



Full wwPDB EM Validation Report ⓘ

Sep 18, 2025 – 05:33 PM EDT

PDB ID : 9OU7 / pdb_00009ou7
EMDB ID : EMD-70864
Title : Methanosarcina acetivorans large (50S) subunit dimer
Authors : Ghosh, A.; Fordjour, G.N.R.; Armache, J.-P.; Ferry, J.G.; Murakami, K.S.; Bevilacqua, P.C.
Deposited on : 2025-05-28
Resolution : 3.51 Å(reported)
Based on initial model : 6SKF

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

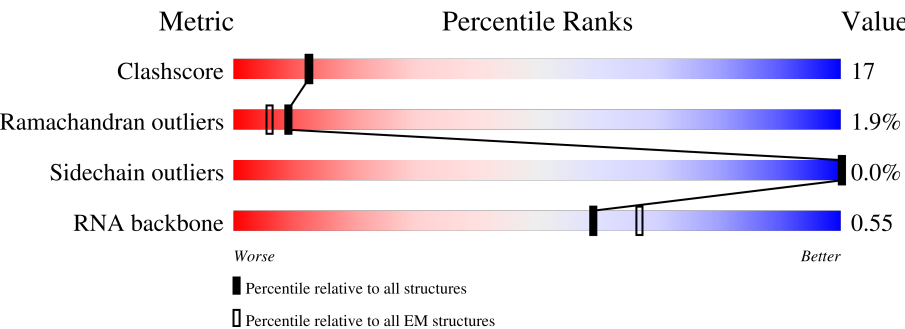
EMDB validation analysis : 0.0.1.dev126
MolProbity : 4-5-2 with Phenix2.0rc1
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.45.1

1 Overall quality at a glance

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





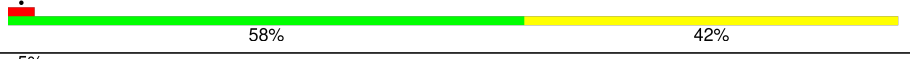
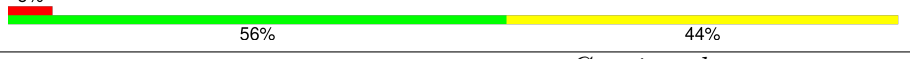
The reported resolution of this entry is 3.51 Å.

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	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415
RNA backbone	6643	2191

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	BA	2899	
1	CA	2899	
2	BB	129	
2	CB	129	
3	BC	238	
3	CC	238	
4	BD	337	







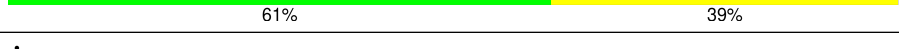
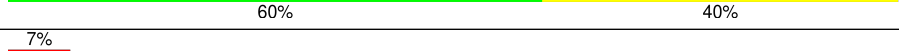
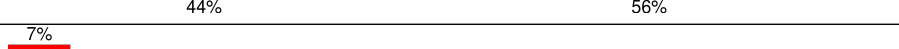
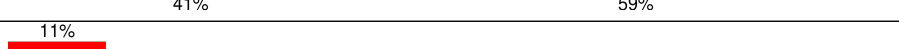
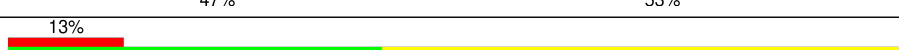

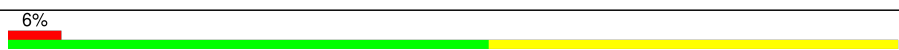

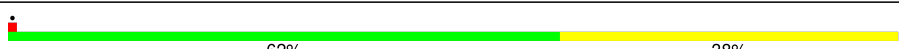






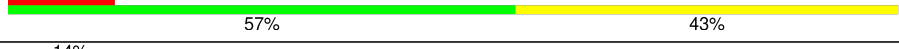



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Mol	Chain	Length	Quality of chain
4	CD	337	
5	BE	253	
5	CE	253	
6	BF	165	
6	CF	165	
7	BG	176	
7	CG	176	
8	BH	120	
8	CH	120	
9	BI	173	
9	CI	173	
10	BJ	143	
10	CJ	143	
11	BK	132	
11	CK	132	
12	BL	140	
12	CL	140	
13	BM	196	
13	CM	196	
14	BN	174	
14	CN	174	
15	BO	126	
15	CO	126	
16	BP	151	
16	CP	151	




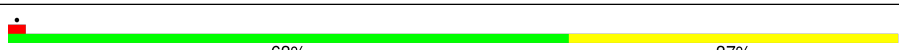
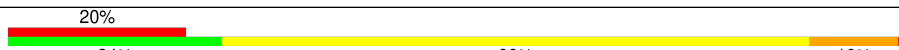
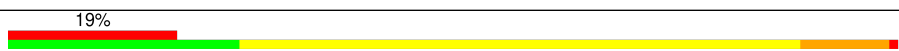
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Mol	Chain	Length	Quality of chain
17	BQ	61	
17	CQ	61	
18	BR	97	
18	CR	97	
19	BS	151	
19	CS	151	
20	BT	82	
20	CT	82	
21	BU	119	
21	CU	119	
22	BV	62	
22	CV	62	
23	BW	67	
23	CW	67	
24	BX	153	
24	CX	153	
25	BY	99	
25	CY	99	
26	BZ	89	
26	CZ	89	
27	Ba	161	
27	Ca	161	
28	Bb	94	
28	Cb	94	
29	Bc	56	

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Mol	Chain	Length	Quality of chain
29	Cc	56	
30	Bd	51	
30	Cd	51	
31	Be	52	
31	Ce	52	
32	Bf	92	
32	Cf	92	
33	DA	538	
33	DB	538	
34	DC	730	
34	DD	730	

2 Entry composition [i](#)

There are 34 unique types of molecules in this entry. The entry contains 272158 atoms, of which 62224 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 RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
1	BA	2884	Total	C	H	N	O	P	0	0
			92834	27549	31112	11225	20065	2883		
1	CA	2884	Total	C	H	N	O	P	0	0
			92834	27549	31112	11225	20065	2883		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
2	BB	128	Total	C	N	O	P	0	0
			2720	1214	481	897	128		
2	CB	128	Total	C	N	O	P	0	0
			2720	1214	481	897	128		

- Molecule 3 is a protein called Large ribosomal subunit protein uL2.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	BC	238	Total	C	N	O	S	0	0
			1808	1129	350	321	8		
3	CC	238	Total	C	N	O	S	0	0
			1808	1129	350	321	8		

- Molecule 4 is a protein called Large ribosomal subunit protein uL3.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	BD	337	Total	C	N	O	S	0	0
			2597	1639	474	476	8		
4	CD	337	Total	C	N	O	S	0	0
			2597	1639	474	476	8		

- Molecule 5 is a protein called Large ribosomal subunit protein uL4.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	BE	252	Total	C	N	O	S	0	0
			1930	1208	368	353	1		
5	CE	252	Total	C	N	O	S	0	0
			1930	1208	368	353	1		

- Molecule 6 is a protein called Large ribosomal subunit protein uL5.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	BF	165	Total	C	N	O	S	0	0
			1289	812	234	235	8		
6	CF	165	Total	C	N	O	S	0	0
			1289	812	234	235	8		

- Molecule 7 is a protein called Large ribosomal subunit protein uL6.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	BG	176	Total	C	N	O	S	0	0
			1371	876	235	254	6		
7	CG	176	Total	C	N	O	S	0	0
			1371	876	235	254	6		

- Molecule 8 is a protein called Large ribosomal subunit protein eL8.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	BH	115	Total	C	N	O	S	0	0
			857	541	144	170	2		
8	CH	115	Total	C	N	O	S	0	0
			857	541	144	170	2		

- Molecule 9 is a protein called Large ribosomal subunit protein uL16.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	BI	159	Total	C	N	O	S	0	0
			1261	794	240	218	9		
9	CI	159	Total	C	N	O	S	0	0
			1261	794	240	218	9		

- Molecule 10 is a protein called Large ribosomal subunit protein uL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	BJ	138	Total	C	N	O	S	0	0
			1086	683	200	199	4		

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Mol	Chain	Residues	Atoms					AltConf	Trace
10	CJ	138	Total	C	N	O	S	0	0
			1086	683	200	199	4		

- Molecule 11 is a protein called Large ribosomal subunit protein uL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	BK	132	Total	C	N	O	S	0	0
			999	623	185	182	9		
11	CK	132	Total	C	N	O	S	0	0
			999	623	185	182	9		

- Molecule 12 is a protein called Large ribosomal subunit protein uL15.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	BL	140	Total	C	N	O	S	0	0
			1058	643	204	205	6		
12	CL	140	Total	C	N	O	S	0	0
			1058	643	204	205	6		

- Molecule 13 is a protein called Large ribosomal subunit protein eL15.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	BM	196	Total	C	N	O	S	0	0
			1593	986	329	273	5		
13	CM	196	Total	C	N	O	S	0	0
			1593	986	329	273	5		

- Molecule 14 is a protein called Large ribosomal subunit protein uL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	BN	174	Total	C	N	O	S	0	0
			1356	853	242	259	2		
14	CN	174	Total	C	N	O	S	0	0
			1356	853	242	259	2		

- Molecule 15 is a protein called Large ribosomal subunit protein eL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	BO	126	Total	C	N	O	S	0	0
			962	608	173	178	3		
15	CO	126	Total	C	N	O	S	0	0
			962	608	173	178	3		

- Molecule 16 is a protein called Large ribosomal subunit protein eL19.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	BP	151	Total	C	N	O	S	0	0
			1195	739	242	210	4		
16	CP	151	Total	C	N	O	S	0	0
			1195	739	242	210	4		

- Molecule 17 is a protein called Large ribosomal subunit protein eL20.

Mol	Chain	Residues	Atoms				AltConf	Trace
17	BQ	57	Total	C	N	O	0	0
			457	289	79	89		
17	CQ	57	Total	C	N	O	0	0
			457	289	79	89		

- Molecule 18 is a protein called Large ribosomal subunit protein eL21.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	BR	96	Total	C	N	O	S	0	0
			766	475	146	141	4		
18	CR	96	Total	C	N	O	S	0	0
			766	475	146	141	4		

- Molecule 19 is a protein called Large ribosomal subunit protein uL22.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	BS	151	Total	C	N	O	S	0	0
			1169	729	218	212	10		
19	CS	151	Total	C	N	O	S	0	0
			1169	729	218	212	10		

- Molecule 20 is a protein called Large ribosomal subunit protein uL23.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	BT	82	Total	C	N	O	S	0	0
			656	418	108	122	8		
20	CT	82	Total	C	N	O	S	0	0
			656	418	108	122	8		

- Molecule 21 is a protein called Large ribosomal subunit protein uL24.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	BU	119	Total	C	N	O	S	0	0
			910	564	170	169	7		
21	CU	119	Total	C	N	O	S	0	0
			910	564	170	169	7		

- Molecule 22 is a protein called Large ribosomal subunit protein eL24.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	BV	62	Total	C	N	O	S	0	0
			499	316	88	87	8		
22	CV	62	Total	C	N	O	S	0	0
			499	316	88	87	8		

- Molecule 23 is a protein called Large ribosomal subunit protein uL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	BW	67	Total	C	N	O	S	0	0
			532	321	103	106	2		
23	CW	67	Total	C	N	O	S	0	0
			532	321	103	106	2		

- Molecule 24 is a protein called Large ribosomal subunit protein uL30.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	BX	153	Total	C	N	O	S	0	0
			1237	779	230	222	6		
24	CX	153	Total	C	N	O	S	0	0
			1237	779	230	222	6		

- Molecule 25 is a protein called Large ribosomal subunit protein eL30.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	BY	92	Total	C	N	O	S	0	0
			658	415	108	131	4		
25	CY	92	Total	C	N	O	S	0	0
			658	415	108	131	4		

- Molecule 26 is a protein called Large ribosomal subunit protein eL31.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	BZ	86	Total	C	N	O	S	0	0
			703	446	131	123	3		

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Mol	Chain	Residues	Atoms					AltConf	Trace
26	CZ	86	Total	C	N	O	S	0	0
			703	446	131	123	3		

- Molecule 27 is a protein called Large ribosomal subunit protein eL32.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	Ba	132	Total	C	N	O	S	0	0
			1028	645	197	184	2		
27	Ca	132	Total	C	N	O	S	0	0
			1028	645	197	184	2		

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Ba	-2	MET	-	initiating methionine	UNP A0A832W8Z7
Ba	-1	ILE	-	conflict	UNP A0A832W8Z7
Ba	0	MET	-	conflict	UNP A0A832W8Z7
Ca	-2	MET	-	initiating methionine	UNP A0A832W8Z7
Ca	-1	ILE	-	conflict	UNP A0A832W8Z7
Ca	0	MET	-	conflict	UNP A0A832W8Z7

- Molecule 28 is a protein called Large ribosomal subunit protein eL43.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	Bb	94	Total	C	N	O	S	0	0
			736	459	145	125	7		
28	Cb	94	Total	C	N	O	S	0	0
			736	459	145	125	7		

- Molecule 29 is a protein called Large ribosomal subunit protein eL37.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	Bc	56	Total	C	N	O	S	0	0
			445	269	92	76	8		
29	Cc	56	Total	C	N	O	S	0	0
			445	269	92	76	8		

- Molecule 30 is a protein called Large ribosomal subunit protein eL39.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	Bd	51	Total	C	N	O	S	0	0
			439	272	101	64	2		

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Mol	Chain	Residues	Atoms					AltConf	Trace
30	Cd	51	Total	C	N	O	S	0	0
			439	272	101	64	2		

- Molecule 31 is a protein called Large ribosomal subunit protein eL40.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	Be	44	Total	C	N	O	S	0	0
			353	215	74	59	5		
31	Ce	44	Total	C	N	O	S	0	0
			353	215	74	59	5		

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Be	-2	MET	-	initiating methionine	UNP Q8TJ19
Be	-1	THR	-	conflict	UNP Q8TJ19
Be	0	LYS	-	conflict	UNP Q8TJ19
Ce	-2	MET	-	initiating methionine	UNP Q8TJ19
Ce	-1	THR	-	conflict	UNP Q8TJ19
Ce	0	LYS	-	conflict	UNP Q8TJ19

- Molecule 32 is a protein called Large ribosomal subunit protein eL42.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Bf	92	Total	C	N	O	S	0	0
			760	480	151	122	7		
32	Cf	92	Total	C	N	O	S	0	0
			760	480	151	122	7		

- Molecule 33 is a protein called Bifunctional phosphoribosylaminoimidazolecarboxamide for myltransferase/IMP cyclohydrolase.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	DA	538	Total	C	N	O	S	0	0
			4172	2644	706	804	18		
33	DB	538	Total	C	N	O	S	0	0
			4172	2644	706	804	18		

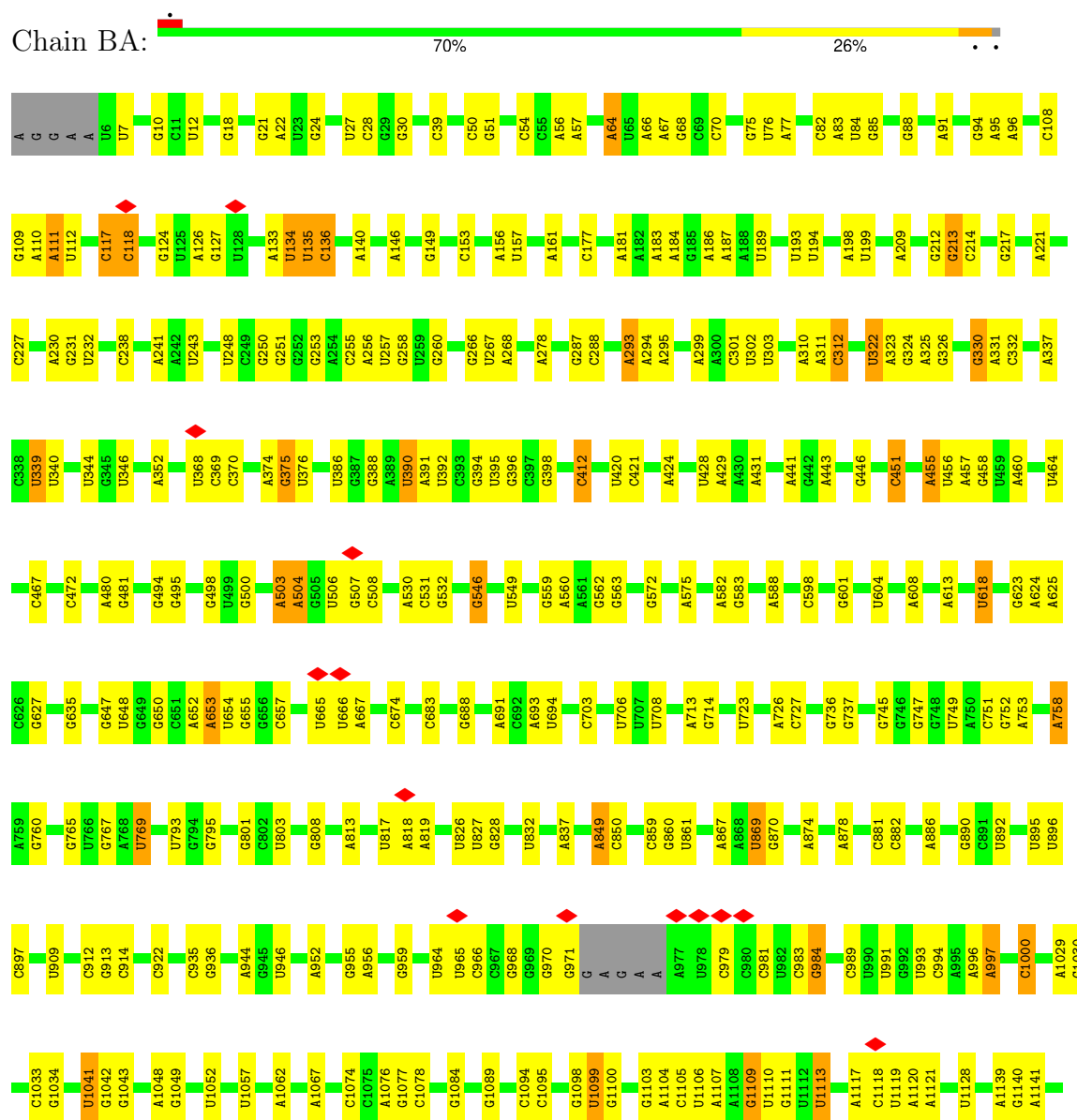
- Molecule 34 is a protein called Elongation factor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	DC	730	Total 5643	C 3547	N 985	O 1075	S 36	0	0
34	DD	730	Total 5643	C 3547	N 985	O 1075	S 36	0	0

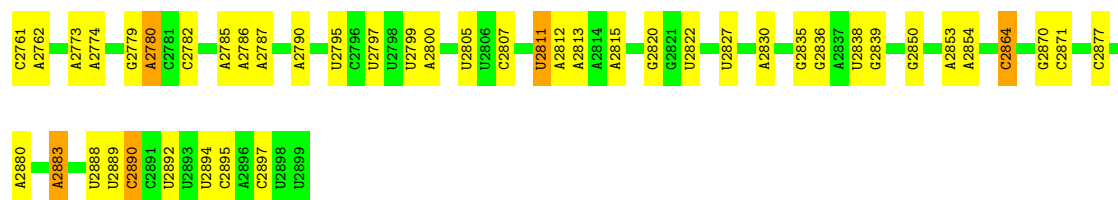
3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

• Molecule 1: 23S rRNA

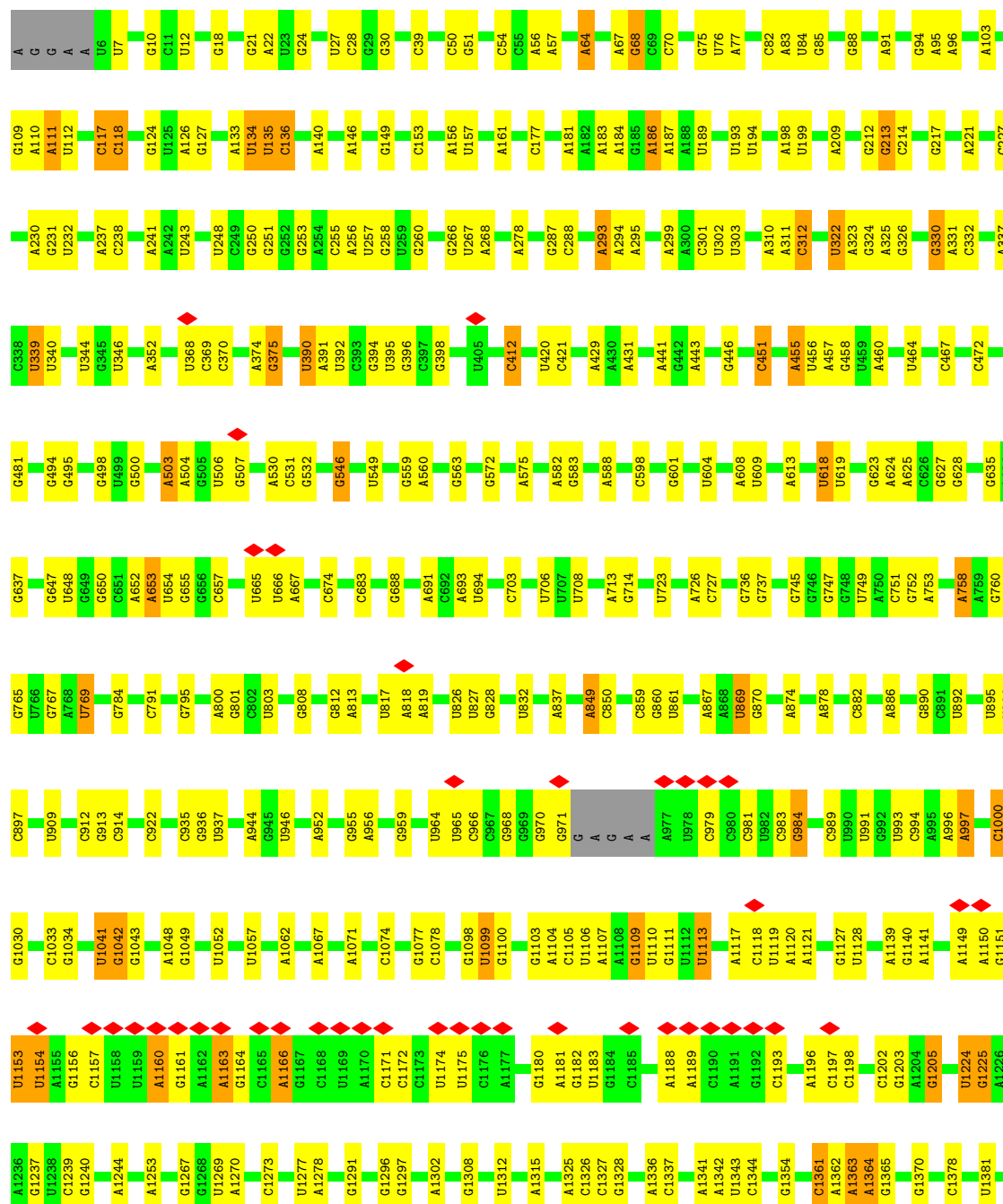


U149	C1232	U1371	U1510	G1831	G2082	G2160	A2250	A2370	G2497
A1150	U1233	G1372	C1515	A1852	A2083	G2161	C2257	G2371	A2500
G1151	C1234	G1373	U1834	U1853	U2089	U2162	U2258	G2377	G2501
G1152	A1235	G1374	G1835	G1676	G2090	G1954	G2259	A2378	C2502
U1153	U1236	C1378	C1520	G1679	G2091	A1958	C2164	U2379	G2507
U1154	U1237	U1381	G1524	C1682	A2092	G1959	G2165	G2380	A2508
A1155	U1238	U1385	G1541	U1844	G2101	U1960	C2166	A2386	G2509
G1156	C1239	G1385	U1550	A1845	C2102	A1961	A2168	C2387	C2512
C1157	A1244	A1389	C1551	A1846	A2103	G1962	G2169	A2391	G2513
U1158	C1245	A1390	U1558	G1848	G2104	U1964	C2170	G2392	G2517
U1159	A1283	G1391	U1568	A1852	U2112	U1972	A2171	U2393	U2517
A1160	U1287	C1395	G1569	U1704	U2113	A1973	U2172	G2396	U2524
G1161	G1267	C1396	A1571	G1705	G2114	A1974	U2173	G2397	U2529
A1162	U1268	A1397	U1574	U1706	G2115	U1984	C2174	U2398	G2538
U1163	A1270	G1398	G1575	A1710	U2118	G1985	G2175	G2400	U2539
G1164	C1273	A1410	C1576	G1711	G2119	C1986	U2176	G2404	G2543
C1165	U1277	A1411	U1577	U1712	U2120	A1987	G2177	C2407	G2544
G1166	A1278	C1422	U1578	A1713	G2121	U1988	G2178	U2410	G2545
G1167	G1291	G1423	C1584	U1716	C1869	A1991	U2179	U2411	G2546
U1168	U1296	C1424	G1587	C1717	U1873	U1992	G2180	G2412	G2547
A1170	G1297	U1430	U1589	A1718	U1883	G1993	C2181	U2419	G2548
C1171	A1302	C1434	A1597	G1726	A1884	G2001	G2182	U2420	U2549
G1172	U1308	G1435	U1599	A1727	U1888	G2002	G2183	G2421	U2550
C1173	U1312	U1451	U1606	G1733	U1899	G2003	U2184	U2422	U2551
U1174	A1315	U1456	G1607	G1734	A1901	U2012	C2185	U2423	A2572
U1175	A1325	G1460	C1611	C1745	A1921	G2013	U2186	U2424	A2573
G1176	A1327	G1466	A1612	G1746	A1922	G2014	G2187	A2441	G2574
A1177	U1336	A1471	A1613	U1753	A1923	C2015	U2188	A2442	G2575
G1180	A1337	A1476	G1614	G1754	A1924	G2016	G2189	A2443	G2576
A1181	A1341	U1482	U1615	G1755	A1928	G2017	G2190	A2444	G2577
G1182	U1342	A1483	C1616	G1756	G1929	U2018	G2191	A2445	G2578
U1183	C1344	A1484	C1622	A1757	G1930	G2033	A2192	A2446	C2584
G1184	U1354	U1485	C1633	C1771	G1931	A2034	U2193	U2452	G2585
C1185	C1361	A1486	C1634	U1790	U1932	U2038	C2194	C2453	G2589
A1188	A1362	U1487	U1635	C1799	A1933	U2039	A2197	C2454	G2593
C1189	A1363	U1498	U1636	G1800	A	A2041	C2198	A2459	C2601
G1190	U1365	U1506	G1637	A1809	C	A2042	C2199	U2460	G2610
A1191	G1370	A1507	A1638	U1816	U	U2043	C2200	A2461	U2611
U1192	U1508	A1508	A1639	U1817	A	U2044	G2201	U2462	A2613
C1193	U1509	A1667	C1661	U1818	U	A2052	U2202	U2464	G2614
A1196	U1509	A1667	G1662	G1658	G1939	C2052	C2203	A2479	G2615
C1197	U1509	A1667	G1663	A1651	A1940	A2054	G2204	A2480	U2620
G1198	U1509	A1667	A1667	G1658	G1941	A2054	G2205	U2481	U2621
C1202	U1509	A1667	A1667	G1658	G1942	G2071	G2206	A2482	A2629
U1203	U1509	A1667	A1667	G1658	G1943	A2076	A2219	A2483	A2632
A1204	U1509	A1667	A1667	G1658	U1944	A2080	A2229	A2484	G2636
G1205	U1509	A1667	A1667	G1658	A1822	A2081	A2234	U2752	U2755
U1224	U1509	A1667	A1667	G1658	A1827	U1947	C2235	G2756	G2756
G1225	U1509	A1667	A1667	G1658	A1827	U1947	G2247	A2757	A2757
A1226	U1509	A1667	A1667	G1658	A1827	U1947	C2248	U2757	U2757
C1227	U1509	A1667	A1667	G1658	A1827	U1947	C2249	U2757	U2757
G1230	U1509	A1667	A1667	G1658	A1827	U1947	C2249	U2757	U2757
G1231	U1509	A1667	A1667	G1658	A1827	U1947	C2249	U2757	U2757

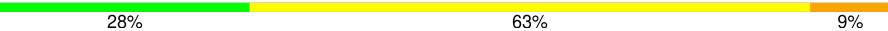


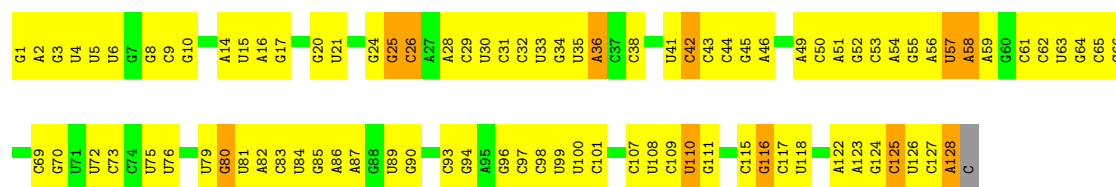
• Molecule 1: 23S rRNA

Chain CA: 70% 26%




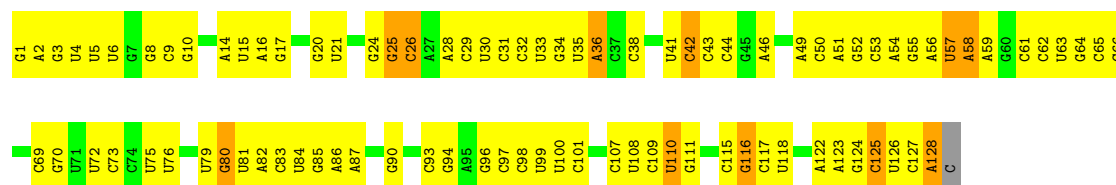


Chain BB:  28% 63% 9%



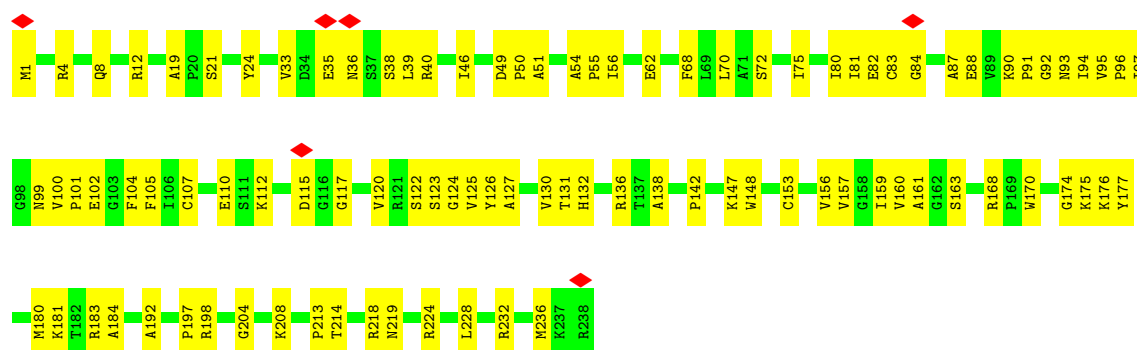
• Molecule 2: 5S rRNA

Chain CB:  29% 61% 9%



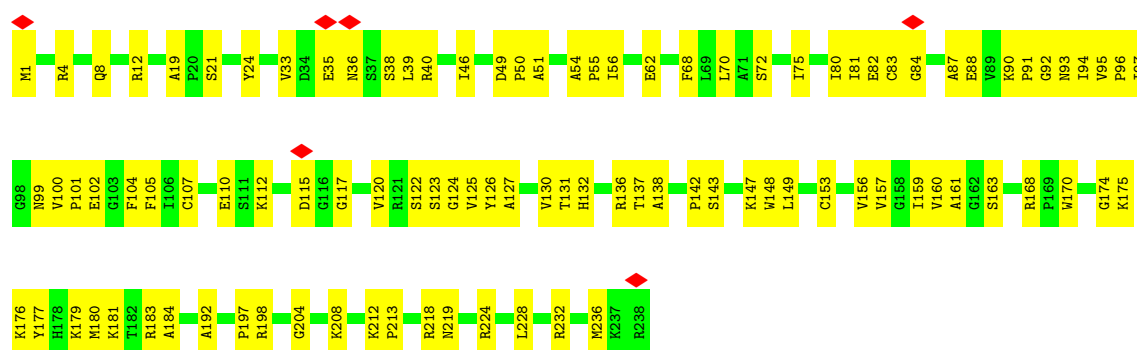
• Molecule 3: Large ribosomal subunit protein uL2

Chain BC:  60% 40%

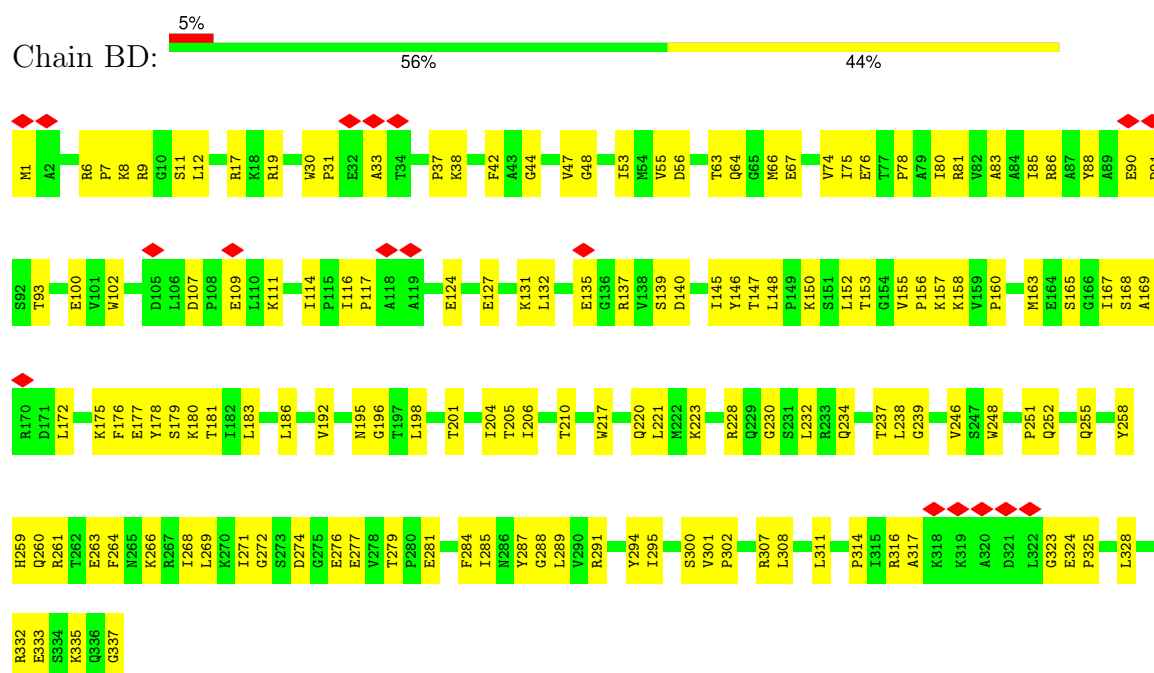


• Molecule 3: Large ribosomal subunit protein uL2

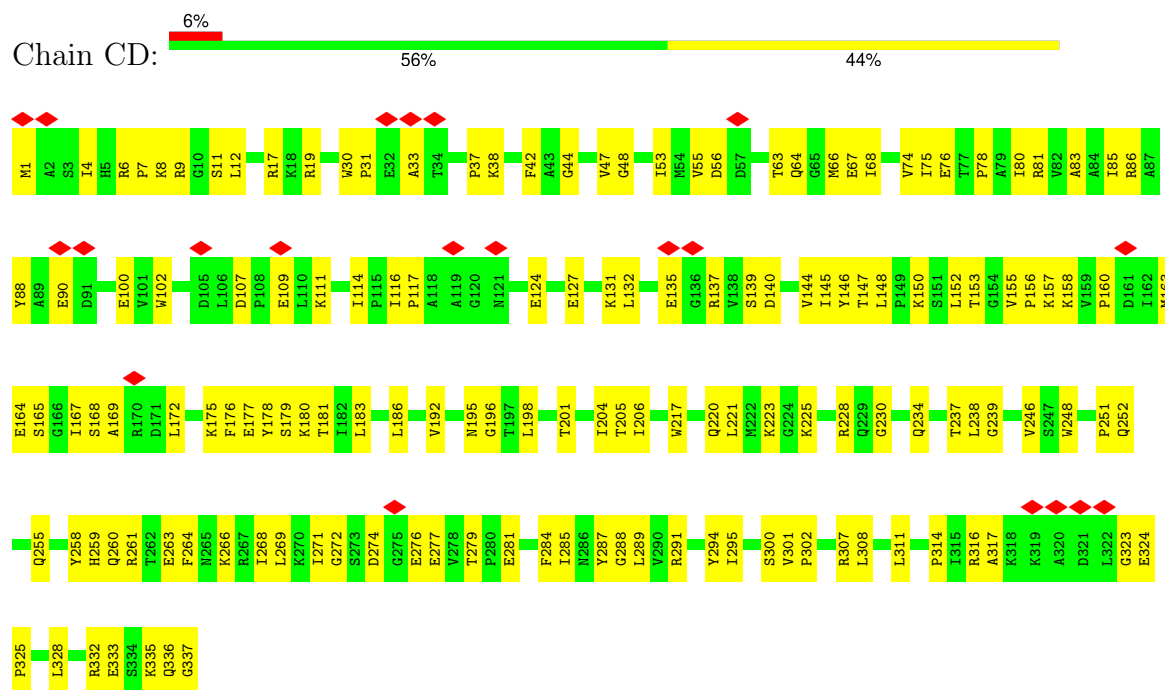
Chain CC:  58% 42%



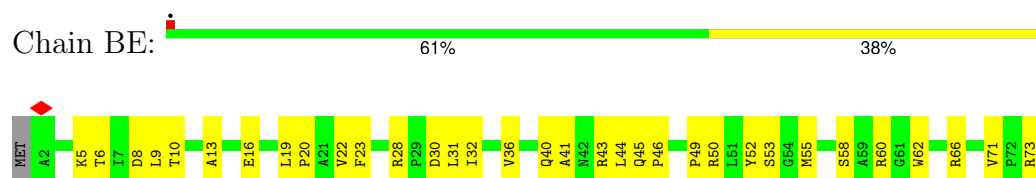
• Molecule 4: Large ribosomal subunit protein uL3

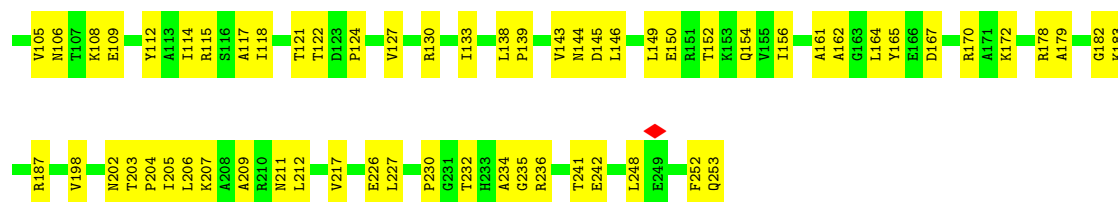


• Molecule 4: Large ribosomal subunit protein uL3

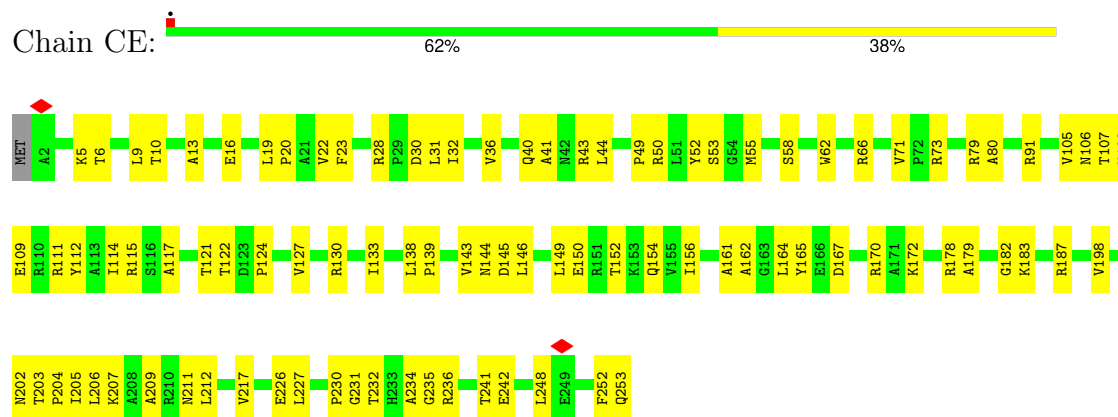


• Molecule 5: Large ribosomal subunit protein uL4

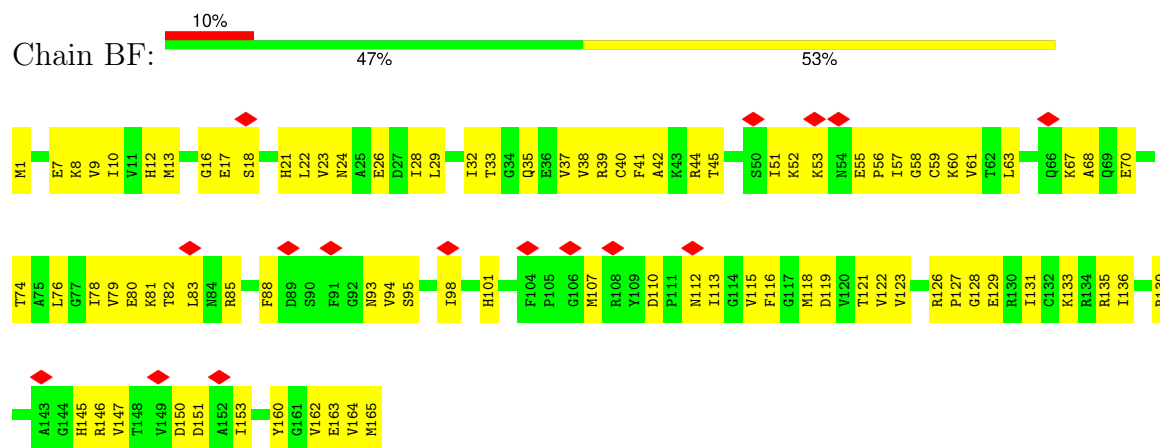




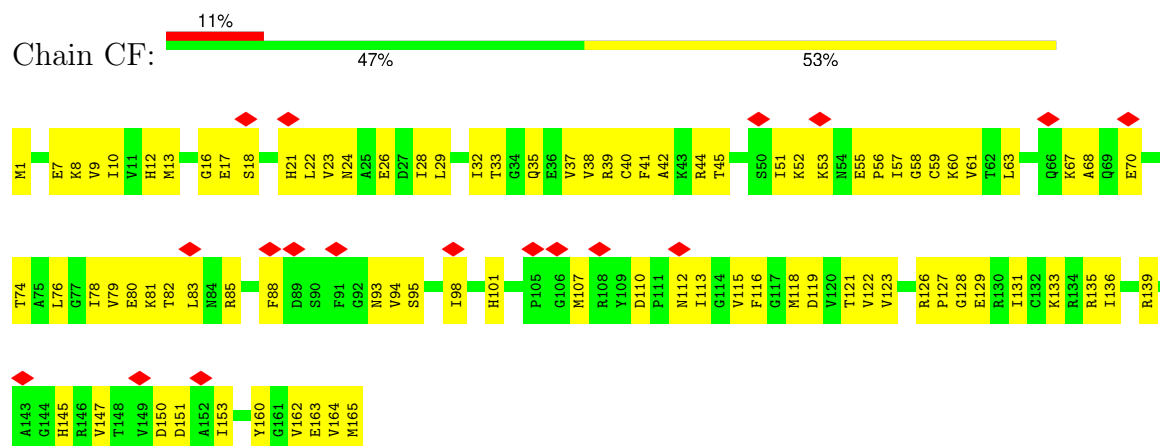
• Molecule 5: Large ribosomal subunit protein uL4



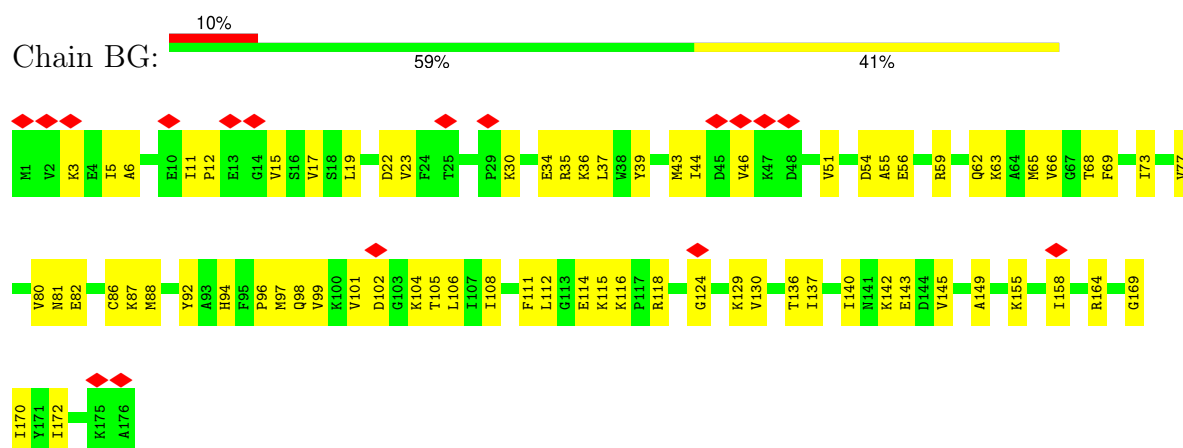
• Molecule 6: Large ribosomal subunit protein uL5



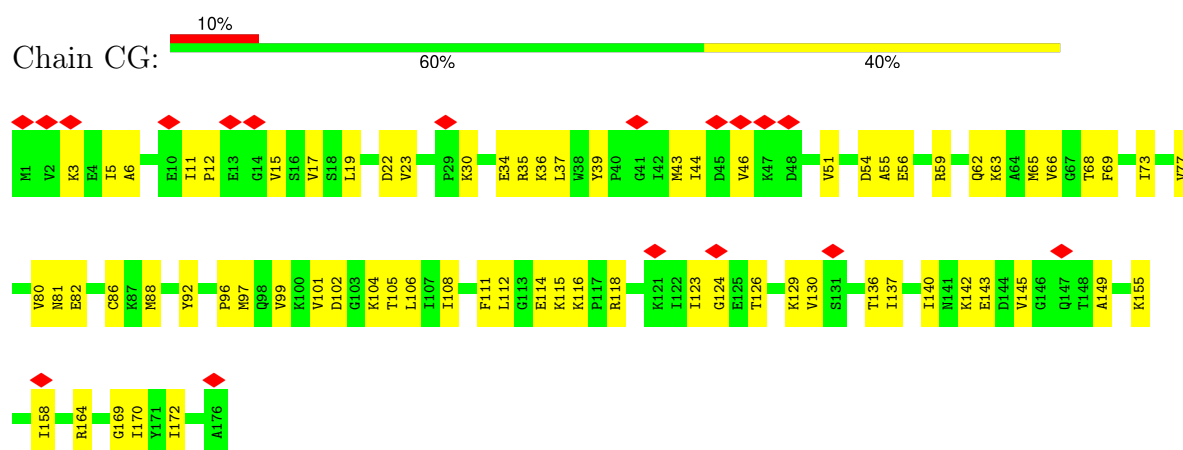
• Molecule 6: Large ribosomal subunit protein uL5



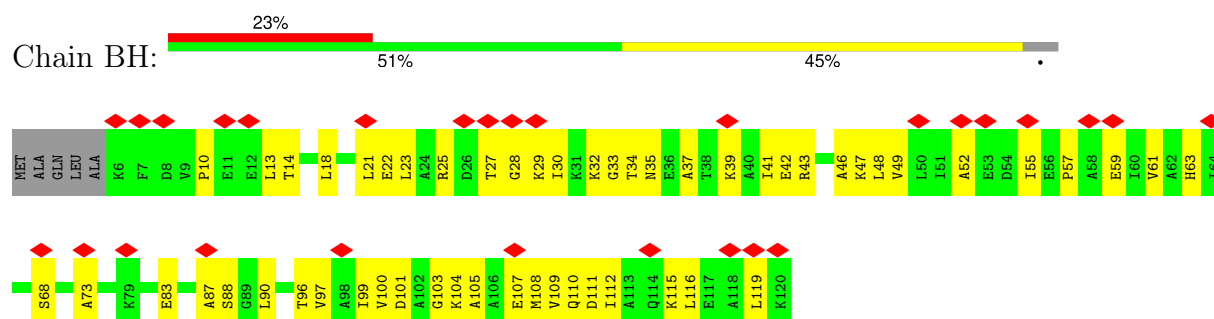
- Molecule 7: Large ribosomal subunit protein uL6



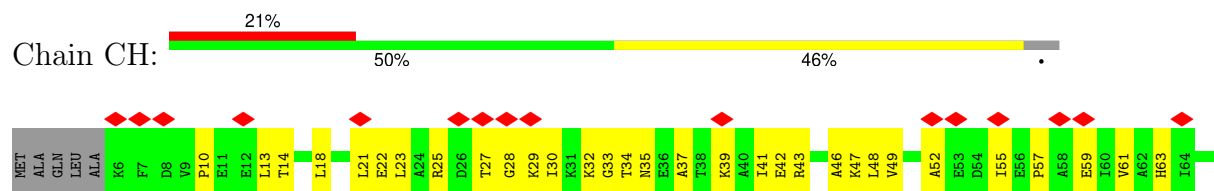
- Molecule 7: Large ribosomal subunit protein uL6



- Molecule 8: Large ribosomal subunit protein eL8

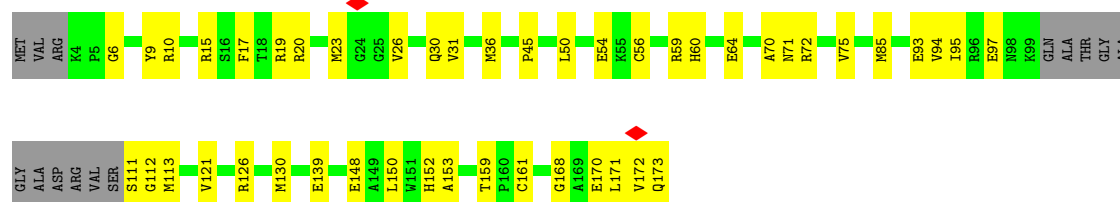


- Molecule 8: Large ribosomal subunit protein eL8

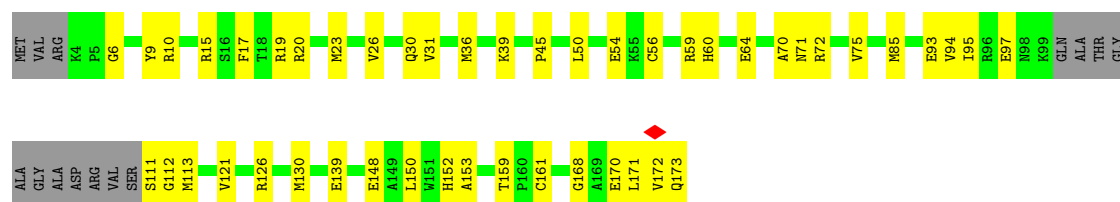




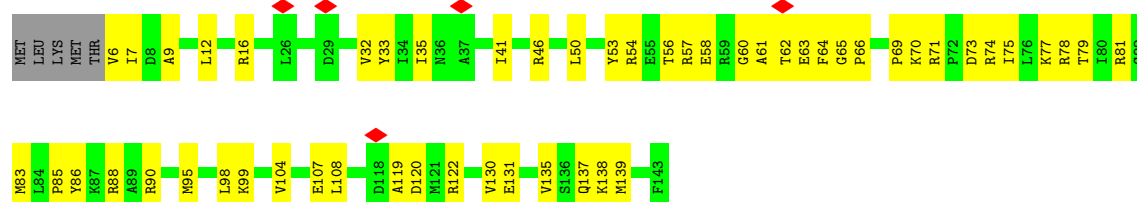
- Molecule 9: Large ribosomal subunit protein uL16



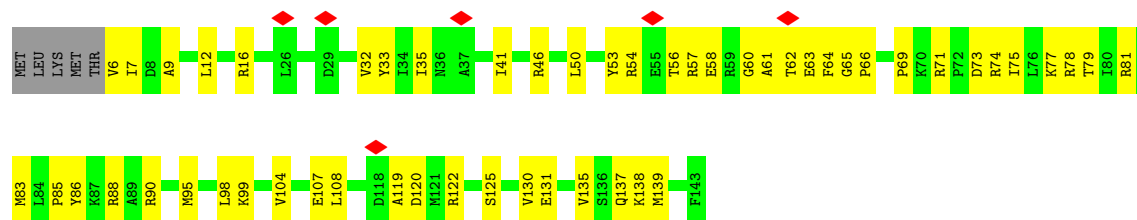
- Molecule 9: Large ribosomal subunit protein uL16



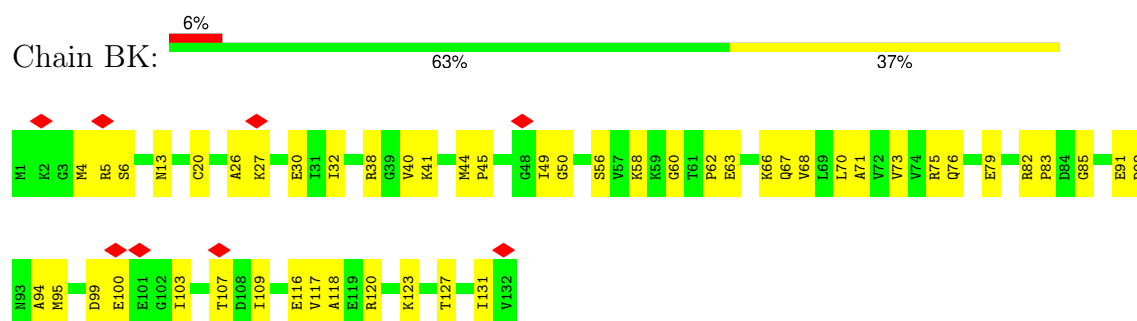
- Molecule 10: Large ribosomal subunit protein uL13



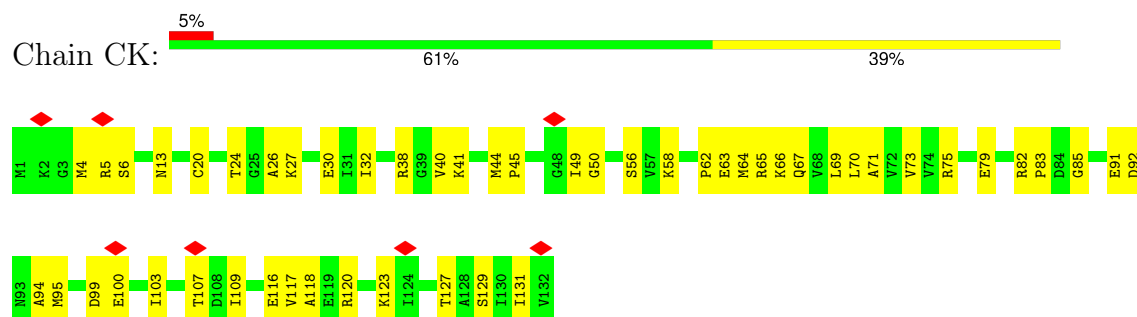
- Molecule 10: Large ribosomal subunit protein uL13



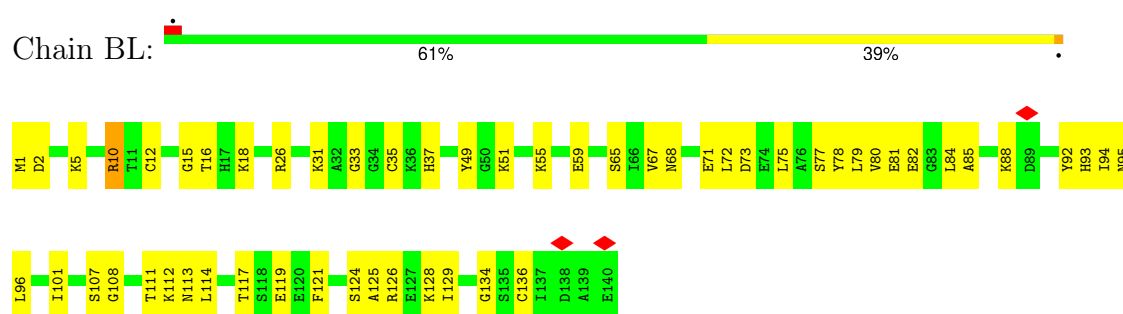
- Molecule 11: Large ribosomal subunit protein uL14



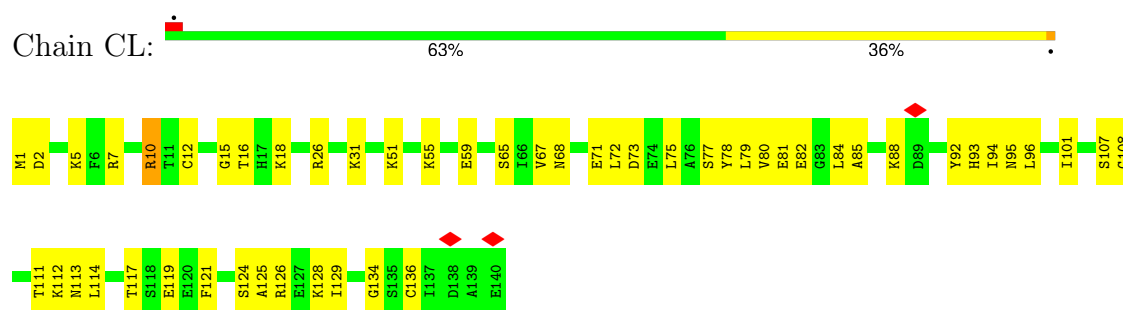
- Molecule 11: Large ribosomal subunit protein uL14



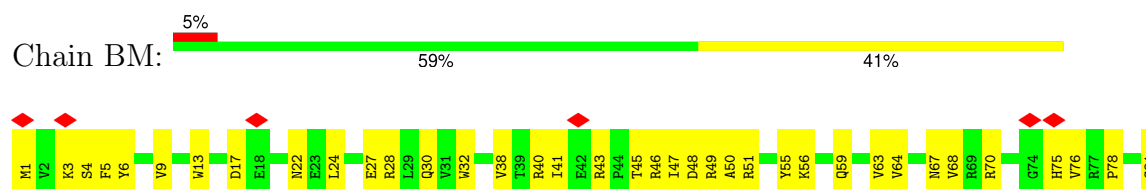
- Molecule 12: Large ribosomal subunit protein uL15

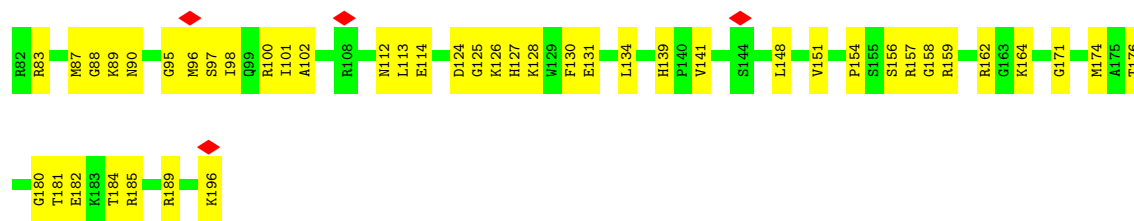


- Molecule 12: Large ribosomal subunit protein uL15



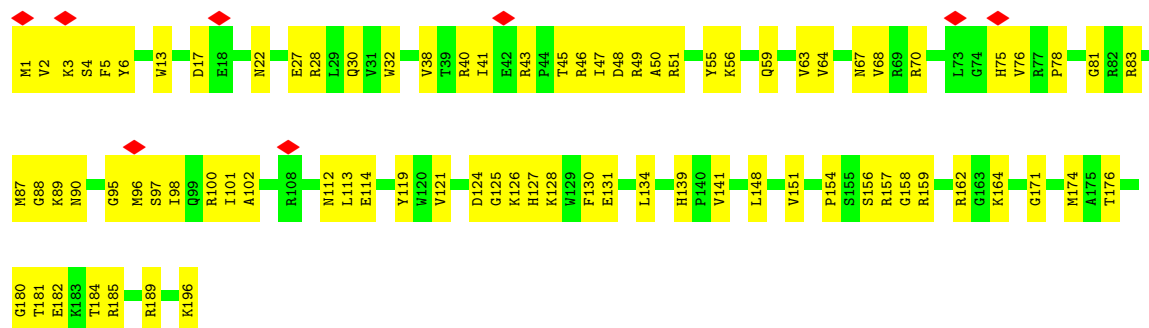
- Molecule 13: Large ribosomal subunit protein eL15





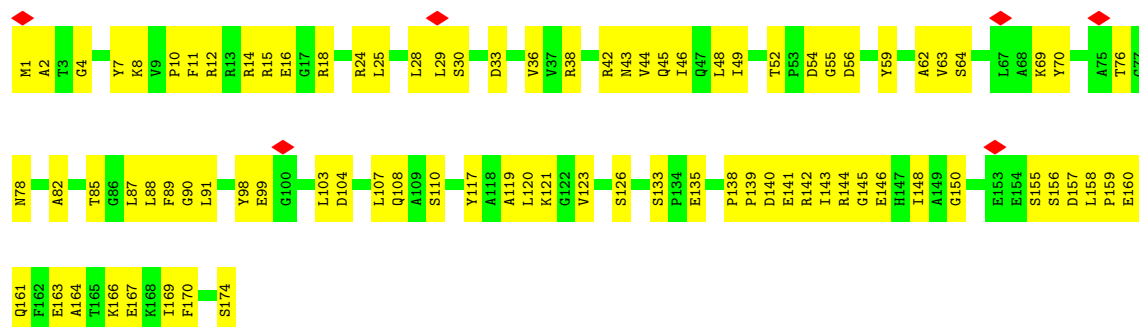
- Molecule 13: Large ribosomal subunit protein eL15

Chain CM: 58% 42%



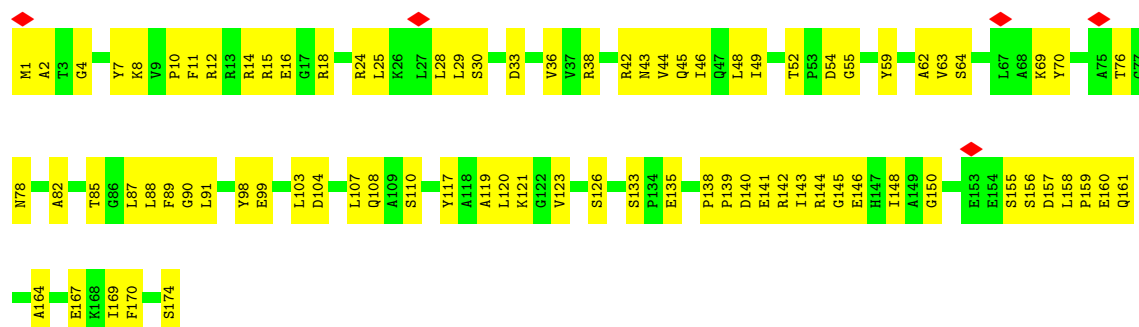
- Molecule 14: Large ribosomal subunit protein uL18

Chain BN: 51% 49%

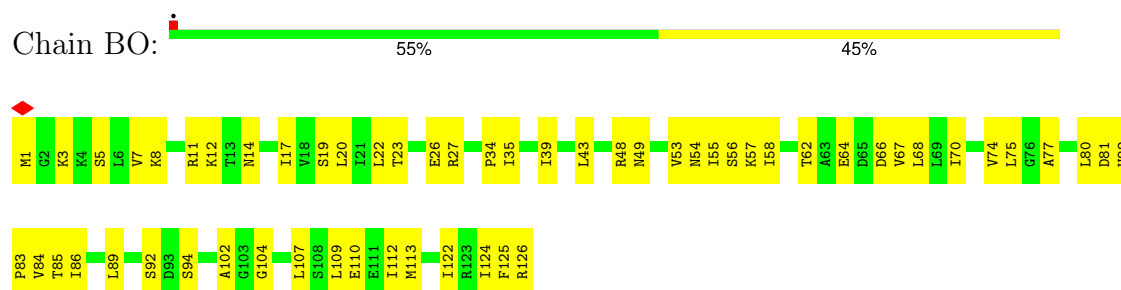


- Molecule 14: Large ribosomal subunit protein uL18

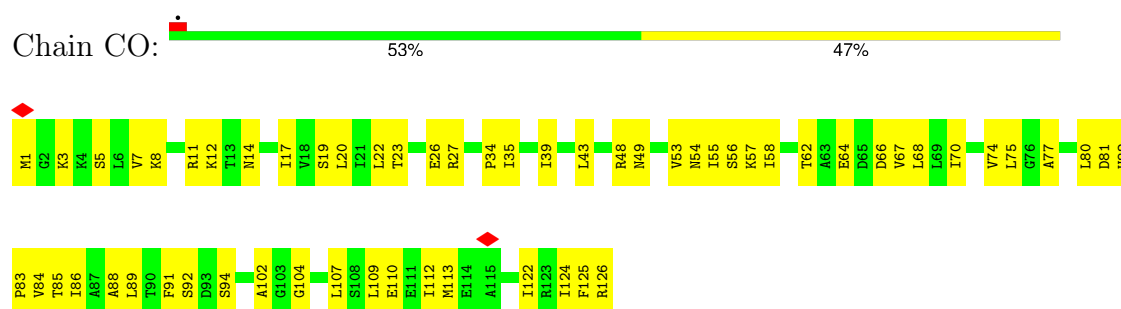
Chain CN: 52% 48%



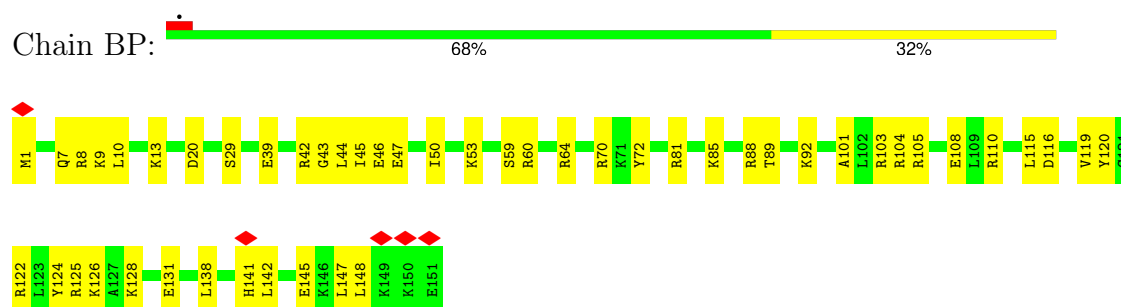
- Molecule 15: Large ribosomal subunit protein eL18



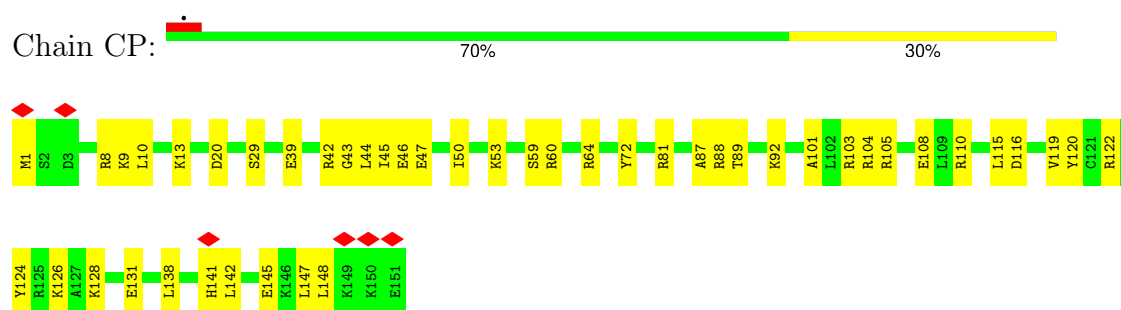
- Molecule 15: Large ribosomal subunit protein eL18



- Molecule 16: Large ribosomal subunit protein eL19



- Molecule 16: Large ribosomal subunit protein eL19

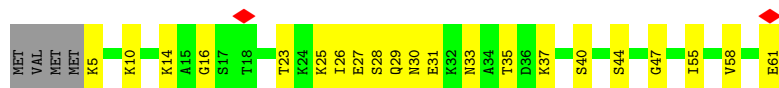


- Molecule 17: Large ribosomal subunit protein eL20

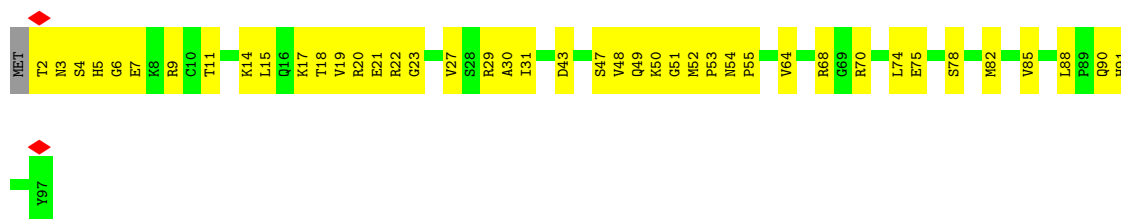




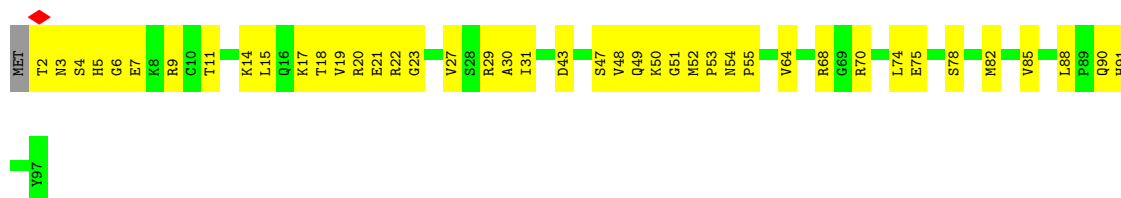
- Molecule 17: Large ribosomal subunit protein eL20



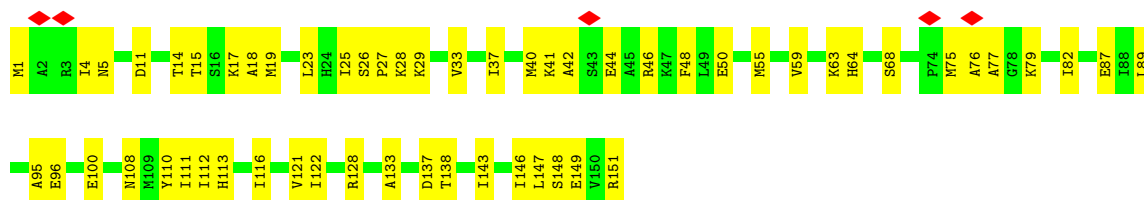
- Molecule 18: Large ribosomal subunit protein eL21



- Molecule 18: Large ribosomal subunit protein eL21

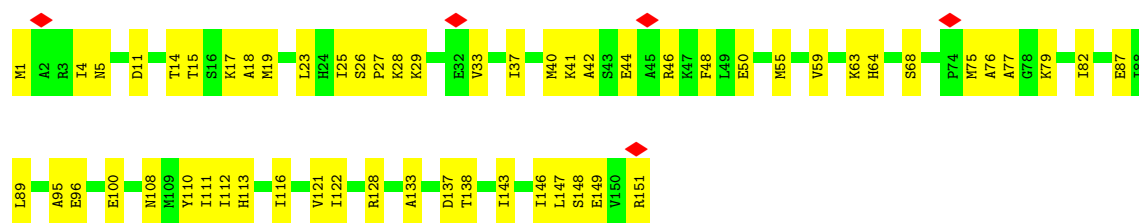


- Molecule 19: Large ribosomal subunit protein uL22



- Molecule 19: Large ribosomal subunit protein uL22





- Molecule 20: Large ribosomal subunit protein uL23



- Molecule 20: Large ribosomal subunit protein uL23



- Molecule 21: Large ribosomal subunit protein uL24

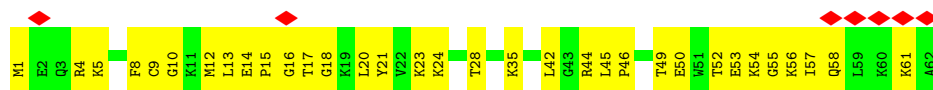


- Molecule 21: Large ribosomal subunit protein uL24

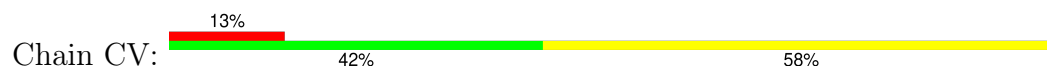


- Molecule 22: Large ribosomal subunit protein eL24

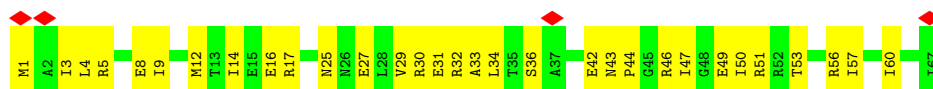




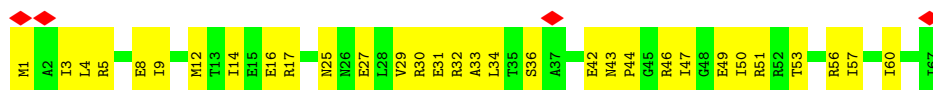
- Molecule 22: Large ribosomal subunit protein eL24



- Molecule 23: Large ribosomal subunit protein uL29



- Molecule 23: Large ribosomal subunit protein uL29



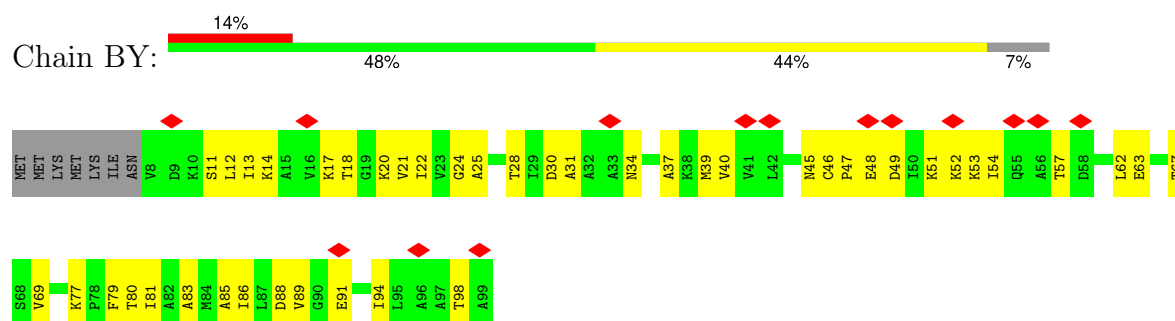
- Molecule 24: Large ribosomal subunit protein uL30



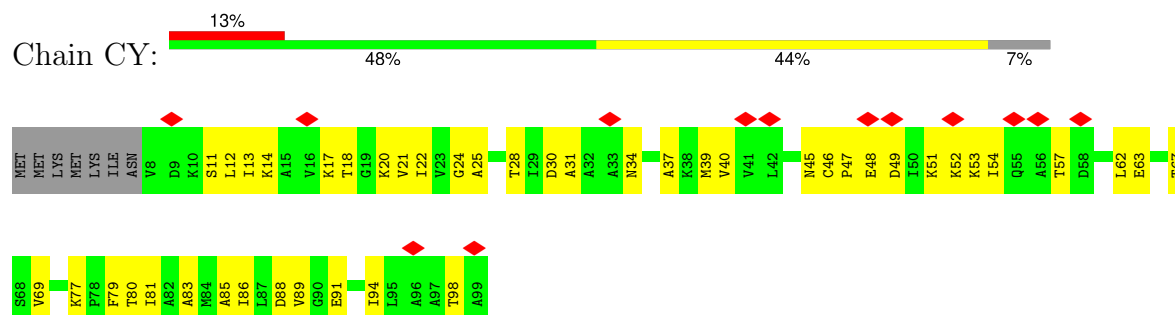
- Molecule 24: Large ribosomal subunit protein uL30



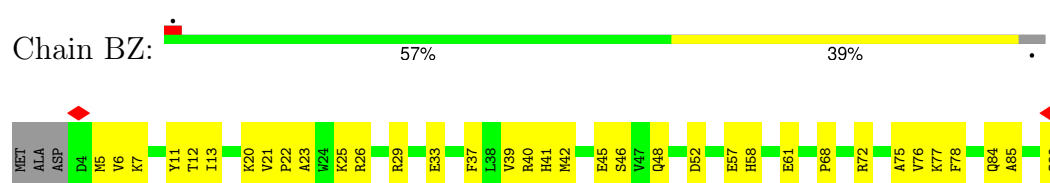
- Molecule 25: Large ribosomal subunit protein eL30



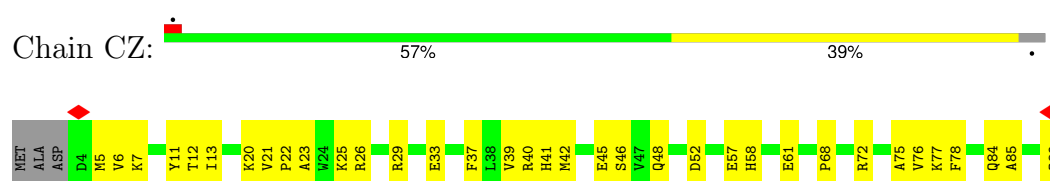
- Molecule 25: Large ribosomal subunit protein eL30



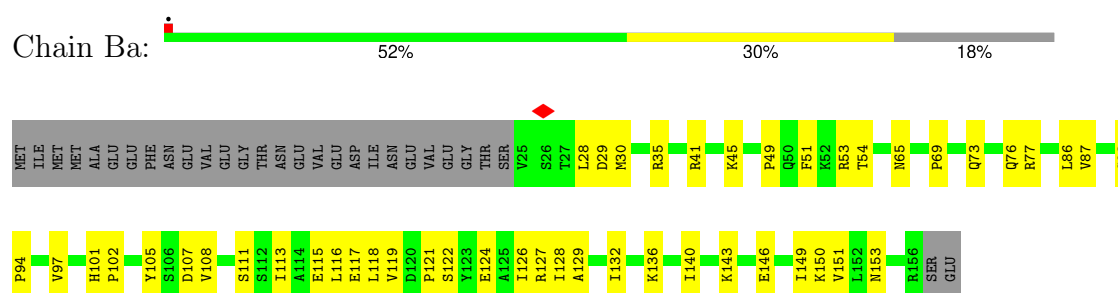
- Molecule 26: Large ribosomal subunit protein eL31



- Molecule 26: Large ribosomal subunit protein eL31

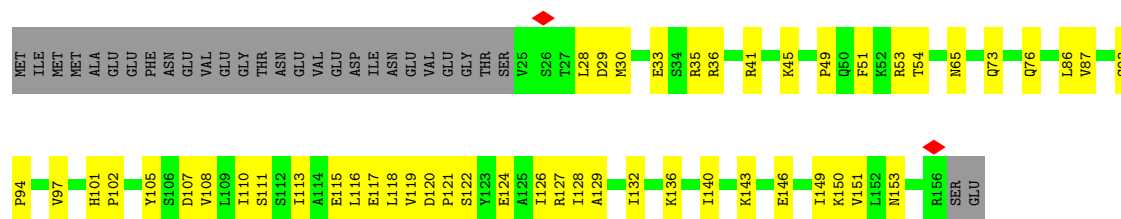


- Molecule 27: Large ribosomal subunit protein eL32

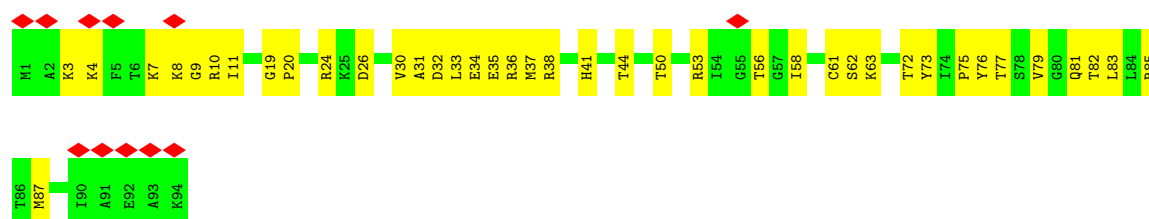


- Molecule 27: Large ribosomal subunit protein eL32

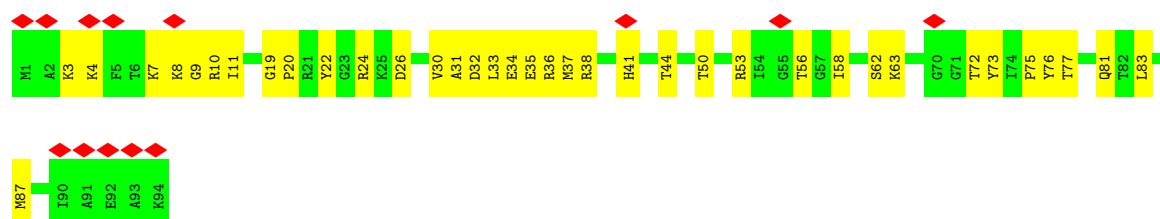




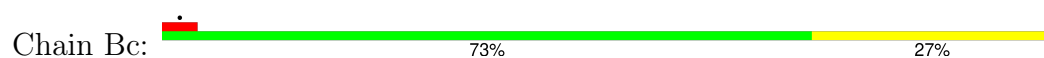
- Molecule 28: Large ribosomal subunit protein eL43



- Molecule 28: Large ribosomal subunit protein eL43



- Molecule 29: Large ribosomal subunit protein eL37

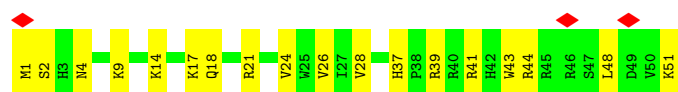


- Molecule 29: Large ribosomal subunit protein eL37



- Molecule 30: Large ribosomal subunit protein eL39

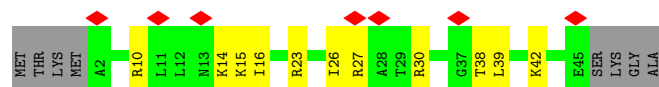




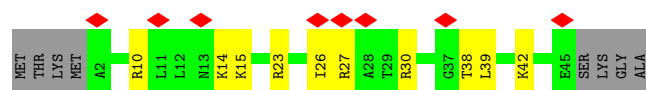
- Molecule 30: Large ribosomal subunit protein eL39



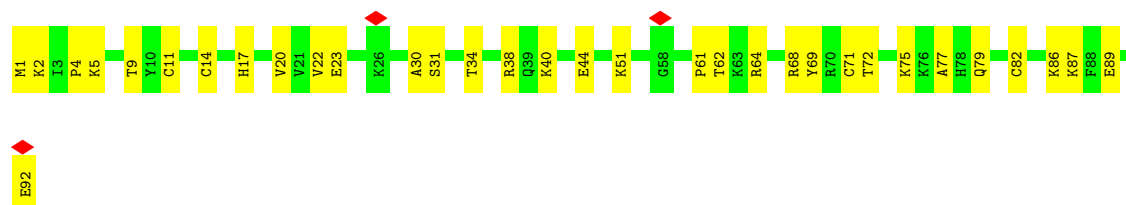
- Molecule 31: Large ribosomal subunit protein eL40



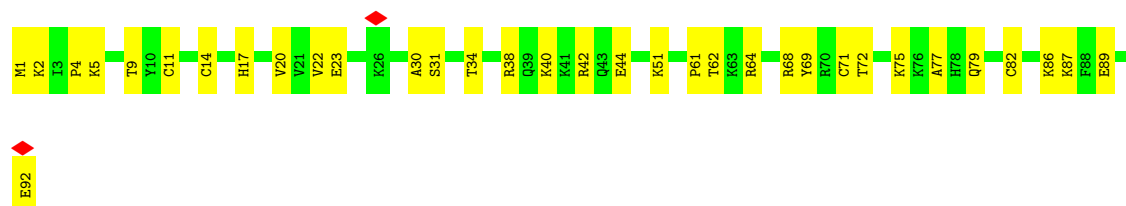
- Molecule 31: Large ribosomal subunit protein eL40



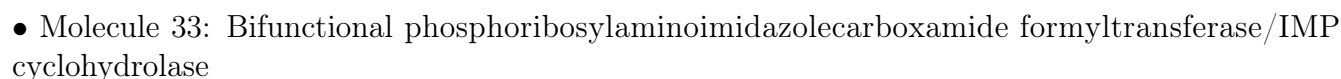
- Molecule 32: Large ribosomal subunit protein eL42

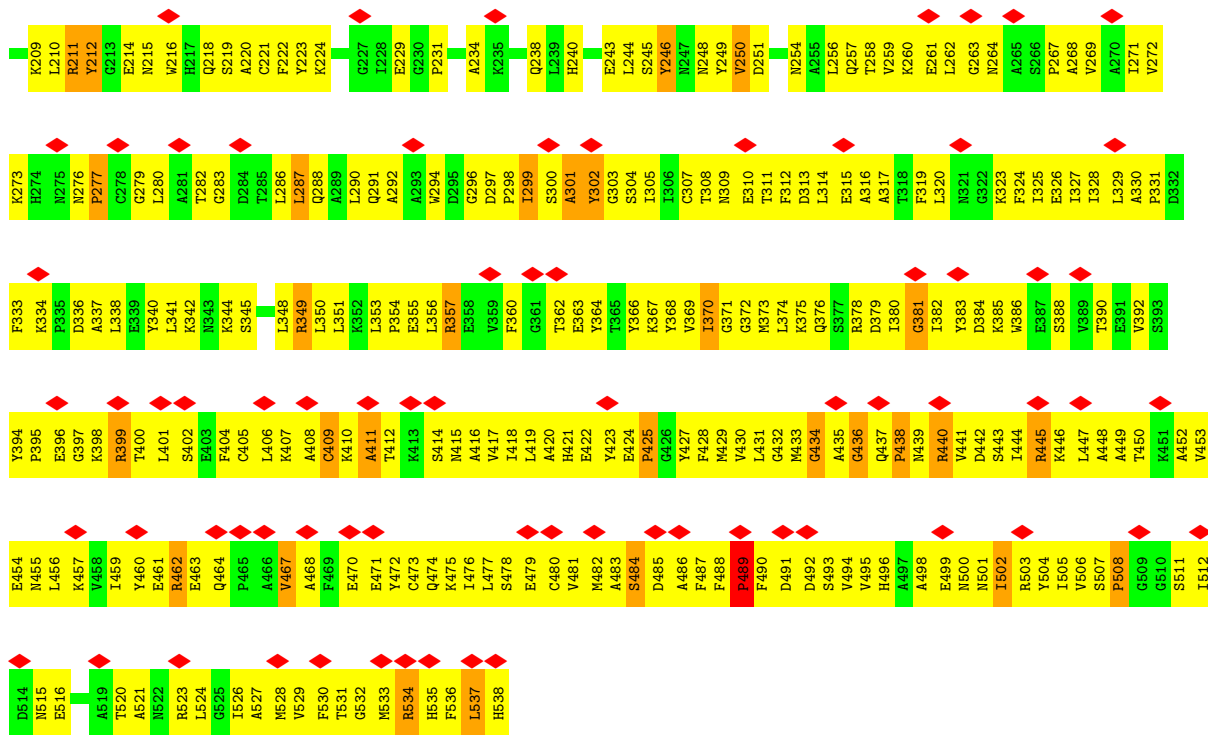


- Molecule 32: Large ribosomal subunit protein eL42

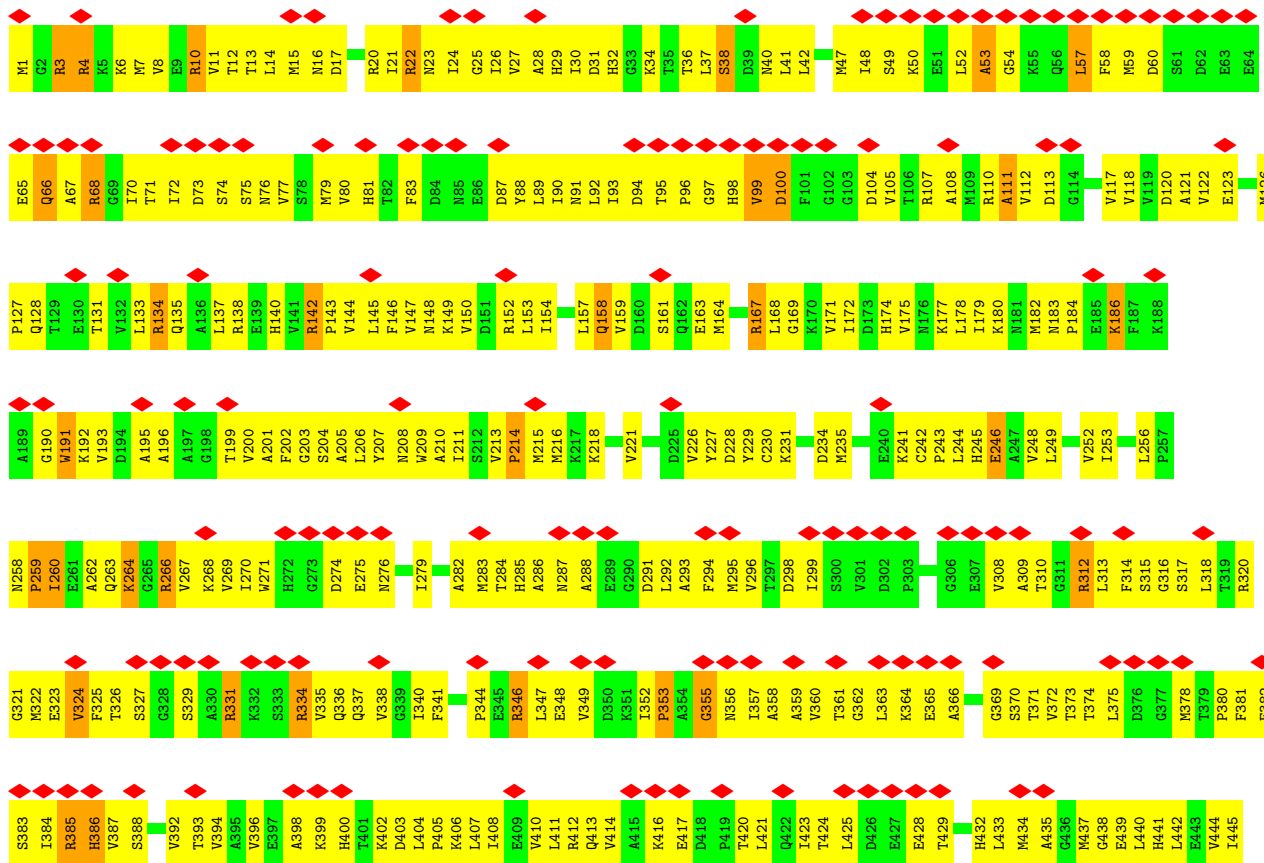


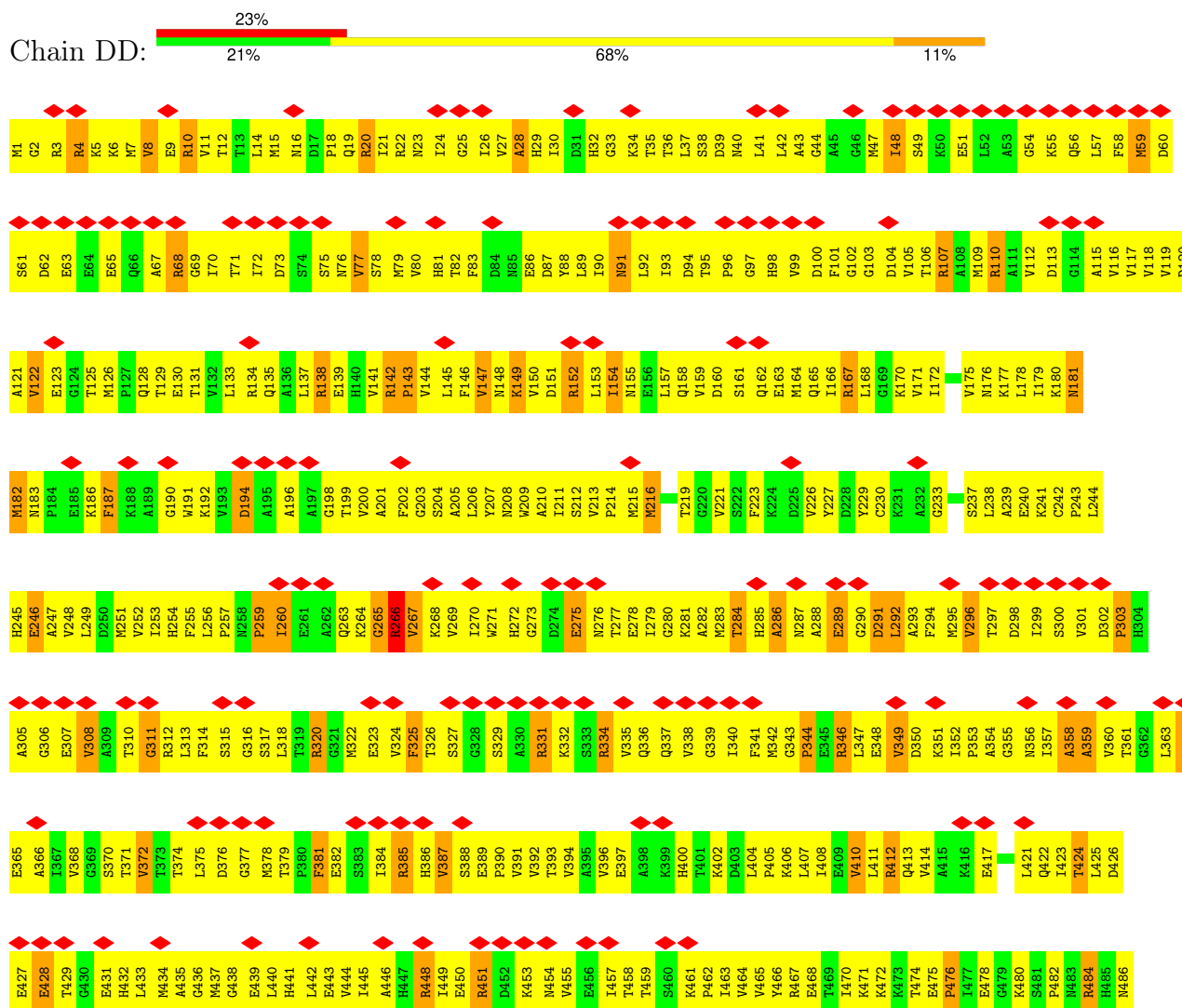
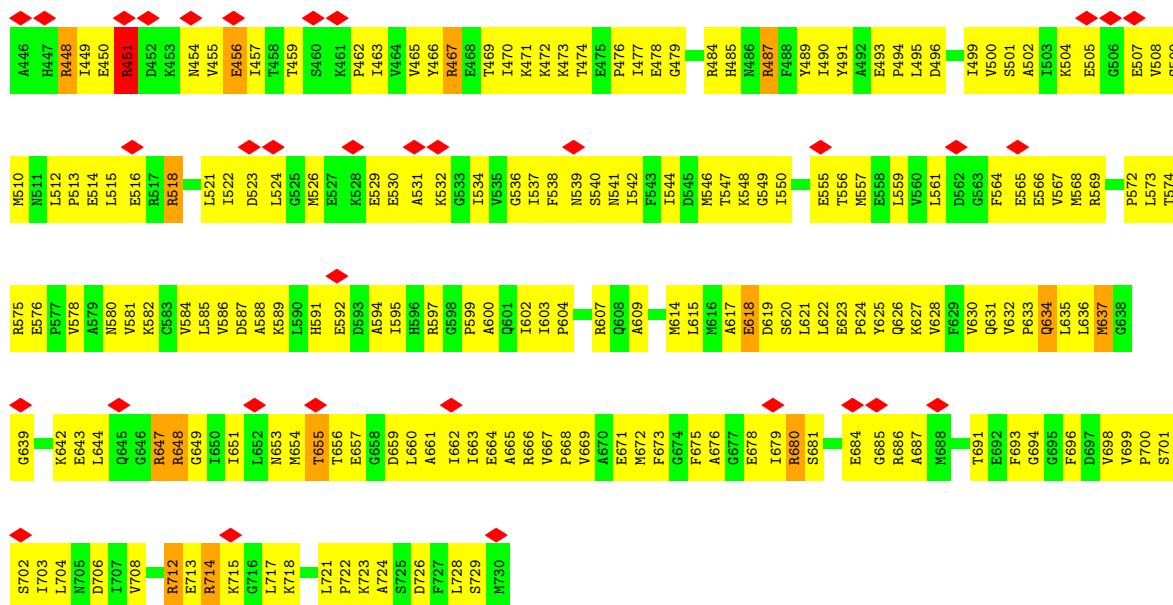
- Molecule 33: Bifunctional phosphoribosylaminoimidazolecarboxamide formyltransferase/IMP cyclohydrolase

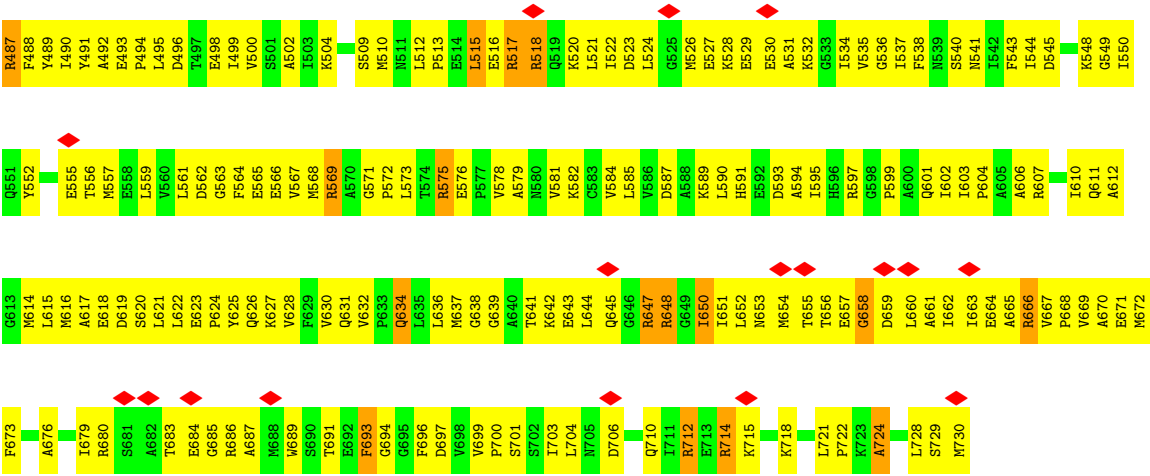




- Molecule 34: Elongation factor 2







4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	15110	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TALOS ARCTICA	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	600	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	2.041	Depositor
Minimum map value	-0.964	Depositor
Average map value	-0.001	Depositor
Map value standard deviation	0.089	Depositor
Recommended contour level	0.311	Depositor
Map size (\AA)	586.2, 586.2, 586.2	wwPDB
Map dimensions	600, 600, 600	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	0.977, 0.977, 0.977	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	$\# Z > 5$	RMSZ	$\# Z > 5$
1	BA	0.16	0/69080	0.37	0/107723
1	CA	0.16	0/69080	0.37	0/107723
2	BB	0.12	0/3037	0.28	0/4728
2	CB	0.12	0/3037	0.28	0/4728
3	BC	0.12	0/1850	0.33	0/2497
3	CC	0.12	0/1850	0.33	0/2497
4	BD	0.12	0/2646	0.32	0/3569
4	CD	0.12	0/2646	0.32	0/3569
5	BE	0.12	0/1964	0.33	0/2654
5	CE	0.12	0/1964	0.33	0/2654
6	BF	0.11	0/1310	0.30	0/1762
6	CF	0.11	0/1310	0.30	0/1762
7	BG	0.10	0/1392	0.28	0/1870
7	CG	0.10	0/1392	0.28	0/1870
8	BH	0.11	0/864	0.30	0/1161
8	CH	0.11	0/864	0.30	0/1161
9	BI	0.12	0/1284	0.30	0/1719
9	CI	0.12	0/1284	0.32	0/1719
10	BJ	0.11	0/1101	0.31	0/1474
10	CJ	0.11	0/1101	0.31	0/1474
11	BK	0.12	0/1010	0.33	0/1355
11	CK	0.13	0/1010	0.34	0/1355
12	BL	0.12	0/1071	0.36	0/1425
12	CL	0.12	0/1071	0.36	0/1425
13	BM	0.12	0/1625	0.34	0/2176
13	CM	0.12	0/1625	0.34	0/2176
14	BN	0.09	0/1382	0.28	0/1863
14	CN	0.09	0/1382	0.28	0/1863
15	BO	0.12	0/975	0.32	0/1312
15	CO	0.12	0/975	0.32	0/1312
16	BP	0.12	0/1209	0.32	0/1602
16	CP	0.12	0/1209	0.32	0/1602
17	BQ	0.12	0/464	0.30	0/614
17	CQ	0.11	0/464	0.30	0/614

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
18	BR	0.12	0/780	0.32	0/1042
18	CR	0.12	0/780	0.32	0/1042
19	BS	0.12	0/1189	0.32	0/1588
19	CS	0.12	0/1189	0.32	0/1588
20	BT	0.12	0/664	0.32	0/884
20	CT	0.12	0/664	0.32	0/884
21	BU	0.11	0/919	0.33	0/1227
21	CU	0.11	0/919	0.34	0/1227
22	BV	0.09	0/508	0.26	0/670
22	CV	0.09	0/508	0.26	0/670
23	BW	0.11	0/534	0.29	0/716
23	CW	0.10	0/534	0.29	0/716
24	BX	0.11	0/1259	0.28	0/1692
24	CX	0.12	0/1259	0.28	0/1692
25	BY	0.10	0/663	0.28	0/897
25	CY	0.10	0/663	0.28	0/897
26	BZ	0.13	0/715	0.31	0/960
26	CZ	0.12	0/715	0.31	0/960
27	Ba	0.11	0/1044	0.28	0/1397
27	Ca	0.11	0/1044	0.28	0/1397
28	Bb	0.12	0/749	0.34	0/997
28	Cb	0.12	0/749	0.34	0/997
29	Bc	0.16	0/452	0.34	0/593
29	Cc	0.15	0/452	0.34	0/593
30	Bd	0.14	0/448	0.34	0/595
30	Cd	0.14	0/448	0.34	0/595
31	Be	0.09	0/355	0.29	0/468
31	Ce	0.09	0/355	0.29	0/468
32	Bf	0.10	0/777	0.30	0/1029
32	Cf	0.11	0/777	0.30	0/1029
33	DA	0.34	0/4247	0.97	5/5744 (0.1%)
33	DB	0.34	0/4247	0.97	7/5744 (0.1%)
34	DC	1.29	7/5731 (0.1%)	0.81	2/7735 (0.0%)
34	DD	0.32	0/5731	0.88	3/7735 (0.0%)
All	All	0.26	7/226596 (0.0%)	0.42	17/335476 (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
33	DA	0	20

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Mol	Chain	#Chirality outliers	#Planarity outliers
33	DB	0	21
34	DC	0	31
34	DD	0	30
All	All	0	102

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	DC	186	LYS	CE-NZ	85.26	4.05	1.49
34	DC	191	TRP	CE3-CZ3	23.80	2.10	1.38
34	DC	191	TRP	CE2-CZ2	18.51	1.78	1.39
34	DC	191	TRP	CZ3-CH2	18.05	1.85	1.40
34	DC	191	TRP	CZ2-CH2	14.57	1.65	1.37
34	DC	191	TRP	CD2-CE2	13.99	1.65	1.41
34	DC	191	TRP	CD2-CE3	13.15	1.61	1.40

All (17) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	DA	70	ILE	N-CA-C	-11.87	102.15	112.12
33	DB	68	PRO	CA-N-CD	-9.90	98.14	112.00
33	DA	409	CYS	CA-CB-SG	6.72	129.86	114.40
34	DD	48	ILE	N-CA-C	-6.46	100.64	108.53
34	DC	186	LYS	CD-CE-NZ	6.44	132.52	111.90
33	DB	409	CYS	CA-CB-SG	6.17	128.59	114.40
33	DB	67	HIS	CA-C-N	6.14	127.51	119.84
33	DB	67	HIS	C-N-CA	6.14	127.51	119.84
33	DA	395	PRO	N-CA-C	-6.08	101.52	111.68
33	DA	56	PRO	N-CA-C	5.80	124.42	112.47
33	DA	409	CYS	CB-CA-C	5.72	120.40	110.68
34	DC	191	TRP	CE3-CZ3-CH2	-5.59	113.83	121.10
34	DD	515	LEU	CA-C-N	5.35	127.72	120.65
34	DD	515	LEU	C-N-CA	5.35	127.72	120.65
33	DB	489	PRO	N-CA-C	5.03	122.82	112.47
33	DB	68	PRO	CA-C-N	-5.02	111.96	121.54
33	DB	68	PRO	C-N-CA	-5.02	111.96	121.54

There are no chirality outliers.

All (102) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
33	DA	132	ARG	Sidechain
33	DA	158	ARG	Sidechain
33	DA	168	ARG	Sidechain
33	DA	177	ARG	Sidechain
33	DA	192	ARG	Sidechain
33	DA	20	ARG	Sidechain
33	DA	201	ARG	Sidechain
33	DA	211	ARG	Sidechain
33	DA	349	ARG	Sidechain
33	DA	357	ARG	Sidechain
33	DA	40	ARG	Sidechain
33	DA	440	ARG	Sidechain
33	DA	445	ARG	Sidechain
33	DA	462	ARG	Sidechain
33	DA	503	ARG	Sidechain
33	DA	513	ARG	Sidechain
33	DA	523	ARG	Sidechain
33	DA	534	ARG	Sidechain
33	DA	69	ARG	Sidechain
33	DA	78	ARG	Sidechain
33	DB	132	ARG	Sidechain
33	DB	139	ARG	Sidechain
33	DB	158	ARG	Sidechain
33	DB	168	ARG	Sidechain
33	DB	177	ARG	Sidechain
33	DB	192	ARG	Sidechain
33	DB	20	ARG	Sidechain
33	DB	201	ARG	Sidechain
33	DB	211	ARG	Sidechain
33	DB	349	ARG	Sidechain
33	DB	357	ARG	Sidechain
33	DB	399	ARG	Sidechain
33	DB	440	ARG	Sidechain
33	DB	445	ARG	Sidechain
33	DB	462	ARG	Sidechain
33	DB	513	ARG	Sidechain
33	DB	523	ARG	Sidechain
33	DB	534	ARG	Sidechain
33	DB	62	ARG	Sidechain
33	DB	68	PRO	Peptide
33	DB	69	ARG	Sidechain
34	DC	10	ARG	Sidechain
34	DC	107	ARG	Sidechain

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Mol	Chain	Res	Type	Group
34	DC	110	ARG	Sidechain
34	DC	134	ARG	Sidechain
34	DC	142	ARG	Sidechain
34	DC	152	ARG	Sidechain
34	DC	167	ARG	Sidechain
34	DC	22	ARG	Sidechain
34	DC	266	ARG	Sidechain
34	DC	3	ARG	Sidechain
34	DC	312	ARG	Sidechain
34	DC	331	ARG	Sidechain
34	DC	334	ARG	Sidechain
34	DC	346	ARG	Sidechain
34	DC	385	ARG	Sidechain
34	DC	4	ARG	Sidechain
34	DC	412	ARG	Sidechain
34	DC	448	ARG	Sidechain
34	DC	451	ARG	Sidechain
34	DC	467	ARG	Sidechain
34	DC	484	ARG	Sidechain
34	DC	487	ARG	Sidechain
34	DC	518	ARG	Sidechain
34	DC	575	ARG	Sidechain
34	DC	607	ARG	Sidechain
34	DC	647	ARG	Sidechain
34	DC	648	ARG	Sidechain
34	DC	68	ARG	Sidechain
34	DC	680	ARG	Sidechain
34	DC	712	ARG	Sidechain
34	DC	714	ARG	Sidechain
34	DD	10	ARG	Sidechain
34	DD	107	ARG	Sidechain
34	DD	110	ARG	Sidechain
34	DD	138	ARG	Sidechain
34	DD	142	ARG	Sidechain
34	DD	152	ARG	Sidechain
34	DD	167	ARG	Sidechain
34	DD	20	ARG	Sidechain
34	DD	266	ARG	Sidechain
34	DD	320	ARG	Sidechain
34	DD	331	ARG	Sidechain
34	DD	334	ARG	Sidechain
34	DD	346	ARG	Sidechain

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Mol	Chain	Res	Type	Group
34	DD	385	ARG	Sidechain
34	DD	4	ARG	Sidechain
34	DD	412	ARG	Sidechain
34	DD	448	ARG	Sidechain
34	DD	451	ARG	Sidechain
34	DD	484	ARG	Sidechain
34	DD	487	ARG	Sidechain
34	DD	517	ARG	Sidechain
34	DD	518	ARG	Sidechain
34	DD	569	ARG	Sidechain
34	DD	575	ARG	Sidechain
34	DD	647	ARG	Sidechain
34	DD	666	ARG	Sidechain
34	DD	68	ARG	Sidechain
34	DD	686	ARG	Sidechain
34	DD	712	ARG	Sidechain
34	DD	714	ARG	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	BA	61722	31112	31115	453	0
1	CA	61722	31112	31115	464	0
2	BB	2720	0	1382	88	0
2	CB	2720	0	1382	82	0
3	BC	1808	0	1842	91	0
3	CC	1808	0	1842	93	0
4	BD	2597	0	2692	124	0
4	CD	2597	0	2692	127	0
5	BE	1930	0	1989	89	0
5	CE	1930	0	1989	87	0
6	BF	1289	0	1317	108	0
6	CF	1289	0	1317	101	0
7	BG	1371	0	1426	56	0
7	CG	1371	0	1426	60	0
8	BH	857	0	898	52	0
8	CH	857	0	898	54	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	BI	1261	0	1300	36	0
9	CI	1261	0	1300	37	0
10	BJ	1086	0	1135	46	0
10	CJ	1086	0	1135	47	0
11	BK	999	0	1059	56	0
11	CK	999	0	1059	61	0
12	BL	1058	0	1044	51	0
12	CL	1058	0	1044	50	0
13	BM	1593	0	1637	70	0
13	CM	1593	0	1637	71	0
14	BN	1356	0	1358	85	0
14	CN	1356	0	1358	82	0
15	BO	962	0	1021	53	0
15	CO	962	0	1021	52	0
16	BP	1195	0	1277	44	0
16	CP	1195	0	1277	40	0
17	BQ	457	0	463	18	0
17	CQ	457	0	463	18	0
18	BR	766	0	777	47	0
18	CR	766	0	777	46	0
19	BS	1169	0	1211	52	0
19	CS	1169	0	1211	52	0
20	BT	656	0	688	33	0
20	CT	656	0	688	32	0
21	BU	910	0	972	57	0
21	CU	910	0	972	59	0
22	BV	499	0	519	28	0
22	CV	499	0	519	30	0
23	BW	532	0	547	38	0
23	CW	532	0	547	36	0
24	BX	1237	0	1269	41	0
24	CX	1237	0	1269	42	0
25	BY	658	0	696	44	0
25	CY	658	0	696	46	0
26	BZ	703	0	735	30	0
26	CZ	703	0	735	32	0
27	Ba	1028	0	1079	38	0
27	Ca	1028	0	1079	40	0
28	Bb	736	0	775	39	0
28	Cb	736	0	775	37	0
29	Bc	445	0	459	19	0
29	Cc	445	0	459	19	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
30	Bd	439	0	479	19	0
30	Cd	439	0	479	20	0
31	Be	353	0	378	9	0
31	Ce	353	0	378	9	0
32	Bf	760	0	801	23	0
32	Cf	760	0	801	24	0
33	DA	4172	0	4180	602	0
33	DB	4172	0	4180	645	0
34	DC	5643	0	5735	636	0
34	DD	5643	0	5735	838	0
All	All	209934	62224	148510	5940	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 17.

All (5940) 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)
34:DC:191:TRP:CZ2	34:DC:191:TRP:CE2	1.78	1.70
34:DC:191:TRP:CH2	34:DC:191:TRP:CZ3	1.85	1.63
34:DC:191:TRP:CZ3	34:DC:191:TRP:CE3	2.10	1.38
33:DA:434:GLY:HA2	33:DA:447:LEU:HG	1.26	1.12
33:DA:215:ASN:HB2	33:DA:218:GLN:HG3	1.35	1.08
34:DD:110:ARG:HG2	34:DD:270:ILE:HD12	1.34	1.08
33:DA:206:ASP:HB2	33:DA:224:LYS:HB2	1.35	1.08
33:DA:299:ILE:HD12	33:DB:438:PRO:HG3	1.37	1.06
34:DC:65:GLU:HG2	34:DC:72:ILE:HB	1.36	1.06
34:DD:338:VAL:HG23	34:DD:350:ASP:HA	1.33	1.05
34:DC:252:VAL:HA	34:DC:256:LEU:HD12	1.36	1.03
34:DD:226:VAL:HG13	34:DD:238:LEU:HD21	1.39	1.03
33:DA:210:LEU:HD11	33:DA:222:PHE:HB2	1.40	1.03
34:DC:24:ILE:HG13	34:DC:252:VAL:HG13	1.40	1.02
34:DD:38:SER:HA	34:DD:41:LEU:HD23	1.39	1.02
3:BC:40:ARG:HG2	3:BC:82:GLU:HG2	1.42	1.01
3:CC:40:ARG:HG2	3:CC:82:GLU:HG2	1.42	1.01
34:DD:117:VAL:HB	34:DD:145:LEU:HA	1.38	1.01
34:DD:512:LEU:HD12	34:DD:513:PRO:HD2	1.42	1.00
33:DB:482:MET:HB3	33:DB:505:ILE:HD12	1.42	1.00
33:DB:437:GLN:HB2	33:DB:438:PRO:HD2	1.41	1.00
34:DD:627:LYS:HA	34:DD:666:ARG:HA	1.44	1.00
33:DB:416:ALA:HA	33:DB:434:GLY:HA3	1.40	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DC:12:THR:HA	34:DC:15:MET:HE3	1.45	0.99
34:DD:211:ILE:HD13	34:DD:226:VAL:HG21	1.44	0.99
34:DD:337:GLN:HG3	34:DD:348:GLU:HG3	1.39	0.99
33:DB:74:LEU:HA	33:DB:78:ARG:HB2	1.42	0.99
5:CE:206:LEU:HD23	5:CE:217:VAL:HG22	1.43	0.99
34:DC:11:VAL:HG12	34:DC:15:MET:HE2	1.44	0.99
33:DB:78:ARG:HH11	33:DB:94:LEU:HA	1.26	0.98
33:DB:378:ARG:HH12	33:DB:380:ILE:HD11	1.29	0.97
34:DC:529:GLU:HB3	34:DC:546:MET:HE1	1.42	0.97
5:BE:206:LEU:HD23	5:BE:217:VAL:HG22	1.43	0.97
34:DD:252:VAL:HA	34:DD:256:LEU:HB3	1.45	0.97
33:DA:508:PRO:HA	33:DA:532:GLY:H	1.29	0.97
34:DD:216:MET:HE3	34:DD:223:PHE:H	1.22	0.97
33:DA:321:ASN:HA	33:DA:344:LYS:HE2	1.48	0.96
33:DA:423:TYR:HB3	33:DA:429:MET:HG2	1.47	0.96
11:CK:62:PRO:HB3	33:DA:3:LYS:HG2	1.47	0.96
20:CT:7:PRO:HD2	23:CW:33:ALA:HB2	1.47	0.96
33:DA:53:THR:HG22	33:DA:70:ILE:HG12	1.44	0.96
33:DB:409:CYS:HB3	33:DB:418:ILE:HG13	1.45	0.96
33:DB:258:THR:HA	33:DB:411:ALA:HB1	1.46	0.95
34:DD:142:ARG:HD3	34:DD:257:PRO:HG3	1.48	0.95
33:DA:123:ILE:HG22	33:DB:136:LYS:HD3	1.48	0.95
34:DC:542:ILE:HD12	34:DC:544:ILE:HD11	1.45	0.95
34:DD:65:GLU:HG2	34:DD:72:ILE:HB	1.46	0.95
33:DA:277:PRO:HG3	33:DA:412:THR:HG23	1.46	0.94
33:DB:327:ILE:HG13	33:DB:349:ARG:HB2	1.49	0.94
20:BT:7:PRO:HD2	23:BW:33:ALA:HB2	1.47	0.94
33:DB:89:LYS:HB3	33:DB:92:ILE:HD12	1.47	0.94
33:DA:269:VAL:HG23	33:DA:308:THR:HG22	1.47	0.93
33:DB:58:MET:HE3	33:DB:59:MET:HE2	1.51	0.93
25:BY:28:THR:HG23	25:BY:85:ALA:HB2	1.50	0.93
34:DD:40:ASN:HA	34:DD:44:GLY:HA3	1.49	0.93
34:DD:510:MET:HE1	34:DD:536:GLY:HA2	1.49	0.93
33:DA:81:LYS:HA	33:DA:84:MET:HE2	1.50	0.92
13:BM:41:ILE:HG13	13:BM:63:VAL:HG13	1.51	0.92
25:CY:28:THR:HG23	25:CY:85:ALA:HB2	1.50	0.91
4:CD:47:VAL:HB	4:CD:74:VAL:HG13	1.52	0.91
34:DC:639:GLY:HA2	34:DC:642:LYS:HE3	1.53	0.91
34:DC:210:ALA:HB2	34:DC:244:LEU:HD12	1.49	0.91
34:DD:107:ARG:HA	34:DD:110:ARG:HD2	1.52	0.91
34:DC:24:ILE:HD12	34:DC:256:LEU:HD13	1.53	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:22:ARG:HB2	34:DD:90:ILE:HA	1.50	0.91
34:DC:669:VAL:HA	34:DC:672:MET:HG2	1.53	0.91
33:DB:433:MET:HE2	33:DB:435:ALA:HA	1.52	0.90
34:DC:313:LEU:HD21	34:DC:318:LEU:HG	1.49	0.90
34:DD:147:VAL:HG21	34:DD:168:LEU:HD22	1.53	0.90
13:CM:41:ILE:HG13	13:CM:63:VAL:HG13	1.51	0.90
10:BJ:35:ILE:HD12	10:BJ:104:VAL:HG22	1.53	0.90
33:DA:300:SER:HB3	33:DB:438:PRO:HB3	1.51	0.90
4:BD:47:VAL:HB	4:BD:74:VAL:HG13	1.53	0.90
33:DA:306:ILE:HD11	33:DA:328:ILE:HG23	1.53	0.89
33:DB:433:MET:HG2	33:DB:434:GLY:H	1.38	0.89
33:DA:483:ALA:HA	33:DA:506:VAL:HB	1.55	0.89
33:DA:401:LEU:HD11	33:DA:422:GLU:HG2	1.52	0.89
34:DC:653:ASN:HD21	34:DC:655:THR:HG23	1.38	0.89
34:DD:11:VAL:HA	34:DD:14:LEU:HD12	1.55	0.89
25:CY:69:VAL:HA	25:CY:80:THR:HG22	1.55	0.89
34:DD:26:ILE:HG22	34:DD:34:LYS:HD2	1.52	0.89
25:BY:69:VAL:HA	25:BY:80:THR:HG22	1.55	0.89
33:DB:6:LEU:HB3	33:DB:98:VAL:HG22	1.52	0.89
34:DC:145:LEU:HB3	34:DC:200:VAL:HG22	1.55	0.89
16:BP:9:LYS:HG3	16:BP:13:LYS:HE2	1.55	0.88
33:DB:503:ARG:HA	33:DB:526:ILE:HD13	1.54	0.88
16:CP:9:LYS:HG3	16:CP:13:LYS:HE2	1.55	0.88
34:DD:320:ARG:HG3	34:DD:336:GLN:HA	1.53	0.88
10:CJ:35:ILE:HD12	10:CJ:104:VAL:HG22	1.53	0.88
34:DD:672:MET:HE2	34:DD:691:THR:HG21	1.53	0.87
8:BH:23:LEU:HD23	8:BH:105:ALA:HB2	1.56	0.87
6:CF:82:THR:HB	6:CF:165:MET:HE1	1.56	0.87
34:DC:632:VAL:HG12	34:DC:687:ALA:HA	1.56	0.87
33:DA:260:LYS:HZ1	33:DA:357:ARG:HA	1.38	0.87
8:CH:23:LEU:HD23	8:CH:105:ALA:HB2	1.56	0.87
34:DD:308:VAL:HA	34:DD:361:THR:HG22	1.57	0.87
33:DA:487:PHE:HB2	33:DA:511:SER:HB3	1.57	0.87
33:DB:311:THR:HG21	33:DB:334:LYS:HG3	1.56	0.87
33:DB:388:SER:HB2	33:DB:529:VAL:HG22	1.53	0.86
33:DB:63:VAL:HG22	33:DB:125:ILE:H	1.40	0.86
34:DC:16:ASN:HA	34:DC:353:PRO:HG3	1.54	0.86
34:DD:25:GLY:HA3	34:DD:95:THR:HG23	1.55	0.86
34:DD:623:GLU:HB3	34:DD:699:VAL:HG22	1.56	0.86
34:DC:90:ILE:HD11	34:DC:253:ILE:HD11	1.55	0.86
2:CB:21:U:H3	2:CB:64:G:H1	1.24	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:30:ILE:HG22	34:DD:70:ILE:HG21	1.58	0.86
33:DA:419:LEU:O	33:DA:431:LEU:HB3	1.74	0.85
34:DD:43:ALA:HB2	34:DD:59:MET:HB2	1.56	0.85
6:BF:82:THR:HB	6:BF:165:MET:HE1	1.56	0.85
10:CJ:85:PRO:HG3	10:CJ:90:ARG:HH21	1.41	0.85
33:DA:197:GLU:HG3	33:DB:206:ASP:HA	1.57	0.85
34:DC:292:LEU:H	34:DC:374:THR:HG22	1.41	0.85
34:DC:295:MET:HA	34:DC:371:THR:HA	1.58	0.85
33:DB:363:GLU:HA	33:DB:378:ARG:HB2	1.57	0.85
34:DD:149:LYS:HD3	34:DD:206:LEU:HG	1.57	0.85
33:DB:392:VAL:HG12	33:DB:527:ALA:HB2	1.57	0.85
33:DB:79:GLU:OE1	33:DB:140:SER:OG	1.95	0.85
12:BL:96:LEU:HD12	12:BL:101:ILE:HB	1.58	0.85
3:BC:40:ARG:HH21	3:BC:80:ILE:HG21	1.42	0.85
3:CC:40:ARG:HH21	3:CC:80:ILE:HG21	1.42	0.85
34:DC:335:VAL:HG22	34:DC:363:LEU:HD21	1.59	0.85
33:DB:490:PHE:HB3	33:DB:512:ILE:HD11	1.57	0.84
34:DD:42:LEU:HB3	34:DD:79:MET:HB3	1.58	0.84
34:DD:346:ARG:HD2	34:DD:359:ALA:HB3	1.58	0.84
33:DB:1:MET:H1	33:DB:162:ILE:HG22	1.41	0.84
7:CG:137:ILE:HG22	7:CG:145:VAL:HG23	1.58	0.84
33:DA:87:ALA:HB1	33:DA:94:LEU:HA	1.58	0.84
2:BB:21:U:H3	2:BB:64:G:H1	1.24	0.84
4:CD:268:ILE:HD13	4:CD:295:ILE:HD11	1.59	0.84
12:CL:96:LEU:HD12	12:CL:101:ILE:HB	1.59	0.84
34:DC:424:THR:HB	34:DC:433:LEU:HG	1.60	0.84
34:DD:264:LYS:HA	34:DD:284:THR:HA	1.58	0.84
9:BI:36:MET:HB2	9:BI:85:MET:HB3	1.60	0.84
33:DB:3:LYS:HE2	33:DB:94:LEU:HD21	1.59	0.84
33:DB:326:GLU:HG3	33:DB:327:ILE:HD12	1.60	0.84
7:BG:137:ILE:HG22	7:BG:145:VAL:HG23	1.58	0.83
10:BJ:85:PRO:HG3	10:BJ:90:ARG:HH21	1.42	0.83
4:CD:80:ILE:HD12	4:CD:145:ILE:HD12	1.59	0.83
34:DD:631:GLN:HG2	34:DD:662:ILE:HG12	1.60	0.83
4:BD:268:ILE:HD13	4:BD:295:ILE:HD11	1.59	0.83
33:DA:353:LEU:HB3	33:DA:356:LEU:HB3	1.60	0.83
7:CG:88:MET:HG2	7:CG:172:ILE:HA	1.61	0.83
33:DB:410:LYS:HE2	33:DB:537:LEU:HD12	1.61	0.82
14:BN:148:ILE:HD12	14:BN:156:SER:HA	1.61	0.82
33:DA:477:LEU:HB2	33:DA:501:ASN:HD22	1.42	0.82
33:DB:76:CYS:HB3	33:DB:136:LYS:HG2	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DC:559:LEU:HD13	34:DC:599:PRO:HA	1.59	0.82
10:BJ:60:GLY:HA3	10:BJ:66:PRO:HD2	1.62	0.82
33:DB:74:LEU:HB2	33:DB:141:VAL:HG21	1.61	0.82
33:DB:209:LYS:HE2	33:DB:219:SER:HB2	1.61	0.82
5:BE:22:VAL:HG23	5:BE:115:ARG:HG2	1.62	0.82
7:BG:88:MET:HG2	7:BG:172:ILE:HA	1.62	0.82
10:CJ:60:GLY:HA3	10:CJ:66:PRO:HD2	1.62	0.82
34:DC:651:ILE:HD13	34:DC:665:ALA:HB2	1.61	0.82
5:CE:22:VAL:HG23	5:CE:115:ARG:HG2	1.62	0.82
6:CF:1:MET:HG2	6:CF:127:PRO:HG2	1.62	0.82
14:CN:148:ILE:HD12	14:CN:156:SER:HA	1.61	0.82
33:DB:417:VAL:HG21	33:DB:448:ALA:HB2	1.60	0.81
1:BA:2001:G:O2'	1:BA:2003:G:OP2	1.98	0.81
4:BD:80:ILE:HD12	4:BD:145:ILE:HD12	1.59	0.81
33:DB:283:GLY:HA3	33:DB:288:GLN:HE22	1.45	0.81
34:DC:421:LEU:HD13	34:DC:423:ILE:HG23	1.61	0.81
11:BK:62:PRO:HG2	33:DB:3:LYS:HE3	1.60	0.81
19:CS:23:LEU:HD13	19:CS:87:GLU:HB3	1.62	0.81
34:DD:175:VAL:HA	34:DD:178:LEU:HD12	1.61	0.81
34:DD:624:PRO:HG2	34:DD:669:VAL:HG21	1.62	0.81
33:DB:192:ARG:HD2	33:DB:198:GLU:HB2	1.63	0.80
34:DC:514:GLU:HG3	34:DC:518:ARG:HH21	1.46	0.80
34:DC:518:ARG:HD3	34:DC:532:LYS:HD3	1.63	0.80
1:CA:2001:G:O2'	1:CA:2003:G:OP2	1.98	0.80
9:CI:36:MET:HB2	9:CI:85:MET:HB3	1.61	0.80
33:DB:398:LYS:NZ	33:DB:479:GLU:O	2.14	0.80
34:DC:196:ALA:HA	34:DC:213:VAL:HG11	1.62	0.80
34:DD:21:ILE:HG23	34:DD:259:PRO:HG3	1.63	0.80
33:DB:320:LEU:HD11	33:DB:325:ILE:HG13	1.64	0.80
3:CC:105:PHE:HB2	28:Cb:83:LEU:HD12	1.64	0.80
8:BH:116:LEU:HD23	8:BH:119:LEU:HD21	1.63	0.80
33:DB:80:SER:HB3	33:DB:83:GLN:HB2	1.62	0.80
33:DB:287:LEU:HD12	33:DB:315:GLU:HG3	1.61	0.80
33:DA:131:LEU:HD21	33:DA:175:ALA:HB1	1.64	0.80
6:BF:1:MET:HG2	6:BF:127:PRO:HG2	1.62	0.80
33:DB:420:ALA:HA	33:DB:430:VAL:HA	1.64	0.80
34:DD:313:LEU:HB2	34:DD:358:ALA:HB2	1.64	0.79
1:CA:2071:G:O3'	4:CD:234:GLN:NE2	2.15	0.79
34:DD:339:GLY:HA2	34:DD:349:VAL:HG22	1.63	0.79
9:CI:56:CYS:SG	9:CI:159:THR:OG1	2.41	0.79
34:DC:445:ILE:HA	34:DC:448:ARG:HD3	1.62	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:463:ILE:HG22	34:DD:465:VAL:HG23	1.64	0.79
25:BY:77:LYS:HG3	25:BY:81:ILE:HD11	1.65	0.79
33:DA:144:ILE:HG13	33:DA:171:LEU:HD22	1.63	0.79
33:DA:388:SER:HA	33:DA:529:VAL:HA	1.65	0.79
34:DD:458:THR:HG22	34:DD:459:THR:H	1.47	0.79
33:DB:74:LEU:HB3	33:DB:78:ARG:HH21	1.47	0.79
33:DB:419:LEU:HD22	33:DB:452:ALA:HB2	1.63	0.79
34:DC:313:LEU:HD11	34:DC:318:LEU:HD11	1.63	0.79
34:DD:341:PHE:HD2	34:DD:357:ILE:HG12	1.47	0.79
19:BS:23:LEU:HD13	19:BS:87:GLU:HB3	1.63	0.79
11:CK:63:GLU:O	11:CK:67:GLN:NE2	2.16	0.78
1:CA:2686:G:O2'	11:CK:38:ARG:O	2.02	0.78
11:CK:129:SER:HB2	34:DC:334:ARG:HH22	1.48	0.78
33:DB:290:LEU:HD23	33:DB:316:ALA:HB1	1.63	0.78
34:DD:466:TYR:O	34:DD:467:ARG:NH1	2.15	0.78
1:BA:2071:G:O3'	4:BD:234:GLN:NE2	2.15	0.78
3:BC:105:PHE:HB2	28:Bb:83:LEU:HD12	1.64	0.78
33:DA:440:ARG:HD3	33:DA:489:PRO:HD3	1.65	0.78
34:DC:279:ILE:HD13	34:DC:291:ASP:HB2	1.65	0.78
17:CQ:35:THR:HG23	17:CQ:55:ILE:HD12	1.66	0.78
33:DB:442:ASP:HA	33:DB:445:ARG:HD3	1.65	0.78
34:DD:337:GLN:HB3	34:DD:346:ARG:HH22	1.49	0.78
1:CA:2379:U:O2'	18:CR:70:ARG:N	2.15	0.78
34:DD:142:ARG:HG3	34:DD:191:TRP:HA	1.66	0.78
21:CU:3:ALA:HB3	21:CU:5:VAL:HG22	1.67	0.78
34:DD:669:VAL:HA	34:DD:672:MET:HB3	1.65	0.78
5:BE:167:ASP:HA	5:BE:170:ARG:HG2	1.66	0.77
6:BF:98:ILE:HD11	6:BF:118:MET:HE2	1.66	0.77
25:BY:28:THR:HG21	25:BY:83:ALA:HB1	1.66	0.77
33:DB:244:LEU:HA	33:DB:349:ARG:HH11	1.49	0.77
34:DD:634:GLN:HB2	34:DD:659:ASP:HA	1.65	0.77
1:BA:1524:G:HO2'	1:BA:1599:U:HO2'	1.26	0.77
6:CF:98:ILE:HD11	6:CF:118:MET:HE2	1.66	0.77
8:CH:116:LEU:HD23	8:CH:119:LEU:HD21	1.63	0.77
18:CR:5:HIS:HA	18:CR:9:ARG:HD3	1.66	0.77
21:BU:3:ALA:HB3	21:BU:5:VAL:HG22	1.66	0.77
33:DA:229:GLU:HG2	33:DA:230:GLY:H	1.47	0.77
34:DC:465:VAL:HG12	34:DC:467:ARG:HH12	1.49	0.77
1:BA:1746:G:OP2	34:DD:548:LYS:NZ	2.14	0.77
33:DA:76:CYS:SG	33:DA:83:GLN:NE2	2.56	0.77
34:DC:93:ILE:HG21	34:DC:112:VAL:HG22	1.64	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:335:VAL:HG12	34:DD:338:VAL:HG13	1.67	0.77
1:BA:2361:A:H61	1:BA:2378:A:H61	1.32	0.77
3:BC:130:VAL:HG12	3:BC:131:THR:HG23	1.67	0.77
1:CA:2361:A:H61	1:CA:2378:A:H61	1.33	0.77
25:CY:77:LYS:HG3	25:CY:81:ILE:HD11	1.64	0.77
34:DD:411:LEU:O	34:DD:414:VAL:HG12	1.84	0.77
18:BR:5:HIS:HA	18:BR:9:ARG:HD3	1.66	0.77
34:DC:34:LYS:HB2	34:DC:71:THR:H	1.47	0.77
34:DC:308:VAL:HG12	34:DC:359:ALA:HB1	1.66	0.77
2:BB:52:G:H21	2:BB:53:C:H41	1.30	0.77
2:CB:52:G:H21	2:CB:53:C:H41	1.30	0.77
10:CJ:135:VAL:HG12	10:CJ:139:MET:HE2	1.67	0.77
34:DD:78:SER:HA	34:DD:91:ASN:HA	1.67	0.77
10:BJ:135:VAL:HG12	10:BJ:139:MET:HE2	1.67	0.77
25:CY:28:THR:HG21	25:CY:83:ALA:HB1	1.66	0.77
34:DD:312:ARG:HA	34:DD:357:ILE:HA	1.67	0.77
1:BA:1104:A:N3	17:BQ:44:SER:OG	2.18	0.77
17:BQ:35:THR:HG23	17:BQ:55:ILE:HD12	1.66	0.77
1:CA:601:G:O2'	1:CA:1308:G:OP1	2.02	0.77
5:CE:167:ASP:HA	5:CE:170:ARG:HG2	1.66	0.77
34:DD:102:GLY:O	34:DD:105:VAL:HG12	1.85	0.77
34:DD:279:ILE:O	34:DD:283:MET:HG3	1.85	0.77
34:DD:427:GLU:N	34:DD:427:GLU:OE1	2.18	0.77
1:BA:2379:U:O2'	18:BR:70:ARG:N	2.15	0.77
33:DA:243:GLU:N	33:DA:243:GLU:OE2	2.18	0.77
1:BA:88:G:O2'	23:BW:43:ASN:OD1	2.03	0.76
1:BA:2686:G:O2'	11:BK:38:ARG:O	2.02	0.76
33:DB:120:ILE:O	33:DB:123:ILE:HG13	1.85	0.76
1:BA:601:G:O2'	1:BA:1308:G:OP1	2.02	0.76
34:DD:628:VAL:HG12	34:DD:691:THR:HG22	1.67	0.76
1:CA:1104:A:N3	17:CQ:44:SER:OG	2.18	0.76
33:DB:325:ILE:HB	33:DB:348:LEU:HD11	1.67	0.76
3:CC:130:VAL:HG12	3:CC:131:THR:HG23	1.67	0.76
33:DA:244:LEU:HA	33:DA:349:ARG:HH21	1.49	0.76
34:DD:4:ARG:HA	34:DD:7:MET:HG3	1.67	0.76
6:BF:45:THR:HG22	6:BF:53:LYS:HE2	1.68	0.76
1:BA:1745:C:OP1	34:DD:548:LYS:HE2	1.86	0.76
33:DB:353:LEU:HB3	33:DB:356:LEU:HD23	1.65	0.76
34:DC:259:PRO:HB3	34:DC:355:GLY:HA3	1.68	0.76
33:DB:71:HIS:HE1	33:DB:130:LEU:HD13	1.50	0.76
33:DB:521:ALA:HB2	33:DB:528:MET:HE3	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:15:MET:SD	34:DD:356:ASN:ND2	2.59	0.76
34:DD:302:ASP:HB3	34:DD:305:ALA:HB3	1.68	0.76
16:BP:1:MET:HE2	16:BP:29:SER:HB2	1.67	0.76
33:DB:379:ASP:O	33:DB:410:LYS:NZ	2.18	0.76
34:DC:341:PHE:HE1	34:DC:346:ARG:HG3	1.51	0.76
8:BH:27:THR:HG21	8:BH:104:LYS:HZ2	1.51	0.75
27:Ba:45:LYS:HE2	27:Ba:93:SER:HB3	1.68	0.75
1:CA:88:G:O2'	23:CW:43:ASN:OD1	2.03	0.75
33:DA:419:LEU:HD23	33:DA:452:ALA:HB2	1.67	0.75
34:DC:334:ARG:HG3	34:DC:335:VAL:H	1.52	0.75
7:CG:5:ILE:HD13	7:CG:55:ALA:HB3	1.68	0.75
34:DC:122:VAL:HG22	34:DC:153:LEU:HD23	1.67	0.75
33:DA:181:ASP:OD1	33:DA:203:LYS:NZ	2.19	0.75
33:DA:285:THR:HG22	33:DA:288:GLN:HE21	1.50	0.75
33:DA:473:CYS:HB3	33:DA:477:LEU:HD21	1.68	0.75
33:DB:405:CYS:HB3	33:DB:483:ALA:HB3	1.66	0.75
33:DB:483:ALA:HA	33:DB:506:VAL:HB	1.68	0.75
34:DD:30:ILE:HG22	34:DD:70:ILE:HD13	1.67	0.75
34:DD:298:ASP:OD1	34:DD:310:THR:HB	1.85	0.75
1:BA:1470:A:N6	1:BA:1679:G:O2'	2.20	0.75
14:CN:87:LEU:HD12	14:CN:126:SER:HB3	1.69	0.75
16:CP:1:MET:HE2	16:CP:29:SER:HB2	1.68	0.75
33:DB:78:ARG:NH1	33:DB:94:LEU:HA	2.02	0.75
34:DD:317:SER:HA	34:DD:353:PRO:HA	1.69	0.75
1:CA:627:G:O2'	1:CA:1342:A:OP1	2.05	0.75
6:CF:45:THR:HG22	6:CF:53:LYS:HE2	1.68	0.75
33:DB:414:SER:OG	33:DB:536:PHE:HA	1.86	0.75
34:DC:271:TRP:HA	34:DC:381:PHE:HA	1.66	0.75
34:DD:295:MET:HE3	34:DD:297:THR:HG22	1.68	0.75
7:BG:5:ILE:HD13	7:BG:55:ALA:HB3	1.68	0.75
12:BL:73:ASP:OD2	12:BL:111:THR:N	2.19	0.75
16:BP:10:LEU:HA	16:BP:13:LYS:HE3	1.69	0.75
34:DD:21:ILE:HD11	34:DD:91:ASN:HD21	1.50	0.75
1:CA:157:U:OP2	13:CM:83:ARG:NH2	2.20	0.75
33:DB:480:CYS:HB2	33:DB:502:ILE:HG12	1.67	0.75
34:DD:276:ASN:O	34:DD:281:LYS:NZ	2.20	0.75
16:CP:10:LEU:HA	16:CP:13:LYS:HE3	1.69	0.75
33:DB:66:LEU:HD21	33:DB:129:THR:HG21	1.69	0.75
5:BE:122:THR:HG23	5:BE:139:PRO:HD3	1.69	0.74
1:CA:1734:C:O2	4:CD:228:ARG:NH2	2.19	0.74
34:DC:308:VAL:CG1	34:DC:359:ALA:HB1	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DA:280:LEU:HD23	33:DA:408:ALA:HB2	1.69	0.74
33:DB:52:VAL:HG12	33:DB:92:ILE:HG23	1.70	0.74
34:DD:490:ILE:HG13	34:DD:585:LEU:HD13	1.69	0.74
33:DA:314:LEU:HA	33:DA:317:ALA:HB3	1.68	0.74
1:BA:157:U:OP2	13:BM:83:ARG:NH2	2.19	0.74
6:BF:9:VAL:HG22	6:BF:122:VAL:HG23	1.70	0.74
34:DD:48:ILE:HD11	34:DD:343:GLY:HA2	1.68	0.74
34:DD:267:VAL:O	34:DD:271:TRP:N	2.14	0.74
33:DB:353:LEU:HD22	33:DB:356:LEU:HB3	1.69	0.74
9:BI:56:CYS:SG	9:BI:159:THR:OG1	2.41	0.74
1:BA:27:U:O4	1:BA:446:G:O2'	2.06	0.74
1:BA:627:G:O2'	1:BA:1342:A:OP1	2.05	0.74
14:BN:87:LEU:HD12	14:BN:126:SER:HB3	1.69	0.74
1:CA:1524:G:HO2'	1:CA:1599:U:HO2'	1.29	0.74
2:CB:55:G:H21	6:CF:1:MET:HE1	1.51	0.74
33:DA:107:ILE:HD11	33:DA:193:THR:HG21	1.70	0.74
33:DB:108:THR:OG1	33:DB:115:GLU:OE2	2.05	0.74
33:DB:419:LEU:HG	33:DB:482:MET:HE2	1.69	0.74
5:BE:146:LEU:HD12	5:BE:149:LEU:HD21	1.69	0.74
7:BG:88:MET:HE2	7:BG:170:ILE:HG22	1.70	0.74
7:CG:96:PRO:HD3	34:DD:157:LEU:HD22	1.70	0.74
33:DA:305:ILE:HG22	33:DA:327:ILE:H	1.53	0.74
33:DB:183:ASP:HA	33:DB:186:ILE:HD12	1.70	0.74
33:DB:415:ASN:HB2	33:DB:436:GLY:HA2	1.70	0.74
34:DD:652:LEU:HG	34:DD:665:ALA:HA	1.67	0.74
33:DA:320:LEU:HD11	33:DA:325:ILE:HG13	1.70	0.74
33:DB:7:LEU:HD13	33:DB:15:ILE:HD11	1.70	0.74
34:DD:118:VAL:HG22	34:DD:146:PHE:HB3	1.69	0.74
8:CH:27:THR:HG21	8:CH:104:LYS:HZ2	1.53	0.73
33:DA:116:LEU:HG	33:DA:120:ILE:HD11	1.69	0.73
2:BB:55:G:H21	6:BF:1:MET:HE1	1.51	0.73
11:BK:73:VAL:HG12	11:BK:95:MET:HG2	1.69	0.73
5:CE:146:LEU:HD12	5:CE:149:LEU:HD21	1.69	0.73
7:CG:35:ARG:HE	7:CG:37:LEU:HD21	1.54	0.73
25:CY:48:GLU:HA	25:CY:51:LYS:HB2	1.70	0.73
34:DC:31:ASP:H	34:DC:70:ILE:HD13	1.52	0.73
4:BD:169:ALA:HB3	4:BD:175:LYS:HG3	1.70	0.73
27:Ca:45:LYS:HE2	27:Ca:93:SER:HB3	1.68	0.73
34:DD:12:THR:HA	34:DD:15:MET:HE2	1.71	0.73
1:BA:340:U:H4'	21:BU:4:MET:HB2	1.69	0.73
1:CA:760:G:HO2'	1:CA:2091:G:HO2'	1.31	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DA:70:ILE:CD1	33:DA:92:ILE:HG23	2.19	0.73
33:DA:109:ILE:HG22	33:DA:114:VAL:HG12	1.70	0.73
34:DC:186:LYS:NZ	34:DC:191:TRP:CZ3	2.56	0.73
34:DC:578:VAL:HG21	34:DC:614:MET:HE1	1.69	0.73
34:DD:599:PRO:HB3	34:DD:603:ILE:HD11	1.69	0.73
1:CA:767:G:OP1	29:Cc:28:ASN:ND2	2.18	0.73
1:CA:1470:A:N6	1:CA:1679:G:O2'	2.20	0.73
4:CD:169:ALA:HB3	4:CD:175:LYS:HG3	1.70	0.73
33:DA:376:GLN:HE21	33:DB:218:GLN:HG3	1.53	0.73
33:DB:74:LEU:HB3	33:DB:78:ARG:NH2	2.02	0.73
34:DD:341:PHE:HA	34:DD:346:ARG:HA	1.69	0.73
1:CA:27:U:O4	1:CA:446:G:O2'	2.06	0.73
6:CF:9:VAL:HG22	6:CF:122:VAL:HG23	1.70	0.73
11:CK:73:VAL:HG12	11:CK:95:MET:HG2	1.69	0.73
33:DB:73:GLY:HA3	33:DB:87:ALA:H	1.52	0.73
34:DD:565:GLU:O	34:DD:569:ARG:HD2	1.88	0.73
5:BE:41:ALA:HA	5:BE:44:LEU:HD12	1.71	0.73
10:BJ:9:ALA:HA	10:BJ:12:LEU:HD12	1.70	0.73
1:CA:340:U:H4'	21:CU:4:MET:HB2	1.69	0.73
5:CE:122:THR:HG23	5:CE:139:PRO:HD3	1.69	0.73
33:DA:135:ALA:HA	33:DA:143:VAL:HG11	1.69	0.73
33:DA:206:ASP:N	33:DB:197:GLU:OE1	2.21	0.73
33:DA:224:LYS:HE3	33:DA:234:ALA:HB1	1.71	0.73
34:DD:631:GLN:HB3	34:DD:660:LEU:HD11	1.70	0.73
1:BA:767:G:OP1	29:Bc:28:ASN:ND2	2.18	0.73
1:BA:1578:U:OP2	16:BP:124:TYR:OH	2.06	0.73
11:BK:63:GLU:O	11:BK:67:GLN:NE2	2.22	0.73
1:CA:2813:A:O2'	1:CA:2815:A:OP2	2.06	0.73
34:DD:4:ARG:HB2	34:DD:48:ILE:HA	1.69	0.73
34:DD:27:VAL:HG13	34:DD:115:ALA:HB1	1.71	0.73
34:DD:338:VAL:CG2	34:DD:350:ASP:HA	2.18	0.73
16:BP:145:GLU:HG3	16:BP:147:LEU:HG	1.71	0.73
1:CA:1873:U:O2'	1:CA:1948:A:N3	2.22	0.73
34:DC:121:ALA:HB1	34:DC:153:LEU:HD11	1.69	0.73
33:DB:405:CYS:CB	33:DB:483:ALA:HB3	2.19	0.73
34:DC:331:ARG:HH12	34:DC:364:LYS:HE3	1.53	0.73
34:DD:77:VAL:HG23	34:DD:92:LEU:HB3	1.71	0.73
34:DD:81:HIS:HB2	34:DD:249:LEU:HD22	1.69	0.73
33:DB:456:LEU:HD21	33:DB:476:ILE:HD11	1.71	0.72
34:DC:634:GLN:HE22	34:DC:656:THR:HB	1.53	0.72
34:DD:18:PRO:O	34:DD:21:ILE:HG22	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:116:VAL:HG13	34:DD:144:VAL:HG23	1.70	0.72
3:CC:126:TYR:HB3	3:CC:159:ILE:HG22	1.71	0.72
4:CD:269:LEU:HA	4:CD:325:PRO:HG2	1.71	0.72
16:CP:145:GLU:HG3	16:CP:147:LEU:HG	1.71	0.72
33:DA:353:LEU:HD12	33:DA:354:PRO:HD2	1.71	0.72
33:DB:404:PHE:HB3	33:DB:420:ALA:HB1	1.69	0.72
34:DC:263:GLN:NE2	34:DC:283:MET:O	2.22	0.72
1:BA:653:A:OP1	15:BO:94:SER:OG	2.07	0.72
26:BZ:21:VAL:HG21	26:BZ:29:ARG:HG2	1.71	0.72
17:CQ:26:ILE:HG23	17:CQ:37:LYS:HD2	1.70	0.72
34:DD:76:ASN:OD1	34:DD:93:ILE:HG23	1.88	0.72
14:BN:42:ARG:O	14:BN:76:THR:OG1	2.07	0.72
1:CA:1578:U:OP2	16:CP:124:TYR:OH	2.06	0.72
10:CJ:9:ALA:HA	10:CJ:12:LEU:HD12	1.71	0.72
1:BA:1363:A:O2'	1:BA:1385:G:O2'	2.08	0.72
33:DA:66:LEU:HB2	33:DB:68:PRO:HA	1.72	0.72
33:DA:163:ILE:HD11	33:DA:167:THR:HG21	1.72	0.72
33:DA:262:LEU:HD23	33:DA:407:LYS:HB3	1.70	0.72
1:CA:1576:C:OP1	16:CP:110:ARG:NH1	2.22	0.72
23:CW:30:ARG:HE	23:CW:34:LEU:HD11	1.54	0.72
33:DB:486:ALA:HA	33:DB:508:PRO:HG2	1.70	0.72
34:DC:566:GLU:O	34:DC:569:ARG:HG2	1.90	0.72
34:DD:90:ILE:HG23	34:DD:252:VAL:HG11	1.70	0.72
1:BA:260:G:OP2	13:BM:56:LYS:NZ	2.23	0.72
17:BQ:26:ILE:HG23	17:BQ:37:LYS:HD2	1.71	0.72
25:BY:48:GLU:HA	25:BY:51:LYS:HB2	1.70	0.72
14:CN:42:ARG:O	14:CN:76:THR:OG1	2.07	0.72
14:CN:139:PRO:HG2	14:CN:142:ARG:HG2	1.72	0.72
34:DC:150:VAL:HG12	34:DC:154:ILE:HD11	1.71	0.72
34:DC:186:LYS:CE	34:DC:191:TRP:CZ3	2.73	0.72
1:BA:1160:A:N6	34:DC:635:LEU:O	2.23	0.72
6:BF:150:ASP:HA	6:BF:153:ILE:HG12	1.72	0.72
32:Cf:2:LYS:HG2	32:Cf:89:GLU:HB2	1.72	0.72
33:DA:242:LYS:HB2	33:DA:349:ARG:HH12	1.53	0.72
34:DC:211:ILE:HD13	34:DC:226:VAL:HG21	1.72	0.72
34:DC:518:ARG:HG2	34:DC:522:ILE:HD11	1.72	0.72
34:DC:680:ARG:CG	34:DC:685:GLY:HA2	2.20	0.72
34:DD:60:ASP:OD2	34:DD:65:GLU:HB2	1.89	0.72
34:DD:340:ILE:HG13	34:DD:357:ILE:HG22	1.72	0.72
26:CZ:21:VAL:HG21	26:CZ:29:ARG:HG2	1.71	0.72
33:DA:214:GLU:OE1	33:DB:538:HIS:ND1	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:42:LEU:HD21	34:DD:77:VAL:CG2	2.20	0.72
21:CU:68:GLN:N	21:CU:78:THR:O	2.23	0.71
25:CY:22:ILE:HD11	25:CY:31:ALA:HB2	1.72	0.71
34:DC:499:ILE:HD13	34:DC:526:MET:HG3	1.72	0.71
25:BY:39:MET:HE1	25:BY:94:ILE:HG13	1.71	0.71
33:DB:357:ARG:HH11	33:DB:357:ARG:HG3	1.54	0.71
34:DD:266:ARG:HB2	34:DD:270:ILE:HD13	1.71	0.71
33:DA:30:ILE:HD11	33:DA:95:ILE:HG12	1.73	0.71
34:DC:211:ILE:HG22	34:DC:215:MET:HE1	1.73	0.71
34:DD:295:MET:HA	34:DD:371:THR:HA	1.70	0.71
1:BA:1873:U:O2'	1:BA:1948:A:N3	2.22	0.71
4:BD:124:GLU:HA	4:BD:127:GLU:HG2	1.72	0.71
33:DB:76:CYS:HA	33:DB:137:ASN:HA	1.73	0.71
34:DC:34:LYS:HZ1	34:DC:71:THR:HB	1.54	0.71
34:DC:490:ILE:HG12	34:DC:585:LEU:HD13	1.70	0.71
1:BA:1734:C:O2	4:BD:228:ARG:NH2	2.19	0.71
11:BK:50:GLY:HA2	11:BK:117:VAL:HG12	1.72	0.71
34:DD:455:VAL:HG12	34:DD:457:ILE:HG23	1.71	0.71
34:DD:564:PHE:HA	34:DD:610:ILE:HD13	1.73	0.71
34:DD:666:ARG:NH1	34:DD:697:ASP:OD2	2.19	0.71
1:BA:1576:C:OP1	16:BP:110:ARG:NH1	2.23	0.71
21:BU:68:GLN:N	21:BU:78:THR:O	2.23	0.71
33:DA:74:LEU:HA	33:DA:141:VAL:HG21	1.72	0.71
33:DB:74:LEU:O	33:DB:137:ASN:ND2	2.23	0.71
33:DB:434:GLY:HA2	33:DB:447:LEU:HG	1.72	0.71
34:DD:41:LEU:HD11	34:DD:248:VAL:HB	1.72	0.71
34:DD:120:ASP:OD1	34:DD:149:LYS:HB2	1.91	0.71
34:DD:203:GLY:HA3	34:DD:210:ALA:HA	1.72	0.71
1:BA:2391:A:O2'	14:BN:30:SER:OG	2.06	0.71
7:BG:35:ARG:HE	7:BG:37:LEU:HD21	1.54	0.71
11:BK:4:MET:HE1	11:BK:50:GLY:HA3	1.72	0.71
1:CA:260:G:OP2	13:CM:56:LYS:NZ	2.23	0.71
5:CE:41:ALA:HA	5:CE:44:LEU:HD12	1.71	0.71
33:DA:111:LYS:NZ	34:DC:726:ASP:O	2.22	0.71
33:DB:31:SER:OG	33:DB:35:THR:OG1	2.07	0.71
34:DD:410:VAL:HG21	34:DD:455:VAL:HG21	1.72	0.71
1:BA:760:G:HO2'	1:BA:2091:G:HO2'	1.31	0.71
4:CD:124:GLU:HA	4:CD:127:GLU:HG2	1.72	0.71
6:CF:76:LEU:O	6:CF:81:LYS:N	2.18	0.71
7:CG:88:MET:HE2	7:CG:170:ILE:HG22	1.71	0.71
33:DB:264:ASN:OD1	33:DB:357:ARG:NE	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DC:325:PHE:N	34:DC:373:THR:O	2.21	0.71
34:DD:318:LEU:HD13	34:DD:338:VAL:HB	1.71	0.71
34:DD:445:ILE:O	34:DD:449:ILE:HG12	1.91	0.71
4:BD:269:LEU:HA	4:BD:325:PRO:HG2	1.71	0.71
1:CA:1363:A:O2'	1:CA:1385:G:O2'	2.08	0.71
34:DD:199:THR:HG22	34:DD:255:PHE:HB3	1.72	0.71
34:DD:271:TRP:NE1	34:DD:379:THR:O	2.23	0.71
3:BC:126:TYR:HB3	3:BC:159:ILE:HG22	1.72	0.71
1:CA:293:A:N7	1:CA:346:U:O2'	2.24	0.71
11:CK:4:MET:HE1	11:CK:50:GLY:HA3	1.73	0.71
25:CY:39:MET:HE1	25:CY:94:ILE:HG13	1.71	0.71
33:DA:490:PHE:HE2	33:DA:492:ASP:HB2	1.56	0.71
33:DB:144:ILE:HD12	33:DB:153:VAL:HG21	1.72	0.71
1:BA:1370:G:O2'	16:BP:1:MET:N	2.24	0.70
1:BA:2344:U:OP2	14:BN:14:ARG:NE	2.24	0.70
6:BF:76:LEU:HA	6:BF:79:VAL:HG22	1.73	0.70
1:CA:861:U:O2	3:CC:1:MET:N	2.25	0.70
1:CA:2797:U:O2'	1:CA:2800:A:N3	2.24	0.70
5:CE:167:ASP:OD1	5:CE:170:ARG:NH1	2.23	0.70
33:DA:116:LEU:HD21	33:DA:194:LEU:HD21	1.72	0.70
34:DC:48:ILE:HD11	34:DC:53:ALA:HB2	1.72	0.70
34:DC:73:ASP:HA	34:DC:96:PRO:HA	1.73	0.70
34:DC:186:LYS:CE	34:DC:191:TRP:CE3	2.74	0.70
34:DD:421:LEU:HD12	34:DD:435:ALA:HB3	1.72	0.70
1:BA:2813:A:O2'	1:BA:2815:A:OP2	2.06	0.70
25:BY:11:SER:HA	25:BY:14:LYS:HG2	1.73	0.70
33:DB:78:ARG:H	33:DB:137:ASN:HD21	1.38	0.70
33:DB:419:LEU:HD11	33:DB:448:ALA:HA	1.73	0.70
34:DC:83:PHE:HB3	34:DC:88:TYR:HE1	1.56	0.70
34:DD:23:ASN:HD21	34:DD:356:ASN:HA	1.55	0.70
34:DD:34:LYS:HA	34:DD:37:LEU:CD2	2.21	0.70
1:BA:1224:U:O2'	1:BA:1225:G:O5'	2.08	0.70
4:BD:167:ILE:O	4:BD:175:LYS:NZ	2.25	0.70
34:DC:680:ARG:HG2	34:DC:685:GLY:HA2	1.71	0.70
34:DC:718:LYS:HA	34:DC:718:LYS:HE3	1.72	0.70
34:DD:298:ASP:HA	34:DD:368:VAL:HG13	1.72	0.70
12:CL:73:ASP:OD2	12:CL:111:THR:N	2.19	0.70
33:DA:397:GLY:O	33:DA:400:THR:OG1	2.09	0.70
34:DD:29:HIS:ND1	34:DD:128:GLN:HB3	2.07	0.70
32:Bf:2:LYS:HG2	32:Bf:89:GLU:HB2	1.72	0.70
6:CF:150:ASP:HA	6:CF:153:ILE:HG12	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DA:321:ASN:ND2	33:DA:340:TYR:OH	2.25	0.70
34:DC:647:ARG:HA	34:DC:671:GLU:OE2	1.92	0.70
34:DC:714:ARG:HH21	34:DC:715:LYS:HE3	1.55	0.70
34:DD:59:MET:HG2	34:DD:77:VAL:HG11	1.74	0.70
1:CA:653:A:OP1	15:CO:94:SER:OG	2.06	0.70
1:CA:1370:G:O2'	16:CP:1:MET:N	2.24	0.70
33:DA:388:SER:HB2	33:DA:529:VAL:HG22	1.72	0.70
1:BA:1430:U:OP2	1:BA:1485:U:O2'	2.10	0.70
6:BF:129:GLU:HG2	6:BF:133:LYS:HE2	1.73	0.70
6:CF:24:ASN:HB3	6:CF:113:ILE:HD12	1.74	0.70
27:Ca:128:ILE:O	27:Ca:153:ASN:ND2	2.24	0.70
33:DA:215:ASN:CB	33:DA:218:GLN:HG3	2.18	0.70
34:DC:550:ILE:HG21	34:DC:588:ALA:HB3	1.73	0.70
34:DD:26:ILE:HA	34:DD:116:VAL:H	1.56	0.70
34:DD:110:ARG:O	34:DD:266:ARG:NH1	2.23	0.70
1:BA:1157:C:N4	1:BA:1163:A:O4'	2.25	0.70
14:BN:139:PRO:HG2	14:BN:142:ARG:HG2	1.72	0.70
25:BY:22:ILE:HD11	25:BY:31:ALA:HB2	1.72	0.70
34:DD:40:ASN:HA	34:DD:44:GLY:CA	2.21	0.70
34:DD:517:ARG:HH21	34:DD:534:ILE:HG23	1.57	0.70
6:BF:24:ASN:HB3	6:BF:113:ILE:HD12	1.74	0.70
14:CN:158:LEU:HD13	14:CN:161:GLN:HE21	1.57	0.70
33:DA:489:PRO:O	33:DA:512:ILE:HG12	1.92	0.70
33:DB:434:GLY:CA	33:DB:447:LEU:HG	2.22	0.70
34:DD:201:ALA:HA	34:DD:212:SER:HB3	1.72	0.70
34:DD:215:MET:HE3	34:DD:219:THR:HG21	1.71	0.70
1:BA:861:U:O2	3:BC:1:MET:N	2.24	0.69
23:BW:30:ARG:HE	23:BW:34:LEU:HD11	1.55	0.69
6:CF:129:GLU:HG2	6:CF:133:LYS:HE2	1.74	0.69
14:CN:28:LEU:HB3	18:CR:31:ILE:HG21	1.74	0.69
33:DB:60:GLY:HA2	33:DB:64:LYS:HD3	1.73	0.69
34:DC:134:ARG:HB2	34:DC:182:MET:HE2	1.74	0.69
1:BA:1361:C:N4	1:BA:1705:G:OP2	2.24	0.69
14:BN:28:LEU:HB3	18:BR:31:ILE:HG21	1.74	0.69
1:CA:1963:C:OP2	1:CA:1964:U:O2'	2.06	0.69
11:CK:50:GLY:HA2	11:CK:117:VAL:HG12	1.73	0.69
27:Ca:41:ARG:HD3	27:Ca:97:VAL:HG23	1.74	0.69
33:DA:338:LEU:HD21	33:DA:342:LYS:HE2	1.72	0.69
33:DB:414:SER:HB2	33:DB:536:PHE:CD1	2.28	0.69
34:DC:404:LEU:HB3	34:DC:405:PRO:HD3	1.74	0.69
34:DC:626:GLN:HG2	34:DC:691:THR:HB	1.72	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1361:C:N4	1:CA:1705:G:OP2	2.24	0.69
1:CA:1430:U:OP2	1:CA:1485:U:O2'	2.10	0.69
10:CJ:120:ASP:OD2	10:CJ:122:ARG:NH1	2.24	0.69
33:DA:273:LYS:HD3	33:DA:300:SER:HB2	1.74	0.69
34:DC:186:LYS:NZ	34:DC:191:TRP:CE3	2.60	0.69
5:BE:52:TYR:OH	29:Bc:54:CYS:O	2.08	0.69
6:BF:76:LEU:O	6:BF:81:LYS:N	2.18	0.69
10:BJ:120:ASP:OD2	10:BJ:122:ARG:NH1	2.24	0.69
1:CA:2575:A:OP1	1:CA:2660:G:O2'	2.10	0.69
33:DB:521:ALA:CB	33:DB:528:MET:HE3	2.22	0.69
34:DC:396:VAL:HG22	34:DC:459:THR:HG22	1.73	0.69
34:DD:486:ASN:OD1	34:DD:591:HIS:N	2.26	0.69
1:CA:1224:U:O2'	1:CA:1225:G:O5'	2.08	0.69
7:CG:129:LYS:HB2	7:CG:136:THR:HG22	1.74	0.69
33:DB:231:PRO:HD2	33:DB:360:PHE:HA	1.74	0.69
33:DB:486:ALA:O	33:DB:508:PRO:HD2	1.91	0.69
34:DC:439:GLU:HA	34:DC:442:LEU:HD12	1.75	0.69
34:DD:280:GLY:HA2	34:DD:283:MET:HE2	1.75	0.69
1:CA:82:C:OP2	1:CA:83:A:O2'	2.07	0.69
25:CY:11:SER:HA	25:CY:14:LYS:HG2	1.73	0.69
34:DD:471:LYS:HE3	34:DD:620:SER:HB2	1.74	0.69
11:BK:62:PRO:HD3	33:DB:28:LYS:HE2	1.73	0.69
1:CA:2301:U:O2'	1:CA:2387:C:O2	2.11	0.69
33:DA:299:ILE:HG13	33:DA:300:SER:H	1.55	0.69
33:DB:480:CYS:O	33:DB:504:TYR:HB2	1.92	0.69
33:DB:495:VAL:HG22	33:DB:524:LEU:HD11	1.73	0.69
34:DC:326:THR:HA	34:DC:372:VAL:HA	1.73	0.69
34:DD:324:VAL:HG12	34:DD:374:THR:HG23	1.73	0.69
1:BA:133:A:OP1	13:BM:40:ARG:NH1	2.26	0.69
20:BT:7:PRO:HG2	20:BT:81:LEU:HD11	1.75	0.69
27:Ba:41:ARG:HD3	27:Ba:97:VAL:HG23	1.74	0.69
1:CA:1856:C:C5	3:CC:125:VAL:HB	2.28	0.69
2:CB:16:A:OP2	2:CB:70:G:N2	2.22	0.69
7:CG:96:PRO:HG3	34:DD:157:LEU:HA	1.74	0.69
18:CR:11:THR:HB	18:CR:15:LEU:HD12	1.75	0.69
33:DA:123:ILE:HD11	33:DA:186:ILE:HG12	1.75	0.69
33:DA:183:ASP:HA	33:DA:186:ILE:HD12	1.74	0.69
33:DA:383:TYR:HA	33:DA:533:MET:HG2	1.73	0.69
34:DC:186:LYS:NZ	34:DC:191:TRP:CH2	2.61	0.69
34:DD:27:VAL:N	34:DD:116:VAL:O	2.26	0.69
1:BA:2301:U:O2'	1:BA:2387:C:O2	2.11	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BB:4:U:H3	2:BB:124:G:H1	1.40	0.69
4:CD:167:ILE:O	4:CD:175:LYS:NZ	2.25	0.69
19:CS:122:ILE:HB	19:CS:138:THR:HB	1.74	0.69
33:DA:470:GLU:O	33:DA:474:GLN:HG2	1.93	0.69
34:DD:142:ARG:HD3	34:DD:257:PRO:CG	2.22	0.69
25:BY:21:VAL:HG12	25:BY:86:ILE:HG22	1.74	0.69
25:CY:21:VAL:HG12	25:CY:86:ILE:HG22	1.74	0.69
34:DD:318:LEU:HB3	34:DD:338:VAL:HB	1.75	0.69
20:CT:7:PRO:HG2	20:CT:81:LEU:HD11	1.75	0.68
24:CX:6:ARG:NH1	24:CX:26:LEU:O	2.25	0.68
33:DA:123:ILE:CG2	33:DB:136:LYS:HD3	2.22	0.68
34:DD:565:GLU:HG2	34:DD:569:ARG:HE	1.58	0.68
1:CA:1157:C:O2	1:CA:1166:A:N6	2.26	0.68
13:BM:38:VAL:HG13	13:BM:64:VAL:HG11	1.76	0.68
33:DB:238:GLN:HE22	33:DB:244:LEU:H	1.41	0.68
33:DB:248:ASN:HD22	33:DB:327:ILE:HD11	1.58	0.68
34:DC:15:MET:HA	34:DC:356:ASN:HD21	1.58	0.68
34:DD:522:ILE:HD13	34:DD:528:LYS:HG2	1.75	0.68
1:BA:1856:C:C5	3:BC:125:VAL:HB	2.28	0.68
2:CB:4:U:H3	2:CB:124:G:H1	1.39	0.68
6:CF:76:LEU:HA	6:CF:79:VAL:HG22	1.74	0.68
33:DB:202:LEU:HD13	33:DB:204:PHE:HE2	1.58	0.68
34:DD:43:ALA:CB	34:DD:59:MET:HB2	2.23	0.68
34:DD:630:VAL:HG12	34:DD:632:VAL:HG13	1.75	0.68
34:DD:706:ASP:O	34:DD:710:GLN:HG3	1.94	0.68
13:CM:38:VAL:HG13	13:CM:64:VAL:HG11	1.76	0.68
33:DA:261:GLU:O	33:DA:407:LYS:HD2	1.93	0.68
34:DD:300:SER:HB2	34:DD:308:VAL:HG23	1.74	0.68
1:BA:1157:C:O2	1:BA:1166:A:N6	2.25	0.68
4:BD:37:PRO:HA	4:BD:168:SER:O	1.93	0.68
18:BR:11:THR:HB	18:BR:15:LEU:HD12	1.75	0.68
34:DD:4:ARG:HE	34:DD:342:MET:HE2	1.58	0.68
34:DD:320:ARG:NH2	34:DD:348:GLU:OE2	2.26	0.68
14:BN:170:PHE:O	14:BN:174:SER:OG	2.07	0.68
22:BV:13:LEU:HD12	22:BV:18:GLY:HA3	1.75	0.68
25:BY:62:LEU:HB2	25:BY:98:THR:HG23	1.75	0.68
4:CD:37:PRO:HA	4:CD:168:SER:O	1.93	0.68
6:CF:76:LEU:HB3	6:CF:81:LYS:HD2	1.74	0.68
7:CG:30:LYS:HG2	7:CG:140:ILE:HG22	1.76	0.68
14:CN:36:VAL:HG21	14:CN:49:ILE:HD12	1.76	0.68
33:DA:229:GLU:HB2	33:DA:361:GLY:HA3	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:4:ARG:HH11	34:DD:343:GLY:HA3	1.58	0.68
34:DD:147:VAL:HB	34:DD:202:PHE:CD1	2.28	0.68
6:BF:76:LEU:HB3	6:BF:81:LYS:HD2	1.74	0.68
12:BL:71:GLU:O	12:BL:75:LEU:HG	1.94	0.68
8:CH:68:SER:OG	8:CH:73:ALA:O	2.12	0.68
33:DA:383:TYR:HA	33:DA:533:MET:CG	2.24	0.68
33:DB:311:THR:CG2	33:DB:334:LYS:HG3	2.23	0.68
33:DB:417:VAL:O	33:DB:419:LEU:HD12	1.94	0.68
34:DC:72:ILE:O	34:DC:96:PRO:HA	1.94	0.68
34:DC:186:LYS:CE	34:DC:191:TRP:CE2	2.77	0.68
34:DD:42:LEU:HB2	34:DD:47:MET:HG3	1.76	0.68
1:BA:370:C:H5''	13:BM:1:MET:HA	1.76	0.68
5:BE:167:ASP:OD1	5:BE:170:ARG:NH1	2.23	0.68
14:CN:28:LEU:HD13	18:CR:31:ILE:HD13	1.76	0.68
33:DA:190:LEU:O	33:DA:194:LEU:HB2	1.93	0.68
1:BA:909:U:O2'	1:BA:2371:G:N2	2.20	0.68
1:BA:2139:U:OP1	1:BA:2169:G:O2'	2.12	0.68
1:CA:299:A:N1	1:CA:323:A:O2'	2.26	0.68
1:CA:653:A:N7	1:CA:737:G:O2'	2.26	0.68
19:CS:113:HIS:HB3	19:CS:146:ILE:HB	1.75	0.68
34:DC:295:MET:HE2	34:DC:371:THR:OG1	1.94	0.68
34:DD:159:VAL:O	34:DD:164:MET:HB2	1.94	0.68
1:BA:2480:A:O2'	9:BI:72:ARG:NH1	2.28	0.67
7:BG:129:LYS:HB2	7:BG:136:THR:HG22	1.75	0.67
27:Ba:121:PRO:HG3	27:Ba:149:ILE:HG13	1.77	0.67
12:CL:71:GLU:O	12:CL:75:LEU:HG	1.94	0.67
33:DA:10:SER:HB2	33:DA:103:TYR:HD1	1.59	0.67
33:DA:363:GLU:HA	33:DA:378:ARG:HB2	1.75	0.67
33:DB:447:LEU:HA	33:DB:450:THR:HB	1.76	0.67
34:DC:20:ARG:NH2	34:DC:87:ASP:O	2.18	0.67
34:DD:429:THR:OG1	34:DD:431:GLU:OE1	2.07	0.67
27:Ba:128:ILE:O	27:Ba:153:ASN:ND2	2.24	0.67
1:CA:133:A:OP1	13:CM:40:ARG:NH1	2.26	0.67
2:CB:33:U:H1'	2:CB:53:C:H42	1.59	0.67
33:DA:423:TYR:HB3	33:DA:429:MET:CG	2.23	0.67
33:DB:376:GLN:NE2	33:DB:538:HIS:O	2.27	0.67
34:DD:59:MET:HA	34:DD:344:PRO:HA	1.76	0.67
34:DD:318:LEU:HB2	34:DD:352:ILE:HB	1.74	0.67
34:DD:496:ASP:HB2	34:DD:499:ILE:HD12	1.74	0.67
1:BA:2016:C:O2	11:BK:13:ASN:ND2	2.28	0.67
1:CA:714:G:OP1	15:CO:57:LYS:NZ	2.23	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1550:U:O3'	1:CA:1614:G:O2'	2.12	0.67
10:CJ:61:ALA:O	10:CJ:65:GLY:N	2.27	0.67
27:Ca:111:SER:N	27:Ca:115:GLU:OE1	2.21	0.67
34:DD:363:LEU:HD21	34:DD:366:ALA:H	1.59	0.67
1:BA:2797:U:O2'	1:BA:2800:A:N3	2.24	0.67
14:BN:158:LEU:HD13	14:BN:161:GLN:HE21	1.57	0.67
19:BS:122:ILE:HB	19:BS:138:THR:HB	1.74	0.67
27:Ba:111:SER:N	27:Ba:115:GLU:OE1	2.21	0.67
1:CA:1157:C:N4	1:CA:1163:A:O4'	2.27	0.67
6:CF:74:THR:O	6:CF:78:ILE:HD12	1.95	0.67
33:DB:224:LYS:HZ2	33:DB:234:ALA:HA	1.58	0.67
34:DD:20:ARG:NH1	34:DD:87:ASP:O	2.26	0.67
1:BA:882:C:OP1	5:BE:58:SER:OG	2.07	0.67
1:BA:1363:A:O2'	1:BA:1364:A:OP1	2.12	0.67
1:CA:1398:G:O6	30:Cd:1:MET:N	2.28	0.67
1:CA:2411:U:O2	32:Cf:79:GLN:NE2	2.24	0.67
22:CV:13:LEU:HD12	22:CV:18:GLY:HA3	1.75	0.67
25:CY:62:LEU:HB2	25:CY:98:THR:HG23	1.74	0.67
33:DB:456:LEU:HD13	33:DB:473:CYS:HA	1.76	0.67
34:DC:186:LYS:NZ	34:DC:191:TRP:CE2	2.62	0.67
34:DC:338:VAL:HG12	34:DC:360:VAL:HG22	1.76	0.67
34:DC:414:VAL:CG1	34:DC:421:LEU:HD21	2.23	0.67
10:BJ:61:ALA:O	10:BJ:65:GLY:N	2.27	0.67
1:CA:2344:U:OP2	14:CN:14:ARG:NE	2.24	0.67
1:CA:2669:A:OP1	34:DD:152:ARG:NH2	2.27	0.67
33:DA:204:PHE:HB3	33:DA:223:TYR:HB3	1.77	0.67
33:DA:277:PRO:CG	33:DA:412:THR:HG23	2.23	0.67
6:BF:76:LEU:HD13	6:BF:162:VAL:HG21	1.77	0.67
4:CD:271:ILE:HD13	4:CD:295:ILE:HG13	1.77	0.67
33:DA:276:ASN:OD1	33:DA:277:PRO:HD2	1.95	0.67
33:DA:321:ASN:OD1	33:DA:344:LYS:NZ	2.21	0.67
34:DD:58:PHE:HA	34:DD:63:GLU:OE1	1.95	0.67
34:DD:396:VAL:HG13	34:DD:457:ILE:HD12	1.74	0.67
1:BA:1398:G:O6	30:Bd:1:MET:N	2.27	0.67
1:BA:1550:U:O3'	1:BA:1614:G:O2'	2.12	0.67
1:BA:1833:U:OP1	3:BC:232:ARG:HD3	1.95	0.67
3:CC:87:ALA:HB3	3:CC:95:VAL:HG12	1.77	0.67
5:CE:52:TYR:OH	29:Cc:54:CYS:O	2.08	0.67
33:DA:366:TYR:C	33:DA:367:LYS:HD3	2.20	0.67
34:DC:264:LYS:NZ	34:DC:285:HIS:HA	2.09	0.67
34:DD:107:ARG:HH12	34:DD:298:ASP:HB3	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:500:VAL:O	34:DD:504:LYS:HG2	1.95	0.67
34:DD:535:VAL:HG13	34:DD:545:ASP:HB2	1.76	0.67
33:DA:67:HIS:HB2	33:DA:70:ILE:CG2	2.25	0.67
33:DB:446:LYS:O	33:DB:447:LEU:HD22	1.94	0.67
34:DC:186:LYS:NZ	34:DC:191:TRP:CZ2	2.63	0.67
34:DC:410:VAL:O	34:DC:414:VAL:HG23	1.95	0.67
34:DC:425:LEU:HD23	34:DC:432:HIS:CD2	2.30	0.67
34:DD:16:ASN:HB3	34:DD:353:PRO:HG2	1.76	0.67
7:BG:96:PRO:HG2	34:DC:158:GLN:OE1	1.95	0.67
1:CA:1754:G:OP2	28:Cb:9:GLY:HA2	1.95	0.67
25:CY:31:ALA:HB1	25:CY:37:ALA:HB2	1.77	0.67
33:DB:340:TYR:HD2	33:DB:341:LEU:HD12	1.60	0.67
1:BA:758:A:N3	1:BA:2454:C:O2'	2.28	0.66
4:BD:177:GLU:O	4:BD:181:THR:HG23	1.95	0.66
19:BS:113:HIS:HB3	19:BS:146:ILE:HB	1.75	0.66
1:CA:1833:U:OP1	3:CC:232:ARG:HD3	1.95	0.66
1:CA:2480:A:O2'	9:CI:72:ARG:NH1	2.28	0.66
33:DA:214:GLU:OE1	33:DB:536:PHE:HB3	1.93	0.66
33:DA:503:ARG:HG2	33:DA:526:ILE:HG12	1.77	0.66
34:DC:308:VAL:HG22	34:DC:361:THR:CG2	2.26	0.66
34:DD:341:PHE:CD2	34:DD:357:ILE:HG12	2.30	0.66
34:DD:421:LEU:HD11	34:DD:434:MET:SD	2.35	0.66
34:DD:449:ILE:HG21	34:DD:457:ILE:HD11	1.75	0.66
34:DD:510:MET:CE	34:DD:536:GLY:HA2	2.24	0.66
14:BN:28:LEU:HD13	18:BR:31:ILE:HD13	1.76	0.66
34:DC:58:PHE:CG	34:DC:344:PRO:HG3	2.30	0.66
34:DC:450:GLU:HA	34:DC:454:ASN:HA	1.77	0.66
34:DC:496:ASP:HB2	34:DC:499:ILE:HD12	1.76	0.66
34:DD:211:ILE:HD12	34:DD:216:MET:HG2	1.77	0.66
1:BA:808:G:OP1	16:BP:92:LYS:NZ	2.27	0.66
8:BH:68:SER:OG	8:BH:73:ALA:O	2.12	0.66
22:BV:58:GLN:HA	22:BV:61:LYS:HD2	1.78	0.66
1:CA:909:U:O2'	1:CA:2371:G:N2	2.20	0.66
6:CF:101:HIS:HE2	6:CF:115:VAL:HA	1.60	0.66
27:Ca:121:PRO:HG3	27:Ca:149:ILE:HG13	1.77	0.66
1:BA:1113:U:OP1	1:BA:1227:C:O2'	2.07	0.66
14:BN:36:VAL:HG21	14:BN:49:ILE:HD12	1.76	0.66
25:BY:31:ALA:HB1	25:BY:37:ALA:HB2	1.77	0.66
1:CA:301:C:OP2	21:CU:43:ARG:NH2	2.27	0.66
1:CA:2139:U:OP1	1:CA:2169:G:O2'	2.12	0.66
34:DD:34:LYS:CE	34:DD:70:ILE:HG13	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:302:ASP:CG	34:DD:303:PRO:HD2	2.20	0.66
3:BC:87:ALA:HB3	3:BC:95:VAL:HG12	1.77	0.66
6:BF:74:THR:O	6:BF:78:ILE:HD12	1.95	0.66
1:CA:370:C:H5''	13:CM:1:MET:HA	1.76	0.66
5:CE:152:THR:O	5:CE:156:ILE:HG12	1.96	0.66
31:Ce:10:ARG:O	31:Ce:14:LYS:NZ	2.29	0.66
33:DA:102:LEU:HD22	33:DA:128:PRO:HD3	1.75	0.66
33:DB:383:TYR:HA	33:DB:533:MET:HG2	1.77	0.66
34:DC:360:VAL:HB	34:DC:363:LEU:HD11	1.78	0.66
34:DD:80:VAL:CG1	34:DD:87:ASP:HB3	2.26	0.66
4:BD:271:ILE:HD13	4:BD:295:ILE:HG13	1.77	0.66
34:DC:474:THR:CG2	34:DC:617:ALA:HB2	2.26	0.66
34:DD:37:LEU:HB3	34:DD:205:ALA:CB	2.26	0.66
34:DD:109:MET:HB2	34:DD:139:GLU:HG2	1.77	0.66
34:DD:393:THR:HG22	34:DD:436:GLY:N	2.11	0.66
1:CA:808:G:OP1	16:CP:92:LYS:NZ	2.27	0.66
1:BA:2575:A:OP1	1:BA:2660:G:O2'	2.11	0.66
2:BB:33:U:H1'	2:BB:53:C:H42	1.60	0.66
1:CA:2016:C:O2	11:CK:13:ASN:ND2	2.28	0.66
1:CA:2131:G:N2	1:CA:2142:G:O2'	2.29	0.66
4:CD:177:GLU:O	4:CD:181:THR:HG23	1.95	0.66
33:DA:260:LYS:NZ	33:DA:357:ARG:HA	2.09	0.66
33:DA:269:VAL:HG22	33:DA:270:ALA:H	1.61	0.66
33:DA:477:LEU:HB3	33:DA:501:ASN:HB3	1.78	0.66
1:BA:1476:A:O2'	1:BA:1487:U:O2	2.14	0.66
14:BN:38:ARG:HA	14:BN:108:GLN:HE22	1.61	0.66
1:CA:996:A:O2'	1:CA:997:A:O4'	2.14	0.66
23:CW:8:GLU:O	23:CW:12:MET:HG3	1.96	0.66
33:DA:244:LEU:HA	33:DA:349:ARG:NH2	2.11	0.66
34:DC:633:PRO:HD2	34:DC:636:LEU:HD12	1.78	0.66
34:DD:480:LYS:NZ	34:DD:729:SER:O	2.21	0.66
34:DD:712:ARG:NH2	34:DD:718:LYS:O	2.28	0.66
1:BA:2131:G:N2	1:BA:2142:G:O2'	2.29	0.66
1:CA:2723:C:O2'	1:CA:2725:C:OP2	2.07	0.66
7:CG:43:MET:HE1	7:CG:56:GLU:HB2	1.78	0.66
33:DA:327:ILE:HG13	33:DA:349:ARG:HB2	1.78	0.66
34:DD:463:ILE:HA	34:DD:714:ARG:CZ	2.26	0.66
34:DD:555:GLU:OE2	34:DD:597:ARG:NH1	2.28	0.66
31:Be:10:ARG:O	31:Be:14:LYS:NZ	2.28	0.65
1:CA:1363:A:OP2	1:CA:1364:A:N6	2.29	0.65
6:CF:13:MET:HG2	6:CF:118:MET:HB3	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DC:186:LYS:CE	34:DC:191:TRP:CD2	2.79	0.65
34:DD:499:ILE:HG12	34:DD:524:LEU:HD13	1.78	0.65
6:BF:18:SER:OG	6:BF:55:GLU:OE2	2.09	0.65
8:BH:42:GLU:OE1	13:BM:3:LYS:N	2.29	0.65
4:CD:220:GLN:HG2	4:CD:221:LEU:O	1.97	0.65
14:CN:64:SER:HB3	14:CN:76:THR:HB	1.78	0.65
33:DA:124:ASP:N	33:DA:182:TYR:OH	2.30	0.65
33:DA:205:THR:OG1	33:DB:197:GLU:OE1	2.13	0.65
34:DC:493:GLU:OE2	34:DC:582:LYS:NZ	2.29	0.65
34:DD:660:LEU:HD21	34:DD:662:ILE:HD11	1.77	0.65
6:BF:13:MET:HG2	6:BF:118:MET:HB3	1.77	0.65
33:DA:81:LYS:O	33:DA:85:GLU:HG2	1.97	0.65
33:DB:163:ILE:O	33:DB:168:ARG:NH1	2.29	0.65
34:DD:312:ARG:CA	34:DD:357:ILE:HD12	2.26	0.65
6:BF:101:HIS:HE2	6:BF:115:VAL:HA	1.60	0.65
24:BX:6:ARG:NH1	24:BX:26:LEU:O	2.25	0.65
33:DA:70:ILE:HD13	33:DA:92:ILE:HD12	1.79	0.65
33:DA:381:GLY:O	33:DA:533:MET:HE2	1.96	0.65
33:DA:496:HIS:O	33:DA:499:GLU:HB2	1.96	0.65
34:DC:404:LEU:O	34:DC:408:ILE:HG12	1.96	0.65
34:DC:675:PHE:CZ	34:DC:679:ILE:HD12	2.32	0.65
1:BA:301:C:OP2	21:BU:43:ARG:NH2	2.27	0.65
1:BA:1363:A:OP2	1:BA:1364:A:N6	2.29	0.65
4:BD:220:GLN:HG2	4:BD:221:LEU:O	1.96	0.65
20:BT:4:ILE:HB	20:BT:42:MET:HE1	1.79	0.65
23:BW:8:GLU:O	23:BW:12:MET:HG3	1.96	0.65
1:CA:1113:U:OP1	1:CA:1227:C:O2'	2.07	0.65
33:DA:7:LEU:HD13	33:DA:15:ILE:HD11	1.77	0.65
33:DA:431:LEU:HD12	33:DA:455:ASN:HD22	1.61	0.65
34:DC:202:PHE:O	34:DC:211:ILE:N	2.26	0.65
34:DD:29:HIS:HB3	34:DD:32:HIS:CE1	2.32	0.65
34:DD:486:ASN:O	34:DD:487:ARG:HG3	1.96	0.65
1:BA:828:G:O2'	1:BA:1718:A:OP1	2.14	0.65
7:BG:30:LYS:HG2	7:BG:140:ILE:HG22	1.76	0.65
1:CA:2675:G:OP1	34:DD:451:ARG:NH1	2.30	0.65
1:CA:2680:C:H4'	7:CG:116:LYS:HD2	1.79	0.65
6:CF:76:LEU:HD13	6:CF:162:VAL:HG21	1.77	0.65
15:CO:58:ILE:O	15:CO:62:THR:OG1	2.06	0.65
20:CT:4:ILE:HB	20:CT:42:MET:HE1	1.79	0.65
33:DA:446:LYS:O	33:DA:447:LEU:HD22	1.97	0.65
33:DB:128:PRO:O	33:DB:132:ARG:HG2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DB:142:THR:HG22	33:DB:168:ARG:HG2	1.78	0.65
34:DC:15:MET:HA	34:DC:356:ASN:ND2	2.10	0.65
34:DC:81:HIS:HB2	34:DC:249:LEU:CD1	2.26	0.65
34:DC:423:ILE:HD12	34:DC:425:LEU:HG	1.79	0.65
34:DC:626:GLN:HB2	34:DC:669:VAL:HG22	1.78	0.65
34:DD:626:GLN:HA	34:DD:694:GLY:H	1.60	0.65
32:Bf:40:LYS:O	32:Bf:44:GLU:HG2	1.97	0.65
1:CA:608:A:OP1	10:CJ:88:ARG:NH1	2.30	0.65
34:DC:144:VAL:HA	34:DC:193:VAL:HG11	1.79	0.65
34:DC:180:LYS:HZ3	34:DC:184:PRO:HB3	1.60	0.65
34:DD:248:VAL:O	34:DD:252:VAL:HG23	1.96	0.65
1:BA:135:U:OP1	1:BA:253:G:O2'	2.11	0.65
1:BA:1754:G:OP2	28:Bb:9:GLY:HA2	1.95	0.65
1:CA:1363:A:O2'	1:CA:1364:A:OP1	2.12	0.65
5:CE:117:ALA:O	5:CE:121:THR:HG23	1.97	0.65
33:DB:302:TYR:HE1	33:DB:323:LYS:HG3	1.61	0.65
33:DB:475:LYS:HG3	33:DB:476:ILE:HG23	1.79	0.65
34:DC:148:ASN:OD1	34:DC:205:ALA:N	2.29	0.65
34:DC:174:HIS:O	34:DC:177:LYS:HG2	1.97	0.65
34:DD:42:LEU:HD22	34:DD:78:SER:O	1.97	0.65
34:DD:148:ASN:OD1	34:DD:205:ALA:N	2.28	0.65
32:Bf:72:THR:O	32:Bf:75:LYS:NZ	2.30	0.65
14:CN:38:ARG:HA	14:CN:108:GLN:HE22	1.61	0.65
34:DD:149:LYS:HD3	34:DD:206:LEU:CG	2.26	0.65
34:DD:480:LYS:HD2	34:DD:484:ARG:HD3	1.79	0.65
34:DD:652:LEU:HD11	34:DD:666:ARG:HB2	1.77	0.65
1:BA:608:A:OP1	10:BJ:88:ARG:NH1	2.30	0.65
1:BA:1790:C:OP1	22:BV:44:ARG:NE	2.30	0.65
5:BE:117:ALA:O	5:BE:121:THR:HG23	1.97	0.65
1:CA:758:A:N3	1:CA:2454:C:O2'	2.28	0.65
1:CA:2807:C:O2	1:CA:2880:A:O2'	2.15	0.65
33:DA:415:ASN:HB3	33:DA:436:GLY:HA2	1.78	0.65
33:DB:200:LEU:HD21	33:DB:366:TYR:CE1	2.31	0.65
33:DB:486:ALA:HB2	33:DB:534:ARG:CB	2.27	0.65
34:DD:42:LEU:HD11	34:DD:59:MET:HG2	1.79	0.65
33:DA:420:ALA:HA	33:DA:430:VAL:HA	1.79	0.64
33:DB:277:PRO:HD2	33:DB:412:THR:HG23	1.80	0.64
33:DB:280:LEU:HD23	33:DB:408:ALA:HB2	1.78	0.64
34:DC:7:MET:O	34:DC:11:VAL:HG23	1.97	0.64
34:DC:341:PHE:CZ	34:DC:359:ALA:HB2	2.32	0.64
34:DD:11:VAL:CA	34:DD:14:LEU:HD12	2.25	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:37:LEU:HB3	34:DD:205:ALA:HB1	1.77	0.64
1:BA:149:G:OP2	13:BM:189:ARG:NH2	2.31	0.64
5:BE:152:THR:O	5:BE:156:ILE:HG12	1.96	0.64
14:BN:64:SER:HB3	14:BN:76:THR:HB	1.78	0.64
1:CA:1476:A:O2'	1:CA:1487:U:O2	2.14	0.64
1:CA:1756:G:OP2	1:CA:1757:A:O2'	2.13	0.64
8:CH:42:GLU:OE1	13:CM:3:LYS:N	2.30	0.64
21:CU:31:ARG:CZ	21:CU:43:ARG:HG3	2.27	0.64
33:DA:58:MET:CG	33:DB:69:ARG:HG3	2.27	0.64
33:DA:316:ALA:HB1	33:DA:319:PHE:CZ	2.32	0.64
33:DA:478:SER:HB2	33:DA:503:ARG:HB3	1.79	0.64
34:DC:385:ARG:HG3	34:DC:386:HIS:H	1.62	0.64
3:CC:54:ALA:HB2	3:CC:123:SER:HB3	1.80	0.64
14:CN:140:ASP:O	14:CN:144:ARG:HG3	1.98	0.64
22:CV:58:GLN:HA	22:CV:61:LYS:HD2	1.78	0.64
33:DB:487:PHE:HD2	33:DB:511:SER:HB3	1.62	0.64
34:DC:36:THR:HG21	34:DC:206:LEU:HD23	1.77	0.64
34:DC:93:ILE:HG21	34:DC:112:VAL:CG2	2.27	0.64
34:DC:537:ILE:HG22	34:DC:542:ILE:HG22	1.79	0.64
1:CA:135:U:OP1	1:CA:253:G:O2'	2.11	0.64
32:Cf:72:THR:O	32:Cf:75:LYS:NZ	2.30	0.64
33:DA:388:SER:CA	33:DA:529:VAL:HA	2.27	0.64
33:DB:115:GLU:HB2	33:DB:118:GLU:OE1	1.97	0.64
33:DB:392:VAL:CG1	33:DB:527:ALA:HB2	2.26	0.64
34:DC:42:LEU:HA	34:DC:79:MET:HE1	1.79	0.64
1:BA:996:A:O2'	1:BA:997:A:O4'	2.14	0.64
3:BC:54:ALA:HB2	3:BC:123:SER:HB3	1.79	0.64
4:BD:63:THR:O	4:BD:66:MET:HG2	1.98	0.64
1:CA:311:A:OP1	21:CU:61:LYS:HD3	1.98	0.64
1:CA:1160:A:N7	34:DD:638:GLY:N	2.44	0.64
33:DA:490:PHE:CE2	33:DA:492:ASP:HB2	2.32	0.64
33:DB:272:VAL:HG23	33:DB:276:ASN:C	2.22	0.64
34:DC:42:LEU:HD23	34:DC:79:MET:SD	2.38	0.64
34:DC:669:VAL:CA	34:DC:672:MET:HG2	2.26	0.64
34:DD:1:MET:SD	34:DD:5:LYS:HG3	2.38	0.64
34:DD:676:ALA:HB2	34:DD:689:TRP:HE1	1.62	0.64
34:DD:706:ASP:OD2	34:DD:710:GLN:NE2	2.24	0.64
1:BA:2807:C:O2	1:BA:2880:A:O2'	2.15	0.64
7:BG:43:MET:HE1	7:BG:56:GLU:HB2	1.78	0.64
16:BP:138:LEU:O	16:BP:142:LEU:HG	1.98	0.64
33:DA:214:GLU:HA	33:DB:538:HIS:HD1	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DC:186:LYS:CE	34:DC:191:TRP:CH2	2.80	0.64
34:DD:440:LEU:O	34:DD:444:VAL:HG23	1.98	0.64
34:DD:626:GLN:HG2	34:DD:691:THR:HB	1.80	0.64
34:DD:655:THR:HB	34:DD:662:ILE:O	1.96	0.64
6:CF:13:MET:HE1	6:CF:28:ILE:HD11	1.79	0.64
34:DD:162:GLN:O	34:DD:166:ILE:HG12	1.97	0.64
34:DD:340:ILE:HD12	34:DD:356:ASN:ND2	2.12	0.64
1:BA:82:C:OP2	1:BA:83:A:O2'	2.07	0.64
1:BA:311:A:OP1	21:BU:61:LYS:HD3	1.98	0.64
1:CA:1790:C:OP1	22:CV:44:ARG:NE	2.31	0.64
7:CG:99:VAL:HG12	7:CG:130:VAL:HG11	1.79	0.64
33:DB:421:HIS:HB3	33:DB:431:LEU:CD1	2.28	0.64
33:DB:490:PHE:HB3	33:DB:512:ILE:CD1	2.27	0.64
34:DC:341:PHE:CE1	34:DC:346:ARG:HG3	2.33	0.64
34:DC:501:SER:O	34:DC:505:GLU:HG3	1.97	0.64
34:DD:424:THR:HB	34:DD:433:LEU:HB2	1.79	0.64
34:DD:490:ILE:HG13	34:DD:585:LEU:CD1	2.28	0.64
2:BB:16:A:OP2	2:BB:70:G:N2	2.22	0.64
12:BL:79:LEU:HD12	12:BL:84:LEU:HB2	1.78	0.64
4:CD:63:THR:O	4:CD:66:MET:HG2	1.98	0.64
16:CP:105:ARG:O	16:CP:108:GLU:HG2	1.98	0.64
33:DB:30:ILE:HG21	33:DB:52:VAL:HG21	1.80	0.64
34:DC:34:LYS:NZ	34:DC:71:THR:HB	2.13	0.64
6:BF:13:MET:HE1	6:BF:28:ILE:HD11	1.79	0.64
6:BF:52:LYS:HG3	6:BF:53:LYS:H	1.63	0.64
21:BU:31:ARG:CZ	21:BU:43:ARG:HG3	2.28	0.64
33:DA:35:THR:O	33:DA:39:LEU:HG	1.98	0.64
33:DA:290:LEU:HD23	33:DA:316:ALA:HB1	1.80	0.64
33:DA:440:ARG:O	33:DA:443:SER:OG	2.12	0.64
34:DC:479:GLY:HA3	34:DC:609:ALA:HB2	1.81	0.64
34:DD:299:ILE:HD11	34:DD:366:ALA:HB3	1.79	0.64
1:BA:256:A:C6	8:BH:90:LEU:HD11	2.33	0.63
1:BA:714:G:OP1	15:BO:57:LYS:NZ	2.23	0.63
1:BA:2365:A:O2'	1:BA:2367:C:OP2	2.15	0.63
1:BA:2680:C:H4'	7:BG:116:LYS:HD2	1.79	0.63
14:BN:140:ASP:O	14:BN:144:ARG:HG3	1.98	0.63
4:CD:263:GLU:HG3	4:CD:302:PRO:HD3	1.80	0.63
33:DB:72:GLY:HA2	33:DB:75:LEU:HD22	1.80	0.63
33:DB:340:TYR:CD2	33:DB:341:LEU:HD12	2.34	0.63
33:DB:419:LEU:HD13	33:DB:432:GLY:HA3	1.79	0.63
33:DB:440:ARG:HD3	33:DB:489:PRO:HD3	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:1756:G:OP2	1:BA:1757:A:O2'	2.13	0.63
1:CA:2043:U:O2'	1:CA:2629:A:OP1	2.16	0.63
12:CL:79:LEU:HD12	12:CL:84:LEU:HB2	1.79	0.63
33:DA:182:TYR:CD2	33:DA:186:ILE:HD11	2.34	0.63
33:DA:214:GLU:N	33:DA:218:GLN:OE1	2.23	0.63
33:DA:400:THR:HB	33:DA:428:PHE:HZ	1.62	0.63
34:DD:496:ASP:O	34:DD:500:VAL:HG23	1.97	0.63
13:BM:97:SER:O	13:BM:101:ILE:HG13	1.99	0.63
33:DB:2:VAL:HG23	33:DB:27:VAL:HG21	1.79	0.63
34:DC:186:LYS:CE	34:DC:191:TRP:CZ2	2.81	0.63
34:DD:652:LEU:HB2	34:DD:664:GLU:HG3	1.79	0.63
1:BA:2411:U:O2	32:Bf:79:GLN:NE2	2.24	0.63
5:BE:36:VAL:HB	5:BE:232:THR:HG22	1.79	0.63
9:BI:36:MET:HE3	9:BI:85:MET:HE2	1.80	0.63
4:CD:75:ILE:HB	4:CD:295:ILE:HG22	1.80	0.63
4:CD:81:ARG:NE	4:CD:107:ASP:OD2	2.31	0.63
9:CI:36:MET:HE3	9:CI:85:MET:HE2	1.81	0.63
25:CY:46:CYS:SG	25:CY:51:LYS:HE2	2.39	0.63
34:DC:190:GLY:HA2	34:DC:192:LYS:NZ	2.12	0.63
1:BA:2412:G:O2'	32:Bf:77:ALA:O	2.14	0.63
1:CA:2391:A:O2'	14:CN:30:SER:OG	2.06	0.63
34:DD:21:ILE:CD1	34:DD:89:LEU:HD23	2.29	0.63
34:DD:323:GLU:OE1	34:DD:332:LYS:HB3	1.99	0.63
34:DD:341:PHE:H	34:DD:357:ILE:HG21	1.62	0.63
34:DD:643:GLU:O	34:DD:647:ARG:HG3	1.98	0.63
1:BA:559:G:O2'	1:BA:588:A:N6	2.32	0.63
1:BA:2043:U:O2'	1:BA:2629:A:OP1	2.16	0.63
4:BD:263:GLU:HG3	4:BD:302:PRO:HD3	1.81	0.63
14:BN:44:VAL:HG11	14:BN:82:ALA:HA	1.80	0.63
1:CA:560:A:O2'	24:CX:77:ARG:NH2	2.32	0.63
6:CF:126:ARG:NH2	6:CF:151:ASP:OD2	2.32	0.63
11:CK:49:ILE:HA	11:CK:73:VAL:HG23	1.80	0.63
33:DA:30:ILE:CD1	33:DA:95:ILE:HG12	2.29	0.63
33:DA:64:LYS:HG3	33:DA:65:THR:H	1.64	0.63
34:DC:627:LYS:HD3	34:DC:666:ARG:HG3	1.81	0.63
34:DD:404:LEU:HB3	34:DD:405:PRO:HD3	1.79	0.63
1:BA:2365:A:H5''	18:BR:54:ASN:HB2	1.81	0.63
4:BD:75:ILE:HB	4:BD:295:ILE:HG22	1.80	0.63
32:Cf:40:LYS:O	32:Cf:44:GLU:HG2	1.97	0.63
33:DB:402:SER:HB2	33:DB:506:VAL:HG21	1.79	0.63
33:DB:477:LEU:HA	33:DB:480:CYS:SG	2.39	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DC:10:ARG:HE	34:DC:80:VAL:HG11	1.61	0.63
34:DC:40:ASN:HB3	34:DC:208:ASN:OD1	1.99	0.63
34:DC:186:LYS:NZ	34:DC:191:TRP:CD2	2.66	0.63
34:DC:190:GLY:HA2	34:DC:192:LYS:HZ2	1.61	0.63
34:DC:499:ILE:CD1	34:DC:526:MET:HG3	2.28	0.63
34:DD:83:PHE:HB2	34:DD:253:ILE:HD13	1.80	0.63
1:BA:861:U:H1'	3:BC:1:MET:HB3	1.81	0.63
1:BA:2165:G:N2	1:BA:2167:C:OP1	2.31	0.63
4:BD:81:ARG:NE	4:BD:107:ASP:OD2	2.31	0.63
16:BP:105:ARG:O	16:BP:108:GLU:HG2	1.98	0.63
1:CA:559:G:O2'	1:CA:588:A:N6	2.32	0.63
6:CF:52:LYS:HG3	6:CF:53:LYS:H	1.63	0.63
16:CP:138:LEU:O	16:CP:142:LEU:HG	1.98	0.63
34:DC:331:ARG:NH1	34:DC:365:GLU:OE2	2.32	0.63
34:DD:121:ALA:HB2	34:DD:150:VAL:HA	1.80	0.63
34:DD:655:THR:HG21	34:DD:662:ILE:HD12	1.80	0.63
17:BQ:5:LYS:HB2	17:BQ:28:SER:O	1.99	0.63
1:CA:828:G:O2'	1:CA:1718:A:OP1	2.14	0.63
5:CE:36:VAL:HB	5:CE:232:THR:HG22	1.79	0.63
34:DD:107:ARG:NH1	34:DD:298:ASP:HB3	2.13	0.63
34:DD:247:ALA:O	34:DD:251:MET:HG3	1.99	0.63
1:BA:1354:G:N7	19:BS:26:SER:OG	2.28	0.62
1:CA:1354:G:N7	19:CS:26:SER:OG	2.28	0.62
1:CA:2601:C:OP1	3:CC:208:LYS:NZ	2.28	0.62
8:CH:63:HIS:CE1	13:CM:5:PHE:HB2	2.34	0.62
11:CK:62:PRO:CB	33:DA:3:LYS:HG2	2.24	0.62
33:DA:35:THR:O	33:DA:38:ILE:HG22	1.99	0.62
33:DA:177:ARG:HB2	33:DB:187:ASP:OD1	1.99	0.62
33:DB:505:ILE:HG22	33:DB:528:MET:HE2	1.79	0.62
34:DD:123:GLU:O	34:DD:126:MET:HE2	1.98	0.62
34:DD:134:ARG:HD3	34:DD:660:LEU:HD22	1.81	0.62
34:DD:615:LEU:HA	34:DD:619:ASP:OD2	1.99	0.62
8:BH:63:HIS:CE1	13:BM:5:PHE:HB2	2.34	0.62
1:CA:1109:G:N2	1:CA:1110:U:O4	2.32	0.62
33:DA:382:ILE:HG12	33:DA:407:LYS:NZ	2.14	0.62
33:DB:493:SER:HA	33:DB:496:HIS:CD2	2.35	0.62
34:DC:14:LEU:HA	34:DC:17:ASP:HB3	1.81	0.62
34:DC:449:ILE:HG21	34:DC:457:ILE:HD11	1.80	0.62
34:DD:610:ILE:HG22	34:DD:614:MET:HE3	1.80	0.62
1:BA:299:A:N1	1:BA:323:A:O2'	2.26	0.62
1:BA:657:C:OP2	5:BE:108:LYS:NZ	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:2712:U:OP2	16:BP:59:SER:OG	2.17	0.62
6:BF:101:HIS:HB2	6:BF:107:MET:HE1	1.81	0.62
15:BO:67:VAL:HA	15:BO:85:THR:HG23	1.80	0.62
16:BP:20:ASP:O	16:BP:53:LYS:NZ	2.30	0.62
19:BS:14:THR:HB	19:BS:149:GLU:HG2	1.81	0.62
1:CA:149:G:OP2	13:CM:189:ARG:NH2	2.31	0.62
1:CA:256:A:C6	8:CH:90:LEU:HD11	2.33	0.62
14:CN:155:SER:O	14:CN:158:LEU:HD23	2.00	0.62
33:DB:105:PHE:CE1	33:DB:123:ILE:HG12	2.34	0.62
33:DB:345:SER:OG	33:DB:348:LEU:HD23	1.99	0.62
33:DB:399:ARG:HB3	33:DB:399:ARG:HH11	1.64	0.62
34:DC:411:LEU:HA	34:DC:414:VAL:HG23	1.81	0.62
34:DC:660:LEU:HB3	34:DC:662:ILE:HD11	1.81	0.62
34:DD:145:LEU:HD21	34:DD:147:VAL:HG23	1.80	0.62
34:DD:176:ASN:HA	34:DD:179:ILE:HG12	1.81	0.62
34:DD:556:THR:HG21	34:DD:590:LEU:CD2	2.29	0.62
1:BA:2601:C:OP1	3:BC:208:LYS:NZ	2.29	0.62
1:CA:2165:G:N2	1:CA:2167:C:OP1	2.32	0.62
15:CO:67:VAL:HA	15:CO:85:THR:HG23	1.80	0.62
33:DB:192:ARG:HD2	33:DB:198:GLU:CB	2.29	0.62
8:BH:52:ALA:HB3	8:BH:55:ILE:HD11	1.80	0.62
1:CA:800:A:N3	33:DA:359:VAL:HG21	2.15	0.62
1:CA:2412:G:O2'	32:Cf:77:ALA:O	2.16	0.62
1:CA:2752:A:OP1	31:Ce:23:ARG:HG3	1.99	0.62
6:CF:18:SER:OG	6:CF:55:GLU:OE2	2.08	0.62
33:DA:286:LEU:HD12	33:DA:289:ALA:HB3	1.82	0.62
33:DA:442:ASP:OD2	33:DB:299:ILE:HG21	1.98	0.62
34:DD:405:PRO:O	34:DD:408:ILE:HB	2.00	0.62
34:DD:410:VAL:HA	34:DD:453:LYS:HD2	1.80	0.62
1:BA:1484:A:OP1	16:BP:13:LYS:NZ	2.26	0.62
16:BP:141:HIS:O	16:BP:145:GLU:HG2	2.00	0.62
32:Bf:23:GLU:OE2	32:Bf:68:ARG:NE	2.30	0.62
1:CA:1048:A:H61	9:CI:113:MET:HE3	1.65	0.62
2:CB:31:C:O3'	6:CF:128:GLY:HA2	2.00	0.62
33:DB:117:GLU:HG2	33:DB:118:GLU:OE2	1.99	0.62
33:DB:421:HIS:CD2	33:DB:476:ILE:HB	2.34	0.62
33:DB:450:THR:O	33:DB:454:GLU:HG2	1.99	0.62
33:DB:460:TYR:HB2	33:DB:472:TYR:CE2	2.34	0.62
34:DD:292:LEU:HD23	34:DD:324:VAL:CG1	2.30	0.62
34:DD:545:ASP:OD2	34:DD:557:MET:HE1	1.98	0.62
12:BL:92:TYR:HB2	12:BL:114:LEU:HD12	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:BN:155:SER:O	14:BN:158:LEU:HD23	2.00	0.62
8:CH:52:ALA:HB3	8:CH:55:ILE:HD11	1.80	0.62
13:CM:97:SER:O	13:CM:101:ILE:HG13	1.99	0.62
15:CO:66:ASP:O	15:CO:84:VAL:HG13	2.00	0.62
34:DC:111:ALA:HA	34:DC:314:PHE:HZ	1.64	0.62
11:BK:92:ASP:OD2	22:BV:24:LYS:HE3	1.99	0.62
15:BO:66:ASP:O	15:BO:84:VAL:HG13	2.00	0.62
1:CA:861:U:H1'	3:CC:1:MET:HB3	1.81	0.62
12:CL:75:LEU:O	12:CL:79:LEU:HD23	2.00	0.62
14:CN:44:VAL:HG11	14:CN:82:ALA:HA	1.79	0.62
16:CP:141:HIS:O	16:CP:145:GLU:HG2	2.00	0.62
19:CS:14:THR:HB	19:CS:149:GLU:HG2	1.82	0.62
33:DB:53:THR:HB	33:DB:67:HIS:CE1	2.35	0.62
33:DB:261:GLU:CD	33:DB:411:ALA:HB2	2.25	0.62
33:DB:277:PRO:HB2	33:DB:412:THR:OG1	1.99	0.62
33:DB:298:PRO:HD2	33:DB:299:ILE:HD12	1.82	0.62
34:DC:323:GLU:CA	34:DC:334:ARG:HD2	2.29	0.62
34:DD:474:THR:HG22	34:DD:492:ALA:O	1.99	0.62
34:DD:644:LEU:HD23	34:DD:665:ALA:HB3	1.81	0.62
34:DD:701:SER:HA	34:DD:704:LEU:HG	1.81	0.62
1:BA:803:U:OP1	28:Bb:7:LYS:HA	2.00	0.62
1:CA:1726:G:O2'	1:CA:2012:U:O4	2.18	0.62
2:CB:122:A:H2'	2:CB:123:A:C8	2.34	0.62
3:CC:120:VAL:HG21	3:CC:127:ALA:HB2	1.82	0.62
6:CF:101:HIS:HB2	6:CF:107:MET:HE1	1.81	0.62
33:DA:347:ASN:O	33:DA:349:ARG:HG3	1.99	0.62
33:DA:398:LYS:HG3	33:DA:504:TYR:CE2	2.34	0.62
33:DA:417:VAL:CG2	33:DA:448:ALA:HB2	2.30	0.62
33:DA:438:PRO:C	33:DB:300:SER:HB2	2.25	0.62
34:DC:264:LYS:O	34:DC:268:LYS:HG3	2.00	0.62
34:DD:35:THR:CG2	34:DD:67:ALA:HA	2.30	0.62
6:BF:110:ASP:OD2	6:BF:113:ILE:HG12	2.00	0.62
6:BF:126:ARG:NH2	6:BF:151:ASP:OD2	2.32	0.62
25:BY:46:CYS:SG	25:BY:51:LYS:HE2	2.39	0.62
11:CK:92:ASP:OD2	22:CV:24:LYS:HE3	1.99	0.62
21:CU:54:LYS:HE2	21:CU:102:MET:HE2	1.82	0.62
27:Ca:143:LYS:O	27:Ca:146:GLU:HG3	2.00	0.62
33:DA:65:THR:O	33:DA:66:LEU:HG	2.00	0.62
33:DA:199:VAL:HG12	33:DB:205:THR:HG23	1.82	0.62
33:DA:503:ARG:HG2	33:DA:526:ILE:CG1	2.30	0.62
34:DC:34:LYS:HE3	34:DC:71:THR:HB	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:21:ILE:HD11	34:DD:356:ASN:HB3	1.81	0.62
34:DD:34:LYS:HA	34:DD:37:LEU:HD23	1.82	0.62
34:DD:407:LEU:HD13	34:DD:457:ILE:HG21	1.82	0.62
1:BA:1048:A:H61	9:BI:113:MET:HE3	1.65	0.61
1:BA:1827:A:O3'	3:BC:170:TRP:HB2	1.99	0.61
2:BB:31:C:O3'	6:BF:128:GLY:HA2	2.00	0.61
2:BB:122:A:H2'	2:BB:123:A:C8	2.34	0.61
3:BC:40:ARG:O	3:BC:62:GLU:HG2	2.00	0.61
3:BC:120:VAL:HG21	3:BC:127:ALA:HB2	1.82	0.61
8:BH:18:LEU:O	8:BH:22:GLU:HG2	1.99	0.61
1:CA:657:C:OP2	5:CE:108:LYS:NZ	2.32	0.61
34:DC:634:GLN:HB2	34:DC:659:ASP:C	2.25	0.61
34:DD:80:VAL:HG12	34:DD:87:ASP:HB3	1.82	0.61
1:CA:803:U:OP1	28:Cb:7:LYS:HA	2.00	0.61
6:CF:110:ASP:OD2	6:CF:113:ILE:HG12	2.00	0.61
33:DA:302:TYR:CE1	33:DA:323:LYS:HA	2.35	0.61
33:DB:75:LEU:HD23	33:DB:83:GLN:OE1	2.00	0.61
34:DD:178:LEU:O	34:DD:182:MET:HB2	2.00	0.61
1:BA:293:A:N7	1:BA:346:U:O2'	2.24	0.61
2:BB:29:C:H2'	2:BB:30:U:O4'	2.00	0.61
33:DA:117:GLU:HG2	33:DA:118:GLU:H	1.65	0.61
33:DB:441:VAL:HG21	33:DB:490:PHE:CZ	2.34	0.61
34:DD:93:ILE:HB	34:DD:112:VAL:HG12	1.82	0.61
34:DD:252:VAL:HA	34:DD:256:LEU:CB	2.27	0.61
34:DD:268:LYS:H	34:DD:268:LYS:HD3	1.66	0.61
1:BA:1963:C:OP2	1:BA:1964:U:O2'	2.08	0.61
1:BA:2301:U:OP1	1:BA:2393:U:O2'	2.18	0.61
16:BP:60:ARG:O	16:BP:64:ARG:HG3	2.00	0.61
27:Ba:143:LYS:O	27:Ba:146:GLU:HG3	2.00	0.61
3:CC:40:ARG:O	3:CC:62:GLU:HG2	2.00	0.61
5:CE:22:VAL:HG23	5:CE:115:ARG:CG	2.30	0.61
33:DA:183:ASP:OD1	33:DB:132:ARG:NH2	2.34	0.61
33:DA:188:THR:HA	33:DA:199:VAL:CG2	2.29	0.61
33:DA:326:GLU:CB	33:DA:327:ILE:HD12	2.30	0.61
33:DA:487:PHE:CD2	33:DA:511:SER:HA	2.35	0.61
34:DC:406:LYS:HE3	34:DC:455:VAL:HG22	1.81	0.61
34:DC:455:VAL:HG12	34:DC:457:ILE:HG23	1.81	0.61
34:DD:406:LYS:NZ	34:DD:454:ASN:O	2.29	0.61
1:BA:683:C:O2	1:BA:723:U:O2'	2.19	0.61
1:BA:1109:G:N2	1:BA:1110:U:O4	2.32	0.61
1:CA:683:C:O2	1:CA:723:U:O2'	2.19	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:5:LYS:HB2	17:CQ:28:SER:O	1.99	0.61
33:DA:260:LYS:HD3	33:DA:358:GLU:O	2.00	0.61
33:DA:305:ILE:HG22	33:DA:327:ILE:N	2.14	0.61
33:DB:496:HIS:O	33:DB:499:GLU:HB2	2.01	0.61
34:DD:567:VAL:HG13	34:DD:611:GLN:HG3	1.82	0.61
34:DD:634:GLN:HB2	34:DD:659:ASP:CA	2.31	0.61
1:BA:2540:G:OP1	7:BG:164:ARG:NH1	2.30	0.61
9:BI:45:PRO:HD2	9:BI:139:GLU:HA	1.83	0.61
12:BL:75:LEU:O	12:BL:79:LEU:HD23	2.00	0.61
30:Bd:37:HIS:NE2	30:Bd:39:ARG:HB2	2.15	0.61
1:CA:2755:U:O2'	7:CG:143:GLU:OE2	2.15	0.61
19:CS:110:TYR:CG	19:CS:151:ARG:HD2	2.36	0.61
32:Cf:20:VAL:HG12	32:Cf:71:CYS:HA	1.81	0.61
33:DA:201:ARG:NH2	33:DB:202:LEU:O	2.32	0.61
33:DB:214:GLU:HB2	33:DB:218:GLN:OE1	2.01	0.61
33:DB:410:LYS:HE2	33:DB:537:LEU:CD1	2.30	0.61
34:DC:214:PRO:O	34:DC:218:LYS:HG3	2.00	0.61
34:DC:561:LEU:O	34:DC:565:GLU:HG2	2.00	0.61
34:DD:48:ILE:HD11	34:DD:343:GLY:CA	2.30	0.61
7:BG:94:HIS:O	34:DC:157:LEU:HD22	2.01	0.61
19:BS:68:SER:CB	19:BS:79:LYS:HD3	2.31	0.61
19:BS:110:TYR:CG	19:BS:151:ARG:HD2	2.36	0.61
1:CA:2652:G:OP1	10:CJ:57:ARG:NH1	2.24	0.61
25:CY:89:VAL:HG13	25:CY:94:ILE:HG22	1.83	0.61
33:DA:493:SER:HA	33:DA:496:HIS:CD2	2.35	0.61
33:DB:144:ILE:HD13	33:DB:171:LEU:HD22	1.81	0.61
33:DB:363:GLU:N	33:DB:363:GLU:OE1	2.33	0.61
1:BA:1973:A:N3	1:BA:2571:U:O2'	2.32	0.61
6:BF:8:LYS:HE3	6:BF:10:ILE:HD11	1.83	0.61
8:BH:23:LEU:HD23	8:BH:105:ALA:CB	2.31	0.61
1:CA:2712:U:OP2	16:CP:59:SER:OG	2.18	0.61
8:CH:23:LEU:HD23	8:CH:105:ALA:CB	2.31	0.61
9:CI:54:GLU:HB2	9:CI:159:THR:HG23	1.83	0.61
19:CS:68:SER:CB	19:CS:79:LYS:HD3	2.31	0.61
30:Cd:37:HIS:NE2	30:Cd:39:ARG:HB2	2.15	0.61
33:DA:71:HIS:HD2	33:DA:130:LEU:HA	1.66	0.61
33:DA:440:ARG:HD3	33:DA:489:PRO:CD	2.29	0.61
33:DB:494:VAL:HG11	33:DB:528:MET:HE1	1.83	0.61
34:DC:59:MET:CE	34:DC:94:ASP:HA	2.31	0.61
34:DC:195:ALA:O	34:DC:213:VAL:HB	1.99	0.61
34:DC:274:ASP:OD1	34:DC:276:ASN:ND2	2.32	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:164:MET:HE2	34:DD:227:TYR:HD2	1.64	0.61
7:BG:99:VAL:HG12	7:BG:130:VAL:HG11	1.81	0.61
14:BN:148:ILE:HD13	14:BN:159:PRO:HD3	1.83	0.61
25:BY:89:VAL:HG13	25:BY:94:ILE:HG22	1.83	0.61
32:Bf:20:VAL:HG12	32:Bf:71:CYS:HA	1.81	0.61
1:CA:1484:A:OP1	16:CP:13:LYS:NZ	2.26	0.61
1:CA:1827:A:O3'	3:CC:170:TRP:HB2	1.99	0.61
8:CH:18:LEU:O	8:CH:22:GLU:HG2	1.99	0.61
13:CM:47:ILE:O	13:CM:51:ARG:HG3	2.01	0.61
33:DA:66:LEU:C	33:DB:68:PRO:HG3	2.24	0.61
33:DA:246:TYR:HD2	33:DB:374:LEU:HD22	1.65	0.61
33:DA:378:ARG:NH1	33:DA:378:ARG:HA	2.15	0.61
33:DB:320:LEU:HD11	33:DB:325:ILE:CG1	2.29	0.61
33:DB:396:GLU:HA	33:DB:399:ARG:HD3	1.83	0.61
33:DB:410:LYS:HB2	33:DB:535:HIS:ND1	2.15	0.61
34:DC:31:ASP:HA	34:DC:70:ILE:HG21	1.81	0.61
1:BA:560:A:O2'	24:BX:77:ARG:NH2	2.32	0.61
10:BJ:77:LYS:HD2	10:BJ:98:LEU:HD23	1.83	0.61
11:BK:4:MET:HE3	11:BK:120:ARG:HD2	1.82	0.61
19:BS:25:ILE:HG21	19:BS:87:GLU:HG3	1.83	0.61
1:CA:1754:G:O2'	28:Cb:19:GLY:HA2	2.01	0.61
1:CA:2365:A:H5''	18:CR:54:ASN:HB2	1.81	0.61
4:CD:19:ARG:HG2	4:CD:255:GLN:HG2	1.83	0.61
4:CD:169:ALA:HB3	4:CD:175:LYS:CG	2.31	0.61
19:CS:25:ILE:HG21	19:CS:87:GLU:HG3	1.83	0.61
19:CS:28:LYS:HD3	19:CS:64:HIS:ND1	2.16	0.61
32:Cf:23:GLU:OE2	32:Cf:68:ARG:NE	2.31	0.61
33:DA:131:LEU:CD2	33:DA:175:ALA:HB1	2.29	0.61
33:DA:410:LYS:HD2	33:DA:535:HIS:CE1	2.36	0.61
33:DB:302:TYR:CE1	33:DB:323:LYS:HA	2.35	0.61
33:DB:419:LEU:CD1	33:DB:482:MET:HE2	2.31	0.61
34:DC:262:ALA:HB1	34:DC:266:ARG:HH21	1.66	0.61
34:DC:669:VAL:HA	34:DC:672:MET:CG	2.30	0.61
34:DD:628:VAL:O	34:DD:664:GLU:HA	2.00	0.61
1:BA:255:C:OP1	13:BM:43:ARG:NH2	2.34	0.60
11:BK:62:PRO:HG2	33:DB:4:ARG:HH21	1.65	0.60
12:BL:2:ASP:HB3	12:BL:5:LYS:HG2	1.83	0.60
20:BT:16:LEU:HD13	20:BT:63:VAL:HG13	1.83	0.60
21:BU:54:LYS:HE2	21:BU:102:MET:HE2	1.82	0.60
4:CD:81:ARG:HD2	4:CD:146:TYR:OH	2.01	0.60
33:DA:70:ILE:HD13	33:DA:92:ILE:HG23	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DB:326:GLU:HG3	33:DB:327:ILE:CD1	2.28	0.60
34:DD:425:LEU:HD12	34:DD:425:LEU:O	2.01	0.60
34:DD:637:MET:HE1	34:DD:656:THR:CG2	2.32	0.60
1:CA:28:C:OP1	21:CU:13:ARG:NE	2.27	0.60
1:CA:2650:C:H5''	10:CJ:71:ARG:HD2	1.83	0.60
11:CK:62:PRO:CG	33:DA:3:LYS:HE3	2.31	0.60
12:CL:92:TYR:HB2	12:CL:114:LEU:HD12	1.82	0.60
33:DA:473:CYS:C	33:DA:477:LEU:HG	2.26	0.60
33:DB:116:LEU:HD21	33:DB:193:THR:HG21	1.83	0.60
33:DB:486:ALA:HB2	33:DB:534:ARG:HB2	1.82	0.60
34:DC:22:ARG:NH1	34:DC:258:ASN:HB3	2.16	0.60
34:DC:335:VAL:HG13	34:DC:360:VAL:HG11	1.83	0.60
34:DC:400:HIS:CE1	34:DC:402:LYS:HB3	2.35	0.60
34:DC:653:ASN:ND2	34:DC:655:THR:HG23	2.11	0.60
34:DD:534:ILE:HD12	34:DD:543:PHE:O	2.02	0.60
1:BA:749:U:OP1	12:BL:26:ARG:HD2	2.01	0.60
4:BD:19:ARG:HG2	4:BD:255:GLN:HG2	1.83	0.60
13:BM:88:GLY:O	13:BM:89:LYS:HD3	2.00	0.60
1:CA:2540:G:OP1	7:CG:164:ARG:NH1	2.28	0.60
20:CT:16:LEU:HD13	20:CT:63:VAL:HG13	1.83	0.60
33:DA:313:ASP:OD1	33:DA:334:LYS:HB2	2.01	0.60
33:DA:417:VAL:HG23	33:DA:448:ALA:HB2	1.83	0.60
34:DD:1:MET:O	34:DD:6:LYS:HG3	2.01	0.60
34:DD:177:LYS:HG2	34:DD:181:ASN:ND2	2.16	0.60
19:BS:28:LYS:HD3	19:BS:64:HIS:ND1	2.16	0.60
1:CA:892:U:OP1	12:CL:18:LYS:NZ	2.26	0.60
1:CA:2301:U:OP1	1:CA:2393:U:O2'	2.18	0.60
1:CA:2365:A:O2'	1:CA:2367:C:OP2	2.15	0.60
3:CC:125:VAL:HG12	3:CC:126:TYR:H	1.67	0.60
8:CH:23:LEU:HD11	8:CH:104:LYS:HZ3	1.66	0.60
16:CP:60:ARG:O	16:CP:64:ARG:HG3	2.00	0.60
22:CV:57:ILE:O	22:CV:61:LYS:HG3	2.02	0.60
34:DC:628:VAL:HG12	34:DC:691:THR:HG22	1.82	0.60
1:BA:1973:A:C6	11:BK:32:ILE:HG23	2.37	0.60
1:BA:2259:G:O2'	1:BA:2507:U:OP1	2.19	0.60
20:BT:4:ILE:HD11	20:BT:39:VAL:HG23	1.83	0.60
1:CA:18:G:H5''	19:CS:4:ILE:HD12	1.83	0.60
2:CB:29:C:H2'	2:CB:30:U:O4'	2.00	0.60
15:CO:17:ILE:HD11	15:CO:89:LEU:HD21	1.84	0.60
33:DA:143:VAL:O	33:DA:171:LEU:HB3	2.00	0.60
34:DC:471:LYS:HG2	34:DC:472:LYS:HE3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:208:ASN:HA	34:DD:244:LEU:HB2	1.82	0.60
1:BA:2353:C:O2'	1:BA:2386:A:O2'	2.15	0.60
28:Bb:30:VAL:O	28:Bb:34:GLU:HG2	2.01	0.60
2:CB:2:A:H2'	2:CB:3:G:C8	2.36	0.60
33:DB:9:VAL:H	33:DB:35:THR:HG21	1.67	0.60
3:BC:125:VAL:HG12	3:BC:126:TYR:H	1.67	0.60
4:BD:81:ARG:HD2	4:BD:146:TYR:OH	2.01	0.60
1:CA:50:C:OP2	30:Cd:14:LYS:NZ	2.31	0.60
1:CA:339:U:O2'	21:CU:2:ILE:O	2.19	0.60
4:CD:85:ILE:HG12	4:CD:183:LEU:HD13	1.83	0.60
6:CF:70:GLU:O	6:CF:74:THR:HG23	2.02	0.60
7:CG:39:TYR:CE2	7:CG:65:MET:HG3	2.37	0.60
26:CZ:58:HIS:HA	26:CZ:61:GLU:HG3	1.83	0.60
33:DB:88:GLU:C	33:DB:92:ILE:HB	2.26	0.60
34:DC:73:ASP:HA	34:DC:96:PRO:CA	2.32	0.60
34:DC:204:SER:HB3	34:DC:209:TRP:NE1	2.15	0.60
34:DC:211:ILE:HA	34:DC:215:MET:CE	2.32	0.60
34:DD:33:GLY:CA	34:DD:69:GLY:HA2	2.31	0.60
4:BD:195:ASN:HB3	4:BD:324:GLU:OE1	2.01	0.60
11:BK:49:ILE:HA	11:BK:73:VAL:HG23	1.83	0.60
23:BW:56:ARG:O	23:BW:60:ILE:HG12	2.02	0.60
1:CA:255:C:OP1	13:CM:43:ARG:NH2	2.33	0.60
1:CA:507:G:H2'	19:CS:1:MET:HE1	1.83	0.60
1:CA:1973:A:C6	11:CK:32:ILE:HG23	2.37	0.60
4:CD:195:ASN:HB3	4:CD:324:GLU:OE1	2.01	0.60
7:CG:102:ASP:OD1	7:CG:105:THR:OG1	2.17	0.60
9:CI:6:GLY:HA2	9:CI:59:ARG:HH11	1.67	0.60
33:DA:7:LEU:CD2	33:DA:99:ALA:HB3	2.32	0.60
33:DA:77:LEU:HB3	33:DA:80:SER:HB3	1.83	0.60
33:DB:4:ARG:HH12	33:DB:94:LEU:HD23	1.66	0.60
33:DB:182:TYR:CD2	33:DB:186:ILE:HD11	2.37	0.60
34:DC:323:GLU:HA	34:DC:334:ARG:HA	1.82	0.60
34:DD:198:GLY:O	34:DD:251:MET:HE3	2.02	0.60
1:BA:546:G:OP2	27:Ba:127:ARG:NH2	2.31	0.60
6:BF:42:ALA:HB2	6:BF:57:ILE:HG13	1.83	0.60
6:CF:42:ALA:HB2	6:CF:57:ILE:HG13	1.83	0.60
20:CT:4:ILE:HD11	20:CT:39:VAL:HG23	1.83	0.60
24:CX:122:ARG:NH2	24:CX:153:ARG:OXT	2.34	0.60
33:DB:200:LEU:HD13	33:DB:375:LYS:HE2	1.84	0.60
33:DB:444:ILE:HG13	33:DB:448:ALA:CB	2.31	0.60
34:DD:266:ARG:HG3	34:DD:267:VAL:H	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:878:A:N6	3:BC:1:MET:O	2.33	0.60
1:BA:2752:A:OP1	31:Be:23:ARG:HG3	2.00	0.60
2:BB:2:A:H2'	2:BB:3:G:C8	2.36	0.60
4:BD:169:ALA:HB3	4:BD:175:LYS:CG	2.31	0.60
26:BZ:58:HIS:HA	26:BZ:61:GLU:HG3	1.83	0.60
1:CA:2836:G:H4'	4:CD:337:GLY:HA2	1.84	0.60
7:CG:112:LEU:HD11	7:CG:158:ILE:HG12	1.84	0.60
33:DA:503:ARG:CD	33:DA:526:ILE:HA	2.32	0.60
33:DB:534:ARG:HG3	33:DB:534:ARG:O	2.00	0.60
34:DC:24:ILE:HG22	34:DC:25:GLY:H	1.66	0.60
34:DC:122:VAL:HG22	34:DC:153:LEU:CD2	2.32	0.60
34:DD:575:ARG:O	34:DD:715:LYS:NZ	2.35	0.60
34:DD:655:THR:HB	34:DD:662:ILE:HB	1.83	0.60
2:BB:14:A:OP2	18:BR:20:ARG:HD3	2.02	0.59
9:BI:170:GLU:HG2	9:BI:171:LEU:HD12	1.84	0.59
13:BM:47:ILE:O	13:BM:51:ARG:HG3	2.01	0.59
14:BN:24:ARG:HG2	18:BR:27:VAL:HG21	1.84	0.59
19:BS:46:ARG:O	19:BS:50:GLU:HG2	2.02	0.59
24:BX:69:ARG:HG2	24:BX:118:LEU:HD23	1.83	0.59
2:CB:14:A:OP2	18:CR:20:ARG:HD3	2.02	0.59
14:CN:148:ILE:HD13	14:CN:159:PRO:HD3	1.83	0.59
24:CX:69:ARG:HG2	24:CX:118:LEU:HD23	1.83	0.59
33:DA:269:VAL:CG2	33:DA:308:THR:HG22	2.25	0.59
33:DA:415:ASN:N	33:DA:485:ASP:OD1	2.35	0.59
33:DB:414:SER:HB3	33:DB:485:ASP:OD1	2.02	0.59
34:DC:59:MET:HE3	34:DC:94:ASP:OD1	2.01	0.59
34:DC:99:VAL:HB	34:DC:128:GLN:OE1	2.02	0.59
34:DD:221:VAL:HG12	34:DD:226:VAL:HG23	1.84	0.59
34:DD:466:TYR:CD1	34:DD:621:LEU:HD21	2.37	0.59
1:BA:28:C:OP1	21:BU:13:ARG:NE	2.27	0.59
3:BC:94:ILE:HG12	3:BC:156:VAL:HG12	1.83	0.59
4:BD:75:ILE:HB	4:BD:295:ILE:CG2	2.32	0.59
14:BN:133:SER:OG	14:BN:135:GLU:OE1	2.21	0.59
1:CA:749:U:OP1	12:CL:26:ARG:HD2	2.01	0.59
1:CA:2398:U:O2'	18:CR:49:GLN:OE1	2.12	0.59
3:CC:94:ILE:HG12	3:CC:156:VAL:HG12	1.83	0.59
4:CD:111:LYS:N	4:CD:116:ILE:HD11	2.17	0.59
9:CI:45:PRO:HD2	9:CI:139:GLU:HA	1.83	0.59
19:CS:46:ARG:O	19:CS:50:GLU:HG2	2.02	0.59
33:DA:78:ARG:NE	33:DA:96:ASP:OD1	2.35	0.59
33:DA:478:SER:HA	33:DA:503:ARG:H	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:282:ALA:HA	34:DD:287:ASN:HB3	1.84	0.59
34:DD:357:ILE:HG13	34:DD:358:ALA:H	1.65	0.59
1:BA:339:U:O2'	21:BU:2:ILE:O	2.19	0.59
1:BA:507:G:H2'	19:BS:1:MET:HE1	1.83	0.59
1:BA:878:A:OP2	1:BA:2092:A:O2'	2.20	0.59
1:BA:1754:G:O2'	28:Bb:19:GLY:HA2	2.01	0.59
1:BA:2652:G:OP1	10:BJ:57:ARG:NH1	2.25	0.59
9:CI:170:GLU:HG2	9:CI:171:LEU:HD12	1.84	0.59
14:CN:133:SER:OG	14:CN:135:GLU:OE1	2.20	0.59
33:DA:58:MET:HG2	33:DB:69:ARG:HG3	1.85	0.59
33:DB:443:SER:O	33:DB:447:LEU:HB2	2.02	0.59
34:DC:59:MET:HE1	34:DC:94:ASP:HA	1.84	0.59
34:DC:411:LEU:HA	34:DC:414:VAL:CG2	2.32	0.59
34:DD:121:ALA:HB1	34:DD:153:LEU:HG	1.84	0.59
34:DD:215:MET:HE3	34:DD:219:THR:CG2	2.32	0.59
34:DD:216:MET:HE3	34:DD:223:PHE:HB2	1.84	0.59
1:BA:50:C:OP2	30:Bd:14:LYS:NZ	2.31	0.59
1:BA:324:G:O6	5:BE:172:LYS:NZ	2.36	0.59
15:BO:17:ILE:HD11	15:BO:89:LEU:HD21	1.83	0.59
22:BV:57:ILE:O	22:BV:61:LYS:HG3	2.02	0.59
6:CF:8:LYS:HE3	6:CF:10:ILE:HD11	1.83	0.59
14:CN:52:THR:HG22	14:CN:54:ASP:H	1.67	0.59
33:DA:74:LEU:HD12	33:DA:75:LEU:N	2.18	0.59
33:DA:330:ALA:O	33:DA:352:LYS:HB2	2.01	0.59
33:DB:405:CYS:SG	33:DB:418:ILE:HB	2.41	0.59
34:DC:163:GLU:O	34:DC:167:ARG:HG3	2.02	0.59
34:DC:407:LEU:CD1	34:DC:457:ILE:HD13	2.33	0.59
34:DC:544:ILE:HG22	34:DC:546:MET:HG2	1.84	0.59
34:DD:186:LYS:HD2	34:DD:191:TRP:CD1	2.38	0.59
34:DD:312:ARG:HB2	34:DD:357:ILE:HD12	1.85	0.59
1:BA:325:A:C2	21:BU:4:MET:HA	2.38	0.59
1:BA:2836:G:H4'	4:BD:337:GLY:HA2	1.84	0.59
6:BF:45:THR:H	6:BF:53:LYS:HD3	1.67	0.59
6:BF:70:GLU:O	6:BF:74:THR:HG23	2.02	0.59
8:BH:57:PRO:HB2	8:BH:59:GLU:OE1	2.03	0.59
25:BY:39:MET:HE2	25:BY:86:ILE:HD13	1.83	0.59
10:CJ:77:LYS:HD2	10:CJ:98:LEU:HD23	1.84	0.59
11:CK:4:MET:HE3	11:CK:120:ARG:HD2	1.83	0.59
28:Cb:30:VAL:O	28:Cb:34:GLU:HG2	2.02	0.59
32:Cf:1:MET:N	32:Cf:87:LYS:O	2.36	0.59
33:DA:182:TYR:O	33:DA:186:ILE:HG13	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DA:418:ILE:O	33:DA:482:MET:HG3	2.02	0.59
33:DB:258:THR:HA	33:DB:411:ALA:CB	2.26	0.59
34:DC:30:ILE:HG23	34:DC:70:ILE:CD1	2.33	0.59
34:DC:313:LEU:HD21	34:DC:318:LEU:CG	2.28	0.59
1:BA:18:G:H5''	19:BS:4:ILE:HD12	1.83	0.59
1:BA:117:C:N4	1:BA:1466:C:O3'	2.36	0.59
1:BA:153:C:OP1	13:BM:95:GLY:N	2.33	0.59
4:BD:85:ILE:HG12	4:BD:183:LEU:HD13	1.83	0.59
9:BI:54:GLU:HB2	9:BI:159:THR:HG23	1.83	0.59
1:CA:882:C:OP1	5:CE:58:SER:OG	2.07	0.59
1:CA:1862:C:O2'	1:CA:1992:U:OP2	2.20	0.59
12:CL:1:MET:HE1	12:CL:12:CYS:HB3	1.84	0.59
33:DA:12:LYS:HB2	34:DC:555:GLU:HB2	1.85	0.59
33:DA:421:HIS:ND1	33:DA:480:CYS:HA	2.17	0.59
33:DA:486:ALA:HA	33:DA:508:PRO:HG3	1.84	0.59
34:DD:41:LEU:HB3	34:DD:79:MET:SD	2.42	0.59
34:DD:104:ASP:O	34:DD:107:ARG:HG3	2.02	0.59
34:DD:113:ASP:O	34:DD:141:VAL:HA	2.02	0.59
34:DD:462:PRO:O	34:DD:714:ARG:NH1	2.34	0.59
1:BA:212:G:OP2	1:BA:214:C:N4	2.34	0.59
8:BH:116:LEU:HA	8:BH:119:LEU:HG	1.85	0.59
25:BY:39:MET:HE2	25:BY:94:ILE:HG23	1.85	0.59
5:CE:28:ARG:HG3	5:CE:112:TYR:HE2	1.67	0.59
8:CH:57:PRO:HB2	8:CH:59:GLU:OE1	2.03	0.59
12:CL:2:ASP:HB3	12:CL:5:LYS:HG2	1.84	0.59
33:DA:67:HIS:CE1	33:DB:68:PRO:HG2	2.37	0.59
33:DB:117:GLU:HG2	33:DB:118:GLU:H	1.68	0.59
33:DB:390:THR:HG23	33:DB:392:VAL:O	2.03	0.59
2:BB:2:A:H2'	2:BB:3:G:H8	1.68	0.59
4:BD:111:LYS:N	4:BD:116:ILE:HD11	2.17	0.59
4:BD:163:MET:HE1	4:BD:308:LEU:HD21	1.85	0.59
5:BE:28:ARG:HG3	5:BE:112:TYR:HE2	1.67	0.59
14:BN:52:THR:HG22	14:BN:54:ASP:H	1.67	0.59
19:BS:48:PHE:CZ	19:BS:59:VAL:HG12	2.38	0.59
30:Bd:14:LYS:HA	30:Bd:17:LYS:HE2	1.85	0.59
12:CL:94:ILE:HD12	12:CL:114:LEU:HD11	1.84	0.59
33:DA:67:HIS:HB2	33:DA:70:ILE:HG22	1.84	0.59
33:DB:126:GLY:O	33:DB:129:THR:OG1	2.12	0.59
34:DC:564:PHE:O	34:DC:568:MET:HG2	2.03	0.59
5:BE:22:VAL:HG23	5:BE:115:ARG:CG	2.30	0.59
7:BG:39:TYR:CE2	7:BG:65:MET:HG3	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:BG:104:LYS:NZ	7:BG:124:GLY:O	2.32	0.59
13:BM:45:THR:OG1	13:BM:131:GLU:OE2	2.18	0.59
32:Bf:1:MET:N	32:Bf:87:LYS:O	2.35	0.59
1:CA:1676:G:N2	29:Cc:5:THR:O	2.36	0.59
3:CC:70:LEU:HD21	3:CC:160:VAL:HG22	1.85	0.59
13:CM:88:GLY:O	13:CM:89:LYS:HD3	2.00	0.59
25:CY:39:MET:HE2	25:CY:94:ILE:HG23	1.85	0.59
25:CY:39:MET:HE2	25:CY:86:ILE:HD13	1.83	0.59
33:DA:245:SER:N	33:DA:248:ASN:OD1	2.36	0.59
33:DA:336:ASP:OD1	33:DA:337:ALA:N	2.36	0.59
33:DB:4:ARG:NH1	33:DB:94:LEU:HD23	2.18	0.59
33:DB:503:ARG:HA	33:DB:526:ILE:CD1	2.31	0.59
34:DC:229:TYR:HB3	34:DC:234:ASP:HB2	1.83	0.59
34:DC:701:SER:HA	34:DC:704:LEU:CD1	2.33	0.59
1:BA:184:A:N3	1:BA:199:U:O2'	2.34	0.59
1:CA:153:C:OP1	13:CM:95:GLY:N	2.33	0.59
14:CN:24:ARG:HG2	18:CR:27:VAL:HG21	1.84	0.59
30:Cd:14:LYS:HA	30:Cd:17:LYS:HE2	1.84	0.59
33:DA:111:LYS:NZ	34:DC:729:SER:HB3	2.18	0.59
33:DA:131:LEU:HD22	33:DA:179:THR:CG2	2.33	0.59
33:DB:381:GLY:O	33:DB:533:MET:HG3	2.03	0.59
34:DD:410:VAL:HG21	34:DD:455:VAL:CG2	2.32	0.59
1:BA:398:G:OP2	13:BM:70:ARG:NH2	2.27	0.58
1:BA:2650:C:H5''	10:BJ:71:ARG:HD2	1.85	0.58
3:BC:90:LYS:HB3	3:BC:93:ASN:ND2	2.18	0.58
4:BD:237:THR:HG22	4:BD:239:GLY:H	1.68	0.58
9:BI:6:GLY:HA2	9:BI:59:ARG:HH11	1.66	0.58
12:BL:94:ILE:HD12	12:BL:114:LEU:HD11	1.84	0.58
24:BX:122:ARG:NH2	24:BX:153:ARG:OXT	2.35	0.58
1:CA:325:A:C2	21:CU:4:MET:HA	2.38	0.58
1:CA:2689:G:H4'	4:CD:11:SER:HB2	1.84	0.58
33:DB:79:GLU:HA	33:DB:84:MET:SD	2.43	0.58
34:DC:335:VAL:HG22	34:DC:363:LEU:CD2	2.33	0.58
34:DC:335:VAL:HG13	34:DC:360:VAL:CG1	2.33	0.58
34:DC:421:LEU:CD1	34:DC:423:ILE:HG23	2.33	0.58
34:DD:42:LEU:HD12	34:DD:43:ALA:N	2.18	0.58
6:BF:129:GLU:OE1	6:BF:129:GLU:N	2.36	0.58
12:BL:1:MET:HE1	12:BL:12:CYS:HB3	1.84	0.58
1:CA:189:U:O4	1:CA:420:U:O2'	2.21	0.58
3:CC:90:LYS:HB3	3:CC:93:ASN:ND2	2.18	0.58
4:CD:132:LEU:HD23	4:CD:135:GLU:OE2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:48:PHE:CZ	19:CS:59:VAL:HG12	2.38	0.58
33:DA:97:LEU:HD12	33:DA:142:THR:HG23	1.83	0.58
33:DA:105:PHE:CD1	33:DA:123:ILE:HD13	2.38	0.58
33:DA:246:TYR:CE1	33:DB:538:HIS:HB3	2.38	0.58
33:DA:327:ILE:HG22	33:DA:329:LEU:HD12	1.84	0.58
33:DB:273:LYS:HG3	33:DB:300:SER:OG	2.03	0.58
33:DB:294:TRP:CZ2	33:DB:323:LYS:HB3	2.38	0.58
34:DC:10:ARG:NE	34:DC:80:VAL:HG11	2.17	0.58
34:DC:142:ARG:HH22	34:DC:199:THR:HG21	1.69	0.58
34:DC:603:ILE:HB	34:DC:604:PRO:HD3	1.84	0.58
34:DD:541:ASN:HD21	34:DD:579:ALA:HA	1.68	0.58
1:BA:1411:A:N1	1:BA:1422:C:O2'	2.32	0.58
1:CA:412:C:OP2	1:CA:2419:C:N4	2.35	0.58
8:CH:116:LEU:HA	8:CH:119:LEU:HG	1.85	0.58
20:CT:43:TYR:CE1	20:CT:79:ILE:HD11	2.38	0.58
23:CW:12:MET:HE3	23:CW:17:ARG:HG2	1.86	0.58
33:DB:102:LEU:HD21	33:DB:128:PRO:HD3	1.86	0.58
33:DB:111:LYS:HG3	33:DB:112:GLU:CD	2.29	0.58
34:DC:174:HIS:O	34:DC:178:LEU:HG	2.03	0.58
34:DC:384:ILE:HG22	34:DC:385:ARG:H	1.68	0.58
8:BH:21:LEU:HD23	8:BH:87:ALA:CB	2.33	0.58
13:BM:100:ARG:NH2	13:BM:171:GLY:HA3	2.19	0.58
21:BU:55:VAL:O	21:BU:62:GLY:N	2.29	0.58
1:CA:1052:U:O2'	1:CA:2283:A:N3	2.31	0.58
20:CT:25:ILE:CD1	20:CT:61:LYS:HG2	2.34	0.58
27:Ca:108:VAL:HG21	27:Ca:124:GLU:OE1	2.03	0.58
33:DA:66:LEU:HD21	33:DA:126:GLY:HA2	1.85	0.58
33:DA:187:ASP:OD2	33:DA:199:VAL:HG21	2.02	0.58
33:DA:507:SER:O	33:DA:530:PHE:HA	2.03	0.58
34:DC:83:PHE:HB3	34:DC:88:TYR:CE1	2.38	0.58
34:DC:487:ARG:HB2	34:DC:589:LYS:HB3	1.85	0.58
34:DD:221:VAL:HG12	34:DD:226:VAL:CG2	2.34	0.58
34:DD:252:VAL:HG22	34:DD:256:LEU:HD13	1.85	0.58
34:DD:312:ARG:HA	34:DD:357:ILE:HD12	1.85	0.58
34:DD:318:LEU:HD12	34:DD:352:ILE:HD12	1.86	0.58
34:DD:391:VAL:HG21	34:DD:696:PHE:HZ	1.67	0.58
4:BD:132:LEU:HD23	4:BD:135:GLU:OE2	2.03	0.58
1:CA:51:G:OP1	30:Cd:17:LYS:NZ	2.29	0.58
2:CB:100:U:H2'	2:CB:101:C:C6	2.38	0.58
3:CC:40:ARG:NH2	3:CC:80:ILE:HG21	2.18	0.58
4:CD:163:MET:HE1	4:CD:308:LEU:HD21	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:119:ALA:O	14:CN:123:VAL:HG23	2.04	0.58
14:CN:170:PHE:O	14:CN:174:SER:OG	2.07	0.58
15:CO:58:ILE:HG23	15:CO:68:LEU:HD21	1.86	0.58
33:DA:299:ILE:HD12	33:DB:438:PRO:CG	2.25	0.58
33:DA:315:GLU:HG2	33:DA:316:ALA:H	1.69	0.58
34:DD:83:PHE:CB	34:DD:253:ILE:HD13	2.33	0.58
34:DD:149:LYS:HG2	34:DD:204:SER:OG	2.03	0.58
34:DD:428:GLU:HG2	34:DD:429:THR:H	1.66	0.58
1:BA:1972:U:OP2	11:BK:66:LYS:NZ	2.35	0.58
14:BN:164:ALA:O	14:BN:167:GLU:HG3	2.03	0.58
15:BO:58:ILE:HG23	15:BO:68:LEU:HD21	1.86	0.58
25:BY:53:LYS:O	25:BY:57:THR:HG23	2.04	0.58
1:CA:878:A:OP2	1:CA:2092:A:O2'	2.20	0.58
4:CD:75:ILE:HB	4:CD:295:ILE:CG2	2.32	0.58
13:CM:100:ARG:NH2	13:CM:171:GLY:HA3	2.19	0.58
14:CN:164:ALA:O	14:CN:167:GLU:HG3	2.03	0.58
22:CV:50:GLU:O	22:CV:56:LYS:HE2	2.04	0.58
23:CW:56:ARG:O	23:CW:60:ILE:HG12	2.02	0.58
33:DA:197:GLU:CG	33:DB:206:ASP:HA	2.30	0.58
33:DB:419:LEU:HB2	33:DB:432:GLY:H	1.69	0.58
34:DC:471:LYS:CG	34:DC:472:LYS:HE3	2.33	0.58
34:DD:110:ARG:HG2	34:DD:270:ILE:CD1	2.23	0.58
1:BA:1676:G:N2	29:Bc:5:THR:O	2.36	0.58
1:BA:2689:G:H4'	4:BD:11:SER:HB2	1.84	0.58
3:BC:70:LEU:HD21	3:BC:160:VAL:HG22	1.85	0.58
3:BC:136:ARG:HB3	3:BC:148:TRP:CE3	2.39	0.58
14:BN:119:ALA:O	14:BN:123:VAL:HG23	2.04	0.58
20:BT:43:TYR:CE1	20:BT:79:ILE:HD11	2.38	0.58
22:BV:50:GLU:O	22:BV:56:LYS:HE2	2.04	0.58
27:Ba:108:VAL:HG21	27:Ba:124:GLU:OE1	2.03	0.58
8:CH:21:LEU:HD23	8:CH:87:ALA:CB	2.33	0.58
14:CN:148:ILE:HG21	14:CN:158:LEU:HB2	1.86	0.58
30:Cd:24:VAL:O	30:Cd:28:VAL:HG23	2.03	0.58
33:DA:211:ARG:HB3	33:DA:212:TYR:CD2	2.38	0.58
33:DA:323:LYS:O	33:DA:325:ILE:HG12	2.03	0.58
33:DB:417:VAL:HB	33:DB:482:MET:SD	2.44	0.58
34:DD:10:ARG:O	34:DD:14:LEU:HG	2.03	0.58
34:DD:495:LEU:HD22	34:DD:500:VAL:CG2	2.33	0.58
34:DD:639:GLY:O	34:DD:642:LYS:HG2	2.03	0.58
25:BY:14:LYS:HD2	25:BY:91:GLU:O	2.04	0.58
1:CA:117:C:N4	1:CA:1466:C:O3'	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2124:U:O2	1:CA:2206:G:N2	2.36	0.58
4:CD:237:THR:HG22	4:CD:239:GLY:H	1.68	0.58
33:DA:116:LEU:HD21	33:DA:194:LEU:CD2	2.34	0.58
33:DB:182:TYR:O	33:DB:186:ILE:HG13	2.03	0.58
33:DB:363:GLU:CA	33:DB:378:ARG:HB2	2.33	0.58
34:DC:312:ARG:HA	34:DC:357:ILE:HA	1.86	0.58
34:DC:336:GLN:HE21	34:DC:362:GLY:HA3	1.68	0.58
34:DC:573:LEU:HD12	34:DC:722:PRO:CG	2.33	0.58
34:DD:8:VAL:N	34:DD:342:MET:HE1	2.17	0.58
34:DD:39:ASP:OD2	34:DD:57:LEU:HD22	2.02	0.58
34:DD:271:TRP:HE3	34:DD:275:GLU:HG3	1.69	0.58
34:DD:391:VAL:HG21	34:DD:696:PHE:CZ	2.38	0.58
2:BB:30:U:H2'	2:BB:31:C:C6	2.39	0.58
8:BH:107:GLU:O	8:BH:110:GLN:HG3	2.04	0.58
1:CA:375:G:OP2	13:CM:46:ARG:NH1	2.36	0.58
2:CB:2:A:H2'	2:CB:3:G:H8	1.68	0.58
2:CB:61:C:OP1	6:CF:139:ARG:NH1	2.37	0.58
4:CD:276:GLU:OE1	4:CD:276:GLU:N	2.36	0.58
14:CN:28:LEU:HB3	18:CR:31:ILE:HD13	1.86	0.58
23:CW:46:ARG:O	23:CW:50:ILE:HG13	2.04	0.58
33:DA:321:ASN:HA	33:DA:344:LYS:CE	2.28	0.58
33:DA:375:LYS:HD2	33:DB:223:TYR:OH	2.03	0.58
34:DD:312:ARG:CB	34:DD:357:ILE:HD12	2.34	0.58
6:BF:51:ILE:HG21	6:BF:57:ILE:HD11	1.86	0.58
14:BN:99:GLU:OE1	14:BN:99:GLU:N	2.37	0.58
23:BW:12:MET:HE3	23:BW:17:ARG:HG2	1.86	0.58
23:BW:46:ARG:O	23:BW:50:ILE:HG13	2.04	0.58
1:CA:1973:A:N3	1:CA:2571:U:O2'	2.33	0.58
5:CE:10:THR:O	5:CE:161:ALA:HB1	2.04	0.58
5:CE:43:ARG:NH2	5:CE:226:GLU:OE1	2.32	0.58
14:CN:99:GLU:OE1	14:CN:99:GLU:N	2.37	0.58
33:DA:414:SER:HB3	33:DA:485:ASP:OD1	2.04	0.58
33:DA:414:SER:N	33:DA:537:LEU:O	2.37	0.58
33:DA:441:VAL:O	33:DA:445:ARG:HG2	2.04	0.58
33:DB:77:LEU:HD23	33:DB:139:ARG:HB2	1.86	0.58
33:DB:84:MET:HE1	33:DB:94:LEU:HD13	1.84	0.58
33:DB:134:ALA:HB1	33:DB:143:VAL:HG12	1.85	0.58
34:DC:34:LYS:CE	34:DC:71:THR:HB	2.34	0.58
34:DC:271:TRP:HZ3	34:DC:275:GLU:HA	1.68	0.58
34:DC:320:ARG:NH1	34:DC:348:GLU:OE2	2.33	0.58
34:DD:243:PRO:HD2	34:DD:246:GLU:OE1	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:2461:A:N6	1:BA:2512:C:O2	2.37	0.57
2:BB:25:G:O6	2:BB:57:U:O2'	2.20	0.57
2:BB:61:C:OP1	6:BF:139:ARG:NH1	2.37	0.57
30:Bd:24:VAL:O	30:Bd:28:VAL:HG23	2.03	0.57
1:CA:77:A:H3'	21:CU:48:ILE:HG23	1.86	0.57
33:DA:73:GLY:HA3	33:DA:87:ALA:HB2	1.85	0.57
33:DA:328:ILE:HG21	33:DA:333:PHE:HE1	1.68	0.57
34:DC:292:LEU:HD21	34:DC:372:VAL:HG12	1.86	0.57
34:DC:392:VAL:HG23	34:DC:442:LEU:HD11	1.86	0.57
34:DC:500:VAL:HG12	34:DC:504:LYS:HE2	1.86	0.57
34:DD:21:ILE:HD12	34:DD:89:LEU:HB3	1.85	0.57
34:DD:410:VAL:HA	34:DD:453:LYS:CD	2.33	0.57
1:BA:293:A:O2'	1:BA:294:A:O4'	2.10	0.57
1:BA:2124:U:O2	1:BA:2206:G:N2	2.36	0.57
2:BB:100:U:H2'	2:BB:101:C:C6	2.38	0.57
4:BD:268:ILE:HG21	4:BD:271:ILE:HD11	1.86	0.57
17:BQ:26:ILE:CG2	17:BQ:37:LYS:HD2	2.33	0.57
27:Ba:121:PRO:HG3	27:Ba:149:ILE:CG1	2.34	0.57
1:CA:878:A:N6	3:CC:1:MET:O	2.33	0.57
2:CB:30:U:H2'	2:CB:31:C:C6	2.39	0.57
11:CK:107:THR:O	11:CK:127:THR:HG23	2.05	0.57
33:DA:123:ILE:CD1	33:DA:186:ILE:HG12	2.33	0.57
33:DB:409:CYS:CB	33:DB:418:ILE:HG13	2.28	0.57
34:DC:8:VAL:O	34:DC:11:VAL:HB	2.03	0.57
34:DC:521:LEU:HD22	34:DC:526:MET:SD	2.44	0.57
34:DC:714:ARG:NH2	34:DC:715:LYS:HE3	2.19	0.57
34:DD:30:ILE:CG2	34:DD:70:ILE:HG21	2.32	0.57
1:BA:1862:C:O2'	1:BA:1992:U:OP2	2.21	0.57
8:BH:21:LEU:HD23	8:BH:87:ALA:HB3	1.86	0.57
14:BN:90:GLY:HA3	14:BN:126:SER:OG	2.03	0.57
20:BT:25:ILE:CD1	20:BT:61:LYS:HG2	2.34	0.57
23:BW:53:THR:O	23:BW:57:ILE:HG13	2.04	0.57
3:CC:136:ARG:HB3	3:CC:148:TRP:CE3	2.39	0.57
5:CE:124:PRO:HA	5:CE:138:LEU:HD12	1.86	0.57
6:CF:129:GLU:N	6:CF:129:GLU:OE1	2.36	0.57
27:Ca:121:PRO:HG3	27:Ca:149:ILE:CG1	2.34	0.57
30:Cd:41:ARG:NE	30:Cd:48:LEU:HD21	2.20	0.57
33:DA:402:SER:O	33:DA:406:LEU:HG	2.03	0.57
33:DB:116:LEU:HD21	33:DB:193:THR:CG2	2.33	0.57
33:DB:200:LEU:HD21	33:DB:366:TYR:HE1	1.69	0.57
33:DB:240:HIS:HB3	33:DB:342:LYS:NZ	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DB:482:MET:O	33:DB:506:VAL:N	2.38	0.57
34:DC:31:ASP:H	34:DC:70:ILE:HG21	1.70	0.57
34:DC:414:VAL:HG12	34:DC:421:LEU:HD21	1.85	0.57
34:DD:281:LYS:HB3	34:DD:285:HIS:NE2	2.18	0.57
34:DD:323:GLU:HG2	34:DD:334:ARG:HH22	1.68	0.57
1:BA:1571:A:N1	1:BA:1584:C:O2'	2.38	0.57
5:BE:124:PRO:HA	5:BE:138:LEU:HD12	1.86	0.57
7:BG:102:ASP:OD1	7:BG:105:THR:OG1	2.18	0.57
14:BN:148:ILE:HG21	14:BN:158:LEU:HB2	1.86	0.57
27:Ba:76:GLN:O	27:Ba:86:LEU:HD21	2.03	0.57
1:CA:2129:A:N6	1:CA:2200:C:OP2	2.37	0.57
14:CN:90:GLY:HA3	14:CN:126:SER:OG	2.03	0.57
18:CR:75:GLU:OE2	18:CR:82:MET:HB3	2.04	0.57
25:CY:53:LYS:O	25:CY:57:THR:HG23	2.04	0.57
33:DA:414:SER:HB3	33:DA:485:ASP:CG	2.29	0.57
33:DA:500:ASN:O	33:DA:502:ILE:HG13	2.03	0.57
33:DB:526:ILE:HG22	33:DB:528:MET:HE2	1.86	0.57
34:DC:31:ASP:N	34:DC:70:ILE:HG21	2.20	0.57
34:DC:292:LEU:HG	34:DC:372:VAL:O	2.03	0.57
34:DD:110:ARG:CZ	34:DD:270:ILE:HB	2.34	0.57
34:DD:216:MET:HE3	34:DD:223:PHE:N	2.06	0.57
34:DD:271:TRP:CE3	34:DD:275:GLU:HG3	2.39	0.57
1:BA:647:G:OP2	15:BO:48:ARG:HD2	2.05	0.57
5:BE:10:THR:O	5:BE:161:ALA:HB1	2.04	0.57
18:BR:75:GLU:OE2	18:BR:82:MET:HB3	2.04	0.57
1:CA:118:C:N3	29:Cc:20:ARG:NE	2.49	0.57
1:CA:1244:A:OP1	24:CX:123:LYS:NZ	2.34	0.57
8:CH:35:ASN:O	8:CH:39:LYS:HG2	2.05	0.57
28:Cb:50:THR:HB	28:Cb:62:SER:OG	2.05	0.57
33:DA:367:LYS:HE3	33:DB:246:TYR:OH	2.03	0.57
33:DB:273:LYS:HD3	33:DB:304:SER:HB3	1.84	0.57
33:DB:314:LEU:HA	33:DB:317:ALA:HB3	1.86	0.57
34:DC:36:THR:CG2	34:DC:206:LEU:HD23	2.34	0.57
34:DC:626:GLN:NE2	34:DC:672:MET:HG3	2.18	0.57
4:BD:201:THR:HG22	4:BD:311:LEU:CD2	2.35	0.57
11:BK:5:ARG:O	11:BK:83:PRO:HG3	2.05	0.57
12:BL:92:TYR:CE1	12:BL:112:LYS:HD3	2.40	0.57
12:BL:121:PHE:HB2	12:BL:126:ARG:HE	1.69	0.57
28:Bb:50:THR:HB	28:Bb:62:SER:OG	2.05	0.57
1:CA:21:G:O2'	1:CA:22:A:OP2	2.21	0.57
1:CA:324:G:O6	5:CE:172:LYS:NZ	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:647:G:OP2	15:CO:48:ARG:HD2	2.05	0.57
1:CA:2183:G:N7	1:CA:2193:C:N4	2.53	0.57
1:CA:2761:C:O2	31:Ce:27:ARG:NH2	2.35	0.57
2:CB:14:A:N1	2:CB:70:G:O2'	2.35	0.57
4:CD:268:ILE:HG21	4:CD:271:ILE:HD11	1.86	0.57
6:CF:45:THR:H	6:CF:53:LYS:HD3	1.67	0.57
8:CH:107:GLU:O	8:CH:110:GLN:HG3	2.04	0.57
12:CL:119:GLU:N	12:CL:119:GLU:OE1	2.38	0.57
12:CL:121:PHE:HB2	12:CL:126:ARG:HE	1.69	0.57
15:CO:107:LEU:HD23	15:CO:107:LEU:H	1.70	0.57
26:CZ:5:MET:HG2	26:CZ:78:PHE:CE2	2.40	0.57
33:DA:253:ASP:CG	33:DB:369:VAL:HG13	2.30	0.57
33:DA:260:LYS:HD2	33:DA:360:PHE:CE1	2.40	0.57
33:DB:395:PRO:HD2	33:DB:398:LYS:HB2	1.86	0.57
34:DC:171:VAL:O	34:DC:175:VAL:HG23	2.05	0.57
34:DC:203:GLY:HA2	34:DC:209:TRP:CZ3	2.39	0.57
34:DC:676:ALA:O	34:DC:679:ILE:HG22	2.05	0.57
1:BA:1103:G:N2	17:BQ:44:SER:HB2	2.20	0.57
4:BD:276:GLU:OE1	4:BD:276:GLU:N	2.37	0.57
1:CA:1424:G:H5''	30:Cd:21:ARG:HD3	1.87	0.57
1:CA:2018:U:OP2	4:CD:223:LYS:NZ	2.27	0.57
1:CA:2130:U:N3	1:CA:2202:U:O2	2.38	0.57
1:CA:2461:A:N6	1:CA:2512:C:O2	2.37	0.57
6:CF:29:LEU:HD22	6:CF:37:VAL:HB	1.87	0.57
7:CG:96:PRO:CG	34:DD:157:LEU:HA	2.34	0.57
8:CH:21:LEU:HD23	8:CH:87:ALA:HB3	1.86	0.57
23:CW:53:THR:O	23:CW:57:ILE:HG13	2.05	0.57
25:CY:14:LYS:HD2	25:CY:91:GLU:O	2.04	0.57
33:DA:223:TYR:CE1	33:DB:198:GLU:HG2	2.39	0.57
33:DA:267:PRO:HG2	33:DA:284:ASP:C	2.30	0.57
33:DA:282:THR:OG1	33:DA:427:TYR:HA	2.05	0.57
33:DA:498:ALA:HB2	33:DA:526:ILE:HD11	1.85	0.57
33:DB:143:VAL:HG21	33:DB:172:ALA:HA	1.86	0.57
33:DB:454:GLU:O	33:DB:457:LYS:HB3	2.04	0.57
33:DB:498:ALA:HB2	33:DB:526:ILE:HD11	1.87	0.57
33:DB:508:PRO:HG3	33:DB:531:THR:OG1	2.05	0.57
34:DC:30:ILE:H	34:DC:30:ILE:HD12	1.69	0.57
34:DC:38:SER:HB3	34:DC:59:MET:HG2	1.86	0.57
1:BA:325:A:H1'	21:BU:4:MET:HE3	1.87	0.57
1:BA:653:A:N7	1:BA:737:G:O2'	2.26	0.57
4:BD:111:LYS:HA	4:BD:114:ILE:O	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:BF:38:VAL:HG22	6:BF:60:LYS:O	2.05	0.57
6:BF:45:THR:CB	6:BF:52:LYS:HA	2.35	0.57
12:BL:80:VAL:HA	12:BL:85:ALA:O	2.05	0.57
26:BZ:5:MET:HG2	26:BZ:78:PHE:CE2	2.40	0.57
1:CA:293:A:O2'	1:CA:294:A:O4'	2.10	0.57
7:CG:96:PRO:HD3	34:DD:157:LEU:CD2	2.34	0.57
9:CI:111:SER:OG	9:CI:112:GLY:N	2.36	0.57
10:CJ:61:ALA:O	10:CJ:64:PHE:N	2.37	0.57
17:CQ:26:ILE:CG2	17:CQ:37:LYS:HD2	2.33	0.57
33:DA:253:ASP:OD2	33:DB:369:VAL:HG13	2.05	0.57
33:DA:394:TYR:CD1	33:DA:527:ALA:HB1	2.40	0.57
34:DC:292:LEU:HD22	34:DC:324:VAL:HG11	1.87	0.57
34:DD:349:VAL:CG2	34:DD:352:ILE:HD11	2.35	0.57
1:BA:849:A:H5''	3:BC:174:GLY:HA3	1.87	0.57
5:BE:28:ARG:HG3	5:BE:112:TYR:CE2	2.40	0.57
11:BK:107:THR:O	11:BK:127:THR:HG23	2.05	0.57
15:BO:107:LEU:HD23	15:BO:107:LEU:H	1.70	0.57
1:CA:546:G:OP2	27:Ca:127:ARG:NH2	2.31	0.57
1:CA:2435:A:OP2	32:Cf:64:ARG:NH1	2.36	0.57
2:CB:25:G:O6	2:CB:57:U:O2'	2.20	0.57
9:CI:23:MET:SD	9:CI:94:VAL:HG21	2.45	0.57
14:CN:12:ARG:O	14:CN:16:GLU:HG3	2.04	0.57
23:CW:30:ARG:O	23:CW:34:LEU:HG	2.05	0.57
33:DA:110:SER:OG	33:DA:113:GLY:O	2.17	0.57
33:DA:505:ILE:O	33:DA:528:MET:HA	2.04	0.57
33:DB:53:THR:HG23	33:DB:55:TYR:H	1.70	0.57
34:DC:485:HIS:HB3	34:DC:591:HIS:HB2	1.86	0.57
34:DD:288:ALA:O	34:DD:316:GLY:N	2.37	0.57
1:BA:1711:G:H5''	26:BZ:20:LYS:HD3	1.87	0.57
8:BH:83:GLU:OE1	8:BH:83:GLU:N	2.36	0.57
1:CA:398:G:OP2	13:CM:70:ARG:NH2	2.27	0.57
4:CD:111:LYS:HA	4:CD:114:ILE:O	2.04	0.57
5:CE:9:LEU:HD21	5:CE:146:LEU:HA	1.87	0.57
6:CF:45:THR:OG1	6:CF:51:ILE:O	2.21	0.57
27:Ca:76:GLN:O	27:Ca:86:LEU:HD21	2.04	0.57
33:DA:133:SER:O	33:DA:136:LYS:HB3	2.05	0.57
34:DC:77:VAL:CG2	34:DC:92:LEU:HB3	2.35	0.57
34:DD:33:GLY:HA2	34:DD:69:GLY:HA2	1.86	0.57
34:DD:526:MET:SD	34:DD:582:LYS:NZ	2.78	0.57
1:BA:375:G:OP2	13:BM:46:ARG:NH1	2.37	0.56
1:BA:1726:G:O2'	1:BA:2012:U:O4	2.18	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:BH:23:LEU:HD11	8:BH:104:LYS:HZ3	1.70	0.56
8:BH:35:ASN:O	8:BH:39:LYS:HG2	2.05	0.56
7:CG:142:LYS:HA	7:CG:145:VAL:HG12	1.87	0.56
15:CO:1:MET:HG2	15:CO:5:SER:HB2	1.87	0.56
21:CU:113:ARG:O	21:CU:117:ILE:HG13	2.05	0.56
33:DA:199:VAL:HG11	33:DB:177:ARG:HH21	1.70	0.56
33:DA:421:HIS:NE2	33:DA:476:ILE:HD12	2.20	0.56
34:DC:623:GLU:HB3	34:DC:699:VAL:HG22	1.86	0.56
34:DD:451:ARG:O	34:DD:451:ARG:HD3	2.05	0.56
1:BA:77:A:H3'	21:BU:48:ILE:HG23	1.87	0.56
9:BI:23:MET:SD	9:BI:94:VAL:HG21	2.45	0.56
30:Bd:41:ARG:NE	30:Bd:48:LEU:HD21	2.20	0.56
1:CA:177:C:OP2	29:Cc:44:ARG:NH2	2.23	0.56
1:CA:184:A:N3	1:CA:199:U:O2'	2.33	0.56
1:CA:2353:C:O2'	1:CA:2386:A:O2'	2.15	0.56
1:CA:2811:U:O2'	4:CD:307:ARG:NH1	2.38	0.56
4:CD:201:THR:HG22	4:CD:311:LEU:CD2	2.35	0.56
33:DA:39:LEU:HD12	33:DA:46:VAL:HG21	1.87	0.56
33:DB:63:VAL:O	33:DB:64:LYS:HG2	2.05	0.56
33:DB:186:ILE:O	33:DB:190:LEU:HD12	2.05	0.56
33:DB:224:LYS:NZ	33:DB:234:ALA:HA	2.20	0.56
33:DB:259:VAL:HG11	33:DB:307:CYS:O	2.05	0.56
33:DB:315:GLU:HG2	33:DB:316:ALA:N	2.20	0.56
33:DB:404:PHE:HB3	33:DB:420:ALA:CB	2.34	0.56
33:DB:439:ASN:O	33:DB:442:ASP:HB2	2.05	0.56
33:DB:489:PRO:HB2	33:DB:490:PHE:CD1	2.40	0.56
34:DD:76:ASN:HD21	34:DD:310:THR:HG21	1.70	0.56
34:DD:82:THR:HA	34:DD:86:GLU:O	2.05	0.56
1:BA:455:A:N7	1:BA:472:C:N4	2.53	0.56
1:BA:1398:G:N7	30:Bd:2:SER:HB3	2.20	0.56
1:BA:1584:C:OP2	28:Bb:63:LYS:HE2	2.05	0.56
1:BA:2811:U:O2'	4:BD:307:ARG:NH1	2.38	0.56
2:BB:24:G:O2'	2:BB:25:G:O5'	2.22	0.56
7:BG:142:LYS:HA	7:BG:145:VAL:HG12	1.87	0.56
14:BN:12:ARG:O	14:BN:16:GLU:HG3	2.04	0.56
15:BO:1:MET:HG2	15:BO:5:SER:HB2	1.87	0.56
23:BW:30:ARG:O	23:BW:34:LEU:HG	2.05	0.56
32:Bf:31:SER:HB3	32:Bf:34:THR:HG23	1.87	0.56
1:CA:212:G:OP2	1:CA:214:C:N4	2.34	0.56
1:CA:849:A:H5''	3:CC:174:GLY:HA3	1.87	0.56
1:CA:2827:U:H5''	4:CD:156:PRO:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:11:ILE:HD12	7:CG:17:VAL:HG11	1.86	0.56
12:CL:92:TYR:CE1	12:CL:112:LYS:HD3	2.40	0.56
33:DA:255:ALA:HB2	33:DA:272:VAL:CG1	2.35	0.56
33:DA:280:LEU:O	33:DA:430:VAL:HG23	2.06	0.56
33:DA:431:LEU:HG	33:DA:452:ALA:HA	1.87	0.56
33:DB:167:THR:HG22	33:DB:171:LEU:HD12	1.86	0.56
33:DB:244:LEU:HD11	33:DB:249:TYR:CE1	2.41	0.56
33:DB:312:PHE:HE1	33:DB:316:ALA:HB3	1.69	0.56
34:DC:193:VAL:HG12	34:DC:199:THR:HB	1.87	0.56
34:DC:639:GLY:HA2	34:DC:642:LYS:HG2	1.87	0.56
34:DD:282:ALA:HB2	34:DD:289:GLU:HB2	1.87	0.56
6:BF:29:LEU:HD22	6:BF:37:VAL:HB	1.86	0.56
17:BQ:28:SER:OG	17:BQ:33:ASN:HB3	2.05	0.56
21:BU:113:ARG:O	21:BU:117:ILE:HG13	2.05	0.56
1:CA:455:A:N7	1:CA:472:C:N4	2.54	0.56
1:CA:1103:G:N2	17:CQ:44:SER:HB2	2.20	0.56
1:CA:1711:G:H5''	26:CZ:20:LYS:HD3	1.87	0.56
1:CA:1972:U:OP2	11:CK:66:LYS:NZ	2.39	0.56
14:CN:38:ARG:HA	14:CN:108:GLN:NE2	2.20	0.56
33:DA:291:GLN:HG2	33:DA:319:PHE:CZ	2.40	0.56
33:DA:302:TYR:CZ	33:DA:323:LYS:HA	2.40	0.56
33:DA:388:SER:HB2	33:DA:529:VAL:CG2	2.36	0.56
33:DA:395:PRO:HD2	33:DA:398:LYS:HB2	1.85	0.56
33:DA:503:ARG:HD2	33:DA:503:ARG:O	2.05	0.56
33:DB:398:LYS:HA	33:DB:401:LEU:HD23	1.87	0.56
34:DC:279:ILE:HG12	34:DC:378:MET:SD	2.46	0.56
34:DC:296:VAL:HG21	34:DC:366:ALA:HB1	1.86	0.56
34:DC:433:LEU:HD12	34:DC:433:LEU:O	2.05	0.56
34:DD:110:ARG:CG	34:DD:270:ILE:HD12	2.24	0.56
1:BA:21:G:O2'	1:BA:22:A:OP2	2.22	0.56
1:BA:310:A:N3	1:BA:330:G:O2'	2.38	0.56
1:BA:859:C:OP1	3:BC:12:ARG:NH2	2.39	0.56
1:BA:2183:G:N7	1:BA:2193:C:N4	2.53	0.56
1:BA:2653:G:OP1	10:BJ:62:THR:HB	2.06	0.56
4:BD:264:PHE:CG	4:BD:316:ARG:HD3	2.41	0.56
10:BJ:61:ALA:O	10:BJ:64:PHE:N	2.37	0.56
14:BN:28:LEU:HB3	18:BR:31:ILE:HD13	1.86	0.56
1:CA:1312:U:O2'	27:Ca:87:VAL:HG13	2.05	0.56
1:CA:1584:C:OP2	28:Cb:63:LYS:HE2	2.05	0.56
2:CB:24:G:O2'	2:CB:25:G:O5'	2.22	0.56
6:CF:51:ILE:HG21	6:CF:57:ILE:HD11	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:80:VAL:HA	12:CL:85:ALA:O	2.05	0.56
33:DA:249:TYR:O	33:DA:252:ALA:HB3	2.06	0.56
33:DB:305:ILE:HG23	33:DB:327:ILE:HB	1.87	0.56
34:DC:530:GLU:HA	34:DC:546:MET:SD	2.45	0.56
34:DD:283:MET:HG2	34:DD:315:SER:HB3	1.86	0.56
34:DD:616:MET:CE	34:DD:724:ALA:HB2	2.35	0.56
1:BA:2129:A:N6	1:BA:2200:C:OP2	2.38	0.56
1:BA:2130:U:N3	1:BA:2202:U:O2	2.38	0.56
7:BG:11:ILE:HD12	7:BG:17:VAL:HG11	1.86	0.56
13:BM:96:MET:SD	13:BM:100:ARG:HB3	2.46	0.56
22:BV:45:LEU:O	22:BV:49:THR:HG23	2.06	0.56
24:BX:127:GLY:O	24:BX:137:VAL:HG12	2.05	0.56
1:CA:1270:A:OP1	24:CX:113:LYS:NZ	2.26	0.56
1:CA:2378:A:OP1	18:CR:51:GLY:N	2.38	0.56
14:CN:110:SER:OG	14:CN:117:TYR:OH	2.06	0.56
16:CP:39:GLU:OE1	16:CP:42:ARG:NH2	2.33	0.56
24:CX:127:GLY:O	24:CX:137:VAL:HG12	2.05	0.56
32:Cf:31:SER:HB3	32:Cf:34:THR:HG23	1.87	0.56
33:DA:339:GLU:O	33:DA:342:LYS:HB2	2.06	0.56
33:DB:2:VAL:HG23	33:DB:27:VAL:CG2	2.35	0.56
33:DB:294:TRP:CZ3	33:DB:325:ILE:HD11	2.41	0.56
33:DB:331:PRO:HG3	33:DB:356:LEU:HD11	1.86	0.56
34:DD:320:ARG:HA	34:DD:335:VAL:O	2.05	0.56
34:DD:550:ILE:HD12	34:DD:550:ILE:H	1.70	0.56
34:DD:623:GLU:HB3	34:DD:699:VAL:CG2	2.32	0.56
1:BA:2378:A:OP1	18:BR:51:GLY:N	2.38	0.56
1:BA:2762:A:O4'	31:Be:27:ARG:NH1	2.39	0.56
16:BP:116:ASP:OD1	16:BP:119:VAL:HG12	2.06	0.56
4:CD:88:TYR:HB2	4:CD:140:ASP:OD1	2.06	0.56
9:CI:130:MET:HE2	9:CI:130:MET:HA	1.88	0.56
11:CK:5:ARG:O	11:CK:83:PRO:HG3	2.05	0.56
17:CQ:28:SER:OG	17:CQ:33:ASN:HB3	2.05	0.56
21:CU:51:ASP:HB2	21:CU:105:LYS:O	2.06	0.56
33:DA:4:ARG:HB2	33:DA:95:ILE:HA	1.87	0.56
33:DA:338:LEU:CD2	33:DA:342:LYS:HE2	2.36	0.56
33:DA:339:GLU:HA	33:DA:342:LYS:HD2	1.87	0.56
33:DA:419:LEU:HD12	33:DA:482:MET:HB2	1.88	0.56
33:DA:496:HIS:HA	33:DA:499:GLU:CD	2.30	0.56
34:DC:592:GLU:O	34:DC:597:ARG:NH2	2.37	0.56
34:DC:651:ILE:HD13	34:DC:665:ALA:CB	2.33	0.56
34:DD:535:VAL:CG1	34:DD:545:ASP:HB2	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:2558:G:O3'	11:BK:41:LYS:HA	2.06	0.56
1:BA:2755:U:O2'	7:BG:143:GLU:OE2	2.15	0.56
7:BG:112:LEU:HD11	7:BG:158:ILE:HG12	1.87	0.56
9:BI:130:MET:HA	9:BI:130:MET:HE2	1.88	0.56
12:BL:119:GLU:OE1	12:BL:119:GLU:N	2.38	0.56
4:CD:33:ALA:HA	4:CD:168:SER:OG	2.05	0.56
6:CF:45:THR:CB	6:CF:52:LYS:HA	2.35	0.56
19:CS:23:LEU:CD1	19:CS:87:GLU:HB3	2.34	0.56
33:DA:311:THR:OG1	33:DA:332:ASP:HB3	2.05	0.56
33:DA:370:ILE:HD11	33:DB:362:THR:OG1	2.06	0.56
33:DA:483:ALA:CA	33:DA:506:VAL:HB	2.32	0.56
34:DD:107:ARG:NH1	34:DD:297:THR:O	2.36	0.56
34:DD:288:ALA:HA	34:DD:354:ALA:HB3	1.87	0.56
1:BA:1921:A:C8	3:BC:236:MET:HG3	2.41	0.56
6:BF:126:ARG:HD2	6:BF:145:HIS:O	2.05	0.56
19:BS:48:PHE:HZ	19:BS:59:VAL:HG12	1.71	0.56
19:BS:68:SER:OG	19:BS:77:ALA:HB1	2.06	0.56
1:CA:1398:G:N7	30:CD:2:SER:HB3	2.20	0.56
5:CE:28:ARG:HG3	5:CE:112:TYR:CE2	2.40	0.56
5:CE:156:ILE:HD11	5:CE:212:LEU:HD11	1.88	0.56
6:CF:38:VAL:HG22	6:CF:60:LYS:O	2.05	0.56
6:CF:126:ARG:HD2	6:CF:145:HIS:O	2.05	0.56
15:CO:68:LEU:HD22	15:CO:86:ILE:HG12	1.88	0.56
25:CY:13:ILE:O	25:CY:17:LYS:HG2	2.06	0.56
33:DA:81:LYS:O	33:DA:84:MET:HG2	2.06	0.56
33:DB:344:LYS:HD2	33:DB:345:SER:N	2.20	0.56
33:DB:423:TYR:CD1	33:DB:429:MET:HG2	2.41	0.56
34:DC:57:LEU:HB2	34:DC:66:GLN:CD	2.31	0.56
34:DC:471:LYS:HB2	34:DC:618:GLU:HB2	1.87	0.56
34:DD:79:MET:SD	34:DD:249:LEU:HD21	2.46	0.56
34:DD:393:THR:OG1	34:DD:463:ILE:HD12	2.06	0.56
1:BA:1312:U:O2'	27:Ba:87:VAL:HG13	2.05	0.56
1:BA:2827:U:H5''	4:BD:156:PRO:HB3	1.86	0.56
3:BC:40:ARG:NH2	3:BC:80:ILE:HG21	2.18	0.56
21:BU:51:ASP:HB2	21:BU:105:LYS:O	2.06	0.56
1:CA:325:A:H1'	21:CU:4:MET:HE3	1.87	0.56
1:CA:874:A:C5	29:Cc:8:MET:HE1	2.41	0.56
1:CA:1921:A:C8	3:CC:236:MET:HG3	2.41	0.56
2:CB:65:C:O2'	2:CB:66:C:H5'	2.06	0.56
4:CD:264:PHE:CG	4:CD:316:ARG:HD3	2.41	0.56
4:CD:274:ASP:OD2	4:CD:276:GLU:HB2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:27:THR:OG1	8:CH:103:GLY:HA3	2.06	0.56
13:CM:75:HIS:ND1	13:CM:89:LYS:HG3	2.22	0.56
26:CZ:57:GLU:O	26:CZ:61:GLU:HG3	2.06	0.56
33:DA:69:ARG:HH22	33:DB:56:PRO:HB2	1.70	0.56
33:DA:189:TYR:O	33:DA:190:LEU:HB2	2.06	0.56
33:DA:269:VAL:HG23	33:DA:308:THR:CG2	2.29	0.56
33:DA:313:ASP:HB2	33:DA:315:GLU:CD	2.30	0.56
33:DA:471:GLU:O	33:DA:475:LYS:HG2	2.06	0.56
33:DB:315:GLU:HG2	33:DB:316:ALA:H	1.71	0.56
33:DB:440:ARG:CZ	33:DB:485:ASP:HB2	2.36	0.56
34:DC:81:HIS:HB2	34:DC:249:LEU:HD12	1.87	0.56
34:DC:248:VAL:O	34:DC:252:VAL:HG23	2.05	0.56
34:DC:320:ARG:HH11	34:DC:337:GLN:HA	1.70	0.56
34:DD:20:ARG:HB3	34:DD:88:TYR:HA	1.88	0.56
34:DD:277:THR:O	34:DD:281:LYS:HG3	2.05	0.56
2:BB:65:C:O2'	2:BB:66:C:H5'	2.06	0.55
4:BD:33:ALA:HA	4:BD:168:SER:OG	2.05	0.55
4:BD:76:GLU:CD	4:BD:152:LEU:HD22	2.31	0.55
5:BE:9:LEU:HD21	5:BE:146:LEU:HA	1.87	0.55
5:BE:43:ARG:NH2	5:BE:226:GLU:OE1	2.32	0.55
11:BK:103:ILE:CD1	11:BK:123:LYS:HG3	2.36	0.55
14:BN:38:ARG:HA	14:BN:108:GLN:NE2	2.20	0.55
15:BO:68:LEU:HD22	15:BO:86:ILE:HG12	1.88	0.55
19:BS:23:LEU:CD1	19:BS:87:GLU:HB3	2.34	0.55
3:CC:88:GLU:HG2	3:CC:90:LYS:HB2	1.86	0.55
4:CD:90:GLU:H	4:CD:139:SER:HB3	1.71	0.55
6:CF:76:LEU:HD13	6:CF:162:VAL:CG2	2.35	0.55
33:DB:10:SER:HB2	33:DB:103:TYR:HD2	1.71	0.55
33:DB:414:SER:HB2	33:DB:536:PHE:HD1	1.70	0.55
33:DB:444:ILE:HG13	33:DB:448:ALA:HB2	1.87	0.55
34:DC:31:ASP:CA	34:DC:70:ILE:HG21	2.35	0.55
34:DC:288:ALA:HA	34:DC:316:GLY:H	1.70	0.55
34:DC:712:ARG:HA	34:DC:717:LEU:HD12	1.86	0.55
34:DD:137:LEU:HD23	34:DD:191:TRP:CZ3	2.42	0.55
34:DD:207:TYR:O	34:DD:239:ALA:HB2	2.06	0.55
34:DD:636:LEU:HD13	34:DD:683:THR:HB	1.88	0.55
3:BC:88:GLU:HG2	3:BC:90:LYS:HB2	1.86	0.55
6:BF:76:LEU:HD13	6:BF:162:VAL:CG2	2.35	0.55
13:BM:75:HIS:ND1	13:BM:89:LYS:HG3	2.22	0.55
21:BU:45:ALA:HB2	21:BU:117:ILE:HG23	1.88	0.55
1:CA:859:C:OP1	3:CC:12:ARG:NH2	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:861:U:O3'	3:CC:1:MET:HE2	2.06	0.55
1:CA:2558:G:O3'	11:CK:41:LYS:HA	2.06	0.55
2:CB:93:C:H2'	2:CB:94:G:O4'	2.07	0.55
4:CD:76:GLU:CD	4:CD:152:LEU:HD22	2.31	0.55
16:CP:116:ASP:OD1	16:CP:119:VAL:HG12	2.06	0.55
33:DB:327:ILE:HG22	33:DB:329:LEU:HD12	1.87	0.55
33:DB:471:GLU:HA	33:DB:474:GLN:HB2	1.87	0.55
34:DC:90:ILE:HD13	34:DC:249:LEU:HD22	1.89	0.55
1:BA:412:C:OP2	1:BA:2419:C:N4	2.35	0.55
6:BF:35:GLN:OE1	6:BF:63:LEU:HD23	2.06	0.55
1:CA:1240:G:N2	17:CQ:40:SER:OG	2.38	0.55
2:CB:117:C:H2'	2:CB:118:U:O4'	2.07	0.55
6:CF:35:GLN:OE1	6:CF:63:LEU:HD23	2.06	0.55
20:CT:14:MET:HE3	20:CT:17:LEU:HD22	1.88	0.55
33:DA:93:SER:HB2	33:DA:95:ILE:HD11	1.88	0.55
33:DB:137:ASN:ND2	33:DB:140:SER:HB2	2.21	0.55
33:DB:262:LEU:HD23	33:DB:407:LYS:HD2	1.87	0.55
33:DB:313:ASP:HB3	33:DB:315:GLU:OE1	2.06	0.55
33:DB:319:PHE:O	33:DB:323:LYS:HE2	2.06	0.55
34:DC:7:MET:HA	34:DC:10:ARG:NH1	2.22	0.55
34:DD:41:LEU:HD11	34:DD:248:VAL:CB	2.34	0.55
34:DD:639:GLY:HA2	34:DD:642:LYS:HG2	1.89	0.55
1:BA:1240:G:N2	17:BQ:40:SER:OG	2.38	0.55
1:BA:1336:A:N1	5:BE:49:PRO:HG3	2.21	0.55
1:BA:1424:G:H5''	30:Bd:21:ARG:HD3	1.86	0.55
1:BA:2822:U:OP1	4:BD:158:LYS:NZ	2.39	0.55
2:BB:9:C:O2'	14:BN:56:ASP:OD2	2.12	0.55
8:BH:34:THR:HA	8:BH:96:THR:CG2	2.36	0.55
23:BW:43:ASN:HB3	23:BW:46:ARG:HB2	1.88	0.55
27:Ba:45:LYS:CE	27:Ba:93:SER:HB3	2.35	0.55
29:Bc:15:THR:HG23	29:Bc:16:HIS:ND1	2.21	0.55
14:CN:8:LYS:HE2	18:CR:22:ARG:O	2.06	0.55
33:DA:405:CYS:SG	33:DA:483:ALA:HB3	2.46	0.55
33:DB:320:LEU:HD21	33:DB:328:ILE:HD11	1.87	0.55
33:DB:418:ILE:HG23	33:DB:430:VAL:CG1	2.36	0.55
34:DC:153:LEU:O	34:DC:159:VAL:HG22	2.07	0.55
34:DC:615:LEU:HB2	34:DC:724:ALA:HB2	1.89	0.55
34:DC:633:PRO:CG	34:DC:636:LEU:HD12	2.36	0.55
34:DD:196:ALA:HA	34:DD:213:VAL:HG21	1.88	0.55
34:DD:544:ILE:HB	34:DD:584:VAL:HG22	1.89	0.55
34:DD:557:MET:O	34:DD:561:LEU:HG	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:209:A:OP1	12:BL:55:LYS:NZ	2.36	0.55
2:BB:5:U:H2'	2:BB:6:U:C6	2.42	0.55
13:BM:98:ILE:HD13	13:BM:128:LYS:HD2	1.88	0.55
5:CE:130:ARG:HH21	5:CE:230:PRO:HB2	1.72	0.55
8:CH:34:THR:HA	8:CH:96:THR:CG2	2.36	0.55
27:Ca:45:LYS:CE	27:Ca:93:SER:HB3	2.35	0.55
33:DA:277:PRO:HG3	33:DA:412:THR:CG2	2.28	0.55
33:DA:304:SER:OG	33:DA:305:ILE:N	2.40	0.55
33:DA:326:GLU:HB3	33:DA:327:ILE:HD12	1.89	0.55
33:DB:72:GLY:HA2	33:DB:75:LEU:HD13	1.88	0.55
34:DC:97:GLY:HA2	34:DC:105:VAL:HG22	1.88	0.55
34:DC:264:LYS:HZ2	34:DC:285:HIS:HA	1.70	0.55
34:DC:336:GLN:NE2	34:DC:362:GLY:HA3	2.21	0.55
34:DC:399:LYS:HZ2	34:DC:456:GLU:HG2	1.72	0.55
1:BA:874:A:C5	29:Bc:8:MET:HE1	2.41	0.55
2:BB:30:U:O2'	2:BB:59:A:N1	2.38	0.55
20:BT:14:MET:HE3	20:BT:17:LEU:HD22	1.88	0.55
21:BU:31:ARG:NH1	21:BU:43:ARG:O	2.38	0.55
25:BY:13:ILE:O	25:BY:17:LYS:HG2	2.06	0.55
26:BZ:57:GLU:O	26:BZ:61:GLU:HG3	2.06	0.55
1:CA:507:G:C2'	19:CS:1:MET:HE1	2.36	0.55
4:CD:155:VAL:HG12	4:CD:157:LYS:HG2	1.89	0.55
22:CV:13:LEU:CD1	22:CV:18:GLY:HA3	2.37	0.55
24:CX:101:GLU:OE1	24:CX:103:LYS:NZ	2.39	0.55
33:DA:520:THR:O	33:DA:523:ARG:HG2	2.07	0.55
33:DB:303:GLY:N	33:DB:324:PHE:O	2.39	0.55
33:DB:419:LEU:HG	33:DB:482:MET:CE	2.35	0.55
34:DC:142:ARG:HH21	34:DC:193:VAL:HG12	1.72	0.55
34:DC:180:LYS:HE2	34:DC:180:LYS:HA	1.88	0.55
34:DC:312:ARG:HH21	34:DC:355:GLY:HA2	1.71	0.55
34:DC:325:PHE:HB2	34:DC:373:THR:HG23	1.89	0.55
34:DD:4:ARG:O	34:DD:8:VAL:HG23	2.07	0.55
34:DD:455:VAL:CG1	34:DD:457:ILE:HG23	2.37	0.55
34:DD:565:GLU:HG2	34:DD:569:ARG:NE	2.20	0.55
1:BA:54:C:OP2	23:BW:51:ARG:NH2	2.32	0.55
1:BA:2435:A:OP2	32:Bf:64:ARG:NH1	2.35	0.55
1:BA:2585:G:N7	4:BD:1:MET:HE1	2.21	0.55
2:BB:93:C:H2'	2:BB:94:G:O4'	2.06	0.55
4:BD:88:TYR:HB2	4:BD:140:ASP:OD1	2.06	0.55
6:BF:40:CYS:N	6:BF:58:GLY:O	2.34	0.55
8:BH:27:THR:OG1	8:BH:103:GLY:HA3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1336:A:N1	5:CE:49:PRO:HG3	2.22	0.55
16:CP:44:LEU:HD23	16:CP:47:GLU:OE2	2.07	0.55
21:CU:55:VAL:HB	21:CU:60:PHE:O	2.07	0.55
22:CV:45:LEU:O	22:CV:49:THR:HG23	2.06	0.55
25:CY:40:VAL:HG12	25:CY:85:ALA:HB2	1.88	0.55
34:DC:108:ALA:O	34:DC:112:VAL:HG23	2.07	0.55
34:DC:150:VAL:HG12	34:DC:154:ILE:CD1	2.35	0.55
34:DC:215:MET:HG3	34:DC:246:GLU:OE1	2.06	0.55
34:DC:385:ARG:HH12	34:DC:387:VAL:HG23	1.71	0.55
34:DD:436:GLY:HA2	34:DD:441:HIS:CG	2.42	0.55
34:DD:624:PRO:HG2	34:DD:669:VAL:CG2	2.35	0.55
4:BD:90:GLU:H	4:BD:139:SER:HB3	1.70	0.55
5:BE:130:ARG:HH21	5:BE:230:PRO:HB2	1.72	0.55
5:BE:156:ILE:HD11	5:BE:212:LEU:HD11	1.88	0.55
14:BN:8:LYS:HE2	18:BR:22:ARG:O	2.06	0.55
1:CA:1106:U:OP1	1:CA:1128:U:O2'	2.21	0.55
1:CA:1224:U:C4	10:CJ:61:ALA:HB2	2.42	0.55
2:CB:5:U:H2'	2:CB:6:U:C6	2.42	0.55
4:CD:314:PRO:HB2	4:CD:317:ALA:HB2	1.89	0.55
33:DB:378:ARG:NH1	33:DB:380:ILE:HD11	2.12	0.55
33:DB:390:THR:HG21	33:DB:528:MET:H	1.72	0.55
34:DC:407:LEU:HD13	34:DC:457:ILE:HD13	1.89	0.55
34:DD:291:ASP:HB3	34:DD:375:LEU:HB2	1.89	0.55
34:DD:299:ILE:HG23	34:DD:307:GLU:OE2	2.06	0.55
34:DD:559:LEU:HB2	34:DD:602:ILE:HG21	1.88	0.55
34:DD:567:VAL:CG1	34:DD:611:GLN:HG3	2.37	0.55
34:DD:628:VAL:HG12	34:DD:691:THR:CG2	2.35	0.55
1:BA:861:U:O3'	3:BC:1:MET:HE2	2.07	0.55
1:BA:1224:U:C4	10:BJ:61:ALA:HB2	2.42	0.55
4:BD:266:LYS:NZ	4:BD:300:SER:O	2.32	0.55
6:BF:45:THR:HB	6:BF:52:LYS:HA	1.89	0.55
11:BK:62:PRO:HB2	33:DB:3:LYS:NZ	2.21	0.55
19:CS:68:SER:OG	19:CS:77:ALA:HB1	2.06	0.55
21:CU:45:ALA:HB2	21:CU:117:ILE:HG23	1.88	0.55
27:Ca:116:LEU:HD21	27:Ca:126:ILE:HD13	1.89	0.55
30:Cd:4:ASN:OD1	30:Cd:51:LYS:HE3	2.07	0.55
33:DA:32:THR:HB	33:DA:49:VAL:HG23	1.89	0.55
33:DA:58:MET:HG3	33:DB:69:ARG:HG3	1.88	0.55
33:DA:74:LEU:O	33:DA:137:ASN:ND2	2.40	0.55
33:DA:418:ILE:H	33:DA:418:ILE:HD12	1.72	0.55
33:DA:461:GLU:O	33:DA:464:GLN:HG2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DB:70:ILE:O	33:DB:87:ALA:HB2	2.06	0.55
33:DB:238:GLN:HG3	33:DB:351:LEU:HD13	1.87	0.55
33:DB:433:MET:HG2	33:DB:435:ALA:H	1.71	0.55
34:DC:515:LEU:HD12	34:DC:516:GLU:N	2.20	0.55
34:DD:211:ILE:HD11	34:DD:223:PHE:CD1	2.42	0.55
34:DD:461:LYS:HB2	34:DD:462:PRO:HD2	1.89	0.55
1:BA:1456:U:C5	29:Bc:44:ARG:HD2	2.42	0.55
3:BC:124:GLY:HA3	3:BC:163:SER:HA	1.89	0.55
4:BD:314:PRO:HB2	4:BD:317:ALA:HB2	1.89	0.55
25:BY:40:VAL:HG12	25:BY:85:ALA:HB2	1.88	0.55
1:CA:2653:G:OP1	10:CJ:62:THR:HB	2.06	0.55
1:CA:2762:A:O4'	31:Ce:27:ARG:NH1	2.39	0.55
13:CM:96:MET:SD	13:CM:100:ARG:HB3	2.46	0.55
29:Cc:15:THR:HG23	29:Cc:16:HIS:ND1	2.21	0.55
33:DA:65:THR:HB	33:DA:67:HIS:HD2	1.72	0.55
33:DB:283:GLY:HA3	33:DB:288:GLN:NE2	2.19	0.55
33:DB:327:ILE:HG13	33:DB:349:ARG:CB	2.32	0.55
34:DC:534:ILE:HG13	34:DC:544:ILE:HD13	1.89	0.55
34:DC:655:THR:OG1	34:DC:662:ILE:HB	2.07	0.55
34:DD:8:VAL:HA	34:DD:342:MET:HE1	1.89	0.55
34:DD:475:GLU:CD	34:DD:476:PRO:HD2	2.32	0.55
34:DD:530:GLU:OE2	34:DD:544:ILE:HG21	2.06	0.55
1:BA:1451:G:O2'	1:BA:1845:A:N3	2.33	0.54
1:BA:1460:G:O2'	1:BA:1848:G:OP1	2.23	0.54
2:BB:117:C:H2'	2:BB:118:U:O4'	2.07	0.54
7:BG:39:TYR:CG	7:BG:65:MET:HE2	2.42	0.54
8:BH:23:LEU:HD11	8:BH:104:LYS:NZ	2.22	0.54
15:BO:35:ILE:CD1	15:BO:124:ILE:HD11	2.37	0.54
24:BX:101:GLU:OE1	24:BX:103:LYS:NZ	2.39	0.54
1:CA:1745:C:H4'	34:DC:548:LYS:HD2	1.89	0.54
1:CA:2585:G:N7	4:CD:1:MET:HE1	2.21	0.54
7:CG:12:PRO:HG2	7:CG:15:VAL:HG21	1.89	0.54
16:CP:142:LEU:HB3	16:CP:148:LEU:CD1	2.37	0.54
33:DA:214:GLU:CD	33:DB:536:PHE:HB3	2.31	0.54
33:DA:281:ALA:HB1	33:DA:428:PHE:O	2.07	0.54
33:DB:402:SER:HA	33:DB:481:VAL:HG11	1.88	0.54
34:DC:105:VAL:HG11	34:DC:135:GLN:OE1	2.06	0.54
34:DC:708:VAL:O	34:DC:712:ARG:HG2	2.07	0.54
34:DD:183:ASN:OD1	34:DD:186:LYS:HB2	2.07	0.54
34:DD:251:MET:O	34:DD:256:LEU:N	2.40	0.54
34:DD:266:ARG:O	34:DD:270:ILE:HG23	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:273:GLY:CA	34:DD:379:THR:HB	2.37	0.54
34:DD:424:THR:HG22	34:DD:433:LEU:HD12	1.89	0.54
1:BA:507:G:C2'	19:BS:1:MET:HE1	2.37	0.54
1:BA:1577:G:OP1	16:BP:110:ARG:NH2	2.40	0.54
3:BC:24:TYR:CD1	3:BC:51:ALA:HB2	2.43	0.54
4:BD:155:VAL:HG12	4:BD:157:LYS:HG2	1.89	0.54
1:CA:1451:G:O2'	1:CA:1845:A:N3	2.33	0.54
1:CA:1571:A:N1	1:CA:1584:C:O2'	2.37	0.54
8:CH:83:GLU:OE1	8:CH:83:GLU:N	2.36	0.54
13:CM:98:ILE:HD13	13:CM:128:LYS:HD2	1.88	0.54
33:DA:440:ARG:HB2	33:DA:489:PRO:HG2	1.88	0.54
33:DB:402:SER:CA	33:DB:481:VAL:HG11	2.36	0.54
33:DB:421:HIS:HB3	33:DB:431:LEU:HD12	1.88	0.54
34:DC:7:MET:HE1	34:DC:47:MET:HA	1.89	0.54
34:DC:175:VAL:O	34:DC:179:ILE:HG13	2.06	0.54
34:DC:448:ARG:HH11	34:DC:448:ARG:HB2	1.72	0.54
34:DC:462:PRO:HB2	34:DC:673:PHE:HZ	1.72	0.54
34:DD:146:PHE:HD1	34:DD:201:ALA:HB3	1.73	0.54
34:DD:271:TRP:CZ3	34:DD:275:GLU:HA	2.42	0.54
34:DD:272:HIS:ND1	34:DD:381:PHE:O	2.34	0.54
34:DD:326:THR:HA	34:DD:372:VAL:HG22	1.89	0.54
34:DD:339:GLY:HA2	34:DD:349:VAL:CG2	2.36	0.54
34:DD:466:TYR:HB2	34:DD:621:LEU:HD11	1.89	0.54
1:BA:2723:C:O2'	1:BA:2725:C:OP2	2.08	0.54
2:BB:34:G:O2'	2:BB:35:U:H5'	2.08	0.54
27:Ba:116:LEU:HD21	27:Ba:126:ILE:HD13	1.89	0.54
1:CA:2862:U:OP2	1:CA:2863:U:O2'	2.19	0.54
5:CE:203:THR:OG1	5:CE:205:ILE:HG22	2.08	0.54
7:CG:39:TYR:CD1	7:CG:65:MET:HE2	2.42	0.54
33:DA:3:LYS:O	33:DA:27:VAL:HA	2.07	0.54
33:DB:144:ILE:CD1	33:DB:153:VAL:HG21	2.36	0.54
33:DB:526:ILE:CG2	33:DB:528:MET:HE2	2.37	0.54
34:DC:634:GLN:HA	34:DC:661:ALA:HB2	1.89	0.54
34:DC:660:LEU:HB3	34:DC:662:ILE:CD1	2.37	0.54
34:DD:8:VAL:CA	34:DD:342:MET:HE1	2.37	0.54
34:DD:493:GLU:HG3	34:DD:582:LYS:CG	2.38	0.54
34:DD:660:LEU:CD2	34:DD:662:ILE:HD11	2.36	0.54
1:BA:1057:U:O2'	24:BX:12:ASN:OD1	2.26	0.54
1:BA:2249:C:H5''	3:BC:1:MET:HG2	1.89	0.54
2:BB:21:U:O2	2:BB:64:G:N2	2.32	0.54
2:BB:49:A:H2'	2:BB:50:C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BV:13:LEU:CD1	22:BV:18:GLY:HA3	2.37	0.54
23:BW:9:ILE:HG22	23:BW:60:ILE:HG21	1.89	0.54
30:Bd:4:ASN:OD1	30:Bd:51:LYS:HE3	2.07	0.54
1:CA:2249:C:H5''	3:CC:1:MET:HG2	1.89	0.54
12:CL:94:ILE:CD1	12:CL:114:LEU:HD11	2.38	0.54
32:Cf:64:ARG:HB3	32:Cf:82:CYS:SG	2.48	0.54
33:DA:19:ALA:HB1	33:DA:44:ILE:HG21	1.89	0.54
33:DA:394:TYR:HD1	33:DA:527:ALA:HB1	1.73	0.54
33:DA:400:THR:HB	33:DA:428:PHE:CZ	2.42	0.54
33:DB:52:VAL:CG1	33:DB:92:ILE:HG23	2.37	0.54
33:DB:72:GLY:HA2	33:DB:75:LEU:HB2	1.89	0.54
33:DB:496:HIS:HA	33:DB:499:GLU:CD	2.33	0.54
34:DC:559:LEU:HB2	34:DC:602:ILE:HG21	1.88	0.54
34:DD:42:LEU:HD21	34:DD:77:VAL:HG23	1.89	0.54
1:BA:892:U:OP1	12:BL:18:LYS:NZ	2.26	0.54
1:BA:1052:U:O2'	1:BA:2283:A:N3	2.31	0.54
12:BL:79:LEU:CD1	12:BL:84:LEU:HB2	2.38	0.54
16:BP:142:LEU:HB3	16:BP:148:LEU:CD1	2.37	0.54
1:CA:1460:G:O2'	1:CA:1848:G:OP1	2.23	0.54
1:CA:2364:C:O2'	1:CA:2365:A:OP1	2.22	0.54
2:CB:49:A:H2'	2:CB:50:C:C6	2.43	0.54
6:CF:94:VAL:HG22	6:CF:122:VAL:HG12	1.90	0.54
8:CH:23:LEU:HD11	8:CH:104:LYS:NZ	2.22	0.54
15:CO:35:ILE:CD1	15:CO:124:ILE:HD11	2.37	0.54
28:Cb:31:ALA:O	28:Cb:35:GLU:HG3	2.08	0.54
33:DA:76:CYS:HA	33:DA:137:ASN:CG	2.33	0.54
33:DB:327:ILE:HD11	33:DB:349:ARG:HD2	1.90	0.54
34:DC:169:GLY:HA2	34:DC:172:ILE:HD12	1.88	0.54
34:DC:523:ASP:OD1	34:DC:524:LEU:N	2.41	0.54
34:DD:27:VAL:CG1	34:DD:115:ALA:HB1	2.37	0.54
1:BA:1354:G:O2'	1:BA:2033:G:O6	2.24	0.54
2:BB:122:A:H2'	2:BB:123:A:H8	1.71	0.54
4:BD:274:ASP:OD2	4:BD:276:GLU:HB2	2.07	0.54
6:BF:8:LYS:HG2	6:BF:123:VAL:CG1	2.38	0.54
1:CA:1456:U:C5	29:Cc:44:ARG:HD2	2.42	0.54
1:CA:2259:G:O2'	1:CA:2507:U:OP1	2.19	0.54
7:CG:39:TYR:CG	7:CG:65:MET:HE2	2.43	0.54
11:CK:103:ILE:CD1	11:CK:123:LYS:HG3	2.37	0.54
19:CS:112:ILE:HD13	19:CS:148:SER:HB3	1.88	0.54
34:DC:207:TYR:CD1	34:DC:235:MET:HE2	2.43	0.54
34:DD:93:ILE:HB	34:DD:112:VAL:CG1	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:1106:U:OP1	1:BA:1128:U:O2'	2.21	0.54
16:BP:44:LEU:HD23	16:BP:47:GLU:OE2	2.07	0.54
1:CA:1057:U:O2'	24:CX:12:ASN:OD1	2.26	0.54
1:CA:1297:G:O2'	1:CA:1325:A:N1	2.38	0.54
1:CA:1411:A:N1	1:CA:1422:C:O2'	2.32	0.54
1:CA:2391:A:HO2'	14:CN:30:SER:HG	1.38	0.54
7:CG:88:MET:HE3	7:CG:172:ILE:HG13	1.90	0.54
33:DA:68:PRO:HD2	33:DB:55:TYR:CE1	2.42	0.54
33:DB:336:ASP:OD1	33:DB:337:ALA:N	2.41	0.54
34:DC:573:LEU:HD12	34:DC:722:PRO:HG2	1.89	0.54
1:BA:1043:G:O3'	9:BI:15:ARG:NH1	2.40	0.54
21:BU:55:VAL:HB	21:BU:60:PHE:O	2.07	0.54
1:CA:1577:G:OP1	16:CP:110:ARG:NH2	2.40	0.54
2:CB:122:A:H2'	2:CB:123:A:H8	1.71	0.54
7:CG:62:GLN:O	7:CG:66:VAL:HG13	2.08	0.54
22:CV:4:ARG:HB2	22:CV:13:LEU:HB2	1.90	0.54
33:DA:65:THR:HB	33:DA:67:HIS:CD2	2.43	0.54
33:DA:69:ARG:HD3	33:DA:89:LYS:HZ3	1.73	0.54
33:DA:81:LYS:CA	33:DA:84:MET:HE2	2.30	0.54
33:DA:376:GLN:HE21	33:DB:218:GLN:CG	2.21	0.54
33:DA:398:LYS:HD2	33:DA:479:GLU:O	2.07	0.54
33:DB:202:LEU:HD13	33:DB:204:PHE:CE2	2.39	0.54
33:DB:238:GLN:CG	33:DB:351:LEU:HD13	2.38	0.54
33:DB:406:LEU:HD22	33:DB:535:HIS:HD2	1.72	0.54
33:DB:495:VAL:CG2	33:DB:524:LEU:HD11	2.38	0.54
34:DC:121:ALA:HB1	34:DC:153:LEU:CD1	2.37	0.54
34:DC:174:HIS:CE1	34:DC:178:LEU:HD21	2.43	0.54
34:DD:404:LEU:O	34:DD:408:ILE:HG12	2.08	0.54
34:DD:526:MET:HE2	34:DD:530:GLU:HB3	1.90	0.54
1:BA:892:U:OP2	12:BL:18:LYS:HD3	2.08	0.54
1:BA:1089:G:OP1	2:BB:89:U:O2'	2.10	0.54
1:BA:2271:C:C5	18:BR:4:SER:HB3	2.43	0.54
4:BD:83:ALA:HB2	4:BD:146:TYR:CE2	2.43	0.54
7:BG:12:PRO:HG2	7:BG:15:VAL:HG21	1.89	0.54
16:BP:103:ARG:HG2	16:BP:124:TYR:CE2	2.43	0.54
21:BU:36:LEU:HD23	21:BU:39:GLU:OE2	2.08	0.54
22:BV:4:ARG:HB2	22:BV:13:LEU:HB2	1.90	0.54
1:CA:209:A:OP1	12:CL:55:LYS:NZ	2.35	0.54
1:CA:310:A:N3	1:CA:330:G:O2'	2.38	0.54
12:CL:79:LEU:CD1	12:CL:84:LEU:HB2	2.38	0.54
16:CP:101:ALA:O	16:CP:104:ARG:HG2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DA:67:HIS:HB3	33:DB:55:TYR:OH	2.08	0.54
33:DA:69:ARG:HG2	33:DB:55:TYR:CD2	2.43	0.54
33:DA:274:HIS:CE1	33:DB:438:PRO:HA	2.43	0.54
33:DB:498:ALA:HB1	33:DB:503:ARG:NH1	2.23	0.54
34:DC:28:ALA:HB2	34:DC:118:VAL:HB	1.89	0.54
34:DD:26:ILE:HB	34:DD:94:ASP:CG	2.33	0.54
34:DD:179:ILE:CD1	34:DD:192:LYS:HA	2.38	0.54
1:BA:2172:U:O2'	1:BA:2173:U:O5'	2.22	0.54
4:BD:44:GLY:O	4:BD:308:LEU:HD12	2.08	0.54
4:BD:201:THR:HG22	4:BD:311:LEU:HD23	1.90	0.54
5:BE:203:THR:OG1	5:BE:205:ILE:HG22	2.08	0.54
8:BH:39:LYS:HE3	13:BM:4:SER:HA	1.90	0.54
18:BR:17:LYS:HE2	18:BR:21:GLU:O	2.08	0.54
19:BS:111:ILE:HG12	19:BS:147:LEU:CD2	2.38	0.54
32:Bf:64:ARG:HB3	32:Bf:82:CYS:SG	2.48	0.54
1:CA:892:U:OP2	12:CL:18:LYS:HD3	2.08	0.54
1:CA:1043:G:O3'	9:CI:15:ARG:NH1	2.40	0.54
6:CF:7:GLU:HB3	6:CF:123:VAL:HG13	1.90	0.54
6:CF:8:LYS:HG2	6:CF:123:VAL:CG1	2.38	0.54
6:CF:45:THR:HB	6:CF:52:LYS:HA	1.89	0.54
21:CU:56:MET:HE2	21:CU:101:VAL:O	2.08	0.54
22:CV:10:GLY:HA3	22:CV:53:GLU:CD	2.33	0.54
33:DB:211:ARG:NH2	33:DB:349:ARG:HH22	2.06	0.54
34:DC:630:VAL:CG2	34:DC:663:ILE:HB	2.38	0.54
34:DD:11:VAL:HG21	34:DD:342:MET:SD	2.48	0.54
34:DD:119:VAL:O	34:DD:147:VAL:HG13	2.07	0.54
34:DD:363:LEU:HD21	34:DD:366:ALA:N	2.22	0.54
34:DD:593:ASP:O	34:DD:597:ARG:NE	2.37	0.54
11:BK:6:SER:OG	11:BK:82:ARG:HD3	2.09	0.53
19:BS:112:ILE:HD13	19:BS:148:SER:HB3	1.88	0.53
3:CC:24:TYR:CD1	3:CC:51:ALA:HB2	2.43	0.53
9:CI:50:LEU:HB2	9:CI:150:LEU:HD21	1.89	0.53
14:CN:59:TYR:HB3	14:CN:98:TYR:CE2	2.43	0.53
31:Ce:38:THR:O	31:Ce:39:LEU:HD23	2.08	0.53
33:DA:474:GLN:HA	33:DA:477:LEU:CD1	2.38	0.53
33:DB:78:ARG:NE	33:DB:95:ILE:O	2.41	0.53
34:DC:77:VAL:HG22	34:DC:92:LEU:HB3	1.90	0.53
34:DC:441:HIS:O	34:DC:445:ILE:HG12	2.08	0.53
34:DC:559:LEU:HD12	34:DC:602:ILE:HG13	1.90	0.53
34:DD:4:ARG:HD2	34:DD:48:ILE:HG12	1.90	0.53
34:DD:32:HIS:HD2	34:DD:120:ASP:CB	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:106:THR:HB	34:DD:110:ARG:NH1	2.23	0.53
34:DD:491:TYR:CE2	34:DD:584:VAL:HB	2.43	0.53
1:BA:886:A:C8	5:BE:55:MET:HE1	2.43	0.53
2:BB:9:C:O2'	14:BN:49:ILE:HD13	2.08	0.53
25:BY:30:ASP:O	25:BY:34:ASN:ND2	2.41	0.53
2:CB:34:G:O2'	2:CB:35:U:H5'	2.08	0.53
15:CO:23:THR:O	15:CO:27:ARG:HG2	2.08	0.53
18:CR:4:SER:O	18:CR:9:ARG:HD3	2.08	0.53
19:CS:68:SER:HB2	19:CS:79:LYS:HD3	1.91	0.53
21:CU:55:VAL:O	21:CU:62:GLY:N	2.29	0.53
33:DA:438:PRO:O	33:DB:300:SER:HB2	2.09	0.53
33:DB:71:HIS:CE1	33:DB:130:LEU:HD13	2.37	0.53
33:DB:438:PRO:HG2	33:DB:442:ASP:OD2	2.08	0.53
33:DB:440:ARG:NH2	33:DB:484:SER:O	2.41	0.53
34:DC:42:LEU:HA	34:DC:79:MET:CE	2.38	0.53
34:DC:202:PHE:N	34:DC:211:ILE:O	2.35	0.53
34:DC:630:VAL:HG22	34:DC:663:ILE:O	2.09	0.53
34:DD:421:LEU:HD13	34:DD:445:ILE:HG13	1.91	0.53
1:BA:88:G:H1'	23:BW:44:PRO:HG2	1.90	0.53
1:BA:227:C:O2	1:BA:431:A:O2'	2.24	0.53
14:BN:59:TYR:HB3	14:BN:98:TYR:CE2	2.43	0.53
15:BO:35:ILE:O	15:BO:39:ILE:HG12	2.07	0.53
16:BP:101:ALA:O	16:BP:104:ARG:HG2	2.08	0.53
8:CH:29:LYS:N	8:CH:101:ASP:HB3	2.23	0.53
8:CH:108:MET:O	8:CH:112:ILE:HG13	2.08	0.53
19:CS:111:ILE:HG12	19:CS:147:LEU:CD2	2.38	0.53
23:CW:9:ILE:HG22	23:CW:60:ILE:HG21	1.89	0.53
33:DA:96:ASP:HA	33:DA:141:VAL:HG22	1.90	0.53
33:DA:229:GLU:HG2	33:DA:230:GLY:N	2.20	0.53
33:DA:239:LEU:HD12	33:DA:350:LEU:HB3	1.91	0.53
33:DB:291:GLN:HG2	33:DB:319:PHE:CD2	2.44	0.53
34:DC:271:TRP:CZ3	34:DC:275:GLU:HA	2.43	0.53
34:DC:478:GLU:OE2	34:DC:487:ARG:HD3	2.08	0.53
1:BA:2761:C:O2	31:Be:27:ARG:NH2	2.35	0.53
7:BG:62:GLN:O	7:BG:66:VAL:HG13	2.08	0.53
11:BK:68:VAL:HB	34:DC:402:LYS:HG2	1.91	0.53
15:BO:23:THR:O	15:BO:27:ARG:HG2	2.08	0.53
17:BQ:27:GLU:O	17:BQ:37:LYS:HE3	2.09	0.53
18:BR:4:SER:O	18:BR:9:ARG:HD3	2.08	0.53
22:BV:10:GLY:HA3	22:BV:53:GLU:CD	2.33	0.53
31:Be:38:THR:O	31:Be:39:LEU:HD23	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:895:U:OP2	12:CL:10:ARG:NH1	2.40	0.53
16:CP:103:ARG:HG2	16:CP:124:TYR:CE2	2.43	0.53
18:CR:17:LYS:HE2	18:CR:21:GLU:O	2.08	0.53
19:CS:48:PHE:HZ	19:CS:59:VAL:HG12	1.71	0.53
33:DA:67:HIS:HB2	33:DA:70:ILE:HG21	1.90	0.53
33:DA:262:LEU:HD23	33:DA:407:LYS:CB	2.38	0.53
34:DC:3:ARG:HD2	34:DC:4:ARG:N	2.23	0.53
34:DC:8:VAL:HG13	34:DC:347:LEU:HD21	1.88	0.53
34:DC:530:GLU:OE1	34:DC:582:LYS:HD2	2.09	0.53
34:DD:480:LYS:HD2	34:DD:484:ARG:CD	2.39	0.53
34:DD:634:GLN:HB2	34:DD:659:ASP:C	2.34	0.53
34:DD:679:ILE:CG2	34:DD:687:ALA:HB3	2.39	0.53
1:BA:70:C:OP1	23:BW:56:ARG:NE	2.27	0.53
4:BD:30:TRP:CH2	4:BD:165:SER:HA	2.44	0.53
8:BH:108:MET:O	8:BH:112:ILE:HG13	2.09	0.53
8:BH:116:LEU:HA	8:BH:119:LEU:CG	2.38	0.53
21:BU:56:MET:HE2	21:BU:101:VAL:O	2.08	0.53
2:CB:9:C:O2'	14:CN:49:ILE:HD13	2.09	0.53
8:CH:116:LEU:HA	8:CH:119:LEU:CG	2.38	0.53
22:CV:58:GLN:HA	22:CV:61:LYS:CD	2.39	0.53
23:CW:43:ASN:HB3	23:CW:46:ARG:HB2	1.88	0.53
27:Ca:41:ARG:HB2	27:Ca:94:PRO:HD2	1.91	0.53
33:DB:32:THR:HB	33:DB:49:VAL:HG22	1.90	0.53
34:DC:282:ALA:HA	34:DC:287:ASN:HB3	1.91	0.53
34:DC:471:LYS:CB	34:DC:618:GLU:HB2	2.37	0.53
34:DD:1:MET:O	34:DD:6:LYS:NZ	2.36	0.53
34:DD:4:ARG:HD2	34:DD:48:ILE:CG1	2.39	0.53
1:BA:118:C:N3	29:Bc:20:ARG:NE	2.49	0.53
8:BH:29:LYS:N	8:BH:101:ASP:HB3	2.23	0.53
13:BM:176:THR:O	13:BM:181:THR:HG21	2.08	0.53
16:BP:39:GLU:OE1	16:BP:42:ARG:NH2	2.33	0.53
4:CD:30:TRP:CH2	4:CD:165:SER:HA	2.44	0.53
8:CH:10:PRO:O	8:CH:14:THR:HG23	2.09	0.53
11:CK:65:ARG:HH12	33:DA:3:LYS:HE2	1.72	0.53
13:CM:70:ARG:HG3	13:CM:126:LYS:C	2.33	0.53
15:CO:80:LEU:HD23	15:CO:102:ALA:HB3	1.90	0.53
16:CP:43:GLY:O	16:CP:46:GLU:HG2	2.09	0.53
17:CQ:27:GLU:O	17:CQ:37:LYS:HE3	2.09	0.53
21:CU:36:LEU:HD23	21:CU:39:GLU:OE2	2.08	0.53
33:DB:97:LEU:HD12	33:DB:142:THR:OG1	2.09	0.53
34:DC:203:GLY:HA3	34:DC:210:ALA:HA	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:88:TYR:CG	34:DD:253:ILE:HG12	2.42	0.53
34:DD:337:GLN:HB2	34:DD:361:THR:OG1	2.08	0.53
34:DD:478:GLU:OE2	34:DD:487:ARG:HG2	2.08	0.53
34:DD:645:GLN:HB3	34:DD:651:ILE:HD11	1.89	0.53
7:BG:39:TYR:CD1	7:BG:65:MET:HE2	2.43	0.53
13:BM:70:ARG:HG3	13:BM:126:LYS:C	2.33	0.53
1:CA:886:A:C8	5:CE:55:MET:HE1	2.43	0.53
1:CA:2271:C:C5	18:CR:4:SER:HB3	2.43	0.53
1:CA:2365:A:C5'	18:CR:54:ASN:HB2	2.39	0.53
33:DA:69:ARG:HD3	33:DA:89:LYS:HG3	1.91	0.53
33:DB:396:GLU:O	33:DB:399:ARG:HB2	2.08	0.53
34:DC:16:ASN:HA	34:DC:353:PRO:CG	2.33	0.53
34:DC:38:SER:CB	34:DC:59:MET:HG2	2.39	0.53
34:DC:213:VAL:O	34:DC:216:MET:HB2	2.08	0.53
34:DC:323:GLU:N	34:DC:334:ARG:HD2	2.23	0.53
34:DC:495:LEU:HD22	34:DC:500:VAL:HG22	1.91	0.53
34:DD:329:SER:HB3	34:DD:331:ARG:HH21	1.74	0.53
34:DD:624:PRO:O	34:DD:669:VAL:HG22	2.09	0.53
34:DD:627:LYS:NZ	34:DD:694:GLY:HA2	2.24	0.53
1:BA:18:G:C5'	19:BS:4:ILE:HG23	2.39	0.53
1:BA:2398:U:O2'	18:BR:49:GLN:OE1	2.12	0.53
11:BK:20:CYS:HB3	11:BK:26:ALA:O	2.09	0.53
15:BO:58:ILE:O	15:BO:62:THR:OG1	2.06	0.53
1:CA:1587:G:C6	25:CY:24:GLY:HA3	2.43	0.53
4:CD:198:LEU:O	4:CD:314:PRO:HD3	2.09	0.53
4:CD:201:THR:HG22	4:CD:311:LEU:HD23	1.90	0.53
5:CE:6:THR:O	5:CE:13:ALA:HA	2.09	0.53
15:CO:35:ILE:O	15:CO:39:ILE:HG12	2.07	0.53
17:CQ:29:GLN:OE1	17:CQ:33:ASN:ND2	2.39	0.53
33:DA:53:THR:HG22	33:DA:70:ILE:HG21	1.89	0.53
33:DA:69:ARG:HH11	33:DB:55:TYR:HD2	1.55	0.53
33:DA:86:GLU:CG	33:DB:58:MET:HE1	2.39	0.53
33:DB:4:ARG:HH11	33:DB:93:SER:HB3	1.74	0.53
33:DB:288:GLN:OE1	33:DB:424:GLU:HG3	2.09	0.53
33:DB:416:ALA:HA	33:DB:434:GLY:CA	2.26	0.53
33:DB:418:ILE:HG23	33:DB:430:VAL:HG13	1.91	0.53
33:DB:486:ALA:C	33:DB:508:PRO:HD2	2.33	0.53
34:DC:21:ILE:HG21	34:DC:355:GLY:O	2.09	0.53
34:DC:24:ILE:HG13	34:DC:252:VAL:CG1	2.27	0.53
34:DC:491:TYR:CE2	34:DC:584:VAL:HB	2.44	0.53
1:BA:323:A:OP2	5:BE:211:ASN:HB2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:BO:70:ILE:HD12	15:BO:74:VAL:HG22	1.91	0.53
16:BP:43:GLY:O	16:BP:46:GLU:HG2	2.09	0.53
4:CD:83:ALA:HB2	4:CD:146:TYR:CE2	2.43	0.53
4:CD:85:ILE:HD12	4:CD:179:SER:HB2	1.91	0.53
7:CG:81:ASN:HB3	7:CG:82:GLU:OE1	2.09	0.53
8:CH:39:LYS:HE3	13:CM:4:SER:HA	1.90	0.53
33:DA:53:THR:CG2	33:DA:70:ILE:HG21	2.39	0.53
33:DA:211:ARG:HB3	33:DA:212:TYR:CE2	2.43	0.53
33:DA:224:LYS:CE	33:DA:234:ALA:HB1	2.37	0.53
33:DA:286:LEU:HA	33:DA:289:ALA:HB3	1.91	0.53
33:DA:307:CYS:HA	33:DA:329:LEU:HB2	1.90	0.53
33:DA:419:LEU:CD1	33:DA:482:MET:HB2	2.39	0.53
33:DB:491:ASP:OD1	33:DB:492:ASP:N	2.40	0.53
34:DC:27:VAL:O	34:DC:117:VAL:HA	2.09	0.53
34:DC:57:LEU:HB2	34:DC:66:GLN:NE2	2.24	0.53
34:DC:174:HIS:HA	34:DC:177:LYS:HG2	1.91	0.53
34:DC:633:PRO:CD	34:DC:636:LEU:HD12	2.39	0.53
34:DD:22:ARG:N	34:DD:89:LEU:O	2.41	0.53
34:DD:71:THR:OG1	34:DD:94:ASP:OD1	2.27	0.53
6:BF:94:VAL:HG22	6:BF:122:VAL:HG12	1.90	0.53
8:BH:10:PRO:O	8:BH:14:THR:HG23	2.09	0.53
9:BI:50:LEU:HB2	9:BI:150:LEU:HD21	1.89	0.53
11:BK:32:ILE:HD11	11:BK:56:SER:HB2	1.90	0.53
1:CA:323:A:OP2	5:CE:211:ASN:HB2	2.09	0.53
1:CA:2543:G:O2'	1:CA:2669:A:N1	2.42	0.53
2:CB:98:C:H2'	2:CB:99:U:O2	2.09	0.53
2:CB:123:A:H2'	2:CB:124:G:C8	2.44	0.53
4:CD:76:GLU:OE1	4:CD:287:TYR:OH	2.24	0.53
5:CE:146:LEU:O	5:CE:149:LEU:HG	2.09	0.53
7:CG:59:ARG:HB2	7:CG:62:GLN:OE1	2.09	0.53
7:CG:137:ILE:CG2	7:CG:145:VAL:HG23	2.36	0.53
9:CI:45:PRO:HB2	9:CI:171:LEU:HD22	1.91	0.53
15:CO:70:ILE:HD12	15:CO:74:VAL:HG22	1.91	0.53
18:CR:5:HIS:HA	18:CR:9:ARG:CD	2.39	0.53
33:DB:3:LYS:HE2	33:DB:94:LEU:CD2	2.35	0.53
33:DB:5:ALA:HA	33:DB:97:LEU:O	2.09	0.53
33:DB:105:PHE:HZ	33:DB:120:ILE:HA	1.74	0.53
33:DB:107:ILE:HD13	33:DB:189:TYR:OH	2.09	0.53
34:DC:146:PHE:HD1	34:DC:201:ALA:HB3	1.74	0.53
34:DD:81:HIS:CG	34:DD:249:LEU:HD13	2.44	0.53
1:BA:2364:C:O2'	1:BA:2365:A:OP1	2.22	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:2652:G:OP2	10:BJ:57:ARG:NH2	2.41	0.52
1:BA:2812:A:OP1	4:BD:307:ARG:NH2	2.42	0.52
2:BB:109:C:C2'	2:BB:110:U:H5'	2.38	0.52
3:BC:35:GLU:HG2	3:BC:36:ASN:OD1	2.10	0.52
7:BG:59:ARG:HB2	7:BG:62:GLN:OE1	2.09	0.52
11:BK:62:PRO:CG	33:DB:3:LYS:HE3	2.36	0.52
23:BW:30:ARG:HE	23:BW:34:LEU:HD21	1.74	0.52
27:Ba:41:ARG:HB2	27:Ba:94:PRO:HD2	1.91	0.52
28:Bb:31:ALA:O	28:Bb:35:GLU:HG3	2.08	0.52
1:CA:88:G:H1'	23:CW:44:PRO:HG2	1.90	0.52
2:CB:41:U:H1'	2:CB:44:C:C5	2.44	0.52
2:CB:109:C:C2'	2:CB:110:U:H5'	2.39	0.52
5:CE:143:VAL:HA	5:CE:242:GLU:HG2	1.91	0.52
14:CN:103:LEU:HD22	14:CN:120:LEU:HD22	1.91	0.52
33:DA:7:LEU:HD23	33:DA:99:ALA:HB3	1.90	0.52
33:DA:136:LYS:NZ	33:DB:121:GLU:HA	2.23	0.52
33:DA:441:VAL:O	33:DA:444:ILE:HG22	2.08	0.52
33:DB:386:TRP:CZ3	33:DB:531:THR:HG22	2.44	0.52
33:DB:401:LEU:HB3	33:DB:481:VAL:HG21	1.90	0.52
33:DB:462:ARG:NH1	33:DB:463:GLU:OE2	2.42	0.52
34:DD:7:MET:HE1	34:DD:47:MET:SD	2.48	0.52
34:DD:20:ARG:HD3	34:DD:86:GLU:OE2	2.09	0.52
1:BA:895:U:OP2	12:BL:10:ARG:NH1	2.40	0.52
2:BB:25:G:H5''	2:BB:26:C:OP1	2.09	0.52
2:BB:41:U:H1'	2:BB:44:C:C5	2.44	0.52
2:BB:56:A:O2'	2:BB:58:A:N7	2.37	0.52
7:BG:69:PHE:O	7:BG:73:ILE:HG12	2.09	0.52
8:BH:59:GLU:HG2	13:BM:13:TRP:HE1	1.74	0.52
2:CB:25:G:H5''	2:CB:26:C:OP1	2.09	0.52
3:CC:124:GLY:HA3	3:CC:163:SER:HA	1.89	0.52
3:CC:224:ARG:NH1	3:CC:224:ARG:O	2.42	0.52
4:CD:44:GLY:O	4:CD:308:LEU:HD12	2.08	0.52
6:CF:81:LYS:NZ	6:CF:160:TYR:O	2.38	0.52
8:CH:29:LYS:H	8:CH:101:ASP:HB3	1.74	0.52
11:CK:6:SER:OG	11:CK:82:ARG:HD3	2.09	0.52
13:CM:67:ASN:OD1	13:CM:127:HIS:HB3	2.10	0.52
33:DA:67:HIS:O	33:DA:70:ILE:HG22	2.08	0.52
33:DB:22:LEU:HB3	33:DB:27:VAL:HB	1.90	0.52
33:DB:442:ASP:HA	33:DB:445:ARG:HB2	1.92	0.52
34:DD:48:ILE:HG22	34:DD:49:SER:H	1.73	0.52
34:DD:389:GLU:OE2	34:DD:467:ARG:NH2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:30:U:O2'	2:CB:59:A:N1	2.38	0.52
7:CG:104:LYS:NZ	7:CG:124:GLY:O	2.32	0.52
24:CX:38:ASN:HB2	24:CX:39:PRO:HD2	1.92	0.52
33:DA:69:ARG:HG2	33:DB:55:TYR:CE2	2.44	0.52
33:DA:236:ALA:HA	33:DA:353:LEU:HD12	1.91	0.52
33:DA:386:TRP:CH2	33:DA:403:GLU:HG3	2.45	0.52
33:DA:414:SER:OG	33:DA:537:LEU:N	2.42	0.52
33:DB:440:ARG:HD3	33:DB:489:PRO:CD	2.40	0.52
34:DC:142:ARG:HB2	34:DC:186:LYS:NZ	2.25	0.52
34:DD:182:MET:O	34:DD:658:GLY:HA3	2.09	0.52
34:DD:364:LYS:O	34:DD:365:GLU:HG3	2.10	0.52
34:DD:482:PRO:HD2	34:DD:601:GLN:HA	1.91	0.52
34:DD:559:LEU:HD12	34:DD:602:ILE:HG13	1.91	0.52
34:DD:625:TYR:HB3	34:DD:666:ARG:HG2	1.92	0.52
1:BA:2328:G:O2'	1:BA:2331:G:O6	2.25	0.52
1:BA:2365:A:C5'	18:BR:54:ASN:HB2	2.39	0.52
2:BB:31:C:H2'	2:BB:32:C:H5'	1.92	0.52
7:BG:88:MET:HE3	7:BG:172:ILE:HG13	1.92	0.52
14:BN:88:LEU:HB2	14:BN:169:ILE:HD11	1.92	0.52
26:BZ:7:LYS:O	26:BZ:76:VAL:HA	2.10	0.52
1:CA:18:G:C5'	19:CS:4:ILE:HG23	2.39	0.52
1:CA:2404:G:OP2	32:Cf:64:ARG:NH2	2.43	0.52
8:CH:59:GLU:HG2	13:CM:13:TRP:HE1	1.74	0.52
12:CL:78:TYR:HA	12:CL:81:GLU:HG2	1.90	0.52
13:CM:45:THR:OG1	13:CM:131:GLU:OE2	2.18	0.52
26:CZ:52:ASP:HB2	26:CZ:85:ALA:O	2.09	0.52
33:DA:438:PRO:CA	33:DB:300:SER:HB2	2.39	0.52
33:DB:6:LEU:HD12	33:DB:30:ILE:O	2.08	0.52
34:DC:320:ARG:NH1	34:DC:337:GLN:HA	2.25	0.52
34:DC:340:ILE:HD13	34:DC:352:ILE:HD13	1.91	0.52
34:DD:131:THR:O	34:DD:135:GLN:HG2	2.10	0.52
34:DD:493:GLU:HG3	34:DD:582:LYS:HG3	1.91	0.52
1:BA:2323:U:H4'	6:BF:60:LYS:HD3	1.90	0.52
7:BG:101:VAL:HG22	7:BG:106:LEU:HD12	1.89	0.52
10:BJ:77:LYS:HE2	10:BJ:95:MET:CE	2.40	0.52
13:BM:67:ASN:OD1	13:BM:127:HIS:HB3	2.10	0.52
24:BX:38:ASN:HB2	24:BX:39:PRO:HD2	1.92	0.52
24:BX:132:VAL:HG23	24:BX:138:LEU:O	2.09	0.52
25:BY:12:LEU:HD12	25:BY:13:ILE:HG13	1.92	0.52
1:CA:109:G:OP2	1:CA:111:A:O2'	2.26	0.52
1:CA:2812:A:OP1	4:CD:307:ARG:NH2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CX:132:VAL:HG23	24:CX:138:LEU:O	2.09	0.52
25:CY:12:LEU:HD12	25:CY:13:ILE:HG13	1.92	0.52
33:DA:73:GLY:CA	33:DA:87:ALA:HB2	2.40	0.52
33:DA:74:LEU:HD12	33:DA:75:LEU:H	1.74	0.52
34:DC:1:MET:HG3	34:DC:1:MET:O	2.09	0.52
34:DD:340:ILE:HD12	34:DD:356:ASN:HD22	1.72	0.52
1:BA:1835:G:O2'	3:BC:147:LYS:HD3	2.10	0.52
2:BB:75:U:H2'	2:BB:76:U:C6	2.45	0.52
2:BB:123:A:H2'	2:BB:124:G:C8	2.44	0.52
3:BC:168:ARG:HB2	28:Bb:33:LEU:CD2	2.40	0.52
13:BM:154:PRO:O	13:BM:157:ARG:HG2	2.10	0.52
1:CA:54:C:OP2	23:CW:51:ARG:NH2	2.32	0.52
1:CA:1754:G:C8	28:Cb:20:PRO:HA	2.45	0.52
3:CC:168:ARG:HB2	28:Cb:33:LEU:CD2	2.40	0.52
8:CH:18:LEU:HD12	8:CH:87:ALA:HB2	1.91	0.52
11:CK:62:PRO:HG3	33:DA:3:LYS:HE3	1.91	0.52
33:DA:233:LEU:HD12	33:DB:369:VAL:CG1	2.40	0.52
33:DB:166:LYS:HD2	33:DB:167:THR:N	2.24	0.52
33:DB:419:LEU:CD2	33:DB:452:ALA:HB2	2.38	0.52
34:DC:90:ILE:CD1	34:DC:253:ILE:HD11	2.33	0.52
34:DC:463:ILE:HB	34:DC:714:ARG:NH1	2.25	0.52
34:DC:526:MET:HE2	34:DC:531:ALA:HA	1.92	0.52
34:DC:547:THR:CG2	34:DC:585:LEU:HG	2.39	0.52
34:DC:634:GLN:NE2	34:DC:656:THR:HB	2.24	0.52
1:BA:189:U:O4	1:BA:420:U:O2'	2.21	0.52
1:BA:1587:G:C6	25:BY:24:GLY:HA3	2.43	0.52
4:BD:85:ILE:HD12	4:BD:179:SER:HB2	1.91	0.52
4:BD:198:LEU:O	4:BD:314:PRO:HD3	2.09	0.52
5:BE:143:VAL:HA	5:BE:242:GLU:HG2	1.92	0.52
5:BE:146:LEU:O	5:BE:149:LEU:HG	2.09	0.52
6:BF:7:GLU:HB3	6:BF:123:VAL:HG13	1.91	0.52
7:BG:81:ASN:HB3	7:BG:82:GLU:OE1	2.09	0.52
2:CB:34:G:H2'	2:CB:35:U:C6	2.45	0.52
3:CC:35:GLU:HG2	3:CC:36:ASN:OD1	2.10	0.52
25:CY:30:ASP:O	25:CY:34:ASN:ND2	2.41	0.52
26:CZ:7:LYS:O	26:CZ:76:VAL:HA	2.10	0.52
33:DA:71:HIS:CD2	33:DA:130:LEU:HA	2.44	0.52
33:DB:364:TYR:HA	33:DB:376:GLN:O	2.10	0.52
34:DC:474:THR:HG23	34:DC:617:ALA:HB2	1.90	0.52
34:DC:478:GLU:OE2	34:DC:487:ARG:NH1	2.42	0.52
1:BA:386:U:O2'	1:BA:388:G:N7	2.37	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:2018:U:OP2	4:BD:223:LYS:NZ	2.27	0.52
2:BB:98:C:H2'	2:BB:99:U:O2	2.09	0.52
4:BD:48:GLY:O	4:BD:74:VAL:HG12	2.10	0.52
8:BH:29:LYS:H	8:BH:101:ASP:HB3	1.74	0.52
9:BI:111:SER:OG	9:BI:112:GLY:N	2.36	0.52
20:BT:75:ILE:O	20:BT:79:ILE:HG12	2.10	0.52
1:CA:2254:U:O2'	1:CA:2447:G:OP2	2.21	0.52
1:CA:2296:A:C2	32:Cf:4:PRO:HG2	2.45	0.52
3:CC:177:TYR:CZ	3:CC:181:LYS:HD3	2.45	0.52
33:DA:2:VAL:O	33:DA:27:VAL:HG22	2.10	0.52
33:DA:136:LYS:CE	33:DB:121:GLU:HA	2.40	0.52
33:DA:333:PHE:HE2	33:DA:338:LEU:HA	1.75	0.52
33:DB:63:VAL:CG2	33:DB:125:ILE:HB	2.40	0.52
33:DB:394:TYR:HE1	33:DB:504:TYR:HD1	1.57	0.52
34:DC:41:LEU:HD12	34:DC:245:HIS:HA	1.91	0.52
34:DC:208:ASN:O	34:DC:244:LEU:HB2	2.10	0.52
34:DC:326:THR:HA	34:DC:372:VAL:CA	2.40	0.52
34:DC:329:SER:OG	34:DC:365:GLU:OE1	2.25	0.52
34:DC:399:LYS:NZ	34:DC:456:GLU:HG2	2.25	0.52
34:DC:406:LYS:CE	34:DC:455:VAL:HG22	2.39	0.52
34:DC:423:ILE:HG22	34:DC:434:MET:HG3	1.92	0.52
34:DD:36:THR:OG1	34:DD:67:ALA:HB1	2.10	0.52
34:DD:70:ILE:HD11	34:DD:97:GLY:HA3	1.91	0.52
34:DD:153:LEU:O	34:DD:159:VAL:HG22	2.09	0.52
34:DD:620:SER:OG	34:DD:621:LEU:N	2.41	0.52
12:BL:94:ILE:CD1	12:BL:114:LEU:HD11	2.38	0.52
22:BV:8:PHE:CD1	22:BV:46:PRO:HG3	2.45	0.52
1:CA:1296:G:OP1	27:Ca:136:LYS:HE2	2.10	0.52
1:CA:2675:G:C5'	34:DD:451:ARG:HH12	2.22	0.52
2:CB:3:G:H2'	2:CB:4:U:H6	1.75	0.52
3:CC:101:PRO:HD2	3:CC:104:PHE:CD2	2.45	0.52
5:CE:202:ASN:HA	5:CE:206:LEU:HD11	1.91	0.52
7:CG:69:PHE:O	7:CG:73:ILE:HG12	2.09	0.52
8:CH:13:LEU:HD11	8:CH:112:ILE:HG23	1.92	0.52
11:CK:20:CYS:HB3	11:CK:26:ALA:O	2.09	0.52
20:CT:75:ILE:O	20:CT:79:ILE:HG12	2.10	0.52
24:CX:69:ARG:HD2	24:CX:117:ARG:O	2.10	0.52
33:DA:471:GLU:HA	33:DA:474:GLN:CG	2.40	0.52
34:DC:93:ILE:HD11	34:DC:357:ILE:HD11	1.92	0.52
34:DC:210:ALA:CB	34:DC:244:LEU:HD12	2.31	0.52
34:DC:495:LEU:HD22	34:DC:500:VAL:CG2	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:410:VAL:HG22	34:DD:453:LYS:CD	2.39	0.52
34:DD:411:LEU:HD12	34:DD:412:ARG:N	2.25	0.52
34:DD:548:LYS:HD2	34:DD:549:GLY:N	2.25	0.52
3:BC:177:TYR:CZ	3:BC:181:LYS:HD3	2.45	0.52
7:BG:22:ASP:HB2	7:BG:36:LYS:HE3	1.92	0.52
13:BM:148:LEU:O	13:BM:151:VAL:HG12	2.10	0.52
15:BO:20:LEU:HD21	15:BO:110:GLU:CD	2.35	0.52
13:CM:154:PRO:O	13:CM:157:ARG:HG2	2.10	0.52
33:DA:221:CYS:O	33:DB:374:LEU:HA	2.10	0.52
33:DB:302:TYR:HE1	33:DB:323:LYS:HA	1.74	0.52
33:DB:419:LEU:CG	33:DB:482:MET:HE2	2.37	0.52
34:DC:24:ILE:HG23	34:DC:256:LEU:HD13	1.92	0.52
34:DD:151:ASP:OD1	34:DD:152:ARG:N	2.43	0.52
34:DD:411:LEU:CD1	34:DD:412:ARG:HD2	2.40	0.52
34:DD:521:LEU:HB2	34:DD:531:ALA:HB1	1.90	0.52
34:DD:527:GLU:OE2	34:DD:530:GLU:N	2.37	0.52
1:BA:135:U:O2'	1:BA:136:C:OP1	2.24	0.51
1:BA:2543:G:O2'	1:BA:2669:A:N1	2.42	0.51
5:BE:6:THR:O	5:BE:13:ALA:HA	2.09	0.51
9:BI:45:PRO:HB2	9:BI:171:LEU:HD22	1.91	0.51
26:BZ:29:ARG:NH2	26:BZ:33:GLU:OE2	2.43	0.51
1:CA:1074:C:O3'	24:CX:129:LYS:NZ	2.40	0.51
1:CA:1856:C:N3	3:CC:122:SER:HB2	2.25	0.51
1:CA:2690:C:OP1	4:CD:17:ARG:NH2	2.34	0.51
2:CB:75:U:H2'	2:CB:76:U:C6	2.45	0.51
8:CH:111:ASP:OD1	8:CH:115:LYS:HE3	2.11	0.51
11:CK:129:SER:HB2	34:DC:334:ARG:NH2	2.22	0.51
13:CM:176:THR:O	13:CM:181:THR:HG21	2.09	0.51
15:CO:35:ILE:HD12	15:CO:124:ILE:HD11	1.93	0.51
27:Ca:119:VAL:HG23	27:Ca:124:GLU:OE1	2.10	0.51
33:DA:53:THR:HG22	33:DA:70:ILE:CG1	2.31	0.51
33:DA:376:GLN:NE2	33:DA:377:SER:O	2.43	0.51
33:DB:473:CYS:HB3	33:DB:477:LEU:CD1	2.39	0.51
33:DB:508:PRO:HB3	33:DB:532:GLY:CA	2.40	0.51
34:DC:23:ASN:OD1	34:DC:91:ASN:ND2	2.41	0.51
34:DC:308:VAL:HG22	34:DC:361:THR:HG22	1.91	0.51
34:DC:313:LEU:HD11	34:DC:358:ALA:HB3	1.92	0.51
34:DC:323:GLU:HA	34:DC:334:ARG:HD2	1.91	0.51
34:DD:147:VAL:HG11	34:DD:168:LEU:CD2	2.40	0.51
34:DD:393:THR:HB	34:DD:434:MET:O	2.10	0.51
34:DD:499:ILE:O	34:DD:502:ALA:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:522:ILE:HA	34:DD:526:MET:O	2.10	0.51
1:BA:177:C:OP2	29:Bc:44:ARG:NH2	2.23	0.51
19:BS:68:SER:HB2	19:BS:79:LYS:HD3	1.91	0.51
23:BW:47:ILE:H	23:BW:47:ILE:HD12	1.76	0.51
24:BX:71:ARG:O	24:BX:112:LEU:HD12	2.10	0.51
1:CA:76:U:O4	1:CA:94:G:O2'	2.14	0.51
1:CA:1483:A:O2'	1:CA:1484:A:O4'	2.28	0.51
4:CD:176:PHE:CZ	4:CD:180:LYS:HD2	2.44	0.51
6:CF:29:LEU:HA	6:CF:32:ILE:HG12	1.92	0.51
21:CU:31:ARG:NH1	21:CU:43:ARG:O	2.38	0.51
33:DA:382:ILE:HG12	33:DA:407:LYS:HZ3	1.75	0.51
33:DB:78:ARG:O	33:DB:78:ARG:HG2	2.10	0.51
33:DB:118:GLU:O	33:DB:121:GLU:HB3	2.09	0.51
34:DC:41:LEU:CD1	34:DC:245:HIS:HA	2.41	0.51
34:DD:632:VAL:HG22	34:DD:661:ALA:O	2.10	0.51
34:DD:636:LEU:HD21	34:DD:684:GLU:OE2	2.10	0.51
1:BA:1074:C:O3'	24:BX:129:LYS:NZ	2.40	0.51
1:BA:2296:A:C2	32:Bf:4:PRO:HG2	2.45	0.51
4:BD:42:PHE:HD1	4:BD:192:VAL:HG21	1.75	0.51
4:BD:248:TRP:CD1	10:BJ:63:GLU:HG3	2.46	0.51
14:BN:103:LEU:HD22	14:BN:120:LEU:HD22	1.91	0.51
15:BO:80:LEU:HD23	15:BO:102:ALA:HB3	1.91	0.51
21:BU:78:THR:HG23	21:BU:93:PRO:HB2	1.93	0.51
1:CA:1111:G:HO2'	1:CA:1237:G:HO2'	1.58	0.51
3:CC:81:ILE:HG23	3:CC:92:GLY:O	2.11	0.51
4:CD:42:PHE:HD1	4:CD:192:VAL:HG21	1.75	0.51
4:CD:274:ASP:HB3	4:CD:277:GLU:OE2	2.11	0.51
5:CE:20:PRO:HD2	5:CE:23:PHE:CE1	2.46	0.51
33:DA:225:ASP:CB	33:DB:371:GLY:HA2	2.39	0.51
33:DA:419:LEU:HD13	33:DA:482:MET:SD	2.50	0.51
34:DD:129:THR:O	34:DD:133:LEU:HD23	2.10	0.51
34:DD:165:GLN:HB2	34:DD:223:PHE:CE2	2.46	0.51
34:DD:375:LEU:HD23	34:DD:376:ASP:N	2.25	0.51
1:BA:1856:C:N3	3:BC:122:SER:HB2	2.25	0.51
4:BD:176:PHE:CZ	4:BD:180:LYS:HD2	2.44	0.51
12:BL:78:TYR:HA	12:BL:81:GLU:HG2	1.90	0.51
22:BV:58:GLN:HA	22:BV:61:LYS:CD	2.39	0.51
24:BX:8:ARG:HG2	24:BX:128:ILE:HD12	1.93	0.51
27:Ba:101:HIS:HB2	27:Ba:107:ASP:OD1	2.10	0.51
1:CA:156:A:OP1	13:CM:83:ARG:HG2	2.11	0.51
2:CB:56:A:O2'	2:CB:58:A:N7	2.37	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:96:G:H2'	2:CB:97:C:O4'	2.10	0.51
3:CC:170:TRP:CE3	3:CC:175:LYS:HG3	2.46	0.51
10:CJ:120:ASP:OD2	10:CJ:122:ARG:HG2	2.10	0.51
13:CM:6:TYR:CE1	13:CM:51:ARG:HD3	2.45	0.51
13:CM:148:LEU:O	13:CM:151:VAL:HG12	2.10	0.51
23:CW:30:ARG:HE	23:CW:34:LEU:HD21	1.74	0.51
23:CW:47:ILE:HD12	23:CW:47:ILE:H	1.76	0.51
33:DA:203:LYS:HD3	33:DB:201:ARG:CZ	2.41	0.51
33:DA:491:ASP:O	33:DA:495:VAL:HG23	2.10	0.51
33:DB:238:GLN:NE2	33:DB:244:LEU:HD22	2.24	0.51
33:DB:251:ASP:HB2	33:DB:305:ILE:HD12	1.93	0.51
34:DC:113:ASP:HA	34:DC:266:ARG:NH2	2.25	0.51
34:DC:469:THR:O	34:DC:619:ASP:HA	2.09	0.51
34:DD:80:VAL:HG22	34:DD:89:LEU:CD1	2.40	0.51
34:DD:252:VAL:CA	34:DD:256:LEU:HB3	2.31	0.51
34:DD:266:ARG:CB	34:DD:270:ILE:HD13	2.41	0.51
34:DD:498:GLU:HG2	34:DD:499:ILE:N	2.25	0.51
34:DD:572:PRO:HB2	34:DD:615:LEU:HD21	1.93	0.51
1:BA:1771:C:OP2	16:BP:72:TYR:OH	2.26	0.51
1:BA:2702:A:OP1	26:BZ:26:ARG:NH2	2.43	0.51
5:BE:20:PRO:HD2	5:BE:23:PHE:CE1	2.45	0.51
11:BK:62:PRO:CD	33:DB:28:LYS:HE2	2.40	0.51
15:BO:68:LEU:HD13	15:BO:84:VAL:CG1	2.41	0.51
16:BP:101:ALA:HA	16:BP:104:ARG:HE	1.76	0.51
24:BX:69:ARG:HD2	24:BX:117:ARG:O	2.10	0.51
26:BZ:52:ASP:HB2	26:BZ:85:ALA:O	2.09	0.51
2:CB:90:G:N2	2:CB:98:C:H1'	2.26	0.51
5:CE:41:ALA:HA	5:CE:44:LEU:CD1	2.39	0.51
15:CO:68:LEU:HD13	15:CO:84:VAL:CG1	2.41	0.51
22:CV:8:PHE:CD1	22:CV:46:PRO:HG3	2.45	0.51
24:CX:17:ILE:O	24:CX:21:MET:HG2	2.11	0.51
24:CX:71:ARG:O	24:CX:112:LEU:HD12	2.10	0.51
33:DA:18:PHE:O	33:DA:22:LEU:HG	2.11	0.51
33:DB:261:GLU:HG2	33:DB:380:ILE:HG12	1.91	0.51
33:DB:410:LYS:HD3	33:DB:535:HIS:ND1	2.25	0.51
34:DC:518:ARG:HG2	34:DC:522:ILE:CD1	2.39	0.51
34:DC:541:ASN:HA	34:DC:581:VAL:O	2.10	0.51
34:DC:547:THR:OG1	34:DC:550:ILE:HD13	2.11	0.51
34:DC:712:ARG:HH11	34:DC:717:LEU:HD13	1.75	0.51
34:DD:4:ARG:CB	34:DD:48:ILE:HG23	2.41	0.51
34:DD:56:GLN:O	34:DD:56:GLN:HG2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:146:PHE:HA	34:DD:201:ALA:O	2.11	0.51
34:DD:292:LEU:HD22	34:DD:322:MET:SD	2.51	0.51
34:DD:299:ILE:H	34:DD:368:VAL:HG22	1.76	0.51
34:DD:392:VAL:H	34:DD:437:MET:HA	1.75	0.51
1:BA:2366:G:OP2	18:BR:7:GLU:HB2	2.10	0.51
5:BE:41:ALA:HA	5:BE:44:LEU:CD1	2.39	0.51
11:BK:30:GLU:OE1	11:BK:58:LYS:HE3	2.10	0.51
11:BK:91:GLU:HB2	22:BV:23:LYS:HA	1.93	0.51
19:BS:41:LYS:NZ	19:BS:108:ASN:HA	2.26	0.51
25:BY:25:ALA:HA	25:BY:83:ALA:HB3	1.92	0.51
27:Ba:29:ASP:OD2	27:Ba:122:SER:HB2	2.10	0.51
1:CA:322:U:O2	5:CE:207:LYS:HD3	2.11	0.51
1:CA:2366:G:OP2	18:CR:7:GLU:HB2	2.10	0.51
1:CA:2524:U:OP1	4:CD:8:LYS:HG2	2.11	0.51
2:CB:127:C:H2'	2:CB:128:A:N3	2.26	0.51
7:CG:19:LEU:CD2	7:CG:44:ILE:HB	2.40	0.51
11:CK:32:ILE:HD11	11:CK:56:SER:HB2	1.93	0.51
26:CZ:29:ARG:NH2	26:CZ:33:GLU:OE2	2.43	0.51
33:DA:62:ARG:HG2	33:DA:63:VAL:N	2.26	0.51
33:DA:214:GLU:HB3	33:DA:218:GLN:NE2	2.25	0.51
33:DA:306:ILE:CD1	33:DA:328:ILE:HD12	2.41	0.51
34:DC:207:TYR:HB3	34:DC:235:MET:CG	2.41	0.51
34:DD:325:PHE:CE1	34:DD:332:LYS:HE2	2.46	0.51
1:BA:1111:G:HO2'	1:BA:1237:G:HO2'	1.58	0.51
1:BA:1483:A:O2'	1:BA:1484:A:O4'	2.28	0.51
3:BC:101:PRO:HD2	3:BC:104:PHE:CD2	2.45	0.51
8:BH:18:LEU:HD12	8:BH:87:ALA:HB2	1.91	0.51
11:BK:109:ILE:HG13	11:BK:127:THR:HG22	1.92	0.51
19:BS:46:ARG:HG3	19:BS:89:LEU:HD11	1.92	0.51
1:CA:2342:C:OP1	18:CR:23:GLY:N	2.25	0.51
2:CB:79:U:H4'	2:CB:80:G:OP1	2.11	0.51
6:CF:40:CYS:N	6:CF:58:GLY:O	2.34	0.51
16:CP:101:ALA:HA	16:CP:104:ARG:HE	1.76	0.51
21:CU:70:VAL:HG22	21:CU:77:ILE:HG22	1.93	0.51
21:CU:78:THR:HG23	21:CU:93:PRO:HB2	1.92	0.51
33:DB:2:VAL:O	33:DB:27:VAL:HG22	2.11	0.51
33:DB:283:GLY:HA2	33:DB:427:TYR:CB	2.41	0.51
34:DC:462:PRO:HB2	34:DC:673:PHE:CZ	2.45	0.51
34:DC:625:TYR:CZ	34:DC:668:PRO:HG3	2.45	0.51
34:DD:106:THR:HB	34:DD:110:ARG:HH12	1.76	0.51
34:DD:392:VAL:HA	34:DD:463:ILE:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:562:ASP:O	34:DD:566:GLU:HG2	2.11	0.51
34:DD:573:LEU:HD13	34:DD:619:ASP:OD2	2.11	0.51
1:BA:747:G:OP1	12:BL:1:MET:HB3	2.11	0.51
1:BA:1296:G:OP1	27:Ba:136:LYS:HE2	2.10	0.51
1:BA:2378:A:P	18:BR:51:GLY:H	2.34	0.51
1:BA:2404:G:OP2	32:Bf:64:ARG:NH2	2.43	0.51
1:BA:2524:U:OP1	4:BD:8:LYS:HG2	2.11	0.51
3:BC:81:ILE:HG23	3:BC:92:GLY:O	2.11	0.51
5:BE:202:ASN:HA	5:BE:206:LEU:CD1	2.41	0.51
1:CA:1835:G:O2'	3:CC:147:LYS:HD3	2.10	0.51
1:CA:2323:U:H4'	6:CF:60:LYS:HD3	1.91	0.51
1:CA:2538:G:OP1	31:Ce:42:LYS:HE3	2.11	0.51
7:CG:129:LYS:HB2	7:CG:136:THR:CG2	2.41	0.51
11:CK:73:VAL:HG12	11:CK:95:MET:CG	2.39	0.51
17:CQ:14:LYS:HD2	17:CQ:16:GLY:O	2.11	0.51
33:DA:256:LEU:O	33:DA:259:VAL:HG12	2.11	0.51
33:DA:491:ASP:HB2	33:DA:520:THR:HG21	1.93	0.51
33:DB:80:SER:HB3	33:DB:83:GLN:CB	2.39	0.51
34:DC:7:MET:HG2	34:DC:10:ARG:HH22	1.76	0.51
34:DC:321:GLY:HA2	34:DC:335:VAL:O	2.11	0.51
34:DC:626:GLN:HE21	34:DC:672:MET:HG3	1.74	0.51
34:DD:115:ALA:H	34:DD:141:VAL:HB	1.76	0.51
34:DD:139:GLU:OE1	34:DD:139:GLU:N	2.43	0.51
34:DD:634:GLN:CB	34:DD:659:ASP:HA	2.37	0.51
2:BB:96:G:H2'	2:BB:97:C:O4'	2.11	0.51
3:BC:110:GLU:HG2	3:BC:117:GLY:H	1.76	0.51
6:BF:29:LEU:HA	6:BF:32:ILE:HG12	1.93	0.51
21:BU:33:SER:O	21:BU:37:THR:HG22	2.11	0.51
21:BU:70:VAL:HG22	21:BU:77:ILE:HG22	1.93	0.51
24:BX:17:ILE:O	24:BX:21:MET:HG2	2.11	0.51
25:BY:31:ALA:HA	25:BY:34:ASN:ND2	2.26	0.51
31:Be:30:ARG:C	31:Be:39:LEU:HD11	2.36	0.51
1:CA:1327:C:OP2	5:CE:183:LYS:NZ	2.39	0.51
6:CF:110:ASP:HB3	6:CF:113:ILE:HG12	1.92	0.51
7:CG:101:VAL:HG22	7:CG:106:LEU:HD12	1.92	0.51
9:CI:70:ALA:HB2	9:CI:153:ALA:HB2	1.92	0.51
11:CK:109:ILE:HG13	11:CK:127:THR:HG22	1.92	0.51
19:CS:11:ASP:O	19:CS:15:THR:HB	2.11	0.51
33:DA:455:ASN:O	33:DA:459:ILE:HG13	2.10	0.51
33:DB:254:ASN:ND2	33:DB:277:PRO:HD3	2.26	0.51
33:DB:437:GLN:CB	33:DB:438:PRO:HD2	2.17	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DB:495:VAL:HA	33:DB:524:LEU:CD1	2.41	0.51
34:DD:312:ARG:HG2	34:DD:356:ASN:O	2.11	0.51
1:BA:1107:A:N1	1:BA:1233:U:O2'	2.44	0.51
1:BA:2835:G:H4'	4:BD:281:GLU:HB3	1.93	0.51
2:BB:3:G:H2'	2:BB:4:U:H6	1.75	0.51
2:BB:34:G:H2'	2:BB:35:U:C6	2.45	0.51
10:BJ:120:ASP:OD2	10:BJ:122:ARG:HG2	2.10	0.51
13:BM:38:VAL:CG1	13:BM:64:VAL:HG11	2.41	0.51
15:BO:49:ASN:O	15:BO:126:ARG:NH1	2.35	0.51
19:BS:121:VAL:CG1	19:BS:137:ASP:HB3	2.41	0.51
1:CA:1658:G:OP1	30:Cd:9:LYS:HD3	2.11	0.51
2:CB:101:C:O2	24:CX:49:LYS:HE2	2.11	0.51
3:CC:126:TYR:O	3:CC:142:PRO:HG3	2.11	0.51
4:CD:268:ILE:CD1	4:CD:295:ILE:HD11	2.36	0.51
10:CJ:77:LYS:HE2	10:CJ:95:MET:CE	2.40	0.51
14:CN:43:ASN:HB3	14:CN:76:THR:OG1	2.11	0.51
14:CN:52:THR:HB	14:CN:55:GLY:O	2.11	0.51
33:DA:390:THR:HG21	33:DA:521:ALA:HB3	1.93	0.51
34:DC:229:TYR:CA	34:DC:234:ASP:HB2	2.40	0.51
34:DC:258:ASN:HB2	34:DC:259:PRO:HD2	1.93	0.51
34:DD:77:VAL:HG21	34:DD:92:LEU:HD23	1.92	0.51
34:DD:162:GLN:HG3	34:DD:163:GLU:H	1.76	0.51
2:BB:79:U:H4'	2:BB:80:G:OP1	2.11	0.50
5:BE:202:ASN:HA	5:BE:206:LEU:HD11	1.92	0.50
10:BJ:81:ARG:HD3	10:BJ:86:TYR:CG	2.46	0.50
15:BO:35:ILE:HD12	15:BO:124:ILE:HD11	1.93	0.50
24:BX:3:ALA:O	24:BX:54:TYR:HA	2.11	0.50
27:Ba:119:VAL:HG23	27:Ba:124:GLU:OE1	2.10	0.50
1:CA:747:G:OP1	12:CL:1:MET:HB3	2.11	0.50
1:CA:2835:G:H4'	4:CD:281:GLU:HB3	1.94	0.50
3:CC:39:LEU:CD2	3:CC:83:CYS:HB3	2.41	0.50
4:CD:48:GLY:O	4:CD:74:VAL:HG12	2.10	0.50
11:CK:91:GLU:HB2	22:CV:23:LYS:HA	1.93	0.50
33:DA:117:GLU:HG2	33:DA:118:GLU:N	2.26	0.50
33:DA:167:THR:HG22	33:DA:171:LEU:CD1	2.41	0.50
33:DA:253:ASP:O	33:DA:257:GLN:HG2	2.10	0.50
34:DC:229:TYR:HA	34:DC:234:ASP:HB2	1.93	0.50
34:DC:537:ILE:HG13	34:DC:537:ILE:O	2.10	0.50
34:DD:393:THR:CG2	34:DD:435:ALA:HA	2.41	0.50
34:DD:518:ARG:HE	34:DD:532:LYS:HE3	1.76	0.50
34:DD:630:VAL:O	34:DD:662:ILE:HA	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:651:ILE:HG21	34:DD:654:MET:HE1	1.93	0.50
1:BA:652:A:C5	15:BO:75:LEU:HD21	2.47	0.50
1:BA:2695:C:H4'	22:BV:17:THR:HG22	1.93	0.50
2:BB:5:U:H2'	2:BB:6:U:H6	1.76	0.50
2:BB:101:C:O2	24:BX:49:LYS:HE2	2.11	0.50
5:BE:156:ILE:CD1	5:BE:212:LEU:HD11	2.42	0.50
13:BM:6:TYR:CE1	13:BM:51:ARG:HD3	2.45	0.50
19:BS:46:ARG:NH2	19:BS:96:GLU:OE1	2.41	0.50
1:CA:1160:A:H62	34:DD:637:MET:H	1.59	0.50
1:CA:2675:G:H5'	34:DD:451:ARG:HH12	1.76	0.50
5:CE:50:ARG:CG	5:CE:53:SER:HB3	2.41	0.50
10:CJ:33:TYR:HD1	10:CJ:99:LYS:HB2	1.76	0.50
27:Ca:101:HIS:HB2	27:Ca:107:ASP:OD1	2.10	0.50
33:DA:246:TYR:CD2	33:DB:374:LEU:HD22	2.45	0.50
33:DA:409:CYS:SG	33:DA:483:ALA:HB3	2.51	0.50
33:DA:474:GLN:HA	33:DA:477:LEU:HG	1.94	0.50
33:DB:76:CYS:HA	33:DB:137:ASN:CA	2.41	0.50
34:DC:21:ILE:HB	34:DC:259:PRO:CG	2.41	0.50
34:DC:210:ALA:HB3	34:DC:244:LEU:HA	1.91	0.50
34:DC:393:THR:HG23	34:DC:463:ILE:HG13	1.92	0.50
34:DD:495:LEU:HD21	34:DD:499:ILE:HG22	1.93	0.50
34:DD:498:GLU:HG2	34:DD:499:ILE:H	1.76	0.50
1:BA:395:U:H5''	13:BM:97:SER:HB3	1.94	0.50
1:BA:1000:C:C5'	18:BR:19:VAL:HG11	2.41	0.50
1:BA:2538:G:OP1	31:Be:42:LYS:HE3	2.11	0.50
4:BD:274:ASP:HB3	4:BD:277:GLU:OE2	2.11	0.50
6:BF:101:HIS:HB2	6:BF:107:MET:CE	2.42	0.50
6:BF:110:ASP:HB3	6:BF:113:ILE:HG12	1.92	0.50
9:BI:70:ALA:HB2	9:BI:153:ALA:HB2	1.92	0.50
10:BJ:33:TYR:HD1	10:BJ:99:LYS:HB2	1.76	0.50
11:BK:40:VAL:HG22	11:BK:41:LYS:H	1.76	0.50
30:Bd:41:ARG:CZ	30:Bd:48:LEU:HD21	2.42	0.50
32:Bf:9:THR:O	32:Bf:17:HIS:HA	2.11	0.50
2:CB:21:U:O2	2:CB:64:G:N2	2.32	0.50
2:CB:31:C:H2'	2:CB:32:C:H5'	1.92	0.50
5:CE:202:ASN:HA	5:CE:206:LEU:CD1	2.41	0.50
10:CJ:81:ARG:HD3	10:CJ:86:TYR:CG	2.46	0.50
11:CK:67:GLN:OE1	11:CK:69:LEU:HD21	2.11	0.50
12:CL:2:ASP:HB3	12:CL:5:LYS:CD	2.41	0.50
12:CL:121:PHE:HB2	12:CL:126:ARG:NE	2.26	0.50
18:CR:64:VAL:HA	18:CR:74:LEU:HD23	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:33:SER:O	21:CU:37:THR:HG22	2.11	0.50
25:CY:77:LYS:HD2	25:CY:79:PHE:CZ	2.47	0.50
28:Cb:32:ASP:HB3	28:Cb:36:ARG:NH1	2.27	0.50
33:DB:192:ARG:CD	33:DB:198:GLU:HB2	2.36	0.50
34:DC:298:ASP:HB3	34:DC:310:THR:HB	1.94	0.50
34:DC:425:LEU:HA	34:DC:432:HIS:HD2	1.76	0.50
34:DC:615:LEU:HD13	34:DC:722:PRO:O	2.12	0.50
34:DC:680:ARG:HG3	34:DC:685:GLY:HA2	1.94	0.50
34:DD:513:PRO:HB2	34:DD:516:GLU:HB3	1.94	0.50
1:BA:1790:C:H1'	22:BV:42:LEU:HD22	1.94	0.50
2:BB:51:A:OP2	14:BN:78:ASN:HA	2.11	0.50
4:BD:301:VAL:HG13	4:BD:302:PRO:HD2	1.93	0.50
5:BE:50:ARG:CG	5:BE:53:SER:HB3	2.41	0.50
5:BE:144:ASN:OD1	5:BE:242:GLU:HB2	2.12	0.50
12:BL:121:PHE:HB2	12:BL:126:ARG:NE	2.27	0.50
24:BX:98:ALA:HA	24:BX:103:LYS:NZ	2.26	0.50
25:BY:77:LYS:HD2	25:BY:79:PHE:CZ	2.47	0.50
28:Bb:3:LYS:HD2	28:Bb:4:LYS:H	1.76	0.50
28:Bb:32:ASP:HB3	28:Bb:36:ARG:HH12	1.76	0.50
1:CA:1000:C:C5'	18:CR:19:VAL:HG11	2.41	0.50
1:CA:1354:G:O2'	1:CA:2033:G:O6	2.24	0.50
1:CA:1790:C:H1'	22:CV:42:LEU:HD22	1.94	0.50
1:CA:2378:A:P	18:CR:51:GLY:H	2.34	0.50
2:CB:51:A:OP2	14:CN:78:ASN:HA	2.12	0.50
3:CC:90:LYS:O	3:CC:157:VAL:HB	2.12	0.50
4:CD:248:TRP:CD1	10:CJ:63:GLU:HG3	2.46	0.50
4:CD:301:VAL:HG13	4:CD:302:PRO:HD2	1.93	0.50
11:CK:62:PRO:HG2	33:DA:4:ARG:HH22	1.76	0.50
14:CN:88:LEU:HB2	14:CN:169:ILE:HD11	1.92	0.50
24:CX:8:ARG:HG2	24:CX:128:ILE:HD12	1.93	0.50
32:Cf:9:THR:O	32:Cf:17:HIS:HA	2.12	0.50
33:DA:63:VAL:O	33:DA:64:LYS:HG2	2.10	0.50
33:DB:73:GLY:O	33:DB:78:ARG:HA	2.11	0.50
33:DB:94:LEU:HD23	33:DB:94:LEU:H	1.76	0.50
33:DB:202:LEU:HB3	33:DB:204:PHE:CD2	2.46	0.50
34:DC:639:GLY:HA2	34:DC:642:LYS:CE	2.35	0.50
34:DC:649:GLY:HA2	34:DC:667:VAL:HG22	1.93	0.50
34:DD:29:HIS:CE1	34:DD:128:GLN:HB3	2.47	0.50
34:DD:78:SER:OG	34:DD:342:MET:HA	2.12	0.50
34:DD:679:ILE:HG23	34:DD:687:ALA:HB3	1.92	0.50
1:BA:238:C:OP1	8:BH:43:ARG:NH2	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:1396:C:OP2	30:Bd:1:MET:HB2	2.12	0.50
1:BA:1745:C:P	34:DD:548:LYS:HE2	2.52	0.50
1:BA:1754:G:C8	28:Bb:20:PRO:HA	2.45	0.50
3:BC:170:TRP:CE3	3:BC:175:LYS:HG3	2.46	0.50
6:BF:45:THR:OG1	6:BF:51:ILE:O	2.21	0.50
7:BG:129:LYS:HB2	7:BG:136:THR:CG2	2.41	0.50
12:BL:2:ASP:O	12:BL:5:LYS:HG2	2.11	0.50
14:BN:43:ASN:HB3	14:BN:76:THR:OG1	2.11	0.50
20:BT:73:HIS:O	20:BT:82:MET:HE2	2.12	0.50
1:CA:2304:A:OP1	6:CF:135:ARG:NH1	2.45	0.50
10:CJ:73:ASP:OD1	10:CJ:73:ASP:N	2.45	0.50
31:Ce:30:ARG:C	31:Ce:39:LEU:HD11	2.37	0.50
33:DA:202:LEU:CD1	33:DA:373:MET:HE1	2.41	0.50
33:DA:299:ILE:CD1	33:DB:438:PRO:HG3	2.24	0.50
33:DA:474:GLN:HA	33:DA:477:LEU:HD12	1.94	0.50
33:DB:10:SER:O	33:DB:12:LYS:HD2	2.12	0.50
33:DB:482:MET:HB3	33:DB:505:ILE:CD1	2.29	0.50
34:DC:93:ILE:CD1	34:DC:357:ILE:HD11	2.42	0.50
34:DC:388:SER:O	34:DC:437:MET:HE1	2.12	0.50
34:DC:413:GLN:OE1	34:DC:416:LYS:HE2	2.11	0.50
34:DC:653:ASN:HB3	34:DC:664:GLU:OE1	2.11	0.50
34:DD:142:ARG:NE	34:DD:190:GLY:O	2.45	0.50
1:BA:737:G:O6	15:BO:56:SER:HB3	2.12	0.50
2:BB:90:G:N2	2:BB:98:C:H1'	2.26	0.50
3:BC:39:LEU:CD2	3:BC:83:CYS:HB3	2.41	0.50
3:BC:126:TYR:O	3:BC:142:PRO:HG3	2.11	0.50
6:BF:16:GLY:HA2	6:BF:57:ILE:HG23	1.94	0.50
17:BQ:14:LYS:HD2	17:BQ:16:GLY:O	2.11	0.50
17:BQ:31:GLU:HG3	17:BQ:58:VAL:CG1	2.42	0.50
22:BV:20:LEU:HD11	22:BV:28:THR:HB	1.94	0.50
1:CA:2096:U:OP1	3:CC:212:LYS:NZ	2.40	0.50
3:CC:110:GLU:HG2	3:CC:117:GLY:H	1.77	0.50
7:CG:22:ASP:HB2	7:CG:36:LYS:HE3	1.92	0.50
19:CS:41:LYS:NZ	19:CS:108:ASN:HA	2.26	0.50
24:CX:98:ALA:HA	24:CX:103:LYS:NZ	2.26	0.50
25:CY:31:ALA:HA	25:CY:34:ASN:ND2	2.25	0.50
25:CY:62:LEU:HD12	25:CY:63:GLU:H	1.77	0.50
26:CZ:29:ARG:NH1	26:CZ:33:GLU:HG2	2.27	0.50
27:Ca:126:ILE:HD11	27:Ca:151:VAL:HG22	1.94	0.50
33:DA:163:ILE:HD11	33:DA:167:THR:CG2	2.41	0.50
33:DA:398:LYS:HE3	33:DA:479:GLU:OE1	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DA:409:CYS:HB3	33:DA:418:ILE:CB	2.41	0.50
33:DA:409:CYS:HB2	33:DA:418:ILE:HD13	1.92	0.50
33:DB:200:LEU:HD13	33:DB:375:LYS:CE	2.41	0.50
33:DB:395:PRO:O	33:DB:399:ARG:HG3	2.12	0.50
34:DC:383:SER:O	34:DC:384:ILE:HD13	2.12	0.50
34:DC:396:VAL:HG22	34:DC:459:THR:CG2	2.39	0.50
34:DC:651:ILE:HG21	34:DC:654:MET:CE	2.41	0.50
34:DD:15:MET:HB3	34:DD:352:ILE:HG23	1.93	0.50
34:DD:79:MET:HE3	34:DD:249:LEU:HD23	1.93	0.50
34:DD:266:ARG:O	34:DD:269:VAL:HG12	2.12	0.50
34:DD:300:SER:CB	34:DD:308:VAL:HG23	2.42	0.50
1:BA:156:A:OP1	13:BM:83:ARG:HG2	2.11	0.50
1:BA:1972:U:O2'	1:BA:1974:A:N7	2.37	0.50
4:BD:140:ASP:HA	4:BD:172:LEU:HD13	1.93	0.50
8:BH:13:LEU:HD11	8:BH:112:ILE:HG23	1.92	0.50
12:BL:95:ASN:HA	12:BL:117:THR:CG2	2.42	0.50
30:Bd:43:TRP:CZ3	30:Bd:44:ARG:HB2	2.47	0.50
1:CA:618:U:O4	27:Ca:73:GLN:NE2	2.44	0.50
2:CB:5:U:H2'	2:CB:6:U:H6	1.76	0.50
11:CK:30:GLU:OE1	11:CK:58:LYS:HE3	2.11	0.50
15:CO:20:LEU:HD21	15:CO:110:GLU:CD	2.35	0.50
15:CO:110:GLU:HA	15:CO:113:MET:HE3	1.93	0.50
25:CY:25:ALA:HA	25:CY:83:ALA:HB3	1.92	0.50
33:DA:111:LYS:HZ1	34:DC:729:SER:HB3	1.76	0.50
33:DA:534:ARG:HE	33:DA:536:PHE:HB2	1.75	0.50
33:DB:271:ILE:HG12	33:DB:279:GLY:HA3	1.94	0.50
33:DB:406:LEU:HD22	33:DB:535:HIS:CD2	2.46	0.50
34:DC:123:GLU:OE1	34:DC:126:MET:HG3	2.11	0.50
34:DC:145:LEU:O	34:DC:200:VAL:HA	2.11	0.50
34:DC:208:ASN:HA	34:DC:244:LEU:HD22	1.93	0.50
34:DC:292:LEU:HB3	34:DC:374:THR:N	2.26	0.50
34:DD:515:LEU:HD12	34:DD:516:GLU:N	2.26	0.50
1:BA:288:C:N4	1:BA:352:A:O2'	2.45	0.50
1:BA:1960:U:OP1	1:BA:2615:G:O2'	2.19	0.50
3:BC:55:PRO:HG2	3:BC:161:ALA:HB3	1.94	0.50
7:BG:23:VAL:HB	7:BG:34:GLU:OE2	2.12	0.50
12:BL:2:ASP:HB3	12:BL:5:LYS:CD	2.41	0.50
19:BS:11:ASP:O	19:BS:15:THR:HB	2.11	0.50
25:BY:62:LEU:HB2	25:BY:98:THR:CG2	2.41	0.50
1:CA:650:G:OP1	5:CE:28:ARG:NH1	2.40	0.50
5:CE:79:ARG:HD2	5:CE:80:ALA:O	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:144:ASN:OD1	5:CE:242:GLU:HB2	2.11	0.50
5:CE:156:ILE:CD1	5:CE:212:LEU:HD11	2.41	0.50
6:CF:16:GLY:HA2	6:CF:57:ILE:HG23	1.93	0.50
24:CX:3:ALA:O	24:CX:54:TYR:HA	2.11	0.50
24:CX:125:HIS:CE1	24:CX:128:ILE:HG23	2.47	0.50
27:Ca:29:ASP:OD2	27:Ca:122:SER:HB2	2.11	0.50
28:Cb:32:ASP:HB3	28:Cb:36:ARG:HH12	1.76	0.50
33:DA:135:ALA:HA	33:DA:143:VAL:CG1	2.42	0.50
33:DA:250:VAL:O	33:DA:253:ASP:HB2	2.12	0.50
33:DA:315:GLU:HG2	33:DA:316:ALA:N	2.26	0.50
33:DA:386:TRP:HE1	33:DA:399:ARG:HG2	1.77	0.50
33:DB:396:GLU:HA	33:DB:399:ARG:CD	2.41	0.50
33:DB:433:MET:HE2	33:DB:435:ALA:CA	2.32	0.50
34:DC:15:MET:HE1	34:DC:349:VAL:HG11	1.93	0.50
34:DC:29:HIS:HA	34:DC:128:GLN:HG2	1.94	0.50
34:DC:509:SER:HA	34:DC:537:ILE:HD11	1.94	0.50
34:DD:76:ASN:ND2	34:DD:310:THR:HG21	2.27	0.50
34:DD:123:GLU:OE2	34:DD:152:ARG:NH1	2.32	0.50
34:DD:149:LYS:N	34:DD:204:SER:HA	2.27	0.50
34:DD:634:GLN:OE1	34:DD:660:LEU:N	2.28	0.50
1:BA:322:U:O2	5:BE:207:LYS:HD3	2.11	0.50
1:BA:2782:C:OP1	4:BD:260:GLN:NE2	2.44	0.50
13:BM:113:LEU:HB2	13:BM:134:LEU:HD23	1.94	0.50
14:BN:52:THR:HB	14:BN:55:GLY:O	2.11	0.50
17:BQ:29:GLN:OE1	17:BQ:33:ASN:ND2	2.40	0.50
26:BZ:29:ARG:NH1	26:BZ:33:GLU:HG2	2.27	0.50
28:Bb:32:ASP:HB3	28:Bb:36:ARG:NH1	2.27	0.50
32:Bf:22:VAL:HG22	32:Bf:69:TYR:CD2	2.47	0.50
1:CA:288:C:N4	1:CA:352:A:O2'	2.45	0.50
1:CA:395:U:H5''	13:CM:97:SER:HB3	1.94	0.50
1:CA:1041:U:O4	9:CI:15:ARG:HA	2.12	0.50
1:CA:1771:C:OP2	16:CP:72:TYR:OH	2.27	0.50
1:CA:2652:G:OP2	10:CJ:57:ARG:NH2	2.44	0.50
1:CA:2822:U:OP1	4:CD:158:LYS:NZ	2.39	0.50
5:CE:105:VAL:HG22	5:CE:109:GLU:HG3	1.94	0.50
9:CI:97:GLU:HB3	9:CI:121:VAL:HG11	1.93	0.50
15:CO:64:GLU:OE1	15:CO:83:PRO:HD2	2.12	0.50
16:CP:115:LEU:HD23	16:CP:120:TYR:HD1	1.76	0.50
19:CS:121:VAL:CG1	19:CS:137:ASP:HB3	2.41	0.50
24:CX:98:ALA:HA	24:CX:103:LYS:HZ1	1.77	0.50
33:DB:190:LEU:HD22	33:DB:194:LEU:HD12	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DB:305:ILE:HA	33:DB:327:ILE:O	2.12	0.50
34:DC:81:HIS:HB2	34:DC:249:LEU:HD13	1.92	0.50
34:DD:24:ILE:HG21	34:DD:256:LEU:HD21	1.94	0.50
34:DD:43:ALA:HB1	34:DD:54:GLY:HA2	1.93	0.50
34:DD:408:ILE:O	34:DD:412:ARG:HD3	2.12	0.50
34:DD:438:GLY:O	34:DD:442:LEU:HG	2.12	0.50
1:BA:1922:A:HO2'	3:BC:214:THR:HG1	1.59	0.49
1:BA:2304:A:OP1	6:BF:135:ARG:NH1	2.45	0.49
5:BE:133:ILE:O	5:BE:167:ASP:HB2	2.12	0.49
10:BJ:53:TYR:O	10:BJ:56:THR:HG22	2.12	0.49
21:BU:50:GLY:O	21:BU:66:LYS:NZ	2.33	0.49
22:BV:5:LYS:HG3	22:BV:12:MET:HE2	1.94	0.49
26:BZ:21:VAL:HG13	26:BZ:22:PRO:HD2	1.93	0.49
4:CD:55:VAL:HG23	4:CD:328:LEU:HD11	1.94	0.49
10:CJ:53:TYR:O	10:CJ:56:THR:HG22	2.12	0.49
11:CK:40:VAL:HG22	11:CK:41:LYS:H	1.76	0.49
13:CM:113:LEU:HB2	13:CM:134:LEU:HD23	1.94	0.49
23:CW:4:LEU:HD12	23:CW:4:LEU:O	2.12	0.49
27:Ca:54:THR:HB	27:Ca:76:GLN:OE1	2.12	0.49
30:Cd:41:ARG:CZ	30:Cd:48:LEU:HD21	2.42	0.49
30:Cd:43:TRP:CZ3	30:Cd:44:ARG:HB2	2.47	0.49
33:DA:72:GLY:C	33:DA:86:GLU:HB2	2.37	0.49
33:DB:104:PRO:HG2	34:DD:595:ILE:HD13	1.94	0.49
33:DB:110:SER:OG	33:DB:113:GLY:O	2.28	0.49
34:DD:147:VAL:HG11	34:DD:168:LEU:HD21	1.93	0.49
34:DD:423:ILE:O	34:DD:425:LEU:N	2.45	0.49
1:BA:2888:U:N3	1:BA:2890:C:OP1	2.46	0.49
2:BB:127:C:H2'	2:BB:128:A:N3	2.26	0.49
5:BE:32:ILE:HD13	5:BE:234:ALA:HB2	1.94	0.49
8:BH:111:ASP:OD1	8:BH:115:LYS:HE3	2.11	0.49
24:BX:41:TYR:O	24:BX:45:VAL:HG23	2.12	0.49
27:Ba:54:THR:HB	27:Ba:76:GLN:OE1	2.12	0.49
2:CB:38:C:O4'	14:CN:142:ARG:NH1	2.45	0.49
4:CD:140:ASP:HA	4:CD:172:LEU:HD13	1.93	0.49
26:CZ:21:VAL:HG13	26:CZ:22:PRO:HD2	1.93	0.49
33:DA:86:GLU:HA	33:DA:89:LYS:NZ	2.27	0.49
33:DA:128:PRO:HG2	33:DB:132:ARG:HH12	1.76	0.49
33:DA:239:LEU:HD21	33:DA:352:LYS:CD	2.42	0.49
33:DA:285:THR:HG23	33:DA:287:LEU:HB3	1.94	0.49
33:DA:312:PHE:CZ	33:DA:320:LEU:HD22	2.47	0.49
33:DA:388:SER:HB2	33:DA:529:VAL:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DB:288:GLN:CD	33:DB:424:GLU:HG3	2.36	0.49
33:DB:294:TRP:HZ3	33:DB:325:ILE:HD11	1.76	0.49
34:DC:128:GLN:O	34:DC:131:THR:OG1	2.26	0.49
34:DC:174:HIS:HE1	34:DC:178:LEU:HD21	1.75	0.49
34:DC:249:LEU:HA	34:DC:252:VAL:HB	1.95	0.49
34:DC:299:ILE:HG13	34:DC:299:ILE:O	2.12	0.49
34:DC:542:ILE:HD12	34:DC:544:ILE:CD1	2.31	0.49
34:DD:71:THR:HB	34:DD:96:PRO:HA	1.93	0.49
34:DD:308:VAL:HG12	34:DD:346:ARG:HH21	1.77	0.49
34:DD:423:ILE:O	34:DD:423:ILE:HG13	2.11	0.49
34:DD:526:MET:HE2	34:DD:530:GLU:HG3	1.94	0.49
1:BA:1658:G:OP1	30:Bd:9:LYS:HD3	2.11	0.49
3:BC:177:TYR:O	3:BC:181:LYS:HG2	2.12	0.49
7:BG:137:ILE:CG2	7:BG:145:VAL:HG23	2.36	0.49
16:BP:115:LEU:HD23	16:BP:120:TYR:HD1	1.78	0.49
23:BW:4:LEU:HD12	23:BW:4:LEU:O	2.12	0.49
1:CA:869:U:O4	3:CC:198:ARG:HB2	2.12	0.49
1:CA:2695:C:H4'	22:CV:17:THR:HG22	1.93	0.49
4:CD:85:ILE:CD1	4:CD:179:SER:HB2	2.43	0.49
7:CG:118:ARG:NH1	7:CG:155:LYS:O	2.45	0.49
33:DB:398:LYS:HE2	33:DB:504:TYR:CD1	2.47	0.49
33:DB:479:GLU:HA	33:DB:504:TYR:CE2	2.47	0.49
34:DC:134:ARG:NH1	34:DC:660:LEU:HB2	2.27	0.49
34:DC:546:MET:CG	34:DC:584:VAL:HG13	2.42	0.49
34:DD:676:ALA:O	34:DD:680:ARG:HG2	2.12	0.49
31:Be:15:LYS:HE3	31:Be:26:ILE:O	2.11	0.49
1:CA:1107:A:N1	1:CA:1233:U:O2'	2.45	0.49
1:CA:1661:C:O2'	1:CA:1667:A:N1	2.38	0.49
1:CA:2888:U:N3	1:CA:2890:C:OP1	2.46	0.49
2:CB:107:C:H2'	2:CB:108:U:O4'	2.12	0.49
3:CC:39:LEU:HD23	3:CC:83:CYS:HB3	1.94	0.49
7:CG:123:ILE:O	7:CG:126:THR:OG1	2.27	0.49
14:CN:139:PRO:HG2	14:CN:142:ARG:CG	2.42	0.49
15:CO:1:MET:HG2	15:CO:5:SER:CB	2.43	0.49
33:DA:188:THR:HG22	33:DA:199:VAL:HG23	1.94	0.49
33:DA:223:TYR:O	33:DB:372:GLY:HA2	2.12	0.49
33:DA:306:ILE:HD11	33:DA:328:ILE:HD12	1.92	0.49
33:DA:353:LEU:HD23	33:DA:356:LEU:CB	2.42	0.49
33:DA:396:GLU:O	33:DA:400:THR:HG23	2.13	0.49
33:DB:12:LYS:HG2	33:DB:38:ILE:HD12	1.93	0.49
33:DB:62:ARG:HG3	33:DB:63:VAL:H	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DC:37:LEU:HD13	34:DC:146:PHE:CE2	2.47	0.49
34:DC:178:LEU:O	34:DC:182:MET:HG3	2.12	0.49
34:DC:252:VAL:O	34:DC:256:LEU:HB2	2.13	0.49
34:DC:324:VAL:HG12	34:DC:374:THR:HB	1.93	0.49
34:DC:414:VAL:HA	34:DC:417:GLU:HB3	1.94	0.49
34:DD:338:VAL:HG12	34:DD:360:VAL:HG12	1.94	0.49
34:DD:641:THR:HG23	34:DD:651:ILE:HD12	1.93	0.49
1:BA:241:A:N1	1:BA:255:C:O2'	2.44	0.49
1:BA:563:G:O6	1:BA:583:G:O2'	2.29	0.49
4:BD:55:VAL:HG23	4:BD:328:LEU:HD11	1.94	0.49
9:BI:97:GLU:HB3	9:BI:121:VAL:HG11	1.93	0.49
13:BM:157:ARG:O	13:BM:162:ARG:NH1	2.46	0.49
25:BY:31:ALA:HA	25:BY:34:ASN:HD21	1.77	0.49
27:Ba:101:HIS:CD2	27:Ba:102:PRO:HD2	2.47	0.49
1:CA:737:G:O6	15:CO:56:SER:HB3	2.12	0.49
2:CB:125:C:H2'	2:CB:126:U:C6	2.48	0.49
3:CC:110:GLU:HG2	3:CC:117:GLY:N	2.28	0.49
3:CC:170:TRP:HE3	3:CC:175:LYS:HG3	1.78	0.49
4:CD:47:VAL:HG22	4:CD:287:TYR:CZ	2.48	0.49
4:CD:80:ILE:HD12	4:CD:145:ILE:CD1	2.39	0.49
4:CD:132:LEU:CD2	4:CD:137:ARG:HD3	2.43	0.49
12:CL:2:ASP:O	12:CL:5:LYS:HG2	2.12	0.49
14:CN:138:PRO:HG2	14:CN:143:ILE:CG1	2.43	0.49
22:CV:20:LEU:HD11	22:CV:28:THR:HB	1.94	0.49
25:CY:28:THR:HG23	25:CY:85:ALA:CB	2.34	0.49
25:CY:62:LEU:HB2	25:CY:98:THR:CG2	2.41	0.49
31:Ce:15:LYS:HE3	31:Ce:26:ILE:O	2.12	0.49
33:DA:382:ILE:HD11	33:DA:406:LEU:HB3	1.94	0.49
33:DB:442:ASP:OD1	33:DB:445:ARG:HD3	2.11	0.49
33:DB:483:ALA:CA	33:DB:506:VAL:HB	2.40	0.49
34:DC:406:LYS:O	34:DC:410:VAL:HG23	2.12	0.49
34:DD:26:ILE:CG2	34:DD:34:LYS:HD2	2.36	0.49
34:DD:41:LEU:HD13	34:DD:245:HIS:HA	1.94	0.49
34:DD:150:VAL:O	34:DD:154:ILE:HG13	2.13	0.49
34:DD:421:LEU:CD1	34:DD:445:ILE:HG13	2.42	0.49
34:DD:538:PHE:HD2	34:DD:568:MET:HB2	1.76	0.49
34:DD:655:THR:CB	34:DD:662:ILE:HB	2.43	0.49
1:BA:75:G:N1	1:BA:95:A:OP2	2.42	0.49
1:BA:1852:A:N7	3:BC:21:SER:HB3	2.28	0.49
2:BB:110:U:H2'	2:BB:111:G:O4'	2.12	0.49
3:BC:97:ILE:HG12	3:BC:153:CYS:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BE:40:GLN:O	5:BE:44:LEU:HG	2.12	0.49
14:BN:135:GLU:OE1	14:BN:135:GLU:N	2.41	0.49
15:BO:64:GLU:OE1	15:BO:83:PRO:HD2	2.12	0.49
15:BO:110:GLU:HA	15:BO:113:MET:HE3	1.93	0.49
19:BS:75:MET:HG2	19:BS:76:ALA:O	2.13	0.49
27:Ba:126:ILE:HD11	27:Ba:151:VAL:HG22	1.94	0.49
3:CC:100:VAL:O	3:CC:132:HIS:NE2	2.45	0.49
5:CE:40:GLN:O	5:CE:44:LEU:HG	2.12	0.49
12:CL:95:ASN:HA	12:CL:117:THR:CG2	2.42	0.49
33:DA:474:GLN:CA	33:DA:477:LEU:HG	2.43	0.49
33:DB:18:PHE:HD1	33:DB:154:LEU:HD21	1.77	0.49
34:DC:294:PHE:HB3	34:DC:372:VAL:HB	1.95	0.49
34:DC:701:SER:HA	34:DC:704:LEU:HD12	1.94	0.49
34:DD:42:LEU:HB3	34:DD:79:MET:CB	2.37	0.49
34:DD:43:ALA:HB1	34:DD:54:GLY:CA	2.42	0.49
34:DD:106:THR:OG1	34:DD:382:GLU:OE2	2.23	0.49
34:DD:107:ARG:CA	34:DD:110:ARG:HD2	2.35	0.49
34:DD:122:VAL:HB	34:DD:153:LEU:HD21	1.94	0.49
34:DD:229:TYR:CD2	34:DD:238:LEU:HB2	2.47	0.49
2:BB:38:C:O4'	14:BN:142:ARG:NH1	2.45	0.49
5:BE:105:VAL:HG22	5:BE:109:GLU:HG3	1.94	0.49
16:BP:105:ARG:NH1	16:BP:108:GLU:OE2	2.34	0.49
24:BX:61:THR:HA	24:BX:64:GLU:HG2	1.94	0.49
25:BY:28:THR:HG23	25:BY:85:ALA:CB	2.34	0.49
28:Bb:41:HIS:CG	28:Bb:75:PRO:HG3	2.47	0.49
1:CA:227:C:O2	1:CA:431:A:O2'	2.25	0.49
1:CA:652:A:C5	15:CO:75:LEU:HD21	2.47	0.49
1:CA:803:U:OP2	28:Cb:10:ARG:HD3	2.13	0.49
1:CA:2272:C:P	18:CR:6:GLY:HA3	2.53	0.49
15:CO:3:LYS:O	15:CO:7:VAL:HG23	2.13	0.49
26:CZ:76:VAL:CG2	26:CZ:84:GLN:HB2	2.42	0.49
32:Cf:22:VAL:HG22	32:Cf:69:TYR:CD2	2.47	0.49
33:DA:29:ILE:CG2	33:DA:46:VAL:HG22	2.42	0.49
33:DA:137:ASN:HD22	33:DA:141:VAL:HB	1.77	0.49
33:DA:459:ILE:O	33:DA:463:GLU:HG3	2.13	0.49
33:DB:95:ILE:H	33:DB:95:ILE:HD12	1.77	0.49
33:DB:231:PRO:CD	33:DB:360:PHE:HA	2.41	0.49
33:DB:492:ASP:O	33:DB:495:VAL:HB	2.13	0.49
34:DC:47:MET:HG3	34:DC:79:MET:HA	1.95	0.49
34:DD:164:MET:HE2	34:DD:227:TYR:CD2	2.47	0.49
34:DD:534:ILE:CD1	34:DD:544:ILE:HD13	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:2272:C:P	18:BR:6:GLY:HA3	2.53	0.49
3:BC:90:LYS:O	3:BC:157:VAL:HB	2.12	0.49
5:BE:127:VAL:HA	5:BE:235:GLY:O	2.13	0.49
6:BF:98:ILE:HD11	6:BF:118:MET:CE	2.40	0.49
15:BO:1:MET:HG2	15:BO:5:SER:CB	2.42	0.49
18:CR:51:GLY:HA3	18:CR:88:LEU:HG	1.94	0.49
20:CT:73:HIS:O	20:CT:82:MET:HE2	2.12	0.49
27:Ca:101:HIS:CD2	27:Ca:102:PRO:HD2	2.47	0.49
33:DA:44:ILE:H	33:DA:44:ILE:HD12	1.76	0.49
33:DA:70:ILE:HD12	33:DA:92:ILE:HG23	1.89	0.49
33:DA:102:LEU:CD2	33:DA:128:PRO:HD3	2.42	0.49
33:DA:104:PRO:HG2	34:DC:595:ILE:HD13	1.94	0.49
33:DA:135:ALA:CA	33:DA:143:VAL:HG11	2.39	0.49
33:DB:92:ILE:HG22	33:DB:93:SER:H	1.78	0.49
33:DB:419:LEU:CD1	33:DB:448:ALA:HA	2.41	0.49
33:DB:499:GLU:C	33:DB:501:ASN:H	2.21	0.49
34:DC:24:ILE:HG22	34:DC:25:GLY:N	2.28	0.49
34:DC:57:LEU:HD13	34:DC:60:ASP:OD2	2.13	0.49
34:DC:414:VAL:HA	34:DC:417:GLU:OE1	2.13	0.49
34:DD:260:ILE:HA	34:DD:286:ALA:HB2	1.94	0.49
34:DD:400:HIS:HB3	34:DD:402:LYS:HG2	1.95	0.49
34:DD:472:LYS:O	34:DD:617:ALA:HB1	2.13	0.49
1:BA:618:U:O4	27:Ba:73:GLN:NE2	2.44	0.49
3:BC:39:LEU:HD23	3:BC:83:CYS:HB3	1.94	0.49
6:BF:42:ALA:HB2	6:BF:57:ILE:CG1	2.43	0.49
18:BR:64:VAL:HA	18:BR:74:LEU:HD23	1.94	0.49
18:BR:75:GLU:HG3	18:BR:82:MET:SD	2.52	0.49
19:BS:42:ALA:HB1	19:BS:96:GLU:OE2	2.13	0.49
2:CB:116:G:H2'	2:CB:117:C:C6	2.48	0.49
3:CC:55:PRO:HG2	3:CC:161:ALA:HB3	1.94	0.49
3:CC:177:TYR:O	3:CC:181:LYS:HG2	2.13	0.49
4:CD:9:ARG:NH2	4:CD:220:GLN:HB2	2.28	0.49
5:CE:156:ILE:HD12	5:CE:165:TYR:CE1	2.48	0.49
5:CE:198:VAL:O	5:CE:241:THR:HG23	2.13	0.49
6:CF:33:THR:HG21	6:CF:61:VAL:HG11	1.95	0.49
7:CG:77:VAL:HA	7:CG:80:VAL:HG22	1.95	0.49
13:CM:28:ARG:HD3	13:CM:32:TRP:CZ2	2.48	0.49
13:CM:157:ARG:O	13:CM:162:ARG:NH1	2.45	0.49
14:CN:158:LEU:HA	14:CN:161:GLN:HE21	1.76	0.49
16:CP:105:ARG:NH1	16:CP:108:GLU:OE2	2.34	0.49
18:CR:75:GLU:HG3	18:CR:82:MET:SD	2.52	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:48:LYS:HB2	20:CT:67:GLU:HG2	1.94	0.49
22:CV:5:LYS:HG3	22:CV:12:MET:HE2	1.94	0.49
28:Cb:37:MET:SD	28:Cb:53:ARG:NE	2.86	0.49
33:DA:67:HIS:ND1	33:DB:68:PRO:HG2	2.28	0.49
34:DC:270:ILE:HG13	34:DC:271:TRP:N	2.27	0.49
34:DC:295:MET:HE1	34:DC:369:GLY:C	2.38	0.49
34:DC:559:LEU:HD13	34:DC:599:PRO:CA	2.37	0.49
34:DC:633:PRO:HG2	34:DC:636:LEU:HD12	1.94	0.49
34:DC:667:VAL:HG12	34:DC:672:MET:SD	2.53	0.49
34:DD:68:ARG:HD2	34:DD:72:ILE:HD11	1.94	0.49
1:BA:1327:C:OP2	5:BE:183:LYS:NZ	2.39	0.49
1:BA:1381:U:OP2	16:BP:8:ARG:NH1	2.46	0.49
3:BC:100:VAL:O	3:BC:132:HIS:NE2	2.45	0.49
4:BD:132:LEU:CD2	4:BD:137:ARG:HD3	2.43	0.49
6:BF:82:THR:HG22	6:BF:163:GLU:OE2	2.13	0.49
8:BH:47:LYS:HD3	8:BH:100:VAL:O	2.12	0.49
10:BJ:73:ASP:OD1	10:BJ:73:ASP:N	2.45	0.49
10:BJ:81:ARG:HD3	10:BJ:86:TYR:CD2	2.48	0.49
11:BK:27:LYS:HG2	11:BK:60:GLY:HA2	1.94	0.49
13:BM:28:ARG:HD3	13:BM:32:TRP:CZ2	2.48	0.49
19:BS:40:MET:HB3	19:BS:44:GLU:HG3	1.95	0.49
25:BY:18:THR:HB	25:BY:91:GLU:OE1	2.12	0.49
25:BY:62:LEU:HD12	25:BY:63:GLU:H	1.77	0.49
1:CA:1253:A:OP1	24:CX:117:ARG:NH2	2.46	0.49
1:CA:1396:C:OP2	30:Cd:1:MET:HB2	2.12	0.49
1:CA:2656:A:N6	1:CA:2779:G:N7	2.61	0.49
9:CI:17:PHE:CZ	9:CI:23:MET:HE2	2.48	0.49
16:CP:119:VAL:HG23	16:CP:122:ARG:NH2	2.28	0.49
19:CS:46:ARG:HG3	19:CS:89:LEU:HD11	1.93	0.49
24:CX:61:THR:HA	24:CX:64:GLU:HG2	1.95	0.49
25:CY:31:ALA:HA	25:CY:34:ASN:HD21	1.77	0.49
28:Cb:33:LEU:HD21	28:Cb:73:TYR:CG	2.48	0.49
33:DA:132:ARG:NH2	33:DB:125:ILE:HD13	2.28	0.49
33:DA:457:LYS:HG3	33:DA:461:GLU:OE1	2.13	0.49
33:DA:473:CYS:HB3	33:DA:477:LEU:CD2	2.38	0.49
33:DA:477:LEU:CB	33:DA:501:ASN:HD22	2.20	0.49
33:DB:327:ILE:CD1	33:DB:349:ARG:HD2	2.43	0.49
33:DB:462:ARG:CZ	33:DB:463:GLU:HG3	2.42	0.49
34:DC:146:PHE:CD1	34:DC:201:ALA:HB3	2.48	0.49
34:DC:392:VAL:HG21	34:DC:438:GLY:C	2.38	0.49
34:DC:635:LEU:H	34:DC:635:LEU:HD12	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:18:PRO:HA	34:DD:21:ILE:CG2	2.43	0.49
34:DD:62:ASP:N	34:DD:75:SER:OG	2.42	0.49
34:DD:70:ILE:HD11	34:DD:97:GLY:CA	2.43	0.49
1:BA:1253:A:OP1	24:BX:117:ARG:NH2	2.46	0.48
1:BA:2656:A:N6	1:BA:2779:G:N7	2.61	0.48
1:BA:2871:C:O2'	4:BD:285:ILE:HA	2.13	0.48
4:BD:47:VAL:HG22	4:BD:287:TYR:CZ	2.48	0.48
5:BE:156:ILE:HD12	5:BE:165:TYR:CE1	2.48	0.48
13:BM:98:ILE:HG22	13:BM:130:PHE:CE1	2.48	0.48
14:BN:158:LEU:HA	14:BN:161:GLN:HE21	1.77	0.48
24:BX:125:HIS:CE1	24:BX:128:ILE:HG23	2.47	0.48
1:CA:96:A:C2	21:CU:21:LEU:HB3	2.47	0.48
3:CC:163:SER:HB3	28:Cb:77:THR:HG21	1.95	0.48
6:CF:101:HIS:HB2	6:CF:107:MET:CE	2.42	0.48
8:CH:47:LYS:HD3	8:CH:100:VAL:O	2.12	0.48
9:CI:36:MET:CE	9:CI:85:MET:HE2	2.42	0.48
15:CO:49:ASN:O	15:CO:126:ARG:NH1	2.36	0.48
19:CS:40:MET:HB3	19:CS:44:GLU:HG3	1.95	0.48
19:CS:75:MET:HG2	19:CS:76:ALA:O	2.13	0.48
20:CT:76:ALA:CB	20:CT:82:MET:HG3	2.43	0.48
33:DA:175:ALA:O	33:DA:179:THR:HG23	2.13	0.48
33:DA:362:THR:HG22	33:DA:364:TYR:H	1.78	0.48
33:DB:146:ASN:HB3	33:DB:149:ASP:OD2	2.13	0.48
33:DB:163:ILE:HD12	33:DB:163:ILE:H	1.79	0.48
33:DB:364:TYR:CD1	33:DB:375:LYS:HG2	2.47	0.48
33:DB:481:VAL:HA	33:DB:504:TYR:O	2.13	0.48
34:DC:32:HIS:NE2	34:DC:123:GLU:OE1	2.36	0.48
34:DC:168:LEU:HD13	34:DC:202:PHE:CD1	2.48	0.48
34:DC:428:GLU:HG3	34:DC:429:THR:N	2.28	0.48
34:DD:32:HIS:O	34:DD:148:ASN:ND2	2.46	0.48
1:BA:803:U:OP2	28:Bb:10:ARG:HD3	2.13	0.48
1:BA:869:U:O4	3:BC:198:ARG:HB2	2.12	0.48
1:BA:1327:C:C5	5:BE:179:ALA:HB2	2.48	0.48
1:BA:2692:C:OP1	4:BD:206:ILE:HG13	2.13	0.48
3:BC:110:GLU:HB3	3:BC:112:LYS:O	2.13	0.48
6:BF:83:LEU:O	6:BF:164:VAL:HA	2.12	0.48
18:BR:51:GLY:HA3	18:BR:88:LEU:HG	1.95	0.48
28:Bb:37:MET:SD	28:Bb:53:ARG:NE	2.86	0.48
1:CA:1381:U:OP2	16:CP:8:ARG:NH1	2.46	0.48
2:CB:110:U:H2'	2:CB:111:G:O4'	2.12	0.48
5:CE:32:ILE:HD13	5:CE:234:ALA:HB2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:133:ILE:O	5:CE:167:ASP:HB2	2.12	0.48
25:CY:18:THR:HB	25:CY:91:GLU:OE1	2.12	0.48
28:Cb:3:LYS:HD2	28:Cb:4:LYS:H	1.77	0.48
28:Cb:41:HIS:CG	28:Cb:75:PRO:HG3	2.48	0.48
33:DA:14:GLY:HA2	33:DA:17:GLU:OE1	2.14	0.48
33:DA:144:ILE:HG12	33:DA:153:VAL:HG21	1.95	0.48
33:DA:503:ARG:HA	33:DA:526:ILE:HG12	1.95	0.48
33:DB:310:GLU:HA	33:DB:331:PRO:HG2	1.96	0.48
33:DB:330:ALA:HB3	33:DB:333:PHE:CE1	2.48	0.48
33:DB:394:TYR:CD2	33:DB:529:VAL:HG23	2.48	0.48
33:DB:482:MET:CB	33:DB:505:ILE:HD12	2.30	0.48
33:DB:505:ILE:H	33:DB:526:ILE:HG23	1.78	0.48
34:DC:463:ILE:HD13	34:DC:714:ARG:HD2	1.94	0.48
34:DC:471:LYS:HG2	34:DC:618:GLU:OE1	2.13	0.48
34:DC:502:ALA:O	34:DC:505:GLU:HB2	2.11	0.48
34:DD:14:LEU:HD22	34:DD:20:ARG:HH12	1.78	0.48
34:DD:42:LEU:HD22	34:DD:78:SER:C	2.37	0.48
34:DD:166:ILE:HG22	34:DD:170:LYS:NZ	2.28	0.48
34:DD:627:LYS:HG2	34:DD:666:ARG:HG3	1.95	0.48
1:BA:24:G:O2'	1:BA:1302:A:N3	2.40	0.48
1:BA:2016:C:O4'	11:BK:44:MET:HE3	2.14	0.48
2:BB:107:C:H2'	2:BB:108:U:O4'	2.12	0.48
2:BB:116:G:H2'	2:BB:117:C:C6	2.48	0.48
2:BB:125:C:H2'	2:BB:126:U:C6	2.48	0.48
3:BC:170:TRP:HE3	3:BC:175:LYS:HG3	1.78	0.48
3:BC:224:ARG:O	3:BC:224:ARG:NH1	2.42	0.48
4:BD:196:GLY:HA3	4:BD:323:GLY:O	2.13	0.48
5:BE:150:GLU:N	5:BE:154:GLN:OE1	2.46	0.48
5:BE:198:VAL:O	5:BE:241:THR:HG23	2.12	0.48
7:BG:77:VAL:HA	7:BG:80:VAL:HG22	1.95	0.48
11:BK:75:ARG:HB2	11:BK:94:ALA:HB3	1.95	0.48
14:BN:110:SER:OG	14:BN:117:TYR:OH	2.06	0.48
16:BP:119:VAL:HG23	16:BP:122:ARG:NH2	2.28	0.48
20:BT:10:THR:O	20:BT:14:MET:HG2	2.13	0.48
26:BZ:76:VAL:CG2	26:BZ:84:GLN:HB2	2.43	0.48
1:CA:1099:U:O4	10:CJ:16:ARG:HA	2.14	0.48
1:CA:1960:U:OP1	1:CA:2615:G:O2'	2.17	0.48
1:CA:2016:C:O4'	11:CK:44:MET:HE3	2.13	0.48
2:CB:14:A:O2'	2:CB:15:U:H3'	2.14	0.48
4:CD:204:ILE:HA	4:CD:259:HIS:O	2.13	0.48
6:CF:82:THR:HG22	6:CF:163:GLU:OE2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:94:VAL:CG2	6:CF:122:VAL:HG12	2.43	0.48
13:CM:38:VAL:CG1	13:CM:64:VAL:HG11	2.41	0.48
24:CX:41:TYR:O	24:CX:45:VAL:HG23	2.13	0.48
33:DA:130:LEU:H	33:DA:130:LEU:HD12	1.78	0.48
33:DB:264:ASN:HA	33:DB:357:ARG:HE	1.78	0.48
34:DC:21:ILE:HG12	34:DC:89:LEU:HD23	1.95	0.48
34:DC:266:ARG:O	34:DC:270:ILE:HG12	2.13	0.48
34:DC:513:PRO:HD2	34:DC:516:GLU:OE1	2.13	0.48
34:DD:264:LYS:HA	34:DD:284:THR:CA	2.36	0.48
34:DD:625:TYR:CE2	34:DD:668:PRO:HG3	2.48	0.48
1:BA:76:U:O4	1:BA:94:G:O2'	2.16	0.48
1:BA:256:A:C4	8:BH:90:LEU:HD21	2.49	0.48
6:BF:33:THR:HG21	6:BF:61:VAL:HG11	1.95	0.48
9:BI:93:GLU:HG3	9:BI:126:ARG:HB2	1.95	0.48
11:BK:62:PRO:HG2	33:DB:4:ARG:NH2	2.28	0.48
11:BK:73:VAL:HG12	11:BK:95:MET:CG	2.38	0.48
1:CA:1898:U:O2'	1:CA:1901:A:N7	2.34	0.48
1:CA:2410:U:H5'	32:Cf:30:ALA:HA	1.96	0.48
3:CC:97:ILE:HG12	3:CC:153:CYS:O	2.12	0.48
15:CO:12:LYS:HE3	15:CO:43:LEU:O	2.14	0.48
17:CQ:31:GLU:HG3	17:CQ:58:VAL:CG1	2.42	0.48
29:Cc:42:THR:HG23	29:Cc:44:ARG:O	2.13	0.48
33:DA:284:ASP:H	33:DA:288:GLN:CD	2.21	0.48
33:DA:328:ILE:HB	33:DA:350:LEU:HA	1.96	0.48
33:DB:382:ILE:HD11	33:DB:407:LYS:CE	2.44	0.48
34:DC:14:LEU:HD22	34:DC:89:LEU:H	1.77	0.48
34:DC:48:ILE:HD12	34:DC:52:LEU:HB2	1.94	0.48
34:DD:116:VAL:HG13	34:DD:144:VAL:O	2.14	0.48
34:DD:148:ASN:HD21	34:DD:205:ALA:HB3	1.78	0.48
34:DD:150:VAL:HG11	34:DD:164:MET:SD	2.53	0.48
34:DD:194:ASP:H	34:DD:200:VAL:HG23	1.78	0.48
34:DD:594:ALA:HA	34:DD:597:ARG:HE	1.78	0.48
1:BA:96:A:C2	21:BU:21:LEU:HB3	2.48	0.48
1:BA:312:C:OP1	21:BU:57:ARG:NE	2.28	0.48
1:BA:1041:U:O4	9:BI:15:ARG:HA	2.12	0.48
1:BA:1856:C:C2	3:BC:122:SER:HB2	2.49	0.48
2:BB:14:A:O2'	2:BB:15:U:H3'	2.13	0.48
3:BC:110:GLU:HG2	3:BC:117:GLY:N	2.28	0.48
3:BC:163:SER:HB3	28:Bb:77:THR:HG21	1.95	0.48
4:BD:76:GLU:OE1	4:BD:287:TYR:OH	2.24	0.48
7:BG:23:VAL:HG12	7:BG:36:LYS:HD3	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:BO:3:LYS:O	15:BO:7:VAL:HG23	2.13	0.48
16:BP:45:ILE:HA	16:BP:50:ILE:O	2.14	0.48
29:Bc:42:THR:HG23	29:Bc:44:ARG:O	2.13	0.48
1:CA:186:A:N1	1:CA:230:A:O2'	2.42	0.48
1:CA:968:G:N2	1:CA:984:G:O6	2.47	0.48
1:CA:2328:G:O2'	1:CA:2331:G:O6	2.25	0.48
3:CC:110:GLU:HB3	3:CC:112:LYS:O	2.13	0.48
5:CE:9:LEU:HG	5:CE:145:ASP:OD1	2.14	0.48
5:CE:127:VAL:HA	5:CE:235:GLY:O	2.13	0.48
6:CF:98:ILE:HD11	6:CF:118:MET:CE	2.40	0.48
8:CH:46:ALA:HA	8:CH:100:VAL:HG12	1.95	0.48
19:CS:42:ALA:HB1	19:CS:96:GLU:OE2	2.13	0.48
28:Cb:50:THR:HG21	28:Cb:63:LYS:HG2	1.95	0.48
33:DA:69:ARG:HD3	33:DA:89:LYS:NZ	2.28	0.48
33:DA:207:GLY:HA3	33:DB:198:GLU:CD	2.38	0.48
33:DA:214:GLU:HG2	33:DB:410:LYS:HE3	1.95	0.48
33:DB:245:SER:O	33:DB:248:ASN:HB2	2.14	0.48
33:DB:445:ARG:O	33:DB:446:LYS:HD3	2.13	0.48
34:DC:291:ASP:OD1	34:DC:375:LEU:HB2	2.14	0.48
34:DD:42:LEU:CB	34:DD:79:MET:HB3	2.37	0.48
34:DD:267:VAL:HG12	34:DD:275:GLU:HG2	1.95	0.48
34:DD:489:TYR:CD1	34:DD:587:ASP:HB3	2.48	0.48
1:BA:562:G:HO2'	1:BA:1084:G:HO2'	1.62	0.48
1:BA:968:G:N2	1:BA:984:G:O6	2.47	0.48
2:BB:79:U:H5'	2:BB:81:U:O4'	2.13	0.48
5:BE:79:ARG:HD2	5:BE:80:ALA:O	2.12	0.48
12:BL:67:VAL:HG12	12:BL:101:ILE:HG21	1.96	0.48
14:BN:24:ARG:O	14:BN:28:LEU:HG	2.14	0.48
18:BR:5:HIS:HA	18:BR:9:ARG:CD	2.39	0.48
21:BU:28:MET:HE2	21:BU:70:VAL:HG13	1.96	0.48
1:CA:1852:A:N7	3:CC:21:SER:HB3	2.28	0.48
12:CL:67:VAL:HG12	12:CL:101:ILE:HG21	1.96	0.48
15:CO:62:THR:CG2	15:CO:68:LEU:HD11	2.44	0.48
24:CX:36:PRO:HD2	24:CX:41:TYR:CE2	2.49	0.48
33:DA:306:ILE:HG12	33:DA:328:ILE:HD13	1.95	0.48
33:DA:514:ASP:OD1	33:DA:515:ASN:N	2.44	0.48
33:DB:486:ALA:HB2	33:DB:534:ARG:HA	1.96	0.48
34:DC:142:ARG:HB2	34:DC:186:LYS:HZ2	1.78	0.48
34:DD:35:THR:HG23	34:DD:67:ALA:HA	1.95	0.48
34:DD:194:ASP:OD2	34:DD:196:ALA:HB3	2.14	0.48
1:BA:109:G:OP2	1:BA:111:A:O2'	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:2690:C:OP1	4:BD:17:ARG:NH2	2.35	0.48
3:BC:91:PRO:HD3	28:Bb:87:MET:HE1	1.96	0.48
3:BC:126:TYR:CB	3:BC:159:ILE:HG22	2.42	0.48
4:BD:85:ILE:CD1	4:BD:179:SER:HB2	2.43	0.48
15:BO:22:LEU:O	15:BO:26:GLU:HG2	2.14	0.48
15:BO:62:THR:CG2	15:BO:68:LEU:HD11	2.44	0.48
16:BP:1:MET:HE2	16:BP:29:SER:CB	2.41	0.48
20:BT:48:LYS:HB2	20:BT:67:GLU:HG2	1.95	0.48
25:BY:22:ILE:HD11	25:BY:31:ALA:CB	2.42	0.48
26:BZ:13:ILE:HG12	26:BZ:37:PHE:CD1	2.49	0.48
28:Bb:44:THR:HG23	28:Bb:76:TYR:OH	2.13	0.48
1:CA:256:A:C4	8:CH:90:LEU:HD21	2.49	0.48
7:CG:23:VAL:HB	7:CG:34:GLU:OE2	2.12	0.48
9:CI:45:PRO:HB2	9:CI:171:LEU:CD2	2.44	0.48
13:CM:98:ILE:HG22	13:CM:130:PHE:CE1	2.48	0.48
20:CT:25:ILE:HD13	20:CT:61:LYS:HG2	1.95	0.48
33:DA:486:ALA:HB3	33:DA:534:ARG:NH2	2.29	0.48
33:DB:75:LEU:HG	33:DB:136:LYS:NZ	2.28	0.48
34:DD:4:ARG:HH11	34:DD:343:GLY:CA	2.26	0.48
34:DD:42:LEU:HD21	34:DD:77:VAL:HG21	1.92	0.48
34:DD:700:PRO:HG2	34:DD:703:ILE:HD11	1.95	0.48
8:BH:46:ALA:HA	8:BH:100:VAL:HG12	1.96	0.48
13:BM:59:GLN:HB2	13:BM:141:VAL:HG21	1.96	0.48
15:BO:12:LYS:HE3	15:BO:43:LEU:O	2.14	0.48
18:BR:30:ALA:HB2	18:BR:90:GLN:HG3	1.96	0.48
20:BT:25:ILE:HD13	20:BT:61:LYS:HG2	1.95	0.48
20:BT:76:ALA:CB	20:BT:82:MET:HG3	2.43	0.48
1:CA:2782:C:OP1	4:CD:260:GLN:NE2	2.44	0.48
6:CF:110:ASP:OD2	6:CF:112:ASN:HB2	2.14	0.48
10:CJ:81:ARG:HD3	10:CJ:86:TYR:CD2	2.48	0.48
13:CM:59:GLN:HB2	13:CM:141:VAL:HG21	1.96	0.48
19:CS:55:MET:HE2	19:CS:82:ILE:HD11	1.96	0.48
21:CU:31:ARG:NH1	21:CU:43:ARG:HG3	2.28	0.48
33:DA:71:HIS:NE2	33:DA:130:LEU:HG	2.29	0.48
33:DA:357:ARG:O	33:DA:357:ARG:HG3	2.14	0.48
33:DA:438:PRO:HA	33:DB:300:SER:HB2	1.95	0.48
33:DB:111:LYS:HG3	33:DB:112:GLU:OE2	2.13	0.48
34:DC:57:LEU:HB2	34:DC:66:GLN:OE1	2.13	0.48
34:DC:580:ASN:ND2	34:DC:622:LEU:HD11	2.29	0.48
34:DC:636:LEU:HD21	34:DC:684:GLU:OE1	2.14	0.48
34:DD:79:MET:HG3	34:DD:90:ILE:HB	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:423:ILE:HD12	34:DD:425:LEU:HD23	1.96	0.48
34:DD:471:LYS:HG2	34:DD:618:GLU:O	2.14	0.48
1:BA:257:U:C4	8:BH:55:ILE:HG23	2.49	0.48
1:BA:1099:U:O4	10:BJ:16:ARG:HA	2.14	0.48
4:BD:6:ARG:HG2	4:BD:7:PRO:HD2	1.95	0.48
28:Bb:33:LEU:HD21	28:Bb:73:TYR:CG	2.49	0.48
1:CA:1205:G:C5'	7:CG:3:LYS:HD2	2.44	0.48
1:CA:2871:C:O2'	4:CD:285:ILE:HA	2.14	0.48
6:CF:42:ALA:HB2	6:CF:57:ILE:CG1	2.43	0.48
8:CH:28:GLY:HA3	8:CH:101:ASP:O	2.14	0.48
12:CL:88:LYS:HD2	12:CL:93:HIS:CE1	2.49	0.48
13:CM:78:PRO:HD2	13:CM:87:MET:HE3	1.95	0.48
13:CM:158:GLY:O	13:CM:162:ARG:HG3	2.14	0.48
14:CN:24:ARG:O	14:CN:28:LEU:HG	2.14	0.48
15:CO:53:VAL:HG22	15:CO:126:ARG:O	2.14	0.48
28:Cb:44:THR:HG23	28:Cb:76:TYR:OH	2.13	0.48
33:DA:29:ILE:HG21	33:DA:46:VAL:HG22	1.95	0.48
33:DA:88:GLU:O	33:DA:92:ILE:HB	2.14	0.48
33:DA:199:VAL:HG12	33:DB:205:THR:CG2	2.43	0.48
33:DA:320:LEU:HD11	33:DA:325:ILE:CG1	2.41	0.48
33:DA:417:VAL:HG12	33:DA:440:ARG:NH2	2.28	0.48
33:DB:73:GLY:N	33:DB:86:GLU:HB2	2.28	0.48
33:DB:240:HIS:HB3	33:DB:342:LYS:HZ1	1.79	0.48
33:DB:420:ALA:CA	33:DB:430:VAL:HA	2.39	0.48
33:DB:495:VAL:HA	33:DB:524:LEU:HD11	1.96	0.48
34:DD:107:ARG:HA	34:DD:110:ARG:CD	2.36	0.48
34:DD:474:THR:CG2	34:DD:492:ALA:H	2.27	0.48
34:DD:603:ILE:N	34:DD:604:PRO:HD2	2.29	0.48
1:BA:1205:G:C5'	7:BG:3:LYS:HD2	2.44	0.48
1:BA:1396:C:OP2	1:BA:1663:G:N1	2.44	0.48
4:BD:268:ILE:CD1	4:BD:295:ILE:HD11	2.36	0.48
5:BE:9:LEU:HG	5:BE:145:ASP:OD1	2.14	0.48
5:BE:143:VAL:HG13	5:BE:145:ASP:OD1	2.14	0.48
6:BF:17:GLU:OE2	6:BF:21:HIS:ND1	2.47	0.48
14:BN:138:PRO:HG2	14:BN:143:ILE:CG1	2.43	0.48
15:BO:8:LYS:HG2	15:BO:11:ARG:HH22	1.79	0.48
1:CA:238:C:OP1	8:CH:43:ARG:NH2	2.39	0.48
1:CA:1327:C:C5	5:CE:179:ALA:HB2	2.48	0.48
6:CF:83:LEU:O	6:CF:164:VAL:HA	2.13	0.48
7:CG:23:VAL:HG12	7:CG:36:LYS:HD3	1.96	0.48
20:CT:10:THR:O	20:CT:14:MET:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DC:111:ALA:HA	34:DC:314:PHE:CZ	2.46	0.48
34:DC:496:ASP:O	34:DC:500:VAL:HG23	2.14	0.48
34:DC:547:THR:HG21	34:DC:585:LEU:HG	1.96	0.48
34:DD:165:GLN:HB2	34:DD:223:PHE:CD2	2.49	0.48
34:DD:279:ILE:HG13	34:DD:293:ALA:HB2	1.95	0.48
34:DD:391:VAL:HG12	34:DD:465:VAL:O	2.13	0.48
34:DD:526:MET:HE2	34:DD:530:GLU:CB	2.44	0.48
34:DD:534:ILE:HD13	34:DD:544:ILE:HD13	1.96	0.48
34:DD:627:LYS:CA	34:DD:666:ARG:HA	2.28	0.48
7:BG:114:GLU:OE2	7:BG:118:ARG:NH2	2.39	0.47
9:BI:17:PHE:CZ	9:BI:23:MET:HE2	2.48	0.47
9:BI:36:MET:CE	9:BI:85:MET:HE2	2.42	0.47
21:BU:31:ARG:NH1	21:BU:43:ARG:HG3	2.28	0.47
1:CA:914:C:O2'	1:CA:2257:C:OP1	2.30	0.47
1:CA:1816:A:C5	29:Cc:3:LYS:HB3	2.49	0.47
2:CB:79:U:H5'	2:CB:81:U:O4'	2.13	0.47
4:CD:289:LEU:HD12	4:CD:291:ARG:HG3	1.96	0.47
11:CK:75:ARG:HB2	11:CK:94:ALA:HB3	1.95	0.47
13:CM:96:MET:HE1	13:CM:100:ARG:HD2	1.96	0.47
20:CT:16:LEU:HB3	20:CT:21:LYS:HB2	1.96	0.47
21:CU:28:MET:HE2	21:CU:70:VAL:HG13	1.95	0.47
26:CZ:13:ILE:HG12	26:CZ:37:PHE:CD1	2.49	0.47
27:Ca:116:LEU:HD12	27:Ca:143:LYS:HD3	1.95	0.47
33:DA:253:ASP:OD1	33:DB:369:VAL:HG13	2.14	0.47
33:DB:440:ARG:CD	33:DB:489:PRO:HD3	2.43	0.47
34:DC:288:ALA:HB1	34:DC:317:SER:N	2.29	0.47
34:DC:547:THR:HB	34:DC:550:ILE:HD11	1.95	0.47
34:DD:627:LYS:CG	34:DD:666:ARG:HG3	2.44	0.47
34:DD:653:ASN:O	34:DD:663:ILE:HA	2.14	0.47
1:BA:441:A:P	21:BU:6:SER:HA	2.54	0.47
1:BA:1270:A:OP1	24:BX:113:LYS:NZ	2.25	0.47
6:BF:94:VAL:CG2	6:BF:122:VAL:HG12	2.43	0.47
8:BH:55:ILE:HG13	8:BH:61:VAL:HG21	1.95	0.47
9:BI:172:VAL:HG23	9:BI:173:GLN:H	1.79	0.47
13:BM:78:PRO:HD2	13:BM:87:MET:HE3	1.95	0.47
13:BM:96:MET:HE1	13:BM:100:ARG:HD2	1.96	0.47
14:BN:157:ASP:O	14:BN:160:GLU:HG2	2.15	0.47
21:BU:115:SER:HA	21:BU:118:LYS:O	2.14	0.47
1:CA:765:G:O2'	29:Cc:46:ARG:NH2	2.48	0.47
1:CA:1727:A:O2'	1:CA:1733:G:N7	2.43	0.47
8:CH:55:ILE:HG13	8:CH:61:VAL:HG21	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:135:GLU:OE1	14:CN:135:GLU:N	2.41	0.47
24:CX:81:GLU:O	24:CX:85:GLU:HG2	2.14	0.47
33:DA:36:ALA:O	33:DA:40:ARG:HG2	2.14	0.47
33:DA:163:ILE:HG13	33:DA:164:SER:N	2.29	0.47
33:DA:269:VAL:O	33:DA:280:LEU:HD12	2.14	0.47
33:DA:294:TRP:HZ3	33:DA:325:ILE:HD11	1.79	0.47
33:DA:294:TRP:CZ3	33:DA:325:ILE:HD11	2.48	0.47
33:DA:300:SER:CB	33:DB:438:PRO:HB3	2.33	0.47
33:DB:326:GLU:CG	33:DB:327:ILE:HD12	2.38	0.47
33:DB:505:ILE:HG22	33:DB:528:MET:HB3	1.95	0.47
34:DC:67:ALA:O	34:DC:68:ARG:HG2	2.14	0.47
34:DC:327:SER:CB	34:DC:371:THR:H	2.27	0.47
34:DD:32:HIS:CD2	34:DD:120:ASP:H	2.32	0.47
34:DD:208:ASN:CA	34:DD:244:LEU:HB2	2.44	0.47
34:DD:292:LEU:HD13	34:DD:317:SER:O	2.14	0.47
34:DD:296:VAL:HB	34:DD:370:SER:HB3	1.95	0.47
1:BA:2103:A:OP1	13:BM:90:ASN:HB2	2.14	0.47
2:BB:43:C:C6	6:BF:38:VAL:HG11	2.50	0.47
4:BD:9:ARG:NH2	4:BD:220:GLN:HB2	2.28	0.47
6:BF:37:VAL:CG2	6:BF:59:CYS:HB2	2.44	0.47
8:BH:48:LEU:HD12	8:BH:49:VAL:H	1.80	0.47
8:BH:116:LEU:HA	8:BH:119:LEU:CD2	2.44	0.47
9:BI:168:GLY:O	9:BI:172:VAL:HG22	2.15	0.47
14:BN:145:GLY:O	14:BN:148:ILE:HG12	2.14	0.47
1:CA:1291:G:OP2	5:CE:178:ARG:NH1	2.42	0.47
1:CA:2692:C:OP1	4:CD:206:ILE:HG13	2.13	0.47
1:CA:2702:A:OP1	26:CZ:26:ARG:NH2	2.43	0.47
4:CD:279:THR:HG21	4:CD:289:LEU:CB	2.44	0.47
6:CF:37:VAL:CG2	6:CF:59:CYS:HB2	2.44	0.47
11:CK:73:VAL:HA	11:CK:95:MET:HG2	1.95	0.47
16:CP:45:ILE:HA	16:CP:50:ILE:O	2.14	0.47
21:CU:35:ALA:O	21:CU:39:GLU:HG2	2.15	0.47
33:DA:68:PRO:HG2	33:DB:55:TYR:CG	2.49	0.47
33:DA:187:ASP:OD1	33:DB:177:ARG:HB2	2.14	0.47
33:DA:204:PHE:CZ	33:DB:373:MET:HE2	2.49	0.47
33:DA:214:GLU:HB2	33:DB:538:HIS:H	1.79	0.47
33:DA:244:LEU:HD23	33:DA:244:LEU:H	1.79	0.47
33:DA:326:GLU:HB2	33:DA:327:ILE:HD12	1.96	0.47
33:DA:364:TYR:N	33:DA:378:ARG:HG2	2.29	0.47
33:DA:401:LEU:O	33:DA:404:PHE:HB3	2.14	0.47
33:DA:424:GLU:HG3	33:DA:427:TYR:CD2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DA:439:ASN:OD1	33:DA:440:ARG:N	2.46	0.47
33:DA:474:GLN:N	33:DA:477:LEU:HG	2.29	0.47
33:DA:517:VAL:CG1	33:DA:528:MET:HE1	2.44	0.47
34:DD:278:GLU:HG3	34:DD:279:ILE:N	2.28	0.47
34:DD:445:ILE:CG2	34:DD:449:ILE:HD11	2.45	0.47
1:BA:936:G:C8	24:BX:23:MET:HE1	2.50	0.47
4:BD:204:ILE:HA	4:BD:259:HIS:O	2.13	0.47
14:BN:28:LEU:HD13	18:BR:31:ILE:CD1	2.44	0.47
21:BU:35:ALA:O	21:BU:39:GLU:HG2	2.15	0.47
27:Ba:116:LEU:HD12	27:Ba:143:LYS:HD3	1.95	0.47
1:CA:648:U:H5'	15:CO:11:ARG:HG2	1.96	0.47
3:CC:91:PRO:HD3	28:Cb:87:MET:HE1	1.95	0.47
3:CC:126:TYR:CB	3:CC:159:ILE:HG22	2.42	0.47
7:CG:6:ALA:HB2	7:CG:54:ASP:OD1	2.14	0.47
14:CN:91:LEU:HG	14:CN:126:SER:HB2	1.97	0.47
14:CN:157:ASP:O	14:CN:160:GLU:HG2	2.14	0.47
18:CR:30:ALA:HB2	18:CR:90:GLN:HG3	1.96	0.47
25:CY:39:MET:SD	25:CY:98:THR:OG1	2.68	0.47
33:DA:76:CYS:HB3	33:DA:136:LYS:HG3	1.95	0.47
33:DA:388:SER:CB	33:DA:529:VAL:HA	2.45	0.47
33:DB:4:ARG:HB3	33:DB:95:ILE:HG13	1.96	0.47
33:DB:135:ALA:N	33:DB:143:VAL:HG11	2.29	0.47
33:DB:385:LYS:HD2	33:DB:385:LYS:O	2.15	0.47
34:DC:74:SER:C	34:DC:94:ASP:HB3	2.39	0.47
34:DC:421:LEU:HA	34:DC:435:ALA:O	2.14	0.47
34:DC:631:GLN:OE1	34:DC:662:ILE:HG12	2.14	0.47
34:DD:495:LEU:HD22	34:DD:500:VAL:HG22	1.95	0.47
13:BM:158:GLY:O	13:BM:162:ARG:HG3	2.14	0.47
15:BO:84:VAL:O	15:BO:104:GLY:HA3	2.14	0.47
1:CA:64:A:O2'	20:CT:1:MET:HE2	2.15	0.47
1:CA:257:U:C4	8:CH:55:ILE:HG23	2.49	0.47
1:CA:1404:C:O2'	1:CA:1483:A:N3	2.39	0.47
2:CB:63:U:O2'	2:CB:64:G:H5'	2.15	0.47
4:CD:6:ARG:HG2	4:CD:7:PRO:HD2	1.95	0.47
4:CD:263:GLU:CG	4:CD:302:PRO:HD3	2.44	0.47
9:CI:31:VAL:HA	9:CI:64:GLU:OE1	2.15	0.47
23:CW:12:MET:CE	23:CW:17:ARG:HG2	2.44	0.47
27:Ca:53:ARG:HB2	27:Ca:65:ASN:O	2.14	0.47
33:DA:373:MET:HB2	33:DB:204:PHE:CE1	2.50	0.47
33:DA:401:LEU:CB	33:DA:481:VAL:HG21	2.43	0.47
33:DB:117:GLU:HG2	33:DB:118:GLU:N	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DB:260:LYS:NZ	33:DB:356:LEU:O	2.34	0.47
34:DC:267:VAL:HG21	34:DC:283:MET:HG3	1.97	0.47
34:DC:515:LEU:HA	34:DC:518:ARG:CZ	2.44	0.47
34:DD:77:VAL:CG2	34:DD:92:LEU:HD23	2.45	0.47
34:DD:154:ILE:O	34:DD:158:GLN:N	2.30	0.47
34:DD:526:MET:CE	34:DD:530:GLU:HG3	2.44	0.47
1:BA:500:G:N1	1:BA:503:A:OP2	2.47	0.47
1:BA:1105:C:OP1	7:BG:59:ARG:NH1	2.48	0.47
1:BA:2410:U:H5'	32:Bf:30:ALA:HA	1.95	0.47
2:BB:41:U:C3'	2:BB:42:C:H5'	2.45	0.47
3:BC:105:PHE:HB2	28:Bb:83:LEU:CD1	2.41	0.47
4:BD:217:TRP:CG	4:BD:251:PRO:HB3	2.50	0.47
12:BL:88:LYS:HD2	12:BL:93:HIS:CE1	2.49	0.47
14:BN:157:ASP:O	14:BN:161:GLN:HG2	2.15	0.47
19:BS:116:ILE:HG22	19:BS:143:ILE:CD1	2.44	0.47
20:BT:16:LEU:HB3	20:BT:21:LYS:HB2	1.96	0.47
20:BT:32:LYS:HE2	20:BT:52:THR:HG22	1.97	0.47
1:CA:441:A:P	21:CU:6:SER:HA	2.54	0.47
1:CA:1856:C:C2	3:CC:122:SER:HB2	2.49	0.47
1:CA:2115:G:O4'	1:CA:2219:A:N6	2.47	0.47
5:CE:22:VAL:HG11	5:CE:248:LEU:HG	1.96	0.47
6:CF:82:THR:HB	6:CF:165:MET:CE	2.38	0.47
9:CI:168:GLY:O	9:CI:172:VAL:HG22	2.15	0.47
9:CI:172:VAL:HG23	9:CI:173:GLN:H	1.79	0.47
14:CN:145:GLY:O	14:CN:148:ILE:HG12	2.14	0.47
16:CP:20:ASP:O	16:CP:53:LYS:NZ	2.30	0.47
19:CS:116:ILE:HG22	19:CS:143:ILE:CD1	2.44	0.47
21:CU:115:SER:HA	21:CU:118:LYS:O	2.15	0.47
26:CZ:6:VAL:N	26:CZ:77:LYS:O	2.32	0.47
33:DA:487:PHE:H	33:DA:508:PRO:HG2	1.78	0.47
33:DA:495:VAL:HG22	33:DA:524:LEU:HD11	1.96	0.47
33:DB:35:THR:OG1	33:DB:36:ALA:N	2.47	0.47
33:DB:212:TYR:O	33:DB:220:ALA:N	2.47	0.47
33:DB:478:SER:HB3	33:DB:501:ASN:ND2	2.30	0.47
34:DC:121:ALA:O	34:DC:153:LEU:HD21	2.13	0.47
34:DC:135:GLN:O	34:DC:138:ARG:HB2	2.14	0.47
34:DD:21:ILE:HG12	34:DD:355:GLY:O	2.14	0.47
34:DD:39:ASP:OD1	34:DD:59:MET:HE3	2.15	0.47
34:DD:160:ASP:OD1	34:DD:160:ASP:N	2.46	0.47
1:BA:394:G:O2'	13:BM:196:LYS:HE2	2.15	0.47
1:BA:650:G:OP1	5:BE:28:ARG:NH1	2.41	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:765:G:O2'	29:Bc:46:ARG:NH2	2.47	0.47
1:BA:1372:G:O2'	1:BA:1374:G:N7	2.43	0.47
1:BA:1816:A:C5	29:Bc:3:LYS:HB3	2.49	0.47
1:BA:1883:U:O2'	1:BA:1884:A:N7	2.43	0.47
1:BA:2161:G:N7	1:BA:2165:G:N1	2.63	0.47
2:BB:25:G:H1'	2:BB:28:A:N6	2.30	0.47
4:BD:246:VAL:HG11	4:BD:252:GLN:HE22	1.79	0.47
4:BD:279:THR:HG21	4:BD:289:LEU:CB	2.44	0.47
7:BG:6:ALA:HB2	7:BG:54:ASP:OD1	2.14	0.47
8:BH:28:GLY:HA3	8:BH:101:ASP:O	2.14	0.47
8:BH:37:ALA:O	8:BH:41:ILE:HG13	2.15	0.47
11:BK:73:VAL:HA	11:BK:95:MET:HG2	1.95	0.47
12:BL:125:ALA:O	12:BL:129:ILE:HG13	2.15	0.47
15:BO:14:ASN:ND2	15:BO:17:ILE:HG12	2.29	0.47
15:BO:53:VAL:HG22	15:BO:126:ARG:O	2.14	0.47
24:BX:36:PRO:HD2	24:BX:41:TYR:CE2	2.49	0.47
27:Ba:49:PRO:HG2	27:Ba:51:PHE:CZ	2.50	0.47
1:CA:57:A:N6	30:Cd:26:VAL:HG21	2.30	0.47
1:CA:394:G:O2'	13:CM:196:LYS:HE2	2.14	0.47
1:CA:2839:G:N2	1:CA:2864:C:O2'	2.45	0.47
2:CB:55:G:N2	6:CF:1:MET:HE1	2.25	0.47
3:CC:4:ARG:HB3	3:CC:8:GLN:HB2	1.97	0.47
3:CC:174:GLY:HA2	3:CC:177:TYR:HB3	1.95	0.47
4:CD:217:TRP:CG	4:CD:251:PRO:HB3	2.50	0.47
8:CH:116:LEU:HA	8:CH:119:LEU:CD2	2.44	0.47
8:CH:116:LEU:HA	8:CH:119:LEU:HD21	1.97	0.47
14:CN:121:LYS:HD3	14:CN:143:ILE:HD13	1.96	0.47
15:CO:22:LEU:O	15:CO:26:GLU:HG2	2.14	0.47
15:CO:84:VAL:O	15:CO:104:GLY:HA3	2.15	0.47
18:CR:54:ASN:OD1	18:CR:55:PRO:HD2	2.15	0.47
22:CV:49:THR:O	22:CV:55:GLY:HA3	2.15	0.47
28:Cb:33:LEU:HD21	28:Cb:73:TYR:CD2	2.49	0.47
33:DA:73:GLY:N	33:DA:86:GLU:HB2	2.29	0.47
33:DA:215:ASN:H	33:DA:218:GLN:CD	2.22	0.47
33:DA:225:ASP:HB2	33:DB:371:GLY:HA2	1.96	0.47
33:DA:228:ILE:HA	33:DA:235:LYS:NZ	2.29	0.47
33:DA:288:GLN:HB2	33:DA:423:TYR:OH	2.15	0.47
33:DA:461:GLU:HA	33:DA:464:GLN:OE1	2.15	0.47
33:DA:499:GLU:C	33:DA:501:ASN:H	2.22	0.47
33:DB:39:LEU:HD12	33:DB:46:VAL:HG21	1.96	0.47
33:DB:87:ALA:O	33:DB:88:GLU:HB3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DB:473:CYS:HB3	33:DB:477:LEU:HD11	1.96	0.47
34:DC:321:GLY:O	34:DC:322:MET:HG3	2.15	0.47
34:DC:340:ILE:HG13	34:DC:341:PHE:H	1.80	0.47
34:DC:634:GLN:O	34:DC:637:MET:HG3	2.14	0.47
34:DD:24:ILE:HG21	34:DD:256:LEU:CD2	2.45	0.47
34:DD:77:VAL:CG2	34:DD:92:LEU:HB3	2.42	0.47
34:DD:88:TYR:O	34:DD:90:ILE:HD12	2.15	0.47
34:DD:411:LEU:HD11	34:DD:412:ARG:HD2	1.96	0.47
34:DD:439:GLU:HG2	34:DD:440:LEU:N	2.29	0.47
34:DD:567:VAL:HG22	34:DD:611:GLN:NE2	2.29	0.47
1:BA:96:A:H2	21:BU:21:LEU:HB3	1.80	0.47
1:BA:2042:A:O2'	1:BA:2044:U:OP2	2.32	0.47
11:BK:73:VAL:HG13	11:BK:95:MET:HE3	1.96	0.47
12:BL:77:SER:HA	12:BL:80:VAL:HG22	1.97	0.47
19:BS:111:ILE:HA	19:BS:147:LEU:HD23	1.97	0.47
26:BZ:23:ALA:O	26:BZ:26:ARG:HG3	2.15	0.47
1:CA:70:C:OP1	23:CW:56:ARG:NE	2.27	0.47
1:CA:572:G:N2	1:CA:575:A:OP2	2.41	0.47
1:CA:2543:G:N2	1:CA:2675:G:O2'	2.47	0.47
1:CA:2838:U:OP1	22:CV:35:LYS:HD2	2.14	0.47
10:CJ:41:ILE:CD1	10:CJ:131:GLU:HG2	2.45	0.47
12:CL:125:ALA:O	12:CL:129:ILE:HG13	2.15	0.47
14:CN:121:LYS:HD3	14:CN:143:ILE:CD1	2.45	0.47
19:CS:111:ILE:HA	19:CS:147:LEU:HD23	1.97	0.47
33:DA:166:LYS:HE2	33:DA:166:LYS:HA	1.97	0.47
33:DB:4:ARG:O	33:DB:95:ILE:HG23	2.15	0.47
33:DB:6:LEU:CB	33:DB:98:VAL:HG22	2.36	0.47
33:DB:125:ILE:O	33:DB:129:THR:HG23	2.14	0.47
33:DB:380:ILE:HG22	33:DB:380:ILE:O	2.15	0.47
34:DC:3:ARG:HA	34:DC:6:LYS:HG2	1.95	0.47
34:DC:47:MET:HG3	34:DC:79:MET:HE3	1.97	0.47
34:DC:318:LEU:HD12	34:DC:352:ILE:HD12	1.96	0.47
34:DC:662:ILE:H	34:DC:662:ILE:HD12	1.78	0.47
34:DC:666:ARG:NH2	34:DC:694:GLY:O	2.34	0.47
1:BA:340:U:H5''	21:BU:4:MET:H	1.80	0.47
1:BA:1244:A:OP1	24:BX:123:LYS:NZ	2.32	0.47
1:BA:1509:G:O2'	1:BA:1510:U:O5'	2.28	0.47
1:BA:1612:A:O2'	1:BA:1613:A:O5'	2.32	0.47
1:BA:1636:U:OP1	3:BC:50:PRO:HB3	2.15	0.47
1:BA:2838:U:OP1	22:BV:35:LYS:HD2	2.15	0.47
1:BA:2839:G:N2	1:BA:2864:C:O2'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:BF:110:ASP:HB3	6:BF:113:ILE:CG1	2.44	0.47
9:BI:45:PRO:HB2	9:BI:171:LEU:CD2	2.44	0.47
28:Bb:50:THR:HG21	28:Bb:63:LYS:HG2	1.96	0.47
1:CA:691:A:OP1	12:CL:124:SER:HB3	2.15	0.47
6:CF:110:ASP:HB3	6:CF:113:ILE:CG1	2.44	0.47
8:CH:37:ALA:O	8:CH:41:ILE:HG13	2.15	0.47
9:CI:93:GLU:HG3	9:CI:126:ARG:HB2	1.96	0.47
19:CS:28:LYS:HD3	19:CS:64:HIS:CG	2.50	0.47
24:CX:83:ILE:HG13	24:CX:92:ILE:CG1	2.45	0.47
34:DC:7:MET:HG2	34:DC:10:ARG:NH2	2.30	0.47
34:DC:142:ARG:NH2	34:DC:193:VAL:HG12	2.30	0.47
34:DC:208:ASN:C	34:DC:244:LEU:HB2	2.40	0.47
34:DC:221:VAL:HG22	34:DC:241:LYS:HD3	1.97	0.47
34:DC:264:LYS:HZ3	34:DC:285:HIS:HA	1.78	0.47
34:DC:627:LYS:HG2	34:DC:694:GLY:HA2	1.95	0.47
34:DD:29:HIS:O	34:DD:70:ILE:HD12	2.15	0.47
1:BA:2638:G:O2'	1:BA:2790:A:N1	2.38	0.47
2:BB:63:U:O2'	2:BB:64:G:H5'	2.15	0.47
7:BG:118:ARG:NH1	7:BG:155:LYS:O	2.46	0.47
21:BU:22:HIS:CE1	21:BU:23:ILE:HG12	2.50	0.47
23:BW:42:GLU:OE1	23:BW:42:GLU:N	2.44	0.47
27:Ba:53:ARG:HB2	27:Ba:65:ASN:O	2.15	0.47
1:CA:18:G:H5'	19:CS:4:ILE:HG23	1.97	0.47
1:CA:322:U:O4'	5:CE:207:LYS:HG2	2.14	0.47
1:CA:340:U:H5''	21:CU:4:MET:H	1.80	0.47
1:CA:1234:C:OP2	10:CJ:125:SER:OG	2.18	0.47
1:CA:2691:G:C5'	4:CD:205:THR:HG21	2.45	0.47
4:CD:153:THR:OG1	4:CD:291:ARG:NE	2.44	0.47
5:CE:22:VAL:HG11	5:CE:248:LEU:CD2	2.45	0.47
5:CE:143:VAL:HG13	5:CE:145:ASP:OD1	2.14	0.47
6:CF:29:LEU:HD22	6:CF:37:VAL:CG2	2.44	0.47
6:CF:126:ARG:HG3	6:CF:147:VAL:HG13	1.97	0.47
14:CN:157:ASP:O	14:CN:161:GLN:HG2	2.14	0.47
15:CO:55:ILE:HG12	15:CO:75:LEU:O	2.15	0.47
33:DA:72:GLY:HA2	33:DA:75:LEU:HB2	1.95	0.47
33:DA:94:LEU:HD12	33:DA:94:LEU:O	2.15	0.47
33:DA:116:LEU:O	33:DA:120:ILE:HG13	2.15	0.47
33:DA:328:ILE:HG21	33:DA:333:PHE:CE1	2.48	0.47
33:DA:366:TYR:HB3	33:DA:373:MET:SD	2.55	0.47
33:DA:372:GLY:HA3	33:DB:222:PHE:HE1	1.80	0.47
33:DA:507:SER:CB	33:DA:528:MET:HE2	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DB:124:ASP:O	33:DB:128:PRO:HG2	2.15	0.47
33:DB:267:PRO:HA	33:DB:309:ASN:HD21	1.80	0.47
34:DC:133:LEU:HB3	34:DC:182:MET:HE1	1.97	0.47
34:DC:148:ASN:ND2	34:DC:149:LYS:HD3	2.30	0.47
34:DC:268:LYS:HA	34:DC:275:GLU:OE2	2.15	0.47
34:DD:273:GLY:HA2	34:DD:379:THR:HB	1.95	0.47
34:DD:669:VAL:HA	34:DD:672:MET:CB	2.39	0.47
1:BA:1753:C:H3'	28:Bb:11:ILE:HB	1.98	0.46
1:BA:2104:G:N2	3:BC:219:ASN:O	2.48	0.46
1:BA:2665:U:O2'	7:BG:115:LYS:HE2	2.15	0.46
3:BC:174:GLY:HA2	3:BC:177:TYR:HB3	1.96	0.46
6:BF:45:THR:OG1	6:BF:52:LYS:HA	2.16	0.46
6:BF:126:ARG:HG3	6:BF:147:VAL:HG13	1.97	0.46
9:BI:9:TYR:HB3	9:BI:95:ILE:HD12	1.98	0.46
14:BN:121:LYS:HD3	14:BN:143:ILE:HD13	1.96	0.46
15:BO:55:ILE:HG12	15:BO:75:LEU:O	2.15	0.46
22:BV:49:THR:O	22:BV:55:GLY:HA3	2.15	0.46
23:BW:1:MET:SD	23:BW:5:ARG:NH1	2.88	0.46
1:CA:1747:U:O2'	1:CA:1759:A:N7	2.45	0.46
1:CA:1753:C:H1'	28:Cb:8:LYS:HD3	1.97	0.46
1:CA:2665:U:O2'	7:CG:115:LYS:HE2	2.15	0.46
2:CB:25:G:H1'	2:CB:28:A:N6	2.30	0.46
4:CD:246:VAL:HG11	4:CD:252:GLN:HE22	1.79	0.46
11:CK:65:ARG:NH1	33:DA:3:LYS:HE2	2.29	0.46
11:CK:73:VAL:HG13	11:CK:95:MET:HE3	1.96	0.46
21:CU:45:ALA:CB	21:CU:117:ILE:HG23	2.45	0.46
21:CU:86:LYS:O	21:CU:89:GLY:N	2.45	0.46
33:DA:77:LEU:H	33:DA:77:LEU:HD12	1.80	0.46
33:DB:52:VAL:O	33:DB:92:ILE:HG12	2.14	0.46
33:DB:84:MET:HE3	33:DB:88:GLU:OE1	2.14	0.46
34:DC:98:HIS:HD2	34:DC:100:ASP:HB2	1.80	0.46
34:DC:292:LEU:O	34:DC:373:THR:HA	2.15	0.46
34:DC:624:PRO:HA	34:DC:696:PHE:HA	1.97	0.46
34:DD:216:MET:CE	34:DD:223:PHE:HB2	2.44	0.46
34:DD:292:LEU:HD23	34:DD:324:VAL:HG11	1.96	0.46
34:DD:316:GLY:N	34:DD:354:ALA:HB2	2.30	0.46
34:DD:470:ILE:HA	34:DD:619:ASP:HA	1.97	0.46
34:DD:672:MET:HE2	34:DD:691:THR:CG2	2.36	0.46
1:BA:57:A:N6	30:Bd:26:VAL:HG21	2.30	0.46
1:BA:322:U:O4'	5:BE:207:LYS:HG2	2.14	0.46
1:BA:325:A:C1'	21:BU:4:MET:HE3	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:1578:U:O4	16:BP:128:LYS:HG3	2.16	0.46
1:BA:2795:U:H4'	4:BD:117:PRO:HB3	1.98	0.46
4:BD:289:LEU:HD12	4:BD:291:ARG:HG3	1.96	0.46
6:BF:12:HIS:HB3	6:BF:119:ASP:OD1	2.15	0.46
6:BF:85:ARG:HH21	6:BF:153:ILE:HD13	1.81	0.46
6:BF:110:ASP:OD2	6:BF:112:ASN:HB2	2.14	0.46
7:BG:19:LEU:CD2	7:BG:44:ILE:HB	2.45	0.46
25:BY:62:LEU:HD12	25:BY:63:GLU:N	2.30	0.46
28:Bb:33:LEU:HD21	28:Bb:73:TYR:CD2	2.50	0.46
1:CA:1710:A:OP1	26:CZ:29:ARG:NH2	2.49	0.46
1:CA:2103:A:OP1	13:CM:90:ASN:HB2	2.14	0.46
4:CD:78:PRO:HG3	4:CD:152:LEU:HD21	1.97	0.46
4:CD:102:TRP:CD2	4:CD:117:PRO:HG2	2.51	0.46
4:CD:196:GLY:HA3	4:CD:323:GLY:O	2.14	0.46
5:CE:114:ILE:HG21	5:CE:252:PHE:CE1	2.51	0.46
21:CU:28:MET:HA	21:CU:98:PRO:HG3	1.98	0.46
33:DA:144:ILE:HG13	33:DA:171:LEU:CD2	2.41	0.46
33:DA:255:ALA:HB2	33:DA:272:VAL:HG11	1.98	0.46
33:DA:366:TYR:O	33:DA:367:LYS:HD3	2.15	0.46
33:DA:389:VAL:HG23	33:DA:530:PHE:CG	2.51	0.46
33:DA:394:TYR:OH	33:DA:506:VAL:HG22	2.15	0.46
33:DB:137:ASN:ND2	33:DB:141:VAL:HG23	2.31	0.46
34:DC:648:ARG:CZ	34:DC:668:PRO:HG2	2.45	0.46
34:DC:721:LEU:HD12	34:DC:721:LEU:O	2.15	0.46
34:DD:32:HIS:HD2	34:DD:120:ASP:HB3	1.81	0.46
34:DD:149:LYS:H	34:DD:204:SER:HA	1.80	0.46
34:DD:529:GLU:O	34:DD:532:LYS:HG2	2.16	0.46
34:DD:619:ASP:N	34:DD:619:ASP:OD1	2.46	0.46
34:DD:661:ALA:O	34:DD:663:ILE:HD12	2.15	0.46
34:DD:701:SER:O	34:DD:704:LEU:HG	2.16	0.46
1:BA:1520:C:H4'	16:BP:92:LYS:HE2	1.97	0.46
1:BA:2691:G:C5'	4:BD:205:THR:HG21	2.45	0.46
4:BD:277:GLU:O	4:BD:332:ARG:HD3	2.16	0.46
6:BF:29:LEU:HD22	6:BF:37:VAL:CG2	2.44	0.46
8:BH:105:ALA:O	8:BH:109:VAL:HG23	2.15	0.46
8:BH:116:LEU:HA	8:BH:119:LEU:HD21	1.97	0.46
10:BJ:33:TYR:CD1	10:BJ:99:LYS:HB2	2.51	0.46
14:BN:45:GLN:HG3	14:BN:63:VAL:HG12	1.98	0.46
14:BN:121:LYS:HD3	14:BN:143:ILE:CD1	2.46	0.46
1:CA:221:A:H4'	13:CM:182:GLU:HG2	1.97	0.46
1:CA:1636:U:OP1	3:CC:50:PRO:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2042:A:O2'	1:CA:2044:U:OP2	2.33	0.46
2:CB:43:C:C6	6:CF:38:VAL:HG11	2.50	0.46
5:CE:106:ASN:HB2	5:CE:109:GLU:HG2	1.97	0.46
5:CE:150:GLU:N	5:CE:154:GLN:OE1	2.46	0.46
20:CT:32:LYS:HE2	20:CT:52:THR:HG22	1.97	0.46
21:CU:22:HIS:CE1	21:CU:23:ILE:HG12	2.50	0.46
21:CU:50:GLY:O	21:CU:66:LYS:NZ	2.33	0.46
21:CU:108:MET:SD	21:CU:113:ARG:HG2	2.55	0.46
24:CX:122:ARG:NH1	24:CX:153:ARG:H	2.13	0.46
33:DA:309:ASN:OD1	33:DA:310:GLU:HG3	2.15	0.46
33:DB:401:LEU:HD22	33:DB:428:PHE:CZ	2.50	0.46
33:DB:410:LYS:HG3	33:DB:537:LEU:HD13	1.98	0.46
33:DB:464:GLN:O	33:DB:464:GLN:HG2	2.15	0.46
34:DC:295:MET:N	34:DC:371:THR:HG23	2.31	0.46
34:DC:508:VAL:HG11	34:DC:521:LEU:HD21	1.96	0.46
34:DD:73:ASP:O	34:DD:96:PRO:HD3	2.15	0.46
34:DD:307:GLU:N	34:DD:361:THR:HB	2.30	0.46
1:BA:64:A:O2'	20:BT:1:MET:HE2	2.15	0.46
1:BA:77:A:N1	1:BA:91:A:O2'	2.44	0.46
1:BA:691:A:OP1	12:BL:124:SER:HB3	2.15	0.46
4:BD:78:PRO:HG3	4:BD:152:LEU:HD21	1.97	0.46
4:BD:335:LYS:HA	4:BD:335:LYS:HE2	1.97	0.46
5:BE:150:GLU:HG2	5:BE:204:PRO:HB3	1.97	0.46
5:BE:209:ALA:HA	5:BE:212:LEU:HD23	1.98	0.46
14:BN:91:LEU:HG	14:BN:126:SER:HB2	1.97	0.46
24:BX:122:ARG:NH1	24:BX:153:ARG:H	2.13	0.46
1:CA:1427:G:O2'	1:CA:1484:A:N1	2.44	0.46
1:CA:1986:C:OP1	1:CA:1987:A:O2'	2.33	0.46
6:CF:45:THR:OG1	6:CF:52:LYS:HA	2.16	0.46
6:CF:101:HIS:NE2	6:CF:115:VAL:HA	2.30	0.46
11:CK:27:LYS:HA	11:CK:27:LYS:HE2	1.97	0.46
12:CL:108:GLY:O	12:CL:128:LYS:HE2	2.16	0.46
25:CY:22:ILE:HD11	25:CY:31:ALA:CB	2.42	0.46
33:DA:163:ILE:HG13	33:DA:164:SER:H	1.81	0.46
33:DB:325:ILE:O	33:DB:348:LEU:HD13	2.15	0.46
33:DB:433:MET:HG2	33:DB:434:GLY:N	2.18	0.46
33:DB:441:VAL:O	33:DB:445:ARG:HG3	2.14	0.46
33:DB:508:PRO:HB3	33:DB:532:GLY:H	1.80	0.46
34:DC:76:ASN:HD22	34:DC:357:ILE:HD12	1.81	0.46
34:DC:450:GLU:HG2	34:DC:450:GLU:O	2.16	0.46
34:DC:626:GLN:HA	34:DC:694:GLY:H	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:267:VAL:HA	34:DD:270:ILE:HG12	1.96	0.46
34:DD:288:ALA:HA	34:DD:354:ALA:CB	2.44	0.46
34:DD:393:THR:HG22	34:DD:435:ALA:C	2.40	0.46
34:DD:421:LEU:HD21	34:DD:445:ILE:HG21	1.98	0.46
34:DD:468:GLU:HG3	34:DD:578:VAL:HG22	1.98	0.46
1:BA:51:G:OP1	30:Bd:17:LYS:NZ	2.29	0.46
1:BA:221:A:H4'	13:BM:182:GLU:HG2	1.97	0.46
1:BA:2249:C:H5''	3:BC:1:MET:HA	1.97	0.46
10:BJ:41:ILE:CD1	10:BJ:131:GLU:HG2	2.45	0.46
11:BK:27:LYS:HE2	11:BK:27:LYS:HA	1.97	0.46
26:BZ:6:VAL:N	26:BZ:77:LYS:O	2.32	0.46
27:Ba:116:LEU:CD2	27:Ba:126:ILE:HD13	2.46	0.46
1:CA:1520:C:H4'	16:CP:92:LYS:HE2	1.97	0.46
1:CA:1657:C:OP1	20:CT:60:LYS:NZ	2.32	0.46
1:CA:2328:G:H5''	14:CN:1:MET:HG2	1.98	0.46
1:CA:2820:G:OP1	4:CD:157:LYS:NZ	2.45	0.46
4:CD:335:LYS:HE2	4:CD:335:LYS:HA	1.97	0.46
12:CL:126:ARG:HD3	12:CL:136:CYS:SG	2.55	0.46
14:CN:28:LEU:HD13	18:CR:31:ILE:CD1	2.44	0.46
27:Ca:28:LEU:HD21	27:Ca:105:TYR:CG	2.51	0.46
27:Ca:49:PRO:HG2	27:Ca:51:PHE:CZ	2.50	0.46
33:DA:56:PRO:HB2	33:DB:69:ARG:NH1	2.31	0.46
33:DA:90:GLU:C	33:DA:92:ILE:H	2.23	0.46
33:DB:39:LEU:CD1	33:DB:46:VAL:HG21	2.45	0.46
34:DC:137:LEU:HD21	34:DC:183:ASN:CB	2.45	0.46
34:DC:324:VAL:HG22	34:DC:335:VAL:HG23	1.97	0.46
34:DC:327:SER:OG	34:DC:370:SER:HA	2.15	0.46
34:DD:33:GLY:N	34:DD:69:GLY:HA2	2.30	0.46
34:DD:42:LEU:CB	34:DD:47:MET:HG3	2.43	0.46
34:DD:93:ILE:HG22	34:DD:93:ILE:O	2.16	0.46
34:DD:95:THR:HB	34:DD:109:MET:HE2	1.96	0.46
34:DD:98:HIS:ND1	34:DD:100:ASP:OD1	2.49	0.46
34:DD:388:SER:HB3	34:DD:693:PHE:HD2	1.80	0.46
1:BA:258:G:O6	8:BH:33:GLY:HA3	2.16	0.46
5:BE:22:VAL:HG11	5:BE:248:LEU:CD2	2.45	0.46
7:BG:46:VAL:HG12	7:BG:51:VAL:HG22	1.98	0.46
19:BS:55:MET:HE2	19:BS:82:ILE:HD11	1.96	0.46
20:BT:6:TYR:CE2	23:BW:36:SER:HB2	2.51	0.46
23:BW:12:MET:CE	23:BW:17:ARG:HG2	2.44	0.46
24:BX:81:GLU:O	24:BX:85:GLU:HG2	2.15	0.46
1:CA:312:C:OP1	21:CU:57:ARG:NE	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:325:A:C1'	21:CU:4:MET:HE3	2.46	0.46
1:CA:936:G:C8	24:CX:23:MET:HE1	2.50	0.46
1:CA:1578:U:O4	16:CP:128:LYS:HG3	2.16	0.46
3:CC:105:PHE:HB2	28:Cb:83:LEU:CD1	2.41	0.46
6:CF:85:ARG:HH21	6:CF:153:ILE:HD13	1.81	0.46
6:CF:88:PHE:CZ	6:CF:153:ILE:HG22	2.51	0.46
12:CL:77:SER:HA	12:CL:80:VAL:HG22	1.97	0.46
15:CO:14:ASN:HD22	15:CO:17:ILE:HG12	1.80	0.46
25:CY:62:LEU:HD12	25:CY:63:GLU:N	2.30	0.46
33:DA:16:THR:HG22	33:DA:20:ARG:HH22	1.81	0.46
33:DA:240:HIS:CD2	33:DA:350:LEU:HD12	2.50	0.46
33:DA:369:VAL:HG13	33:DA:369:VAL:O	2.16	0.46
33:DB:74:LEU:HA	33:DB:78:ARG:CB	2.30	0.46
33:DB:368:TYR:HB2	33:DB:373:MET:HE1	1.97	0.46
34:DC:29:HIS:HA	34:DC:128:GLN:CG	2.45	0.46
34:DC:243:PRO:HB2	34:DC:246:GLU:HB2	1.97	0.46
34:DC:384:ILE:HG22	34:DC:385:ARG:N	2.29	0.46
34:DC:518:ARG:O	34:DC:522:ILE:HG13	2.16	0.46
34:DC:521:LEU:HB3	34:DC:526:MET:SD	2.55	0.46
34:DD:27:VAL:O	34:DD:117:VAL:HA	2.16	0.46
34:DD:79:MET:HG2	34:DD:90:ILE:O	2.15	0.46
34:DD:271:TRP:HZ3	34:DD:275:GLU:HA	1.81	0.46
34:DD:327:SER:HB3	34:DD:370:SER:OG	2.15	0.46
34:DD:625:TYR:CZ	34:DD:668:PRO:HG3	2.51	0.46
34:DD:625:TYR:O	34:DD:694:GLY:N	2.49	0.46
34:DD:647:ARG:NH2	34:DD:673:PHE:O	2.48	0.46
9:BI:31:VAL:HA	9:BI:64:GLU:OE1	2.15	0.46
10:BJ:53:TYR:HA	10:BJ:56:THR:HG22	1.98	0.46
12:BL:126:ARG:HD3	12:BL:136:CYS:SG	2.55	0.46
13:BM:48:ASP:OD1	13:BM:49:ARG:N	2.49	0.46
18:BR:54:ASN:OD1	18:BR:55:PRO:HD2	2.15	0.46
19:BS:28:LYS:HD3	19:BS:64:HIS:CG	2.50	0.46
27:Ba:28:LEU:HD21	27:Ba:105:TYR:CG	2.51	0.46
1:CA:75:G:N1	1:CA:95:A:OP2	2.45	0.46
5:CE:50:ARG:HG2	5:CE:53:SER:HB3	1.97	0.46
6:CF:136:ILE:HG13	14:CN:107:LEU:HB2	1.98	0.46
11:CK:118:ALA:HB1	11:CK:131:ILE:HD13	1.98	0.46
12:CL:73:ASP:OD1	12:CL:112:LYS:HE3	2.16	0.46
15:CO:14:ASN:ND2	15:CO:17:ILE:HG12	2.29	0.46
26:CZ:23:ALA:O	26:CZ:26:ARG:HG3	2.15	0.46
26:CZ:42:MET:HE3	26:CZ:75:ALA:CB	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DA:95:ILE:H	33:DA:95:ILE:HD12	1.81	0.46
33:DA:197:GLU:OE1	33:DB:205:THR:HG22	2.16	0.46
33:DB:31:SER:HB3	33:DB:46:VAL:HG11	1.97	0.46
34:DC:121:ALA:C	34:DC:153:LEU:HD21	2.41	0.46
34:DC:260:ILE:HG22	34:DC:264:LYS:CE	2.45	0.46
34:DC:625:TYR:C	34:DC:669:VAL:HG23	2.41	0.46
34:DD:35:THR:HB	34:DD:70:ILE:C	2.41	0.46
34:DD:443:GLU:HA	34:DD:446:ALA:HB2	1.97	0.46
1:BA:1230:G:N3	10:BJ:83:MET:HG2	2.31	0.46
1:BA:1986:C:OP1	1:BA:1987:A:O2'	2.33	0.46
4:BD:56:ASP:HB3	4:BD:64:GLN:HA	1.97	0.46
6:BF:136:ILE:HG13	14:BN:107:LEU:HB2	1.97	0.46
14:BN:87:LEU:HD12	14:BN:126:SER:CB	2.43	0.46
16:BP:145:GLU:HG3	16:BP:147:LEU:CG	2.45	0.46
21:BU:45:ALA:CB	21:BU:117:ILE:HG23	2.45	0.46
27:Ba:41:ARG:HG3	27:Ba:93:SER:HB2	1.97	0.46
1:CA:258:G:O6	8:CH:33:GLY:HA3	2.16	0.46
1:CA:859:C:O2'	1:CA:860:G:O5'	2.32	0.46
1:CA:2795:U:H4'	4:CD:117:PRO:HB3	1.97	0.46
6:CF:23:VAL:O	6:CF:26:GLU:HG2	2.16	0.46
14:CN:87:LEU:HD12	14:CN:126:SER:CB	2.43	0.46
23:CW:42:GLU:OE1	23:CW:42:GLU:N	2.44	0.46
33:DA:167:THR:HG22	33:DA:171:LEU:HD12	1.97	0.46
33:DA:281:ALA:HB2	33:DA:429:MET:HA	1.98	0.46
33:DA:305:ILE:HG21	33:DA:327:ILE:HD13	1.98	0.46
33:DA:306:ILE:HG12	33:DA:328:ILE:HA	1.98	0.46
33:DA:345:SER:OG	33:DA:348:LEU:HD23	2.15	0.46
33:DA:487:PHE:HB2	33:DA:511:SER:CB	2.39	0.46
33:DB:212:TYR:HA	33:DB:219:SER:HA	1.98	0.46
34:DC:258:ASN:HB2	34:DC:259:PRO:CD	2.46	0.46
34:DD:34:LYS:HZ1	34:DD:70:ILE:HG13	1.80	0.46
34:DD:299:ILE:N	34:DD:368:VAL:HG22	2.30	0.46
34:DD:648:ARG:O	34:DD:648:ARG:HG2	2.15	0.46
5:BE:50:ARG:HG2	5:BE:53:SER:HB3	1.96	0.46
5:BE:227:LEU:O	5:BE:236:ARG:NH1	2.48	0.46
12:BL:108:GLY:O	12:BL:128:LYS:HE2	2.16	0.46
17:BQ:27:GLU:O	17:BQ:27:GLU:HG2	2.16	0.46
21:BU:108:MET:SD	21:BU:113:ARG:HG2	2.56	0.46
22:BV:9:CYS:HA	22:BV:52:THR:HB	1.98	0.46
1:CA:96:A:H2	21:CU:21:LEU:HB3	1.80	0.46
1:CA:1105:C:OP1	7:CG:59:ARG:NH1	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1753:C:H3'	28:Cb:11:ILE:HB	1.97	0.46
1:CA:1835:G:O6	3:CC:143:SER:OG	2.31	0.46
1:CA:2104:G:N2	3:CC:219:ASN:O	2.47	0.46
4:CD:277:GLU:O	4:CD:332:ARG:HD3	2.15	0.46
8:CH:105:ALA:O	8:CH:109:VAL:HG23	2.15	0.46
12:CL:65:SER:OG	12:CL:101:ILE:HA	2.16	0.46
13:CM:114:GLU:CD	13:CM:157:ARG:HA	2.41	0.46
13:CM:156:SER:O	13:CM:159:ARG:HG3	2.16	0.46
15:CO:8:LYS:HG2	15:CO:11:ARG:HH22	1.80	0.46
23:CW:1:MET:SD	23:CW:5:ARG:NH1	2.89	0.46
23:CW:30:ARG:NE	23:CW:34:LEU:HD11	2.27	0.46
33:DA:209:LYS:HA	33:DA:221:CYS:SG	2.56	0.46
33:DA:290:LEU:HD23	33:DA:316:ALA:CB	2.44	0.46
33:DB:297:ASP:O	33:DB:301:ALA:HB2	2.15	0.46
34:DC:96:PRO:HB2	34:DC:104:ASP:CG	2.40	0.46
34:DC:229:TYR:HB3	34:DC:234:ASP:CB	2.45	0.46
34:DC:420:THR:HB	34:DC:437:MET:HG2	1.97	0.46
34:DD:294:PHE:CE2	34:DD:360:VAL:HG22	2.50	0.46
34:DD:390:PRO:HB3	34:DD:436:GLY:C	2.41	0.46
1:BA:390:U:OP2	32:Bf:38:ARG:NE	2.35	0.46
1:BA:2115:G:O4'	1:BA:2219:A:N6	2.49	0.46
4:BD:53:ILE:HG13	22:BV:15:PRO:HB2	1.98	0.46
5:BE:22:VAL:HG11	5:BE:248:LEU:HG	1.97	0.46
5:BE:114:ILE:HG21	5:BE:252:PHE:CE1	2.50	0.46
6:BF:44:ARG:HA	6:BF:53:LYS:HZ2	1.80	0.46
15:BO:14:ASN:HD22	15:BO:17:ILE:HG12	1.80	0.46
24:BX:83:ILE:HG13	24:BX:92:ILE:CG1	2.45	0.46
26:BZ:42:MET:HE3	26:BZ:75:ALA:CB	2.46	0.46
2:CB:41:U:C3'	2:CB:42:C:H5'	2.45	0.46
3:CC:56:ILE:HD12	3:CC:68:PHE:CD1	2.51	0.46
5:CE:182:GLY:O	5:CE:187:ARG:N	2.46	0.46
10:CJ:53:TYR:HA	10:CJ:56:THR:HG22	1.98	0.46
22:CV:9:CYS:HA	22:CV:52:THR:HB	1.97	0.46
26:CZ:21:VAL:HG21	26:CZ:29:ARG:CG	2.43	0.46
33:DB:18:PHE:CD1	33:DB:154:LEU:HD21	2.51	0.46
33:DB:74:LEU:HD12	33:DB:134:ALA:HA	1.98	0.46
33:DB:115:GLU:HB2	33:DB:118:GLU:CD	2.41	0.46
33:DB:256:LEU:O	33:DB:260:LYS:HG2	2.15	0.46
34:DC:313:LEU:HD13	34:DC:356:ASN:O	2.16	0.46
34:DC:473:LYS:HA	34:DC:493:GLU:HB3	1.98	0.46
34:DC:542:ILE:HG13	34:DC:582:LYS:HG3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DC:630:VAL:O	34:DC:662:ILE:HA	2.16	0.46
34:DD:16:ASN:HB3	34:DD:353:PRO:CG	2.45	0.46
34:DD:214:PRO:HB3	34:DD:255:PHE:HZ	1.81	0.46
34:DD:312:ARG:NH1	34:DD:314:PHE:HA	2.31	0.46
34:DD:494:PRO:O	34:DD:582:LYS:HG2	2.16	0.46
34:DD:540:SER:OG	34:DD:579:ALA:HB1	2.16	0.46
34:DD:628:VAL:O	34:DD:628:VAL:HG23	2.16	0.46
1:BA:184:A:OP2	13:BM:164:LYS:HE3	2.17	0.45
2:BB:99:U:H2'	2:BB:100:U:H6	1.81	0.45
4:BD:80:ILE:HD12	4:BD:145:ILE:CD1	2.39	0.45
4:BD:263:GLU:CG	4:BD:302:PRO:HD3	2.45	0.45
11:BK:62:PRO:CB	33:DB:28:LYS:HZ3	2.29	0.45
13:BM:156:SER:O	13:BM:159:ARG:HG3	2.16	0.45
15:BO:82:HIS:HD2	15:BO:84:VAL:HG23	1.81	0.45
1:CA:500:G:N1	1:CA:503:A:OP2	2.47	0.45
1:CA:635:G:OP1	5:CE:91:ARG:NH1	2.49	0.45
1:CA:2172:U:O2'	1:CA:2173:U:O5'	2.22	0.45
4:CD:284:PHE:N	4:CD:288:GLY:O	2.46	0.45
8:CH:48:LEU:HD12	8:CH:49:VAL:H	1.80	0.45
13:CM:48:ASP:OD1	13:CM:49:ARG:N	2.49	0.45
15:CO:62:THR:HG22	15:CO:68:LEU:HD11	1.99	0.45
20:CT:6:TYR:CE2	23:CW:36:SER:HB2	2.51	0.45
25:CY:28:THR:CG2	25:CY:83:ALA:HB1	2.43	0.45
33:DA:123:ILE:HD11	33:DA:186:ILE:CG1	2.46	0.45
33:DB:71:HIS:O	33:DB:74:LEU:HD23	2.16	0.45
33:DB:402:SER:HA	33:DB:481:VAL:CG1	2.46	0.45
33:DB:457:LYS:HG3	33:DB:461:GLU:CD	2.41	0.45
34:DC:292:LEU:CD2	34:DC:372:VAL:HG12	2.46	0.45
34:DC:467:ARG:HD3	34:DC:467:ARG:HA	1.75	0.45
34:DC:644:LEU:O	34:DC:649:GLY:N	2.49	0.45
34:DD:30:ILE:HG22	34:DD:70:ILE:CD1	2.40	0.45
34:DD:202:PHE:HD2	34:DD:223:PHE:CE1	2.34	0.45
34:DD:264:LYS:CA	34:DD:284:THR:HA	2.40	0.45
1:BA:769:U:H5	29:Bc:15:THR:HG22	1.81	0.45
1:BA:1121:A:N3	1:BA:2497:G:O2'	2.44	0.45
1:BA:1297:G:O2'	1:BA:1325:A:N1	2.38	0.45
1:BA:2034:A:H2	19:BS:128:ARG:HH22	1.64	0.45
2:BB:109:C:H2'	2:BB:110:U:H5'	1.98	0.45
3:BC:102:GLU:HG2	3:BC:130:VAL:O	2.16	0.45
5:BE:106:ASN:HB2	5:BE:109:GLU:HG2	1.98	0.45
6:BF:23:VAL:O	6:BF:26:GLU:HG2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:BL:16:THR:HG22	12:BL:18:LYS:H	1.81	0.45
1:CA:563:G:O6	1:CA:583:G:O2'	2.29	0.45
1:CA:2249:C:H5''	3:CC:1:MET:HA	1.97	0.45
6:CF:81:LYS:HE2	6:CF:162:VAL:HG22	1.98	0.45
6:CF:101:HIS:ND1	6:CF:107:MET:HE3	2.31	0.45
11:CK:67:GLN:CD	34:DD:405:PRO:HB3	2.42	0.45
21:CU:97:ASN:OD1	21:CU:99:SER:OG	2.30	0.45
27:Ca:41:ARG:HG3	27:Ca:93:SER:HB2	1.97	0.45
33:DB:58:MET:O	33:DB:64:LYS:HB3	2.16	0.45
34:DC:542:ILE:HD11	34:DC:582:LYS:CD	2.46	0.45
34:DD:55:LYS:HE2	34:DD:55:LYS:HA	1.96	0.45
34:DD:164:MET:HE1	34:DD:223:PHE:CE2	2.51	0.45
34:DD:294:PHE:CZ	34:DD:360:VAL:HG22	2.52	0.45
34:DD:341:PHE:CE2	34:DD:359:ALA:HB2	2.51	0.45
34:DD:493:GLU:HG3	34:DD:582:LYS:CD	2.46	0.45
1:BA:18:G:H5'	19:BS:4:ILE:HG23	1.97	0.45
1:BA:217:G:OP2	12:BL:31:LYS:NZ	2.45	0.45
1:BA:648:U:H5'	15:BO:11:ARG:HG2	1.96	0.45
3:BC:4:ARG:HB3	3:BC:8:GLN:HB2	1.97	0.45
6:BF:67:LYS:O	6:BF:70:GLU:HG2	2.17	0.45
12:BL:65:SER:OG	12:BL:101:ILE:HA	2.16	0.45
12:BL:73:ASP:OD1	12:BL:112:LYS:HE3	2.16	0.45
15:BO:62:THR:HG22	15:BO:68:LEU:HD11	1.98	0.45
15:BO:81:ASP:OD1	15:BO:82:HIS:N	2.49	0.45
19:BS:4:ILE:HG22	19:BS:5:ASN:O	2.16	0.45
1:CA:769:U:H5	29:Cc:15:THR:HG22	1.81	0.45
1:CA:2161:G:N7	1:CA:2165:G:N1	2.63	0.45
2:CB:55:G:C2'	2:CB:56:A:H5'	2.47	0.45
2:CB:62:C:H2'	2:CB:63:U:C6	2.52	0.45
4:CD:53:ILE:HG13	22:CV:15:PRO:HB2	1.98	0.45
5:CE:150:GLU:HG2	5:CE:204:PRO:HB3	1.97	0.45
6:CF:13:MET:HG3	6:CF:29:LEU:HD12	1.99	0.45
18:CR:2:THR:OG1	18:CR:3:ASN:N	2.49	0.45
18:CR:14:LYS:HD3	18:CR:55:PRO:HB3	1.98	0.45
27:Ca:49:PRO:HG2	27:Ca:51:PHE:CE1	2.52	0.45
33:DA:7:LEU:HD13	33:DA:15:ILE:CD1	2.44	0.45
33:DA:136:LYS:HE2	33:DB:121:GLU:HA	1.98	0.45
33:DA:398:LYS:HA	33:DA:401:LEU:HD23	1.98	0.45
33:DB:521:ALA:HB2	33:DB:528:MET:CE	2.43	0.45
34:DC:10:ARG:O	34:DC:13:THR:OG1	2.24	0.45
34:DC:73:ASP:HA	34:DC:96:PRO:HB3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DC:229:TYR:CB	34:DC:234:ASP:HB2	2.44	0.45
34:DC:312:ARG:HB3	34:DC:314:PHE:CE2	2.51	0.45
34:DC:555:GLU:HG2	34:DC:556:THR:N	2.31	0.45
34:DD:35:THR:HG21	34:DD:67:ALA:HA	1.99	0.45
34:DD:63:GLU:OE1	34:DD:63:GLU:HA	2.17	0.45
34:DD:138:ARG:O	34:DD:269:VAL:HG11	2.16	0.45
34:DD:307:GLU:O	34:DD:361:THR:HA	2.17	0.45
34:DD:378:MET:HG2	34:DD:379:THR:H	1.81	0.45
1:BA:504:A:O2'	1:BA:508:C:O2'	2.34	0.45
1:BA:2342:C:OP1	18:BR:17:LYS:NZ	2.45	0.45
2:BB:14:A:N1	2:BB:70:G:O2'	2.35	0.45
2:BB:99:U:H2'	2:BB:100:U:C6	2.52	0.45
5:BE:203:THR:HB	5:BE:204:PRO:HD2	1.99	0.45
6:BF:81:LYS:NZ	6:BF:160:TYR:O	2.38	0.45
9:BI:20:ARG:HA	9:BI:23:MET:CG	2.47	0.45
1:CA:183:A:OP1	13:CM:162:ARG:NH2	2.50	0.45
1:CA:1231:G:H5'	10:CJ:79:THR:HG23	1.97	0.45
2:CB:41:U:H1'	2:CB:44:C:H5	1.81	0.45
15:CO:82:HIS:HD2	15:CO:84:VAL:HG23	1.81	0.45
19:CS:4:ILE:HG22	19:CS:5:ASN:O	2.16	0.45
21:CU:83:ILE:HD12	21:CU:91:GLU:HB3	1.97	0.45
33:DA:18:PHE:HD1	33:DA:150:TYR:HB3	1.82	0.45
33:DA:285:THR:CG2	33:DA:287:LEU:HB3	2.47	0.45
33:DA:450:THR:O	33:DA:453:VAL:HG12	2.17	0.45
33:DA:512:ILE:O	33:DA:513:ARG:HG3	2.16	0.45
33:DB:382:ILE:HD11	33:DB:407:LYS:HE2	1.98	0.45
33:DB:409:CYS:HB3	33:DB:418:ILE:CG1	2.32	0.45
33:DB:418:ILE:HA	33:DB:432:GLY:O	2.16	0.45
33:DB:453:VAL:HA	33:DB:456:LEU:HB2	1.99	0.45
33:DB:498:ALA:CB	33:DB:526:ILE:HD11	2.46	0.45
33:DB:508:PRO:HA	33:DB:532:GLY:H	1.81	0.45
34:DC:32:HIS:CD2	34:DC:120:ASP:HB2	2.51	0.45
34:DC:324:VAL:HB	34:DC:373:THR:O	2.15	0.45
34:DC:445:ILE:HG23	34:DC:448:ARG:NH1	2.32	0.45
34:DC:448:ARG:HA	34:DC:451:ARG:NH1	2.30	0.45
34:DC:721:LEU:O	34:DC:723:LYS:N	2.44	0.45
34:DD:18:PRO:HB2	34:DD:260:ILE:HD11	1.99	0.45
34:DD:103:GLY:O	34:DD:106:THR:OG1	2.34	0.45
34:DD:167:ARG:O	34:DD:171:VAL:HG23	2.16	0.45
34:DD:396:VAL:CG1	34:DD:457:ILE:HD12	2.45	0.45
1:BA:1710:A:OP1	26:BZ:29:ARG:NH2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:2342:C:OP1	18:BR:23:GLY:N	2.25	0.45
3:BC:49:ASP:HB2	3:BC:56:ILE:HG23	1.98	0.45
3:BC:72:SER:O	3:BC:75:ILE:HG22	2.17	0.45
5:BE:30:ASP:OD1	5:BE:30:ASP:N	2.49	0.45
6:BF:44:ARG:HA	6:BF:53:LYS:NZ	2.32	0.45
6:BF:88:PHE:CZ	6:BF:153:ILE:HG22	2.50	0.45
10:BJ:63:GLU:HG2	10:BJ:64:PHE:N	2.31	0.45
13:BM:114:GLU:CD	13:BM:157:ARG:HA	2.42	0.45
15:BO:109:LEU:O	15:BO:112:ILE:HG22	2.17	0.45
21:BU:83:ILE:HD12	21:BU:91:GLU:HB3	1.97	0.45
25:BY:28:THR:CG2	25:BY:83:ALA:HB1	2.43	0.45
32:Bf:5:LYS:HB2	32:Bf:92:GLU:OE2	2.17	0.45
1:CA:140:A:N3	13:CM:112:ASN:HB3	2.32	0.45
1:CA:1230:G:N3	10:CJ:83:MET:HG2	2.30	0.45
1:CA:1883:U:O2'	1:CA:1884:A:N7	2.43	0.45
1:CA:2362:U:O4	1:CA:2377:G:O6	2.35	0.45
3:CC:102:GLU:HG2	3:CC:130:VAL:O	2.16	0.45
6:CF:37:VAL:HG22	6:CF:59:CYS:HB2	1.99	0.45
6:CF:67:LYS:O	6:CF:70:GLU:HG2	2.16	0.45
11:CK:62:PRO:HG3	33:DA:3:LYS:CG	2.46	0.45
33:DA:75:LEU:O	33:DA:137:ASN:HB2	2.16	0.45
33:DA:382:ILE:CD1	33:DA:406:LEU:HB3	2.47	0.45
33:DA:421:HIS:NE2	33:DA:476:ILE:HB	2.31	0.45
33:DB:215:ASN:OD1	33:DB:216:TRP:N	2.50	0.45
33:DB:244:LEU:HD21	33:DB:249:TYR:CZ	2.52	0.45
33:DB:283:GLY:HA2	33:DB:427:TYR:HB3	1.97	0.45
33:DB:287:LEU:HD23	33:DB:291:GLN:OE1	2.16	0.45
33:DB:491:ASP:HB2	33:DB:520:THR:HG21	1.99	0.45
34:DC:74:SER:HB2	34:DC:96:PRO:HG3	1.99	0.45
34:DC:728:LEU:O	34:DC:728:LEU:HD23	2.16	0.45
34:DD:4:ARG:HB3	34:DD:48:ILE:HG23	1.99	0.45
1:BA:1661:C:O2'	1:BA:1667:A:N1	2.38	0.45
1:BA:1816:A:C4	29:Bc:3:LYS:HB3	2.52	0.45
2:BB:123:A:H2'	2:BB:124:G:H8	1.82	0.45
4:BD:102:TRP:CD2	4:BD:117:PRO:HG2	2.51	0.45
4:BD:147:THR:O	4:BD:160:PRO:HB3	2.17	0.45
8:BH:88:SER:HB3	8:BH:97:VAL:HG11	1.98	0.45
14:BN:139:PRO:HD2	14:BN:142:ARG:HD3	1.98	0.45
27:Ba:30:MET:SD	27:Ba:35:ARG:HD2	2.56	0.45
1:CA:1862:C:OP1	3:CC:192:ALA:HB3	2.17	0.45
1:CA:2034:A:H2	19:CS:128:ARG:HH22	1.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2112:U:H1'	13:CM:125:GLY:HA3	1.97	0.45
1:CA:2692:C:OP1	4:CD:206:ILE:N	2.44	0.45
2:CB:30:U:H2'	2:CB:31:C:H6	1.80	0.45
8:CH:88:SER:HB3	8:CH:97:VAL:HG11	1.98	0.45
10:CJ:63:GLU:HG2	10:CJ:64:PHE:N	2.31	0.45
11:CK:70:LEU:HD11	11:CK:100:GLU:CD	2.41	0.45
14:CN:62:ALA:HB3	14:CN:89:PHE:HB2	1.99	0.45
19:CS:14:THR:HG22	19:CS:149:GLU:OE2	2.16	0.45
21:CU:20:PRO:HB2	21:CU:22:HIS:ND1	2.32	0.45
27:Ca:41:ARG:NH1	27:Ca:97:VAL:O	2.49	0.45
33:DA:104:PRO:HG2	34:DC:595:ILE:CD1	2.47	0.45
33:DA:177:ARG:O	33:DA:180:ALA:HB3	2.16	0.45
33:DA:215:ASN:OD1	33:DB:379:ASP:HB3	2.16	0.45
33:DB:4:ARG:HH11	33:DB:93:SER:CB	2.29	0.45
33:DB:4:ARG:HG2	33:DB:28:LYS:HB2	1.97	0.45
33:DB:143:VAL:O	33:DB:171:LEU:HB3	2.17	0.45
33:DB:212:TYR:CD2	33:DB:216:TRP:HA	2.52	0.45
33:DB:244:LEU:HD11	33:DB:249:TYR:CZ	2.52	0.45
33:DB:328:ILE:HB	33:DB:350:LEU:HD23	1.97	0.45
33:DB:386:TRP:CE2	33:DB:529:VAL:HG11	2.52	0.45
34:DC:140:HIS:CD2	34:DC:269:VAL:HG21	2.51	0.45
34:DC:317:SER:O	34:DC:322:MET:HE1	2.16	0.45
34:DC:398:ALA:HB2	34:DC:407:LEU:HD22	1.99	0.45
34:DC:567:VAL:HG12	34:DC:614:MET:CE	2.46	0.45
34:DD:41:LEU:HD11	34:DD:248:VAL:CG1	2.47	0.45
34:DD:463:ILE:HA	34:DD:714:ARG:NH2	2.31	0.45
34:DD:572:PRO:HG3	34:DD:614:MET:HB2	1.99	0.45
1:BA:183:A:OP1	13:BM:162:ARG:NH2	2.50	0.45
1:BA:2112:U:H1'	13:BM:125:GLY:HA3	1.97	0.45
1:BA:2250:A:O3'	13:BM:81:GLY:HA2	2.17	0.45
2:BB:62:C:H2'	2:BB:63:U:C6	2.52	0.45
4:BD:284:PHE:N	4:BD:288:GLY:O	2.46	0.45
5:BE:19:LEU:HD22	5:BE:23:PHE:CE1	2.51	0.45
5:BE:71:VAL:HG23	5:BE:73:ARG:HE	1.82	0.45
6:BF:13:MET:HG3	6:BF:29:LEU:HD12	1.99	0.45
6:BF:37:VAL:HG22	6:BF:59:CYS:HB2	1.99	0.45
6:BF:101:HIS:ND1	6:BF:107:MET:HE3	2.31	0.45
16:BP:125:ARG:HA	16:BP:125:ARG:HD3	1.80	0.45
18:BR:2:THR:OG1	18:BR:3:ASN:N	2.49	0.45
21:BU:28:MET:HA	21:BU:98:PRO:HG3	1.98	0.45
27:Ba:41:ARG:NH1	27:Ba:97:VAL:O	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2138:G:N2	1:CA:2182:C:OP1	2.50	0.45
2:CB:99:U:H2'	2:CB:100:U:H6	1.81	0.45
4:CD:107:ASP:HB3	4:CD:109:GLU:OE1	2.17	0.45
5:CE:203:THR:HB	5:CE:204:PRO:HD2	1.98	0.45
27:Ca:30:MET:SD	27:Ca:35:ARG:HD2	2.56	0.45
33:DA:86:GLU:HA	33:DA:89:LYS:HZ2	1.82	0.45
33:DA:199:VAL:HG11	33:DB:177:ARG:NH2	2.30	0.45
33:DA:217:HIS:HE1	33:DB:533:MET:HE1	1.82	0.45
33:DB:99:ALA:HB2	33:DB:144:ILE:HB	1.99	0.45
33:DB:210:LEU:HD21	33:DB:249:TYR:HE2	1.81	0.45
33:DB:440:ARG:NH2	33:DB:485:ASP:HB2	2.31	0.45
33:DB:483:ALA:CB	33:DB:506:VAL:HB	2.47	0.45
34:DC:49:SER:OG	34:DC:52:LEU:HG	2.17	0.45
34:DC:221:VAL:CG2	34:DC:241:LYS:HD3	2.47	0.45
34:DD:495:LEU:HD22	34:DD:500:VAL:HG23	1.97	0.45
1:BA:703:C:P	15:BO:34:PRO:HG2	2.57	0.45
1:BA:2324:C:H4'	6:BF:10:ILE:HD12	1.99	0.45
1:BA:2328:G:H5''	14:BN:1:MET:HG2	1.98	0.45
2:BB:55:G:C2'	2:BB:56:A:H5'	2.47	0.45
14:BN:62:ALA:HB3	14:BN:89:PHE:HB2	1.99	0.45
18:BR:48:VAL:HB	18:BR:91:HIS:CE1	2.52	0.45
19:BS:29:LYS:O	19:BS:33:VAL:HG23	2.17	0.45
3:CC:49:ASP:HB2	3:CC:56:ILE:HG23	1.98	0.45
3:CC:72:SER:O	3:CC:75:ILE:HG22	2.17	0.45
4:CD:83:ALA:HB2	4:CD:146:TYR:CD2	2.52	0.45
6:CF:44:ARG:HA	6:CF:53:LYS:NZ	2.32	0.45
7:CG:46:VAL:HG12	7:CG:51:VAL:HG22	1.99	0.45
13:CM:17:ASP:HA	13:CM:22:ASN:HB2	1.98	0.45
14:CN:139:PRO:HD2	14:CN:142:ARG:HD3	1.98	0.45
33:DA:72:GLY:HA3	33:DA:86:GLU:CD	2.42	0.45
33:DA:220:ALA:HB1	33:DB:375:LYS:H	1.82	0.45
33:DB:73:GLY:HA3	33:DB:87:ALA:N	2.25	0.45
34:DC:17:ASP:OD2	34:DC:20:ARG:HG3	2.17	0.45
34:DD:312:ARG:HH11	34:DD:314:PHE:HA	1.81	0.45
34:DD:378:MET:HG2	34:DD:379:THR:N	2.32	0.45
34:DD:382:GLU:O	34:DD:384:ILE:HG12	2.17	0.45
34:DD:393:THR:HG22	34:DD:435:ALA:HA	1.98	0.45
34:DD:397:GLU:OE1	34:DD:397:GLU:HA	2.17	0.45
1:BA:1103:G:H21	17:BQ:44:SER:HB2	1.81	0.45
1:BA:1456:U:C1'	29:Bc:42:THR:HB	2.47	0.45
1:BA:1753:C:H1'	28:Bb:8:LYS:HD3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:2500:A:N3	1:BA:2502:C:N4	2.59	0.45
2:BB:55:G:N2	6:BF:1:MET:HE1	2.25	0.45
4:BD:37:PRO:HB2	4:BD:178:TYR:CG	2.52	0.45
4:BD:279:THR:HG21	4:BD:289:LEU:HB2	1.99	0.45
6:BF:81:LYS:HE2	6:BF:162:VAL:HG22	1.98	0.45
17:BQ:25:LYS:HE2	17:BQ:61:GLU:OE1	2.17	0.45
1:CA:184:A:OP2	13:CM:164:LYS:HE3	2.17	0.45
1:CA:451:C:H4'	5:CE:50:ARG:HD3	1.99	0.45
1:CA:1042:G:O2'	1:CA:2276:A:OP2	2.28	0.45
1:CA:2500:A:N3	1:CA:2502:C:N4	2.59	0.45
6:CF:12:HIS:HB3	6:CF:119:ASP:OD1	2.15	0.45
10:CJ:33:TYR:CD1	10:CJ:99:LYS:HB2	2.51	0.45
12:CL:16:THR:HG22	12:CL:18:LYS:H	1.82	0.45
15:CO:81:ASP:OD1	15:CO:82:HIS:N	2.49	0.45
15:CO:109:LEU:O	15:CO:112:ILE:HG22	2.17	0.45
23:CW:12:MET:HB3	23:CW:16:GLU:CG	2.47	0.45
23:CW:14:ILE:HD12	23:CW:14:ILE:H	1.82	0.45
33:DA:53:THR:CG2	33:DA:70:ILE:HG12	2.31	0.45
33:DA:370:ILE:HG12	33:DB:360:PHE:HE2	1.82	0.45
33:DB:296:GLY:HA2	33:DB:455:ASN:OD1	2.16	0.45
34:DC:270:ILE:HB	34:DC:382:GLU:OE2	2.16	0.45
34:DC:337:GLN:HB2	34:DC:361:THR:OG1	2.17	0.45
34:DD:306:GLY:O	34:DD:308:VAL:HG13	2.16	0.45
34:DD:325:PHE:HE1	34:DD:332:LYS:HE2	1.82	0.45
34:DD:421:LEU:HD22	34:DD:445:ILE:HG13	1.99	0.45
34:DD:515:LEU:O	34:DD:518:ARG:HB3	2.17	0.45
34:DD:634:GLN:HB2	34:DD:660:LEU:N	2.32	0.45
1:BA:1160:A:H62	34:DC:637:MET:HB2	1.82	0.45
1:BA:1713:A:O2'	4:BD:210:THR:O	2.33	0.45
2:BB:41:U:H1'	2:BB:44:C:H5	1.81	0.45
3:BC:56:ILE:HD12	3:BC:68:PHE:CD1	2.51	0.45
6:BF:101:HIS:NE2	6:BF:115:VAL:HA	2.30	0.45
18:BR:14:LYS:HD3	18:BR:55:PRO:HB3	1.98	0.45
23:BW:25:ASN:O	23:BW:29:VAL:HG23	2.17	0.45
1:CA:703:C:P	15:CO:34:PRO:HG2	2.57	0.45
4:CD:56:ASP:HB3	4:CD:64:GLN:HA	1.98	0.45
5:CE:19:LEU:HD22	5:CE:23:PHE:CE1	2.52	0.45
17:CQ:27:GLU:O	17:CQ:27:GLU:HG2	2.16	0.45
23:CW:3:ILE:CD1	23:CW:49:GLU:HG3	2.47	0.45
23:CW:27:GLU:O	23:CW:31:GLU:HG2	2.17	0.45
25:CY:12:LEU:CD1	25:CY:13:ILE:HG13	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DA:360:PHE:HE2	33:DA:378:ARG:HH21	1.64	0.45
33:DA:417:VAL:HG21	33:DA:444:ILE:HA	1.99	0.45
33:DB:258:THR:CA	33:DB:411:ALA:HB1	2.33	0.45
33:DB:291:GLN:HG2	33:DB:319:PHE:CG	2.52	0.45
33:DB:330:ALA:HB3	33:DB:333:PHE:HE1	1.81	0.45
34:DD:24:ILE:HD13	34:DD:252:VAL:HG13	1.99	0.45
34:DD:81:HIS:CB	34:DD:249:LEU:HD22	2.44	0.45
34:DD:165:GLN:O	34:DD:165:GLN:HG2	2.17	0.45
34:DD:179:ILE:HD12	34:DD:192:LYS:HA	1.99	0.45
34:DD:289:GLU:O	34:DD:316:GLY:HA2	2.16	0.45
34:DD:470:ILE:HG12	34:DD:581:VAL:HG22	1.99	0.45
1:BA:451:C:H4'	5:BE:50:ARG:HD3	1.99	0.44
4:BD:81:ARG:HA	4:BD:186:LEU:HD23	1.98	0.44
9:BI:20:ARG:NH2	9:BI:26:VAL:HB	2.33	0.44
11:BK:4:MET:HE1	11:BK:50:GLY:CA	2.45	0.44
13:BM:100:ARG:HH21	13:BM:171:GLY:HA3	1.81	0.44
19:BS:14:THR:HG22	19:BS:149:GLU:OE2	2.16	0.44
23:BW:12:MET:HB3	23:BW:16:GLU:CG	2.47	0.44
1:CA:217:G:OP2	12:CL:31:LYS:NZ	2.46	0.44
3:CC:51:ALA:C	3:CC:183:ARG:HH21	2.25	0.44
11:CK:99:ASP:OD1	11:CK:103:ILE:N	2.46	0.44
24:CX:61:THR:O	24:CX:65:VAL:HG23	2.17	0.44
33:DA:188:THR:HA	33:DA:199:VAL:HG22	1.97	0.44
33:DB:508:PRO:CA	33:DB:532:GLY:H	2.30	0.44
33:DB:508:PRO:CB	33:DB:532:GLY:H	2.30	0.44
34:DC:147:VAL:O	34:DC:147:VAL:HG13	2.17	0.44
34:DC:213:VAL:HB	34:DC:214:PRO:HD3	1.99	0.44
34:DC:469:THR:HG22	34:DC:470:ILE:O	2.17	0.44
34:DC:651:ILE:HG21	34:DC:654:MET:HE3	1.99	0.44
34:DD:101:PHE:CE2	34:DD:105:VAL:HA	2.52	0.44
34:DD:152:ARG:O	34:DD:157:LEU:HG	2.17	0.44
34:DD:211:ILE:HA	34:DD:215:MET:HG2	1.98	0.44
34:DD:426:ASP:OD1	34:DD:426:ASP:N	2.50	0.44
34:DD:522:ILE:HD11	34:DD:528:LYS:HA	1.99	0.44
34:DD:552:TYR:HB2	34:DD:597:ARG:NH1	2.31	0.44
34:DD:626:GLN:CG	34:DD:691:THR:HB	2.45	0.44
4:BD:107:ASP:HB3	4:BD:109:GLU:OE1	2.17	0.44
14:BN:43:ASN:HB2	14:BN:64:SER:HB2	1.99	0.44
21:BU:47:VAL:O	21:BU:48:ILE:HD13	2.17	0.44
25:BY:39:MET:HE2	25:BY:86:ILE:CD1	2.48	0.44
1:CA:10:G:OP1	19:CS:63:LYS:HD2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1103:G:H21	17:CQ:44:SER:HB2	1.81	0.44
1:CA:1456:U:C1'	29:Cc:42:THR:HB	2.47	0.44
1:CA:2188:U:OP1	1:CA:2192:A:N6	2.43	0.44
2:CB:99:U:H2'	2:CB:100:U:C6	2.52	0.44
2:CB:109:C:H2'	2:CB:110:U:H5'	1.99	0.44
4:CD:81:ARG:HA	4:CD:186:LEU:HD23	1.98	0.44
9:CI:20:ARG:HA	9:CI:23:MET:CG	2.47	0.44
19:CS:29:LYS:O	19:CS:33:VAL:HG23	2.17	0.44
23:CW:25:ASN:O	23:CW:29:VAL:HG23	2.17	0.44
33:DA:88:GLU:N	33:DA:92:ILE:HG22	2.33	0.44
33:DA:284:ASP:HB2	33:DA:427:TYR:CZ	2.52	0.44
33:DB:243:GLU:O	33:DB:243:GLU:HG2	2.17	0.44
33:DB:245:SER:N	33:DB:248:ASN:OD1	2.40	0.44
33:DB:257:GLN:OE1	33:DB:257:GLN:HA	2.17	0.44
33:DB:269:VAL:CG1	33:DB:286:LEU:HD22	2.47	0.44
33:DB:364:TYR:CG	33:DB:375:LYS:HG2	2.52	0.44
34:DC:22:ARG:CZ	34:DC:258:ASN:HB3	2.47	0.44
34:DC:639:GLY:CA	34:DC:642:LYS:HE3	2.36	0.44
34:DD:21:ILE:CD1	34:DD:356:ASN:HB3	2.46	0.44
34:DD:96:PRO:HG3	34:DD:101:PHE:CE2	2.52	0.44
34:DD:117:VAL:O	34:DD:146:PHE:N	2.49	0.44
34:DD:209:TRP:HA	34:DD:239:ALA:HA	1.98	0.44
34:DD:313:LEU:HG	34:DD:354:ALA:HA	1.98	0.44
34:DD:537:ILE:HG23	34:DD:541:ASN:O	2.17	0.44
1:BA:30:G:O6	21:BU:10:ARG:NH1	2.51	0.44
1:BA:1946:U:O2'	1:BA:1947:U:OP1	2.32	0.44
1:BA:2071:G:N2	4:BD:238:LEU:HD13	2.32	0.44
1:BA:2133:A:OP2	1:BA:2191:G:N2	2.50	0.44
1:BA:2362:U:O4	1:BA:2377:G:O6	2.35	0.44
4:BD:91:ASP:OD1	4:BD:93:THR:OG1	2.30	0.44
5:BE:20:PRO:HD2	5:BE:23:PHE:CD1	2.52	0.44
13:BM:50:ALA:HB1	13:BM:55:TYR:CB	2.47	0.44
13:BM:174:MET:HE2	13:BM:184:THR:O	2.17	0.44
23:BW:3:ILE:CD1	23:BW:49:GLU:HG3	2.47	0.44
1:CA:134:U:O2'	1:CA:135:U:OP2	2.33	0.44
1:CA:2250:A:O3'	13:CM:81:GLY:HA2	2.17	0.44
2:CB:44:C:O4'	6:CF:35:GLN:NE2	2.51	0.44
3:CC:112:LYS:O	3:CC:115:ASP:HB2	2.17	0.44
5:CE:20:PRO:HD2	5:CE:23:PHE:CD1	2.52	0.44
5:CE:143:VAL:HA	5:CE:242:GLU:CG	2.47	0.44
6:CF:17:GLU:OE2	6:CF:21:HIS:ND1	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:95:SER:HB2	6:CF:121:THR:HB	2.00	0.44
9:CI:20:ARG:NH2	9:CI:26:VAL:HB	2.33	0.44
13:CM:50:ALA:HB1	13:CM:55:TYR:CB	2.47	0.44
13:CM:171:GLY:O	13:CM:196:LYS:HD2	2.18	0.44
18:CR:17:LYS:NZ	18:CR:47:SER:HB3	2.33	0.44
18:CR:48:VAL:HB	18:CR:91:HIS:CE1	2.52	0.44
21:CU:52:THR:HA	21:CU:65:GLY:O	2.17	0.44
27:Ca:116:LEU:CD2	27:Ca:126:ILE:HD13	2.46	0.44
32:Cf:5:LYS:HB2	32:Cf:92:GLU:OE2	2.17	0.44
33:DA:387:GLU:C	33:DA:529:VAL:HG13	2.42	0.44
33:DA:486:ALA:HB3	33:DA:534:ARG:CZ	2.47	0.44
33:DB:202:LEU:HA	33:DB:202:LEU:HD23	1.76	0.44
33:DB:369:VAL:O	33:DB:369:VAL:HG12	2.17	0.44
34:DC:47:MET:SD	34:DC:80:VAL:N	2.90	0.44
34:DD:70:ILE:HD11	34:DD:97:GLY:O	2.18	0.44
34:DD:80:VAL:HG22	34:DD:89:LEU:HD12	1.99	0.44
34:DD:99:VAL:HB	34:DD:131:THR:HG21	1.99	0.44
34:DD:118:VAL:HA	34:DD:146:PHE:O	2.16	0.44
34:DD:176:ASN:HA	34:DD:179:ILE:CG1	2.46	0.44
34:DD:200:VAL:O	34:DD:212:SER:HB2	2.17	0.44
34:DD:204:SER:HB3	34:DD:209:TRP:CD1	2.52	0.44
34:DD:271:TRP:CE3	34:DD:283:MET:HE1	2.51	0.44
34:DD:408:ILE:HG23	34:DD:412:ARG:NE	2.32	0.44
34:DD:680:ARG:HA	34:DD:685:GLY:HA2	2.00	0.44
1:BA:881:C:OP1	5:BE:60:ARG:NH2	2.23	0.44
1:BA:2293:C:OP1	32:Bf:61:PRO:HB2	2.17	0.44
1:BA:2543:G:N2	1:BA:2675:G:O2'	2.51	0.44
3:BC:90:LYS:HG3	3:BC:91:PRO:HD2	1.99	0.44
5:BE:130:ARG:NH2	5:BE:230:PRO:HB2	2.33	0.44
10:BJ:6:VAL:HA	10:BJ:33:TYR:O	2.18	0.44
1:CA:337:A:OP1	21:CU:44:SER:HB2	2.18	0.44
1:CA:1816:A:C4	29:Cc:3:LYS:HB3	2.52	0.44
7:CG:114:GLU:OE2	7:CG:118:ARG:NH2	2.39	0.44
12:CL:2:ASP:HB3	12:CL:5:LYS:CG	2.46	0.44
15:CO:86:ILE:O	15:CO:107:LEU:HD23	2.18	0.44
16:CP:145:GLU:HG3	16:CP:147:LEU:CG	2.45	0.44
18:CR:52:MET:HG2	18:CR:53:PRO:O	2.18	0.44
26:CZ:72:ARG:HD3	26:CZ:89:GLN:O	2.17	0.44
33:DA:134:ALA:HB1	33:DA:143:VAL:HB	2.00	0.44
33:DA:149:ASP:OD1	33:DA:149:ASP:N	2.48	0.44
33:DA:411:ALA:HA	33:DA:537:LEU:HD22	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DA:477:LEU:HB3	33:DA:501:ASN:CB	2.46	0.44
33:DA:486:ALA:CA	33:DA:508:PRO:HG3	2.46	0.44
33:DA:488:PHE:HD2	33:DA:494:VAL:HG23	1.83	0.44
34:DC:154:ILE:HG21	34:DC:230:CYS:HB2	1.99	0.44
34:DC:470:ILE:HD11	34:DC:493:GLU:C	2.41	0.44
1:BA:10:G:OP1	19:BS:63:LYS:HD2	2.18	0.44
1:BA:2756:G:O2'	7:BG:68:THR:HG23	2.18	0.44
12:BL:2:ASP:HB3	12:BL:5:LYS:CG	2.46	0.44
14:BN:139:PRO:HG2	14:BN:142:ARG:CG	2.42	0.44
24:BX:105:SER:O	24:BX:108:ASP:HB2	2.18	0.44
26:BZ:21:VAL:HG21	26:BZ:29:ARG:CG	2.43	0.44
28:Bb:77:THR:O	28:Bb:81:GLN:HG2	2.17	0.44
2:CB:3:G:H2'	2:CB:4:U:C6	2.52	0.44
6:CF:8:LYS:CE	6:CF:10:ILE:HD11	2.47	0.44
14:CN:43:ASN:HB2	14:CN:64:SER:HB2	2.00	0.44
14:CN:45:GLN:HG3	14:CN:63:VAL:HG12	1.99	0.44
16:CP:43:GLY:O	16:CP:47:GLU:HG2	2.17	0.44
28:Cb:56:THR:HG23	28:Cb:72:THR:HG23	2.00	0.44
33:DA:390:THR:HG21	33:DA:528:MET:HB3	1.99	0.44
34:DC:71:THR:HG21	34:DC:95:THR:H	1.82	0.44
34:DC:149:LYS:HE3	34:DC:206:LEU:CD1	2.48	0.44
34:DC:177:LYS:O	34:DC:180:LYS:HB3	2.18	0.44
34:DC:548:LYS:C	34:DC:550:ILE:HD12	2.43	0.44
34:DC:623:GLU:OE2	34:DC:648:ARG:NH1	2.46	0.44
34:DD:387:VAL:HG23	34:DD:387:VAL:O	2.17	0.44
34:DD:487:ARG:HE	34:DD:589:LYS:HD2	1.82	0.44
34:DD:700:PRO:HG2	34:DD:703:ILE:CD1	2.48	0.44
1:BA:134:U:O2'	1:BA:135:U:OP2	2.33	0.44
5:BE:143:VAL:HA	5:BE:242:GLU:CG	2.47	0.44
6:BF:41:PHE:CE1	6:BF:56:PRO:HG3	2.53	0.44
16:BP:43:GLY:O	16:BP:47:GLU:HG2	2.16	0.44
18:BR:52:MET:HG2	18:BR:53:PRO:O	2.18	0.44
25:BY:12:LEU:CD1	25:BY:13:ILE:HG13	2.48	0.44
28:Bb:56:THR:HG23	28:Bb:72:THR:HG23	1.99	0.44
1:CA:2407:C:O3'	12:CL:51:LYS:HE3	2.17	0.44
4:CD:147:THR:O	4:CD:160:PRO:HB3	2.17	0.44
5:CE:209:ALA:HA	5:CE:212:LEU:HD23	1.98	0.44
19:CS:46:ARG:NH2	19:CS:96:GLU:OE1	2.41	0.44
20:CT:55:THR:CG2	20:CT:61:LYS:HE2	2.48	0.44
33:DA:194:LEU:HD23	33:DA:194:LEU:HA	1.87	0.44
33:DA:246:TYR:CD1	33:DB:538:HIS:HB3	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DA:417:VAL:HA	33:DA:484:SER:CB	2.48	0.44
33:DB:89:LYS:CB	33:DB:92:ILE:HD12	2.34	0.44
33:DB:143:VAL:CG2	33:DB:172:ALA:HA	2.48	0.44
33:DB:406:LEU:H	33:DB:406:LEU:HG	1.63	0.44
34:DD:22:ARG:HE	34:DD:253:ILE:HA	1.83	0.44
34:DD:88:TYR:CD1	34:DD:253:ILE:HG12	2.53	0.44
34:DD:440:LEU:C	34:DD:444:VAL:HG23	2.42	0.44
34:DD:522:ILE:CD1	34:DD:528:LYS:HG2	2.45	0.44
1:BA:2188:U:OP1	1:BA:2192:A:N6	2.43	0.44
1:BA:2780:A:C8	4:BD:316:ARG:HB3	2.52	0.44
3:BC:112:LYS:O	3:BC:115:ASP:HB2	2.17	0.44
6:BF:8:LYS:HE3	6:BF:10:ILE:CD1	2.48	0.44
6:BF:9:VAL:HG22	6:BF:122:VAL:CG2	2.44	0.44
6:BF:131:ILE:HG22	6:BF:139:ARG:O	2.18	0.44
7:BG:87:LYS:HB3	7:BG:87:LYS:HE2	1.74	0.44
13:BM:17:ASP:HA	13:BM:22:ASN:HB2	1.98	0.44
15:BO:80:LEU:HD23	15:BO:102:ALA:CB	2.47	0.44
15:BO:81:ASP:OD1	15:BO:82:HIS:ND1	2.50	0.44
20:BT:76:ALA:HB3	20:BT:82:MET:HG3	2.00	0.44
23:BW:14:ILE:H	23:BW:14:ILE:HD12	1.82	0.44
27:Ba:49:PRO:HG2	27:Ba:51:PHE:CE1	2.52	0.44
1:CA:135:U:O2'	1:CA:136:C:OP1	2.24	0.44
1:CA:1471:G:O2'	1:CA:1638:A:N6	2.51	0.44
1:CA:1790:C:N3	1:CA:2726:C:O2'	2.42	0.44
4:CD:37:PRO:HB2	4:CD:178:TYR:CG	2.52	0.44
19:CS:33:VAL:O	19:CS:37:ILE:HG12	2.18	0.44
33:DA:363:GLU:OE1	33:DA:363:GLU:N	2.51	0.44
33:DA:460:TYR:CE2	33:DA:469:PHE:HB2	2.52	0.44
33:DB:209:LYS:HD2	33:DB:220:ALA:O	2.17	0.44
33:DB:440:ARG:HH22	33:DB:486:ALA:C	2.26	0.44
34:DC:407:LEU:HD11	34:DC:457:ILE:HD13	1.99	0.44
34:DC:572:PRO:HG2	34:DC:615:LEU:HD21	2.00	0.44
34:DC:678:GLU:HA	34:DC:681:SER:OG	2.18	0.44
34:DC:713:GLU:HA	34:DC:713:GLU:OE2	2.18	0.44
1:BA:495:G:H5''	19:BS:17:LYS:HG3	2.00	0.44
1:BA:2138:G:N2	1:BA:2182:C:OP1	2.50	0.44
3:BC:33:VAL:HG22	3:BC:39:LEU:HD22	2.00	0.44
4:BD:83:ALA:HB2	4:BD:146:TYR:CD2	2.52	0.44
6:BF:8:LYS:HG2	6:BF:123:VAL:HG11	2.00	0.44
6:BF:45:THR:N	6:BF:53:LYS:HD3	2.32	0.44
9:BI:20:ARG:HA	9:BI:23:MET:HG2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:BU:20:PRO:HB2	21:BU:22:HIS:ND1	2.32	0.44
21:BU:52:THR:HA	21:BU:65:GLY:O	2.17	0.44
24:BX:61:THR:O	24:BX:65:VAL:HG23	2.18	0.44
1:CA:2362:U:C4	1:CA:2377:G:O6	2.71	0.44
5:CE:227:LEU:O	5:CE:236:ARG:NH1	2.49	0.44
15:CO:81:ASP:OD1	15:CO:82:HIS:ND1	2.50	0.44
21:CU:29:GLY:HA2	21:CU:46:ALA:HA	2.00	0.44
33:DA:68:PRO:CD	33:DB:66:LEU:HB2	2.48	0.44
33:DA:292:ALA:O	33:DA:429:MET:HB2	2.18	0.44
33:DA:410:LYS:O	33:DA:537:LEU:HD22	2.16	0.44
33:DB:137:ASN:CG	33:DB:140:SER:HB2	2.43	0.44
33:DB:142:THR:HG22	33:DB:168:ARG:CG	2.46	0.44
33:DB:433:MET:CG	33:DB:434:GLY:H	2.19	0.44
33:DB:479:GLU:HA	33:DB:504:TYR:HE2	1.81	0.44
34:DD:21:ILE:HG23	34:DD:259:PRO:CG	2.43	0.44
34:DD:148:ASN:HA	34:DD:203:GLY:O	2.17	0.44
34:DD:300:SER:HB2	34:DD:308:VAL:O	2.18	0.44
34:DD:316:GLY:O	34:DD:354:ALA:N	2.48	0.44
34:DD:601:GLN:O	34:DD:604:PRO:HG2	2.18	0.44
1:BA:322:U:C2	5:BE:207:LYS:HD3	2.53	0.44
1:BA:1000:C:H5''	18:BR:19:VAL:HG11	1.99	0.44
1:BA:1471:G:O2'	1:BA:1638:A:N6	2.51	0.44
1:BA:1754:G:OP2	28:Bb:8:LYS:HD2	2.17	0.44
2:BB:84:U:H2'	2:BB:85:G:C8	2.53	0.44
4:BD:131:LYS:O	4:BD:135:GLU:HG2	2.18	0.44
4:BD:176:PHE:CE2	4:BD:180:LYS:HD2	2.53	0.44
5:BE:118:ILE:O	5:BE:121:THR:OG1	2.24	0.44
21:BU:86:LYS:O	21:BU:89:GLY:N	2.45	0.44
21:BU:92:VAL:HG13	21:BU:93:PRO:HD2	1.99	0.44
23:BW:30:ARG:NE	23:BW:34:LEU:HD21	2.33	0.44
1:CA:2780:A:C8	4:CD:316:ARG:HB3	2.53	0.44
4:CD:67:GLU:OE1	4:CD:328:LEU:HD12	2.18	0.44
10:CJ:6:VAL:HA	10:CJ:33:TYR:O	2.18	0.44
28:Cb:77:THR:O	28:Cb:81:GLN:HG2	2.17	0.44
32:Cf:11:CYS:HB3	32:Cf:14:CYS:SG	2.58	0.44
33:DA:116:LEU:HG	33:DA:120:ILE:CD1	2.42	0.44
33:DA:380:ILE:O	33:DA:380:ILE:HG22	2.18	0.44
33:DA:382:ILE:HD11	33:DA:406:LEU:CB	2.47	0.44
33:DB:261:GLU:OE1	33:DB:411:ALA:HB2	2.17	0.44
33:DB:269:VAL:O	33:DB:280:LEU:HD12	2.18	0.44
33:DB:331:PRO:HG3	33:DB:356:LEU:CD1	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DC:260:ILE:HG22	34:DC:264:LYS:HE2	2.00	0.44
34:DC:636:LEU:CD1	34:DC:686:ARG:HB2	2.48	0.44
34:DD:21:ILE:HD11	34:DD:356:ASN:CB	2.46	0.44
34:DD:34:LYS:O	34:DD:37:LEU:HD23	2.18	0.44
34:DD:298:ASP:OD1	34:DD:298:ASP:N	2.51	0.44
34:DD:363:LEU:HD21	34:DD:366:ALA:CB	2.48	0.44
34:DD:407:LEU:HG	34:DD:411:LEU:HD23	2.00	0.44
34:DD:480:LYS:NZ	34:DD:730:MET:HA	2.32	0.44
1:BA:1231:G:H5'	10:BJ:79:THR:HG23	2.00	0.43
2:BB:1:G:H2'	2:BB:2:A:C8	2.53	0.43
5:BE:22:VAL:HG11	5:BE:248:LEU:HD23	2.00	0.43
6:BF:94:VAL:HG22	6:BF:122:VAL:CG1	2.48	0.43
13:BM:171:GLY:O	13:BM:196:LYS:HD2	2.17	0.43
17:BQ:10:LYS:HG2	17:BQ:23:THR:HG23	2.00	0.43
19:BS:33:VAL:O	19:BS:37:ILE:HG12	2.18	0.43
23:BW:43:ASN:HB3	23:BW:46:ARG:CB	2.47	0.43
24:BX:131:THR:O	24:BX:136:GLY:N	2.47	0.43
1:CA:24:G:O2'	1:CA:1302:A:N3	2.40	0.43
1:CA:213:G:OP1	32:Cf:51:LYS:HE2	2.18	0.43
1:CA:464:U:OP1	29:Cc:11:ARG:NH2	2.51	0.43
1:CA:1000:C:H5''	18:CR:19:VAL:HG11	1.99	0.43
1:CA:1121:A:N3	1:CA:2497:G:O2'	2.44	0.43
1:CA:2071:G:N2	4:CD:238:LEU:HD13	2.32	0.43
1:CA:2293:C:OP1	32:Cf:61:PRO:HB2	2.18	0.43
5:CE:71:VAL:HG23	5:CE:73:ARG:HE	1.82	0.43
5:CE:130:ARG:NH2	5:CE:230:PRO:HB2	2.33	0.43
6:CF:41:PHE:CE1	6:CF:56:PRO:HG3	2.53	0.43
13:CM:100:ARG:HH21	13:CM:171:GLY:HA3	1.81	0.43
13:CM:174:MET:HE2	13:CM:184:THR:O	2.18	0.43
33:DA:88:GLU:C	33:DA:92:ILE:HB	2.43	0.43
33:DA:89:LYS:HB2	33:DA:92:ILE:HG13	2.00	0.43
33:DA:163:ILE:HG23	33:DA:168:ARG:NH1	2.33	0.43
33:DA:295:ASP:OD1	33:DA:459:ILE:HG12	2.18	0.43
33:DA:404:PHE:CE2	33:DA:420:ALA:HB1	2.52	0.43
33:DA:493:SER:HA	33:DA:496:HIS:HD2	1.82	0.43
33:DB:63:VAL:C	33:DB:65:THR:H	2.25	0.43
33:DB:162:ILE:HG13	33:DB:162:ILE:O	2.17	0.43
33:DB:512:ILE:HG13	33:DB:513:ARG:N	2.33	0.43
34:DC:26:ILE:CD1	34:DC:37:LEU:HD23	2.48	0.43
34:DC:29:HIS:O	34:DC:32:HIS:HB2	2.17	0.43
34:DC:140:HIS:CE1	34:DC:269:VAL:HG21	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DC:466:TYR:O	34:DC:467:ARG:NH1	2.50	0.43
34:DD:68:ARG:CD	34:DD:72:ILE:HD11	2.48	0.43
34:DD:178:LEU:HB3	34:DD:182:MET:CE	2.48	0.43
34:DD:292:LEU:HD23	34:DD:324:VAL:HG12	2.00	0.43
34:DD:311:GLY:O	34:DD:358:ALA:HB3	2.18	0.43
34:DD:363:LEU:HD23	34:DD:364:LYS:N	2.32	0.43
34:DD:488:PHE:HB3	34:DD:490:ILE:HD11	2.00	0.43
1:BA:572:G:N2	1:BA:575:A:OP2	2.41	0.43
1:BA:1230:G:N3	10:BJ:83:MET:HE2	2.33	0.43
1:BA:1482:U:P	16:BP:42:ARG:HH22	2.41	0.43
1:BA:2362:U:C4	1:BA:2377:G:O6	2.71	0.43
10:BJ:7:ILE:HD12	10:BJ:32:VAL:CG1	2.48	0.43
22:BV:46:PRO:HB2	22:BV:54:LYS:HD2	2.00	0.43
1:CA:2361:A:H61	1:CA:2378:A:N6	2.10	0.43
1:CA:2638:G:O2'	1:CA:2790:A:N1	2.39	0.43
4:CD:279:THR:HG21	4:CD:289:LEU:HB2	1.99	0.43
5:CE:22:VAL:HG11	5:CE:248:LEU:HD23	2.00	0.43
21:CU:92:VAL:HG13	21:CU:93:PRO:HD2	1.99	0.43
23:CW:43:ASN:HB3	23:CW:46:ARG:CB	2.48	0.43
28:Cb:50:THR:HG21	28:Cb:63:LYS:CG	2.49	0.43
33:DA:39:LEU:HB2	33:DA:46:VAL:HG21	1.98	0.43
33:DA:286:LEU:HD23	33:DA:312:PHE:HA	2.00	0.43
33:DA:375:LYS:HB3	33:DB:221:CYS:SG	2.58	0.43
33:DA:503:ARG:HG2	33:DA:526:ILE:HA	2.01	0.43
33:DB:136:LYS:O	33:DB:138:TYR:N	2.51	0.43
33:DB:211:ARG:HG3	33:DB:245:SER:HB2	2.00	0.43
33:DB:407:LYS:HA	33:DB:407:LYS:HD3	1.63	0.43
34:DC:8:VAL:O	34:DC:12:THR:HG23	2.18	0.43
34:DC:159:VAL:O	34:DC:227:TYR:HE2	2.01	0.43
34:DD:120:ASP:OD2	34:DD:152:ARG:HD3	2.18	0.43
34:DD:149:LYS:CA	34:DD:204:SER:HA	2.47	0.43
34:DD:411:LEU:CD1	34:DD:425:LEU:HD22	2.48	0.43
34:DD:495:LEU:HD21	34:DD:499:ILE:CG2	2.48	0.43
34:DD:527:GLU:OE2	34:DD:529:GLU:HB3	2.18	0.43
34:DD:544:ILE:HB	34:DD:584:VAL:HG13	2.00	0.43
34:DD:627:LYS:HA	34:DD:666:ARG:CA	2.30	0.43
1:BA:140:A:N3	13:BM:112:ASN:HB3	2.33	0.43
1:BA:337:A:OP1	21:BU:44:SER:HB2	2.18	0.43
1:BA:914:C:O2'	1:BA:2257:C:OP1	2.30	0.43
1:BA:1844:U:OP1	13:BM:76:VAL:HG22	2.19	0.43
1:BA:1862:C:OP1	3:BC:192:ALA:HB3	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BB:3:G:H2'	2:BB:4:U:C6	2.52	0.43
4:BD:90:GLU:N	4:BD:139:SER:HB3	2.33	0.43
4:BD:153:THR:OG1	4:BD:291:ARG:NE	2.45	0.43
6:BF:81:LYS:O	6:BF:162:VAL:HG13	2.18	0.43
1:CA:30:G:O6	21:CU:10:ARG:NH1	2.51	0.43
1:CA:1746:G:OP1	34:DC:549:GLY:HA2	2.18	0.43
1:CA:1754:G:OP2	28:Cb:8:LYS:HD2	2.18	0.43
1:CA:2434:A:OP1	32:Cf:64:ARG:HD3	2.19	0.43
2:CB:1:G:H2'	2:CB:2:A:C8	2.53	0.43
3:CC:33:VAL:HG22	3:CC:39:LEU:HD22	2.00	0.43
4:CD:131:LYS:O	4:CD:135:GLU:HG2	2.18	0.43
5:CE:149:LEU:HB2	5:CE:154:GLN:OE1	2.19	0.43
8:CH:14:THR:O	8:CH:18:LEU:HD23	2.18	0.43
13:CM:68:VAL:HG21	13:CM:102:ALA:HB2	2.00	0.43
15:CO:80:LEU:HD23	15:CO:102:ALA:CB	2.47	0.43
22:CV:57:ILE:HG22	22:CV:61:LYS:HE3	2.00	0.43
33:DA:68:PRO:HG3	33:DB:66:LEU:N	2.32	0.43
33:DA:268:ALA:H	33:DA:309:ASN:HD21	1.66	0.43
33:DA:382:ILE:HD11	33:DA:406:LEU:C	2.43	0.43
33:DA:471:GLU:HA	33:DA:474:GLN:HB2	1.99	0.43
33:DB:76:CYS:O	33:DB:77:LEU:HG	2.19	0.43
34:DC:31:ASP:HA	34:DC:70:ILE:CG2	2.47	0.43
34:DC:211:ILE:HA	34:DC:215:MET:HE3	2.01	0.43
34:DC:538:PHE:O	34:DC:540:SER:N	2.52	0.43
34:DC:655:THR:OG1	34:DC:662:ILE:O	2.33	0.43
34:DD:37:LEU:HB3	34:DD:205:ALA:HB2	1.97	0.43
34:DD:215:MET:HE1	34:DD:246:GLU:CD	2.44	0.43
34:DD:387:VAL:HG11	34:DD:504:LYS:O	2.17	0.43
34:DD:394:VAL:O	34:DD:433:LEU:HA	2.18	0.43
1:BA:18:G:H5''	19:BS:4:ILE:HG23	2.01	0.43
3:BC:51:ALA:C	3:BC:183:ARG:HH21	2.25	0.43
4:BD:38:LYS:HA	4:BD:178:TYR:CZ	2.53	0.43
9:BI:6:GLY:O	9:BI:10:ARG:HB2	2.18	0.43
14:BN:148:ILE:CD1	14:BN:159:PRO:HD3	2.48	0.43
20:BT:55:THR:CG2	20:BT:61:LYS:HE2	2.48	0.43
20:BT:79:ILE:O	23:BW:30:ARG:HD3	2.18	0.43
23:BW:27:GLU:O	23:BW:31:GLU:HG2	2.18	0.43
26:BZ:21:VAL:CG2	26:BZ:29:ARG:HG2	2.45	0.43
1:CA:495:G:H5''	19:CS:17:LYS:HG3	2.00	0.43
1:CA:1753:C:O2'	28:Cb:8:LYS:HG2	2.18	0.43
2:CB:24:G:H2'	2:CB:25:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:38:VAL:O	6:CF:59:CYS:HA	2.18	0.43
7:CG:88:MET:HG2	7:CG:172:ILE:CA	2.41	0.43
11:CK:103:ILE:HD12	11:CK:123:LYS:HG3	2.00	0.43
18:CR:19:VAL:O	18:CR:22:ARG:NH1	2.51	0.43
21:CU:40:TYR:CE2	21:CU:106:LEU:HD12	2.53	0.43
24:CX:105:SER:O	24:CX:108:ASP:HB2	2.18	0.43
27:Ca:33:GLU:OE2	27:Ca:36:ARG:NH2	2.50	0.43
33:DA:207:GLY:HA3	33:DB:198:GLU:OE2	2.18	0.43
33:DA:401:LEU:HD21	33:DA:422:GLU:HG2	2.00	0.43
33:DB:65:THR:O	33:DB:66:LEU:HG	2.19	0.43
33:DB:70:ILE:HG23	33:DB:87:ALA:HA	1.99	0.43
33:DB:111:LYS:HG3	33:DB:112:GLU:HG2	2.00	0.43
33:DB:246:TYR:O	33:DB:250:VAL:HG23	2.18	0.43
33:DB:459:ILE:HB	33:DB:472:TYR:OH	2.18	0.43
34:DC:186:LYS:HE2	34:DC:191:TRP:CZ3	2.49	0.43
34:DC:387:VAL:O	34:DC:388:SER:OG	2.34	0.43
34:DC:512:LEU:HD22	34:DC:516:GLU:CD	2.42	0.43
34:DC:647:ARG:HA	34:DC:671:GLU:CD	2.43	0.43
34:DD:51:GLU:HA	34:DD:51:GLU:OE2	2.18	0.43
34:DD:81:HIS:CD2	34:DD:249:LEU:HB3	2.54	0.43
34:DD:237:SER:O	34:DD:240:GLU:HB2	2.18	0.43
34:DD:657:GLU:HA	34:DD:657:GLU:OE2	2.18	0.43
1:BA:12:U:O2'	1:BA:604:U:OP1	2.35	0.43
1:BA:635:G:OP1	5:BE:91:ARG:NH1	2.49	0.43
1:BA:2692:C:OP1	4:BD:206:ILE:N	2.44	0.43
2:BB:44:C:O4'	6:BF:35:GLN:NE2	2.51	0.43
11:BK:70:LEU:HD11	11:BK:100:GLU:CD	2.43	0.43
11:BK:103:ILE:HD12	11:BK:123:LYS:HG3	2.00	0.43
18:BR:17:LYS:NZ	18:BR:47:SER:HB3	2.33	0.43
26:BZ:72:ARG:HD3	26:BZ:89:GLN:O	2.18	0.43
27:Ba:129:ALA:HB3	27:Ba:132:ILE:HG12	1.99	0.43
6:CF:8:LYS:HG2	6:CF:123:VAL:HG11	2.00	0.43
6:CF:45:THR:N	6:CF:53:LYS:HD3	2.32	0.43
20:CT:73:HIS:HB3	20:CT:82:MET:HE1	2.01	0.43
33:DA:137:ASN:ND2	33:DA:141:VAL:HB	2.34	0.43
33:DA:368:TYR:CE2	33:DA:370:ILE:HA	2.54	0.43
33:DA:368:TYR:CZ	33:DA:370:ILE:HA	2.53	0.43
34:DC:80:VAL:CG1	34:DC:87:ASP:HB3	2.49	0.43
34:DC:623:GLU:CB	34:DC:699:VAL:HG22	2.48	0.43
34:DC:644:LEU:HB3	34:DC:649:GLY:HA3	2.00	0.43
34:DD:241:LYS:C	34:DD:243:PRO:HD3	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:213:G:OP1	32:Bf:51:LYS:HE2	2.18	0.43
1:BA:2407:C:O3'	12:BL:51:LYS:HE3	2.17	0.43
2:BB:20:G:O2'	2:BB:21:U:H5'	2.19	0.43
6:BF:95:SER:HB2	6:BF:121:THR:HB	2.00	0.43
12:BL:92:TYR:CD1	12:BL:112:LYS:HD3	2.54	0.43
18:BR:29:ARG:HH22	18:BR:43:ASP:HB3	1.84	0.43
20:BT:45:PHE:HD2	20:BT:75:ILE:HD11	1.84	0.43
20:BT:73:HIS:HB3	20:BT:82:MET:HE1	2.00	0.43
28:Bb:50:THR:HG21	28:Bb:63:LYS:CG	2.49	0.43
1:CA:392:U:O2'	13:CM:180:GLY:HA2	2.19	0.43
1:CA:882:C:O2'	29:Cc:50:TRP:O	2.30	0.43
1:CA:1239:C:O2'	17:CQ:47:GLY:HA2	2.18	0.43
1:CA:1362:A:O2'	1:CA:1364:A:N7	2.52	0.43
1:CA:2756:G:O2'	7:CG:68:THR:HG23	2.18	0.43
2:CB:51:A:OP1	14:CN:78:ASN:HB2	2.19	0.43
2:CB:84:U:H2'	2:CB:85:G:C8	2.53	0.43
4:CD:38:LYS:HA	4:CD:178:TYR:CZ	2.53	0.43
6:CF:42:ALA:CB	6:CF:51:ILE:HD12	2.49	0.43
6:CF:131:ILE:HG22	6:CF:139:ARG:O	2.18	0.43
11:CK:24:THR:HG22	11:CK:64:MET:SD	2.58	0.43
14:CN:69:LYS:HE3	14:CN:70:TYR:CE2	2.53	0.43
33:DA:370:ILE:HG23	33:DA:370:ILE:O	2.19	0.43
33:DB:395:PRO:C	33:DB:399:ARG:HG3	2.43	0.43
33:DB:489:PRO:O	33:DB:512:ILE:HG12	2.18	0.43
34:DC:413:GLN:HE22	34:DC:416:LYS:HE3	1.83	0.43
34:DC:615:LEU:HD12	34:DC:724:ALA:HA	2.01	0.43
34:DD:19:GLN:OE1	34:DD:20:ARG:HG3	2.18	0.43
34:DD:61:SER:N	34:DD:75:SER:OG	2.52	0.43
34:DD:263:GLN:HG3	34:DD:283:MET:O	2.17	0.43
34:DD:264:LYS:HB2	34:DD:268:LYS:NZ	2.33	0.43
34:DD:612:ALA:CB	34:DD:728:LEU:HD21	2.49	0.43
1:BA:1753:C:O2'	28:Bb:8:LYS:HG2	2.18	0.43
2:BB:70:G:H4'	14:BN:4:GLY:HA2	2.01	0.43
13:BM:68:VAL:HG21	13:BM:102:ALA:HB2	1.99	0.43
14:BN:33:ASP:HB3	14:BN:48:LEU:HD11	2.01	0.43
14:BN:46:ILE:HD12	14:BN:85:THR:HG22	2.00	0.43
15:BO:86:ILE:O	15:BO:107:LEU:HD23	2.18	0.43
18:BR:19:VAL:O	18:BR:22:ARG:NH1	2.52	0.43
21:BU:29:GLY:HA2	21:BU:46:ALA:HA	2.00	0.43
1:CA:237:A:OP1	8:CH:39:LYS:NZ	2.34	0.43
1:CA:390:U:OP2	32:Cf:38:ARG:NE	2.35	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1844:U:OP1	13:CM:76:VAL:HG22	2.19	0.43
10:CJ:7:ILE:HD12	10:CJ:32:VAL:CG1	2.48	0.43
14:CN:11:PHE:O	14:CN:15:ARG:HG3	2.19	0.43
17:CQ:25:LYS:HE2	17:CQ:61:GLU:OE1	2.17	0.43
20:CT:76:ALA:HB3	20:CT:82:MET:HG3	2.00	0.43
26:CZ:21:VAL:CG2	26:CZ:29:ARG:HG2	2.44	0.43
33:DA:491:ASP:HB3	33:DA:517:VAL:HA	2.01	0.43
33:DB:29:ILE:O	33:DB:46:VAL:HG13	2.19	0.43
33:DB:231:PRO:HG2	33:DB:360:PHE:HA	1.99	0.43
33:DB:276:ASN:ND2	33:DB:433:MET:HE1	2.34	0.43
34:DC:375:LEU:HD23	34:DC:378:MET:HE1	2.01	0.43
34:DC:472:LYS:O	34:DC:494:PRO:HD3	2.17	0.43
34:DD:15:MET:HE3	34:DD:352:ILE:HG12	2.00	0.43
34:DD:266:ARG:HG3	34:DD:267:VAL:N	2.31	0.43
34:DD:341:PHE:CE1	34:DD:346:ARG:HD3	2.54	0.43
1:BA:392:U:O2'	13:BM:180:GLY:HA2	2.19	0.43
1:BA:922:C:N3	1:BA:1029:A:N6	2.67	0.43
1:BA:2317:G:OP1	1:BA:2317:G:N2	2.36	0.43
2:BB:51:A:OP1	14:BN:78:ASN:HB2	2.19	0.43
4:BD:86:ARG:HG3	4:BD:100:GLU:HG2	2.00	0.43
10:BJ:54:ARG:O	10:BJ:58:GLU:HG2	2.19	0.43
11:BK:62:PRO:HB2	33:DB:3:LYS:CE	2.48	0.43
14:BN:2:ALA:HA	14:BN:7:TYR:CD2	2.54	0.43
21:BU:40:TYR:CE2	21:BU:106:LEU:HD12	2.53	0.43
2:CB:8:G:OP1	14:CN:18:ARG:NH1	2.52	0.43
2:CB:123:A:H2'	2:CB:124:G:H8	1.82	0.43
7:CG:63:LYS:O	7:CG:66:VAL:HG22	2.18	0.43
9:CI:20:ARG:HA	9:CI:23:MET:HG2	1.99	0.43
17:CQ:10:LYS:HG2	17:CQ:23:THR:HG23	2.00	0.43
19:CS:41:LYS:HB2	19:CS:44:GLU:HG2	2.01	0.43
20:CT:45:PHE:HD2	20:CT:75:ILE:HD11	1.84	0.43
23:CW:3:ILE:H	23:CW:3:ILE:HD12	1.84	0.43
26:CZ:39:VAL:HG21	26:CZ:46:SER:HA	2.00	0.43
26:CZ:45:GLU:HB2	26:CZ:48:GLN:HG3	2.01	0.43
27:Ca:129:ALA:HB3	27:Ca:132:ILE:HG12	1.99	0.43
33:DB:328:ILE:HG13	33:DB:348:LEU:HD12	2.00	0.43
33:DB:368:TYR:CZ	33:DB:370:ILE:HA	2.53	0.43
33:DB:398:LYS:O	33:DB:401:LEU:HB2	2.18	0.43
33:DB:470:GLU:HG2	33:DB:471:GLU:H	1.84	0.43
33:DB:498:ALA:CA	33:DB:526:ILE:HD11	2.49	0.43
34:DC:168:LEU:HD13	34:DC:202:PHE:HD1	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:34:LYS:NZ	34:DD:70:ILE:HG13	2.34	0.43
34:DD:390:PRO:HA	34:DD:437:MET:HB3	1.99	0.43
34:DD:493:GLU:HG3	34:DD:582:LYS:HD3	2.01	0.43
34:DD:529:GLU:HA	34:DD:532:LYS:HZ2	1.84	0.43
34:DD:529:GLU:HA	34:DD:532:LYS:NZ	2.33	0.43
34:DD:626:GLN:NE2	34:DD:672:MET:HG2	2.34	0.43
1:BA:618:U:O5'	1:BA:1033:C:N4	2.52	0.43
5:BE:149:LEU:HB2	5:BE:154:GLN:OE1	2.18	0.43
6:BF:38:VAL:O	6:BF:59:CYS:HA	2.18	0.43
6:BF:82:THR:HB	6:BF:165:MET:CE	2.38	0.43
11:BK:85:GLY:HA3	22:BV:16:GLY:HA2	2.00	0.43
11:BK:91:GLU:OE1	22:BV:24:LYS:NZ	2.43	0.43
15:BO:109:LEU:HA	15:BO:112:ILE:HG22	2.01	0.43
24:BX:148:LEU:HA	24:BX:151:LYS:HG2	2.01	0.43
1:CA:241:A:N1	1:CA:255:C:O2'	2.45	0.43
1:CA:1278:A:O3'	12:CL:15:GLY:HA2	2.19	0.43
1:CA:1396:C:OP2	1:CA:1663:G:N1	2.44	0.43
1:CA:1482:U:P	16:CP:42:ARG:HH22	2.41	0.43
4:CD:86:ARG:HG3	4:CD:100:GLU:HG2	2.00	0.43
4:CD:176:PHE:CE2	4:CD:180:LYS:HD2	2.53	0.43
4:CD:272:GLY:HA3	4:CD:294:TYR:CZ	2.54	0.43
9:CI:9:TYR:HB3	9:CI:95:ILE:HD12	2.00	0.43
11:CK:62:PRO:HG3	33:DA:3:LYS:HG2	2.01	0.43
16:CP:1:MET:HE2	16:CP:29:SER:CB	2.41	0.43
18:CR:18:THR:OG1	18:CR:21:GLU:HG2	2.18	0.43
25:CY:69:VAL:HA	25:CY:80:THR:CG2	2.38	0.43
33:DA:18:PHE:CD1	33:DA:150:TYR:HB3	2.54	0.43
33:DA:269:VAL:HG22	33:DA:270:ALA:N	2.28	0.43
33:DA:504:TYR:CD2	33:DA:527:ALA:HB3	2.53	0.43
33:DB:397:GLY:O	33:DB:400:THR:OG1	2.31	0.43
33:DB:456:LEU:HD13	33:DB:473:CYS:CA	2.47	0.43
33:DB:467:VAL:HG23	33:DB:467:VAL:O	2.19	0.43
34:DC:298:ASP:OD1	34:DC:299:ILE:N	2.52	0.43
34:DC:471:LYS:NZ	34:DC:620:SER:HB3	2.34	0.43
34:DD:40:ASN:CA	34:DD:44:GLY:HA3	2.35	0.43
34:DD:149:LYS:HA	34:DD:204:SER:HA	1.99	0.43
34:DD:252:VAL:HG13	34:DD:256:LEU:HD22	2.00	0.43
34:DD:283:MET:HG2	34:DD:315:SER:CB	2.49	0.43
34:DD:466:TYR:HB3	34:DD:622:LEU:O	2.18	0.43
1:BA:460:A:H5''	30:Bd:39:ARG:HH21	1.84	0.43
1:BA:1160:A:N6	34:DC:637:MET:HB2	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:2419:C:O2'	12:BL:59:GLU:OE1	2.31	0.43
2:BB:8:G:OP1	14:BN:18:ARG:NH1	2.52	0.43
2:BB:24:G:H2'	2:BB:25:G:C8	2.54	0.43
3:BC:38:SER:OG	3:BC:84:GLY:HA3	2.19	0.43
7:BG:149:ALA:HB1	7:BG:172:ILE:HG12	2.00	0.43
14:BN:142:ARG:HA	14:BN:146:GLU:H	1.84	0.43
21:BU:94:ARG:NH1	21:BU:95:PRO:O	2.52	0.43
25:BY:49:ASP:HA	25:BY:52:LYS:NZ	2.34	0.43
1:CA:2324:C:H4'	6:CF:10:ILE:HD12	1.99	0.43
1:CA:2342:C:OP1	18:CR:17:LYS:NZ	2.45	0.43
2:CB:70:G:H4'	14:CN:4:GLY:HA2	2.01	0.43
3:CC:90:LYS:CG	3:CC:91:PRO:HD2	2.49	0.43
6:CF:94:VAL:HG22	6:CF:122:VAL:CG1	2.48	0.43
13:CM:13:TRP:CE2	13:CM:46:ARG:HG2	2.54	0.43
14:CN:36:VAL:HG22	14:CN:104:ASP:OD2	2.19	0.43
21:CU:112:ARG:HE	21:CU:112:ARG:HB2	1.63	0.43
22:CV:46:PRO:HB2	22:CV:54:LYS:HD2	2.00	0.43
25:CY:22:ILE:HG13	25:CY:22:ILE:O	2.19	0.43
33:DA:68:PRO:HD2	33:DB:55:TYR:CZ	2.53	0.43
33:DA:255:ALA:HB1	33:DA:307:CYS:CB	2.49	0.43
33:DA:299:ILE:HG13	33:DA:300:SER:N	2.28	0.43
33:DB:325:ILE:HB	33:DB:348:LEU:CD1	2.44	0.43
33:DB:462:ARG:NH2	33:DB:463:GLU:HG3	2.34	0.43
33:DB:480:CYS:O	33:DB:502:ILE:HG23	2.19	0.43
34:DC:3:ARG:HA	34:DC:6:LYS:NZ	2.34	0.43
34:DC:74:SER:HA	34:DC:94:ASP:HB3	2.00	0.43
34:DD:119:VAL:O	34:DD:147:VAL:HA	2.19	0.43
34:DD:149:LYS:HA	34:DD:204:SER:HB2	2.01	0.43
34:DD:178:LEU:CD2	34:DD:182:MET:HE2	2.49	0.43
34:DD:666:ARG:HE	34:DD:694:GLY:C	2.27	0.43
1:BA:1291:G:OP2	5:BE:178:ARG:NH1	2.42	0.42
1:BA:1362:A:O2'	1:BA:1364:A:N7	2.51	0.42
1:BA:1385:G:OP1	1:BA:2719:G:O2'	2.33	0.42
1:BA:1790:C:N3	1:BA:2726:C:O2'	2.42	0.42
1:BA:1898:U:O2'	1:BA:1901:A:N7	2.34	0.42
1:BA:2805:U:H3	1:BA:2883:A:H62	1.67	0.42
1:BA:2827:U:C5'	4:BD:156:PRO:HB3	2.48	0.42
3:BC:91:PRO:CD	28:Bb:87:MET:HE1	2.49	0.42
6:BF:63:LEU:C	6:BF:68:ALA:HB2	2.44	0.42
6:BF:93:ASN:OD1	6:BF:123:VAL:HG23	2.19	0.42
10:BJ:12:LEU:HA	10:BJ:119:ALA:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:BJ:46:ARG:HB2	10:BJ:130:VAL:CG1	2.49	0.42
13:BM:174:MET:HB3	13:BM:185:ARG:NH2	2.34	0.42
18:BR:18:THR:OG1	18:BR:21:GLU:HG2	2.18	0.42
22:BV:57:ILE:HG22	22:BV:61:LYS:HE3	2.00	0.42
25:BY:20:LYS:HB2	25:BY:88:ASP:H	1.84	0.42
28:Bb:50:THR:OG1	28:Bb:61:CYS:SG	2.72	0.42
1:CA:322:U:C2	5:CE:207:LYS:HD3	2.53	0.42
1:CA:618:U:O5'	1:CA:1033:C:N4	2.52	0.42
1:CA:2827:U:C5'	4:CD:156:PRO:HB3	2.48	0.42
3:CC:218:ARG:O	3:CC:218:ARG:HG3	2.19	0.42
4:CD:30:TRP:HA	4:CD:31:PRO:HD3	1.87	0.42
6:CF:81:LYS:O	6:CF:162:VAL:HG13	2.18	0.42
7:CG:149:ALA:HB1	7:CG:172:ILE:HG12	2.00	0.42
9:CI:50:LEU:HD11	9:CI:161:CYS:HB3	2.01	0.42
10:CJ:12:LEU:HA	10:CJ:119:ALA:O	2.19	0.42
12:CL:72:LEU:HD23	12:CL:72:LEU:HA	1.81	0.42
12:CL:92:TYR:CD1	12:CL:112:LYS:HD3	2.54	0.42
21:CU:47:VAL:O	21:CU:48:ILE:HD13	2.18	0.42
33:DA:284:ASP:HB2	33:DA:427:TYR:OH	2.18	0.42
33:DA:383:TYR:HA	33:DA:533:MET:HG3	2.01	0.42
33:DB:79:GLU:C	33:DB:84:MET:HB2	2.44	0.42
33:DB:398:LYS:NZ	33:DB:481:VAL:HG23	2.34	0.42
33:DB:438:PRO:HB2	33:DB:439:ASN:H	1.66	0.42
34:DC:382:GLU:O	34:DC:384:ILE:HG12	2.19	0.42
34:DC:444:VAL:HG12	34:DC:448:ARG:HD2	2.00	0.42
34:DC:643:GLU:OE2	34:DC:647:ARG:NE	2.49	0.42
34:DD:9:GLU:O	34:DD:12:THR:OG1	2.37	0.42
34:DD:213:VAL:HA	34:DD:216:MET:SD	2.59	0.42
34:DD:564:PHE:CE1	34:DD:568:MET:HE3	2.54	0.42
34:DD:623:GLU:HG3	34:DD:625:TYR:HE1	1.84	0.42
1:BA:2434:A:OP1	32:Bf:64:ARG:HD3	2.18	0.42
4:BD:67:GLU:OE1	4:BD:328:LEU:HD12	2.18	0.42
9:BI:50:LEU:HD11	9:BI:161:CYS:HB3	2.00	0.42
10:BJ:77:LYS:HG3	10:BJ:95:MET:HE1	2.01	0.42
13:BM:96:MET:SD	13:BM:100:ARG:HD2	2.59	0.42
1:CA:922:C:N3	1:CA:1029:A:N6	2.67	0.42
1:CA:1659:U:OP2	30:Cd:9:LYS:NZ	2.45	0.42
3:CC:90:LYS:HG3	3:CC:91:PRO:HD2	1.99	0.42
4:CD:148:LEU:HD23	4:CD:150:LYS:NZ	2.34	0.42
6:CF:101:HIS:CD2	6:CF:116:PHE:H	2.37	0.42
9:CI:148:GLU:OE2	9:CI:152:HIS:NE2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:85:GLY:HA3	22:CV:16:GLY:HA2	2.00	0.42
14:CN:2:ALA:HA	14:CN:7:TYR:CD2	2.54	0.42
18:CR:78:SER:O	18:CR:78:SER:OG	2.35	0.42
20:CT:70:GLU:O	20:CT:74:GLU:HG3	2.19	0.42
24:CX:79:THR:O	24:CX:83:ILE:HG12	2.19	0.42
32:Cf:62:THR:CG2	32:Cf:86:LYS:HE3	2.49	0.42
33:DA:20:ARG:HH21	33:DA:44:ILE:HD11	1.84	0.42
33:DA:224:LYS:HE3	33:DA:234:ALA:CB	2.46	0.42
33:DB:134:ALA:CB	33:DB:143:VAL:HG12	2.48	0.42
33:DB:486:ALA:HB2	33:DB:534:ARG:CA	2.49	0.42
34:DC:509:SER:OG	34:DC:512:LEU:HG	2.18	0.42
34:DC:542:ILE:HD11	34:DC:582:LYS:HD3	2.00	0.42
34:DC:630:VAL:O	34:DC:630:VAL:HG23	2.19	0.42
34:DD:26:ILE:HB	34:DD:94:ASP:OD1	2.20	0.42
34:DD:70:ILE:HD11	34:DD:97:GLY:C	2.44	0.42
34:DD:145:LEU:HD21	34:DD:147:VAL:CG2	2.48	0.42
34:DD:214:PRO:HG3	34:DD:255:PHE:CE2	2.54	0.42
1:BA:1094:C:OP2	1:BA:1095:C:O2'	2.31	0.42
1:BA:1269:U:H5''	24:BX:73:GLU:HG2	2.01	0.42
2:BB:41:U:N3	2:BB:45:G:OP2	2.46	0.42
4:BD:272:GLY:HA3	4:BD:294:TYR:CZ	2.54	0.42
6:BF:22:LEU:HD13	6:BF:39:ARG:HH21	1.85	0.42
8:BH:14:THR:O	8:BH:18:LEU:HD23	2.18	0.42
11:BK:71:ALA:HB3	11:BK:95:MET:HE2	2.01	0.42
13:BM:13:TRP:CE2	13:BM:46:ARG:HG2	2.54	0.42
13:BM:27:GLU:HA	13:BM:30:GLN:NE2	2.34	0.42
14:BN:69:LYS:HE3	14:BN:70:TYR:CE2	2.54	0.42
19:BS:18:ALA:CB	19:BS:95:ALA:HB2	2.49	0.42
20:BT:7:PRO:HB2	20:BT:81:LEU:HD21	2.01	0.42
23:BW:3:ILE:H	23:BW:3:ILE:HD12	1.83	0.42
23:BW:30:ARG:NE	23:BW:34:LEU:HD11	2.27	0.42
30:Bd:14:LYS:HE2	30:Bd:18:GLN:NE2	2.34	0.42
32:Bf:62:THR:CG2	32:Bf:86:LYS:HE3	2.49	0.42
1:CA:1972:U:O2'	1:CA:1974:A:N7	2.39	0.42
2:CB:20:G:O2'	2:CB:21:U:H5'	2.19	0.42
3:CC:96:PRO:HG2	3:CC:99:ASN:ND2	2.35	0.42
6:CF:8:LYS:HE3	6:CF:10:ILE:CD1	2.48	0.42
10:CJ:54:ARG:O	10:CJ:58:GLU:HG2	2.19	0.42
10:CJ:69:PRO:CB	10:CJ:74:ARG:HG2	2.50	0.42
14:CN:46:ILE:HD12	14:CN:85:THR:HG22	2.00	0.42
20:CT:6:TYR:CD1	23:CW:32:ARG:HB3	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:50:GLY:H	21:CU:67:VAL:HB	1.84	0.42
30:Cd:14:LYS:HE2	30:Cd:18:GLN:NE2	2.34	0.42
33:DA:382:ILE:HG12	33:DA:407:LYS:HZ2	1.83	0.42
33:DA:398:LYS:HZ3	33:DA:401:LEU:HD21	1.83	0.42
33:DB:214:GLU:HB2	33:DB:218:GLN:CD	2.44	0.42
33:DB:244:LEU:HA	33:DB:349:ARG:NH1	2.26	0.42
33:DB:248:ASN:ND2	33:DB:327:ILE:HD11	2.30	0.42
33:DB:313:ASP:OD1	33:DB:334:LYS:HE3	2.19	0.42
33:DB:488:PHE:CZ	33:DB:493:SER:HB2	2.54	0.42
34:DC:37:LEU:HD13	34:DC:146:PHE:HE2	1.83	0.42
34:DC:260:ILE:C	34:DC:264:LYS:HE2	2.44	0.42
34:DC:394:VAL:HG12	34:DC:462:PRO:HA	2.02	0.42
34:DC:400:HIS:HD2	34:DC:456:GLU:OE1	2.02	0.42
34:DD:38:SER:CA	34:DD:41:LEU:HD23	2.29	0.42
34:DD:110:ARG:NH2	34:DD:270:ILE:O	2.52	0.42
34:DD:115:ALA:O	34:DD:143:PRO:HA	2.19	0.42
34:DD:230:CYS:O	34:DD:233:GLY:N	2.51	0.42
34:DD:346:ARG:HG2	34:DD:346:ARG:HH11	1.83	0.42
34:DD:421:LEU:CD2	34:DD:445:ILE:HG13	2.49	0.42
34:DD:527:GLU:OE2	34:DD:530:GLU:HG2	2.19	0.42
1:BA:2461:A:N6	1:BA:2512:C:C2	2.87	0.42
2:BB:55:G:H21	6:BF:1:MET:CE	2.27	0.42
3:BC:91:PRO:HA	3:BC:157:VAL:O	2.19	0.42
9:BI:30:GLN:HG2	9:BI:60:HIS:CE1	2.54	0.42
10:BJ:137:GLN:NE2	10:BJ:138:LYS:HG3	2.34	0.42
11:BK:116:GLU:OE1	11:BK:116:GLU:N	2.50	0.42
13:BM:96:MET:HG3	13:BM:101:ILE:CG1	2.50	0.42
14:BN:36:VAL:HG22	14:BN:104:ASP:OD2	2.19	0.42
15:BO:19:SER:O	15:BO:23:THR:HG22	2.20	0.42
1:CA:460:A:H5"	30:Cd:39:ARG:HH21	1.84	0.42
1:CA:1224:U:C5	10:CJ:61:ALA:HB2	2.54	0.42
1:CA:2329:A:C2	14:CN:8:LYS:HG2	2.55	0.42
3:CC:91:PRO:HA	3:CC:157:VAL:O	2.19	0.42
4:CD:333:GLU:OE1	22:CV:14:GLU:HG3	2.20	0.42
6:CF:93:ASN:OD1	6:CF:123:VAL:HG23	2.19	0.42
8:CH:107:GLU:HG2	8:CH:108:MET:N	2.35	0.42
14:CN:141:GLU:HG2	14:CN:142:ARG:N	2.34	0.42
21:CU:34:GLU:O	21:CU:38:LYS:HG3	2.20	0.42
25:CY:49:ASP:HA	25:CY:52:LYS:NZ	2.34	0.42
25:CY:54:ILE:HA	25:CY:57:THR:OG1	2.19	0.42
33:DA:69:ARG:NH1	33:DB:56:PRO:HD2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DA:111:LYS:HG3	33:DA:112:GLU:HG2	2.01	0.42
33:DA:446:LYS:C	33:DA:447:LEU:HD22	2.44	0.42
33:DB:137:ASN:HD21	33:DB:140:SER:HB2	1.82	0.42
33:DB:486:ALA:CA	33:DB:508:PRO:HG2	2.46	0.42
33:DB:508:PRO:HB3	33:DB:532:GLY:HA2	2.00	0.42
33:DB:513:ARG:NH2	33:DB:516:GLU:HG2	2.33	0.42
34:DC:93:ILE:CG2	34:DC:112:VAL:HG22	2.43	0.42
34:DD:229:TYR:HD2	34:DD:238:LEU:HB2	1.85	0.42
34:DD:387:VAL:HG21	34:DD:504:LYS:O	2.19	0.42
34:DD:421:LEU:O	34:DD:423:ILE:HG23	2.19	0.42
1:BA:1278:A:O3'	12:BL:15:GLY:HA2	2.19	0.42
1:BA:2038:U:O2'	1:BA:2040:A:OP2	2.33	0.42
1:BA:2379:U:OP1	18:BR:50:LYS:HB3	2.19	0.42
2:BB:32:C:O2'	2:BB:33:U:H5'	2.18	0.42
4:BD:148:LEU:HD23	4:BD:150:LYS:NZ	2.35	0.42
6:BF:8:LYS:CE	6:BF:10:ILE:HD11	2.47	0.42
6:BF:42:ALA:CB	6:BF:51:ILE:HD12	2.49	0.42
6:BF:57:ILE:HD13	6:BF:57:ILE:HA	1.93	0.42
18:BR:78:SER:O	18:BR:78:SER:OG	2.35	0.42
20:BT:6:TYR:CD1	23:BW:32:ARG:HB3	2.54	0.42
20:BT:40:GLU:HG2	20:BT:45:PHE:O	2.20	0.42
25:BY:22:ILE:CD1	25:BY:31:ALA:HB2	2.46	0.42
1:CA:12:U:O2'	1:CA:604:U:OP1	2.35	0.42
1:CA:2378:A:H3'	18:CR:50:LYS:HE3	2.01	0.42
1:CA:2461:A:N6	1:CA:2512:C:C2	2.87	0.42
7:CG:108:ILE:HB	7:CG:118:ARG:HB2	2.01	0.42
9:CI:30:GLN:HG2	9:CI:60:HIS:CE1	2.54	0.42
28:Cb:32:ASP:O	28:Cb:36:ARG:HG3	2.20	0.42
33:DA:200:LEU:N	33:DB:204:PHE:O	2.48	0.42
33:DA:233:LEU:HD12	33:DB:369:VAL:HG12	2.02	0.42
33:DA:389:VAL:HG12	33:DA:518:ILE:HG21	2.01	0.42
33:DB:63:VAL:HG21	33:DB:125:ILE:HB	2.02	0.42
34:DC:360:VAL:HB	34:DC:363:LEU:CD1	2.47	0.42
34:DC:392:VAL:CG2	34:DC:442:LEU:HD11	2.49	0.42
34:DC:572:PRO:HG2	34:DC:615:LEU:CD2	2.50	0.42
34:DD:48:ILE:HG22	34:DD:49:SER:N	2.34	0.42
34:DD:264:LYS:HG3	34:DD:265:GLY:H	1.85	0.42
34:DD:318:LEU:HD11	34:DD:358:ALA:HA	2.02	0.42
34:DD:478:GLU:OE2	34:DD:480:LYS:HB3	2.19	0.42
1:BA:1076:A:P	24:BX:9:GLY:H	2.42	0.42
1:BA:1170:A:O2'	1:BA:1172:C:OP1	2.29	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:1866:A:O2'	28:Bb:24:ARG:HG2	2.19	0.42
3:BC:19:ALA:CA	3:BC:184:ALA:HB2	2.50	0.42
3:BC:90:LYS:CG	3:BC:91:PRO:HD2	2.49	0.42
4:BD:12:LEU:HD22	4:BD:248:TRP:CZ3	2.55	0.42
5:BE:22:VAL:HB	5:BE:253:GLN:HE22	1.85	0.42
7:BG:30:LYS:HG2	7:BG:140:ILE:CG2	2.48	0.42
7:BG:63:LYS:O	7:BG:66:VAL:HG22	2.18	0.42
7:BG:86:CYS:SG	7:BG:172:ILE:HG23	2.60	0.42
7:BG:108:ILE:HB	7:BG:118:ARG:HB2	2.00	0.42
11:BK:13:ASN:HA	11:BK:45:PRO:O	2.20	0.42
11:BK:91:GLU:HG2	22:BV:21:TYR:OH	2.20	0.42
12:BL:113:ASN:OD1	12:BL:134:GLY:HA2	2.20	0.42
14:BN:11:PHE:O	14:BN:15:ARG:HG3	2.19	0.42
26:BZ:39:VAL:HG21	26:BZ:46:SER:HA	2.01	0.42
1:CA:18:G:H5''	19:CS:4:ILE:HG23	2.01	0.42
2:CB:17:G:N3	14:CN:2:ALA:HB3	2.34	0.42
10:CJ:77:LYS:HG3	10:CJ:95:MET:HE1	2.02	0.42
11:CK:91:GLU:HG2	22:CV:21:TYR:OH	2.20	0.42
13:CM:119:TYR:OH	13:CM:131:GLU:OE1	2.20	0.42
14:CN:33:ASP:HB3	14:CN:48:LEU:HD11	2.00	0.42
20:CT:79:ILE:HB	20:CT:81:LEU:HD13	2.02	0.42
21:CU:94:ARG:NH1	21:CU:95:PRO:O	2.53	0.42
25:CY:20:LYS:HB2	25:CY:88:ASP:H	1.84	0.42
33:DA:514:ASP:O	33:DA:518:ILE:HD12	2.18	0.42
33:DB:81:LYS:HB2	33:DB:82:GLU:H	1.63	0.42
34:DC:647:ARG:O	34:DC:667:VAL:HG13	2.20	0.42
34:DC:648:ARG:NH1	34:DC:700:PRO:HG3	2.34	0.42
34:DD:101:PHE:CD2	34:DD:105:VAL:HB	2.55	0.42
34:DD:631:GLN:HB3	34:DD:660:LEU:CD1	2.46	0.42
1:BA:340:U:OP1	21:BU:3:ALA:HA	2.19	0.42
1:BA:464:U:OP1	29:Bc:11:ARG:NH2	2.52	0.42
1:BA:1239:C:O2'	17:BQ:47:GLY:HA2	2.19	0.42
1:BA:2329:A:N6	14:BN:10:PRO:HG3	2.34	0.42
2:BB:30:U:H2'	2:BB:31:C:H6	1.80	0.42
4:BD:246:VAL:HG11	4:BD:252:GLN:NE2	2.35	0.42
7:BG:97:MET:HE1	7:BG:169:GLY:CA	2.50	0.42
10:BJ:69:PRO:CB	10:BJ:74:ARG:HG2	2.50	0.42
20:BT:5:ASN:HB2	20:BT:25:ILE:O	2.20	0.42
21:BU:50:GLY:H	21:BU:67:VAL:HB	1.84	0.42
24:BX:83:ILE:HG13	24:BX:92:ILE:HG12	2.02	0.42
1:CA:340:U:OP1	21:CU:3:ALA:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:480:A:O3'	21:CU:86:LYS:HB2	2.19	0.42
1:CA:2805:U:H3	1:CA:2883:A:H62	1.67	0.42
2:CB:32:C:O2'	2:CB:33:U:H5'	2.19	0.42
3:CC:19:ALA:CA	3:CC:184:ALA:HB2	2.50	0.42
3:CC:38:SER:OG	3:CC:84:GLY:HA3	2.19	0.42
6:CF:51:ILE:HG21	6:CF:57:ILE:CD1	2.50	0.42
6:CF:63:LEU:C	6:CF:68:ALA:HB2	2.45	0.42
10:CJ:137:GLN:NE2	10:CJ:138:LYS:HG3	2.34	0.42
11:CK:71:ALA:CB	11:CK:95:MET:HE2	2.49	0.42
14:CN:157:ASP:HA	14:CN:160:GLU:CD	2.44	0.42
18:CR:53:PRO:HB3	18:CR:85:VAL:CG1	2.50	0.42
23:CW:30:ARG:NE	23:CW:34:LEU:HD21	2.33	0.42
33:DA:262:LEU:HD21	33:DA:280:LEU:HD21	2.02	0.42
33:DA:453:VAL:HA	33:DA:456:LEU:HD12	2.00	0.42
33:DB:294:TRP:CH2	33:DB:301:ALA:HB1	2.54	0.42
33:DB:446:LYS:C	33:DB:447:LEU:HD22	2.44	0.42
33:DB:488:PHE:CE2	33:DB:493:SER:HB2	2.55	0.42
34:DC:385:ARG:NH1	34:DC:387:VAL:HG23	2.35	0.42
34:DC:489:TYR:CD1	34:DC:587:ASP:HB3	2.55	0.42
34:DC:574:THR:HG21	34:DC:621:LEU:HD11	2.02	0.42
1:BA:2171:A:N1	1:BA:2173:U:C4	2.88	0.42
3:BC:125:VAL:HG12	3:BC:126:TYR:N	2.34	0.42
4:BD:333:GLU:OE1	22:BV:14:GLU:HG3	2.20	0.42
8:BH:107:GLU:HG2	8:BH:108:MET:N	2.35	0.42
11:BK:71:ALA:CB	11:BK:95:MET:HE2	2.50	0.42
11:BK:99:ASP:OD1	11:BK:103:ILE:N	2.46	0.42
15:BO:54:ASN:OD1	15:BO:77:ALA:HB3	2.20	0.42
21:BU:34:GLU:O	21:BU:38:LYS:HG3	2.20	0.42
32:Bf:11:CYS:HB3	32:Bf:14:CYS:SG	2.59	0.42
1:CA:77:A:N1	1:CA:91:A:O2'	2.43	0.42
1:CA:212:G:OP1	32:Cf:42:ARG:NH2	2.51	0.42
1:CA:494:G:H4'	19:CS:19:MET:HB3	2.01	0.42
1:CA:812:G:OP1	28:Cb:22:TYR:OH	2.17	0.42
1:CA:937:U:O2'	24:CX:40:HIS:O	2.34	0.42
1:CA:2419:C:O2'	12:CL:59:GLU:OE1	2.31	0.42
11:CK:49:ILE:HG23	11:CK:117:VAL:HG13	2.02	0.42
13:CM:27:GLU:HA	13:CM:30:GLN:NE2	2.35	0.42
13:CM:174:MET:HB3	13:CM:185:ARG:NH2	2.34	0.42
14:CN:69:LYS:HE3	14:CN:70:TYR:CZ	2.55	0.42
15:CO:54:ASN:OD1	15:CO:77:ALA:HB3	2.20	0.42
19:CS:15:THR:HG23	19:CS:147:LEU:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:18:ALA:CB	19:CS:95:ALA:HB2	2.49	0.42
20:CT:6:TYR:HA	23:CW:29:VAL:HG13	2.01	0.42
20:CT:7:PRO:HB2	20:CT:81:LEU:HD21	2.01	0.42
20:CT:79:ILE:O	23:CW:30:ARG:HD3	2.19	0.42
33:DA:50:SER:OG	33:DA:51:GLU:OE1	2.33	0.42
33:DA:239:LEU:HD21	33:DA:352:LYS:HD3	2.02	0.42
33:DA:305:ILE:HG21	33:DA:327:ILE:CD1	2.49	0.42
33:DA:315:GLU:O	33:DA:318:THR:OG1	2.26	0.42
33:DA:454:GLU:O	33:DA:457:LYS:HB3	2.20	0.42
33:DB:421:HIS:HB3	33:DB:431:LEU:HD11	2.00	0.42
33:DB:422:GLU:HB2	33:DB:428:PHE:CE1	2.55	0.42
33:DB:468:ALA:HB3	33:DB:470:GLU:OE2	2.19	0.42
33:DB:505:ILE:O	33:DB:528:MET:HA	2.20	0.42
34:DC:22:ARG:HH22	34:DC:258:ASN:HD22	1.66	0.42
34:DC:263:GLN:HB3	34:DC:283:MET:O	2.20	0.42
34:DC:279:ILE:CD1	34:DC:291:ASP:HB2	2.45	0.42
34:DD:168:LEU:HB3	34:DD:202:PHE:CZ	2.55	0.42
34:DD:273:GLY:HA3	34:DD:379:THR:HB	2.01	0.42
34:DD:413:GLN:HE22	34:DD:417:GLU:CG	2.33	0.42
34:DD:480:LYS:HE3	34:DD:730:MET:O	2.20	0.42
34:DD:489:TYR:HD1	34:DD:587:ASP:HB3	1.83	0.42
5:BE:115:ARG:CD	5:BE:252:PHE:HB2	2.50	0.42
6:BF:95:SER:HB2	6:BF:121:THR:CB	2.50	0.42
14:BN:141:GLU:HG2	14:BN:142:ARG:N	2.34	0.42
19:BS:41:LYS:HB2	19:BS:44:GLU:HG2	2.01	0.42
24:BX:79:THR:O	24:BX:83:ILE:HG12	2.19	0.42
1:CA:1923:C:O4'	3:CC:213:PRO:HA	2.20	0.42
1:CA:2379:U:OP1	18:CR:50:LYS:HB3	2.19	0.42
2:CB:32:C:H1'	2:CB:54:A:H61	1.85	0.42
3:CC:91:PRO:CD	28:Cb:87:MET:HE1	2.49	0.42
3:CC:107:CYS:O	3:CC:156:VAL:HG22	2.20	0.42
5:CE:115:ARG:CD	5:CE:252:PHE:HB2	2.50	0.42
6:CF:13:MET:HB2	6:CF:59:CYS:SG	2.60	0.42
6:CF:95:SER:HB2	6:CF:121:THR:CB	2.50	0.42
10:CJ:46:ARG:HB2	10:CJ:130:VAL:CG1	2.49	0.42
11:CK:71:ALA:HB3	11:CK:95:MET:HE2	2.01	0.42
13:CM:96:MET:SD	13:CM:100:ARG:HD2	2.59	0.42
14:CN:138:PRO:HG2	14:CN:143:ILE:HD11	2.02	0.42
15:CO:109:LEU:HA	15:CO:112:ILE:HG22	2.01	0.42
16:CP:89:THR:HG23	16:CP:89:THR:O	2.20	0.42
18:CR:29:ARG:HH22	18:CR:43:ASP:HB3	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Ca:120:ASP:HA	27:Ca:121:PRO:HD3	1.87	0.42
33:DA:225:ASP:HB3	33:DB:371:GLY:HA2	2.01	0.42
33:DA:421:HIS:CD2	33:DA:476:ILE:HD12	2.55	0.42
33:DB:72:GLY:CA	33:DB:75:LEU:HB2	2.50	0.42
33:DB:269:VAL:HA	33:DB:308:THR:HA	2.01	0.42
34:DC:174:HIS:C	34:DC:177:LYS:HG2	2.43	0.42
34:DC:186:LYS:HB3	34:DC:186:LYS:HE3	1.74	0.42
34:DC:400:HIS:HB3	34:DC:403:ASP:OD2	2.20	0.42
1:BA:376:U:O2'	1:BA:424:A:O2'	2.36	0.42
1:BA:1923:C:O4'	3:BC:213:PRO:HA	2.19	0.42
5:BE:5:LYS:HG2	5:BE:16:GLU:OE2	2.20	0.42
9:BI:95:ILE:HG22	9:BI:121:VAL:CG2	2.50	0.42
12:BL:82:GLU:OE1	12:BL:84:LEU:HG	2.20	0.42
15:BO:8:LYS:O	15:BO:12:LYS:HG2	2.20	0.42
17:BQ:35:THR:HG23	17:BQ:55:ILE:CD1	2.43	0.42
20:BT:6:TYR:HA	23:BW:29:VAL:HG13	2.01	0.42
26:BZ:11:TYR:HE2	26:BZ:42:MET:HE2	1.84	0.42
1:CA:258:G:OP2	13:CM:6:TYR:OH	2.33	0.42
1:CA:2133:A:OP2	1:CA:2191:G:N2	2.50	0.42
5:CE:62:TRP:CE3	5:CE:66:ARG:HD3	2.55	0.42
11:CK:13:ASN:HA	11:CK:45:PRO:O	2.20	0.42
11:CK:91:GLU:OE1	22:CV:24:LYS:NZ	2.42	0.42
14:CN:142:ARG:HA	14:CN:146:GLU:H	1.85	0.42
15:CO:8:LYS:O	15:CO:12:LYS:HG2	2.20	0.42
23:CW:9:ILE:HA	23:CW:12:MET:HE2	2.01	0.42
24:CX:148:LEU:HA	24:CX:151:LYS:HG2	2.01	0.42
33:DA:409:CYS:HB3	33:DA:418:ILE:CG1	2.50	0.42
33:DA:503:ARG:HD2	33:DA:526:ILE:HA	2.01	0.42
33:DB:251:ASP:CB	33:DB:305:ILE:HD12	2.50	0.42
33:DB:507:SER:O	33:DB:530:PHE:HA	2.20	0.42
34:DC:127:PRO:O	34:DC:131:THR:HG23	2.20	0.42
34:DC:137:LEU:HD21	34:DC:183:ASN:HB3	2.00	0.42
34:DC:213:VAL:HA	34:DC:216:MET:SD	2.60	0.42
34:DC:428:GLU:HG3	34:DC:429:THR:H	1.85	0.42
34:DC:632:VAL:HG22	34:DC:661:ALA:O	2.19	0.42
34:DD:40:ASN:HA	34:DD:44:GLY:N	2.35	0.42
34:DD:283:MET:HA	34:DD:314:PHE:O	2.19	0.42
34:DD:654:MET:SD	34:DD:663:ILE:HG23	2.60	0.42
34:DD:670:ALA:HB3	34:DD:671:GLU:OE1	2.20	0.42
1:BA:1224:U:C5	10:BJ:61:ALA:HB2	2.54	0.41
5:BE:45:GLN:HA	5:BE:46:PRO:HD3	1.96	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BE:62:TRP:CE3	5:BE:66:ARG:HD3	2.55	0.41
5:BE:149:LEU:HD12	5:BE:149:LEU:O	2.20	0.41
6:BF:80:GLU:O	6:BF:82:THR:HG23	2.20	0.41
7:BG:111:PHE:HE1	7:BG:169:GLY:HA2	1.85	0.41
14:BN:69:LYS:HE3	14:BN:70:TYR:CZ	2.55	0.41
21:BU:97:ASN:OD1	21:BU:99:SER:OG	2.30	0.41
26:BZ:45:GLU:HB2	26:BZ:48:GLN:HG3	2.01	0.41
1:CA:2532:C:O2'	1:CA:2575:A:N3	2.48	0.41
2:CB:86:A:H2'	2:CB:87:A:C8	2.55	0.41
4:CD:90:GLU:N	4:CD:139:SER:HB3	2.33	0.41
6:CF:13:MET:SD	6:CF:29:LEU:HD12	2.61	0.41
7:CG:30:LYS:HG2	7:CG:140:ILE:CG2	2.47	0.41
7:CG:86:CYS:SG	7:CG:172:ILE:HG23	2.60	0.41
12:CL:113:ASN:OD1	12:CL:134:GLY:HA2	2.20	0.41
18:CR:64:VAL:HG22	18:CR:74:LEU:CD2	2.50	0.41
20:CT:16:LEU:HD12	20:CT:23:GLN:HB2	2.02	0.41
20:CT:40:GLU:HG2	20:CT:45:PHE:O	2.20	0.41
33:DA:4:ARG:CB	33:DA:95:ILE:HA	2.49	0.41
33:DA:55:TYR:CZ	33:DB:70:ILE:HD12	2.55	0.41
33:DB:439:ASN:OD1	33:DB:440:ARG:N	2.53	0.41
34:DC:7:MET:HG2	34:DC:10:ARG:HH12	1.83	0.41
34:DC:134:ARG:CB	34:DC:182:MET:HE2	2.47	0.41
34:DC:653:ASN:HD21	34:DC:655:THR:CG2	2.20	0.41
34:DD:213:VAL:N	34:DD:214:PRO:HD2	2.35	0.41
34:DD:428:GLU:CG	34:DD:429:THR:H	2.32	0.41
34:DD:571:GLY:N	34:DD:576:GLU:O	2.51	0.41
34:DD:650:ILE:HG23	34:DD:650:ILE:O	2.19	0.41
1:BA:1689:G:OP1	16:BP:70:ARG:NH2	2.53	0.41
3:BC:176:LYS:O	3:BC:180:MET:HG2	2.20	0.41
5:BE:253:GLN:OE1	5:BE:253:GLN:N	2.54	0.41
6:BF:101:HIS:CD2	6:BF:116:PHE:H	2.37	0.41
8:BH:21:LEU:HA	8:BH:99:ILE:HD11	2.01	0.41
10:BJ:71:ARG:O	10:BJ:75:ILE:HG13	2.20	0.41
15:BO:112:ILE:HD11	15:BO:122:ILE:HD13	2.02	0.41
16:BP:81:ARG:HG2	16:BP:88:ARG:CZ	2.50	0.41
18:BR:64:VAL:HG22	18:BR:74:LEU:CD2	2.50	0.41
21:BU:20:PRO:O	21:BU:24:ARG:HG3	2.20	0.41
23:BW:9:ILE:HA	23:BW:12:MET:HE2	2.02	0.41
24:BX:121:PRO:CA	24:BX:152:MET:HG2	2.51	0.41
25:BY:22:ILE:O	25:BY:22:ILE:HG13	2.19	0.41
28:Bb:34:GLU:O	28:Bb:38:ARG:HD3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:118:C:N3	29:Cc:20:ARG:HG3	2.35	0.41
1:CA:2691:G:H5'	4:CD:261:ARG:HG3	2.03	0.41
2:CB:5:U:O2'	2:CB:6:U:H5'	2.20	0.41
2:CB:36:A:N3	14:CN:150:GLY:HA3	2.35	0.41
5:CE:231:GLY:O	5:CE:232:THR:OG1	2.32	0.41
7:CG:92:TYR:CE1	7:CG:96:PRO:HA	2.55	0.41
9:CI:6:GLY:O	9:CI:10:ARG:HB2	2.20	0.41
9:CI:71:ASN:O	9:CI:75:VAL:HG23	2.20	0.41
10:CJ:46:ARG:O	10:CJ:50:LEU:HG	2.20	0.41
13:CM:59:GLN:HB3	13:CM:139:HIS:CE1	2.55	0.41
13:CM:64:VAL:O	13:CM:131:GLU:HA	2.20	0.41
16:CP:81:ARG:HG2	16:CP:88:ARG:CZ	2.50	0.41
18:CR:68:ARG:HG3	18:CR:68:ARG:O	2.20	0.41
21:CU:103:ILE:HG21	21:CU:106:LEU:CD2	2.50	0.41
24:CX:121:PRO:CA	24:CX:152:MET:HG2	2.51	0.41
27:Ca:117:GLU:OE2	27:Ca:118:LEU:HG	2.21	0.41
28:Cb:26:ASP:O	28:Cb:30:VAL:HG23	2.20	0.41
33:DA:30:ILE:HA	33:DA:47:THR:O	2.21	0.41
33:DA:109:ILE:HA	33:DA:114:VAL:HA	2.01	0.41
33:DA:123:ILE:HG22	33:DB:136:LYS:CD	2.35	0.41
33:DA:260:LYS:HD2	33:DA:360:PHE:CD1	2.55	0.41
33:DB:60:GLY:HA2	33:DB:64:LYS:CD	2.48	0.41
33:DB:144:ILE:HG23	33:DB:149:ASP:OD1	2.20	0.41
33:DB:491:ASP:O	33:DB:495:VAL:HG23	2.21	0.41
34:DC:73:ASP:HA	34:DC:96:PRO:CB	2.50	0.41
34:DC:93:ILE:HG22	34:DC:94:ASP:O	2.20	0.41
34:DD:20:ARG:HD3	34:DD:86:GLU:CG	2.50	0.41
34:DD:125:THR:OG1	34:DD:130:GLU:HG2	2.20	0.41
34:DD:263:GLN:HB3	34:DD:284:THR:O	2.20	0.41
34:DD:267:VAL:CA	34:DD:270:ILE:HG12	2.49	0.41
34:DD:325:PHE:O	34:DD:372:VAL:HG13	2.19	0.41
1:BA:1297:G:OP2	27:Ba:136:LYS:HD2	2.20	0.41
1:BA:1710:A:OP2	26:BZ:29:ARG:NE	2.54	0.41
1:BA:2572:A:OP1	34:DC:402:LYS:HB2	2.19	0.41
2:BB:5:U:O2'	2:BB:6:U:H5'	2.20	0.41
2:BB:100:U:H2'	2:BB:101:C:H6	1.84	0.41
3:BC:138:ALA:HB2	3:BC:148:TRP:CH2	2.55	0.41
5:BE:43:ARG:HH22	5:BE:226:GLU:CD	2.23	0.41
5:BE:182:GLY:O	5:BE:187:ARG:N	2.46	0.41
6:BF:76:LEU:HA	6:BF:79:VAL:CG2	2.47	0.41
6:BF:126:ARG:NE	6:BF:146:ARG:O	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:BJ:78:ARG:NE	10:BJ:81:ARG:HH21	2.18	0.41
12:BL:95:ASN:HA	12:BL:117:THR:HG22	2.02	0.41
1:CA:791:C:O2'	1:CA:1581:U:OP1	2.28	0.41
1:CA:1127:G:OP2	31:Ce:30:ARG:NH2	2.51	0.41
1:CA:1224:U:HO2'	1:CA:1225:G:P	2.42	0.41
4:CD:246:VAL:HG11	4:CD:252:GLN:NE2	2.35	0.41
5:CE:30:ASP:OD1	5:CE:30:ASP:N	2.50	0.41
10:CJ:78:ARG:NE	10:CJ:81:ARG:HH21	2.18	0.41
12:CL:82:GLU:OE1	12:CL:84:LEU:HG	2.21	0.41
14:CN:46:ILE:HD11	14:CN:119:ALA:HB1	2.02	0.41
26:CZ:11:TYR:HE2	26:CZ:42:MET:HE2	1.84	0.41
27:Ca:105:TYR:CE1	27:Ca:150:LYS:HD2	2.56	0.41
28:Cb:34:GLU:O	28:Cb:38:ARG:HD3	2.20	0.41
33:DA:51:GLU:OE1	33:DA:51:GLU:N	2.53	0.41
33:DA:312:PHE:HZ	33:DA:320:LEU:HD22	1.85	0.41
33:DB:212:TYR:HD2	33:DB:215:ASN:O	2.02	0.41
33:DB:245:SER:H	33:DB:248:ASN:CG	2.25	0.41
33:DB:441:VAL:O	33:DB:444:ILE:HG22	2.20	0.41
33:DB:456:LEU:HA	33:DB:459:ILE:HD12	2.00	0.41
33:DB:470:GLU:HG2	33:DB:471:GLU:N	2.35	0.41
34:DC:576:GLU:OE2	34:DC:715:LYS:NZ	2.31	0.41
34:DC:701:SER:HA	34:DC:704:LEU:HG	2.02	0.41
34:DD:30:ILE:O	34:DD:32:HIS:ND1	2.54	0.41
34:DD:122:VAL:O	34:DD:122:VAL:HG22	2.20	0.41
34:DD:142:ARG:HD3	34:DD:257:PRO:CD	2.49	0.41
34:DD:179:ILE:HG13	34:DD:187:PHE:CD2	2.55	0.41
34:DD:384:ILE:C	34:DD:385:ARG:HD3	2.45	0.41
34:DD:417:GLU:OE1	34:DD:448:ARG:HD3	2.20	0.41
1:BA:494:G:H4'	19:BS:19:MET:HB3	2.02	0.41
1:BA:1634:C:H6	3:BC:175:LYS:HE3	1.85	0.41
1:BA:2329:A:C2	14:BN:8:LYS:HG2	2.55	0.41
1:BA:2361:A:H61	1:BA:2378:A:N6	2.10	0.41
1:BA:2378:A:H3'	18:BR:50:LYS:HE3	2.01	0.41
1:BA:2678:A:H2	7:BG:114:GLU:HG2	1.85	0.41
4:BD:124:GLU:O	4:BD:127:GLU:HG2	2.20	0.41
5:BE:162:ALA:CB	5:BE:164:LEU:HD13	2.50	0.41
9:BI:148:GLU:OE2	9:BI:152:HIS:NE2	2.52	0.41
13:BM:64:VAL:O	13:BM:131:GLU:HA	2.21	0.41
14:BN:144:ARG:NH2	14:BN:163:GLU:OE1	2.43	0.41
14:BN:157:ASP:HA	14:BN:160:GLU:CD	2.45	0.41
19:BS:96:GLU:O	19:BS:100:GLU:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:BS:112:ILE:HG12	19:BS:146:ILE:O	2.20	0.41
20:BT:79:ILE:HB	20:BT:81:LEU:HD13	2.02	0.41
23:BW:47:ILE:HG22	23:BW:51:ARG:NH1	2.36	0.41
25:BY:12:LEU:HD12	25:BY:13:ILE:N	2.35	0.41
26:BZ:21:VAL:HG12	26:BZ:25:LYS:HB2	2.01	0.41
27:Ba:105:TYR:CE1	27:Ba:150:LYS:HD2	2.55	0.41
28:Bb:32:ASP:O	28:Bb:36:ARG:HG3	2.20	0.41
1:CA:1866:A:O2'	28:Cb:24:ARG:HG2	2.19	0.41
1:CA:2329:A:N6	14:CN:10:PRO:HG3	2.34	0.41
3:CC:87:ALA:HB3	3:CC:95:VAL:CG1	2.49	0.41
4:CD:285:ILE:HD11	4:CD:336:GLN:HA	2.02	0.41
26:CZ:13:ILE:HG12	26:CZ:37:PHE:CE1	2.56	0.41
26:CZ:58:HIS:CE1	26:CZ:68:PRO:HG3	2.55	0.41
33:DA:228:ILE:O	33:DA:228:ILE:HG22	2.20	0.41
33:DA:424:GLU:OE1	33:DA:425:PRO:HG2	2.21	0.41
33:DB:304:SER:O	33:DB:325:ILE:HG23	2.20	0.41
33:DB:384:ASP:OD1	33:DB:385:LYS:N	2.53	0.41
33:DB:440:ARG:HH12	33:DB:486:ALA:C	2.28	0.41
34:DC:161:SER:O	34:DC:164:MET:HB3	2.20	0.41
34:DC:309:ALA:O	34:DC:359:ALA:HA	2.20	0.41
34:DD:58:PHE:HA	34:DD:63:GLU:CD	2.45	0.41
34:DD:62:ASP:H	34:DD:75:SER:HG	1.64	0.41
34:DD:101:PHE:HD2	34:DD:105:VAL:HB	1.84	0.41
34:DD:125:THR:HG23	34:DD:125:THR:O	2.20	0.41
34:DD:198:GLY:HA2	34:DD:214:PRO:HD3	2.02	0.41
34:DD:267:VAL:HG12	34:DD:275:GLU:CG	2.50	0.41
34:DD:410:VAL:HG22	34:DD:453:LYS:CB	2.51	0.41
34:DD:464:VAL:HG23	34:DD:464:VAL:O	2.20	0.41
34:DD:573:LEU:HD12	34:DD:721:LEU:HD21	2.02	0.41
34:DD:636:LEU:HD11	34:DD:684:GLU:OE2	2.20	0.41
1:BA:480:A:O3'	21:BU:86:LYS:HB2	2.19	0.41
1:BA:1727:A:O2'	1:BA:1733:G:N7	2.43	0.41
6:BF:13:MET:HB2	6:BF:59:CYS:SG	2.59	0.41
11:BK:123:LYS:HE2	11:BK:123:LYS:HA	2.02	0.41
13:BM:59:GLN:HB3	13:BM:139:HIS:CE1	2.55	0.41
14:BN:46:ILE:HD11	14:BN:119:ALA:HB1	2.02	0.41
19:BS:41:LYS:N	19:BS:44:GLU:OE2	2.45	0.41
26:BZ:58:HIS:CE1	26:BZ:68:PRO:HG3	2.55	0.41
1:CA:1385:G:OP1	1:CA:2719:G:O2'	2.33	0.41
1:CA:1634:C:H6	3:CC:175:LYS:HE3	1.85	0.41
2:CB:82:A:H2'	2:CB:83:C:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:12:LEU:HD22	4:CD:248:TRP:CZ3	2.55	0.41
6:CF:22:LEU:HD13	6:CF:39:ARG:HH21	1.85	0.41
9:CI:95:ILE:HG22	9:CI:121:VAL:CG2	2.50	0.41
10:CJ:71:ARG:O	10:CJ:75:ILE:HG13	2.20	0.41
20:CT:5:ASN:HB2	20:CT:25:ILE:O	2.20	0.41
33:DA:53:THR:HB	33:DA:67:HIS:CG	2.56	0.41
33:DA:237:VAL:HG23	33:DA:354:PRO:HD3	2.02	0.41
33:DA:353:LEU:HD23	33:DA:356:LEU:HB2	2.03	0.41
33:DA:394:TYR:HE1	33:DA:527:ALA:O	2.04	0.41
33:DA:508:PRO:HA	33:DA:532:GLY:N	2.12	0.41
33:DB:495:VAL:HG22	33:DB:524:LEU:HD21	2.03	0.41
34:DC:77:VAL:HG23	34:DC:92:LEU:HB3	2.02	0.41
34:DC:150:VAL:CG1	34:DC:154:ILE:HD11	2.47	0.41
34:DC:477:ILE:HG12	34:DC:728:LEU:CD1	2.50	0.41
34:DC:499:ILE:HD13	34:DC:526:MET:CG	2.46	0.41
34:DC:594:ALA:HA	34:DC:597:ARG:HB2	2.01	0.41
34:DD:77:VAL:HA	34:DD:341:PHE:HB3	2.03	0.41
34:DD:168:LEU:O	34:DD:172:ILE:HD12	2.19	0.41
34:DD:410:VAL:HG22	34:DD:453:LYS:HD2	2.02	0.41
34:DD:631:GLN:HG2	34:DD:662:ILE:CG1	2.42	0.41
34:DD:655:THR:CB	34:DD:662:ILE:O	2.65	0.41
1:BA:230:A:N1	1:BA:428:U:O2'	2.50	0.41
1:BA:2820:G:OP1	4:BD:157:LYS:NZ	2.46	0.41
3:BC:96:PRO:HG2	3:BC:99:ASN:ND2	2.35	0.41
4:BD:53:ILE:HG21	22:BV:1:MET:HE2	2.01	0.41
7:BG:97:MET:HE1	7:BG:169:GLY:N	2.36	0.41
13:BM:70:ARG:HD2	13:BM:124:ASP:O	2.21	0.41
18:BR:53:PRO:HB3	18:BR:85:VAL:CG1	2.50	0.41
19:BS:15:THR:HG23	19:BS:147:LEU:O	2.20	0.41
20:BT:70:GLU:O	20:BT:74:GLU:HG3	2.20	0.41
25:BY:54:ILE:HA	25:BY:57:THR:OG1	2.19	0.41
1:CA:1230:G:N3	10:CJ:83:MET:HE2	2.35	0.41
1:CA:1671:A:C2	19:CS:133:ALA:HB2	2.56	0.41
1:CA:2822:U:O2'	1:CA:2881:C:OP1	2.30	0.41
2:CB:72:U:H2'	2:CB:73:C:C6	2.56	0.41
4:CD:266:LYS:NZ	4:CD:300:SER:O	2.33	0.41
5:CE:5:LYS:HG2	5:CE:16:GLU:OE2	2.20	0.41
5:CE:43:ARG:HH22	5:CE:226:GLU:CD	2.23	0.41
5:CE:149:LEU:HD12	5:CE:149:LEU:O	2.20	0.41
5:CE:178:ARG:O	5:CE:183:LYS:HD3	2.20	0.41
7:CG:111:PHE:HE1	7:CG:169:GLY:HA2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:21:LEU:HA	8:CH:99:ILE:HD11	2.01	0.41
10:CJ:107:GLU:HG2	10:CJ:108:LEU:N	2.36	0.41
12:CL:95:ASN:HA	12:CL:117:THR:HG22	2.02	0.41
23:CW:47:ILE:HG22	23:CW:51:ARG:NH1	2.36	0.41
25:CY:39:MET:HE2	25:CY:86:ILE:CD1	2.48	0.41
26:CZ:21:VAL:HG12	26:CZ:25:LYS:HB2	2.01	0.41
27:Ca:113:ILE:CD1	27:Ca:140:ILE:HA	2.51	0.41
33:DA:120:ILE:HG22	33:DB:136:LYS:HG3	2.02	0.41
33:DA:401:LEU:CD1	33:DA:422:GLU:HG2	2.36	0.41
33:DA:440:ARG:HB2	33:DA:489:PRO:CG	2.50	0.41
33:DA:488:PHE:CE2	33:DA:493:SER:HB2	2.56	0.41
33:DB:415:ASN:HA	33:DB:485:ASP:OD2	2.20	0.41
34:DC:440:LEU:O	34:DC:444:VAL:HG23	2.20	0.41
34:DC:496:ASP:OD2	34:DC:499:ILE:HD12	2.21	0.41
34:DC:628:VAL:HA	34:DC:691:THR:HG22	2.03	0.41
34:DD:20:ARG:HA	34:DD:88:TYR:HD2	1.85	0.41
34:DD:81:HIS:HB3	34:DD:90:ILE:HD11	2.03	0.41
34:DD:212:SER:O	34:DD:215:MET:N	2.53	0.41
34:DD:594:ALA:CA	34:DD:597:ARG:HH21	2.32	0.41
1:BA:50:C:OP1	30:Bd:14:LYS:HD3	2.21	0.41
1:BA:1153:U:O2'	1:BA:1154:U:OP2	2.30	0.41
2:BB:17:G:N3	14:BN:2:ALA:HB3	2.35	0.41
2:BB:36:A:N3	14:BN:150:GLY:HA3	2.35	0.41
3:BC:218:ARG:O	3:BC:218:ARG:HG3	2.19	0.41
5:BE:178:ARG:O	5:BE:183:LYS:HD3	2.20	0.41
6:BF:55:GLU:HG2	6:BF:56:PRO:HD2	2.02	0.41
8:BH:25:ARG:HG2	8:BH:30:ILE:HD13	2.03	0.41
12:BL:35:CYS:HB2	12:BL:49:TYR:CE2	2.56	0.41
12:BL:96:LEU:HB3	12:BL:101:ILE:O	2.20	0.41
13:BM:5:PHE:O	13:BM:9:VAL:HG23	2.20	0.41
14:BN:138:PRO:HG2	14:BN:143:ILE:HD11	2.02	0.41
16:BP:89:THR:HG23	16:BP:89:THR:O	2.20	0.41
18:BR:68:ARG:HG3	18:BR:68:ARG:O	2.20	0.41
21:BU:103:ILE:HG21	21:BU:106:LEU:CD2	2.50	0.41
26:BZ:39:VAL:CG2	26:BZ:46:SER:HA	2.51	0.41
29:Bc:54:CYS:O	29:Bc:56:TYR:N	2.52	0.41
1:CA:713:A:H1'	15:CO:125:PHE:HA	2.02	0.41
1:CA:1205:G:H5'	7:CG:3:LYS:HD2	2.03	0.41
1:CA:1269:U:H5''	24:CX:73:GLU:HG2	2.02	0.41
3:CC:138:ALA:HB2	3:CC:148:TRP:CH2	2.55	0.41
3:CC:197:PRO:HD3	3:CC:204:GLY:CA	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:22:VAL:HB	5:CE:253:GLN:HE22	1.85	0.41
6:CF:80:GLU:O	6:CF:82:THR:HG23	2.20	0.41
10:CJ:69:PRO:HB3	10:CJ:74:ARG:HG2	2.03	0.41
11:CK:62:PRO:CD	33:DA:3:LYS:HE3	2.50	0.41
14:CN:158:LEU:HD13	14:CN:161:GLN:NE2	2.31	0.41
22:CV:51:TRP:CZ3	22:CV:52:THR:HG22	2.56	0.41
24:CX:2:TYR:HB2	24:CX:35:VAL:HG23	2.02	0.41
25:CY:12:LEU:HD12	25:CY:13:ILE:N	2.35	0.41
26:CZ:42:MET:HE3	26:CZ:75:ALA:HB3	2.03	0.41
33:DA:306:ILE:CG1	33:DA:328:ILE:HA	2.50	0.41
33:DB:354:PRO:O	33:DB:355:GLU:HG2	2.21	0.41
34:DC:12:THR:HA	34:DC:15:MET:CE	2.31	0.41
34:DC:13:THR:O	34:DC:17:ASP:HB2	2.21	0.41
34:DC:49:SER:O	34:DC:52:LEU:HG	2.21	0.41
34:DC:134:ARG:NE	34:DC:660:LEU:HG	2.36	0.41
34:DC:313:LEU:CD2	34:DC:318:LEU:HG	2.36	0.41
34:DC:628:VAL:HG12	34:DC:691:THR:CG2	2.48	0.41
34:DD:25:GLY:C	34:DD:115:ALA:HA	2.46	0.41
34:DD:27:VAL:HG22	34:DD:115:ALA:HB1	2.03	0.41
34:DD:180:LYS:HG2	34:DD:187:PHE:CD2	2.56	0.41
34:DD:389:GLU:OE2	34:DD:391:VAL:HG22	2.20	0.41
1:BA:118:C:N3	29:Bc:20:ARG:HG3	2.35	0.41
1:BA:1671:A:C2	19:BS:133:ALA:HB2	2.56	0.41
1:BA:1716:U:OP1	4:BD:232:LEU:N	2.51	0.41
9:BI:71:ASN:O	9:BI:75:VAL:HG23	2.20	0.41
11:BK:68:VAL:HB	34:DC:402:LYS:CG	2.50	0.41
11:BK:118:ALA:HB1	11:BK:131:ILE:HD13	2.02	0.41
13:BM:24:LEU:HD23	13:BM:24:LEU:HA	1.93	0.41
19:BS:18:ALA:HB3	19:BS:95:ALA:HB2	2.03	0.41
24:BX:119:HIS:HB3	24:BX:122:ARG:HH12	1.85	0.41
26:BZ:40:ARG:HG3	26:BZ:41:HIS:ND1	2.36	0.41
29:Bc:31:THR:O	29:Bc:33:GLN:HG3	2.20	0.41
1:CA:1612:A:O2'	1:CA:1613:A:O5'	2.32	0.41
1:CA:2171:A:N1	1:CA:2173:U:C4	2.88	0.41
1:CA:2558:G:H5''	4:CD:4:ILE:HG23	2.03	0.41
11:CK:62:PRO:HG2	33:DA:4:ARG:NH2	2.35	0.41
13:CM:70:ARG:HD2	13:CM:124:ASP:O	2.21	0.41
14:CN:25:LEU:O	14:CN:29:LEU:HG	2.20	0.41
14:CN:36:VAL:CG2	14:CN:49:ILE:HD12	2.48	0.41
15:CO:19:SER:O	15:CO:23:THR:HG22	2.20	0.41
19:CS:96:GLU:O	19:CS:100:GLU:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CY:40:VAL:HA	25:CY:85:ALA:HA	2.03	0.41
33:DA:66:LEU:HB2	33:DB:68:PRO:CA	2.45	0.41
33:DA:205:THR:O	33:DA:224:LYS:N	2.54	0.41
33:DA:300:SER:HB3	33:DB:438:PRO:CB	2.37	0.41
33:DA:310:GLU:O	33:DA:331:PRO:HG2	2.21	0.41
33:DA:365:THR:HG23	33:DB:368:TYR:HD2	1.86	0.41
33:DA:403:GLU:HA	33:DA:406:LEU:HD12	2.02	0.41
33:DA:474:GLN:HA	33:DA:477:LEU:CG	2.50	0.41
33:DB:77:LEU:HD13	33:DB:80:SER:HB2	2.03	0.41
33:DB:89:LYS:HB3	33:DB:92:ILE:CD1	2.34	0.41
33:DB:231:PRO:HD2	33:DB:360:PHE:CA	2.48	0.41
34:DC:65:GLU:OE1	34:DC:72:ILE:N	2.34	0.41
34:DC:90:ILE:HG21	34:DC:252:VAL:HG11	2.02	0.41
34:DC:228:ASP:O	34:DC:231:LYS:HG2	2.20	0.41
34:DC:479:GLY:CA	34:DC:609:ALA:HB2	2.49	0.41
34:DD:25:GLY:O	34:DD:116:VAL:N	2.54	0.41
34:DD:412:ARG:CZ	34:DD:425:LEU:HD13	2.50	0.41
34:DD:563:GLY:O	34:DD:567:VAL:HG23	2.20	0.41
1:BA:713:A:H1'	15:BO:125:PHE:HA	2.02	0.41
1:BA:896:U:OP1	12:BL:10:ARG:HA	2.21	0.41
1:BA:2398:U:O2	18:BR:49:GLN:NE2	2.45	0.41
2:BB:32:C:H1'	2:BB:54:A:H61	1.85	0.41
2:BB:72:U:H2'	2:BB:73:C:C6	2.56	0.41
2:BB:82:A:H2'	2:BB:83:C:O4'	2.21	0.41
2:BB:86:A:H2'	2:BB:87:A:C8	2.55	0.41
3:BC:46:ILE:HG22	28:Bb:58:ILE:HG12	2.03	0.41
3:BC:107:CYS:O	3:BC:156:VAL:HG22	2.20	0.41
7:BG:92:TYR:CE1	7:BG:96:PRO:HA	2.56	0.41
8:BH:21:LEU:HG	8:BH:87:ALA:O	2.21	0.41
10:BJ:46:ARG:O	10:BJ:50:LEU:HG	2.21	0.41
12:BL:72:LEU:HD23	12:BL:72:LEU:HA	1.81	0.41
14:BN:25:LEU:O	14:BN:29:LEU:HG	2.21	0.41
14:BN:157:ASP:HA	14:BN:160:GLU:OE2	2.21	0.41
15:BO:14:ASN:HB3	15:BO:17:ILE:HG12	2.03	0.41
20:BT:16:LEU:HD12	20:BT:23:GLN:HB2	2.02	0.41
21:BU:103:ILE:HG21	21:BU:106:LEU:HD23	2.03	0.41
23:BW:12:MET:HB3	23:BW:16:GLU:HG2	2.03	0.41
24:BX:2:TYR:HB2	24:BX:35:VAL:HG23	2.03	0.41
28:Bb:26:ASP:O	28:Bb:30:VAL:HG23	2.20	0.41
28:Bb:82:THR:O	28:Bb:85:ARG:HG2	2.21	0.41
1:CA:619:U:O2'	1:CA:1071:A:N1	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:637:G:P	12:CL:7:ARG:HH22	2.44	0.41
1:CA:1153:U:O2'	1:CA:1154:U:OP2	2.30	0.41
1:CA:1297:G:OP2	27:Ca:136:LYS:HD2	2.21	0.41
1:CA:1710:A:OP2	26:CZ:29:ARG:NE	2.54	0.41
1:CA:1717:C:OP1	4:CD:230:GLY:HA2	2.21	0.41
1:CA:2830:A:H4'	26:CZ:12:THR:HB	2.03	0.41
3:CC:176:LYS:O	3:CC:180:MET:HG2	2.20	0.41
3:CC:179:LYS:HE2	3:CC:183:ARG:HH12	1.86	0.41
4:CD:53:ILE:HG21	22:CV:1:MET:HE2	2.01	0.41
5:CE:162:ALA:CB	5:CE:164:LEU:HD13	2.50	0.41
6:CF:83:LEU:O	6:CF:164:VAL:HG13	2.21	0.41
8:CH:25:ARG:HG2	8:CH:30:ILE:HD13	2.03	0.41
9:CI:39:LYS:HE2	9:CI:39:LYS:HB2	1.84	0.41
12:CL:68:ASN:CG	12:CL:107:SER:HB3	2.45	0.41
12:CL:96:LEU:HB3	12:CL:101:ILE:O	2.21	0.41
14:CN:157:ASP:HA	14:CN:160:GLU:OE2	2.21	0.41
15:CO:88:ALA:HB3	15:CO:91:PHE:CZ	2.56	0.41
19:CS:112:ILE:HG12	19:CS:146:ILE:O	2.20	0.41
24:CX:58:ASP:OD1	24:CX:61:THR:OG1	2.36	0.41
30:Cd:37:HIS:CD2	30:Cd:39:ARG:H	2.39	0.41
33:DB:231:PRO:HG2	33:DB:360:PHE:CD1	2.56	0.41
33:DB:240:HIS:ND1	33:DB:342:LYS:HG2	2.36	0.41
33:DB:338:LEU:HD23	33:DB:342:LYS:HD3	2.03	0.41
33:DB:388:SER:HA	33:DB:529:VAL:HA	2.02	0.41
33:DB:398:LYS:HE2	33:DB:504:TYR:CE1	2.56	0.41
33:DB:401:LEU:HB3	33:DB:481:VAL:CG2	2.49	0.41
33:DB:456:LEU:HD13	33:DB:473:CYS:CB	2.51	0.41
34:DC:76:ASN:ND2	34:DC:357:ILE:HB	2.36	0.41
34:DC:267:VAL:HG11	34:DC:284:THR:OG1	2.21	0.41
34:DC:703:ILE:HB	34:DC:706:ASP:HB3	2.02	0.41
34:DD:34:LYS:HA	34:DD:37:LEU:HD21	2.02	0.41
34:DD:81:HIS:ND1	34:DD:249:LEU:HD13	2.36	0.41
34:DD:155:ASN:O	34:DD:158:GLN:NE2	2.52	0.41
34:DD:205:ALA:HA	34:DD:244:LEU:HD22	2.03	0.41
34:DD:318:LEU:HB3	34:DD:338:VAL:CB	2.48	0.41
34:DD:326:THR:HG22	34:DD:327:SER:N	2.36	0.41
34:DD:340:ILE:HA	34:DD:357:ILE:CG2	2.51	0.41
34:DD:445:ILE:HG22	34:DD:449:ILE:HD11	2.03	0.41
34:DD:509:SER:OG	34:DD:512:LEU:HB2	2.21	0.41
34:DD:543:PHE:CE1	34:DD:585:LEU:HB2	2.55	0.41
34:DD:566:GLU:HA	34:DD:569:ARG:HD3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DD:626:GLN:CD	34:DD:691:THR:HB	2.46	0.41
34:DD:628:VAL:CG2	34:DD:667:VAL:HG23	2.51	0.41
1:BA:51:G:O2'	1:BA:66:A:N1	2.50	0.41
1:BA:256:A:C8	8:BH:32:LYS:HG3	2.56	0.41
1:BA:859:C:O2'	1:BA:860:G:O5'	2.32	0.41
1:BA:2691:G:H5'	4:BD:261:ARG:HG3	2.02	0.41
6:BF:13:MET:SD	6:BF:29:LEU:HD12	2.61	0.41
7:BG:96:PRO:O	7:BG:98:GLN:NE2	2.54	0.41
10:BJ:60:GLY:CA	10:BJ:66:PRO:HD2	2.43	0.41
12:BL:33:GLY:HA3	12:BL:37:HIS:CE1	2.56	0.41
20:BT:6:TYR:HE2	23:BW:36:SER:HB2	1.86	0.41
27:Ba:101:HIS:CG	27:Ba:102:PRO:HD2	2.56	0.41
27:Ba:117:GLU:OE2	27:Ba:118:LEU:HG	2.21	0.41
3:CC:125:VAL:HG12	3:CC:126:TYR:N	2.34	0.41
4:CD:124:GLU:O	4:CD:127:GLU:HG2	2.20	0.41
11:CK:67:GLN:HG2	34:DD:405:PRO:HG3	2.03	0.41
19:CS:18:ALA:HB3	19:CS:95:ALA:HB2	2.03	0.41
29:Cc:31:THR:O	29:Cc:33:GLN:HG3	2.21	0.41
33:DA:81:LYS:H	33:DA:81:LYS:HD2	1.86	0.41
33:DA:108:THR:HG21	34:DC:600:ALA:HB1	2.02	0.41
33:DA:203:LYS:HB2	33:DA:203:LYS:HE2	1.82	0.41
33:DA:291:GLN:O	33:DA:295:ASP:HB2	2.20	0.41
33:DA:372:GLY:HA3	33:DB:222:PHE:CE1	2.56	0.41
33:DA:388:SER:CB	33:DA:529:VAL:HG22	2.47	0.41
33:DB:327:ILE:HG13	33:DB:349:ARG:HD2	2.02	0.41
34:DC:42:LEU:HD21	34:DC:77:VAL:HB	2.02	0.41
34:DC:215:MET:CE	34:DC:242:CYS:HB3	2.51	0.41
34:DC:256:LEU:HD23	34:DC:256:LEU:HA	1.87	0.41
34:DC:271:TRP:HB2	34:DC:381:PHE:CD1	2.56	0.41
34:DC:413:GLN:OE1	34:DC:413:GLN:HA	2.21	0.41
34:DC:467:ARG:HB2	34:DC:622:LEU:HB2	2.02	0.41
34:DC:637:MET:HE3	34:DC:661:ALA:HB2	2.03	0.41
34:DD:150:VAL:O	34:DD:150:VAL:HG12	2.21	0.41
34:DD:172:ILE:HD11	34:DD:202:PHE:HZ	1.85	0.41
34:DD:180:LYS:HD2	34:DD:180:LYS:HA	1.98	0.41
34:DD:251:MET:HE2	34:DD:251:MET:HB3	1.94	0.41
34:DD:421:LEU:HD22	34:DD:445:ILE:CD1	2.50	0.41
34:DD:541:ASN:ND2	34:DD:579:ALA:HA	2.32	0.41
34:DD:573:LEU:HD12	34:DD:721:LEU:CD2	2.51	0.41
34:DD:610:ILE:CG2	34:DD:614:MET:HE3	2.50	0.41
34:DD:701:SER:HA	34:DD:704:LEU:CG	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:BA:1717:C:OP1	4:BD:230:GLY:HA2	2.21	0.40
3:BC:197:PRO:HD3	3:BC:204:GLY:CA	2.50	0.40
4:BD:204:ILE:HG22	4:BD:258:TYR:HA	2.03	0.40
11:BK:49:ILE:CD1	11:BK:76:GLN:HG2	2.51	0.40
14:BN:166:LYS:O	14:BN:169:ILE:HG22	2.22	0.40
16:BP:85:LYS:O	16:BP:85:LYS:HD2	2.21	0.40
25:BY:69:VAL:HA	25:BY:80:THR:CG2	2.38	0.40
30:Bd:37:HIS:CD2	30:Bd:39:ARG:H	2.39	0.40
4:CD:144:VAL:HG22	4:CD:164:GLU:HG2	2.03	0.40
4:CD:204:ILE:HG22	4:CD:258:TYR:HA	2.03	0.40
5:CE:31:LEU:HD12	5:CE:112:TYR:HD2	1.86	0.40
7:CG:97:MET:HE1	7:CG:169:GLY:CA	2.51	0.40
11:CK:4:MET:HE2	11:CK:116:GLU:HB3	2.03	0.40
13:CM:96:MET:HG3	13:CM:101:ILE:CG1	2.50	0.40
22:CV:25:ASP:OD2	22:CV:27:SER:OG	2.35	0.40
23:CW:12:MET:HB3	23:CW:16:GLU:HG2	2.03	0.40
24:CX:53:ALA:HB1	24:CX:141:HIS:CD2	2.55	0.40
25:CY:20:LYS:HB2	25:CY:88:ASP:N	2.37	0.40
26:CZ:39:VAL:CG2	26:CZ:46:SER:HA	2.51	0.40
27:Ca:101:HIS:CG	27:Ca:102:PRO:HD2	2.56	0.40
33:DA:267:PRO:HD2	33:DA:283:GLY:O	2.20	0.40
33:DA:424:GLU:CD	33:DA:425:PRO:HD2	2.45	0.40
33:DB:28:LYS:H	33:DB:28:LYS:CD	2.34	0.40
34:DC:293:ALA:HB3	34:DC:315:SER:HB3	2.04	0.40
34:DD:10:ARG:HH11	34:DD:80:VAL:HG11	1.86	0.40
34:DD:21:ILE:CD1	34:DD:91:ASN:HD21	2.25	0.40
34:DD:37:LEU:HB2	34:DD:244:LEU:HD21	2.03	0.40
34:DD:277:THR:HG22	34:DD:278:GLU:N	2.36	0.40
34:DD:520:LYS:O	34:DD:523:ASP:HB2	2.21	0.40
34:DD:526:MET:HE2	34:DD:530:GLU:CG	2.50	0.40
34:DD:534:ILE:HD13	34:DD:544:ILE:CD1	2.51	0.40
34:DD:606:ALA:O	34:DD:610:ILE:HD12	2.20	0.40
1:BA:1831:G:H21	3:BC:228:LEU:HD22	1.85	0.40
2:BB:64:G:O2'	2:BB:65:C:H5'	2.21	0.40
3:BC:87:ALA:HB3	3:BC:95:VAL:CG1	2.49	0.40
3:BC:126:TYR:CE1	28:Bb:79:VAL:HG11	2.56	0.40
4:BD:30:TRP:HA	4:BD:31:PRO:HD3	1.87	0.40
6:BF:83:LEU:O	6:BF:164:VAL:HG13	2.21	0.40
12:BL:68:ASN:CG	12:BL:107:SER:HB3	2.46	0.40
14:BN:28:LEU:CB	18:BR:31:ILE:HG21	2.47	0.40
14:BN:88:LEU:CB	14:BN:169:ILE:HD11	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:BO:75:LEU:HD23	15:BO:92:SER:OG	2.21	0.40
24:BX:10:GLN:HB2	24:BX:18:GLU:OE1	2.21	0.40
31:Be:15:LYS:O	31:Be:16:ILE:HD13	2.22	0.40
1:CA:68:G:H22	1:CA:103:A:H2	1.69	0.40
1:CA:1732:G:O6	4:CD:225:LYS:NZ	2.47	0.40
1:CA:1831:G:H21	3:CC:228:LEU:HD22	1.85	0.40
3:CC:137:THR:HG22	3:CC:149:LEU:O	2.21	0.40
4:CD:68:ILE:O	4:CD:68:ILE:HG13	2.21	0.40
4:CD:147:THR:C	4:CD:148:LEU:HD12	2.46	0.40
6:CF:55:GLU:HG2	6:CF:56:PRO:HD2	2.02	0.40
7:CG:19:LEU:HD21	7:CG:44:ILE:HB	2.03	0.40
11:CK:116:GLU:OE1	11:CK:116:GLU:N	2.50	0.40
11:CK:123:LYS:HE2	11:CK:123:LYS:HA	2.03	0.40
15:CO:112:ILE:HD11	15:CO:122:ILE:HD13	2.03	0.40
16:CP:126:LYS:HD2	16:CP:131:GLU:HG3	2.03	0.40
17:CQ:30:ASN:OD1	17:CQ:33:ASN:HB2	2.21	0.40
19:CS:27:PRO:O	19:CS:116:ILE:HD13	2.21	0.40
21:CU:20:PRO:O	21:CU:24:ARG:HG3	2.21	0.40
24:CX:1:MET:HE3	24:CX:35:VAL:N	2.37	0.40
25:CY:47:PRO:O	25:CY:51:LYS:HD3	2.21	0.40
29:Cc:54:CYS:O	29:Cc:56:TYR:N	2.52	0.40
33:DA:8:SER:H	33:DA:100:VAL:HG22	1.85	0.40
33:DA:129:THR:HG23	33:DB:129:THR:HG21	2.03	0.40
33:DA:202:LEU:HB2	33:DB:202:LEU:HB2	2.03	0.40
33:DB:78:ARG:HD3	33:DB:94:LEU:CA	2.52	0.40
34:DC:7:MET:HG2	34:DC:10:ARG:NH1	2.36	0.40
34:DC:507:GLU:O	34:DC:512:LEU:HD11	2.21	0.40
34:DC:573:LEU:HD22	34:DC:619:ASP:HB3	2.02	0.40
34:DD:198:GLY:HA2	34:DD:214:PRO:CD	2.51	0.40
34:DD:229:TYR:HE2	34:DD:238:LEU:N	2.19	0.40
34:DD:264:LYS:CG	34:DD:265:GLY:H	2.35	0.40
34:DD:351:LYS:NZ	34:DD:353:PRO:HG3	2.36	0.40
34:DD:443:GLU:HA	34:DD:446:ALA:CB	2.50	0.40
34:DD:450:GLU:HG3	34:DD:455:VAL:O	2.21	0.40
1:BA:1245:C:OP2	24:BX:123:LYS:HG2	2.22	0.40
1:BA:2696:U:O2'	11:BK:79:GLU:HG3	2.21	0.40
1:BA:2830:A:H4'	26:BZ:12:THR:HB	2.04	0.40
5:BE:8:ASP:HA	5:BE:143:VAL:CG1	2.52	0.40
5:BE:31:LEU:HD12	5:BE:112:TYR:HD2	1.86	0.40
6:BF:150:ASP:CA	6:BF:153:ILE:HG12	2.48	0.40
8:BH:23:LEU:HD23	8:BH:105:ALA:CA	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:BN:123:VAL:O	14:BN:126:SER:OG	2.33	0.40
16:BP:7:GLN:OE1	16:BP:7:GLN:N	2.48	0.40
20:BT:7:PRO:CD	23:BW:33:ALA:HB2	2.36	0.40
25:BY:45:ASN:OD1	25:BY:67:THR:HG22	2.21	0.40
26:BZ:23:ALA:HA	26:BZ:26:ARG:HG3	2.02	0.40
1:CA:784:G:H4'	16:CP:87:ALA:HB2	2.03	0.40
1:CA:896:U:OP1	12:CL:10:ARG:HA	2.21	0.40
1:CA:2398:U:O2	18:CR:49:GLN:NE2	2.46	0.40
7:CG:11:ILE:HD12	7:CG:17:VAL:CG1	2.51	0.40
9:CI:19:ARG:O	9:CI:23:MET:HE3	2.22	0.40
14:CN:148:ILE:CD1	14:CN:159:PRO:HD3	2.48	0.40
24:CX:83:ILE:HG13	24:CX:92:ILE:HG12	2.02	0.40
27:Ca:110:ILE:CG1	27:Ca:126:ILE:HB	2.51	0.40
33:DA:2:VAL:O	33:DA:2:VAL:HG23	2.20	0.40
33:DA:163:ILE:HG23	33:DA:168:ARG:CZ	2.52	0.40
33:DA:309:ASN:HB2	33:DA:357:ARG:HH11	1.87	0.40
33:DA:330:ALA:HB3	33:DA:333:PHE:HD1	1.85	0.40
33:DA:473:CYS:O	33:DA:477:LEU:HG	2.21	0.40
33:DB:29:ILE:HG22	33:DB:46:VAL:HG13	2.04	0.40
33:DB:231:PRO:CG	33:DB:360:PHE:HA	2.51	0.40
33:DB:268:ALA:HA	33:DB:282:THR:HA	2.02	0.40
33:DB:447:LEU:HB3	33:DB:448:ALA:H	1.68	0.40
33:DB:449:ALA:HB2	33:DB:500:ASN:ND2	2.37	0.40
34:DC:149:LYS:HE3	34:DC:206:LEU:HD11	2.04	0.40
34:DC:150:VAL:O	34:DC:154:ILE:HG13	2.21	0.40
34:DC:510:MET:SD	34:DC:536:GLY:N	2.94	0.40
34:DD:242:CYS:N	34:DD:243:PRO:HD3	2.36	0.40
34:DD:283:MET:HE3	34:DD:283:MET:HB2	1.95	0.40
34:DD:313:LEU:HA	34:DD:313:LEU:HD12	1.73	0.40
34:DD:337:GLN:HB3	34:DD:346:ARG:NH2	2.27	0.40
34:DD:471:LYS:C	34:DD:494:PRO:HG3	2.46	0.40
34:DD:518:ARG:HH21	34:DD:528:LYS:NZ	2.20	0.40
1:BA:793:U:O2'	16:BP:131:GLU:OE2	2.34	0.40
6:BF:51:ILE:HG21	6:BF:57:ILE:CD1	2.50	0.40
9:BI:19:ARG:O	9:BI:23:MET:HE3	2.21	0.40
15:BO:70:ILE:CD1	15:BO:74:VAL:HG22	2.51	0.40
16:BP:126:LYS:HD2	16:BP:131:GLU:HG3	2.03	0.40
19:BS:27:PRO:O	19:BS:116:ILE:HD13	2.21	0.40
25:BY:47:PRO:O	25:BY:51:LYS:HD3	2.21	0.40
27:Ba:69:PRO:HB2	27:Ba:77:ARG:HB2	2.04	0.40
1:CA:256:A:C8	8:CH:32:LYS:HG3	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:628:G:OP1	1:CA:1343:U:O2'	2.36	0.40
1:CA:1946:U:O2'	1:CA:1947:U:OP1	2.32	0.40
1:CA:2678:A:H2	7:CG:114:GLU:HG2	1.86	0.40
3:CC:46:ILE:HG22	28:Cb:58:ILE:HG12	2.02	0.40
5:CE:107:THR:O	5:CE:111:ARG:HG3	2.22	0.40
8:CH:42:GLU:OE1	13:CM:2:VAL:HA	2.22	0.40
8:CH:90:LEU:HG	8:CH:92:VAL:HG22	2.03	0.40
11:CK:4:MET:HE1	11:CK:50:GLY:CA	2.46	0.40
21:CU:82:VAL:HG11	21:CU:96:LEU:HD11	2.04	0.40
25:CY:45:ASN:OD1	25:CY:67:THR:HG22	2.21	0.40
33:DA:12:LYS:CB	34:DC:555:GLU:HB2	2.48	0.40
33:DA:255:ALA:HB1	33:DA:307:CYS:HB2	2.03	0.40
33:DA:365:THR:HG23	33:DB:368:TYR:CD2	2.56	0.40
33:DB:367:LYS:HD2	33:DB:368:TYR:N	2.36	0.40
33:DB:417:VAL:O	33:DB:417:VAL:HG23	2.21	0.40
33:DB:508:PRO:HB3	33:DB:532:GLY:N	2.36	0.40
33:DB:515:ASN:OD1	33:DB:515:ASN:N	2.53	0.40
34:DC:29:HIS:HB3	34:DC:32:HIS:CE1	2.57	0.40
34:DC:514:GLU:HG3	34:DC:518:ARG:NH2	2.25	0.40
34:DC:547:THR:HG22	34:DC:586:VAL:C	2.47	0.40
34:DC:566:GLU:HA	34:DC:569:ARG:HE	1.87	0.40
34:DD:26:ILE:HD13	34:DD:94:ASP:CG	2.46	0.40
34:DD:28:ALA:HB2	34:DD:118:VAL:H	1.86	0.40
34:DD:474:THR:HG22	34:DD:492:ALA:H	1.84	0.40
34:DD:496:ASP:HB3	34:DD:498:GLU:OE2	2.22	0.40
34:DD:561:LEU:O	34:DD:564:PHE:HB3	2.22	0.40
34:DD:567:VAL:CG2	34:DD:607:ARG:HA	2.52	0.40
1:BA:108:C:O2'	29:Bc:20:ARG:HB3	2.22	0.40
1:BA:2102:C:O3'	13:BM:88:GLY:HA2	2.21	0.40
1:BA:2651:G:OP1	10:BJ:70:LYS:N	2.38	0.40
10:BJ:107:GLU:HG2	10:BJ:108:LEU:N	2.36	0.40
11:BK:49:ILE:HG23	11:BK:117:VAL:HG13	2.03	0.40
27:Ba:113:ILE:CD1	27:Ba:140:ILE:HA	2.51	0.40
1:CA:50:C:OP1	30:Cd:14:LYS:HD3	2.21	0.40
1:CA:609:U:OP2	10:CJ:88:ARG:NH2	2.54	0.40
1:CA:2696:U:O2'	11:CK:79:GLU:HG3	2.21	0.40
5:CE:253:GLN:N	5:CE:253:GLN:OE1	2.54	0.40
8:CH:23:LEU:HD23	8:CH:105:ALA:CA	2.51	0.40
13:CM:32:TRP:HH2	13:CM:121:VAL:HG22	1.87	0.40
15:CO:75:LEU:HD23	15:CO:92:SER:OG	2.21	0.40
19:CS:121:VAL:HG13	19:CS:137:ASP:HB3	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:103:ILE:HG21	21:CU:106:LEU:HD23	2.02	0.40
24:CX:119:HIS:HB3	24:CX:122:ARG:HH12	1.85	0.40
26:CZ:23:ALA:HA	26:CZ:26:ARG:HG3	2.02	0.40
26:CZ:40:ARG:HG3	26:CZ:41:HIS:ND1	2.36	0.40
33:DB:72:GLY:C	33:DB:75:LEU:HB2	2.46	0.40
33:DB:292:ALA:HB1	33:DB:429:MET:SD	2.61	0.40
33:DB:366:TYR:HB3	33:DB:373:MET:HG3	2.03	0.40
34:DC:30:ILE:HD12	34:DC:128:GLN:HG2	2.03	0.40
34:DC:440:LEU:HD12	34:DC:441:HIS:N	2.36	0.40
34:DD:59:MET:SD	34:DD:60:ASP:N	2.95	0.40
34:DD:65:GLU:OE2	34:DD:75:SER:HB2	2.21	0.40
34:DD:159:VAL:O	34:DD:159:VAL:HG23	2.22	0.40
34:DD:201:ALA:HB2	34:DD:251:MET:SD	2.60	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	
3	BC	236/238 (99%)	228 (97%)	8 (3%)	0	100	100
3	CC	236/238 (99%)	228 (97%)	8 (3%)	0	100	100
4	BD	335/337 (99%)	328 (98%)	7 (2%)	0	100	100
4	CD	335/337 (99%)	328 (98%)	7 (2%)	0	100	100
5	BE	250/253 (99%)	244 (98%)	6 (2%)	0	100	100
5	CE	250/253 (99%)	244 (98%)	6 (2%)	0	100	100
6	BF	163/165 (99%)	155 (95%)	8 (5%)	0	100	100
6	CF	163/165 (99%)	156 (96%)	7 (4%)	0	100	100
7	BG	174/176 (99%)	167 (96%)	7 (4%)	0	100	100
7	CG	174/176 (99%)	167 (96%)	7 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	BH	113/120 (94%)	111 (98%)	2 (2%)	0	100	100
8	CH	113/120 (94%)	111 (98%)	2 (2%)	0	100	100
9	BI	155/173 (90%)	148 (96%)	7 (4%)	0	100	100
9	CI	155/173 (90%)	148 (96%)	7 (4%)	0	100	100
10	BJ	136/143 (95%)	134 (98%)	2 (2%)	0	100	100
10	CJ	136/143 (95%)	134 (98%)	2 (2%)	0	100	100
11	BK	130/132 (98%)	126 (97%)	4 (3%)	0	100	100
11	CK	130/132 (98%)	126 (97%)	4 (3%)	0	100	100
12	BL	138/140 (99%)	132 (96%)	5 (4%)	1 (1%)	19	53
12	CL	138/140 (99%)	132 (96%)	5 (4%)	1 (1%)	19	53
13	BM	194/196 (99%)	189 (97%)	5 (3%)	0	100	100
13	CM	194/196 (99%)	189 (97%)	5 (3%)	0	100	100
14	BN	172/174 (99%)	167 (97%)	5 (3%)	0	100	100
14	CN	172/174 (99%)	167 (97%)	5 (3%)	0	100	100
15	BO	124/126 (98%)	123 (99%)	1 (1%)	0	100	100
15	CO	124/126 (98%)	123 (99%)	1 (1%)	0	100	100
16	BP	149/151 (99%)	146 (98%)	3 (2%)	0	100	100
16	CP	149/151 (99%)	145 (97%)	4 (3%)	0	100	100
17	BQ	55/61 (90%)	55 (100%)	0	0	100	100
17	CQ	55/61 (90%)	55 (100%)	0	0	100	100
18	BR	94/97 (97%)	89 (95%)	5 (5%)	0	100	100
18	CR	94/97 (97%)	89 (95%)	5 (5%)	0	100	100
19	BS	149/151 (99%)	142 (95%)	7 (5%)	0	100	100
19	CS	149/151 (99%)	142 (95%)	7 (5%)	0	100	100
20	BT	80/82 (98%)	78 (98%)	2 (2%)	0	100	100
20	CT	80/82 (98%)	78 (98%)	2 (2%)	0	100	100
21	BU	117/119 (98%)	114 (97%)	3 (3%)	0	100	100
21	CU	117/119 (98%)	114 (97%)	3 (3%)	0	100	100
22	BV	60/62 (97%)	59 (98%)	1 (2%)	0	100	100
22	CV	60/62 (97%)	59 (98%)	1 (2%)	0	100	100
23	BW	65/67 (97%)	64 (98%)	1 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
23	CW	65/67 (97%)	64 (98%)	1 (2%)	0	100	100
24	BX	151/153 (99%)	147 (97%)	4 (3%)	0	100	100
24	CX	151/153 (99%)	147 (97%)	4 (3%)	0	100	100
25	BY	90/99 (91%)	87 (97%)	3 (3%)	0	100	100
25	CY	90/99 (91%)	87 (97%)	3 (3%)	0	100	100
26	BZ	84/89 (94%)	82 (98%)	2 (2%)	0	100	100
26	CZ	84/89 (94%)	82 (98%)	2 (2%)	0	100	100
27	Ba	130/161 (81%)	129 (99%)	1 (1%)	0	100	100
27	Ca	130/161 (81%)	129 (99%)	1 (1%)	0	100	100
28	Bb	92/94 (98%)	85 (92%)	7 (8%)	0	100	100
28	Cb	92/94 (98%)	85 (92%)	7 (8%)	0	100	100
29	Bc	54/56 (96%)	50 (93%)	4 (7%)	0	100	100
29	Cc	54/56 (96%)	50 (93%)	4 (7%)	0	100	100
30	Bd	49/51 (96%)	41 (84%)	8 (16%)	0	100	100
30	Cd	49/51 (96%)	41 (84%)	8 (16%)	0	100	100
31	Be	42/52 (81%)	41 (98%)	1 (2%)	0	100	100
31	Ce	42/52 (81%)	41 (98%)	1 (2%)	0	100	100
32	Bf	90/92 (98%)	87 (97%)	3 (3%)	0	100	100
32	Cf	90/92 (98%)	87 (97%)	3 (3%)	0	100	100
33	DA	536/538 (100%)	336 (63%)	151 (28%)	49 (9%)	0	6
33	DB	536/538 (100%)	345 (64%)	146 (27%)	45 (8%)	0	7
34	DC	728/730 (100%)	535 (74%)	157 (22%)	36 (5%)	2	16
34	DD	728/730 (100%)	449 (62%)	217 (30%)	62 (8%)	0	7
All	All	10270/10556 (97%)	9161 (89%)	915 (9%)	194 (2%)	9	33

All (194) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
33	DA	56	PRO
33	DA	59	MET
33	DA	63	VAL
33	DA	66	LEU
33	DA	75	LEU
33	DA	81	LYS

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Mol	Chain	Res	Type
33	DA	140	SER
33	DA	267	PRO
33	DA	323	LYS
33	DA	344	LYS
33	DA	350	LEU
33	DA	370	ILE
33	DA	502	ILE
33	DA	508	PRO
33	DB	56	PRO
33	DB	68	PRO
33	DB	70	ILE
33	DB	75	LEU
33	DB	84	MET
33	DB	88	GLU
33	DB	89	LYS
33	DB	137	ASN
33	DB	140	SER
33	DB	190	LEU
33	DB	287	LEU
33	DB	301	ALA
33	DB	425	PRO
33	DB	438	PRO
34	DC	75	SER
34	DC	260	ILE
34	DC	353	PRO
34	DC	557	MET
34	DD	149	LYS
34	DD	154	ILE
34	DD	187	PHE
34	DD	265	GLY
34	DD	267	VAL
34	DD	303	PRO
34	DD	364	LYS
34	DD	724	ALA
33	DA	54	GLY
33	DA	68	PRO
33	DA	77	LEU
33	DA	89	LYS
33	DA	159	SER
33	DA	190	LEU
33	DA	436	GLY
33	DA	536	PHE

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Mol	Chain	Res	Type
33	DB	81	LYS
33	DB	127	GLY
33	DB	229	GLU
33	DB	263	GLY
33	DB	302	TYR
33	DB	381	GLY
33	DB	436	GLY
33	DB	467	VAL
34	DC	158	GLN
34	DC	246	GLU
34	DC	456	GLU
34	DC	539	ASN
34	DC	618	GLU
34	DC	655	THR
34	DC	657	GLU
34	DD	2	GLY
34	DD	3	ARG
34	DD	28	ALA
34	DD	147	VAL
34	DD	284	THR
34	DD	290	GLY
34	DD	372	VAL
34	DD	377	GLY
34	DD	381	PHE
34	DD	424	THR
34	DD	432	HIS
34	DD	650	ILE
34	DD	658	GLY
34	DD	693	PHE
33	DA	69	ARG
33	DA	301	ALA
33	DA	425	PRO
33	DA	435	ALA
33	DA	469	PHE
33	DA	484	SER
33	DA	485	ASP
33	DB	27	VAL
33	DB	69	ARG
33	DB	160	SER
33	DB	206	ASP
33	DB	489	PRO
33	DB	508	PRO

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Mol	Chain	Res	Type
34	DC	50	LYS
34	DC	111	ALA
34	DC	264	LYS
34	DC	286	ALA
34	DC	386	HIS
34	DC	451	ARG
34	DC	693	PHE
34	DD	77	VAL
34	DD	91	ASN
34	DD	161	SER
34	DD	182	MET
34	DD	246	GLU
34	DD	260	ILE
34	DD	286	ALA
34	DD	291	ASP
34	DD	296	VAL
34	DD	347	LEU
34	DD	386	HIS
34	DD	428	GLU
34	DD	476	PRO
34	DD	634	GLN
34	DD	722	PRO
33	DA	188	THR
33	DA	277	PRO
33	DA	302	TYR
33	DA	348	LEU
33	DA	368	TYR
33	DA	527	ALA
33	DB	13	THR
33	DB	64	LYS
33	DB	66	LEU
33	DB	117	GLU
33	DB	212	TYR
33	DB	246	TYR
33	DB	411	ALA
33	DB	484	SER
34	DC	38	SER
34	DC	53	ALA
34	DC	57	LEU
34	DC	214	PRO
34	DC	355	GLY
34	DC	698	VAL

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Mol	Chain	Res	Type
34	DC	702	SER
34	DD	59	MET
34	DD	194	ASP
34	DD	259	PRO
34	DD	266	ARG
34	DD	289	GLU
34	DD	292	LEU
34	DD	325	PHE
34	DD	349	VAL
34	DD	358	ALA
34	DD	648	ARG
33	DA	27	VAL
33	DA	82	GLU
33	DA	211	ARG
33	DA	434	GLY
33	DA	438	PRO
33	DA	489	PRO
33	DB	52	VAL
33	DB	63	VAL
33	DB	299	ILE
33	DB	370	ILE
33	DB	537	LEU
34	DC	66	GLN
34	DC	100	ASP
34	DC	143	PRO
34	DC	634	GLN
34	DD	8	VAL
34	DD	181	ASN
34	DD	254	HIS
34	DD	275	GLU
34	DD	308	VAL
34	DD	344	PRO
34	DD	359	ALA
12	BL	10	ARG
12	CL	10	ARG
33	DA	52	VAL
33	DA	62	ARG
33	DA	131	LEU
33	DA	212	TYR
33	DB	277	PRO
33	DB	502	ILE
34	DC	54	GLY

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Mol	Chain	Res	Type
34	DC	637	MET
34	DD	216	MET
34	DD	422	GLN
33	DA	299	ILE
33	DB	250	VAL
34	DC	380	PRO
34	DC	476	PRO
34	DD	410	VAL
33	DA	381	GLY
33	DB	434	GLY
34	DD	387	VAL
33	DA	127	GLY
34	DC	99	VAL
34	DC	259	PRO
34	DD	143	PRO
34	DD	301	VAL
34	DD	311	GLY
33	DA	196	GLY
34	DC	324	VAL
34	DD	122	VAL

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	
3	BC	188/188 (100%)	188 (100%)	0	100	100
3	CC	188/188 (100%)	188 (100%)	0	100	100
4	BD	277/277 (100%)	277 (100%)	0	100	100
4	CD	277/277 (100%)	277 (100%)	0	100	100
5	BE	197/198 (100%)	197 (100%)	0	100	100
5	CE	197/198 (100%)	197 (100%)	0	100	100
6	BF	140/140 (100%)	140 (100%)	0	100	100
6	CF	140/140 (100%)	140 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
7	BG	148/148 (100%)	148 (100%)	0	100	100
7	CG	148/148 (100%)	148 (100%)	0	100	100
8	BH	88/91 (97%)	88 (100%)	0	100	100
8	CH	88/91 (97%)	88 (100%)	0	100	100
9	BI	132/141 (94%)	132 (100%)	0	100	100
9	CI	132/141 (94%)	132 (100%)	0	100	100
10	BJ	114/119 (96%)	114 (100%)	0	100	100
10	CJ	114/119 (96%)	114 (100%)	0	100	100
11	BK	109/109 (100%)	109 (100%)	0	100	100
11	CK	109/109 (100%)	109 (100%)	0	100	100
12	BL	108/108 (100%)	108 (100%)	0	100	100
12	CL	108/108 (100%)	108 (100%)	0	100	100
13	BM	166/166 (100%)	166 (100%)	0	100	100
13	CM	166/166 (100%)	166 (100%)	0	100	100
14	BN	143/143 (100%)	143 (100%)	0	100	100
14	CN	143/143 (100%)	143 (100%)	0	100	100
15	BO	104/104 (100%)	104 (100%)	0	100	100
15	CO	104/104 (100%)	104 (100%)	0	100	100
16	BP	123/123 (100%)	123 (100%)	0	100	100
16	CP	123/123 (100%)	123 (100%)	0	100	100
17	BQ	50/54 (93%)	50 (100%)	0	100	100
17	CQ	50/54 (93%)	50 (100%)	0	100	100
18	BR	85/86 (99%)	85 (100%)	0	100	100
18	CR	85/86 (99%)	85 (100%)	0	100	100
19	BS	124/124 (100%)	124 (100%)	0	100	100
19	CS	124/124 (100%)	124 (100%)	0	100	100
20	BT	73/73 (100%)	73 (100%)	0	100	100
20	CT	73/73 (100%)	73 (100%)	0	100	100
21	BU	100/100 (100%)	100 (100%)	0	100	100
21	CU	100/100 (100%)	100 (100%)	0	100	100
22	BV	54/54 (100%)	54 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
22	CV	54/54 (100%)	54 (100%)	0	100	100
23	BW	57/57 (100%)	57 (100%)	0	100	100
23	CW	57/57 (100%)	57 (100%)	0	100	100
24	BX	134/134 (100%)	134 (100%)	0	100	100
24	CX	134/134 (100%)	134 (100%)	0	100	100
25	BY	71/78 (91%)	71 (100%)	0	100	100
25	CY	71/78 (91%)	71 (100%)	0	100	100
26	BZ	76/78 (97%)	76 (100%)	0	100	100
26	CZ	76/78 (97%)	76 (100%)	0	100	100
27	Ba	109/135 (81%)	109 (100%)	0	100	100
27	Ca	109/135 (81%)	109 (100%)	0	100	100
28	Bb	76/76 (100%)	76 (100%)	0	100	100
28	Cb	76/76 (100%)	76 (100%)	0	100	100
29	Bc	49/49 (100%)	49 (100%)	0	100	100
29	Cc	49/49 (100%)	49 (100%)	0	100	100
30	Bd	48/48 (100%)	48 (100%)	0	100	100
30	Cd	48/48 (100%)	48 (100%)	0	100	100
31	Be	37/43 (86%)	37 (100%)	0	100	100
31	Ce	37/43 (86%)	37 (100%)	0	100	100
32	Bf	82/82 (100%)	82 (100%)	0	100	100
32	Cf	82/82 (100%)	82 (100%)	0	100	100
33	DA	447/447 (100%)	447 (100%)	0	100	100
33	DB	447/447 (100%)	446 (100%)	1 (0%)	92	97
34	DC	614/614 (100%)	614 (100%)	0	100	100
34	DD	614/614 (100%)	614 (100%)	0	100	100
All	All	8646/8774 (98%)	8645 (100%)	1 (0%)	100	100

All (1) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
33	DB	425	PRO

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (72)

such sidechains are listed below:

Mol	Chain	Res	Type
3	BC	48	HIS
3	BC	196	ASN
6	BF	20	GLN
6	BF	24	ASN
8	BH	15	ASN
9	BI	60	HIS
11	BK	78	GLN
12	BL	93	HIS
13	BM	117	ASN
14	BN	20	ASN
14	BN	108	GLN
14	BN	161	GLN
15	BO	59	ASN
19	BS	123	HIS
21	BU	25	GLN
25	BY	26	ASN
29	Bc	30	HIS
30	Bd	16	HIS
31	Be	13	ASN
32	Bf	29	GLN
3	CC	30	HIS
3	CC	48	HIS
3	CC	196	ASN
6	CF	20	GLN
6	CF	24	ASN
9	CI	60	HIS
11	CK	78	GLN
12	CL	93	HIS
14	CN	20	ASN
14	CN	108	GLN
14	CN	161	GLN
15	CO	59	ASN
16	CP	78	HIS
19	CS	123	HIS
21	CU	25	GLN
25	CY	26	ASN
27	Ca	88	GLN
29	Cc	30	HIS
30	Cd	16	HIS
31	Ce	13	ASN
32	Cf	29	GLN
33	DA	83	GLN

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Mol	Chain	Res	Type
33	DA	137	ASN
33	DA	217	HIS
33	DA	288	GLN
33	DA	376	GLN
33	DA	496	HIS
33	DA	501	ASN
33	DB	137	ASN
33	DB	238	GLN
33	DB	240	HIS
33	DB	247	ASN
33	DB	254	ASN
33	DB	257	GLN
33	DB	274	HIS
33	DB	288	GLN
33	DB	309	ASN
33	DB	496	HIS
33	DB	500	ASN
34	DC	174	HIS
34	DC	176	ASN
34	DC	254	HIS
34	DC	432	HIS
34	DC	580	ASN
34	DC	634	GLN
34	DC	653	ASN
34	DD	32	HIS
34	DD	263	GLN
34	DD	287	ASN
34	DD	441	HIS
34	DD	454	ASN
34	DD	591	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	BA	2881/2899 (99%)	466 (16%)	13 (0%)
1	CA	2881/2899 (99%)	466 (16%)	13 (0%)
2	BB	127/129 (98%)	15 (11%)	0
2	CB	127/129 (98%)	15 (11%)	0
All	All	6016/6056 (99%)	962 (15%)	26 (0%)

All (962) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	BA	7	U
1	BA	39	C
1	BA	56	A
1	BA	64	A
1	BA	67	A
1	BA	68	G
1	BA	84	U
1	BA	85	G
1	BA	110	A
1	BA	111	A
1	BA	112	U
1	BA	117	C
1	BA	118	C
1	BA	124	G
1	BA	126	A
1	BA	127	G
1	BA	134	U
1	BA	135	U
1	BA	136	C
1	BA	146	A
1	BA	161	A
1	BA	181	A
1	BA	186	A
1	BA	187	A
1	BA	193	U
1	BA	194	U
1	BA	198	A
1	BA	213	G
1	BA	231	G
1	BA	232	U
1	BA	243	U
1	BA	248	U
1	BA	250	G
1	BA	251	G
1	BA	266	G
1	BA	267	U
1	BA	268	A
1	BA	278	A
1	BA	287	G
1	BA	293	A
1	BA	295	A
1	BA	302	U
1	BA	303	U

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Mol	Chain	Res	Type
1	BA	312	C
1	BA	322	U
1	BA	326	G
1	BA	330	G
1	BA	331	A
1	BA	332	C
1	BA	339	U
1	BA	344	U
1	BA	368	U
1	BA	369	C
1	BA	374	A
1	BA	375	G
1	BA	390	U
1	BA	391	A
1	BA	396	G
1	BA	412	C
1	BA	421	C
1	BA	429	A
1	BA	443	A
1	BA	451	C
1	BA	455	A
1	BA	456	U
1	BA	457	A
1	BA	458	G
1	BA	467	C
1	BA	481	G
1	BA	498	G
1	BA	503	A
1	BA	504	A
1	BA	506	U
1	BA	530	A
1	BA	531	C
1	BA	532	G
1	BA	546	G
1	BA	549	U
1	BA	582	A
1	BA	598	C
1	BA	613	A
1	BA	618	U
1	BA	623	G
1	BA	624	A
1	BA	625	A

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Mol	Chain	Res	Type
1	BA	653	A
1	BA	654	U
1	BA	655	G
1	BA	665	U
1	BA	666	U
1	BA	667	A
1	BA	674	C
1	BA	688	G
1	BA	693	A
1	BA	694	U
1	BA	706	U
1	BA	708	U
1	BA	726	A
1	BA	727	C
1	BA	736	G
1	BA	745	G
1	BA	751	C
1	BA	752	G
1	BA	753	A
1	BA	758	A
1	BA	769	U
1	BA	795	G
1	BA	801	G
1	BA	813	A
1	BA	817	U
1	BA	818	A
1	BA	819	A
1	BA	827	U
1	BA	832	U
1	BA	837	A
1	BA	849	A
1	BA	850	C
1	BA	867	A
1	BA	869	U
1	BA	870	G
1	BA	890	G
1	BA	897	C
1	BA	912	C
1	BA	913	G
1	BA	935	C
1	BA	944	A
1	BA	946	U

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Mol	Chain	Res	Type
1	BA	952	A
1	BA	955	G
1	BA	956	A
1	BA	959	G
1	BA	964	U
1	BA	965	U
1	BA	966	C
1	BA	970	G
1	BA	971	G
1	BA	979	C
1	BA	981	C
1	BA	983	C
1	BA	984	G
1	BA	989	C
1	BA	991	U
1	BA	993	U
1	BA	994	C
1	BA	997	A
1	BA	1000	C
1	BA	1030	G
1	BA	1034	G
1	BA	1041	U
1	BA	1042	G
1	BA	1049	G
1	BA	1062	A
1	BA	1067	A
1	BA	1077	G
1	BA	1078	C
1	BA	1098	G
1	BA	1099	U
1	BA	1100	G
1	BA	1109	G
1	BA	1113	U
1	BA	1117	A
1	BA	1118	C
1	BA	1119	U
1	BA	1120	A
1	BA	1139	A
1	BA	1140	G
1	BA	1141	A
1	BA	1149	A
1	BA	1150	A

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Mol	Chain	Res	Type
1	BA	1151	G
1	BA	1152	G
1	BA	1153	U
1	BA	1154	U
1	BA	1156	G
1	BA	1160	A
1	BA	1161	G
1	BA	1163	A
1	BA	1164	G
1	BA	1166	A
1	BA	1171	C
1	BA	1172	C
1	BA	1174	U
1	BA	1175	U
1	BA	1180	G
1	BA	1181	A
1	BA	1182	G
1	BA	1183	U
1	BA	1188	A
1	BA	1189	A
1	BA	1193	C
1	BA	1196	A
1	BA	1197	C
1	BA	1198	C
1	BA	1202	C
1	BA	1203	G
1	BA	1205	G
1	BA	1225	G
1	BA	1227	C
1	BA	1235	A
1	BA	1267	G
1	BA	1273	C
1	BA	1277	U
1	BA	1315	A
1	BA	1326	C
1	BA	1328	G
1	BA	1337	C
1	BA	1341	A
1	BA	1344	C
1	BA	1361	C
1	BA	1363	A
1	BA	1364	A

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Mol	Chain	Res	Type
1	BA	1365	G
1	BA	1378	C
1	BA	1389	A
1	BA	1390	A
1	BA	1391	G
1	BA	1395	C
1	BA	1410	A
1	BA	1434	C
1	BA	1435	G
1	BA	1456	U
1	BA	1464	G
1	BA	1470	A
1	BA	1484	A
1	BA	1486	A
1	BA	1487	U
1	BA	1498	U
1	BA	1506	U
1	BA	1507	U
1	BA	1508	A
1	BA	1509	G
1	BA	1515	C
1	BA	1541	G
1	BA	1551	C
1	BA	1568	U
1	BA	1570	G
1	BA	1571	A
1	BA	1574	G
1	BA	1577	G
1	BA	1597	A
1	BA	1598	A
1	BA	1599	U
1	BA	1606	U
1	BA	1607	G
1	BA	1612	A
1	BA	1613	A
1	BA	1616	C
1	BA	1622	C
1	BA	1633	C
1	BA	1634	C
1	BA	1635	G
1	BA	1636	U
1	BA	1638	A

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Mol	Chain	Res	Type
1	BA	1651	A
1	BA	1667	A
1	BA	1679	G
1	BA	1682	C
1	BA	1698	A
1	BA	1704	U
1	BA	1705	G
1	BA	1706	U
1	BA	1710	A
1	BA	1711	G
1	BA	1712	U
1	BA	1733	G
1	BA	1755	G
1	BA	1799	G
1	BA	1800	G
1	BA	1809	A
1	BA	1818	U
1	BA	1820	C
1	BA	1822	A
1	BA	1836	C
1	BA	1847	G
1	BA	1856	C
1	BA	1857	A
1	BA	1869	C
1	BA	1883	U
1	BA	1884	A
1	BA	1899	U
1	BA	1924	A
1	BA	1928	G
1	BA	1929	G
1	BA	1932	U
1	BA	1933	A
1	BA	1940	A
1	BA	1941	C
1	BA	1943	C
1	BA	1944	U
1	BA	1945	C
1	BA	1946	U
1	BA	1947	U
1	BA	1948	A
1	BA	1951	G
1	BA	1954	G

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Mol	Chain	Res	Type
1	BA	1958	A
1	BA	1959	G
1	BA	1961	A
1	BA	1984	U
1	BA	1985	G
1	BA	1988	U
1	BA	1991	A
1	BA	1992	U
1	BA	1993	G
1	BA	2003	G
1	BA	2012	U
1	BA	2014	U
1	BA	2044	U
1	BA	2052	A
1	BA	2053	C
1	BA	2054	A
1	BA	2076	A
1	BA	2080	A
1	BA	2081	A
1	BA	2082	G
1	BA	2083	A
1	BA	2089	U
1	BA	2090	G
1	BA	2101	G
1	BA	2114	G
1	BA	2118	U
1	BA	2120	U
1	BA	2122	G
1	BA	2126	U
1	BA	2127	G
1	BA	2132	U
1	BA	2133	A
1	BA	2134	C
1	BA	2135	A
1	BA	2137	U
1	BA	2140	A
1	BA	2142	G
1	BA	2144	A
1	BA	2146	G
1	BA	2147	A
1	BA	2148	G
1	BA	2149	G

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Mol	Chain	Res	Type
1	BA	2153	C
1	BA	2154	G
1	BA	2155	A
1	BA	2160	G
1	BA	2161	G
1	BA	2162	U
1	BA	2164	C
1	BA	2167	C
1	BA	2168	A
1	BA	2169	G
1	BA	2172	U
1	BA	2173	U
1	BA	2174	C
1	BA	2175	G
1	BA	2179	A
1	BA	2180	G
1	BA	2181	C
1	BA	2182	C
1	BA	2183	G
1	BA	2186	C
1	BA	2187	U
1	BA	2188	U
1	BA	2190	G
1	BA	2192	A
1	BA	2194	A
1	BA	2195	C
1	BA	2196	U
1	BA	2198	C
1	BA	2199	C
1	BA	2201	U
1	BA	2202	U
1	BA	2203	C
1	BA	2205	G
1	BA	2206	G
1	BA	2210	U
1	BA	2219	A
1	BA	2229	A
1	BA	2234	A
1	BA	2235	C
1	BA	2247	G
1	BA	2248	G
1	BA	2267	A

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Mol	Chain	Res	Type
1	BA	2289	G
1	BA	2292	G
1	BA	2293	C
1	BA	2297	A
1	BA	2315	U
1	BA	2316	C
1	BA	2319	A
1	BA	2320	A
1	BA	2330	A
1	BA	2332	A
1	BA	2345	A
1	BA	2346	A
1	BA	2357	C
1	BA	2364	C
1	BA	2365	A
1	BA	2366	G
1	BA	2367	C
1	BA	2368	A
1	BA	2369	U
1	BA	2377	G
1	BA	2378	A
1	BA	2379	U
1	BA	2380	G
1	BA	2396	G
1	BA	2398	U
1	BA	2420	U
1	BA	2438	G
1	BA	2443	A
1	BA	2444	A
1	BA	2446	A
1	BA	2452	C
1	BA	2459	A
1	BA	2464	U
1	BA	2479	A
1	BA	2485	A
1	BA	2487	A
1	BA	2489	A
1	BA	2509	C
1	BA	2513	G
1	BA	2517	U
1	BA	2529	A
1	BA	2540	G

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Mol	Chain	Res	Type
1	BA	2565	U
1	BA	2577	A
1	BA	2578	G
1	BA	2584	C
1	BA	2589	G
1	BA	2593	G
1	BA	2610	G
1	BA	2613	A
1	BA	2620	U
1	BA	2621	U
1	BA	2632	A
1	BA	2636	G
1	BA	2641	C
1	BA	2642	G
1	BA	2651	G
1	BA	2657	G
1	BA	2677	A
1	BA	2701	U
1	BA	2702	A
1	BA	2724	G
1	BA	2736	C
1	BA	2742	C
1	BA	2743	A
1	BA	2757	A
1	BA	2773	A
1	BA	2774	A
1	BA	2780	A
1	BA	2785	A
1	BA	2786	A
1	BA	2787	A
1	BA	2799	U
1	BA	2811	U
1	BA	2850	G
1	BA	2853	A
1	BA	2854	A
1	BA	2864	C
1	BA	2870	G
1	BA	2877	C
1	BA	2883	A
1	BA	2889	U
1	BA	2890	C
1	BA	2892	U

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Mol	Chain	Res	Type
1	BA	2894	U
1	BA	2895	C
1	BA	2897	C
2	BB	10	G
2	BB	25	G
2	BB	26	C
2	BB	36	A
2	BB	42	C
2	BB	46	A
2	BB	57	U
2	BB	58	A
2	BB	69	C
2	BB	80	G
2	BB	110	U
2	BB	115	C
2	BB	116	G
2	BB	125	C
2	BB	128	A
1	CA	7	U
1	CA	39	C
1	CA	56	A
1	CA	64	A
1	CA	67	A
1	CA	68	G
1	CA	84	U
1	CA	85	G
1	CA	110	A
1	CA	111	A
1	CA	112	U
1	CA	117	C
1	CA	118	C
1	CA	124	G
1	CA	126	A
1	CA	127	G
1	CA	134	U
1	CA	135	U
1	CA	136	C
1	CA	146	A
1	CA	161	A
1	CA	181	A
1	CA	186	A
1	CA	187	A

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Mol	Chain	Res	Type
1	CA	193	U
1	CA	194	U
1	CA	198	A
1	CA	213	G
1	CA	231	G
1	CA	232	U
1	CA	243	U
1	CA	248	U
1	CA	250	G
1	CA	251	G
1	CA	266	G
1	CA	267	U
1	CA	268	A
1	CA	278	A
1	CA	287	G
1	CA	293	A
1	CA	295	A
1	CA	302	U
1	CA	303	U
1	CA	312	C
1	CA	322	U
1	CA	326	G
1	CA	330	G
1	CA	331	A
1	CA	332	C
1	CA	339	U
1	CA	344	U
1	CA	368	U
1	CA	369	C
1	CA	374	A
1	CA	375	G
1	CA	390	U
1	CA	391	A
1	CA	396	G
1	CA	412	C
1	CA	421	C
1	CA	429	A
1	CA	443	A
1	CA	451	C
1	CA	455	A
1	CA	456	U
1	CA	457	A

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Mol	Chain	Res	Type
1	CA	458	G
1	CA	467	C
1	CA	481	G
1	CA	498	G
1	CA	503	A
1	CA	504	A
1	CA	506	U
1	CA	530	A
1	CA	531	C
1	CA	532	G
1	CA	546	G
1	CA	549	U
1	CA	582	A
1	CA	598	C
1	CA	613	A
1	CA	618	U
1	CA	623	G
1	CA	624	A
1	CA	625	A
1	CA	653	A
1	CA	654	U
1	CA	655	G
1	CA	665	U
1	CA	666	U
1	CA	667	A
1	CA	674	C
1	CA	688	G
1	CA	693	A
1	CA	694	U
1	CA	706	U
1	CA	708	U
1	CA	726	A
1	CA	727	C
1	CA	736	G
1	CA	745	G
1	CA	751	C
1	CA	752	G
1	CA	753	A
1	CA	758	A
1	CA	769	U
1	CA	795	G
1	CA	801	G

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Mol	Chain	Res	Type
1	CA	813	A
1	CA	817	U
1	CA	818	A
1	CA	819	A
1	CA	827	U
1	CA	832	U
1	CA	837	A
1	CA	849	A
1	CA	850	C
1	CA	867	A
1	CA	869	U
1	CA	870	G
1	CA	890	G
1	CA	897	C
1	CA	912	C
1	CA	913	G
1	CA	935	C
1	CA	944	A
1	CA	946	U
1	CA	952	A
1	CA	955	G
1	CA	956	A
1	CA	959	G
1	CA	964	U
1	CA	965	U
1	CA	966	C
1	CA	970	G
1	CA	971	G
1	CA	979	C
1	CA	981	C
1	CA	983	C
1	CA	984	G
1	CA	989	C
1	CA	991	U
1	CA	993	U
1	CA	994	C
1	CA	997	A
1	CA	1000	C
1	CA	1030	G
1	CA	1034	G
1	CA	1041	U
1	CA	1042	G

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Mol	Chain	Res	Type
1	CA	1049	G
1	CA	1062	A
1	CA	1067	A
1	CA	1077	G
1	CA	1078	C
1	CA	1098	G
1	CA	1099	U
1	CA	1100	G
1	CA	1109	G
1	CA	1113	U
1	CA	1117	A
1	CA	1118	C
1	CA	1119	U
1	CA	1120	A
1	CA	1139	A
1	CA	1140	G
1	CA	1141	A
1	CA	1149	A
1	CA	1150	A
1	CA	1151	G
1	CA	1152	G
1	CA	1153	U
1	CA	1154	U
1	CA	1156	G
1	CA	1160	A
1	CA	1161	G
1	CA	1163	A
1	CA	1164	G
1	CA	1166	A
1	CA	1171	C
1	CA	1172	C
1	CA	1174	U
1	CA	1175	U
1	CA	1180	G
1	CA	1181	A
1	CA	1182	G
1	CA	1183	U
1	CA	1188	A
1	CA	1189	A
1	CA	1193	C
1	CA	1196	A
1	CA	1197	C

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Mol	Chain	Res	Type
1	CA	1198	C
1	CA	1202	C
1	CA	1203	G
1	CA	1205	G
1	CA	1225	G
1	CA	1227	C
1	CA	1235	A
1	CA	1267	G
1	CA	1273	C
1	CA	1277	U
1	CA	1315	A
1	CA	1326	C
1	CA	1328	G
1	CA	1337	C
1	CA	1341	A
1	CA	1344	C
1	CA	1361	C
1	CA	1363	A
1	CA	1364	A
1	CA	1365	G
1	CA	1378	C
1	CA	1389	A
1	CA	1390	A
1	CA	1391	G
1	CA	1395	C
1	CA	1410	A
1	CA	1434	C
1	CA	1435	G
1	CA	1456	U
1	CA	1464	G
1	CA	1470	A
1	CA	1484	A
1	CA	1486	A
1	CA	1487	U
1	CA	1498	U
1	CA	1506	U
1	CA	1507	U
1	CA	1508	A
1	CA	1509	G
1	CA	1515	C
1	CA	1541	G
1	CA	1551	C

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Mol	Chain	Res	Type
1	CA	1568	U
1	CA	1570	G
1	CA	1571	A
1	CA	1574	G
1	CA	1577	G
1	CA	1597	A
1	CA	1598	A
1	CA	1599	U
1	CA	1606	U
1	CA	1607	G
1	CA	1612	A
1	CA	1613	A
1	CA	1616	C
1	CA	1622	C
1	CA	1633	C
1	CA	1634	C
1	CA	1635	G
1	CA	1636	U
1	CA	1638	A
1	CA	1651	A
1	CA	1667	A
1	CA	1679	G
1	CA	1682	C
1	CA	1698	A
1	CA	1704	U
1	CA	1705	G
1	CA	1706	U
1	CA	1710	A
1	CA	1711	G
1	CA	1712	U
1	CA	1733	G
1	CA	1755	G
1	CA	1799	G
1	CA	1800	G
1	CA	1809	A
1	CA	1818	U
1	CA	1820	C
1	CA	1822	A
1	CA	1836	C
1	CA	1847	G
1	CA	1856	C
1	CA	1857	A

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Mol	Chain	Res	Type
1	CA	1869	C
1	CA	1883	U
1	CA	1884	A
1	CA	1899	U
1	CA	1924	A
1	CA	1928	G
1	CA	1929	G
1	CA	1932	U
1	CA	1933	A
1	CA	1940	A
1	CA	1941	C
1	CA	1943	C
1	CA	1944	U
1	CA	1945	C
1	CA	1946	U
1	CA	1947	U
1	CA	1948	A
1	CA	1951	G
1	CA	1954	G
1	CA	1958	A
1	CA	1959	G
1	CA	1961	A
1	CA	1984	U
1	CA	1985	G
1	CA	1988	U
1	CA	1991	A
1	CA	1992	U
1	CA	1993	G
1	CA	2003	G
1	CA	2012	U
1	CA	2014	U
1	CA	2044	U
1	CA	2052	A
1	CA	2053	C
1	CA	2054	A
1	CA	2076	A
1	CA	2080	A
1	CA	2081	A
1	CA	2082	G
1	CA	2083	A
1	CA	2089	U
1	CA	2090	G

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Mol	Chain	Res	Type
1	CA	2101	G
1	CA	2114	G
1	CA	2118	U
1	CA	2120	U
1	CA	2122	G
1	CA	2126	U
1	CA	2127	G
1	CA	2132	U
1	CA	2133	A
1	CA	2134	C
1	CA	2135	A
1	CA	2137	U
1	CA	2140	A
1	CA	2142	G
1	CA	2144	A
1	CA	2146	G
1	CA	2147	A
1	CA	2148	G
1	CA	2149	G
1	CA	2153	C
1	CA	2154	G
1	CA	2155	A
1	CA	2160	G
1	CA	2161	G
1	CA	2162	U
1	CA	2164	C
1	CA	2167	C
1	CA	2168	A
1	CA	2169	G
1	CA	2172	U
1	CA	2173	U
1	CA	2174	C
1	CA	2175	G
1	CA	2179	A
1	CA	2180	G
1	CA	2181	C
1	CA	2182	C
1	CA	2183	G
1	CA	2186	C
1	CA	2187	U
1	CA	2188	U
1	CA	2190	G

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Mol	Chain	Res	Type
1	CA	2192	A
1	CA	2194	A
1	CA	2195	C
1	CA	2196	U
1	CA	2198	C
1	CA	2199	C
1	CA	2201	U
1	CA	2202	U
1	CA	2203	C
1	CA	2205	G
1	CA	2206	G
1	CA	2210	U
1	CA	2219	A
1	CA	2229	A
1	CA	2234	A
1	CA	2235	C
1	CA	2247	G
1	CA	2248	G
1	CA	2267	A
1	CA	2289	G
1	CA	2292	G
1	CA	2293	C
1	CA	2297	A
1	CA	2315	U
1	CA	2316	C
1	CA	2319	A
1	CA	2320	A
1	CA	2330	A
1	CA	2332	A
1	CA	2345	A
1	CA	2346	A
1	CA	2357	C
1	CA	2364	C
1	CA	2365	A
1	CA	2366	G
1	CA	2367	C
1	CA	2368	A
1	CA	2369	U
1	CA	2377	G
1	CA	2378	A
1	CA	2379	U
1	CA	2380	G

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Mol	Chain	Res	Type
1	CA	2396	G
1	CA	2398	U
1	CA	2420	U
1	CA	2438	G
1	CA	2443	A
1	CA	2444	A
1	CA	2446	A
1	CA	2452	C
1	CA	2459	A
1	CA	2464	U
1	CA	2479	A
1	CA	2485	A
1	CA	2487	A
1	CA	2489	A
1	CA	2509	C
1	CA	2513	G
1	CA	2517	U
1	CA	2529	A
1	CA	2540	G
1	CA	2565	U
1	CA	2577	A
1	CA	2578	G
1	CA	2584	C
1	CA	2589	G
1	CA	2593	G
1	CA	2610	G
1	CA	2613	A
1	CA	2620	U
1	CA	2621	U
1	CA	2632	A
1	CA	2636	G
1	CA	2641	C
1	CA	2642	G
1	CA	2651	G
1	CA	2657	G
1	CA	2677	A
1	CA	2701	U
1	CA	2702	A
1	CA	2724	G
1	CA	2736	C
1	CA	2742	C
1	CA	2743	A

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Mol	Chain	Res	Type
1	CA	2757	A
1	CA	2773	A
1	CA	2774	A
1	CA	2780	A
1	CA	2785	A
1	CA	2786	A
1	CA	2787	A
1	CA	2799	U
1	CA	2811	U
1	CA	2850	G
1	CA	2853	A
1	CA	2854	A
1	CA	2864	C
1	CA	2870	G
1	CA	2877	C
1	CA	2883	A
1	CA	2889	U
1	CA	2890	C
1	CA	2892	U
1	CA	2894	U
1	CA	2895	C
1	CA	2897	C
2	CB	10	G
2	CB	25	G
2	CB	26	C
2	CB	36	A
2	CB	42	C
2	CB	46	A
2	CB	57	U
2	CB	58	A
2	CB	69	C
2	CB	80	G
2	CB	110	U
2	CB	115	C
2	CB	116	G
2	CB	125	C
2	CB	128	A

All (26) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	BA	134	U

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Mol	Chain	Res	Type
1	BA	455	A
1	BA	817	U
1	BA	826	U
1	BA	869	U
1	BA	1160	A
1	BA	1224	U
1	BA	1633	C
1	BA	1634	C
1	BA	1984	U
1	BA	2172	U
1	BA	2365	A
1	BA	2463	U
1	CA	134	U
1	CA	455	A
1	CA	817	U
1	CA	826	U
1	CA	869	U
1	CA	1160	A
1	CA	1224	U
1	CA	1633	C
1	CA	1634	C
1	CA	1984	U
1	CA	2172	U
1	CA	2365	A
1	CA	2463	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 oligosaccharides 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.

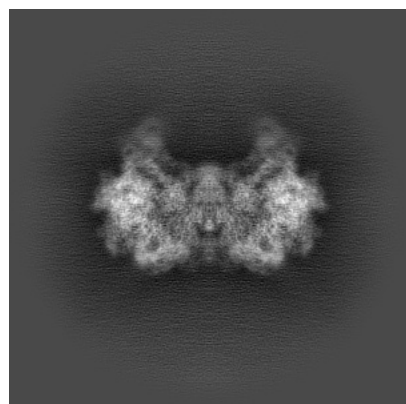
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-70864. These allow visual inspection of the internal detail of the map and identification of artifacts.

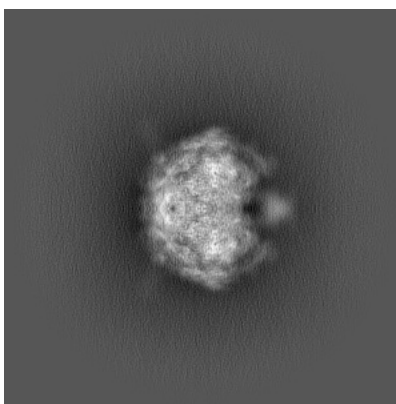
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

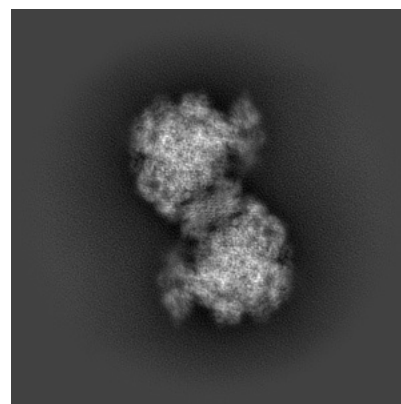
6.1.1 Primary map



X

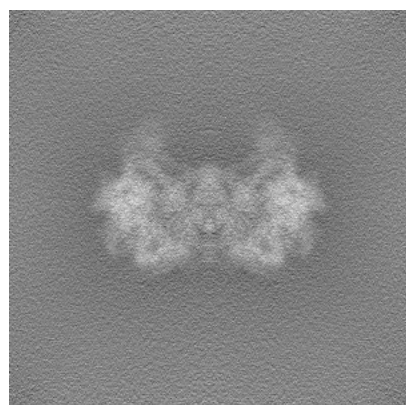


Y

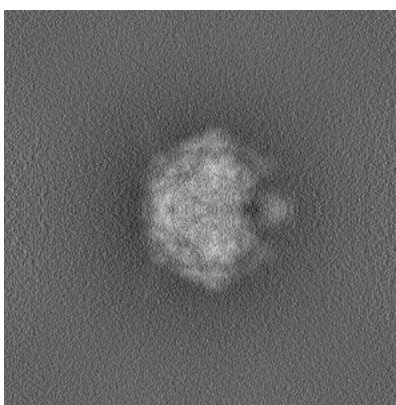


Z

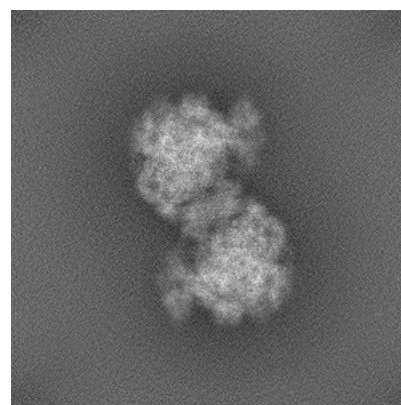
6.1.2 Raw map



X



Y

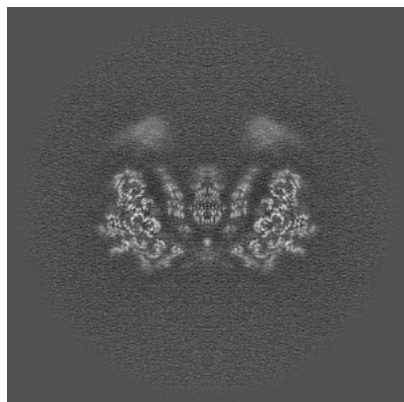


Z

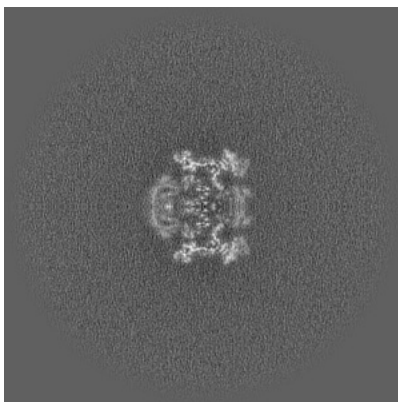
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

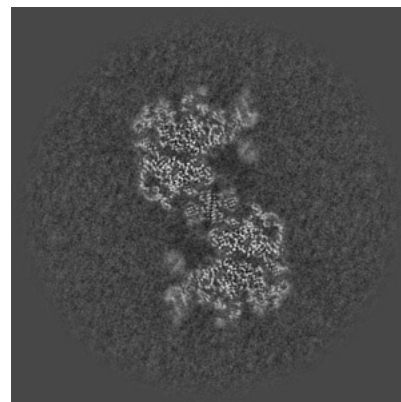
6.2.1 Primary map



X Index: 300

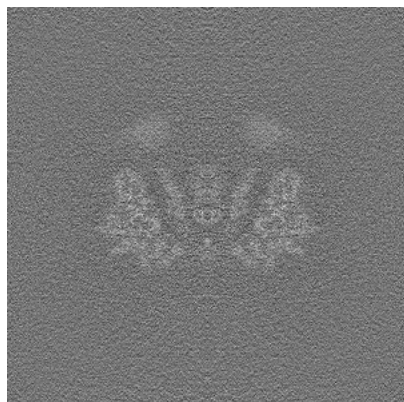


Y Index: 300

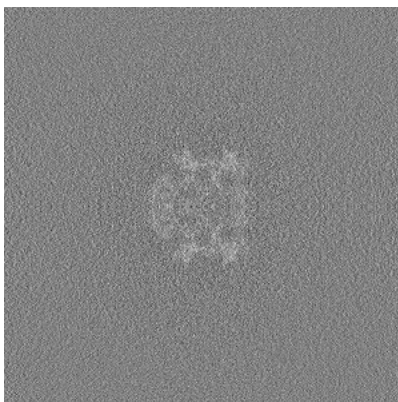


Z Index: 300

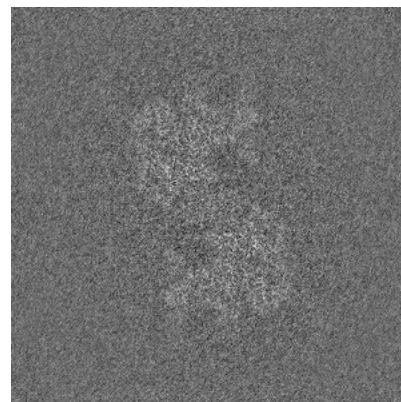
6.2.2 Raw map



X Index: 300



Y Index: 300

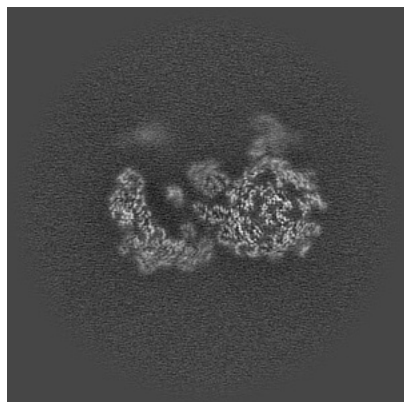


Z Index: 300

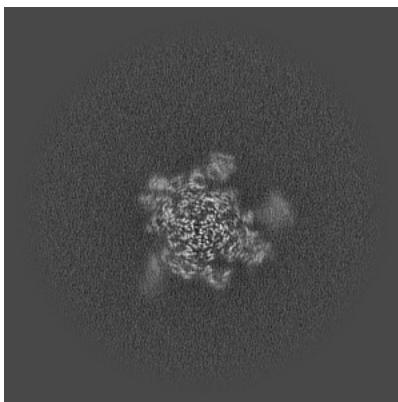
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

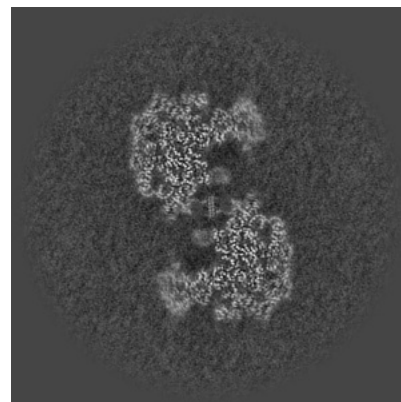
6.3.1 Primary map



X Index: 285

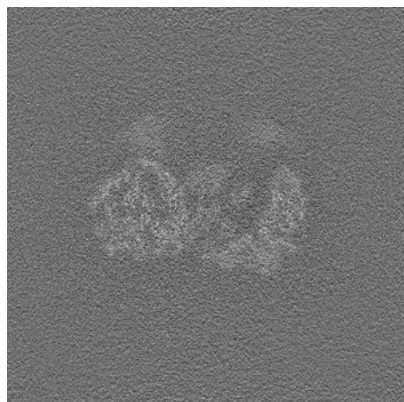


Y Index: 400

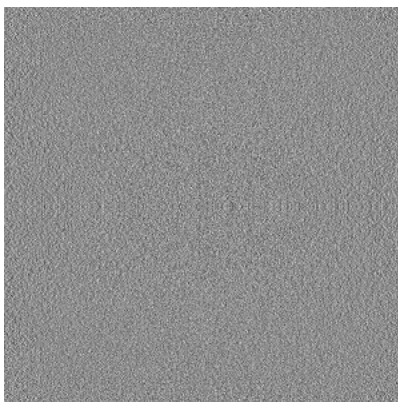


Z Index: 313

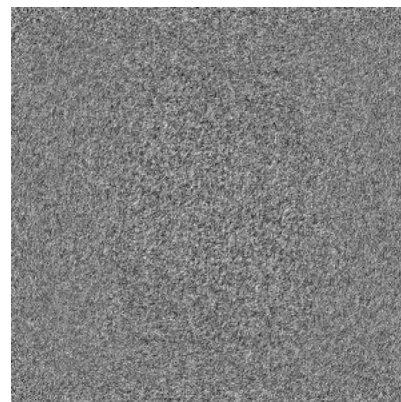
6.3.2 Raw map



X Index: 310



Y Index: 0

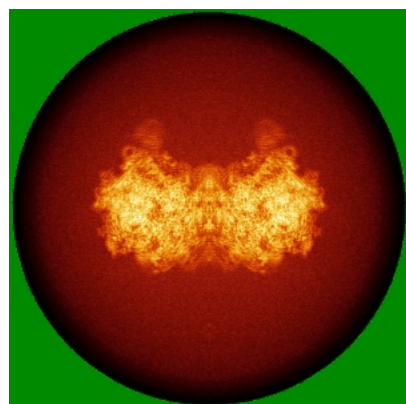


Z Index: 0

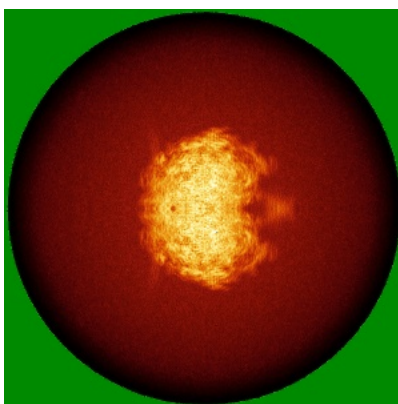
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

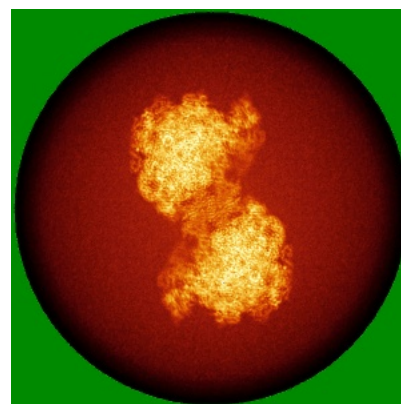
6.4.1 Primary map



X

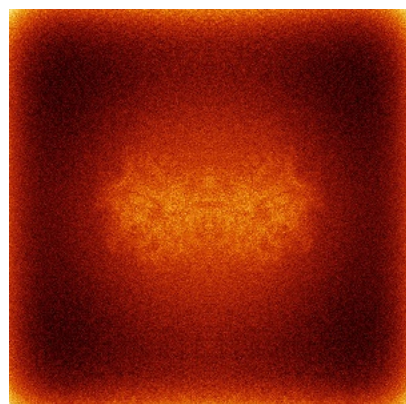


Y

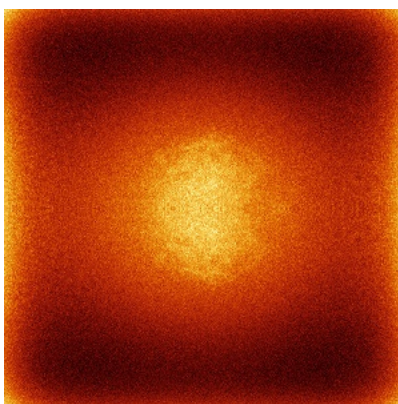


Z

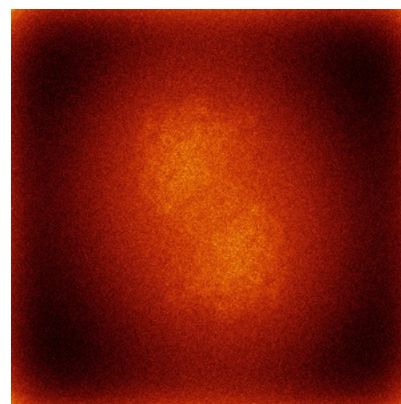
6.4.2 Raw map



X



Y

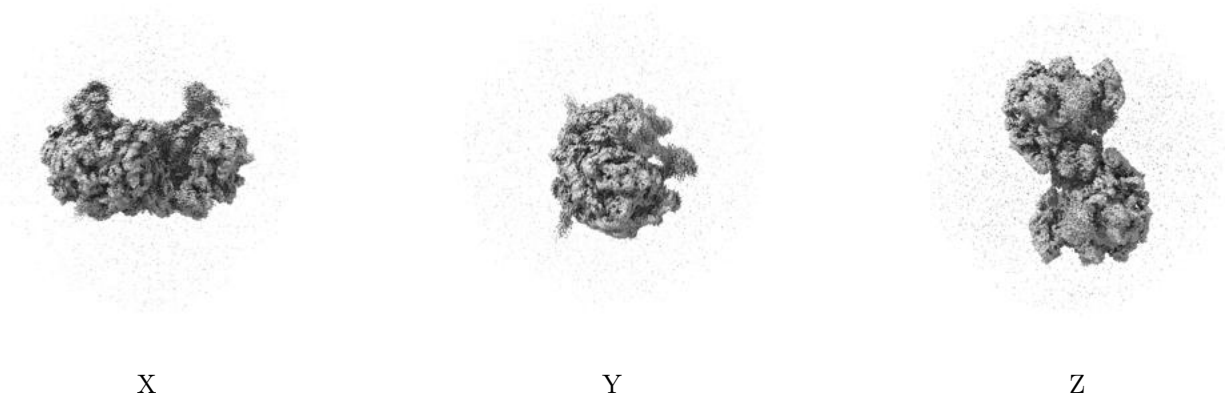


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

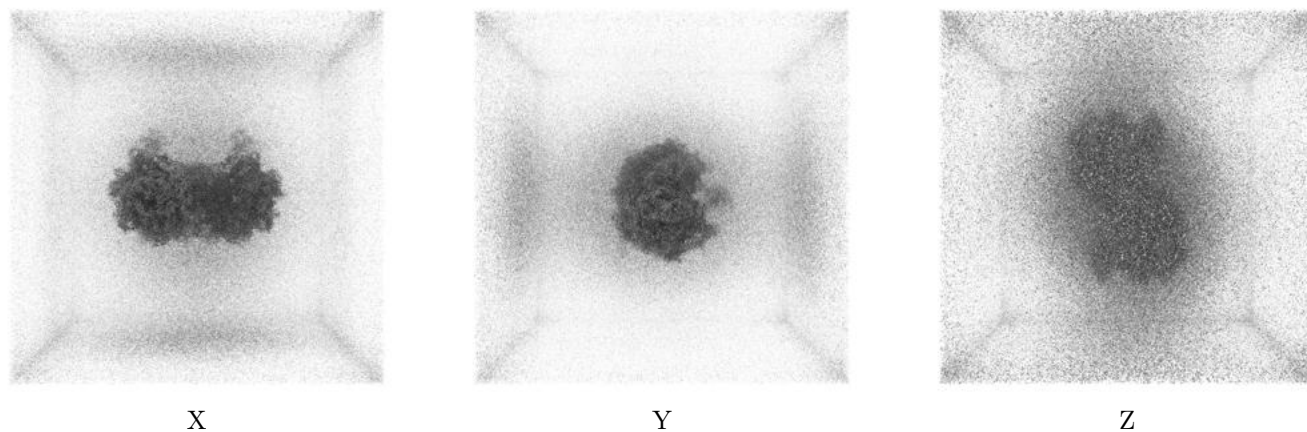
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.311. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

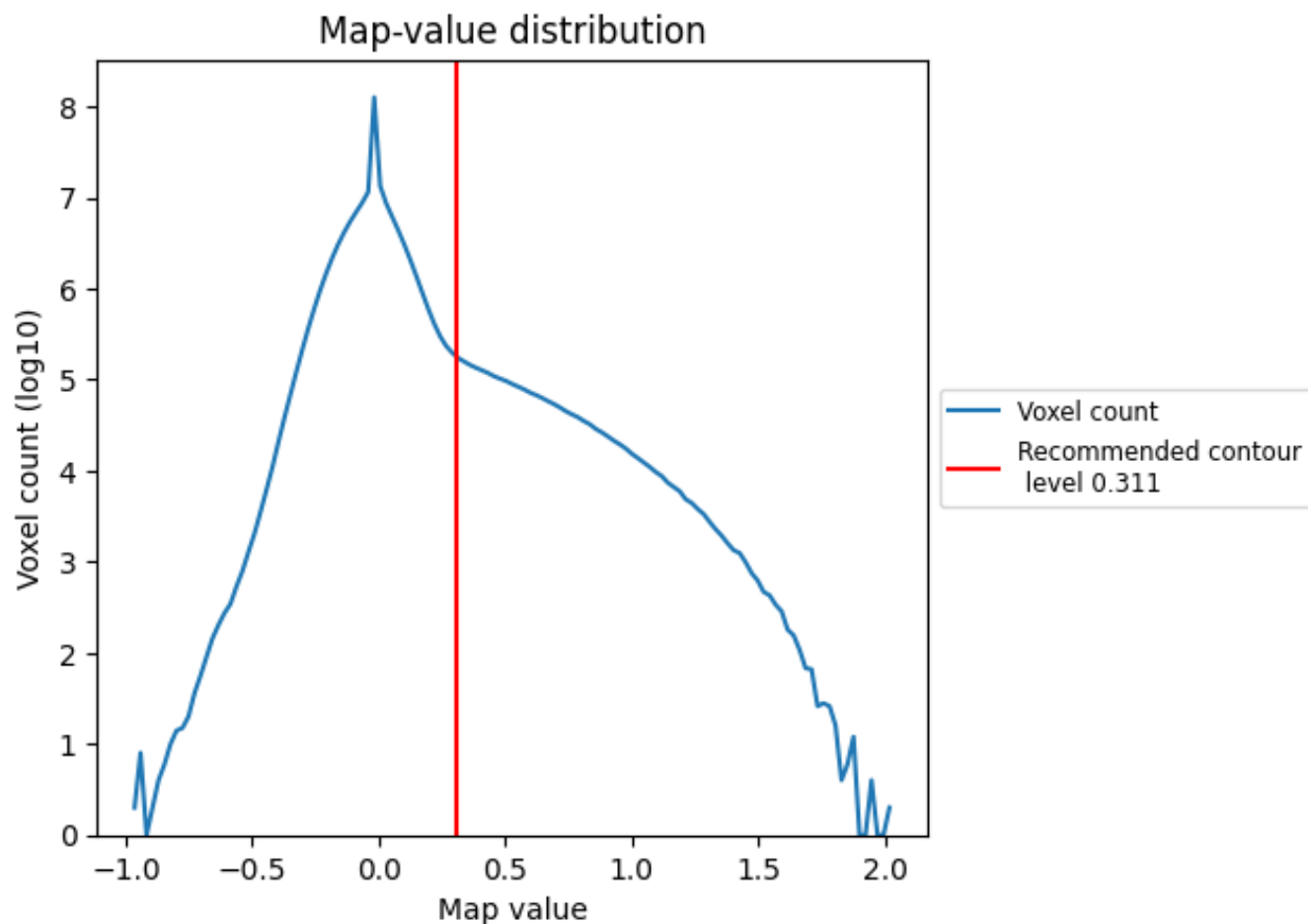
6.6 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis [i](#)

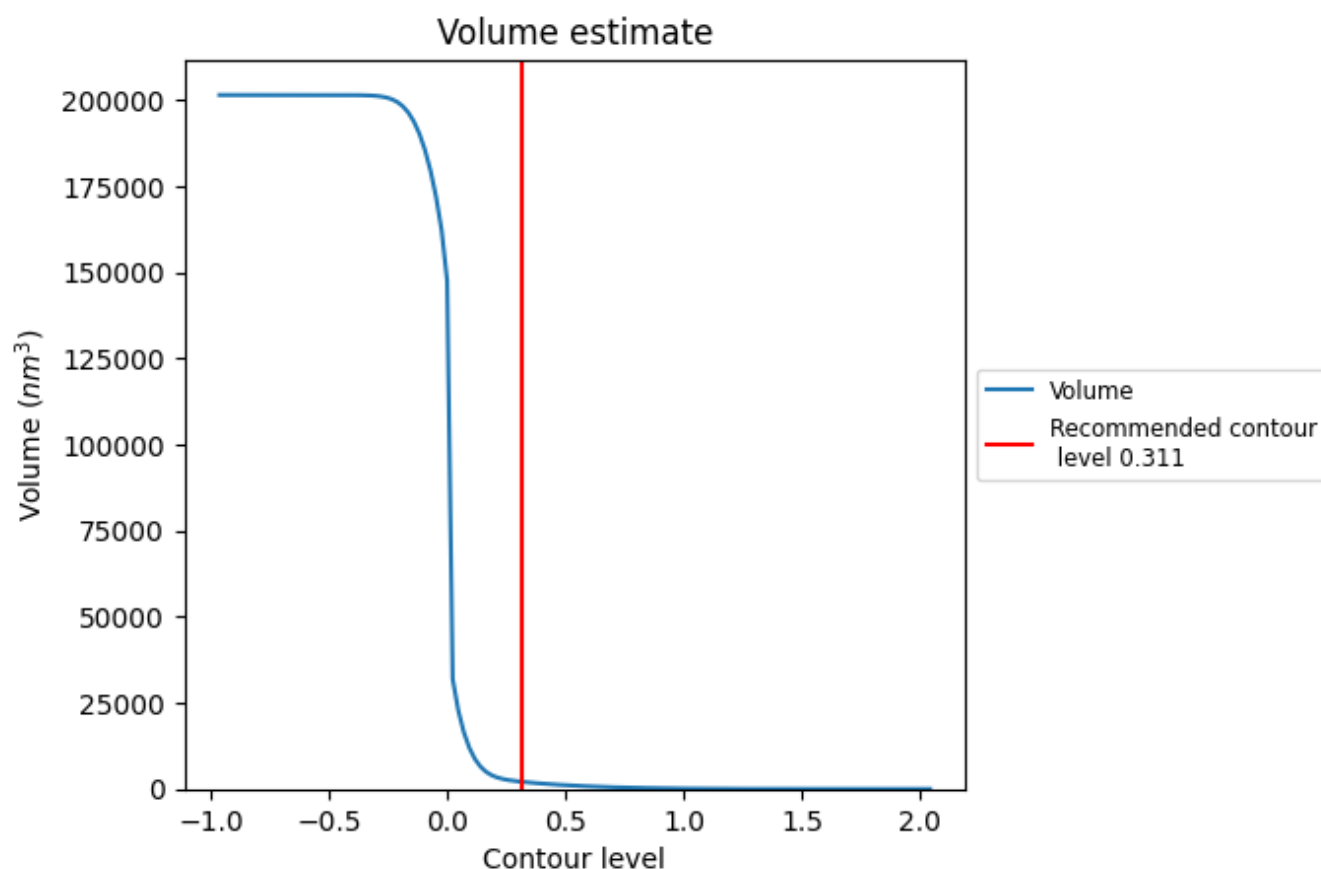
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

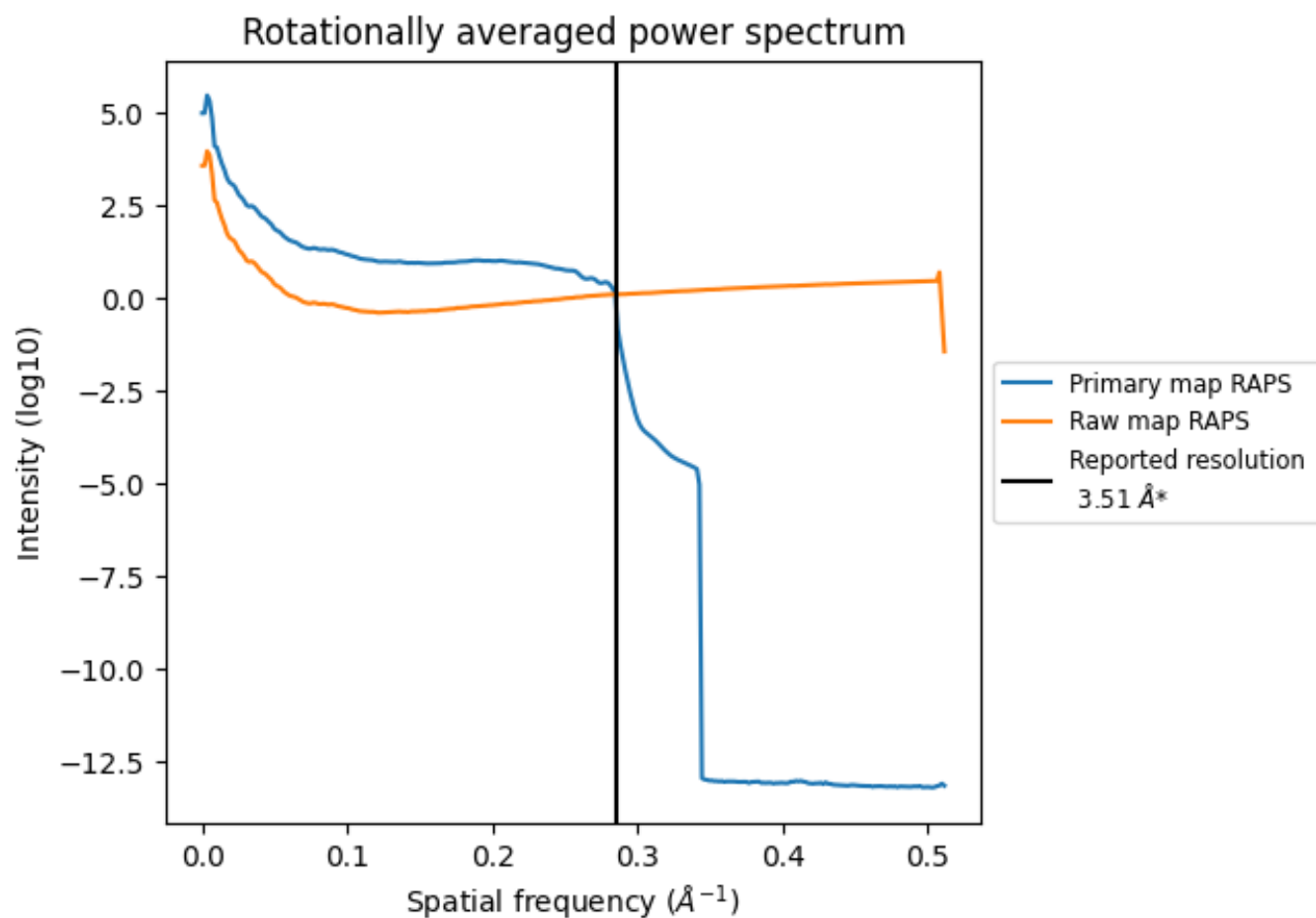
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2105 nm^3 ; this corresponds to an approximate mass of 1902 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ

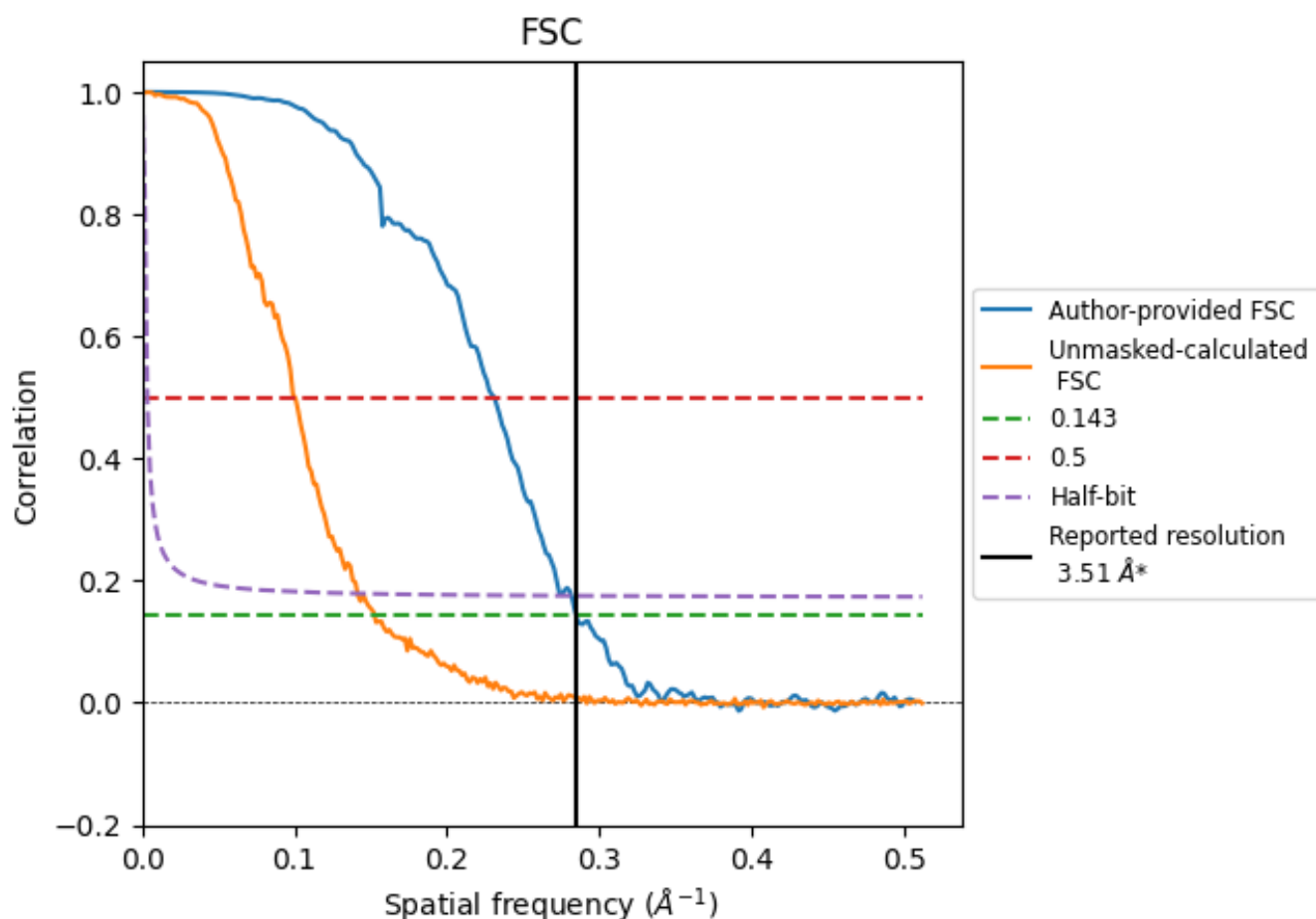


*Reported resolution corresponds to spatial frequency of 0.285 Å⁻¹

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.285 \AA^{-1}

8.2 Resolution estimates [i](#)

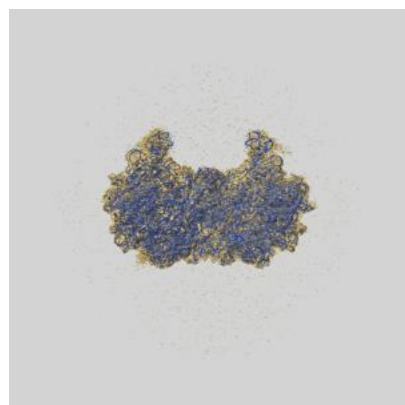
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.51	-	-
Author-provided FSC curve	3.51	4.33	3.55
Unmasked-calculated*	6.56	9.98	7.08

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 6.56 differs from the reported value 3.51 by more than 10 %

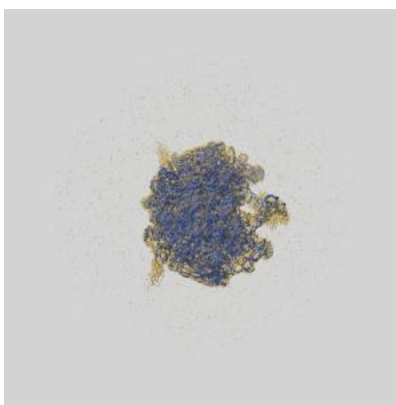
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-70864 and PDB model 9OU7. Per-residue inclusion information can be found in [section 3](#) on [page 14](#).

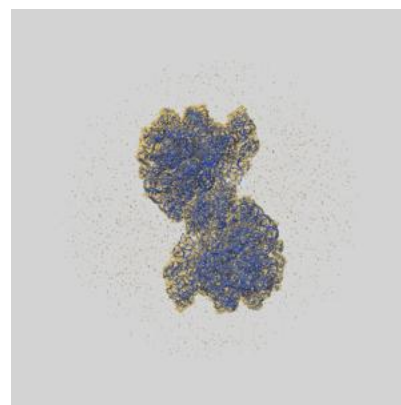
9.1 Map-model overlay [i](#)



X



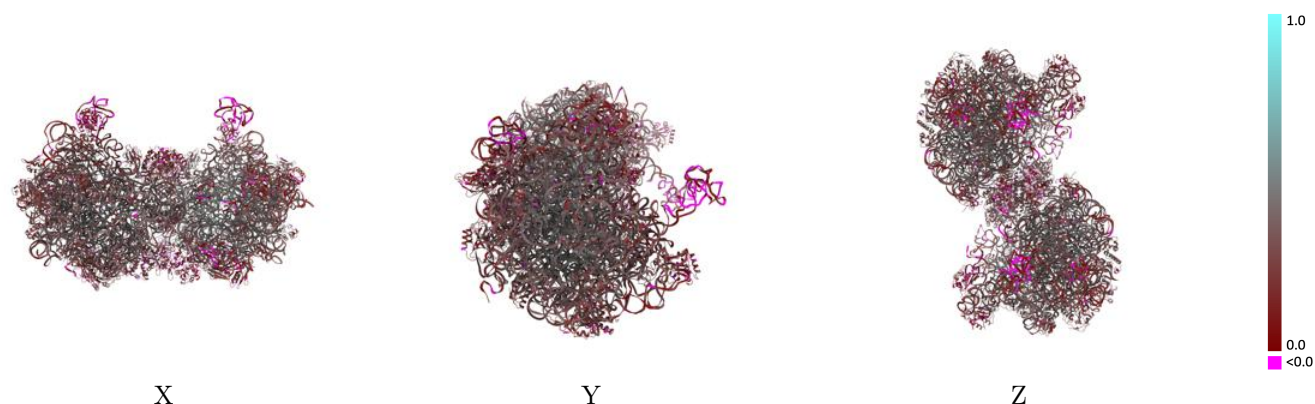
Y



Z

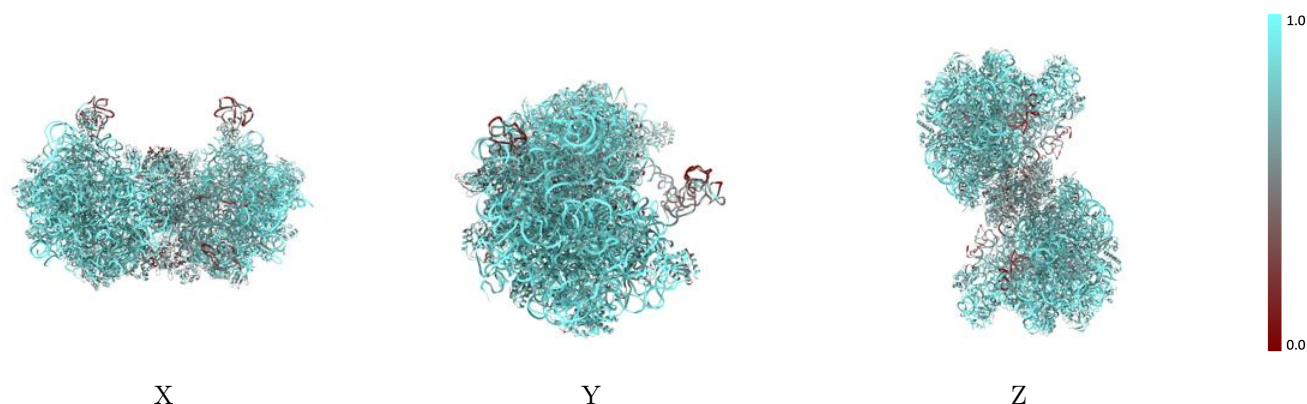
The images above show the 3D surface view of the map at the recommended contour level 0.311 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



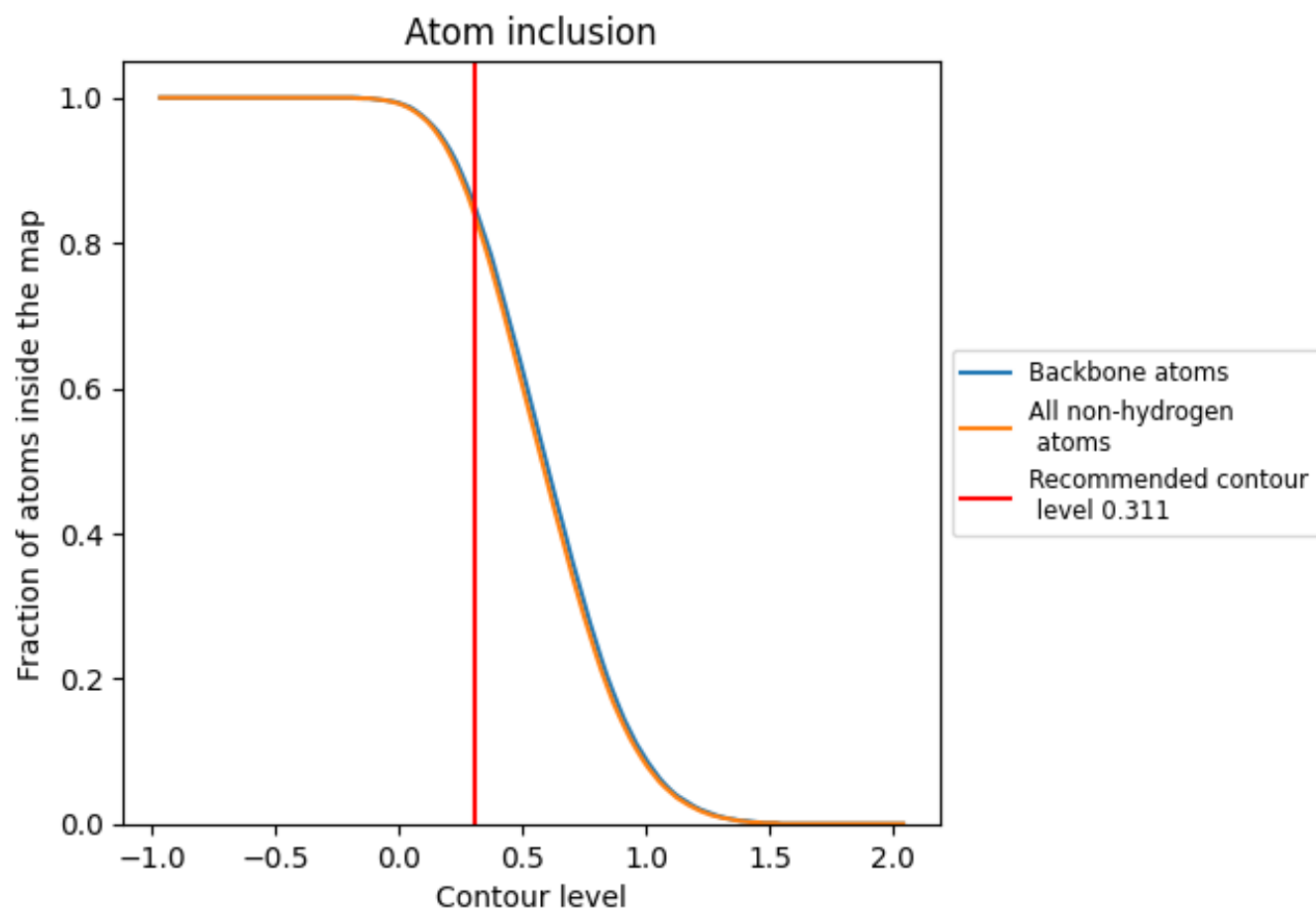
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.311).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 85% of all backbone atoms, 84% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ





































































The table lists the average atom inclusion at the recommended contour level (0.311) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8350	 0.3340
BA	 0.9080	 0.3570
BB	 0.9530	 0.3130
BC	 0.7780	 0.3710
BD	 0.7370	 0.3260
BE	 0.8060	 0.3590
BF	 0.6710	 0.1710
BG	 0.6570	 0.2440
BH	 0.5940	 0.1630
BI	 0.7770	 0.3720
BJ	 0.7410	 0.3250
BK	 0.6940	 0.3840
BL	 0.8090	 0.3460
BM	 0.7500	 0.3340
BN	 0.7960	 0.2580
BO	 0.8150	 0.3520
BP	 0.7980	 0.3740
BQ	 0.7260	 0.3040
BR	 0.7830	 0.3960
BS	 0.7610	 0.3610
BT	 0.7470	 0.3060
BU	 0.7750	 0.2700
BV	 0.6920	 0.3300
BW	 0.7550	 0.2690
BX	 0.8120	 0.3640
BY	 0.6560	 0.1930
BZ	 0.7860	 0.3640
Ba	 0.8080	 0.3770
Bb	 0.7280	 0.3130
Bc	 0.8210	 0.4500
Bd	 0.8160	 0.3980
Be	 0.6600	 0.2650
Bf	 0.7540	 0.3160
CA	 0.9060	 0.3560
CB	 0.9520	 0.3090



Continued on next page...

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Chain	Atom inclusion	Q-score
CC	 0.7860	 0.3730
CD	 0.7330	 0.3260
CE	 0.8120	 0.3580
CF	 0.6760	 0.1750
CG	 0.6520	 0.2370
CH	 0.6000	 0.1620
CI	 0.7730	 0.3650
CJ	 0.7390	 0.3240
CK	 0.7040	 0.3780
CL	 0.8020	 0.3470
CM	 0.7500	 0.3330
CN	 0.7800	 0.2580
CO	 0.8150	 0.3460
CP	 0.7920	 0.3740
CQ	 0.7000	 0.3000
CR	 0.7950	 0.3900
CS	 0.7550	 0.3630
CT	 0.7500	 0.3030
CU	 0.7750	 0.2660
CV	 0.6900	 0.3270
CW	 0.7490	 0.2680
CX	 0.8110	 0.3640
CY	 0.6560	 0.1960
CZ	 0.7720	 0.3670
Ca	 0.8040	 0.3780
Cb	 0.7110	 0.3160
Cc	 0.8260	 0.4500
Cd	 0.8070	 0.3980
Ce	 0.6570	 0.2570
Cf	 0.7560	 0.3190
DA	 0.5900	 0.2490
DB	 0.5920	 0.2570
DC	 0.5700	 0.2200
DD	 0.5680	 0.2210