



Full wwPDB X-ray Structure Validation Report

Jun 16, 2014 – 10:05 PM BST

PDB ID : 4V4I
Title : Crystal Structure of a 70S Ribosome-tRNA Complex Reveals Functional Interactions and Rearrangements.
Authors : Korostelev, A.; Trakhanov, S.; Laurberg, M.; Noller, H.F.
Deposited on : 2007-02-15
Resolution : 3.71 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

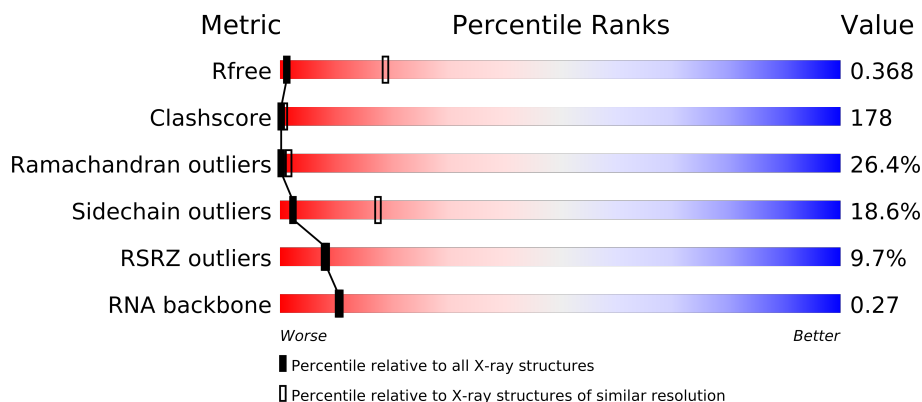
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.16 November 2013
Xtriage (Phenix) : dev-1323
EDS : stable23397
Percentile statistics : 21963
Refmac : 5.8.0049
CCP4 : 6.3.0 (Settle)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : stable23397

1 Overall quality at a glance




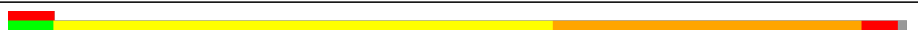

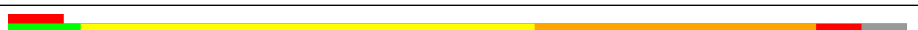
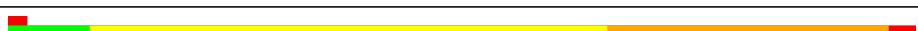
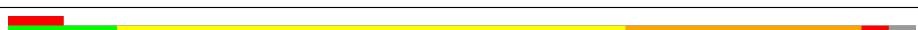




The reported resolution of this entry is 3.71 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	66092	1103 (4.04-3.40)
Clashscore	79885	1026 (3.98-3.46)
Ramachandran outliers	78287	1082 (4.00-3.44)
Sidechain outliers	78261	1075 (4.00-3.44)
RSRZ outliers	66119	1104 (4.04-3.40)
RNA backbone	1838	1008 (4.52-2.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	w	2889	
2	x	121	
3	A	229	
4	B	276	
5	C	206	
6	D	205	
7	E	182	
8	F	180	
9	G	148	
10	H	163	
11	I	122	
12	J	150	

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Mol	Chain	Length	Quality of chain
13	K	141	
14	L	118	
15	M	112	
16	N	146	
17	O	118	
18	P	101	
19	Q	113	
20	R	96	
21	S	110	
22	T	206	
23	U	85	
24	V	98	
25	W	72	
26	X	60	
27	Y	60	
28	Z	49	
29	a	65	
30	b	37	
31	y	1522	
32	z	76	
33	0	76	
34	l	10	
35	c	256	
36	d	239	
37	e	209	
38	f	162	
39	g	101	
40	h	156	
41	i	138	
42	j	128	
43	k	105	
44	l	129	
45	m	132	
46	n	126	
47	o	61	
48	p	89	
49	q	88	
50	r	105	
51	s	88	
52	t	93	
53	u	106	
54	v	27	

2 Entry composition

There are 54 unique types of molecules in this entry. The entry contains 146532 atoms, of which 0 are hydrogen and 0 are deuterium.

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

- Molecule 1 is a RNA chain called 23S LARGE SUBUNIT RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	w	2889	Total	C	N	O	P	0	0	0
			62213	27690	11624	20011	2888			

- Molecule 2 is a RNA chain called 5S LARGE SUBUNIT RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	x	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			

- Molecule 3 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	A	127	Total	C	N	O	S	0	0	0
			996	627	184	184	1			

- Molecule 4 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	B	272	Total	C	N	O	S	0	0	0
			2115	1335	420	357	3			

- Molecule 5 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	C	201	Total	C	N	O	S	0	0	0
			1541	974	295	267	5			

- Molecule 6 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	D	194	Total	C	N	O	S	0	0	0
			1517	969	283	263	2			

- Molecule 7 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	E	180	Total	C	N	O	S	0	0	0
			1468	938	267	259	4			

- Molecule 8 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	F	173	Total	C	N	O	S	0	0	0
			1319	839	245	234	1			

- Molecule 9 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	G	148	Total	C	N	O	S	0	0	0
			1156	737	204	214	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	H	138	Total	C	N	O	S	0	0	0
			1103	712	206	182	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	I	122	Total	C	N	O	S	0	0	0
			932	587	171	170	4			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	K	137	Total	C	N	O	S	0	0	0
			1089	698	207	177	7			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	L	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	M	106	Total	C	N	O	S	0	0	0
			846	534	168	144				

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	N	137	Total	C	N	O	S	0	0	0
			1143	713	234	195	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	O	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	Q	109	Total	C	N	O	S	0	0	0
			868	547	170	150	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	R	92	Total	C	N	O	S	0	0	0
			725	471	131	123				

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	S	103	Total	C	N	O	S	0	0	0
			793	510	151	126	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	T	185	Total	C	N	O	S	0	0	0
			1475	941	262	269	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	U	76	Total	C	N	O	S	0	0	0
			605	376	126	102	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	V	88	Total	C	N	O		0	0	0
			694	435	141	118				

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	W	62	Total	C	N	O	S	0	0	0
			520	325	102	91	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	X	60	Total	C	N	O	S	0	0	0
			477	303	91	82	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	Y	56	Total	C	N	O	S	0	0	0
			436	275	84	72	5			

- Molecule 28 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	Z	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 29 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	a	63	Total	C	N	O	S	0	0	0
			507	326	101	78	2			

- Molecule 30 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	b	35	Total	C	N	O	S	0	0	0
			294	181	66	44	3			

- Molecule 31 is a RNA chain called 16S SMALL SUBUNIT RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	y	1502	Total	C	N	O	P	0	0	0
			32302	14386	5984	10431	1501			

There are 13 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
y	450	G	C	CONFLICT	GB 155076
y	516	PSU	U	MODIFIED RESIDUE	GB 155076
y	527	7MG	G	MODIFIED RESIDUE	GB 155076
y	966	M2G	G	MODIFIED RESIDUE	GB 155076
y	967	5MC	C	MODIFIED RESIDUE	GB 155076
y	1207	2MG	G	MODIFIED RESIDUE	GB 155076
y	1400	5MC	C	MODIFIED RESIDUE	GB 155076
y	1402	4OC	C	MODIFIED RESIDUE	GB 155076
y	1404	5MC	C	MODIFIED RESIDUE	GB 155076
y	1407	5MC	C	MODIFIED RESIDUE	GB 155076
y	1498	UR3	U	MODIFIED RESIDUE	GB 155076
y	1518	MA6	A	MODIFIED RESIDUE	GB 155076
y	1519	MA6	A	MODIFIED RESIDUE	GB 155076

- Molecule 32 is a RNA chain called P-site PHE-tRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	z	76	Total	C	N	O	P	S	0	0
			1628	731	290	530	75	2		

There are 9 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
z	8	4SU	U	MODIFIED RESIDUE	GB 174422
z	16	H2U	U	MODIFIED RESIDUE	GB 174422
z	20	H2U	U	MODIFIED RESIDUE	GB 174422
z	32	PSU	U	MODIFIED RESIDUE	GB 174422
z	37	MIA	A	MODIFIED RESIDUE	GB 174422
z	39	PSU	U	MODIFIED RESIDUE	GB 174422
z	46	7MG	G	MODIFIED RESIDUE	GB 174422
z	54	5MU	U	MODIFIED RESIDUE	GB 174422
z	55	PSU	U	MODIFIED RESIDUE	GB 174422

- Molecule 33 is a RNA chain called E-TRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	0	76	Total	C	N	O	P	0	0	0
			1621	725	293	528	75			

- Molecule 34 is a RNA chain called MRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	1	6	Total	C	N	O	P	0	0	0
			122	56	19	42	5			

- Molecule 35 is a protein called 30S ribosomal protein S2.

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

- Molecule 36 is a protein called 30S ribosomal protein S3.

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

- Molecule 37 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	e	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 38 is a protein called 30S ribosomal protein S5.

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

- Molecule 39 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	g	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 40 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	h	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 41 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	i	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 42 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	j	127	Total	C	N	O	0	0	0
			1011	639	198	174			

- Molecule 43 is a protein called 30S ribosomal protein S10.

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

- Molecule 44 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	l	116	Total	C	N	O	S	0	0	0
			864	537	164	160	3			

- Molecule 45 is a protein called 30S ribosomal protein S12.

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

- Molecule 46 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	n	125	Total	C	N	O	S	0	0	0
			997	617	207	171	2			

- Molecule 47 is a protein called 30S ribosomal protein S14.

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

- Molecule 48 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	p	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 49 is a protein called 30S ribosomal protein S16.

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

- Molecule 50 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	r	104	Total	C	N	O	S	0	0	0
			857	547	161	147	2			

- Molecule 51 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
51	s	73	Total	C	N	O	0	0	0
			598	381	118	99			

- Molecule 52 is a protein called 30S ribosomal protein S19.

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

- Molecule 53 is a protein called 30S ribosomal protein S20.

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

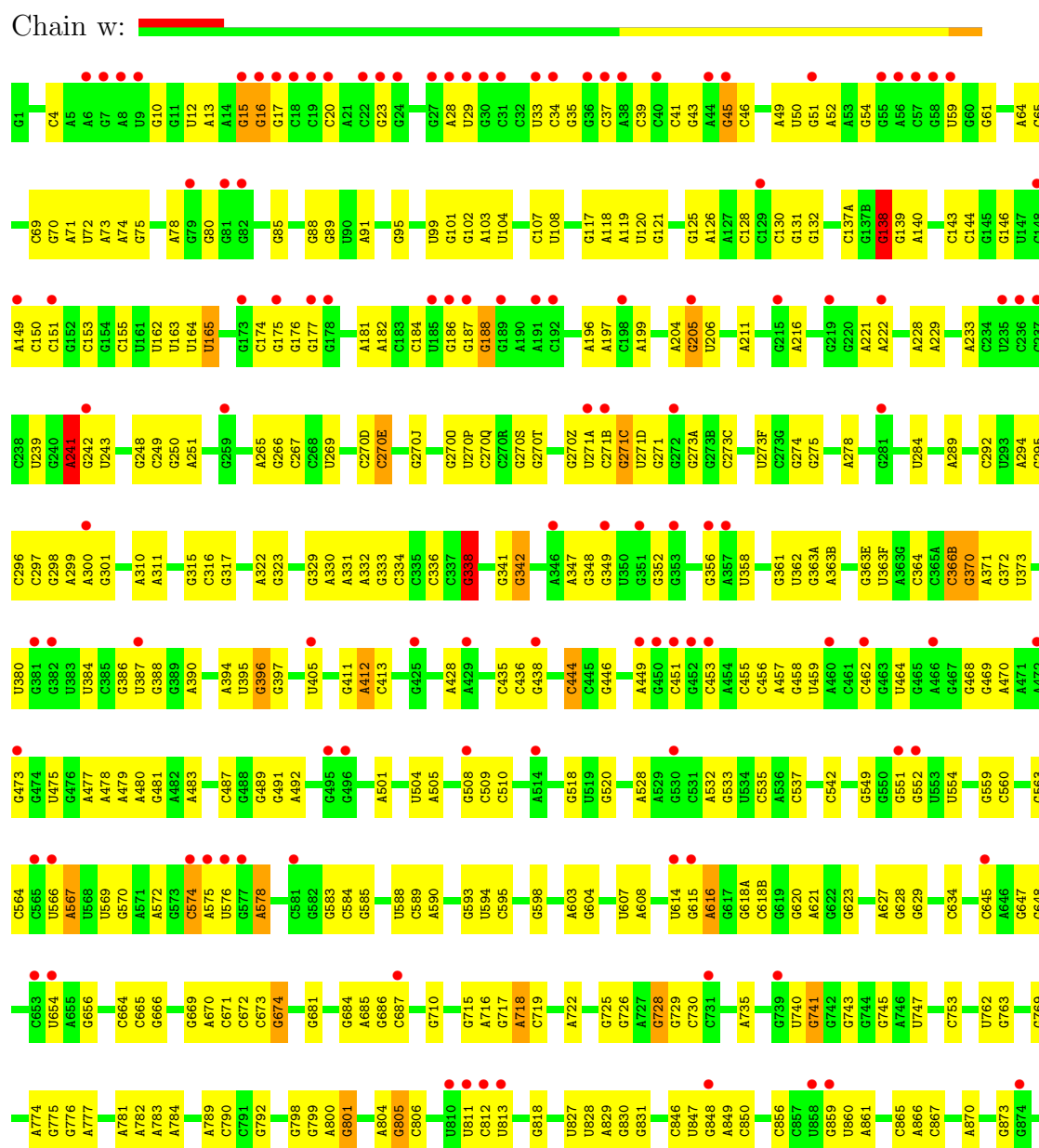
- Molecule 54 is a protein called 30S ribosomal protein Thx.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
54	v	24	Total 208	C 128	N 50	O 30	0	0	0

3 Residue-property plots

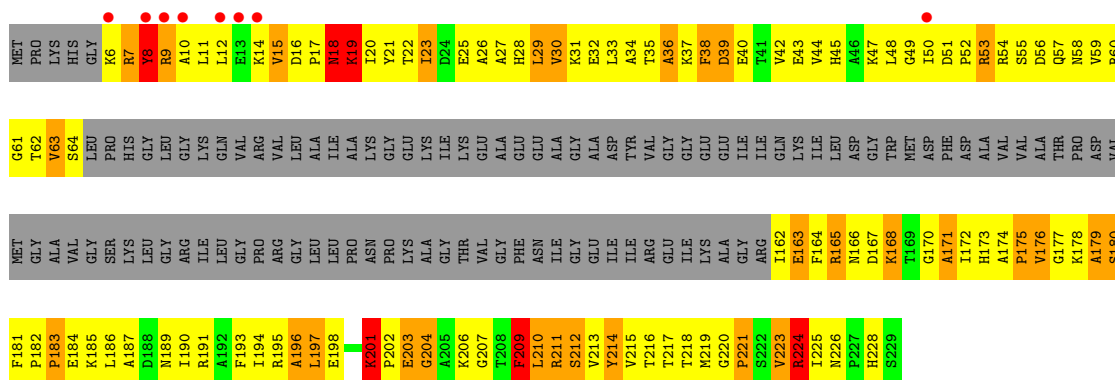
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according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

• Molecule 1: 23S LARGE SUBUNIT RIBOSOMAL RNA



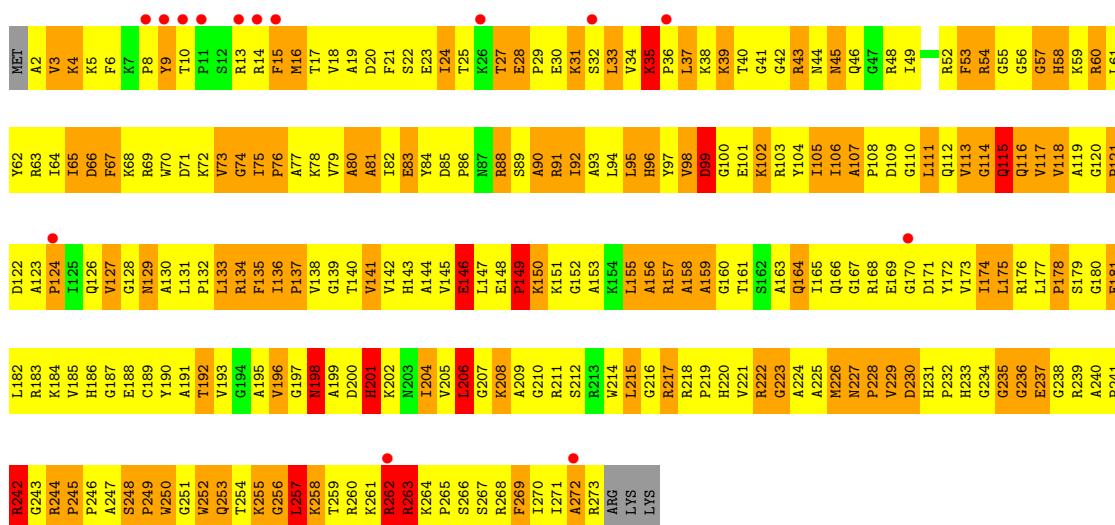
A2013	U1915	G1822	U1735	C1640	G1561	U1481	A1384	C1305	G1223	G1160	G1059	C964	A878
A2014	A1916	G1823	C1741	A1641	A1562	G1481	G1385	C1306	C1224	C1161	G1060	C965	G879
A2020	U1917	G1824	C1742	G1642	G1484	C1386	C1386	A1307	A1226	C1162	U1061	G966	G880
A2021	A1918	G1825	G1743	G1643	C1565	G1485	U1396	G1310	G1227	G1163	A1070	G972	G881
U2022	G1929	G1826	G1746	C1644	A1566	A1486	U1397	G1311	G1228	G1164	G1071	A973	G882
G2023	G1930	G1827	G1747	C1645	A1567	A1487	C1398	G1312	G1229	U1165	C1079	G974	G883
G2024	G1931	G1828	G1748	C1646	G1568	G1488	C1399	U1313	C1230	C1166	U1081	G975	C886
G2025	U1931	A1829	C1751	G1647	A1569	U1489	G1400	C1314	G1231	G1167	C1082	G976	A887
C2026	C1934	U1833	C1752	G1649	G1573	A1490	U1406	G1319	G1236	G1170	U1083	G977	A890
A2031	G1935	G1834	G1753	G1650	U1574	A1491	G1413	G1320	A1237	G1171	C1079	C974	C886
G2032	A1936	G1835	U1757	G1651	U1575	U1497	G1416	A1322	G1238	G1173	C1079	G974	A887
A2033	G1937	C1836	G1758	G1652	U1576	C1498	G1416	U1323	G1244	A1174	G1087	A980	C888
U2034	A1938	C1837	G1759	A1655	U1578	C1499	G1416	A1323	G1245	U1175	A1088	A980	C889
G2035	C1838	G1839	A1759	A1579	U1579	G1500	U1419	G1324	G1246	G1176	G1093	A988	A899
C2036	G1839	G1840	G1763	C1662	A1580	G1501	U1420	G1325	G1247	A1177	G1094	A989	C902
U2041	U1944	G1841	G1764	C1663	G1581	C1502	G1421	U1326	A1247	G1178	C1098	A990	G906
G2042	G1944	G1842	G1764	A1664	A1582	G1506	G1421	U1327	C1251	C1179	C1100	C994	U907
C2043	G1945	C1843	A1773	A1665	A1583	C1508	G1424	G1328	G1248	C1180	A1103	C995	A910
U2047	A1953	G1846	C1774	A1669	C1585	A1509	G1425	U1329	U1249	G1181	G1110	A996	A911
G2048	U1955	A1847	U1777	C1670	A1586	A1510	G1426	U1330	G1250	A1182	G1111	A997	C912
G2049	A1960	A1848	U1777	U1671	A1587	A1510	G1427	A1331	C1251	G1183	G1112	C1005	C914
C2050	U1963	G1849	C1781	C1672	G1591	U1516	G1428	G1332	G1252	G1184	C1116	C1006	G915
A2051	G1964	G1850	C1782	U1673	C1592	G1517	G1429	G1333	G1253	C1185	C1122	G1007	G916
G2052	G1965	U1851	A1784	G1674	G1593	C1518	C1430	U1334	U1265	G1186	G1125	A1010	A918
C2053	A1966	G1855	A1785	G1682	A1596	G1519	G1436	U1335	G1266	G1187	G1126	G1011	G920
A2054	G1967	G1856	A1786	C1683	U1599	U1520	G1437	A1336	U1267	G1196	A1127	U1012	G921
C2055	G1968	U1858	A1787	G1688	G1601	G1522	U1438	G1337	C1261	G1197	A1128	U1013	A926
G2056	A1969	G1863	U1791	U1888	U1602	U1523	A1448	U1341	G1264	U1198	A1129	U1014	G931
A2057	G1970	U1864	C1792	U1692	A1603	G1526	C1445	A1342	A1265	U1199	U1130	G1015	G932
G2058	A1971	G1869	C1793	U1693	C1604	U1527	G1448	G1343	G1266	G1195	G1131	G1016	A933
A2060	A1972	C1869	U1794	C1694	G1605	A1528	G1448	G1344	U1272	G1196	A1132	G1017	G933
G2061	G1973	C1870	C1795	C1695	G1606	A1529	A1498	G1346	U1273	G1197	A1133	A1020	G940
A2062	C1974	G1872	U1796	A1608	A1607	G1530	G1449	G1347	C1270	U1198	U1133	A1021	G938
G1975	C1975	C1879	U1797	A1609	A1610	C1531	C1450	G1348	G1271	U1199	G1136	A1022	G939
C2064	U1976	G1880	U1798	G1699	G1610	C1532	A1451	A1349	A1272	U1199	G1137	G1023	G943
C2065	A1977	G1881	G1800	A1700	A1613	U1535	A1454	C1350	U1273	G1196	G1138	G1024	A945
C2066	A1978	A1885	G1801	A1701	G1613	A1536	U1454	C1351	A1274	G1197	G1141	U1033	G946
G2069	A1981	C1886	G1802	G1702	A1616	G1537	G1455	G1352	A1275	U1204	C1142	U1034	G954
G2070	C1982	G1888	A1803	G1703	C1617	G1538	G1456	A1359	G1277	U1205	G1136	U1035	A958
A2071	G1987	A1889	C1806	U1706	A1618	C1539	A1457	C1362	A1278	G1206	G1137	G1025	A959
U2076	U1991	U1898	G1807	G1707	G1619	U1541	G1459	G1363	G1283	G1209	G1138	G1026	A960
A2077	G1992	G1899	U1808	C1712	G1623	A1543	A1461	G1364	A1287	U1211	C1146	G1027	G962
C2078	U1993	A1900	A1809	U1716	G1626	C1544	G1465	A1365	U1288	G1212	U1141	G1028	U963
G2087	C1994	G1903	G1811	G1717	G1627	A1546	G1466	A1366	U1289	A1213	C1142	U1034	
U2090	U1995	G1906	A1815	G1725	G1628	C1548	C1467	A1367	C1289	G1216	A1148	G1043	
G2091	G1996	C1909	G1816	G1725	U1629	C1547	G1470	G1374	C1295	G1217	A1148	C1043	
U2092	G1997	C1909	G1817	G1730	G1630	A1553	A1471	G1377	G1296	G1218	G1149	A1045	
G2093	C1999	U1818	U1819	G1731	G1636	A1558	C1474	A1378	C1297	A1220	C1152	A1046	
U2096	G2000	A1912	A1820	A1732	A1634	G1559	G1474	A1379	U1300	C1221	C1152	G1047	
C2097	G2012	C1914	A1821	C1734	G1635	G1560	G1478	C1383	A1301	C122A	C1155	A1054	





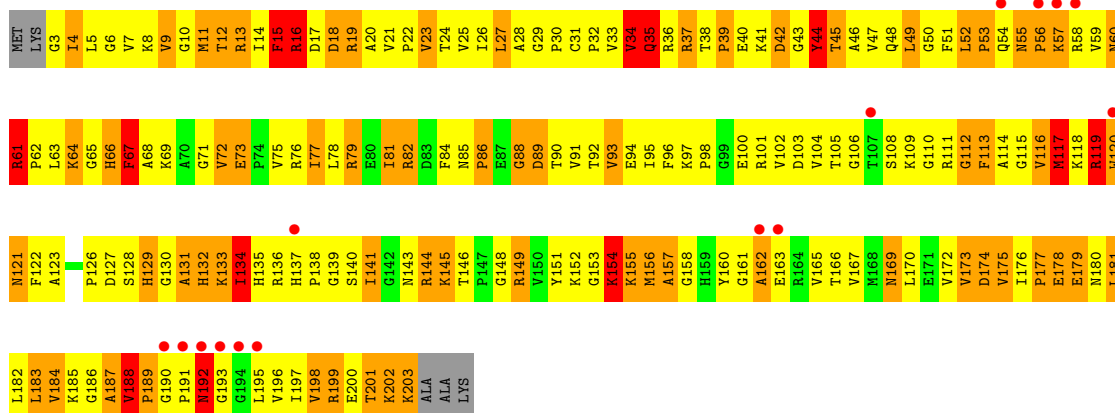
- Molecule 4: 50S ribosomal protein L2

Chain B:



- Molecule 5: 50S ribosomal protein L3

Chain C:

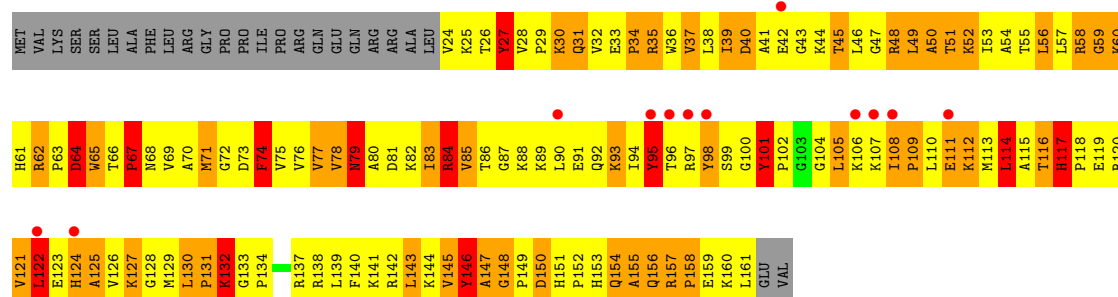


- Molecule 6: 50S ribosomal protein L4

Chain D:

- Molecule 10: 50S ribosomal protein L13

Chain H:



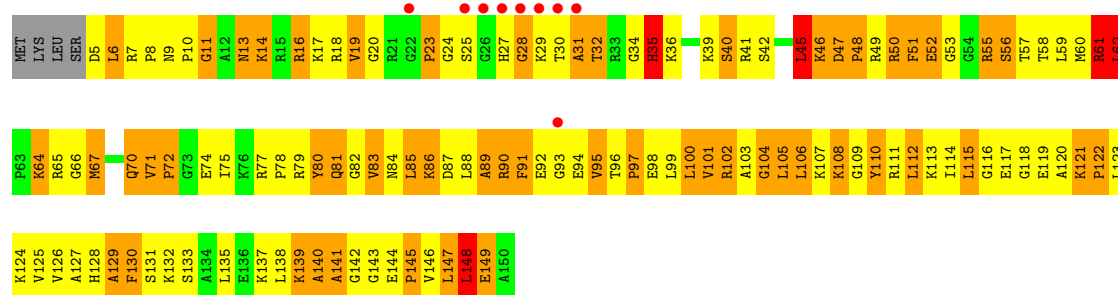
- Molecule 11: 50S ribosomal protein L14

Chain I:



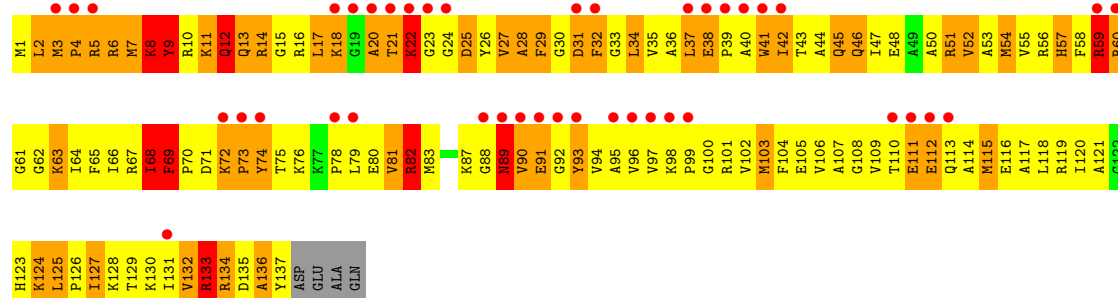
- Molecule 12: 50S ribosomal protein L15

Chain J:

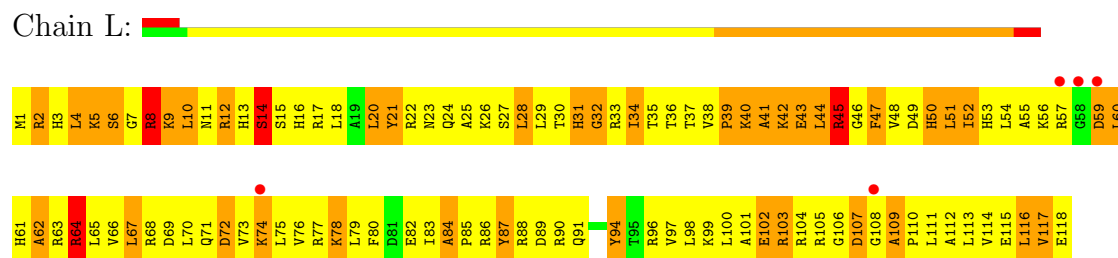


- Molecule 13: 50S ribosomal protein L16

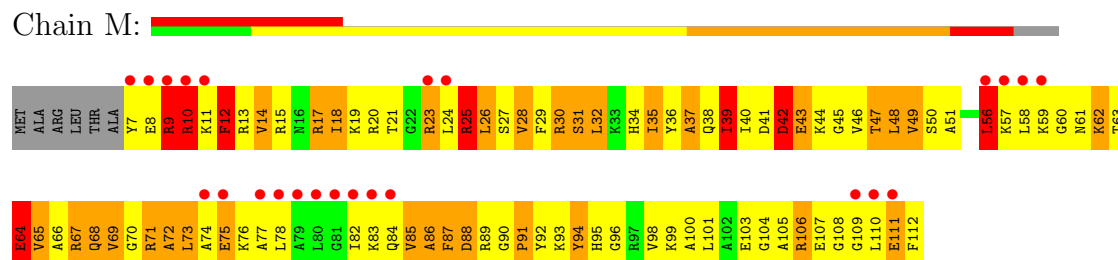
Chain K:



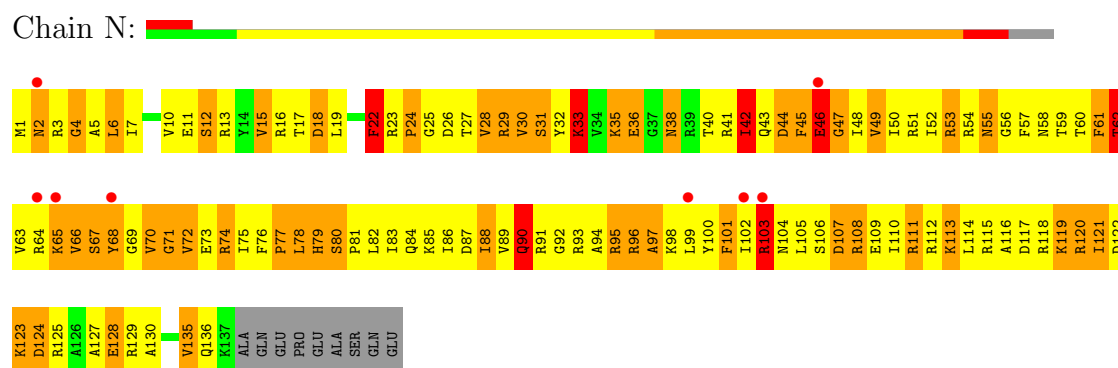
- Molecule 14: 50S ribosomal protein L17



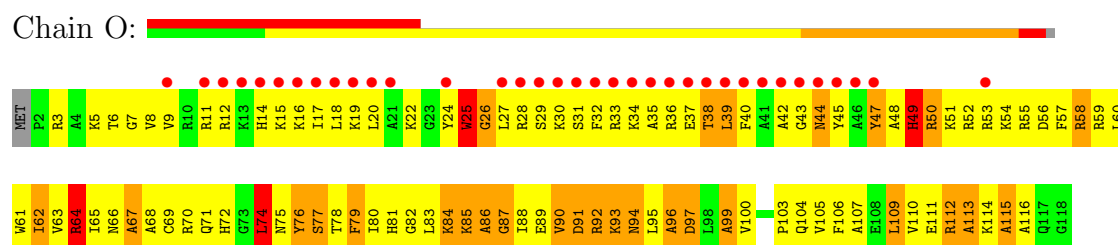
- Molecule 15: 50S ribosomal protein L18



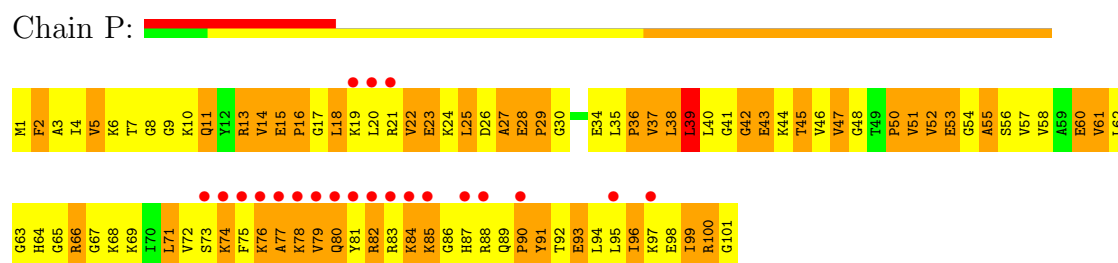
- Molecule 16: 50S ribosomal protein L19



- Molecule 17: 50S ribosomal protein L20

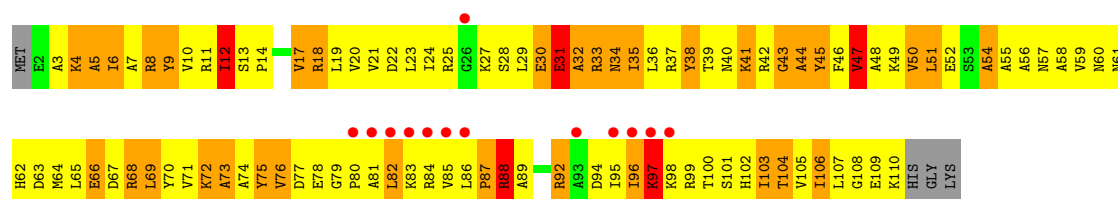


- Molecule 18: 50S ribosomal protein L21



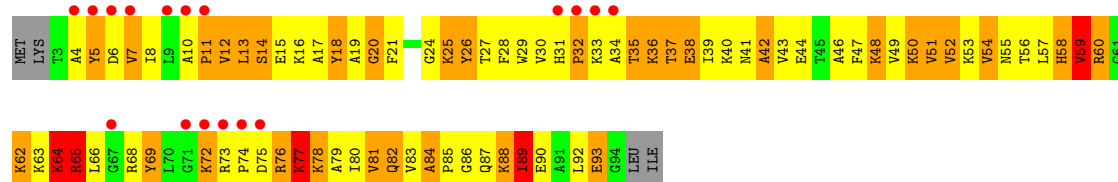
- Molecule 19: 50S ribosomal protein L22

Chain Q:



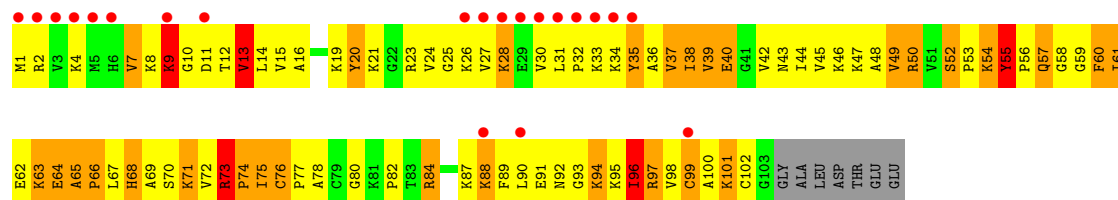
- Molecule 20: 50S ribosomal protein L23

Chain R:



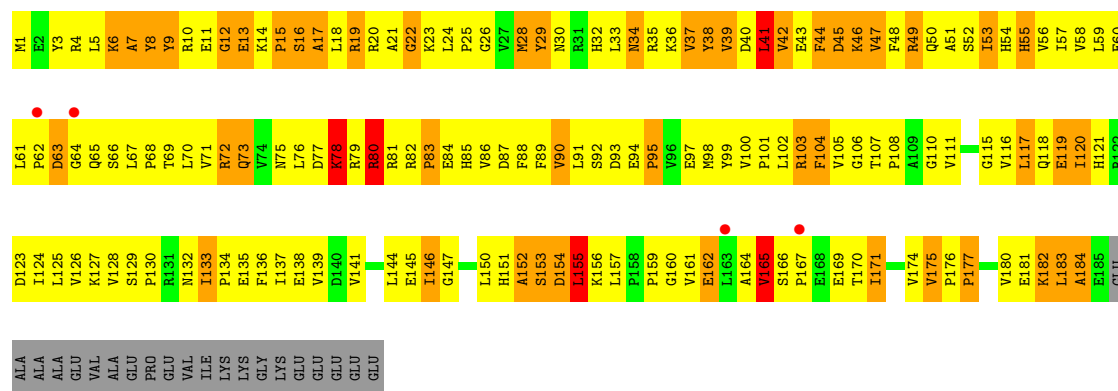
- Molecule 21: 50S ribosomal protein L24

Chain S:



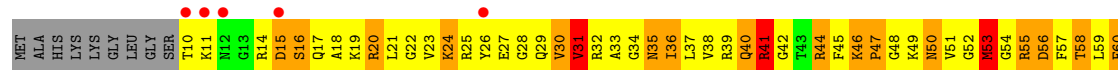
- Molecule 22: 50S ribosomal protein L25

Chain T:



- Molecule 23: 50S ribosomal protein L27

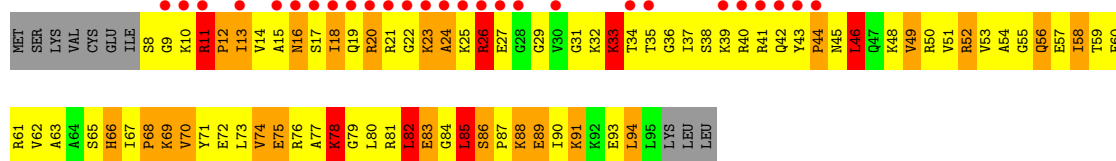
Chain U:





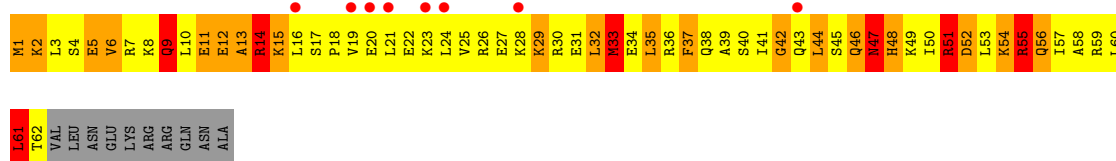
- Molecule 24: 50S ribosomal protein L28

Chain V:



- Molecule 25: 50S ribosomal protein L29

Chain W:



- Molecule 26: 50S ribosomal protein L30

Chain X:



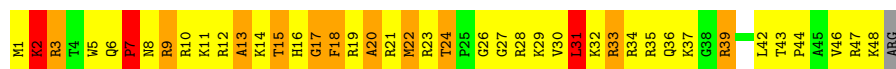
- Molecule 27: 50S ribosomal protein L32

Chain Y:



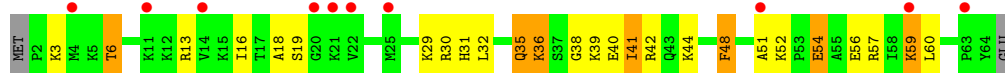
- Molecule 28: 50S ribosomal protein L34

Chain Z:



- Molecule 29: 50S ribosomal protein L35

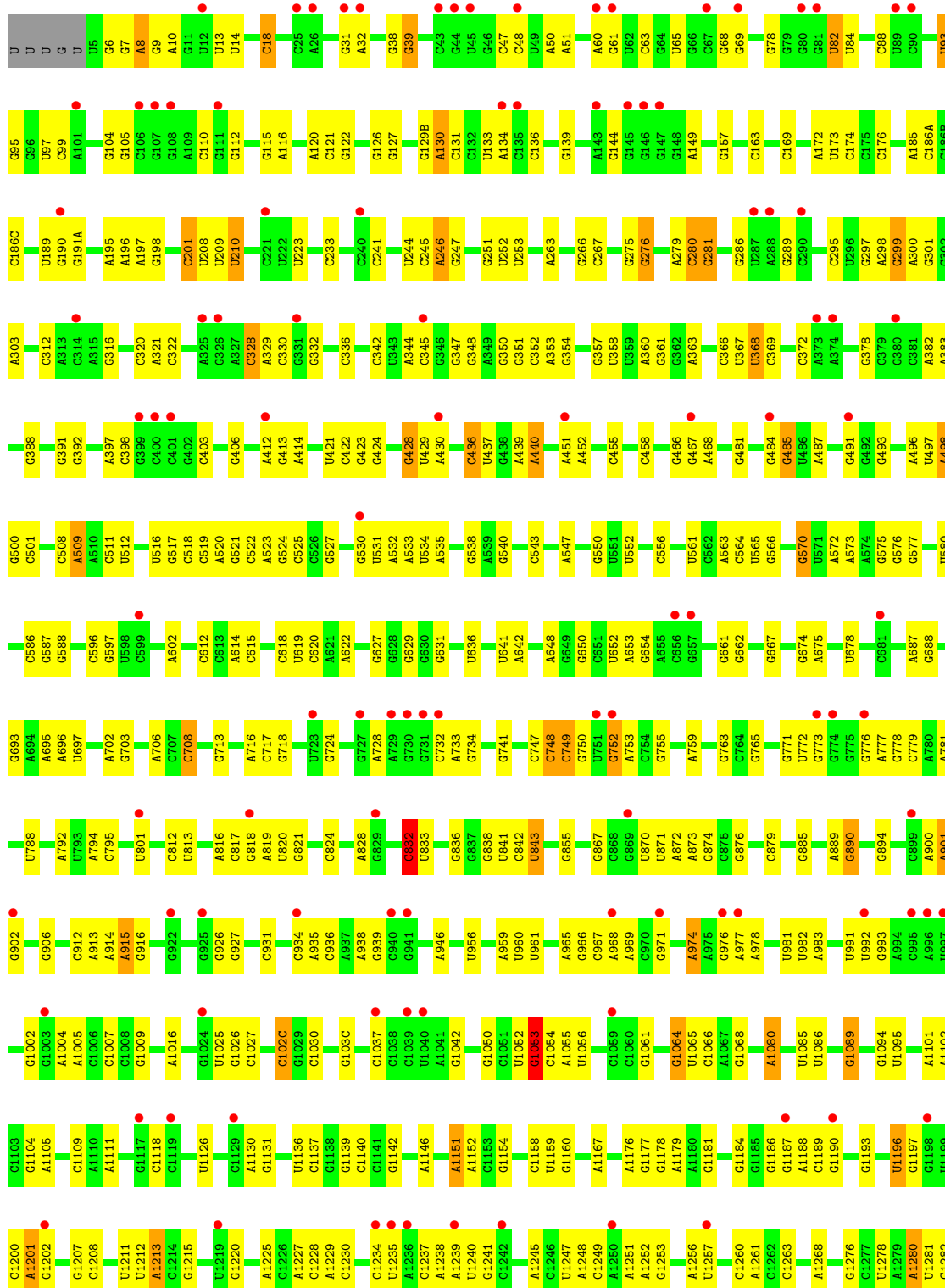
Chain a:

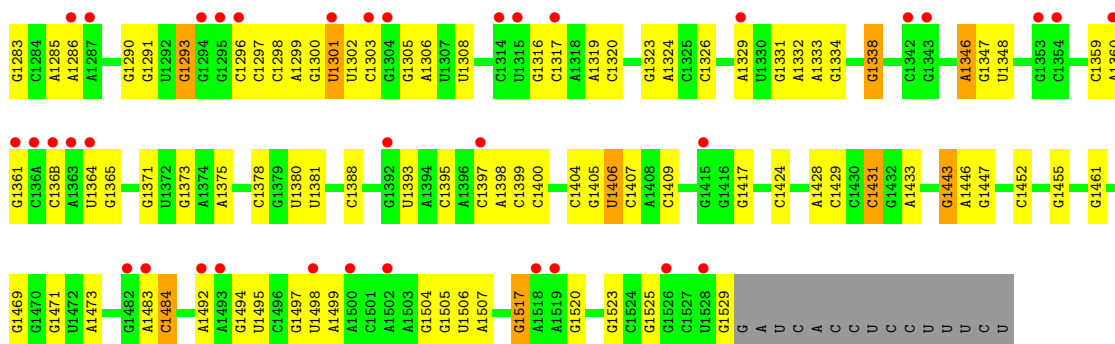


- Molecule 30: 50S ribosomal protein L36

Chain b:

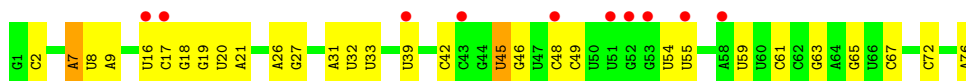
Chain y:





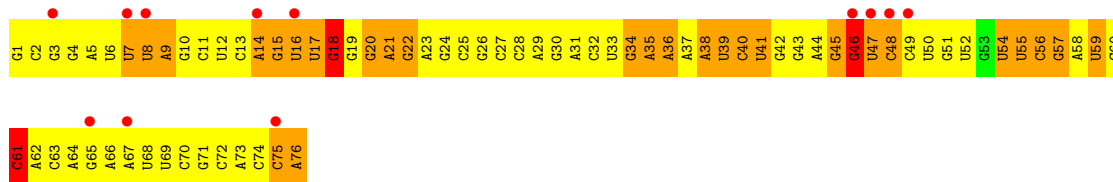
• Molecule 32: P-site PHE-tRNA

Chain z:



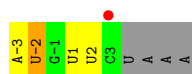
• Molecule 33: E-TRNA

Chain 0:



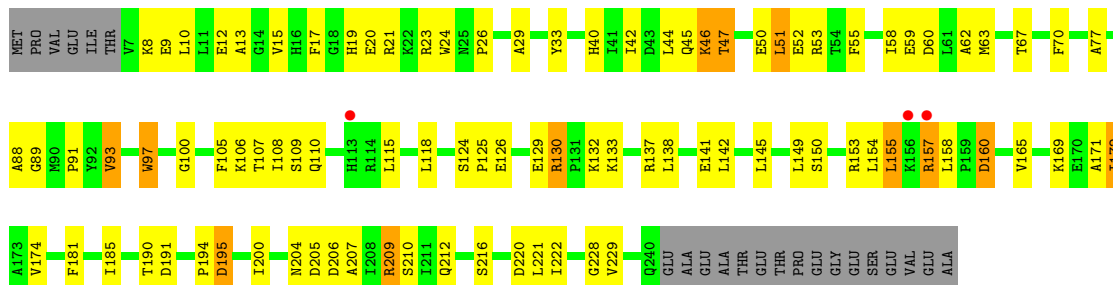
• Molecule 34: MRNA

Chain 1:



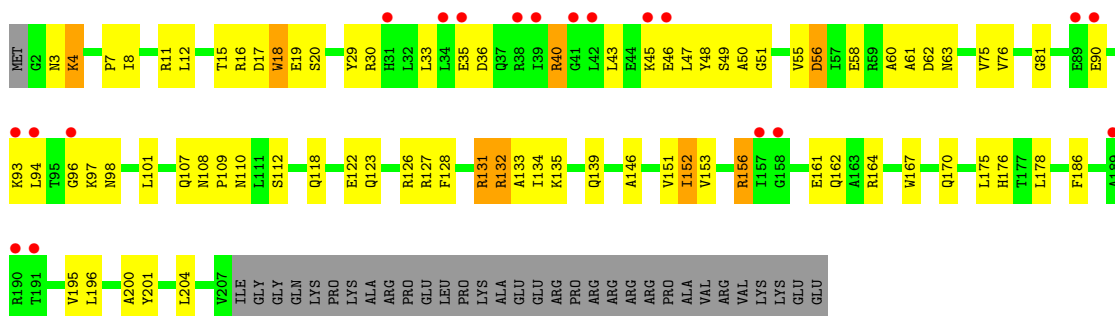
• Molecule 35: 30S ribosomal protein S2

Chain c:



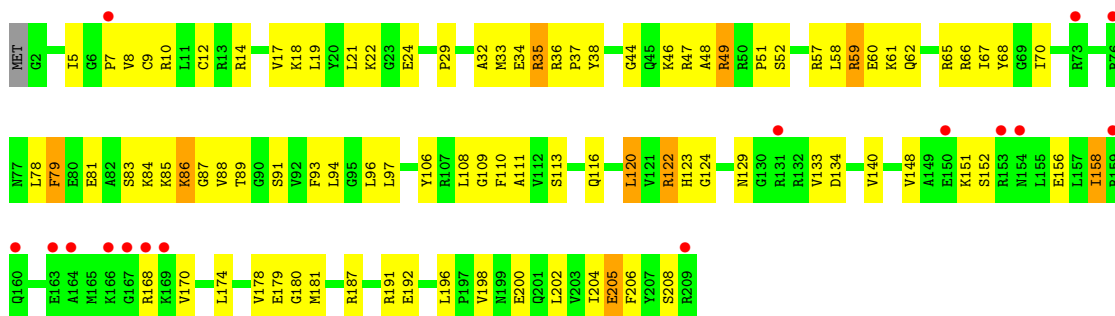
• Molecule 36: 30S ribosomal protein S3

Chain d:



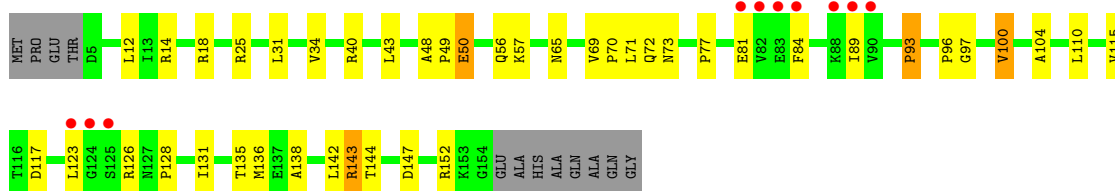
- Molecule 37: 30S ribosomal protein S4

Chain e:



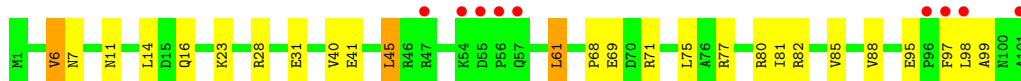
- Molecule 38: 30S ribosomal protein S5

Chain f:



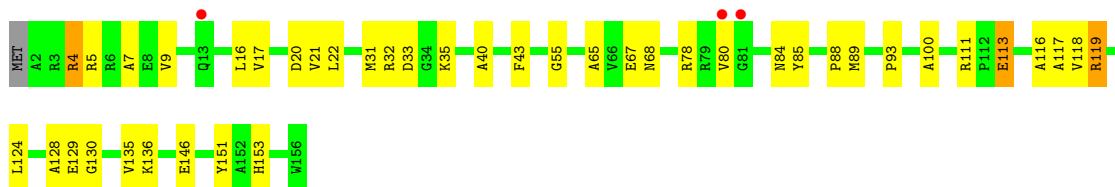
- Molecule 39: 30S ribosomal protein S6

Chain g:



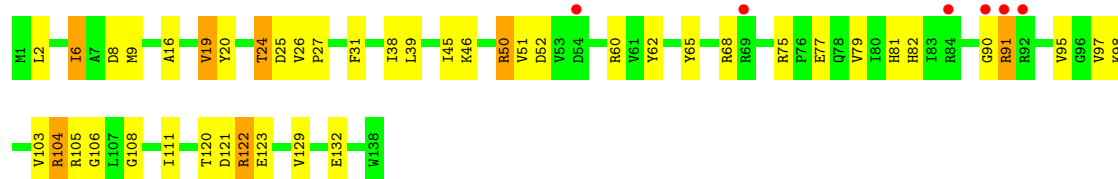
- Molecule 40: 30S ribosomal protein S7

Chain h:



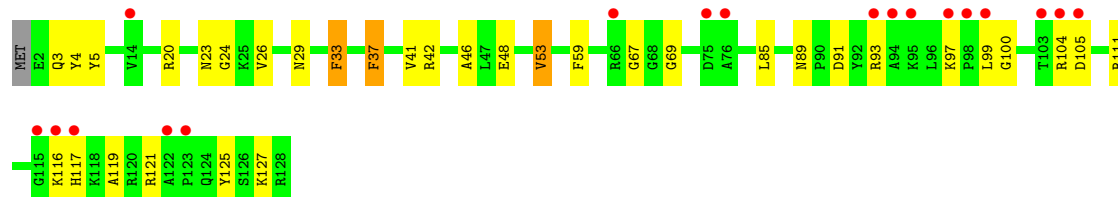
- Molecule 41: 30S ribosomal protein S8

Chain i:



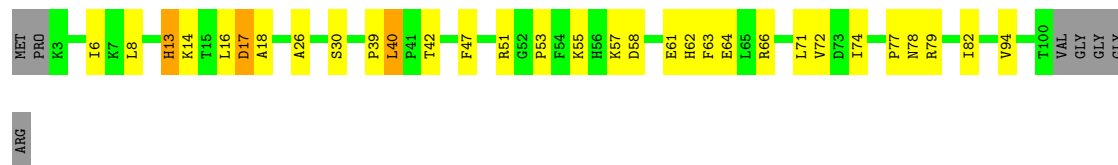
- Molecule 42: 30S ribosomal protein S9

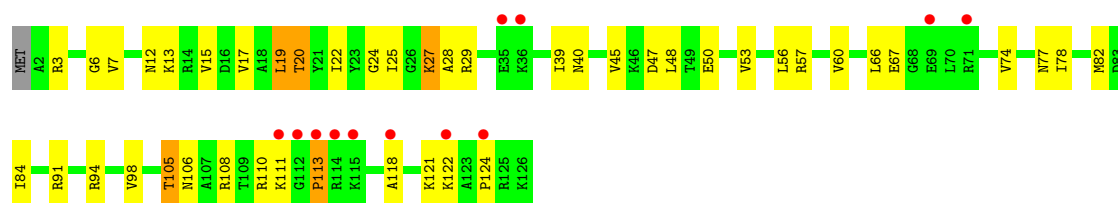
Chain j:



- Molecule 43: 30S ribosomal protein S10

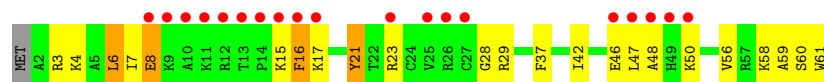
Chain k:





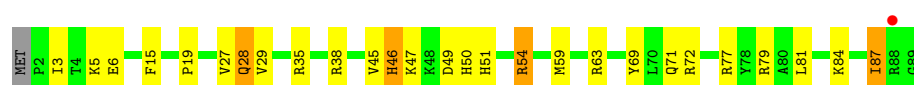
- Molecule 47: 30S ribosomal protein S14

Chain o:



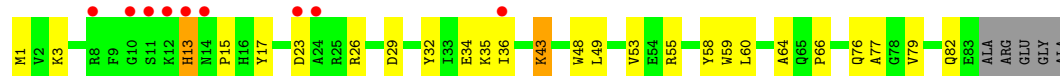
- Molecule 48: 30S ribosomal protein S15

Chain p:



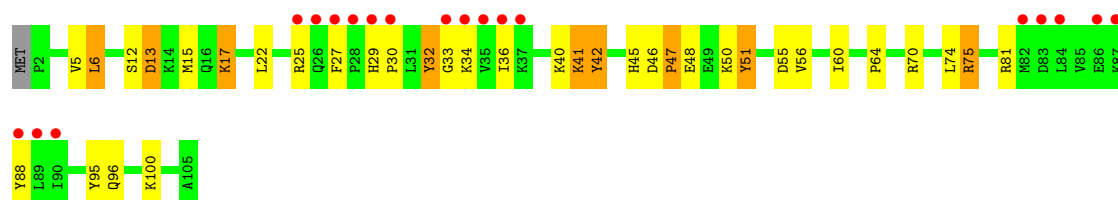
- Molecule 49: 30S ribosomal protein S16

Chain q:



- Molecule 50: 30S ribosomal protein S17

Chain r:



- Molecule 51: 30S ribosomal protein S18

Chain s:



- Molecule 52: 30S ribosomal protein S19

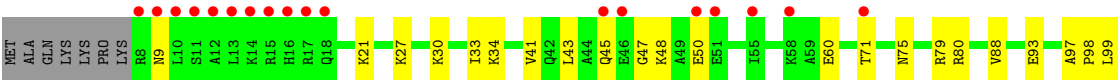
Chain t:



LYS
LYS

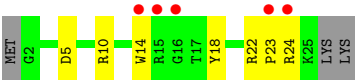
• Molecule 53: 30S ribosomal protein S20

Chain u:



• Molecule 54: 30S ribosomal protein Thx

Chain v:



4 Data and refinement statistics

Property	Value	Source
Space group	I 4 2 2	Depositor
Cell constants a, b, c, α , β , γ	507.81Å 507.81Å 689.52Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	30.00 – 3.71 72.78 – 3.70	Depositor EDS
% Data completeness (in resolution range)	100.0 (30.00-3.71) 97.9 (72.78-3.70)	Depositor EDS
R_{merge}	0.15	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.68 (at 3.67Å)	Xtriage
Refinement program	REFMAC 5.2.0019	Depositor
R, R_{free}	0.348 , 0.353 0.363 , 0.368	Depositor DCC
R_{free} test set	11428 reflections (2.55%)	DCC
Wilson B-factor (Å ²)	40.4	Xtriage
Anisotropy	0.192	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	-0.70 , 446.3	EDS
Estimated twinning fraction	0.228 for -1/2*h+1/2*k-1/2*l, 1/2*h-1/2*k-1/2*l, -h-k 0.219 for -1/2*h-1/2*k+1/2*l, -1/2*h-1/2*k-1/2*l, h-k	Xtriage
L-test for twinning	$\langle L \rangle = 0.26$, $\langle L^2 \rangle = 0.11$	Xtriage
Outliers	4 of 459965 reflections (0.001%)	Xtriage
F_o, F_c correlation	0.83	EDS
Total number of atoms	146532	wwPDB-VP
Average B, all atoms (Å ²)	40.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.09% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: 5MU, M2G, MA6, MIA, H2U, 2MG, 5MC, UR3, 4OC, 4SU, 7MG, PSU

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	w	1.06	48/69679 (0.1%)	1.11	232/108779 (0.2%)
2	x	0.89	0/2878	1.03	11/4490 (0.2%)
3	A	0.50	0/1015	0.57	0/1369
4	B	0.49	0/2165	0.63	0/2919
5	C	0.57	0/1574	0.68	0/2125
6	D	0.57	0/1551	0.66	0/2101
7	E	0.55	0/1492	0.65	0/2006
8	F	0.55	0/1345	0.66	1/1819 (0.1%)
9	G	0.53	0/1171	0.65	0/1583
10	H	0.47	0/1130	0.59	0/1525
11	I	0.54	0/942	0.66	0/1268
12	J	0.50	0/1131	0.64	0/1504
13	K	0.62	0/1110	0.71	1/1483 (0.1%)
14	L	0.51	0/982	0.65	0/1312
15	M	0.54	0/856	0.63	0/1138
16	N	0.49	0/1157	0.62	0/1544
17	O	0.54	0/982	0.67	0/1306
18	P	0.51	0/790	0.62	0/1057
19	Q	0.56	0/878	0.66	0/1179
20	R	0.59	0/739	0.69	0/993
21	S	0.58	0/806	0.64	0/1074
22	T	0.54	0/1507	0.64	0/2045
23	U	0.57	0/613	0.65	0/816
24	V	0.49	0/701	0.60	0/932
25	W	0.52	0/522	0.65	0/690
26	X	0.56	0/482	0.73	0/646
27	Y	0.45	0/449	0.55	0/606
28	Z	0.80	0/426	0.73	0/561
29	a	0.58	0/515	0.69	0/679
30	b	0.55	0/297	0.61	0/392
31	y	0.97	13/35859 (0.0%)	1.07	96/55966 (0.2%)
32	z	0.98	1/1603 (0.1%)	1.05	3/2497 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	0	0.89	1/1791 (0.1%)	0.97	2/2791 (0.1%)
34	1	0.94	0/135	1.02	0/208
35	c	0.55	0/1935	0.60	0/2609
36	d	0.51	0/1636	0.62	0/2205
37	e	0.53	0/1733	0.62	1/2318 (0.0%)
38	f	0.51	0/1162	0.60	0/1564
39	g	0.56	0/856	0.63	0/1154
40	h	0.53	0/1276	0.57	0/1709
41	i	0.51	0/1136	0.62	0/1527
42	j	0.47	0/1029	0.53	0/1378
43	k	0.52	0/807	0.59	0/1085
44	l	0.49	0/879	0.59	0/1187
45	m	0.57	0/986	0.72	0/1320
46	n	0.52	0/1008	0.61	0/1347
47	o	0.53	0/501	0.57	0/664
48	p	0.49	0/745	0.58	0/992
49	q	0.49	0/716	0.63	0/963
50	r	0.55	0/870	0.63	0/1159
51	s	0.51	0/604	0.63	0/801
52	t	0.54	0/661	0.64	0/890
53	u	0.21	0/764	0.44	0/1006
54	v	0.57	0/212	0.52	0/277
All	All	0.91	63/158789 (0.0%)	0.99	347/237558 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	w	0	24
2	x	2	0
31	y	0	8
All	All	2	32

All (63) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	w	926	A	O3'-P	30.08	1.97	1.61
1	w	1506	C	O3'-P	29.80	1.97	1.61
1	w	1171	G	O3'-P	28.10	1.94	1.61
1	w	890	A	O3'-P	28.02	1.94	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	w	1481	U	O3'-P	24.13	1.90	1.61
1	w	154(B)	C	O3'-P	24.08	1.90	1.61
1	w	1743	G	O3'-P	23.54	1.89	1.61
31	y	102(C)	C	O3'-P	22.10	1.87	1.61
1	w	41	C	O3'-P	20.99	1.86	1.61
1	w	1133	U	O3'-P	20.84	1.86	1.61
1	w	1712	C	O3'-P	20.82	1.86	1.61
1	w	99	U	O3'-P	20.13	1.85	1.61
1	w	149(B)	A	O3'-P	19.89	1.85	1.61
1	w	1864	U	O3'-P	18.86	1.83	1.61
1	w	2219	G	O3'-P	18.29	1.83	1.61
1	w	2199	A	O3'-P	18.16	1.82	1.61
1	w	155	C	O3'-P	17.94	1.82	1.61
1	w	489	G	O3'-P	17.86	1.82	1.61
1	w	1735	U	O3'-P	17.73	1.82	1.61
31	y	458	C	O3'-P	17.60	1.82	1.61
1	w	114(B)	A	O3'-P	17.30	1.81	1.61
1	w	2213	U	O3'-P	17.17	1.81	1.61
31	y	843	U	O3'-P	16.55	1.81	1.61
1	w	122(A)	C	O3'-P	16.15	1.80	1.61
31	y	210	U	O3'-P	16.06	1.80	1.61
1	w	366(B)	C	O3'-P	16.02	1.80	1.61
1	w	163(B)	C	O3'-P	15.29	1.79	1.61
1	w	1872	A	O3'-P	15.27	1.79	1.61
1	w	165	U	O3'-P	15.22	1.79	1.61
1	w	1451	C	O3'-P	14.26	1.78	1.61
1	w	436	C	O3'-P	13.99	1.77	1.61
1	w	1583	A	O3'-P	13.92	1.77	1.61
1	w	144(B)	A	O3'-P	13.22	1.77	1.61
1	w	537	C	O3'-P	12.96	1.76	1.61
31	y	838	G	O3'-P	12.86	1.76	1.61
31	y	1167	A	O3'-P	-12.34	1.46	1.61
31	y	82	U	O3'-P	-12.18	1.46	1.61
1	w	712(B)	A	O3'-P	12.03	1.75	1.61
1	w	1718	G	O3'-P	10.66	1.74	1.61
1	w	2799	A	O3'-P	10.65	1.74	1.61
31	y	103(C)	G	O3'-P	10.53	1.73	1.61
1	w	2712	U	C4-O4	8.43	1.30	1.23
31	y	1443	G	O3'-P	7.64	1.70	1.61
31	y	440	A	O3'-P	6.99	1.69	1.61
1	w	574	C	N1-C2	6.38	1.46	1.40
31	y	97	U	O3'-P	6.22	1.68	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	w	578	A	C5-C6	6.11	1.46	1.41
1	w	888	C	P-O5'	5.93	1.65	1.59
1	w	1264	G	N9-C4	5.76	1.42	1.38
1	w	990	A	N9-C4	5.53	1.41	1.37
31	y	99	C	O3'-P	5.48	1.67	1.61
1	w	2057	A	N9-C4	-5.33	1.34	1.37
1	w	2877	G	C3'-O3'	5.31	1.49	1.42
1	w	188	G	N7-C5	5.24	1.42	1.39
1	w	16	G	C3'-O3'	5.21	1.49	1.42
32	z	26	A	C5-C6	5.21	1.45	1.41
1	w	973	A	C3'-O3'	5.18	1.49	1.42
1	w	2171	A	C3'-O3'	5.14	1.49	1.42
31	y	1455	G	O3'-P	5.14	1.67	1.61
1	w	2874	C	C3'-O3'	5.06	1.49	1.42
1	w	1826	G	C3'-O3'	5.06	1.49	1.42
33	0	61	C	C3'-O3'	5.05	1.49	1.42
1	w	554	U	O3'-P	5.02	1.67	1.61

All (347) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	w	1822	G	N9-C1'-C2'	-18.71	89.67	114.00
1	w	1577	C	N1-C1'-C2'	-15.42	93.96	114.00
1	w	712(B)	A	P-O3'-C3'	-14.26	102.58	119.70
31	y	93	U	N1-C1'-C2'	-14.11	95.66	114.00
31	y	832	C	N1-C1'-C2'	-13.21	96.82	114.00
1	w	2471	C	N1-C1'-C2'	-13.02	97.08	114.00
1	w	1516	U	N1-C1'-C2'	-12.83	97.32	114.00
1	w	1274	A	N9-C1'-C2'	-12.37	97.92	114.00
1	w	1863	G	N9-C1'-C2'	-12.08	98.30	114.00
31	y	436	C	N1-C1'-C2'	-12.07	98.31	114.00
1	w	1454	U	N1-C1'-C2'	-11.67	98.83	114.00
1	w	489	G	P-O3'-C3'	-11.50	105.90	119.70
1	w	926	A	P-O3'-C3'	-11.21	106.25	119.70
1	w	1627	G	N9-C1'-C2'	-11.15	99.50	114.00
1	w	2393	A	N9-C1'-C2'	-11.13	99.53	114.00
1	w	338	G	N9-C1'-C2'	-11.08	99.59	114.00
1	w	890	A	P-O3'-C3'	-10.90	106.62	119.70
1	w	2848	G	N9-C1'-C2'	-10.89	99.84	114.00
1	w	1506	C	P-O3'-C3'	-10.35	107.29	119.70
1	w	945	A	N9-C1'-C2'	10.30	127.39	114.00
1	w	712(B)	A	N9-C1'-C2'	-10.23	100.70	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	w	2451	A	N9-C1'-C2'	-10.15	100.81	114.00
1	w	1743	G	P-O3'-C3'	-10.13	107.55	119.70
1	w	873	G	N9-C1'-C2'	-9.85	101.17	112.00
31	y	1230	C	N1-C1'-C2'	-9.80	101.22	112.00
31	y	93	U	P-O3'-C3'	-9.73	108.03	119.70
1	w	1577	C	O4'-C1'-N1	9.66	115.93	108.20
1	w	1171	G	P-O3'-C3'	-9.64	108.13	119.70
31	y	890	G	N9-C1'-C2'	-9.40	101.66	112.00
1	w	1191	G	N9-C1'-C2'	-9.35	101.72	112.00
31	y	280	C	N1-C1'-C2'	-9.29	101.78	112.00
1	w	241	A	N9-C1'-C2'	9.25	126.02	114.00
31	y	189	U	N1-C1'-C2'	-9.20	101.88	112.00
31	y	102(C)	C	P-O3'-C3'	-9.20	108.66	119.70
1	w	1822	G	O4'-C1'-N9	8.90	115.32	108.20
31	y	97	U	P-O3'-C3'	-8.81	109.13	119.70
1	w	2865	U	N1-C1'-C2'	-8.73	102.39	112.00
31	y	210	U	P-O3'-C3'	-8.73	109.22	119.70
1	w	1385	G	N9-C1'-C2'	-8.64	102.49	112.00
1	w	1626	G	N9-C1'-C2'	-8.57	102.57	112.00
1	w	155	C	P-O3'-C3'	-8.53	109.46	119.70
33	0	46	G	N9-C1'-C2'	-8.35	102.81	112.00
31	y	894	G	N9-C1'-C2'	-8.28	102.89	112.00
1	w	537	C	P-O3'-C3'	-8.23	109.82	119.70
1	w	945	A	O4'-C1'-N9	8.23	114.78	108.20
1	w	114(B)	A	P-O3'-C3'	-8.22	109.83	119.70
31	y	748	C	N1-C1'-C2'	-8.20	102.98	112.00
1	w	15	G	N9-C1'-C2'	-8.18	103.00	112.00
31	y	1213	A	N9-C1'-C2'	-8.16	103.02	112.00
31	y	1293	G	N9-C1'-C2'	-8.04	103.16	112.00
31	y	1229	A	N9-C1'-C2'	-7.91	103.30	112.00
1	w	1662	C	N1-C1'-C2'	-7.84	103.38	112.00
31	y	201	C	P-O3'-C3'	-7.81	110.33	119.70
31	y	1455	G	OP2-P-O3'	7.72	122.19	105.20
31	y	773	G	N9-C1'-C2'	-7.72	103.51	112.00
1	w	1163	G	N9-C1'-C2'	-7.68	103.55	112.00
1	w	887	A	C3'-C2'-C1'	-7.66	95.37	101.50
1	w	1059	G	O4'-C1'-N9	7.59	114.28	108.20
1	w	2056	G	C3'-C2'-C1'	-7.58	95.44	101.50
31	y	1455	G	P-O3'-C3'	-7.48	110.72	119.70
31	y	130	A	N9-C1'-C2'	-7.46	103.80	112.00
1	w	2190	G	N9-C1'-C2'	-7.46	103.80	112.00
31	y	1151	A	O4'-C1'-N9	7.44	114.15	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	w	2243	U	N1-C1'-C2'	-7.43	103.82	112.00
31	y	890	G	O4'-C1'-N9	7.41	114.13	108.20
1	w	99	U	P-O3'-C3'	-7.39	110.84	119.70
1	w	1627	G	O4'-C1'-N9	7.36	114.08	108.20
31	y	1151	A	N9-C1'-C2'	-7.32	103.95	112.00
1	w	1930	G	N9-C1'-C2'	-7.31	103.95	112.00
1	w	2053	G	N9-C1'-C2'	-7.30	103.97	112.00
1	w	1934	C	N1-C1'-C2'	-7.25	104.03	112.00
31	y	403	C	N1-C1'-C2'	-7.23	104.05	112.00
1	w	1626	G	O4'-C1'-N9	7.18	113.95	108.20
1	w	270(E)	C	N1-C1'-C2'	7.16	123.31	114.00
31	y	795	C	N1-C1'-C2'	-7.15	104.13	112.00
2	x	24	G	C4'-C3'-C2'	7.14	109.74	102.60
1	w	1185	C	N1-C1'-C2'	-7.13	104.16	112.00
1	w	205	G	O4'-C1'-N9	7.11	113.89	108.20
2	x	21	G	C2'-C3'-O3'	7.10	125.11	109.50
2	x	14	U	C4'-C3'-C2'	7.09	109.69	102.60
2	x	111	U	C1'-O4'-C4'	-7.09	104.23	109.90
31	y	102(C)	C	OP2-P-O3'	7.06	120.73	105.20
1	w	2263	C	N1-C1'-C2'	-7.04	104.25	112.00
31	y	312	C	N1-C1'-C2'	-7.04	104.26	112.00
1	w	1955	U	N1-C1'-C2'	7.00	123.11	114.00
1	w	1059	G	N9-C1'-C2'	-6.98	104.32	112.00
8	F	149	ARG	N-CA-C	-6.91	92.35	111.00
31	y	1301	U	N1-C1'-C2'	-6.90	104.41	112.00
1	w	1963	U	N1-C1'-C2'	6.88	122.94	114.00
1	w	2484	G	N9-C1'-C2'	-6.86	104.45	112.00
1	w	149(B)	A	P-O3'-C3'	-6.85	111.48	119.70
1	w	1465	G	N9-C1'-C2'	-6.84	104.48	112.00
31	y	650	G	N9-C1'-C2'	-6.81	104.51	112.00
1	w	1247	A	N9-C1'-C2'	6.81	122.85	114.00
31	y	428	G	N9-C1'-C2'	6.80	122.84	114.00
1	w	2431	U	N1-C1'-C2'	-6.79	104.53	112.00
31	y	172	A	N9-C1'-C2'	-6.79	104.53	112.00
1	w	2115	G	N9-C1'-C2'	-6.78	104.54	112.00
1	w	2490	G	N9-C1'-C2'	6.74	122.76	114.00
31	y	1105	A	N9-C1'-C2'	-6.73	104.60	112.00
31	y	1517	G	C4'-C3'-O3'	6.73	126.46	113.00
2	x	21	G	C4'-C3'-C2'	6.72	109.32	102.60
1	w	45	G	N9-C1'-C2'	-6.69	104.64	112.00
1	w	491	G	N9-C1'-C2'	-6.68	104.65	112.00
31	y	241	C	N1-C1'-C2'	-6.67	104.67	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	z	31	A	C3'-C2'-C1'	-6.67	96.17	101.50
31	y	763	G	N9-C1'-C2'	-6.65	104.69	112.00
31	y	752	G	N9-C1'-C2'	-6.64	104.70	112.00
31	y	1517	G	C3'-C2'-C1'	-6.61	96.21	101.50
1	w	674	G	N9-C1'-C2'	-6.61	104.73	112.00
31	y	1517	G	O4'-C4'-C3'	-6.61	97.39	104.00
31	y	1053	G	O4'-C1'-N9	-6.55	102.96	108.20
1	w	1751	C	N1-C1'-C2'	-6.53	104.82	112.00
31	y	303	A	N9-C1'-C2'	-6.53	104.82	112.00
1	w	41	C	P-O3'-C3'	-6.50	111.90	119.70
2	x	24	G	C2'-C3'-O3'	6.48	124.07	113.70
1	w	1577	C	C3'-C2'-C1'	6.46	106.66	101.50
1	w	342	G	N9-C1'-C2'	-6.45	104.90	112.00
1	w	2235	G	N9-C1'-C2'	-6.45	104.91	112.00
31	y	1517	G	N9-C1'-C2'	-6.44	104.91	112.00
1	w	436	C	P-O3'-C3'	-6.41	112.01	119.70
1	w	4	C	O4'-C1'-N1	6.40	113.32	108.20
31	y	1431	C	O4'-C1'-N1	6.40	113.32	108.20
1	w	2481	G	O4'-C1'-N9	6.38	113.31	108.20
31	y	971	G	O4'-C1'-N9	6.37	113.30	108.20
1	w	1245	G	N9-C1'-C2'	-6.37	104.99	112.00
32	z	45	U	C3'-C2'-C1'	-6.35	96.42	101.50
1	w	1735	U	P-O3'-C3'	-6.34	112.09	119.70
31	y	974	A	N9-C1'-C2'	6.31	122.20	114.00
1	w	1278	A	C3'-C2'-C1'	-6.30	96.46	101.50
1	w	2805	G	P-O3'-C3'	-6.29	112.16	119.70
1	w	1131	G	O4'-C1'-N9	6.28	113.22	108.20
1	w	1230	C	N1-C1'-C2'	-6.28	105.09	112.00
1	w	2061	G	N9-C1'-C2'	-6.27	105.11	112.00
31	y	1089	G	N9-C1'-C2'	-6.26	105.11	112.00
31	y	697	U	N1-C1'-C2'	-6.26	105.11	112.00
1	w	54	G	N9-C1'-C2'	-6.25	105.12	112.00
1	w	829	A	N9-C1'-C2'	6.23	122.10	114.00
1	w	1811	G	C3'-C2'-C1'	-6.23	96.52	101.50
1	w	1231	G	N9-C1'-C2'	-6.22	105.16	112.00
1	w	2369	A	N9-C1'-C2'	-6.22	105.16	112.00
1	w	2712	U	N3-C4-C5	6.21	118.33	114.60
1	w	1128	A	N9-C1'-C2'	6.19	122.05	114.00
1	w	436	C	OP1-P-O3'	6.18	118.80	105.20
1	w	1822	G	C3'-C2'-C1'	6.18	106.44	101.50
1	w	681	G	C3'-C2'-C1'	-6.17	96.57	101.50
1	w	23	G	N9-C1'-C2'	-6.15	105.24	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	y	458	C	P-O3'-C3'	-6.15	112.32	119.70
1	w	728	G	N9-C1'-C2'	6.14	121.98	114.00
1	w	370	G	N9-C1'-C2'	6.14	121.98	114.00
2	x	14	U	C4'-C3'-O3'	6.10	125.20	113.00
2	x	14	U	C2'-C3'-O3'	6.10	123.46	113.70
2	x	12	C	C2'-C3'-O3'	6.09	123.45	113.70
1	w	1218	C	N1-C1'-C2'	-6.09	105.30	112.00
1	w	1650	G	O4'-C1'-N9	6.08	113.07	108.20
31	y	1196	U	N1-C1'-C2'	-6.07	105.32	112.00
1	w	1247	A	O4'-C1'-N9	6.07	113.06	108.20
1	w	990	A	O4'-C1'-N9	6.06	113.05	108.20
2	x	24	G	C4'-C3'-O3'	6.05	125.11	113.00
31	y	1249	C	C3'-C2'-C1'	-6.05	96.66	101.50
1	w	188	G	C3'-C2'-C1'	-6.05	96.66	101.50
1	w	1301	A	N9-C1'-C2'	-6.04	105.36	112.00
1	w	2171	A	N9-C1'-C2'	6.04	121.85	114.00
1	w	718	A	N9-C1'-C2'	-6.00	105.40	112.00
1	w	1218	C	O4'-C1'-N1	6.00	113.00	108.20
1	w	2669	G	N9-C1'-C2'	-5.98	105.42	112.00
1	w	2451	A	C3'-C2'-C1'	-5.96	96.73	101.50
1	w	520	G	C3'-C2'-C1'	-5.95	96.74	101.50
1	w	2765	A	N9-C1'-C2'	5.95	121.73	114.00
1	w	2453	A	O4'-C1'-N9	5.94	112.95	108.20
1	w	889	C	O4'-C1'-N1	5.93	112.94	108.20
1	w	2287	A	O4'-C1'-N9	5.93	112.94	108.20
1	w	187	G	N9-C1'-C2'	-5.92	105.49	112.00
1	w	537	C	OP2-P-O3'	5.91	118.20	105.20
1	w	2262	U	C3'-C2'-C1'	-5.91	96.77	101.50
1	w	567	A	O4'-C1'-N9	5.91	112.93	108.20
32	z	7	A	C2'-C3'-O3'	5.90	123.14	113.70
1	w	1616	A	N9-C1'-C2'	5.90	121.67	114.00
31	y	336	C	N1-C1'-C2'	-5.89	105.52	112.00
1	w	741	G	N9-C1'-C2'	-5.89	105.52	112.00
31	y	1506	U	N1-C1'-C2'	-5.89	105.52	112.00
31	y	749	C	C5'-C4'-C3'	-5.86	106.63	116.00
1	w	1995	U	O4'-C1'-N1	5.85	112.88	108.20
31	y	458	C	OP2-P-O3'	5.85	118.07	105.20
1	w	574	C	N1-C2-O2	5.85	122.41	118.90
31	y	312	C	C3'-C2'-C1'	-5.85	96.82	101.50
1	w	163(B)	C	P-O3'-C3'	-5.84	112.69	119.70
1	w	2395	C	N1-C1'-C2'	-5.83	105.58	112.00
31	y	485	G	N9-C1'-C2'	5.82	121.57	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	y	1201	A	N9-C1'-C2'	5.82	121.56	114.00
31	y	1406	U	N1-C1'-C2'	-5.79	105.64	112.00
31	y	1484	C	O4'-C1'-N1	5.78	112.82	108.20
1	w	1839	G	N9-C1'-C2'	-5.78	105.65	112.00
31	y	570	G	N9-C1'-C2'	5.77	121.50	114.00
1	w	977	G	N9-C1'-C2'	-5.76	105.67	112.00
1	w	1577	C	C4'-C3'-O3'	5.76	124.52	113.00
1	w	1275	A	O4'-C1'-N9	5.75	112.80	108.20
1	w	1199	U	N1-C1'-C2'	5.74	121.46	114.00
1	w	2595	G	N9-C1'-C2'	-5.73	105.70	112.00
1	w	712(B)	A	OP2-P-O3'	5.73	117.80	105.20
31	y	587	G	O4'-C1'-N9	5.72	112.78	108.20
1	w	412	A	O4'-C1'-N9	5.72	112.78	108.20
31	y	97	U	OP2-P-O3'	5.70	117.74	105.20
1	w	1542	G	C3'-C2'-C1'	-5.70	96.94	101.50
1	w	2257	U	N1-C1'-C2'	-5.69	105.74	112.00
33	0	18	G	N9-C1'-C2'	5.69	121.40	114.00
1	w	1944	U	O4'-C1'-N1	5.69	112.75	108.20
31	y	1497	G	C3'-C2'-C1'	-5.69	96.95	101.50
31	y	276	G	N9-C1'-C2'	-5.68	105.76	112.00
1	w	338	G	C3'-C2'-C1'	5.67	106.04	101.50
1	w	805	G	N9-C1'-C2'	5.66	121.36	114.00
31	y	773	G	C3'-C2'-C1'	-5.66	96.97	101.50
1	w	271(C)	G	N9-C1'-C2'	5.65	121.35	114.00
31	y	879	C	N1-C1'-C2'	-5.65	105.79	112.00
31	y	281	G	N9-C1'-C2'	-5.64	105.80	112.00
31	y	636	U	C1'-O4'-C4'	-5.62	105.40	109.90
31	y	328	C	OP1-P-O3'	5.62	117.56	105.20
1	w	1126	A	N9-C1'-C2'	5.61	121.30	114.00
1	w	1644	C	N1-C1'-C2'	5.61	121.30	114.00
31	y	246	A	O4'-C1'-N9	5.61	112.69	108.20
1	w	1520	U	N1-C1'-C2'	5.60	121.28	114.00
1	w	1497	U	O4'-C1'-N1	-5.60	103.72	108.20
1	w	715	G	N9-C1'-C2'	-5.59	105.85	112.00
1	w	2463	C	O4'-C1'-N1	5.59	112.67	108.20
1	w	1329	U	C5'-C4'-C3'	-5.58	107.07	116.00
1	w	1846	G	C3'-C2'-C1'	-5.57	97.04	101.50
1	w	974(A)	G	O4'-C1'-N9	5.57	112.65	108.20
1	w	2198	A	N9-C1'-C2'	5.56	121.23	114.00
1	w	2866	U	N1-C1'-C2'	5.54	121.20	114.00
1	w	959	A	N9-C1'-C2'	5.54	121.20	114.00
1	w	1610	A	N9-C1'-C2'	5.53	121.19	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	w	1634	A	O4'-C1'-N9	5.53	112.62	108.20
1	w	1934	C	C2'-C3'-O3'	5.53	122.54	113.70
1	w	2199	A	P-O3'-C3'	-5.53	113.07	119.70
1	w	664	C	O4'-C1'-N1	5.51	112.61	108.20
1	w	1008	C	N1-C1'-C2'	-5.50	105.95	112.00
31	y	1280	A	O4'-C1'-N9	5.50	112.60	108.20
1	w	41	C	N1-C1'-C2'	-5.50	105.95	112.00
1	w	1516	U	O4'-C1'-N1	5.49	112.59	108.20
1	w	2805	G	OP2-P-O3'	5.48	117.26	105.20
1	w	150	C	O4'-C1'-N1	5.47	112.58	108.20
1	w	1460	A	O4'-C1'-N9	5.47	112.57	108.20
1	w	2049	G	N9-C1'-C2'	-5.47	105.99	112.00
1	w	2712	U	C2-N3-C4	-5.46	123.72	127.00
31	y	348	G	N9-C1'-C2'	5.46	121.10	114.00
1	w	1219	G	N9-C1'-C2'	-5.45	106.01	112.00
1	w	585	G	N9-C1'-C2'	5.45	121.08	114.00
1	w	2000	G	N9-C1'-C2'	-5.45	106.01	112.00
1	w	138	G	N9-C1'-C2'	5.44	121.07	114.00
1	w	1237	A	O4'-C1'-N9	5.44	112.55	108.20
1	w	2031	A	O4'-C1'-N9	5.44	112.55	108.20
1	w	1864	U	P-O3'-C3'	-5.43	113.19	119.70
31	y	501	C	N1-C1'-C2'	-5.42	106.04	112.00
1	w	1128	A	C4-N9-C1'	-5.42	116.55	126.30
31	y	189	U	P-O3'-C3'	-5.42	113.20	119.70
1	w	122(A)	C	P-O3'-C3'	-5.40	113.22	119.70
1	w	1332	G	N9-C1'-C2'	5.40	121.02	114.00
1	w	2725	A	N9-C1'-C2'	5.40	121.02	114.00
1	w	886	C	O4'-C1'-N1	5.40	112.52	108.20
1	w	1185	C	C5'-C4'-C3'	-5.40	107.36	116.00
31	y	1064	G	N9-C1'-C2'	5.39	121.01	114.00
1	w	2382	G	N9-C1'-C2'	5.39	121.01	114.00
1	w	673	C	N1-C1'-C2'	-5.38	106.08	112.00
1	w	2262	U	N1-C1'-C2'	-5.38	106.08	112.00
31	y	10	A	N9-C1'-C2'	-5.37	106.09	112.00
1	w	1297	C	O4'-C1'-N1	5.37	112.50	108.20
1	w	1385	G	C3'-C2'-C1'	5.37	105.79	101.50
1	w	1795	C	N1-C1'-C2'	-5.37	106.10	112.00
2	x	16	G	N9-C1'-C2'	-5.36	106.10	112.00
1	w	2754	U	N1-C1'-C2'	-5.36	106.11	112.00
1	w	1837	C	C3'-C2'-C1'	-5.36	97.21	101.50
1	w	273(A)	G	O4'-C1'-N9	5.35	112.48	108.20
1	w	444	C	O4'-C1'-N1	5.35	112.48	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	w	2819	G	O4'-C1'-N9	5.34	112.48	108.20
1	w	356	G	O4'-C1'-N9	5.34	112.47	108.20
31	y	1053	G	C2'-C3'-O3'	5.34	122.25	113.70
1	w	99	U	OP1-P-O3'	5.34	116.94	105.20
1	w	1601	G	O4'-C1'-N9	5.33	112.47	108.20
37	e	120	LEU	CA-CB-CG	5.33	127.55	115.30
1	w	2315	G	C3'-C2'-C1'	-5.30	97.26	101.50
1	w	1663	C	N1-C1'-C2'	-5.29	106.18	112.00
1	w	2655	G	N9-C1'-C2'	-5.28	106.19	112.00
31	y	297	G	N9-C1'-C2'	-5.28	106.19	112.00
31	y	1188	A	N9-C1'-C2'	-5.28	106.19	112.00
1	w	576	U	O4'-C1'-N1	5.27	112.42	108.20
31	y	301	G	C3'-C2'-C1'	-5.25	97.30	101.50
1	w	1297	C	N1-C1'-C2'	-5.25	106.22	112.00
31	y	522	C	N1-C1'-C2'	-5.24	106.24	112.00
1	w	1934	C	C3'-C2'-C1'	-5.24	97.31	101.50
1	w	2396	G	C3'-C2'-C1'	-5.24	97.31	101.50
1	w	913	U	P-O3'-C3'	5.23	125.98	119.70
1	w	65	C	C3'-C2'-C1'	-5.23	97.32	101.50
1	w	396	G	N9-C1'-C2'	-5.22	106.26	112.00
1	w	1964	G	N9-C1'-C2'	5.22	120.78	114.00
31	y	708	C	N1-C1'-C2'	-5.20	106.28	112.00
31	y	498	A	P-O3'-C3'	5.19	125.93	119.70
1	w	2603	G	N9-C1'-C2'	-5.18	106.30	112.00
1	w	926	A	C3'-C2'-C1'	-5.18	97.36	101.50
1	w	1992	G	O4'-C1'-N9	-5.18	104.06	108.20
1	w	2504	U	O4'-C1'-N1	5.18	112.34	108.20
31	y	1371	G	N9-C1'-C2'	-5.18	106.31	112.00
1	w	2178	C	O4'-C1'-N1	5.16	112.33	108.20
1	w	2885	C	N1-C1'-C2'	-5.16	106.33	112.00
31	y	185	A	O4'-C1'-N9	5.16	112.33	108.20
1	w	144(B)	A	OP2-P-O3'	5.15	116.54	105.20
31	y	39	G	N9-C1'-C2'	-5.15	106.34	112.00
31	y	901	A	O4'-C1'-N9	-5.14	104.09	108.20
1	w	2374	C	N1-C1'-C2'	-5.14	106.34	112.00
1	w	2014	A	O4'-C1'-N9	-5.14	104.09	108.20
1	w	2358	G	N9-C1'-C2'	-5.14	106.35	112.00
31	y	648	A	C3'-C2'-C1'	-5.13	97.39	101.50
1	w	1079	C	N1-C1'-C2'	-5.13	106.36	112.00
31	y	487	A	O4'-C1'-N9	5.13	112.30	108.20
1	w	2262	U	O4'-C1'-N1	5.13	112.30	108.20
1	w	2394	C	O4'-C1'-N1	5.12	112.30	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	w	1516	U	C3'-C2'-C1'	5.10	105.58	101.50
1	w	2483	C	C3'-C2'-C1'	-5.10	97.42	101.50
31	y	538	G	N9-C1'-C2'	-5.09	106.40	112.00
1	w	1566	A	C2'-C3'-O3'	5.09	121.84	113.70
1	w	2848	G	O4'-C1'-N9	5.09	112.27	108.20
31	y	189	U	C3'-C2'-C1'	5.08	105.56	101.50
1	w	1953	A	O4'-C1'-N9	5.08	112.26	108.20
31	y	18	C	N1-C1'-C2'	-5.08	106.42	112.00
1	w	211	A	N9-C1'-C2'	-5.06	106.43	112.00
1	w	479	A	N9-C1'-C2'	5.06	120.58	114.00
1	w	1863	G	C3'-C2'-C1'	5.06	105.55	101.50
1	w	1553	A	O4'-C1'-N9	5.06	112.25	108.20
1	w	2866	U	O4'-C1'-N1	5.06	112.25	108.20
1	w	1149	G	C1'-O4'-C4'	-5.05	105.86	109.90
1	w	150	C	C1'-O4'-C4'	-5.05	105.86	109.90
1	w	2676	C	C3'-C2'-C1'	-5.05	97.46	101.50
31	y	1061	G	O4'-C1'-N9	5.05	112.24	108.20
1	w	2712	U	C5-C4-O4	-5.04	122.87	125.90
31	y	509	A	C3'-C2'-C1'	-5.04	97.47	101.50
1	w	552	G	C8-N9-C4	-5.04	104.38	106.40
31	y	8	A	O4'-C1'-N9	5.04	112.23	108.20
1	w	177	G	N9-C1'-C2'	5.04	120.55	114.00
1	w	2036	C	O4'-C1'-N1	5.04	112.23	108.20
13	K	37	LEU	CA-CB-CG	5.04	126.88	115.30
1	w	2208	U	O4'-C1'-N1	5.03	112.23	108.20
1	w	1128	A	C8-N9-C1'	5.03	136.76	127.70
1	w	616	A	C4'-C3'-C2'	-5.03	97.57	102.60
1	w	33	U	N1-C1'-C2'	-5.02	106.47	112.00
1	w	1748	G	N9-C1'-C2'	-5.02	106.47	112.00
31	y	824	C	N1-C1'-C2'	-5.02	106.48	112.00
1	w	2414	G	C3'-C2'-C1'	-5.00	97.50	101.50
1	w	2471	C	C4'-C3'-C2'	5.00	107.60	102.60

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
2	x	14	U	C3'
2	x	24	G	C3'

All (32) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	w	1191	G	Sidechain
1	w	1231	G	Sidechain
1	w	1247	A	Sidechain
1	w	1274	A	Sidechain
1	w	1323	U	Sidechain
1	w	138	G	Sidechain
1	w	1497	U	Sidechain
1	w	1577	C	Sidechain
1	w	1626	G	Sidechain
1	w	1627	G	Sidechain
1	w	1822	G	Sidechain
1	w	1934	C	Sidechain
1	w	1973	G	Sidechain
1	w	2061	G	Sidechain
1	w	2158	A	Sidechain
1	w	241	A	Sidechain
1	w	2451	A	Sidechain
1	w	2662	A	Sidechain
1	w	2756	U	Sidechain
1	w	338	G	Sidechain
1	w	566	U	Sidechain
1	w	74	A	Sidechain
1	w	801	G	Sidechain
1	w	974(A)	G	Sidechain
31	y	1053	G	Sidechain
31	y	1080	A	Sidechain
31	y	1338	G	Sidechain
31	y	1346	A	Sidechain
31	y	299	G	Sidechain
31	y	832	C	Sidechain
31	y	915	A	Sidechain
31	y	938	A	Sidechain

5.2 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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	w	62213	0	31360	0	1
2	x	2573	0	1306	0	0
3	A	996	0	1013	324	0
4	B	2115	0	2195	865	0
5	C	1541	0	1599	658	0
6	D	1517	0	1565	619	0
7	E	1468	0	1529	570	0
8	F	1319	0	1399	472	0
9	G	1156	0	1239	549	2
10	H	1103	0	1177	595	0
11	I	932	0	994	481	0
12	J	1114	0	1187	402	0
13	K	1089	0	1156	504	0
14	L	968	0	1033	432	0
15	M	846	0	902	322	0
16	N	1143	0	1211	519	0
17	O	964	0	1022	345	0
18	P	779	0	852	345	0
19	Q	868	0	929	344	0
20	R	725	0	778	264	0
21	S	793	0	890	240	0
22	T	1475	0	1504	524	0
23	U	605	0	628	287	0
24	V	694	0	764	335	0
25	W	520	0	575	182	0
26	X	477	0	529	208	0
27	Y	436	0	460	135	0
28	Z	418	0	467	83	0
29	a	507	0	576	0	0
30	b	294	0	323	0	0
31	y	32302	0	16327	0	2
32	z	1628	0	844	0	0
33	0	1621	0	821	271	0
34	1	122	0	65	2	0
35	c	1900	0	1951	0	0
36	d	1612	0	1677	0	0
37	e	1703	0	1767	0	0
38	f	1146	0	1207	0	0
39	g	843	0	857	0	0
40	h	1257	0	1296	0	0
41	i	1116	0	1177	0	0
42	j	1011	0	1043	0	0
43	k	794	0	840	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	l	864	0	881	0	0
45	m	970	0	1057	0	0
46	n	997	0	1072	0	0
47	o	492	0	533	0	0
48	p	734	0	771	0	0
49	q	700	0	720	0	0
50	r	857	0	930	0	0
51	s	598	0	670	0	0
52	t	647	0	673	0	0
53	u	762	0	859	0	0
54	v	208	0	221	0	0
All	All	146532	0	99421	10655	3

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 178.

All (10655) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:J:71:VAL:HG13	12:J:72:PRO:CD	1.47	1.43
9:G:124:GLY:CA	9:G:144:VAL:H	1.33	1.38
11:I:17:ARG:NE	11:I:47:ILE:HB	1.39	1.37
33:O:9:A:N6	33:O:23:A:N7	1.74	1.36
16:N:100:TYR:HA	16:N:103:ARG:NH2	1.36	1.36
24:V:60:PHE:CD1	24:V:87:PRO:HB3	1.62	1.33
11:I:86:ILE:CG2	11:I:94:ARG:HD3	1.57	1.33
9:G:101:LEU:HB3	9:G:107:ILE:O	1.16	1.31
6:D:119:LEU:CB	6:D:188:VAL:HA	1.61	1.30
27:Y:13:LYS:O	27:Y:16:ARG:HB3	1.32	1.28
26:X:22:ALA:O	26:X:26:LEU:HG	1.19	1.28
4:B:63:ARG:NE	4:B:86:PRO:HD3	1.47	1.27
5:C:54:GLN:CG	5:C:75:VAL:HG21	1.62	1.27
13:K:40:ALA:O	13:K:97:VAL:HB	1.35	1.27
11:I:17:ARG:HE	11:I:47:ILE:CB	1.45	1.27
5:C:9:VAL:CG2	5:C:26:ILE:HA	1.64	1.27
21:S:55:TYR:CB	21:S:56:PRO:HD2	1.65	1.27
5:C:28:ALA:CB	5:C:93:VAL:HG13	1.64	1.26
8:F:60:ARG:NH2	8:F:60:ARG:HB3	1.47	1.26
5:C:28:ALA:HB2	5:C:93:VAL:CG1	1.66	1.26
24:V:69:LYS:O	24:V:73:LEU:HG	1.29	1.26
8:F:152:ARG:CA	8:F:152:ARG:HH21	1.50	1.25
15:M:67:ARG:O	15:M:71:ARG:HD3	1.36	1.25
21:S:55:TYR:HB2	21:S:56:PRO:CD	1.65	1.25

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:49:ILE:HD12	4:B:49:ILE:O	1.32	1.24
23:U:45:PHE:HA	23:U:77:ARG:O	1.30	1.24
16:N:50:ILE:HG22	16:N:62:THR:C	1.57	1.24
22:T:17:ALA:HA	22:T:20:ARG:NE	1.53	1.24
15:M:40:ILE:HG23	15:M:46:VAL:O	1.33	1.23
12:J:71:VAL:CG1	12:J:72:PRO:HD3	1.68	1.23
15:M:26:LEU:HB3	15:M:87:PHE:CD1	1.73	1.23
4:B:63:ARG:HE	4:B:86:PRO:CD	1.51	1.22
6:D:26:HIS:HB2	12:J:13:ASN:HB2	1.22	1.22
9:G:7:GLU:CG	9:G:8:PRO:HD3	1.70	1.21
14:L:68:ARG:NH2	14:L:69:ASP:HB2	1.55	1.21
26:X:20:LYS:O	26:X:23:LEU:HG	1.34	1.21
18:P:96:ILE:CG2	18:P:97:LYS:H	1.54	1.20
13:K:125:LEU:HD22	13:K:126:PRO:CD	1.69	1.20
8:F:152:ARG:HA	8:F:152:ARG:NH2	1.56	1.20
6:D:119:LEU:HB3	6:D:188:VAL:HA	1.23	1.20
13:K:67:ARG:O	13:K:68:ILE:HG13	1.39	1.20
10:H:26:THR:HG22	10:H:28:VAL:H	1.04	1.19
26:X:8:LEU:HA	26:X:54:VAL:HA	1.20	1.19
13:K:34:LEU:HD12	13:K:103:MET:CE	1.71	1.19
19:Q:71:VAL:HA	19:Q:107:LEU:HD22	1.20	1.19
20:R:81:VAL:HG21	20:R:86:GLY:CA	1.72	1.19
4:B:211:ARG:HG3	4:B:215:LEU:HD11	1.25	1.18
33:O:54:U:H3	33:O:58:A:N6	1.38	1.18
10:H:80:ALA:O	10:H:83:ILE:HG12	1.42	1.18
22:T:19:ARG:HE	22:T:25:PRO:HG2	1.03	1.18
13:K:27:VAL:HG11	13:K:136:ALA:HB3	1.23	1.18
15:M:70:GLY:HA3	15:M:101:LEU:CD2	1.71	1.18
19:Q:39:THR:OG1	27:Y:28:PRO:HG3	1.42	1.18
24:V:88:LYS:HG2	24:V:89:GLU:OE2	1.39	1.18
12:J:98:GLU:O	12:J:102:ARG:HB3	1.43	1.18
9:G:101:LEU:HD12	9:G:107:ILE:CG2	1.73	1.18
5:C:20:ALA:CB	11:I:73:ASP:HB3	1.73	1.18
27:Y:33:CYS:SG	27:Y:34:PRO:HD2	1.84	1.17
19:Q:10:VAL:HG12	19:Q:11:ARG:H	1.06	1.17
19:Q:57:ASN:HA	19:Q:60:ASN:HB2	1.26	1.17
28:Z:16:HIS:HA	28:Z:21:ARG:HG3	1.17	1.17
7:E:74:LYS:HB2	7:E:86:MET:HB2	1.25	1.16
17:O:93:LYS:H	17:O:93:LYS:HD2	1.04	1.16
13:K:125:LEU:HD13	13:K:126:PRO:HD2	1.19	1.16
11:I:24:VAL:HG22	11:I:25:LEU:H	1.08	1.16
15:M:39:ILE:CG1	15:M:49:VAL:HG13	1.74	1.16

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:A:21:TYR:HA	3:A:25:GLU:OE2	1.44	1.16
27:Y:38:ALA:H	27:Y:49:CYS:HB2	1.03	1.16
5:C:27:LEU:HG	5:C:180:ASN:O	1.40	1.16
16:N:93:ARG:HA	16:N:117:ASP:HB2	1.28	1.15
16:N:28:VAL:HG22	16:N:45:PHE:O	1.44	1.15
5:C:77:ILE:HG22	5:C:78:LEU:H	1.08	1.15
9:G:124:GLY:HA2	9:G:144:VAL:HG23	1.16	1.15
9:G:114:LEU:HA	9:G:130:TYR:CD1	1.80	1.15
15:M:27:SER:HA	15:M:89:ARG:CG	1.77	1.15
22:T:55:HIS:O	22:T:70:LEU:HD11	1.41	1.15
11:I:86:ILE:HG22	11:I:94:ARG:CD	1.77	1.15
12:J:92:GLU:HG3	12:J:95:VAL:HG13	1.26	1.15
13:K:125:LEU:CD1	13:K:126:PRO:HD2	1.76	1.15
16:N:51:ARG:HB3	16:N:62:THR:CG2	1.75	1.15
6:D:4:ILE:HA	6:D:12:ARG:HE	1.05	1.15
21:S:49:VAL:HG12	21:S:50:ARG:H	1.07	1.15
24:V:12:PRO:HG3	24:V:63:ALA:N	1.60	1.15
15:M:39:ILE:HG13	15:M:49:VAL:HG13	1.22	1.15
16:N:50:ILE:HG22	16:N:62:THR:O	1.47	1.15
20:R:81:VAL:HG22	20:R:82:GLN:H	1.06	1.15
4:B:78:LYS:HB2	4:B:114:GLY:O	1.43	1.14
24:V:26:ARG:HG3	24:V:34:THR:CG2	1.77	1.14
20:R:11:PRO:HA	20:R:28:PHE:HA	1.22	1.14
8:F:125:VAL:HA	8:F:131:VAL:HB	1.27	1.14
10:H:123:GLU:HB3	10:H:127:LYS:HE3	1.15	1.14
15:M:27:SER:CA	15:M:89:ARG:HG3	1.76	1.14
5:C:188:VAL:CG2	5:C:189:PRO:HD2	1.76	1.14
8:F:98:LEU:HB2	8:F:102:ALA:O	1.47	1.14
13:K:51:ARG:HD3	13:K:51:ARG:N	1.60	1.14
5:C:63:LEU:HD23	5:C:65:GLY:N	1.63	1.14
3:A:201:LYS:HB2	3:A:202:PRO:CD	1.77	1.14
4:B:140:THR:O	4:B:164:GLN:HA	1.45	1.14
16:N:25:GLY:O	16:N:48:ILE:HG23	1.48	1.14
8:F:20:ALA:HB1	8:F:21:PRO:HD2	1.19	1.14
9:G:6:LEU:HD13	9:G:35:LEU:HD22	1.27	1.14
5:C:198:VAL:HG12	5:C:199:ARG:N	1.61	1.14
23:U:34:GLY:HA2	23:U:60:PHE:HE2	1.04	1.14
7:E:165:THR:OG1	7:E:167:GLU:HG3	1.45	1.13
5:C:105:THR:CG2	5:C:106:GLY:H	1.62	1.13
14:L:40:LYS:HD3	14:L:40:LYS:H	1.07	1.13
4:B:79:VAL:HG21	4:B:111:LEU:HG	1.17	1.13
5:C:51:PHE:HB3	5:C:76:ARG:CD	1.77	1.13

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:54:GLN:HG3	5:C:75:VAL:HG21	1.22	1.13
17:O:85:LYS:HA	17:O:85:LYS:HE3	1.19	1.13
5:C:31:CYS:SG	5:C:51:PHE:HB2	1.88	1.13
18:P:15:GLU:HB2	18:P:16:PRO:HD3	1.26	1.13
23:U:50:ASN:HB2	23:U:81:VAL:CG1	1.77	1.13
5:C:51:PHE:HB3	5:C:76:ARG:HD2	1.27	1.13
16:N:62:THR:HG21	16:N:75:ILE:HG12	1.22	1.13
4:B:75:ILE:H	4:B:76:PRO:HD2	1.13	1.13
6:D:15:LEU:HB2	6:D:19:LEU:HD11	1.27	1.13
11:I:67:LYS:HG2	11:I:68:GLU:H	1.10	1.13
4:B:2:ALA:CA	4:B:200:ASP:HB3	1.77	1.13
18:P:76:LYS:HE3	18:P:78:LYS:HB2	1.19	1.13
23:U:25:ARG:HG3	23:U:37:LEU:HB2	1.25	1.13
5:C:198:VAL:CG1	5:C:199:ARG:H	1.61	1.13
6:D:105:LEU:O	6:D:105:LEU:HD13	1.48	1.13
7:E:115:ARG:O	7:E:118:ARG:HG2	10.76	1.12
15:M:35:ILE:HD13	15:M:69:VAL:HB	1.20	1.12
18:P:68:LYS:HB3	18:P:94:LEU:CD2	1.79	1.12
26:X:35:ARG:HH21	26:X:37:LEU:HD21	1.09	1.12
11:I:6:THR:HG22	11:I:7:TYR:H	1.03	1.12
13:K:42:ILE:HD13	13:K:43:THR:N	1.62	1.12
14:L:75:LEU:O	14:L:79:LEU:HG	1.47	1.12
26:X:20:LYS:HA	26:X:23:LEU:HD21	1.21	1.12
4:B:24:ILE:HG12	4:B:25:THR:H	1.11	1.12
10:H:90:LEU:HA	10:H:110:LEU:CB	1.79	1.12
4:B:137:PRO:HB2	4:B:140:THR:HG22	1.24	1.12
4:B:155:LEU:HD22	4:B:157:ARG:HG2	1.29	1.12
10:H:127:LYS:HA	10:H:130:LEU:CD1	1.78	1.12
26:X:3:ARG:O	26:X:58:VAL:HG13	1.49	1.12
10:H:110:LEU:O	10:H:114:LEU:HG	1.46	1.12
16:N:24:PRO:HA	16:N:49:VAL:CG1	1.79	1.12
10:H:138:ARG:HA	10:H:141:LYS:HE2	1.18	1.12
22:T:99:TYR:O	22:T:123:ASP:HB2	1.47	1.12
9:G:124:GLY:HA2	9:G:144:VAL:CG2	1.80	1.12
14:L:86:ARG:HG3	14:L:87:TYR:CD1	1.85	1.12
10:H:117:HIS:HB2	10:H:120:ARG:HB3	1.13	1.12
13:K:46:GLN:NE2	13:K:125:LEU:HD21	1.64	1.12
14:L:68:ARG:HB3	14:L:68:ARG:HH11	1.15	1.12
18:P:30:GLY:HA3	18:P:65:GLY:H	1.09	1.12
18:P:78:LYS:H	18:P:83:ARG:HA	0.98	1.12
13:K:23:GLY:N	13:K:99:PRO:HD2	1.64	1.12
18:P:96:ILE:HG22	18:P:97:LYS:N	1.56	1.12

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:11:MET:HB2	5:C:23:VAL:O	1.48	1.11
14:L:56:LYS:HD2	14:L:88:ARG:HA	1.18	1.11
19:Q:10:VAL:HB	19:Q:101:SER:H	1.05	1.11
20:R:12:VAL:HA	20:R:29:TRP:NE1	1.64	1.11
5:C:108:SER:HA	5:C:189:PRO:CG	1.80	1.11
6:D:119:LEU:HA	6:D:188:VAL:HG22	1.15	1.11
6:D:98:LYS:HA	6:D:101:ARG:HB3	1.32	1.11
7:E:120:LEU:HB2	7:E:179:PRO:HG2	1.27	1.11
9:G:124:GLY:CA	9:G:144:VAL:N	2.11	1.11
17:O:99:ALA:HA	17:O:103:PRO:HB3	1.12	1.11
27:Y:38:ALA:HB3	27:Y:49:CYS:HB3	1.30	1.11
8:F:118:PRO:HD2	8:F:121:ILE:HB	1.24	1.11
9:G:62:LYS:HZ3	9:G:133:HIS:HB2	1.11	1.11
17:O:12:ARG:HA	17:O:15:LYS:HD3	1.20	1.11
12:J:7:ARG:HH11	12:J:10:PRO:HG2	1.12	1.11
5:C:59:VAL:HG21	5:C:63:LEU:HA	1.29	1.11
8:F:117:PRO:HA	8:F:121:ILE:HD12	1.27	1.11
16:N:51:ARG:HB3	16:N:62:THR:HG23	1.15	1.11
22:T:102:LEU:HD11	22:T:124:ILE:HG22	1.18	1.11
11:I:8:LEU:HD13	11:I:82:ASN:HB3	1.32	1.11
20:R:20:GLY:HA2	20:R:24:GLY:O	1.46	1.11
8:F:95:ARG:HE	8:F:107:VAL:HA	1.11	1.11
3:A:30:VAL:HA	3:A:33:LEU:HD12	1.17	1.11
17:O:92:ARG:HB3	17:O:94:ASN:HD21	1.02	1.11
9:G:88:ILE:HG22	9:G:121:LYS:HG2	1.14	1.11
24:V:26:ARG:HG2	24:V:27:GLU:H	1.08	1.11
11:I:91:LEU:H	11:I:91:LEU:HD13	1.07	1.10
15:M:73:LEU:CA	15:M:76:LYS:HD3	1.81	1.10
9:G:124:GLY:C	9:G:143:SER:HA	1.70	1.10
26:X:44:ARG:HD2	26:X:44:ARG:H	0.97	1.10
16:N:91:ARG:NH1	16:N:91:ARG:HB3	5.19	1.10
22:T:39:VAL:HG12	22:T:40:ASP:H	1.04	1.10
7:E:122:PRO:HG3	7:E:180:PHE:HA	1.21	1.10
9:G:40:THR:HG23	9:G:43:ASN:HB2	1.30	1.10
12:J:7:ARG:HD2	12:J:10:PRO:HD2	1.31	1.10
6:D:150:LEU:HA	6:D:169:VAL:HB	1.30	1.10
26:X:28:LEU:HD12	26:X:33:GLN:HB3	1.33	1.10
5:C:108:SER:HA	5:C:189:PRO:HG3	1.32	1.10
8:F:124:GLU:HG2	8:F:132:ARG:HE	1.14	1.10
15:M:26:LEU:HD21	15:M:39:ILE:HG22	1.28	1.10
18:P:4:ILE:HG12	18:P:13:ARG:HB3	1.32	1.10
13:K:33:GLY:H	13:K:132:VAL:HB	0.96	1.10

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:79:VAL:HB	4:B:111:LEU:HD11	1.31	1.10
6:D:4:ILE:HA	6:D:12:ARG:NE	1.67	1.10
7:E:172:LEU:HA	7:E:175:LEU:HD12	1.20	1.10
8:F:43:VAL:HG22	8:F:44:VAL:H	1.11	1.10
20:R:82:GLN:HG3	20:R:83:VAL:H	1.14	1.10
4:B:69:ARG:HH11	4:B:76:PRO:HG3	1.01	1.10
22:T:17:ALA:HA	22:T:20:ARG:HE	1.01	1.10
24:V:51:VAL:HB	24:V:60:PHE:H	1.16	1.10
5:C:51:PHE:CD1	5:C:52:LEU:N	2.19	1.10
10:H:113:MET:HA	10:H:116:THR:HG23	1.24	1.10
18:P:60:GLU:HA	18:P:101:GLY:HA2	1.15	1.10
7:E:20:ILE:HG23	7:E:21:ARG:H	0.93	1.10
9:G:92:VAL:O	9:G:93:THR:HG23	1.51	1.10
11:I:85:VAL:C	11:I:86:ILE:HD12	1.70	1.10
15:M:70:GLY:HA3	15:M:101:LEU:HD22	1.13	1.10
13:K:125:LEU:HD22	13:K:126:PRO:HD3	1.30	1.09
4:B:2:ALA:HA	4:B:200:ASP:CB	1.81	1.09
20:R:59:VAL:O	20:R:74:PRO:HD2	1.50	1.09
21:S:65:ALA:HB3	21:S:66:PRO:HD3	1.33	1.09
23:U:66:VAL:O	23:U:81:VAL:HA	1.50	1.09
24:V:11:ARG:NH2	24:V:61:ARG:H	1.48	1.09
14:L:37:THR:HG22	14:L:111:LEU:HG	1.32	1.09
14:L:86:ARG:HG3	14:L:87:TYR:HD1	1.15	1.09
12:J:71:VAL:HG13	12:J:72:PRO:HD2	1.31	1.09
13:K:11:LYS:CG	13:K:12:GLN:H	1.63	1.09
14:L:5:LYS:HG2	14:L:6:SER:H	1.01	1.09
22:T:44:PHE:CE2	22:T:45:ASP:HB2	1.85	1.09
18:P:16:PRO:HD2	18:P:18:LEU:HD21	1.31	1.09
5:C:102:VAL:HA	5:C:201:THR:N	1.64	1.09
12:J:79:ARG:HD2	12:J:108:LYS:O	1.50	1.09
16:N:100:TYR:CA	16:N:103:ARG:HH22	1.65	1.09
5:C:102:VAL:CA	5:C:201:THR:H	1.66	1.09
8:F:54:ARG:HB2	8:F:55:PRO:HD2	1.30	1.09
18:P:30:GLY:HA2	18:P:64:HIS:HB3	1.33	1.09
24:V:49:VAL:HG12	24:V:50:ARG:H	1.07	1.09
25:W:51:ARG:HD3	25:W:52:ASP:OD2	1.52	1.09
4:B:44:ASN:HA	4:B:49:ILE:HA	1.21	1.09
5:C:117:MET:HA	5:C:122:PHE:H	0.93	1.09
16:N:101:PHE:HD2	16:N:101:PHE:N	1.50	1.09
16:N:24:PRO:HA	16:N:49:VAL:HG11	1.12	1.09
24:V:11:ARG:HG3	24:V:61:ARG:HB3	1.24	1.09
3:A:8:TYR:HB2	3:A:12:LEU:HD13	1.13	1.09

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:267:SER:HA	4:B:270:ILE:HG13	1.32	1.09
14:L:38:VAL:CG1	14:L:39:PRO:HD3	1.82	1.09
4:B:75:ILE:HG23	4:B:98:VAL:HB	1.22	1.09
5:C:188:VAL:HG22	5:C:189:PRO:CD	1.83	1.09
9:G:124:GLY:HA3	9:G:144:VAL:H	1.05	1.09
10:H:157:ARG:HD2	10:H:157:ARG:O	1.52	1.09
15:M:67:ARG:O	15:M:71:ARG:CD	2.01	1.09
16:N:28:VAL:HG13	16:N:44:ASP:O	1.52	1.09
22:T:77:ASP:N	22:T:83:PRO:HA	1.66	1.09
5:C:176:ILE:HB	5:C:181:LEU:HB2	1.09	1.09
5:C:51:PHE:N	5:C:76:ARG:HB3	1.65	1.09
11:I:25:LEU:HD12	11:I:26:LYS:H	0.99	1.09
22:T:141:VAL:CG2	22:T:144:LEU:HG	1.82	1.09
8:F:98:LEU:HB3	8:F:123:PHE:CE2	1.86	1.08
17:O:47:TYR:O	17:O:50:ARG:HB2	1.52	1.08
20:R:63:LYS:HZ1	20:R:65:ARG:HB2	1.18	1.08
13:K:51:ARG:NH1	13:K:51:ARG:HB2	1.68	1.08
3:A:21:TYR:CB	3:A:25:GLU:HG3	1.83	1.08
3:A:7:ARG:CB	3:A:7:ARG:HH11	1.66	1.08
4:B:81:ALA:HB3	4:B:94:LEU:HB3	1.13	1.08
23:U:50:ASN:HA	23:U:63:VAL:HB	1.33	1.08
24:V:51:VAL:CG1	24:V:52:ARG:H	1.66	1.08
15:M:75:GLU:HA	15:M:78:LEU:CD1	1.83	1.08
12:J:138:LEU:HA	12:J:142:GLY:HA3	1.09	1.08
6:D:148:SER:HB3	6:D:184:THR:HG22	1.30	1.08
9:G:7:GLU:HA	9:G:14:ASP:HB3	1.10	1.08
16:N:91:ARG:HH11	16:N:91:ARG:HB3	5.04	1.08
17:O:12:ARG:O	17:O:15:LYS:HG2	1.52	1.08
13:K:132:VAL:HG22	13:K:133:ARG:H	1.16	1.08
22:T:99:TYR:HA	22:T:124:ILE:O	1.53	1.08
19:Q:19:LEU:HB2	27:Y:25:LEU:HD23	1.22	1.08
12:J:122:PRO:HB2	12:J:142:GLY:CA	1.84	1.08
17:O:36:ARG:HA	17:O:39:LEU:HD11	1.34	1.08
5:C:24:THR:HB	5:C:186:GLY:HA2	1.15	1.08
16:N:50:ILE:CA	16:N:99:LEU:HG	1.83	1.08
22:T:137:ILE:HG12	22:T:138:GLU:H	1.16	1.08
26:X:44:ARG:HD2	26:X:44:ARG:N	1.65	1.08
13:K:34:LEU:HD12	13:K:103:MET:HE2	1.22	1.07
15:M:96:GLY:HA2	15:M:99:LYS:HD2	1.27	1.07
24:V:12:PRO:HG2	24:V:13:ILE:H	1.19	1.07
7:E:74:LYS:HB2	7:E:86:MET:CB	1.84	1.07
8:F:124:GLU:O	8:F:131:VAL:HA	1.54	1.07

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:V:29:GLY:HA2	24:V:33:LYS:HA	1.36	1.07
10:H:50:ALA:HA	10:H:53:ILE:HD12	1.11	1.07
24:V:50:ARG:HG2	24:V:51:VAL:H	1.14	1.07
33:0:27:C:H2'	33:0:28:C:C6	1.90	1.07
3:A:217:THR:HG22	3:A:219:MET:H	1.15	1.07
7:E:135:LEU:HD11	7:E:155:MET:HG2	1.14	1.07
13:K:37:LEU:CD1	13:K:128:LYS:H	1.66	1.07
13:K:39:PRO:HB3	13:K:99:PRO:CG	1.84	1.07
10:H:127:LYS:HA	10:H:130:LEU:HD11	1.24	1.07
11:I:87:ILE:HG23	11:I:91:LEU:HA	1.28	1.07
12:J:83:VAL:HG22	12:J:84:ASN:H	0.96	1.07
5:C:116:VAL:HG22	5:C:117:MET:H	1.17	1.07
13:K:98:LYS:HB2	13:K:101:ARG:CG	1.83	1.07
4:B:218:ARG:HG2	4:B:219:PRO:HD2	1.35	1.07
8:F:105:LEU:O	8:F:113:VAL:HB	1.55	1.07
21:S:71:LYS:NZ	21:S:78:ALA:HB1	1.70	1.07
9:G:98:ALA:HA	9:G:109:ILE:HD11	1.35	1.07
8:F:17:VAL:HA	8:F:26:VAL:HG22	1.11	1.07
9:G:88:ILE:CG2	9:G:121:LYS:HG2	1.83	1.07
15:M:68:GLN:HA	15:M:71:ARG:NH1	1.69	1.07
5:C:11:MET:O	5:C:12:THR:HG23	1.55	1.07
22:T:102:LEU:HD11	22:T:124:ILE:CG2	1.84	1.07
24:V:21:ARG:HG3	24:V:22:GLY:H	1.14	1.06
7:E:103:LEU:HA	7:E:106:LEU:HG	1.31	1.06
8:F:125:VAL:CA	8:F:131:VAL:HB	1.85	1.06
8:F:157:TYR:HA	8:F:172:LYS:H	1.13	1.06
18:P:15:GLU:HB2	18:P:16:PRO:CD	1.83	1.06
22:T:44:PHE:CD2	22:T:45:ASP:N	2.22	1.06
5:C:9:VAL:HG23	5:C:26:ILE:HA	1.33	1.06
8:F:89:ILE:HG23	8:F:129:THR:HG21	1.34	1.06
21:S:52:SER:HB3	21:S:53:PRO:HD2	1.09	1.06
23:U:68:GLU:HB3	23:U:80:HIS:H	1.17	1.06
17:O:45:TYR:O	17:O:49:HIS:HB2	1.51	1.06
25:W:28:LYS:O	25:W:31:GLU:HG3	1.55	1.06
33:0:6:U:H2'	33:0:7:U:H5''	1.31	1.06
5:C:117:MET:HA	5:C:122:PHE:N	1.69	1.06
12:J:71:VAL:HG13	12:J:72:PRO:HD3	1.10	1.06
15:M:73:LEU:HA	15:M:76:LYS:CD	1.84	1.06
16:N:102:ILE:HG13	16:N:103:ARG:N	1.66	1.06
18:P:34:GLU:HB2	18:P:64:HIS:HE1	1.21	1.06
33:0:19:G:H5''	33:0:20:G:OP1	1.55	1.06
10:H:113:MET:HG3	10:H:121:VAL:HG13	1.34	1.06

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:J:50:ARG:HH11	12:J:57:THR:HB	1.14	1.06
18:P:44:LYS:HG2	18:P:45:THR:H	1.19	1.06
22:T:53:ILE:HD13	22:T:53:ILE:H	1.17	1.06
22:T:99:TYR:CD1	22:T:125:LEU:HD13	1.88	1.06
8:F:72:ILE:H	8:F:72:ILE:HD13	1.14	1.06
15:M:39:ILE:HD11	15:M:49:VAL:HG22	1.12	1.06
16:N:50:ILE:HA	16:N:99:LEU:CG	1.85	1.06
7:E:146:TYR:HE1	7:E:149:VAL:HG13	1.20	1.06
9:G:97:ILE:HD13	9:G:98:ALA:N	1.71	1.06
3:A:7:ARG:HB3	3:A:7:ARG:NH1	1.70	1.06
5:C:52:LEU:HB3	5:C:75:VAL:HB	1.32	1.06
6:D:150:LEU:CA	6:D:169:VAL:HB	1.85	1.06
14:L:34:ILE:HG22	14:L:35:THR:H	0.94	1.06
14:L:38:VAL:HG12	14:L:39:PRO:HD3	1.08	1.06
14:L:45:ARG:HG3	14:L:46:GLY:H	0.94	1.06
22:T:98:MET:C	22:T:125:LEU:HD12	1.76	1.06
33:O:18:G:N2	33:O:58:A:O4'	1.89	1.05
5:C:55:ASN:ND2	5:C:75:VAL:HG22	1.69	1.05
9:G:101:LEU:HG	9:G:109:ILE:HG23	1.33	1.05
12:J:112:LEU:H	12:J:128:HIS:HB2	1.15	1.05
16:N:123:LYS:NZ	16:N:123:LYS:HB2	1.71	1.05
9:G:77:LEU:HB3	9:G:142:VAL:HG22	1.35	1.05
10:H:80:ALA:HA	10:H:83:ILE:HD11	1.37	1.05
15:M:64:GLU:O	15:M:67:ARG:HG2	1.54	1.05
15:M:78:LEU:HD11	15:M:109:GLY:HA2	1.32	1.05
22:T:46:LYS:HA	22:T:49:ARG:HD2	1.37	1.05
7:E:163:ALA:HA	7:E:168:GLU:HB2	1.30	1.05
23:U:30:VAL:HG22	23:U:31:VAL:H	0.96	1.05
22:T:141:VAL:CG1	22:T:144:LEU:HB2	1.85	1.05
23:U:34:GLY:HA2	23:U:60:PHE:CE2	1.91	1.05
24:V:15:ALA:O	24:V:46:LEU:HG	1.56	1.05
11:I:104:ARG:HB3	11:I:104:ARG:HH11	1.16	1.05
18:P:51:VAL:HG12	18:P:52:VAL:H	1.16	1.05
13:K:48:GLU:HA	13:K:51:ARG:HE	1.19	1.05
18:P:5:VAL:HG22	18:P:6:LYS:H	1.22	1.05
33:O:26:G:C2'	33:O:27:C:H5'	1.86	1.05
14:L:68:ARG:NH1	14:L:68:ARG:HB3	1.72	1.05
20:R:54:VAL:HG21	20:R:78:LYS:H	0.98	1.05
24:V:26:ARG:CG	24:V:34:THR:HG23	1.85	1.05
4:B:169:GLU:CG	4:B:174:ILE:HD11	1.87	1.05
5:C:20:ALA:HB2	11:I:73:ASP:HB3	1.06	1.05
19:Q:58:ALA:O	19:Q:64:MET:HG2	1.57	1.05

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:R:88:LYS:O	20:R:89:ILE:HB	1.56	1.05
4:B:76:PRO:HB2	4:B:117:VAL:CG1	1.86	1.05
4:B:79:VAL:HA	4:B:95:LEU:HB3	1.05	1.05
10:H:65:TRP:HB3	17:O:64:ARG:NE	1.70	1.05
24:V:51:VAL:HG11	24:V:60:PHE:CD2	1.89	1.05
17:O:93:LYS:H	17:O:93:LYS:CD	1.66	1.05
17:O:106:PHE:HA	17:O:109:LEU:CD1	1.87	1.05
9:G:40:THR:CG2	9:G:43:ASN:HB2	1.86	1.04
11:I:78:ARG:HB3	16:N:73:GLU:HB2	1.34	1.04
3:A:40:GLU:HB3	3:A:217:THR:HG21	1.39	1.04
6:D:26:HIS:HB2	12:J:13:ASN:CB	1.86	1.04
6:D:26:HIS:CB	12:J:13:ASN:HB2	1.87	1.04
14:L:37:THR:HA	14:L:111:LEU:HA	1.09	1.04
14:L:37:THR:OG1	14:L:39:PRO:HD2	1.55	1.04
20:R:14:SER:HB3	20:R:16:LYS:HE2	1.09	1.04
22:T:15:PRO:O	22:T:19:ARG:CD	2.05	1.04
6:D:117:LYS:HZ2	6:D:186:ARG:HA	1.21	1.04
11:I:62:VAL:O	11:I:63:VAL:HG13	1.57	1.04
12:J:148:LEU:H	12:J:148:LEU:HD13	1.19	1.04
14:L:78:LYS:HE2	14:L:82:GLU:HB3	1.34	1.04
14:L:79:LEU:HA	14:L:83:ILE:HB	1.37	1.04
21:S:52:SER:HB3	21:S:53:PRO:CD	1.88	1.04
4:B:134:ARG:NH2	4:B:187:GLY:HA3	1.72	1.04
5:C:48:GLN:HB3	5:C:78:LEU:HD22	1.36	1.04
9:G:120:ILE:HG12	9:G:121:LYS:N	1.72	1.04
28:Z:28:ARG:HA	28:Z:31:LEU:HG	1.39	1.04
4:B:10:THR:O	4:B:14:ARG:HB3	1.57	1.04
5:C:144:ARG:HH11	5:C:144:ARG:HB3	1.16	1.04
6:D:59:ILE:HD11	6:D:73:ILE:HB	1.07	1.04
11:I:4:PRO:HB2	11:I:22:ILE:O	1.55	1.04
13:K:51:ARG:H	13:K:51:ARG:HD3	0.90	1.04
17:O:90:VAL:HG12	17:O:91:ASP:H	1.22	1.04
14:L:38:VAL:HB	14:L:110:PRO:HB2	1.38	1.04
21:S:38:ILE:HG23	21:S:39:VAL:H	1.16	1.04
4:B:182:LEU:O	4:B:271:ILE:HB	1.57	1.04
9:G:120:ILE:HG12	9:G:121:LYS:H	0.91	1.04
13:K:52:VAL:HG23	13:K:53:ALA:H	1.17	1.04
16:N:29:ARG:O	16:N:85:LYS:HA	1.57	1.04
16:N:93:ARG:HH22	16:N:118:ARG:HG2	1.19	1.04
26:X:12:PRO:HD2	26:X:13:ILE:HD13	1.38	1.04
26:X:40:THR:O	26:X:43:ILE:HB	1.56	1.04
6:D:40:ARG:HH11	6:D:40:ARG:HB3	6.53	1.04

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:59:GLU:HG3	7:E:60:LEU:H	1.20	1.04
7:E:56:ALA:O	7:E:60:LEU:HG	1.56	1.04
19:Q:92:ARG:HA	19:Q:92:ARG:HE	1.16	1.04
13:K:17:LEU:O	13:K:18:LYS:HB3	1.57	1.04
19:Q:59:VAL:HG22	19:Q:64:MET:HB2	1.34	1.04
3:A:201:LYS:HB2	3:A:202:PRO:HD2	1.06	1.03
5:C:63:LEU:HD23	5:C:65:GLY:H	0.90	1.03
16:N:64:ARG:NE	16:N:103:ARG:HB2	1.72	1.03
4:B:81:ALA:CB	4:B:94:LEU:HB3	1.87	1.03
11:I:78:ARG:HB3	16:N:73:GLU:CB	1.87	1.03
33:0:62:A:H2'	33:0:63:C:C6	1.92	1.03
4:B:81:ALA:HB3	4:B:94:LEU:CB	1.88	1.03
6:D:163:ARG:HG3	6:D:164:ASN:H	1.23	1.03
8:F:19:VAL:HG22	8:F:24:VAL:HG22	1.38	1.03
20:R:14:SER:HB3	20:R:16:LYS:CE	1.88	1.03
23:U:36:ILE:HA	23:U:60:PHE:HB2	1.40	1.03
4:B:102:LYS:HE2	4:B:102:LYS:N	1.74	1.03
9:G:101:LEU:CB	9:G:107:ILE:O	2.05	1.03
14:L:28:LEU:O	14:L:28:LEU:HD23	1.57	1.03
16:N:64:ARG:HH22	16:N:66:VAL:HG23	1.18	1.03
4:B:77:ALA:HB3	4:B:96:HIS:O	1.59	1.03
7:E:98:ARG:O	7:E:102:PHE:HB2	1.56	1.03
20:R:54:VAL:HG22	20:R:77:LYS:HD3	1.36	1.03
24:V:10:LYS:C	24:V:12:PRO:HD2	1.78	1.03
33:0:6:U:C2'	33:0:7:U:H5''	1.88	1.03
4:B:21:PHE:HA	4:B:24:ILE:HB	1.35	1.03
13:K:23:GLY:HA2	13:K:98:LYS:HB3	1.36	1.03
16:N:66:VAL:HA	16:N:70:VAL:O	1.56	1.03
18:P:30:GLY:HA3	18:P:65:GLY:N	1.71	1.03
4:B:24:ILE:HA	4:B:91:ARG:NH1	1.73	1.03
5:C:32:PRO:HB3	5:C:69:LYS:HE3	1.38	1.03
11:I:20:MET:O	11:I:41:ALA:HB1	1.59	1.03
5:C:51:PHE:H	5:C:76:ARG:HB3	0.90	1.03
16:N:62:THR:HB	16:N:75:ILE:CA	1.87	1.03
3:A:167:ASP:H	3:A:171:ALA:HA	1.22	1.03
3:A:164:PHE:HZ	3:A:197:LEU:HA	1.18	1.03
4:B:21:PHE:CA	4:B:24:ILE:HB	1.88	1.03
5:C:175:VAL:HB	5:C:182:LEU:CD1	1.89	1.03
11:I:64:ARG:HB3	11:I:102:VAL:HG11	1.40	1.03
4:B:138:VAL:HG23	4:B:139:GLY:H	1.21	1.03
6:D:192:ASP:O	6:D:195:GLU:HG2	1.57	1.03
7:E:107:LEU:HA	7:E:111:LEU:HD13	1.38	1.03

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:103:ARG:HD2	9:G:104:GLN:N	1.73	1.03
22:T:3:TYR:O	22:T:57:ILE:HD12	1.58	1.03
27:Y:38:ALA:HB2	27:Y:49:CYS:N	1.73	1.03
11:I:111:PHE:HB3	11:I:114:ILE:HD11	1.40	1.03
5:C:51:PHE:HD1	5:C:52:LEU:HD12	1.20	1.02
7:E:15:VAL:HG12	7:E:19:LEU:HD11	1.41	1.02
9:G:9:LEU:HG	9:G:10:GLU:H	0.89	1.02
13:K:39:PRO:CB	13:K:99:PRO:HG3	1.88	1.02
15:M:18:ILE:HG23	15:M:19:LYS:H	1.23	1.02
22:T:19:ARG:H	22:T:19:ARG:HD2	1.22	1.02
22:T:69:THR:HG23	22:T:89:PHE:O	1.57	1.02
10:H:78:VAL:O	10:H:80:ALA:N	1.92	1.02
13:K:25:ASP:HB2	13:K:101:ARG:HD3	1.41	1.02
14:L:84:ALA:HB3	14:L:85:PRO:HD3	1.06	1.02
17:O:32:PHE:O	17:O:36:ARG:HB2	1.58	1.02
5:C:105:THR:HG22	5:C:106:GLY:N	1.71	1.02
7:E:139:LEU:HB2	7:E:146:TYR:N	1.73	1.02
7:E:33:ARG:CB	7:E:33:ARG:HH21	1.71	1.02
8:F:127:GLU:HB3	8:F:129:THR:H	1.21	1.02
5:C:13:ARG:HA	5:C:23:VAL:CG2	1.90	1.02
6:D:121:VAL:HG13	6:D:191:LEU:H	1.23	1.02
8:F:60:ARG:HB3	8:F:60:ARG:HH21	0.93	1.02
13:K:51:ARG:HH11	13:K:51:ARG:CB	1.70	1.02
14:L:84:ALA:HB3	14:L:85:PRO:CD	1.89	1.02
15:M:73:LEU:O	15:M:76:LYS:HB2	1.59	1.02
13:K:134:ARG:NH1	22:T:53:ILE:HD12	1.75	1.02
10:H:29:PRO:HG3	10:H:64:ASP:HB3	1.40	1.02
20:R:57:LEU:HG	20:R:58:HIS:H	1.19	1.02
6:D:59:ILE:CD1	6:D:73:ILE:HB	1.89	1.02
9:G:7:GLU:HG2	9:G:8:PRO:CD	1.89	1.02
11:I:23:ARG:O	11:I:39:ILE:HG22	1.58	1.02
22:T:155:LEU:HD13	22:T:156:LYS:H	1.23	1.02
16:N:100:TYR:CA	16:N:103:ARG:NH2	2.23	1.02
9:G:13:GLY:HA2	9:G:17:GLN:HG3	1.41	1.02
9:G:23:PRO:HB2	9:G:27:ARG:HE	1.23	1.02
17:O:90:VAL:HG13	18:P:11:GLN:HE22	1.22	1.02
9:G:78:THR:HG22	9:G:143:SER:HB3	1.40	1.02
10:H:91:GLU:H	10:H:110:LEU:HB2	1.24	1.02
11:I:98:VAL:HG22	11:I:99:PHE:H	1.23	1.02
13:K:27:VAL:HG23	13:K:28:ALA:H	1.18	1.02
14:L:100:LEU:HG	14:L:112:ALA:HA	1.40	1.02
17:O:8:VAL:HG13	17:O:11:ARG:NE	1.75	1.02

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:65:TRP:HB3	17:O:64:ARG:CD	1.89	1.01
12:J:83:VAL:HG22	12:J:84:ASN:N	1.75	1.01
20:R:12:VAL:HG13	20:R:13:LEU:H	1.23	1.01
26:X:5:LYS:CE	26:X:7:LYS:HE3	1.90	1.01
33:O:34:G:C2'	33:O:35:A:H5''	1.90	1.01
3:A:21:TYR:HB3	3:A:25:GLU:HG3	1.04	1.01
26:X:10:LYS:CG	26:X:53:LEU:HA	1.89	1.01
16:N:33:LYS:HD3	16:N:41:ARG:HB3	1.42	1.01
3:A:7:ARG:HB3	3:A:7:ARG:HH11	1.24	1.01
15:M:88:ASP:O	15:M:89:ARG:HG2	1.60	1.01
20:R:64:LYS:HD3	20:R:64:LYS:H	1.24	1.01
22:T:102:LEU:HD21	22:T:124:ILE:HB	1.38	1.01
22:T:5:LEU:HD13	22:T:6:LYS:N	1.75	1.01
17:O:87:GLY:HA3	18:P:52:VAL:CG1	1.89	1.01
22:T:72:ARG:O	22:T:73:GLN:HB2	1.55	1.01
24:V:26:ARG:HG3	24:V:34:THR:HG23	1.02	1.01
24:V:51:VAL:HG21	24:V:60:PHE:HB2	1.41	1.01
27:Y:30:LEU:HD21	27:Y:39:MET:O	1.59	1.01
5:C:176:ILE:HB	5:C:181:LEU:CB	1.90	1.01
5:C:77:ILE:CG2	5:C:78:LEU:H	1.73	1.01
5:C:34:VAL:HG23	5:C:78:LEU:HD21	1.43	1.01
8:F:42:ARG:H	8:F:53:GLU:HB3	1.23	1.01
11:I:41:ALA:O	11:I:57:VAL:HA	1.59	1.01
13:K:98:LYS:HB2	13:K:101:ARG:HG3	1.35	1.01
17:O:87:GLY:HA3	18:P:52:VAL:HG12	1.01	1.01
6:D:119:LEU:O	6:D:121:VAL:N	1.93	1.01
8:F:89:ILE:HG23	8:F:129:THR:CG2	1.88	1.01
14:L:56:LYS:HA	14:L:84:ALA:HB1	1.40	1.01
16:N:26:ASP:HA	16:N:48:ILE:HG13	1.38	1.01
17:O:40:PHE:HA	18:P:78:LYS:HG3	1.37	1.01
21:S:61:ILE:HG23	21:S:62:GLU:H	1.22	1.01
22:T:141:VAL:HG22	22:T:144:LEU:CG	1.89	1.01
20:R:36:LYS:O	20:R:38:GLU:N	1.94	1.01
5:C:184:VAL:HG23	5:C:185:LYS:N	1.74	1.01
5:C:54:GLN:CG	5:C:75:VAL:CG2	2.38	1.01
10:H:98:TYR:O	10:H:105:LEU:HB2	1.59	1.01
11:I:22:ILE:HG12	11:I:40:VAL:O	1.60	1.01
26:X:35:ARG:NH2	26:X:37:LEU:HD21	1.74	1.01
21:S:1:MET:HG2	21:S:2:ARG:H	1.22	1.01
10:H:60:LYS:HA	10:H:60:LYS:HE3	1.41	1.01
12:J:122:PRO:HB2	12:J:142:GLY:HA2	1.38	1.01
4:B:117:VAL:HG13	4:B:128:GLY:O	1.60	1.01

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:F:156:ALA:HB2	8:F:169:VAL:HG23	1.40	1.01
7:E:139:LEU:HB2	7:E:146:TYR:H	1.24	1.00
7:E:172:LEU:HA	7:E:175:LEU:CD1	1.89	1.00
7:E:15:VAL:O	7:E:19:LEU:HD12	1.59	1.00
8:F:95:ARG:NE	8:F:107:VAL:HA	1.75	1.00
3:A:8:TYR:HB2	3:A:12:LEU:CD1	1.90	1.00
5:C:4:ILE:HG13	5:C:91:VAL:HG11	1.44	1.00
10:H:93:LYS:HB3	10:H:110:LEU:HD21	1.41	1.00
12:J:6:LEU:C	12:J:8:PRO:HD3	1.79	1.00
14:L:104:ARG:HB2	14:L:109:ALA:HB2	1.42	1.00
16:N:92:GLY:HA2	16:N:115:ARG:H	1.21	1.00
17:O:44:ASN:ND2	18:P:78:LYS:HB3	1.75	1.00
20:R:51:VAL:HB	20:R:79:ALA:HB1	1.41	1.00
22:T:99:TYR:HD2	22:T:124:ILE:HA	1.24	1.00
23:U:36:ILE:HA	23:U:60:PHE:CB	1.90	1.00
27:Y:30:LEU:HD23	27:Y:31:VAL:H	1.24	1.00
7:E:125:PHE:HB2	7:E:166:ASP:CG	1.81	1.00
8:F:105:LEU:HD11	8:F:107:VAL:HG22	1.43	1.00
9:G:133:HIS:NE2	9:G:136:VAL:HB	1.76	1.00
11:I:88:ASN:HB2	11:I:92:GLU:O	1.61	1.00
9:G:64:GLU:HG3	9:G:67:ARG:NH2	1.76	1.00
11:I:86:ILE:HG22	11:I:94:ARG:HD3	1.00	1.00
13:K:51:ARG:HH11	13:K:51:ARG:HB2	1.22	1.00
15:M:58:LEU:HD23	15:M:59:LYS:H	1.22	1.00
18:P:76:LYS:HG2	18:P:85:LYS:HB2	1.42	1.00
8:F:149:ARG:HA	8:F:153:LYS:HG3	1.40	1.00
12:J:17:LYS:HB3	12:J:19:VAL:HG23	1.43	1.00
20:R:58:HIS:O	20:R:59:VAL:HG13	1.62	1.00
19:Q:18:ARG:O	19:Q:21:VAL:HG22	1.62	1.00
9:G:101:LEU:HD12	9:G:107:ILE:HG23	1.04	1.00
13:K:51:ARG:H	13:K:51:ARG:CD	1.71	1.00
5:C:102:VAL:HA	5:C:201:THR:H	0.86	1.00
5:C:4:ILE:HD12	5:C:91:VAL:HG12	1.44	1.00
7:E:128:ARG:HA	7:E:165:THR:HA	1.43	1.00
7:E:55:LYS:HD3	7:E:56:ALA:N	1.77	1.00
11:I:67:LYS:HG2	11:I:68:GLU:N	1.77	1.00
10:H:63:PRO:HA	17:O:64:ARG:NH2	1.76	1.00
6:D:105:LEU:HD13	6:D:109:VAL:HG22	1.42	1.00
9:G:7:GLU:CA	9:G:14:ASP:HB3	1.91	1.00
10:H:113:MET:HA	10:H:116:THR:CG2	1.92	1.00
10:H:112:LYS:NZ	10:H:115:ALA:HB3	1.75	1.00
10:H:117:HIS:HB2	10:H:120:ARG:CB	1.92	1.00

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:K:38:GLU:HB2	13:K:127:ILE:HG21	1.43	1.00
19:Q:10:VAL:HG12	19:Q:11:ARG:N	1.75	1.00
11:I:91:LEU:N	11:I:91:LEU:HD13	1.71	0.99
15:M:25:ARG:HE	15:M:40:ILE:HG22	1.21	0.99
19:Q:42:ARG:HG3	19:Q:46:PHE:HE2	1.26	0.99
19:Q:59:VAL:CG2	19:Q:64:MET:HB2	1.90	0.99
26:X:5:LYS:HA	26:X:36:VAL:HG12	1.40	0.99
5:C:32:PRO:HB3	5:C:69:LYS:CE	1.92	0.99
5:C:91:VAL:HG13	5:C:95:ILE:HD11	1.44	0.99
7:E:141:PHE:CD1	7:E:142:PRO:HD2	1.97	0.99
7:E:31:VAL:HG22	7:E:32:PRO:CD	1.91	0.99
10:H:44:LYS:N	10:H:84:ARG:HB2	1.77	0.99
15:M:74:ALA:HB1	15:M:109:GLY:HA3	1.44	0.99
22:T:69:THR:HG22	22:T:70:LEU:N	1.77	0.99
4:B:121:PRO:HA	4:B:131:LEU:HG	1.42	0.99
6:D:112:ARG:HG3	6:D:112:ARG:HH21	1.22	0.99
6:D:178:VAL:O	6:D:181:ILE:HG22	1.62	0.99
16:N:74:ARG:HB3	16:N:76:PHE:CE1	1.96	0.99
4:B:260:ARG:NH1	4:B:262:ARG:HA	1.76	0.99
8:F:152:ARG:N	8:F:152:ARG:HD2	1.72	0.99
9:G:88:ILE:HG22	9:G:121:LYS:CG	1.93	0.99
9:G:4:ILE:HA	9:G:17:GLN:O	1.61	0.99
9:G:98:ALA:HA	9:G:109:ILE:CD1	1.91	0.99
10:H:95:TYR:OH	10:H:110:LEU:HA	1.62	0.99
11:I:114:ILE:HG13	11:I:115:VAL:H	1.25	0.99
20:R:17:ALA:HA	20:R:26:TYR:HB3	1.42	0.99
23:U:25:ARG:HE	23:U:37:LEU:HA	1.27	0.99
26:X:4:LEU:O	26:X:36:VAL:HA	1.62	0.99
25:W:47:ASN:HB2	25:W:51:ARG:CD	1.92	0.99
16:N:123:LYS:HZ2	16:N:123:LYS:HB2	1.26	0.99
18:P:16:PRO:HD2	18:P:18:LEU:CD2	1.91	0.99
9:G:9:LEU:HG	9:G:10:GLU:N	1.75	0.99
22:T:141:VAL:HG13	22:T:144:LEU:CB	1.90	0.99
3:A:21:TYR:HB3	3:A:25:GLU:CG	1.91	0.99
7:E:75:LYS:HB2	7:E:77:ILE:HD13	1.44	0.99
10:H:50:ALA:HB2	10:H:126:VAL:HG22	1.40	0.99
13:K:42:ILE:HD13	13:K:43:THR:H	0.84	0.99
19:Q:19:LEU:CB	27:Y:25:LEU:HD23	1.91	0.99
3:A:166:ASN:HA	3:A:171:ALA:HB2	1.41	0.99
17:O:31:SER:HB3	17:O:34:LYS:HB2	1.42	0.99
24:V:51:VAL:HG12	24:V:52:ARG:N	1.78	0.99
3:A:23:ILE:HG23	3:A:187:ALA:CB	1.93	0.99

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:5:LEU:HB3	5:C:76:ARG:HD3	1.43	0.99
6:D:120:LEU:HD13	6:D:123:ALA:HB2	1.44	0.99
11:I:10:VAL:HG22	11:I:17:ARG:O	1.62	0.99
17:O:61:TRP:HE3	17:O:61:TRP:N	4.73	0.99
17:O:92:ARG:O	17:O:94:ASN:ND2	1.95	0.99
21:S:47:LYS:HG2	21:S:48:ALA:H	1.26	0.99
3:A:23:ILE:CG2	3:A:187:ALA:HB1	1.93	0.99
4:B:137:PRO:HB2	4:B:140:THR:CG2	1.93	0.99
4:B:185:VAL:HG12	4:B:186:HIS:N	1.77	0.99
24:V:85:LEU:CD1	24:V:88:LYS:H	1.76	0.99
5:C:119:ARG:HD2	5:C:120:TRP:CE2	1.98	0.99
17:O:90:VAL:HG12	17:O:91:ASP:N	1.76	0.98
25:W:47:ASN:HB2	25:W:51:ARG:HD2	1.03	0.98
4:B:148:GLU:CG	4:B:149:PRO:HD2	1.92	0.98
12:J:47:ASP:HB2	12:J:51:PHE:CE2	1.99	0.98
23:U:30:VAL:HG22	23:U:31:VAL:N	1.76	0.98
33:O:34:G:H2'	33:O:35:A:H5''	1.43	0.98
3:A:40:GLU:HB3	3:A:217:THR:CG2	1.92	0.98
5:C:103:ASP:OD1	5:C:201:THR:HA	1.61	0.98
7:E:33:ARG:CA	7:E:33:ARG:HH21	1.77	0.98
23:U:68:GLU:HB3	23:U:80:HIS:N	1.78	0.98
3:A:165:ARG:HH11	3:A:165:ARG:HB2	1.25	0.98
6:D:112:ARG:CG	6:D:112:ARG:HH21	1.76	0.98
9:G:1:MET:O	9:G:3:VAL:N	1.95	0.98
14:L:34:ILE:HG22	14:L:35:THR:N	1.76	0.98
14:L:45:ARG:HG3	14:L:46:GLY:N	1.77	0.98
17:O:87:GLY:CA	18:P:52:VAL:HG12	1.92	0.98
27:Y:31:VAL:HB	27:Y:32:PRO:CD	1.94	0.98
4:B:79:VAL:HB	4:B:111:LEU:CD1	1.93	0.98
4:B:34:VAL:HG22	4:B:35:LYS:HD3	1.43	0.98
4:B:79:VAL:CA	4:B:95:LEU:HB3	1.93	0.98
5:C:24:THR:HB	5:C:186:GLY:CA	1.92	0.98
7:E:20:ILE:HG23	7:E:21:ARG:N	1.76	0.98
8:F:127:GLU:HB2	8:F:130:ARG:HG3	1.42	0.98
16:N:62:THR:CB	16:N:75:ILE:HA	1.92	0.98
23:U:30:VAL:CG2	23:U:31:VAL:H	1.76	0.98
10:H:35:ARG:H	10:H:73:ASP:HA	1.26	0.98
22:T:141:VAL:HG13	22:T:144:LEU:HB2	0.99	0.98
4:B:183:ARG:HG3	4:B:270:ILE:HA	1.43	0.98
7:E:135:LEU:CD1	7:E:155:MET:HG2	1.94	0.98
9:G:9:LEU:CG	9:G:10:GLU:H	1.73	0.98
12:J:71:VAL:CG1	12:J:72:PRO:CD	2.33	0.98

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:K:40:ALA:O	13:K:97:VAL:CB	2.12	0.98
14:L:84:ALA:CB	14:L:85:PRO:HD3	1.93	0.98
18:P:37:VAL:HB	18:P:55:ALA:HB1	1.46	0.98
23:U:62:LEU:CD1	23:U:63:VAL:H	1.76	0.98
25:W:47:ASN:HA	25:W:50:ILE:O	1.59	0.98
4:B:250:TRP:H	4:B:250:TRP:HE3	1.08	0.98
8:F:153:LYS:CB	8:F:154:PRO:HD3	1.92	0.98
13:K:47:ILE:O	13:K:51:ARG:HD2	1.64	0.98
22:T:108:PRO:HG3	22:T:141:VAL:HG11	1.44	0.98
4:B:165:ILE:HG21	4:B:173:VAL:HG23	1.46	0.98
5:C:38:THR:HG21	5:C:40:GLU:OE2	1.64	0.98
9:G:113:ARG:HB3	9:G:132:PRO:HA	1.00	0.98
10:H:35:ARG:N	10:H:73:ASP:HA	1.79	0.98
17:O:70:ARG:HG2	17:O:75:ASN:OD1	1.64	0.98
19:Q:10:VAL:CG1	19:Q:11:ARG:H	1.76	0.98
21:S:49:VAL:O	21:S:55:TYR:HA	1.64	0.98
24:V:85:LEU:HD11	24:V:88:LYS:HB3	1.45	0.98
9:G:113:ARG:HB3	9:G:132:PRO:CA	1.92	0.97
10:H:78:VAL:HA	10:H:146:TYR:CE2	1.98	0.97
12:J:113:LYS:HA	12:J:129:ALA:O	1.63	0.97
12:J:83:VAL:HG12	12:J:114:ILE:HA	1.44	0.97
14:L:5:LYS:HG2	14:L:6:SER:N	1.75	0.97
20:R:54:VAL:HG22	20:R:77:LYS:CD	1.94	0.97
20:R:89:ILE:HA	20:R:92:LEU:HB2	1.42	0.97
21:S:55:TYR:HB2	21:S:56:PRO:HD2	1.01	0.97
18:P:34:GLU:HB2	18:P:64:HIS:CE1	1.99	0.97
23:U:28:GLY:CA	23:U:67:VAL:HG13	1.94	0.97
26:X:49:LYS:HA	26:X:49:LYS:HE3	1.42	0.97
33:O:69:U:H2'	33:O:70:C:C6	1.98	0.97
7:E:96:ARG:O	7:E:99:MET:HG3	1.64	0.97
7:E:98:ARG:O	7:E:102:PHE:CB	2.11	0.97
8:F:152:ARG:HA	8:F:152:ARG:HH21	0.81	0.97
15:M:26:LEU:HB3	15:M:87:PHE:HD1	0.81	0.97
22:T:39:VAL:HG12	22:T:40:ASP:N	1.71	0.97
4:B:130:ALA:HA	4:B:191:ALA:O	1.62	0.97
7:E:135:LEU:HD11	7:E:155:MET:CG	1.94	0.97
8:F:20:ALA:HB1	8:F:21:PRO:CD	1.95	0.97
20:R:17:ALA:CA	20:R:26:TYR:HB3	1.93	0.97
4:B:97:TYR:HB3	4:B:101:GLU:O	1.63	0.97
6:D:112:ARG:HA	6:D:115:GLU:HG2	1.44	0.97
14:L:51:LEU:HD23	14:L:51:LEU:H	1.28	0.97
19:Q:22:ASP:HA	19:Q:25:ARG:HG3	1.46	0.97

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:62:TYR:CE1	4:B:64:ILE:HB	1.99	0.97
6:D:169:VAL:HG13	6:D:170:THR:H	1.27	0.97
7:E:103:LEU:HA	7:E:106:LEU:CG	1.94	0.97
8:F:8:PRO:HB3	8:F:49:VAL:HG13	1.47	0.97
10:H:123:GLU:HB3	10:H:127:LYS:CE	1.95	0.97
22:T:80:ARG:NH1	22:T:82:ARG:HB2	1.79	0.97
4:B:211:ARG:HG3	4:B:215:LEU:CD1	1.95	0.97
17:O:54:LYS:O	17:O:58:ARG:HG3	1.63	0.97
19:Q:10:VAL:HB	19:Q:101:SER:N	1.80	0.97
21:S:36:ALA:O	21:S:37:VAL:HG13	1.62	0.97
8:F:60:ARG:CB	8:F:60:ARG:HH21	1.77	0.97
9:G:128:LEU:HB2	9:G:140:LEU:O	1.64	0.97
10:H:49:LEU:HA	10:H:52:LYS:HE3	1.43	0.97
13:K:42:ILE:CD1	13:K:43:THR:H	1.77	0.97
15:M:75:GLU:HA	15:M:78:LEU:CG	1.93	0.97
24:V:85:LEU:HD11	24:V:88:LYS:CB	1.92	0.97
3:A:23:ILE:HG23	3:A:187:ALA:HB1	1.00	0.97
6:D:121:VAL:HA	6:D:189:MET:O	1.63	0.97
9:G:7:GLU:HA	9:G:14:ASP:CB	1.94	0.97
4:B:169:GLU:HG2	4:B:174:ILE:HD11	1.47	0.97
5:C:4:ILE:HD12	5:C:91:VAL:CG1	1.95	0.97
5:C:77:ILE:HG22	5:C:78:LEU:N	1.74	0.97
10:H:129:MET:SD	10:H:130:LEU:N	2.37	0.97
11:I:78:ARG:HB3	16:N:73:GLU:HG3	1.46	0.97
12:J:16:ARG:HE	12:J:17:LYS:H	1.08	0.97
14:L:102:GLU:HG3	14:L:103:ARG:H	1.28	0.97
14:L:13:HIS:O	14:L:17:ARG:HG3	1.65	0.97
5:C:119:ARG:HE	5:C:157:ALA:HA	1.30	0.97
6:D:149:VAL:O	6:D:150:LEU:HD13	1.62	0.97
7:E:31:VAL:HG22	7:E:32:PRO:HD3	1.47	0.97
17:O:92:ARG:HB3	17:O:94:ASN:ND2	1.80	0.97
12:J:83:VAL:CG2	12:J:84:ASN:H	1.76	0.97
20:R:81:VAL:HG21	20:R:86:GLY:HA3	1.44	0.96
21:S:67:LEU:HD13	21:S:68:HIS:N	1.80	0.96
5:C:51:PHE:HD1	5:C:52:LEU:H	1.06	0.96
10:H:40:ASP:OD2	10:H:77:VAL:HG13	1.64	0.96
22:T:146:ILE:H	22:T:146:ILE:HD13	1.28	0.96
27:Y:38:ALA:HB3	27:Y:49:CYS:CB	1.96	0.96
9:G:6:LEU:CD1	9:G:35:LEU:HD22	1.95	0.96
9:G:7:GLU:HG2	9:G:8:PRO:HD3	0.98	0.96
10:H:50:ALA:CB	10:H:126:VAL:HG22	1.95	0.96
18:P:73:SER:HB2	18:P:89:GLN:HB3	1.47	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:U:31:VAL:HG13	23:U:65:GLY:H	1.27	0.96
4:B:21:PHE:HA	4:B:24:ILE:CB	1.94	0.96
4:B:248:SER:HB2	4:B:249:PRO:CD	1.94	0.96
7:E:122:PRO:HB3	7:E:173:LEU:HD11	1.45	0.96
8:F:122:THR:HG23	8:F:134:SER:OG	1.64	0.96
12:J:122:PRO:HB3	12:J:137:LYS:O	1.63	0.96
14:L:44:LEU:HA	14:L:47:PHE:CD2	2.00	0.96
17:O:61:TRP:N	17:O:61:TRP:CE3	4.80	0.96
22:T:99:TYR:HB3	22:T:123:ASP:OD2	1.64	0.96
3:A:50:ILE:HD12	3:A:52:PRO:HD3	1.43	0.96
8:F:8:PRO:O	8:F:9:ILE:HB	1.62	0.96
13:K:11:LYS:HG2	13:K:12:GLN:H	1.26	0.96
20:R:63:LYS:NZ	20:R:65:ARG:HB2	1.79	0.96
22:T:99:TYR:CZ	22:T:125:LEU:HB2	1.99	0.96
22:T:90:VAL:HG22	22:T:91:LEU:H	1.27	0.96
5:C:52:LEU:CB	5:C:75:VAL:HB	1.94	0.96
13:K:37:LEU:HG	13:K:128:LYS:O	1.65	0.96
18:P:72:VAL:HA	18:P:90:PRO:HA	1.47	0.96
24:V:25:LYS:HE2	24:V:37:ILE:HG12	1.46	0.96
3:A:16:ASP:HB3	3:A:19:LYS:HD2	1.48	0.96
5:C:54:GLN:HG3	5:C:75:VAL:CG2	1.93	0.96
14:L:17:ARG:C	14:L:21:TYR:HE1	1.69	0.96
18:P:30:GLY:CA	18:P:65:GLY:H	1.78	0.96
28:Z:13:ALA:O	28:Z:20:ALA:HB2	1.66	0.96
5:C:105:THR:CG2	5:C:106:GLY:N	2.25	0.96
10:H:38:LEU:HD13	10:H:39:ILE:N	1.80	0.96
10:H:76:VAL:HG22	10:H:144:LYS:HB2	1.48	0.96
11:I:25:LEU:HD12	11:I:26:LYS:N	1.81	0.96
11:I:98:VAL:HG22	11:I:99:PHE:N	1.80	0.96
9:G:115:ALA:HB3	9:G:129:THR:O	1.65	0.96
15:M:10:ARG:HH21	15:M:11:LYS:NZ	1.64	0.96
26:X:28:LEU:CD1	26:X:35:ARG:HG2	1.96	0.96
4:B:54:ARG:HA	4:B:217:ARG:HA	1.47	0.96
5:C:4:ILE:CG1	5:C:91:VAL:HG11	1.96	0.96
7:E:68:PRO:HB3	7:E:92:VAL:CG1	1.95	0.96
16:N:100:TYR:HB2	16:N:101:PHE:CD2	2.01	0.96
13:K:125:LEU:CD2	13:K:126:PRO:HD2	1.96	0.96
21:S:52:SER:CB	21:S:53:PRO:HD2	1.95	0.96
6:D:165:LEU:HG	6:D:170:THR:HB	1.48	0.96
6:D:24:ASN:O	6:D:28:LEU:HG	1.65	0.96
8:F:17:VAL:HG22	8:F:45:VAL:HG12	1.44	0.96
4:B:270:ILE:O	4:B:270:ILE:HD12	1.66	0.95

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:2:ILE:HG12	11:I:34:THR:HA	1.45	0.95
13:K:25:ASP:HB3	13:K:102:VAL:HG23	1.46	0.95
14:L:104:ARG:HB2	14:L:109:ALA:CB	1.95	0.95
18:P:99:ILE:HG22	18:P:100:ARG:HG3	1.48	0.95
20:R:55:ASN:O	20:R:56:THR:HG23	1.65	0.95
23:U:22:GLY:O	23:U:38:VAL:HA	1.66	0.95
23:U:62:LEU:HD13	23:U:63:VAL:N	1.81	0.95
9:G:67:ARG:NH2	9:G:67:ARG:HB3	1.80	0.95
11:I:78:ARG:HB3	16:N:73:GLU:CG	1.95	0.95
22:T:141:VAL:HG22	22:T:144:LEU:HG	1.00	0.95
3:A:185:LYS:O	3:A:185:LYS:HD3	1.65	0.95
26:X:10:LYS:HB2	26:X:53:LEU:HB3	1.44	0.95
4:B:69:ARG:NH1	4:B:76:PRO:HG3	1.81	0.95
9:G:67:ARG:HH21	9:G:67:ARG:HB3	1.31	0.95
10:H:111:GLU:HA	10:H:114:LEU:HD21	1.48	0.95
33:O:63:C:H2'	33:O:64:A:C8	2.01	0.95
16:N:64:ARG:HG2	16:N:65:LYS:H	1.30	0.95
17:O:92:ARG:CB	17:O:94:ASN:HD21	1.79	0.95
20:R:54:VAL:CG2	20:R:78:LYS:H	1.79	0.95
3:A:164:PHE:CZ	3:A:197:LEU:HA	1.99	0.95
5:C:198:VAL:HG12	5:C:199:ARG:H	0.82	0.95
14:L:37:THR:HA	14:L:111:LEU:CA	1.96	0.95
10:H:80:ALA:HB3	10:H:146:TYR:O	1.66	0.95
16:N:29:ARG:CG	16:N:86:ILE:H	1.79	0.95
8:F:118:PRO:HD2	8:F:121:ILE:CB	1.96	0.95
17:O:93:LYS:HD2	17:O:93:LYS:N	1.78	0.95
22:T:4:ARG:HG3	22:T:58:VAL:HB	1.49	0.95
26:X:10:LYS:HG2	26:X:53:LEU:HA	1.47	0.95
3:A:185:LYS:O	3:A:189:ASN:HB2	1.65	0.95
4:B:267:SER:HA	4:B:270:ILE:CG1	1.95	0.95
4:B:63:ARG:HE	4:B:86:PRO:HD3	0.80	0.95
5:C:116:VAL:C	5:C:118:LYS:H	1.70	0.95
10:H:112:LYS:HA	10:H:112:LYS:HE2	1.48	0.95
14:L:56:LYS:CD	14:L:88:ARG:HA	1.97	0.95
15:M:71:ARG:HG2	15:M:104:GLY:O	1.65	0.95
25:W:47:ASN:CB	25:W:51:ARG:HD2	1.96	0.95
4:B:155:LEU:CD2	4:B:157:ARG:HG2	1.97	0.95
10:H:62:ARG:O	10:H:65:TRP:HB2	1.66	0.95
12:J:35:HIS:CG	12:J:36:LYS:H	1.84	0.95
13:K:8:LYS:HB2	13:K:12:GLN:NE2	1.81	0.95
20:R:54:VAL:HG21	20:R:78:LYS:N	1.80	0.95
11:I:71:ARG:HB3	11:I:72:PRO:HD2	1.49	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:M:73:LEU:HA	15:M:76:LYS:HD3	0.97	0.94
17:O:12:ARG:HA	17:O:15:LYS:CD	1.95	0.94
19:Q:86:LEU:HD13	19:Q:87:PRO:O	1.67	0.94
24:V:60:PHE:HD1	24:V:87:PRO:HB3	1.15	0.94
27:Y:38:ALA:N	27:Y:49:CYS:HB2	1.82	0.94
3:A:165:ARG:NH1	3:A:165:ARG:HB2	1.80	0.94
6:D:150:LEU:HD12	6:D:169:VAL:HA	1.47	0.94
10:H:52:LYS:O	10:H:56:LEU:HD13	1.66	0.94
6:D:148:SER:HB3	6:D:184:THR:CG2	1.97	0.94
6:D:119:LEU:HB2	6:D:188:VAL:HA	1.49	0.94
33:O:74:C:H2'	33:O:75:C:O4'	1.65	0.94
5:C:13:ARG:HB3	5:C:22:PRO:HA	1.50	0.94
16:N:102:ILE:HG13	16:N:103:ARG:H	1.29	0.94
17:O:84:LYS:HD3	17:O:89:GLU:HG2	1.47	0.94
24:V:85:LEU:HD13	24:V:87:PRO:HD2	1.47	0.94
7:E:20:ILE:CG2	7:E:21:ARG:H	1.78	0.94
13:K:33:GLY:N	13:K:132:VAL:HB	1.82	0.94
18:P:64:HIS:HA	18:P:96:ILE:HG23	1.47	0.94
5:C:13:ARG:HB2	5:C:21:VAL:O	1.67	0.94
21:S:55:TYR:CG	21:S:56:PRO:HD2	2.01	0.94
26:X:8:LEU:HD11	26:X:33:GLN:H	1.30	0.94
4:B:93:ALA:HB2	4:B:107:ALA:HB2	1.46	0.94
10:H:126:VAL:HG12	10:H:130:LEU:HD23	1.48	0.94
13:K:48:GLU:HA	13:K:51:ARG:NE	1.81	0.94
16:N:92:GLY:HA3	16:N:114:LEU:HD13	1.48	0.94
21:S:73:ARG:HG2	21:S:78:ALA:HB2	1.48	0.94
5:C:28:ALA:HB3	5:C:180:ASN:CB	1.97	0.94
7:E:97:ASP:HA	7:E:100:TRP:HB2	1.48	0.94
10:H:50:ALA:CA	10:H:53:ILE:HD12	1.96	0.94
16:N:108:ARG:HH11	16:N:108:ARG:HG2	1.32	0.94
17:O:36:ARG:HA	17:O:39:LEU:CD1	1.96	0.94
5:C:13:ARG:HA	5:C:23:VAL:HG22	1.47	0.94
14:L:37:THR:HG23	14:L:40:LYS:NZ	1.83	0.94
18:P:47:VAL:HG22	18:P:48:GLY:H	1.32	0.94
22:T:99:TYR:CD2	22:T:124:ILE:HA	2.02	0.94
3:A:21:TYR:CD1	3:A:26:ALA:HB2	2.03	0.94
5:C:20:ALA:HB2	11:I:73:ASP:CB	1.97	0.94
5:C:59:VAL:CG2	5:C:63:LEU:HA	1.98	0.94
10:H:26:THR:O	10:H:27:TYR:HB2	1.63	0.94
13:K:125:LEU:HD13	13:K:126:PRO:CD	1.97	0.94
18:P:35:LEU:HB2	18:P:60:GLU:O	1.67	0.94
19:Q:95:ILE:O	19:Q:96:ILE:HG23	1.68	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:247:ALA:HA	4:B:253:GLN:HA	1.50	0.94
7:E:33:ARG:HB3	7:E:33:ARG:HH21	1.33	0.94
12:J:31:ALA:O	12:J:32:THR:HG23	1.68	0.94
14:L:109:ALA:HB1	14:L:111:LEU:HD13	1.50	0.94
14:L:79:LEU:HD22	14:L:83:ILE:HG13	1.45	0.94
13:K:35:VAL:C	13:K:103:MET:HE1	1.88	0.94
26:X:22:ALA:O	26:X:26:LEU:CG	2.15	0.94
5:C:117:MET:CA	5:C:122:PHE:H	1.78	0.94
19:Q:75:TYR:C	19:Q:103:ILE:HG13	1.88	0.94
7:E:3:LEU:CD2	7:E:101:ILE:HD12	1.97	0.93
23:U:50:ASN:HB2	23:U:81:VAL:HG11	1.49	0.93
33:0:13:C:H2'	33:0:14:A:H1'	1.49	0.93
33:0:9:A:H62	33:0:23:A:H62	1.06	0.93
8:F:141:VAL:HG13	8:F:144:VAL:CG1	1.98	0.93
15:M:28:VAL:HG12	15:M:29:PHE:N	1.82	0.93
20:R:12:VAL:HG13	20:R:13:LEU:N	1.83	0.93
3:A:21:TYR:HD1	3:A:26:ALA:HB2	1.33	0.93
7:E:131:TYR:HD2	7:E:132:ASN:H	1.10	0.93
10:H:78:VAL:HB	10:H:149:PRO:HA	1.50	0.93
4:B:173:VAL:HG12	4:B:187:GLY:HA2	1.50	0.93
4:B:183:ARG:HE	4:B:270:ILE:HG23	1.33	0.93
4:B:75:ILE:CG2	4:B:98:VAL:HB	1.99	0.93
10:H:112:LYS:HZ3	10:H:115:ALA:HB3	1.27	0.93
9:G:79:ILE:C	9:G:145:VAL:HB	1.88	0.93
12:J:41:ARG:NH2	12:J:45:LEU:HD12	1.82	0.93
13:K:125:LEU:CG	13:K:126:PRO:HD2	1.97	0.93
21:S:84:ARG:N	21:S:84:ARG:HD2	1.83	0.93
9:G:130:TYR:HD2	9:G:138:ILE:CG2	1.82	0.93
11:I:93:PRO:C	11:I:95:GLY:H	1.71	0.93
12:J:79:ARG:HD2	12:J:108:LYS:C	1.89	0.93
18:P:60:GLU:CA	18:P:101:GLY:HA2	1.98	0.93
24:V:18:ILE:HG13	24:V:43:TYR:HE1	1.30	0.93
3:A:214:TYR:HB3	3:A:223:VAL:H	1.33	0.93
24:V:51:VAL:CG1	24:V:52:ARG:N	2.27	0.93
9:G:101:LEU:CD1	9:G:107:ILE:HG23	1.96	0.93
18:P:76:LYS:CE	18:P:78:LYS:HB2	1.97	0.93
18:P:78:LYS:N	18:P:83:ARG:HA	1.83	0.93
7:E:12:TYR:HD2	7:E:12:TYR:H	1.11	0.93
8:F:157:TYR:HA	8:F:172:LYS:N	1.83	0.93
16:N:3:ARG:HB2	16:N:7:ILE:HD11	1.48	0.93
23:U:62:LEU:HD13	23:U:63:VAL:H	1.29	0.93
4:B:72:LYS:HD2	4:B:75:ILE:HD12	1.49	0.93

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:19:ARG:NH1	5:C:21:VAL:HG12	1.83	0.93
7:E:94:LEU:HD12	7:E:94:LEU:N	4.50	0.93
10:H:120:ARG:O	10:H:123:GLU:HB2	1.69	0.93
26:X:5:LYS:HE3	26:X:7:LYS:HE3	1.49	0.93
5:C:117:MET:HB3	5:C:136:ARG:NH2	1.84	0.93
12:J:92:GLU:O	12:J:94:GLU:N	2.02	0.93
14:L:56:LYS:HA	14:L:84:ALA:CB	1.96	0.93
16:N:62:THR:HB	16:N:75:ILE:HA	0.96	0.93
17:O:90:VAL:CG1	17:O:91:ASP:H	1.82	0.93
21:S:61:ILE:HG23	21:S:62:GLU:N	1.75	0.93
23:U:28:GLY:HA2	23:U:67:VAL:O	1.69	0.93
26:X:27:GLY:HA2	26:X:29:ARG:NH1	1.84	0.93
4:B:260:ARG:HH22	4:B:264:LYS:HB2	1.33	0.93
6:D:165:LEU:HB2	6:D:168:VAL:HG23	1.49	0.93
7:E:46:ALA:H	7:E:84:LYS:HD2	1.33	0.93
8:F:172:LYS:HZ1	8:F:172:LYS:HA	1.31	0.93
10:H:138:ARG:O	10:H:141:LYS:HG2	1.69	0.93
10:H:39:ILE:HG13	10:H:40:ASP:H	1.31	0.93
13:K:34:LEU:HD22	13:K:118:LEU:HG	1.49	0.93
14:L:50:HIS:HD2	14:L:53:HIS:HE1	1.11	0.93
26:X:20:LYS:HA	26:X:23:LEU:CD2	1.99	0.93
6:D:150:LEU:O	6:D:187:LEU:HG	1.68	0.92
7:E:129:GLY:HA3	7:E:161:THR:O	1.69	0.92
8:F:54:ARG:HB2	8:F:55:PRO:CD	1.98	0.92
9:G:60:GLU:O	9:G:64:GLU:HB2	1.69	0.92
10:H:124:HIS:HA	10:H:127:LYS:HD2	1.49	0.92
4:B:8:PRO:HB3	4:B:14:ARG:O	1.69	0.92
9:G:44:LEU:O	9:G:47:LEU:HG	1.69	0.92
10:H:79:ASN:CA	10:H:147:ALA:HA	2.00	0.92
11:I:17:ARG:HG2	11:I:47:ILE:HG12	1.52	0.92
11:I:90:GLN:O	11:I:92:GLU:N	2.02	0.92
13:K:125:LEU:HD22	13:K:126:PRO:HD2	1.48	0.92
33:O:24:G:C8	33:O:25:C:C5	2.57	0.92
14:L:49:ASP:HA	14:L:94:TYR:HE1	1.32	0.92
4:B:60:ARG:CD	4:B:86:PRO:HB2	1.99	0.92
5:C:82:ARG:HH12	5:C:93:VAL:HA	24.54	0.92
8:F:7:LEU:N	8:F:8:PRO:HD2	1.84	0.92
10:H:38:LEU:HD13	10:H:39:ILE:H	1.35	0.92
13:K:37:LEU:HD12	13:K:128:LYS:H	1.33	0.92
13:K:42:ILE:HD11	13:K:46:GLN:HB2	1.52	0.92
13:K:54:MET:HB3	13:K:58:PHE:CE1	2.04	0.92
22:T:19:ARG:NE	22:T:25:PRO:HG2	1.84	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:164:GLN:HG3	4:B:176:ARG:HB3	1.49	0.92
4:B:35:LYS:HB2	4:B:36:PRO:HA	1.52	0.92
7:E:33:ARG:HB3	7:E:33:ARG:NH2	1.83	0.92
9:G:81:VAL:HG11	9:G:144:VAL:HG13	1.50	0.92
13:K:50:ALA:HB2	13:K:124:LYS:HD2	1.49	0.92
17:O:92:ARG:HB2	18:P:11:GLN:OE1	1.69	0.92
19:Q:18:ARG:HA	19:Q:76:VAL:HG12	1.51	0.92
22:T:56:VAL:HG12	22:T:70:LEU:HD12	1.51	0.92
15:M:26:LEU:CB	15:M:87:PHE:HD1	1.78	0.92
5:C:38:THR:HA	5:C:44:TYR:O	1.69	0.92
7:E:46:ALA:HB2	7:E:84:LYS:HB3	1.48	0.92
28:Z:2:LYS:N	28:Z:2:LYS:HD3	1.85	0.92
6:D:196:VAL:HG22	6:D:197:PHE:CD1	2.05	0.92
6:D:27:LEU:HD13	6:D:27:LEU:H	1.35	0.92
14:L:26:LYS:O	14:L:29:LEU:HB3	1.68	0.92
17:O:82:GLY:HA3	17:O:113:ALA:HB1	1.50	0.92
22:T:111:VAL:HA	22:T:115:GLY:N	1.84	0.92
7:E:12:TYR:N	7:E:12:TYR:HD2	1.67	0.92
9:G:120:ILE:CG1	9:G:121:LYS:H	1.79	0.92
9:G:125:GLU:HA	9:G:142:VAL:O	1.69	0.92
16:N:92:GLY:HA2	16:N:115:ARG:N	1.84	0.92
7:E:151:ALA:O	7:E:152:LEU:HB3	1.69	0.92
10:H:48:ARG:HB3	10:H:48:ARG:NH1	1.85	0.92
15:M:51:ALA:HB3	15:M:73:LEU:HD21	1.49	0.92
22:T:120:ILE:HB	22:T:171:ILE:O	1.70	0.92
6:D:120:LEU:HD13	6:D:123:ALA:CB	1.99	0.92
7:E:19:LEU:HD23	7:E:25:TYR:CE2	2.05	0.92
11:I:25:LEU:CD1	11:I:26:LYS:H	1.82	0.92
14:L:5:LYS:CG	14:L:6:SER:H	1.81	0.92
16:N:95:ARG:HD2	16:N:96:ARG:NH1	1.85	0.92
24:V:88:LYS:HG3	24:V:89:GLU:H	1.30	0.92
15:M:68:GLN:HA	15:M:71:ARG:HH11	1.31	0.92
6:D:90:ARG:NH2	6:D:92:TYR:HA	1.84	0.92
7:E:128:ARG:HG2	7:E:129:GLY:H	1.35	0.92
9:G:6:LEU:HD13	9:G:35:LEU:CD2	1.99	0.92
9:G:81:VAL:O	9:G:148:GLU:HG3	1.69	0.92
11:I:102:VAL:O	11:I:122:LEU:O	1.87	0.92
13:K:132:VAL:HG23	13:K:133:ARG:NH2	1.85	0.92
17:O:78:THR:O	17:O:81:HIS:HB3	1.67	0.92
26:X:43:ILE:CD1	26:X:43:ILE:H	1.82	0.92
9:G:133:HIS:HE2	9:G:136:VAL:HB	1.32	0.92
11:I:101:PRO:O	11:I:102:VAL:HG13	1.70	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:K:11:LYS:CD	13:K:12:GLN:H	1.83	0.92
18:P:18:LEU:O	18:P:98:GLU:HG2	1.69	0.92
6:D:59:ILE:HD11	6:D:73:ILE:CB	1.97	0.91
8:F:98:LEU:HB3	8:F:123:PHE:HE2	1.34	0.91
10:H:26:THR:HG22	10:H:27:TYR:N	1.86	0.91
14:L:37:THR:H	14:L:40:LYS:HZ1	1.16	0.91
17:O:83:LEU:O	17:O:86:ALA:HB3	1.69	0.91
33:O:41:U:H2'	33:O:42:G:O4'	1.70	0.91
4:B:24:ILE:HA	4:B:91:ARG:HH12	1.33	0.91
8:F:153:LYS:HB2	8:F:154:PRO:HD3	1.50	0.91
8:F:172:LYS:NZ	8:F:172:LYS:HA	1.85	0.91
15:M:75:GLU:HA	15:M:78:LEU:HG	1.50	0.91
16:N:46:GLU:O	16:N:47:GLY:O	1.89	0.91
28:Z:21:ARG:O	28:Z:23:ARG:N	2.02	0.91
3:A:167:ASP:N	3:A:171:ALA:HA	1.83	0.91
7:E:111:LEU:HB2	7:E:112:PRO:HD3	1.49	0.91
24:V:22:GLY:HA3	24:V:39:LYS:HB3	1.53	0.91
26:X:22:ALA:HB1	26:X:46:ASN:HB3	1.52	0.91
13:K:111:GLU:HB2	13:K:115:MET:HG2	1.50	0.91
16:N:113:LYS:HA	16:N:113:LYS:HE3	1.52	0.91
9:G:95:LYS:CD	9:G:95:LYS:H	1.83	0.91
17:O:40:PHE:HB3	18:P:78:LYS:HE2	1.49	0.91
18:P:96:ILE:HG22	18:P:97:LYS:H	0.74	0.91
21:S:75:ILE:HG23	21:S:76:CYS:H	1.36	0.91
18:P:15:GLU:CB	18:P:16:PRO:HD3	2.00	0.91
5:C:54:GLN:HG2	5:C:75:VAL:HG21	1.50	0.91
6:D:156:GLU:HA	6:D:159:ARG:HD2	1.51	0.91
6:D:48:THR:HG23	6:D:49:ARG:H	1.32	0.91
8:F:20:ALA:CB	8:F:21:PRO:HD2	2.00	0.91
15:M:75:GLU:HA	15:M:78:LEU:HD12	1.50	0.91
16:N:121:ILE:HG23	16:N:122:ASP:N	1.84	0.91
23:U:28:GLY:HA2	23:U:67:VAL:HG13	1.52	0.91
5:C:31:CYS:O	5:C:49:LEU:HD12	1.70	0.91
10:H:32:VAL:HG12	10:H:35:ARG:HH22	1.32	0.91
12:J:138:LEU:HA	12:J:142:GLY:CA	1.99	0.91
12:J:35:HIS:CD2	12:J:36:LYS:N	2.38	0.91
14:L:22:ARG:O	14:L:26:LYS:HB2	1.70	0.91
19:Q:19:LEU:HB2	27:Y:25:LEU:CD2	2.01	0.91
22:T:152:ALA:HB1	22:T:166:SER:O	1.70	0.91
22:T:41:LEU:O	22:T:44:PHE:CD2	2.23	0.91
22:T:56:VAL:HG12	22:T:70:LEU:CD1	2.01	0.91
23:U:28:GLY:CA	23:U:67:VAL:O	2.18	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:54:GLN:HG2	5:C:75:VAL:CG2	2.00	0.91
7:E:110:ALA:HB2	7:E:142:PRO:HD3	1.52	0.91
10:H:80:ALA:HA	10:H:83:ILE:CD1	2.00	0.91
13:K:35:VAL:HG22	13:K:130:LYS:H	1.33	0.91
13:K:38:GLU:HB2	13:K:127:ILE:CG2	2.01	0.91
14:L:37:THR:OG1	14:L:40:LYS:HE2	1.69	0.91
18:P:13:ARG:H	18:P:13:ARG:HD3	1.34	0.91
21:S:71:LYS:HZ1	21:S:78:ALA:HB1	1.32	0.91
3:A:21:TYR:HB2	3:A:26:ALA:HB2	1.51	0.91
14:L:48:VAL:HA	14:L:51:LEU:HD21	1.52	0.91
16:N:24:PRO:CA	16:N:49:VAL:HG11	2.01	0.91
17:O:14:HIS:HD2	17:O:32:PHE:HB2	1.36	0.91
17:O:83:LEU:HD11	17:O:89:GLU:HA	1.50	0.91
17:O:92:ARG:O	17:O:94:ASN:N	2.04	0.91
4:B:172:TYR:HD1	4:B:187:GLY:H	0.93	0.91
10:H:77:VAL:HG12	10:H:80:ALA:HB2	1.53	0.91
23:U:47:PRO:HA	23:U:51:VAL:CG2	2.01	0.91
5:C:5:LEU:HD12	5:C:5:LEU:H	1.35	0.91
12:J:101:VAL:HG13	12:J:102:ARG:H	1.32	0.91
33:O:9:A:H62	33:O:23:A:N6	1.68	0.91
3:A:216:THR:HA	3:A:221:PRO:O	1.71	0.91
4:B:185:VAL:CG1	4:B:186:HIS:N	2.33	0.91
6:D:56:GLY:H	6:D:73:ILE:HD13	1.36	0.91
24:V:91:LYS:HE3	24:V:91:LYS:N	1.86	0.91
18:P:68:LYS:HB3	18:P:94:LEU:HD23	1.51	0.91
4:B:172:TYR:HB3	4:B:184:LYS:HD3	1.51	0.90
5:C:52:LEU:HD13	5:C:76:ARG:HB2	1.51	0.90
8:F:114:VAL:HG22	8:F:115:VAL:H	1.35	0.90
8:F:76:VAL:O	8:F:79:VAL:HG22	1.71	0.90
9:G:23:PRO:HB2	9:G:27:ARG:NE	1.85	0.90
24:V:26:ARG:HG2	24:V:27:GLU:N	1.87	0.90
33:O:26:G:H2'	33:O:27:C:H5'	1.50	0.90
4:B:79:VAL:HA	4:B:95:LEU:CB	1.99	0.90
4:B:63:ARG:CZ	4:B:86:PRO:HD3	2.01	0.90
7:E:120:LEU:CB	7:E:179:PRO:HG2	2.00	0.90
12:J:35:HIS:CD2	12:J:36:LYS:H	1.88	0.90
13:K:23:GLY:H	13:K:99:PRO:HD2	1.24	0.90
20:R:12:VAL:HG22	20:R:13:LEU:HD23	1.49	0.90
21:S:38:ILE:O	21:S:62:GLU:HG2	1.71	0.90
22:T:80:ARG:HD2	22:T:82:ARG:HD3	1.50	0.90
4:B:27:THR:O	4:B:29:PRO:HD2	1.71	0.90
9:G:124:GLY:HA2	9:G:144:VAL:CB	2.01	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:36:TRP:O	10:H:37:VAL:HG23	1.70	0.90
13:K:23:GLY:CA	13:K:98:LYS:HB3	1.99	0.90
16:N:31:SER:HB2	16:N:43:GLN:O	1.71	0.90
22:T:19:ARG:HH21	22:T:25:PRO:HB2	1.37	0.90
4:B:25:THR:OG1	4:B:27:THR:HG23	1.71	0.90
10:H:151:HIS:NE2	10:H:154:GLN:HB2	1.87	0.90
11:I:6:THR:HG22	11:I:7:TYR:N	1.86	0.90
20:R:82:GLN:HG3	20:R:83:VAL:N	1.85	0.90
8:F:124:GLU:HB2	8:F:132:ARG:HG2	1.52	0.90
9:G:13:GLY:HA2	9:G:17:GLN:CG	2.01	0.90
11:I:17:ARG:CZ	11:I:47:ILE:HB	2.01	0.90
11:I:8:LEU:HD13	11:I:82:ASN:CB	2.01	0.90
22:T:69:THR:CG2	22:T:89:PHE:O	2.19	0.90
4:B:25:THR:HB	4:B:82:ILE:O	1.72	0.90
13:K:51:ARG:NH1	13:K:52:VAL:N	2.19	0.90
14:L:40:LYS:HD3	14:L:40:LYS:N	1.86	0.90
17:O:88:ILE:HD13	18:P:53:GLU:HA	1.51	0.90
26:X:8:LEU:O	26:X:9:VAL:HG22	1.70	0.90
7:E:137:GLU:OE2	7:E:140:ILE:HG12	1.72	0.90
7:E:61:ALA:O	7:E:64:THR:HG22	1.71	0.90
8:F:153:LYS:HB2	8:F:154:PRO:CD	2.01	0.90
11:I:65:THR:HB	11:I:82:ASN:ND2	1.86	0.90
11:I:88:ASN:H	11:I:93:PRO:HA	1.34	0.90
14:L:45:ARG:CG	14:L:46:GLY:H	1.80	0.90
15:M:39:ILE:HD11	15:M:49:VAL:CG2	1.99	0.90
20:R:11:PRO:HG3	20:R:28:PHE:HD2	1.36	0.90
4:B:65:ILE:CD1	4:B:105:ILE:HA	2.01	0.90
4:B:263:ARG:H	4:B:263:ARG:HE	1.15	0.90
9:G:77:LEU:HB3	9:G:142:VAL:CG2	2.01	0.90
11:I:98:VAL:CG2	11:I:99:PHE:H	1.84	0.90
13:K:46:GLN:NE2	13:K:125:LEU:CD2	2.35	0.90
26:X:9:VAL:HG12	26:X:32:GLN:HA	1.53	0.90
3:A:223:VAL:HG12	3:A:224:ARG:N	1.86	0.90
5:C:59:VAL:HG11	5:C:63:LEU:HD12	1.54	0.90
7:E:51:ARG:O	7:E:54:GLU:HG3	1.71	0.90
16:N:35:LYS:HG2	16:N:38:ASN:ND2	1.87	0.90
21:S:33:LYS:HB2	21:S:65:ALA:HB1	1.51	0.90
22:T:111:VAL:HA	22:T:115:GLY:H	1.35	0.90
6:D:105:LEU:O	6:D:109:VAL:HG22	1.70	0.90
13:K:51:ARG:O	13:K:55:VAL:HG23	1.72	0.90
33:O:56:C:O2'	33:O:57:G:OP1	1.88	0.90
9:G:113:ARG:CB	9:G:132:PRO:HA	1.96	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:94:ALA:O	9:G:97:ILE:HG23	1.72	0.90
21:S:80:GLY:O	21:S:97:ARG:HG3	1.71	0.90
22:T:150:LEU:HD12	22:T:171:ILE:HD11	1.54	0.90
23:U:50:ASN:HB2	23:U:81:VAL:CB	2.02	0.90
26:X:47:VAL:O	26:X:50:VAL:HG22	1.71	0.90
14:L:39:PRO:HB2	14:L:40:LYS:HD3	1.54	0.90
27:Y:29:ILE:O	27:Y:30:LEU:HB2	1.71	0.90
4:B:157:ARG:HA	4:B:196:VAL:HG21	1.50	0.89
8:F:118:PRO:CD	8:F:121:ILE:HB	2.02	0.89
9:G:25:TYR:HB3	9:G:30:LEU:HD12	1.52	0.89
12:J:41:ARG:HA	12:J:45:LEU:HG	1.54	0.89
22:T:85:HIS:HD2	22:T:86:VAL:N	1.69	0.89
27:Y:13:LYS:O	27:Y:16:ARG:CB	2.20	0.89
4:B:16:MET:HG3	4:B:206:LEU:O	1.70	0.89
3:A:60:ARG:HA	3:A:164:PHE:O	1.72	0.89
11:I:78:ARG:CB	16:N:73:GLU:HB2	2.03	0.89
19:Q:88:ARG:NH1	19:Q:92:ARG:O	2.04	0.89
18:P:84:LYS:HA	18:P:84:LYS:HE3	1.53	0.89
4:B:140:THR:OG1	4:B:165:ILE:HD13	1.72	0.89
5:C:144:ARG:NH1	5:C:144:ARG:HB3	1.85	0.89
5:C:59:VAL:HG21	5:C:63:LEU:CA	2.02	0.89
7:E:173:LEU:O	7:E:178:PHE:HD1	1.55	0.89
11:I:19:ILE:HG22	11:I:44:LYS:H	1.35	0.89
11:I:41:ALA:N	11:I:57:VAL:HG13	1.87	0.89
14:L:38:VAL:HG12	14:L:39:PRO:CD	1.99	0.89
14:L:44:LEU:HD22	14:L:47:PHE:HE2	1.37	0.89
15:M:69:VAL:O	15:M:73:LEU:HD13	1.71	0.89
24:V:88:LYS:CG	24:V:89:GLU:H	1.85	0.89
5:C:91:VAL:HG13	5:C:95:ILE:CD1	2.02	0.89
14:L:113:LEU:HD11	14:L:115:GLU:HG2	1.52	0.89
22:T:69:THR:CG2	22:T:70:LEU:H	1.86	0.89
23:U:41:ARG:HD3	23:U:42:GLY:N	1.87	0.89
22:T:155:LEU:CD1	22:T:156:LYS:H	1.85	0.89
3:A:8:TYR:CB	3:A:12:LEU:HD13	2.02	0.89
6:D:96:LEU:HB3	6:D:97:PRO:CD	2.03	0.89
9:G:127:VAL:HA	9:G:141:LYS:HE3	1.53	0.89
9:G:124:GLY:CA	9:G:144:VAL:HG23	2.01	0.89
10:H:90:LEU:HA	10:H:110:LEU:HB2	1.52	0.89
11:I:59:LYS:HB3	11:I:94:ARG:HH12	1.36	0.89
17:O:55:ARG:HA	17:O:58:ARG:HD2	1.53	0.89
33:O:14:A:N6	33:O:21:A:C2	2.41	0.89
4:B:185:VAL:CG1	4:B:186:HIS:H	1.86	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:125:GLU:N	9:G:143:SER:HA	1.86	0.89
11:I:111:PHE:CB	11:I:114:ILE:HD11	2.02	0.89
12:J:137:LYS:C	12:J:138:LEU:HD12	1.93	0.89
14:L:37:THR:N	14:L:40:LYS:HZ1	1.71	0.89
23:U:23:VAL:HA	23:U:38:VAL:HG22	1.54	0.89
23:U:47:PRO:HA	23:U:51:VAL:HG21	1.52	0.89
26:X:2:PRO:HB2	26:X:39:ASP:OD2	1.70	0.89
26:X:50:VAL:O	26:X:53:LEU:HD23	1.73	0.89
5:C:51:PHE:CD1	5:C:52:LEU:HD12	2.07	0.89
13:K:39:PRO:HB3	13:K:99:PRO:HG3	0.95	0.89
19:Q:11:ARG:HA	19:Q:100:THR:HG22	1.52	0.89
22:T:137:ILE:HG12	22:T:138:GLU:N	1.85	0.89
24:V:85:LEU:HD13	24:V:87:PRO:CD	2.02	0.89
6:D:55:SER:HB2	6:D:73:ILE:HG23	1.54	0.89
7:E:137:GLU:O	7:E:138:GLN:HG3	1.71	0.89
12:J:50:ARG:NH1	12:J:57:THR:HB	1.88	0.89
12:J:95:VAL:O	12:J:125:VAL:HA	1.73	0.89
15:M:35:ILE:CD1	15:M:69:VAL:HB	2.03	0.89
20:R:81:VAL:HG22	20:R:82:GLN:N	1.86	0.89
6:D:56:GLY:N	6:D:73:ILE:HD13	1.87	0.89
10:H:113:MET:SD	10:H:121:VAL:HG22	2.13	0.89
12:J:50:ARG:HD3	12:J:51:PHE:N	1.87	0.89
15:M:35:ILE:CD1	15:M:66:ALA:HA	2.03	0.89
17:O:84:LYS:CD	17:O:89:GLU:HG2	2.03	0.89
4:B:76:PRO:HB2	4:B:117:VAL:HG12	1.53	0.89
5:C:116:VAL:HG21	5:C:122:PHE:CE1	2.08	0.89
5:C:4:ILE:HG12	5:C:5:LEU:N	1.87	0.89
7:E:135:LEU:C	7:E:135:LEU:HD12	1.93	0.89
9:G:101:LEU:HG	9:G:109:ILE:CG2	2.02	0.89
10:H:113:MET:SD	10:H:116:THR:HG23	2.12	0.89
11:I:19:ILE:HA	11:I:44:LYS:CG	2.03	0.89
13:K:73:PRO:HA	13:K:92:GLY:O	1.73	0.89
19:Q:92:ARG:HA	19:Q:92:ARG:NE	1.86	0.89
3:A:61:GLY:O	3:A:163:GLU:HA	1.72	0.88
16:N:64:ARG:HG2	16:N:65:LYS:N	1.83	0.88
10:H:63:PRO:O	17:O:64:ARG:HD3	1.73	0.88
24:V:49:VAL:HG12	24:V:50:ARG:N	1.86	0.88
9:G:94:ALA:HB2	9:G:116:LEU:HD23	1.54	0.88
10:H:50:ALA:HA	10:H:53:ILE:CD1	2.00	0.88
15:M:44:LYS:O	15:M:46:VAL:N	2.06	0.88
21:S:42:VAL:HB	21:S:61:ILE:CG2	2.01	0.88
14:L:47:PHE:CD1	14:L:47:PHE:C	2.47	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:N:121:ILE:HG23	16:N:122:ASP:H	1.37	0.88
17:O:8:VAL:HG13	17:O:11:ARG:HE	1.33	0.88
20:R:12:VAL:HA	20:R:29:TRP:HE1	1.32	0.88
6:D:108:ALA:O	6:D:112:ARG:HG2	1.72	0.88
10:H:101:TYR:HB2	10:H:102:PRO:HD3	1.56	0.88
11:I:24:VAL:HG22	11:I:25:LEU:N	1.87	0.88
13:K:21:THR:HG23	13:K:98:LYS:HG2	1.54	0.88
16:N:91:ARG:HH11	16:N:91:ARG:CB	4.89	0.88
19:Q:39:THR:OG1	27:Y:28:PRO:CG	2.21	0.88
20:R:20:GLY:CA	20:R:25:LYS:HA	2.02	0.88
5:C:105:THR:HG22	5:C:106:GLY:H	1.28	0.88
10:H:62:ARG:NH2	10:H:63:PRO:HD2	1.88	0.88
11:I:35:VAL:HA	11:I:62:VAL:CG1	2.03	0.88
11:I:12:ASP:OD1	11:I:86:ILE:HD13	1.74	0.88
12:J:138:LEU:CA	12:J:142:GLY:HA3	2.02	0.88
21:S:97:ARG:HD2	21:S:97:ARG:C	1.94	0.88
22:T:80:ARG:HG3	22:T:81:ARG:H	1.38	0.88
23:U:47:PRO:HA	23:U:51:VAL:CB	2.03	0.88
33:O:29:A:H2	33:O:41:U:O2	1.57	0.88
5:C:84:PHE:CZ	5:C:86:PRO:HG3	2.09	0.88
13:K:133:ARG:HG2	13:K:134:ARG:H	1.37	0.88
13:K:47:ILE:O	13:K:51:ARG:CD	2.21	0.88
15:M:28:VAL:CG1	15:M:29:PHE:H	1.86	0.88
4:B:44:ASN:CA	4:B:49:ILE:HA	2.02	0.88
5:C:37:ARG:HA	5:C:42:ASP:OD2	1.73	0.88
13:K:11:LYS:CG	13:K:12:GLN:N	2.37	0.88
17:O:48:ALA:C	17:O:50:ARG:H	1.76	0.88
22:T:137:ILE:CG1	22:T:138:GLU:H	1.86	0.88
4:B:148:GLU:HG3	4:B:149:PRO:HD2	1.55	0.88
5:C:128:SER:O	5:C:129:HIS:CD2	2.27	0.88
5:C:51:PHE:CB	5:C:76:ARG:HD2	2.03	0.88
7:E:171:ALA:O	7:E:175:LEU:HG	1.73	0.88
13:K:16:ARG:C	13:K:17:LEU:HD13	1.93	0.88
18:P:66:ARG:HD2	18:P:94:LEU:HD22	1.56	0.88
22:T:4:ARG:HA	22:T:58:VAL:HB	1.53	0.88
33:O:47:U:C4	33:O:50:U:H5"	2.08	0.88
4:B:49:ILE:CD1	4:B:49:ILE:O	2.21	0.88
5:C:28:ALA:HB3	5:C:180:ASN:HB3	1.52	0.88
18:P:60:GLU:HA	18:P:101:GLY:CA	2.03	0.88
25:W:22:GLU:HA	25:W:25:VAL:HG13	1.56	0.88
27:Y:16:ARG:HA	27:Y:20:ARG:CZ	2.02	0.88
7:E:120:LEU:O	7:E:122:PRO:HD3	1.74	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:124:GLY:HA2	9:G:144:VAL:N	1.88	0.88
10:H:63:PRO:HA	17:O:64:ARG:CZ	2.02	0.88
12:J:7:ARG:HD2	12:J:10:PRO:CD	2.02	0.88
20:R:8:ILE:HG23	20:R:30:VAL:HG22	1.55	0.88
4:B:131:LEU:HD21	4:B:135:PHE:HB2	1.54	0.88
9:G:2:LYS:HG3	9:G:20:ASP:H	1.36	0.88
20:R:54:VAL:HG22	20:R:77:LYS:CE	2.03	0.88
26:X:41:PRO:HA	26:X:44:ARG:HD3	1.56	0.88
9:G:80:PRO:HA	9:G:145:VAL:O	1.74	0.88
10:H:113:MET:HE1	10:H:120:ARG:HD3	1.54	0.88
12:J:85:LEU:H	12:J:85:LEU:HD22	1.35	0.88
17:O:105:VAL:HG13	18:P:43:GLU:HB3	1.54	0.88
10:H:65:TRP:HB3	17:O:64:ARG:HD2	1.55	0.88
17:O:74:LEU:HD21	17:O:110:VAL:HG22	1.53	0.88
18:P:5:VAL:HG22	18:P:6:LYS:N	1.87	0.88
19:Q:38:TYR:HE2	27:Y:41:PRO:HG3	1.39	0.88
21:S:14:LEU:CD2	21:S:39:VAL:HG11	2.04	0.88
21:S:31:LEU:HB2	21:S:32:PRO:HD3	1.55	0.88
23:U:37:LEU:HG	23:U:59:LEU:O	1.72	0.88
25:W:3:LEU:HD11	25:W:8:LYS:HD3	1.55	0.88
26:X:30:ARG:HD3	26:X:33:GLN:HG2	1.55	0.88
8:F:156:ALA:HB2	8:F:169:VAL:CG2	2.03	0.88
33:O:33:U:H3	33:O:36:A:P	1.96	0.87
5:C:144:ARG:O	5:C:148:GLY:HA2	1.74	0.87
5:C:44:TYR:CE2	5:C:46:ALA:HB2	2.10	0.87
5:C:98:PRO:HB3	5:C:173:VAL:O	1.74	0.87
6:D:98:LYS:HG2	6:D:101:ARG:HD2	1.55	0.87
7:E:146:TYR:CG	7:E:147:ASP:N	2.41	0.87
8:F:114:VAL:HG22	8:F:115:VAL:N	1.89	0.87
10:H:48:ARG:HB3	10:H:48:ARG:HH11	1.35	0.87
12:J:111:ARG:NH2	12:J:148:LEU:HD21	1.89	0.87
13:K:67:ARG:O	13:K:68:ILE:CG1	2.21	0.87
19:Q:22:ASP:HA	19:Q:25:ARG:CG	2.04	0.87
21:S:49:VAL:HG12	21:S:50:ARG:N	1.87	0.87
23:U:49:LYS:O	23:U:81:VAL:HB	1.75	0.87
24:V:51:VAL:HG13	24:V:52:ARG:H	1.37	0.87
4:B:35:LYS:HG3	4:B:63:ARG:HA	1.56	0.87
7:E:107:LEU:HA	7:E:111:LEU:CD1	2.04	0.87
9:G:27:ARG:NH2	9:G:27:ARG:HB2	1.89	0.87
5:C:187:ALA:O	5:C:188:VAL:HB	1.73	0.87
6:D:155:ASN:O	6:D:159:ARG:HG3	1.74	0.87
7:E:3:LEU:HD21	7:E:101:ILE:HD12	1.53	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:17:ARG:HE	11:I:47:ILE:HB	0.72	0.87
14:L:13:HIS:HD2	14:L:16:HIS:CG	1.92	0.87
17:O:106:PHE:O	17:O:109:LEU:HG	1.74	0.87
22:T:39:VAL:CG1	22:T:40:ASP:H	1.88	0.87
5:C:15:PHE:O	5:C:16:ARG:HB2	1.71	0.87
4:B:88:ARG:HH11	4:B:88:ARG:HG2	1.38	0.87
7:E:96:ARG:HD3	7:E:97:ASP:N	1.89	0.87
11:I:111:PHE:HB3	11:I:114:ILE:CD1	2.05	0.87
14:L:37:THR:HG22	14:L:111:LEU:CG	2.03	0.87
17:O:33:ARG:O	17:O:37:GLU:OE1	1.92	0.87
17:O:105:VAL:HA	18:P:43:GLU:CD	1.93	0.87
22:T:45:ASP:HA	22:T:48:PHE:CE2	2.09	0.87
4:B:95:LEU:HD23	4:B:95:LEU:H	1.38	0.87
18:P:86:GLY:O	18:P:87:HIS:CD2	2.28	0.87
19:Q:69:LEU:HD23	19:Q:108:GLY:O	1.73	0.87
20:R:11:PRO:HA	20:R:28:PHE:CA	2.04	0.87
22:T:98:MET:HG2	22:T:99:TYR:H	1.39	0.87
26:X:10:LYS:HB2	26:X:53:LEU:CB	2.04	0.87
26:X:41:PRO:CA	26:X:44:ARG:HD3	2.03	0.87
16:N:135:VAL:HG13	16:N:136:GLN:H	1.39	0.87
10:H:26:THR:HG22	10:H:28:VAL:N	1.87	0.87
15:M:10:ARG:HH21	15:M:11:LYS:HZ3	1.23	0.87
17:O:88:ILE:HG12	18:P:53:GLU:H	1.38	0.87
28:Z:13:ALA:HA	28:Z:17:GLY:HA3	1.57	0.87
28:Z:18:PHE:O	28:Z:22:MET:HB2	1.74	0.87
22:T:45:ASP:O	22:T:47:VAL:N	2.07	0.87
23:U:62:LEU:HD12	23:U:63:VAL:HG23	1.55	0.87
3:A:165:ARG:HH22	3:A:172:ILE:HB	1.35	0.87
8:F:86:GLU:HA	8:F:132:ARG:HA	1.57	0.87
10:H:123:GLU:O	10:H:127:LYS:HG3	1.74	0.87
10:H:51:THR:HG23	10:H:52:LYS:H	1.40	0.87
13:K:55:VAL:O	13:K:58:PHE:HB2	1.74	0.87
18:P:17:GLY:HA2	18:P:98:GLU:HG3	1.56	0.87
25:W:3:LEU:HD23	25:W:4:SER:N	1.90	0.87
28:Z:29:LYS:O	28:Z:33:ARG:HG3	1.72	0.87
5:C:31:CYS:HG	5:C:51:PHE:HB2	1.40	0.87
6:D:172:ALA:HB3	6:D:173:PRO:CD	2.04	0.87
6:D:48:THR:HG23	6:D:49:ARG:N	1.89	0.87
9:G:114:LEU:HA	9:G:130:TYR:CE1	2.09	0.87
9:G:2:LYS:HA	9:G:20:ASP:HA	1.56	0.87
9:G:33:ARG:HB2	9:G:33:ARG:NH2	1.89	0.87
10:H:106:LYS:HG3	10:H:107:LYS:H	1.40	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:L:104:ARG:HG2	14:L:105:ARG:H	1.37	0.87
15:M:24:LEU:HB3	15:M:85:VAL:HG23	1.57	0.87
17:O:99:ALA:HA	17:O:103:PRO:CB	2.03	0.87
18:P:64:HIS:HA	18:P:96:ILE:CG2	2.04	0.87
22:T:130:PRO:C	22:T:133:ILE:HG12	1.94	0.87
25:W:3:LEU:HG	25:W:7:ARG:HG3	1.57	0.87
5:C:55:ASN:HD21	5:C:75:VAL:HG22	1.38	0.87
7:E:6:ALA:HB3	7:E:104:GLU:OE2	1.75	0.87
8:F:14:GLY:O	8:F:15:VAL:HG22	1.75	0.87
17:O:63:VAL:O	17:O:65:ILE:N	2.08	0.87
20:R:8:ILE:HG23	20:R:30:VAL:CG2	2.05	0.87
24:V:49:VAL:CG1	24:V:50:ARG:H	1.88	0.87
26:X:13:ILE:H	26:X:13:ILE:HD13	1.39	0.87
4:B:183:ARG:NE	4:B:270:ILE:HG23	1.90	0.86
12:J:95:VAL:HG22	12:J:123:LEU:HD22	1.54	0.86
15:M:46:VAL:HG12	15:M:48:LEU:H	1.40	0.86
22:T:24:LEU:HG	22:T:40:ASP:C	1.96	0.86
8:F:43:VAL:HG22	8:F:44:VAL:N	1.90	0.86
14:L:73:VAL:HG22	14:L:77:ARG:HB3	1.57	0.86
16:N:31:SER:CB	16:N:43:GLN:O	2.22	0.86
20:R:65:ARG:NE	20:R:65:ARG:HA	1.89	0.86
24:V:10:LYS:HD2	24:V:15:ALA:H	1.38	0.86
24:V:58:ILE:HG21	24:V:86:SER:HB3	1.57	0.86
3:A:59:VAL:O	3:A:165:ARG:HA	1.74	0.86
4:B:6:PHE:O	4:B:8:PRO:HD3	1.75	0.86
5:C:184:VAL:HG23	5:C:185:LYS:H	1.39	0.86
10:H:133:GLY:O	10:H:137:ARG:HG3	1.75	0.86
10:H:62:ARG:HG3	10:H:71:MET:HG3	1.57	0.86
10:H:62:ARG:HG3	10:H:71:MET:CG	2.05	0.86
13:K:51:ARG:CA	13:K:51:ARG:HH11	1.86	0.86
14:L:37:THR:H	14:L:40:LYS:NZ	1.71	0.86
18:P:24:LYS:HA	18:P:94:LEU:HG	1.57	0.86
4:B:169:GLU:HG3	4:B:174:ILE:HD11	1.55	0.86
6:D:112:ARG:HA	6:D:115:GLU:CG	2.04	0.86
8:F:122:THR:O	8:F:134:SER:HB3	1.75	0.86
8:F:122:THR:C	8:F:134:SER:HB3	1.96	0.86
12:J:75:ILE:HD11	12:J:77:ARG:HH12	1.39	0.86
17:O:44:ASN:HD21	18:P:78:LYS:HB3	1.36	0.86
22:T:80:ARG:HH11	22:T:82:ARG:HB2	1.37	0.86
23:U:52:GLY:CA	23:U:62:LEU:HB2	2.05	0.86
4:B:117:VAL:CG1	4:B:128:GLY:O	2.23	0.86
4:B:31:LYS:HD3	4:B:32:SER:N	1.90	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:4:ILE:HG12	6:D:12:ARG:HG2	1.56	0.86
7:E:68:PRO:HB2	7:E:91:ARG:O	1.74	0.86
10:H:94:ILE:HG22	10:H:96:THR:HG23	1.57	0.86
11:I:59:LYS:HE2	11:I:87:ILE:HG22	1.57	0.86
20:R:27:THR:HA	20:R:78:LYS:HB3	1.57	0.86
23:U:27:GLU:HA	23:U:69:PHE:CD2	2.11	0.86
22:T:128:VAL:HG11	22:T:134:PRO:HD2	1.55	0.86
4:B:31:LYS:HB2	4:B:104:TYR:OH	1.74	0.86
13:K:119:ARG:HH22	13:K:131:ILE:HG22	1.39	0.86
14:L:116:LEU:H	14:L:116:LEU:HD12	1.40	0.86
24:V:50:ARG:HG2	24:V:60:PHE:O	1.76	0.86
26:X:15:TYR:HB3	26:X:16:PRO:HD2	1.56	0.86
28:Z:16:HIS:CA	28:Z:21:ARG:HG3	2.04	0.86
17:O:3:ARG:HH11	17:O:3:ARG:HG3	4.46	0.86
22:T:15:PRO:O	22:T:19:ARG:HD3	1.74	0.86
3:A:50:ILE:CD1	3:A:52:PRO:HD3	2.05	0.86
4:B:123:ALA:HB1	4:B:124:PRO:HD2	1.55	0.86
4:B:4:LYS:HE3	4:B:20:ASP:HA	1.56	0.86
6:D:151:LEU:H	6:D:169:VAL:HG21	1.40	0.86
8:F:30:LYS:HG3	8:F:31:GLY:H	1.40	0.86
8:F:94:TYR:HD2	8:F:129:THR:HB	1.40	0.86
11:I:21:CYS:SG	11:I:22:ILE:N	2.49	0.86
11:I:18:LYS:O	11:I:44:LYS:HB2	1.75	0.86
25:W:14:ARG:HD3	25:W:14:ARG:N	1.89	0.86
33:O:24:G:N7	33:O:25:C:C4	2.43	0.86
4:B:62:TYR:HE1	4:B:64:ILE:HB	1.31	0.86
5:C:16:ARG:O	5:C:19:ARG:HG3	1.75	0.86
7:E:72:ARG:HA	7:E:87:PRO:CB	2.06	0.86
10:H:26:THR:HG22	10:H:27:TYR:H	1.40	0.86
11:I:69:VAL:HG12	11:I:77:ILE:H	1.40	0.86
12:J:79:ARG:CD	12:J:108:LYS:O	2.24	0.86
14:L:98:LEU:O	14:L:112:ALA:HB1	1.74	0.86
21:S:49:VAL:O	21:S:50:ARG:HG3	1.76	0.86
24:V:34:THR:CG2	24:V:35:THR:H	1.88	0.86
4:B:73:VAL:HG13	4:B:121:PRO:HD3	1.55	0.86
19:Q:9:TYR:H	19:Q:102:HIS:CE1	1.94	0.86
24:V:17:SER:O	24:V:44:PRO:HG2	1.75	0.86
4:B:24:ILE:HG12	4:B:25:THR:N	1.91	0.86
8:F:127:GLU:HB3	8:F:129:THR:N	1.89	0.86
11:I:19:ILE:HG21	11:I:43:VAL:HA	1.58	0.86
14:L:83:ILE:HD13	14:L:86:ARG:HD3	1.56	0.86
18:P:76:LYS:CG	18:P:85:LYS:HB2	2.05	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:W:50:ILE:O	25:W:51:ARG:HB3	1.73	0.86
9:G:109:ILE:H	9:G:109:ILE:HD13	1.41	0.85
11:I:6:THR:CG2	11:I:7:TYR:H	1.88	0.85
21:S:33:LYS:CB	21:S:65:ALA:HB1	2.05	0.85
22:T:166:SER:HB3	22:T:169:GLU:HB2	1.54	0.85
16:N:50:ILE:HB	16:N:63:VAL:HA	1.57	0.85
20:R:8:ILE:HA	20:R:30:VAL:HG13	1.58	0.85
21:S:88:LYS:HG3	21:S:89:PHE:CD1	2.11	0.85
10:H:46:LEU:HD21	10:H:83:ILE:HB	1.57	0.85
14:L:28:LEU:O	14:L:32:GLY:HA2	1.76	0.85
16:N:107:ASP:O	16:N:111:ARG:HG2	1.74	0.85
24:V:34:THR:HG22	24:V:35:THR:N	1.91	0.85
4:B:142:VAL:HG22	4:B:143:HIS:N	1.91	0.85
12:J:79:ARG:HG2	12:J:109:GLY:HA2	1.58	0.85
3:A:21:TYR:CA	3:A:25:GLU:OE2	2.25	0.85
4:B:249:PRO:HB3	4:B:250:TRP:CZ3	2.11	0.85
6:D:149:VAL:C	6:D:150:LEU:HD22	1.96	0.85
8:F:153:LYS:CB	8:F:154:PRO:CD	2.54	0.85
10:H:40:ASP:CG	10:H:77:VAL:HG13	1.95	0.85
11:I:87:ILE:CG2	11:I:91:LEU:HA	2.05	0.85
17:O:90:VAL:HG13	18:P:11:GLN:NE2	1.90	0.85
3:A:225:ILE:HG22	3:A:226:ASN:H	1.41	0.85
8:F:95:ARG:HE	8:F:107:VAL:CA	1.89	0.85
10:H:76:VAL:HG12	10:H:77:VAL:H	1.41	0.85
11:I:86:ILE:HG21	11:I:94:ARG:HD3	1.57	0.85
12:J:100:LEU:O	12:J:102:ARG:N	2.10	0.85
13:K:11:LYS:HG2	13:K:12:GLN:N	1.89	0.85
19:Q:58:ALA:HA	19:Q:62:HIS:HB2	1.58	0.85
33:O:75:C:H5'	33:O:76:A:OP1	1.75	0.85
4:B:250:TRP:N	4:B:250:TRP:HE3	1.75	0.85
5:C:4:ILE:HD11	5:C:29:GLY:CA	2.06	0.85
5:C:51:PHE:HB3	5:C:76:ARG:NE	1.92	0.85
9:G:125:GLU:O	9:G:126:TYR:HB3	1.75	0.85
9:G:132:PRO:CD	9:G:138:ILE:HG22	2.07	0.85
9:G:132:PRO:HD3	9:G:138:ILE:HG22	1.56	0.85
11:I:8:LEU:CD1	11:I:82:ASN:HB3	2.07	0.85
11:I:86:ILE:HG22	11:I:94:ARG:HH11	1.41	0.85
24:V:57:GLU:O	24:V:58:ILE:HG23	1.75	0.85
18:P:40:LEU:HD13	18:P:41:GLY:N	1.91	0.85
4:B:64:ILE:HD11	4:B:67:PHE:HZ	1.40	0.85
5:C:110:GLY:HA2	5:C:161:GLY:HA3	1.57	0.85
9:G:73:GLU:HG2	9:G:138:ILE:HD11	1.57	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:78:THR:CG2	9:G:143:SER:HB3	2.06	0.85
12:J:48:PRO:HA	12:J:51:PHE:CE2	2.12	0.85
13:K:66:ILE:O	13:K:66:ILE:HD12	1.77	0.85
4:B:134:ARG:CZ	4:B:187:GLY:HA3	2.06	0.85
3:A:19:LYS:HE3	3:A:19:LYS:HA	1.59	0.85
22:T:16:SER:CA	22:T:19:ARG:HD3	2.06	0.85
4:B:78:LYS:HB3	4:B:116:GLN:NE2	1.92	0.85
9:G:121:LYS:O	9:G:122:GLU:HB3	1.76	0.85
10:H:40:ASP:CB	10:H:77:VAL:HG13	2.06	0.85
10:H:44:LYS:O	10:H:84:ARG:HB3	1.76	0.85
13:K:11:LYS:HB2	13:K:14:ARG:NH1	1.92	0.85
14:L:38:VAL:CG1	14:L:39:PRO:CD	2.55	0.85
4:B:242:ARG:HD2	4:B:242:ARG:N	1.91	0.85
7:E:19:LEU:HD23	7:E:25:TYR:HE2	1.41	0.85
7:E:91:ARG:HD2	7:E:91:ARG:C	1.95	0.85
9:G:2:LYS:HA	9:G:20:ASP:CA	2.07	0.85
10:H:91:GLU:N	10:H:110:LEU:HB2	1.92	0.85
14:L:34:ILE:CG2	14:L:35:THR:H	1.80	0.85
21:S:67:LEU:O	21:S:68:HIS:CG	2.30	0.85
24:V:85:LEU:HD11	24:V:88:LYS:H	1.42	0.85
4:B:138:VAL:HG23	4:B:139:GLY:N	1.92	0.85
8:F:24:VAL:HG12	8:F:26:VAL:HG23	1.57	0.85
13:K:125:LEU:CD2	13:K:126:PRO:CD	2.51	0.85
22:T:15:PRO:C	22:T:19:ARG:HD3	1.97	0.85
26:X:8:LEU:HD12	26:X:9:VAL:H	1.42	0.85
4:B:27:THR:HG21	4:B:81:ALA:HB1	1.58	0.85
11:I:16:ALA:O	11:I:17:ARG:NH1	2.10	0.85
12:J:85:LEU:HD23	12:J:86:LYS:H	1.39	0.85
14:L:17:ARG:O	14:L:20:LEU:HB3	1.76	0.85
5:C:110:GLY:O	14:L:3:HIS:HB2	1.77	0.85
17:O:47:TYR:O	17:O:50:ARG:N	2.10	0.85
21:S:49:VAL:CG1	21:S:50:ARG:H	1.90	0.85
22:T:102:LEU:HD13	22:T:123:ASP:C	1.98	0.85
24:V:34:THR:HG22	24:V:35:THR:H	1.40	0.85
13:K:53:ALA:O	13:K:57:HIS:HB3	1.76	0.84
17:O:91:ASP:O	17:O:92:ARG:O	1.95	0.84
5:C:19:ARG:HH11	5:C:21:VAL:CG1	1.89	0.84
5:C:63:LEU:CD2	5:C:65:GLY:H	1.83	0.84
8:F:45:VAL:HG13	8:F:45:VAL:O	1.77	0.84
28:Z:2:LYS:HB2	28:Z:6:GLN:NE2	1.92	0.84
4:B:121:PRO:CA	4:B:131:LEU:HG	2.06	0.84
3:A:186:LEU:O	3:A:190:ILE:HG13	1.77	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:F:76:VAL:HA	8:F:79:VAL:HG13	1.56	0.84
9:G:130:TYR:H	9:G:139:GLN:HA	1.42	0.84
9:G:88:ILE:HG12	9:G:89:TYR:N	1.89	0.84
10:H:26:THR:CG2	10:H:28:VAL:H	1.88	0.84
14:L:57:ARG:HB3	14:L:60:LEU:HD11	1.59	0.84
16:N:35:LYS:NZ	16:N:35:LYS:HB3	1.92	0.84
16:N:45:PHE:HE1	16:N:67:SER:HB2	1.39	0.84
20:R:81:VAL:HG21	20:R:86:GLY:N	1.91	0.84
25:W:5:GLU:OE2	25:W:9:GLN:HA	1.77	0.84
26:X:8:LEU:HD21	26:X:28:LEU:HD12	1.56	0.84
22:T:71:VAL:HG12	22:T:72:ARG:H	1.41	0.84
3:A:30:VAL:HA	3:A:33:LEU:CD1	2.05	0.84
4:B:65:ILE:HB	4:B:104:TYR:O	1.77	0.84
4:B:79:VAL:CG2	4:B:95:LEU:HD13	2.07	0.84
6:D:181:ILE:HA	6:D:184:THR:OG1	1.77	0.84
8:F:10:PRO:HB2	8:F:12:PRO:HD3	1.57	0.84
19:Q:22:ASP:HA	19:Q:25:ARG:CD	2.07	0.84
19:Q:22:ASP:CA	19:Q:25:ARG:HG3	2.06	0.84
24:V:10:LYS:O	24:V:11:ARG:HB2	1.74	0.84
24:V:46:LEU:H	24:V:46:LEU:HD23	1.40	0.84
4:B:211:ARG:CG	4:B:215:LEU:HD11	2.07	0.84
5:C:132:HIS:O	5:C:133:LYS:HB2	1.76	0.84
7:E:144:ILE:HG22	7:E:144:ILE:O	1.75	0.84
9:G:4:ILE:HB	9:G:37:VAL:CB	2.08	0.84
10:H:138:ARG:CA	10:H:141:LYS:HE2	2.05	0.84
10:H:44:LYS:HB2	10:H:83:ILE:HG21	1.59	0.84
11:I:113:LYS:O	11:I:117:LEU:HG	1.77	0.84
14:L:13:HIS:CD2	14:L:16:HIS:CD2	2.64	0.84
7:E:113:ARG:HB2	16:N:3:ARG:HG2	171.92	0.84
19:Q:30:GLU:O	19:Q:33:ARG:HG2	1.77	0.84
19:Q:52:GLU:O	19:Q:56:ALA:HB2	1.76	0.84
24:V:11:ARG:HH22	24:V:61:ARG:H	1.26	0.84
28:Z:28:ARG:HA	28:Z:31:LEU:CG	2.07	0.84
33:O:64:A:H2'	33:O:65:G:C8	2.12	0.84
4:B:231:HIS:O	4:B:233:HIS:N	2.10	0.84
15:M:28:VAL:CG1	15:M:29:PHE:N	2.39	0.84
4:B:69:ARG:NH2	4:B:130:ALA:HB2	1.92	0.84
7:E:82:LEU:HD12	7:E:84:LYS:H	1.42	0.84
10:H:40:ASP:HB2	10:H:77:VAL:HG13	1.60	0.84
16:N:52:ILE:HG23	16:N:52:ILE:O	1.75	0.84
24:V:85:LEU:HD22	24:V:87:PRO:HG2	1.59	0.84
3:A:35:THR:HG22	3:A:36:ALA:H	1.41	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:176:ILE:CB	5:C:181:LEU:HB2	2.00	0.84
6:D:165:LEU:H	6:D:165:LEU:HD13	1.42	0.84
8:F:94:TYR:CD2	8:F:129:THR:HB	2.12	0.84
10:H:65:TRP:CH2	10:H:67:PRO:HA	2.13	0.84
15:M:8:GLU:O	15:M:9:ARG:HB2	1.75	0.84
16:N:35:LYS:HG2	16:N:38:ASN:HD21	1.40	0.84
18:P:40:LEU:HD23	18:P:50:PRO:HB3	1.60	0.84
24:V:51:VAL:HB	24:V:60:PHE:N	1.92	0.84
26:X:44:ARG:O	26:X:48:GLU:HG2	1.78	0.84
4:B:94:LEU:HG	4:B:104:TYR:HE2	1.43	0.84
5:C:192:ASN:HD22	5:C:193:GLY:N	1.75	0.84
11:I:64:ARG:HD3	11:I:102:VAL:HG11	1.59	0.84
22:T:102:LEU:HD22	22:T:123:ASP:O	1.76	0.84
22:T:53:ILE:N	22:T:53:ILE:HD13	1.91	0.84
23:U:23:VAL:HA	23:U:38:VAL:HG13	1.59	0.84
7:E:125:PHE:HB2	7:E:166:ASP:OD2	1.78	0.84
10:H:107:LYS:HG3	10:H:108:ILE:H	1.41	0.84
13:K:5:ARG:HG3	13:K:6:ARG:H	1.41	0.84
20:R:89:ILE:HD12	20:R:92:LEU:HB2	1.59	0.84
22:T:176:PRO:HB2	22:T:177:PRO:HD2	1.60	0.84
23:U:36:ILE:CA	23:U:60:PHE:HB2	2.07	0.84
26:X:5:LYS:HE2	26:X:7:LYS:HE3	1.59	0.84
26:X:8:LEU:O	26:X:53:LEU:O	1.96	0.84
4:B:65:ILE:HG21	4:B:105:ILE:HA	1.60	0.84
10:H:124:HIS:O	10:H:127:LYS:N	2.11	0.84
13:K:16:ARG:HD2	13:K:17:LEU:HD22	1.60	0.84
16:N:102:ILE:O	16:N:106:SER:HB3	1.76	0.84
17:O:61:TRP:HE3	17:O:61:TRP:H	4.21	0.84
21:S:28:LYS:HA	21:S:35:TYR:HB3	1.60	0.84
22:T:24:LEU:HD11	22:T:44:PHE:HB3	1.59	0.84
23:U:50:ASN:HA	23:U:63:VAL:CB	2.07	0.84
24:V:85:LEU:C	24:V:87:PRO:HD2	1.98	0.84
24:V:90:ILE:HB	24:V:91:LYS:NZ	1.93	0.84
9:G:4:ILE:HB	9:G:37:VAL:CG1	2.07	0.84
12:J:78:PRO:HB2	12:J:110:TYR:CD2	2.12	0.84
17:O:36:ARG:O	17:O:39:LEU:HG	1.77	0.84
17:O:59:ARG:HG2	17:O:62:ILE:HD12	1.58	0.84
21:S:23:ARG:NE	21:S:38:ILE:HG21	1.92	0.84
23:U:31:VAL:HG23	23:U:61:ALA:CA	2.07	0.84
8:F:96:ALA:HB3	8:F:128:PRO:O	1.77	0.83
11:I:22:ILE:HG13	11:I:23:ARG:N	1.93	0.83
3:A:178:LYS:O	3:A:180:SER:N	2.10	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:60:TRP:HB3	6:D:61:PRO:HD2	1.60	0.83
5:C:7:VAL:HG21	5:C:27:LEU:HB3	1.59	0.83
7:E:94:LEU:N	7:E:94:LEU:CD1	4.47	0.83
5:C:37:ARG:HG3	5:C:46:ALA:HB3	1.60	0.83
3:A:201:LYS:HZ2	3:A:203:GLU:HA	1.44	0.83
10:H:41:ALA:O	10:H:83:ILE:HG23	1.78	0.83
10:H:98:TYR:O	10:H:105:LEU:CB	2.25	0.83
14:L:102:GLU:HG3	14:L:103:ARG:N	1.92	0.83
14:L:38:VAL:HB	14:L:110:PRO:CB	2.08	0.83
14:L:117:VAL:HG13	14:L:118:GLU:H	1.43	0.83
14:L:21:TYR:HA	14:L:24:GLN:HG2	1.58	0.83
16:N:119:LYS:HD3	16:N:119:LYS:H	1.43	0.83
23:U:71:ASP:HB3	23:U:77:ARG:HA	1.58	0.83
24:V:18:ILE:HG13	24:V:43:TYR:CE1	2.12	0.83
4:B:79:VAL:CG2	4:B:111:LEU:HG	2.06	0.83
4:B:36:PRO:HB2	4:B:62:TYR:H	1.42	0.83
5:C:175:VAL:HB	5:C:182:LEU:HD11	1.57	0.83
6:D:117:LYS:NZ	6:D:186:ARG:HA	1.93	0.83
7:E:63:ILE:HG23	7:E:144:ILE:HG13	1.58	0.83
7:E:33:ARG:HA	7:E:33:ARG:HH21	1.43	0.83
8:F:148:ILE:HA	8:F:151:ILE:HG12	1.58	0.83
12:J:16:ARG:HE	12:J:17:LYS:N	1.74	0.83
13:K:37:LEU:CG	13:K:128:LYS:H	1.91	0.83
25:W:14:ARG:HB3	25:W:54:LYS:NZ	1.92	0.83
27:Y:51:TYR:HB2	27:Y:56:LYS:HE2	1.58	0.83
6:D:151:LEU:O	6:D:169:VAL:HG21	1.79	0.83
22:T:106:GLY:C	22:T:108:PRO:HD3	1.98	0.83
16:N:88:ILE:HG22	16:N:89:VAL:HG23	1.58	0.83
22:T:73:GLN:HB3	22:T:87:ASP:CG	1.98	0.83
33:O:15:G:H8	33:O:15:G:OP2	1.61	0.83
33:O:74:C:H2'	33:O:75:C:C1'	2.08	0.83
5:C:48:GLN:HB3	5:C:78:LEU:CD2	2.06	0.83
6:D:150:LEU:HD23	6:D:181:ILE:HG12	1.58	0.83
9:G:130:TYR:CE2	9:G:132:PRO:HG3	2.12	0.83
14:L:78:LYS:CE	14:L:82:GLU:HB3	2.09	0.83
18:P:60:GLU:OE1	18:P:62:LEU:HD11	1.79	0.83
27:Y:44:THR:HG22	27:Y:45:VAL:N	1.92	0.83
16:N:11:GLU:HB2	16:N:57:PHE:CZ	2.14	0.83
26:X:5:LYS:HB3	26:X:57:GLU:O	1.78	0.83
3:A:223:VAL:HG12	3:A:224:ARG:H	1.41	0.83
4:B:176:ARG:HA	4:B:182:LEU:HD12	1.59	0.83
6:D:196:VAL:HG22	6:D:197:PHE:HD1	1.39	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:91:ARG:HD2	7:E:91:ARG:O	1.77	0.83
9:G:4:ILE:HB	9:G:37:VAL:HB	1.58	0.83
10:H:34:PRO:HB2	10:H:142:ARG:NH1	1.93	0.83
18:P:73:SER:O	18:P:74:LYS:HB2	1.78	0.83
25:W:32:LEU:HG	25:W:33:MET:H	1.43	0.83
5:C:188:VAL:HG22	5:C:189:PRO:HD2	0.88	0.83
5:C:61:ARG:HG3	5:C:62:PRO:CD	2.08	0.83
8:F:127:GLU:CB	8:F:129:THR:H	1.90	0.83
10:H:37:VAL:HG13	10:H:159:GLU:HA	1.60	0.83
14:L:37:THR:CA	14:L:111:LEU:HA	2.04	0.83
14:L:21:TYR:HD1	14:L:21:TYR:H	1.24	0.83
18:P:64:HIS:CA	18:P:96:ILE:HG23	2.07	0.83
19:Q:10:VAL:HG12	19:Q:12:ILE:H	1.43	0.83
6:D:100:VAL:C	6:D:102:LYS:H	1.82	0.83
7:E:111:LEU:CB	7:E:112:PRO:HD3	2.07	0.83
9:G:64:GLU:O	9:G:67:ARG:NH2	2.11	0.83
9:G:6:LEU:HB3	9:G:35:LEU:HD13	1.59	0.83
14:L:2:ARG:CG	14:L:3:HIS:H	1.91	0.83
14:L:37:THR:H	14:L:40:LYS:CE	1.92	0.83
18:P:22:VAL:O	18:P:23:GLU:CD	2.17	0.83
22:T:174:VAL:O	22:T:175:VAL:HG23	1.76	0.83
3:A:225:ILE:HG22	3:A:226:ASN:N	1.94	0.83
5:C:200:GLU:O	5:C:202:LYS:HE2	1.79	0.83
16:N:89:VAL:O	16:N:90:GLN:O	1.96	0.83
21:S:54:LYS:HD3	21:S:55:TYR:H	1.44	0.83
33:O:21:A:N6	33:O:46:G:O2'	2.11	0.83
5:C:9:VAL:CG2	5:C:26:ILE:CA	2.55	0.83
11:I:59:LYS:HD2	11:I:87:ILE:O	1.79	0.83
19:Q:21:VAL:O	19:Q:25:ARG:HG3	1.79	0.83
6:D:120:LEU:HD22	6:D:122:GLU:O	1.78	0.83
18:P:30:GLY:CA	18:P:64:HIS:HB3	2.09	0.83
3:A:201:LYS:CB	3:A:202:PRO:HD2	2.01	0.83
5:C:116:VAL:O	5:C:136:ARG:NH2	2.12	0.83
5:C:64:LYS:O	5:C:66:HIS:HD2	1.61	0.83
8:F:72:ILE:H	8:F:72:ILE:CD1	1.91	0.83
11:I:65:THR:HA	11:I:81:ASP:O	1.77	0.83
12:J:147:LEU:HB2	12:J:148:LEU:HD13	1.59	0.83
14:L:56:LYS:HD2	14:L:88:ARG:CA	2.04	0.83
15:M:26:LEU:HD21	15:M:39:ILE:CG2	2.08	0.83
16:N:93:ARG:HA	16:N:117:ASP:CB	2.06	0.83
18:P:34:GLU:CB	18:P:64:HIS:HE1	1.92	0.83
19:Q:29:LEU:HD11	19:Q:67:ASP:H	1.40	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:Q:71:VAL:HA	19:Q:107:LEU:CD2	2.06	0.83
22:T:41:LEU:O	22:T:44:PHE:HD2	1.60	0.83
26:X:40:THR:O	26:X:44:ARG:CD	2.27	0.83
33:O:54:U:H2'	33:O:55:PSU:O5'	1.78	0.83
5:C:113:PHE:HD2	5:C:114:ALA:N	1.75	0.82
21:S:44:ILE:O	21:S:58:GLY:HA3	1.78	0.82
24:V:50:ARG:HG3	24:V:61:ARG:HA	1.61	0.82
6:D:119:LEU:HA	6:D:188:VAL:CG2	2.04	0.82
16:N:29:ARG:HB3	16:N:86:ILE:O	1.79	0.82
17:O:92:ARG:HB2	18:P:11:GLN:CD	2.00	0.82
19:Q:17:VAL:CG2	19:Q:18:ARG:N	2.42	0.82
22:T:99:TYR:O	22:T:123:ASP:CB	2.26	0.82
19:Q:87:PRO:O	19:Q:88:ARG:HB3	1.79	0.82
4:B:144:ALA:O	4:B:191:ALA:HB1	1.80	0.82
5:C:32:PRO:HB3	5:C:69:LYS:CD	2.07	0.82
7:E:146:TYR:CE1	7:E:149:VAL:HG13	2.10	0.82
8:F:125:VAL:HA	8:F:131:VAL:CB	2.09	0.82
9:G:36:ALA:O	9:G:38:LEU:HD12	1.79	0.82
13:K:27:VAL:CG1	13:K:136:ALA:HB3	2.06	0.82
17:O:62:ILE:O	17:O:65:ILE:HB	1.77	0.82
15:M:27:SER:HA	15:M:89:ARG:HG3	0.88	0.82
17:O:40:PHE:HA	18:P:78:LYS:CG	2.08	0.82
26:X:28:LEU:HD11	26:X:35:ARG:HG2	1.60	0.82
5:C:113:PHE:C	5:C:113:PHE:HD2	1.81	0.82
5:C:116:VAL:HG21	5:C:122:PHE:CD1	2.15	0.82
5:C:156:MET:HA	5:C:156:MET:HE3	1.59	0.82
22:T:69:THR:CG2	22:T:70:LEU:N	2.37	0.82
22:T:99:TYR:CB	22:T:123:ASP:OD2	2.25	0.82
4:B:83:GLU:OE1	4:B:92:ILE:HD11	1.80	0.82
5:C:11:MET:HG3	5:C:12:THR:N	1.93	0.82
7:E:122:PRO:CG	7:E:180:PHE:HA	2.08	0.82
8:F:157:TYR:CA	8:F:172:LYS:H	1.92	0.82
10:H:25:LYS:HG3	18:P:13:ARG:HH21	1.42	0.82
10:H:80:ALA:HA	10:H:83:ILE:CG1	2.09	0.82
11:I:64:ARG:HD3	11:I:102:VAL:CG1	2.10	0.82
20:R:57:LEU:O	20:R:58:HIS:HB2	1.79	0.82
22:T:4:ARG:NH1	22:T:4:ARG:HB2	1.93	0.82
26:X:55:ARG:NH1	26:X:56:VAL:O	2.13	0.82
28:Z:26:GLY:O	28:Z:29:LYS:HB2	1.79	0.82
4:B:79:VAL:HG22	4:B:95:LEU:HD13	1.60	0.82
5:C:105:THR:HG23	5:C:106:GLY:H	1.44	0.82
7:E:43:LEU:HD22	7:E:45:GLU:HG2	1.59	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:82:LEU:HG	7:E:84:LYS:HE2	1.61	0.82
7:E:70:VAL:HA	7:E:90:LEU:CD1	2.09	0.82
8:F:43:VAL:CG2	8:F:44:VAL:H	1.89	0.82
10:H:61:HIS:HE1	10:H:73:ASP:OD2	1.61	0.82
12:J:35:HIS:C	12:J:36:LYS:HD2	1.99	0.82
13:K:66:ILE:HG22	13:K:104:PHE:CE2	2.15	0.82
14:L:47:PHE:CD1	14:L:48:VAL:N	2.48	0.82
15:M:95:HIS:O	15:M:99:LYS:HG3	1.80	0.82
16:N:99:LEU:HD13	16:N:102:ILE:HD13	1.60	0.82
20:R:21:PHE:CD2	20:R:90:GLU:HG2	2.14	0.82
23:U:74:ARG:O	23:U:74:ARG:HD2	1.79	0.82
4:B:235:GLY:HA2	4:B:240:ALA:HB3	1.60	0.82
24:V:87:PRO:HB2	24:V:91:LYS:HD3	1.61	0.82
3:A:211:ARG:NH1	3:A:211:ARG:HB2	1.95	0.82
4:B:226:MET:O	4:B:227:ASN:O	1.96	0.82
4:B:8:PRO:HG3	4:B:15:PHE:CE2	2.14	0.82
5:C:64:LYS:O	5:C:66:HIS:CD2	2.33	0.82
7:E:120:LEU:HD13	7:E:121:ASN:N	1.95	0.82
10:H:78:VAL:HG12	10:H:146:TYR:HE2	1.44	0.82
16:N:78:LEU:O	16:N:81:PRO:HD2	1.79	0.82
24:V:22:GLY:HA3	24:V:39:LYS:CB	2.09	0.82
22:T:102:LEU:CD2	22:T:124:ILE:HB	2.09	0.82
24:V:21:ARG:HG3	24:V:22:GLY:N	1.92	0.82
24:V:78:LYS:C	24:V:78:LYS:HD2	2.00	0.82
4:B:148:GLU:HG2	4:B:149:PRO:HD2	1.61	0.82
4:B:183:ARG:HG3	4:B:270:ILE:CA	2.08	0.82
9:G:62:LYS:HZ3	9:G:133:HIS:CB	1.92	0.82
9:G:76:THR:HG23	9:G:141:LYS:O	1.80	0.82
12:J:47:ASP:HB2	12:J:51:PHE:HE2	1.39	0.82
16:N:27:THR:O	16:N:28:VAL:HG23	1.78	0.82
16:N:49:VAL:HG23	16:N:49:VAL:O	1.78	0.82
16:N:62:THR:CG2	16:N:75:ILE:HG12	2.08	0.82
33:O:51:G:H2'	33:O:52:U:O4'	1.80	0.82
3:A:217:THR:HB	3:A:220:GLY:HA3	1.62	0.82
5:C:119:ARG:NE	5:C:157:ALA:HA	1.94	0.82
6:D:112:ARG:O	6:D:117:LYS:HG2	1.78	0.82
8:F:172:LYS:HE3	8:F:173:PRO:HD2	1.61	0.82
9:G:67:ARG:HH21	9:G:67:ARG:CB	1.93	0.82
13:K:132:VAL:HG22	13:K:133:ARG:N	1.95	0.82
13:K:6:ARG:HD3	13:K:7:MET:N	1.95	0.82
16:N:100:TYR:HA	16:N:103:ARG:HH22	1.02	0.82
16:N:50:ILE:HG13	16:N:99:LEU:HB2	1.62	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:Q:42:ARG:HG3	19:Q:46:PHE:CE2	2.15	0.82
22:T:15:PRO:O	22:T:17:ALA:N	2.11	0.82
5:C:51:PHE:H	5:C:76:ARG:CB	1.85	0.82
7:E:43:LEU:HD22	7:E:45:GLU:H	1.43	0.82
9:G:124:GLY:HA3	9:G:144:VAL:N	1.86	0.82
9:G:97:ILE:HD13	9:G:98:ALA:H	1.45	0.82
10:H:29:PRO:HG3	10:H:64:ASP:CB	2.09	0.82
11:I:71:ARG:N	11:I:74:GLY:O	2.12	0.82
12:J:25:SER:HB3	12:J:30:THR:HG21	1.62	0.82
26:X:7:LYS:H	26:X:55:ARG:HB3	1.45	0.82
3:A:167:ASP:H	3:A:171:ALA:CA	1.92	0.81
5:C:5:LEU:HB2	5:C:76:ARG:HH11	1.43	0.81
6:D:19:LEU:N	6:D:20:PRO:HD2	1.95	0.81
6:D:55:SER:HB2	6:D:73:ILE:CG2	2.09	0.81
7:E:78:SER:HA	7:E:83:ARG:HG2	1.61	0.81
26:X:50:VAL:HA	26:X:53:LEU:HD21	1.60	0.81
13:K:121:ALA:O	13:K:124:LYS:CG	2.28	0.81
16:N:64:ARG:CZ	16:N:103:ARG:HA	2.10	0.81
7:E:11:TYR:HA	7:E:15:VAL:HG23	1.60	0.81
14:L:9:LYS:O	14:L:10:LEU:HB2	1.80	0.81
16:N:64:ARG:NH2	16:N:66:VAL:HG23	1.95	0.81
17:O:44:ASN:O	17:O:48:ALA:CB	2.29	0.81
3:A:57:GLN:CG	3:A:202:PRO:HB3	2.08	0.81
17:O:95:LEU:C	17:O:97:ASP:H	1.83	0.81
22:T:101:PRO:HB2	22:T:136:PHE:HB3	1.61	0.81
22:T:44:PHE:CG	22:T:45:ASP:N	2.48	0.81
26:X:6:VAL:O	26:X:6:VAL:HG12	1.80	0.81
33:0:6:U:C3'	33:0:7:U:H5''	2.09	0.81
3:A:194:ILE:O	3:A:197:LEU:HG	1.81	0.81
4:B:121:PRO:C	4:B:131:LEU:HG	2.00	0.81
4:B:79:VAL:HG21	4:B:111:LEU:CG	2.06	0.81
12:J:7:ARG:NH1	12:J:10:PRO:HG2	1.94	0.81
20:R:10:ALA:O	20:R:29:TRP:HB2	1.79	0.81
21:S:38:ILE:HG23	21:S:39:VAL:N	1.94	0.81
33:0:56:C:HO2'	33:0:57:G:P	2.02	0.81
4:B:106:ILE:O	4:B:106:ILE:HG13	1.79	0.81
4:B:209:ALA:O	4:B:212:SER:HB3	1.79	0.81
5:C:24:THR:CB	5:C:186:GLY:HA2	2.07	0.81
10:H:126:VAL:HG12	10:H:130:LEU:CD2	2.11	0.81
10:H:82:LYS:O	10:H:83:ILE:O	1.97	0.81
16:N:100:TYR:HB2	16:N:101:PHE:HD2	1.45	0.81
22:T:108:PRO:HB2	22:T:111:VAL:HG23	1.62	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:W:32:LEU:HG	25:W:33:MET:N	1.95	0.81
17:O:40:PHE:CA	18:P:78:LYS:HG3	2.10	0.81
4:B:177:LEU:HB2	4:B:180:GLY:O	1.80	0.81
5:C:19:ARG:NH1	5:C:21:VAL:CG1	2.44	0.81
6:D:4:ILE:CG1	6:D:12:ARG:HG2	2.09	0.81
6:D:51:GLU:O	6:D:52:VAL:HG12	1.80	0.81
9:G:26:ALA:O	9:G:32:PRO:CD	2.28	0.81
10:H:78:VAL:CB	10:H:149:PRO:HA	2.09	0.81
11:I:86:ILE:O	11:I:94:ARG:NH1	2.13	0.81
17:O:91:ASP:OD1	17:O:96:ALA:HB2	1.81	0.81
28:Z:10:ARG:O	28:Z:13:ALA:HB3	1.81	0.81
22:T:41:LEU:HD13	22:T:42:VAL:HG23	1.59	0.81
3:A:217:THR:HG22	3:A:219:MET:N	1.94	0.81
4:B:48:ARG:HD3	4:B:49:ILE:H	1.46	0.81
5:C:26:ILE:O	5:C:182:LEU:O	1.98	0.81
6:D:105:LEU:CD1	6:D:109:VAL:HG22	2.11	0.81
6:D:112:ARG:HG3	6:D:112:ARG:NH2	1.95	0.81
10:H:40:ASP:OD2	10:H:77:VAL:CG1	2.29	0.81
17:O:5:LYS:HG3	17:O:6:THR:N	1.95	0.81
19:Q:88:ARG:HD2	19:Q:92:ARG:C	2.00	0.81
22:T:152:ALA:CB	22:T:166:SER:O	2.28	0.81
22:T:150:LEU:HD12	22:T:171:ILE:CD1	2.10	0.81
20:R:81:VAL:CG2	20:R:82:GLN:H	1.91	0.81
4:B:44:ASN:ND2	4:B:45:ASN:H	1.79	0.81
5:C:3:GLY:HA2	5:C:198:VAL:HB	1.62	0.81
5:C:4:ILE:HD11	5:C:29:GLY:N	1.96	0.81
5:C:93:VAL:HG12	5:C:182:LEU:HD13	1.63	0.81
8:F:64:LEU:HD12	8:F:65:HIS:N	1.96	0.81
10:H:60:LYS:CA	10:H:60:LYS:HE3	2.10	0.81
11:I:19:ILE:HB	11:I:42:SER:O	1.80	0.81
22:T:98:MET:CA	22:T:125:LEU:HD12	2.09	0.81
4:B:172:TYR:CE1	4:B:186:HIS:HA	2.16	0.81
5:C:52:LEU:HB2	5:C:76:ARG:N	1.96	0.81
7:E:172:LEU:CA	7:E:175:LEU:HD12	2.06	0.81
9:G:65:ALA:HB2	9:G:113:ARG:HH22	1.46	0.81
11:I:7:TYR:C	11:I:8:LEU:HD22	2.01	0.81
15:M:58:LEU:HD23	15:M:59:LYS:N	1.94	0.81
19:Q:14:PRO:CB	19:Q:78:GLU:HG2	2.11	0.81
20:R:65:ARG:HE	20:R:65:ARG:HA	1.44	0.81
6:D:159:ARG:HG2	6:D:172:ALA:HB2	1.63	0.81
6:D:62:GLN:OE1	6:D:69:ARG:NE	2.14	0.81
8:F:23:ARG:HD3	8:F:34:GLU:OE1	1.81	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:113:ARG:NH1	9:G:133:HIS:HB3	1.96	0.81
4:B:27:THR:HG21	4:B:83:GLU:HG3	1.62	0.81
16:N:74:ARG:HD2	16:N:76:PHE:CZ	2.16	0.81
24:V:51:VAL:HG11	24:V:60:PHE:HD2	1.46	0.81
26:X:9:VAL:HB	26:X:32:GLN:HG2	1.62	0.81
3:A:224:ARG:NH2	3:A:225:ILE:H	1.78	0.81
7:E:131:TYR:HD2	7:E:132:ASN:N	1.79	0.81
9:G:95:LYS:HD3	9:G:95:LYS:H	1.43	0.81
11:I:65:THR:O	11:I:79:PHE:CD1	2.34	0.81
15:M:39:ILE:HD13	15:M:39:ILE:H	1.45	0.81
22:T:80:ARG:CG	22:T:81:ARG:H	1.92	0.81
24:V:76:ARG:HH12	24:V:90:ILE:HG23	1.46	0.81
22:T:99:TYR:CE1	22:T:125:LEU:HD22	2.15	0.81
6:D:39:ARG:HG3	6:D:40:ARG:N	1.96	0.81
8:F:117:PRO:CA	8:F:121:ILE:HD12	2.11	0.81
8:F:141:VAL:HG13	8:F:144:VAL:HG11	1.62	0.81
12:J:122:PRO:HB2	12:J:142:GLY:HA3	1.60	0.81
12:J:61:ARG:N	12:J:61:ARG:HE	1.79	0.81
15:M:75:GLU:CA	15:M:78:LEU:HG	2.10	0.81
19:Q:10:VAL:HG21	19:Q:101:SER:HB2	1.63	0.81
25:W:14:ARG:HB3	25:W:54:LYS:HZ3	1.44	0.81
25:W:55:ARG:H	25:W:55:ARG:HH11	1.29	0.81
28:Z:37:LYS:HE3	28:Z:39:ARG:HE	1.45	0.81
33:O:14:A:H62	33:O:21:A:H2	1.29	0.80
33:O:47:U:N3	33:O:50:U:H5"	1.95	0.80
4:B:6:PHE:CE1	4:B:18:VAL:HG23	2.16	0.80
10:H:140:PHE:O	10:H:143:LEU:HD12	1.81	0.80
10:H:44:LYS:C	10:H:84:ARG:HB3	2.01	0.80
10:H:78:VAL:HG12	10:H:146:TYR:CE2	2.17	0.80
22:T:19:ARG:HA	22:T:23:LYS:H	1.46	0.80
33:O:9:A:N6	33:O:23:A:C5	2.48	0.80
4:B:73:VAL:HG12	4:B:120:GLY:HA2	1.62	0.80
5:C:4:ILE:HD11	5:C:29:GLY:H	1.46	0.80
8:F:17:VAL:HG21	8:F:44:VAL:CG2	2.11	0.80
10:H:96:THR:CG2	10:H:107:LYS:HA	2.11	0.80
10:H:34:PRO:HB2	10:H:142:ARG:HH12	1.45	0.80
12:J:85:LEU:HD22	12:J:85:LEU:N	1.96	0.80
14:L:78:LYS:HB3	14:L:82:GLU:OE2	1.81	0.80
18:P:4:ILE:HG12	18:P:13:ARG:CB	2.09	0.80
19:Q:65:LEU:HB3	19:Q:68:ARG:NH1	1.95	0.80
13:K:134:ARG:NH1	22:T:53:ILE:CD1	2.44	0.80
17:O:64:ARG:HB3	17:O:64:ARG:HH21	1.44	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:O:24:G:C6	33:O:25:C:C2	2.70	0.80
9:G:125:GLU:HG2	9:G:126:TYR:N	1.96	0.80
9:G:41:GLU:O	9:G:44:LEU:HB3	1.80	0.80
12:J:79:ARG:HG2	12:J:81:GLN:NE2	1.96	0.80
13:K:21:THR:O	13:K:23:GLY:N	2.13	0.80
17:O:48:ALA:O	17:O:50:ARG:N	2.14	0.80
19:Q:30:GLU:HA	19:Q:33:ARG:NE	1.97	0.80
20:R:57:LEU:HG	20:R:58:HIS:N	1.95	0.80
7:E:35:GLU:OE2	7:E:160:VAL:HG13	1.82	0.80
4:B:99:ASP:OD2	4:B:101:GLU:HB2	1.82	0.80
6:D:150:LEU:HA	6:D:169:VAL:CB	2.12	0.80
6:D:46:THR:HG22	6:D:87:PRO:HD2	1.62	0.80
7:E:69:ALA:O	7:E:90:LEU:HG	1.80	0.80
11:I:69:VAL:HG22	11:I:70:LYS:H	1.47	0.80
16:N:124:ASP:HB2	16:N:125:ARG:NH1	1.96	0.80
17:O:106:PHE:HA	17:O:109:LEU:CG	2.11	0.80
22:T:99:TYR:CE1	22:T:125:LEU:HB2	2.16	0.80
25:W:5:GLU:O	25:W:8:LYS:N	2.15	0.80
5:C:30:PRO:HG3	5:C:180:ASN:ND2	1.96	0.80
6:D:153:THR:O	6:D:172:ALA:HA	1.80	0.80
8:F:149:ARG:HD2	8:F:153:LYS:HE2	1.63	0.80
9:G:68:LEU:HA	9:G:71:ILE:HG22	1.62	0.80
9:G:88:ILE:HG12	9:G:89:TYR:H	1.46	0.80
11:I:104:ARG:HA	11:I:104:ARG:HH11	3.61	0.80
11:I:86:ILE:CG2	11:I:94:ARG:CD	2.48	0.80
12:J:148:LEU:CD2	12:J:149:GLU:H	1.94	0.80
14:L:44:LEU:HD22	14:L:47:PHE:CE2	2.16	0.80
14:L:97:VAL:C	14:L:98:LEU:HD12	2.02	0.80
17:O:106:PHE:C	17:O:109:LEU:HG	2.01	0.80
18:P:64:HIS:O	18:P:96:ILE:HG23	1.82	0.80
19:Q:59:VAL:HG12	19:Q:59:VAL:O	1.82	0.80
21:S:40:GLU:HB3	21:S:62:GLU:HA	1.64	0.80
21:S:97:ARG:HA	21:S:102:CYS:O	1.80	0.80
23:U:67:VAL:HG23	23:U:79:VAL:CG1	2.12	0.80
23:U:45:PHE:CA	23:U:77:ARG:O	2.23	0.80
4:B:242:ARG:H	4:B:242:ARG:HH11	1.25	0.80
5:C:116:VAL:HG22	5:C:117:MET:N	1.97	0.80
5:C:154:LYS:HA	5:C:154:LYS:HE3	1.61	0.80
5:C:84:PHE:O	5:C:86:PRO:HD3	1.81	0.80
7:E:131:TYR:HB3	7:E:159:VAL:HG22	1.63	0.80
9:G:127:VAL:HA	9:G:141:LYS:CE	2.11	0.80
11:I:102:VAL:O	11:I:122:LEU:N	2.13	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:J:102:ARG:O	12:J:102:ARG:HD2	1.82	0.80
13:K:21:THR:OG1	13:K:98:LYS:HE2	1.81	0.80
19:Q:92:ARG:CA	19:Q:92:ARG:HE	1.94	0.80
23:U:32:ARG:N	23:U:61:ALA:HB1	1.96	0.80
25:W:26:ARG:HA	25:W:29:LYS:CG	2.12	0.80
25:W:40:SER:O	25:W:44:LEU:HG	1.82	0.80
4:B:183:ARG:HA	4:B:269:PHE:O	1.82	0.80
14:L:43:GLU:HA	14:L:43:GLU:OE1	1.81	0.80
15:M:29:PHE:CG	15:M:30:ARG:N	2.50	0.80
18:P:76:LYS:HE3	18:P:78:LYS:CB	2.05	0.80
23:U:50:ASN:HB2	23:U:81:VAL:HB	1.62	0.80
26:X:56:VAL:O	26:X:57:GLU:HB2	1.81	0.80
14:L:104:ARG:HH21	14:L:107:ASP:HB2	1.44	0.80
24:V:12:PRO:HG2	24:V:13:ILE:N	1.96	0.80
3:A:217:THR:HB	3:A:220:GLY:CA	2.12	0.80
3:A:21:TYR:HD1	3:A:26:ALA:CB	1.93	0.80
6:D:151:LEU:HB3	6:D:169:VAL:HG11	1.64	0.80
11:I:15:GLY:H	11:I:50:GLY:HA3	1.47	0.80
15:M:11:LYS:HD2	15:M:11:LYS:H	1.46	0.80
16:N:121:ILE:CG2	16:N:122:ASP:H	1.95	0.80
17:O:85:LYS:HA	17:O:85:LYS:CE	2.05	0.80
18:P:13:ARG:N	18:P:13:ARG:HD3	1.95	0.80
23:U:41:ARG:HD3	23:U:41:ARG:C	2.02	0.80
23:U:50:ASN:CB	23:U:81:VAL:CG1	2.58	0.80
24:V:11:ARG:NH2	24:V:61:ARG:N	2.29	0.80
4:B:248:SER:HB2	4:B:249:PRO:HD2	1.64	0.80
8:F:17:VAL:HA	8:F:26:VAL:CG2	2.05	0.80
9:G:38:LEU:HD12	9:G:38:LEU:H	1.44	0.80
13:K:52:VAL:HG23	13:K:53:ALA:N	1.96	0.80
16:N:50:ILE:HD12	16:N:64:ARG:HB2	1.62	0.80
18:P:17:GLY:O	18:P:97:LYS:HD2	1.82	0.80
19:Q:42:ARG:O	19:Q:44:ALA:N	2.14	0.80
4:B:172:TYR:HD1	4:B:187:GLY:N	1.77	0.80
4:B:20:ASP:O	4:B:24:ILE:HB	1.82	0.80
6:D:148:SER:CB	6:D:184:THR:HG22	2.12	0.80
6:D:8:SER:HB2	6:D:9:PRO:CD	2.11	0.80
7:E:115:ARG:O	7:E:118:ARG:CG	10.62	0.80
14:L:2:ARG:HG3	14:L:3:HIS:H	1.47	0.80
15:M:61:ASN:O	15:M:62:LYS:HG3	1.82	0.80
26:X:43:ILE:HD12	26:X:43:ILE:N	1.96	0.80
16:N:31:SER:OG	16:N:32:TYR:N	2.15	0.80
18:P:7:THR:HG21	18:P:22:VAL:HG21	1.63	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:T:45:ASP:OD1	22:T:48:PHE:CE2	2.34	0.80
23:U:37:LEU:HD12	23:U:38:VAL:CB	2.12	0.80
18:P:46:VAL:O	18:P:47:VAL:HB	1.78	0.80
4:B:36:PRO:HB2	4:B:62:TYR:N	1.95	0.79
6:D:112:ARG:NH1	6:D:185:GLU:OE2	2.15	0.79
8:F:55:PRO:HG3	8:F:61:HIS:CD2	2.16	0.79
8:F:92:ILE:HD13	8:F:92:ILE:H	1.45	0.79
14:L:104:ARG:HG2	14:L:105:ARG:N	1.97	0.79
15:M:25:ARG:NE	15:M:40:ILE:HG22	1.96	0.79
16:N:11:GLU:C	16:N:13:ARG:H	1.83	0.79
18:P:100:ARG:HD2	18:P:101:GLY:N	1.98	0.79
27:Y:30:LEU:CD2	27:Y:31:VAL:H	1.93	0.79
4:B:142:VAL:HG22	4:B:143:HIS:O	1.82	0.79
4:B:78:LYS:O	4:B:95:LEU:HB2	1.82	0.79
6:D:58:LYS:O	6:D:59:ILE:HG13	1.82	0.79
22:T:58:VAL:C	22:T:59:LEU:HD22	2.01	0.79
3:A:35:THR:HG22	3:A:36:ALA:N	1.98	0.79
6:D:170:THR:HG22	6:D:170:THR:O	1.81	0.79
6:D:179:TYR:O	6:D:182:VAL:HG22	1.82	0.79
7:E:148:MET:O	7:E:151:ALA:HB3	1.82	0.79
7:E:31:VAL:HG12	7:E:33:ARG:HD3	1.64	0.79
8:F:126:PRO:HG2	8:F:130:ARG:HB2	1.63	0.79
21:S:67:LEU:HD13	21:S:68:HIS:H	1.47	0.79
33:O:18:G:H21	33:O:58:A:C5'	1.95	0.79
4:B:200:ASP:C	4:B:202:LYS:H	1.82	0.79
4:B:69:ARG:HG2	4:B:69:ARG:O	1.83	0.79
9:G:101:LEU:HB2	9:G:109:ILE:HD12	1.63	0.79
10:H:32:VAL:CG1	10:H:35:ARG:HH12	1.96	0.79
13:K:3:MET:H	13:K:4:PRO:HD3	1.47	0.79
17:O:5:LYS:NZ	17:O:7:GLY:HA2	1.96	0.79
23:U:31:VAL:HG13	23:U:65:GLY:N	1.98	0.79
24:V:38:SER:C	24:V:39:LYS:HD2	2.02	0.79
25:W:55:ARG:HD2	25:W:55:ARG:N	1.98	0.79
4:B:151:LYS:HG3	4:B:151:LYS:O	1.82	0.79
5:C:9:VAL:HG21	5:C:26:ILE:HA	1.64	0.79
9:G:94:ALA:HB2	9:G:116:LEU:CD2	2.13	0.79
10:H:114:LEU:HD12	10:H:115:ALA:N	1.98	0.79
10:H:50:ALA:HB1	10:H:126:VAL:HG13	1.65	0.79
19:Q:18:ARG:HA	19:Q:76:VAL:CG1	2.11	0.79
21:S:84:ARG:H	21:S:84:ARG:HD2	1.43	0.79
28:Z:21:ARG:C	28:Z:23:ARG:H	1.83	0.79
3:A:187:ALA:HA	3:A:190:ILE:HD12	1.65	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:106:ILE:O	4:B:108:PRO:HD3	1.82	0.79
5:C:81:ILE:HD12	5:C:81:ILE:N	1.98	0.79
6:D:79:VAL:HG13	6:D:79:VAL:O	1.82	0.79
6:D:85:PHE:HB3	6:D:88:LYS:HE2	1.63	0.79
13:K:34:LEU:CD2	13:K:118:LEU:HG	2.11	0.79
13:K:11:LYS:HG2	13:K:13:GLN:H	1.45	0.79
17:O:17:ILE:HG21	17:O:35:ALA:HB3	1.63	0.79
19:Q:72:LYS:HD2	19:Q:106:ILE:HB	1.62	0.79
21:S:62:GLU:O	21:S:63:LYS:HB2	1.80	0.79
22:T:98:MET:HG2	22:T:99:TYR:N	1.95	0.79
19:Q:42:ARG:HD2	19:Q:46:PHE:CZ	2.18	0.79
26:X:7:LYS:N	26:X:55:ARG:HB3	1.97	0.79
4:B:72:LYS:C	4:B:74:GLY:H	1.85	0.79
4:B:75:ILE:H	4:B:76:PRO:CD	1.94	0.79
5:C:92:THR:O	5:C:95:ILE:HG13	1.82	0.79
6:D:39:ARG:HG3	6:D:40:ARG:H	1.44	0.79
11:I:67:LYS:CG	11:I:68:GLU:H	1.84	0.79
21:S:1:MET:HG2	21:S:2:ARG:N	1.97	0.79
4:B:165:ILE:HG12	4:B:173:VAL:CG2	2.12	0.79
4:B:184:LYS:HG2	4:B:185:VAL:H	1.47	0.79
4:B:57:GLY:N	4:B:216:GLY:HA2	1.98	0.79
8:F:124:GLU:HG2	8:F:132:ARG:NE	1.96	0.79
8:F:146:ALA:C	8:F:148:ILE:H	1.86	0.79
12:J:71:VAL:CB	12:J:72:PRO:HD3	2.13	0.79
13:K:5:ARG:HG3	13:K:6:ARG:N	1.97	0.79
16:N:25:GLY:O	16:N:48:ILE:CG2	2.29	0.79
17:O:45:TYR:O	17:O:49:HIS:CB	2.31	0.79
19:Q:5:ALA:HB2	19:Q:54:ALA:CB	2.12	0.79
19:Q:14:PRO:HB2	19:Q:78:GLU:HG2	1.64	0.79
21:S:73:ARG:HG2	21:S:78:ALA:CB	2.11	0.79
24:V:37:ILE:N	24:V:39:LYS:HZ1	1.79	0.79
24:V:9:GLY:O	24:V:48:LYS:HE2	1.83	0.79
3:A:190:ILE:O	3:A:194:ILE:HG13	1.82	0.79
6:D:159:ARG:NE	6:D:172:ALA:HB1	1.98	0.79
9:G:130:TYR:HD2	9:G:138:ILE:HG23	1.48	0.79
13:K:24:GLY:O	13:K:101:ARG:HA	1.81	0.79
16:N:45:PHE:CD1	16:N:46:GLU:N	2.50	0.79
24:V:85:LEU:HD11	24:V:88:LYS:N	1.97	0.79
21:S:14:LEU:HG	21:S:21:LYS:O	1.83	0.79
4:B:45:ASN:CG	4:B:46:GLN:N	2.35	0.79
4:B:78:LYS:CB	4:B:114:GLY:O	2.29	0.79
6:D:132:LYS:HG3	6:D:133:GLU:H	1.47	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:135:LEU:O	6:D:138:ALA:N	2.14	0.79
6:D:18:ASP:C	6:D:20:PRO:HD2	2.02	0.79
7:E:139:LEU:HB3	7:E:146:TYR:O	1.83	0.79
9:G:69:LYS:HG3	9:G:138:ILE:HD13	1.65	0.79
9:G:73:GLU:HG2	9:G:138:ILE:CD1	2.12	0.79
13:K:125:LEU:HD13	13:K:127:ILE:HG23	1.65	0.79
18:P:64:HIS:C	18:P:96:ILE:HG23	2.03	0.79
21:S:14:LEU:HD22	21:S:39:VAL:HG11	1.65	0.79
24:V:21:ARG:CG	24:V:22:GLY:H	1.95	0.79
4:B:31:LYS:HB3	4:B:104:TYR:HE1	1.46	0.79
5:C:25:VAL:O	5:C:26:ILE:HD13	1.83	0.79
5:C:4:ILE:CD1	5:C:29:GLY:H	1.96	0.79
6:D:65:THR:O	6:D:67:ARG:N	2.15	0.79
6:D:98:LYS:HD2	6:D:101:ARG:NH2	1.98	0.79
8:F:7:LEU:HB3	8:F:50:VAL:O	1.83	0.79
6:D:183:ARG:CZ	12:J:7:ARG:HB3	2.12	0.79
14:L:31:HIS:CG	14:L:34:ILE:HD11	2.18	0.79
17:O:106:PHE:HA	17:O:109:LEU:HG	1.65	0.79
17:O:14:HIS:CD2	17:O:32:PHE:HB2	2.18	0.79
21:S:26:LYS:N	21:S:37:VAL:HG12	1.98	0.79
21:S:45:VAL:HA	21:S:58:GLY:H	1.48	0.79
22:T:166:SER:CB	22:T:169:GLU:HB2	2.12	0.79
22:T:17:ALA:HA	22:T:20:ARG:CZ	2.12	0.79
23:U:15:ASP:OD1	23:U:20:ARG:HB3	1.82	0.79
23:U:52:GLY:HA3	23:U:62:LEU:HB2	1.65	0.79
24:V:26:ARG:O	33:O:74:C:OP1	2.00	0.79
5:C:31:CYS:O	5:C:91:VAL:HG23	1.82	0.78
33:O:56:C:C6	33:O:56:C:O5'	2.35	0.78
4:B:115:GLN:HE22	4:B:127:VAL:HB	1.46	0.78
4:B:57:GLY:N	4:B:216:GLY:CA	2.46	0.78
5:C:183:LEU:O	5:C:183:LEU:HD12	1.83	0.78
5:C:4:ILE:CG1	5:C:5:LEU:N	2.43	0.78
6:D:190:ASP:O	6:D:194:TRP:CB	2.32	0.78
9:G:97:ILE:HD11	9:G:111:PRO:HG3	1.63	0.78
11:I:62:VAL:HG12	11:I:63:VAL:N	1.97	0.78
13:K:119:ARG:N	13:K:119:ARG:HD2	1.97	0.78
16:N:49:VAL:HA	16:N:63:VAL:HG12	1.66	0.78
17:O:83:LEU:HD23	17:O:84:LYS:NZ	1.98	0.78
19:Q:72:LYS:HB2	19:Q:106:ILE:O	1.81	0.78
24:V:88:LYS:HG3	24:V:89:GLU:N	1.98	0.78
27:Y:40:LYS:HD2	27:Y:51:TYR:CE1	2.17	0.78
12:J:137:LYS:O	12:J:138:LEU:HD12	1.83	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:V:33:LYS:H	24:V:33:LYS:HD3	1.46	0.78
24:V:50:ARG:HG2	24:V:51:VAL:N	1.95	0.78
25:W:13:ALA:C	25:W:14:ARG:HD3	2.02	0.78
3:A:57:GLN:HG2	3:A:202:PRO:HB3	1.66	0.78
4:B:45:ASN:CG	4:B:46:GLN:H	1.85	0.78
6:D:126:GLY:HA3	6:D:133:GLU:CD	2.03	0.78
7:E:166:ASP:HA	7:E:169:ALA:HB3	1.66	0.78
7:E:46:ALA:N	7:E:84:LYS:HD2	1.98	0.78
8:F:19:VAL:CG2	8:F:24:VAL:HG22	2.12	0.78
8:F:19:VAL:HG22	8:F:24:VAL:CG2	2.12	0.78
9:G:47:LEU:O	9:G:51:ILE:HG13	1.82	0.78
10:H:69:VAL:HG13	10:H:71:MET:CE	2.12	0.78
11:I:104:ARG:CB	11:I:104:ARG:HH11	1.92	0.78
14:L:40:LYS:O	14:L:44:LEU:HG	1.84	0.78
15:M:71:ARG:HB3	15:M:108:GLY:N	1.98	0.78
11:I:77:ILE:HD11	16:N:72:VAL:HA	1.64	0.78
16:N:3:ARG:HB2	16:N:7:ILE:CD1	2.12	0.78
27:Y:54:GLY:O	27:Y:55:ARG:HB2	1.82	0.78
28:Z:13:ALA:O	28:Z:20:ALA:CB	2.30	0.78
22:T:128:VAL:HG23	22:T:160:GLY:O	1.83	0.78
6:D:159:ARG:C	6:D:161:ALA:H	1.86	0.78
7:E:173:LEU:O	7:E:178:PHE:CD1	2.36	0.78
8:F:88:LEU:CB	8:F:129:THR:O	2.31	0.78
9:G:88:ILE:CG1	9:G:89:TYR:HD1	1.96	0.78
9:G:95:LYS:CE	9:G:95:LYS:H	1.94	0.78
13:K:26:TYR:CD2	13:K:27:VAL:HG22	2.18	0.78
16:N:50:ILE:H	16:N:63:VAL:HA	1.48	0.78
22:T:15:PRO:O	22:T:19:ARG:HD2	1.80	0.78
22:T:99:TYR:HA	22:T:124:ILE:C	2.02	0.78
8:F:156:ALA:CB	8:F:169:VAL:HG23	2.12	0.78
4:B:2:ALA:HA	4:B:200:ASP:HB3	0.86	0.78
4:B:65:ILE:CD1	4:B:105:ILE:HG13	2.14	0.78
6:D:165:LEU:HB2	6:D:168:VAL:CG2	2.14	0.78
7:E:45:GLU:HA	7:E:84:LYS:HE3	1.63	0.78
9:G:7:GLU:CG	9:G:8:PRO:CD	2.56	0.78
10:H:45:THR:O	10:H:49:LEU:HD13	1.84	0.78
12:J:92:GLU:C	12:J:94:GLU:H	1.85	0.78
12:J:97:PRO:CD	12:J:126:VAL:HB	2.14	0.78
13:K:46:GLN:HE21	13:K:125:LEU:CD2	1.95	0.78
20:R:75:ASP:O	20:R:76:ARG:HD3	1.83	0.78
13:K:111:GLU:CB	13:K:115:MET:HG2	2.13	0.78
4:B:183:ARG:NH2	4:B:266:SER:HB3	1.99	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:148:SER:HB2	6:D:184:THR:HA	1.66	0.78
7:E:124:SER:O	7:E:131:TYR:CE2	2.36	0.78
8:F:41:MET:HG3	8:F:54:ARG:HB3	1.64	0.78
9:G:22:LYS:HB2	9:G:23:PRO:HD2	1.63	0.78
12:J:35:HIS:CG	12:J:36:LYS:N	2.52	0.78
14:L:13:HIS:CD2	14:L:16:HIS:H	2.01	0.78
21:S:16:ALA:HB2	21:S:20:TYR:HA	1.66	0.78
4:B:57:GLY:O	4:B:59:LYS:N	2.15	0.78
4:B:30:GLU:HG3	4:B:63:ARG:HH12	1.48	0.78
6:D:78:PHE:HD2	6:D:78:PHE:H	1.28	0.78
6:D:8:SER:HB2	6:D:9:PRO:HD3	1.65	0.78
8:F:114:VAL:CG2	8:F:115:VAL:H	1.97	0.78
13:K:66:ILE:HA	13:K:104:PHE:CD2	2.18	0.78
13:K:81:VAL:O	13:K:82:ARG:HB3	1.82	0.78
17:O:95:LEU:O	17:O:97:ASP:N	2.16	0.78
18:P:85:LYS:HZ3	18:P:86:GLY:H	1.28	0.78
18:P:24:LYS:HA	18:P:94:LEU:CD1	2.14	0.78
22:T:24:LEU:HD21	22:T:41:LEU:HA	1.64	0.78
24:V:11:ARG:CG	24:V:61:ARG:HB3	2.09	0.78
33:O:48:C:H5"	33:O:48:C:H6	1.47	0.78
3:A:164:PHE:HZ	3:A:197:LEU:CA	1.95	0.78
4:B:172:TYR:CB	4:B:184:LYS:HD3	2.14	0.78
4:B:75:ILE:N	4:B:76:PRO:HD2	1.97	0.78
4:B:92:ILE:O	4:B:92:ILE:HD12	1.82	0.78
6:D:59:ILE:HD12	6:D:59:ILE:N	1.99	0.78
9:G:24:GLY:H	9:G:27:ARG:NE	1.80	0.78
9:G:89:TYR:HD1	9:G:89:TYR:H	1.31	0.78
11:I:19:ILE:CG2	11:I:43:VAL:HA	2.14	0.78
11:I:90:GLN:OE1	11:I:92:GLU:HB3	1.84	0.78
15:M:94:TYR:HE2	15:M:99:LYS:HA	1.47	0.78
18:P:37:VAL:HB	18:P:55:ALA:CB	2.14	0.78
18:P:84:LYS:HA	18:P:84:LYS:CE	2.10	0.78
19:Q:33:ARG:O	19:Q:37:ARG:HB2	1.84	0.78
24:V:26:ARG:CG	24:V:27:GLU:H	1.85	0.78
26:X:28:LEU:HD13	26:X:35:ARG:HG2	1.65	0.78
5:C:44:TYR:HE2	5:C:46:ALA:HB2	1.48	0.78
5:C:4:ILE:CD1	5:C:91:VAL:CG1	2.62	0.78
6:D:32:VAL:O	6:D:36:LEU:HD23	1.83	0.78
10:H:151:HIS:CD2	10:H:154:GLN:HB2	2.19	0.78
13:K:98:LYS:HB2	13:K:101:ARG:HG2	1.65	0.78
13:K:64:ILE:HG13	13:K:105:GLU:C	2.04	0.78
15:M:74:ALA:CB	15:M:109:GLY:HA3	2.13	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:Q:7:ALA:HB3	19:Q:103:ILE:O	1.83	0.78
5:C:113:PHE:C	5:C:113:PHE:CD2	2.54	0.78
8:F:110:SER:O	8:F:113:VAL:HG23	1.84	0.78
22:T:3:TYR:O	22:T:57:ILE:CD1	2.30	0.78
4:B:233:HIS:HD2	4:B:234:GLY:H	1.32	0.78
5:C:34:VAL:O	5:C:35:GLN:HB2	1.83	0.78
5:C:32:PRO:HB3	5:C:69:LYS:HD2	1.62	0.78
6:D:30:GLU:HA	6:D:33:ARG:CZ	2.14	0.78
8:F:138:LYS:CA	8:F:141:VAL:HB	2.13	0.78
10:H:118:PRO:O	10:H:122:LEU:HD13	1.83	0.78
10:H:39:ILE:HG13	10:H:40:ASP:N	1.98	0.78
10:H:49:LEU:O	10:H:53:ILE:HG13	1.84	0.78
10:H:89:LYS:C	10:H:110:LEU:HG	2.04	0.78
14:L:47:PHE:CE1	14:L:48:VAL:HG12	2.19	0.78
33:O:18:G:C2	33:O:57:G:C2	2.72	0.78
33:O:50:U:O2'	33:O:51:G:H5'	1.84	0.78
33:O:76:A:OP2	33:O:76:A:H3'	1.84	0.78
14:L:56:LYS:CA	14:L:84:ALA:HB1	2.14	0.78
15:M:71:ARG:HB3	15:M:108:GLY:H	1.49	0.78
16:N:70:VAL:CG1	16:N:71:GLY:N	2.47	0.78
17:O:85:LYS:HE3	17:O:85:LYS:CA	2.07	0.78
23:U:50:ASN:CB	23:U:81:VAL:HG11	2.13	0.78
23:U:71:ASP:CB	23:U:77:ARG:HA	2.12	0.78
24:V:65:SER:C	24:V:67:ILE:H	1.87	0.78
4:B:65:ILE:HD13	4:B:105:ILE:HA	1.65	0.77
6:D:40:ARG:NH1	6:D:40:ARG:HB3	6.36	0.77
8:F:38:SER:HB2	8:F:39:PRO:HD2	1.66	0.77
15:M:23:ARG:HB2	15:M:24:LEU:HD22	1.66	0.77
20:R:20:GLY:HA3	20:R:25:LYS:HA	1.64	0.77
21:S:54:LYS:CD	21:S:55:TYR:H	1.97	0.77
23:U:31:VAL:HG23	23:U:61:ALA:HA	1.64	0.77
24:V:68:PRO:O	24:V:70:VAL:N	2.17	0.77
10:H:44:LYS:HB2	10:H:83:ILE:CG2	2.15	0.77
11:I:67:LYS:O	11:I:68:GLU:HG2	1.84	0.77
14:L:37:THR:H	14:L:40:LYS:HE3	1.49	0.77
21:S:42:VAL:HB	21:S:61:ILE:HG22	1.66	0.77
24:V:18:ILE:N	24:V:18:ILE:HD12	2.00	0.77
33:O:33:U:O2	33:O:35:A:H3'	1.84	0.77
7:E:94:LEU:H	7:E:94:LEU:CD1	5.04	0.77
9:G:77:LEU:HD22	9:G:78:THR:H	1.49	0.77
10:H:79:ASN:N	10:H:147:ALA:HA	1.98	0.77
13:K:111:GLU:HB2	13:K:115:MET:CG	2.14	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:N:55:ASN:ND2	16:N:58:ASN:H	1.81	0.77
10:H:53:ILE:O	10:H:56:LEU:HB2	1.84	0.77
7:E:3:LEU:HB3	7:E:5:LEU:CD2	2.15	0.77
8:F:153:LYS:HB3	8:F:154:PRO:HD3	1.65	0.77
11:I:10:VAL:HG23	11:I:10:VAL:O	1.83	0.77
14:L:79:LEU:HD22	14:L:83:ILE:CG1	2.14	0.77
16:N:32:TYR:CD1	16:N:33:LYS:N	2.52	0.77
17:O:99:ALA:CA	17:O:103:PRO:HB3	2.05	0.77
22:T:153:SER:HB3	22:T:167:PRO:O	1.84	0.77
24:V:10:LYS:HD2	24:V:15:ALA:N	2.00	0.77
4:B:24:ILE:CG1	4:B:25:THR:H	1.93	0.77
4:B:260:ARG:HH12	4:B:262:ARG:HA	1.50	0.77
5:C:27:LEU:HD23	5:C:28:ALA:O	1.84	0.77
6:D:111:ASP:HA	6:D:114:ARG:HG2	1.65	0.77
6:D:29:TRP:HE3	6:D:33:ARG:HH11	1.32	0.77
7:E:12:TYR:N	7:E:12:TYR:CD2	2.42	0.77
8:F:13:LYS:HE2	8:F:29:PRO:HA	1.66	0.77
10:H:81:ASP:HA	10:H:118:PRO:HB2	1.66	0.77
13:K:35:VAL:HG21	13:K:130:LYS:HB2	1.67	0.77
13:K:61:GLY:HA2	22:T:183:LEU:O	1.84	0.77
14:L:10:LEU:O	14:L:17:ARG:NH2	2.16	0.77
26:X:58:VAL:HG11	26:X:60:GLU:OE2	1.83	0.77
6:D:165:LEU:HD22	6:D:165:LEU:O	1.83	0.77
7:E:128:ARG:HA	7:E:165:THR:CA	2.13	0.77
7:E:31:VAL:HG22	7:E:32:PRO:HD2	1.66	0.77
10:H:38:LEU:CD2	10:H:76:VAL:HB	2.13	0.77
12:J:148:LEU:H	12:J:148:LEU:CD1	1.94	0.77
12:J:41:ARG:HH21	12:J:45:LEU:HD12	1.47	0.77
20:R:17:ALA:HA	20:R:26:TYR:CB	2.13	0.77
22:T:39:VAL:CG1	22:T:40:ASP:N	2.47	0.77
24:V:12:PRO:CG	24:V:13:ILE:H	1.96	0.77
3:A:215:VAL:O	3:A:223:VAL:HG23	1.84	0.77
5:C:62:PRO:O	5:C:64:LYS:NZ	2.18	0.77
6:D:119:LEU:CB	6:D:188:VAL:CA	2.54	0.77
9:G:44:LEU:HD22	9:G:44:LEU:O	1.85	0.77
26:X:26:LEU:HB3	26:X:28:LEU:HD23	1.67	0.77
7:E:129:GLY:HA2	7:E:163:ALA:HB3	1.67	0.77
18:P:74:LYS:C	18:P:75:PHE:HD2	1.88	0.77
22:T:77:ASP:H	22:T:83:PRO:HA	1.46	0.77
4:B:24:ILE:HG13	4:B:91:ARG:HH11	1.49	0.77
6:D:172:ALA:HB3	6:D:173:PRO:HD2	1.66	0.77
13:K:21:THR:CG2	13:K:98:LYS:HG2	2.14	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:K:35:VAL:HG22	13:K:130:LYS:N	1.98	0.77
13:K:37:LEU:CD1	13:K:128:LYS:N	2.45	0.77
13:K:52:VAL:CG2	13:K:53:ALA:H	1.93	0.77
10:H:25:LYS:HG3	18:P:13:ARG:NH2	2.00	0.77
23:U:49:LYS:O	23:U:51:VAL:HG23	1.83	0.77
33:O:16:U:H2'	33:O:17:U:H5'	1.67	0.77
4:B:250:TRP:N	4:B:250:TRP:CE3	2.51	0.77
5:C:172:VAL:HG22	5:C:184:VAL:CG1	2.15	0.77
8:F:153:LYS:O	8:F:161:GLY:HA3	1.83	0.77
10:H:131:PRO:O	10:H:132:LYS:HB3	1.84	0.77
12:J:85:LEU:HD23	12:J:86:LYS:N	1.99	0.77
13:K:50:ALA:HB2	13:K:124:LYS:CD	2.14	0.77
15:M:71:ARG:HB3	15:M:108:GLY:CA	2.15	0.77
17:O:106:PHE:CA	17:O:109:LEU:HG	2.14	0.77
17:O:92:ARG:HB2	18:P:11:GLN:CG	2.14	0.77
21:S:88:LYS:HG3	21:S:89:PHE:HD1	1.48	0.77
23:U:23:VAL:CA	23:U:38:VAL:HG22	2.14	0.77
24:V:12:PRO:HB2	24:V:66:HIS:ND1	2.00	0.77
25:W:7:ARG:C	25:W:8:LYS:HD2	2.04	0.77
5:C:179:GLU:H	5:C:181:LEU:HD21	1.49	0.77
10:H:127:LYS:HA	10:H:130:LEU:CG	2.14	0.77
23:U:37:LEU:HD12	23:U:38:VAL:HB	1.66	0.77
26:X:15:TYR:HB3	26:X:16:PRO:CD	2.14	0.77
13:K:36:ALA:O	13:K:37:LEU:HD23	1.85	0.77
14:L:37:THR:HG23	14:L:40:LYS:HZ1	1.49	0.77
21:S:23:ARG:CZ	21:S:38:ILE:HG21	2.14	0.77
24:V:50:ARG:CG	24:V:60:PHE:O	2.33	0.77
4:B:184:LYS:HB3	4:B:269:PHE:HB3	1.67	0.77
6:D:105:LEU:CD1	6:D:109:VAL:CG2	2.63	0.77
6:D:55:SER:CB	6:D:73:ILE:HG23	2.14	0.77
7:E:59:GLU:HG3	7:E:60:LEU:HD23	1.67	0.77
11:I:104:ARG:HD3	11:I:105:GLU:OE1	1.85	0.77
19:Q:11:ARG:O	19:Q:98:LYS:HE2	1.85	0.77
3:A:34:ALA:HB2	3:A:179:ALA:CB	2.14	0.76
4:B:136:ILE:HG12	4:B:137:PRO:HD2	1.65	0.76
6:D:179:TYR:H	6:D:179:TYR:HD2	1.33	0.76
7:E:106:LEU:HD12	7:E:107:LEU:N	1.99	0.76
12:J:41:ARG:CZ	12:J:45:LEU:HB2	2.15	0.76
13:K:14:ARG:H	13:K:14:ARG:HD2	1.50	0.76
14:L:13:HIS:NE2	14:L:15:SER:HB2	2.00	0.76
16:N:124:ASP:HB2	16:N:125:ARG:HH12	1.48	0.76
25:W:26:ARG:HA	25:W:29:LYS:HG2	1.65	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:U:67:VAL:HG23	23:U:79:VAL:HB	1.67	0.76
3:A:201:LYS:HG2	3:A:209:PHE:CZ	2.20	0.76
4:B:105:ILE:HG12	4:B:106:ILE:N	2.01	0.76
5:C:119:ARG:HB3	5:C:120:TRP:CD1	2.20	0.76
6:D:131:THR:HA	6:D:134:PHE:CD2	2.19	0.76
7:E:173:LEU:HG	7:E:178:PHE:O	1.85	0.76
8:F:138:LYS:HA	8:F:141:VAL:HB	1.66	0.76
9:G:124:GLY:O	9:G:143:SER:HA	1.85	0.76
9:G:2:LYS:HG2	9:G:18:VAL:HG12	1.68	0.76
12:J:70:GLN:OE1	12:J:71:VAL:HG12	1.85	0.76
17:O:76:TYR:O	17:O:79:PHE:HB3	1.85	0.76
18:P:51:VAL:HG12	18:P:52:VAL:N	1.98	0.76
24:V:85:LEU:HD13	24:V:88:LYS:H	1.50	0.76
25:W:5:GLU:CD	25:W:9:GLN:HA	2.04	0.76
3:A:211:ARG:HH11	3:A:211:ARG:HB2	1.47	0.76
5:C:11:MET:CG	5:C:12:THR:H	1.97	0.76
9:G:62:LYS:NZ	9:G:133:HIS:HB2	1.98	0.76
10:H:82:LYS:HG2	10:H:82:LYS:O	1.82	0.76
14:L:28:LEU:HD11	14:L:114:VAL:HG12	1.66	0.76
4:B:148:GLU:O	4:B:149:PRO:C	2.23	0.76
13:K:136:ALA:C	13:K:137:TYR:CD1	2.58	0.76
24:V:58:ILE:HG21	24:V:86:SER:CB	2.16	0.76
3:A:49:GLY:N	3:A:211:ARG:NH1	2.33	0.76
4:B:116:GLN:O	4:B:117:VAL:HG23	1.83	0.76
4:B:172:TYR:CD1	4:B:187:GLY:N	2.52	0.76
4:B:165:ILE:HG13	4:B:174:ILE:O	1.86	0.76
4:B:228:PRO:O	4:B:231:HIS:N	2.18	0.76
7:E:18:GLU:OE2	7:E:18:GLU:HA	1.84	0.76
16:N:24:PRO:HG3	16:N:49:VAL:HG21	1.67	0.76
26:X:50:VAL:O	26:X:53:LEU:CD2	2.34	0.76
17:O:94:ASN:ND2	17:O:95:LEU:H	1.84	0.76
22:T:51:ALA:HB1	22:T:55:HIS:O	1.84	0.76
33:O:12:U:H3	33:O:23:A:H61	1.28	0.76
4:B:69:ARG:CZ	4:B:130:ALA:HB2	2.16	0.76
5:C:5:LEU:HD13	5:C:31:CYS:HB2	1.65	0.76
5:C:76:ARG:O	5:C:77:ILE:O	2.04	0.76
8:F:124:GLU:O	8:F:126:PRO:HD3	1.85	0.76
9:G:125:GLU:HG2	9:G:126:TYR:H	1.49	0.76
9:G:13:GLY:CA	9:G:17:GLN:HG3	2.14	0.76
13:K:136:ALA:O	13:K:137:TYR:HD1	1.66	0.76
13:K:59:ARG:HD2	13:K:59:ARG:N	1.99	0.76
15:M:13:ARG:CG	15:M:91:PRO:HA	2.15	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:N:29:ARG:C	16:N:44:ASP:OD2	2.24	0.76
18:P:47:VAL:HG22	18:P:48:GLY:N	2.00	0.76
23:U:25:ARG:CG	23:U:37:LEU:HB2	2.13	0.76
26:X:28:LEU:CD1	26:X:33:GLN:HB3	2.12	0.76
3:A:166:ASN:HA	3:A:171:ALA:CB	2.16	0.76
4:B:101:GLU:C	4:B:102:LYS:HE2	2.06	0.76
4:B:249:PRO:HB3	4:B:250:TRP:CE3	2.20	0.76
4:B:266:SER:C	4:B:269:PHE:HE1	1.89	0.76
5:C:116:VAL:HG11	5:C:122:PHE:CD2	2.20	0.76
5:C:77:ILE:HG22	5:C:79:ARG:HH21	1.50	0.76
6:D:190:ASP:O	6:D:194:TRP:HB2	1.85	0.76
8:F:49:VAL:HG12	8:F:50:VAL:H	1.49	0.76
10:H:78:VAL:HA	10:H:146:TYR:HE2	1.47	0.76
13:K:51:ARG:HH11	13:K:51:ARG:C	1.88	0.76
14:L:68:ARG:CZ	14:L:69:ASP:HB2	2.16	0.76
18:P:9:GLY:O	18:P:10:LYS:HG3	1.85	0.76
20:R:64:LYS:O	20:R:65:ARG:O	2.04	0.76
20:R:68:ARG:O	20:R:69:TYR:HB2	1.84	0.76
21:S:45:VAL:HA	21:S:57:GLN:HA	1.68	0.76
22:T:9:TYR:CE2	22:T:62:PRO:HD2	2.20	0.76
22:T:69:THR:HG22	22:T:70:LEU:H	1.46	0.76
33:O:27:C:C2'	33:O:28:C:C6	2.67	0.76
7:E:59:GLU:HG3	7:E:60:LEU:N	1.98	0.76
10:H:121:VAL:HA	10:H:124:HIS:CD2	2.21	0.76
10:H:65:TRP:CE3	10:H:71:MET:SD	2.79	0.76
11:I:94:ARG:HD2	11:I:94:ARG:H	1.48	0.76
12:J:85:LEU:CD2	12:J:86:LYS:H	1.98	0.76
13:K:32:PHE:HB2	13:K:106:VAL:HG12	1.67	0.76
5:C:109:LYS:NZ	14:L:4:LEU:HG	2.01	0.76
16:N:92:GLY:H	16:N:115:ARG:C	1.89	0.76
16:N:50:ILE:HG23	16:N:51:ARG:N	1.99	0.76
19:Q:70:TYR:CE1	19:Q:108:GLY:HA3	2.20	0.76
20:R:25:LYS:NZ	20:R:26:TYR:CE1	2.53	0.76
22:T:98:MET:HA	22:T:125:LEU:CD1	2.16	0.76
26:X:6:VAL:HG13	26:X:54:VAL:HB	1.67	0.76
6:D:145:GLY:HA2	6:D:167:TRP:CD2	2.21	0.76
7:E:114:ILE:HG12	7:E:115:ARG:N	2.00	0.76
10:H:96:THR:HG22	10:H:107:LYS:HA	1.68	0.76
13:K:106:VAL:HG22	13:K:107:ALA:H	1.48	0.76
14:L:31:HIS:O	14:L:33:ARG:N	2.15	0.76
15:M:38:GLN:O	15:M:40:ILE:HG13	1.85	0.76
18:P:85:LYS:HG2	18:P:87:HIS:H	1.50	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:T:17:ALA:O	22:T:20:ARG:HG2	1.86	0.76
22:T:45:ASP:HB3	22:T:49:ARG:NH2	2.01	0.76
24:V:71:TYR:HA	24:V:74:VAL:HG23	1.67	0.76
5:C:32:PRO:CB	5:C:69:LYS:HD2	2.16	0.76
8:F:149:ARG:CA	8:F:153:LYS:HG3	2.14	0.76
15:M:26:LEU:CD2	15:M:39:ILE:HG22	2.13	0.76
19:Q:42:ARG:HD2	19:Q:46:PHE:HZ	1.49	0.76
4:B:14:ARG:O	4:B:15:PHE:CG	2.38	0.76
7:E:55:LYS:HD3	7:E:56:ALA:H	1.50	0.76
8:F:54:ARG:HD2	8:F:65:HIS:CE1	2.21	0.76
10:H:112:LYS:CA	10:H:112:LYS:HE2	2.15	0.76
12:J:79:ARG:CG	12:J:109:GLY:HA2	2.15	0.76
13:K:103:MET:C	13:K:104:PHE:CD1	2.59	0.76
14:L:68:ARG:HH21	14:L:69:ASP:HB2	1.45	0.76
15:M:28:VAL:HG13	15:M:36:TYR:O	1.86	0.76
15:M:63:THR:CG2	15:M:96:GLY:HA3	2.15	0.76
16:N:23:ARG:HB2	16:N:24:PRO:CD	2.15	0.76
25:W:59:ARG:HE	25:W:62:THR:HA	1.51	0.76
25:W:8:LYS:N	25:W:8:LYS:HD2	1.99	0.76
27:Y:8:LYS:O	27:Y:9:LYS:HG2	1.85	0.76
28:Z:11:LYS:HE3	28:Z:15:THR:OG1	1.87	0.76
4:B:142:VAL:HG23	4:B:192:THR:O	1.84	0.75
5:C:120:TRP:CD2	5:C:155:LYS:HB3	2.21	0.75
5:C:8:LYS:HA	5:C:26:ILE:HD12	1.68	0.75
6:D:195:GLU:HG3	6:D:196:VAL:N	2.00	0.75
10:H:37:VAL:HG12	10:H:38:LEU:N	2.01	0.75
10:H:58:ARG:O	10:H:71:MET:SD	2.44	0.75
10:H:89:LYS:O	10:H:110:LEU:CD2	2.34	0.75
11:I:19:ILE:HA	11:I:44:LYS:HG2	1.68	0.75
11:I:24:VAL:CG2	11:I:25:LEU:H	1.92	0.75
12:J:98:GLU:H	12:J:101:VAL:CG1	1.98	0.75
14:L:31:HIS:HB2	14:L:34:ILE:HD11	1.68	0.75
17:O:51:LYS:O	17:O:55:ARG:HG3	1.86	0.75
33:O:14:A:H2'	33:O:15:G:H5'	1.68	0.75
4:B:249:PRO:CB	4:B:250:TRP:CE3	2.70	0.75
4:B:78:LYS:C	4:B:95:LEU:HB2	2.06	0.75
11:I:37:ASP:O	11:I:62:VAL:HG23	1.85	0.75
12:J:75:ILE:HD11	12:J:77:ARG:NH1	2.00	0.75
13:K:27:VAL:HG11	13:K:136:ALA:CB	2.09	0.75
13:K:3:MET:N	13:K:4:PRO:CD	2.48	0.75
16:N:50:ILE:HD11	16:N:73:GLU:OE1	1.86	0.75
11:I:80:ASP:CG	16:N:71:GLY:HA3	2.06	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:O:59:ARG:HG2	17:O:62:ILE:CD1	2.15	0.75
18:P:38:LEU:H	18:P:55:ALA:HB2	1.49	0.75
21:S:73:ARG:CG	21:S:78:ALA:HB2	2.16	0.75
26:X:17:LYS:HE2	26:X:21:ALA:HB2	1.66	0.75
5:C:60:ASN:O	5:C:62:PRO:N	2.19	0.75
9:G:82:ARG:HB3	9:G:89:TYR:CE1	2.20	0.75
14:L:21:TYR:HA	14:L:24:GLN:CG	2.16	0.75
15:M:106:ARG:HE	15:M:106:ARG:C	1.90	0.75
16:N:23:ARG:HB2	16:N:24:PRO:HD2	1.67	0.75
18:P:34:GLU:H	18:P:64:HIS:CE1	2.03	0.75
18:P:98:GLU:O	18:P:99:ILE:HG12	1.86	0.75
19:Q:57:ASN:CA	19:Q:60:ASN:HB2	2.12	0.75
19:Q:65:LEU:O	19:Q:68:ARG:HD2	1.86	0.75
21:S:33:LYS:O	21:S:65:ALA:HA	1.87	0.75
22:T:90:VAL:HG22	22:T:91:LEU:N	2.01	0.75
28:Z:35:ARG:HA	28:Z:42:LEU:HD21	1.68	0.75
16:N:135:VAL:HG13	16:N:136:GLN:N	2.01	0.75
33:O:56:C:O5'	33:O:56:C:H6	1.68	0.75
5:C:172:VAL:HA	5:C:184:VAL:HG12	1.68	0.75
6:D:121:VAL:HG13	6:D:191:LEU:N	2.00	0.75
6:D:26:HIS:CB	12:J:13:ASN:CB	2.57	0.75
9:G:27:ARG:HH21	9:G:27:ARG:HB2	1.49	0.75
10:H:79:ASN:O	10:H:83:ILE:HD11	1.86	0.75
14:L:45:ARG:HG3	14:L:45:ARG:HH11	1.50	0.75
14:L:47:PHE:HD1	14:L:47:PHE:C	1.89	0.75
15:M:25:ARG:HE	15:M:40:ILE:CG2	1.99	0.75
20:R:15:GLU:HA	20:R:18:TYR:HD2	1.51	0.75
22:T:9:TYR:HE2	22:T:62:PRO:HD2	1.50	0.75
25:W:52:ASP:O	25:W:55:ARG:HD3	1.87	0.75
27:Y:44:THR:HG22	27:Y:45:VAL:H	1.49	0.75
24:V:78:LYS:HD2	24:V:79:GLY:N	2.00	0.75
5:C:52:LEU:HD13	5:C:76:ARG:CB	2.17	0.75
7:E:124:SER:C	7:E:131:TYR:CE2	2.60	0.75
8:F:157:TYR:HB3	8:F:172:LYS:HB3	1.66	0.75
8:F:61:HIS:O	8:F:65:HIS:HB2	1.86	0.75
10:H:90:LEU:HA	10:H:110:LEU:HB3	1.67	0.75
15:M:18:ILE:HG23	15:M:19:LYS:N	2.00	0.75
15:M:30:ARG:HA	15:M:36:TYR:CD1	2.22	0.75
16:N:101:PHE:CD2	16:N:101:PHE:N	2.23	0.75
16:N:80:SER:HB2	16:N:81:PRO:HD3	1.69	0.75
19:Q:44:ALA:O	19:Q:46:PHE:N	2.20	0.75
21:S:47:LYS:CG	21:S:48:ALA:H	1.98	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:V:12:PRO:CG	24:V:63:ALA:N	2.44	0.75
25:W:9:GLN:O	25:W:14:ARG:HD2	1.86	0.75
19:Q:23:LEU:HD22	27:Y:25:LEU:HB3	1.69	0.75
4:B:142:VAL:CG2	4:B:192:THR:O	2.34	0.75
8:F:146:ALA:HA	8:F:149:ARG:CG	2.17	0.75
9:G:125:GLU:CA	9:G:142:VAL:O	2.35	0.75
10:H:146:TYR:CD2	10:H:147:ALA:N	2.54	0.75
10:H:75:VAL:HG12	10:H:76:VAL:N	2.01	0.75
10:H:86:THR:HG21	10:H:89:LYS:HZ2	1.52	0.75
13:K:11:LYS:O	13:K:12:GLN:HB2	1.84	0.75
15:M:87:PHE:CG	15:M:88:ASP:N	2.55	0.75
16:N:107:ASP:HA	16:N:111:ARG:CZ	2.16	0.75
10:H:25:LYS:HE3	18:P:13:ARG:HH21	1.52	0.75
21:S:38:ILE:HG13	21:S:60:PHE:CZ	2.21	0.75
22:T:102:LEU:CD1	22:T:124:ILE:HG22	2.10	0.75
3:A:30:VAL:CA	3:A:33:LEU:HD12	2.10	0.75
4:B:90:ALA:HB1	4:B:106:ILE:CG2	2.16	0.75
4:B:117:VAL:HG12	4:B:118:VAL:H	1.52	0.75
4:B:117:VAL:HG12	4:B:118:VAL:N	2.02	0.75
6:D:145:GLY:HA2	6:D:167:TRP:CE3	2.22	0.75
6:D:148:SER:HB3	6:D:184:THR:CB	2.17	0.75
6:D:181:ILE:HD11	6:D:185:GLU:O	1.87	0.75
7:E:69:ALA:HB3	7:E:91:ARG:CZ	2.16	0.75
20:R:11:PRO:CA	20:R:28:PHE:HA	2.11	0.75
23:U:27:GLU:HA	23:U:69:PHE:CB	2.17	0.75
3:A:7:ARG:HH11	3:A:7:ARG:HB2	1.51	0.75
5:C:20:ALA:CB	11:I:73:ASP:CB	2.61	0.75
7:E:110:ALA:O	7:E:113:ARG:HG3	1.85	0.75
9:G:78:THR:HA	9:G:143:SER:O	1.87	0.75
10:H:27:TYR:CZ	17:O:100:VAL:HG22	2.22	0.75
11:I:104:ARG:HA	11:I:104:ARG:NH1	4.46	0.75
11:I:114:ILE:HG13	11:I:115:VAL:N	2.01	0.75
15:M:71:ARG:CG	15:M:104:GLY:O	2.34	0.75
16:N:100:TYR:HB2	16:N:101:PHE:CE2	2.22	0.75
16:N:123:LYS:NZ	16:N:123:LYS:CB	2.48	0.75
24:V:60:PHE:CD1	24:V:87:PRO:CB	2.58	0.75
5:C:141:ILE:H	5:C:141:ILE:HD13	1.52	0.75
6:D:165:LEU:CD2	6:D:165:LEU:O	2.35	0.75
6:D:92:TYR:HB3	6:D:94:TYR:CE2	2.20	0.75
6:D:95:THR:C	6:D:96:LEU:HD22	2.07	0.75
8:F:7:LEU:O	8:F:50:VAL:HB	1.87	0.75
9:G:127:VAL:CA	9:G:141:LYS:HE3	2.17	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:64:ARG:CB	11:I:102:VAL:HG11	2.14	0.75
13:K:27:VAL:HG23	13:K:28:ALA:N	2.00	0.75
13:K:59:ARG:HG2	13:K:60:ARG:H	1.52	0.75
15:M:23:ARG:HG3	15:M:24:LEU:H	1.52	0.75
15:M:40:ILE:HG12	15:M:47:THR:HA	1.68	0.75
16:N:30:VAL:O	16:N:85:LYS:HG2	1.86	0.75
17:O:59:ARG:O	17:O:62:ILE:HB	1.87	0.75
21:S:65:ALA:CB	21:S:66:PRO:HD3	2.16	0.75
22:T:110:GLY:HA3	22:T:146:ILE:HG23	1.68	0.75
23:U:47:PRO:HA	23:U:51:VAL:HB	1.67	0.75
4:B:177:LEU:O	4:B:179:SER:N	2.20	0.74
4:B:227:ASN:HB3	4:B:228:PRO:HD2	1.68	0.74
5:C:172:VAL:HG22	5:C:184:VAL:HG11	1.69	0.74
6:D:176:LEU:HD11	6:D:178:VAL:HG13	1.68	0.74
7:E:41:GLN:HE21	7:E:155:MET:HA	1.52	0.74
7:E:44:GLY:O	7:E:84:LYS:HG3	1.87	0.74
10:H:29:PRO:CG	10:H:64:ASP:HB3	2.16	0.74
10:H:78:VAL:HA	10:H:146:TYR:CD2	2.21	0.74
13:K:133:ARG:HE	13:K:134:ARG:N	1.85	0.74
13:K:136:ALA:C	13:K:137:TYR:HD1	1.89	0.74
13:K:60:ARG:HD2	13:K:61:GLY:N	2.02	0.74
16:N:93:ARG:NH2	16:N:118:ARG:HG2	2.01	0.74
16:N:28:VAL:HG21	16:N:46:GLU:HA	1.69	0.74
16:N:87:ASP:OD2	16:N:90:GLN:HG3	1.87	0.74
17:O:44:ASN:O	17:O:48:ALA:HB3	1.86	0.74
18:P:24:LYS:HA	18:P:94:LEU:CG	2.17	0.74
20:R:89:ILE:HG23	20:R:89:ILE:O	1.86	0.74
22:T:19:ARG:HH21	22:T:25:PRO:CB	2.00	0.74
24:V:51:VAL:CB	24:V:60:PHE:H	1.97	0.74
25:W:22:GLU:HA	25:W:25:VAL:CG1	2.17	0.74
4:B:117:VAL:C	4:B:126:GLN:NE2	2.40	0.74
5:C:109:LYS:O	5:C:161:GLY:HA3	1.87	0.74
6:D:120:LEU:CD1	6:D:123:ALA:HB2	2.15	0.74
7:E:96:ARG:HD3	7:E:97:ASP:H	1.48	0.74
11:I:65:THR:CB	11:I:82:ASN:HD22	2.01	0.74
13:K:124:LYS:HZ3	13:K:125:LEU:HA	1.53	0.74
13:K:124:LYS:NZ	13:K:125:LEU:HD23	2.01	0.74
13:K:25:ASP:CB	13:K:102:VAL:HG23	2.17	0.74
14:L:44:LEU:HD13	14:L:47:PHE:CE2	2.22	0.74
16:N:121:ILE:CG2	16:N:122:ASP:N	2.50	0.74
17:O:40:PHE:HB3	18:P:78:LYS:CE	2.18	0.74
19:Q:85:VAL:HG13	19:Q:95:ILE:HG12	1.67	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:T:101:PRO:HB2	22:T:136:PHE:CB	2.17	0.74
22:T:85:HIS:CD2	22:T:86:VAL:N	2.54	0.74
25:W:51:ARG:O	25:W:55:ARG:CZ	2.35	0.74
33:O:18:G:N1	33:O:57:G:N1	2.34	0.74
3:A:49:GLY:N	3:A:211:ARG:HH12	1.85	0.74
5:C:102:VAL:CG1	5:C:200:GLU:HA	2.17	0.74
6:D:125:ALA:HB1	6:D:134:PHE:HA	1.69	0.74
8:F:162:ILE:HD13	8:F:163:TYR:N	2.02	0.74
9:G:123:LEU:HD22	9:G:123:LEU:H	1.52	0.74
13:K:3:MET:N	13:K:4:PRO:HD3	2.01	0.74
13:K:58:PHE:HB3	13:K:61:GLY:O	1.86	0.74
16:N:66:VAL:O	16:N:68:TYR:N	2.21	0.74
19:Q:66:GLU:HG2	19:Q:67:ASP:H	1.52	0.74
23:U:45:PHE:HD2	23:U:78:TYR:C	1.91	0.74
26:X:43:ILE:CD1	26:X:43:ILE:N	2.47	0.74
27:Y:38:ALA:CB	27:Y:49:CYS:N	2.48	0.74
27:Y:40:LYS:NZ	27:Y:50:GLY:O	2.20	0.74
22:T:130:PRO:O	22:T:133:ILE:HG12	1.86	0.74
4:B:130:ALA:HB1	4:B:190:TYR:CZ	2.22	0.74
4:B:16:MET:C	4:B:205:VAL:HB	2.08	0.74
4:B:60:ARG:HD3	4:B:86:PRO:HB2	1.68	0.74
4:B:65:ILE:HD12	4:B:105:ILE:HG13	1.70	0.74
4:B:78:LYS:HA	4:B:116:GLN:HA	1.69	0.74
6:D:119:LEU:HB2	6:D:189:MET:N	2.03	0.74
8:F:89:ILE:HA	8:F:162:ILE:HG12	1.69	0.74
9:G:79:ILE:HG23	9:G:80:PRO:HD2	1.68	0.74
10:H:49:LEU:O	10:H:52:LYS:HD2	1.87	0.74
11:I:10:VAL:HG21	11:I:17:ARG:HA	1.69	0.74
12:J:97:PRO:HD2	12:J:126:VAL:CG2	2.18	0.74
13:K:7:MET:HB2	13:K:8:LYS:NZ	2.03	0.74
17:O:110:VAL:O	17:O:114:LYS:HG2	1.86	0.74
17:O:80:ILE:O	17:O:83:LEU:HB3	1.87	0.74
19:Q:21:VAL:O	19:Q:25:ARG:CG	2.35	0.74
26:X:9:VAL:HG12	26:X:32:GLN:CA	2.17	0.74
4:B:31:LYS:CD	4:B:32:SER:H	2.00	0.74
5:C:59:VAL:HG11	5:C:63:LEU:HB2	1.69	0.74
6:D:163:ARG:HG3	6:D:164:ASN:N	2.00	0.74
8:F:17:VAL:HG21	8:F:44:VAL:HG23	1.68	0.74
9:G:4:ILE:CG1	9:G:18:VAL:HG22	2.17	0.74
9:G:48:GLU:HA	9:G:51:ILE:HD12	1.67	0.74
11:I:22:ILE:HG13	11:I:23:ARG:H	1.50	0.74
11:I:69:VAL:HG12	11:I:77:ILE:N	2.01	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:Q:75:TYR:CE1	19:Q:77:ASP:HB2	2.23	0.74
33:O:29:A:C2	33:O:41:U:N3	2.55	0.74
4:B:144:ALA:HB3	4:B:192:THR:HG22	1.68	0.74
5:C:77:ILE:CG2	5:C:78:LEU:N	2.42	0.74
6:D:156:GLU:HA	6:D:159:ARG:CD	2.17	0.74
6:D:119:LEU:HB2	6:D:189:MET:H	1.52	0.74
8:F:8:PRO:CB	8:F:49:VAL:HG13	2.16	0.74
9:G:128:LEU:CB	9:G:140:LEU:O	2.36	0.74
9:G:127:VAL:HA	9:G:141:LYS:CD	2.17	0.74
9:G:26:ALA:O	9:G:32:PRO:HD2	1.86	0.74
10:H:89:LYS:O	10:H:110:LEU:HG	1.86	0.74
10:H:113:MET:HG3	10:H:121:VAL:CG1	2.13	0.74
10:H:76:VAL:HG12	10:H:77:VAL:N	2.02	0.74
12:J:90:ARG:HE	12:J:91:PHE:HB3	1.53	0.74
12:J:91:PHE:HZ	12:J:99:LEU:HD21	1.53	0.74
20:R:50:LYS:HE2	20:R:51:VAL:H	1.51	0.74
4:B:133:LEU:HD12	4:B:173:VAL:HG21	1.69	0.74
5:C:35:GLN:CB	5:C:48:GLN:OE1	2.35	0.74
6:D:15:LEU:HD13	6:D:19:LEU:HD21	1.69	0.74
6:D:52:VAL:O	6:D:52:VAL:HG13	1.87	0.74
7:E:139:LEU:HD13	7:E:139:LEU:H	1.53	0.74
10:H:138:ARG:HA	10:H:141:LYS:CE	2.09	0.74
12:J:75:ILE:CD1	12:J:77:ARG:HH12	2.00	0.74
14:L:37:THR:OG1	14:L:40:LYS:CE	2.35	0.74
15:M:57:LYS:HG3	15:M:58:LEU:N	2.03	0.74
17:O:94:ASN:HD22	17:O:94:ASN:H	1.35	0.74
20:R:25:LYS:HZ2	20:R:26:TYR:HE1	1.32	0.74
23:U:24:LYS:HE2	23:U:37:LEU:O	1.86	0.74
26:X:8:LEU:CA	26:X:54:VAL:HA	2.10	0.74
4:B:148:GLU:O	4:B:150:LYS:N	2.21	0.74
4:B:70:TRP:CH2	4:B:190:TYR:HB3	2.22	0.74
5:C:78:LEU:C	5:C:79:ARG:NE	2.41	0.74
6:D:178:VAL:HG23	6:D:179:TYR:HD2	1.52	0.74
8:F:98:LEU:HB3	8:F:123:PHE:CZ	2.22	0.74
10:H:123:GLU:CB	10:H:127:LYS:HE3	2.08	0.74
10:H:35:ARG:HB2	10:H:73:ASP:CG	2.09	0.74
10:H:80:ALA:C	10:H:83:ILE:HG12	2.08	0.74
11:I:91:LEU:CD1	11:I:91:LEU:N	2.46	0.74
12:J:111:ARG:HH22	12:J:148:LEU:HD21	1.52	0.74
14:L:50:HIS:CD2	14:L:53:HIS:HE1	2.02	0.74
15:M:57:LYS:HG3	15:M:58:LEU:H	1.53	0.74
16:N:50:ILE:CG2	16:N:62:THR:C	2.49	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:N:45:PHE:HE2	16:N:64:ARG:HA	1.53	0.74
10:H:27:TYR:CE2	17:O:100:VAL:HG22	2.22	0.74
19:Q:30:GLU:O	19:Q:34:ASN:OD1	2.06	0.74
24:V:10:LYS:O	24:V:12:PRO:HD2	1.88	0.74
4:B:25:THR:HB	4:B:82:ILE:C	2.08	0.74
7:E:106:LEU:O	7:E:111:LEU:HD13	1.87	0.74
7:E:137:GLU:C	7:E:138:GLN:HG3	2.08	0.74
7:E:43:LEU:CD1	7:E:153:ARG:HD3	2.17	0.74
7:E:85:GLY:O	7:E:86:MET:HB2	1.87	0.74
8:F:76:VAL:HA	8:F:79:VAL:CG1	2.17	0.74
8:F:7:LEU:HD22	8:F:52:VAL:HG13	1.70	0.74
10:H:132:LYS:O	10:H:132:LYS:HE2	1.88	0.74
10:H:81:ASP:H	10:H:147:ALA:HB2	1.50	0.74
11:I:10:VAL:CG2	11:I:17:ARG:O	2.36	0.74
12:J:82:GLY:HA2	12:J:113:LYS:O	1.87	0.74
14:L:5:LYS:HG3	14:L:8:ARG:NH2	2.02	0.74
16:N:64:ARG:HH22	16:N:66:VAL:CG2	1.95	0.74
16:N:48:ILE:O	16:N:99:LEU:HD11	1.88	0.74
17:O:106:PHE:HA	17:O:109:LEU:HD12	1.70	0.74
17:O:109:LEU:N	17:O:109:LEU:HD23	2.01	0.74
19:Q:75:TYR:CD1	19:Q:77:ASP:HB2	2.23	0.74
21:S:47:LYS:HG2	21:S:48:ALA:N	2.01	0.74
25:W:47:ASN:C	25:W:51:ARG:HH11	1.90	0.74
26:X:41:PRO:N	26:X:44:ARG:HD3	2.02	0.74
5:C:7:VAL:CG2	5:C:27:LEU:HB3	2.18	0.74
5:C:82:ARG:HH12	5:C:93:VAL:CA	25.13	0.74
6:D:105:LEU:HD13	6:D:109:VAL:CG2	2.16	0.74
6:D:119:LEU:HB2	6:D:188:VAL:CA	2.17	0.74
10:H:80:ALA:CA	10:H:83:ILE:HD11	2.16	0.74
11:I:65:THR:CB	11:I:82:ASN:ND2	2.50	0.74
12:J:71:VAL:CG2	12:J:72:PRO:HD3	2.16	0.74
12:J:90:ARG:NE	12:J:91:PHE:HB3	2.03	0.74
14:L:17:ARG:C	14:L:21:TYR:CE1	2.57	0.74
14:L:46:GLY:HA2	14:L:49:ASP:CG	2.07	0.74
16:N:26:ASP:CA	16:N:48:ILE:HG13	2.16	0.74
19:Q:29:LEU:HD23	19:Q:30:GLU:H	1.52	0.74
4:B:233:HIS:CD2	4:B:234:GLY:H	2.05	0.73
5:C:167:VAL:HG22	5:C:170:LEU:HD11	1.69	0.73
5:C:61:ARG:HG3	5:C:62:PRO:HD3	1.68	0.73
12:J:79:ARG:HB3	12:J:109:GLY:HA2	1.69	0.73
13:K:35:VAL:O	13:K:129:THR:CB	2.36	0.73
16:N:41:ARG:O	16:N:42:ILE:HG23	1.88	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:N:85:LYS:HB3	16:N:85:LYS:NZ	2.03	0.73
22:T:15:PRO:C	22:T:19:ARG:CD	2.53	0.73
23:U:84:LEU:HG	23:U:85:ALA:H	1.53	0.73
5:C:11:MET:HE3	5:C:12:THR:O	1.88	0.73
5:C:90:THR:HG22	5:C:91:VAL:N	2.03	0.73
6:D:155:ASN:CG	6:D:157:LEU:HD12	2.09	0.73
6:D:69:ARG:HD3	6:D:70:HIS:H	1.51	0.73
9:G:81:VAL:HB	9:G:88:ILE:HD12	1.70	0.73
12:J:135:LEU:O	12:J:139:LYS:HB2	1.87	0.73
17:O:103:PRO:O	17:O:106:PHE:N	2.18	0.73
17:O:37:GLU:HA	17:O:40:PHE:CD1	2.23	0.73
33:O:34:G:H2'	33:O:35:A:C5'	2.18	0.73
4:B:4:LYS:HD3	4:B:18:VAL:O	1.88	0.73
5:C:196:VAL:O	5:C:197:ILE:HG23	1.88	0.73
7:E:103:LEU:HA	7:E:106:LEU:CD2	2.17	0.73
7:E:15:VAL:HG12	7:E:19:LEU:CD1	2.18	0.73
10:H:65:TRP:O	17:O:64:ARG:HD2	1.88	0.73
16:N:92:GLY:HA3	16:N:114:LEU:CD1	2.18	0.73
17:O:47:TYR:O	17:O:50:ARG:CB	2.34	0.73
21:S:23:ARG:NH1	21:S:38:ILE:HG22	2.03	0.73
23:U:24:LYS:HG2	23:U:37:LEU:O	1.89	0.73
26:X:45:GLY:HA2	26:X:48:GLU:HG3	1.70	0.73
33:O:24:G:H2'	33:O:25:C:C6	2.23	0.73
4:B:118:VAL:O	4:B:129:ASN:HA	1.87	0.73
5:C:60:ASN:O	5:C:62:PRO:CD	2.37	0.73
10:H:110:LEU:HD22	10:H:110:LEU:N	2.03	0.73
11:I:17:ARG:HB2	11:I:45:GLU:CG	2.18	0.73
12:J:92:GLU:CD	12:J:123:LEU:HB3	2.09	0.73
14:L:55:ALA:O	14:L:80:PHE:HA	1.88	0.73
17:O:39:LEU:O	17:O:43:GLY:HA3	1.87	0.73
19:Q:24:ILE:HG12	19:Q:36:LEU:HD12	1.68	0.73
21:S:12:THR:O	21:S:13:VAL:HB	1.89	0.73
22:T:98:MET:O	22:T:125:LEU:HA	1.89	0.73
27:Y:31:VAL:HB	27:Y:32:PRO:HD3	1.69	0.73
13:K:32:PHE:HB2	13:K:106:VAL:CG1	2.18	0.73
33:O:24:G:C5	33:O:25:C:C4	2.76	0.73
4:B:228:PRO:O	4:B:230:ASP:N	2.21	0.73
4:B:65:ILE:HG22	4:B:104:TYR:HB3	1.69	0.73
5:C:10:GLY:O	5:C:11:MET:HB3	1.88	0.73
6:D:40:ARG:CB	6:D:40:ARG:HH11	6.23	0.73
7:E:163:ALA:HA	7:E:168:GLU:CB	2.14	0.73
7:E:19:LEU:HB3	7:E:25:TYR:CZ	2.24	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:124:GLY:C	9:G:144:VAL:H	1.91	0.73
9:G:8:PRO:O	9:G:9:LEU:HB3	1.88	0.73
22:T:110:GLY:HA3	22:T:146:ILE:HD12	1.71	0.73
23:U:23:VAL:HA	23:U:38:VAL:CG2	2.19	0.73
26:X:8:LEU:C	26:X:53:LEU:O	2.27	0.73
33:O:18:G:C6	33:O:57:G:N1	2.56	0.73
4:B:31:LYS:CB	4:B:104:TYR:HE1	2.01	0.73
5:C:105:THR:HG23	5:C:165:VAL:O	1.89	0.73
5:C:9:VAL:HG23	5:C:26:ILE:CA	2.17	0.73
10:H:86:THR:HG22	10:H:89:LYS:NZ	2.04	0.73
13:K:36:ALA:HB2	13:K:103:MET:SD	2.28	0.73
14:L:37:THR:CG2	14:L:111:LEU:HG	2.14	0.73
14:L:10:LEU:HD23	14:L:11:ASN:N	2.03	0.73
22:T:4:ARG:HH11	22:T:4:ARG:HB2	1.50	0.73
23:U:36:ILE:HA	23:U:60:PHE:HB3	1.71	0.73
26:X:8:LEU:HA	26:X:54:VAL:CA	2.10	0.73
27:Y:7:PRO:O	27:Y:8:LYS:HB2	1.87	0.73
4:B:231:HIS:C	4:B:233:HIS:H	1.91	0.73
5:C:109:LYS:HZ3	14:L:4:LEU:HG	1.52	0.73
5:C:59:VAL:HG13	5:C:60:ASN:H	1.54	0.73
8:F:10:PRO:CB	8:F:12:PRO:HD3	2.18	0.73
14:L:28:LEU:HA	14:L:34:ILE:HG12	1.69	0.73
15:M:44:LYS:HB3	15:M:46:VAL:HG23	1.69	0.73
16:N:35:LYS:N	16:N:35:LYS:HD2	2.02	0.73
20:R:21:PHE:HB3	20:R:90:GLU:OE1	1.89	0.73
21:S:23:ARG:HG2	21:S:24:VAL:N	2.02	0.73
21:S:31:LEU:CB	21:S:32:PRO:HD3	2.18	0.73
24:V:25:LYS:CE	24:V:37:ILE:HG12	2.17	0.73
24:V:88:LYS:CG	24:V:89:GLU:OE2	2.30	0.73
22:T:45:ASP:HA	22:T:48:PHE:CD2	2.23	0.73
3:A:197:LEU:HG	3:A:198:GLU:H	1.50	0.73
5:C:131:ALA:O	5:C:132:HIS:HB2	1.87	0.73
6:D:105:LEU:HD13	6:D:105:LEU:C	2.07	0.73
6:D:130:LYS:N	6:D:134:PHE:CZ	2.57	0.73
6:D:70:HIS:HE1	6:D:72:ASP:C	1.90	0.73
7:E:99:MET:O	7:E:103:LEU:HD21	1.87	0.73
9:G:126:TYR:C	9:G:141:LYS:HE3	2.09	0.73
10:H:120:ARG:HG3	10:H:124:HIS:CE1	2.23	0.73
10:H:65:TRP:HB3	17:O:64:ARG:HE	1.50	0.73
12:J:48:PRO:HA	12:J:51:PHE:HE2	1.52	0.73
13:K:72:LYS:O	13:K:94:VAL:HG22	1.89	0.73
14:L:23:ASN:HA	14:L:26:LYS:HB2	1.71	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:L:28:LEU:O	14:L:28:LEU:CD2	2.35	0.73
13:K:61:GLY:CA	22:T:183:LEU:HG	2.19	0.73
22:T:81:ARG:O	22:T:81:ARG:HG2	1.87	0.73
28:Z:35:ARG:HA	28:Z:42:LEU:CD2	2.19	0.73
19:Q:3:ALA:HB3	19:Q:107:LEU:O	1.89	0.73
33:O:36:A:OP2	33:O:36:A:H8	1.72	0.73
33:O:54:U:N3	33:O:58:A:N6	2.17	0.73
4:B:246:PRO:O	4:B:253:GLN:HA	1.89	0.73
5:C:8:LYS:HA	5:C:26:ILE:CD1	2.19	0.73
6:D:151:LEU:H	6:D:169:VAL:CG2	2.01	0.73
6:D:134:PHE:CZ	6:D:161:ALA:HB1	2.23	0.73
6:D:48:THR:CG2	6:D:49:ARG:H	2.02	0.73
6:D:62:GLN:O	6:D:64:HIS:N	2.21	0.73
7:E:128:ARG:CA	7:E:165:THR:HA	2.18	0.73
7:E:41:GLN:HG2	7:E:155:MET:HA	1.69	0.73
8:F:10:PRO:C	8:F:12:PRO:HD2	2.09	0.73
13:K:34:LEU:CD1	13:K:103:MET:CE	2.62	0.73
14:L:116:LEU:H	14:L:116:LEU:CD1	2.01	0.73
18:P:89:GLN:CG	18:P:90:PRO:HD2	2.19	0.73
21:S:84:ARG:NH2	21:S:94:LYS:HE3	2.04	0.73
22:T:14:LYS:HG3	22:T:15:PRO:HD2	1.71	0.73
25:W:17:SER:O	25:W:21:LEU:HB3	1.88	0.73
3:A:29:LEU:HD12	3:A:32:GLU:OE2	1.88	0.73
3:A:51:ASP:OD1	3:A:53:ARG:HD2	1.89	0.73
4:B:175:LEU:HD23	4:B:183:ARG:O	1.88	0.73
5:C:55:ASN:CG	5:C:75:VAL:HG22	2.08	0.73
7:E:72:ARG:HA	7:E:87:PRO:HB3	1.71	0.73
8:F:121:ILE:O	8:F:121:ILE:HG12	1.87	0.73
11:I:38:VAL:HG13	11:I:60:ALA:O	1.89	0.73
14:L:79:LEU:O	14:L:80:PHE:HD2	1.71	0.73
16:N:45:PHE:CZ	16:N:72:VAL:HB	2.24	0.73
11:I:64:ARG:HD2	16:N:70:VAL:HG21	1.71	0.73
19:Q:7:ALA:CB	19:Q:103:ILE:HG23	2.19	0.73
21:S:71:LYS:HZ2	21:S:78:ALA:HB1	1.50	0.73
24:V:85:LEU:HD12	24:V:86:SER:H	1.54	0.73
24:V:87:PRO:O	24:V:88:LYS:C	2.27	0.73
24:V:90:ILE:HG22	24:V:94:LEU:HD21	1.70	0.73
4:B:136:ILE:HG12	4:B:137:PRO:CD	2.19	0.72
5:C:176:ILE:O	5:C:181:LEU:HD23	1.88	0.72
5:C:52:LEU:CD1	5:C:76:ARG:HB2	2.19	0.72
8:F:16:SER:O	8:F:26:VAL:HG13	1.88	0.72
8:F:87:LEU:HD21	8:F:133:VAL:HG13	1.69	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:82:ARG:CB	9:G:89:TYR:CE1	2.72	0.72
10:H:113:MET:SD	10:H:116:THR:O	2.47	0.72
12:J:127:ALA:HB1	12:J:130:PHE:CD1	2.25	0.72
14:L:23:ASN:HA	14:L:26:LYS:CB	2.19	0.72
15:M:27:SER:O	15:M:28:VAL:HG23	1.89	0.72
15:M:63:THR:HG21	15:M:96:GLY:HA3	1.69	0.72
15:M:82:ILE:HG23	15:M:85:VAL:HB	1.71	0.72
19:Q:38:TYR:CE2	27:Y:41:PRO:HG3	2.23	0.72
20:R:89:ILE:O	20:R:89:ILE:CG2	2.38	0.72
21:S:19:LYS:O	21:S:20:TYR:HB2	1.86	0.72
24:V:84:GLY:O	24:V:86:SER:N	2.22	0.72
33:O:33:U:O2	33:O:35:A:C8	2.42	0.72
3:A:34:ALA:HB2	3:A:179:ALA:HB2	1.69	0.72
5:C:93:VAL:CG1	5:C:182:LEU:HD13	2.18	0.72
6:D:90:ARG:HH21	6:D:92:TYR:HA	1.50	0.72
8:F:106:THR:HG22	8:F:106:THR:O	1.88	0.72
9:G:95:LYS:HD3	9:G:95:LYS:N	2.02	0.72
12:J:133:SER:O	12:J:137:LYS:HG2	1.88	0.72
13:K:67:ARG:C	13:K:68:ILE:HG13	2.09	0.72
14:L:42:LYS:O	14:L:44:LEU:N	2.21	0.72
18:P:52:VAL:HG23	18:P:52:VAL:O	1.89	0.72
18:P:78:LYS:HD3	18:P:78:LYS:C	2.10	0.72
22:T:133:ILE:HG22	22:T:133:ILE:O	1.88	0.72
22:T:102:LEU:HD11	22:T:124:ILE:CB	2.19	0.72
33:O:18:G:H21	33:O:58:A:H5'	1.54	0.72
24:V:26:ARG:O	33:O:74:C:H5''	1.89	0.72
5:C:116:VAL:O	5:C:118:LYS:N	2.23	0.72
6:D:166:PRO:O	6:D:168:VAL:HG13	1.89	0.72
7:E:18:GLU:O	7:E:19:LEU:C	2.27	0.72
8:F:127:GLU:CB	8:F:130:ARG:HG3	2.19	0.72
9:G:117:GLU:HG3	9:G:118:LYS:HD2	1.70	0.72
9:G:26:ALA:O	9:G:32:PRO:HD3	1.89	0.72
13:K:8:LYS:HE3	13:K:70:PRO:HG2	1.70	0.72
15:M:35:ILE:HD11	15:M:66:ALA:HA	1.69	0.72
16:N:50:ILE:HB	16:N:63:VAL:CA	2.20	0.72
16:N:24:PRO:HG2	16:N:96:ARG:O	1.89	0.72
20:R:75:ASP:C	20:R:76:ARG:HD3	2.10	0.72
22:T:5:LEU:HD13	22:T:6:LYS:H	1.51	0.72
24:V:90:ILE:HG22	24:V:94:LEU:CD2	2.19	0.72
4:B:78:LYS:CA	4:B:116:GLN:HA	2.20	0.72
4:B:137:PRO:CB	4:B:140:THR:HG22	2.13	0.72
5:C:133:LYS:C	5:C:134:ILE:HG13	2.09	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:179:TYR:CD2	6:D:179:TYR:N	2.56	0.72
9:G:112:LYS:C	9:G:114:LEU:H	1.89	0.72
9:G:113:ARG:HD3	9:G:132:PRO:HB3	1.70	0.72
10:H:72:GLY:O	10:H:73:ASP:OD2	2.07	0.72
11:I:88:ASN:N	11:I:93:PRO:HA	2.03	0.72
12:J:111:ARG:NH2	12:J:148:LEU:CD2	2.52	0.72
12:J:86:LYS:CG	12:J:118:GLY:HA3	2.20	0.72
13:K:42:ILE:O	13:K:94:VAL:HA	1.89	0.72
17:O:49:HIS:HA	17:O:52:ARG:HG3	1.70	0.72
5:C:181:LEU:N	5:C:181:LEU:HD22	2.04	0.72
4:B:132:PRO:HB2	4:B:135:PHE:HE1	1.53	0.72
4:B:143:HIS:HA	4:B:156:ALA:CB	2.19	0.72
4:B:70:TRP:HZ2	4:B:146:GLU:HB3	1.53	0.72
4:B:183:ARG:HG2	4:B:269:PHE:HB2	1.71	0.72
5:C:47:VAL:HG21	5:C:84:PHE:HB3	1.71	0.72
6:D:57:ARG:O	6:D:58:LYS:O	2.07	0.72
8:F:92:ILE:CD1	8:F:92:ILE:H	2.02	0.72
11:I:10:VAL:HG23	11:I:12:ASP:O	1.89	0.72
14:L:21:TYR:N	14:L:21:TYR:CD1	2.58	0.72
14:L:103:ARG:HG3	19:Q:40:ASN:CG	2.09	0.72
19:Q:87:PRO:HA	19:Q:88:ARG:NH2	2.04	0.72
21:S:36:ALA:O	21:S:37:VAL:CG1	2.38	0.72
21:S:23:ARG:CZ	21:S:38:ILE:CG2	2.68	0.72
22:T:107:THR:N	22:T:108:PRO:HD3	2.04	0.72
22:T:71:VAL:HG12	22:T:72:ARG:N	2.04	0.72
28:Z:30:VAL:O	28:Z:33:ARG:HB2	1.88	0.72
33:O:36:A:OP2	33:O:36:A:C8	2.41	0.72
5:C:51:PHE:CG	5:C:52:LEU:N	2.57	0.72
6:D:112:ARG:HB3	6:D:117:LYS:HE2	1.70	0.72
6:D:75:ALA:HB1	6:D:77:ILE:HD12	1.71	0.72
6:D:87:PRO:O	6:D:88:LYS:HB2	1.90	0.72
8:F:54:ARG:NH1	8:F:61:HIS:HB2	2.03	0.72
9:G:101:LEU:CB	9:G:109:ILE:HD12	2.19	0.72
13:K:5:ARG:CG	13:K:6:ARG:H	2.03	0.72
14:L:82:GLU:HG2	14:L:83:ILE:H	1.53	0.72
18:P:28:GLU:HB2	18:P:29:PRO:CD	2.20	0.72
23:U:27:GLU:HA	23:U:69:PHE:HB2	1.70	0.72
27:Y:31:VAL:HB	27:Y:32:PRO:HD2	1.71	0.72
9:G:131:LYS:HG3	9:G:131:LYS:O	1.88	0.72
3:A:43:GLU:OE2	3:A:218:THR:N	2.21	0.72
4:B:108:PRO:HB2	4:B:195:ALA:O	1.90	0.72
4:B:27:THR:CG2	4:B:81:ALA:HB1	2.20	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:25:THR:HB	4:B:83:GLU:HA	1.71	0.72
6:D:179:TYR:O	6:D:182:VAL:HG13	1.89	0.72
10:H:124:HIS:O	10:H:126:VAL:N	2.22	0.72
10:H:156:GLN:O	10:H:157:ARG:HB3	1.89	0.72
10:H:93:LYS:HD2	10:H:94:ILE:N	2.03	0.72
15:M:8:GLU:HA	15:M:11:LYS:HE2	1.72	0.72
18:P:13:ARG:HH11	18:P:13:ARG:HG2	1.54	0.72
19:Q:17:VAL:HG23	19:Q:18:ARG:N	2.05	0.72
19:Q:65:LEU:O	19:Q:68:ARG:CD	2.37	0.72
19:Q:76:VAL:HA	19:Q:103:ILE:HD12	1.70	0.72
26:X:12:PRO:HD2	26:X:13:ILE:CD1	2.16	0.72
26:X:20:LYS:O	26:X:23:LEU:CG	2.27	0.72
28:Z:14:LYS:O	28:Z:20:ALA:HB1	1.89	0.72
7:E:18:GLU:O	7:E:20:ILE:HG22	1.88	0.72
33:O:9:A:N6	33:O:23:A:H62	1.86	0.72
5:C:37:ARG:O	5:C:45:THR:HA	1.90	0.72
7:E:54:GLU:O	7:E:57:ALA:HB3	1.90	0.72
9:G:88:ILE:CG1	9:G:89:TYR:H	2.03	0.72
7:E:37:VAL:O	7:E:93:THR:HG23	1.90	0.72
10:H:58:ARG:HA	10:H:139:LEU:HD22	1.72	0.72
14:L:104:ARG:CB	14:L:109:ALA:HB2	2.16	0.72
14:L:57:ARG:CB	14:L:60:LEU:HD11	2.19	0.72
17:O:84:LYS:HD3	17:O:89:GLU:CG	2.19	0.72
24:V:12:PRO:HB3	24:V:62:VAL:HG23	1.71	0.72
24:V:60:PHE:HD1	24:V:87:PRO:CB	1.97	0.72
28:Z:28:ARG:CA	28:Z:31:LEU:HG	2.19	0.72
16:N:90:GLN:NE2	16:N:90:GLN:O	2.23	0.72
5:C:27:LEU:HD12	5:C:181:LEU:CD1	2.19	0.72
5:C:63:LEU:CD2	5:C:65:GLY:N	2.49	0.72
8:F:101:ARG:HH22	8:F:121:ILE:HG23	1.54	0.72
13:K:101:ARG:O	13:K:103:MET:SD	2.47	0.72
14:L:3:HIS:CE1	14:L:4:LEU:HG	2.24	0.72
16:N:65:LYS:O	16:N:67:SER:N	2.21	0.72
21:S:54:LYS:O	21:S:55:TYR:O	2.08	0.72
25:W:35:LEU:HA	25:W:37:PHE:CE2	2.25	0.72
25:W:47:ASN:CA	25:W:50:ILE:O	2.37	0.72
3:A:30:VAL:HG12	3:A:31:LYS:N	2.05	0.72
4:B:138:VAL:CG2	4:B:139:GLY:H	1.99	0.72
4:B:248:SER:O	4:B:249:PRO:O	2.07	0.72
4:B:247:ALA:HA	4:B:253:GLN:CA	2.19	0.72
10:H:93:LYS:CB	10:H:110:LEU:HD21	2.20	0.72
16:N:66:VAL:HG22	16:N:71:GLY:CA	2.19	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:T:119:GLU:O	22:T:121:HIS:N	2.22	0.72
4:B:249:PRO:CB	4:B:250:TRP:HE3	2.02	0.71
4:B:64:ILE:HD11	4:B:67:PHE:CZ	2.23	0.71
5:C:137:HIS:ND1	5:C:138:PRO:HD2	2.05	0.71
8:F:144:VAL:CG1	8:F:145:ALA:N	2.53	0.71
10:H:61:HIS:O	10:H:63:PRO:HD3	1.90	0.71
11:I:49:ARG:N	11:I:49:ARG:HD3	2.04	0.71
11:I:62:VAL:CG1	11:I:63:VAL:N	2.53	0.71
11:I:85:VAL:C	11:I:86:ILE:CD1	2.55	0.71
12:J:148:LEU:HD23	12:J:149:GLU:H	1.55	0.71
16:N:50:ILE:HA	16:N:99:LEU:HG	0.89	0.71
17:O:64:ARG:HB3	17:O:64:ARG:NH2	2.05	0.71
19:Q:23:LEU:CD1	27:Y:27:PRO:HD3	2.20	0.71
19:Q:25:ARG:HH21	19:Q:73:ALA:HB1	1.55	0.71
20:R:63:LYS:HD3	20:R:64:LYS:N	2.05	0.71
24:V:76:ARG:HH22	24:V:94:LEU:HD11	1.53	0.71
3:A:61:GLY:HA3	3:A:164:PHE:CE2	2.25	0.71
5:C:108:SER:HA	5:C:189:PRO:HG2	1.72	0.71
5:C:13:ARG:CB	5:C:22:PRO:HA	2.20	0.71
5:C:4:ILE:HG13	5:C:5:LEU:HD12	1.72	0.71
5:C:82:ARG:HH11	5:C:82:ARG:HG2	4.54	0.71
6:D:58:LYS:C	6:D:59:ILE:HD12	2.11	0.71
9:G:4:ILE:HB	9:G:37:VAL:HG11	1.71	0.71
11:I:43:VAL:HG23	11:I:56:ASP:O	1.90	0.71
11:I:69:VAL:HG13	11:I:70:LYS:N	2.04	0.71
11:I:91:LEU:H	11:I:91:LEU:CD1	1.95	0.71
13:K:8:LYS:O	13:K:10:ARG:N	2.23	0.71
14:L:82:GLU:CG	14:L:83:ILE:N	2.53	0.71
19:Q:68:ARG:HD3	19:Q:69:LEU:N	2.04	0.71
23:U:31:VAL:CG1	23:U:65:GLY:H	2.00	0.71
24:V:53:VAL:O	24:V:58:ILE:O	2.08	0.71
25:W:55:ARG:HH11	25:W:55:ARG:N	1.87	0.71
26:X:10:LYS:HG3	26:X:53:LEU:HA	1.70	0.71
16:N:128:GLU:O	16:N:128:GLU:HG3	1.90	0.71
7:E:153:ARG:HE	7:E:154:GLY:H	1.37	0.71
8:F:89:ILE:HA	8:F:162:ILE:CG1	2.20	0.71
10:H:32:VAL:HG12	10:H:35:ARG:NH2	2.05	0.71
11:I:19:ILE:HA	11:I:44:LYS:HG3	1.72	0.71
12:J:95:VAL:HG23	12:J:124:LYS:O	1.89	0.71
19:Q:75:TYR:N	19:Q:103:ILE:HG13	2.06	0.71
19:Q:55:ALA:HA	19:Q:58:ALA:HB3	1.73	0.71
23:U:48:GLY:O	23:U:49:LYS:HG3	1.90	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:U:84:LEU:HG	23:U:85:ALA:N	2.04	0.71
27:Y:38:ALA:CB	27:Y:49:CYS:CB	2.68	0.71
3:A:22:THR:OG1	3:A:25:GLU:HG2	1.91	0.71
5:C:12:THR:O	5:C:13:ARG:HB3	1.90	0.71
5:C:7:VAL:O	5:C:7:VAL:HG23	1.90	0.71
7:E:129:GLY:CA	7:E:163:ALA:HB3	2.21	0.71
7:E:70:VAL:HA	7:E:90:LEU:HD11	1.72	0.71
9:G:111:PRO:C	9:G:112:LYS:HD2	2.10	0.71
12:J:13:ASN:O	12:J:14:LYS:HB2	1.91	0.71
13:K:133:ARG:CG	13:K:134:ARG:H	1.98	0.71
15:M:29:PHE:CD1	15:M:30:ARG:N	2.58	0.71
17:O:76:TYR:CG	17:O:77:SER:N	2.58	0.71
19:Q:17:VAL:HG22	19:Q:18:ARG:H	1.54	0.71
19:Q:46:PHE:O	19:Q:48:ALA:N	2.22	0.71
33:0:41:U:H6	33:0:41:U:H5'	1.56	0.71
33:0:54:U:C2'	33:0:55:PSU:O5'	2.38	0.71
3:A:197:LEU:HD12	3:A:198:GLU:N	2.05	0.71
4:B:126:GLN:HG2	4:B:129:ASN:HD22	1.56	0.71
5:C:169:ASN:C	5:C:170:LEU:HD12	2.11	0.71
7:E:135:LEU:HG	7:E:155:MET:O	1.90	0.71
7:E:120:LEU:N	7:E:181:ARG:HD2	2.04	0.71
10:H:25:LYS:HD2	10:H:25:LYS:N	2.06	0.71
10:H:62:ARG:HH21	10:H:63:PRO:HD2	1.52	0.71
18:P:19:LYS:HZ2	18:P:96:ILE:HB	1.55	0.71
19:Q:29:LEU:CD1	19:Q:67:ASP:H	2.04	0.71
21:S:75:ILE:HG12	21:S:76:CYS:N	2.05	0.71
24:V:10:LYS:O	24:V:12:PRO:CD	2.39	0.71
24:V:34:THR:CG2	24:V:35:THR:N	2.50	0.71
24:V:39:LYS:N	24:V:39:LYS:HD2	2.05	0.71
19:Q:38:TYR:HE2	27:Y:41:PRO:CG	2.04	0.71
33:0:13:C:H2'	33:0:14:A:C1'	2.20	0.71
4:B:45:ASN:ND2	4:B:46:GLN:H	1.89	0.71
7:E:120:LEU:HD12	7:E:179:PRO:O	1.90	0.71
7:E:74:LYS:HB2	7:E:86:MET:HB3	1.72	0.71
8:F:42:ARG:H	8:F:53:GLU:CB	2.01	0.71
10:H:38:LEU:HD22	10:H:76:VAL:HB	1.71	0.71
15:M:39:ILE:HG13	15:M:49:VAL:CG1	2.13	0.71
15:M:40:ILE:HG22	15:M:41:ASP:N	2.06	0.71
16:N:48:ILE:CG2	16:N:49:VAL:N	2.54	0.71
22:T:4:ARG:HA	22:T:58:VAL:CB	2.20	0.71
24:V:10:LYS:C	24:V:12:PRO:CD	2.57	0.71
24:V:27:GLU:HG3	33:0:74:C:H4'	1.72	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:127:VAL:N	6:D:133:GLU:OE1	2.17	0.71
6:D:164:ASN:O	6:D:166:PRO:HD2	1.90	0.71
6:D:27:LEU:HA	6:D:30:GLU:OE1	1.91	0.71
7:E:56:ALA:O	7:E:60:LEU:CG	2.38	0.71
9:G:124:GLY:C	9:G:143:SER:CA	2.56	0.71
13:K:56:ARG:C	13:K:58:PHE:H	1.94	0.71
14:L:18:LEU:HA	14:L:21:TYR:CD1	2.26	0.71
16:N:50:ILE:CG2	16:N:51:ARG:N	2.54	0.71
16:N:64:ARG:CD	16:N:103:ARG:HB2	2.21	0.71
18:P:30:GLY:HA2	18:P:64:HIS:CB	2.19	0.71
20:R:30:VAL:HG12	20:R:31:HIS:N	2.06	0.71
22:T:99:TYR:CD2	22:T:124:ILE:CA	2.74	0.71
22:T:10:ARG:NE	22:T:36:LYS:HB3	2.05	0.71
26:X:17:LYS:CE	26:X:21:ALA:HB2	2.21	0.71
26:X:44:ARG:HB3	26:X:48:GLU:OE1	1.90	0.71
33:O:69:U:H2'	33:O:70:C:H6	1.52	0.71
4:B:142:VAL:CG2	4:B:143:HIS:N	2.54	0.71
5:C:102:VAL:HG12	5:C:200:GLU:HA	1.72	0.71
5:C:4:ILE:CG1	5:C:5:LEU:H	2.04	0.71
8:F:7:LEU:N	8:F:8:PRO:CD	2.54	0.71
8:F:88:LEU:HG	8:F:90:LYS:NZ	2.06	0.71
8:F:8:PRO:HA	8:F:50:VAL:H	1.55	0.71
10:H:113:MET:O	10:H:115:ALA:N	2.24	0.71
11:I:97:ARG:HA	11:I:97:ARG:CZ	2.21	0.71
12:J:121:LYS:H	12:J:121:LYS:HD3	1.56	0.71
13:K:7:MET:HB2	13:K:8:LYS:HZ3	1.56	0.71
17:O:63:VAL:C	17:O:65:ILE:N	2.41	0.71
19:Q:88:ARG:HG3	19:Q:92:ARG:HB2	1.71	0.71
23:U:74:ARG:HD2	23:U:74:ARG:C	2.10	0.71
33:O:26:G:O2'	33:O:27:C:H5'	1.90	0.71
4:B:157:ARG:HG3	4:B:158:ALA:H	1.55	0.71
4:B:218:ARG:CG	4:B:219:PRO:HD2	2.18	0.71
4:B:248:SER:HB2	4:B:249:PRO:HD3	1.71	0.71
5:C:54:GLN:O	5:C:55:ASN:HB2	1.91	0.71
6:D:112:ARG:CA	6:D:115:GLU:HG2	2.20	0.71
7:E:103:LEU:CA	7:E:106:LEU:HG	2.15	0.71
9:G:103:ARG:HD2	9:G:104:GLN:H	1.52	0.71
9:G:3:VAL:O	9:G:21:VAL:HG22	1.91	0.71
9:G:69:LYS:HG2	9:G:69:LYS:O	1.91	0.71
12:J:139:LYS:C	12:J:141:ALA:H	1.94	0.71
14:L:29:LEU:HD23	14:L:30:THR:N	2.06	0.71
14:L:64:ARG:HG2	14:L:64:ARG:HH11	1.55	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:L:79:LEU:C	14:L:80:PHE:HD2	1.93	0.71
14:L:82:GLU:HG2	14:L:83:ILE:N	2.06	0.71
17:O:112:ARG:HG2	17:O:112:ARG:HH11	1.56	0.71
26:X:17:LYS:C	26:X:17:LYS:HD3	2.11	0.71
4:B:211:ARG:O	4:B:215:LEU:HD13	1.90	0.71
5:C:32:PRO:HA	5:C:90:THR:HA	1.72	0.71
5:C:82:ARG:HH11	5:C:82:ARG:CG	4.03	0.71
7:E:163:ALA:CA	7:E:168:GLU:HB2	2.14	0.71
8:F:61:HIS:HA	8:F:64:LEU:HG	1.73	0.71
9:G:77:LEU:CB	9:G:142:VAL:HG22	2.17	0.71
10:H:44:LYS:H	10:H:84:ARG:HB2	1.55	0.71
12:J:47:ASP:OD1	12:J:49:ARG:NE	2.24	0.71
12:J:92:GLU:HG3	12:J:95:VAL:CG1	2.14	0.71
13:K:134:ARG:CD	13:K:134:ARG:C	2.59	0.71
14:L:37:THR:HG23	14:L:40:LYS:HZ3	1.55	0.71
16:N:92:GLY:H	16:N:116:ALA:N	1.89	0.71
17:O:76:TYR:O	17:O:79:PHE:N	2.23	0.71
19:Q:97:LYS:HD2	19:Q:98:LYS:N	2.06	0.71
22:T:30:ASN:HA	22:T:89:PHE:CE1	2.25	0.71
22:T:58:VAL:O	22:T:59:LEU:HD13	1.91	0.71
22:T:97:GLU:HB2	22:T:126:VAL:O	1.90	0.71
23:U:35:ASN:N	23:U:35:ASN:HD22	1.87	0.71
23:U:37:LEU:HD12	23:U:38:VAL:CG2	2.20	0.71
24:V:90:ILE:O	24:V:94:LEU:HD13	1.91	0.71
27:Y:34:PRO:HB3	27:Y:52:TYR:HE2	1.56	0.71
33:O:48:C:H5"	33:O:48:C:C6	2.26	0.70
4:B:73:VAL:CG1	4:B:121:PRO:HD3	2.21	0.70
4:B:200:ASP:C	4:B:202:LYS:N	2.44	0.70
4:B:70:TRP:CZ2	4:B:146:GLU:HB3	2.26	0.70
5:C:177:PRO:HG2	5:C:178:GLU:H	1.56	0.70
5:C:103:ASP:OD2	5:C:202:LYS:HE3	1.91	0.70
8:F:141:VAL:HA	8:F:144:VAL:HG12	1.73	0.70
8:F:141:VAL:HA	8:F:144:VAL:CG1	2.21	0.70
10:H:79:ASN:HA	10:H:147:ALA:HA	1.73	0.70
11:I:61:VAL:O	11:I:84:ALA:HA	1.91	0.70
14:L:45:ARG:HH11	14:L:46:GLY:N	1.89	0.70
16:N:50:ILE:CB	16:N:63:VAL:HA	2.21	0.70
19:Q:30:GLU:HA	19:Q:33:ARG:CZ	2.21	0.70
23:U:62:LEU:O	23:U:64:ASP:N	2.24	0.70
24:V:82:LEU:O	24:V:82:LEU:HD23	1.90	0.70
18:P:42:GLY:C	18:P:47:VAL:HG11	2.12	0.70
33:O:18:G:H21	33:O:58:A:C4'	2.02	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:121:PRO:HB3	4:B:132:PRO:CD	2.21	0.70
4:B:157:ARG:HA	4:B:196:VAL:CG2	2.19	0.70
4:B:17:THR:OG1	4:B:205:VAL:HG23	1.92	0.70
5:C:183:LEU:C	5:C:183:LEU:HD12	2.11	0.70
7:E:56:ALA:HB1	7:E:60:LEU:HD11	1.73	0.70
8:F:10:PRO:C	8:F:12:PRO:CD	2.59	0.70
8:F:34:GLU:HG2	8:F:35:VAL:N	2.06	0.70
8:F:49:VAL:HG12	8:F:50:VAL:N	2.05	0.70
10:H:34:PRO:HG3	10:H:71:MET:C	2.11	0.70
13:K:103:MET:O	13:K:104:PHE:CG	2.44	0.70
19:Q:33:ARG:HH11	19:Q:33:ARG:HG3	1.57	0.70
20:R:40:LYS:HA	20:R:43:VAL:CG1	2.21	0.70
13:K:59:ARG:O	22:T:184:ALA:HB2	1.90	0.70
22:T:43:GLU:O	22:T:44:PHE:C	2.29	0.70
33:O:10:G:C6	33:O:26:G:C5	2.79	0.70
3:A:7:ARG:CB	3:A:7:ARG:NH1	2.38	0.70
4:B:155:LEU:HD13	4:B:156:ALA:H	1.56	0.70
4:B:79:VAL:CB	4:B:111:LEU:CD1	2.68	0.70
6:D:121:VAL:CA	6:D:189:MET:O	2.39	0.70
7:E:60:LEU:O	7:E:63:ILE:HB	1.91	0.70
8:F:97:ARG:H	8:F:125:VAL:HG11	1.56	0.70
10:H:80:ALA:H	10:H:147:ALA:HA	1.55	0.70
12:J:122:PRO:HG3	12:J:141:ALA:O	1.91	0.70
14:L:79:LEU:CA	14:L:83:ILE:HB	2.18	0.70
15:M:10:ARG:NH2	15:M:11:LYS:NZ	2.39	0.70
15:M:8:GLU:O	15:M:9:ARG:CB	2.39	0.70
16:N:51:ARG:NH2	16:N:60:THR:HB	2.05	0.70
17:O:12:ARG:CA	17:O:15:LYS:HD3	2.11	0.70
17:O:91:ASP:O	17:O:92:ARG:C	2.30	0.70
18:P:78:LYS:O	18:P:79:VAL:HG23	1.91	0.70
20:R:11:PRO:HG3	20:R:28:PHE:CD2	2.25	0.70
20:R:35:THR:O	20:R:37:THR:N	2.23	0.70
23:U:47:PRO:CA	23:U:51:VAL:HB	2.20	0.70
23:U:45:PHE:CE2	23:U:70:GLN:O	2.45	0.70
27:Y:44:THR:CG2	27:Y:45:VAL:H	2.04	0.70
28:Z:33:ARG:O	28:Z:37:LYS:HB2	1.91	0.70
3:A:201:LYS:CB	3:A:202:PRO:CD	2.61	0.70
4:B:108:PRO:CB	4:B:195:ALA:O	2.40	0.70
4:B:260:ARG:NH2	4:B:264:LYS:HB2	2.03	0.70
5:C:11:MET:HG3	5:C:12:THR:H	1.52	0.70
7:E:153:ARG:HG3	7:E:154:GLY:N	2.07	0.70
7:E:165:THR:OG1	7:E:167:GLU:CG	2.33	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:4:ILE:N	9:G:4:ILE:HD12	2.06	0.70
13:K:37:LEU:H	13:K:127:ILE:HD12	1.54	0.70
13:K:40:ALA:O	13:K:97:VAL:CG2	2.38	0.70
14:L:90:ARG:HH22	14:L:118:GLU:HG3	1.55	0.70
17:O:92:ARG:CB	17:O:94:ASN:ND2	2.47	0.70
20:R:80:ILE:O	20:R:81:VAL:HB	1.92	0.70
33:O:59:U:H2'	33:O:59:U:O2	1.91	0.70
4:B:132:PRO:HB2	4:B:135:PHE:CE1	2.26	0.70
7:E:170:ARG:O	7:E:173:LEU:CB	2.39	0.70
7:E:84:LYS:O	7:E:86:MET:HG3	1.91	0.70
8:F:152:ARG:N	8:F:152:ARG:CD	2.50	0.70
8:F:42:ARG:N	8:F:53:GLU:HB3	2.03	0.70
12:J:146:VAL:HG22	12:J:147:LEU:H	1.57	0.70
14:L:33:ARG:HA	14:L:115:GLU:HB3	1.71	0.70
15:M:72:ALA:O	15:M:74:ALA:N	2.25	0.70
15:M:78:LEU:HD23	15:M:82:ILE:HB	1.72	0.70
22:T:6:LYS:HA	22:T:60:GLU:HB2	1.72	0.70
33:O:54:U:O2'	33:O:55:PSU:OP1	2.09	0.70
5:C:152:LYS:HD2	5:C:153:GLY:H	1.56	0.70
6:D:12:ARG:HD2	6:D:12:ARG:N	2.05	0.70
7:E:35:GLU:HB2	7:E:160:VAL:HG12	1.72	0.70
9:G:109:ILE:N	9:G:109:ILE:HD13	2.06	0.70
10:H:65:TRP:CZ3	10:H:71:MET:HE1	2.27	0.70
10:H:86:THR:CG2	10:H:89:LYS:NZ	2.55	0.70
11:I:17:ARG:HE	11:I:47:ILE:CG1	2.05	0.70
12:J:85:LEU:HD21	12:J:118:GLY:N	2.05	0.70
13:K:11:LYS:HB2	13:K:14:ARG:HH11	1.56	0.70
13:K:7:MET:HB2	13:K:93:TYR:CE2	2.27	0.70
18:P:72:VAL:CA	18:P:90:PRO:HA	2.21	0.70
19:Q:65:LEU:HB3	19:Q:68:ARG:CZ	2.21	0.70
4:B:242:ARG:NH1	4:B:242:ARG:H	1.90	0.70
4:B:248:SER:CB	4:B:249:PRO:CD	2.70	0.70
6:D:135:LEU:HD23	6:D:135:LEU:O	1.92	0.70
6:D:148:SER:N	6:D:167:TRP:CE2	2.59	0.70
7:E:43:LEU:HG	7:E:153:ARG:HD3	1.72	0.70
8:F:153:LYS:HA	8:F:162:ILE:O	1.92	0.70
9:G:124:GLY:CA	9:G:144:VAL:CB	2.68	0.70
11:I:2:ILE:CG1	11:I:34:THR:HA	2.20	0.70
11:I:60:ALA:HA	11:I:86:ILE:HA	1.72	0.70
12:J:47:ASP:OD1	12:J:49:ARG:CZ	2.40	0.70
13:K:42:ILE:CD1	13:K:43:THR:N	2.45	0.70
19:Q:28:SER:C	19:Q:71:VAL:HG23	2.10	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:S:54:LYS:CG	21:S:55:TYR:H	2.04	0.70
10:H:48:ARG:CB	10:H:48:ARG:HH11	2.05	0.70
33:O:29:A:H2	33:O:41:U:C2	2.09	0.70
33:O:50:U:O5'	33:O:50:U:H6	1.75	0.70
4:B:201:HIS:HB2	4:B:204:ILE:HG23	1.72	0.70
10:H:144:LYS:HE2	10:H:153:HIS:CE1	2.26	0.70
10:H:50:ALA:O	10:H:53:ILE:N	2.21	0.70
11:I:12:ASP:OD1	11:I:86:ILE:CD1	2.39	0.70
15:M:9:ARG:O	15:M:11:LYS:N	2.24	0.70
22:T:146:ILE:HB	22:T:176:PRO:CD	2.22	0.70
24:V:15:ALA:O	24:V:46:LEU:CG	2.37	0.70
4:B:21:PHE:HA	4:B:24:ILE:CG1	2.22	0.70
4:B:63:ARG:NH2	4:B:86:PRO:HD3	2.06	0.70
5:C:5:LEU:HB2	5:C:76:ARG:NH1	2.07	0.70
5:C:4:ILE:CD1	5:C:91:VAL:HG11	2.20	0.70
7:E:31:VAL:HG12	7:E:33:ARG:CD	2.22	0.70
10:H:44:LYS:C	10:H:84:ARG:CB	2.59	0.70
11:I:104:ARG:NH1	11:I:104:ARG:CA	3.98	0.70
14:L:13:HIS:HD2	14:L:16:HIS:CD2	2.06	0.70
15:M:94:TYR:O	15:M:99:LYS:HE3	1.91	0.70
22:T:28:MET:O	22:T:29:TYR:HB3	1.92	0.70
3:A:191:ARG:HA	3:A:194:ILE:HD12	1.74	0.70
3:A:40:GLU:CB	3:A:217:THR:HG21	2.20	0.70
6:D:134:PHE:CE2	6:D:161:ALA:HB1	2.26	0.70
6:D:84:VAL:HG22	6:D:85:PHE:H	1.57	0.70
9:G:52:ARG:O	9:G:55:ALA:N	2.24	0.70
16:N:33:LYS:CD	16:N:41:ARG:HB3	2.21	0.70
17:O:8:VAL:CG1	17:O:11:ARG:HE	2.04	0.70
20:R:82:GLN:CG	20:R:83:VAL:H	1.93	0.70
21:S:31:LEU:HB2	21:S:32:PRO:CD	2.22	0.70
26:X:40:THR:C	26:X:44:ARG:HD3	2.12	0.70
22:T:26:GLY:O	22:T:37:VAL:HG23	1.92	0.69
33:O:26:G:H2'	33:O:27:C:C5'	2.22	0.69
4:B:208:LYS:HE3	4:B:210:GLY:CA	2.22	0.69
4:B:24:ILE:HD13	4:B:25:THR:HG22	1.73	0.69
4:B:27:THR:HG21	4:B:83:GLU:CG	2.22	0.69
5:C:78:LEU:C	5:C:79:ARG:HE	1.95	0.69
6:D:70:HIS:HE1	6:D:72:ASP:O	1.75	0.69
16:N:117:ASP:HB3	16:N:120:ARG:HE	1.57	0.69
17:O:94:ASN:HD22	17:O:94:ASN:N	1.86	0.69
19:Q:14:PRO:HG2	19:Q:78:GLU:HG2	1.72	0.69
20:R:57:LEU:CG	20:R:58:HIS:H	1.97	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:U:37:LEU:HD12	23:U:38:VAL:HG23	1.73	0.69
4:B:99:ASP:CG	4:B:101:GLU:HB2	2.11	0.69
4:B:136:ILE:HG23	4:B:137:PRO:HD2	1.74	0.69
6:D:118:LEU:O	6:D:187:LEU:O	2.10	0.69
9:G:125:GLU:CA	9:G:143:SER:HA	2.22	0.69
6:D:182:VAL:HB	12:J:6:LEU:CA	2.22	0.69
13:K:73:PRO:HA	13:K:93:TYR:HA	1.73	0.69
15:M:28:VAL:HG22	15:M:37:ALA:HA	1.73	0.69
19:Q:72:LYS:CE	19:Q:107:LEU:O	2.40	0.69
26:X:8:LEU:HG	26:X:33:GLN:O	1.91	0.69
22:T:1:MET:SD	22:T:1:MET:O	2.50	0.69
3:A:29:LEU:CD2	3:A:33:LEU:HD21	2.21	0.69
4:B:78:LYS:HB3	4:B:116:GLN:CD	2.10	0.69
5:C:145:LYS:HA	5:C:148:GLY:CA	2.22	0.69
6:D:95:THR:O	6:D:96:LEU:HD22	1.92	0.69
9:G:4:ILE:C	9:G:37:VAL:HB	2.12	0.69
11:I:2:ILE:HG12	11:I:34:THR:CA	2.22	0.69
15:M:43:GLU:HG3	15:M:44:LYS:HD3	1.72	0.69
15:M:68:GLN:C	15:M:70:GLY:H	1.96	0.69
16:N:51:ARG:NH1	16:N:75:ILE:HG21	2.07	0.69
18:P:44:LYS:HG2	18:P:45:THR:N	2.01	0.69
19:Q:75:TYR:CA	19:Q:103:ILE:HG13	2.22	0.69
20:R:20:GLY:CA	20:R:25:LYS:CA	2.71	0.69
20:R:81:VAL:CG2	20:R:86:GLY:HA3	2.22	0.69
23:U:67:VAL:HA	23:U:81:VAL:HG22	1.72	0.69
25:W:3:LEU:HD11	25:W:8:LYS:CD	2.22	0.69
21:S:1:MET:CG	21:S:2:ARG:H	1.96	0.69
4:B:48:ARG:HD3	4:B:49:ILE:N	2.07	0.69
8:F:117:PRO:HA	8:F:121:ILE:CD1	2.16	0.69
9:G:88:ILE:CG2	9:G:121:LYS:CG	2.63	0.69
9:G:130:TYR:CD2	9:G:138:ILE:HG23	2.27	0.69
9:G:2:LYS:HG3	9:G:20:ASP:N	2.07	0.69
10:H:57:LEU:O	10:H:72:GLY:CA	2.39	0.69
13:K:37:LEU:N	13:K:127:ILE:HD12	2.06	0.69
13:K:9:TYR:CG	13:K:10:ARG:N	2.60	0.69
14:L:12:ARG:CG	14:L:13:HIS:H	2.05	0.69
15:M:71:ARG:HG3	15:M:105:ALA:HA	1.72	0.69
16:N:4:GLY:O	16:N:7:ILE:HB	1.92	0.69
16:N:61:PHE:CD1	16:N:61:PHE:N	2.60	0.69
16:N:51:ARG:CB	16:N:62:THR:HG23	2.08	0.69
22:T:146:ILE:H	22:T:146:ILE:CD1	1.99	0.69
22:T:162:GLU:OE2	22:T:164:ALA:HB2	1.93	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:U:66:VAL:C	23:U:81:VAL:HG13	2.13	0.69
25:W:54:LYS:O	25:W:55:ARG:HG2	1.93	0.69
27:Y:30:LEU:HD23	27:Y:31:VAL:N	2.04	0.69
22:T:132:ASN:O	22:T:134:PRO:HD3	1.92	0.69
3:A:20:ILE:HA	3:A:224:ARG:HB3	1.73	0.69
5:C:63:LEU:HD21	5:C:65:GLY:HA3	1.73	0.69
6:D:112:ARG:CB	6:D:112:ARG:HH21	2.04	0.69
7:E:122:PRO:HG3	7:E:180:PHE:CA	2.13	0.69
11:I:86:ILE:N	11:I:86:ILE:HD12	2.08	0.69
13:K:51:ARG:N	13:K:51:ARG:CD	2.41	0.69
13:K:73:PRO:CA	13:K:92:GLY:O	2.39	0.69
15:M:68:GLN:O	15:M:70:GLY:N	2.25	0.69
15:M:96:GLY:HA2	15:M:99:LYS:CD	2.16	0.69
16:N:51:ARG:HH11	16:N:75:ILE:HD13	1.57	0.69
21:S:54:LYS:HD3	21:S:55:TYR:N	2.06	0.69
22:T:38:TYR:HD2	22:T:38:TYR:O	1.75	0.69
23:U:67:VAL:HG23	23:U:79:VAL:CB	2.22	0.69
25:W:29:LYS:HE3	25:W:30:ARG:N	2.07	0.69
25:W:47:ASN:N	25:W:47:ASN:HD22	1.89	0.69
27:Y:50:GLY:O	27:Y:51:TYR:HB2	1.90	0.69
17:O:68:ALA:O	17:O:71:GLN:HB3	1.93	0.69
5:C:33:VAL:CA	5:C:49:LEU:HD13	2.23	0.69
9:G:88:ILE:HG12	9:G:89:TYR:HD1	1.58	0.69
10:H:110:LEU:C	10:H:112:LYS:H	1.95	0.69
10:H:83:ILE:O	10:H:84:ARG:C	2.31	0.69
6:D:182:VAL:HA	12:J:5:ASP:C	2.13	0.69
13:K:125:LEU:CD1	13:K:127:ILE:HG23	2.22	0.69
13:K:51:ARG:NH1	13:K:51:ARG:C	2.46	0.69
19:Q:47:VAL:O	19:Q:50:VAL:HB	1.93	0.69
24:V:82:LEU:O	24:V:86:SER:HA	1.91	0.69
3:A:172:ILE:HG12	3:A:173:HIS:H	1.56	0.69
3:A:63:VAL:HG22	3:A:64:SER:N	2.07	0.69
4:B:263:ARG:N	4:B:263:ARG:HE	1.91	0.69
7:E:19:LEU:HA	7:E:25:TYR:OH	1.93	0.69
8:F:124:GLU:OE1	8:F:132:ARG:HG3	1.93	0.69
10:H:39:ILE:O	10:H:77:VAL:HA	1.92	0.69
11:I:104:ARG:NH1	11:I:104:ARG:N	4.03	0.69
11:I:17:ARG:NH2	11:I:47:ILE:O	2.25	0.69
13:K:64:ILE:HG12	13:K:104:PHE:HB3	1.74	0.69
14:L:13:HIS:CD2	14:L:16:HIS:CG	2.80	0.69
15:M:38:GLN:CD	15:M:47:THR:HG1	1.96	0.69
16:N:45:PHE:CE1	16:N:67:SER:HB2	2.26	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:N:74:ARG:HB3	16:N:76:PHE:CZ	2.28	0.69
17:O:38:THR:C	17:O:40:PHE:N	2.43	0.69
22:T:98:MET:CA	22:T:125:LEU:CD1	2.71	0.69
6:D:24:ASN:O	6:D:28:LEU:CG	2.41	0.69
9:G:80:PRO:N	9:G:145:VAL:HB	2.08	0.69
10:H:58:ARG:CB	10:H:139:LEU:HD13	2.23	0.69
10:H:78:VAL:O	10:H:79:ASN:C	2.30	0.69
11:I:65:THR:O	11:I:79:PHE:HB2	1.93	0.69
22:T:28:MET:HE2	22:T:34:ASN:HA	1.74	0.69
26:X:44:ARG:H	26:X:44:ARG:CD	1.90	0.69
33:O:24:G:C5	33:O:25:C:C2	2.80	0.69
4:B:136:ILE:HG23	4:B:137:PRO:N	2.06	0.69
4:B:150:LYS:HD2	4:B:188:GLU:O	1.92	0.69
6:D:98:LYS:CG	6:D:101:ARG:HD2	2.22	0.69
8:F:88:LEU:HB3	8:F:129:THR:O	1.93	0.69
11:I:69:VAL:HG11	11:I:77:ILE:HG22	1.74	0.69
12:J:92:GLU:OE2	12:J:123:LEU:HB3	1.93	0.69
15:M:70:GLY:HA3	15:M:101:LEU:HD21	1.68	0.69
21:S:14:LEU:HD21	21:S:39:VAL:HG11	1.72	0.69
22:T:110:GLY:CA	22:T:146:ILE:HD12	2.22	0.69
23:U:36:ILE:CD1	23:U:36:ILE:H	2.06	0.69
24:V:50:ARG:CG	24:V:51:VAL:H	1.97	0.69
26:X:4:LEU:HD13	26:X:58:VAL:HG23	1.75	0.69
28:Z:37:LYS:HE3	28:Z:39:ARG:NE	2.07	0.69
33:O:63:C:H2'	33:O:64:A:H8	1.54	0.69
5:C:33:VAL:HA	5:C:49:LEU:HD13	1.73	0.69
7:E:98:ARG:O	7:E:102:PHE:HB3	1.93	0.69
8:F:30:LYS:HG3	8:F:31:GLY:N	2.06	0.69
9:G:128:LEU:N	9:G:141:LYS:HG2	2.08	0.69
9:G:77:LEU:HD13	9:G:78:THR:N	2.06	0.69
11:I:15:GLY:N	11:I:50:GLY:HA3	2.06	0.69
15:M:26:LEU:CD1	15:M:39:ILE:HA	2.23	0.69
16:N:26:ASP:OD1	16:N:90:GLN:N	2.25	0.69
19:Q:23:LEU:HD13	27:Y:25:LEU:O	1.92	0.69
21:S:15:VAL:HG22	21:S:16:ALA:H	1.57	0.69
21:S:38:ILE:CG1	21:S:60:PHE:HZ	2.05	0.69
22:T:16:SER:O	22:T:20:ARG:HB3	1.92	0.69
22:T:98:MET:HA	22:T:125:LEU:HD11	1.75	0.69
22:T:69:THR:OG1	22:T:90:VAL:HA	1.93	0.69
4:B:155:LEU:HD22	4:B:157:ARG:CG	2.16	0.69
5:C:11:MET:CB	5:C:23:VAL:O	2.34	0.69
6:D:29:TRP:O	6:D:33:ARG:HG3	1.93	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:61:PRO:O	6:D:62:GLN:NE2	2.26	0.69
7:E:106:LEU:O	7:E:110:ALA:HB3	1.93	0.69
8:F:65:HIS:HD2	8:F:68:THR:HB	1.57	0.69
8:F:72:ILE:N	8:F:72:ILE:HD13	1.98	0.69
11:I:87:ILE:HD13	11:I:93:PRO:HD3	1.74	0.69
13:K:24:GLY:O	13:K:25:ASP:HB2	1.93	0.69
14:L:51:LEU:CD2	14:L:51:LEU:H	2.05	0.69
14:L:90:ARG:HH12	14:L:117:VAL:HG11	1.58	0.69
15:M:67:ARG:O	15:M:71:ARG:HD2	1.92	0.69
18:P:13:ARG:CD	18:P:13:ARG:N	2.55	0.69
28:Z:28:ARG:O	28:Z:31:LEU:HB2	1.93	0.69
3:A:29:LEU:HD23	3:A:33:LEU:HD21	1.74	0.68
4:B:140:THR:O	4:B:164:GLN:CA	2.35	0.68
4:B:24:ILE:CG1	4:B:91:ARG:HH11	2.05	0.68
7:E:139:LEU:HD22	7:E:140:ILE:N	2.07	0.68
7:E:10:LYS:HE2	7:E:14:GLU:HB2	1.75	0.68
7:E:83:ARG:O	7:E:84:LYS:O	2.10	0.68
10:H:124:HIS:CA	10:H:127:LYS:HD2	2.22	0.68
10:H:34:PRO:CB	10:H:142:ARG:NH1	2.56	0.68
14:L:31:HIS:C	14:L:33:ARG:H	1.97	0.68
15:M:103:GLU:O	15:M:106:ARG:HB3	1.92	0.68
15:M:12:PHE:HD1	15:M:13:ARG:H	1.41	0.68
15:M:39:ILE:N	15:M:39:ILE:HD13	2.06	0.68
15:M:71:ARG:O	15:M:74:ALA:HB3	1.93	0.68
17:O:64:ARG:O	17:O:67:ALA:HB3	1.92	0.68
21:S:37:VAL:H	21:S:62:GLU:HG3	1.56	0.68
22:T:3:TYR:O	22:T:57:ILE:HA	1.93	0.68
23:U:23:VAL:HA	23:U:38:VAL:CG1	2.22	0.68
23:U:17:GLN:NE2	23:U:39:ARG:NH2	2.41	0.68
27:Y:16:ARG:O	27:Y:20:ARG:HD2	1.93	0.68
4:B:56:GLY:CA	4:B:216:GLY:HA2	2.23	0.68
4:B:21:PHE:CD2	4:B:24:ILE:HD12	2.29	0.68
6:D:116:GLY:O	6:D:186:ARG:HG2	1.93	0.68
8:F:105:LEU:CD1	8:F:107:VAL:H	2.06	0.68
8:F:12:PRO:C	8:F:14:GLY:H	1.96	0.68
8:F:20:ALA:O	8:F:22:GLY:N	2.24	0.68
9:G:127:VAL:N	9:G:141:LYS:HE3	2.08	0.68
11:I:13:ASN:C	11:I:17:ARG:NH1	2.47	0.68
13:K:34:LEU:HD13	13:K:129:THR:OG1	1.93	0.68
13:K:35:VAL:CG2	13:K:130:LYS:HB2	2.23	0.68
14:L:90:ARG:NH2	14:L:118:GLU:OE1	2.26	0.68
14:L:7:GLY:O	14:L:8:ARG:HG2	1.94	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:M:61:ASN:O	15:M:62:LYS:CG	2.41	0.68
16:N:28:VAL:CG2	16:N:46:GLU:HA	2.24	0.68
19:Q:75:TYR:O	19:Q:75:TYR:HD1	1.76	0.68
19:Q:14:PRO:CG	19:Q:78:GLU:HG2	2.23	0.68
22:T:6:LYS:O	22:T:7:ALA:CB	2.41	0.68
3:A:43:GLU:HA	3:A:175:PRO:HA	1.75	0.68
4:B:148:GLU:HG2	4:B:149:PRO:CD	2.22	0.68
4:B:44:ASN:CG	4:B:45:ASN:H	1.95	0.68
5:C:63:LEU:O	5:C:65:GLY:N	2.26	0.68
5:C:91:VAL:CG1	5:C:95:ILE:HD11	2.23	0.68
6:D:165:LEU:HB3	6:D:170:THR:OG1	1.92	0.68
7:E:110:ALA:HA	7:E:113:ARG:HD2	1.75	0.68
7:E:27:ASN:OD1	7:E:29:TRP:CE3	2.46	0.68
11:I:2:ILE:HD13	11:I:33:ALA:O	1.94	0.68
12:J:50:ARG:C	12:J:50:ARG:HD3	2.14	0.68
14:L:102:GLU:CG	14:L:103:ARG:H	2.03	0.68
14:L:18:LEU:HA	14:L:21:TYR:CE1	2.28	0.68
15:M:39:ILE:O	15:M:48:LEU:HB2	1.92	0.68
15:M:86:ALA:HA	15:M:112:PHE:CE1	2.28	0.68
18:P:35:LEU:CB	18:P:60:GLU:O	2.42	0.68
19:Q:59:VAL:HG22	19:Q:64:MET:CB	2.19	0.68
19:Q:66:GLU:HG2	19:Q:67:ASP:N	2.09	0.68
21:S:46:LYS:H	21:S:57:GLN:C	1.97	0.68
23:U:45:PHE:HE2	23:U:70:GLN:O	1.76	0.68
28:Z:28:ARG:HA	28:Z:31:LEU:CD2	2.23	0.68
3:A:23:ILE:HD13	3:A:187:ALA:O	1.93	0.68
4:B:31:LYS:CB	4:B:104:TYR:CE1	2.76	0.68
4:B:136:ILE:HG23	4:B:137:PRO:CD	2.23	0.68
4:B:6:PHE:HE1	4:B:18:VAL:HG23	1.57	0.68
6:D:151:LEU:N	6:D:169:VAL:HG21	2.09	0.68
6:D:5:PRO:HG3	6:D:120:LEU:HD21	1.75	0.68
8:F:86:GLU:HA	8:F:132:ARG:CA	2.23	0.68
9:G:60:GLU:O	9:G:64:GLU:CB	2.41	0.68
10:H:157:ARG:CD	10:H:157:ARG:O	2.35	0.68
10:H:76:VAL:HG13	10:H:144:LYS:C	2.13	0.68
11:I:69:VAL:CG1	11:I:77:ILE:HG22	2.23	0.68
14:L:3:HIS:ND1	14:L:4:LEU:HG	2.08	0.68
15:M:40:ILE:CG2	15:M:46:VAL:O	2.28	0.68
16:N:51:ARG:HE	16:N:53:ARG:HB2	1.58	0.68
18:P:14:VAL:HG21	18:P:98:GLU:OE2	1.93	0.68
22:T:17:ALA:HB2	22:T:20:ARG:NH2	2.08	0.68
23:U:47:PRO:CB	23:U:51:VAL:HB	2.23	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:X:6:VAL:HA	26:X:55:ARG:O	1.93	0.68
33:0:41:U:C2	33:0:42:G:C8	2.82	0.68
5:C:156:MET:CE	5:C:156:MET:HA	2.23	0.68
5:C:7:VAL:O	5:C:7:VAL:HG22	2.72	0.68
6:D:151:LEU:HD12	6:D:152:VAL:H	1.58	0.68
7:E:172:LEU:O	7:E:175:LEU:HB2	1.93	0.68
8:F:122:THR:CG2	8:F:134:SER:OG	2.40	0.68
9:G:78:THR:HG22	9:G:143:SER:CB	2.20	0.68
10:H:84:ARG:HD3	10:H:86:THR:H	1.57	0.68
11:I:23:ARG:C	11:I:39:ILE:HG22	2.13	0.68
16:N:100:TYR:O	16:N:103:ARG:NH1	2.27	0.68
17:O:112:ARG:NH2	18:P:50:PRO:HD2	2.09	0.68
20:R:25:LYS:HG3	20:R:26:TYR:H	1.57	0.68
22:T:95:PRO:HB2	22:T:127:LYS:HE2	1.74	0.68
22:T:77:ASP:CB	22:T:82:ARG:O	2.42	0.68
26:X:41:PRO:O	26:X:44:ARG:HB2	1.93	0.68
4:B:21:PHE:C	4:B:24:ILE:HB	2.13	0.68
8:F:57:ASP:O	8:F:58:GLU:O	2.12	0.68
10:H:110:LEU:O	10:H:112:LYS:N	2.27	0.68
11:I:2:ILE:N	11:I:2:ILE:HD12	2.07	0.68
12:J:49:ARG:HG2	12:J:51:PHE:CZ	2.28	0.68
14:L:27:SER:C	14:L:29:LEU:H	1.95	0.68
15:M:49:VAL:CG2	15:M:50:SER:N	2.56	0.68
17:O:59:ARG:CG	17:O:62:ILE:HD12	2.23	0.68
24:V:37:ILE:HG23	24:V:38:SER:N	2.08	0.68
24:V:19:GLN:H	24:V:44:PRO:HD2	1.59	0.68
24:V:91:LYS:H	24:V:91:LYS:HE3	1.58	0.68
27:Y:47:PRO:HB3	27:Y:57:VAL:HG21	1.76	0.68
33:0:31:A:H2	33:0:39:U:O2	1.75	0.68
5:C:9:VAL:HG23	5:C:26:ILE:HD13	1.73	0.68
7:E:172:LEU:HA	7:E:175:LEU:CG	2.22	0.68
9:G:129:THR:HA	9:G:139:GLN:HA	1.75	0.68
13:K:62:GLY:O	13:K:63:LYS:HB3	1.92	0.68
20:R:89:ILE:HD12	20:R:92:LEU:CB	2.24	0.68
23:U:10:THR:C	23:U:11:LYS:HG2	2.14	0.68
24:V:60:PHE:CE1	24:V:87:PRO:HB3	2.25	0.68
24:V:83:GLU:O	24:V:88:LYS:HE2	1.94	0.68
25:W:27:GLU:OE1	25:W:30:ARG:HD2	1.94	0.68
3:A:8:TYR:HB3	3:A:11:LEU:HD22	1.76	0.68
4:B:79:VAL:CB	4:B:111:LEU:HD11	2.18	0.68
4:B:118:VAL:HG12	4:B:126:GLN:HE21	1.57	0.68
5:C:34:VAL:HG23	5:C:78:LEU:CD2	2.22	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:69:ARG:CD	6:D:70:HIS:H	2.06	0.68
9:G:15:VAL:HG22	9:G:15:VAL:O	1.94	0.68
9:G:79:ILE:HG23	9:G:80:PRO:CD	2.24	0.68
10:H:36:TRP:O	10:H:37:VAL:CG2	2.42	0.68
10:H:95:TYR:CE1	10:H:109:PRO:O	2.46	0.68
13:K:132:VAL:C	13:K:133:ARG:HD3	2.14	0.68
14:L:2:ARG:CG	14:L:3:HIS:N	2.57	0.68
15:M:69:VAL:HG13	15:M:73:LEU:HD11	1.76	0.68
15:M:93:LYS:N	15:M:93:LYS:HD2	2.09	0.68
20:R:63:LYS:HD3	20:R:64:LYS:O	1.94	0.68
22:T:11:GLU:HG3	22:T:12:GLY:N	2.09	0.68
23:U:23:VAL:HG13	23:U:38:VAL:HG11	1.76	0.68
23:U:68:GLU:O	23:U:79:VAL:HA	1.94	0.68
3:A:213:VAL:O	3:A:224:ARG:NH2	2.26	0.68
3:A:224:ARG:CZ	3:A:225:ILE:H	2.06	0.68
3:A:63:VAL:HG13	3:A:64:SER:H	1.58	0.68
4:B:4:LYS:CB	4:B:18:VAL:HB	2.23	0.68
8:F:8:PRO:HA	8:F:50:VAL:N	2.09	0.68
9:G:79:ILE:N	9:G:145:VAL:HG23	2.09	0.68
10:H:100:GLY:H	10:H:105:LEU:HD22	1.59	0.68
10:H:117:HIS:CE1	10:H:120:ARG:NH1	2.62	0.68
11:I:64:ARG:HA	11:I:79:PHE:CD2	2.29	0.68
13:K:33:GLY:H	13:K:132:VAL:CB	1.91	0.68
13:K:44:ALA:HA	13:K:47:ILE:HD12	1.75	0.68
14:L:18:LEU:N	14:L:21:TYR:HE1	1.91	0.68
15:M:30:ARG:HA	15:M:36:TYR:CE1	2.28	0.68
16:N:3:ARG:CB	16:N:7:ILE:CD1	2.72	0.68
17:O:82:GLY:O	17:O:113:ALA:HA	1.94	0.68
17:O:92:ARG:HB2	18:P:11:GLN:HG3	1.75	0.68
18:P:21:ARG:CZ	18:P:21:ARG:HB2	2.23	0.68
20:R:50:LYS:HA	20:R:50:LYS:HE3	1.75	0.68
20:R:82:GLN:HB3	20:R:85:PRO:HD2	1.76	0.68
21:S:26:LYS:HB2	21:S:37:VAL:HA	1.76	0.68
22:T:104:PHE:HA	22:T:139:VAL:HB	1.76	0.68
23:U:17:GLN:HE21	23:U:39:ARG:NH2	1.92	0.68
25:W:7:ARG:HB3	25:W:8:LYS:NZ	2.09	0.68
4:B:142:VAL:O	4:B:156:ALA:HB1	1.92	0.68
5:C:132:HIS:O	5:C:133:LYS:CB	2.41	0.68
5:C:177:PRO:O	5:C:179:GLU:N	2.26	0.68
5:C:34:VAL:CG2	5:C:78:LEU:HD21	2.22	0.68
7:E:41:GLN:NE2	7:E:42:GLY:O	2.26	0.68
8:F:94:TYR:O	8:F:95:ARG:HG3	1.94	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:113:ARG:HH12	9:G:133:HIS:HB3	1.56	0.68
10:H:155:ALA:O	10:H:156:GLN:CB	2.42	0.68
15:M:61:ASN:C	15:M:62:LYS:HG3	2.15	0.68
16:N:92:GLY:CA	16:N:114:LEU:HD22	2.24	0.68
20:R:4:ALA:O	20:R:5:TYR:HB2	1.94	0.68
22:T:171:ILE:HD13	22:T:171:ILE:H	1.59	0.68
24:V:51:VAL:HG12	24:V:52:ARG:H	1.41	0.68
33:0:64:A:C2'	33:0:65:G:C8	2.77	0.67
4:B:145:VAL:HG22	4:B:191:ALA:HB2	1.75	0.67
7:E:50:ALA:HA	7:E:53:LEU:HD11	1.74	0.67
7:E:82:LEU:HD12	7:E:84:LYS:HG2	1.75	0.67
7:E:91:ARG:CD	7:E:91:ARG:C	2.62	0.67
10:H:119:GLU:HB3	10:H:146:TYR:HA	1.76	0.67
15:M:70:GLY:CA	15:M:101:LEU:HD22	2.08	0.67
17:O:64:ARG:HA	17:O:64:ARG:CZ	2.23	0.67
26:X:4:LEU:HA	26:X:58:VAL:HG22	1.75	0.67
33:0:16:U:O2	33:0:16:U:H2'	1.94	0.67
33:0:9:A:N7	33:0:12:U:O4	2.27	0.67
4:B:102:LYS:O	4:B:103:ARG:HG2	1.93	0.67
4:B:109:ASP:HB2	4:B:199:ALA:HB3	1.76	0.67
6:D:191:LEU:HD22	6:D:193:ALA:H	1.58	0.67
7:E:10:LYS:HD3	7:E:11:TYR:N	2.08	0.67
8:F:96:ALA:O	8:F:97:ARG:HB3	1.94	0.67
9:G:99:GLU:O	9:G:103:ARG:HG3	1.93	0.67
9:G:2:LYS:CA	9:G:20:ASP:HA	2.24	0.67
9:G:81:VAL:HG22	9:G:146:ALA:HA	1.75	0.67
9:G:88:ILE:CG1	9:G:89:TYR:CD1	2.77	0.67
13:K:119:ARG:HH22	13:K:131:ILE:CG2	2.07	0.67
20:R:57:LEU:CD2	20:R:76:ARG:HE	2.07	0.67
20:R:51:VAL:HA	20:R:81:VAL:HA	1.75	0.67
23:U:25:ARG:HH22	23:U:35:ASN:HB3	1.59	0.67
23:U:66:VAL:O	23:U:81:VAL:CA	2.36	0.67
24:V:51:VAL:C	24:V:59:THR:HG23	2.14	0.67
3:A:40:GLU:HB3	3:A:217:THR:HG23	1.77	0.67
4:B:155:LEU:CD2	4:B:157:ARG:CG	2.72	0.67
5:C:32:PRO:HG3	5:C:90:THR:OG1	1.94	0.67
6:D:131:THR:HA	6:D:134:PHE:CE2	2.29	0.67
6:D:148:SER:N	6:D:167:TRP:NE1	2.43	0.67
7:E:3:LEU:HB2	7:E:100:TRP:CZ3	2.29	0.67
7:E:127:GLY:O	7:E:165:THR:HG22	1.95	0.67
7:E:73:ALA:H	7:E:87:PRO:CA	2.08	0.67
9:G:33:ARG:HB2	9:G:33:ARG:HH21	1.58	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:62:ARG:O	10:H:65:TRP:CB	2.41	0.67
13:K:37:LEU:HD11	13:K:128:LYS:HB2	1.77	0.67
13:K:6:ARG:HD3	13:K:6:ARG:C	2.13	0.67
15:M:38:GLN:HG3	15:M:50:SER:OG	1.94	0.67
15:M:60:GLY:HA3	15:M:65:VAL:HG11	1.76	0.67
15:M:24:LEU:HB3	15:M:85:VAL:CG2	2.24	0.67
16:N:62:THR:CB	16:N:74:ARG:O	2.42	0.67
16:N:82:LEU:HD12	16:N:82:LEU:N	2.09	0.67
20:R:60:ARG:HD3	20:R:74:PRO:HG3	1.76	0.67
21:S:61:ILE:CG2	21:S:62:GLU:H	1.95	0.67
22:T:16:SER:N	22:T:19:ARG:HD3	2.09	0.67
22:T:24:LEU:HD21	22:T:41:LEU:CA	2.24	0.67
22:T:24:LEU:CD1	22:T:44:PHE:HB3	2.24	0.67
24:V:88:LYS:CG	24:V:89:GLU:N	2.54	0.67
8:F:171:LEU:HD12	8:F:171:LEU:N	2.10	0.67
33:O:54:U:H6	33:O:54:U:OP2	1.77	0.67
33:O:6:U:H2'	33:O:7:U:C5'	2.19	0.67
3:A:165:ARG:HH22	3:A:172:ILE:CB	2.06	0.67
4:B:201:HIS:HB2	4:B:204:ILE:CG2	2.24	0.67
4:B:34:VAL:HG22	4:B:35:LYS:CD	2.21	0.67
5:C:30:PRO:HG3	5:C:180:ASN:HD22	1.59	0.67
5:C:54:GLN:O	5:C:55:ASN:CB	2.43	0.67
6:D:48:THR:HA	6:D:52:VAL:CB	2.24	0.67
8:F:138:LYS:CB	8:F:141:VAL:HB	2.25	0.67
8:F:152:ARG:NH2	8:F:152:ARG:CA	2.34	0.67
14:L:44:LEU:HA	14:L:47:PHE:HD2	1.58	0.67
15:M:18:ILE:CG2	15:M:19:LYS:H	2.05	0.67
15:M:25:ARG:HG2	15:M:42:ASP:OD1	1.93	0.67
18:P:30:GLY:HA3	18:P:65:GLY:CA	2.24	0.67
22:T:60:GLU:O	22:T:62:PRO:HD3	1.95	0.67
23:U:49:LYS:O	23:U:81:VAL:CB	2.42	0.67
6:D:148:SER:CB	6:D:184:THR:HA	2.25	0.67
7:E:139:LEU:CB	7:E:146:TYR:N	2.54	0.67
7:E:169:ALA:O	7:E:172:LEU:HG	1.95	0.67
8:F:95:ARG:O	8:F:105:LEU:HD22	1.94	0.67
9:G:56:LYS:HG3	9:G:57:ARG:HD3	1.77	0.67
12:J:101:VAL:HG22	12:J:102:ARG:N	2.09	0.67
13:K:75:THR:HG22	13:K:76:LYS:N	2.09	0.67
14:L:117:VAL:HG13	14:L:118:GLU:N	2.08	0.67
16:N:35:LYS:HZ2	16:N:35:LYS:HB3	1.59	0.67
18:P:47:VAL:HG13	18:P:48:GLY:N	2.07	0.67
19:Q:86:LEU:N	19:Q:94:ASP:O	2.26	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:T:150:LEU:C	22:T:150:LEU:HD13	2.15	0.67
21:S:13:VAL:HG12	21:S:13:VAL:O	1.94	0.67
33:0:24:G:H2'	33:0:25:C:O4'	1.94	0.67
4:B:263:ARG:NE	4:B:263:ARG:H	1.92	0.67
4:B:183:ARG:HG3	4:B:270:ILE:N	2.09	0.67
4:B:84:TYR:CZ	4:B:85:ASP:O	2.46	0.67
5:C:81:ILE:CD1	5:C:81:ILE:N	2.58	0.67
6:D:4:ILE:CD1	6:D:119:LEU:H	2.08	0.67
6:D:18:ASP:OD1	6:D:20:PRO:HG2	1.95	0.67
8:F:152:ARG:N	8:F:152:ARG:HH21	1.93	0.67
8:F:16:SER:HB2	8:F:27:LYS:HB2	1.75	0.67
10:H:30:LYS:O	10:H:31:GLN:HB2	1.94	0.67
10:H:50:ALA:O	10:H:53:ILE:HB	1.95	0.67
12:J:98:GLU:HA	12:J:102:ARG:HB2	1.76	0.67
13:K:37:LEU:HD12	13:K:128:LYS:N	2.06	0.67
13:K:62:GLY:H	22:T:183:LEU:HD11	1.58	0.67
16:N:61:PHE:C	16:N:62:THR:HG22	2.15	0.67
18:P:95:LEU:C	18:P:96:ILE:HD12	2.15	0.67
19:Q:88:ARG:HD2	19:Q:92:ARG:CA	2.24	0.67
20:R:78:LYS:HD2	20:R:79:ALA:N	2.09	0.67
24:V:54:ALA:C	24:V:56:GLN:H	1.96	0.67
33:0:24:G:H2'	33:0:25:C:H6	1.58	0.67
4:B:20:ASP:O	4:B:24:ILE:CB	2.42	0.67
4:B:60:ARG:NE	4:B:86:PRO:HB2	2.09	0.67
6:D:111:ASP:HA	6:D:114:ARG:CG	2.24	0.67
7:E:113:ARG:O	7:E:140:ILE:HD11	1.94	0.67
8:F:114:VAL:CG2	8:F:115:VAL:N	2.57	0.67
9:G:4:ILE:HG22	9:G:37:VAL:HG21	1.77	0.67
11:I:66:LYS:HA	11:I:79:PHE:O	1.93	0.67
11:I:77:ILE:HD13	11:I:78:ARG:O	1.94	0.67
18:P:43:GLU:HA	18:P:47:VAL:HG13	1.75	0.67
18:P:37:VAL:CB	18:P:55:ALA:HB1	2.24	0.67
20:R:36:LYS:C	20:R:38:GLU:N	2.47	0.67
22:T:44:PHE:HD2	22:T:45:ASP:H	1.35	0.67
19:Q:23:LEU:HD13	27:Y:25:LEU:HB3	1.76	0.67
19:Q:23:LEU:HD11	27:Y:27:PRO:HD3	1.76	0.67
27:Y:38:ALA:HB2	27:Y:48:GLU:C	2.14	0.67
33:0:44:A:C2'	33:0:45:G:H5'	2.25	0.67
3:A:225:ILE:CG2	3:A:226:ASN:H	2.08	0.67
4:B:78:LYS:O	4:B:95:LEU:CB	2.43	0.67
5:C:51:PHE:C	5:C:53:PRO:HD3	2.15	0.67
6:D:4:ILE:N	6:D:5:PRO:CD	2.58	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:11:TYR:HA	7:E:15:VAL:CG2	2.24	0.67
7:E:33:ARG:CB	7:E:33:ARG:NH2	2.44	0.67
7:E:56:ALA:HA	7:E:60:LEU:HD21	1.77	0.67
8:F:105:LEU:HD13	8:F:106:THR:N	2.09	0.67
12:J:47:ASP:HB2	12:J:51:PHE:CZ	2.30	0.67
14:L:31:HIS:HB2	14:L:34:ILE:CD1	2.24	0.67
16:N:83:ILE:HG13	16:N:84:GLN:H	1.59	0.67
16:N:29:ARG:HG3	16:N:86:ILE:H	1.60	0.67
22:T:146:ILE:CG2	22:T:176:PRO:HD3	2.24	0.67
24:V:29:GLY:CA	24:V:33:LYS:HA	2.21	0.67
4:B:133:LEU:O	4:B:168:ARG:NH1	2.21	0.67
6:D:119:LEU:C	6:D:188:VAL:HG13	2.15	0.67
6:D:165:LEU:H	6:D:165:LEU:CD1	2.08	0.67
6:D:171:LEU:O	6:D:172:ALA:CB	2.43	0.67
8:F:41:MET:SD	8:F:55:PRO:HD3	2.34	0.67
9:G:6:LEU:O	9:G:14:ASP:CB	2.42	0.67
10:H:145:VAL:O	10:H:146:TYR:HB3	1.94	0.67
10:H:146:TYR:CG	10:H:147:ALA:N	2.55	0.67
11:I:109:LYS:HA	11:I:109:LYS:HE3	1.76	0.67
11:I:59:LYS:CE	11:I:87:ILE:O	2.43	0.67
11:I:85:VAL:CG1	11:I:93:PRO:HB2	2.23	0.67
13:K:118:LEU:HB2	13:K:119:ARG:NH1	2.09	0.67
13:K:14:ARG:N	13:K:14:ARG:CD	2.58	0.67
15:M:83:LYS:O	15:M:111:GLU:HB3	1.95	0.67
16:N:74:ARG:HB3	16:N:76:PHE:HE1	1.58	0.67
18:P:34:GLU:O	18:P:62:LEU:HB2	1.94	0.67
18:P:90:PRO:O	18:P:91:TYR:HB3	1.95	0.67
19:Q:70:TYR:O	19:Q:107:LEU:HB3	1.95	0.67
21:S:38:ILE:HG12	21:S:39:VAL:N	2.10	0.67
22:T:45:ASP:OD1	22:T:48:PHE:HE2	1.77	0.67
9:G:131:LYS:HE2	9:G:134:PRO:HA	1.77	0.67
33:O:35:A:C6	33:O:36:A:N6	2.63	0.67
5:C:102:VAL:HB	5:C:200:GLU:HA	1.77	0.67
5:C:60:ASN:O	5:C:62:PRO:HD2	1.95	0.67
11:I:96:THR:O	11:I:97:ARG:NE	2.28	0.67
12:J:75:ILE:CD1	12:J:77:ARG:NH1	2.58	0.67
17:O:92:ARG:NE	18:P:11:GLN:HG2	2.10	0.67
18:P:21:ARG:HG2	18:P:93:GLU:HG2	1.76	0.67
18:P:69:LYS:HB3	18:P:93:GLU:OE1	1.94	0.67
21:S:14:LEU:HD22	21:S:39:VAL:HG21	1.76	0.67
24:V:40:ARG:CG	24:V:41:ARG:H	2.08	0.67
26:X:40:THR:O	26:X:44:ARG:HD2	1.95	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:211:ARG:C	4:B:215:LEU:HD22	2.15	0.66
4:B:255:LYS:HD3	4:B:255:LYS:O	1.95	0.66
9:G:13:GLY:CA	9:G:17:GLN:CG	2.71	0.66
9:G:73:GLU:O	9:G:75:LEU:N	2.26	0.66
10:H:117:HIS:O	10:H:121:VAL:HG23	1.95	0.66
10:H:76:VAL:HA	10:H:144:LYS:O	1.95	0.66
11:I:65:THR:O	11:I:79:PHE:CB	2.43	0.66
11:I:88:ASN:HB3	11:I:90:GLN:NE2	2.09	0.66
11:I:93:PRO:C	11:I:95:GLY:N	2.42	0.66
16:N:47:GLY:CA	16:N:64:ARG:O	2.43	0.66
22:T:146:ILE:HB	22:T:176:PRO:HD3	1.77	0.66
26:X:5:LYS:CA	26:X:36:VAL:HG12	2.19	0.66
3:A:45:HIS:CE1	3:A:216:THR:OG1	2.48	0.66
4:B:175:LEU:CD2	4:B:183:ARG:O	2.43	0.66
6:D:73:ILE:HG12	6:D:73:ILE:O	1.96	0.66
9:G:60:GLU:C	9:G:64:GLU:HB2	2.15	0.66
11:I:64:ARG:CD	11:I:102:VAL:HG11	2.24	0.66
11:I:65:THR:C	11:I:79:PHE:CD1	2.69	0.66
13:K:65:PHE:O	13:K:104:PHE:CD2	2.49	0.66
13:K:66:ILE:HG22	13:K:104:PHE:HE2	1.60	0.66
15:M:74:ALA:O	15:M:78:LEU:HG	1.94	0.66
16:N:47:GLY:HA3	16:N:64:ARG:O	1.95	0.66
20:R:28:PHE:C	20:R:29:TRP:HD1	1.98	0.66
20:R:29:TRP:HA	20:R:76:ARG:HG3	1.76	0.66
22:T:181:GLU:O	22:T:182:LYS:HB2	1.94	0.66
24:V:10:LYS:CD	24:V:15:ALA:H	2.08	0.66
26:X:15:TYR:CB	26:X:16:PRO:CD	2.72	0.66
27:Y:44:THR:CG2	27:Y:45:VAL:N	2.57	0.66
28:Z:32:LYS:HE2	28:Z:36:GLN:OE1	1.95	0.66
33:O:18:G:C2	33:O:58:A:O4'	2.47	0.66
4:B:44:ASN:HB3	4:B:49:ILE:HG22	1.76	0.66
5:C:199:ARG:O	5:C:200:GLU:HG2	1.95	0.66
5:C:7:VAL:O	5:C:26:ILE:HG23	1.95	0.66
6:D:112:ARG:O	6:D:117:LYS:HE2	1.95	0.66
7:E:15:VAL:C	7:E:19:LEU:HD12	2.15	0.66
10:H:57:LEU:O	10:H:72:GLY:HA3	1.95	0.66
11:I:108:GLU:HB2	11:I:109:LYS:HZ1	1.60	0.66
16:N:22:PHE:HD1	16:N:22:PHE:C	1.99	0.66
17:O:76:TYR:O	17:O:79:PHE:CB	2.43	0.66
17:O:92:ARG:C	17:O:94:ASN:H	1.99	0.66
21:S:11:ASP:O	21:S:24:VAL:HA	1.94	0.66
21:S:53:PRO:O	21:S:54:LYS:HB2	1.95	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:T:101:PRO:CB	22:T:136:PHE:HB3	2.25	0.66
22:T:4:ARG:HG3	22:T:58:VAL:CB	2.23	0.66
22:T:57:ILE:HG13	22:T:58:VAL:N	2.09	0.66
22:T:6:LYS:N	22:T:6:LYS:HD3	4.83	0.66
20:R:7:VAL:O	20:R:31:HIS:HB2	1.94	0.66
3:A:63:VAL:HG22	3:A:64:SER:H	1.59	0.66
4:B:102:LYS:CE	4:B:102:LYS:N	2.57	0.66
4:B:18:VAL:HG12	4:B:19:ALA:O	1.96	0.66
7:E:3:LEU:HD22	7:E:101:ILE:HD12	1.74	0.66
7:E:107:LEU:CA	7:E:111:LEU:HD13	2.21	0.66
7:E:120:LEU:O	7:E:181:ARG:N	2.29	0.66
7:E:172:LEU:HD12	7:E:172:LEU:C	2.16	0.66
9:G:4:ILE:CB	9:G:37:VAL:HB	2.25	0.66
10:H:60:LYS:NZ	17:O:63:VAL:CG1	2.59	0.66
12:J:92:GLU:HG2	12:J:123:LEU:HD13	1.76	0.66
12:J:58:THR:HA	12:J:60:MET:SD	2.35	0.66
13:K:133:ARG:HD3	13:K:133:ARG:N	2.10	0.66
14:L:63:ARG:HA	14:L:66:VAL:HG22	1.77	0.66
17:O:109:LEU:O	17:O:112:ARG:HB2	1.94	0.66
17:O:44:ASN:CG	18:P:78:LYS:HB3	2.16	0.66
18:P:7:THR:HG23	18:P:7:THR:O	1.95	0.66
21:S:45:VAL:HG12	21:S:57:GLN:HG3	1.77	0.66
22:T:52:SER:HB2	22:T:53:ILE:HD13	1.77	0.66
24:V:10:LYS:HA	24:V:48:LYS:NZ	2.10	0.66
24:V:70:VAL:HG12	24:V:71:TYR:N	2.11	0.66
25:W:4:SER:H	25:W:7:ARG:CG	2.08	0.66
33:O:44:A:H2'	33:O:45:G:O4'	1.95	0.66
33:O:19:G:C5'	33:O:20:G:OP1	2.40	0.66
4:B:176:ARG:CA	4:B:182:LEU:HD12	2.24	0.66
4:B:108:PRO:HA	4:B:197:GLY:HA2	1.77	0.66
4:B:84:TYR:CG	4:B:85:ASP:N	2.62	0.66
6:D:4:ILE:CA	6:D:12:ARG:HE	1.96	0.66
6:D:78:PHE:CE2	6:D:81:GLY:HA3	2.30	0.66
10:H:40:ASP:OD2	10:H:83:ILE:HG13	1.96	0.66
11:I:35:VAL:HA	11:I:62:VAL:HG11	1.75	0.66
11:I:24:VAL:HG21	11:I:37:ASP:HB3	1.77	0.66
13:K:82:ARG:NE	13:K:82:ARG:O	2.21	0.66
14:L:100:LEU:HG	14:L:112:ALA:CA	2.23	0.66
18:P:100:ARG:NH1	18:P:101:GLY:OXT	2.28	0.66
19:Q:57:ASN:O	19:Q:60:ASN:N	2.20	0.66
22:T:10:ARG:CD	22:T:36:LYS:HB3	2.26	0.66
23:U:10:THR:O	23:U:11:LYS:HG2	1.95	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:U:23:VAL:C	23:U:38:VAL:HG22	2.16	0.66
23:U:79:VAL:HG23	23:U:81:VAL:HG23	1.77	0.66
4:B:133:LEU:HD23	4:B:189:CYS:O	1.95	0.66
5:C:11:MET:CE	5:C:12:THR:O	2.43	0.66
5:C:16:ARG:HB3	5:C:19:ARG:HD2	1.78	0.66
5:C:19:ARG:HH12	5:C:21:VAL:HG12	1.61	0.66
6:D:112:ARG:HB3	6:D:112:ARG:NH2	2.10	0.66
7:E:112:PRO:C	7:E:114:ILE:H	1.99	0.66
9:G:130:TYR:N	9:G:139:GLN:HA	2.09	0.66
10:H:57:LEU:O	10:H:59:GLY:N	2.28	0.66
11:I:1:MET:H2	11:I:67:LYS:HB2	1.60	0.66
11:I:88:ASN:H	11:I:93:PRO:CA	2.06	0.66
12:J:79:ARG:CB	12:J:109:GLY:HA2	2.26	0.66
14:L:36:THR:OG1	14:L:40:LYS:HG2	1.94	0.66
14:L:9:LYS:O	14:L:10:LEU:CB	2.44	0.66
19:Q:106:ILE:O	19:Q:107:LEU:HD23	1.95	0.66
20:R:7:VAL:O	20:R:30:VAL:HG13	1.95	0.66
21:S:67:LEU:O	21:S:68:HIS:CB	2.44	0.66
23:U:49:LYS:HD2	23:U:80:HIS:O	1.95	0.66
24:V:51:VAL:HB	24:V:60:PHE:O	1.94	0.66
33:O:24:G:C6	33:O:25:C:N3	2.63	0.66
4:B:243:GLY:O	4:B:244:ARG:HB3	1.94	0.66
6:D:30:GLU:HA	6:D:33:ARG:NE	2.10	0.66
7:E:148:MET:HB3	7:E:151:ALA:HB2	1.77	0.66
9:G:6:LEU:HD13	9:G:35:LEU:HD13	1.77	0.66
9:G:94:ALA:HB3	9:G:95:LYS:NZ	2.11	0.66
10:H:145:VAL:O	10:H:146:TYR:CB	2.44	0.66
10:H:84:ARG:HH21	10:H:85:VAL:HG22	1.61	0.66
11:I:59:LYS:HE2	11:I:87:ILE:CG2	2.25	0.66
14:L:44:LEU:CD2	14:L:47:PHE:HE2	2.08	0.66
14:L:45:ARG:O	14:L:48:VAL:HG13	1.96	0.66
17:O:49:HIS:HA	17:O:52:ARG:CG	2.25	0.66
18:P:24:LYS:CA	18:P:94:LEU:HG	2.25	0.66
18:P:73:SER:O	18:P:74:LYS:CB	2.43	0.66
20:R:42:ALA:O	20:R:46:ALA:HB3	1.95	0.66
20:R:81:VAL:CG2	20:R:86:GLY:CA	2.64	0.66
6:D:162:ALA:HB1	6:D:170:THR:OG1	1.95	0.66
9:G:114:LEU:CA	9:G:130:TYR:CE1	2.77	0.66
9:G:88:ILE:CG1	9:G:89:TYR:N	2.57	0.66
10:H:113:MET:CA	10:H:116:THR:HG23	2.16	0.66
13:K:132:VAL:CG2	13:K:133:ARG:NH2	2.58	0.66
14:L:104:ARG:HB2	14:L:109:ALA:HB3	1.78	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:L:20:LEU:HD23	14:L:21:TYR:N	2.10	0.66
22:T:17:ALA:CA	22:T:20:ARG:HE	1.93	0.66
22:T:94:GLU:O	22:T:95:PRO:O	2.13	0.66
28:Z:27:GLY:O	28:Z:31:LEU:HD23	1.96	0.66
3:A:186:LEU:O	3:A:190:ILE:CG1	2.44	0.66
8:F:89:ILE:HG13	8:F:94:TYR:CD1	2.31	0.66
9:G:3:VAL:HB	9:G:21:VAL:HG23	1.78	0.66
9:G:64:GLU:HG3	9:G:67:ARG:CZ	2.26	0.66
10:H:80:ALA:N	10:H:147:ALA:HA	2.09	0.66
10:H:29:PRO:O	10:H:30:LYS:HB2	1.95	0.66
10:H:32:VAL:HG11	10:H:35:ARG:HH12	1.60	0.66
10:H:90:LEU:HA	10:H:110:LEU:CG	2.25	0.66
13:K:111:GLU:CA	13:K:115:MET:HG2	2.25	0.66
14:L:37:THR:N	14:L:40:LYS:HE3	2.10	0.66
15:M:69:VAL:O	15:M:69:VAL:HG12	1.95	0.66
17:O:74:LEU:CD2	17:O:110:VAL:HG13	2.26	0.66
20:R:34:ALA:O	20:R:36:LYS:N	2.29	0.66
20:R:62:LYS:HE3	20:R:62:LYS:H	1.61	0.66
22:T:19:ARG:N	22:T:19:ARG:HD2	2.02	0.66
22:T:41:LEU:HD13	22:T:42:VAL:H	1.60	0.66
23:U:36:ILE:N	23:U:36:ILE:CD1	2.58	0.66
24:V:49:VAL:O	24:V:62:VAL:O	2.13	0.66
22:T:130:PRO:CA	22:T:133:ILE:HG12	2.26	0.66
3:A:57:GLN:HG3	3:A:202:PRO:HB3	1.75	0.66
4:B:57:GLY:H	4:B:216:GLY:CA	2.08	0.66
4:B:60:ARG:O	4:B:61:LEU:HD12	1.95	0.66
7:E:68:PRO:HB3	7:E:92:VAL:HG11	1.78	0.66
7:E:68:PRO:HB3	7:E:92:VAL:HG12	1.75	0.66
11:I:65:THR:HB	11:I:82:ASN:HD22	1.61	0.66
11:I:59:LYS:CD	11:I:87:ILE:O	2.43	0.66
11:I:88:ASN:HA	11:I:94:ARG:NE	2.10	0.66
14:L:59:ASP:O	14:L:62:ALA:HB3	1.96	0.66
14:L:71:GLN:O	14:L:72:ASP:CB	2.44	0.66
15:M:66:ALA:O	15:M:101:LEU:HD11	1.96	0.66
15:M:13:ARG:HG3	15:M:90:GLY:C	2.16	0.66
15:M:94:TYR:HE2	15:M:99:LYS:CA	2.09	0.66
16:N:48:ILE:O	16:N:50:ILE:N	2.29	0.66
20:R:51:VAL:HB	20:R:79:ALA:CB	2.22	0.66
13:K:134:ARG:HH12	22:T:53:ILE:CD1	2.08	0.66
22:T:61:LEU:HD11	22:T:67:LEU:HB2	1.77	0.66
24:V:13:ILE:HG23	24:V:14:VAL:N	2.11	0.66
4:B:201:HIS:ND1	4:B:201:HIS:C	2.49	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:218:ARG:HG2	4:B:219:PRO:CD	2.20	0.65
7:E:123:ASN:C	7:E:125:PHE:H	1.99	0.65
7:E:52:ILE:O	7:E:55:LYS:HB3	1.96	0.65
7:E:95:ARG:HD2	7:E:95:ARG:N	2.10	0.65
9:G:25:TYR:HB3	9:G:30:LEU:CD1	2.26	0.65
10:H:90:LEU:CA	10:H:110:LEU:HB2	2.26	0.65
11:I:71:ARG:C	11:I:73:ASP:H	2.00	0.65
13:K:121:ALA:O	13:K:124:LYS:HG2	1.95	0.65
13:K:26:TYR:CG	13:K:27:VAL:N	2.64	0.65
13:K:3:MET:HG2	13:K:3:MET:O	1.95	0.65
17:O:28:ARG:HD3	17:O:38:THR:OG1	1.96	0.65
20:R:12:VAL:CG1	20:R:13:LEU:H	1.96	0.65
20:R:21:PHE:CE2	20:R:26:TYR:HE1	2.14	0.65
21:S:65:ALA:HB3	21:S:66:PRO:CD	2.20	0.65
22:T:43:GLU:HA	22:T:46:LYS:HG2	1.77	0.65
4:B:242:ARG:H	4:B:242:ARG:CD	2.10	0.65
7:E:35:GLU:CB	7:E:160:VAL:HG12	2.26	0.65
8:F:125:VAL:N	8:F:131:VAL:HB	2.10	0.65
8:F:95:ARG:CZ	8:F:107:VAL:HA	2.26	0.65
9:G:125:GLU:C	9:G:142:VAL:O	2.34	0.65
9:G:62:LYS:HD3	9:G:133:HIS:HD2	1.62	0.65
9:G:82:ARG:HD2	9:G:89:TYR:CZ	2.32	0.65
13:K:124:LYS:NZ	13:K:125:LEU:HA	2.10	0.65
14:L:51:LEU:HD23	14:L:51:LEU:N	2.07	0.65
16:N:107:ASP:HA	16:N:111:ARG:NE	2.11	0.65
16:N:106:SER:HA	16:N:110:ILE:HD13	1.78	0.65
16:N:45:PHE:CZ	16:N:65:LYS:O	2.49	0.65
18:P:16:PRO:CD	18:P:18:LEU:HD21	2.19	0.65
19:Q:29:LEU:O	19:Q:33:ARG:HG2	1.96	0.65
23:U:63:VAL:O	23:U:64:ASP:HB2	1.95	0.65
25:W:10:LEU:HA	25:W:14:ARG:NH1	2.11	0.65
25:W:45:SER:O	25:W:46:GLN:HB2	1.95	0.65
3:A:165:ARG:O	3:A:171:ALA:HB1	1.96	0.65
3:A:29:LEU:O	3:A:33:LEU:HG	1.97	0.65
4:B:260:ARG:HH11	4:B:262:ARG:HA	1.60	0.65
4:B:27:THR:CG2	4:B:83:GLU:CG	2.74	0.65
5:C:38:THR:HG22	5:C:40:GLU:HG3	1.78	0.65
7:E:107:LEU:O	7:E:111:LEU:HB2	1.96	0.65
7:E:135:LEU:HD12	7:E:136:ARG:N	2.10	0.65
7:E:71:THR:HG23	7:E:89:GLY:O	1.96	0.65
8:F:60:ARG:CB	8:F:60:ARG:NH2	2.42	0.65
10:H:113:MET:C	10:H:115:ALA:N	2.49	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:79:ASN:HA	10:H:147:ALA:CA	2.27	0.65
10:H:24:VAL:HG13	10:H:24:VAL:O	1.96	0.65
15:M:71:ARG:HG3	15:M:105:ALA:CA	2.26	0.65
16:N:27:THR:O	16:N:28:VAL:CG2	2.43	0.65
16:N:70:VAL:HG13	16:N:71:GLY:H	1.62	0.65
20:R:17:ALA:CB	20:R:26:TYR:HB3	2.27	0.65
20:R:84:ALA:N	20:R:85:PRO:CD	2.60	0.65
22:T:97:GLU:HB2	22:T:126:VAL:C	2.17	0.65
23:U:68:GLU:CB	23:U:80:HIS:H	2.03	0.65
25:W:14:ARG:HG3	25:W:54:LYS:HE2	1.77	0.65
4:B:88:ARG:NH1	4:B:88:ARG:HG2	2.09	0.65
4:B:97:TYR:O	4:B:98:VAL:CG2	2.44	0.65
6:D:181:ILE:HD13	6:D:184:THR:HG1	1.61	0.65
7:E:74:LYS:HD2	7:E:86:MET:HB3	1.77	0.65
8:F:141:VAL:HG13	8:F:144:VAL:HG12	1.76	0.65
9:G:98:ALA:HB2	9:G:111:PRO:HG2	1.76	0.65
11:I:114:ILE:HG13	11:I:115:VAL:HG23	1.76	0.65
12:J:79:ARG:CG	12:J:81:GLN:NE2	2.58	0.65
13:K:62:GLY:O	13:K:63:LYS:CB	2.44	0.65
14:L:108:GLY:O	14:L:110:PRO:HD3	1.97	0.65
14:L:64:ARG:NH1	14:L:64:ARG:HB3	2.11	0.65
15:M:35:ILE:HD12	15:M:65:VAL:O	1.96	0.65
16:N:66:VAL:HG22	16:N:71:GLY:N	2.11	0.65
22:T:99:TYR:HE1	22:T:125:LEU:HD22	1.58	0.65
24:V:26:ARG:HG3	24:V:34:THR:CB	2.25	0.65
26:X:9:VAL:CG1	26:X:32:GLN:HA	2.26	0.65
33:O:64:A:C3'	33:O:65:G:C8	2.79	0.65
4:B:143:HIS:HA	4:B:156:ALA:HB1	1.78	0.65
4:B:8:PRO:HA	4:B:14:ARG:HA	1.79	0.65
4:B:175:LEU:HD23	4:B:175:LEU:O	1.96	0.65
5:C:116:VAL:CG2	5:C:122:PHE:CD1	2.79	0.65
5:C:9:VAL:HG23	5:C:25:VAL:O	1.97	0.65
5:C:5:LEU:CD1	5:C:31:CYS:HB2	2.26	0.65
6:D:153:THR:C	6:D:172:ALA:HA	2.17	0.65
6:D:190:ASP:O	6:D:194:TRP:HB3	1.96	0.65
12:J:35:HIS:C	12:J:36:LYS:CD	2.65	0.65
13:K:132:VAL:HG13	13:K:133:ARG:N	2.12	0.65
13:K:136:ALA:O	13:K:137:TYR:CD1	2.48	0.65
13:K:71:ASP:OD2	13:K:96:VAL:HG23	1.96	0.65
14:L:54:LEU:HA	14:L:57:ARG:HG2	1.78	0.65
14:L:73:VAL:HG13	14:L:77:ARG:NH2	2.12	0.65
4:B:92:ILE:HA	4:B:105:ILE:O	1.97	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:64:ILE:CD1	4:B:67:PHE:HZ	2.09	0.65
4:B:9:TYR:HD1	4:B:9:TYR:H	1.41	0.65
7:E:6:ALA:O	7:E:10:LYS:HB2	1.96	0.65
8:F:97:ARG:N	8:F:125:VAL:HG11	2.11	0.65
9:G:127:VAL:HA	9:G:141:LYS:HG2	1.79	0.65
9:G:15:VAL:HG13	9:G:17:GLN:HE21	1.61	0.65
9:G:26:ALA:HB1	9:G:31:LEU:HB2	1.78	0.65
10:H:95:TYR:HE1	10:H:109:PRO:O	1.80	0.65
12:J:45:LEU:O	12:J:47:ASP:N	2.29	0.65
12:J:80:TYR:C	12:J:81:GLN:HE21	2.00	0.65
13:K:37:LEU:HG	13:K:128:LYS:N	2.12	0.65
13:K:66:ILE:HG22	13:K:104:PHE:CD2	2.32	0.65
13:K:67:ARG:C	13:K:68:ILE:CG1	2.63	0.65
14:L:2:ARG:HG3	14:L:3:HIS:N	2.10	0.65
19:Q:48:ALA:O	19:Q:51:LEU:HD13	1.97	0.65
20:R:12:VAL:HB	20:R:27:THR:HB	1.79	0.65
21:S:27:VAL:C	21:S:28:LYS:HD3	2.17	0.65
23:U:37:LEU:HG	23:U:38:VAL:H	1.61	0.65
23:U:75:LEU:O	23:U:75:LEU:HD13	1.97	0.65
23:U:84:LEU:HD23	23:U:84:LEU:C	4.33	0.65
25:W:22:GLU:CA	25:W:25:VAL:HG13	2.25	0.65
27:Y:8:LYS:NZ	27:Y:8:LYS:HB2	2.12	0.65
4:B:118:VAL:CG1	4:B:129:ASN:HD21	2.10	0.65
5:C:3:GLY:CA	5:C:198:VAL:HB	2.26	0.65
5:C:5:LEU:HD13	5:C:31:CYS:CB	2.27	0.65
5:C:55:ASN:ND2	5:C:75:VAL:CG2	2.55	0.65
9:G:147:GLN:HG3	9:G:148:GLU:H	1.62	0.65
13:K:5:ARG:O	13:K:6:ARG:HB3	1.96	0.65
14:L:73:VAL:HG13	14:L:77:ARG:HH21	1.62	0.65
15:M:17:ARG:NH1	15:M:89:ARG:CD	2.60	0.65
15:M:38:GLN:HA	15:M:50:SER:HA	1.79	0.65
21:S:44:ILE:O	21:S:44:ILE:HG13	1.95	0.65
25:W:12:GLU:O	25:W:14:ARG:N	2.29	0.65
26:X:15:TYR:CB	26:X:16:PRO:HD2	2.25	0.65
26:X:5:LYS:CB	26:X:57:GLU:O	2.44	0.65
5:C:96:PHE:HA	5:C:100:GLU:OE1	1.96	0.65
5:C:11:MET:O	5:C:12:THR:CG2	2.40	0.65
5:C:5:LEU:HD13	5:C:31:CYS:SG	2.37	0.65
12:J:95:VAL:HB	12:J:125:VAL:HB	1.79	0.65
12:J:6:LEU:O	12:J:8:PRO:HD3	1.96	0.65
12:J:82:GLY:O	12:J:83:VAL:HB	1.94	0.65
13:K:121:ALA:O	13:K:124:LYS:HG3	1.96	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:K:35:VAL:CA	13:K:103:MET:HE1	2.27	0.65
13:K:82:ARG:HD3	13:K:82:ARG:N	2.12	0.65
14:L:66:VAL:HG12	14:L:70:LEU:HD12	1.79	0.65
22:T:45:ASP:O	22:T:49:ARG:HG3	1.97	0.65
24:V:12:PRO:O	24:V:13:ILE:HD12	1.97	0.65
28:Z:14:LYS:HA	28:Z:20:ALA:CB	2.27	0.65
4:B:228:PRO:HD3	4:B:236:GLY:HA2	1.78	0.65
4:B:32:SER:OG	4:B:33:LEU:N	2.29	0.65
5:C:7:VAL:O	5:C:9:VAL:HG22	1.97	0.65
9:G:62:LYS:HD3	9:G:133:HIS:CD2	2.32	0.65
9:G:69:LYS:HD2	9:G:137:PRO:O	1.96	0.65
12:J:99:LEU:O	12:J:103:ALA:HB3	1.97	0.65
17:O:44:ASN:ND2	18:P:78:LYS:CB	2.57	0.65
21:S:38:ILE:CG1	21:S:60:PHE:CZ	2.80	0.65
23:U:22:GLY:HA3	23:U:24:LYS:HZ2	1.62	0.65
24:V:90:ILE:HB	24:V:91:LYS:HZ1	1.62	0.65
20:R:8:ILE:H	25:W:26:ARG:HH12	1.45	0.65
26:X:8:LEU:CD1	26:X:33:GLN:H	2.09	0.65
4:B:158:ALA:O	4:B:159:ALA:HB3	1.96	0.65
4:B:20:ASP:O	4:B:91:ARG:NH1	2.29	0.65
4:B:212:SER:HA	4:B:217:ARG:HD2	1.79	0.65
5:C:20:ALA:HB3	11:I:72:PRO:O	1.97	0.65
7:E:170:ARG:O	7:E:173:LEU:HB3	1.97	0.65
7:E:19:LEU:CD2	7:E:25:TYR:CE2	2.80	0.65
9:G:125:GLU:HA	9:G:143:SER:HA	1.77	0.65
10:H:75:VAL:CG1	10:H:76:VAL:N	2.60	0.65
10:H:86:THR:HG22	10:H:89:LYS:HZ1	1.62	0.65
11:I:71:ARG:O	11:I:73:ASP:N	2.30	0.65
11:I:73:ASP:O	11:I:74:GLY:C	2.35	0.65
12:J:71:VAL:HG22	12:J:72:PRO:CD	2.28	0.65
14:L:53:HIS:O	14:L:57:ARG:HG2	1.97	0.65
16:N:98:LYS:O	16:N:100:TYR:HD1	1.80	0.65
16:N:110:ILE:C	16:N:112:ARG:H	1.98	0.65
18:P:38:LEU:HD21	18:P:58:VAL:HG12	1.79	0.65
18:P:21:ARG:HD2	18:P:93:GLU:HG3	1.78	0.65
21:S:11:ASP:HA	21:S:24:VAL:HG23	1.79	0.65
21:S:23:ARG:HD3	21:S:38:ILE:CG2	2.27	0.65
21:S:45:VAL:HA	21:S:58:GLY:N	2.12	0.65
23:U:49:LYS:O	23:U:81:VAL:CG2	2.45	0.65
26:X:5:LYS:CE	26:X:7:LYS:CE	2.72	0.65
33:O:24:G:C5	33:O:25:C:N3	2.65	0.64
33:O:27:C:C2	33:O:28:C:C4	2.85	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:121:PRO:HB3	4:B:132:PRO:HD2	1.78	0.64
4:B:164:GLN:HG3	4:B:176:ARG:CB	2.26	0.64
4:B:223:GLY:O	4:B:225:ALA:N	2.24	0.64
4:B:36:PRO:HG3	4:B:61:LEU:HD23	1.78	0.64
4:B:77:ALA:O	4:B:117:VAL:HG23	1.97	0.64
6:D:109:VAL:HA	6:D:112:ARG:HB2	1.79	0.64
6:D:112:ARG:CB	6:D:117:LYS:HE2	2.27	0.64
8:F:15:VAL:O	8:F:15:VAL:HG23	1.95	0.64
11:I:112:MET:O	11:I:113:LYS:C	2.35	0.64
11:I:32:TYR:O	11:I:33:ALA:HB2	1.95	0.64
12:J:61:ARG:C	12:J:61:ARG:NE	2.51	0.64
13:K:73:PRO:O	13:K:74:TYR:HB2	1.95	0.64
19:Q:17:VAL:CG2	19:Q:18:ARG:H	2.08	0.64
19:Q:17:VAL:O	19:Q:20:VAL:N	2.29	0.64
22:T:119:GLU:N	22:T:119:GLU:OE1	2.28	0.64
23:U:49:LYS:NZ	23:U:80:HIS:HB3	2.12	0.64
4:B:111:LEU:HD13	4:B:112:GLN:N	2.12	0.64
4:B:133:LEU:HB2	4:B:187:GLY:O	1.97	0.64
4:B:164:GLN:C	4:B:165:ILE:HD12	2.17	0.64
8:F:70:THR:O	8:F:74:ASN:ND2	2.30	0.64
9:G:101:LEU:CG	9:G:109:ILE:HD12	2.27	0.64
10:H:132:LYS:HE2	10:H:132:LYS:N	2.12	0.64
10:H:58:ARG:HA	10:H:139:LEU:HD13	1.80	0.64
11:I:69:VAL:O	11:I:70:LYS:HB3	1.97	0.64
11:I:88:ASN:O	11:I:89:ASN:C	2.34	0.64
12:J:71:VAL:HG22	12:J:72:PRO:HD3	1.78	0.64
13:K:75:THR:O	13:K:88:GLY:HA3	1.97	0.64
16:N:45:PHE:CD2	16:N:63:VAL:HG23	2.31	0.64
17:O:25:TRP:C	17:O:25:TRP:HE3	2.00	0.64
17:O:63:VAL:O	17:O:66:ASN:N	2.30	0.64
19:Q:72:LYS:CD	19:Q:106:ILE:HB	2.27	0.64
23:U:40:GLN:CG	23:U:41:ARG:H	2.11	0.64
4:B:65:ILE:HG21	4:B:105:ILE:CA	2.25	0.64
5:C:15:PHE:HA	5:C:20:ALA:HA	1.79	0.64
6:D:127:VAL:O	6:D:129:GLY:N	2.30	0.64
7:E:97:ASP:HA	7:E:100:TRP:CB	2.22	0.64
9:G:53:ALA:O	9:G:57:ARG:HD3	1.97	0.64
10:H:39:ILE:O	10:H:40:ASP:CB	2.45	0.64
10:H:49:LEU:CA	10:H:52:LYS:HE3	2.24	0.64
13:K:59:ARG:HD2	13:K:59:ARG:H	1.60	0.64
14:L:53:HIS:HA	14:L:56:LYS:HE2	1.80	0.64
16:N:92:GLY:O	16:N:93:ARG:HB3	1.97	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:O:63:VAL:O	17:O:64:ARG:C	2.35	0.64
19:Q:51:LEU:HD22	19:Q:52:GLU:N	2.12	0.64
20:R:36:LYS:C	20:R:38:GLU:H	2.00	0.64
20:R:55:ASN:H	20:R:77:LYS:CD	2.09	0.64
20:R:57:LEU:O	20:R:58:HIS:CB	2.45	0.64
21:S:32:PRO:O	21:S:33:LYS:HB2	1.97	0.64
22:T:77:ASP:HB3	22:T:82:ARG:O	1.97	0.64
4:B:115:GLN:NE2	4:B:127:VAL:HB	2.11	0.64
4:B:72:LYS:C	4:B:74:GLY:N	2.51	0.64
5:C:28:ALA:HB3	5:C:180:ASN:CA	2.27	0.64
6:D:100:VAL:C	6:D:102:LYS:N	2.51	0.64
8:F:144:VAL:HG13	8:F:145:ALA:N	2.13	0.64
8:F:19:VAL:HA	8:F:24:VAL:HA	1.78	0.64
12:J:96:THR:O	12:J:100:LEU:HD23	1.96	0.64
12:J:78:PRO:CB	12:J:110:TYR:CD2	2.80	0.64
13:K:37:LEU:HG	13:K:128:LYS:H	1.63	0.64
14:L:12:ARG:HG2	14:L:13:HIS:N	2.11	0.64
14:L:96:ARG:H	14:L:98:LEU:HG	8.10	0.64
16:N:38:ASN:N	16:N:38:ASN:HD22	1.95	0.64
11:I:80:ASP:OD1	16:N:71:GLY:HA3	1.96	0.64
17:O:8:VAL:O	17:O:11:ARG:HG2	1.97	0.64
17:O:50:ARG:HH21	17:O:50:ARG:HG2	1.63	0.64
18:P:19:LYS:HG2	18:P:96:ILE:C	2.17	0.64
19:Q:5:ALA:HB2	19:Q:54:ALA:HB2	1.78	0.64
20:R:32:PRO:HB3	20:R:73:ARG:O	1.97	0.64
22:T:72:ARG:O	22:T:73:GLN:CB	2.38	0.64
24:V:40:ARG:CD	24:V:41:ARG:H	2.10	0.64
24:V:66:HIS:O	24:V:70:VAL:HG23	1.98	0.64
33:O:24:G:C4	33:O:25:C:C6	2.86	0.64
24:V:27:GLU:HG3	33:O:74:C:H5"	1.80	0.64
3:A:217:THR:HB	3:A:220:GLY:N	2.13	0.64
4:B:198:ASN:HB3	4:B:201:HIS:CD2	2.32	0.64
4:B:208:LYS:HE3	4:B:211:ARG:N	2.12	0.64
5:C:39:PRO:HD3	5:C:44:TYR:HA	1.80	0.64
6:D:178:VAL:O	6:D:181:ILE:CG2	2.43	0.64
6:D:26:HIS:CG	6:D:27:LEU:HD13	2.33	0.64
9:G:81:VAL:CG1	9:G:144:VAL:HG13	2.25	0.64
11:I:70:LYS:HA	11:I:76:ALA:HA	1.80	0.64
13:K:134:ARG:HD3	13:K:134:ARG:C	2.16	0.64
15:M:35:ILE:HD13	15:M:69:VAL:CB	2.13	0.64
21:S:28:LYS:HA	21:S:35:TYR:CB	2.27	0.64
22:T:4:ARG:CG	22:T:58:VAL:HB	2.26	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:U:49:LYS:O	23:U:51:VAL:N	2.30	0.64
24:V:65:SER:O	24:V:67:ILE:N	2.30	0.64
25:W:35:LEU:HD23	25:W:35:LEU:H	1.62	0.64
5:C:77:ILE:CG2	5:C:79:ARG:HH21	2.10	0.64
6:D:96:LEU:HB3	6:D:97:PRO:HD2	1.77	0.64
8:F:124:GLU:OE1	8:F:134:SER:HB2	1.98	0.64
8:F:54:ARG:HH11	8:F:61:HIS:HB2	1.62	0.64
8:F:87:LEU:HD21	8:F:133:VAL:CG1	2.27	0.64
8:F:89:ILE:HD12	8:F:89:ILE:H	4.48	0.64
9:G:130:TYR:HD2	9:G:138:ILE:HG21	1.63	0.64
9:G:40:THR:CG2	9:G:43:ASN:CB	2.72	0.64
10:H:89:LYS:HD3	10:H:89:LYS:N	2.13	0.64
11:I:81:ASP:O	11:I:82:ASN:ND2	2.31	0.64
11:I:81:ASP:O	11:I:82:ASN:CG	2.36	0.64
13:K:57:HIS:O	13:K:58:PHE:HD2	1.79	0.64
14:L:25:ALA:O	14:L:29:LEU:HB2	1.96	0.64
15:M:28:VAL:HG13	15:M:29:PHE:H	1.63	0.64
19:Q:101:SER:O	19:Q:102:HIS:ND1	2.31	0.64
19:Q:46:PHE:C	19:Q:48:ALA:N	2.50	0.64
4:B:117:VAL:CG1	4:B:118:VAL:H	2.10	0.64
4:B:20:ASP:O	4:B:24:ILE:CA	2.46	0.64
5:C:102:VAL:CB	5:C:200:GLU:HA	2.27	0.64
5:C:28:ALA:O	5:C:30:PRO:HD3	1.96	0.64
5:C:35:GLN:HB2	5:C:48:GLN:OE1	1.96	0.64
7:E:120:LEU:O	7:E:181:ARG:HB2	1.98	0.64
7:E:13:GLU:O	7:E:17:PRO:HG3	1.97	0.64
7:E:93:THR:HG22	7:E:94:LEU:N	2.13	0.64
10:H:112:LYS:O	10:H:115:ALA:HB3	1.98	0.64
11:I:71:ARG:HB3	11:I:72:PRO:CD	2.26	0.64
14:L:31:HIS:CB	14:L:34:ILE:HD11	2.27	0.64
16:N:108:ARG:NH1	16:N:108:ARG:HG2	2.10	0.64
16:N:64:ARG:HD2	16:N:73:GLU:OE1	1.97	0.64
17:O:94:ASN:ND2	17:O:94:ASN:H	1.95	0.64
17:O:92:ARG:HG2	17:O:94:ASN:ND2	2.13	0.64
22:T:80:ARG:CG	22:T:81:ARG:N	2.57	0.64
23:U:50:ASN:CA	23:U:63:VAL:HB	2.19	0.64
24:V:55:GLY:O	24:V:56:GLN:HB2	1.96	0.64
24:V:85:LEU:O	24:V:86:SER:CB	2.44	0.64
26:X:43:ILE:HD12	26:X:43:ILE:H	1.53	0.64
28:Z:16:HIS:HA	28:Z:21:ARG:CG	2.11	0.64
4:B:92:ILE:HD12	4:B:92:ILE:C	2.18	0.64
5:C:4:ILE:CD1	5:C:91:VAL:HG12	2.24	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:117:LYS:HE3	6:D:185:GLU:O	1.97	0.64
6:D:183:ARG:NH2	12:J:7:ARG:HB3	2.11	0.64
9:G:44:LEU:HA	9:G:47:LEU:CD2	2.28	0.64
10:H:37:VAL:CG1	10:H:159:GLU:HA	2.28	0.64
10:H:86:THR:CG2	10:H:89:LYS:HZ2	2.08	0.64
13:K:34:LEU:HD22	13:K:118:LEU:CG	2.26	0.64
15:M:67:ARG:HA	15:M:101:LEU:HD23	1.80	0.64
16:N:48:ILE:HG22	16:N:49:VAL:N	2.11	0.64
17:O:106:PHE:HA	17:O:109:LEU:HD11	1.80	0.64
17:O:38:THR:C	17:O:40:PHE:H	2.00	0.64
17:O:89:GLU:O	17:O:90:VAL:HG23	1.98	0.64
18:P:38:LEU:O	18:P:55:ALA:HB2	1.97	0.64
18:P:86:GLY:O	18:P:87:HIS:HD2	1.80	0.64
26:X:27:GLY:HA2	26:X:29:ARG:HH12	1.63	0.64
26:X:8:LEU:HD12	26:X:9:VAL:N	2.12	0.64
3:A:16:ASP:CB	3:A:19:LYS:HD2	2.26	0.64
3:A:53:ARG:N	3:A:53:ARG:NE	2.44	0.64
5:C:119:ARG:HE	5:C:157:ALA:CA	2.07	0.64
6:D:150:LEU:CB	6:D:169:VAL:HB	2.27	0.64
6:D:55:SER:C	6:D:57:ARG:H	1.99	0.64
7:E:75:LYS:CB	7:E:77:ILE:HD13	2.25	0.64
8:F:28:GLY:C	8:F:30:LYS:H	2.01	0.64
9:G:37:VAL:O	9:G:38:LEU:C	2.36	0.64
10:H:127:LYS:CA	10:H:130:LEU:HD11	2.14	0.64
12:J:61:ARG:O	12:J:62:LEU:HB3	1.98	0.64
12:J:88:LEU:C	12:J:90:ARG:H	2.01	0.64
13:K:8:LYS:HE3	13:K:70:PRO:CG	2.28	0.64
15:M:71:ARG:HA	15:M:108:GLY:O	1.97	0.64
18:P:5:VAL:CG2	18:P:6:LYS:H	2.01	0.64
18:P:85:LYS:HG2	18:P:86:GLY:N	2.13	0.64
19:Q:23:LEU:HB2	27:Y:25:LEU:HB2	1.80	0.64
22:T:99:TYR:CE1	22:T:125:LEU:HD13	2.32	0.64
22:T:28:MET:HE2	22:T:29:TYR:HA	1.79	0.64
25:W:26:ARG:HG3	25:W:29:LYS:HD3	1.78	0.64
26:X:40:THR:O	26:X:43:ILE:CB	2.40	0.64
33:O:69:U:O5'	33:O:69:U:H6	1.80	0.64
3:A:23:ILE:O	3:A:27:ALA:CB	2.46	0.64
3:A:21:TYR:CB	3:A:26:ALA:HB2	2.25	0.64
4:B:106:ILE:CD1	4:B:197:GLY:H	2.09	0.64
5:C:176:ILE:HG22	5:C:181:LEU:HD23	1.80	0.64
5:C:81:ILE:CD1	5:C:81:ILE:H	2.11	0.64
6:D:112:ARG:O	6:D:117:LYS:CE	2.46	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:165:LEU:CG	6:D:170:THR:HB	2.26	0.64
6:D:177:ASN:HA	6:D:179:TYR:CE2	2.33	0.64
8:F:127:GLU:N	8:F:128:PRO:HA	2.13	0.64
9:G:19:VAL:C	9:G:21:VAL:H	1.99	0.64
11:I:66:LYS:O	11:I:67:LYS:O	2.16	0.64
13:K:98:LYS:HD2	13:K:101:ARG:HE	1.61	0.64
17:O:104:GLN:O	17:O:107:ALA:HB3	1.97	0.64
18:P:25:LEU:H	18:P:94:LEU:HD11	1.62	0.64
19:Q:85:VAL:HG22	19:Q:95:ILE:HG12	1.79	0.64
21:S:40:GLU:OE1	21:S:42:VAL:HG23	1.98	0.64
22:T:150:LEU:CD2	22:T:154:ASP:HB2	2.27	0.64
22:T:3:TYR:C	22:T:57:ILE:HD12	2.18	0.64
23:U:49:LYS:C	23:U:51:VAL:H	2.01	0.64
9:G:131:LYS:HE2	9:G:134:PRO:CA	2.28	0.63
4:B:123:ALA:CB	4:B:124:PRO:HD2	2.20	0.63
5:C:152:LYS:HD2	5:C:153:GLY:N	2.12	0.63
5:C:59:VAL:HG13	5:C:60:ASN:N	2.13	0.63
5:C:91:VAL:O	5:C:92:THR:HG23	1.97	0.63
7:E:137:GLU:O	7:E:138:GLN:CG	2.43	0.63
7:E:22:ARG:O	7:E:23:PHE:CB	2.46	0.63
7:E:93:THR:CG2	7:E:94:LEU:N	2.61	0.63
9:G:47:LEU:HD12	9:G:48:GLU:N	2.13	0.63
10:H:65:TRP:CE3	10:H:71:MET:CE	2.81	0.63
10:H:83:ILE:HG22	10:H:84:ARG:N	2.12	0.63
11:I:86:ILE:O	11:I:87:ILE:C	2.35	0.63
12:J:85:LEU:C	12:J:87:ASP:H	2.01	0.63
12:J:88:LEU:HD21	12:J:90:ARG:NH2	2.13	0.63
13:K:14:ARG:N	13:K:14:ARG:HD2	2.12	0.63
13:K:31:ASP:HB3	13:K:106:VAL:O	1.98	0.63
14:L:64:ARG:CG	14:L:64:ARG:HH11	2.11	0.63
17:O:66:ASN:O	17:O:70:ARG:HG3	1.98	0.63
18:P:85:LYS:NZ	18:P:86:GLY:H	1.96	0.63
19:Q:29:LEU:HG	19:Q:30:GLU:N	2.12	0.63
19:Q:46:PHE:C	19:Q:48:ALA:H	2.02	0.63
20:R:55:ASN:H	20:R:77:LYS:HD3	1.62	0.63
21:S:42:VAL:HB	21:S:61:ILE:HG21	1.79	0.63
23:U:47:PRO:HB3	23:U:51:VAL:HB	1.77	0.63
23:U:71:ASP:HB2	23:U:76:GLY:O	1.98	0.63
4:B:96:HIS:HA	4:B:102:LYS:HG3	1.80	0.63
5:C:101:ARG:NE	5:C:169:ASN:HB3	2.14	0.63
5:C:203:LYS:HB2	5:C:203:LYS:NZ	2.12	0.63
5:C:51:PHE:CA	5:C:76:ARG:HB3	2.27	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:60:TRP:CB	6:D:61:PRO:HD2	2.28	0.63
8:F:40:GLU:HG3	8:F:55:PRO:HB3	1.80	0.63
9:G:4:ILE:HG13	9:G:18:VAL:HG22	1.79	0.63
13:K:134:ARG:CZ	13:K:137:TYR:H	2.10	0.63
13:K:61:GLY:HA3	22:T:183:LEU:HG	1.79	0.63
13:K:8:LYS:HE3	13:K:70:PRO:HB2	1.80	0.63
16:N:38:ASN:H	16:N:38:ASN:HD22	1.46	0.63
16:N:85:LYS:HB3	16:N:85:LYS:HZ2	1.61	0.63
17:O:17:ILE:CG2	17:O:35:ALA:HB3	2.28	0.63
17:O:5:LYS:HG3	17:O:6:THR:H	1.63	0.63
18:P:50:PRO:HG2	18:P:51:VAL:H	1.64	0.63
23:U:67:VAL:HG23	23:U:79:VAL:HG11	1.80	0.63
26:X:8:LEU:CD2	26:X:33:GLN:O	2.46	0.63
27:Y:38:ALA:HB2	27:Y:49:CYS:H	1.58	0.63
33:O:15:G:OP2	33:O:15:G:C8	2.48	0.63
5:C:7:VAL:HG12	5:C:76:ARG:NH2	2.13	0.63
6:D:169:VAL:HG13	6:D:170:THR:N	2.08	0.63
6:D:4:ILE:HG12	6:D:12:ARG:CG	2.28	0.63
8:F:81:GLU:HB3	8:F:89:ILE:O	27.05	0.63
9:G:124:GLY:HA2	9:G:144:VAL:CA	2.28	0.63
10:H:122:LEU:CD1	10:H:122:LEU:H	2.11	0.63
11:I:4:PRO:HA	11:I:21:CYS:SG	2.38	0.63
11:I:4:PRO:HB3	11:I:23:ARG:HA	1.79	0.63
13:K:124:LYS:HZ1	13:K:125:LEU:HD23	1.62	0.63
14:L:76:VAL:HG12	14:L:80:PHE:CZ	2.34	0.63
17:O:78:THR:O	17:O:81:HIS:CB	2.44	0.63
19:Q:58:ALA:CA	19:Q:62:HIS:HB2	2.27	0.63
19:Q:6:ILE:N	19:Q:6:ILE:HD13	2.13	0.63
20:R:89:ILE:N	20:R:92:LEU:HD12	2.13	0.63
25:W:3:LEU:HG	25:W:7:ARG:CG	2.27	0.63
4:B:130:ALA:HB1	4:B:190:TYR:CE1	2.34	0.63
4:B:27:THR:CG2	4:B:83:GLU:HG3	2.28	0.63
5:C:11:MET:CG	5:C:12:THR:N	2.58	0.63
5:C:60:ASN:C	5:C:62:PRO:HD2	2.19	0.63
6:D:129:GLY:C	6:D:134:PHE:HZ	2.01	0.63
6:D:148:SER:N	6:D:167:TRP:CZ2	2.66	0.63
6:D:172:ALA:CB	6:D:173:PRO:CD	2.75	0.63
6:D:26:HIS:CD2	6:D:27:LEU:HD13	2.33	0.63
9:G:130:TYR:HB3	9:G:138:ILE:HG23	1.79	0.63
9:G:81:VAL:CG2	9:G:146:ALA:HA	2.27	0.63
9:G:6:LEU:CD1	9:G:35:LEU:HA	2.28	0.63
11:I:66:LYS:HD2	11:I:78:ARG:HH21	1.63	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:J:39:LYS:NZ	12:J:40:SER:H	1.97	0.63
15:M:17:ARG:CZ	15:M:89:ARG:CD	2.76	0.63
15:M:94:TYR:CD2	15:M:99:LYS:HG2	2.32	0.63
16:N:93:ARG:HH22	16:N:118:ARG:CG	2.03	0.63
17:O:24:TYR:CE1	17:O:38:THR:HG21	2.33	0.63
17:O:50:ARG:O	17:O:53:ARG:HG2	1.98	0.63
13:K:2:LEU:HD12	22:T:182:LYS:NZ	2.13	0.63
22:T:44:PHE:O	22:T:48:PHE:HD2	1.81	0.63
25:W:4:SER:CB	25:W:6:VAL:HG22	2.28	0.63
26:X:58:VAL:HG12	26:X:59:VAL:N	2.13	0.63
14:L:78:LYS:O	14:L:82:GLU:HG2	1.96	0.63
3:A:63:VAL:HG13	3:A:64:SER:N	2.14	0.63
4:B:132:PRO:HB3	4:B:188:GLU:HG2	1.80	0.63
4:B:165:ILE:HA	4:B:175:LEU:HA	1.81	0.63
4:B:185:VAL:HG13	4:B:186:HIS:H	1.60	0.63
4:B:200:ASP:O	4:B:202:LYS:N	2.31	0.63
5:C:175:VAL:CB	5:C:182:LEU:CD1	2.73	0.63
6:D:48:THR:HA	6:D:52:VAL:HG11	1.79	0.63
6:D:65:THR:C	6:D:67:ARG:H	2.00	0.63
7:E:111:LEU:CB	7:E:112:PRO:CD	2.76	0.63
7:E:137:GLU:OE2	7:E:140:ILE:CG1	2.46	0.63
9:G:3:VAL:C	9:G:4:ILE:HD12	2.19	0.63
11:I:17:ARG:HB2	11:I:45:GLU:HG3	1.81	0.63
12:J:122:PRO:CB	12:J:142:GLY:HA3	2.29	0.63
12:J:148:LEU:N	12:J:148:LEU:HD13	2.04	0.63
13:K:37:LEU:HG	13:K:128:LYS:C	2.18	0.63
13:K:23:GLY:C	13:K:98:LYS:HD3	2.17	0.63
13:K:81:VAL:HG23	13:K:82:ARG:H	1.63	0.63
14:L:116:LEU:N	14:L:116:LEU:HD12	2.11	0.63
14:L:73:VAL:O	14:L:77:ARG:HB3	1.98	0.63
16:N:53:ARG:HE	16:N:59:THR:HA	1.64	0.63
11:I:78:ARG:H	16:N:73:GLU:HB2	1.64	0.63
18:P:89:GLN:HG2	18:P:90:PRO:HD2	1.79	0.63
17:O:69:CYS:O	17:O:74:LEU:HD12	1.98	0.63
5:C:108:SER:CA	5:C:189:PRO:HG3	2.20	0.63
5:C:84:PHE:CE1	5:C:86:PRO:HG3	2.33	0.63
6:D:111:ASP:O	6:D:114:ARG:HG2	1.98	0.63
7:E:170:ARG:HA	7:E:173:LEU:HB2	1.80	0.63
8:F:60:ARG:HB3	8:F:60:ARG:CZ	2.27	0.63
9:G:130:TYR:CD2	9:G:132:PRO:HG3	2.32	0.63
11:I:108:GLU:HB2	11:I:109:LYS:NZ	2.13	0.63
11:I:114:ILE:CG1	11:I:115:VAL:H	2.03	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:J:59:LEU:HG	12:J:59:LEU:O	1.99	0.63
13:K:16:ARG:HG3	13:K:17:LEU:H	1.64	0.63
14:L:32:GLY:HA3	14:L:116:LEU:HD11	1.81	0.63
18:P:26:ASP:O	18:P:27:ALA:CB	2.46	0.63
22:T:18:LEU:HB3	22:T:23:LYS:HG3	1.81	0.63
22:T:77:ASP:HB3	22:T:82:ARG:C	2.19	0.63
25:W:17:SER:O	25:W:21:LEU:CB	2.46	0.63
26:X:40:THR:HB	26:X:41:PRO:HD2	1.79	0.63
33:O:41:U:O2'	33:O:42:G:H5'	1.97	0.63
33:O:8:U:C2'	33:O:9:A:H5''	2.28	0.63
3:A:27:ALA:O	3:A:30:VAL:HG23	1.98	0.63
4:B:157:ARG:O	4:B:158:ALA:CB	2.47	0.63
4:B:31:LYS:HE2	4:B:32:SER:O	1.98	0.63
5:C:27:LEU:CD2	5:C:28:ALA:O	2.46	0.63
5:C:90:THR:HG22	5:C:91:VAL:H	1.63	0.63
6:D:100:VAL:O	6:D:102:LYS:N	2.32	0.63
9:G:3:VAL:HG12	9:G:4:ILE:N	2.13	0.63
10:H:119:GLU:HG3	10:H:120:ARG:H	1.63	0.63
11:I:41:ALA:C	11:I:57:VAL:HG22	2.19	0.63
11:I:64:ARG:O	11:I:82:ASN:HA	1.98	0.63
11:I:65:THR:HB	11:I:82:ASN:HD21	1.62	0.63
11:I:85:VAL:HG12	11:I:86:ILE:N	2.14	0.63
14:L:11:ASN:O	14:L:12:ARG:CB	2.47	0.63
14:L:45:ARG:HH11	14:L:46:GLY:H	1.44	0.63
17:O:49:HIS:HA	17:O:52:ARG:HB2	1.80	0.63
18:P:44:LYS:CG	18:P:45:THR:H	2.01	0.63
19:Q:22:ASP:OD2	19:Q:25:ARG:HD2	1.98	0.63
20:R:20:GLY:HA3	20:R:25:LYS:C	2.19	0.63
23:U:48:GLY:C	23:U:49:LYS:HG3	2.17	0.63
24:V:76:ARG:NH2	24:V:94:LEU:HD11	2.12	0.63
26:X:43:ILE:HD13	26:X:43:ILE:H	1.62	0.63
27:Y:40:LYS:HE2	27:Y:46:CYS:HB2	1.81	0.63
28:Z:2:LYS:HB2	28:Z:6:GLN:HE22	1.60	0.63
4:B:4:LYS:HB3	4:B:18:VAL:HB	1.81	0.63
5:C:55:ASN:O	5:C:57:LYS:N	2.31	0.63
6:D:135:LEU:C	6:D:135:LEU:HD23	2.19	0.63
6:D:36:LEU:HA	6:D:39:ARG:NH2	2.14	0.63
8:F:118:PRO:HD2	8:F:121:ILE:CG1	2.28	0.63
8:F:53:GLU:HG3	8:F:54:ARG:N	2.14	0.63
9:G:1:MET:C	9:G:3:VAL:H	1.98	0.63
13:K:35:VAL:CG2	13:K:130:LYS:H	2.10	0.63
13:K:131:ILE:HG13	13:K:132:VAL:N	2.12	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:L:59:ASP:O	14:L:60:LEU:O	2.17	0.63
15:M:69:VAL:O	15:M:69:VAL:CG1	2.47	0.63
22:T:61:LEU:CD1	22:T:67:LEU:HB2	2.29	0.63
24:V:85:LEU:HD11	24:V:88:LYS:CA	2.29	0.63
24:V:86:SER:N	24:V:87:PRO:HD2	2.14	0.63
4:B:165:ILE:HG12	4:B:173:VAL:HG22	1.80	0.63
5:C:184:VAL:CG2	5:C:185:LYS:H	2.01	0.63
5:C:48:GLN:HA	5:C:79:ARG:O	1.98	0.63
7:E:123:ASN:HA	7:E:125:PHE:CD2	2.33	0.63
7:E:46:ALA:CB	7:E:84:LYS:HB3	2.25	0.63
9:G:92:VAL:O	9:G:93:THR:CG2	2.38	0.63
10:H:34:PRO:CB	10:H:142:ARG:HH12	2.10	0.63
10:H:40:ASP:OD1	10:H:83:ILE:HD11	1.98	0.63
13:K:124:LYS:NZ	13:K:125:LEU:CA	2.62	0.63
13:K:51:ARG:NH1	13:K:51:ARG:CB	2.41	0.63
14:L:12:ARG:CG	14:L:13:HIS:N	2.62	0.63
14:L:50:HIS:HD2	14:L:53:HIS:CE1	2.03	0.63
16:N:29:ARG:HG2	16:N:86:ILE:HB	1.80	0.63
16:N:30:VAL:C	16:N:44:ASP:OD2	2.36	0.63
17:O:25:TRP:C	17:O:25:TRP:CE3	2.73	0.63
19:Q:61:ASN:O	19:Q:62:HIS:HD2	1.82	0.63
20:R:62:LYS:HB2	20:R:69:TYR:H	1.62	0.63
13:K:133:ARG:HG3	22:T:81:ARG:NE	2.14	0.63
24:V:26:ARG:CB	24:V:35:THR:N	2.62	0.63
24:V:82:LEU:HD23	24:V:82:LEU:C	2.19	0.63
25:W:35:LEU:HA	25:W:37:PHE:CD2	2.33	0.63
27:Y:30:LEU:HD21	27:Y:39:MET:C	2.19	0.63
3:A:57:GLN:HG2	3:A:202:PRO:CB	2.29	0.62
3:A:29:LEU:O	3:A:32:GLU:HG2	1.98	0.62
4:B:65:ILE:HD12	4:B:105:ILE:CB	2.29	0.62
4:B:39:LYS:HG3	4:B:40:THR:H	1.64	0.62
4:B:60:ARG:HA	4:B:60:ARG:HE	1.64	0.62
8:F:105:LEU:O	8:F:113:VAL:CB	2.42	0.62
11:I:65:THR:O	11:I:79:PHE:O	2.17	0.62
12:J:78:PRO:HB2	12:J:110:TYR:CG	2.33	0.62
16:N:50:ILE:HG22	16:N:63:VAL:N	2.14	0.62
16:N:66:VAL:HG22	16:N:71:GLY:HA2	1.81	0.62
10:H:25:LYS:HE3	18:P:13:ARG:NH2	2.13	0.62
21:S:80:GLY:N	21:S:97:ARG:HE	1.96	0.62
23:U:27:GLU:HA	23:U:69:PHE:HD2	1.62	0.62
20:R:8:ILE:HB	25:W:26:ARG:NH2	2.14	0.62
21:S:9:LYS:HG3	21:S:10:GLY:H	1.64	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:249:PRO:HB3	4:B:250:TRP:HZ3	1.59	0.62
9:G:94:ALA:N	9:G:95:LYS:HZ3	1.96	0.62
10:H:124:HIS:O	10:H:125:ALA:C	2.36	0.62
13:K:129:THR:OG1	13:K:130:LYS:N	2.31	0.62
13:K:8:LYS:HD3	13:K:8:LYS:H	1.63	0.62
16:N:64:ARG:NH1	16:N:103:ARG:HA	2.14	0.62
16:N:109:GLU:HA	16:N:112:ARG:HE	1.64	0.62
11:I:78:ARG:CB	16:N:73:GLU:HG3	2.27	0.62
16:N:32:TYR:HB2	16:N:81:PRO:O	1.99	0.62
18:P:82:ARG:HG2	18:P:82:ARG:HH11	1.63	0.62
20:R:30:VAL:CG1	20:R:31:HIS:N	2.62	0.62
22:T:69:THR:HG21	22:T:88:PHE:CZ	2.33	0.62
26:X:41:PRO:HA	26:X:44:ARG:CD	2.29	0.62
27:Y:34:PRO:HG2	27:Y:49:CYS:SG	2.39	0.62
33:O:33:U:N3	33:O:36:A:P	2.70	0.62
3:A:8:TYR:CB	3:A:12:LEU:CD1	2.71	0.62
3:A:22:THR:O	3:A:225:ILE:HG23	2.00	0.62
4:B:201:HIS:O	4:B:204:ILE:HG23	1.99	0.62
7:E:47:LYS:HG3	7:E:50:ALA:HB2	1.81	0.62
8:F:11:VAL:O	8:F:11:VAL:HG12	1.97	0.62
9:G:26:ALA:HA	9:G:30:LEU:HB2	1.79	0.62
11:I:52:VAL:HG12	11:I:52:VAL:O	2.00	0.62
18:P:38:LEU:H	18:P:55:ALA:CB	2.12	0.62
23:U:31:VAL:HG23	23:U:62:LEU:N	2.13	0.62
23:U:37:LEU:HD23	23:U:60:PHE:N	2.14	0.62
18:P:89:GLN:HG2	18:P:90:PRO:CD	2.29	0.62
3:A:21:TYR:CD1	3:A:26:ALA:CB	2.74	0.62
4:B:133:LEU:H	4:B:189:CYS:H	1.47	0.62
5:C:11:MET:SD	5:C:23:VAL:O	2.58	0.62
5:C:61:ARG:HG3	5:C:62:PRO:HD2	1.79	0.62
6:D:146:SER:N	6:D:167:TRP:CE2	2.58	0.62
6:D:195:GLU:CG	6:D:196:VAL:N	2.62	0.62
6:D:4:ILE:HD13	6:D:119:LEU:H	1.64	0.62
7:E:43:LEU:CG	7:E:153:ARG:HD3	2.28	0.62
7:E:165:THR:C	7:E:167:GLU:H	2.01	0.62
9:G:121:LYS:O	9:G:122:GLU:CB	2.46	0.62
9:G:125:GLU:OE2	9:G:125:GLU:N	2.31	0.62
9:G:90:GLY:O	9:G:121:LYS:NZ	2.31	0.62
11:I:28:SER:C	11:I:30:ALA:H	2.03	0.62
11:I:17:ARG:CG	11:I:47:ILE:HG12	2.26	0.62
11:I:78:ARG:HD3	16:N:73:GLU:OE2	1.98	0.62
13:K:115:MET:O	13:K:119:ARG:HD3	2.00	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:K:134:ARG:HH21	13:K:134:ARG:HG2	1.64	0.62
13:K:35:VAL:O	13:K:129:THR:HA	1.99	0.62
16:N:22:PHE:C	16:N:22:PHE:CD1	2.72	0.62
16:N:11:GLU:HB2	16:N:57:PHE:HZ	1.63	0.62
16:N:45:PHE:CE1	16:N:72:VAL:HB	2.34	0.62
16:N:50:ILE:CG1	16:N:99:LEU:HB2	2.30	0.62
17:O:83:LEU:CD1	17:O:89:GLU:HA	2.27	0.62
18:P:36:PRO:HD2	18:P:62:LEU:CD1	2.29	0.62
22:T:102:LEU:CD2	22:T:123:ASP:O	2.47	0.62
22:T:10:ARG:HD2	22:T:36:LYS:HB3	1.80	0.62
26:X:16:PRO:O	26:X:20:LYS:HG3	1.98	0.62
26:X:33:GLN:HE22	26:X:35:ARG:HD3	1.64	0.62
4:B:76:PRO:CB	4:B:117:VAL:HG12	2.27	0.62
4:B:252:TRP:O	4:B:253:GLN:C	2.38	0.62
5:C:133:LYS:O	5:C:134:ILE:HG13	1.99	0.62
6:D:135:LEU:O	6:D:138:ALA:HB3	2.00	0.62
6:D:187:LEU:HD23	6:D:188:VAL:N	2.14	0.62
7:E:144:ILE:CG2	7:E:144:ILE:O	2.44	0.62
7:E:33:ARG:HA	7:E:33:ARG:NH2	2.12	0.62
11:I:35:VAL:HG22	11:I:62:VAL:HG12	1.81	0.62
11:I:85:VAL:HG11	11:I:93:PRO:CB	2.29	0.62
13:K:37:LEU:HB2	13:K:127:ILE:HB	1.81	0.62
14:L:8:ARG:HB3	14:L:43:GLU:OE2	1.98	0.62
14:L:42:LYS:C	14:L:44:LEU:H	2.02	0.62
16:N:61:PHE:CE1	16:N:77:PRO:O	2.53	0.62
24:V:27:GLU:HG3	33:O:74:C:C4'	2.29	0.62
3:A:197:LEU:CG	3:A:198:GLU:H	2.12	0.62
3:A:43:GLU:HB2	3:A:45:HIS:HE2	1.64	0.62
4:B:181:GLU:HG2	4:B:182:LEU:N	2.14	0.62
5:C:59:VAL:CG1	5:C:63:LEU:HD12	2.28	0.62
8:F:172:LYS:CE	8:F:173:PRO:HD2	2.30	0.62
9:G:4:ILE:HG12	9:G:18:VAL:HG22	1.81	0.62
9:G:81:VAL:HG23	9:G:82:ARG:H	1.65	0.62
10:H:37:VAL:CG1	10:H:38:LEU:N	2.61	0.62
10:H:62:ARG:CZ	10:H:63:PRO:HD2	2.30	0.62
12:J:128:HIS:HA	12:J:147:LEU:HB3	1.81	0.62
13:K:11:LYS:CD	13:K:12:GLN:N	2.60	0.62
13:K:74:TYR:CG	13:K:75:THR:N	2.68	0.62
16:N:3:ARG:CB	16:N:7:ILE:HD11	2.26	0.62
18:P:7:THR:CG2	18:P:22:VAL:HG21	2.30	0.62
20:R:21:PHE:HE2	20:R:26:TYR:HE1	1.47	0.62
21:S:14:LEU:HB3	21:S:23:ARG:H	1.64	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:V:85:LEU:HD12	24:V:86:SER:N	2.15	0.62
27:Y:16:ARG:O	27:Y:20:ARG:CD	2.47	0.62
23:U:36:ILE:N	23:U:36:ILE:HD12	2.13	0.62
5:C:37:ARG:CG	5:C:46:ALA:HB3	2.29	0.62
5:C:63:LEU:CD2	5:C:65:GLY:CA	2.78	0.62
7:E:25:TYR:CD1	7:E:25:TYR:N	2.68	0.62
11:I:16:ALA:O	11:I:17:ARG:HD3	2.00	0.62
11:I:48:PRO:HA	11:I:53:LYS:HE2	1.80	0.62
11:I:64:ARG:HB3	11:I:102:VAL:CG1	2.23	0.62
13:K:60:ARG:C	13:K:60:ARG:HD2	2.20	0.62
17:O:81:HIS:CE1	17:O:85:LYS:HB2	2.35	0.62
18:P:81:TYR:H	18:P:83:ARG:CZ	2.12	0.62
19:Q:72:LYS:NZ	19:Q:107:LEU:O	2.32	0.62
22:T:77:ASP:O	22:T:79:ARG:N	2.33	0.62
5:C:12:THR:O	5:C:13:ARG:CB	2.46	0.62
5:C:12:THR:OG1	5:C:13:ARG:N	2.30	0.62
7:E:122:PRO:CB	7:E:173:LEU:HD11	2.23	0.62
7:E:43:LEU:HD22	7:E:45:GLU:N	2.14	0.62
8:F:123:PHE:HB2	8:F:131:VAL:HG21	1.82	0.62
8:F:124:GLU:OE2	8:F:134:SER:HB2	2.00	0.62
8:F:149:ARG:CD	8:F:153:LYS:HE2	2.29	0.62
9:G:76:THR:CG2	9:G:142:VAL:HA	2.30	0.62
9:G:54:GLN:O	9:G:58:LEU:HB2	2.00	0.62
10:H:38:LEU:H	10:H:38:LEU:HD12	4.94	0.62
10:H:65:TRP:CZ3	10:H:71:MET:SD	2.92	0.62
10:H:76:VAL:CG1	10:H:77:VAL:H	2.11	0.62
11:I:71:ARG:HB2	11:I:75:SER:HB2	1.80	0.62
13:K:124:LYS:HE2	13:K:124:LYS:O	2.00	0.62
14:L:40:LYS:O	14:L:44:LEU:CG	2.47	0.62
14:L:44:LEU:HA	14:L:47:PHE:CE2	2.34	0.62
14:L:44:LEU:HD13	14:L:47:PHE:CZ	2.35	0.62
16:N:56:GLY:H	16:N:59:THR:HG23	1.65	0.62
17:O:48:ALA:C	17:O:50:ARG:N	2.41	0.62
18:P:22:VAL:O	18:P:22:VAL:HG13	1.99	0.62
18:P:89:GLN:HG2	18:P:90:PRO:N	2.15	0.62
24:V:40:ARG:HD3	24:V:41:ARG:H	1.62	0.62
4:B:21:PHE:HA	4:B:24:ILE:HD12	1.81	0.62
4:B:98:VAL:C	4:B:100:GLY:H	2.02	0.62
5:C:37:ARG:HB2	5:C:46:ALA:N	2.14	0.62
5:C:7:VAL:HG22	5:C:27:LEU:O	1.98	0.62
6:D:171:LEU:O	6:D:172:ALA:HB2	2.00	0.62
7:E:59:GLU:CG	7:E:60:LEU:H	2.04	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:72:ARG:O	7:E:73:ALA:HB3	1.98	0.62
9:G:4:ILE:HG23	9:G:17:GLN:N	2.15	0.62
10:H:65:TRP:CB	17:O:64:ARG:HD2	2.28	0.62
11:I:71:ARG:C	11:I:73:ASP:N	2.50	0.62
13:K:22:LYS:O	13:K:22:LYS:HG2	2.24	0.62
13:K:89:ASN:C	13:K:91:GLU:H	2.04	0.62
14:L:63:ARG:O	14:L:67:LEU:HD23	1.99	0.62
17:O:114:LYS:HG3	17:O:115:ALA:H	1.64	0.62
18:P:28:GLU:HB2	18:P:29:PRO:HD2	1.81	0.62
18:P:89:GLN:HG3	18:P:90:PRO:HD2	1.81	0.62
20:R:57:LEU:HD21	20:R:76:ARG:HH21	1.64	0.62
20:R:88:LYS:O	20:R:89:ILE:CB	2.40	0.62
21:S:37:VAL:HG23	21:S:37:VAL:O	2.00	0.62
21:S:73:ARG:CD	21:S:78:ALA:HB2	2.29	0.62
22:T:135:GLU:HG2	22:T:136:PHE:H	1.65	0.62
22:T:161:VAL:HG12	22:T:162:GLU:N	2.15	0.62
22:T:45:ASP:HA	22:T:48:PHE:HE2	1.65	0.62
22:T:45:ASP:HB3	22:T:49:ARG:HH21	1.64	0.62
22:T:8:TYR:HD1	22:T:39:VAL:HA	1.63	0.62
24:V:91:LYS:CE	24:V:91:LYS:H	2.12	0.62
24:V:19:GLN:HB2	24:V:44:PRO:HG3	1.82	0.62
3:A:18:ASN:C	3:A:18:ASN:HD22	2.01	0.62
4:B:65:ILE:HD12	4:B:105:ILE:CG1	2.29	0.62
4:B:6:PHE:CE2	4:B:16:MET:HB2	2.34	0.62
6:D:150:LEU:HB2	6:D:187:LEU:HD12	1.80	0.62
6:D:197:PHE:O	6:D:197:PHE:CG	2.52	0.62
7:E:173:LEU:HA	7:E:178:PHE:HB2	1.81	0.62
7:E:23:PHE:HB3	7:E:25:TYR:CE1	2.35	0.62
8:F:111:HIS:HB3	8:F:112:PRO:HD3	1.81	0.62
8:F:54:ARG:CB	8:F:55:PRO:HD2	2.20	0.62
11:I:22:ILE:CG1	11:I:23:ARG:H	2.13	0.62
11:I:50:GLY:O	11:I:51:ALA:CB	2.47	0.62
14:L:103:ARG:HB2	19:Q:40:ASN:CB	2.29	0.62
14:L:60:LEU:CD1	14:L:61:HIS:H	2.13	0.62
16:N:118:ARG:HH11	16:N:118:ARG:HG3	1.65	0.62
16:N:23:ARG:CB	16:N:24:PRO:CD	2.78	0.62
19:Q:59:VAL:O	19:Q:59:VAL:CG1	2.48	0.62
21:S:32:PRO:HB2	21:S:34:LYS:HE3	1.81	0.62
22:T:76:LEU:C	22:T:83:PRO:HA	2.19	0.62
24:V:11:ARG:HH22	24:V:60:PHE:HB3	1.65	0.62
4:B:208:LYS:HG2	4:B:209:ALA:N	2.15	0.61
7:E:111:LEU:HB2	7:E:112:PRO:CD	2.27	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:154:GLY:C	7:E:155:MET:SD	2.78	0.61
7:E:163:ALA:O	7:E:165:THR:N	2.33	0.61
7:E:73:ALA:N	7:E:87:PRO:HA	2.14	0.61
8:F:146:ALA:HA	8:F:149:ARG:HG3	1.82	0.61
8:F:17:VAL:CG2	8:F:45:VAL:HG12	2.24	0.61
9:G:142:VAL:CG1	9:G:143:SER:N	2.63	0.61
9:G:6:LEU:CD2	9:G:7:GLU:HB3	2.30	0.61
11:I:2:ILE:HB	11:I:33:ALA:C	2.21	0.61
11:I:49:ARG:HD3	11:I:49:ARG:H	1.64	0.61
11:I:85:VAL:CA	11:I:86:ILE:HD12	2.29	0.61
11:I:86:ILE:HG22	11:I:94:ARG:NH1	2.13	0.61
12:J:128:HIS:HA	12:J:147:LEU:CB	2.29	0.61
14:L:78:LYS:HB3	14:L:82:GLU:CD	2.20	0.61
16:N:26:ASP:HA	16:N:48:ILE:CG1	2.22	0.61
16:N:52:ILE:CG2	16:N:52:ILE:O	2.47	0.61
20:R:15:GLU:HA	20:R:18:TYR:CD2	2.35	0.61
22:T:150:LEU:CD1	22:T:171:ILE:HD11	2.29	0.61
23:U:30:VAL:C	23:U:31:VAL:HG12	2.20	0.61
24:V:12:PRO:O	24:V:13:ILE:CD1	2.48	0.61
26:X:8:LEU:CD1	26:X:9:VAL:H	2.12	0.61
27:Y:16:ARG:HA	27:Y:20:ARG:NH1	2.14	0.61
27:Y:38:ALA:CB	27:Y:48:GLU:HB3	2.30	0.61
33:O:64:A:C3'	33:O:65:G:H8	2.12	0.61
3:A:172:ILE:HG12	3:A:173:HIS:N	2.14	0.61
4:B:183:ARG:NE	4:B:270:ILE:CG2	2.62	0.61
4:B:209:ALA:O	4:B:212:SER:CB	2.46	0.61
5:C:116:VAL:C	5:C:118:LYS:N	2.42	0.61
5:C:177:PRO:O	5:C:178:GLU:C	2.38	0.61
5:C:26:ILE:HG22	5:C:27:LEU:N	2.15	0.61
6:D:179:TYR:HA	6:D:182:VAL:HG13	1.83	0.61
7:E:20:ILE:O	7:E:23:PHE:O	2.17	0.61
8:F:92:ILE:HG12	8:F:92:ILE:O	2.00	0.61
9:G:124:GLY:CA	9:G:144:VAL:HB	2.30	0.61
9:G:7:GLU:HG2	9:G:35:LEU:HD11	1.82	0.61
9:G:64:GLU:O	9:G:67:ARG:HB3	2.00	0.61
10:H:119:GLU:HG3	10:H:120:ARG:N	2.15	0.61
10:H:77:VAL:HB	10:H:145:VAL:HG12	1.81	0.61
10:H:89:LYS:O	10:H:110:LEU:CG	2.47	0.61
13:K:8:LYS:HE3	13:K:70:PRO:CB	2.31	0.61
14:L:85:PRO:HA	14:L:88:ARG:HB2	1.82	0.61
22:T:76:LEU:HD23	22:T:78:LYS:N	2.15	0.61
25:W:4:SER:HB2	25:W:6:VAL:HG22	1.82	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:A:11:LEU:C	3:A:12:LEU:HD12	2.20	0.61
3:A:36:ALA:CB	3:A:219:MET:HG2	2.31	0.61
4:B:3:VAL:HA	4:B:17:THR:CG2	2.30	0.61
5:C:6:GLY:HA3	5:C:196:VAL:HG23	1.82	0.61
5:C:72:VAL:O	5:C:72:VAL:HG12	2.00	0.61
6:D:121:VAL:O	6:D:122:GLU:HB2	2.01	0.61
6:D:151:LEU:O	6:D:171:LEU:HB2	2.01	0.61
8:F:10:PRO:O	8:F:12:PRO:HD2	1.99	0.61
8:F:147:ASN:O	8:F:148:ILE:HD12	2.00	0.61
8:F:25:LYS:HA	8:F:34:GLU:HA	1.80	0.61
9:G:8:PRO:O	9:G:9:LEU:CB	2.47	0.61
10:H:78:VAL:C	10:H:80:ALA:N	2.53	0.61
11:I:111:PHE:O	11:I:115:VAL:HG23	2.00	0.61
11:I:79:PHE:CD1	11:I:79:PHE:N	2.66	0.61
12:J:122:PRO:CB	12:J:142:GLY:CA	2.72	0.61
12:J:75:ILE:CG1	12:J:77:ARG:HH12	2.13	0.61
13:K:116:GLU:HB3	13:K:120:ILE:CD1	2.30	0.61
15:M:39:ILE:HG12	15:M:49:VAL:HG13	1.76	0.61
16:N:30:VAL:N	16:N:44:ASP:OD2	2.33	0.61
16:N:64:ARG:HA	16:N:72:VAL:O	1.99	0.61
17:O:83:LEU:HD23	17:O:84:LYS:HZ1	1.65	0.61
19:Q:22:ASP:HA	19:Q:25:ARG:HD2	1.81	0.61
20:R:25:LYS:HE3	20:R:26:TYR:CZ	2.35	0.61
25:W:26:ARG:CG	25:W:29:LYS:HD3	2.30	0.61
25:W:45:SER:O	25:W:46:GLN:CB	2.47	0.61
26:X:13:ILE:CD1	26:X:13:ILE:H	2.13	0.61
3:A:35:THR:CG2	3:A:36:ALA:H	2.10	0.61
4:B:116:GLN:O	4:B:117:VAL:CG2	2.48	0.61
5:C:33:VAL:HG22	5:C:34:VAL:N	2.15	0.61
7:E:59:GLU:OE2	7:E:151:ALA:HB1	1.99	0.61
8:F:41:MET:HG3	8:F:54:ARG:CB	2.30	0.61
10:H:34:PRO:HA	10:H:35:ARG:CZ	2.30	0.61
11:I:17:ARG:HB2	11:I:45:GLU:HG2	1.82	0.61
12:J:17:LYS:HB3	12:J:19:VAL:CG2	2.27	0.61
12:J:95:VAL:CG2	12:J:125:VAL:HB	2.30	0.61
13:K:119:ARG:H	13:K:119:ARG:HD2	1.65	0.61
14:L:12:ARG:HG2	14:L:13:HIS:H	1.63	0.61
14:L:49:ASP:HA	14:L:94:TYR:CE1	2.24	0.61
15:M:49:VAL:HG23	15:M:50:SER:N	2.14	0.61
16:N:102:ILE:O	16:N:106:SER:CB	2.48	0.61
17:O:114:LYS:HG3	17:O:115:ALA:N	2.15	0.61
17:O:59:ARG:HA	17:O:62:ILE:HG13	1.81	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:S:97:ARG:HD2	21:S:97:ARG:O	1.99	0.61
21:S:97:ARG:HD3	21:S:99:CYS:N	2.15	0.61
22:T:19:ARG:HA	22:T:23:LYS:N	2.14	0.61
24:V:36:GLY:C	24:V:39:LYS:NZ	2.53	0.61
25:W:14:ARG:CB	25:W:54:LYS:HZ3	2.14	0.61
25:W:4:SER:O	25:W:5:GLU:C	2.39	0.61
33:O:29:A:C2	33:O:41:U:C2	2.88	0.61
3:A:40:GLU:O	3:A:178:LYS:HD2	2.01	0.61
4:B:98:VAL:O	4:B:100:GLY:N	2.33	0.61
4:B:141:VAL:HA	4:B:163:ALA:O	2.00	0.61
5:C:78:LEU:O	5:C:79:ARG:NE	2.34	0.61
9:G:127:VAL:HA	9:G:141:LYS:CG	2.30	0.61
10:H:130:LEU:HB3	10:H:131:PRO:HD2	1.83	0.61
12:J:112:LEU:HB3	12:J:128:HIS:H	1.65	0.61
12:J:113:LYS:NZ	12:J:131:SER:HB2	2.16	0.61
14:L:18:LEU:O	14:L:21:TYR:HD1	1.84	0.61
15:M:94:TYR:O	15:M:99:LYS:CE	2.48	0.61
16:N:101:PHE:HD2	16:N:101:PHE:H	0.75	0.61
16:N:32:TYR:CG	16:N:33:LYS:N	2.67	0.61
23:U:40:GLN:NE2	23:U:41:ARG:N	2.48	0.61
24:V:12:PRO:HG3	24:V:63:ALA:CA	2.29	0.61
25:W:4:SER:H	25:W:7:ARG:HG3	1.64	0.61
33:O:24:G:C2'	33:O:25:C:C6	2.83	0.61
3:A:21:TYR:HB2	3:A:26:ALA:CB	2.26	0.61
6:D:25:PRO:HA	6:D:28:LEU:HD12	1.81	0.61
8:F:146:ALA:HA	8:F:149:ARG:HG2	1.83	0.61
10:H:33:GLU:C	10:H:35:ARG:NH2	2.53	0.61
12:J:85:LEU:O	12:J:87:ASP:N	2.33	0.61
14:L:103:ARG:HB2	19:Q:40:ASN:HB3	1.82	0.61
14:L:17:ARG:O	14:L:20:LEU:N	2.30	0.61
14:L:18:LEU:N	14:L:21:TYR:CE1	2.68	0.61
14:L:1:MET:O	14:L:2:ARG:C	2.38	0.61
15:M:29:PHE:O	15:M:36:TYR:HB2	2.00	0.61
16:N:3:ARG:HD2	16:N:6:LEU:HD22	1.82	0.61
17:O:5:LYS:HZ1	17:O:7:GLY:HA2	1.62	0.61
24:V:12:PRO:CB	24:V:63:ALA:H	2.13	0.61
24:V:74:VAL:O	24:V:76:ARG:N	2.25	0.61
26:X:44:ARG:C	26:X:48:GLU:HG2	2.20	0.61
3:A:22:THR:H	3:A:25:GLU:CG	2.14	0.61
3:A:36:ALA:HB3	3:A:219:MET:HG2	1.82	0.61
4:B:262:ARG:C	4:B:262:ARG:HD3	2.20	0.61
5:C:33:VAL:CG2	5:C:34:VAL:N	2.64	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:155:ASN:OD1	6:D:157:LEU:HB2	2.01	0.61
7:E:117:PHE:CG	7:E:118:ARG:N	2.69	0.61
7:E:127:GLY:O	7:E:165:THR:HA	2.01	0.61
11:I:43:VAL:HB	11:I:54:GLU:HA	1.81	0.61
12:J:99:LEU:HD22	12:J:99:LEU:H	4.75	0.61
16:N:91:ARG:HB2	16:N:115:ARG:O	2.01	0.61
16:N:62:THR:OG1	16:N:74:ARG:O	2.19	0.61
18:P:23:GLU:OE2	18:P:25:LEU:HD11	2.00	0.61
19:Q:70:TYR:CE1	19:Q:108:GLY:CA	2.83	0.61
20:R:20:GLY:HA3	20:R:25:LYS:CA	2.28	0.61
21:S:93:GLY:O	21:S:94:LYS:HB2	2.01	0.61
23:U:28:GLY:HA2	23:U:67:VAL:CG1	2.27	0.61
24:V:85:LEU:O	24:V:86:SER:HB2	2.00	0.61
25:W:37:PHE:HD2	25:W:37:PHE:H	1.46	0.61
4:B:177:LEU:C	4:B:179:SER:H	2.03	0.61
4:B:35:LYS:HB2	4:B:62:TYR:O	1.99	0.61
4:B:99:ASP:OD1	4:B:101:GLU:HB2	2.00	0.61
5:C:148:GLY:O	5:C:149:ARG:O	2.18	0.61
5:C:16:ARG:O	5:C:17:ASP:HB3	2.01	0.61
5:C:102:VAL:O	5:C:170:LEU:HD13	2.01	0.61
6:D:111:ASP:CA	6:D:114:ARG:HG2	2.29	0.61
10:H:71:MET:HG2	10:H:72:GLY:N	2.15	0.61
11:I:17:ARG:NH2	11:I:47:ILE:HB	2.15	0.61
11:I:43:VAL:CG1	11:I:54:GLU:HA	2.30	0.61
12:J:75:ILE:HG12	12:J:77:ARG:NH1	2.16	0.61
13:K:81:VAL:C	13:K:82:ARG:HD3	2.21	0.61
14:L:28:LEU:CD1	14:L:114:VAL:HG12	2.31	0.61
16:N:125:ARG:HH11	16:N:125:ARG:HB3	4.27	0.61
16:N:30:VAL:N	16:N:44:ASP:CG	2.53	0.61
16:N:95:ARG:HD2	16:N:96:ARG:HH12	1.63	0.61
17:O:92:ARG:CZ	18:P:11:GLN:HG2	2.30	0.61
22:T:53:ILE:N	22:T:53:ILE:CD1	2.59	0.61
23:U:37:LEU:HD23	23:U:60:PHE:CA	2.30	0.61
28:Z:1:MET:O	28:Z:3:ARG:N	2.33	0.61
5:C:38:THR:HG23	5:C:39:PRO:HD2	1.82	0.61
4:B:228:PRO:O	4:B:229:VAL:C	2.38	0.61
4:B:78:LYS:CB	4:B:116:GLN:NE2	2.64	0.61
4:B:94:LEU:CD2	4:B:94:LEU:O	2.49	0.61
5:C:144:ARG:C	5:C:146:THR:H	2.03	0.61
5:C:52:LEU:HB2	5:C:75:VAL:HB	1.82	0.61
6:D:152:VAL:O	6:D:190:ASP:HB2	2.01	0.61
7:E:131:TYR:HB3	7:E:159:VAL:CG2	2.29	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:61:HIS:CE1	10:H:73:ASP:OD2	2.48	0.61
11:I:90:GLN:C	11:I:92:GLU:H	2.03	0.61
12:J:138:LEU:HB3	12:J:144:GLU:HG3	1.83	0.61
12:J:9:ASN:OD1	12:J:9:ASN:O	2.19	0.61
13:K:132:VAL:CG2	13:K:133:ARG:H	1.93	0.61
15:M:66:ALA:O	15:M:101:LEU:HD21	2.00	0.61
16:N:64:ARG:HB3	16:N:102:ILE:HD11	1.82	0.61
10:H:65:TRP:CB	17:O:64:ARG:HE	2.14	0.61
19:Q:59:VAL:HG23	19:Q:64:MET:HB2	1.82	0.61
20:R:27:THR:HG22	20:R:28:PHE:H	1.64	0.61
21:S:49:VAL:C	21:S:55:TYR:HA	2.21	0.61
24:V:11:ARG:HG3	24:V:61:ARG:CB	2.15	0.61
26:X:36:VAL:HG23	26:X:36:VAL:O	2.00	0.61
33:O:65:G:H8	33:O:65:G:P	2.24	0.61
33:O:73:A:O2'	33:O:74:C:H5'	2.01	0.61
4:B:172:TYR:CE1	4:B:186:HIS:ND1	2.69	0.61
4:B:25:THR:CB	4:B:83:GLU:HA	2.30	0.61
5:C:176:ILE:O	5:C:181:LEU:CD2	2.49	0.61
6:D:130:LYS:N	6:D:134:PHE:HZ	1.97	0.61
7:E:59:GLU:O	7:E:62:LEU:HG	2.01	0.61
8:F:161:GLY:O	8:F:162:ILE:HB	2.01	0.61
8:F:19:VAL:HA	8:F:24:VAL:HG22	1.83	0.61
9:G:101:LEU:HD23	9:G:109:ILE:HD12	1.83	0.61
9:G:124:GLY:C	9:G:144:VAL:N	2.50	0.61
9:G:15:VAL:CG1	9:G:17:GLN:HE21	2.13	0.61
9:G:55:ALA:O	9:G:58:LEU:HB3	2.01	0.61
9:G:88:ILE:HG13	9:G:89:TYR:HD1	1.65	0.61
11:I:10:VAL:HG13	11:I:18:LYS:HA	1.83	0.61
6:D:26:HIS:HB3	12:J:13:ASN:HB2	1.82	0.61
16:N:33:LYS:HD2	16:N:43:GLN:H	1.66	0.61
23:U:15:ASP:HB3	23:U:20:ARG:HD3	1.81	0.61
23:U:40:GLN:CD	23:U:41:ARG:H	2.04	0.61
4:B:27:THR:HG23	4:B:83:GLU:HG2	1.83	0.60
5:C:61:ARG:CG	5:C:62:PRO:HD3	2.30	0.60
6:D:195:GLU:O	6:D:196:VAL:HB	2.01	0.60
6:D:30:GLU:OE1	12:J:13:ASN:OD1	2.19	0.60
7:E:135:LEU:C	7:E:135:LEU:CD1	2.67	0.60
8:F:146:ALA:C	8:F:148:ILE:N	2.53	0.60
16:N:51:ARG:NH2	16:N:60:THR:CB	2.63	0.60
17:O:84:LYS:HD2	17:O:89:GLU:HG2	1.83	0.60
22:T:99:TYR:HD2	22:T:124:ILE:CA	2.05	0.60
23:U:31:VAL:CG2	23:U:62:LEU:H	2.14	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:U:45:PHE:CD2	23:U:78:TYR:N	2.69	0.60
24:V:12:PRO:HG3	24:V:62:VAL:C	2.21	0.60
24:V:8:SER:OG	24:V:9:GLY:N	2.34	0.60
27:Y:38:ALA:HB2	27:Y:48:GLU:HB3	1.82	0.60
33:O:32:C:O2'	33:O:33:U:H5'	2.01	0.60
33:O:34:G:C3'	33:O:35:A:H5''	2.29	0.60
3:A:198:GLU:O	3:A:198:GLU:OE2	2.18	0.60
5:C:82:ARG:NH1	5:C:93:VAL:HA	23.75	0.60
8:F:98:LEU:CB	8:F:102:ALA:O	2.37	0.60
9:G:31:LEU:O	9:G:34:GLY:N	2.35	0.60
9:G:94:ALA:O	9:G:97:ILE:HD12	2.01	0.60
10:H:106:LYS:HG3	10:H:107:LYS:N	2.14	0.60
11:I:17:ARG:HH21	11:I:47:ILE:HG22	1.64	0.60
12:J:147:LEU:HD11	12:J:149:GLU:CD	2.21	0.60
15:M:35:ILE:HD12	15:M:66:ALA:HA	1.82	0.60
15:M:67:ARG:HA	15:M:101:LEU:CD2	2.31	0.60
18:P:60:GLU:O	18:P:62:LEU:HG	2.00	0.60
18:P:24:LYS:HG2	18:P:94:LEU:HD11	1.83	0.60
19:Q:11:ARG:CA	19:Q:100:THR:HG22	2.30	0.60
24:V:10:LYS:HB3	24:V:13:ILE:O	2.00	0.60
25:W:41:ILE:HA	25:W:44:LEU:HD12	1.83	0.60
27:Y:16:ARG:HA	27:Y:20:ARG:NH2	2.16	0.60
13:K:55:VAL:O	13:K:58:PHE:CB	2.49	0.60
3:A:59:VAL:O	3:A:165:ARG:CA	2.48	0.60
3:A:197:LEU:CG	3:A:198:GLU:N	2.64	0.60
3:A:29:LEU:CG	3:A:33:LEU:HD21	2.31	0.60
4:B:233:HIS:CD2	4:B:234:GLY:N	2.70	0.60
4:B:241:PRO:HB2	4:B:242:ARG:CZ	2.32	0.60
4:B:34:VAL:C	4:B:35:LYS:HD3	2.22	0.60
5:C:180:ASN:C	5:C:181:LEU:HD22	2.21	0.60
5:C:52:LEU:N	5:C:76:ARG:HB2	2.15	0.60
5:C:92:THR:O	5:C:95:ILE:CG1	2.49	0.60
6:D:101:ARG:HG2	6:D:101:ARG:O	2.01	0.60
6:D:29:TRP:HE3	6:D:33:ARG:NH1	1.99	0.60
7:E:53:LEU:H	7:E:53:LEU:HD23	1.65	0.60
9:G:81:VAL:O	9:G:148:GLU:CG	2.47	0.60
10:H:78:VAL:CA	10:H:146:TYR:HE2	2.15	0.60
11:I:22:ILE:CG1	11:I:23:ARG:N	2.63	0.60
11:I:71:ARG:CB	11:I:72:PRO:HD2	2.28	0.60
13:K:106:VAL:HG22	13:K:107:ALA:N	2.14	0.60
13:K:68:ILE:HD12	13:K:68:ILE:N	2.16	0.60
13:K:79:LEU:HD12	13:K:80:GLU:H	1.66	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:T:61:LEU:HB2	22:T:65:GLN:O	2.01	0.60
24:V:19:GLN:CB	24:V:44:PRO:HG3	2.31	0.60
24:V:85:LEU:CD1	24:V:86:SER:N	2.65	0.60
3:A:162:ILE:O	3:A:163:GLU:HB2	2.01	0.60
4:B:84:TYR:CE2	4:B:85:ASP:O	2.55	0.60
6:D:118:LEU:O	6:D:119:LEU:HB3	2.02	0.60
7:E:114:ILE:CG1	7:E:115:ARG:N	2.64	0.60
7:E:153:ARG:HG3	7:E:154:GLY:H	1.65	0.60
8:F:55:PRO:HG2	8:F:56:SER:H	1.66	0.60
8:F:89:ILE:HD12	8:F:89:ILE:N	4.34	0.60
8:F:95:ARG:HH11	8:F:107:VAL:HB	1.67	0.60
9:G:122:GLU:OE2	9:G:126:TYR:CB	2.50	0.60
9:G:90:GLY:O	9:G:91:SER:CB	2.49	0.60
10:H:88:LYS:O	10:H:92:GLN:HB2	2.01	0.60
11:I:35:VAL:CG1	11:I:106:LEU:HD11	2.31	0.60
11:I:35:VAL:HA	11:I:62:VAL:CB	2.31	0.60
15:M:67:ARG:HB3	15:M:100:ALA:O	2.01	0.60
15:M:17:ARG:HG2	15:M:88:ASP:OD1	2.01	0.60
25:W:22:GLU:OE2	25:W:25:VAL:HG22	2.01	0.60
27:Y:34:PRO:HB3	27:Y:52:TYR:CE2	2.37	0.60
33:O:23:A:O2'	33:O:24:G:H5'	2.00	0.60
33:O:24:G:C2'	33:O:25:C:H6	2.14	0.60
3:A:29:LEU:HG	3:A:33:LEU:HD21	1.84	0.60
4:B:113:VAL:O	4:B:114:GLY:C	2.40	0.60
4:B:130:ALA:C	4:B:190:TYR:CE1	2.75	0.60
6:D:150:LEU:HD12	6:D:169:VAL:CA	2.27	0.60
7:E:92:VAL:HG22	7:E:93:THR:N	2.16	0.60
9:G:56:LYS:HG3	9:G:57:ARG:CD	2.31	0.60
10:H:50:ALA:HB1	10:H:126:VAL:HG22	1.81	0.60
10:H:77:VAL:O	10:H:77:VAL:HG12	1.99	0.60
12:J:84:ASN:HA	12:J:115:LEU:O	2.01	0.60
12:J:121:LYS:O	12:J:123:LEU:N	2.35	0.60
13:K:66:ILE:HA	13:K:104:PHE:CE2	2.36	0.60
14:L:23:ASN:CA	14:L:26:LYS:HB2	2.31	0.60
15:M:24:LEU:CB	15:M:85:VAL:HA	2.32	0.60
17:O:82:GLY:CA	17:O:113:ALA:HB1	2.30	0.60
20:R:63:LYS:HE2	20:R:64:LYS:NZ	2.16	0.60
22:T:146:ILE:N	22:T:146:ILE:HD13	2.08	0.60
22:T:46:LYS:HA	22:T:49:ARG:CD	2.22	0.60
23:U:27:GLU:HA	23:U:69:PHE:CG	2.36	0.60
24:V:68:PRO:HG2	24:V:69:LYS:H	1.65	0.60
25:W:12:GLU:C	25:W:14:ARG:N	2.53	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:W:54:LYS:C	25:W:55:ARG:HD2	2.22	0.60
4:B:76:PRO:HB2	4:B:117:VAL:CB	2.30	0.60
4:B:166:GLN:O	4:B:174:ILE:HD12	2.02	0.60
7:E:164:GLU:N	7:E:168:GLU:OE2	2.35	0.60
7:E:173:LEU:O	7:E:177:GLY:O	2.19	0.60
13:K:133:ARG:CG	13:K:134:ARG:N	2.63	0.60
7:E:139:LEU:HD21	16:N:3:ARG:HH22	173.95	0.60
21:S:23:ARG:CG	21:S:24:VAL:N	2.64	0.60
22:T:99:TYR:C	22:T:123:ASP:HB2	2.18	0.60
25:W:27:GLU:HA	25:W:30:ARG:HG2	1.83	0.60
27:Y:34:PRO:CB	27:Y:52:TYR:HE2	2.14	0.60
33:O:37:A:C8	33:O:38:A:C8	2.89	0.60
3:A:44:VAL:HB	3:A:174:ALA:O	2.02	0.60
4:B:114:GLY:O	4:B:115:GLN:C	2.40	0.60
4:B:16:MET:HE2	4:B:206:LEU:O	2.01	0.60
5:C:145:LYS:HA	5:C:148:GLY:HA2	1.84	0.60
5:C:27:LEU:HD12	5:C:181:LEU:HD13	1.84	0.60
5:C:63:LEU:C	5:C:65:GLY:H	2.05	0.60
8:F:23:ARG:HG2	8:F:36:PRO:HA	1.83	0.60
9:G:130:TYR:HB3	9:G:138:ILE:O	2.02	0.60
9:G:147:GLN:HG3	9:G:148:GLU:N	2.17	0.60
10:H:112:LYS:HZ1	10:H:115:ALA:HB3	1.63	0.60
10:H:33:GLU:O	10:H:34:PRO:O	2.19	0.60
10:H:81:ASP:O	10:H:82:LYS:HB3	2.01	0.60
11:I:52:VAL:HG13	11:I:56:ASP:HB2	1.84	0.60
13:K:83:MET:HG3	13:K:83:MET:O	2.02	0.60
15:M:17:ARG:CZ	15:M:89:ARG:HD3	2.31	0.60
18:P:25:LEU:N	18:P:25:LEU:HD12	2.16	0.60
18:P:40:LEU:HD22	18:P:40:LEU:O	2.02	0.60
22:T:76:LEU:HA	22:T:83:PRO:CB	2.31	0.60
27:Y:50:GLY:O	27:Y:51:TYR:CB	2.49	0.60
3:A:48:LEU:HB2	3:A:209:PHE:O	2.02	0.60
4:B:24:ILE:HG23	4:B:25:THR:O	2.01	0.60
6:D:87:PRO:O	6:D:88:LYS:CB	2.49	0.60
7:E:83:ARG:O	7:E:84:LYS:C	2.40	0.60
8:F:11:VAL:N	8:F:12:PRO:CD	2.65	0.60
9:G:1:MET:C	9:G:3:VAL:N	2.54	0.60
10:H:80:ALA:CB	10:H:146:TYR:O	2.47	0.60
10:H:25:LYS:CG	18:P:13:ARG:HH21	2.12	0.60
10:H:65:TRP:CE3	10:H:71:MET:HE1	2.37	0.60
13:K:45:GLN:O	13:K:47:ILE:N	2.34	0.60
15:M:10:ARG:O	15:M:12:PHE:CD1	2.55	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:M:13:ARG:HG3	15:M:91:PRO:N	2.17	0.60
16:N:29:ARG:HG2	16:N:86:ILE:H	1.62	0.60
17:O:40:PHE:CA	18:P:78:LYS:CG	2.77	0.60
17:O:88:ILE:CG1	18:P:53:GLU:H	2.11	0.60
18:P:75:PHE:O	18:P:85:LYS:HG3	2.02	0.60
21:S:75:ILE:HG23	21:S:76:CYS:N	2.14	0.60
22:T:150:LEU:HD22	22:T:154:ASP:HB2	1.82	0.60
22:T:48:PHE:C	22:T:50:GLN:H	2.05	0.60
22:T:89:PHE:HD2	22:T:90:VAL:O	1.84	0.60
26:X:13:ILE:N	26:X:13:ILE:HD13	2.13	0.60
26:X:16:PRO:HD2	26:X:19:GLN:OE1	2.02	0.60
26:X:31:LEU:O	26:X:32:GLN:HB2	2.01	0.60
33:O:29:A:H2'	33:O:30:G:C8	2.37	0.60
33:O:8:U:H2'	33:O:9:A:H5''	1.84	0.60
4:B:79:VAL:HG23	4:B:95:LEU:HD13	1.81	0.60
5:C:110:GLY:HA2	5:C:161:GLY:CA	2.31	0.60
5:C:186:GLY:O	5:C:187:ALA:CB	2.49	0.60
5:C:47:VAL:HG12	5:C:48:GLN:H	1.67	0.60
6:D:26:HIS:O	6:D:30:GLU:HG3	2.01	0.60
6:D:60:TRP:HB3	6:D:61:PRO:CD	2.32	0.60
7:E:19:LEU:HB3	7:E:25:TYR:CE2	2.37	0.60
5:C:20:ALA:HB3	11:I:73:ASP:HB3	1.78	0.60
13:K:124:LYS:HZ2	13:K:125:LEU:CB	2.15	0.60
13:K:24:GLY:O	13:K:25:ASP:CB	2.49	0.60
13:K:8:LYS:O	13:K:9:TYR:C	2.40	0.60
14:L:1:MET:O	14:L:3:HIS:N	2.35	0.60
15:M:49:VAL:HG23	15:M:50:SER:H	1.67	0.60
15:M:64:GLU:O	15:M:67:ARG:CG	2.42	0.60
16:N:113:LYS:HE3	16:N:113:LYS:CA	2.29	0.60
7:E:139:LEU:CD2	16:N:3:ARG:HH22	174.38	0.60
16:N:53:ARG:HD2	16:N:53:ARG:C	2.22	0.60
17:O:79:PHE:HD2	17:O:79:PHE:C	2.05	0.60
18:P:38:LEU:HD12	18:P:55:ALA:HA	1.84	0.60
18:P:39:LEU:N	18:P:39:LEU:HD12	2.16	0.60
17:O:44:ASN:OD1	18:P:78:LYS:HD2	2.02	0.60
19:Q:14:PRO:O	19:Q:17:VAL:HG22	2.01	0.60
19:Q:72:LYS:HE3	19:Q:107:LEU:O	2.01	0.60
22:T:115:GLY:HA2	22:T:176:PRO:HB3	1.82	0.60
23:U:62:LEU:HD12	23:U:62:LEU:C	3.69	0.60
23:U:50:ASN:ND2	23:U:65:GLY:HA3	2.16	0.60
24:V:69:LYS:O	24:V:70:VAL:O	2.20	0.60
9:G:131:LYS:CG	9:G:131:LYS:O	2.50	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:167:GLY:O	4:B:174:ILE:HG13	2.02	0.60
4:B:4:LYS:CE	4:B:20:ASP:HA	2.30	0.60
6:D:120:LEU:O	6:D:120:LEU:HD23	2.01	0.60
6:D:27:LEU:CD2	6:D:28:LEU:HD23	2.31	0.60
6:D:35:GLN:HE22	6:D:39:ARG:NH2	1.99	0.60
8:F:141:VAL:CA	8:F:144:VAL:HG12	2.32	0.60
10:H:107:LYS:O	10:H:108:ILE:HG12	2.01	0.60
10:H:78:VAL:CG1	10:H:146:TYR:HE2	2.11	0.60
11:I:26:LYS:HB3	11:I:30:ALA:HB2	1.84	0.60
12:J:84:ASN:OD1	12:J:116:GLY:HA3	2.02	0.60
15:M:13:ARG:NE	15:M:90:GLY:O	2.34	0.60
17:O:93:LYS:N	17:O:93:LYS:CD	2.46	0.60
21:S:19:LYS:HE2	21:S:40:GLU:HA	1.83	0.60
22:T:45:ASP:CG	22:T:49:ARG:HE	2.05	0.60
23:U:46:LYS:O	23:U:48:GLY:N	2.35	0.60
24:V:12:PRO:HD3	24:V:62:VAL:HA	1.83	0.60
25:W:46:GLN:C	25:W:48:HIS:H	2.04	0.60
25:W:4:SER:O	25:W:7:ARG:HG2	2.02	0.60
26:X:21:ALA:HA	26:X:24:LYS:HE2	1.83	0.60
9:G:131:LYS:HE2	9:G:134:PRO:N	2.16	0.59
19:Q:85:VAL:HG13	19:Q:95:ILE:CG1	2.31	0.59
33:O:10:G:C6	33:O:26:G:C6	2.90	0.59
33:O:14:A:N3	33:O:14:A:H2'	2.16	0.59
33:O:27:C:H2'	33:O:28:C:C5	2.35	0.59
3:A:48:LEU:HD12	3:A:209:PHE:HD1	1.66	0.59
4:B:236:GLY:O	4:B:237:GLU:C	2.40	0.59
4:B:97:TYR:H	4:B:102:LYS:HA	1.66	0.59
6:D:105:LEU:HD11	6:D:109:VAL:CG2	2.32	0.59
6:D:147:GLU:N	6:D:167:TRP:HZ2	1.99	0.59
6:D:52:VAL:O	6:D:53:ALA:HB3	2.02	0.59
7:E:166:ASP:HA	7:E:169:ALA:CB	2.32	0.59
7:E:73:ALA:H	7:E:87:PRO:HA	1.66	0.59
8:F:154:PRO:O	8:F:155:SER:HB2	2.01	0.59
9:G:81:VAL:HG23	9:G:82:ARG:N	2.17	0.59
16:N:72:VAL:HG12	16:N:74:ARG:HG2	1.83	0.59
17:O:97:ASP:O	17:O:100:VAL:N	2.28	0.59
19:Q:48:ALA:HA	19:Q:51:LEU:HD11	1.84	0.59
21:S:23:ARG:CG	21:S:24:VAL:H	2.15	0.59
21:S:23:ARG:HG2	21:S:24:VAL:H	1.65	0.59
21:S:75:ILE:CG2	21:S:76:CYS:H	2.09	0.59
22:T:146:ILE:CB	22:T:176:PRO:HD3	2.32	0.59
25:W:26:ARG:O	25:W:29:LYS:HG3	2.02	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:W:46:GLN:O	25:W:48:HIS:N	2.35	0.59
28:Z:14:LYS:C	28:Z:20:ALA:HB1	2.23	0.59
21:S:2:ARG:NH2	21:S:4:LYS:HE2	2.16	0.59
24:V:27:GLU:CG	33:0:74:C:H4'	2.31	0.59
3:A:224:ARG:HH21	3:A:225:ILE:H	1.49	0.59
6:D:119:LEU:CA	6:D:188:VAL:HA	2.30	0.59
6:D:48:THR:HA	6:D:52:VAL:HB	1.83	0.59
7:E:131:TYR:CD2	7:E:132:ASN:N	2.66	0.59
8:F:89:ILE:H	8:F:129:THR:HG22	1.66	0.59
12:J:53:GLY:O	12:J:55:ARG:HG2	2.00	0.59
14:L:18:LEU:CA	14:L:21:TYR:CE1	2.85	0.59
15:M:38:GLN:O	15:M:38:GLN:HG2	2.02	0.59
15:M:94:TYR:CE2	15:M:99:LYS:HA	2.34	0.59
16:N:92:GLY:HA3	16:N:114:LEU:CG	2.31	0.59
16:N:50:ILE:HG13	16:N:99:LEU:CB	2.32	0.59
18:P:54:GLY:C	18:P:56:SER:H	2.04	0.59
18:P:77:ALA:O	18:P:78:LYS:HB3	2.02	0.59
19:Q:86:LEU:O	19:Q:94:ASP:HB2	2.02	0.59
22:T:4:ARG:CA	22:T:58:VAL:HB	2.28	0.59
23:U:51:VAL:HG22	23:U:81:VAL:CG2	2.32	0.59
4:B:57:GLY:H	4:B:216:GLY:HA2	1.67	0.59
5:C:44:TYR:N	5:C:44:TYR:CD1	2.70	0.59
5:C:63:LEU:HD23	5:C:65:GLY:CA	2.33	0.59
8:F:17:VAL:HG21	8:F:44:VAL:HG22	1.82	0.59
10:H:149:PRO:O	10:H:150:ASP:HB2	2.02	0.59
10:H:35:ARG:HD2	10:H:72:GLY:O	2.02	0.59
11:I:35:VAL:HA	11:I:62:VAL:HB	1.84	0.59
12:J:90:ARG:HE	12:J:91:PHE:H	1.51	0.59
14:L:60:LEU:HD13	14:L:61:HIS:H	1.66	0.59
16:N:16:ARG:O	16:N:79:HIS:NE2	2.34	0.59
20:R:54:VAL:CG2	20:R:77:LYS:HD3	2.21	0.59
22:T:10:ARG:HG3	22:T:36:LYS:C	2.22	0.59
22:T:98:MET:CG	22:T:99:TYR:H	2.13	0.59
23:U:20:ARG:HH11	23:U:20:ARG:HG2	1.67	0.59
23:U:34:GLY:CA	23:U:60:PHE:CE2	2.77	0.59
23:U:62:LEU:CD1	23:U:63:VAL:HG23	2.31	0.59
23:U:79:VAL:HG23	23:U:79:VAL:O	2.00	0.59
23:U:80:HIS:O	23:U:81:VAL:C	2.40	0.59
24:V:10:LYS:HD2	24:V:14:VAL:HA	1.83	0.59
21:S:2:ARG:HH22	21:S:4:LYS:HE2	1.67	0.59
22:T:130:PRO:O	22:T:133:ILE:CG1	2.50	0.59
24:V:62:VAL:HG22	24:V:63:ALA:N	2.18	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:0:1:G:C2	33:0:73:A:C2	2.90	0.59
3:A:44:VAL:HG23	3:A:175:PRO:O	2.02	0.59
4:B:145:VAL:HG22	4:B:191:ALA:CB	2.32	0.59
4:B:227:ASN:ND2	4:B:237:GLU:HG2	2.16	0.59
5:C:36:ARG:HH21	5:C:88:GLY:HA2	1.68	0.59
7:E:106:LEU:CD1	7:E:107:LEU:HG	2.32	0.59
7:E:21:ARG:O	7:E:23:PHE:N	2.31	0.59
9:G:75:LEU:C	9:G:75:LEU:HD23	2.23	0.59
10:H:101:TYR:H	10:H:102:PRO:HD2	1.68	0.59
12:J:25:SER:CB	12:J:30:THR:HG21	2.32	0.59
12:J:7:ARG:HH11	12:J:10:PRO:CG	2.03	0.59
13:K:20:ALA:O	13:K:22:LYS:N	2.34	0.59
15:M:15:ARG:O	15:M:18:ILE:HG22	2.03	0.59
18:P:89:GLN:CG	18:P:90:PRO:CD	2.80	0.59
19:Q:34:ASN:ND2	19:Q:35:ILE:H	2.01	0.59
19:Q:4:LYS:HD2	19:Q:4:LYS:C	2.23	0.59
20:R:59:VAL:O	20:R:60:ARG:HB2	2.01	0.59
20:R:64:LYS:HZ3	20:R:64:LYS:HB2	1.67	0.59
26:X:5:LYS:HE3	26:X:7:LYS:CE	2.27	0.59
26:X:8:LEU:HD11	26:X:33:GLN:N	2.11	0.59
3:A:51:ASP:OD1	3:A:53:ARG:CD	2.51	0.59
4:B:63:ARG:HH21	4:B:86:PRO:HD3	1.66	0.59
5:C:50:GLY:HA2	5:C:76:ARG:O	2.02	0.59
5:C:51:PHE:CG	5:C:76:ARG:CZ	2.86	0.59
5:C:5:LEU:CB	5:C:76:ARG:HD3	2.25	0.59
6:D:26:HIS:CD2	6:D:26:HIS:N	2.70	0.59
7:E:115:ARG:O	7:E:116:ASP:CB	2.49	0.59
8:F:141:VAL:CG1	8:F:144:VAL:HG12	2.33	0.59
8:F:88:LEU:HA	8:F:129:THR:O	2.01	0.59
9:G:3:VAL:O	9:G:21:VAL:CG2	2.50	0.59
9:G:54:GLN:O	9:G:58:LEU:CB	2.51	0.59
9:G:88:ILE:HG12	9:G:89:TYR:CD1	2.37	0.59
10:H:124:HIS:HA	10:H:127:LYS:HB2	1.83	0.59
10:H:45:THR:N	10:H:49:LEU:HD21	2.18	0.59
10:H:50:ALA:O	10:H:53:ILE:CB	2.50	0.59
10:H:84:ARG:HE	10:H:85:VAL:N	1.99	0.59
11:I:35:VAL:HG11	11:I:106:LEU:HD11	1.84	0.59
12:J:92:GLU:CG	12:J:95:VAL:HG13	2.18	0.59
13:K:66:ILE:O	13:K:66:ILE:CD1	2.48	0.59
14:L:71:GLN:O	14:L:72:ASP:HB2	2.03	0.59
14:L:82:GLU:O	14:L:86:ARG:HG2	2.01	0.59
15:M:40:ILE:CG2	15:M:41:ASP:N	2.66	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:M:67:ARG:NH1	15:M:68:GLN:NE2	2.50	0.59
16:N:45:PHE:CE2	16:N:64:ARG:HA	2.34	0.59
17:O:25:TRP:O	17:O:26:GLY:O	2.20	0.59
17:O:90:VAL:CG1	17:O:91:ASP:N	2.44	0.59
17:O:92:ARG:CB	18:P:11:GLN:OE1	2.48	0.59
22:T:41:LEU:O	22:T:42:VAL:C	2.40	0.59
24:V:12:PRO:CG	24:V:63:ALA:HB2	2.33	0.59
25:W:32:LEU:O	25:W:34:GLU:N	2.36	0.59
26:X:56:VAL:O	26:X:57:GLU:CB	2.51	0.59
26:X:9:VAL:HA	26:X:32:GLN:HA	1.83	0.59
27:Y:34:PRO:HG3	27:Y:52:TYR:CE2	2.37	0.59
16:N:135:VAL:HG22	16:N:136:GLN:N	2.18	0.59
16:N:127:ALA:O	16:N:128:GLU:C	2.39	0.59
4:B:157:ARG:HG3	4:B:158:ALA:N	2.18	0.59
5:C:28:ALA:N	5:C:180:ASN:O	2.36	0.59
5:C:38:THR:HG22	5:C:40:GLU:H	1.68	0.59
6:D:48:THR:HA	6:D:52:VAL:CG1	2.32	0.59
6:D:56:GLY:H	6:D:73:ILE:CD1	2.11	0.59
7:E:70:VAL:HA	7:E:90:LEU:CG	2.32	0.59
9:G:25:TYR:O	9:G:29:TYR:HB3	2.02	0.59
11:I:93:PRO:O	11:I:95:GLY:N	2.34	0.59
12:J:101:VAL:C	12:J:103:ALA:H	2.04	0.59
12:J:115:LEU:HG	12:J:116:GLY:H	1.68	0.59
12:J:34:GLY:O	12:J:35:HIS:HB3	2.01	0.59
13:K:27:VAL:HG12	13:K:135:ASP:CG	2.22	0.59
13:K:48:GLU:O	13:K:52:VAL:HG13	2.03	0.59
14:L:31:HIS:ND1	14:L:34:ILE:HD11	2.17	0.59
14:L:66:VAL:O	14:L:68:ARG:N	2.36	0.59
17:O:75:ASN:O	17:O:76:TYR:O	2.21	0.59
19:Q:83:LYS:O	19:Q:84:ARG:HG3	2.03	0.59
21:S:93:GLY:O	21:S:94:LYS:CB	2.49	0.59
22:T:11:GLU:HG3	22:T:12:GLY:H	1.65	0.59
24:V:26:ARG:CD	24:V:34:THR:HG23	2.32	0.59
24:V:85:LEU:CD1	24:V:88:LYS:HB3	2.27	0.59
25:W:7:ARG:CB	25:W:8:LYS:HZ2	2.16	0.59
27:Y:54:GLY:O	27:Y:55:ARG:CB	2.51	0.59
33:O:64:A:O3'	33:O:65:G:H8	1.85	0.59
4:B:133:LEU:HD13	4:B:136:ILE:HG22	1.84	0.59
4:B:131:LEU:CD2	4:B:135:PHE:HB2	2.31	0.59
4:B:155:LEU:O	4:B:156:ALA:CB	2.50	0.59
4:B:19:ALA:HB3	4:B:21:PHE:CE2	2.36	0.59
4:B:82:ILE:HG21	4:B:91:ARG:CZ	2.33	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:103:ASP:O	5:C:199:ARG:HB2	2.03	0.59
5:C:5:LEU:HD22	5:C:31:CYS:SG	2.43	0.59
6:D:15:LEU:CD1	6:D:19:LEU:HD21	2.33	0.59
6:D:178:VAL:HG23	6:D:179:TYR:CD2	2.37	0.59
6:D:196:VAL:O	6:D:196:VAL:HG13	2.02	0.59
6:D:38:LYS:C	6:D:38:LYS:HD3	2.21	0.59
6:D:5:PRO:CG	6:D:9:PRO:HG2	2.33	0.59
8:F:133:VAL:HG23	8:F:133:VAL:O	2.03	0.59
8:F:12:PRO:C	8:F:14:GLY:N	2.56	0.59
10:H:120:ARG:HG2	10:H:124:HIS:HE2	1.66	0.59
10:H:27:TYR:O	10:H:29:PRO:HD3	2.03	0.59
10:H:45:THR:CG2	10:H:48:ARG:HG3	2.33	0.59
14:L:28:LEU:HA	14:L:34:ILE:CG1	2.33	0.59
14:L:60:LEU:CD1	14:L:61:HIS:N	2.65	0.59
14:L:64:ARG:CZ	14:L:64:ARG:HB3	2.32	0.59
14:L:73:VAL:O	14:L:77:ARG:N	2.34	0.59
15:M:13:ARG:HG3	15:M:91:PRO:CA	2.33	0.59
16:N:100:TYR:CB	16:N:103:ARG:HH22	2.16	0.59
16:N:95:ARG:HD2	16:N:96:ARG:CZ	2.31	0.59
18:P:68:LYS:CB	18:P:94:LEU:HD23	2.29	0.59
22:T:42:VAL:HG12	22:T:46:LYS:CD	2.32	0.59
4:B:105:ILE:HG23	4:B:106:ILE:H	1.67	0.59
4:B:242:ARG:HG3	4:B:242:ARG:HH11	1.67	0.59
4:B:5:LYS:HD2	4:B:5:LYS:H	1.67	0.59
5:C:102:VAL:HA	5:C:201:THR:CA	2.33	0.59
8:F:23:ARG:HA	8:F:35:VAL:O	2.03	0.59
10:H:37:VAL:CG1	10:H:38:LEU:H	2.16	0.59
13:K:35:VAL:O	13:K:129:THR:HB	2.02	0.59
13:K:17:LEU:N	13:K:17:LEU:HD22	2.17	0.59
14:L:29:LEU:CD2	14:L:75:LEU:HD13	2.32	0.59
14:L:86:ARG:HG3	14:L:87:TYR:CE1	2.34	0.59
15:M:44:LYS:HB3	15:M:46:VAL:CG2	2.32	0.59
15:M:84:GLN:NE2	15:M:86:ALA:H	2.01	0.59
17:O:11:ARG:HG3	17:O:12:ARG:N	2.18	0.59
18:P:16:PRO:HG2	18:P:17:GLY:H	1.68	0.59
19:Q:86:LEU:CD1	19:Q:87:PRO:O	2.49	0.59
23:U:37:LEU:CD1	23:U:38:VAL:HB	2.31	0.59
24:V:11:ARG:HH22	24:V:61:ARG:N	1.93	0.59
24:V:51:VAL:CG2	24:V:60:PHE:HB2	2.25	0.59
26:X:18:ASP:O	26:X:19:GLN:C	2.41	0.59
33:O:9:A:C2	33:O:46:G:C2	2.91	0.59
3:A:49:GLY:H	3:A:211:ARG:HH12	1.51	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:30:GLU:HG3	7:E:30:GLU:O	2.02	0.59
10:H:36:TRP:CB	10:H:156:GLN:HG2	2.32	0.59
10:H:53:ILE:HA	10:H:56:LEU:HD22	1.84	0.59
12:J:19:VAL:O	12:J:19:VAL:HG12	2.03	0.59
14:L:20:LEU:O	14:L:24:GLN:HG2	2.02	0.59
15:M:69:VAL:HG13	15:M:73:LEU:CD1	2.31	0.59
15:M:17:ARG:NE	15:M:89:ARG:HD3	2.18	0.59
16:N:108:ARG:HH11	16:N:108:ARG:CG	2.10	0.59
16:N:93:ARG:HH11	16:N:119:LYS:HE2	1.68	0.59
16:N:70:VAL:HG12	16:N:71:GLY:N	2.16	0.59
16:N:70:VAL:HG13	16:N:71:GLY:N	2.17	0.59
17:O:63:VAL:C	17:O:65:ILE:H	2.05	0.59
17:O:90:VAL:CG1	18:P:11:GLN:NE2	2.64	0.59
17:O:92:ARG:NE	18:P:11:GLN:OE1	2.36	0.59
18:P:34:GLU:CB	18:P:64:HIS:CE1	2.76	0.59
20:R:68:ARG:O	20:R:69:TYR:CB	2.49	0.59
22:T:84:GLU:HG3	22:T:85:HIS:H	1.68	0.59
24:V:18:ILE:CG1	24:V:43:TYR:HE1	2.12	0.59
24:V:48:LYS:HG3	24:V:63:ALA:HA	1.84	0.59
4:B:17:THR:OG1	4:B:205:VAL:N	2.32	0.59
4:B:184:LYS:H	4:B:269:PHE:HB2	1.67	0.59
5:C:36:ARG:NH2	5:C:88:GLY:HA2	2.17	0.59
6:D:165:LEU:C	6:D:168:VAL:HG22	2.23	0.59
10:H:27:TYR:CD2	17:O:100:VAL:HG13	2.37	0.59
14:L:55:ALA:HB1	14:L:80:PHE:CE2	2.38	0.59
18:P:61:VAL:HG23	18:P:101:GLY:OXT	2.02	0.59
22:T:151:HIS:HA	22:T:170:THR:HA	1.83	0.59
22:T:41:LEU:HD13	22:T:42:VAL:N	2.18	0.59
22:T:76:LEU:HA	22:T:83:PRO:HB3	1.85	0.59
22:T:53:ILE:HA	22:T:98:MET:SD	2.43	0.59
25:W:47:ASN:ND2	25:W:47:ASN:N	2.51	0.59
33:O:69:U:C2	33:O:70:C:C5	2.90	0.59
33:O:59:U:N3	33:O:60:C:C5	2.69	0.58
4:B:31:LYS:HB2	4:B:104:TYR:CZ	2.38	0.58
4:B:65:ILE:HD12	4:B:105:ILE:HA	1.82	0.58
4:B:174:ILE:HG22	4:B:175:LEU:H	1.66	0.58
5:C:195:LEU:HD12	5:C:196:VAL:H	1.68	0.58
6:D:162:ALA:HB3	6:D:170:THR:HG23	1.85	0.58
7:E:31:VAL:CG2	7:E:32:PRO:CD	2.75	0.58
9:G:75:LEU:HD13	9:G:75:LEU:H	5.60	0.58
10:H:36:TRP:HA	10:H:74:PHE:O	2.01	0.58
10:H:79:ASN:O	10:H:83:ILE:CD1	2.50	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:121:VAL:O	11:I:122:LEU:HD23	2.04	0.58
12:J:98:GLU:C	12:J:102:ARG:HB3	2.21	0.58
12:J:97:PRO:HD2	12:J:126:VAL:HG21	1.85	0.58
12:J:41:ARG:NH1	12:J:42:SER:O	2.33	0.58
16:N:11:GLU:C	16:N:13:ARG:N	2.54	0.58
16:N:24:PRO:CG	16:N:49:VAL:HG21	2.32	0.58
17:O:12:ARG:HA	17:O:15:LYS:CG	2.33	0.58
23:U:35:ASN:H	23:U:61:ALA:HB3	1.67	0.58
28:Z:13:ALA:HA	28:Z:17:GLY:CA	2.30	0.58
33:O:12:U:H3	33:O:23:A:N6	2.00	0.58
3:A:22:THR:H	3:A:25:GLU:HG3	1.68	0.58
4:B:131:LEU:HD23	4:B:132:PRO:HD2	1.83	0.58
4:B:150:LYS:CD	4:B:188:GLU:O	2.50	0.58
5:C:116:VAL:CG2	5:C:117:MET:H	2.02	0.58
5:C:78:LEU:O	5:C:79:ARG:CZ	2.50	0.58
6:D:159:ARG:C	6:D:161:ALA:N	2.56	0.58
10:H:134:PRO:HA	10:H:137:ARG:HD2	1.85	0.58
10:H:151:HIS:O	10:H:154:GLN:HB3	2.04	0.58
11:I:37:ASP:O	11:I:39:ILE:HD13	2.03	0.58
12:J:39:LYS:NZ	12:J:40:SER:N	2.51	0.58
13:K:98:LYS:CB	13:K:101:ARG:HG3	2.23	0.58
14:L:38:VAL:H	14:L:110:PRO:HG2	1.68	0.58
14:L:46:GLY:HA2	14:L:49:ASP:OD1	2.03	0.58
14:L:76:VAL:CG1	14:L:80:PHE:CZ	2.86	0.58
15:M:13:ARG:HG3	15:M:91:PRO:HA	1.85	0.58
16:N:49:VAL:CA	16:N:63:VAL:HG12	2.33	0.58
17:O:5:LYS:NZ	17:O:7:GLY:CA	2.66	0.58
19:Q:82:LEU:HD13	19:Q:83:LYS:N	2.18	0.58
22:T:102:LEU:HD21	22:T:124:ILE:CB	2.24	0.58
22:T:126:VAL:HB	22:T:162:GLU:O	2.03	0.58
22:T:58:VAL:HG12	22:T:59:LEU:H	1.68	0.58
24:V:43:TYR:O	24:V:45:ASN:N	2.35	0.58
24:V:16:ASN:C	24:V:46:LEU:HD21	2.24	0.58
4:B:3:VAL:C	4:B:17:THR:HG23	2.24	0.58
4:B:249:PRO:HB2	4:B:250:TRP:HE3	1.68	0.58
4:B:37:LEU:H	4:B:62:TYR:H	1.52	0.58
6:D:189:MET:HG2	6:D:190:ASP:N	2.19	0.58
8:F:111:HIS:HB3	8:F:112:PRO:CD	2.32	0.58
10:H:112:LYS:HD3	10:H:116:THR:HG22	1.85	0.58
10:H:33:GLU:O	10:H:35:ARG:NH2	2.36	0.58
10:H:63:PRO:C	10:H:65:TRP:H	2.06	0.58
11:I:4:PRO:CB	11:I:22:ILE:O	2.41	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:J:112:LEU:N	12:J:128:HIS:HB2	2.00	0.58
12:J:147:LEU:HD11	12:J:149:GLU:OE2	2.03	0.58
12:J:7:ARG:O	12:J:7:ARG:HG3	2.04	0.58
13:K:64:ILE:HG13	13:K:106:VAL:N	2.18	0.58
13:K:36:ALA:N	13:K:103:MET:HE1	2.17	0.58
16:N:100:TYR:CB	16:N:101:PHE:HD2	2.13	0.58
16:N:19:LEU:CD1	16:N:79:HIS:HA	2.33	0.58
17:O:106:PHE:O	17:O:109:LEU:CG	2.48	0.58
18:P:21:ARG:CG	18:P:93:GLU:HG2	2.32	0.58
19:Q:5:ALA:HB3	19:Q:105:VAL:HB	1.83	0.58
20:R:47:PHE:O	20:R:48:LYS:HB2	2.03	0.58
21:S:33:LYS:HE3	21:S:66:PRO:HA	1.84	0.58
21:S:76:CYS:HB3	21:S:77:PRO:CD	2.33	0.58
23:U:30:VAL:O	23:U:31:VAL:HG12	2.04	0.58
23:U:31:VAL:O	23:U:64:ASP:HA	2.03	0.58
24:V:54:ALA:HB1	24:V:57:GLU:HA	1.85	0.58
33:O:15:G:OP2	33:O:15:G:H3'	2.03	0.58
5:C:199:ARG:C	5:C:200:GLU:HG2	2.23	0.58
5:C:93:VAL:HB	5:C:175:VAL:HG21	1.84	0.58
6:D:127:VAL:C	6:D:129:GLY:H	2.07	0.58
6:D:27:LEU:HD22	6:D:28:LEU:H	1.69	0.58
7:E:68:PRO:HB3	7:E:92:VAL:CB	2.33	0.58
8:F:126:PRO:HD2	8:F:130:ARG:H	1.69	0.58
9:G:118:LYS:N	9:G:118:LYS:HD3	2.18	0.58
9:G:128:LEU:H	9:G:141:LYS:HG2	1.68	0.58
9:G:26:ALA:HA	9:G:31:LEU:H	1.69	0.58
11:I:106:LEU:O	11:I:111:PHE:HD2	1.86	0.58
11:I:22:ILE:HD11	11:I:40:VAL:HG23	1.84	0.58
11:I:50:GLY:O	11:I:51:ALA:HB3	2.02	0.58
11:I:65:THR:O	11:I:79:PHE:CG	2.56	0.58
12:J:97:PRO:HD2	12:J:126:VAL:HB	1.85	0.58
12:J:70:GLN:CD	12:J:71:VAL:HG12	2.23	0.58
12:J:83:VAL:HG12	12:J:114:ILE:CA	2.28	0.58
19:Q:23:LEU:CD2	19:Q:36:LEU:HD21	2.33	0.58
21:S:13:VAL:HB	21:S:70:SER:O	2.03	0.58
28:Z:11:LYS:CE	28:Z:15:THR:OG1	2.51	0.58
33:O:74:C:H2'	33:O:75:C:H1'	1.83	0.58
3:A:195:ARG:HG3	3:A:196:ALA:N	2.18	0.58
4:B:241:PRO:HB2	4:B:242:ARG:NE	2.19	0.58
5:C:5:LEU:CB	5:C:76:ARG:HH11	2.16	0.58
8:F:148:ILE:O	8:F:151:ILE:HB	2.02	0.58
8:F:41:MET:CA	8:F:54:ARG:HA	2.34	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:27:ARG:NH2	9:G:28:ASN:ND2	2.51	0.58
10:H:35:ARG:O	10:H:74:PHE:HB2	2.04	0.58
10:H:62:ARG:HH21	10:H:63:PRO:CD	2.15	0.58
11:I:85:VAL:HG12	11:I:93:PRO:HB2	1.85	0.58
13:K:103:MET:C	13:K:104:PHE:CG	2.77	0.58
14:L:104:ARG:CG	14:L:105:ARG:N	2.64	0.58
14:L:37:THR:OG1	14:L:39:PRO:CD	2.43	0.58
17:O:93:LYS:O	17:O:96:ALA:HB3	2.03	0.58
22:T:90:VAL:CG2	22:T:91:LEU:H	2.09	0.58
23:U:66:VAL:CG2	23:U:82:ARG:HB2	2.33	0.58
24:V:91:LYS:CD	24:V:91:LYS:H	2.17	0.58
27:Y:33:CYS:HG	27:Y:34:PRO:HD2	1.63	0.58
33:O:33:U:O4	33:O:36:A:OP1	2.21	0.58
3:A:47:LYS:HB3	3:A:212:SER:HB3	1.86	0.58
5:C:92:THR:H	5:C:95:ILE:HD11	1.68	0.58
6:D:4:ILE:HG23	6:D:118:LEU:HD22	1.85	0.58
7:E:70:VAL:HA	7:E:90:LEU:HG	1.84	0.58
7:E:96:ARG:CD	7:E:97:ASP:H	2.16	0.58
8:F:105:LEU:CD1	8:F:107:VAL:HG22	2.28	0.58
8:F:123:PHE:HD2	8:F:125:VAL:CG2	2.16	0.58
8:F:20:ALA:HB3	8:F:23:ARG:HB2	1.86	0.58
8:F:88:LEU:O	8:F:162:ILE:HG12	2.03	0.58
9:G:44:LEU:HD13	9:G:45:LYS:N	2.18	0.58
10:H:37:VAL:HG13	10:H:159:GLU:CA	2.32	0.58
10:H:71:MET:H	10:H:71:MET:CE	2.16	0.58
11:I:59:LYS:CB	11:I:94:ARG:HH12	2.14	0.58
12:J:79:ARG:HB3	12:J:110:TYR:N	2.18	0.58
13:K:37:LEU:CG	13:K:128:LYS:O	2.47	0.58
13:K:60:ARG:C	13:K:60:ARG:CD	2.72	0.58
15:M:24:LEU:HB2	15:M:85:VAL:HA	1.86	0.58
15:M:17:ARG:NH1	15:M:89:ARG:NE	2.51	0.58
17:O:112:ARG:HG2	17:O:112:ARG:NH1	2.18	0.58
19:Q:5:ALA:HB3	19:Q:105:VAL:CB	2.33	0.58
21:S:31:LEU:CB	21:S:32:PRO:CD	2.80	0.58
25:W:55:ARG:CD	25:W:55:ARG:N	2.65	0.58
26:X:8:LEU:C	26:X:9:VAL:HG13	2.24	0.58
8:F:156:ALA:C	8:F:171:LEU:HA	2.23	0.58
4:B:184:LYS:HG2	4:B:185:VAL:N	2.16	0.58
4:B:76:PRO:HB2	4:B:117:VAL:HG11	1.81	0.58
5:C:98:PRO:HA	5:C:172:VAL:HG12	1.85	0.58
6:D:19:LEU:HD22	6:D:19:LEU:H	1.67	0.58
6:D:52:VAL:O	6:D:52:VAL:CG1	2.52	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:35:GLU:OE1	7:E:162:THR:HA	2.03	0.58
8:F:27:LYS:HB3	8:F:31:GLY:HA2	1.86	0.58
8:F:81:GLU:HG3	8:F:82:GLY:H	1.68	0.58
9:G:133:HIS:O	9:G:136:VAL:O	2.20	0.58
9:G:6:LEU:CB	9:G:35:LEU:HD13	2.30	0.58
11:I:86:ILE:O	11:I:94:ARG:HD2	2.04	0.58
12:J:148:LEU:CD2	12:J:149:GLU:N	2.65	0.58
16:N:90:GLN:HB2	16:N:120:ARG:CZ	2.34	0.58
16:N:35:LYS:HZ3	16:N:35:LYS:HB3	1.67	0.58
16:N:92:GLY:O	16:N:114:LEU:HD22	2.04	0.58
19:Q:75:TYR:O	19:Q:103:ILE:HG13	2.03	0.58
21:S:84:ARG:HD3	21:S:91:GLU:C	2.24	0.58
22:T:73:GLN:HB3	22:T:87:ASP:CB	2.33	0.58
27:Y:47:PRO:CB	27:Y:57:VAL:HG21	2.33	0.58
4:B:65:ILE:CG2	4:B:105:ILE:HA	2.32	0.58
4:B:157:ARG:CG	4:B:158:ALA:H	2.13	0.58
4:B:242:ARG:N	4:B:242:ARG:CD	2.59	0.58
4:B:247:ALA:HB1	4:B:251:GLY:HA2	1.85	0.58
5:C:48:GLN:NE2	5:C:78:LEU:HD13	2.18	0.58
7:E:23:PHE:HB3	7:E:25:TYR:CZ	2.38	0.58
8:F:125:VAL:HG13	8:F:131:VAL:CG1	2.33	0.58
8:F:29:PRO:HD3	8:F:79:VAL:HB	1.86	0.58
8:F:95:ARG:HB2	8:F:107:VAL:CG1	2.33	0.58
9:G:113:ARG:CD	9:G:132:PRO:HB3	2.32	0.58
10:H:112:LYS:NZ	10:H:116:THR:HG22	2.19	0.58
12:J:79:ARG:HB3	12:J:109:GLY:CA	2.34	0.58
12:J:123:LEU:HD23	12:J:124:LYS:N	2.18	0.58
14:L:36:THR:O	14:L:111:LEU:HB3	2.04	0.58
16:N:45:PHE:HE2	16:N:64:ARG:CA	2.17	0.58
16:N:93:ARG:HB2	16:N:116:ALA:O	2.03	0.58
19:Q:14:PRO:O	19:Q:18:ARG:HD3	2.04	0.58
20:R:84:ALA:H	20:R:85:PRO:CD	2.16	0.58
21:S:37:VAL:H	21:S:62:GLU:CG	2.16	0.58
21:S:38:ILE:HG12	21:S:60:PHE:HZ	1.68	0.58
21:S:55:TYR:CB	21:S:56:PRO:CD	2.37	0.58
22:T:69:THR:HG23	22:T:70:LEU:H	1.68	0.58
23:U:31:VAL:CG2	23:U:62:LEU:N	2.67	0.58
23:U:35:ASN:N	23:U:35:ASN:ND2	2.51	0.58
24:V:55:GLY:O	24:V:56:GLN:CB	2.51	0.58
26:X:31:LEU:HD22	26:X:31:LEU:H	1.69	0.58
27:Y:30:LEU:CD2	27:Y:31:VAL:N	2.63	0.58
4:B:94:LEU:CG	4:B:104:TYR:HE2	2.16	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:109:ASP:HB2	4:B:199:ALA:CB	2.33	0.58
5:C:104:VAL:HG12	5:C:105:THR:N	2.19	0.58
5:C:154:LYS:HE2	5:C:155:LYS:H	1.69	0.58
8:F:152:ARG:H	8:F:152:ARG:HD2	1.64	0.58
9:G:141:LYS:O	9:G:142:VAL:HG23	2.03	0.58
11:I:66:LYS:HD2	11:I:78:ARG:NH2	2.19	0.58
11:I:85:VAL:CG1	11:I:93:PRO:CB	2.82	0.58
12:J:13:ASN:O	12:J:14:LYS:CB	2.51	0.58
12:J:80:TYR:C	12:J:81:GLN:NE2	2.57	0.58
13:K:41:TRP:CD1	13:K:41:TRP:N	2.72	0.58
13:K:61:GLY:HA2	22:T:183:LEU:HG	1.84	0.58
13:K:68:ILE:O	13:K:69:PHE:HB3	2.01	0.58
14:L:56:LYS:CE	14:L:88:ARG:HA	2.34	0.58
15:M:71:ARG:CB	15:M:108:GLY:H	2.15	0.58
16:N:54:ARG:O	16:N:55:ASN:CB	2.52	0.58
18:P:77:ALA:HB3	18:P:83:ARG:HA	1.86	0.58
19:Q:44:ALA:C	19:Q:46:PHE:H	2.06	0.58
21:S:38:ILE:CG2	21:S:39:VAL:H	1.94	0.58
22:T:99:TYR:CE2	22:T:125:LEU:HB2	2.39	0.58
22:T:16:SER:HA	22:T:19:ARG:HD3	1.84	0.58
22:T:38:TYR:C	22:T:38:TYR:HD2	2.07	0.58
22:T:8:TYR:H	22:T:39:VAL:HG22	1.68	0.58
23:U:70:GLN:O	23:U:78:TYR:O	2.22	0.58
3:A:40:GLU:C	3:A:178:LYS:HD2	2.24	0.58
4:B:172:TYR:CD1	4:B:186:HIS:HA	2.39	0.58
6:D:126:GLY:HA3	6:D:133:GLU:OE2	2.04	0.58
6:D:129:GLY:HA2	6:D:161:ALA:HB2	1.84	0.58
7:E:180:PHE:O	7:E:182:LYS:HG2	2.02	0.58
7:E:31:VAL:HG13	7:E:32:PRO:N	2.17	0.58
8:F:7:LEU:HD22	8:F:52:VAL:CG1	2.33	0.58
9:G:13:GLY:O	9:G:15:VAL:N	2.36	0.58
9:G:44:LEU:CD2	9:G:47:LEU:HD11	2.34	0.58
10:H:35:ARG:O	10:H:36:TRP:CD1	2.57	0.58
10:H:94:ILE:HG22	10:H:96:THR:CG2	2.33	0.58
11:I:69:VAL:HG22	11:I:70:LYS:N	2.17	0.58
14:L:113:LEU:CD1	14:L:115:GLU:HG2	2.31	0.58
16:N:35:LYS:O	16:N:38:ASN:ND2	2.36	0.58
16:N:51:ARG:HD3	16:N:62:THR:HG22	1.85	0.58
16:N:66:VAL:HG13	16:N:70:VAL:CA	2.34	0.58
16:N:7:ILE:O	16:N:10:VAL:N	2.29	0.58
16:N:83:ILE:HG13	16:N:84:GLN:N	2.18	0.58
19:Q:80:PRO:HD2	19:Q:100:THR:OG1	2.03	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:S:45:VAL:CA	21:S:57:GLN:HA	2.33	0.58
23:U:36:ILE:HD13	23:U:36:ILE:H	1.67	0.58
25:W:17:SER:HB3	25:W:21:LEU:HD13	1.84	0.58
25:W:6:VAL:HG23	25:W:7:ARG:N	2.18	0.58
3:A:194:ILE:HA	3:A:197:LEU:HD23	1.85	0.57
4:B:117:VAL:CG1	4:B:118:VAL:N	2.67	0.57
5:C:101:ARG:CZ	5:C:169:ASN:HB3	2.34	0.57
6:D:151:LEU:HD13	6:D:188:VAL:HB	1.85	0.57
6:D:148:SER:OG	6:D:167:TRP:CD1	2.52	0.57
6:D:48:THR:O	6:D:52:VAL:HB	2.04	0.57
7:E:170:ARG:O	7:E:173:LEU:HB2	2.03	0.57
9:G:3:VAL:CG1	9:G:4:ILE:N	2.67	0.57
9:G:4:ILE:CG2	9:G:37:VAL:HG21	2.33	0.57
10:H:36:TRP:HB2	10:H:156:GLN:HG2	1.86	0.57
10:H:75:VAL:CG1	10:H:76:VAL:H	2.15	0.57
12:J:95:VAL:CG2	12:J:123:LEU:HD22	2.30	0.57
12:J:138:LEU:HD23	12:J:143:GLY:O	2.03	0.57
19:Q:65:LEU:HD23	19:Q:68:ARG:HH11	1.69	0.57
20:R:25:LYS:HG3	20:R:26:TYR:N	2.19	0.57
20:R:60:ARG:CD	20:R:74:PRO:HG3	2.34	0.57
23:U:17:GLN:HE21	23:U:39:ARG:CZ	2.17	0.57
25:W:41:ILE:HD13	25:W:44:LEU:HD12	1.86	0.57
26:X:5:LYS:O	26:X:56:VAL:HA	2.03	0.57
33:O:24:G:N7	33:O:25:C:C5	2.71	0.57
5:C:28:ALA:CB	5:C:180:ASN:HB3	2.32	0.57
5:C:35:GLN:HB3	5:C:48:GLN:OE1	2.02	0.57
5:C:90:THR:CG2	5:C:91:VAL:H	2.17	0.57
6:D:165:LEU:O	6:D:168:VAL:HG22	2.04	0.57
6:D:78:PHE:HE2	6:D:81:GLY:HA3	1.67	0.57
7:E:128:ARG:CG	7:E:129:GLY:H	2.14	0.57
7:E:50:ALA:HA	7:E:53:LEU:CD1	2.34	0.57
9:G:27:ARG:HH22	9:G:28:ASN:HD22	1.52	0.57
10:H:112:LYS:C	10:H:112:LYS:HD3	2.25	0.57
10:H:52:LYS:O	10:H:56:LEU:CD1	2.48	0.57
12:J:7:ARG:N	12:J:8:PRO:HD3	2.17	0.57
12:J:92:GLU:C	12:J:94:GLU:N	2.49	0.57
13:K:88:GLY:O	13:K:91:GLU:OE2	2.23	0.57
15:M:71:ARG:CB	15:M:108:GLY:CA	2.82	0.57
16:N:7:ILE:O	16:N:10:VAL:HB	2.04	0.57
19:Q:87:PRO:HA	19:Q:88:ARG:CZ	2.34	0.57
19:Q:95:ILE:CG2	19:Q:96:ILE:N	2.67	0.57
20:R:8:ILE:HG23	20:R:30:VAL:HG21	1.84	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:R:64:LYS:HD3	20:R:64:LYS:N	2.08	0.57
22:T:52:SER:HB2	22:T:53:ILE:CD1	2.34	0.57
24:V:66:HIS:HB3	24:V:69:LYS:HD2	1.86	0.57
3:A:224:ARG:CZ	3:A:224:ARG:HA	2.34	0.57
4:B:143:HIS:HA	4:B:156:ALA:HB3	1.86	0.57
4:B:185:VAL:HG12	4:B:186:HIS:H	1.53	0.57
4:B:242:ARG:NH1	4:B:242:ARG:HG3	2.17	0.57
4:B:249:PRO:HB2	4:B:250:TRP:CE3	2.40	0.57
4:B:253:GLN:HB3	4:B:255:LYS:HD2	1.86	0.57
4:B:31:LYS:CD	4:B:32:SER:N	2.59	0.57
6:D:146:SER:N	6:D:167:TRP:CZ2	2.69	0.57
6:D:169:VAL:HG22	6:D:170:THR:N	2.19	0.57
6:D:196:VAL:HG22	6:D:197:PHE:CE1	2.39	0.57
7:E:27:ASN:OD1	7:E:29:TRP:HE3	1.86	0.57
7:E:46:ALA:HB1	7:E:72:ARG:HH12	1.69	0.57
8:F:147:ASN:C	8:F:150:ALA:HB3	2.25	0.57
10:H:58:ARG:CA	10:H:139:LEU:HD13	2.35	0.57
13:K:124:LYS:HG3	13:K:125:LEU:N	2.20	0.57
17:O:17:ILE:CG2	17:O:35:ALA:CB	2.81	0.57
17:O:83:LEU:HG	17:O:84:LYS:HZ3	1.69	0.57
22:T:98:MET:C	22:T:125:LEU:CD1	2.64	0.57
25:W:52:ASP:OD2	25:W:52:ASP:N	2.36	0.57
25:W:61:LEU:O	25:W:62:THR:CB	2.52	0.57
4:B:266:SER:O	4:B:270:ILE:CG2	2.52	0.57
4:B:67:PHE:O	4:B:153:ALA:HB3	2.04	0.57
6:D:16:ALA:O	6:D:17:ALA:C	2.42	0.57
7:E:176:LEU:HG	7:E:178:PHE:CE1	2.40	0.57
7:E:53:LEU:N	7:E:53:LEU:HD23	2.19	0.57
9:G:25:TYR:CB	9:G:30:LEU:HD12	2.30	0.57
11:I:87:ILE:HG23	11:I:91:LEU:CA	2.18	0.57
13:K:109:VAL:CG2	13:K:113:GLN:HB2	2.33	0.57
13:K:27:VAL:O	13:K:28:ALA:HB2	2.04	0.57
14:L:11:ASN:O	14:L:12:ARG:HB3	2.03	0.57
15:M:72:ALA:C	15:M:74:ALA:N	2.56	0.57
15:M:72:ALA:O	15:M:75:GLU:HG3	2.05	0.57
16:N:92:GLY:HA3	16:N:114:LEU:HD22	1.85	0.57
18:P:78:LYS:O	18:P:79:VAL:CG2	2.53	0.57
19:Q:33:ARG:NH1	19:Q:33:ARG:HG3	2.18	0.57
21:S:88:LYS:HZ3	21:S:89:PHE:HE1	1.52	0.57
22:T:107:THR:N	22:T:108:PRO:CD	2.67	0.57
13:K:135:ASP:OD1	22:T:76:LEU:CD1	2.53	0.57
26:X:4:LEU:HD12	26:X:58:VAL:N	2.20	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:0:16:U:C2'	33:0:17:U:H5'	2.33	0.57
4:B:65:ILE:CD1	4:B:105:ILE:CA	2.79	0.57
7:E:128:ARG:HG2	7:E:129:GLY:N	2.13	0.57
8:F:127:GLU:HB2	8:F:130:ARG:CG	2.27	0.57
9:G:68:LEU:HB3	9:G:72:LEU:CD1	2.35	0.57
11:I:85:VAL:HG12	11:I:86:ILE:H	1.68	0.57
16:N:123:LYS:HG3	16:N:124:ASP:N	2.20	0.57
16:N:55:ASN:HD22	16:N:58:ASN:H	1.51	0.57
16:N:29:ARG:HH21	16:N:84:GLN:CD	2.08	0.57
17:O:31:SER:CB	17:O:34:LYS:HB2	2.27	0.57
17:O:3:ARG:HH11	17:O:3:ARG:CG	4.00	0.57
18:P:4:ILE:CG1	18:P:13:ARG:HB3	2.22	0.57
18:P:36:PRO:CD	18:P:62:LEU:HD12	2.34	0.57
19:Q:86:LEU:HD22	19:Q:87:PRO:HD2	1.86	0.57
20:R:8:ILE:HD13	25:W:26:ARG:HH22	1.69	0.57
22:T:8:TYR:CE1	22:T:39:VAL:HG13	2.39	0.57
23:U:16:SER:OG	23:U:17:GLN:N	2.37	0.57
23:U:21:LEU:HD22	23:U:39:ARG:CG	2.34	0.57
24:V:36:GLY:C	24:V:39:LYS:HZ1	2.07	0.57
33:0:1:G:O2'	33:0:2:C:H5'	2.04	0.57
33:0:37:A:H3'	33:0:38:A:H8	1.70	0.57
3:A:35:THR:CG2	3:A:36:ALA:N	2.67	0.57
4:B:76:PRO:CB	4:B:117:VAL:CG1	2.73	0.57
4:B:257:LEU:O	4:B:259:THR:N	2.38	0.57
4:B:69:ARG:HD2	4:B:119:ALA:HB2	1.84	0.57
5:C:133:LYS:O	5:C:134:ILE:HG23	2.05	0.57
5:C:113:PHE:HA	5:C:158:GLY:O	2.05	0.57
6:D:5:PRO:CG	6:D:120:LEU:HD21	2.34	0.57
7:E:123:ASN:HA	7:E:125:PHE:CE2	2.39	0.57
7:E:5:LEU:HB2	7:E:100:TRP:HH2	1.68	0.57
12:J:35:HIS:HD2	12:J:36:LYS:HD2	1.68	0.57
13:K:65:PHE:O	13:K:104:PHE:HD2	1.86	0.57
14:L:66:VAL:HG23	14:L:67:LEU:HD22	1.85	0.57
15:M:110:LEU:HD12	15:M:110:LEU:H	1.69	0.57
15:M:7:TYR:O	15:M:8:GLU:HB2	2.03	0.57
16:N:95:ARG:CD	16:N:96:ARG:HH12	2.17	0.57
17:O:79:PHE:C	17:O:79:PHE:CD2	2.78	0.57
20:R:55:ASN:N	20:R:77:LYS:HD3	2.20	0.57
20:R:87:GLN:O	20:R:88:LYS:CB	2.53	0.57
21:S:61:ILE:CG2	21:S:62:GLU:N	2.49	0.57
22:T:102:LEU:HD13	22:T:123:ASP:CA	2.34	0.57
22:T:151:HIS:HB3	22:T:170:THR:OG1	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:T:61:LEU:HB3	22:T:63:ASP:OD2	2.03	0.57
25:W:26:ARG:HA	25:W:29:LYS:HG3	1.87	0.57
26:X:7:LYS:O	26:X:8:LEU:O	2.23	0.57
13:K:110:THR:O	13:K:112:GLU:N	2.38	0.57
3:A:34:ALA:HA	3:A:40:GLU:CD	2.24	0.57
5:C:90:THR:CG2	5:C:91:VAL:N	2.67	0.57
7:E:122:PRO:C	7:E:123:ASN:HD22	2.08	0.57
8:F:151:ILE:O	8:F:153:LYS:N	2.37	0.57
11:I:109:LYS:CA	11:I:109:LYS:HE3	2.35	0.57
11:I:70:LYS:HA	11:I:76:ALA:CA	2.34	0.57
12:J:41:ARG:HD2	12:J:45:LEU:HD12	1.85	0.57
13:K:48:GLU:CA	13:K:51:ARG:HE	2.07	0.57
22:T:14:LYS:HG3	22:T:15:PRO:CD	2.35	0.57
22:T:28:MET:CE	22:T:29:TYR:HA	2.33	0.57
28:Z:14:LYS:HA	28:Z:20:ALA:HB1	1.86	0.57
4:B:130:ALA:CB	4:B:190:TYR:CZ	2.87	0.57
4:B:142:VAL:CG2	4:B:143:HIS:H	2.18	0.57
4:B:21:PHE:HA	4:B:24:ILE:CD1	2.35	0.57
4:B:31:LYS:HB2	4:B:104:TYR:CE1	2.39	0.57
5:C:34:VAL:HA	5:C:67:PHE:CD1	2.38	0.57
6:D:119:LEU:C	6:D:121:VAL:H	2.06	0.57
6:D:143:LEU:HD11	6:D:186:ARG:HD2	1.87	0.57
7:E:40:ASN:O	7:E:156:ASP:O	2.23	0.57
7:E:41:GLN:HG2	7:E:155:MET:CA	2.35	0.57
9:G:130:TYR:CD2	9:G:138:ILE:CG2	2.74	0.57
9:G:81:VAL:O	9:G:82:ARG:HB2	2.04	0.57
9:G:82:ARG:HB2	9:G:89:TYR:CE1	2.40	0.57
11:I:7:TYR:O	11:I:8:LEU:HD22	2.04	0.57
12:J:75:ILE:CG1	12:J:77:ARG:NH1	2.68	0.57
12:J:88:LEU:C	12:J:90:ARG:N	2.53	0.57
14:L:15:SER:O	14:L:18:LEU:N	2.38	0.57
15:M:60:GLY:CA	15:M:65:VAL:HG11	2.35	0.57
15:M:72:ALA:O	15:M:73:LEU:C	2.43	0.57
16:N:44:ASP:OD2	16:N:85:LYS:HE2	2.05	0.57
17:O:89:GLU:O	17:O:90:VAL:CG2	2.52	0.57
21:S:14:LEU:HB3	21:S:23:ARG:N	2.19	0.57
21:S:27:VAL:O	21:S:28:LYS:HD3	2.05	0.57
22:T:56:VAL:HG12	22:T:70:LEU:CG	2.35	0.57
23:U:21:LEU:HD22	23:U:39:ARG:HG3	1.86	0.57
23:U:50:ASN:HA	23:U:63:VAL:CG2	2.33	0.57
24:V:54:ALA:HB1	24:V:57:GLU:N	2.20	0.57
24:V:85:LEU:CD1	24:V:87:PRO:HD2	2.29	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:W:8:LYS:O	25:W:54:LYS:NZ	2.34	0.57
26:X:8:LEU:O	26:X:9:VAL:CG2	2.49	0.57
33:0:13:C:H6	33:0:13:C:H5"	1.68	0.57
3:A:198:GLU:O	3:A:201:LYS:HG3	2.05	0.57
5:C:172:VAL:HG22	5:C:184:VAL:HG12	1.87	0.57
6:D:149:VAL:HG11	6:D:186:ARG:HB2	1.87	0.57
9:G:13:GLY:HA2	9:G:17:GLN:HG2	1.86	0.57
9:G:6:LEU:HD13	9:G:35:LEU:CD1	2.33	0.57
10:H:57:LEU:O	10:H:72:GLY:HA2	2.04	0.57
11:I:13:ASN:HB2	11:I:17:ARG:HD2	1.86	0.57
11:I:20:MET:HG2	11:I:21:CYS:N	2.19	0.57
14:L:38:VAL:N	14:L:39:PRO:CD	2.67	0.57
15:M:44:LYS:O	15:M:46:VAL:HG23	2.04	0.57
16:N:2:ASN:OD1	16:N:3:ARG:HD3	2.03	0.57
16:N:89:VAL:HG12	16:N:121:ILE:HG12	1.87	0.57
19:Q:28:SER:CA	19:Q:71:VAL:HG23	2.35	0.57
20:R:80:ILE:O	20:R:81:VAL:CB	2.52	0.57
22:T:15:PRO:C	22:T:17:ALA:H	2.08	0.57
22:T:69:THR:CG2	22:T:88:PHE:CE1	2.87	0.57
24:V:65:SER:C	24:V:67:ILE:N	2.58	0.57
26:X:46:ASN:O	26:X:50:VAL:HG13	2.04	0.57
4:B:151:LYS:O	4:B:151:LYS:CG	2.52	0.57
33:0:48:C:H4'	33:0:49:C:H5"	1.85	0.57
33:0:54:U:C2	33:0:58:A:N6	2.72	0.57
3:A:42:VAL:HG12	3:A:43:GLU:N	2.20	0.57
5:C:172:VAL:HA	5:C:184:VAL:CG1	2.35	0.57
5:C:4:ILE:HG13	5:C:5:LEU:H	1.69	0.57
7:E:87:PRO:O	7:E:88:ILE:HG13	2.05	0.57
8:F:144:VAL:HG12	8:F:145:ALA:H	1.68	0.57
10:H:155:ALA:O	10:H:156:GLN:HB3	2.04	0.57
10:H:50:ALA:O	10:H:51:THR:C	2.43	0.57
10:H:84:ARG:C	10:H:86:THR:H	2.08	0.57
13:K:23:GLY:HA2	13:K:98:LYS:CB	2.23	0.57
13:K:36:ALA:N	13:K:103:MET:CE	2.68	0.57
13:K:48:GLU:CA	13:K:51:ARG:NE	2.63	0.57
13:K:75:THR:HA	13:K:87:LYS:O	2.05	0.57
15:M:73:LEU:O	15:M:76:LYS:CB	2.46	0.57
18:P:77:ALA:HB3	18:P:83:ARG:CA	2.34	0.57
21:S:24:VAL:HG22	21:S:25:GLY:N	2.20	0.57
22:T:101:PRO:CG	22:T:136:PHE:HB3	2.35	0.57
4:B:222:ARG:O	4:B:223:GLY:C	2.43	0.56
4:B:62:TYR:CD1	4:B:64:ILE:HB	2.39	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:15:LEU:HD13	6:D:19:LEU:CD2	2.35	0.56
7:E:132:ASN:O	7:E:133:LEU:HD13	2.05	0.56
12:J:49:ARG:O	12:J:51:PHE:N	2.36	0.56
13:K:69:PHE:HD2	13:K:69:PHE:O	1.86	0.56
13:K:7:MET:O	13:K:8:LYS:C	2.44	0.56
14:L:73:VAL:CG2	14:L:77:ARG:HB3	2.32	0.56
18:P:96:ILE:CG2	18:P:97:LYS:N	2.27	0.56
19:Q:85:VAL:HG12	19:Q:86:LEU:N	2.19	0.56
20:R:32:PRO:HA	20:R:75:ASP:CB	2.35	0.56
22:T:97:GLU:OE1	22:T:164:ALA:HB3	2.04	0.56
22:T:45:ASP:CB	22:T:49:ARG:HH21	2.18	0.56
23:U:46:LYS:HB2	23:U:78:TYR:CE2	2.40	0.56
24:V:19:GLN:H	24:V:44:PRO:CD	2.18	0.56
24:V:19:GLN:O	24:V:42:GLN:O	2.23	0.56
24:V:31:GLY:O	24:V:32:LYS:HB2	2.05	0.56
26:X:55:ARG:HH11	26:X:56:VAL:H	1.53	0.56
22:T:130:PRO:HA	22:T:133:ILE:CG1	2.35	0.56
4:B:132:PRO:HB3	4:B:188:GLU:CG	2.35	0.56
4:B:27:THR:O	4:B:28:GLU:HB2	2.04	0.56
5:C:154:LYS:O	5:C:156:MET:N	2.38	0.56
5:C:59:VAL:HG11	5:C:63:LEU:CD1	2.31	0.56
6:D:47:LYS:O	6:D:48:THR:HB	2.05	0.56
6:D:52:VAL:O	6:D:53:ALA:CB	2.52	0.56
8:F:122:THR:C	8:F:123:PHE:CD1	2.78	0.56
8:F:144:VAL:CG1	8:F:145:ALA:H	2.18	0.56
9:G:125:GLU:HA	9:G:143:SER:CA	2.35	0.56
9:G:66:GLU:OE1	9:G:66:GLU:HA	2.04	0.56
9:G:94:ALA:C	9:G:97:ILE:HG23	2.26	0.56
10:H:38:LEU:H	10:H:159:GLU:HA	1.70	0.56
11:I:106:LEU:O	11:I:111:PHE:CD2	2.57	0.56
12:J:94:GLU:HG3	12:J:96:THR:HG23	1.88	0.56
13:K:8:LYS:N	13:K:8:LYS:HD3	2.21	0.56
15:M:27:SER:OG	15:M:40:ILE:HD12	2.05	0.56
16:N:32:TYR:CB	16:N:81:PRO:O	2.53	0.56
17:O:29:SER:O	17:O:30:LYS:HD3	2.04	0.56
17:O:35:ALA:O	17:O:39:LEU:CD2	2.52	0.56
17:O:60:LEU:HD23	17:O:60:LEU:C	2.25	0.56
18:P:51:VAL:CG1	18:P:52:VAL:H	2.00	0.56
19:Q:30:GLU:HB2	19:Q:31:GLU:OE1	2.05	0.56
24:V:46:LEU:N	24:V:46:LEU:HD23	2.17	0.56
25:W:54:LYS:C	25:W:55:ARG:CG	2.74	0.56
27:Y:40:LYS:HG2	27:Y:46:CYS:SG	2.45	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:0:24:G:H3'	33:0:25:C:C6	2.40	0.56
33:0:50:U:H2'	33:0:51:G:C8	2.39	0.56
33:0:54:U:O2'	33:0:55:PSU:P	2.63	0.56
5:C:63:LEU:CD2	5:C:65:GLY:HA3	2.35	0.56
6:D:191:LEU:HD22	6:D:193:ALA:CB	2.35	0.56
8:F:144:VAL:C	8:F:146:ALA:N	2.55	0.56
9:G:114:LEU:HA	9:G:130:TYR:HD1	1.63	0.56
9:G:5:LEU:HD22	9:G:5:LEU:N	2.19	0.56
10:H:78:VAL:HG21	10:H:149:PRO:HB3	1.87	0.56
10:H:146:TYR:OH	10:H:150:ASP:O	2.22	0.56
10:H:36:TRP:O	10:H:158:PRO:HG2	2.05	0.56
11:I:97:ARG:HA	11:I:97:ARG:NH1	2.20	0.56
12:J:101:VAL:C	12:J:103:ALA:N	2.57	0.56
12:J:101:VAL:O	12:J:103:ALA:N	2.39	0.56
15:M:75:GLU:OE2	15:M:76:LYS:N	2.39	0.56
18:P:66:ARG:CD	18:P:94:LEU:HD22	2.32	0.56
19:Q:74:ALA:HB1	19:Q:103:ILE:HG12	1.86	0.56
20:R:58:HIS:O	20:R:59:VAL:CG1	2.48	0.56
22:T:24:LEU:HG	22:T:40:ASP:CA	2.36	0.56
25:W:22:GLU:O	25:W:25:VAL:HG13	2.05	0.56
3:A:53:ARG:N	3:A:53:ARG:HE	2.02	0.56
4:B:126:GLN:HG2	4:B:129:ASN:ND2	2.19	0.56
4:B:70:TRP:CZ3	4:B:190:TYR:HB3	2.40	0.56
5:C:146:THR:N	5:C:148:GLY:N	2.54	0.56
7:E:16:ARG:HA	7:E:19:LEU:CD1	2.34	0.56
8:F:152:ARG:N	8:F:152:ARG:NH2	2.52	0.56
9:G:95:LYS:N	9:G:95:LYS:CD	2.56	0.56
11:I:45:GLU:OE1	11:I:45:GLU:C	2.43	0.56
11:I:87:ILE:O	11:I:87:ILE:HG22	2.06	0.56
13:K:103:MET:HB3	13:K:104:PHE:CE1	2.40	0.56
13:K:35:VAL:CG2	13:K:130:LYS:N	2.68	0.56
14:L:104:ARG:HG2	14:L:105:ARG:HG2	1.87	0.56
15:M:103:GLU:CG	15:M:104:GLY:N	2.69	0.56
15:M:10:ARG:N	15:M:10:ARG:HD2	2.20	0.56
16:N:28:VAL:HG13	16:N:44:ASP:HB2	1.87	0.56
18:P:57:VAL:O	18:P:57:VAL:HG12	2.06	0.56
19:Q:75:TYR:N	19:Q:103:ILE:CG1	2.69	0.56
22:T:45:ASP:C	22:T:47:VAL:H	2.05	0.56
26:X:8:LEU:CG	26:X:33:GLN:O	2.53	0.56
27:Y:31:VAL:CB	27:Y:32:PRO:CD	2.72	0.56
27:Y:56:LYS:HD2	27:Y:56:LYS:H	1.70	0.56
28:Z:16:HIS:O	28:Z:17:GLY:O	2.23	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:O:92:ARG:C	17:O:94:ASN:N	2.56	0.56
3:A:176:VAL:HG13	3:A:177:GLY:N	2.19	0.56
4:B:242:ARG:HD2	4:B:242:ARG:H	1.68	0.56
4:B:28:GLU:CB	4:B:29:PRO:CD	2.84	0.56
4:B:97:TYR:O	4:B:98:VAL:HG23	2.06	0.56
6:D:105:LEU:CD1	6:D:109:VAL:HG21	2.35	0.56
6:D:119:LEU:HD12	6:D:119:LEU:O	2.06	0.56
7:E:122:PRO:HB2	7:E:173:LEU:HD21	1.87	0.56
8:F:52:VAL:HG23	8:F:52:VAL:O	2.05	0.56
9:G:124:GLY:CA	9:G:144:VAL:CG2	2.68	0.56
9:G:21:VAL:O	9:G:21:VAL:HG23	2.06	0.56
12:J:6:LEU:HB2	12:J:8:PRO:HG3	1.87	0.56
13:K:116:GLU:O	13:K:117:ALA:C	2.42	0.56
13:K:26:TYR:CZ	13:K:27:VAL:HG13	2.41	0.56
16:N:50:ILE:CG2	16:N:62:THR:O	2.38	0.56
17:O:84:LYS:HE2	17:O:84:LYS:H	1.69	0.56
18:P:76:LYS:CB	18:P:85:LYS:HB2	2.35	0.56
19:Q:23:LEU:HD11	27:Y:27:PRO:CD	2.34	0.56
19:Q:61:ASN:O	19:Q:62:HIS:CD2	2.58	0.56
20:R:12:VAL:CA	20:R:29:TRP:HE1	2.12	0.56
21:S:16:ALA:HB1	21:S:20:TYR:CD1	2.40	0.56
22:T:150:LEU:HD22	22:T:154:ASP:CB	2.35	0.56
24:V:12:PRO:HG2	24:V:63:ALA:HB2	1.87	0.56
26:X:4:LEU:CA	26:X:58:VAL:HG22	2.35	0.56
27:Y:33:CYS:SG	27:Y:38:ALA:O	2.64	0.56
22:T:138:GLU:HG2	22:T:139:VAL:N	2.21	0.56
3:A:223:VAL:O	3:A:224:ARG:HB2	2.04	0.56
3:A:43:GLU:HB2	3:A:45:HIS:NE2	2.21	0.56
4:B:208:LYS:HE3	4:B:210:GLY:C	2.26	0.56
4:B:262:ARG:O	4:B:264:LYS:N	2.39	0.56
4:B:65:ILE:HG13	4:B:66:ASP:N	2.20	0.56
5:C:111:ARG:O	5:C:112:GLY:O	2.24	0.56
5:C:51:PHE:CD1	5:C:52:LEU:CA	2.88	0.56
5:C:48:GLN:CB	5:C:78:LEU:HD22	2.24	0.56
6:D:151:LEU:HD13	6:D:188:VAL:CB	2.36	0.56
6:D:165:LEU:HD23	6:D:168:VAL:O	2.04	0.56
6:D:121:VAL:CG1	6:D:191:LEU:H	2.09	0.56
6:D:15:LEU:CB	6:D:19:LEU:HD11	2.18	0.56
7:E:11:TYR:CD1	7:E:11:TYR:C	2.77	0.56
7:E:148:MET:HB3	7:E:151:ALA:CB	2.35	0.56
7:E:61:ALA:O	7:E:64:THR:CG2	2.49	0.56
7:E:70:VAL:CA	7:E:90:LEU:HD11	2.35	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:94:LEU:H	7:E:94:LEU:HD13	5.49	0.56
7:E:96:ARG:O	7:E:99:MET:HE2	2.06	0.56
8:F:126:PRO:HD3	8:F:131:VAL:HA	1.86	0.56
8:F:140:LYS:HE3	8:F:141:VAL:HG22	1.86	0.56
8:F:88:LEU:HG	8:F:90:LYS:HZ3	1.69	0.56
9:G:19:VAL:C	9:G:21:VAL:N	2.59	0.56
9:G:83:ALA:HB3	9:G:88:ILE:HA	1.87	0.56
10:H:101:TYR:HB2	10:H:102:PRO:CD	2.32	0.56
10:H:41:ALA:C	10:H:43:GLY:H	2.09	0.56
11:I:12:ASP:OD2	11:I:86:ILE:HD11	2.05	0.56
11:I:86:ILE:CG2	11:I:94:ARG:HH11	2.17	0.56
12:J:147:LEU:HD13	12:J:148:LEU:HD22	1.86	0.56
13:K:103:MET:O	13:K:104:PHE:CD1	2.58	0.56
14:L:47:PHE:CZ	14:L:48:VAL:HG12	2.40	0.56
18:P:30:GLY:HA3	18:P:66:ARG:H	1.70	0.56
17:O:40:PHE:HB3	18:P:78:LYS:HG2	1.87	0.56
20:R:63:LYS:C	20:R:63:LYS:HD3	2.25	0.56
24:V:27:GLU:HG3	33:O:74:C:C5'	2.34	0.56
3:A:59:VAL:HG12	3:A:201:LYS:HA	1.88	0.56
3:A:202:PRO:O	3:A:204:GLY:N	2.38	0.56
3:A:47:LYS:HZ3	3:A:47:LYS:HB3	1.70	0.56
4:B:101:GLU:C	4:B:102:LYS:CE	2.74	0.56
4:B:92:ILE:HD13	4:B:104:TYR:CG	2.40	0.56
4:B:257:LEU:O	4:B:257:LEU:HD12	2.05	0.56
5:C:198:VAL:HG12	5:C:199:ARG:O	2.05	0.56
5:C:7:VAL:HG21	5:C:27:LEU:HD22	1.88	0.56
5:C:36:ARG:NH1	5:C:86:PRO:HD2	2.20	0.56
7:E:8:LYS:C	7:E:10:LYS:H	2.08	0.56
7:E:124:SER:O	7:E:131:TYR:CD2	2.58	0.56
7:E:153:ARG:NE	7:E:154:GLY:H	2.02	0.56
9:G:6:LEU:HD12	9:G:35:LEU:HA	1.88	0.56
9:G:6:LEU:HD22	9:G:7:GLU:OE1	2.06	0.56
11:I:15:GLY:N	11:I:17:ARG:HH22	2.04	0.56
11:I:27:GLY:O	11:I:28:SER:HB3	2.05	0.56
11:I:45:GLU:HG3	11:I:45:GLU:O	2.06	0.56
11:I:88:ASN:HB3	11:I:90:GLN:HE21	1.69	0.56
12:J:39:LYS:HZ3	12:J:40:SER:H	1.52	0.56
13:K:23:GLY:C	13:K:98:LYS:HB3	2.25	0.56
15:M:46:VAL:HG11	15:M:48:LEU:HD23	1.86	0.56
16:N:64:ARG:NH2	16:N:66:VAL:CG2	2.63	0.56
17:O:49:HIS:CA	17:O:52:ARG:HB2	2.35	0.56
18:P:24:LYS:HD3	18:P:25:LEU:N	2.21	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:Q:29:LEU:CD2	19:Q:30:GLU:H	2.16	0.56
22:T:102:LEU:HA	22:T:137:ILE:CG2	2.35	0.56
22:T:85:HIS:HD2	22:T:86:VAL:H	1.53	0.56
23:U:62:LEU:CD1	23:U:63:VAL:N	2.51	0.56
24:V:26:ARG:HG3	24:V:34:THR:CA	2.36	0.56
28:Z:10:ARG:HG3	28:Z:11:LYS:N	2.20	0.56
18:P:84:LYS:HE3	18:P:84:LYS:CA	2.27	0.56
33:O:26:G:N2	33:O:27:C:H1'	2.20	0.56
4:B:243:GLY:O	4:B:244:ARG:CB	2.54	0.56
4:B:24:ILE:CA	4:B:91:ARG:NH1	2.61	0.56
5:C:117:MET:HA	5:C:121:ASN:HA	1.87	0.56
5:C:78:LEU:N	5:C:79:ARG:HE	2.04	0.56
9:G:37:VAL:O	9:G:39:ALA:N	2.39	0.56
10:H:26:THR:CG2	10:H:27:TYR:N	2.57	0.56
10:H:62:ARG:CG	10:H:71:MET:HG3	2.34	0.56
6:D:30:GLU:OE1	12:J:13:ASN:CG	2.44	0.56
12:J:111:ARG:HH22	12:J:148:LEU:CD2	2.15	0.56
13:K:35:VAL:O	13:K:129:THR:CA	2.53	0.56
14:L:87:TYR:OH	14:L:116:LEU:HD23	2.06	0.56
14:L:49:ASP:O	14:L:94:TYR:OH	2.17	0.56
14:L:5:LYS:CG	14:L:8:ARG:NH2	2.68	0.56
14:L:54:LEU:HB3	14:L:65:LEU:HD21	1.86	0.56
15:M:68:GLN:C	15:M:70:GLY:N	2.59	0.56
16:N:66:VAL:HG13	16:N:70:VAL:HA	1.88	0.56
17:O:3:ARG:NH1	17:O:3:ARG:HG3	4.65	0.56
19:Q:75:TYR:H	19:Q:103:ILE:CG1	2.19	0.56
21:S:54:LYS:CG	21:S:55:TYR:N	2.68	0.56
22:T:141:VAL:CG1	22:T:144:LEU:CB	2.69	0.56
8:F:156:ALA:HB1	8:F:170:ARG:O	2.06	0.56
33:O:35:A:H8	33:O:35:A:H5'	1.71	0.56
4:B:128:GLY:HA2	4:B:192:THR:OG1	2.06	0.56
4:B:195:ALA:O	4:B:196:VAL:O	2.24	0.56
4:B:72:LYS:HG3	4:B:97:TYR:HE2	1.71	0.56
5:C:104:VAL:HG13	5:C:198:VAL:HA	1.87	0.56
6:D:135:LEU:C	6:D:138:ALA:H	2.08	0.56
6:D:26:HIS:HB2	12:J:13:ASN:HB3	1.85	0.56
7:E:7:LEU:O	7:E:10:LYS:HB3	2.06	0.56
9:G:129:THR:HA	9:G:139:GLN:CA	2.35	0.56
9:G:4:ILE:C	9:G:5:LEU:HD22	2.26	0.56
10:H:78:VAL:CA	10:H:146:TYR:CE2	2.83	0.56
11:I:111:PHE:HB3	11:I:114:ILE:CG1	2.35	0.56
11:I:65:THR:HA	11:I:82:ASN:ND2	2.21	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:61:VAL:H	11:I:84:ALA:HB1	1.70	0.56
12:J:139:LYS:CD	12:J:140:ALA:N	2.68	0.56
12:J:57:THR:HG23	12:J:57:THR:O	2.04	0.56
12:J:91:PHE:HZ	12:J:99:LEU:CD2	2.18	0.56
15:M:63:THR:HG22	15:M:96:GLY:HA3	1.87	0.56
7:E:139:LEU:CD2	16:N:3:ARG:NH2	173.54	0.56
17:O:103:PRO:C	17:O:105:VAL:N	2.57	0.56
17:O:36:ARG:C	17:O:39:LEU:HG	2.26	0.56
17:O:90:VAL:O	17:O:91:ASP:CB	2.54	0.56
19:Q:59:VAL:HA	19:Q:64:MET:H	1.70	0.56
20:R:72:LYS:HG3	20:R:73:ARG:N	2.21	0.56
20:R:57:LEU:CD2	20:R:76:ARG:NE	2.69	0.56
21:S:97:ARG:CD	21:S:97:ARG:C	2.71	0.56
22:T:10:ARG:CZ	22:T:36:LYS:HB3	2.35	0.56
23:U:26:TYR:HE2	23:U:29:GLN:NE2	2.04	0.56
24:V:19:GLN:HG2	24:V:20:ARG:N	2.21	0.56
24:V:54:ALA:C	24:V:56:GLN:N	2.59	0.56
13:K:110:THR:C	13:K:112:GLU:H	2.08	0.56
33:O:31:A:H2'	33:O:32:C:C6	2.41	0.56
4:B:72:LYS:HG3	4:B:97:TYR:CE2	2.40	0.56
5:C:192:ASN:C	5:C:192:ASN:HD22	2.08	0.56
6:D:170:THR:CG2	6:D:170:THR:O	2.54	0.56
6:D:77:ILE:HD13	6:D:78:PHE:N	2.21	0.56
7:E:89:GLY:O	7:E:90:LEU:HD12	2.05	0.56
9:G:41:GLU:O	9:G:44:LEU:N	2.38	0.56
9:G:7:GLU:HG3	9:G:8:PRO:HD3	1.78	0.56
10:H:114:LEU:HD12	10:H:115:ALA:H	1.70	0.56
10:H:39:ILE:O	10:H:40:ASP:HB3	2.05	0.56
12:J:83:VAL:HG11	12:J:114:ILE:HG22	1.87	0.56
14:L:24:GLN:O	14:L:28:LEU:HB3	2.06	0.56
18:P:13:ARG:NH1	18:P:13:ARG:HG2	2.21	0.56
19:Q:12:ILE:HG22	19:Q:13:SER:H	1.71	0.56
19:Q:23:LEU:HD23	19:Q:36:LEU:HD21	1.88	0.56
20:R:82:GLN:HG3	20:R:83:VAL:HG22	1.88	0.56
22:T:12:GLY:O	22:T:13:GLU:O	2.23	0.56
22:T:51:ALA:HB1	22:T:55:HIS:C	2.26	0.56
23:U:16:SER:O	23:U:20:ARG:HA	2.06	0.56
24:V:54:ALA:HB1	24:V:57:GLU:CA	2.35	0.56
27:Y:47:PRO:CA	27:Y:57:VAL:HG21	2.36	0.56
21:S:9:LYS:CG	21:S:10:GLY:H	2.18	0.56
33:O:56:C:OP1	33:O:56:C:C5	2.59	0.56
3:A:197:LEU:CD1	3:A:198:GLU:N	2.69	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:93:VAL:HA	5:C:182:LEU:HD22	1.88	0.56
7:E:100:TRP:O	7:E:104:GLU:HG3	2.06	0.56
7:E:163:ALA:O	7:E:164:GLU:C	2.44	0.56
8:F:25:LYS:HG2	8:F:34:GLU:CB	2.36	0.56
9:G:112:LYS:N	9:G:112:LYS:HD2	2.21	0.56
9:G:38:LEU:N	9:G:38:LEU:HD12	2.18	0.56
10:H:82:LYS:O	10:H:83:ILE:C	2.44	0.56
10:H:94:ILE:HD12	10:H:94:ILE:N	2.21	0.56
11:I:59:LYS:HB3	11:I:94:ARG:NH1	2.14	0.56
12:J:128:HIS:O	12:J:129:ALA:HB2	2.05	0.56
13:K:23:GLY:CA	13:K:99:PRO:HD2	2.36	0.56
14:L:45:ARG:CG	14:L:45:ARG:HH11	2.18	0.56
16:N:98:LYS:HG3	16:N:100:TYR:HE1	1.70	0.56
10:H:65:TRP:CB	17:O:64:ARG:NE	2.57	0.56
18:P:16:PRO:HD2	18:P:18:LEU:HD22	1.83	0.56
19:Q:7:ALA:HB1	19:Q:103:ILE:CG2	2.35	0.56
19:Q:5:ALA:HB2	19:Q:54:ALA:CA	2.36	0.56
19:Q:5:ALA:HB2	19:Q:54:ALA:HA	1.88	0.56
21:S:12:THR:O	21:S:13:VAL:CB	2.54	0.56
22:T:105:VAL:HB	22:T:139:VAL:O	2.06	0.56
22:T:146:ILE:HB	22:T:176:PRO:HD2	1.87	0.56
22:T:146:ILE:HB	22:T:175:VAL:HA	1.88	0.56
22:T:15:PRO:C	22:T:17:ALA:N	2.57	0.56
22:T:71:VAL:CG1	22:T:72:ARG:H	2.15	0.56
23:U:37:LEU:HD21	23:U:59:LEU:CB	2.36	0.56
24:V:18:ILE:N	24:V:18:ILE:CD1	2.69	0.56
24:V:53:VAL:HB	24:V:60:PHE:HE2	1.71	0.56
24:V:71:TYR:HA	24:V:74:VAL:CG2	2.34	0.56
24:V:85:LEU:HD12	24:V:85:LEU:N	2.20	0.56
25:W:3:LEU:HD11	25:W:8:LYS:CE	2.35	0.56
27:Y:13:LYS:HA	27:Y:16:ARG:HB2	1.87	0.56
27:Y:16:ARG:HG3	27:Y:20:ARG:NH1	2.21	0.56
20:R:28:PHE:HE1	20:R:78:LYS:HB2	1.70	0.55
22:T:69:THR:CG2	22:T:88:PHE:CZ	2.88	0.55
3:A:51:ASP:CG	3:A:53:ARG:HD2	2.25	0.55
4:B:90:ALA:HB1	4:B:106:ILE:HB	1.86	0.55
4:B:108:PRO:CA	4:B:197:GLY:HA2	2.36	0.55
4:B:22:SER:C	4:B:24:ILE:H	2.08	0.55
5:C:52:LEU:O	5:C:54:GLN:N	2.40	0.55
5:C:66:HIS:CD2	5:C:66:HIS:H	2.23	0.55
6:D:111:ASP:C	6:D:114:ARG:HG2	2.26	0.55
6:D:31:VAL:O	6:D:34:TRP:HB3	2.05	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:11:TYR:HD1	7:E:15:VAL:HB	1.70	0.55
8:F:124:GLU:CD	8:F:134:SER:HB2	2.26	0.55
8:F:45:VAL:O	8:F:45:VAL:CG1	2.50	0.55
8:F:41:MET:HA	8:F:54:ARG:HA	1.87	0.55
8:F:92:ILE:N	8:F:92:ILE:HD13	2.20	0.55
11:I:17:ARG:HH21	11:I:47:ILE:CB	2.19	0.55
11:I:23:ARG:HG3	11:I:24:VAL:O	2.06	0.55
11:I:44:LYS:O	11:I:54:GLU:HG2	2.07	0.55
11:I:77:ILE:HD13	11:I:78:ARG:N	2.20	0.55
12:J:70:GLN:HG3	12:J:71:VAL:N	2.20	0.55
13:K:89:ASN:O	13:K:91:GLU:N	2.30	0.55
16:N:29:ARG:CB	16:N:86:ILE:H	2.20	0.55
19:Q:102:HIS:O	19:Q:103:ILE:HB	2.06	0.55
19:Q:45:TYR:HD2	19:Q:46:PHE:CE1	2.24	0.55
21:S:31:LEU:HD13	21:S:31:LEU:H	3.31	0.55
22:T:15:PRO:HB3	22:T:19:ARG:CZ	2.36	0.55
22:T:19:ARG:NH2	22:T:25:PRO:HB2	2.15	0.55
22:T:84:GLU:CG	22:T:85:HIS:H	2.19	0.55
24:V:17:SER:O	24:V:44:PRO:CG	2.50	0.55
3:A:8:TYR:HB2	3:A:11:LEU:HB2	1.88	0.55
3:A:20:ILE:HD11	3:A:225:ILE:O	2.07	0.55
4:B:62:TYR:HD1	4:B:62:TYR:O	1.88	0.55
7:E:56:ALA:CB	7:E:60:LEU:HD11	2.34	0.55
9:G:26:ALA:CA	9:G:30:LEU:HB2	2.36	0.55
10:H:34:PRO:HB3	10:H:73:ASP:N	2.21	0.55
11:I:104:ARG:NH1	11:I:104:ARG:HB3	2.01	0.55
11:I:85:VAL:HG11	11:I:93:PRO:HB2	1.87	0.55
13:K:11:LYS:HE2	13:K:12:GLN:HA	1.88	0.55
14:L:35:THR:O	14:L:36:THR:HG22	2.06	0.55
15:M:34:HIS:CB	15:M:36:TYR:CE1	2.88	0.55
15:M:38:GLN:CG	15:M:50:SER:OG	2.54	0.55
16:N:125:ARG:CB	16:N:125:ARG:NH1	4.27	0.55
16:N:27:THR:C	16:N:28:VAL:HG23	2.25	0.55
16:N:68:TYR:N	16:N:68:TYR:CD2	2.72	0.55
22:T:103:ARG:HG3	22:T:136:PHE:HB2	1.88	0.55
22:T:58:VAL:HG12	22:T:59:LEU:N	2.21	0.55
24:V:26:ARG:CG	24:V:27:GLU:N	2.53	0.55
24:V:90:ILE:HB	24:V:91:LYS:CE	2.35	0.55
26:X:28:LEU:CD2	26:X:35:ARG:HG3	2.35	0.55
26:X:50:VAL:HG23	26:X:54:VAL:CG2	2.37	0.55
3:A:176:VAL:HG13	3:A:177:GLY:H	1.71	0.55
4:B:117:VAL:CA	4:B:126:GLN:NE2	2.70	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:94:LEU:HG	4:B:104:TYR:CE2	2.33	0.55
7:E:139:LEU:CB	7:E:146:TYR:CA	2.84	0.55
8:F:148:ILE:O	8:F:148:ILE:CG2	2.54	0.55
8:F:54:ARG:HD2	8:F:65:HIS:HE1	1.69	0.55
9:G:138:ILE:O	9:G:138:ILE:HG13	2.06	0.55
11:I:105:GLU:O	11:I:109:LYS:HG2	2.05	0.55
11:I:4:PRO:O	11:I:5:GLN:HB2	2.06	0.55
11:I:65:THR:CA	11:I:81:ASP:O	2.53	0.55
12:J:41:ARG:CZ	12:J:45:LEU:HD12	2.36	0.55
13:K:8:LYS:CB	13:K:12:GLN:NE2	2.63	0.55
14:L:79:LEU:C	14:L:80:PHE:CD2	2.78	0.55
16:N:49:VAL:O	16:N:49:VAL:CG2	2.50	0.55
16:N:51:ARG:CB	16:N:62:THR:CG2	2.68	0.55
17:O:92:ARG:NH1	18:P:10:LYS:HA	2.21	0.55
18:P:36:PRO:HD2	18:P:62:LEU:HD12	1.86	0.55
18:P:90:PRO:O	18:P:91:TYR:CB	2.54	0.55
19:Q:75:TYR:O	19:Q:75:TYR:CD1	2.58	0.55
20:R:21:PHE:HE2	20:R:26:TYR:CE1	2.23	0.55
20:R:21:PHE:CE2	20:R:26:TYR:CE1	2.94	0.55
21:S:46:LYS:H	21:S:57:GLN:CA	2.18	0.55
22:T:11:GLU:O	22:T:13:GLU:N	2.39	0.55
22:T:176:PRO:CB	22:T:177:PRO:HD2	2.34	0.55
23:U:48:GLY:HA3	23:U:80:HIS:HA	1.89	0.55
25:W:12:GLU:C	25:W:14:ARG:H	2.08	0.55
4:B:134:ARG:HH21	4:B:172:TYR:HA	1.72	0.55
4:B:199:ALA:O	4:B:202:LYS:N	2.40	0.55
5:C:93:VAL:HB	5:C:175:VAL:CG2	2.36	0.55
5:C:9:VAL:HG21	5:C:26:ILE:CA	2.31	0.55
6:D:130:LYS:C	6:D:134:PHE:CZ	2.79	0.55
6:D:16:ALA:O	6:D:18:ASP:N	2.39	0.55
6:D:196:VAL:O	6:D:197:PHE:C	2.44	0.55
6:D:35:GLN:HE22	6:D:39:ARG:HH22	1.54	0.55
7:E:31:VAL:HG13	7:E:32:PRO:HD2	1.88	0.55
8:F:153:LYS:HD2	8:F:162:ILE:O	2.07	0.55
8:F:34:GLU:HG2	8:F:35:VAL:H	1.71	0.55
8:F:49:VAL:CG1	8:F:50:VAL:H	2.19	0.55
9:G:109:ILE:C	9:G:111:PRO:HD3	2.26	0.55
11:I:10:VAL:CG2	11:I:10:VAL:O	2.54	0.55
11:I:41:ALA:CA	11:I:57:VAL:HG13	2.36	0.55
12:J:105:LEU:C	12:J:106:LEU:HG	2.26	0.55
12:J:98:GLU:HA	12:J:102:ARG:CB	2.36	0.55
14:L:85:PRO:HA	14:L:88:ARG:CB	2.35	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:M:71:ARG:HB3	15:M:108:GLY:O	2.06	0.55
16:N:106:SER:HA	16:N:110:ILE:CD1	2.36	0.55
16:N:117:ASP:HB3	16:N:120:ARG:NE	2.20	0.55
16:N:28:VAL:CG1	16:N:44:ASP:O	2.41	0.55
17:O:50:ARG:HB3	17:O:50:ARG:CZ	2.35	0.55
18:P:24:LYS:HD3	18:P:24:LYS:C	2.26	0.55
18:P:90:PRO:HG2	18:P:91:TYR:H	1.71	0.55
19:Q:75:TYR:O	19:Q:103:ILE:HA	2.06	0.55
19:Q:29:LEU:CG	19:Q:30:GLU:N	2.70	0.55
19:Q:46:PHE:O	19:Q:50:VAL:HG23	2.05	0.55
22:T:29:TYR:CE1	22:T:89:PHE:HD1	2.25	0.55
23:U:27:GLU:CA	23:U:69:PHE:CD2	2.89	0.55
20:R:8:ILE:H	25:W:26:ARG:NH1	2.04	0.55
26:X:4:LEU:HD11	26:X:57:GLU:H	1.71	0.55
22:T:180:VAL:HG22	22:T:180:VAL:O	2.06	0.55
4:B:106:ILE:O	4:B:108:PRO:CD	2.53	0.55
4:B:264:LYS:O	4:B:266:SER:N	2.39	0.55
5:C:29:GLY:O	5:C:91:VAL:HB	2.07	0.55
6:D:182:VAL:HB	12:J:6:LEU:N	2.21	0.55
7:E:39:ILE:HA	7:E:157:ILE:HD12	1.89	0.55
7:E:72:ARG:HA	7:E:87:PRO:CA	2.36	0.55
8:F:90:LYS:HG2	8:F:162:ILE:HA	1.88	0.55
9:G:112:LYS:C	9:G:114:LEU:N	2.59	0.55
9:G:29:TYR:O	9:G:33:ARG:HG3	2.07	0.55
10:H:47:GLY:O	10:H:50:ALA:HB3	2.06	0.55
11:I:62:VAL:O	11:I:63:VAL:CG1	2.44	0.55
12:J:100:LEU:N	12:J:100:LEU:HD22	2.21	0.55
13:K:127:ILE:HG13	13:K:128:LYS:N	2.21	0.55
14:L:38:VAL:HG13	14:L:39:PRO:N	2.21	0.55
15:M:66:ALA:O	15:M:68:GLN:N	2.39	0.55
16:N:107:ASP:C	16:N:111:ARG:HG2	2.27	0.55
16:N:113:LYS:HA	16:N:113:LYS:CE	2.30	0.55
19:Q:39:THR:CG2	27:Y:28:PRO:HD3	2.37	0.55
22:T:16:SER:C	22:T:19:ARG:HD3	2.26	0.55
22:T:176:PRO:HB2	22:T:177:PRO:CD	2.34	0.55
22:T:33:LEU:HD12	22:T:33:LEU:C	2.26	0.55
22:T:68:PRO:O	22:T:91:LEU:HG	2.07	0.55
4:B:106:ILE:CD1	4:B:196:VAL:HG13	2.36	0.55
4:B:25:THR:HB	4:B:83:GLU:CA	2.37	0.55
4:B:267:SER:O	4:B:269:PHE:CE1	2.59	0.55
5:C:31:CYS:SG	5:C:76:ARG:NH1	2.80	0.55
7:E:5:LEU:HB2	7:E:100:TRP:CH2	2.42	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:21:ARG:C	7:E:23:PHE:H	2.09	0.55
7:E:39:ILE:HD12	7:E:39:ILE:N	2.22	0.55
7:E:43:LEU:CD2	7:E:45:GLU:HG2	2.33	0.55
7:E:56:ALA:CA	7:E:60:LEU:HD21	2.37	0.55
8:F:41:MET:N	8:F:54:ARG:HA	2.22	0.55
8:F:89:ILE:HD12	8:F:90:LYS:N	2.21	0.55
9:G:122:GLU:OE2	9:G:126:TYR:CG	2.60	0.55
13:K:32:PHE:CB	13:K:106:VAL:HG12	2.35	0.55
20:R:89:ILE:H	20:R:92:LEU:HD12	1.70	0.55
22:T:6:LYS:O	22:T:7:ALA:HB2	2.06	0.55
25:W:61:LEU:HD12	25:W:62:THR:N	2.22	0.55
26:X:4:LEU:HD13	26:X:58:VAL:CG2	2.37	0.55
33:0:33:U:C2	33:0:35:A:H3'	2.42	0.55
3:A:54:ARG:HB2	3:A:56:ASP:OD1	2.06	0.55
4:B:142:VAL:HG22	4:B:143:HIS:H	1.71	0.55
4:B:150:LYS:NZ	4:B:188:GLU:OE2	2.39	0.55
4:B:242:ARG:N	4:B:242:ARG:HH11	2.02	0.55
5:C:144:ARG:HG2	5:C:146:THR:OG1	2.07	0.55
5:C:51:PHE:O	5:C:52:LEU:C	2.45	0.55
7:E:139:LEU:HD23	16:N:3:ARG:NH2	174.47	0.55
8:F:8:PRO:CA	8:F:49:VAL:HG13	2.37	0.55
10:H:37:VAL:HG12	10:H:38:LEU:H	1.70	0.55
10:H:63:PRO:C	10:H:65:TRP:N	2.59	0.55
11:I:20:MET:C	11:I:20:MET:SD	2.84	0.55
12:J:7:ARG:CD	12:J:10:PRO:HD2	2.22	0.55
13:K:59:ARG:CD	13:K:59:ARG:N	2.70	0.55
13:K:59:ARG:CD	13:K:59:ARG:H	2.20	0.55
14:L:33:ARG:HA	14:L:115:GLU:CB	2.35	0.55
20:R:25:LYS:CE	20:R:26:TYR:CE1	2.89	0.55
20:R:12:VAL:CB	20:R:27:THR:HB	2.36	0.55
21:S:96:ILE:C	21:S:96:ILE:HD13	2.27	0.55
23:U:24:LYS:HD3	23:U:24:LYS:H	1.71	0.55
24:V:46:LEU:H	24:V:46:LEU:CD2	2.16	0.55
24:V:59:THR:HG22	24:V:60:PHE:N	2.20	0.55
21:S:95:LYS:HG2	21:S:95:LYS:O	2.06	0.55
33:0:18:G:N1	33:0:57:G:C6	2.75	0.55
33:0:56:C:OP1	33:0:56:C:H5	1.89	0.55
4:B:157:ARG:CG	4:B:158:ALA:N	2.70	0.55
4:B:227:ASN:CB	4:B:228:PRO:HD2	2.37	0.55
5:C:172:VAL:HG12	5:C:173:VAL:N	2.21	0.55
6:D:90:ARG:C	6:D:92:TYR:H	2.08	0.55
7:E:96:ARG:NH2	7:E:97:ASP:HB2	2.22	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:F:87:LEU:HA	8:F:164:TYR:O	2.06	0.55
10:H:110:LEU:C	10:H:112:LYS:N	2.60	0.55
10:H:151:HIS:CE1	10:H:157:ARG:HG2	2.42	0.55
10:H:50:ALA:CA	10:H:53:ILE:CD1	2.73	0.55
11:I:111:PHE:O	11:I:114:ILE:HG13	2.05	0.55
11:I:42:SER:N	11:I:57:VAL:HG22	2.22	0.55
13:K:56:ARG:C	13:K:58:PHE:N	2.55	0.55
14:L:45:ARG:NH1	14:L:46:GLY:N	2.55	0.55
15:M:11:LYS:HD2	15:M:11:LYS:N	2.16	0.55
16:N:47:GLY:C	16:N:63:VAL:HB	2.27	0.55
19:Q:38:TYR:CE2	27:Y:41:PRO:HD3	2.41	0.55
19:Q:40:ASN:O	19:Q:41:LYS:HB2	2.07	0.55
20:R:8:ILE:O	25:W:26:ARG:NH1	2.40	0.55
21:S:23:ARG:CD	21:S:38:ILE:CG2	2.85	0.55
24:V:90:ILE:HG23	24:V:94:LEU:HD11	1.89	0.55
26:X:5:LYS:HE2	26:X:7:LYS:CE	2.35	0.55
3:A:42:VAL:HB	3:A:177:GLY:O	2.06	0.55
4:B:118:VAL:CG1	4:B:129:ASN:ND2	2.69	0.55
4:B:34:VAL:HG13	4:B:35:LYS:CE	2.37	0.55
4:B:35:LYS:HB2	4:B:36:PRO:CA	2.33	0.55
4:B:25:THR:CB	4:B:82:ILE:O	2.53	0.55
5:C:93:VAL:HG12	5:C:182:LEU:CD1	2.35	0.55
6:D:149:VAL:O	6:D:150:LEU:CD1	2.49	0.55
6:D:181:ILE:O	6:D:181:ILE:HD13	2.06	0.55
6:D:30:GLU:HG2	6:D:33:ARG:NH2	2.22	0.55
7:E:124:SER:HB3	7:E:133:LEU:HD11	1.89	0.55
8:F:141:VAL:CG1	8:F:144:VAL:CG1	2.81	0.55
9:G:2:LYS:HA	9:G:20:ASP:C	2.26	0.55
10:H:113:MET:HE1	10:H:120:ARG:CD	2.33	0.55
10:H:113:MET:C	10:H:115:ALA:H	2.10	0.55
10:H:129:MET:O	10:H:130:LEU:O	2.24	0.55
12:J:41:ARG:HD2	12:J:45:LEU:CD1	2.36	0.55
13:K:25:ASP:CB	13:K:101:ARG:HD3	2.27	0.55
13:K:124:LYS:C	13:K:124:LYS:HE2	2.26	0.55
14:L:37:THR:HG22	14:L:111:LEU:CD1	2.36	0.55
15:M:82:ILE:HG21	15:M:85:VAL:HG11	1.89	0.55
10:H:25:LYS:CE	18:P:13:ARG:HH21	2.20	0.55
18:P:71:LEU:CD2	18:P:93:GLU:HB3	2.37	0.55
22:T:38:TYR:C	22:T:38:TYR:CD2	2.78	0.55
22:T:42:VAL:HG12	22:T:46:LYS:HD2	1.87	0.55
23:U:37:LEU:HD12	23:U:38:VAL:N	2.22	0.55
28:Z:14:LYS:CA	28:Z:20:ALA:HB1	2.37	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:197:GLY:O	4:B:198:ASN:O	2.25	0.55
4:B:198:ASN:HB3	4:B:201:HIS:HD2	1.72	0.55
4:B:25:THR:HG23	4:B:28:GLU:OE2	2.06	0.55
4:B:266:SER:C	4:B:269:PHE:CE1	2.78	0.55
5:C:146:THR:N	5:C:148:GLY:H	2.04	0.55
6:D:94:TYR:CD2	6:D:94:TYR:N	2.75	0.55
6:D:98:LYS:C	6:D:100:VAL:H	2.08	0.55
7:E:10:LYS:CE	7:E:14:GLU:HB2	2.37	0.55
7:E:163:ALA:C	7:E:165:THR:N	2.60	0.55
10:H:149:PRO:O	10:H:150:ASP:CB	2.55	0.55
11:I:2:ILE:N	11:I:2:ILE:CD1	2.70	0.55
14:L:36:THR:O	14:L:111:LEU:CB	2.55	0.55
14:L:33:ARG:HG2	14:L:115:GLU:HB2	1.89	0.55
14:L:44:LEU:O	14:L:45:ARG:C	2.45	0.55
17:O:44:ASN:O	17:O:48:ALA:HB2	2.07	0.55
18:P:22:VAL:HG22	18:P:22:VAL:O	2.07	0.55
18:P:29:PRO:HA	18:P:66:ARG:CB	2.38	0.55
18:P:77:ALA:HB3	18:P:83:ARG:C	2.28	0.55
19:Q:3:ALA:O	19:Q:106:ILE:HG22	2.06	0.55
19:Q:89:ALA:O	19:Q:92:ARG:HG2	2.07	0.55
21:S:26:LYS:CB	21:S:37:VAL:HA	2.35	0.55
22:T:53:ILE:O	22:T:100:VAL:HA	2.07	0.55
23:U:37:LEU:HD21	23:U:59:LEU:HB2	1.89	0.55
24:V:26:ARG:CG	24:V:34:THR:HA	2.37	0.55
24:V:44:PRO:O	24:V:46:LEU:HD23	2.07	0.55
24:V:66:HIS:CG	24:V:69:LYS:HD2	2.41	0.55
24:V:84:GLY:C	24:V:86:SER:N	2.60	0.55
27:Y:16:ARG:O	27:Y:20:ARG:NE	2.39	0.55
22:T:128:VAL:HG21	22:T:134:PRO:HD3	1.89	0.54
33:O:23:A:C6	33:O:24:G:C5	2.95	0.54
33:O:7:U:O2	33:O:66:A:C2	2.60	0.54
3:A:33:LEU:O	3:A:40:GLU:OE1	2.25	0.54
4:B:89:SER:O	4:B:90:ALA:HB2	2.06	0.54
5:C:91:VAL:HG12	5:C:92:THR:N	2.21	0.54
7:E:31:VAL:HG13	7:E:32:PRO:CD	2.37	0.54
8:F:40:GLU:CG	8:F:55:PRO:HB3	2.38	0.54
9:G:44:LEU:HD13	9:G:44:LEU:C	2.26	0.54
13:K:111:GLU:O	13:K:115:MET:CG	2.55	0.54
13:K:20:ALA:O	13:K:21:THR:C	2.46	0.54
14:L:5:LYS:HG3	14:L:8:ARG:HH21	1.71	0.54
17:O:92:ARG:CG	17:O:94:ASN:ND2	2.70	0.54
19:Q:7:ALA:HB3	19:Q:103:ILE:HG23	1.87	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:R:60:ARG:HB2	20:R:74:PRO:CD	2.37	0.54
22:T:102:LEU:CD1	22:T:123:ASP:C	2.73	0.54
23:U:41:ARG:C	23:U:41:ARG:CD	2.71	0.54
23:U:47:PRO:O	23:U:48:GLY:C	2.43	0.54
23:U:56:ASP:OD2	23:U:56:ASP:N	2.39	0.54
26:X:40:THR:C	26:X:44:ARG:CD	2.73	0.54
3:A:224:ARG:C	3:A:225:ILE:HG13	2.27	0.54
3:A:28:HIS:C	3:A:30:VAL:N	2.58	0.54
4:B:88:ARG:HG3	4:B:89:SER:N	2.22	0.54
5:C:145:LYS:C	5:C:148:GLY:N	2.61	0.54
6:D:165:LEU:HG	6:D:169:VAL:O	2.07	0.54
7:E:55:LYS:CD	7:E:56:ALA:N	2.63	0.54
8:F:64:LEU:C	8:F:64:LEU:HD12	2.27	0.54
8:F:95:ARG:HH11	8:F:107:VAL:CA	2.20	0.54
10:H:57:LEU:C	10:H:57:LEU:HD13	2.27	0.54
10:H:75:VAL:HG12	10:H:76:VAL:H	1.72	0.54
11:I:16:ALA:C	11:I:17:ARG:HD3	2.27	0.54
11:I:66:LYS:O	11:I:78:ARG:HG3	2.07	0.54
13:K:134:ARG:HD2	13:K:135:ASP:N	2.22	0.54
13:K:2:LEU:HD12	22:T:182:LYS:HZ2	1.71	0.54
13:K:89:ASN:OD1	13:K:89:ASN:N	2.37	0.54
16:N:106:SER:HA	16:N:110:ILE:CG1	2.37	0.54
16:N:54:ARG:C	16:N:59:THR:HG22	2.28	0.54
17:O:94:ASN:HD22	17:O:95:LEU:H	1.54	0.54
18:P:19:LYS:HD2	18:P:20:LEU:H	1.71	0.54
18:P:21:ARG:NH1	18:P:21:ARG:HB2	2.21	0.54
18:P:73:SER:HB2	18:P:89:GLN:CB	2.30	0.54
19:Q:51:LEU:H	19:Q:51:LEU:HD13	1.72	0.54
20:R:55:ASN:O	20:R:56:THR:CG2	2.50	0.54
21:S:62:GLU:O	21:S:63:LYS:CB	2.52	0.54
22:T:76:LEU:HG	22:T:77:ASP:H	1.72	0.54
26:X:9:VAL:HG12	26:X:32:GLN:CB	2.38	0.54
26:X:8:LEU:HB3	26:X:54:VAL:HG12	1.90	0.54
33:O:24:G:C2	33:O:25:C:HI'	2.42	0.54
4:B:165:ILE:HG21	4:B:173:VAL:CG2	2.30	0.54
4:B:208:LYS:HE3	4:B:210:GLY:HA3	1.89	0.54
6:D:153:THR:O	6:D:153:THR:OG1	2.25	0.54
6:D:70:HIS:CE1	6:D:72:ASP:C	2.77	0.54
7:E:110:ALA:O	7:E:113:ARG:CG	2.53	0.54
7:E:7:LEU:O	7:E:8:LYS:O	2.26	0.54
9:G:70:GLU:O	9:G:74:ASN:OD1	2.26	0.54
10:H:59:GLY:HA2	10:H:72:GLY:HA2	1.88	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:80:ALA:CA	10:H:83:ILE:CG1	2.83	0.54
11:I:10:VAL:O	11:I:99:PHE:HE2	1.90	0.54
16:N:31:SER:HB3	16:N:43:GLN:N	2.22	0.54
16:N:51:ARG:CZ	16:N:60:THR:HB	2.36	0.54
16:N:53:ARG:HD2	16:N:54:ARG:O	2.07	0.54
18:P:68:LYS:HB3	18:P:94:LEU:HD21	1.83	0.54
19:Q:17:VAL:O	19:Q:20:VAL:HB	2.07	0.54
23:U:37:LEU:H	23:U:60:PHE:HA	1.73	0.54
21:S:100:ALA:O	21:S:101:LYS:HB2	2.07	0.54
22:T:128:VAL:HG21	22:T:132:ASN:O	2.07	0.54
24:V:27:GLU:HA	33:O:74:C:H5'	1.89	0.54
4:B:199:ALA:O	4:B:202:LYS:HB2	2.06	0.54
4:B:227:ASN:O	4:B:228:PRO:O	2.26	0.54
7:E:41:GLN:NE2	7:E:155:MET:HA	2.21	0.54
7:E:78:SER:O	7:E:79:ASN:O	2.26	0.54
8:F:124:GLU:CD	8:F:124:GLU:N	2.60	0.54
8:F:152:ARG:H	8:F:152:ARG:NH2	2.04	0.54
8:F:40:GLU:O	8:F:42:ARG:HG2	2.07	0.54
9:G:126:TYR:CE1	9:G:127:VAL:HG22	2.43	0.54
10:H:124:HIS:HA	10:H:127:LYS:CD	2.30	0.54
11:I:111:PHE:O	11:I:114:ILE:CG1	2.54	0.54
12:J:146:VAL:HG22	12:J:147:LEU:N	2.22	0.54
13:K:109:VAL:HB	13:K:113:GLN:HB2	1.90	0.54
14:L:73:VAL:O	14:L:77:ARG:CB	2.56	0.54
16:N:51:ARG:HD3	16:N:62:THR:CG2	2.36	0.54
11:I:78:ARG:HD3	16:N:73:GLU:HG3	1.89	0.54
16:N:74:ARG:HD2	16:N:76:PHE:CE2	2.43	0.54
16:N:90:GLN:C	16:N:90:GLN:HE21	2.11	0.54
19:Q:65:LEU:O	19:Q:66:GLU:O	2.26	0.54
20:R:25:LYS:CG	20:R:26:TYR:H	2.20	0.54
22:T:15:PRO:HB3	22:T:19:ARG:NH2	2.22	0.54
22:T:67:LEU:HD11	22:T:69:THR:OG1	2.08	0.54
8:F:171:LEU:HD12	8:F:171:LEU:H	1.73	0.54
4:B:131:LEU:HD23	4:B:132:PRO:CD	2.38	0.54
4:B:158:ALA:O	4:B:159:ALA:CB	2.54	0.54
4:B:211:ARG:HD3	4:B:214:TRP:HE3	1.71	0.54
4:B:82:ILE:O	4:B:82:ILE:HG22	2.06	0.54
5:C:92:THR:H	5:C:95:ILE:CD1	2.20	0.54
6:D:121:VAL:O	6:D:121:VAL:HG12	2.08	0.54
6:D:19:LEU:N	6:D:20:PRO:CD	2.68	0.54
6:D:73:ILE:O	6:D:73:ILE:CG1	2.54	0.54
7:E:12:TYR:O	7:E:13:GLU:HB2	2.07	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:F:89:ILE:CG2	8:F:129:THR:HG21	2.23	0.54
9:G:87:LYS:O	9:G:88:ILE:HB	2.08	0.54
10:H:120:ARG:HG3	10:H:124:HIS:HE1	1.68	0.54
11:I:12:ASP:CG	11:I:86:ILE:HD11	2.28	0.54
12:J:61:ARG:HD2	12:J:62:LEU:N	2.23	0.54
12:J:84:ASN:OD1	12:J:85:LEU:HD22	2.08	0.54
12:J:97:PRO:HD2	12:J:126:VAL:CB	2.37	0.54
13:K:35:VAL:N	13:K:129:THR:OG1	2.40	0.54
14:L:104:ARG:CB	14:L:109:ALA:CB	2.79	0.54
15:M:78:LEU:CD1	15:M:109:GLY:HA2	2.23	0.54
18:P:74:LYS:C	18:P:75:PHE:CD2	2.77	0.54
19:Q:57:ASN:HA	19:Q:60:ASN:CB	2.19	0.54
19:Q:75:TYR:H	19:Q:103:ILE:HG13	1.71	0.54
19:Q:85:VAL:CG1	19:Q:95:ILE:HG12	2.34	0.54
21:S:97:ARG:CZ	21:S:99:CYS:HA	2.37	0.54
22:T:98:MET:O	22:T:124:ILE:O	2.26	0.54
22:T:146:ILE:HG21	22:T:176:PRO:HD3	1.89	0.54
22:T:76:LEU:HG	22:T:77:ASP:N	2.22	0.54
24:V:87:PRO:O	24:V:91:LYS:HD2	2.07	0.54
28:Z:2:LYS:CD	28:Z:2:LYS:N	2.63	0.54
3:A:22:THR:N	3:A:25:GLU:CG	2.70	0.54
4:B:105:ILE:HG12	4:B:106:ILE:H	1.69	0.54
4:B:121:PRO:HA	4:B:131:LEU:CG	2.28	0.54
4:B:48:ARG:CD	4:B:49:ILE:N	2.69	0.54
4:B:95:LEU:N	4:B:95:LEU:HD23	2.18	0.54
5:C:33:VAL:N	5:C:49:LEU:HD13	2.22	0.54
5:C:81:ILE:O	5:C:82:ARG:C	2.46	0.54
9:G:124:GLY:O	9:G:143:SER:CA	2.54	0.54
9:G:81:VAL:HG11	9:G:144:VAL:CG1	2.31	0.54
11:I:65:THR:CA	11:I:82:ASN:ND2	2.71	0.54
12:J:139:LYS:HD2	12:J:140:ALA:H	1.73	0.54
12:J:18:ARG:O	12:J:19:VAL:C	2.46	0.54
12:J:27:HIS:NE2	12:J:30:THR:OG1	2.39	0.54
13:K:104:PHE:O	13:K:105:GLU:HG3	2.07	0.54
13:K:54:MET:HB3	13:K:58:PHE:CZ	2.42	0.54
18:P:40:LEU:HD23	18:P:50:PRO:CB	2.35	0.54
19:Q:17:VAL:O	19:Q:18:ARG:C	2.45	0.54
20:R:20:GLY:C	20:R:25:LYS:HA	2.27	0.54
22:T:98:MET:O	22:T:125:LEU:HD12	2.06	0.54
22:T:137:ILE:CG1	22:T:138:GLU:N	2.54	0.54
25:W:7:ARG:HB3	25:W:8:LYS:HZ2	1.68	0.54
26:X:45:GLY:HA2	26:X:48:GLU:CG	2.37	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:Y:33:CYS:SG	27:Y:34:PRO:CD	2.78	0.54
33:0:34:G:C2'	33:0:35:A:C5'	2.77	0.54
33:0:41:U:C5'	33:0:41:U:H6	2.20	0.54
4:B:268:ARG:HH21	4:B:269:PHE:HE2	1.55	0.54
4:B:30:GLU:HG3	4:B:63:ARG:NH1	2.21	0.54
4:B:53:PHE:O	4:B:54:ARG:HB2	2.08	0.54
5:C:31:CYS:H	5:C:91:VAL:HB	1.73	0.54
5:C:33:VAL:HG22	5:C:35:GLN:H	1.73	0.54
5:C:52:LEU:HD12	5:C:52:LEU:H	1.72	0.54
6:D:153:THR:O	6:D:155:ASN:N	2.40	0.54
6:D:27:LEU:CD1	6:D:27:LEU:H	2.15	0.54
8:F:20:ALA:HB3	8:F:23:ARG:O	2.07	0.54
9:G:117:GLU:HG3	9:G:118:LYS:CD	2.37	0.54
9:G:1:MET:O	9:G:21:VAL:O	2.25	0.54
10:H:112:LYS:HZ3	10:H:116:THR:H	1.54	0.54
10:H:26:THR:O	10:H:27:TYR:CB	2.44	0.54
10:H:45:THR:HG22	10:H:48:ARG:HG3	1.90	0.54
12:J:104:GLY:C	12:J:105:LEU:HG	2.28	0.54
12:J:27:HIS:ND1	12:J:28:GLY:N	2.55	0.54
12:J:40:SER:OG	12:J:46:LYS:HE2	2.08	0.54
12:J:79:ARG:HB3	12:J:110:TYR:H	1.73	0.54
12:J:80:TYR:O	12:J:81:GLN:NE2	2.41	0.54
13:K:98:LYS:O	13:K:101:ARG:HB2	2.08	0.54
15:M:71:ARG:CG	15:M:104:GLY:C	2.76	0.54
19:Q:34:ASN:ND2	19:Q:35:ILE:HG12	2.23	0.54
19:Q:48:ALA:HA	19:Q:51:LEU:CD1	2.37	0.54
20:R:26:TYR:OH	20:R:88:LYS:O	2.25	0.54
20:R:8:ILE:HD12	20:R:8:ILE:N	2.23	0.54
22:T:18:LEU:HD13	22:T:38:TYR:CD1	2.42	0.54
22:T:8:TYR:HB2	22:T:38:TYR:CE2	2.42	0.54
23:U:32:ARG:H	23:U:61:ALA:HB1	1.72	0.54
25:W:55:ARG:NH1	25:W:55:ARG:HA	2.23	0.54
28:Z:10:ARG:HD3	28:Z:14:LYS:HE2	1.90	0.54
8:F:177:GLY:O	8:F:178:ALA:C	2.46	0.54
33:0:2:C:H6	33:0:2:C:O5'	1.91	0.54
33:0:37:A:H3'	33:0:38:A:C8	2.42	0.54
3:A:18:ASN:C	3:A:18:ASN:ND2	2.61	0.54
4:B:103:ARG:HA	4:B:103:ARG:NE	2.23	0.54
6:D:150:LEU:HB2	6:D:187:LEU:CD1	2.38	0.54
12:J:139:LYS:HD2	12:J:140:ALA:N	2.23	0.54
16:N:56:GLY:H	16:N:59:THR:CG2	2.19	0.54
16:N:78:LEU:N	16:N:78:LEU:HD23	2.22	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:N:19:LEU:HD11	16:N:79:HIS:HA	1.90	0.54
19:Q:19:LEU:O	19:Q:23:LEU:HB2	2.08	0.54
19:Q:31:GLU:O	19:Q:35:ILE:HG12	2.08	0.54
20:R:83:VAL:O	20:R:84:ALA:HB2	2.08	0.54
22:T:9:TYR:N	22:T:9:TYR:HD2	2.05	0.54
23:U:28:GLY:HA2	23:U:67:VAL:C	2.28	0.54
25:W:46:GLN:C	25:W:48:HIS:N	2.61	0.54
26:X:4:LEU:HB2	26:X:58:VAL:HG22	1.89	0.54
33:O:41:U:C2'	33:O:42:G:O4'	2.50	0.54
6:D:105:LEU:HD23	6:D:178:VAL:HG12	1.88	0.54
28:Z:9:ARG:O	28:Z:10:ARG:C	2.46	0.54
33:O:75:C:H5'	33:O:76:A:P	2.48	0.54
4:B:106:ILE:HD12	4:B:196:VAL:HG13	1.89	0.54
4:B:126:GLN:O	4:B:128:GLY:N	2.41	0.54
4:B:157:ARG:O	4:B:161:THR:OG1	2.25	0.54
5:C:103:ASP:O	5:C:104:VAL:CG2	2.56	0.54
5:C:93:VAL:HG12	5:C:182:LEU:HD22	1.90	0.54
5:C:198:VAL:CG1	5:C:199:ARG:N	2.35	0.54
6:D:118:LEU:O	6:D:119:LEU:CB	2.56	0.54
6:D:177:ASN:HA	6:D:179:TYR:CZ	2.43	0.54
8:F:103:LEU:HB2	8:F:123:PHE:CZ	2.42	0.54
8:F:124:GLU:HB2	8:F:132:ARG:CG	2.29	0.54
8:F:138:LYS:HA	8:F:141:VAL:CB	2.35	0.54
8:F:149:ARG:C	8:F:151:ILE:N	2.61	0.54
8:F:81:GLU:HA	8:F:89:ILE:O	27.10	0.54
9:G:13:GLY:O	9:G:17:GLN:HG2	2.08	0.54
10:H:37:VAL:HG22	10:H:158:PRO:O	2.08	0.54
10:H:65:TRP:HZ3	10:H:71:MET:HE1	1.71	0.54
10:H:66:THR:O	10:H:68:ASN:N	2.40	0.54
6:D:183:ARG:NH1	12:J:7:ARG:HG2	2.22	0.54
13:K:131:ILE:HG13	13:K:132:VAL:O	2.08	0.54
13:K:132:VAL:CG2	13:K:133:ARG:CZ	2.85	0.54
16:N:123:LYS:HZ3	16:N:123:LYS:HB2	1.70	0.54
17:O:92:ARG:C	17:O:94:ASN:ND2	2.61	0.54
18:P:76:LYS:C	18:P:76:LYS:HD2	2.28	0.54
19:Q:21:VAL:C	19:Q:25:ARG:HG3	2.28	0.54
20:R:57:LEU:HD22	20:R:76:ARG:NE	2.23	0.54
20:R:76:ARG:O	20:R:77:LYS:HG2	2.08	0.54
21:S:47:LYS:O	21:S:56:PRO:HB3	2.07	0.54
21:S:7:VAL:HG23	21:S:8:LYS:N	2.23	0.54
22:T:5:LEU:HD13	22:T:6:LYS:HZ3	7.73	0.54
24:V:13:ILE:CG2	24:V:14:VAL:N	2.70	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:V:85:LEU:HD11	24:V:88:LYS:CG	2.38	0.54
33:0:14:A:C2'	33:0:15:G:H5'	2.38	0.54
3:A:195:ARG:O	3:A:197:LEU:N	2.33	0.54
4:B:165:ILE:CG1	4:B:174:ILE:O	2.56	0.54
4:B:127:VAL:HA	4:B:193:VAL:HG13	1.90	0.54
6:D:155:ASN:HB2	6:D:157:LEU:HG	1.88	0.54
7:E:125:PHE:HB2	7:E:166:ASP:OD1	2.07	0.54
7:E:46:ALA:O	7:E:53:LEU:CD2	2.55	0.54
10:H:81:ASP:CG	10:H:147:ALA:CB	2.76	0.54
11:I:17:ARG:HH21	11:I:47:ILE:CG2	2.20	0.54
11:I:63:VAL:CG2	11:I:83:ALA:O	2.56	0.54
12:J:101:VAL:HA	12:J:106:LEU:HB2	1.90	0.54
12:J:92:GLU:CG	12:J:123:LEU:HD13	2.38	0.54
13:K:118:LEU:HD12	13:K:118:LEU:N	2.23	0.54
13:K:34:LEU:HD13	13:K:129:THR:CB	2.38	0.54
13:K:79:LEU:HG	13:K:80:GLU:HG3	1.90	0.54
16:N:64:ARG:H	16:N:99:LEU:HD12	1.72	0.54
18:P:19:LYS:C	18:P:20:LEU:HD12	2.28	0.54
18:P:30:GLY:CA	18:P:66:ARG:H	2.20	0.54
19:Q:10:VAL:HG12	19:Q:12:ILE:N	2.20	0.54
20:R:17:ALA:C	20:R:19:ALA:H	2.11	0.54
20:R:54:VAL:HG22	20:R:77:LYS:HE3	1.89	0.54
21:S:23:ARG:CZ	21:S:38:ILE:HG22	2.38	0.54
21:S:44:ILE:O	21:S:58:GLY:CA	2.54	0.54
23:U:51:VAL:CG2	23:U:81:VAL:HG23	2.37	0.54
24:V:10:LYS:O	24:V:12:PRO:HD3	2.08	0.54
25:W:13:ALA:C	25:W:14:ARG:CD	2.74	0.54
25:W:51:ARG:CD	25:W:52:ASP:OD2	2.42	0.54
3:A:48:LEU:HA	3:A:211:ARG:HH11	1.73	0.53
4:B:90:ALA:HB1	4:B:106:ILE:CB	2.38	0.53
5:C:109:LYS:NZ	14:L:4:LEU:CD2	2.71	0.53
5:C:32:PRO:CG	5:C:69:LYS:HD2	2.38	0.53
6:D:112:ARG:HA	6:D:115:GLU:HG3	1.88	0.53
6:D:5:PRO:HG3	6:D:120:LEU:CD2	2.38	0.53
6:D:55:SER:O	6:D:57:ARG:N	2.41	0.53
6:D:5:PRO:HG2	6:D:9:PRO:HG2	1.90	0.53
9:G:77:LEU:O	9:G:142:VAL:HG13	2.07	0.53
9:G:27:ARG:HH22	9:G:28:ASN:ND2	2.06	0.53
9:G:44:LEU:C	9:G:47:LEU:HG	2.27	0.53
11:I:45:GLU:OE1	11:I:46:ALA:N	2.42	0.53
12:J:123:LEU:C	12:J:123:LEU:HD23	2.29	0.53
13:K:132:VAL:HG22	13:K:133:ARG:CZ	2.39	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:L:90:ARG:NH1	14:L:117:VAL:HG11	2.21	0.53
14:L:17:ARG:HB3	14:L:21:TYR:OH	2.08	0.53
15:M:31:SER:OG	15:M:32:LEU:N	2.38	0.53
15:M:71:ARG:HG3	15:M:104:GLY:C	2.29	0.53
16:N:45:PHE:CG	16:N:46:GLU:N	2.75	0.53
18:P:47:VAL:HG13	18:P:48:GLY:H	1.73	0.53
18:P:38:LEU:CD1	18:P:55:ALA:HA	2.38	0.53
19:Q:42:ARG:HG3	19:Q:43:GLY:N	2.22	0.53
21:S:27:VAL:O	21:S:35:TYR:HB2	2.08	0.53
21:S:55:TYR:CD1	21:S:56:PRO:HD2	2.43	0.53
22:T:5:LEU:O	22:T:6:LYS:C	3.40	0.53
26:X:4:LEU:CB	26:X:58:VAL:HG22	2.38	0.53
28:Z:3:ARG:HG2	28:Z:3:ARG:HH11	1.72	0.53
33:O:68:U:H2'	33:O:69:U:C6	2.42	0.53
26:X:20:LYS:HB3	26:X:23:LEU:HD11	1.90	0.53
33:O:62:A:H2'	33:O:63:C:H6	1.63	0.53
4:B:169:GLU:HG2	4:B:174:ILE:CD1	2.30	0.53
4:B:206:LEU:CD2	4:B:206:LEU:H	2.21	0.53
5:C:128:SER:O	5:C:129:HIS:HD2	1.90	0.53
5:C:110:GLY:CA	5:C:161:GLY:HA3	2.35	0.53
5:C:178:GLU:HG3	5:C:179:GLU:OE1	2.07	0.53
5:C:25:VAL:O	5:C:26:ILE:CD1	2.55	0.53
5:C:26:ILE:CG2	5:C:27:LEU:N	2.71	0.53
6:D:151:LEU:HD12	6:D:188:VAL:O	2.08	0.53
6:D:28:LEU:O	6:D:32:VAL:HG23	2.08	0.53
6:D:62:GLN:OE1	6:D:69:ARG:CZ	2.55	0.53
7:E:82:LEU:HD13	7:E:83:ARG:N	2.24	0.53
8:F:148:ILE:C	8:F:151:ILE:H	2.10	0.53
9:G:147:GLN:CG	9:G:148:GLU:H	2.18	0.53
10:H:117:HIS:ND1	10:H:120:ARG:HD2	2.23	0.53
11:I:44:LYS:HA	11:I:44:LYS:NZ	2.23	0.53
11:I:43:VAL:CB	11:I:54:GLU:HA	2.38	0.53
12:J:85:LEU:HD21	12:J:118:GLY:CA	2.38	0.53
13:K:124:LYS:HZ3	13:K:125:LEU:CA	2.21	0.53
13:K:82:ARG:N	13:K:82:ARG:CD	2.71	0.53
14:L:66:VAL:HG11	14:L:80:PHE:CE1	2.43	0.53
16:N:23:ARG:CB	16:N:24:PRO:HD2	2.37	0.53
18:P:100:ARG:CD	18:P:101:GLY:N	2.71	0.53
20:R:20:GLY:CA	20:R:25:LYS:C	2.76	0.53
20:R:65:ARG:HB3	20:R:66:LEU:HD22	1.91	0.53
23:U:28:GLY:HA3	23:U:67:VAL:O	2.03	0.53
23:U:68:GLU:N	23:U:79:VAL:HB	2.23	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:W:43:GLN:O	25:W:45:SER:N	2.41	0.53
26:X:10:LYS:HG2	26:X:53:LEU:CA	2.28	0.53
33:0:3:G:C2	33:0:4:G:C8	2.97	0.53
3:A:21:TYR:CG	3:A:26:ALA:HB2	2.42	0.53
4:B:144:ALA:O	4:B:191:ALA:CB	2.56	0.53
4:B:56:GLY:C	4:B:216:GLY:HA2	2.28	0.53
4:B:25:THR:OG1	4:B:27:THR:CG2	2.49	0.53
4:B:25:THR:HG1	4:B:27:THR:HG23	1.72	0.53
4:B:63:ARG:HH21	4:B:86:PRO:CD	2.21	0.53
5:C:59:VAL:O	5:C:60:ASN:CB	2.56	0.53
8:F:12:PRO:O	8:F:14:GLY:N	2.41	0.53
8:F:17:VAL:HG11	8:F:45:VAL:H	1.74	0.53
10:H:112:LYS:C	10:H:112:LYS:CD	2.77	0.53
10:H:40:ASP:HB2	10:H:77:VAL:HG22	1.89	0.53
10:H:80:ALA:HB3	10:H:146:TYR:C	2.28	0.53
11:I:66:LYS:HB3	11:I:78:ARG:NH2	2.22	0.53
13:K:111:GLU:HB3	13:K:115:MET:CE	2.38	0.53
13:K:118:LEU:HD23	13:K:130:LYS:O	2.07	0.53
13:K:1:MET:O	13:K:2:LEU:HB2	2.07	0.53
15:M:65:VAL:O	15:M:68:GLN:HB2	2.08	0.53
20:R:21:PHE:CE2	20:R:90:GLU:HA	2.43	0.53
25:W:26:ARG:O	25:W:26:ARG:HG3	2.08	0.53
33:0:29:A:H2'	33:0:30:G:H8	1.73	0.53
33:0:9:A:H1'	33:0:46:G:H1'	1.91	0.53
3:A:179:ALA:O	3:A:181:PHE:N	2.38	0.53
3:A:44:VAL:H	3:A:175:PRO:HA	1.73	0.53
5:C:56:PRO:HB2	5:C:58:ARG:HE	1.73	0.53
5:C:84:PHE:O	5:C:84:PHE:CD1	2.62	0.53
6:D:169:VAL:CG1	6:D:170:THR:H	2.08	0.53
6:D:24:ASN:N	6:D:25:PRO:CD	2.72	0.53
6:D:55:SER:C	6:D:57:ARG:N	2.61	0.53
7:E:120:LEU:O	7:E:122:PRO:CD	2.53	0.53
7:E:19:LEU:O	7:E:25:TYR:CE1	2.61	0.53
8:F:140:LYS:HD2	8:F:140:LYS:C	2.28	0.53
9:G:142:VAL:HG12	9:G:143:SER:N	2.24	0.53
9:G:69:LYS:HG3	9:G:138:ILE:CD1	2.38	0.53
9:G:88:ILE:HD11	9:G:89:TYR:CE1	2.43	0.53
10:H:93:LYS:O	10:H:110:LEU:HD22	2.09	0.53
10:H:127:LYS:HA	10:H:130:LEU:HG	1.88	0.53
10:H:37:VAL:HB	10:H:75:VAL:HG22	1.89	0.53
10:H:38:LEU:HB2	10:H:157:ARG:HB2	1.91	0.53
10:H:65:TRP:HE3	10:H:71:MET:CE	2.21	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:63:VAL:O	11:I:64:ARG:O	2.25	0.53
12:J:97:PRO:HD3	12:J:126:VAL:HB	1.89	0.53
14:L:96:ARG:C	14:L:98:LEU:N	4.61	0.53
16:N:66:VAL:HG12	16:N:66:VAL:O	2.09	0.53
17:O:105:VAL:HA	18:P:43:GLU:OE2	2.07	0.53
17:O:83:LEU:CD2	17:O:84:LYS:NZ	2.69	0.53
19:Q:7:ALA:CB	19:Q:103:ILE:CG2	2.87	0.53
25:W:3:LEU:HD23	25:W:4:SER:C	2.29	0.53
26:X:5:LYS:HA	26:X:36:VAL:CG1	2.28	0.53
27:Y:16:ARG:HG2	27:Y:17:ASP:N	2.22	0.53
5:C:117:MET:HG2	5:C:122:PHE:C	2.29	0.53
5:C:7:VAL:O	5:C:7:VAL:CG2	2.56	0.53
6:D:98:LYS:CA	6:D:101:ARG:HB3	2.23	0.53
6:D:25:PRO:HB2	6:D:29:TRP:CZ2	2.43	0.53
6:D:4:ILE:CG2	6:D:118:LEU:HD22	2.39	0.53
7:E:110:ALA:HB2	7:E:142:PRO:CD	2.33	0.53
7:E:166:ASP:CA	7:E:169:ALA:HB3	2.37	0.53
10:H:151:HIS:O	10:H:151:HIS:CG	2.62	0.53
10:H:76:VAL:CG1	10:H:77:VAL:N	2.71	0.53
11:I:101:PRO:O	11:I:102:VAL:CG1	2.50	0.53
13:K:57:HIS:ND1	13:K:57:HIS:O	2.42	0.53
15:M:26:LEU:HD13	15:M:27:SER:H	1.74	0.53
16:N:50:ILE:CG2	16:N:51:ARG:H	2.21	0.53
18:P:73:SER:CB	18:P:89:GLN:HB3	2.31	0.53
19:Q:33:ARG:HG3	19:Q:34:ASN:N	2.22	0.53
22:T:181:GLU:O	22:T:182:LYS:CB	2.56	0.53
22:T:9:TYR:N	22:T:9:TYR:CD2	2.76	0.53
24:V:68:PRO:C	24:V:70:VAL:N	2.59	0.53
19:Q:38:TYR:HE2	27:Y:41:PRO:CD	2.22	0.53
3:A:20:ILE:CA	3:A:224:ARG:HB3	2.39	0.53
4:B:259:THR:O	4:B:259:THR:HG22	2.09	0.53
4:B:34:VAL:HG13	4:B:35:LYS:HE2	1.91	0.53
5:C:103:ASP:C	5:C:104:VAL:HG23	2.29	0.53
5:C:5:LEU:CD1	5:C:91:VAL:HG21	2.38	0.53
6:D:151:LEU:N	6:D:169:VAL:CB	2.72	0.53
6:D:26:HIS:H	6:D:26:HIS:CD2	2.25	0.53
6:D:70:HIS:CG	6:D:71:GLY:N	2.77	0.53
7:E:115:ARG:O	7:E:116:ASP:OD2	2.27	0.53
7:E:139:LEU:O	7:E:144:ILE:O	2.26	0.53
8:F:88:LEU:CA	8:F:129:THR:O	2.57	0.53
8:F:149:ARG:HD2	8:F:153:LYS:CE	2.36	0.53
9:G:22:LYS:HB2	9:G:23:PRO:CD	2.37	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:24:GLY:O	9:G:25:TYR:C	2.46	0.53
11:I:10:VAL:O	11:I:99:PHE:CE2	2.62	0.53
11:I:71:ARG:NH1	11:I:75:SER:HB3	2.23	0.53
12:J:110:TYR:HD2	12:J:111:ARG:HG2	1.74	0.53
12:J:5:ASP:O	12:J:6:LEU:HG	2.09	0.53
12:J:88:LEU:HD11	12:J:90:ARG:CZ	2.39	0.53
16:N:61:PHE:O	16:N:62:THR:HG22	2.08	0.53
16:N:64:ARG:CZ	16:N:103:ARG:CA	2.85	0.53
16:N:90:GLN:HB2	16:N:120:ARG:NH1	2.24	0.53
18:P:21:ARG:HD2	18:P:93:GLU:CG	2.39	0.53
20:R:12:VAL:CG1	20:R:27:THR:HB	2.38	0.53
20:R:59:VAL:O	20:R:74:PRO:CD	2.41	0.53
21:S:80:GLY:H	21:S:97:ARG:HH21	1.57	0.53
22:T:3:TYR:O	22:T:57:ILE:CG1	2.57	0.53
24:V:87:PRO:HB2	24:V:91:LYS:CD	2.36	0.53
24:V:91:LYS:CE	24:V:91:LYS:N	2.64	0.53
26:X:8:LEU:O	26:X:9:VAL:HG13	2.07	0.53
17:O:38:THR:O	17:O:40:PHE:N	2.41	0.53
33:O:27:C:C3'	33:O:28:C:C6	2.92	0.53
5:C:32:PRO:CA	5:C:90:THR:HA	2.39	0.53
6:D:132:LYS:CB	6:D:132:LYS:NZ	2.72	0.53
6:D:70:HIS:CE1	6:D:72:ASP:O	2.58	0.53
7:E:59:GLU:OE2	7:E:151:ALA:CB	2.57	0.53
7:E:68:PRO:HB3	7:E:92:VAL:HB	1.89	0.53
7:E:72:ARG:CA	7:E:87:PRO:HB3	2.37	0.53
9:G:26:ALA:HA	9:G:31:LEU:N	2.23	0.53
10:H:84:ARG:O	10:H:86:THR:N	2.40	0.53
12:J:104:GLY:O	12:J:105:LEU:HG	2.08	0.53
12:J:82:GLY:CA	12:J:113:LYS:O	2.56	0.53
13:K:103:MET:N	13:K:103:MET:SD	2.82	0.53
13:K:81:VAL:O	13:K:82:ARG:CB	2.54	0.53
13:K:95:ALA:O	13:K:97:VAL:HG23	2.08	0.53
14:L:32:GLY:O	14:L:115:GLU:HA	2.08	0.53
14:L:70:LEU:HD23	14:L:70:LEU:N	2.24	0.53
15:M:24:LEU:CB	15:M:85:VAL:HG23	2.35	0.53
16:N:64:ARG:NH1	16:N:65:LYS:HA	2.24	0.53
18:P:3:ALA:O	18:P:4:ILE:HG13	2.09	0.53
22:T:152:ALA:CB	22:T:169:GLU:H	2.22	0.53
22:T:159:PRO:O	22:T:161:VAL:HG23	2.09	0.53
23:U:37:LEU:HB3	23:U:60:PHE:HA	1.91	0.53
24:V:85:LEU:C	24:V:87:PRO:CD	2.74	0.53
3:A:214:TYR:HB3	3:A:223:VAL:N	2.13	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:A:34:ALA:HB2	3:A:179:ALA:HB1	1.89	0.53
4:B:173:VAL:HG12	4:B:187:GLY:CA	2.33	0.53
4:B:3:VAL:HA	4:B:17:THR:HG21	1.89	0.53
4:B:133:LEU:CB	4:B:187:GLY:O	2.57	0.53
4:B:4:LYS:HB2	4:B:18:VAL:O	2.08	0.53
4:B:52:ARG:HE	4:B:53:PHE:HD1	1.56	0.53
5:C:5:LEU:H	5:C:5:LEU:CD1	2.08	0.53
7:E:43:LEU:CD2	7:E:44:GLY:N	2.72	0.53
8:F:84:SER:C	8:F:85:LYS:HG3	2.30	0.53
9:G:125:GLU:CG	9:G:126:TYR:N	2.65	0.53
9:G:94:ALA:O	9:G:97:ILE:CD1	2.56	0.53
10:H:110:LEU:CD2	10:H:110:LEU:N	2.71	0.53
10:H:132:LYS:O	10:H:132:LYS:CE	2.56	0.53
10:H:90:LEU:C	10:H:92:GLN:H	2.11	0.53
12:J:41:ARG:NH1	12:J:45:LEU:HB2	2.23	0.53
14:L:75:LEU:O	14:L:79:LEU:CG	2.40	0.53
15:M:65:VAL:HA	15:M:68:GLN:HG3	1.89	0.53
16:N:1:MET:O	16:N:3:ARG:N	2.41	0.53
19:Q:22:ASP:CA	19:Q:25:ARG:HD2	2.38	0.53
20:R:44:GLU:HA	20:R:48:LYS:HA	1.91	0.53
20:R:50:LYS:CE	20:R:51:VAL:H	2.19	0.53
21:S:84:ARG:CD	21:S:84:ARG:N	2.58	0.53
25:W:26:ARG:HG3	25:W:29:LYS:CD	2.37	0.53
26:X:9:VAL:CA	26:X:32:GLN:HA	2.39	0.53
33:O:23:A:C4	33:O:24:G:C8	2.97	0.53
4:B:72:LYS:O	4:B:74:GLY:N	2.42	0.53
5:C:109:LYS:O	5:C:161:GLY:CA	2.56	0.53
5:C:180:ASN:N	5:C:181:LEU:HD22	2.24	0.53
5:C:71:GLY:O	5:C:73:GLU:N	2.42	0.53
5:C:36:ARG:HH21	5:C:88:GLY:CA	2.22	0.53
6:D:24:ASN:C	6:D:26:HIS:HD2	2.12	0.53
6:D:5:PRO:HB2	6:D:9:PRO:HG2	1.89	0.53
6:D:84:VAL:HG22	6:D:85:PHE:N	2.23	0.53
7:E:139:LEU:HB3	7:E:146:TYR:CA	2.38	0.53
7:E:113:ARG:O	7:E:140:ILE:CD1	2.57	0.53
9:G:31:LEU:O	9:G:32:PRO:C	2.47	0.53
9:G:95:LYS:HE2	9:G:95:LYS:H	1.71	0.53
10:H:113:MET:CG	10:H:121:VAL:HG22	2.39	0.53
10:H:32:VAL:CG1	10:H:35:ARG:NH1	2.70	0.53
10:H:81:ASP:OD2	10:H:81:ASP:O	2.27	0.53
11:I:23:ARG:HD2	11:I:24:VAL:H	1.74	0.53
11:I:24:VAL:CG2	11:I:37:ASP:HB3	2.39	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:J:27:HIS:CD2	12:J:30:THR:HG1	2.27	0.53
14:L:27:SER:C	14:L:29:LEU:N	2.62	0.53
15:M:25:ARG:NE	15:M:40:ILE:CG2	2.67	0.53
16:N:47:GLY:HA2	16:N:64:ARG:O	2.09	0.53
22:T:15:PRO:C	22:T:19:ARG:NE	2.62	0.53
22:T:44:PHE:CD2	22:T:45:ASP:HB2	2.42	0.53
23:U:79:VAL:O	23:U:79:VAL:CG2	2.57	0.53
24:V:49:VAL:CG1	24:V:50:ARG:N	2.58	0.53
26:X:22:ALA:HB1	26:X:46:ASN:CB	2.33	0.53
26:X:5:LYS:HB3	26:X:57:GLU:C	2.29	0.53
33:O:67:A:H2'	33:O:68:U:H6	1.74	0.53
4:B:105:ILE:O	4:B:106:ILE:CG2	2.57	0.53
4:B:231:HIS:C	4:B:233:HIS:N	2.60	0.53
6:D:58:LYS:C	6:D:59:ILE:CD1	2.77	0.53
7:E:115:ARG:O	7:E:116:ASP:HB2	2.09	0.53
7:E:163:ALA:HB1	7:E:165:THR:O	2.09	0.53
8:F:105:LEU:C	8:F:105:LEU:CD1	2.77	0.53
9:G:69:LYS:CG	9:G:138:ILE:HD13	2.38	0.53
11:I:17:ARG:HG2	11:I:47:ILE:CG1	2.33	0.53
11:I:2:ILE:CD1	11:I:34:THR:HA	2.39	0.53
11:I:35:VAL:CA	11:I:62:VAL:HG11	2.38	0.53
11:I:73:ASP:N	11:I:73:ASP:OD2	2.40	0.53
13:K:133:ARG:CD	13:K:133:ARG:N	2.72	0.53
13:K:16:ARG:CG	13:K:17:LEU:H	2.21	0.53
15:M:110:LEU:HD12	15:M:110:LEU:N	2.23	0.53
15:M:66:ALA:C	15:M:101:LEU:HG	2.28	0.53
16:N:108:ARG:O	16:N:112:ARG:CB	2.58	0.53
16:N:35:LYS:H	16:N:35:LYS:HD2	1.72	0.53
16:N:50:ILE:HG21	16:N:62:THR:OG1	2.09	0.53
17:O:75:ASN:O	17:O:79:PHE:HB2	2.09	0.53
17:O:92:ARG:NE	18:P:11:GLN:CG	2.73	0.53
18:P:24:LYS:O	18:P:25:LEU:HG	2.08	0.53
18:P:36:PRO:HD2	18:P:60:GLU:OE1	2.08	0.53
18:P:4:ILE:O	18:P:39:LEU:HD12	2.09	0.53
19:Q:29:LEU:HD21	19:Q:67:ASP:HA	1.89	0.53
19:Q:95:ILE:HG22	19:Q:96:ILE:N	2.23	0.53
22:T:67:LEU:C	22:T:67:LEU:HD13	2.30	0.53
23:U:35:ASN:O	23:U:60:PHE:HB2	2.09	0.53
25:W:7:ARG:HB2	25:W:8:LYS:HD2	1.91	0.53
33:O:50:U:H2'	33:O:51:G:H8	1.74	0.52
3:A:182:PRO:C	3:A:184:GLU:H	2.11	0.52
4:B:231:HIS:ND1	4:B:233:HIS:HB2	2.24	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:34:VAL:O	4:B:35:LYS:HG2	2.08	0.52
4:B:72:LYS:HB2	4:B:97:TYR:OH	2.09	0.52
4:B:97:TYR:C	4:B:98:VAL:HG23	2.30	0.52
5:C:54:GLN:HG2	5:C:75:VAL:HG23	1.87	0.52
7:E:106:LEU:O	7:E:111:LEU:CD1	2.56	0.52
7:E:31:VAL:O	7:E:33:ARG:N	2.39	0.52
7:E:79:ASN:ND2	7:E:86:MET:HG2	2.24	0.52
8:F:129:THR:O	8:F:129:THR:HG22	2.09	0.52
8:F:161:GLY:O	8:F:162:ILE:CB	2.57	0.52
9:G:88:ILE:HG13	9:G:89:TYR:CD1	2.44	0.52
10:H:111:GLU:HA	10:H:114:LEU:CD2	2.31	0.52
10:H:126:VAL:O	10:H:128:GLY:N	2.42	0.52
11:I:65:THR:O	11:I:79:PHE:C	2.47	0.52
12:J:100:LEU:O	12:J:101:VAL:C	2.45	0.52
12:J:16:ARG:NE	12:J:17:LYS:N	2.50	0.52
14:L:5:LYS:CG	14:L:6:SER:N	2.50	0.52
14:L:62:ALA:O	14:L:66:VAL:HG13	2.09	0.52
15:M:71:ARG:HG3	15:M:105:ALA:N	2.24	0.52
16:N:92:GLY:CA	16:N:114:LEU:HD13	2.32	0.52
17:O:74:LEU:HD21	17:O:110:VAL:CG2	2.32	0.52
19:Q:29:LEU:O	19:Q:30:GLU:O	2.27	0.52
20:R:32:PRO:HG2	20:R:33:LYS:H	1.73	0.52
25:W:17:SER:HA	25:W:21:LEU:HB2	1.91	0.52
25:W:29:LYS:C	25:W:29:LYS:HZ1	2.12	0.52
25:W:41:ILE:HA	25:W:44:LEU:HB2	1.89	0.52
26:X:28:LEU:HD11	26:X:35:ARG:CG	2.34	0.52
26:X:31:LEU:N	26:X:31:LEU:HD22	2.24	0.52
28:Z:19:ARG:HD3	28:Z:23:ARG:NH2	2.24	0.52
4:B:227:ASN:ND2	4:B:237:GLU:CG	2.72	0.52
5:C:31:CYS:SG	5:C:51:PHE:CB	2.80	0.52
9:G:13:GLY:C	9:G:15:VAL:H	2.11	0.52
9:G:19:VAL:O	9:G:21:VAL:N	2.43	0.52
10:H:76:VAL:HG13	10:H:144:LYS:HB3	1.91	0.52
10:H:157:ARG:HH11	10:H:159:GLU:HB3	1.73	0.52
10:H:44:LYS:O	10:H:84:ARG:CB	2.55	0.52
15:M:71:ARG:CA	15:M:108:GLY:O	2.57	0.52
22:T:99:TYR:CD2	22:T:125:LEU:N	2.78	0.52
22:T:5:LEU:CD1	22:T:6:LYS:N	2.63	0.52
24:V:19:GLN:HB3	24:V:44:PRO:HD3	1.91	0.52
25:W:17:SER:N	25:W:18:PRO:CD	2.71	0.52
33:O:24:G:C3'	33:O:25:C:H6	2.23	0.52
33:O:24:G:N9	33:O:25:C:C6	2.78	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:A:217:THR:C	3:A:219:MET:N	2.60	0.52
4:B:180:GLY:O	4:B:181:GLU:O	2.27	0.52
4:B:106:ILE:HD12	4:B:197:GLY:H	1.74	0.52
4:B:96:HIS:HA	4:B:102:LYS:CG	2.39	0.52
5:C:92:THR:HG22	5:C:180:ASN:HD21	1.74	0.52
6:D:132:LYS:CG	6:D:133:GLU:H	2.20	0.52
6:D:65:THR:C	6:D:67:ARG:N	2.59	0.52
6:D:78:PHE:N	6:D:78:PHE:CD2	2.72	0.52
7:E:13:GLU:HA	7:E:16:ARG:NH1	2.24	0.52
8:F:10:PRO:HG2	8:F:12:PRO:CD	2.39	0.52
8:F:54:ARG:CB	8:F:55:PRO:CD	2.75	0.52
9:G:26:ALA:O	9:G:31:LEU:HB3	2.09	0.52
9:G:55:ALA:HA	9:G:58:LEU:HB3	1.91	0.52
10:H:122:LEU:H	10:H:122:LEU:HD12	1.74	0.52
10:H:80:ALA:CA	10:H:83:ILE:HG12	2.38	0.52
11:I:80:ASP:H	16:N:70:VAL:HG13	1.73	0.52
12:J:127:ALA:HB1	12:J:130:PHE:HD1	1.73	0.52
12:J:88:LEU:O	12:J:88:LEU:HG	2.09	0.52
13:K:119:ARG:NH2	13:K:131:ILE:HG22	2.19	0.52
14:L:68:ARG:CB	14:L:68:ARG:HH11	2.05	0.52
15:M:66:ALA:C	15:M:68:GLN:N	2.61	0.52
19:Q:79:GLY:HA2	19:Q:102:HIS:CD2	2.45	0.52
19:Q:87:PRO:O	19:Q:88:ARG:CB	2.53	0.52
20:R:32:PRO:HA	20:R:75:ASP:HB2	1.91	0.52
20:R:81:VAL:HG21	20:R:86:GLY:HA2	1.81	0.52
22:T:9:TYR:O	22:T:38:TYR:CE2	2.62	0.52
23:U:63:VAL:O	23:U:64:ASP:CB	2.57	0.52
24:V:23:LYS:HB2	24:V:37:ILE:CG2	2.40	0.52
25:W:27:GLU:CA	25:W:30:ARG:HG2	2.39	0.52
3:A:213:VAL:HB	3:A:224:ARG:HH22	1.73	0.52
4:B:117:VAL:HG13	4:B:128:GLY:C	2.29	0.52
4:B:267:SER:OG	4:B:268:ARG:N	2.42	0.52
5:C:4:ILE:CG1	5:C:91:VAL:CG1	2.81	0.52
6:D:112:ARG:CG	6:D:112:ARG:NH2	2.48	0.52
6:D:119:LEU:HB3	6:D:188:VAL:CA	2.16	0.52
6:D:7:LEU:N	6:D:7:LEU:HD12	2.25	0.52
6:D:88:LYS:O	6:D:90:ARG:N	2.43	0.52
8:F:144:VAL:C	8:F:146:ALA:H	2.11	0.52
9:G:73:GLU:C	9:G:75:LEU:H	2.10	0.52
10:H:117:HIS:O	10:H:120:ARG:HB3	2.09	0.52
10:H:145:VAL:O	10:H:146:TYR:CG	2.63	0.52
10:H:36:TRP:CE3	10:H:156:GLN:O	2.62	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:15:GLY:CA	11:I:17:ARG:HH22	2.22	0.52
11:I:1:MET:N	11:I:67:LYS:HB2	2.23	0.52
13:K:25:ASP:CG	13:K:102:VAL:HB	2.30	0.52
13:K:111:GLU:HB3	13:K:115:MET:HE3	1.92	0.52
13:K:7:MET:CB	13:K:8:LYS:NZ	2.70	0.52
14:L:113:LEU:HD13	14:L:113:LEU:C	2.30	0.52
16:N:92:GLY:HA3	16:N:114:LEU:HB3	1.92	0.52
17:O:36:ARG:HA	17:O:39:LEU:CG	2.39	0.52
18:P:21:ARG:HG2	18:P:93:GLU:CG	2.39	0.52
18:P:3:ALA:C	18:P:4:ILE:HG13	2.30	0.52
20:R:17:ALA:HB1	20:R:26:TYR:HB3	1.91	0.52
22:T:102:LEU:HA	22:T:137:ILE:HG23	1.91	0.52
27:Y:33:CYS:SG	27:Y:49:CYS:CB	2.98	0.52
27:Y:57:VAL:HG23	27:Y:58:LEU:H	1.74	0.52
28:Z:14:LYS:HA	28:Z:20:ALA:HB2	1.91	0.52
22:T:155:LEU:CD1	22:T:156:LYS:N	2.64	0.52
33:O:69:U:O5'	33:O:69:U:C6	2.60	0.52
33:O:34:G:C3'	33:O:35:A:C5'	2.87	0.52
3:A:6:LYS:C	3:A:7:ARG:HG3	2.30	0.52
4:B:133:LEU:HD13	4:B:136:ILE:CG2	2.38	0.52
5:C:38:THR:O	5:C:40:GLU:N	2.42	0.52
7:E:64:THR:OG1	7:E:102:PHE:CZ	2.62	0.52
7:E:101:ILE:HG12	7:E:105:LYS:HE3	1.92	0.52
9:G:129:THR:CG2	9:G:130:TYR:N	2.73	0.52
10:H:24:VAL:N	10:H:25:LYS:HZ2	2.07	0.52
10:H:84:ARG:HD3	10:H:86:THR:N	2.25	0.52
11:I:43:VAL:HG12	11:I:54:GLU:HA	1.90	0.52
13:K:90:VAL:HG13	13:K:90:VAL:O	2.08	0.52
16:N:89:VAL:CG1	16:N:121:ILE:HG12	2.40	0.52
16:N:17:THR:HG23	16:N:18:ASP:N	2.25	0.52
16:N:70:VAL:O	16:N:72:VAL:N	2.43	0.52
18:P:22:VAL:O	18:P:23:GLU:CG	2.58	0.52
19:Q:32:ALA:O	19:Q:33:ARG:C	2.47	0.52
19:Q:58:ALA:HA	19:Q:62:HIS:CB	2.35	0.52
19:Q:68:ARG:HG2	19:Q:110:LYS:CA	2.39	0.52
22:T:97:GLU:CB	22:T:126:VAL:O	2.58	0.52
22:T:18:LEU:C	22:T:23:LYS:HB2	2.29	0.52
23:U:16:SER:O	23:U:17:GLN:HB3	2.10	0.52
23:U:17:GLN:O	23:U:18:ALA:HB3	2.10	0.52
4:B:36:PRO:CG	4:B:61:LEU:HD23	2.39	0.52
4:B:69:ARG:CG	4:B:69:ARG:O	2.55	0.52
5:C:119:ARG:HD2	5:C:120:TRP:NE1	2.23	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:145:LYS:HA	5:C:148:GLY:HA3	1.91	0.52
6:D:110:ALA:O	6:D:113:ALA:HB3	2.09	0.52
6:D:195:GLU:O	6:D:196:VAL:CB	2.57	0.52
7:E:41:GLN:HG3	7:E:155:MET:HB3	1.92	0.52
7:E:165:THR:C	7:E:167:GLU:N	2.62	0.52
9:G:44:LEU:HA	9:G:47:LEU:HG	1.91	0.52
9:G:91:SER:HB3	9:G:121:LYS:CE	2.40	0.52
10:H:100:GLY:N	10:H:105:LEU:HB3	2.25	0.52
10:H:90:LEU:N	10:H:110:LEU:HG	2.24	0.52
10:H:79:ASN:H	10:H:148:GLY:N	2.08	0.52
10:H:93:LYS:NZ	10:H:95:TYR:HA	2.24	0.52
13:K:102:VAL:C	13:K:103:MET:SD	2.88	0.52
13:K:55:VAL:O	13:K:58:PHE:C	2.48	0.52
14:L:17:ARG:O	14:L:21:TYR:CE1	2.62	0.52
14:L:5:LYS:CG	14:L:8:ARG:HH21	2.23	0.52
15:M:106:ARG:NE	15:M:106:ARG:O	2.33	0.52
15:M:26:LEU:HD13	15:M:39:ILE:HA	1.91	0.52
17:O:104:GLN:O	18:P:43:GLU:OE1	2.28	0.52
17:O:15:LYS:O	17:O:18:LEU:HB2	2.10	0.52
17:O:49:HIS:HA	17:O:52:ARG:CB	2.39	0.52
18:P:71:LEU:O	18:P:72:VAL:HG23	2.08	0.52
19:Q:10:VAL:CG1	19:Q:11:ARG:N	2.45	0.52
19:Q:9:TYR:H	19:Q:102:HIS:HE1	1.55	0.52
20:R:12:VAL:HA	20:R:29:TRP:CD1	2.41	0.52
20:R:12:VAL:HG22	20:R:13:LEU:N	2.25	0.52
20:R:63:LYS:HE2	20:R:64:LYS:HZ2	1.71	0.52
21:S:14:LEU:H	21:S:23:ARG:H	1.58	0.52
21:S:39:VAL:O	21:S:40:GLU:C	2.47	0.52
21:S:13:VAL:HG12	21:S:70:SER:H	1.74	0.52
22:T:123:ASP:O	22:T:124:ILE:HB	2.10	0.52
25:W:14:ARG:CD	25:W:14:ARG:N	2.64	0.52
3:A:23:ILE:O	3:A:27:ALA:HB2	2.07	0.52
5:C:174:ASP:HB3	5:C:183:LEU:HD11	1.92	0.52
6:D:181:ILE:CA	6:D:184:THR:OG1	2.55	0.52
6:D:112:ARG:HH12	6:D:185:GLU:HA	1.75	0.52
6:D:60:TRP:CE3	6:D:60:TRP:HA	2.45	0.52
7:E:35:GLU:OE2	7:E:160:VAL:CG1	2.56	0.52
7:E:5:LEU:H	7:E:100:TRP:HH2	1.54	0.52
8:F:103:LEU:HD23	8:F:104:GLU:N	2.24	0.52
8:F:16:SER:C	8:F:26:VAL:HG13	2.30	0.52
8:F:24:VAL:HG12	8:F:26:VAL:CG2	2.35	0.52
9:G:38:LEU:O	9:G:39:ALA:HB2	2.10	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:113:MET:O	10:H:114:LEU:C	2.46	0.52
10:H:157:ARG:O	10:H:159:GLU:N	2.42	0.52
10:H:90:LEU:HA	10:H:110:LEU:HG	1.90	0.52
11:I:12:ASP:CG	11:I:86:ILE:CD1	2.78	0.52
13:K:36:ALA:N	13:K:103:MET:SD	2.82	0.52
13:K:133:ARG:NE	13:K:134:ARG:N	2.54	0.52
15:M:86:ALA:N	15:M:112:PHE:CZ	2.78	0.52
16:N:29:ARG:H	16:N:44:ASP:HB3	1.74	0.52
17:O:110:VAL:HG12	17:O:114:LYS:HD2	1.91	0.52
17:O:40:PHE:O	17:O:44:ASN:HB2	2.10	0.52
20:R:78:LYS:CD	20:R:79:ALA:H	2.23	0.52
23:U:23:VAL:CA	23:U:38:VAL:HG13	2.35	0.52
23:U:28:GLY:H	23:U:69:PHE:HB2	1.75	0.52
24:V:13:ILE:HG23	24:V:14:VAL:HG12	1.92	0.52
24:V:34:THR:O	24:V:35:THR:OG1	2.23	0.52
25:W:45:SER:O	25:W:46:GLN:HG2	2.09	0.52
33:O:37:A:H3'	33:O:38:A:O4'	2.09	0.52
3:A:8:TYR:HB3	3:A:11:LEU:CD2	2.39	0.52
3:A:194:ILE:HA	3:A:197:LEU:CD2	2.40	0.52
3:A:164:PHE:CZ	3:A:197:LEU:HB2	2.45	0.52
3:A:47:LYS:HZ3	3:A:212:SER:CB	2.22	0.52
4:B:17:THR:CG2	4:B:18:VAL:N	2.73	0.52
4:B:17:THR:HG21	4:B:204:ILE:HA	1.92	0.52
6:D:23:ILE:O	6:D:23:ILE:HG23	2.10	0.52
7:E:123:ASN:HD22	7:E:123:ASN:N	2.06	0.52
8:F:123:PHE:CD1	8:F:123:PHE:N	2.77	0.52
8:F:31:GLY:O	8:F:32:GLU:HB3	2.10	0.52
10:H:90:LEU:HD12	10:H:110:LEU:HB2	1.92	0.52
12:J:97:PRO:O	12:J:98:GLU:HB2	2.09	0.52
13:K:25:ASP:HA	13:K:101:ARG:NH1	2.24	0.52
14:L:101:ALA:HA	27:Y:44:THR:HG23	1.91	0.52
14:L:117:VAL:CG1	14:L:118:GLU:H	2.19	0.52
14:L:4:LEU:O	14:L:5:LYS:O	2.28	0.52
15:M:73:LEU:CD1	15:M:73:LEU:H	2.23	0.52
16:N:100:TYR:O	16:N:103:ARG:CZ	2.58	0.52
16:N:110:ILE:C	16:N:112:ARG:N	2.61	0.52
16:N:26:ASP:OD1	16:N:88:ILE:HB	2.09	0.52
16:N:47:GLY:O	16:N:63:VAL:HB	2.10	0.52
16:N:24:PRO:CB	16:N:49:VAL:HG21	2.40	0.52
17:O:64:ARG:CB	17:O:64:ARG:NH2	2.73	0.52
18:P:75:PHE:CD2	18:P:75:PHE:N	2.75	0.52
19:Q:24:ILE:HG12	19:Q:36:LEU:CD1	2.38	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:S:55:TYR:HB2	21:S:56:PRO:HD3	1.77	0.52
22:T:99:TYR:HB3	22:T:123:ASP:CG	2.29	0.52
24:V:38:SER:C	24:V:39:LYS:CD	2.77	0.52
25:W:4:SER:O	25:W:7:ARG:N	2.41	0.52
27:Y:20:ARG:HB3	27:Y:23:HIS:HD2	1.75	0.52
3:A:27:ALA:O	3:A:30:VAL:CG2	2.58	0.52
4:B:8:PRO:CB	4:B:14:ARG:O	2.52	0.52
4:B:27:THR:CG2	4:B:83:GLU:HG2	2.39	0.52
5:C:101:ARG:O	5:C:201:THR:HB	2.10	0.52
5:C:169:ASN:ND2	5:C:203:LYS:HB3	2.25	0.52
5:C:63:LEU:C	5:C:65:GLY:N	2.61	0.52
6:D:186:ARG:O	6:D:187:LEU:HB2	2.10	0.52
7:E:25:TYR:HD2	7:E:31:VAL:CG2	2.22	0.52
7:E:43:LEU:HD21	7:E:45:GLU:OE1	2.10	0.52
8:F:114:VAL:O	8:F:115:VAL:HG23	2.10	0.52
8:F:19:VAL:CA	8:F:24:VAL:HA	2.40	0.52
9:G:122:GLU:OE2	9:G:126:TYR:HB2	2.10	0.52
12:J:138:LEU:CB	12:J:144:GLU:HG3	2.40	0.52
12:J:99:LEU:HD22	12:J:99:LEU:N	5.02	0.52
14:L:68:ARG:NH1	14:L:69:ASP:H	2.07	0.52
16:N:119:LYS:C	16:N:123:LYS:HD2	2.31	0.52
16:N:125:ARG:CB	16:N:125:ARG:HH11	3.58	0.52
16:N:12:SER:HA	16:N:15:VAL:HG22	1.92	0.52
16:N:6:LEU:HD23	16:N:10:VAL:HG23	1.92	0.52
18:P:42:GLY:C	18:P:47:VAL:CG1	2.78	0.52
18:P:76:LYS:HD2	18:P:77:ALA:N	2.25	0.52
19:Q:4:LYS:NZ	19:Q:62:HIS:HE1	2.07	0.52
20:R:30:VAL:CG1	20:R:31:HIS:H	2.22	0.52
21:S:23:ARG:CD	21:S:38:ILE:HG21	2.39	0.52
22:T:45:ASP:HB3	22:T:49:ARG:CZ	2.38	0.52
23:U:26:TYR:CE2	23:U:29:GLN:CD	2.83	0.52
24:V:18:ILE:HD12	24:V:18:ILE:H	1.75	0.52
25:W:8:LYS:HA	25:W:11:GLU:HB2	1.92	0.52
27:Y:47:PRO:HB3	27:Y:57:VAL:CG2	2.39	0.52
28:Z:11:LYS:O	28:Z:12:ARG:C	2.47	0.52
3:A:164:PHE:CZ	3:A:197:LEU:CA	2.78	0.52
4:B:247:ALA:O	4:B:248:SER:CB	2.58	0.52
6:D:159:ARG:O	6:D:161:ALA:N	2.43	0.52
6:D:163:ARG:NH2	6:D:164:ASN:HB3	2.25	0.52
7:E:92:VAL:CG2	7:E:93:THR:N	2.73	0.52
8:F:98:LEU:HA	8:F:103:LEU:HA	1.92	0.52
9:G:6:LEU:HD13	9:G:35:LEU:CG	2.39	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:117:HIS:CE1	10:H:120:ARG:HH11	2.28	0.52
11:I:78:ARG:N	16:N:73:GLU:HB2	2.25	0.52
14:L:18:LEU:CA	14:L:21:TYR:CD1	2.92	0.52
14:L:37:THR:CA	14:L:40:LYS:HE3	2.40	0.52
14:L:66:VAL:CG1	14:L:70:LEU:HD12	2.40	0.52
15:M:23:ARG:CB	15:M:24:LEU:HD22	2.38	0.52
15:M:42:ASP:O	15:M:44:LYS:N	2.43	0.52
16:N:45:PHE:CE2	16:N:72:VAL:O	2.63	0.52
16:N:50:ILE:CD1	16:N:64:ARG:HB2	2.36	0.52
16:N:45:PHE:CE2	16:N:72:VAL:HB	2.45	0.52
16:N:86:ILE:HG22	16:N:87:ASP:O	2.10	0.52
17:O:15:LYS:HA	17:O:18:LEU:HD12	1.92	0.52
17:O:27:LEU:HD12	17:O:34:LYS:HE3	1.92	0.52
19:Q:4:LYS:HG2	19:Q:5:ALA:N	2.25	0.52
19:Q:25:ARG:NH2	19:Q:74:ALA:O	2.42	0.52
20:R:62:LYS:HE3	20:R:62:LYS:N	2.24	0.52
22:T:8:TYR:CD1	22:T:39:VAL:HA	2.44	0.52
22:T:99:TYR:HB3	22:T:123:ASP:HB2	1.91	0.52
23:U:26:TYR:CE2	23:U:29:GLN:NE2	2.78	0.52
24:V:40:ARG:HD3	24:V:41:ARG:N	2.24	0.52
24:V:85:LEU:CD1	24:V:88:LYS:N	2.53	0.52
27:Y:38:ALA:O	27:Y:40:LYS:HG3	2.10	0.52
28:Z:46:VAL:HG12	28:Z:47:ARG:N	2.25	0.52
33:O:68:U:H2'	33:O:69:U:O4'	2.09	0.51
3:A:217:THR:N	3:A:220:GLY:O	2.43	0.51
3:A:28:HIS:O	3:A:30:VAL:N	2.42	0.51
4:B:256:GLY:O	4:B:258:LYS:N	2.44	0.51
5:C:119:ARG:HD2	5:C:120:TRP:CZ2	2.42	0.51
6:D:127:VAL:HG12	6:D:127:VAL:O	2.10	0.51
6:D:155:ASN:CB	6:D:157:LEU:HD12	2.40	0.51
6:D:151:LEU:N	6:D:169:VAL:HG11	2.25	0.51
7:E:135:LEU:CD1	7:E:136:ARG:N	2.73	0.51
7:E:18:GLU:OE2	7:E:18:GLU:CA	2.57	0.51
8:F:124:GLU:CB	8:F:132:ARG:HG2	2.32	0.51
8:F:88:LEU:HD21	8:F:165:ALA:HA	1.91	0.51
9:G:101:LEU:CD1	9:G:107:ILE:CG2	2.67	0.51
10:H:121:VAL:O	10:H:124:HIS:N	2.43	0.51
10:H:90:LEU:CA	10:H:110:LEU:HG	2.40	0.51
13:K:42:ILE:CD1	13:K:46:GLN:HB2	2.32	0.51
13:K:72:LYS:C	13:K:72:LYS:HD3	2.30	0.51
14:L:47:PHE:CD1	14:L:48:VAL:HG12	2.45	0.51
16:N:108:ARG:O	16:N:112:ARG:HB2	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:N:22:PHE:CD1	16:N:23:ARG:N	2.78	0.51
16:N:43:GLN:C	16:N:44:ASP:OD1	2.48	0.51
16:N:66:VAL:HA	16:N:70:VAL:C	2.26	0.51
17:O:105:VAL:O	17:O:109:LEU:HD21	2.10	0.51
17:O:38:THR:HG23	17:O:42:ALA:CB	2.41	0.51
19:Q:6:ILE:O	19:Q:105:VAL:HG23	2.10	0.51
19:Q:31:GLU:H	19:Q:31:GLU:CD	2.11	0.51
19:Q:5:ALA:HB3	19:Q:105:VAL:HG11	1.92	0.51
19:Q:75:TYR:C	19:Q:103:ILE:CG1	2.72	0.51
20:R:17:ALA:HA	20:R:26:TYR:HA	1.92	0.51
22:T:102:LEU:HD13	22:T:123:ASP:HA	1.91	0.51
23:U:28:GLY:HA2	23:U:67:VAL:CA	2.40	0.51
23:U:28:GLY:C	23:U:67:VAL:HG13	2.30	0.51
27:Y:32:PRO:O	27:Y:33:CYS:HB2	2.09	0.51
4:B:55:GLY:N	4:B:216:GLY:O	2.44	0.51
4:B:24:ILE:CG1	4:B:25:THR:N	2.61	0.51
5:C:103:ASP:O	5:C:104:VAL:HG22	2.10	0.51
5:C:109:LYS:NZ	14:L:4:LEU:CG	2.72	0.51
5:C:179:GLU:H	5:C:181:LEU:CD2	2.20	0.51
5:C:30:PRO:C	5:C:31:CYS:SG	2.89	0.51
6:D:119:LEU:HD22	6:D:189:MET:HB2	1.92	0.51
6:D:135:LEU:O	6:D:138:ALA:CB	2.58	0.51
6:D:85:PHE:CB	6:D:88:LYS:HE2	2.35	0.51
7:E:25:TYR:H	7:E:25:TYR:HD1	1.58	0.51
7:E:33:ARG:N	7:E:33:ARG:HD2	2.23	0.51
7:E:34:LEU:HG	7:E:35:GLU:H	1.76	0.51
8:F:141:VAL:HG12	8:F:141:VAL:O	2.10	0.51
8:F:64:LEU:O	8:F:66:GLY:N	2.41	0.51
10:H:38:LEU:CD1	10:H:39:ILE:N	2.64	0.51
11:I:22:ILE:HD11	11:I:40:VAL:CG2	2.40	0.51
13:K:7:MET:O	13:K:8:LYS:O	2.29	0.51
15:M:27:SER:O	15:M:28:VAL:CG2	2.57	0.51
15:M:9:ARG:NH2	15:M:9:ARG:HB2	2.24	0.51
16:N:91:ARG:O	16:N:114:LEU:HD13	2.09	0.51
18:P:43:GLU:HA	18:P:47:VAL:CG1	2.40	0.51
19:Q:68:ARG:HH21	19:Q:109:GLU:HG2	1.75	0.51
20:R:84:ALA:N	20:R:85:PRO:HD3	2.25	0.51
22:T:152:ALA:HB3	22:T:169:GLU:H	1.76	0.51
22:T:62:PRO:C	22:T:64:GLY:H	2.13	0.51
22:T:6:LYS:CD	22:T:6:LYS:N	4.34	0.51
23:U:49:LYS:CE	23:U:80:HIS:HB3	2.40	0.51
3:A:16:ASP:O	3:A:17:PRO:C	2.48	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:A:43:GLU:OE2	3:A:217:THR:HA	2.10	0.51
3:A:216:THR:HB	3:A:220:GLY:O	2.09	0.51
4:B:65:ILE:HD12	4:B:105:ILE:CA	2.39	0.51
4:B:267:SER:O	4:B:268:ARG:CB	2.58	0.51
4:B:271:ILE:CG2	4:B:272:ALA:N	2.72	0.51
5:C:11:MET:HB3	5:C:24:THR:HA	1.92	0.51
5:C:59:VAL:HG21	5:C:63:LEU:CB	2.40	0.51
6:D:155:ASN:HB2	6:D:157:LEU:CD1	2.41	0.51
6:D:61:PRO:HG2	6:D:65:THR:HA	1.92	0.51
7:E:153:ARG:CG	7:E:154:GLY:N	2.73	0.51
7:E:46:ALA:O	7:E:53:LEU:HD21	2.10	0.51
7:E:60:LEU:O	7:E:63:ILE:CB	2.58	0.51
7:E:82:LEU:HD12	7:E:84:LYS:CG	2.41	0.51
9:G:110:ASP:O	9:G:112:LYS:N	2.38	0.51
9:G:124:GLY:CA	9:G:144:VAL:CA	2.87	0.51
9:G:2:LYS:CB	9:G:20:ASP:HA	2.40	0.51
9:G:40:THR:HG21	9:G:43:ASN:HB2	1.89	0.51
9:G:42:SER:O	9:G:45:LYS:HB2	2.09	0.51
10:H:107:LYS:O	10:H:108:ILE:CG1	2.58	0.51
10:H:40:ASP:OD1	10:H:83:ILE:CD1	2.58	0.51
11:I:39:ILE:HD11	11:I:62:VAL:HG23	1.90	0.51
11:I:69:VAL:CG2	11:I:70:LYS:H	2.16	0.51
12:J:110:TYR:CE2	12:J:111:ARG:NE	2.78	0.51
12:J:95:VAL:CB	12:J:125:VAL:HB	2.40	0.51
13:K:91:GLU:OE2	13:K:92:GLY:N	2.43	0.51
15:M:88:ASP:O	15:M:89:ARG:CG	2.46	0.51
16:N:11:GLU:O	16:N:13:ARG:N	2.44	0.51
16:N:48:ILE:CG2	16:N:49:VAL:H	2.22	0.51
16:N:95:ARG:HE	16:N:96:ARG:HH22	1.58	0.51
18:P:1:MET:HG2	18:P:2:PHE:N	2.25	0.51
20:R:13:LEU:HD22	20:R:29:TRP:HZ2	1.74	0.51
20:R:87:GLN:HG2	20:R:90:GLU:OE2	2.10	0.51
21:S:60:PHE:CD1	21:S:61:ILE:N	2.78	0.51
23:U:31:VAL:HG23	23:U:61:ALA:C	2.30	0.51
26:X:40:THR:OG1	26:X:43:ILE:CD1	2.58	0.51
19:Q:39:THR:CB	27:Y:28:PRO:HG3	2.39	0.51
28:Z:26:GLY:O	28:Z:29:LYS:CB	2.56	0.51
22:T:130:PRO:HA	22:T:133:ILE:HG12	1.91	0.51
33:O:54:U:HO2'	33:O:55:PSU:P	2.33	0.51
3:A:167:ASP:OD2	3:A:171:ALA:HA	2.11	0.51
4:B:24:ILE:CD1	4:B:25:THR:HG22	2.38	0.51
4:B:254:THR:O	4:B:254:THR:HG23	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:262:ARG:HB3	4:B:263:ARG:HH21	1.75	0.51
5:C:52:LEU:HB2	5:C:76:ARG:H	1.70	0.51
7:E:11:TYR:CD2	7:E:12:TYR:CE2	2.97	0.51
10:H:95:TYR:HH	10:H:110:LEU:HA	1.74	0.51
10:H:58:ARG:HA	10:H:139:LEU:CD2	2.40	0.51
11:I:43:VAL:HG11	11:I:53:LYS:C	2.31	0.51
13:K:72:LYS:O	13:K:94:VAL:HG13	2.10	0.51
15:M:10:ARG:O	15:M:12:PHE:CE1	2.63	0.51
15:M:13:ARG:O	15:M:14:VAL:C	2.48	0.51
15:M:43:GLU:HG3	15:M:44:LYS:H	1.73	0.51
18:P:5:VAL:HG21	18:P:37:VAL:O	2.09	0.51
18:P:72:VAL:HG12	18:P:73:SER:N	2.26	0.51
20:R:10:ALA:HB1	20:R:11:PRO:HD2	1.92	0.51
20:R:39:ILE:C	20:R:41:ASN:N	2.63	0.51
20:R:8:ILE:HB	25:W:26:ARG:CZ	2.41	0.51
22:T:17:ALA:CB	22:T:20:ARG:NH2	2.74	0.51
24:V:68:PRO:O	24:V:69:LYS:C	2.48	0.51
24:V:86:SER:N	24:V:87:PRO:CD	2.73	0.51
27:Y:45:VAL:HG22	27:Y:56:LYS:HG2	1.93	0.51
33:O:61:C:H2'	33:O:62:A:H8	1.74	0.51
3:A:38:PHE:HD1	3:A:39:ASP:H	1.57	0.51
4:B:134:ARG:NH2	4:B:172:TYR:HA	2.25	0.51
4:B:77:ALA:O	4:B:116:GLN:C	2.49	0.51
5:C:20:ALA:O	5:C:21:VAL:HG13	2.10	0.51
5:C:46:ALA:HA	5:C:82:ARG:O	2.10	0.51
5:C:4:ILE:HD11	5:C:29:GLY:O	2.09	0.51
6:D:112:ARG:CB	6:D:112:ARG:NH2	2.69	0.51
6:D:128:ASN:O	6:D:161:ALA:HB2	2.10	0.51
7:E:41:GLN:O	7:E:89:GLY:HA3	2.11	0.51
7:E:51:ARG:HG3	7:E:51:ARG:HH21	1.75	0.51
8:F:22:GLY:O	8:F:37:VAL:HG22	2.10	0.51
8:F:40:GLU:HB3	8:F:55:PRO:N	2.25	0.51
8:F:87:LEU:HD22	8:F:132:ARG:HA	1.93	0.51
9:G:129:THR:HG22	9:G:130:TYR:N	2.25	0.51
11:I:104:ARG:HD2	11:I:104:ARG:H	1.74	0.51
11:I:77:ILE:CD1	11:I:78:ARG:O	2.58	0.51
11:I:59:LYS:HZ1	11:I:89:ASN:CA	2.24	0.51
12:J:13:ASN:HD22	12:J:13:ASN:C	2.13	0.51
12:J:50:ARG:HH11	12:J:57:THR:CB	2.05	0.51
13:K:111:GLU:O	13:K:115:MET:HG2	2.09	0.51
13:K:116:GLU:HA	13:K:119:ARG:HB2	1.92	0.51
15:M:28:VAL:HG12	15:M:29:PHE:H	1.51	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:N:29:ARG:H	16:N:44:ASP:CB	2.24	0.51
16:N:7:ILE:O	16:N:11:GLU:OE1	2.28	0.51
18:P:18:LEU:HA	18:P:97:LYS:HZ2	1.75	0.51
21:S:28:LYS:CA	21:S:35:TYR:HB3	2.37	0.51
22:T:151:HIS:O	22:T:152:ALA:C	2.48	0.51
23:U:57:PHE:O	23:U:59:LEU:HD12	2.11	0.51
24:V:81:ARG:HG2	24:V:81:ARG:HH21	1.75	0.51
26:X:19:GLN:HE21	26:X:49:LYS:HG2	1.76	0.51
27:Y:42:PRO:O	27:Y:43:HIS:HB2	2.11	0.51
20:R:29:TRP:CD1	20:R:76:ARG:HG2	2.45	0.51
21:S:2:ARG:HH22	21:S:4:LYS:CE	2.23	0.51
26:X:31:LEU:O	26:X:32:GLN:CB	2.58	0.51
4:B:140:THR:O	4:B:141:VAL:HG13	2.11	0.51
4:B:3:VAL:O	4:B:3:VAL:HG12	2.10	0.51
5:C:63:LEU:HD21	5:C:65:GLY:CA	2.38	0.51
6:D:39:ARG:HG2	6:D:39:ARG:HH21	1.76	0.51
6:D:98:LYS:HD2	6:D:101:ARG:HH21	1.74	0.51
8:F:84:SER:OG	8:F:133:VAL:HG23	2.10	0.51
9:G:31:LEU:C	9:G:31:LEU:HD13	2.31	0.51
10:H:36:TRP:O	10:H:158:PRO:HD2	2.11	0.51
10:H:62:ARG:HH21	10:H:63:PRO:CG	2.24	0.51
10:H:71:MET:H	10:H:71:MET:HE3	1.75	0.51
11:I:67:LYS:CG	11:I:68:GLU:N	2.51	0.51
11:I:86:ILE:HG22	11:I:86:ILE:O	2.10	0.51
12:J:7:ARG:HD2	12:J:10:PRO:CG	2.40	0.51
13:K:23:GLY:O	13:K:98:LYS:HD3	2.09	0.51
16:N:26:ASP:N	16:N:90:GLN:HA	2.25	0.51
17:O:40:PHE:CB	18:P:78:LYS:HG2	2.40	0.51
17:O:92:ARG:CB	18:P:11:GLN:HG3	2.40	0.51
18:P:20:LEU:C	18:P:21:ARG:HG3	2.30	0.51
18:P:5:VAL:CG2	18:P:6:LYS:N	2.61	0.51
20:R:13:LEU:O	20:R:14:SER:O	2.29	0.51
22:T:42:VAL:O	22:T:44:PHE:HD2	1.94	0.51
22:T:7:ALA:O	22:T:8:TYR:CD2	2.63	0.51
24:V:51:VAL:HG12	24:V:59:THR:HA	1.93	0.51
24:V:69:LYS:CA	24:V:72:GLU:HB3	2.40	0.51
26:X:5:LYS:H	26:X:58:VAL:HA	1.75	0.51
33:0:34:G:OP1	33:0:34:G:H8	1.93	0.51
33:0:56:C:C2	33:0:57:G:C8	2.98	0.51
3:A:184:GLU:C	3:A:186:LEU:N	2.63	0.51
4:B:175:LEU:O	4:B:182:LEU:HG	2.09	0.51
4:B:221:VAL:O	4:B:223:GLY:N	2.41	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:20:ASP:HB2	4:B:91:ARG:HH22	1.76	0.51
4:B:78:LYS:C	4:B:95:LEU:CB	2.77	0.51
5:C:52:LEU:CD1	5:C:76:ARG:HE	2.24	0.51
6:D:103:LYS:O	6:D:106:ALA:HB3	2.09	0.51
6:D:4:ILE:HD12	6:D:119:LEU:C	2.31	0.51
7:E:122:PRO:CB	7:E:173:LEU:HD21	2.41	0.51
7:E:176:LEU:HG	7:E:178:PHE:CZ	2.45	0.51
7:E:16:ARG:HA	7:E:19:LEU:HD13	1.92	0.51
8:F:124:GLU:N	8:F:131:VAL:HG23	2.26	0.51
8:F:53:GLU:O	8:F:54:ARG:HB3	2.10	0.51
9:G:132:PRO:HD3	9:G:138:ILE:CG2	2.35	0.51
9:G:31:LEU:HB3	9:G:32:PRO:HD3	1.92	0.51
9:G:65:ALA:HB2	9:G:113:ARG:NH2	2.20	0.51
9:G:6:LEU:HD13	9:G:35:LEU:HA	1.92	0.51
13:K:109:VAL:HG21	13:K:113:GLN:HB2	1.93	0.51
14:L:109:ALA:HB1	14:L:111:LEU:CD1	2.31	0.51
14:L:87:TYR:CD1	14:L:87:TYR:N	2.78	0.51
16:N:109:GLU:HA	16:N:112:ARG:NE	2.25	0.51
16:N:32:TYR:O	16:N:33:LYS:O	2.27	0.51
18:P:85:LYS:CG	18:P:86:GLY:N	2.68	0.51
19:Q:88:ARG:CG	19:Q:92:ARG:H	2.24	0.51
21:S:65:ALA:O	21:S:66:PRO:O	2.29	0.51
21:S:71:LYS:HG3	21:S:96:ILE:CG1	2.40	0.51
22:T:28:MET:SD	22:T:35:ARG:N	2.84	0.51
23:U:68:GLU:O	23:U:78:TYR:O	2.29	0.51
24:V:13:ILE:HD13	24:V:66:HIS:CE1	2.46	0.51
24:V:12:PRO:CG	24:V:63:ALA:H	2.18	0.51
27:Y:40:LYS:HD2	27:Y:51:TYR:HE1	1.68	0.51
33:O:65:G:C2	33:O:66:A:C8	2.99	0.51
4:B:148:GLU:CG	4:B:149:PRO:CD	2.76	0.51
4:B:24:ILE:HG23	4:B:25:THR:N	2.25	0.51
4:B:48:ARG:HH11	4:B:49:ILE:HG13	1.76	0.51
4:B:75:ILE:HG23	4:B:98:VAL:CB	2.16	0.51
5:C:6:GLY:O	5:C:196:VAL:HG22	2.11	0.51
5:C:196:VAL:O	5:C:197:ILE:CG2	2.58	0.51
5:C:201:THR:O	5:C:202:LYS:HD3	2.11	0.51
5:C:54:GLN:CG	5:C:75:VAL:HG23	2.38	0.51
5:C:7:VAL:CG1	5:C:76:ARG:HH22	2.24	0.51
6:D:130:LYS:HG3	6:D:132:LYS:CG	2.40	0.51
6:D:172:ALA:HB3	6:D:173:PRO:HD3	1.89	0.51
7:E:124:SER:HB3	7:E:131:TYR:HE2	1.75	0.51
8:F:122:THR:HG23	8:F:134:SER:CB	2.40	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:F:138:LYS:HA	8:F:141:VAL:CG2	2.41	0.51
8:F:58:GLU:CG	8:F:61:HIS:HD2	2.24	0.51
10:H:49:LEU:C	10:H:53:ILE:HG13	2.31	0.51
10:H:50:ALA:N	10:H:53:ILE:CD1	2.74	0.51
11:I:69:VAL:HG13	11:I:70:LYS:H	1.74	0.51
11:I:59:LYS:O	11:I:86:ILE:C	2.48	0.51
12:J:85:LEU:CD2	12:J:86:LYS:N	2.66	0.51
13:K:16:ARG:O	13:K:17:LEU:HD13	2.11	0.51
14:L:83:ILE:HA	14:L:86:ARG:HG2	1.93	0.51
15:M:40:ILE:CG2	15:M:41:ASP:H	2.24	0.51
15:M:67:ARG:CB	15:M:100:ALA:O	2.58	0.51
16:N:33:LYS:HD2	16:N:43:GLN:N	2.25	0.51
16:N:50:ILE:HB	16:N:63:VAL:C	2.31	0.51
11:I:73:ASP:O	16:N:77:PRO:HG2	2.10	0.51
17:O:109:LEU:HD23	17:O:109:LEU:H	1.76	0.51
18:P:47:VAL:CG2	18:P:48:GLY:H	2.03	0.51
19:Q:48:ALA:O	19:Q:49:LYS:C	2.47	0.51
19:Q:97:LYS:C	19:Q:97:LYS:HD2	2.31	0.51
21:S:25:GLY:HA2	21:S:37:VAL:HG11	1.91	0.51
22:T:40:ASP:O	22:T:43:GLU:OE2	2.29	0.51
22:T:61:LEU:HD13	22:T:66:SER:O	2.10	0.51
24:V:13:ILE:HB	24:V:66:HIS:CE1	2.46	0.51
25:W:5:GLU:OE1	25:W:5:GLU:O	2.29	0.51
26:X:50:VAL:HG23	26:X:54:VAL:HG22	1.93	0.51
27:Y:40:LYS:HE2	27:Y:46:CYS:CB	2.41	0.51
27:Y:8:LYS:HZ3	27:Y:8:LYS:HB2	1.76	0.51
3:A:34:ALA:CB	3:A:179:ALA:CB	2.86	0.51
4:B:172:TYR:HE1	4:B:186:HIS:ND1	2.08	0.51
4:B:266:SER:O	4:B:270:ILE:HG23	2.11	0.51
8:F:115:VAL:HG12	8:F:116:GLU:N	2.26	0.51
8:F:25:LYS:HG2	8:F:34:GLU:HB2	1.93	0.51
9:G:98:ALA:CA	9:G:109:ILE:HD11	2.23	0.51
9:G:6:LEU:O	9:G:14:ASP:HB2	2.09	0.51
12:J:111:ARG:NH2	12:J:148:LEU:CG	2.74	0.51
12:J:50:ARG:O	12:J:51:PHE:O	2.29	0.51
12:J:61:ARG:CA	12:J:61:ARG:NE	2.74	0.51
13:K:102:VAL:HG12	13:K:103:MET:N	2.25	0.51
14:L:14:SER:O	14:L:17:ARG:HB2	2.11	0.51
15:M:9:ARG:C	15:M:11:LYS:H	2.14	0.51
17:O:105:VAL:HA	18:P:43:GLU:CG	2.41	0.51
20:R:12:VAL:CG1	20:R:13:LEU:N	2.55	0.51
22:T:150:LEU:C	22:T:150:LEU:CD1	2.79	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:T:4:ARG:HH11	22:T:4:ARG:CB	2.21	0.51
25:W:54:LYS:C	25:W:55:ARG:HG2	2.31	0.51
4:B:97:TYR:CB	4:B:101:GLU:O	2.49	0.51
4:B:24:ILE:HA	4:B:91:ARG:HH11	1.69	0.51
4:B:269:PHE:HD1	4:B:270:ILE:H	1.59	0.51
5:C:9:VAL:H	5:C:26:ILE:HD13	1.76	0.51
5:C:38:THR:C	5:C:40:GLU:H	2.15	0.51
5:C:82:ARG:CG	5:C:82:ARG:NH1	4.34	0.51
6:D:105:LEU:C	6:D:105:LEU:CD1	2.79	0.51
6:D:148:SER:O	6:D:149:VAL:CG1	2.58	0.51
6:D:179:TYR:O	6:D:182:VAL:CG2	2.58	0.51
7:E:31:VAL:O	7:E:33:ARG:HG2	2.11	0.51
8:F:34:GLU:O	8:F:35:VAL:CG2	2.58	0.51
8:F:49:VAL:O	8:F:50:VAL:HG23	2.11	0.51
9:G:77:LEU:HD22	9:G:78:THR:N	2.23	0.51
10:H:131:PRO:O	10:H:132:LYS:CB	2.57	0.51
11:I:63:VAL:O	11:I:64:ARG:C	2.48	0.51
11:I:59:LYS:NZ	11:I:89:ASN:HA	2.25	0.51
14:L:38:VAL:HB	14:L:110:PRO:CG	2.40	0.51
14:L:64:ARG:NH1	14:L:64:ARG:CG	2.73	0.51
14:L:7:GLY:O	14:L:8:ARG:CG	2.58	0.51
15:M:56:LEU:HD12	15:M:56:LEU:N	2.26	0.51
16:N:45:PHE:CE1	16:N:65:LYS:O	2.64	0.51
17:O:12:ARG:C	17:O:15:LYS:HG2	2.27	0.51
17:O:83:LEU:CG	17:O:84:LYS:HZ3	2.23	0.51
18:P:100:ARG:CD	18:P:101:GLY:H	2.24	0.51
19:Q:14:PRO:HB3	19:Q:18:ARG:HH12	1.74	0.51
19:Q:86:LEU:HB3	19:Q:94:ASP:HB3	1.93	0.51
20:R:53:LYS:O	20:R:79:ALA:HA	2.10	0.51
21:S:14:LEU:HD12	21:S:15:VAL:H	1.76	0.51
21:S:16:ALA:HA	21:S:20:TYR:H	1.76	0.51
22:T:77:ASP:O	22:T:78:LYS:C	2.49	0.51
23:U:31:VAL:HG21	23:U:62:LEU:H	1.75	0.51
23:U:50:ASN:HD22	23:U:65:GLY:HA3	1.75	0.51
24:V:22:GLY:HA3	24:V:39:LYS:CA	2.41	0.51
24:V:59:THR:HG22	24:V:60:PHE:H	1.76	0.51
24:V:89:GLU:O	24:V:93:GLU:HG2	2.12	0.51
33:O:33:U:C4	33:O:36:A:OP1	2.64	0.50
33:O:74:C:C2'	33:O:75:C:O4'	2.48	0.50
4:B:164:GLN:HE21	4:B:176:ARG:CB	2.24	0.50
4:B:192:THR:CG2	4:B:192:THR:O	2.58	0.50
4:B:270:ILE:O	4:B:271:ILE:HD12	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:45:THR:O	5:C:45:THR:HG22	2.11	0.50
6:D:127:VAL:C	6:D:129:GLY:N	2.64	0.50
7:E:41:GLN:CG	7:E:155:MET:HB3	2.40	0.50
9:G:112:LYS:O	9:G:114:LEU:N	2.44	0.50
9:G:33:ARG:CZ	9:G:33:ARG:HB2	2.40	0.50
10:H:101:TYR:CD1	10:H:101:TYR:N	2.79	0.50
10:H:95:TYR:HD1	10:H:108:ILE:HG13	1.76	0.50
10:H:65:TRP:CZ3	10:H:71:MET:CE	2.94	0.50
11:I:2:ILE:HB	11:I:33:ALA:O	2.11	0.50
11:I:62:VAL:CG1	11:I:63:VAL:H	2.25	0.50
11:I:77:ILE:HB	16:N:74:ARG:HD3	1.92	0.50
11:I:65:THR:CG2	11:I:82:ASN:HD22	2.23	0.50
15:M:27:SER:OG	15:M:89:ARG:CZ	2.59	0.50
16:N:29:ARG:HG3	16:N:29:ARG:O	2.11	0.50
16:N:61:PHE:O	16:N:62:THR:CB	2.59	0.50
17:O:106:PHE:O	17:O:109:LEU:CB	2.59	0.50
17:O:32:PHE:CD1	17:O:33:ARG:N	2.80	0.50
18:P:40:LEU:HD13	18:P:40:LEU:C	2.30	0.50
19:Q:7:ALA:HB1	19:Q:103:ILE:HG23	1.94	0.50
19:Q:105:VAL:O	19:Q:106:ILE:HG23	2.12	0.50
19:Q:23:LEU:HD13	27:Y:25:LEU:CB	2.41	0.50
21:S:23:ARG:NE	21:S:38:ILE:CG2	2.69	0.50
23:U:31:VAL:HG23	23:U:61:ALA:CB	2.41	0.50
24:V:37:ILE:CG2	24:V:38:SER:N	2.74	0.50
33:O:14:A:N6	33:O:21:A:H2	1.86	0.50
3:A:172:ILE:CG1	3:A:173:HIS:H	2.24	0.50
3:A:52:PRO:HB3	3:A:166:ASN:HB2	1.92	0.50
4:B:69:ARG:HD2	4:B:119:ALA:CB	2.41	0.50
5:C:114:ALA:O	5:C:157:ALA:HB1	2.11	0.50
5:C:120:TRP:O	5:C:121:ASN:CB	2.59	0.50
6:D:119:LEU:CD1	6:D:119:LEU:O	2.58	0.50
6:D:139:LYS:C	6:D:141:ALA:H	2.14	0.50
6:D:98:LYS:HA	6:D:101:ARG:CB	2.22	0.50
7:E:178:PHE:CD1	7:E:178:PHE:N	2.79	0.50
9:G:6:LEU:C	9:G:6:LEU:HD23	2.32	0.50
10:H:36:TRP:HB2	10:H:156:GLN:CD	2.31	0.50
10:H:79:ASN:N	10:H:147:ALA:CA	2.73	0.50
12:J:84:ASN:HA	12:J:116:GLY:HA3	1.93	0.50
16:N:27:THR:HG23	16:N:63:VAL:HG11	1.93	0.50
17:O:92:ARG:HG2	17:O:94:ASN:CG	2.31	0.50
19:Q:5:ALA:HB3	19:Q:105:VAL:CG1	2.41	0.50
19:Q:75:TYR:C	19:Q:75:TYR:CD1	2.85	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:R:20:GLY:HA2	20:R:25:LYS:CA	2.41	0.50
21:S:49:VAL:O	21:S:55:TYR:CA	2.49	0.50
25:W:4:SER:H	25:W:7:ARG:HG2	1.75	0.50
3:A:8:TYR:CB	3:A:11:LEU:HB2	2.42	0.50
3:A:57:GLN:HG2	3:A:202:PRO:CG	2.41	0.50
4:B:105:ILE:CG1	4:B:106:ILE:N	2.68	0.50
4:B:228:PRO:CD	4:B:236:GLY:HA2	2.40	0.50
5:C:176:ILE:HB	5:C:181:LEU:CG	2.41	0.50
5:C:32:PRO:CB	5:C:69:LYS:HE3	2.27	0.50
5:C:84:PHE:CG	5:C:84:PHE:O	2.63	0.50
6:D:4:ILE:O	6:D:12:ARG:NH1	2.44	0.50
6:D:25:PRO:HA	6:D:28:LEU:CD1	2.41	0.50
7:E:106:LEU:HB3	7:E:141:PHE:HE1	1.77	0.50
7:E:106:LEU:HD12	7:E:106:LEU:C	2.32	0.50
7:E:107:LEU:HD23	7:E:111:LEU:HD11	1.93	0.50
7:E:78:SER:CA	7:E:83:ARG:HG2	2.36	0.50
7:E:70:VAL:CB	7:E:90:LEU:HD11	2.41	0.50
8:F:95:ARG:NH1	8:F:107:VAL:HA	2.25	0.50
9:G:103:ARG:CD	9:G:104:GLN:N	2.61	0.50
10:H:110:LEU:HD22	10:H:110:LEU:H	1.75	0.50
11:I:17:ARG:CG	11:I:47:ILE:CG1	2.89	0.50
14:L:80:PHE:C	14:L:84:ALA:HB2	2.32	0.50
14:L:7:GLY:O	14:L:8:ARG:CB	2.60	0.50
18:P:71:LEU:O	18:P:72:VAL:CG2	2.59	0.50
19:Q:14:PRO:HG2	19:Q:78:GLU:CG	2.41	0.50
21:S:38:ILE:N	21:S:62:GLU:HG3	2.25	0.50
21:S:38:ILE:HG23	21:S:39:VAL:HG23	1.92	0.50
23:U:44:ARG:HG3	23:U:45:PHE:H	1.76	0.50
23:U:51:VAL:CG2	23:U:81:VAL:CG2	2.90	0.50
24:V:81:ARG:O	24:V:82:LEU:HB2	2.10	0.50
27:Y:14:ALA:HB3	27:Y:15:ARG:HH21	1.76	0.50
33:O:27:C:H3'	33:O:28:C:C5	2.47	0.50
4:B:3:VAL:CA	4:B:17:THR:HG23	2.42	0.50
4:B:262:ARG:CD	4:B:262:ARG:C	2.79	0.50
4:B:35:LYS:HD2	4:B:64:ILE:O	2.12	0.50
4:B:44:ASN:CG	4:B:45:ASN:N	2.63	0.50
4:B:60:ARG:CG	4:B:86:PRO:HB2	2.41	0.50
5:C:51:PHE:CD1	5:C:76:ARG:CZ	2.94	0.50
5:C:82:ARG:HH12	5:C:93:VAL:C	25.01	0.50
5:C:9:VAL:CG2	5:C:26:ILE:HD13	2.41	0.50
6:D:4:ILE:HG13	6:D:12:ARG:HG2	1.89	0.50
6:D:147:GLU:N	6:D:167:TRP:CZ2	2.79	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:31:VAL:HG13	6:D:32:VAL:N	2.26	0.50
8:F:157:TYR:N	8:F:157:TYR:CD2	2.79	0.50
9:G:21:VAL:O	9:G:22:LYS:O	2.29	0.50
9:G:4:ILE:HG22	9:G:5:LEU:N	2.27	0.50
10:H:50:ALA:HB1	10:H:126:VAL:CG1	2.40	0.50
10:H:51:THR:HG23	10:H:52:LYS:N	2.19	0.50
10:H:63:PRO:O	10:H:65:TRP:N	2.44	0.50
11:I:39:ILE:N	11:I:39:ILE:HD13	2.27	0.50
12:J:89:ALA:O	12:J:121:LYS:HD2	2.11	0.50
13:K:109:VAL:O	13:K:114:ALA:HB2	2.11	0.50
13:K:124:LYS:C	13:K:124:LYS:CE	2.80	0.50
14:L:20:LEU:O	14:L:23:ASN:HB3	2.12	0.50
14:L:38:VAL:CG1	14:L:39:PRO:N	2.73	0.50
5:C:192:ASN:OD1	16:N:4:GLY:CA	2.59	0.50
16:N:65:LYS:O	16:N:72:VAL:HG23	2.11	0.50
19:Q:18:ARG:HD2	19:Q:76:VAL:HB	1.94	0.50
20:R:51:VAL:O	20:R:52:VAL:CG2	2.59	0.50
20:R:63:LYS:HD3	20:R:64:LYS:C	2.32	0.50
22:T:58:VAL:HG23	22:T:58:VAL:O	4.64	0.50
22:T:5:LEU:HB3	22:T:58:VAL:O	2.11	0.50
23:U:32:ARG:H	23:U:61:ALA:CB	2.24	0.50
24:V:76:ARG:HH12	24:V:94:LEU:HD11	1.76	0.50
25:W:15:LYS:O	25:W:16:LEU:HB3	2.12	0.50
26:X:28:LEU:HD22	26:X:35:ARG:HG3	1.93	0.50
20:R:12:VAL:CG1	20:R:17:ALA:HB2	2.42	0.50
3:A:8:TYR:CD1	3:A:12:LEU:HD22	2.46	0.50
4:B:241:PRO:CB	4:B:242:ARG:CZ	2.90	0.50
4:B:34:VAL:O	4:B:35:LYS:CG	2.59	0.50
4:B:36:PRO:CB	4:B:61:LEU:HB3	2.42	0.50
5:C:108:SER:HB3	5:C:165:VAL:HG21	1.93	0.50
6:D:11:GLY:C	6:D:12:ARG:HG3	2.32	0.50
6:D:176:LEU:CD1	6:D:178:VAL:HG22	2.41	0.50
7:E:139:LEU:CD1	7:E:139:LEU:H	2.22	0.50
8:F:155:SER:HA	8:F:157:TYR:HE2	1.76	0.50
9:G:101:LEU:HB2	9:G:109:ILE:CD1	2.38	0.50
9:G:7:GLU:H	9:G:8:PRO:HD2	1.75	0.50
10:H:58:ARG:HB2	10:H:139:LEU:HD13	1.93	0.50
10:H:81:ASP:N	10:H:146:TYR:O	2.45	0.50
11:I:15:GLY:CA	11:I:50:GLY:HA3	2.40	0.50
13:K:11:LYS:CB	13:K:14:ARG:NH1	2.70	0.50
15:M:10:ARG:NH2	15:M:11:LYS:HZ1	2.09	0.50
15:M:44:LYS:CB	15:M:46:VAL:HG23	2.40	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:M:47:THR:O	15:M:48:LEU:C	2.49	0.50
18:P:73:SER:N	18:P:89:GLN:O	2.40	0.50
19:Q:21:VAL:O	19:Q:25:ARG:HG2	2.10	0.50
19:Q:18:ARG:HG3	19:Q:38:TYR:HA	21.03	0.50
24:V:40:ARG:NH1	24:V:42:GLN:HA	2.27	0.50
25:W:21:LEU:O	25:W:21:LEU:HD23	2.11	0.50
25:W:32:LEU:CG	25:W:33:MET:N	2.65	0.50
4:B:76:PRO:HB2	4:B:117:VAL:HB	1.94	0.50
4:B:58:HIS:O	4:B:59:LYS:C	2.50	0.50
5:C:141:ILE:N	5:C:141:ILE:HD13	2.25	0.50
5:C:154:LYS:CA	5:C:154:LYS:HE3	2.37	0.50
5:C:93:VAL:HG22	5:C:180:ASN:OD1	2.11	0.50
7:E:126:ASP:HB3	7:E:130:ASN:O	2.11	0.50
8:F:162:ILE:C	8:F:162:ILE:HD13	2.31	0.50
9:G:3:VAL:HG12	9:G:4:ILE:O	2.12	0.50
10:H:57:LEU:O	10:H:58:ARG:C	2.50	0.50
13:K:28:ALA:CB	13:K:105:GLU:OE1	2.60	0.50
13:K:69:PHE:O	13:K:95:ALA:CB	2.59	0.50
14:L:1:MET:HE3	14:L:2:ARG:HH12	1.76	0.50
15:M:110:LEU:HD23	15:M:112:PHE:CE1	2.46	0.50
16:N:121:ILE:C	16:N:121:ILE:HD13	2.32	0.50
18:P:34:GLU:H	18:P:64:HIS:HE1	1.54	0.50
18:P:75:PHE:O	18:P:76:LYS:HB2	2.12	0.50
21:S:72:VAL:C	21:S:73:ARG:HG3	2.32	0.50
22:T:153:SER:O	22:T:154:ASP:C	2.50	0.50
22:T:42:VAL:O	22:T:44:PHE:CD2	2.65	0.50
22:T:8:TYR:HB2	22:T:38:TYR:HE2	1.77	0.50
33:O:46:G:C5'	33:O:46:G:H8	2.24	0.50
3:A:179:ALA:C	3:A:181:PHE:H	2.15	0.50
4:B:182:LEU:O	4:B:271:ILE:CB	2.46	0.50
4:B:184:LYS:CG	4:B:185:VAL:N	2.74	0.50
4:B:261:LYS:O	4:B:263:ARG:N	2.45	0.50
4:B:8:PRO:HB3	4:B:14:ARG:C	2.30	0.50
4:B:84:TYR:HA	4:B:91:ARG:HA	1.94	0.50
5:C:66:HIS:CG	5:C:66:HIS:O	2.65	0.50
5:C:77:ILE:C	5:C:79:ARG:HE	2.15	0.50
6:D:177:ASN:HB3	6:D:180:ASP:OD1	2.11	0.50
6:D:30:GLU:OE2	12:J:13:ASN:CG	2.50	0.50
6:D:77:ILE:CG1	6:D:81:GLY:HA2	8.06	0.50
7:E:5:LEU:O	7:E:6:ALA:O	2.30	0.50
9:G:127:VAL:HG12	9:G:141:LYS:HZ2	1.76	0.50
10:H:95:TYR:CZ	10:H:113:MET:HB3	2.46	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:49:LEU:O	10:H:50:ALA:C	2.50	0.50
11:I:43:VAL:HG11	11:I:54:GLU:N	2.27	0.50
12:J:31:ALA:O	12:J:32:THR:CG2	2.50	0.50
12:J:71:VAL:HG22	12:J:72:PRO:N	2.27	0.50
13:K:107:ALA:O	13:K:109:VAL:N	2.40	0.50
13:K:26:TYR:CE2	13:K:27:VAL:HG13	2.46	0.50
16:N:81:PRO:HB2	16:N:82:LEU:HD12	1.94	0.50
17:O:19:LYS:HA	17:O:19:LYS:HZ2	1.77	0.50
17:O:5:LYS:CG	17:O:6:THR:N	2.65	0.50
20:R:77:LYS:CE	20:R:77:LYS:HA	2.41	0.50
21:S:73:ARG:NE	21:S:78:ALA:HB2	2.27	0.50
22:T:182:LYS:C	22:T:184:ALA:H	2.15	0.50
22:T:17:ALA:CA	22:T:20:ARG:NH2	2.75	0.50
22:T:48:PHE:CD1	22:T:48:PHE:C	2.85	0.50
25:W:13:ALA:C	25:W:15:LYS:H	2.15	0.50
26:X:20:LYS:HA	26:X:23:LEU:CG	2.42	0.50
28:Z:1:MET:O	28:Z:2:LYS:C	2.50	0.50
16:N:135:VAL:HG22	16:N:136:GLN:H	1.77	0.50
3:A:42:VAL:CG1	3:A:43:GLU:N	2.74	0.50
4:B:149:PRO:C	4:B:150:LYS:HE3	2.32	0.50
4:B:248:SER:CB	4:B:249:PRO:HD2	2.36	0.50
5:C:5:LEU:HD12	5:C:5:LEU:N	2.16	0.50
6:D:112:ARG:C	6:D:117:LYS:HG2	2.31	0.50
6:D:148:SER:C	6:D:149:VAL:HG13	2.33	0.50
6:D:30:GLU:OE2	12:J:13:ASN:ND2	2.44	0.50
7:E:106:LEU:HD12	7:E:107:LEU:HG	1.92	0.50
7:E:153:ARG:CG	7:E:154:GLY:H	2.25	0.50
7:E:176:LEU:N	7:E:176:LEU:HD23	2.26	0.50
8:F:53:GLU:HG3	8:F:54:ARG:H	1.75	0.50
8:F:8:PRO:O	8:F:9:ILE:CB	2.43	0.50
9:G:101:LEU:CD2	9:G:109:ILE:HD12	2.41	0.50
9:G:109:ILE:N	9:G:109:ILE:CD1	2.75	0.50
9:G:33:ARG:CB	9:G:33:ARG:HH21	2.25	0.50
9:G:41:GLU:HA	9:G:44:LEU:HB3	1.93	0.50
9:G:77:LEU:O	9:G:78:THR:HG23	2.11	0.50
10:H:36:TRP:HB2	10:H:156:GLN:CG	2.41	0.50
11:I:64:ARG:HD3	11:I:102:VAL:HG13	1.89	0.50
11:I:16:ALA:N	11:I:17:ARG:NH1	2.60	0.50
11:I:59:LYS:HZ1	11:I:89:ASN:HA	1.77	0.50
12:J:115:LEU:CG	12:J:116:GLY:H	2.23	0.50
12:J:148:LEU:HD22	12:J:149:GLU:N	2.27	0.50
12:J:35:HIS:O	12:J:36:LYS:CD	2.60	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:K:28:ALA:HB1	13:K:105:GLU:CD	2.32	0.50
14:L:83:ILE:O	14:L:84:ALA:C	2.51	0.50
16:N:50:ILE:N	16:N:63:VAL:HA	2.22	0.50
16:N:4:GLY:N	16:N:7:ILE:HG12	2.27	0.50
17:O:114:LYS:O	17:O:116:ALA:N	2.44	0.50
20:R:20:GLY:HA2	20:R:24:GLY:C	2.25	0.50
33:O:24:G:C4	33:O:25:C:N1	2.79	0.50
33:O:60:C:H5"	33:O:61:C:OP2	2.12	0.50
4:B:31:LYS:CE	4:B:32:SER:O	2.59	0.50
6:D:135:LEU:HG	6:D:138:ALA:HB3	1.94	0.50
6:D:164:ASN:O	6:D:166:PRO:CD	2.58	0.50
7:E:43:LEU:HD12	7:E:153:ARG:HD3	1.92	0.50
8:F:151:ILE:C	8:F:152:ARG:HD2	2.30	0.50
8:F:87:LEU:HD12	8:F:164:TYR:HA	1.93	0.50
11:I:24:VAL:CG2	11:I:25:LEU:N	2.60	0.50
13:K:13:GLN:HA	13:K:14:ARG:CZ	2.42	0.50
13:K:22:LYS:N	13:K:22:LYS:HD3	2.27	0.50
14:L:24:GLN:O	14:L:28:LEU:CB	2.60	0.50
15:M:98:VAL:O	15:M:101:LEU:N	2.45	0.50
16:N:105:LEU:O	16:N:107:ASP:OD1	2.29	0.50
16:N:119:LYS:CD	16:N:119:LYS:H	2.16	0.50
19:Q:76:VAL:CA	19:Q:103:ILE:HD12	2.42	0.50
20:R:17:ALA:HA	20:R:26:TYR:CA	2.42	0.50
20:R:5:TYR:OH	20:R:46:ALA:HB2	2.11	0.50
21:S:54:LYS:HG3	21:S:55:TYR:H	1.75	0.50
22:T:150:LEU:CD2	22:T:154:ASP:CB	2.90	0.50
22:T:18:LEU:HD13	22:T:38:TYR:HD1	1.77	0.50
23:U:51:VAL:HG22	23:U:79:VAL:CG2	2.41	0.50
24:V:58:ILE:HG21	24:V:82:LEU:HG	1.94	0.50
19:Q:23:LEU:HD11	27:Y:27:PRO:HB3	1.94	0.50
33:O:67:A:H2'	33:O:68:U:C6	2.47	0.49
8:F:156:ALA:O	8:F:171:LEU:HA	2.11	0.49
33:O:9:A:N3	33:O:46:G:C2	2.79	0.49
33:O:47:U:H2'	33:O:50:U:OP1	2.12	0.49
4:B:73:VAL:CG1	4:B:120:GLY:HA2	2.37	0.49
5:C:44:TYR:CE2	5:C:46:ALA:CB	2.90	0.49
6:D:150:LEU:CD1	6:D:169:VAL:HA	2.32	0.49
6:D:182:VAL:CG2	6:D:183:ARG:N	2.75	0.49
6:D:190:ASP:O	6:D:191:LEU:O	2.30	0.49
6:D:75:ALA:C	6:D:77:ILE:H	2.15	0.49
6:D:94:TYR:HD2	6:D:94:TYR:N	2.10	0.49
7:E:127:GLY:C	7:E:165:THR:HA	2.32	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:13:GLU:HA	7:E:16:ARG:CZ	2.42	0.49
7:E:74:LYS:O	7:E:75:LYS:CB	2.60	0.49
7:E:78:SER:HA	7:E:83:ARG:CG	2.39	0.49
7:E:77:ILE:CG2	7:E:78:SER:N	2.74	0.49
10:H:45:THR:HG22	10:H:48:ARG:CG	2.41	0.49
11:I:14:THR:N	11:I:17:ARG:HH12	2.10	0.49
11:I:46:ALA:O	11:I:48:PRO:HD3	2.12	0.49
12:J:50:ARG:NH1	12:J:53:GLY:HA3	2.26	0.49
14:L:106:GLY:C	14:L:107:ASP:OD1	2.50	0.49
17:O:112:ARG:O	17:O:113:ALA:C	2.50	0.49
17:O:35:ALA:O	17:O:39:LEU:HG	2.12	0.49
18:P:36:PRO:HD2	18:P:60:GLU:OE2	2.12	0.49
24:V:86:SER:HB2	24:V:87:PRO:HD3	1.93	0.49
24:V:85:LEU:HD13	24:V:87:PRO:N	2.26	0.49
28:Z:21:ARG:C	28:Z:23:ARG:N	2.54	0.49
22:T:155:LEU:HD13	22:T:156:LYS:N	2.07	0.49
33:O:11:C:H6	33:O:11:C:O5'	1.95	0.49
3:A:60:ARG:O	3:A:164:PHE:CZ	2.64	0.49
3:A:209:PHE:O	3:A:210:LEU:O	2.30	0.49
4:B:105:ILE:HG12	4:B:106:ILE:HG12	1.93	0.49
4:B:106:ILE:O	4:B:106:ILE:CG1	2.54	0.49
4:B:109:ASP:CB	4:B:199:ALA:HB3	2.43	0.49
4:B:57:GLY:H	4:B:216:GLY:N	2.10	0.49
4:B:37:LEU:HD23	4:B:62:TYR:HB3	1.94	0.49
5:C:4:ILE:HD11	5:C:29:GLY:C	2.31	0.49
6:D:46:THR:HG21	6:D:88:LYS:HG3	1.93	0.49
6:D:88:LYS:C	6:D:90:ARG:N	2.65	0.49
7:E:170:ARG:HB2	7:E:173:LEU:HD22	1.93	0.49
8:F:43:VAL:HG21	8:F:51:ARG:O	2.12	0.49
10:H:127:LYS:CA	10:H:130:LEU:HG	2.42	0.49
10:H:37:VAL:HG22	10:H:158:PRO:HG2	1.95	0.49
10:H:71:MET:HE3	10:H:71:MET:N	2.26	0.49
11:I:34:THR:O	11:I:37:ASP:HB2	2.12	0.49
11:I:4:PRO:O	11:I:5:GLN:CB	2.60	0.49
11:I:15:GLY:HA3	11:I:52:VAL:O	2.12	0.49
11:I:38:VAL:HG11	11:I:59:LYS:HD3	1.94	0.49
11:I:59:LYS:HD3	11:I:87:ILE:HB	1.95	0.49
12:J:46:LYS:HB3	12:J:51:PHE:CD2	2.47	0.49
12:J:55:ARG:C	12:J:57:THR:H	2.15	0.49
13:K:11:LYS:CE	13:K:12:GLN:H	2.24	0.49
14:L:50:HIS:O	14:L:51:LEU:C	2.50	0.49
15:M:71:ARG:CB	15:M:108:GLY:HA3	2.43	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:N:91:ARG:HH21	16:N:115:ARG:HA	1.77	0.49
17:O:90:VAL:O	17:O:91:ASP:HB3	2.12	0.49
18:P:7:THR:O	18:P:10:LYS:NZ	2.44	0.49
21:S:71:LYS:CG	21:S:96:ILE:HD11	2.42	0.49
22:T:77:ASP:OD2	22:T:80:ARG:NH1	2.45	0.49
23:U:45:PHE:CD1	23:U:77:ARG:HB2	2.47	0.49
24:V:11:ARG:N	24:V:12:PRO:HD2	2.27	0.49
27:Y:38:ALA:HA	27:Y:48:GLU:HB3	1.94	0.49
5:C:61:ARG:CD	5:C:62:PRO:HD3	2.43	0.49
6:D:150:LEU:C	6:D:187:LEU:HG	2.31	0.49
7:E:43:LEU:HD23	7:E:44:GLY:N	2.27	0.49
7:E:74:LYS:O	7:E:75:LYS:HB3	2.11	0.49
8:F:95:ARG:HB2	8:F:107:VAL:HG12	1.93	0.49
9:G:109:ILE:HG12	9:G:111:PRO:HD3	1.94	0.49
11:I:88:ASN:HA	11:I:94:ARG:CZ	2.42	0.49
13:K:132:VAL:O	13:K:133:ARG:HB3	2.12	0.49
15:M:71:ARG:H	15:M:71:ARG:HD3	1.77	0.49
15:M:51:ALA:CB	15:M:73:LEU:HD21	2.31	0.49
16:N:24:PRO:CG	16:N:96:ARG:O	2.57	0.49
16:N:25:GLY:CA	16:N:91:ARG:H	2.25	0.49
16:N:30:VAL:N	16:N:44:ASP:OD1	2.46	0.49
17:O:40:PHE:HB3	18:P:78:LYS:CG	2.42	0.49
17:O:83:LEU:O	17:O:86:ALA:CB	2.52	0.49
18:P:71:LEU:N	18:P:71:LEU:HD22	2.27	0.49
19:Q:74:ALA:HB1	19:Q:104:THR:O	2.12	0.49
19:Q:88:ARG:HG2	19:Q:92:ARG:H	1.77	0.49
21:S:55:TYR:CD1	21:S:56:PRO:CD	2.95	0.49
24:V:84:GLY:O	24:V:85:LEU:C	2.48	0.49
25:W:50:ILE:O	25:W:51:ARG:CB	2.54	0.49
3:A:167:ASP:O	3:A:171:ALA:CA	2.60	0.49
4:B:112:GLN:O	4:B:113:VAL:C	2.51	0.49
4:B:131:LEU:HD23	4:B:132:PRO:N	2.27	0.49
4:B:3:VAL:O	4:B:4:LYS:C	2.50	0.49
7:E:19:LEU:O	7:E:25:TYR:HE1	1.95	0.49
7:E:47:LYS:HB2	7:E:72:ARG:HH22	1.76	0.49
8:F:17:VAL:CA	8:F:26:VAL:HG22	2.07	0.49
8:F:49:VAL:HG11	8:F:51:ARG:HH22	1.76	0.49
11:I:16:ALA:CB	11:I:43:VAL:HG13	2.42	0.49
11:I:61:VAL:O	11:I:84:ALA:CA	2.61	0.49
11:I:75:SER:N	16:N:77:PRO:HD3	2.28	0.49
12:J:114:ILE:CG1	12:J:130:PHE:HB3	2.41	0.49
13:K:124:LYS:HZ2	13:K:125:LEU:CA	2.24	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:L:38:VAL:HG13	14:L:39:PRO:CD	2.42	0.49
14:L:50:HIS:O	14:L:53:HIS:ND1	2.45	0.49
16:N:31:SER:HB3	16:N:43:GLN:O	2.10	0.49
18:P:17:GLY:CA	18:P:98:GLU:HG3	2.37	0.49
21:S:12:THR:O	21:S:71:LYS:HA	2.11	0.49
22:T:85:HIS:CD2	22:T:85:HIS:C	2.85	0.49
22:T:99:TYR:CE2	22:T:124:ILE:HD12	2.47	0.49
23:U:33:ALA:O	23:U:60:PHE:CE2	2.65	0.49
25:W:3:LEU:HD23	25:W:4:SER:CA	2.42	0.49
27:Y:16:ARG:CZ	27:Y:17:ASP:HB2	2.42	0.49
28:Z:18:PHE:CE2	28:Z:22:MET:CE	2.95	0.49
24:V:77:ALA:O	24:V:78:LYS:HB3	2.13	0.49
33:O:59:U:C2'	33:O:59:U:O2	2.59	0.49
3:A:163:GLU:CD	3:A:164:PHE:N	2.66	0.49
3:A:195:ARG:CG	3:A:196:ALA:N	2.75	0.49
3:A:216:THR:O	3:A:217:THR:OG1	2.27	0.49
4:B:10:THR:HG23	4:B:13:ARG:H	1.77	0.49
4:B:142:VAL:HG23	4:B:193:VAL:CA	2.43	0.49
4:B:247:ALA:HB1	4:B:251:GLY:CA	2.42	0.49
4:B:247:ALA:O	4:B:248:SER:HB3	2.12	0.49
4:B:257:LEU:CD1	4:B:257:LEU:C	2.80	0.49
5:C:103:ASP:C	5:C:104:VAL:CG2	2.80	0.49
5:C:15:PHE:O	5:C:21:VAL:HG22	2.13	0.49
6:D:149:VAL:HB	6:D:186:ARG:O	2.12	0.49
7:E:22:ARG:O	7:E:23:PHE:HB2	2.12	0.49
10:H:118:PRO:HA	10:H:121:VAL:CG2	2.42	0.49
11:I:20:MET:CG	11:I:21:CYS:N	2.75	0.49
11:I:90:GLN:OE1	11:I:92:GLU:CB	2.57	0.49
16:N:48:ILE:N	16:N:48:ILE:HD12	2.26	0.49
16:N:48:ILE:HG23	16:N:49:VAL:H	1.76	0.49
16:N:29:ARG:HG2	16:N:86:ILE:CB	2.43	0.49
18:P:92:THR:OG1	18:P:93:GLU:N	2.46	0.49
19:Q:62:HIS:O	19:Q:64:MET:HE2	2.13	0.49
23:U:37:LEU:CG	23:U:38:VAL:H	2.25	0.49
23:U:27:GLU:OE1	23:U:69:PHE:HB3	2.13	0.49
25:W:3:LEU:HG	25:W:7:ARG:CB	2.43	0.49
26:X:7:LYS:HB2	26:X:55:ARG:CB	2.43	0.49
21:S:101:LYS:HG2	21:S:101:LYS:O	2.12	0.49
20:R:16:LYS:O	20:R:19:ALA:HB3	2.13	0.49
4:B:108:PRO:HA	4:B:197:GLY:CA	2.41	0.49
4:B:133:LEU:HD22	4:B:136:ILE:HG21	1.95	0.49
4:B:60:ARG:NE	4:B:60:ARG:HA	2.26	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:78:LYS:NZ	4:B:113:VAL:HG12	2.28	0.49
5:C:7:VAL:CG1	5:C:76:ARG:NH2	2.76	0.49
7:E:68:PRO:HG2	7:E:90:LEU:HD23	1.93	0.49
7:E:72:ARG:HD2	7:E:87:PRO:HB3	1.93	0.49
8:F:19:VAL:H	8:F:24:VAL:HG13	1.78	0.49
9:G:91:SER:HB3	9:G:121:LYS:HZ1	1.76	0.49
9:G:44:LEU:HA	9:G:47:LEU:HD23	1.94	0.49
9:G:52:ARG:C	9:G:54:GLN:N	2.64	0.49
10:H:100:GLY:HA2	10:H:104:GLY:O	2.12	0.49
11:I:106:LEU:HD12	11:I:106:LEU:H	1.76	0.49
11:I:16:ALA:HA	11:I:46:ALA:HA	1.94	0.49
11:I:59:LYS:NZ	11:I:87:ILE:O	2.45	0.49
12:J:95:VAL:O	12:J:125:VAL:CA	2.55	0.49
13:K:132:VAL:CG2	13:K:133:ARG:N	2.64	0.49
13:K:69:PHE:CD2	13:K:69:PHE:C	2.84	0.49
15:M:25:ARG:HG2	15:M:42:ASP:CG	2.33	0.49
16:N:107:ASP:CA	16:N:111:ARG:CZ	2.89	0.49
16:N:90:GLN:NE2	16:N:120:ARG:NE	2.60	0.49
17:O:95:LEU:C	17:O:97:ASP:N	2.52	0.49
17:O:97:ASP:O	17:O:99:ALA:N	2.41	0.49
19:Q:29:LEU:HD11	19:Q:67:ASP:N	2.20	0.49
20:R:5:TYR:O	20:R:7:VAL:N	2.46	0.49
22:T:75:ASN:HB2	22:T:85:HIS:O	2.12	0.49
26:X:40:THR:O	26:X:44:ARG:HD3	2.09	0.49
27:Y:30:LEU:HD22	27:Y:31:VAL:O	2.12	0.49
33:O:22:G:H5"	33:O:46:G:H1	1.78	0.49
33:O:23:A:C2'	33:O:24:G:H5'	2.42	0.49
3:A:22:THR:CA	3:A:225:ILE:HG23	2.42	0.49
4:B:105:ILE:C	4:B:106:ILE:HG23	2.33	0.49
4:B:17:THR:HG22	4:B:18:VAL:N	2.26	0.49
4:B:211:ARG:O	4:B:212:SER:C	2.50	0.49
4:B:267:SER:O	4:B:268:ARG:HB2	2.13	0.49
4:B:58:HIS:CD2	4:B:58:HIS:O	2.66	0.49
4:B:65:ILE:HG22	4:B:104:TYR:CB	2.42	0.49
5:C:184:VAL:CG2	5:C:185:LYS:N	2.46	0.49
5:C:188:VAL:CG2	5:C:189:PRO:CD	2.65	0.49
5:C:67:PHE:O	5:C:69:LYS:N	2.46	0.49
6:D:147:GLU:H	6:D:167:TRP:HZ2	1.58	0.49
6:D:149:VAL:CG1	6:D:186:ARG:HB2	2.43	0.49
6:D:69:ARG:HD3	6:D:70:HIS:N	2.22	0.49
6:D:77:ILE:HG12	6:D:81:GLY:HA2	8.32	0.49
7:E:103:LEU:HA	7:E:106:LEU:HD21	1.93	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:103:LEU:HD12	7:E:104:GLU:N	2.27	0.49
7:E:155:MET:N	7:E:155:MET:SD	2.85	0.49
7:E:120:LEU:C	7:E:181:ARG:HD2	2.31	0.49
9:G:126:TYR:CE1	9:G:127:VAL:CG2	2.96	0.49
9:G:4:ILE:N	9:G:4:ILE:CD1	2.75	0.49
9:G:6:LEU:HB3	9:G:35:LEU:O	2.11	0.49
9:G:97:ILE:CD1	9:G:98:ALA:N	2.60	0.49
10:H:38:LEU:HD12	10:H:38:LEU:N	4.78	0.49
10:H:71:MET:SD	10:H:71:MET:N	2.71	0.49
11:I:13:ASN:HB2	11:I:17:ARG:CD	2.43	0.49
12:J:147:LEU:HD12	12:J:147:LEU:C	2.33	0.49
12:J:39:LYS:NZ	12:J:39:LYS:HA	2.28	0.49
12:J:79:ARG:CG	12:J:81:GLN:HE22	2.25	0.49
12:J:85:LEU:N	12:J:85:LEU:CD2	2.69	0.49
14:L:100:LEU:CG	14:L:112:ALA:HA	2.28	0.49
14:L:96:ARG:HG3	14:L:117:VAL:HG23	1.94	0.49
14:L:20:LEU:HD23	14:L:20:LEU:C	2.32	0.49
16:N:82:LEU:N	16:N:82:LEU:CD1	2.73	0.49
16:N:92:GLY:N	16:N:116:ALA:N	2.59	0.49
18:P:2:PHE:N	18:P:2:PHE:CD1	2.80	0.49
18:P:40:LEU:HD13	18:P:41:GLY:CA	2.42	0.49
18:P:64:HIS:HA	18:P:96:ILE:HG21	1.89	0.49
18:P:81:TYR:H	18:P:83:ARG:NH2	2.10	0.49
20:R:27:THR:C	20:R:28:PHE:CG	2.86	0.49
20:R:77:LYS:HE3	20:R:77:LYS:HA	1.94	0.49
23:U:29:GLN:HG3	23:U:30:VAL:H	1.78	0.49
23:U:33:ALA:C	23:U:61:ALA:O	2.50	0.49
23:U:79:VAL:HG23	23:U:81:VAL:CG2	2.42	0.49
24:V:23:LYS:O	24:V:24:ALA:HB2	2.13	0.49
24:V:90:ILE:CG2	24:V:94:LEU:HD11	2.42	0.49
25:W:5:GLU:OE1	25:W:9:GLN:HA	2.13	0.49
27:Y:40:LYS:NZ	27:Y:46:CYS:H	2.11	0.49
28:Z:13:ALA:CA	28:Z:17:GLY:HA3	2.37	0.49
24:V:27:GLU:HA	33:O:74:C:C5'	2.43	0.49
3:A:165:ARG:O	3:A:171:ALA:CB	2.60	0.49
3:A:48:LEU:C	3:A:211:ARG:NH1	2.65	0.49
4:B:147:LEU:HG	4:B:148:GLU:H	1.77	0.49
4:B:68:LYS:HB2	4:B:68:LYS:NZ	2.28	0.49
4:B:6:PHE:CD2	4:B:16:MET:HB2	2.47	0.49
5:C:192:ASN:OD1	16:N:4:GLY:HA3	2.12	0.49
5:C:48:GLN:C	5:C:49:LEU:HD22	2.33	0.49
6:D:125:ALA:O	6:D:133:GLU:HG2	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:148:SER:C	6:D:184:THR:HB	2.33	0.49
6:D:192:ASP:O	6:D:192:ASP:OD2	2.31	0.49
6:D:191:LEU:HD22	6:D:193:ALA:HB3	1.95	0.49
6:D:48:THR:CA	6:D:52:VAL:HB	2.42	0.49
7:E:19:LEU:O	7:E:20:ILE:C	2.50	0.49
7:E:25:TYR:HD2	7:E:31:VAL:HG22	1.78	0.49
7:E:54:GLU:HA	7:E:57:ALA:CB	2.42	0.49
8:F:89:ILE:H	8:F:129:THR:CG2	2.25	0.49
8:F:72:ILE:CD1	8:F:72:ILE:N	2.64	0.49
9:G:130:TYR:HE2	9:G:132:PRO:HG3	1.75	0.49
9:G:7:GLU:O	9:G:12:LEU:HA	2.13	0.49
10:H:65:TRP:CZ3	10:H:67:PRO:HA	2.47	0.49
11:I:70:LYS:CA	11:I:76:ALA:HA	2.42	0.49
12:J:139:LYS:C	12:J:141:ALA:N	2.64	0.49
12:J:13:ASN:C	12:J:13:ASN:ND2	2.66	0.49
13:K:76:LYS:O	13:K:78:PRO:HD3	2.13	0.49
14:L:34:ILE:CG2	14:L:35:THR:N	2.50	0.49
15:M:39:ILE:CD1	15:M:49:VAL:HG13	2.39	0.49
15:M:68:GLN:CA	15:M:71:ARG:HH11	2.15	0.49
16:N:50:ILE:CG2	16:N:62:THR:HG23	2.43	0.49
17:O:17:ILE:O	17:O:18:LEU:C	2.51	0.49
17:O:40:PHE:C	18:P:78:LYS:HE3	2.33	0.49
19:Q:70:TYR:CZ	19:Q:108:GLY:HA3	2.48	0.49
22:T:150:LEU:HD12	22:T:171:ILE:HD13	1.93	0.49
22:T:161:VAL:HG12	22:T:162:GLU:H	1.76	0.49
24:V:88:LYS:HG2	24:V:89:GLU:CD	2.26	0.49
28:Z:15:THR:O	28:Z:16:HIS:ND1	2.46	0.49
16:N:135:VAL:CG1	16:N:136:GLN:H	2.09	0.49
3:A:27:ALA:O	3:A:183:PRO:HB3	2.12	0.49
4:B:16:MET:HA	4:B:205:VAL:HG12	1.95	0.49
4:B:233:HIS:CE1	4:B:242:ARG:HA	2.48	0.49
4:B:94:LEU:C	4:B:94:LEU:HD23	2.34	0.49
6:D:132:LYS:NZ	6:D:132:LYS:HB2	2.28	0.49
7:E:75:LYS:HG3	7:E:86:MET:HE3	1.94	0.49
8:F:95:ARG:HH11	8:F:107:VAL:CB	2.25	0.49
9:G:66:GLU:OE1	9:G:69:LYS:HB3	2.13	0.49
10:H:113:MET:SD	10:H:116:THR:CG2	2.95	0.49
10:H:40:ASP:HA	10:H:44:LYS:HG3	1.95	0.49
12:J:132:LYS:O	12:J:135:LEU:HB3	2.12	0.49
14:L:17:ARG:O	14:L:18:LEU:C	2.50	0.49
16:N:92:GLY:HA3	16:N:114:LEU:CD2	2.43	0.49
16:N:99:LEU:HD13	16:N:102:ILE:CD1	2.37	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:Q:72:LYS:O	19:Q:73:ALA:HB2	2.13	0.49
20:R:27:THR:C	20:R:28:PHE:CD1	2.87	0.49
25:W:13:ALA:O	25:W:14:ARG:HG2	2.13	0.49
25:W:20:GLU:O	25:W:24:LEU:HD13	2.13	0.49
33:O:44:A:H2'	33:O:45:G:H5'	1.94	0.49
4:B:235:GLY:CA	4:B:240:ALA:HB3	2.37	0.49
4:B:118:VAL:HG12	4:B:129:ASN:ND2	2.28	0.49
4:B:43:ARG:HG2	4:B:54:ARG:O	2.13	0.49
4:B:20:ASP:HB2	4:B:91:ARG:NH2	2.27	0.49
5:C:51:PHE:CB	5:C:76:ARG:NE	2.70	0.49
5:C:8:LYS:HE2	5:C:192:ASN:N	2.28	0.49
6:D:112:ARG:O	6:D:117:LYS:NZ	2.46	0.49
6:D:124:PHE:CZ	6:D:126:GLY:O	2.66	0.49
6:D:133:GLU:O	6:D:136:ALA:HB3	2.13	0.49
6:D:15:LEU:O	6:D:19:LEU:HD22	2.13	0.49
6:D:36:LEU:O	6:D:39:ARG:HG2	2.13	0.49
7:E:41:GLN:NE2	7:E:154:GLY:O	2.46	0.49
9:G:123:LEU:CD2	9:G:123:LEU:H	2.22	0.49
9:G:40:THR:OG1	9:G:43:ASN:CG	2.51	0.49
9:G:97:ILE:HD13	9:G:97:ILE:C	2.30	0.49
10:H:45:THR:HB	10:H:49:LEU:HD11	1.95	0.49
10:H:64:ASP:N	10:H:64:ASP:OD2	2.45	0.49
10:H:97:ARG:HH22	10:H:127:LYS:HB3	1.78	0.49
11:I:39:ILE:CD1	11:I:62:VAL:HG23	2.43	0.49
12:J:41:ARG:NH2	12:J:45:LEU:CD1	2.68	0.49
13:K:115:MET:O	13:K:119:ARG:CD	2.60	0.49
13:K:25:ASP:CG	13:K:102:VAL:HG23	2.33	0.49
14:L:29:LEU:HD23	14:L:75:LEU:HD13	1.94	0.49
14:L:31:HIS:C	14:L:33:ARG:N	2.63	0.49
14:L:36:THR:HB	14:L:40:LYS:NZ	2.28	0.49
16:N:105:LEU:O	16:N:110:ILE:HD13	2.13	0.49
16:N:5:ALA:O	16:N:6:LEU:C	2.50	0.49
16:N:64:ARG:CG	16:N:65:LYS:N	2.65	0.49
16:N:92:GLY:HA3	16:N:114:LEU:CB	2.42	0.49
18:P:38:LEU:HD12	18:P:55:ALA:CA	2.43	0.49
19:Q:85:VAL:CG2	19:Q:95:ILE:HG12	2.43	0.49
20:R:25:LYS:HZ3	20:R:87:GLN:HA	1.78	0.49
22:T:11:GLU:O	22:T:12:GLY:C	2.50	0.49
22:T:164:ALA:O	22:T:165:VAL:HG13	2.12	0.49
22:T:57:ILE:HG13	22:T:58:VAL:H	1.77	0.49
24:V:37:ILE:HG23	24:V:38:SER:H	1.76	0.49
22:T:117:LEU:HG	22:T:118:GLN:N	2.26	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:23:ILE:C	6:D:25:PRO:HD2	2.33	0.48
18:P:66:ARG:HD3	18:P:96:ILE:HD11	1.94	0.48
33:0:13:C:H5"	33:0:13:C:C6	2.46	0.48
3:A:216:THR:OG1	3:A:217:THR:N	2.45	0.48
4:B:132:PRO:HA	4:B:189:CYS:C	2.33	0.48
5:C:192:ASN:ND2	5:C:192:ASN:C	2.66	0.48
6:D:22:GLU:HA	6:D:107:MET:SD	2.52	0.48
6:D:135:LEU:HA	6:D:138:ALA:HB2	1.95	0.48
6:D:182:VAL:HB	12:J:6:LEU:C	2.33	0.48
6:D:60:TRP:CB	6:D:61:PRO:CD	2.90	0.48
7:E:72:ARG:O	7:E:73:ALA:CB	2.61	0.48
9:G:69:LYS:HA	9:G:138:ILE:HD13	1.95	0.48
9:G:6:LEU:H	9:G:36:ALA:HA	1.77	0.48
9:G:94:ALA:HA	9:G:97:ILE:HG23	1.93	0.48
10:H:112:LYS:NZ	10:H:115:ALA:CB	2.64	0.48
10:H:113:MET:HG3	10:H:121:VAL:HG22	1.94	0.48
11:I:15:GLY:HA2	11:I:50:GLY:HA3	1.94	0.48
12:J:83:VAL:CG1	12:J:114:ILE:HG22	2.41	0.48
12:J:89:ALA:C	12:J:121:LYS:HZ2	2.17	0.48
13:K:134:ARG:NE	13:K:136:ALA:HA	2.28	0.48
14:L:20:LEU:HD22	14:L:21:TYR:CD1	2.48	0.48
15:M:35:ILE:O	15:M:35:ILE:HG23	2.13	0.48
11:I:80:ASP:H	16:N:70:VAL:CG1	2.26	0.48
19:Q:69:LEU:HA	19:Q:108:GLY:O	2.12	0.48
20:R:64:LYS:H	20:R:64:LYS:CD	2.07	0.48
22:T:110:GLY:HA2	22:T:146:ILE:HD12	1.93	0.48
22:T:10:ARG:HG3	22:T:37:VAL:HA	1.94	0.48
22:T:69:THR:HB	22:T:88:PHE:CZ	2.47	0.48
23:U:28:GLY:N	23:U:67:VAL:HG13	2.28	0.48
24:V:12:PRO:CG	24:V:13:ILE:N	2.61	0.48
24:V:81:ARG:HG2	24:V:81:ARG:NH2	2.28	0.48
26:X:28:LEU:CD1	26:X:35:ARG:CG	2.81	0.48
27:Y:34:PRO:CB	27:Y:52:TYR:CE2	2.94	0.48
27:Y:56:LYS:H	27:Y:56:LYS:CD	2.26	0.48
33:0:27:C:C4	33:0:28:C:N4	2.82	0.48
4:B:19:ALA:O	4:B:21:PHE:N	2.45	0.48
4:B:73:VAL:CG1	4:B:121:PRO:CD	2.90	0.48
5:C:112:GLY:H	14:L:2:ARG:HD2	1.77	0.48
6:D:109:VAL:O	6:D:110:ALA:C	2.51	0.48
6:D:112:ARG:NE	12:J:5:ASP:HA	2.29	0.48
6:D:24:ASN:O	6:D:28:LEU:CD2	2.61	0.48
7:E:7:LEU:HA	7:E:10:LYS:HB3	1.95	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:125:GLU:O	9:G:126:TYR:CB	2.54	0.48
11:I:15:GLY:H	11:I:17:ARG:HH22	1.62	0.48
12:J:81:GLN:N	12:J:81:GLN:HE21	2.11	0.48
13:K:37:LEU:CG	13:K:128:LYS:N	2.65	0.48
13:K:55:VAL:O	13:K:58:PHE:CA	2.61	0.48
16:N:102:ILE:CG1	16:N:103:ARG:N	2.55	0.48
19:Q:46:PHE:O	19:Q:47:VAL:C	2.52	0.48
19:Q:88:ARG:CG	19:Q:92:ARG:HB2	2.43	0.48
21:S:47:LYS:O	21:S:56:PRO:CA	2.61	0.48
22:T:41:LEU:HD12	22:T:41:LEU:N	2.28	0.48
23:U:29:GLN:HG3	23:U:30:VAL:N	2.28	0.48
23:U:37:LEU:CG	23:U:38:VAL:N	2.76	0.48
23:U:40:GLN:HG2	23:U:41:ARG:H	1.77	0.48
25:W:26:ARG:CD	25:W:29:LYS:HD3	2.44	0.48
25:W:34:GLU:O	25:W:37:PHE:CD2	2.66	0.48
33:O:16:U:C3'	33:O:17:U:H5'	2.43	0.48
3:A:14:LYS:O	3:A:16:ASP:N	2.47	0.48
4:B:131:LEU:N	4:B:190:TYR:CD1	2.82	0.48
4:B:228:PRO:HD3	4:B:236:GLY:CA	2.43	0.48
4:B:34:VAL:O	4:B:34:VAL:HG13	2.13	0.48
5:C:126:PRO:O	5:C:128:SER:N	2.47	0.48
5:C:8:LYS:CA	5:C:26:ILE:HD12	2.41	0.48
5:C:52:LEU:N	5:C:53:PRO:HD3	2.28	0.48
7:E:122:PRO:HG2	7:E:123:ASN:ND2	2.28	0.48
7:E:139:LEU:HA	7:E:144:ILE:O	2.14	0.48
7:E:152:LEU:O	7:E:153:ARG:HB2	2.13	0.48
9:G:77:LEU:C	9:G:77:LEU:HD13	2.33	0.48
12:J:101:VAL:HG13	12:J:102:ARG:N	2.13	0.48
12:J:55:ARG:O	12:J:57:THR:N	2.46	0.48
12:J:56:SER:O	12:J:57:THR:HG22	2.12	0.48
13:K:133:ARG:HB3	22:T:81:ARG:CZ	2.43	0.48
14:L:20:LEU:HD23	14:L:24:GLN:HG2	1.95	0.48
15:M:110:LEU:CD1	15:M:110:LEU:H	2.26	0.48
15:M:26:LEU:CD2	15:M:39:ILE:HA	2.43	0.48
16:N:29:ARG:HB3	16:N:86:ILE:N	2.28	0.48
19:Q:109:GLU:O	19:Q:110:LYS:HB3	2.13	0.48
22:T:17:ALA:CA	22:T:20:ARG:HH21	2.26	0.48
3:A:47:LYS:HZ3	3:A:212:SER:HB3	1.78	0.48
3:A:8:TYR:HA	3:A:11:LEU:HD22	1.96	0.48
4:B:108:PRO:HB3	4:B:195:ALA:O	2.13	0.48
4:B:143:HIS:O	4:B:144:ALA:HB3	2.13	0.48
4:B:183:ARG:HG2	4:B:184:LYS:H	1.78	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:27:THR:HG23	4:B:83:GLU:CG	2.43	0.48
6:D:78:PHE:CE2	6:D:81:GLY:CA	2.96	0.48
7:E:177:GLY:C	7:E:178:PHE:CD1	2.87	0.48
7:E:49:ASP:O	7:E:50:ALA:HB3	2.13	0.48
7:E:74:LYS:HG3	7:E:86:MET:O	2.13	0.48
8:F:111:HIS:CB	8:F:112:PRO:CD	2.91	0.48
8:F:41:MET:HA	8:F:54:ARG:N	2.27	0.48
10:H:131:PRO:C	10:H:132:LYS:HD3	2.32	0.48
11:I:20:MET:HG2	11:I:21:CYS:H	1.77	0.48
11:I:44:LYS:HA	11:I:44:LYS:HZ2	1.78	0.48
11:I:86:ILE:O	11:I:88:ASN:N	2.46	0.48
13:K:1:MET:O	13:K:2:LEU:CB	2.61	0.48
14:L:21:TYR:CA	14:L:24:GLN:HG2	2.39	0.48
15:M:67:ARG:N	15:M:101:LEU:HG	2.28	0.48
15:M:21:THR:CG2	15:M:23:ARG:HH11	2.26	0.48
15:M:47:THR:O	15:M:47:THR:HG23	2.12	0.48
16:N:26:ASP:OD1	16:N:89:VAL:N	2.38	0.48
17:O:47:TYR:O	17:O:48:ALA:C	2.51	0.48
18:P:22:VAL:C	18:P:23:GLU:HG3	2.34	0.48
18:P:80:GLN:C	18:P:82:ARG:H	2.16	0.48
22:T:4:ARG:HG3	22:T:58:VAL:CG1	2.42	0.48
22:T:58:VAL:CG1	22:T:67:LEU:H	2.27	0.48
22:T:80:ARG:HG2	22:T:80:ARG:HH11	1.77	0.48
22:T:97:GLU:OE1	22:T:125:LEU:HG	2.13	0.48
24:V:91:LYS:CA	24:V:91:LYS:HE3	2.43	0.48
26:X:7:LYS:HG2	26:X:34:GLU:HB2	1.94	0.48
33:O:18:G:N1	33:O:57:G:C2	2.81	0.48
33:O:18:G:N2	33:O:58:A:C5'	2.71	0.48
34:1:2:U:C6	34:1:2:U:H5''	2.48	0.48
5:C:32:PRO:C	5:C:49:LEU:HD13	2.34	0.48
5:C:60:ASN:O	5:C:61:ARG:C	2.51	0.48
6:D:33:ARG:O	6:D:36:LEU:HB2	2.14	0.48
7:E:106:LEU:HD11	7:E:107:LEU:HG	1.95	0.48
8:F:58:GLU:HG2	8:F:61:HIS:HD2	1.78	0.48
9:G:126:TYR:O	9:G:141:LYS:HE3	2.13	0.48
9:G:62:LYS:CD	9:G:133:HIS:HD2	2.26	0.48
9:G:127:VAL:HG12	9:G:141:LYS:NZ	2.27	0.48
10:H:83:ILE:CG2	10:H:84:ARG:N	2.76	0.48
10:H:83:ILE:O	10:H:85:VAL:N	2.46	0.48
14:L:36:THR:OG1	14:L:40:LYS:CG	2.62	0.48
14:L:63:ARG:O	14:L:65:LEU:N	2.46	0.48
16:N:11:GLU:CD	16:N:11:GLU:N	2.67	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:N:33:LYS:HE3	16:N:41:ARG:HE	1.78	0.48
17:O:5:LYS:CG	17:O:6:THR:H	2.21	0.48
19:Q:18:ARG:CD	19:Q:76:VAL:HB	2.44	0.48
20:R:8:ILE:CG2	20:R:30:VAL:HG22	2.36	0.48
20:R:36:LYS:O	20:R:37:THR:C	2.49	0.48
24:V:91:LYS:HD2	24:V:91:LYS:H	1.78	0.48
25:W:29:LYS:HE3	25:W:30:ARG:HB3	1.95	0.48
27:Y:51:TYR:O	27:Y:52:TYR:HB3	2.13	0.48
28:Z:19:ARG:HA	28:Z:22:MET:HB3	1.94	0.48
33:O:4:G:C6	33:O:5:A:C5	3.01	0.48
3:A:193:PHE:CZ	3:A:197:LEU:HD22	2.48	0.48
4:B:155:LEU:CD2	4:B:157:ARG:HD3	2.43	0.48
4:B:201:HIS:CB	4:B:204:ILE:HG23	2.42	0.48
4:B:266:SER:O	4:B:270:ILE:CG1	2.61	0.48
4:B:4:LYS:HB2	4:B:18:VAL:HB	1.96	0.48
6:D:112:ARG:HB3	6:D:112:ARG:HH21	1.69	0.48
6:D:181:ILE:HD13	6:D:184:THR:OG1	2.12	0.48
6:D:31:VAL:O	6:D:32:VAL:C	2.52	0.48
7:E:16:ARG:HE	7:E:17:PRO:HD3	1.79	0.48
10:H:51:THR:HG23	10:H:52:LYS:HG3	1.96	0.48
11:I:6:THR:C	11:I:7:TYR:CD2	2.87	0.48
11:I:88:ASN:O	11:I:90:GLN:N	2.47	0.48
12:J:128:HIS:O	12:J:129:ALA:CB	2.61	0.48
12:J:125:VAL:O	12:J:145:PRO:HG3	2.14	0.48
12:J:35:HIS:O	12:J:36:LYS:HD3	2.13	0.48
13:K:11:LYS:HG2	13:K:13:GLN:N	2.21	0.48
15:M:56:LEU:CD1	15:M:56:LEU:N	2.77	0.48
16:N:93:ARG:CA	16:N:117:ASP:HB2	2.19	0.48
16:N:33:LYS:HD3	16:N:42:ILE:N	2.28	0.48
16:N:50:ILE:CD1	16:N:73:GLU:OE1	2.58	0.48
17:O:62:ILE:HG22	17:O:63:VAL:N	2.28	0.48
17:O:94:ASN:ND2	17:O:95:LEU:N	2.60	0.48
19:Q:68:ARG:HG2	19:Q:110:LYS:N	2.28	0.48
19:Q:21:VAL:HA	19:Q:24:ILE:CD1	2.43	0.48
19:Q:66:GLU:O	19:Q:68:ARG:N	2.43	0.48
20:R:10:ALA:O	20:R:29:TRP:CB	2.58	0.48
22:T:99:TYR:CD2	22:T:124:ILE:C	2.86	0.48
33:O:4:G:H2'	33:O:5:A:O4'	2.13	0.48
4:B:56:GLY:HA3	4:B:216:GLY:HA2	1.96	0.48
5:C:109:LYS:HB3	14:L:3:HIS:CD2	2.48	0.48
5:C:192:ASN:ND2	5:C:193:GLY:N	2.54	0.48
5:C:3:GLY:HA2	5:C:198:VAL:CB	2.38	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:8:LYS:HD2	5:C:9:VAL:N	2.27	0.48
7:E:139:LEU:O	7:E:145:THR:HA	2.14	0.48
8:F:49:VAL:HG11	8:F:51:ARG:NH2	2.28	0.48
9:G:101:LEU:HD23	9:G:109:ILE:CD1	2.42	0.48
9:G:107:ILE:O	9:G:107:ILE:HG23	2.14	0.48
9:G:43:ASN:N	9:G:43:ASN:HD22	2.10	0.48
9:G:6:LEU:HB2	9:G:35:LEU:C	2.34	0.48
11:I:43:VAL:HB	11:I:54:GLU:CA	2.44	0.48
13:K:114:ALA:O	13:K:118:LEU:HD13	2.14	0.48
13:K:8:LYS:CE	13:K:70:PRO:HG2	2.40	0.48
14:L:3:HIS:CE1	14:L:4:LEU:CD1	2.97	0.48
14:L:49:ASP:CA	14:L:94:TYR:HE1	2.14	0.48
15:M:64:GLU:O	15:M:65:VAL:O	3.91	0.48
18:P:85:LYS:HB3	18:P:85:LYS:NZ	2.28	0.48
19:Q:88:ARG:CZ	19:Q:92:ARG:O	2.61	0.48
21:S:32:PRO:O	21:S:33:LYS:CB	2.60	0.48
21:S:40:GLU:OE1	21:S:42:VAL:CG2	2.60	0.48
22:T:146:ILE:HG22	22:T:174:VAL:HG12	1.95	0.48
22:T:77:ASP:HB2	22:T:83:PRO:C	2.34	0.48
22:T:69:THR:HG22	22:T:88:PHE:CE1	2.49	0.48
23:U:37:LEU:HG	23:U:59:LEU:C	2.34	0.48
24:V:25:LYS:HG3	24:V:37:ILE:HG21	1.95	0.48
24:V:40:ARG:HG2	24:V:41:ARG:H	1.79	0.48
26:X:8:LEU:HD21	26:X:33:GLN:HB3	1.94	0.48
26:X:50:VAL:CA	26:X:53:LEU:HD21	2.39	0.48
3:A:16:ASP:O	3:A:19:LYS:HB2	2.14	0.48
3:A:52:PRO:HG2	3:A:53:ARG:HE	1.78	0.48
4:B:34:VAL:O	4:B:35:LYS:CD	2.61	0.48
4:B:97:TYR:O	4:B:98:VAL:HG22	2.13	0.48
6:D:159:ARG:CD	6:D:172:ALA:HB1	2.44	0.48
6:D:58:LYS:C	6:D:59:ILE:CG1	2.81	0.48
6:D:96:LEU:HB3	6:D:97:PRO:HD3	1.94	0.48
7:E:34:LEU:HG	7:E:35:GLU:N	2.29	0.48
8:F:89:ILE:HG12	8:F:93:GLY:O	2.14	0.48
9:G:82:ARG:O	9:G:83:ALA:C	2.51	0.48
11:I:103:ALA:C	11:I:105:GLU:H	2.15	0.48
11:I:9:GLU:OE1	11:I:10:VAL:N	2.47	0.48
11:I:23:ARG:HG3	11:I:24:VAL:N	2.29	0.48
11:I:11:ALA:O	11:I:99:PHE:HD2	1.96	0.48
13:K:58:PHE:HA	13:K:113:GLN:OE1	2.14	0.48
14:L:13:HIS:HD2	14:L:16:HIS:H	1.56	0.48
14:L:37:THR:N	14:L:40:LYS:CE	2.68	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:R:60:ARG:HB2	20:R:74:PRO:HD2	1.96	0.48
21:S:19:LYS:O	21:S:20:TYR:CB	2.60	0.48
22:T:99:TYR:HB3	22:T:123:ASP:CB	2.44	0.48
26:X:19:GLN:O	26:X:22:ALA:HB3	2.14	0.48
28:Z:31:LEU:H	28:Z:31:LEU:HD23	1.79	0.48
4:B:76:PRO:HG2	4:B:118:VAL:CA	2.43	0.48
5:C:32:PRO:C	5:C:49:LEU:CD1	2.82	0.48
6:D:34:TRP:HZ2	6:D:94:TYR:CD1	2.31	0.48
8:F:86:GLU:O	8:F:87:LEU:HD13	2.13	0.48
10:H:98:TYR:O	10:H:105:LEU:HB3	2.12	0.48
11:I:85:VAL:CG1	11:I:86:ILE:H	2.24	0.48
12:J:147:LEU:HD13	12:J:148:LEU:N	2.29	0.48
12:J:148:LEU:HD22	12:J:149:GLU:OE1	2.14	0.48
12:J:55:ARG:C	12:J:57:THR:N	2.67	0.48
12:J:71:VAL:CB	12:J:72:PRO:CD	2.79	0.48
13:K:135:ASP:OD1	22:T:76:LEU:HD13	2.13	0.48
13:K:54:MET:O	13:K:58:PHE:CG	2.67	0.48
14:L:66:VAL:HG11	14:L:80:PHE:CZ	2.48	0.48
15:M:13:ARG:CD	15:M:91:PRO:HA	2.44	0.48
16:N:30:VAL:HG23	16:N:30:VAL:O	2.13	0.48
16:N:3:ARG:O	16:N:4:GLY:C	2.52	0.48
16:N:51:ARG:HH21	16:N:53:ARG:HG3	1.78	0.48
16:N:66:VAL:CG2	16:N:71:GLY:HA2	2.43	0.48
11:I:78:ARG:O	16:N:71:GLY:O	2.32	0.48
17:O:81:HIS:O	17:O:84:LYS:N	2.46	0.48
19:Q:78:GLU:O	19:Q:102:HIS:CD2	2.67	0.48
26:X:44:ARG:O	26:X:45:GLY:C	2.52	0.48
28:Z:10:ARG:HD3	28:Z:14:LYS:CE	2.44	0.48
24:V:78:LYS:HD3	24:V:80:LEU:HG	1.96	0.48
21:S:9:LYS:HG3	21:S:10:GLY:N	2.28	0.48
33:O:10:G:O6	33:O:26:G:C6	2.67	0.48
5:C:15:PHE:O	5:C:16:ARG:CB	2.50	0.48
6:D:113:ALA:HA	6:D:117:LYS:HG2	1.96	0.48
6:D:166:PRO:C	6:D:168:VAL:H	2.16	0.48
6:D:179:TYR:C	6:D:182:VAL:HG13	2.34	0.48
6:D:4:ILE:HB	6:D:120:LEU:HA	1.96	0.48
7:E:100:TRP:O	7:E:103:LEU:CD1	2.62	0.48
7:E:106:LEU:HB3	7:E:141:PHE:CE1	2.49	0.48
7:E:141:PHE:CG	7:E:142:PRO:HD2	2.44	0.48
7:E:5:LEU:N	7:E:100:TRP:HH2	2.12	0.48
8:F:172:LYS:NZ	8:F:172:LYS:CA	2.70	0.48
9:G:88:ILE:HG23	9:G:121:LYS:HG2	1.88	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:44:LEU:HA	9:G:47:LEU:CG	2.44	0.48
9:G:87:LYS:HA	9:G:121:LYS:HB2	1.95	0.48
10:H:46:LEU:HD22	10:H:122:LEU:HG	1.96	0.48
11:I:49:ARG:N	11:I:49:ARG:CD	2.75	0.48
11:I:70:LYS:N	11:I:76:ALA:HA	2.29	0.48
13:K:33:GLY:O	13:K:118:LEU:HD21	2.14	0.48
14:L:24:GLN:OE1	14:L:24:GLN:HA	2.13	0.48
14:L:56:LYS:HB3	14:L:84:ALA:HA	1.95	0.48
14:L:83:ILE:HA	14:L:86:ARG:CG	2.43	0.48
15:M:67:ARG:NH1	15:M:68:GLN:HE21	2.11	0.48
15:M:86:ALA:O	15:M:87:PHE:CB	2.62	0.48
17:O:59:ARG:HA	17:O:62:ILE:CG1	2.43	0.48
18:P:46:VAL:O	18:P:47:VAL:CB	2.53	0.48
17:O:112:ARG:CZ	18:P:50:PRO:HD2	2.44	0.48
19:Q:18:ARG:HD2	19:Q:76:VAL:HG12	1.96	0.48
20:R:57:LEU:HD21	20:R:76:ARG:NH2	2.28	0.48
22:T:138:GLU:CG	22:T:139:VAL:N	2.77	0.48
22:T:151:HIS:HB3	22:T:170:THR:N	2.29	0.48
22:T:77:ASP:HB2	22:T:82:ARG:O	2.13	0.48
23:U:32:ARG:HA	23:U:64:ASP:OD2	2.14	0.48
26:X:28:LEU:CD2	26:X:35:ARG:CG	2.92	0.48
28:Z:10:ARG:HB2	28:Z:14:LYS:HE2	1.94	0.48
28:Z:3:ARG:HG2	28:Z:3:ARG:NH1	2.28	0.48
33:O:7:U:H6	33:O:7:U:H5'	1.79	0.47
3:A:226:ASN:C	3:A:228:HIS:H	2.17	0.47
3:A:8:TYR:N	3:A:8:TYR:CD1	2.82	0.47
4:B:120:GLY:C	4:B:122:ASP:H	2.17	0.47
4:B:146:GLU:OE1	4:B:147:LEU:N	2.47	0.47
4:B:131:LEU:CA	4:B:190:TYR:HD1	2.26	0.47
6:D:26:HIS:CB	12:J:13:ASN:HB3	2.44	0.47
6:D:4:ILE:N	6:D:5:PRO:HD3	2.29	0.47
6:D:85:PHE:CD1	6:D:85:PHE:N	2.82	0.47
7:E:78:SER:O	7:E:83:ARG:HA	2.14	0.47
8:F:28:GLY:O	8:F:30:LYS:N	2.42	0.47
8:F:49:VAL:O	8:F:50:VAL:CG2	2.62	0.47
9:G:122:GLU:OE1	9:G:126:TYR:HB3	2.14	0.47
10:H:37:VAL:HG13	10:H:158:PRO:O	2.14	0.47
10:H:54:ALA:C	10:H:56:LEU:H	2.17	0.47
12:J:62:LEU:HD22	12:J:62:LEU:C	2.35	0.47
12:J:70:GLN:O	12:J:71:VAL:HB	2.14	0.47
13:K:57:HIS:O	13:K:58:PHE:CD2	2.64	0.47
14:L:104:ARG:NH2	14:L:107:ASP:HB2	2.21	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:L:1:MET:CE	14:L:2:ARG:HH12	2.26	0.47
16:N:62:THR:HG1	16:N:74:ARG:C	2.17	0.47
16:N:5:ALA:O	16:N:7:ILE:N	2.47	0.47
17:O:74:LEU:HD23	17:O:110:VAL:HG13	1.95	0.47
18:P:76:LYS:HD3	18:P:83:ARG:HB3	1.96	0.47
19:Q:48:ALA:C	19:Q:50:VAL:N	2.66	0.47
19:Q:88:ARG:HD2	19:Q:92:ARG:N	2.29	0.47
22:T:146:ILE:CB	22:T:176:PRO:CD	2.90	0.47
22:T:3:TYR:O	22:T:57:ILE:CA	2.62	0.47
23:U:84:LEU:CG	23:U:85:ALA:H	2.16	0.47
13:K:45:GLN:O	13:K:46:GLN:C	2.51	0.47
16:N:10:VAL:O	16:N:10:VAL:HG12	2.14	0.47
33:O:36:A:H2'	33:O:37:A:H5'	1.96	0.47
4:B:262:ARG:CB	4:B:263:ARG:HH21	2.27	0.47
5:C:30:PRO:HA	5:C:91:VAL:O	2.15	0.47
6:D:179:TYR:CA	6:D:182:VAL:HG13	2.44	0.47
7:E:41:GLN:HG2	7:E:155:MET:CB	2.43	0.47
7:E:66:GLN:HG3	7:E:94:LEU:HD11	1.96	0.47
11:I:69:VAL:HG12	11:I:77:ILE:HG22	1.95	0.47
11:I:85:VAL:O	11:I:86:ILE:HG13	2.14	0.47
12:J:50:ARG:HD3	12:J:51:PHE:CA	2.44	0.47
12:J:61:ARG:N	12:J:61:ARG:NE	2.57	0.47
13:K:34:LEU:N	13:K:104:PHE:O	2.37	0.47
13:K:21:THR:O	13:K:22:LYS:C	2.52	0.47
14:L:27:SER:O	14:L:29:LEU:N	2.47	0.47
16:N:50:ILE:HB	16:N:64:ARG:N	2.29	0.47
19:Q:75:TYR:H	19:Q:104:THR:H	1.60	0.47
21:S:43:ASN:HA	21:S:59:GLY:O	2.14	0.47
22:T:100:VAL:HB	22:T:101:PRO:CD	2.43	0.47
25:W:29:LYS:HE3	25:W:30:ARG:CA	2.44	0.47
26:X:58:VAL:CG1	26:X:60:GLU:OE2	2.59	0.47
28:Z:28:ARG:HA	28:Z:31:LEU:HD23	1.96	0.47
33:O:16:U:H3'	33:O:17:U:C5'	2.43	0.47
8:F:171:LEU:CD1	8:F:171:LEU:N	2.76	0.47
33:O:48:C:H4'	33:O:49:C:C5'	2.44	0.47
33:O:16:U:O2	33:O:16:U:C2'	2.62	0.47
3:A:29:LEU:CD1	3:A:32:GLU:OE2	2.61	0.47
4:B:78:LYS:HA	4:B:115:GLN:O	2.13	0.47
4:B:70:TRP:HH2	4:B:146:GLU:HG2	1.77	0.47
4:B:21:PHE:CG	4:B:24:ILE:HD12	2.49	0.47
4:B:257:LEU:HD12	4:B:259:THR:HG1	1.80	0.47
5:C:93:VAL:HG12	5:C:182:LEU:HB2	1.95	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:4:ILE:CD1	6:D:119:LEU:N	2.74	0.47
6:D:47:LYS:O	6:D:48:THR:CB	2.62	0.47
7:E:120:LEU:O	7:E:181:ARG:CB	2.62	0.47
8:F:10:PRO:C	8:F:12:PRO:HD3	2.34	0.47
10:H:134:PRO:HA	10:H:137:ARG:CD	2.43	0.47
10:H:48:ARG:O	10:H:52:LYS:HE2	2.13	0.47
10:H:63:PRO:O	17:O:64:ARG:CD	2.54	0.47
10:H:77:VAL:HG12	10:H:80:ALA:CB	2.35	0.47
12:J:30:THR:O	12:J:31:ALA:HB3	2.14	0.47
12:J:48:PRO:HA	12:J:51:PHE:CD2	2.48	0.47
14:L:53:HIS:HA	14:L:56:LYS:CE	2.44	0.47
15:M:43:GLU:HG3	15:M:44:LYS:N	2.29	0.47
15:M:67:ARG:HH11	15:M:68:GLN:HE21	1.62	0.47
16:N:107:ASP:O	16:N:111:ARG:CG	2.55	0.47
16:N:17:THR:O	16:N:19:LEU:HG	2.14	0.47
16:N:91:ARG:HA	16:N:116:ALA:HA	1.96	0.47
19:Q:6:ILE:O	19:Q:105:VAL:CG2	2.61	0.47
20:R:57:LEU:HD22	20:R:76:ARG:HB2	1.96	0.47
21:S:54:LYS:HE2	21:S:54:LYS:HA	1.94	0.47
22:T:150:LEU:CD1	22:T:171:ILE:CD1	2.88	0.47
22:T:80:ARG:NH1	22:T:80:ARG:HG2	2.29	0.47
22:T:129:SER:HB2	22:T:132:ASN:HB2	1.97	0.47
33:O:5:A:H2'	33:O:6:U:O4'	2.13	0.47
4:B:155:LEU:O	4:B:156:ALA:HB3	2.13	0.47
4:B:45:ASN:OD1	4:B:48:ARG:N	2.48	0.47
4:B:94:LEU:HD22	4:B:94:LEU:O	2.14	0.47
5:C:51:PHE:CD1	5:C:76:ARG:NH2	2.82	0.47
6:D:75:ALA:O	6:D:77:ILE:N	2.41	0.47
7:E:35:GLU:O	7:E:36:LYS:HG2	2.14	0.47
7:E:79:ASN:HB3	7:E:82:LEU:O	2.14	0.47
8:F:29:PRO:CD	8:F:79:VAL:HB	2.43	0.47
10:H:113:MET:CG	10:H:121:VAL:HG13	2.25	0.47
10:H:73:ASP:O	10:H:142:ARG:NH1	2.40	0.47
12:J:85:LEU:HD23	12:J:86:LYS:HG2	1.97	0.47
14:L:27:SER:C	14:L:34:ILE:HG13	2.34	0.47
14:L:96:ARG:C	14:L:98:LEU:H	4.67	0.47
16:N:125:ARG:NH1	16:N:125:ARG:HB2	4.84	0.47
20:R:17:ALA:CB	20:R:26:TYR:CB	2.91	0.47
21:S:88:LYS:CG	21:S:89:PHE:CD1	2.93	0.47
23:U:57:PHE:O	23:U:59:LEU:CD1	2.63	0.47
25:W:16:LEU:C	25:W:16:LEU:HD23	2.34	0.47
33:O:41:U:C3'	33:O:41:U:C6	2.98	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:A:220:GLY:HA2	3:A:221:PRO:HD3	1.75	0.47
4:B:105:ILE:O	4:B:106:ILE:HG22	2.14	0.47
5:C:20:ALA:O	5:C:21:VAL:CG1	2.63	0.47
5:C:47:VAL:O	5:C:48:GLN:CG	2.63	0.47
6:D:192:ASP:C	6:D:192:ASP:OD2	2.53	0.47
7:E:145:THR:O	7:E:147:ASP:OD2	2.33	0.47
8:F:172:LYS:HA	8:F:172:LYS:CE	2.44	0.47
8:F:19:VAL:CA	8:F:24:VAL:HG22	2.43	0.47
8:F:88:LEU:CD2	8:F:165:ALA:HA	2.44	0.47
9:G:23:PRO:HB2	9:G:27:ARG:CD	2.43	0.47
10:H:82:LYS:CG	10:H:82:LYS:O	2.59	0.47
10:H:89:LYS:O	10:H:110:LEU:HD23	2.11	0.47
11:I:59:LYS:CD	11:I:87:ILE:HB	2.44	0.47
12:J:148:LEU:O	12:J:149:GLU:HB2	2.15	0.47
13:K:116:GLU:HB3	13:K:120:ILE:HD11	1.97	0.47
13:K:32:PHE:HA	13:K:132:VAL:HG12	1.96	0.47
13:K:73:PRO:HD3	13:K:93:TYR:CE1	2.49	0.47
14:L:36:THR:HB	14:L:40:LYS:HZ2	1.79	0.47
14:L:43:GLU:OE1	14:L:43:GLU:CA	2.58	0.47
14:L:69:ASP:C	14:L:70:LEU:HD23	2.34	0.47
14:L:63:ARG:NH2	14:L:73:VAL:HG23	2.29	0.47
15:M:46:VAL:HG12	15:M:47:THR:N	2.28	0.47
16:N:66:VAL:HG13	16:N:70:VAL:C	2.35	0.47
17:O:103:PRO:O	17:O:105:VAL:N	2.47	0.47
18:P:83:ARG:O	18:P:85:LYS:N	2.47	0.47
22:T:69:THR:HA	22:T:91:LEU:HG	1.96	0.47
23:U:17:GLN:O	23:U:17:GLN:HG3	2.15	0.47
23:U:36:ILE:HG21	23:U:39:ARG:NH2	2.29	0.47
23:U:39:ARG:NH1	23:U:58:THR:HG21	2.29	0.47
23:U:40:GLN:CG	23:U:41:ARG:N	2.75	0.47
23:U:50:ASN:O	23:U:62:LEU:HB3	2.15	0.47
23:U:27:GLU:CA	23:U:69:PHE:HD2	2.27	0.47
24:V:81:ARG:O	24:V:82:LEU:CB	2.63	0.47
28:Z:18:PHE:HE2	28:Z:22:MET:HE1	1.80	0.47
33:0:13:C:H6	33:0:13:C:C5'	2.27	0.47
33:0:31:A:C2	33:0:39:U:N3	2.80	0.47
3:A:23:ILE:O	3:A:187:ALA:HB1	2.15	0.47
3:A:63:VAL:CG2	3:A:64:SER:N	2.74	0.47
4:B:14:ARG:O	4:B:15:PHE:CB	2.63	0.47
4:B:3:VAL:HA	4:B:17:THR:HG23	1.96	0.47
4:B:2:ALA:O	4:B:3:VAL:HB	2.14	0.47
5:C:61:ARG:CG	5:C:62:PRO:CD	2.86	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:F:89:ILE:HD12	8:F:90:LYS:O	2.13	0.47
9:G:31:LEU:C	9:G:33:ARG:N	2.68	0.47
9:G:52:ARG:O	9:G:54:GLN:N	2.47	0.47
9:G:64:GLU:O	9:G:67:ARG:CB	2.63	0.47
10:H:154:GLN:HG2	10:H:155:ALA:N	2.30	0.47
10:H:32:VAL:HG12	10:H:35:ARG:HH12	1.74	0.47
10:H:88:LYS:HD3	10:H:88:LYS:O	2.15	0.47
11:I:69:VAL:O	11:I:70:LYS:CB	2.63	0.47
13:K:71:ASP:CG	13:K:96:VAL:HG23	2.35	0.47
14:L:87:TYR:HD1	14:L:87:TYR:N	2.12	0.47
15:M:61:ASN:OD1	15:M:62:LYS:HG3	2.15	0.47
15:M:84:GLN:HE22	15:M:86:ALA:N	2.12	0.47
17:O:11:ARG:CG	17:O:12:ARG:N	2.78	0.47
18:P:40:LEU:HD22	18:P:40:LEU:C	2.35	0.47
18:P:63:GLY:O	18:P:96:ILE:CG2	2.63	0.47
19:Q:85:VAL:CG1	19:Q:86:LEU:N	2.78	0.47
23:U:41:ARG:HD3	23:U:42:GLY:CA	2.44	0.47
23:U:59:LEU:H	23:U:59:LEU:HD12	1.79	0.47
23:U:62:LEU:O	23:U:63:VAL:C	2.51	0.47
24:V:69:LYS:HA	24:V:72:GLU:CD	2.35	0.47
28:Z:1:MET:C	28:Z:2:LYS:HD3	2.35	0.47
3:A:55:SER:C	3:A:57:GLN:H	2.18	0.47
4:B:168:ARG:HA	4:B:173:VAL:HA	1.96	0.47
4:B:206:LEU:HD22	4:B:206:LEU:N	2.30	0.47
5:C:111:ARG:O	5:C:112:GLY:C	2.53	0.47
6:D:38:LYS:O	6:D:39:ARG:C	2.52	0.47
6:D:4:ILE:HD13	6:D:118:LEU:HD22	1.97	0.47
6:D:56:GLY:CA	6:D:73:ILE:HD13	2.43	0.47
7:E:139:LEU:CB	7:E:146:TYR:O	2.60	0.47
7:E:64:THR:HG1	7:E:102:PHE:HZ	1.60	0.47
7:E:82:LEU:CG	7:E:84:LYS:HE2	2.39	0.47
8:F:95:ARG:HB2	8:F:107:VAL:HG13	1.95	0.47
9:G:44:LEU:CA	9:G:47:LEU:HG	2.44	0.47
10:H:81:ASP:HA	10:H:118:PRO:CB	2.41	0.47
11:I:87:ILE:CA	11:I:93:PRO:HA	2.44	0.47
12:J:82:GLY:HA2	12:J:113:LYS:C	2.35	0.47
13:K:114:ALA:O	13:K:117:ALA:HB3	2.15	0.47
13:K:52:VAL:O	13:K:53:ALA:C	2.53	0.47
14:L:40:LYS:H	14:L:40:LYS:CD	1.93	0.47
14:L:74:LYS:O	14:L:77:ARG:HG2	2.14	0.47
15:M:84:GLN:NE2	15:M:86:ALA:N	2.63	0.47
16:N:61:PHE:O	16:N:62:THR:HB	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:O:84:LYS:N	17:O:84:LYS:HE2	2.30	0.47
18:P:82:ARG:HG2	18:P:82:ARG:NH1	2.28	0.47
19:Q:21:VAL:HA	19:Q:24:ILE:HD11	1.96	0.47
19:Q:23:LEU:HB2	27:Y:25:LEU:CB	2.45	0.47
19:Q:65:LEU:HD23	19:Q:68:ARG:NH1	2.30	0.47
21:S:47:LYS:O	21:S:56:PRO:CB	2.63	0.47
25:W:57:ILE:O	25:W:57:ILE:HG13	2.15	0.47
26:X:45:GLY:CA	26:X:48:GLU:CG	2.92	0.47
33:O:20:G:H2'	33:O:21:A:O5'	2.15	0.47
4:B:142:VAL:CG2	4:B:192:THR:C	2.82	0.47
4:B:227:ASN:HD21	4:B:237:GLU:CG	2.27	0.47
5:C:154:LYS:CE	5:C:155:LYS:H	2.26	0.47
5:C:181:LEU:N	5:C:181:LEU:CD2	2.73	0.47
5:C:38:THR:CG2	5:C:39:PRO:HD2	2.45	0.47
7:E:8:LYS:HB2	7:E:100:TRP:HZ2	1.79	0.47
7:E:123:ASN:C	7:E:125:PHE:N	2.66	0.47
7:E:124:SER:CB	7:E:133:LEU:HD11	2.44	0.47
8:F:125:VAL:HG13	8:F:131:VAL:HG11	1.96	0.47
9:G:81:VAL:HG21	9:G:144:VAL:CG1	2.45	0.47
9:G:87:LYS:HG3	9:G:88:ILE:N	2.29	0.47
9:G:98:ALA:HA	9:G:109:ILE:HD13	1.87	0.47
11:I:12:ASP:CG	11:I:13:ASN:N	2.67	0.47
11:I:23:ARG:HH11	11:I:23:ARG:HG2	1.79	0.47
11:I:86:ILE:O	11:I:94:ARG:CD	2.63	0.47
12:J:127:ALA:C	12:J:129:ALA:H	2.18	0.47
12:J:114:ILE:HG12	12:J:130:PHE:HB3	1.96	0.47
17:O:110:VAL:O	17:O:111:GLU:C	2.52	0.47
17:O:47:TYR:CG	17:O:48:ALA:N	2.82	0.47
17:O:49:HIS:O	17:O:52:ARG:HB2	2.15	0.47
18:P:16:PRO:O	18:P:99:ILE:O	2.32	0.47
19:Q:97:LYS:CD	19:Q:98:LYS:N	2.76	0.47
20:R:63:LYS:CD	20:R:64:LYS:N	2.77	0.47
23:U:45:PHE:CD2	23:U:78:TYR:CA	2.98	0.47
24:V:26:ARG:HG3	24:V:35:THR:H	1.79	0.47
25:W:3:LEU:HD11	25:W:8:LYS:NZ	2.30	0.47
26:X:15:TYR:N	26:X:15:TYR:CD1	2.83	0.47
26:X:49:LYS:HE3	26:X:49:LYS:CA	2.28	0.47
33:O:65:G:P	33:O:65:G:C8	3.06	0.47
33:O:8:U:O2'	33:O:9:A:H5''	2.14	0.47
3:A:163:GLU:OE2	3:A:164:PHE:O	2.32	0.47
3:A:59:VAL:HG22	3:A:166:ASN:HB3	1.97	0.47
3:A:57:GLN:HG2	3:A:202:PRO:HG3	1.95	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:93:ALA:O	4:B:104:TYR:HA	2.15	0.47
4:B:24:ILE:HG13	4:B:91:ARG:NH1	2.26	0.47
4:B:260:ARG:NH1	4:B:262:ARG:CA	2.64	0.47
5:C:102:VAL:HA	5:C:201:THR:CB	2.45	0.47
5:C:14:ILE:O	5:C:21:VAL:HG22	2.15	0.47
5:C:4:ILE:HD13	5:C:29:GLY:H	1.78	0.47
6:D:30:GLU:HA	6:D:33:ARG:CD	2.45	0.47
7:E:75:LYS:O	7:E:86:MET:HE3	2.14	0.47
7:E:79:ASN:HD22	7:E:86:MET:CG	2.28	0.47
8:F:10:PRO:HG2	8:F:12:PRO:HG3	1.96	0.47
8:F:124:GLU:OE2	8:F:134:SER:CB	2.63	0.47
8:F:145:ALA:O	8:F:149:ARG:HG2	2.15	0.47
9:G:94:ALA:HB3	9:G:95:LYS:HZ3	1.79	0.47
10:H:38:LEU:O	10:H:39:ILE:HB	2.15	0.47
11:I:65:THR:HG22	11:I:82:ASN:HD22	1.79	0.47
12:J:88:LEU:O	12:J:90:ARG:N	2.48	0.47
13:K:75:THR:HG22	13:K:76:LYS:H	1.77	0.47
14:L:56:LYS:CB	14:L:84:ALA:HA	2.44	0.47
15:M:35:ILE:CD1	15:M:65:VAL:O	2.62	0.47
16:N:27:THR:CG2	16:N:63:VAL:HG11	2.45	0.47
19:Q:7:ALA:HB3	19:Q:103:ILE:C	2.35	0.47
19:Q:43:GLY:O	19:Q:47:VAL:HG22	2.14	0.47
22:T:115:GLY:HA2	22:T:176:PRO:CB	2.44	0.47
22:T:41:LEU:C	22:T:44:PHE:CD2	2.88	0.47
23:U:22:GLY:HA3	23:U:24:LYS:NZ	2.28	0.47
23:U:45:PHE:CZ	23:U:77:ARG:HB3	2.50	0.47
24:V:76:ARG:NH1	24:V:94:LEU:HD11	2.30	0.47
19:Q:39:THR:HG21	27:Y:28:PRO:HD3	1.97	0.47
27:Y:34:PRO:CG	27:Y:52:TYR:HE2	2.28	0.47
28:Z:30:VAL:O	28:Z:33:ARG:CB	2.61	0.47
3:A:167:ASP:HB2	3:A:168:LYS:NZ	2.30	0.47
5:C:117:MET:HA	5:C:121:ASN:CA	2.45	0.47
5:C:38:THR:C	5:C:40:GLU:N	2.69	0.47
5:C:47:VAL:O	5:C:48:GLN:HG2	2.15	0.47
6:D:79:VAL:CG1	6:D:79:VAL:O	2.56	0.47
10:H:112:LYS:CA	10:H:112:LYS:CE	2.85	0.47
10:H:62:ARG:HG3	10:H:71:MET:HG2	1.94	0.47
11:I:34:THR:HG23	11:I:35:VAL:O	2.15	0.47
11:I:35:VAL:CA	11:I:62:VAL:CG1	2.85	0.47
12:J:113:LYS:HZ1	12:J:131:SER:HB2	1.78	0.47
15:M:71:ARG:HB2	15:M:108:GLY:HA3	1.97	0.47
17:O:49:HIS:C	17:O:52:ARG:HB2	2.34	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:Q:14:PRO:HG3	19:Q:101:SER:HA	1.96	0.47
21:S:67:LEU:O	21:S:68:HIS:HB2	2.15	0.47
23:U:84:LEU:CD2	23:U:84:LEU:C	4.36	0.47
25:W:47:ASN:O	25:W:51:ARG:NH1	2.41	0.47
26:X:10:LYS:CG	26:X:53:LEU:CA	2.77	0.47
26:X:11:SER:OG	26:X:12:PRO:CD	2.63	0.47
26:X:21:ALA:HA	26:X:24:LYS:CE	2.45	0.47
26:X:23:LEU:HA	26:X:26:LEU:HD12	1.97	0.47
26:X:30:ARG:HG2	26:X:30:ARG:O	2.14	0.47
33:O:19:G:C6	33:O:57:G:C2	3.03	0.47
4:B:113:VAL:HG12	4:B:114:GLY:N	2.30	0.47
4:B:245:PRO:HB2	4:B:246:PRO:CD	2.45	0.47
4:B:36:PRO:CG	4:B:61:LEU:HB3	2.44	0.47
4:B:95:LEU:H	4:B:95:LEU:CD2	2.17	0.47
5:C:102:VAL:O	5:C:170:LEU:CD1	2.62	0.47
5:C:51:PHE:CD1	5:C:76:ARG:NE	2.83	0.47
5:C:66:HIS:HD2	5:C:66:HIS:H	1.61	0.47
6:D:180:ASP:N	6:D:180:ASP:OD2	2.30	0.47
7:E:54:GLU:HA	7:E:57:ALA:HB3	1.96	0.47
8:F:126:PRO:C	8:F:128:PRO:HA	2.36	0.47
8:F:127:GLU:CG	8:F:130:ARG:HG3	2.45	0.47
8:F:49:VAL:CG1	8:F:50:VAL:N	2.74	0.47
10:H:60:LYS:HE2	17:O:67:ALA:CB	2.45	0.47
10:H:82:LYS:C	10:H:83:ILE:O	2.54	0.47
11:I:67:LYS:O	11:I:68:GLU:CG	2.59	0.47
11:I:6:THR:C	11:I:7:TYR:HD2	2.18	0.47
5:C:20:ALA:HB3	11:I:73:ASP:CA	2.45	0.47
11:I:69:VAL:HG13	11:I:76:ALA:HA	1.97	0.47
13:K:10:ARG:NE	13:K:10:ARG:HA	2.29	0.47
13:K:8:LYS:CB	13:K:12:GLN:HE21	2.28	0.47
14:L:3:HIS:HE1	14:L:4:LEU:CD1	2.28	0.47
15:M:73:LEU:HD12	15:M:73:LEU:H	1.79	0.47
16:N:69:GLY:O	16:N:70:VAL:HG23	2.15	0.47
17:O:59:ARG:O	17:O:60:LEU:C	2.54	0.47
18:P:15:GLU:HB2	18:P:16:PRO:HD2	1.88	0.47
19:Q:74:ALA:CB	19:Q:104:THR:O	2.63	0.47
20:R:17:ALA:HB1	20:R:26:TYR:CB	2.43	0.47
20:R:27:THR:HG22	20:R:28:PHE:N	2.30	0.47
22:T:17:ALA:O	22:T:20:ARG:N	2.47	0.47
28:Z:11:LYS:HA	28:Z:14:LYS:HD3	1.97	0.47
25:W:1:MET:O	25:W:2:LYS:C	2.53	0.46
25:W:51:ARG:O	25:W:55:ARG:NH1	2.48	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:X:50:VAL:HG21	26:X:54:VAL:HG11	1.96	0.46
27:Y:16:ARG:CA	27:Y:20:ARG:CZ	2.87	0.46
6:D:13:ARG:HG2	6:D:13:ARG:HH21	1.78	0.46
6:D:189:MET:SD	6:D:192:ASP:HA	2.55	0.46
33:O:58:A:O2'	33:O:59:U:OP2	2.29	0.46
3:A:47:LYS:NZ	3:A:47:LYS:HB3	2.27	0.46
4:B:181:GLU:HB2	4:B:273:ARG:HA	1.97	0.46
5:C:72:VAL:O	5:C:73:GLU:HB2	2.15	0.46
5:C:86:PRO:HG2	5:C:88:GLY:H	1.80	0.46
6:D:15:LEU:O	6:D:19:LEU:CD2	2.63	0.46
7:E:148:MET:SD	7:E:148:MET:N	2.88	0.46
7:E:74:LYS:C	7:E:75:LYS:HG2	2.35	0.46
7:E:94:LEU:HD13	7:E:98:ARG:HB2	1.96	0.46
8:F:101:ARG:O	8:F:101:ARG:NH2	2.39	0.46
8:F:141:VAL:HA	8:F:144:VAL:CB	2.45	0.46
8:F:30:LYS:CG	8:F:31:GLY:H	2.19	0.46
8:F:41:MET:N	8:F:41:MET:SD	2.87	0.46
9:G:91:SER:HB3	9:G:121:LYS:NZ	2.30	0.46
9:G:6:LEU:HD23	9:G:7:GLU:HB3	1.97	0.46
10:H:32:VAL:CG2	10:H:62:ARG:HD2	2.45	0.46
11:I:104:ARG:CG	11:I:104:ARG:HH11	2.28	0.46
11:I:63:VAL:HG23	11:I:83:ALA:O	2.16	0.46
12:J:98:GLU:O	12:J:100:LEU:O	2.33	0.46
13:K:126:PRO:HG2	13:K:127:ILE:CG2	2.45	0.46
13:K:48:GLU:HA	13:K:51:ARG:CZ	2.42	0.46
13:K:98:LYS:HD2	13:K:101:ARG:NE	2.29	0.46
14:L:9:LYS:HD3	14:L:10:LEU:N	2.30	0.46
15:M:112:PHE:N	15:M:112:PHE:CD2	2.82	0.46
15:M:39:ILE:CD1	15:M:39:ILE:H	2.21	0.46
15:M:64:GLU:N	15:M:64:GLU:OE1	4.79	0.46
11:I:78:ARG:CA	16:N:73:GLU:HB2	2.44	0.46
19:Q:78:GLU:O	19:Q:102:HIS:HD2	1.98	0.46
22:T:150:LEU:HD22	22:T:154:ASP:OD1	2.16	0.46
22:T:5:LEU:HD13	22:T:6:LYS:CA	2.43	0.46
23:U:15:ASP:HB3	23:U:20:ARG:CD	2.44	0.46
23:U:29:GLN:N	23:U:67:VAL:HG13	2.30	0.46
23:U:31:VAL:CG2	23:U:61:ALA:HA	2.41	0.46
4:B:106:ILE:HB	4:B:197:GLY:HA3	1.95	0.46
4:B:136:ILE:CG2	4:B:137:PRO:HD2	2.44	0.46
4:B:79:VAL:CG2	4:B:111:LEU:CG	2.81	0.46
5:C:51:PHE:O	5:C:53:PRO:N	2.48	0.46
6:D:11:GLY:O	6:D:12:ARG:HG3	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:5:PRO:HG3	6:D:120:LEU:CG	2.45	0.46
7:E:117:PHE:O	7:E:118:ARG:CB	2.62	0.46
7:E:139:LEU:HB3	7:E:146:TYR:C	2.33	0.46
7:E:176:LEU:HD23	7:E:176:LEU:C	3.78	0.46
8:F:103:LEU:HD23	8:F:103:LEU:C	2.35	0.46
8:F:101:ARG:NH2	8:F:121:ILE:HG23	2.28	0.46
8:F:140:LYS:CE	8:F:141:VAL:CG2	2.93	0.46
9:G:62:LYS:NZ	9:G:133:HIS:CD2	2.83	0.46
10:H:119:GLU:O	10:H:120:ARG:C	2.53	0.46
11:I:25:LEU:O	11:I:26:LYS:HB3	2.16	0.46
11:I:21:CYS:HA	11:I:41:ALA:CB	2.45	0.46
12:J:147:LEU:CD1	12:J:147:LEU:C	2.84	0.46
12:J:111:ARG:NH2	12:J:148:LEU:HG	2.31	0.46
12:J:35:HIS:N	12:J:36:LYS:HD2	2.31	0.46
12:J:61:ARG:CD	12:J:62:LEU:N	2.79	0.46
13:K:109:VAL:CB	13:K:113:GLN:HB2	2.46	0.46
13:K:134:ARG:NH2	13:K:134:ARG:HG2	2.29	0.46
16:N:78:LEU:N	16:N:78:LEU:CD2	2.77	0.46
17:O:32:PHE:HD1	17:O:33:ARG:N	2.14	0.46
17:O:88:ILE:O	17:O:89:GLU:HG3	2.15	0.46
18:P:35:LEU:HD13	18:P:61:VAL:HA	1.97	0.46
22:T:19:ARG:C	22:T:21:ALA:N	2.68	0.46
23:U:14:ARG:O	23:U:15:ASP:HB2	2.15	0.46
23:U:15:ASP:HB3	23:U:20:ARG:HH11	1.78	0.46
27:Y:33:CYS:SG	27:Y:49:CYS:HB3	2.55	0.46
6:D:150:LEU:C	6:D:169:VAL:HB	2.35	0.46
15:M:57:LYS:CG	15:M:58:LEU:N	2.69	0.46
20:R:54:VAL:CG2	20:R:77:LYS:CE	2.87	0.46
18:P:71:LEU:HD23	18:P:93:GLU:HB3	1.96	0.46
33:O:7:U:O2	33:O:66:A:H2	1.97	0.46
3:A:49:GLY:O	3:A:50:ILE:HG23	2.15	0.46
4:B:258:LYS:HG3	4:B:258:LYS:O	2.16	0.46
4:B:58:HIS:CD2	4:B:58:HIS:C	2.86	0.46
4:B:80:ALA:O	4:B:81:ALA:HB2	2.15	0.46
5:C:182:LEU:HD12	5:C:182:LEU:HA	1.74	0.46
5:C:7:VAL:HG21	5:C:27:LEU:CD2	2.45	0.46
6:D:148:SER:O	6:D:149:VAL:HG12	2.15	0.46
6:D:60:TRP:CE3	6:D:60:TRP:CA	2.98	0.46
7:E:111:LEU:O	7:E:114:ILE:HB	2.16	0.46
7:E:123:ASN:ND2	7:E:123:ASN:N	2.62	0.46
8:F:105:LEU:C	8:F:105:LEU:HD13	2.35	0.46
8:F:114:VAL:O	8:F:115:VAL:CG2	2.64	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:F:147:ASN:C	8:F:148:ILE:HD12	2.36	0.46
9:G:122:GLU:O	9:G:144:VAL:HG21	2.16	0.46
10:H:100:GLY:C	10:H:101:TYR:CD1	2.89	0.46
10:H:49:LEU:CD1	10:H:49:LEU:N	2.78	0.46
10:H:60:LYS:HZ3	17:O:63:VAL:CG1	2.26	0.46
11:I:81:ASP:CG	11:I:82:ASN:N	2.67	0.46
12:J:96:THR:O	12:J:97:PRO:O	2.34	0.46
13:K:23:GLY:HA2	13:K:99:PRO:N	2.31	0.46
13:K:23:GLY:N	13:K:99:PRO:CD	2.57	0.46
13:K:57:HIS:C	13:K:58:PHE:CD2	2.89	0.46
13:K:69:PHE:CD2	13:K:69:PHE:O	2.68	0.46
14:L:108:GLY:O	14:L:110:PRO:CD	2.63	0.46
14:L:5:LYS:HG3	14:L:8:ARG:HH22	1.80	0.46
14:L:60:LEU:HD12	14:L:61:HIS:N	2.29	0.46
16:N:46:GLU:O	16:N:63:VAL:HG21	2.15	0.46
16:N:62:THR:OG1	16:N:74:ARG:C	2.54	0.46
16:N:97:ALA:O	16:N:98:LYS:HD2	2.16	0.46
18:P:25:LEU:HD12	18:P:94:LEU:HD12	1.97	0.46
22:T:10:ARG:NH1	22:T:36:LYS:HD3	2.30	0.46
24:V:76:ARG:NH1	24:V:90:ILE:HG23	2.21	0.46
27:Y:57:VAL:HG23	27:Y:58:LEU:N	2.30	0.46
12:J:29:LYS:HG2	12:J:29:LYS:O	2.14	0.46
19:Q:14:PRO:O	19:Q:18:ARG:NH1	2.49	0.46
33:O:62:A:C2'	33:O:63:C:C6	2.83	0.46
3:A:20:ILE:CB	3:A:224:ARG:HB3	2.45	0.46
3:A:224:ARG:NE	3:A:225:ILE:H	2.13	0.46
3:A:22:THR:O	3:A:225:ILE:CG2	2.63	0.46
4:B:101:GLU:C	4:B:102:LYS:NZ	2.69	0.46
4:B:16:MET:CE	4:B:207:GLY:HA2	2.44	0.46
4:B:260:ARG:HH12	4:B:262:ARG:CA	2.22	0.46
5:C:120:TRP:CG	5:C:155:LYS:HB3	2.50	0.46
6:D:30:GLU:CA	6:D:33:ARG:CZ	2.91	0.46
6:D:36:LEU:HD13	6:D:39:ARG:NH2	2.31	0.46
7:E:146:TYR:CD1	7:E:147:ASP:N	2.83	0.46
7:E:16:ARG:N	7:E:17:PRO:HD2	2.31	0.46
7:E:79:ASN:ND2	7:E:86:MET:CG	2.78	0.46
8:F:92:ILE:CG1	8:F:92:ILE:O	2.62	0.46
9:G:133:HIS:CD2	9:G:136:VAL:HB	2.47	0.46
9:G:29:TYR:N	9:G:32:PRO:HD2	2.31	0.46
9:G:40:THR:HG1	9:G:43:ASN:CG	2.18	0.46
9:G:81:VAL:CG2	9:G:82:ARG:H	2.24	0.46
10:H:112:LYS:HD3	10:H:116:THR:CG2	2.45	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:J:86:LYS:HG2	12:J:118:GLY:HA3	1.98	0.46
12:J:123:LEU:HD23	12:J:124:LYS:O	2.16	0.46
14:L:103:ARG:HG3	19:Q:40:ASN:OD1	2.14	0.46
15:M:25:ARG:HH21	15:M:40:ILE:CG2	2.29	0.46
15:M:43:GLU:CG	15:M:44:LYS:HD3	2.44	0.46
17:O:40:PHE:CD2	17:O:40:PHE:N	2.81	0.46
18:P:71:LEU:C	18:P:72:VAL:HG23	2.35	0.46
19:Q:48:ALA:O	19:Q:50:VAL:N	2.48	0.46
22:T:102:LEU:HD13	22:T:124:ILE:N	2.30	0.46
22:T:10:ARG:HG3	22:T:37:VAL:N	2.30	0.46
22:T:69:THR:HB	22:T:88:PHE:HZ	1.81	0.46
23:U:49:LYS:C	23:U:81:VAL:HB	2.35	0.46
24:V:62:VAL:CG2	24:V:63:ALA:N	2.78	0.46
24:V:73:LEU:O	24:V:75:GLU:N	2.49	0.46
6:D:98:LYS:C	6:D:100:VAL:N	2.68	0.46
19:Q:18:ARG:HD3	19:Q:18:ARG:H	1.80	0.46
19:Q:18:ARG:HD2	19:Q:76:VAL:CB	2.46	0.46
33:O:41:U:H3'	33:O:41:U:C6	2.50	0.46
4:B:111:LEU:C	4:B:111:LEU:HD13	2.35	0.46
4:B:135:PHE:N	4:B:135:PHE:CD1	2.83	0.46
4:B:144:ALA:CB	4:B:192:THR:HG22	2.43	0.46
4:B:192:THR:HG23	4:B:192:THR:O	2.15	0.46
6:D:130:LYS:HG3	6:D:132:LYS:HG3	1.96	0.46
6:D:75:ALA:O	6:D:78:PHE:CE2	2.69	0.46
8:F:118:PRO:CG	8:F:121:ILE:HB	2.45	0.46
8:F:88:LEU:HB3	8:F:130:ARG:HA	1.96	0.46
8:F:89:ILE:CG1	8:F:94:TYR:CD1	2.99	0.46
10:H:25:LYS:CD	10:H:25:LYS:N	2.78	0.46
10:H:38:LEU:O	10:H:159:GLU:HB2	2.16	0.46
12:J:115:LEU:HG	12:J:116:GLY:N	2.29	0.46
12:J:122:PRO:CB	12:J:142:GLY:HA2	2.27	0.46
12:J:27:HIS:O	12:J:28:GLY:O	2.33	0.46
12:J:35:HIS:O	12:J:36:LYS:HB2	2.15	0.46
12:J:85:LEU:C	12:J:87:ASP:N	2.68	0.46
13:K:55:VAL:O	13:K:58:PHE:O	2.33	0.46
14:L:79:LEU:HD23	14:L:82:GLU:OE2	2.16	0.46
15:M:82:ILE:CG2	15:M:85:VAL:HG11	2.44	0.46
16:N:50:ILE:HG23	16:N:62:THR:HG23	1.98	0.46
20:R:12:VAL:HG11	20:R:27:THR:HB	1.96	0.46
20:R:77:LYS:HE3	20:R:77:LYS:CA	2.46	0.46
22:T:56:VAL:HG12	22:T:70:LEU:HG	1.98	0.46
23:U:14:ARG:HE	23:U:14:ARG:HA	1.80	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:V:11:ARG:HH22	24:V:60:PHE:CB	2.29	0.46
24:V:40:ARG:CG	24:V:41:ARG:N	2.78	0.46
25:W:4:SER:HB2	25:W:6:VAL:CG2	2.45	0.46
26:X:17:LYS:O	26:X:20:LYS:HB2	2.16	0.46
33:O:64:A:H3'	33:O:65:G:C8	2.50	0.46
3:A:201:LYS:CG	3:A:209:PHE:HZ	2.29	0.46
4:B:126:GLN:HG3	4:B:126:GLN:O	2.14	0.46
5:C:5:LEU:HD22	5:C:76:ARG:HD2	1.98	0.46
5:C:78:LEU:CA	5:C:79:ARG:HE	2.28	0.46
6:D:5:PRO:CB	6:D:9:PRO:HG2	2.46	0.46
7:E:112:PRO:C	7:E:114:ILE:N	2.69	0.46
7:E:50:ALA:C	7:E:53:LEU:HG	2.36	0.46
8:F:172:LYS:HZ1	8:F:173:PRO:HD2	1.80	0.46
9:G:125:GLU:CG	9:G:126:TYR:H	2.17	0.46
10:H:35:ARG:HB2	10:H:73:ASP:OD2	2.15	0.46
10:H:71:MET:HG2	10:H:72:GLY:H	1.80	0.46
11:I:94:ARG:HD2	11:I:94:ARG:N	2.24	0.46
12:J:125:VAL:O	12:J:145:PRO:CG	2.64	0.46
14:L:54:LEU:HD22	14:L:61:HIS:CG	2.51	0.46
17:O:81:HIS:HE1	17:O:85:LYS:HB2	1.77	0.46
18:P:19:LYS:HD2	18:P:20:LEU:N	2.30	0.46
19:Q:79:GLY:CA	19:Q:102:HIS:CD2	2.98	0.46
19:Q:33:ARG:HG3	19:Q:34:ASN:H	1.80	0.46
19:Q:4:LYS:HZ1	19:Q:62:HIS:HE1	1.64	0.46
19:Q:70:TYR:CE2	19:Q:72:LYS:HG2	2.50	0.46
20:R:12:VAL:O	20:R:13:LEU:HB3	2.16	0.46
23:U:19:LYS:O	23:U:20:ARG:O	2.34	0.46
24:V:23:LYS:HG2	24:V:38:SER:O	2.16	0.46
25:W:53:LEU:O	25:W:54:LYS:CB	2.62	0.46
22:T:108:PRO:HG3	22:T:141:VAL:CG1	2.32	0.46
33:O:27:C:N3	33:O:28:C:N4	2.64	0.46
14:L:66:VAL:CB	14:L:70:LEU:HD12	2.45	0.46
14:L:86:ARG:NE	14:L:87:TYR:HE1	2.13	0.46
17:O:90:VAL:HG11	18:P:39:LEU:HD21	1.97	0.46
11:I:98:VAL:HG21	11:I:118:ALA:HA	1.98	0.46
33:O:23:A:C5	33:O:24:G:N7	2.84	0.46
4:B:17:THR:CB	4:B:204:ILE:HA	2.45	0.46
4:B:70:TRP:CZ3	4:B:190:TYR:CB	2.99	0.46
4:B:266:SER:O	4:B:270:ILE:HG12	2.16	0.46
4:B:53:PHE:CB	4:B:218:ARG:HB3	2.46	0.46
5:C:109:LYS:HD2	5:C:191:PRO:HD3	1.97	0.46
5:C:81:ILE:HD12	5:C:81:ILE:H	1.72	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:105:LEU:HD21	6:D:109:VAL:HG13	1.97	0.46
6:D:131:THR:OG1	6:D:163:ARG:HD3	2.16	0.46
7:E:78:SER:O	7:E:79:ASN:HB3	2.15	0.46
7:E:93:THR:CG2	7:E:94:LEU:H	2.27	0.46
8:F:140:LYS:HE3	8:F:141:VAL:CG2	2.45	0.46
8:F:141:VAL:HA	8:F:144:VAL:HB	1.97	0.46
9:G:7:GLU:H	9:G:8:PRO:CD	2.29	0.46
9:G:94:ALA:CA	9:G:97:ILE:HG23	2.46	0.46
10:H:146:TYR:CE2	10:H:148:GLY:N	2.84	0.46
11:I:6:THR:CG2	11:I:7:TYR:N	2.59	0.46
12:J:27:HIS:O	12:J:28:GLY:C	2.54	0.46
12:J:50:ARG:CD	12:J:51:PHE:N	2.70	0.46
6:D:183:ARG:NH1	12:J:7:ARG:HB3	2.30	0.46
13:K:25:ASP:CB	13:K:102:VAL:H	2.28	0.46
13:K:89:ASN:C	13:K:91:GLU:N	2.68	0.46
13:K:8:LYS:CE	13:K:70:PRO:HB2	2.45	0.46
14:L:117:VAL:CG1	14:L:118:GLU:N	2.78	0.46
14:L:23:ASN:HA	14:L:26:LYS:HB3	1.97	0.46
14:L:35:THR:O	14:L:36:THR:CG2	2.64	0.46
21:S:46:LYS:N	21:S:57:GLN:H	2.13	0.46
24:V:90:ILE:HB	24:V:91:LYS:HE3	1.97	0.46
26:X:17:LYS:HE3	26:X:21:ALA:HB2	1.98	0.46
11:I:120:GLU:OE1	11:I:120:GLU:HA	2.16	0.46
18:P:2:PHE:N	18:P:2:PHE:HD1	2.13	0.46
19:Q:36:LEU:O	19:Q:37:ARG:C	2.54	0.46
22:T:132:ASN:O	22:T:134:PRO:CD	2.63	0.46
16:N:3:ARG:HB3	16:N:7:ILE:HD13	1.96	0.46
19:Q:47:VAL:O	19:Q:51:LEU:CD1	2.64	0.46
22:T:59:LEU:HD22	22:T:59:LEU:N	2.31	0.46
23:U:22:GLY:H	23:U:39:ARG:HB3	1.81	0.46
3:A:165:ARG:NH2	3:A:172:ILE:HD12	2.30	0.46
3:A:184:GLU:C	3:A:186:LEU:H	2.18	0.46
3:A:195:ARG:C	3:A:197:LEU:H	2.17	0.46
4:B:161:THR:O	4:B:196:VAL:HG23	2.16	0.46
4:B:62:TYR:CD1	4:B:62:TYR:O	2.67	0.46
6:D:105:LEU:HD11	6:D:109:VAL:HG21	1.97	0.46
6:D:110:ALA:HB1	6:D:114:ARG:NH1	2.31	0.46
7:E:34:LEU:O	7:E:35:GLU:HG3	2.16	0.46
8:F:8:PRO:HA	8:F:49:VAL:HG13	1.98	0.46
9:G:115:ALA:CB	9:G:129:THR:O	2.52	0.46
9:G:97:ILE:O	9:G:100:ALA:HB3	2.16	0.46
10:H:57:LEU:HD12	10:H:139:LEU:HB3	1.98	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:81:ASP:CG	10:H:147:ALA:HB1	2.36	0.46
11:I:87:ILE:HD11	11:I:114:ILE:HG21	1.98	0.46
11:I:11:ALA:O	11:I:99:PHE:CD2	2.68	0.46
13:K:103:MET:CB	13:K:104:PHE:CD1	2.99	0.46
16:N:104:ASN:OD1	16:N:104:ASN:N	2.49	0.46
20:R:32:PRO:HG3	20:R:72:LYS:NZ	2.31	0.46
21:S:71:LYS:HG3	21:S:96:ILE:HD11	1.97	0.46
24:V:12:PRO:C	24:V:66:HIS:HE1	2.19	0.46
24:V:54:ALA:HA	24:V:58:ILE:HG13	1.97	0.46
20:R:25:LYS:CG	20:R:26:TYR:N	2.79	0.46
23:U:67:VAL:CG2	23:U:79:VAL:HG11	2.45	0.46
24:V:26:ARG:HB3	24:V:35:THR:N	2.31	0.46
26:X:55:ARG:HG3	26:X:56:VAL:N	2.30	0.46
16:N:135:VAL:CG1	16:N:136:GLN:N	2.70	0.46
33:O:31:A:H2	33:O:39:U:C2	2.33	0.46
15:M:30:ARG:HD3	15:M:32:LEU:HA	1.97	0.46
3:A:49:GLY:O	3:A:50:ILE:CG2	2.64	0.46
4:B:103:ARG:HA	4:B:103:ARG:HE	1.81	0.46
4:B:67:PHE:O	4:B:153:ALA:CB	2.64	0.46
5:C:117:MET:HB3	5:C:136:ARG:HH21	1.72	0.46
5:C:117:MET:CA	5:C:121:ASN:HA	2.46	0.46
5:C:133:LYS:C	5:C:134:ILE:CG1	2.81	0.46
5:C:102:VAL:N	5:C:201:THR:OG1	2.48	0.46
7:E:120:LEU:HG	7:E:179:PRO:CD	2.46	0.46
7:E:14:GLU:O	7:E:17:PRO:HG2	2.15	0.46
8:F:139:GLN:C	8:F:141:VAL:N	2.70	0.46
9:G:4:ILE:HD11	9:G:18:VAL:HG13	1.96	0.46
9:G:1:MET:O	9:G:3:VAL:HG23	2.16	0.46
10:H:44:LYS:C	10:H:84:ARG:HB2	2.37	0.46
11:I:87:ILE:O	11:I:88:ASN:C	2.53	0.46
13:K:32:PHE:HA	13:K:132:VAL:CG1	2.46	0.46
13:K:51:ARG:NH1	13:K:52:VAL:H	2.10	0.46
14:L:104:ARG:HH21	14:L:107:ASP:CB	2.22	0.46
14:L:22:ARG:O	14:L:26:LYS:CB	2.54	0.46
14:L:87:TYR:HE2	14:L:116:LEU:HB3	1.80	0.46
15:M:103:GLU:HG2	15:M:104:GLY:H	1.81	0.46
16:N:19:LEU:HD12	16:N:79:HIS:CD2	2.51	0.46
16:N:6:LEU:HD23	16:N:6:LEU:C	2.36	0.46
17:O:15:LYS:HA	17:O:18:LEU:CD1	2.45	0.46
18:P:20:LEU:N	18:P:20:LEU:HD12	2.31	0.46
20:R:62:LYS:HE3	20:R:62:LYS:CA	2.46	0.46
22:T:150:LEU:HD13	22:T:151:HIS:N	2.30	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:T:151:HIS:HB3	22:T:170:THR:CA	2.46	0.46
23:U:16:SER:O	23:U:20:ARG:CA	2.63	0.46
24:V:51:VAL:HG21	24:V:60:PHE:CB	2.28	0.46
24:V:50:ARG:HG3	24:V:60:PHE:O	2.14	0.46
24:V:70:VAL:HG12	24:V:71:TYR:H	1.80	0.46
24:V:58:ILE:CG2	24:V:86:SER:CB	2.89	0.46
28:Z:39:ARG:HH11	28:Z:39:ARG:CG	2.28	0.46
33:0:20:G:C8	33:0:20:G:H3'	2.50	0.46
13:K:25:ASP:CG	13:K:102:VAL:CG2	2.84	0.46
13:K:125:LEU:HD13	13:K:126:PRO:CG	2.46	0.46
22:T:5:LEU:HB2	22:T:57:ILE:HG12	1.96	0.46
22:T:97:GLU:HG3	22:T:97:GLU:O	2.16	0.46
16:N:129:ARG:HA	16:N:129:ARG:HD2	1.68	0.46
7:E:85:GLY:O	7:E:86:MET:CB	2.60	0.46
33:0:15:G:H8	33:0:15:G:H3'	1.80	0.46
3:A:20:ILE:HG12	3:A:21:TYR:N	2.31	0.46
3:A:28:HIS:O	3:A:29:LEU:C	2.53	0.46
3:A:50:ILE:HD12	3:A:50:ILE:C	2.36	0.46
4:B:263:ARG:O	4:B:265:PRO:HD3	2.16	0.46
4:B:65:ILE:HD13	4:B:105:ILE:CA	2.39	0.46
5:C:174:ASP:OD1	5:C:176:ILE:HD12	2.16	0.46
5:C:4:ILE:H	5:C:198:VAL:HB	1.80	0.46
5:C:52:LEU:H	5:C:76:ARG:HB2	1.81	0.46
6:D:153:THR:C	6:D:155:ASN:H	2.20	0.46
6:D:196:VAL:C	6:D:197:PHE:HD1	2.18	0.46
6:D:69:ARG:CD	6:D:70:HIS:N	2.78	0.46
7:E:101:ILE:HA	7:E:104:GLU:HG3	1.97	0.46
7:E:8:LYS:C	7:E:10:LYS:N	2.68	0.46
7:E:124:SER:C	7:E:131:TYR:HE2	2.15	0.46
9:G:139:GLN:N	9:G:139:GLN:OE1	2.49	0.46
9:G:76:THR:HG22	9:G:77:LEU:N	2.30	0.46
10:H:36:TRP:HB3	10:H:156:GLN:HG2	1.98	0.46
10:H:39:ILE:CG1	10:H:40:ASP:H	2.15	0.46
12:J:39:LYS:CA	12:J:39:LYS:NZ	2.79	0.46
13:K:106:VAL:HG11	13:K:114:ALA:HB1	1.97	0.46
13:K:116:GLU:HA	13:K:116:GLU:OE1	2.15	0.46
16:N:61:PHE:CZ	16:N:78:LEU:HB3	2.51	0.46
19:Q:3:ALA:CB	19:Q:107:LEU:O	2.62	0.46
19:Q:12:ILE:O	19:Q:99:ARG:O	2.34	0.46
24:V:26:ARG:HB3	24:V:35:THR:O	2.16	0.46
24:V:38:SER:N	24:V:39:LYS:HZ1	2.13	0.46
24:V:71:TYR:O	24:V:74:VAL:HB	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:W:1:MET:SD	25:W:1:MET:N	2.82	0.46
27:Y:40:LYS:HE2	27:Y:46:CYS:N	2.31	0.46
33:O:24:G:H3'	33:O:25:C:H6	1.77	0.46
7:E:28:VAL:C	7:E:30:GLU:H	2.19	0.46
7:E:82:LEU:CD1	7:E:84:LYS:HG2	2.43	0.46
15:M:94:TYR:CE2	15:M:99:LYS:HG2	2.50	0.46
19:Q:47:VAL:O	19:Q:51:LEU:HD13	2.16	0.46
15:M:34:HIS:HB2	15:M:36:TYR:CE1	2.51	0.46
19:Q:3:ALA:HB3	19:Q:108:GLY:HA2	1.97	0.46
3:A:23:ILE:O	3:A:187:ALA:CB	2.64	0.45
4:B:172:TYR:OH	4:B:186:HIS:ND1	2.46	0.45
4:B:98:VAL:C	4:B:100:GLY:N	2.69	0.45
5:C:34:VAL:HA	5:C:67:PHE:CE1	2.51	0.45
6:D:11:GLY:C	6:D:12:ARG:CG	2.85	0.45
6:D:151:LEU:HD13	6:D:188:VAL:HG12	1.97	0.45
6:D:151:LEU:CD1	6:D:188:VAL:O	2.63	0.45
6:D:46:THR:C	6:D:47:LYS:HG3	2.37	0.45
7:E:128:ARG:HA	7:E:163:ALA:O	2.16	0.45
7:E:6:ALA:O	7:E:7:LEU:C	2.54	0.45
8:F:108:GLY:O	8:F:113:VAL:HG21	2.14	0.45
8:F:149:ARG:O	8:F:151:ILE:N	2.49	0.45
8:F:38:SER:CB	8:F:39:PRO:HD2	2.41	0.45
9:G:31:LEU:O	9:G:33:ARG:N	2.48	0.45
10:H:65:TRP:CZ2	10:H:67:PRO:HA	2.50	0.45
10:H:71:MET:CG	10:H:72:GLY:N	2.76	0.45
11:I:87:ILE:O	11:I:88:ASN:O	2.33	0.45
12:J:103:ALA:O	12:J:105:LEU:N	2.44	0.45
12:J:107:LYS:O	12:J:108:LYS:O	2.33	0.45
12:J:35:HIS:H	12:J:36:LYS:HD2	1.81	0.45
12:J:90:ARG:CZ	12:J:91:PHE:HB3	2.46	0.45
17:O:88:ILE:HD13	18:P:53:GLU:CA	2.34	0.45
17:O:112:ARG:HH21	18:P:50:PRO:HD2	1.78	0.45
19:Q:29:LEU:CD1	19:Q:67:ASP:N	2.74	0.45
20:R:78:LYS:CD	20:R:79:ALA:N	2.77	0.45
21:S:48:ALA:HA	21:S:56:PRO:HD3	1.98	0.45
22:T:14:LYS:NZ	22:T:16:SER:HB3	2.31	0.45
22:T:17:ALA:HA	22:T:20:ARG:NH2	2.30	0.45
23:U:49:LYS:C	23:U:51:VAL:N	2.67	0.45
23:U:51:VAL:HG22	23:U:81:VAL:HG23	1.97	0.45
24:V:17:SER:C	24:V:44:PRO:HG2	2.34	0.45
24:V:71:TYR:O	24:V:74:VAL:N	2.49	0.45
25:W:35:LEU:C	25:W:37:PHE:H	2.20	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:X:4:LEU:HA	26:X:58:VAL:HA	1.97	0.45
16:N:109:GLU:O	16:N:112:ARG:HB3	2.16	0.45
33:O:15:G:C8	33:O:15:G:H3'	2.51	0.45
13:K:67:ARG:O	13:K:68:ILE:CB	2.64	0.45
20:R:25:LYS:CE	20:R:26:TYR:CZ	2.99	0.45
25:W:22:GLU:O	25:W:23:LYS:C	2.52	0.45
33:O:24:G:C3'	33:O:25:C:C6	3.00	0.45
3:A:183:PRO:HG2	3:A:184:GLU:OE2	2.16	0.45
3:A:223:VAL:O	3:A:224:ARG:CB	2.64	0.45
3:A:22:THR:C	3:A:225:ILE:HG23	2.37	0.45
4:B:124:PRO:O	4:B:129:ASN:CG	2.55	0.45
4:B:138:VAL:C	4:B:140:THR:H	2.19	0.45
5:C:195:LEU:HD12	5:C:196:VAL:N	2.31	0.45
5:C:199:ARG:HG3	5:C:199:ARG:HH11	1.81	0.45
6:D:27:LEU:HD23	6:D:28:LEU:HD23	1.98	0.45
6:D:76:PRO:CB	6:D:82:GLY:O	2.64	0.45
6:D:7:LEU:H	6:D:7:LEU:HD12	1.82	0.45
7:E:11:TYR:O	7:E:16:ARG:HG3	2.16	0.45
7:E:21:ARG:C	7:E:23:PHE:N	2.67	0.45
7:E:93:THR:O	7:E:94:LEU:HG	2.16	0.45
8:F:117:PRO:CB	8:F:121:ILE:HG21	2.47	0.45
8:F:148:ILE:HG23	8:F:148:ILE:O	2.16	0.45
8:F:89:ILE:HG12	8:F:94:TYR:HA	1.97	0.45
9:G:65:ALA:HB3	9:G:133:HIS:CE1	2.50	0.45
10:H:30:LYS:O	10:H:31:GLN:CB	2.64	0.45
10:H:40:ASP:HB2	10:H:77:VAL:CG1	2.39	0.45
6:D:30:GLU:CD	12:J:13:ASN:CG	2.74	0.45
14:L:86:ARG:CD	14:L:87:TYR:HE1	2.29	0.45
16:N:106:SER:HA	16:N:110:ILE:HG12	1.98	0.45
16:N:123:LYS:CB	16:N:123:LYS:HZ3	2.23	0.45
16:N:33:LYS:HD3	16:N:41:ARG:CB	2.30	0.45
16:N:64:ARG:O	16:N:65:LYS:CB	2.64	0.45
17:O:56:ASP:O	17:O:58:ARG:N	2.50	0.45
18:P:26:ASP:O	18:P:27:ALA:HB2	2.15	0.45
18:P:52:VAL:O	18:P:52:VAL:CG2	2.60	0.45
21:S:97:ARG:HD3	21:S:99:CYS:CA	2.46	0.45
22:T:150:LEU:O	22:T:170:THR:HA	2.17	0.45
23:U:32:ARG:N	23:U:61:ALA:CB	2.74	0.45
23:U:59:LEU:HD12	23:U:59:LEU:N	2.30	0.45
24:V:37:ILE:C	24:V:39:LYS:HZ1	2.20	0.45
8:F:105:LEU:HD11	8:F:107:VAL:CG2	2.31	0.45
13:K:37:LEU:HG	13:K:128:LYS:CA	2.46	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:L:113:LEU:HD22	14:L:114:VAL:N	2.30	0.45
19:Q:34:ASN:O	19:Q:35:ILE:C	2.55	0.45
26:X:45:GLY:CA	26:X:48:GLU:HG2	2.46	0.45
12:J:95:VAL:O	12:J:125:VAL:HG23	2.17	0.45
3:A:206:LYS:HB3	3:A:207:GLY:H	1.60	0.45
33:O:46:G:C5'	33:O:46:G:C8	2.99	0.45
3:A:172:ILE:CG1	3:A:173:HIS:N	2.80	0.45
3:A:201:LYS:C	3:A:201:LYS:HD2	2.37	0.45
4:B:150:LYS:HD3	4:B:150:LYS:N	2.30	0.45
4:B:79:VAL:HB	4:B:111:LEU:HD12	1.91	0.45
4:B:82:ILE:HG21	4:B:91:ARG:NH1	2.31	0.45
6:D:149:VAL:N	6:D:184:THR:HB	2.31	0.45
6:D:183:ARG:CZ	12:J:7:ARG:CB	2.89	0.45
6:D:56:GLY:O	6:D:57:ARG:O	2.35	0.45
8:F:122:THR:C	8:F:123:PHE:HD1	2.17	0.45
8:F:167:GLU:HA	8:F:168:PRO:HD2	1.84	0.45
8:F:34:GLU:C	8:F:35:VAL:HG23	2.37	0.45
8:F:41:MET:HA	8:F:54:ARG:CA	2.46	0.45
8:F:99:VAL:HG22	8:F:104:GLU:HB2	1.97	0.45
11:I:75:SER:O	16:N:74:ARG:NH1	2.49	0.45
12:J:18:ARG:O	12:J:20:GLY:N	2.49	0.45
12:J:53:GLY:C	12:J:55:ARG:N	2.69	0.45
13:K:72:LYS:HD3	13:K:73:PRO:N	2.31	0.45
14:L:20:LEU:HD23	14:L:24:GLN:CG	2.47	0.45
15:M:105:ALA:O	15:M:108:GLY:O	2.34	0.45
17:O:89:GLU:C	17:O:90:VAL:HG23	2.37	0.45
18:P:71:LEU:CD2	18:P:71:LEU:N	2.80	0.45
24:V:23:LYS:CB	24:V:38:SER:O	2.64	0.45
25:W:14:ARG:HB3	25:W:54:LYS:HZ1	1.76	0.45
25:W:38:GLN:O	25:W:40:SER:N	2.48	0.45
25:W:8:LYS:O	25:W:9:GLN:O	2.34	0.45
25:W:5:GLU:O	25:W:6:VAL:C	2.54	0.45
20:R:28:PHE:CE1	20:R:78:LYS:HB2	2.50	0.45
22:T:11:GLU:CG	22:T:12:GLY:N	2.78	0.45
15:M:17:ARG:HH11	15:M:89:ARG:NE	2.13	0.45
21:S:47:LYS:C	21:S:56:PRO:HB3	2.37	0.45
3:A:201:LYS:NZ	3:A:203:GLU:HA	2.23	0.45
4:B:101:GLU:C	4:B:102:LYS:HZ3	2.19	0.45
4:B:142:VAL:HG23	4:B:193:VAL:HA	1.99	0.45
5:C:11:MET:HE2	5:C:12:THR:CA	2.47	0.45
5:C:38:THR:HG21	5:C:40:GLU:CD	2.34	0.45
6:D:159:ARG:HG2	6:D:172:ALA:CB	2.40	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:178:VAL:HG23	6:D:179:TYR:H	1.82	0.45
6:D:24:ASN:O	6:D:27:LEU:HD22	2.17	0.45
6:D:64:HIS:O	6:D:65:THR:HG22	2.16	0.45
7:E:60:LEU:H	7:E:60:LEU:HD23	1.80	0.45
7:E:46:ALA:CB	7:E:85:GLY:N	2.80	0.45
7:E:8:LYS:O	7:E:12:TYR:CD2	2.69	0.45
8:F:19:VAL:N	8:F:24:VAL:HA	2.32	0.45
8:F:17:VAL:CG2	8:F:44:VAL:HG23	2.41	0.45
10:H:112:LYS:O	10:H:112:LYS:NZ	2.47	0.45
10:H:79:ASN:N	10:H:148:GLY:N	2.64	0.45
10:H:80:ALA:H	10:H:147:ALA:CA	2.27	0.45
12:J:41:ARG:CD	12:J:45:LEU:HD12	2.46	0.45
12:J:90:ARG:HG2	12:J:91:PHE:N	2.31	0.45
13:K:59:ARG:O	22:T:184:ALA:CB	2.61	0.45
14:L:54:LEU:HD23	14:L:57:ARG:HH11	1.82	0.45
14:L:61:HIS:O	14:L:62:ALA:C	2.54	0.45
15:M:27:SER:OG	15:M:89:ARG:NH2	2.50	0.45
15:M:62:LYS:NZ	15:M:62:LYS:HB3	2.31	0.45
17:O:105:VAL:HG22	18:P:43:GLU:O	2.16	0.45
20:R:8:ILE:HD13	25:W:26:ARG:NH2	2.30	0.45
22:T:103:ARG:HD2	22:T:136:PHE:CD1	2.51	0.45
22:T:166:SER:OG	22:T:169:GLU:HB2	2.17	0.45
22:T:174:VAL:O	22:T:175:VAL:CG2	2.58	0.45
22:T:24:LEU:CG	22:T:40:ASP:C	2.77	0.45
22:T:75:ASN:O	22:T:84:GLU:HG2	2.16	0.45
23:U:41:ARG:HH11	23:U:41:ARG:HG3	1.82	0.45
22:T:67:LEU:CD1	22:T:69:THR:OG1	2.65	0.45
11:I:77:ILE:HG12	16:N:74:ARG:HA	1.97	0.45
15:M:94:TYR:CE2	15:M:99:LYS:CA	2.97	0.45
16:N:32:TYR:CD1	16:N:32:TYR:C	2.89	0.45
16:N:92:GLY:O	16:N:93:ARG:CB	2.64	0.45
6:D:41:ARG:CD	6:D:43:THR:HG23	2.47	0.45
4:B:21:PHE:CA	4:B:24:ILE:CB	2.69	0.45
5:C:109:LYS:HZ2	14:L:4:LEU:CD2	2.30	0.45
5:C:176:ILE:HD12	5:C:176:ILE:N	2.32	0.45
5:C:34:VAL:O	5:C:35:GLN:CB	2.58	0.45
5:C:7:VAL:O	5:C:26:ILE:HD12	2.17	0.45
6:D:166:PRO:O	6:D:168:VAL:N	2.50	0.45
7:E:124:SER:HB3	7:E:133:LEU:CD1	2.47	0.45
7:E:139:LEU:HD13	7:E:139:LEU:N	2.28	0.45
8:F:86:GLU:C	8:F:87:LEU:HD13	2.37	0.45
10:H:79:ASN:CA	10:H:147:ALA:CA	2.80	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:88:ASN:CB	11:I:90:GLN:NE2	2.78	0.45
14:L:68:ARG:O	14:L:69:ASP:OD2	2.35	0.45
15:M:75:GLU:CA	15:M:78:LEU:HD12	2.35	0.45
16:N:30:VAL:O	16:N:85:LYS:CG	2.61	0.45
17:O:109:LEU:CD2	17:O:109:LEU:H	2.29	0.45
17:O:37:GLU:HA	17:O:40:PHE:CE1	2.51	0.45
19:Q:88:ARG:CD	19:Q:92:ARG:N	2.80	0.45
24:V:85:LEU:CD1	24:V:86:SER:H	2.24	0.45
28:Z:1:MET:HG2	28:Z:1:MET:O	2.16	0.45
5:C:101:ARG:NH2	5:C:169:ASN:HB3	2.32	0.45
7:E:138:GLN:OE1	7:E:152:LEU:HA	2.16	0.45
7:E:3:LEU:N	7:E:3:LEU:HD12	2.30	0.45
12:J:122:PRO:CG	12:J:141:ALA:O	2.63	0.45
13:K:124:LYS:CE	13:K:124:LYS:O	2.65	0.45
19:Q:55:ALA:O	19:Q:59:VAL:HB	2.17	0.45
20:R:7:VAL:O	20:R:7:VAL:HG12	2.17	0.45
22:T:101:PRO:HB2	22:T:136:PHE:HB2	1.95	0.45
22:T:102:LEU:HD11	22:T:124:ILE:HB	1.97	0.45
11:I:87:ILE:HA	11:I:93:PRO:CA	2.47	0.45
20:R:32:PRO:HA	20:R:75:ASP:HB3	1.97	0.45
33:O:33:U:C5	33:O:35:A:OP2	2.69	0.45
4:B:131:LEU:CA	4:B:190:TYR:CD1	3.00	0.45
4:B:262:ARG:C	4:B:264:LYS:H	2.19	0.45
5:C:115:GLY:O	5:C:118:LYS:HB2	2.17	0.45
5:C:117:MET:CA	5:C:122:PHE:N	2.55	0.45
5:C:13:ARG:HA	5:C:23:VAL:HG23	1.88	0.45
5:C:145:LYS:CA	5:C:148:GLY:CA	2.94	0.45
5:C:24:THR:CB	5:C:186:GLY:CA	2.79	0.45
6:D:120:LEU:CD1	6:D:123:ALA:CB	2.83	0.45
7:E:107:LEU:HD22	7:E:111:LEU:HD21	1.98	0.45
7:E:117:PHE:O	7:E:118:ARG:HB3	2.16	0.45
7:E:124:SER:CB	7:E:133:LEU:CD1	2.94	0.45
8:F:121:ILE:O	8:F:123:PHE:HE1	1.99	0.45
8:F:39:PRO:O	8:F:40:GLU:HB2	2.17	0.45
8:F:41:MET:C	8:F:42:ARG:HG2	2.36	0.45
10:H:69:VAL:HG22	10:H:70:ALA:N	2.32	0.45
10:H:72:GLY:C	10:H:73:ASP:OD2	2.54	0.45
12:J:105:LEU:O	12:J:106:LEU:CB	2.64	0.45
12:J:86:LYS:HD3	12:J:118:GLY:HA3	1.98	0.45
13:K:133:ARG:HE	13:K:134:ARG:C	2.19	0.45
13:K:134:ARG:HD2	13:K:135:ASP:C	2.37	0.45
13:K:43:THR:O	13:K:44:ALA:C	2.55	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:K:44:ALA:O	13:K:47:ILE:HB	2.16	0.45
13:K:50:ALA:O	13:K:52:VAL:N	2.50	0.45
13:K:67:ARG:O	13:K:68:ILE:HG23	2.15	0.45
15:M:67:ARG:H	15:M:100:ALA:HB1	1.82	0.45
16:N:41:ARG:NH2	16:N:43:GLN:HG2	2.32	0.45
16:N:89:VAL:O	16:N:90:GLN:NE2	2.50	0.45
18:P:40:LEU:HD13	18:P:41:GLY:C	2.37	0.45
21:S:93:GLY:O	21:S:94:LYS:CG	2.65	0.45
23:U:27:GLU:CD	23:U:69:PHE:HB3	2.36	0.45
24:V:71:TYR:C	24:V:73:LEU:N	2.69	0.45
25:W:47:ASN:C	25:W:51:ARG:NH1	2.66	0.45
4:B:130:ALA:CB	4:B:190:TYR:CE1	2.98	0.45
8:F:23:ARG:O	8:F:25:LYS:N	2.49	0.45
4:B:206:LEU:HD22	4:B:206:LEU:H	1.81	0.45
5:C:175:VAL:HA	5:C:181:LEU:O	2.17	0.45
5:C:59:VAL:O	5:C:60:ASN:CG	2.55	0.45
6:D:132:LYS:HB2	6:D:132:LYS:HZ2	1.81	0.45
6:D:151:LEU:H	6:D:169:VAL:CB	2.29	0.45
6:D:46:THR:O	6:D:47:LYS:HG3	2.17	0.45
7:E:101:ILE:HG13	7:E:104:GLU:OE1	2.15	0.45
7:E:128:ARG:C	7:E:130:ASN:H	2.19	0.45
7:E:96:ARG:CZ	7:E:97:ASP:HB2	2.47	0.45
8:F:147:ASN:O	8:F:150:ALA:HB3	2.17	0.45
8:F:41:MET:HA	8:F:53:GLU:C	2.37	0.45
8:F:40:GLU:OE2	8:F:55:PRO:HB3	2.17	0.45
10:H:24:VAL:C	10:H:25:LYS:HD2	2.36	0.45
10:H:88:LYS:HG3	10:H:92:GLN:HG3	1.98	0.45
12:J:84:ASN:CB	12:J:116:GLY:HA3	2.47	0.45
13:K:116:GLU:HB3	13:K:120:ILE:HD12	1.97	0.45
16:N:29:ARG:HG3	16:N:84:GLN:O	2.16	0.45
17:O:92:ARG:CD	18:P:11:GLN:HG2	2.47	0.45
19:Q:27:LYS:CB	19:Q:27:LYS:NZ	5.06	0.45
21:S:55:TYR:CG	21:S:56:PRO:CD	2.87	0.45
24:V:26:ARG:N	24:V:26:ARG:HD3	2.31	0.45
28:Z:47:ARG:O	28:Z:48:LYS:HB3	2.16	0.45
33:O:1:G:C6	33:O:73:A:N1	2.84	0.45
13:K:134:ARG:NE	13:K:137:TYR:H	2.15	0.45
16:N:12:SER:HA	16:N:15:VAL:CG2	2.47	0.45
4:B:126:GLN:O	4:B:127:VAL:C	2.55	0.45
4:B:209:ALA:O	4:B:212:SER:N	2.49	0.45
5:C:144:ARG:C	5:C:146:THR:N	2.70	0.45
5:C:43:GLY:C	5:C:44:TYR:HD1	2.20	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:170:ARG:CA	7:E:173:LEU:HB2	2.46	0.45
8:F:152:ARG:O	8:F:153:LYS:C	2.55	0.45
8:F:163:TYR:HB3	8:F:167:GLU:OE1	2.17	0.45
8:F:53:GLU:CG	8:F:54:ARG:N	2.78	0.45
9:G:113:ARG:CZ	9:G:132:PRO:CB	2.95	0.45
9:G:6:LEU:O	9:G:14:ASP:HB3	2.15	0.45
10:H:69:VAL:HG13	10:H:71:MET:HE1	1.94	0.45
11:I:85:VAL:O	11:I:86:ILE:HD12	2.13	0.45
13:K:30:GLY:HA3	13:K:65:PHE:CE1	2.52	0.45
14:L:60:LEU:O	14:L:61:HIS:C	2.55	0.45
14:L:78:LYS:C	14:L:80:PHE:H	2.19	0.45
17:O:83:LEU:HB3	17:O:84:LYS:HZ1	1.81	0.45
19:Q:18:ARG:HH22	19:Q:78:GLU:HG3	1.82	0.45
19:Q:88:ARG:CD	19:Q:92:ARG:H	2.30	0.45
22:T:115:GLY:CA	22:T:176:PRO:HB3	2.47	0.45
24:V:26:ARG:C	24:V:27:GLU:OE1	2.55	0.45
24:V:50:ARG:NH1	24:V:61:ARG:HB2	2.31	0.45
24:V:54:ALA:HA	24:V:58:ILE:CG1	2.47	0.45
33:O:40:C:O2	33:O:40:C:H2'	2.17	0.45
8:F:156:ALA:HB2	8:F:169:VAL:HG21	1.96	0.45
8:F:171:LEU:CD1	8:F:171:LEU:H	2.29	0.45
12:J:64:LYS:O	12:J:66:GLY:N	2.50	0.45
22:T:119:GLU:O	22:T:120:ILE:C	2.54	0.45
25:W:13:ALA:C	25:W:15:LYS:N	2.70	0.45
3:A:185:LYS:CD	3:A:185:LYS:O	2.51	0.45
4:B:249:PRO:HB2	4:B:252:TRP:CH2	2.52	0.45
6:D:105:LEU:HD11	6:D:109:VAL:CG1	2.46	0.45
7:E:117:PHE:CD1	7:E:118:ARG:N	2.75	0.45
7:E:19:LEU:CB	7:E:25:TYR:CZ	2.97	0.45
7:E:84:LYS:O	7:E:85:GLY:C	2.55	0.45
9:G:115:ALA:HB3	9:G:129:THR:C	2.35	0.45
9:G:41:GLU:O	9:G:44:LEU:CB	2.58	0.45
11:I:52:VAL:HG13	11:I:56:ASP:CB	2.46	0.45
5:C:20:ALA:HB3	11:I:73:ASP:HA	1.99	0.45
11:I:65:THR:N	11:I:79:PHE:CG	2.84	0.45
13:K:126:PRO:HG2	13:K:127:ILE:HG23	1.99	0.45
13:K:8:LYS:CD	13:K:8:LYS:N	2.80	0.45
14:L:48:VAL:O	14:L:51:LEU:HG	2.17	0.45
15:M:61:ASN:C	15:M:62:LYS:CG	2.85	0.45
9:G:77:LEU:C	9:G:78:THR:HG23	2.37	0.45
10:H:106:LYS:CG	10:H:107:LYS:H	2.21	0.45
10:H:123:GLU:HB3	10:H:127:LYS:NZ	2.32	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:61:HIS:O	10:H:63:PRO:CD	2.62	0.45
22:T:6:LYS:HD3	22:T:6:LYS:H	4.63	0.45
27:Y:38:ALA:CA	27:Y:48:GLU:HB3	2.47	0.45
3:A:21:TYR:HE1	3:A:223:VAL:HG13	1.82	0.45
3:A:53:ARG:NE	3:A:53:ARG:CA	2.80	0.45
4:B:83:GLU:O	4:B:91:ARG:HB3	2.16	0.45
5:C:10:GLY:C	5:C:25:VAL:HB	2.37	0.45
5:C:132:HIS:CE1	5:C:135:HIS:NE2	2.85	0.45
5:C:166:THR:HG22	5:C:167:VAL:N	2.32	0.45
5:C:186:GLY:O	5:C:187:ALA:HB3	2.16	0.45
7:E:157:ILE:HG13	7:E:158:ALA:N	2.31	0.45
8:F:102:ALA:HB2	8:F:117:PRO:HD3	1.99	0.45
8:F:18:GLU:H	8:F:24:VAL:HG13	1.82	0.45
8:F:88:LEU:H	8:F:88:LEU:HD23	1.82	0.45
9:G:128:LEU:HB3	9:G:129:THR:H	1.68	0.45
9:G:132:PRO:CG	9:G:138:ILE:CG2	2.95	0.45
9:G:126:TYR:O	9:G:141:LYS:HB3	2.15	0.45
9:G:5:LEU:C	9:G:37:VAL:HG23	2.38	0.45
9:G:44:LEU:HD22	9:G:44:LEU:C	2.37	0.45
10:H:32:VAL:HG13	10:H:62:ARG:HH11	1.81	0.45
10:H:66:THR:O	10:H:69:VAL:HG12	2.17	0.45
10:H:91:GLU:N	10:H:110:LEU:HD23	2.31	0.45
10:H:93:LYS:C	10:H:93:LYS:HD2	2.37	0.45
13:K:50:ALA:HB2	13:K:124:LYS:CG	2.47	0.45
14:L:113:LEU:HD11	14:L:115:GLU:CG	2.34	0.45
14:L:46:GLY:O	14:L:47:PHE:C	2.55	0.45
16:N:60:THR:HG22	16:N:61:PHE:N	2.32	0.45
22:T:16:SER:N	22:T:19:ARG:NH1	2.64	0.45
22:T:182:LYS:O	22:T:184:ALA:N	2.44	0.45
23:U:49:LYS:HZ1	23:U:80:HIS:HB3	1.82	0.45
24:V:88:LYS:O	24:V:89:GLU:C	2.55	0.45
26:X:29:ARG:O	26:X:30:ARG:HB3	2.17	0.45
22:T:128:VAL:HG13	22:T:133:ILE:HD13	1.99	0.45
17:O:72:HIS:CD2	17:O:72:HIS:N	2.84	0.45
4:B:172:TYR:HD2	4:B:184:LYS:HZ2	1.63	0.45
4:B:21:PHE:CD2	4:B:24:ILE:CD1	2.99	0.45
13:K:69:PHE:HB2	13:K:70:PRO:HD2	1.98	0.45
16:N:12:SER:HA	16:N:15:VAL:HG13	1.99	0.45
19:Q:7:ALA:O	19:Q:102:HIS:HA	2.16	0.45
3:A:186:LEU:O	3:A:190:ILE:N	2.50	0.44
3:A:195:ARG:CG	3:A:196:ALA:H	2.30	0.44
4:B:136:ILE:CG1	4:B:137:PRO:HD2	2.43	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:143:HIS:CE1	4:B:192:THR:HG23	2.52	0.44
4:B:262:ARG:O	4:B:262:ARG:HD3	2.17	0.44
6:D:151:LEU:HD12	6:D:152:VAL:N	2.27	0.44
6:D:178:VAL:O	6:D:181:ILE:N	2.50	0.44
6:D:75:ALA:HB1	6:D:77:ILE:CD1	2.44	0.44
7:E:69:ALA:HB3	7:E:91:ARG:NH1	2.32	0.44
8:F:126:PRO:HD3	8:F:131:VAL:CA	2.47	0.44
8:F:28:GLY:C	8:F:30:LYS:N	2.70	0.44
13:K:14:ARG:N	13:K:14:ARG:NE	2.65	0.44
13:K:53:ALA:O	13:K:54:MET:C	2.56	0.44
15:M:67:ARG:HA	15:M:100:ALA:O	2.18	0.44
17:O:79:PHE:O	17:O:80:ILE:C	2.55	0.44
18:P:37:VAL:HB	18:P:38:LEU:H	1.71	0.44
18:P:85:LYS:CE	18:P:86:GLY:H	2.31	0.44
19:Q:58:ALA:C	19:Q:62:HIS:HB2	2.37	0.44
20:R:25:LYS:NZ	20:R:26:TYR:CZ	2.85	0.44
20:R:25:LYS:NZ	20:R:87:GLN:HA	2.31	0.44
20:R:51:VAL:C	20:R:52:VAL:HG23	2.37	0.44
28:Z:17:GLY:O	28:Z:18:PHE:C	2.56	0.44
6:D:182:VAL:O	12:J:5:ASP:O	2.35	0.44
8:F:88:LEU:N	8:F:88:LEU:HD23	2.31	0.44
9:G:15:VAL:CG2	9:G:15:VAL:O	2.64	0.44
22:T:152:ALA:O	22:T:153:SER:C	2.56	0.44
23:U:40:GLN:CD	23:U:41:ARG:N	2.70	0.44
5:C:109:LYS:C	5:C:161:GLY:HA3	2.37	0.44
5:C:177:PRO:CG	5:C:178:GLU:H	2.26	0.44
5:C:19:ARG:HH11	5:C:21:VAL:HG13	1.79	0.44
5:C:37:ARG:HG3	5:C:44:TYR:CZ	2.51	0.44
5:C:45:THR:CG2	5:C:85:ASN:HB2	2.46	0.44
6:D:176:LEU:HD13	6:D:176:LEU:C	2.37	0.44
6:D:35:GLN:O	6:D:35:GLN:CD	2.55	0.44
6:D:77:ILE:O	6:D:77:ILE:HG12	2.84	0.44
7:E:122:PRO:CD	7:E:181:ARG:H	2.30	0.44
7:E:43:LEU:HD13	7:E:45:GLU:HG2	1.99	0.44
8:F:95:ARG:HH11	8:F:107:VAL:HA	1.81	0.44
10:H:110:LEU:CD2	10:H:110:LEU:H	2.29	0.44
10:H:38:LEU:CB	10:H:157:ARG:HD3	2.47	0.44
11:I:99:PHE:HB3	11:I:100:GLY:H	1.58	0.44
11:I:13:ASN:CA	11:I:17:ARG:HH11	2.30	0.44
11:I:28:SER:O	11:I:30:ALA:N	2.49	0.44
12:J:110:TYR:HE2	12:J:111:ARG:NE	2.15	0.44
12:J:39:LYS:HZ2	12:J:40:SER:N	2.14	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:K:7:MET:CB	13:K:8:LYS:HZ3	2.25	0.44
14:L:116:LEU:O	14:L:117:VAL:HB	2.16	0.44
15:M:24:LEU:HG	15:M:85:VAL:HA	1.99	0.44
15:M:26:LEU:HD21	15:M:39:ILE:CB	2.46	0.44
16:N:3:ARG:O	16:N:5:ALA:N	2.50	0.44
16:N:45:PHE:HZ	16:N:65:LYS:N	2.14	0.44
16:N:61:PHE:O	16:N:75:ILE:HA	2.17	0.44
21:S:46:LYS:HB2	21:S:56:PRO:HA	1.99	0.44
21:S:93:GLY:O	21:S:94:LYS:HG3	2.17	0.44
22:T:11:GLU:CG	22:T:12:GLY:H	2.30	0.44
22:T:38:TYR:O	22:T:39:VAL:HG23	2.18	0.44
22:T:84:GLU:CG	22:T:85:HIS:N	2.80	0.44
26:X:28:LEU:HD21	26:X:35:ARG:CG	2.47	0.44
26:X:31:LEU:CD2	26:X:31:LEU:H	2.30	0.44
33:O:18:G:C6	33:O:57:G:C6	3.05	0.44
16:N:67:SER:C	16:N:69:GLY:H	2.21	0.44
8:F:54:ARG:HB3	8:F:65:HIS:CE1	2.52	0.44
17:O:83:LEU:CD2	17:O:84:LYS:HZ3	2.30	0.44
19:Q:21:VAL:C	19:Q:25:ARG:CG	2.85	0.44
4:B:4:LYS:HZ2	4:B:21:PHE:H	1.66	0.44
5:C:94:GLU:O	5:C:95:ILE:C	2.55	0.44
6:D:119:LEU:HB2	6:D:188:VAL:C	2.38	0.44
6:D:159:ARG:CD	6:D:172:ALA:CB	2.95	0.44
6:D:151:LEU:HD13	6:D:188:VAL:C	2.37	0.44
7:E:128:ARG:O	7:E:130:ASN:N	2.42	0.44
7:E:15:VAL:CG1	7:E:19:LEU:HD11	2.29	0.44
7:E:68:PRO:CB	7:E:92:VAL:HB	2.47	0.44
9:G:6:LEU:CD1	9:G:35:LEU:HD13	2.44	0.44
9:G:77:LEU:HD12	9:G:142:VAL:HG21	1.99	0.44
11:I:12:ASP:CG	11:I:13:ASN:H	2.21	0.44
11:I:16:ALA:HB2	11:I:43:VAL:HG13	1.98	0.44
11:I:49:ARG:CD	11:I:49:ARG:H	2.28	0.44
13:K:43:THR:O	13:K:47:ILE:HG13	2.17	0.44
13:K:8:LYS:NZ	13:K:93:TYR:CZ	2.84	0.44
5:C:112:GLY:N	14:L:2:ARG:HD2	2.32	0.44
14:L:2:ARG:HH11	14:L:2:ARG:HG2	1.82	0.44
15:M:42:ASP:O	15:M:43:GLU:C	2.56	0.44
15:M:87:PHE:CD1	15:M:88:ASP:N	2.82	0.44
17:O:50:ARG:HH21	17:O:50:ARG:CG	2.25	0.44
18:P:77:ALA:O	18:P:78:LYS:CB	2.66	0.44
20:R:28:PHE:C	20:R:29:TRP:CD1	2.84	0.44
27:Y:30:LEU:HD23	27:Y:40:LYS:O	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:V:78:LYS:CD	24:V:79:GLY:N	2.76	0.44
19:Q:86:LEU:HB3	19:Q:94:ASP:CB	2.46	0.44
9:G:26:ALA:C	9:G:31:LEU:HB3	2.37	0.44
21:S:38:ILE:O	21:S:39:VAL:C	2.56	0.44
24:V:12:PRO:HB2	24:V:66:HIS:CE1	2.52	0.44
26:X:17:LYS:HD3	26:X:18:ASP:N	2.32	0.44
19:Q:65:LEU:O	19:Q:68:ARG:HD3	2.16	0.44
33:O:33:U:N3	33:O:36:A:OP1	2.51	0.44
3:A:8:TYR:CB	3:A:11:LEU:HD22	2.44	0.44
3:A:44:VAL:HG23	3:A:175:PRO:C	2.37	0.44
3:A:201:LYS:HZ2	3:A:203:GLU:CA	2.21	0.44
3:A:215:VAL:H	3:A:223:VAL:HB	1.82	0.44
4:B:136:ILE:HG12	4:B:137:PRO:HD3	1.95	0.44
4:B:16:MET:HG2	4:B:211:ARG:HH22	1.82	0.44
4:B:52:ARG:NH2	4:B:220:HIS:ND1	2.66	0.44
5:C:5:LEU:HD11	5:C:91:VAL:HG21	1.98	0.44
6:D:127:VAL:H	6:D:133:GLU:CD	2.15	0.44
6:D:177:ASN:O	6:D:180:ASP:OD2	2.35	0.44
7:E:10:LYS:NZ	7:E:14:GLU:HB2	2.33	0.44
7:E:120:LEU:O	7:E:181:ARG:CA	2.66	0.44
9:G:27:ARG:CZ	9:G:27:ARG:HB2	2.47	0.44
10:H:121:VAL:O	10:H:122:LEU:C	2.55	0.44
10:H:58:ARG:HA	10:H:139:LEU:CD1	2.46	0.44
11:I:65:THR:O	11:I:79:PHE:HD1	1.94	0.44
11:I:70:LYS:HA	11:I:76:ALA:N	2.32	0.44
6:D:183:ARG:NH1	12:J:7:ARG:CB	2.81	0.44
13:K:11:LYS:HE2	13:K:12:GLN:CA	2.46	0.44
14:L:30:THR:OG1	14:L:31:HIS:CE1	2.70	0.44
14:L:53:HIS:HA	14:L:56:LYS:CD	2.48	0.44
14:L:30:THR:HG22	14:L:75:LEU:CD1	2.47	0.44
19:Q:80:PRO:CD	19:Q:100:THR:OG1	2.65	0.44
20:R:16:LYS:H	20:R:16:LYS:HG3	1.56	0.44
20:R:21:PHE:CZ	20:R:90:GLU:HA	2.53	0.44
21:S:42:VAL:CB	21:S:61:ILE:HG22	2.44	0.44
22:T:58:VAL:HG13	22:T:67:LEU:O	2.16	0.44
23:U:51:VAL:HG22	23:U:81:VAL:HG21	1.98	0.44
26:X:12:PRO:O	26:X:15:TYR:HD1	2.01	0.44
26:X:3:ARG:HG3	26:X:36:VAL:O	2.17	0.44
26:X:58:VAL:CG1	26:X:59:VAL:N	2.79	0.44
5:C:192:ASN:HD22	5:C:193:GLY:H	1.63	0.44
12:J:137:LYS:HD3	12:J:137:LYS:N	2.31	0.44
3:A:15:VAL:HG22	3:A:15:VAL:O	2.15	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:A:217:THR:O	3:A:218:THR:C	2.55	0.44
3:A:19:LYS:O	3:A:21:TYR:CZ	2.71	0.44
4:B:267:SER:O	4:B:269:PHE:CZ	2.70	0.44
4:B:181:GLU:HG3	4:B:271:ILE:O	2.18	0.44
5:C:16:ARG:HB3	5:C:19:ARG:CD	2.46	0.44
5:C:52:LEU:O	5:C:75:VAL:HG23	2.18	0.44
6:D:120:LEU:C	6:D:122:GLU:H	2.20	0.44
6:D:148:SER:C	6:D:149:VAL:CG1	2.86	0.44
6:D:174:GLU:HG2	6:D:174:GLU:O	2.17	0.44
6:D:35:GLN:O	6:D:36:LEU:C	2.56	0.44
7:E:31:VAL:CG2	7:E:32:PRO:HD2	2.41	0.44
9:G:48:GLU:HA	9:G:51:ILE:CD1	2.43	0.44
10:H:118:PRO:HA	10:H:121:VAL:HG23	1.99	0.44
10:H:141:LYS:O	10:H:143:LEU:HD13	2.17	0.44
10:H:69:VAL:O	10:H:69:VAL:HG12	3.46	0.44
11:I:59:LYS:O	11:I:94:ARG:NH1	2.51	0.44
12:J:114:ILE:HD11	12:J:130:PHE:HB3	2.00	0.44
13:K:111:GLU:CB	13:K:115:MET:CE	2.95	0.44
13:K:11:LYS:CB	13:K:14:ARG:HH12	2.31	0.44
13:K:28:ALA:HB1	13:K:105:GLU:OE1	2.17	0.44
13:K:59:ARG:C	13:K:61:GLY:N	2.71	0.44
13:K:65:PHE:O	13:K:104:PHE:HA	2.17	0.44
14:L:30:THR:HG1	14:L:31:HIS:CE1	2.34	0.44
15:M:9:ARG:HA	15:M:9:ARG:CZ	2.48	0.44
18:P:35:LEU:HD23	18:P:35:LEU:N	2.33	0.44
18:P:34:GLU:N	18:P:64:HIS:CE1	2.82	0.44
19:Q:8:ARG:O	19:Q:9:TYR:HB3	2.18	0.44
20:R:38:GLU:HG2	20:R:38:GLU:O	2.18	0.44
21:S:24:VAL:CG2	21:S:25:GLY:N	2.79	0.44
22:T:115:GLY:HA2	22:T:176:PRO:HG3	1.98	0.44
23:U:26:TYR:O	23:U:27:GLU:C	2.56	0.44
24:V:51:VAL:HG13	24:V:53:VAL:H	1.83	0.44
25:W:17:SER:HB3	25:W:21:LEU:CD1	2.47	0.44
27:Y:40:LYS:CE	27:Y:46:CYS:H	2.30	0.44
28:Z:18:PHE:CE2	28:Z:22:MET:HE1	2.52	0.44
16:N:128:GLU:C	16:N:130:ALA:H	2.21	0.44
9:G:6:LEU:HD22	9:G:7:GLU:HB3	1.99	0.44
24:V:37:ILE:N	24:V:39:LYS:NZ	2.59	0.44
25:W:6:VAL:HG23	25:W:7:ARG:H	1.80	0.44
33:O:20:G:H8	33:O:20:G:H3'	1.82	0.44
3:A:201:LYS:CG	3:A:209:PHE:CZ	2.94	0.44
4:B:175:LEU:HD13	4:B:185:VAL:CG2	2.47	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:79:VAL:HG13	4:B:93:ALA:HB1	2.00	0.44
4:B:25:THR:CB	4:B:82:ILE:C	2.82	0.44
5:C:156:MET:HE2	5:C:157:ALA:H	1.83	0.44
5:C:203:LYS:HB2	5:C:203:LYS:HZ2	1.80	0.44
5:C:38:THR:CG2	5:C:40:GLU:HG3	2.47	0.44
7:E:115:ARG:O	7:E:116:ASP:CG	2.56	0.44
7:E:19:LEU:C	7:E:25:TYR:CE1	2.91	0.44
8:F:9:ILE:HG22	8:F:10:PRO:O	2.16	0.44
8:F:54:ARG:NH1	8:F:61:HIS:CB	2.77	0.44
9:G:7:GLU:CG	9:G:35:LEU:HD11	2.48	0.44
10:H:112:LYS:C	10:H:112:LYS:CE	2.86	0.44
10:H:90:LEU:HD12	10:H:111:GLU:N	2.32	0.44
11:I:26:LYS:HD2	11:I:30:ALA:HA	2.00	0.44
11:I:19:ILE:HD12	11:I:42:SER:C	2.38	0.44
11:I:47:ILE:HG23	11:I:49:ARG:CZ	2.48	0.44
11:I:46:ALA:HB2	11:I:54:GLU:H	1.83	0.44
11:I:98:VAL:CG2	11:I:99:PHE:N	2.48	0.44
12:J:85:LEU:HD23	12:J:86:LYS:CG	2.48	0.44
14:L:2:ARG:HG2	14:L:3:HIS:H	1.76	0.44
15:M:17:ARG:CZ	15:M:89:ARG:HD2	2.47	0.44
15:M:72:ALA:C	15:M:74:ALA:H	2.20	0.44
18:P:3:ALA:O	18:P:4:ILE:CG1	2.65	0.44
19:Q:30:GLU:O	19:Q:31:GLU:C	2.56	0.44
19:Q:5:ALA:CB	19:Q:54:ALA:HB2	2.46	0.44
19:Q:18:ARG:HD2	19:Q:76:VAL:CG1	2.48	0.44
20:R:55:ASN:N	20:R:77:LYS:CD	2.79	0.44
20:R:7:VAL:O	20:R:30:VAL:CG1	2.64	0.44
22:T:176:PRO:CB	22:T:177:PRO:CD	2.96	0.44
22:T:10:ARG:HG3	22:T:36:LYS:O	2.18	0.44
25:W:57:ILE:O	25:W:58:ALA:HB3	2.18	0.44
25:W:5:GLU:OE1	25:W:9:GLN:N	2.51	0.44
28:Z:11:LYS:O	28:Z:11:LYS:HD2	2.18	0.44
13:K:34:LEU:C	13:K:34:LEU:CD1	2.86	0.44
22:T:104:PHE:HA	22:T:139:VAL:CB	2.46	0.44
24:V:58:ILE:CG2	24:V:82:LEU:HG	2.48	0.44
3:A:22:THR:HG22	3:A:226:ASN:HB3	1.99	0.44
3:A:61:GLY:HA3	3:A:164:PHE:HE2	1.80	0.44
4:B:106:ILE:HD12	4:B:197:GLY:N	2.33	0.44
4:B:137:PRO:CB	4:B:140:THR:CG2	2.82	0.44
4:B:34:VAL:HG11	4:B:35:LYS:HZ3	1.83	0.44
4:B:48:ARG:HD2	4:B:49:ILE:HG13	2.00	0.44
4:B:88:ARG:CG	4:B:88:ARG:NH1	2.78	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:116:VAL:HG23	5:C:120:TRP:CD1	2.53	0.44
5:C:172:VAL:CG1	5:C:173:VAL:N	2.80	0.44
5:C:20:ALA:C	5:C:21:VAL:HG13	2.38	0.44
6:D:146:SER:C	6:D:167:TRP:HE1	2.21	0.44
8:F:46:GLU:HG2	8:F:46:GLU:O	2.16	0.44
9:G:81:VAL:CG2	9:G:82:ARG:N	2.80	0.44
13:K:48:GLU:O	13:K:51:ARG:CZ	2.66	0.44
13:K:9:TYR:OH	13:K:11:LYS:NZ	2.50	0.44
14:L:63:ARG:NH2	14:L:77:ARG:HA	2.33	0.44
16:N:61:PHE:HZ	16:N:78:LEU:HD13	1.82	0.44
18:P:23:GLU:OE2	18:P:25:LEU:CD1	2.64	0.44
20:R:52:VAL:HG23	20:R:81:VAL:O	2.17	0.44
20:R:54:VAL:CG2	20:R:78:LYS:N	2.60	0.44
20:R:82:GLN:CG	20:R:83:VAL:N	2.59	0.44
22:T:165:VAL:HB	22:T:166:SER:H	1.53	0.44
22:T:171:ILE:HD13	22:T:171:ILE:N	2.31	0.44
23:U:23:VAL:HA	23:U:38:VAL:CB	2.47	0.44
24:V:10:LYS:HB2	24:V:11:ARG:H	1.71	0.44
25:W:13:ALA:O	25:W:15:LYS:N	2.50	0.44
26:X:3:ARG:NH1	26:X:38:GLU:HA	2.32	0.44
26:X:40:THR:HB	26:X:41:PRO:CD	2.44	0.44
26:X:45:GLY:O	26:X:48:GLU:HB2	2.18	0.44
33:O:43:G:C2	33:O:44:A:C5	3.05	0.44
5:C:93:VAL:HG12	5:C:182:LEU:CG	2.48	0.44
3:A:43:GLU:HA	3:A:175:PRO:CA	2.46	0.44
3:A:62:THR:O	3:A:63:VAL:C	2.56	0.44
4:B:261:LYS:HD2	4:B:261:LYS:N	2.32	0.44
4:B:40:THR:O	4:B:42:GLY:N	2.51	0.44
4:B:75:ILE:O	4:B:76:PRO:C	2.56	0.44
4:B:78:LYS:O	4:B:95:LEU:CA	2.65	0.44
5:C:51:PHE:C	5:C:53:PRO:CD	2.86	0.44
5:C:28:ALA:HB2	5:C:93:VAL:HG13	0.71	0.44
6:D:143:LEU:HD21	6:D:186:ARG:HH21	1.83	0.44
7:E:141:PHE:HB3	7:E:144:ILE:HB	2.00	0.44
7:E:16:ARG:HG3	7:E:16:ARG:H	1.50	0.44
7:E:19:LEU:CA	7:E:25:TYR:OH	2.65	0.44
7:E:42:GLY:HA2	7:E:88:ILE:O	2.18	0.44
7:E:53:LEU:H	7:E:53:LEU:CD2	2.24	0.44
7:E:6:ALA:C	7:E:10:LYS:HB2	2.39	0.44
8:F:88:LEU:HD23	8:F:164:TYR:O	2.18	0.44
9:G:125:GLU:O	9:G:142:VAL:O	2.36	0.44
9:G:82:ARG:HD2	9:G:89:TYR:CE1	2.52	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:90:GLY:O	9:G:91:SER:OG	2.36	0.44
10:H:35:ARG:HG2	10:H:61:HIS:NE2	2.33	0.44
10:H:93:LYS:O	10:H:110:LEU:CD2	2.66	0.44
11:I:38:VAL:CG1	11:I:59:LYS:HG2	2.48	0.44
12:J:86:LYS:HG3	12:J:118:GLY:HA3	1.97	0.44
12:J:85:LEU:HD22	12:J:85:LEU:C	3.03	0.44
13:K:100:GLY:O	13:K:101:ARG:C	2.55	0.44
13:K:104:PHE:C	13:K:105:GLU:HG3	2.38	0.44
13:K:11:LYS:O	13:K:12:GLN:CB	2.61	0.44
14:L:64:ARG:CB	14:L:64:ARG:NH1	2.80	0.44
14:L:66:VAL:O	14:L:70:LEU:HG	2.18	0.44
15:M:28:VAL:HG22	15:M:37:ALA:CA	2.46	0.44
18:P:82:ARG:C	18:P:82:ARG:HD3	2.39	0.44
19:Q:23:LEU:HD22	27:Y:25:LEU:CB	2.45	0.44
19:Q:30:GLU:C	19:Q:34:ASN:OD1	2.54	0.44
22:T:10:ARG:HG3	22:T:37:VAL:CA	2.48	0.44
22:T:38:TYR:O	22:T:39:VAL:CG2	2.66	0.44
33:O:34:G:OP1	33:O:34:G:C8	2.71	0.44
13:K:89:ASN:HB2	13:K:90:VAL:H	1.57	0.44
3:A:201:LYS:NZ	3:A:203:GLU:HG3	2.33	0.44
4:B:157:ARG:O	4:B:158:ALA:HB3	2.16	0.44
3:A:182:PRO:O	3:A:184:GLU:N	2.51	0.44
4:B:176:ARG:O	4:B:178:PRO:HD3	2.17	0.44
4:B:17:THR:CG2	4:B:204:ILE:HA	2.48	0.44
4:B:21:PHE:O	4:B:24:ILE:CG2	2.66	0.44
5:C:22:PRO:O	5:C:23:VAL:HG13	2.18	0.44
7:E:72:ARG:HA	7:E:87:PRO:HA	2.00	0.44
7:E:7:LEU:HG	7:E:12:TYR:CE2	2.53	0.44
7:E:79:ASN:ND2	7:E:86:MET:SD	2.77	0.44
9:G:123:LEU:O	9:G:144:VAL:HB	2.18	0.44
9:G:37:VAL:O	9:G:37:VAL:HG12	2.18	0.44
11:I:92:GLU:HA	11:I:93:PRO:HD2	1.77	0.44
12:J:99:LEU:HA	12:J:102:ARG:NH1	2.33	0.44
13:K:117:ALA:HB3	13:K:118:LEU:HD12	2.00	0.44
13:K:134:ARG:C	13:K:134:ARG:HD2	2.35	0.44
13:K:16:ARG:CA	13:K:17:LEU:HD13	2.48	0.44
13:K:34:LEU:HD12	13:K:103:MET:HE1	1.84	0.44
13:K:54:MET:O	13:K:58:PHE:CD2	2.70	0.44
13:K:73:PRO:HB2	13:K:74:TYR:H	1.63	0.44
16:N:102:ILE:O	16:N:104:ASN:N	2.51	0.44
18:P:16:PRO:CG	18:P:17:GLY:H	2.30	0.44
18:P:50:PRO:CG	18:P:51:VAL:H	2.27	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:R:65:ARG:O	20:R:66:LEU:HB2	2.18	0.44
21:S:34:LYS:HA	21:S:64:GLU:O	2.18	0.44
21:S:33:LYS:HB3	21:S:65:ALA:HB1	1.92	0.44
22:T:14:LYS:HA	22:T:15:PRO:HD3	1.72	0.44
23:U:57:PHE:O	23:U:58:THR:C	2.56	0.44
24:V:71:TYR:O	24:V:72:GLU:C	2.56	0.44
25:W:3:LEU:CD2	25:W:4:SER:N	2.73	0.44
3:A:15:VAL:O	3:A:16:ASP:C	2.56	0.44
6:D:105:LEU:HD22	6:D:108:ALA:HB3	1.99	0.44
6:D:72:ASP:C	6:D:74:GLY:H	2.21	0.44
15:M:65:VAL:HA	15:M:68:GLN:CG	2.48	0.44
24:V:19:GLN:N	24:V:44:PRO:CD	2.81	0.44
13:K:112:GLU:N	13:K:112:GLU:OE2	2.50	0.44
4:B:65:ILE:CB	4:B:105:ILE:HA	2.47	0.43
4:B:19:ALA:HB3	4:B:21:PHE:HE2	1.80	0.43
4:B:94:LEU:HD23	4:B:94:LEU:O	2.16	0.43
5:C:33:VAL:CG2	5:C:34:VAL:H	2.28	0.43
5:C:59:VAL:O	5:C:60:ASN:HB2	2.18	0.43
6:D:58:LYS:O	6:D:59:ILE:CG1	2.60	0.43
7:E:115:ARG:O	7:E:118:ARG:CB	9.21	0.43
7:E:14:GLU:HA	7:E:17:PRO:CG	2.48	0.43
9:G:101:LEU:HD13	9:G:101:LEU:HA	1.63	0.43
9:G:128:LEU:HB2	9:G:141:LYS:HA	2.00	0.43
9:G:13:GLY:CA	9:G:17:GLN:HG2	2.46	0.43
9:G:48:GLU:CA	9:G:51:ILE:HD12	2.42	0.43
10:H:143:LEU:C	10:H:143:LEU:HD22	2.39	0.43
10:H:148:GLY:HA3	10:H:149:PRO:C	2.38	0.43
11:I:32:TYR:O	11:I:33:ALA:CB	2.61	0.43
11:I:47:ILE:HA	11:I:47:ILE:HD13	1.87	0.43
12:J:119:GLU:O	12:J:120:ALA:HB2	2.18	0.43
12:J:97:PRO:O	12:J:99:LEU:N	2.50	0.43
14:L:35:THR:C	14:L:36:THR:CG2	2.86	0.43
15:M:23:ARG:HG3	15:M:24:LEU:N	2.28	0.43
15:M:71:ARG:HG2	15:M:104:GLY:C	2.35	0.43
19:Q:17:VAL:O	19:Q:20:VAL:CB	2.65	0.43
24:V:85:LEU:HD13	24:V:86:SER:N	2.33	0.43
28:Z:5:TRP:CD1	28:Z:7:PRO:HD3	2.53	0.43
14:L:87:TYR:OH	14:L:116:LEU:CD2	2.65	0.43
21:S:46:LYS:N	21:S:57:GLN:CA	2.81	0.43
21:S:67:LEU:C	21:S:68:HIS:CG	2.91	0.43
21:S:88:LYS:CG	21:S:89:PHE:HD1	2.22	0.43
22:T:76:LEU:CG	22:T:77:ASP:N	2.80	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:X:44:ARG:N	26:X:44:ARG:CD	2.54	0.43
33:O:36:A:N6	33:O:37:A:C5	2.86	0.43
3:A:52:PRO:CB	3:A:166:ASN:ND2	2.81	0.43
5:C:174:ASP:OD1	5:C:176:ILE:CD1	2.66	0.43
5:C:182:LEU:O	5:C:183:LEU:HB3	2.17	0.43
6:D:196:VAL:O	6:D:197:PHE:CD1	2.70	0.43
8:F:8:PRO:HA	8:F:49:VAL:CG1	2.48	0.43
9:G:33:ARG:C	9:G:33:ARG:HH21	2.21	0.43
9:G:76:THR:HG23	9:G:141:LYS:C	2.36	0.43
10:H:101:TYR:H	10:H:102:PRO:CD	2.31	0.43
10:H:41:ALA:C	10:H:43:GLY:N	2.72	0.43
12:J:55:ARG:O	12:J:55:ARG:HG3	2.17	0.43
13:K:3:MET:CG	13:K:3:MET:O	2.64	0.43
13:K:6:ARG:CD	13:K:6:ARG:C	2.86	0.43
16:N:114:LEU:HA	16:N:114:LEU:HD23	1.86	0.43
16:N:24:PRO:CA	16:N:49:VAL:CG1	2.73	0.43
16:N:92:GLY:H	16:N:116:ALA:CA	2.32	0.43
17:O:55:ARG:HA	17:O:58:ARG:CD	2.35	0.43
17:O:66:ASN:HA	17:O:69:CYS:SG	2.58	0.43
24:V:69:LYS:C	24:V:72:GLU:HB3	2.39	0.43
24:V:84:GLY:C	24:V:86:SER:H	2.21	0.43
25:W:54:LYS:C	25:W:55:ARG:CD	2.86	0.43
25:W:7:ARG:HB3	25:W:8:LYS:HZ1	1.80	0.43
27:Y:16:ARG:CA	27:Y:20:ARG:NH1	2.80	0.43
8:F:19:VAL:HA	8:F:24:VAL:CA	2.47	0.43
18:P:22:VAL:C	18:P:23:GLU:CG	2.86	0.43
25:W:41:ILE:O	25:W:42:GLY:C	2.56	0.43
3:A:61:GLY:CA	3:A:164:PHE:CE2	2.99	0.43
4:B:136:ILE:CG1	4:B:137:PRO:CD	2.94	0.43
4:B:143:HIS:O	4:B:192:THR:O	2.36	0.43
4:B:20:ASP:C	4:B:22:SER:H	2.22	0.43
4:B:63:ARG:HH21	4:B:86:PRO:N	2.16	0.43
5:C:119:ARG:NE	5:C:120:TRP:CZ2	2.86	0.43
5:C:116:VAL:HG23	5:C:120:TRP:HD1	1.82	0.43
5:C:196:VAL:C	5:C:197:ILE:HG23	2.38	0.43
6:D:152:VAL:HG13	6:D:190:ASP:H	1.83	0.43
7:E:128:ARG:HG3	7:E:163:ALA:O	2.18	0.43
7:E:74:LYS:CB	7:E:86:MET:HB2	2.18	0.43
8:F:144:VAL:HA	8:F:147:ASN:HD22	1.84	0.43
8:F:19:VAL:H	8:F:24:VAL:HA	1.82	0.43
10:H:79:ASN:C	10:H:147:ALA:HA	2.37	0.43
11:I:47:ILE:O	11:I:47:ILE:HG22	2.17	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:39:ILE:HD11	11:I:62:VAL:CG2	2.48	0.43
11:I:74:GLY:O	11:I:75:SER:HB2	2.18	0.43
11:I:7:TYR:N	11:I:7:TYR:CD2	2.84	0.43
13:K:15:GLY:O	13:K:16:ARG:HB2	2.18	0.43
14:L:9:LYS:HB2	14:L:10:LEU:H	1.52	0.43
14:L:3:HIS:CE1	14:L:4:LEU:CG	2.99	0.43
14:L:61:HIS:O	14:L:65:LEU:HG	2.18	0.43
16:N:24:PRO:HA	16:N:49:VAL:CG2	2.48	0.43
16:N:51:ARG:CZ	16:N:60:THR:HG21	2.49	0.43
17:O:106:PHE:O	17:O:107:ALA:C	2.57	0.43
17:O:8:VAL:CG1	17:O:11:ARG:NE	2.63	0.43
17:O:16:LYS:O	17:O:20:LEU:HD23	2.19	0.43
17:O:76:TYR:C	17:O:79:PHE:HB3	2.39	0.43
17:O:5:LYS:HZ2	17:O:7:GLY:CA	2.30	0.43
17:O:92:ARG:CG	17:O:94:ASN:HD21	2.26	0.43
18:P:29:PRO:HA	18:P:66:ARG:HB3	2.00	0.43
18:P:78:LYS:C	18:P:78:LYS:CD	2.82	0.43
19:Q:75:TYR:HD1	19:Q:75:TYR:C	2.21	0.43
20:R:13:LEU:O	20:R:14:SER:C	2.56	0.43
21:S:55:TYR:HD1	21:S:56:PRO:N	2.16	0.43
23:U:45:PHE:HD2	23:U:78:TYR:CA	2.31	0.43
24:V:69:LYS:HA	24:V:72:GLU:HB3	2.01	0.43
25:W:59:ARG:HE	25:W:62:THR:CA	2.27	0.43
27:Y:24:ALA:O	27:Y:25:LEU:C	2.57	0.43
7:E:56:ALA:C	7:E:60:LEU:HD11	2.38	0.43
33:O:36:A:C2'	33:O:37:A:H5'	2.48	0.43
16:N:103:ARG:HH11	16:N:103:ARG:HG2	1.83	0.43
16:N:92:GLY:C	16:N:114:LEU:HD22	2.38	0.43
21:S:76:CYS:HB3	21:S:77:PRO:HD2	2.00	0.43
22:T:17:ALA:CA	22:T:20:ARG:CZ	2.91	0.43
22:T:28:MET:SD	22:T:28:MET:C	2.96	0.43
33:O:54:U:H3	33:O:58:A:H62	0.62	0.43
3:A:194:ILE:CA	3:A:197:LEU:HD23	2.48	0.43
3:A:63:VAL:CG2	3:A:64:SER:H	2.24	0.43
4:B:131:LEU:N	4:B:190:TYR:CE1	2.86	0.43
4:B:249:PRO:C	4:B:251:GLY:N	2.72	0.43
4:B:60:ARG:HG3	4:B:86:PRO:HB2	2.01	0.43
4:B:74:GLY:O	4:B:75:ILE:CG1	2.66	0.43
6:D:55:SER:OG	6:D:73:ILE:HG23	2.17	0.43
7:E:162:THR:O	7:E:163:ALA:C	2.56	0.43
8:F:125:VAL:HG12	8:F:128:PRO:HB2	2.00	0.43
9:G:11:ASN:HB3	9:G:12:LEU:H	1.63	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:132:PRO:CG	9:G:138:ILE:HG22	2.48	0.43
9:G:76:THR:HG22	9:G:142:VAL:HA	2.01	0.43
9:G:38:LEU:O	9:G:39:ALA:CB	2.65	0.43
9:G:66:GLU:C	9:G:68:LEU:N	2.70	0.43
9:G:77:LEU:O	9:G:78:THR:CG2	2.66	0.43
10:H:112:LYS:NZ	10:H:116:THR:H	2.16	0.43
10:H:120:ARG:CG	10:H:124:HIS:CE1	2.99	0.43
10:H:156:GLN:O	10:H:157:ARG:CB	2.60	0.43
10:H:157:ARG:NH1	10:H:159:GLU:OE1	2.50	0.43
10:H:45:THR:HG21	10:H:48:ARG:HG3	1.99	0.43
14:L:90:ARG:NH2	14:L:118:GLU:HG3	2.28	0.43
14:L:54:LEU:HA	14:L:57:ARG:CG	2.47	0.43
14:L:72:ASP:O	14:L:76:VAL:HB	2.18	0.43
15:M:75:GLU:C	15:M:78:LEU:HG	2.38	0.43
16:N:109:GLU:HB3	16:N:112:ARG:HH21	1.83	0.43
16:N:33:LYS:HB3	16:N:33:LYS:NZ	2.33	0.43
17:O:74:LEU:HD21	17:O:110:VAL:HG13	2.00	0.43
18:P:1:MET:HG2	18:P:2:PHE:H	1.84	0.43
18:P:36:PRO:HD2	18:P:60:GLU:CD	2.39	0.43
18:P:42:GLY:O	18:P:47:VAL:CG1	2.67	0.43
21:S:14:LEU:HD22	21:S:39:VAL:CG1	2.43	0.43
22:T:151:HIS:HA	22:T:169:GLU:O	2.18	0.43
22:T:84:GLU:HG3	22:T:85:HIS:N	2.32	0.43
23:U:21:LEU:CD2	23:U:39:ARG:HG2	2.49	0.43
23:U:50:ASN:CB	23:U:81:VAL:HG12	2.44	0.43
23:U:68:GLU:H	23:U:79:VAL:HB	1.82	0.43
24:V:51:VAL:CB	24:V:60:PHE:N	2.70	0.43
26:X:20:LYS:C	26:X:22:ALA:N	2.71	0.43
27:Y:38:ALA:CB	27:Y:49:CYS:HB2	2.46	0.43
5:C:18:ASP:OD1	16:N:81:PRO:HA	2.18	0.43
17:O:59:ARG:O	17:O:62:ILE:N	2.51	0.43
21:S:60:PHE:CE1	21:S:61:ILE:O	2.72	0.43
27:Y:32:PRO:O	27:Y:39:MET:HA	2.17	0.43
33:O:37:A:C3'	33:O:38:A:O4'	2.67	0.43
33:O:46:G:H5''	33:O:46:G:H8	1.82	0.43
4:B:17:THR:OG1	4:B:205:VAL:CG2	2.65	0.43
4:B:72:LYS:CB	4:B:97:TYR:OH	2.66	0.43
4:B:90:ALA:HB1	4:B:106:ILE:HG21	1.98	0.43
6:D:150:LEU:N	6:D:150:LEU:HD22	2.34	0.43
9:G:114:LEU:N	9:G:130:TYR:CE1	2.86	0.43
9:G:40:THR:O	9:G:40:THR:HG23	2.18	0.43
9:G:68:LEU:C	9:G:70:GLU:H	2.22	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:6:LEU:CB	9:G:35:LEU:O	2.66	0.43
10:H:60:LYS:CA	10:H:60:LYS:CE	2.88	0.43
11:I:14:THR:N	11:I:17:ARG:NH1	2.66	0.43
12:J:86:LYS:CD	12:J:118:GLY:HA3	2.49	0.43
13:K:9:TYR:HE1	13:K:12:GLN:OE1	2.00	0.43
16:N:50:ILE:CG2	16:N:63:VAL:N	2.79	0.43
17:O:83:LEU:CG	17:O:84:LYS:NZ	2.81	0.43
18:P:54:GLY:C	18:P:56:SER:N	2.71	0.43
19:Q:44:ALA:C	19:Q:46:PHE:N	2.69	0.43
22:T:102:LEU:CD1	22:T:124:ILE:N	2.82	0.43
22:T:30:ASN:OD1	22:T:32:HIS:N	2.43	0.43
24:V:26:ARG:HB2	24:V:35:THR:N	2.33	0.43
26:X:29:ARG:O	26:X:30:ARG:CB	2.65	0.43
28:Z:24:THR:HG23	28:Z:27:GLY:HA3	2.00	0.43
4:B:215:LEU:CD1	4:B:215:LEU:N	2.82	0.43
4:B:34:VAL:O	4:B:35:LYS:HD3	2.17	0.43
4:B:36:PRO:HG2	4:B:61:LEU:HG	2.00	0.43
4:B:6:PHE:HE1	4:B:17:THR:C	2.21	0.43
6:D:148:SER:HA	6:D:167:TRP:CE2	2.54	0.43
7:E:43:LEU:HD22	7:E:45:GLU:CG	2.40	0.43
9:G:4:ILE:CA	9:G:37:VAL:HB	2.48	0.43
9:G:76:THR:CG2	9:G:77:LEU:N	2.81	0.43
10:H:155:ALA:O	10:H:156:GLN:HB2	2.18	0.43
10:H:41:ALA:O	10:H:43:GLY:N	2.52	0.43
10:H:60:LYS:NZ	17:O:63:VAL:HG12	2.33	0.43
10:H:32:VAL:HG11	10:H:71:MET:HB2	2.00	0.43
11:I:107:ARG:HB2	11:I:115:VAL:HG11	2.01	0.43
11:I:23:ARG:CG	11:I:24:VAL:N	2.82	0.43
11:I:90:GLN:O	11:I:90:GLN:OE1	2.36	0.43
12:J:101:VAL:CG1	12:J:102:ARG:N	2.79	0.43
12:J:98:GLU:N	12:J:101:VAL:CG1	2.76	0.43
13:K:37:LEU:CD2	13:K:128:LYS:O	2.67	0.43
13:K:75:THR:CG2	13:K:76:LYS:H	2.32	0.43
14:L:28:LEU:N	14:L:34:ILE:HG13	2.34	0.43
14:L:28:LEU:C	14:L:32:GLY:HA2	2.38	0.43
16:N:35:LYS:O	16:N:36:GLU:C	2.56	0.43
16:N:79:HIS:O	16:N:80:SER:C	2.57	0.43
16:N:29:ARG:HB3	16:N:86:ILE:H	1.82	0.43
20:R:7:VAL:HG13	20:R:31:HIS:CG	2.53	0.43
22:T:9:TYR:HA	22:T:37:VAL:HG12	2.00	0.43
23:U:51:VAL:CG2	23:U:79:VAL:CG2	2.96	0.43
24:V:58:ILE:HG21	24:V:86:SER:OG	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:129:THR:CA	9:G:139:GLN:HA	2.45	0.43
19:Q:29:LEU:HD11	19:Q:66:GLU:HG2	2.01	0.43
26:X:2:PRO:C	26:X:3:ARG:HD2	2.39	0.43
4:B:105:ILE:C	4:B:106:ILE:CG2	2.86	0.43
4:B:212:SER:N	4:B:215:LEU:HD22	2.33	0.43
4:B:227:ASN:ND2	4:B:237:GLU:OE2	2.51	0.43
4:B:257:LEU:O	4:B:257:LEU:CD1	2.67	0.43
4:B:33:LEU:O	4:B:34:VAL:C	2.57	0.43
6:D:121:VAL:CG1	6:D:121:VAL:O	2.66	0.43
6:D:139:LYS:C	6:D:141:ALA:N	2.71	0.43
6:D:151:LEU:N	6:D:169:VAL:HB	2.33	0.43
6:D:48:THR:N	6:D:52:VAL:HG21	2.34	0.43
6:D:69:ARG:O	6:D:70:HIS:HB2	2.19	0.43
7:E:123:ASN:O	7:E:125:PHE:N	2.46	0.43
9:G:55:ALA:CA	9:G:58:LEU:HB3	2.49	0.43
10:H:32:VAL:O	10:H:33:GLU:HB2	2.19	0.43
10:H:99:SER:HA	10:H:105:LEU:HD13	2.01	0.43
11:I:2:ILE:CG2	11:I:33:ALA:HB3	2.49	0.43
12:J:147:LEU:CD1	12:J:148:LEU:N	2.81	0.43
12:J:60:MET:N	12:J:60:MET:SD	2.91	0.43
12:J:98:GLU:H	12:J:101:VAL:HG13	1.79	0.43
13:K:25:ASP:OD1	13:K:102:VAL:HB	2.18	0.43
14:L:76:VAL:O	14:L:80:PHE:CD2	2.72	0.43
22:T:29:TYR:HE1	22:T:89:PHE:HD1	1.65	0.43
23:U:10:THR:O	23:U:11:LYS:CG	2.65	0.43
24:V:38:SER:N	24:V:39:LYS:NZ	2.65	0.43
25:W:7:ARG:CB	25:W:8:LYS:NZ	2.77	0.43
26:X:4:LEU:CD1	26:X:57:GLU:H	2.31	0.43
26:X:9:VAL:HA	26:X:32:GLN:CA	2.49	0.43
28:Z:24:THR:O	28:Z:28:ARG:HB2	2.18	0.43
28:Z:6:GLN:HA	28:Z:7:PRO:HD2	1.90	0.43
33:0:73:A:H8	33:0:73:A:O5'	2.01	0.43
33:0:26:G:H2'	33:0:27:C:O4'	2.18	0.43
7:E:3:LEU:HB3	7:E:5:LEU:HD23	1.94	0.43
17:O:44:ASN:ND2	18:P:77:ALA:O	2.41	0.43
21:S:84:ARG:HD3	21:S:92:ASN:N	2.34	0.43
27:Y:7:PRO:O	27:Y:8:LYS:CB	2.59	0.43
33:0:26:G:C6	33:0:27:C:C5	3.06	0.43
33:0:61:C:H2'	33:0:62:A:C8	2.53	0.43
3:A:167:ASP:O	3:A:171:ALA:HA	2.18	0.43
4:B:138:VAL:O	4:B:165:ILE:HB	2.18	0.43
5:C:110:GLY:HA2	5:C:160:TYR:O	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:100:GLU:O	5:C:172:VAL:HG23	2.19	0.43
6:D:88:LYS:C	6:D:90:ARG:H	2.21	0.43
7:E:92:VAL:CG2	7:E:93:THR:H	2.32	0.43
8:F:34:GLU:O	8:F:35:VAL:HG23	2.18	0.43
8:F:89:ILE:HG13	8:F:94:TYR:CE1	2.53	0.43
9:G:26:ALA:HA	9:G:30:LEU:N	2.34	0.43
10:H:34:PRO:HG3	10:H:71:MET:CA	2.48	0.43
11:I:117:LEU:O	11:I:119:PRO:HD3	2.18	0.43
11:I:28:SER:C	11:I:30:ALA:N	2.71	0.43
13:K:111:GLU:C	13:K:115:MET:HG2	2.39	0.43
14:L:44:LEU:HD13	14:L:47:PHE:HE2	1.77	0.43
14:L:98:LEU:O	14:L:112:ALA:CB	2.58	0.43
15:M:66:ALA:O	15:M:67:ARG:C	2.57	0.43
15:M:67:ARG:CA	15:M:101:LEU:CD2	2.96	0.43
15:M:73:LEU:CB	15:M:76:LYS:HD3	2.44	0.43
15:M:98:VAL:O	15:M:99:LYS:C	2.57	0.43
16:N:74:ARG:CD	16:N:76:PHE:CZ	2.96	0.43
17:O:105:VAL:O	18:P:43:GLU:OE2	2.36	0.43
18:P:24:LYS:C	18:P:25:LEU:HG	2.38	0.43
20:R:87:GLN:O	20:R:88:LYS:HB2	2.18	0.43
20:R:88:LYS:HA	20:R:88:LYS:HD2	1.79	0.43
21:S:80:GLY:O	21:S:97:ARG:CG	2.55	0.43
22:T:15:PRO:O	22:T:16:SER:C	2.57	0.43
23:U:30:VAL:HG13	23:U:31:VAL:N	2.34	0.43
23:U:41:ARG:NH1	23:U:41:ARG:HG3	2.34	0.43
23:U:44:ARG:HG3	23:U:45:PHE:HD1	1.84	0.43
23:U:36:ILE:HD12	23:U:60:PHE:CD2	2.54	0.43
24:V:23:LYS:CG	24:V:38:SER:O	2.67	0.43
15:M:26:LEU:O	15:M:88:ASP:O	2.37	0.43
16:N:40:THR:O	16:N:41:ARG:HB2	2.18	0.43
3:A:48:LEU:HD12	3:A:209:PHE:CD1	2.49	0.43
5:C:104:VAL:O	5:C:167:VAL:CG1	2.67	0.43
5:C:9:VAL:H	5:C:26:ILE:CD1	2.31	0.43
11:I:75:SER:H	16:N:77:PRO:HD3	1.83	0.43
23:U:22:GLY:O	23:U:38:VAL:CA	2.52	0.43
28:Z:14:LYS:CA	28:Z:20:ALA:CB	2.95	0.43
33:O:33:U:O2	33:O:35:A:H8	1.98	0.43
3:A:8:TYR:CG	3:A:12:LEU:CD1	3.02	0.43
3:A:29:LEU:HG	3:A:33:LEU:CD2	2.49	0.43
3:A:36:ALA:HB3	3:A:219:MET:CG	2.49	0.43
4:B:46:GLN:CG	4:B:46:GLN:O	2.67	0.43
5:C:66:HIS:O	5:C:67:PHE:CD2	2.72	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:29:GLY:O	5:C:91:VAL:CG1	2.67	0.43
6:D:111:ASP:HA	6:D:114:ARG:HE	1.83	0.43
6:D:15:LEU:HD13	6:D:19:LEU:CG	2.49	0.43
6:D:179:TYR:HA	6:D:182:VAL:CG1	2.49	0.43
7:E:120:LEU:HB3	7:E:179:PRO:C	2.39	0.43
10:H:36:TRP:C	10:H:158:PRO:HD2	2.39	0.43
13:K:68:ILE:O	13:K:69:PHE:CB	2.67	0.43
16:N:17:THR:O	16:N:18:ASP:HB3	2.18	0.43
16:N:70:VAL:O	16:N:72:VAL:HG23	2.19	0.43
18:P:4:ILE:HG22	18:P:39:LEU:HD11	2.01	0.43
17:O:40:PHE:CB	18:P:78:LYS:CG	2.96	0.43
19:Q:72:LYS:HG3	19:Q:107:LEU:HA	2.00	0.43
20:R:26:TYR:HB2	20:R:27:THR:H	1.74	0.43
22:T:12:GLY:O	22:T:13:GLU:C	2.57	0.43
25:W:43:GLN:C	25:W:45:SER:N	2.72	0.43
26:X:4:LEU:HD11	26:X:56:VAL:HG13	1.99	0.43
28:Z:10:ARG:O	28:Z:13:ALA:CB	2.59	0.43
8:F:138:LYS:HB3	8:F:141:VAL:CG1	2.49	0.43
8:F:76:VAL:CA	8:F:79:VAL:HG13	2.39	0.43
17:O:44:ASN:CG	18:P:78:LYS:HD2	2.40	0.43
22:T:43:GLU:HA	22:T:46:LYS:CG	2.46	0.43
24:V:14:VAL:HG22	24:V:16:ASN:O	2.19	0.43
3:A:11:LEU:H	3:A:11:LEU:CD1	2.32	0.43
3:A:194:ILE:O	3:A:197:LEU:CG	2.61	0.43
3:A:43:GLU:O	3:A:215:VAL:HG13	2.19	0.43
3:A:48:LEU:HA	3:A:211:ARG:NH1	2.33	0.43
4:B:137:PRO:HB2	4:B:140:THR:HG23	1.94	0.43
4:B:183:ARG:HG3	4:B:269:PHE:C	2.39	0.43
5:C:8:LYS:CD	5:C:190:GLY:O	2.67	0.43
5:C:8:LYS:HD3	5:C:190:GLY:O	2.19	0.43
5:C:5:LEU:CD1	5:C:5:LEU:N	2.81	0.43
6:D:151:LEU:HD13	6:D:188:VAL:CG1	2.49	0.43
8:F:13:LYS:CE	8:F:29:PRO:HA	2.45	0.43
10:H:36:TRP:C	10:H:37:VAL:HG23	2.37	0.43
10:H:45:THR:C	10:H:49:LEU:HD22	2.39	0.43
11:I:108:GLU:CB	11:I:109:LYS:HZ1	2.30	0.43
11:I:15:GLY:N	11:I:17:ARG:HH12	2.17	0.43
15:M:38:GLN:O	15:M:39:ILE:C	2.56	0.43
15:M:58:LEU:CD2	15:M:59:LYS:N	2.74	0.43
15:M:68:GLN:HA	15:M:71:ARG:HH12	1.69	0.43
16:N:102:ILE:HA	16:N:110:ILE:HG12	2.00	0.43
16:N:35:LYS:N	16:N:35:LYS:CD	2.77	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:N:61:PHE:HD1	16:N:76:PHE:O	2.01	0.43
17:O:81:HIS:C	17:O:83:LEU:N	2.72	0.43
18:P:34:GLU:N	18:P:64:HIS:HE1	2.17	0.43
18:P:71:LEU:HD21	18:P:93:GLU:HB3	1.99	0.43
20:R:84:ALA:H	20:R:85:PRO:HD2	1.84	0.43
21:S:72:VAL:O	21:S:73:ARG:HG3	2.19	0.43
21:S:84:ARG:HB2	21:S:91:GLU:HA	2.00	0.43
22:T:45:ASP:CG	22:T:49:ARG:HH21	2.22	0.43
22:T:73:GLN:HB3	22:T:87:ASP:HB2	1.99	0.43
22:T:7:ALA:C	22:T:8:TYR:CD2	2.91	0.43
23:U:45:PHE:CE1	23:U:77:ARG:HB3	2.53	0.43
24:V:51:VAL:HB	24:V:60:PHE:CA	2.49	0.43
26:X:23:LEU:HD23	26:X:23:LEU:N	2.34	0.43
20:R:29:TRP:N	20:R:29:TRP:CD1	2.87	0.43
20:R:78:LYS:HD2	20:R:79:ALA:H	1.78	0.43
33:O:35:A:C6	33:O:36:A:C6	3.07	0.43
20:R:27:THR:HA	20:R:78:LYS:CB	2.39	0.43
20:R:62:LYS:HE3	20:R:62:LYS:C	2.38	0.43
6:D:69:ARG:O	6:D:70:HIS:CB	2.66	0.43
7:E:5:LEU:CB	7:E:100:TRP:HH2	2.32	0.43
7:E:5:LEU:HD22	7:E:5:LEU:N	2.34	0.43
17:O:50:ARG:CG	17:O:50:ARG:NH2	2.82	0.43
18:P:11:GLN:HG2	18:P:11:GLN:H	1.71	0.43
19:Q:24:ILE:CG1	19:Q:36:LEU:CD1	2.97	0.43
20:R:28:PHE:CE1	20:R:78:LYS:CB	3.01	0.43
24:V:82:LEU:O	24:V:83:GLU:O	2.37	0.43
3:A:20:ILE:HD12	3:A:224:ARG:HD3	2.00	0.42
3:A:21:TYR:CE1	3:A:223:VAL:HG13	2.54	0.42
3:A:19:LYS:HB3	3:A:21:TYR:OH	2.18	0.42
3:A:27:ALA:O	3:A:183:PRO:CB	2.67	0.42
3:A:53:ARG:CD	3:A:53:ARG:H	2.31	0.42
4:B:116:GLN:C	4:B:117:VAL:HG23	2.39	0.42
4:B:244:ARG:HA	4:B:245:PRO:HA	1.68	0.42
5:C:59:VAL:CG1	5:C:60:ASN:N	2.82	0.42
6:D:165:LEU:N	6:D:165:LEU:HD13	2.22	0.42
7:E:100:TRP:O	7:E:103:LEU:HD12	2.18	0.42
7:E:120:LEU:C	7:E:120:LEU:HD13	2.39	0.42
8:F:89:ILE:HG12	8:F:93:GLY:C	2.39	0.42
9:G:115:ALA:O	9:G:118:LYS:NZ	2.50	0.42
9:G:137:PRO:O	9:G:138:ILE:HB	2.19	0.42
9:G:138:ILE:O	9:G:138:ILE:CG1	2.67	0.42
9:G:26:ALA:CA	9:G:31:LEU:H	2.31	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:89:TYR:CD1	9:G:89:TYR:N	2.81	0.42
11:I:61:VAL:O	11:I:84:ALA:CB	2.67	0.42
11:I:63:VAL:HG22	11:I:83:ALA:O	2.18	0.42
12:J:137:LYS:HB2	12:J:138:LEU:HD12	2.01	0.42
12:J:23:PRO:HB2	12:J:24:GLY:H	1.66	0.42
12:J:39:LYS:HZ2	12:J:39:LYS:HB3	1.84	0.42
12:J:61:ARG:HE	12:J:61:ARG:CA	2.31	0.42
13:K:1:MET:HG2	13:K:2:LEU:N	2.34	0.42
16:N:124:ASP:CB	16:N:125:ARG:HH12	2.26	0.42
16:N:38:ASN:ND2	16:N:38:ASN:H	2.13	0.42
21:S:82:PRO:HD3	21:S:97:ARG:NH1	2.34	0.42
24:V:51:VAL:CG1	24:V:53:VAL:H	2.31	0.42
25:W:5:GLU:C	25:W:5:GLU:OE1	2.57	0.42
26:X:7:LYS:CA	26:X:55:ARG:HB3	2.48	0.42
10:H:161:LEU:HD12	10:H:161:LEU:H	1.84	0.42
24:V:55:GLY:H	24:V:58:ILE:HD11	1.83	0.42
17:O:5:LYS:HZ1	17:O:7:GLY:CA	2.28	0.42
18:P:13:ARG:O	18:P:14:VAL:HG13	2.18	0.42
22:T:48:PHE:C	22:T:50:GLN:N	2.69	0.42
24:V:37:ILE:CG2	24:V:38:SER:H	2.32	0.42
4:B:155:LEU:CD2	4:B:157:ARG:CD	2.96	0.42
4:B:242:ARG:CG	4:B:242:ARG:HH11	2.31	0.42
5:C:64:LYS:C	5:C:66:HIS:H	2.23	0.42
7:E:82:LEU:CD1	7:E:84:LYS:H	2.23	0.42
9:G:127:VAL:CG1	9:G:141:LYS:NZ	2.82	0.42
10:H:151:HIS:HE1	10:H:157:ARG:HG2	1.83	0.42
10:H:48:ARG:O	10:H:52:LYS:CE	2.67	0.42
14:L:38:VAL:CB	14:L:110:PRO:HB2	2.29	0.42
17:O:59:ARG:HG2	17:O:62:ILE:HD11	1.99	0.42
19:Q:10:VAL:CG2	19:Q:101:SER:HB2	2.41	0.42
20:R:19:ALA:O	20:R:21:PHE:N	2.51	0.42
21:S:13:VAL:O	21:S:69:ALA:HB1	2.19	0.42
21:S:53:PRO:O	21:S:54:LYS:CB	2.66	0.42
22:T:103:ARG:HB2	22:T:137:ILE:O	2.19	0.42
24:V:26:ARG:CD	24:V:26:ARG:N	2.82	0.42
26:X:20:LYS:O	26:X:24:LYS:NZ	2.51	0.42
15:M:25:ARG:O	15:M:26:LEU:HD23	2.18	0.42
16:N:17:THR:C	16:N:19:LEU:H	2.22	0.42
23:U:51:VAL:HG22	23:U:79:VAL:HG23	2.01	0.42
17:O:114:LYS:CG	17:O:115:ALA:H	2.31	0.42
17:O:94:ASN:ND2	17:O:95:LEU:HG	2.34	0.42
20:R:51:VAL:O	20:R:52:VAL:HG23	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:T:100:VAL:HB	22:T:101:PRO:HD2	2.00	0.42
23:U:52:GLY:HA2	23:U:62:LEU:HB2	1.95	0.42
21:S:21:LYS:N	21:S:21:LYS:HD2	4.96	0.42
33:0:4:G:C2	33:0:5:A:C4	3.08	0.42
3:A:23:ILE:CG2	3:A:23:ILE:O	2.67	0.42
4:B:76:PRO:HG2	4:B:118:VAL:HA	2.02	0.42
4:B:175:LEU:HD13	4:B:185:VAL:HG21	2.00	0.42
4:B:81:ALA:CB	4:B:94:LEU:CB	2.71	0.42
5:C:109:LYS:NZ	14:L:3:HIS:CE1	2.87	0.42
5:C:138:PRO:O	5:C:140:SER:N	2.52	0.42
5:C:101:ARG:HE	5:C:169:ASN:HB3	1.84	0.42
5:C:37:ARG:HB2	5:C:46:ALA:H	1.84	0.42
5:C:51:PHE:HD1	5:C:52:LEU:N	1.82	0.42
5:C:8:LYS:HE2	5:C:191:PRO:C	2.40	0.42
6:D:129:GLY:N	6:D:134:PHE:CZ	2.87	0.42
6:D:24:ASN:C	6:D:26:HIS:CD2	2.92	0.42
7:E:114:ILE:CG1	7:E:115:ARG:H	2.32	0.42
7:E:16:ARG:HB2	7:E:17:PRO:CD	2.49	0.42
8:F:60:ARG:H	8:F:60:ARG:HG2	1.64	0.42
8:F:81:GLU:CB	8:F:89:ILE:O	26.29	0.42
9:G:34:GLY:O	9:G:35:LEU:HB2	2.17	0.42
9:G:41:GLU:OE1	9:G:41:GLU:N	2.52	0.42
9:G:78:THR:C	9:G:145:VAL:HG23	2.39	0.42
10:H:25:LYS:CD	18:P:13:ARG:HH21	2.33	0.42
10:H:54:ALA:C	10:H:56:LEU:N	2.72	0.42
11:I:104:ARG:N	11:I:104:ARG:HD2	2.34	0.42
13:K:134:ARG:CD	13:K:136:ALA:N	2.82	0.42
13:K:34:LEU:O	13:K:103:MET:CE	2.67	0.42
13:K:65:PHE:O	13:K:104:PHE:CB	2.67	0.42
14:L:94:TYR:CD1	14:L:94:TYR:N	2.88	0.42
16:N:25:GLY:O	16:N:48:ILE:HG13	2.20	0.42
16:N:98:LYS:HG3	16:N:100:TYR:CE1	2.52	0.42
18:P:28:GLU:CB	18:P:29:PRO:CD	2.89	0.42
23:U:15:ASP:HB3	23:U:20:ARG:HG2	2.01	0.42
27:Y:31:VAL:HG22	27:Y:40:LYS:O	2.19	0.42
4:B:23:GLU:O	4:B:82:ILE:HD12	2.20	0.42
10:H:36:TRP:O	10:H:158:PRO:CG	2.67	0.42
4:B:228:PRO:HG3	4:B:236:GLY:HA2	2.01	0.42
11:I:49:ARG:O	11:I:51:ALA:N	2.52	0.42
16:N:107:ASP:HA	16:N:111:ARG:NH2	2.34	0.42
27:Y:38:ALA:HB2	27:Y:48:GLU:CA	2.50	0.42
3:A:226:ASN:O	3:A:228:HIS:N	2.52	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:A:63:VAL:CG1	3:A:64:SER:H	2.23	0.42
4:B:142:VAL:CG2	4:B:143:HIS:O	2.62	0.42
4:B:6:PHE:CE1	4:B:17:THR:C	2.93	0.42
4:B:211:ARG:O	4:B:215:LEU:N	2.48	0.42
5:C:113:PHE:CD2	5:C:114:ALA:N	2.67	0.42
5:C:40:GLU:HB2	5:C:41:LYS:H	1.58	0.42
6:D:151:LEU:O	6:D:169:VAL:CG2	2.60	0.42
6:D:165:LEU:HD22	6:D:165:LEU:C	2.38	0.42
6:D:27:LEU:HD22	6:D:28:LEU:N	2.33	0.42
6:D:61:PRO:CG	6:D:65:THR:HA	2.50	0.42
7:E:11:TYR:CD2	7:E:12:TYR:CD2	3.07	0.42
7:E:125:PHE:HD1	7:E:125:PHE:O	2.02	0.42
7:E:35:GLU:CD	7:E:161:THR:C	2.78	0.42
7:E:5:LEU:CA	7:E:100:TRP:HH2	2.33	0.42
7:E:62:LEU:C	7:E:62:LEU:HD12	2.39	0.42
7:E:87:PRO:O	7:E:88:ILE:CB	2.67	0.42
7:E:8:LYS:O	7:E:10:LYS:N	2.51	0.42
9:G:74:ASN:O	9:G:75:LEU:HB2	2.19	0.42
10:H:120:ARG:HG2	10:H:124:HIS:NE2	2.34	0.42
10:H:34:PRO:CG	10:H:142:ARG:HH12	2.33	0.42
10:H:35:ARG:CA	10:H:73:ASP:HA	2.47	0.42
10:H:80:ALA:CA	10:H:83:ILE:CD1	2.83	0.42
11:I:59:LYS:NZ	11:I:89:ASN:CA	2.82	0.42
13:K:11:LYS:HD3	13:K:12:GLN:N	2.34	0.42
15:M:111:GLU:OE2	15:M:112:PHE:HD2	2.03	0.42
16:N:98:LYS:CG	16:N:100:TYR:HE1	2.33	0.42
17:O:92:ARG:HB3	17:O:95:LEU:HG	2.01	0.42
18:P:74:LYS:O	18:P:75:PHE:HD2	2.01	0.42
19:Q:10:VAL:C	19:Q:100:THR:HB	2.39	0.42
19:Q:21:VAL:HG23	19:Q:22:ASP:N	2.34	0.42
20:R:12:VAL:HG22	20:R:13:LEU:H	1.84	0.42
20:R:78:LYS:O	20:R:79:ALA:HB2	2.20	0.42
20:R:7:VAL:CG1	20:R:31:HIS:CB	2.97	0.42
22:T:53:ILE:HG12	22:T:54:HIS:CE1	2.54	0.42
23:U:37:LEU:HD23	23:U:60:PHE:HA	2.01	0.42
24:V:55:GLY:H	24:V:58:ILE:CG1	2.33	0.42
26:X:52:HIS:O	26:X:53:LEU:HB3	2.19	0.42
17:O:112:ARG:HA	17:O:112:ARG:HD3	1.73	0.42
33:O:24:G:C5	33:O:25:C:C5	3.07	0.42
7:E:165:THR:O	7:E:167:GLU:N	2.53	0.42
21:S:71:LYS:HZ2	21:S:78:ALA:CB	2.26	0.42
22:T:10:ARG:HG2	22:T:37:VAL:C	2.39	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:T:70:LEU:HD23	22:T:70:LEU:HA	1.82	0.42
23:U:50:ASN:HB2	23:U:81:VAL:HG12	1.85	0.42
26:X:50:VAL:O	26:X:51:ALA:C	2.57	0.42
3:A:59:VAL:HG12	3:A:201:LYS:CA	2.48	0.42
4:B:107:ALA:HA	4:B:108:PRO:HD2	1.88	0.42
4:B:117:VAL:HA	4:B:126:GLN:NE2	2.35	0.42
4:B:79:VAL:HG12	4:B:80:ALA:N	2.35	0.42
5:C:122:PHE:HB3	5:C:123:ALA:H	1.55	0.42
5:C:91:VAL:CG1	5:C:95:ILE:CD1	2.85	0.42
6:D:166:PRO:C	6:D:168:VAL:N	2.73	0.42
6:D:177:ASN:HB3	6:D:180:ASP:CG	2.39	0.42
7:E:148:MET:O	7:E:151:ALA:CB	2.62	0.42
7:E:35:GLU:HB3	7:E:160:VAL:HG12	2.00	0.42
7:E:16:ARG:HA	7:E:19:LEU:HD12	2.00	0.42
8:F:121:ILE:O	8:F:123:PHE:CE1	2.73	0.42
8:F:26:VAL:O	8:F:33:LEU:N	2.53	0.42
8:F:43:VAL:HB	8:F:51:ARG:O	2.19	0.42
9:G:118:LYS:N	9:G:118:LYS:CD	2.82	0.42
9:G:113:ARG:NE	9:G:132:PRO:HB3	2.35	0.42
9:G:40:THR:HG21	9:G:43:ASN:CB	2.47	0.42
10:H:119:GLU:CG	10:H:120:ARG:H	2.32	0.42
11:I:93:PRO:HG3	11:I:114:ILE:HG22	2.01	0.42
11:I:17:ARG:NE	11:I:47:ILE:CB	2.27	0.42
11:I:29:ASN:ND2	11:I:29:ASN:C	2.72	0.42
11:I:60:ALA:HA	11:I:86:ILE:CA	2.47	0.42
12:J:107:LYS:HG2	12:J:108:LYS:N	2.34	0.42
12:J:78:PRO:CB	12:J:110:TYR:CG	3.02	0.42
12:J:39:LYS:HZ2	12:J:39:LYS:CA	2.32	0.42
13:K:81:VAL:HB	13:K:82:ARG:HD3	2.01	0.42
14:L:90:ARG:HH22	14:L:118:GLU:CG	2.26	0.42
15:M:25:ARG:CZ	15:M:40:ILE:HG22	2.50	0.42
15:M:67:ARG:HB3	15:M:100:ALA:HB1	2.01	0.42
16:N:51:ARG:CZ	16:N:60:THR:CG2	2.98	0.42
22:T:19:ARG:O	22:T:22:GLY:N	2.52	0.42
22:T:68:PRO:HB2	22:T:91:LEU:HD12	2.01	0.42
23:U:15:ASP:HB3	23:U:20:ARG:CG	2.49	0.42
25:W:27:GLU:C	25:W:30:ARG:HG2	2.40	0.42
25:W:55:ARG:HB2	25:W:56:GLN:OE1	2.19	0.42
25:W:4:SER:HB3	25:W:6:VAL:HG22	2.01	0.42
27:Y:38:ALA:CA	27:Y:49:CYS:HB2	2.49	0.42
27:Y:40:LYS:NZ	27:Y:51:TYR:CD1	2.78	0.42
22:T:116:VAL:HG21	22:T:177:PRO:HD3	2.01	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:X:8:LEU:CD2	26:X:28:LEU:HD12	2.39	0.42
23:U:30:VAL:CG2	23:U:31:VAL:N	2.49	0.42
15:M:103:GLU:HG3	15:M:104:GLY:N	2.34	0.42
15:M:104:GLY:O	15:M:107:GLU:N	2.52	0.42
16:N:98:LYS:HB3	16:N:100:TYR:CE1	2.54	0.42
23:U:45:PHE:HD2	23:U:78:TYR:O	2.01	0.42
26:X:8:LEU:HD21	26:X:28:LEU:CD1	2.40	0.42
33:O:27:C:C2'	33:O:28:C:C5	3.01	0.42
4:B:117:VAL:O	4:B:118:VAL:HB	2.19	0.42
4:B:149:PRO:HA	4:B:186:HIS:CD2	2.54	0.42
5:C:104:VAL:HG12	5:C:105:THR:H	1.85	0.42
6:D:131:THR:CA	6:D:134:PHE:CE2	3.01	0.42
6:D:160:ARG:O	6:D:160:ARG:HG2	2.19	0.42
8:F:145:ALA:O	8:F:149:ARG:N	2.52	0.42
8:F:151:ILE:O	8:F:153:LYS:HG2	2.20	0.42
10:H:146:TYR:CZ	10:H:148:GLY:CA	3.03	0.42
10:H:78:VAL:CG1	10:H:149:PRO:HA	2.47	0.42
10:H:78:VAL:HG21	10:H:149:PRO:CB	2.49	0.42
10:H:88:LYS:CG	10:H:88:LYS:O	2.67	0.42
12:J:85:LEU:HG	12:J:118:GLY:O	2.20	0.42
12:J:39:LYS:CB	12:J:39:LYS:HZ2	2.33	0.42
12:J:82:GLY:O	12:J:83:VAL:CB	2.66	0.42
13:K:102:VAL:HG12	13:K:103:MET:H	1.83	0.42
13:K:124:LYS:HZ2	13:K:125:LEU:HB2	1.84	0.42
13:K:29:PHE:HB3	13:K:65:PHE:CE2	2.54	0.42
16:N:55:ASN:HD21	16:N:58:ASN:H	1.63	0.42
17:O:36:ARG:CA	17:O:39:LEU:HG	2.49	0.42
17:O:61:TRP:C	17:O:65:ILE:HD12	2.40	0.42
17:O:74:LEU:HD21	17:O:110:VAL:HA	2.02	0.42
17:O:81:HIS:O	17:O:83:LEU:N	2.52	0.42
18:P:92:THR:O	18:P:93:GLU:HB2	2.20	0.42
19:Q:80:PRO:HD3	19:Q:102:HIS:HE2	1.83	0.42
22:T:17:ALA:O	22:T:18:LEU:C	2.58	0.42
22:T:58:VAL:HG13	22:T:67:LEU:C	2.40	0.42
23:U:24:LYS:C	23:U:25:ARG:HG2	2.40	0.42
24:V:73:LEU:O	24:V:74:VAL:C	2.58	0.42
33:O:29:A:C2	33:O:41:U:O2	2.50	0.42
4:B:38:LYS:O	4:B:39:LYS:O	2.38	0.42
14:L:80:PHE:HA	14:L:84:ALA:HB2	2.00	0.42
16:N:108:ARG:CG	16:N:108:ARG:NH1	2.73	0.42
16:N:45:PHE:HZ	16:N:65:LYS:O	1.99	0.42
3:A:223:VAL:CG1	3:A:224:ARG:H	2.06	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:119:ALA:O	4:B:123:ALA:CB	2.68	0.42
4:B:177:LEU:HD12	4:B:181:GLU:HB3	2.01	0.42
4:B:249:PRO:CB	4:B:250:TRP:CZ3	2.93	0.42
5:C:29:GLY:CA	5:C:76:ARG:HH12	2.32	0.42
6:D:109:VAL:O	6:D:113:ALA:N	2.53	0.42
7:E:123:ASN:OD1	7:E:180:PHE:HE1	2.03	0.42
7:E:54:GLU:C	7:E:57:ALA:HB3	2.40	0.42
8:F:125:VAL:HG12	8:F:128:PRO:C	2.39	0.42
9:G:97:ILE:CD1	9:G:111:PRO:HG3	2.41	0.42
9:G:65:ALA:CB	9:G:133:HIS:CE1	3.02	0.42
9:G:56:LYS:HG3	9:G:57:ARG:H	1.85	0.42
9:G:79:ILE:N	9:G:145:VAL:CG2	2.82	0.42
10:H:143:LEU:HD13	10:H:143:LEU:H	1.85	0.42
10:H:27:TYR:CE2	10:H:64:ASP:HA	2.55	0.42
11:I:114:ILE:O	11:I:115:VAL:C	2.58	0.42
12:J:88:LEU:HD21	12:J:90:ARG:HH21	1.81	0.42
13:K:65:PHE:HD1	13:K:105:GLU:O	2.03	0.42
14:L:36:THR:O	14:L:111:LEU:CA	2.67	0.42
15:M:38:GLN:O	15:M:38:GLN:CG	2.66	0.42
15:M:71:ARG:HB3	15:M:108:GLY:C	2.40	0.42
16:N:64:ARG:HE	16:N:103:ARG:HB2	1.71	0.42
16:N:47:GLY:O	16:N:63:VAL:HG21	2.19	0.42
16:N:64:ARG:CG	16:N:65:LYS:H	2.16	0.42
17:O:111:GLU:HA	17:O:114:LYS:HD3	2.01	0.42
17:O:19:LYS:HA	17:O:19:LYS:NZ	2.35	0.42
18:P:25:LEU:H	18:P:94:LEU:CD1	2.30	0.42
19:Q:81:ALA:HA	19:Q:98:LYS:O	2.19	0.42
24:V:36:GLY:C	24:V:39:LYS:HZ3	2.23	0.42
24:V:66:HIS:CB	24:V:69:LYS:HD2	2.49	0.42
25:W:12:GLU:O	25:W:13:ALA:C	2.58	0.42
22:T:92:SER:O	22:T:93:ASP:C	2.57	0.42
19:Q:83:LYS:HA	19:Q:97:LYS:HB3	2.02	0.42
21:S:46:LYS:N	21:S:57:GLN:N	2.67	0.42
33:O:15:G:C8	33:O:15:G:C3'	3.02	0.42
4:B:17:THR:HB	4:B:204:ILE:HA	2.01	0.42
4:B:82:ILE:CG2	4:B:91:ARG:CZ	2.98	0.42
6:D:152:VAL:HG13	6:D:152:VAL:O	2.20	0.42
7:E:28:VAL:O	7:E:33:ARG:HD3	2.20	0.42
7:E:3:LEU:CB	7:E:5:LEU:HD23	2.50	0.42
7:E:7:LEU:HD12	7:E:11:TYR:HB3	2.02	0.42
8:F:58:GLU:CG	8:F:61:HIS:CD2	3.03	0.42
9:G:39:ALA:O	9:G:40:THR:C	2.58	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:40:ASP:OD1	10:H:78:VAL:O	2.37	0.42
11:I:104:ARG:HD3	11:I:105:GLU:CD	2.40	0.42
11:I:66:LYS:HB3	11:I:78:ARG:HH22	1.85	0.42
11:I:66:LYS:O	11:I:78:ARG:NH1	2.53	0.42
12:J:100:LEU:CD2	12:J:100:LEU:N	2.83	0.42
12:J:50:ARG:HD3	12:J:51:PHE:O	2.20	0.42
12:J:9:ASN:O	12:J:11:GLY:N	2.53	0.42
13:K:53:ALA:O	13:K:57:HIS:CB	2.58	0.42
14:L:1:MET:HG3	14:L:1:MET:O	2.20	0.42
14:L:63:ARG:HD3	14:L:63:ARG:HA	1.93	0.42
14:L:80:PHE:CD2	14:L:80:PHE:N	2.87	0.42
16:N:102:ILE:CG1	16:N:103:ARG:H	2.14	0.42
19:Q:13:SER:HA	19:Q:14:PRO:HD3	1.70	0.42
19:Q:42:ARG:CG	19:Q:43:GLY:H	2.32	0.42
22:T:161:VAL:CG1	22:T:162:GLU:N	2.81	0.42
24:V:67:ILE:O	24:V:70:VAL:CG2	2.67	0.42
26:X:16:PRO:HG2	26:X:19:GLN:HG3	2.00	0.42
22:T:28:MET:CE	22:T:34:ASN:HA	2.48	0.42
23:U:37:LEU:H	23:U:60:PHE:CA	2.33	0.42
9:G:3:VAL:CG1	9:G:4:ILE:H	2.32	0.42
15:M:26:LEU:HD11	15:M:39:ILE:HA	1.97	0.42
17:O:85:LYS:CG	17:O:116:ALA:HB1	2.49	0.42
18:P:21:ARG:O	18:P:22:VAL:HB	2.20	0.42
21:S:35:TYR:HB2	21:S:36:ALA:H	1.65	0.42
23:U:22:GLY:N	23:U:39:ARG:HB3	2.34	0.42
33:O:20:G:C8	33:O:20:G:C3'	3.03	0.42
3:A:43:GLU:CA	3:A:175:PRO:HA	2.47	0.42
3:A:20:ILE:HG13	3:A:225:ILE:N	2.34	0.42
4:B:248:SER:O	4:B:249:PRO:C	2.56	0.42
4:B:31:LYS:HD3	4:B:32:SER:O	2.19	0.42
4:B:44:ASN:HB2	4:B:48:ARG:C	2.40	0.42
5:C:162:ALA:O	5:C:163:GLU:HB3	2.18	0.42
6:D:111:ASP:HA	6:D:114:ARG:NE	2.35	0.42
6:D:154:GLY:HA3	6:D:194:TRP:CZ2	2.55	0.42
7:E:129:GLY:N	7:E:163:ALA:HB3	2.35	0.42
8:F:14:GLY:O	8:F:15:VAL:CG2	2.58	0.42
8:F:152:ARG:O	8:F:154:PRO:N	2.52	0.42
8:F:72:ILE:O	8:F:73:ALA:C	2.58	0.42
9:G:97:ILE:C	9:G:99:GLU:N	2.72	0.42
10:H:107:LYS:HG3	10:H:108:ILE:N	2.22	0.42
10:H:78:VAL:O	10:H:80:ALA:CA	2.65	0.42
11:I:77:ILE:HG23	11:I:77:ILE:O	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:67:LYS:HB3	11:I:79:PHE:CE1	2.55	0.42
12:J:79:ARG:HG3	12:J:81:GLN:HE22	1.84	0.42
13:K:36:ALA:CB	13:K:103:MET:SD	3.06	0.42
13:K:118:LEU:HB2	13:K:119:ARG:HH11	1.81	0.42
13:K:134:ARG:HE	13:K:136:ALA:HA	1.85	0.42
13:K:42:ILE:HD11	13:K:46:GLN:CB	2.35	0.42
13:K:79:LEU:HG	13:K:80:GLU:N	2.34	0.42
15:M:12:PHE:HD1	15:M:13:ARG:N	2.13	0.42
16:N:33:LYS:CE	16:N:41:ARG:HB3	2.50	0.42
23:U:37:LEU:H	23:U:60:PHE:CB	2.33	0.42
23:U:31:VAL:HG23	23:U:61:ALA:HB1	2.00	0.42
25:W:10:LEU:HD12	25:W:10:LEU:C	2.40	0.42
27:Y:42:PRO:O	27:Y:43:HIS:CB	2.67	0.42
28:Z:46:VAL:CG1	28:Z:47:ARG:N	2.83	0.42
14:L:38:VAL:N	14:L:39:PRO:HD2	2.34	0.42
14:L:3:HIS:O	14:L:4:LEU:O	2.38	0.42
18:P:7:THR:HG23	18:P:10:LYS:HZ3	1.83	0.42
7:E:176:LEU:C	7:E:178:PHE:CE1	2.93	0.42
21:S:67:LEU:O	21:S:68:HIS:CD2	2.72	0.42
26:X:35:ARG:HD2	26:X:35:ARG:HA	1.79	0.42
19:Q:23:LEU:HD11	27:Y:27:PRO:CB	2.50	0.42
33:O:9:A:N3	33:O:46:G:N3	2.67	0.42
3:A:40:GLU:O	3:A:178:LYS:HA	2.20	0.42
4:B:92:ILE:HG22	4:B:105:ILE:O	2.20	0.42
4:B:242:ARG:CD	4:B:243:GLY:H	2.33	0.42
4:B:42:GLY:C	4:B:44:ASN:H	2.23	0.42
5:C:97:LYS:N	5:C:100:GLU:OE1	2.49	0.42
5:C:120:TRP:HZ2	5:C:156:MET:C	2.23	0.42
5:C:11:MET:HE3	5:C:23:VAL:H	1.85	0.42
5:C:11:MET:CB	5:C:24:THR:HA	2.50	0.42
5:C:67:PHE:C	5:C:69:LYS:N	2.72	0.42
5:C:93:VAL:HG11	5:C:175:VAL:HG23	2.02	0.42
6:D:78:PHE:N	6:D:78:PHE:HD2	2.03	0.42
8:F:139:GLN:C	8:F:141:VAL:H	2.22	0.42
8:F:140:LYS:CE	8:F:141:VAL:HG23	2.50	0.42
9:G:126:TYR:CD1	9:G:127:VAL:N	2.88	0.42
9:G:126:TYR:CG	9:G:127:VAL:N	2.88	0.42
10:H:113:MET:HG3	10:H:121:VAL:CB	2.50	0.42
12:J:99:LEU:CD2	12:J:99:LEU:H	4.83	0.42
14:L:20:LEU:HD22	14:L:21:TYR:CE1	2.55	0.42
14:L:49:ASP:O	14:L:52:ILE:HB	2.20	0.42
7:E:139:LEU:HD23	16:N:3:ARG:CZ	173.91	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:N:47:GLY:HA3	16:N:64:ARG:C	2.39	0.42
17:O:38:THR:O	17:O:39:LEU:C	2.57	0.42
18:P:66:ARG:HG3	18:P:67:GLY:N	2.35	0.42
19:Q:72:LYS:HE3	19:Q:107:LEU:C	2.40	0.42
25:W:45:SER:O	25:W:46:GLN:CG	2.67	0.42
28:Z:10:ARG:HG3	28:Z:11:LYS:H	1.85	0.42
28:Z:24:THR:H	28:Z:28:ARG:CD	2.33	0.42
18:P:18:LEU:HD22	18:P:98:GLU:OE1	2.19	0.42
21:S:30:VAL:O	21:S:31:LEU:C	2.58	0.42
16:N:28:VAL:CG2	16:N:45:PHE:O	2.39	0.41
5:C:101:ARG:HA	5:C:170:LEU:O	2.20	0.41
5:C:175:VAL:HA	5:C:182:LEU:HD12	2.01	0.41
6:D:177:ASN:O	6:D:180:ASP:CG	2.58	0.41
6:D:177:ASN:HB3	6:D:180:ASP:OD2	2.20	0.41
7:E:172:LEU:HD12	7:E:173:LEU:N	2.35	0.41
7:E:176:LEU:O	7:E:178:PHE:CE1	2.73	0.41
7:E:64:THR:O	7:E:102:PHE:CE1	2.73	0.41
8:F:27:LYS:HA	8:F:32:GLU:N	2.35	0.41
8:F:46:GLU:O	8:F:47:GLU:HB2	2.19	0.41
6:D:171:LEU:HB3	6:D:172:ALA:H	1.44	0.41
10:H:96:THR:HG21	10:H:107:LYS:HA	1.99	0.41
10:H:112:LYS:CD	10:H:116:THR:HG22	2.48	0.41
10:H:130:LEU:HB3	10:H:131:PRO:CD	2.49	0.41
10:H:138:ARG:C	10:H:140:PHE:H	2.24	0.41
10:H:140:PHE:O	10:H:141:LYS:C	2.59	0.41
11:I:44:LYS:HB2	11:I:45:GLU:H	1.70	0.41
12:J:16:ARG:HH21	12:J:17:LYS:HA	1.85	0.41
12:J:51:PHE:O	12:J:52:GLU:HB2	2.20	0.41
13:K:55:VAL:HA	13:K:58:PHE:HB2	2.02	0.41
13:K:69:PHE:O	13:K:95:ALA:HB1	2.21	0.41
14:L:45:ARG:CG	14:L:45:ARG:NH1	2.81	0.41
14:L:86:ARG:CD	14:L:87:TYR:CE1	3.03	0.41
14:L:85:PRO:CA	14:L:88:ARG:HB2	2.49	0.41
15:M:27:SER:C	15:M:28:VAL:HG23	2.39	0.41
15:M:99:LYS:O	15:M:103:GLU:HG2	2.19	0.41
18:P:82:ARG:C	18:P:82:ARG:CD	2.88	0.41
18:P:24:LYS:HG2	18:P:94:LEU:HD21	2.01	0.41
20:R:60:ARG:CG	20:R:74:PRO:HG3	2.50	0.41
21:S:38:ILE:CG1	21:S:39:VAL:N	2.76	0.41
23:U:21:LEU:HB3	23:U:39:ARG:O	2.20	0.41
23:U:45:PHE:CD2	23:U:77:ARG:C	2.93	0.41
24:V:21:ARG:O	24:V:39:LYS:HB3	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:V:59:THR:O	24:V:60:PHE:CD1	2.73	0.41
9:G:94:ALA:HB3	9:G:95:LYS:HZ2	1.81	0.41
25:W:3:LEU:CD1	25:W:8:LYS:NZ	2.83	0.41
27:Y:51:TYR:O	27:Y:52:TYR:CB	2.68	0.41
27:Y:51:TYR:HB3	27:Y:52:TYR:H	1.48	0.41
14:L:26:LYS:O	14:L:29:LEU:CB	2.54	0.41
14:L:38:VAL:O	14:L:41:ALA:HB3	2.20	0.41
17:O:114:LYS:CG	17:O:115:ALA:N	2.81	0.41
17:O:47:TYR:O	17:O:50:ARG:CA	2.66	0.41
23:U:71:ASP:HB3	23:U:77:ARG:CA	2.41	0.41
25:W:22:GLU:OE1	25:W:22:GLU:C	2.58	0.41
26:X:41:PRO:CA	26:X:44:ARG:CD	2.87	0.41
16:N:26:ASP:H	16:N:90:GLN:HA	1.85	0.41
4:B:111:LEU:C	4:B:111:LEU:CD1	2.89	0.41
4:B:78:LYS:HZ2	4:B:113:VAL:HG12	1.84	0.41
4:B:124:PRO:O	4:B:129:ASN:HB3	2.20	0.41
4:B:130:ALA:C	4:B:190:TYR:HE1	2.20	0.41
4:B:8:PRO:HG3	4:B:15:PHE:CZ	2.54	0.41
6:D:165:LEU:CD1	6:D:165:LEU:N	2.81	0.41
6:D:176:LEU:HD11	6:D:178:VAL:CG1	2.46	0.41
6:D:26:HIS:HD2	6:D:26:HIS:N	2.17	0.41
7:E:70:VAL:HB	7:E:90:LEU:HD11	2.02	0.41
8:F:20:ALA:CB	8:F:23:ARG:O	2.69	0.41
9:G:6:LEU:CG	9:G:35:LEU:HD13	2.50	0.41
10:H:118:PRO:CA	10:H:121:VAL:HG23	2.50	0.41
10:H:143:LEU:HD13	10:H:143:LEU:N	2.35	0.41
10:H:84:ARG:HE	10:H:84:ARG:C	2.24	0.41
13:K:116:GLU:O	13:K:119:ARG:N	2.53	0.41
13:K:16:ARG:HG3	13:K:17:LEU:N	2.34	0.41
14:L:21:TYR:HA	14:L:24:GLN:CB	2.50	0.41
14:L:29:LEU:HD21	14:L:75:LEU:HD13	1.99	0.41
14:L:97:VAL:HG22	14:L:114:VAL:HA	2.02	0.41
15:M:47:THR:O	15:M:48:LEU:O	2.37	0.41
15:M:76:LYS:NZ	15:M:76:LYS:CB	2.83	0.41
15:M:87:PHE:O	15:M:88:ASP:HB2	2.21	0.41
16:N:64:ARG:NE	16:N:103:ARG:CB	2.61	0.41
17:O:22:LYS:HA	17:O:22:LYS:HD3	1.77	0.41
18:P:82:ARG:O	18:P:82:ARG:HD2	2.21	0.41
19:Q:30:GLU:HA	19:Q:33:ARG:HE	1.79	0.41
21:S:47:LYS:CG	21:S:48:ALA:N	2.66	0.41
22:T:23:LYS:C	22:T:24:LEU:HD23	2.40	0.41
23:U:82:ARG:HA	23:U:83:PRO:HD3	1.93	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:W:34:GLU:C	25:W:36:ARG:H	2.23	0.41
27:Y:25:LEU:O	27:Y:27:PRO:HD3	2.21	0.41
33:O:10:G:C2	33:O:11:C:C4	3.08	0.41
10:H:55:THR:O	10:H:55:THR:HG22	2.20	0.41
33:O:32:C:C2'	33:O:33:U:H5'	2.50	0.41
33:O:29:A:C2	33:O:42:G:C5	3.08	0.41
3:A:216:THR:CA	3:A:221:PRO:O	2.56	0.41
4:B:97:TYR:C	4:B:98:VAL:CG2	2.87	0.41
6:D:155:ASN:HB2	6:D:157:LEU:CG	2.51	0.41
6:D:150:LEU:HB3	6:D:169:VAL:HB	1.99	0.41
6:D:181:ILE:C	6:D:184:THR:HG1	2.23	0.41
6:D:57:ARG:N	6:D:73:ILE:HG21	2.35	0.41
7:E:103:LEU:HG	7:E:103:LEU:H	1.60	0.41
8:F:117:PRO:HA	8:F:118:PRO:HD2	1.92	0.41
8:F:157:TYR:HB2	8:F:172:LYS:O	2.19	0.41
8:F:95:ARG:HD2	8:F:106:THR:O	2.20	0.41
9:G:113:ARG:HB2	9:G:130:TYR:CZ	2.55	0.41
9:G:96:ASP:O	9:G:99:GLU:HB2	2.20	0.41
9:G:8:PRO:HB2	9:G:9:LEU:H	1.70	0.41
10:H:95:TYR:CD1	10:H:108:ILE:HG13	2.54	0.41
10:H:118:PRO:O	10:H:121:VAL:HB	2.20	0.41
10:H:123:GLU:C	10:H:127:LYS:HG3	2.38	0.41
12:J:105:LEU:O	12:J:106:LEU:HB2	2.20	0.41
12:J:111:ARG:HH21	12:J:148:LEU:HD21	1.76	0.41
16:N:100:TYR:C	16:N:103:ARG:NH1	2.73	0.41
17:O:38:THR:HG23	17:O:42:ALA:HB2	2.02	0.41
18:P:47:VAL:CG1	18:P:48:GLY:H	2.31	0.41
19:Q:106:ILE:C	19:Q:107:LEU:HD23	2.40	0.41
21:S:97:ARG:CA	21:S:102:CYS:O	2.62	0.41
21:S:55:TYR:CD1	21:S:56:PRO:N	2.88	0.41
21:S:84:ARG:O	21:S:91:GLU:HG3	2.20	0.41
22:T:121:HIS:C	22:T:123:ASP:H	2.23	0.41
22:T:5:LEU:HB2	22:T:57:ILE:CG1	2.51	0.41
22:T:26:GLY:HA3	22:T:86:VAL:HG23	2.02	0.41
22:T:97:GLU:HB3	22:T:127:LYS:HA	2.01	0.41
23:U:50:ASN:HD22	23:U:65:GLY:CA	2.34	0.41
24:V:12:PRO:CG	24:V:63:ALA:CB	2.97	0.41
24:V:9:GLY:HA3	24:V:61:ARG:CZ	2.49	0.41
25:W:27:GLU:HA	25:W:30:ARG:CG	2.50	0.41
3:A:22:THR:N	3:A:25:GLU:HG3	2.34	0.41
4:B:134:ARG:NH2	4:B:187:GLY:CA	2.62	0.41
4:B:231:HIS:CE1	4:B:233:HIS:HB2	2.55	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:52:ARG:HB3	4:B:53:PHE:CD1	2.55	0.41
13:K:68:ILE:HB	13:K:69:PHE:H	1.51	0.41
14:L:48:VAL:HG22	14:L:49:ASP:N	2.35	0.41
19:Q:42:ARG:CD	19:Q:46:PHE:CZ	2.97	0.41
20:R:60:ARG:HD2	20:R:60:ARG:HA	1.89	0.41
19:Q:23:LEU:CD1	27:Y:25:LEU:O	2.64	0.41
15:M:30:ARG:C	15:M:30:ARG:HD2	2.40	0.41
33:O:26:G:C2	33:O:27:C:H1'	2.55	0.41
3:A:19:LYS:HA	3:A:19:LYS:CE	2.39	0.41
4:B:260:ARG:NH2	4:B:264:LYS:HD3	2.34	0.41
4:B:79:VAL:CA	4:B:95:LEU:CB	2.80	0.41
6:D:179:TYR:O	6:D:182:VAL:CG1	2.62	0.41
7:E:12:TYR:O	7:E:13:GLU:CB	2.69	0.41
9:G:41:GLU:C	9:G:44:LEU:H	2.23	0.41
9:G:55:ALA:C	9:G:58:LEU:HB3	2.40	0.41
10:H:26:THR:CG2	10:H:27:TYR:H	2.09	0.41
10:H:49:LEU:HD13	10:H:49:LEU:N	2.36	0.41
11:I:106:LEU:HB3	11:I:111:PHE:HD2	1.86	0.41
11:I:24:VAL:HG13	11:I:25:LEU:N	2.35	0.41
17:O:81:HIS:O	17:O:82:GLY:C	2.58	0.41
18:P:73:SER:HB3	18:P:75:PHE:CE2	2.55	0.41
19:Q:45:TYR:CG	19:Q:45:TYR:O	2.72	0.41
19:Q:57:ASN:C	19:Q:59:VAL:N	2.73	0.41
19:Q:95:ILE:O	19:Q:96:ILE:CG2	2.54	0.41
20:R:55:ASN:H	20:R:77:LYS:HD2	1.84	0.41
21:S:87:LYS:HB3	21:S:88:LYS:H	1.70	0.41
22:T:48:PHE:O	22:T:50:GLN:N	2.53	0.41
22:T:5:LEU:HD22	22:T:6:LYS:NZ	6.50	0.41
23:U:33:ALA:O	23:U:60:PHE:CZ	2.73	0.41
23:U:77:ARG:C	23:U:78:TYR:CD1	2.93	0.41
26:X:19:GLN:NE2	26:X:49:LYS:HG2	2.35	0.41
26:X:20:LYS:CA	26:X:23:LEU:HD21	2.15	0.41
27:Y:34:PRO:CG	27:Y:52:TYR:CE2	3.02	0.41
4:B:48:ARG:CD	4:B:49:ILE:HG13	2.51	0.41
5:C:44:TYR:HD1	5:C:44:TYR:N	2.15	0.41
16:N:38:ASN:ND2	16:N:38:ASN:N	2.66	0.41
16:N:67:SER:O	16:N:69:GLY:N	2.44	0.41
16:N:76:PHE:HA	16:N:77:PRO:HD3	1.77	0.41
24:V:31:GLY:O	24:V:32:LYS:CB	2.67	0.41
25:W:12:GLU:N	25:W:12:GLU:OE1	2.54	0.41
5:C:36:ARG:O	5:C:37:ARG:O	2.38	0.41
33:O:26:G:C5	33:O:27:C:C6	3.07	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:A:20:ILE:HB	3:A:224:ARG:HD3	2.02	0.41
3:A:47:LYS:NZ	3:A:47:LYS:CB	2.84	0.41
4:B:134:ARG:NH2	4:B:171:ASP:O	2.51	0.41
4:B:247:ALA:CA	4:B:253:GLN:HA	2.37	0.41
4:B:79:VAL:O	4:B:80:ALA:HB2	2.20	0.41
5:C:47:VAL:HG12	5:C:49:LEU:CD2	2.50	0.41
6:D:158:VAL:HA	6:D:161:ALA:HB3	2.02	0.41
6:D:153:THR:HG21	6:D:158:VAL:HG11	2.02	0.41
6:D:164:ASN:CG	6:D:166:PRO:HD3	2.41	0.41
6:D:196:VAL:C	6:D:197:PHE:CD1	2.94	0.41
6:D:26:HIS:CD2	6:D:27:LEU:CD1	3.02	0.41
8:F:162:ILE:O	8:F:163:TYR:CD1	2.74	0.41
8:F:53:GLU:CG	8:F:54:ARG:H	2.32	0.41
8:F:55:PRO:HG2	8:F:58:GLU:OE2	2.20	0.41
9:G:126:TYR:CE2	9:G:127:VAL:O	2.74	0.41
9:G:127:VAL:O	9:G:128:LEU:HG	2.19	0.41
9:G:129:THR:OG1	9:G:139:GLN:HB3	2.20	0.41
9:G:48:GLU:HG3	9:G:51:ILE:HD12	2.02	0.41
9:G:4:ILE:HG22	9:G:37:VAL:CG2	2.46	0.41
10:H:138:ARG:C	10:H:140:PHE:N	2.74	0.41
10:H:78:VAL:CB	10:H:146:TYR:HE2	2.33	0.41
10:H:29:PRO:O	10:H:30:LYS:CB	2.66	0.41
11:I:10:VAL:O	11:I:11:ALA:C	2.59	0.41
11:I:12:ASP:OD2	11:I:13:ASN:N	2.53	0.41
11:I:21:CYS:HA	11:I:41:ALA:HB2	2.01	0.41
11:I:85:VAL:O	11:I:86:ILE:CD1	2.67	0.41
12:J:135:LEU:HD13	12:J:135:LEU:C	2.41	0.41
14:L:96:ARG:HG3	14:L:117:VAL:HA	2.02	0.41
14:L:96:ARG:N	14:L:98:LEU:HG	7.46	0.41
15:M:75:GLU:O	15:M:78:LEU:HB2	2.20	0.41
15:M:9:ARG:HH21	15:M:9:ARG:HB2	1.84	0.41
16:N:29:ARG:C	16:N:44:ASP:CG	2.77	0.41
19:Q:42:ARG:CG	19:Q:43:GLY:N	2.83	0.41
19:Q:87:PRO:HA	19:Q:88:ARG:HH21	1.83	0.41
22:T:15:PRO:CA	22:T:19:ARG:CZ	2.98	0.41
22:T:5:LEU:CD1	22:T:6:LYS:H	2.26	0.41
23:U:17:GLN:HA	23:U:17:GLN:OE1	2.20	0.41
23:U:54:GLY:O	23:U:55:ARG:C	2.59	0.41
23:U:62:LEU:HD12	23:U:63:VAL:CG2	2.38	0.41
10:H:84:ARG:NE	10:H:84:ARG:C	2.74	0.41
28:Z:17:GLY:O	28:Z:20:ALA:HB3	2.20	0.41
27:Y:8:LYS:HZ2	27:Y:8:LYS:HB2	1.85	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:64:LYS:HB2	5:C:64:LYS:HE2	1.93	0.41
6:D:40:ARG:HA	6:D:40:ARG:HD2	4.28	0.41
7:E:128:ARG:CG	7:E:129:GLY:N	2.80	0.41
7:E:41:GLN:CG	7:E:155:MET:HA	2.44	0.41
8:F:116:GLU:CD	8:F:117:PRO:HD2	2.40	0.41
8:F:172:LYS:HA	8:F:173:PRO:HD2	1.96	0.41
8:F:43:VAL:CG2	8:F:44:VAL:N	2.61	0.41
8:F:58:GLU:HG2	8:F:61:HIS:CD2	2.55	0.41
8:F:64:LEU:HD12	8:F:65:HIS:CA	2.49	0.41
8:F:90:LYS:O	8:F:160:LYS:HG3	2.21	0.41
9:G:3:VAL:HB	9:G:21:VAL:CG2	2.48	0.41
9:G:73:GLU:C	9:G:75:LEU:N	2.72	0.41
9:G:90:GLY:O	9:G:91:SER:HB3	2.21	0.41
9:G:91:SER:O	9:G:92:VAL:HG13	2.21	0.41
10:H:101:TYR:N	10:H:101:TYR:HD1	2.18	0.41
11:I:118:ALA:HA	11:I:119:PRO:HD2	1.89	0.41
12:J:95:VAL:HG23	12:J:125:VAL:HB	2.02	0.41
12:J:71:VAL:CG2	12:J:72:PRO:CD	2.88	0.41
12:J:82:GLY:C	12:J:113:LYS:O	2.59	0.41
17:O:61:TRP:O	17:O:62:ILE:C	2.58	0.41
18:P:14:VAL:C	18:P:15:GLU:HG3	2.40	0.41
18:P:78:LYS:C	18:P:79:VAL:HG23	2.40	0.41
18:P:85:LYS:HE2	18:P:86:GLY:HA2	2.03	0.41
18:P:93:GLU:CD	18:P:93:GLU:O	2.58	0.41
19:Q:42:ARG:HG3	19:Q:43:GLY:H	1.85	0.41
22:T:99:TYR:CE1	22:T:125:LEU:CD2	2.97	0.41
23:U:34:GLY:C	23:U:35:ASN:HD22	2.24	0.41
23:U:45:PHE:HB3	23:U:79:VAL:HG13	2.03	0.41
24:V:57:GLU:O	24:V:58:ILE:CG2	2.59	0.41
25:W:35:LEU:HA	25:W:37:PHE:HE2	1.80	0.41
25:W:3:LEU:CD1	25:W:8:LYS:HZ2	2.33	0.41
22:T:128:VAL:HG11	22:T:134:PRO:CD	2.40	0.41
3:A:30:VAL:HG21	3:A:183:PRO:HB3	2.02	0.41
5:C:71:GLY:C	5:C:73:GLU:N	2.74	0.41
25:W:22:GLU:C	25:W:22:GLU:CD	2.79	0.41
3:A:12:LEU:HD12	3:A:12:LEU:N	2.36	0.41
4:B:257:LEU:HD12	4:B:259:THR:OG1	2.21	0.41
4:B:82:ILE:HG22	4:B:91:ARG:HD2	2.02	0.41
5:C:192:ASN:OD1	16:N:4:GLY:HA2	2.19	0.41
5:C:201:THR:CG2	5:C:203:LYS:H	2.34	0.41
6:D:131:THR:O	6:D:132:LYS:C	2.58	0.41
6:D:149:VAL:O	6:D:150:LEU:HD22	2.18	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:15:LEU:C	6:D:19:LEU:HD21	2.41	0.41
6:D:62:GLN:O	6:D:63:LYS:C	2.58	0.41
7:E:149:VAL:HG23	7:E:150:ASP:N	2.36	0.41
7:E:54:GLU:CA	7:E:57:ALA:HB3	2.51	0.41
7:E:79:ASN:CG	7:E:82:LEU:O	2.59	0.41
8:F:20:ALA:H	8:F:23:ARG:C	2.24	0.41
9:G:126:TYR:CD1	9:G:127:VAL:HG22	2.56	0.41
9:G:62:LYS:HZ3	9:G:133:HIS:CG	2.38	0.41
9:G:95:LYS:HE2	9:G:95:LYS:N	2.36	0.41
10:H:116:THR:O	10:H:117:HIS:C	2.59	0.41
10:H:121:VAL:O	10:H:123:GLU:N	2.53	0.41
10:H:32:VAL:HG21	10:H:62:ARG:HD2	2.01	0.41
10:H:86:THR:HB	10:H:87:GLY:H	1.68	0.41
11:I:42:SER:CA	11:I:57:VAL:HG22	2.50	0.41
11:I:75:SER:HA	16:N:76:PHE:HA	2.03	0.41
13:K:27:VAL:CG2	13:K:28:ALA:H	2.00	0.41
13:K:47:ILE:O	13:K:51:ARG:HD3	2.16	0.41
15:M:63:THR:O	15:M:100:ALA:CB	2.69	0.41
16:N:24:PRO:CA	16:N:49:VAL:HG21	2.50	0.41
18:P:63:GLY:O	18:P:96:ILE:HG21	2.20	0.41
19:Q:18:ARG:HG3	19:Q:76:VAL:HG11	2.02	0.41
21:S:98:VAL:O	21:S:99:CYS:HB2	2.20	0.41
22:T:48:PHE:HD1	22:T:52:SER:OG	2.03	0.41
23:U:23:VAL:HG13	23:U:38:VAL:CG1	2.46	0.41
23:U:53:MET:HA	23:U:59:LEU:HG	2.02	0.41
24:V:25:LYS:H	24:V:37:ILE:CG2	2.34	0.41
25:W:47:ASN:C	25:W:49:LYS:N	2.73	0.41
25:W:55:ARG:CA	25:W:55:ARG:NH1	2.82	0.41
10:H:160:LYS:HA	10:H:160:LYS:HD3	1.90	0.41
13:K:11:LYS:CG	13:K:14:ARG:HH12	2.34	0.41
24:V:53:VAL:O	24:V:58:ILE:C	2.59	0.41
3:A:10:ALA:C	3:A:12:LEU:N	2.74	0.41
4:B:73:VAL:HG12	4:B:73:VAL:O	2.21	0.41
5:C:63:LEU:HD23	5:C:63:LEU:C	2.41	0.41
5:C:52:LEU:HD12	5:C:76:ARG:HE	1.83	0.41
6:D:129:GLY:CA	6:D:134:PHE:HZ	2.32	0.41
6:D:180:ASP:O	6:D:184:THR:HG23	2.21	0.41
6:D:99:LYS:HG2	6:D:99:LYS:O	2.21	0.41
7:E:41:GLN:NE2	7:E:42:GLY:H	2.18	0.41
9:G:113:ARG:NH1	9:G:133:HIS:CB	2.77	0.41
10:H:24:VAL:CG1	10:H:24:VAL:O	2.68	0.41
10:H:32:VAL:HG12	10:H:35:ARG:NH1	2.34	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:16:ALA:N	11:I:17:ARG:CZ	2.84	0.41
12:J:75:ILE:HG23	12:J:75:ILE:O	2.20	0.41
16:N:51:ARG:HH11	16:N:75:ILE:HG21	1.80	0.41
20:R:51:VAL:CB	20:R:79:ALA:HB1	2.30	0.41
25:W:61:LEU:O	25:W:62:THR:OG1	2.37	0.41
26:X:20:LYS:C	26:X:23:LEU:HG	2.26	0.41
26:X:28:LEU:HD21	26:X:35:ARG:HG3	2.03	0.41
27:Y:56:LYS:N	27:Y:56:LYS:CD	2.84	0.41
4:B:233:HIS:NE2	4:B:241:PRO:O	2.53	0.41
4:B:38:LYS:O	4:B:39:LYS:C	2.59	0.41
4:B:5:LYS:H	4:B:5:LYS:CD	2.33	0.41
17:O:17:ILE:CG2	17:O:35:ALA:HB1	2.50	0.41
17:O:47:TYR:CD2	17:O:48:ALA:N	2.89	0.41
19:Q:104:THR:HG22	19:Q:105:VAL:H	1.85	0.41
20:R:10:ALA:HA	20:R:11:PRO:HD3	1.91	0.41
21:S:26:LYS:HG2	21:S:27:VAL:HG22	2.03	0.41
22:T:52:SER:O	22:T:98:MET:CE	2.69	0.41
28:Z:18:PHE:CE2	28:Z:22:MET:HE2	2.56	0.41
28:Z:39:ARG:HH11	28:Z:39:ARG:HG3	1.85	0.41
33:O:18:G:C2	33:O:57:G:N2	2.89	0.41
33:O:73:A:C2	33:O:74:C:C2	3.09	0.41
4:B:206:LEU:CD2	4:B:206:LEU:N	2.84	0.41
4:B:247:ALA:HA	4:B:253:GLN:N	2.35	0.41
4:B:31:LYS:CE	4:B:32:SER:H	2.33	0.41
5:C:144:ARG:HB2	5:C:145:LYS:H	1.62	0.41
5:C:201:THR:CG2	5:C:202:LYS:N	2.83	0.41
6:D:120:LEU:O	6:D:120:LEU:CD2	2.66	0.41
6:D:132:LYS:HG3	6:D:133:GLU:N	2.25	0.41
6:D:150:LEU:O	6:D:187:LEU:CG	2.55	0.41
6:D:182:VAL:O	12:J:6:LEU:HA	2.20	0.41
6:D:4:ILE:HG12	6:D:12:ARG:CD	2.50	0.41
7:E:82:LEU:CG	7:E:84:LYS:HG2	2.50	0.41
8:F:172:LYS:NZ	8:F:173:PRO:HD2	2.36	0.41
9:G:147:GLN:O	9:G:148:GLU:HB2	2.21	0.41
9:G:57:ARG:N	9:G:57:ARG:HD2	2.35	0.41
10:H:156:GLN:CG	10:H:157:ARG:N	2.84	0.41
10:H:31:GLN:HB3	10:H:33:GLU:OE2	2.21	0.41
11:I:102:VAL:O	11:I:122:LEU:C	2.56	0.41
11:I:111:PHE:O	11:I:114:ILE:HG12	2.20	0.41
11:I:87:ILE:CD1	11:I:114:ILE:HG21	2.51	0.41
11:I:77:ILE:HG12	16:N:74:ARG:CA	2.51	0.41
11:I:85:VAL:O	11:I:86:ILE:CG1	2.69	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:J:36:LYS:N	12:J:36:LYS:HD2	2.34	0.41
14:L:35:THR:OG1	14:L:36:THR:N	2.54	0.41
14:L:54:LEU:HD13	14:L:65:LEU:HD22	2.03	0.41
15:M:77:ALA:O	15:M:82:ILE:HG12	2.20	0.41
16:N:107:ASP:CA	16:N:111:ARG:NE	2.82	0.41
17:O:51:LYS:O	17:O:55:ARG:CG	2.63	0.41
18:P:76:LYS:HD2	18:P:77:ALA:C	2.41	0.41
18:P:90:PRO:CG	18:P:91:TYR:H	2.31	0.41
19:Q:30:GLU:HA	19:Q:33:ARG:NH2	2.36	0.41
20:R:92:LEU:O	20:R:93:GLU:HB2	2.21	0.41
22:T:183:LEU:O	22:T:184:ALA:HB2	2.21	0.41
22:T:46:LYS:HB3	22:T:49:ARG:NH1	2.35	0.41
23:U:51:VAL:CG2	23:U:79:VAL:HG23	2.50	0.41
24:V:76:ARG:HH22	24:V:94:LEU:CD1	2.28	0.41
3:A:23:ILE:O	3:A:27:ALA:HB3	2.20	0.41
4:B:53:PHE:O	4:B:54:ARG:CB	2.68	0.41
5:C:7:VAL:CG2	5:C:27:LEU:H	2.33	0.41
5:C:91:VAL:CG1	5:C:92:THR:N	2.83	0.41
5:C:94:GLU:C	5:C:96:PHE:N	2.71	0.41
7:E:124:SER:O	7:E:131:TYR:HE2	1.98	0.41
8:F:149:ARG:C	8:F:151:ILE:H	2.24	0.41
9:G:118:LYS:HA	9:G:119:PRO:HD2	1.87	0.41
10:H:93:LYS:O	10:H:109:PRO:HA	2.20	0.41
12:J:79:ARG:HG3	12:J:80:TYR:H	1.85	0.41
13:K:65:PHE:CD1	13:K:105:GLU:O	2.74	0.41
14:L:9:LYS:CD	14:L:10:LEU:N	2.84	0.41
15:M:82:ILE:HG23	15:M:85:VAL:CB	2.47	0.41
17:O:44:ASN:HD21	18:P:78:LYS:CB	2.18	0.41
16:N:118:ARG:NH1	16:N:118:ARG:HG3	2.32	0.41
23:U:37:LEU:CB	23:U:60:PHE:HA	2.51	0.41
25:W:29:LYS:O	25:W:32:LEU:HB3	2.21	0.41
6:D:30:GLU:OE1	12:J:13:ASN:HB3	2.20	0.41
13:K:57:HIS:CG	13:K:57:HIS:O	2.74	0.41
33:O:10:G:H2'	33:O:11:C:C6	2.56	0.41
3:A:34:ALA:CB	3:A:179:ALA:HB1	2.51	0.41
5:C:104:VAL:O	5:C:167:VAL:HG12	2.20	0.41
6:D:148:SER:H	6:D:167:TRP:HE1	1.64	0.41
16:N:43:GLN:C	16:N:44:ASP:CG	2.80	0.41
18:P:30:GLY:N	18:P:66:ARG:H	2.19	0.41
19:Q:24:ILE:O	19:Q:71:VAL:HG11	2.21	0.41
19:Q:36:LEU:HD23	19:Q:36:LEU:HA	1.80	0.41
20:R:40:LYS:O	20:R:44:GLU:HB2	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:T:40:ASP:OD2	22:T:41:LEU:HD12	2.21	0.41
24:V:22:GLY:CA	24:V:39:LYS:HA	2.50	0.41
24:V:17:SER:O	24:V:44:PRO:CD	2.68	0.41
14:L:20:LEU:O	14:L:24:GLN:N	2.54	0.41
3:A:25:GLU:HG3	3:A:26:ALA:H	1.85	0.41
4:B:108:PRO:N	4:B:197:GLY:HA2	2.36	0.41
4:B:34:VAL:CG1	4:B:35:LYS:HZ3	2.34	0.41
4:B:67:PHE:O	4:B:68:LYS:HG3	2.21	0.41
7:E:103:LEU:O	7:E:104:GLU:C	2.58	0.41
7:E:149:VAL:HG23	7:E:150:ASP:H	1.86	0.41
7:E:11:TYR:CD1	7:E:15:VAL:HB	2.54	0.41
7:E:41:GLN:CD	7:E:42:GLY:N	2.74	0.41
8:F:111:HIS:CB	8:F:112:PRO:HD3	2.48	0.41
8:F:17:VAL:HG13	8:F:45:VAL:HB	2.02	0.41
9:G:4:ILE:HG13	9:G:18:VAL:HA	2.03	0.41
10:H:112:LYS:HZ1	10:H:115:ALA:CB	2.31	0.41
10:H:157:ARG:NH1	10:H:159:GLU:HB3	2.36	0.41
10:H:27:TYR:CZ	10:H:63:PRO:O	2.74	0.41
12:J:35:HIS:H	12:J:36:LYS:CD	2.34	0.41
14:L:23:ASN:CA	14:L:26:LYS:CB	2.94	0.41
5:C:109:LYS:HZ2	14:L:4:LEU:HG	1.83	0.41
15:M:66:ALA:C	15:M:101:LEU:CG	2.89	0.41
15:M:96:GLY:CA	15:M:99:LYS:HD2	2.20	0.41
16:N:12:SER:CA	16:N:15:VAL:HG22	2.50	0.41
16:N:95:ARG:NE	16:N:96:ARG:HH22	2.17	0.41
17:O:20:LEU:HD22	17:O:20:LEU:N	2.36	0.41
17:O:61:TRP:CZ2	17:O:94:ASN:HB3	2.55	0.41
18:P:68:LYS:HB3	18:P:94:LEU:HD22	1.86	0.41
20:R:62:LYS:HB2	20:R:63:LYS:H	1.76	0.41
20:R:54:VAL:CG2	20:R:77:LYS:HE3	2.49	0.41
22:T:15:PRO:C	22:T:19:ARG:CZ	2.89	0.41
28:Z:16:HIS:O	28:Z:17:GLY:C	2.60	0.41
16:N:90:GLN:OE1	16:N:120:ARG:HG2	2.20	0.41
16:N:93:ARG:HG3	16:N:117:ASP:OD2	2.20	0.41
14:L:56:LYS:HA	14:L:84:ALA:HB2	1.93	0.41
33:0:41:U:H2'	33:0:42:G:H8	1.86	0.40
34:1:-3:A:O2'	34:1:-2:U:H5'	2.20	0.40
3:A:44:VAL:C	3:A:45:HIS:HD2	2.24	0.40
3:A:49:GLY:C	3:A:50:ILE:HG23	2.42	0.40
4:B:131:LEU:HD21	4:B:135:PHE:CB	2.39	0.40
5:C:9:VAL:N	5:C:26:ILE:HD13	2.37	0.40
6:D:147:GLU:O	6:D:185:GLU:HB2	2.20	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:191:LEU:CD2	6:D:193:ALA:H	2.32	0.40
7:E:10:LYS:HZ3	7:E:15:VAL:N	2.18	0.40
7:E:176:LEU:HG	7:E:178:PHE:HE1	1.85	0.40
7:E:180:PHE:HB3	7:E:182:LYS:NZ	2.35	0.40
8:F:10:PRO:CG	8:F:12:PRO:HD3	2.50	0.40
8:F:175:LYS:HB3	8:F:176:ALA:H	1.59	0.40
9:G:44:LEU:HD22	9:G:47:LEU:HD11	2.03	0.40
9:G:52:ARG:O	9:G:53:ALA:C	2.59	0.40
13:K:133:ARG:HG2	13:K:134:ARG:N	2.16	0.40
15:M:66:ALA:C	15:M:101:LEU:HD11	2.42	0.40
15:M:25:ARG:HH21	15:M:40:ILE:HG22	1.85	0.40
16:N:25:GLY:C	16:N:48:ILE:HG13	2.42	0.40
16:N:91:ARG:HE	16:N:91:ARG:HB2	1.73	0.40
16:N:98:LYS:O	16:N:100:TYR:CD1	2.69	0.40
17:O:6:THR:HB	17:O:7:GLY:H	1.74	0.40
20:R:29:TRP:CD1	20:R:76:ARG:CG	3.04	0.40
26:X:33:GLN:NE2	26:X:35:ARG:HD3	2.34	0.40
28:Z:19:ARG:O	28:Z:20:ALA:C	2.60	0.40
16:N:53:ARG:HD2	16:N:54:ARG:N	2.35	0.40
21:S:42:VAL:CB	21:S:61:ILE:CG2	2.88	0.40
23:U:62:LEU:CD1	23:U:63:VAL:CG2	2.99	0.40
24:V:76:ARG:CZ	24:V:94:LEU:HD11	2.51	0.40
33:O:10:G:C2	33:O:26:G:C8	3.09	0.40
3:A:168:LYS:C	3:A:170:GLY:H	2.24	0.40
3:A:39:ASP:HB3	3:A:40:GLU:H	1.65	0.40
3:A:7:ARG:C	3:A:8:TYR:CG	2.95	0.40
4:B:10:THR:HG23	4:B:10:THR:O	2.21	0.40
4:B:146:GLU:HA	4:B:153:ALA:HA	2.02	0.40
4:B:150:LYS:HD2	4:B:188:GLU:HB3	2.03	0.40
4:B:227:ASN:HD21	4:B:237:GLU:CD	2.25	0.40
4:B:80:ALA:HA	4:B:113:VAL:HG13	2.03	0.40
4:B:92:ILE:HA	4:B:105:ILE:C	2.42	0.40
5:C:183:LEU:CD1	5:C:183:LEU:C	2.84	0.40
5:C:27:LEU:HA	5:C:181:LEU:HA	2.03	0.40
5:C:51:PHE:CD1	5:C:52:LEU:HA	2.55	0.40
5:C:59:VAL:CG1	5:C:60:ASN:H	2.26	0.40
6:D:187:LEU:HD23	6:D:188:VAL:H	1.86	0.40
7:E:51:ARG:NH2	7:E:51:ARG:HG3	2.35	0.40
8:F:11:VAL:O	8:F:11:VAL:CG1	2.68	0.40
9:G:101:LEU:O	9:G:107:ILE:N	2.42	0.40
10:H:151:HIS:HA	10:H:152:PRO:HD2	1.83	0.40
10:H:58:ARG:HG3	10:H:59:GLY:N	2.36	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:15:GLY:C	11:I:52:VAL:O	2.59	0.40
11:I:34:THR:OG1	11:I:35:VAL:N	2.53	0.40
13:K:106:VAL:CG2	13:K:107:ALA:H	2.25	0.40
13:K:50:ALA:C	13:K:52:VAL:N	2.72	0.40
16:N:7:ILE:HG22	16:N:11:GLU:OE1	2.20	0.40
17:O:14:HIS:HB3	17:O:32:PHE:HB3	2.03	0.40
19:Q:40:ASN:O	19:Q:41:LYS:CB	2.70	0.40
22:T:19:ARG:CD	22:T:19:ARG:H	2.11	0.40
25:W:22:GLU:C	25:W:25:VAL:HG13	2.41	0.40
25:W:3:LEU:HG	25:W:7:ARG:HB2	2.02	0.40
10:H:161:LEU:N	10:H:161:LEU:HD12	2.36	0.40
20:R:47:PHE:CD1	20:R:47:PHE:N	2.89	0.40
22:T:141:VAL:HG22	22:T:144:LEU:CD2	2.46	0.40
23:U:66:VAL:O	23:U:66:VAL:HG23	2.21	0.40
27:Y:36:CYS:HB3	27:Y:48:GLU:O	2.22	0.40
22:T:45:ASP:CB	22:T:49:ARG:HE	2.34	0.40
33:0:41:U:H2'	33:0:42:G:C8	2.56	0.40
4:B:133:LEU:H	4:B:189:CYS:N	2.15	0.40
5:C:101:ARG:HG2	5:C:170:LEU:H	1.86	0.40
5:C:117:MET:CB	5:C:136:ARG:NH2	2.69	0.40
5:C:145:LYS:CA	5:C:148:GLY:HA2	2.50	0.40
5:C:8:LYS:CE	5:C:190:GLY:O	2.69	0.40
5:C:8:LYS:HG3	5:C:192:ASN:HA	2.04	0.40
6:D:90:ARG:C	6:D:92:TYR:N	2.73	0.40
7:E:87:PRO:HG2	7:E:88:ILE:H	1.86	0.40
10:H:90:LEU:HD12	10:H:110:LEU:CB	2.50	0.40
10:H:90:LEU:CA	10:H:110:LEU:CG	2.97	0.40
10:H:112:LYS:O	10:H:115:ALA:CB	2.66	0.40
10:H:120:ARG:O	10:H:121:VAL:C	2.60	0.40
11:I:66:LYS:HD3	11:I:80:ASP:HA	2.03	0.40
11:I:80:ASP:OD1	11:I:80:ASP:N	2.55	0.40
12:J:101:VAL:HA	12:J:105:LEU:O	2.21	0.40
12:J:110:TYR:CD2	12:J:111:ARG:HG2	2.54	0.40
13:K:133:ARG:HE	13:K:134:ARG:CA	2.34	0.40
18:P:76:LYS:HE2	18:P:76:LYS:HB3	1.86	0.40
19:Q:12:ILE:N	19:Q:100:THR:HA	2.37	0.40
19:Q:19:LEU:O	19:Q:23:LEU:CB	2.68	0.40
19:Q:4:LYS:CG	19:Q:5:ALA:N	2.85	0.40
22:T:47:VAL:C	22:T:49:ARG:N	2.74	0.40
25:W:6:VAL:CG2	25:W:7:ARG:N	2.83	0.40
12:J:122:PRO:HA	12:J:138:LEU:HG	2.04	0.40
6:D:16:ALA:HA	6:D:19:LEU:CD2	2.52	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:10:LYS:O	7:E:14:GLU:HB2	2.21	0.40
21:S:25:GLY:HA2	21:S:37:VAL:CG1	2.50	0.40
33:O:24:G:N1	33:O:25:C:C2	2.89	0.40
3:A:36:ALA:CB	3:A:219:MET:CG	2.97	0.40
3:A:59:VAL:O	3:A:59:VAL:HG23	2.22	0.40
4:B:136:ILE:HG23	4:B:140:THR:HG21	2.03	0.40
4:B:119:ALA:HB1	4:B:190:TYR:OH	2.21	0.40
4:B:215:LEU:N	4:B:215:LEU:HD13	2.36	0.40
4:B:31:LYS:CG	4:B:32:SER:H	2.33	0.40
4:B:35:LYS:HB3	4:B:64:ILE:HG22	2.03	0.40
4:B:44:ASN:CB	4:B:49:ILE:HA	2.51	0.40
4:B:71:ASP:OD2	4:B:72:LYS:HG2	2.21	0.40
4:B:88:ARG:NE	4:B:157:ARG:HH21	2.19	0.40
5:C:128:SER:O	5:C:129:HIS:CG	2.74	0.40
5:C:153:GLY:O	5:C:154:LYS:O	2.40	0.40
5:C:103:ASP:CG	5:C:202:LYS:HE3	2.41	0.40
6:D:187:LEU:CG	6:D:188:VAL:H	2.35	0.40
6:D:195:GLU:CG	6:D:196:VAL:H	2.33	0.40
6:D:35:GLN:OE1	6:D:38:LYS:HB3	2.22	0.40
8:F:10:PRO:HG2	8:F:12:PRO:CG	2.51	0.40
8:F:43:VAL:CB	8:F:51:ARG:O	2.69	0.40
9:G:130:TYR:CD2	9:G:138:ILE:HG21	2.51	0.40
9:G:65:ALA:O	9:G:68:LEU:HB2	2.22	0.40
11:I:10:VAL:C	11:I:12:ASP:N	2.74	0.40
13:K:16:ARG:CG	13:K:17:LEU:N	2.84	0.40
13:K:30:GLY:CA	13:K:65:PHE:CZ	3.04	0.40
13:K:9:TYR:CE1	13:K:12:GLN:NE2	2.89	0.40
14:L:44:LEU:CD1	14:L:47:PHE:CE2	3.01	0.40
14:L:60:LEU:C	14:L:64:ARG:HD3	2.42	0.40
14:L:78:LYS:NZ	14:L:82:GLU:HB3	2.36	0.40
15:M:11:LYS:O	15:M:14:VAL:HB	2.22	0.40
16:N:28:VAL:CG1	16:N:44:ASP:HB2	2.52	0.40
16:N:50:ILE:CB	16:N:63:VAL:CA	2.92	0.40
17:O:74:LEU:CD2	17:O:110:VAL:HG22	2.38	0.40
18:P:14:VAL:HB	18:P:98:GLU:OE1	2.20	0.40
19:Q:87:PRO:C	19:Q:88:ARG:NE	2.74	0.40
21:S:45:VAL:HA	21:S:57:GLN:CA	2.46	0.40
21:S:52:SER:O	21:S:54:LYS:N	2.54	0.40
22:T:101:PRO:HD2	22:T:135:GLU:O	2.22	0.40
22:T:150:LEU:HA	22:T:154:ASP:OD1	2.21	0.40
22:T:15:PRO:CB	22:T:19:ARG:CZ	2.99	0.40
22:T:45:ASP:OD1	22:T:48:PHE:CZ	2.74	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:V:12:PRO:O	24:V:13:ILE:HD13	2.21	0.40
27:Y:41:PRO:O	27:Y:43:HIS:N	2.55	0.40
11:I:35:VAL:N	11:I:62:VAL:HG11	2.36	0.40
12:J:109:GLY:O	12:J:110:TYR:C	2.60	0.40
12:J:49:ARG:HG2	12:J:49:ARG:H	1.73	0.40
26:X:10:LYS:CB	26:X:53:LEU:CB	2.89	0.40
14:L:20:LEU:C	14:L:24:GLN:HG2	2.42	0.40
14:L:65:LEU:HD12	14:L:66:VAL:N	2.37	0.40
33:O:27:C:N3	33:O:28:C:C4	2.89	0.40
3:A:20:ILE:C	3:A:21:TYR:CD2	2.94	0.40
3:A:226:ASN:C	3:A:228:HIS:N	2.75	0.40
3:A:51:ASP:HA	3:A:52:PRO:HD2	1.90	0.40
4:B:17:THR:CB	4:B:205:VAL:H	2.34	0.40
4:B:262:ARG:C	4:B:264:LYS:N	2.74	0.40
4:B:36:PRO:HB2	4:B:61:LEU:HB3	2.02	0.40
5:C:201:THR:HG23	5:C:203:LYS:H	1.87	0.40
5:C:33:VAL:HA	5:C:48:GLN:O	2.22	0.40
6:D:135:LEU:C	6:D:135:LEU:CD2	2.89	0.40
6:D:156:GLU:O	6:D:159:ARG:HB2	2.22	0.40
6:D:112:ARG:HH22	6:D:181:ILE:HD12	1.85	0.40
7:E:151:ALA:O	7:E:152:LEU:CB	2.53	0.40
7:E:43:LEU:HD13	7:E:45:GLU:CG	2.52	0.40
7:E:59:GLU:CG	7:E:60:LEU:HD23	2.46	0.40
7:E:8:LYS:HB2	7:E:100:TRP:CZ2	2.57	0.40
7:E:99:MET:O	7:E:103:LEU:CD2	2.64	0.40
9:G:77:LEU:O	9:G:142:VAL:HA	2.22	0.40
9:G:4:ILE:HG22	9:G:5:LEU:H	1.87	0.40
9:G:88:ILE:HG22	9:G:121:LYS:CB	2.49	0.40
10:H:90:LEU:HD11	10:H:111:GLU:HB2	2.03	0.40
10:H:112:LYS:CE	10:H:112:LYS:O	2.70	0.40
10:H:156:GLN:HG2	10:H:157:ARG:N	2.36	0.40
10:H:45:THR:HB	10:H:49:LEU:CD1	2.51	0.40
11:I:113:LYS:HG3	11:I:114:ILE:H	1.85	0.40
15:M:71:ARG:CB	15:M:108:GLY:O	2.69	0.40
16:N:48:ILE:HG23	16:N:49:VAL:HG13	2.04	0.40
16:N:95:ARG:CD	16:N:96:ARG:NH1	2.65	0.40
17:O:74:LEU:HD11	17:O:110:VAL:HG22	2.03	0.40
17:O:80:ILE:HG22	17:O:84:LYS:HE3	2.03	0.40
19:Q:65:LEU:C	19:Q:66:GLU:O	2.59	0.40
21:S:45:VAL:O	21:S:45:VAL:HG23	2.22	0.40
22:T:150:LEU:HD21	22:T:154:ASP:HB2	2.00	0.40
22:T:4:ARG:O	22:T:57:ILE:HD11	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:V:51:VAL:CG1	24:V:60:PHE:H	2.34	0.40
25:W:61:LEU:O	25:W:62:THR:HB	2.21	0.40
27:Y:6:VAL:HA	27:Y:7:PRO:HD3	1.75	0.40
13:K:35:VAL:HG22	13:K:130:LYS:CA	2.51	0.40
16:N:98:LYS:CB	16:N:100:TYR:HE1	2.34	0.40

All (3) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:w:1457:A:OP1	1:w:1457:A:OP1[6_555]	1.38	0.82
9:G:89:TYR:O	31:y:357:G:O2'[4_555]	2.01	0.19
9:G:91:SER:O	31:y:368:U:OP1[4_555]	2.19	0.01

5.3 Torsion angles

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	A	123/229 (54%)	54 (44%)	39 (32%)	30 (24%)	0	2
4	B	270/276 (98%)	103 (38%)	84 (31%)	83 (31%)	0	1
5	C	199/206 (97%)	89 (45%)	48 (24%)	62 (31%)	0	0
6	D	192/205 (94%)	76 (40%)	54 (28%)	62 (32%)	0	0
7	E	178/182 (98%)	84 (47%)	53 (30%)	41 (23%)	0	2
8	F	171/180 (95%)	76 (44%)	53 (31%)	42 (25%)	0	2
9	G	146/148 (99%)	75 (51%)	30 (20%)	41 (28%)	0	1
10	H	136/163 (83%)	48 (35%)	40 (29%)	48 (35%)	0	0
11	I	120/122 (98%)	50 (42%)	37 (31%)	33 (28%)	0	1
12	J	144/150 (96%)	59 (41%)	39 (27%)	46 (32%)	0	0
13	K	135/141 (96%)	52 (38%)	44 (33%)	39 (29%)	0	1
14	L	116/118 (98%)	60 (52%)	28 (24%)	28 (24%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
15	M	104/112 (93%)	40 (38%)	31 (30%)	33 (32%)	0	0
16	N	135/146 (92%)	59 (44%)	36 (27%)	40 (30%)	0	1
17	O	115/118 (98%)	64 (56%)	27 (24%)	24 (21%)	0	3
18	P	99/101 (98%)	30 (30%)	32 (32%)	37 (37%)	0	0
19	Q	107/113 (95%)	49 (46%)	30 (28%)	28 (26%)	0	2
20	R	90/96 (94%)	28 (31%)	29 (32%)	33 (37%)	0	0
21	S	101/110 (92%)	36 (36%)	34 (34%)	31 (31%)	0	1
22	T	183/206 (89%)	104 (57%)	41 (22%)	38 (21%)	0	3
23	U	74/85 (87%)	35 (47%)	23 (31%)	16 (22%)	0	3
24	V	86/98 (88%)	30 (35%)	31 (36%)	25 (29%)	0	1
25	W	60/72 (83%)	28 (47%)	12 (20%)	20 (33%)	0	0
26	X	58/60 (97%)	32 (55%)	15 (26%)	11 (19%)	0	5
27	Y	54/60 (90%)	22 (41%)	12 (22%)	20 (37%)	0	0
28	Z	46/49 (94%)	25 (54%)	9 (20%)	12 (26%)	0	2
29	a	61/65 (94%)	20 (33%)	22 (36%)	19 (31%)	0	0
30	b	33/37 (89%)	22 (67%)	5 (15%)	6 (18%)	0	5
35	c	232/256 (91%)	109 (47%)	66 (28%)	57 (25%)	0	2
36	d	204/239 (85%)	98 (48%)	49 (24%)	57 (28%)	0	1
37	e	206/209 (99%)	99 (48%)	44 (21%)	63 (31%)	0	1
38	f	148/162 (91%)	89 (60%)	33 (22%)	26 (18%)	0	6
39	g	99/101 (98%)	61 (62%)	24 (24%)	14 (14%)	0	11
40	h	153/156 (98%)	84 (55%)	40 (26%)	29 (19%)	0	5
41	i	136/138 (99%)	71 (52%)	35 (26%)	30 (22%)	0	2
42	j	125/128 (98%)	73 (58%)	31 (25%)	21 (17%)	0	7
43	k	96/105 (91%)	50 (52%)	24 (25%)	22 (23%)	0	2
44	l	114/129 (88%)	59 (52%)	28 (25%)	27 (24%)	0	2
45	m	122/132 (92%)	51 (42%)	32 (26%)	39 (32%)	0	0
46	n	123/126 (98%)	53 (43%)	35 (28%)	35 (28%)	0	1
47	o	58/61 (95%)	22 (38%)	19 (33%)	17 (29%)	0	1
48	p	86/89 (97%)	46 (54%)	23 (27%)	17 (20%)	0	4
49	q	81/88 (92%)	37 (46%)	28 (35%)	16 (20%)	0	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
50	r	102/105 (97%)	46 (45%)	31 (30%)	25 (24%)	0	2
51	s	71/88 (81%)	42 (59%)	12 (17%)	17 (24%)	0	2
52	t	78/93 (84%)	26 (33%)	31 (40%)	21 (27%)	0	1
53	u	97/106 (92%)	42 (43%)	37 (38%)	18 (19%)	0	5
54	v	22/27 (82%)	11 (50%)	7 (32%)	4 (18%)	0	5
All	All	5689/6186 (92%)	2619 (46%)	1567 (28%)	1503 (26%)	0	1

All (1503) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	A	63	VAL
3	A	179	ALA
3	A	180	SER
3	A	201	LYS
3	A	203	GLU
3	A	209	PHE
3	A	210	LEU
3	A	224	ARG
4	B	4	LYS
4	B	15	PHE
4	B	28	GLU
4	B	39	LYS
4	B	53	PHE
4	B	58	HIS
4	B	75	ILE
4	B	80	ALA
4	B	81	ALA
4	B	83	GLU
4	B	90	ALA
4	B	99	ASP
4	B	105	ILE
4	B	115	GLN
4	B	124	PRO
4	B	127	VAL
4	B	146	GLU
4	B	149	PRO
4	B	157	ARG
4	B	158	ALA
4	B	178	PRO
4	B	181	GLU

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Mol	Chain	Res	Type
4	B	196	VAL
4	B	198	ASN
4	B	223	GLY
4	B	224	ALA
4	B	227	ASN
4	B	228	PRO
4	B	229	VAL
4	B	244	ARG
4	B	248	SER
4	B	249	PRO
4	B	257	LEU
4	B	262	ARG
4	B	272	ALA
5	C	11	MET
5	C	12	THR
5	C	16	ARG
5	C	37	ARG
5	C	60	ASN
5	C	61	ARG
5	C	64	LYS
5	C	77	ILE
5	C	82	ARG
5	C	89	ASP
5	C	116	VAL
5	C	131	ALA
5	C	134	ILE
5	C	143	ASN
5	C	149	ARG
5	C	154	LYS
5	C	155	LYS
5	C	157	ALA
5	C	178	GLU
5	C	187	ALA
5	C	198	VAL
5	C	201	THR
6	D	15	LEU
6	D	17	ALA
6	D	23	ILE
6	D	26	HIS
6	D	30	GLU
6	D	48	THR
6	D	57	ARG

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Mol	Chain	Res	Type
6	D	58	LYS
6	D	59	ILE
6	D	60	TRP
6	D	65	THR
6	D	87	PRO
6	D	92	TYR
6	D	101	ARG
6	D	119	LEU
6	D	120	LEU
6	D	121	VAL
6	D	122	GLU
6	D	128	ASN
6	D	148	SER
6	D	157	LEU
6	D	165	LEU
6	D	172	ALA
6	D	196	VAL
7	E	6	ALA
7	E	8	LYS
7	E	13	GLU
7	E	20	ILE
7	E	23	PHE
7	E	33	ARG
7	E	49	ASP
7	E	60	LEU
7	E	84	LYS
7	E	86	MET
7	E	88	ILE
7	E	116	ASP
8	F	42	ARG
8	F	55	PRO
8	F	58	GLU
8	F	109	PHE
8	F	118	PRO
8	F	126	PRO
8	F	152	ARG
8	F	153	LYS
8	F	155	SER
8	F	160	LYS
8	F	162	ILE
8	F	178	ALA
9	G	2	LYS

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Mol	Chain	Res	Type
9	G	9	LEU
9	G	14	ASP
9	G	21	VAL
9	G	25	TYR
9	G	35	LEU
9	G	38	LEU
9	G	74	ASN
9	G	82	ARG
9	G	88	ILE
9	G	91	SER
9	G	92	VAL
9	G	93	THR
9	G	120	ILE
9	G	125	GLU
9	G	138	ILE
9	G	147	GLN
10	H	27	TYR
10	H	34	PRO
10	H	40	ASP
10	H	51	THR
10	H	58	ARG
10	H	67	PRO
10	H	74	PHE
10	H	79	ASN
10	H	83	ILE
10	H	85	VAL
10	H	111	GLU
10	H	114	LEU
10	H	121	VAL
10	H	125	ALA
10	H	130	LEU
10	H	146	TYR
10	H	147	ALA
10	H	156	GLN
10	H	157	ARG
11	I	5	GLN
11	I	28	SER
11	I	48	PRO
11	I	51	ALA
11	I	64	ARG
11	I	67	LYS
11	I	70	LYS

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Mol	Chain	Res	Type
11	I	87	ILE
11	I	91	LEU
11	I	102	VAL
11	I	114	ILE
11	I	115	VAL
12	J	14	LYS
12	J	19	VAL
12	J	23	PRO
12	J	35	HIS
12	J	46	LYS
12	J	47	ASP
12	J	51	PHE
12	J	56	SER
12	J	61	ARG
12	J	71	VAL
12	J	83	VAL
12	J	86	LYS
12	J	90	ARG
12	J	97	PRO
12	J	101	VAL
12	J	108	LYS
12	J	115	LEU
12	J	129	ALA
12	J	148	LEU
13	K	4	PRO
13	K	8	LYS
13	K	9	TYR
13	K	12	GLN
13	K	18	LYS
13	K	21	THR
13	K	22	LYS
13	K	27	VAL
13	K	32	PHE
13	K	45	GLN
13	K	52	VAL
13	K	59	ARG
13	K	63	LYS
13	K	68	ILE
13	K	73	PRO
13	K	81	VAL
13	K	82	ARG
13	K	89	ASN

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Mol	Chain	Res	Type
13	K	90	VAL
13	K	111	GLU
13	K	133	ARG
14	L	2	ARG
14	L	4	LEU
14	L	5	LYS
14	L	8	ARG
14	L	10	LEU
14	L	12	ARG
14	L	39	PRO
14	L	43	GLU
14	L	45	ARG
14	L	60	LEU
14	L	62	ALA
14	L	64	ARG
14	L	67	LEU
14	L	72	ASP
14	L	74	LYS
14	L	117	VAL
15	M	9	ARG
15	M	10	ARG
15	M	12	PHE
15	M	14	VAL
15	M	18	ILE
15	M	25	ARG
15	M	35	ILE
15	M	43	GLU
15	M	45	GLY
15	M	48	LEU
15	M	69	VAL
15	M	73	LEU
15	M	85	VAL
15	M	86	ALA
15	M	87	PHE
15	M	92	TYR
16	N	2	ASN
16	N	22	PHE
16	N	24	PRO
16	N	30	VAL
16	N	33	LYS
16	N	36	GLU
16	N	42	ILE

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Mol	Chain	Res	Type
16	N	47	GLY
16	N	49	VAL
16	N	55	ASN
16	N	65	LYS
16	N	66	VAL
16	N	67	SER
16	N	79	HIS
16	N	88	ILE
16	N	90	GLN
16	N	107	ASP
17	O	9	VAL
17	O	26	GLY
17	O	49	HIS
17	O	62	ILE
17	O	64	ARG
17	O	76	TYR
17	O	77	SER
17	O	86	ALA
17	O	91	ASP
17	O	93	LYS
17	O	96	ALA
17	O	112	ARG
18	P	5	VAL
18	P	15	GLU
18	P	16	PRO
18	P	22	VAL
18	P	27	ALA
18	P	28	GLU
18	P	47	VAL
18	P	50	PRO
18	P	51	VAL
18	P	66	ARG
18	P	74	LYS
18	P	77	ALA
18	P	79	VAL
18	P	84	LYS
18	P	90	PRO
18	P	99	ILE
18	P	100	ARG
19	Q	18	ARG
19	Q	30	GLU
19	Q	31	GLU

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Mol	Chain	Res	Type
19	Q	35	ILE
19	Q	43	GLY
19	Q	45	TYR
19	Q	47	VAL
19	Q	63	ASP
19	Q	66	GLU
19	Q	88	ARG
19	Q	96	ILE
19	Q	103	ILE
20	R	5	TYR
20	R	11	PRO
20	R	12	VAL
20	R	14	SER
20	R	35	THR
20	R	37	THR
20	R	42	ALA
20	R	52	VAL
20	R	58	HIS
20	R	59	VAL
20	R	60	ARG
20	R	64	LYS
20	R	65	ARG
20	R	69	TYR
20	R	81	VAL
20	R	82	GLN
20	R	84	ALA
20	R	88	LYS
20	R	89	ILE
21	S	9	LYS
21	S	13	VAL
21	S	37	VAL
21	S	39	VAL
21	S	52	SER
21	S	55	TYR
21	S	60	PHE
21	S	61	ILE
21	S	66	PRO
21	S	68	HIS
21	S	74	PRO
21	S	75	ILE
21	S	88	LYS
21	S	90	LEU

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Mol	Chain	Res	Type
21	S	94	LYS
21	S	99	CYS
21	S	101	LYS
22	T	7	ALA
22	T	13	GLU
22	T	15	PRO
22	T	16	SER
22	T	41	LEU
22	T	42	VAL
22	T	46	LYS
22	T	72	ARG
22	T	73	GLN
22	T	78	LYS
22	T	83	PRO
22	T	95	PRO
22	T	120	ILE
22	T	153	SER
22	T	154	ASP
22	T	155	LEU
22	T	165	VAL
22	T	184	ALA
23	U	20	ARG
23	U	30	VAL
23	U	31	VAL
23	U	47	PRO
23	U	58	THR
23	U	63	VAL
23	U	64	ASP
23	U	81	VAL
24	V	11	ARG
24	V	24	ALA
24	V	33	LYS
24	V	66	HIS
24	V	69	LYS
24	V	70	VAL
24	V	75	GLU
24	V	82	LEU
24	V	83	GLU
24	V	85	LEU
24	V	86	SER
25	W	9	GLN
25	W	13	ALA

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Mol	Chain	Res	Type
25	W	32	LEU
25	W	33	MET
25	W	46	GLN
25	W	54	LYS
26	X	8	LEU
26	X	9	VAL
26	X	12	PRO
26	X	30	ARG
26	X	57	GLU
27	Y	8	LYS
27	Y	35	GLU
27	Y	51	TYR
27	Y	52	TYR
27	Y	55	ARG
28	Z	2	LYS
28	Z	3	ARG
28	Z	9	ARG
28	Z	17	GLY
28	Z	18	PHE
28	Z	22	MET
28	Z	44	PRO
29	a	6	THR
29	a	18	ALA
29	a	19	SER
29	a	29	LYS
29	a	30	ARG
29	a	36	LYS
29	a	40	GLU
29	a	41	ILE
29	a	42	ARG
29	a	51	ALA
29	a	57	ARG
30	b	3	VAL
30	b	10	ILE
35	c	13	ALA
35	c	21	ARG
35	c	24	TRP
35	c	45	GLN
35	c	47	THR
35	c	58	ILE
35	c	107	THR
35	c	109	SER

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Mol	Chain	Res	Type
35	c	130	ARG
35	c	157	ARG
35	c	160	ASP
35	c	172	ILE
35	c	174	VAL
35	c	181	PHE
35	c	190	THR
35	c	195	ASP
35	c	207	ALA
36	d	4	LYS
36	d	12	LEU
36	d	18	TRP
36	d	20	SER
36	d	29	TYR
36	d	30	ARG
36	d	43	LEU
36	d	45	LYS
36	d	47	LEU
36	d	49	SER
36	d	50	ALA
36	d	56	ASP
36	d	61	ALA
36	d	62	ASP
36	d	108	ASN
36	d	127	ARG
36	d	128	PHE
36	d	133	ALA
36	d	146	ALA
36	d	152	ILE
36	d	156	ARG
36	d	161	GLU
36	d	170	GLN
36	d	195	VAL
37	e	22	LYS
37	e	34	GLU
37	e	35	ARG
37	e	52	SER
37	e	59	ARG
37	e	66	ARG
37	e	67	ILE
37	e	79	PHE
37	e	81	GLU

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Mol	Chain	Res	Type
37	e	111	ALA
37	e	113	SER
37	e	140	VAL
37	e	148	VAL
37	e	152	SER
37	e	156	GLU
37	e	178	VAL
37	e	196	LEU
37	e	205	GLU
37	e	206	PHE
38	f	56	GLN
38	f	70	PRO
38	f	73	ASN
38	f	77	PRO
38	f	84	PHE
38	f	144	THR
38	f	152	ARG
39	g	45	LEU
39	g	95	GLU
39	g	99	ALA
40	h	4	ARG
40	h	31	MET
40	h	32	ARG
40	h	65	ALA
40	h	80	VAL
40	h	113	GLU
40	h	117	ALA
40	h	118	VAL
40	h	119	ARG
41	i	19	VAL
41	i	25	ASP
41	i	27	PRO
41	i	50	ARG
41	i	60	ARG
41	i	68	ARG
41	i	79	VAL
41	i	97	VAL
41	i	132	GLU
42	j	3	GLN
42	j	37	PHE
42	j	41	VAL
42	j	91	ASP

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Mol	Chain	Res	Type
42	j	105	ASP
42	j	117	HIS
43	k	18	ALA
43	k	26	ALA
43	k	30	SER
43	k	57	LYS
43	k	58	ASP
43	k	72	VAL
43	k	94	VAL
44	l	54	ARG
44	l	71	LYS
44	l	91	ARG
44	l	123	LYS
45	m	7	ASN
45	m	8	GLN
45	m	24	PRO
45	m	28	GLY
45	m	37	THR
45	m	40	ARG
45	m	46	LYS
45	m	65	VAL
45	m	72	GLU
45	m	73	GLY
45	m	74	HIS
45	m	75	ASN
45	m	78	GLU
45	m	103	VAL
45	m	104	TYR
45	m	109	VAL
45	m	119	TYR
46	n	7	VAL
46	n	12	ASN
46	n	19	LEU
46	n	27	LYS
46	n	57	ARG
46	n	77	ASN
46	n	94	ARG
46	n	98	VAL
46	n	108	ARG
46	n	113	PRO
46	n	122	LYS
46	n	124	PRO

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Mol	Chain	Res	Type
47	o	6	LEU
47	o	8	GLU
47	o	16	PHE
47	o	21	TYR
47	o	50	LYS
47	o	56	VAL
47	o	60	SER
48	p	3	ILE
48	p	6	GLU
48	p	27	VAL
48	p	28	GLN
48	p	29	VAL
48	p	45	VAL
48	p	46	HIS
48	p	49	ASP
49	q	3	LYS
49	q	13	HIS
49	q	17	TYR
49	q	23	ASP
49	q	26	ARG
49	q	34	GLU
49	q	36	ILE
49	q	64	ALA
49	q	66	PRO
49	q	77	ALA
50	r	27	PHE
50	r	33	GLY
50	r	47	PRO
50	r	55	ASP
50	r	74	LEU
50	r	75	ARG
50	r	95	TYR
51	s	17	SER
51	s	48	GLY
51	s	83	GLU
52	t	5	LEU
52	t	6	LYS
52	t	9	VAL
52	t	37	ARG
52	t	43	GLU
52	t	44	MET
52	t	47	HIS

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Mol	Chain	Res	Type
52	t	52	TYR
52	t	61	TYR
52	t	67	VAL
52	t	69	HIS
52	t	79	THR
53	u	48	LYS
53	u	75	ASN
53	u	93	GLU
54	v	22	ARG
54	v	23	PRO
3	A	9	ARG
3	A	15	VAL
3	A	18	ASN
3	A	30	VAL
3	A	163	GLU
3	A	171	ALA
3	A	196	ALA
4	B	41	GLY
4	B	45	ASN
4	B	54	ARG
4	B	65	ILE
4	B	91	ARG
4	B	98	VAL
4	B	113	VAL
4	B	114	GLY
4	B	152	GLY
4	B	156	ALA
4	B	201	HIS
4	B	206	LEU
4	B	222	ARG
4	B	232	PRO
4	B	235	GLY
4	B	237	GLU
4	B	245	PRO
4	B	253	GLN
4	B	258	LYS
4	B	263	ARG
5	C	13	ARG
5	C	35	GLN
5	C	44	TYR
5	C	55	ASN
5	C	68	ALA

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Mol	Chain	Res	Type
5	C	86	PRO
5	C	88	GLY
5	C	112	GLY
5	C	127	ASP
5	C	132	HIS
5	C	133	LYS
5	C	139	GLY
5	C	151	TYR
5	C	184	VAL
6	D	28	LEU
6	D	38	LYS
6	D	53	ALA
6	D	63	LYS
6	D	66	GLY
6	D	71	GLY
6	D	73	ILE
6	D	83	VAL
6	D	97	PRO
6	D	117	LYS
6	D	125	ALA
6	D	145	GLY
6	D	154	GLY
6	D	160	ARG
6	D	185	GLU
6	D	191	LEU
7	E	59	GLU
7	E	75	LYS
7	E	79	ASN
7	E	87	PRO
7	E	151	ALA
7	E	163	ALA
7	E	164	GLU
7	E	173	LEU
8	F	8	PRO
8	F	18	GLU
8	F	24	VAL
8	F	40	GLU
8	F	54	ARG
8	F	65	HIS
8	F	71	LEU
9	G	20	ASP
9	G	22	LYS

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Mol	Chain	Res	Type
9	G	39	ALA
9	G	81	VAL
9	G	83	ALA
9	G	86	THR
9	G	94	ALA
9	G	107	ILE
9	G	113	ARG
9	G	117	GLU
9	G	134	PRO
9	G	137	PRO
10	H	39	ILE
10	H	42	GLU
10	H	50	ALA
10	H	84	ARG
10	H	108	ILE
10	H	122	LEU
10	H	124	HIS
10	H	127	LYS
10	H	148	GLY
11	I	13	ASN
11	I	29	ASN
11	I	49	ARG
11	I	85	VAL
11	I	86	ILE
11	I	88	ASN
11	I	94	ARG
11	I	103	ALA
12	J	11	GLY
12	J	28	GLY
12	J	32	THR
12	J	40	SER
12	J	65	ARG
12	J	67	MET
12	J	70	GLN
12	J	93	GLY
12	J	102	ARG
12	J	104	GLY
12	J	141	ALA
13	K	2	LEU
13	K	20	ALA
13	K	25	ASP
13	K	46	GLN

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Mol	Chain	Res	Type
13	K	115	MET
13	K	136	ALA
14	L	28	LEU
14	L	32	GLY
14	L	102	GLU
15	M	39	ILE
15	M	42	ASP
15	M	67	ARG
15	M	68	GLN
15	M	91	PRO
16	N	4	GLY
16	N	28	VAL
16	N	45	PHE
16	N	46	GLU
16	N	68	TYR
16	N	71	GLY
16	N	77	PRO
16	N	94	ALA
16	N	97	ALA
16	N	120	ARG
17	O	58	ARG
17	O	67	ALA
17	O	92	ARG
17	O	113	ALA
17	O	115	ALA
18	P	8	GLY
18	P	14	VAL
18	P	43	GLU
18	P	45	THR
18	P	76	LYS
18	P	91	TYR
18	P	93	GLU
19	Q	32	ALA
19	Q	41	LYS
20	R	6	ASP
20	R	13	LEU
20	R	20	GLY
20	R	25	LYS
20	R	36	LYS
20	R	93	GLU
21	S	7	VAL
21	S	38	ILE

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Mol	Chain	Res	Type
21	S	50	ARG
21	S	54	LYS
21	S	63	LYS
21	S	65	ALA
21	S	73	ARG
21	S	96	ILE
22	T	12	GLY
22	T	39	VAL
22	T	49	ARG
22	T	63	ASP
22	T	90	VAL
22	T	133	ILE
22	T	182	LYS
23	U	16	SER
23	U	50	ASN
24	V	12	PRO
24	V	23	LYS
24	V	44	PRO
24	V	52	ARG
24	V	56	GLN
24	V	68	PRO
24	V	74	VAL
24	V	78	LYS
24	V	88	LYS
24	V	89	GLU
25	W	11	GLU
25	W	14	ARG
25	W	19	VAL
25	W	39	ALA
25	W	42	GLY
25	W	44	LEU
25	W	47	ASN
25	W	51	ARG
26	X	32	GLN
26	X	53	LEU
26	X	58	VAL
27	Y	18	ALA
27	Y	30	LEU
27	Y	34	PRO
27	Y	42	PRO
27	Y	57	VAL
28	Z	7	PRO

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Mol	Chain	Res	Type
29	a	35	GLN
29	a	38	GLY
29	a	59	LYS
30	b	4	ARG
30	b	9	ARG
30	b	20	HIS
35	c	9	GLU
35	c	15	VAL
35	c	29	ALA
35	c	52	GLU
35	c	62	ALA
35	c	77	ALA
35	c	88	ALA
35	c	93	VAL
35	c	100	GLY
35	c	106	LYS
35	c	115	LEU
35	c	150	SER
35	c	153	ARG
35	c	155	LEU
35	c	165	VAL
35	c	171	ALA
35	c	194	PRO
36	d	8	ILE
36	d	15	THR
36	d	36	ASP
36	d	48	TYR
36	d	51	GLY
36	d	63	ASN
36	d	90	GLU
36	d	98	ASN
36	d	109	PRO
36	d	132	ARG
36	d	164	ARG
36	d	178	LEU
36	d	196	LEU
36	d	200	ALA
37	e	5	ILE
37	e	18	LYS
37	e	19	LEU
37	e	24	GLU
37	e	29	PRO

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Mol	Chain	Res	Type
37	e	85	LYS
37	e	88	VAL
37	e	91	SER
37	e	109	GLY
37	e	134	ASP
37	e	151	LYS
37	e	179	GLU
37	e	181	MET
37	e	204	ILE
38	f	49	PRO
38	f	100	VAL
38	f	104	ALA
38	f	117	ASP
38	f	126	ARG
38	f	131	ILE
39	g	7	ASN
39	g	16	GLN
40	h	7	ALA
40	h	89	MET
40	h	116	ALA
40	h	128	ALA
40	h	153	HIS
41	i	20	TYR
41	i	24	THR
41	i	45	ILE
41	i	46	LYS
41	i	51	VAL
41	i	82	HIS
41	i	91	ARG
41	i	108	GLY
42	j	24	GLY
42	j	46	ALA
42	j	53	VAL
42	j	69	GLY
42	j	100	GLY
42	j	119	ALA
43	k	6	ILE
43	k	14	LYS
43	k	17	ASP
43	k	51	ARG
43	k	55	LYS
43	k	61	GLU

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Mol	Chain	Res	Type
43	k	74	ILE
44	l	13	GLN
44	l	52	GLY
44	l	60	ALA
44	l	78	GLN
44	l	96	ARG
44	l	98	LEU
45	m	9	LEU
45	m	14	ARG
45	m	15	GLU
45	m	21	SER
45	m	36	CYS
45	m	44	PRO
45	m	71	GLY
45	m	99	ILE
45	m	115	SER
45	m	124	PRO
46	n	6	GLY
46	n	20	THR
46	n	22	ILE
46	n	39	ILE
46	n	45	VAL
46	n	48	LEU
46	n	66	LEU
46	n	67	GLU
46	n	74	VAL
46	n	118	ALA
47	o	3	ARG
47	o	42	ILE
48	p	50	HIS
48	p	72	ARG
48	p	81	LEU
49	q	43	LYS
49	q	53	VAL
49	q	76	GLN
50	r	17	LYS
50	r	32	TYR
50	r	34	LYS
50	r	40	LYS
50	r	50	LYS
50	r	56	VAL
50	r	96	GLN

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Mol	Chain	Res	Type
51	s	20	ALA
51	s	42	ARG
51	s	44	LEU
51	s	53	ARG
51	s	58	LEU
51	s	82	THR
51	s	85	LEU
52	t	3	ARG
52	t	51	VAL
52	t	66	MET
52	t	80	TYR
53	u	9	ASN
53	u	50	GLU
53	u	71	THR
53	u	80	ARG
53	u	99	LEU
54	v	18	TYR
3	A	8	TYR
3	A	19	LYS
3	A	29	LEU
3	A	36	ALA
3	A	176	VAL
3	A	211	ARG
3	A	221	PRO
3	A	223	VAL
4	B	3	VAL
4	B	33	LEU
4	B	73	VAL
4	B	107	ALA
4	B	116	GLN
4	B	137	PRO
4	B	170	GLY
4	B	226	MET
4	B	236	GLY
4	B	238	GLY
4	B	239	ARG
4	B	242	ARG
5	C	53	PRO
5	C	56	PRO
5	C	117	MET
5	C	119	ARG
5	C	129	HIS

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Mol	Chain	Res	Type
5	C	169	ASN
6	D	18	ASP
6	D	56	GLY
6	D	70	HIS
6	D	88	LYS
6	D	106	ALA
6	D	132	LYS
6	D	146	SER
6	D	163	ARG
6	D	167	TRP
6	D	173	PRO
6	D	186	ARG
7	E	9	ARG
7	E	82	LEU
7	E	138	GLN
7	E	152	LEU
8	F	9	ILE
8	F	13	LYS
8	F	20	ALA
8	F	32	GLU
8	F	60	ARG
8	F	170	ARG
9	G	8	PRO
9	G	23	PRO
10	H	64	ASP
10	H	65	TRP
10	H	93	LYS
10	H	131	PRO
10	H	132	LYS
10	H	150	ASP
11	I	24	VAL
11	I	33	ALA
11	I	63	VAL
11	I	113	LYS
12	J	16	ARG
12	J	52	GLU
12	J	117	GLU
12	J	122	PRO
12	J	145	PRO
13	K	13	GLN
14	L	6	SER
14	L	42	LYS

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Mol	Chain	Res	Type
15	M	17	ARG
15	M	20	ARG
15	M	56	LEU
15	M	72	ALA
16	N	12	SER
16	N	29	ARG
16	N	62	THR
16	N	96	ARG
16	N	103	ARG
16	N	135	VAL
17	O	25	TRP
17	O	47	TYR
17	O	57	PHE
17	O	87	GLY
17	O	90	VAL
17	O	99	ALA
18	P	29	PRO
19	Q	34	ASN
19	Q	73	ALA
19	Q	87	PRO
19	Q	97	LYS
20	R	32	PRO
20	R	72	LYS
20	R	78	LYS
21	S	20	TYR
21	S	35	TYR
22	T	45	ASP
22	T	80	ARG
22	T	152	ALA
22	T	183	LEU
23	U	44	ARG
24	V	26	ARG
24	V	46	LEU
25	W	2	LYS
27	Y	7	PRO
27	Y	16	ARG
27	Y	24	ALA
27	Y	28	PRO
27	Y	32	PRO
27	Y	39	MET
28	Z	13	ALA
28	Z	31	LEU

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Mol	Chain	Res	Type
28	Z	33	ARG
29	a	48	PHE
29	a	56	GLU
35	c	12	GLU
35	c	26	PRO
35	c	51	LEU
35	c	141	GLU
35	c	142	LEU
35	c	145	LEU
35	c	210	SER
35	c	212	GLN
36	d	17	ASP
36	d	40	ARG
36	d	110	ASN
36	d	122	GLU
37	e	10	ARG
37	e	36	ARG
37	e	37	PRO
37	e	48	ALA
37	e	49	ARG
37	e	51	PRO
37	e	84	LYS
37	e	89	THR
37	e	122	ARG
37	e	168	ARG
37	e	174	LEU
37	e	202	LEU
37	e	208	SER
38	f	48	ALA
38	f	50	GLU
38	f	65	ASN
38	f	71	LEU
38	f	97	GLY
38	f	135	THR
39	g	41	GLU
39	g	82	ARG
40	h	17	VAL
40	h	68	ASN
40	h	93	PRO
40	h	100	ALA
40	h	129	GLU
40	h	130	GLY

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Mol	Chain	Res	Type
41	i	16	ALA
41	i	106	GLY
41	i	121	ASP
42	j	29	ASN
42	j	97	LYS
42	j	111	ARG
43	k	8	LEU
43	k	13	HIS
43	k	39	PRO
43	k	71	LEU
44	l	15	ALA
44	l	59	TYR
44	l	72	ALA
44	l	101	SER
44	l	121	PRO
45	m	26	LEU
45	m	82	VAL
45	m	93	PRO
45	m	111	ASP
45	m	120	GLY
46	n	29	ARG
46	n	105	THR
46	n	106	ASN
46	n	121	LYS
47	o	15	LYS
47	o	59	ALA
48	p	5	LYS
48	p	51	HIS
48	p	54	ARG
48	p	79	ARG
49	q	15	PRO
49	q	55	ARG
49	q	82	GLN
50	r	12	SER
50	r	13	ASP
50	r	30	PRO
50	r	41	LYS
50	r	45	HIS
50	r	46	ASP
51	s	84	LYS
51	s	87	ARG
52	t	42	PRO

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Mol	Chain	Res	Type
52	t	54	GLY
53	u	43	LEU
53	u	98	PRO
54	v	24	ARG
3	A	168	LYS
4	B	57	GLY
4	B	106	ILE
4	B	204	ILE
5	C	18	ASP
5	C	45	THR
5	C	121	ASN
5	C	130	GLY
5	C	145	LYS
5	C	177	PRO
5	C	183	LEU
5	C	188	VAL
5	C	192	ASN
5	C	199	ARG
6	D	39	ARG
6	D	61	PRO
6	D	80	GLY
6	D	91	ASP
6	D	96	LEU
6	D	104	GLY
6	D	116	GLY
7	E	22	ARG
7	E	73	ALA
7	E	124	SER
7	E	127	GLY
7	E	136	ARG
7	E	166	ASP
8	F	25	LYS
8	F	59	ARG
8	F	173	PRO
9	G	7	GLU
9	G	29	TYR
9	G	69	LYS
9	G	75	LEU
9	G	119	PRO
9	G	135	GLU
10	H	101	TYR
11	I	27	GLY

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Mol	Chain	Res	Type
11	I	54	GLU
11	I	89	ASN
12	J	50	ARG
12	J	55	ARG
12	J	89	ALA
12	J	110	TYR
13	K	6	ARG
13	K	31	ASP
13	K	54	MET
13	K	132	VAL
14	L	41	ALA
14	L	50	HIS
14	L	52	ILE
14	L	84	ALA
15	M	37	ALA
15	M	62	LYS
15	M	64	GLU
16	N	31	SER
16	N	80	SER
16	N	128	GLU
18	P	36	PRO
18	P	53	GLU
18	P	55	ALA
19	Q	5	ALA
19	Q	33	ARG
19	Q	44	ALA
19	Q	72	LYS
20	R	7	VAL
20	R	18	TYR
20	R	48	LYS
20	R	77	LYS
21	S	40	GLU
22	T	6	LYS
22	T	29	TYR
22	T	103	ARG
22	T	147	GLY
23	U	41	ARG
23	U	53	MET
23	U	69	PHE
25	W	35	LEU
25	W	56	GLN
26	X	44	ARG

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Mol	Chain	Res	Type
26	X	51	ALA
27	Y	43	HIS
28	Z	20	ALA
29	a	32	LEU
29	a	54	GLU
35	c	46	LYS
35	c	97	TRP
35	c	110	GLN
35	c	216	SER
36	d	19	GLU
36	d	60	ALA
36	d	76	VAL
36	d	131	ARG
36	d	135	LYS
36	d	176	HIS
37	e	32	ALA
37	e	46	LYS
37	e	86	LYS
38	f	40	ARG
38	f	128	PRO
38	f	136	MET
38	f	138	ALA
40	h	9	VAL
40	h	20	ASP
40	h	40	ALA
40	h	78	ARG
40	h	135	VAL
40	h	146	GLU
41	i	81	HIS
41	i	104	ARG
41	i	122	ARG
41	i	123	GLU
42	j	42	ARG
42	j	48	GLU
43	k	42	THR
44	l	35	PRO
44	l	55	LYS
44	l	79	SER
44	l	95	ILE
44	l	104	GLN
44	l	105	VAL
45	m	18	ARG

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Mol	Chain	Res	Type
45	m	45	LYS
45	m	116	ARG
46	n	13	LYS
46	n	24	GLY
46	n	111	LYS
47	o	4	LYS
47	o	28	GLY
47	o	46	GLU
47	o	58	LYS
50	r	42	TYR
51	s	68	LYS
52	t	31	ILE
52	t	78	ARG
53	u	30	LYS
53	u	33	ILE
53	u	97	ALA
3	A	37	LYS
3	A	39	ASP
4	B	35	LYS
4	B	117	VAL
4	B	118	VAL
5	C	67	PHE
5	C	73	GLU
6	D	8	SER
7	E	7	LEU
7	E	19	LEU
7	E	58	GLN
7	E	92	VAL
7	E	111	LEU
7	E	169	ALA
8	F	11	VAL
8	F	19	VAL
8	F	150	ALA
8	F	157	TYR
9	G	26	ALA
9	G	53	ALA
10	H	30	LYS
10	H	31	GLN
10	H	37	VAL
10	H	45	THR
10	H	78	VAL
10	H	145	VAL

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Mol	Chain	Res	Type
10	H	155	ALA
11	I	10	VAL
11	I	69	VAL
11	I	99	PHE
12	J	31	ALA
12	J	45	LEU
12	J	140	ALA
13	K	5	ARG
13	K	7	MET
13	K	28	ALA
13	K	74	TYR
14	L	14	SER
14	L	109	ALA
15	M	30	ARG
15	M	32	LEU
15	M	88	ASP
16	N	6	LEU
16	N	74	ARG
18	P	71	LEU
18	P	78	LYS
19	Q	69	LEU
19	Q	76	VAL
20	R	51	VAL
21	S	57	GLN
21	S	76	CYS
22	T	17	ALA
22	T	22	GLY
23	U	55	ARG
24	V	49	VAL
25	W	6	VAL
29	a	31	HIS
30	b	6	SER
35	c	20	GLU
35	c	67	THR
35	c	89	GLY
35	c	91	PRO
35	c	125	PRO
35	c	154	LEU
35	c	209	ARG
35	c	229	VAL
36	d	151	VAL
36	d	162	GLN

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Mol	Chain	Res	Type
37	e	9	CYS
37	e	78	LEU
37	e	83	SER
37	e	87	GLY
37	e	124	GLY
38	f	93	PRO
38	f	143	ARG
39	g	23	LYS
39	g	61	LEU
39	g	77	ARG
39	g	88	VAL
40	h	33	ASP
42	j	23	ASN
43	k	40	LEU
43	k	77	PRO
44	l	40	ILE
44	l	43	SER
44	l	70	LYS
44	l	117	ASN
45	m	13	GLY
46	n	28	ALA
46	n	40	ASN
46	n	78	ILE
46	n	84	ILE
47	o	37	PHE
50	r	51	TYR
50	r	64	PRO
53	u	45	GLN
53	u	47	GLY
53	u	100	ILE
3	A	58	ASN
3	A	204	GLY
4	B	141	VAL
4	B	159	ALA
5	C	15	PHE
5	C	39	PRO
5	C	52	LEU
5	C	72	VAL
5	C	162	ALA
6	D	52	VAL
6	D	149	VAL
6	D	171	LEU

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Mol	Chain	Res	Type
7	E	10	LYS
7	E	44	GLY
7	E	97	ASP
8	F	66	GLY
8	F	75	ALA
8	F	93	GLY
8	F	121	ILE
10	H	59	GLY
10	H	95	TYR
10	H	109	PRO
12	J	48	PRO
12	J	62	LEU
12	J	72	PRO
12	J	106	LEU
13	K	69	PHE
15	M	28	VAL
15	M	65	VAL
17	O	74	LEU
18	P	39	LEU
18	P	88	ARG
19	Q	9	TYR
19	Q	50	VAL
19	Q	54	ALA
22	T	175	VAL
22	T	177	PRO
23	U	15	ASP
25	W	55	ARG
25	W	61	LEU
26	X	59	VAL
27	Y	9	LYS
35	c	60	ASP
36	d	35	GLU
36	d	75	VAL
36	d	81	GLY
36	d	134	ILE
37	e	70	ILE
37	e	170	VAL
37	e	198	VAL
40	h	88	PRO
41	i	75	ARG
41	i	90	GLY
42	j	33	PHE

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Mol	Chain	Res	Type
42	j	116	LYS
44	l	107	SER
45	m	31	PHE
47	o	48	ALA
48	p	19	PRO
50	r	6	LEU
51	s	66	LEU
51	s	78	LEU
51	s	81	PHE
52	t	49	ILE
3	A	175	PRO
3	A	183	PRO
4	B	74	GLY
4	B	174	ILE
4	B	256	GLY
8	F	17	VAL
9	G	34	GLY
9	G	111	PRO
11	I	4	PRO
11	I	72	PRO
13	K	108	GLY
18	P	42	GLY
18	P	61	VAL
18	P	96	ILE
19	Q	12	ILE
35	c	124	SER
37	e	17	VAL
37	e	133	VAL
37	e	158	ILE
45	m	42	VAL
4	B	24	ILE
5	C	34	VAL
8	F	50	VAL
8	F	52	VAL
8	F	136	ILE
13	K	3	MET
18	P	37	VAL
21	S	49	VAL
24	V	58	ILE
27	Y	29	ILE
36	d	96	GLY
39	g	81	ILE

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Mol	Chain	Res	Type
40	h	55	GLY
41	i	6	ILE
41	i	26	VAL
41	i	38	ILE
41	i	129	VAL
42	j	67	GLY
43	k	53	PRO
45	m	94	GLY
46	n	17	VAL
51	s	52	PRO
4	B	76	PRO
4	B	110	GLY
4	B	121	PRO
10	H	77	VAL
10	H	158	PRO
14	L	34	ILE
22	T	47	VAL
36	d	7	PRO
37	e	7	PRO
37	e	180	GLY
38	f	96	PRO
46	n	53	VAL
53	u	88	VAL
4	B	160	GLY
5	C	189	PRO
7	E	32	PRO
8	F	29	PRO
10	H	117	HIS
16	N	72	VAL
18	P	52	VAL
27	Y	50	GLY
35	c	228	GLY
39	g	6	VAL
39	g	68	PRO
44	l	58	PRO
48	p	87	ILE
50	r	5	VAL
53	u	41	VAL
5	C	173	VAL
7	E	85	GLY
11	I	110	GLY
16	N	70	VAL

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Mol	Chain	Res	Type
36	d	55	VAL
37	e	44	GLY
8	F	128	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	A	106/181 (59%)	91 (86%)	15 (14%)	5	33
4	B	214/218 (98%)	169 (79%)	45 (21%)	1	12
5	C	163/166 (98%)	126 (77%)	37 (23%)	1	10
6	D	154/162 (95%)	123 (80%)	31 (20%)	2	14
7	E	154/156 (99%)	127 (82%)	27 (18%)	3	21
8	F	142/148 (96%)	124 (87%)	18 (13%)	6	39
9	G	124/124 (100%)	103 (83%)	21 (17%)	3	24
10	H	117/139 (84%)	90 (77%)	27 (23%)	1	9
11	I	100/100 (100%)	79 (79%)	21 (21%)	1	12
12	J	112/116 (97%)	89 (80%)	23 (20%)	2	13
13	K	108/111 (97%)	77 (71%)	31 (29%)	0	5
14	L	101/101 (100%)	79 (78%)	22 (22%)	1	11
15	M	84/88 (96%)	66 (79%)	18 (21%)	1	12
16	N	121/128 (94%)	97 (80%)	24 (20%)	2	15
17	O	93/94 (99%)	79 (85%)	14 (15%)	4	30
18	P	82/82 (100%)	70 (85%)	12 (15%)	5	31
19	Q	89/92 (97%)	72 (81%)	17 (19%)	2	16
20	R	74/78 (95%)	62 (84%)	12 (16%)	3	26
21	S	86/91 (94%)	75 (87%)	11 (13%)	6	39
22	T	163/179 (91%)	140 (86%)	23 (14%)	5	34
23	U	61/67 (91%)	47 (77%)	14 (23%)	1	9
24	V	73/83 (88%)	60 (82%)	13 (18%)	2	20

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
25	W	58/67 (87%)	42 (72%)	16 (28%)	0	6
26	X	52/52 (100%)	41 (79%)	11 (21%)	1	12
27	Y	49/52 (94%)	44 (90%)	5 (10%)	11	51
28	Z	41/42 (98%)	32 (78%)	9 (22%)	1	11
29	a	53/55 (96%)	39 (74%)	14 (26%)	1	7
30	b	33/34 (97%)	30 (91%)	3 (9%)	14	58
35	c	202/220 (92%)	154 (76%)	48 (24%)	1	8
36	d	160/188 (85%)	130 (81%)	30 (19%)	2	17
37	e	180/181 (99%)	143 (79%)	37 (21%)	2	13
38	f	115/123 (94%)	94 (82%)	21 (18%)	2	18
39	g	90/90 (100%)	75 (83%)	15 (17%)	3	24
40	h	126/127 (99%)	110 (87%)	16 (13%)	6	39
41	i	119/119 (100%)	97 (82%)	22 (18%)	2	18
42	j	98/99 (99%)	82 (84%)	16 (16%)	3	26
43	k	88/92 (96%)	76 (86%)	12 (14%)	5	36
44	l	88/99 (89%)	72 (82%)	16 (18%)	2	19
45	m	104/109 (95%)	85 (82%)	19 (18%)	2	18
46	n	100/101 (99%)	85 (85%)	15 (15%)	4	30
47	o	49/50 (98%)	39 (80%)	10 (20%)	2	13
48	p	79/80 (99%)	65 (82%)	14 (18%)	3	20
49	q	72/74 (97%)	60 (83%)	12 (17%)	3	24
50	r	96/97 (99%)	76 (79%)	20 (21%)	2	12
51	s	64/77 (83%)	52 (81%)	12 (19%)	2	17
52	t	71/80 (89%)	58 (82%)	13 (18%)	2	18
53	u	76/82 (93%)	70 (92%)	6 (8%)	18	65
54	v	19/22 (86%)	16 (84%)	3 (16%)	4	28
All	All	4803/5116 (94%)	3912 (81%)	891 (19%)	2	17

All (891) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	A	7	ARG
3	A	8	TYR

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Mol	Chain	Res	Type
3	A	9	ARG
3	A	18	ASN
3	A	19	LYS
3	A	23	ILE
3	A	38	PHE
3	A	53	ARG
3	A	165	ARG
3	A	197	LEU
3	A	201	LYS
3	A	209	PHE
3	A	212	SER
3	A	214	TYR
3	A	224	ARG
4	B	9	TYR
4	B	16	MET
4	B	27	THR
4	B	31	LYS
4	B	35	LYS
4	B	37	LEU
4	B	43	ARG
4	B	60	ARG
4	B	66	ASP
4	B	67	PHE
4	B	88	ARG
4	B	92	ILE
4	B	95	LEU
4	B	96	HIS
4	B	99	ASP
4	B	102	LYS
4	B	111	LEU
4	B	115	GLN
4	B	129	ASN
4	B	133	LEU
4	B	134	ARG
4	B	135	PHE
4	B	136	ILE
4	B	146	GLU
4	B	149	PRO
4	B	150	LYS
4	B	155	LEU
4	B	164	GLN
4	B	175	LEU

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Mol	Chain	Res	Type
4	B	192	THR
4	B	198	ASN
4	B	201	HIS
4	B	206	LEU
4	B	208	LYS
4	B	215	LEU
4	B	217	ARG
4	B	230	ASP
4	B	242	ARG
4	B	250	TRP
4	B	252	TRP
4	B	255	LYS
4	B	257	LEU
4	B	262	ARG
4	B	263	ARG
4	B	269	PHE
5	C	4	ILE
5	C	9	VAL
5	C	15	PHE
5	C	16	ARG
5	C	19	ARG
5	C	23	VAL
5	C	27	LEU
5	C	34	VAL
5	C	35	GLN
5	C	42	ASP
5	C	44	TYR
5	C	49	LEU
5	C	57	LYS
5	C	61	ARG
5	C	66	HIS
5	C	67	PHE
5	C	79	ARG
5	C	81	ILE
5	C	89	ASP
5	C	93	VAL
5	C	113	PHE
5	C	117	MET
5	C	119	ARG
5	C	120	TRP
5	C	134	ILE
5	C	141	ILE

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Mol	Chain	Res	Type
5	C	144	ARG
5	C	154	LYS
5	C	156	MET
5	C	174	ASP
5	C	175	VAL
5	C	179	GLU
5	C	181	LEU
5	C	188	VAL
5	C	192	ASN
5	C	202	LYS
5	C	203	LYS
6	D	7	LEU
6	D	12	ARG
6	D	15	LEU
6	D	26	HIS
6	D	27	LEU
6	D	29	TRP
6	D	41	ARG
6	D	54	TYR
6	D	57	ARG
6	D	59	ILE
6	D	60	TRP
6	D	69	ARG
6	D	77	ILE
6	D	78	PHE
6	D	85	PHE
6	D	94	TYR
6	D	97	PRO
6	D	101	ARG
6	D	109	VAL
6	D	112	ARG
6	D	132	LYS
6	D	144	ASP
6	D	147	GLU
6	D	165	LEU
6	D	171	LEU
6	D	178	VAL
6	D	179	TYR
6	D	180	ASP
6	D	181	ILE
6	D	191	LEU
6	D	197	PHE

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Mol	Chain	Res	Type
7	E	10	LYS
7	E	11	TYR
7	E	12	TYR
7	E	25	TYR
7	E	31	VAL
7	E	33	ARG
7	E	53	LEU
7	E	55	LYS
7	E	60	LEU
7	E	71	THR
7	E	82	LEU
7	E	90	LEU
7	E	91	ARG
7	E	95	ARG
7	E	99	MET
7	E	103	LEU
7	E	121	ASN
7	E	125	PHE
7	E	131	TYR
7	E	133	LEU
7	E	139	LEU
7	E	140	ILE
7	E	148	MET
7	E	155	MET
7	E	164	GLU
7	E	176	LEU
7	E	178	PHE
8	F	60	ARG
8	F	65	HIS
8	F	68	THR
8	F	72	ILE
8	F	87	LEU
8	F	89	ILE
8	F	92	ILE
8	F	105	LEU
8	F	123	PHE
8	F	125	VAL
8	F	131	VAL
8	F	138	LYS
8	F	140	LYS
8	F	144	VAL
8	F	149	ARG

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Mol	Chain	Res	Type
8	F	152	ARG
8	F	162	ILE
8	F	172	LYS
9	G	12	LEU
9	G	27	ARG
9	G	33	ARG
9	G	35	LEU
9	G	41	GLU
9	G	44	LEU
9	G	58	LEU
9	G	64	GLU
9	G	89	TYR
9	G	95	LYS
9	G	97	ILE
9	G	99	GLU
9	G	101	LEU
9	G	103	ARG
9	G	107	ILE
9	G	109	ILE
9	G	114	LEU
9	G	118	LYS
9	G	121	LYS
9	G	123	LEU
9	G	139	GLN
10	H	27	TYR
10	H	35	ARG
10	H	48	ARG
10	H	49	LEU
10	H	52	LYS
10	H	56	LEU
10	H	60	LYS
10	H	62	ARG
10	H	64	ASP
10	H	67	PRO
10	H	71	MET
10	H	74	PHE
10	H	79	ASN
10	H	84	ARG
10	H	95	TYR
10	H	98	TYR
10	H	101	TYR
10	H	105	LEU

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Mol	Chain	Res	Type
10	H	112	LYS
10	H	114	LEU
10	H	116	THR
10	H	117	HIS
10	H	122	LEU
10	H	132	LYS
10	H	143	LEU
10	H	146	TYR
10	H	154	GLN
11	I	1	MET
11	I	3	GLN
11	I	9	GLU
11	I	17	ARG
11	I	20	MET
11	I	29	ASN
11	I	39	ILE
11	I	40	VAL
11	I	44	LYS
11	I	45	GLU
11	I	48	PRO
11	I	49	ARG
11	I	59	LYS
11	I	73	ASP
11	I	77	ILE
11	I	79	PHE
11	I	80	ASP
11	I	91	LEU
11	I	104	ARG
11	I	105	GLU
11	I	109	LYS
12	J	6	LEU
12	J	13	ASN
12	J	35	HIS
12	J	45	LEU
12	J	61	ARG
12	J	62	LEU
12	J	64	LYS
12	J	67	MET
12	J	74	GLU
12	J	80	TYR
12	J	81	GLN
12	J	85	LEU

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Mol	Chain	Res	Type
12	J	91	PHE
12	J	95	VAL
12	J	100	LEU
12	J	105	LEU
12	J	112	LEU
12	J	121	LYS
12	J	130	PHE
12	J	139	LYS
12	J	147	LEU
12	J	148	LEU
12	J	149	GLU
13	K	8	LYS
13	K	9	TYR
13	K	11	LYS
13	K	12	GLN
13	K	14	ARG
13	K	17	LEU
13	K	22	LYS
13	K	29	PHE
13	K	34	LEU
13	K	38	GLU
13	K	41	TRP
13	K	42	ILE
13	K	51	ARG
13	K	57	HIS
13	K	59	ARG
13	K	60	ARG
13	K	68	ILE
13	K	69	PHE
13	K	72	LYS
13	K	82	ARG
13	K	89	ASN
13	K	91	GLU
13	K	93	TYR
13	K	103	MET
13	K	112	GLU
13	K	123	HIS
13	K	124	LYS
13	K	125	LEU
13	K	127	ILE
13	K	133	ARG
13	K	134	ARG

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Mol	Chain	Res	Type
14	L	8	ARG
14	L	9	LYS
14	L	14	SER
14	L	20	LEU
14	L	21	TYR
14	L	31	HIS
14	L	40	LYS
14	L	44	LEU
14	L	45	ARG
14	L	47	PHE
14	L	51	LEU
14	L	59	ASP
14	L	64	ARG
14	L	78	LYS
14	L	87	TYR
14	L	89	ASP
14	L	91	GLN
14	L	94	TYR
14	L	99	LYS
14	L	103	ARG
14	L	107	ASP
14	L	116	LEU
15	M	9	ARG
15	M	10	ARG
15	M	12	PHE
15	M	23	ARG
15	M	25	ARG
15	M	26	LEU
15	M	31	SER
15	M	39	ILE
15	M	42	ASP
15	M	47	THR
15	M	49	VAL
15	M	56	LEU
15	M	64	GLU
15	M	71	ARG
15	M	75	GLU
15	M	94	TYR
15	M	106	ARG
15	M	111	GLU
16	N	15	VAL
16	N	18	ASP

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Mol	Chain	Res	Type
16	N	22	PHE
16	N	33	LYS
16	N	35	LYS
16	N	38	ASN
16	N	42	ILE
16	N	44	ASP
16	N	46	GLU
16	N	53	ARG
16	N	61	PHE
16	N	62	THR
16	N	78	LEU
16	N	90	GLN
16	N	95	ARG
16	N	101	PHE
16	N	103	ARG
16	N	108	ARG
16	N	111	ARG
16	N	113	LYS
16	N	119	LYS
16	N	121	ILE
16	N	123	LYS
16	N	124	ASP
17	O	25	TRP
17	O	38	THR
17	O	39	LEU
17	O	44	ASN
17	O	49	HIS
17	O	50	ARG
17	O	64	ARG
17	O	74	LEU
17	O	79	PHE
17	O	84	LYS
17	O	85	LYS
17	O	94	ASN
17	O	97	ASP
17	O	109	LEU
18	P	2	PHE
18	P	11	GLN
18	P	13	ARG
18	P	18	LEU
18	P	23	GLU
18	P	25	LEU

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Mol	Chain	Res	Type
18	P	38	LEU
18	P	39	LEU
18	P	60	GLU
18	P	80	GLN
18	P	82	ARG
18	P	85	LYS
19	Q	4	LYS
19	Q	6	ILE
19	Q	8	ARG
19	Q	12	ILE
19	Q	17	VAL
19	Q	31	GLU
19	Q	38	TYR
19	Q	47	VAL
19	Q	51	LEU
19	Q	68	ARG
19	Q	75	TYR
19	Q	82	LEU
19	Q	88	ARG
19	Q	92	ARG
19	Q	97	LYS
19	Q	104	THR
19	Q	106	ILE
20	R	26	TYR
20	R	38	GLU
20	R	49	VAL
20	R	50	LYS
20	R	54	VAL
20	R	59	VAL
20	R	62	LYS
20	R	64	LYS
20	R	65	ARG
20	R	76	ARG
20	R	77	LYS
20	R	89	ILE
21	S	9	LYS
21	S	13	VAL
21	S	28	LYS
21	S	55	TYR
21	S	64	GLU
21	S	71	LYS
21	S	73	ARG

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Mol	Chain	Res	Type
21	S	74	PRO
21	S	84	ARG
21	S	96	ILE
21	S	97	ARG
22	T	8	TYR
22	T	9	TYR
22	T	19	ARG
22	T	28	MET
22	T	34	ASN
22	T	37	VAL
22	T	38	TYR
22	T	41	LEU
22	T	44	PHE
22	T	53	ILE
22	T	55	HIS
22	T	78	LYS
22	T	80	ARG
22	T	104	PHE
22	T	117	LEU
22	T	119	GLU
22	T	145	GLU
22	T	146	ILE
22	T	155	LEU
22	T	157	LEU
22	T	162	GLU
22	T	165	VAL
22	T	171	ILE
23	U	24	LYS
23	U	31	VAL
23	U	35	ASN
23	U	36	ILE
23	U	40	GLN
23	U	41	ARG
23	U	46	LYS
23	U	53	MET
23	U	56	ASP
23	U	60	PHE
23	U	67	VAL
23	U	69	PHE
23	U	71	ASP
23	U	75	LEU
24	V	11	ARG

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Mol	Chain	Res	Type
24	V	13	ILE
24	V	16	ASN
24	V	18	ILE
24	V	20	ARG
24	V	26	ARG
24	V	33	LYS
24	V	46	LEU
24	V	78	LYS
24	V	82	LEU
24	V	85	LEU
24	V	91	LYS
24	V	94	LEU
25	W	1	MET
25	W	5	GLU
25	W	9	GLN
25	W	12	GLU
25	W	14	ARG
25	W	15	LYS
25	W	29	LYS
25	W	33	MET
25	W	37	PHE
25	W	47	ASN
25	W	48	HIS
25	W	51	ARG
25	W	52	ASP
25	W	55	ARG
25	W	60	LEU
25	W	61	LEU
26	X	8	LEU
26	X	13	ILE
26	X	15	TYR
26	X	17	LYS
26	X	23	LEU
26	X	33	GLN
26	X	43	ILE
26	X	44	ARG
26	X	49	LYS
26	X	53	LEU
26	X	59	VAL
27	Y	15	ARG
27	Y	26	THR
27	Y	29	ILE

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Mol	Chain	Res	Type
27	Y	51	TYR
27	Y	56	LYS
28	Z	2	LYS
28	Z	7	PRO
28	Z	8	ASN
28	Z	15	THR
28	Z	24	THR
28	Z	31	LEU
28	Z	34	ARG
28	Z	39	ARG
28	Z	43	THR
29	a	3	LYS
29	a	6	THR
29	a	13	ARG
29	a	16	ILE
29	a	35	GLN
29	a	36	LYS
29	a	39	LYS
29	a	41	ILE
29	a	44	LYS
29	a	48	PHE
29	a	52	LYS
29	a	54	GLU
29	a	59	LYS
29	a	60	LEU
30	b	2	LYS
30	b	25	VAL
30	b	29	ASN
35	c	8	LYS
35	c	10	LEU
35	c	17	PHE
35	c	19	HIS
35	c	23	ARG
35	c	33	TYR
35	c	40	HIS
35	c	42	ILE
35	c	44	LEU
35	c	46	LYS
35	c	47	THR
35	c	50	GLU
35	c	51	LEU
35	c	53	ARG

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Mol	Chain	Res	Type
35	c	55	PHE
35	c	59	GLU
35	c	63	MET
35	c	70	PHE
35	c	93	VAL
35	c	97	TRP
35	c	105	PHE
35	c	108	ILE
35	c	118	LEU
35	c	126	GLU
35	c	129	GLU
35	c	130	ARG
35	c	132	LYS
35	c	133	LYS
35	c	137	ARG
35	c	138	LEU
35	c	149	LEU
35	c	155	LEU
35	c	157	ARG
35	c	158	LEU
35	c	160	ASP
35	c	169	LYS
35	c	172	ILE
35	c	185	ILE
35	c	191	ASP
35	c	195	ASP
35	c	200	ILE
35	c	204	ASN
35	c	205	ASP
35	c	206	ASP
35	c	209	ARG
35	c	220	ASP
35	c	221	LEU
35	c	222	ILE
36	d	3	ASN
36	d	4	LYS
36	d	11	ARG
36	d	16	ARG
36	d	18	TRP
36	d	33	LEU
36	d	40	ARG
36	d	46	GLU

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Mol	Chain	Res	Type
36	d	56	ASP
36	d	58	GLU
36	d	93	LYS
36	d	94	LEU
36	d	97	LYS
36	d	101	LEU
36	d	107	GLN
36	d	112	SER
36	d	118	GLN
36	d	123	GLN
36	d	126	ARG
36	d	131	ARG
36	d	132	ARG
36	d	139	GLN
36	d	152	ILE
36	d	153	VAL
36	d	156	ARG
36	d	167	TRP
36	d	175	LEU
36	d	186	PHE
36	d	201	TYR
36	d	204	LEU
37	e	8	VAL
37	e	12	CYS
37	e	14	ARG
37	e	21	LEU
37	e	33	MET
37	e	35	ARG
37	e	38	TYR
37	e	47	ARG
37	e	49	ARG
37	e	57	ARG
37	e	58	LEU
37	e	59	ARG
37	e	60	GLU
37	e	61	LYS
37	e	62	GLN
37	e	65	ARG
37	e	68	TYR
37	e	79	PHE
37	e	86	LYS
37	e	93	PHE

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Mol	Chain	Res	Type
37	e	94	LEU
37	e	96	LEU
37	e	97	LEU
37	e	106	TYR
37	e	108	LEU
37	e	110	PHE
37	e	116	GLN
37	e	120	LEU
37	e	122	ARG
37	e	123	HIS
37	e	129	ASN
37	e	158	ILE
37	e	187	ARG
37	e	191	ARG
37	e	192	GLU
37	e	200	GLU
37	e	205	GLU
38	f	12	LEU
38	f	14	ARG
38	f	18	ARG
38	f	25	ARG
38	f	31	LEU
38	f	34	VAL
38	f	43	LEU
38	f	50	GLU
38	f	57	LYS
38	f	69	VAL
38	f	72	GLN
38	f	81	GLU
38	f	89	ILE
38	f	93	PRO
38	f	100	VAL
38	f	110	LEU
38	f	115	VAL
38	f	123	LEU
38	f	142	LEU
38	f	143	ARG
38	f	147	ASP
39	g	6	VAL
39	g	11	ASN
39	g	14	LEU
39	g	28	ARG

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Mol	Chain	Res	Type
39	g	31	GLU
39	g	40	VAL
39	g	45	LEU
39	g	61	LEU
39	g	69	GLU
39	g	71	ARG
39	g	75	LEU
39	g	80	ARG
39	g	85	VAL
39	g	97	PHE
39	g	98	LEU
40	h	4	ARG
40	h	5	ARG
40	h	16	LEU
40	h	21	VAL
40	h	22	LEU
40	h	35	LYS
40	h	43	PHE
40	h	67	GLU
40	h	84	ASN
40	h	85	TYR
40	h	111	ARG
40	h	113	GLU
40	h	119	ARG
40	h	124	LEU
40	h	136	LYS
40	h	151	TYR
41	i	2	LEU
41	i	6	ILE
41	i	8	ASP
41	i	9	MET
41	i	19	VAL
41	i	24	THR
41	i	31	PHE
41	i	39	LEU
41	i	50	ARG
41	i	52	ASP
41	i	62	TYR
41	i	65	TYR
41	i	77	GLU
41	i	91	ARG
41	i	95	VAL

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Mol	Chain	Res	Type
41	i	98	LYS
41	i	103	VAL
41	i	104	ARG
41	i	105	ARG
41	i	111	ILE
41	i	120	THR
41	i	122	ARG
42	j	4	TYR
42	j	5	TYR
42	j	20	ARG
42	j	26	VAL
42	j	33	PHE
42	j	37	PHE
42	j	53	VAL
42	j	59	PHE
42	j	85	LEU
42	j	89	ASN
42	j	93	ARG
42	j	99	LEU
42	j	104	ARG
42	j	121	ARG
42	j	125	TYR
42	j	127	LYS
43	k	13	HIS
43	k	16	LEU
43	k	17	ASP
43	k	40	LEU
43	k	47	PHE
43	k	62	HIS
43	k	63	PHE
43	k	64	GLU
43	k	66	ARG
43	k	78	ASN
43	k	79	ARG
43	k	82	ILE
44	l	13	GLN
44	l	29	ILE
44	l	51	LYS
44	l	54	ARG
44	l	62	GLN
44	l	73	MET
44	l	75	TYR

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Mol	Chain	Res	Type
44	l	77	MET
44	l	92	GLU
44	l	93	GLN
44	l	99	GLN
44	l	103	LEU
44	l	108	ILE
44	l	110	ASP
44	l	122	LYS
44	l	124	LYS
45	m	14	ARG
45	m	27	LYS
45	m	31	PHE
45	m	40	ARG
45	m	41	THR
45	m	43	THR
45	m	52	ARG
45	m	58	ARG
45	m	59	LEU
45	m	64	GLU
45	m	77	GLN
45	m	84	ILE
45	m	96	ARG
45	m	98	HIS
45	m	104	TYR
45	m	105	ASP
45	m	111	ASP
45	m	112	ARG
45	m	126	GLU
46	n	3	ARG
46	n	15	VAL
46	n	19	LEU
46	n	20	THR
46	n	25	ILE
46	n	27	LYS
46	n	47	ASP
46	n	50	GLU
46	n	56	LEU
46	n	60	VAL
46	n	82	MET
46	n	91	ARG
46	n	105	THR
46	n	110	ARG

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Mol	Chain	Res	Type
46	n	113	PRO
47	o	6	LEU
47	o	7	ILE
47	o	8	GLU
47	o	16	PHE
47	o	17	LYS
47	o	21	TYR
47	o	23	ARG
47	o	29	ARG
47	o	47	LEU
47	o	61	TRP
48	p	15	PHE
48	p	28	GLN
48	p	35	ARG
48	p	38	ARG
48	p	46	HIS
48	p	47	LYS
48	p	54	ARG
48	p	59	MET
48	p	63	ARG
48	p	69	TYR
48	p	71	GLN
48	p	77	ARG
48	p	84	LYS
48	p	87	ILE
49	q	1	MET
49	q	13	HIS
49	q	29	ASP
49	q	32	TYR
49	q	35	LYS
49	q	43	LYS
49	q	48	TRP
49	q	49	LEU
49	q	58	TYR
49	q	59	TRP
49	q	60	LEU
49	q	79	VAL
50	r	6	LEU
50	r	13	ASP
50	r	15	MET
50	r	17	LYS
50	r	22	LEU

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Mol	Chain	Res	Type
50	r	25	ARG
50	r	29	HIS
50	r	32	TYR
50	r	36	ILE
50	r	41	LYS
50	r	42	TYR
50	r	47	PRO
50	r	48	GLU
50	r	51	TYR
50	r	60	ILE
50	r	70	ARG
50	r	75	ARG
50	r	81	ARG
50	r	88	TYR
50	r	100	LYS
51	s	19	LYS
51	s	23	LYS
51	s	28	GLU
51	s	31	LEU
51	s	32	ARG
51	s	38	GLU
51	s	41	LYS
51	s	42	ARG
51	s	46	GLU
51	s	66	LEU
51	s	68	LYS
51	s	78	LEU
52	t	5	LEU
52	t	6	LYS
52	t	7	LYS
52	t	12	ASP
52	t	13	ASP
52	t	14	HIS
52	t	15	LEU
52	t	25	LYS
52	t	32	LYS
52	t	34	TRP
52	t	37	ARG
52	t	49	ILE
52	t	61	TYR
53	u	21	LYS
53	u	27	LYS

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Mol	Chain	Res	Type
53	u	34	LYS
53	u	60	GLU
53	u	79	ARG
53	u	104	LEU
54	v	5	ASP
54	v	10	ARG
54	v	14	TRP

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (167) such sidechains are listed below:

Mol	Chain	Res	Type
3	A	18	ASN
3	A	45	HIS
3	A	57	GLN
3	A	189	ASN
4	B	44	ASN
4	B	46	GLN
4	B	115	GLN
4	B	116	GLN
4	B	126	GLN
4	B	129	ASN
4	B	164	GLN
4	B	203	ASN
4	B	227	ASN
4	B	253	GLN
5	C	55	ASN
5	C	60	ASN
5	C	66	HIS
5	C	137	HIS
5	C	143	ASN
5	C	159	HIS
6	D	26	HIS
6	D	35	GLN
6	D	70	HIS
6	D	128	ASN
7	E	41	GLN
7	E	123	ASN
8	F	61	HIS
8	F	65	HIS
8	F	74	ASN
8	F	111	HIS
8	F	147	ASN

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Mol	Chain	Res	Type
9	G	17	GLN
9	G	28	ASN
9	G	133	HIS
9	G	147	GLN
10	H	61	HIS
10	H	79	ASN
10	H	154	GLN
11	I	3	GLN
11	I	13	ASN
11	I	29	ASN
11	I	82	ASN
12	J	35	HIS
12	J	81	GLN
12	J	128	HIS
13	K	12	GLN
13	K	46	GLN
14	L	13	HIS
14	L	16	HIS
14	L	50	HIS
14	L	53	HIS
14	L	91	GLN
15	M	68	GLN
15	M	84	GLN
16	N	38	ASN
16	N	55	ASN
16	N	90	GLN
17	O	14	HIS
17	O	72	HIS
17	O	81	HIS
17	O	94	ASN
18	P	64	HIS
18	P	87	HIS
18	P	89	GLN
19	Q	57	ASN
19	Q	61	ASN
19	Q	62	HIS
20	R	31	HIS
20	R	41	ASN
21	S	68	HIS
22	T	34	ASN
22	T	54	HIS
22	T	65	GLN

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Mol	Chain	Res	Type
22	T	73	GLN
22	T	85	HIS
23	U	35	ASN
23	U	40	GLN
23	U	50	ASN
23	U	80	HIS
24	V	19	GLN
24	V	47	GLN
24	V	66	HIS
25	W	47	ASN
27	Y	23	HIS
28	Z	6	GLN
28	Z	36	GLN
29	a	35	GLN
30	b	36	GLN
35	c	16	HIS
35	c	76	GLN
35	c	94	ASN
35	c	95	GLN
35	c	110	GLN
35	c	113	HIS
35	c	135	GLN
35	c	146	GLN
35	c	212	GLN
36	d	3	ASN
36	d	28	GLN
36	d	63	ASN
36	d	69	HIS
36	d	102	ASN
36	d	107	GLN
36	d	108	ASN
36	d	110	ASN
36	d	139	GLN
36	d	162	GLN
36	d	176	HIS
37	e	42	GLN
37	e	62	GLN
37	e	129	ASN
37	e	199	ASN
37	e	201	GLN
38	f	65	ASN
38	f	72	GLN

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Mol	Chain	Res	Type
38	f	73	ASN
39	g	11	ASN
39	g	13	ASN
39	g	16	GLN
39	g	27	GLN
39	g	94	GLN
39	g	100	ASN
40	h	13	GLN
40	h	28	ASN
40	h	64	GLN
40	h	84	ASN
40	h	148	ASN
41	i	15	ASN
41	i	82	HIS
42	j	3	GLN
42	j	73	GLN
42	j	89	ASN
43	k	13	HIS
43	k	69	ASN
43	k	76	ASN
43	k	78	ASN
43	k	84	GLN
44	l	22	HIS
44	l	26	ASN
44	l	38	ASN
44	l	78	GLN
44	l	93	GLN
44	l	99	GLN
44	l	116	HIS
44	l	117	ASN
45	m	74	HIS
45	m	77	GLN
45	m	98	HIS
46	n	77	ASN
47	o	49	HIS
48	p	13	GLN
48	p	42	HIS
48	p	46	HIS
48	p	53	HIS
48	p	71	GLN
49	q	14	ASN
49	q	76	GLN

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Mol	Chain	Res	Type
50	r	26	GLN
50	r	29	HIS
50	r	45	HIS
51	s	63	GLN
52	t	23	ASN
52	t	69	HIS
53	u	16	HIS
53	u	18	GLN
53	u	42	GLN
53	u	75	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	w	2888/2889 (99%)	1138 (39%)	0
2	x	119/121 (98%)	42 (35%)	0
31	y	1498/1522 (98%)	502 (33%)	0
32	z	74/76 (97%)	28 (37%)	0
33	0	75/76 (98%)	30 (40%)	5 (6%)
34	1	5/10 (50%)	2 (40%)	0
All	All	4659/4694 (99%)	1742 (37%)	5 (0%)

All (1742) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	w	10	G
1	w	12	U
1	w	13	A
1	w	15	G
1	w	16	G
1	w	17	G
1	w	20	C
1	w	28	A
1	w	29	U
1	w	34	C
1	w	35	G
1	w	37	C
1	w	39	C
1	w	43	G
1	w	45	G
1	w	46	C

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Mol	Chain	Res	Type
1	w	49	A
1	w	50	U
1	w	51	G
1	w	52	A
1	w	59	U
1	w	61	G
1	w	64	A
1	w	69	C
1	w	70	G
1	w	71	A
1	w	72	U
1	w	73	A
1	w	75	G
1	w	78	A
1	w	80	G
1	w	85	G
1	w	88	G
1	w	89	G
1	w	91	A
1	w	95	G
1	w	101	G
1	w	102	G
1	w	103	A
1	w	104	U
1	w	107	C
1	w	108	U
1	w	117	G
1	w	118	A
1	w	119	A
1	w	120	U
1	w	121	G
1	w	125	G
1	w	126	A
1	w	128	C
1	w	130	C
1	w	131	G
1	w	132	G
1	w	137(A)	C
1	w	138	G
1	w	139	G
1	w	140	A
1	w	143	C

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Mol	Chain	Res	Type
1	w	144	C
1	w	146	G
1	w	149	A
1	w	151	C
1	w	153	C
1	w	162	U
1	w	163	U
1	w	164	U
1	w	165	U
1	w	174	C
1	w	175	G
1	w	176	G
1	w	181	A
1	w	182	A
1	w	184	C
1	w	186	G
1	w	188	G
1	w	196	A
1	w	197	A
1	w	199	A
1	w	204	A
1	w	205	G
1	w	206	U
1	w	216	A
1	w	221	A
1	w	222	A
1	w	228	A
1	w	229	A
1	w	233	A
1	w	239	U
1	w	241	A
1	w	242	G
1	w	243	U
1	w	248	G
1	w	249	C
1	w	250	G
1	w	251	A
1	w	265	A
1	w	266	G
1	w	267	C
1	w	269	U
1	w	270(D)	C

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Mol	Chain	Res	Type
1	w	270(E)	C
1	w	270(J)	G
1	w	270(O)	G
1	w	270(P)	U
1	w	270(Q)	C
1	w	270(S)	G
1	w	270(T)	G
1	w	270(Z)	G
1	w	271(A)	U
1	w	271(B)	C
1	w	271(C)	G
1	w	271(D)	U
1	w	271	G
1	w	273(C)	C
1	w	273(F)	U
1	w	274	G
1	w	275	G
1	w	278	A
1	w	284	U
1	w	289	A
1	w	292	C
1	w	294	A
1	w	295	G
1	w	296	C
1	w	297	C
1	w	298	G
1	w	299	A
1	w	300	A
1	w	301	G
1	w	310	A
1	w	311	A
1	w	315	G
1	w	316	C
1	w	317	G
1	w	322	A
1	w	323	G
1	w	329	G
1	w	330	A
1	w	331	A
1	w	332	A
1	w	333	G
1	w	334	C

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Mol	Chain	Res	Type
1	w	336	C
1	w	338	G
1	w	341	G
1	w	342	G
1	w	347	A
1	w	348	G
1	w	349	G
1	w	352	G
1	w	358	U
1	w	361	G
1	w	362	U
1	w	363(A)	G
1	w	363(B)	A
1	w	363(E)	G
1	w	363(F)	U
1	w	364	C
1	w	366(B)	C
1	w	370	G
1	w	371	A
1	w	372	G
1	w	373	U
1	w	380	U
1	w	384	U
1	w	386	G
1	w	387	U
1	w	388	G
1	w	390	A
1	w	394	A
1	w	395	U
1	w	396	G
1	w	397	G
1	w	405	U
1	w	411	G
1	w	412	A
1	w	413	C
1	w	428	A
1	w	435	C
1	w	438	G
1	w	444	C
1	w	446	G
1	w	449	A
1	w	451	C

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Mol	Chain	Res	Type
1	w	453	C
1	w	455	C
1	w	456	C
1	w	457	A
1	w	458	G
1	w	459	U
1	w	462	C
1	w	464	U
1	w	468	G
1	w	469	G
1	w	470	A
1	w	473	G
1	w	475	U
1	w	477	A
1	w	478	A
1	w	480	A
1	w	481	G
1	w	483	A
1	w	487	C
1	w	492	A
1	w	501	A
1	w	504	U
1	w	505	A
1	w	508	G
1	w	509	C
1	w	510	C
1	w	518	G
1	w	528	A
1	w	532	A
1	w	533	G
1	w	535	C
1	w	542	C
1	w	549	G
1	w	551	G
1	w	559	G
1	w	560	C
1	w	563	G
1	w	564	C
1	w	567	A
1	w	569	U
1	w	570	G
1	w	572	A

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Mol	Chain	Res	Type
1	w	574	C
1	w	575	A
1	w	578	A
1	w	583	G
1	w	584	C
1	w	588	U
1	w	589	C
1	w	590	A
1	w	593	G
1	w	594	U
1	w	595	C
1	w	598	G
1	w	603	A
1	w	604	G
1	w	607	U
1	w	608	A
1	w	614	U
1	w	615	G
1	w	616	A
1	w	618(A)	G
1	w	618(B)	C
1	w	620	G
1	w	621	A
1	w	623	G
1	w	627	A
1	w	628	G
1	w	629	G
1	w	634	C
1	w	645	C
1	w	647	G
1	w	648	G
1	w	654	U
1	w	656	G
1	w	665	C
1	w	666	G
1	w	669	G
1	w	670	A
1	w	671	C
1	w	672	C
1	w	674	G
1	w	684	G
1	w	685	A

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Mol	Chain	Res	Type
1	w	686	G
1	w	687	C
1	w	710	G
1	w	716	A
1	w	717	G
1	w	718	A
1	w	719	C
1	w	722	A
1	w	725	G
1	w	726	G
1	w	728	G
1	w	729	G
1	w	730	C
1	w	735	A
1	w	740	U
1	w	741	G
1	w	743	G
1	w	745	G
1	w	747	U
1	w	753	C
1	w	762	U
1	w	763	G
1	w	769	G
1	w	774	A
1	w	775	G
1	w	776	G
1	w	777	A
1	w	781	A
1	w	782	A
1	w	783	A
1	w	784	A
1	w	789	A
1	w	790	C
1	w	792	G
1	w	798	G
1	w	799	G
1	w	800	A
1	w	801	G
1	w	804	A
1	w	805	G
1	w	806	C
1	w	811	U

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Mol	Chain	Res	Type
1	w	812	C
1	w	813	U
1	w	818	G
1	w	827	U
1	w	828	U
1	w	830	G
1	w	831	G
1	w	846	C
1	w	847	U
1	w	848	G
1	w	849	A
1	w	850	C
1	w	856	C
1	w	859	G
1	w	860	U
1	w	861	A
1	w	865	C
1	w	866	A
1	w	867	C
1	w	870	A
1	w	883	G
1	w	886	C
1	w	887	A
1	w	889	C
1	w	890	A
1	w	895	U
1	w	896	A
1	w	897	C
1	w	899	A
1	w	902	C
1	w	906	G
1	w	907	U
1	w	910	A
1	w	912	C
1	w	914	C
1	w	916	G
1	w	919	G
1	w	921	G
1	w	926	A
1	w	931	G
1	w	932	G
1	w	933	A

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Mol	Chain	Res	Type
1	w	938	G
1	w	939	G
1	w	943	U
1	w	944	G
1	w	945	A
1	w	946	G
1	w	954	G
1	w	958	U
1	w	959	A
1	w	960	A
1	w	961	C
1	w	962	G
1	w	963	U
1	w	965	C
1	w	966	G
1	w	972	G
1	w	973	A
1	w	974(A)	G
1	w	974(B)	C
1	w	975	G
1	w	976	C
1	w	980	A
1	w	983	A
1	w	984	A
1	w	988	A
1	w	990	A
1	w	991	C
1	w	992	C
1	w	993	G
1	w	995	C
1	w	996	A
1	w	997	G
1	w	1005	C
1	w	1006	C
1	w	1008	C
1	w	1009	A
1	w	1011	G
1	w	1012	U
1	w	1013	C
1	w	1015	G
1	w	1016	G
1	w	1017	G

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Mol	Chain	Res	Type
1	w	1020	A
1	w	1022	G
1	w	1023	U
1	w	1024	G
1	w	1025	G
1	w	1033	U
1	w	1034	G
1	w	1043	C
1	w	1045	A
1	w	1046	A
1	w	1047	G
1	w	1054	A
1	w	1059	G
1	w	1060	U
1	w	1061	U
1	w	1070	A
1	w	1071	G
1	w	1079	C
1	w	1080	C
1	w	1082	U
1	w	1083	U
1	w	1087	G
1	w	1088	A
1	w	1103	A
1	w	1110	G
1	w	1111	A
1	w	1112	G
1	w	1116	C
1	w	1122	G
1	w	1125	G
1	w	1126	A
1	w	1129	A
1	w	1131	G
1	w	1132	A
1	w	1135	C
1	w	1136	G
1	w	1138	G
1	w	1139	G
1	w	1141	U
1	w	1142	C
1	w	114(B)	A
1	w	1148	A

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Mol	Chain	Res	Type
1	w	1149	G
1	w	1152	C
1	w	1155	A
1	w	1160	G
1	w	1161	C
1	w	1164	G
1	w	1166	C
1	w	1167	U
1	w	1170	G
1	w	1174	A
1	w	1175	U
1	w	1177	A
1	w	1178	C
1	w	1179	C
1	w	1180	C
1	w	1182	A
1	w	1183	G
1	w	1185	C
1	w	1186	G
1	w	1188	U
1	w	1194	A
1	w	1195	G
1	w	1197	G
1	w	1199	U
1	w	1201	C
1	w	1204	A
1	w	1205	U
1	w	1206	G
1	w	1209	G
1	w	1211	U
1	w	1212	G
1	w	1213	A
1	w	1216	G
1	w	1220	A
1	w	1221	C
1	w	1223	G
1	w	1224	C
1	w	1225	G
1	w	1227	G
1	w	1229	G
1	w	1236	G
1	w	1237	A

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Mol	Chain	Res	Type
1	w	1238	G
1	w	1240	U
1	w	1244	G
1	w	1247	A
1	w	1248	G
1	w	1250	G
1	w	1251	C
1	w	1252	G
1	w	1253	A
1	w	1254	A
1	w	1256	G
1	w	1261	C
1	w	1265	A
1	w	1266	G
1	w	1267	U
1	w	1270	C
1	w	1271	G
1	w	1272	A
1	w	1273	U
1	w	1274	A
1	w	1275	A
1	w	1276	A
1	w	1278	A
1	w	1283	G
1	w	1287	A
1	w	1289	C
1	w	1295	C
1	w	1300	U
1	w	1301	A
1	w	1302	A
1	w	1305	C
1	w	1310	G
1	w	1311	G
1	w	1313	U
1	w	1314	C
1	w	1319	G
1	w	1320	C
1	w	1321	A
1	w	1324	G
1	w	1326	U
1	w	1329	U
1	w	1332	G

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Mol	Chain	Res	Type
1	w	1334	G
1	w	1335	U
1	w	1336	A
1	w	1337	G
1	w	1341	U
1	w	1343	G
1	w	1344	G
1	w	1345	C
1	w	1347	G
1	w	1351	C
1	w	1358	G
1	w	1359	A
1	w	1362	C
1	w	1364	G
1	w	1365	A
1	w	1366	A
1	w	1367	A
1	w	1374	G
1	w	1377	G
1	w	1378	A
1	w	1379	A
1	w	1384	A
1	w	1385	G
1	w	1386	C
1	w	1398	C
1	w	1400	G
1	w	1406	U
1	w	1413	G
1	w	1416	G
1	w	1419	A
1	w	1421	G
1	w	1424	G
1	w	1426	G
1	w	1427	A
1	w	1428	C
1	w	1429	G
1	w	1430	C
1	w	1436	G
1	w	1438	U
1	w	144(B)	A
1	w	1445	C
1	w	1448	G

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Mol	Chain	Res	Type
1	w	149(B)	A
1	w	1449	G
1	w	1451	C
1	w	1453	A
1	w	1454	U
1	w	1455	G
1	w	1458	C
1	w	1459	G
1	w	1460	A
1	w	1461	G
1	w	1466	G
1	w	1467	C
1	w	1470	G
1	w	1471	A
1	w	1474	C
1	w	1478	G
1	w	1481	U
1	w	1483	G
1	w	1485	G
1	w	1487	G
1	w	1488	G
1	w	1490	A
1	w	1491	G
1	w	1497	U
1	w	1498	C
1	w	1499	C
1	w	1501	C
1	w	1502	C
1	w	1506	C
1	w	1508	A
1	w	1509	A
1	w	1510	A
1	w	1517	G
1	w	1519	G
1	w	1522	G
1	w	1523	U
1	w	1526	G
1	w	1528	A
1	w	1530	G
1	w	1531	C
1	w	1535	U
1	w	1536	A

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Mol	Chain	Res	Type
1	w	1537	C
1	w	1538	G
1	w	1540	G
1	w	1541	U
1	w	1544	C
1	w	1545	A
1	w	1546	A
1	w	154(B)	C
1	w	1547	C
1	w	1553	A
1	w	1558	A
1	w	1559	G
1	w	1560	G
1	w	1562	A
1	w	1565	C
1	w	1567	A
1	w	1569	A
1	w	1574	C
1	w	1576	U
1	w	1577	C
1	w	1578	U
1	w	1579	A
1	w	1581	G
1	w	1585	C
1	w	1586	A
1	w	1596	A
1	w	1603	A
1	w	1604	C
1	w	1608	A
1	w	1609	A
1	w	1613	G
1	w	1616	A
1	w	1617	C
1	w	1618	A
1	w	1619	G
1	w	1623	G
1	w	1627	G
1	w	1628	G
1	w	163(B)	C
1	w	1635	G
1	w	1640	C
1	w	1645	G

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Mol	Chain	Res	Type
1	w	1646	C
1	w	1647	G
1	w	1648	C
1	w	1651	G
1	w	1652	A
1	w	1655	A
1	w	1664	A
1	w	1665	A
1	w	1669	A
1	w	1670	C
1	w	1672	C
1	w	1674	G
1	w	1682	G
1	w	1683	C
1	w	1688	U
1	w	1693	U
1	w	1694	C
1	w	1695	G
1	w	1698	A
1	w	1699	G
1	w	1700	A
1	w	1701	A
1	w	1703	G
1	w	1706	U
1	w	1707	G
1	w	1716	U
1	w	1717	G
1	w	1718	G
1	w	1725	G
1	w	1729	A
1	w	1730	U
1	w	1731	G
1	w	1733	G
1	w	1741	C
1	w	1742	C
1	w	1747	G
1	w	1753	G
1	w	1757	U
1	w	1758	G
1	w	1759	A
1	w	1763	G
1	w	1764	G

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Mol	Chain	Res	Type
1	w	1773	A
1	w	1774	C
1	w	1777	U
1	w	1781	C
1	w	1782	C
1	w	1784	A
1	w	1785	A
1	w	1787	A
1	w	1791	A
1	w	1792	G
1	w	1794	U
1	w	1795	C
1	w	1797	C
1	w	1798	U
1	w	1799	G
1	w	1800	C
1	w	1801	G
1	w	1802	A
1	w	1803	A
1	w	1806	C
1	w	1809	A
1	w	1810	A
1	w	1811	G
1	w	1815	A
1	w	1816	G
1	w	1817	G
1	w	1819	A
1	w	1820	U
1	w	1821	A
1	w	1822	G
1	w	1823	G
1	w	1824	G
1	w	1825	A
1	w	1827	C
1	w	1828	G
1	w	1829	A
1	w	1836	C
1	w	1838	C
1	w	1839	G
1	w	1841	U
1	w	1843	C
1	w	1847	A

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Mol	Chain	Res	Type
1	w	1848	A
1	w	1850	G
1	w	1858	G
1	w	1863	G
1	w	1864	U
1	w	1869	G
1	w	1878	G
1	w	1879	C
1	w	1880	C
1	w	1885	A
1	w	1886	C
1	w	1888	G
1	w	1889	A
1	w	1898	U
1	w	1899	G
1	w	1900	A
1	w	1903	G
1	w	1906	G
1	w	1909	C
1	w	1912	A
1	w	1913	A
1	w	1914	C
1	w	1916	A
1	w	1918	A
1	w	1929	G
1	w	1930	G
1	w	1931	U
1	w	1935	G
1	w	1937	A
1	w	1938	A
1	w	1939	U
1	w	1943	U
1	w	1944	U
1	w	1945	G
1	w	1955	U
1	w	1960	A
1	w	1963	U
1	w	1964	G
1	w	1965	C
1	w	1967	C
1	w	1968	G
1	w	1969	A

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Mol	Chain	Res	Type
1	w	1971	A
1	w	1972	A
1	w	1975	G
1	w	1976	U
1	w	1978	A
1	w	1981	A
1	w	1982	C
1	w	1987	G
1	w	1991	U
1	w	1992	G
1	w	1993	U
1	w	1997	G
1	w	1998	G
1	w	2013	A
1	w	2014	A
1	w	2020	A
1	w	2022	U
1	w	2023	G
1	w	2024	G
1	w	2026	C
1	w	2031	A
1	w	2033	A
1	w	2034	U
1	w	2035	G
1	w	2036	C
1	w	2041	U
1	w	2043	C
1	w	2047	U
1	w	2048	G
1	w	2051	A
1	w	2052	G
1	w	2055	C
1	w	2056	G
1	w	2057	A
1	w	2060	A
1	w	2061	G
1	w	2062	A
1	w	2063	C
1	w	2064	C
1	w	2066	C
1	w	2069	G
1	w	2071	A

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Mol	Chain	Res	Type
1	w	2076	U
1	w	2077	A
1	w	2078	C
1	w	2087	G
1	w	2092	U
1	w	2093	G
1	w	2096	U
1	w	2097	C
1	w	2099	U
1	w	2101	G
1	w	2110	G
1	w	2111	C
1	w	2112	G
1	w	2113	U
1	w	2116	G
1	w	2118	U
1	w	2120	G
1	w	2126	A
1	w	2127	G
1	w	2128	C
1	w	2130	U
1	w	2131	G
1	w	2132	U
1	w	2133	G
1	w	2138	C
1	w	2145	C
1	w	2148	G
1	w	2153	G
1	w	2157	G
1	w	2158	A
1	w	2160	G
1	w	2168	G
1	w	2169	A
1	w	2171	A
1	w	2172	U
1	w	2173	A
1	w	2174	C
1	w	2176	A
1	w	2179	C
1	w	2181	G
1	w	2188	C
1	w	2190	G

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Mol	Chain	Res	Type
1	w	2191	G
1	w	2192	G
1	w	2193	G
1	w	2194	G
1	w	2195	C
1	w	2198	A
1	w	2199	A
1	w	2205	C
1	w	2211	G
1	w	2212	A
1	w	2213	U
1	w	2215	G
1	w	2218	G
1	w	2219	G
1	w	2225	A
1	w	2226	C
1	w	2228	G
1	w	2238	G
1	w	2239	G
1	w	2243	U
1	w	2246	G
1	w	2251	G
1	w	2255	G
1	w	2259	G
1	w	2267	A
1	w	2268	A
1	w	2273	A
1	w	2275	C
1	w	2276	G
1	w	2279	G
1	w	2280	G
1	w	2282	G
1	w	2283	C
1	w	2286	A
1	w	2287	A
1	w	2288	A
1	w	2290	G
1	w	2293	C
1	w	2294	C
1	w	2296	U
1	w	2297	C
1	w	2298	A

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Mol	Chain	Res	Type
1	w	2304	G
1	w	2305	A
1	w	2307	G
1	w	2308	G
1	w	2309	A
1	w	2310	A
1	w	2311	A
1	w	2314	C
1	w	2319	G
1	w	2320	A
1	w	2321	G
1	w	2322	A
1	w	2323	G
1	w	2325	G
1	w	2331	G
1	w	2334	G
1	w	2335	A
1	w	2336	A
1	w	2337	G
1	w	2341	G
1	w	2345	G
1	w	2346	A
1	w	2347	C
1	w	2350	C
1	w	2354	G
1	w	2356	C
1	w	2357	U
1	w	2359	C
1	w	2361	A
1	w	2363	C
1	w	2365	G
1	w	2367	G
1	w	2368	C
1	w	2374	C
1	w	2378	A
1	w	2379	G
1	w	2383	G
1	w	2385	C
1	w	2390	U
1	w	2391	G
1	w	2394	C
1	w	2398	U

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Mol	Chain	Res	Type
1	w	2399	G
1	w	2400	G
1	w	2402	C
1	w	2403	C
1	w	2406	U
1	w	2407	G
1	w	2411	A
1	w	2414	G
1	w	2416	C
1	w	2422	A
1	w	2423	U
1	w	2425	A
1	w	2427	C
1	w	2428	G
1	w	2429	G
1	w	2432	A
1	w	2434	A
1	w	2435	A
1	w	2439	A
1	w	2441	C
1	w	2442	C
1	w	2447	G
1	w	2448	A
1	w	2449	U
1	w	2450	A
1	w	2457	U
1	w	2463	C
1	w	2469	A
1	w	2471	C
1	w	2478	A
1	w	2480	C
1	w	2491	U
1	w	2492	U
1	w	2495	G
1	w	2498	C
1	w	2501	C
1	w	2502	G
1	w	2503	A
1	w	2504	U
1	w	2505	G
1	w	2506	U
1	w	2511	U

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Mol	Chain	Res	Type
1	w	2512	C
1	w	2513	G
1	w	2514	U
1	w	2515	C
1	w	2517	C
1	w	2518	A
1	w	2519	U
1	w	2520	C
1	w	2523	G
1	w	2529	G
1	w	2535	G
1	w	2538	C
1	w	2542	A
1	w	2543	G
1	w	2547	U
1	w	2549	G
1	w	2553	G
1	w	2554	U
1	w	2556	C
1	w	2563	U
1	w	2566	A
1	w	2567	G
1	w	2572	A
1	w	2573	C
1	w	2574	G
1	w	2576	G
1	w	2578	G
1	w	2582	G
1	w	2583	G
1	w	2584	U
1	w	2585	U
1	w	2586	C
1	w	2588	G
1	w	2602	A
1	w	2603	G
1	w	2610	C
1	w	2611	U
1	w	2613	U
1	w	2615	U
1	w	2616	C
1	w	2618	G
1	w	2621	A

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Mol	Chain	Res	Type
1	w	2622	C
1	w	2629	A
1	w	2630	G
1	w	2634	G
1	w	2643	G
1	w	2644	G
1	w	2646	C
1	w	2647	U
1	w	2648	C
1	w	2649	U
1	w	2653	U
1	w	2654	A
1	w	2655	G
1	w	2656	U
1	w	2658	C
1	w	2665	A
1	w	2668	G
1	w	2670	A
1	w	2675	A
1	w	2680	C
1	w	2682	U
1	w	2685	G
1	w	2690	C
1	w	2691	C
1	w	2694	G
1	w	2695	C
1	w	2702	U
1	w	2703	C
1	w	2712	U
1	w	712(B)	A
1	w	2713	A
1	w	2714	G
1	w	2718	G
1	w	2720	U
1	w	2721	A
1	w	2723	C
1	w	2724	C
1	w	2726	U
1	w	2727	G
1	w	2732	G
1	w	2734	A
1	w	2736	G

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Mol	Chain	Res	Type
1	w	2744	G
1	w	2745	C
1	w	2751	G
1	w	2752	C
1	w	2754	U
1	w	2755	C
1	w	2756	U
1	w	2757	A
1	w	2759	G
1	w	2761	G
1	w	2762	G
1	w	2763	G
1	w	2766	G
1	w	2768	C
1	w	2771	C
1	w	2775	A
1	w	2777	G
1	w	2778	A
1	w	2779	U
1	w	2781	A
1	w	2785	C
1	w	2787	C
1	w	2789	C
1	w	2791	C
1	w	2792	G
1	w	2793	G
1	w	2795	G
1	w	2797	U
1	w	2798	C
1	w	2799	A
1	w	2802	G
1	w	2804	C
1	w	2807	G
1	w	2808	U
1	w	2815	C
1	w	2818	G
1	w	2820	A
1	w	2821	A
1	w	2823	A
1	w	2825	G
1	w	2827	C
1	w	2833	G

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Mol	Chain	Res	Type
1	w	2834	G
1	w	2835	A
1	w	2836	U
1	w	2841	C
1	w	2845	G
1	w	2848	G
1	w	2849	U
1	w	2852	G
1	w	2853	C
1	w	2858	C
1	w	2861	G
1	w	2864	G
1	w	2866	U
1	w	2867	G
1	w	2868	A
1	w	2872	G
1	w	2873	A
1	w	2875	C
1	w	2876	G
1	w	2879	C
1	w	2880	C
1	w	2883	A
1	w	2884	U
1	w	2887	U
1	w	2889	C
1	w	2892	A
1	w	2894	G
1	w	2895	U
1	w	2896	C
1	w	2901	C
2	x	8	U
2	x	9	G
2	x	10	C
2	x	13	A
2	x	15	A
2	x	21	G
2	x	25	A
2	x	26	A
2	x	27	C
2	x	33	G
2	x	34	U
2	x	35	U

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Mol	Chain	Res	Type
2	x	38	C
2	x	40	U
2	x	42	C
2	x	43	C
2	x	44	G
2	x	45	A
2	x	50	G
2	x	52	A
2	x	53	A
2	x	63	G
2	x	64	C
2	x	65	C
2	x	66	A
2	x	67	G
2	x	75	G
2	x	76	G
2	x	79	C
2	x	83	G
2	x	87	G
2	x	90	C
2	x	98	G
2	x	99	A
2	x	103	U
2	x	108	C
2	x	109	G
2	x	111	U
2	x	113	C
2	x	114	G
2	x	117	G
2	x	118	G
31	y	6	G
31	y	7	G
31	y	8	A
31	y	9	G
31	y	13	U
31	y	14	U
31	y	18	C
31	y	31	G
31	y	32	A
31	y	38	G
31	y	39	G
31	y	47	C

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Mol	Chain	Res	Type
31	y	48	C
31	y	50	A
31	y	51	A
31	y	60	A
31	y	61	G
31	y	63	C
31	y	65	U
31	y	68	G
31	y	69	G
31	y	78	G
31	y	82	U
31	y	84	U
31	y	88	C
31	y	93	U
31	y	95	G
31	y	104	G
31	y	105	G
31	y	110	C
31	y	112	G
31	y	115	G
31	y	116	A
31	y	120	A
31	y	121	C
31	y	122	G
31	y	126	G
31	y	127	G
31	y	129(B)	G
31	y	130	A
31	y	131	C
31	y	133	U
31	y	134	A
31	y	136	C
31	y	139	G
31	y	144	G
31	y	149	A
31	y	157	G
31	y	163	C
31	y	169	C
31	y	173	U
31	y	174	C
31	y	176	C
31	y	186(A)	C

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Mol	Chain	Res	Type
31	y	186(C)	C
31	y	190	G
31	y	191(A)	G
31	y	195	A
31	y	196	A
31	y	197	A
31	y	198	G
31	y	201	C
31	y	208	U
31	y	209	U
31	y	210	U
31	y	223	U
31	y	233	C
31	y	244	U
31	y	245	C
31	y	246	A
31	y	247	G
31	y	251	G
31	y	252	U
31	y	253	U
31	y	263	A
31	y	266	G
31	y	267	C
31	y	275	G
31	y	276	G
31	y	279	A
31	y	280	C
31	y	281	G
31	y	286	G
31	y	289	G
31	y	295	C
31	y	298	A
31	y	299	G
31	y	300	A
31	y	316	G
31	y	320	C
31	y	321	A
31	y	322	C
31	y	328	C
31	y	329	A
31	y	330	C
31	y	332	G

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Mol	Chain	Res	Type
31	y	342	C
31	y	344	A
31	y	345	C
31	y	347	G
31	y	350	G
31	y	351	G
31	y	352	C
31	y	353	A
31	y	354	G
31	y	358	U
31	y	360	A
31	y	361	G
31	y	363	A
31	y	366	C
31	y	367	U
31	y	368	U
31	y	369	C
31	y	372	C
31	y	378	G
31	y	382	A
31	y	383	A
31	y	388	G
31	y	391	G
31	y	392	G
31	y	397	A
31	y	398	C
31	y	406	G
31	y	412	A
31	y	413	G
31	y	414	A
31	y	421	U
31	y	422	C
31	y	423	G
31	y	424	G
31	y	428	G
31	y	429	U
31	y	430	A
31	y	436	C
31	y	437	U
31	y	439	A
31	y	440	A
31	y	451	A

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Mol	Chain	Res	Type
31	y	452	A
31	y	455	C
31	y	466	G
31	y	467	G
31	y	468	A
31	y	481	G
31	y	484	G
31	y	485	G
31	y	491	G
31	y	493	G
31	y	496	A
31	y	497	U
31	y	498	A
31	y	500	G
31	y	508	C
31	y	509	A
31	y	511	C
31	y	512	U
31	y	516	PSU
31	y	517	G
31	y	518	C
31	y	519	C
31	y	520	A
31	y	521	G
31	y	523	A
31	y	524	G
31	y	525	C
31	y	527	7MG
31	y	530	G
31	y	531	U
31	y	532	A
31	y	533	A
31	y	534	U
31	y	535	A
31	y	540	G
31	y	543	C
31	y	547	A
31	y	550	G
31	y	552	U
31	y	556	C
31	y	561	U
31	y	563	A

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Mol	Chain	Res	Type
31	y	564	C
31	y	565	U
31	y	566	G
31	y	570	G
31	y	572	A
31	y	573	A
31	y	575	G
31	y	576	G
31	y	577	G
31	y	580	U
31	y	586	C
31	y	588	G
31	y	596	C
31	y	597	G
31	y	602	A
31	y	612	C
31	y	614	A
31	y	615	C
31	y	618	C
31	y	619	U
31	y	620	C
31	y	622	A
31	y	627	G
31	y	629	G
31	y	631	G
31	y	641	U
31	y	642	A
31	y	652	U
31	y	653	A
31	y	654	G
31	y	661	G
31	y	662	G
31	y	667	G
31	y	674	G
31	y	675	A
31	y	678	U
31	y	687	A
31	y	688	G
31	y	693	G
31	y	695	A
31	y	696	A
31	y	702	A

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Mol	Chain	Res	Type
31	y	703	G
31	y	706	A
31	y	708	C
31	y	713	G
31	y	716	A
31	y	717	C
31	y	718	G
31	y	724	G
31	y	728	A
31	y	732	C
31	y	733	A
31	y	734	G
31	y	741	G
31	y	747	C
31	y	748	C
31	y	749	C
31	y	750	G
31	y	752	G
31	y	753	A
31	y	755	G
31	y	759	A
31	y	765	G
31	y	771	G
31	y	772	U
31	y	776	G
31	y	777	A
31	y	778	G
31	y	779	C
31	y	781	A
31	y	788	U
31	y	792	A
31	y	794	A
31	y	801	U
31	y	812	C
31	y	813	U
31	y	816	A
31	y	817	C
31	y	818	G
31	y	819	A
31	y	820	U
31	y	821	G
31	y	828	A

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Mol	Chain	Res	Type
31	y	832	C
31	y	833	U
31	y	836	G
31	y	841	U
31	y	842	C
31	y	843	U
31	y	855	G
31	y	867	G
31	y	870	U
31	y	871	U
31	y	872	A
31	y	873	A
31	y	874	G
31	y	876	G
31	y	885	G
31	y	889	A
31	y	890	G
31	y	900	A
31	y	901	A
31	y	902	G
31	y	906	G
31	y	912	C
31	y	913	A
31	y	914	A
31	y	915	A
31	y	916	G
31	y	926	G
31	y	927	G
31	y	931	C
31	y	934	C
31	y	935	A
31	y	936	C
31	y	939	G
31	y	946	A
31	y	956	U
31	y	959	A
31	y	960	U
31	y	961	U
31	y	965	A
31	y	966	M2G
31	y	967	5MC
31	y	968	A

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Mol	Chain	Res	Type
31	y	969	A
31	y	974	A
31	y	976	G
31	y	977	A
31	y	978	A
31	y	981	U
31	y	982	U
31	y	983	A
31	y	991	U
31	y	992	U
31	y	993	G
31	y	1002	G
31	y	1004	A
31	y	1005	A
31	y	1007	C
31	y	1009	G
31	y	1016	A
31	y	1025	U
31	y	1026	G
31	y	1027	C
31	y	102(C)	C
31	y	1030	C
31	y	1037	C
31	y	1042	G
31	y	1050	G
31	y	1052	U
31	y	1053	G
31	y	1054	C
31	y	1055	A
31	y	1056	U
31	y	1064	G
31	y	1065	U
31	y	1066	C
31	y	1068	G
31	y	1080	A
31	y	1085	U
31	y	1086	U
31	y	1089	G
31	y	1094	G
31	y	1095	U
31	y	1101	A
31	y	1102	A

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Mol	Chain	Res	Type
31	y	1104	G
31	y	1109	C
31	y	1111	A
31	y	1118	C
31	y	1126	U
31	y	1130	A
31	y	1131	G
31	y	1136	U
31	y	1137	C
31	y	1139	G
31	y	1140	C
31	y	1142	G
31	y	1146	A
31	y	1151	A
31	y	1152	A
31	y	1154	G
31	y	1158	C
31	y	1159	U
31	y	1160	G
31	y	1176	A
31	y	1177	G
31	y	1178	G
31	y	1179	A
31	y	1181	G
31	y	1184	G
31	y	1186	G
31	y	1187	G
31	y	1189	C
31	y	1190	G
31	y	1193	G
31	y	1196	U
31	y	1197	G
31	y	1200	C
31	y	1201	A
31	y	1202	G
31	y	1207	2MG
31	y	1208	C
31	y	1211	U
31	y	1212	U
31	y	1213	A
31	y	1215	G
31	y	1220	G

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Mol	Chain	Res	Type
31	y	1225	A
31	y	1227	A
31	y	1228	C
31	y	1234	C
31	y	1235	U
31	y	1237	C
31	y	1238	A
31	y	1239	A
31	y	1240	U
31	y	1241	G
31	y	1245	A
31	y	1247	U
31	y	1248	A
31	y	1251	A
31	y	1252	A
31	y	1253	G
31	y	1256	A
31	y	1257	U
31	y	1260	C
31	y	1261	A
31	y	1263	C
31	y	1268	A
31	y	1276	G
31	y	1278	U
31	y	1280	A
31	y	1281	U
31	y	1282	C
31	y	1283	G
31	y	1285	A
31	y	1286	A
31	y	1290	G
31	y	1291	G
31	y	1293	G
31	y	1296	C
31	y	1297	C
31	y	1298	C
31	y	1299	A
31	y	1300	G
31	y	1301	U
31	y	1302	U
31	y	1303	C
31	y	1305	G

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Mol	Chain	Res	Type
31	y	1306	A
31	y	1308	U
31	y	1316	G
31	y	1317	C
31	y	1319	A
31	y	1320	C
31	y	1323	G
31	y	1324	A
31	y	1326	C
31	y	1329	A
31	y	1331	G
31	y	1332	A
31	y	1333	A
31	y	1334	G
31	y	1338	G
31	y	1346	A
31	y	1347	G
31	y	1348	U
31	y	1359	C
31	y	1360	A
31	y	1361	G
31	y	136(B)	C
31	y	1364	U
31	y	1365	G
31	y	1373	G
31	y	1375	A
31	y	1378	C
31	y	1380	U
31	y	1381	U
31	y	1388	C
31	y	1393	U
31	y	1395	C
31	y	1397	C
31	y	1398	A
31	y	1399	C
31	y	1400	5MC
31	y	1404	5MC
31	y	1405	G
31	y	1406	U
31	y	1407	5MC
31	y	1409	C
31	y	1417	G

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Mol	Chain	Res	Type
31	y	1424	C
31	y	1428	A
31	y	1429	C
31	y	1431	C
31	y	1433	A
31	y	1443	G
31	y	1446	A
31	y	1447	G
31	y	1452	C
31	y	1461	G
31	y	1469	G
31	y	1471	G
31	y	1473	A
31	y	1483	A
31	y	1484	C
31	y	1492	A
31	y	1494	G
31	y	1495	U
31	y	1498	UR3
31	y	1499	A
31	y	1504	G
31	y	1505	G
31	y	1507	A
31	y	1517	G
31	y	1520	G
31	y	1523	G
31	y	1525	G
31	y	1529	G
32	z	2	C
32	z	7	A
32	z	8	4SU
32	z	9	A
32	z	16	H2U
32	z	17	C
32	z	18	G
32	z	19	G
32	z	20	H2U
32	z	21	A
32	z	27	G
32	z	32	PSU
32	z	33	U
32	z	39	PSU

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Mol	Chain	Res	Type
32	z	42	C
32	z	45	U
32	z	46	7MG
32	z	48	C
32	z	49	C
32	z	54	5MU
32	z	55	PSU
32	z	59	U
32	z	61	C
32	z	63	G
32	z	65	G
32	z	67	C
32	z	72	C
32	z	76	A
33	0	8	U
33	0	14	A
33	0	15	G
33	0	16	U
33	0	17	U
33	0	18	G
33	0	20	G
33	0	21	A
33	0	22	G
33	0	34	G
33	0	35	A
33	0	36	A
33	0	38	A
33	0	39	U
33	0	40	C
33	0	41	U
33	0	45	G
33	0	46	G
33	0	47	U
33	0	48	C
33	0	54	U
33	0	55	PSU
33	0	56	C
33	0	57	G
33	0	59	U
33	0	61	C
33	0	71	G
33	0	72	C

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Mol	Chain	Res	Type
33	0	75	C
33	0	76	A
34	1	-2	U
34	1	1	U

All (5) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
33	0	7	U
33	0	9	A
33	0	46	G
33	0	48	C
33	0	56	C

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

22 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
33	PSU	0	55	33	19,21,22	5.15	4 (21%)	23,30,33	2.93	7 (30%)
31	2MG	y	1207	31	24,26,27	1.72	3 (12%)	33,38,41	5.36	8 (24%)
31	5MC	y	1400	31	20,22,23	1.38	3 (15%)	26,32,35	1.87	6 (23%)
31	4OC	y	1402	31	21,23,24	1.59	4 (19%)	26,32,35	1.91	7 (26%)
31	5MC	y	1404	31	20,22,23	1.79	4 (20%)	26,32,35	2.12	5 (19%)
31	5MC	y	1407	31	20,22,23	1.53	4 (20%)	26,32,35	1.78	6 (23%)
31	UR3	y	1498	31	20,22,23	2.02	6 (30%)	23,32,35	1.66	6 (26%)
31	MA6	y	1518	31	26,26,27	1.74	5 (19%)	37,38,41	2.50	12 (32%)
31	MA6	y	1519	31	26,26,27	2.14	5 (19%)	37,38,41	2.35	12 (32%)
31	PSU	y	516	31	19,21,22	2.68	3 (15%)	23,30,33	1.84	6 (26%)
31	7MG	y	527	31	24,26,27	3.34	8 (33%)	34,39,42	1.88	5 (14%)
31	M2G	y	966	31	25,27,28	2.51	6 (24%)	35,40,43	4.24	8 (22%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
31	5MC	y	967	31	20,22,23	1.16	1 (5%)	26,32,35	1.60	3 (11%)
32	H2U	z	16	32	19,21,22	1.36	2 (10%)	27,30,33	1.08	3 (11%)
32	H2U	z	20	32	19,21,22	1.25	1 (5%)	27,30,33	1.04	2 (7%)
32	PSU	z	32	32	19,21,22	2.85	4 (21%)	23,30,33	1.81	5 (21%)
32	MIA	z	37	32	29,31,32	1.79	7 (24%)	41,44,47	1.77	5 (12%)
32	PSU	z	39	32	19,21,22	3.28	4 (21%)	23,30,33	1.88	7 (30%)
32	7MG	z	46	32	24,26,27	3.36	9 (37%)	34,39,42	1.97	8 (23%)
32	5MU	z	54	32	20,22,23	2.04	5 (25%)	25,32,35	2.27	6 (24%)
32	PSU	z	55	32	19,21,22	3.13	3 (15%)	23,30,33	2.37	7 (30%)
32	4SU	z	8	32	19,21,22	2.74	8 (42%)	23,30,33	4.36	7 (30%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
33	PSU	0	55	33	-	0/8/25/26	0/2/2/2
31	2MG	y	1207	31	-	0/10/27/28	0/3/3/3
31	5MC	y	1400	31	-	0/6/25/26	0/2/2/2
31	4OC	y	1402	31	-	0/10/29/30	0/2/2/2
31	5MC	y	1404	31	-	0/6/25/26	0/2/2/2
31	5MC	y	1407	31	-	0/6/25/26	0/2/2/2
31	UR3	y	1498	31	-	0/6/25/26	0/2/2/2
31	MA6	y	1518	31	-	0/13/29/30	0/3/3/3
31	MA6	y	1519	31	-	0/13/29/30	0/3/3/3
31	PSU	y	516	31	-	0/8/25/26	0/2/2/2
31	7MG	y	527	31	-	0/8/37/38	0/3/3/3
31	M2G	y	966	31	-	0/12/29/30	0/3/3/3
31	5MC	y	967	31	-	0/6/25/26	0/2/2/2
32	H2U	z	16	32	-	0/8/38/39	0/2/2/2
32	H2U	z	20	32	-	0/8/38/39	0/2/2/2
32	PSU	z	32	32	-	0/8/25/26	0/2/2/2
32	MIA	z	37	32	-	1/16/33/34	0/3/3/3
32	PSU	z	39	32	-	0/8/25/26	0/2/2/2
32	7MG	z	46	32	-	0/8/37/38	0/3/3/3
32	5MU	z	54	32	-	0/6/25/26	0/2/2/2
32	PSU	z	55	32	-	0/8/25/26	0/2/2/2
32	4SU	z	8	32	-	0/6/25/26	0/2/2/2

All (99) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
33	0	55	PSU	O2-C2	20.88	1.48	1.21
32	z	39	PSU	O2-C2	12.54	1.38	1.21
31	y	527	7MG	C8-N9	-12.22	1.36	1.46
32	z	46	7MG	C8-N9	-11.45	1.37	1.46
32	z	32	PSU	O2-C2	11.19	1.36	1.21
32	z	55	PSU	O2-C2	10.79	1.35	1.21
31	y	516	PSU	O2-C2	10.56	1.35	1.21
31	y	966	M2G	C6-N1	7.64	1.47	1.36
32	z	8	4SU	P-OP1	7.33	1.55	1.46
32	z	55	PSU	C5-C1'	-7.07	1.46	1.52
31	y	1519	MA6	O4'-C1'	6.18	1.49	1.41
31	y	1518	MA6	C6-N1	6.04	1.42	1.34
32	z	46	7MG	C6-N1	5.98	1.45	1.36
32	z	46	7MG	C6-C5	5.87	1.48	1.41
33	0	55	PSU	C5-C1'	-5.85	1.47	1.52
31	y	1519	MA6	C6-N1	5.70	1.42	1.34
31	y	527	7MG	C6-C5	5.45	1.48	1.41
31	y	1207	2MG	C6-N1	5.30	1.44	1.36
32	z	54	5MU	O4-C4	5.16	1.36	1.24
31	y	966	M2G	C2-N1	4.95	1.45	1.36
31	y	527	7MG	C6-N1	4.94	1.43	1.36
32	z	37	MIA	P-OP1	4.91	1.52	1.46
32	z	39	PSU	C5-C1'	-4.56	1.48	1.52
32	z	8	4SU	O2-C2	4.54	1.27	1.21
32	z	37	MIA	C6-N1	4.49	1.39	1.33
31	y	966	M2G	C2-N2	4.41	1.40	1.34
31	y	1498	UR3	O4-C4	4.40	1.34	1.24
31	y	1404	5MC	O4'-C1'	4.32	1.46	1.41
32	z	54	5MU	P-OP1	4.28	1.51	1.46
32	z	8	4SU	O4'-C1'	4.26	1.46	1.41
31	y	966	M2G	O5'-C5'	-4.25	1.38	1.44
32	z	46	7MG	P-OP1	4.07	1.51	1.46
32	z	20	H2U	P-OP1	4.02	1.51	1.46
31	y	527	7MG	C2-N1	3.98	1.42	1.36
31	y	966	M2G	O4'-C1'	3.98	1.46	1.41
32	z	16	H2U	P-OP1	3.98	1.51	1.46
32	z	54	5MU	O5'-C5'	-3.95	1.39	1.44
31	y	1498	UR3	C2'-C1'	3.94	1.59	1.53
32	z	46	7MG	C2-N1	3.71	1.42	1.36
31	y	1407	5MC	O4'-C1'	3.66	1.45	1.41
31	y	1498	UR3	C5-C4	3.60	1.41	1.37
32	z	8	4SU	C4-N3	3.58	1.41	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	z	37	MIA	C2-S10	-3.54	1.72	1.75
31	y	1402	4OC	O2'-CM2	-3.51	1.29	1.42
31	y	1404	5MC	P-OP1	3.47	1.50	1.46
32	z	32	PSU	O5'-C5'	-3.46	1.39	1.44
31	y	1400	5MC	P-OP1	3.40	1.50	1.46
32	z	8	4SU	C6-C5	3.40	1.45	1.38
31	y	527	7MG	C2-N2	3.38	1.37	1.32
31	y	1400	5MC	C4-N4	3.37	1.42	1.34
32	z	8	4SU	O5'-C5'	-3.21	1.40	1.44
31	y	1519	MA6	C4-N9	-3.17	1.33	1.37
32	z	46	7MG	O5'-C5'	-3.09	1.40	1.44
31	y	1207	2MG	P-OP1	3.09	1.50	1.46
31	y	516	PSU	C2'-C1'	3.06	1.56	1.53
32	z	54	5MU	O4'-C1'	3.06	1.45	1.41
31	y	1518	MA6	C6-N6	2.98	1.45	1.36
31	y	1519	MA6	C6-C5	2.96	1.49	1.44
32	z	46	7MG	C8-N7	-2.92	1.30	1.44
31	y	527	7MG	C8-N7	-2.91	1.30	1.44
31	y	967	5MC	C4-N4	2.83	1.41	1.34
32	z	46	7MG	C2-N2	2.83	1.36	1.32
31	y	966	M2G	P-OP1	2.83	1.49	1.46
31	y	1498	UR3	P-OP1	2.81	1.49	1.46
31	y	527	7MG	P-OP1	2.79	1.49	1.46
31	y	1407	5MC	P-OP1	2.79	1.49	1.46
31	y	1207	2MG	C2-N1	2.78	1.42	1.36
31	y	1404	5MC	C2-N1	2.76	1.41	1.38
31	y	1404	5MC	C4-N4	2.75	1.41	1.34
31	y	516	PSU	P-OP1	2.72	1.49	1.46
33	0	55	PSU	O4'-C1'	2.69	1.49	1.44
32	z	55	PSU	P-OP1	2.62	1.49	1.46
31	y	1407	5MC	C4-N4	2.60	1.40	1.34
32	z	37	MIA	O4'-C1'	2.58	1.44	1.41
32	z	37	MIA	C2-N1	2.56	1.37	1.34
31	y	1498	UR3	O4'-C1'	2.52	1.44	1.41
31	y	1518	MA6	C6-C5	2.51	1.49	1.44
31	y	1400	5MC	C6-N1	2.46	1.38	1.34
32	z	37	MIA	C16-C14	2.38	1.66	1.51
32	z	16	H2U	C1'-N1	2.37	1.50	1.45
32	z	54	5MU	C6-N1	2.36	1.38	1.34
32	z	37	MIA	C4-N9	-2.34	1.34	1.37
31	y	527	7MG	C4-N3	2.33	1.37	1.34
31	y	1407	5MC	C6-C5	-2.33	1.33	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	y	1402	4OC	C4-N4	2.31	1.41	1.36
31	y	1518	MA6	C2'-C1'	2.29	1.56	1.53
32	z	8	4SU	C4-S4	2.24	1.71	1.67
32	z	32	PSU	C2'-C1'	2.21	1.55	1.53
31	y	1498	UR3	C2-N3	-2.20	1.36	1.38
31	y	1402	4OC	O3'-C3'	2.20	1.48	1.43
31	y	1518	MA6	O5'-C5'	-2.19	1.41	1.44
32	z	39	PSU	O4'-C4'	-2.17	1.40	1.45
31	y	1402	4OC	CM4-N4	2.15	1.49	1.45
31	y	1519	MA6	C6-N6	2.15	1.43	1.36
32	z	32	PSU	P-OP1	2.13	1.49	1.46
32	z	39	PSU	C2'-C1'	2.08	1.55	1.53
32	z	8	4SU	C5-C4	2.07	1.40	1.38
32	z	46	7MG	C4-N3	2.06	1.37	1.34
33	0	55	PSU	P-OP1	2.03	1.49	1.46

All (141) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	y	1207	2MG	C6-C5-N7	-26.85	130.53	134.14
31	y	966	M2G	C6-C5-N7	-22.38	131.13	134.14
32	z	8	4SU	C4-N3-C2	19.06	122.42	121.60
31	y	1207	2MG	C4'-O4'-C1'	-11.73	96.83	109.72
33	0	55	PSU	C5-C1'-C2'	-9.22	98.62	115.73
32	z	54	5MU	C6-N1-C2	-8.27	120.06	122.41
32	z	55	PSU	C5-C1'-C2'	-8.06	100.78	115.73
32	z	37	MIA	C12-N6-C6	-6.85	114.41	123.33
31	y	966	M2G	C6-N1-C2	6.76	123.14	120.18
31	y	1404	5MC	C4'-O4'-C1'	-6.60	102.47	109.72
31	y	516	PSU	C4'-O4'-C1'	-6.44	101.76	109.42
31	y	1518	MA6	N1-C6-N6	6.39	123.78	117.04
31	y	1519	MA6	N3-C2-N1	-6.27	123.37	128.89
31	y	527	7MG	N7-C8-N9	6.23	111.41	103.13
32	z	46	7MG	N7-C8-N9	6.06	111.17	103.13
31	y	1518	MA6	N3-C2-N1	-5.94	123.67	128.89
31	y	1518	MA6	C5-C4-N3	-5.75	120.38	125.98
31	y	1404	5MC	C2-N3-C4	5.31	120.58	115.50
31	y	1207	2MG	CM2-N2-C2	-5.31	115.92	123.29
31	y	967	5MC	C2-N3-C4	5.30	120.58	115.50
31	y	1407	5MC	C2-N3-C4	5.23	120.51	115.50
33	0	55	PSU	O4'-C1'-C5	5.13	118.39	109.80
31	y	1400	5MC	C2-N3-C4	5.11	120.39	115.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	y	1518	MA6	N3-C4-N9	5.07	134.09	125.39
33	0	55	PSU	C4'-O4'-C1'	-5.01	103.46	109.42
32	z	39	PSU	C4'-O4'-C1'	-5.00	103.48	109.42
31	y	1519	MA6	C5-C4-N3	-4.97	121.14	125.98
32	z	37	MIA	C11-S10-C2	4.67	105.63	102.23
31	y	1519	MA6	C2'-C1'-N9	-4.60	100.81	113.35
31	y	1402	4OC	C2-N1-C1'	4.50	125.16	119.03
32	z	46	7MG	C6-N1-C2	4.49	122.73	120.20
31	y	966	M2G	P-O5'-C5'	-4.48	105.30	122.98
31	y	527	7MG	C6-N1-C2	4.45	122.71	120.20
33	0	55	PSU	P-O5'-C5'	-4.35	105.81	122.98
31	y	1207	2MG	C6-N1-C2	4.35	122.66	120.20
31	y	1404	5MC	C2-N1-C1'	4.22	124.78	119.03
32	z	32	PSU	C3'-C2'-C1'	4.20	107.05	101.94
32	z	8	4SU	N3-C2-N1	4.19	119.47	115.97
31	y	1519	MA6	N1-C6-N6	4.18	121.46	117.04
31	y	1518	MA6	C2-N1-C6	4.13	120.46	111.52
32	z	32	PSU	P-O5'-C5'	-4.05	106.98	122.98
31	y	1519	MA6	N3-C4-N9	4.04	132.32	125.39
32	z	46	7MG	O4'-C1'-N9	-4.02	103.27	108.93
32	z	54	5MU	P-O5'-C5'	-3.96	107.35	122.98
31	y	1519	MA6	C3'-C2'-C1'	3.93	107.09	100.92
31	y	1518	MA6	C3'-C2'-C1'	3.86	106.98	100.92
31	y	1519	MA6	C2-N1-C6	3.82	119.80	111.52
32	z	55	PSU	C4'-O4'-C1'	-3.76	104.94	109.42
31	y	1498	UR3	P-O5'-C5'	-3.74	108.20	122.98
31	y	527	7MG	C6-C5-C4	3.74	121.10	116.01
31	y	1518	MA6	P-O5'-C5'	-3.74	107.31	122.54
33	0	55	PSU	C3'-C2'-C1'	3.68	106.42	101.94
32	z	8	4SU	P-O5'-C5'	-3.63	108.67	122.98
32	z	46	7MG	P-O5'-C5'	-3.62	108.70	122.98
32	z	39	PSU	C6-C5-C1'	-3.55	114.54	121.33
32	z	55	PSU	O4'-C1'-C5	3.48	115.63	109.80
31	y	966	M2G	C3'-C2'-C1'	3.47	106.36	100.92
31	y	1407	5MC	C3'-C2'-C1'	3.46	106.35	100.92
31	y	1402	4OC	C2-N3-C4	3.46	120.76	115.50
31	y	1407	5MC	C2'-C1'-N1	-3.38	104.10	113.34
31	y	967	5MC	C3'-C2'-C1'	3.33	106.14	100.92
32	z	54	5MU	N3-C2-N1	3.32	118.74	115.97
32	z	8	4SU	C5'-C4'-C3'	-3.16	102.55	115.19
31	y	1498	UR3	C2-N1-C1'	3.14	122.84	118.74
31	y	527	7MG	P-O5'-C5'	-3.10	110.74	122.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	z	8	4SU	C3'-C2'-C1'	3.09	105.77	100.92
32	z	37	MIA	C5-C6-N1	-3.07	117.19	120.46
31	y	1400	5MC	P-O5'-C5'	-3.05	110.94	122.98
31	y	1519	MA6	C2'-C3'-C4'	3.01	108.65	102.64
31	y	966	M2G	C2'-C1'-N9	-2.99	105.20	113.35
32	z	32	PSU	C5'-C4'-C3'	-2.97	103.31	115.19
32	z	37	MIA	C2'-C1'-N9	-2.95	105.30	113.35
32	z	55	PSU	C3'-C2'-C1'	2.85	105.41	101.94
32	z	39	PSU	O4'-C1'-C5	-2.85	105.02	109.80
32	z	55	PSU	P-O5'-C5'	-2.84	111.78	122.98
31	y	1498	UR3	C3'-C2'-C1'	2.79	105.30	100.92
31	y	1519	MA6	C8-N9-C4	2.79	109.22	106.96
32	z	32	PSU	O4'-C4'-C3'	2.79	110.83	105.16
31	y	1402	4OC	CM4-N4-C4	2.79	125.37	122.90
32	z	54	5MU	C3'-C2'-C1'	2.75	105.23	100.92
31	y	1402	4OC	P-O5'-C5'	-2.75	112.14	122.98
31	y	1207	2MG	P-O5'-C5'	-2.69	112.37	122.98
31	y	1400	5MC	C5-C6-N1	-2.67	119.62	122.02
31	y	516	PSU	P-O5'-C5'	-2.66	112.49	122.98
31	y	1519	MA6	C2-N3-C4	2.65	120.91	113.27
31	y	1518	MA6	O4'-C4'-C3'	2.65	110.54	105.16
31	y	1207	2MG	O4'-C1'-C2'	-2.64	102.85	106.69
31	y	1402	4OC	O4'-C4'-C3'	2.63	110.50	105.16
31	y	1400	5MC	O4'-C1'-C2'	2.61	110.49	106.69
31	y	966	M2G	O3'-C3'-C2'	2.59	120.21	111.83
31	y	1400	5MC	C6-N1-C1'	2.58	125.72	119.33
32	z	55	PSU	C6-C5-C1'	-2.56	116.43	121.33
31	y	1407	5MC	P-O5'-C5'	-2.56	112.88	122.98
32	z	37	MIA	C2-N1-C6	2.56	120.90	113.31
31	y	1404	5MC	O4'-C4'-C5'	2.55	118.44	109.37
32	z	55	PSU	C4-N3-C2	-2.55	120.19	125.36
32	z	8	4SU	C2-N1-C1'	2.52	119.79	118.21
32	z	46	7MG	C8-N9-C1'	2.50	127.95	121.06
31	y	1402	4OC	O4'-C4'-C5'	2.49	118.20	109.37
31	y	1518	MA6	C5'-C4'-C3'	-2.48	105.25	115.19
31	y	1518	MA6	C2-N3-C4	2.48	120.41	113.27
31	y	967	5MC	P-O5'-C5'	-2.48	113.19	122.98
31	y	1400	5MC	C2-N1-C1'	-2.48	115.65	119.03
32	z	46	7MG	C6-C5-C4	2.41	119.29	116.01
31	y	516	PSU	C4-N3-C2	-2.39	120.50	125.36
31	y	1498	UR3	O4'-C1'-N1	-2.39	102.83	108.08
31	y	966	M2G	C2-N3-C4	2.37	118.33	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	z	39	PSU	C4-C5-C1'	2.35	125.68	120.98
33	0	55	PSU	C6-C5-C1'	-2.33	116.87	121.33
32	z	54	5MU	O3'-C3'-C4'	-2.30	104.28	111.07
31	y	1519	MA6	C4'-O4'-C1'	2.30	112.25	109.72
32	z	16	H2U	C6-N1-C1'	-2.30	114.74	119.30
32	z	16	H2U	C3'-C2'-C1'	2.29	105.93	101.38
33	0	55	PSU	C4-N3-C2	-2.27	120.75	125.36
32	z	39	PSU	P-O5'-C5'	-2.27	114.01	122.98
31	y	1404	5MC	P-O5'-C5'	-2.26	114.07	122.98
31	y	1498	UR3	O3'-C3'-C4'	2.25	117.68	111.07
32	z	20	H2U	C6-N1-C1'	-2.24	114.86	119.30
32	z	32	PSU	C4-N3-C2	-2.23	120.83	125.36
31	y	1407	5MC	C2'-C3'-C4'	2.22	107.06	102.64
32	z	39	PSU	C4-N3-C2	-2.21	120.88	125.36
31	y	1519	MA6	C8-N9-C1'	-2.19	122.02	126.15
31	y	1498	UR3	O4'-C4'-C3'	2.19	109.61	105.16
32	z	20	H2U	C3'-C2'-C1'	2.18	105.72	101.38
32	z	8	4SU	O4'-C4'-C3'	2.18	109.58	105.16
32	z	16	H2U	C1'-N1-C2	2.17	121.28	118.27
31	y	1207	2MG	O4'-C4'-C5'	2.17	117.07	109.37
31	y	516	PSU	C3'-C2'-C1'	2.16	104.58	101.94
31	y	966	M2G	C5'-C4'-C3'	-2.16	106.53	115.19
32	z	46	7MG	O4'-C4'-C3'	2.15	109.53	105.16
32	z	54	5MU	C2-N1-C1'	2.14	119.55	118.21
31	y	516	PSU	C6-C5-C1'	-2.13	117.25	121.33
32	z	39	PSU	O3'-C3'-C2'	2.12	118.67	111.83
31	y	1207	2MG	O3'-C3'-C2'	2.10	118.63	111.83
31	y	527	7MG	C4'-O4'-C1'	-2.10	104.72	109.52
31	y	1407	5MC	C2-N1-C1'	2.06	121.83	119.03
31	y	1518	MA6	C4'-O4'-C1'	-2.03	107.49	109.72
31	y	516	PSU	O4'-C4'-C5'	2.03	116.56	109.37
31	y	1402	4OC	O3'-C3'-C4'	2.02	117.03	111.07
32	z	46	7MG	C5'-C4'-C3'	-2.02	107.10	115.19
31	y	1518	MA6	O3'-C3'-C2'	2.00	118.31	111.83

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
32	z	37	MIA	OP2-P-O5'-C5'

There are no ring outliers.

5.5 Carbohydrates

There are no carbohydrates in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	w	4

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	w	926:A	O3'	928:G	P	1.97
1	w	1506:C	O3'	1508:A	P	1.96
1	w	890:A	O3'	892:G	P	1.94
1	w	1171:G	O3'	1173:G	P	1.94

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	w	2889/2889 (100%)	1.27	282 (9%) 8 8	5, 5, 117, 159	0
2	x	120/121 (99%)	1.36	24 (20%) 2 2	5, 13, 95, 127	0
3	A	127/229 (55%)	0.28	8 (6%) 19 13	5, 50, 148, 151	0
4	B	272/276 (98%)	0.52	14 (5%) 27 17	5, 60, 148, 155	0
5	C	201/206 (97%)	0.53	15 (7%) 14 11	5, 49, 148, 159	0
6	D	194/205 (94%)	0.32	13 (6%) 17 13	5, 55, 148, 165	0
7	E	180/182 (98%)	0.20	4 (2%) 59 37	5, 58, 148, 156	0
8	F	173/180 (96%)	0.18	11 (6%) 19 13	5, 67, 148, 160	0
9	G	148/148 (100%)	0.07	8 (5%) 25 16	5, 43, 148, 151	0
10	H	138/163 (84%)	0.75	12 (8%) 10 9	5, 52, 147, 152	0
11	I	122/122 (100%)	0.27	4 (3%) 44 28	5, 35, 142, 148	0
12	J	146/150 (97%)	0.56	9 (6%) 20 14	5, 90, 150, 160	0
13	K	137/141 (97%)	1.48	41 (29%) 1 2	5, 24, 148, 152	0
14	L	118/118 (100%)	0.34	5 (4%) 35 22	5, 44, 148, 148	0
15	M	106/112 (94%)	1.14	24 (22%) 1 2	5, 48, 148, 160	0
16	N	137/146 (93%)	0.44	8 (5%) 22 15	5, 74, 150, 167	0
17	O	117/118 (99%)	1.07	35 (29%) 1 2	5, 35, 114, 148	0
18	P	101/101 (100%)	0.89	21 (20%) 1 2	5, 79, 148, 159	0
19	Q	109/113 (96%)	0.56	13 (11%) 5 6	5, 33, 137, 149	0
20	R	92/96 (95%)	0.81	17 (18%) 2 3	5, 73, 148, 161	0
21	S	103/110 (93%)	1.14	21 (20%) 1 2	5, 86, 160, 163	0
22	T	185/206 (89%)	0.02	4 (2%) 59 37	5, 50, 148, 161	0
23	U	76/85 (89%)	1.16	9 (11%) 5 6	5, 57, 151, 166	0
24	V	88/98 (89%)	1.13	27 (30%) 1 2	5, 91, 148, 154	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
25	W	62/72 (86%)	0.60	8 (12%) 4 5	5, 88, 149, 155	0
26	X	60/60 (100%)	0.15	0 100 100	5, 36, 148, 150	0
27	Y	56/60 (93%)	0.44	5 (8%) 10 9	7, 77, 164, 168	0
28	Z	48/49 (97%)	0.61	0 100 100	5, 5, 42, 126	0
29	a	63/65 (96%)	1.05	10 (15%) 3 3	5, 50, 151, 157	0
30	b	35/37 (94%)	1.71	12 (34%) 1 1	5, 102, 149, 153	0
31	y	1501/1522 (98%)	1.27	143 (9%) 8 8	5, 9, 114, 163	0
32	z	75/76 (98%)	1.28	10 (13%) 4 4	5, 7, 90, 128	0
33	0	76/76 (100%)	1.27	12 (15%) 3 4	5, 37, 129, 148	0
34	1	6/10 (60%)	1.15	1 (16%) 2 3	5, 5, 54, 67	0
35	c	234/256 (91%)	0.16	3 (1%) 74 50	5, 50, 151, 165	0
36	d	206/239 (86%)	0.51	19 (9%) 9 8	5, 57, 148, 151	0
37	e	208/209 (99%)	0.51	16 (7%) 13 10	5, 50, 148, 157	0
38	f	150/162 (92%)	0.47	10 (6%) 17 13	5, 62, 148, 154	0
39	g	101/101 (100%)	0.18	9 (8%) 10 9	5, 72, 148, 156	0
40	h	155/156 (99%)	0.28	3 (1%) 64 41	5, 73, 155, 163	0
41	i	138/138 (100%)	0.32	6 (4%) 34 22	5, 43, 148, 149	0
42	j	127/128 (99%)	0.67	18 (14%) 3 4	5, 85, 150, 154	0
43	k	98/105 (93%)	0.14	0 100 100	5, 83, 151, 164	0
44	l	116/129 (89%)	0.62	10 (8%) 11 9	5, 71, 150, 162	0
45	m	124/132 (93%)	0.38	11 (8%) 10 9	5, 30, 148, 152	0
46	n	125/126 (99%)	0.55	12 (9%) 8 8	5, 74, 148, 162	0
47	o	60/61 (98%)	1.73	19 (31%) 1 2	5, 66, 151, 161	0
48	p	88/89 (98%)	0.27	1 (1%) 77 54	5, 57, 148, 163	0
49	q	83/88 (94%)	0.65	9 (10%) 6 7	5, 50, 148, 148	0
50	r	104/105 (99%)	0.84	19 (18%) 2 3	5, 52, 148, 158	0
51	s	73/88 (82%)	-0.02	0 100 100	5, 69, 149, 157	0
52	t	80/93 (86%)	-0.07	1 (1%) 74 50	5, 52, 148, 159	0
53	u	99/106 (93%)	1.06	18 (18%) 2 3	10, 66, 199, 199	0
54	v	24/27 (88%)	1.23	5 (20%) 1 2	5, 47, 139, 142	0
All	All	10454/10880 (96%)	0.86	1019 (9%) 8 8	5, 32, 148, 199	0

All (1019) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
31	y	1498	UR3	11.8
1	w	508	G	7.9
13	K	92	GLY	7.5
15	M	82	ILE	7.5
15	M	81	GLY	7.5
13	K	91	GLU	7.4
47	o	12	ARG	7.2
23	U	85	ALA	7.1
23	U	84	LEU	7.0
15	M	80	LEU	6.7
1	w	2296	U	6.7
3	A	9	ARG	6.6
15	M	83	LYS	6.4
47	o	13	THR	6.4
15	M	9	ARG	6.3
31	y	723	U	6.3
21	S	1	MET	6.2
31	y	1492	A	6.2
13	K	23	GLY	6.2
13	K	5	ARG	6.0
44	l	124	LYS	5.9
25	W	20	GLU	5.9
44	l	125	PHE	5.9
50	r	26	GLN	5.9
23	U	83	PRO	5.8
21	S	5	MET	5.8
47	o	17	LYS	5.8
5	C	57	LYS	5.7
31	y	731	G	5.6
47	o	11	LYS	5.6
8	F	179	LYS	5.5
21	S	35	TYR	5.5
46	n	111	LYS	5.5
47	o	16	PHE	5.5
37	e	168	ARG	5.5
21	S	28	LYS	5.5
18	P	77	ALA	5.4
15	M	111	GLU	5.4
13	K	40	ALA	5.4
12	J	27	HIS	5.4
13	K	112	GLU	5.4
53	u	15	ARG	5.3

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Mol	Chain	Res	Type	RSRZ
47	o	15	LYS	5.3
1	w	958	U	5.2
15	M	10	ARG	5.2
14	L	58	GLY	5.2
1	w	19	C	5.2
31	y	108	G	5.2
21	S	29	GLU	5.1
31	y	107	G	5.1
20	R	74	PRO	5.1
46	n	112	GLY	5.1
44	l	126	ARG	5.1
1	w	614	U	5.1
1	w	1641	A	5.1
37	e	160	GLN	5.1
13	K	111	GLU	5.0
31	y	325	A	5.0
31	y	135	C	5.0
46	n	113	PRO	5.0
3	A	8	TYR	4.9
31	y	1493	A	4.9
13	K	39	PRO	4.9
47	o	10	ALA	4.9
1	w	449	A	4.9
53	u	9	ASN	4.9
21	S	4	LYS	4.9
10	H	96	THR	4.8
21	S	30	VAL	4.8
3	A	13	GLU	4.8
30	b	28	GLU	4.8
7	E	182	LYS	4.8
15	M	8	GLU	4.7
1	w	615	G	4.7
19	Q	81	ALA	4.7
6	D	91	ASP	4.7
12	J	28	GLY	4.7
53	u	10	LEU	4.7
1	w	405	U	4.7
53	u	51	GLU	4.6
15	M	79	ALA	4.6
18	P	74	LYS	4.6
19	Q	83	LYS	4.5
30	b	15	LYS	4.5

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Mol	Chain	Res	Type	RSRZ
30	b	17	ILE	4.5
53	u	16	HIS	4.5
44	l	123	LYS	4.5
1	w	6	A	4.5
13	K	38	GLU	4.4
23	U	10	THR	4.4
4	B	170	GLY	4.4
1	w	812	C	4.4
38	f	88	LYS	4.4
18	P	76	LYS	4.4
4	B	272	ALA	4.4
1	w	2820	A	4.4
1	w	1694	C	4.4
2	x	6	C	4.4
21	S	32	PRO	4.3
13	K	98	LYS	4.3
36	d	90	GLU	4.3
1	w	29	U	4.3
36	d	38	ARG	4.3
27	Y	55	ARG	4.3
12	J	30	THR	4.3
1	w	1099	G	4.3
1	w	2317	C	4.3
38	f	89	ILE	4.2
31	y	1397	C	4.2
8	F	56	SER	4.2
42	j	98	PRO	4.2
21	S	31	LEU	4.2
53	u	46	GLU	4.2
53	u	18	GLN	4.2
24	V	43	TYR	4.2
19	Q	85	VAL	4.2
18	P	83	ARG	4.2
24	V	18	ILE	4.2
37	e	169	LYS	4.2
17	O	36	ARG	4.2
13	K	73	PRO	4.1
13	K	20	ALA	4.1
1	w	1573	G	4.1
15	M	57	LYS	4.1
13	K	21	THR	4.1
31	y	44	G	4.1

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Mol	Chain	Res	Type	RSRZ
36	d	42	LEU	4.1
1	w	18	C	4.1
21	S	34	LYS	4.1
1	w	30	G	4.1
47	o	14	PRO	4.1
37	e	167	GLY	4.0
8	F	170	ARG	4.0
1	w	37	C	4.0
10	H	106	LYS	4.0
13	K	99	PRO	4.0
1	w	2318	G	4.0
21	S	3	VAL	4.0
1	w	79	G	3.9
10	H	42	GLU	3.9
44	l	119	CYS	3.9
1	w	1252	G	3.9
1	w	2087	G	3.9
31	y	136(A)	C	3.9
36	d	39	ILE	3.9
1	w	2382	G	3.9
1	w	1642	G	3.9
31	y	146	G	3.9
23	U	82	ARG	3.9
1	w	2833	G	3.9
31	y	134	A	3.9
13	K	90	VAL	3.9
18	P	85	LYS	3.9
45	m	19	LYS	3.9
8	F	169	VAL	3.9
1	w	8	A	3.9
38	f	124	GLY	3.9
18	P	78	LYS	3.9
15	M	7	TYR	3.9
20	R	34	ALA	3.9
1	w	2334	G	3.8
13	K	24	GLY	3.8
15	M	11	LYS	3.8
13	K	110	THR	3.8
1	w	1847	A	3.8
19	Q	82	LEU	3.8
9	G	20	ASP	3.8
53	u	17	ARG	3.8

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Mol	Chain	Res	Type	RSRZ
1	w	7	G	3.8
13	K	19	GLY	3.8
1	w	1098	A	3.8
40	h	81	GLY	3.8
13	K	60	ARG	3.8
13	K	4	PRO	3.8
17	O	16	LYS	3.7
21	S	26	LYS	3.7
46	n	69	GLU	3.7
2	x	88	C	3.7
10	H	122	LEU	3.7
17	O	47	TYR	3.7
36	d	93	LYS	3.7
13	K	41	TRP	3.7
31	y	1519	MA6	3.7
18	P	84	LYS	3.7
24	V	10	LYS	3.7
13	K	97	VAL	3.7
12	J	26	GLY	3.7
21	S	27	VAL	3.7
1	w	2297	C	3.7
13	K	59	ARG	3.7
1	w	848	G	3.7
17	O	13	LYS	3.7
31	y	1354	C	3.7
37	e	164	ALA	3.7
17	O	14	HIS	3.7
42	j	123	PRO	3.7
10	H	97	ARG	3.7
35	c	156	LYS	3.7
20	R	33	LYS	3.6
31	y	732	C	3.6
50	r	89	LEU	3.6
37	e	153	ARG	3.6
27	Y	24	ALA	3.6
47	o	27	CYS	3.6
53	u	11	SER	3.6
1	w	24	G	3.6
3	A	14	LYS	3.6
38	f	83	GLU	3.6
50	r	29	HIS	3.5
17	O	17	ILE	3.5

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Mol	Chain	Res	Type	RSRZ
5	C	193	GLY	3.5
13	K	22	LYS	3.5
38	f	123	LEU	3.5
17	O	40	PHE	3.5
5	C	190	GLY	3.5
1	w	20	C	3.5
44	l	118	GLY	3.5
1	w	1808	U	3.5
15	M	58	LEU	3.5
25	W	24	LEU	3.5
1	w	2323	G	3.5
17	O	43	GLY	3.5
20	R	72	LYS	3.5
53	u	50	GLU	3.5
30	b	24	TYR	3.5
4	B	36	PRO	3.5
53	u	14	LYS	3.4
31	y	727	G	3.4
1	w	645	C	3.4
1	w	653	C	3.4
33	0	48	C	3.4
1	w	2322	A	3.4
5	C	191	PRO	3.4
20	R	10	ALA	3.4
47	o	26	ARG	3.4
24	V	28	GLY	3.4
1	w	1093	G	3.4
24	V	42	GLN	3.4
31	y	1483	A	3.4
31	y	1502	A	3.4
1	w	192	C	3.4
1	w	149	A	3.4
18	P	73	SER	3.4
41	i	91	ARG	3.4
20	R	11	PRO	3.4
37	e	163	GLU	3.4
44	l	121	PRO	3.4
42	j	75	ASP	3.3
50	r	37	LYS	3.3
9	G	135	GLU	3.3
20	R	5	TYR	3.3
4	B	10	THR	3.3

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Mol	Chain	Res	Type	RSRZ
10	H	107	LYS	3.3
1	w	2316	C	3.3
2	x	5	C	3.3
31	y	136(B)	C	3.3
50	r	86	GLU	3.3
54	v	16	GLY	3.3
15	M	78	LEU	3.3
24	V	41	ARG	3.3
29	a	20	GLY	3.3
10	H	98	TYR	3.3
13	K	96	VAL	3.3
33	0	16	U	3.3
1	w	36	G	3.3
1	w	2319	G	3.3
50	r	33	GLY	3.3
2	x	28	C	3.3
46	n	71	ARG	3.3
1	w	186	G	3.3
13	K	93	TYR	3.3
24	V	24	ALA	3.3
46	n	115	LYS	3.3
18	P	95	LEU	3.3
17	O	37	GLU	3.3
19	Q	84	ARG	3.3
20	R	73	ARG	3.3
31	y	530	G	3.3
1	w	888	C	3.3
14	L	59	ASP	3.3
24	V	19	GLN	3.3
19	Q	97	LYS	3.3
31	y	412	A	3.3
36	d	190	ARG	3.3
1	w	2321	G	3.3
16	N	64	ARG	3.3
24	V	40	ARG	3.3
31	y	657	G	3.3
41	i	54	ASP	3.2
2	x	4	C	3.2
30	b	9	ARG	3.2
21	S	6	HIS	3.2
1	w	58	G	3.2
31	y	977	A	3.2

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Mol	Chain	Res	Type	RSRZ
31	y	1257	U	3.2
1	w	2345	G	3.2
13	K	32	PHE	3.2
1	w	2798	C	3.2
50	r	87	LYS	3.2
31	y	681	C	3.2
31	y	1303	C	3.2
45	m	18	ARG	3.2
1	w	2523	G	3.2
8	F	57	ASP	3.2
1	w	813	U	3.2
1	w	237	C	3.2
38	f	125	SER	3.2
47	o	49	HIS	3.2
9	G	2	LYS	3.1
3	A	12	LEU	3.1
19	Q	86	LEU	3.1
17	O	20	LEU	3.1
18	P	82	ARG	3.1
31	y	995	C	3.1
50	r	90	ILE	3.1
24	V	17	SER	3.1
31	y	287	U	3.1
39	g	101	ALA	3.1
16	N	99	LEU	3.1
19	Q	80	PRO	3.1
8	F	171	LEU	3.1
17	O	39	LEU	3.1
1	w	346	A	3.1
32	z	48	C	3.1
54	v	24	ARG	3.1
18	P	81	TYR	3.1
9	G	19	VAL	3.1
17	O	21	ALA	3.1
18	P	75	PHE	3.1
39	g	54	LYS	3.1
46	n	36	LYS	3.1
1	w	51	G	3.1
37	e	73	ARG	3.1
45	m	28	GLY	3.1
42	j	94	ALA	3.1
31	y	1392	G	3.1

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Mol	Chain	Res	Type	RSRZ
30	b	16	VAL	3.1
1	w	2466	C	3.1
5	C	54	GLN	3.1
25	W	23	LYS	3.0
1	w	1365	A	3.0
1	w	2090	G	3.0
25	W	43	GLN	3.0
38	f	90	VAL	3.0
1	w	2092	U	3.0
1	w	27	G	3.0
6	D	41	ARG	3.0
50	r	34	LYS	3.0
31	y	400	C	3.0
50	r	88	TYR	3.0
48	p	88	ARG	3.0
39	g	97	PHE	3.0
1	w	1100	C	3.0
50	r	28	PRO	3.0
17	O	38	THR	3.0
1	w	2295	C	3.0
31	y	48	C	3.0
50	r	25	ARG	3.0
49	q	12	LYS	3.0
1	w	259	G	3.0
6	D	81	GLY	3.0
7	E	118	ARG	3.0
17	O	28	ARG	3.0
6	D	90	ARG	3.0
29	a	14	VAL	3.0
41	i	90	GLY	3.0
1	w	23	G	2.9
30	b	26	ILE	2.9
1	w	9	U	2.9
18	P	88	ARG	2.9
1	w	1010	A	2.9
13	K	89	ASN	2.9
37	e	166	LYS	2.9
46	n	124	PRO	2.9
12	J	31	ALA	2.9
15	M	109	GLY	2.9
24	V	9	GLY	2.9
36	d	35	GLU	2.9

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Mol	Chain	Res	Type	RSRZ
42	j	99	LEU	2.9
13	K	18	LYS	2.9
47	o	9	LYS	2.9
1	w	300	A	2.9
1	w	1306	C	2.9
15	M	56	LEU	2.9
20	R	32	PRO	2.9
1	w	2500	U	2.9
29	a	21	LYS	2.9
47	o	47	LEU	2.9
1	w	15	G	2.9
12	J	22	GLY	2.9
1	w	514	A	2.9
1	w	1305	C	2.9
17	O	44	ASN	2.9
31	y	1500	A	2.9
30	b	12	ASP	2.9
18	P	19	LYS	2.9
10	H	95	TYR	2.9
5	C	107	THR	2.9
35	c	157	ARG	2.9
50	r	83	ASP	2.9
1	w	17	G	2.9
1	w	1640	C	2.9
17	O	18	LEU	2.9
42	j	115	GLY	2.9
1	w	16	G	2.8
1	w	1169	G	2.8
31	y	1528	U	2.8
15	M	23	ARG	2.8
13	K	78	PRO	2.8
31	y	1360	A	2.8
44	l	117	ASN	2.8
32	z	55	PSU	2.8
50	r	84	LEU	2.8
45	m	20	LYS	2.8
45	m	22	LYS	2.8
1	w	387	U	2.8
1	w	34	C	2.8
13	K	3	MET	2.8
46	n	122	LYS	2.8
1	w	57	C	2.8

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Mol	Chain	Res	Type	RSRZ
1	w	353	G	2.8
1	w	2380	C	2.8
6	D	94	TYR	2.8
13	K	88	GLY	2.8
17	O	35	ALA	2.8
21	S	2	ARG	2.8
54	v	15	ARG	2.8
1	w	148	C	2.8
1	w	575	A	2.8
1	w	1190	G	2.8
23	U	11	LYS	2.8
6	D	42	GLY	2.8
24	V	11	ARG	2.8
24	V	35	THR	2.8
4	B	9	TYR	2.8
47	o	25	VAL	2.8
20	R	75	ASP	2.8
3	A	10	ALA	2.8
42	j	117	HIS	2.8
1	w	382	G	2.8
17	O	11	ARG	2.8
31	y	968	A	2.8
9	G	1	MET	2.8
31	y	326	G	2.8
31	y	12	U	2.7
50	r	30	PRO	2.7
1	w	2748	A	2.7
21	S	11	ASP	2.7
1	w	1330	C	2.7
32	z	17	C	2.7
36	d	189	ALA	2.7
50	r	36	ILE	2.7
53	u	8	ARG	2.7
31	y	60	A	2.7
1	w	1251	C	2.7
1	w	187	G	2.7
2	x	89(A)	G	2.7
24	V	15	ALA	2.7
5	C	56	PRO	2.7
15	M	84	GLN	2.7
45	m	113	LYS	2.7
1	w	1328	G	2.7

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Mol	Chain	Res	Type	RSRZ
31	y	484	G	2.7
31	y	730	G	2.7
1	w	2387	U	2.7
25	W	19	VAL	2.7
31	y	26	A	2.7
2	x	27	C	2.7
18	P	20	LEU	2.7
1	w	205	G	2.7
31	y	1190	G	2.7
6	D	89	PRO	2.7
41	i	84	ARG	2.7
1	w	1350	C	2.7
19	Q	95	ILE	2.7
1	w	576	U	2.7
13	K	42	ILE	2.7
15	M	110	LEU	2.7
39	g	98	LEU	2.7
39	g	96	PRO	2.7
1	w	149(B)	A	2.7
27	Y	26	THR	2.7
1	w	451	C	2.7
5	C	192	ASN	2.7
1	w	351	G	2.7
1	w	425	G	2.7
32	z	39	PSU	2.7
5	C	58	ARG	2.7
7	E	76	SER	2.7
1	w	38	A	2.7
31	y	996	A	2.7
42	j	76	ALA	2.7
38	f	84	PHE	2.7
18	P	79	VAL	2.7
31	y	1518	MA6	2.7
45	m	17	VAL	2.7
33	0	8	U	2.7
5	C	162	ALA	2.7
31	y	1003	G	2.7
49	q	10	GLY	2.7
4	B	124	PRO	2.7
24	V	30	VAL	2.6
31	y	314	C	2.6
19	Q	96	ILE	2.6

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Mol	Chain	Res	Type	RSRZ
1	w	932	G	2.6
45	m	15	GLU	2.6
1	w	1815	A	2.6
17	O	15	LYS	2.6
38	f	81	GLU	2.6
6	D	38	LYS	2.6
17	O	42	ALA	2.6
15	M	77	ALA	2.6
1	w	811	U	2.6
10	H	111	GLU	2.6
1	w	450	G	2.6
1	w	1817	G	2.6
1	w	2446	G	2.6
50	r	35	VAL	2.6
8	F	178	ALA	2.6
1	w	59	U	2.6
1	w	2503	A	2.6
1	w	462	C	2.6
1	w	897	C	2.6
30	b	25	VAL	2.6
19	Q	26	GLY	2.6
18	P	80	GLN	2.6
1	w	2481	G	2.6
21	S	33	LYS	2.6
22	T	64	GLY	2.6
1	w	654	U	2.6
13	K	95	ALA	2.6
5	C	137	HIS	2.6
42	j	104	ARG	2.6
1	w	2644	G	2.6
31	y	1415	G	2.6
36	d	96	GLY	2.6
36	d	94	LEU	2.6
1	w	1800	C	2.6
24	V	22	GLY	2.6
36	d	46	GLU	2.6
29	a	22	VAL	2.6
1	w	2300	G	2.6
1	w	2625	G	2.6
36	d	41	GLY	2.6
27	Y	27	PRO	2.6
31	y	67	C	2.6

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Mol	Chain	Res	Type	RSRZ
50	r	27	PHE	2.6
1	w	473	G	2.6
17	O	34	LYS	2.6
33	0	46	G	2.6
53	u	58	LYS	2.6
53	u	55	ILE	2.6
33	0	49	C	2.6
40	h	13	GLN	2.6
11	I	49	ARG	2.6
36	d	31	HIS	2.6
1	w	452	G	2.6
31	y	1040	U	2.6
1	w	31	C	2.6
31	y	43	C	2.6
31	y	1317	C	2.6
37	e	150	GLU	2.6
1	w	495	G	2.5
40	h	80	VAL	2.5
1	w	1630	G	2.5
31	y	773	G	2.5
31	y	1039	C	2.5
18	P	87	HIS	2.5
41	i	92	ARG	2.5
1	w	81	G	2.5
1	w	1519	G	2.5
31	y	31	G	2.5
36	d	45	LYS	2.5
1	w	881	G	2.5
1	w	151	C	2.5
1	w	1574	C	2.5
1	w	2099	U	2.5
3	A	6	LYS	2.5
21	S	9	LYS	2.5
1	w	2289	G	2.5
2	x	50	G	2.5
49	q	36	ILE	2.5
1	w	2626	C	2.5
31	y	401	C	2.5
47	o	48	ALA	2.5
16	N	102	ILE	2.5
31	y	1198	G	2.5
33	0	3	G	2.5

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Mol	Chain	Res	Type	RSRZ
36	d	157	ILE	2.5
1	w	198	C	2.5
1	w	1013	C	2.5
1	w	2374	C	2.5
8	F	166	GLY	2.5
17	O	46	ALA	2.5
23	U	26	TYR	2.5
29	a	11	LYS	2.5
32	z	16	H2U	2.5
1	w	2100	G	2.5
1	w	2379	G	2.5
31	y	1239	A	2.5
1	w	581	C	2.5
15	M	75	GLU	2.5
20	R	67	GLY	2.5
24	V	44	PRO	2.5
4	B	15	PHE	2.5
1	w	959	A	2.5
1	w	2062	A	2.5
2	x	89(B)	A	2.5
31	y	1287	A	2.5
1	w	55	G	2.5
31	y	61	G	2.5
1	w	858	U	2.5
14	L	57	ARG	2.5
7	E	49	ASP	2.5
1	w	56	A	2.5
1	w	189	G	2.5
33	0	65	G	2.5
1	w	565	C	2.5
1	w	1396	U	2.5
31	y	940	C	2.5
37	e	159	ARG	2.5
1	w	1143	A	2.4
1	w	530	G	2.4
1	w	739	G	2.4
31	y	80	G	2.4
31	y	147	G	2.4
31	y	399	G	2.4
4	B	262	ARG	2.4
37	e	154	ASN	2.4
46	n	114	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
45	m	21	SER	2.4
47	o	50	LYS	2.4
1	w	1593	G	2.4
1	w	1605	C	2.4
1	w	2329	G	2.4
1	w	2447	G	2.4
31	y	190	G	2.4
21	S	90	LEU	2.4
22	T	62	PRO	2.4
23	U	15	ASP	2.4
42	j	105	ASP	2.4
6	D	20	PRO	2.4
17	O	12	ARG	2.4
1	w	1088	A	2.4
17	O	41	ALA	2.4
1	w	381	G	2.4
1	w	551	G	2.4
1	w	1498	C	2.4
1	w	2373	G	2.4
1	w	2423	U	2.4
31	y	1364	U	2.4
24	V	27	GLU	2.4
45	m	16	LYS	2.4
10	H	124	HIS	2.4
38	f	82	VAL	2.4
44	l	120	ARG	2.4
1	w	1587	A	2.4
31	y	451	A	2.4
1	w	1035	U	2.4
33	0	47	U	2.4
1	w	271(B)	C	2.4
1	w	2154	G	2.4
1	w	2869	G	2.4
18	P	21	ARG	2.4
54	v	14	TRP	2.4
1	w	2431	U	2.4
16	N	46	GLU	2.4
1	w	40	C	2.4
20	R	31	HIS	2.4
30	b	29	ASN	2.4
53	u	71	THR	2.4
1	w	2388	A	2.4

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Mol	Chain	Res	Type	RSRZ
31	y	45	U	2.4
1	w	1383	C	2.4
1	w	2829	C	2.4
27	Y	25	LEU	2.4
19	Q	98	LYS	2.4
5	C	163	GLU	2.4
1	w	1692	U	2.4
24	V	25	LYS	2.4
31	y	374	A	2.4
31	y	997	U	2.4
1	w	281	G	2.4
1	w	731	C	2.4
1	w	1289	C	2.4
1	w	2443	C	2.4
1	w	2480	C	2.4
1	w	2612	C	2.4
36	d	191	THR	2.4
17	O	53	ARG	2.4
1	w	1802	A	2.4
1	w	2231	C	2.4
31	y	1129	C	2.4
37	e	76	ARG	2.4
2	x	7	G	2.4
31	y	1301	U	2.4
35	c	113	HIS	2.3
1	w	2290	G	2.3
17	O	32	PHE	2.3
31	y	599	C	2.3
15	M	74	ALA	2.3
9	G	18	VAL	2.3
1	w	236	C	2.3
6	D	39	ARG	2.3
1	w	349	G	2.3
18	P	97	LYS	2.3
29	a	59	LYS	2.3
31	y	380	G	2.3
31	y	467	G	2.3
31	y	776	G	2.3
31	y	1294	G	2.3
24	V	26	ARG	2.3
1	w	191	A	2.3
17	O	30	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
24	V	39	LYS	2.3
13	K	37	LEU	2.3
8	F	81	GLU	2.3
31	y	106	C	2.3
1	w	178	G	2.3
31	y	69	G	2.3
31	y	491	G	2.3
36	d	158	GLY	2.3
20	R	7	VAL	2.3
8	F	168	PRO	2.3
31	y	934	C	2.3
39	g	47	ARG	2.3
1	w	219	G	2.3
17	O	33	ARG	2.3
13	K	79	LEU	2.3
1	w	1224	C	2.3
6	D	95	THR	2.3
42	j	116	LYS	2.3
1	w	1693	U	2.3
31	y	829	G	2.3
31	y	941	G	2.3
42	j	14	VAL	2.3
42	j	95	LYS	2.3
1	w	574	C	2.3
1	w	1673	U	2.3
11	I	7	TYR	2.3
1	w	2375	G	2.3
33	0	7	U	2.3
49	q	11	SER	2.3
52	t	57	HIS	2.3
24	V	34	THR	2.3
47	o	23	ARG	2.3
1	w	429	A	2.3
5	C	195	LEU	2.3
32	z	58	A	2.3
49	q	14	ASN	2.3
31	y	1119	C	2.3
31	y	801	U	2.3
49	q	24	ALA	2.3
1	w	82	G	2.3
1	w	1470	G	2.3
54	v	23	PRO	2.3

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Mol	Chain	Res	Type	RSRZ
1	w	2711	A	2.3
31	y	1363	A	2.3
36	d	89	GLU	2.3
5	C	194	GLY	2.3
13	K	113	GLN	2.3
1	w	129	C	2.3
13	K	131	ILE	2.3
31	y	656	C	2.3
50	r	82	MET	2.3
1	w	1591	G	2.3
1	w	1807	G	2.3
17	O	29	SER	2.3
39	g	55	ASP	2.3
3	A	50	ILE	2.3
1	w	2611	U	2.3
47	o	8	GLU	2.3
31	y	976	G	2.2
31	y	1482	G	2.2
1	w	357	A	2.2
33	0	67	A	2.2
49	q	13	HIS	2.2
4	B	14	ARG	2.2
1	w	271(A)	U	2.2
1	w	1094	U	2.2
31	y	1296	C	2.2
33	0	75	C	2.2
12	J	25	SER	2.2
1	w	1011	G	2.2
25	W	28	LYS	2.2
31	y	818	G	2.2
24	V	16	ASN	2.2
1	w	2499	C	2.2
31	y	1242	C	2.2
19	Q	93	ALA	2.2
25	W	21	LEU	2.2
41	i	69	ARG	2.2
1	w	878	A	2.2
2	x	29	A	2.2
11	I	112	MET	2.2
2	x	2	C	2.2
31	y	240	C	2.2
39	g	57	GLN	2.2

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Mol	Chain	Res	Type	RSRZ
12	J	93	GLY	2.2
21	S	99	CYS	2.2
1	w	940	G	2.2
42	j	93	ARG	2.2
4	B	8	PRO	2.2
20	R	71	GLY	2.2
15	M	59	LYS	2.2
23	U	12	ASN	2.2
30	b	34	GLN	2.2
34	l	3	C	2.2
10	H	90	LEU	2.2
31	y	902	G	2.2
31	y	1361	G	2.2
47	o	46	GLU	2.2
17	O	31	SER	2.2
22	T	167	PRO	2.2
1	w	2555	U	2.2
31	y	751	U	2.2
4	B	11	PRO	2.2
20	R	6	ASP	2.2
4	B	13	ARG	2.2
17	O	9	VAL	2.2
31	y	111	G	2.2
31	y	1304	G	2.2
1	w	2333	A	2.2
1	w	2753	A	2.2
31	y	430	A	2.2
33	0	14	A	2.2
49	q	8	ARG	2.2
1	w	1349	A	2.2
1	w	1855	G	2.2
31	y	869	G	2.2
1	w	810	U	2.2
31	y	1236	A	2.2
1	w	453	C	2.2
10	H	108	ILE	2.2
1	w	859	G	2.2
1	w	880	G	2.2
1	w	1195	G	2.2
1	w	1348	G	2.2
1	w	2291	U	2.2
31	y	1286	A	2.2

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Mol	Chain	Res	Type	RSRZ
31	y	1353	G	2.2
46	n	118	ALA	2.2
6	D	92	TYR	2.2
17	O	27	LEU	2.2
18	P	90	PRO	2.2
31	y	345	C	2.2
13	K	31	ASP	2.2
24	V	20	ARG	2.2
1	w	173	G	2.2
1	w	1869	G	2.2
1	w	2012	G	2.2
1	w	2370	G	2.2
31	y	1329	A	2.2
11	I	8	LEU	2.2
17	O	24	TYR	2.2
29	a	63	PRO	2.1
31	y	899	C	2.1
31	y	1059	C	2.1
39	g	56	PRO	2.1
16	N	68	TYR	2.1
44	l	122	LYS	2.1
1	w	33	U	2.1
37	e	7	PRO	2.1
1	w	1606	G	2.1
1	w	2468	G	2.1
31	y	143	A	2.1
31	y	290	C	2.1
8	F	58	GLU	2.1
1	w	185	U	2.1
1	w	177	G	2.1
31	y	101	A	2.1
31	y	922	G	2.1
2	x	3	C	2.1
20	R	9	LEU	2.1
29	a	4	MET	2.1
31	y	1315	U	2.1
32	z	51	U	2.1
1	w	1307	A	2.1
1	w	2335	A	2.1
2	x	116	G	2.1
14	L	74	LYS	2.1
31	y	1295	G	2.1

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Mol	Chain	Res	Type	RSRZ
32	z	52	G	2.1
2	x	49	C	2.1
1	w	566	U	2.1
1	w	2167	U	2.1
1	w	28	A	2.1
1	w	2059	A	2.1
9	G	16	GLY	2.1
25	W	16	LEU	2.1
1	w	45	G	2.1
1	w	438	G	2.1
2	x	87	G	2.1
31	y	81	G	2.1
31	y	1024	G	2.1
31	y	1343	G	2.1
9	G	39	ALA	2.1
53	u	12	ALA	2.1
1	w	2540	C	2.1
2	x	32	C	2.1
31	y	25	C	2.1
31	y	1314	C	2.1
31	y	1342	C	2.1
32	z	43	C	2.1
16	N	65	LYS	2.1
53	u	13	LEU	2.1
1	w	222	A	2.1
5	C	120	TRP	2.1
1	w	242	G	2.1
1	w	874	G	2.1
1	w	1170	G	2.1
31	y	1187	G	2.1
31	y	1526	G	2.1
1	w	915	C	2.1
1	w	2681	C	2.1
2	x	38	C	2.1
13	K	74	TYR	2.1
31	y	992	U	2.1
37	e	209	ARG	2.1
1	w	466	A	2.1
1	w	896	A	2.1
1	w	1265	A	2.1
17	O	45	TYR	2.1
21	S	88	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
1	w	175	G	2.1
1	w	272	G	2.1
45	m	25	ALA	2.1
1	w	22	C	2.1
1	w	1523	U	2.1
1	w	1834	U	2.1
29	a	25	MET	2.1
29	a	51	ALA	2.1
31	y	1235	U	2.1
37	e	131	ARG	2.1
1	w	215	G	2.1
1	w	496	G	2.1
1	w	577	G	2.1
1	w	1542	G	2.1
1	w	2467	C	2.1
2	x	12	C	2.1
4	B	26	LYS	2.1
31	y	1234	C	2.1
31	y	89	U	2.1
42	j	122	ALA	2.1
24	V	13	ILE	2.1
12	J	29	LYS	2.1
1	w	552	G	2.1
1	w	2156	G	2.1
1	w	2525	G	2.1
2	x	51	G	2.1
31	y	925	G	2.1
1	w	687	C	2.1
1	w	895	U	2.1
1	w	2701	C	2.1
17	O	19	LYS	2.1
31	y	221	C	2.1
49	q	23	ASP	2.1
31	y	1219	U	2.1
15	M	24	LEU	2.1
1	w	472	A	2.0
1	w	918	A	2.0
6	D	47	LYS	2.0
24	V	23	LYS	2.0
31	y	32	A	2.0
31	y	729	A	2.0
1	w	356	G	2.0

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Mol	Chain	Res	Type	RSRZ
1	w	1191	G	2.0
1	w	2053	G	2.0
1	w	2793	G	2.0
2	x	81	G	2.0
2	x	114	G	2.0
31	y	752	G	2.0
31	y	774	G	2.0
31	y	1202	G	2.0
36	d	34	LEU	2.0
20	R	4	ALA	2.0
31	y	1037	C	2.0
1	w	44	A	2.0
31	y	1250	A	2.0
53	u	45	GLN	2.0
24	V	21	ARG	2.0
1	w	1527	G	2.0
31	y	331	G	2.0
32	z	53	G	2.0
1	w	1851	U	2.0
1	w	2381	C	2.0
1	w	460	A	2.0
1	w	1226	A	2.0
1	w	1460	A	2.0
4	B	32	SER	2.0
42	j	97	LYS	2.0
46	n	35	GLU	2.0
31	y	373	A	2.0
1	w	1324	G	2.0
1	w	1695	G	2.0
1	w	1833	U	2.0
1	w	2308	G	2.0
30	b	8	LYS	2.0
31	y	971	G	2.0
1	w	2021	C	2.0
2	x	90	C	2.0
31	y	288	A	2.0
16	N	103	ARG	2.0
1	w	235	U	2.0
1	w	1024	G	2.0
1	w	1880	C	2.0
1	w	2063	C	2.0
1	w	2445	G	2.0

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Mol	Chain	Res	Type	RSRZ
2	x	33	G	2.0
13	K	72	LYS	2.0
31	y	90	C	2.0
31	y	145	G	2.0
31	y	1117	G	2.0
1	w	1213	A	2.0
14	L	108	GLY	2.0
42	j	103	THR	2.0
16	N	2	ASN	2.0
22	T	163	LEU	2.0
42	j	66	ARG	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å ²)	Q<0.9
31	2MG	y	1207	24/25	0.30	-	21,22,26,26	0
32	7MG	z	46	24/25	0.30	-	5,5,12,12	0
31	PSU	y	516	20/21	0.32	-	137,138,148,148	0
32	H2U	z	20	20/21	0.35	-	124,124,133,133	0
33	PSU	0	55	20/21	0.26	-	36,36,36,36	0
32	MIA	z	37	29/30	0.36	-	20,26,32,32	0
31	M2G	y	966	25/26	0.36	-	15,16,20,31	0
31	4OC	y	1402	22/23	0.36	-	10,13,16,16	0
31	5MC	y	1404	21/22	0.36	-	5,6,8,9	0
31	UR3	y	1498	21/22	0.31	-	5,5,5,5	0
32	PSU	z	55	20/21	0.38	-	40,50,52,53	0
31	5MC	y	1407	21/22	0.28	-	25,28,30,30	0
32	PSU	z	39	20/21	0.37	-	5,5,5,5	0
32	H2U	z	16	20/21	0.58	-	80,92,93,95	0
32	4SU	z	8	20/21	0.34	-	5,5,5,5	0
31	7MG	y	527	24/25	0.29	-	7,10,24,26	0
32	5MU	z	54	21/22	0.29	-	5,5,5,5	0
31	MA6	y	1519	24/25	0.30	-	5,5,6,8	0
31	5MC	y	1400	21/22	0.35	-	5,5,5,5	0
31	MA6	y	1518	24/25	0.28	-	31,39,52,53	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
31	5MC	y	967	21/22	0.38	-	124,124,133,133	0
32	PSU	z	32	20/21	0.32	-	42,52,58,59	0

6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

6.4 Ligands ⓘ

There are no ligands in this entry.

6.5 Other polymers ⓘ

There are no such residues in this entry.