD1	2.83	0.41
25:75:82:LEU:HB3	25:75:84:PHE:CZ	2.55	0.41
59:13:96:VAL:HA	59:13:99:ARG:CB	2.43	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2700:G:H2'	79:2S:2701:U:H6	1.76	0.41
45:RC:211:ILE:HD11	45:RC:225:LEU:HA	2.02	0.41
76:30:46:ASN:O	76:30:47:VAL:HG12	2.20	0.41
79:2S:2272:G:H5'	79:2S:2272:G:N3	2.35	0.41
20:70:73:LYS:HB2	20:70:75:PHE:CE1	2.56	0.41
20:70:73:LYS:HE2	20:70:75:PHE:HE1	1.85	0.41
55:S9:175:ARG:HH11	55:S9:175:ARG:HG3	1.85	0.41
5:L5:20:PHE:HB2	5:L5:23:ARG:CB	2.50	0.41
47:S1:126:THR:CG2	47:S1:136:ARG:HG3	2.48	0.41
17:67:122:ALA:HB2	17:67:145:HIS:CD2	2.54	0.41
55:S9:125:ALA:O	55:S9:129:ILE:HG13	2.19	0.41
65:19:31:PRO:HD2	65:19:34:VAL:CB	2.49	0.41
8:L8:178:ALA:HB2	8:L8:218:ILE:CG2	2.49	0.41
20:70:1:MET:HA	79:2S:1323:G:C5'	2.49	0.41
47:S1:29:TRP:CH2	47:S1:45:LYS:HB3	2.55	0.41
17:67:67:ILE:HG22	17:67:68:GLY:N	2.34	0.41
79:2S:1448:U:H2'	79:2S:1449:A:H8	1.85	0.41
78:1S:966:A:H2'	78:1S:967:A:C8	2.54	0.41
9:L9:12:VAL:HB	9:L9:51:GLN:HA	2.02	0.41
37:87:26:SER:HB2	37:87:34:CYS:SG	2.60	0.41
79:2S:866:A:H3'	79:2S:867:G:C8	2.54	0.41
53:S7:44:LYS:CG	53:S7:63:PRO:HG3	2.50	0.41
79:2S:3250:U:H2'	79:2S:3251:U:H6	1.85	0.41
78:1S:1596:C:HO2'	78:1S:1598:U:H5	1.66	0.41
67:21:34:ILE:O	67:21:52:THR:HA	2.19	0.41
51:S5:25:LEU:HB2	51:S5:26:ALA:H	1.52	0.41
79:2S:1851:G:H2'	79:2S:1852:G:C8	2.55	0.41
4:L4:151:VAL:HG21	4:L4:255:PHE:CD2	2.55	0.41
79:2S:3372:A:H2'	79:2S:3373:U:C6	2.55	0.41
79:2S:1743:G:H2'	79:2S:1744:G:O4'	2.20	0.41
14:64:66:THR:HG22	14:64:99:TRP:CZ3	2.55	0.41
79:2S:167:U:H2'	79:2S:168:U:O4'	2.20	0.41
3:L3:238:LEU:N	3:L3:238:LEU:HD22	2.35	0.41
66:20:51:VAL:O	66:20:51:VAL:HG13	2.19	0.41
78:1S:1170:G:H2'	78:1S:1170:G:N3	2.34	0.41
56:10:82:LEU:HD22	56:10:86:ILE:HG21	2.01	0.41
51:S5:88:PRO:O	51:S5:92:ARG:HG3	2.20	0.41
79:2S:2512:C:H2'	79:2S:2513:U:OP2	2.20	0.41
13:63:79:GLU:HG3	13:63:103:ASN:HD21	1.85	0.41
71:25:83:LEU:HB2	71:25:89:ILE:HD11	2.02	0.41
27:77:13:VAL:HG12	27:77:14:VAL:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:S1:148:ASN:HB3	63:17:125:SER:O	2.20	0.41
1:L1:120:VAL:H	1:L1:121:PRO:HD3	1.84	0.41
55:S9:65:LYS:HA	55:S9:70:LEU:CD1	2.49	0.41
10:60:55:ASN:O	10:60:56:GLU:HG3	2.20	0.41
36:86:70:ARG:CZ	36:86:84:LYS:HG2	2.49	0.41
7:L7:82:LYS:HA	7:L7:119:VAL:CG2	2.50	0.41
79:2S:3190:C:H2'	79:2S:3191:G:H8	1.85	0.41
33:83:35:VAL:HG11	33:83:41:ALA:HB2	2.01	0.41
7:L7:232:ARG:O	7:L7:235:PHE:HD2	2.02	0.41
79:2S:1596:C:H42	79:2S:1611:G:H1	1.67	0.41
79:2S:3287:U:H2'	79:2S:3288:G:H5'	2.02	0.41
8:L8:69:LEU:HD13	15:65:21:PHE:CZ	2.55	0.41
67:21:73:ALA:HB3	67:21:79:LEU:CD1	2.50	0.41
23:73:84:SER:CA	23:73:94:TYR:HB3	2.46	0.41
78:1S:1106:U:H2'	78:1S:1107:G:H8	1.86	0.41
46:S0:125:ASP:HA	46:S0:126:PRO:HD2	1.92	0.41
2:L2:96:LEU:HD23	43:93:83:ILE:HG23	2.02	0.41
43:93:15:GLY:HA3	43:93:17:ARG:NH2	2.35	0.41
20:70:1:MET:C	79:2S:1323:G:H5''	2.39	0.41
15:65:68:ARG:HD2	15:65:127:TYR:C	2.40	0.41
17:67:124:LYS:HB3	17:67:140:GLU:HB3	2.02	0.41
15:65:38:ARG:HG2	15:65:61:ILE:O	2.20	0.41
2:L2:23:ARG:HD3	79:2S:2175:U:O2'	2.21	0.41
7:L7:41:ARG:NH1	7:L7:41:ARG:HB3	2.35	0.41
23:73:57:MET:HA	23:73:77:ILE:HA	2.02	0.41
79:2S:2732:G:H5'	79:2S:2761:G:H5''	2.01	0.41
78:1S:705:U:H2'	78:1S:706:A:C8	2.53	0.41
58:12:61:VAL:HG13	58:12:121:VAL:HG23	2.02	0.41
11:61:50:ALA:HB3	11:61:60:ARG:O	2.20	0.41
78:1S:1762:A:O2'	78:1S:1783:C:H5''	2.20	0.41
50:S4:156:VAL:HG12	50:S4:157:ASN:ND2	2.35	0.41
37:87:3:LYS:HE3	79:2S:2138:A:C8	2.55	0.41
44:P0:77:LEU:HD23	44:P0:77:LEU:O	2.20	0.41
74:28:42:ARG:HD3	74:28:61:ARG:O	2.20	0.41
79:2S:198:A:H2'	79:2S:199:A:H5'	2.02	0.41
40:90:108:THR:O	40:90:119:ASN:HA	2.20	0.41
42:92:2:VAL:HG22	42:92:90:HIS:O	2.21	0.41
13:63:74:GLY:HA3	13:63:98:ASP:HB2	2.01	0.41
6:L6:153:PRO:O	6:L6:154:LEU:HB2	2.20	0.41
27:77:83:THR:HG23	27:77:85:TYR:H	1.85	0.41
5:L5:296:GLN:O	5:L5:297:GLN:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1465:A:H2'	79:2S:1466:G:O4'	2.19	0.41
17:67:175:ARG:HH21	17:67:175:ARG:HG3	1.86	0.41
47:S1:20:VAL:HG12	47:S1:20:VAL:O	2.20	0.41
1:L1:117:ILE:HG12	1:L1:117:ILE:O	2.20	0.41
10:60:72:ALA:HB1	10:60:76:MET:CE	2.50	0.41
79:2S:2477:G:H2'	79:2S:2478:C:H5'	2.01	0.41
31:81:88:PRO:HG2	31:81:89:LEU:CD1	2.47	0.41
57:11:155:LYS:HG3	57:11:156:PHE:H	1.85	0.41
34:84:42:PRO:HB3	79:2S:1653:G:O2'	2.20	0.41
45:RC:127:ARG:HA	45:RC:150:TRP:HB3	2.03	0.41
78:1S:1790:A:O2'	78:1S:1791:A:H5'	2.20	0.41
2:L2:57:PRO:CB	43:93:54:ILE:HD11	2.48	0.41
46:S0:148:ASP:HB3	46:S0:149:LEU:H	1.70	0.41
73:27:54:VAL:HG21	73:27:64:CYS:SG	2.60	0.41
48:S2:145:GLY:HA3	68:22:97:ARG:NH1	2.29	0.41
6:L6:176:PHE:HE2	33:83:107:ILE:HD13	1.84	0.41
8:L8:72:PRO:HB2	8:L8:74:THR:HG22	2.02	0.41
78:1S:1304:G:H2'	78:1S:1305:U:O2	2.20	0.41
79:2S:374:A:C4'	79:2S:375:A:H5'	2.49	0.41
17:67:119:VAL:HG23	17:67:144:SER:HB3	2.02	0.41
22:72:33:TYR:CZ	22:72:37:LEU:HD11	2.55	0.41
8:L8:48:ARG:HA	79:2S:2585:G:H8	1.85	0.41
9:L9:117:PHE:O	9:L9:118:LEU:HB2	2.20	0.41
3:L3:46:PHE:CZ	3:L3:204:ALA:HA	2.56	0.41
19:69:35:ALA:HB1	19:69:41:ILE:HD12	2.01	0.41
64:18:46:VAL:HG13	64:18:72:ILE:HB	2.02	0.41
37:87:28:HIS:CE1	37:87:30:GLN:HB2	2.56	0.41
46:S0:188:LEU:CD2	46:S0:195:TRP:HE1	2.33	0.41
79:2S:1828:A:H2'	79:2S:1829:G:H8	1.84	0.41
16:66:178:VAL:O	16:66:182:ASN:HB2	2.20	0.41
15:65:14:LYS:HE2	79:2S:269:G:H5''	2.01	0.41
10:60:40:LYS:HE2	79:2S:1010:G:H4'	2.01	0.41
79:2S:2174:G:H4'	79:2S:2175:U:H5''	2.03	0.41
33:83:75:HIS:HB3	33:83:80:VAL:HG12	2.01	0.41
79:2S:1449:A:H2'	79:2S:1450:G:H5'	2.03	0.41
47:S1:179:SER:O	47:S1:182:ALA:HB3	2.20	0.41
5:L5:35:ARG:HB2	79:2S:2748:A:C2	2.55	0.41
5:L5:206:GLN:O	5:L5:210:GLU:HG3	2.20	0.41
79:2S:1739:U:C2'	79:2S:1740:U:H5'	2.51	0.41
79:2S:1046:A:H2'	79:2S:1049:C:C5	2.55	0.41
54:S8:8:ARG:HD3	54:S8:21:PHE:CD1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L4:138:ARG:HD3	4:L4:245:GLY:C	2.41	0.41
78:1S:1537:C:H4'	78:1S:1538:U:H5	1.85	0.41
79:2S:740:G:H2'	79:2S:741:U:O4'	2.21	0.41
9:L9:113:GLU:HG2	9:L9:114:VAL:N	2.35	0.41
78:1S:1784:C:H2'	78:1S:1785:U:C6	2.54	0.41
79:2S:422:A:C2	79:2S:2363:A:H4'	2.54	0.41
79:2S:422:A:N1	79:2S:2363:A:H4'	2.36	0.41
79:2S:164:A:C2	79:2S:165:A:N6	2.89	0.41
81:5S:35:C:H2'	81:5S:36:C:H5'	2.02	0.41
65:19:69:LYS:O	65:19:123:ARG:HG3	2.20	0.41
25:75:33:ARG:HB2	25:75:34:LEU:H	1.62	0.41
79:2S:1978:A:H61	79:2S:2041:U:H3	1.69	0.41
70:24:87:PRO:O	70:24:91:LEU:HG	2.20	0.41
47:S1:51:SER:HA	47:S1:56:SER:HA	2.01	0.41
8:L8:145:ASN:O	8:L8:146:LYS:HB2	2.20	0.41
79:2S:804:C:H2'	79:2S:805:G:C8	2.56	0.41
4:L4:157:GLU:O	4:L4:213:ASN:HB2	2.20	0.41
48:S2:143:TYR:N	48:S2:143:TYR:CD1	2.87	0.41
78:1S:1031:U:H3'	78:1S:1032:G:C5'	2.50	0.41
79:2S:3089:C:H2'	79:2S:3090:U:C6	2.56	0.41
65:19:102:ARG:HH22	78:1S:1501:C:N4	2.02	0.41
59:13:64:ARG:HD2	59:13:64:ARG:O	2.20	0.41
79:2S:2931:C:H2'	79:2S:2932:U:O4'	2.20	0.41
1:L1:162:VAL:HG22	1:L1:163:LEU:N	2.34	0.41
11:61:23:VAL:HG12	11:61:24:GLY:N	2.35	0.41
78:1S:1086:A:H2'	78:1S:1087:A:C8	2.55	0.41
23:73:67:PRO:CA	23:73:70:ARG:HD3	2.45	0.41
1:L1:201:VAL:CG1	1:L1:204:LEU:HD11	2.45	0.41
1:L1:36:VAL:HG12	1:L1:168:ALA:O	2.21	0.41
7:L7:235:PHE:CE2	20:70:35:VAL:HG23	2.56	0.41
33:83:18:ARG:HB2	33:83:22:VAL:O	2.19	0.41
15:65:59:PHE:HD1	15:65:133:ILE:HD11	1.85	0.41
55:S9:140:ILE:HG12	55:S9:159:ALA:HB2	2.03	0.41
79:2S:3343:G:H21	79:2S:3362:A:H2	1.64	0.41
53:S7:30:SER:O	53:S7:34:LEU:HB2	2.19	0.41
21:71:105:PHE:CE2	79:2S:1062:A:H4'	2.55	0.41
3:L3:311:PHE:HB2	3:L3:315:GLY:H	1.86	0.41
78:1S:855:A:H3'	78:1S:856:A:C5'	2.50	0.41
50:S4:68:ARG:HG2	50:S4:68:ARG:HH11	1.85	0.41
15:65:50:ARG:HD3	79:2S:267:G:H1'	2.01	0.41
17:67:68:GLY:HA3	79:2S:2350:C:H5''	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1556:C:H3'	79:2S:2169:G:H22	1.84	0.41
26:76:70:ILE:CD1	26:76:70:ILE:H	2.32	0.41
78:1S:1208:A:H4'	78:1S:1269:U:O3'	2.19	0.41
34:84:95:ILE:HG22	34:84:95:ILE:O	2.20	0.41
68:22:47:ILE:CG2	68:22:69:LEU:HD22	2.49	0.41
78:1S:1387:G:H1'	78:1S:1410:A:N6	2.35	0.41
4:L4:209:TYR:O	4:L4:230:VAL:HG23	2.21	0.41
40:90:104:PRO:HD2	40:90:107:ALA:HB2	2.01	0.41
78:1S:1196:A:H4'	78:1S:1197:C:C5'	2.51	0.41
3:L3:17:LEU:HA	3:L3:18:PRO:C	2.41	0.41
79:2S:504:A:H2'	79:2S:505:G:C8	2.56	0.41
67:21:19:ALA:HA	67:21:71:ARG:HH12	1.86	0.41
8:L8:93:LEU:HD22	8:L8:214:LEU:HD22	2.03	0.41
40:90:93:LYS:O	40:90:124:LYS:HB3	2.20	0.41
25:75:72:ALA:O	25:75:76:VAL:HG23	2.20	0.41
13:63:172:LEU:HD23	13:63:172:LEU:C	2.40	0.41
79:2S:3255:U:H2'	79:2S:3256:G:C8	2.56	0.41
52:S6:174:LYS:HD2	78:1S:78:A:H2	1.86	0.41
55:S9:87:SER:OG	55:S9:90:LYS:HB2	2.19	0.41
2:L2:136:ILE:N	2:L2:136:ILE:HD12	2.35	0.41
18:68:147:ARG:HG2	18:68:148:GLU:N	2.32	0.41
21:71:68:THR:HG23	21:71:69:LYS:N	2.27	0.41
8:L8:116:VAL:HG23	8:L8:125:ALA:CB	2.50	0.41
79:2S:2516:U:H3	79:2S:2591:A:H2	1.67	0.41
20:70:76:GLY:HA2	20:70:93:GLU:HG2	2.03	0.41
7:L7:88:ARG:NH2	7:L7:92:ILE:HA	2.34	0.41
80:8S:71:A:H4'	80:8S:72:A:O5'	2.20	0.41
4:L4:122:THR:O	4:L4:126:ILE:HG13	2.21	0.41
79:2S:927:C:O2'	79:2S:928:C:H5'	2.21	0.41
79:2S:3163:A:H2'	79:2S:3164:C:H5''	2.02	0.41
52:S6:122:GLU:O	52:S6:126:ASP:CB	2.68	0.41
57:11:93:TYR:HB2	57:11:100:TYR:CE1	2.55	0.41
14:64:131:VAL:HG13	16:66:181:ALA:HB1	2.02	0.41
20:70:38:LYS:HD3	20:70:58:ILE:HG21	2.01	0.41
48:S2:159:THR:HG23	48:S2:167:VAL:O	2.20	0.41
63:17:99:VAL:HG23	63:17:100:LEU:H	1.85	0.41
78:1S:320:U:C3'	78:1S:321:C:H5''	2.51	0.41
75:29:36:LEU:HD12	75:29:37:ASN:H	1.85	0.41
20:70:154:HIS:HA	20:70:170:THR:HB	2.03	0.41
19:69:66:HIS:O	19:69:70:LYS:HG2	2.19	0.41
4:L4:74:ILE:HD13	4:L4:88:GLY:HA2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:L8:64:ILE:O	8:L8:68:ARG:HG2	2.20	0.41
58:12:56:GLU:HB3	58:12:124:LYS:HG2	2.02	0.41
14:64:116:GLU:O	14:64:120:VAL:HG23	2.19	0.41
79:2S:2162:U:H2'	79:2S:2163:C:C6	2.55	0.41
13:63:53:LEU:HD12	13:63:55:ARG:HH12	1.83	0.41
19:69:151:ARG:O	19:69:155:LEU:HB2	2.21	0.41
57:11:76:VAL:HG12	57:11:85:VAL:O	2.20	0.41
27:77:108:GLU:O	27:77:112:LYS:HG3	2.20	0.41
65:19:13:ASP:HA	65:19:16:ASN:CB	2.50	0.41
13:63:16:LYS:CB	13:63:21:ARG:HH22	2.34	0.41
1:L1:92:LYS:N	1:L1:92:LYS:HD2	2.35	0.41
79:2S:1978:A:C2'	79:2S:1979:G:H5'	2.50	0.41
16:66:185:ALA:O	16:66:191:ALA:HB2	2.21	0.41
77:31:143:LYS:HA	78:1S:1253:U:H4'	2.02	0.41
35:85:53:CYS:HA	80:8S:64:U:O2'	2.20	0.41
78:1S:1639:C:H2'	78:1S:1640:C:O4'	2.21	0.41
46:S0:134:LYS:HA	46:S0:137:SER:OG	2.20	0.41
79:2S:67:A:H61	79:2S:271:C:H4'	1.86	0.41
31:81:35:GLU:O	31:81:39:PHE:HB2	2.20	0.41
46:S0:203:PHE:CD2	46:S0:203:PHE:N	2.88	0.41
5:L5:68:THR:HG22	5:L5:70:THR:H	1.86	0.41
78:1S:1696:G:H4'	78:1S:1697:G:OP1	2.20	0.41
1:L1:183:ILE:O	1:L1:187:VAL:HG23	2.19	0.41
49:S3:134:CYS:O	49:S3:153:ALA:HA	2.21	0.41
55:S9:112:GLN:HA	55:S9:112:GLN:HE21	1.85	0.41
69:23:96:VAL:CG2	69:23:97:ASP:H	2.23	0.41
54:S8:137:LYS:H	54:S8:137:LYS:CD	2.20	0.41
7:L7:125:GLU:O	7:L7:129:LEU:HG	2.21	0.41
79:2S:3353:G:C8	79:2S:3356:G:H1'	2.55	0.41
78:1S:492:A:H5''	78:1S:493:U:C5'	2.45	0.41
54:S8:173:PRO:O	54:S8:177:GLY:HA2	2.20	0.41
79:2S:2608:G:O2'	79:2S:2609:A:H5'	2.21	0.41
1:L1:198:TRP:HA	1:L1:198:TRP:CE3	2.56	0.41
7:L7:81:HIS:O	7:L7:119:VAL:HG21	2.20	0.41
81:5S:106:U:H2'	81:5S:107:C:C6	2.56	0.41
9:L9:49:ASN:HD21	9:L9:52:LEU:HD13	1.86	0.41
79:2S:1218:U:H2'	79:2S:1219:C:C5'	2.47	0.41
2:L2:35:ALA:HA	8:L8:36:ILE:CD1	2.49	0.41
78:1S:485:A:H2'	78:1S:486:G:O4'	2.20	0.41
47:S1:122:GLU:HG2	47:S1:123:ALA:N	2.35	0.41
40:90:122:ARG:HH12	40:90:125:LYS:HG3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:70:1:MET:HA	79:2S:1323:G:H5'	2.02	0.41
64:18:46:VAL:CG1	64:18:72:ILE:HB	2.51	0.41
34:84:22:VAL:CG1	34:84:30:LEU:HD22	2.48	0.41
70:24:75:VAL:O	70:24:75:VAL:HG13	2.20	0.41
52:S6:7:TYR:HB2	52:S6:124:LEU:HD23	2.02	0.41
38:88:5:ILE:HD12	38:88:11:PHE:HD2	1.83	0.41
5:L5:11:ALA:HB1	79:2S:1003:A:C5'	2.49	0.41
79:2S:379:C:H2'	79:2S:380:U:C6	2.55	0.41
19:69:173:ARG:HG2	78:1S:852:C:OP2	2.20	0.41
78:1S:1247:U:H2'	78:1S:1248:C:O4'	2.21	0.41
79:2S:837:A:H3'	79:2S:838:G:H8	1.86	0.41
79:2S:3003:G:H2'	79:2S:3004:C:H6	1.86	0.41
44:P0:48:ARG:HE	44:P0:90:ASN:HB3	1.85	0.41
79:2S:1964:C:C2'	79:2S:1965:C:H5'	2.50	0.41
51:S5:117:THR:OG1	51:S5:191:ALA:HB1	2.21	0.41
9:L9:4:ILE:HD13	20:70:148:LEU:HD11	2.02	0.41
78:1S:646:C:C2'	78:1S:647:G:H5'	2.50	0.41
79:2S:687:U:H2'	79:2S:688:G:C8	2.56	0.41
79:2S:2247:G:H2'	79:2S:2248:C:O4'	2.19	0.41
39:89:38:ASN:HD22	39:89:41:ARG:CD	2.34	0.41
79:2S:170:G:H2'	79:2S:171:G:H8	1.86	0.41
10:60:77:THR:HG22	10:60:82:ARG:HB3	2.02	0.41
75:29:21:CYS:HB3	75:29:26:SER:H	1.85	0.41
69:23:95:PHE:HB3	69:23:135:LEU:HD13	2.02	0.41
5:L5:222:LEU:O	5:L5:223:PHE:HB2	2.21	0.41
15:65:9:GLU:OE2	15:65:12:ARG:HD2	2.21	0.41
78:1S:1079:U:H2'	78:1S:1080:U:O4'	2.21	0.41
10:60:7:ARG:HA	10:60:10:ARG:HB2	2.03	0.41
79:2S:2659:G:H2'	79:2S:2660:G:C8	2.55	0.41
79:2S:291:C:H2'	79:2S:292:U:C6	2.56	0.41
82:PT:32:G:H2'	82:PT:33:C:C6	2.55	0.41
17:67:157:VAL:HG12	17:67:157:VAL:O	2.20	0.41
79:2S:2078:C:O5'	79:2S:2078:C:H6	2.03	0.41
10:60:169:LYS:HD2	10:60:169:LYS:N	2.35	0.41
31:81:14:ILE:HG23	31:81:14:ILE:O	2.21	0.41
49:S3:79:TYR:HB3	49:S3:80:ALA:H	1.66	0.41
78:1S:123:G:H2'	78:1S:124:A:O4'	2.20	0.41
55:S9:7:THR:HG23	78:1S:771:A:H5'	2.03	0.41
78:1S:1688:U:H2'	78:1S:1689:A:O4'	2.20	0.41
55:S9:172:VAL:O	55:S9:176:ASN:ND2	2.53	0.41
5:L5:134:ALA:HA	5:L5:141:PRO:HD3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:1362:G:H2'	79:2S:1363:A:C8	2.56	0.41
7:L7:84:VAL:HG12	7:L7:138:TYR:CD1	2.56	0.41
6:L6:82:ARG:HB3	33:83:104:PRO:CA	2.45	0.41
23:73:80:ARG:CD	23:73:117:PRO:HG2	2.46	0.41
69:23:103:LEU:HB2	69:23:126:LYS:HB2	2.02	0.41
79:2S:1645:U:H3'	79:2S:1646:G:H8	1.86	0.41
79:2S:1398:U:H4'	80:8S:9:A:H5''	2.03	0.41
28:78:115:LYS:HG2	79:2S:715:A:N7	2.35	0.41
46:S0:56:LYS:CB	46:S0:160:ILE:HG12	2.49	0.41
79:2S:296:A:H2'	79:2S:297:G:N3	2.36	0.41
7:L7:179:LEU:HD13	7:L7:183:ASP:OD2	2.20	0.41
2:L2:225:ILE:HG21	2:L2:234:LYS:HG2	2.03	0.41
64:18:50:ALA:HB2	64:18:72:ILE:HD12	2.03	0.41
79:2S:969:C:H2'	79:2S:970:A:H8	1.86	0.41
9:L9:137:SER:CB	9:L9:143:GLU:HB3	2.51	0.41
1:L1:134:PHE:HZ	1:L1:156:LYS:HD3	1.86	0.41
49:S3:168:ILE:HD12	49:S3:168:ILE:C	2.41	0.41
79:2S:1137:C:H2'	79:2S:1138:U:C6	2.56	0.41
79:2S:999:G:H21	79:2S:1002:A:H62	1.69	0.41
79:2S:360:G:H2'	79:2S:361:A:O4'	2.21	0.41
47:S1:140:ILE:O	47:S1:211:HIS:HB2	2.20	0.41
7:L7:218:ARG:HH11	79:2S:1170:A:H5''	1.85	0.41
79:2S:710:A:H2'	79:2S:711:A:C8	2.56	0.41
79:2S:1058:U:H2'	79:2S:1059:G:H8	1.86	0.41
78:1S:342:C:H2'	78:1S:343:C:H6	1.85	0.41
78:1S:463:U:H6	78:1S:463:U:O5'	2.02	0.41
45:RC:239:GLU:O	45:RC:256:THR:HA	2.20	0.41
53:S7:101:LYS:HA	53:S7:102:PRO:HD3	1.90	0.41
46:S0:104:PRO:HB2	78:1S:1321:A:N3	2.35	0.41
17:67:127:ARG:HB3	17:67:139:TYR:O	2.21	0.41
3:L3:183:LEU:HD12	3:L3:183:LEU:N	2.34	0.41
55:S9:85:VAL:HG12	55:S9:85:VAL:O	2.20	0.41
57:11:3:THR:HG22	57:11:4:GLU:N	2.35	0.41
22:72:99:LYS:HB3	22:72:100:THR:H	1.78	0.41
79:2S:1604:G:H3'	79:2S:1604:G:N3	2.36	0.41
78:1S:139:C:H1'	78:1S:140:A:OP2	2.21	0.41
4:L4:300:ARG:HB2	4:L4:301:PRO:CD	2.36	0.41
51:S5:81:ARG:HE	74:28:47:PRO:HB3	1.86	0.41
2:L2:187:HIS:HB3	2:L2:190:ARG:NH2	2.36	0.41
2:L2:206:PRO:HG3	2:L2:213:GLY:CA	2.43	0.41
22:72:104:ARG:HD2	22:72:105:LEU:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:21:45:ALA:O	67:21:46:ILE:HB	2.21	0.41
10:60:212:GLU:C	10:60:214:PRO:HD3	2.40	0.41
17:67:29:THR:C	17:67:32:THR:HG22	2.41	0.41
78:1S:293:U:H2'	78:1S:294:C:C6	2.56	0.41
7:L7:92:ILE:HD13	7:L7:109:THR:O	2.19	0.41
20:70:117:ARG:HG3	20:70:119:ARG:NH1	2.36	0.41
47:S1:35:PRO:HD2	47:S1:38:PHE:CE2	2.55	0.41
20:70:123:ILE:O	21:71:153:PRO:HG3	2.20	0.41
5:L5:8:LYS:N	5:L5:8:LYS:HD2	2.35	0.41
79:2S:2722:U:H2'	79:2S:2723:U:H6	1.85	0.41
8:L8:34:PHE:HE2	8:L8:42:PRO:HD3	1.85	0.41
54:S8:45:SER:HB3	54:S8:55:TYR:HA	2.02	0.41
60:14:25:ASP:OD1	60:14:54:GLU:HB3	2.21	0.41
18:68:185:LYS:HD3	18:68:186:VAL:HG23	2.02	0.41
39:89:36:ARG:HG2	39:89:36:ARG:NH1	2.35	0.41
16:66:97:ALA:O	16:66:101:ARG:HG3	2.21	0.41
79:2S:1403:C:H2'	79:2S:1404:G:C8	2.55	0.41
8:L8:247:ASP:O	8:L8:251:LYS:HB2	2.20	0.41
7:L7:221:LYS:HB2	7:L7:227:GLY:CA	2.50	0.41
50:S4:131:LEU:HD22	50:S4:131:LEU:N	2.35	0.41
50:S4:129:VAL:HG12	50:S4:156:VAL:HG22	2.03	0.41
1:L1:108:ASN:HB2	1:L1:130:LYS:HG2	2.01	0.41
10:60:5:PRO:HB2	10:60:7:ARG:HG2	2.02	0.41
22:72:75:TYR:O	22:72:79:LEU:HG	2.20	0.41
8:L8:122:LYS:H	8:L8:122:LYS:HD3	1.85	0.41
19:69:21:LYS:HD2	19:69:55:VAL:HA	2.03	0.41
35:85:44:ILE:HA	35:85:47:VAL:HG12	2.03	0.41
79:2S:2286:U:H4'	79:2S:2287:C:H2'	2.03	0.41
78:1S:1728:A:H2'	78:1S:1729:C:C6	2.55	0.41
82:PT:10:G:C2	82:PT:27:G:H1'	2.56	0.41
55:S9:83:VAL:HG23	55:S9:84:GLY:N	2.35	0.41
79:2S:629:U:H2'	79:2S:630:A:C8	2.55	0.41
5:L5:49:TYR:CD1	5:L5:66:SER:HB3	2.56	0.41
79:2S:386:A:H8	79:2S:386:A:O5'	2.03	0.41
53:S7:126:LEU:HD22	53:S7:126:LEU:H	1.86	0.41
78:1S:782:U:H3'	78:1S:783:G:C5'	2.51	0.41
78:1S:140:A:C4'	78:1S:141:U:H5'	2.47	0.41
31:81:62:ARG:HD2	79:2S:3074:G:O2'	2.21	0.41
23:73:39:VAL:HA	23:73:58:VAL:HG12	2.02	0.41
13:63:79:GLU:HG2	13:63:109:PHE:CE2	2.56	0.41
78:1S:1058:U:H5	78:1S:1061:A:H61	1.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:1058:U:H5	78:1S:1061:A:N6	2.19	0.41
46:S0:190:ASP:HB2	46:S0:191:ARG:H	1.64	0.41
10:60:191:LYS:NZ	10:60:191:LYS:HB2	2.36	0.41
64:18:112:ASP:O	64:18:115:ARG:NH2	2.54	0.41
53:S7:139:ARG:HH11	53:S7:139:ARG:HG3	1.85	0.41
78:1S:1731:A:H2'	78:1S:1732:A:O4'	2.20	0.41
10:60:55:ASN:O	10:60:131:ILE:HG23	2.21	0.41
52:S6:179:VAL:O	52:S6:179:VAL:HG13	2.21	0.41
71:25:46:LYS:O	71:25:50:ILE:HG13	2.21	0.41
46:S0:41:ARG:HG3	46:S0:41:ARG:NH2	2.35	0.41
57:11:83:THR:N	57:11:111:VAL:HG12	2.34	0.41
2:L2:175:VAL:CG2	79:2S:2179:C:H1'	2.50	0.41
78:1S:750:U:H2'	78:1S:751:G:C8	2.56	0.41
8:L8:72:PRO:HG2	8:L8:75:ILE:HG13	2.02	0.41
15:65:13:LYS:NZ	36:86:45:ARG:HA	2.35	0.41
70:24:83:LYS:HG2	70:24:96:LEU:HD23	2.03	0.41
45:RC:203:THR:HG22	45:RC:212:ALA:HB3	2.02	0.41
15:65:133:ILE:C	15:65:134:LEU:HD12	2.41	0.41
24:74:23:ARG:HB3	24:74:25:ASP:OD2	2.21	0.41
65:19:30:VAL:HA	65:19:31:PRO:HD3	1.83	0.41
48:S2:53:ILE:HD11	48:S2:73:LEU:HB2	2.02	0.41
23:73:93:LEU:HB3	24:74:20:LEU:HB3	2.03	0.41
22:72:37:LEU:N	22:72:37:LEU:HD12	2.36	0.41
6:L6:56:LYS:HD2	6:L6:98:VAL:O	2.20	0.41
59:13:129:TYR:CD1	59:13:134:VAL:HG21	2.56	0.41
9:L9:47:LYS:HZ3	14:64:6:ILE:H	1.69	0.41
7:L7:144:ILE:O	7:L7:148:VAL:HG23	2.21	0.41
15:65:89:VAL:CG2	79:2S:2424:A:H5'	2.51	0.41
21:71:109:VAL:HG13	79:2S:1063:G:N1	2.36	0.41
78:1S:1721:A:H2'	78:1S:1722:A:O4'	2.21	0.41
54:S8:43:ILE:HG21	54:S8:55:TYR:HB3	2.01	0.41
78:1S:1333:C:H2'	78:1S:1334:U:C6	2.56	0.41
54:S8:119:GLN:C	54:S8:120:THR:HG1	2.24	0.41
76:30:10:ARG:CD	76:30:13:LYS:HD2	2.51	0.41
1:L1:55:LEU:HD22	1:L1:134:PHE:HB3	2.01	0.41
79:2S:1670:C:O2'	79:2S:1860:G:H5''	2.21	0.41
82:PT:15:G:OP2	82:PT:16:C:H5	2.04	0.41
5:L5:221:GLU:O	5:L5:224:LYS:HB2	2.20	0.41
64:18:86:LEU:HD12	64:18:86:LEU:N	2.36	0.41
79:2S:439:C:O2	79:2S:439:C:C2'	2.68	0.41
78:1S:1414:U:H3'	78:1S:1415:U:C5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:27:20:LYS:H	73:27:20:LYS:CD	2.32	0.41
5:L5:36:LEU:CD2	79:2S:2748:A:H1'	2.50	0.41
60:14:22:SER:HA	60:14:95:GLY:HA3	2.02	0.41
67:21:86:SER:HA	73:27:6:ASP:HB2	2.03	0.41
11:61:166:LYS:O	11:61:167:TYR:CB	2.68	0.41
61:15:97:TYR:HB2	61:15:102:PHE:CD1	2.56	0.41
78:1S:1759:C:H2'	78:1S:1760:G:O4'	2.21	0.41
3:L3:150:ARG:HD2	3:L3:154:TYR:HE2	1.86	0.41
78:1S:1765:A:H5'	78:1S:1767:G:N7	2.35	0.41
79:2S:1933:A:H4'	79:2S:2124:G:H5'	2.03	0.41
72:26:3:LYS:HZ1	72:26:6:ALA:HA	1.84	0.41
26:76:16:ARG:HH11	26:76:16:ARG:HG2	1.86	0.41
42:92:46:LYS:HD3	79:2S:44:U:O2'	2.21	0.41
5:L5:190:ILE:HA	5:L5:190:ILE:HD12	1.97	0.41
2:L2:94:ALA:HB3	2:L2:102:LEU:HD21	2.03	0.41
79:2S:86:G:N2	79:2S:98:G:H2'	2.36	0.41
40:90:78:ILE:O	40:90:79:GLU:HB3	2.20	0.41
79:2S:1502:C:C5	79:2S:1511:U:H5''	2.55	0.41
79:2S:646:A:H2'	79:2S:647:A:O4'	2.21	0.41
46:S0:7:PHE:HD2	46:S0:7:PHE:N	2.18	0.41
3:L3:31:ALA:HB2	79:2S:3136:G:H5''	2.03	0.41
51:S5:218:GLU:O	51:S5:222:LYS:HB2	2.21	0.41
17:67:83:TRP:N	17:67:84:PRO:HD3	2.36	0.41
33:83:77:ASN:HB2	79:2S:1180:A:H5''	2.02	0.41
79:2S:1214:U:H2'	79:2S:1215:U:H6	1.86	0.41
49:S3:29:LEU:O	49:S3:34:TYR:HB2	2.20	0.41
8:L8:122:LYS:O	8:L8:123:GLN:HB3	2.21	0.41
13:63:132:ALA:HA	13:63:133:PRO:HD2	2.01	0.41
43:93:4:ARG:HD3	79:2S:836:A:P	2.61	0.41
79:2S:2192:C:H2'	79:2S:2193:U:O4'	2.21	0.41
78:1S:1282:U:H2'	78:1S:1283:U:C6	2.56	0.41
47:S1:166:LYS:HB2	47:S1:166:LYS:HE3	1.88	0.41
13:63:23:LYS:HB2	13:63:23:LYS:NZ	2.36	0.41
45:RC:252:LEU:HB3	45:RC:263:PHE:O	2.20	0.41
28:78:96:LYS:O	28:78:97:GLU:HB2	2.21	0.41
60:14:36:LYS:HG3	78:1S:894:U:O2'	2.20	0.41
21:71:126:VAL:HG23	21:71:127:GLN:H	1.85	0.41
72:26:21:VAL:O	72:26:29:SER:HA	2.21	0.41
20:70:11:GLY:HA3	20:70:42:TRP:CH2	2.56	0.41
15:65:81:TYR:OH	79:2S:908:G:H3'	2.21	0.41
79:2S:611:A:H1'	79:2S:612:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:12:59:LEU:HD23	58:12:60:VAL:N	2.35	0.41
56:10:81:ASN:O	56:10:82:LEU:O	2.38	0.41
51:S5:59:VAL:HG12	51:S5:60:ASP:H	1.86	0.41
79:2S:829:U:H3	79:2S:895:A:N6	1.93	0.41
78:1S:632:U:H2'	78:1S:633:U:C6	2.56	0.41
63:17:103:ASP:HA	63:17:122:ILE:HG22	2.02	0.41
79:2S:1581:C:C3'	79:2S:1582:C:H5'	2.51	0.41
79:2S:986:U:H2'	79:2S:987:U:C6	2.56	0.41
26:76:17:LYS:HA	80:8S:23:U:O4'	2.21	0.41
34:84:31:ARG:HH11	34:84:31:ARG:HG2	1.86	0.41
2:L2:59:ALA:HB1	2:L2:61:VAL:HG23	2.03	0.41
50:S4:103:TYR:CZ	50:S4:189:LEU:HD11	2.56	0.41
56:10:68:LEU:CD1	56:10:72:GLY:HA3	2.49	0.41
78:1S:396:G:H22	78:1S:399:A:H5'	1.86	0.41
79:2S:578:A:OP2	79:2S:579:G:H5'	2.20	0.41
34:84:19:LYS:HZ1	34:84:37:LYS:HA	1.86	0.41
9:L9:112:ILE:O	9:L9:125:ASN:HA	2.21	0.41
13:63:76:THR:HG22	13:63:101:ARG:HB3	2.03	0.41
4:L4:122:THR:OG1	4:L4:262:TRP:HH2	2.04	0.41
78:1S:941:A:H2'	78:1S:942:G:C5'	2.50	0.41
81:5S:62:U:H2'	81:5S:63:A:C8	2.56	0.41
65:19:52:GLY:C	65:19:54:PHE:H	2.24	0.41
79:2S:929:A:H2'	79:2S:930:U:C6	2.56	0.41
8:L8:150:LEU:HA	8:L8:176:PRO:HG2	2.02	0.41
2:L2:200:ARG:HH21	2:L2:200:ARG:CB	2.33	0.41
4:L4:113:VAL:HG13	4:L4:117:GLU:OE1	2.21	0.41
21:71:109:VAL:HG22	79:2S:1063:G:C6	2.56	0.41
8:L8:140:VAL:HG21	15:65:3:ALA:HB2	2.02	0.41
70:24:21:LYS:HB3	70:24:75:VAL:HG12	2.03	0.41
11:61:94:ARG:HB2	11:61:95:ASN:H	1.68	0.41
66:20:61:LYS:H	66:20:61:LYS:HG2	1.68	0.41
45:RC:236:ALA:C	45:RC:238:ASP:H	2.24	0.41
20:70:77:VAL:HG22	20:70:126:VAL:HG13	2.03	0.41
79:2S:2755:C:H2'	79:2S:2756:C:C6	2.55	0.41
10:60:30:LYS:H	10:60:30:LYS:HD2	1.86	0.41
14:64:76:ALA:HA	79:2S:561:C:OP1	2.21	0.41
78:1S:1723:U:H2'	78:1S:1724:U:H6	1.87	0.41
45:RC:229:LYS:HB3	45:RC:230:ALA:H	1.69	0.41
37:87:37:CYS:O	37:87:44:THR:HA	2.21	0.41
80:8S:104:A:O5'	80:8S:105:A:H8	2.03	0.41
5:L5:157:ALA:HB3	5:L5:160:PHE:CE2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:2S:2985:C:H2'	79:2S:2986:U:H6	1.85	0.41
52:S6:211:LEU:HD22	52:S6:215:ARG:HH21	1.86	0.41
79:2S:3005:A:C2	79:2S:3141:A:N7	2.89	0.41
2:L2:8:GLN:HA	79:2S:2163:C:H4'	2.03	0.41
54:S8:194:ARG:HB3	54:S8:195:ARG:NH1	2.35	0.41
78:1S:730:G:C2'	78:1S:730:G:N3	2.84	0.41
67:21:80:LYS:O	67:21:82:VAL:HG23	2.21	0.41
27:77:87:LEU:HG	27:77:88:ASP:H	1.86	0.41
49:S3:51:ARG:HB3	49:S3:91:VAL:HB	2.01	0.41
79:2S:3000:A:H2'	79:2S:3001:C:C6	2.56	0.41
48:S2:198:THR:O	78:1S:3:U:H5''	2.21	0.41
79:2S:2449:A:H2'	79:2S:2450:G:H5'	2.03	0.41
15:65:56:LYS:HZ1	15:65:148:TYR:HE2	1.69	0.41
79:2S:314:U:H2'	79:2S:315:C:C6	2.55	0.41
15:65:109:ARG:HD2	80:8S:140:G:O2'	2.21	0.41
79:2S:507:U:H2'	79:2S:508:U:C6	2.56	0.41
10:60:20:SER:OG	10:60:22:TYR:HD1	2.03	0.41
3:L3:103:THR:HG22	3:L3:104:THR:N	2.36	0.41
62:16:10:PHE:HD2	78:1S:1378:U:HO2'	1.65	0.41
79:2S:363:G:H2'	79:2S:364:G:O4'	2.20	0.41
79:2S:181:U:H2'	79:2S:182:U:O4'	2.21	0.41
80:8S:125:U:O2	80:8S:125:U:H3'	2.21	0.41
79:2S:1324:U:O5'	79:2S:1324:U:H6	2.04	0.41
78:1S:1222:C:H2'	78:1S:1223:A:C8	2.56	0.41
82:ET:53:G:H2'	82:ET:54:G:O4'	2.21	0.41
66:20:106:ILE:HG13	66:20:107:THR:N	2.23	0.40
79:2S:2271:A:C3'	79:2S:2272:G:H5''	2.51	0.40
13:63:76:THR:CG2	13:63:101:ARG:HH11	2.34	0.40
47:S1:121:ILE:CD1	47:S1:207:LEU:HD21	2.49	0.40
19:69:75:HIS:HA	79:2S:1940:G:OP1	2.20	0.40
79:2S:2585:G:O2'	79:2S:2586:G:H5''	2.21	0.40
18:68:44:PHE:O	18:68:48:VAL:HG23	2.21	0.40
79:2S:1200:A:C6	79:2S:2370:G:H5''	2.56	0.40
15:65:169:LYS:HG2	15:65:174:ILE:HD12	2.02	0.40
58:12:66:VAL:HB	58:12:72:ILE:HD11	2.03	0.40
78:1S:421:A:C2'	78:1S:422:G:H5'	2.52	0.40
27:77:71:PHE:HA	27:77:111:LYS:HD3	2.02	0.40
3:L3:2:SER:N	79:2S:2940:A:H8	2.20	0.40
29:79:28:LYS:HG2	79:2S:1065:A:N3	2.36	0.40
66:20:20:ILE:H	66:20:20:ILE:HG13	1.68	0.40
20:70:12:ARG:O	20:70:22:PRO:HB2	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:1S:152:U:H2'	78:1S:153:G:H5''	2.03	0.40
13:63:31:LYS:HG2	80:8S:30:C:OP1	2.21	0.40
50:S4:7:LYS:CB	78:1S:94:U:H1'	2.51	0.40
11:61:9:MET:O	11:61:134:PRO:HG2	2.21	0.40
17:67:69:ARG:CD	79:2S:3309:G:H1'	2.50	0.40
78:1S:1404:C:H2'	78:1S:1405:G:H8	1.86	0.40
4:L4:73:ARG:O	79:2S:805:G:H4'	2.21	0.40
78:1S:977:A:H2'	78:1S:978:A:O4'	2.21	0.40
49:S3:11:LEU:HA	49:S3:14:ASP:HB2	2.02	0.40
62:16:33:GLY:HA2	78:1S:1366:U:H5''	2.02	0.40
78:1S:614:C:H2'	78:1S:615:A:C8	2.55	0.40
79:2S:888:A:H2'	79:2S:889:U:C6	2.55	0.40
4:L4:269:SER:O	4:L4:270:SER:HB3	2.21	0.40
79:2S:3390:G:H2'	79:2S:3391:A:C8	2.56	0.40
79:2S:1389:G:O3'	79:2S:1392:G:H4'	2.21	0.40
66:20:57:ARG:HG2	78:1S:1382:A:O4'	2.20	0.40
9:L9:160:ASP:O	9:L9:164:ILE:HG12	2.21	0.40
78:1S:1231:U:O2'	78:1S:1258:U:H1'	2.21	0.40
58:12:33:ARG:O	58:12:37:VAL:HG23	2.21	0.40
52:S6:98:ARG:HD3	52:S6:99:GLY:N	2.27	0.40
13:63:103:ASN:ND2	13:63:109:PHE:HD2	2.20	0.40
79:2S:153:U:C3'	79:2S:154:U:H5''	2.51	0.40
37:87:52:LYS:O	37:87:56:ARG:HG3	2.20	0.40
33:83:60:ARG:HH11	79:2S:622:A:C5'	2.34	0.40
78:1S:1734:U:O2'	78:1S:1735:U:H5'	2.21	0.40
54:S8:48:THR:HB	54:S8:49:ARG:H	1.69	0.40
18:68:147:ARG:HH12	18:68:150:VAL:HG12	1.85	0.40
70:24:4:ALA:HB3	70:24:30:PRO:HD2	2.03	0.40
43:93:51:ALA:HB3	43:93:54:ILE:HB	2.02	0.40
5:L5:40:HIS:HD2	5:L5:42:ALA:HB3	1.85	0.40
46:S0:30:GLN:HA	46:S0:149:LEU:HB3	2.03	0.40
54:S8:42:ARG:O	54:S8:58:LEU:HB2	2.22	0.40
32:82:27:ARG:HD2	79:2S:1433:A:C4'	2.51	0.40
26:76:28:ARG:HA	26:76:31:LEU:HD12	2.04	0.40
1:L1:136:THR:H	1:L1:137:PRO:HD2	1.87	0.40
8:L8:81:THR:OG1	8:L8:181:LYS:HB2	2.21	0.40
47:S1:136:ARG:HH11	78:1S:884:A:H5''	1.87	0.40
50:S4:92:LEU:HD12	50:S4:92:LEU:N	2.35	0.40
15:65:187:ARG:O	15:65:190:THR:HG22	2.21	0.40
72:26:23:CYS:HB3	72:26:27:SER:CA	2.51	0.40
47:S1:29:TRP:HA	47:S1:47:LEU:HB3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:P0:61:ARG:CB	79:2S:1221:A:H5'	2.51	0.40
50:S4:23:LEU:CD1	55:S9:4:ALA:HB3	2.49	0.40
3:L3:130:PHE:H	79:2S:3150:A:H5'	1.85	0.40
79:2S:2820:A:H5''	82:PT:77:A:C6	2.56	0.40
78:1S:1269:U:H2'	78:1S:1269:U:O2	2.21	0.40
13:63:164:GLU:O	13:63:165:SER:HB3	2.21	0.40
59:13:40:TYR:O	59:13:45:LEU:HD23	2.21	0.40
78:1S:588:U:H2'	78:1S:589:C:H6	1.83	0.40
80:8S:58:G:O2'	80:8S:99:C:H4'	2.21	0.40
79:2S:1649:U:H2'	79:2S:1650:G:C8	2.56	0.40
79:2S:3138:U:C2'	79:2S:3139:A:H5''	2.50	0.40
79:2S:27:C:H4'	79:2S:328:U:C4'	2.51	0.40
79:2S:3325:G:O2'	79:2S:3326:G:H5'	2.21	0.40
79:2S:769:G:H2'	79:2S:770:G:H5'	2.03	0.40
79:2S:951:A:H2'	79:2S:952:A:C8	2.56	0.40
45:RC:135:THR:CG2	45:RC:141:LEU:HD21	2.51	0.40
8:L8:59:GLN:HA	8:L8:62:LYS:HE2	2.03	0.40
55:S9:132:ARG:HB2	78:1S:513:U:OP1	2.21	0.40
78:1S:64:U:C3'	78:1S:65:A:H5''	2.51	0.40
6:L6:135:VAL:HG22	79:2S:3268:A:C2	2.57	0.40
79:2S:233:C:H2'	79:2S:234:G:O4'	2.22	0.40
64:18:11:PHE:CE1	64:18:59:GLY:HA3	2.55	0.40
11:61:89:TYR:O	11:61:169:ALA:HA	2.21	0.40
11:61:37:LEU:HD13	11:61:45:PRO:HB3	2.02	0.40
79:2S:2104:A:H2'	79:2S:2105:G:C8	2.57	0.40
21:71:80:VAL:HG13	21:71:80:VAL:O	2.22	0.40
74:28:43:ASN:HD21	74:28:63:ALA:HB3	1.86	0.40
78:1S:85:A:H2'	78:1S:86:A:O4'	2.21	0.40
31:81:5:LYS:HG2	31:81:89:LEU:HD11	2.04	0.40
19:69:163:ARG:CG	78:1S:815:G:H5''	2.38	0.40
25:75:108:LEU:HD22	25:75:125:ARG:HD3	2.02	0.40
69:23:127:VAL:HG22	69:23:132:LEU:HD22	2.03	0.40
27:77:14:VAL:HG12	27:77:79:HIS:C	2.42	0.40
79:2S:2224:A:H2'	79:2S:2225:U:H5'	2.04	0.40
45:RC:217:ASP:HB2	45:RC:219:GLU:HG2	2.03	0.40
1:L1:207:LYS:CG	1:L1:208:SER:N	2.84	0.40
14:64:53:VAL:HA	14:64:54:PRO:HD3	1.94	0.40
51:S5:133:VAL:O	51:S5:137:ILE:HG12	2.21	0.40
81:5S:104:A:C2'	81:5S:105:C:H5'	2.48	0.40
78:1S:1336:A:H2'	78:1S:1337:A:H4'	2.03	0.40
15:65:188:ARG:HG2	79:2S:50:U:OP1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:67:112:LEU:HD12	17:67:152:GLU:CA	2.51	0.40
16:66:49:ARG:HB2	79:2S:1191:U:H5'	2.03	0.40
2:L2:182:ALA:HB2	79:2S:2148:U:H4'	2.02	0.40
79:2S:3392:U:H2'	79:2S:3393:U:H6	1.85	0.40
21:71:89:LEU:HD21	79:2S:2723:U:H4'	2.02	0.40
79:2S:1245:A:H3'	79:2S:1246:G:H5''	2.02	0.40
48:S2:103:VAL:HG12	48:S2:104:VAL:N	2.35	0.40
46:S0:179:ARG:HG2	46:S0:183:ARG:NH1	2.37	0.40
25:75:92:LYS:HE3	25:75:110:VAL:O	2.21	0.40
63:17:71:PHE:O	63:17:72:LYS:HB3	2.21	0.40
20:70:78:TRP:HE3	20:70:125:LYS:HE3	1.83	0.40
79:2S:2527:G:H2'	79:2S:2528:G:H8	1.86	0.40
36:86:4:LYS:HD2	36:86:14:GLY:HA3	2.03	0.40
51:S5:89:ILE:HG13	51:S5:89:ILE:H	1.56	0.40
81:5S:24:A:H4'	81:5S:120:C:H4'	2.03	0.40
45:RC:7:LEU:HD11	45:RC:251:TRP:HZ3	1.86	0.40
78:1S:1388:A:H4'	78:1S:1389:C:O4'	2.22	0.40
79:2S:818:C:H42	79:2S:919:U:H4'	1.86	0.40
29:79:28:LYS:HD3	29:79:28:LYS:HA	1.91	0.40
42:92:55:LYS:CB	82:ET:76:C:H1'	2.52	0.40
78:1S:1783:C:H2'	78:1S:1784:C:C6	2.56	0.40
5:L5:178:ASN:HA	5:L5:183:TRP:CD2	2.57	0.40
78:1S:1262:U:H2'	78:1S:1263:G:H8	1.85	0.40
49:S3:41:VAL:HG13	49:S3:41:VAL:O	2.22	0.40
11:61:43:GLN:HB3	81:5S:39:C:O2'	2.21	0.40
60:14:128:LYS:HB3	72:26:22:ARG:NH1	2.37	0.40
67:21:17:CYS:HB3	67:21:22:ARG:H	1.86	0.40
63:17:41:ILE:HD13	63:17:47:ARG:HB2	2.04	0.40
7:L7:158:LYS:O	7:L7:159:GLN:C	2.60	0.40
9:L9:129:ARG:HH21	79:2S:3126:C:H4'	1.87	0.40
43:93:85:ARG:HG2	43:93:85:ARG:HH11	1.86	0.40
43:93:85:ARG:O	43:93:89:MET:HG3	2.21	0.40
79:2S:3160:U:H2'	79:2S:3161:C:C5	2.56	0.40
7:L7:101:LYS:HG3	79:2S:984:G:O2'	2.22	0.40
11:61:133:ARG:O	11:61:135:GLY:N	2.54	0.40
79:2S:1626:U:H4'	79:2S:1632:A:C4'	2.28	0.40
79:2S:726:G:H8	79:2S:726:G:H5'	1.86	0.40
23:73:38:ALA:HB3	23:73:59:MET:CB	2.36	0.40
79:2S:109:A:C4'	79:2S:110:G:H5'	2.36	0.40
13:63:46:ILE:O	13:63:49:ARG:HB2	2.21	0.40
79:2S:603:A:H2'	79:2S:604:G:H4'	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:L7:126:LEU:HD21	79:2S:986:U:O4'	2.20	0.40
47:S1:33:LYS:O	47:S1:98:THR:HG22	2.22	0.40
27:77:17:ARG:NH1	79:2S:1633:C:C5	2.89	0.40
79:2S:2969:A:H2'	79:2S:2970:C:C6	2.56	0.40
79:2S:2356:A:H2'	79:2S:2357:A:H5'	2.03	0.40
17:67:167:ARG:HD3	79:2S:619:A:OP1	2.22	0.40
78:1S:689:G:H2'	78:1S:690:G:C5'	2.45	0.40
15:65:104:GLU:HG2	15:65:160:GLU:CG	2.44	0.40
18:68:71:LEU:HD13	18:68:97:PRO:HG2	2.03	0.40
14:64:85:TRP:CD1	14:64:91:CYS:HB3	2.55	0.40
9:L9:112:ILE:HD13	9:L9:161:LEU:HD21	2.03	0.40
79:2S:636:C:O2'	79:2S:637:C:H5''	2.22	0.40
32:82:40:SER:HB3	32:82:43:ARG:HB2	2.03	0.40
4:L4:313:LEU:HD13	4:L4:314:LYS:N	2.36	0.40
8:L8:69:LEU:HB3	79:2S:2514:U:O4	2.22	0.40
34:84:86:LYS:HB3	34:84:86:LYS:HE2	1.98	0.40
46:S0:101:ARG:HD3	78:1S:1320:U:C5	2.56	0.40
17:67:22:LEU:C	17:67:24:VAL:N	2.75	0.40
17:67:122:ALA:HB1	17:67:123:PRO:HD2	2.04	0.40
79:2S:211:A:H5'	79:2S:229:G:C1'	2.52	0.40
71:25:38:HIS:O	71:25:39:ALA:HB3	2.21	0.40
10:60:119:TRP:HZ3	79:2S:1126:G:H5''	1.86	0.40
54:S8:67:TRP:CD1	54:S8:183:ILE:HD11	2.57	0.40
23:73:33:ASN:H	23:73:33:ASN:HD22	1.68	0.40
79:2S:1123:U:H2'	79:2S:1124:U:C5'	2.52	0.40
78:1S:1270:G:H2'	78:1S:1271:G:C8	2.56	0.40
79:2S:912:G:H2'	79:2S:914:A:C8	2.56	0.40
45:RC:13:LEU:HB2	45:RC:310:ILE:HB	2.04	0.40
78:1S:445:A:H2'	78:1S:446:A:H8	1.87	0.40
65:19:99:SER:HB2	78:1S:1504:G:OP1	2.21	0.40
23:73:86:ARG:HD2	23:73:92:PHE:CE2	2.57	0.40
79:2S:3003:G:H2'	79:2S:3004:C:C6	2.57	0.40
54:S8:197:THR:HG22	54:S8:200:LYS:HD2	2.03	0.40
16:66:27:LEU:HD23	16:66:31:GLN:O	2.21	0.40
75:29:21:CYS:HB2	75:29:26:SER:HB3	2.02	0.40
79:2S:1326:A:H2'	79:2S:1327:C:O4'	2.22	0.40
13:63:155:GLU:O	28:78:100:PRO:HA	2.21	0.40
16:66:115:LYS:HG3	79:2S:3178:A:H2'	2.03	0.40
45:RC:174:ASN:HA	45:RC:199:ILE:H	1.87	0.40
17:67:127:ARG:HG2	17:67:128:ARG:H	1.85	0.40
45:RC:2:ALA:O	45:RC:3:SER:HB3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:S6:217:SER:O	52:S6:220:LYS:HE3	2.21	0.40
78:1S:1202:A:H1'	78:1S:1207:C:N4	2.36	0.40
78:1S:743:U:H2'	78:1S:744:U:O4'	2.21	0.40
78:1S:103:A:H4'	78:1S:105:A:N7	2.36	0.40
45:RC:193:ILE:HD12	49:S3:218:LEU:HD13	2.03	0.40
14:64:8:LYS:HE2	79:2S:3187:A:H5''	2.03	0.40
79:2S:2249:G:O2'	79:2S:2250:G:H5'	2.22	0.40
10:60:174:THR:HG22	10:60:175:ASN:N	2.37	0.40
63:17:125:SER:O	63:17:126:ALA:HB3	2.22	0.40
3:L3:174:LYS:HD2	79:2S:3314:A:H5''	2.04	0.40
21:71:40:VAL:HG12	21:71:98:HIS:HD2	1.87	0.40
59:13:3:ARG:NH1	59:13:3:ARG:HB2	2.37	0.40
2:L2:45:VAL:HB	2:L2:61:VAL:HG22	2.04	0.40
16:66:25:LYS:HE3	79:2S:1176:C:OP1	2.21	0.40
81:5S:105:C:H2'	81:5S:106:U:H6	1.86	0.40
55:S9:134:ILE:HG22	55:S9:157:ASP:O	2.20	0.40
34:84:86:LYS:HA	34:84:89:ILE:HD12	2.03	0.40
55:S9:126:ARG:NH1	55:S9:144:PRO:HG2	2.37	0.40
30:80:42:ILE:HG13	30:80:67:VAL:HG13	2.03	0.40
78:1S:1311:U:H2'	78:1S:1313:A:OP2	2.22	0.40
55:S9:24:LEU:HA	55:S9:27:GLU:OE1	2.20	0.40
43:93:27:LYS:HA	43:93:30:GLU:OE2	2.21	0.40
11:61:91:LEU:HB3	11:61:92:ARG:H	1.49	0.40
16:66:120:VAL:HA	16:66:121:PRO:HD3	1.82	0.40
4:L4:170:LYS:HG3	4:L4:175:HIS:ND1	2.37	0.40
63:17:29:GLN:H	63:17:29:GLN:HE21	1.70	0.40
79:2S:1115:G:H5''	79:2S:1116:G:H5''	2.03	0.40
17:67:47:TYR:HD1	17:67:56:ARG:NE	2.20	0.40
76:30:29:LYS:HE3	76:30:35:TYR:CE2	2.57	0.40
40:90:112:LYS:HB3	40:90:114:LYS:CG	2.52	0.40
58:12:113:ARG:HG3	58:12:114:LYS:N	2.37	0.40
45:RC:169:ILE:CD1	45:RC:183:LEU:HD21	2.52	0.40
7:L7:218:ARG:NH2	7:L7:220:PHE:HB2	2.37	0.40
5:L5:146:LEU:HD21	5:L5:173:VAL:CG1	2.51	0.40
39:89:37:TYR:HB2	39:89:38:ASN:H	1.72	0.40
3:L3:199:PHE:O	3:L3:200:GLU:HB2	2.22	0.40
23:73:132:ASN:HD22	23:73:132:ASN:N	2.20	0.40
78:1S:1545:A:H2'	78:1S:1546:G:C8	2.56	0.40
7:L7:78:GLU:HA	21:71:138:SER:HB3	2.02	0.40
79:2S:3331:U:H2'	79:2S:3332:U:O4'	2.21	0.40
79:2S:2686:A:H2'	79:2S:2687:G:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:83:6:ARG:HG3	33:83:8:TYR:CE1	2.56	0.40
5:L5:58:LYS:HG3	81:5S:49:G:N7	2.36	0.40
39:89:16:ALA:O	39:89:20:ASN:ND2	2.54	0.40
71:25:62:VAL:O	71:25:66:VAL:HG23	2.21	0.40
77:31:97:LYS:O	77:31:98:VAL:CB	2.69	0.40
19:69:67:ALA:O	19:69:71:ARG:HG3	2.22	0.40
50:S4:71:LYS:HG3	50:S4:71:LYS:O	2.22	0.40
8:L8:38:GLN:HB2	79:2S:2557:A:H2	1.87	0.40
45:RC:26:SER:OG	45:RC:77:GLY:HA3	2.22	0.40
51:S5:208:SER:OG	51:S5:211:ILE:HG12	2.22	0.40
8:L8:103:ALA:O	8:L8:107:GLU:HB3	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	
1	L1	202/217 (93%)	140 (69%)	50 (25%)	12 (6%)	2	26
2	L2	250/254 (98%)	205 (82%)	34 (14%)	11 (4%)	3	33
3	L3	384/387 (99%)	328 (85%)	47 (12%)	9 (2%)	8	48
4	L4	359/362 (99%)	290 (81%)	53 (15%)	16 (4%)	3	33
5	L5	294/297 (99%)	251 (85%)	32 (11%)	11 (4%)	4	37
6	L6	152/176 (86%)	131 (86%)	19 (12%)	2 (1%)	15	59
7	L7	220/244 (90%)	182 (83%)	32 (14%)	6 (3%)	6	44
8	L8	231/256 (90%)	191 (83%)	30 (13%)	10 (4%)	3	34
9	L9	189/191 (99%)	163 (86%)	22 (12%)	4 (2%)	9	50
10	60	207/221 (94%)	183 (88%)	21 (10%)	3 (1%)	14	58
11	61	167/174 (96%)	131 (78%)	23 (14%)	13 (8%)	1	20

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
12	62	137/165 (83%)	79 (58%)	37 (27%)	21 (15%)	0	5
13	63	191/199 (96%)	158 (83%)	20 (10%)	13 (7%)	1	23
14	64	134/138 (97%)	110 (82%)	21 (16%)	3 (2%)	8	49
15	65	201/204 (98%)	160 (80%)	33 (16%)	8 (4%)	4	35
16	66	195/199 (98%)	173 (89%)	17 (9%)	5 (3%)	7	45
17	67	181/184 (98%)	153 (84%)	23 (13%)	5 (3%)	6	44
18	68	183/186 (98%)	155 (85%)	21 (12%)	7 (4%)	4	37
19	69	186/189 (98%)	169 (91%)	16 (9%)	1 (0%)	34	76
20	70	170/172 (99%)	142 (84%)	21 (12%)	7 (4%)	3	34
21	71	157/160 (98%)	137 (87%)	15 (10%)	5 (3%)	5	40
22	72	98/121 (81%)	81 (83%)	14 (14%)	3 (3%)	5	41
23	73	134/137 (98%)	118 (88%)	14 (10%)	2 (2%)	13	57
24	74	62/155 (40%)	50 (81%)	10 (16%)	2 (3%)	5	40
25	75	119/142 (84%)	99 (83%)	14 (12%)	6 (5%)	3	31
26	76	124/127 (98%)	116 (94%)	8 (6%)	0	100	100
27	77	133/136 (98%)	102 (77%)	25 (19%)	6 (4%)	3	33
28	78	146/149 (98%)	119 (82%)	22 (15%)	5 (3%)	5	40
29	79	56/59 (95%)	50 (89%)	4 (7%)	2 (4%)	4	38
30	80	95/105 (90%)	82 (86%)	11 (12%)	2 (2%)	9	50
31	81	107/113 (95%)	93 (87%)	11 (10%)	3 (3%)	6	44
32	82	125/130 (96%)	111 (89%)	13 (10%)	1 (1%)	24	69
33	83	104/107 (97%)	82 (79%)	14 (14%)	8 (8%)	1	20
34	84	110/121 (91%)	87 (79%)	18 (16%)	5 (4%)	3	33
35	85	117/120 (98%)	108 (92%)	7 (6%)	2 (2%)	11	55
36	86	97/100 (97%)	83 (86%)	8 (8%)	6 (6%)	2	25
37	87	85/88 (97%)	70 (82%)	14 (16%)	1 (1%)	16	61
38	88	75/78 (96%)	66 (88%)	8 (11%)	1 (1%)	15	59
39	89	48/51 (94%)	40 (83%)	7 (15%)	1 (2%)	9	50
40	90	50/128 (39%)	41 (82%)	7 (14%)	2 (4%)	4	35
41	91	23/25 (92%)	23 (100%)	0	0	100	100
42	92	103/106 (97%)	83 (81%)	18 (18%)	2 (2%)	10	52

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
43	93	89/92 (97%)	77 (86%)	11 (12%)	1 (1%)	17	63
44	P0	121/312 (39%)	107 (88%)	13 (11%)	1 (1%)	24	69
45	RC	316/319 (99%)	262 (83%)	44 (14%)	10 (3%)	5	40
46	S0	204/252 (81%)	161 (79%)	37 (18%)	6 (3%)	6	43
47	S1	212/255 (83%)	162 (76%)	39 (18%)	11 (5%)	2	29
48	S2	215/254 (85%)	177 (82%)	30 (14%)	8 (4%)	4	37
49	S3	221/240 (92%)	188 (85%)	25 (11%)	8 (4%)	4	38
50	S4	258/261 (99%)	202 (78%)	45 (17%)	11 (4%)	3	34
51	S5	204/225 (91%)	170 (83%)	25 (12%)	9 (4%)	3	33
52	S6	224/236 (95%)	196 (88%)	24 (11%)	4 (2%)	11	53
53	S7	182/190 (96%)	145 (80%)	27 (15%)	10 (6%)	2	28
54	S8	184/200 (92%)	141 (77%)	34 (18%)	9 (5%)	3	31
55	S9	183/197 (93%)	151 (82%)	20 (11%)	12 (7%)	1	24
56	10	94/105 (90%)	69 (73%)	17 (18%)	8 (8%)	1	17
57	11	153/156 (98%)	122 (80%)	23 (15%)	8 (5%)	2	29
58	12	122/143 (85%)	81 (66%)	26 (21%)	15 (12%)	0	8
59	13	148/151 (98%)	133 (90%)	11 (7%)	4 (3%)	6	44
60	14	125/137 (91%)	95 (76%)	25 (20%)	5 (4%)	4	35
61	15	122/142 (86%)	97 (80%)	18 (15%)	7 (6%)	2	27
62	16	139/143 (97%)	118 (85%)	17 (12%)	4 (3%)	6	43
63	17	116/136 (85%)	90 (78%)	18 (16%)	8 (7%)	1	22
64	18	143/146 (98%)	114 (80%)	20 (14%)	9 (6%)	2	25
65	19	141/144 (98%)	118 (84%)	16 (11%)	7 (5%)	3	31
66	20	105/121 (87%)	83 (79%)	16 (15%)	6 (6%)	2	27
67	21	85/87 (98%)	68 (80%)	11 (13%)	6 (7%)	1	22
68	22	127/130 (98%)	112 (88%)	11 (9%)	4 (3%)	5	41
69	23	142/145 (98%)	107 (75%)	30 (21%)	5 (4%)	4	39
70	24	132/135 (98%)	106 (80%)	18 (14%)	8 (6%)	2	25
71	25	68/108 (63%)	51 (75%)	14 (21%)	3 (4%)	3	33
72	26	95/119 (80%)	64 (67%)	20 (21%)	11 (12%)	0	9
73	27	79/82 (96%)	61 (77%)	18 (23%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
74	28	61/67 (91%)	46 (75%)	13 (21%)	2 (3%)	5	40
75	29	51/56 (91%)	43 (84%)	7 (14%)	1 (2%)	9	51
76	30	58/63 (92%)	44 (76%)	8 (14%)	6 (10%)	1	12
77	31	69/152 (45%)	44 (64%)	14 (20%)	11 (16%)	0	5
All	All	11389/12574 (91%)	9340 (82%)	1579 (14%)	470 (4%)	6	34

All (470) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	L1	20	SER
1	L1	151	VAL
2	L2	41	ILE
2	L2	115	ASN
2	L2	192	LYS
3	L3	4	ARG
4	L4	268	ALA
4	L4	317	PRO
5	L5	19	PRO
7	L7	92	ILE
7	L7	163	LEU
8	L8	36	ILE
11	61	12	LEU
11	61	114	ILE
11	61	152	HIS
12	62	30	PRO
12	62	34	PRO
12	62	39	PRO
12	62	68	GLN
12	62	87	GLU
12	62	89	PRO
12	62	106	LEU
12	62	147	ASN
12	62	148	PRO
13	63	62	THR
13	63	136	GLU
16	66	16	VAL
18	68	41	ASP
18	68	97	PRO
18	68	162	ALA
19	69	130	ASN
20	70	23	LYS

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Mol	Chain	Res	Type
20	70	61	ILE
30	80	97	ASP
33	83	75	HIS
36	86	3	VAL
42	92	34	SER
45	RC	94	VAL
49	S3	93	ASP
50	S4	70	VAL
50	S4	194	THR
50	S4	195	ILE
51	S5	204	GLY
53	S7	12	ALA
53	S7	32	PRO
53	S7	64	VAL
53	S7	74	GLN
54	S8	40	ALA
54	S8	154	SER
55	S9	134	ILE
55	S9	138	LYS
55	S9	157	ASP
56	10	64	TYR
56	10	81	ASN
56	10	82	LEU
56	10	87	VAL
56	10	88	PRO
58	12	85	LYS
58	12	106	ILE
60	14	42	VAL
61	15	12	PHE
61	15	69	GLU
61	15	101	ALA
61	15	125	PRO
63	17	85	VAL
63	17	86	PRO
63	17	124	VAL
64	18	14	ILE
64	18	61	LEU
64	18	82	PRO
64	18	83	ALA
64	18	92	ILE
64	18	102	ALA
65	19	53	TRP

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Mol	Chain	Res	Type
66	20	96	PRO
67	21	44	ARG
70	24	35	VAL
71	25	44	GLN
71	25	71	ILE
72	26	12	LYS
72	26	81	ALA
72	26	84	VAL
72	26	86	VAL
74	28	36	THR
76	30	43	ARG
76	30	45	VAL
76	30	47	VAL
77	31	98	VAL
77	31	102	VAL
1	L1	74	VAL
1	L1	199	GLN
3	L3	5	LYS
3	L3	187	SER
3	L3	298	PHE
3	L3	317	ILE
4	L4	91	GLY
4	L4	232	SER
4	L4	264	SER
4	L4	293	SER
5	L5	6	ASP
5	L5	188	GLU
6	L6	98	VAL
7	L7	158	LYS
7	L7	159	GLN
8	L8	43	LYS
8	L8	79	GLN
9	L9	14	GLU
9	L9	22	SER
9	L9	50	ASN
9	L9	110	LYS
11	61	108	GLU
11	61	134	PRO
12	62	37	LEU
12	62	58	VAL
12	62	125	LEU
12	62	128	VAL

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Mol	Chain	Res	Type
13	63	47	ALA
13	63	76	THR
17	67	156	ALA
18	68	13	SER
18	68	175	ALA
20	70	147	ASP
21	71	124	VAL
21	71	125	ALA
22	72	44	GLU
25	75	54	TYR
25	75	57	LEU
27	77	19	ALA
27	77	32	GLY
28	78	65	GLN
29	79	25	LYS
30	80	47	ASN
32	82	5	PRO
33	83	15	SER
33	83	59	VAL
35	85	119	LYS
36	86	34	SER
36	86	97	SER
39	89	22	PRO
46	S0	4	PRO
47	S1	153	HIS
47	S1	221	PRO
48	S2	176	SER
49	S3	160	SER
50	S4	35	PRO
50	S4	150	PRO
51	S5	21	THR
51	S5	43	PHE
51	S5	63	GLN
51	S5	64	VAL
51	S5	101	GLY
52	S6	153	VAL
53	S7	8	ILE
53	S7	98	ILE
53	S7	109	VAL
53	S7	111	LYS
54	S8	186	GLY
55	S9	21	SER

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Mol	Chain	Res	Type
55	S9	98	ALA
56	10	54	TYR
56	10	60	SER
57	11	6	THR
57	11	24	LYS
57	11	54	ILE
58	12	91	VAL
60	14	52	ARG
62	16	40	GLU
63	17	88	VAL
64	18	145	ARG
65	19	119	LYS
66	20	17	GLN
66	20	54	GLY
66	20	118	VAL
68	22	30	SER
69	23	112	LYS
70	24	60	PHE
71	25	97	LYS
77	31	84	VAL
1	L1	132	GLY
1	L1	136	THR
2	L2	29	LEU
2	L2	120	PRO
2	L2	174	ARG
2	L2	195	SER
3	L3	234	GLY
3	L3	333	LYS
4	L4	72	ALA
4	L4	196	ASN
4	L4	269	SER
5	L5	125	VAL
5	L5	296	GLN
7	L7	191	VAL
8	L8	157	VAL
8	L8	174	GLY
10	60	24	ARG
11	61	91	LEU
11	61	135	GLY
11	61	173	ASP
12	62	88	PRO
12	62	142	ARG

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Mol	Chain	Res	Type
13	63	61	PRO
15	65	75	VAL
16	66	87	MET
16	66	149	TYR
17	67	23	ARG
20	70	91	TYR
21	71	159	PHE
22	72	11	ILE
22	72	90	ARG
23	73	24	ASN
23	73	47	ASN
25	75	23	ALA
27	77	17	ARG
27	77	51	LEU
28	78	110	GLY
28	78	119	PRO
33	83	88	ASN
35	85	93	THR
36	86	13	LYS
36	86	78	GLY
37	87	14	LYS
43	93	18	TYR
44	P0	92	PRO
45	RC	63	GLY
45	RC	105	GLY
47	S1	82	ARG
47	S1	206	PRO
47	S1	213	ARG
47	S1	222	LYS
48	S2	39	THR
48	S2	108	ASN
49	S3	44	THR
49	S3	82	GLY
49	S3	217	ILE
50	S4	3	ARG
50	S4	79	ASP
51	S5	99	MET
53	S7	13	PRO
54	S8	120	THR
54	S8	155	SER
55	S9	18	PRO
56	10	86	ILE

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Mol	Chain	Res	Type
58	12	68	GLU
58	12	102	GLY
58	12	108	ARG
58	12	110	GLY
58	12	119	SER
59	13	3	ARG
59	13	28	LEU
60	14	22	SER
62	16	39	VAL
63	17	87	GLU
64	18	8	GLN
65	19	69	LYS
65	19	90	PRO
67	21	7	GLN
67	21	56	SER
68	22	93	LEU
69	23	41	SER
70	24	34	ASN
72	26	17	HIS
72	26	61	GLU
72	26	83	ILE
76	30	13	LYS
77	31	87	THR
77	31	118	ARG
77	31	129	GLY
1	L1	45	ARG
1	L1	120	VAL
1	L1	200	ASN
1	L1	209	SER
2	L2	158	ILE
2	L2	235	ALA
4	L4	131	VAL
4	L4	292	SER
4	L4	328	ASN
5	L5	21	ARG
5	L5	44	TYR
5	L5	259	LYS
8	L8	136	LEU
10	60	122	PRO
11	61	8	PRO
11	61	167	TYR
12	62	29	ALA

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Mol	Chain	Res	Type
12	62	93	LYS
13	63	51	LEU
13	63	56	PRO
13	63	154	VAL
14	64	6	ILE
14	64	10	SER
15	65	52	GLY
15	65	74	PRO
15	65	118	SER
15	65	185	ALA
17	67	119	VAL
17	67	161	ALA
20	70	24	LEU
20	70	154	HIS
21	71	123	GLY
24	74	23	ARG
25	75	50	ALA
27	77	103	GLN
28	78	56	VAL
31	81	66	GLY
34	84	26	PRO
45	RC	146	GLY
45	RC	276	PRO
46	S0	39	ASN
46	S0	103	THR
46	S0	195	TRP
47	S1	88	VAL
48	S2	109	GLY
48	S2	150	GLN
49	S3	84	ILE
50	S4	193	GLY
54	S8	52	ASN
57	11	3	THR
57	11	7	VAL
57	11	30	ARG
59	13	24	ALA
62	16	14	LYS
65	19	35	ASP
67	21	12	TYR
67	21	46	ILE
69	23	144	ARG
70	24	5	VAL

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Mol	Chain	Res	Type
70	24	6	THR
70	24	75	VAL
72	26	63	ALA
76	30	58	PRO
77	31	89	LYS
77	31	90	LYS
77	31	148	TYR
1	L1	32	VAL
2	L2	40	TYR
3	L3	174	LYS
4	L4	245	GLY
4	L4	304	GLN
5	L5	41	LYS
5	L5	185	PHE
8	L8	39	ALA
11	61	117	ASP
11	61	172	LEU
12	62	38	SER
12	62	136	ALA
12	62	154	GLY
13	63	59	ARG
13	63	127	PRO
13	63	132	ALA
14	64	5	SER
15	65	95	GLN
15	65	123	GLN
15	65	187	ARG
16	66	62	THR
18	68	76	ALA
21	71	132	PRO
24	74	7	SER
28	78	27	LYS
33	83	94	PHE
34	84	76	TYR
38	88	34	ALA
40	90	127	LEU
42	92	96	GLU
45	RC	3	SER
45	RC	98	GLU
45	RC	163	ASP
48	S2	145	GLY
48	S2	236	PRO

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Mol	Chain	Res	Type
49	S3	33	GLY
49	S3	154	ASP
50	S4	96	ASN
52	S6	20	ASP
52	S6	173	PRO
54	S8	33	PRO
54	S8	59	ARG
55	S9	62	ARG
55	S9	162	SER
58	12	101	ALA
58	12	111	ASN
58	12	125	ASN
58	12	130	THR
60	14	24	ASN
61	15	73	PRO
68	22	67	GLY
69	23	70	LYS
69	23	127	VAL
70	24	11	LYS
70	24	121	THR
72	26	11	ASN
72	26	64	LEU
74	28	61	ARG
77	31	99	LYS
1	L1	168	ALA
4	L4	351	PRO
7	L7	25	GLN
8	L8	25	PRO
10	60	132	GLY
18	68	165	ILE
25	75	66	PRO
33	83	3	GLU
36	86	21	THR
40	90	79	GLU
45	RC	197	SER
46	S0	32	HIS
47	S1	210	ILE
50	S4	32	SER
50	S4	171	ASP
51	S5	68	ILE
57	11	130	PRO
58	12	82	PRO

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Mol	Chain	Res	Type
58	12	116	VAL
60	14	124	ASP
61	15	52	LYS
64	18	135	GLY
65	19	3	GLY
66	20	55	PRO
66	20	119	ALA
68	22	83	ILE
75	29	22	ARG
77	31	85	TYR
4	L4	146	PRO
31	81	107	VAL
47	S1	48	VAL
47	S1	75	GLY
51	S5	22	PRO
57	11	41	GLY
58	12	115	VAL
65	19	34	VAL
72	26	41	ILE
76	30	50	VAL
3	L3	33	PRO
5	L5	26	GLY
12	62	22	VAL
31	81	7	VAL
46	S0	68	PRO
55	S9	35	GLY
55	S9	129	ILE
55	S9	169	PRO
63	17	22	PRO
63	17	122	ILE
67	21	48	GLY
17	67	36	ILE
25	75	118	GLY
34	84	28	GLY
34	84	59	PRO
45	RC	49	GLY
53	S7	31	SER
61	15	99	GLY
2	L2	137	ILE
8	L8	163	VAL
11	61	67	VAL
13	63	72	GLY

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Mol	Chain	Res	Type
16	66	111	PRO
29	79	21	ILE
34	84	27	GLY
47	S1	35	PRO
54	S8	39	GLY
55	S9	136	VAL
59	13	22	ALA
6	L6	91	VAL
8	L8	182	GLY
13	63	50	PRO
20	70	21	GLU
27	77	75	VAL
33	83	25	PRO
48	S2	36	VAL
52	S6	69	LEU
63	17	99	VAL
62	16	41	PRO
33	83	104	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	
1	L1	185/198 (93%)	172 (93%)	13 (7%)	19	56
2	L2	194/196 (99%)	185 (95%)	9 (5%)	33	68
3	L3	322/323 (100%)	310 (96%)	12 (4%)	41	73
4	L4	288/289 (100%)	276 (96%)	12 (4%)	36	70
5	L5	244/245 (100%)	236 (97%)	8 (3%)	45	76
6	L6	134/153 (88%)	128 (96%)	6 (4%)	34	69
7	L7	186/205 (91%)	178 (96%)	8 (4%)	35	70
8	L8	191/208 (92%)	178 (93%)	13 (7%)	20	57
9	L9	171/171 (100%)	158 (92%)	13 (8%)	16	53
10	60	180/187 (96%)	167 (93%)	13 (7%)	18	55

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
11	61	147/150 (98%)	134 (91%)	13 (9%)	12	45
13	63	154/159 (97%)	146 (95%)	8 (5%)	29	65
14	64	107/109 (98%)	103 (96%)	4 (4%)	41	73
15	65	175/176 (99%)	163 (93%)	12 (7%)	19	56
16	66	160/162 (99%)	150 (94%)	10 (6%)	22	59
17	67	145/146 (99%)	135 (93%)	10 (7%)	19	56
18	68	150/151 (99%)	142 (95%)	8 (5%)	28	64
19	69	153/154 (99%)	142 (93%)	11 (7%)	18	55
20	70	156/156 (100%)	145 (93%)	11 (7%)	18	55
21	71	136/137 (99%)	132 (97%)	4 (3%)	50	78
22	72	87/107 (81%)	84 (97%)	3 (3%)	44	75
23	73	104/105 (99%)	99 (95%)	5 (5%)	31	67
24	74	56/129 (43%)	55 (98%)	1 (2%)	66	87
25	75	105/118 (89%)	93 (89%)	12 (11%)	7	32
26	76	109/110 (99%)	103 (94%)	6 (6%)	27	63
27	77	115/116 (99%)	111 (96%)	4 (4%)	43	74
28	78	118/119 (99%)	111 (94%)	7 (6%)	24	61
29	79	46/47 (98%)	40 (87%)	6 (13%)	5	28
30	80	81/88 (92%)	76 (94%)	5 (6%)	23	60
31	81	96/97 (99%)	88 (92%)	8 (8%)	14	49
32	82	109/111 (98%)	103 (94%)	6 (6%)	27	63
33	83	90/91 (99%)	88 (98%)	2 (2%)	60	83
34	84	95/103 (92%)	89 (94%)	6 (6%)	22	59
35	85	104/105 (99%)	98 (94%)	6 (6%)	25	61
36	86	81/82 (99%)	74 (91%)	7 (9%)	13	47
37	87	70/71 (99%)	68 (97%)	2 (3%)	50	78
38	88	68/69 (99%)	63 (93%)	5 (7%)	17	54
39	89	45/46 (98%)	39 (87%)	6 (13%)	5	28
40	90	47/116 (40%)	46 (98%)	1 (2%)	61	84
41	91	23/23 (100%)	18 (78%)	5 (22%)	1	9
42	92	90/91 (99%)	87 (97%)	3 (3%)	45	76

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
43	93	71/72 (99%)	69 (97%)	2 (3%)	51	78
44	P0	105/254 (41%)	98 (93%)	7 (7%)	20	57
45	RC	261/262 (100%)	242 (93%)	19 (7%)	17	54
46	S0	173/210 (82%)	158 (91%)	15 (9%)	13	45
47	S1	191/224 (85%)	171 (90%)	20 (10%)	8	36
48	S2	176/205 (86%)	167 (95%)	9 (5%)	29	66
49	S3	182/195 (93%)	167 (92%)	15 (8%)	14	49
50	S4	221/222 (100%)	209 (95%)	12 (5%)	27	64
51	S5	173/191 (91%)	166 (96%)	7 (4%)	38	71
52	S6	193/201 (96%)	183 (95%)	10 (5%)	29	65
53	S7	165/170 (97%)	154 (93%)	11 (7%)	20	57
54	S8	150/161 (93%)	143 (95%)	7 (5%)	32	68
55	S9	158/166 (95%)	151 (96%)	7 (4%)	35	69
56	10	89/98 (91%)	79 (89%)	10 (11%)	7	33
57	11	136/137 (99%)	128 (94%)	8 (6%)	24	61
58	12	100/119 (84%)	90 (90%)	10 (10%)	9	38
59	13	127/128 (99%)	118 (93%)	9 (7%)	18	55
60	14	96/105 (91%)	89 (93%)	7 (7%)	17	54
61	15	104/118 (88%)	95 (91%)	9 (9%)	13	45
62	16	117/119 (98%)	111 (95%)	6 (5%)	29	66
63	17	109/124 (88%)	95 (87%)	14 (13%)	5	29
64	18	128/129 (99%)	116 (91%)	12 (9%)	11	42
65	19	115/116 (99%)	109 (95%)	6 (5%)	29	65
66	20	100/114 (88%)	94 (94%)	6 (6%)	24	60
67	21	74/74 (100%)	69 (93%)	5 (7%)	20	57
68	22	110/111 (99%)	103 (94%)	7 (6%)	22	58
69	23	119/120 (99%)	112 (94%)	7 (6%)	24	61
70	24	112/113 (99%)	105 (94%)	7 (6%)	22	59
71	25	61/89 (68%)	55 (90%)	6 (10%)	10	39
72	26	83/101 (82%)	76 (92%)	7 (8%)	14	48
73	27	70/71 (99%)	65 (93%)	5 (7%)	18	55

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
74	28	56/60 (93%)	53 (95%)	3 (5%)	27	64
75	29	47/49 (96%)	47 (100%)	0	100	100
76	30	51/54 (94%)	47 (92%)	4 (8%)	16	51
77	31	43/135 (32%)	38 (88%)	5 (12%)	7	32
All	All	9583/10436 (92%)	8985 (94%)	598 (6%)	27	60

All (598) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	L1	18	LYS
1	L1	19	TYR
1	L1	26	ARG
1	L1	58	CYS
1	L1	83	ASP
1	L1	92	LYS
1	L1	103	LEU
1	L1	107	TYR
1	L1	108	ASN
1	L1	130	LYS
1	L1	134	PHE
1	L1	140	HIS
1	L1	198	TRP
2	L2	126	LEU
2	L2	176	ASP
2	L2	193	ARG
2	L2	204	MET
2	L2	207	VAL
2	L2	208	ASP
2	L2	218	HIS
2	L2	227	ARG
2	L2	241	ARG
3	L3	25	ILE
3	L3	30	LYS
3	L3	46	PHE
3	L3	102	LEU
3	L3	123	TYR
3	L3	140	ASP
3	L3	198	HIS
3	L3	240	ARG
3	L3	246	LEU
3	L3	266	ARG

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Mol	Chain	Res	Type
3	L3	272	TYR
3	L3	332	ARG
4	L4	43	ASN
4	L4	93	MET
4	L4	99	MET
4	L4	105	THR
4	L4	148	ILE
4	L4	170	LYS
4	L4	194	TYR
4	L4	246	ARG
4	L4	265	GLU
4	L4	279	HIS
4	L4	319	LYS
4	L4	345	GLU
5	L5	12	TYR
5	L5	15	ARG
5	L5	22	ARG
5	L5	23	ARG
5	L5	92	LEU
5	L5	95	TRP
5	L5	131	LEU
5	L5	168	ASP
6	L6	48	ARG
6	L6	54	TYR
6	L6	64	LEU
6	L6	65	ILE
6	L6	77	ARG
6	L6	91	VAL
7	L7	24	GLU
7	L7	25	GLN
7	L7	48	ASN
7	L7	60	ARG
7	L7	82	LYS
7	L7	136	TYR
7	L7	179	LEU
7	L7	200	ASN
8	L8	41	GLN
8	L8	63	LYS
8	L8	65	LEU
8	L8	69	LEU
8	L8	78	PHE
8	L8	80	TYR

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Mol	Chain	Res	Type
8	L8	84	ARG
8	L8	107	GLU
8	L8	122	LYS
8	L8	124	ASP
8	L8	134	TYR
8	L8	177	TYR
8	L8	204	ARG
9	L9	36	LYS
9	L9	41	ILE
9	L9	69	ARG
9	L9	92	TYR
9	L9	102	ASN
9	L9	106	LYS
9	L9	113	GLU
9	L9	130	ASP
9	L9	134	ILE
9	L9	157	ASN
9	L9	168	ARG
9	L9	172	ILE
9	L9	177	ASP
10	60	9	TYR
10	60	23	ASN
10	60	32	ARG
10	60	39	LYS
10	60	40	LYS
10	60	63	GLU
10	60	122	PRO
10	60	163	GLN
10	60	165	ILE
10	60	169	LYS
10	60	180	GLU
10	60	191	LYS
10	60	212	GLU
11	61	6	GLN
11	61	10	ARG
11	61	12	LEU
11	61	13	LYS
11	61	25	GLU
11	61	30	LEU
11	61	40	LEU
11	61	52	TYR
11	61	94	ARG

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Mol	Chain	Res	Type
11	61	99	THR
11	61	112	LEU
11	61	140	ARG
11	61	172	LEU
13	63	13	HIS
13	63	23	LYS
13	63	35	ARG
13	63	117	LYS
13	63	124	ILE
13	63	131	LYS
13	63	136	GLU
13	63	160	GLN
14	64	40	ASP
14	64	42	LYS
14	64	77	ARG
14	64	124	ARG
15	65	10	LEU
15	65	30	TYR
15	65	38	ARG
15	65	50	ARG
15	65	62	TYR
15	65	68	ARG
15	65	117	ASN
15	65	119	TYR
15	65	138	GLN
15	65	153	ASP
15	65	160	GLU
15	65	202	TYR
16	66	47	PHE
16	66	80	PHE
16	66	94	ARG
16	66	113	ASP
16	66	117	ARG
16	66	122	GLN
16	66	134	LYS
16	66	151	ASP
16	66	167	TYR
16	66	182	ASN
17	67	10	ASN
17	67	28	ASN
17	67	53	ASP
17	67	61	ARG

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Mol	Chain	Res	Type
17	67	111	LYS
17	67	120	ASN
17	67	128	ARG
17	67	159	LYS
17	67	168	LEU
17	67	180	LYS
18	68	3	ILE
18	68	12	ARG
18	68	41	ASP
18	68	105	ARG
18	68	138	LEU
18	68	159	LYS
18	68	179	ARG
18	68	184	PHE
19	69	5	ARG
19	69	74	ARG
19	69	104	ARG
19	69	109	TYR
19	69	148	ASP
19	69	152	GLU
19	69	164	LEU
19	69	166	ASN
19	69	171	ASP
19	69	175	GLN
19	69	188	ASP
20	70	43	TYR
20	70	44	PHE
20	70	68	HIS
20	70	78	TRP
20	70	96	ASP
20	70	99	ARG
20	70	108	GLN
20	70	137	ARG
20	70	139	TYR
20	70	147	ASP
20	70	166	LYS
21	71	83	ARG
21	71	94	GLU
21	71	126	VAL
21	71	139	ARG
22	72	38	ILE
22	72	58	GLU

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Mol	Chain	Res	Type
22	72	59	ASP
23	73	12	ARG
23	73	33	ASN
23	73	74	MET
23	73	89	ASP
23	73	124	ASP
24	74	32	GLN
25	75	27	ARG
25	75	33	ARG
25	75	34	LEU
25	75	45	LYS
25	75	49	LYS
25	75	54	TYR
25	75	63	ILE
25	75	74	LYS
25	75	108	LEU
25	75	135	ILE
25	75	141	TYR
25	75	142	ILE
26	76	6	LEU
26	76	37	LYS
26	76	50	ILE
26	76	54	ASP
26	76	100	HIS
26	76	126	LEU
27	77	49	TYR
27	77	92	PHE
27	77	121	ARG
27	77	134	LEU
28	78	10	LYS
28	78	46	ASP
28	78	60	TYR
28	78	67	HIS
28	78	85	ASP
28	78	88	ASP
28	78	91	LEU
29	79	14	ARG
29	79	21	ILE
29	79	22	LYS
29	79	43	HIS
29	79	52	LYS
29	79	59	LYS

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Mol	Chain	Res	Type
30	80	41	LEU
30	80	61	MET
30	80	69	TYR
30	80	83	LYS
30	80	97	ASP
31	81	19	ARG
31	81	31	ARG
31	81	35	GLU
31	81	50	ARG
31	81	55	LEU
31	81	79	ARG
31	81	90	PHE
31	81	112	ASP
32	82	5	PRO
32	82	30	GLU
32	82	33	ARG
32	82	62	LYS
32	82	73	THR
32	82	75	LEU
33	83	60	ARG
33	83	86	ARG
34	84	8	ARG
34	84	29	ILE
34	84	46	ASP
34	84	51	LEU
34	84	58	ARG
34	84	61	GLN
35	85	20	GLN
35	85	71	LYS
35	85	89	ARG
35	85	90	ARG
35	85	107	LYS
35	85	119	LYS
36	86	26	ILE
36	86	53	TYR
36	86	57	LEU
36	86	59	ASP
36	86	60	LEU
36	86	80	PHE
36	86	99	ARG
37	87	25	ARG
37	87	49	TRP

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Mol	Chain	Res	Type
38	88	4	GLU
38	88	31	LEU
38	88	38	PHE
38	88	58	ASP
38	88	63	LYS
39	89	5	LYS
39	89	21	ARG
39	89	23	LEU
39	89	37	TYR
39	89	45	ARG
39	89	50	ASN
40	90	127	LEU
41	91	4	LYS
41	91	5	TRP
41	91	11	ARG
41	91	13	LEU
41	91	19	LYS
42	92	93	LEU
42	92	100	LYS
42	92	105	GLN
43	93	17	ARG
43	93	45	LYS
44	P0	4	ILE
44	P0	12	PHE
44	P0	53	MET
44	P0	58	MET
44	P0	67	LEU
44	P0	93	LEU
44	P0	185	LEU
45	RC	70	ASP
45	RC	93	ASP
45	RC	117	LYS
45	RC	136	ILE
45	RC	137	LYS
45	RC	153	GLN
45	RC	160	GLU
45	RC	161	LYS
45	RC	175	ASP
45	RC	182	ASN
45	RC	202	LEU
45	RC	207	ASP
45	RC	217	ASP

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Mol	Chain	Res	Type
45	RC	232	TYR
45	RC	245	PHE
45	RC	266	ASP
45	RC	268	GLN
45	RC	273	ASP
45	RC	307	ASP
46	S0	7	PHE
46	S0	27	ARG
46	S0	41	ARG
46	S0	54	TRP
46	S0	56	LYS
46	S0	110	TYR
46	S0	163	ASN
46	S0	172	LEU
46	S0	180	GLU
46	S0	183	ARG
46	S0	188	LEU
46	S0	190	ASP
46	S0	191	ARG
46	S0	193	GLN
46	S0	195	TRP
47	S1	29	TRP
47	S1	47	LEU
47	S1	61	LEU
47	S1	70	LEU
47	S1	96	LEU
47	S1	99	ASN
47	S1	104	ASP
47	S1	105	PHE
47	S1	111	ARG
47	S1	131	ASP
47	S1	133	TYR
47	S1	135	LEU
47	S1	148	ASN
47	S1	180	THR
47	S1	181	LEU
47	S1	202	LYS
47	S1	204	ILE
47	S1	205	PHE
47	S1	206	PRO
47	S1	218	LEU
48	S2	66	PHE

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Mol	Chain	Res	Type
48	S2	82	ASN
48	S2	89	GLN
48	S2	106	ASP
48	S2	140	ARG
48	S2	141	ARG
48	S2	193	VAL
48	S2	206	THR
48	S2	212	LYS
49	S3	4	LEU
49	S3	14	ASP
49	S3	57	ASP
49	S3	76	ARG
49	S3	84	ILE
49	S3	92	GLN
49	S3	105	MET
49	S3	120	TYR
49	S3	141	LYS
49	S3	156	PHE
49	S3	158	ILE
49	S3	166	ASP
49	S3	178	ARG
49	S3	204	ASP
49	S3	223	LYS
50	S4	6	LYS
50	S4	18	TRP
50	S4	24	SER
50	S4	38	LEU
50	S4	39	ARG
50	S4	54	TYR
50	S4	158	ASP
50	S4	182	TYR
50	S4	198	LYS
50	S4	222	LEU
50	S4	226	PHE
50	S4	259	GLN
51	S5	25	LEU
51	S5	45	LYS
51	S5	48	PHE
51	S5	108	LEU
51	S5	112	ARG
51	S5	128	ASN
51	S5	203	LYS

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Mol	Chain	Res	Type
52	S6	7	TYR
52	S6	19	ASP
52	S6	21	GLU
52	S6	29	ASP
52	S6	45	PHE
52	S6	95	LYS
52	S6	98	ARG
52	S6	137	ARG
52	S6	156	PHE
52	S6	220	LYS
53	S7	24	PHE
53	S7	50	ASP
53	S7	85	PHE
53	S7	87	ASP
53	S7	114	ARG
53	S7	128	ASP
53	S7	134	GLU
53	S7	142	TYR
53	S7	143	LEU
53	S7	173	TYR
53	S7	185	ILE
54	S8	8	ARG
54	S8	29	LEU
54	S8	123	LYS
54	S8	137	LYS
54	S8	160	PHE
54	S8	182	TYR
54	S8	191	PHE
55	S9	3	ARG
55	S9	58	ASP
55	S9	66	ASP
55	S9	89	ASP
55	S9	138	LYS
55	S9	151	ASP
55	S9	171	ARG
56	10	1	MET
56	10	16	PHE
56	10	32	HIS
56	10	36	ASP
56	10	56	LYS
56	10	78	GLU
56	10	79	TYR

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Mol	Chain	Res	Type
56	10	88	PRO
56	10	91	TYR
56	10	95	ARG
57	11	20	PHE
57	11	21	ASN
57	11	54	ILE
57	11	67	ARG
57	11	69	LYS
57	11	121	ASP
57	11	129	ARG
57	11	151	LYS
58	12	24	ILE
58	12	61	VAL
58	12	71	ILE
58	12	89	ILE
58	12	97	LEU
58	12	103	LEU
58	12	114	LYS
58	12	116	VAL
58	12	125	ASN
58	12	126	TRP
59	13	3	ARG
59	13	9	LYS
59	13	39	LYS
59	13	64	ARG
59	13	71	ILE
59	13	76	LYS
59	13	114	ARG
59	13	128	TYR
59	13	129	TYR
60	14	20	TYR
60	14	39	ILE
60	14	70	LYS
60	14	102	LEU
60	14	118	VAL
60	14	133	ARG
60	14	137	LEU
61	15	8	LYS
61	15	9	LYS
61	15	12	PHE
61	15	21	ASP
61	15	35	LYS

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Mol	Chain	Res	Type
61	15	36	LEU
61	15	69	GLU
61	15	97	TYR
61	15	104	GLN
62	16	26	LYS
62	16	52	LEU
62	16	68	ARG
62	16	109	PHE
62	16	137	ARG
62	16	140	LYS
63	17	29	GLN
63	17	49	LYS
63	17	66	VAL
63	17	69	ILE
63	17	71	PHE
63	17	72	LYS
63	17	75	GLU
63	17	84	TYR
63	17	86	PRO
63	17	88	VAL
63	17	97	ASN
63	17	113	LEU
63	17	116	LYS
63	17	123	ASN
64	18	3	LEU
64	18	15	LEU
64	18	28	ILE
64	18	41	ARG
64	18	47	CYS
64	18	54	LEU
64	18	82	PRO
64	18	85	PHE
64	18	92	ILE
64	18	112	ASP
64	18	115	ARG
64	18	138	THR
65	19	13	ASP
65	19	28	LEU
65	19	33	TYR
65	19	64	HIS
65	19	70	GLN
65	19	99	SER

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Mol	Chain	Res	Type
66	20	27	THR
66	20	46	GLU
66	20	60	THR
66	20	61	LYS
66	20	72	ASN
66	20	77	LYS
67	21	4	ASP
67	21	5	LYS
67	21	40	ASP
67	21	62	ARG
67	21	78	LEU
68	22	37	PHE
68	22	55	ASP
68	22	65	LEU
68	22	66	ASN
68	22	98	GLN
68	22	104	LEU
68	22	105	THR
69	23	82	LYS
69	23	83	VAL
69	23	100	ASP
69	23	110	LYS
69	23	127	VAL
69	23	140	LYS
69	23	144	ARG
70	24	32	ARG
70	24	34	ASN
70	24	38	ASP
70	24	102	LYS
70	24	124	ARG
70	24	128	LYS
70	24	132	ARG
71	25	38	HIS
71	25	42	LEU
71	25	43	ASP
71	25	47	TYR
71	25	60	VAL
71	25	100	ILE
72	26	26	CYS
72	26	36	ILE
72	26	37	LYS
72	26	41	ILE

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Mol	Chain	Res	Type
72	26	46	GLU
72	26	64	LEU
72	26	91	ASP
73	27	15	GLU
73	27	20	LYS
73	27	37	CYS
73	27	40	CYS
73	27	47	PHE
74	28	32	PHE
74	28	34	GLU
74	28	35	ASP
76	30	20	LYS
76	30	42	ARG
76	30	48	THR
76	30	49	LEU
77	31	113	LYS
77	31	116	LYS
77	31	120	GLU
77	31	138	ARG
77	31	140	TYR

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (223) such sidechains are listed below:

Mol	Chain	Res	Type
1	L1	57	ASN
1	L1	62	ASN
1	L1	94	ASN
1	L1	108	ASN
1	L1	158	GLN
1	L1	200	ASN
2	L2	47	GLN
2	L2	79	ASN
2	L2	132	ASN
2	L2	140	ASN
2	L2	187	HIS
2	L2	205	ASN
2	L2	215	ASN
2	L2	250	GLN
2	L2	253	GLN
3	L3	139	GLN
3	L3	165	GLN
3	L3	182	GLN

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Mol	Chain	Res	Type
3	L3	184	ASN
3	L3	243	HIS
3	L3	273	HIS
3	L3	293	ASN
3	L3	345	ASN
4	L4	5	GLN
4	L4	45	ASN
4	L4	48	GLN
4	L4	59	GLN
4	L4	87	GLN
4	L4	114	ASN
4	L4	260	GLN
4	L4	291	ASN
4	L4	328	ASN
5	L5	57	ASN
5	L5	264	GLN
5	L5	296	GLN
6	L6	28	GLN
6	L6	57	HIS
6	L6	167	ASN
7	L7	146	GLN
7	L7	197	GLN
7	L7	200	ASN
8	L8	41	GLN
8	L8	59	GLN
8	L8	240	ASN
9	L9	8	GLN
9	L9	49	ASN
9	L9	50	ASN
9	L9	125	ASN
9	L9	156	GLN
10	60	12	GLN
10	60	14	ASN
10	60	23	ASN
10	60	73	ASN
10	60	123	HIS
10	60	209	ASN
10	60	220	GLN
11	61	43	GLN
11	61	47	GLN
11	61	101	ASN
11	61	132	ASN

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Mol	Chain	Res	Type
11	61	152	HIS
13	63	103	ASN
13	63	120	GLN
13	63	137	GLN
15	65	70	ASN
15	65	87	GLN
16	66	31	GLN
16	66	50	ASN
16	66	55	HIS
17	67	28	ASN
17	67	55	GLN
17	67	96	GLN
17	67	116	HIS
17	67	120	ASN
17	67	121	GLN
17	67	137	ASN
18	68	45	ASN
18	68	58	ASN
18	68	145	ASN
19	69	34	GLN
19	69	166	ASN
20	70	8	GLN
20	70	63	GLN
20	70	88	HIS
21	71	58	GLN
21	71	98	HIS
21	71	146	ASN
22	72	49	ASN
23	73	33	ASN
23	73	81	GLN
24	74	32	GLN
26	76	81	GLN
27	77	57	HIS
28	78	39	HIS
28	78	44	ASN
29	79	11	ASN
30	80	36	GLN
31	81	57	GLN
32	82	13	HIS
32	82	26	HIS
32	82	31	ASN
32	82	35	GLN

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Mol	Chain	Res	Type
32	82	49	ASN
32	82	52	GLN
32	82	104	ASN
33	83	13	HIS
33	83	23	ASN
33	83	42	GLN
33	83	77	ASN
33	83	87	ASN
34	84	83	ASN
35	85	16	GLN
35	85	62	GLN
35	85	68	GLN
36	86	92	ASN
38	88	40	GLN
39	89	4	GLN
39	89	32	ASN
39	89	38	ASN
39	89	50	ASN
40	90	119	ASN
42	92	3	ASN
42	92	22	GLN
42	92	47	GLN
42	92	99	GLN
44	P0	56	ASN
44	P0	103	ASN
45	RC	29	GLN
45	RC	182	ASN
45	RC	196	ASN
45	RC	237	GLN
45	RC	248	ASN
46	S0	30	GLN
46	S0	33	GLN
46	S0	46	HIS
46	S0	163	ASN
46	S0	164	ASN
46	S0	193	GLN
47	S1	101	HIS
47	S1	146	GLN
47	S1	148	ASN
47	S1	157	GLN
47	S1	177	GLN
47	S1	209	ASN

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Mol	Chain	Res	Type
47	S1	211	HIS
48	S2	59	HIS
48	S2	82	ASN
48	S2	89	GLN
48	S2	108	ASN
48	S2	147	ASN
48	S2	220	ASN
48	S2	228	ASN
49	S3	92	GLN
50	S4	36	HIS
50	S4	50	ASN
50	S4	98	ASN
50	S4	188	ASN
50	S4	216	ASN
50	S4	258	GLN
50	S4	259	GLN
51	S5	79	ASN
51	S5	86	GLN
51	S5	95	ASN
51	S5	122	ASN
51	S5	128	ASN
51	S5	131	GLN
51	S5	224	ASN
52	S6	13	GLN
52	S6	34	GLN
52	S6	56	ASN
52	S6	59	GLN
52	S6	140	ASN
52	S6	201	GLN
53	S7	19	GLN
53	S7	22	GLN
53	S7	180	GLN
54	S8	64	ASN
54	S8	111	GLN
54	S8	119	GLN
54	S8	138	ASN
55	S9	112	GLN
55	S9	123	HIS
55	S9	131	GLN
56	10	12	HIS
56	10	29	GLN
56	10	32	HIS

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Mol	Chain	Res	Type
56	10	62	GLN
57	11	14	GLN
58	12	125	ASN
61	15	79	HIS
61	15	104	GLN
63	17	29	GLN
63	17	83	GLN
63	17	97	ASN
63	17	104	ASN
63	17	105	GLN
63	17	123	ASN
64	18	74	GLN
64	18	75	ASN
64	18	104	ASN
64	18	127	HIS
65	19	138	GLN
66	20	40	ASN
66	20	98	GLN
67	21	7	GLN
67	21	21	ASN
67	21	74	GLN
68	22	15	ASN
68	22	42	GLN
68	22	64	GLN
68	22	70	ASN
68	22	80	ASN
68	22	92	ASN
68	22	98	GLN
69	23	22	ASN
69	23	75	GLN
69	23	79	ASN
72	26	8	ASN
72	26	72	HIS
74	28	43	ASN
75	29	5	ASN
76	30	51	ASN
77	31	123	ASN

5.3.3 RNA ⓘ

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
78	1S	1780/1798 (98%)	329 (18%)	16 (0%)
79	2S	3298/3395 (97%)	474 (14%)	23 (0%)
80	8S	157/158 (99%)	22 (14%)	1 (0%)
81	5S	120/121 (99%)	8 (6%)	0
82	ET	76/77 (98%)	11 (14%)	1 (1%)
82	PT	76/77 (98%)	7 (9%)	0
83	MR	8/14 (57%)	1 (12%)	0
All	All	5515/5640 (97%)	852 (15%)	41 (0%)

All (852) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
78	1S	2	A
78	1S	4	C
78	1S	25	C
78	1S	26	A
78	1S	34	G
78	1S	40	A
78	1S	42	G
78	1S	43	A
78	1S	47	A
78	1S	57	G
78	1S	60	U
78	1S	68	A
78	1S	69	G
78	1S	72	A
78	1S	73	U
78	1S	74	U
78	1S	76	A
78	1S	77	U
78	1S	104	A
78	1S	114	C
78	1S	116	U
78	1S	124	A
78	1S	132	U
78	1S	133	U
78	1S	134	U
78	1S	135	A
78	1S	136	C
78	1S	137	U
78	1S	140	A

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Mol	Chain	Res	Type
78	1S	141	U
78	1S	145	A
78	1S	153	G
78	1S	159	U
78	1S	166	C
78	1S	178	U
78	1S	191	C
78	1S	192	U
78	1S	195	G
78	1S	197	A
78	1S	200	A
78	1S	215	A
78	1S	219	A
78	1S	231	U
78	1S	232	U
78	1S	233	C
78	1S	235	G
78	1S	238	U
78	1S	240	U
78	1S	241	U
78	1S	250	C
78	1S	261	U
78	1S	265	A
78	1S	276	C
78	1S	278	U
78	1S	279	G
78	1S	280	U
78	1S	288	A
78	1S	299	A
78	1S	316	A
78	1S	320	U
78	1S	321	C
78	1S	322	G
78	1S	323	A
78	1S	337	G
78	1S	352	A
78	1S	359	A
78	1S	360	A
78	1S	361	C
78	1S	380	U
78	1S	401	A
78	1S	402	C

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Mol	Chain	Res	Type
78	1S	404	G
78	1S	416	A
78	1S	417	A
78	1S	418	G
78	1S	423	G
78	1S	424	C
78	1S	425	A
78	1S	426	G
78	1S	434	G
78	1S	439	U
78	1S	444	C
78	1S	477	A
78	1S	485	A
78	1S	488	G
78	1S	489	C
78	1S	493	U
78	1S	495	C
78	1S	496	G
78	1S	497	G
78	1S	499	U
78	1S	502	U
78	1S	505	A
78	1S	506	A
78	1S	510	G
78	1S	515	A
78	1S	532	U
78	1S	539	G
78	1S	540	G
78	1S	541	A
78	1S	544	A
78	1S	545	A
78	1S	556	A
78	1S	557	G
78	1S	558	U
78	1S	559	C
78	1S	565	C
78	1S	579	A
78	1S	580	A
78	1S	581	U
78	1S	582	U
78	1S	594	A
78	1S	606	A

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Mol	Chain	Res	Type
78	1S	619	A
78	1S	620	A
78	1S	622	A
78	1S	623	A
78	1S	624	G
78	1S	639	U
78	1S	647	G
78	1S	650	U
78	1S	654	C
78	1S	655	G
78	1S	656	G
78	1S	657	U
78	1S	677	G
78	1S	683	C
78	1S	684	A
78	1S	685	A
78	1S	687	G
78	1S	688	G
78	1S	690	G
78	1S	694	U
78	1S	696	C
78	1S	697	C
78	1S	700	C
78	1S	702	G
78	1S	705	U
78	1S	707	A
78	1S	708	C
78	1S	709	C
78	1S	710	U
78	1S	711	U
78	1S	712	G
78	1S	713	A
78	1S	715	U
78	1S	718	U
78	1S	721	U
78	1S	733	A
78	1S	734	A
78	1S	738	G
78	1S	741	C
78	1S	742	U
78	1S	754	A
78	1S	755	A

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Mol	Chain	Res	Type
78	1S	765	G
78	1S	766	U
78	1S	774	A
78	1S	775	G
78	1S	778	G
78	1S	781	U
78	1S	783	G
78	1S	784	C
78	1S	789	A
78	1S	794	U
78	1S	806	A
78	1S	812	A
78	1S	815	G
78	1S	820	U
78	1S	821	U
78	1S	823	G
78	1S	830	U
78	1S	831	U
78	1S	833	U
78	1S	850	A
78	1S	855	A
78	1S	856	A
78	1S	863	A
78	1S	865	A
78	1S	876	G
78	1S	898	A
78	1S	912	U
78	1S	913	G
78	1S	914	G
78	1S	915	A
78	1S	921	U
78	1S	933	A
78	1S	935	U
78	1S	944	A
78	1S	966	A
78	1S	970	A
78	1S	982	U
78	1S	992	A
78	1S	993	A
78	1S	1004	U
78	1S	1005	A
78	1S	1012	U

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Mol	Chain	Res	Type
78	1S	1021	C
78	1S	1026	A
78	1S	1028	C
78	1S	1029	U
78	1S	1032	G
78	1S	1052	U
78	1S	1053	G
78	1S	1058	U
78	1S	1061	A
78	1S	1072	C
78	1S	1074	G
78	1S	1082	C
78	1S	1091	A
78	1S	1092	A
78	1S	1096	C
78	1S	1097	U
78	1S	1100	G
78	1S	1109	G
78	1S	1150	G
78	1S	1151	A
78	1S	1155	G
78	1S	1157	A
78	1S	1158	C
78	1S	1160	A
78	1S	1163	A
78	1S	1167	G
78	1S	1194	A
78	1S	1196	A
78	1S	1199	G
78	1S	1200	G
78	1S	1202	A
78	1S	1217	A
78	1S	1218	G
78	1S	1227	A
78	1S	1228	G
78	1S	1229	G
78	1S	1243	G
78	1S	1244	A
78	1S	1245	G
78	1S	1246	C
78	1S	1260	U
78	1S	1284	C

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Mol	Chain	Res	Type
78	1S	1288	G
78	1S	1305	U
78	1S	1314	U
78	1S	1316	G
78	1S	1321	A
78	1S	1337	A
78	1S	1340	U
78	1S	1341	A
78	1S	1344	A
78	1S	1345	A
78	1S	1347	U
78	1S	1354	G
78	1S	1361	U
78	1S	1363	U
78	1S	1364	G
78	1S	1370	U
78	1S	1371	A
78	1S	1378	U
78	1S	1390	U
78	1S	1391	A
78	1S	1398	U
78	1S	1399	C
78	1S	1413	U
78	1S	1414	U
78	1S	1415	U
78	1S	1427	A
78	1S	1428	G
78	1S	1432	U
78	1S	1448	G
78	1S	1457	C
78	1S	1459	C
78	1S	1460	A
78	1S	1471	A
78	1S	1473	U
78	1S	1482	C
78	1S	1483	A
78	1S	1486	G
78	1S	1490	C
78	1S	1491	U
78	1S	1492	A
78	1S	1499	G
78	1S	1514	U

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Mol	Chain	Res	Type
78	1S	1516	A
78	1S	1520	U
78	1S	1521	G
78	1S	1523	G
78	1S	1524	A
78	1S	1535	U
78	1S	1537	C
78	1S	1538	U
78	1S	1539	G
78	1S	1540	G
78	1S	1557	U
78	1S	1559	A
78	1S	1573	A
78	1S	1574	G
78	1S	1584	G
78	1S	1597	A
78	1S	1601	G
78	1S	1616	G
78	1S	1619	C
78	1S	1622	G
78	1S	1631	A
78	1S	1657	U
78	1S	1658	G
78	1S	1664	C
78	1S	1682	U
78	1S	1683	C
78	1S	1684	U
78	1S	1686	C
78	1S	1690	G
78	1S	1693	A
78	1S	1697	G
78	1S	1700	C
78	1S	1702	A
78	1S	1713	G
78	1S	1715	G
78	1S	1716	C
78	1S	1717	G
78	1S	1736	G
78	1S	1757	G
78	1S	1762	A
78	1S	1765	A
78	1S	1769	U

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Mol	Chain	Res	Type
78	1S	1770	U
78	1S	1780	G
78	1S	1792	G
78	1S	1794	A
78	1S	1796	C
78	1S	1797	A
79	2S	14	U
79	2S	26	A
79	2S	40	A
79	2S	43	A
79	2S	49	A
79	2S	60	A
79	2S	65	A
79	2S	66	A
79	2S	73	C
79	2S	92	G
79	2S	110	G
79	2S	116	A
79	2S	120	G
79	2S	121	A
79	2S	122	A
79	2S	123	A
79	2S	124	U
79	2S	133	U
79	2S	135	C
79	2S	136	G
79	2S	148	G
79	2S	149	U
79	2S	150	A
79	2S	156	G
79	2S	157	A
79	2S	161	G
79	2S	165	A
79	2S	166	C
79	2S	170	G
79	2S	187	A
79	2S	190	U
79	2S	191	U
79	2S	200	C
79	2S	210	U
79	2S	218	G
79	2S	219	A

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Mol	Chain	Res	Type
79	2S	240	U
79	2S	241	G
79	2S	243	G
79	2S	252	U
79	2S	269	G
79	2S	283	G
79	2S	286	U
79	2S	295	A
79	2S	305	U
79	2S	323	A
79	2S	329	U
79	2S	338	A
79	2S	339	C
79	2S	346	C
79	2S	350	C
79	2S	352	A
79	2S	370	U
79	2S	372	A
79	2S	376	G
79	2S	397	A
79	2S	398	A
79	2S	401	U
79	2S	402	A
79	2S	403	C
79	2S	421	G
79	2S	422	A
79	2S	439	C
79	2S	440	A
79	2S	441	U
79	2S	442	G
79	2S	450	G
79	2S	487	U
79	2S	494	G
79	2S	495	G
79	2S	517	G
79	2S	520	U
79	2S	521	A
79	2S	523	A
79	2S	535	G
79	2S	536	U
79	2S	546	C
79	2S	547	G

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Mol	Chain	Res	Type
79	2S	557	A
79	2S	559	A
79	2S	578	A
79	2S	579	G
79	2S	600	G
79	2S	604	G
79	2S	608	A
79	2S	609	G
79	2S	611	A
79	2S	620	U
79	2S	621	A
79	2S	636	C
79	2S	637	C
79	2S	638	C
79	2S	646	A
79	2S	647	A
79	2S	648	C
79	2S	649	A
79	2S	677	A
79	2S	681	U
79	2S	690	A
79	2S	699	A
79	2S	705	A
79	2S	726	G
79	2S	742	G
79	2S	758	C
79	2S	765	C
79	2S	766	U
79	2S	767	U
79	2S	776	U
79	2S	781	G
79	2S	784	A
79	2S	785	G
79	2S	786	A
79	2S	806	A
79	2S	817	A
79	2S	830	A
79	2S	849	C
79	2S	861	C
79	2S	874	U
79	2S	875	G
79	2S	879	U

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Mol	Chain	Res	Type
79	2S	880	G
79	2S	896	A
79	2S	907	G
79	2S	908	G
79	2S	914	A
79	2S	916	G
79	2S	920	A
79	2S	921	A
79	2S	923	C
79	2S	932	U
79	2S	933	A
79	2S	937	G
79	2S	944	C
79	2S	959	C
79	2S	960	U
79	2S	979	U
79	2S	981	U
79	2S	1002	A
79	2S	1010	G
79	2S	1024	G
79	2S	1025	A
79	2S	1041	U
79	2S	1047	A
79	2S	1049	C
79	2S	1063	G
79	2S	1064	A
79	2S	1081	U
79	2S	1093	A
79	2S	1095	U
79	2S	1097	G
79	2S	1098	A
79	2S	1103	A
79	2S	1104	G
79	2S	1117	G
79	2S	1131	G
79	2S	1159	A
79	2S	1177	G
79	2S	1180	A
79	2S	1181	U
79	2S	1186	G
79	2S	1193	A
79	2S	1201	C

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Mol	Chain	Res	Type
79	2S	1209	G
79	2S	1220	U
79	2S	1222	G
79	2S	1236	G
79	2S	1237	G
79	2S	1239	C
79	2S	1241	U
79	2S	1242	G
79	2S	1245	A
79	2S	1246	G
79	2S	1247	U
79	2S	1258	U
79	2S	1262	G
79	2S	1263	A
79	2S	1264	G
79	2S	1265	U
79	2S	1292	C
79	2S	1305	U
79	2S	1308	A
79	2S	1309	U
79	2S	1330	A
79	2S	1348	U
79	2S	1349	G
79	2S	1351	U
79	2S	1352	A
79	2S	1353	U
79	2S	1355	A
79	2S	1357	G
79	2S	1386	A
79	2S	1387	G
79	2S	1399	A
79	2S	1400	G
79	2S	1419	A
79	2S	1434	G
79	2S	1437	C
79	2S	1446	A
79	2S	1452	A
79	2S	1455	U
79	2S	1481	A
79	2S	1482	A
79	2S	1508	C
79	2S	1519	G

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Mol	Chain	Res	Type
79	2S	1522	U
79	2S	1556	C
79	2S	1557	A
79	2S	1562	C
79	2S	1563	C
79	2S	1569	U
79	2S	1570	U
79	2S	1572	U
79	2S	1573	G
79	2S	1581	C
79	2S	1582	C
79	2S	1583	A
79	2S	1589	A
79	2S	1607	U
79	2S	1608	C
79	2S	1629	U
79	2S	1642	A
79	2S	1643	A
79	2S	1645	U
79	2S	1655	G
79	2S	1687	U
79	2S	1694	U
79	2S	1717	U
79	2S	1725	C
79	2S	1730	G
79	2S	1750	A
79	2S	1751	G
79	2S	1761	C
79	2S	1765	U
79	2S	1766	G
79	2S	1780	G
79	2S	1788	C
79	2S	1797	A
79	2S	1814	A
79	2S	1815	U
79	2S	1816	A
79	2S	1819	U
79	2S	1821	U
79	2S	1841	A
79	2S	1842	A
79	2S	1845	G
79	2S	1849	C

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Mol	Chain	Res	Type
79	2S	1850	A
79	2S	1859	A
79	2S	1866	C
79	2S	1879	A
79	2S	1886	A
79	2S	1906	G
79	2S	1948	G
79	2S	1952	G
79	2S	1953	G
79	2S	1954	G
79	2S	1968	G
79	2S	1973	G
79	2S	1978	A
79	2S	1980	C
79	2S	2045	G
79	2S	2059	U
79	2S	2064	C
79	2S	2065	U
79	2S	2066	C
79	2S	2067	U
79	2S	2068	U
79	2S	2069	G
79	2S	2071	A
79	2S	2082	U
79	2S	2085	U
79	2S	2087	C
79	2S	2094	C
79	2S	2101	C
79	2S	2102	U
79	2S	2107	A
79	2S	2111	G
79	2S	2112	U
79	2S	2116	G
79	2S	2121	G
79	2S	2122	G
79	2S	2131	A
79	2S	2142	A
79	2S	2144	A
79	2S	2158	A
79	2S	2169	G
79	2S	2188	A
79	2S	2205	U

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Mol	Chain	Res	Type
79	2S	2208	A
79	2S	2223	A
79	2S	2244	A
79	2S	2249	G
79	2S	2252	A
79	2S	2255	A
79	2S	2256	A
79	2S	2273	G
79	2S	2281	A
79	2S	2282	U
79	2S	2298	U
79	2S	2307	G
79	2S	2308	C
79	2S	2313	A
79	2S	2314	U
79	2S	2315	G
79	2S	2336	U
79	2S	2339	C
79	2S	2347	U
79	2S	2373	A
79	2S	2374	C
79	2S	2375	G
79	2S	2388	U
79	2S	2397	A
79	2S	2401	A
79	2S	2402	A
79	2S	2403	G
79	2S	2411	U
79	2S	2418	G
79	2S	2434	U
79	2S	2454	G
79	2S	2458	A
79	2S	2459	A
79	2S	2462	A
79	2S	2463	G
79	2S	2468	A
79	2S	2472	U
79	2S	2474	G
79	2S	2485	A
79	2S	2488	A
79	2S	2490	C
79	2S	2494	A

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Mol	Chain	Res	Type
79	2S	2496	C
79	2S	2512	C
79	2S	2513	U
79	2S	2515	A
79	2S	2522	G
79	2S	2523	A
79	2S	2526	C
79	2S	2531	C
79	2S	2533	G
79	2S	2537	U
79	2S	2538	U
79	2S	2540	A
79	2S	2541	U
79	2S	2542	U
79	2S	2549	G
79	2S	2554	A
79	2S	2555	G
79	2S	2561	A
79	2S	2562	A
79	2S	2569	A
79	2S	2570	U
79	2S	2571	U
79	2S	2572	C
79	2S	2573	G
79	2S	2585	G
79	2S	2586	G
79	2S	2587	U
79	2S	2594	C
79	2S	2596	U
79	2S	2606	G
79	2S	2607	G
79	2S	2614	G
79	2S	2619	G
79	2S	2635	A
79	2S	2637	A
79	2S	2638	C
79	2S	2645	G
79	2S	2652	U
79	2S	2656	A
79	2S	2657	A
79	2S	2674	A
79	2S	2677	G

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Mol	Chain	Res	Type
79	2S	2680	A
79	2S	2689	A
79	2S	2691	A
79	2S	2694	A
79	2S	2696	A
79	2S	2720	G
79	2S	2728	G
79	2S	2729	U
79	2S	2753	G
79	2S	2755	C
79	2S	2762	A
79	2S	2777	G
79	2S	2778	G
79	2S	2779	A
79	2S	2788	C
79	2S	2796	G
79	2S	2800	G
79	2S	2801	A
79	2S	2804	A
79	2S	2810	C
79	2S	2814	G
79	2S	2816	G
79	2S	2817	A
79	2S	2818	U
79	2S	2842	U
79	2S	2845	A
79	2S	2861	U
79	2S	2867	C
79	2S	2871	G
79	2S	2872	A
79	2S	2873	U
79	2S	2887	A
79	2S	2896	A
79	2S	2899	C
79	2S	2923	U
79	2S	2928	C
79	2S	2935	U
79	2S	2936	A
79	2S	2951	G
79	2S	2972	G
79	2S	2983	C
79	2S	2992	U

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Mol	Chain	Res	Type
79	2S	2997	G
79	2S	3012	A
79	2S	3021	A
79	2S	3059	G
79	2S	3078	U
79	2S	3080	G
79	2S	3086	A
79	2S	3092	C
79	2S	3094	A
79	2S	3116	G
79	2S	3122	A
79	2S	3130	A
79	2S	3131	U
79	2S	3139	A
79	2S	3142	A
79	2S	3143	C
79	2S	3154	C
79	2S	3155	U
79	2S	3156	U
79	2S	3158	G
79	2S	3164	C
79	2S	3173	G
79	2S	3174	A
79	2S	3176	G
79	2S	3179	U
79	2S	3181	C
79	2S	3187	A
79	2S	3198	U
79	2S	3207	U
79	2S	3217	C
79	2S	3218	A
79	2S	3219	G
79	2S	3229	G
79	2S	3245	A
79	2S	3246	G
79	2S	3259	U
79	2S	3270	U
79	2S	3276	G
79	2S	3279	A
79	2S	3281	U
79	2S	3286	G
79	2S	3287	U

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Mol	Chain	Res	Type
79	2S	3289	G
79	2S	3294	A
79	2S	3304	U
79	2S	3307	A
79	2S	3316	A
79	2S	3317	U
79	2S	3318	G
79	2S	3319	U
79	2S	3335	A
79	2S	3341	U
79	2S	3345	G
79	2S	3352	U
79	2S	3354	U
79	2S	3355	U
79	2S	3369	G
79	2S	3375	A
79	2S	3378	C
79	2S	3389	U
80	8S	23	U
80	8S	34	U
80	8S	35	C
80	8S	51	G
80	8S	59	A
80	8S	62	C
80	8S	63	G
80	8S	80	A
80	8S	86	U
80	8S	87	G
80	8S	90	U
80	8S	95	G
80	8S	105	A
80	8S	106	C
80	8S	111	A
80	8S	113	U
80	8S	114	G
80	8S	125	U
80	8S	126	A
80	8S	138	A
80	8S	151	C
80	8S	157	U
81	5S	13	A
81	5S	22	A

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Mol	Chain	Res	Type
81	5S	38	U
81	5S	65	G
81	5S	76	A
81	5S	95	A
81	5S	102	A
81	5S	112	G
82	ET	6	G
82	ET	16	C
82	ET	18(A)	U
82	ET	19	G
82	ET	20	G
82	ET	22	A
82	ET	34	U
82	ET	48	U
82	ET	49	C
82	ET	60	A
82	ET	77	A
83	MR	5	A
82	PT	9	G
82	PT	20	G
82	PT	21	U
82	PT	48	U
82	PT	49	C
82	PT	75	C
82	PT	77	A

All (41) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
78	1S	25	C
78	1S	103	A
78	1S	139	C
78	1S	240	U
78	1S	501	U
78	1S	555	A
78	1S	676	G
78	1S	829	A
78	1S	1051	G
78	1S	1339	C
78	1S	1344	A
78	1S	1481	C
78	1S	1573	A

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Mol	Chain	Res	Type
78	1S	1615	C
78	1S	1696	G
78	1S	1761	U
79	2S	65	A
79	2S	169	U
79	2S	282	G
79	2S	517	G
79	2S	637	C
79	2S	959	C
79	2S	1103	A
79	2S	1241	U
79	2S	1307	G
79	2S	1329	U
79	2S	1352	A
79	2S	1556	C
79	2S	2065	U
79	2S	2101	C
79	2S	2512	C
79	2S	2525	G
79	2S	2541	U
79	2S	2554	A
79	2S	3121	U
79	2S	3218	A
79	2S	3228	C
79	2S	3269	U
79	2S	3317	U
80	8S	85	G
82	ET	18(A)	U

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

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](#)

There are no chain breaks in this entry.