



Full wwPDB EM Validation Report ⓘ

Jul 23, 2024 – 07:10 PM JST

PDB ID : 8I0V
EMDB ID : EMD-35111
Title : The cryo-EM structure of human post-Bact complex
Authors : Zhan, X.; Lu, Y.; Shi, Y.
Deposited on : 2023-01-11
Resolution : 3.00 Å(reported)

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

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A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

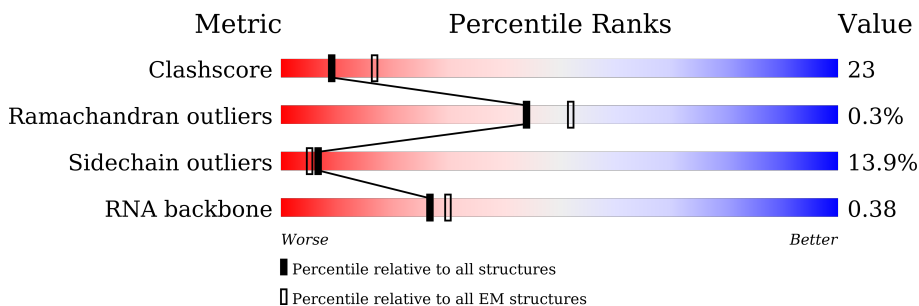
EMDB validation analysis : 0.0.1.dev92
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.37.1

1 Overall quality at a glance

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

The reported resolution of this entry is 3.00 Å.

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



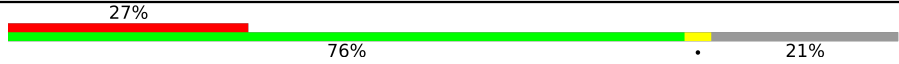
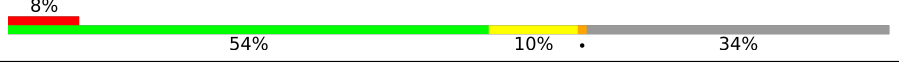

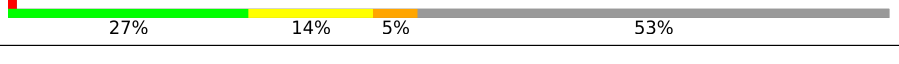



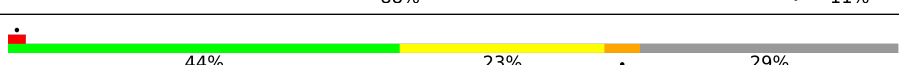

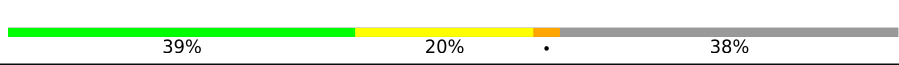
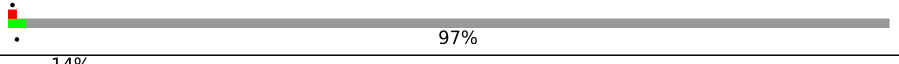

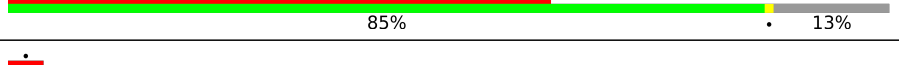
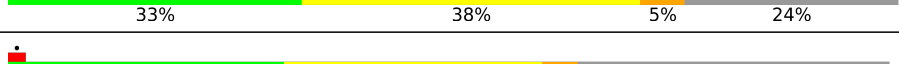
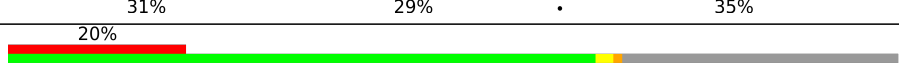
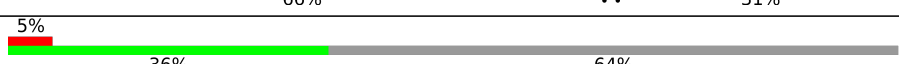
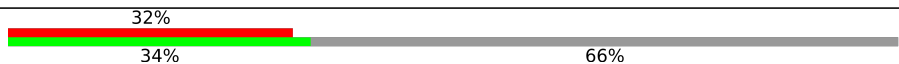

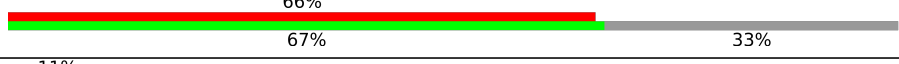






Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

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

Mol	Chain	Length	Quality of chain
1	A	2335	
2	B	117	
3	C	972	
4	E	357	
5	F	107	
6	G	220	
7	H	188	



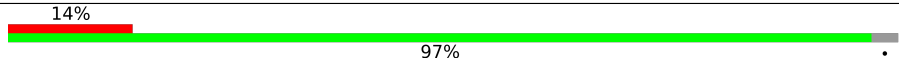
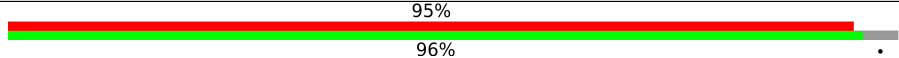












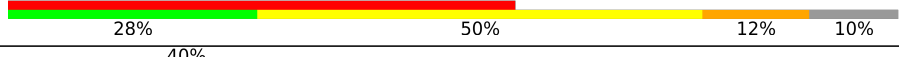


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Mol	Chain	Length	Quality of chain
8	I	855	
9	J	848	
10	L	802	
11	M	243	
12	N	144	
13	O	420	
14	P	229	
15	Q	1485	
16	R	536	
17	S	166	
18	T	514	
19	U	2752	
20	V	908	
21	W	579	
22	X	1041	
23	Y	492	
24	Z	225	
25	a	240	
25	m	240	
26	b	119	
26	n	119	
27	c	118	
27	h	118	
28	d	86	
28	i	86	

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Mol	Chain	Length	Quality of chain
29	e	92	 86% 14%
29	j	92	 88% 12%
30	f	76	 14% 97% 9%
30	k	76	 95% 5%
31	g	126	 64% 36%
31	l	126	 60% 34%
32	q	504	 17% 26% 74%
32	r	504	 12% 26% 74%
32	s	504	 15% 25% 74%
32	t	504	 17% 26% 74%
33	y	301	 16% 26% 74%
34	1	1304	 49% 24% 33% 6% 37%
35	3	1217	 81% 35% 51% 11% 1%
36	2	895	 23% 18% 7% 72%
37	4	424	 28% 34% 62%
38	7	110	 50% 25% 34% 15% 26%
39	5	86	 57% 28% 50% 12% 10%
40	p	225	 40% 40% 60%
41	o	255	 63% 64% 36%

2 Entry composition [i](#)

There are 45 unique types of molecules in this entry. The entry contains 104205 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Pre-mRNA-processing-splicing factor 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	1969	16331	10528	2863	2872	68	0	0

- Molecule 2 is a RNA chain called U5 snRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	B	98	2066	925	347	696	98	0	0

- Molecule 3 is a protein called 116 kDa U5 small nuclear ribonucleoprotein component.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	860	6724	4298	1122	1272	32	0	0

- Molecule 4 is a protein called U5 small nuclear ribonucleoprotein 40 kDa protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	E	299	2338	1470	410	445	13	0	0

- Molecule 5 is a RNA chain called U6 snRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
5	F	97	2075	928	381	669	97	0	0

- Molecule 6 is a RNA chain called Pre-mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
6	G	79	1587	708	248	552	79	0	0

- Molecule 7 is a RNA chain called U2 snRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
7	H	151	3203	1431	551	1070	151	0	0

- Molecule 8 is a protein called Pre-mRNA-splicing factor SYF1.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
8	I	672	3387	2043	672	672	0	0

- Molecule 9 is a protein called Crooked neck-like protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	J	563	3789	2361	712	710	6	0	0

- Molecule 10 is a protein called Cell division cycle 5-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	L	387	2584	1596	494	489	5	0	0

- Molecule 11 is a protein called Pre-mRNA-splicing factor SYF2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	M	114	971	605	181	183	2	0	0

- Molecule 12 is a protein called Protein BUD31 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	N	143	1184	746	217	209	12	0	0

- Molecule 13 is a protein called Pre-mRNA-splicing factor RBM22.

Mol	Chain	Residues	Atoms			AltConf	Trace	
			Total	C	N			O
13	O	290	1447	862	292	293	0	0

- Molecule 14 is a protein called Spliceosome-associated protein CWC15 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	P	101	Total	C	N	O	S	0	0
			876	537	175	162	2		

- Molecule 15 is a protein called RNA helicase aquarius.

Mol	Chain	Residues	Atoms				AltConf	Trace
15	Q	1322	Total	C	N	O	0	0
			5288	2644	1322	1322		

- Molecule 16 is a protein called SNW domain-containing protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace	
16	R	380	Total	C	N	O	P	S	0	0
			2915	1791	552	558	2	12		

- Molecule 17 is a protein called Peptidyl-prolyl cis-trans isomerase-like 1.

Mol	Chain	Residues	Atoms			AltConf	Trace	
17	S	158	Total	C	N	O	0	0
			770	454	158	158		

- Molecule 18 is a protein called Pleiotropic regulator 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	T	320	Total	C	N	O	S	0	0
			2507	1582	456	462	7		

- Molecule 19 is a protein called Serine/arginine repetitive matrix protein 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	U	72	Total	C	N	O	S	0	0
			422	257	82	82	1		

- Molecule 20 is a protein called Pre-mRNA-splicing factor CWC22 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	V	462	Total	C	N	O	S	0	0
			2959	1842	537	567	13		

- Molecule 21 is a protein called Pre-mRNA-processing factor 17.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
21	W	501	2473	1471	501	501	0	0

- Molecule 22 is a protein called Pre-mRNA-splicing factor ATP-dependent RNA helicase DHX16.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
22	X	786	6357	4010	1133	1184	30	0	0

- Molecule 23 is a protein called Peptidyl-prolyl cis-trans isomerase-like 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
23	Y	320	2556	1616	420	508	12	0	0

- Molecule 24 is a protein called Pre-mRNA-splicing factor SPF27.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
24	Z	155	772	462	155	155	0	0

- Molecule 25 is a protein called Small nuclear ribonucleoprotein-associated proteins B and B'.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
25	a	86	344	172	86	86	0	0
25	m	82	413	249	82	82	0	0

- Molecule 26 is a protein called Small nuclear ribonucleoprotein Sm D1.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
26	b	82	328	164	82	82	0	0
26	n	80	402	242	80	80	0	0

- Molecule 27 is a protein called Small nuclear ribonucleoprotein Sm D2.

Mol	Chain	Residues	Atoms				AltConf	Trace
27	c	97	Total	C	N	O	0	0
			388	194	97	97		
27	h	95	Total	C	N	O	0	0
			482	292	95	95		

- Molecule 28 is a protein called Small nuclear ribonucleoprotein F.

Mol	Chain	Residues	Atoms				AltConf	Trace
28	d	74	Total	C	N	O	0	0
			296	148	74	74		
28	i	72	Total	C	N	O	0	0
			359	215	72	72		

- Molecule 29 is a protein called Small nuclear ribonucleoprotein E.

Mol	Chain	Residues	Atoms				AltConf	Trace
29	e	79	Total	C	N	O	0	0
			316	158	79	79		
29	j	81	Total	C	N	O	0	0
			403	241	81	81		

- Molecule 30 is a protein called Small nuclear ribonucleoprotein G.

Mol	Chain	Residues	Atoms				AltConf	Trace
30	f	74	Total	C	N	O	0	0
			296	148	74	74		
30	k	73	Total	C	N	O	0	0
			364	218	73	73		

- Molecule 31 is a protein called Small nuclear ribonucleoprotein Sm D3.

Mol	Chain	Residues	Atoms				AltConf	Trace
31	g	81	Total	C	N	O	0	0
			324	162	81	81		
31	l	83	Total	C	N	O	0	0
			415	249	83	83		

- Molecule 32 is a protein called Pre-mRNA-processing factor 19.

Mol	Chain	Residues	Atoms				AltConf	Trace
32	q	132	Total	C	N	O	0	0
			659	395	132	132		

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Mol	Chain	Residues	Atoms				AltConf	Trace
32	r	131	Total	C	N	O	0	0
			654	392	131	131		
32	s	132	Total	C	N	O	0	0
			659	395	132	132		
32	t	131	Total	C	N	O	0	0
			654	392	131	131		

- Molecule 33 is a protein called Peptidyl-prolyl cis-trans isomerase E.

Mol	Chain	Residues	Atoms				AltConf	Trace
33	y	79	Total	C	N	O	0	0
			316	158	79	79		

- Molecule 34 is a protein called Splicing factor 3B subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	1	816	Total	C	N	O	S	0	0
			6378	4084	1106	1151	37		

- Molecule 35 is a protein called Splicing factor 3B subunit 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	3	1177	Total	C	N	O	S	0	0
			9210	5848	1562	1755	45		

- Molecule 36 is a protein called Splicing factor 3B subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	2	250	Total	C	N	O	S	0	0
			1576	973	307	294	2		

- Molecule 37 is a protein called Splicing factor 3B subunit 4.

Mol	Chain	Residues	Atoms				AltConf	Trace
37	4	161	Total	C	N	O	0	0
			792	470	161	161		

- Molecule 38 is a protein called PHD finger-like domain-containing protein 5A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
38	7	81	613	376	109	115	13	0	0

- Molecule 39 is a protein called Splicing factor 3B subunit 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
39	5	77	635	403	110	117	5	0	0

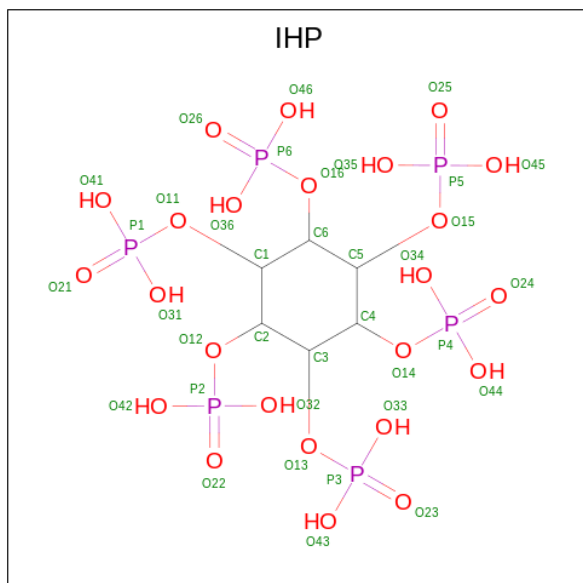
- Molecule 40 is a protein called U2 small nuclear ribonucleoprotein B'.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
40	p	90	451	271	90	90	0	0

- Molecule 41 is a protein called U2 small nuclear ribonucleoprotein A'.

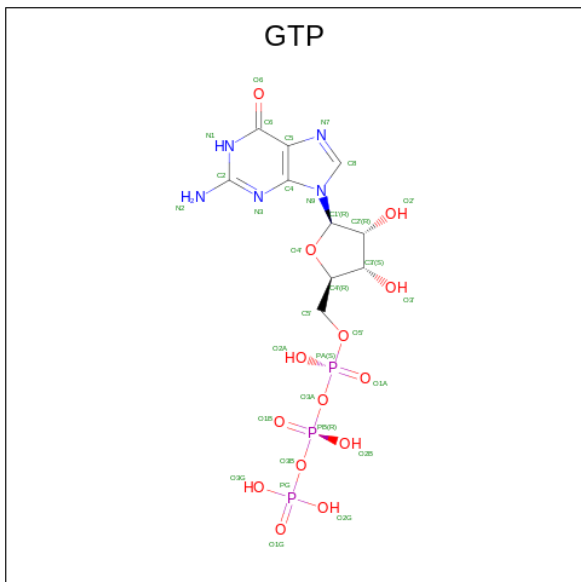
Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
41	o	162	816	492	162	162	0	0

- Molecule 42 is INOSITOL HEXAKISPHOSPHATE (three-letter code: IHP) (formula: $C_6H_{18}O_{24}P_6$).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	O	P	
42	A	1	36	6	24	6	0

- Molecule 43 is GUANOSINE-5'-TRIPHOSPHATE (three-letter code: GTP) (formula: $C_{10}H_{16}N_5O_{14}P_3$).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
43	C	1	32	10	5	14	3	0

- Molecule 44 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
44	C	1	1	1	0
44	F	5	5	5	0
44	L	1	1	1	0

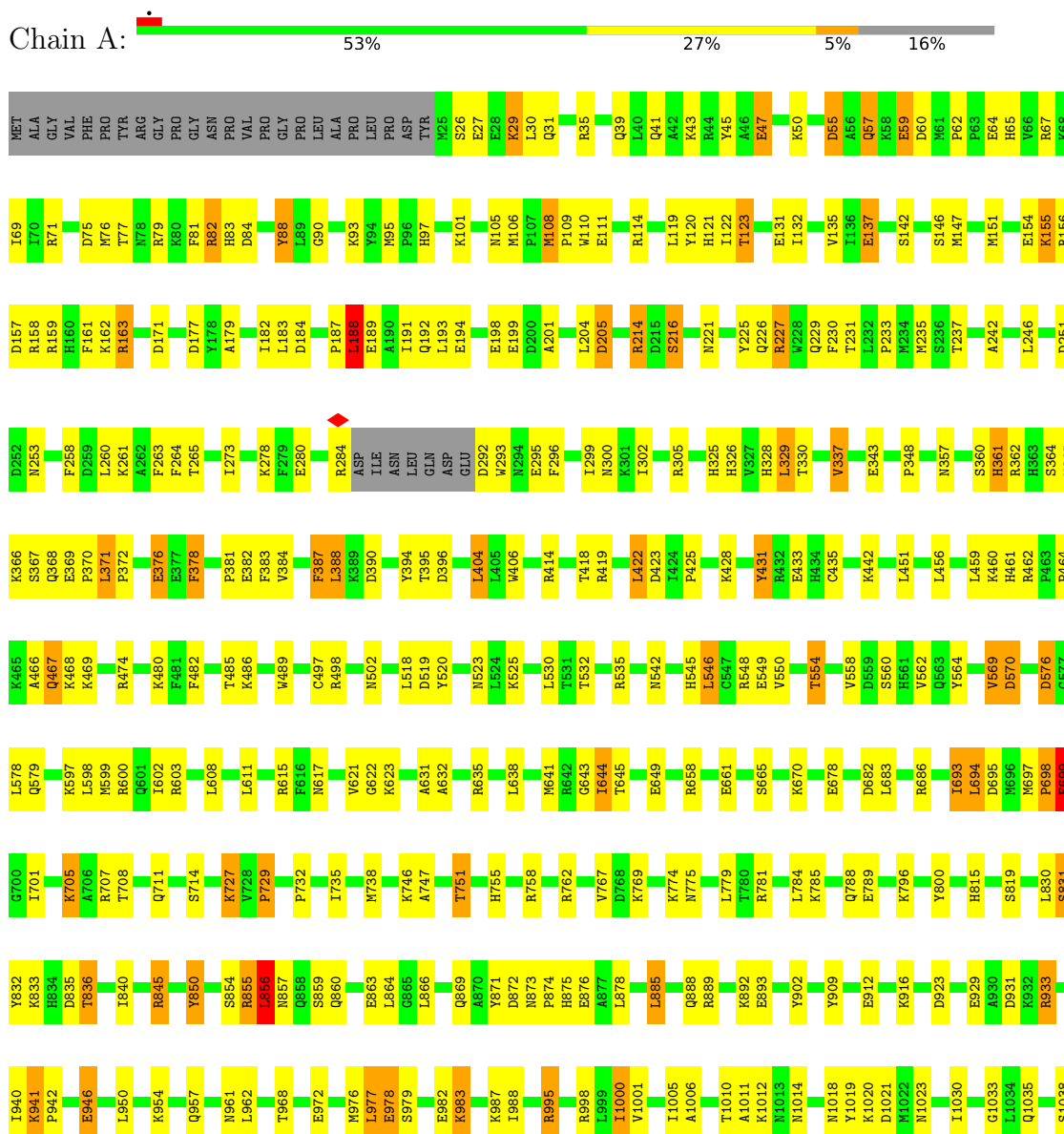
- Molecule 45 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
			Total	Zn	
45	N	3	3	3	0
45	7	3	3	3	0

3 Residue-property plots

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

- Molecule 1: Pre-mRNA-processing-splicing factor 8

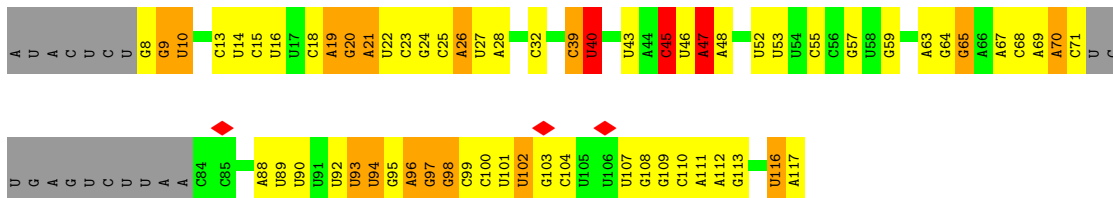


THR	GLN	ASP	GLU	H1968	I1906	A1837	Q1775	R1681	V1590	E1564	L1391	E1276	V1168	Y1043
CYS	THR	ASP	GLN	P1969	I1906	K1838	I1776	R1684	Q1599	K1505	L1391	E1276	Q1169	Y1043
THR	THR	ASP	GLN	T1970	T1910	M1839	I1777	F1684	E1600	SER	Q1394	E1284	S1173	L1046
PRO	THR	GLU	LEU	T1972	E1911	L1840	W1778	F1684	L1601	GLY	E1395	L1283	F1174	L1046
GLY	THR	D1973	ALA	D1973	M1914	E1844	W1780	D1690	L1604	PHE	A1396	N1293	V1175	L1050
TYR	GLN	E1974	VAL	D1973	V1915	V1845	D1781	M1691	L1606	GLU	I1397	R1298	S1176	R1057
CYS	THR	E1975	THR	E1975	V1915	A1846	D1782	M1692	I1606	SER	A1398	R1298	S1179	R1057
LEU	PRO	W1976	ARG	W1976	I1916	A1847	N1783	S1693	I1607	GLU	Q1399	I1301	E1060	E1060
THR	THR	L1977	THR	L1977	F1917	L1848	N1784	S1693	E1607	MET	Q1399	I1301	D1181	E1060
LEU	THR	K1978	THR	K1978	L1918	H1849	H1785	S1697	G1607	LYS	R1401	G1302	D1181	E1060
VAL	GLU	V1979	VAL	V1979	L1919	H1849	H1785	S1697	G1607	LYS	R1401	G1302	D1181	E1060
ASN	THR	I1920	ASN	I1920	R1850	E1850	Y1786	T1699	T1608	VAL	R1402	L1303	Q1075	Q1075
LYS	LEU	S1851	LYS	S1851	S1851	S1851	Y1786	G1700	H1645	LEU	L1403	K1306	D1076	D1076
ASN	LEU	D1921	ASN	D1921	S1851	S1851	Y1786	G1700	H1645	LEU	L1403	K1306	D1076	D1076
VAL	LEU	D1922	VAL	D1922	L1922	L1922	Y1786	V1701	M1623	GLN	D1407	R1310	T1079	T1079
GLY	VAL	L1923	GLY	L1923	P1853	S1853	Y1786	L1702	S1624	VAL	L1408	F1311	M1189	Y1090
LEU	GLU	L1924	LEU	L1924	V1854	V1854	Y1786	I1703	S1625	GLY	E1409	M1189	Y1090	Y1090
ASP	LEU	K1925	ASP	K1925	E1855	E1855	Y1786	I1703	S1625	GLY	E1409	M1189	Y1090	Y1090
THR	THR	I1927	THR	I1927	Q1857	Q1857	Y1786	D1706	D1628	THR	S1411	L1328	I1092	I1092
GLY	THR	S1928	GLY	S1928	P1858	P1858	Y1786	H1712	L1629	THR	W1412	S1329	D1104	D1104
THR	THR	K1859	THR	K1859	K1859	K1859	Y1786	S1713	L1630	THR	W1412	S1329	D1104	D1104
TRP	TRP	I1930	TRP	I1930	Q1860	Q1860	Y1786	A1714	F1631	TRP	D1413	V1333	K1199	D1108
GLY	HIS	Y1931	GLY	Y1931	I1861	I1861	Y1786	G1716	F1632	GLY	R1414	V1333	C1200	L1109
LEU	THR	A1932	LEU	A1932	L1862	L1862	Y1786	H1717	A1633	LEU	G1415	P1336	R1201	L1109
ARG	GLN	F1933	ARG	F1933	I1862	I1862	Y1786	H1717	A1633	LEU	G1415	P1336	R1201	L1109
ALA	GLN	S1934	ALA	S1934	V1863	V1863	Y1786	W1718	Y1635	ARG	P1417	Q1337	T1202	R1112
GLY	THR	R1935	GLY	R1935	I1863	I1863	Y1786	F1719	K1636	THR	R1418	S1338	S1203	H1117
THR	PRO	I1937	THR	I1937	K1866	K1866	Y1786	P1720	W1637	THR	R1419	S1338	S1203	H1117
LEU	GLY	L1938	LEU	L1938	G1867	G1867	Y1786	K1723	M1639	LEU	R1427	W1342	E1205	N1121
ASN	GLN	I1939	ASN	I1939	M1868	M1868	Y1786	L1725	L1639	ASN	R1437	W1342	E1205	N1121
ASN	GLN	L1940	ASN	L1940	G1869	G1869	Y1786	I1726	M1640	ASN	R1437	W1342	E1205	N1121
THR	THR	R1941	THR	R1941	D1870	D1870	Y1786	M1734	S1642	THR	Y1436	K1344	F1207	N1122
GLY	THR	A1942	GLY	A1942	E1872	E1872	Y1786	M1734	S1642	THR	Y1436	K1344	F1207	N1122
VAL	VAL	H1944	VAL	H1944	I1873	I1873	Y1786	M1734	S1642	VAL	R1439	K1344	F1207	N1122
VAL	VAL	V1945	VAL	V1945	V1874	V1874	Y1786	M1734	S1642	VAL	R1439	K1344	F1207	N1122
PRO	PRO	N1946	PRO	N1946	L1877	L1877	Y1786	M1734	S1642	PRO	H1467	W1348	H1209	H1209
THR	THR	D1947	THR	D1947	D1878	D1878	Y1786	M1734	S1642	THR	H1467	W1348	H1209	H1209
ASN	ASN	N1948	ASN	N1948	F1879	F1879	Y1786	M1734	S1642	ASN	H1467	W1348	H1209	H1209
ALA	ALA	R1949	ALA	R1949	P1880	P1880	Y1786	M1734	S1642	ALA	H1467	W1348	H1209	H1209
GLN	GLN	A1950	GLN	A1950	M1881	M1881	Y1786	M1734	S1642	GLN	H1467	W1348	H1209	H1209
VAL	VAL	K1951	VAL	K1951	I1882	I1882	Y1786	M1734	S1642	VAL	H1467	W1348	H1209	H1209
LEU	LEU	V1952	LEU	V1952	I1882	I1882	Y1786	M1734	S1642	LEU	H1467	W1348	H1209	H1209
LEU	LEU	L1953	LEU	L1953	F1884	F1884	Y1786	M1734	S1642	LEU	H1467	W1348	H1209	H1209
ASN	ASN	K1954	ASN	K1954	I1884	I1884	Y1786	M1734	S1642	ASN	H1467	W1348	H1209	H1209
LEU	LEU	K1955	LEU	K1955	K1885	K1885	Y1786	M1734	S1642	LEU	H1467	W1348	H1209	H1209
GLN	GLN	P1956	GLN	P1956	G1886	G1886	Y1786	M1734	S1642	GLN	H1467	W1348	H1209	H1209
ARG	ARG	E1957	ARG	E1957	I1822	I1822	Y1786	M1734	S1642	ARG	H1467	W1348	H1209	H1209
THR	THR	L1889	THR	L1889	S1825	S1825	Y1786	M1734	S1642	THR	H1467	W1348	H1209	H1209
ASN	ASN	Q1890	ASN	Q1890	W1827	W1827	Y1786	M1734	S1642	ASN	H1467	W1348	H1209	H1209
ILE	ILE	L1891	ILE	L1891	W1827	W1827	Y1786	M1734	S1642	ILE	H1467	W1348	H1209	H1209
GLY	GLY	T1959	GLY	T1959	A1828	A1828	Y1786	M1734	S1642	GLY	H1467	W1348	H1209	H1209
GLN	GLN	T1960	GLN	T1960	G1829	G1829	Y1786	M1734	S1642	GLN	H1467	W1348	H1209	H1209
TRP	TRP	I1961	TRP	I1961	Q1830	Q1830	Y1786	M1734	S1642	TRP	H1467	W1348	H1209	H1209
VAL	VAL	T1962	VAL	T1962	Q1830	Q1830	Y1786	M1734	S1642	VAL	H1467	W1348	H1209	H1209
THR	THR	E1963	THR	E1963	K1831	K1831	Y1786	M1734	S1642	THR	H1467	W1348	H1209	H1209
LEU	LEU	P1964	LEU	P1964	R1832	R1832	Y1786	M1734	S1642	LEU	H1467	W1348	H1209	H1209
GLY	GLY	H1965	GLY	H1965	L1833	L1833	Y1786	M1734	S1642	GLY	H1467	W1348	H1209	H1209
VAL	VAL	H1966	VAL	H1966	Q1835	Q1835	Y1786	M1734	S1642	VAL	H1467	W1348	H1209	H1209
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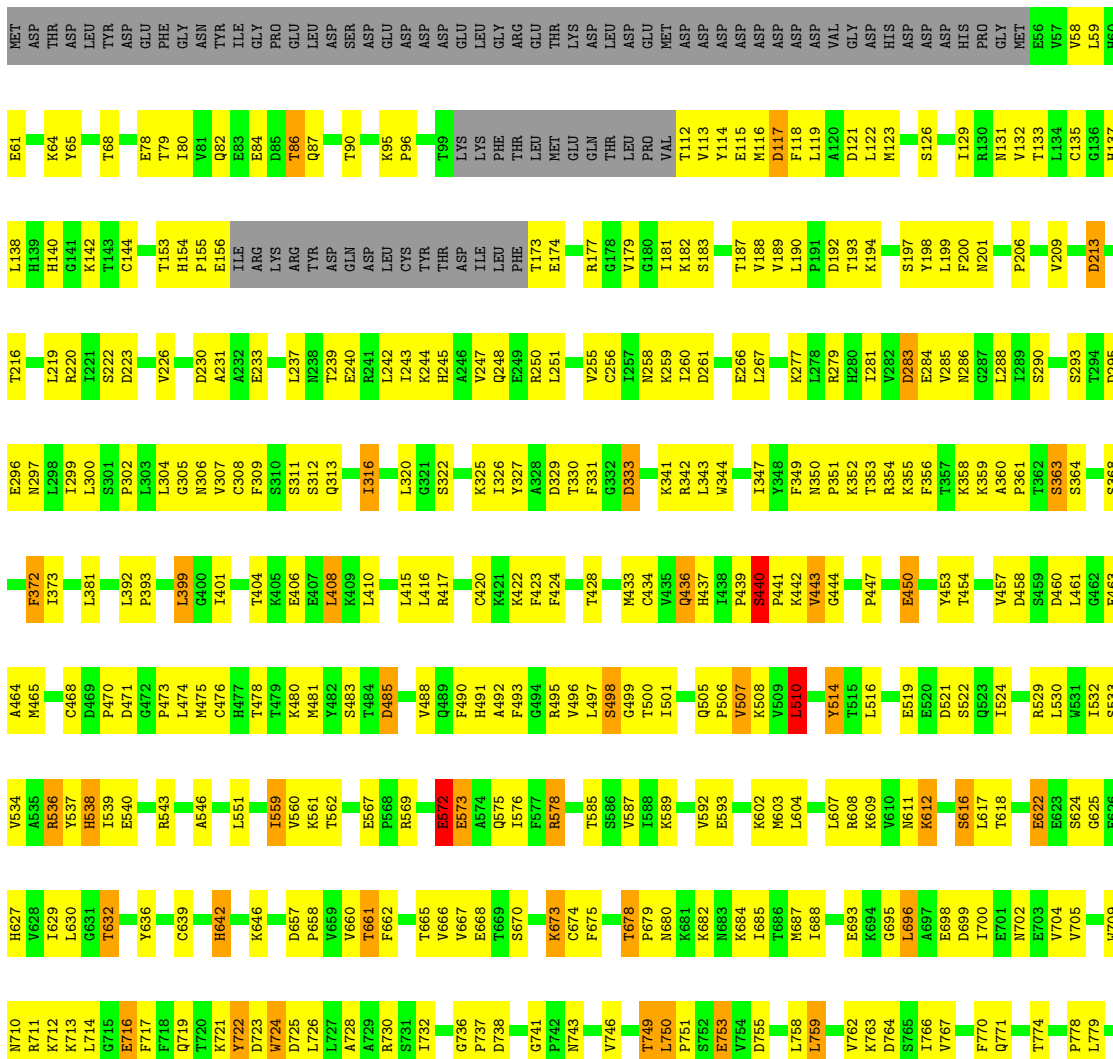
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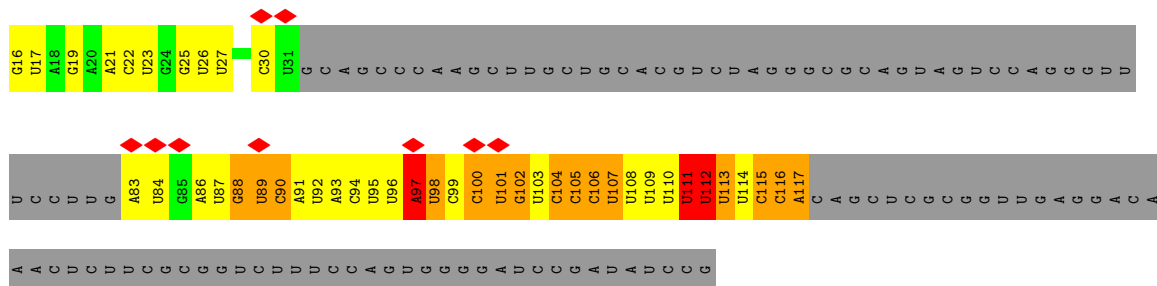
ALA

Molecule 2: U5 snRNA

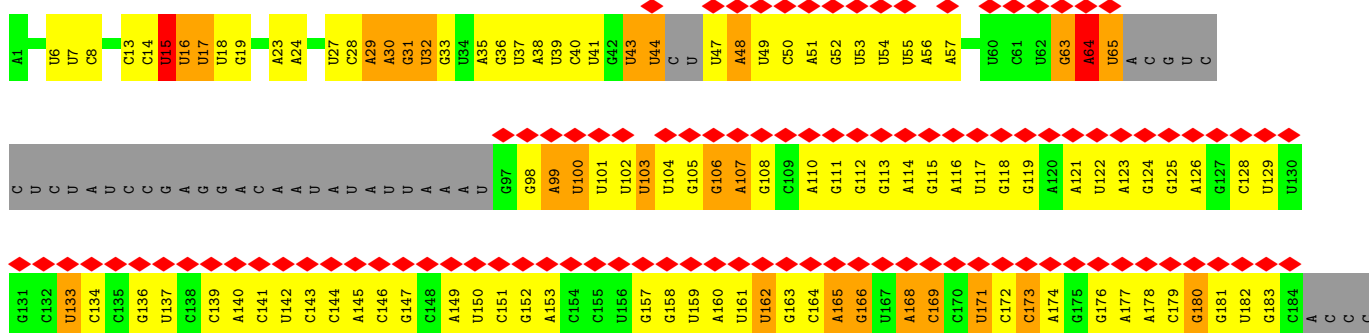
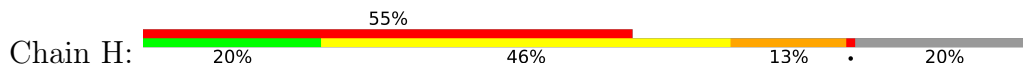


Molecule 3: 116 kDa U5 small nuclear ribonucleoprotein component

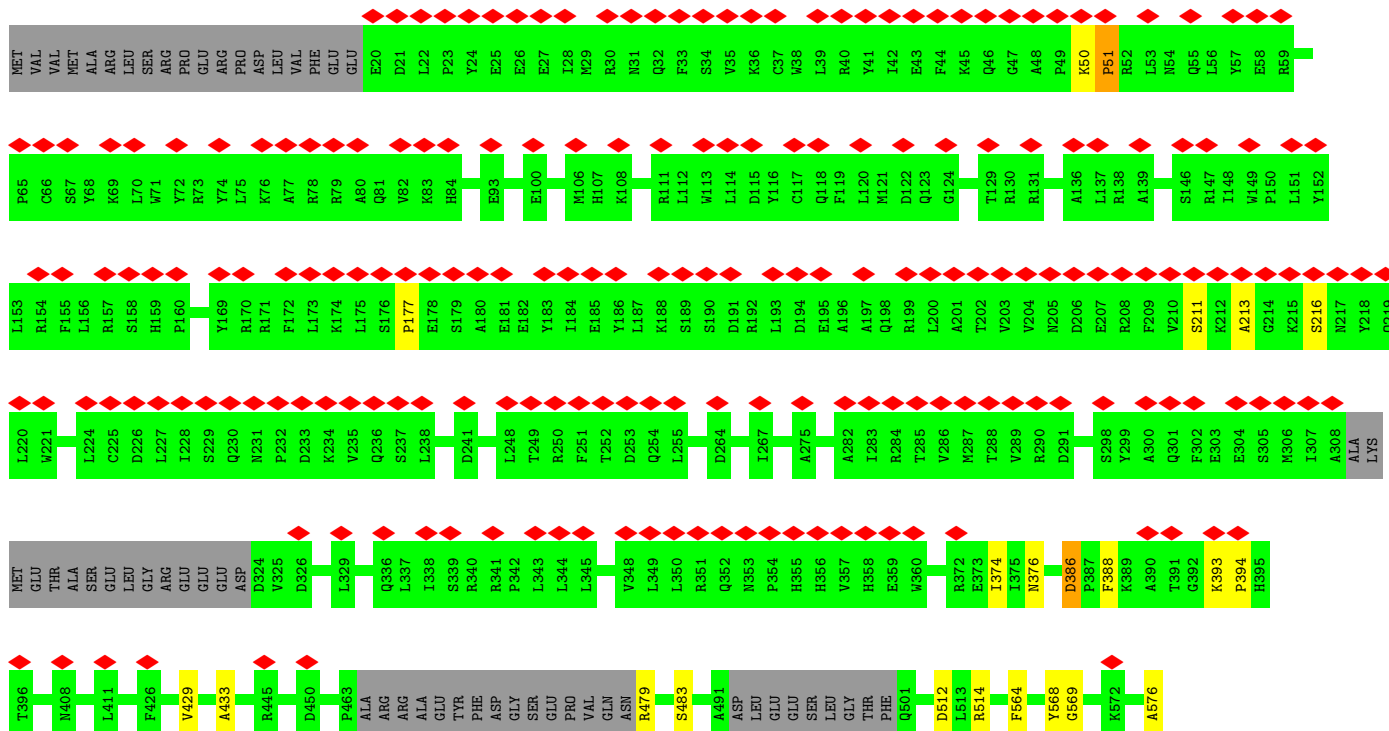
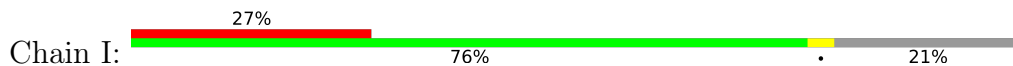


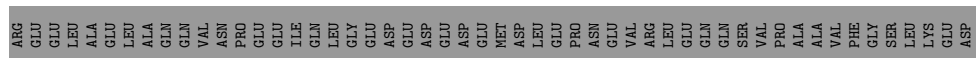
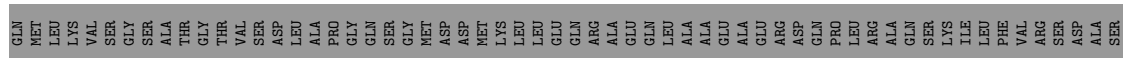
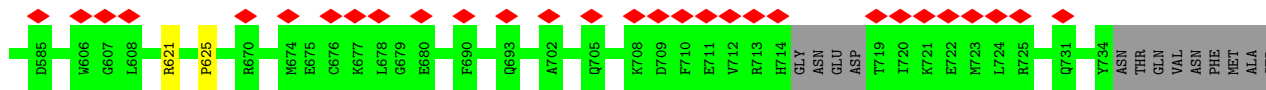


• Molecule 7: U2 snRNA

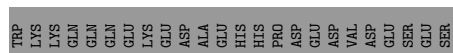
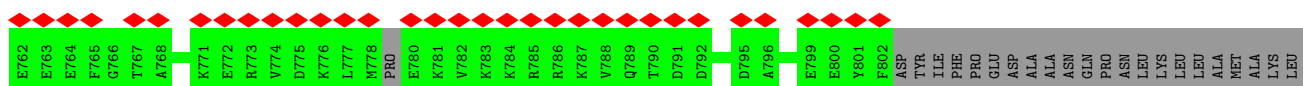
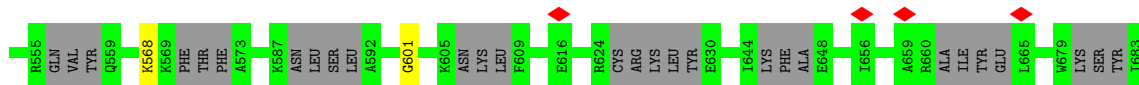
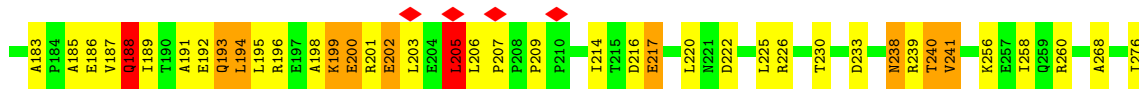
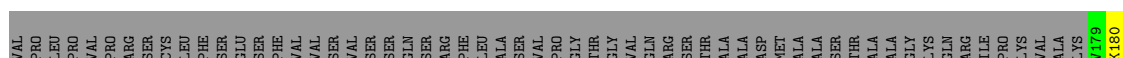
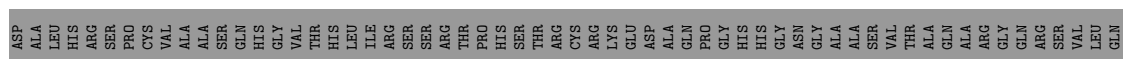
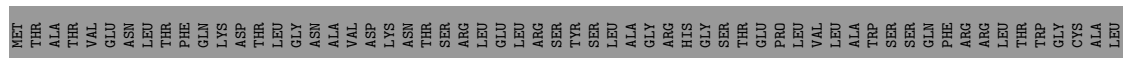


• Molecule 8: Pre-mRNA-splicing factor SYF1

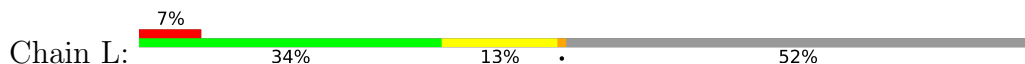


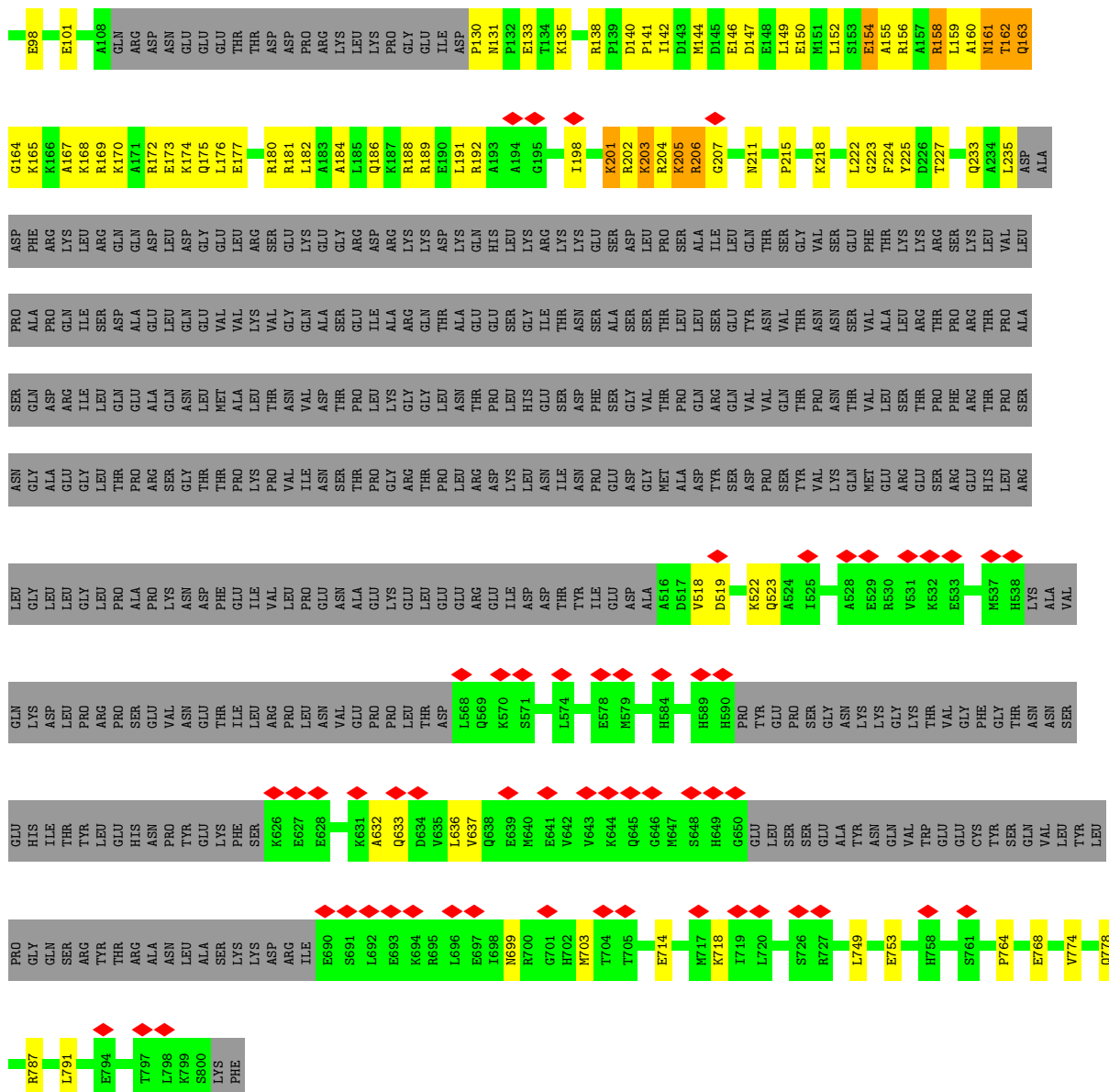


• Molecule 9: Crooked neck-like protein 1

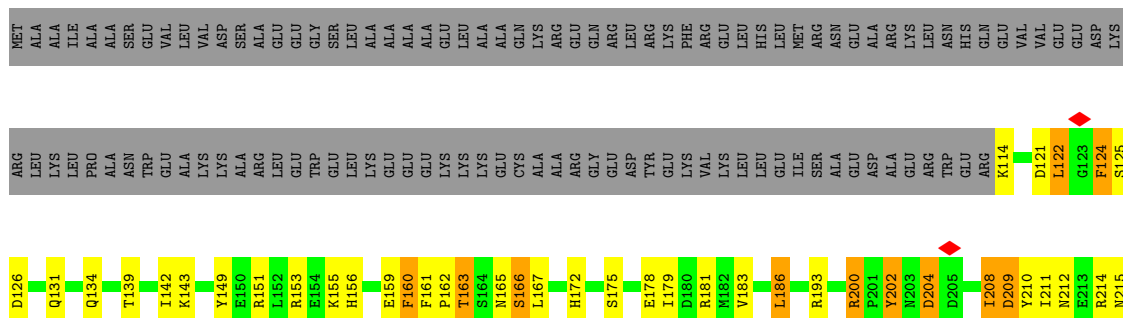
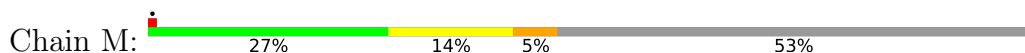


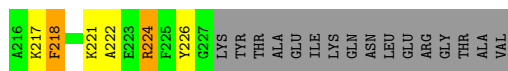
• Molecule 10: Cell division cycle 5-like protein



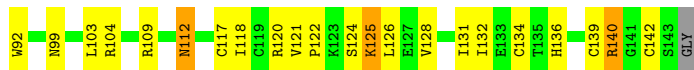
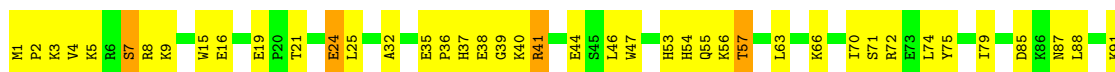


• Molecule 11: Pre-mRNA-splicing factor SYF2

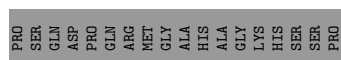
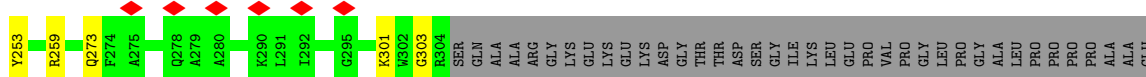




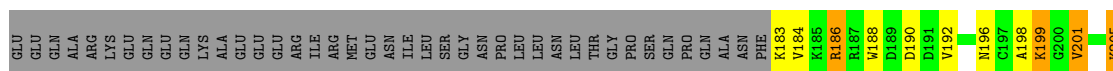
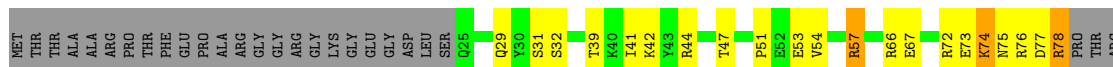
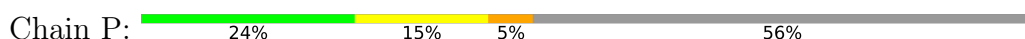
Molecule 12: Protein BUD31 homolog



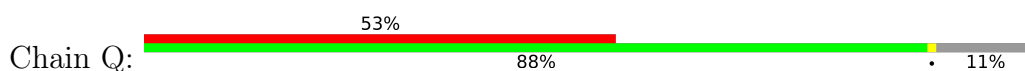
Molecule 13: Pre-mRNA-splicing factor RBM22



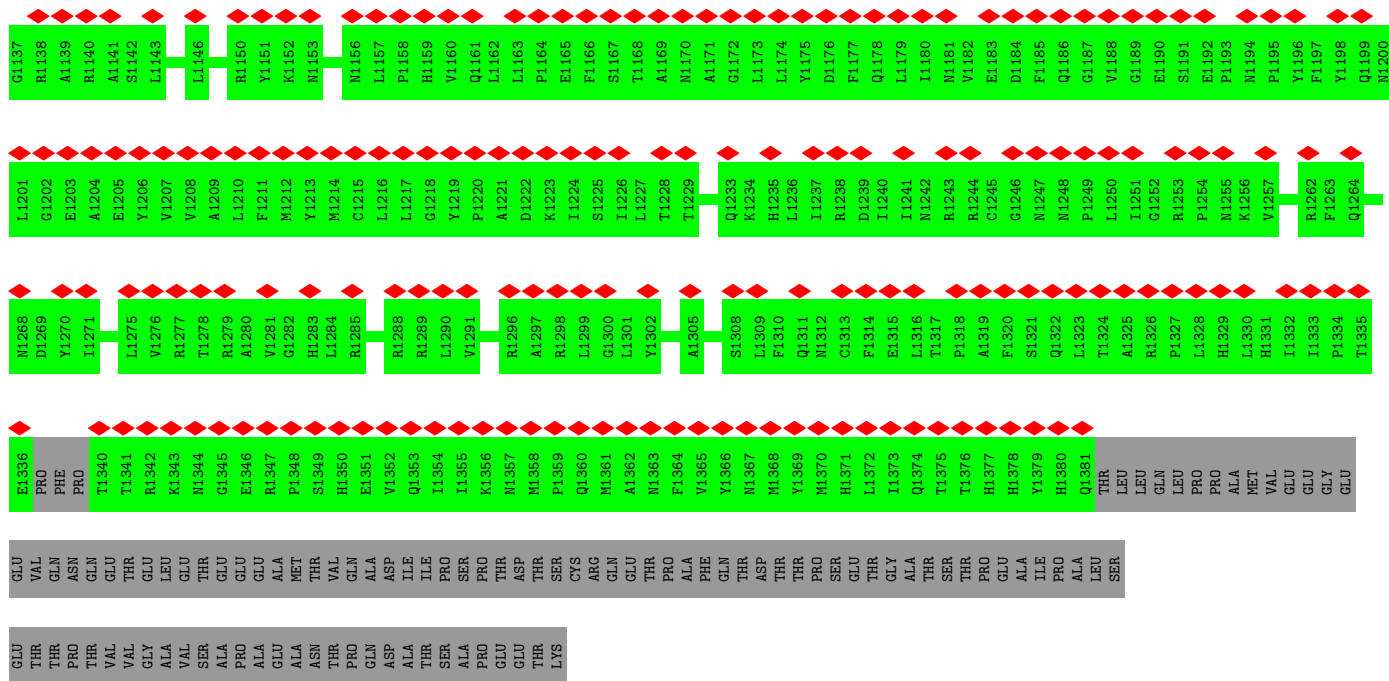
Molecule 14: Spliceosome-associated protein CWC15 homolog



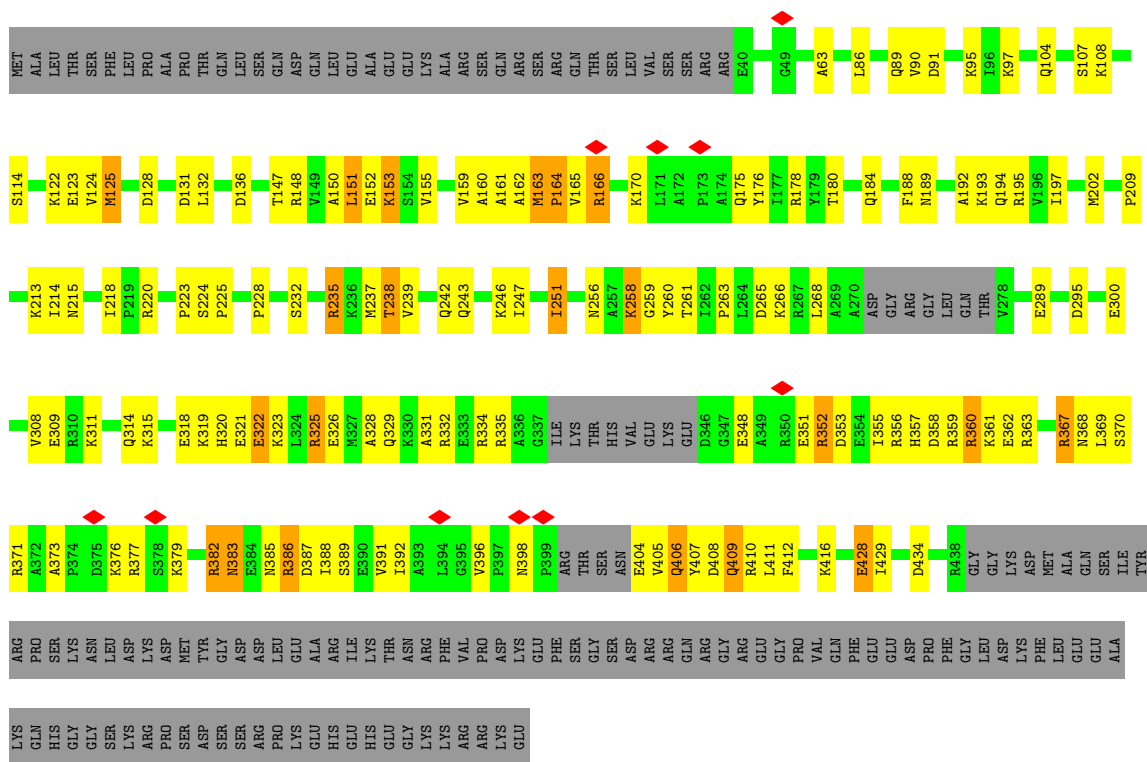
Molecule 15: RNA helicase aquarius



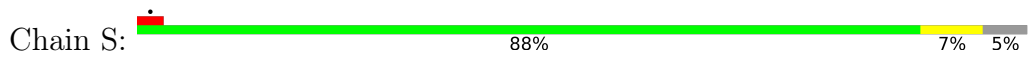
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I61	K62	R63	I64	K128	M65	L66	L67	E68	F69	S70	L73	E74	N75	Y76	L77	W78	M79	H80	Y81	S82	P83	E84	D85	H86	C88	S88	S87	K88	A89	Y90	L91	M92	D90	L91	S93	I94	C95	R163	S99	Q165	V166	Q167	Q168	K101	F102	R103	I104	A108	W109	E110	I111	F112	K113	K114	I181	R182	K115	D117	H118	F121	F122
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T190	P191	K192	L193	R194	K195	F196	W197	M198	L199	L200	K201	K202	N203	D204	E205	K206	M207	D208	P209	E210	A211	R212	E213	Q214	Y216	Q217	E218	R219	R220	F221	L222	S223	Q224	K228	V236	P237	L238	S239	E240	P241	M244	D245	K246	Y247	C250	E251	R252	F253	L254	E255	L256	M257	L260								
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L719	S720	I721	E722	H723	L724	K725	A726	S727	F728	P729	G730	H731	N732	V733	K734	T735	V736	V737	E738	D739	P740	A741	L742	Q743	ILE	P746	F747	R748	I749	T750	F751	P752	V753	ARG	GLY	LYS	GLY	LYS	LYS	ARG	ASP	ALA	ASP	VAL	GLU	ASP	GLU	ASP	GLU	E773	A774	K775	L776	I777	L778						
V779	E780	F781	H782	V783	I784	P785	N786	R787	G788	F791	Y792	N793	Q794	P795	K796	R797	N798	Q801	F802	T803	H804	T805	Q806	I810	R811	A812	Q815	P816	T819	M820	V821	V822	G823	G828	D831	S838	N839	I840	Y841	H842	N843	F844	P845	E846	Q847	E864	K865	L866	M867	A868											
L869	D870	H881	GLY	GLU	E884	E885	L886	E889	K890	D891	F892	S893	R894	Y895	V898	N899	Y900	V901	L902	A903	R904	R905	I906	E907	L908	L909	E910	E911	V912	K913	R914	L915	Q916	K917	S918	L919	G920	V921	P922	G923	D924	A925	S926	Y927	T928	C929	E930	Y944	E945	E946	Y947	I948	S949	K950	V951						
K952	N953	LYS	GLY	SER	THR	LEU	P959	D960	V961	T962	E963	V964	S965	T966	F967	E972	A975	N976	A977	PRO	GLN	PRO	I981	F982	K983	G984	R985	S986	Y987	E988	E989	D990	M991	E992	H1000	I1001	K1002	K1003	I1004	F1005	T1006	Q1007	E1010	F1011	R1012	E1015	S1019	L1028	V1029	D1132	L1133	S949	D1134	A1135	Q1136						
C1039	V1050	K1051	I1059	L1068	E1069	I1070	F1073	I1074	L1078	Q1079	M1080	P1081	Q1082	D1083	G1084	F1085	L1088	K1089	R1090	W1091	I1094	Q1099	L1100	P1101	I1104	K1105	M1106	F1109	Q1110	K1111	L1119	F1120	F1123	V1124	R1125	V1126	K1127	V1128	P1129	T1130	V1131	D1132	L1133	V1029	D1134	A1135	Q1136														



● Molecule 16: SNW domain-containing protein 1

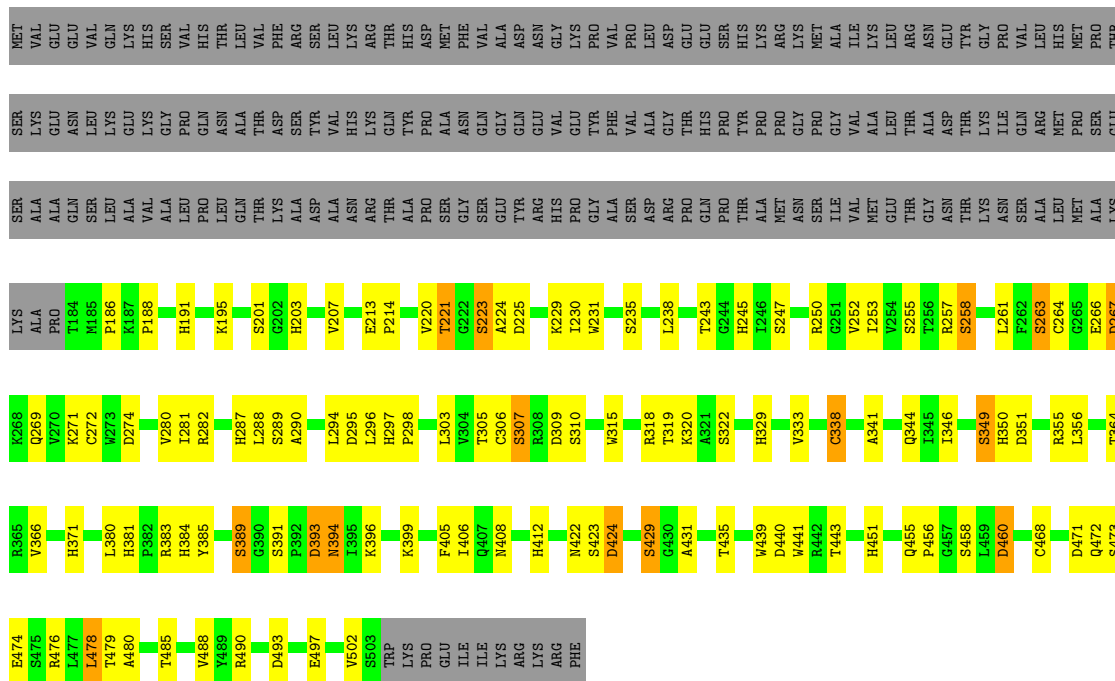
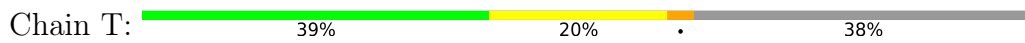


● Molecule 17: Peptidyl-prolyl cis-trans isomerase-like 1

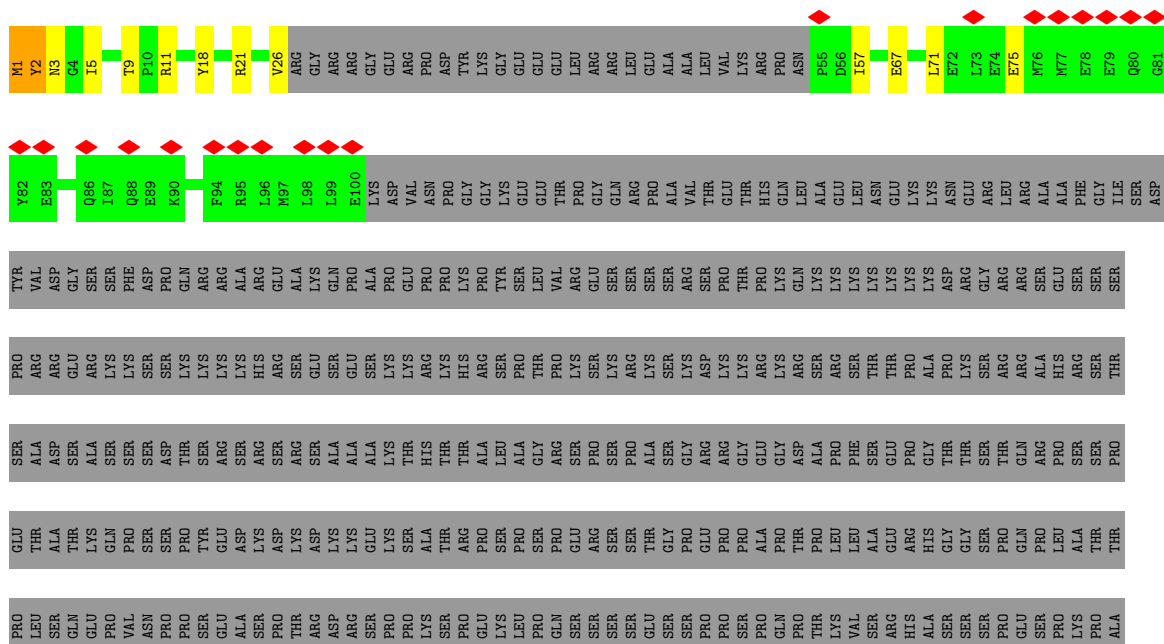


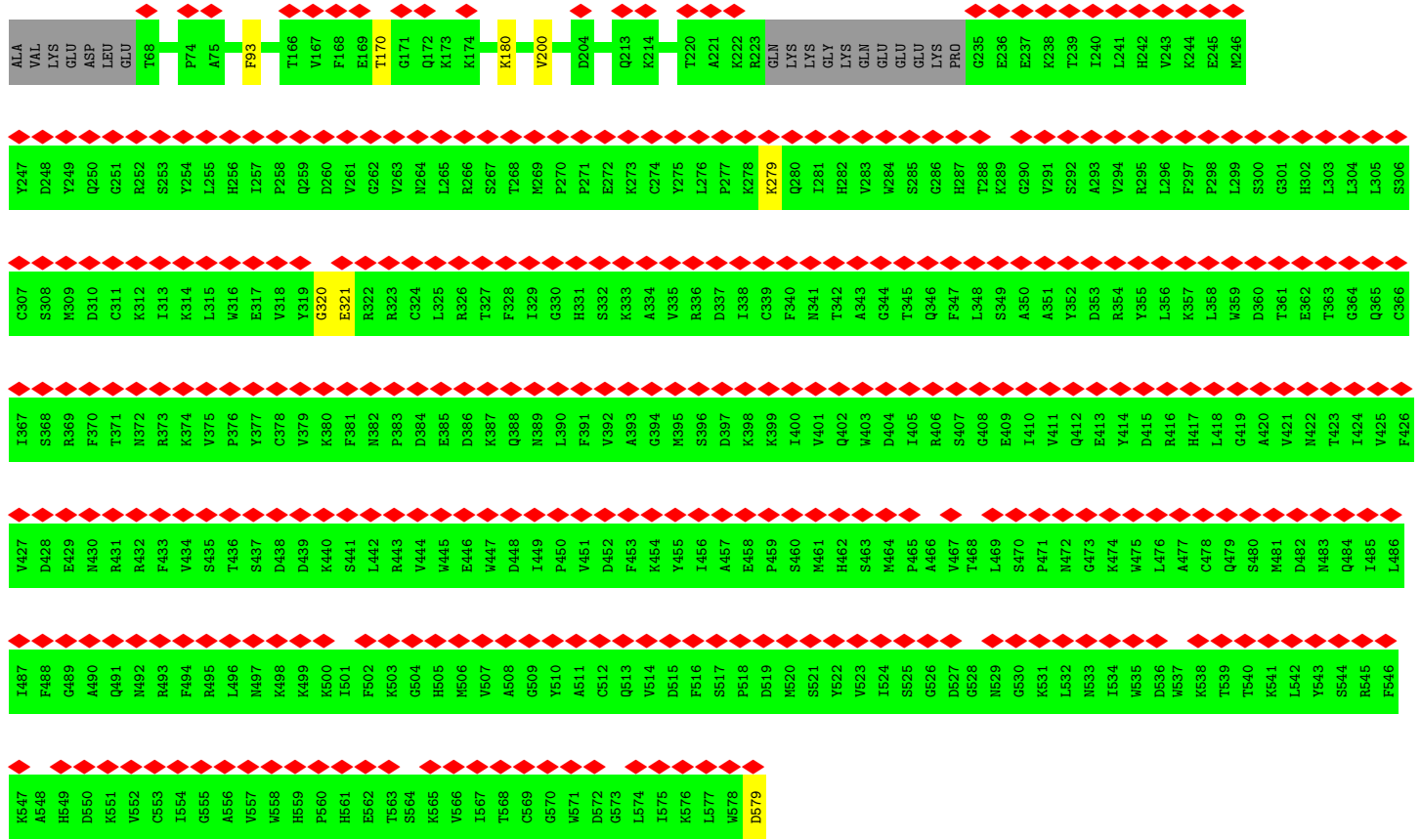


• Molecule 18: Pleiotropic regulator 1

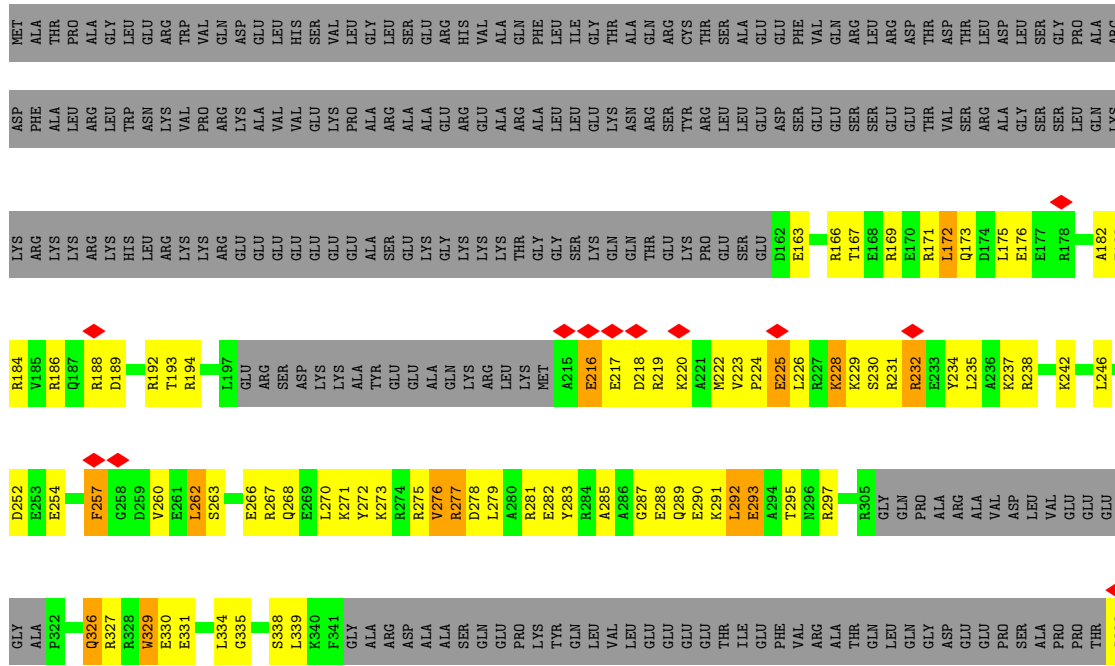


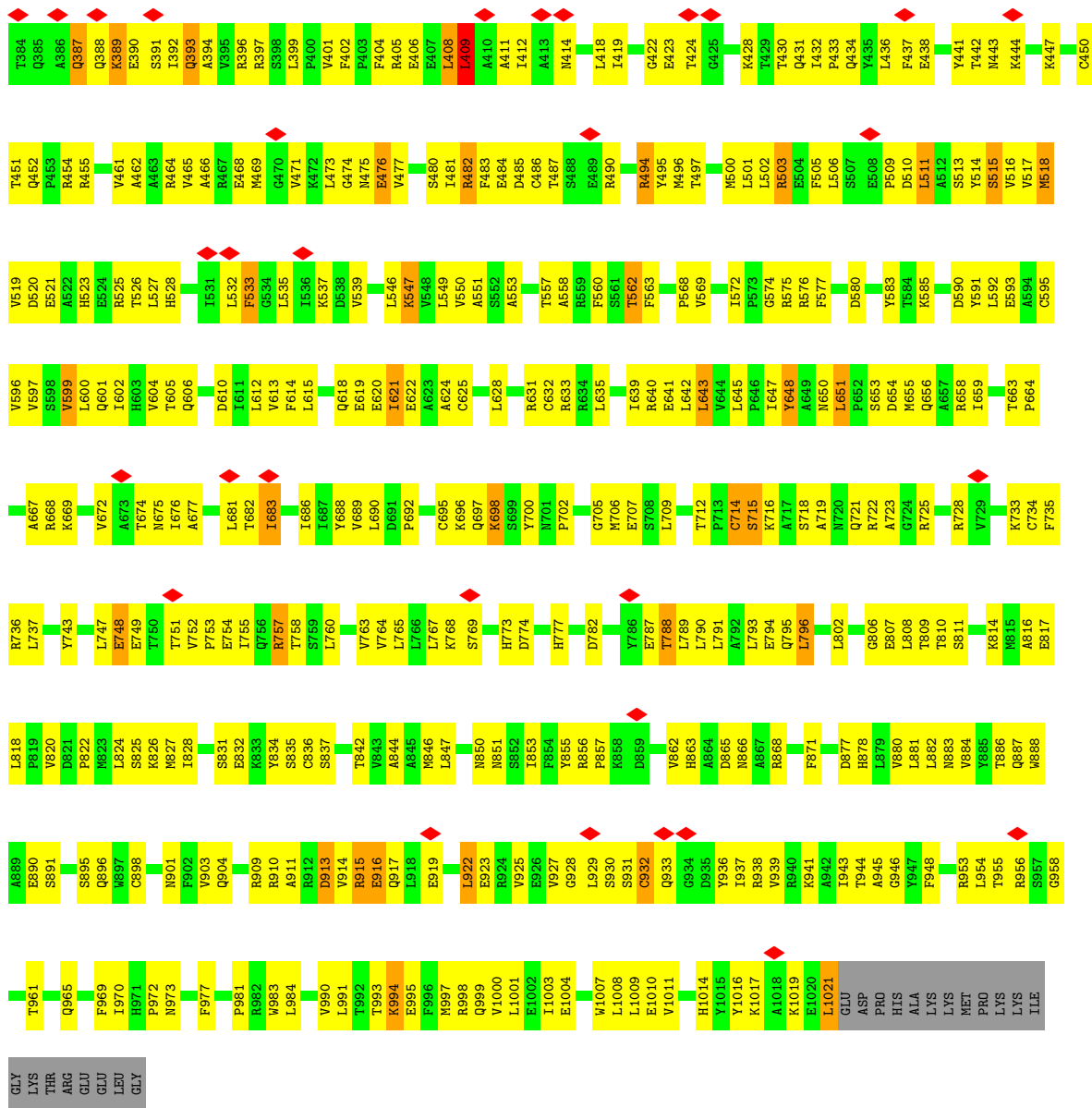
• Molecule 19: Serine/arginine repetitive matrix protein 2



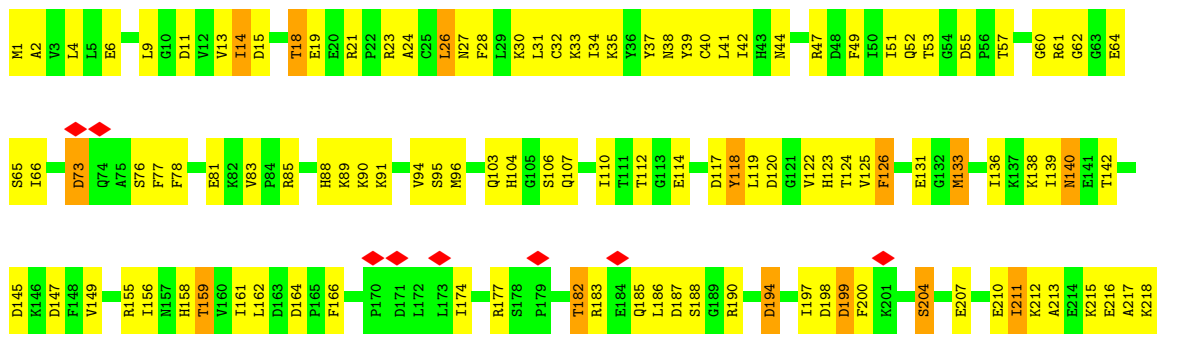
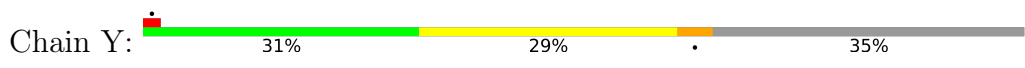


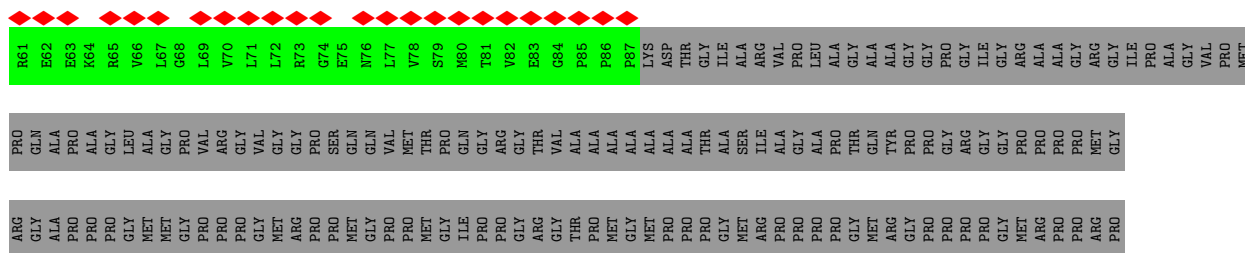
• Molecule 22: Pre-mRNA-splicing factor ATP-dependent RNA helicase DHX16



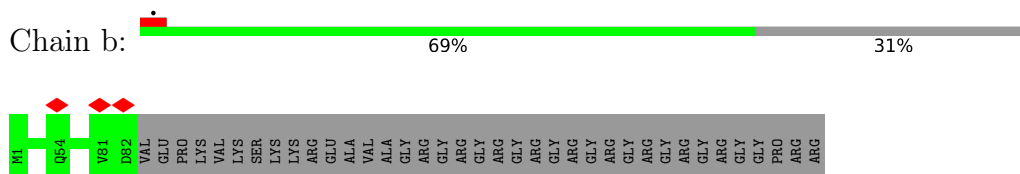


• Molecule 23: Peptidyl-prolyl cis-trans isomerase-like 4

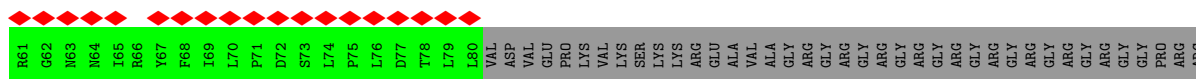
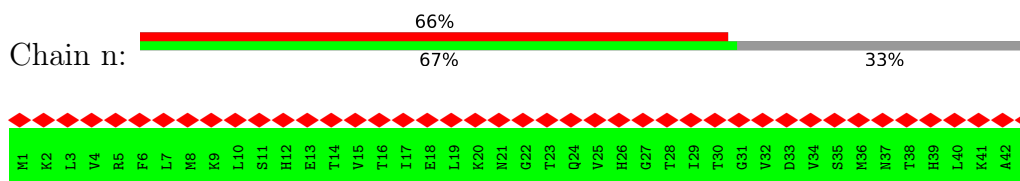




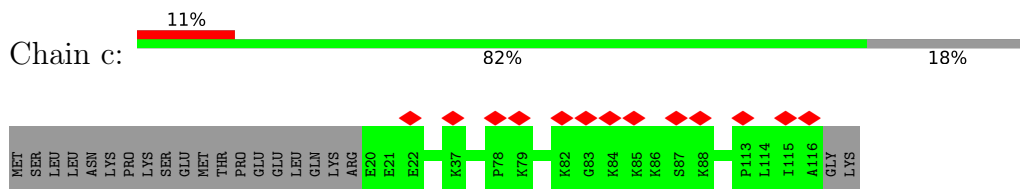
• Molecule 26: Small nuclear ribonucleoprotein Sm D1



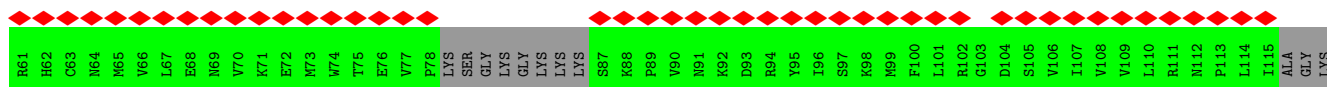
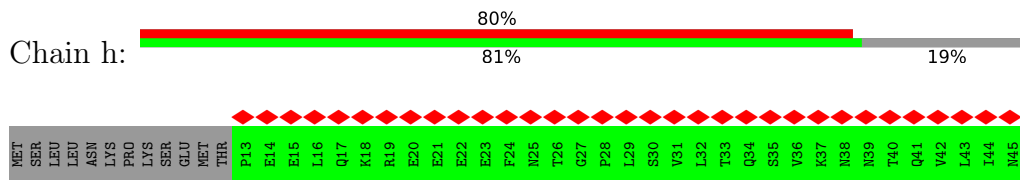
• Molecule 26: Small nuclear ribonucleoprotein Sm D1



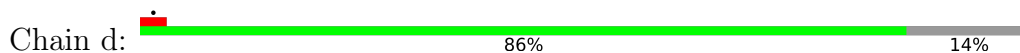
• Molecule 27: Small nuclear ribonucleoprotein Sm D2

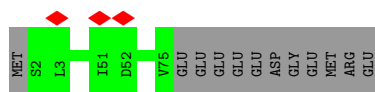


• Molecule 27: Small nuclear ribonucleoprotein Sm D2

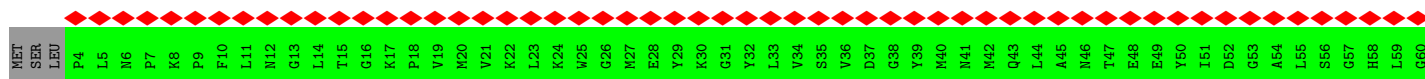
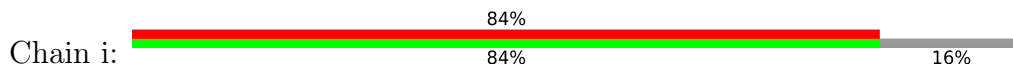


• Molecule 28: Small nuclear ribonucleoprotein F

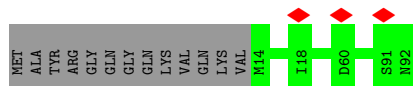
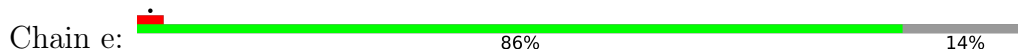




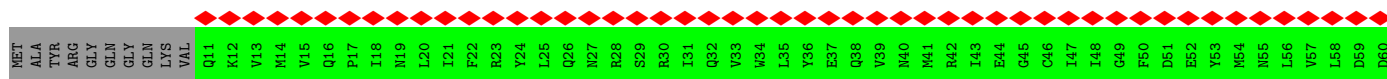
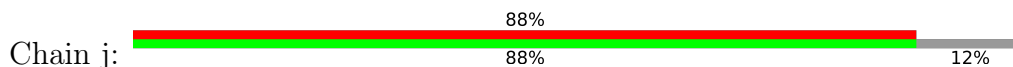
- Molecule 28: Small nuclear ribonucleoprotein F



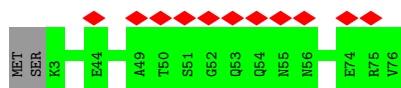
- Molecule 29: Small nuclear ribonucleoprotein E



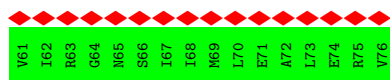
- Molecule 29: Small nuclear ribonucleoprotein E

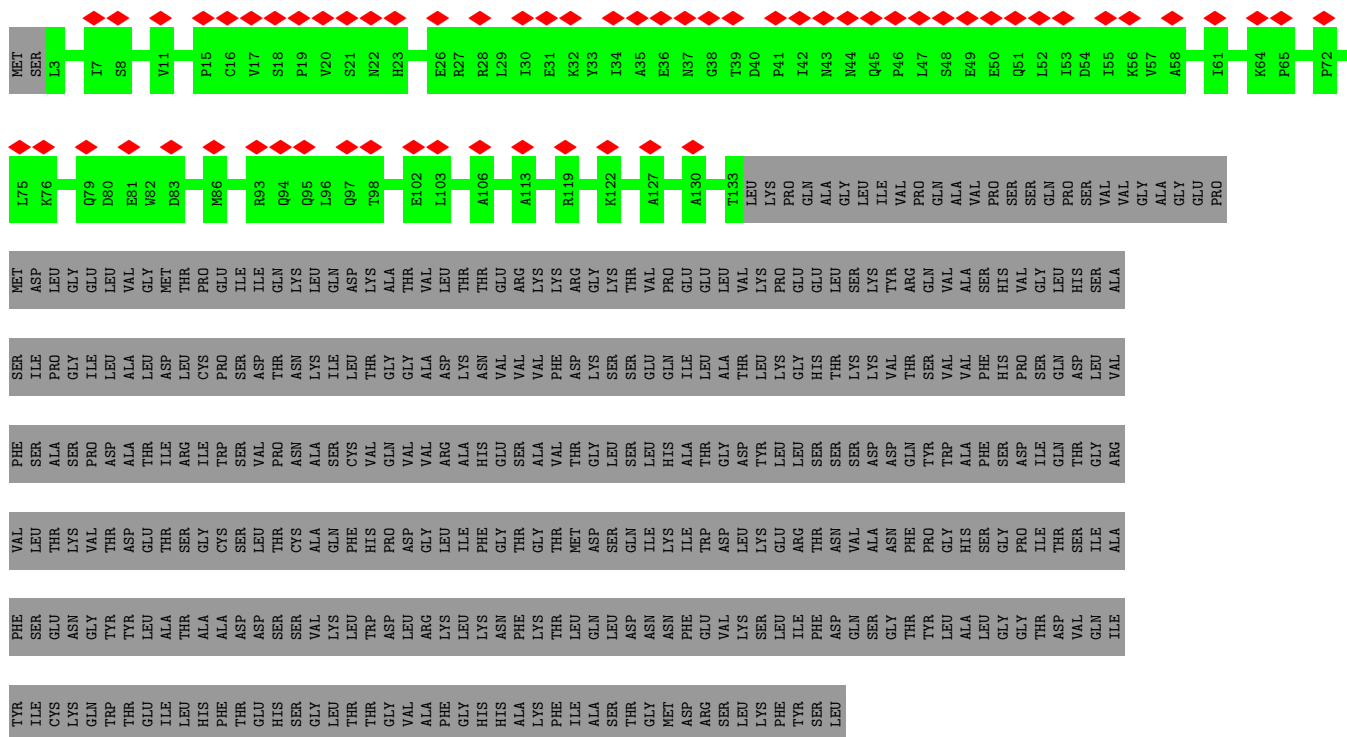


- Molecule 30: Small nuclear ribonucleoprotein G



- Molecule 30: Small nuclear ribonucleoprotein G

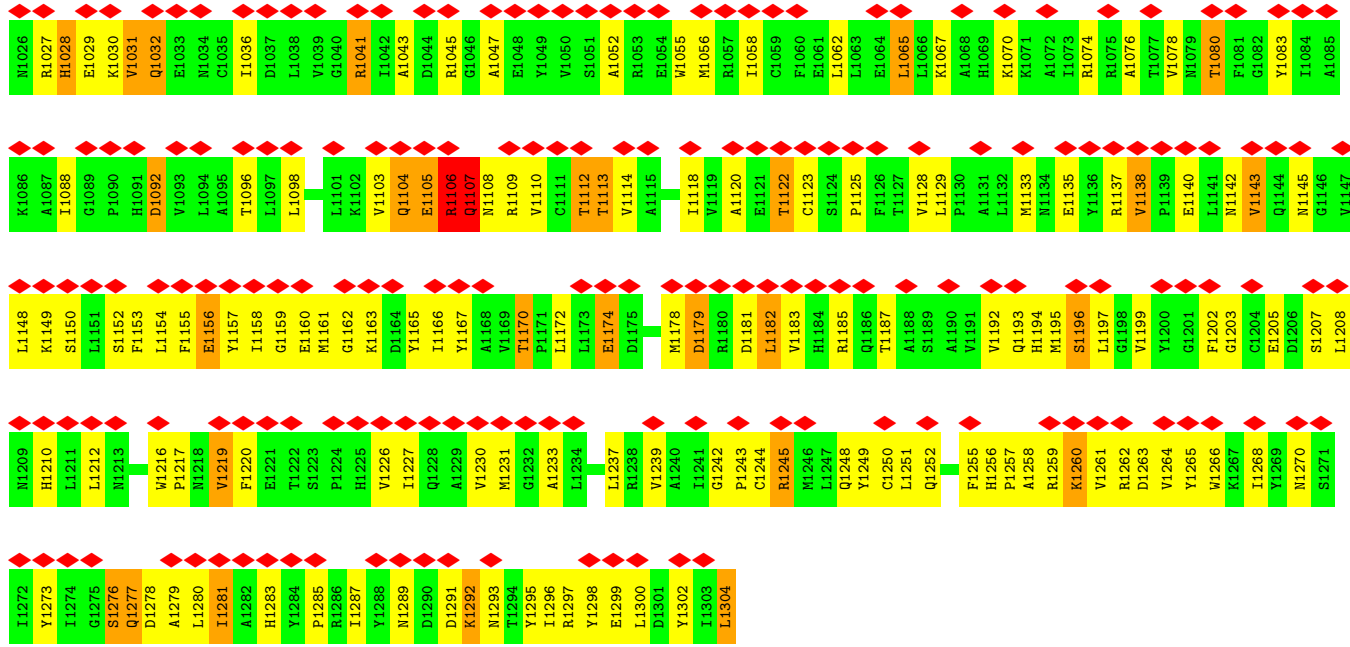




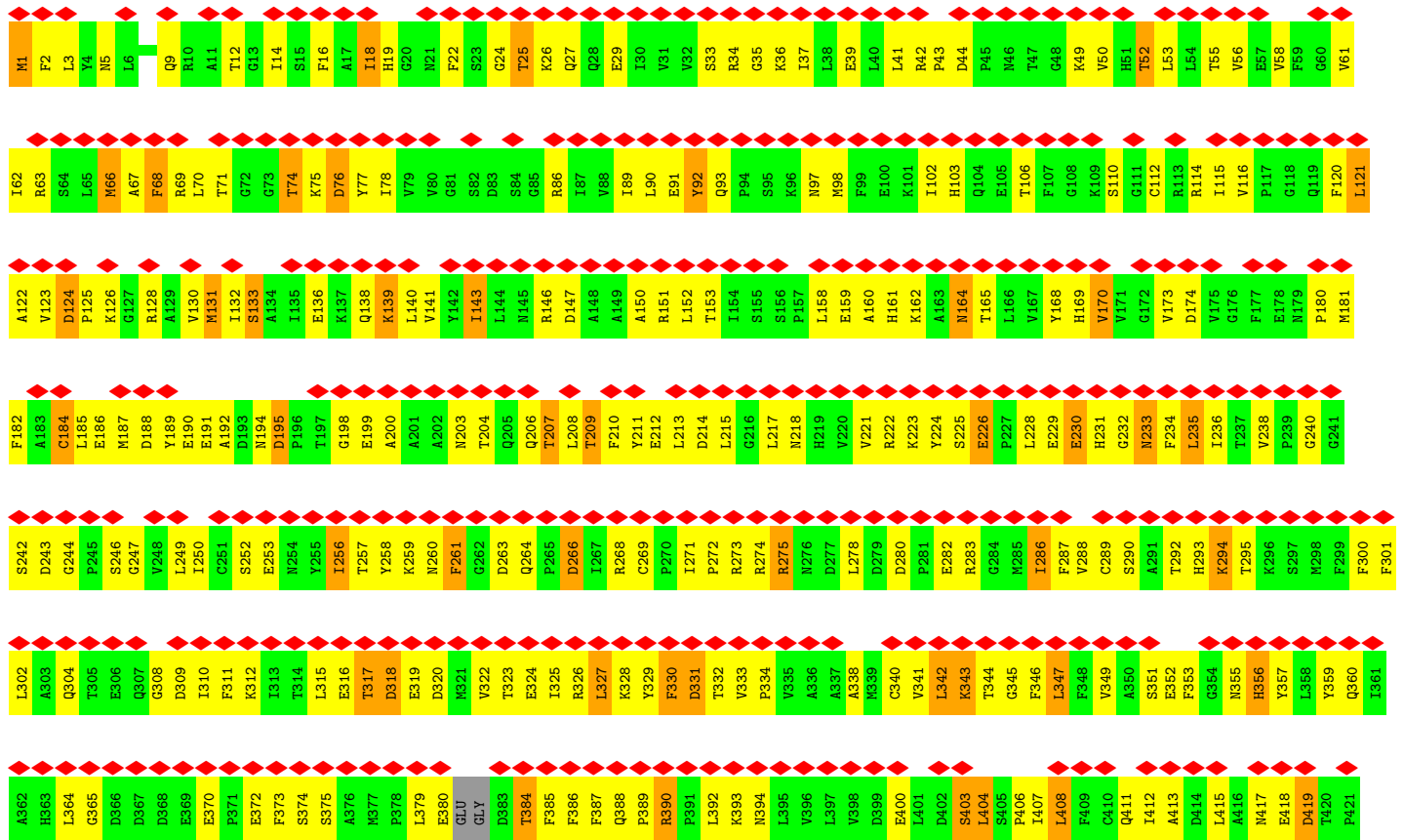
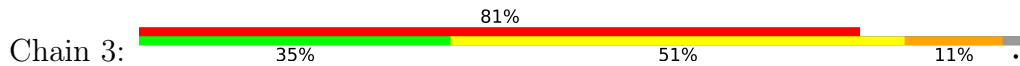
• Molecule 32: Pre-mRNA-processing factor 19



• Molecule 32: Pre-mRNA-processing factor 19



● Molecule 35: Splicing factor 3B subunit 3



E1151	E1090	L966	G906	H844	F783	G723	L663	R603	T543	L483	Q422
H1152	V1091	L967	L906	E845	I784	S724	Y664	F604	I544	V484	L423
F1153	I1092	R968	G909	R846	R785	S725	L665	L605	V545	V485	L424
P1154	M1093	Y970	A910	L847	R786	O726	N666	A606	K546	S486	C427
L1155	N1094	D971	K911	P848	F788	S727	N667	V607	C547	I487	G428
C1156	Y1095	D972	K912	E849	F789	R728	G668	G608	A549	G488	R429
R1157	H1096	G973	D912	S850	I790	F729	L669	L609	V549	E489	G430
R1158	V1097	K974	L913	T851	H791	H730	Q670	V610	T490	T490	P431
D1159	G1098	K975	L914	F852	H792	L731	N671	D611	Q551	V491	R432
H1160	E1099	K976	L915	G853	F793	I732	G672	N612	R552	E492	R433
S1162	L1102	L977	N916	R854	S794	F733	V673	T613	Q553	S433	S434
F1163	S1103	L978	P917	P855	E795	L734	L674	V614	V554	V494	L435
R1164	Q1105	R978	R918	K856	N796	S735	L675	R615	V555	T495	R436
S1165	K1106	K980	S919	A857	N797	Y736	L676	I616	I556	V437	V437
Y1166	T1107	C981	Y920	G858	L798	E737	T677	I617	A557	S497	R439
Y1167	T1108	E982	A921	R859	I799	T738	V678	S618	L558	G498	H440
F1168	L1109	N983	G922	R860	T802	L739	L679	L619	T559	F499	G441
P1169	L1109	K984	G923	Q861	D803	E740	D680	D620	G560	L500	L442
V1170	A1045	H865	F924	R862	D804	F741	P681	P621	G561	G501	E443
K1171	P1110	I986	Y925	A862	N805	A742	V682	D623	E562	T502	V444
N1172	G1112	N988	T927	S864	R806	S743	T683	D624	V564	P504	S445
V1173	G1113	Y989	T928	R865	A906	G744	T684	G624	V564	P504	E446
I1174	S1114	I990	Y928	T866	Y807	F745	D885	L625	Y565	T505	M447
D1175	E1115	S991	K929	R867	T808	A746	L686	Q626	F566	L506	A448
K1176	S1116	G992	L930	R868	E809	S747	L687	P627	E567	S507	A449
D1177	L1117	I993	Y931	R869	A810	E748	D688	L628	M568	C508	S450
L1178	V1118	Q994	N932	R869	R810	Q749	T689	S629	D569	S509	E451
C1179	Y1119	T995	N933	R870	T811	C750	T889	M630	P570	L510	L452
Q1180	P1059	I996	G934	P871	K612	P751	R690	Q631	S571	L511	P453
K1181	M1061	G997	E935	L872	A813	E752	T691	ARG	G572	G512	G454
F1182	T1062	H998	K936	Q873	Q814	G753	ARG	A632	Q573	D513	M455
M1183	M1063	R999	L937	G874	R815	I754	LEU	TVR	L674	D514	M456
S1184	D1064	I999	E938	R875	K816	V755	G695	L633	N575	A515	M457
M1185	E1065	I1001	F939	T876	Q817	A756	S696	A635	E576	L516	A458
E1186	V1066	V1002	F939	L877	Q818	I757	R697	P637	Y577	V517	V459
P1187	I1128	S1003	L940	R878	M819	S758	P698	E638	T578	Q518	W460
I1128	L1129	Q1006	H941	D878	A820	I759	P699	S639	E579	V519	T461
V1130	D1004	Q1007	K942	W880	E822	N760	V699	L640	R580	Y520	V462
P1131	V1005	E1007	T943	R881	M823	T761	V699	C641	K581	P521	R463
F1132	E1007	S1008	P944	L882	V824	L762	V699	I642	E582	D522	R464
T1133	F1009	E946	E946	E883	E825	R763	V699	I643	M583	G523	H465
V1135	I1010	E947	E948	Q884	A826	R763	V699	E644	S584	I524	I466
E1136	W1011	Y948	Y948	R885	A826	I764	V699	E644	A585	R525	I467
E1137	V1012	F949	F949	E886	A827	L765	M706	M645	D586	H526	D468
D1137	R1013	A887	A951	R887	G828	A766	M706	GLY	V587	I527	E469
H1138	Y1014	A887	A951	E833	E833	L767	Q707	GLY	I527	F470	F470
L1139	K1015	L1015	L952	ASP	GLU	L767	Q707	THR	V587	D471	D471
F1140	R1016	L1016	A953	GLU	ARG	E768	G708	GLU	V588	A529	A529
Q1142	M1017	M1017	P954	GLU	ARG	K769	Q709	GLN	C589	D530	A472
H1143	E1018	F955	F955	GLU	GLU	L770	E710	ASP	M590	K531	Y473
V1144	M1019	Q956	Q956	L834	A835	G771	A711	GLU	S591	R532	I475
I1145	Q1020	R957	R957	A836	A836	A772	L713	LEU	L592	R533	I475
M1146	L1021	F896	F896	E837	E837	A773	A714	GLY	A593	V533	V476
H1147	I1022	R898	R898	R838	R838	F774	M715	GLY	N594	N534	V476
R1148	I1023	T899	T899	A840	A840	Q776	S716	GLY	V595	E536	S477
L1149	F1024	E901	E901	A841	A841	V777	S717	ILE	P597	K537	F478
S1150	A1025	D902	D902	F842	F842	A778	R718	GLY	G598	T538	V479
E1151	E1151	Y903	Y903	L843	L843	F779	S719	GLY	E599	P539	M480
H1152	H1152	R965	R965	L843	L843	F780	W720	GLY	Q600	G540	A481
F1153	F1153	L965	L965	L843	L843	L781	L721	GLY	R601	S602	T482
L1155	L1155	L965	L965	L843	L843	Q782	S722	GLY	S602	S602	T482

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	92596	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1400	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	3.253	Depositor
Minimum map value	-1.475	Depositor
Average map value	0.005	Depositor
Map value standard deviation	0.066	Depositor
Recommended contour level	0.22	Depositor
Map size (\AA)	516.96, 516.96, 516.96	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.077, 1.077, 1.077	Depositor

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: MG, IHP, GTP, ZN, SEP

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	A	0.78	1/16774 (0.0%)	0.66	5/22749 (0.0%)
2	B	1.08	2/2303 (0.1%)	1.04	6/3579 (0.2%)
3	C	0.55	0/6873	0.63	2/9346 (0.0%)
4	E	0.42	0/2392	0.63	1/3242 (0.0%)
5	F	1.21	3/2323 (0.1%)	1.17	11/3619 (0.3%)
6	G	0.70	3/1764 (0.2%)	1.30	19/2737 (0.7%)
7	H	0.66	2/3574 (0.1%)	1.07	10/5560 (0.2%)
8	I	0.25	0/3406	0.42	0/4767
9	J	0.58	0/3833	0.55	0/5205
10	L	0.46	0/2612	0.53	0/3548
11	M	0.48	0/991	0.73	0/1325
12	N	0.64	0/1210	0.60	0/1622
13	O	0.33	0/1447	0.48	0/2013
14	P	0.74	0/888	0.80	1/1177 (0.1%)
15	Q	0.24	0/5279	0.45	0/6583
16	R	0.52	0/2937	0.58	0/3945
17	S	0.27	0/769	0.50	0/1063
18	T	1.02	0/2574	0.73	3/3511 (0.1%)
19	U	0.43	0/424	0.48	0/582
20	V	0.32	0/2993	0.50	1/4088 (0.0%)
21	W	0.34	0/2471	0.71	0/3437
22	X	0.34	0/6479	0.59	4/8747 (0.0%)
23	Y	0.33	0/2605	0.58	0/3522
24	Z	0.25	0/768	0.39	0/1067
25	a	0.26	0/343	0.55	0/427
25	m	0.25	0/416	0.54	0/581
26	b	0.25	0/327	0.52	0/407
26	n	0.24	0/404	0.50	0/564
27	c	0.24	0/387	0.52	0/482
27	h	0.24	0/485	0.48	0/677
28	d	0.24	0/295	0.54	0/367
28	i	0.27	0/362	0.53	0/502

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
29	e	0.23	0/315	0.51	0/392
29	j	0.25	0/403	0.46	0/561
30	f	0.24	0/295	0.53	0/367
30	k	0.26	0/366	0.53	0/509
31	g	0.24	0/322	0.51	0/399
31	l	0.26	0/417	0.51	0/581
32	q	0.25	0/658	0.41	0/919
32	r	0.27	0/653	0.41	0/912
32	s	0.27	0/658	0.45	0/919
32	t	0.26	0/653	0.38	0/912
33	y	0.26	0/315	0.51	0/392
34	1	0.63	0/6494	0.70	7/8801 (0.1%)
35	3	0.52	0/9398	0.66	1/12756 (0.0%)
36	2	0.56	0/1593	0.75	1/2170 (0.0%)
37	4	0.27	0/790	0.48	0/1095
38	7	0.56	0/621	0.61	0/833
39	5	0.72	0/654	0.64	0/885
40	p	0.25	0/453	0.46	0/631
41	o	0.24	0/821	0.48	0/1149
All	All	0.59	11/106587 (0.0%)	0.68	72/146224 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	11
3	C	0	4
4	E	0	1
8	I	0	1
9	J	0	3
11	M	0	1
12	N	0	1
14	P	0	1
16	R	0	1
22	X	0	1
23	Y	0	1
24	Z	0	1
34	1	0	4
35	3	0	5
36	2	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
38	7	0	1
39	5	0	1
All	All	0	40

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	G	97	A	N7-C5	7.07	1.43	1.39
6	G	97	A	N9-C4	-6.39	1.34	1.37
1	A	705	LYS	CD-CE	5.89	1.66	1.51
7	H	15	U	C4-O4	-5.71	1.19	1.23
2	B	32	C	N3-C4	-5.67	1.29	1.33
7	H	15	U	C2-O2	-5.47	1.17	1.22
5	F	65	G	N9-C8	-5.42	1.34	1.37
2	B	55	C	N1-C6	-5.33	1.33	1.37
5	F	72	G	C5-C4	-5.09	1.34	1.38
5	F	65	G	C5-C4	-5.02	1.34	1.38
6	G	-3	A	N3-C4	-5.01	1.31	1.34

All (72) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	G	97	A	C8-N9-C4	20.50	114.00	105.80
34	1	755	PRO	CA-N-CD	-15.48	89.83	111.50
6	G	97	A	N9-C4-C5	-13.31	100.47	105.80
7	H	15	U	N3-C4-O4	-12.76	110.47	119.40
7	H	15	U	N3-C2-O2	-11.44	114.19	122.20
6	G	97	A	C4-C5-C6	-10.90	111.55	117.00
6	G	97	A	N1-C2-N3	-10.17	124.22	129.30
6	G	97	A	N7-C8-N9	-9.90	108.85	113.80
6	G	97	A	N3-C4-C5	9.47	133.43	126.80
7	H	15	U	N3-C4-C5	9.06	120.03	114.60
18	T	186	PRO	C-N-CA	-9.00	99.21	121.70
7	H	15	U	C2-N3-C4	-8.29	122.03	127.00
5	F	38	G	O5'-P-OP2	-7.63	98.83	105.70
5	F	78	A	C8-N9-C4	7.40	108.76	105.80
36	2	550	LYS	N-CA-CB	-7.06	97.89	110.60
2	B	40	U	C2-N1-C1'	6.99	126.09	117.70
5	F	82	A	C2-N3-C4	-6.96	107.12	110.60
6	G	9	C	N3-C2-O2	-6.90	117.07	121.90
2	B	19	A	N9-C4-C5	-6.84	103.07	105.80
7	H	15	U	N1-C2-N3	6.51	118.81	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	G	97	A	N9-C1'-C2'	-6.35	105.01	112.00
20	V	494	LEU	CA-CB-CG	6.34	129.88	115.30
34	1	1107	GLN	C-N-CA	-6.33	105.88	121.70
6	G	112	U	N1-C2-O2	6.31	127.22	122.80
6	G	-5	C	C2-N1-C1'	6.14	125.56	118.80
7	H	173	C	N1-C2-O2	5.96	122.48	118.90
5	F	59	G	C4-C5-N7	5.93	113.17	110.80
34	1	718	PRO	CA-N-CD	-5.90	103.24	111.50
5	F	34	G	C4-N9-C1'	5.89	134.16	126.50
6	G	112	U	C2-N1-C1'	5.88	124.75	117.70
5	F	82	A	C5-C6-N1	-5.84	114.78	117.70
7	H	64	A	C5-C6-N6	-5.84	119.03	123.70
4	E	227	LEU	CA-CB-CG	5.78	128.60	115.30
6	G	112	U	O5'-P-OP2	-5.77	100.51	105.70
1	A	1518	LEU	CB-CG-CD2	5.77	120.81	111.00
6	G	111	U	OP2-P-O3'	5.60	117.52	105.20
5	F	59	G	C5-N7-C8	-5.58	101.51	104.30
6	G	97	A	C6-N1-C2	5.57	121.94	118.60
7	H	15	U	OP2-P-O3'	5.55	117.41	105.20
34	1	963	LYS	CB-CA-C	-5.49	99.42	110.40
5	F	38	G	C8-N9-C4	-5.48	104.21	106.40
6	G	9	C	N1-C2-O2	5.47	122.18	118.90
2	B	40	U	C6-N1-C1'	-5.46	113.56	121.20
14	P	216	ARG	NE-CZ-NH1	-5.43	117.58	120.30
5	F	38	G	N7-C8-N9	5.42	115.81	113.10
1	A	598	LEU	CB-CG-CD2	-5.41	101.80	111.00
35	3	235	LEU	CA-CB-CG	5.40	127.72	115.30
22	X	651	LEU	CA-CB-CG	5.40	127.72	115.30
7	H	15	U	N1-C2-O2	5.39	126.58	122.80
1	A	1517	LYS	CA-CB-CG	5.39	125.25	113.40
34	1	718	PRO	N-CA-CB	-5.36	96.70	102.60
22	X	262	LEU	CA-CB-CG	5.35	127.61	115.30
5	F	34	G	C8-N9-C1'	-5.34	120.06	127.00
7	H	15	U	C5-C4-O4	5.29	129.07	125.90
6	G	2	U	C6-N1-C2	-5.25	117.85	121.00
2	B	19	A	N3-C4-N9	5.25	131.60	127.40
18	T	303	LEU	CA-CB-CG	5.24	127.35	115.30
3	C	510	LEU	CA-CB-CG	5.23	127.33	115.30
3	C	251	LEU	CA-CB-CG	5.23	127.33	115.30
34	1	563	LEU	CA-CB-CG	5.20	127.26	115.30
6	G	113	U	P-O3'-C3'	5.18	125.91	119.70
2	B	45	C	N3-C2-O2	-5.15	118.30	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	X	172	LEU	CA-CB-CG	5.15	127.14	115.30
5	F	35	A	N1-C2-N3	5.10	131.85	129.30
34	1	1280	LEU	CB-CG-CD2	-5.10	102.33	111.00
6	G	112	U	N3-C2-O2	-5.09	118.63	122.20
1	A	1516	LYS	C-N-CA	5.09	134.43	121.70
6	G	115	C	N1-C2-O2	5.07	121.94	118.90
2	B	47	A	O4'-C1'-N9	5.07	112.26	108.20
1	A	1817	LEU	CA-CB-CG	5.07	126.95	115.30
18	T	351	ASP	C-N-CA	5.02	134.25	121.70
22	X	409	LEU	CA-CB-CG	5.02	126.85	115.30

There are no chirality outliers.

All (40) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
34	1	1105	GLU	Peptide
34	1	1107	GLN	Peptide
34	1	1179	ASP	Peptide
34	1	962	MET	Mainchain
36	2	502	ARG	Peptide
36	2	548	THR	Mainchain
35	3	268	ARG	Peptide
35	3	342	LEU	Peptide
35	3	490	THR	Peptide
35	3	916	ASN	Peptide
35	3	971	ASP	Peptide
39	5	79	PRO	Peptide
38	7	13	LYS	Peptide
1	A	1338	SER	Peptide
1	A	1416	ILE	Peptide
1	A	1516	LYS	Peptide
1	A	187	PRO	Peptide
1	A	365	VAL	Peptide
1	A	433	GLU	Peptide
1	A	699	GLU	Peptide
1	A	855	ARG	Peptide
1	A	940	ILE	Peptide
1	A	941	LYS	Peptide
1	A	982	GLU	Peptide
3	C	443	VAL	Peptide
3	C	533	SER	Peptide
3	C	572	GLU	Peptide

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Mol	Chain	Res	Type	Group
3	C	823	ALA	Peptide
4	E	321	TYR	Peptide
8	I	386	ASP	Peptide
9	J	202	GLU	Peptide
9	J	205	LEU	Peptide
9	J	240	THR	Peptide
11	M	124	PHE	Peptide
12	N	36	PRO	Peptide
14	P	29	GLN	Peptide
16	R	163	MET	Peptide
22	X	326	GLN	Peptide
23	Y	204	SER	Peptide
24	Z	77	GLN	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	16331	0	16276	594	0
2	B	2066	0	1047	50	0
3	C	6724	0	6696	316	0
4	E	2338	0	2275	144	0
5	F	2075	0	1048	86	0
6	G	1587	0	808	77	0
7	H	3203	0	1618	100	0
8	I	3387	0	1651	13	0
9	J	3789	0	2891	95	0
10	L	2584	0	2096	97	0
11	M	971	0	950	69	0
12	N	1184	0	1190	44	0
13	O	1447	0	638	15	0
14	P	876	0	875	51	0
15	Q	5288	0	1361	5	0
16	R	2915	0	2794	134	0
17	S	770	0	356	8	0
18	T	2507	0	2451	79	0
19	U	422	0	291	14	0
20	V	2959	0	2237	103	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
21	W	2473	0	1096	19	0
22	X	6357	0	6349	345	0
23	Y	2556	0	2492	135	0
24	Z	772	0	342	2	0
25	a	344	0	93	0	0
25	m	413	0	194	0	0
26	b	328	0	89	0	0
26	n	402	0	184	0	0
27	c	388	0	102	0	0
27	h	482	0	220	0	0
28	d	296	0	87	0	0
28	i	359	0	179	0	0
29	e	316	0	85	0	0
29	j	403	0	173	0	0
30	f	296	0	84	0	0
30	k	364	0	176	0	0
31	g	324	0	89	0	0
31	l	415	0	198	0	0
32	q	659	0	296	0	0
32	r	654	0	294	0	0
32	s	659	0	296	0	0
32	t	654	0	294	0	0
33	y	316	0	86	0	0
34	1	6378	0	6511	959	0
35	3	9210	0	9117	813	0
36	2	1576	0	1191	294	0
37	4	792	0	367	11	0
38	7	613	0	596	56	0
39	5	635	0	595	137	0
40	p	451	0	215	0	0
41	o	816	0	386	0	0
42	A	36	0	6	5	0
43	C	32	0	12	0	0
44	C	1	0	0	0	0
44	F	5	0	0	0	0
44	L	1	0	0	0	0
45	7	3	0	0	0	0
45	N	3	0	0	0	0
All	All	104205	0	82043	4180	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 23.

All (4180) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:1279:ALA:HA	35:3:1167:TYR:CD1	1.35	1.61
1:A:1798:LEU:HD21	34:1:973:HIS:CD2	1.35	1.58
34:1:495:ARG:CG	34:1:530:PRO:HB3	1.36	1.54
21:W:279:LYS:CB	36:2:622:GLY:HA3	1.10	1.51
34:1:495:ARG:HG2	34:1:530:PRO:CB	1.44	1.45
34:1:933:CYS:CB	34:1:970:LEU:HD11	1.45	1.44
34:1:1300:LEU:HB3	35:3:1032:TRP:CZ3	1.51	1.44
34:1:598:SER:HA	34:1:638:ALA:CB	1.46	1.43
34:1:594:ARG:NH1	34:1:674:LEU:HD22	1.16	1.43
35:3:353:PHE:CE1	39:5:55:ILE:HD11	1.51	1.42
34:1:598:SER:HA	34:1:638:ALA:CA	1.50	1.41
34:1:1257:PRO:CB	36:2:481:THR:HG23	1.49	1.40
36:2:487:LEU:CD2	39:5:28:LYS:HB2	1.48	1.40
34:1:594:ARG:HA	34:1:634:VAL:CG1	1.53	1.38
34:1:1281:ILE:HG22	35:3:1050:PHE:CE1	1.59	1.37
21:W:279:LYS:CB	36:2:622:GLY:CA	2.02	1.36
34:1:778:GLN:HG3	34:1:817:HIS:CG	1.64	1.32
34:1:594:ARG:HH11	34:1:674:LEU:CD2	1.42	1.32
34:1:1256:HIS:CD2	34:1:1257:PRO:HD2	1.65	1.31
35:3:1116:SER:CA	36:2:708:TRP:HZ2	1.44	1.29
34:1:933:CYS:SG	34:1:970:LEU:HD11	1.73	1.29
34:1:1154:LEU:O	34:1:1158:ILE:HG12	1.34	1.28
34:1:1148:LEU:CD1	34:1:1187:THR:HB	1.61	1.28
34:1:582:LEU:HG	34:1:634:VAL:CG2	1.63	1.27
1:A:1798:LEU:CD2	34:1:973:HIS:CD2	2.18	1.26
34:1:1148:LEU:HD13	34:1:1187:THR:CB	1.62	1.26
38:7:9:ILE:CG1	39:5:6:THR:HG21	1.66	1.26
34:1:1153:PHE:O	34:1:1157:TYR:HD2	1.19	1.26
3:C:213:ASP:OD1	3:C:616:SER:HB2	1.32	1.23
36:2:487:LEU:HD22	39:5:28:LYS:CB	1.69	1.22
34:1:933:CYS:SG	34:1:974:LEU:HD21	1.80	1.22
34:1:1125:PRO:HD2	34:1:1165:TYR:OH	1.35	1.21
34:1:601:ALA:O	34:1:639:LEU:HD21	1.39	1.21
1:A:1792:LYS:HE2	34:1:973:HIS:NE2	1.57	1.19
34:1:1148:LEU:HB3	34:1:1187:THR:HG22	1.23	1.19
35:3:353:PHE:CZ	39:5:55:ILE:HD11	1.75	1.19
34:1:1160:GLU:HG3	35:3:1146:MET:HE1	1.22	1.18
34:1:1281:ILE:CG2	35:3:1050:PHE:HE1	1.55	1.18
7:H:56:A:N7	36:2:505:CYS:HB3	1.57	1.18
34:1:594:ARG:HD3	34:1:674:LEU:CD1	1.72	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:1256:HIS:CD2	34:1:1257:PRO:CD	2.27	1.18
34:1:854:VAL:HG11	34:1:891:GLN:HE21	1.01	1.17
34:1:1257:PRO:CB	36:2:481:THR:CG2	2.23	1.17
34:1:1263:ASP:CA	39:5:24:ALA:HB2	1.75	1.17
34:1:933:CYS:HB2	34:1:970:LEU:CD1	1.73	1.16
34:1:777:PHE:CE2	34:1:814:PHE:HB2	1.79	1.16
34:1:1279:ALA:CA	35:3:1167:TYR:CD1	2.26	1.16
34:1:606:LEU:HG	34:1:639:LEU:CD1	1.75	1.16
1:A:1994:LYS:HD3	34:1:986:TYR:OH	1.41	1.16
34:1:598:SER:CA	34:1:638:ALA:CB	2.23	1.15
35:3:1041:TYR:CD2	36:2:705:ARG:NE	2.15	1.15
34:1:1279:ALA:HA	35:3:1167:TYR:CE1	1.82	1.14
34:1:1257:PRO:HB3	36:2:481:THR:CG2	1.77	1.14
34:1:1217:PRO:HB2	36:2:510:TYR:CZ	1.82	1.14
34:1:702:ARG:HD2	34:1:738:HIS:CD2	1.82	1.13
34:1:754:ILE:HG21	34:1:795:CYS:HA	1.21	1.13
34:1:495:ARG:HD3	34:1:530:PRO:HA	1.29	1.13
34:1:1256:HIS:CG	34:1:1257:PRO:HD2	1.84	1.13
34:1:598:SER:CA	34:1:638:ALA:HB2	1.77	1.13
34:1:707:LEU:HD12	34:1:741:LYS:HD3	1.30	1.12
34:1:778:GLN:HG3	34:1:817:HIS:ND1	1.63	1.12
34:1:1160:GLU:CG	35:3:1146:MET:HE1	1.80	1.12
34:1:1300:LEU:CB	35:3:1032:TRP:CZ3	2.33	1.12
35:3:1116:SER:C	36:2:708:TRP:CZ2	2.22	1.12
34:1:582:LEU:HD23	34:1:631:ALA:HA	1.28	1.12
35:3:1041:TYR:CE2	36:2:705:ARG:NH2	2.18	1.12
34:1:582:LEU:CG	34:1:634:VAL:HG21	1.80	1.11
34:1:1300:LEU:HD13	35:3:1032:TRP:CH2	1.85	1.11
35:3:1116:SER:CA	36:2:708:TRP:CZ2	2.32	1.11
35:3:1041:TYR:CD2	36:2:705:ARG:CZ	2.33	1.11
34:1:1248:GLN:NE2	36:2:496:ASN:HB3	1.63	1.10
34:1:1302:TYR:CE1	35:3:915:LEU:HB3	1.86	1.10
35:3:35:GLY:HA2	39:5:47:PHE:CZ	1.87	1.10
34:1:1257:PRO:HB2	36:2:481:THR:HG23	1.34	1.10
34:1:869:MET:SD	34:1:896:ILE:HD13	1.92	1.10
36:2:482:ALA:HB2	36:2:488:LEU:HD12	1.13	1.09
38:7:9:ILE:HG13	39:5:6:THR:HG21	1.27	1.09
34:1:1302:TYR:HE1	35:3:915:LEU:HB3	1.14	1.09
35:3:189:TYR:HA	39:5:73:LEU:CD1	1.81	1.09
34:1:719:TYR:CE1	35:3:146:ARG:NH1	2.21	1.08
34:1:850:ILE:HG22	34:1:888:LEU:HD11	1.30	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:1279:ALA:HB2	35:3:1167:TYR:HA	1.27	1.08
1:A:1798:LEU:HD11	34:1:973:HIS:CD2	1.88	1.08
34:1:523:ALA:C	34:1:563:LEU:HD11	1.71	1.08
34:1:1179:ASP:HB2	36:2:511:LEU:CB	1.84	1.08
34:1:1153:PHE:O	34:1:1157:TYR:CD2	2.06	1.07
34:1:1217:PRO:HD3	36:2:590:LEU:HD13	1.34	1.07
34:1:1263:ASP:HA	39:5:24:ALA:HB2	1.31	1.07
36:2:482:ALA:CB	36:2:488:LEU:HD12	1.85	1.07
34:1:594:ARG:CA	34:1:634:VAL:HG13	1.83	1.07
34:1:598:SER:HA	34:1:638:ALA:HA	1.34	1.07
34:1:1281:ILE:CG2	35:3:1050:PHE:CE1	2.33	1.07
34:1:598:SER:HA	34:1:638:ALA:HB2	1.19	1.06
34:1:933:CYS:HB2	34:1:970:LEU:HD11	1.13	1.06
35:3:1041:TYR:CB	36:2:705:ARG:HG3	1.84	1.06
34:1:606:LEU:HG	34:1:639:LEU:HD13	1.11	1.06
34:1:774:ILE:HG23	34:1:813:PRO:HG3	1.16	1.06
35:3:805:ASN:HB3	39:5:58:ASN:HB2	1.35	1.06
34:1:598:SER:CA	34:1:638:ALA:HA	1.84	1.06
34:1:1179:ASP:HB2	36:2:511:LEU:HB2	1.08	1.06
34:1:1279:ALA:CB	35:3:1167:TYR:HA	1.83	1.06
34:1:1257:PRO:HB3	36:2:481:THR:HG23	1.07	1.06
36:2:459:ARG:HD2	36:2:480:VAL:O	1.53	1.06
34:1:1125:PRO:HB2	34:1:1165:TYR:CZ	1.91	1.05
34:1:582:LEU:HG	34:1:634:VAL:HG21	1.11	1.05
34:1:1155:PHE:HA	34:1:1158:ILE:CG1	1.86	1.05
35:3:353:PHE:CE1	39:5:55:ILE:CD1	2.39	1.05
35:3:616:ILE:HB	35:3:629:SER:O	1.54	1.05
34:1:1125:PRO:HB2	34:1:1165:TYR:CE2	1.91	1.05
34:1:1242:GLY:HA2	35:3:1169:PRO:HD3	1.35	1.05
34:1:1251:LEU:HD12	36:2:497:SER:CB	1.86	1.05
34:1:778:GLN:CG	34:1:817:HIS:CG	2.38	1.04
34:1:1153:PHE:HB3	34:1:1157:TYR:HE2	1.21	1.04
34:1:1300:LEU:HD13	35:3:1032:TRP:CZ2	1.92	1.04
34:1:933:CYS:CB	34:1:970:LEU:CD1	2.29	1.04
34:1:949:GLN:HB2	34:1:989:VAL:HG22	1.38	1.04
34:1:598:SER:CA	34:1:638:ALA:CA	2.35	1.04
35:3:805:ASN:CB	39:5:58:ASN:HB2	1.87	1.04
34:1:854:VAL:HG11	34:1:891:GLN:NE2	1.73	1.03
34:1:857:LEU:HD13	34:1:895:GLY:HA3	1.36	1.03
34:1:1167:TYR:CE2	36:2:581:LYS:HA	1.94	1.03
34:1:1249:TYR:HA	36:2:498:VAL:HB	1.41	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:1041:TYR:CE2	36:2:705:ARG:CZ	2.42	1.03
7:H:56:A:C5	36:2:505:CYS:HB3	1.93	1.02
34:1:774:ILE:HG23	34:1:813:PRO:CG	1.89	1.02
34:1:594:ARG:NH1	34:1:674:LEU:CD2	2.08	1.02
34:1:869:MET:CE	34:1:896:ILE:HA	1.89	1.02
35:3:35:GLY:HA2	39:5:47:PHE:CE1	1.94	1.02
34:1:1179:ASP:CB	36:2:511:LEU:HB2	1.88	1.02
35:3:114:ARG:NH1	39:5:37:ARG:HB2	1.74	1.02
1:A:1798:LEU:CD2	34:1:973:HIS:HD2	1.60	1.02
21:W:279:LYS:CB	36:2:621:VAL:O	2.08	1.01
34:1:789:LEU:HB3	34:1:836:THR:HG21	1.38	1.01
1:A:1798:LEU:HD21	34:1:973:HIS:NE2	1.75	1.01
10:L:162:THR:HG22	16:R:259:GLY:O	1.60	1.01
34:1:495:ARG:HD3	34:1:530:PRO:CA	1.89	1.00
34:1:594:ARG:HA	34:1:634:VAL:HG13	1.04	1.00
6:G:83:A:H62	37:4:22:GLU:CB	1.73	1.00
9:J:199:LYS:HE2	9:J:199:LYS:HA	1.43	1.00
34:1:1251:LEU:HD12	36:2:497:SER:HB3	1.43	1.00
34:1:594:ARG:CD	34:1:674:LEU:HD13	1.92	0.99
36:2:514:LYS:CE	36:2:591:TYR:OH	2.10	0.99
34:1:869:MET:CE	34:1:896:ILE:HD13	1.93	0.99
10:L:164:GLY:O	10:L:167:ALA:N	1.95	0.99
34:1:789:LEU:CD2	34:1:836:THR:HG21	1.93	0.99
34:1:1160:GLU:CD	35:3:1146:MET:CE	2.31	0.99
34:1:1285:PRO:HB3	36:2:494:THR:HG21	1.44	0.99
34:1:1160:GLU:CB	34:1:1202:PHE:CE2	2.46	0.99
35:3:1041:TYR:HB3	36:2:705:ARG:HG3	1.02	0.99
34:1:1278:ASP:OD2	35:3:1166:TYR:CE2	2.14	0.98
36:2:498:VAL:HG21	36:2:587:HIS:CE1	1.97	0.98
34:1:1160:GLU:HG3	35:3:1146:MET:CE	1.93	0.98
35:3:115:ILE:HD13	39:5:19:ILE:H	1.26	0.98
35:3:115:ILE:HG21	39:5:19:ILE:HB	1.43	0.98
36:2:487:LEU:HD13	39:5:28:LYS:HD2	0.99	0.98
36:2:487:LEU:CD1	39:5:28:LYS:HD2	1.94	0.98
10:L:161:ASN:OD1	10:L:168:LYS:HD2	1.64	0.97
36:2:482:ALA:HB2	36:2:488:LEU:CD1	1.93	0.97
1:A:1792:LYS:HE3	34:1:973:HIS:CE1	1.99	0.97
5:F:38:G:H2'	5:F:39:A:H8	1.25	0.97
34:1:1148:LEU:HD13	34:1:1187:THR:HB	0.99	0.97
34:1:1148:LEU:CB	34:1:1187:THR:HG22	1.95	0.97
35:3:353:PHE:CZ	39:5:55:ILE:CD1	2.47	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:2:511:LEU:HD11	36:2:591:TYR:HE1	1.25	0.97
1:A:855:ARG:HG3	1:A:1520:ASN:HB3	1.43	0.97
34:1:606:LEU:CG	34:1:639:LEU:HD13	1.95	0.97
34:1:850:ILE:HG22	34:1:888:LEU:CD1	1.95	0.97
34:1:869:MET:HE1	34:1:896:ILE:HA	1.47	0.97
34:1:1292:LYS:NZ	39:5:78:PRO:HG2	1.81	0.96
36:2:487:LEU:HD13	39:5:28:LYS:CD	1.93	0.96
35:3:1041:TYR:HB3	36:2:705:ARG:CG	1.96	0.96
35:3:477:SER:HB2	35:3:505:THR:H	1.28	0.96
34:1:558:ARG:NH1	35:3:217:LEU:HD22	1.81	0.96
35:3:1040:ASP:HB3	36:2:706:THR:O	1.65	0.96
34:1:949:GLN:HB2	34:1:989:VAL:CG2	1.97	0.95
34:1:949:GLN:HA	34:1:989:VAL:HG13	1.47	0.95
3:C:618:THR:OG1	3:C:630:LEU:HB3	1.64	0.95
34:1:1043:ALA:HB2	34:1:1055:TRP:CH2	2.01	0.95
34:1:1125:PRO:CD	34:1:1165:TYR:OH	2.14	0.95
11:M:215:ASN:ND2	16:R:260:TYR:HA	1.82	0.95
17:S:83:GLU:HA	17:S:106:ASP:HA	1.46	0.95
1:A:1792:LYS:CE	34:1:973:HIS:NE2	2.30	0.95
34:1:1148:LEU:CB	34:1:1187:THR:CG2	2.43	0.95
34:1:707:LEU:CD1	34:1:741:LYS:HD3	1.96	0.95
34:1:1148:LEU:HD13	34:1:1187:THR:CG2	1.96	0.95
38:7:9:ILE:CG1	39:5:6:THR:CG2	2.45	0.94
10:L:16:ASP:HB2	10:L:54:LEU:HD21	1.47	0.94
34:1:1300:LEU:HB3	35:3:1032:TRP:CE3	2.03	0.94
34:1:1279:ALA:HA	35:3:1167:TYR:HD1	1.19	0.94
34:1:582:LEU:HD23	34:1:631:ALA:CA	1.97	0.94
34:1:1153:PHE:HB3	34:1:1157:TYR:CE2	2.02	0.94
34:1:937:LEU:HD23	34:1:977:VAL:HG21	1.47	0.94
34:1:1178:MET:SD	36:2:514:LYS:NZ	2.41	0.94
36:2:487:LEU:HD21	39:5:28:LYS:HB2	1.50	0.94
34:1:1178:MET:HG2	36:2:591:TYR:CZ	2.03	0.93
34:1:778:GLN:CG	34:1:817:HIS:ND1	2.30	0.93
34:1:866:LYS:HG2	34:1:909:VAL:HG11	1.48	0.93
34:1:1125:PRO:HG2	34:1:1165:TYR:CE2	2.02	0.93
34:1:594:ARG:CD	34:1:674:LEU:CD1	2.45	0.93
2:B:40:U:O4	6:G:0:G:N2	2.01	0.93
34:1:933:CYS:SG	34:1:970:LEU:CD1	2.57	0.93
34:1:774:ILE:CG2	34:1:813:PRO:HG3	1.98	0.93
34:1:1179:ASP:CB	36:2:511:LEU:CB	2.46	0.93
2:B:46:U:O2	19:U:11:ARG:NH2	2.00	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:59:G:H1	5:F:76:A:H61	1.09	0.93
39:5:36:HIS:HD1	39:5:76:CYS:HG	1.08	0.93
35:3:805:ASN:HB3	39:5:58:ASN:CB	1.98	0.92
34:1:937:LEU:CD2	34:1:977:VAL:HG21	1.98	0.92
34:1:1262:ARG:CB	39:5:24:ALA:HB1	1.99	0.92
34:1:1263:ASP:N	39:5:24:ALA:HB2	1.84	0.92
36:2:487:LEU:HD22	39:5:28:LYS:HB2	0.93	0.92
2:B:20:G:O6	2:B:57:G:N1	2.02	0.92
34:1:850:ILE:CG2	34:1:888:LEU:HD11	1.99	0.92
35:3:1116:SER:HA	36:2:708:TRP:CZ2	2.03	0.92
34:1:594:ARG:HA	34:1:634:VAL:HG11	1.49	0.92
34:1:1148:LEU:HB2	34:1:1187:THR:HG21	1.52	0.92
1:A:467:GLN:OE1	2:B:20:G:N2	2.03	0.91
34:1:1257:PRO:HB2	36:2:481:THR:CG2	1.94	0.91
34:1:857:LEU:HD13	34:1:895:GLY:CA	1.99	0.91
21:W:320:GLY:O	36:2:667:ALA:O	1.87	0.91
35:3:516:LEU:O	35:3:527:ILE:HB	1.70	0.91
14:P:207:ASP:HB2	14:P:218:GLU:HB2	1.50	0.91
34:1:1125:PRO:HG2	34:1:1165:TYR:HE2	1.35	0.91
35:3:35:GLY:CA	39:5:47:PHE:CZ	2.53	0.91
34:1:1257:PRO:HG3	36:2:478:HIS:CA	2.01	0.91
34:1:884:ILE:HD13	34:1:889:GLU:HB3	1.50	0.91
34:1:1148:LEU:CD1	34:1:1187:THR:CG2	2.48	0.91
9:J:199:LYS:HG3	11:M:208:ILE:HD13	1.53	0.91
4:E:150:HIS:HE2	4:E:169:THR:HG1	1.13	0.90
34:1:884:ILE:HB	34:1:888:LEU:HD23	1.52	0.90
34:1:778:GLN:HG2	34:1:817:HIS:CE1	2.04	0.90
35:3:459:VAL:HG21	35:3:757:ILE:HG21	1.51	0.90
3:C:350:ASN:HD22	3:C:353:THR:HG22	1.36	0.90
34:1:1160:GLU:CD	35:3:1146:MET:HE2	1.89	0.90
8:I:394:PRO:HG2	8:I:429:VAL:HA	1.53	0.90
34:1:967:GLU:CB	34:1:970:LEU:HB3	2.00	0.90
35:3:463:ARG:H	35:3:510:LEU:HD22	1.36	0.90
34:1:1155:PHE:HA	34:1:1158:ILE:HD11	1.52	0.90
34:1:1155:PHE:HA	34:1:1158:ILE:CD1	2.00	0.90
34:1:1160:GLU:HB2	34:1:1202:PHE:CE2	2.07	0.90
34:1:789:LEU:HD22	34:1:836:THR:HG21	1.52	0.90
34:1:778:GLN:CG	34:1:817:HIS:CE1	2.55	0.89
1:A:705:LYS:NZ	16:R:247:ILE:O	2.04	0.89
38:7:9:ILE:HG12	39:5:6:THR:CG2	2.02	0.89
34:1:962:MET:HG2	34:1:974:LEU:HD12	1.53	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:1292:LYS:HZ2	39:5:78:PRO:HG2	1.37	0.89
34:1:789:LEU:HD22	34:1:836:THR:CG2	2.01	0.89
34:1:582:LEU:CD2	34:1:631:ALA:HA	2.03	0.89
34:1:719:TYR:CD1	35:3:146:ARG:NH1	2.41	0.89
34:1:960:VAL:O	34:1:963:LYS:HB3	1.72	0.89
34:1:1278:ASP:HB3	35:3:1166:TYR:HE2	1.38	0.89
34:1:1281:ILE:HG22	35:3:1050:PHE:CZ	2.06	0.89
1:A:1798:LEU:CD1	34:1:973:HIS:CD2	2.55	0.88
11:M:215:ASN:HD21	16:R:261:THR:N	1.70	0.88
34:1:1245:ARG:HH22	35:3:1028:THR:HB	1.37	0.88
1:A:39:GLN:HE22	21:W:170:THR:H	1.18	0.88
34:1:962:MET:SD	34:1:974:LEU:HD11	2.13	0.88
34:1:1160:GLU:HB3	34:1:1202:PHE:CE2	2.08	0.88
1:A:1792:LYS:CE	34:1:973:HIS:CE1	2.56	0.88
34:1:1217:PRO:CB	36:2:510:TYR:CZ	2.55	0.88
34:1:594:ARG:HD3	34:1:674:LEU:CD2	2.03	0.88
34:1:1256:HIS:CD2	34:1:1257:PRO:HD3	2.09	0.88
35:3:189:TYR:CB	39:5:73:LEU:HD12	2.04	0.88
34:1:1125:PRO:CB	34:1:1165:TYR:CE2	2.57	0.88
34:1:1266:TRP:CE3	39:5:22:GLY:HA3	2.08	0.88
9:J:195:LEU:HD23	11:M:209:ASP:HA	1.56	0.88
34:1:497:ILE:HG12	34:1:526:PHE:HZ	1.37	0.88
34:1:601:ALA:O	34:1:639:LEU:CD2	2.21	0.88
34:1:1160:GLU:HB2	34:1:1202:PHE:CZ	2.08	0.88
34:1:1178:MET:HA	36:2:511:LEU:HD13	1.55	0.88
34:1:1300:LEU:HB3	35:3:1032:TRP:HZ3	1.33	0.88
34:1:1148:LEU:HB3	34:1:1187:THR:CG2	2.00	0.88
34:1:1160:GLU:CG	35:3:1146:MET:CE	2.50	0.87
34:1:1293:ASN:OD1	39:5:77:GLY:HA3	1.73	0.87
35:3:353:PHE:CE1	39:5:51:ASN:HB3	2.09	0.87
34:1:594:ARG:HD3	34:1:674:LEU:HD11	1.54	0.87
36:2:514:LYS:HE3	36:2:591:TYR:OH	1.72	0.87
36:2:642:PRO:CB	37:4:66:ASP:CB	2.51	0.87
3:C:213:ASP:OD1	3:C:616:SER:CB	2.20	0.87
18:T:307:SER:OG	18:T:309:ASP:OD1	1.92	0.87
34:1:564:ASP:O	34:1:568:ARG:NH2	2.06	0.87
34:1:1255:PHE:O	36:2:488:LEU:HG	1.75	0.87
1:A:372:PRO:O	3:C:342:ARG:NH2	2.07	0.87
1:A:1526:LEU:HD13	1:A:1528:GLN:H	1.40	0.87
22:X:690:LEU:HD22	22:X:735:PHE:HB2	1.57	0.87
23:Y:246:LYS:HE3	23:Y:312:HIS:HB2	1.57	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:707:ARG:HH12	7:H:18:U:H5'	1.37	0.87
34:1:710:ALA:HA	34:1:749:ALA:HB2	1.57	0.87
35:3:1129:LEU:O	36:2:708:TRP:HH2	1.58	0.87
34:1:1242:GLY:HA2	35:3:1169:PRO:CD	2.05	0.86
36:2:478:HIS:O	36:2:481:THR:HG22	1.73	0.86
34:1:952:ALA:HB2	34:1:993:ILE:HD11	1.56	0.86
35:3:1007:GLU:HB3	36:2:495:ARG:NH2	1.89	0.86
5:F:36:A:H3'	5:F:37:C:H5''	1.55	0.86
3:C:478:THR:HG21	3:C:492:ALA:HB1	1.56	0.86
34:1:582:LEU:CD1	34:1:634:VAL:HG21	2.04	0.86
34:1:1302:TYR:CE1	35:3:915:LEU:HD13	2.09	0.86
34:1:949:GLN:HA	34:1:989:VAL:CG1	2.05	0.86
35:3:1116:SER:C	36:2:708:TRP:HZ2	1.64	0.86
35:3:1008:SER:OG	35:3:1009:PHE:N	2.07	0.86
1:A:414:ARG:NH1	3:C:410:LEU:O	2.09	0.85
10:L:161:ASN:O	10:L:161:ASN:ND2	2.07	0.85
1:A:1994:LYS:CD	34:1:986:TYR:OH	2.24	0.85
34:1:594:ARG:CZ	34:1:674:LEU:HD22	2.06	0.85
35:3:668:GLY:HA3	35:3:699:VAL:HG11	1.57	0.85
34:1:1125:PRO:CG	34:1:1165:TYR:CE2	2.58	0.85
5:F:38:G:H2'	5:F:39:A:C8	2.10	0.85
34:1:712:LEU:O	34:1:716:ALA:HB3	1.76	0.85
34:1:594:ARG:CA	34:1:634:VAL:CG1	2.46	0.85
34:1:1248:GLN:NE2	36:2:496:ASN:CB	2.40	0.85
1:A:1018:ASN:ND2	1:A:1023:ASN:OD1	2.09	0.85
34:1:1257:PRO:HB3	36:2:478:HIS:O	1.77	0.85
36:2:452:LYS:HD2	36:2:452:LYS:O	1.75	0.85
35:3:139:LYS:HG3	35:3:160:ALA:HB3	1.57	0.85
35:3:353:PHE:CD1	39:5:55:ILE:HD11	2.11	0.85
34:1:497:ILE:HG23	34:1:526:PHE:HE1	1.42	0.84
9:J:187:VAL:HG13	9:J:188:GLN:H	1.43	0.84
34:1:582:LEU:HG	34:1:634:VAL:HG23	1.59	0.84
34:1:949:GLN:OE1	34:1:989:VAL:HG22	1.76	0.84
35:3:115:ILE:HD11	39:5:18:TYR:HA	1.57	0.84
35:3:568:MET:HB3	35:3:574:LEU:HD12	1.60	0.84
35:3:253:GLU:OE1	39:5:63:ARG:NH1	2.10	0.84
38:7:40:CYS:SG	38:7:73:LYS:NZ	2.51	0.84
34:1:1242:GLY:CA	35:3:1169:PRO:CD	2.55	0.84
3:C:117:ASP:N	3:C:117:ASP:OD1	2.11	0.84
9:J:193:GLN:HA	9:J:193:GLN:HE21	1.42	0.84
34:1:744:ALA:HB1	34:1:784:MET:HA	1.57	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:X:991:LEU:HA	22:X:995:GLU:HA	1.60	0.84
34:1:1257:PRO:HG3	36:2:478:HIS:C	1.97	0.84
3:C:488:VAL:HG13	3:C:609:LYS:HD3	1.59	0.84
34:1:962:MET:SD	34:1:974:LEU:CD1	2.65	0.84
35:3:280:ASP:HB3	35:3:283:ARG:HG3	1.60	0.83
35:3:806:ALA:HA	35:3:856:LYS:HB3	1.58	0.83
35:3:1116:SER:N	36:2:708:TRP:HZ2	1.76	0.83
34:1:926:LYS:HE2	34:1:964:THR:O	1.78	0.83
34:1:1251:LEU:HD12	36:2:497:SER:HB2	1.57	0.83
35:3:585:ALA:HB1	35:3:610:VAL:HG12	1.59	0.83
35:3:114:ARG:HD3	39:5:38:ASP:OD1	1.78	0.83
34:1:754:ILE:HG21	34:1:795:CYS:CA	2.08	0.83
34:1:1263:ASP:N	39:5:24:ALA:CB	2.41	0.83
35:3:429:ARG:HD3	39:5:55:ILE:HG23	1.60	0.83
34:1:777:PHE:CD1	34:1:818:PHE:HE2	1.96	0.83
34:1:1300:LEU:CD1	35:3:1032:TRP:CH2	2.61	0.83
34:1:598:SER:O	34:1:638:ALA:HB1	1.79	0.83
1:A:1636:LYS:HD3	1:A:1658:GLN:HE21	1.44	0.83
7:H:56:A:C5	36:2:505:CYS:CB	2.62	0.83
34:1:1125:PRO:HD2	34:1:1165:TYR:HH	1.40	0.83
4:E:92:LEU:HD12	4:E:103:ALA:HB3	1.61	0.83
34:1:734:GLY:O	34:1:738:HIS:HB2	1.77	0.83
39:5:36:HIS:ND1	39:5:76:CYS:SG	2.49	0.83
3:C:618:THR:HG1	3:C:630:LEU:HB3	1.44	0.83
34:1:1281:ILE:HG21	35:3:1050:PHE:HE1	1.42	0.83
35:3:352:GLU:OE2	35:3:429:ARG:NH1	2.12	0.83
11:M:215:ASN:ND2	16:R:260:TYR:CA	2.40	0.82
1:A:325:HIS:HD2	1:A:326:HIS:HD2	1.25	0.82
34:1:558:ARG:NH1	35:3:217:LEU:CD2	2.42	0.82
7:H:56:A:N7	36:2:505:CYS:CB	2.42	0.82
34:1:857:LEU:CD1	34:1:895:GLY:HA3	2.09	0.82
11:M:215:ASN:HD21	16:R:261:THR:H	1.24	0.82
3:C:670:SER:HA	3:C:823:ALA:HB3	1.61	0.82
36:2:511:LEU:HD23	36:2:593:GLU:HB3	1.61	0.82
34:1:1285:PRO:CB	36:2:494:THR:HG21	2.09	0.82
1:A:1838:LYS:HB3	1:A:1868:MET:HG3	1.60	0.81
5:F:59:G:H1	5:F:76:A:N6	1.76	0.81
34:1:665:ILE:HD13	34:1:705:SER:HB2	1.61	0.81
34:1:1148:LEU:CD1	34:1:1187:THR:CB	2.34	0.81
34:1:1205:GLU:OE1	35:3:1171:LYS:HD3	1.79	0.81
35:3:162:LYS:HE3	35:3:165:THR:HG21	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:2:517:ILE:HD12	36:2:517:ILE:O	1.80	0.81
34:1:702:ARG:HD2	34:1:738:HIS:CG	2.15	0.81
34:1:929:LEU:CB	34:1:970:LEU:HD22	2.10	0.81
34:1:725:ASP:HA	34:1:728:LEU:HG	1.61	0.81
11:M:215:ASN:HD22	16:R:260:TYR:HA	1.45	0.81
1:A:1835:GLN:HA	1:A:1838:LYS:HG3	1.63	0.81
36:2:454:LEU:HD12	36:2:454:LEU:O	1.80	0.81
22:X:242:LYS:NZ	23:Y:220:GLN:O	2.14	0.81
34:1:1242:GLY:CA	35:3:1169:PRO:HD3	2.11	0.81
36:2:511:LEU:CD2	36:2:593:GLU:HB3	2.10	0.81
4:E:92:LEU:O	4:E:101:ASN:ND2	2.14	0.80
4:E:197:LEU:HG	4:E:212:GLY:HA2	1.62	0.80
36:2:487:LEU:CD2	39:5:28:LYS:CB	2.42	0.80
38:7:33:CYS:SG	38:7:35:SER:OG	2.31	0.80
1:A:1807:ILE:HB	1:A:1820:LYS:HB3	1.63	0.80
35:3:412:ILE:HG12	35:3:423:LEU:HD22	1.63	0.80
34:1:1259:ARG:NH2	39:5:25:ASP:OD1	2.15	0.80
4:E:87:ASP:N	4:E:87:ASP:OD1	2.13	0.80
34:1:929:LEU:CB	34:1:970:LEU:CD2	2.59	0.80
1:A:701:ILE:HD11	16:R:237:MET:HG3	1.64	0.80
35:3:170:VAL:HG23	35:3:184:CYS:HB3	1.64	0.80
36:2:511:LEU:CD1	36:2:591:TYR:HE1	1.94	0.80
34:1:652:CYS:HB2	34:1:692:HIS:HE1	1.46	0.80
34:1:778:GLN:HG2	34:1:817:HIS:NE2	1.97	0.80
22:X:604:VAL:HG13	22:X:605:THR:HG23	1.64	0.80
3:C:534:VAL:HG22	3:C:537:TYR:HB2	1.65	0.79
35:3:115:ILE:CD1	39:5:19:ILE:H	1.95	0.79
34:1:497:ILE:HG12	34:1:526:PHE:CZ	2.17	0.79
34:1:558:ARG:HH12	35:3:217:LEU:HD22	1.47	0.79
34:1:1178:MET:HB3	36:2:514:LYS:NZ	1.98	0.79
3:C:343:LEU:HD13	3:C:373:ILE:HD11	1.63	0.79
34:1:929:LEU:C	34:1:970:LEU:HD22	2.02	0.79
34:1:1160:GLU:CD	35:3:1146:MET:HE1	1.96	0.79
35:3:29:GLU:HG3	35:3:42:ARG:HG3	1.63	0.79
34:1:1257:PRO:HG3	36:2:478:HIS:O	1.83	0.79
16:R:376:LYS:HA	16:R:379:LYS:HB2	1.65	0.79
34:1:598:SER:O	34:1:602:LYS:HB2	1.83	0.79
34:1:598:SER:N	34:1:638:ALA:HB2	1.98	0.79
35:3:136:GLU:OE2	35:3:189:TYR:OH	2.00	0.79
35:3:228:LEU:HD21	35:3:250:ILE:HG21	1.65	0.79
2:B:97:G:H1	2:B:116:U:H3	1.29	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:R:367:ARG:NH1	23:Y:282:CYS:SG	2.55	0.78
34:1:854:VAL:CG1	34:1:891:GLN:HE21	1.91	0.78
34:1:952:ALA:CB	34:1:993:ILE:HD11	2.12	0.78
35:3:412:ILE:HD12	35:3:1107:THR:HG21	1.64	0.78
35:3:929:LYS:HE3	35:3:938:GLU:HB2	1.65	0.78
34:1:834:VAL:HG22	34:1:871:THR:HG23	1.65	0.78
14:P:67:GLU:OE2	18:T:476:ARG:NH2	2.15	0.78
34:1:805:TYR:O	34:1:809:GLU:HB2	1.82	0.78
34:1:1217:PRO:HG2	36:2:510:TYR:OH	1.83	0.78
18:T:191:HIS:NE2	18:T:440:ASP:OD1	2.16	0.78
34:1:523:ALA:O	34:1:563:LEU:HD11	1.83	0.78
34:1:1279:ALA:CA	35:3:1167:TYR:HD1	1.80	0.78
16:R:163:MET:O	16:R:165:VAL:N	2.15	0.78
34:1:757:MET:HB3	34:1:762:ALA:HB2	1.64	0.78
36:2:479:ASP:HA	36:2:488:LEU:HD13	1.64	0.78
1:A:221:ASN:HB2	1:A:227:ARG:HB2	1.64	0.78
34:1:778:GLN:CG	34:1:817:HIS:CD2	2.67	0.78
1:A:1826:VAL:O	1:A:1830:GLN:NE2	2.17	0.77
34:1:544:LEU:HD21	34:1:549:ARG:HG3	1.64	0.77
34:1:972:GLY:HA2	34:1:1010:THR:HG21	1.64	0.77
34:1:1283:HIS:HE1	35:3:1168:PHE:CZ	2.01	0.77
21:W:180:LYS:HA	21:W:200:VAL:H	1.49	0.77
34:1:1125:PRO:CB	34:1:1165:TYR:CZ	2.67	0.77
34:1:554:LYS:HA	34:1:558:ARG:HH21	1.50	0.77
35:3:1041:TYR:CZ	36:2:705:ARG:NH2	2.53	0.77
34:1:1244:CYS:SG	35:3:1030:PRO:HD2	2.25	0.77
23:Y:245:CYS:SG	23:Y:246:LYS:N	2.58	0.77
34:1:866:LYS:CG	34:1:909:VAL:HG11	2.14	0.77
34:1:1160:GLU:HB3	34:1:1202:PHE:HE2	1.49	0.77
16:R:348:GLU:O	16:R:352:ARG:HB2	1.84	0.77
34:1:952:ALA:HB1	34:1:993:ILE:CD1	2.15	0.77
34:1:1251:LEU:CB	36:2:497:SER:HB2	2.14	0.77
35:3:89:ILE:HD12	35:3:103:HIS:HB2	1.67	0.77
35:3:189:TYR:CA	39:5:73:LEU:CD1	2.61	0.77
1:A:923:ASP:OD2	1:A:1439:ARG:NH1	2.18	0.77
16:R:308:VAL:HA	23:Y:197:ILE:HG21	1.66	0.77
34:1:1302:TYR:HE1	35:3:915:LEU:CB	1.96	0.77
35:3:878:ASP:OD1	35:3:879:LEU:N	2.18	0.77
35:3:996:ILE:HD13	36:2:703:ILE:N	2.00	0.77
3:C:144:CYS:SG	3:C:313:GLN:NE2	2.58	0.77
34:1:1257:PRO:CG	36:2:478:HIS:O	2.33	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:464:ARG:HG2	35:3:516:LEU:HD11	1.67	0.77
21:W:321:GLU:HA	36:2:667:ALA:HB3	1.65	0.76
36:2:568:TYR:O	36:2:570:LYS:N	2.18	0.76
14:P:183:LYS:HA	23:Y:52:GLN:HE22	1.50	0.76
22:X:480:SER:OG	22:X:485:ASP:OD1	2.04	0.76
34:1:712:LEU:O	34:1:716:ALA:CB	2.33	0.76
34:1:884:ILE:CD1	34:1:889:GLU:HB3	2.15	0.76
36:2:498:VAL:CG2	36:2:587:HIS:CE1	2.67	0.76
3:C:684:LYS:HB3	3:C:795:VAL:HB	1.67	0.76
34:1:495:ARG:CD	34:1:530:PRO:HB3	2.15	0.76
35:3:351:SER:H	35:3:356:HIS:HB3	1.50	0.76
35:3:1013:ARG:NH2	35:3:1064:ASP:OD1	2.18	0.76
22:X:242:LYS:O	22:X:246:LEU:HB2	1.86	0.76
34:1:1178:MET:HA	36:2:511:LEU:CD1	2.14	0.76
36:2:711:LEU:O	36:2:711:LEU:HD13	1.85	0.76
34:1:739:ARG:HA	34:1:743:LEU:CD2	2.16	0.76
34:1:1148:LEU:CB	34:1:1187:THR:HG21	2.12	0.76
35:3:592:LEU:HD22	35:3:605:LEU:HD13	1.65	0.76
36:2:498:VAL:HG21	36:2:587:HIS:HE1	1.45	0.76
1:A:1830:GLN:HB3	1:A:1836:LEU:HD22	1.68	0.76
4:E:216:ASP:OD2	4:E:218:LYS:NZ	2.18	0.76
22:X:961:THR:O	22:X:965:GLN:NE2	2.19	0.76
34:1:838:VAL:HG13	34:1:875:ILE:HG12	1.67	0.76
38:7:22:LEU:N	38:7:67:SER:O	2.18	0.76
1:A:1798:LEU:CG	34:1:973:HIS:CD2	2.68	0.76
34:1:747:LEU:HD12	34:1:750:ILE:HD11	1.68	0.76
10:L:159:LEU:O	11:M:211:ILE:HD13	1.86	0.76
35:3:459:VAL:HG22	35:3:476:VAL:HA	1.68	0.76
4:E:135:VAL:HG13	4:E:144:VAL:HG23	1.68	0.76
6:G:88:G:H1	7:H:41:U:H3	1.28	0.76
20:V:576:THR:HB	20:V:579:SER:H	1.49	0.76
34:1:565:ASP:HA	34:1:568:ARG:HE	1.51	0.76
34:1:1160:GLU:OE2	35:3:1146:MET:CE	2.33	0.76
34:1:1193:GLN:NE2	38:7:78:GLN:NE2	2.34	0.76
35:3:525:ARG:HG3	35:3:533:VAL:HG13	1.67	0.76
1:A:57:GLN:N	1:A:57:GLN:HE21	1.84	0.75
34:1:744:ALA:O	34:1:787:ILE:CB	2.34	0.75
34:1:702:ARG:CD	34:1:738:HIS:CD2	2.65	0.75
35:3:412:ILE:H	35:3:1105:GLN:HE22	1.34	0.75
1:A:729:PRO:HG2	11:M:226:TYR:CE1	2.22	0.75
8:I:621:ARG:O	8:I:625:PRO:HD2	1.85	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:1262:ARG:C	39:5:24:ALA:CB	2.55	0.75
34:1:1178:MET:HG2	36:2:591:TYR:CE2	2.21	0.75
35:3:1026:ASP:OD1	35:3:1026:ASP:N	2.18	0.75
2:B:18:C:O2	2:B:59:G:N2	2.19	0.75
7:H:28:C:O2'	7:H:29:A:N3	2.18	0.75
9:J:193:GLN:HE21	9:J:193:GLN:CA	2.00	0.75
35:3:463:ARG:HB2	35:3:510:LEU:HD13	1.66	0.75
16:R:359:ARG:HB3	16:R:363:ARG:HH21	1.52	0.75
34:1:1243:PRO:CD	35:3:1167:TYR:O	2.34	0.75
1:A:1104:ASP:OD1	1:A:1104:ASP:N	2.19	0.75
4:E:312:TRP:HE1	4:E:319:ILE:HG12	1.50	0.75
35:3:115:ILE:HD13	39:5:19:ILE:N	2.01	0.75
17:S:18:THR:HA	17:S:159:ILE:HA	1.69	0.75
34:1:754:ILE:CG2	34:1:795:CYS:HA	2.11	0.75
34:1:778:GLN:HG2	34:1:817:HIS:CD2	2.21	0.75
34:1:789:LEU:HB3	34:1:836:THR:CG2	2.15	0.75
34:1:861:ALA:O	34:1:864:TYR:N	2.17	0.75
34:1:869:MET:HE2	34:1:896:ILE:HD13	1.68	0.75
34:1:1262:ARG:CB	39:5:24:ALA:O	2.34	0.75
35:3:969:VAL:HB	35:3:981:CYS:HB2	1.69	0.75
23:Y:246:LYS:HB2	23:Y:311:ILE:HA	1.67	0.75
6:G:98:U:O4	7:H:33:G:N1	2.19	0.74
20:V:539:LEU:HD13	20:V:543:LYS:HB3	1.68	0.74
35:3:1040:ASP:OD2	35:3:1043:THR:N	2.20	0.74
1:A:658:ARG:NH1	5:F:67:G:OP2	2.19	0.74
14:P:206:LYS:HB3	14:P:218:GLU:HG2	1.69	0.74
18:T:267:ASP:OD1	18:T:267:ASP:N	2.21	0.74
34:1:1285:PRO:HB3	36:2:494:THR:CG2	2.17	0.74
1:A:1870:ASP:N	1:A:1870:ASP:OD1	2.20	0.74
16:R:325:ARG:HE	23:Y:222:ILE:HG23	1.51	0.74
34:1:789:LEU:CB	34:1:836:THR:HG21	2.15	0.74
12:N:53:HIS:NE2	12:N:85:ASP:OD2	2.19	0.74
35:3:902:ASP:OD1	35:3:902:ASP:N	2.20	0.74
1:A:850:TYR:OH	1:A:863:GLU:OE1	2.05	0.74
4:E:166:LEU:HD11	4:E:178:LEU:HG	1.70	0.74
22:X:919:GLU:HA	22:X:922:LEU:HB2	1.69	0.74
34:1:884:ILE:HD13	34:1:889:GLU:CB	2.17	0.74
35:3:206:GLN:HG3	35:3:231:HIS:HD2	1.52	0.74
35:3:325:ILE:N	35:3:375:SER:OG	2.20	0.74
35:3:511:LEU:HD23	35:3:512:GLY:H	1.52	0.74
1:A:184:ASP:HB2	12:N:1:MET:HA	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:22:PHE:O	35:3:75:LYS:NZ	2.19	0.74
35:3:487:ILE:HA	35:3:491:VAL:HG13	1.69	0.74
9:J:199:LYS:HE2	9:J:199:LYS:CA	2.18	0.74
34:1:717:THR:CB	34:1:718:PRO:HD2	2.16	0.74
34:1:1043:ALA:HB2	34:1:1055:TRP:HH2	1.53	0.74
9:J:438:TYR:O	9:J:442:ARG:HB2	1.88	0.74
36:2:491:LEU:O	36:2:494:THR:OG1	2.06	0.74
16:R:125:MET:N	16:R:125:MET:SD	2.61	0.73
34:1:869:MET:HE2	34:1:896:ILE:HA	1.70	0.73
34:1:1203:GLY:HA2	35:3:1171:LYS:CG	2.18	0.73
6:G:108:U:H5''	22:X:676:ILE:HB	1.70	0.73
22:X:428:LYS:HD2	22:X:551:ALA:HB1	1.70	0.73
34:1:850:ILE:HG21	34:1:888:LEU:HD21	1.68	0.73
1:A:1382:SER:HB2	1:A:1415:GLY:HA2	1.69	0.73
11:M:165:ASN:HB2	16:R:95:LYS:HB3	1.69	0.73
1:A:55:ASP:OD1	1:A:55:ASP:N	2.17	0.73
20:V:581:ILE:HA	20:V:584:LYS:HG2	1.71	0.73
35:3:228:LEU:HD12	35:3:229:GLU:H	1.52	0.73
4:E:189:THR:OG1	4:E:191:GLN:OE1	2.06	0.73
4:E:255:MET:HB2	4:E:282:HIS:HB3	1.71	0.73
34:1:1251:LEU:HB2	36:2:497:SER:HB2	1.68	0.73
18:T:223:SER:OG	18:T:225:ASP:OD2	2.02	0.73
34:1:1205:GLU:OE1	35:3:1171:LYS:CD	2.36	0.73
34:1:1257:PRO:CB	36:2:478:HIS:O	2.37	0.73
1:A:1838:LYS:O	1:A:1841:THR:OG1	2.07	0.73
34:1:597:ILE:O	34:1:638:ALA:CB	2.36	0.73
22:X:752:VAL:O	22:X:757:ARG:NH2	2.21	0.73
34:1:1249:TYR:HE2	36:2:587:HIS:HD1	1.36	0.73
35:3:932:ASN:HB2	35:3:936:LYS:HE3	1.69	0.73
14:P:186:ARG:CB	14:P:186:ARG:HH11	2.02	0.72
34:1:702:ARG:HD2	34:1:738:HIS:NE2	2.03	0.72
34:1:962:MET:HG2	34:1:974:LEU:CD1	2.18	0.72
1:A:1652:MET:HG2	1:A:1719:PHE:HA	1.72	0.72
34:1:952:ALA:HB1	34:1:993:ILE:HD13	1.71	0.72
36:2:457:MET:HA	36:2:457:MET:CE	2.19	0.72
6:G:105:C:H4'	6:G:106:C:OP2	1.88	0.72
34:1:1145:ASN:HD21	34:1:1183:VAL:HG11	1.52	0.72
4:E:128:SER:OG	4:E:130:ASP:OD1	2.03	0.72
4:E:137:ASP:O	4:E:141:GLY:N	2.19	0.72
34:1:1160:GLU:CB	34:1:1202:PHE:CZ	2.69	0.72
34:1:1248:GLN:HE22	36:2:496:ASN:HB3	1.49	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:474:ARG:NH1	2:B:15:C:OP2	2.23	0.72
1:A:1878:ASP:OD1	1:A:1878:ASP:N	2.13	0.72
3:C:778:PRO:HB2	3:C:821:LEU:HD21	1.71	0.72
18:T:188:PRO:HG2	18:T:502:VAL:HG11	1.70	0.72
22:X:689:VAL:O	22:X:734:CYS:HA	1.89	0.72
38:7:73:LYS:O	38:7:77:ILE:HG13	1.88	0.72
34:1:758:ASP:O	34:1:762:ALA:N	2.15	0.72
34:1:796:CYS:HB3	34:1:806:ILE:HG12	1.71	0.72
35:3:581:LYS:HD2	35:3:625:LEU:HD22	1.71	0.72
1:A:888:GLN:O	1:A:889:ARG:NH1	2.22	0.72
2:B:18:C:N3	2:B:59:G:N1	2.34	0.72
4:E:126:SER:HG	4:E:136:TRP:HE1	1.34	0.72
23:Y:51:ILE:HD11	23:Y:112:THR:HG23	1.72	0.72
34:1:962:MET:CG	34:1:974:LEU:HD12	2.19	0.72
1:A:159:ARG:NH1	1:A:159:ARG:HA	2.05	0.72
22:X:945:ALA:HA	22:X:1011:VAL:HG11	1.71	0.72
34:1:594:ARG:HG3	34:1:634:VAL:HG22	1.72	0.72
34:1:597:ILE:C	34:1:638:ALA:HB2	2.10	0.72
34:1:963:LYS:HB2	34:1:1003:VAL:HG21	1.71	0.72
1:A:27:GLU:OE1	1:A:31:GLN:NE2	2.22	0.71
1:A:419:ARG:NH2	1:A:423:ASP:O	2.23	0.71
15:Q:497:SER:O	15:Q:500:GLY:N	2.23	0.71
23:Y:62:GLY:O	23:Y:107:GLN:NE2	2.23	0.71
23:Y:122:VAL:HB	23:Y:123:HIS:HD2	1.53	0.71
1:A:1637:TRP:O	1:A:1656:THR:HA	1.89	0.71
34:1:1287:ILE:HA	36:2:490:HIS:NE2	2.05	0.71
34:1:1299:GLU:HA	34:1:1302:TYR:HE2	1.55	0.71
35:3:208:LEU:HD13	35:3:250:ILE:HD11	1.71	0.71
38:7:71:TYR:CE2	38:7:81:ASP:HB2	2.25	0.71
9:J:363:ARG:NH1	9:J:386:GLU:OE2	2.23	0.71
13:O:163:HIS:O	13:O:182:ARG:N	2.23	0.71
35:3:353:PHE:HE1	39:5:51:ASN:HB3	1.54	0.71
11:M:215:ASN:ND2	16:R:261:THR:H	1.88	0.71
22:X:405:ARG:NH2	22:X:438:GLU:OE1	2.24	0.71
35:3:805:ASN:CB	39:5:58:ASN:CB	2.64	0.71
36:2:462:VAL:HG22	36:2:480:VAL:HG11	1.73	0.71
36:2:479:ASP:N	36:2:479:ASP:OD1	2.23	0.71
6:G:111:U:H4'	6:G:112:U:OP2	1.90	0.71
35:3:565:TYR:HB3	35:3:577:TYR:HB3	1.72	0.71
35:3:565:TYR:HE1	35:3:619:LEU:HB2	1.54	0.71
3:C:258:ASN:OD1	3:C:259:LYS:N	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:5:U:H5'	5:F:6:C:H4'	1.73	0.71
1:A:1992:GLY:HA2	1:A:1997:VAL:HG23	1.73	0.71
34:1:777:PHE:CD1	34:1:818:PHE:CE2	2.79	0.71
34:1:933:CYS:SG	34:1:974:LEU:CD2	2.71	0.71
34:1:952:ALA:CB	34:1:993:ILE:CD1	2.68	0.71
1:A:325:HIS:CD2	1:A:326:HIS:HD2	2.09	0.71
18:T:195:LYS:HZ3	18:T:490:ARG:HD2	1.56	0.71
22:X:219:ARG:NH2	23:Y:292:GLU:OE2	2.24	0.71
34:1:503:LYS:HE2	34:1:511:MET:HG2	1.72	0.71
34:1:857:LEU:HD13	34:1:895:GLY:C	2.11	0.71
34:1:1256:HIS:HD2	34:1:1257:PRO:HD3	1.54	0.71
34:1:1298:TYR:CD1	35:3:918:ARG:HB2	2.25	0.71
35:3:1129:LEU:O	36:2:708:TRP:CH2	2.43	0.71
1:A:1935:ARG:NE	1:A:1980:GLU:OE2	2.24	0.71
4:E:277:PHE:HE2	4:E:300:ILE:HG21	1.56	0.71
34:1:884:ILE:HD12	34:1:884:ILE:O	1.91	0.71
34:1:1178:MET:HB3	36:2:514:LYS:HD2	1.72	0.71
38:7:21:ARG:NH1	38:7:68:ASP:OD1	2.21	0.71
1:A:1399:GLN:OE1	1:A:1401:ARG:NH1	2.24	0.70
7:H:18:U:OP2	11:M:221:LYS:NZ	2.23	0.70
7:H:56:A:OP1	36:2:504:TRP:HZ3	1.73	0.70
34:1:1108:ASN:O	34:1:1112:THR:HG22	1.91	0.70
35:3:1048:ASP:OD1	35:3:1049:LYS:N	2.24	0.70
34:1:598:SER:CB	34:1:638:ALA:HA	2.21	0.70
35:3:384:THR:OG1	35:3:385:PHE:O	2.08	0.70
35:3:812:LYS:HD2	35:3:856:LYS:HE3	1.74	0.70
11:M:209:ASP:OD1	11:M:209:ASP:N	2.23	0.70
34:1:777:PHE:HA	34:1:818:PHE:CE2	2.26	0.70
36:2:514:LYS:CD	36:2:591:TYR:OH	2.38	0.70
1:A:39:GLN:HE22	21:W:170:THR:N	1.89	0.70
1:A:857:ASN:ND2	1:A:860:GLN:OE1	2.23	0.70
35:3:286:ILE:CD1	39:5:63:ARG:HA	2.20	0.70
39:5:62:ALA:HA	39:5:65:ARG:HH12	1.55	0.70
1:A:41:GLN:HE22	1:A:45:TYR:HD2	1.38	0.70
34:1:707:LEU:HD12	34:1:741:LYS:CD	2.17	0.70
34:1:1276:SER:O	34:1:1276:SER:OG	2.07	0.70
35:3:1160:HIS:NE2	35:3:1175:ASP:OD2	2.20	0.70
35:3:189:TYR:HA	39:5:73:LEU:HD11	1.74	0.70
36:2:675:VAL:HA	36:2:681:PRO:HA	1.73	0.70
9:J:225:LEU:HG	10:L:211:ASN:HB2	1.74	0.70
22:X:231:ARG:O	22:X:235:LEU:HG	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:597:ILE:O	34:1:638:ALA:HB2	1.92	0.70
35:3:1057:ARG:NH2	36:2:707:PRO:HB3	2.06	0.70
34:1:1242:GLY:HA3	35:3:1169:PRO:HD2	1.74	0.70
35:3:1182:PHE:O	35:3:1190:GLN:NE2	2.24	0.70
1:A:382:GLU:HG3	3:C:354:ARG:HG3	1.72	0.70
6:G:92:U:H2'	6:G:93:A:H8	1.57	0.70
34:1:594:ARG:NE	34:1:674:LEU:HD13	2.06	0.70
34:1:739:ARG:HA	34:1:743:LEU:HD22	1.74	0.70
35:3:286:ILE:HD11	39:5:63:ARG:HA	1.74	0.70
35:3:642:ILE:O	35:3:703:ARG:NE	2.24	0.70
1:A:1057:ARG:NH1	1:A:1060:GLU:OE1	2.25	0.69
22:X:501:LEU:HB3	22:X:532:LEU:HD21	1.73	0.69
34:1:1056:MET:HE2	34:1:1096:THR:HG21	1.73	0.69
34:1:734:GLY:O	34:1:738:HIS:CB	2.40	0.69
34:1:789:LEU:CD2	34:1:836:THR:CG2	2.65	0.69
34:1:1181:ASP:OD1	34:1:1182:LEU:N	2.24	0.69
1:A:155:LYS:NZ	1:A:622:GLY:O	2.25	0.69
10:L:55:ASP:HB3	10:L:58:ILE:HD12	1.74	0.69
22:X:592:LEU:HD23	22:X:593:GLU:H	1.57	0.69
34:1:553:VAL:HA	34:1:556:ILE:HG22	1.72	0.69
34:1:929:LEU:O	34:1:970:LEU:HD22	1.91	0.69
35:3:1:MET:CG	36:2:709:GLY:O	2.40	0.69
35:3:487:ILE:HG13	35:3:491:VAL:HG22	1.73	0.69
35:3:983:ASN:ND2	35:3:1021:LEU:O	2.25	0.69
4:E:277:PHE:CE2	4:E:300:ILE:HG21	2.28	0.69
12:N:120:ARG:NH1	12:N:142:CYS:SG	2.66	0.69
18:T:245:HIS:HE2	18:T:263:SER:HG	1.41	0.69
35:3:189:TYR:CA	39:5:73:LEU:HD12	2.21	0.69
35:3:499:PHE:HZ	35:3:516:LEU:HD22	1.57	0.69
36:2:477:MET:HA	36:2:480:VAL:HG13	1.74	0.69
7:H:56:A:C5	36:2:505:CYS:SG	2.85	0.69
34:1:872:ILE:CD1	34:1:892:LEU:HD11	2.22	0.69
38:7:46:CYS:H	38:7:85:CYS:HB2	1.58	0.69
3:C:137:HIS:CD2	3:C:138:LEU:H	2.11	0.69
10:L:519:ASP:O	10:L:523:GLN:N	2.23	0.69
34:1:680:LEU:HA	34:1:683:LEU:HB2	1.75	0.69
34:1:1302:TYR:CD1	35:3:915:LEU:HD13	2.27	0.69
1:A:1889:LEU:HD11	1:A:2012:LEU:HD21	1.73	0.69
3:C:682:LYS:HB3	3:C:797:ALA:HB2	1.74	0.69
22:X:835:SER:OG	22:X:938:ARG:NH1	2.26	0.69
34:1:586:ASP:OD1	34:1:589:ALA:N	2.24	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:1052:ALA:HA	34:1:1088:ILE:HD11	1.75	0.69
34:1:1153:PHE:CB	34:1:1157:TYR:HE2	2.04	0.69
35:3:981:CYS:SG	35:3:1019:ASN:ND2	2.66	0.69
39:5:62:ALA:HA	39:5:65:ARG:NH1	2.07	0.69
5:F:86:U:OP2	11:M:193:ARG:NH1	2.25	0.69
34:1:630:ARG:HE	34:1:670:GLN:CD	1.95	0.69
35:3:114:ARG:NH2	39:5:37:ARG:HD2	2.07	0.69
36:2:452:LYS:HD2	36:2:452:LYS:C	2.11	0.69
3:C:131:ASN:HA	3:C:201:ASN:HB2	1.75	0.69
14:P:41:ILE:HG13	18:T:318:ARG:HG3	1.75	0.69
1:A:1179:SER:O	1:A:1201:ARG:NH1	2.23	0.68
5:F:82:A:H4'	5:F:82:A:OP2	1.92	0.68
11:M:217:LYS:HD2	11:M:217:LYS:O	1.93	0.68
1:A:1134:TRP:O	1:A:1139:ARG:NH1	2.25	0.68
3:C:759:LEU:HA	3:C:762:VAL:HG12	1.74	0.68
34:1:774:ILE:HD11	34:1:810:ILE:HA	1.75	0.68
35:3:353:PHE:CZ	39:5:51:ASN:HB3	2.28	0.68
35:3:968:ARG:HB2	35:3:970:TYR:HE2	1.57	0.68
35:3:1041:TYR:CG	36:2:705:ARG:NE	2.60	0.68
1:A:705:LYS:HD3	16:R:247:ILE:HB	1.76	0.68
4:E:68:GLU:HG2	4:E:347:SER:HB2	1.75	0.68
34:1:854:VAL:CG1	34:1:891:GLN:HG3	2.23	0.68
34:1:1249:TYR:CE2	36:2:587:HIS:CE1	2.80	0.68
35:3:775:ASN:HD22	35:3:775:ASN:H	1.40	0.68
34:1:1217:PRO:CB	36:2:510:TYR:OH	2.41	0.68
35:3:1194:SER:OG	35:3:1199:ARG:O	2.10	0.68
1:A:682:ASP:OD1	1:A:746:LYS:NZ	2.25	0.68
9:J:330:ARG:NH2	11:M:149:TYR:OH	2.24	0.68
10:L:67:GLU:OE1	10:L:91:ARG:NH2	2.26	0.68
34:1:850:ILE:HG21	34:1:888:LEU:CD2	2.24	0.68
34:1:1174:GLU:OE2	34:1:1210:HIS:NE2	2.26	0.68
34:1:1217:PRO:HD3	36:2:590:LEU:CD1	2.19	0.68
34:1:1242:GLY:CA	35:3:1169:PRO:HD2	2.23	0.68
34:1:770:MET:SD	34:1:810:ILE:HD11	2.34	0.68
35:3:39:GLU:OE2	35:3:55:THR:OG1	2.12	0.68
35:3:1057:ARG:HH22	36:2:707:PRO:HB3	1.57	0.68
4:E:146:ARG:HD2	4:E:148:LYS:HE2	1.75	0.68
7:H:173:C:H2'	7:H:174:A:C8	2.28	0.68
11:M:215:ASN:HD21	16:R:260:TYR:CA	2.07	0.68
18:T:471:ASP:OD1	18:T:473:SER:OG	2.07	0.68
22:X:281:ARG:NH1	22:X:281:ARG:HA	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:955:ILE:HG21	34:1:978:LEU:HD11	1.74	0.68
34:1:1006:MET:HE2	34:1:1045:ARG:HD3	1.74	0.68
1:A:1831:LYS:HG3	1:A:1832:ARG:N	2.07	0.68
6:G:92:U:H2'	6:G:93:A:C8	2.29	0.68
12:N:25:LEU:HD13	12:N:56:LYS:HG2	1.76	0.68
34:1:1043:ALA:CB	34:1:1055:TRP:CH2	2.77	0.68
1:A:1011:ALA:HB2	10:L:80:THR:HB	1.76	0.68
1:A:1544:ARG:NE	1:A:1672:ASP:OD2	2.26	0.68
35:3:705:ARG:HA	35:3:710:GLU:HA	1.76	0.68
36:2:511:LEU:HD11	36:2:591:TYR:CE1	2.18	0.68
2:B:8:G:H22	2:B:70:A:H1'	1.57	0.68
34:1:732:TRP:NE1	34:1:768:GLU:OE2	2.27	0.68
1:A:1578:ARG:HE	1:A:1746:ARG:NH2	1.91	0.67
4:E:294:SER:OG	4:E:299:LYS:O	2.10	0.67
20:V:543:LYS:HA	20:V:546:ASN:ND2	2.08	0.67
35:3:288:VAL:HG23	35:3:289:CYS:H	1.59	0.67
35:3:328:LYS:NZ	35:3:370:GLU:OE2	2.26	0.67
35:3:876:THR:O	35:3:876:THR:OG1	2.12	0.67
34:1:601:ALA:C	34:1:639:LEU:HD21	2.13	0.67
35:3:603:ARG:HG3	35:3:604:PHE:CE1	2.29	0.67
1:A:1807:ILE:HD11	1:A:1841:THR:HG22	1.75	0.67
3:C:193:THR:HG23	3:C:194:LYS:HD2	1.75	0.67
16:R:367:ARG:O	16:R:371:ARG:HG3	1.93	0.67
35:3:185:LEU:HG	35:3:235:LEU:HD11	1.76	0.67
35:3:449:VAL:HG13	35:3:763:ARG:HG2	1.76	0.67
1:A:1723:LYS:HB3	1:A:1724:PRO:HD3	1.75	0.67
9:J:311:GLN:OE1	9:J:311:GLN:N	2.24	0.67
16:R:389:SER:HA	16:R:392:ILE:HD12	1.75	0.67
34:1:933:CYS:SG	34:1:974:LEU:HD11	2.35	0.67
35:3:215:LEU:H	35:3:215:LEU:HD12	1.59	0.67
35:3:697:ARG:NH2	35:3:717:SER:OG	2.28	0.67
38:7:37:VAL:HB	38:7:38:ARG:HG3	1.76	0.67
1:A:873:ASN:ND2	1:A:876:GLU:OE1	2.28	0.67
4:E:217:ILE:HB	4:E:231:MET:HG3	1.74	0.67
9:J:196:ARG:NH1	9:J:196:ARG:HB2	2.09	0.67
35:3:427:CYS:SG	35:3:428:GLY:N	2.66	0.67
35:3:620:ASP:N	35:3:620:ASP:OD1	2.27	0.67
1:A:946:GLU:HB3	1:A:950:LEU:HD23	1.75	0.67
5:F:43:A:H1'	6:G:5:G:N2	2.10	0.67
20:V:484:SER:O	20:V:487:LYS:NZ	2.20	0.67
36:2:455:ARG:HA	36:2:458:ASN:HB3	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:875:HIS:CE1	22:X:866:ASN:HB3	2.30	0.67
3:C:137:HIS:HB2	3:C:239:THR:HG23	1.77	0.67
4:E:251:LEU:HD21	4:E:300:ILE:HG13	1.76	0.67
14:P:212:ASN:ND2	18:T:458:SER:OG	2.27	0.67
34:1:1156:GLU:HB3	38:7:38:ARG:HH12	1.58	0.67
36:2:568:TYR:C	36:2:570:LYS:H	1.96	0.67
1:A:1792:LYS:HE3	34:1:973:HIS:HE1	1.56	0.67
1:A:1936:LEU:O	1:A:1940:LEU:HG	1.93	0.67
22:X:430:THR:HG23	22:X:465:VAL:HG22	1.77	0.67
34:1:1207:SER:HA	36:2:584:LEU:HD22	1.77	0.67
34:1:1220:PHE:CE2	36:2:504:TRP:HB3	2.30	0.67
1:A:747:ALA:O	1:A:751:THR:HG22	1.94	0.67
34:1:1299:GLU:HA	34:1:1302:TYR:CE2	2.30	0.67
35:3:288:VAL:HA	39:5:62:ALA:HB2	1.77	0.67
3:C:64:LYS:HA	14:P:206:LYS:NZ	2.10	0.66
3:C:508:LYS:HG3	3:C:524:ILE:HG13	1.77	0.66
6:G:19:G:N2	13:O:194:ALA:O	2.28	0.66
22:X:583:TYR:O	22:X:585:LYS:NZ	2.22	0.66
35:3:169:HIS:ND1	35:3:234:PHE:HB2	2.10	0.66
35:3:191:GLU:HA	35:3:194:ASN:HD22	1.59	0.66
35:3:745:PHE:HB2	35:3:755:VAL:HG23	1.76	0.66
35:3:1136:GLU:OE1	35:3:1136:GLU:N	2.27	0.66
9:J:411:MET:SD	9:J:416:TYR:HE2	2.18	0.66
10:L:201:LYS:HD2	10:L:202:ARG:H	1.58	0.66
34:1:767:ARG:HE	34:1:805:TYR:HE1	1.44	0.66
34:1:1193:GLN:NE2	38:7:78:GLN:HE22	1.93	0.66
1:A:1664:ILE:HG22	1:A:1703:ILE:HB	1.77	0.66
3:C:758:LEU:HB3	3:C:796:VAL:HG11	1.78	0.66
20:V:547:VAL:O	20:V:550:MET:HB2	1.95	0.66
20:V:628:ILE:O	20:V:632:THR:OG1	2.12	0.66
22:X:234:TYR:O	22:X:238:ARG:HB2	1.96	0.66
34:1:621:ASP:HB3	34:1:624:VAL:HG22	1.75	0.66
35:3:168:TYR:CE1	39:5:69:MET:HB3	2.30	0.66
35:3:485:LEU:HD23	35:3:491:VAL:HG12	1.76	0.66
20:V:456:ARG:NE	20:V:492:MET:SD	2.68	0.66
1:A:372:PRO:HG3	3:C:341:LYS:HB3	1.76	0.66
1:A:1962:THR:HG23	1:A:1966:HIS:HB2	1.75	0.66
5:F:41:A:N1	6:G:6:A:N6	2.41	0.66
34:1:694:LEU:HD12	34:1:694:LEU:H	1.59	0.66
34:1:859:ASP:O	34:1:865:ARG:NE	2.27	0.66
35:3:147:ASP:OD1	35:3:151:ARG:N	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:511:LEU:HD21	35:3:517:VAL:HG23	1.78	0.66
35:3:700:LYS:HB3	35:3:702:PHE:CZ	2.30	0.66
35:3:833:GLU:O	35:3:836:ALA:N	2.23	0.66
35:3:926:TYR:HB3	35:3:928:TYR:HE2	1.60	0.66
36:2:514:LYS:HE3	36:2:591:TYR:HH	1.59	0.66
1:A:532:THR:OG1	6:G:3:A:OP1	2.13	0.66
7:H:43:U:O2'	7:H:44:U:O5'	2.13	0.66
9:J:194:LEU:HD13	10:L:156:ARG:HG3	1.77	0.66
34:1:929:LEU:CA	34:1:970:LEU:HD22	2.25	0.66
35:3:777:VAL:HG22	35:3:779:PHE:HE1	1.61	0.66
1:A:1457:HIS:ND1	1:A:1460:HIS:HD2	1.94	0.66
3:C:64:LYS:HD3	14:P:209:ARG:HH12	1.60	0.66
34:1:1217:PRO:HB2	36:2:510:TYR:OH	1.95	0.66
34:1:1217:PRO:CG	36:2:510:TYR:OH	2.43	0.66
34:1:1251:LEU:CD1	36:2:497:SER:HB2	2.25	0.66
3:C:255:VAL:HB	3:C:307:VAL:HG12	1.77	0.66
6:G:95:U:H2'	6:G:96:U:C6	2.31	0.66
9:J:409:GLU:HG2	9:J:410:HIS:CD2	2.31	0.66
22:X:827:MET:HB3	22:X:946:GLY:HA3	1.78	0.66
34:1:850:ILE:CG2	34:1:888:LEU:CG	2.73	0.66
34:1:1179:ASP:CB	36:2:511:LEU:HB3	2.25	0.66
34:1:1216:TRP:HD1	36:2:590:LEU:HD11	1.61	0.66
35:3:1188:ASN:OD1	35:3:1189:LYS:N	2.28	0.66
1:A:75:ASP:O	1:A:77:THR:N	2.29	0.66
1:A:1629:ILE:HB	1:A:1662:ILE:HB	1.77	0.66
1:A:1631:LEU:HB2	1:A:1660:TYR:HB3	1.76	0.66
1:A:1860:GLN:HG2	1:A:1883:VAL:HB	1.78	0.66
5:F:80:G:OP2	10:L:174:LYS:NZ	2.27	0.66
14:P:186:ARG:HD3	14:P:190:ASP:HB2	1.76	0.66
34:1:1278:ASP:O	35:3:1167:TYR:CE1	2.49	0.66
35:3:121:LEU:HB2	35:3:132:ILE:HD12	1.78	0.66
35:3:840:ALA:O	35:3:844:ASN:ND2	2.28	0.66
35:3:911:LYS:HB3	35:3:922:GLY:O	1.96	0.66
16:R:315:LYS:O	16:R:318:GLU:HG3	1.96	0.66
34:1:755:PRO:HD2	34:1:794:GLN:HB3	1.78	0.66
34:1:937:LEU:HD21	34:1:977:VAL:HG21	1.78	0.66
36:2:454:LEU:HD12	36:2:454:LEU:C	2.16	0.66
22:X:698:LYS:HD3	22:X:707:GLU:HG3	1.78	0.65
22:X:769:SER:OG	22:X:816:ALA:HB1	1.96	0.65
34:1:523:ALA:C	34:1:563:LEU:CD1	2.58	0.65
34:1:1217:PRO:O	36:2:503:HIS:CE1	2.48	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:1279:ALA:HB1	35:3:1167:TYR:HA	1.74	0.65
35:3:169:HIS:HD2	35:3:170:VAL:H	1.44	0.65
35:3:635:ALA:HB3	35:3:669:LEU:HD13	1.78	0.65
1:A:678:GLU:OE1	1:A:774:LYS:NZ	2.27	0.65
1:A:1255:THR:HG22	1:A:1526:LEU:HD21	1.78	0.65
7:H:125:G:H2'	7:H:126:A:C8	2.30	0.65
34:1:696:ASP:O	34:1:702:ARG:NH1	2.29	0.65
34:1:1249:TYR:HE2	36:2:587:HIS:ND1	1.92	0.65
36:2:674:PRO:O	36:2:682:LEU:N	2.24	0.65
3:C:618:THR:OG1	3:C:618:THR:O	2.13	0.65
34:1:495:ARG:HH21	34:1:530:PRO:HA	1.61	0.65
1:A:59:GLU:OE1	12:N:87:ASN:HB2	1.95	0.65
3:C:925:PRO:HG2	3:C:928:HIS:CE1	2.31	0.65
23:Y:94:VAL:HG13	23:Y:110:ILE:HG13	1.77	0.65
34:1:962:MET:CG	34:1:974:LEU:CD1	2.75	0.65
34:1:1257:PRO:HG3	36:2:478:HIS:CB	2.26	0.65
35:3:568:MET:HA	35:3:574:LEU:HA	1.79	0.65
35:3:586:ASP:HB3	35:3:610:VAL:HB	1.77	0.65
7:H:56:A:H4'	36:2:478:HIS:HA	1.77	0.65
13:O:29:GLY:O	16:R:195:ARG:NH2	2.23	0.65
21:W:320:GLY:C	36:2:667:ALA:O	2.35	0.65
34:1:1278:ASP:O	35:3:1167:TYR:HE1	1.80	0.65
35:3:1:MET:SD	36:2:709:GLY:O	2.53	0.65
35:3:1117:LEU:O	35:3:1128:ILE:HA	1.96	0.65
38:7:10:PHE:HB3	38:7:12:ARG:HG2	1.79	0.65
34:1:594:ARG:HD3	34:1:674:LEU:CG	2.27	0.65
34:1:1155:PHE:HA	34:1:1158:ILE:HG12	1.76	0.65
35:3:434:SER:HG	35:3:436:ARG:HE	1.43	0.65
36:2:469:VAL:HG12	36:2:471:ARG:H	1.62	0.65
7:H:32:U:O2'	7:H:33:G:N7	2.26	0.65
22:X:527:LEU:HD22	22:X:763:VAL:HG11	1.77	0.65
36:2:476:GLU:O	36:2:480:VAL:HG13	1.97	0.65
1:A:1703:ILE:HD13	1:A:1714:ALA:HB2	1.77	0.65
2:B:99:C:H2'	2:B:100:C:C6	2.32	0.65
22:X:910:ARG:O	22:X:914:VAL:HG13	1.96	0.65
23:Y:267:ARG:N	23:Y:287:GLU:O	2.29	0.65
34:1:789:LEU:HD22	34:1:836:THR:HG23	1.79	0.65
34:1:955:ILE:HG22	34:1:996:ALA:HB1	1.79	0.65
35:3:206:GLN:HG3	35:3:231:HIS:CD2	2.30	0.65
22:X:824:LEU:HD21	22:X:844:ALA:HB1	1.77	0.65
23:Y:39:TYR:N	23:Y:156:ILE:O	2.28	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:Y:253:ASP:OD1	23:Y:253:ASP:N	2.29	0.65
34:1:1302:TYR:HE1	35:3:915:LEU:HD13	1.58	0.65
35:3:260:ASN:OD1	35:3:261:PHE:N	2.30	0.65
38:7:9:ILE:HG12	39:5:6:THR:HG22	1.78	0.65
1:A:154:GLU:OE2	1:A:158:ARG:NE	2.29	0.65
4:E:118:ASN:HD21	4:E:122:SER:H	1.45	0.65
4:E:236:ASP:HB2	4:E:256:ASP:HB3	1.78	0.65
5:F:43:A:H2	6:G:4:A:H61	1.44	0.65
7:H:119:G:H8	7:H:119:G:O5'	1.80	0.65
34:1:495:ARG:CD	34:1:530:PRO:HA	2.19	0.65
34:1:940:LEU:HD23	34:1:977:VAL:CG1	2.27	0.65
35:3:545:VAL:HG12	35:3:546:LYS:HG2	1.79	0.65
20:V:622:ARG:HA	20:V:625:ARG:HE	1.61	0.64
22:X:618:GLN:HG2	22:X:648:TYR:CD2	2.32	0.64
34:1:850:ILE:HG21	34:1:888:LEU:CG	2.27	0.64
1:A:1014:ASN:HD21	10:L:83:ARG:HB2	1.62	0.64
3:C:926:ALA:HA	3:C:929:LEU:HG	1.80	0.64
10:L:149:LEU:HA	10:L:152:LEU:HD12	1.79	0.64
1:A:357:ASN:HD22	3:C:862:PRO:HB3	1.62	0.64
1:A:707:ARG:HH22	7:H:17:U:H4'	1.62	0.64
20:V:525:PHE:HB3	20:V:560:LEU:HD21	1.80	0.64
35:3:1004:ASP:OD1	35:3:1006:GLN:N	2.28	0.64
1:A:1201:ARG:O	1:A:1203:SER:N	2.30	0.64
1:A:1778:TRP:O	1:A:1862:ILE:HG13	1.98	0.64
7:H:56:A:C6	36:2:505:CYS:HB3	2.33	0.64
34:1:850:ILE:CG2	34:1:888:LEU:CD1	2.68	0.64
35:3:233:ASN:ND2	35:3:233:ASN:H	1.95	0.64
1:A:1994:LYS:HD3	34:1:986:TYR:CZ	2.32	0.64
10:L:188:ARG:O	10:L:192:ARG:HG2	1.97	0.64
14:P:206:LYS:CB	14:P:218:GLU:HG2	2.27	0.64
22:X:272:TYR:OH	23:Y:227:VAL:O	2.10	0.64
24:Z:74:ALA:O	24:Z:78:PRO:HA	1.97	0.64
34:1:582:LEU:CG	34:1:634:VAL:CG2	2.54	0.64
34:1:933:CYS:HB2	34:1:970:LEU:HD13	1.72	0.64
1:A:1768:TYR:HA	1:A:1771:LEU:HB2	1.79	0.64
1:A:1798:LEU:CD1	34:1:973:HIS:HD2	2.06	0.64
1:A:1809:ILE:HB	1:A:1818:PHE:HD2	1.62	0.64
34:1:662:HIS:CD2	34:1:704:ILE:HG21	2.33	0.64
1:A:57:GLN:HE21	1:A:57:GLN:H	1.45	0.64
1:A:201:ALA:HA	1:A:204:LEU:HD23	1.78	0.64
4:E:153:PHE:HB2	4:E:172:ASP:HB2	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:175:THR:HG22	4:E:191:GLN:HG3	1.80	0.64
5:F:82:A:H2'	7:H:17:U:OP1	1.97	0.64
23:Y:32:CYS:SG	23:Y:159:THR:OG1	2.50	0.64
35:3:452:LEU:HD12	35:3:453:PRO:HD2	1.80	0.64
35:3:734:LEU:HD12	35:3:767:LEU:HD22	1.79	0.64
35:3:1009:PHE:HE1	35:3:1036:ALA:HB2	1.61	0.64
22:X:232:ARG:HA	22:X:235:LEU:HD12	1.80	0.64
34:1:744:ALA:CB	34:1:784:MET:HA	2.26	0.64
34:1:869:MET:SD	34:1:896:ILE:CD1	2.80	0.64
35:3:434:SER:OG	35:3:436:ARG:NE	2.25	0.64
35:3:665:LEU:HD11	35:3:667:ILE:HG13	1.78	0.64
35:3:805:ASN:HB2	39:5:58:ASN:HB2	1.77	0.64
35:3:1201:PRO:HA	35:3:1204:VAL:HG22	1.80	0.64
38:7:33:CYS:HG	38:7:35:SER:HG	1.09	0.64
1:A:1778:TRP:HB2	1:A:1861:ILE:HD12	1.79	0.64
1:A:1789:THR:HG22	1:A:1803:ILE:HD11	1.78	0.64
5:F:37:C:H4'	5:F:38:G:OP2	1.97	0.64
22:X:937:ILE:HG22	22:X:941:LYS:HD2	1.78	0.64
34:1:662:HIS:CE1	34:1:700:LYS:HB3	2.32	0.64
34:1:923:LYS:HG2	34:1:926:LYS:HE3	1.78	0.64
34:1:1155:PHE:HA	34:1:1158:ILE:HG13	1.74	0.64
34:1:1217:PRO:HB3	36:2:510:TYR:CE2	2.33	0.64
34:1:1248:GLN:HE21	36:2:496:ASN:CB	2.11	0.64
35:3:189:TYR:CD1	39:5:37:ARG:NH2	2.66	0.64
35:3:512:GLY:HA3	35:3:515:ALA:HB3	1.79	0.64
38:7:9:ILE:CD1	39:5:6:THR:HG21	2.28	0.64
1:A:535:ARG:NH1	6:G:2:U:OP2	2.31	0.64
1:A:1528:GLN:O	1:A:1532:ARG:HB2	1.99	0.64
3:C:381:LEU:HD22	3:C:416:LEU:HD21	1.78	0.64
3:C:737:PRO:HD2	3:C:741:GLY:HA3	1.78	0.64
9:J:185:ALA:HA	10:L:142:ILE:HD13	1.79	0.64
22:X:619:GLU:HA	22:X:622:GLU:OE1	1.97	0.64
34:1:499:LYS:HD2	34:1:534:GLN:NE2	2.12	0.64
34:1:1262:ARG:C	39:5:24:ALA:HB1	2.19	0.63
35:3:794:SER:O	35:3:796:ASN:ND2	2.31	0.63
36:2:596:GLU:H	36:2:596:GLU:CD	2.02	0.63
3:C:493:PHE:HD2	3:C:551:LEU:HG	1.62	0.63
12:N:112:ASN:N	12:N:112:ASN:OD1	2.28	0.63
20:V:609:GLN:HE22	20:V:616:LEU:HD21	1.63	0.63
23:Y:303:ASN:O	23:Y:310:ARG:NH1	2.30	0.63
34:1:826:ASP:OD1	34:1:827:ARG:N	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:958:ARG:NH2	35:3:1014:TYR:OH	2.31	0.63
7:H:29:A:H4'	7:H:29:A:OP1	1.96	0.63
9:J:296:ARG:NH1	9:J:320:GLU:OE2	2.29	0.63
16:R:357:HIS:CD2	16:R:361:LYS:HE2	2.33	0.63
34:1:1217:PRO:CB	36:2:510:TYR:CE2	2.81	0.63
34:1:490:GLU:O	34:1:494:GLU:HG2	1.98	0.63
35:3:1017:ASN:OD1	35:3:1018:GLU:N	2.31	0.63
36:2:517:ILE:HD12	36:2:517:ILE:C	2.19	0.63
34:1:617:ILE:HD12	34:1:660:ALA:HB1	1.81	0.63
34:1:1160:GLU:OE1	34:1:1160:GLU:N	2.19	0.63
35:3:1031:ARG:HG2	35:3:1031:ARG:HH11	1.63	0.63
3:C:709:TRP:HB3	3:C:713:LYS:HB2	1.81	0.63
5:F:79:C:H1'	5:F:82:A:H2	1.62	0.63
22:X:621:ILE:HG12	22:X:672:VAL:HG12	1.81	0.63
34:1:719:TYR:CZ	35:3:146:ARG:NH1	2.66	0.63
34:1:843:LYS:HB3	34:1:844:VAL:HG22	1.80	0.63
34:1:1160:GLU:CD	34:1:1160:GLU:H	2.01	0.63
35:3:330:PHE:O	35:3:390:ARG:NH2	2.32	0.63
38:7:30:CYS:SG	38:7:31:VAL:N	2.72	0.63
1:A:762:ARG:HH12	14:P:226:LYS:HZ1	1.47	0.63
1:A:1948:ASP:HA	1:A:1951:LYS:HD3	1.80	0.63
10:L:79:PRO:O	10:L:80:THR:OG1	2.16	0.63
14:P:77:ASP:O	14:P:78:ARG:NE	2.32	0.63
23:Y:14:ILE:HD12	23:Y:94:VAL:HG21	1.80	0.63
35:3:207:THR:O	35:3:207:THR:OG1	2.15	0.63
35:3:387:PHE:HE1	35:3:389:PRO:HG3	1.64	0.63
1:A:1014:ASN:ND2	1:A:1014:ASN:O	2.32	0.63
5:F:79:C:H1'	5:F:82:A:C2	2.33	0.63
10:L:188:ARG:HE	10:L:191:LEU:HD12	1.64	0.63
34:1:1155:PHE:CA	34:1:1158:ILE:CG1	2.72	0.63
3:C:464:ALA:HB1	3:C:473:PRO:HG3	1.80	0.63
4:E:312:TRP:HD1	4:E:319:ILE:HA	1.63	0.63
9:J:311:GLN:HG3	11:M:131:GLN:HG2	1.79	0.63
16:R:348:GLU:HB2	22:X:263:SER:H	1.64	0.63
34:1:625:ARG:NH1	34:1:659:GLN:OE1	2.31	0.63
34:1:1249:TYR:HA	36:2:498:VAL:CB	2.25	0.63
35:3:565:TYR:CE1	35:3:619:LEU:HB2	2.33	0.63
1:A:485:THR:HG22	1:A:486:LYS:H	1.63	0.62
9:J:198:ALA:HB1	10:L:160:ALA:HB2	1.80	0.62
16:R:325:ARG:NH1	23:Y:222:ILE:O	2.32	0.62
20:V:620:ASN:ND2	20:V:623:ASN:OD1	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:521:PRO:O	35:3:543:THR:OG1	2.13	0.62
1:A:90:GLY:HA3	16:R:209:PRO:HD3	1.80	0.62
5:F:49:G:H2'	5:F:50:A:H8	1.64	0.62
23:Y:27:ASN:O	23:Y:31:LEU:HD12	1.99	0.62
23:Y:39:TYR:O	23:Y:185:GLN:NE2	2.32	0.62
35:3:70:LEU:HD11	35:3:152:LEU:HD13	1.80	0.62
38:7:52:GLY:H	38:7:55:GLN:HE21	1.47	0.62
6:G:105:C:OP1	22:X:993:THR:OG1	2.16	0.62
13:O:235:TYR:N	13:O:301:LYS:O	2.32	0.62
34:1:550:HIS:HD2	34:1:551:LEU:HD22	1.64	0.62
34:1:872:ILE:HD13	34:1:892:LEU:HD11	1.79	0.62
34:1:1278:ASP:OD2	35:3:1166:TYR:CZ	2.52	0.62
35:3:966:LEU:HB2	35:3:968:ARG:HD2	1.81	0.62
3:C:560:VAL:HG22	3:C:561:LYS:H	1.64	0.62
3:C:750:LEU:HD23	3:C:751:PRO:HD3	1.82	0.62
34:1:1120:ALA:HB2	34:1:1128:VAL:HG21	1.80	0.62
35:3:1:MET:CB	36:2:709:GLY:O	2.47	0.62
3:C:561:LYS:NZ	3:C:611:ASN:O	2.32	0.62
20:V:609:GLN:HA	20:V:612:PHE:HB2	1.80	0.62
34:1:598:SER:C	34:1:638:ALA:CB	2.67	0.62
34:1:1155:PHE:CG	34:1:1158:ILE:HD11	2.35	0.62
35:3:884:GLN:NE2	35:3:884:GLN:O	2.32	0.62
1:A:758:ARG:HH21	1:A:775:ASN:HD22	1.45	0.62
1:A:957:GLN:O	1:A:961:ASN:ND2	2.26	0.62
9:J:330:ARG:HD3	9:J:361:ARG:HH22	1.64	0.62
34:1:1278:ASP:CB	35:3:1166:TYR:HE2	2.11	0.62
35:3:207:THR:O	35:3:209:THR:HG22	1.99	0.62
35:3:747:SER:N	35:3:750:CYS:O	2.31	0.62
35:3:947:GLU:HB3	35:3:963:VAL:HG13	1.82	0.62
37:4:68:ASP:CB	37:4:114:LYS:CB	2.78	0.62
38:7:39:PRO:HB2	38:7:70:TYR:HD1	1.63	0.62
1:A:1251:SER:O	1:A:1251:SER:OG	2.17	0.62
22:X:580:ASP:OD2	22:X:733:LYS:NZ	2.31	0.62
34:1:495:ARG:CD	34:1:530:PRO:CB	2.75	0.62
34:1:929:LEU:CB	34:1:970:LEU:HD23	2.30	0.62
34:1:1137:ARG:NH1	36:2:522:PHE:H	1.97	0.62
35:3:1193:VAL:HA	35:3:1196:GLU:HG2	1.81	0.62
36:2:514:LYS:HD2	36:2:591:TYR:OH	1.98	0.62
2:B:53:U:OP1	14:P:39:THR:OG1	2.17	0.62
14:P:184:VAL:HB	23:Y:123:HIS:HE1	1.65	0.62
22:X:632:CYS:SG	22:X:642:LEU:HD13	2.39	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:1249:TYR:CA	36:2:498:VAL:HB	2.24	0.62
35:3:384:THR:OG1	35:3:385:PHE:N	2.31	0.62
20:V:540:GLU:HG3	20:V:541:THR:H	1.65	0.62
22:X:396:ARG:NH1	22:X:468:GLU:OE1	2.32	0.62
2:B:63:A:H2'	2:B:64:G:H8	1.65	0.62
2:B:64:G:H2'	2:B:65:G:C8	2.35	0.62
9:J:206:LEU:HD22	9:J:207:PRO:HD2	1.81	0.62
20:V:532:GLN:HE21	20:V:547:VAL:HG11	1.64	0.62
22:X:249:GLU:HB3	22:X:273:LYS:HE2	1.82	0.62
23:Y:147:ASP:HB2	23:Y:149:VAL:HG12	1.80	0.62
23:Y:219:THR:O	23:Y:223:LEU:HB2	2.00	0.62
35:3:680:ASP:CG	35:3:681:PRO:HD2	2.21	0.62
35:3:807:TYR:H	35:3:856:LYS:HD2	1.65	0.62
35:3:996:ILE:CD1	36:2:703:ILE:N	2.63	0.62
35:3:1009:PHE:HZ	35:3:1046:GLY:HA3	1.65	0.62
3:C:64:LYS:HA	14:P:206:LYS:HZ3	1.65	0.61
22:X:824:LEU:HD11	22:X:844:ALA:HA	1.82	0.61
34:1:528:ALA:HB2	34:1:567:VAL:HG12	1.82	0.61
34:1:600:LEU:O	34:1:604:ALA:CB	2.48	0.61
35:3:293:HIS:NE2	35:3:295:THR:HB	2.15	0.61
36:2:478:HIS:O	36:2:481:THR:CG2	2.47	0.61
1:A:1780:VAL:HB	1:A:1863:VAL:HG23	1.81	0.61
16:R:320:HIS:O	16:R:323:LYS:HG2	1.99	0.61
1:A:231:THR:HG22	1:A:233:PRO:HD2	1.83	0.61
1:A:987:LYS:NZ	3:C:61:GLU:OE1	2.27	0.61
1:A:1181:ASP:OD1	1:A:1181:ASP:N	2.32	0.61
9:J:344:GLN:N	9:J:344:GLN:OE1	2.33	0.61
22:X:558:ALA:O	22:X:562:THR:OG1	2.17	0.61
34:1:738:HIS:ND1	34:1:743:LEU:HD11	2.15	0.61
35:3:325:ILE:O	35:3:374:SER:HA	2.00	0.61
35:3:429:ARG:NE	39:5:55:ILE:HG12	2.15	0.61
1:A:784:LEU:O	1:A:788:GLN:HG3	2.00	0.61
1:A:1608:THR:HB	1:A:1632:PHE:HB2	1.83	0.61
4:E:126:SER:OG	4:E:136:TRP:NE1	2.26	0.61
34:1:606:LEU:HD12	34:1:606:LEU:N	2.15	0.61
35:3:114:ARG:CZ	39:5:37:ARG:HB2	2.29	0.61
35:3:191:GLU:O	35:3:194:ASN:N	2.26	0.61
1:A:1336:PRO:HB2	1:A:1350:ILE:HG12	1.83	0.61
20:V:511:ALA:HB1	20:V:525:PHE:HZ	1.64	0.61
34:1:703:THR:OG1	34:1:738:HIS:HE1	1.84	0.61
34:1:1129:LEU:CD1	34:1:1165:TYR:HB3	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:12:THR:O	35:3:34:ARG:NH1	2.34	0.61
35:3:61:VAL:HG21	39:5:46:HIS:CE1	2.35	0.61
1:A:81:PHE:O	1:A:83:HIS:N	2.34	0.61
1:A:732:PRO:HG2	1:A:735:ILE:HD13	1.83	0.61
1:A:1276:GLU:OE1	1:A:1375:TRP:N	2.31	0.61
3:C:209:VAL:HG21	3:C:237:LEU:HD23	1.82	0.61
4:E:108:HIS:CD2	4:E:128:SER:HB2	2.36	0.61
9:J:195:LEU:HD23	11:M:209:ASP:CA	2.29	0.61
9:J:441:ASP:OD1	9:J:445:LYS:NZ	2.33	0.61
22:X:651:LEU:HG	22:X:656:GLN:NE2	2.15	0.61
23:Y:40:CYS:O	23:Y:156:ILE:N	2.28	0.61
34:1:595:GLU:O	34:1:599:ASN:ND2	2.33	0.61
34:1:1028:HIS:O	34:1:1032:GLN:HB2	2.01	0.61
34:1:1302:TYR:HE1	35:3:915:LEU:CD1	2.13	0.61
35:3:928:TYR:HB3	35:3:937:LEU:HB3	1.81	0.61
35:3:1010:ILE:HG12	35:3:1026:ASP:HB3	1.80	0.61
35:3:1040:ASP:CB	36:2:706:THR:O	2.45	0.61
1:A:988:ILE:HD12	1:A:1030:ILE:HG13	1.81	0.61
1:A:1869:LEU:HD22	1:A:1884:ILE:HG22	1.83	0.61
10:L:699:ASN:O	10:L:703:MET:N	2.32	0.61
34:1:1133:MET:HG2	34:1:1172:LEU:HD13	1.82	0.61
34:1:1179:ASP:HB3	36:2:511:LEU:HB3	1.81	0.61
10:L:63:TRP:CD1	10:L:67:GLU:HB3	2.36	0.61
11:M:163:THR:HG23	11:M:166:SER:HB2	1.82	0.61
13:O:172:GLU:O	13:O:174:LYS:N	2.32	0.61
34:1:1166:ILE:O	34:1:1170:THR:HG22	2.01	0.61
34:1:1212:LEU:HD13	34:1:1237:LEU:HD13	1.81	0.61
35:3:318:ASP:OD1	35:3:319:GLU:N	2.33	0.61
38:7:13:LYS:NZ	38:7:48:GLU:OE1	2.26	0.61
3:C:724:TRP:HH2	3:C:788:LYS:HZ2	1.48	0.61
4:E:135:VAL:HG12	4:E:145:LYS:HB2	1.82	0.61
5:F:15:A:H2'	5:F:16:G:C8	2.35	0.61
38:7:46:CYS:O	38:7:50:ASN:HB2	1.99	0.61
1:A:1870:ASP:O	1:A:1874:VAL:HG23	2.01	0.61
1:A:1919:LEU:HD12	1:A:1936:LEU:HD11	1.83	0.61
2:B:63:A:H2'	2:B:64:G:C8	2.36	0.61
7:H:56:A:C6	36:2:505:CYS:CB	2.84	0.61
16:R:122:LYS:HG2	16:R:124:VAL:HG23	1.83	0.61
35:3:25:THR:OG1	35:3:27:GLN:N	2.31	0.61
36:2:596:GLU:OE2	36:2:596:GLU:N	2.21	0.61
2:B:102:U:H2'	2:B:103:G:C8	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:209:ILE:HG13	4:E:219:VAL:HG13	1.83	0.60
5:F:35:A:C8	6:G:12:G:C6	2.89	0.60
34:1:834:VAL:O	34:1:838:VAL:HG23	2.01	0.60
34:1:850:ILE:CG2	34:1:888:LEU:HD21	2.30	0.60
34:1:949:GLN:CB	34:1:989:VAL:HG22	2.24	0.60
1:A:641:MET:O	1:A:645:THR:HG23	1.99	0.60
1:A:1969:PRO:HB2	1:A:1971:LEU:HD23	1.83	0.60
22:X:257:PHE:CZ	22:X:270:LEU:HB2	2.36	0.60
22:X:677:ALA:O	22:X:725:ARG:NE	2.34	0.60
34:1:617:ILE:HD13	34:1:651:VAL:HB	1.83	0.60
37:4:17:VAL:O	37:4:56:TYR:HA	2.01	0.60
5:F:36:A:H2'	5:F:38:G:OP2	2.02	0.60
34:1:630:ARG:HG3	34:1:670:GLN:HG3	1.83	0.60
35:3:139:LYS:NZ	35:3:160:ALA:O	2.34	0.60
35:3:706:MET:HG3	35:3:707:GLN:HG2	1.83	0.60
1:A:384:VAL:HG12	3:C:331:PHE:HB3	1.82	0.60
1:A:1578:ARG:HE	1:A:1746:ARG:HH21	1.48	0.60
9:J:361:ARG:HD3	11:M:161:PHE:CE2	2.36	0.60
34:1:549:ARG:NH2	34:1:592:GLU:OE1	2.30	0.60
34:1:777:PHE:CD2	34:1:814:PHE:HB2	2.35	0.60
34:1:953:ASP:O	34:1:956:SER:OG	2.18	0.60
34:1:1178:MET:CG	36:2:591:TYR:CZ	2.82	0.60
35:3:418:GLU:OE1	35:3:419:ASP:N	2.28	0.60
34:1:677:CYS:O	34:1:680:LEU:HD12	2.01	0.60
34:1:949:GLN:CA	34:1:989:VAL:HG13	2.27	0.60
34:1:1258:ALA:HB3	34:1:1261:VAL:HG13	1.83	0.60
35:3:214:ASP:O	35:3:218:ASN:N	2.33	0.60
1:A:729:PRO:HG2	11:M:226:TYR:HE1	1.64	0.60
1:A:892:LYS:HD2	1:A:912:GLU:OE1	2.00	0.60
1:A:1490:PHE:O	1:A:1493:THR:OG1	2.19	0.60
7:H:99:A:O2'	7:H:100:U:OP2	2.18	0.60
11:M:215:ASN:ND2	16:R:260:TYR:CB	2.65	0.60
34:1:664:GLY:HA2	34:1:667:ILE:HD12	1.82	0.60
35:3:71:THR:O	35:3:146:ARG:NH2	2.33	0.60
35:3:910:ALA:HB1	35:3:913:LEU:HD11	1.83	0.60
1:A:47:GLU:H	1:A:47:GLU:CD	2.03	0.60
1:A:857:ASN:OD1	1:A:860:GLN:N	2.26	0.60
1:A:1892:PRO:HB3	1:A:1944:HIS:CD2	2.36	0.60
22:X:802:LEU:HB3	22:X:806:GLY:HA2	1.83	0.60
34:1:508:THR:HB	34:1:510:PRO:HD2	1.83	0.60
34:1:1155:PHE:CA	34:1:1158:ILE:HD11	2.30	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:1292:LYS:CD	39:5:78:PRO:HG2	2.32	0.60
35:3:112:CYS:HG	39:5:46:HIS:CD2	2.18	0.60
36:2:514:LYS:NZ	36:2:591:TYR:OH	2.34	0.60
14:P:72:ARG:HA	14:P:75:ASN:ND2	2.17	0.60
22:X:765:LEU:HD22	22:X:822:PRO:HG3	1.82	0.60
23:Y:96:MET:HB2	23:Y:124:THR:HB	1.84	0.60
34:1:1192:VAL:O	34:1:1196:SER:OG	2.20	0.60
35:3:329:TYR:CE2	35:3:389:PRO:HA	2.37	0.60
35:3:477:SER:CB	35:3:505:THR:H	2.11	0.60
35:3:615:ARG:NH2	35:3:630:MET:HB3	2.17	0.60
3:C:192:ASP:CG	3:C:193:THR:H	2.04	0.60
3:C:811:THR:O	3:C:815:VAL:HG23	2.00	0.60
4:E:105:LEU:HD11	4:E:136:TRP:CD2	2.37	0.60
7:H:48:A:C2	7:H:65:U:H2'	2.37	0.60
18:T:271:LYS:HG2	18:T:280:VAL:HG11	1.84	0.60
22:X:406:GLU:HA	22:X:409:LEU:HD23	1.84	0.60
34:1:675:MET:HB3	34:1:678:ALA:HB3	1.84	0.60
34:1:803:ALA:HB1	34:1:844:VAL:CG1	2.32	0.60
34:1:1178:MET:HB3	36:2:514:LYS:CD	2.30	0.60
35:3:883:GLU:OE2	35:3:884:GLN:N	2.33	0.60
1:A:39:GLN:NE2	21:W:170:THR:H	1.96	0.60
1:A:875:HIS:HE1	22:X:866:ASN:HB3	1.65	0.60
1:A:972:GLU:OE1	1:A:972:GLU:N	2.30	0.60
1:A:1160:ARG:HD3	14:P:192:VAL:HG11	1.84	0.60
4:E:203:ASP:N	4:E:203:ASP:OD1	2.32	0.60
34:1:528:ALA:CB	34:1:567:VAL:HG12	2.32	0.60
34:1:777:PHE:CZ	34:1:810:ILE:HG23	2.37	0.60
34:1:1178:MET:HB3	36:2:514:LYS:HZ3	1.67	0.60
35:3:680:ASP:OD2	35:3:681:PRO:HD2	2.02	0.60
39:5:65:ARG:HB3	39:5:65:ARG:CZ	2.32	0.60
5:F:79:C:H4'	5:F:80:G:OP1	2.02	0.59
6:G:117:A:H2'	23:Y:246:LYS:HE2	1.84	0.59
34:1:590:ARG:O	34:1:594:ARG:HB2	2.02	0.59
34:1:1148:LEU:CD1	34:1:1187:THR:HG21	2.31	0.59
1:A:390:ASP:OD1	1:A:390:ASP:N	2.35	0.59
1:A:693:ILE:HG22	1:A:694:LEU:HD23	1.82	0.59
1:A:1527:ASN:O	1:A:1529:ILE:N	2.36	0.59
3:C:724:TRP:HE1	3:C:732:ILE:HD11	1.67	0.59
4:E:114:GLU:OE2	4:E:290:ARG:NH2	2.36	0.59
23:Y:42:ILE:HA	23:Y:53:THR:HG22	1.83	0.59
23:Y:77:PHE:HB3	23:Y:103:GLN:HB3	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:497:ILE:CG1	34:1:526:PHE:HZ	2.11	0.59
34:1:698:GLN:HB3	34:1:701:VAL:HG12	1.84	0.59
35:3:1140:PHE:HE1	35:3:1197:LEU:HD13	1.67	0.59
1:A:1663:ASP:O	1:A:1703:ILE:N	2.34	0.59
4:E:202:ASN:ND2	4:E:204:THR:OG1	2.36	0.59
4:E:300:ILE:HG23	4:E:312:TRP:HB2	1.83	0.59
22:X:272:TYR:O	22:X:276:VAL:HB	2.02	0.59
22:X:802:LEU:HA	22:X:807:GLU:O	2.02	0.59
34:1:495:ARG:CD	34:1:530:PRO:CA	2.74	0.59
34:1:815:PHE:HZ	34:1:849:ILE:HG23	1.67	0.59
35:3:462:VAL:O	35:3:472:ALA:N	2.30	0.59
1:A:1558:THR:OG1	1:A:1559:GLY:N	2.33	0.59
1:A:1841:THR:O	1:A:1845:VAL:HG23	2.02	0.59
4:E:312:TRP:CD1	4:E:319:ILE:HA	2.37	0.59
9:J:439:ALA:HA	9:J:442:ARG:HB3	1.84	0.59
12:N:70:ILE:HB	12:N:74:LEU:HD23	1.83	0.59
12:N:121:VAL:HG11	12:N:126:LEU:HD21	1.83	0.59
22:X:225:GLU:O	22:X:229:LYS:HD3	2.03	0.59
23:Y:91:LYS:HG3	23:Y:114:GLU:HG3	1.84	0.59
35:3:982:GLU:HG2	35:3:984:LYS:HE3	1.84	0.59
42:A:3000:IHP:H1	42:A:3000:IHP:O46	2.01	0.59
5:F:28:A:O2'	12:N:39:GLY:O	2.19	0.59
7:H:50:C:H2'	7:H:51:A:C8	2.38	0.59
9:J:196:ARG:HB2	9:J:196:ARG:HH11	1.68	0.59
17:S:99:ALA:HB2	17:S:128:ILE:HA	1.83	0.59
23:Y:161:ILE:HG21	23:Y:164:ASP:HB2	1.84	0.59
34:1:1295:TYR:HH	39:5:29:TRP:HD1	1.50	0.59
35:3:138:GLN:HG2	35:3:161:HIS:CE1	2.36	0.59
35:3:1039:LEU:HD13	36:2:708:TRP:HB3	1.85	0.59
34:1:597:ILE:HB	34:1:634:VAL:HG12	1.83	0.59
34:1:598:SER:O	34:1:638:ALA:CB	2.48	0.59
34:1:669:GLN:HB2	34:1:708:ALA:HA	1.83	0.59
34:1:759:ALA:O	34:1:763:ASN:N	2.35	0.59
35:3:112:CYS:SG	39:5:46:HIS:NE2	2.65	0.59
35:3:1116:SER:N	36:2:708:TRP:CZ2	2.60	0.59
3:C:137:HIS:O	3:C:142:LYS:NZ	2.26	0.59
5:F:59:G:N2	5:F:76:A:N1	2.42	0.59
21:W:279:LYS:CB	36:2:621:VAL:C	2.71	0.59
22:X:612:LEU:O	22:X:689:VAL:HA	2.03	0.59
22:X:698:LYS:NZ	22:X:758:THR:HA	2.17	0.59
34:1:1203:GLY:HA2	35:3:1171:LYS:HG2	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:1116:SER:HA	36:2:708:TRP:CH2	2.38	0.59
1:A:729:PRO:HG2	11:M:226:TYR:CD1	2.38	0.59
9:J:199:LYS:O	9:J:199:LYS:HD3	2.03	0.59
22:X:557:THR:HA	22:X:560:PHE:HB2	1.85	0.59
34:1:777:PHE:CE2	34:1:814:PHE:CB	2.72	0.59
1:A:83:HIS:NE2	6:G:16:G:O6	2.36	0.59
1:A:1946:ASN:O	34:1:943:LYS:HE2	2.03	0.59
3:C:453:TYR:CZ	3:C:575:GLN:HB2	2.38	0.59
4:E:251:LEU:HB2	4:E:293:TRP:CE2	2.38	0.59
18:T:455:GLN:HG2	18:T:456:PRO:HD2	1.85	0.59
20:V:545:ARG:HG3	20:V:585:ILE:HG21	1.85	0.59
22:X:219:ARG:NE	23:Y:295:GLU:OE1	2.34	0.59
34:1:850:ILE:HG21	34:1:888:LEU:HG	1.85	0.59
34:1:881:ALA:HB3	34:1:920:ALA:O	2.02	0.59
34:1:1255:PHE:O	36:2:488:LEU:CG	2.51	0.59
35:3:114:ARG:HH12	39:5:34:ASN:HA	1.68	0.59
35:3:1039:LEU:HB3	36:2:708:TRP:HB2	1.84	0.59
1:A:47:GLU:HA	1:A:50:LYS:HG3	1.83	0.59
1:A:425:PRO:HB2	1:A:428:LYS:HG3	1.85	0.59
1:A:498:ARG:O	1:A:502:ASN:ND2	2.35	0.59
1:A:1776:ILE:HG22	1:A:1859:LYS:HZ3	1.67	0.59
35:3:435:LEU:HD13	35:3:799:ILE:HD11	1.84	0.59
35:3:525:ARG:HD3	35:3:533:VAL:HG22	1.85	0.59
35:3:700:LYS:HE2	35:3:715:MET:HB3	1.84	0.59
1:A:1298:ARG:HH11	1:A:1298:ARG:HB2	1.68	0.58
16:R:334:ARG:O	22:X:268:GLN:NE2	2.35	0.58
20:V:606:GLU:HA	20:V:609:GLN:CG	2.33	0.58
34:1:739:ARG:HD2	34:1:739:ARG:C	2.23	0.58
34:1:940:LEU:HD23	34:1:977:VAL:HG12	1.85	0.58
34:1:1110:VAL:O	34:1:1113:THR:HG22	2.02	0.58
35:3:35:GLY:CA	39:5:47:PHE:CE1	2.77	0.58
35:3:212:GLU:HB2	35:3:223:LYS:HG3	1.84	0.58
35:3:528:ARG:HG2	35:3:532:ARG:HH21	1.67	0.58
7:H:180:G:H2'	7:H:181:G:C8	2.38	0.58
9:J:443:ILE:HG13	9:J:444:SER:N	2.18	0.58
10:L:163:GLN:HA	10:L:163:GLN:HE21	1.68	0.58
20:V:497:CYS:HB3	20:V:507:PHE:CG	2.38	0.58
22:X:526:THR:HG22	22:X:528:HIS:H	1.68	0.58
34:1:597:ILE:HB	34:1:634:VAL:CG1	2.33	0.58
34:1:739:ARG:HA	34:1:743:LEU:HD21	1.84	0.58
34:1:778:GLN:HA	34:1:817:HIS:HB3	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:1078:VAL:HG12	34:1:1118:ILE:HD12	1.85	0.58
35:3:189:TYR:HB2	39:5:73:LEU:HD12	1.84	0.58
35:3:387:PHE:CE1	35:3:389:PRO:HG3	2.38	0.58
35:3:758:SER:N	35:3:761:THR:O	2.25	0.58
35:3:1041:TYR:H	36:2:705:ARG:HA	1.68	0.58
1:A:163:ARG:NH2	1:A:576:ASP:OD1	2.36	0.58
1:A:263:PHE:HE1	1:A:273:ILE:HD11	1.68	0.58
1:A:758:ARG:HD3	1:A:779:LEU:HD11	1.85	0.58
1:A:1222:LYS:O	20:V:592:GLU:HG3	2.02	0.58
1:A:1519:THR:OG1	1:A:1522:GLN:HB2	2.04	0.58
4:E:218:LYS:HD2	4:E:220:TRP:CZ2	2.38	0.58
9:J:433:ARG:O	9:J:437:LYS:HG2	2.03	0.58
34:1:777:PHE:CA	34:1:818:PHE:CE2	2.87	0.58
35:3:607:VAL:N	35:3:615:ARG:O	2.29	0.58
35:3:1117:LEU:N	36:2:708:TRP:CH2	2.72	0.58
1:A:1407:ASP:OD1	1:A:1407:ASP:N	2.32	0.58
22:X:546:LEU:HD22	22:X:547:LYS:H	1.68	0.58
23:Y:13:VAL:HB	23:Y:131:GLU:HB3	1.85	0.58
34:1:558:ARG:HH11	35:3:217:LEU:CD2	2.15	0.58
34:1:1110:VAL:O	34:1:1114:VAL:HG23	2.03	0.58
34:1:1193:GLN:HE21	38:7:78:GLN:NE2	2.01	0.58
35:3:195:ASP:OD2	35:3:198:GLY:N	2.36	0.58
36:2:458:ASN:O	36:2:458:ASN:ND2	2.35	0.58
1:A:1815:GLY:O	1:A:1918:ASN:HA	2.04	0.58
1:A:1862:ILE:HA	1:A:1885:LYS:O	2.01	0.58
2:B:14:U:H2'	2:B:15:C:H6	1.69	0.58
4:E:140:THR:HB	4:E:142:GLU:HG2	1.85	0.58
34:1:755:PRO:CD	34:1:794:GLN:HB3	2.33	0.58
34:1:884:ILE:HD12	34:1:884:ILE:C	2.22	0.58
34:1:1148:LEU:HB2	34:1:1187:THR:CG2	2.16	0.58
1:A:909:TYR:HB2	1:A:1033:GLY:HA3	1.85	0.58
3:C:879:ASP:OD1	3:C:879:ASP:N	2.36	0.58
12:N:32:ALA:HA	12:N:35:GLU:HG2	1.85	0.58
16:R:328:ALA:HB2	23:Y:226:MET:SD	2.43	0.58
16:R:373:ALA:HB3	16:R:376:LYS:HB3	1.84	0.58
34:1:850:ILE:O	34:1:854:VAL:HG13	2.04	0.58
35:3:695:GLY:O	35:3:697:ARG:NE	2.30	0.58
6:G:101:U:O3'	6:G:102:G:H2'	2.04	0.58
9:J:193:GLN:HA	9:J:193:GLN:NE2	2.13	0.58
10:L:49:ARG:NH1	10:L:133:GLU:O	2.37	0.58
22:X:192:ARG:HG2	22:X:192:ARG:HH11	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:141:VAL:HB	35:3:158:LEU:HD12	1.86	0.58
4:E:313:ASP:OD1	4:E:316:SER:N	2.28	0.58
6:G:106:C:OP2	22:X:998:ARG:NH2	2.36	0.58
17:S:14:VAL:O	17:S:24:VAL:HA	2.03	0.58
1:A:707:ARG:NH1	7:H:18:U:H5'	2.13	0.58
1:A:711:GLN:HE22	7:H:18:U:H5''	1.69	0.58
3:C:250:ARG:NH1	3:C:447:PRO:O	2.36	0.58
7:H:125:G:H2'	7:H:126:A:H8	1.67	0.58
14:P:184:VAL:HB	23:Y:123:HIS:CE1	2.38	0.58
20:V:543:LYS:HA	20:V:546:ASN:HD21	1.69	0.58
21:W:321:GLU:CA	36:2:667:ALA:HB3	2.34	0.58
22:X:653:SER:HA	22:X:656:GLN:HG3	1.85	0.58
34:1:1074:ARG:O	34:1:1078:VAL:HG23	2.03	0.58
35:3:69:ARG:NH1	35:3:74:THR:HA	2.18	0.58
35:3:310:ILE:O	35:3:311:PHE:HD2	1.87	0.58
35:3:642:ILE:H	35:3:703:ARG:HE	1.52	0.58
39:5:14:LEU:HA	39:5:17:LYS:HB2	1.86	0.58
1:A:1519:THR:HB	6:G:97:A:N6	2.19	0.58
5:F:35:A:C2	5:F:36:A:C6	2.91	0.58
20:V:491:ASN:HA	20:V:528:ILE:HD11	1.85	0.58
22:X:664:PRO:HG2	22:X:667:ALA:HB3	1.85	0.58
1:A:755:HIS:CD2	14:P:219:PHE:HE2	2.22	0.57
1:A:1436:TRP:O	1:A:1440:THR:HG23	2.04	0.57
1:A:1779:PHE:HB2	1:A:1810:PHE:HB3	1.85	0.57
3:C:444:GLY:O	3:C:447:PRO:HD2	2.04	0.57
4:E:150:HIS:NE2	4:E:169:THR:OG1	2.19	0.57
11:M:179:ILE:O	11:M:183:VAL:HG23	2.04	0.57
12:N:57:THR:HG21	12:N:88:LEU:HD23	1.86	0.57
16:R:161:ALA:HA	16:R:166:ARG:HH12	1.69	0.57
22:X:850:ASN:O	22:X:853:ILE:HG12	2.03	0.57
34:1:524:ARG:HD2	34:1:563:LEU:HD12	1.85	0.57
34:1:854:VAL:HG23	34:1:855:ASP:H	1.68	0.57
34:1:876:MET:HE3	34:1:920:ALA:HB3	1.85	0.57
34:1:1256:HIS:HD2	36:2:488:LEU:HD11	1.68	0.57
35:3:791:HIS:HD2	35:3:794:SER:OG	1.87	0.57
22:X:650:ASN:O	22:X:904:GLN:NE2	2.37	0.57
22:X:714:CYS:SG	22:X:718:SER:OG	2.61	0.57
34:1:512:ARG:O	34:1:516:LEU:HB2	2.04	0.57
34:1:1104:GLN:O	34:1:1105:GLU:HB3	2.03	0.57
35:3:449:VAL:HG22	35:3:763:ARG:HB3	1.85	0.57
35:3:607:VAL:HB	35:3:615:ARG:HB2	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:7:33:CYS:HB2	38:7:74:GLU:OE1	2.04	0.57
1:A:194:GLU:HA	1:A:194:GLU:OE2	2.03	0.57
3:C:711:ARG:NH2	3:C:732:ILE:O	2.38	0.57
11:M:165:ASN:HD22	16:R:95:LYS:HE2	1.70	0.57
35:3:345:GLY:O	35:3:360:GLN:HG3	2.04	0.57
39:5:7:ILE:HG13	39:5:8:HIS:N	2.18	0.57
1:A:1604:LEU:HD21	1:A:1725:LEU:HD22	1.85	0.57
1:A:1676:ILE:HD12	1:A:1706:ASP:HB2	1.85	0.57
1:A:1927:ILE:HD12	1:A:1931:THR:HG22	1.87	0.57
3:C:779:LEU:O	3:C:938:ARG:HD2	2.04	0.57
10:L:11:TRP:CE2	10:L:49:ARG:HD3	2.39	0.57
18:T:195:LYS:NZ	18:T:490:ARG:HD2	2.19	0.57
34:1:499:LYS:HG2	34:1:534:GLN:OE1	2.04	0.57
34:1:826:ASP:HB3	34:1:829:ASN:HB2	1.87	0.57
34:1:1178:MET:CG	36:2:514:LYS:HZ2	2.17	0.57
34:1:1244:CYS:HB3	35:3:1029:TYR:CE1	2.39	0.57
39:5:8:HIS:NE2	39:5:12:GLU:OE2	2.37	0.57
1:A:665:SER:O	1:A:665:SER:OG	2.18	0.57
1:A:1275:ARG:NH1	1:A:1373:GLN:O	2.36	0.57
1:A:1333:VAL:HG11	20:V:467:LEU:HD13	1.87	0.57
1:A:1978:LYS:O	1:A:1981:VAL:HG12	2.05	0.57
1:A:1994:LYS:HD3	34:1:986:TYR:HH	1.62	0.57
3:C:113:VAL:HG23	3:C:114:TYR:H	1.68	0.57
3:C:461:LEU:HB3	3:C:465:MET:HE1	1.85	0.57
22:X:394:ALA:HA	22:X:397:ARG:HD2	1.86	0.57
22:X:707:GLU:O	22:X:990:VAL:HA	2.03	0.57
23:Y:2:ALA:HA	23:Y:15:ASP:HA	1.87	0.57
23:Y:24:ALA:HA	23:Y:78:PHE:HZ	1.69	0.57
34:1:1098:LEU:HD12	34:1:1135:GLU:HG2	1.87	0.57
34:1:1178:MET:CB	36:2:514:LYS:NZ	2.67	0.57
35:3:479:VAL:HG23	35:3:480:ASN:ND2	2.20	0.57
35:3:538:THR:OG1	35:3:542:LYS:O	2.22	0.57
1:A:406:TRP:CZ2	3:C:266:GLU:HG3	2.39	0.57
2:B:96:A:H4'	2:B:97:G:H5''	1.85	0.57
4:E:158:TYR:HB3	4:E:168:CYS:SG	2.44	0.57
4:E:260:ARG:HD3	4:E:276:ILE:HG12	1.87	0.57
22:X:593:GLU:O	22:X:597:VAL:HG22	2.04	0.57
22:X:1009:LEU:HD21	22:X:1021:LEU:HD11	1.85	0.57
23:Y:55:ASP:OD2	23:Y:60:GLY:N	2.37	0.57
23:Y:139:ILE:HA	23:Y:142:THR:HG23	1.86	0.57
34:1:557:ASP:HB2	34:1:558:ARG:NH2	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1397:ILE:HD11	16:R:405:VAL:HA	1.87	0.57
3:C:261:ASP:OD2	3:C:261:ASP:N	2.35	0.57
11:M:163:THR:OG1	11:M:165:ASN:OD1	2.21	0.57
22:X:462:ALA:HB1	22:X:473:LEU:HD11	1.86	0.57
22:X:760:LEU:O	22:X:764:VAL:HG23	2.05	0.57
34:1:777:PHE:CE2	34:1:810:ILE:HG23	2.39	0.57
35:3:365:GLY:HA2	35:3:394:ASN:ND2	2.19	0.57
3:C:126:SER:O	3:C:126:SER:OG	2.22	0.57
9:J:334:GLU:OE2	9:J:349:TYR:OH	2.10	0.57
20:V:491:ASN:O	20:V:494:LEU:HB3	2.05	0.57
22:X:640:ARG:HH22	22:X:668:ARG:HB2	1.70	0.57
34:1:495:ARG:HD3	34:1:530:PRO:CB	2.35	0.57
34:1:777:PHE:CD2	34:1:814:PHE:CA	2.87	0.57
34:1:898:TYR:OH	34:1:902:GLU:HG2	2.04	0.57
35:3:616:ILE:HG22	35:3:628:LEU:HB3	1.86	0.57
35:3:638:GLU:OE2	35:3:698:PRO:HB3	2.04	0.57
35:3:1147:HIS:O	35:3:1151:GLU:HG3	2.03	0.57
35:3:1200:THR:O	35:3:1203:GLU:N	2.37	0.57
1:A:1635:TYR:CZ	1:A:1636:LYS:HB2	2.40	0.57
9:J:199:LYS:HD3	9:J:199:LYS:C	2.25	0.57
16:R:175:GLN:OE1	16:R:176:TYR:N	2.33	0.57
20:V:551:PHE:HD1	20:V:554:LEU:HD12	1.69	0.57
23:Y:23:ARG:O	23:Y:26:LEU:HD23	2.05	0.57
34:1:739:ARG:HH11	34:1:740:GLY:HA2	1.70	0.57
34:1:747:LEU:HD21	34:1:773:LEU:HD22	1.86	0.57
35:3:552:ARG:HH21	35:3:567:GLU:HB3	1.70	0.57
3:C:461:LEU:HB3	3:C:465:MET:CE	2.35	0.57
14:P:42:LYS:O	18:T:258:SER:HB3	2.04	0.57
14:P:44:ARG:NH2	18:T:255:SER:O	2.36	0.57
17:S:14:VAL:HA	17:S:164:PRO:HA	1.87	0.57
20:V:636:LEU:O	20:V:640:THR:OG1	2.18	0.57
23:Y:33:LYS:HG3	23:Y:174:ILE:HD13	1.85	0.57
34:1:719:TYR:CD1	34:1:719:TYR:N	2.73	0.57
34:1:1160:GLU:OE2	35:3:1146:MET:HE1	2.02	0.57
34:1:1239:VAL:O	35:3:1169:PRO:HB3	2.05	0.57
1:A:1167:THR:OG1	1:A:1168:VAL:N	2.38	0.56
11:M:208:ILE:O	11:M:208:ILE:HG22	2.04	0.56
22:X:511:LEU:HG	22:X:514:TYR:HB2	1.86	0.56
35:3:86:ARG:NH1	35:3:1157:GLY:O	2.38	0.56
1:A:1839:TRP:CZ3	1:A:1871:PRO:HA	2.40	0.56
14:P:209:ARG:O	14:P:209:ARG:HG2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:Q:543:LEU:N	15:Q:621:GLU:O	2.35	0.56
34:1:1178:MET:HB3	36:2:591:TYR:OH	2.05	0.56
1:A:1768:TYR:HA	1:A:1771:LEU:CB	2.34	0.56
1:A:1980:GLU:O	1:A:1984:LYS:HG2	2.06	0.56
3:C:463:GLU:H	3:C:463:GLU:CD	2.08	0.56
3:C:829:GLU:HG2	3:C:907:VAL:HB	1.86	0.56
21:W:579:ASP:O	36:2:623:PRO:CB	2.53	0.56
22:X:217:GLU:HA	22:X:220:LYS:HB2	1.87	0.56
22:X:519:VAL:HB	22:X:550:VAL:HG13	1.87	0.56
34:1:619:ASN:OD1	34:1:620:MET:N	2.32	0.56
34:1:652:CYS:HB2	34:1:692:HIS:CE1	2.35	0.56
34:1:1006:MET:CE	34:1:1045:ARG:HD3	2.36	0.56
34:1:1155:PHE:O	34:1:1159:GLY:N	2.35	0.56
35:3:246:SER:OG	35:3:247:GLY:N	2.35	0.56
35:3:373:PHE:HE1	35:3:385:PHE:HB3	1.70	0.56
35:3:1057:ARG:HH22	36:2:707:PRO:CB	2.17	0.56
35:3:1145:GLU:HA	35:3:1148:LEU:HB2	1.88	0.56
3:C:490:PHE:O	3:C:491:HIS:ND1	2.33	0.56
12:N:16:GLU:OE1	12:N:16:GLU:N	2.33	0.56
23:Y:224:LEU:HD11	23:Y:230:LEU:HD23	1.86	0.56
35:3:286:ILE:HD11	39:5:63:ARG:CA	2.35	0.56
35:3:429:ARG:HE	39:5:55:ILE:HG12	1.70	0.56
35:3:1180:GLU:CD	35:3:1212:ARG:HH21	2.08	0.56
1:A:431:TYR:HB3	1:A:611:LEU:HD21	1.88	0.56
2:B:99:C:H2'	2:B:100:C:H6	1.69	0.56
16:R:162:ALA:C	16:R:164:PRO:HD3	2.26	0.56
22:X:716:LYS:HG3	22:X:747:LEU:HB3	1.87	0.56
34:1:1249:TYR:CE2	36:2:587:HIS:ND1	2.73	0.56
35:3:353:PHE:CZ	39:5:55:ILE:CG1	2.89	0.56
35:3:592:LEU:HD11	35:3:619:LEU:HD21	1.88	0.56
35:3:1148:LEU:HA	35:3:1151:GLU:OE2	2.05	0.56
1:A:1006:ALA:O	1:A:1010:THR:HG22	2.05	0.56
1:A:1410:ASP:OD2	1:A:1411:SER:N	2.38	0.56
1:A:1817:LEU:HD23	1:A:1919:LEU:HD21	1.87	0.56
10:L:28:LYS:HE2	16:R:268:LEU:HD23	1.88	0.56
22:X:246:LEU:HG	22:X:277:ARG:NE	2.21	0.56
23:Y:216:GLU:HA	23:Y:219:THR:HG23	1.86	0.56
23:Y:247:LEU:HD11	23:Y:256:LEU:HD11	1.86	0.56
34:1:631:ALA:O	34:1:635:VAL:HG13	2.05	0.56
35:3:342:LEU:HB3	35:3:343:LYS:O	2.06	0.56
35:3:527:ILE:HG12	35:3:532:ARG:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:381:PRO:O	1:A:383:PHE:N	2.32	0.56
3:C:833:PHE:HB3	3:C:900:VAL:HG23	1.88	0.56
4:E:197:LEU:HD11	4:E:213:ILE:HD13	1.88	0.56
4:E:243:LEU:HG	4:E:250:LEU:HB2	1.87	0.56
16:R:321:GLU:HB2	22:X:283:TYR:CE2	2.41	0.56
22:X:430:THR:O	22:X:434:GLN:HG3	2.06	0.56
23:Y:246:LYS:HD2	23:Y:310:ARG:O	2.06	0.56
34:1:523:ALA:CB	34:1:563:LEU:HD11	2.35	0.56
34:1:954:LEU:O	34:1:958:THR:HG22	2.05	0.56
35:3:25:THR:OG1	35:3:26:LYS:N	2.35	0.56
35:3:206:GLN:NE2	35:3:231:HIS:HA	2.21	0.56
35:3:717:SER:HB2	35:3:718:ARG:NH1	2.21	0.56
1:A:854:SER:OG	1:A:855:ARG:N	2.37	0.56
1:A:1790:ILE:HD12	34:1:977:VAL:HG22	1.86	0.56
1:A:1798:LEU:CD2	34:1:973:HIS:NE2	2.54	0.56
2:B:15:C:H2'	2:B:16:U:H6	1.71	0.56
3:C:401:ILE:HD11	3:C:423:PHE:HB2	1.88	0.56
6:G:104:C:O2'	6:G:105:C:O2	2.14	0.56
9:J:321:GLU:OE1	9:J:355:ARG:NH1	2.39	0.56
10:L:147:ASP:HA	10:L:150:GLU:HG3	1.88	0.56
22:X:476:GLU:HG3	22:X:477:VAL:H	1.70	0.56
34:1:970:LEU:O	34:1:973:HIS:HB2	2.06	0.56
35:3:329:TYR:HE2	35:3:389:PRO:HA	1.69	0.56
35:3:1143:HIS:O	35:3:1147:HIS:ND1	2.39	0.56
1:A:378:PHE:O	3:C:355:LYS:HG3	2.05	0.56
3:C:529:ARG:NH2	3:C:540:GLU:HB2	2.20	0.56
3:C:617:LEU:HD11	3:C:629:ILE:HG23	1.88	0.56
7:H:50:C:H2'	7:H:51:A:H8	1.71	0.56
22:X:242:LYS:NZ	23:Y:224:LEU:HB2	2.21	0.56
22:X:331:GLU:O	22:X:335:GLY:N	2.39	0.56
22:X:430:THR:HG22	22:X:434:GLN:NE2	2.20	0.56
34:1:789:LEU:HD23	34:1:836:THR:HG21	1.87	0.56
34:1:819:TRP:HZ2	34:1:837:THR:HG21	1.71	0.56
34:1:1270:ASN:OD1	39:5:21:THR:HB	2.06	0.56
35:3:1:MET:HA	36:2:709:GLY:O	2.05	0.56
35:3:1083:ASN:OD1	35:3:1084:GLY:N	2.39	0.56
1:A:35:ARG:O	1:A:39:GLN:HG3	2.06	0.56
22:X:518:MET:HA	22:X:549:LEU:O	2.06	0.56
22:X:580:ASP:HB2	22:X:733:LYS:HG3	1.88	0.56
22:X:698:LYS:O	22:X:757:ARG:HD3	2.05	0.56
34:1:1278:ASP:HB3	35:3:1166:TYR:CE2	2.31	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:762:ARG:HH22	14:P:226:LYS:HZ3	1.54	0.55
3:C:678:THR:HG22	3:C:679:PRO:HD2	1.88	0.55
7:H:27:U:O2'	7:H:28:C:H5'	2.06	0.55
10:L:223:GLY:HA2	16:R:86:LEU:CD2	2.36	0.55
16:R:357:HIS:O	16:R:361:LYS:HD2	2.06	0.55
35:3:510:LEU:HD23	35:3:510:LEU:H	1.70	0.55
36:2:511:LEU:CD1	36:2:591:TYR:CE1	2.83	0.55
1:A:1636:LYS:HD3	1:A:1658:GLN:NE2	2.18	0.55
10:L:66:GLU:O	10:L:69:GLU:HG3	2.05	0.55
14:P:198:ALA:O	14:P:201:VAL:HG23	2.06	0.55
22:X:700:TYR:HA	22:X:706:MET:O	2.07	0.55
38:7:30:CYS:SG	38:7:33:CYS:N	2.79	0.55
1:A:758:ARG:HH21	1:A:775:ASN:ND2	2.03	0.55
1:A:1382:SER:CB	1:A:1415:GLY:HA2	2.36	0.55
10:L:714:GLU:O	10:L:718:LYS:N	2.32	0.55
16:R:160:ALA:O	16:R:166:ARG:NH1	2.40	0.55
22:X:602:ILE:O	22:X:606:GLN:HB2	2.06	0.55
22:X:811:SER:HA	22:X:814:LYS:NZ	2.21	0.55
23:Y:257:GLU:OE2	23:Y:266:ILE:HG21	2.06	0.55
34:1:784:MET:O	34:1:788:VAL:HG12	2.05	0.55
34:1:807:LYS:HG3	34:1:844:VAL:HG11	1.88	0.55
35:3:68:PHE:CE2	35:3:77:TYR:HB2	2.41	0.55
35:3:169:HIS:CD2	35:3:170:VAL:H	2.22	0.55
35:3:477:SER:HB2	35:3:505:THR:N	2.11	0.55
35:3:703:ARG:HH11	35:3:703:ARG:HB2	1.70	0.55
35:3:926:TYR:HB3	35:3:928:TYR:CE2	2.41	0.55
1:A:1303:LEU:HD12	1:A:1311:PHE:CE1	2.41	0.55
5:F:35:A:H8	6:G:12:G:C6	2.23	0.55
7:H:165:A:O2'	7:H:166:G:O5'	2.24	0.55
22:X:443:ASN:O	22:X:444:LYS:HB2	2.05	0.55
35:3:92:TYR:OH	35:3:97:ASN:OD1	2.18	0.55
35:3:226:GLU:OE1	35:3:259:LYS:HD3	2.07	0.55
36:2:456:ARG:HD2	36:2:456:ARG:C	2.27	0.55
3:C:86:THR:OG1	3:C:87:GLN:N	2.38	0.55
4:E:165:GLN:HG3	4:E:181:ILE:HD13	1.89	0.55
7:H:6:U:H2'	7:H:7:U:H6	1.70	0.55
15:Q:27:ALA:O	15:Q:32:ALA:N	2.32	0.55
22:X:275:ARG:O	22:X:279:LEU:HD23	2.07	0.55
22:X:647:ILE:HA	22:X:651:LEU:HD21	1.88	0.55
34:1:598:SER:HA	34:1:638:ALA:N	2.18	0.55
34:1:1062:LEU:HA	34:1:1065:LEU:HD12	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:542:LYS:HB2	35:3:558:LEU:HD11	1.88	0.55
35:3:943:THR:HG23	35:3:976:LYS:HB3	1.89	0.55
35:3:1041:TYR:HD2	36:2:705:ARG:CG	2.18	0.55
37:4:13:ALA:O	37:4:60:GLU:HA	2.06	0.55
1:A:227:ARG:HH22	1:A:229:GLN:HE21	1.54	0.55
3:C:441:PRO:HB3	3:C:495:ARG:HH21	1.72	0.55
3:C:529:ARG:HH22	3:C:540:GLU:HB2	1.71	0.55
5:F:42:C:H2'	5:F:43:A:O4'	2.06	0.55
6:G:111:U:O2'	22:X:482:ARG:HD2	2.07	0.55
7:H:107:A:H2'	7:H:108:G:C8	2.42	0.55
19:U:71:LEU:O	19:U:75:GLU:N	2.38	0.55
23:Y:122:VAL:HB	23:Y:123:HIS:CD2	2.39	0.55
24:Z:73:LEU:O	24:Z:77:GLN:CB	2.55	0.55
34:1:524:ARG:HE	34:1:566:LEU:HD22	1.72	0.55
36:2:510:TYR:OH	36:2:591:TYR:O	2.23	0.55
1:A:214:ARG:HH12	1:A:225:TYR:HB2	1.72	0.55
1:A:1502:PHE:HZ	1:A:1505:LYS:HG3	1.72	0.55
3:C:711:ARG:HB3	3:C:730:ARG:HH22	1.72	0.55
12:N:38:GLU:C	12:N:40:LYS:H	2.10	0.55
22:X:640:ARG:HG3	22:X:640:ARG:HH11	1.70	0.55
34:1:1257:PRO:HG3	36:2:478:HIS:HA	1.85	0.55
35:3:233:ASN:HD21	35:3:286:ILE:CG2	2.19	0.55
35:3:312:LYS:HB2	35:3:330:PHE:HD1	1.72	0.55
35:3:406:PRO:HG2	35:3:408:LEU:HD11	1.89	0.55
35:3:747:SER:OG	35:3:748:GLU:N	2.40	0.55
39:5:14:LEU:HD23	39:5:17:LYS:HD2	1.88	0.55
1:A:548:ARG:HG2	1:A:548:ARG:HH21	1.72	0.55
3:C:632:THR:H	3:C:636:TYR:HD2	1.55	0.55
4:E:105:LEU:HD11	4:E:136:TRP:CG	2.42	0.55
14:P:67:GLU:CD	18:T:476:ARG:HH21	2.07	0.55
18:T:349:SER:OG	18:T:350:HIS:N	2.39	0.55
22:X:537:LYS:HD2	22:X:563:PHE:CZ	2.41	0.55
35:3:69:ARG:HH12	35:3:74:THR:HA	1.71	0.55
35:3:567:GLU:OE2	35:3:601:ARG:NH2	2.40	0.55
39:5:27:THR:HG23	39:5:30:GLU:HG3	1.88	0.55
1:A:121:HIS:ND1	1:A:123:THR:HG23	2.21	0.55
1:A:831:SER:O	1:A:831:SER:OG	2.18	0.55
3:C:360:ALA:H	3:C:361:PRO:HD3	1.72	0.55
3:C:506:PRO:HB2	3:C:569:ARG:NH2	2.22	0.55
4:E:188:GLN:NE2	4:E:189:THR:H	2.05	0.55
12:N:131:ILE:H	12:N:131:ILE:HD12	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:V:606:GLU:OE2	20:V:609:GLN:HG3	2.06	0.55
22:X:1008:LEU:HB3	22:X:1016:TYR:HD2	1.71	0.55
23:Y:104:HIS:CD2	23:Y:124:THR:HG1	2.24	0.55
34:1:850:ILE:CG2	34:1:888:LEU:HG	2.37	0.55
34:1:1148:LEU:HD12	34:1:1187:THR:HG21	1.89	0.55
35:3:530:ASP:O	35:3:532:ARG:N	2.40	0.55
35:3:718:ARG:HB2	35:3:720:TRP:NE1	2.21	0.55
1:A:348:PRO:HB3	1:A:394:TYR:CZ	2.42	0.55
1:A:1108:ASP:O	1:A:1112:ARG:HG3	2.06	0.55
9:J:438:TYR:O	9:J:442:ARG:CB	2.55	0.55
18:T:371:HIS:CE1	18:T:396:LYS:HG3	2.42	0.55
34:1:803:ALA:HB1	34:1:844:VAL:HG12	1.88	0.55
35:3:35:GLY:HA3	39:5:47:PHE:CZ	2.40	0.55
5:F:38:G:P	5:F:38:G:H8	2.29	0.54
16:R:408:ASP:OD1	16:R:410:ARG:N	2.28	0.54
18:T:429:SER:HB3	18:T:439:TRP:HE1	1.72	0.54
22:X:515:SER:O	22:X:547:LYS:HB2	2.07	0.54
22:X:631:ARG:HG3	22:X:635:LEU:HD23	1.88	0.54
34:1:1263:ASP:N	39:5:24:ALA:HB1	2.20	0.54
1:A:1861:ILE:HG22	1:A:1882:ILE:HG12	1.89	0.54
1:A:1920:TYR:HE1	1:A:1936:LEU:HD22	1.72	0.54
3:C:216:THR:HG22	3:C:245:HIS:CE1	2.41	0.54
10:L:164:GLY:O	10:L:167:ALA:CA	2.55	0.54
10:L:518:VAL:O	10:L:522:LYS:N	2.37	0.54
11:M:204:ASP:OD2	11:M:204:ASP:N	2.40	0.54
20:V:584:LYS:HG3	20:V:585:ILE:N	2.21	0.54
22:X:412:ILE:HB	22:X:418:LEU:HD22	1.88	0.54
34:1:747:LEU:HD23	34:1:788:VAL:HB	1.90	0.54
34:1:1279:ALA:CA	35:3:1167:TYR:CE1	2.72	0.54
1:A:1519:THR:HG23	1:A:1519:THR:O	2.08	0.54
1:A:1979:VAL:HA	1:A:1982:GLN:HB2	1.88	0.54
3:C:112:THR:OG1	3:C:116:MET:N	2.41	0.54
3:C:514:TYR:HE2	3:C:522:SER:HB3	1.73	0.54
3:C:713:LYS:HA	3:C:716:GLU:OE2	2.07	0.54
4:E:201:PHE:CD1	4:E:208:ILE:HD13	2.42	0.54
5:F:41:A:H2'	5:F:42:C:C6	2.43	0.54
22:X:695:CYS:HB3	22:X:722:ARG:HH22	1.73	0.54
34:1:869:MET:HE2	34:1:896:ILE:CD1	2.37	0.54
35:3:115:ILE:CD1	39:5:18:TYR:HA	2.33	0.54
35:3:526:HIS:CG	35:3:573:GLN:HE21	2.25	0.54
35:3:791:HIS:NE2	35:3:934:GLY:HA3	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:911:LYS:CB	35:3:922:GLY:O	2.55	0.54
35:3:1191:LYS:O	35:3:1195:GLU:HG3	2.07	0.54
1:A:1206:GLU:HG2	1:A:1207:PHE:N	2.21	0.54
1:A:1975:GLU:O	1:A:1979:VAL:HG22	2.07	0.54
3:C:297:ASN:N	3:C:297:ASN:OD1	2.37	0.54
3:C:465:MET:HE3	3:C:475:MET:HG3	1.90	0.54
4:E:62:LEU:O	4:E:350:ARG:HB2	2.07	0.54
4:E:90:ILE:HD12	4:E:105:LEU:HD22	1.90	0.54
4:E:166:LEU:HD12	4:E:167:VAL:H	1.73	0.54
7:H:7:U:H2'	7:H:8:C:C6	2.42	0.54
10:L:224:PHE:H	16:R:86:LEU:HD23	1.72	0.54
18:T:371:HIS:NE2	18:T:389:SER:OG	2.37	0.54
34:1:778:GLN:N	34:1:778:GLN:OE1	2.41	0.54
34:1:1300:LEU:HD22	35:3:1032:TRP:CE3	2.42	0.54
35:3:18:ILE:HG21	35:3:67:ALA:H	1.72	0.54
35:3:289:CYS:SG	35:3:338:ALA:HA	2.48	0.54
35:3:1015:LYS:O	35:3:1019:ASN:N	2.40	0.54
37:4:79:LEU:N	37:4:82:LYS:O	2.41	0.54
1:A:41:GLN:NE2	1:A:41:GLN:O	2.41	0.54
1:A:135:VAL:O	1:A:418:THR:OG1	2.22	0.54
1:A:1352:HIS:CD2	19:U:5:ILE:HG21	2.42	0.54
1:A:1642:PRO:HA	1:A:1716:GLY:O	2.08	0.54
2:B:8:G:H1	2:B:70:A:H1'	1.71	0.54
5:F:16:G:H2'	5:F:17:C:C6	2.42	0.54
10:L:205:LYS:H	10:L:205:LYS:HD3	1.71	0.54
22:X:937:ILE:HD12	22:X:937:ILE:H	1.72	0.54
23:Y:4:LEU:HD11	23:Y:11:ASP:HB3	1.89	0.54
34:1:785:LYS:O	34:1:789:LEU:HD12	2.07	0.54
34:1:1154:LEU:C	34:1:1158:ILE:HG12	2.23	0.54
34:1:1155:PHE:CA	34:1:1158:ILE:HG12	2.37	0.54
35:3:1:MET:SD	36:2:709:GLY:N	2.79	0.54
35:3:189:TYR:HA	39:5:73:LEU:HD13	1.78	0.54
1:A:1946:ASN:O	34:1:943:LYS:CE	2.55	0.54
5:F:15:A:H2'	5:F:16:G:H8	1.73	0.54
9:J:216:ASP:HB3	9:J:217:GLU:OE1	2.08	0.54
22:X:837:SER:HB2	22:X:930:SER:O	2.08	0.54
23:Y:255:ASP:HA	23:Y:258:ILE:HD12	1.89	0.54
35:3:1041:TYR:HB2	36:2:703:ILE:O	2.07	0.54
1:A:122:ILE:HD12	1:A:123:THR:HG22	1.90	0.54
1:A:371:LEU:HD21	3:C:347:ILE:HD11	1.87	0.54
1:A:701:ILE:H	1:A:701:ILE:HD12	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1130:ASN:OD1	1:A:1139:ARG:HB3	2.07	0.54
1:A:1681:ARG:NH1	1:A:1681:ARG:HB3	2.23	0.54
3:C:674:CYS:HB3	3:C:818:SER:HB2	1.90	0.54
9:J:200:GLU:OE1	9:J:200:GLU:HA	2.06	0.54
23:Y:88:HIS:ND1	23:Y:120:ASP:OD1	2.35	0.54
34:1:565:ASP:OD1	34:1:566:LEU:N	2.41	0.54
38:7:68:ASP:OD1	38:7:68:ASP:N	2.38	0.54
1:A:1795:GLU:HG2	1:A:1797:ASN:H	1.71	0.54
1:A:1894:GLN:HE21	1:A:1944:HIS:CE1	2.26	0.54
3:C:213:ASP:CG	3:C:616:SER:HB2	2.20	0.54
7:H:56:A:O4'	36:2:504:TRP:HH2	1.91	0.54
9:J:568:LYS:HA	9:J:601:GLY:HA3	1.89	0.54
11:M:178:GLU:HA	11:M:181:ARG:HD3	1.90	0.54
14:P:208:LYS:O	14:P:208:LYS:NZ	2.29	0.54
20:V:589:GLU:O	20:V:593:TYR:HB2	2.07	0.54
22:X:648:TYR:O	22:X:656:GLN:NE2	2.40	0.54
3:C:119:LEU:O	3:C:123:MET:HG3	2.08	0.54
3:C:349:PHE:HB2	3:C:356:PHE:CD1	2.43	0.54
3:C:699:ASP:OD1	3:C:722:TYR:OH	2.24	0.54
3:C:928:HIS:ND1	3:C:928:HIS:N	2.55	0.54
4:E:283:ASN:N	4:E:283:ASN:OD1	2.41	0.54
10:L:184:ALA:O	10:L:188:ARG:N	2.31	0.54
18:T:346:ILE:HD13	18:T:380:LEU:HD21	1.89	0.54
22:X:635:LEU:HB2	22:X:639:ILE:HD11	1.89	0.54
22:X:639:ILE:HG22	22:X:640:ARG:H	1.73	0.54
34:1:815:PHE:HA	34:1:819:TRP:CD1	2.43	0.54
34:1:1092:ASP:O	34:1:1096:THR:HG23	2.08	0.54
3:C:129:ILE:HG22	3:C:199:LEU:HB3	1.90	0.54
3:C:216:THR:HG22	3:C:245:HIS:HE1	1.73	0.54
6:G:99:C:O2'	6:G:102:G:O6	2.25	0.54
22:X:696:LYS:HB3	22:X:709:LEU:HD11	1.90	0.54
22:X:793:LEU:HA	22:X:796:LEU:HD12	1.90	0.54
34:1:598:SER:C	34:1:638:ALA:HB1	2.28	0.54
34:1:731:LEU:O	34:1:735:ILE:HG12	2.08	0.54
35:3:286:ILE:HD11	39:5:63:ARG:HD3	1.90	0.54
35:3:429:ARG:HD3	39:5:55:ILE:HG12	1.89	0.54
35:3:803:ASP:OD1	35:3:804:HIS:N	2.41	0.54
35:3:883:GLU:HB3	35:3:886:GLU:HG3	1.89	0.54
38:7:46:CYS:N	38:7:85:CYS:HB2	2.22	0.54
3:C:220:ARG:NH1	3:C:578:ARG:O	2.38	0.53
4:E:202:ASN:ND2	4:E:207:GLN:OE1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:239:THR:OG1	4:E:289:LEU:O	2.22	0.53
7:H:151:C:H2'	7:H:152:G:C8	2.43	0.53
22:X:455:ARG:NE	22:X:481:ILE:HD13	2.23	0.53
23:Y:104:HIS:NE2	23:Y:124:THR:OG1	2.38	0.53
34:1:693:GLY:HA2	34:1:696:ASP:HB2	1.90	0.53
34:1:881:ALA:CB	34:1:920:ALA:O	2.56	0.53
34:1:1279:ALA:CB	35:3:1167:TYR:CA	2.74	0.53
35:3:234:PHE:CE1	35:3:236:ILE:HG12	2.42	0.53
35:3:356:HIS:CD2	35:3:403:SER:HG	2.25	0.53
1:A:57:GLN:HE21	1:A:57:GLN:CA	2.20	0.53
1:A:1189:MET:HG2	1:A:1190:CYS:H	1.72	0.53
1:A:1771:LEU:HD21	1:A:1779:PHE:HE2	1.73	0.53
3:C:187:THR:HA	3:C:200:PHE:O	2.08	0.53
3:C:818:SER:O	3:C:822:MET:HB2	2.09	0.53
4:E:260:ARG:CD	4:E:276:ILE:HG12	2.39	0.53
20:V:628:ILE:HD11	20:V:643:LEU:HB2	1.90	0.53
22:X:527:LEU:HD23	22:X:755:ILE:HD13	1.89	0.53
23:Y:118:TYR:N	23:Y:118:TYR:CD1	2.77	0.53
34:1:933:CYS:O	34:1:936:VAL:N	2.41	0.53
34:1:1058:ILE:O	34:1:1062:LEU:HG	2.08	0.53
34:1:1255:PHE:HD2	36:2:491:LEU:HD12	1.73	0.53
35:3:266:ASP:OD1	35:3:266:ASP:N	2.40	0.53
35:3:994:GLN:HE22	35:3:1036:ALA:C	2.10	0.53
36:2:568:TYR:C	36:2:570:LYS:N	2.58	0.53
1:A:214:ARG:NH1	1:A:225:TYR:HB2	2.24	0.53
1:A:263:PHE:CE1	1:A:273:ILE:HD11	2.43	0.53
1:A:395:THR:HG22	1:A:396:ASP:H	1.73	0.53
1:A:836:THR:O	1:A:840:ILE:HG12	2.07	0.53
9:J:443:ILE:HG13	9:J:444:SER:H	1.73	0.53
16:R:351:GLU:O	16:R:355:ILE:HG13	2.08	0.53
18:T:250:ARG:HD2	18:T:266:GLU:HG3	1.90	0.53
20:V:609:GLN:NE2	20:V:616:LEU:HD21	2.23	0.53
22:X:643:LEU:HG	22:X:669:LYS:HA	1.89	0.53
35:3:164:ASN:HA	35:3:189:TYR:CZ	2.43	0.53
35:3:229:GLU:HB2	35:3:230:GLU:OE1	2.09	0.53
35:3:286:ILE:CD1	39:5:63:ARG:CA	2.87	0.53
35:3:642:ILE:N	35:3:703:ARG:HE	2.06	0.53
1:A:661:GLU:HB3	16:R:214:ILE:HG12	1.91	0.53
3:C:825:PRO:O	3:C:826:ARG:HG2	2.08	0.53
6:G:116:C:O4'	16:R:371:ARG:HA	2.07	0.53
16:R:386:ARG:NH1	16:R:391:VAL:HG21	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:X:700:TYR:HE2	22:X:705:GLY:HA2	1.73	0.53
23:Y:21:ARG:HH12	23:Y:83:VAL:N	2.07	0.53
34:1:594:ARG:HD3	34:1:674:LEU:HD21	1.86	0.53
34:1:652:CYS:SG	34:1:689:ILE:HG23	2.48	0.53
34:1:728:LEU:HB3	34:1:765:TYR:OH	2.08	0.53
34:1:777:PHE:O	34:1:818:PHE:CE2	2.62	0.53
35:3:1131:PRO:CG	36:2:709:GLY:HA2	2.38	0.53
1:A:1817:LEU:CD2	1:A:1919:LEU:HD21	2.39	0.53
3:C:725:ASP:HB3	3:C:728:ALA:H	1.74	0.53
4:E:311:VAL:HB	4:E:321:TYR:HB2	1.90	0.53
11:M:125:SER:O	16:R:242:GLN:NE2	2.42	0.53
16:R:150:ALA:O	16:R:153:LYS:HG3	2.09	0.53
16:R:328:ALA:HB1	23:Y:226:MET:HA	1.89	0.53
22:X:842:THR:HB	22:X:882:LEU:HD23	1.91	0.53
34:1:594:ARG:CD	34:1:674:LEU:CD2	2.81	0.53
34:1:1163:LYS:HE3	35:3:1142:GLN:HE22	1.73	0.53
36:2:495:ARG:O	36:2:497:SER:N	2.41	0.53
1:A:142:SER:HA	1:A:242:ALA:HB2	1.91	0.53
6:G:83:A:N6	37:4:22:GLU:CB	2.58	0.53
9:J:397:LYS:O	9:J:400:GLU:HG3	2.09	0.53
10:L:201:LYS:NZ	10:L:203:LYS:HG2	2.23	0.53
22:X:640:ARG:HH12	22:X:668:ARG:HB2	1.74	0.53
38:7:21:ARG:NH1	38:7:66:VAL:O	2.27	0.53
39:5:63:ARG:O	39:5:67:ASN:ND2	2.42	0.53
1:A:1143:MET:SD	1:A:1143:MET:N	2.81	0.53
3:C:441:PRO:O	3:C:444:GLY:HA3	2.09	0.53
3:C:460:ASP:OD2	3:C:461:LEU:N	2.41	0.53
3:C:481:MET:SD	3:C:612:LYS:HG3	2.48	0.53
4:E:240:GLY:O	4:E:252:SER:HA	2.09	0.53
6:G:12:G:H3'	6:G:13:C:C6	2.44	0.53
11:M:215:ASN:HD21	16:R:260:TYR:C	2.11	0.53
12:N:63:LEU:O	12:N:70:ILE:HG12	2.09	0.53
23:Y:306:ILE:HG12	23:Y:311:ILE:HD13	1.89	0.53
34:1:896:ILE:HD12	34:1:917:VAL:HG11	1.90	0.53
36:2:457:MET:CE	36:2:457:MET:CA	2.85	0.53
1:A:1831:LYS:NZ	1:A:1832:ARG:HB2	2.24	0.53
3:C:439:PRO:O	3:C:443:VAL:HB	2.09	0.53
4:E:208:ILE:HG23	4:E:220:TRP:HD1	1.74	0.53
18:T:287:HIS:NE2	18:T:305:THR:OG1	2.33	0.53
22:X:725:ARG:HD3	22:X:728:ARG:NH1	2.23	0.53
34:1:702:ARG:HD2	34:1:738:HIS:CE1	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:769:VAL:HA	34:1:772:ILE:HD13	1.89	0.53
34:1:806:ILE:HG23	34:1:810:ILE:HB	1.90	0.53
34:1:850:ILE:CB	34:1:888:LEU:HD11	2.38	0.53
34:1:1216:TRP:CD1	36:2:590:LEU:HD11	2.43	0.53
35:3:269:CYS:SG	35:3:327:LEU:HD11	2.48	0.53
35:3:605:LEU:O	35:3:617:ILE:N	2.42	0.53
35:3:642:ILE:HB	35:3:703:ARG:HH21	1.73	0.53
35:3:769:LYS:HD3	35:3:769:LYS:N	2.24	0.53
35:3:939:PHE:CZ	35:3:942:LYS:HG2	2.44	0.53
35:3:1025:ALA:HA	35:3:1087:GLN:O	2.09	0.53
1:A:41:GLN:HE22	1:A:45:TYR:HB2	1.74	0.53
3:C:938:ARG:HG2	3:C:942:GLY:HA3	1.91	0.53
18:T:203:HIS:CE1	18:T:229:LYS:HG3	2.44	0.53
34:1:713:ALA:CB	34:1:749:ALA:HA	2.37	0.53
34:1:1103:VAL:O	34:1:1109:ARG:HD3	2.08	0.53
35:3:34:ARG:HB2	35:3:37:ILE:HB	1.91	0.53
35:3:698:PRO:O	35:3:700:LYS:NZ	2.34	0.53
35:3:777:VAL:HG22	35:3:779:PHE:CE1	2.43	0.53
3:C:514:TYR:CE2	3:C:522:SER:HB3	2.44	0.53
4:E:108:HIS:NE2	4:E:128:SER:HB2	2.24	0.53
34:1:743:LEU:HD12	34:1:743:LEU:N	2.23	0.53
34:1:1036:ILE:HD11	34:1:1080:THR:HG21	1.90	0.53
1:A:65:HIS:O	1:A:69:ILE:HG13	2.10	0.52
1:A:1381:ASP:OD1	1:A:1414:ARG:HG2	2.09	0.52
6:G:8:C:H2'	6:G:9:C:C2	2.44	0.52
18:T:468:CYS:HB3	18:T:479:THR:HG22	1.89	0.52
22:X:167:THR:O	22:X:171:ARG:HG3	2.09	0.52
22:X:936:TYR:HA	22:X:939:VAL:HG22	1.91	0.52
23:Y:6:GLU:HG3	23:Y:158:HIS:HB3	1.91	0.52
34:1:523:ALA:CA	34:1:563:LEU:HD11	2.39	0.52
34:1:1266:TRP:CD1	39:5:24:ALA:HA	2.44	0.52
35:3:519:VAL:HB	35:3:524:ILE:HG23	1.92	0.52
35:3:623:ASP:OD2	35:3:626:GLN:NE2	2.41	0.52
1:A:325:HIS:HD2	1:A:326:HIS:CD2	2.16	0.52
1:A:384:VAL:HA	3:C:331:PHE:HD2	1.73	0.52
3:C:750:LEU:HA	3:C:753:GLU:HB2	1.91	0.52
4:E:145:LYS:NZ	4:E:184:LYS:HG3	2.24	0.52
4:E:258:THR:HG23	4:E:278:GLN:HE22	1.73	0.52
9:J:375:ASP:OD1	9:J:376:VAL:N	2.42	0.52
20:V:490:CYS:SG	20:V:521:TYR:HB3	2.50	0.52
34:1:499:LYS:HD2	34:1:534:GLN:HE22	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:515:ALA:O	34:1:519:ILE:HG22	2.09	0.52
34:1:774:ILE:CD1	34:1:810:ILE:HA	2.39	0.52
34:1:1122:THR:OG1	34:1:1123:CYS:N	2.41	0.52
34:1:1260:LYS:O	34:1:1264:VAL:HG22	2.10	0.52
35:3:1117:LEU:N	36:2:708:TRP:CZ2	2.75	0.52
1:A:233:PRO:O	1:A:237:THR:HG23	2.10	0.52
1:A:885:LEU:HD23	1:A:1005:ILE:HG12	1.90	0.52
1:A:1972:THR:O	1:A:1976:TRP:HB2	2.09	0.52
6:G:112:U:OP1	22:X:503:ARG:HG2	2.09	0.52
9:J:443:ILE:HG23	9:J:444:SER:O	2.10	0.52
11:M:208:ILE:HG12	11:M:210:TYR:CE1	2.44	0.52
13:O:249:ARG:O	13:O:252:PHE:N	2.42	0.52
22:X:390:GLU:O	22:X:393:GLN:HG3	2.09	0.52
34:1:1148:LEU:HD12	34:1:1187:THR:CB	2.32	0.52
35:3:991:SER:O	35:3:991:SER:OG	2.28	0.52
1:A:845:ARG:HH11	1:A:1440:THR:HG22	1.74	0.52
1:A:1283:GLU:OE1	1:A:1283:GLU:N	2.42	0.52
3:C:559:ILE:HD12	3:C:560:VAL:O	2.09	0.52
4:E:281:VAL:HG21	4:E:306:ASP:HB2	1.91	0.52
34:1:545:GLU:HG2	34:1:548:GLU:HG3	1.91	0.52
34:1:842:ASN:OD1	34:1:879:LEU:HD11	2.10	0.52
34:1:846:ALA:HB1	34:1:850:ILE:HG12	1.91	0.52
34:1:886:HIS:HD2	34:1:887:LYS:HD3	1.74	0.52
34:1:1152:SER:HG	34:1:1194:HIS:CE1	2.27	0.52
34:1:1283:HIS:CE1	35:3:1168:PHE:CE1	2.97	0.52
35:3:632:ALA:O	35:3:633:LEU:HD23	2.09	0.52
35:3:940:LEU:HB3	35:3:941:HIS:CE1	2.43	0.52
2:B:64:G:H2'	2:B:65:G:H8	1.74	0.52
6:G:91:A:H2'	6:G:92:U:C6	2.45	0.52
16:R:91:ASP:OD1	16:R:95:LYS:N	2.27	0.52
34:1:600:LEU:O	34:1:604:ALA:HB3	2.10	0.52
34:1:854:VAL:HG12	34:1:891:GLN:HG3	1.90	0.52
1:A:597:LYS:N	2:B:45:C:OP1	2.42	0.52
1:A:832:TYR:OH	1:A:929:GLU:OE2	2.25	0.52
4:E:100:ASP:N	4:E:100:ASP:OD1	2.42	0.52
7:H:118:G:H2'	7:H:119:G:C8	2.43	0.52
16:R:189:ASN:ND2	16:R:192:ALA:O	2.42	0.52
35:3:91:GLU:HG2	35:3:92:TYR:N	2.25	0.52
35:3:147:ASP:OD1	35:3:150:ALA:N	2.43	0.52
35:3:1041:TYR:CD2	36:2:705:ARG:HG3	2.43	0.52
36:2:457:MET:HA	36:2:457:MET:HE3	1.89	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1785:VAL:O	1:A:1805:GLY:HA3	2.10	0.52
1:A:1844:GLU:O	1:A:1848:LEU:HD23	2.10	0.52
2:B:112:A:H2'	2:B:113:G:C8	2.44	0.52
3:C:497:LEU:O	3:C:546:ALA:HB1	2.10	0.52
4:E:208:ILE:O	4:E:219:VAL:HA	2.10	0.52
22:X:223:VAL:HA	22:X:226:LEU:HG	1.92	0.52
34:1:962:MET:CE	34:1:974:LEU:HD13	2.39	0.52
34:1:1248:GLN:O	36:2:498:VAL:HB	2.10	0.52
34:1:1249:TYR:CD2	36:2:587:HIS:HE1	2.28	0.52
34:1:1255:PHE:HD2	36:2:491:LEU:CD1	2.23	0.52
35:3:206:GLN:NE2	35:3:232:GLY:H	2.07	0.52
35:3:233:ASN:HD21	35:3:286:ILE:HG22	1.75	0.52
35:3:429:ARG:CD	39:5:55:ILE:HG12	2.40	0.52
1:A:1737:ASN:OD1	1:A:1739:ALA:N	2.39	0.52
4:E:145:LYS:HE2	4:E:184:LYS:HE2	1.92	0.52
10:L:63:TRP:HB3	10:L:68:GLU:HG3	1.91	0.52
22:X:432:ILE:HB	22:X:433:PRO:HD3	1.90	0.52
23:Y:27:ASN:HD21	23:Y:65:SER:HA	1.75	0.52
35:3:1115:GLU:CG	36:2:708:TRP:HE1	2.23	0.52
37:4:117:TYR:O	37:4:121:SER:CB	2.58	0.52
38:7:58:CYS:HB3	38:7:62:GLY:N	2.25	0.52
1:A:75:ASP:O	1:A:77:THR:HG22	2.10	0.52
1:A:357:ASN:ND2	3:C:862:PRO:HB3	2.25	0.52
1:A:872:ASP:O	1:A:874:PRO:HD3	2.10	0.52
1:A:1650:ASP:OD1	1:A:1718:TRP:HB2	2.10	0.52
3:C:478:THR:CG2	3:C:492:ALA:HB1	2.37	0.52
5:F:48:A:H2'	10:L:165:LYS:NZ	2.24	0.52
7:H:172:C:N4	7:H:173:C:H41	2.07	0.52
11:M:217:LYS:NZ	11:M:224:ARG:HH12	2.08	0.52
34:1:601:ALA:C	34:1:639:LEU:CD2	2.77	0.52
34:1:648:LEU:HA	34:1:651:VAL:HG22	1.92	0.52
34:1:750:ILE:HG22	34:1:753:LEU:HD12	1.92	0.52
34:1:777:PHE:HA	34:1:818:PHE:CZ	2.44	0.52
34:1:1125:PRO:CG	34:1:1165:TYR:CZ	2.92	0.52
34:1:1289:ASN:HB3	34:1:1295:TYR:H	1.75	0.52
34:1:1291:ASP:OD1	34:1:1292:LYS:N	2.43	0.52
35:3:390:ARG:HD3	35:3:393:LYS:HE3	1.91	0.52
35:3:515:ALA:HB2	35:3:528:ARG:CZ	2.40	0.52
35:3:606:ALA:HA	35:3:616:ILE:HA	1.92	0.52
35:3:695:GLY:HA3	35:3:717:SER:OG	2.10	0.52
3:C:209:VAL:HG23	3:C:898:LEU:HD13	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:320:LEU:HD13	3:C:343:LEU:HB2	1.92	0.52
3:C:333:ASP:OD1	3:C:333:ASP:N	2.43	0.52
4:E:135:VAL:CG1	4:E:145:LYS:HB2	2.40	0.52
16:R:319:LYS:O	16:R:322:GLU:HG3	2.10	0.52
20:V:511:ALA:HB1	20:V:525:PHE:CZ	2.43	0.52
22:X:287:GLY:O	22:X:291:LYS:HG2	2.10	0.52
34:1:523:ALA:HB1	34:1:563:LEU:HD11	1.91	0.52
34:1:606:LEU:N	34:1:606:LEU:CD1	2.73	0.52
34:1:1257:PRO:HB3	36:2:481:THR:HG22	1.83	0.52
34:1:1302:TYR:CE1	35:3:915:LEU:CB	2.77	0.52
35:3:442:LEU:HD13	35:3:770:LEU:HD23	1.91	0.52
35:3:872:ILE:HD12	35:3:872:ILE:H	1.75	0.52
35:3:1008:SER:HG	35:3:1009:PHE:N	2.06	0.52
36:2:460:PHE:HB3	36:2:464:GLU:HG2	1.91	0.52
1:A:1831:LYS:HG3	1:A:1832:ARG:H	1.75	0.51
2:B:69:A:H3'	2:B:70:A:C8	2.45	0.51
3:C:131:ASN:OD1	3:C:201:ASN:ND2	2.43	0.51
6:G:116:C:H2'	6:G:117:A:H5'	1.91	0.51
14:P:39:THR:O	18:T:318:ARG:HD3	2.10	0.51
22:X:401:VAL:HG12	22:X:572:ILE:HD12	1.91	0.51
22:X:700:TYR:HB3	22:X:757:ARG:O	2.09	0.51
35:3:189:TYR:CB	39:5:73:LEU:CD1	2.83	0.51
35:3:451:GLU:HA	35:3:761:THR:HG22	1.92	0.51
36:2:711:LEU:C	36:2:711:LEU:HD22	2.30	0.51
38:7:57:ARG:NH1	38:7:62:GLY:O	2.39	0.51
1:A:1014:ASN:ND2	10:L:83:ARG:HB2	2.25	0.51
1:A:1786:TYR:CD1	1:A:1833:LEU:HB2	2.45	0.51
3:C:713:LYS:HA	3:C:716:GLU:CD	2.30	0.51
5:F:41:A:C2	6:G:7:G:N1	2.78	0.51
14:P:213:ASP:OD2	14:P:216:ARG:HB2	2.10	0.51
22:X:424:THR:HG21	22:X:728:ARG:NH2	2.25	0.51
22:X:441:TYR:OH	22:X:547:LYS:NZ	2.39	0.51
22:X:683:ILE:HD13	22:X:686:ILE:HG13	1.91	0.51
34:1:873:GLU:HG3	34:1:916:THR:HG21	1.92	0.51
35:3:181:MET:HB3	35:3:212:GLU:HA	1.92	0.51
35:3:275:ARG:HB3	35:3:275:ARG:HH21	1.75	0.51
35:3:1168:PHE:N	35:3:1168:PHE:CD2	2.77	0.51
7:H:103:U:H4'	7:H:104:U:H5'	1.92	0.51
22:X:289:GLN:HG2	22:X:293:GLU:OE1	2.11	0.51
22:X:877:ASP:O	22:X:881:LEU:HG	2.10	0.51
34:1:560:LEU:HD23	34:1:603:ALA:HB3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:831:ARG:O	34:1:834:VAL:HB	2.11	0.51
1:A:280:GLU:HG3	19:U:9:THR:HG21	1.93	0.51
1:A:1770:GLU:O	1:A:1773:SER:OG	2.29	0.51
1:A:1819:LEU:HD21	1:A:1906:ILE:HD11	1.91	0.51
11:M:210:TYR:C	11:M:210:TYR:CD2	2.84	0.51
16:R:367:ARG:HH11	16:R:371:ARG:NH1	2.08	0.51
22:X:882:LEU:O	22:X:886:THR:OG1	2.20	0.51
34:1:687:VAL:O	34:1:690:ILE:HG13	2.11	0.51
34:1:743:LEU:N	34:1:743:LEU:CD1	2.73	0.51
35:3:120:PHE:HB2	35:3:133:SER:OG	2.09	0.51
35:3:614:VAL:HG23	35:3:633:LEU:HD11	1.93	0.51
35:3:1041:TYR:CD2	36:2:705:ARG:CG	2.94	0.51
35:3:1041:TYR:CD2	36:2:705:ARG:NH2	2.62	0.51
1:A:71:ARG:NH1	1:A:177:ASP:OD1	2.43	0.51
1:A:1718:TRP:CZ3	1:A:1726:ILE:HD11	2.45	0.51
1:A:1738:PRO:HB2	36:2:550:LYS:CB	2.41	0.51
2:B:98:G:H2'	2:B:99:C:C6	2.45	0.51
3:C:213:ASP:OD2	3:C:213:ASP:N	2.42	0.51
4:E:84:ALA:HB2	4:E:90:ILE:HG12	1.93	0.51
5:F:40:U:H2'	5:F:41:A:C8	2.45	0.51
6:G:88:G:O6	7:H:41:U:O4	2.28	0.51
14:P:186:ARG:CB	14:P:186:ARG:NH1	2.73	0.51
14:P:188:TRP:O	14:P:188:TRP:CG	2.62	0.51
16:R:148:ARG:O	16:R:152:GLU:HG3	2.11	0.51
18:T:381:HIS:HD2	18:T:441:TRP:CE2	2.29	0.51
22:X:412:ILE:HD13	22:X:418:LEU:HB2	1.91	0.51
23:Y:95:SER:OG	23:Y:125:VAL:HA	2.11	0.51
23:Y:213:ALA:HA	23:Y:216:GLU:HG3	1.91	0.51
34:1:747:LEU:HD11	34:1:773:LEU:HD21	1.92	0.51
34:1:960:VAL:O	34:1:963:LYS:CB	2.52	0.51
35:3:413:ALA:HB1	35:3:415:LEU:HD13	1.92	0.51
35:3:550:ASN:HD22	35:3:553:GLN:HB2	1.75	0.51
35:3:700:LYS:O	35:3:714:ALA:HA	2.11	0.51
1:A:26:SER:HB3	1:A:29:LYS:HB2	1.93	0.51
1:A:874:PRO:HG2	22:X:866:ASN:HD21	1.75	0.51
1:A:1502:PHE:CZ	1:A:1505:LYS:HG3	2.46	0.51
3:C:112:THR:OG1	3:C:112:THR:O	2.25	0.51
4:E:72:CYS:SG	4:E:81:LEU:HD11	2.51	0.51
7:H:181:G:H2'	7:H:182:U:C6	2.46	0.51
14:P:74:LYS:O	14:P:77:ASP:HB3	2.11	0.51
18:T:272:CYS:HB3	18:T:282:ARG:HB3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:Y:244:VAL:HG13	23:Y:312:HIS:O	2.11	0.51
34:1:573:LYS:H	34:1:573:LYS:HD2	1.75	0.51
34:1:641:ILE:N	34:1:642:PRO:HD2	2.26	0.51
34:1:661:ARG:HG2	34:1:692:HIS:NE2	2.25	0.51
35:3:424:TYR:CD1	35:3:437:VAL:HG22	2.46	0.51
35:3:720:TRP:CE3	35:3:731:LEU:HG	2.45	0.51
35:3:1114:SER:HB2	35:3:1215:TYR:CE1	2.46	0.51
36:2:458:ASN:HD22	36:2:458:ASN:C	2.13	0.51
1:A:693:ILE:O	1:A:695:ASP:N	2.43	0.51
1:A:1935:ARG:O	1:A:1938:LEU:HG	2.11	0.51
5:F:40:U:H3	6:G:7:G:H1	1.59	0.51
11:M:165:ASN:HB2	16:R:95:LYS:CB	2.37	0.51
19:U:1:MET:O	19:U:3:ASN:N	2.44	0.51
22:X:418:LEU:HD12	22:X:568:PRO:HG2	1.92	0.51
23:Y:215:LYS:O	23:Y:218:LYS:N	2.44	0.51
34:1:1179:ASP:H	36:2:511:LEU:CD1	2.22	0.51
35:3:458:ALA:HB1	35:3:460:TRP:HZ3	1.76	0.51
35:3:628:LEU:HD21	35:3:681:PRO:HA	1.92	0.51
1:A:1121:ASN:HB2	1:A:1123:GLU:OE2	2.11	0.51
1:A:1554:GLN:HG3	1:A:1561:PHE:CE1	2.46	0.51
1:A:1785:VAL:O	1:A:1822:ILE:HD11	2.11	0.51
3:C:782:GLU:OE2	3:C:941:LYS:NZ	2.44	0.51
9:J:193:GLN:CA	9:J:193:GLN:NE2	2.72	0.51
34:1:830:TYR:O	34:1:834:VAL:HG23	2.11	0.51
34:1:1080:THR:HA	34:1:1083:TYR:HD2	1.74	0.51
34:1:1179:ASP:H	36:2:511:LEU:HD13	1.74	0.51
38:7:71:TYR:CD2	38:7:81:ASP:HB2	2.46	0.51
1:A:422:LEU:HD22	1:A:638:LEU:HD13	1.93	0.51
1:A:467:GLN:HG3	2:B:19:A:N7	2.26	0.51
1:A:1375:TRP:O	1:A:1378:GLU:N	2.44	0.51
1:A:1516:LYS:O	1:A:1517:LYS:HD2	2.10	0.51
2:B:101:U:H2'	2:B:102:U:C6	2.45	0.51
4:E:152:SER:OG	4:E:153:PHE:N	2.43	0.51
4:E:308:PHE:HE1	4:E:324:PRO:HB3	1.76	0.51
8:I:393:LYS:N	8:I:394:PRO:HD3	2.26	0.51
10:L:172:ARG:HA	10:L:175:GLN:HE21	1.75	0.51
12:N:54:HIS:CE1	12:N:92:TRP:HZ2	2.28	0.51
12:N:104:ARG:HD3	12:N:136:HIS:HB3	1.92	0.51
18:T:274:ASP:HB2	18:T:281:ILE:HD13	1.92	0.51
22:X:235:LEU:HD22	23:Y:217:ALA:HA	1.91	0.51
22:X:330:GLU:O	22:X:334:LEU:HD12	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:X:596:VAL:O	22:X:600:LEU:HG	2.11	0.51
34:1:738:HIS:C	34:1:743:LEU:HD21	2.32	0.51
35:3:932:ASN:O	35:3:933:ASN:ND2	2.44	0.51
36:2:555:GLU:O	36:2:559:PRO:HA	2.11	0.51
38:7:39:PRO:HB2	38:7:70:TYR:CD1	2.44	0.51
1:A:59:GLU:HB3	12:N:103:LEU:HD21	1.92	0.51
1:A:1590:VAL:HG21	1:A:1628:ASP:OD1	2.11	0.51
1:A:1599:GLN:HB2	1:A:1600:GLU:OE1	2.10	0.51
1:A:1973:ASP:OD1	1:A:1973:ASP:N	2.42	0.51
22:X:257:PHE:CE1	22:X:270:LEU:HB2	2.46	0.51
22:X:451:THR:HA	22:X:496:MET:O	2.10	0.51
22:X:483:PHE:HE1	22:X:917:GLN:HB2	1.76	0.51
34:1:972:GLY:O	34:1:976:VAL:HG12	2.10	0.51
34:1:1251:LEU:CG	36:2:497:SER:HB2	2.41	0.51
35:3:317:THR:HB	35:3:322:VAL:HA	1.92	0.51
35:3:819:MET:HA	35:3:822:GLU:OE1	2.10	0.51
35:3:940:LEU:HB3	35:3:941:HIS:ND1	2.26	0.51
35:3:1011:TRP:HB2	35:3:1025:ALA:O	2.11	0.51
1:A:767:VAL:HG21	2:B:39:C:O2'	2.11	0.50
4:E:60:MET:CB	4:E:353:MET:HB3	2.41	0.50
5:F:30:A:H61	6:G:16:G:H1'	1.76	0.50
5:F:45:A:C6	6:G:3:A:C5	2.99	0.50
10:L:192:ARG:NH1	10:L:198:ILE:HB	2.26	0.50
11:M:159:GLU:OE2	11:M:167:LEU:HB3	2.12	0.50
22:X:721:GLN:O	22:X:725:ARG:N	2.43	0.50
22:X:880:VAL:O	22:X:884:VAL:HG23	2.11	0.50
34:1:594:ARG:CA	34:1:634:VAL:HG11	2.30	0.50
34:1:594:ARG:C	34:1:634:VAL:HG13	2.32	0.50
34:1:702:ARG:CD	34:1:738:HIS:NE2	2.74	0.50
34:1:777:PHE:HD1	34:1:818:PHE:CE2	2.29	0.50
34:1:1266:TRP:HD1	39:5:24:ALA:HA	1.76	0.50
35:3:42:ARG:HB2	35:3:53:LEU:HD11	1.93	0.50
35:3:146:ARG:HB3	35:3:150:ALA:HA	1.93	0.50
36:2:452:LYS:HE3	36:2:456:ARG:HB2	1.93	0.50
1:A:1845:VAL:O	1:A:1849:ILE:HG12	2.11	0.50
3:C:343:LEU:HA	3:C:368:SER:OG	2.11	0.50
3:C:534:VAL:CG2	3:C:537:TYR:HB2	2.38	0.50
10:L:26:TYR:OH	10:L:158:ARG:NH1	2.36	0.50
12:N:139:CYS:SG	12:N:140:ARG:N	2.84	0.50
20:V:536:ILE:HG21	20:V:579:SER:OG	2.11	0.50
20:V:550:MET:O	20:V:554:LEU:HG	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:X:601:GLN:HA	22:X:604:VAL:HG12	1.93	0.50
22:X:697:GLN:NE2	22:X:751:THR:OG1	2.42	0.50
22:X:810:THR:O	22:X:814:LYS:HG3	2.11	0.50
22:X:944:THR:HG23	22:X:1003:ILE:HD11	1.93	0.50
34:1:598:SER:C	34:1:638:ALA:HA	2.31	0.50
34:1:1125:PRO:HD2	34:1:1165:TYR:CZ	2.39	0.50
34:1:1205:GLU:OE1	35:3:1171:LYS:HD2	2.10	0.50
35:3:379:LEU:HD12	35:3:380:GLU:H	1.76	0.50
7:H:133:U:H2'	7:H:134:C:C6	2.46	0.50
22:X:430:THR:HG22	22:X:434:GLN:HE21	1.77	0.50
23:Y:217:ALA:O	23:Y:220:GLN:HG3	2.12	0.50
34:1:594:ARG:CD	34:1:674:LEU:HD22	2.40	0.50
34:1:872:ILE:HD12	34:1:892:LEU:HD11	1.93	0.50
35:3:706:MET:HG2	35:3:770:LEU:HD12	1.94	0.50
35:3:823:MET:SD	35:3:838:MET:HG3	2.52	0.50
1:A:1785:VAL:HG23	1:A:1786:TYR:CD2	2.47	0.50
7:H:151:C:H2'	7:H:152:G:H8	1.76	0.50
9:J:429:PHE:O	9:J:432:VAL:HG22	2.11	0.50
18:T:309:ASP:OD1	18:T:309:ASP:N	2.43	0.50
22:X:856:ARG:NH2	22:X:865:ASP:OD1	2.44	0.50
34:1:547:GLN:HA	34:1:550:HIS:HB3	1.92	0.50
34:1:597:ILE:O	34:1:638:ALA:HB1	2.12	0.50
34:1:602:LYS:HA	34:1:639:LEU:HD23	1.92	0.50
34:1:618:ASP:HA	34:1:660:ALA:HB2	1.92	0.50
34:1:906:GLU:N	34:1:906:GLU:OE1	2.44	0.50
35:3:2:PHE:C	35:3:3:LEU:HD23	2.32	0.50
35:3:326:ARG:NE	35:3:372:GLU:OE2	2.19	0.50
35:3:1031:ARG:HG2	35:3:1031:ARG:NH1	2.26	0.50
1:A:79:ARG:HB3	1:A:79:ARG:NH1	2.26	0.50
1:A:225:TYR:O	1:A:418:THR:HG21	2.11	0.50
1:A:916:LYS:HD2	1:A:1035:GLN:NE2	2.26	0.50
3:C:300:LEU:HD23	3:C:306:ASN:HB3	1.92	0.50
3:C:406:GLU:OE1	3:C:406:GLU:N	2.39	0.50
3:C:687:MET:HE2	3:C:791:ILE:HG12	1.93	0.50
11:M:218:PHE:CD1	11:M:218:PHE:C	2.85	0.50
18:T:497:GLU:OE1	18:T:497:GLU:N	2.33	0.50
34:1:583:ILE:CB	34:1:626:ASN:OD1	2.60	0.50
34:1:777:PHE:CD2	34:1:814:PHE:HA	2.47	0.50
34:1:1265:TYR:OH	36:2:500:VAL:HG13	2.12	0.50
35:3:238:VAL:HB	35:3:247:GLY:O	2.12	0.50
35:3:463:ARG:HD3	35:3:468:ASP:HB3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:663:LEU:HD23	35:3:679:LEU:HB3	1.92	0.50
35:3:819:MET:HA	35:3:822:GLU:CD	2.31	0.50
1:A:216:SER:O	1:A:216:SER:OG	2.27	0.50
1:A:1712:HIS:ND1	1:A:1734:MET:HG3	2.26	0.50
7:H:152:G:H2'	7:H:153:A:C8	2.47	0.50
9:J:222:ASP:OD1	9:J:226:ARG:NH1	2.44	0.50
18:T:422:ASN:OD1	18:T:474:GLU:HB3	2.11	0.50
22:X:171:ARG:HH22	22:X:509:PRO:HD3	1.77	0.50
22:X:230:SER:O	22:X:234:TYR:HB2	2.11	0.50
23:Y:274:ASP:HB3	23:Y:277:THR:OG1	2.12	0.50
34:1:523:ALA:O	34:1:563:LEU:CD1	2.58	0.50
34:1:1266:TRP:CZ3	39:5:22:GLY:HA3	2.46	0.50
35:3:677:THR:HA	35:3:685:ASP:O	2.12	0.50
35:3:929:LYS:HG3	35:3:931:VAL:HG22	1.93	0.50
1:A:1207:PHE:HB2	1:A:1209:HIS:CD2	2.47	0.50
2:B:107:U:H2'	2:B:108:G:O4'	2.12	0.50
3:C:115:GLU:OE1	3:C:115:GLU:N	2.45	0.50
3:C:710:ASN:OD1	3:C:712:LYS:HB3	2.12	0.50
6:G:94:C:H2'	6:G:95:U:C6	2.47	0.50
8:I:386:ASP:O	8:I:388:PHE:N	2.44	0.50
10:L:63:TRP:HD1	10:L:67:GLU:HB3	1.77	0.50
10:L:632:ALA:O	10:L:636:LEU:N	2.40	0.50
16:R:235:ARG:NE	16:R:235:ARG:H	2.10	0.50
18:T:231:TRP:CZ3	18:T:238:LEU:HB2	2.46	0.50
22:X:834:TYR:CZ	22:X:941:LYS:HB3	2.47	0.50
34:1:581:LEU:O	34:1:584:ASP:HB3	2.12	0.50
34:1:1179:ASP:HB3	36:2:511:LEU:CB	2.35	0.50
34:1:1248:GLN:HE21	36:2:496:ASN:HB2	1.77	0.50
35:3:776:GLN:HG2	35:3:777:VAL:N	2.27	0.50
35:3:945:VAL:HG21	35:3:963:VAL:HG21	1.93	0.50
35:3:1207:LYS:O	35:3:1211:ILE:HG12	2.12	0.50
1:A:550:VAL:O	1:A:554:THR:HG23	2.12	0.50
3:C:300:LEU:HA	3:C:306:ASN:ND2	2.27	0.50
3:C:726:LEU:O	3:C:730:ARG:HG2	2.11	0.50
5:F:35:A:H8	6:G:12:G:O6	1.93	0.50
7:H:165:A:O2'	7:H:166:G:O4'	2.29	0.50
10:L:19:LEU:HD23	10:L:54:LEU:HD22	1.92	0.50
18:T:243:THR:O	18:T:243:THR:OG1	2.23	0.50
20:V:540:GLU:O	20:V:544:LEU:HB2	2.12	0.50
20:V:553:HIS:CD2	20:V:556:TYR:HE1	2.30	0.50
23:Y:37:TYR:O	23:Y:40:CYS:HB2	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:777:PHE:CG	34:1:818:PHE:HE2	2.29	0.50
34:1:1003:VAL:HG22	34:1:1004:ILE:N	2.27	0.50
34:1:1292:LYS:NZ	39:5:78:PRO:CG	2.66	0.50
35:3:642:ILE:H	35:3:703:ARG:NE	2.09	0.50
35:3:644:GLU:HG2	35:3:645:MET:N	2.25	0.50
35:3:1040:ASP:OD2	35:3:1042:ASP:N	2.45	0.50
35:3:1131:PRO:HB3	36:2:709:GLY:HA2	1.93	0.50
35:3:1187:PRO:O	35:3:1191:LYS:HG3	2.12	0.50
3:C:687:MET:HA	3:C:790:LYS:O	2.12	0.50
4:E:248:SER:HB2	4:E:263:ASP:OD2	2.12	0.50
18:T:213:GLU:HG2	18:T:214:PRO:N	2.26	0.50
22:X:612:LEU:HB2	22:X:686:ILE:HD12	1.93	0.50
23:Y:183:ARG:HA	23:Y:183:ARG:NE	2.26	0.50
34:1:1283:HIS:HE1	35:3:1168:PHE:CE1	2.30	0.50
35:3:616:ILE:O	35:3:628:LEU:N	2.45	0.50
38:7:52:GLY:N	38:7:55:GLN:HE21	2.10	0.50
1:A:93:LYS:O	1:A:649:GLU:HG2	2.11	0.49
1:A:1418:ARG:HB2	1:A:1462:GLY:HA3	1.94	0.49
1:A:1866:LYS:HG3	1:A:1886:GLY:HA3	1.94	0.49
4:E:105:LEU:HD21	4:E:136:TRP:CE2	2.47	0.49
4:E:243:LEU:HA	4:E:250:LEU:HA	1.93	0.49
20:V:217:ALA:HB2	20:V:357:LEU:HA	1.94	0.49
22:X:184:ARG:O	22:X:188:ARG:HG3	2.12	0.49
22:X:480:SER:HB3	22:X:500:MET:CE	2.42	0.49
22:X:715:SER:O	22:X:718:SER:OG	2.29	0.49
23:Y:298:PHE:HE2	23:Y:314:ASP:HA	1.76	0.49
23:Y:305:LEU:HD23	23:Y:305:LEU:H	1.77	0.49
35:3:115:ILE:CG2	39:5:19:ILE:HB	2.28	0.49
35:3:185:LEU:HD13	35:3:206:GLN:OE1	2.11	0.49
35:3:234:PHE:C	35:3:235:LEU:HD12	2.33	0.49
35:3:581:LYS:HB2	35:3:625:LEU:HD22	1.94	0.49
2:B:39:C:H4'	2:B:40:U:OP1	2.12	0.49
7:H:54:U:H2'	7:H:55:U:C6	2.47	0.49
8:I:433:ALA:HA	8:I:479:ARG:HA	1.94	0.49
9:J:238:ASN:C	9:J:240:THR:H	2.15	0.49
20:V:503:TYR:CD1	20:V:549:LYS:HD2	2.47	0.49
22:X:471:VAL:HG21	22:X:476:GLU:CD	2.33	0.49
34:1:803:ALA:HB1	34:1:807:LYS:HE3	1.93	0.49
35:3:757:ILE:HG22	35:3:762:LEU:HG	1.94	0.49
38:7:15:ALA:HB2	38:7:84:GLY:HA2	1.94	0.49
3:C:404:THR:O	3:C:408:LEU:HD12	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:536:ARG:O	3:C:536:ARG:HD3	2.12	0.49
3:C:832:TYR:CD2	3:C:899:SER:HB2	2.47	0.49
4:E:66:GLU:N	4:E:87:ASP:OD2	2.45	0.49
5:F:86:U:H5''	11:M:134:GLN:HE22	1.77	0.49
10:L:86:ALA:HB1	10:L:91:ARG:O	2.12	0.49
18:T:201:SER:HB3	18:T:485:THR:HG22	1.94	0.49
18:T:297:HIS:HA	18:T:338:CYS:SG	2.53	0.49
20:V:571:SER:OG	20:V:573:GLU:OE2	2.29	0.49
22:X:856:ARG:HD2	22:X:868:ARG:HH12	1.77	0.49
22:X:1007:TRP:HA	22:X:1010:GLU:HB2	1.94	0.49
34:1:777:PHE:HA	34:1:818:PHE:HE2	1.76	0.49
34:1:1279:ALA:CB	35:3:1167:TYR:CD1	2.92	0.49
1:A:1517:LYS:HG3	6:G:97:A:N7	2.27	0.49
1:A:1661:TRP:NE1	1:A:1697:SER:O	2.41	0.49
1:A:1874:VAL:O	1:A:1877:LEU:HG	2.13	0.49
5:F:49:G:N2	7:H:29:A:N7	2.61	0.49
9:J:320:GLU:OE1	9:J:325:ASN:HB3	2.13	0.49
10:L:162:THR:CG2	16:R:259:GLY:O	2.48	0.49
14:P:186:ARG:HH11	14:P:186:ARG:HB3	1.76	0.49
16:R:263:PRO:HB2	16:R:265:ASP:OD1	2.12	0.49
20:V:391:PHE:O	20:V:395:GLU:CB	2.61	0.49
20:V:596:LEU:N	20:V:597:PRO:HD2	2.27	0.49
22:X:171:ARG:CZ	22:X:509:PRO:HB3	2.43	0.49
22:X:419:ILE:HD11	22:X:560:PHE:HB3	1.95	0.49
23:Y:182:THR:OG1	23:Y:183:ARG:N	2.45	0.49
23:Y:211:ILE:O	23:Y:215:LYS:HG2	2.13	0.49
23:Y:290:LYS:HB3	23:Y:293:ASP:H	1.78	0.49
34:1:1125:PRO:CD	34:1:1165:TYR:CZ	2.95	0.49
1:A:1352:HIS:HD2	19:U:5:ILE:HG21	1.77	0.49
2:B:13:C:H2'	2:B:14:U:C6	2.48	0.49
3:C:132:VAL:HG11	3:C:226:VAL:HG23	1.93	0.49
3:C:474:LEU:HA	3:C:498:SER:O	2.11	0.49
3:C:750:LEU:HD22	19:U:67:GLU:HA	1.95	0.49
3:C:770:PHE:HE1	3:C:789:PHE:CD1	2.30	0.49
4:E:182:ARG:NE	4:E:182:ARG:HA	2.28	0.49
5:F:80:G:H22	9:J:209:PRO:HD3	1.78	0.49
9:J:189:ILE:HG22	9:J:189:ILE:O	2.12	0.49
9:J:330:ARG:CZ	9:J:361:ARG:HH12	2.26	0.49
11:M:155:LYS:HD2	11:M:156:HIS:NE2	2.27	0.49
34:1:663:THR:HA	34:1:666:LYS:CE	2.43	0.49
34:1:663:THR:HA	34:1:666:LYS:HE3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:884:ILE:CB	34:1:888:LEU:HD23	2.33	0.49
34:1:1076:ALA:O	34:1:1080:THR:HG23	2.12	0.49
34:1:1256:HIS:HA	36:2:488:LEU:HD11	1.94	0.49
35:3:469:GLU:HG2	35:3:470:PHE:CD1	2.47	0.49
35:3:757:ILE:HA	35:3:762:LEU:HA	1.94	0.49
35:3:1095:TYR:CE1	35:3:1164:ARG:HD2	2.48	0.49
36:2:462:VAL:O	36:2:466:LYS:HG3	2.12	0.49
38:7:42:LEU:HG	38:7:70:TYR:CE2	2.47	0.49
1:A:162:LYS:HE2	1:A:163:ARG:O	2.13	0.49
1:A:485:THR:HG22	1:A:486:LYS:N	2.27	0.49
3:C:480:LYS:HB2	3:C:493:PHE:HB3	1.93	0.49
3:C:514:TYR:OH	3:C:519:GLU:HG2	2.13	0.49
4:E:75:HIS:HB2	4:E:80:THR:H	1.78	0.49
6:G:109:U:H5''	22:X:454:ARG:HD3	1.93	0.49
9:J:185:ALA:HB2	10:L:141:PRO:O	2.13	0.49
13:O:259:ARG:N	13:O:273:GLN:O	2.39	0.49
16:R:104:GLN:HE21	16:R:225:PRO:HB3	1.77	0.49
18:T:460:ASP:OD2	18:T:460:ASP:N	2.45	0.49
22:X:743:TYR:O	22:X:747:LEU:HB2	2.12	0.49
22:X:828:ILE:O	22:X:831:SER:OG	2.29	0.49
22:X:972:PRO:HA	22:X:977:PHE:CD2	2.47	0.49
23:Y:104:HIS:CE1	23:Y:124:THR:HG1	2.29	0.49
34:1:754:ILE:HD13	34:1:754:ILE:N	2.27	0.49
34:1:862:GLU:HA	34:1:865:ARG:NH1	2.27	0.49
35:3:22:PHE:N	35:3:29:GLU:OE1	2.45	0.49
35:3:43:PRO:HB3	35:3:50:VAL:HG22	1.93	0.49
35:3:259:LYS:HE2	35:3:266:ASP:HB3	1.94	0.49
35:3:968:ARG:HG2	35:3:982:GLU:OE1	2.12	0.49
35:3:1165:SER:HB2	35:3:1169:PRO:HA	1.94	0.49
2:B:14:U:H2'	2:B:15:C:C6	2.46	0.49
3:C:447:PRO:HA	3:C:450:GLU:OE1	2.13	0.49
3:C:767:VAL:O	3:C:771:GLN:HG3	2.12	0.49
10:L:164:GLY:O	10:L:167:ALA:HB3	2.12	0.49
22:X:496:MET:HB2	22:X:500:MET:HB3	1.95	0.49
22:X:855:TYR:CE2	22:X:857:PRO:HG3	2.46	0.49
23:Y:89:LYS:HB3	23:Y:90:LYS:HD3	1.95	0.49
34:1:767:ARG:HA	34:1:805:TYR:OH	2.13	0.49
34:1:862:GLU:OE1	34:1:904:THR:OG1	2.30	0.49
34:1:963:LYS:O	34:1:963:LYS:HD2	2.12	0.49
35:3:18:ILE:HD12	35:3:67:ALA:HB2	1.95	0.49
35:3:168:TYR:OH	39:5:70:GLU:OE2	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:713:LEU:HD13	35:3:714:ALA:N	2.27	0.49
36:2:705:ARG:N	36:2:705:ARG:HD2	2.28	0.49
3:C:114:TYR:N	3:C:115:GLU:OE1	2.46	0.49
3:C:538:HIS:CE1	3:C:551:LEU:HD13	2.47	0.49
5:F:31:U:H3'	5:F:32:U:H6	1.76	0.49
6:G:107:U:OP2	22:X:618:GLN:NE2	2.46	0.49
9:J:286:GLU:HG3	9:J:298:ILE:HD12	1.94	0.49
11:M:142:ILE:HD12	11:M:143:LYS:H	1.78	0.49
14:P:184:VAL:HG21	23:Y:119:LEU:HD22	1.95	0.49
16:R:89:GLN:OE1	16:R:90:VAL:N	2.39	0.49
18:T:396:LYS:HD3	18:T:405:PHE:HE1	1.78	0.49
23:Y:77:PHE:O	23:Y:103:GLN:NE2	2.46	0.49
23:Y:246:LYS:CE	23:Y:312:HIS:HB2	2.38	0.49
34:1:523:ALA:HB1	34:1:563:LEU:CD1	2.43	0.49
34:1:898:TYR:CZ	34:1:902:GLU:HG2	2.47	0.49
34:1:970:LEU:O	34:1:974:LEU:HG	2.13	0.49
34:1:1148:LEU:HD13	34:1:1187:THR:HG22	1.87	0.49
35:3:346:PHE:HA	35:3:360:GLN:HA	1.95	0.49
35:3:603:ARG:HD2	35:3:603:ARG:O	2.13	0.49
1:A:226:GLN:HA	1:A:418:THR:HG22	1.94	0.49
1:A:643:GLY:HA3	2:B:28:A:O2'	2.13	0.49
1:A:1771:LEU:HD21	1:A:1779:PHE:CE2	2.47	0.49
1:A:1862:ILE:HG22	1:A:1885:LYS:HB3	1.95	0.49
4:E:145:LYS:HZ3	4:E:184:LYS:HG3	1.78	0.49
4:E:181:ILE:H	4:E:181:ILE:HD12	1.77	0.49
7:H:16:U:H6	7:H:16:U:OP1	1.96	0.49
10:L:48:ALA:O	10:L:52:GLU:HG2	2.12	0.49
16:R:369:LEU:HG	16:R:376:LYS:HG3	1.94	0.49
34:1:998:LYS:HZ1	34:1:1041:ARG:NH1	2.11	0.49
34:1:1217:PRO:HB2	36:2:510:TYR:CE1	2.43	0.49
35:3:253:GLU:CD	39:5:63:ARG:HH12	2.16	0.49
35:3:804:HIS:NE2	35:3:859:ASN:O	2.46	0.49
1:A:156:ARG:NH2	1:A:157:ASP:OD2	2.46	0.49
1:A:983:LYS:HE3	1:A:983:LYS:HB3	1.52	0.49
3:C:302:PRO:HB2	3:C:320:LEU:HG	1.94	0.49
4:E:75:HIS:CE1	4:E:121:GLY:HA3	2.47	0.49
6:G:11:A:H2'	6:G:12:G:O4'	2.12	0.49
9:J:286:GLU:HG3	9:J:298:ILE:CD1	2.43	0.49
9:J:399:TYR:O	9:J:403:VAL:HG23	2.13	0.49
16:R:123:GLU:HB3	16:R:125:MET:CE	2.43	0.49
18:T:220:VAL:HG13	18:T:252:VAL:HG21	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:T:424:ASP:OD1	18:T:424:ASP:N	2.46	0.49
20:V:473:ALA:O	20:V:477:LEU:HG	2.12	0.49
22:X:447:LYS:HB2	22:X:514:TYR:CD1	2.47	0.49
22:X:533:PHE:CE1	22:X:550:VAL:HG11	2.48	0.49
34:1:517:ARG:HB3	34:1:517:ARG:CZ	2.43	0.49
34:1:582:LEU:HD12	34:1:634:VAL:HG21	1.90	0.49
34:1:600:LEU:O	34:1:604:ALA:HB2	2.13	0.49
34:1:770:MET:HA	34:1:773:LEU:HG	1.95	0.49
35:3:316:GLU:O	35:3:323:THR:OG1	2.29	0.49
35:3:740:GLU:HB2	35:3:758:SER:HA	1.95	0.49
35:3:952:ILE:HG12	35:3:961:ILE:HG12	1.95	0.49
3:C:133:THR:OG1	3:C:222:SER:OG	2.30	0.48
3:C:476:CYS:SG	3:C:496:VAL:HG12	2.53	0.48
3:C:843:VAL:O	3:C:846:VAL:HG13	2.13	0.48
4:E:94:ASN:O	4:E:99:CYS:HA	2.13	0.48
4:E:337:PRO:HG2	4:E:338:ASP:OD2	2.12	0.48
16:R:189:ASN:HA	16:R:195:ARG:HH21	1.78	0.48
21:W:321:GLU:CB	36:2:667:ALA:HB3	2.43	0.48
22:X:281:ARG:HA	22:X:281:ARG:CZ	2.42	0.48
22:X:618:GLN:HG2	22:X:648:TYR:CG	2.48	0.48
22:X:648:TYR:CE2	22:X:651:LEU:HB3	2.48	0.48
23:Y:241:VAL:HG22	23:Y:287:GLU:HA	1.95	0.48
34:1:815:PHE:O	34:1:819:TRP:HB2	2.13	0.48
34:1:824:ALA:HB3	34:1:864:TYR:HD1	1.76	0.48
34:1:1283:HIS:CE1	35:3:1168:PHE:CZ	2.91	0.48
35:3:249:LEU:HA	35:3:257:THR:O	2.12	0.48
35:3:914:ILE:HD12	35:3:919:SER:HB3	1.95	0.48
35:3:1102:LEU:HD12	35:3:1102:LEU:HA	1.66	0.48
39:5:60:SER:O	39:5:63:ARG:N	2.46	0.48
1:A:1301:ILE:HD11	1:A:1306:LYS:HD3	1.96	0.48
3:C:325:LYS:HG2	3:C:329:ASP:OD2	2.14	0.48
3:C:471:ASP:H	3:C:499:GLY:HA2	1.78	0.48
3:C:618:THR:OG1	3:C:630:LEU:CB	2.51	0.48
3:C:724:TRP:HA	3:C:724:TRP:CE3	2.48	0.48
4:E:156:SER:HB2	4:E:199:VAL:HG12	1.95	0.48
5:F:77:C:H2'	5:F:78:A:O4'	2.13	0.48
7:H:56:A:O4'	36:2:504:TRP:CH2	2.65	0.48
7:H:64:A:H2'	7:H:65:U:C6	2.48	0.48
11:M:165:ASN:HB2	16:R:95:LYS:HA	1.95	0.48
16:R:408:ASP:OD1	16:R:409:GLN:N	2.46	0.48
22:X:768:LYS:HE3	22:X:802:LEU:HD21	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:495:ARG:CG	34:1:530:PRO:CB	2.31	0.48
34:1:497:ILE:HG23	34:1:526:PHE:CE1	2.33	0.48
34:1:569:PRO:HD2	34:1:570:TYR:CE2	2.48	0.48
34:1:632:PHE:O	34:1:635:VAL:HG22	2.13	0.48
35:3:70:LEU:HD13	35:3:146:ARG:HG2	1.95	0.48
35:3:503:THR:HG22	35:3:504:PRO:HD2	1.95	0.48
35:3:665:LEU:HD21	35:3:667:ILE:HD11	1.94	0.48
1:A:147:MET:O	1:A:151:MET:HG2	2.13	0.48
1:A:1786:TYR:HD1	1:A:1833:LEU:HB2	1.78	0.48
3:C:363:SER:O	3:C:364:SER:OG	2.28	0.48
3:C:764:ASP:OD2	3:C:764:ASP:N	2.45	0.48
4:E:162:ARG:HE	4:E:162:ARG:HB2	1.52	0.48
4:E:255:MET:HB2	4:E:282:HIS:CB	2.43	0.48
7:H:106:G:N3	7:H:107:A:C6	2.81	0.48
16:R:256:ASN:ND2	16:R:259:GLY:HA2	2.28	0.48
18:T:220:VAL:HG23	18:T:230:ILE:HG12	1.94	0.48
22:X:820:VAL:HG21	22:X:824:LEU:HD22	1.94	0.48
34:1:606:LEU:CD1	34:1:606:LEU:H	2.25	0.48
35:3:75:LYS:HE3	35:3:76:ASP:H	1.79	0.48
35:3:436:ARG:HD3	35:3:776:GLN:OE1	2.14	0.48
1:A:251:ASP:N	1:A:251:ASP:OD2	2.45	0.48
4:E:242:SER:O	4:E:293:TRP:NE1	2.45	0.48
8:I:479:ARG:O	8:I:483:SER:N	2.36	0.48
18:T:355:ARG:HH11	18:T:364:THR:HG21	1.78	0.48
22:X:527:LEU:HG	22:X:754:GLU:OE1	2.13	0.48
34:1:850:ILE:HG22	34:1:888:LEU:CG	2.38	0.48
35:3:388:GLN:NE2	35:3:845:GLU:OE1	2.46	0.48
35:3:484:VAL:O	35:3:485:LEU:HD12	2.13	0.48
1:A:111:GLU:OE2	1:A:114:ARG:NH2	2.41	0.48
1:A:205:ASP:OD2	1:A:205:ASP:N	2.43	0.48
1:A:525:LYS:HB2	1:A:525:LYS:HZ3	1.77	0.48
3:C:589:LYS:HD2	3:C:661:THR:HG22	1.96	0.48
3:C:746:VAL:O	3:C:791:ILE:HG13	2.13	0.48
4:E:105:LEU:HD21	4:E:136:TRP:CZ2	2.49	0.48
7:H:182:U:H2'	7:H:183:G:C8	2.48	0.48
9:J:230:THR:HA	9:J:233:ASP:OD2	2.13	0.48
12:N:21:THR:O	12:N:24:GLU:HG3	2.13	0.48
16:R:124:VAL:O	16:R:124:VAL:HG12	2.13	0.48
19:U:26:VAL:HG22	20:V:517:LEU:HD12	1.95	0.48
34:1:795:CYS:O	34:1:798:THR:HG23	2.14	0.48
34:1:1244:CYS:SG	35:3:1029:TYR:HD1	2.37	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:1299:GLU:O	34:1:1302:TYR:HD2	1.97	0.48
1:A:1792:LYS:HE2	1:A:1798:LEU:HG	1.95	0.48
3:C:230:ASP:OD2	3:C:259:LYS:HD2	2.13	0.48
3:C:719:GLN:NE2	3:C:726:LEU:HA	2.28	0.48
7:H:31:G:H2'	7:H:31:G:N3	2.28	0.48
7:H:139:C:H2'	7:H:140:A:H8	1.78	0.48
16:R:358:ASP:O	16:R:362:GLU:HB2	2.13	0.48
20:V:535:THR:HB	20:V:538:ARG:HG3	1.95	0.48
22:X:818:LEU:HD21	22:X:925:VAL:HG21	1.95	0.48
23:Y:133:MET:HA	23:Y:136:ILE:HB	1.96	0.48
35:3:181:MET:HB2	35:3:211:TYR:O	2.13	0.48
35:3:189:TYR:HB3	39:5:73:LEU:HD12	1.92	0.48
35:3:209:THR:OG1	35:3:210:PHE:N	2.45	0.48
35:3:407:ILE:HD11	35:3:1124:GLY:CA	2.44	0.48
39:5:51:ASN:OD1	39:5:51:ASN:N	2.46	0.48
1:A:105:ASN:O	1:A:489:TRP:NE1	2.46	0.48
1:A:835:ASP:HB3	1:A:878:LEU:HD13	1.95	0.48
1:A:1635:TYR:CE1	1:A:1636:LYS:HB2	2.49	0.48
1:A:1866:LYS:HE2	1:A:1886:GLY:H	1.79	0.48
3:C:820:PHE:HD1	3:C:821:LEU:HD23	1.77	0.48
4:E:328:GLY:O	4:E:346:SER:OG	2.31	0.48
10:L:164:GLY:N	10:L:167:ALA:HB3	2.28	0.48
14:P:186:ARG:HA	23:Y:49:PHE:CE1	2.49	0.48
22:X:461:VAL:O	22:X:465:VAL:HG23	2.14	0.48
22:X:461:VAL:HA	22:X:464:ARG:HE	1.78	0.48
22:X:618:GLN:HG2	22:X:648:TYR:CE2	2.48	0.48
34:1:558:ARG:NH1	35:3:217:LEU:HD21	2.24	0.48
34:1:563:LEU:HB2	34:1:567:VAL:HG13	1.95	0.48
35:3:22:PHE:HA	35:3:76:ASP:HB2	1.95	0.48
35:3:24:GLY:HA2	35:3:74:THR:O	2.14	0.48
35:3:302:LEU:HA	35:3:311:PHE:O	2.14	0.48
35:3:604:PHE:HA	35:3:618:SER:HA	1.96	0.48
1:A:1019:TYR:O	1:A:1020:LYS:C	2.52	0.48
1:A:1210:LYS:HD3	1:A:1210:LYS:N	2.29	0.48
1:A:1303:LEU:HD12	1:A:1311:PHE:HE1	1.78	0.48
1:A:1684:PHE:HD1	1:A:1702:LEU:HG	1.78	0.48
7:H:106:G:H1'	7:H:107:A:N7	2.29	0.48
7:H:107:A:C6	7:H:108:G:C6	3.02	0.48
10:L:19:LEU:HD23	10:L:54:LEU:CD2	2.44	0.48
10:L:201:LYS:HD2	10:L:202:ARG:N	2.28	0.48
13:O:155:PRO:N	16:R:188:PHE:HE1	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:R:235:ARG:HB3	16:R:235:ARG:CZ	2.43	0.48
23:Y:241:VAL:HA	23:Y:286:ILE:O	2.12	0.48
34:1:974:LEU:HG	34:1:974:LEU:H	1.46	0.48
34:1:1179:ASP:N	36:2:511:LEU:CD1	2.76	0.48
35:3:143:ILE:H	35:3:143:ILE:HD12	1.79	0.48
35:3:449:VAL:HG11	35:3:763:ARG:NH1	2.29	0.48
35:3:457:ASN:ND2	35:3:479:VAL:HG12	2.29	0.48
35:3:605:LEU:HD23	35:3:617:ILE:HG22	1.95	0.48
35:3:926:TYR:CZ	35:3:942:LYS:HD2	2.48	0.48
36:2:518:GLU:OE1	36:2:518:GLU:HA	2.14	0.48
37:4:102:ILE:C	37:4:177:ALA:HB2	2.33	0.48
1:A:1776:ILE:HD11	1:A:1778:TRP:NE1	2.29	0.48
1:A:1935:ARG:O	1:A:1939:ILE:HG13	2.14	0.48
5:F:13:G:H8	5:F:13:G:O5'	1.97	0.48
6:G:116:C:OP1	23:Y:309:ARG:HD3	2.14	0.48
10:L:774:VAL:O	10:L:778:GLN:N	2.46	0.48
12:N:132:ILE:O	12:N:140:ARG:HG3	2.13	0.48
20:V:606:GLU:HA	20:V:609:GLN:HG2	1.96	0.48
22:X:224:PRO:O	22:X:228:LYS:HD2	2.14	0.48
22:X:878:HIS:CE1	22:X:1001:LEU:HB2	2.48	0.48
34:1:914:PHE:O	34:1:918:VAL:HG23	2.14	0.48
34:1:1140:GLU:HB2	34:1:1143:VAL:CG1	2.44	0.48
34:1:1193:GLN:HE21	38:7:78:GLN:HE21	1.60	0.48
34:1:1287:ILE:HG23	36:2:490:HIS:CD2	2.49	0.48
35:3:415:LEU:HB2	35:3:424:TYR:CE2	2.49	0.48
35:3:664:TYR:CG	35:3:729:PHE:HZ	2.32	0.48
35:3:674:LEU:C	35:3:675:LEU:HD12	2.34	0.48
1:A:41:GLN:NE2	1:A:45:TYR:HB2	2.28	0.48
1:A:137:GLU:HG2	1:A:419:ARG:HD3	1.96	0.48
1:A:278:LYS:NZ	6:G:-8:C:OP1	2.47	0.48
1:A:384:VAL:HA	3:C:331:PHE:CD2	2.48	0.48
1:A:1664:ILE:HG13	1:A:1664:ILE:O	2.13	0.48
3:C:118:PHE:HA	3:C:121:ASP:OD2	2.14	0.48
3:C:592:VAL:O	3:C:593:GLU:HG2	2.14	0.48
3:C:826:ARG:NH1	3:C:911:PRO:HD2	2.29	0.48
3:C:918:ILE:HG23	3:C:924:GLN:NE2	2.29	0.48
7:H:176:G:H8	7:H:176:G:O5'	1.97	0.48
11:M:200:ARG:HD2	11:M:200:ARG:N	2.28	0.48
22:X:285:ALA:HA	22:X:288:GLU:OE2	2.13	0.48
22:X:503:ARG:O	22:X:506:LEU:HB3	2.14	0.48
22:X:835:SER:OG	22:X:835:SER:O	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:777:PHE:CZ	34:1:814:PHE:HB2	2.39	0.48
34:1:1251:LEU:CD1	36:2:497:SER:CB	2.75	0.48
35:3:839:ALA:O	35:3:843:LEU:HD12	2.14	0.48
37:4:103:PHE:N	37:4:177:ALA:HB2	2.29	0.48
1:A:845:ARG:NH1	1:A:1440:THR:HG22	2.29	0.47
3:C:181:ILE:O	3:C:206:PRO:HG3	2.14	0.47
3:C:192:ASP:CG	3:C:193:THR:N	2.67	0.47
10:L:206:ARG:HD2	10:L:206:ARG:O	2.13	0.47
11:M:222:ALA:HB1	16:R:266:LYS:HE3	1.96	0.47
14:P:186:ARG:NH1	14:P:186:ARG:HB2	2.28	0.47
20:V:471:GLU:OE1	20:V:475:LYS:NZ	2.33	0.47
22:X:166:ARG:HH22	22:X:773:HIS:CD2	2.31	0.47
22:X:234:TYR:CE1	23:Y:317:GLN:HB3	2.48	0.47
22:X:503:ARG:NH2	22:X:817:GLU:O	2.47	0.47
34:1:929:LEU:O	34:1:970:LEU:CD2	2.62	0.47
35:3:286:ILE:HD12	39:5:63:ARG:N	2.29	0.47
35:3:357:TYR:HE1	35:3:400:GLU:HG3	1.77	0.47
35:3:373:PHE:CE1	35:3:385:PHE:HB3	2.48	0.47
35:3:617:ILE:HG12	35:3:627:PRO:HA	1.95	0.47
38:7:47:ASP:HA	38:7:50:ASN:HB3	1.96	0.47
38:7:73:LYS:HA	38:7:76:THR:HG22	1.95	0.47
1:A:1352:HIS:HD1	19:U:21:ARG:HA	1.79	0.47
1:A:1491:LYS:HE3	1:A:1491:LYS:HB2	1.49	0.47
1:A:1838:LYS:HE2	1:A:1868:MET:CE	2.44	0.47
2:B:15:C:H2'	2:B:16:U:C6	2.49	0.47
4:E:308:PHE:CE1	4:E:324:PRO:HB3	2.49	0.47
34:1:570:TYR:HA	34:1:573:LYS:HD3	1.96	0.47
34:1:594:ARG:CD	34:1:674:LEU:HD11	2.27	0.47
34:1:823:MET:O	34:1:829:ASN:HB2	2.14	0.47
35:3:19:HIS:ND1	35:3:19:HIS:O	2.46	0.47
35:3:169:HIS:HD2	35:3:170:VAL:N	2.09	0.47
35:3:563:LEU:O	35:3:580:ARG:HB3	2.14	0.47
35:3:945:VAL:HG23	35:3:968:ARG:HH12	1.80	0.47
1:A:123:THR:O	1:A:123:THR:OG1	2.30	0.47
1:A:1953:ILE:O	1:A:1956:PRO:HD3	2.13	0.47
3:C:116:MET:HA	3:C:119:LEU:HD12	1.95	0.47
7:H:6:U:H2'	7:H:7:U:C6	2.48	0.47
10:L:204:ARG:HE	10:L:207:GLY:HA3	1.78	0.47
11:M:222:ALA:CB	16:R:266:LYS:HE3	2.44	0.47
13:O:233:THR:O	13:O:303:GLY:N	2.41	0.47
14:P:184:VAL:HG13	14:P:184:VAL:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:T:493:ASP:OD1	18:T:493:ASP:N	2.34	0.47
20:V:549:LYS:O	20:V:549:LYS:HD3	2.13	0.47
22:X:698:LYS:HZ1	22:X:758:THR:HA	1.79	0.47
34:1:582:LEU:HA	34:1:590:ARG:HA	1.97	0.47
35:3:592:LEU:HD11	35:3:619:LEU:HD11	1.97	0.47
35:3:642:ILE:H	35:3:703:ARG:HH21	1.61	0.47
1:A:1211:ASP:C	1:A:1213:VAL:H	2.18	0.47
1:A:1391:LEU:O	1:A:1394:GLN:HG3	2.13	0.47
1:A:1630:LEU:HA	1:A:1660:TYR:O	2.14	0.47
3:C:153:THR:O	3:C:155:PRO:HD3	2.14	0.47
3:C:352:LYS:HE2	3:C:352:LYS:H	1.80	0.47
3:C:441:PRO:HA	3:C:444:GLY:HA3	1.96	0.47
3:C:737:PRO:HD3	3:C:743:ASN:HD22	1.80	0.47
4:E:124:LEU:O	4:E:135:VAL:HA	2.14	0.47
6:G:97:A:H8	6:G:97:A:H2'	1.59	0.47
9:J:189:ILE:HD12	10:L:140:ASP:OD2	2.13	0.47
10:L:764:PRO:O	10:L:768:GLU:N	2.41	0.47
20:V:497:CYS:HB3	20:V:507:PHE:CB	2.43	0.47
23:Y:27:ASN:OD1	23:Y:66:ILE:N	2.36	0.47
34:1:529:GLY:HA2	34:1:570:TYR:CZ	2.49	0.47
34:1:666:LYS:HB3	34:1:704:ILE:HD13	1.96	0.47
34:1:1255:PHE:HE1	39:5:26:THR:O	1.97	0.47
35:3:347:LEU:CD2	35:3:359:TYR:HB2	2.44	0.47
35:3:594:ASN:OD1	35:3:594:ASN:N	2.46	0.47
38:7:58:CYS:HB3	38:7:62:GLY:H	1.79	0.47
39:5:13:HIS:ND1	39:5:17:LYS:HE3	2.30	0.47
1:A:171:ASP:O	1:A:520:TYR:HB2	2.14	0.47
1:A:179:ALA:HA	1:A:183:LEU:HB2	1.96	0.47
1:A:1779:PHE:CG	1:A:1862:ILE:HD11	2.50	0.47
4:E:60:MET:HB3	4:E:353:MET:HB3	1.96	0.47
5:F:49:G:H2'	5:F:50:A:C8	2.47	0.47
6:G:106:C:N3	22:X:851:ASN:ND2	2.63	0.47
7:H:171:U:N3	7:H:172:C:C4	2.83	0.47
12:N:44:GLU:HB2	12:N:47:TRP:CE3	2.49	0.47
16:R:235:ARG:H	16:R:235:ARG:HE	1.62	0.47
18:T:213:GLU:HG2	18:T:214:PRO:HD2	1.97	0.47
18:T:295:ASP:OD1	18:T:296:LEU:N	2.40	0.47
20:V:556:TYR:HB2	20:V:594:MET:SD	2.53	0.47
34:1:684:ARG:CZ	34:1:723:SER:HB2	2.44	0.47
34:1:1070:LYS:HE3	34:1:1070:LYS:HB2	1.72	0.47
34:1:1158:ILE:HG22	34:1:1161:MET:SD	2.55	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:168:TYR:OH	35:3:187:MET:SD	2.63	0.47
35:3:442:LEU:HD23	35:3:442:LEU:HA	1.71	0.47
35:3:679:LEU:HD22	35:3:679:LEU:HA	1.78	0.47
35:3:1015:LYS:HZ2	35:3:1016:ARG:N	2.12	0.47
1:A:182:ILE:HD11	1:A:562:VAL:HG13	1.95	0.47
1:A:464:PRO:O	1:A:466:ALA:N	2.47	0.47
1:A:762:ARG:HA	1:A:902:TYR:O	2.15	0.47
1:A:1624:SER:OG	1:A:1625:SER:N	2.47	0.47
3:C:496:VAL:HG23	3:C:546:ALA:HA	1.97	0.47
3:C:667:VAL:HG13	3:C:826:ARG:HG3	1.97	0.47
4:E:150:HIS:HA	4:E:177:LYS:NZ	2.29	0.47
10:L:633:GLN:O	10:L:637:VAL:N	2.46	0.47
20:V:577:SER:O	20:V:581:ILE:HG12	2.14	0.47
22:X:291:LYS:O	22:X:295:THR:HG22	2.15	0.47
22:X:597:VAL:HA	22:X:600:LEU:HD12	1.97	0.47
22:X:618:GLN:HA	22:X:648:TYR:CE1	2.50	0.47
23:Y:44:ASN:OD1	23:Y:52:GLN:HB3	2.13	0.47
23:Y:212:LYS:O	23:Y:216:GLU:HG3	2.15	0.47
34:1:949:GLN:HA	34:1:989:VAL:HG11	1.93	0.47
35:3:169:HIS:CD2	35:3:170:VAL:N	2.82	0.47
35:3:636:GLN:HG2	35:3:637:PRO:HD2	1.96	0.47
35:3:665:LEU:CB	35:3:679:LEU:HD23	2.45	0.47
35:3:700:LYS:HB3	35:3:702:PHE:HZ	1.74	0.47
35:3:1125:GLY:C	35:3:1126:ILE:HG13	2.35	0.47
1:A:608:LEU:HD13	1:A:632:ALA:HB1	1.96	0.47
1:A:697:MET:N	1:A:698:PRO:HD3	2.29	0.47
1:A:833:LYS:O	1:A:833:LYS:HD3	2.14	0.47
1:A:1852:LEU:HD23	1:A:1857:GLN:HA	1.97	0.47
1:A:1919:LEU:N	1:A:1919:LEU:HD23	2.29	0.47
3:C:320:LEU:HD11	3:C:344:TRP:HB2	1.96	0.47
3:C:801:LEU:HD13	3:C:802:HIS:NE2	2.30	0.47
4:E:131:LYS:HA	4:E:152:SER:O	2.15	0.47
4:E:343:ILE:HA	4:E:352:TYR:O	2.14	0.47
6:G:88:G:O2'	6:G:89:U:H5'	2.15	0.47
8:I:564:PHE:O	8:I:568:TYR:N	2.44	0.47
10:L:98:GLU:O	10:L:101:GLU:HG3	2.15	0.47
11:M:165:ASN:ND2	16:R:95:LYS:HE2	2.28	0.47
22:X:702:PRO:HG2	22:X:788:THR:HB	1.96	0.47
22:X:718:SER:OG	22:X:719:ALA:N	2.47	0.47
22:X:811:SER:HA	22:X:814:LYS:HZ2	1.80	0.47
22:X:824:LEU:O	22:X:828:ILE:HG13	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:X:911:ALA:HA	22:X:914:VAL:HG22	1.97	0.47
22:X:970:ILE:HD12	22:X:977:PHE:O	2.14	0.47
23:Y:65:SER:N	23:Y:76:SER:O	2.27	0.47
34:1:908:SER:OG	34:1:912:ASN:OD1	2.28	0.47
34:1:1178:MET:CA	36:2:511:LEU:HD13	2.37	0.47
34:1:1205:GLU:CD	35:3:1171:LYS:HD2	2.35	0.47
34:1:1243:PRO:CG	35:3:1167:TYR:O	2.63	0.47
35:3:569:ASP:O	35:3:572:GLY:N	2.45	0.47
35:3:612:ASN:HA	35:3:636:GLN:HA	1.95	0.47
35:3:1041:TYR:CG	36:2:705:ARG:HG3	2.46	0.47
1:A:376:GLU:H	1:A:376:GLU:HG3	1.50	0.47
1:A:693:ILE:HB	1:A:738:MET:SD	2.55	0.47
1:A:1413:ASP:O	1:A:1414:ARG:HG3	2.14	0.47
1:A:1836:LEU:HA	1:A:1839:TRP:HD1	1.79	0.47
1:A:1901:LYS:NZ	1:A:1967:ILE:HA	2.30	0.47
1:A:1998:ASN:OD1	1:A:2001:SER:N	2.48	0.47
3:C:311:SER:HB2	3:C:316:ILE:HG23	1.96	0.47
3:C:804:GLY:O	3:C:808:ILE:HG12	2.15	0.47
4:E:241:LEU:HA	4:E:251:LEU:O	2.14	0.47
4:E:259:VAL:HG22	4:E:277:PHE:HB2	1.97	0.47
6:G:88:G:N1	7:H:41:U:N3	2.46	0.47
11:M:121:ASP:OD2	11:M:122:LEU:N	2.47	0.47
16:R:434:ASP:OD2	16:R:434:ASP:N	2.48	0.47
22:X:183:GLU:HA	22:X:186:ARG:HD2	1.96	0.47
22:X:842:THR:O	22:X:846:MET:HG2	2.15	0.47
34:1:860:GLU:O	34:1:865:ARG:NH2	2.48	0.47
34:1:929:LEU:N	34:1:930:PRO:HD2	2.30	0.47
34:1:1295:TYR:OH	39:5:29:TRP:HD1	1.98	0.47
34:1:1300:LEU:HD13	35:3:1032:TRP:CZ3	2.43	0.47
35:3:35:GLY:HA3	39:5:47:PHE:HZ	1.79	0.47
35:3:484:VAL:C	35:3:485:LEU:HD12	2.34	0.47
35:3:558:LEU:HG	35:3:559:THR:N	2.30	0.47
35:3:864:SER:O	35:3:865:VAL:HG23	2.15	0.47
35:3:867:ARG:NH1	35:3:879:LEU:HD13	2.30	0.47
38:7:12:ARG:NH1	38:7:84:GLY:O	2.48	0.47
1:A:682:ASP:O	1:A:686:ARG:HG2	2.14	0.47
1:A:1090:ARG:HG2	1:A:1091:TYR:O	2.15	0.47
3:C:200:PHE:HE1	3:C:434:CYS:SG	2.37	0.47
3:C:219:LEU:HD23	3:C:219:LEU:HA	1.68	0.47
3:C:350:ASN:HD22	3:C:353:THR:H	1.63	0.47
4:E:161:ARG:HH12	4:E:203:ASP:HB3	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:J:325:ASN:HB2	11:M:172:HIS:HD2	1.80	0.47
14:P:53:GLU:HB3	14:P:57:ARG:HH12	1.80	0.47
22:X:267:ARG:O	22:X:271:LYS:HD3	2.14	0.47
22:X:606:GLN:HG3	22:X:688:TYR:CE1	2.50	0.47
34:1:568:ARG:HG3	34:1:568:ARG:HH11	1.80	0.47
34:1:770:MET:O	34:1:774:ILE:HG12	2.14	0.47
34:1:826:ASP:OD1	34:1:828:ARG:N	2.42	0.47
35:3:304:GLN:HE21	35:3:308:GLY:HA2	1.80	0.47
35:3:477:SER:HA	35:3:482:THR:HG23	1.95	0.47
36:2:466:LYS:HG2	36:2:475:VAL:HG21	1.97	0.47
1:A:874:PRO:CG	22:X:866:ASN:HD21	2.28	0.47
3:C:239:THR:O	3:C:243:ILE:HG23	2.14	0.47
3:C:284:GLU:O	3:C:288:LEU:HG	2.14	0.47
3:C:702:ASN:HB2	3:C:704:VAL:HG23	1.95	0.47
4:E:345:ALA:HA	4:E:351:LEU:HD23	1.96	0.47
5:F:3:G:H2'	5:F:4:C:C6	2.50	0.47
20:V:479:MET:HE3	20:V:479:MET:HB3	1.84	0.47
22:X:189:ASP:O	22:X:193:THR:HG22	2.15	0.47
22:X:871:PHE:HZ	22:X:901:ASN:HB3	1.80	0.47
34:1:647:PHE:O	34:1:651:VAL:HG13	2.15	0.47
34:1:1178:MET:HG2	36:2:591:TYR:CE1	2.49	0.47
35:3:272:PRO:HD3	35:3:327:LEU:HD13	1.97	0.47
35:3:1181:GLN:O	35:3:1185:MET:HG3	2.14	0.47
35:3:1204:VAL:HG23	35:3:1205:SER:N	2.30	0.47
1:A:1000:ILE:HD12	1:A:1000:ILE:HA	1.59	0.46
1:A:1943:LEU:HD12	1:A:1950:ALA:HB1	1.97	0.46
3:C:668:GLU:HG3	3:C:824:THR:HG21	1.97	0.46
3:C:693:GLU:OE1	3:C:695:GLY:N	2.38	0.46
12:N:1:MET:N	12:N:2:PRO:HD2	2.30	0.46
12:N:117:CYS:SG	12:N:136:HIS:ND1	2.87	0.46
13:O:167:PHE:O	13:O:171:GLY:N	2.48	0.46
18:T:221:THR:OG1	18:T:231:TRP:NE1	2.46	0.46
20:V:562:TRP:CE2	20:V:602:ARG:HD3	2.50	0.46
22:X:591:TYR:HB2	22:X:737:LEU:HD23	1.97	0.46
34:1:554:LYS:HD2	34:1:558:ARG:HE	1.80	0.46
34:1:1216:TRP:HD1	36:2:590:LEU:CD1	2.26	0.46
34:1:1243:PRO:HD2	35:3:1167:TYR:O	2.10	0.46
34:1:1279:ALA:O	34:1:1281:ILE:N	2.48	0.46
35:3:524:ILE:O	35:3:535:GLU:HA	2.15	0.46
35:3:1085:ALA:HB3	35:3:1088:LYS:HE2	1.97	0.46
39:5:69:MET:HE2	39:5:69:MET:HB2	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:30:LEU:HD22	4:E:214:ASP:HA	1.97	0.46
1:A:296:PHE:O	1:A:302:ILE:HD11	2.14	0.46
1:A:362:ARG:HH22	20:V:320:ARG:HA	1.80	0.46
1:A:497:CYS:SG	1:A:558:VAL:HG11	2.55	0.46
2:B:21:A:H2'	2:B:21:A:N3	2.31	0.46
3:C:137:HIS:CG	3:C:138:LEU:H	2.33	0.46
3:C:243:ILE:O	3:C:247:VAL:HG13	2.15	0.46
3:C:514:TYR:CD1	3:C:514:TYR:C	2.89	0.46
3:C:514:TYR:C	3:C:514:TYR:HD1	2.19	0.46
4:E:124:LEU:HD21	4:E:138:SER:HB3	1.97	0.46
4:E:137:ASP:HB2	4:E:140:THR:OG1	2.14	0.46
5:F:29:A:H2'	5:F:30:A:O4'	2.14	0.46
5:F:86:U:H5''	11:M:134:GLN:NE2	2.30	0.46
11:M:125:SER:HA	16:R:242:GLN:OE1	2.14	0.46
18:T:315:TRP:CZ3	18:T:322:SER:HB2	2.51	0.46
18:T:393:ASP:OD2	18:T:393:ASP:N	2.40	0.46
20:V:540:GLU:HG3	20:V:541:THR:N	2.28	0.46
34:1:898:TYR:HA	34:1:901:GLN:OE1	2.15	0.46
34:1:1248:GLN:O	36:2:498:VAL:N	2.47	0.46
35:3:1131:PRO:HG3	36:2:709:GLY:HA2	1.96	0.46
35:3:1158:ARG:HG3	35:3:1159:ASP:H	1.79	0.46
38:7:13:LYS:HD2	38:7:48:GLU:OE2	2.15	0.46
1:A:362:ARG:HD3	1:A:362:ARG:HA	1.69	0.46
1:A:781:ARG:O	1:A:785:LYS:HG3	2.14	0.46
1:A:1019:TYR:CG	1:A:1020:LYS:N	2.83	0.46
3:C:749:THR:O	3:C:753:GLU:HB2	2.16	0.46
3:C:916:ILE:HG21	3:C:928:HIS:HB3	1.97	0.46
7:H:18:U:C5	11:M:218:PHE:CE2	3.02	0.46
7:H:173:C:H2'	7:H:174:A:H8	1.76	0.46
12:N:38:GLU:CD	12:N:38:GLU:H	2.18	0.46
21:W:579:ASP:C	36:2:623:PRO:CB	2.83	0.46
22:X:941:LYS:HE2	22:X:1007:TRP:NE1	2.31	0.46
22:X:998:ARG:O	22:X:999:GLN:HG2	2.16	0.46
23:Y:21:ARG:NH1	23:Y:83:VAL:O	2.48	0.46
34:1:625:ARG:HH21	34:1:662:HIS:HB3	1.79	0.46
34:1:962:MET:CE	34:1:974:LEU:CD1	2.94	0.46
34:1:1178:MET:CG	36:2:591:TYR:CE2	2.96	0.46
35:3:69:ARG:HG3	35:3:75:LYS:O	2.15	0.46
35:3:232:GLY:HA3	35:3:252:SER:HA	1.97	0.46
35:3:334:PRO:HB3	35:3:432:ARG:NH1	2.30	0.46
35:3:511:LEU:HD21	35:3:517:VAL:CG2	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:565:TYR:HE1	35:3:619:LEU:HD12	1.80	0.46
1:A:468:LYS:HA	1:A:468:LYS:HZ2	1.80	0.46
1:A:1091:TYR:O	1:A:1092:ILE:C	2.52	0.46
1:A:1799:THR:O	1:A:1801:LYS:NZ	2.42	0.46
3:C:622:GLU:O	3:C:625:GLY:N	2.41	0.46
5:F:41:A:H2	6:G:6:A:N1	2.13	0.46
12:N:25:LEU:HD23	12:N:25:LEU:HA	1.70	0.46
20:V:594:MET:O	20:V:598:LYS:HE3	2.15	0.46
22:X:172:LEU:HD12	22:X:173:GLN:N	2.31	0.46
34:1:871:THR:O	34:1:875:ILE:HG13	2.15	0.46
34:1:1167:TYR:CE2	36:2:581:LYS:CA	2.82	0.46
34:1:1233:ALA:O	34:1:1237:LEU:HB2	2.15	0.46
35:3:226:GLU:HB3	35:3:261:PHE:CE2	2.51	0.46
35:3:601:ARG:HD3	35:3:620:ASP:HB3	1.98	0.46
35:3:1210:ASP:HA	35:3:1213:THR:OG1	2.15	0.46
36:2:450:SER:HB2	36:2:453:LYS:HD3	1.98	0.46
1:A:81:PHE:C	1:A:83:HIS:H	2.19	0.46
1:A:371:LEU:HD22	1:A:371:LEU:HA	1.74	0.46
3:C:281:ILE:O	3:C:285:VAL:HG12	2.15	0.46
9:J:191:ALA:O	9:J:194:LEU:N	2.49	0.46
9:J:199:LYS:O	9:J:199:LYS:NZ	2.46	0.46
9:J:297:ASN:OD1	10:L:225:TYR:HB2	2.15	0.46
9:J:325:ASN:HB2	11:M:172:HIS:CD2	2.51	0.46
22:X:249:GLU:CB	22:X:273:LYS:HE2	2.45	0.46
22:X:663:THR:HG23	22:X:669:LYS:HB2	1.98	0.46
22:X:818:LEU:HD12	22:X:825:SER:OG	2.15	0.46
34:1:573:LYS:O	34:1:577:VAL:HG23	2.15	0.46
34:1:778:GLN:HG3	34:1:817:HIS:CB	2.36	0.46
34:1:830:TYR:CG	34:1:867:MET:HG3	2.51	0.46
34:1:864:TYR:O	34:1:868:VAL:HG13	2.15	0.46
34:1:869:MET:O	34:1:873:GLU:HB3	2.15	0.46
34:1:1244:CYS:HB3	35:3:1029:TYR:CD1	2.51	0.46
34:1:1292:LYS:HZ3	39:5:78:PRO:HG2	1.75	0.46
35:3:233:ASN:ND2	35:3:233:ASN:N	2.59	0.46
35:3:1199:ARG:HH21	35:3:1207:LYS:HD3	1.80	0.46
38:7:12:ARG:HD2	38:7:12:ARG:HA	1.67	0.46
1:A:260:LEU:HD23	1:A:260:LEU:HA	1.70	0.46
1:A:1382:SER:HA	1:A:1415:GLY:HA2	1.96	0.46
1:A:1629:ILE:O	1:A:1661:TRP:HA	2.15	0.46
3:C:532:ILE:HB	3:C:539:ILE:HD11	1.97	0.46
3:C:841:ASP:OD1	3:C:842:CYS:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:H:166:G:N3	7:H:166:G:H2'	2.30	0.46
11:M:175:SER:N	11:M:178:GLU:OE2	2.49	0.46
14:P:186:ARG:HH11	14:P:186:ARG:HB2	1.77	0.46
22:X:474:GLY:HA2	22:X:486:CYS:O	2.15	0.46
34:1:848:GLU:O	34:1:852:ARG:HG3	2.15	0.46
35:3:114:ARG:CZ	39:5:37:ARG:CB	2.93	0.46
35:3:451:GLU:HG3	35:3:760:ASN:O	2.16	0.46
35:3:592:LEU:HA	35:3:592:LEU:HD13	1.64	0.46
1:A:1275:ARG:O	1:A:1369:TYR:HE1	1.99	0.46
2:B:8:G:N2	2:B:70:A:H1'	2.26	0.46
3:C:283:ASP:OD2	3:C:284:GLU:N	2.48	0.46
4:E:143:ARG:CZ	4:E:146:ARG:HE	2.28	0.46
5:F:23:U:H2'	5:F:24:A:O4'	2.15	0.46
9:J:199:LYS:HA	9:J:199:LYS:CE	2.29	0.46
11:M:214:ARG:HB3	16:R:260:TYR:OH	2.14	0.46
14:P:205:LYS:CB	14:P:208:LYS:HB3	2.46	0.46
16:R:251:ILE:O	16:R:251:ILE:HG12	2.15	0.46
18:T:412:HIS:ND1	18:T:429:SER:OG	2.47	0.46
20:V:609:GLN:HE21	20:V:612:PHE:HD2	1.64	0.46
20:V:618:ARG:HB3	20:V:646:HIS:CE1	2.50	0.46
22:X:257:PHE:CZ	22:X:266:GLU:HG3	2.50	0.46
34:1:884:ILE:CD1	34:1:889:GLU:CB	2.88	0.46
34:1:1135:GLU:HG3	34:1:1135:GLU:O	2.15	0.46
34:1:1277:GLN:NE2	34:1:1277:GLN:O	2.48	0.46
35:3:642:ILE:H	35:3:703:ARG:NH2	2.14	0.46
39:5:8:HIS:HA	39:5:11:LEU:HB2	1.97	0.46
1:A:1638:ASN:O	1:A:1652:MET:HB3	2.15	0.46
1:A:1660:TYR:CE1	1:A:1699:THR:HG22	2.51	0.46
3:C:604:LEU:HD21	3:C:627:HIS:HE1	1.80	0.46
3:C:710:ASN:O	3:C:714:LEU:HD13	2.16	0.46
4:E:62:LEU:HD21	4:E:99:CYS:HB2	1.98	0.46
7:H:56:A:N6	36:2:505:CYS:CB	2.78	0.46
16:R:328:ALA:CB	23:Y:226:MET:HA	2.46	0.46
22:X:953:ARG:HB3	22:X:983:TRP:CZ3	2.51	0.46
34:1:606:LEU:HG	34:1:639:LEU:HD11	1.81	0.46
34:1:702:ARG:HG2	34:1:738:HIS:CD2	2.51	0.46
34:1:1027:ARG:HD3	34:1:1027:ARG:HA	1.82	0.46
35:3:147:ASP:OD2	35:3:151:ARG:HG2	2.16	0.46
35:3:159:GLU:CD	35:3:161:HIS:H	2.19	0.46
35:3:817:GLN:HG3	35:3:818:GLN:OE1	2.15	0.46
35:3:1034:THR:HG22	35:3:1049:LYS:HG3	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:191:ILE:O	1:A:191:ILE:HG22	2.16	0.46
1:A:361:HIS:HD1	1:A:361:HIS:N	2.14	0.46
1:A:1199:LYS:HE2	1:A:1206:GLU:HG3	1.97	0.46
3:C:465:MET:O	3:C:468:CYS:N	2.46	0.46
4:E:147:LEU:HD23	4:E:147:LEU:HA	1.72	0.46
5:F:38:G:OP2	5:F:38:G:H8	1.99	0.46
6:G:9:C:O2'	6:G:10:U:O4'	2.25	0.46
16:R:91:ASP:HA	16:R:97:LYS:NZ	2.31	0.46
22:X:487:THR:HG21	22:X:494:ARG:HD2	1.98	0.46
22:X:520:ASP:HB3	22:X:521:GLU:OE1	2.16	0.46
22:X:640:ARG:HG3	22:X:640:ARG:NH1	2.30	0.46
34:1:516:LEU:HD12	34:1:516:LEU:HA	1.69	0.46
34:1:586:ASP:O	34:1:590:ARG:HG3	2.16	0.46
34:1:907:ASP:OD2	34:1:909:VAL:HB	2.16	0.46
34:1:1000:ILE:O	34:1:1003:VAL:HG13	2.16	0.46
34:1:1015:ASP:OD1	34:1:1015:ASP:N	2.49	0.46
34:1:1135:GLU:O	34:1:1138:VAL:HG12	2.16	0.46
34:1:1195:MET:O	34:1:1199:VAL:HG23	2.16	0.46
34:1:1216:TRP:O	34:1:1219:VAL:HB	2.16	0.46
35:3:184:CYS:SG	35:3:211:TYR:HE1	2.39	0.46
35:3:565:TYR:CE1	35:3:619:LEU:HD12	2.51	0.46
35:3:910:ALA:CB	35:3:913:LEU:HD11	2.45	0.46
36:2:548:THR:C	36:2:550:LYS:N	2.70	0.46
1:A:1868:MET:O	1:A:1871:PRO:HD2	2.15	0.46
1:A:1870:ASP:HA	1:A:1873:GLU:OE1	2.16	0.46
3:C:673:LYS:NZ	19:U:57:ILE:HA	2.31	0.46
3:C:921:LEU:HD23	3:C:921:LEU:HA	1.78	0.46
4:E:117:TYR:CD1	4:E:121:GLY:HA2	2.51	0.46
5:F:31:U:H3'	5:F:32:U:C6	2.51	0.46
6:G:86:A:H2'	6:G:87:U:C6	2.51	0.46
7:H:51:A:H2'	7:H:52:G:O4'	2.15	0.46
9:J:537:TRP:O	9:J:541:ALA:N	2.48	0.46
10:L:94:ALA:O	10:L:98:GLU:HG3	2.16	0.46
11:M:217:LYS:HZ2	11:M:224:ARG:HH12	1.63	0.46
12:N:15:TRP:NE1	12:N:19:GLU:OE1	2.49	0.46
12:N:122:PRO:HB2	12:N:125:LYS:HD3	1.98	0.46
16:R:382:ARG:NH2	16:R:385:ASN:HB2	2.31	0.46
23:Y:73:ASP:OD1	23:Y:73:ASP:N	2.48	0.46
34:1:497:ILE:CG2	34:1:526:PHE:HE1	2.21	0.46
34:1:1178:MET:CG	36:2:514:LYS:NZ	2.79	0.46
34:1:1279:ALA:HB1	35:3:1167:TYR:CA	2.42	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:93:GLN:O	35:3:97:ASN:N	2.49	0.46
35:3:676:ARG:HD2	35:3:729:PHE:CD2	2.51	0.46
35:3:809:GLU:O	35:3:812:LYS:HB2	2.15	0.46
1:A:67:ARG:HE	1:A:67:ARG:HB2	1.47	0.45
1:A:198:GLU:HG2	1:A:199:GLU:H	1.82	0.45
1:A:468:LYS:NZ	1:A:469:LYS:H	2.14	0.45
1:A:1361:GLU:HG3	1:A:1362:ASP:OD2	2.17	0.45
1:A:1391:LEU:O	1:A:1395:GLU:HG2	2.16	0.45
1:A:1552:GLN:OE1	1:A:1563:HIS:NE2	2.48	0.45
1:A:1892:PRO:HG2	1:A:1940:LEU:CB	2.45	0.45
3:C:350:ASN:HD21	3:C:352:LYS:HB2	1.80	0.45
3:C:510:LEU:HB3	3:C:576:ILE:HG22	1.98	0.45
3:C:711:ARG:HB3	3:C:730:ARG:NH2	2.31	0.45
4:E:118:ASN:ND2	4:E:122:SER:H	2.10	0.45
10:L:223:GLY:HA2	16:R:86:LEU:HD21	1.98	0.45
20:V:562:TRP:CD2	20:V:602:ARG:HD3	2.51	0.45
22:X:228:LYS:HA	22:X:231:ARG:HD3	1.99	0.45
22:X:576:ARG:HB3	22:X:577:PHE:CD2	2.51	0.45
22:X:624:ALA:O	22:X:628:LEU:HG	2.16	0.45
22:X:715:SER:HB3	22:X:718:SER:HB3	1.98	0.45
22:X:997:MET:HE2	22:X:997:MET:HB3	1.65	0.45
22:X:1008:LEU:HB3	22:X:1016:TYR:CD2	2.50	0.45
23:Y:198:ASP:CG	23:Y:199:ASP:H	2.19	0.45
34:1:1158:ILE:HD12	34:1:1162:GLY:CA	2.46	0.45
34:1:1167:TYR:CD2	36:2:581:LYS:HA	2.46	0.45
35:3:164:ASN:HA	35:3:189:TYR:OH	2.15	0.45
35:3:485:LEU:HA	35:3:494:VAL:HB	1.99	0.45
35:3:604:PHE:CE1	35:3:681:PRO:HD3	2.51	0.45
1:A:84:ASP:O	1:A:88:TYR:HB2	2.16	0.45
1:A:101:LYS:HD3	1:A:101:LYS:HA	1.76	0.45
1:A:1127:GLY:HA3	1:A:1151:ARG:HH22	1.81	0.45
1:A:1144:LYS:O	1:A:1148:ASN:HB2	2.16	0.45
1:A:1359:HIS:HD2	1:A:1361:GLU:O	1.99	0.45
3:C:351:PRO:O	3:C:354:ARG:HD3	2.16	0.45
5:F:36:A:N1	6:G:10:U:C4	2.84	0.45
6:G:13:C:C2	6:G:14:A:C8	3.04	0.45
7:H:28:C:O2'	7:H:29:A:O4'	2.35	0.45
7:H:158:G:H2'	7:H:159:U:O4'	2.17	0.45
8:I:569:GLY:HA3	8:I:576:ALA:HB2	1.97	0.45
11:M:160:PHE:HB3	11:M:161:PHE:CD1	2.51	0.45
18:T:341:ALA:O	18:T:344:GLN:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:X:790:LEU:O	22:X:794:GLU:HG2	2.16	0.45
35:3:234:PHE:HE1	35:3:236:ILE:HG12	1.81	0.45
35:3:333:VAL:HG21	35:3:349:VAL:HG21	1.97	0.45
35:3:528:ARG:NH1	35:3:572:GLY:O	2.49	0.45
35:3:558:LEU:HD23	35:3:562:GLU:HB3	1.99	0.45
1:A:977:LEU:HG	1:A:978:GLU:N	2.31	0.45
3:C:845:ALA:O	3:C:848:THR:OG1	2.31	0.45
4:E:171:SER:H	4:E:196:VAL:HG13	1.81	0.45
4:E:207:GLN:HB3	4:E:219:VAL:HG12	1.99	0.45
7:H:43:U:HO2'	7:H:44:U:P	2.36	0.45
9:J:199:LYS:CA	9:J:199:LYS:CE	2.85	0.45
16:R:377:ARG:HH21	16:R:377:ARG:HG2	1.81	0.45
20:V:569:LYS:HD2	20:V:614:GLY:HA3	1.98	0.45
34:1:747:LEU:HA	34:1:750:ILE:HG13	1.98	0.45
34:1:856:ASP:HB3	34:1:864:TYR:CE2	2.51	0.45
34:1:1154:LEU:O	34:1:1158:ILE:CG1	2.29	0.45
35:3:249:LEU:HD23	35:3:256:ILE:HD11	1.98	0.45
35:3:353:PHE:CZ	39:5:55:ILE:HG13	2.51	0.45
35:3:717:SER:HB2	35:3:718:ARG:HH12	1.81	0.45
35:3:745:PHE:CG	35:3:755:VAL:HG23	2.51	0.45
35:3:769:LYS:HD3	35:3:769:LYS:H	1.81	0.45
1:A:1275:ARG:C	1:A:1276:GLU:HG3	2.35	0.45
1:A:1670:ASP:N	1:A:1670:ASP:OD1	2.48	0.45
1:A:1785:VAL:HG11	1:A:1807:ILE:HD13	1.99	0.45
1:A:1820:LYS:NZ	1:A:1914:MET:HB2	2.32	0.45
2:B:103:G:C6	2:B:104:C:C4	3.04	0.45
3:C:860:ASP:N	3:C:860:ASP:OD1	2.49	0.45
5:F:33:G:C2	5:F:34:G:C8	3.05	0.45
7:H:150:U:H3	7:H:181:G:H22	1.64	0.45
18:T:203:HIS:CE1	18:T:223:SER:HB3	2.51	0.45
18:T:329:HIS:CE1	18:T:349:SER:HB3	2.51	0.45
22:X:807:GLU:HA	22:X:807:GLU:OE2	2.17	0.45
34:1:850:ILE:CB	34:1:888:LEU:HD21	2.46	0.45
34:1:903:GLN:HG2	34:1:910:MET:HG3	1.98	0.45
34:1:946:LYS:O	34:1:950:GLN:HG3	2.17	0.45
34:1:1193:GLN:HE22	38:7:78:GLN:HE22	1.60	0.45
34:1:1263:ASP:CB	39:5:24:ALA:HB2	2.40	0.45
35:3:515:ALA:HA	35:3:528:ARG:HA	1.97	0.45
35:3:696:SER:O	35:3:696:SER:OG	2.32	0.45
35:3:704:VAL:C	35:3:710:GLU:HG3	2.37	0.45
35:3:725:TYR:O	35:3:728:ARG:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:2:456:ARG:C	36:2:456:ARG:CD	2.85	0.45
36:2:557:VAL:O	36:2:559:PRO:N	2.49	0.45
1:A:542:ASN:O	1:A:546:LEU:HB2	2.17	0.45
1:A:699:GLU:OE1	1:A:699:GLU:HA	2.14	0.45
1:A:845:ARG:HA	1:A:845:ARG:HD2	1.61	0.45
1:A:1526:LEU:HD22	1:A:1527:ASN:H	1.82	0.45
1:A:1854:VAL:HA	1:A:1857:GLN:OE1	2.17	0.45
3:C:662:PHE:CE1	3:C:829:GLU:HB3	2.51	0.45
3:C:755:ASP:O	3:C:758:LEU:N	2.47	0.45
3:C:918:ILE:HG21	3:C:932:GLU:OE2	2.16	0.45
4:E:209:ILE:HG23	4:E:219:VAL:HG22	1.99	0.45
4:E:299:LYS:HE2	4:E:299:LYS:HB2	1.79	0.45
6:G:15:U:C2	6:G:16:G:C8	3.05	0.45
9:J:199:LYS:C	9:J:199:LYS:CD	2.85	0.45
11:M:139:THR:O	11:M:142:ILE:HG22	2.17	0.45
15:Q:263:LEU:O	15:Q:267:ARG:N	2.47	0.45
16:R:309:GLU:OE1	16:R:309:GLU:HA	2.17	0.45
16:R:351:GLU:HG3	22:X:260:VAL:HG21	1.99	0.45
18:T:391:SER:OG	18:T:393:ASP:OD2	2.26	0.45
20:V:476:LEU:HD23	20:V:476:LEU:HA	1.83	0.45
23:Y:117:ASP:N	23:Y:117:ASP:OD1	2.48	0.45
34:1:644:LEU:HB3	34:1:648:LEU:CD1	2.46	0.45
34:1:668:VAL:HG22	34:1:686:LEU:HD23	1.99	0.45
34:1:802:GLU:OE1	34:1:802:GLU:HA	2.16	0.45
34:1:1203:GLY:HA2	35:3:1171:LYS:CD	2.45	0.45
34:1:1226:VAL:O	34:1:1230:VAL:HG23	2.17	0.45
35:3:278:LEU:HD21	35:3:816:LYS:NZ	2.32	0.45
35:3:412:ILE:H	35:3:1105:GLN:NE2	2.09	0.45
1:A:235:MET:HB3	1:A:404:LEU:HD11	1.98	0.45
1:A:292:ASP:CG	1:A:293:TRP:H	2.20	0.45
1:A:727:LYS:HE2	1:A:727:LYS:HB3	1.70	0.45
1:A:832:TYR:HB3	1:A:835:ASP:OD1	2.17	0.45
2:B:97:G:O6	2:B:116:U:O4	2.35	0.45
13:O:249:ARG:O	13:O:253:TYR:N	2.50	0.45
16:R:331:ALA:HA	22:X:275:ARG:HH12	1.81	0.45
16:R:335:ARG:CB	22:X:272:TYR:HB2	2.47	0.45
22:X:774:ASP:CG	22:X:777:HIS:HD1	2.18	0.45
23:Y:186:LEU:HD23	23:Y:186:LEU:HA	1.71	0.45
23:Y:236:LYS:HA	23:Y:236:LYS:HD3	1.69	0.45
34:1:869:MET:HE1	34:1:896:ILE:CA	2.31	0.45
34:1:1041:ARG:HD2	34:1:1041:ARG:HA	1.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:1148:LEU:HD12	34:1:1187:THR:HB	1.80	0.45
35:3:185:LEU:O	35:3:186:GLU:HG3	2.16	0.45
35:3:1211:ILE:HD12	35:3:1214:ARG:HE	1.82	0.45
1:A:188:LEU:HD23	1:A:188:LEU:HA	1.80	0.45
1:A:1458:GLN:NE2	1:A:1463:LYS:HD3	2.32	0.45
1:A:1969:PRO:HB2	1:A:1971:LEU:CD2	2.47	0.45
3:C:137:HIS:HB3	3:C:140:HIS:CE1	2.51	0.45
3:C:188:VAL:HG23	3:C:190:LEU:HD11	1.97	0.45
3:C:685:ILE:HB	3:C:815:VAL:HG21	1.99	0.45
4:E:108:HIS:CE1	4:E:128:SER:HB2	2.52	0.45
5:F:10:U:H2'	5:F:11:C:H4'	1.99	0.45
14:P:51:PRO:HA	14:P:54:VAL:HG22	1.99	0.45
14:P:73:GLU:HG2	14:P:76:ARG:HH21	1.81	0.45
14:P:78:ARG:HD3	14:P:78:ARG:HA	1.72	0.45
18:T:478:LEU:HD23	18:T:488:VAL:HG22	1.98	0.45
22:X:592:LEU:O	22:X:596:VAL:HG23	2.16	0.45
22:X:725:ARG:HD3	22:X:728:ARG:HH12	1.82	0.45
34:1:532:PHE:HD2	34:1:570:TYR:CD2	2.35	0.45
34:1:702:ARG:CG	34:1:738:HIS:NE2	2.80	0.45
34:1:761:TYR:O	34:1:765:TYR:HB2	2.17	0.45
34:1:857:LEU:HA	34:1:865:ARG:HB3	1.98	0.45
34:1:1142:ASN:H	34:1:1142:ASN:HD22	1.64	0.45
34:1:1300:LEU:CB	35:3:1032:TRP:CH2	2.98	0.45
35:3:49:LYS:HD3	35:3:49:LYS:HA	1.59	0.45
35:3:294:LYS:HZ2	35:3:294:LYS:C	2.20	0.45
35:3:528:ARG:HG3	35:3:529:ALA:N	2.32	0.45
35:3:788:PHE:HB2	35:3:799:ILE:HA	1.98	0.45
1:A:1402:ARG:NH2	22:X:641:GLU:OE2	2.47	0.45
1:A:1812:PRO:O	1:A:1920:TYR:OH	2.22	0.45
3:C:678:THR:HB	3:C:680:ASN:O	2.17	0.45
3:C:803:ARG:O	3:C:807:GLN:HG3	2.17	0.45
9:J:357:LYS:N	9:J:357:LYS:HD2	2.31	0.45
10:L:14:THR:HG23	10:L:152:LEU:HD21	1.99	0.45
16:R:147:THR:O	16:R:151:LEU:HB2	2.17	0.45
20:V:490:CYS:HA	20:V:493:ILE:HD12	1.99	0.45
20:V:503:TYR:CE2	20:V:550:MET:HG2	2.52	0.45
20:V:647:LEU:O	20:V:651:PRO:HD3	2.17	0.45
22:X:182:ALA:HB1	22:X:186:ARG:HH21	1.82	0.45
22:X:475:ASN:ND2	22:X:490:ARG:HD3	2.32	0.45
22:X:871:PHE:HB3	22:X:883:ASN:HD22	1.82	0.45
34:1:503:LYS:HE2	34:1:511:MET:CG	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:536:LEU:O	34:1:540:MET:HG2	2.16	0.45
34:1:560:LEU:HD11	34:1:600:LEU:HD12	1.99	0.45
34:1:658:TRP:CZ3	34:1:698:GLN:HG2	2.52	0.45
34:1:1080:THR:HA	34:1:1083:TYR:CD2	2.52	0.45
35:3:125:PRO:HG2	35:3:174:ASP:HA	1.98	0.45
35:3:1159:ASP:OD1	35:3:1160:HIS:N	2.50	0.45
1:A:108:MET:O	1:A:110:TRP:N	2.50	0.45
1:A:1359:HIS:CD2	1:A:1361:GLU:O	2.70	0.45
1:A:1661:TRP:HH2	1:A:1684:PHE:CE1	2.35	0.45
1:A:1977:ILE:HG22	1:A:1978:LYS:HD2	1.98	0.45
3:C:530:LEU:HD23	3:C:530:LEU:HA	1.70	0.45
4:E:263:ASP:O	4:E:272:ARG:HD2	2.16	0.45
7:H:160:A:C2	7:H:171:U:C2	3.05	0.45
22:X:172:LEU:HA	22:X:175:LEU:HD23	1.99	0.45
22:X:502:LEU:O	22:X:505:PHE:HB2	2.17	0.45
22:X:674:THR:HG22	22:X:675:ASN:N	2.32	0.45
22:X:984:LEU:HD21	22:X:1000:VAL:HG21	1.97	0.45
34:1:1217:PRO:HB2	36:2:510:TYR:CE2	2.41	0.45
35:3:14:ILE:HD11	35:3:356:HIS:CD2	2.52	0.45
35:3:52:THR:O	35:3:52:THR:OG1	2.34	0.45
35:3:164:ASN:HD22	35:3:190:GLU:HG2	1.82	0.45
35:3:996:ILE:HG21	35:3:1041:TYR:CD1	2.52	0.45
38:7:23:CYS:N	38:7:58:CYS:SG	2.73	0.45
1:A:64:GLU:OE1	1:A:64:GLU:N	2.35	0.45
1:A:995:ARG:HH11	1:A:998:ARG:HH11	1.64	0.45
1:A:1402:ARG:HH22	22:X:641:GLU:CD	2.20	0.45
1:A:1554:GLN:HG3	1:A:1561:PHE:HE1	1.82	0.45
1:A:1914:MET:HE3	1:A:1916:LEU:HD23	1.98	0.45
2:B:26:A:H2'	2:B:27:U:O4'	2.17	0.45
3:C:177:ARG:C	3:C:179:VAL:H	2.20	0.45
3:C:719:GLN:HG3	3:C:724:TRP:O	2.17	0.45
3:C:774:THR:HG22	3:C:784:ILE:HD11	1.99	0.45
4:E:181:ILE:HD12	4:E:181:ILE:N	2.32	0.45
10:L:162:THR:HG23	11:M:211:ILE:HG21	1.98	0.45
12:N:9:LYS:HE2	12:N:9:LYS:HB3	1.58	0.45
18:T:399:LYS:HB2	18:T:406:ILE:HD11	1.98	0.45
20:V:539:LEU:HB3	20:V:543:LYS:HB2	1.99	0.45
20:V:560:LEU:HA	20:V:560:LEU:HD23	1.80	0.45
22:X:171:ARG:NH1	22:X:509:PRO:HB3	2.32	0.45
34:1:606:LEU:O	34:1:610:ILE:HG13	2.17	0.45
35:3:910:ALA:HB2	35:3:948:VAL:HG23	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:1117:LEU:HD12	35:3:1117:LEU:HA	1.60	0.45
36:2:512:GLN:O	36:2:515:ARG:HB3	2.17	0.45
1:A:367:SER:OG	1:A:368:GLN:N	2.50	0.44
1:A:1189:MET:CG	1:A:1190:CYS:H	2.30	0.44
1:A:1397:ILE:CG1	16:R:405:VAL:HG22	2.47	0.44
7:H:105:G:N2	7:H:107:A:H5'	2.32	0.44
9:J:367:GLU:OE1	9:J:382:TYR:CZ	2.70	0.44
10:L:233:GLN:H	10:L:233:GLN:CD	2.19	0.44
14:P:205:LYS:HG2	14:P:208:LYS:HB3	1.98	0.44
22:X:719:ALA:HB1	22:X:736:ARG:HE	1.82	0.44
34:1:662:HIS:HB2	34:1:701:VAL:HB	1.98	0.44
34:1:685:SER:O	34:1:689:ILE:HG12	2.18	0.44
34:1:834:VAL:HG22	34:1:871:THR:CG2	2.44	0.44
34:1:1248:GLN:HB3	36:2:496:ASN:O	2.17	0.44
35:3:5:ASN:O	35:3:1176:GLY:HA3	2.16	0.44
35:3:259:LYS:HB2	35:3:259:LYS:HE3	1.69	0.44
35:3:292:THR:HG1	35:3:301:PHE:HD1	1.61	0.44
35:3:595:VAL:HG22	35:3:596:PRO:O	2.17	0.44
35:3:611:ASP:O	35:3:612:ASN:HB2	2.17	0.44
35:3:639:SER:OG	35:3:699:VAL:O	2.13	0.44
1:A:1498:TRP:O	1:A:1501:LEU:HG	2.16	0.44
1:A:1813:ARG:HA	1:A:1929:SER:HB2	1.99	0.44
2:B:67:A:H2'	2:B:68:C:O4'	2.18	0.44
3:C:260:ILE:CD1	3:C:309:PHE:HB3	2.47	0.44
4:E:176:VAL:O	4:E:189:THR:HA	2.17	0.44
9:J:187:VAL:CG1	9:J:188:GLN:H	2.22	0.44
11:M:215:ASN:ND2	16:R:261:THR:N	2.49	0.44
13:O:167:PHE:O	13:O:172:GLU:N	2.48	0.44
16:R:386:ARG:NE	16:R:386:ARG:HA	2.29	0.44
16:R:404:GLU:OE1	22:X:327:ARG:NE	2.42	0.44
20:V:551:PHE:HA	20:V:554:LEU:HD12	1.98	0.44
21:W:279:LYS:CB	36:2:622:GLY:C	2.78	0.44
22:X:388:GLN:O	22:X:392:ILE:HG13	2.17	0.44
22:X:698:LYS:HZ2	22:X:758:THR:HA	1.82	0.44
34:1:581:LEU:HD13	34:1:589:ALA:HB1	1.98	0.44
34:1:769:VAL:HG13	34:1:773:LEU:HD21	1.98	0.44
34:1:1158:ILE:HD12	34:1:1162:GLY:HA2	1.99	0.44
34:1:1178:MET:CB	36:2:514:LYS:HZ3	2.26	0.44
35:3:124:ASP:OD2	35:3:128:ARG:HG3	2.17	0.44
35:3:278:LEU:HD21	35:3:816:LYS:HZ3	1.82	0.44
35:3:745:PHE:CB	35:3:755:VAL:HG23	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:993:ILE:HG23	35:3:1002:VAL:HG23	1.99	0.44
1:A:106:MET:HE2	1:A:106:MET:HB2	1.74	0.44
1:A:159:ARG:HA	1:A:159:ARG:CZ	2.48	0.44
1:A:329:LEU:HD23	1:A:329:LEU:H	1.83	0.44
1:A:1164:SER:HB3	3:C:59:LEU:HD21	1.99	0.44
1:A:2007:ILE:HA	1:A:2010:ILE:HG22	1.99	0.44
2:B:97:G:H2'	2:B:97:G:N3	2.31	0.44
2:B:110:C:H2'	2:B:111:A:C8	2.52	0.44
3:C:304:LEU:H	3:C:304:LEU:HD12	1.82	0.44
3:C:585:THR:O	3:C:587:VAL:HG23	2.17	0.44
3:C:687:MET:HB3	3:C:815:VAL:CG1	2.47	0.44
3:C:711:ARG:HA	3:C:714:LEU:HD22	1.99	0.44
5:F:30:A:H2'	5:F:31:U:O4'	2.17	0.44
5:F:58:G:HO2'	5:F:59:G:P	2.38	0.44
5:F:93:G:H2'	5:F:94:C:C6	2.52	0.44
7:H:18:U:O2	16:R:258:LYS:HB2	2.17	0.44
9:J:194:LEU:HA	9:J:194:LEU:HD22	1.76	0.44
18:T:435:THR:HB	18:T:451:HIS:CE1	2.53	0.44
20:V:622:ARG:NH2	20:V:623:ASN:HB3	2.32	0.44
22:X:826:LYS:HZ3	22:X:948:PHE:HE1	1.66	0.44
23:Y:221:ALA:O	23:Y:225:GLU:HG2	2.17	0.44
34:1:645:LEU:HD13	34:1:682:HIS:CD2	2.52	0.44
34:1:1152:SER:OG	34:1:1194:HIS:CE1	2.70	0.44
35:3:27:GLN:OE1	35:3:42:ARG:NH1	2.50	0.44
35:3:243:ASP:OD1	35:3:244:GLY:N	2.50	0.44
35:3:331:ASP:CG	35:3:390:ARG:HH21	2.21	0.44
35:3:633:LEU:HD12	35:3:637:PRO:HG3	1.97	0.44
35:3:1183:ASN:OD1	35:3:1183:ASN:N	2.51	0.44
1:A:251:ASP:HB3	1:A:337:VAL:HG13	1.99	0.44
1:A:644:ILE:HD12	1:A:644:ILE:HA	1.80	0.44
1:A:1606:ILE:HD11	1:A:1631:LEU:HD13	1.98	0.44
7:H:106:G:N3	7:H:107:A:N6	2.65	0.44
11:M:125:SER:HB2	16:R:237:MET:O	2.18	0.44
16:R:411:LEU:HD13	16:R:411:LEU:HA	1.74	0.44
20:V:468:ASP:OD1	20:V:468:ASP:N	2.49	0.44
20:V:503:TYR:HE2	20:V:550:MET:HG2	1.82	0.44
22:X:289:GLN:HA	22:X:292:LEU:HD23	2.00	0.44
23:Y:246:LYS:HE3	23:Y:312:HIS:CB	2.40	0.44
34:1:524:ARG:HA	34:1:566:LEU:HD23	1.99	0.44
34:1:602:LYS:HD2	34:1:638:ALA:O	2.17	0.44
35:3:741:PHE:HB3	35:3:757:ILE:HG13	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:753:GLY:O	35:3:754:ILE:HD13	2.17	0.44
35:3:965:LYS:HB3	35:3:965:LYS:HE2	1.69	0.44
1:A:758:ARG:HD2	1:A:775:ASN:HD21	1.83	0.44
1:A:1817:LEU:O	1:A:1916:LEU:HA	2.17	0.44
3:C:118:PHE:O	3:C:122:LEU:HD12	2.18	0.44
3:C:461:LEU:HD21	3:C:572:GLU:OE2	2.18	0.44
3:C:485:ASP:OD2	3:C:485:ASP:N	2.47	0.44
3:C:642:HIS:O	3:C:646:LYS:HB2	2.18	0.44
5:F:44:G:H8	5:F:44:G:OP2	2.00	0.44
8:I:50:LYS:CB	8:I:51:PRO:HD3	2.47	0.44
10:L:223:GLY:O	10:L:225:TYR:N	2.51	0.44
14:P:218:GLU:HA	14:P:221:LYS:HG3	2.00	0.44
16:R:314:GLN:HA	22:X:290:GLU:OE1	2.17	0.44
16:R:325:ARG:NE	23:Y:222:ILE:HG23	2.26	0.44
20:V:497:CYS:HB3	20:V:507:PHE:HB2	1.99	0.44
20:V:532:GLN:HE22	20:V:539:LEU:HD11	1.82	0.44
22:X:461:VAL:HA	22:X:464:ARG:NE	2.33	0.44
22:X:461:VAL:HG22	22:X:464:ARG:HH21	1.83	0.44
22:X:620:GLU:CD	22:X:620:GLU:H	2.15	0.44
22:X:1017:LYS:HE2	22:X:1017:LYS:HB2	1.76	0.44
23:Y:126:PHE:C	23:Y:126:PHE:CD2	2.91	0.44
34:1:1205:GLU:CD	35:3:1171:LYS:CD	2.86	0.44
35:3:341:VAL:HG12	35:3:347:LEU:HB2	2.00	0.44
35:3:488:GLY:C	35:3:490:THR:H	2.20	0.44
35:3:543:THR:O	35:3:558:LEU:HD12	2.17	0.44
35:3:549:VAL:HG12	35:3:550:ASN:O	2.18	0.44
36:2:487:LEU:HD22	39:5:28:LYS:HB3	1.81	0.44
39:5:33:VAL:CG2	39:5:76:CYS:HB2	2.47	0.44
1:A:564:TYR:HA	1:A:569:VAL:HG23	1.99	0.44
1:A:1043:TYR:O	1:A:1046:LEU:HB3	2.18	0.44
1:A:1427:ARG:HB3	22:X:329:TRP:CE3	2.52	0.44
1:A:1503:TRP:HE3	1:A:1533:ARG:HH11	1.66	0.44
1:A:1963:GLU:O	1:A:1965:HIS:N	2.51	0.44
2:B:109:G:H2'	2:B:110:C:C6	2.52	0.44
3:C:349:PHE:HE1	3:C:354:ARG:HA	1.82	0.44
3:C:514:TYR:HB2	3:C:521:ASP:HB2	1.99	0.44
4:E:181:ILE:HG22	4:E:182:ARG:NH1	2.32	0.44
4:E:287:ASN:OD1	4:E:288:LEU:N	2.51	0.44
5:F:26:U:H3'	5:F:27:A:H5''	2.00	0.44
5:F:79:C:O2'	5:F:80:G:O5'	2.32	0.44
9:J:333:PHE:O	9:J:337:MET:HG2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:M:160:PHE:C	11:M:161:PHE:HD1	2.20	0.44
12:N:120:ARG:HA	12:N:120:ARG:HD2	1.66	0.44
16:R:383:ASN:N	16:R:383:ASN:OD1	2.51	0.44
18:T:191:HIS:CD2	18:T:440:ASP:OD1	2.70	0.44
23:Y:39:TYR:HB3	23:Y:185:GLN:HE22	1.82	0.44
35:3:312:LYS:HB2	35:3:330:PHE:CD1	2.50	0.44
35:3:925:VAL:O	35:3:942:LYS:HA	2.18	0.44
35:3:955:PHE:HZ	35:3:1014:TYR:CD2	2.36	0.44
39:5:44:MET:HE2	39:5:44:MET:HB2	1.87	0.44
1:A:369:GLU:OE1	1:A:370:PRO:HD2	2.18	0.44
1:A:946:GLU:HG2	1:A:954:LYS:NZ	2.33	0.44
1:A:1635:TYR:CE2	1:A:1636:LYS:HB2	2.52	0.44
3:C:789:PHE:CE2	3:C:816:VAL:HG13	2.53	0.44
9:J:428:GLU:O	9:J:432:VAL:HG13	2.18	0.44
9:J:440:LEU:O	9:J:445:LYS:HD2	2.16	0.44
16:R:86:LEU:HD23	16:R:86:LEU:H	1.81	0.44
20:V:554:LEU:HA	20:V:559:SER:OG	2.18	0.44
20:V:617:PRO:HB3	20:V:623:ASN:ND2	2.32	0.44
22:X:659:ILE:O	22:X:669:LYS:NZ	2.50	0.44
34:1:508:THR:HB	34:1:510:PRO:CD	2.46	0.44
34:1:774:ILE:HG23	34:1:813:PRO:CB	2.45	0.44
34:1:1262:ARG:C	39:5:24:ALA:HB2	2.27	0.44
35:3:1:MET:CA	36:2:709:GLY:O	2.66	0.44
35:3:404:LEU:HB3	35:3:407:ILE:HG12	1.99	0.44
35:3:503:THR:OG1	35:3:522:ASP:OD2	2.21	0.44
35:3:728:ARG:HD3	35:3:728:ARG:HA	1.88	0.44
35:3:988:ASN:ND2	35:3:1004:ASP:OD1	2.50	0.44
36:2:707:PRO:HG2	36:2:710:GLU:HG2	2.00	0.44
36:2:711:LEU:HD22	36:2:712:GLU:N	2.32	0.44
38:7:9:ILE:O	38:7:88:ILE:HG22	2.17	0.44
1:A:1284:LEU:HA	1:A:1284:LEU:HD23	1.72	0.44
3:C:470:PRO:HA	3:C:499:GLY:O	2.18	0.44
3:C:587:VAL:HG11	3:C:830:PRO:HG3	1.99	0.44
3:C:902:HIS:ND1	3:C:903:HIS:HD2	2.16	0.44
5:F:32:U:H2'	5:F:33:G:C8	2.53	0.44
6:G:99:C:C4	7:H:33:G:C5	3.06	0.44
6:G:110:U:H4'	22:X:497:THR:HG21	1.99	0.44
7:H:57:A:H5'	36:2:477:MET:CB	2.47	0.44
16:R:63:ALA:H	17:S:131:ARG:CB	2.31	0.44
22:X:824:LEU:HA	22:X:827:MET:HG2	1.99	0.44
23:Y:194:ASP:N	23:Y:194:ASP:OD1	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:770:MET:SD	34:1:810:ILE:CG1	3.06	0.44
34:1:1178:MET:HB3	36:2:514:LYS:CE	2.48	0.44
34:1:1256:HIS:CG	34:1:1257:PRO:CD	2.72	0.44
34:1:1279:ALA:C	35:3:1167:TYR:HD1	2.20	0.44
34:1:1281:ILE:HG21	35:3:1050:PHE:CE1	2.33	0.44
35:3:184:CYS:HG	35:3:211:TYR:HE1	1.66	0.44
35:3:458:ALA:O	35:3:459:VAL:HG23	2.17	0.44
36:2:526:ASP:O	36:2:528:ILE:N	2.50	0.44
39:5:20:GLY:HA2	39:5:34:ASN:ND2	2.33	0.44
1:A:599:MET:O	1:A:603:ARG:HG3	2.17	0.44
1:A:929:GLU:OE1	1:A:933:ARG:NH2	2.51	0.44
1:A:1427:ARG:HE	22:X:326:GLN:CD	2.15	0.44
1:A:1857:GLN:HE21	1:A:1857:GLN:HB2	1.54	0.44
3:C:78:GLU:HG3	3:C:79:THR:N	2.33	0.44
3:C:305:GLY:O	3:C:433:MET:HG3	2.18	0.44
5:F:80:G:C6	9:J:206:LEU:HD12	2.53	0.44
5:F:87:C:OP2	11:M:193:ARG:HA	2.17	0.44
6:G:91:A:H2'	6:G:92:U:H6	1.83	0.44
6:G:111:U:O2	22:X:503:ARG:NH1	2.50	0.44
10:L:163:GLN:HA	10:L:163:GLN:NE2	2.31	0.44
18:T:333:VAL:HA	18:T:349:SER:HB2	1.99	0.44
20:V:570:LEU:HD23	20:V:570:LEU:HA	1.86	0.44
23:Y:28:PHE:O	23:Y:32:CYS:HB2	2.18	0.44
34:1:582:LEU:HD23	34:1:631:ALA:N	2.32	0.44
34:1:1300:LEU:HD13	35:3:1032:TRP:CE2	2.48	0.44
35:3:924:PHE:HA	35:3:943:THR:O	2.18	0.44
1:A:253:ASN:O	3:C:893:GLY:HA3	2.18	0.43
1:A:1527:ASN:O	1:A:1529:ILE:HD12	2.17	0.43
5:F:13:G:H2'	5:F:14:C:C6	2.53	0.43
5:F:36:A:C3'	5:F:37:C:H5''	2.37	0.43
5:F:58:G:O2'	5:F:59:G:H5'	2.17	0.43
7:H:114:A:H2'	7:H:115:G:C8	2.53	0.43
12:N:124:SER:OG	12:N:125:LYS:HD2	2.18	0.43
20:V:515:CYS:HA	20:V:521:TYR:HB2	2.00	0.43
34:1:548:GLU:O	34:1:552:LEU:HG	2.18	0.43
34:1:1149:LYS:O	34:1:1152:SER:HB3	2.17	0.43
34:1:1197:LEU:HD22	38:7:77:ILE:HG22	1.99	0.43
34:1:1287:ILE:HG23	36:2:490:HIS:HD2	1.81	0.43
35:3:206:GLN:HE22	35:3:232:GLY:H	1.66	0.43
35:3:1098:GLY:C	35:3:1099:GLU:HG3	2.37	0.43
36:2:517:ILE:C	36:2:517:ILE:CD1	2.85	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:120:TYR:HE1	1:A:485:THR:OG1	2.01	0.43
1:A:1865:ARG:HD2	1:A:1865:ARG:HA	1.76	0.43
2:B:100:C:H2'	2:B:101:U:C6	2.52	0.43
3:C:267:LEU:HD23	3:C:267:LEU:HA	1.81	0.43
3:C:750:LEU:HD13	19:U:67:GLU:HA	2.00	0.43
7:H:162:U:H4'	7:H:163:G:O4'	2.18	0.43
14:P:188:TRP:O	14:P:188:TRP:CD1	2.71	0.43
16:R:320:HIS:HA	16:R:323:LYS:CE	2.48	0.43
18:T:266:GLU:HG2	18:T:290:ALA:HB1	2.00	0.43
22:X:297:ARG:HE	22:X:297:ARG:HB3	1.60	0.43
22:X:681:LEU:O	22:X:725:ARG:NH2	2.50	0.43
22:X:915:ARG:O	22:X:919:GLU:HG3	2.18	0.43
22:X:1003:ILE:HG13	22:X:1004:GLU:N	2.33	0.43
34:1:739:ARG:CA	34:1:743:LEU:HD21	2.48	0.43
34:1:806:ILE:HA	34:1:810:ILE:HD12	2.00	0.43
34:1:830:TYR:HA	34:1:867:MET:SD	2.57	0.43
34:1:873:GLU:HG3	34:1:916:THR:OG1	2.19	0.43
35:3:112:CYS:SG	39:5:46:HIS:CD2	3.10	0.43
35:3:169:HIS:HD2	35:3:170:VAL:O	2.02	0.43
35:3:424:TYR:HD1	35:3:437:VAL:HG22	1.82	0.43
35:3:526:HIS:HB2	35:3:574:LEU:CD2	2.48	0.43
35:3:604:PHE:CZ	35:3:681:PRO:HD3	2.53	0.43
35:3:833:GLU:C	35:3:836:ALA:H	2.14	0.43
35:3:986:ILE:HG21	35:3:990:ILE:HG12	1.99	0.43
1:A:1401:ARG:HG2	1:A:1401:ARG:HH11	1.82	0.43
1:A:1580:HIS:HB3	1:A:1583:GLN:NE2	2.33	0.43
3:C:436:GLN:HB3	3:C:437:HIS:HD2	1.82	0.43
4:E:283:ASN:O	4:E:286:LYS:HD2	2.19	0.43
4:E:304:SER:O	4:E:330:ILE:HD12	2.17	0.43
4:E:326:HIS:CE1	4:E:346:SER:HB2	2.52	0.43
5:F:34:G:H2'	5:F:35:A:C8	2.54	0.43
7:H:161:U:H2'	7:H:163:G:N2	2.32	0.43
17:S:96:GLY:O	17:S:131:ARG:HA	2.19	0.43
18:T:288:LEU:O	18:T:289:SER:OG	2.34	0.43
20:V:496:CYS:HA	20:V:499:GLN:OE1	2.17	0.43
22:X:192:ARG:HG2	22:X:192:ARG:NH1	2.30	0.43
22:X:871:PHE:HB3	22:X:883:ASN:ND2	2.33	0.43
34:1:551:LEU:O	34:1:555:VAL:HG23	2.18	0.43
34:1:673:ILE:HD13	34:1:673:ILE:HA	1.76	0.43
34:1:748:LYS:HB2	34:1:787:ILE:CB	2.49	0.43
34:1:1153:PHE:C	34:1:1157:TYR:HD2	2.08	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:1217:PRO:O	36:2:503:HIS:HE1	1.98	0.43
35:3:407:ILE:HD11	35:3:1124:GLY:HA2	1.99	0.43
35:3:543:THR:C	35:3:558:LEU:HD12	2.38	0.43
35:3:576:GLU:OE1	35:3:580:ARG:NH2	2.52	0.43
35:3:705:ARG:NH2	35:3:746:ALA:HB2	2.33	0.43
38:7:74:GLU:O	38:7:78:GLN:HG3	2.18	0.43
1:A:1838:LYS:HE2	1:A:1868:MET:HE2	2.00	0.43
3:C:660:VAL:HG22	3:C:878:ILE:HD11	2.01	0.43
3:C:682:LYS:HB3	3:C:797:ALA:CB	2.45	0.43
4:E:301:ALA:HB2	4:E:335:PHE:CZ	2.53	0.43
12:N:7:SER:O	12:N:8:ARG:HB2	2.18	0.43
17:S:103:ALA:HB2	21:W:93:PHE:HA	2.01	0.43
20:V:546:ASN:OD1	20:V:547:VAL:N	2.51	0.43
23:Y:225:GLU:OE1	23:Y:233:ALA:HA	2.18	0.43
34:1:733:LYS:HE3	34:1:733:LYS:HB3	1.80	0.43
35:3:329:TYR:HB3	35:3:370:GLU:CD	2.39	0.43
35:3:595:VAL:HG21	35:3:600:GLN:C	2.39	0.43
35:3:1106:LYS:HG3	36:2:708:TRP:CD1	2.54	0.43
36:2:512:GLN:N	36:2:512:GLN:OE1	2.51	0.43
1:A:41:GLN:NE2	1:A:45:TYR:HD2	2.09	0.43
1:A:59:GLU:CD	12:N:87:ASN:HB2	2.38	0.43
1:A:699:GLU:HB3	16:R:237:MET:HE2	2.00	0.43
1:A:1586:HIS:NE2	1:A:1664:ILE:HG13	2.34	0.43
3:C:173:THR:O	3:C:177:ARG:HB2	2.18	0.43
3:C:279:ARG:HH12	20:V:324:HIS:CB	2.31	0.43
4:E:335:PHE:CE1	4:E:342:ILE:HD12	2.54	0.43
10:L:177:GLU:O	10:L:180:ARG:N	2.51	0.43
16:R:325:ARG:NH1	23:Y:225:GLU:HB2	2.32	0.43
20:V:547:VAL:HA	20:V:550:MET:HG3	2.00	0.43
22:X:399:LEU:HD23	22:X:399:LEU:HA	1.84	0.43
22:X:888:TRP:O	22:X:891:SER:OG	2.24	0.43
23:Y:147:ASP:OD2	23:Y:147:ASP:N	2.51	0.43
34:1:630:ARG:O	34:1:634:VAL:HG23	2.19	0.43
34:1:956:SER:HB3	34:1:996:ALA:HB2	1.99	0.43
34:1:969:LYS:HD2	34:1:969:LYS:H	1.83	0.43
34:1:1154:LEU:HD12	34:1:1158:ILE:HG23	2.01	0.43
34:1:1251:LEU:HD23	34:1:1251:LEU:HA	1.68	0.43
35:3:123:VAL:HG22	35:3:124:ASP:H	1.83	0.43
35:3:234:PHE:CD1	35:3:235:LEU:N	2.86	0.43
35:3:275:ARG:HH21	35:3:275:ARG:CB	2.31	0.43
35:3:554:VAL:HG12	35:3:556:ILE:HG23	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:1116:SER:C	36:2:708:TRP:CH2	2.83	0.43
1:A:191:ILE:HD13	1:A:191:ILE:HG21	1.69	0.43
1:A:1109:LEU:HG	1:A:1152:ALA:HB1	2.00	0.43
1:A:1623:ASN:H	1:A:1623:ASN:ND2	2.17	0.43
1:A:1661:TRP:HH2	1:A:1684:PHE:HE1	1.67	0.43
3:C:154:HIS:C	3:C:156:GLU:H	2.22	0.43
3:C:231:ALA:O	3:C:277:LYS:HE3	2.18	0.43
3:C:392:LEU:HB3	3:C:393:PRO:HD3	2.01	0.43
9:J:202:GLU:HG2	9:J:205:LEU:HD11	2.01	0.43
9:J:400:GLU:O	9:J:404:GLU:HG2	2.19	0.43
16:R:353:ASP:O	16:R:357:HIS:HB2	2.19	0.43
18:T:269:GLN:HE21	18:T:269:GLN:HB3	1.60	0.43
22:X:523:HIS:O	22:X:525:ARG:HG2	2.18	0.43
22:X:654:ASP:OD1	22:X:655:MET:N	2.52	0.43
22:X:743:TYR:HA	22:X:747:LEU:HD23	2.00	0.43
23:Y:183:ARG:HA	23:Y:183:ARG:CZ	2.48	0.43
34:1:592:GLU:O	34:1:596:ILE:HG23	2.18	0.43
34:1:601:ALA:HB1	34:1:639:LEU:HG	2.00	0.43
34:1:1155:PHE:CD1	34:1:1158:ILE:HD11	2.53	0.43
34:1:1179:ASP:N	36:2:511:LEU:HD13	2.34	0.43
35:3:373:PHE:HD1	35:3:385:PHE:CD2	2.36	0.43
35:3:1041:TYR:HD2	36:2:705:ARG:NE	1.98	0.43
35:3:1158:ARG:HG3	35:3:1159:ASP:N	2.34	0.43
36:2:461:THR:OG1	36:2:464:GLU:N	2.26	0.43
36:2:472:PRO:O	36:2:475:VAL:HG23	2.19	0.43
1:A:65:HIS:CD2	12:N:46:LEU:HD13	2.54	0.43
1:A:1213:VAL:HG22	1:A:1229:PHE:CD1	2.53	0.43
1:A:1690:ASP:OD1	1:A:1693:SER:OG	2.29	0.43
1:A:1865:ARG:HA	1:A:1865:ARG:NH2	2.33	0.43
3:C:177:ARG:HG3	3:C:179:VAL:HB	2.01	0.43
3:C:665:THR:HG21	3:C:828:MET:HG3	2.00	0.43
6:G:90:C:H2'	6:G:91:A:C8	2.54	0.43
9:J:240:THR:HG22	9:J:241:VAL:N	2.33	0.43
10:L:92:THR:OG1	10:L:95:GLN:HG3	2.19	0.43
11:M:153:ARG:HB2	11:M:160:PHE:HE2	1.84	0.43
16:R:428:GLU:O	16:R:429:ILE:HD13	2.19	0.43
18:T:213:GLU:HG2	18:T:214:PRO:CD	2.48	0.43
20:V:609:GLN:N	20:V:610:PRO:HD2	2.33	0.43
22:X:268:GLN:HA	22:X:271:LYS:HE2	2.00	0.43
22:X:289:GLN:NE2	22:X:293:GLU:OE2	2.51	0.43
34:1:666:LYS:HB3	34:1:704:ILE:CD1	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:873:GLU:HB2	34:1:913:GLY:HA2	2.00	0.43
34:1:1292:LYS:HZ2	39:5:78:PRO:CG	2.20	0.43
35:3:325:ILE:HB	35:3:375:SER:HB3	1.99	0.43
35:3:565:TYR:HB3	35:3:577:TYR:CB	2.46	0.43
36:2:469:VAL:HG12	36:2:471:ARG:N	2.31	0.43
1:A:64:GLU:H	1:A:64:GLU:CD	2.21	0.43
1:A:388:LEU:HD23	3:C:399:LEU:HD21	2.01	0.43
1:A:1050:LEU:HD23	1:A:1050:LEU:HA	1.83	0.43
1:A:1555:LEU:HD22	1:A:1555:LEU:HA	1.71	0.43
1:A:1799:THR:O	1:A:1801:LYS:HG3	2.19	0.43
1:A:1975:GLU:HG2	1:A:1979:VAL:HG13	2.00	0.43
2:B:109:G:H2'	2:B:110:C:H6	1.83	0.43
3:C:242:LEU:HD23	3:C:242:LEU:HA	1.68	0.43
3:C:300:LEU:HA	3:C:306:ASN:HD22	1.84	0.43
4:E:133:VAL:HG22	4:E:154:VAL:HG21	2.00	0.43
5:F:80:G:N2	9:J:209:PRO:HD3	2.34	0.43
6:G:111:U:OP2	22:X:482:ARG:HB2	2.19	0.43
9:J:206:LEU:HA	9:J:206:LEU:HD23	1.55	0.43
9:J:354:LEU:HA	9:J:354:LEU:HD23	1.81	0.43
9:J:429:PHE:HA	9:J:432:VAL:HG22	1.99	0.43
11:M:224:ARG:HE	11:M:224:ARG:HB2	1.54	0.43
34:1:948:ARG:NH2	34:1:984:GLU:OE2	2.51	0.43
34:1:1270:ASN:OD1	39:5:22:GLY:N	2.49	0.43
35:3:192:ALA:HA	35:3:200:ALA:HB3	2.01	0.43
35:3:514:ASP:OD1	35:3:514:ASP:N	2.52	0.43
35:3:779:PHE:N	35:3:779:PHE:CD1	2.86	0.43
35:3:791:HIS:NE2	35:3:793:GLU:HB2	2.34	0.43
36:2:635:ALA:HB3	37:4:69:TYR:CB	2.49	0.43
1:A:1718:TRP:HZ3	1:A:1726:ILE:HD11	1.84	0.43
3:C:193:THR:HB	3:C:428:THR:CG2	2.49	0.43
4:E:96:TYR:OH	4:E:336:HIS:NE2	2.49	0.43
7:H:56:A:N6	36:2:505:CYS:HB2	2.34	0.43
12:N:7:SER:C	12:N:9:LYS:H	2.22	0.43
18:T:356:LEU:HD13	18:T:366:VAL:HB	2.00	0.43
18:T:394:ASN:OD1	18:T:394:ASN:N	2.51	0.43
20:V:502:THR:HG22	20:V:503:TYR:H	1.84	0.43
21:W:279:LYS:CB	36:2:622:GLY:N	2.73	0.43
22:X:232:ARG:HD2	23:Y:213:ALA:HB1	2.00	0.43
22:X:516:VAL:HG13	22:X:549:LEU:HD13	2.01	0.43
22:X:535:LEU:O	22:X:539:VAL:HG23	2.19	0.43
22:X:868:ARG:NH2	22:X:973:ASN:HD21	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:1106:ARG:H	34:1:1109:ARG:HG3	1.83	0.43
35:3:590:MET:HB2	35:3:606:ALA:O	2.18	0.43
35:3:641:CYS:H	35:3:701:LEU:HD23	1.83	0.43
35:3:1191:LYS:O	35:3:1192:ASN:C	2.57	0.43
39:5:57:GLU:H	39:5:57:GLU:HG2	1.71	0.43
39:5:61:LYS:HB3	39:5:65:ARG:HH22	1.83	0.43
1:A:82:ARG:HE	1:A:82:ARG:HB3	1.70	0.43
1:A:785:LYS:HB3	1:A:785:LYS:HE3	1.67	0.43
1:A:976:MET:HB2	1:A:976:MET:HE2	1.71	0.43
1:A:1581:LEU:HD22	1:A:1746:ARG:HH11	1.84	0.43
1:A:1719:PHE:HB2	1:A:1720:PRO:HD2	2.01	0.43
3:C:624:SER:OG	3:C:941:LYS:HA	2.19	0.43
3:C:658:PRO:HB2	3:C:881:PHE:CZ	2.54	0.43
3:C:673:LYS:HB3	3:C:688:ILE:CG2	2.49	0.43
3:C:938:ARG:O	3:C:942:GLY:N	2.50	0.43
5:F:37:C:H6	5:F:37:C:H2'	1.48	0.43
5:F:97:U:O5'	5:F:97:U:H6	2.01	0.43
6:G:88:G:O2'	6:G:89:U:OP1	2.27	0.43
8:I:177:PRO:HB3	8:I:211:SER:HA	2.01	0.43
9:J:260:ARG:NH1	10:L:215:PRO:HD3	2.33	0.43
10:L:57:SER:O	10:L:57:SER:OG	2.36	0.43
11:M:165:ASN:O	16:R:95:LYS:HA	2.19	0.43
15:Q:514:ILE:N	15:Q:654:ASN:O	2.31	0.43
20:V:545:ARG:HG3	20:V:585:ILE:HD13	2.00	0.43
22:X:396:ARG:NE	22:X:431:GLN:HE22	2.17	0.43
23:Y:183:ARG:HH21	23:Y:187:ASP:CG	2.21	0.43
35:3:249:LEU:HD12	35:3:249:LEU:N	2.33	0.43
35:3:462:VAL:HG11	35:3:516:LEU:HD23	2.00	0.43
35:3:542:LYS:H	35:3:542:LYS:HG3	1.45	0.43
3:C:189:VAL:HA	3:C:198:TYR:O	2.19	0.42
3:C:200:PHE:CE1	3:C:434:CYS:SG	3.12	0.42
3:C:255:VAL:O	3:C:307:VAL:HA	2.19	0.42
3:C:933:PHE:O	3:C:937:THR:HG22	2.18	0.42
4:E:287:ASN:ND2	4:E:331:ASN:OD1	2.52	0.42
4:E:305:ALA:HA	4:E:329:SER:HB2	1.99	0.42
5:F:42:C:H3'	5:F:43:A:C8	2.54	0.42
7:H:63:G:N1	7:H:64:A:N6	2.67	0.42
18:T:253:ILE:O	18:T:261:LEU:HD12	2.19	0.42
18:T:394:ASN:ND2	18:T:408:ASN:HD22	2.17	0.42
18:T:471:ASP:OD2	18:T:472:GLN:N	2.48	0.42
20:V:584:LYS:HE2	20:V:584:LYS:HB2	1.92	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:X:257:PHE:CE2	22:X:262:LEU:HD21	2.54	0.42
22:X:397:ARG:HA	22:X:402:PHE:CD1	2.54	0.42
22:X:419:ILE:HG21	22:X:557:THR:OG1	2.19	0.42
22:X:913:ASP:O	22:X:916:GLU:HG3	2.19	0.42
22:X:991:LEU:HB2	22:X:995:GLU:OE1	2.19	0.42
23:Y:207:GLU:HA	23:Y:210:GLU:HB3	2.01	0.42
34:1:961:VAL:C	34:1:963:LYS:N	2.69	0.42
34:1:1199:VAL:HG12	34:1:1199:VAL:O	2.19	0.42
34:1:1255:PHE:CE2	36:2:487:LEU:HD21	2.54	0.42
35:3:16:PHE:HE2	35:3:63:ARG:C	2.22	0.42
35:3:665:LEU:HB2	35:3:679:LEU:HD23	2.00	0.42
35:3:671:ASN:HB3	35:3:696:SER:HA	2.01	0.42
35:3:822:GLU:H	35:3:822:GLU:HG3	1.64	0.42
35:3:1156:CYS:O	35:3:1158:ARG:N	2.50	0.42
39:5:12:GLU:HA	39:5:15:GLN:HB3	2.01	0.42
1:A:382:GLU:N	1:A:382:GLU:OE1	2.52	0.42
1:A:1169:GLN:O	1:A:1173:SER:OG	2.24	0.42
1:A:1965:HIS:N	1:A:1965:HIS:CD2	2.87	0.42
3:C:505:GLN:HG3	3:C:507:VAL:HG13	2.00	0.42
3:C:506:PRO:HB2	3:C:569:ARG:HH22	1.84	0.42
3:C:665:THR:OG1	3:C:666:VAL:N	2.52	0.42
7:H:152:G:C6	7:H:153:A:N6	2.87	0.42
11:M:186:LEU:HA	11:M:186:LEU:HD22	1.82	0.42
16:R:356:ARG:O	16:R:360:ARG:HB2	2.19	0.42
16:R:367:ARG:HD2	16:R:368:ASN:N	2.35	0.42
16:R:391:VAL:HG13	16:R:396:VAL:HB	2.01	0.42
22:X:431:GLN:HA	22:X:434:GLN:NE2	2.35	0.42
22:X:658:ARG:HE	22:X:658:ARG:HB3	1.73	0.42
34:1:501:LEU:HD23	34:1:501:LEU:HA	1.72	0.42
34:1:1249:TYR:CD2	36:2:587:HIS:CE1	3.06	0.42
34:1:1252:GLN:OE1	36:2:499:PRO:HB3	2.19	0.42
34:1:1273:TYR:O	34:1:1277:GLN:HB3	2.19	0.42
35:3:896:PHE:H	35:3:896:PHE:HD2	1.67	0.42
35:3:1151:GLU:OE2	35:3:1193:VAL:HG21	2.18	0.42
36:2:477:MET:HA	36:2:480:VAL:CG1	2.44	0.42
36:2:598:GLU:HA	36:2:598:GLU:OE2	2.19	0.42
1:A:435:CYS:SG	6:G:-10:G:N1	2.70	0.42
1:A:623:LYS:O	42:A:3000:IHP:O44	2.37	0.42
1:A:800:TYR:HB3	3:C:59:LEU:HD23	2.00	0.42
1:A:1489:LEU:HD12	1:A:1489:LEU:HA	1.77	0.42
1:A:1779:PHE:CD2	1:A:1862:ILE:HD11	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:46:U:C2'	2:B:47:A:H5'	2.49	0.42
3:C:193:THR:HB	3:C:428:THR:HG21	2.01	0.42
5:F:35:A:C5	6:G:11:A:N1	2.87	0.42
5:F:35:A:H2	5:F:36:A:N6	2.16	0.42
5:F:36:A:H5''	5:F:37:C:OP2	2.20	0.42
5:F:92:A:H2'	5:F:93:G:C8	2.54	0.42
7:H:182:U:H2'	7:H:183:G:H8	1.85	0.42
9:J:183:ALA:O	10:L:142:ILE:HG12	2.19	0.42
10:L:201:LYS:HZ2	10:L:203:LYS:HG2	1.84	0.42
16:R:155:VAL:O	16:R:159:VAL:HG12	2.18	0.42
22:X:218:ASP:O	22:X:222:MET:HG2	2.19	0.42
34:1:497:ILE:CG1	34:1:526:PHE:CZ	2.94	0.42
34:1:550:HIS:CD2	34:1:551:LEU:HD22	2.49	0.42
34:1:679:ILE:O	34:1:682:HIS:N	2.46	0.42
34:1:936:VAL:HG12	34:1:937:LEU:HD12	2.01	0.42
34:1:1270:ASN:OD1	39:5:21:THR:CB	2.67	0.42
35:3:356:HIS:CE1	35:3:403:SER:HG	2.34	0.42
35:3:484:VAL:O	35:3:494:VAL:HB	2.19	0.42
35:3:568:MET:H	35:3:568:MET:HG2	1.58	0.42
35:3:1114:SER:HB2	35:3:1215:TYR:HE1	1.83	0.42
38:7:48:GLU:H	38:7:48:GLU:HG3	1.32	0.42
1:A:57:GLN:O	1:A:57:GLN:NE2	2.52	0.42
1:A:299:ILE:HD12	3:C:920:PRO:HB2	2.00	0.42
1:A:364:SER:O	1:A:366:LYS:HD3	2.19	0.42
1:A:758:ARG:NH2	1:A:775:ASN:HD22	2.15	0.42
1:A:1076:ASP:N	1:A:1076:ASP:OD1	2.52	0.42
1:A:1436:TRP:CZ3	1:A:1457:HIS:HB2	2.54	0.42
3:C:80:ILE:HG22	3:C:82:GLN:HG2	2.01	0.42
3:C:668:GLU:O	3:C:824:THR:OG1	2.37	0.42
3:C:763:LYS:O	3:C:767:VAL:HG22	2.20	0.42
5:F:73:A:OP1	5:F:75:G:O2'	2.33	0.42
10:L:131:ASN:O	10:L:135:LYS:NZ	2.53	0.42
12:N:37:HIS:O	12:N:37:HIS:CG	2.72	0.42
12:N:75:TYR:CZ	12:N:79:ILE:HD11	2.54	0.42
14:P:72:ARG:HA	14:P:75:ASN:HD21	1.83	0.42
22:X:277:ARG:O	22:X:281:ARG:HG2	2.20	0.42
22:X:419:ILE:HG21	22:X:569:VAL:HG22	2.02	0.42
22:X:787:GLU:O	22:X:790:LEU:HB3	2.19	0.42
22:X:862:VAL:HG13	22:X:863:HIS:CD2	2.54	0.42
23:Y:267:ARG:HB3	23:Y:287:GLU:HG2	2.02	0.42
34:1:666:LYS:O	34:1:670:GLN:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:823:MET:SD	34:1:829:ASN:ND2	2.92	0.42
34:1:972:GLY:CA	34:1:1010:THR:HG21	2.40	0.42
35:3:114:ARG:CZ	39:5:37:ARG:HD2	2.49	0.42
35:3:199:GLU:OE2	35:3:199:GLU:HA	2.19	0.42
35:3:436:ARG:HG2	35:3:778:ALA:CB	2.49	0.42
35:3:595:VAL:HG21	35:3:601:ARG:N	2.34	0.42
35:3:996:ILE:O	35:3:998:HIS:N	2.53	0.42
35:3:1116:SER:O	36:2:708:TRP:CZ2	2.69	0.42
36:2:458:ASN:ND2	36:2:458:ASN:C	2.72	0.42
36:2:465:LEU:HB3	36:2:475:VAL:HG11	2.01	0.42
1:A:711:GLN:HE22	7:H:18:U:C5'	2.30	0.42
1:A:856:LEU:H	1:A:856:LEU:HG	1.36	0.42
1:A:1802:PRO:HB3	1:A:1827:TRP:CZ3	2.55	0.42
1:A:1826:VAL:HB	1:A:1830:GLN:HE22	1.85	0.42
3:C:603:MET:O	3:C:607:LEU:HD12	2.18	0.42
3:C:762:VAL:HG23	3:C:808:ILE:HD12	2.02	0.42
9:J:256:LYS:HG3	10:L:235:LEU:HD23	2.01	0.42
10:L:168:LYS:O	10:L:172:ARG:HG3	2.20	0.42
10:L:205:LYS:H	10:L:205:LYS:CD	2.33	0.42
23:Y:224:LEU:CD1	23:Y:230:LEU:HD23	2.50	0.42
34:1:747:LEU:HD23	34:1:788:VAL:CB	2.49	0.42
34:1:754:ILE:HD12	34:1:754:ILE:HA	1.81	0.42
34:1:1244:CYS:HB3	35:3:1029:TYR:HE1	1.81	0.42
35:3:131:MET:HB2	35:3:141:VAL:HG22	2.01	0.42
35:3:185:LEU:HD23	35:3:185:LEU:HA	1.69	0.42
35:3:483:LEU:HD11	35:3:493:GLU:OE2	2.19	0.42
35:3:1175:ASP:OD1	35:3:1178:LEU:N	2.52	0.42
36:2:548:THR:O	36:2:551:SER:N	2.48	0.42
1:A:110:TRP:O	1:A:192:GLN:NE2	2.53	0.42
1:A:1503:TRP:HE3	1:A:1533:ARG:NH1	2.18	0.42
1:A:1963:GLU:O	1:A:1966:HIS:N	2.50	0.42
4:E:74:PHE:CZ	4:E:343:ILE:HG13	2.55	0.42
4:E:251:LEU:HB2	4:E:293:TRP:NE1	2.34	0.42
4:E:308:PHE:N	4:E:330:ILE:HD11	2.35	0.42
7:H:56:A:N6	36:2:505:CYS:HB3	2.35	0.42
8:I:213:ALA:HA	8:I:216:SER:O	2.20	0.42
8:I:512:ASP:O	8:I:514:ARG:N	2.52	0.42
9:J:299:TRP:O	9:J:303:ILE:HG23	2.18	0.42
10:L:164:GLY:O	10:L:167:ALA:CB	2.67	0.42
10:L:787:ARG:O	10:L:791:LEU:N	2.48	0.42
20:V:590:LEU:HB3	20:V:599:LEU:HD22	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:X:898:CYS:HB3	22:X:903:VAL:O	2.19	0.42
23:Y:30:LYS:O	23:Y:34:ILE:HG23	2.19	0.42
23:Y:35:LYS:NZ	23:Y:159:THR:O	2.50	0.42
35:3:182:PHE:O	35:3:210:PHE:HA	2.19	0.42
35:3:638:GLU:O	35:3:638:GLU:HG3	2.19	0.42
35:3:855:PRO:O	35:3:856:LYS:HD3	2.20	0.42
35:3:914:ILE:HG22	35:3:917:PRO:HD2	2.02	0.42
35:3:1199:ARG:HH21	35:3:1207:LYS:NZ	2.18	0.42
36:2:471:ARG:HE	36:2:471:ARG:HB3	1.49	0.42
36:2:506:PHE:N	36:2:506:PHE:CD1	2.88	0.42
38:7:30:CYS:SG	38:7:32:ILE:N	2.90	0.42
39:5:11:LEU:O	39:5:14:LEU:HB2	2.19	0.42
1:A:246:LEU:HD23	1:A:246:LEU:HA	1.82	0.42
1:A:1000:ILE:HG22	1:A:1001:VAL:HG13	2.00	0.42
1:A:1633:ALA:HB2	1:A:1637:TRP:CZ3	2.55	0.42
1:A:1640:SER:HB3	1:A:1652:MET:HA	2.01	0.42
3:C:522:SER:O	3:C:522:SER:OG	2.36	0.42
3:C:736:GLY:HA2	3:C:771:GLN:HG2	2.02	0.42
3:C:809:ILE:CG1	3:C:810:PRO:HD3	2.49	0.42
3:C:810:PRO:HA	3:C:813:ARG:HG2	2.01	0.42
9:J:268:ALA:HB1	9:J:278:LEU:HD21	2.01	0.42
16:R:352:ARG:HA	16:R:355:ILE:HD12	2.02	0.42
18:T:309:ASP:O	18:T:310:SER:OG	2.26	0.42
20:V:452:LEU:HD11	20:V:456:ARG:CZ	2.49	0.42
20:V:487:LYS:H	20:V:487:LYS:HD3	1.85	0.42
22:X:814:LYS:NZ	22:X:814:LYS:HB2	2.34	0.42
22:X:1004:GLU:HB2	22:X:1007:TRP:CD2	2.55	0.42
23:Y:31:LEU:HD11	23:Y:66:ILE:N	2.35	0.42
34:1:493:LYS:O	34:1:496:LYS:N	2.52	0.42
34:1:551:LEU:O	34:1:554:LYS:HB3	2.19	0.42
34:1:612:THR:HB	34:1:613:MET:HE2	2.01	0.42
34:1:740:GLY:H	34:1:743:LEU:HD22	1.84	0.42
34:1:816:LYS:HB3	34:1:816:LYS:HE3	1.82	0.42
35:3:58:VAL:HG21	35:3:62:ILE:CD1	2.49	0.42
35:3:288:VAL:HG12	39:5:62:ALA:HB3	2.02	0.42
35:3:408:LEU:HD12	35:3:427:CYS:HA	2.02	0.42
35:3:947:GLU:HG3	35:3:948:VAL:H	1.84	0.42
35:3:969:VAL:HB	35:3:981:CYS:CB	2.45	0.42
1:A:35:ARG:HG2	1:A:35:ARG:HH11	1.84	0.42
1:A:525:LYS:HB2	1:A:525:LYS:NZ	2.34	0.42
1:A:1217:GLN:OE1	1:A:1224:ARG:NE	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1397:ILE:HD13	1:A:1397:ILE:HA	1.72	0.42
3:C:440:SER:O	3:C:442:LYS:N	2.52	0.42
3:C:907:VAL:HA	3:C:908:PRO:HD3	1.83	0.42
4:E:313:ASP:OD1	4:E:316:SER:OG	2.32	0.42
4:E:341:ILE:C	4:E:342:ILE:HD13	2.39	0.42
6:G:100:C:H4'	6:G:101:U:O2	2.19	0.42
9:J:238:ASN:O	9:J:239:ARG:HB3	2.20	0.42
22:X:450:CYS:O	22:X:495:TYR:HA	2.20	0.42
22:X:595:CYS:O	22:X:599:VAL:HG22	2.20	0.42
22:X:887:GLN:O	22:X:890:GLU:HB3	2.19	0.42
23:Y:24:ALA:HA	23:Y:78:PHE:CZ	2.53	0.42
34:1:594:ARG:O	34:1:634:VAL:HG13	2.20	0.42
34:1:632:PHE:HA	34:1:635:VAL:HG22	2.02	0.42
34:1:739:ARG:NH1	34:1:740:GLY:HA2	2.33	0.42
34:1:796:CYS:O	34:1:843:LYS:HG3	2.20	0.42
34:1:815:PHE:HA	34:1:819:TRP:HD1	1.83	0.42
34:1:949:GLN:OE1	34:1:989:VAL:CG2	2.58	0.42
34:1:1179:ASP:H	36:2:511:LEU:CB	2.33	0.42
34:1:1243:PRO:HD3	35:3:1167:TYR:O	2.16	0.42
35:3:541:LYS:HD3	35:3:541:LYS:HA	1.87	0.42
35:3:675:LEU:HB3	35:3:686:LEU:HD12	2.02	0.42
35:3:1083:ASN:O	35:3:1085:ALA:N	2.48	0.42
1:A:1776:ILE:HG23	1:A:1859:LYS:HG3	2.02	0.42
3:C:243:ILE:HG13	3:C:244:LYS:N	2.33	0.42
3:C:381:LEU:CD2	3:C:416:LEU:HD21	2.49	0.42
3:C:602:LYS:HE2	3:C:602:LYS:HB3	1.84	0.42
5:F:45:A:N6	6:G:3:A:C8	2.88	0.42
6:G:88:G:N2	7:H:41:U:O2	2.46	0.42
6:G:105:C:H41	22:X:856:ARG:NH1	2.18	0.42
12:N:2:PRO:O	12:N:4:VAL:N	2.53	0.42
14:P:73:GLU:HG2	14:P:76:ARG:NH2	2.34	0.42
16:R:352:ARG:HG2	16:R:356:ARG:HH21	1.85	0.42
16:R:352:ARG:HG2	16:R:356:ARG:NH2	2.35	0.42
20:V:617:PRO:HB2	20:V:624:THR:OG1	2.19	0.42
22:X:406:GLU:HA	22:X:409:LEU:CD2	2.48	0.42
22:X:480:SER:HB3	22:X:500:MET:HE1	2.02	0.42
22:X:692:PRO:HA	22:X:737:LEU:HB2	2.02	0.42
34:1:664:GLY:O	34:1:668:VAL:HG23	2.20	0.42
34:1:1109:ARG:O	34:1:1112:THR:HG23	2.20	0.42
34:1:1137:ARG:HH12	36:2:522:PHE:H	1.67	0.42
34:1:1227:ILE:O	34:1:1231:MET:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:3:1:MET:HG3	35:3:1092:ILE:HD12	2.02	0.42
35:3:91:GLU:OE1	35:3:102:ILE:HD11	2.20	0.42
35:3:164:ASN:ND2	35:3:190:GLU:HG2	2.35	0.42
35:3:275:ARG:HB3	35:3:386:PHE:HB3	2.02	0.42
35:3:605:LEU:HB3	35:3:619:LEU:HD22	2.02	0.42
1:A:1604:LEU:HB3	1:A:1606:ILE:CD1	2.49	0.42
42:A:3000:IHP:O12	42:A:3000:IHP:P1	2.78	0.42
3:C:299:ILE:HD13	3:C:299:ILE:HA	1.79	0.42
5:F:92:A:H2'	5:F:93:G:H8	1.85	0.42
7:H:36:G:H2'	7:H:37:U:H6	1.84	0.42
7:H:118:G:C6	7:H:140:A:N6	2.87	0.42
9:J:278:LEU:HD12	9:J:278:LEU:HA	1.69	0.42
18:T:423:SER:HB3	18:T:474:GLU:OE1	2.20	0.42
22:X:832:GLU:HG2	22:X:927:VAL:HG22	2.02	0.42
23:Y:41:LEU:HD23	23:Y:155:ARG:HH12	1.85	0.42
34:1:750:ILE:O	34:1:754:ILE:N	2.53	0.42
34:1:892:LEU:HA	34:1:892:LEU:HD22	1.70	0.42
35:3:43:PRO:HA	35:3:50:VAL:HA	2.01	0.42
35:3:128:ARG:HH21	35:3:180:PRO:HG3	1.85	0.42
35:3:228:LEU:HD12	35:3:229:GLU:N	2.28	0.42
35:3:789:VAL:HG13	35:3:891:VAL:HG13	2.01	0.42
1:A:47:GLU:OE1	1:A:47:GLU:N	2.52	0.41
1:A:120:TYR:HE1	1:A:485:THR:HG1	1.68	0.41
1:A:599:MET:HA	1:A:602:ILE:HB	2.01	0.41
1:A:1661:TRP:CD2	1:A:1700:GLY:HA3	2.55	0.41
3:C:420:CYS:O	3:C:424:PHE:HB2	2.20	0.41
3:C:662:PHE:HE1	3:C:829:GLU:HB3	1.84	0.41
3:C:809:ILE:H	3:C:809:ILE:HG12	1.46	0.41
5:F:10:U:H2'	5:F:11:C:C4'	2.50	0.41
8:I:374:ILE:O	8:I:376:ASN:N	2.52	0.41
11:M:160:PHE:O	11:M:162:PRO:HD3	2.19	0.41
12:N:41:ARG:HB3	12:N:44:GLU:HG2	2.02	0.41
13:O:34:ILE:O	16:R:197:ILE:HA	2.20	0.41
16:R:387:ASP:OD1	16:R:388:ILE:N	2.53	0.41
20:V:600:ASN:OD1	20:V:639:LEU:HB2	2.20	0.41
22:X:932:CYS:HB2	22:X:938:ARG:HD2	2.01	0.41
23:Y:204:SER:OG	23:Y:207:GLU:HG2	2.20	0.41
23:Y:317:GLN:NE2	23:Y:317:GLN:HA	2.35	0.41
34:1:777:PHE:CG	34:1:814:PHE:HA	2.55	0.41
34:1:903:GLN:OE1	34:1:910:MET:HB2	2.19	0.41
35:3:274:ARG:NH1	35:3:309:ASP:OD1	2.32	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:2:548:THR:O	36:2:550:LYS:N	2.52	0.41
1:A:79:ARG:HG2	1:A:82:ARG:HG3	2.02	0.41
1:A:119:LEU:HD11	1:A:482:PHE:HB3	2.03	0.41
1:A:265:THR:OG1	1:A:328:HIS:O	2.38	0.41
1:A:451:LEU:HA	1:A:451:LEU:HD23	1.86	0.41
1:A:857:ASN:OD1	1:A:859:SER:N	2.53	0.41
1:A:1122:ASN:OD1	1:A:1122:ASN:N	2.53	0.41
1:A:1310:ARG:NH1	1:A:1566:ILE:HD11	2.35	0.41
1:A:1385:VAL:HG12	1:A:1419:ILE:HD11	2.01	0.41
1:A:1633:ALA:HB3	1:A:1658:GLN:HA	2.02	0.41
42:A:3000:IHP:P3	42:A:3000:IHP:O24	2.79	0.41
2:B:9:G:H2'	2:B:10:U:C6	2.55	0.41
3:C:121:ASP:OD1	3:C:122:LEU:N	2.53	0.41
3:C:801:LEU:HD13	3:C:802:HIS:CE1	2.56	0.41
3:C:940:ARG:H	3:C:940:ARG:HG2	1.71	0.41
4:E:179:TRP:HA	4:E:187:ILE:HG12	2.02	0.41
4:E:321:TYR:HB3	4:E:323:LEU:HG	2.02	0.41
9:J:189:ILE:HG21	10:L:152:LEU:HD22	2.02	0.41
10:L:146:GLU:HA	10:L:149:LEU:HD12	2.02	0.41
11:M:153:ARG:HA	11:M:160:PHE:CE2	2.55	0.41
20:V:603:LEU:HA	20:V:603:LEU:HD12	1.79	0.41
22:X:169:ARG:O	22:X:173:GLN:HG3	2.20	0.41
23:Y:18:THR:HB	23:Y:166:PHE:CE2	2.55	0.41
23:Y:241:VAL:O	23:Y:316:SER:HB3	2.20	0.41
34:1:1257:PRO:HD3	36:2:488:LEU:HD11	2.02	0.41
35:3:311:PHE:HZ	35:3:387:PHE:CE2	2.38	0.41
35:3:791:HIS:CB	35:3:796:ASN:O	2.68	0.41
38:7:58:CYS:N	38:7:63:GLY:O	2.52	0.41
38:7:85:CYS:HA	38:7:86:PRO:HD3	1.89	0.41
1:A:1352:HIS:CD2	19:U:5:ILE:HG12	2.55	0.41
1:A:1684:PHE:HB2	1:A:1702:LEU:HD11	2.03	0.41
1:A:1781:ASP:HB2	1:A:1808:PHE:HB3	2.01	0.41
1:A:1847:ALA:O	1:A:1850:ARG:HB3	2.21	0.41
1:A:1868:MET:C	1:A:1871:PRO:HD2	2.41	0.41
2:B:101:U:H2'	2:B:102:U:H6	1.85	0.41
3:C:174:GLU:OE1	3:C:182:LYS:NZ	2.53	0.41
3:C:529:ARG:HH12	3:C:540:GLU:HG3	1.86	0.41
4:E:313:ASP:HB3	4:E:320:LEU:HD11	2.02	0.41
9:J:400:GLU:OE2	9:J:401:ARG:HG3	2.20	0.41
16:R:377:ARG:HG2	16:R:377:ARG:NH2	2.35	0.41
20:V:612:PHE:O	20:V:616:LEU:HG	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:X:610:ASP:HB2	22:X:686:ILE:HA	2.02	0.41
23:Y:41:LEU:HD23	23:Y:155:ARG:NH1	2.34	0.41
34:1:504:ILE:HG13	34:1:515:ALA:HB3	2.03	0.41
34:1:933:CYS:O	34:1:934:GLY:C	2.58	0.41
34:1:949:GLN:HB2	34:1:989:VAL:HG21	1.93	0.41
34:1:967:GLU:O	34:1:971:MET:N	2.36	0.41
34:1:1216:TRP:CH2	34:1:1268:ILE:HD13	2.56	0.41
35:3:423:LEU:HB2	35:3:438:LEU:HB2	2.02	0.41
35:3:577:TYR:HE2	35:3:579:GLU:HB3	1.85	0.41
35:3:610:VAL:HA	35:3:636:GLN:HE21	1.85	0.41
35:3:615:ARG:C	35:3:616:ILE:HD12	2.41	0.41
35:3:715:MET:HE3	35:3:739:LEU:H	1.85	0.41
35:3:1035:THR:HG21	35:3:1103:SER:HA	2.01	0.41
35:3:1147:HIS:O	35:3:1150:SER:OG	2.33	0.41
1:A:456:LEU:HD22	1:A:460:LYS:NZ	2.35	0.41
1:A:569:VAL:O	1:A:570:ASP:HB2	2.19	0.41
1:A:1019:TYR:O	1:A:1021:ASP:N	2.53	0.41
2:B:93:U:O2'	2:B:94:U:O4'	2.38	0.41
3:C:286:ASN:ND2	3:C:299:ILE:HG23	2.35	0.41
3:C:493:PHE:CD2	3:C:551:LEU:HG	2.50	0.41
3:C:696:LEU:O	3:C:700:ILE:HG12	2.20	0.41
3:C:833:PHE:O	3:C:899:SER:HA	2.20	0.41
4:E:290:ARG:HG3	4:E:331:ASN:O	2.20	0.41
10:L:130:PRO:HB2	10:L:131:ASN:H	1.62	0.41
13:O:165:CYS:O	13:O:169:VAL:N	2.52	0.41
16:R:265:ASP:OD1	16:R:265:ASP:N	2.53	0.41
20:V:469:PHE:CZ	20:V:509:LEU:HD22	2.55	0.41
20:V:630:PHE:HD1	20:V:631:PHE:HD2	1.68	0.41
22:X:832:GLU:CD	22:X:928:GLY:H	2.23	0.41
34:1:646:PRO:O	34:1:649:LYS:HB2	2.20	0.41
34:1:850:ILE:CG2	34:1:888:LEU:CD2	2.92	0.41
35:3:66:MET:HE1	35:3:122:ALA:HA	2.02	0.41
35:3:180:PRO:HD2	35:3:215:LEU:HD11	2.03	0.41
35:3:212:GLU:CB	35:3:223:LYS:HG3	2.49	0.41
35:3:343:LYS:C	35:3:345:GLY:H	2.24	0.41
35:3:528:ARG:HG3	35:3:529:ALA:H	1.83	0.41
35:3:690:ARG:HH12	35:3:696:SER:H	1.67	0.41
35:3:1135:HIS:HA	35:3:1138:HIS:HB3	2.03	0.41
36:2:478:HIS:C	36:2:481:THR:HG22	2.39	0.41
1:A:55:ASP:O	12:N:109:ARG:NH2	2.53	0.41
1:A:300:ASN:OD1	1:A:300:ASN:N	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:796:LYS:HB3	1:A:796:LYS:HE3	1.80	0.41
1:A:1117:HIS:CE1	14:P:199:LYS:HG3	2.56	0.41
1:A:1636:LYS:HE3	1:A:1656:THR:HG23	2.01	0.41
1:A:1638:ASN:HA	1:A:1655:THR:O	2.20	0.41
3:C:480:LYS:C	3:C:481:MET:HG3	2.40	0.41
4:E:81:LEU:O	4:E:92:LEU:HA	2.21	0.41
5:F:23:U:C4	12:N:118:ILE:HD13	2.55	0.41
9:J:323:LEU:HA	9:J:323:LEU:HD23	1.77	0.41
12:N:55:GLN:HE21	12:N:55:GLN:HB2	1.75	0.41
18:T:423:SER:N	18:T:474:GLU:OE2	2.52	0.41
22:X:411:ALA:HA	22:X:414:ASN:ND2	2.36	0.41
22:X:535:LEU:HA	22:X:535:LEU:HD23	1.78	0.41
22:X:969:PHE:CD2	22:X:994:LYS:HG2	2.55	0.41
34:1:641:ILE:H	34:1:641:ILE:HG13	1.56	0.41
34:1:717:THR:CB	34:1:718:PRO:CD	2.94	0.41
34:1:769:VAL:O	34:1:772:ILE:HB	2.21	0.41
34:1:862:GLU:O	34:1:866:LYS:HB2	2.21	0.41
34:1:1292:LYS:CE	39:5:78:PRO:HG2	2.47	0.41
35:3:212:GLU:HG2	35:3:213:LEU:N	2.35	0.41
35:3:724:SER:HB2	35:3:727:SER:HA	2.01	0.41
35:3:1041:TYR:CB	36:2:705:ARG:CG	2.75	0.41
35:3:1096:HIS:ND1	35:3:1166:TYR:HB2	2.36	0.41
38:7:23:CYS:HB3	38:7:58:CYS:HB2	2.03	0.41
1:A:442:LYS:NZ	42:A:3000:IHP:O33	2.53	0.41
3:C:406:GLU:H	3:C:406:GLU:CD	2.21	0.41
3:C:736:GLY:O	3:C:738:ASP:N	2.53	0.41
3:C:828:MET:HG2	3:C:906:ILE:HD13	2.03	0.41
3:C:846:VAL:HB	3:C:887:LEU:HD11	2.02	0.41
20:V:476:LEU:O	20:V:479:MET:HB2	2.21	0.41
22:X:910:ARG:HA	22:X:913:ASP:OD2	2.20	0.41
34:1:686:LEU:HA	34:1:689:ILE:HG12	2.02	0.41
34:1:770:MET:SD	34:1:810:ILE:CD1	3.07	0.41
34:1:1245:ARG:CZ	36:2:587:HIS:HB2	2.50	0.41
34:1:1281:ILE:CG2	35:3:1050:PHE:CZ	2.87	0.41
35:3:941:HIS:CE1	35:3:974:LYS:HA	2.56	0.41
35:3:1015:LYS:NZ	35:3:1016:ARG:H	2.18	0.41
35:3:1200:THR:N	35:3:1203:GLU:OE1	2.38	0.41
1:A:57:GLN:HE21	1:A:57:GLN:C	2.23	0.41
1:A:305:ARG:HG3	3:C:878:ILE:HG21	2.01	0.41
1:A:611:LEU:HD12	1:A:611:LEU:HA	1.90	0.41
1:A:874:PRO:HB2	22:X:866:ASN:ND2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1130:ASN:HD21	1:A:1140:MET:CB	2.33	0.41
1:A:1184:ASN:OD1	1:A:1195:ARG:NH1	2.51	0.41
1:A:1482:GLU:N	1:A:1482:GLU:OE2	2.53	0.41
3:C:353:THR:HG23	3:C:355:LYS:H	1.84	0.41
3:C:759:LEU:HA	3:C:759:LEU:HD12	1.83	0.41
7:H:168:A:H5''	7:H:169:C:C6	2.56	0.41
16:R:159:VAL:O	16:R:162:ALA:N	2.54	0.41
18:T:223:SER:OG	18:T:224:ALA:N	2.52	0.41
20:V:650:THR:HB	20:V:651:PRO:HD3	2.03	0.41
22:X:173:GLN:HA	22:X:176:GLU:OE2	2.21	0.41
22:X:483:PHE:HB2	22:X:484:GLU:OE1	2.20	0.41
22:X:981:PRO:HD2	22:X:984:LEU:HD13	2.02	0.41
23:Y:2:ALA:O	23:Y:162:LEU:HB3	2.20	0.41
34:1:556:ILE:O	34:1:560:LEU:HB2	2.21	0.41
34:1:662:HIS:HE1	34:1:700:LYS:HB3	1.81	0.41
34:1:854:VAL:HG23	34:1:855:ASP:N	2.34	0.41
34:1:933:CYS:SG	34:1:970:LEU:CG	3.08	0.41
35:3:66:MET:HE3	35:3:123:VAL:HG12	2.03	0.41
35:3:224:TYR:HB3	35:3:261:PHE:CD1	2.56	0.41
35:3:499:PHE:CZ	35:3:516:LEU:HD22	2.46	0.41
35:3:1131:PRO:CB	36:2:709:GLY:HA2	2.51	0.41
39:5:74:GLN:NE2	39:5:78:PRO:HA	2.36	0.41
1:A:296:PHE:HZ	3:C:593:GLU:HB2	1.85	0.41
1:A:1402:ARG:HD2	16:R:406:GLN:OE1	2.20	0.41
1:A:1885:LYS:HG2	1:A:1886:GLY:N	2.35	0.41
3:C:177:ARG:HA	3:C:177:ARG:HE	1.86	0.41
3:C:705:VAL:HB	3:C:717:PHE:CZ	2.55	0.41
4:E:168:CYS:SG	4:E:208:ILE:HD11	2.60	0.41
7:H:7:U:H2'	7:H:8:C:H6	1.82	0.41
7:H:36:G:H2'	7:H:37:U:C6	2.55	0.41
7:H:160:A:H2'	7:H:161:U:O4'	2.20	0.41
9:J:201:ARG:HH21	9:J:203:LEU:HD21	1.86	0.41
9:J:294:HIS:CE1	10:L:227:THR:OG1	2.73	0.41
10:L:26:TYR:CE1	10:L:33:ARG:HB3	2.56	0.41
10:L:749:LEU:O	10:L:753:GLU:N	2.48	0.41
14:P:66:ARG:HE	14:P:66:ARG:HB2	1.49	0.41
22:X:246:LEU:HG	22:X:277:ARG:CZ	2.51	0.41
22:X:393:GLN:HA	22:X:396:ARG:HB2	2.02	0.41
22:X:533:PHE:HE1	22:X:550:VAL:HG11	1.86	0.41
22:X:614:PHE:O	22:X:615:LEU:HD12	2.21	0.41
22:X:645:LEU:HB3	22:X:659:ILE:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:X:790:LEU:HD23	22:X:791:LEU:N	2.35	0.41
34:1:510:PRO:HA	34:1:513:LYS:HE2	2.03	0.41
34:1:777:PHE:CD2	34:1:814:PHE:N	2.89	0.41
35:3:164:ASN:N	35:3:164:ASN:OD1	2.53	0.41
35:3:289:CYS:SG	35:3:290:SER:N	2.94	0.41
35:3:968:ARG:HB2	35:3:970:TYR:CE2	2.47	0.41
1:A:62:PRO:HB2	1:A:64:GLU:OE1	2.20	0.41
1:A:131:GLU:HG2	1:A:132:ILE:N	2.35	0.41
1:A:631:ALA:O	1:A:635:ARG:HG3	2.21	0.41
1:A:888:GLN:C	1:A:889:ARG:HG2	2.41	0.41
1:A:962:LEU:HD23	1:A:962:LEU:HA	1.80	0.41
1:A:1012:LYS:O	1:A:1012:LYS:HG3	2.20	0.41
1:A:1194:CYS:HB3	1:A:1228:CYS:SG	2.60	0.41
1:A:1457:HIS:O	1:A:1461:ASP:HB2	2.20	0.41
1:A:1581:LEU:O	1:A:1585:ILE:HG13	2.20	0.41
1:A:1933:PHE:O	1:A:1937:ILE:HG13	2.21	0.41
1:A:2002:LEU:HD22	1:A:2006:GLU:OE1	2.21	0.41
3:C:95:LYS:HA	3:C:96:PRO:HD3	1.90	0.41
3:C:129:ILE:HA	3:C:199:LEU:O	2.21	0.41
3:C:501:ILE:HG22	3:C:530:LEU:HD11	2.01	0.41
3:C:516:LEU:HD23	3:C:516:LEU:H	1.86	0.41
4:E:125:PHE:CD2	4:E:125:PHE:N	2.89	0.41
4:E:197:LEU:HD21	4:E:213:ILE:HD11	2.03	0.41
6:G:99:C:N4	6:G:100:C:H42	2.19	0.41
7:H:15:U:O3'	7:H:16:U:H2'	2.21	0.41
7:H:28:C:O2'	7:H:29:A:C4	2.69	0.41
7:H:38:A:H2'	7:H:39:U:C6	2.56	0.41
7:H:55:U:H2'	7:H:57:A:OP2	2.21	0.41
10:L:161:ASN:OD1	10:L:168:LYS:CD	2.53	0.41
10:L:170:LYS:HA	10:L:173:GLU:HG2	2.03	0.41
10:L:173:GLU:HA	10:L:176:LEU:HB3	2.02	0.41
16:R:114:SER:HB3	16:R:228:PRO:HG2	2.02	0.41
16:R:213:LYS:NZ	16:R:215:ASN:OD1	2.48	0.41
16:R:238:THR:OG1	16:R:239:VAL:N	2.53	0.41
16:R:408:ASP:HB3	16:R:411:LEU:HD23	2.02	0.41
18:T:207:VAL:HG12	18:T:480:ALA:HB1	2.03	0.41
18:T:297:HIS:CG	18:T:298:PRO:HD2	2.56	0.41
18:T:306:CYS:HB2	18:T:333:VAL:HG12	2.02	0.41
20:V:495:ASP:O	20:V:498:ALA:HB3	2.21	0.41
20:V:617:PRO:HB3	20:V:623:ASN:HD22	1.86	0.41
22:X:246:LEU:HG	22:X:277:ARG:HE	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:X:389:LYS:NZ	22:X:390:GLU:HG3	2.35	0.41
22:X:422:GLY:O	22:X:553:ALA:HA	2.20	0.41
22:X:595:CYS:SG	22:X:613:VAL:HG11	2.61	0.41
22:X:674:THR:HG22	22:X:675:ASN:H	1.86	0.41
22:X:716:LYS:HB2	22:X:748:GLU:O	2.21	0.41
23:Y:255:ASP:OD2	23:Y:259:ILE:HD11	2.21	0.41
34:1:555:VAL:HG12	34:1:559:ILE:HD13	2.02	0.41
34:1:702:ARG:CG	34:1:738:HIS:CD2	3.03	0.41
34:1:777:PHE:CA	34:1:818:PHE:HE2	2.30	0.41
34:1:914:PHE:O	34:1:917:VAL:HG12	2.21	0.41
34:1:1262:ARG:CA	39:5:24:ALA:HB1	2.49	0.41
34:1:1300:LEU:HD22	35:3:1032:TRP:CD2	2.56	0.41
35:3:280:ASP:H	35:3:857:ALA:CB	2.33	0.41
35:3:610:VAL:HG23	35:3:636:GLN:NE2	2.36	0.41
35:3:1022:ILE:HD13	35:3:1022:ILE:HA	1.77	0.41
35:3:1188:ASN:HA	35:3:1191:LYS:HZ3	1.85	0.41
36:2:510:TYR:O	36:2:511:LEU:HD23	2.20	0.41
1:A:27:GLU:O	1:A:31:GLN:HG2	2.21	0.41
1:A:76:MET:HE3	1:A:76:MET:HB3	1.73	0.41
1:A:387:PHE:HZ	3:C:330:THR:HG21	1.85	0.41
1:A:615:ARG:HE	1:A:615:ARG:HB2	1.69	0.41
1:A:1636:LYS:HE3	1:A:1656:THR:CG2	2.51	0.41
1:A:1831:LYS:HZ3	1:A:1832:ARG:HB2	1.85	0.41
5:F:8:C:H3'	5:F:9:U:O4'	2.20	0.41
5:F:33:G:C2	5:F:34:G:H8	2.39	0.41
6:G:7:G:C2	6:G:8:C:C2	3.09	0.41
9:J:200:GLU:OE1	9:J:200:GLU:CA	2.69	0.41
9:J:394:HIS:O	9:J:398:VAL:HG23	2.21	0.41
12:N:91:LYS:HA	12:N:91:LYS:HD3	1.80	0.41
13:O:200:ASP:O	13:O:204:GLY:N	2.46	0.41
18:T:320:LYS:HE2	18:T:320:LYS:HB2	1.64	0.41
20:V:402:LYS:O	20:V:406:LEU:N	2.53	0.41
20:V:458:THR:HG21	20:V:479:MET:HE1	2.03	0.41
22:X:387:GLN:NE2	22:X:391:SER:OG	2.54	0.41
22:X:466:ALA:HA	22:X:469:MET:HB2	2.03	0.41
22:X:856:ARG:HB3	22:X:856:ARG:CZ	2.51	0.41
22:X:931:SER:O	22:X:933:GLN:NE2	2.54	0.41
22:X:955:THR:OG1	22:X:958:GLY:O	2.24	0.41
23:Y:41:LEU:HA	23:Y:155:ARG:HA	2.02	0.41
23:Y:47:ARG:HA	23:Y:140:ASN:HD21	1.85	0.41
23:Y:55:ASP:OD1	23:Y:57:THR:OG1	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:729:LYS:O	34:1:733:LYS:HG2	2.21	0.41
34:1:961:VAL:O	34:1:964:THR:N	2.54	0.41
34:1:1145:ASN:HD21	34:1:1183:VAL:CG1	2.27	0.41
34:1:1208:LEU:HB3	34:1:1237:LEU:HD21	2.03	0.41
35:3:334:PRO:HG2	35:3:357:TYR:CD2	2.56	0.41
35:3:469:GLU:OE1	35:3:469:GLU:N	2.53	0.41
35:3:1001:ILE:HG21	35:3:1044:VAL:HG21	2.02	0.41
35:3:1004:ASP:OD2	35:3:1007:GLU:HB2	2.21	0.41
1:A:519:ASP:OD2	1:A:523:ASN:HB2	2.20	0.40
2:B:13:C:H2'	2:B:14:U:H6	1.85	0.40
3:C:415:LEU:HD12	3:C:415:LEU:HA	1.83	0.40
3:C:572:GLU:HG3	3:C:573:GLU:H	1.86	0.40
3:C:680:ASN:O	3:C:682:LYS:N	2.53	0.40
3:C:717:PHE:CE1	3:C:721:LYS:HE2	2.55	0.40
4:E:136:TRP:CZ3	4:E:143:ARG:HG2	2.56	0.40
4:E:208:ILE:HA	4:E:208:ILE:HD12	1.81	0.40
5:F:94:C:H2'	5:F:95:G:C8	2.56	0.40
6:G:-8:C:O4'	19:U:18:TYR:HB2	2.22	0.40
6:G:8:C:H2'	6:G:9:C:C4	2.57	0.40
10:L:186:GLN:HG3	10:L:189:ARG:HH12	1.87	0.40
16:R:376:LYS:CA	16:R:379:LYS:HB2	2.42	0.40
16:R:412:PHE:HE2	22:X:326:GLN:HE22	1.68	0.40
20:V:529:PHE:CE1	20:V:564:VAL:HB	2.56	0.40
21:W:279:LYS:CB	36:2:623:PRO:N	2.84	0.40
22:X:832:GLU:OE1	22:X:927:VAL:HG13	2.21	0.40
22:X:909:ARG:HG2	22:X:909:ARG:HH11	1.85	0.40
23:Y:26:LEU:HB2	23:Y:166:PHE:CG	2.56	0.40
23:Y:212:LYS:HA	23:Y:212:LYS:HD2	1.80	0.40
34:1:534:GLN:O	34:1:538:LEU:HD12	2.20	0.40
34:1:702:ARG:HG2	34:1:738:HIS:NE2	2.35	0.40
34:1:881:ALA:HB1	34:1:921:LEU:HD23	2.03	0.40
34:1:1244:CYS:O	34:1:1245:ARG:C	2.60	0.40
35:3:226:GLU:HG3	35:3:226:GLU:O	2.22	0.40
35:3:328:LYS:NZ	35:3:370:GLU:HB3	2.36	0.40
35:3:637:PRO:HB3	35:3:640:LEU:HD21	2.03	0.40
35:3:820:ALA:HA	35:3:823:MET:HE1	2.02	0.40
35:3:911:LYS:HG3	35:3:912:ASP:CG	2.42	0.40
35:3:1001:ILE:HD12	35:3:1011:TRP:NE1	2.36	0.40
1:A:83:HIS:NE2	6:G:16:G:C6	2.89	0.40
1:A:461:HIS:O	1:A:462:ARG:NH1	2.54	0.40
1:A:578:LEU:HD23	1:A:578:LEU:HA	1.82	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:617:ASN:HA	1:A:621:VAL:HB	2.02	0.40
1:A:850:TYR:HD2	1:A:864:LEU:HD21	1.85	0.40
1:A:1409:GLU:OE2	1:A:1409:GLU:HA	2.20	0.40
1:A:1821:ILE:HD11	1:A:1911:GLU:O	2.22	0.40
1:A:1865:ARG:HA	1:A:1865:ARG:HH21	1.86	0.40
4:E:145:LYS:NZ	4:E:181:ILE:O	2.44	0.40
7:H:13:C:H5''	7:H:14:C:C5	2.56	0.40
7:H:142:U:C2	7:H:143:C:C5	3.09	0.40
18:T:405:PHE:HZ	18:T:408:ASN:OD1	2.04	0.40
22:X:723:ALA:HA	22:X:734:CYS:SG	2.61	0.40
23:Y:33:LYS:HA	23:Y:33:LYS:HD3	1.67	0.40
34:1:699:GLN:NE2	34:1:739:ARG:O	2.54	0.40
34:1:949:GLN:CA	34:1:989:VAL:CG1	2.88	0.40
34:1:1055:TRP:CE3	34:1:1055:TRP:HA	2.56	0.40
34:1:1185:ARG:HE	34:1:1185:ARG:HB2	1.43	0.40
34:1:1304:LEU:HD21	35:3:786:ARG:CZ	2.50	0.40
35:3:459:VAL:HA	35:3:475:ILE:O	2.21	0.40
35:3:485:LEU:CD2	35:3:491:VAL:HG12	2.46	0.40
35:3:615:ARG:O	35:3:616:ILE:HD12	2.21	0.40
35:3:998:HIS:CE1	35:3:1041:TYR:OH	2.75	0.40
35:3:1057:ARG:O	35:3:1090:GLU:HG3	2.22	0.40
35:3:1115:GLU:HG3	36:2:708:TRP:HE1	1.85	0.40
35:3:1165:SER:CB	35:3:1169:PRO:HA	2.52	0.40
1:A:229:GLN:O	1:A:230:PHE:HD1	2.03	0.40
1:A:264:PHE:CD1	1:A:459:LEU:HD13	2.57	0.40
1:A:1130:ASN:HD21	1:A:1140:MET:HB2	1.87	0.40
1:A:1776:ILE:HG22	1:A:1859:LYS:NZ	2.35	0.40
1:A:1776:ILE:CG2	1:A:1859:LYS:HG3	2.51	0.40
1:A:1777:ILE:HA	1:A:1860:GLN:O	2.21	0.40
3:C:183:SER:HG	3:C:480:LYS:HZ1	1.61	0.40
4:E:219:VAL:O	4:E:228:THR:N	2.54	0.40
6:G:5:G:N1	6:G:6:A:N6	2.69	0.40
6:G:7:G:C5	6:G:8:C:C4	3.10	0.40
7:H:56:A:N7	36:2:505:CYS:SG	2.94	0.40
10:L:169:ARG:O	10:L:173:GLU:HG2	2.22	0.40
11:M:114:LYS:HA	11:M:114:LYS:HD3	1.88	0.40
14:P:206:LYS:O	14:P:209:ARG:O	2.39	0.40
16:R:325:ARG:HH12	23:Y:226:MET:N	2.19	0.40
16:R:376:LYS:HA	16:R:379:LYS:CB	2.44	0.40
22:X:681:LEU:H	22:X:725:ARG:NH2	2.19	0.40
22:X:716:LYS:N	22:X:747:LEU:HD12	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:X:868:ARG:HH22	22:X:973:ASN:HD21	1.69	0.40
22:X:929:LEU:HD23	22:X:929:LEU:HA	1.89	0.40
23:Y:145:ASP:OD2	23:Y:190:ARG:NH2	2.54	0.40
23:Y:247:LEU:HG	23:Y:248:ASN:N	2.36	0.40
34:1:513:LYS:HE2	34:1:513:LYS:HB2	1.91	0.40
34:1:601:ALA:HB3	34:1:638:ALA:HB3	2.02	0.40
34:1:606:LEU:O	34:1:610:ILE:CG1	2.70	0.40
34:1:739:ARG:CA	34:1:743:LEU:CD2	2.94	0.40
34:1:777:PHE:HZ	34:1:810:ILE:HG23	1.86	0.40
34:1:897:LEU:HD21	34:1:932:ILE:HG13	2.04	0.40
34:1:1028:HIS:HB3	34:1:1031:VAL:HG13	2.02	0.40
34:1:1297:ARG:HH21	35:3:1032:TRP:HZ2	1.68	0.40
35:3:77:TYR:HE2	35:3:152:LEU:HD22	1.85	0.40
35:3:139:LYS:O	35:3:140:LEU:HD23	2.21	0.40
35:3:288:VAL:HG23	35:3:289:CYS:N	2.30	0.40
35:3:605:LEU:N	35:3:617:ILE:O	2.55	0.40
35:3:779:PHE:HA	35:3:780:PRO:HD3	1.95	0.40
38:7:26:CYS:SG	38:7:60:ILE:HG13	2.61	0.40
39:5:53:PHE:O	39:5:57:GLU:HG2	2.21	0.40
1:A:545:HIS:O	1:A:549:GLU:HG2	2.21	0.40
1:A:1131:LYS:HE2	1:A:1174:PHE:CE2	2.55	0.40
1:A:1215:ASN:HB3	1:A:1224:ARG:HH11	1.86	0.40
1:A:1342:TRP:HB2	1:A:1348:VAL:HG21	2.03	0.40
1:A:1362:ASP:O	1:A:1364:LEU:N	2.49	0.40
3:C:368:SER:O	3:C:372:PHE:HB2	2.21	0.40
5:F:39:A:C2'	5:F:40:U:H5'	2.51	0.40
5:F:47:A:H4'	5:F:48:A:OP1	2.21	0.40
10:L:11:TRP:CD2	10:L:49:ARG:HD3	2.56	0.40
10:L:55:ASP:OD2	10:L:57:SER:HB3	2.22	0.40
10:L:141:PRO:HG2	10:L:144:MET:HA	2.03	0.40
10:L:154:GLU:HG3	10:L:155:ALA:N	2.35	0.40
12:N:66:LYS:HD2	12:N:66:LYS:HA	1.84	0.40
16:R:178:ARG:HD3	16:R:194:GLN:OE1	2.21	0.40
19:U:5:ILE:O	19:U:5:ILE:HD12	2.21	0.40
20:V:461:LEU:HA	20:V:461:LEU:HD23	1.88	0.40
22:X:216:GLU:HG2	22:X:217:GLU:N	2.37	0.40
22:X:423:GLU:HB2	22:X:574:GLY:O	2.22	0.40
22:X:753:PRO:HG2	22:X:782:ASP:OD2	2.22	0.40
34:1:549:ARG:O	34:1:553:VAL:HG22	2.22	0.40
34:1:596:ILE:HA	34:1:599:ASN:HD22	1.86	0.40
34:1:846:ALA:HB2	34:1:883:ASP:OD1	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:1:912:ASN:OD1	34:1:912:ASN:N	2.53	0.40
34:1:1255:PHE:CD2	36:2:491:LEU:CD1	3.04	0.40
35:3:258:TYR:CG	35:3:259:LYS:N	2.90	0.40
35:3:373:PHE:HD1	35:3:385:PHE:CG	2.40	0.40
35:3:497:SER:OG	35:3:499:PHE:HB2	2.21	0.40
35:3:719:SER:OG	35:3:734:LEU:HB2	2.22	0.40
35:3:895:ARG:HG2	35:3:903:TRP:HA	2.04	0.40
35:3:926:TYR:CD1	35:3:942:LYS:HB3	2.56	0.40
36:2:487:LEU:HA	36:2:487:LEU:HD12	1.85	0.40
38:7:51:TYR:CG	38:7:52:GLY:N	2.90	0.40
1:A:366:LYS:HG3	20:V:324:HIS:O	2.21	0.40
1:A:1651:VAL:O	1:A:1651:VAL:HG23	2.21	0.40
3:C:823:ALA:O	3:C:824:THR:OG1	2.35	0.40
4:E:96:TYR:HH	4:E:336:HIS:HE2	1.68	0.40
7:H:30:A:H3'	7:H:31:G:H5''	2.04	0.40
10:L:186:GLN:HG3	10:L:189:ARG:NH1	2.37	0.40
16:R:124:VAL:O	16:R:124:VAL:CG1	2.69	0.40
18:T:412:HIS:NE2	18:T:431:ALA:HB2	2.37	0.40
20:V:553:HIS:HA	20:V:556:TYR:CD1	2.56	0.40
22:X:173:GLN:O	22:X:176:GLU:HG2	2.22	0.40
22:X:404:PHE:O	22:X:408:LEU:HD23	2.22	0.40
22:X:480:SER:HB3	22:X:500:MET:HE2	2.03	0.40
23:Y:136:ILE:O	23:Y:140:ASN:HB2	2.22	0.40
34:1:669:GLN:NE2	34:1:707:LEU:HD22	2.37	0.40
34:1:747:LEU:HD11	34:1:773:LEU:CD2	2.52	0.40
34:1:835:ASP:O	34:1:839:GLU:HG2	2.22	0.40
34:1:893:ILE:HG22	34:1:894:ASP:OD2	2.22	0.40
34:1:921:LEU:HD23	34:1:921:LEU:HA	1.86	0.40
34:1:1108:ASN:OD1	34:1:1108:ASN:N	2.51	0.40
34:1:1160:GLU:CD	34:1:1160:GLU:N	2.73	0.40
34:1:1179:ASP:H	36:2:511:LEU:HB3	1.86	0.40
35:3:70:LEU:HA	35:3:70:LEU:HD23	1.78	0.40
35:3:174:ASP:HB3	35:3:240:GLY:H	1.86	0.40
35:3:184:CYS:SG	35:3:211:TYR:CE1	3.14	0.40
35:3:278:LEU:HA	35:3:815:ARG:NH1	2.37	0.40
35:3:316:GLU:HG3	35:3:324:GLU:OE1	2.22	0.40
35:3:553:GLN:OE1	35:3:553:GLN:N	2.47	0.40
35:3:601:ARG:HB2	35:3:620:ASP:OD2	2.22	0.40
35:3:755:VAL:HG22	35:3:764:ILE:CD1	2.52	0.40
35:3:998:HIS:HE1	35:3:1041:TYR:OH	2.04	0.40

There are no symmetry-related clashes.

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 PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	1961/2335 (84%)	1760 (90%)	186 (10%)	15 (1%)	19	57
3	C	854/972 (88%)	751 (88%)	100 (12%)	3 (0%)	34	72
4	E	297/357 (83%)	270 (91%)	27 (9%)	0	100	100
8	I	662/855 (77%)	575 (87%)	86 (13%)	1 (0%)	47	82
9	J	527/848 (62%)	487 (92%)	36 (7%)	4 (1%)	19	57
10	L	375/802 (47%)	360 (96%)	15 (4%)	0	100	100
11	M	112/243 (46%)	105 (94%)	5 (4%)	2 (2%)	8	37
12	N	141/144 (98%)	124 (88%)	17 (12%)	0	100	100
13	O	288/420 (69%)	262 (91%)	26 (9%)	0	100	100
14	P	97/229 (42%)	90 (93%)	6 (6%)	1 (1%)	15	53
15	Q	1304/1485 (88%)	1279 (98%)	25 (2%)	0	100	100
16	R	370/536 (69%)	337 (91%)	30 (8%)	3 (1%)	19	57
17	S	156/166 (94%)	144 (92%)	12 (8%)	0	100	100
18	T	318/514 (62%)	301 (95%)	17 (5%)	0	100	100
19	U	68/2752 (2%)	63 (93%)	4 (6%)	1 (2%)	10	42
20	V	458/908 (50%)	433 (94%)	25 (6%)	0	100	100
21	W	497/579 (86%)	473 (95%)	24 (5%)	0	100	100
22	X	778/1041 (75%)	730 (94%)	48 (6%)	0	100	100
23	Y	318/492 (65%)	296 (93%)	22 (7%)	0	100	100
24	Z	147/225 (65%)	138 (94%)	6 (4%)	3 (2%)	7	34
25	a	84/240 (35%)	76 (90%)	8 (10%)	0	100	100
25	m	80/240 (33%)	72 (90%)	8 (10%)	0	100	100
26	b	80/119 (67%)	73 (91%)	7 (9%)	0	100	100
26	n	78/119 (66%)	67 (86%)	11 (14%)	0	100	100
27	c	95/118 (80%)	87 (92%)	8 (8%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
27	h	91/118 (77%)	82 (90%)	9 (10%)	0	100	100
28	d	72/86 (84%)	67 (93%)	5 (7%)	0	100	100
28	i	70/86 (81%)	64 (91%)	6 (9%)	0	100	100
29	e	77/92 (84%)	73 (95%)	4 (5%)	0	100	100
29	j	79/92 (86%)	73 (92%)	6 (8%)	0	100	100
30	f	72/76 (95%)	66 (92%)	6 (8%)	0	100	100
30	k	71/76 (93%)	63 (89%)	8 (11%)	0	100	100
31	g	77/126 (61%)	72 (94%)	5 (6%)	0	100	100
31	l	81/126 (64%)	70 (86%)	11 (14%)	0	100	100
32	q	130/504 (26%)	122 (94%)	8 (6%)	0	100	100
32	r	129/504 (26%)	122 (95%)	7 (5%)	0	100	100
32	s	130/504 (26%)	113 (87%)	12 (9%)	5 (4%)	3	18
32	t	129/504 (26%)	122 (95%)	7 (5%)	0	100	100
33	y	77/301 (26%)	76 (99%)	1 (1%)	0	100	100
34	1	814/1304 (62%)	709 (87%)	100 (12%)	5 (1%)	25	64
35	3	1165/1217 (96%)	992 (85%)	172 (15%)	1 (0%)	51	85
36	2	246/895 (28%)	217 (88%)	24 (10%)	5 (2%)	7	34
37	4	157/424 (37%)	138 (88%)	19 (12%)	0	100	100
38	7	79/110 (72%)	65 (82%)	14 (18%)	0	100	100
39	5	75/86 (87%)	64 (85%)	11 (15%)	0	100	100
40	p	88/225 (39%)	81 (92%)	7 (8%)	0	100	100
41	o	160/255 (63%)	137 (86%)	23 (14%)	0	100	100
All	All	14214/24450 (58%)	12941 (91%)	1224 (9%)	49 (0%)	44	76

All (49) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	1417	PRO
16	R	164	PRO
32	s	59	HIS
32	s	60	PRO
34	1	718	PRO
34	1	1047	ALA
36	2	549	MET

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Mol	Chain	Res	Type
36	2	557	VAL
36	2	558	ARG
36	2	569	GLN
1	A	699	GLU
1	A	856	LEU
1	A	1517	LYS
3	C	84	GLU
9	J	241	VAL
11	M	202	TYR
14	P	199	LYS
24	Z	66	MET
34	1	1107	GLN
36	2	521	PRO
1	A	1418	ARG
1	A	1528	GLN
11	M	124	PHE
32	s	72	PRO
34	1	1106	ARG
1	A	378	PHE
1	A	570	ASP
1	A	698	PRO
3	C	358	LYS
9	J	188	GLN
16	R	428	GLU
19	U	2	TYR
24	Z	78	PRO
34	1	724	PHE
1	A	188	LEU
9	J	205	LEU
9	J	341	PRO
24	Z	79	ILE
32	s	56	LYS
1	A	108	MET
1	A	227	ARG
16	R	223	PRO
32	s	71	ILE
1	A	942	PRO
3	C	440	SER
1	A	109	PRO
8	I	51	PRO
35	3	672	GLY
1	A	729	PRO

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	1768/2108 (84%)	1580 (89%)	188 (11%)	6	26
3	C	747/866 (86%)	654 (88%)	93 (12%)	4	20
4	E	256/300 (85%)	213 (83%)	43 (17%)	2	11
8	I	24/749 (3%)	24 (100%)	0	100	100
9	J	241/751 (32%)	223 (92%)	18 (8%)	13	43
10	L	171/709 (24%)	150 (88%)	21 (12%)	4	21
11	M	104/209 (50%)	89 (86%)	15 (14%)	3	15
12	N	130/130 (100%)	116 (89%)	14 (11%)	6	26
13	O	3/361 (1%)	3 (100%)	0	100	100
14	P	95/203 (47%)	80 (84%)	15 (16%)	2	12
16	R	282/457 (62%)	238 (84%)	44 (16%)	2	13
18	T	273/441 (62%)	248 (91%)	25 (9%)	9	34
19	U	21/2432 (1%)	19 (90%)	2 (10%)	8	32
20	V	188/838 (22%)	156 (83%)	32 (17%)	2	10
22	X	682/897 (76%)	599 (88%)	83 (12%)	5	21
23	Y	286/451 (63%)	246 (86%)	40 (14%)	3	16
25	m	4/177 (2%)	4 (100%)	0	100	100
26	n	3/101 (3%)	3 (100%)	0	100	100
27	h	5/110 (4%)	5 (100%)	0	100	100
28	i	4/74 (5%)	4 (100%)	0	100	100
29	j	1/84 (1%)	1 (100%)	0	100	100
30	k	3/66 (4%)	3 (100%)	0	100	100
31	l	3/101 (3%)	3 (100%)	0	100	100
34	1	675/1104 (61%)	574 (85%)	101 (15%)	3	14
35	3	1016/1051 (97%)	808 (80%)	208 (20%)	1	6
36	2	92/776 (12%)	68 (74%)	24 (26%)	0	2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
38	7	69/95 (73%)	47 (68%)	22 (32%)	0	1
39	5	68/77 (88%)	53 (78%)	15 (22%)	1	4
40	p	3/195 (2%)	3 (100%)	0	100	100
41	o	6/218 (3%)	6 (100%)	0	100	100
All	All	7223/16131 (45%)	6220 (86%)	1003 (14%)	7	16

All (1003) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	29	LYS
1	A	43	LYS
1	A	47	GLU
1	A	55	ASP
1	A	57	GLN
1	A	59	GLU
1	A	60	ASP
1	A	82	ARG
1	A	88	TYR
1	A	95	MET
1	A	97	HIS
1	A	123	THR
1	A	137	GLU
1	A	146	SER
1	A	155	LYS
1	A	161	PHE
1	A	163	ARG
1	A	188	LEU
1	A	189	GLU
1	A	193	LEU
1	A	205	ASP
1	A	214	ARG
1	A	216	SER
1	A	258	PHE
1	A	261	LYS
1	A	284	ARG
1	A	295	GLU
1	A	329	LEU
1	A	330	THR
1	A	337	VAL
1	A	343	GLU
1	A	360	SER

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Mol	Chain	Res	Type
1	A	361	HIS
1	A	371	LEU
1	A	376	GLU
1	A	387	PHE
1	A	388	LEU
1	A	404	LEU
1	A	422	LEU
1	A	431	TYR
1	A	467	GLN
1	A	480	LYS
1	A	518	LEU
1	A	530	LEU
1	A	546	LEU
1	A	554	THR
1	A	560	SER
1	A	569	VAL
1	A	576	ASP
1	A	579	GLN
1	A	600	ARG
1	A	644	ILE
1	A	670	LYS
1	A	683	LEU
1	A	693	ILE
1	A	694	LEU
1	A	708	THR
1	A	714	SER
1	A	727	LYS
1	A	751	THR
1	A	769	LYS
1	A	789	GLU
1	A	815	HIS
1	A	819	SER
1	A	830	LEU
1	A	831	SER
1	A	836	THR
1	A	845	ARG
1	A	850	TYR
1	A	856	LEU
1	A	866	LEU
1	A	869	GLN
1	A	871	TYR
1	A	885	LEU

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Mol	Chain	Res	Type
1	A	893	GLU
1	A	931	ASP
1	A	933	ARG
1	A	941	LYS
1	A	946	GLU
1	A	968	THR
1	A	977	LEU
1	A	978	GLU
1	A	979	SER
1	A	983	LYS
1	A	995	ARG
1	A	1000	ILE
1	A	1038	SER
1	A	1075	GLN
1	A	1076	ASP
1	A	1079	THR
1	A	1091	TYR
1	A	1104	ASP
1	A	1122	ASN
1	A	1128	TYR
1	A	1144	LYS
1	A	1158	LYS
1	A	1166	THR
1	A	1176	SER
1	A	1181	ASP
1	A	1186	LEU
1	A	1199	LYS
1	A	1205	GLU
1	A	1210	LYS
1	A	1235	GLU
1	A	1243	ARG
1	A	1253	SER
1	A	1276	GLU
1	A	1293	ASN
1	A	1298	ARG
1	A	1327	MET
1	A	1329	SER
1	A	1343	SER
1	A	1344	LYS
1	A	1348	VAL
1	A	1359	HIS
1	A	1362	ASP

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Mol	Chain	Res	Type
1	A	1368	LEU
1	A	1370	ARG
1	A	1376	GLU
1	A	1377	SER
1	A	1382	SER
1	A	1394	GLN
1	A	1404	THR
1	A	1407	ASP
1	A	1427	ARG
1	A	1437	ARG
1	A	1449	LYS
1	A	1459	ARG
1	A	1517	LYS
1	A	1519	THR
1	A	1520	ASN
1	A	1523	ARG
1	A	1524	SER
1	A	1529	ILE
1	A	1548	TYR
1	A	1554	GLN
1	A	1555	LEU
1	A	1558	THR
1	A	1568	THR
1	A	1601	LEU
1	A	1606	ILE
1	A	1608	THR
1	A	1615	HIS
1	A	1623	ASN
1	A	1624	SER
1	A	1628	ASP
1	A	1635	TYR
1	A	1644	LEU
1	A	1648	SER
1	A	1649	LYS
1	A	1667	ARG
1	A	1672	ASP
1	A	1692	MET
1	A	1697	SER
1	A	1702	LEU
1	A	1723	LYS
1	A	1772	PHE
1	A	1773	SER

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Mol	Chain	Res	Type
1	A	1783	THR
1	A	1800	THR
1	A	1813	ARG
1	A	1818	PHE
1	A	1825	SER
1	A	1830	GLN
1	A	1831	LYS
1	A	1833	LEU
1	A	1836	LEU
1	A	1850	ARG
1	A	1852	LEU
1	A	1857	GLN
1	A	1870	ASP
1	A	1878	ASP
1	A	1887	SER
1	A	1910	THR
1	A	1914	MET
1	A	1919	LEU
1	A	1924	LEU
1	A	1926	THR
1	A	1930	TYR
1	A	1944	HIS
1	A	1970	THR
1	A	1973	ASP
1	A	1976	TRP
1	A	1977	ILE
1	A	1986	LEU
1	A	1997	VAL
1	A	2005	SER
1	A	2012	LEU
3	C	58	VAL
3	C	65	TYR
3	C	68	THR
3	C	86	THR
3	C	90	THR
3	C	117	ASP
3	C	135	CYS
3	C	197	SER
3	C	213	ASP
3	C	223	ASP
3	C	233	GLU
3	C	240	GLU

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Mol	Chain	Res	Type
3	C	248	GLN
3	C	256	CYS
3	C	283	ASP
3	C	290	SER
3	C	293	SER
3	C	295	ASP
3	C	296	GLU
3	C	308	CYS
3	C	312	SER
3	C	316	ILE
3	C	322	SER
3	C	326	ILE
3	C	327	TYR
3	C	333	ASP
3	C	359	LYS
3	C	363	SER
3	C	372	PHE
3	C	399	LEU
3	C	408	LEU
3	C	417	ARG
3	C	422	LYS
3	C	436	GLN
3	C	440	SER
3	C	450	GLU
3	C	454	THR
3	C	457	VAL
3	C	458	ASP
3	C	483	SER
3	C	485	ASP
3	C	498	SER
3	C	500	THR
3	C	507	VAL
3	C	510	LEU
3	C	514	TYR
3	C	536	ARG
3	C	538	HIS
3	C	543	ARG
3	C	559	ILE
3	C	562	THR
3	C	567	GLU
3	C	572	GLU
3	C	573	GLU

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Mol	Chain	Res	Type
3	C	578	ARG
3	C	608	ARG
3	C	612	LYS
3	C	616	SER
3	C	622	GLU
3	C	632	THR
3	C	639	CYS
3	C	642	HIS
3	C	657	ASP
3	C	661	THR
3	C	673	LYS
3	C	675	PHE
3	C	678	THR
3	C	696	LEU
3	C	698	GLU
3	C	716	GLU
3	C	722	TYR
3	C	723	ASP
3	C	724	TRP
3	C	749	THR
3	C	750	LEU
3	C	753	GLU
3	C	759	LEU
3	C	766	ILE
3	C	802	HIS
3	C	803	ARG
3	C	809	ILE
3	C	822	MET
3	C	824	THR
3	C	829	GLU
3	C	837	GLN
3	C	846	VAL
3	C	879	ASP
3	C	885	THR
3	C	900	VAL
3	C	916	ILE
3	C	922	GLU
3	C	928	HIS
3	C	940	ARG
4	E	61	LEU
4	E	71	CYS
4	E	73	LYS

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Mol	Chain	Res	Type
4	E	86	PHE
4	E	87	ASP
4	E	100	ASP
4	E	104	THR
4	E	106	LYS
4	E	108	HIS
4	E	117	TYR
4	E	119	THR
4	E	123	MET
4	E	125	PHE
4	E	137	ASP
4	E	143	ARG
4	E	144	VAL
4	E	155	ASN
4	E	162	ARG
4	E	167	VAL
4	E	175	THR
4	E	176	VAL
4	E	189	THR
4	E	205	SER
4	E	206	ASP
4	E	210	SER
4	E	226	LYS
4	E	227	LEU
4	E	232	ARG
4	E	234	HIS
4	E	243	LEU
4	E	258	THR
4	E	265	ARG
4	E	267	PHE
4	E	282	HIS
4	E	284	PHE
4	E	286	LYS
4	E	290	ARG
4	E	300	ILE
4	E	307	ARG
4	E	330	ILE
4	E	333	VAL
4	E	338	ASP
4	E	344	SER
9	J	180	LYS
9	J	186	GLU

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Mol	Chain	Res	Type
9	J	188	GLN
9	J	192	GLU
9	J	193	GLN
9	J	194	LEU
9	J	199	LYS
9	J	200	GLU
9	J	214	ILE
9	J	217	GLU
9	J	220	LEU
9	J	238	ASN
9	J	258	ILE
9	J	276	ILE
9	J	367	GLU
9	J	400	GLU
9	J	408	ASP
9	J	419	PHE
10	L	18	ILE
10	L	24	MET
10	L	25	LYS
10	L	63	TRP
10	L	64	SER
10	L	89	ILE
10	L	91	ARG
10	L	138	ARG
10	L	154	GLU
10	L	158	ARG
10	L	161	ASN
10	L	162	THR
10	L	163	GLN
10	L	181	ARG
10	L	182	LEU
10	L	201	LYS
10	L	203	LYS
10	L	205	LYS
10	L	206	ARG
10	L	218	LYS
10	L	222	LEU
11	M	122	LEU
11	M	126	ASP
11	M	151	ARG
11	M	160	PHE
11	M	163	THR

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Mol	Chain	Res	Type
11	M	166	SER
11	M	186	LEU
11	M	200	ARG
11	M	202	TYR
11	M	204	ASP
11	M	208	ILE
11	M	209	ASP
11	M	212	ASN
11	M	218	PHE
11	M	224	ARG
12	N	3	LYS
12	N	5	LYS
12	N	7	SER
12	N	24	GLU
12	N	41	ARG
12	N	57	THR
12	N	71	SER
12	N	72	ARG
12	N	99	ASN
12	N	112	ASN
12	N	125	LYS
12	N	128	VAL
12	N	134	CYS
12	N	140	ARG
14	P	31	SER
14	P	32	SER
14	P	47	THR
14	P	57	ARG
14	P	74	LYS
14	P	78	ARG
14	P	186	ARG
14	P	196	ASN
14	P	201	VAL
14	P	205	LYS
14	P	207	ASP
14	P	209	ARG
14	P	214	THR
14	P	217	SER
14	P	221	LYS
16	R	107	SER
16	R	108	LYS
16	R	125	MET

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Mol	Chain	Res	Type
16	R	128	ASP
16	R	131	ASP
16	R	132	LEU
16	R	136	ASP
16	R	151	LEU
16	R	153	LYS
16	R	166	ARG
16	R	170	LYS
16	R	180	THR
16	R	184	GLN
16	R	193	LYS
16	R	202	MET
16	R	218	ILE
16	R	220	ARG
16	R	235	ARG
16	R	238	THR
16	R	243	GLN
16	R	246	LYS
16	R	251	ILE
16	R	258	LYS
16	R	289	GLU
16	R	295	ASP
16	R	300	GLU
16	R	311	LYS
16	R	322	GLU
16	R	325	ARG
16	R	326	GLU
16	R	329	GLN
16	R	332	ARG
16	R	352	ARG
16	R	360	ARG
16	R	367	ARG
16	R	370	SER
16	R	382	ARG
16	R	383	ASN
16	R	386	ARG
16	R	398	ASN
16	R	406	GLN
16	R	407	TYR
16	R	409	GLN
16	R	416	LYS
18	T	221	THR

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Mol	Chain	Res	Type
18	T	223	SER
18	T	235	SER
18	T	247	SER
18	T	257	ARG
18	T	258	SER
18	T	263	SER
18	T	264	CYS
18	T	267	ASP
18	T	294	LEU
18	T	307	SER
18	T	319	THR
18	T	338	CYS
18	T	349	SER
18	T	383	ARG
18	T	384	HIS
18	T	385	TYR
18	T	389	SER
18	T	393	ASP
18	T	394	ASN
18	T	424	ASP
18	T	429	SER
18	T	443	THR
18	T	460	ASP
18	T	478	LEU
19	U	1	MET
19	U	2	TYR
20	V	457	ARG
20	V	458	THR
20	V	465	SER
20	V	481	PHE
20	V	483	GLU
20	V	486	THR
20	V	487	LYS
20	V	494	LEU
20	V	504	GLU
20	V	528	ILE
20	V	530	LYS
20	V	538	ARG
20	V	544	LEU
20	V	556	TYR
20	V	571	SER
20	V	576	THR

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Mol	Chain	Res	Type
20	V	578	SER
20	V	579	SER
20	V	584	LYS
20	V	588	GLN
20	V	590	LEU
20	V	593	TYR
20	V	606	GLU
20	V	616	LEU
20	V	619	ASP
20	V	622	ARG
20	V	625	ARG
20	V	628	ILE
20	V	633	SER
20	V	640	THR
20	V	646	HIS
20	V	648	LYS
22	X	163	GLU
22	X	194	ARG
22	X	216	GLU
22	X	225	GLU
22	X	228	LYS
22	X	232	ARG
22	X	237	LYS
22	X	252	ASP
22	X	254	GLU
22	X	257	PHE
22	X	276	VAL
22	X	277	ARG
22	X	278	ASP
22	X	282	GLU
22	X	292	LEU
22	X	293	GLU
22	X	329	TRP
22	X	338	SER
22	X	339	LEU
22	X	383	SER
22	X	387	GLN
22	X	389	LYS
22	X	393	GLN
22	X	408	LEU
22	X	409	LEU
22	X	436	LEU

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Mol	Chain	Res	Type
22	X	437	PHE
22	X	442	THR
22	X	452	GLN
22	X	476	GLU
22	X	482	ARG
22	X	494	ARG
22	X	503	ARG
22	X	510	ASP
22	X	511	LEU
22	X	513	SER
22	X	515	SER
22	X	517	VAL
22	X	518	MET
22	X	533	PHE
22	X	547	LYS
22	X	562	THR
22	X	575	ARG
22	X	590	ASP
22	X	599	VAL
22	X	621	ILE
22	X	625	CYS
22	X	633	ARG
22	X	643	LEU
22	X	648	TYR
22	X	682	THR
22	X	683	ILE
22	X	698	LYS
22	X	712	THR
22	X	714	CYS
22	X	715	SER
22	X	748	GLU
22	X	749	GLU
22	X	757	ARG
22	X	767	LEU
22	X	788	THR
22	X	789	LEU
22	X	795	GLN
22	X	796	LEU
22	X	808	LEU
22	X	809	THR
22	X	836	CYS
22	X	847	LEU

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Mol	Chain	Res	Type
22	X	895	SER
22	X	896	GLN
22	X	913	ASP
22	X	915	ARG
22	X	916	GLU
22	X	922	LEU
22	X	923	GLU
22	X	932	CYS
22	X	943	ILE
22	X	954	LEU
22	X	956	ARG
22	X	994	LYS
22	X	1014	HIS
22	X	1019	LYS
22	X	1021	LEU
23	Y	1	MET
23	Y	9	LEU
23	Y	14	ILE
23	Y	18	THR
23	Y	19	GLU
23	Y	26	LEU
23	Y	38	ASN
23	Y	61	ARG
23	Y	64	GLU
23	Y	73	ASP
23	Y	81	GLU
23	Y	85	ARG
23	Y	106	SER
23	Y	118	TYR
23	Y	126	PHE
23	Y	133	MET
23	Y	138	LYS
23	Y	140	ASN
23	Y	159	THR
23	Y	177	ARG
23	Y	182	THR
23	Y	188	SER
23	Y	194	ASP
23	Y	199	ASP
23	Y	200	PHE
23	Y	211	ILE
23	Y	219	THR

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Mol	Chain	Res	Type
23	Y	232	ASP
23	Y	245	CYS
23	Y	251	THR
23	Y	253	ASP
23	Y	255	ASP
23	Y	257	GLU
23	Y	274	ASP
23	Y	276	LYS
23	Y	279	GLU
23	Y	280	SER
23	Y	305	LEU
23	Y	312	HIS
23	Y	319	VAL
34	1	493	LYS
34	1	512	ARG
34	1	526	PHE
34	1	544	LEU
34	1	545	GLU
34	1	554	LYS
34	1	558	ARG
34	1	560	LEU
34	1	562	LYS
34	1	563	LEU
34	1	564	ASP
34	1	566	LEU
34	1	568	ARG
34	1	571	VAL
34	1	573	LYS
34	1	581	LEU
34	1	582	LEU
34	1	585	GLU
34	1	610	ILE
34	1	623	TYR
34	1	630	ARG
34	1	673	ILE
34	1	685	SER
34	1	686	LEU
34	1	698	GLN
34	1	707	LEU
34	1	718	PRO
34	1	719	TYR
34	1	721	ILE

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Mol	Chain	Res	Type
34	1	724	PHE
34	1	736	ARG
34	1	739	ARG
34	1	741	LYS
34	1	754	ILE
34	1	756	LEU
34	1	760	GLU
34	1	768	GLU
34	1	779	SER
34	1	794	GLN
34	1	795	CYS
34	1	827	ARG
34	1	836	THR
34	1	844	VAL
34	1	858	LYS
34	1	873	GLU
34	1	890	GLU
34	1	892	LEU
34	1	893	ILE
34	1	901	GLN
34	1	904	THR
34	1	925	VAL
34	1	926	LYS
34	1	928	TYR
34	1	943	LYS
34	1	946	LYS
34	1	947	VAL
34	1	958	THR
34	1	968	GLU
34	1	971	MET
34	1	973	HIS
34	1	982	LEU
34	1	1003	VAL
34	1	1009	MET
34	1	1010	THR
34	1	1014	LYS
34	1	1015	ASP
34	1	1019	ARG
34	1	1021	THR
34	1	1028	HIS
34	1	1029	GLU
34	1	1030	LYS

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Mol	Chain	Res	Type
34	1	1031	VAL
34	1	1032	GLN
34	1	1041	ARG
34	1	1065	LEU
34	1	1067	LYS
34	1	1080	THR
34	1	1092	ASP
34	1	1104	GLN
34	1	1106	ARG
34	1	1112	THR
34	1	1113	THR
34	1	1122	THR
34	1	1138	VAL
34	1	1143	VAL
34	1	1150	SER
34	1	1156	GLU
34	1	1170	THR
34	1	1174	GLU
34	1	1182	LEU
34	1	1196	SER
34	1	1219	VAL
34	1	1245	ARG
34	1	1250	CYS
34	1	1260	LYS
34	1	1276	SER
34	1	1277	GLN
34	1	1281	ILE
34	1	1292	LYS
34	1	1296	ILE
34	1	1304	LEU
35	3	1	MET
35	3	9	GLN
35	3	18	ILE
35	3	25	THR
35	3	33	SER
35	3	36	LYS
35	3	41	LEU
35	3	44	ASP
35	3	52	THR
35	3	56	VAL
35	3	66	MET
35	3	68	PHE

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Mol	Chain	Res	Type
35	3	74	THR
35	3	76	ASP
35	3	78	ILE
35	3	90	LEU
35	3	92	TYR
35	3	98	MET
35	3	106	THR
35	3	110	SER
35	3	116	VAL
35	3	121	LEU
35	3	124	ASP
35	3	126	LYS
35	3	130	VAL
35	3	131	MET
35	3	133	SER
35	3	139	LYS
35	3	143	ILE
35	3	153	THR
35	3	164	ASN
35	3	170	VAL
35	3	173	VAL
35	3	184	CYS
35	3	188	ASP
35	3	195	ASP
35	3	203	ASN
35	3	204	THR
35	3	207	THR
35	3	209	THR
35	3	221	VAL
35	3	222	ARG
35	3	225	SER
35	3	226	GLU
35	3	230	GLU
35	3	233	ASN
35	3	242	SER
35	3	256	ILE
35	3	261	PHE
35	3	263	ASP
35	3	264	GLN
35	3	266	ASP
35	3	271	ILE
35	3	273	ARG

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Mol	Chain	Res	Type
35	3	275	ARG
35	3	282	GLU
35	3	286	ILE
35	3	287	PHE
35	3	294	LYS
35	3	300	PHE
35	3	315	LEU
35	3	317	THR
35	3	318	ASP
35	3	320	ASP
35	3	327	LEU
35	3	330	PHE
35	3	331	ASP
35	3	332	THR
35	3	340	CYS
35	3	343	LYS
35	3	344	THR
35	3	347	LEU
35	3	355	ASN
35	3	356	HIS
35	3	364	LEU
35	3	384	THR
35	3	390	ARG
35	3	392	LEU
35	3	403	SER
35	3	404	LEU
35	3	408	LEU
35	3	411	GLN
35	3	417	ASN
35	3	419	ASP
35	3	427	CYS
35	3	433	SER
35	3	435	LEU
35	3	439	ARG
35	3	443	GLU
35	3	455	ASN
35	3	461	THR
35	3	464	ARG
35	3	465	HIS
35	3	469	GLU
35	3	471	ASP
35	3	475	ILE

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Mol	Chain	Res	Type
35	3	477	SER
35	3	482	THR
35	3	492	GLU
35	3	510	LEU
35	3	511	LEU
35	3	514	ASP
35	3	526	HIS
35	3	527	ILE
35	3	537	LYS
35	3	543	THR
35	3	544	ILE
35	3	547	CYS
35	3	568	MET
35	3	573	GLN
35	3	574	LEU
35	3	580	ARG
35	3	584	SER
35	3	592	LEU
35	3	594	ASN
35	3	595	VAL
35	3	604	PHE
35	3	605	LEU
35	3	612	ASN
35	3	617	ILE
35	3	620	ASP
35	3	630	MET
35	3	638	GLU
35	3	665	LEU
35	3	669	LEU
35	3	676	ARG
35	3	677	THR
35	3	679	LEU
35	3	685	ASP
35	3	689	THR
35	3	697	ARG
35	3	703	ARG
35	3	704	VAL
35	3	715	MET
35	3	727	SER
35	3	732	THR
35	3	738	THR
35	3	743	SER

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Mol	Chain	Res	Type
35	3	758	SER
35	3	768	GLU
35	3	775	ASN
35	3	776	GLN
35	3	786	ARG
35	3	797	LEU
35	3	798	ILE
35	3	802	THR
35	3	814	GLN
35	3	815	ARG
35	3	822	GLU
35	3	834	LEU
35	3	837	GLU
35	3	842	PHE
35	3	850	SER
35	3	851	ILE
35	3	867	ARG
35	3	876	THR
35	3	882	LEU
35	3	883	GLU
35	3	901	GLU
35	3	902	ASP
35	3	904	TYR
35	3	906	LEU
35	3	927	THR
35	3	931	VAL
35	3	936	LYS
35	3	937	LEU
35	3	941	HIS
35	3	942	LYS
35	3	958	ARG
35	3	961	ILE
35	3	966	LEU
35	3	978	LEU
35	3	981	CYS
35	3	988	ASN
35	3	991	SER
35	3	993	ILE
35	3	995	THR
35	3	996	ILE
35	3	998	HIS
35	3	1002	VAL

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Mol	Chain	Res	Type
35	3	1004	ASP
35	3	1012	VAL
35	3	1022	ILE
35	3	1026	ASP
35	3	1028	THR
35	3	1035	THR
35	3	1042	ASP
35	3	1062	THR
35	3	1066	VAL
35	3	1090	GLU
35	3	1093	MET
35	3	1094	ASN
35	3	1099	GLU
35	3	1103	SER
35	3	1107	THR
35	3	1114	SER
35	3	1116	SER
35	3	1118	VAL
35	3	1120	THR
35	3	1121	THR
35	3	1148	LEU
35	3	1150	SER
35	3	1151	GLU
35	3	1166	TYR
35	3	1168	PHE
35	3	1170	VAL
35	3	1183	ASN
35	3	1217	PHE
36	2	452	LYS
36	2	453	LYS
36	2	454	LEU
36	2	456	ARG
36	2	458	ASN
36	2	460	PHE
36	2	461	THR
36	2	464	GLU
36	2	465	LEU
36	2	471	ARG
36	2	475	VAL
36	2	476	GLU
36	2	479	ASP
36	2	480	VAL

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Mol	Chain	Res	Type
36	2	488	LEU
36	2	494	THR
36	2	497	SER
36	2	502	ARG
36	2	509	LYS
36	2	512	GLN
36	2	590	LEU
36	2	705	ARG
36	2	710	GLU
36	2	711	LEU
38	7	9	ILE
38	7	11	CYS
38	7	12	ARG
38	7	14	GLN
38	7	23	CYS
38	7	25	LYS
38	7	29	LYS
38	7	30	CYS
38	7	33	CYS
38	7	35	SER
38	7	37	VAL
38	7	40	CYS
38	7	45	ILE
38	7	48	GLU
38	7	60	ILE
38	7	68	ASP
38	7	70	TYR
38	7	71	TYR
38	7	72	CYS
38	7	74	GLU
38	7	81	ASP
38	7	89	VAL
39	5	5	TYR
39	5	18	TYR
39	5	23	HIS
39	5	25	ASP
39	5	27	THR
39	5	32	LEU
39	5	35	GLN
39	5	36	HIS
39	5	42	SER
39	5	51	ASN

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Mol	Chain	Res	Type
39	5	60	SER
39	5	63	ARG
39	5	65	ARG
39	5	69	MET
39	5	74	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (154) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	39	GLN
1	A	41	GLN
1	A	57	GLN
1	A	73	HIS
1	A	78	ASN
1	A	105	ASN
1	A	112	GLN
1	A	229	GLN
1	A	321	ASN
1	A	322	ASN
1	A	325	HIS
1	A	326	HIS
1	A	357	ASN
1	A	495	GLN
1	A	502	ASN
1	A	654	ASN
1	A	659	GLN
1	A	664	HIS
1	A	711	GLN
1	A	755	HIS
1	A	775	ASN
1	A	788	GLN
1	A	834	HIS
1	A	1014	ASN
1	A	1121	ASN
1	A	1400	ASN
1	A	1424	GLN
1	A	1460	HIS
1	A	1546	ASN
1	A	1552	GLN
1	A	1554	GLN
1	A	1583	GLN
1	A	1623	ASN

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Mol	Chain	Res	Type
1	A	1658	GLN
1	A	1774	ASN
1	A	1804	ASN
1	A	1823	HIS
1	A	1830	GLN
1	A	1857	GLN
1	A	1944	HIS
1	A	1965	HIS
3	C	82	GLN
3	C	139	HIS
3	C	245	HIS
3	C	306	ASN
3	C	313	GLN
3	C	350	ASN
3	C	402	HIS
3	C	437	HIS
3	C	505	GLN
3	C	538	HIS
3	C	627	HIS
3	C	903	HIS
3	C	924	GLN
4	E	188	GLN
4	E	225	ASN
4	E	257	ASN
4	E	280	ASN
9	J	193	GLN
9	J	238	ASN
9	J	410	HIS
10	L	45	GLN
10	L	81	GLN
10	L	163	GLN
10	L	175	GLN
10	L	233	GLN
11	M	134	GLN
11	M	172	HIS
11	M	189	GLN
11	M	215	ASN
11	M	219	ASN
12	N	54	HIS
12	N	95	GLN
14	P	45	GLN
14	P	212	ASN

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Mol	Chain	Res	Type
16	R	104	GLN
16	R	243	GLN
16	R	279	HIS
16	R	357	HIS
16	R	381	GLN
16	R	398	ASN
18	T	203	HIS
18	T	269	GLN
18	T	407	GLN
18	T	408	ASN
18	T	446	ASN
20	V	451	ASN
20	V	532	GLN
20	V	553	HIS
20	V	609	GLN
22	X	387	GLN
22	X	414	ASN
22	X	475	ASN
22	X	523	HIS
22	X	697	GLN
22	X	745	HIS
22	X	803	ASN
22	X	863	HIS
22	X	904	GLN
23	Y	52	GLN
23	Y	115	ASN
23	Y	123	HIS
23	Y	140	ASN
23	Y	312	HIS
34	1	550	HIS
34	1	599	ASN
34	1	682	HIS
34	1	692	HIS
34	1	738	HIS
34	1	763	ASN
34	1	817	HIS
34	1	829	ASN
34	1	886	HIS
34	1	891	GLN
34	1	973	HIS
34	1	1028	HIS
34	1	1032	GLN

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Mol	Chain	Res	Type
34	1	1145	ASN
34	1	1193	GLN
34	1	1277	GLN
34	1	1283	HIS
35	3	5	ASN
35	3	19	HIS
35	3	145	ASN
35	3	169	HIS
35	3	179	ASN
35	3	194	ASN
35	3	205	GLN
35	3	206	GLN
35	3	231	HIS
35	3	233	ASN
35	3	264	GLN
35	3	411	GLN
35	3	480	ASN
35	3	550	ASN
35	3	573	GLN
35	3	612	ASN
35	3	636	GLN
35	3	709	GLN
35	3	730	HIS
35	3	775	ASN
35	3	791	HIS
35	3	796	ASN
35	3	817	GLN
35	3	844	ASN
35	3	861	GLN
35	3	994	GLN
35	3	1019	ASN
35	3	1052	ASN
35	3	1105	GLN
36	2	458	ASN
36	2	483	GLN
38	7	14	GLN
38	7	55	GLN

5.3.3 RNA [i](#)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	B	96/117 (82%)	31 (32%)	1 (1%)
5	F	96/107 (89%)	42 (43%)	6 (6%)
6	G	77/220 (35%)	41 (53%)	7 (9%)
7	H	149/188 (79%)	60 (40%)	5 (3%)
All	All	418/632 (66%)	174 (41%)	19 (4%)

All (174) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
2	B	9	G
2	B	10	U
2	B	20	G
2	B	21	A
2	B	22	U
2	B	23	C
2	B	24	G
2	B	25	C
2	B	26	A
2	B	40	U
2	B	43	U
2	B	45	C
2	B	47	A
2	B	48	A
2	B	52	U
2	B	65	G
2	B	70	A
2	B	71	C
2	B	88	A
2	B	89	U
2	B	90	U
2	B	92	U
2	B	93	U
2	B	94	U
2	B	95	G
2	B	96	A
2	B	97	G
2	B	98	G
2	B	102	U
2	B	116	U
2	B	117	A
5	F	6	C

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Mol	Chain	Res	Type
5	F	7	G
5	F	9	U
5	F	10	U
5	F	11	C
5	F	12	G
5	F	14	C
5	F	16	G
5	F	25	C
5	F	26	U
5	F	27	A
5	F	28	A
5	F	29	A
5	F	30	A
5	F	33	G
5	F	34	G
5	F	35	A
5	F	37	C
5	F	38	G
5	F	40	U
5	F	44	G
5	F	45	A
5	F	48	A
5	F	54	G
5	F	59	G
5	F	60	C
5	F	61	C
5	F	65	G
5	F	66	C
5	F	68	C
5	F	73	A
5	F	74	U
5	F	75	G
5	F	79	C
5	F	80	G
5	F	81	C
5	F	82	A
5	F	83	A
5	F	84	A
5	F	85	U
5	F	86	U
5	F	87	C
6	G	-10	G

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Mol	Chain	Res	Type
6	G	-9	C
6	G	-8	C
6	G	-7	U
6	G	-5	C
6	G	-4	G
6	G	1	G
6	G	2	U
6	G	3	A
6	G	4	A
6	G	8	C
6	G	9	C
6	G	11	A
6	G	13	C
6	G	17	U
6	G	21	A
6	G	22	C
6	G	23	U
6	G	25	G
6	G	26	U
6	G	27	U
6	G	30	C
6	G	84	U
6	G	88	G
6	G	89	U
6	G	90	C
6	G	97	A
6	G	98	U
6	G	100	C
6	G	101	U
6	G	103	U
6	G	104	C
6	G	106	C
6	G	107	U
6	G	111	U
6	G	112	U
6	G	113	U
6	G	114	U
6	G	115	C
6	G	116	C
6	G	117	A
7	H	15	U
7	H	16	U

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Mol	Chain	Res	Type
7	H	17	U
7	H	19	G
7	H	23	A
7	H	24	A
7	H	29	A
7	H	30	A
7	H	31	G
7	H	32	U
7	H	35	A
7	H	40	C
7	H	44	U
7	H	48	A
7	H	49	U
7	H	53	U
7	H	63	G
7	H	64	A
7	H	65	U
7	H	98	G
7	H	99	A
7	H	100	U
7	H	101	U
7	H	102	U
7	H	103	U
7	H	106	G
7	H	107	A
7	H	110	A
7	H	111	G
7	H	112	G
7	H	113	G
7	H	116	A
7	H	117	U
7	H	121	A
7	H	122	U
7	H	123	A
7	H	124	G
7	H	128	C
7	H	129	U
7	H	133	U
7	H	136	G
7	H	137	U
7	H	141	C
7	H	144	C

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Mol	Chain	Res	Type
7	H	145	A
7	H	146	C
7	H	147	G
7	H	149	A
7	H	157	G
7	H	162	U
7	H	164	C
7	H	165	A
7	H	166	G
7	H	168	A
7	H	169	C
7	H	171	U
7	H	177	A
7	H	178	A
7	H	179	C
7	H	180	G

All (19) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	B	39	C
5	F	37	C
5	F	47	A
5	F	58	G
5	F	79	C
5	F	84	A
5	F	86	U
6	G	21	A
6	G	88	G
6	G	89	U
6	G	102	G
6	G	105	C
6	G	111	U
6	G	113	U
7	H	15	U
7	H	16	U
7	H	43	U
7	H	47	U
7	H	165	A

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

2 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
16	SEP	R	232	16	8,9,10	1.50	1 (12%)	8,12,14	1.30	1 (12%)
16	SEP	R	224	16	8,9,10	1.41	1 (12%)	8,12,14	1.63	2 (25%)

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
16	SEP	R	232	16	-	2/5/8/10	-
16	SEP	R	224	16	-	1/5/8/10	-

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	R	232	SEP	P-O1P	3.20	1.60	1.50
16	R	224	SEP	P-O1P	3.11	1.60	1.50

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	R	224	SEP	P-OG-CB	-3.28	109.25	118.30
16	R	224	SEP	OG-CB-CA	2.41	110.50	108.14
16	R	232	SEP	P-OG-CB	-2.26	112.07	118.30

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
16	R	224	SEP	N-CA-CB-OG
16	R	232	SEP	CB-OG-P-O2P
16	R	232	SEP	CB-OG-P-O3P

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 15 ligands modelled in this entry, 13 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
43	GTP	C	1500	44	26,34,34	1.60	4 (15%)	32,54,54	2.02	9 (28%)
42	IHP	A	3000	-	36,36,36	1.00	1 (2%)	54,60,60	1.84	12 (22%)

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
43	GTP	C	1500	44	-	4/18/38/38	0/3/3/3
42	IHP	A	3000	-	-	5/30/54/54	0/1/1/1

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
43	C	1500	GTP	C5-C6	-5.10	1.37	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
43	C	1500	GTP	C2'-C1'	-2.98	1.49	1.53
43	C	1500	GTP	C5-C4	-2.33	1.37	1.43
42	A	3000	IHP	P5-O15	2.16	1.63	1.59
43	C	1500	GTP	C2-N3	2.01	1.38	1.33

All (21) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	C	1500	GTP	PB-O3B-PG	-5.17	115.07	132.83
42	A	3000	IHP	O41-P1-O31	4.72	125.69	107.64
42	A	3000	IHP	C5-C4-C3	4.58	120.43	110.41
42	A	3000	IHP	C5-C6-C1	4.38	120.00	110.41
42	A	3000	IHP	O15-C5-C4	4.29	118.80	108.69
43	C	1500	GTP	C5-C6-N1	4.02	121.06	113.95
43	C	1500	GTP	PA-O3A-PB	-3.94	119.30	132.83
42	A	3000	IHP	O41-P1-O11	-3.91	88.46	105.99
43	C	1500	GTP	C2-N1-C6	-3.73	118.23	125.10
43	C	1500	GTP	C8-N7-C5	3.16	109.01	102.99
42	A	3000	IHP	C4-C3-C2	3.16	117.33	110.41
43	C	1500	GTP	O2G-PG-O3B	2.88	114.30	104.64
42	A	3000	IHP	O16-C6-C5	2.79	115.27	108.69
42	A	3000	IHP	C6-C1-C2	2.70	116.32	110.41
42	A	3000	IHP	O15-C5-C6	2.67	114.99	108.69
42	A	3000	IHP	O36-P6-O26	2.52	120.53	110.68
43	C	1500	GTP	O6-C6-C5	-2.42	119.65	124.37
42	A	3000	IHP	O12-P2-O22	-2.28	100.58	109.39
43	C	1500	GTP	O5'-C5'-C4'	2.26	116.76	108.99
43	C	1500	GTP	O2'-C2'-C1'	-2.09	103.14	110.85
42	A	3000	IHP	O34-P4-O24	2.02	118.57	110.68

There are no chirality outliers.

All (9) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
42	A	3000	IHP	C3-C4-O14-P4
42	A	3000	IHP	C3-O13-P3-O23
42	A	3000	IHP	C5-O15-P5-O25
43	C	1500	GTP	C4'-C5'-O5'-PA
43	C	1500	GTP	C3'-C4'-C5'-O5'
43	C	1500	GTP	O4'-C4'-C5'-O5'
42	A	3000	IHP	C1-C6-O16-P6
42	A	3000	IHP	C3-O13-P3-O43

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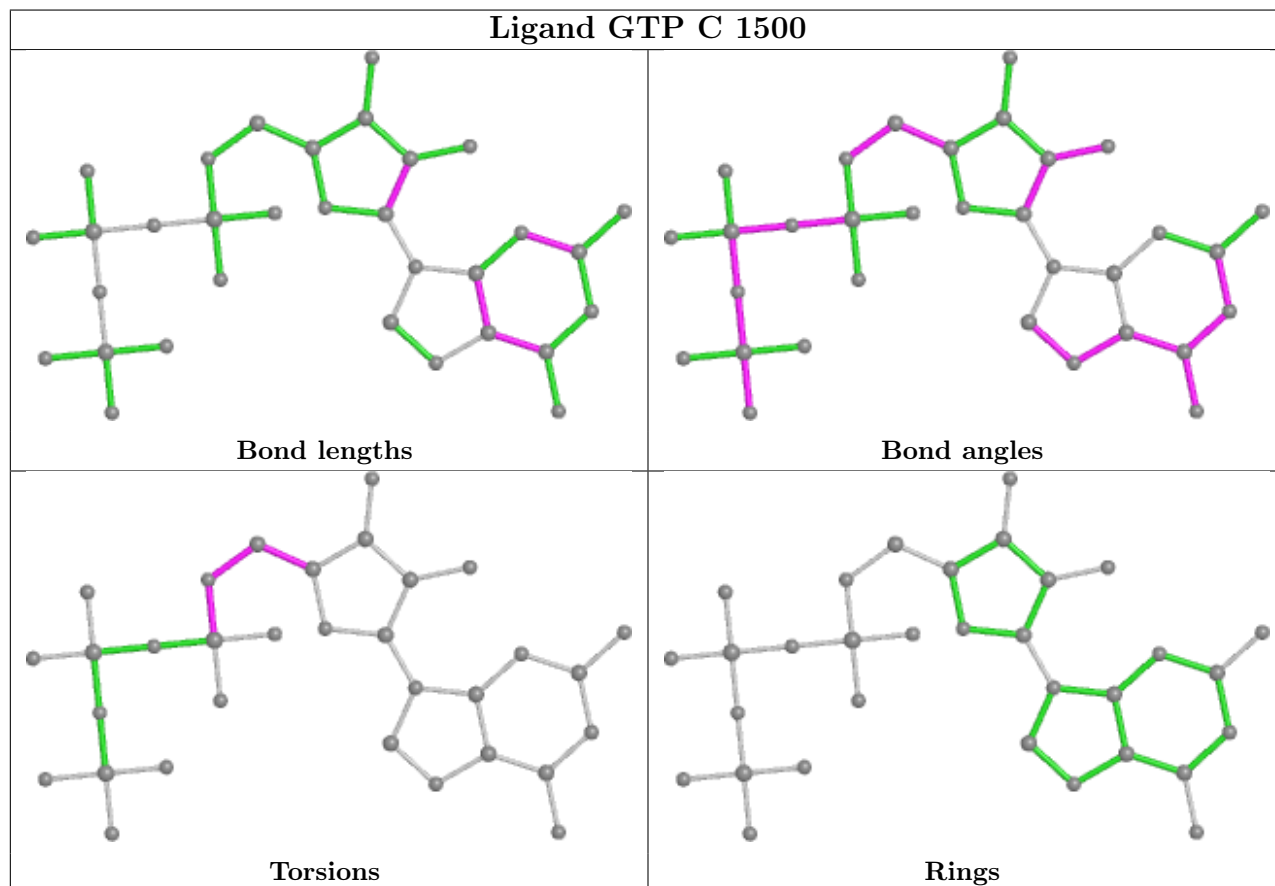
Mol	Chain	Res	Type	Atoms
43	C	1500	GTP	C5'-O5'-PA-O1A

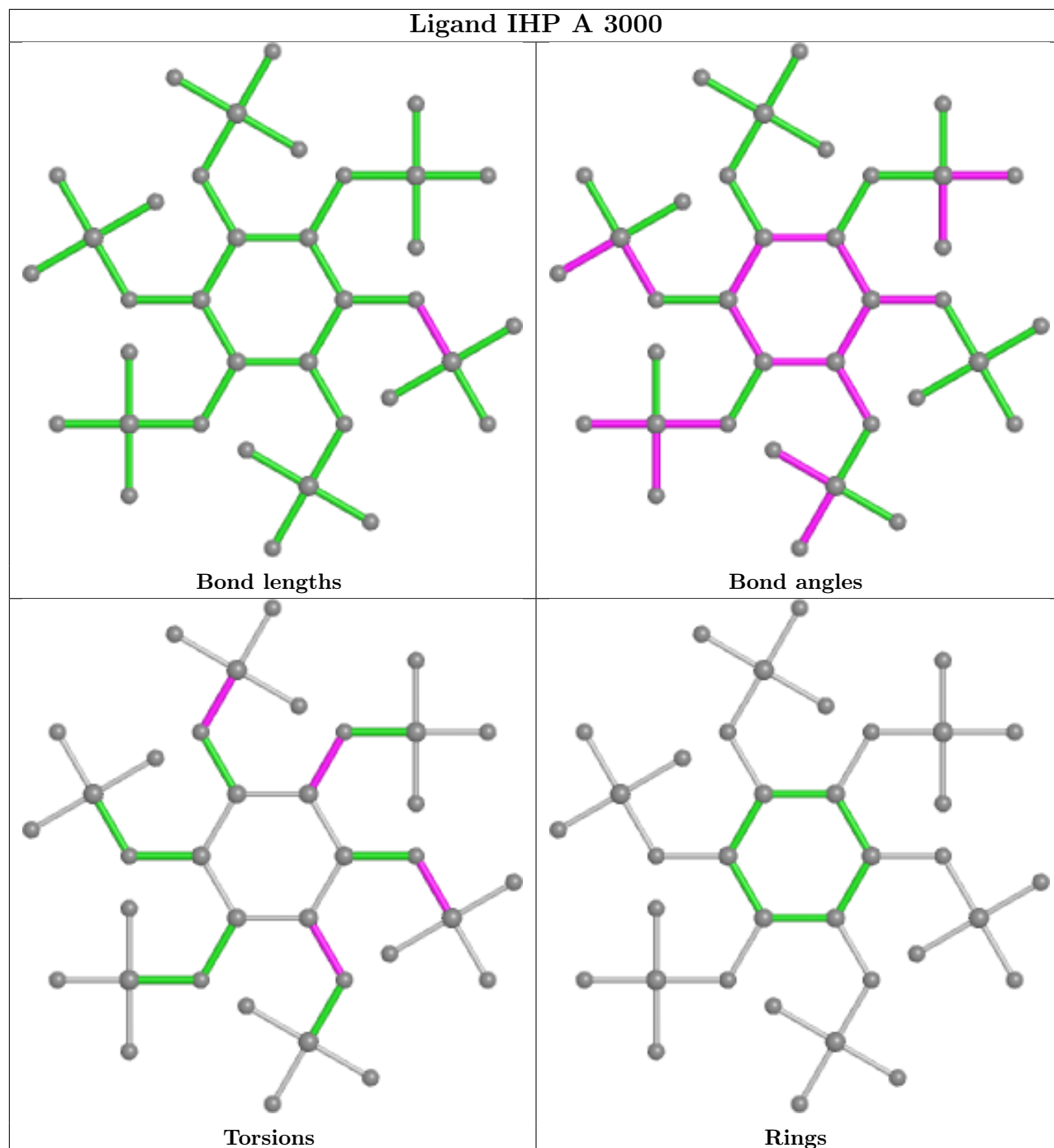
There are no ring outliers.

1 monomer is involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
42	A	3000	IHP	5	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

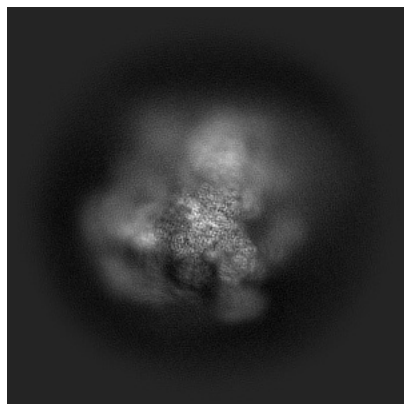
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-35111. These allow visual inspection of the internal detail of the map and identification of artifacts.

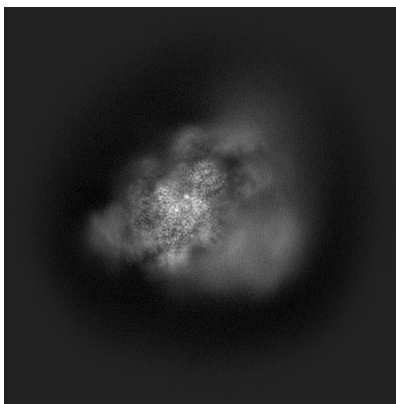
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

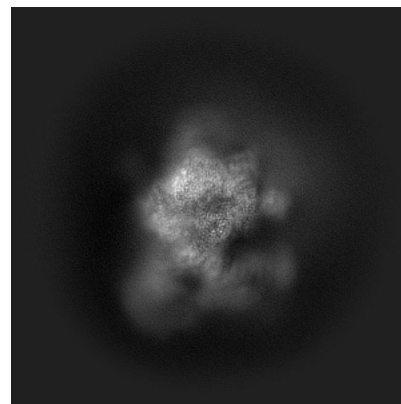
6.1.1 Primary map



X

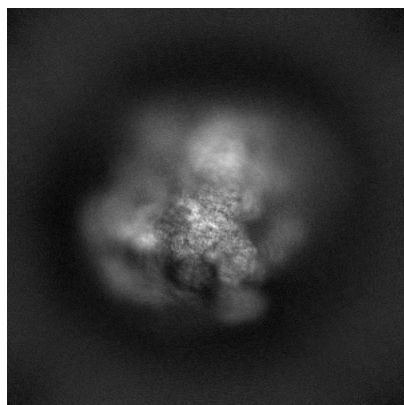


Y

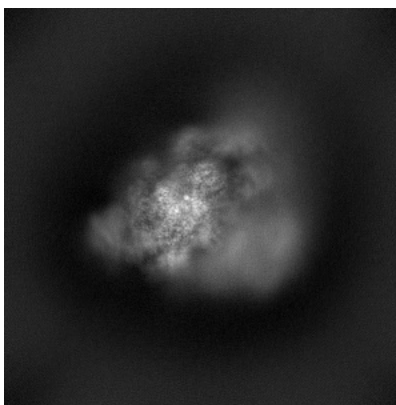


Z

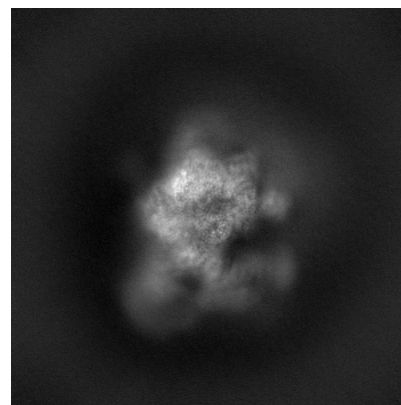
6.1.2 Raw map



X



Y

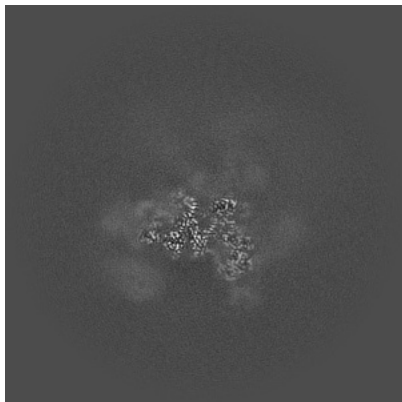


Z

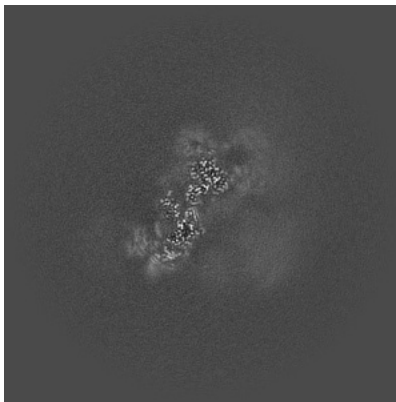
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

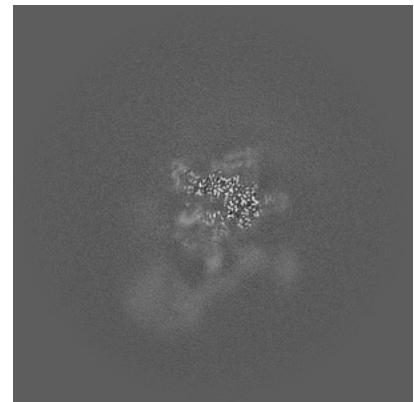
6.2.1 Primary map



X Index: 240

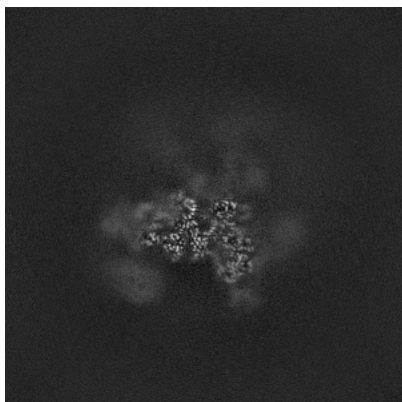


Y Index: 240

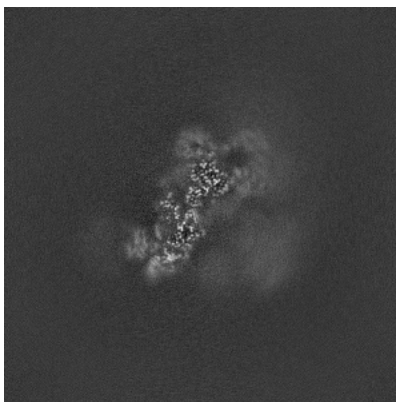


Z Index: 240

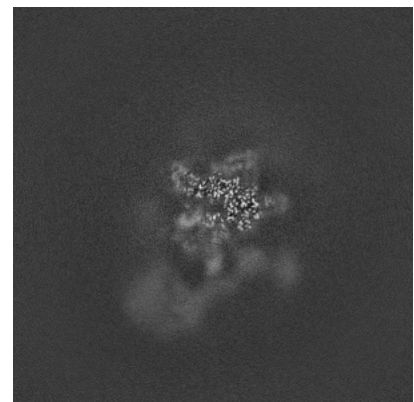
6.2.2 Raw map



X Index: 240



Y Index: 240

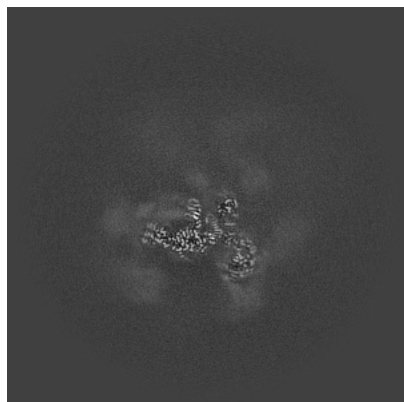


Z Index: 240

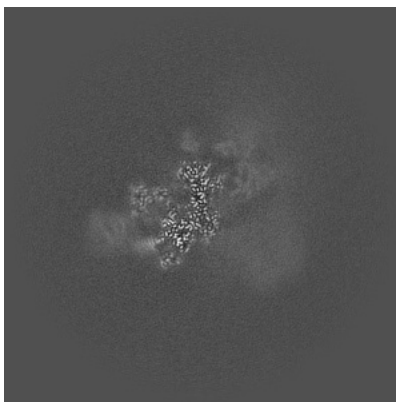
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

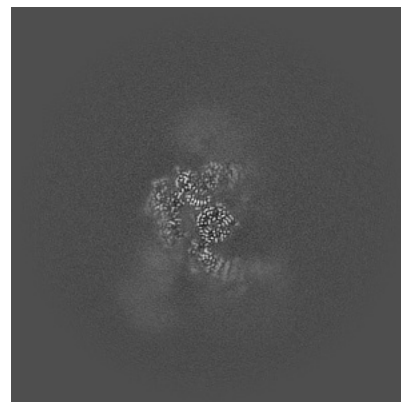
6.3.1 Primary map



X Index: 235

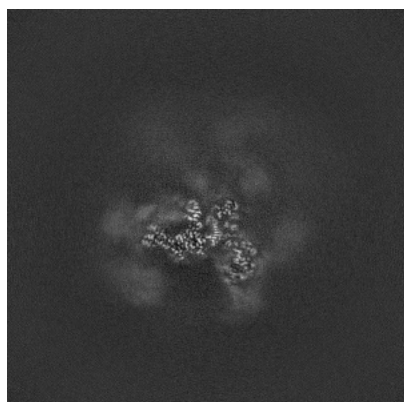


Y Index: 259

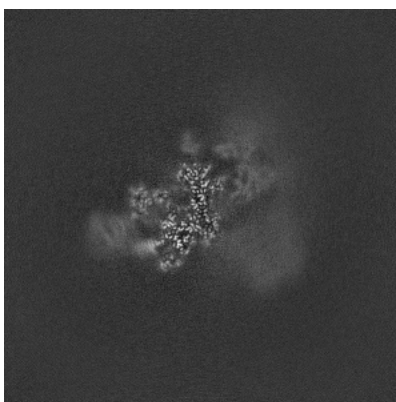


Z Index: 200

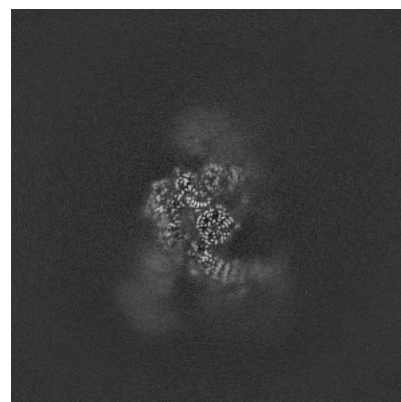
6.3.2 Raw map



X Index: 236



Y Index: 259

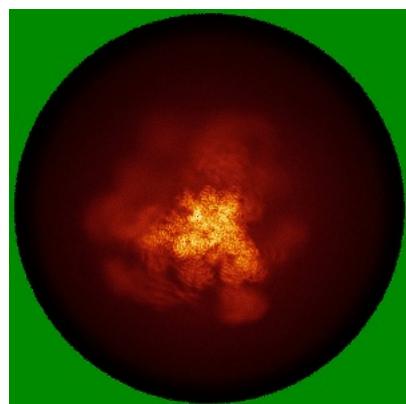


Z Index: 200

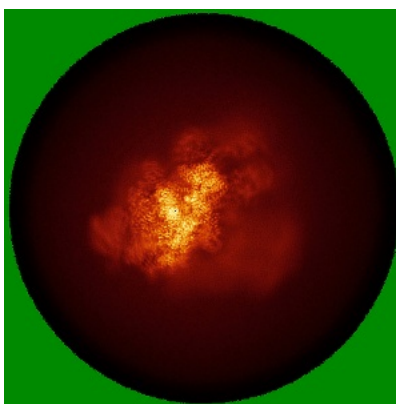
The images above show the largest variance slices of the map in three orthogonal directions.

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

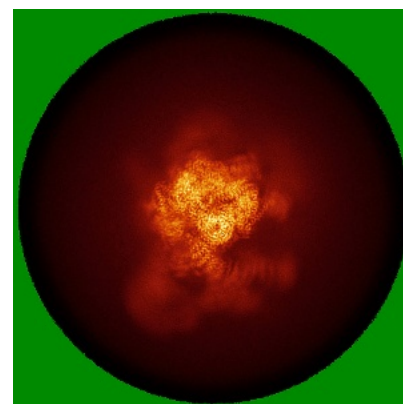
6.4.1 Primary map



X

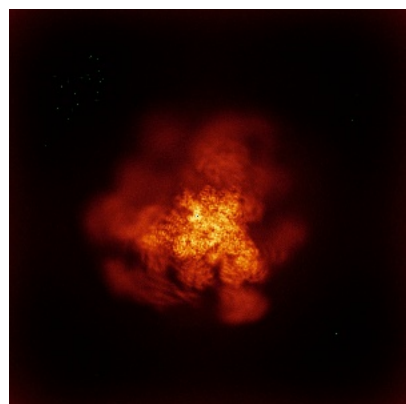


Y

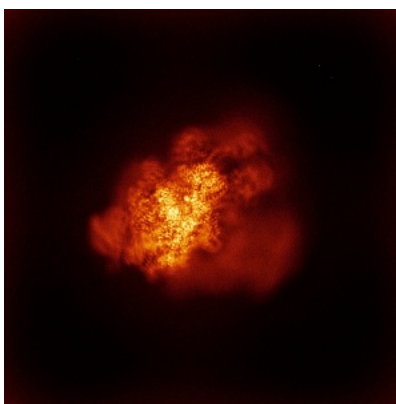


Z

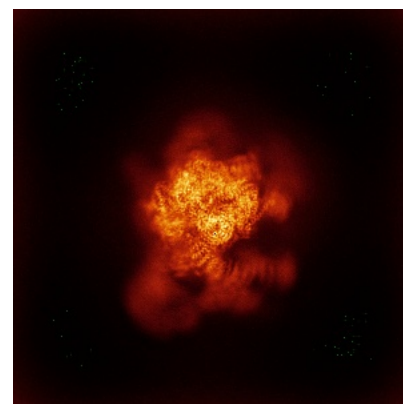
6.4.2 Raw map



X



Y

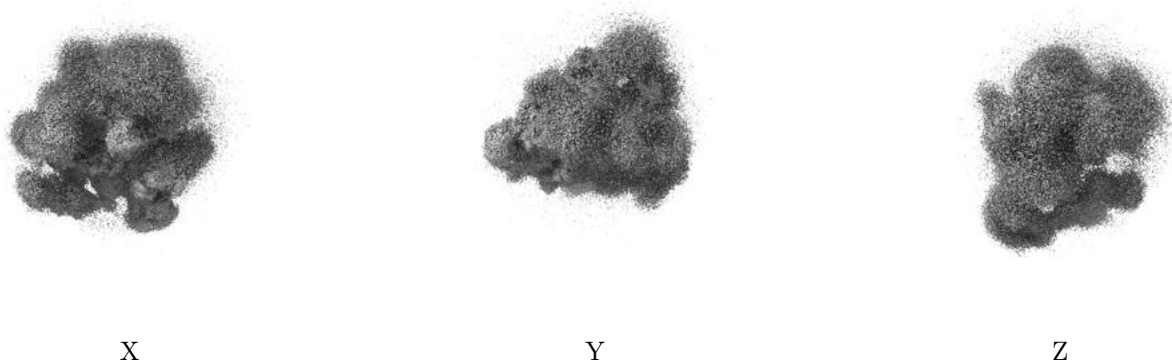


Z

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

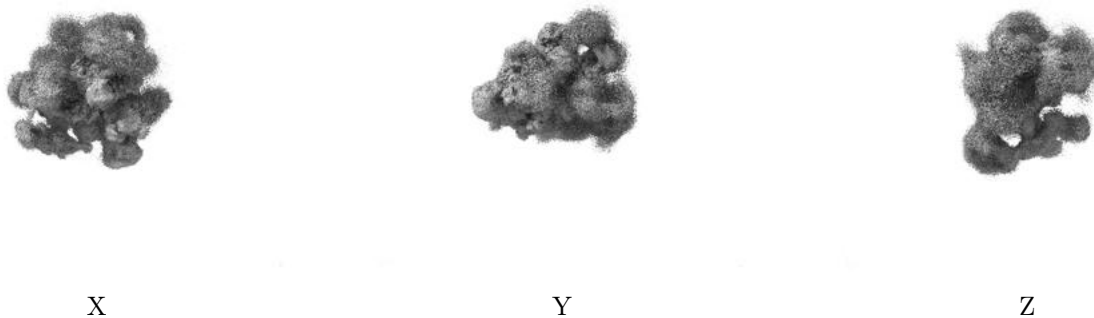
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.22. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



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

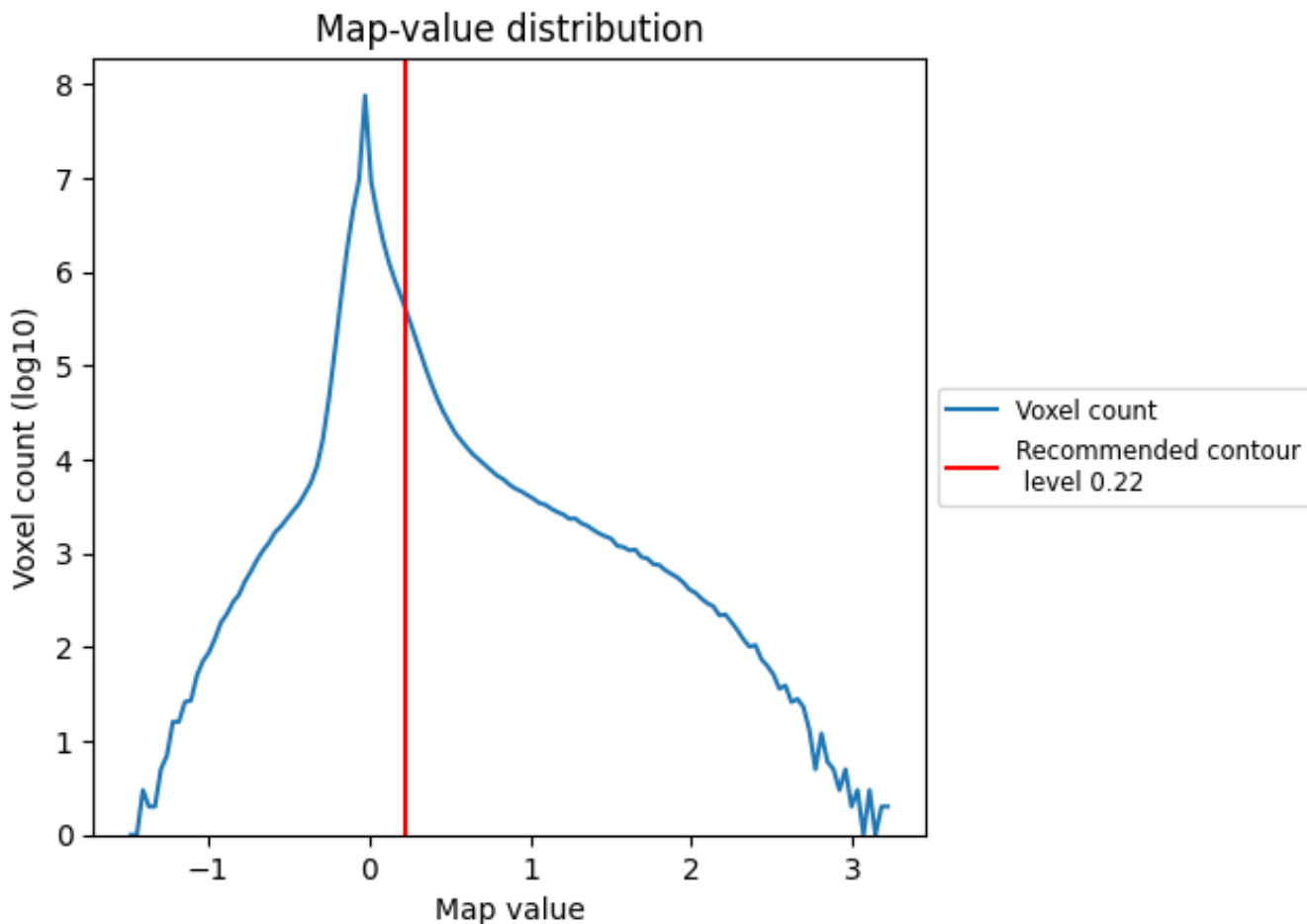
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

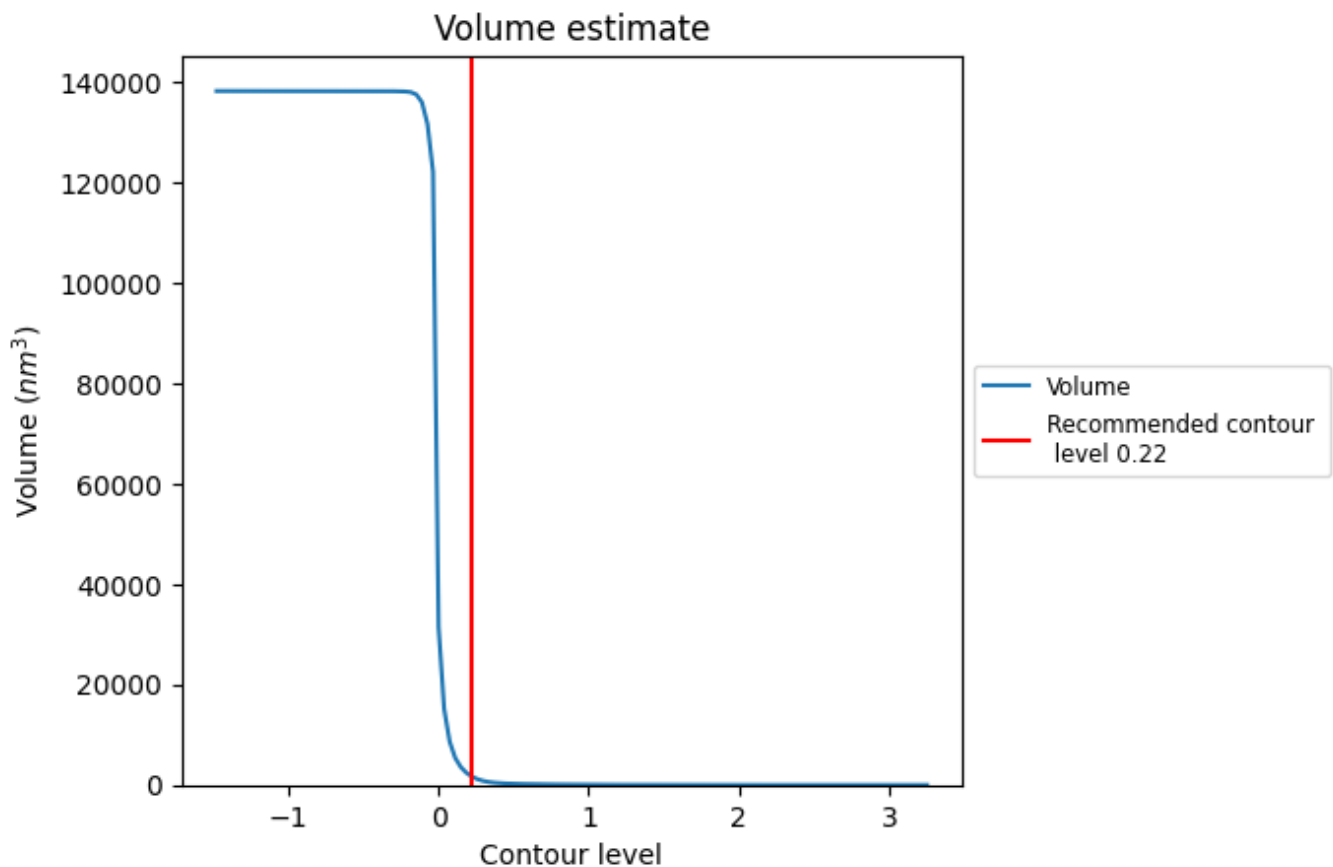
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

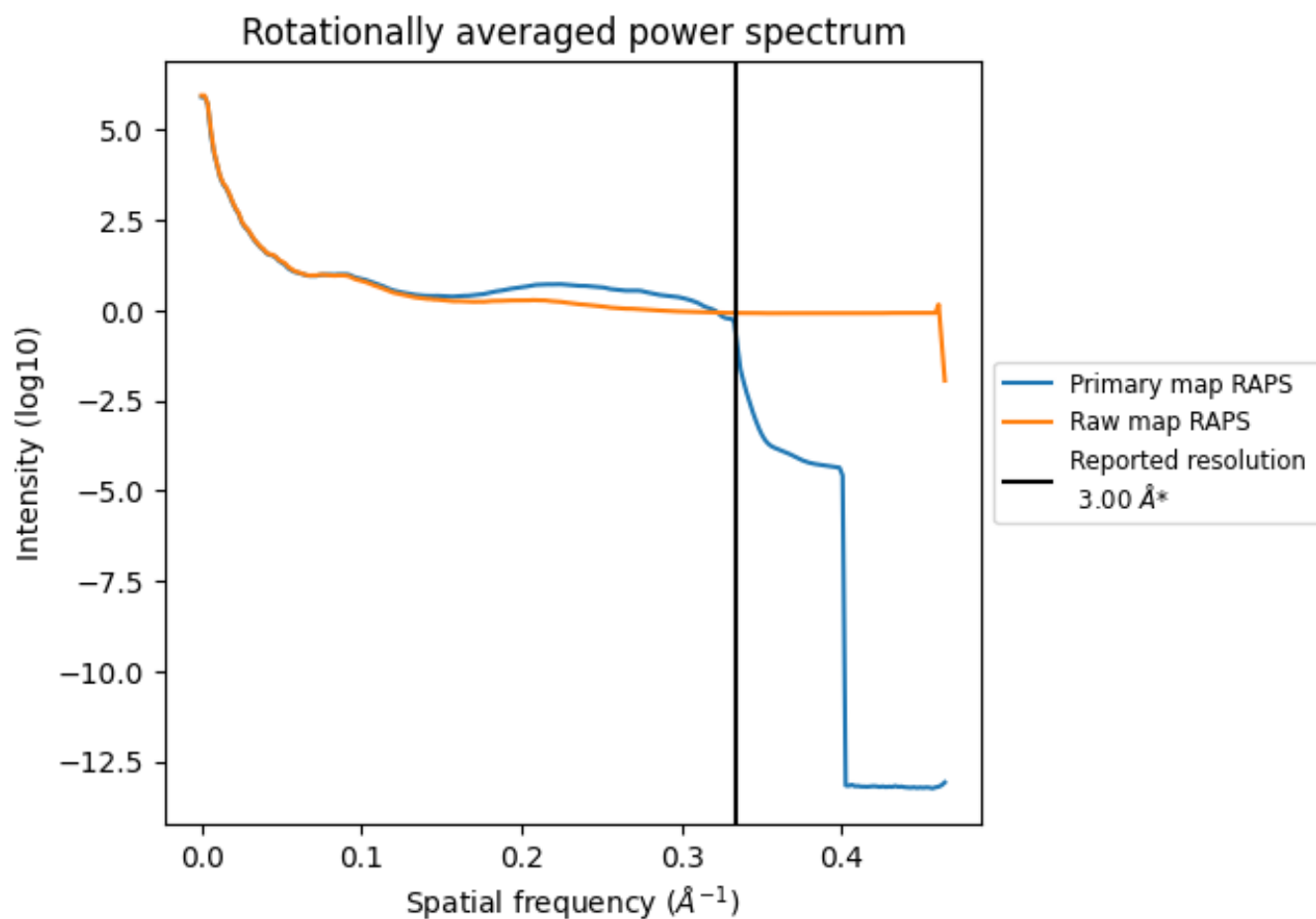
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1755 nm^3 ; this corresponds to an approximate mass of 1586 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)

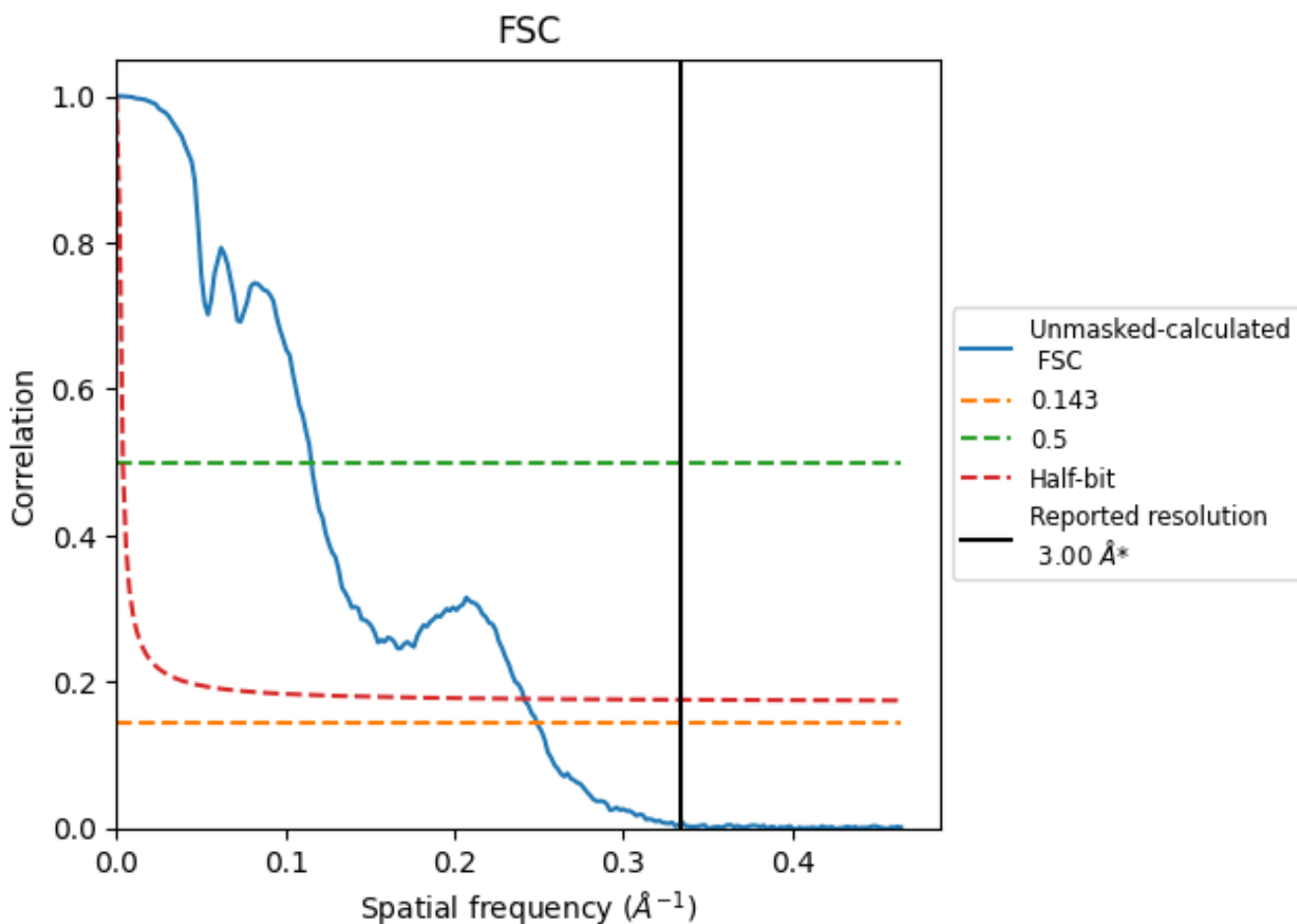


*Reported resolution corresponds to spatial frequency of 0.333 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.333 \AA^{-1}

8.2 Resolution estimates [i](#)

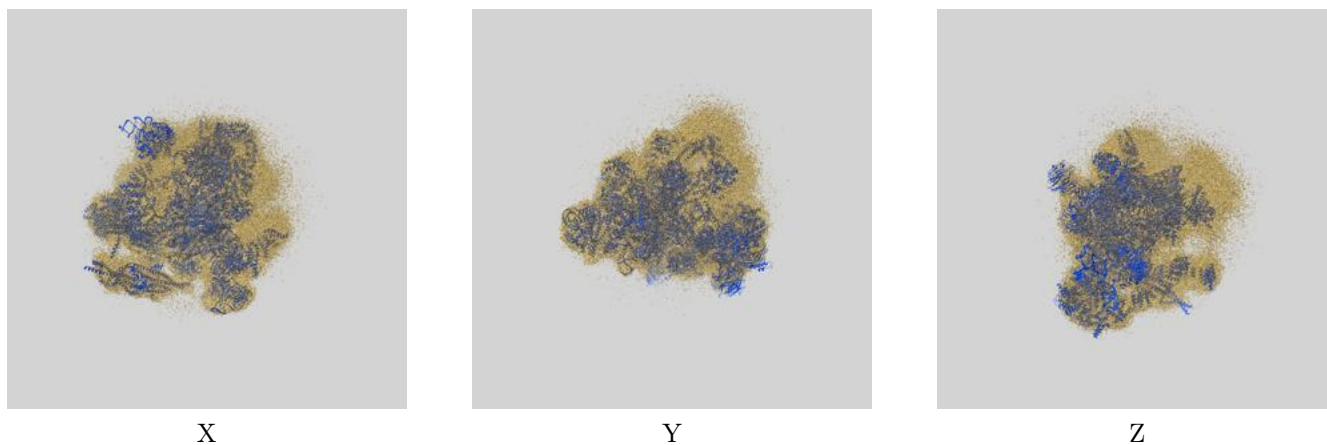
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.00	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.02	8.67	4.14

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.02 differs from the reported value 3.0 by more than 10 %

9 Map-model fit [i](#)

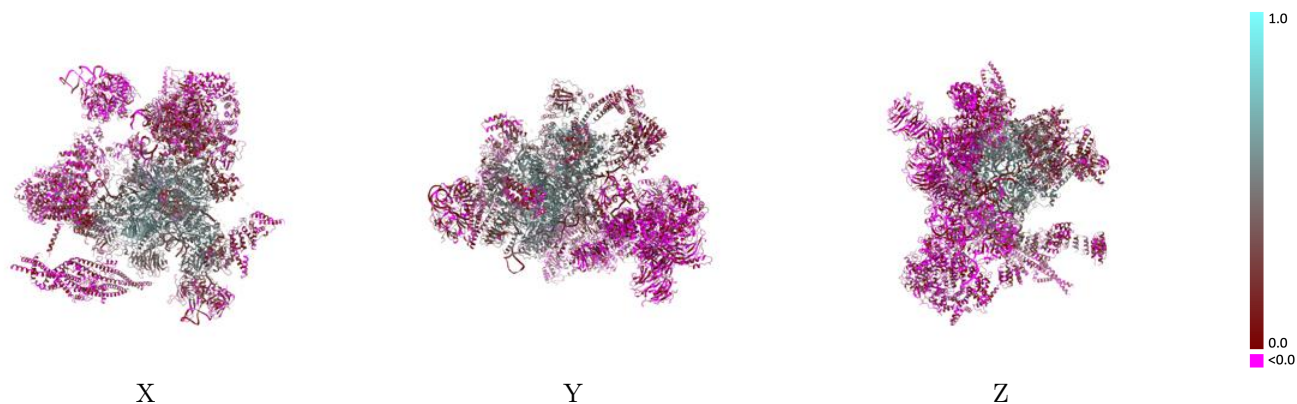
This section contains information regarding the fit between EMDB map EMD-35111 and PDB model 8I0V. Per-residue inclusion information can be found in section 3 on page 13.

9.1 Map-model overlay [i](#)



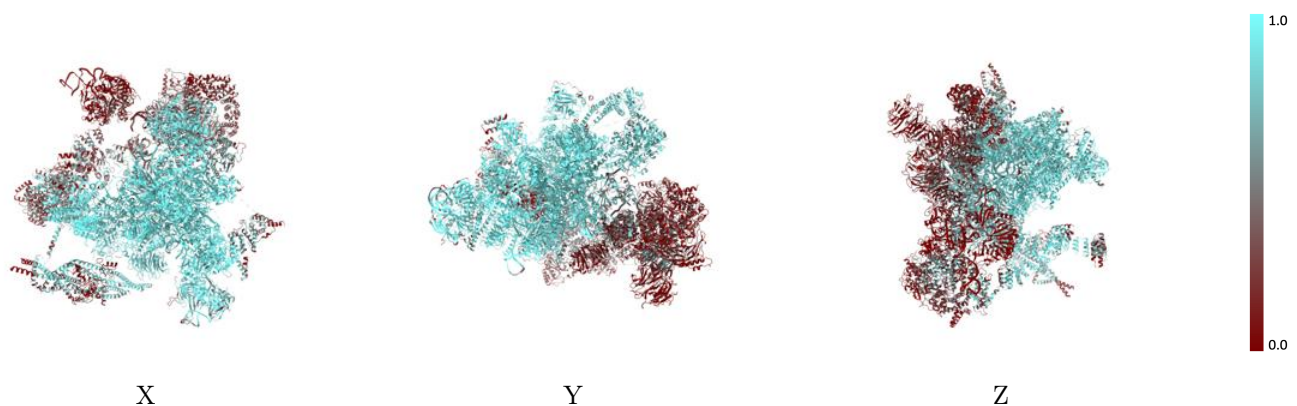
The images above show the 3D surface view of the map at the recommended contour level 0.22 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



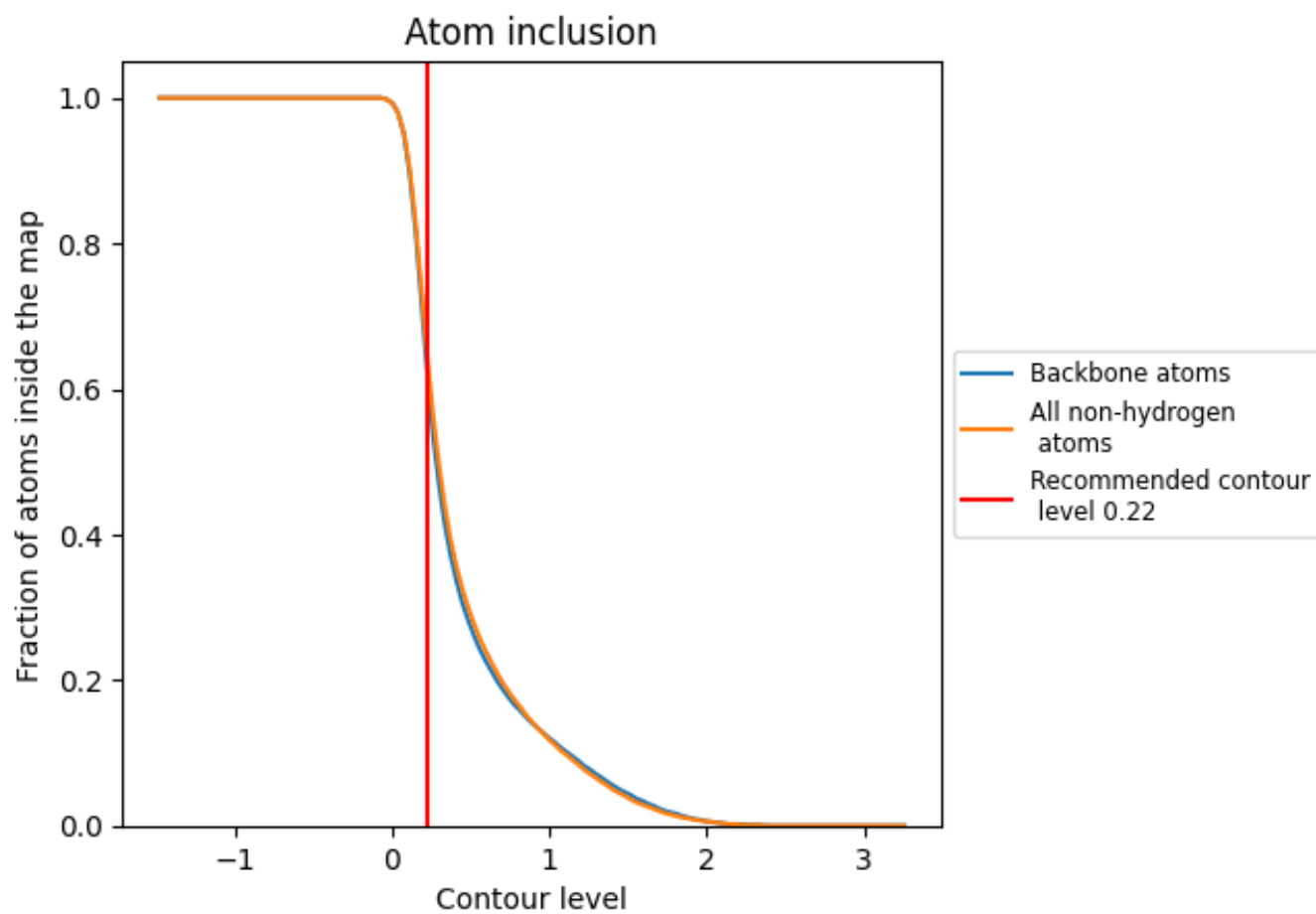
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.22).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 63% of all backbone atoms, 66% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary



































The table lists the average atom inclusion at the recommended contour level (0.22) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6560	 0.2460
1	 0.2480	 0.0090
2	 0.2640	 0.0420
3	 0.1890	 0.0020
4	 0.3410	 0.0300
5	 0.3310	 0.0080
7	 0.2760	 -0.0280
A	 0.9260	 0.4910
B	 0.9280	 0.3460
C	 0.9700	 0.4480
E	 0.9600	 0.3550
F	 0.9400	 0.3750
G	 0.8110	 0.2260
H	 0.3280	 0.0810
I	 0.6230	 0.0850
J	 0.8550	 0.3550
L	 0.8380	 0.3330
M	 0.9220	 0.3990
N	 0.9740	 0.5010
O	 0.9330	 0.3810
P	 0.9530	 0.4970
Q	 0.3220	 0.0740
R	 0.9070	 0.4050
S	 0.9430	 0.2510
T	 0.9970	 0.6080
U	 0.7430	 0.3070
V	 0.7270	 0.2130
W	 0.3490	 0.1250
X	 0.8180	 0.2260
Y	 0.8710	 0.2490
Z	 0.6760	 0.1220
a	 0.7960	 0.1420
b	 0.8960	 0.1690
c	 0.7940	 0.1090
d	 0.8410	 0.0950



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Chain	Atom inclusion	Q-score
e	 0.8510	 0.1010
f	 0.8010	 0.1390
g	 0.9170	 0.2400
h	 0.0600	 0.0340
i	 0.0190	 -0.0070
j	 0.0200	 -0.0000
k	 0.0520	 -0.0180
l	 0.1610	 -0.0180
m	 0.1770	 0.0080
n	 0.1070	 -0.0200
o	 0.0370	 -0.0200
p	 0.0640	 -0.0240
q	 0.3500	 0.0400
r	 0.5180	 0.0530
s	 0.3980	 0.0820
t	 0.3260	 0.0430
y	 0.3230	 0.0340