Full wwPDB X-ray Structure Validation Report ⓘ

Dec 8, 2023 – 03:52 am GMT

PDB ID	:	2UV8
Title	:	Crystal structure of yeast fatty acid synthase with stalled acyl carrier protein at 3.1 angstrom resolution
Authors	:	Leibundgut, M.; Jenni, S.; Frick, C.; Ban, N.
Deposited on	:	2007-03-09
Resolution	:	3.10 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
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:

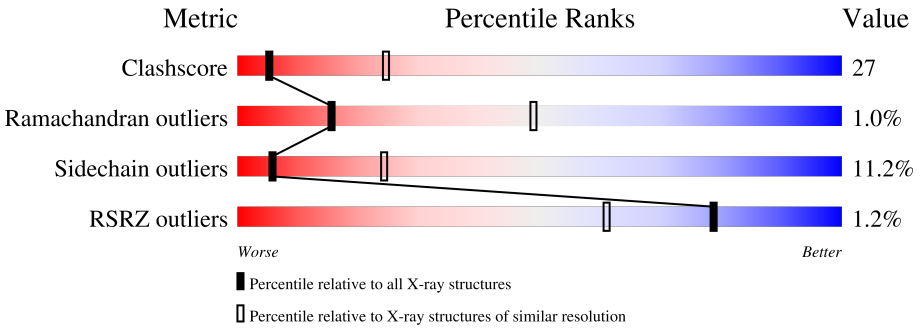
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	1184 (3.10-3.10)
Ramachandran outliers	138981	1141 (3.10-3.10)
Sidechain outliers	138945	1141 (3.10-3.10)
RSRZ outliers	127900	1067 (3.10-3.10)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower 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 <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	1887	2% 50% 31% 5% 14%
1	B	1887	% 51% 30% 5% 14%
1	C	1887	2% 49% 31% 5% 14%
2	G	2051	% 51% 41% 7% •
2	H	2051	% 52% 40% 7% •
2	I	2051	% 51% 41% 8% •

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 85962 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

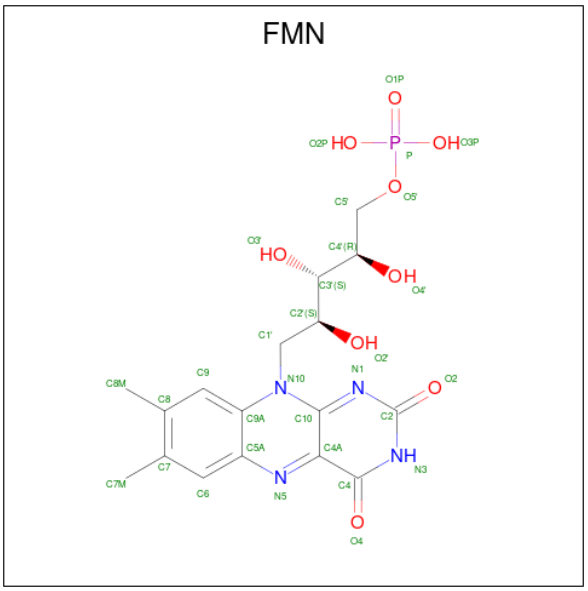
- Molecule 1 is a protein called FATTY ACID SYNTHASE SUBUNIT ALPHA (FAS2).

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	1614	Total	C	N	O	P	S	0	0	0
			12628	8003	2128	2448	1	48			
1	B	1614	Total	C	N	O	P	S	0	0	0
			12628	8003	2128	2448	1	48			
1	C	1614	Total	C	N	O	P	S	0	0	0
			12628	8003	2128	2448	1	48			

- Molecule 2 is a protein called FATTY ACID SYNTHASE SUBUNIT BETA (FAS1).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	G	2033	Total	C	N	O	S	0	0	0
			15995	10253	2660	3026	56			
2	H	2033	Total	C	N	O	S	0	0	0
			15995	10253	2660	3026	56			
2	I	2033	Total	C	N	O	S	0	0	0
			15995	10253	2660	3026	56			

- Molecule 3 is FLAVIN MONONUCLEOTIDE (three-letter code: FMN) (formula: $C_{17}H_{21}N_4O_9P$).



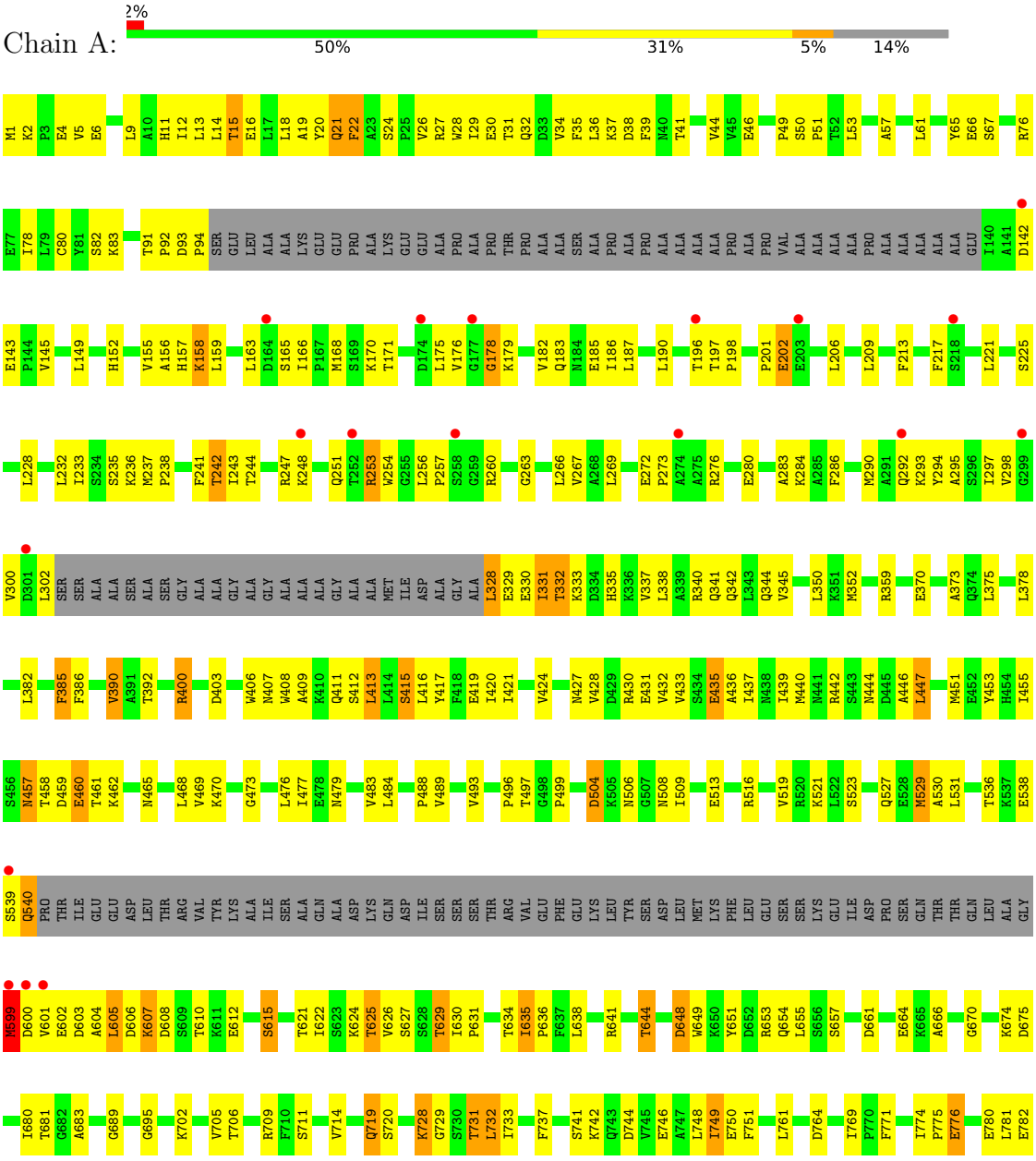
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	G	1	Total	C	N	O	P	0	0
			31	17	4	9	1		
3	H	1	Total	C	N	O	P	0	0
			31	17	4	9	1		
3	I	1	Total	C	N	O	P	0	0
			31	17	4	9	1		

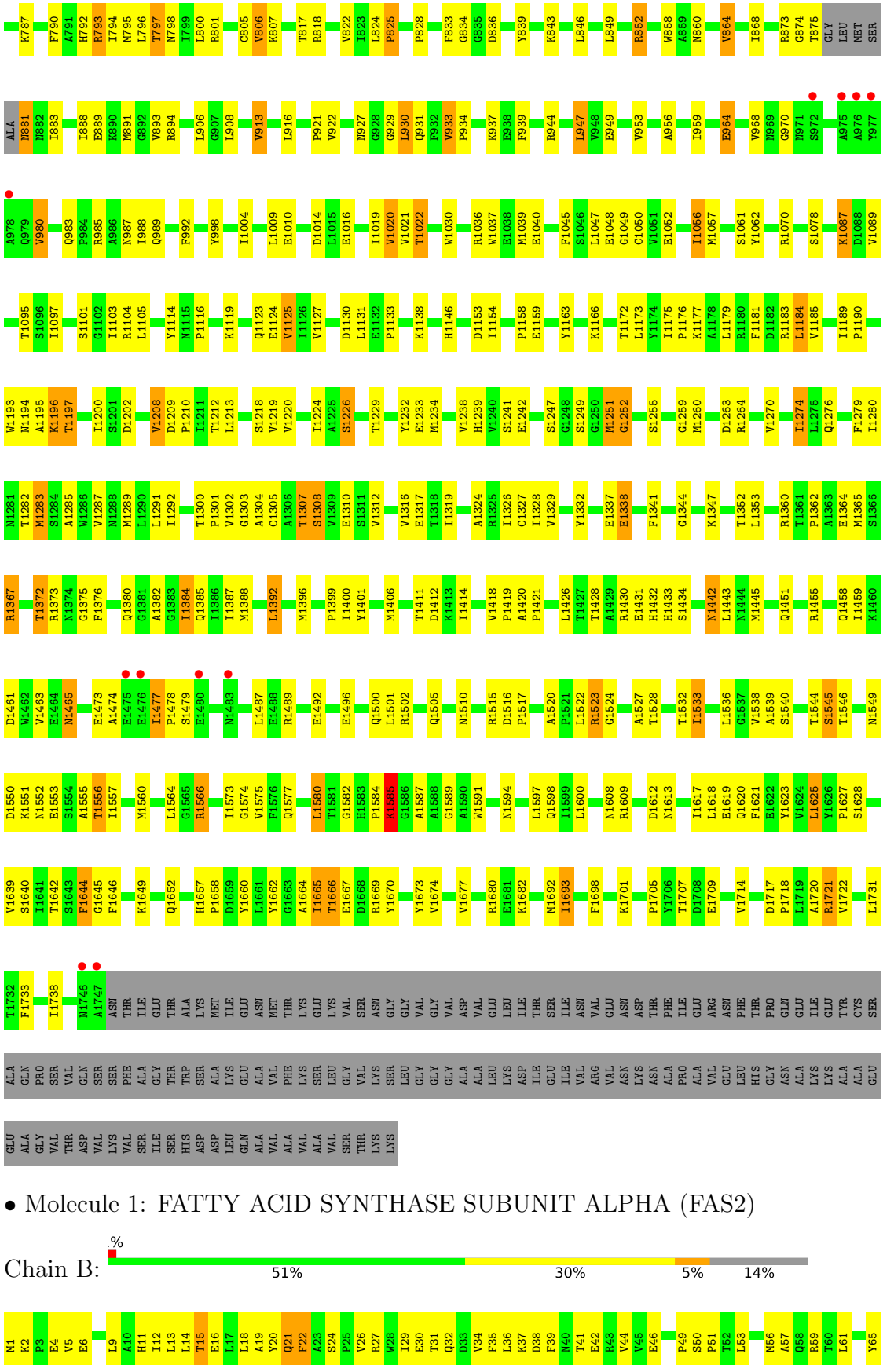
3 Residue-property plots (i)

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 electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

• Molecule 1: FATTY ACID SYNTHASE SUBUNIT ALPHA (FAS2)

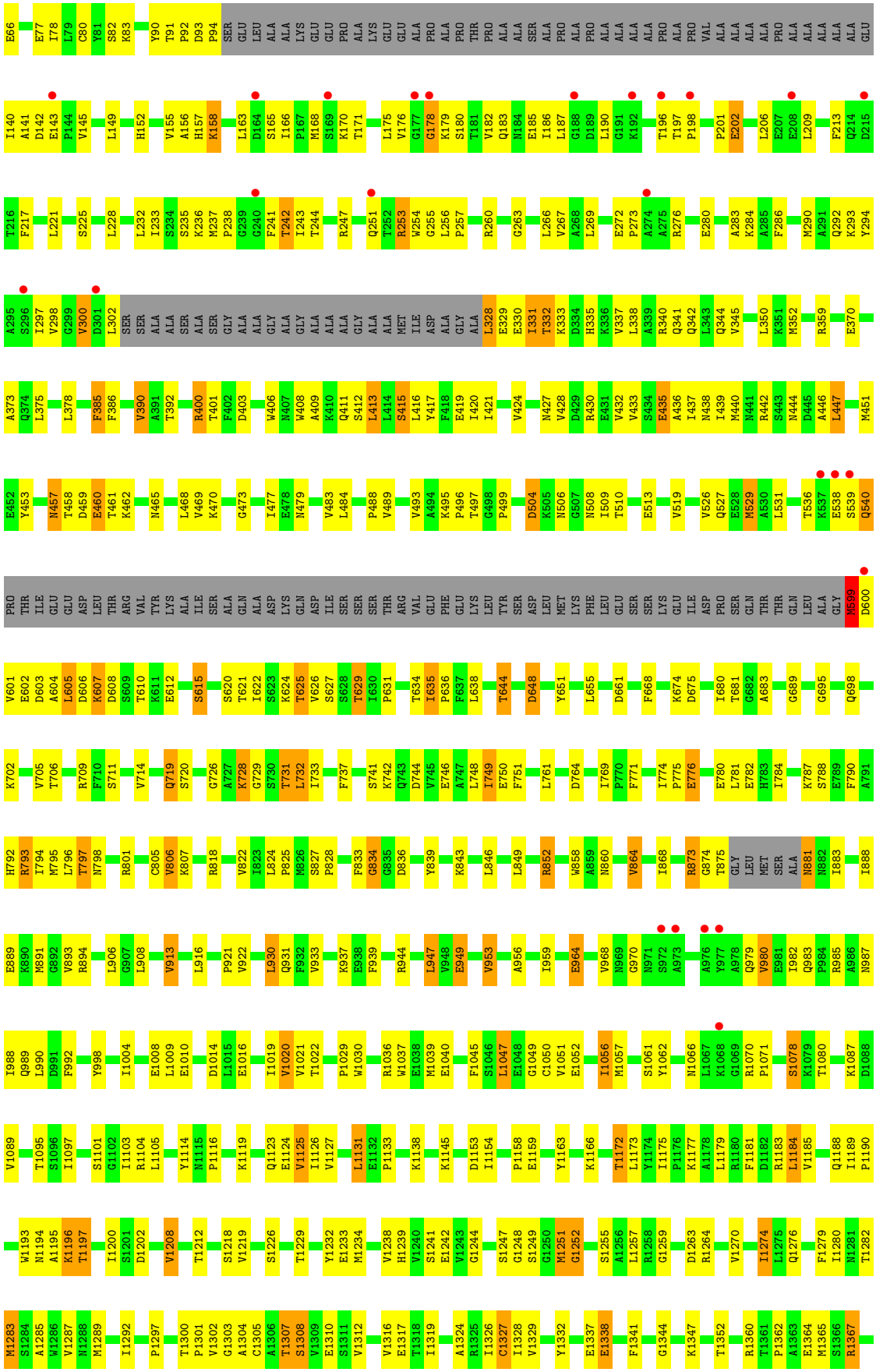
Chain A:

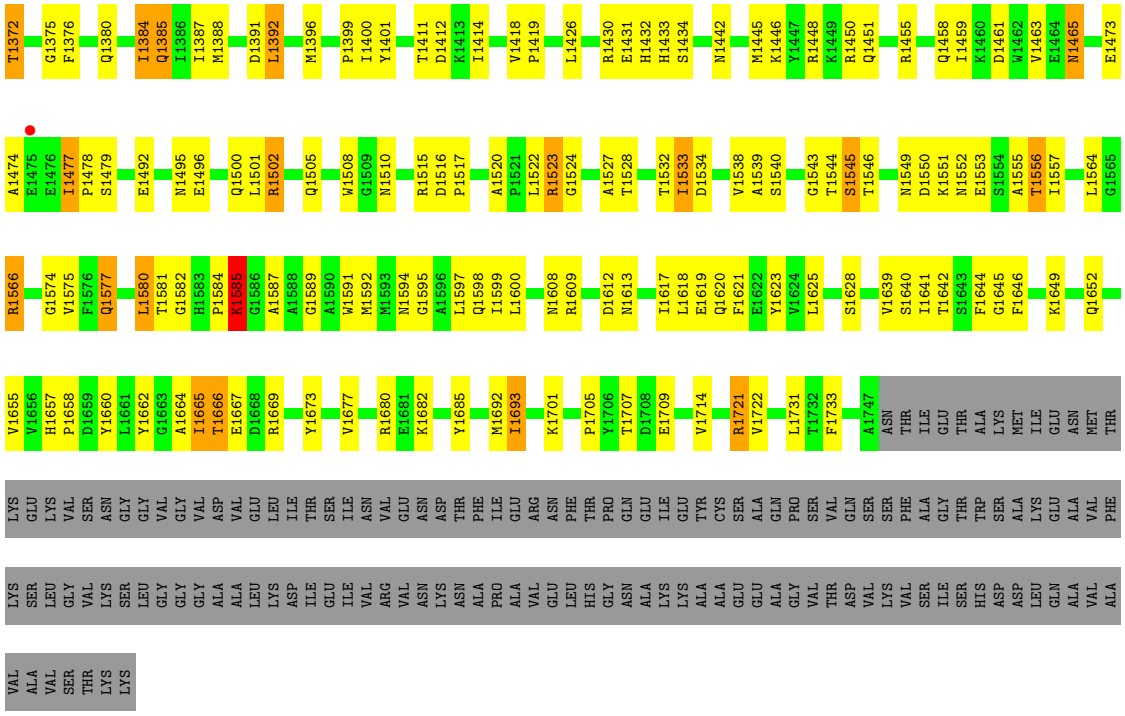




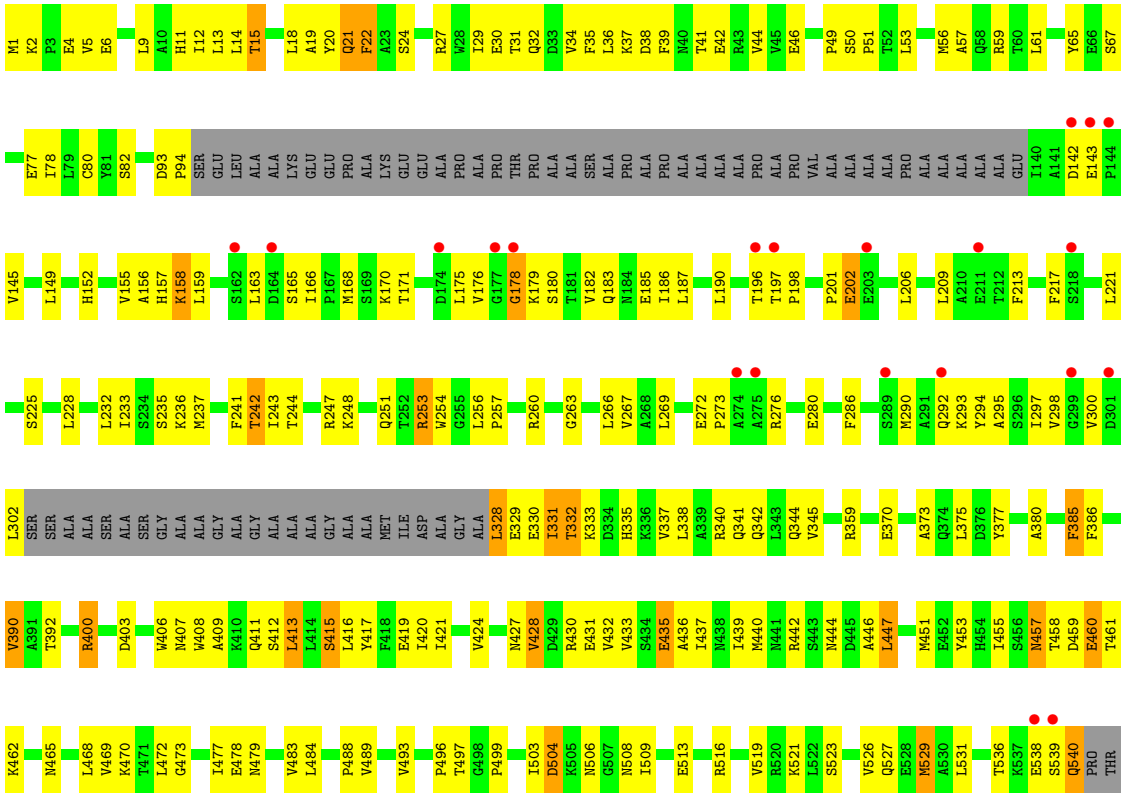
• Molecule 1: FATTY ACID SYNTHASE SUBUNIT ALPHA (FAS2)

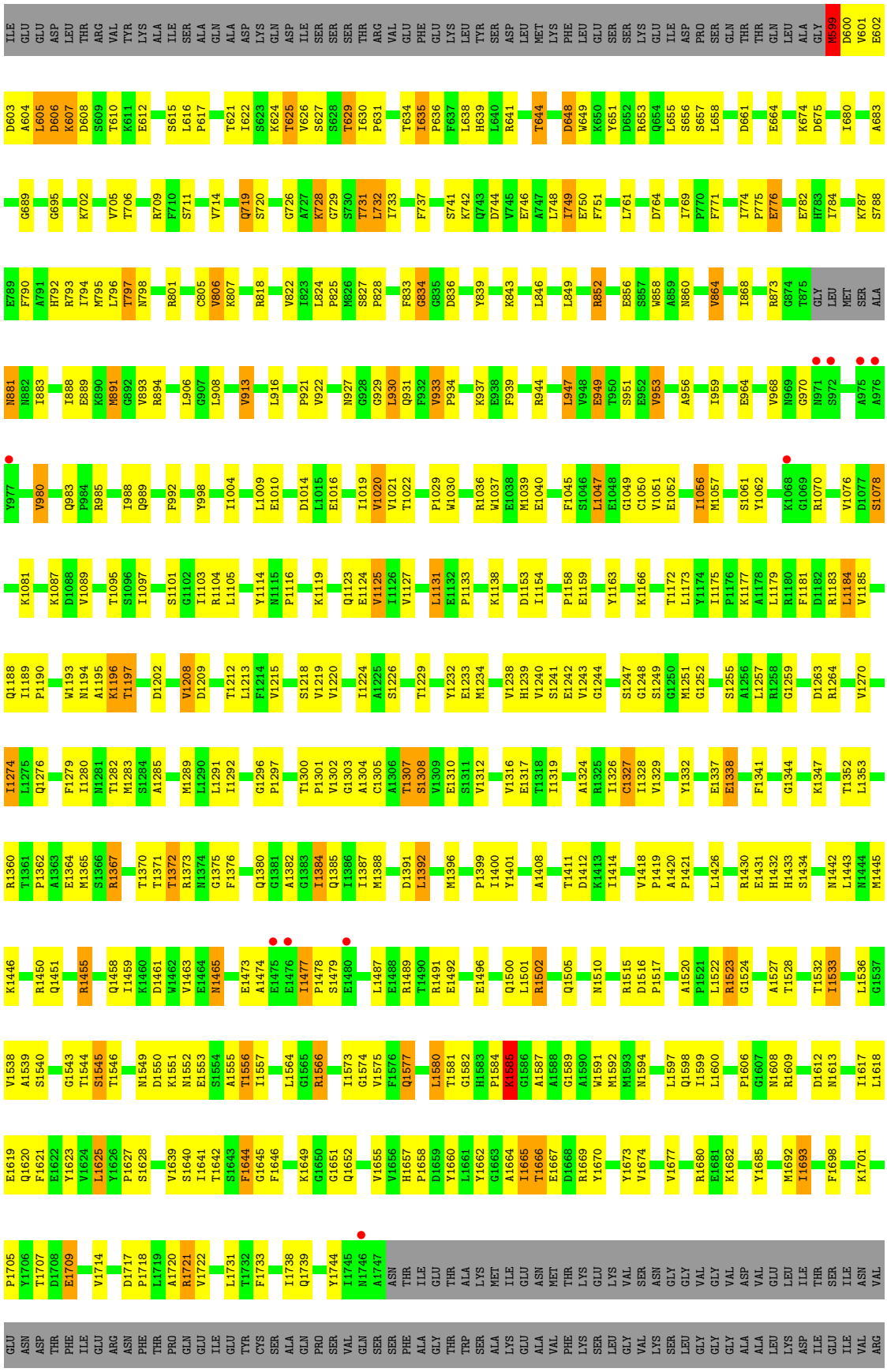
Chain B:





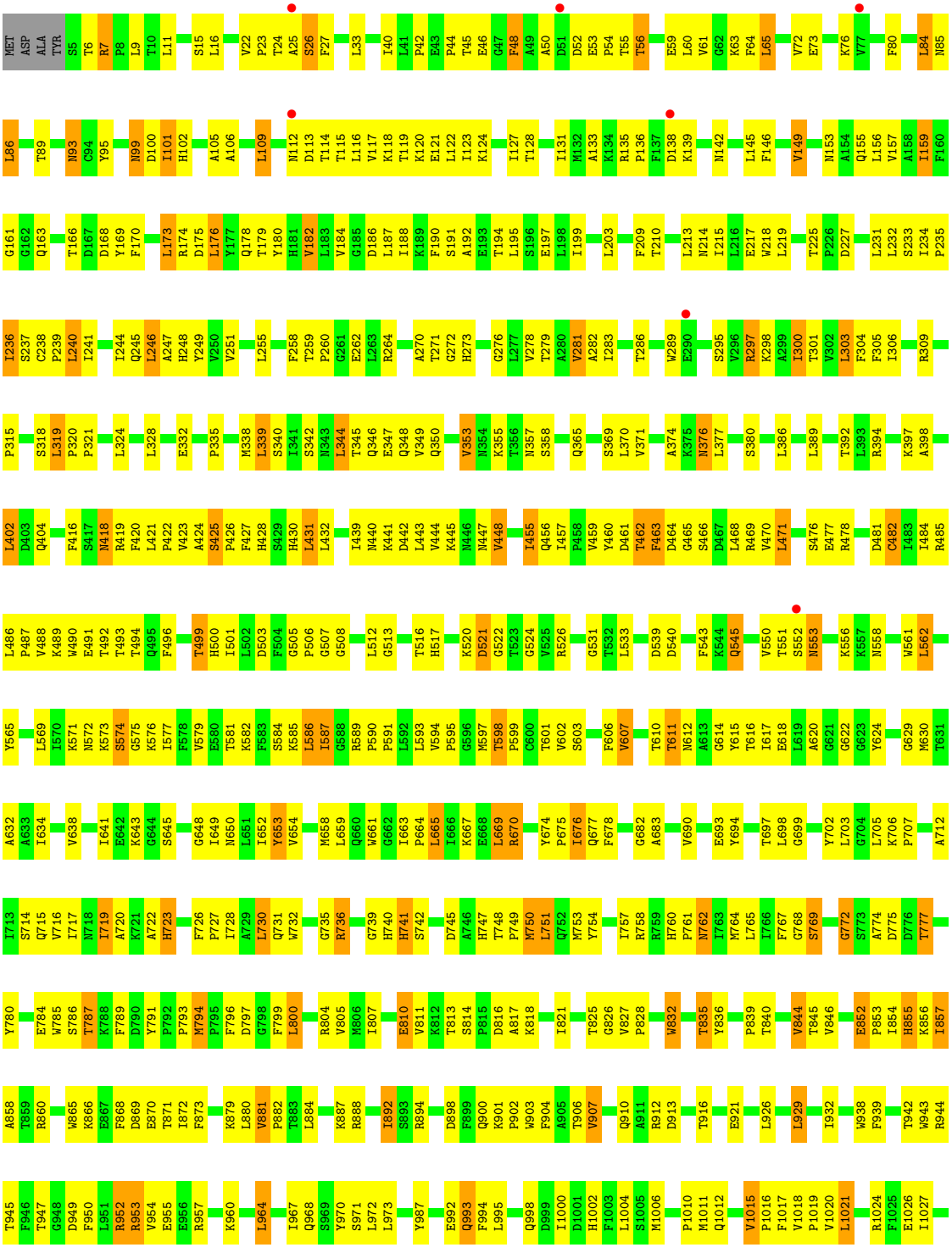
• Molecule 1: FATTY ACID SYNTHASE SUBUNIT ALPHA (FAS2)

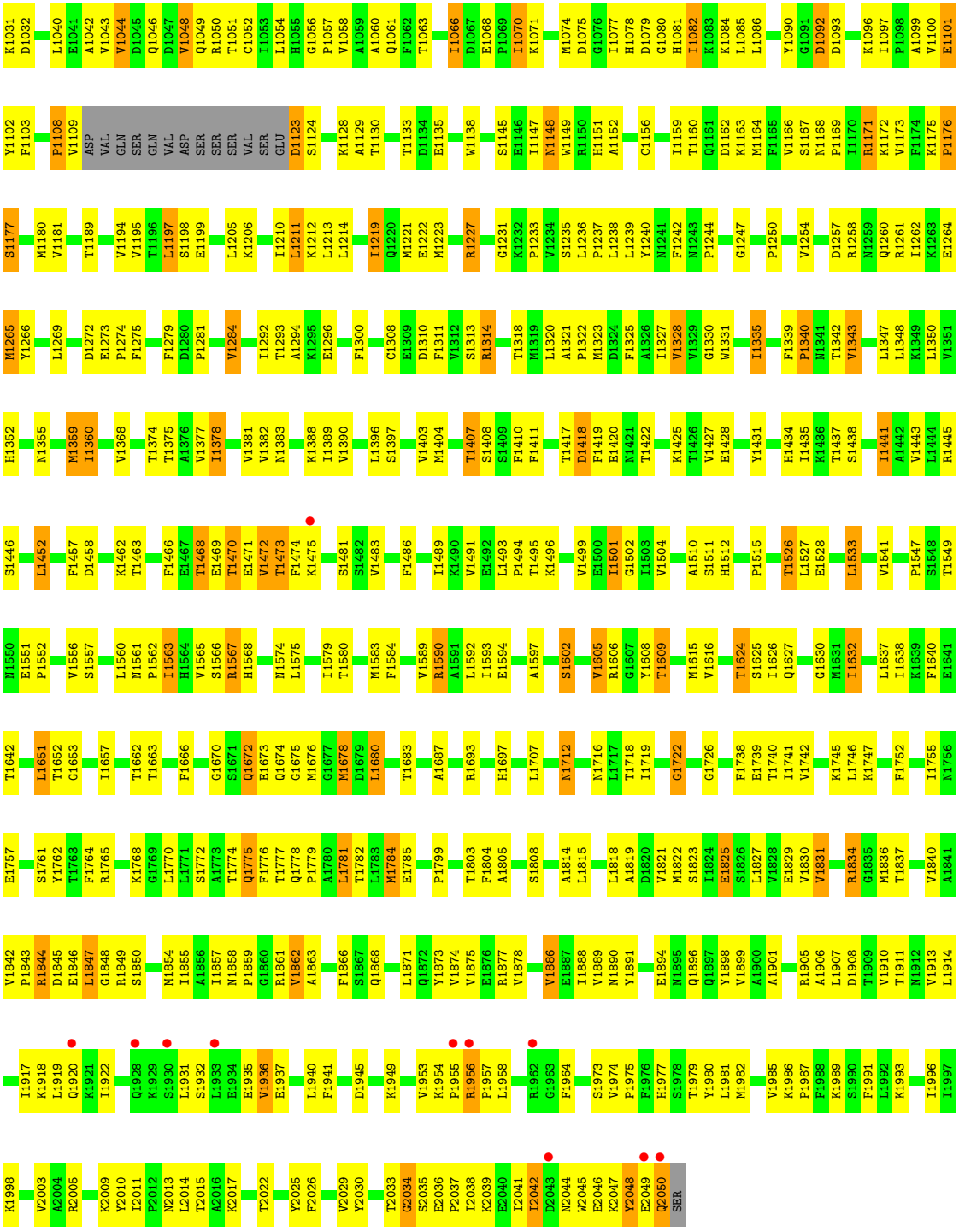




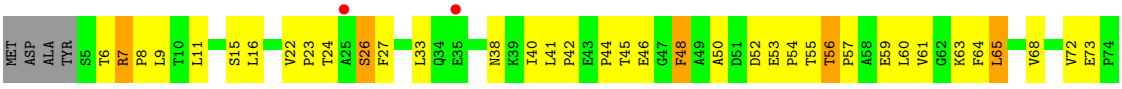
• Molecule 2: FATTY ACID SYNTHASE SUBUNIT BETA (FAS1)

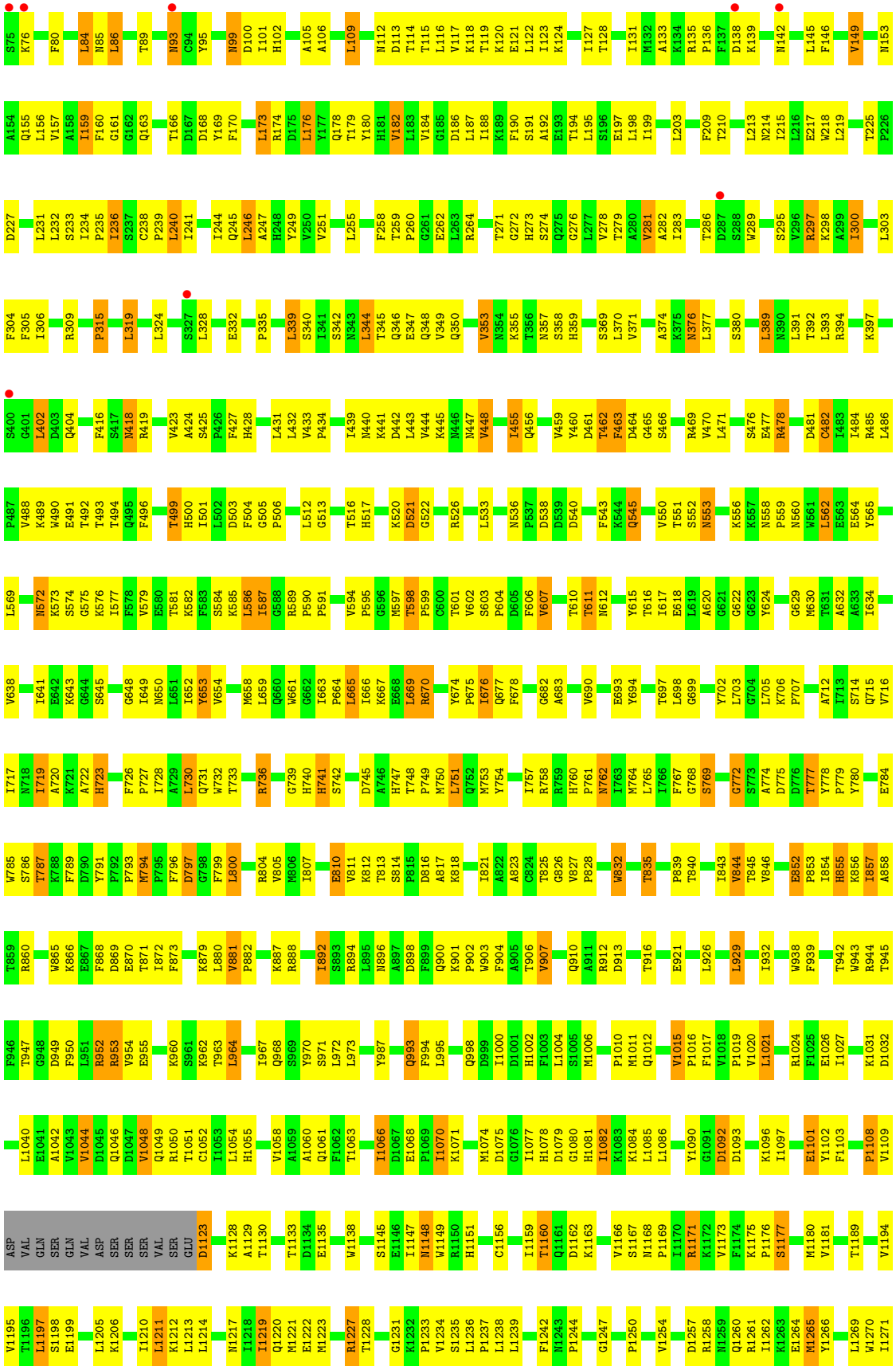
Chain G:

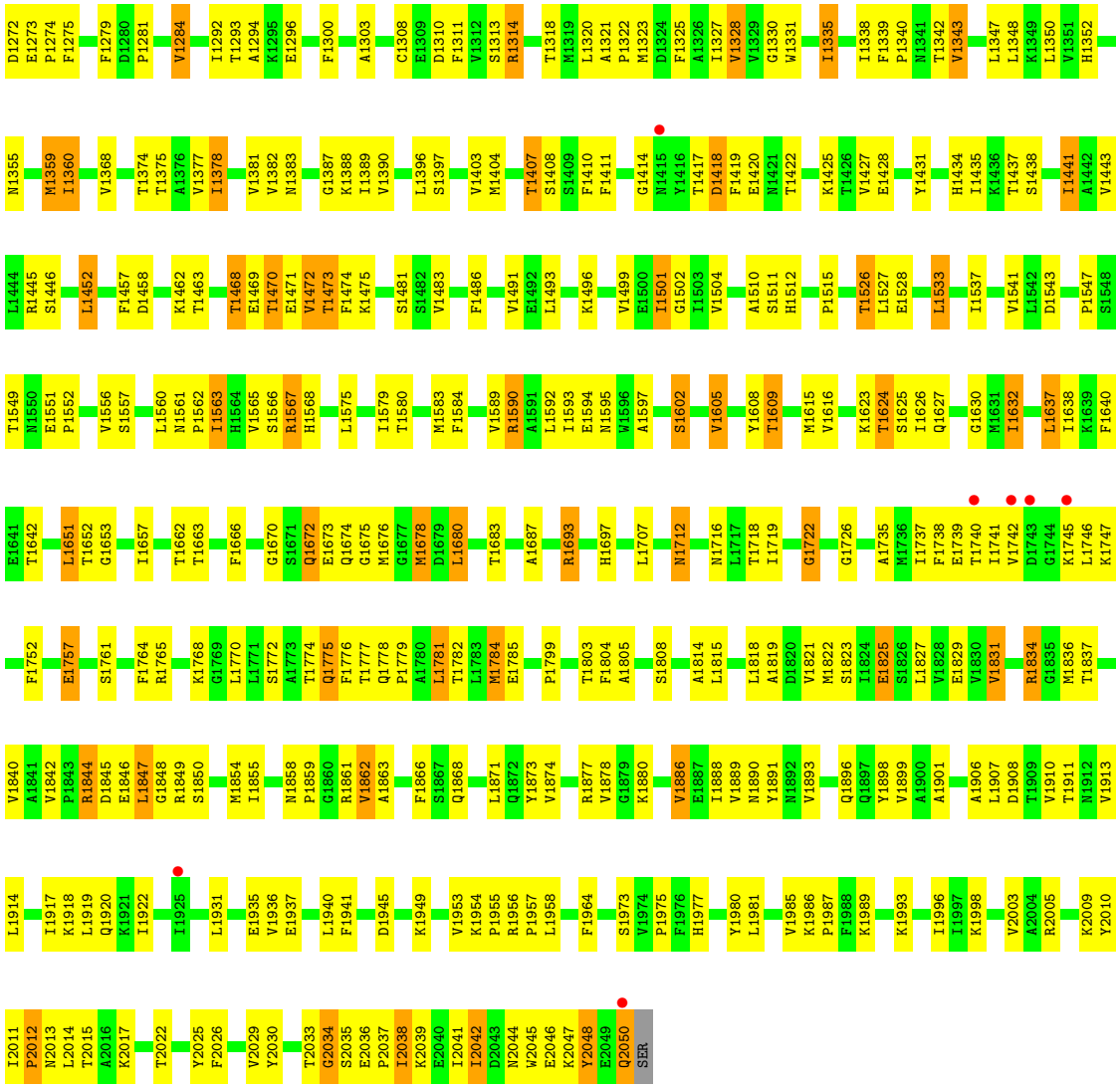




• Molecule 2: FATTY ACID SYNTHASE SUBUNIT BETA (FAS1)

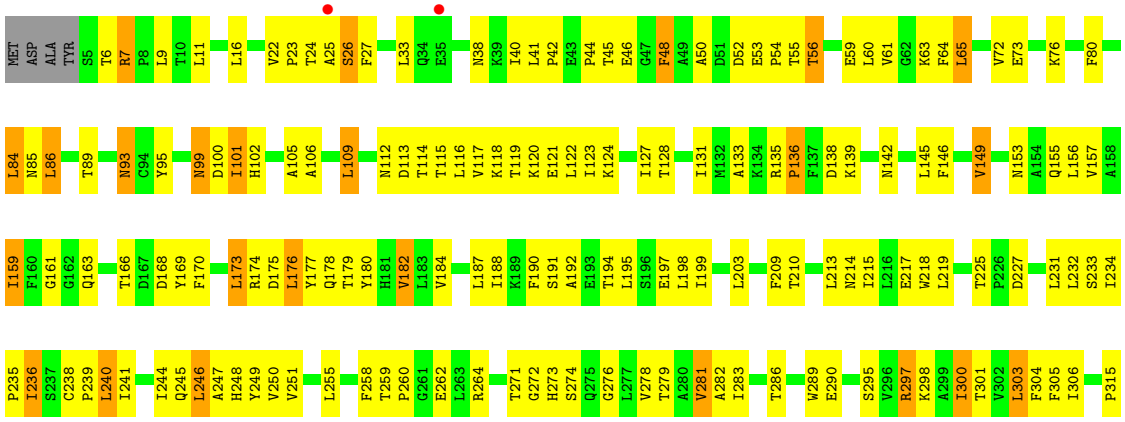


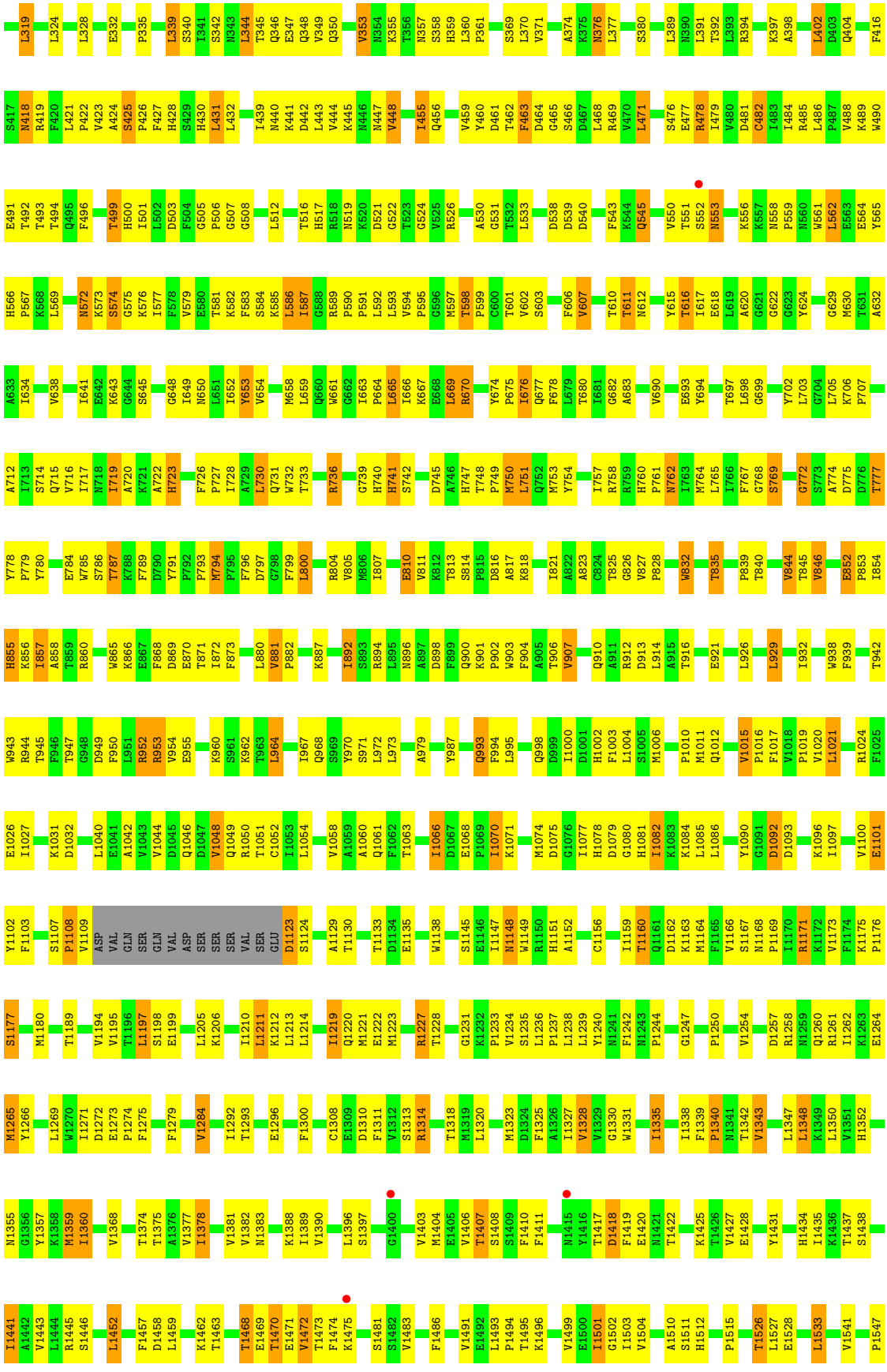


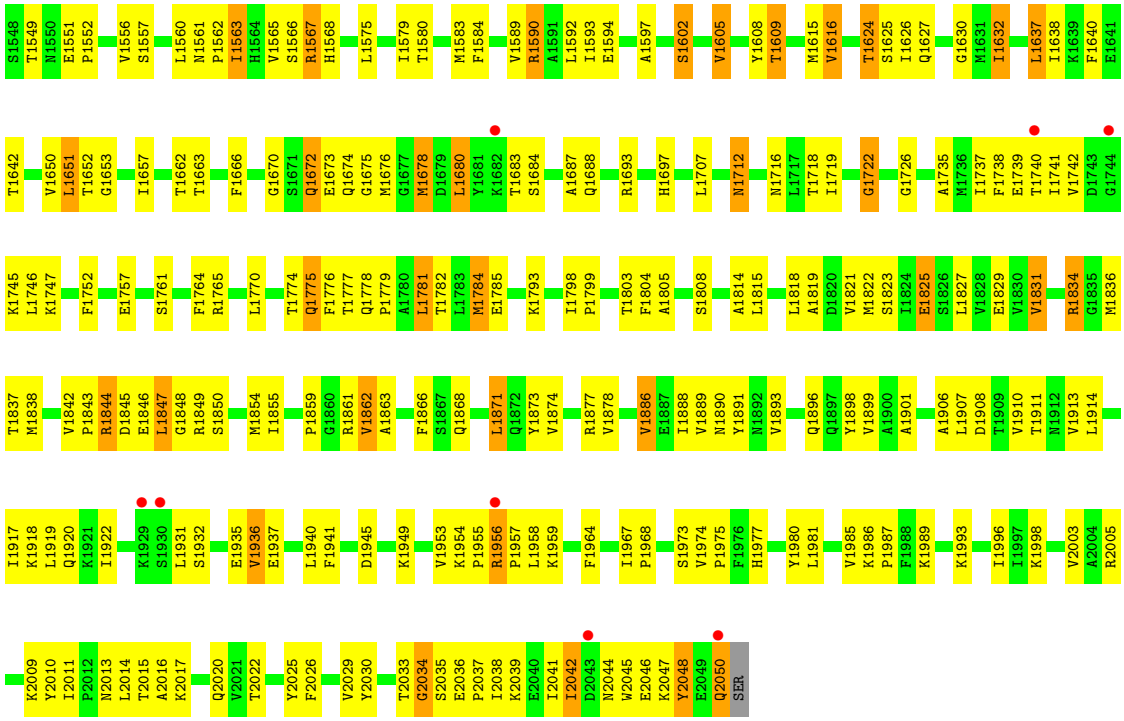


• Molecule 2: FATTY ACID SYNTHASE SUBUNIT BETA (FAS1)

Chain I:






S1548 T1549 N1550 E1551 P1552 V1556 S1557 L1560 N1561 P1562 I1563 H1564 V1565 S1566 R1567 H1568 L1575 I1579 T1580 M1583 F1584 V1589 R1590 A1591 L1592 I1593 E1594 A1597 S1602 V1605 Y1608 T1609 M1615 V1616 T1624 S1625 I1626 Q1627 G1630 M1631 I1632 L1637 I1638 K1639 F1640 E1641
T1642 V1650 L1651 T1652 G1653 I1657 T1662 T1663 F1666 G1670 S1671 Q1672 E1673 Q1674 G1675 M1676 G1677 M1678 D1679 L1680 Y1681 K1682 T1683 S1684 A1687 Q1688 R1693 H1697 L1707 N1712 N1716 L1717 T1718 I1719 G1722 G1726 A1735 M1736 I1737 F1738 E1739 T1740 I1741 V1742 D1743 G1744
K1745 L1746 K1747 F1752 E1757 S1761 F1764 R1765 L1770 T1774 Q1775 F1776 T1777 Q1778 P1779 A1780 L1781 T1782 L1783 M1784 E1785 K1793 I1798 P1799 T1803 F1804 A1805 S1808 A1814 L1815 L1818 A1819 D1820 V1821 M1822 S1823 I1824 E1825 S1826 L1827 V1828 E1829 V1830 V1831 R1834 G1835 M1836
T1837 M1838 V1842 P1843 R1844 D1845 E1846 L1847 G1848 R1849 S1850 M1854 I1855 P1859 G1860 R1861 V1862 A1863 F1866 S1867 Q1868 L1871 Q1872 Y1873 V1874 R1877 V1878 V1886 E1887 I1888 V1889 N1890 Y1891 N1892 V1893 Q1896 Q1897 Y1898 V1899 A1900 A1901 A1906 L1907 D1908 T1909 V1910 T1911 N1912 V1913 L1914
I1917 K1918 L1919 Q1920 K1921 I1922 K1929 S1930 L1931 S1932 E1935 V1936 E1937 L1940 F1941 D1945 K1949 V1953 K1954 P1955 R1956 P1957 L1958 K1959 F1964 I1967 P1968 S1973 V1974 P1975 F1976 H1977 Y1980 L1981 V1985 K1986 P1987 F1988 K1989 K1993 I1996 I1997 K1998 V2003 A2004 R2005
K2009 Y2010 I2011 P2012 N2013 L2014 T2015 A2016 K2017 Q2020 V2021 T2022 Y2025 F2026 V2029 Y2030 T2033 G2034 S2035 E2036 P2037 I2038 K2039 E2040 I2041 I2042 D2043 N2044 W2045 E2046 K2047 Y2048 E2049 Q2050 SER

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 41 21 2	Depositor
Cell constants a, b, c, α, β, γ	230.60Å 230.60Å 784.30Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	12.00 – 3.10 12.00 – 3.10	Depositor EDS
% Data completeness (in resolution range)	86.1 (12.00-3.10) 91.5 (12.00-3.10)	Depositor EDS
R_{merge}	0.11	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.94 (at 3.09Å)	Xtriage
Refinement program	PHENIX, PHENIX	Depositor
R, R_{free}	0.200 , 0.250 0.202 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	wwPDB-VP
Wilson B-factor (Å^2)	74.1	Xtriage
Anisotropy	0.124	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 50.3	EDS
L-test for twinning[2]	$< \|L\| > = 0.52$, $< L^2 > = 0.36$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	85962	wwPDB-VP
Average B, all atoms (Å^2)	73.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.36% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: FMN, GVL

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	0.41	0/12848	0.59	2/17358 (0.0%)
1	B	0.42	0/12848	0.59	2/17358 (0.0%)
1	C	0.41	0/12848	0.59	2/17358 (0.0%)
2	G	0.37	0/16360	0.56	0/22198
2	H	0.37	0/16360	0.57	0/22198
2	I	0.37	0/16360	0.56	0/22198
All	All	0.39	0/87624	0.58	6/118668 (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
2	G	0	1
2	H	0	1
2	I	0	1
All	All	0	3

There are no bond length outliers.

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	599	MET	N-CA-C	-6.92	92.32	111.00
1	B	599	MET	N-CA-C	-6.91	92.36	111.00
1	C	599	MET	N-CA-C	-6.90	92.36	111.00
1	B	540	GLN	N-CA-C	-5.67	95.69	111.00
1	C	540	GLN	N-CA-C	-5.63	95.81	111.00
1	A	540	GLN	N-CA-C	-5.63	95.81	111.00

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	G	1108	PRO	Peptide
2	H	1108	PRO	Peptide
2	I	1108	PRO	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	12628	0	12603	572	0
1	B	12628	0	12603	587	0
1	C	12628	0	12603	584	0
2	G	15995	0	15978	984	0
2	H	15995	0	15978	995	0
2	I	15995	0	15978	996	0
3	G	31	0	19	7	0
3	H	31	0	19	6	0
3	I	31	0	19	6	0
All	All	85962	0	85800	4562	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 27.

All (4562) 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)
2:I:1956:ARG:HB2	2:I:1957:PRO:HD3	1.23	1.21
2:G:499:THR:HB	2:G:500:HIS:HD2	1.07	1.16
2:G:1956:ARG:HB2	2:G:1957:PRO:HD3	1.23	1.14
2:H:490:TRP:HE1	2:H:516:THR:HG22	1.11	1.13
2:G:490:TRP:HE1	2:G:516:THR:HG22	1.12	1.13
1:B:253:ARG:HG3	1:B:254:TRP:HD1	1.17	1.10
2:H:601:THR:HG21	2:H:618:GLU:O	1.50	1.09
2:H:1834:ARG:HG2	2:H:1834:ARG:HH11	1.06	1.09
2:I:499:THR:HB	2:I:500:HIS:HD2	1.07	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1956:ARG:HB2	2:H:1957:PRO:HD3	1.24	1.09
2:I:601:THR:HG21	2:I:618:GLU:O	1.50	1.09
2:I:1834:ARG:HG2	2:I:1834:ARG:HH11	1.16	1.09
2:I:490:TRP:HE1	2:I:516:THR:HG22	1.10	1.09
2:G:1834:ARG:HG2	2:G:1834:ARG:HH11	1.16	1.08
2:G:1859:PRO:HG3	2:G:1871:LEU:HD12	1.29	1.08
2:H:499:THR:HB	2:H:500:HIS:HD2	1.10	1.08
1:A:1721:ARG:HG2	1:A:1721:ARG:HH11	1.16	1.08
2:I:297:ARG:HD3	2:I:447:ASN:HD21	1.15	1.07
2:G:601:THR:HG21	2:G:618:GLU:O	1.52	1.07
1:A:253:ARG:HG3	1:A:254:TRP:HD1	1.15	1.07
1:B:2:LYS:HD2	2:H:2050:GLN:HB3	1.36	1.07
1:C:253:ARG:HG3	1:C:254:TRP:HD1	1.15	1.06
1:C:852:ARG:HG2	1:C:852:ARG:HH11	1.14	1.06
2:I:1227:ARG:HH11	2:I:1227:ARG:HG3	1.18	1.06
2:H:1859:PRO:HG3	2:H:1871:LEU:HD12	1.38	1.05
1:B:1721:ARG:HH11	1:B:1721:ARG:HG2	1.20	1.05
1:A:1367:ARG:NH1	1:A:1372:THR:HB	1.72	1.05
1:B:1722:VAL:HG11	1:B:1731:LEU:HB3	1.37	1.05
1:C:1721:ARG:HG2	1:C:1721:ARG:HH11	1.20	1.05
2:H:1227:ARG:HH11	2:H:1227:ARG:HG3	1.19	1.05
2:G:7:ARG:HH21	2:G:27:PHE:HB3	1.22	1.04
1:C:1367:ARG:NH1	1:C:1372:THR:HB	1.71	1.04
2:H:7:ARG:HH21	2:H:27:PHE:HB3	1.22	1.04
2:H:297:ARG:HD3	2:H:447:ASN:HD21	1.16	1.03
1:A:1722:VAL:HG11	1:A:1731:LEU:HB3	1.41	1.03
1:C:1722:VAL:HG11	1:C:1731:LEU:HB3	1.37	1.02
1:B:1367:ARG:NH1	1:B:1372:THR:HB	1.73	1.02
2:G:1227:ARG:HG3	2:G:1227:ARG:HH11	1.18	1.02
1:A:852:ARG:HG2	1:A:852:ARG:HH11	1.23	1.02
1:A:599:MET:HB2	1:A:624:LYS:HD2	1.43	1.01
1:C:1219:VAL:HA	1:C:1384:ILE:HD11	1.40	1.01
1:C:1303:GLY:HA2	1:C:1649:LYS:HE2	1.42	1.01
2:G:297:ARG:HD3	2:G:447:ASN:HD21	1.18	1.01
2:I:762:ASN:H	2:I:762:ASN:HD22	1.08	1.01
1:B:852:ARG:HH11	1:B:852:ARG:HG2	1.20	1.01
2:G:835:THR:HG21	2:G:855:HIS:CD2	1.96	1.01
2:I:7:ARG:HH21	2:I:27:PHE:HB3	1.19	1.01
2:G:128:THR:HA	2:G:182:VAL:HG21	1.42	1.00
2:G:652:ILE:H	2:G:658:MET:HE3	1.20	1.00
2:G:499:THR:HB	2:G:500:HIS:CD2	1.97	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1739:GLU:HB2	2:I:1987:PRO:HB3	1.40	1.00
2:H:1739:GLU:HB2	2:H:1987:PRO:HB3	1.42	1.00
2:I:1859:PRO:HG3	2:I:1871:LEU:HD12	1.41	1.00
2:H:594:VAL:HB	2:H:617:ILE:HG13	1.44	0.99
1:A:2:LYS:HD2	2:G:2050:GLN:HB3	1.43	0.99
2:G:892:ILE:HD11	2:G:903:TRP:CE2	1.98	0.99
2:I:499:THR:HB	2:I:500:HIS:CD2	1.97	0.99
1:A:400:ARG:CG	1:A:400:ARG:HH11	1.76	0.99
2:H:1803:THR:HG22	2:H:2009:LYS:HA	1.45	0.99
1:A:253:ARG:HG3	1:A:254:TRP:CD1	1.98	0.98
1:A:1219:VAL:HA	1:A:1384:ILE:HD11	1.45	0.98
1:C:253:ARG:HG3	1:C:254:TRP:CD1	1.98	0.98
1:B:403:ASP:HB2	1:B:1613:ASN:HD21	1.29	0.98
2:G:1739:GLU:HB2	2:G:1987:PRO:HB3	1.43	0.98
2:H:499:THR:HB	2:H:500:HIS:CD2	1.99	0.97
2:G:1567:ARG:HH11	2:G:1567:ARG:HG3	1.29	0.97
2:H:1567:ARG:HG3	2:H:1567:ARG:HH11	1.27	0.97
1:B:1693:ILE:HD11	2:H:998:GLN:HB2	1.46	0.97
2:H:762:ASN:HD22	2:H:762:ASN:H	1.03	0.97
2:I:892:ILE:HD11	2:I:903:TRP:CE2	1.98	0.97
1:C:599:MET:HB2	1:C:624:LYS:HD2	1.43	0.97
2:G:762:ASN:H	2:G:762:ASN:HD22	1.03	0.97
1:A:198:PRO:HG3	1:A:209:LEU:HD21	1.47	0.97
2:I:490:TRP:NE1	2:I:516:THR:HG22	1.79	0.97
1:C:1693:ILE:HD11	2:I:998:GLN:HB2	1.42	0.97
1:B:599:MET:HB2	1:B:624:LYS:HD2	1.42	0.96
2:G:490:TRP:NE1	2:G:516:THR:HG22	1.81	0.96
2:I:835:THR:HG21	2:I:855:HIS:CD2	1.99	0.96
2:I:1567:ARG:HH11	2:I:1567:ARG:HG3	1.29	0.96
2:H:490:TRP:NE1	2:H:516:THR:HG22	1.81	0.96
2:I:594:VAL:HB	2:I:617:ILE:HG13	1.47	0.96
1:B:253:ARG:HG3	1:B:254:TRP:CD1	1.99	0.96
2:H:128:THR:HA	2:H:182:VAL:HG21	1.45	0.96
2:I:1567:ARG:HH11	2:I:1567:ARG:CG	1.78	0.96
1:B:1219:VAL:HA	1:B:1384:ILE:HD11	1.45	0.95
1:C:198:PRO:HG3	1:C:209:LEU:HD21	1.48	0.95
2:H:1567:ARG:HH11	2:H:1567:ARG:CG	1.78	0.95
2:I:932:ILE:HD11	2:I:1042:ALA:HB2	1.44	0.95
1:B:1303:GLY:HA2	1:B:1649:LYS:HE2	1.46	0.95
2:H:55:THR:HG22	2:H:56:THR:HG22	1.48	0.95
1:C:2:LYS:HD2	2:I:2050:GLN:HB3	1.47	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:652:ILE:H	2:I:658:MET:HE3	1.31	0.95
1:A:444:ASN:HB2	1:A:447:LEU:H	1.31	0.94
1:A:400:ARG:HH11	1:A:400:ARG:HG2	1.28	0.94
2:H:892:ILE:HD11	2:H:903:TRP:CE2	2.01	0.94
2:H:1314:ARG:HH11	2:H:1314:ARG:HG3	1.31	0.94
2:I:128:THR:HA	2:I:182:VAL:HG21	1.49	0.94
2:G:1878:VAL:HG11	2:G:1910:VAL:HG22	1.48	0.94
1:C:1523:ARG:HG3	1:C:1523:ARG:HH11	1.32	0.94
2:G:1567:ARG:HH11	2:G:1567:ARG:CG	1.80	0.94
2:G:1741:ILE:HD12	2:G:1986:LYS:HD2	1.47	0.94
1:C:400:ARG:HG2	1:C:400:ARG:HH11	1.33	0.94
2:I:1314:ARG:HG3	2:I:1314:ARG:HH11	1.32	0.94
1:B:444:ASN:HB2	1:B:447:LEU:H	1.31	0.94
2:G:1314:ARG:HH11	2:G:1314:ARG:HG3	1.32	0.94
1:B:529:MET:HA	1:B:529:MET:HE3	1.47	0.93
1:C:444:ASN:HB2	1:C:447:LEU:H	1.33	0.93
2:G:56:THR:HG23	2:G:59:GLU:HG3	1.50	0.93
2:H:1589:VAL:HA	2:H:1592:LEU:HD12	1.49	0.93
1:A:1303:GLY:HA2	1:A:1649:LYS:HE2	1.49	0.93
1:B:198:PRO:HG3	1:B:209:LEU:HD21	1.47	0.93
2:I:1878:VAL:HG11	2:I:1910:VAL:HG22	1.50	0.93
2:I:56:THR:HG23	2:I:59:GLU:HG3	1.49	0.93
2:I:1741:ILE:HD12	2:I:1986:LYS:HD2	1.49	0.93
2:G:594:VAL:HB	2:G:617:ILE:HG13	1.51	0.92
2:I:1589:VAL:HA	2:I:1592:LEU:HD12	1.51	0.92
2:H:1845:ASP:HB2	2:H:1849:ARG:H	1.34	0.92
1:B:400:ARG:HH11	1:B:400:ARG:CG	1.81	0.92
1:C:400:ARG:HH11	1:C:400:ARG:CG	1.81	0.92
1:C:793:ARG:HA	1:C:797:THR:HG23	1.52	0.92
2:G:1589:VAL:HA	2:G:1592:LEU:HD12	1.49	0.92
2:G:942:THR:HB	2:G:1012:GLN:HG2	1.50	0.92
2:G:1803:THR:HG22	2:G:2009:LYS:HA	1.48	0.92
1:C:1376:PHE:HB3	1:C:1544:THR:HG22	1.52	0.92
2:G:55:THR:HG22	2:G:56:THR:HG22	1.52	0.92
2:I:667:LYS:HD2	2:I:697:THR:HG22	1.51	0.92
1:C:152:HIS:CD2	1:C:163:LEU:HB2	2.05	0.92
2:I:55:THR:HG22	2:I:56:THR:HG22	1.51	0.91
2:I:942:THR:HB	2:I:1012:GLN:HG2	1.52	0.91
1:A:1523:ARG:HH11	1:A:1523:ARG:HG3	1.33	0.91
2:G:1845:ASP:HB2	2:G:1849:ARG:H	1.34	0.91
2:H:741:HIS:HE1	2:H:845:THR:CG2	1.82	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1352:HIS:HE1	2:H:1583:MET:HE2	1.34	0.91
2:I:707:PRO:HG3	2:I:716:VAL:HG21	1.52	0.91
1:A:335:HIS:CE1	1:C:335:HIS:HE1	1.89	0.91
1:A:403:ASP:HB2	1:A:1613:ASN:HD21	1.36	0.91
1:A:1367:ARG:HH12	1:A:1372:THR:HB	1.35	0.91
1:A:152:HIS:CD2	1:A:163:LEU:HB2	2.05	0.91
1:A:1279:PHE:HB2	1:A:1282:THR:HG23	1.52	0.90
1:A:1376:PHE:HB3	1:A:1544:THR:HG22	1.53	0.90
1:A:1721:ARG:HH11	1:A:1721:ARG:CG	1.84	0.90
1:B:1376:PHE:HB3	1:B:1544:THR:HG22	1.51	0.90
2:G:932:ILE:HD11	2:G:1042:ALA:HB2	1.51	0.90
1:B:1523:ARG:HH11	1:B:1523:ARG:HG3	1.36	0.90
2:H:942:THR:HB	2:H:1012:GLN:HG2	1.54	0.90
1:A:1693:ILE:HD11	2:G:998:GLN:HB2	1.51	0.90
2:H:903:TRP:O	2:H:906:THR:HG22	1.71	0.90
2:H:1741:ILE:HD12	2:H:1986:LYS:HD2	1.54	0.90
2:I:1441:ILE:HD11	2:I:1445:ARG:CZ	2.02	0.90
2:I:1803:THR:HG22	2:I:2009:LYS:HA	1.51	0.90
1:B:793:ARG:HA	1:B:797:THR:HG23	1.54	0.89
2:I:55:THR:HG21	2:I:113:ASP:HB2	1.53	0.89
1:A:793:ARG:HA	1:A:797:THR:HG23	1.53	0.89
1:C:403:ASP:HB2	1:C:1613:ASN:HD21	1.33	0.89
1:B:253:ARG:HE	1:B:254:TRP:HE1	1.21	0.89
1:C:253:ARG:HE	1:C:254:TRP:HE1	1.21	0.89
2:H:707:PRO:HG3	2:H:716:VAL:HG21	1.54	0.89
2:H:1878:VAL:HG11	2:H:1910:VAL:HG22	1.55	0.89
2:G:1352:HIS:HE1	2:G:1583:MET:HE2	1.36	0.89
1:B:1721:ARG:HH11	1:B:1721:ARG:CG	1.85	0.89
2:H:667:LYS:HD2	2:H:697:THR:HG22	1.55	0.89
2:I:1845:ASP:HB2	2:I:1849:ARG:H	1.38	0.89
1:B:152:HIS:CD2	1:B:163:LEU:HB2	2.08	0.89
1:B:260:ARG:HH12	1:B:300:VAL:HG21	1.38	0.89
1:A:529:MET:HA	1:A:529:MET:HE3	1.54	0.88
2:G:55:THR:HG21	2:G:113:ASP:HB2	1.52	0.88
2:H:1533:LEU:HD13	2:H:1630:GLY:HA2	1.56	0.88
2:G:741:HIS:HE1	2:G:845:THR:CG2	1.86	0.88
2:G:1847:LEU:H	2:G:1847:LEU:HD12	1.37	0.88
2:I:1352:HIS:HE1	2:I:1583:MET:HE2	1.36	0.88
2:G:835:THR:HB	2:G:845:THR:HG23	1.55	0.88
2:G:903:TRP:O	2:G:906:THR:HG22	1.74	0.88
2:G:1352:HIS:CE1	2:G:1583:MET:HE2	2.09	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:707:PRO:HG3	2:G:716:VAL:HG21	1.56	0.88
2:G:1441:ILE:HD11	2:G:1445:ARG:CZ	2.02	0.88
1:A:1584:PRO:HG3	1:A:1591:TRP:CZ3	2.09	0.88
2:G:667:LYS:HD2	2:G:697:THR:HG22	1.55	0.88
2:H:1441:ILE:HD11	2:H:1445:ARG:CZ	2.04	0.88
2:H:1847:LEU:HD12	2:H:1847:LEU:H	1.36	0.88
2:H:55:THR:HG21	2:H:113:ASP:HB2	1.53	0.87
1:C:1279:PHE:HB2	1:C:1282:THR:HG23	1.56	0.87
1:B:1584:PRO:HG3	1:B:1591:TRP:CZ3	2.08	0.87
2:G:369:SER:OG	2:G:380:SER:HB3	1.75	0.87
2:H:741:HIS:NE2	2:H:855:HIS:CE1	2.42	0.87
1:C:1721:ARG:HH11	1:C:1721:ARG:CG	1.87	0.87
1:A:340:ARG:NH1	1:A:344:GLN:HG2	1.88	0.87
1:C:1014:ASP:H	1:C:1510:ASN:HD21	1.23	0.87
1:B:893:VAL:HG11	1:B:930:LEU:HD23	1.55	0.87
2:G:741:HIS:HE1	2:G:845:THR:HG22	1.39	0.87
2:I:1227:ARG:HH11	2:I:1227:ARG:CG	1.87	0.86
1:A:1474:ALA:HA	1:A:1478:PRO:HG2	1.55	0.86
1:C:1367:ARG:HH12	1:C:1372:THR:HB	1.38	0.86
1:B:1367:ARG:HH12	1:B:1372:THR:HB	1.38	0.86
2:H:1739:GLU:HB3	2:H:1746:LEU:HD11	1.56	0.86
2:H:56:THR:HG23	2:H:59:GLU:HG3	1.54	0.86
2:I:298:LYS:HG2	2:I:448:VAL:HG22	1.56	0.86
2:I:1847:LEU:H	2:I:1847:LEU:HD12	1.40	0.86
1:A:253:ARG:HE	1:A:254:TRP:HE1	1.21	0.86
2:H:774:ALA:HB1	2:H:1081:HIS:HD2	1.41	0.86
2:H:1352:HIS:CE1	2:H:1583:MET:HE2	2.11	0.86
2:G:1425:LYS:HG2	2:G:1471:GLU:HG3	1.57	0.86
2:H:1844:ARG:CG	2:H:1844:ARG:HH11	1.89	0.86
2:H:835:THR:HG21	2:H:855:HIS:CD2	2.10	0.85
2:I:774:ALA:HB2	2:I:1077:ILE:HA	1.58	0.85
2:I:903:TRP:O	2:I:906:THR:HG22	1.76	0.85
1:B:1474:ALA:HA	1:B:1478:PRO:HG2	1.58	0.85
1:C:340:ARG:NH1	1:C:344:GLN:HG2	1.91	0.85
2:I:1352:HIS:CE1	2:I:1583:MET:HE2	2.10	0.85
1:B:340:ARG:NH1	1:B:344:GLN:HG2	1.91	0.85
1:A:893:VAL:HG11	1:A:930:LEU:HD23	1.58	0.85
1:C:529:MET:HA	1:C:529:MET:HE3	1.57	0.85
2:I:741:HIS:HE1	2:I:845:THR:CG2	1.88	0.85
1:A:335:HIS:CE1	1:C:335:HIS:CE1	2.64	0.85
2:H:741:HIS:CE1	2:H:845:THR:CG2	2.60	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1227:ARG:HH11	2:G:1227:ARG:CG	1.89	0.85
2:H:1672:GLN:HG2	2:H:1777:THR:HG23	1.59	0.85
2:H:1227:ARG:HH11	2:H:1227:ARG:CG	1.90	0.85
1:C:893:VAL:HG11	1:C:930:LEU:HD23	1.59	0.84
1:C:1474:ALA:HA	1:C:1478:PRO:HG2	1.57	0.84
2:G:1739:GLU:HB3	2:G:1746:LEU:HD11	1.59	0.84
2:H:777:THR:CG2	2:H:1081:HIS:NE2	2.40	0.84
1:C:31:THR:HG23	2:I:2011:ILE:HG21	1.58	0.84
2:H:297:ARG:HD3	2:H:447:ASN:ND2	1.91	0.84
1:B:1279:PHE:HB2	1:B:1282:THR:HG23	1.57	0.84
2:H:741:HIS:CE1	2:H:845:THR:HG22	2.11	0.84
2:I:297:ARG:HD3	2:I:447:ASN:ND2	1.92	0.84
1:B:400:ARG:HH11	1:B:400:ARG:HG2	1.40	0.84
1:C:1584:PRO:HG3	1:C:1591:TRP:CZ3	2.11	0.84
2:H:369:SER:OG	2:H:380:SER:HB3	1.78	0.84
2:I:369:SER:OG	2:I:380:SER:HB3	1.75	0.84
2:G:1834:ARG:HG2	2:G:1834:ARG:NH1	1.93	0.83
2:I:774:ALA:HB1	2:I:1081:HIS:HD2	1.43	0.83
2:I:1834:ARG:HG2	2:I:1834:ARG:NH1	1.92	0.83
2:I:1844:ARG:HG2	2:I:1844:ARG:HH11	1.42	0.83
2:H:995:LEU:HD23	2:H:1000:ILE:HD13	1.58	0.83
2:I:1739:GLU:HB3	2:I:1746:LEU:HD11	1.58	0.83
2:G:777:THR:CG2	2:G:1081:HIS:NE2	2.42	0.83
2:I:1533:LEU:HD13	2:I:1630:GLY:HA2	1.59	0.83
2:G:995:LEU:HD23	2:G:1000:ILE:HD13	1.60	0.83
2:H:932:ILE:HD11	2:H:1042:ALA:HB2	1.59	0.83
2:H:1425:LYS:HG2	2:H:1471:GLU:HG3	1.58	0.83
1:A:36:LEU:HD22	1:A:61:LEU:HD21	1.60	0.83
2:G:1533:LEU:HD13	2:G:1630:GLY:HA2	1.60	0.83
2:G:2038:ILE:HG22	2:G:2042:ILE:HD11	1.60	0.83
2:G:297:ARG:HD3	2:G:447:ASN:ND2	1.94	0.82
2:G:298:LYS:HG2	2:G:448:VAL:HG22	1.61	0.82
2:H:1844:ARG:HH11	2:H:1844:ARG:HG2	1.41	0.82
1:B:31:THR:HG23	2:H:2011:ILE:HG21	1.61	0.82
1:C:333:LYS:O	1:C:337:VAL:HG23	1.80	0.82
2:I:1931:LEU:HB3	2:I:1935:GLU:HG2	1.61	0.82
2:H:652:ILE:H	2:H:658:MET:HE3	1.42	0.82
2:I:124:LYS:HG2	2:I:179:THR:HA	1.62	0.82
2:I:1672:GLN:HG2	2:I:1777:THR:HG23	1.61	0.82
2:G:1284:VAL:HG13	2:G:1377:VAL:HG22	1.62	0.82
2:I:1425:LYS:HG2	2:I:1471:GLU:HG3	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1844:ARG:HH11	2:I:1844:ARG:CG	1.93	0.82
1:B:1189:ILE:HD12	1:B:1380:GLN:HG3	1.61	0.81
2:G:1931:LEU:HB3	2:G:1935:GLU:HG2	1.61	0.81
2:H:1931:LEU:HB3	2:H:1935:GLU:HG2	1.62	0.81
2:G:652:ILE:N	2:G:658:MET:HE3	1.95	0.81
2:H:1159:ILE:HG12	2:H:1168:ASN:HA	1.61	0.81
2:I:1242:PHE:HE2	2:I:1244:PRO:HG3	1.46	0.81
2:G:774:ALA:HB2	2:G:1077:ILE:HA	1.61	0.81
2:G:1293:THR:HG23	2:G:1296:GLU:H	1.44	0.81
2:I:598:THR:HG22	2:I:622:GLY:HA3	1.61	0.81
2:H:543:PHE:HB2	2:H:545:GLN:HE22	1.45	0.81
2:H:1149:TRP:HA	2:H:1242:PHE:CE1	2.15	0.81
2:I:345:THR:HG22	2:I:347:GLU:H	1.46	0.81
2:I:2038:ILE:HG22	2:I:2042:ILE:HD11	1.61	0.81
2:I:1693:ARG:HD2	2:I:1825:GLU:OE2	1.80	0.81
2:G:1678:MET:HE3	2:G:1707:LEU:HD22	1.62	0.81
2:H:85:ASN:HD22	2:H:135:ARG:HH11	1.26	0.81
2:I:85:ASN:HD22	2:I:135:ARG:HH11	1.28	0.81
2:I:741:HIS:HE1	2:I:845:THR:HG22	1.44	0.81
1:B:1014:ASP:H	1:B:1510:ASN:HD21	1.28	0.80
2:H:2038:ILE:HG22	2:H:2042:ILE:HD11	1.60	0.80
1:B:93:ASP:HB3	1:B:94:PRO:HD2	1.62	0.80
2:I:995:LEU:HD23	2:I:1000:ILE:HD13	1.60	0.80
2:H:741:HIS:HE1	2:H:845:THR:HG22	1.41	0.80
1:B:1030:TRP:CD1	1:B:1580:LEU:HD22	2.17	0.80
2:G:1352:HIS:HE1	2:G:1583:MET:CE	1.95	0.80
2:G:1672:GLN:HG2	2:G:1777:THR:HG23	1.61	0.80
1:A:340:ARG:HH12	1:A:344:GLN:HG2	1.44	0.80
1:A:1552:ASN:O	1:A:1556:THR:HG22	1.80	0.80
2:H:757:ILE:HG21	2:H:765:LEU:HD13	1.64	0.80
1:B:36:LEU:HD22	1:B:61:LEU:HD21	1.64	0.80
2:G:85:ASN:HD22	2:G:135:ARG:HH11	1.28	0.80
2:G:634:ILE:HD11	2:G:649:ILE:HD11	1.63	0.80
2:G:1314:ARG:HH11	2:G:1314:ARG:CG	1.95	0.80
2:G:1847:LEU:HD13	2:G:1849:ARG:HD2	1.62	0.80
2:I:777:THR:CG2	2:I:1081:HIS:NE2	2.43	0.80
1:A:333:LYS:O	1:A:337:VAL:HG23	1.81	0.80
1:C:852:ARG:HG2	1:C:852:ARG:NH1	1.93	0.80
2:G:131:ILE:HD12	2:G:182:VAL:HB	1.64	0.80
2:G:1956:ARG:CB	2:G:1957:PRO:HD3	2.10	0.80
1:A:93:ASP:HB3	1:A:94:PRO:HD2	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:400:ARG:HG2	1:A:400:ARG:NH1	1.91	0.80
2:G:1844:ARG:HH11	2:G:1844:ARG:CG	1.94	0.80
2:H:741:HIS:CE1	2:H:855:HIS:CE1	2.69	0.80
2:H:907:VAL:HG21	2:H:921:GLU:HG2	1.64	0.80
2:I:1159:ILE:HG12	2:I:1168:ASN:HA	1.63	0.80
2:I:345:THR:HB	2:I:348:GLN:H	1.46	0.80
2:I:543:PHE:HB2	2:I:545:GLN:HE22	1.46	0.80
2:G:774:ALA:HB1	2:G:1081:HIS:HD2	1.47	0.79
2:I:455:ILE:HD11	2:I:469:ARG:HD3	1.63	0.79
2:I:584:SER:HB3	2:I:591:PRO:HG3	1.63	0.79
2:G:1693:ARG:HD2	2:G:1825:GLU:OE2	1.81	0.79
2:G:1844:ARG:HH11	2:G:1844:ARG:HG2	1.46	0.79
2:I:1847:LEU:HD13	2:I:1849:ARG:HD2	1.64	0.79
2:H:1847:LEU:HD13	2:H:1849:ARG:HD2	1.63	0.79
2:I:259:THR:HG22	2:I:262:GLU:HG3	1.64	0.79
2:I:907:VAL:HG21	2:I:921:GLU:HG2	1.65	0.79
2:H:774:ALA:HB2	2:H:1077:ILE:HA	1.65	0.79
2:I:732:TRP:CG	2:I:750:MET:HE1	2.17	0.79
1:B:333:LYS:O	1:B:337:VAL:HG23	1.81	0.79
2:G:907:VAL:HG21	2:G:921:GLU:HG2	1.65	0.79
2:H:598:THR:HG22	2:H:622:GLY:HA3	1.64	0.79
2:H:1159:ILE:HG12	2:H:1169:PRO:HD3	1.64	0.79
2:G:543:PHE:HB2	2:G:545:GLN:HE22	1.46	0.79
2:H:1693:ARG:HD2	2:H:1825:GLU:OE2	1.83	0.79
2:I:238:CYS:HB2	2:I:239:PRO:HD3	1.65	0.79
1:B:198:PRO:HG3	1:B:209:LEU:CD2	2.13	0.79
2:G:741:HIS:CE1	2:G:845:THR:HG22	2.17	0.79
2:I:55:THR:CG2	2:I:113:ASP:HB2	2.12	0.79
2:I:1956:ARG:HB2	2:I:1957:PRO:CD	2.11	0.79
2:H:455:ILE:HD11	2:H:469:ARG:HD3	1.64	0.79
2:H:298:LYS:HG2	2:H:448:VAL:HG22	1.64	0.78
1:B:260:ARG:NH1	1:B:300:VAL:HG21	1.97	0.78
1:C:400:ARG:HG2	1:C:400:ARG:NH1	1.94	0.78
2:H:55:THR:CG2	2:H:113:ASP:HB2	2.13	0.78
1:B:1665:ILE:HG13	1:B:1669:ARG:HD3	1.66	0.78
2:H:960:LYS:HE2	2:H:960:LYS:HA	1.65	0.78
2:I:1293:THR:HG23	2:I:1296:GLU:H	1.47	0.78
1:C:340:ARG:HH12	1:C:344:GLN:HG2	1.49	0.78
1:A:328:LEU:O	1:A:331:ILE:HG22	1.84	0.78
2:G:345:THR:HG22	2:G:347:GLU:H	1.47	0.78
2:H:124:LYS:HG2	2:H:179:THR:HA	1.62	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1834:ARG:HG2	2:H:1834:ARG:NH1	1.86	0.78
2:I:192:ALA:HA	2:I:215:ILE:HD12	1.64	0.78
2:I:741:HIS:CE1	2:I:845:THR:HG22	2.18	0.78
2:I:1149:TRP:HA	2:I:1242:PHE:CE1	2.19	0.78
1:B:1722:VAL:CG1	1:B:1731:LEU:HB3	2.13	0.78
1:C:328:LEU:O	1:C:331:ILE:HG22	1.84	0.78
2:H:105:ALA:HB1	2:H:119:THR:HG23	1.65	0.78
1:C:93:ASP:HB3	1:C:94:PRO:HD2	1.65	0.77
2:G:960:LYS:HE2	2:G:960:LYS:HA	1.67	0.77
2:I:131:ILE:HD12	2:I:182:VAL:HB	1.66	0.77
2:I:741:HIS:NE2	2:I:855:HIS:CE1	2.52	0.77
2:I:1956:ARG:CB	2:I:1957:PRO:HD3	2.09	0.77
1:C:1523:ARG:HH11	1:C:1523:ARG:CG	1.96	0.77
2:G:55:THR:CG2	2:G:113:ASP:HB2	2.13	0.77
2:G:146:PHE:HA	2:G:149:VAL:CG1	2.15	0.77
2:G:1770:LEU:HD23	2:G:1776:PHE:CE2	2.20	0.77
1:A:198:PRO:HG3	1:A:209:LEU:CD2	2.14	0.77
1:A:1030:TRP:NE1	1:A:1580:LEU:HD22	1.99	0.77
1:B:335:HIS:HE1	1:C:335:HIS:CE1	2.02	0.77
2:G:839:PRO:HA	2:G:844:VAL:HG13	1.64	0.77
2:H:345:THR:HB	2:H:348:GLN:H	1.48	0.77
1:C:968:VAL:O	2:I:1512:HIS:HB2	1.85	0.77
2:I:634:ILE:HD11	2:I:649:ILE:HD11	1.66	0.77
2:I:1770:LEU:HD23	2:I:1776:PHE:CE2	2.19	0.77
1:B:1239:HIS:HD2	1:B:1241:SER:OG	1.67	0.77
1:A:31:THR:HG23	2:G:2011:ILE:HG21	1.66	0.77
1:A:1523:ARG:HH11	1:A:1523:ARG:CG	1.97	0.77
2:G:757:ILE:HG21	2:G:765:LEU:HD13	1.67	0.77
2:I:105:ALA:HB1	2:I:119:THR:HG23	1.67	0.77
2:I:1422:THR:CG2	2:I:1474:PHE:HB2	2.15	0.77
2:G:192:ALA:HA	2:G:215:ILE:HD12	1.67	0.77
2:G:1956:ARG:HB2	2:G:1957:PRO:CD	2.11	0.76
2:H:355:LYS:O	2:H:358:SER:HB3	1.85	0.76
2:I:355:LYS:O	2:I:358:SER:HB3	1.85	0.76
1:A:1276:GLN:O	1:A:1282:THR:HG21	1.85	0.76
1:A:1665:ILE:HG13	1:A:1669:ARG:HD3	1.66	0.76
1:C:1030:TRP:CD1	1:C:1580:LEU:HD22	2.20	0.76
1:C:1722:VAL:CG1	1:C:1731:LEU:HB3	2.14	0.76
2:H:1314:ARG:HH11	2:H:1314:ARG:CG	1.97	0.76
1:A:881:ASN:HA	1:A:944:ARG:NH2	2.00	0.76
2:G:7:ARG:NH2	2:G:27:PHE:HB3	1.99	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:707:PRO:CG	2:I:716:VAL:HG21	2.15	0.76
1:B:1030:TRP:NE1	1:B:1580:LEU:HD22	2.00	0.76
1:C:1239:HIS:HD2	1:C:1241:SER:OG	1.68	0.76
1:C:1030:TRP:NE1	1:C:1580:LEU:HD22	2.00	0.76
2:G:964:LEU:HD23	2:G:964:LEU:H	1.50	0.76
1:A:1239:HIS:HD2	1:A:1241:SER:OG	1.69	0.76
1:B:340:ARG:HH12	1:B:344:GLN:HG2	1.48	0.76
2:I:741:HIS:CE1	2:I:845:THR:CG2	2.68	0.76
2:I:1567:ARG:HG3	2:I:1567:ARG:NH1	2.00	0.76
1:A:1189:ILE:HD12	1:A:1380:GLN:HG3	1.68	0.76
2:G:355:LYS:O	2:G:358:SER:HB3	1.84	0.76
2:G:835:THR:HG22	2:G:845:THR:N	2.01	0.76
2:H:7:ARG:NH2	2:H:27:PHE:HB3	1.99	0.76
2:H:579:VAL:HG23	2:H:1078:HIS:CD2	2.21	0.76
1:B:980:VAL:HG21	2:H:952:ARG:HH21	1.49	0.76
1:C:198:PRO:HG3	1:C:209:LEU:CD2	2.15	0.76
1:C:985:ARG:NH1	2:I:953:ARG:CZ	2.48	0.76
1:C:1693:ILE:CD1	2:I:998:GLN:HB2	2.15	0.76
2:H:1129:ALA:HB2	2:H:1138:TRP:CZ3	2.21	0.76
2:I:1314:ARG:HH11	2:I:1314:ARG:CG	1.98	0.76
2:I:7:ARG:NH2	2:I:27:PHE:HB3	1.97	0.75
1:B:1523:ARG:HH11	1:B:1523:ARG:CG	1.98	0.75
2:G:1149:TRP:HA	2:G:1242:PHE:CE1	2.21	0.75
2:I:1284:VAL:HG13	2:I:1377:VAL:HG22	1.68	0.75
1:A:1014:ASP:H	1:A:1510:ASN:HD21	1.34	0.75
2:G:741:HIS:CE1	2:G:845:THR:CG2	2.69	0.75
2:H:259:THR:HG22	2:H:262:GLU:HG3	1.67	0.75
2:H:2015:THR:HG22	2:H:2017:LYS:H	1.51	0.75
1:B:1693:ILE:CD1	2:H:998:GLN:HB2	2.17	0.75
2:H:192:ALA:HA	2:H:215:ILE:HD12	1.68	0.75
2:I:902:PRO:HG2	2:I:929:LEU:HD21	1.68	0.75
1:A:1310:GLU:OE1	1:A:1649:LYS:HE3	1.86	0.75
1:B:1208:VAL:HG13	1:B:1212:THR:HB	1.68	0.75
2:G:598:THR:HG22	2:G:622:GLY:HA3	1.67	0.75
2:G:1159:ILE:HG12	2:G:1168:ASN:HA	1.67	0.75
2:G:345:THR:HB	2:G:348:GLN:H	1.50	0.75
2:G:2015:THR:HG22	2:G:2017:LYS:H	1.51	0.75
2:H:1293:THR:HG23	2:H:1296:GLU:H	1.49	0.75
1:C:1665:ILE:HG13	1:C:1669:ARG:HD3	1.66	0.75
2:G:455:ILE:HD11	2:G:469:ARG:HD3	1.66	0.75
2:H:598:THR:OG1	2:H:599:PRO:HD3	1.86	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:943:TRP:CH2	2:I:1016:PRO:HG3	2.21	0.75
2:I:1310:ASP:OD2	2:I:1602:SER:HB3	1.87	0.75
2:I:1352:HIS:HE1	2:I:1583:MET:CE	1.99	0.75
1:A:427:ASN:HD21	1:A:610:THR:H	1.35	0.74
1:B:968:VAL:HG23	2:H:1515:PRO:HG3	1.67	0.74
1:C:1189:ILE:HD12	1:C:1380:GLN:HG3	1.68	0.74
2:I:2015:THR:HG22	2:I:2017:LYS:H	1.51	0.74
1:B:1552:ASN:O	1:B:1556:THR:HG22	1.88	0.74
1:A:1030:TRP:CD1	1:A:1580:LEU:HD22	2.21	0.74
2:G:572:ASN:HB3	2:G:576:LYS:H	1.52	0.74
2:H:455:ILE:HD11	2:H:469:ARG:CD	2.17	0.74
2:H:943:TRP:CH2	2:H:1016:PRO:HG3	2.22	0.74
2:H:1770:LEU:HD23	2:H:1776:PHE:CE2	2.21	0.74
2:I:138:ASP:O	2:I:139:LYS:HG3	1.87	0.74
2:I:1889:VAL:HG13	2:I:1977:HIS:HB2	1.70	0.74
2:H:1672:GLN:HA	2:H:1676:MET:CE	2.18	0.74
1:A:655:LEU:HD22	1:A:916:LEU:HD11	1.68	0.74
1:C:36:LEU:HD22	1:C:61:LEU:HD21	1.68	0.74
1:B:335:HIS:CE1	1:C:335:HIS:CE1	2.75	0.74
2:H:584:SER:HB3	2:H:591:PRO:HG3	1.67	0.74
2:H:1284:VAL:HG13	2:H:1377:VAL:HG22	1.69	0.74
2:I:960:LYS:HE2	2:I:960:LYS:HA	1.67	0.74
1:B:964:GLU:HG2	2:H:1515:PRO:HB3	1.69	0.74
2:I:741:HIS:CE1	2:I:855:HIS:CE1	2.76	0.74
1:C:260:ARG:HH12	1:C:300:VAL:HG21	1.52	0.74
2:G:259:THR:HG22	2:G:262:GLU:HG3	1.68	0.74
2:G:705:LEU:HD12	2:G:716:VAL:HG13	1.70	0.74
2:I:1159:ILE:HG12	2:I:1169:PRO:HD3	1.68	0.74
1:B:1551:LYS:HD2	1:B:1617:ILE:HG21	1.70	0.74
1:C:1552:ASN:O	1:C:1556:THR:HG22	1.88	0.74
2:H:1242:PHE:HE2	2:H:1244:PRO:HG3	1.51	0.74
2:H:1956:ARG:HB2	2:H:1957:PRO:CD	2.13	0.74
1:B:328:LEU:O	1:B:331:ILE:HG22	1.86	0.73
1:B:400:ARG:HG2	1:B:400:ARG:NH1	2.00	0.73
2:G:194:THR:HG23	2:G:300:ILE:HD11	1.70	0.73
2:G:584:SER:HB3	2:G:591:PRO:HG3	1.70	0.73
2:I:7:ARG:NH1	2:I:24:THR:HG23	2.03	0.73
2:I:757:ILE:HG21	2:I:765:LEU:HD13	1.69	0.73
1:B:1376:PHE:CB	1:B:1544:THR:HG22	2.18	0.73
2:G:777:THR:HG22	2:G:1081:HIS:NE2	2.03	0.73
2:H:579:VAL:HG23	2:H:1078:HIS:NE2	2.03	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:572:ASN:HB3	2:I:576:LYS:H	1.52	0.73
2:I:1129:ALA:HB2	2:I:1138:TRP:CZ3	2.22	0.73
1:C:881:ASN:HA	1:C:944:ARG:NH2	2.01	0.73
2:H:84:LEU:HD13	2:H:133:ALA:HB2	1.69	0.73
2:H:1194:VAL:HG22	2:H:1212:LYS:HB3	1.70	0.73
2:H:1265:MET:HE1	2:H:1562:PRO:HG2	1.68	0.73
2:H:1331:TRP:CZ2	2:H:1335:ILE:HG13	2.23	0.73
2:G:124:LYS:HG2	2:G:179:THR:HA	1.70	0.73
2:I:1784:MET:HG3	2:I:1785:GLU:N	2.02	0.73
2:I:2035:SER:HB3	2:I:2038:ILE:HG13	1.70	0.73
2:H:345:THR:HG22	2:H:347:GLU:H	1.51	0.73
2:I:455:ILE:HD11	2:I:469:ARG:CD	2.19	0.73
2:G:7:ARG:HH21	2:G:27:PHE:CB	2.01	0.73
2:G:7:ARG:NH1	2:G:24:THR:HG23	2.03	0.73
1:A:44:VAL:CG1	1:A:78:ILE:HG12	2.18	0.73
1:B:749:ILE:HD13	1:B:806:VAL:HG12	1.71	0.73
1:C:1551:LYS:HD2	1:C:1617:ILE:HG21	1.70	0.73
2:G:105:ALA:HB1	2:G:119:THR:HG23	1.70	0.73
2:H:131:ILE:HD12	2:H:182:VAL:HB	1.71	0.73
1:A:1551:LYS:HD2	1:A:1617:ILE:HG21	1.70	0.73
1:C:67:SER:OG	2:H:359:HIS:HE1	1.70	0.73
2:G:1638:ILE:HD12	2:G:1657:ILE:HD12	1.71	0.73
2:G:1680:LEU:HD13	2:G:1687:ALA:HB2	1.71	0.73
2:H:572:ASN:HB3	2:H:576:LYS:H	1.54	0.73
1:B:1153:ASP:OD2	1:C:359:ARG:NH2	2.22	0.73
2:H:1956:ARG:CB	2:H:1957:PRO:HD3	2.11	0.73
1:A:335:HIS:HE1	1:B:335:HIS:CE1	2.06	0.72
1:C:749:ILE:HD13	1:C:806:VAL:HG12	1.70	0.72
2:H:7:ARG:NH1	2:H:24:THR:HG23	2.03	0.72
2:H:194:THR:HG23	2:H:300:ILE:HD11	1.71	0.72
2:I:777:THR:HG22	2:I:1081:HIS:NE2	2.04	0.72
2:I:835:THR:HB	2:I:845:THR:HG23	1.71	0.72
1:A:833:PHE:HA	1:A:937:LYS:HD2	1.71	0.72
2:H:238:CYS:HB2	2:H:239:PRO:HD3	1.71	0.72
2:H:1680:LEU:HD13	2:H:1687:ALA:HB2	1.71	0.72
2:I:84:LEU:HD13	2:I:133:ALA:HB2	1.71	0.72
1:A:1208:VAL:HG13	1:A:1212:THR:HB	1.70	0.72
1:C:1376:PHE:CB	1:C:1544:THR:HG22	2.19	0.72
2:G:598:THR:OG1	2:G:599:PRO:HD3	1.89	0.72
2:H:856:LYS:HG2	2:H:1054:LEU:HD12	1.72	0.72
2:H:1784:MET:HG3	2:H:1785:GLU:N	2.03	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:7:ARG:HH21	2:I:27:PHE:CB	1.99	0.72
2:I:707:PRO:HG3	2:I:716:VAL:CG2	2.19	0.72
2:I:1331:TRP:CZ2	2:I:1335:ILE:HG13	2.25	0.72
1:B:473:GLY:O	1:B:477:ILE:HG13	1.89	0.72
1:C:655:LEU:HD22	1:C:916:LEU:HD11	1.71	0.72
2:H:705:LEU:HD12	2:H:716:VAL:HG13	1.70	0.72
2:I:1672:GLN:HA	2:I:1676:MET:CE	2.20	0.72
1:B:44:VAL:CG1	1:B:78:ILE:HG12	2.18	0.72
1:A:1279:PHE:HB2	1:A:1282:THR:CG2	2.19	0.72
2:G:1269:LEU:O	2:G:1560:LEU:HD23	1.90	0.72
1:A:411:GLN:HE22	1:A:1628:SER:H	1.34	0.72
1:C:473:GLY:O	1:C:477:ILE:HG13	1.88	0.72
1:C:733:ILE:HD13	1:C:761:LEU:HD11	1.72	0.72
1:C:427:ASN:HD21	1:C:610:THR:H	1.35	0.72
2:G:238:CYS:HB2	2:G:239:PRO:HD3	1.71	0.72
2:G:707:PRO:CG	2:G:716:VAL:HG21	2.20	0.72
2:G:1310:ASP:OD2	2:G:1602:SER:HB3	1.90	0.72
2:H:138:ASP:O	2:H:139:LYS:HG3	1.90	0.72
2:H:777:THR:HG22	2:H:1081:HIS:NE2	2.04	0.72
2:I:194:THR:HG23	2:I:300:ILE:HD11	1.70	0.72
1:B:254:TRP:CZ3	1:B:302:LEU:HD13	2.25	0.72
2:H:109:LEU:HD11	2:H:116:LEU:HD23	1.72	0.72
2:H:146:PHE:HA	2:H:149:VAL:CG1	2.18	0.72
2:H:1355:ASN:HA	2:H:1407:THR:O	1.88	0.72
1:B:852:ARG:HG2	1:B:852:ARG:NH1	1.98	0.71
2:H:1678:MET:HE3	2:H:1707:LEU:HD22	1.71	0.71
1:A:331:ILE:HD11	1:C:332:THR:HG22	1.71	0.71
1:A:733:ILE:HD13	1:A:761:LEU:HD11	1.71	0.71
1:B:1030:TRP:NE1	1:B:1580:LEU:CD2	2.54	0.71
2:G:1265:MET:HE1	2:G:1562:PRO:HG2	1.72	0.71
2:G:1917:ILE:HG23	2:G:1922:ILE:HB	1.72	0.71
2:H:455:ILE:CG1	2:H:469:ARG:HD3	2.20	0.71
2:H:634:ILE:HD11	2:H:649:ILE:HD11	1.70	0.71
2:I:1496:LYS:HE2	2:I:1693:ARG:HH21	1.55	0.71
1:A:1045:PHE:HB3	1:A:1049:GLY:HA3	1.71	0.71
1:B:1312:VAL:HG22	1:B:1329:VAL:HG11	1.73	0.71
2:G:751:LEU:HD23	2:G:791:TYR:CE2	2.25	0.71
2:I:146:PHE:HA	2:I:149:VAL:CG1	2.20	0.71
2:I:732:TRP:CG	2:I:750:MET:CE	2.73	0.71
2:I:1680:LEU:HD13	2:I:1687:ALA:HB2	1.73	0.71
2:I:2036:GLU:HB2	2:I:2037:PRO:HD3	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1:MET:CE	1:B:6:GLU:HA	2.20	0.71
1:C:1208:VAL:HG13	1:C:1212:THR:HB	1.71	0.71
2:H:1819:ALA:HA	2:H:2005:ARG:HH11	1.55	0.71
2:I:751:LEU:HD23	2:I:791:TYR:CE2	2.25	0.71
2:I:964:LEU:HD23	2:I:964:LEU:H	1.55	0.71
1:B:459:ASP:HB3	1:B:462:LYS:HG3	1.72	0.71
1:B:1232:TYR:CZ	1:B:1701:LYS:HD2	2.26	0.71
1:C:27:ARG:HH21	2:I:2015:THR:HA	1.54	0.71
2:G:109:LEU:HD11	2:G:116:LEU:HD23	1.71	0.71
2:G:949:ASP:HB3	2:G:1006:MET:HE2	1.72	0.71
2:H:1173:VAL:HG21	2:H:1221:MET:HE1	1.73	0.71
2:H:1889:VAL:HG13	2:H:1977:HIS:HB2	1.72	0.71
2:I:191:SER:HA	2:I:194:THR:HG22	1.72	0.71
2:I:455:ILE:CG1	2:I:469:ARG:HD3	2.21	0.71
2:I:579:VAL:HG23	2:I:1078:HIS:CD2	2.24	0.71
2:I:1770:LEU:HD23	2:I:1776:PHE:HE2	1.55	0.71
2:I:1862:VAL:HG11	2:I:1866:PHE:CD1	2.26	0.71
1:A:1:MET:CE	1:A:6:GLU:HA	2.21	0.71
1:B:655:LEU:HD22	1:B:916:LEU:HD11	1.72	0.71
2:G:1159:ILE:HG12	2:G:1169:PRO:HD3	1.71	0.71
2:H:455:ILE:CD1	2:H:469:ARG:HD3	2.20	0.71
2:H:499:THR:CB	2:H:500:HIS:HD2	1.99	0.71
2:H:1352:HIS:HE1	2:H:1583:MET:CE	2.02	0.71
1:B:1208:VAL:CG1	1:B:1212:THR:HB	2.20	0.71
2:G:1496:LYS:HE2	2:G:1693:ARG:HH21	1.54	0.71
2:H:1279:PHE:HD2	2:H:1340:PRO:HG3	1.55	0.71
2:I:234:ILE:HG13	2:I:235:PRO:HD3	1.73	0.71
2:I:856:LYS:HG2	2:I:1054:LEU:HD12	1.72	0.71
1:A:12:ILE:HA	1:A:15:THR:CG2	2.21	0.71
1:B:27:ARG:HH21	2:H:2015:THR:HA	1.56	0.71
2:H:1567:ARG:HG3	2:H:1567:ARG:NH1	1.99	0.71
2:I:652:ILE:N	2:I:658:MET:HE3	2.04	0.71
2:I:1058:VAL:O	2:I:1061:GLN:HG2	1.90	0.71
2:G:161:GLY:H	2:G:505:GLY:HA3	1.54	0.70
2:G:2036:GLU:HB2	2:G:2037:PRO:HD3	1.73	0.70
2:I:259:THR:HG22	2:I:262:GLU:CG	2.20	0.70
2:G:50:ALA:HB3	2:G:53:GLU:HG3	1.72	0.70
2:G:1889:VAL:HG13	2:G:1977:HIS:HB2	1.72	0.70
1:A:27:ARG:HH21	2:G:2015:THR:HA	1.56	0.70
2:H:7:ARG:HH21	2:H:27:PHE:CB	2.01	0.70
2:H:816:ASP:HB3	2:H:1048:VAL:HG21	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:968:VAL:O	2:H:1512:HIS:HB2	1.91	0.70
2:G:762:ASN:HD22	2:G:762:ASN:N	1.82	0.70
2:H:54:PRO:HG3	2:H:63:LYS:HG3	1.73	0.70
2:H:762:ASN:HD22	2:H:762:ASN:N	1.82	0.70
2:I:1242:PHE:CE2	2:I:1244:PRO:HG3	2.26	0.70
2:I:1279:PHE:HD2	2:I:1340:PRO:HG3	1.54	0.70
2:I:1419:PHE:O	2:I:1422:THR:HG22	1.90	0.70
2:H:1310:ASP:OD2	2:H:1602:SER:HB3	1.91	0.70
1:A:852:ARG:HG2	1:A:852:ARG:NH1	2.00	0.70
1:C:1219:VAL:HG22	1:C:1384:ILE:HD12	1.73	0.70
2:I:1917:ILE:HG23	2:I:1922:ILE:HB	1.74	0.70
1:A:1208:VAL:CG1	1:A:1212:THR:HB	2.21	0.70
1:A:1722:VAL:CG1	1:A:1731:LEU:HB3	2.19	0.70
1:B:881:ASN:HA	1:B:944:ARG:NH2	2.06	0.70
1:C:888:ILE:HD12	1:C:939:PHE:HE2	1.57	0.70
2:G:1331:TRP:CZ2	2:G:1335:ILE:HG13	2.26	0.70
2:H:2036:GLU:HB2	2:H:2037:PRO:HD3	1.72	0.70
1:A:254:TRP:CZ3	1:A:292:GLN:HG3	2.26	0.70
1:A:631:PRO:HB2	1:A:634:THR:OG1	1.92	0.70
1:C:833:PHE:HA	1:C:937:LYS:HD2	1.73	0.70
2:I:1086:LEU:HG	2:I:1092:ASP:HA	1.72	0.70
1:A:749:ILE:HD13	1:A:806:VAL:HG12	1.72	0.70
1:A:1312:VAL:HG22	1:A:1329:VAL:HG11	1.73	0.70
2:G:964:LEU:H	2:G:964:LEU:CD2	2.04	0.70
2:G:1194:VAL:HG22	2:G:1212:LYS:HB3	1.74	0.70
2:H:652:ILE:H	2:H:658:MET:CE	2.03	0.70
2:I:455:ILE:CD1	2:I:469:ARG:HD3	2.21	0.70
1:C:631:PRO:HB2	1:C:634:THR:OG1	1.92	0.70
2:G:652:ILE:H	2:G:658:MET:CE	2.01	0.70
2:G:1670:GLY:H	2:G:1672:GLN:HE21	1.40	0.70
2:H:707:PRO:CG	2:H:716:VAL:HG21	2.21	0.70
2:I:161:GLY:H	2:I:505:GLY:HA3	1.56	0.70
1:C:1045:PHE:HB3	1:C:1049:GLY:HA3	1.74	0.69
1:C:1276:GLN:O	1:C:1282:THR:HG21	1.92	0.69
2:G:1672:GLN:HA	2:G:1676:MET:CE	2.21	0.69
1:C:260:ARG:NH1	1:C:300:VAL:HG21	2.06	0.69
1:C:459:ASP:HB3	1:C:462:LYS:HG3	1.73	0.69
2:H:1889:VAL:HG13	2:H:1977:HIS:CB	2.22	0.69
2:I:768:GLY:HA3	2:I:800:LEU:HD21	1.75	0.69
1:A:1376:PHE:CB	1:A:1544:THR:HG22	2.19	0.69
2:G:707:PRO:HG3	2:G:716:VAL:CG2	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1242:PHE:HE2	2:G:1244:PRO:HG3	1.56	0.69
2:H:259:THR:HG22	2:H:262:GLU:CG	2.22	0.69
2:I:109:LEU:HD11	2:I:116:LEU:HD23	1.73	0.69
1:C:1208:VAL:CG1	1:C:1212:THR:HB	2.23	0.69
1:C:1219:VAL:HA	1:C:1384:ILE:CD1	2.20	0.69
2:G:191:SER:HA	2:G:194:THR:HG22	1.74	0.69
2:H:964:LEU:HD23	2:H:964:LEU:H	1.56	0.69
2:H:1808:SER:OG	2:H:1977:HIS:HE1	1.74	0.69
2:G:732:TRP:CG	2:G:750:MET:HE1	2.27	0.69
2:H:741:HIS:CE1	2:H:845:THR:HG21	2.27	0.69
2:H:1422:THR:CG2	2:H:1474:PHE:HB2	2.22	0.69
1:B:888:ILE:HD12	1:B:939:PHE:HE2	1.57	0.69
1:B:1219:VAL:HG22	1:B:1384:ILE:HD12	1.75	0.69
2:G:187:LEU:HA	2:G:190:PHE:HB3	1.74	0.69
2:H:234:ILE:HG13	2:H:235:PRO:HD3	1.74	0.69
2:H:1670:GLY:H	2:H:1672:GLN:HE21	1.40	0.69
2:I:1264:GLU:HA	2:I:1275:PHE:CE1	2.27	0.69
1:A:1232:TYR:CZ	1:A:1701:LYS:HD2	2.27	0.69
1:B:254:TRP:CZ3	1:B:292:GLN:HG3	2.27	0.69
1:C:1310:GLU:OE1	1:C:1649:LYS:HE3	1.93	0.69
2:G:455:ILE:HD11	2:G:469:ARG:CD	2.22	0.69
2:G:1355:ASN:HA	2:G:1407:THR:O	1.92	0.69
2:G:1676:MET:HE1	2:G:1781:LEU:HD21	1.73	0.69
2:H:751:LEU:HD23	2:H:791:TYR:CE2	2.27	0.69
2:I:926:LEU:HD13	2:I:947:THR:HG22	1.73	0.69
1:A:504:ASP:HB3	1:A:508:ASN:H	1.56	0.69
1:A:888:ILE:HD12	1:A:939:PHE:HE2	1.57	0.69
2:G:259:THR:HG22	2:G:262:GLU:CG	2.22	0.69
2:G:455:ILE:CG1	2:G:469:ARG:HD3	2.23	0.69
2:G:579:VAL:HG23	2:G:1078:HIS:CD2	2.27	0.69
2:H:663:ILE:HB	2:H:664:PRO:HD3	1.75	0.69
2:I:910:GLN:HE21	2:I:912:ARG:HH21	1.40	0.69
2:I:949:ASP:HB3	2:I:1006:MET:HE2	1.74	0.69
2:I:1920:GLN:HG2	2:I:1922:ILE:HD11	1.75	0.69
1:A:1431:GLU:HG3	1:A:1433:HIS:CE1	2.28	0.69
2:H:2022:THR:HG23	2:H:2025:TYR:H	1.58	0.69
2:I:1265:MET:HE1	2:I:1562:PRO:HG2	1.74	0.69
2:G:490:TRP:HE1	2:G:516:THR:CG2	1.99	0.69
2:G:741:HIS:NE2	2:G:855:HIS:CE1	2.61	0.69
2:I:598:THR:CG2	2:I:622:GLY:HA3	2.23	0.69
1:B:985:ARG:NH1	2:H:953:ARG:CZ	2.55	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:44:VAL:CG1	1:C:78:ILE:HG12	2.24	0.68
2:G:455:ILE:CD1	2:G:469:ARG:HD3	2.24	0.68
2:I:652:ILE:H	2:I:658:MET:CE	2.04	0.68
2:I:1638:ILE:HD12	2:I:1657:ILE:HD12	1.75	0.68
2:H:187:LEU:HA	2:H:190:PHE:HB3	1.75	0.68
2:H:305:PHE:CE1	2:H:442:ASP:HB3	2.27	0.68
2:I:663:ILE:HB	2:I:664:PRO:HD3	1.76	0.68
2:I:748:THR:HB	2:I:749:PRO:HD3	1.74	0.68
2:I:1739:GLU:CB	2:I:1987:PRO:HB3	2.20	0.68
1:C:985:ARG:HH12	2:I:953:ARG:CZ	2.06	0.68
2:G:84:LEU:HD13	2:G:133:ALA:HB2	1.75	0.68
2:G:1264:GLU:HA	2:G:1275:PHE:CE1	2.28	0.68
2:I:594:VAL:HG21	2:I:610:THR:HG21	1.75	0.68
1:C:968:VAL:HG23	2:I:1515:PRO:HG3	1.75	0.68
2:G:732:TRP:CG	2:G:750:MET:CE	2.76	0.68
2:G:835:THR:HG21	2:G:855:HIS:HD2	1.51	0.68
2:H:1195:VAL:CG1	2:H:1211:LEU:HB3	2.23	0.68
2:H:1638:ILE:HD12	2:H:1657:ILE:HD12	1.76	0.68
2:I:305:PHE:CE1	2:I:442:ASP:HB3	2.29	0.68
2:I:545:GLN:HE21	2:I:545:GLN:H	1.41	0.68
2:I:1355:ASN:HB3	2:I:1583:MET:HE1	1.74	0.68
1:A:1056:ILE:HD13	1:A:1193:TRP:HD1	1.59	0.68
1:C:12:ILE:HA	1:C:15:THR:CG2	2.22	0.68
2:G:663:ILE:HB	2:G:664:PRO:HD3	1.74	0.68
2:G:1770:LEU:HD23	2:G:1776:PHE:HE2	1.58	0.68
2:G:1784:MET:HG3	2:G:1785:GLU:N	2.07	0.68
2:H:1381:VAL:HG13	2:H:1390:VAL:HG22	1.74	0.68
1:A:1721:ARG:CG	1:A:1721:ARG:NH1	2.52	0.68
1:C:11:HIS:ND1	2:I:1998:LYS:HA	2.08	0.68
1:C:964:GLU:HG2	2:I:1515:PRO:HB3	1.76	0.68
2:G:1058:VAL:O	2:G:1061:GLN:HG2	1.93	0.68
2:G:2035:SER:HB3	2:G:2038:ILE:HG13	1.74	0.68
2:I:163:GLN:HG2	2:I:423:VAL:HG12	1.76	0.68
1:B:427:ASN:HD21	1:B:610:THR:H	1.41	0.68
2:H:1058:VAL:O	2:H:1061:GLN:HG2	1.94	0.68
2:H:1419:PHE:O	2:H:1422:THR:HG22	1.93	0.68
1:A:1474:ALA:HA	1:A:1478:PRO:CG	2.24	0.68
1:B:183:GLN:HE21	1:B:202:GLU:HG2	1.59	0.68
1:B:833:PHE:HA	1:B:937:LYS:HD2	1.75	0.68
1:B:1279:PHE:HB2	1:B:1282:THR:CG2	2.24	0.68
1:B:1310:GLU:OE1	1:B:1649:LYS:HE3	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:488:PRO:HG3	1:C:728:LYS:HG3	1.75	0.68
2:G:910:GLN:HE21	2:G:912:ARG:HH21	1.42	0.68
2:H:1264:GLU:HA	2:H:1275:PHE:CE1	2.29	0.68
1:A:1030:TRP:NE1	1:A:1580:LEU:CD2	2.57	0.68
2:H:902:PRO:HG2	2:H:929:LEU:HD21	1.75	0.68
2:I:187:LEU:HA	2:I:190:PHE:HB3	1.76	0.68
2:I:1670:GLY:H	2:I:1672:GLN:HE21	1.38	0.68
1:A:183:GLN:HE21	1:A:202:GLU:HG2	1.59	0.68
1:A:359:ARG:NH2	1:C:1153:ASP:OD2	2.27	0.68
2:G:1889:VAL:HG13	2:G:1977:HIS:CB	2.24	0.68
2:I:499:THR:CB	2:I:500:HIS:HD2	1.95	0.68
2:I:1269:LEU:O	2:I:1560:LEU:HD23	1.93	0.68
2:I:1675:GLY:O	2:I:1678:MET:HB2	1.94	0.68
1:A:1594:ASN:O	1:A:1598:GLN:HG3	1.94	0.67
1:B:1391:ASP:OD2	1:B:1502:ARG:NH2	2.27	0.67
2:H:1834:ARG:HH11	2:H:1834:ARG:CG	1.92	0.67
2:I:703:LEU:HD21	2:I:705:LEU:HD21	1.76	0.67
2:I:1673:GLU:H	2:I:1676:MET:HE3	1.58	0.67
1:A:328:LEU:O	1:A:328:LEU:HD22	1.94	0.67
1:A:459:ASP:HB3	1:A:462:LYS:HG3	1.76	0.67
1:C:257:PRO:HD2	1:C:260:ARG:HB2	1.76	0.67
2:H:762:ASN:H	2:H:762:ASN:ND2	1.85	0.67
2:H:1770:LEU:HD23	2:H:1776:PHE:HE2	1.59	0.67
2:I:1194:VAL:HG22	2:I:1212:LYS:HB3	1.75	0.67
1:C:1021:VAL:HG11	1:C:1597:LEU:HD11	1.74	0.67
2:H:1159:ILE:CG1	2:H:1169:PRO:HD3	2.25	0.67
2:I:1676:MET:HE1	2:I:1781:LEU:HD21	1.77	0.67
1:C:254:TRP:CZ3	1:C:292:GLN:HG3	2.29	0.67
1:C:1232:TYR:CZ	1:C:1701:LYS:HD2	2.29	0.67
1:C:1279:PHE:HB2	1:C:1282:THR:CG2	2.23	0.67
2:G:54:PRO:HG3	2:G:63:LYS:HG3	1.76	0.67
2:G:579:VAL:HG23	2:G:1078:HIS:NE2	2.10	0.67
2:G:768:GLY:HA3	2:G:800:LEU:HD21	1.76	0.67
2:G:1173:VAL:HG21	2:G:1221:MET:HE1	1.77	0.67
2:G:1808:SER:H	2:G:2013:ASN:ND2	1.93	0.67
2:H:648:GLY:HA3	2:H:678:PHE:CE2	2.29	0.67
2:H:1741:ILE:HG12	2:H:1746:LEU:HD13	1.76	0.67
2:H:1917:ILE:HG23	2:H:1922:ILE:HB	1.74	0.67
1:B:1045:PHE:HB3	1:B:1049:GLY:HA3	1.76	0.67
1:C:409:ALA:HB2	1:C:442:ARG:HD2	1.76	0.67
2:G:499:THR:CB	2:G:500:HIS:HD2	1.97	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1176:PRO:O	2:G:1177:SER:HB3	1.93	0.67
2:H:1086:LEU:HG	2:H:1092:ASP:HA	1.76	0.67
2:H:1269:LEU:O	2:H:1560:LEU:HD23	1.94	0.67
2:I:1889:VAL:HG13	2:I:1977:HIS:CB	2.25	0.67
1:B:20:TYR:CE2	2:H:1985:VAL:HG11	2.29	0.67
1:B:1276:GLN:O	1:B:1282:THR:HG21	1.95	0.67
2:G:816:ASP:HB3	2:G:1048:VAL:HG21	1.77	0.67
2:I:1101:GLU:HB3	2:I:1147:ILE:HG22	1.75	0.67
1:B:2:LYS:CD	2:H:2050:GLN:HB3	2.21	0.67
1:B:1039:MET:O	1:B:1609:ARG:NH2	2.27	0.67
2:G:1227:ARG:HD2	2:G:1565:VAL:HG11	1.76	0.67
2:G:1475:LYS:CG	2:G:1481:SER:HB2	2.25	0.67
2:H:545:GLN:HE21	2:H:545:GLN:H	1.41	0.67
2:I:904:PHE:HB2	2:I:1017:PHE:CD1	2.28	0.67
1:A:749:ILE:HD11	1:A:805:CYS:HB3	1.75	0.67
1:A:1219:VAL:HA	1:A:1384:ILE:CD1	2.23	0.67
1:A:1360:ARG:HH11	1:A:1364:GLU:HG2	1.60	0.67
1:C:12:ILE:HD11	2:I:2041:ILE:HD12	1.76	0.67
1:C:1030:TRP:NE1	1:C:1580:LEU:CD2	2.58	0.67
2:H:826:GLY:HA3	2:H:1061:GLN:HB3	1.76	0.67
2:H:1242:PHE:CE2	2:H:1244:PRO:HG3	2.30	0.67
2:I:1195:VAL:CG1	2:I:1211:LEU:HB3	2.25	0.67
1:C:746:GLU:O	1:C:750:GLU:HG3	1.95	0.67
2:H:50:ALA:HB3	2:H:53:GLU:HG3	1.76	0.67
2:H:707:PRO:HG3	2:H:716:VAL:CG2	2.24	0.67
2:H:1054:LEU:HB2	3:H:3051:FMN:HM72	1.77	0.67
2:I:598:THR:OG1	2:I:599:PRO:HD3	1.94	0.67
1:A:257:PRO:HD2	1:A:260:ARG:HB2	1.76	0.66
1:C:1360:ARG:HH11	1:C:1364:GLU:HG2	1.60	0.66
1:C:1455:ARG:HH11	1:C:1458:GLN:HE21	1.42	0.66
1:A:836:ASP:HB3	1:A:839:TYR:HB3	1.76	0.66
1:B:504:ASP:HB3	1:B:508:ASN:H	1.60	0.66
1:C:328:LEU:O	1:C:328:LEU:HD22	1.95	0.66
2:G:904:PHE:HB2	2:G:1017:PHE:CD1	2.30	0.66
2:G:1101:GLU:HB3	2:G:1147:ILE:HG22	1.76	0.66
2:H:641:ILE:HG12	2:H:645:SER:HB2	1.76	0.66
2:H:910:GLN:HE21	2:H:912:ARG:HH21	1.43	0.66
2:I:705:LEU:HD12	2:I:716:VAL:HG13	1.76	0.66
1:A:1662:TYR:O	1:A:1665:ILE:HG22	1.95	0.66
1:B:12:ILE:HA	1:B:15:THR:CG2	2.25	0.66
1:C:294:TYR:CE1	1:C:298:VAL:HG21	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:504:ASP:HB3	1:C:508:ASN:H	1.60	0.66
2:G:1381:VAL:HG13	2:G:1390:VAL:HG22	1.78	0.66
2:I:1672:GLN:HA	2:I:1676:MET:HE1	1.76	0.66
1:C:183:GLN:HE21	1:C:202:GLU:HG2	1.60	0.66
2:G:1419:PHE:O	2:G:1422:THR:HG22	1.96	0.66
2:G:1739:GLU:CB	2:G:1987:PRO:HB3	2.23	0.66
2:H:1227:ARG:HD2	2:H:1565:VAL:HG11	1.77	0.66
2:I:1054:LEU:HB2	3:I:3051:FMN:HM72	1.78	0.66
1:B:328:LEU:O	1:B:328:LEU:HD22	1.95	0.66
1:B:864:VAL:HG22	1:B:921:PRO:HB3	1.77	0.66
1:B:883:ILE:HD12	1:B:947:LEU:HD12	1.77	0.66
1:C:836:ASP:HB3	1:C:839:TYR:HB3	1.77	0.66
2:H:1862:VAL:HG11	2:H:1866:PHE:CD1	2.30	0.66
1:A:473:GLY:O	1:A:477:ILE:HG13	1.95	0.66
1:A:1219:VAL:HG22	1:A:1384:ILE:HD12	1.77	0.66
1:C:1:MET:CE	1:C:6:GLU:HA	2.25	0.66
1:C:32:GLN:HA	1:C:35:PHE:CE2	2.31	0.66
2:G:163:GLN:HG2	2:G:423:VAL:HG12	1.77	0.66
2:G:1352:HIS:CD2	2:G:1410:PHE:CE2	2.84	0.66
2:G:1355:ASN:HB3	2:G:1583:MET:HE1	1.77	0.66
2:G:1862:VAL:HG11	2:G:1866:PHE:CD1	2.30	0.66
1:A:599:MET:HB2	1:A:624:LYS:CD	2.25	0.66
1:C:1721:ARG:HG2	1:C:1721:ARG:NH1	2.00	0.66
2:G:353:VAL:HG23	2:G:357:ASN:ND2	2.10	0.66
2:G:736:ARG:NH1	2:G:769:SER:O	2.29	0.66
2:G:1129:ALA:HB2	2:G:1138:TRP:CZ3	2.30	0.66
2:H:1676:MET:HE1	2:H:1781:LEU:HD21	1.78	0.66
2:I:1173:VAL:HG21	2:I:1221:MET:HE1	1.78	0.66
1:C:460:GLU:HG2	1:C:470:LYS:HD3	1.77	0.66
2:G:835:THR:HG22	2:G:844:VAL:C	2.17	0.66
2:G:902:PRO:HG2	2:G:929:LEU:HD21	1.76	0.66
2:G:1457:PHE:CZ	2:G:1501:ILE:HD11	2.30	0.66
2:G:1920:GLN:HG2	2:G:1922:ILE:HD11	1.78	0.66
2:H:161:GLY:H	2:H:505:GLY:HA3	1.59	0.66
2:H:594:VAL:HG21	2:H:610:THR:HG21	1.77	0.66
2:H:670:ARG:HD3	2:H:699:GLY:O	1.95	0.66
2:I:835:THR:HG21	2:I:855:HIS:HD2	1.59	0.66
1:C:435:GLU:O	1:C:439:ILE:HG13	1.96	0.66
2:G:670:ARG:HD3	2:G:699:GLY:O	1.95	0.66
2:G:748:THR:HB	2:G:749:PRO:HD3	1.78	0.66
2:H:1986:LYS:N	2:H:1987:PRO:HD2	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:50:ALA:HB3	2:I:53:GLU:HG3	1.76	0.66
1:A:504:ASP:HB2	1:A:508:ASN:HB2	1.78	0.66
2:H:768:GLY:HA3	2:H:800:LEU:HD21	1.77	0.66
2:I:54:PRO:HG3	2:I:63:LYS:HG3	1.75	0.66
2:I:1176:PRO:O	2:I:1177:SER:HB3	1.95	0.66
1:A:254:TRP:CH2	1:A:292:GLN:HG3	2.31	0.65
1:A:968:VAL:O	2:G:1512:HIS:HB2	1.96	0.65
1:B:460:GLU:HG2	1:B:470:LYS:HD3	1.78	0.65
1:B:529:MET:CG	1:B:638:LEU:HG	2.26	0.65
1:C:749:ILE:HD11	1:C:805:CYS:HB3	1.78	0.65
1:C:1056:ILE:HD13	1:C:1193:TRP:HD1	1.60	0.65
2:I:61:VAL:O	2:I:65:LEU:HB2	1.96	0.65
2:I:251:VAL:O	2:I:255:LEU:HB2	1.96	0.65
2:I:750:MET:HG3	2:I:796:PHE:HZ	1.60	0.65
1:A:864:VAL:HG22	1:A:921:PRO:HB3	1.78	0.65
1:B:294:TYR:CE1	1:B:298:VAL:HG21	2.31	0.65
2:G:61:VAL:O	2:G:65:LEU:HB2	1.96	0.65
2:H:904:PHE:HB2	2:H:1017:PHE:CD1	2.30	0.65
2:I:816:ASP:HB3	2:I:1048:VAL:CG2	2.26	0.65
1:A:294:TYR:CE1	1:A:298:VAL:HG21	2.32	0.65
1:A:488:PRO:HG3	1:A:728:LYS:HG3	1.77	0.65
1:A:881:ASN:HA	1:A:944:ARG:HH21	1.60	0.65
2:G:33:LEU:HD11	2:G:80:PHE:HD2	1.61	0.65
2:G:234:ILE:HG13	2:G:235:PRO:HD3	1.77	0.65
2:G:1279:PHE:HD2	2:G:1340:PRO:HG3	1.62	0.65
2:H:61:VAL:O	2:H:65:LEU:HB2	1.96	0.65
2:H:748:THR:HB	2:H:749:PRO:HD3	1.78	0.65
2:H:816:ASP:HB3	2:H:1048:VAL:CG2	2.26	0.65
2:H:949:ASP:HB3	2:H:1006:MET:HE2	1.78	0.65
2:H:964:LEU:H	2:H:964:LEU:CD2	2.10	0.65
1:A:1305:CYS:HB2	1:A:1645:GLY:HA2	1.79	0.65
1:B:497:THR:OG1	1:B:513:GLU:HG2	1.95	0.65
1:C:497:THR:OG1	1:C:513:GLU:HG2	1.97	0.65
2:G:856:LYS:NZ	2:G:1052:CYS:SG	2.69	0.65
2:H:732:TRP:CG	2:H:750:MET:CE	2.79	0.65
2:H:1325:PHE:CZ	2:H:1328:VAL:HG11	2.32	0.65
2:I:1739:GLU:O	2:I:1987:PRO:HG3	1.95	0.65
1:A:335:HIS:CE1	1:B:335:HIS:CE1	2.84	0.65
1:A:985:ARG:NH1	2:G:953:ARG:CZ	2.60	0.65
1:C:411:GLN:HE22	1:C:1628:SER:H	1.42	0.65
2:G:1242:PHE:CE2	2:G:1244:PRO:HG3	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:2035:SER:HB3	2:H:2038:ILE:HG13	1.79	0.65
2:I:579:VAL:HG23	2:I:1078:HIS:NE2	2.10	0.65
2:I:1808:SER:H	2:I:2013:ASN:ND2	1.94	0.65
1:A:27:ARG:HD2	1:A:30:GLU:OE2	1.97	0.65
1:B:421:ILE:CG1	1:B:469:VAL:HG21	2.27	0.65
1:C:295:ALA:HB2	1:C:302:LEU:HD11	1.77	0.65
2:G:353:VAL:HG23	2:G:357:ASN:HD22	1.61	0.65
2:G:1567:ARG:HG3	2:G:1567:ARG:NH1	2.02	0.65
2:H:1739:GLU:CB	2:H:1987:PRO:HB3	2.21	0.65
1:A:1021:VAL:HG11	1:A:1597:LEU:HD11	1.79	0.65
1:B:1317:GLU:OE1	1:B:1317:GLU:HA	1.96	0.65
2:G:816:ASP:HB3	2:G:1048:VAL:CG2	2.26	0.65
2:G:1740:THR:HG22	2:G:1742:VAL:HG23	1.78	0.65
2:G:1741:ILE:HG12	2:G:1746:LEU:HD13	1.77	0.65
2:H:703:LEU:HD21	2:H:705:LEU:HD21	1.79	0.65
2:H:1740:THR:HG22	2:H:1742:VAL:HG23	1.79	0.65
2:I:1678:MET:HE3	2:I:1707:LEU:HD22	1.78	0.65
1:A:340:ARG:HH12	1:A:344:GLN:CG	2.09	0.65
1:B:257:PRO:HD2	1:B:260:ARG:HB2	1.78	0.65
1:C:864:VAL:HG22	1:C:921:PRO:HB3	1.79	0.65
1:C:1194:ASN:HB3	1:C:1197:THR:CG2	2.27	0.65
2:G:826:GLY:HA3	2:G:1061:GLN:HB3	1.78	0.65
2:G:1265:MET:CE	2:G:1562:PRO:HG2	2.27	0.65
2:H:1823:SER:OG	2:H:1825:GLU:HG2	1.96	0.65
2:I:1378:ILE:HD11	2:I:1381:VAL:HG21	1.79	0.65
1:B:746:GLU:O	1:B:750:GLU:HG3	1.97	0.65
2:H:1472:VAL:HG22	2:H:1483:VAL:HG22	1.79	0.65
1:A:497:THR:OG1	1:A:513:GLU:HG2	1.96	0.65
1:B:749:ILE:HD11	1:B:805:CYS:HB3	1.78	0.65
2:G:131:ILE:HB	2:G:182:VAL:HG11	1.78	0.65
2:G:305:PHE:CE1	2:G:442:ASP:HB3	2.32	0.65
2:H:163:GLN:HG2	2:H:423:VAL:HG12	1.79	0.65
2:H:191:SER:HA	2:H:194:THR:HG22	1.77	0.65
2:H:1808:SER:H	2:H:2013:ASN:ND2	1.95	0.65
2:I:1475:LYS:CG	2:I:1481:SER:HB2	2.27	0.65
1:A:529:MET:CG	1:A:638:LEU:HG	2.27	0.64
1:A:1039:MET:O	1:A:1609:ARG:NH2	2.30	0.64
1:B:1474:ALA:HA	1:B:1478:PRO:CG	2.27	0.64
1:C:1594:ASN:O	1:C:1598:GLN:HG3	1.97	0.64
2:G:259:THR:HG23	2:G:262:GLU:H	1.62	0.64
2:G:1195:VAL:CG1	2:G:1211:LEU:HB3	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1378:ILE:HD11	2:G:1381:VAL:HG21	1.76	0.64
2:I:7:ARG:HE	2:I:27:PHE:HB2	1.62	0.64
1:C:408:TRP:CZ3	1:C:1628:SER:HB3	2.32	0.64
1:C:1292:ILE:CD1	1:C:1328:ILE:HD11	2.27	0.64
2:H:259:THR:CG2	2:H:262:GLU:H	2.10	0.64
2:I:1782:THR:HG22	2:I:1827:LEU:HD21	1.78	0.64
1:C:604:ALA:HB3	1:C:612:GLU:HG2	1.80	0.64
2:H:1205:LEU:O	2:H:1206:LYS:HG3	1.97	0.64
2:H:1719:ILE:O	2:H:1761:SER:HB2	1.97	0.64
2:I:1355:ASN:HA	2:I:1407:THR:O	1.96	0.64
1:A:746:GLU:O	1:A:750:GLU:HG3	1.97	0.64
1:B:254:TRP:CH2	1:B:292:GLN:HG3	2.32	0.64
2:G:1054:LEU:HB2	3:G:3051:FMN:HM72	1.78	0.64
2:I:826:GLY:HA3	2:I:1061:GLN:HB3	1.79	0.64
2:I:1266:TYR:CB	2:I:1347:LEU:HD23	2.28	0.64
1:A:1693:ILE:CD1	2:G:998:GLN:HB2	2.25	0.64
2:H:658:MET:HA	2:H:661:TRP:NE1	2.13	0.64
2:I:1741:ILE:HG12	2:I:1746:LEU:HD13	1.80	0.64
1:A:330:GLU:HA	1:A:333:LYS:HD2	1.80	0.64
1:A:1022:THR:HG22	1:A:1226:SER:HB2	1.80	0.64
1:A:1317:GLU:HA	1:A:1317:GLU:OE1	1.96	0.64
1:C:883:ILE:HD12	1:C:947:LEU:HD12	1.80	0.64
2:G:159:ILE:HD11	2:G:512:LEU:HG	1.80	0.64
2:G:1086:LEU:HG	2:G:1092:ASP:HA	1.77	0.64
2:G:1986:LYS:N	2:G:1987:PRO:HD2	2.12	0.64
2:H:598:THR:CG2	2:H:622:GLY:HA3	2.28	0.64
2:I:816:ASP:HB3	2:I:1048:VAL:HG21	1.79	0.64
1:C:1317:GLU:OE1	1:C:1317:GLU:HA	1.96	0.64
2:H:259:THR:HG23	2:H:262:GLU:H	1.63	0.64
2:H:871:THR:HB	2:H:872:ILE:HD12	1.80	0.64
2:H:1457:PHE:CZ	2:H:1501:ILE:HD11	2.32	0.64
2:I:259:THR:CG2	2:I:262:GLU:H	2.11	0.64
2:I:719:ILE:O	2:I:722:ALA:HB3	1.97	0.64
2:G:259:THR:CG2	2:G:262:GLU:H	2.10	0.64
2:H:1266:TYR:CB	2:H:1347:LEU:HD23	2.28	0.64
2:I:184:VAL:HG13	2:I:187:LEU:HD21	1.80	0.64
2:I:892:ILE:HD11	2:I:903:TRP:NE1	2.12	0.64
1:A:331:ILE:CD1	1:C:332:THR:HG22	2.28	0.64
2:G:641:ILE:HG12	2:G:645:SER:HB2	1.80	0.64
2:G:1422:THR:CG2	2:G:1474:PHE:HB2	2.27	0.64
2:I:648:GLY:HA3	2:I:678:PHE:CE2	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:504:ASP:CB	1:A:508:ASN:H	2.10	0.64
1:B:733:ILE:HD13	1:B:761:LEU:HD11	1.78	0.64
1:B:980:VAL:H	2:H:968:GLN:HE22	1.45	0.64
1:C:12:ILE:HD11	2:I:2041:ILE:CD1	2.27	0.64
1:C:436:ALA:O	1:C:440:MET:HG3	1.98	0.64
2:G:1205:LEU:O	2:G:1206:LYS:HG3	1.98	0.64
2:I:1103:PHE:O	2:I:1247:GLY:HA3	1.98	0.64
1:C:1312:VAL:HG22	1:C:1329:VAL:HG11	1.78	0.63
1:C:1474:ALA:HA	1:C:1478:PRO:CG	2.27	0.63
2:G:259:THR:OG1	2:G:260:PRO:HD2	1.98	0.63
2:G:1906:ALA:O	2:G:1910:VAL:HG23	1.97	0.63
2:H:601:THR:CG2	2:H:618:GLU:O	2.38	0.63
2:H:732:TRP:CG	2:H:750:MET:HE1	2.32	0.63
2:H:1352:HIS:CD2	2:H:1410:PHE:CE2	2.85	0.63
2:H:1874:VAL:O	2:H:1878:VAL:HG12	1.98	0.63
2:I:1195:VAL:HG13	2:I:1211:LEU:HB3	1.79	0.63
2:I:1381:VAL:HG13	2:I:1390:VAL:HG22	1.79	0.63
2:I:1740:THR:HG22	2:I:1742:VAL:HG23	1.79	0.63
1:B:330:GLU:HA	1:B:333:LYS:HD2	1.80	0.63
1:B:529:MET:HG3	1:B:638:LEU:HG	1.80	0.63
2:H:85:ASN:ND2	2:H:135:ARG:HH11	1.96	0.63
2:H:232:LEU:O	2:H:232:LEU:HD23	1.98	0.63
2:H:667:LYS:HB2	2:H:698:LEU:HD23	1.79	0.63
2:H:1859:PRO:O	2:H:1862:VAL:HG13	1.98	0.63
2:I:259:THR:OG1	2:I:260:PRO:HD2	1.98	0.63
2:I:490:TRP:HE1	2:I:516:THR:CG2	2.00	0.63
2:I:670:ARG:HD3	2:I:699:GLY:O	1.98	0.63
2:I:1194:VAL:O	2:I:1194:VAL:HG12	1.99	0.63
2:I:1819:ALA:HA	2:I:2005:ARG:HH11	1.61	0.63
1:C:158:LYS:HD3	1:C:185:GLU:HB3	1.79	0.63
2:G:648:GLY:HA3	2:G:678:PHE:CE2	2.33	0.63
2:G:726:PHE:O	2:G:762:ASN:HB2	1.98	0.63
2:I:115:THR:HB	2:I:118:LYS:HB2	1.80	0.63
2:I:1859:PRO:O	2:I:1862:VAL:HG13	1.98	0.63
1:A:421:ILE:CG1	1:A:469:VAL:HG21	2.27	0.63
2:G:835:THR:CB	2:G:845:THR:HG23	2.28	0.63
2:H:353:VAL:HG23	2:H:357:ASN:ND2	2.13	0.63
2:H:1168:ASN:ND2	2:H:1171:ARG:HB2	2.14	0.63
2:I:964:LEU:H	2:I:964:LEU:CD2	2.11	0.63
1:A:436:ALA:O	1:A:440:MET:HG3	1.99	0.63
1:A:460:GLU:HG2	1:A:470:LYS:HD3	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1194:ASN:HB3	1:A:1197:THR:CG2	2.28	0.63
1:A:1292:ILE:CD1	1:A:1328:ILE:HD11	2.28	0.63
1:A:1308:SER:HB3	1:A:1589:GLY:HA3	1.81	0.63
1:C:680:ILE:HG13	1:C:769:ILE:HB	1.80	0.63
2:H:33:LEU:HD11	2:H:80:PHE:HD2	1.63	0.63
2:H:131:ILE:HB	2:H:182:VAL:HG11	1.81	0.63
2:I:56:THR:HG23	2:I:59:GLU:CG	2.28	0.63
2:I:131:ILE:HB	2:I:182:VAL:HG11	1.79	0.63
2:I:1159:ILE:CG1	2:I:1169:PRO:HD3	2.28	0.63
1:B:488:PRO:HG3	1:B:728:LYS:HG3	1.78	0.63
1:C:1431:GLU:HG3	1:C:1433:HIS:CE1	2.33	0.63
2:G:1673:GLU:H	2:G:1676:MET:HE3	1.62	0.63
2:H:856:LYS:NZ	2:H:1052:CYS:SG	2.70	0.63
2:H:1176:PRO:O	2:H:1177:SER:HB3	1.97	0.63
1:A:11:HIS:ND1	2:G:1998:LYS:HA	2.13	0.63
1:A:1461:ASP:O	1:A:1465:ASN:HB2	1.99	0.63
1:B:1540:SER:HA	1:B:1575:VAL:HG22	1.81	0.63
1:C:254:TRP:CH2	1:C:292:GLN:HG3	2.34	0.63
1:C:742:LYS:HD3	1:C:746:GLU:OE2	1.98	0.63
1:C:1039:MET:O	1:C:1609:ARG:NH2	2.31	0.63
2:G:99:ASN:HA	2:G:550:VAL:CG2	2.28	0.63
2:G:138:ASP:O	2:G:139:LYS:HG3	1.99	0.63
2:G:1266:TYR:CB	2:G:1347:LEU:HD23	2.29	0.63
2:G:1808:SER:H	2:G:2013:ASN:HD21	1.47	0.63
2:G:2022:THR:HG23	2:G:2025:TYR:H	1.63	0.63
2:H:1004:LEU:HD21	2:H:1020:VAL:HG23	1.81	0.63
2:H:1931:LEU:HD22	2:H:1935:GLU:HG2	1.81	0.63
2:I:2022:THR:HG23	2:I:2025:TYR:H	1.63	0.63
1:B:1219:VAL:HA	1:B:1384:ILE:CD1	2.24	0.63
1:C:956:ALA:O	1:C:959:ILE:HG22	1.99	0.63
1:C:1292:ILE:HD11	1:C:1328:ILE:HD11	1.81	0.63
2:G:7:ARG:HE	2:G:27:PHE:HB2	1.63	0.63
2:G:545:GLN:HE21	2:G:545:GLN:H	1.46	0.63
2:H:100:ASP:OD2	2:H:102:HIS:HD2	1.82	0.63
2:H:1672:GLN:HA	2:H:1676:MET:HE1	1.79	0.63
2:I:259:THR:HG23	2:I:262:GLU:H	1.64	0.63
1:A:158:LYS:HD3	1:A:185:GLU:HB3	1.81	0.63
1:A:1721:ARG:HG2	1:A:1721:ARG:NH1	1.97	0.63
1:B:504:ASP:HB2	1:B:508:ASN:HB2	1.79	0.63
2:G:241:ILE:HG23	2:G:506:PRO:HG3	1.80	0.63
2:H:115:THR:HB	2:H:118:LYS:HB2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1195:VAL:HG13	2:H:1211:LEU:HB3	1.79	0.63
2:H:1475:LYS:CG	2:H:1481:SER:HB2	2.29	0.63
2:I:1457:PHE:CZ	2:I:1501:ILE:HD11	2.33	0.63
2:I:1890:ASN:HB2	2:I:1899:VAL:HB	1.81	0.63
1:B:444:ASN:HB3	1:B:446:ALA:H	1.63	0.62
2:G:943:TRP:CH2	2:G:1016:PRO:HG3	2.34	0.62
2:G:1103:PHE:O	2:G:1247:GLY:HA3	1.99	0.62
2:H:741:HIS:CB	2:H:853:PRO:HB2	2.29	0.62
2:H:750:MET:HG3	2:H:796:PHE:HZ	1.64	0.62
2:H:1149:TRP:CD1	2:H:1213:LEU:HD12	2.34	0.62
2:H:1808:SER:H	2:H:2013:ASN:HD21	1.46	0.62
2:I:1808:SER:H	2:I:2013:ASN:HD21	1.47	0.62
1:B:836:ASP:HB3	1:B:839:TYR:HB3	1.79	0.62
1:C:330:GLU:HA	1:C:333:LYS:HD2	1.79	0.62
2:G:324:LEU:HD12	2:G:328:LEU:HG	1.81	0.62
2:G:1672:GLN:HA	2:G:1676:MET:HE1	1.81	0.62
2:H:251:VAL:O	2:H:255:LEU:HB2	1.99	0.62
2:H:1675:GLY:O	2:H:1678:MET:HB2	1.99	0.62
2:I:641:ILE:HG12	2:I:645:SER:HB2	1.79	0.62
1:A:1523:ARG:CG	1:A:1523:ARG:NH1	2.57	0.62
2:H:7:ARG:HE	2:H:27:PHE:HB2	1.64	0.62
1:B:1455:ARG:HH11	1:B:1458:GLN:HE21	1.47	0.62
1:C:985:ARG:HH12	2:I:953:ARG:NH2	1.97	0.62
2:G:490:TRP:O	2:G:494:THR:HG22	1.98	0.62
2:I:159:ILE:HD11	2:I:512:LEU:HG	1.80	0.62
2:I:846:VAL:HG13	2:I:865:TRP:NE1	2.15	0.62
2:I:1472:VAL:HG22	2:I:1483:VAL:HG22	1.81	0.62
2:I:1823:SER:OG	2:I:1825:GLU:HG2	2.00	0.62
2:I:1868:GLN:HG3	2:I:1898:TYR:OH	1.99	0.62
1:A:152:HIS:HD2	1:A:163:LEU:HB2	1.61	0.62
2:G:115:THR:HB	2:G:118:LYS:HB2	1.81	0.62
2:G:1819:ALA:HA	2:G:2005:ARG:HH11	1.65	0.62
2:H:1906:ALA:O	2:H:1910:VAL:HG23	1.98	0.62
1:C:529:MET:CG	1:C:638:LEU:HG	2.30	0.62
1:C:824:LEU:HD12	1:C:846:LEU:HB3	1.82	0.62
1:C:1523:ARG:CG	1:C:1523:ARG:NH1	2.57	0.62
2:G:251:VAL:O	2:G:255:LEU:HB2	1.99	0.62
2:H:159:ILE:HD11	2:H:512:LEU:HG	1.82	0.62
2:I:667:LYS:HB2	2:I:698:LEU:HD23	1.82	0.62
1:A:529:MET:HE1	1:A:894:ARG:HD2	1.80	0.62
1:B:1056:ILE:HD13	1:B:1193:TRP:HD1	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1721:ARG:HG2	1:B:1721:ARG:NH1	2.00	0.62
2:G:33:LEU:HD11	2:G:80:PHE:CD2	2.35	0.62
2:H:33:LEU:HD11	2:H:80:PHE:CD2	2.35	0.62
1:A:705:VAL:HG23	1:A:732:LEU:HD21	1.82	0.62
1:A:956:ALA:O	1:A:959:ILE:HG22	1.98	0.62
1:B:27:ARG:HD2	1:B:30:GLU:OE2	2.00	0.62
2:H:601:THR:HG22	2:H:601:THR:O	2.00	0.62
2:I:464:ASP:HB3	2:I:466:SER:HB3	1.80	0.62
1:B:1594:ASN:O	1:B:1598:GLN:HG3	2.00	0.62
2:G:1859:PRO:O	2:G:1862:VAL:HG13	1.99	0.62
2:H:1374:THR:HG23	2:H:1396:LEU:HD12	1.81	0.62
1:B:198:PRO:CG	1:B:209:LEU:HD21	2.26	0.62
1:B:1292:ILE:HD11	1:B:1328:ILE:HD11	1.82	0.62
2:G:607:VAL:HA	2:G:617:ILE:HD13	1.82	0.62
2:G:719:ILE:O	2:G:722:ALA:HB3	2.00	0.62
2:G:1360:ILE:HG23	2:G:1403:VAL:O	1.99	0.62
2:H:1673:GLU:H	2:H:1676:MET:HE3	1.63	0.62
1:A:644:THR:HG23	1:A:648:ASP:H	1.65	0.61
1:A:749:ILE:CD1	1:A:805:CYS:HB3	2.29	0.61
1:A:824:LEU:HD12	1:A:846:LEU:HB3	1.80	0.61
1:A:1326:ILE:HG12	1:A:1388:MET:HG3	1.82	0.61
1:B:340:ARG:HH12	1:B:344:GLN:CG	2.13	0.61
1:C:644:THR:HG23	1:C:648:ASP:H	1.65	0.61
1:C:992:PHE:CE2	1:C:1399:PRO:HG3	2.36	0.61
2:H:490:TRP:O	2:H:494:THR:HG22	2.00	0.61
2:H:589:ARG:HB3	2:H:590:PRO:HD2	1.82	0.61
2:H:892:ILE:HD11	2:H:903:TRP:NE1	2.14	0.61
1:B:604:ALA:HB3	1:B:612:GLU:HG2	1.82	0.61
1:C:504:ASP:CB	1:C:508:ASN:H	2.13	0.61
2:G:741:HIS:CE1	2:G:855:HIS:CE1	2.88	0.61
2:H:174:ARG:NH2	2:H:225:THR:OG1	2.33	0.61
2:I:33:LEU:HD11	2:I:80:PHE:HD2	1.65	0.61
2:I:241:ILE:HG23	2:I:506:PRO:HG3	1.81	0.61
2:I:1624:THR:HB	2:I:1642:THR:HG23	1.81	0.61
1:A:1455:ARG:HH11	1:A:1458:GLN:HE21	1.47	0.61
1:B:1292:ILE:CD1	1:B:1328:ILE:HD11	2.30	0.61
1:B:1555:ALA:HA	1:B:1621:PHE:CE1	2.36	0.61
1:C:24:SER:CB	2:I:2014:LEU:HD12	2.30	0.61
1:C:233:ILE:HD13	1:C:237:MET:CE	2.30	0.61
1:C:529:MET:HG3	1:C:638:LEU:HG	1.83	0.61
1:C:881:ASN:HA	1:C:944:ARG:HH21	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:85:ASN:ND2	2:G:135:ARG:HH11	1.97	0.61
2:G:745:ASP:HA	2:G:832:TRP:HH2	1.64	0.61
2:G:1719:ILE:O	2:G:1761:SER:HB2	2.00	0.61
2:H:315:PRO:O	2:I:1314:ARG:NH2	2.33	0.61
2:H:353:VAL:HG23	2:H:357:ASN:HD22	1.65	0.61
2:H:1086:LEU:HD12	2:H:1090:TYR:HB2	1.83	0.61
2:I:565:TYR:CZ	2:I:758:ARG:HD2	2.35	0.61
1:B:411:GLN:HE22	1:B:1628:SER:H	1.47	0.61
1:B:421:ILE:HG13	1:B:469:VAL:HG21	1.81	0.61
2:G:1004:LEU:HD21	2:G:1020:VAL:HG23	1.82	0.61
2:G:1359:MET:HA	2:G:1359:MET:HE3	1.81	0.61
2:G:1908:ASP:HB2	2:G:1958:LEU:HD21	1.81	0.61
2:H:603:SER:O	2:H:607:VAL:HG12	2.01	0.61
2:H:1496:LYS:HE2	2:H:1693:ARG:HH21	1.65	0.61
2:H:1624:THR:HB	2:H:1642:THR:HG23	1.82	0.61
2:I:1325:PHE:CZ	2:I:1328:VAL:HG11	2.36	0.61
1:A:32:GLN:HA	1:A:35:PHE:CE2	2.35	0.61
1:A:232:LEU:HD22	1:A:269:LEU:HA	1.83	0.61
1:A:822:VAL:HG12	1:A:824:LEU:HD22	1.82	0.61
2:G:1931:LEU:HD22	2:G:1935:GLU:HG2	1.82	0.61
2:I:835:THR:HG21	2:I:855:HIS:NE2	2.14	0.61
1:B:1194:ASN:HB3	1:B:1197:THR:CG2	2.30	0.61
2:G:174:ARG:NH2	2:G:225:THR:OG1	2.34	0.61
2:G:522:GLY:HA3	2:G:561:TRP:CZ3	2.35	0.61
2:I:1054:LEU:HB2	3:I:3051:FMN:C7M	2.30	0.61
1:A:1103:ILE:HD11	1:A:1582:GLY:N	2.16	0.61
1:B:1523:ARG:CG	1:B:1523:ARG:NH1	2.59	0.61
1:C:1540:SER:HA	1:C:1575:VAL:HG22	1.82	0.61
2:I:745:ASP:HA	2:I:832:TRP:HH2	1.65	0.61
2:I:1906:ALA:O	2:I:1910:VAL:HG23	2.00	0.61
1:A:1259:GLY:HA2	1:A:1263:ASP:HB2	1.81	0.61
1:B:400:ARG:HH11	1:B:400:ARG:HG3	1.64	0.61
1:B:1021:VAL:HG11	1:B:1597:LEU:HD11	1.83	0.61
1:C:529:MET:CE	1:C:894:ARG:HD2	2.30	0.61
1:C:1308:SER:HB3	1:C:1589:GLY:HA3	1.80	0.61
2:I:1101:GLU:HB2	2:I:1147:ILE:O	2.00	0.61
1:B:158:LYS:HD3	1:B:185:GLU:HB3	1.82	0.61
1:B:631:PRO:HB2	1:B:634:THR:OG1	2.00	0.61
1:B:1052:GLU:O	1:B:1056:ILE:HG23	2.00	0.61
2:G:1782:THR:HG22	2:G:1827:LEU:HD21	1.81	0.61
2:H:597:MET:HA	3:H:3051:FMN:N5	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:33:LEU:HD11	2:I:80:PHE:CD2	2.36	0.61
2:I:663:ILE:HG13	2:I:694:TYR:HE1	1.66	0.61
2:I:860:ARG:HB3	2:I:898:ASP:HB3	1.81	0.61
2:I:1227:ARG:HD2	2:I:1565:VAL:HG11	1.81	0.61
2:I:1355:ASN:CB	2:I:1583:MET:HE1	2.31	0.61
2:I:1822:MET:HE2	2:I:1996:ILE:HG12	1.83	0.61
1:B:1431:GLU:HG3	1:B:1433:HIS:CE1	2.36	0.61
2:G:871:THR:HB	2:G:872:ILE:HD12	1.82	0.61
2:I:835:THR:HG22	2:I:845:THR:N	2.16	0.61
2:I:1086:LEU:HD12	2:I:1090:TYR:HB2	1.82	0.61
1:A:1292:ILE:HD11	1:A:1328:ILE:HD11	1.81	0.60
1:C:444:ASN:HB3	1:C:446:ALA:H	1.65	0.60
1:C:599:MET:HB2	1:C:624:LYS:CD	2.25	0.60
1:C:635:ILE:HG22	1:C:651:TYR:CG	2.36	0.60
2:G:601:THR:O	2:G:601:THR:HG22	2.01	0.60
2:H:260:PRO:HD3	2:H:289:TRP:CE2	2.36	0.60
1:B:644:THR:HG23	1:B:648:ASP:H	1.65	0.60
1:C:504:ASP:HB2	1:C:508:ASN:HB2	1.81	0.60
1:C:980:VAL:HG21	2:I:952:ARG:HH21	1.65	0.60
2:G:1378:ILE:HD11	2:G:1381:VAL:CG2	2.30	0.60
2:I:932:ILE:HD11	2:I:1042:ALA:CB	2.25	0.60
1:A:12:ILE:HD11	2:G:2041:ILE:CD1	2.30	0.60
1:B:1062:TYR:CD2	1:B:1693:ILE:HG23	2.36	0.60
1:C:340:ARG:HH12	1:C:344:GLN:CG	2.14	0.60
1:C:705:VAL:HG23	1:C:732:LEU:HD21	1.82	0.60
1:C:1492:GLU:O	1:C:1496:GLU:HG3	2.01	0.60
2:G:598:THR:CG2	2:G:622:GLY:HA3	2.30	0.60
2:G:1086:LEU:HD12	2:G:1090:TYR:HB2	1.83	0.60
2:G:1123:ASP:N	2:G:1123:ASP:OD1	2.34	0.60
2:G:1805:ALA:HB2	2:G:2011:ILE:HB	1.84	0.60
2:H:499:THR:CB	2:H:500:HIS:CD2	2.81	0.60
2:I:741:HIS:CE1	2:I:845:THR:HG21	2.35	0.60
2:I:1805:ALA:HB2	2:I:2011:ILE:HB	1.82	0.60
1:B:956:ALA:O	1:B:959:ILE:HG22	2.02	0.60
1:B:1184:LEU:HB2	1:B:1352:THR:HG21	1.83	0.60
1:C:1057:MET:SD	1:C:1097:ILE:HG23	2.40	0.60
2:G:271:THR:OG1	2:G:460:TYR:HB2	2.01	0.60
2:G:443:LEU:HD22	2:G:448:VAL:HG11	1.83	0.60
2:G:526:ARG:HH11	2:G:558:ASN:HD21	1.49	0.60
2:G:1195:VAL:HG13	2:G:1211:LEU:HB3	1.84	0.60
2:G:1325:PHE:CZ	2:G:1328:VAL:HG11	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1739:GLU:O	2:G:1987:PRO:HG3	2.00	0.60
2:I:1374:THR:HG23	2:I:1396:LEU:HD12	1.84	0.60
1:B:233:ILE:HD13	1:B:237:MET:HE2	1.83	0.60
1:C:198:PRO:CG	1:C:209:LEU:HD21	2.28	0.60
1:C:822:VAL:HG12	1:C:824:LEU:HD22	1.82	0.60
1:C:1544:THR:O	1:C:1545:SER:HB3	2.02	0.60
2:G:846:VAL:HG13	2:G:865:TRP:NE1	2.16	0.60
2:G:1472:VAL:HG22	2:G:1483:VAL:HG22	1.83	0.60
2:H:241:ILE:HG23	2:H:506:PRO:HG3	1.83	0.60
2:H:324:LEU:HD12	2:H:328:LEU:HG	1.84	0.60
2:H:455:ILE:HG13	2:H:469:ARG:HD3	1.83	0.60
2:H:814:SER:HB2	2:H:1040:LEU:HD13	1.83	0.60
2:I:100:ASP:OD2	2:I:102:HIS:HD2	1.83	0.60
2:I:324:LEU:HD12	2:I:328:LEU:HG	1.82	0.60
2:I:732:TRP:CD2	2:I:750:MET:CE	2.84	0.60
2:I:1173:VAL:O	2:I:1567:ARG:NH2	2.35	0.60
2:I:1360:ILE:HG23	2:I:1403:VAL:O	2.01	0.60
1:A:635:ILE:HG22	1:A:651:TYR:CG	2.36	0.60
1:A:980:VAL:HG21	2:G:952:ARG:HH21	1.64	0.60
1:B:80:CYS:SG	1:B:82:SER:HB3	2.42	0.60
1:B:221:LEU:O	1:B:225:SER:HB3	2.02	0.60
1:B:680:ILE:HG13	1:B:769:ILE:HB	1.83	0.60
2:G:1834:ARG:HH11	2:G:1834:ARG:CG	2.02	0.60
2:H:197:GLU:OE1	2:H:197:GLU:HA	2.02	0.60
2:H:565:TYR:CZ	2:H:758:ARG:HD2	2.35	0.60
2:H:745:ASP:HA	2:H:832:TRP:HH2	1.66	0.60
2:H:1219:ILE:HD11	2:H:1242:PHE:HB2	1.83	0.60
2:H:1739:GLU:O	2:H:1987:PRO:HG3	2.02	0.60
2:I:1198:SER:HB3	2:I:1205:LEU:HD21	1.82	0.60
2:I:1205:LEU:O	2:I:1206:LYS:HG3	2.00	0.60
1:A:1194:ASN:O	1:A:1197:THR:HG23	2.02	0.60
1:C:1194:ASN:O	1:C:1197:THR:HG23	2.01	0.60
2:G:184:VAL:HG13	2:G:187:LEU:HD21	1.84	0.60
2:G:907:VAL:O	2:G:910:GLN:HB3	2.02	0.60
2:G:1355:ASN:CB	2:G:1583:MET:HE1	2.32	0.60
2:I:1874:VAL:O	2:I:1878:VAL:HG12	2.02	0.60
1:B:992:PHE:CD2	1:B:1399:PRO:HG3	2.37	0.60
1:C:221:LEU:O	1:C:225:SER:HB3	2.02	0.60
1:C:531:LEU:HD21	1:C:629:THR:HG22	1.83	0.60
1:C:1009:LEU:HD13	1:C:1445:MET:HE1	1.83	0.60
1:C:1062:TYR:CD2	1:C:1693:ILE:HG23	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:61:VAL:HG21	2:G:95:TYR:HE1	1.67	0.60
2:G:100:ASP:OD2	2:G:102:HIS:HD2	1.85	0.60
2:H:1103:PHE:O	2:H:1247:GLY:HA3	2.02	0.60
2:H:1198:SER:HB3	2:H:1205:LEU:HD21	1.83	0.60
2:I:1986:LYS:N	2:I:1987:PRO:HD2	2.17	0.60
1:A:529:MET:HG3	1:A:638:LEU:HG	1.84	0.60
1:B:824:LEU:HD12	1:B:846:LEU:HB3	1.82	0.60
1:B:1259:GLY:HA2	1:B:1263:ASP:HB2	1.84	0.60
1:C:749:ILE:CD1	1:C:805:CYS:HB3	2.32	0.60
2:G:762:ASN:H	2:G:762:ASN:ND2	1.85	0.60
2:H:652:ILE:N	2:H:658:MET:HE3	2.13	0.60
2:H:663:ILE:HG13	2:H:694:TYR:HE1	1.67	0.60
2:H:817:ALA:O	2:H:821:ILE:HG13	2.02	0.60
2:H:860:ARG:HB3	2:H:898:ASP:HB3	1.83	0.60
2:I:732:TRP:CD2	2:I:750:MET:HE1	2.37	0.60
2:I:1719:ILE:O	2:I:1761:SER:HB2	2.01	0.60
1:C:1304:ALA:O	1:C:1307:THR:HG23	2.02	0.60
1:C:1662:TYR:O	1:C:1665:ILE:HG22	2.01	0.60
2:G:565:TYR:CZ	2:G:758:ARG:HD2	2.37	0.60
2:G:892:ILE:HD11	2:G:903:TRP:NE1	2.17	0.60
2:H:490:TRP:HE1	2:H:516:THR:CG2	2.01	0.60
2:H:1054:LEU:HB2	3:H:3051:FMN:C7M	2.31	0.60
2:H:1805:ALA:HB2	2:H:2011:ILE:HB	1.82	0.60
2:I:674:TYR:HB3	2:I:676:ILE:HG22	1.84	0.60
2:I:762:ASN:HD22	2:I:762:ASN:N	1.88	0.60
2:I:1123:ASP:N	2:I:1123:ASP:OD1	2.35	0.60
2:I:1149:TRP:CD1	2:I:1213:LEU:HD12	2.37	0.60
1:A:440:MET:HE3	1:A:483:VAL:HG21	1.84	0.59
1:B:1057:MET:SD	1:B:1097:ILE:HG23	2.42	0.59
1:C:80:CYS:SG	1:C:82:SER:HB3	2.42	0.59
2:H:846:VAL:HG13	2:H:865:TRP:NE1	2.17	0.59
2:I:402:LEU:O	2:I:402:LEU:HD13	2.02	0.59
2:I:817:ALA:O	2:I:821:ILE:HG13	2.01	0.59
1:B:1657:HIS:ND1	1:B:1658:PRO:HD2	2.17	0.59
2:G:747:HIS:HE1	2:G:780:TYR:OH	1.84	0.59
2:I:1004:LEU:HD21	2:I:1020:VAL:HG23	1.84	0.59
1:A:233:ILE:HD13	1:A:237:MET:CE	2.32	0.59
1:B:989:GLN:NE2	2:H:993:GLN:OE1	2.35	0.59
1:B:1360:ARG:HH11	1:B:1364:GLU:HG2	1.66	0.59
1:C:152:HIS:HD2	1:C:163:LEU:HB2	1.63	0.59
1:C:232:LEU:HD22	1:C:269:LEU:HA	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:750:MET:HG3	2:G:796:PHE:HZ	1.65	0.59
2:H:1378:ILE:HD11	2:H:1381:VAL:HG21	1.84	0.59
2:I:601:THR:O	2:I:601:THR:HG22	2.02	0.59
2:I:658:MET:HA	2:I:661:TRP:NE1	2.17	0.59
2:I:942:THR:HG21	2:I:1012:GLN:HA	1.85	0.59
2:I:1352:HIS:CD2	2:I:1410:PHE:CE2	2.89	0.59
1:A:251:GLN:HA	1:A:256:LEU:H	1.68	0.59
1:A:417:TYR:OH	1:A:458:THR:HG22	2.02	0.59
1:A:1304:ALA:O	1:A:1307:THR:HG23	2.03	0.59
1:A:1524:GLY:O	1:A:1528:THR:HG23	2.03	0.59
1:B:1392:LEU:HD22	1:B:1396:MET:HG3	1.84	0.59
1:C:980:VAL:HG23	2:I:968:GLN:OE1	2.02	0.59
2:G:1223:MET:HE3	2:G:1238:LEU:HD12	1.84	0.59
2:I:839:PRO:HA	2:I:844:VAL:HG13	1.83	0.59
1:A:50:SER:HB2	1:A:51:PRO:HD3	1.85	0.59
1:B:233:ILE:HD13	1:B:237:MET:CE	2.32	0.59
1:B:504:ASP:CB	1:B:508:ASN:H	2.15	0.59
1:C:421:ILE:CG1	1:C:469:VAL:HG21	2.32	0.59
2:G:597:MET:HA	3:G:3051:FMN:N5	2.17	0.59
2:G:732:TRP:CD2	2:G:750:MET:CE	2.85	0.59
2:G:926:LEU:HD13	2:G:947:THR:HG22	1.83	0.59
2:G:2038:ILE:O	2:G:2042:ILE:HG12	2.02	0.59
2:H:99:ASN:HA	2:H:550:VAL:CG2	2.32	0.59
2:H:184:VAL:HG13	2:H:187:LEU:HD21	1.83	0.59
2:I:1567:ARG:CG	2:I:1567:ARG:NH1	2.50	0.59
1:A:12:ILE:HD11	2:G:2041:ILE:HD12	1.82	0.59
1:A:37:LYS:HB2	1:A:65:TYR:HE1	1.67	0.59
1:A:989:GLN:NE2	2:G:993:GLN:OE1	2.36	0.59
1:B:1461:ASP:O	1:B:1465:ASN:HB2	2.03	0.59
1:B:1474:ALA:O	1:B:1478:PRO:HD2	2.03	0.59
1:C:1:MET:HE3	1:C:5:VAL:HG12	1.84	0.59
1:C:1461:ASP:O	1:C:1465:ASN:HB2	2.02	0.59
1:C:1657:HIS:ND1	1:C:1658:PRO:HD2	2.17	0.59
2:H:719:ILE:O	2:H:722:ALA:HB3	2.02	0.59
2:I:163:GLN:CG	2:I:423:VAL:HG12	2.32	0.59
2:I:490:TRP:O	2:I:494:THR:HG22	2.03	0.59
1:A:1432:HIS:CE1	1:A:1434:SER:OG	2.56	0.59
1:B:1119:LYS:HE2	1:B:1341:PHE:CG	2.38	0.59
1:C:421:ILE:HG13	1:C:469:VAL:HG21	1.85	0.59
1:C:1555:ALA:HA	1:C:1621:PHE:CE1	2.38	0.59
2:G:594:VAL:HG21	2:G:610:THR:HG21	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:163:GLN:CG	2:H:423:VAL:HG12	2.32	0.59
2:I:127:ILE:O	2:I:131:ILE:HG13	2.03	0.59
1:B:1308:SER:HB3	1:B:1589:GLY:HA3	1.83	0.59
2:G:232:LEU:O	2:G:232:LEU:HD23	2.03	0.59
2:G:754:TYR:CD2	2:G:794:MET:HG3	2.38	0.59
2:H:726:PHE:O	2:H:762:ASN:HB2	2.03	0.59
2:H:1265:MET:CE	2:H:1562:PRO:HG2	2.31	0.59
2:H:1844:ARG:CG	2:H:1844:ARG:NH1	2.58	0.59
2:H:2038:ILE:O	2:H:2042:ILE:HG12	2.03	0.59
2:I:589:ARG:HB3	2:I:590:PRO:HD2	1.83	0.59
2:I:1908:ASP:HB2	2:I:1958:LEU:HD21	1.83	0.59
1:A:2:LYS:CD	2:G:2050:GLN:HB3	2.24	0.59
1:B:32:GLN:HA	1:B:35:PHE:CE2	2.38	0.59
1:B:413:LEU:HD13	1:B:451:MET:HG2	1.85	0.59
1:C:20:TYR:CE1	2:I:2035:SER:HB2	2.38	0.59
2:G:402:LEU:O	2:G:402:LEU:HD13	2.03	0.59
2:I:174:ARG:NH2	2:I:225:THR:OG1	2.36	0.59
2:I:762:ASN:H	2:I:762:ASN:ND2	1.88	0.59
2:I:1210:ILE:HB	2:I:1222:GLU:HB3	1.85	0.59
2:G:1823:SER:OG	2:G:1825:GLU:HG2	2.03	0.59
2:H:813:THR:HB	2:H:818:LYS:HE3	1.84	0.59
2:H:1314:ARG:CG	2:H:1314:ARG:NH1	2.62	0.59
2:I:99:ASN:HA	2:I:550:VAL:CG2	2.33	0.59
2:I:601:THR:CG2	2:I:618:GLU:O	2.39	0.59
2:I:813:THR:HB	2:I:818:LYS:HE3	1.85	0.59
1:A:409:ALA:HB2	1:A:442:ARG:HD2	1.84	0.58
1:B:286:PHE:O	1:B:290:MET:HG2	2.03	0.58
1:B:417:TYR:OH	1:B:458:THR:HG22	2.03	0.58
1:B:980:VAL:HG23	2:H:968:GLN:OE1	2.02	0.58
1:C:408:TRP:CH2	1:C:1628:SER:HB3	2.38	0.58
1:C:733:ILE:HD12	1:C:761:LEU:HD21	1.85	0.58
1:C:1233:GLU:OE2	1:C:1680:ARG:NH2	2.36	0.58
2:H:1575:LEU:HD13	2:H:1579:ILE:HD12	1.85	0.58
2:I:1223:MET:HE3	2:I:1238:LEU:HD12	1.85	0.58
1:A:444:ASN:HB3	1:A:446:ALA:H	1.66	0.58
1:B:332:THR:HG22	1:C:331:ILE:CD1	2.33	0.58
2:G:1844:ARG:CG	2:G:1844:ARG:NH1	2.62	0.58
2:H:105:ALA:HB3	2:H:533:LEU:HD21	1.84	0.58
2:H:606:PHE:HZ	2:H:805:VAL:HG11	1.68	0.58
2:H:1149:TRP:CD1	2:H:1213:LEU:CD1	2.85	0.58
2:I:597:MET:HA	3:I:3051:FMN:N5	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1496:GLU:O	1:B:1500:GLN:HG3	2.03	0.58
1:C:1721:ARG:CG	1:C:1721:ARG:NH1	2.56	0.58
2:G:166:THR:HG22	2:G:168:ASP:N	2.19	0.58
2:H:259:THR:OG1	2:H:260:PRO:HD2	2.03	0.58
2:I:736:ARG:NH1	2:I:769:SER:O	2.36	0.58
1:B:599:MET:HB2	1:B:624:LYS:CD	2.24	0.58
1:B:705:VAL:HG23	1:B:732:LEU:HD21	1.85	0.58
1:B:985:ARG:HH12	2:H:953:ARG:CZ	2.15	0.58
1:B:1662:TYR:O	1:B:1665:ILE:HG22	2.04	0.58
1:C:989:GLN:NE2	2:I:993:GLN:OE1	2.36	0.58
1:C:1056:ILE:CD1	1:C:1193:TRP:HD1	2.17	0.58
2:G:674:TYR:HB3	2:G:676:ILE:HG22	1.85	0.58
2:G:1931:LEU:HB3	2:G:1935:GLU:CG	2.33	0.58
2:H:926:LEU:HD13	2:H:947:THR:HG22	1.85	0.58
2:H:1101:GLU:HB3	2:H:1147:ILE:HG22	1.86	0.58
2:H:1130:THR:H	2:H:1133:THR:HG23	1.68	0.58
2:I:856:LYS:NZ	2:I:1052:CYS:SG	2.70	0.58
2:I:907:VAL:O	2:I:910:GLN:HB3	2.03	0.58
2:I:1086:LEU:HD12	2:I:1090:TYR:CB	2.33	0.58
2:I:1989:LYS:O	2:I:1993:LYS:HG3	2.02	0.58
1:A:1:MET:HE3	1:A:5:VAL:HG12	1.85	0.58
1:A:11:HIS:O	1:A:15:THR:HG22	2.04	0.58
1:A:232:LEU:HD13	1:A:272:GLU:HB2	1.84	0.58
1:A:435:GLU:O	1:A:439:ILE:HG13	2.02	0.58
1:A:1544:THR:O	1:A:1545:SER:HB3	2.02	0.58
1:B:232:LEU:HD22	1:B:269:LEU:HA	1.85	0.58
1:B:531:LEU:HD21	1:B:629:THR:HG22	1.84	0.58
1:C:852:ARG:HH11	1:C:852:ARG:CG	2.00	0.58
2:G:603:SER:O	2:G:607:VAL:HG12	2.03	0.58
2:G:807:ILE:CG2	2:G:1066:ILE:HA	2.34	0.58
2:G:1149:TRP:CD1	2:G:1213:LEU:CD1	2.87	0.58
2:G:1597:ALA:HB1	2:G:1638:ILE:CD1	2.33	0.58
2:H:1223:MET:HE3	2:H:1238:LEU:HD12	1.84	0.58
2:H:1360:ILE:HG23	2:H:1403:VAL:O	2.04	0.58
2:H:1589:VAL:HG11	2:H:1640:PHE:CE1	2.39	0.58
2:I:105:ALA:HB3	2:I:533:LEU:HD21	1.84	0.58
2:I:455:ILE:HG13	2:I:469:ARG:HD3	1.85	0.58
2:I:1265:MET:CE	2:I:1562:PRO:HG2	2.33	0.58
1:A:529:MET:CE	1:A:894:ARG:HD2	2.34	0.58
1:B:50:SER:HB2	1:B:51:PRO:HD3	1.86	0.58
1:B:419:GLU:HG2	1:B:424:VAL:HB	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:232:LEU:HD13	1:C:272:GLU:HB2	1.85	0.58
2:G:611:THR:CG2	2:G:641:ILE:HG13	2.34	0.58
2:G:638:VAL:HA	2:G:641:ILE:HG22	1.86	0.58
2:H:1210:ILE:HB	2:H:1222:GLU:HB3	1.85	0.58
2:I:145:LEU:O	2:I:149:VAL:HG12	2.03	0.58
2:I:1219:ILE:HD11	2:I:1242:PHE:HB2	1.83	0.58
2:G:634:ILE:HD11	2:G:649:ILE:CD1	2.34	0.58
2:G:835:THR:HG21	2:G:855:HIS:NE2	2.19	0.58
2:G:1149:TRP:CD1	2:G:1213:LEU:HD12	2.38	0.58
2:H:89:THR:O	2:H:93:ASN:HB2	2.04	0.58
2:H:732:TRP:CD2	2:H:750:MET:CE	2.87	0.58
2:H:1871:LEU:HD22	2:H:1888:ILE:HD11	1.85	0.58
1:A:260:ARG:HH12	1:A:300:VAL:HG21	1.68	0.58
1:B:37:LYS:HB2	1:B:65:TYR:HE1	1.69	0.58
1:B:980:VAL:H	2:H:968:GLN:NE2	2.00	0.58
2:G:1210:ILE:HB	2:G:1222:GLU:HB3	1.85	0.58
2:H:1331:TRP:CE2	2:H:1335:ILE:HG13	2.38	0.58
1:A:992:PHE:CE2	1:A:1399:PRO:HG3	2.39	0.58
1:B:1125:VAL:HG21	1:B:1175:ILE:HD12	1.86	0.58
1:C:1020:VAL:HG13	1:C:1400:ILE:HG23	1.85	0.58
1:C:1665:ILE:HD11	1:C:1669:ARG:HG2	1.85	0.58
2:G:56:THR:HG23	2:G:59:GLU:CG	2.29	0.58
2:G:146:PHE:HA	2:G:149:VAL:HG12	1.86	0.58
2:G:260:PRO:HD3	2:G:289:TRP:CE2	2.38	0.58
2:G:658:MET:HA	2:G:661:TRP:NE1	2.19	0.58
2:G:741:HIS:CE1	2:G:845:THR:HG21	2.38	0.58
2:G:821:ILE:HA	2:G:857:ILE:HD11	1.84	0.58
2:I:1822:MET:CE	2:I:1996:ILE:HG12	2.34	0.58
2:I:1931:LEU:HD22	2:I:1935:GLU:HG2	1.86	0.58
1:A:1062:TYR:CD2	1:A:1693:ILE:HG23	2.39	0.58
2:G:1778:GLN:HB3	2:G:1831:VAL:HG13	1.85	0.58
2:H:490:TRP:CH2	2:H:512:LEU:HD21	2.39	0.58
2:H:665:LEU:O	2:H:669:LEU:HB2	2.04	0.58
2:H:907:VAL:O	2:H:910:GLN:HB3	2.03	0.58
2:H:1093:ASP:HB3	2:H:1096:LYS:HG3	1.84	0.58
2:I:239:PRO:HG3	2:I:304:PHE:HA	1.86	0.58
2:I:1004:LEU:CD2	2:I:1019:PRO:HB2	2.34	0.58
1:A:828:PRO:HG3	1:A:868:ILE:HG22	1.86	0.57
1:B:749:ILE:CD1	1:B:805:CYS:HB3	2.33	0.57
1:C:1052:GLU:O	1:C:1056:ILE:HG23	2.04	0.57
2:G:7:ARG:NH1	2:G:24:THR:HA	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:703:LEU:HD21	2:G:705:LEU:HD21	1.86	0.57
2:G:1054:LEU:HB2	3:G:3051:FMN:C7M	2.34	0.57
2:G:1822:MET:HE2	2:G:1996:ILE:HG12	1.85	0.57
2:H:127:ILE:O	2:H:131:ILE:HG13	2.04	0.57
2:H:166:THR:HG22	2:H:168:ASP:N	2.19	0.57
1:A:419:GLU:HG2	1:A:424:VAL:HB	1.86	0.57
1:A:635:ILE:HG22	1:A:651:TYR:CD1	2.39	0.57
1:B:1009:LEU:HG	1:B:1664:ALA:HB2	1.87	0.57
1:B:1304:ALA:O	1:B:1307:THR:HG23	2.04	0.57
1:C:341:GLN:O	1:C:345:VAL:HG12	2.04	0.57
1:C:771:PHE:CD1	1:C:825:PRO:HG3	2.40	0.57
2:G:667:LYS:HB2	2:G:698:LEU:HD23	1.85	0.57
2:H:638:VAL:HA	2:H:641:ILE:HG22	1.86	0.57
2:I:353:VAL:HG23	2:I:357:ASN:ND2	2.19	0.57
2:I:376:ASN:HD22	2:I:377:LEU:N	2.01	0.57
2:I:1130:THR:H	2:I:1133:THR:HG23	1.69	0.57
1:B:436:ALA:O	1:B:440:MET:HG3	2.04	0.57
1:C:1184:LEU:HB2	1:C:1352:THR:HG21	1.85	0.57
2:G:741:HIS:CB	2:G:853:PRO:HB2	2.34	0.57
2:G:1130:THR:H	2:G:1133:THR:HG23	1.70	0.57
2:G:1374:THR:HG23	2:G:1396:LEU:HD12	1.85	0.57
2:H:443:LEU:HD22	2:H:448:VAL:HG11	1.86	0.57
2:H:736:ARG:NH1	2:H:769:SER:O	2.36	0.57
2:I:499:THR:CB	2:I:500:HIS:CD2	2.79	0.57
2:I:2030:TYR:CE1	2:I:2034:GLY:HA2	2.39	0.57
1:A:233:ILE:HD13	1:A:237:MET:HE2	1.87	0.57
1:A:604:ALA:HB3	1:A:612:GLU:HG2	1.86	0.57
1:A:1056:ILE:CD1	1:A:1193:TRP:HD1	2.17	0.57
1:B:232:LEU:HD13	1:B:272:GLU:HB2	1.87	0.57
1:C:1600:LEU:HD13	1:C:1657:HIS:HA	1.86	0.57
2:G:601:THR:CG2	2:G:618:GLU:O	2.41	0.57
2:G:856:LYS:HG2	2:G:1054:LEU:HD12	1.86	0.57
2:G:1624:THR:HB	2:G:1642:THR:HG23	1.86	0.57
2:I:726:PHE:O	2:I:762:ASN:HB2	2.04	0.57
1:A:415:SER:O	1:A:419:GLU:HB2	2.05	0.57
1:A:421:ILE:HG12	1:A:469:VAL:HG21	1.85	0.57
1:A:985:ARG:HH12	2:G:953:ARG:NH2	2.03	0.57
1:A:1540:SER:HA	1:A:1575:VAL:HG22	1.86	0.57
1:A:1600:LEU:HD13	1:A:1657:HIS:HA	1.85	0.57
1:B:11:HIS:ND1	2:H:1998:LYS:HA	2.19	0.57
1:B:1234:MET:HG2	1:B:1326:ILE:HD12	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:817:ALA:O	2:G:821:ILE:HG13	2.04	0.57
2:G:1159:ILE:CG1	2:G:1169:PRO:HD3	2.34	0.57
2:G:1293:THR:CG2	2:G:1296:GLU:H	2.14	0.57
2:H:601:THR:HG22	2:H:620:ALA:H	1.69	0.57
2:H:835:THR:HB	2:H:845:THR:HG23	1.85	0.57
2:H:835:THR:HG22	2:H:845:THR:N	2.20	0.57
2:H:1010:PRO:O	2:H:1011:MET:HB2	2.03	0.57
2:H:1231:GLY:O	2:H:1233:PRO:HD3	2.04	0.57
2:H:1355:ASN:HB3	2:H:1583:MET:HE1	1.86	0.57
1:B:1:MET:HE3	1:B:9:LEU:HD12	1.85	0.57
1:B:408:TRP:CZ3	1:B:1628:SER:HB3	2.40	0.57
1:B:1524:GLY:O	1:B:1528:THR:HG23	2.05	0.57
2:G:163:GLN:CG	2:G:423:VAL:HG12	2.34	0.57
2:G:273:HIS:HB3	2:G:512:LEU:HD22	1.86	0.57
2:G:1010:PRO:O	2:G:1011:MET:HB2	2.05	0.57
2:H:741:HIS:CE1	2:H:855:HIS:NE2	2.73	0.57
2:I:707:PRO:HG2	2:I:730:LEU:HD13	1.85	0.57
1:A:531:LEU:HD21	1:A:629:THR:HG22	1.87	0.57
2:G:89:THR:O	2:G:93:ASN:HB2	2.05	0.57
2:G:1086:LEU:HD12	2:G:1090:TYR:CB	2.35	0.57
2:G:1194:VAL:O	2:G:1194:VAL:HG12	2.05	0.57
2:G:1775:GLN:HG2	2:G:1836:MET:SD	2.44	0.57
2:H:543:PHE:CB	2:H:545:GLN:HE22	2.17	0.57
2:H:1086:LEU:HD12	2:H:1090:TYR:CB	2.34	0.57
2:H:1123:ASP:OD1	2:H:1123:ASP:N	2.36	0.57
2:H:1782:THR:HG22	2:H:1827:LEU:HD21	1.86	0.57
2:I:353:VAL:HG23	2:I:357:ASN:HD22	1.70	0.57
2:I:1931:LEU:HB3	2:I:1935:GLU:CG	2.35	0.57
2:I:2029:VAL:O	2:I:2033:THR:HG22	2.05	0.57
1:B:440:MET:HE3	1:B:483:VAL:HG21	1.87	0.57
1:B:980:VAL:HG21	2:H:952:ARG:NH2	2.19	0.57
1:B:1022:THR:HG22	1:B:1226:SER:HB2	1.86	0.57
1:B:1538:VAL:HB	1:B:1639:VAL:HG22	1.87	0.57
1:C:741:SER:HB3	1:C:744:ASP:HB2	1.86	0.57
2:G:455:ILE:HG13	2:G:469:ARG:HD3	1.86	0.57
2:G:577:ILE:HD13	2:G:1097:ILE:CD1	2.35	0.57
2:G:1198:SER:HB3	2:G:1205:LEU:HD21	1.85	0.57
2:H:99:ASN:HA	2:H:550:VAL:HG23	1.87	0.57
2:H:273:HIS:HB3	2:H:512:LEU:HD22	1.85	0.57
2:H:517:HIS:C	2:H:517:HIS:CD2	2.78	0.57
2:H:722:ALA:HB1	2:H:723:HIS:CE1	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:814:SER:HB2	2:I:1040:LEU:HD13	1.86	0.57
2:I:1010:PRO:O	2:I:1011:MET:HB2	2.05	0.57
2:I:1575:LEU:HD13	2:I:1579:ILE:HD12	1.84	0.57
1:A:1057:MET:SD	1:A:1097:ILE:HG23	2.45	0.57
1:A:1474:ALA:O	1:A:1478:PRO:HD2	2.04	0.57
1:B:1431:GLU:HB3	1:B:1520:ALA:HB2	1.87	0.57
1:B:1473:GLU:O	1:B:1478:PRO:HD3	2.04	0.57
1:C:2:LYS:CD	2:I:2050:GLN:HB3	2.29	0.57
1:C:1305:CYS:HB2	1:C:1645:GLY:HA2	1.86	0.57
1:C:1474:ALA:O	1:C:1478:PRO:HD2	2.05	0.57
2:G:1954:LYS:HD3	2:G:1958:LEU:HD13	1.87	0.57
2:I:653:TYR:CD1	2:I:659:LEU:HD21	2.40	0.57
1:A:329:GLU:O	1:A:333:LYS:HG3	2.05	0.57
1:C:251:GLN:HA	1:C:256:LEU:H	1.70	0.57
1:C:433:VAL:O	1:C:437:ILE:HG13	2.04	0.57
2:G:826:GLY:O	2:G:827:VAL:HG23	2.04	0.57
2:G:942:THR:HG21	2:G:1012:GLN:HA	1.86	0.57
2:G:1266:TYR:CG	2:G:1347:LEU:HD23	2.40	0.57
2:G:1868:GLN:HG3	2:G:1898:TYR:OH	2.05	0.57
2:G:1989:LYS:O	2:G:1993:LYS:HG3	2.05	0.57
2:H:271:THR:OG1	2:H:460:TYR:HB2	2.03	0.57
2:H:2029:VAL:O	2:H:2033:THR:HG22	2.05	0.57
2:I:665:LEU:O	2:I:669:LEU:HB2	2.05	0.57
1:A:400:ARG:HH11	1:A:400:ARG:HG3	1.67	0.56
1:A:1538:VAL:HB	1:A:1639:VAL:HG22	1.86	0.56
1:B:251:GLN:HA	1:B:256:LEU:H	1.70	0.56
1:B:409:ALA:HB2	1:B:442:ARG:HD2	1.86	0.56
1:C:1524:GLY:O	1:C:1528:THR:HG23	2.05	0.56
2:G:499:THR:CB	2:G:500:HIS:CD2	2.80	0.56
2:G:517:HIS:C	2:G:517:HIS:CD2	2.78	0.56
2:G:741:HIS:HE1	2:G:845:THR:HG21	1.69	0.56
2:G:1561:ASN:OD1	2:G:1563:ILE:HB	2.05	0.56
2:H:55:THR:CG2	2:H:56:THR:HG22	2.30	0.56
2:H:1834:ARG:NH1	2:H:1834:ARG:CG	2.60	0.56
2:I:273:HIS:HB3	2:I:512:LEU:HD22	1.87	0.56
2:I:481:ASP:OD2	2:I:485:ARG:NH1	2.38	0.56
2:I:490:TRP:CH2	2:I:512:LEU:HD21	2.40	0.56
2:I:634:ILE:HD11	2:I:649:ILE:CD1	2.35	0.56
2:I:741:HIS:CB	2:I:853:PRO:HB2	2.35	0.56
2:I:1300:PHE:HA	2:I:1556:VAL:HG11	1.87	0.56
1:A:80:CYS:SG	1:A:82:SER:HB3	2.45	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:883:ILE:HD12	1:A:947:LEU:HD12	1.86	0.56
1:A:1285:ALA:O	1:A:1289:MET:HG3	2.05	0.56
1:B:59:ARG:HH11	2:H:1896:GLN:NE2	2.03	0.56
1:B:742:LYS:HD3	1:B:746:GLU:OE2	2.05	0.56
1:B:1305:CYS:HB2	1:B:1645:GLY:HA2	1.86	0.56
1:C:807:LYS:HG3	1:C:858:TRP:HB3	1.87	0.56
1:C:1538:VAL:HB	1:C:1639:VAL:HG22	1.86	0.56
2:G:653:TYR:CD1	2:G:659:LEU:HD21	2.40	0.56
2:H:1908:ASP:HB2	2:H:1958:LEU:HD21	1.86	0.56
2:H:1920:GLN:HG2	2:H:1922:ILE:HD11	1.87	0.56
2:I:7:ARG:NH1	2:I:24:THR:HA	2.20	0.56
2:I:463:PHE:HD1	2:I:486:LEU:HD13	1.70	0.56
2:I:777:THR:CG2	2:I:1081:HIS:CE1	2.88	0.56
2:I:1231:GLY:O	2:I:1233:PRO:HD3	2.05	0.56
2:I:1804:PHE:CZ	2:I:2010:TYR:HB2	2.40	0.56
1:A:408:TRP:CZ3	1:A:1628:SER:HB3	2.40	0.56
1:B:1014:ASP:N	1:B:1510:ASN:HD21	2.01	0.56
1:C:625:THR:HG23	1:C:661:ASP:OD1	2.05	0.56
1:C:980:VAL:H	2:I:968:GLN:HE22	1.53	0.56
1:C:1022:THR:HG22	1:C:1226:SER:HB2	1.87	0.56
1:C:1326:ILE:HG12	1:C:1388:MET:HG3	1.87	0.56
2:G:102:HIS:HE1	2:G:180:TYR:OH	1.88	0.56
2:G:120:LYS:O	2:G:124:LYS:HG3	2.05	0.56
2:G:376:ASN:HD22	2:G:377:LEU:N	2.02	0.56
2:G:543:PHE:CB	2:G:545:GLN:HE22	2.17	0.56
2:G:702:TYR:CB	2:G:727:PRO:HB2	2.35	0.56
2:G:732:TRP:CD2	2:G:750:MET:HE1	2.40	0.56
2:G:860:ARG:HB3	2:G:898:ASP:HB3	1.85	0.56
2:G:1874:VAL:O	2:G:1878:VAL:HG12	2.05	0.56
2:H:653:TYR:CD1	2:H:659:LEU:HD21	2.40	0.56
2:H:807:ILE:CG2	2:H:1066:ILE:HA	2.36	0.56
2:H:1223:MET:CE	2:H:1238:LEU:HD12	2.35	0.56
2:H:1266:TYR:CG	2:H:1347:LEU:HD23	2.40	0.56
2:I:89:THR:O	2:I:93:ASN:HB2	2.05	0.56
2:I:105:ALA:CB	2:I:533:LEU:HD21	2.34	0.56
2:I:281:VAL:HG23	2:I:459:VAL:HG11	1.87	0.56
2:I:1300:PHE:CA	2:I:1556:VAL:HG11	2.36	0.56
2:I:1314:ARG:CG	2:I:1314:ARG:NH1	2.63	0.56
2:I:1567:ARG:HH12	2:I:1568:HIS:HB3	1.70	0.56
1:A:411:GLN:NE2	1:A:1628:SER:H	2.01	0.56
1:B:635:ILE:HG22	1:B:651:TYR:CG	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:430:ARG:NH2	1:C:605:LEU:HD13	2.21	0.56
2:G:239:PRO:HG3	2:G:304:PHE:HA	1.88	0.56
2:I:120:LYS:O	2:I:124:LYS:HG3	2.06	0.56
2:I:603:SER:O	2:I:607:VAL:HG12	2.06	0.56
2:I:807:ILE:CG2	2:I:1066:ILE:HA	2.34	0.56
2:I:1328:VAL:HG23	2:I:1557:SER:HA	1.88	0.56
2:I:2038:ILE:O	2:I:2042:ILE:HG12	2.04	0.56
1:B:529:MET:HG2	1:B:638:LEU:CD1	2.35	0.56
1:C:419:GLU:HG2	1:C:424:VAL:HB	1.86	0.56
2:G:463:PHE:HD1	2:G:486:LEU:HD13	1.70	0.56
2:H:61:VAL:HG21	2:H:95:TYR:HE1	1.69	0.56
2:I:443:LEU:HD22	2:I:448:VAL:HG11	1.87	0.56
2:I:1149:TRP:CD1	2:I:1213:LEU:CD1	2.88	0.56
2:I:1292:ILE:O	2:I:1368:VAL:O	2.23	0.56
2:I:1378:ILE:HD11	2:I:1381:VAL:CG2	2.34	0.56
1:B:56:MET:HG3	2:H:1893:VAL:CG2	2.35	0.56
1:C:27:ARG:HD2	1:C:30:GLU:OE2	2.06	0.56
1:C:529:MET:HE1	1:C:894:ARG:HD2	1.88	0.56
1:C:1259:GLY:HA2	1:C:1263:ASP:HB2	1.87	0.56
2:G:584:SER:HA	2:G:587:ILE:HG23	1.87	0.56
2:G:1567:ARG:HG3	2:G:1568:HIS:N	2.20	0.56
2:G:1722:GLY:N	2:G:1726:GLY:HA3	2.21	0.56
2:H:376:ASN:HD22	2:H:377:LEU:N	2.03	0.56
2:H:741:HIS:HB3	2:H:853:PRO:HB2	1.88	0.56
2:H:1868:GLN:HG3	2:H:1898:TYR:OH	2.06	0.56
1:A:152:HIS:CE1	1:A:168:MET:HG3	2.41	0.56
1:A:295:ALA:HB2	1:A:302:LEU:HD11	1.87	0.56
1:A:742:LYS:HD3	1:A:746:GLU:OE2	2.05	0.56
1:A:1665:ILE:HD11	1:A:1669:ARG:HG2	1.88	0.56
1:B:152:HIS:CE1	1:B:168:MET:HG3	2.41	0.56
1:B:1009:LEU:HD13	1:B:1445:MET:HE1	1.86	0.56
1:C:1056:ILE:HD13	1:C:1193:TRP:CD1	2.41	0.56
1:C:1473:GLU:O	1:C:1478:PRO:HD3	2.05	0.56
2:H:16:LEU:HG	2:H:48:PHE:CZ	2.41	0.56
2:H:777:THR:CG2	2:H:1081:HIS:CE1	2.88	0.56
2:H:1194:VAL:O	2:H:1194:VAL:HG12	2.05	0.56
2:H:1890:ASN:HB2	2:H:1899:VAL:HB	1.88	0.56
2:H:1989:LYS:O	2:H:1993:LYS:HG3	2.06	0.56
2:I:232:LEU:HD23	2:I:232:LEU:O	2.06	0.56
2:I:1227:ARG:HG3	2:I:1227:ARG:NH1	2.00	0.56
1:B:644:THR:HG22	1:B:648:ASP:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1347:LYS:O	1:C:1347:LYS:HD3	2.05	0.56
2:G:1343:VAL:O	2:G:1343:VAL:HG22	2.06	0.56
2:G:1567:ARG:HH12	2:G:1568:HIS:HB3	1.71	0.56
2:G:1675:GLY:O	2:G:1678:MET:HB2	2.05	0.56
2:H:526:ARG:HH11	2:H:558:ASN:HD21	1.53	0.56
2:I:607:VAL:HA	2:I:617:ILE:HD13	1.86	0.56
2:I:774:ALA:HB1	2:I:1081:HIS:CD2	2.33	0.56
1:A:1052:GLU:O	1:A:1056:ILE:HG23	2.06	0.56
2:G:589:ARG:HB3	2:G:590:PRO:HD2	1.87	0.56
2:G:654:VAL:HG23	2:G:683:ALA:HB1	1.87	0.56
2:G:663:ILE:HG13	2:G:694:TYR:HE1	1.70	0.56
2:G:964:LEU:CD2	2:G:964:LEU:N	2.68	0.56
2:G:1101:GLU:HB2	2:G:1147:ILE:O	2.06	0.56
2:G:1428:GLU:HB2	2:G:1468:THR:HG22	1.88	0.56
2:H:463:PHE:HD1	2:H:486:LEU:HD13	1.70	0.56
2:H:1431:TYR:CE1	2:H:1526:THR:HG23	2.41	0.56
2:I:577:ILE:HD13	2:I:1097:ILE:CD1	2.35	0.56
2:I:1722:GLY:N	2:I:1726:GLY:HA3	2.20	0.56
1:A:864:VAL:CG2	1:A:921:PRO:HB3	2.36	0.56
1:A:1036:ARG:NH1	1:A:1040:GLU:OE1	2.39	0.56
1:A:1473:GLU:O	1:A:1478:PRO:HD3	2.06	0.56
1:B:2:LYS:HD2	2:H:2050:GLN:CB	2.26	0.56
1:C:50:SER:HB2	1:C:51:PRO:HD3	1.88	0.56
1:C:417:TYR:OH	1:C:458:THR:HG22	2.06	0.56
2:G:665:LEU:O	2:G:669:LEU:HB2	2.06	0.56
2:G:807:ILE:HG21	2:G:1066:ILE:HA	1.88	0.56
2:H:1166:VAL:HG12	2:H:1167:SER:N	2.21	0.56
1:A:221:LEU:O	1:A:225:SER:HB3	2.05	0.55
1:A:263:GLY:O	1:A:267:VAL:HG23	2.05	0.55
1:A:1125:VAL:HG21	1:A:1175:ILE:HD12	1.88	0.55
1:A:1566:ARG:HB3	1:A:1623:TYR:CE1	2.42	0.55
1:B:992:PHE:CE2	1:B:1399:PRO:HG3	2.41	0.55
1:B:1665:ILE:HD11	1:B:1669:ARG:HG2	1.88	0.55
1:C:12:ILE:HA	1:C:15:THR:HG23	1.87	0.55
1:C:254:TRP:CZ3	1:C:302:LEU:HD13	2.41	0.55
1:C:695:GLY:HA3	1:C:906:LEU:HD11	1.88	0.55
2:G:99:ASN:HA	2:G:550:VAL:HG23	1.87	0.55
2:G:652:ILE:HB	2:G:658:MET:CE	2.36	0.55
2:G:1168:ASN:ND2	2:G:1171:ARG:HB2	2.20	0.55
2:G:1475:LYS:HG3	2:G:1481:SER:HB2	1.88	0.55
2:G:1678:MET:CE	2:G:1707:LEU:HD22	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1804:PHE:CZ	2:G:2010:TYR:HB2	2.40	0.55
2:G:1890:ASN:HB2	2:G:1899:VAL:HB	1.86	0.55
2:H:1475:LYS:HB2	2:H:1481:SER:HB2	1.88	0.55
2:I:601:THR:HG22	2:I:620:ALA:H	1.71	0.55
2:I:654:VAL:HG23	2:I:683:ALA:HB1	1.87	0.55
2:I:1873:TYR:HE1	2:I:1877:ARG:HH21	1.54	0.55
1:A:1238:VAL:HG12	1:A:1239:HIS:N	2.21	0.55
1:B:733:ILE:HD12	1:B:761:LEU:HD21	1.88	0.55
1:B:1233:GLU:OE2	1:B:1680:ARG:NH2	2.40	0.55
1:C:1496:GLU:O	1:C:1500:GLN:HG3	2.06	0.55
2:G:1227:ARG:CG	2:G:1227:ARG:NH1	2.56	0.55
2:G:1313:SER:O	2:G:1314:ARG:HD3	2.06	0.55
2:H:702:TYR:CB	2:H:727:PRO:HB2	2.36	0.55
2:H:1567:ARG:HH12	2:H:1568:HIS:HB3	1.70	0.55
2:I:260:PRO:HD3	2:I:289:TRP:CE2	2.42	0.55
2:I:1422:THR:HG21	2:I:1474:PHE:HB2	1.88	0.55
2:I:1778:GLN:HB3	2:I:1831:VAL:HG13	1.88	0.55
1:A:1657:HIS:ND1	1:A:1658:PRO:HD2	2.21	0.55
2:G:813:THR:HB	2:G:818:LYS:HE3	1.87	0.55
2:H:56:THR:HG23	2:H:59:GLU:CG	2.32	0.55
2:I:1382:VAL:HA	2:I:1422:THR:OG1	2.07	0.55
2:I:1589:VAL:HG11	2:I:1640:PHE:CE1	2.41	0.55
1:A:529:MET:HG2	1:A:638:LEU:CD1	2.36	0.55
1:A:680:ILE:HG13	1:A:769:ILE:HB	1.87	0.55
1:A:825:PRO:HB2	1:A:843:LYS:NZ	2.21	0.55
1:B:1584:PRO:HG3	1:B:1591:TRP:CH2	2.41	0.55
1:C:11:HIS:O	1:C:15:THR:HG22	2.06	0.55
2:H:120:LYS:O	2:H:124:LYS:HG3	2.06	0.55
2:I:197:GLU:OE1	2:I:197:GLU:HA	2.05	0.55
2:I:543:PHE:CB	2:I:545:GLN:HE22	2.17	0.55
1:A:1233:GLU:OE2	1:A:1680:ARG:NH2	2.40	0.55
1:B:49:PRO:O	1:B:82:SER:HB2	2.07	0.55
1:B:985:ARG:HH12	2:H:953:ARG:NH2	2.04	0.55
1:B:1036:ARG:NH1	1:B:1040:GLU:OE1	2.40	0.55
1:C:37:LYS:HB2	1:C:65:TYR:HE1	1.72	0.55
2:G:1004:LEU:CD2	2:G:1019:PRO:HB2	2.36	0.55
2:G:1359:MET:HE3	2:G:1404:MET:HB3	1.89	0.55
2:I:491:GLU:HA	2:I:494:THR:HG22	1.89	0.55
2:I:1093:ASP:HB3	2:I:1096:LYS:HG3	1.89	0.55
2:I:1331:TRP:CE2	2:I:1335:ILE:HG13	2.42	0.55
1:A:1524:GLY:HA2	1:A:1527:ALA:HB3	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1014:ASP:N	1:C:1510:ASN:HD21	1.99	0.55
1:C:1249:SER:HB3	1:C:1280:ILE:HG12	1.87	0.55
1:C:1585:LYS:HD3	1:C:1585:LYS:H	1.72	0.55
2:G:777:THR:CG2	2:G:1081:HIS:CE1	2.89	0.55
1:A:733:ILE:CD1	1:A:761:LEU:HD11	2.37	0.55
1:A:1555:ALA:HA	1:A:1621:PHE:CE1	2.42	0.55
1:B:1138:LYS:HG3	1:B:1163:TYR:CE1	2.41	0.55
1:B:1544:THR:O	1:B:1545:SER:HB3	2.06	0.55
1:C:20:TYR:HE1	2:I:2035:SER:HB2	1.71	0.55
2:H:7:ARG:NH1	2:H:24:THR:HA	2.21	0.55
2:H:146:PHE:HA	2:H:149:VAL:HG12	1.89	0.55
2:H:839:PRO:HA	2:H:844:VAL:HG13	1.88	0.55
2:H:1173:VAL:CG2	2:H:1221:MET:HE1	2.35	0.55
2:I:85:ASN:ND2	2:I:135:ARG:HH11	1.99	0.55
2:I:826:GLY:HA2	2:I:1060:ALA:HB3	1.88	0.55
2:I:1624:THR:HB	2:I:1642:THR:OG1	2.06	0.55
1:A:12:ILE:HA	1:A:15:THR:HG23	1.88	0.55
1:A:198:PRO:CG	1:A:209:LEU:HD21	2.28	0.55
1:A:771:PHE:CD1	1:A:825:PRO:HG3	2.42	0.55
1:A:824:LEU:HD11	1:A:849:LEU:HD12	1.89	0.55
1:A:1455:ARG:NH2	1:A:1459:ILE:HG12	2.22	0.55
1:B:328:LEU:HD22	1:B:328:LEU:C	2.27	0.55
1:B:433:VAL:O	1:B:437:ILE:HG13	2.07	0.55
1:B:529:MET:CE	1:B:894:ARG:HD2	2.37	0.55
1:B:771:PHE:CD1	1:B:825:PRO:HG3	2.42	0.55
1:C:329:GLU:O	1:C:333:LYS:HG3	2.06	0.55
1:C:335:HIS:HD2	1:C:335:HIS:O	1.89	0.55
2:G:197:GLU:OE1	2:G:197:GLU:HA	2.06	0.55
2:G:758:ARG:NH2	2:G:797:ASP:OD1	2.33	0.55
2:H:402:LEU:O	2:H:402:LEU:HD13	2.07	0.55
2:H:490:TRP:HA	2:H:493:THR:CG2	2.37	0.55
2:I:145:LEU:HD21	2:I:156:LEU:HD21	1.89	0.55
2:I:166:THR:HG22	2:I:168:ASP:N	2.21	0.55
2:I:517:HIS:CD2	2:I:517:HIS:C	2.80	0.55
2:I:606:PHE:HZ	2:I:805:VAL:HG11	1.71	0.55
2:I:1452:LEU:HA	2:I:1502:GLY:HA3	1.88	0.55
1:C:152:HIS:CE1	1:C:168:MET:HG3	2.42	0.55
2:G:1575:LEU:HD13	2:G:1579:ILE:HD12	1.89	0.55
2:H:264:ARG:NH1	2:H:456:GLN:HG3	2.22	0.55
2:H:1102:TYR:HB3	2:H:1244:PRO:HA	1.89	0.55
2:H:1359:MET:HA	2:H:1359:MET:HE3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1672:GLN:HA	2:H:1676:MET:HE3	1.88	0.55
2:I:702:TYR:CB	2:I:727:PRO:HB2	2.36	0.55
1:B:236:LYS:HE2	1:B:273:PRO:O	2.07	0.55
1:B:529:MET:HE1	1:B:894:ARG:HD2	1.89	0.55
1:C:286:PHE:O	1:C:290:MET:HG2	2.07	0.55
2:G:1859:PRO:CG	2:G:1871:LEU:HD12	2.21	0.55
2:H:1378:ILE:HD11	2:H:1381:VAL:CG2	2.37	0.55
2:H:1493:LEU:HD11	2:H:1499:VAL:CG2	2.36	0.55
2:H:2015:THR:HG22	2:H:2017:LYS:N	2.21	0.55
2:I:490:TRP:HA	2:I:493:THR:CG2	2.37	0.55
2:I:871:THR:HB	2:I:872:ILE:HD12	1.88	0.55
2:I:926:LEU:HB3	2:I:947:THR:HG22	1.88	0.55
2:I:1382:VAL:HA	2:I:1422:THR:HG1	1.72	0.55
1:A:20:TYR:CE2	2:G:1985:VAL:HG11	2.42	0.54
2:G:464:ASP:HB3	2:G:466:SER:HB3	1.88	0.54
2:G:1227:ARG:HG3	2:G:1227:ARG:NH1	2.00	0.54
2:H:239:PRO:HG3	2:H:304:PHE:HA	1.88	0.54
2:H:464:ASP:HB3	2:H:466:SER:HB3	1.90	0.54
2:H:611:THR:CG2	2:H:641:ILE:HG13	2.38	0.54
2:H:826:GLY:O	2:H:827:VAL:HG23	2.07	0.54
2:H:1159:ILE:HG12	2:H:1169:PRO:CD	2.36	0.54
2:H:1325:PHE:CE1	2:H:1328:VAL:HG11	2.43	0.54
2:H:1778:GLN:HB3	2:H:1831:VAL:HG13	1.88	0.54
2:I:584:SER:HA	2:I:587:ILE:HG23	1.89	0.54
2:I:611:THR:CG2	2:I:641:ILE:HG13	2.37	0.54
2:I:1293:THR:HG22	2:I:1296:GLU:CD	2.27	0.54
1:B:1:MET:HE3	1:B:5:VAL:HG12	1.89	0.54
1:B:59:ARG:HH11	2:H:1896:GLN:HE22	1.54	0.54
1:B:1492:GLU:O	1:B:1496:GLU:HG3	2.06	0.54
2:G:332:GLU:OE2	2:G:394:ARG:HD3	2.07	0.54
2:G:1040:LEU:HD21	2:G:1048:VAL:HA	1.90	0.54
2:H:584:SER:HA	2:H:587:ILE:HG23	1.89	0.54
2:H:607:VAL:HA	2:H:617:ILE:HD13	1.88	0.54
2:I:240:LEU:O	2:I:244:ILE:HG13	2.08	0.54
2:I:526:ARG:HH11	2:I:558:ASN:HD21	1.55	0.54
2:I:638:VAL:HA	2:I:641:ILE:HG22	1.88	0.54
1:A:1247:SER:HB2	1:A:1332:TYR:HE2	1.72	0.54
1:A:1392:LEU:HD22	1:A:1396:MET:HG3	1.89	0.54
1:A:1665:ILE:CG1	1:A:1669:ARG:HD3	2.36	0.54
1:C:1219:VAL:CA	1:C:1384:ILE:HD11	2.27	0.54
1:C:1477:ILE:H	1:C:1478:PRO:CD	2.20	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:747:HIS:O	2:G:751:LEU:HB2	2.07	0.54
2:G:1231:GLY:O	2:G:1233:PRO:HD3	2.08	0.54
2:H:674:TYR:HB3	2:H:676:ILE:HG22	1.89	0.54
2:H:1343:VAL:O	2:H:1343:VAL:HG22	2.06	0.54
2:H:1697:HIS:CE1	2:H:1829:GLU:HG2	2.42	0.54
2:H:1822:MET:CE	2:H:1996:ILE:HG12	2.37	0.54
2:I:722:ALA:HB1	2:I:723:HIS:CE1	2.42	0.54
2:I:754:TYR:CD2	2:I:794:MET:HG3	2.43	0.54
1:B:332:THR:HG22	1:C:331:ILE:HD11	1.88	0.54
1:B:529:MET:HE3	1:B:529:MET:CA	2.31	0.54
2:G:722:ALA:HB1	2:G:723:HIS:CE1	2.42	0.54
2:H:1040:LEU:HD21	2:H:1048:VAL:HA	1.89	0.54
2:I:61:VAL:HG21	2:I:95:TYR:HE1	1.72	0.54
2:I:1475:LYS:HB2	2:I:1481:SER:HB2	1.89	0.54
2:I:1954:LYS:HD3	2:I:1958:LEU:HD13	1.89	0.54
1:A:340:ARG:HH12	1:A:344:GLN:NE2	2.06	0.54
1:A:733:ILE:HD12	1:A:761:LEU:HD21	1.89	0.54
1:A:1184:LEU:HB2	1:A:1352:THR:HG21	1.89	0.54
1:B:1285:ALA:O	1:B:1289:MET:HG3	2.07	0.54
1:C:236:LYS:HE2	1:C:273:PRO:O	2.08	0.54
1:C:1501:LEU:O	1:C:1505:GLN:HG3	2.07	0.54
2:G:127:ILE:O	2:G:131:ILE:HG13	2.07	0.54
2:G:264:ARG:NH1	2:G:456:GLN:HG3	2.22	0.54
2:G:1300:PHE:HA	2:G:1556:VAL:HG11	1.89	0.54
2:G:2036:GLU:O	2:G:2039:LYS:HG2	2.07	0.54
2:I:826:GLY:O	2:I:827:VAL:HG23	2.08	0.54
2:I:1427:VAL:O	2:I:1427:VAL:HG12	2.07	0.54
1:A:1234:MET:CE	1:A:1326:ILE:HG21	2.38	0.54
1:A:1584:PRO:HB2	1:A:1587:ALA:HB3	1.88	0.54
1:B:263:GLY:O	1:B:267:VAL:HG23	2.07	0.54
1:B:625:THR:HG23	1:B:661:ASP:OD1	2.07	0.54
1:B:1432:HIS:CE1	1:B:1434:SER:OG	2.60	0.54
1:B:1566:ARG:HB3	1:B:1623:TYR:CE1	2.42	0.54
1:C:1036:ARG:NH1	1:C:1040:GLU:OE1	2.41	0.54
1:C:1125:VAL:HG21	1:C:1175:ILE:HD12	1.88	0.54
2:G:344:LEU:HB3	2:G:349:VAL:HG23	1.90	0.54
2:G:462:THR:HB	2:G:482:CYS:SG	2.48	0.54
2:G:707:PRO:HG2	2:G:730:LEU:HD13	1.90	0.54
2:H:85:ASN:HD22	2:H:135:ARG:NH1	2.02	0.54
2:H:1239:LEU:O	2:H:1254:VAL:HG23	2.08	0.54
2:I:545:GLN:H	2:I:545:GLN:NE2	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1227:ARG:CG	2:I:1227:ARG:NH1	2.55	0.54
1:A:529:MET:HG2	1:A:638:LEU:HG	1.89	0.54
1:A:1114:TYR:CD1	1:A:1337:GLU:HG3	2.41	0.54
1:A:1585:LYS:H	1:A:1585:LYS:HD3	1.71	0.54
1:B:12:ILE:HD11	2:H:2041:ILE:HD12	1.88	0.54
1:B:385:PHE:HD2	1:B:787:LYS:HA	1.73	0.54
1:B:1501:LEU:O	1:B:1505:GLN:HG3	2.08	0.54
1:C:479:ASN:O	1:C:483:VAL:HG23	2.07	0.54
1:C:1455:ARG:NH2	1:C:1459:ILE:HG12	2.22	0.54
2:G:346:GLN:HA	2:G:377:LEU:HD21	1.89	0.54
2:G:1382:VAL:HA	2:G:1422:THR:OG1	2.08	0.54
2:H:402:LEU:HD12	2:H:404:GLN:HG2	1.90	0.54
2:H:1279:PHE:CD2	2:H:1340:PRO:HG3	2.41	0.54
2:H:1293:THR:HG22	2:H:1296:GLU:CD	2.28	0.54
2:H:2036:GLU:O	2:H:2039:LYS:HG2	2.08	0.54
2:I:271:THR:OG1	2:I:460:TYR:HB2	2.08	0.54
2:I:615:TYR:CZ	2:I:1074:MET:HB3	2.42	0.54
1:A:1455:ARG:O	1:A:1459:ILE:HG13	2.08	0.54
1:B:1392:LEU:CD2	1:B:1396:MET:HG3	2.38	0.54
1:B:1600:LEU:HD13	1:B:1657:HIS:HA	1.90	0.54
1:C:411:GLN:NE2	1:C:1628:SER:H	2.05	0.54
2:G:1496:LYS:HE2	2:G:1693:ARG:NH2	2.22	0.54
2:H:173:LEU:HD13	2:H:219:LEU:HD21	1.90	0.54
2:H:1350:LEU:HD11	2:H:1410:PHE:HB3	1.89	0.54
2:H:1913:VAL:O	2:H:1917:ILE:HG13	2.08	0.54
1:A:24:SER:CB	2:G:2014:LEU:HD12	2.38	0.54
1:A:236:LYS:HE2	1:A:273:PRO:O	2.07	0.54
1:A:1123:GLN:HB2	1:A:1177:LYS:HE2	1.90	0.54
1:A:1183:ARG:NH1	1:A:1344:GLY:HA2	2.23	0.54
1:B:1584:PRO:HB2	1:B:1587:ALA:HB3	1.90	0.54
2:H:774:ALA:HB1	2:H:1081:HIS:CD2	2.32	0.54
2:H:1173:VAL:O	2:H:1567:ARG:NH2	2.40	0.54
2:I:1493:LEU:HD11	2:I:1499:VAL:CG2	2.37	0.54
2:I:2035:SER:HB3	2:I:2038:ILE:CG1	2.37	0.54
1:A:183:GLN:O	1:A:187:LEU:HG	2.08	0.54
1:A:1194:ASN:HB3	1:A:1197:THR:HG22	1.88	0.54
1:B:280:GLU:HG2	1:B:280:GLU:O	2.08	0.54
1:B:824:LEU:HD11	1:B:849:LEU:HD12	1.89	0.54
1:B:1123:GLN:HG3	1:B:1124:GLU:N	2.22	0.54
1:C:233:ILE:HD13	1:C:237:MET:HE2	1.88	0.54
1:C:263:GLY:O	1:C:267:VAL:HG23	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:490:TRP:CH2	2:G:512:LEU:HD21	2.43	0.54
2:G:1378:ILE:O	2:G:1378:ILE:HG12	2.06	0.54
2:G:1822:MET:CE	2:G:1996:ILE:HG12	2.37	0.54
2:H:606:PHE:CE1	2:H:811:VAL:HG13	2.43	0.54
2:H:667:LYS:HD2	2:H:697:THR:CG2	2.35	0.54
2:H:707:PRO:HG2	2:H:730:LEU:HD13	1.89	0.54
2:I:99:ASN:HA	2:I:550:VAL:HG23	1.90	0.54
2:I:652:ILE:HB	2:I:658:MET:CE	2.38	0.54
1:A:421:ILE:HG13	1:A:469:VAL:HG21	1.89	0.53
1:A:1020:VAL:HG13	1:A:1400:ILE:HG23	1.90	0.53
1:B:329:GLU:O	1:B:333:LYS:HG3	2.08	0.53
1:B:1401:TYR:C	1:B:1658:PRO:HG3	2.28	0.53
1:C:1285:ALA:O	1:C:1289:MET:HG3	2.09	0.53
2:G:1166:VAL:HG12	2:G:1167:SER:N	2.23	0.53
2:G:1173:VAL:CG2	2:G:1221:MET:HE1	2.38	0.53
2:H:1313:SER:O	2:H:1314:ARG:HD3	2.08	0.53
2:I:868:PHE:HB3	2:I:873:PHE:CE2	2.43	0.53
1:B:11:HIS:O	1:B:15:THR:HG22	2.06	0.53
1:B:751:PHE:CZ	1:B:761:LEU:HD13	2.42	0.53
1:C:1123:GLN:HG3	1:C:1124:GLU:N	2.23	0.53
2:G:750:MET:CG	2:G:796:PHE:HZ	2.21	0.53
2:H:964:LEU:CD2	2:H:964:LEU:N	2.70	0.53
2:I:1168:ASN:ND2	2:I:1171:ARG:HB2	2.22	0.53
2:I:1266:TYR:CG	2:I:1347:LEU:HD23	2.43	0.53
1:A:625:THR:HG23	1:A:661:ASP:OD1	2.08	0.53
1:A:1392:LEU:CD2	1:A:1396:MET:HG3	2.38	0.53
1:B:1010:GLU:HA	1:B:1664:ALA:HA	1.89	0.53
2:G:1093:ASP:HB3	2:G:1096:LYS:HG3	1.91	0.53
2:H:545:GLN:H	2:H:545:GLN:NE2	2.07	0.53
2:H:1804:PHE:CZ	2:H:2010:TYR:HB2	2.44	0.53
2:I:873:PHE:CD1	2:I:1026:GLU:HB2	2.43	0.53
1:A:1496:GLU:O	1:A:1500:GLN:HG3	2.07	0.53
1:A:1584:PRO:HG3	1:A:1591:TRP:CH2	2.42	0.53
1:A:1665:ILE:HG12	1:A:1666:THR:N	2.23	0.53
1:B:807:LYS:HG3	1:B:858:TRP:HB3	1.90	0.53
2:G:1697:HIS:CE1	2:G:1829:GLU:HG2	2.43	0.53
2:H:123:ILE:HD11	2:H:533:LEU:CD2	2.38	0.53
2:H:346:GLN:HA	2:H:377:LEU:HD21	1.91	0.53
2:H:615:TYR:CZ	2:H:1074:MET:HB3	2.43	0.53
2:H:652:ILE:HB	2:H:658:MET:CE	2.38	0.53
2:H:1177:SER:O	2:H:1180:MET:HG2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:892:ILE:HG12	2:I:903:TRP:CG	2.44	0.53
2:I:964:LEU:CD2	2:I:964:LEU:N	2.72	0.53
1:A:1310:GLU:OE1	1:A:1649:LYS:CE	2.57	0.53
1:B:1247:SER:HB2	1:B:1332:TYR:HE2	1.74	0.53
2:G:1292:ILE:O	2:G:1368:VAL:O	2.26	0.53
2:G:2030:TYR:CE1	2:G:2034:GLY:HA2	2.43	0.53
2:H:1931:LEU:HB3	2:H:1935:GLU:CG	2.36	0.53
2:I:835:THR:HG22	2:I:844:VAL:C	2.29	0.53
2:I:1861:ARG:HD2	2:I:1964:PHE:O	2.08	0.53
1:A:328:LEU:HD22	1:A:328:LEU:C	2.28	0.53
1:A:998:TYR:CE2	1:A:1667:GLU:HB2	2.44	0.53
1:A:1477:ILE:H	1:A:1478:PRO:CD	2.21	0.53
1:B:408:TRP:CH2	1:B:1628:SER:HB3	2.44	0.53
1:C:24:SER:HB3	2:I:2014:LEU:HD12	1.90	0.53
1:C:1194:ASN:HB3	1:C:1197:THR:HG22	1.90	0.53
2:G:176:LEU:HD22	2:G:247:ALA:HB1	1.90	0.53
2:G:606:PHE:HZ	2:G:805:VAL:HG11	1.74	0.53
2:G:839:PRO:CA	2:G:844:VAL:HG13	2.35	0.53
2:G:892:ILE:HG12	2:G:903:TRP:CG	2.44	0.53
2:G:1672:GLN:HA	2:G:1676:MET:HE3	1.90	0.53
2:G:1808:SER:OG	2:G:1977:HIS:HE1	1.91	0.53
2:H:835:THR:HG21	2:H:855:HIS:NE2	2.23	0.53
2:I:1040:LEU:HD21	2:I:1048:VAL:HA	1.90	0.53
2:I:2036:GLU:O	2:I:2039:LYS:HG2	2.09	0.53
1:A:1138:LYS:HG3	1:A:1163:TYR:CE1	2.43	0.53
1:A:1492:GLU:O	1:A:1496:GLU:HG3	2.09	0.53
1:B:12:ILE:HA	1:B:15:THR:HG23	1.90	0.53
1:B:980:VAL:N	2:H:968:GLN:HE22	2.07	0.53
2:G:1475:LYS:HB2	2:G:1481:SER:HB2	1.89	0.53
2:H:194:THR:CG2	2:H:300:ILE:HD11	2.39	0.53
2:H:1292:ILE:O	2:H:1368:VAL:O	2.27	0.53
2:I:102:HIS:HE1	2:I:180:TYR:OH	1.91	0.53
2:I:161:GLY:N	2:I:505:GLY:HA3	2.24	0.53
2:I:2046:GLU:C	2:I:2048:TYR:H	2.11	0.53
1:A:341:GLN:O	1:A:345:VAL:HG12	2.09	0.53
1:B:1194:ASN:O	1:B:1197:THR:HG23	2.08	0.53
1:B:1665:ILE:CG1	1:B:1669:ARG:HD3	2.35	0.53
2:G:85:ASN:HD22	2:G:135:ARG:NH1	2.03	0.53
2:G:1427:VAL:O	2:G:1427:VAL:HG12	2.09	0.53
2:G:1475:LYS:CB	2:G:1481:SER:HB2	2.39	0.53
2:G:1697:HIS:HE1	2:G:1829:GLU:HG2	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1227:ARG:CG	2:H:1227:ARG:NH1	2.57	0.53
2:H:1954:LYS:HD3	2:H:1958:LEU:HD13	1.91	0.53
2:I:465:GLY:HA2	2:I:493:THR:HA	1.91	0.53
2:I:606:PHE:CE1	2:I:811:VAL:HG13	2.44	0.53
2:I:1279:PHE:CD2	2:I:1340:PRO:HG3	2.40	0.53
2:I:1343:VAL:HG22	2:I:1343:VAL:O	2.09	0.53
2:I:1441:ILE:HD11	2:I:1445:ARG:NH2	2.23	0.53
2:I:2036:GLU:HG2	2:I:2039:LYS:NZ	2.24	0.53
1:A:644:THR:HG22	1:A:648:ASP:O	2.08	0.53
1:B:340:ARG:HH12	1:B:344:GLN:NE2	2.07	0.53
1:B:607:LYS:HG2	1:B:608:ASP:N	2.23	0.53
1:B:881:ASN:HA	1:B:944:ARG:HH21	1.73	0.53
1:C:825:PRO:HB2	1:C:843:LYS:NZ	2.24	0.53
1:C:992:PHE:CD2	1:C:1399:PRO:HG3	2.44	0.53
2:G:1314:ARG:CG	2:G:1314:ARG:NH1	2.61	0.53
2:H:654:VAL:HG23	2:H:683:ALA:HB1	1.91	0.53
2:I:332:GLU:OE2	2:I:394:ARG:HD3	2.08	0.53
2:I:1166:VAL:HG12	2:I:1167:SER:N	2.23	0.53
2:I:1350:LEU:HD11	2:I:1410:PHE:HB3	1.91	0.53
1:A:807:LYS:HG3	1:A:858:TRP:HB3	1.90	0.53
1:A:964:GLU:HG2	2:G:1515:PRO:HB3	1.91	0.53
1:B:1304:ALA:N	1:B:1307:THR:HG22	2.24	0.53
1:B:1312:VAL:CG2	1:B:1329:VAL:HG11	2.39	0.53
1:C:529:MET:HG2	1:C:638:LEU:CD1	2.39	0.53
2:G:121:GLU:HA	2:G:124:LYS:HD2	1.91	0.53
2:G:376:ASN:HD22	2:G:376:ASN:C	2.13	0.53
2:G:913:ASP:H	2:G:916:THR:CG2	2.22	0.53
2:G:1236:LEU:HD11	2:G:1262:ILE:HG12	1.91	0.53
2:G:1359:MET:CE	2:G:1404:MET:HB3	2.39	0.53
2:G:1422:THR:HG21	2:G:1474:PHE:HB2	1.91	0.53
2:H:281:VAL:HG23	2:H:459:VAL:HG11	1.90	0.53
2:H:1382:VAL:HA	2:H:1422:THR:OG1	2.09	0.53
2:H:1567:ARG:HG3	2:H:1568:HIS:N	2.23	0.53
2:I:1040:LEU:O	2:I:1046:GLN:HG3	2.09	0.53
2:I:1177:SER:O	2:I:1180:MET:HG2	2.09	0.53
2:I:1438:SER:O	2:I:1441:ILE:HG23	2.08	0.53
1:B:152:HIS:HD2	1:B:163:LEU:HB2	1.66	0.52
1:B:695:GLY:HA3	1:B:906:LEU:HD11	1.90	0.52
1:B:1056:ILE:CD1	1:B:1193:TRP:HD1	2.22	0.52
1:C:1103:ILE:HD11	1:C:1582:GLY:N	2.24	0.52
1:C:1401:TYR:C	1:C:1658:PRO:HG3	2.29	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:615:TYR:CZ	2:G:1074:MET:HB3	2.44	0.52
2:G:663:ILE:HB	2:G:664:PRO:CD	2.40	0.52
2:H:455:ILE:HG12	2:H:469:ARG:HG2	1.91	0.52
2:H:768:GLY:HA3	2:H:800:LEU:CD2	2.39	0.52
2:H:2026:PHE:CD2	2:H:2045:TRP:HZ3	2.27	0.52
1:A:1249:SER:HB3	1:A:1280:ILE:HG12	1.92	0.52
1:B:1194:ASN:HB3	1:B:1197:THR:HG22	1.91	0.52
1:C:824:LEU:HD11	1:C:849:LEU:HD12	1.90	0.52
1:C:1524:GLY:HA2	1:C:1527:ALA:HB3	1.91	0.52
2:G:161:GLY:N	2:G:505:GLY:HA3	2.23	0.52
2:G:1331:TRP:CE2	2:G:1335:ILE:HG13	2.43	0.52
2:G:1774:THR:HA	2:G:1777:THR:HB	1.91	0.52
2:H:145:LEU:O	2:H:149:VAL:HG12	2.10	0.52
2:H:577:ILE:HD13	2:H:1097:ILE:CD1	2.40	0.52
2:I:234:ILE:CG1	2:I:235:PRO:HD3	2.38	0.52
2:I:747:HIS:O	2:I:751:LEU:HB2	2.10	0.52
2:I:1567:ARG:HH11	2:I:1567:ARG:HG2	1.70	0.52
1:A:156:ALA:HA	1:A:166:ILE:CD1	2.39	0.52
1:A:385:PHE:HD2	1:A:787:LYS:HA	1.74	0.52
1:A:705:VAL:CG2	1:A:732:LEU:HD21	2.39	0.52
1:A:1119:LYS:HE2	1:A:1341:PHE:CG	2.44	0.52
1:A:1303:GLY:H	1:A:1307:THR:HG22	1.74	0.52
1:C:864:VAL:CG2	1:C:921:PRO:HB3	2.39	0.52
2:G:871:THR:HG21	2:G:887:LYS:NZ	2.25	0.52
2:G:955:GLU:HG2	2:G:987:TYR:CE2	2.45	0.52
2:H:732:TRP:CD2	2:H:750:MET:HE1	2.44	0.52
2:H:754:TYR:CD2	2:H:794:MET:HG3	2.45	0.52
2:H:1300:PHE:HA	2:H:1556:VAL:HG11	1.92	0.52
2:H:1427:VAL:HG12	2:H:1427:VAL:O	2.08	0.52
2:H:1452:LEU:HA	2:H:1502:GLY:HA3	1.90	0.52
2:I:1293:THR:CG2	2:I:1296:GLU:H	2.20	0.52
2:I:1566:SER:HB3	2:I:1568:HIS:CE1	2.45	0.52
2:I:2026:PHE:CD2	2:I:2045:TRP:HZ3	2.27	0.52
1:A:988:ILE:HD13	1:A:1048:GLU:HB3	1.91	0.52
1:B:12:ILE:HD11	2:H:2041:ILE:CD1	2.38	0.52
1:B:1326:ILE:HG12	1:B:1388:MET:HG3	1.91	0.52
1:C:607:LYS:HG2	1:C:608:ASP:N	2.24	0.52
1:C:630:ILE:O	1:C:653:ARG:NH2	2.42	0.52
1:C:1411:THR:HG22	1:C:1412:ASP:N	2.24	0.52
1:C:1577:GLN:HE22	1:C:1591:TRP:C	2.13	0.52
2:G:926:LEU:HB3	2:G:947:THR:HG22	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1328:VAL:HG23	2:G:1557:SER:HA	1.91	0.52
2:H:814:SER:CB	2:H:1040:LEU:HD13	2.40	0.52
2:H:1359:MET:HE3	2:H:1404:MET:HB3	1.90	0.52
2:I:598:THR:O	2:I:602:VAL:HB	2.09	0.52
2:I:652:ILE:N	2:I:652:ILE:HD12	2.25	0.52
2:I:871:THR:HG21	2:I:887:LYS:NZ	2.25	0.52
2:I:1597:ALA:HB1	2:I:1638:ILE:CD1	2.39	0.52
1:A:655:LEU:CD2	1:A:916:LEU:HD11	2.38	0.52
1:A:741:SER:HB3	1:A:744:ASP:HB2	1.89	0.52
1:B:1158:PRO:HD2	1:B:1159:GLU:OE2	2.10	0.52
1:B:1577:GLN:HE22	1:B:1591:TRP:C	2.12	0.52
1:C:385:PHE:HD2	1:C:787:LYS:HA	1.73	0.52
1:C:1037:TRP:HB2	1:C:1598:GLN:OE1	2.09	0.52
2:G:1745:LYS:HD3	2:G:1747:LYS:HE2	1.91	0.52
2:G:1986:LYS:HA	2:G:1989:LYS:HB3	1.92	0.52
2:G:2026:PHE:CD2	2:G:2045:TRP:HZ3	2.27	0.52
2:H:1491:VAL:HB	2:H:1501:ILE:HD12	1.92	0.52
2:H:1776:PHE:O	2:H:1779:PRO:HD2	2.09	0.52
2:I:418:ASN:N	2:I:418:ASN:HD22	2.07	0.52
2:I:582:LYS:HE2	2:I:1108:PRO:HB3	1.91	0.52
2:I:1293:THR:HG22	2:I:1296:GLU:CG	2.39	0.52
2:I:1868:GLN:HG3	2:I:1898:TYR:CZ	2.45	0.52
1:A:13:LEU:HB2	2:G:2026:PHE:CE1	2.45	0.52
1:A:674:LYS:O	1:A:675:ASP:HB2	2.09	0.52
1:A:1411:THR:HG22	1:A:1412:ASP:N	2.25	0.52
1:B:341:GLN:O	1:B:345:VAL:HG12	2.10	0.52
1:B:415:SER:O	1:B:419:GLU:HB2	2.10	0.52
2:H:1745:LYS:HE2	2:H:1747:LYS:HG2	1.91	0.52
2:I:702:TYR:HB2	2:I:727:PRO:HB2	1.92	0.52
2:I:1475:LYS:HG3	2:I:1481:SER:HB2	1.92	0.52
2:I:2015:THR:HG22	2:I:2017:LYS:N	2.21	0.52
1:A:335:HIS:HD2	1:A:335:HIS:O	1.92	0.52
1:B:655:LEU:CD2	1:B:916:LEU:HD11	2.38	0.52
1:B:1234:MET:CE	1:B:1326:ILE:HG21	2.40	0.52
1:B:1721:ARG:CG	1:B:1721:ARG:NH1	2.55	0.52
2:G:278:VAL:HG11	2:G:303:LEU:HD13	1.92	0.52
2:G:490:TRP:HA	2:G:493:THR:CG2	2.40	0.52
2:G:768:GLY:HA3	2:G:800:LEU:CD2	2.38	0.52
2:H:1159:ILE:CG1	2:H:1169:PRO:CD	2.87	0.52
2:H:2038:ILE:HG22	2:H:2042:ILE:CD1	2.36	0.52
2:I:264:ARG:NH1	2:I:456:GLN:HG3	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:751:LEU:HD23	2:I:791:TYR:CZ	2.44	0.52
2:I:821:ILE:HA	2:I:857:ILE:HD11	1.92	0.52
2:I:949:ASP:CB	2:I:1006:MET:HE2	2.39	0.52
1:A:1123:GLN:HG3	1:A:1124:GLU:N	2.24	0.52
1:B:338:LEU:O	1:B:342:GLN:HG3	2.10	0.52
1:B:784:ILE:HG23	1:B:788:SER:HB2	1.92	0.52
1:B:1020:VAL:HG13	1:B:1400:ILE:HG23	1.91	0.52
1:B:1411:THR:HG22	1:B:1412:ASP:H	1.75	0.52
1:C:328:LEU:HD22	1:C:328:LEU:C	2.30	0.52
1:C:635:ILE:HG22	1:C:651:TYR:CD1	2.45	0.52
1:C:1247:SER:HB2	1:C:1332:TYR:HE2	1.75	0.52
2:G:234:ILE:CG1	2:G:235:PRO:HD3	2.40	0.52
2:G:1589:VAL:HG11	2:G:1640:PHE:CE1	2.45	0.52
2:H:1227:ARG:HG3	2:H:1227:ARG:NH1	2.01	0.52
2:I:715:GLN:O	2:I:719:ILE:HG12	2.10	0.52
2:I:1173:VAL:CG2	2:I:1221:MET:HE1	2.39	0.52
2:I:1567:ARG:HG3	2:I:1568:HIS:N	2.22	0.52
1:A:36:LEU:CD2	1:A:61:LEU:HD21	2.37	0.52
1:A:50:SER:HB2	1:A:51:PRO:CD	2.39	0.52
1:B:335:HIS:O	1:B:335:HIS:HD2	1.93	0.52
1:B:529:MET:HG2	1:B:638:LEU:HG	1.92	0.52
1:B:1665:ILE:HG12	1:B:1666:THR:N	2.25	0.52
1:C:1238:VAL:HG12	1:C:1239:HIS:N	2.25	0.52
2:G:1223:MET:CE	2:G:1238:LEU:HD12	2.40	0.52
2:G:1678:MET:HE3	2:G:1707:LEU:CD2	2.38	0.52
2:H:1081:HIS:O	2:H:1085:LEU:HB2	2.10	0.52
2:H:1422:THR:HG21	2:H:1474:PHE:HB2	1.91	0.52
2:H:1561:ASN:OD1	2:H:1563:ILE:HB	2.10	0.52
2:I:1871:LEU:HD22	2:I:1888:ILE:HD11	1.92	0.52
1:B:864:VAL:CG2	1:B:921:PRO:HB3	2.40	0.52
1:B:1123:GLN:HB2	1:B:1177:LYS:HE2	1.91	0.52
1:B:1238:VAL:HG12	1:B:1239:HIS:N	2.25	0.52
1:C:156:ALA:HA	1:C:166:ILE:CD1	2.40	0.52
1:C:1665:ILE:CG1	1:C:1669:ARG:HD3	2.36	0.52
2:G:1493:LEU:HD11	2:G:1499:VAL:CG2	2.40	0.52
2:H:1148:ASN:ND2	2:H:1151:HIS:H	2.08	0.52
2:H:1475:LYS:CB	2:H:1481:SER:HB2	2.40	0.52
2:H:1722:GLY:N	2:H:1726:GLY:HA3	2.24	0.52
2:H:2046:GLU:C	2:H:2048:TYR:H	2.14	0.52
2:I:273:HIS:CB	2:I:512:LEU:HD22	2.40	0.52
2:I:346:GLN:HA	2:I:377:LEU:HD21	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1486:PHE:HA	2:I:1504:VAL:O	2.10	0.52
2:I:1745:LYS:HE2	2:I:1747:LYS:HG2	1.91	0.52
2:I:1776:PHE:O	2:I:1779:PRO:HD2	2.09	0.52
1:B:50:SER:HB2	1:B:51:PRO:CD	2.40	0.51
1:B:1477:ILE:H	1:B:1478:PRO:CD	2.23	0.51
1:B:1524:GLY:HA2	1:B:1527:ALA:HB3	1.93	0.51
1:C:440:MET:HE3	1:C:483:VAL:HG21	1.92	0.51
1:C:465:ASN:O	1:C:469:VAL:HG23	2.09	0.51
2:G:654:VAL:O	2:G:654:VAL:HG12	2.09	0.51
2:H:747:HIS:O	2:H:751:LEU:HB2	2.10	0.51
2:H:1004:LEU:CD2	2:H:1019:PRO:HB2	2.40	0.51
2:I:281:VAL:HG12	2:I:282:ALA:N	2.26	0.51
2:I:913:ASP:H	2:I:916:THR:CG2	2.23	0.51
2:I:1223:MET:CE	2:I:1238:LEU:HD12	2.40	0.51
1:A:411:GLN:HE22	1:A:1628:SER:N	2.06	0.51
1:A:607:LYS:HG2	1:A:608:ASP:N	2.25	0.51
1:B:386:PHE:O	1:B:390:VAL:HB	2.10	0.51
1:C:157:HIS:HE1	1:C:228:LEU:HD22	1.75	0.51
2:H:234:ILE:CG1	2:H:235:PRO:HD3	2.40	0.51
2:H:807:ILE:HG21	2:H:1066:ILE:HA	1.92	0.51
2:H:1775:GLN:HG2	2:H:1836:MET:SD	2.50	0.51
2:I:55:THR:CG2	2:I:56:THR:HG22	2.33	0.51
2:I:786:SER:CB	2:I:794:MET:HE2	2.40	0.51
1:A:1056:ILE:HD13	1:A:1193:TRP:CD1	2.42	0.51
1:B:1682:LYS:HB3	2:H:994:PHE:CE2	2.45	0.51
1:C:1303:GLY:H	1:C:1307:THR:HG22	1.75	0.51
1:C:1411:THR:HG22	1:C:1412:ASP:H	1.75	0.51
2:G:145:LEU:HD21	2:G:156:LEU:HD21	1.91	0.51
2:G:1177:SER:O	2:G:1180:MET:HG2	2.09	0.51
2:G:1438:SER:O	2:G:1441:ILE:HG23	2.09	0.51
2:H:55:THR:HB	2:H:59:GLU:OE2	2.10	0.51
2:H:892:ILE:HG12	2:H:903:TRP:CG	2.45	0.51
2:H:1378:ILE:O	2:H:1378:ILE:HG12	2.10	0.51
2:H:1493:LEU:HD11	2:H:1499:VAL:HG21	1.93	0.51
2:H:1697:HIS:HE1	2:H:1829:GLU:CG	2.23	0.51
1:B:852:ARG:HH11	1:B:852:ARG:CG	2.06	0.51
1:C:1431:GLU:HB3	1:C:1520:ALA:HB2	1.92	0.51
2:G:16:LEU:HG	2:G:48:PHE:CZ	2.45	0.51
2:G:105:ALA:CB	2:G:533:LEU:HD21	2.40	0.51
2:G:489:LYS:O	2:G:493:THR:HG22	2.10	0.51
2:G:1081:HIS:O	2:G:1085:LEU:HB2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1579:ILE:HD11	2:G:1615:MET:SD	2.51	0.51
2:G:1764:PHE:HB2	2:G:1770:LEU:HD21	1.93	0.51
2:H:1435:ILE:O	2:H:1435:ILE:HG22	2.10	0.51
1:A:20:TYR:CE1	2:G:2035:SER:HB2	2.45	0.51
1:B:1585:LYS:HD3	1:B:1585:LYS:H	1.76	0.51
1:C:644:THR:HG22	1:C:648:ASP:O	2.10	0.51
2:G:1431:TYR:CE1	2:G:1526:THR:HG23	2.45	0.51
2:G:1861:ARG:HD2	2:G:1964:PHE:O	2.10	0.51
2:H:278:VAL:HG11	2:H:303:LEU:HD13	1.92	0.51
2:H:835:THR:HG22	2:H:844:VAL:C	2.31	0.51
2:H:949:ASP:CB	2:H:1006:MET:HE2	2.40	0.51
2:H:1697:HIS:HE1	2:H:1829:GLU:HG2	1.74	0.51
2:I:376:ASN:HD22	2:I:376:ASN:C	2.13	0.51
1:A:630:ILE:O	1:A:653:ARG:NH2	2.42	0.51
1:B:430:ARG:NH2	1:B:605:LEU:HD13	2.26	0.51
1:B:1189:ILE:CD1	1:B:1380:GLN:HG3	2.38	0.51
1:C:46:GLU:OE1	1:C:53:LEU:HB2	2.10	0.51
1:C:1584:PRO:HB2	1:C:1587:ALA:HB3	1.92	0.51
2:G:99:ASN:HA	2:G:550:VAL:HG21	1.92	0.51
2:G:786:SER:CB	2:G:794:MET:HE2	2.41	0.51
2:G:1389:ILE:HG13	2:G:1411:PHE:HD1	1.75	0.51
2:G:1932:SER:O	2:G:1936:VAL:HG22	2.10	0.51
2:H:105:ALA:CB	2:H:533:LEU:HD21	2.40	0.51
2:H:332:GLU:OE2	2:H:394:ARG:HD3	2.10	0.51
2:I:306:ILE:HA	2:I:439:ILE:CD1	2.40	0.51
2:I:522:GLY:HA3	2:I:561:TRP:CZ3	2.46	0.51
2:I:1697:HIS:CE1	2:I:1829:GLU:HG2	2.45	0.51
2:I:1716:ASN:OD1	2:I:1765:ARG:HA	2.11	0.51
2:I:1953:VAL:O	2:I:1953:VAL:HG12	2.11	0.51
2:I:2038:ILE:HG22	2:I:2042:ILE:CD1	2.37	0.51
1:A:286:PHE:O	1:A:290:MET:HG2	2.10	0.51
1:A:1577:GLN:HE22	1:A:1591:TRP:C	2.13	0.51
1:B:170:LYS:HD3	1:B:175:LEU:HD23	1.92	0.51
2:G:443:LEU:HD22	2:G:448:VAL:CG1	2.41	0.51
2:G:868:PHE:HB3	2:G:873:PHE:CE2	2.46	0.51
2:H:598:THR:O	2:H:602:VAL:HB	2.11	0.51
2:H:955:GLU:HG2	2:H:987:TYR:CE2	2.45	0.51
2:H:1389:ILE:HG13	2:H:1411:PHE:HD1	1.76	0.51
2:H:1673:GLU:N	2:H:1676:MET:HE3	2.26	0.51
2:I:259:THR:HG22	2:I:262:GLU:CB	2.41	0.51
2:I:675:PRO:HG3	2:I:1163:LYS:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1159:ILE:HG12	2:I:1169:PRO:CD	2.39	0.51
1:A:29:ILE:HG13	2:G:1891:TYR:O	2.10	0.51
1:A:34:VAL:O	1:A:38:ASP:HB2	2.10	0.51
1:A:465:ASN:O	1:A:469:VAL:HG23	2.11	0.51
1:A:1004:ILE:HG22	1:A:1660:TYR:CE2	2.46	0.51
1:A:1533:ILE:HD11	1:A:1564:LEU:HD13	1.93	0.51
1:B:421:ILE:HG12	1:B:469:VAL:HG21	1.93	0.51
1:B:1104:ARG:O	1:B:1185:VAL:HG13	2.11	0.51
1:B:1303:GLY:H	1:B:1307:THR:HG22	1.76	0.51
1:C:260:ARG:HH12	1:C:300:VAL:CG2	2.22	0.51
1:C:340:ARG:HH12	1:C:344:GLN:NE2	2.08	0.51
1:C:411:GLN:HE22	1:C:1628:SER:N	2.09	0.51
1:C:1705:PRO:HB2	1:C:1733:PHE:CE1	2.46	0.51
2:G:281:VAL:HG23	2:G:459:VAL:HG11	1.91	0.51
2:G:1159:ILE:HG12	2:G:1169:PRO:CD	2.39	0.51
2:G:2015:THR:HG22	2:G:2017:LYS:N	2.22	0.51
2:H:1162:ASP:O	2:H:1163:LYS:HB2	2.11	0.51
2:H:1293:THR:HG22	2:H:1296:GLU:CG	2.41	0.51
2:H:1382:VAL:HA	2:H:1422:THR:HG1	1.74	0.51
2:H:1716:ASN:OD1	2:H:1765:ARG:HA	2.11	0.51
2:H:1774:THR:HA	2:H:1777:THR:HB	1.93	0.51
2:I:1313:SER:O	2:I:1314:ARG:HD3	2.11	0.51
2:I:2035:SER:HB3	2:I:2038:ILE:CD1	2.40	0.51
1:A:254:TRP:HZ3	1:A:292:GLN:HG3	1.75	0.51
1:A:1105:LEU:HD23	1:A:1185:VAL:HG22	1.93	0.51
1:B:822:VAL:HG12	1:B:824:LEU:HD22	1.93	0.51
1:B:983:GLN:NE2	2:H:962:LYS:HD2	2.26	0.51
1:C:705:VAL:CG2	1:C:732:LEU:HD21	2.40	0.51
2:G:55:THR:CG2	2:G:56:THR:HG22	2.33	0.51
2:G:145:LEU:O	2:G:149:VAL:HG12	2.10	0.51
2:G:1452:LEU:HA	2:G:1502:GLY:HA3	1.92	0.51
2:H:1845:ASP:HB2	2:H:1849:ARG:N	2.15	0.51
2:H:2026:PHE:HD2	2:H:2045:TRP:HZ3	1.59	0.51
2:H:2030:TYR:CE1	2:H:2034:GLY:HA2	2.46	0.51
2:I:1015:VAL:HG11	2:I:1017:PHE:CE1	2.45	0.51
1:A:1181:PHE:CZ	1:A:1341:PHE:HA	2.46	0.51
1:A:1304:ALA:N	1:A:1307:THR:HG22	2.26	0.51
1:B:764:ASP:OD2	1:B:818:ARG:HD3	2.11	0.51
1:B:1196:LYS:HE3	1:B:1202:ASP:CG	2.31	0.51
1:C:1009:LEU:HG	1:C:1664:ALA:HB2	1.93	0.51
1:C:1304:ALA:N	1:C:1307:THR:HG22	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:7:ARG:HE	2:G:27:PHE:CB	2.24	0.51
2:G:213:LEU:O	2:G:213:LEU:HG	2.11	0.51
2:G:784:GLU:O	2:G:787:THR:HB	2.11	0.51
2:H:273:HIS:CB	2:H:512:LEU:HD22	2.41	0.51
2:H:281:VAL:HG12	2:H:282:ALA:N	2.25	0.51
2:H:463:PHE:CE1	2:H:486:LEU:HD22	2.46	0.51
2:H:533:LEU:HD13	2:H:545:GLN:HG3	1.92	0.51
2:I:60:LEU:O	2:I:63:LYS:HB2	2.11	0.51
2:I:955:GLU:HG2	2:I:987:TYR:CE2	2.46	0.51
2:I:1359:MET:HE3	2:I:1404:MET:HB3	1.93	0.51
2:I:1918:LYS:HG2	2:I:1919:LEU:HD23	1.92	0.51
1:A:1347:LYS:O	1:A:1347:LYS:HD3	2.11	0.50
1:B:1411:THR:HG22	1:B:1412:ASP:N	2.26	0.50
1:C:280:GLU:O	1:C:280:GLU:HG2	2.11	0.50
2:G:7:ARG:CZ	2:G:24:THR:HA	2.41	0.50
2:G:732:TRP:CG	2:G:750:MET:HE3	2.46	0.50
2:G:932:ILE:HD11	2:G:1042:ALA:CB	2.33	0.50
2:G:1272:ASP:O	2:G:1273:GLU:HG3	2.11	0.50
2:G:2035:SER:HB3	2:G:2038:ILE:CG1	2.41	0.50
2:H:418:ASN:HD22	2:H:418:ASN:N	2.08	0.50
2:H:1475:LYS:HG3	2:H:1481:SER:HB2	1.93	0.50
2:H:2036:GLU:HG2	2:H:2039:LYS:NZ	2.26	0.50
2:I:157:VAL:HG11	2:I:496:PHE:CZ	2.46	0.50
2:I:455:ILE:HG12	2:I:469:ARG:HG2	1.92	0.50
2:I:1945:ASP:O	2:I:1949:LYS:HG3	2.11	0.50
2:I:1986:LYS:HA	2:I:1989:LYS:HB3	1.93	0.50
1:A:156:ALA:HA	1:A:166:ILE:HD12	1.93	0.50
1:B:635:ILE:HG22	1:B:651:TYR:CD1	2.46	0.50
1:C:702:LYS:HE2	1:C:729:GLY:O	2.11	0.50
1:C:1566:ARG:HB3	1:C:1623:TYR:CE1	2.46	0.50
2:G:440:ASN:ND2	2:G:477:GLU:HG2	2.26	0.50
2:G:601:THR:HG22	2:G:620:ALA:H	1.75	0.50
2:G:611:THR:HA	2:G:615:TYR:O	2.11	0.50
2:G:702:TYR:HB2	2:G:727:PRO:HB2	1.93	0.50
2:H:871:THR:HG21	2:H:887:LYS:NZ	2.26	0.50
1:A:1411:THR:HG22	1:A:1412:ASP:H	1.76	0.50
1:B:411:GLN:NE2	1:B:1628:SER:H	2.09	0.50
1:B:435:GLU:O	1:B:439:ILE:HG13	2.11	0.50
1:B:674:LYS:O	1:B:675:ASP:HB2	2.11	0.50
1:B:1642:THR:HG22	1:B:1652:GLN:HG3	1.93	0.50
1:C:157:HIS:CE1	1:C:228:LEU:HD22	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1116:PRO:HB2	1:C:1184:LEU:HD12	1.93	0.50
1:C:1455:ARG:O	1:C:1459:ILE:HG13	2.12	0.50
1:C:1584:PRO:O	1:C:1585:LYS:C	2.50	0.50
2:G:1293:THR:HG22	2:G:1296:GLU:CG	2.40	0.50
2:G:1716:ASN:OD1	2:G:1765:ARG:HA	2.12	0.50
2:H:432:LEU:HB3	2:H:484:ILE:HG23	1.92	0.50
2:H:732:TRP:CG	2:H:750:MET:HE3	2.47	0.50
2:H:1597:ALA:HB1	2:H:1638:ILE:CD1	2.41	0.50
2:I:650:ASN:HD21	3:I:3051:FMN:HN3	1.58	0.50
2:I:1431:TYR:CE1	2:I:1526:THR:HG23	2.46	0.50
2:I:1678:MET:CE	2:I:1707:LEU:HD22	2.41	0.50
1:A:142:ASP:CG	1:A:257:PRO:HB2	2.32	0.50
1:A:280:GLU:O	1:A:280:GLU:HG2	2.10	0.50
1:A:1474:ALA:HA	1:A:1478:PRO:CD	2.41	0.50
1:B:1347:LYS:O	1:B:1347:LYS:HD3	2.11	0.50
2:G:1135:GLU:OE2	2:G:1175:LYS:HE3	2.11	0.50
2:G:1873:TYR:CE1	2:G:1877:ARG:NE	2.75	0.50
2:G:1918:LYS:HG2	2:G:1919:LEU:HD23	1.93	0.50
2:H:260:PRO:HD3	2:H:289:TRP:CZ2	2.46	0.50
2:H:344:LEU:HB3	2:H:349:VAL:HG23	1.94	0.50
2:H:750:MET:CG	2:H:796:PHE:HZ	2.25	0.50
2:H:1428:GLU:HB2	2:H:1468:THR:HG22	1.94	0.50
2:H:1873:TYR:HE1	2:H:1877:ARG:HH21	1.59	0.50
2:I:161:GLY:HA3	2:I:506:PRO:HD2	1.94	0.50
2:I:344:LEU:HB3	2:I:349:VAL:HG23	1.93	0.50
2:I:460:TYR:HA	2:I:466:SER:O	2.10	0.50
2:I:1308:CYS:HB3	2:I:1311:PHE:CD2	2.46	0.50
1:B:1600:LEU:HD11	1:B:1655:VAL:HG12	1.94	0.50
1:B:1685:TYR:CE1	2:H:993:GLN:OE1	2.64	0.50
1:C:20:TYR:CG	2:I:2033:THR:OG1	2.65	0.50
1:C:1392:LEU:HD22	1:C:1396:MET:HG3	1.93	0.50
2:G:105:ALA:HB3	2:G:533:LEU:HD21	1.94	0.50
2:G:741:HIS:HB3	2:G:853:PRO:HB2	1.94	0.50
2:G:1493:LEU:HD11	2:G:1499:VAL:HG21	1.93	0.50
2:H:582:LYS:HE2	2:H:1108:PRO:HB3	1.92	0.50
2:H:1678:MET:CE	2:H:1707:LEU:HD22	2.40	0.50
2:H:1861:ARG:HD2	2:H:1964:PHE:O	2.11	0.50
2:I:1359:MET:HE3	2:I:1359:MET:HA	1.94	0.50
2:I:1475:LYS:CB	2:I:1481:SER:HB2	2.41	0.50
1:A:433:VAL:O	1:A:437:ILE:HG13	2.12	0.50
1:A:889:GLU:HG3	1:A:893:VAL:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:254:TRP:HZ3	1:B:292:GLN:HG3	1.76	0.50
1:B:1105:LEU:HD23	1:B:1185:VAL:HG22	1.93	0.50
1:C:29:ILE:HG13	2:I:1891:TYR:O	2.12	0.50
1:C:156:ALA:HA	1:C:166:ILE:HD12	1.92	0.50
1:C:328:LEU:HD13	1:C:329:GLU:N	2.27	0.50
1:C:674:LYS:O	1:C:675:ASP:HB2	2.11	0.50
1:C:702:LYS:HD3	1:C:731:THR:CG2	2.41	0.50
2:G:24:THR:O	2:G:26:SER:N	2.44	0.50
2:G:281:VAL:HG12	2:G:282:ALA:N	2.26	0.50
2:G:418:ASN:HD22	2:G:418:ASN:N	2.08	0.50
2:G:533:LEU:HD13	2:G:545:GLN:HG3	1.94	0.50
2:G:606:PHE:CE1	2:G:811:VAL:HG13	2.47	0.50
2:G:2046:GLU:C	2:G:2048:TYR:H	2.15	0.50
2:H:491:GLU:HA	2:H:494:THR:HG22	1.93	0.50
2:H:702:TYR:HB2	2:H:727:PRO:HB2	1.94	0.50
2:H:1822:MET:HE2	2:H:1996:ILE:HG12	1.92	0.50
2:I:1673:GLU:N	2:I:1676:MET:HE3	2.25	0.50
1:A:1234:MET:HG2	1:A:1326:ILE:HD12	1.93	0.50
1:B:1234:MET:HE3	1:B:1326:ILE:HG21	1.92	0.50
1:B:1705:PRO:HB2	1:B:1733:PHE:CE1	2.46	0.50
1:C:335:HIS:O	1:C:335:HIS:CD2	2.65	0.50
1:C:627:SER:HB2	1:C:657:SER:CB	2.41	0.50
1:C:828:PRO:HG3	1:C:868:ILE:HG22	1.94	0.50
1:C:1264:ARG:NH1	1:C:1270:VAL:HB	2.27	0.50
1:C:1474:ALA:HA	1:C:1478:PRO:CD	2.42	0.50
2:G:751:LEU:HD23	2:G:791:TYR:CZ	2.46	0.50
2:G:814:SER:HB2	2:G:1040:LEU:HD13	1.93	0.50
2:G:949:ASP:CB	2:G:1006:MET:HE2	2.40	0.50
2:G:1593:ILE:HD13	2:G:1626:ILE:HD13	1.92	0.50
2:G:1697:HIS:HE1	2:G:1829:GLU:CG	2.25	0.50
2:G:2035:SER:HB3	2:G:2038:ILE:CD1	2.42	0.50
2:H:1148:ASN:HD22	2:H:1151:HIS:H	1.60	0.50
2:H:1889:VAL:HG13	2:H:1977:HIS:HB3	1.93	0.50
2:I:1428:GLU:HB2	2:I:1468:THR:HG22	1.93	0.50
2:I:1774:THR:HA	2:I:1777:THR:HB	1.92	0.50
1:B:1362:PRO:HA	1:B:1365:MET:HG3	1.94	0.50
1:B:1451:GLN:OE1	1:B:1451:GLN:HA	2.12	0.50
1:C:888:ILE:HD12	1:C:939:PHE:CE2	2.44	0.50
2:G:732:TRP:CD1	2:G:750:MET:HE3	2.47	0.50
2:G:836:TYR:HA	2:G:845:THR:OG1	2.11	0.50
2:G:1871:LEU:HD22	2:G:1888:ILE:HD11	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1913:VAL:O	2:G:1917:ILE:HG13	2.12	0.50
2:H:161:GLY:N	2:H:505:GLY:HA3	2.25	0.50
2:H:233:SER:HA	2:H:424:ALA:CB	2.41	0.50
2:H:638:VAL:HG22	2:H:675:PRO:HG2	1.94	0.50
2:H:1308:CYS:HB3	2:H:1311:PHE:CD2	2.47	0.50
2:H:1593:ILE:O	2:H:1597:ALA:HB3	2.12	0.50
2:I:238:CYS:CB	2:I:239:PRO:HD3	2.40	0.50
2:I:324:LEU:HD12	2:I:324:LEU:O	2.12	0.50
2:I:807:ILE:HG21	2:I:1066:ILE:HA	1.92	0.50
2:I:1027:ILE:O	2:I:1031:LYS:HB2	2.11	0.50
1:A:408:TRP:CH2	1:A:1628:SER:HB3	2.47	0.50
1:A:1104:ARG:O	1:A:1185:VAL:HG13	2.12	0.50
1:B:156:ALA:HA	1:B:166:ILE:CD1	2.41	0.50
1:C:267:VAL:HG12	1:C:290:MET:CE	2.42	0.50
1:C:1105:LEU:HD23	1:C:1185:VAL:HG22	1.94	0.50
1:C:1123:GLN:HB2	1:C:1177:LYS:HE2	1.93	0.50
2:G:60:LEU:O	2:G:63:LYS:HB2	2.12	0.50
2:G:1382:VAL:HA	2:G:1422:THR:HG1	1.76	0.50
2:G:1552:PRO:O	2:G:1556:VAL:HG23	2.12	0.50
2:H:121:GLU:HA	2:H:124:LYS:HD2	1.93	0.50
2:H:455:ILE:HD11	2:H:469:ARG:NE	2.27	0.50
2:H:835:THR:HG21	2:H:855:HIS:HD2	1.70	0.50
2:H:995:LEU:HB3	2:H:1000:ILE:HD11	1.94	0.50
2:I:173:LEU:HD13	2:I:219:LEU:HD21	1.93	0.50
2:I:1435:ILE:HG22	2:I:1435:ILE:O	2.12	0.50
2:I:1493:LEU:HD11	2:I:1499:VAL:HG21	1.93	0.50
1:A:157:HIS:HE1	1:A:228:LEU:HD22	1.76	0.49
1:A:328:LEU:HD13	1:A:329:GLU:N	2.27	0.49
1:A:1125:VAL:HG21	1:A:1175:ILE:CD1	2.42	0.49
1:A:1451:GLN:OE1	1:A:1451:GLN:HA	2.12	0.49
1:A:1459:ILE:O	1:A:1463:VAL:HG23	2.12	0.49
1:B:157:HIS:HE1	1:B:228:LEU:HD22	1.77	0.49
1:B:413:LEU:HB2	1:B:439:ILE:HD13	1.94	0.49
1:B:790:PHE:CE2	1:B:794:ILE:HD11	2.47	0.49
2:G:369:SER:HG	2:G:380:SER:HB3	1.73	0.49
2:H:7:ARG:CZ	2:H:24:THR:HA	2.42	0.49
2:H:102:HIS:HE1	2:H:180:TYR:OH	1.95	0.49
2:H:214:ASN:ND2	2:H:217:GLU:HB2	2.27	0.49
2:H:460:TYR:HA	2:H:466:SER:O	2.12	0.49
2:H:868:PHE:HB3	2:H:873:PHE:CE2	2.47	0.49
2:I:7:ARG:CZ	2:I:24:THR:HA	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:194:THR:CG2	2:I:300:ILE:HD11	2.40	0.49
2:I:402:LEU:HD12	2:I:404:GLN:HG2	1.94	0.49
2:I:611:THR:HA	2:I:615:TYR:O	2.11	0.49
2:I:1378:ILE:O	2:I:1378:ILE:HG12	2.11	0.49
2:I:1873:TYR:CE2	2:I:1940:LEU:HD21	2.47	0.49
1:B:156:ALA:HA	1:B:166:ILE:HD12	1.93	0.49
1:B:465:ASN:O	1:B:469:VAL:HG23	2.12	0.49
1:C:56:MET:HG3	2:I:1893:VAL:CG2	2.42	0.49
1:C:176:VAL:HG12	1:C:178:GLY:H	1.77	0.49
1:C:233:ILE:HD13	1:C:237:MET:HE3	1.94	0.49
1:C:655:LEU:CD2	1:C:916:LEU:HD11	2.39	0.49
1:C:1665:ILE:HG12	1:C:1666:THR:N	2.27	0.49
2:G:463:PHE:CE1	2:G:486:LEU:HD22	2.47	0.49
2:G:491:GLU:HA	2:G:494:THR:HG22	1.95	0.49
2:G:597:MET:H	2:G:601:THR:HB	1.77	0.49
2:G:677:GLN:O	2:G:678:PHE:HB3	2.13	0.49
2:G:740:HIS:HA	2:G:854:ILE:HD13	1.94	0.49
2:H:461:ASP:HB3	2:H:464:ASP:HB2	1.93	0.49
2:H:1745:LYS:HD3	2:H:1747:LYS:HE2	1.94	0.49
2:H:2035:SER:HB3	2:H:2038:ILE:CD1	2.42	0.49
2:I:24:THR:O	2:I:26:SER:N	2.45	0.49
2:I:274:SER:OG	2:I:428:HIS:HE1	1.96	0.49
2:I:573:LYS:HE3	2:I:1101:GLU:OE1	2.12	0.49
2:I:712:ALA:O	2:I:715:GLN:HB3	2.12	0.49
1:A:980:VAL:HG23	2:G:968:GLN:OE1	2.12	0.49
1:A:1401:TYR:C	1:A:1658:PRO:HG3	2.33	0.49
1:A:1419:PRO:HB3	1:A:1646:PHE:CE2	2.48	0.49
1:B:1474:ALA:HA	1:B:1478:PRO:CD	2.41	0.49
1:B:1584:PRO:O	1:B:1585:LYS:C	2.50	0.49
1:C:790:PHE:CE2	1:C:794:ILE:HD11	2.48	0.49
1:C:889:GLU:HG3	1:C:893:VAL:O	2.13	0.49
1:C:1050:CYS:HB3	1:C:1089:VAL:HG12	1.93	0.49
2:G:157:VAL:HG11	2:G:496:PHE:CZ	2.47	0.49
2:G:1441:ILE:HD11	2:G:1445:ARG:NH2	2.25	0.49
2:G:1666:PHE:CD1	2:G:1814:ALA:HA	2.47	0.49
2:G:1845:ASP:HB2	2:G:1849:ARG:N	2.15	0.49
2:H:7:ARG:HE	2:H:27:PHE:CB	2.25	0.49
2:H:306:ILE:HA	2:H:439:ILE:CD1	2.43	0.49
2:H:634:ILE:HD11	2:H:649:ILE:CD1	2.40	0.49
2:H:1567:ARG:CG	2:H:1567:ARG:NH1	2.50	0.49
2:I:950:PHE:O	2:I:954:VAL:HG23	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:11:HIS:HE1	2:H:1996:ILE:O	1.94	0.49
1:B:140:ILE:HD13	1:B:255:GLY:O	2.11	0.49
1:C:34:VAL:O	1:C:38:ASP:HB2	2.11	0.49
1:C:415:SER:O	1:C:419:GLU:HB2	2.12	0.49
1:C:764:ASP:OD2	1:C:818:ARG:HD3	2.12	0.49
2:G:194:THR:CG2	2:G:300:ILE:HD11	2.41	0.49
2:G:306:ILE:HA	2:G:439:ILE:CD1	2.42	0.49
2:G:676:ILE:O	2:G:676:ILE:HG12	2.11	0.49
2:G:1350:LEU:HD11	2:G:1410:PHE:HB3	1.93	0.49
2:G:1428:GLU:HG2	2:G:1470:THR:HG22	1.94	0.49
2:H:259:THR:HG22	2:H:262:GLU:CB	2.42	0.49
2:H:777:THR:HG23	2:H:1081:HIS:CE1	2.47	0.49
2:I:7:ARG:HE	2:I:27:PHE:CB	2.25	0.49
2:I:72:VAL:HG12	2:I:73:GLU:N	2.28	0.49
2:I:866:LYS:O	2:I:870:GLU:HG3	2.12	0.49
1:A:1312:VAL:CG2	1:A:1329:VAL:HG11	2.41	0.49
1:B:46:GLU:OE1	1:B:53:LEU:HB2	2.12	0.49
1:B:1419:PRO:HB3	1:B:1646:PHE:CE2	2.48	0.49
1:B:1455:ARG:NH2	1:B:1459:ILE:HG12	2.26	0.49
1:B:1533:ILE:HG13	1:B:1564:LEU:HB3	1.94	0.49
1:C:254:TRP:HZ3	1:C:292:GLN:HG3	1.77	0.49
1:C:1020:VAL:CG1	1:C:1400:ILE:HG23	2.42	0.49
2:G:1776:PHE:O	2:G:1779:PRO:HD2	2.12	0.49
2:H:173:LEU:O	2:H:173:LEU:HD22	2.13	0.49
2:H:732:TRP:CD2	2:H:750:MET:HE3	2.48	0.49
2:I:629:GLY:O	2:I:632:ALA:HB3	2.12	0.49
2:I:682:GLY:O	2:I:683:ALA:HB3	2.13	0.49
2:I:777:THR:HG23	2:I:1081:HIS:CE1	2.47	0.49
2:I:1135:GLU:OE2	2:I:1175:LYS:HE3	2.12	0.49
2:I:1844:ARG:CG	2:I:1844:ARG:NH1	2.61	0.49
2:I:1850:SER:HB2	2:I:1973:SER:HB2	1.95	0.49
2:I:2026:PHE:HD2	2:I:2045:TRP:HZ3	1.60	0.49
1:A:427:ASN:ND2	1:A:610:THR:H	2.05	0.49
1:A:1009:LEU:HD13	1:A:1445:MET:HE1	1.94	0.49
1:B:9:LEU:HD23	2:H:2041:ILE:HD13	1.95	0.49
1:C:256:LEU:HD22	1:C:260:ARG:HB3	1.95	0.49
2:G:273:HIS:CB	2:G:512:LEU:HD22	2.43	0.49
2:G:774:ALA:HB1	2:G:1081:HIS:CD2	2.37	0.49
2:G:1547:PRO:HD3	2:G:1584:PHE:CE2	2.47	0.49
2:G:1567:ARG:CG	2:G:1567:ARG:NH1	2.51	0.49
2:G:2029:VAL:O	2:G:2033:THR:HG22	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:369:SER:O	2:H:370:LEU:HD23	2.13	0.49
2:H:758:ARG:NH2	2:H:797:ASP:OD1	2.35	0.49
2:H:860:ARG:HB2	2:H:1049:GLN:HG3	1.94	0.49
2:I:1130:THR:H	2:I:1133:THR:CG2	2.25	0.49
2:I:1491:VAL:HB	2:I:1501:ILE:HD12	1.93	0.49
1:A:1523:ARG:NH2	1:A:1564:LEU:O	2.45	0.49
1:A:1705:PRO:HB2	1:A:1733:PHE:CE1	2.47	0.49
1:B:328:LEU:N	1:B:330:GLU:H	2.11	0.49
1:C:267:VAL:O	1:C:290:MET:HE1	2.13	0.49
1:C:733:ILE:CD1	1:C:761:LEU:HD11	2.40	0.49
2:G:706:LYS:HE2	2:G:731:GLN:OE1	2.13	0.49
2:H:747:HIS:HE1	2:H:780:TYR:OH	1.95	0.49
2:H:826:GLY:HA2	2:H:1060:ALA:HB3	1.94	0.49
2:H:1040:LEU:O	2:H:1046:GLN:HG3	2.13	0.49
2:H:1323:MET:CE	2:H:1605:VAL:HG22	2.42	0.49
2:H:1632:ILE:HG23	2:H:1632:ILE:O	2.13	0.49
2:I:345:THR:HG22	2:I:347:GLU:N	2.23	0.49
2:I:768:GLY:HA3	2:I:800:LEU:CD2	2.41	0.49
2:I:995:LEU:HB3	2:I:1000:ILE:HD11	1.95	0.49
1:A:430:ARG:NH2	1:A:605:LEU:HD13	2.27	0.49
1:A:927:ASN:O	1:A:929:GLY:N	2.41	0.49
1:A:1477:ILE:H	1:A:1478:PRO:HD3	1.78	0.49
1:B:182:VAL:O	1:B:186:ILE:HG13	2.12	0.49
1:B:1056:ILE:HD13	1:B:1193:TRP:CD1	2.45	0.49
2:G:11:LEU:HD11	2:G:64:PHE:CD2	2.48	0.49
2:G:1130:THR:H	2:G:1133:THR:CG2	2.26	0.49
2:G:1300:PHE:CA	2:G:1556:VAL:HG11	2.42	0.49
2:G:1425:LYS:HG2	2:G:1471:GLU:CG	2.37	0.49
2:G:1673:GLU:N	2:G:1676:MET:HE3	2.26	0.49
2:H:597:MET:H	2:H:601:THR:HB	1.78	0.49
2:H:682:GLY:O	2:H:683:ALA:HB3	2.13	0.49
2:I:306:ILE:HA	2:I:439:ILE:HD13	1.94	0.49
2:I:814:SER:CB	2:I:1040:LEU:HD13	2.42	0.49
2:I:1266:TYR:HB2	2:I:1347:LEU:HD23	1.95	0.49
2:I:1697:HIS:HE1	2:I:1829:GLU:CG	2.26	0.49
2:I:1745:LYS:HD3	2:I:1747:LYS:HE2	1.93	0.49
1:A:67:SER:OG	2:I:359:HIS:HE1	1.95	0.49
1:A:400:ARG:CG	1:A:400:ARG:NH1	2.47	0.49
1:B:187:LEU:HD22	1:B:201:PRO:HB2	1.94	0.49
1:B:1009:LEU:HA	1:B:1445:MET:HE2	1.95	0.49
1:B:1014:ASP:H	1:B:1510:ASN:ND2	2.06	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:983:GLN:NE2	2:I:962:LYS:HD2	2.27	0.49
1:C:1584:PRO:HG3	1:C:1591:TRP:CH2	2.47	0.49
2:G:463:PHE:HD2	2:G:463:PHE:O	1.95	0.49
2:G:1486:PHE:HA	2:G:1504:VAL:O	2.12	0.49
2:G:1567:ARG:NH1	2:G:1568:HIS:HB3	2.28	0.49
2:H:489:LYS:O	2:H:493:THR:HG22	2.13	0.49
2:H:569:LEU:HD12	2:H:1090:TYR:CD1	2.48	0.49
2:I:569:LEU:HD12	2:I:1090:TYR:CD1	2.48	0.49
2:I:926:LEU:HB3	2:I:947:THR:CG2	2.43	0.49
2:I:1632:ILE:HG23	2:I:1632:ILE:O	2.12	0.49
1:B:825:PRO:HB2	1:B:843:LYS:NZ	2.27	0.49
1:C:427:ASN:HB2	1:C:468:LEU:HD21	1.95	0.49
1:C:1419:PRO:HB3	1:C:1646:PHE:CE2	2.47	0.49
2:G:455:ILE:HG12	2:G:469:ARG:HG2	1.94	0.49
2:G:569:LEU:HD12	2:G:1090:TYR:CD1	2.48	0.49
2:G:2026:PHE:HD2	2:G:2045:TRP:HZ3	1.60	0.49
2:H:22:VAL:HG11	2:H:27:PHE:HA	1.94	0.49
2:H:950:PHE:O	2:H:954:VAL:HG23	2.13	0.49
2:H:1441:ILE:HD11	2:H:1445:ARG:NH2	2.27	0.49
2:I:55:THR:HB	2:I:59:GLU:OE2	2.13	0.49
2:I:249:TYR:CD2	2:I:283:ILE:HD11	2.48	0.49
2:I:428:HIS:HD2	2:I:486:LEU:O	1.95	0.49
2:I:900:GLN:NE2	2:I:1051:THR:HA	2.28	0.49
2:I:1697:HIS:HE1	2:I:1829:GLU:HG2	1.77	0.49
2:I:1738:PHE:CE1	2:I:1837:THR:HG23	2.48	0.49
1:A:46:GLU:OE1	1:A:53:LEU:HB2	2.12	0.48
1:A:987:ASN:HD22	2:G:957:ARG:HD2	1.77	0.48
1:A:1264:ARG:NH1	1:A:1270:VAL:HB	2.28	0.48
1:B:243:ILE:O	1:B:247:ARG:HG3	2.13	0.48
1:B:1183:ARG:NH1	1:B:1344:GLY:HA2	2.28	0.48
1:C:420:ILE:HG22	1:C:469:VAL:HG22	1.96	0.48
1:C:1119:LYS:HE2	1:C:1341:PHE:CG	2.48	0.48
2:G:463:PHE:CD1	2:G:486:LEU:HD22	2.48	0.48
2:G:682:GLY:O	2:G:683:ALA:HB3	2.12	0.48
2:G:1325:PHE:CE1	2:G:1328:VAL:HG11	2.48	0.48
2:G:1427:VAL:HG22	2:G:1469:GLU:HG2	1.94	0.48
2:G:2038:ILE:HG22	2:G:2042:ILE:CD1	2.37	0.48
2:H:176:LEU:HD22	2:H:247:ALA:HB1	1.95	0.48
2:H:522:GLY:O	2:H:560:ASN:HA	2.13	0.48
2:H:1272:ASP:O	2:H:1273:GLU:HG3	2.13	0.48
2:H:1438:SER:O	2:H:1441:ILE:HG23	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:705:VAL:CG2	1:B:732:LEU:HD21	2.43	0.48
1:C:331:ILE:HG23	1:C:332:THR:N	2.28	0.48
1:C:386:PHE:O	1:C:390:VAL:HB	2.14	0.48
1:C:430:ARG:CZ	1:C:605:LEU:HD13	2.43	0.48
1:C:1114:TYR:CD1	1:C:1337:GLU:HG3	2.48	0.48
1:C:1392:LEU:CD2	1:C:1396:MET:HG3	2.43	0.48
1:C:1523:ARG:NH2	1:C:1564:LEU:O	2.46	0.48
2:G:618:GLU:HG2	2:G:678:PHE:CZ	2.48	0.48
2:G:653:TYR:HD1	2:G:659:LEU:HD21	1.78	0.48
2:G:1266:TYR:HB2	2:G:1347:LEU:HD23	1.95	0.48
2:G:1330:GLY:HA2	2:G:1374:THR:HG21	1.94	0.48
2:H:232:LEU:HD21	2:H:423:VAL:HA	1.95	0.48
2:H:397:LYS:HB3	2:H:416:PHE:CE2	2.48	0.48
2:H:465:GLY:HA2	2:H:493:THR:HA	1.95	0.48
2:H:901:LYS:NZ	2:H:1031:LYS:O	2.46	0.48
2:H:1624:THR:HB	2:H:1642:THR:OG1	2.14	0.48
2:H:1842:VAL:HG21	2:H:1975:PRO:HD3	1.95	0.48
2:I:562:LEU:HG	2:I:793:PRO:CB	2.44	0.48
2:I:881:VAL:N	2:I:882:PRO:CD	2.76	0.48
2:I:1325:PHE:CE1	2:I:1328:VAL:HG11	2.48	0.48
2:I:1579:ILE:HD11	2:I:1615:MET:SD	2.54	0.48
1:A:340:ARG:HH12	1:A:344:GLN:HE21	1.60	0.48
1:A:1362:PRO:HA	1:A:1365:MET:HG3	1.94	0.48
1:B:256:LEU:HD22	1:B:260:ARG:HB3	1.95	0.48
1:B:328:LEU:HD13	1:B:329:GLU:N	2.28	0.48
1:B:413:LEU:C	1:B:415:SER:H	2.17	0.48
1:C:237:MET:HG3	1:C:241:PHE:HB3	1.95	0.48
1:C:1010:GLU:HA	1:C:1664:ALA:HA	1.95	0.48
1:C:1396:MET:O	1:C:1680:ARG:NH1	2.46	0.48
1:C:1451:GLN:HA	1:C:1451:GLN:OE1	2.13	0.48
2:G:109:LEU:HD11	2:G:116:LEU:CD2	2.41	0.48
2:G:428:HIS:CD2	2:G:488:VAL:HG23	2.47	0.48
2:G:741:HIS:HB2	2:G:853:PRO:O	2.13	0.48
2:I:11:LEU:HD11	2:I:64:PHE:CD2	2.47	0.48
2:I:741:HIS:HB3	2:I:853:PRO:HB2	1.95	0.48
2:I:750:MET:CG	2:I:796:PHE:HZ	2.24	0.48
1:A:695:GLY:HA3	1:A:906:LEU:HD11	1.94	0.48
1:A:1037:TRP:HB2	1:A:1598:GLN:OE1	2.13	0.48
1:B:1116:PRO:HB2	1:B:1184:LEU:HD12	1.95	0.48
1:B:1125:VAL:HG21	1:B:1175:ILE:CD1	2.42	0.48
1:C:1:MET:HE3	1:C:9:LEU:HD12	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1019:ILE:HG21	1:C:1316:VAL:HG22	1.94	0.48
2:G:545:GLN:H	2:G:545:GLN:NE2	2.09	0.48
2:G:598:THR:O	2:G:602:VAL:HB	2.13	0.48
2:G:715:GLN:O	2:G:719:ILE:HG12	2.13	0.48
2:G:950:PHE:O	2:G:954:VAL:HG23	2.13	0.48
2:G:1148:ASN:ND2	2:G:1151:HIS:H	2.11	0.48
2:G:1213:LEU:O	2:G:1214:LEU:HD23	2.12	0.48
2:G:1868:GLN:HG3	2:G:1898:TYR:CZ	2.48	0.48
2:H:169:TYR:CG	2:H:170:PHE:N	2.81	0.48
2:H:441:LYS:O	2:H:444:VAL:HG12	2.12	0.48
2:H:715:GLN:O	2:H:719:ILE:HG12	2.13	0.48
2:H:932:ILE:HD12	2:H:939:PHE:HD1	1.78	0.48
2:H:1986:LYS:HA	2:H:1989:LYS:HB3	1.95	0.48
2:I:173:LEU:O	2:I:173:LEU:HD22	2.13	0.48
2:I:1081:HIS:O	2:I:1085:LEU:HB2	2.13	0.48
2:I:1159:ILE:HG22	2:I:1160:THR:N	2.28	0.48
2:I:1169:PRO:O	2:I:1173:VAL:HG23	2.13	0.48
2:I:1784:MET:HE2	2:I:1784:MET:O	2.13	0.48
2:I:1834:ARG:NH1	2:I:1834:ARG:CG	2.66	0.48
1:A:1:MET:HE3	1:A:9:LEU:HD12	1.95	0.48
1:A:335:HIS:O	1:A:338:LEU:HB3	2.12	0.48
1:A:683:ALA:HA	1:A:689:GLY:HA3	1.95	0.48
1:B:683:ALA:HA	1:B:689:GLY:HA3	1.96	0.48
2:G:593:LEU:HD21	2:G:800:LEU:HB3	1.96	0.48
2:G:720:ALA:HA	2:G:728:ILE:CD1	2.43	0.48
2:H:428:HIS:CD2	2:H:488:VAL:HG23	2.49	0.48
2:H:455:ILE:HG13	2:H:455:ILE:O	2.14	0.48
2:H:1323:MET:HE3	2:H:1605:VAL:HG22	1.96	0.48
2:H:1566:SER:HB3	2:H:1568:HIS:CE1	2.47	0.48
2:H:1674:GLN:OE1	2:H:1712:ASN:HA	2.12	0.48
2:I:16:LEU:HG	2:I:48:PHE:CZ	2.48	0.48
2:I:663:ILE:HB	2:I:664:PRO:CD	2.42	0.48
2:I:871:THR:HG21	2:I:887:LYS:HZ2	1.78	0.48
2:I:970:TYR:O	2:I:973:LEU:HB2	2.13	0.48
1:A:182:VAL:O	1:A:186:ILE:HG13	2.14	0.48
1:A:1116:PRO:HB2	1:A:1184:LEU:HD12	1.94	0.48
1:A:1189:ILE:HG23	1:A:1190:PRO:HD2	1.94	0.48
1:B:186:ILE:O	1:B:190:LEU:HG	2.13	0.48
1:C:50:SER:HB2	1:C:51:PRO:CD	2.43	0.48
2:G:259:THR:HG22	2:G:262:GLU:CB	2.43	0.48
2:G:1745:LYS:HE2	2:G:1747:LYS:HG2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:145:LEU:HD21	2:H:156:LEU:HD21	1.95	0.48
2:H:1868:GLN:HG3	2:H:1898:TYR:CZ	2.48	0.48
2:H:1918:LYS:HG2	2:H:1919:LEU:HD23	1.96	0.48
2:I:85:ASN:HD22	2:I:135:ARG:NH1	2.04	0.48
2:I:455:ILE:HG13	2:I:455:ILE:O	2.13	0.48
2:I:747:HIS:HE1	2:I:780:TYR:OH	1.97	0.48
2:I:758:ARG:NH2	2:I:797:ASP:OD1	2.38	0.48
2:I:1015:VAL:HG13	2:I:1017:PHE:CE2	2.48	0.48
1:A:985:ARG:HH12	2:G:953:ARG:CZ	2.26	0.48
1:A:1061:SER:HB2	1:A:1078:SER:HB3	1.96	0.48
1:A:1584:PRO:O	1:A:1585:LYS:C	2.51	0.48
1:B:438:ASN:HD21	1:B:698:GLN:HE21	1.61	0.48
1:C:852:ARG:NH1	1:C:852:ARG:CG	2.66	0.48
2:G:55:THR:HB	2:G:59:GLU:OE2	2.14	0.48
2:G:173:LEU:HD13	2:G:219:LEU:HD21	1.94	0.48
2:G:1493:LEU:HB3	2:G:1494:PRO:HD2	1.96	0.48
2:G:1590:ARG:HG3	2:G:1608:TYR:CD2	2.48	0.48
2:G:1666:PHE:CD1	2:G:1814:ALA:HB2	2.49	0.48
2:H:40:ILE:O	2:H:42:PRO:HD3	2.13	0.48
2:H:161:GLY:HA3	2:H:506:PRO:HD2	1.94	0.48
2:H:967:ILE:HD12	2:H:972:LEU:HD22	1.96	0.48
2:H:1953:VAL:O	2:H:1953:VAL:HG12	2.13	0.48
2:I:593:LEU:HD21	2:I:800:LEU:HB3	1.95	0.48
2:I:753:MET:O	2:I:757:ILE:HG13	2.14	0.48
2:I:1674:GLN:OE1	2:I:1712:ASN:HA	2.13	0.48
1:A:256:LEU:HD22	1:A:260:ARG:HB3	1.94	0.48
1:A:908:LEU:HA	1:A:913:VAL:HG21	1.96	0.48
1:B:34:VAL:O	1:B:38:ASP:HB2	2.14	0.48
1:C:335:HIS:O	1:C:338:LEU:HB3	2.14	0.48
1:C:400:ARG:HH11	1:C:400:ARG:HG3	1.72	0.48
1:C:1617:ILE:O	1:C:1620:GLN:HG2	2.13	0.48
2:G:318:SER:HB3	2:H:1595:ASN:HD21	1.78	0.48
2:G:376:ASN:C	2:G:376:ASN:ND2	2.67	0.48
2:G:754:TYR:CE2	2:G:794:MET:HG3	2.48	0.48
2:G:1180:MET:HB2	2:G:1197:LEU:HD21	1.95	0.48
2:G:1651:LEU:O	2:G:1652:THR:HG23	2.14	0.48
2:H:7:ARG:HH11	2:H:24:THR:HG23	1.75	0.48
2:H:428:HIS:HD2	2:H:486:LEU:O	1.96	0.48
2:H:463:PHE:CD1	2:H:486:LEU:HD22	2.48	0.48
2:H:739:GLY:HA2	2:H:1054:LEU:HG	1.95	0.48
2:H:955:GLU:HG2	2:H:987:TYR:HE2	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1873:TYR:CE1	2:H:1877:ARG:NE	2.78	0.48
1:A:1319:ILE:HA	1:A:1324:ALA:O	2.14	0.48
1:B:157:HIS:CE1	1:B:228:LEU:HD22	2.49	0.48
2:G:40:ILE:O	2:G:42:PRO:HD3	2.14	0.48
2:G:173:LEU:O	2:G:173:LEU:HD22	2.13	0.48
2:G:465:GLY:HA2	2:G:493:THR:HA	1.95	0.48
2:G:1148:ASN:C	2:G:1148:ASN:HD22	2.17	0.48
2:H:238:CYS:CB	2:H:239:PRO:HD3	2.43	0.48
2:H:376:ASN:HD22	2:H:376:ASN:C	2.18	0.48
2:H:786:SER:CB	2:H:794:MET:HE2	2.43	0.48
2:H:1130:THR:H	2:H:1133:THR:CG2	2.27	0.48
2:I:233:SER:HA	2:I:424:ALA:CB	2.44	0.48
2:I:551:THR:HG22	2:I:552:SER:N	2.29	0.48
2:I:835:THR:CB	2:I:845:THR:HG23	2.42	0.48
2:I:894:ARG:NH1	2:I:898:ASP:OD2	2.42	0.48
2:I:1567:ARG:NH1	2:I:1568:HIS:HB3	2.28	0.48
1:A:157:HIS:CE1	1:A:228:LEU:HD22	2.48	0.48
1:A:176:VAL:HG12	1:A:178:GLY:H	1.79	0.48
1:A:427:ASN:HB2	1:A:468:LEU:HD21	1.95	0.48
1:A:852:ARG:NH1	1:A:852:ARG:CG	2.73	0.48
1:A:1501:LEU:O	1:A:1505:GLN:HG3	2.14	0.48
1:B:2:LYS:HE2	1:B:4:GLU:CD	2.34	0.48
1:C:751:PHE:CZ	1:C:761:LEU:HD13	2.49	0.48
1:C:1738:ILE:O	1:C:1739:GLN:HB2	2.14	0.48
2:G:72:VAL:HG12	2:G:73:GLU:N	2.28	0.48
2:G:240:LEU:O	2:G:244:ILE:HG13	2.13	0.48
2:G:455:ILE:HG13	2:G:455:ILE:O	2.14	0.48
2:G:807:ILE:HD12	2:G:1063:THR:HG23	1.95	0.48
2:I:131:ILE:HD12	2:I:182:VAL:CB	2.42	0.48
2:I:278:VAL:HG11	2:I:303:LEU:HD13	1.95	0.48
2:I:455:ILE:HD11	2:I:469:ARG:NE	2.29	0.48
2:I:675:PRO:HD3	2:I:1164:MET:HE2	1.95	0.48
2:I:1496:LYS:HE2	2:I:1693:ARG:NH2	2.25	0.48
2:I:1804:PHE:CD2	2:I:1818:LEU:HD22	2.49	0.48
1:A:19:ALA:O	1:A:22:PHE:HB2	2.14	0.47
1:A:243:ILE:O	1:A:247:ARG:HG3	2.14	0.47
1:A:332:THR:HG22	1:B:331:ILE:HD11	1.96	0.47
1:A:1158:PRO:HD2	1:A:1159:GLU:OE2	2.14	0.47
1:A:1682:LYS:HB3	2:G:994:PHE:CE2	2.49	0.47
1:B:983:GLN:NE2	2:H:962:LYS:HB2	2.28	0.47
1:C:186:ILE:O	1:C:190:LEU:HG	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:370:GLU:O	1:C:373:ALA:HB3	2.14	0.47
2:G:732:TRP:CD2	2:G:750:MET:HE3	2.48	0.47
2:G:1873:TYR:CE2	2:G:1940:LEU:HD21	2.49	0.47
2:H:463:PHE:O	2:H:463:PHE:HD2	1.96	0.47
2:H:1417:THR:C	2:H:1419:PHE:H	2.18	0.47
2:H:1425:LYS:HG2	2:H:1471:GLU:CG	2.38	0.47
2:H:1590:ARG:NH2	2:H:1594:GLU:OE2	2.47	0.47
2:I:489:LYS:O	2:I:493:THR:HG22	2.13	0.47
2:I:533:LEU:HG	2:I:533:LEU:O	2.13	0.47
2:I:1764:PHE:HB2	2:I:1770:LEU:HD21	1.96	0.47
1:A:20:TYR:HE1	2:G:2035:SER:HB2	1.79	0.47
1:A:529:MET:HE3	1:A:529:MET:CA	2.36	0.47
1:A:1021:VAL:HG22	1:A:1387:ILE:HG22	1.95	0.47
1:B:335:HIS:O	1:B:338:LEU:HB3	2.14	0.47
1:B:741:SER:HB3	1:B:744:ASP:HB2	1.97	0.47
1:B:1310:GLU:OE1	1:B:1649:LYS:CE	2.62	0.47
1:B:1319:ILE:HA	1:B:1324:ALA:O	2.13	0.47
2:G:461:ASP:HB3	2:G:464:ASP:HB2	1.96	0.47
2:G:995:LEU:HB3	2:G:1000:ILE:HD11	1.95	0.47
2:G:1566:SER:HB3	2:G:1568:HIS:CE1	2.49	0.47
2:G:1676:MET:HE1	2:G:1781:LEU:CD2	2.43	0.47
2:H:33:LEU:HD21	2:H:80:PHE:CE2	2.49	0.47
2:H:157:VAL:HG11	2:H:496:PHE:CZ	2.49	0.47
2:H:740:HIS:HA	2:H:854:ILE:HD13	1.96	0.47
2:H:1427:VAL:HG22	2:H:1469:GLU:HG2	1.96	0.47
2:I:146:PHE:HA	2:I:149:VAL:HG12	1.93	0.47
2:I:214:ASN:ND2	2:I:217:GLU:HB2	2.28	0.47
2:I:845:THR:HG22	2:I:855:HIS:CD2	2.49	0.47
1:A:980:VAL:HG21	2:G:952:ARG:NH2	2.28	0.47
1:A:1238:VAL:CG1	1:A:1242:GLU:HB2	2.44	0.47
1:B:889:GLU:HG3	1:B:893:VAL:O	2.15	0.47
1:C:32:GLN:NE2	1:C:57:ALA:HA	2.28	0.47
1:C:328:LEU:N	1:C:330:GLU:H	2.13	0.47
1:C:998:TYR:CE2	1:C:1667:GLU:HB2	2.49	0.47
1:C:1133:PRO:HG3	1:C:1166:LYS:HG3	1.97	0.47
1:C:1312:VAL:CG2	1:C:1329:VAL:HG11	2.44	0.47
1:C:1477:ILE:H	1:C:1478:PRO:HD3	1.78	0.47
2:G:123:ILE:HD11	2:G:533:LEU:CD2	2.44	0.47
2:G:1308:CYS:HB3	2:G:1311:PHE:CD2	2.49	0.47
2:G:1624:THR:HB	2:G:1642:THR:OG1	2.15	0.47
2:H:1300:PHE:CA	2:H:1556:VAL:HG11	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1355:ASN:CB	2:H:1583:MET:HE1	2.43	0.47
2:H:1486:PHE:HA	2:H:1504:VAL:O	2.14	0.47
2:I:109:LEU:HD11	2:I:116:LEU:CD2	2.43	0.47
2:I:109:LEU:HD22	2:I:114:THR:HG23	1.96	0.47
2:I:176:LEU:HD22	2:I:247:ALA:HB1	1.96	0.47
2:I:741:HIS:CE1	2:I:855:HIS:NE2	2.82	0.47
2:I:1071:LYS:HE3	2:I:1075:ASP:OD2	2.14	0.47
2:I:1389:ILE:HG13	2:I:1411:PHE:HD1	1.80	0.47
1:A:186:ILE:O	1:A:190:LEU:HG	2.14	0.47
1:A:702:LYS:HD3	1:A:731:THR:CG2	2.44	0.47
1:A:1639:VAL:HG12	1:A:1640:SER:N	2.28	0.47
1:B:32:GLN:NE2	1:B:57:ALA:HA	2.30	0.47
1:C:142:ASP:CG	1:C:257:PRO:HB2	2.34	0.47
2:G:33:LEU:HD21	2:G:80:PHE:CE2	2.50	0.47
2:G:777:THR:HG23	2:G:1081:HIS:CE1	2.50	0.47
2:G:804:ARG:NH2	2:G:1068:GLU:OE1	2.48	0.47
2:G:1842:VAL:HG21	2:G:1975:PRO:HD3	1.96	0.47
2:G:2036:GLU:HG2	2:G:2039:LYS:NZ	2.28	0.47
2:H:598:THR:CB	2:H:599:PRO:HD3	2.44	0.47
2:H:751:LEU:HD23	2:H:791:TYR:CZ	2.49	0.47
2:H:1666:PHE:CD1	2:H:1814:ALA:HA	2.48	0.47
2:H:1666:PHE:CD1	2:H:1814:ALA:HB2	2.49	0.47
2:I:376:ASN:C	2:I:376:ASN:ND2	2.68	0.47
2:I:461:ASP:HB3	2:I:464:ASP:HB2	1.95	0.47
2:I:1913:VAL:O	2:I:1917:ILE:HG13	2.15	0.47
1:A:1714:VAL:HG22	1:A:1738:ILE:HD11	1.96	0.47
1:B:260:ARG:HH12	1:B:300:VAL:CG2	2.20	0.47
1:B:702:LYS:HD3	1:B:731:THR:CG2	2.44	0.47
1:C:908:LEU:HA	1:C:913:VAL:HG21	1.96	0.47
1:C:1004:ILE:HG22	1:C:1660:TYR:CE2	2.49	0.47
1:C:1138:LYS:HG3	1:C:1163:TYR:CE1	2.49	0.47
2:G:22:VAL:HG11	2:G:27:PHE:HA	1.96	0.47
2:G:428:HIS:HD2	2:G:486:LEU:O	1.97	0.47
2:G:1227:ARG:CZ	2:G:1565:VAL:HG12	2.44	0.47
2:G:1850:SER:HB2	2:G:1973:SER:HB2	1.96	0.47
2:G:2042:ILE:HG12	2:G:2042:ILE:H	1.39	0.47
2:H:551:THR:HG22	2:H:552:SER:N	2.30	0.47
2:H:677:GLN:O	2:H:678:PHE:HB3	2.15	0.47
2:H:807:ILE:HD12	2:H:1063:THR:HG23	1.95	0.47
2:H:1567:ARG:NH1	2:H:1568:HIS:HB3	2.29	0.47
2:I:597:MET:H	2:I:601:THR:HB	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:772:GLY:O	2:I:804:ARG:HD3	2.14	0.47
1:B:998:TYR:CE2	1:B:1667:GLU:HB2	2.49	0.47
1:B:1477:ILE:H	1:B:1478:PRO:HD3	1.79	0.47
1:C:13:LEU:HB2	2:I:2026:PHE:CE1	2.50	0.47
1:C:460:GLU:H	1:C:460:GLU:HG3	1.27	0.47
1:C:499:PRO:HD3	1:C:516:ARG:HH21	1.80	0.47
1:C:539:SER:O	1:C:540:GLN:C	2.52	0.47
1:C:1642:THR:HG22	1:C:1652:GLN:HG3	1.96	0.47
1:C:1709:GLU:H	1:C:1709:GLU:HG3	1.42	0.47
2:G:369:SER:O	2:G:370:LEU:HD23	2.15	0.47
2:G:402:LEU:HD12	2:G:404:GLN:HG2	1.95	0.47
2:G:481:ASP:OD2	2:G:485:ARG:NH1	2.47	0.47
2:H:490:TRP:HA	2:H:493:THR:HG22	1.96	0.47
2:H:579:VAL:CG2	2:H:1078:HIS:CD2	2.95	0.47
2:H:706:LYS:HE2	2:H:731:GLN:OE1	2.14	0.47
2:I:490:TRP:HA	2:I:493:THR:HG22	1.96	0.47
2:I:1547:PRO:HD3	2:I:1584:PHE:CE2	2.49	0.47
1:A:232:LEU:HD13	1:A:272:GLU:CB	2.44	0.47
1:A:413:LEU:C	1:A:415:SER:H	2.18	0.47
1:A:516:ARG:NH1	1:A:894:ARG:CZ	2.78	0.47
1:A:1238:VAL:CG1	1:A:1239:HIS:N	2.78	0.47
1:A:1487:LEU:C	1:A:1487:LEU:HD23	2.35	0.47
1:B:66:GLU:OE1	1:B:66:GLU:HA	2.15	0.47
1:B:253:ARG:O	1:B:254:TRP:CD1	2.68	0.47
1:B:331:ILE:HG23	1:B:332:THR:N	2.29	0.47
1:B:1114:TYR:CD1	1:B:1337:GLU:HG3	2.50	0.47
1:B:1308:SER:HB3	1:B:1589:GLY:CA	2.45	0.47
1:B:1523:ARG:NH2	1:B:1564:LEU:O	2.48	0.47
1:C:427:ASN:ND2	1:C:610:THR:H	2.08	0.47
1:C:636:PRO:HB2	1:C:638:LEU:O	2.15	0.47
1:C:1125:VAL:HG21	1:C:1175:ILE:CD1	2.43	0.47
1:C:1319:ILE:HA	1:C:1324:ALA:O	2.14	0.47
1:C:1332:TYR:HB3	1:C:1382:ALA:CB	2.44	0.47
2:G:7:ARG:HH11	2:G:24:THR:HG23	1.76	0.47
2:G:169:TYR:CG	2:G:170:PHE:N	2.83	0.47
2:G:232:LEU:HD21	2:G:423:VAL:HA	1.97	0.47
2:G:279:THR:O	2:G:283:ILE:HB	2.15	0.47
2:G:512:LEU:O	2:G:516:THR:HG23	2.15	0.47
2:G:652:ILE:N	2:G:652:ILE:HD12	2.29	0.47
2:G:730:LEU:C	2:G:730:LEU:HD12	2.35	0.47
2:G:852:GLU:H	2:G:852:GLU:HG3	1.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1027:ILE:O	2:G:1031:LYS:HB2	2.14	0.47
2:G:1100:VAL:HG21	2:G:1147:ILE:CD1	2.45	0.47
2:G:1784:MET:HE2	2:G:1784:MET:O	2.14	0.47
2:H:213:LEU:HG	2:H:213:LEU:O	2.14	0.47
2:H:559:PRO:HB3	2:H:564:GLU:HG3	1.97	0.47
2:H:652:ILE:N	2:H:652:ILE:HD12	2.30	0.47
2:H:751:LEU:HD23	2:H:791:TYR:CD2	2.50	0.47
2:H:784:GLU:O	2:H:787:THR:HB	2.13	0.47
2:H:860:ARG:H	2:H:1049:GLN:HG3	1.80	0.47
2:H:942:THR:HG21	2:H:1012:GLN:HA	1.95	0.47
2:H:943:TRP:CZ2	2:H:1016:PRO:HG3	2.49	0.47
2:H:1002:HIS:NE2	2:H:1006:MET:HE3	2.29	0.47
2:H:1227:ARG:CZ	2:H:1565:VAL:HG12	2.45	0.47
2:H:1804:PHE:CD2	2:H:1818:LEU:HD22	2.50	0.47
2:H:1854:MET:CG	2:H:1901:ALA:HB2	2.45	0.47
2:I:740:HIS:HA	2:I:854:ILE:HD13	1.97	0.47
2:I:1159:ILE:CG1	2:I:1169:PRO:CD	2.91	0.47
1:A:18:LEU:HD21	2:G:1815:LEU:HD12	1.97	0.47
1:A:187:LEU:HD22	1:A:201:PRO:HB2	1.96	0.47
1:A:406:TRP:CE3	1:A:1619:GLU:HG3	2.50	0.47
1:A:1009:LEU:HG	1:A:1664:ALA:HB2	1.95	0.47
1:A:1208:VAL:HG11	1:A:1212:THR:HB	1.96	0.47
1:A:1533:ILE:HG13	1:A:1564:LEU:HB3	1.97	0.47
1:A:1557:ILE:HD11	1:A:1642:THR:HG21	1.97	0.47
1:B:142:ASP:CG	1:B:257:PRO:HB2	2.35	0.47
1:B:916:LEU:HD22	1:B:922:VAL:HG22	1.95	0.47
1:C:529:MET:HG2	1:C:638:LEU:HG	1.95	0.47
1:C:930:LEU:HD23	1:C:930:LEU:HA	1.68	0.47
2:G:306:ILE:HA	2:G:439:ILE:HD13	1.96	0.47
2:G:355:LYS:HE2	2:G:355:LYS:HB3	1.64	0.47
2:G:650:ASN:HD21	3:G:3051:FMN:HN3	1.63	0.47
2:G:1002:HIS:NE2	2:G:1006:MET:HE3	2.30	0.47
2:G:1417:THR:C	2:G:1419:PHE:H	2.18	0.47
2:H:159:ILE:CG2	2:H:501:ILE:HG22	2.44	0.47
2:H:873:PHE:CD1	2:H:1026:GLU:HB2	2.49	0.47
2:H:894:ARG:NH1	2:H:898:ASP:OD2	2.41	0.47
2:H:1195:VAL:HG13	2:H:1211:LEU:CB	2.44	0.47
2:H:1273:GLU:HB3	2:H:1274:PRO:CD	2.45	0.47
2:I:7:ARG:HH11	2:I:24:THR:HG23	1.77	0.47
2:I:589:ARG:HB3	2:I:590:PRO:CD	2.44	0.47
2:I:706:LYS:HE2	2:I:731:GLN:OE1	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:955:GLU:HG2	2:I:987:TYR:HE2	1.79	0.47
2:I:1590:ARG:NH2	2:I:1594:GLU:OE2	2.48	0.47
2:I:1593:ILE:HD13	2:I:1626:ILE:HD13	1.97	0.47
1:A:1251:MET:O	1:A:1252:GLY:O	2.33	0.47
1:A:1430:ARG:O	1:A:1430:ARG:HG2	2.15	0.47
1:A:1617:ILE:O	1:A:1620:GLN:HG2	2.15	0.47
1:B:513:GLU:OE2	1:B:873:ARG:NH1	2.45	0.47
1:B:1219:VAL:CA	1:B:1384:ILE:HD11	2.31	0.47
1:C:2:LYS:HE2	1:C:4:GLU:CD	2.35	0.47
1:C:187:LEU:HD22	1:C:201:PRO:HB2	1.96	0.47
1:C:338:LEU:O	1:C:342:GLN:HG3	2.15	0.47
1:C:1577:GLN:NE2	1:C:1591:TRP:HB3	2.30	0.47
2:G:249:TYR:CD2	2:G:283:ILE:HD11	2.50	0.47
2:G:309:ARG:HD3	2:G:309:ARG:HA	1.65	0.47
2:G:732:TRP:CE2	2:G:750:MET:HE3	2.50	0.47
2:H:7:ARG:NH2	2:H:24:THR:O	2.48	0.47
2:H:306:ILE:HA	2:H:439:ILE:HD13	1.96	0.47
2:H:741:HIS:HE1	2:H:845:THR:HG21	1.65	0.47
2:H:751:LEU:HA	2:H:794:MET:HE3	1.97	0.47
2:H:1135:GLU:OE2	2:H:1175:LYS:HE3	2.15	0.47
2:H:1258:ARG:O	2:H:1262:ILE:HG13	2.15	0.47
2:H:1738:PHE:CE1	2:H:1837:THR:HG23	2.50	0.47
2:I:42:PRO:HG2	2:I:52:ASP:CG	2.35	0.47
2:I:121:GLU:HA	2:I:124:LYS:HD2	1.96	0.47
2:I:732:TRP:CD1	2:I:750:MET:HE3	2.49	0.47
2:I:844:VAL:HG22	2:I:858:ALA:HB2	1.97	0.47
2:I:1180:MET:HB2	2:I:1197:LEU:HD21	1.97	0.47
1:A:2:LYS:HD2	2:G:2050:GLN:CB	2.30	0.47
1:A:852:ARG:HB3	1:A:858:TRP:HZ2	1.80	0.47
1:A:1010:GLU:HA	1:A:1664:ALA:HA	1.97	0.47
1:A:1114:TYR:CE1	1:A:1337:GLU:HG3	2.50	0.47
1:B:979:GLN:HB3	2:H:968:GLN:NE2	2.29	0.47
1:C:1533:ILE:HD11	1:C:1564:LEU:HD13	1.97	0.47
2:G:7:ARG:NH2	2:G:24:THR:O	2.48	0.47
2:G:214:ASN:ND2	2:G:217:GLU:HB2	2.30	0.47
2:G:432:LEU:HB3	2:G:484:ILE:HG23	1.96	0.47
2:G:772:GLY:O	2:G:804:ARG:HD3	2.15	0.47
2:G:860:ARG:HB2	2:G:1049:GLN:HG3	1.97	0.47
2:G:1327:ILE:HD12	2:G:1327:ILE:HA	1.79	0.47
2:G:1886:VAL:HG22	2:G:1906:ALA:HB1	1.97	0.47
2:H:11:LEU:HD11	2:H:64:PHE:CD2	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:109:LEU:HD11	2:H:116:LEU:CD2	2.43	0.47
2:H:481:ASP:OD2	2:H:485:ARG:NH1	2.48	0.47
2:H:720:ALA:HA	2:H:728:ILE:CD1	2.45	0.47
2:H:1491:VAL:HB	2:H:1501:ILE:CD1	2.45	0.47
2:I:584:SER:CB	2:I:591:PRO:HG3	2.41	0.47
2:I:586:LEU:HD12	2:I:764:MET:SD	2.54	0.47
1:A:170:LYS:HD3	1:A:175:LEU:HD23	1.97	0.46
1:A:636:PRO:HB2	1:A:638:LEU:O	2.15	0.46
1:B:1133:PRO:HG3	1:B:1166:LYS:HG3	1.97	0.46
1:B:1239:HIS:CD2	1:B:1241:SER:H	2.33	0.46
1:C:59:ARG:HH11	2:I:1896:GLN:HE22	1.62	0.46
1:C:1189:ILE:HG23	1:C:1190:PRO:HD2	1.97	0.46
2:G:1148:ASN:HD22	2:G:1151:HIS:H	1.63	0.46
2:G:1273:GLU:HB3	2:G:1274:PRO:CD	2.45	0.46
2:H:440:ASN:ND2	2:H:477:GLU:HG2	2.30	0.46
2:H:573:LYS:HE3	2:H:1101:GLU:OE1	2.15	0.46
2:H:1266:TYR:HB2	2:H:1347:LEU:HD23	1.97	0.46
2:I:350:GLN:HA	2:I:353:VAL:HG13	1.97	0.46
1:A:11:HIS:HE1	2:G:1996:ILE:O	1.98	0.46
1:A:1639:VAL:CG1	1:A:1640:SER:N	2.78	0.46
1:B:340:ARG:HH12	1:B:344:GLN:HE21	1.64	0.46
1:B:702:LYS:HE2	1:B:729:GLY:O	2.15	0.46
1:C:11:HIS:C	1:C:11:HIS:CD2	2.89	0.46
1:C:293:LYS:O	1:C:297:ILE:HG13	2.15	0.46
1:C:1183:ARG:NH1	1:C:1344:GLY:HA2	2.30	0.46
2:G:247:ALA:O	2:G:251:VAL:HG13	2.15	0.46
2:G:894:ARG:NH1	2:G:898:ASP:OD2	2.42	0.46
2:G:1199:GLU:OE2	2:G:1567:ARG:NH1	2.47	0.46
2:H:42:PRO:HG2	2:H:52:ASP:CG	2.36	0.46
2:H:586:LEU:HD12	2:H:764:MET:SD	2.55	0.46
2:H:589:ARG:HB3	2:H:590:PRO:CD	2.43	0.46
2:H:702:TYR:HB3	2:H:727:PRO:HB2	1.97	0.46
2:H:1945:ASP:O	2:H:1949:LYS:HG3	2.15	0.46
2:I:443:LEU:HD22	2:I:448:VAL:CG1	2.45	0.46
2:I:553:ASN:O	2:I:556:LYS:HE3	2.15	0.46
2:I:736:ARG:H	2:I:736:ARG:HG3	1.57	0.46
2:I:817:ALA:HA	2:I:1048:VAL:HG11	1.97	0.46
2:I:873:PHE:CE1	2:I:1026:GLU:HB2	2.49	0.46
2:I:1080:GLY:O	2:I:1084:LYS:HG3	2.15	0.46
2:I:1100:VAL:HG21	2:I:1147:ILE:CD1	2.46	0.46
2:I:1148:ASN:C	2:I:1148:ASN:HD22	2.19	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1609:THR:O	2:I:1653:GLY:HA3	2.15	0.46
2:I:1873:TYR:CE1	2:I:1877:ARG:NH2	2.81	0.46
1:A:328:LEU:N	1:A:330:GLU:H	2.12	0.46
1:A:539:SER:O	1:A:540:GLN:C	2.52	0.46
1:A:709:ARG:O	1:A:714:VAL:HG21	2.16	0.46
1:A:1270:VAL:HG11	1:A:1274:ILE:HD13	1.97	0.46
1:B:19:ALA:O	1:B:22:PHE:HB2	2.15	0.46
1:B:1375:GLY:HA2	1:B:1546:THR:HG22	1.97	0.46
1:B:1618:LEU:HD23	1:B:1621:PHE:CE2	2.50	0.46
1:C:59:ARG:HH11	2:I:1896:GLN:NE2	2.14	0.46
1:C:67:SER:CB	2:H:359:HIS:HE1	2.29	0.46
1:C:893:VAL:HG11	1:C:930:LEU:CD2	2.40	0.46
2:G:233:SER:HA	2:G:424:ALA:CB	2.46	0.46
2:G:785:TRP:CG	2:G:786:SER:N	2.83	0.46
2:G:873:PHE:CD1	2:G:1026:GLU:HB2	2.50	0.46
2:G:955:GLU:HG2	2:G:987:TYR:HE2	1.80	0.46
2:G:1015:VAL:HG11	2:G:1017:PHE:CE1	2.50	0.46
2:G:1173:VAL:O	2:G:1567:ARG:NH2	2.48	0.46
2:G:1314:ARG:NH2	2:I:315:PRO:O	2.48	0.46
2:G:1949:LYS:O	2:G:1953:VAL:HG23	2.15	0.46
2:H:606:PHE:HZ	2:H:805:VAL:CG1	2.28	0.46
2:H:881:VAL:N	2:H:882:PRO:CD	2.79	0.46
2:H:926:LEU:HB3	2:H:947:THR:HG22	1.97	0.46
2:H:1593:ILE:HD13	2:H:1626:ILE:HD13	1.97	0.46
2:H:1666:PHE:CE1	2:H:1814:ALA:HA	2.50	0.46
2:I:606:PHE:HZ	2:I:805:VAL:CG1	2.28	0.46
2:I:751:LEU:HD11	2:I:789:PHE:CD1	2.51	0.46
2:I:1021:LEU:HA	2:I:1021:LEU:HD22	1.61	0.46
2:I:1842:VAL:HG21	2:I:1975:PRO:HD3	1.97	0.46
2:I:1873:TYR:CE1	2:I:1877:ARG:NE	2.77	0.46
1:A:37:LYS:HB2	1:A:65:TYR:CE1	2.48	0.46
1:A:479:ASN:O	1:A:483:VAL:HG23	2.15	0.46
1:A:1308:SER:HB3	1:A:1589:GLY:CA	2.45	0.46
1:B:733:ILE:CD1	1:B:761:LEU:HD11	2.46	0.46
1:B:1019:ILE:HG21	1:B:1316:VAL:HG22	1.98	0.46
1:C:1238:VAL:CG1	1:C:1242:GLU:HB2	2.45	0.46
1:C:1300:THR:HA	1:C:1301:PRO:HD3	1.67	0.46
2:G:101:ILE:H	2:G:101:ILE:HG13	1.31	0.46
2:G:629:GLY:O	2:G:632:ALA:HB3	2.15	0.46
2:G:745:ASP:HA	2:G:832:TRP:CH2	2.48	0.46
2:G:1004:LEU:HD21	2:G:1019:PRO:HB2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1314:ARG:HD3	2:G:1314:ARG:HA	1.63	0.46
2:G:1435:ILE:O	2:G:1435:ILE:HG22	2.15	0.46
2:G:1666:PHE:CE1	2:G:1814:ALA:HA	2.50	0.46
2:G:1980:TYR:HD1	2:G:1981:LEU:HD12	1.80	0.46
2:H:553:ASN:O	2:H:556:LYS:HE3	2.16	0.46
2:H:1169:PRO:O	2:H:1173:VAL:HG23	2.15	0.46
2:H:1359:MET:CE	2:H:1404:MET:HB3	2.44	0.46
2:I:99:ASN:HA	2:I:550:VAL:HG21	1.98	0.46
2:I:213:LEU:O	2:I:213:LEU:HG	2.16	0.46
2:I:391:LEU:CD2	2:I:394:ARG:NH2	2.78	0.46
2:I:732:TRP:CG	2:I:750:MET:HE3	2.50	0.46
2:I:1752:PHE:HZ	2:I:1836:MET:HE3	1.80	0.46
1:B:2:LYS:HE2	1:B:4:GLU:OE1	2.15	0.46
1:B:29:ILE:HG13	2:H:1891:TYR:O	2.15	0.46
1:B:1595:GLY:O	1:B:1599:ILE:HG13	2.15	0.46
1:C:421:ILE:HG12	1:C:469:VAL:HG21	1.98	0.46
1:C:1021:VAL:HG11	1:C:1597:LEU:CD1	2.44	0.46
2:G:159:ILE:CG2	2:G:501:ILE:HG22	2.46	0.46
2:G:739:GLY:HA2	2:G:1054:LEU:HG	1.97	0.46
2:G:826:GLY:HA3	2:G:1061:GLN:CB	2.45	0.46
2:G:1567:ARG:HH11	2:G:1567:ARG:HG2	1.73	0.46
2:H:1328:VAL:HG23	2:H:1557:SER:HA	1.98	0.46
2:I:123:ILE:HD11	2:I:533:LEU:CD2	2.46	0.46
1:A:293:LYS:O	1:A:297:ILE:HG13	2.16	0.46
1:A:1056:ILE:HG13	1:A:1057:MET:N	2.30	0.46
1:B:1251:MET:O	1:B:1252:GLY:O	2.33	0.46
1:C:143:GLU:H	1:C:260:ARG:HG2	1.81	0.46
1:C:243:ILE:O	1:C:247:ARG:HG3	2.16	0.46
2:G:441:LYS:O	2:G:444:VAL:HG12	2.15	0.46
2:G:807:ILE:HA	2:G:818:LYS:HG2	1.97	0.46
2:G:1738:PHE:CE1	2:G:1837:THR:HG23	2.50	0.46
2:H:350:GLN:HA	2:H:353:VAL:HG13	1.97	0.46
2:H:1624:THR:HB	2:H:1642:THR:CG2	2.45	0.46
2:H:1850:SER:HB2	2:H:1973:SER:HB2	1.97	0.46
2:H:1908:ASP:HA	2:H:1911:THR:HG22	1.97	0.46
2:H:2037:PRO:O	2:H:2041:ILE:HG13	2.15	0.46
2:I:573:LYS:C	2:I:575:GLY:H	2.18	0.46
2:I:1148:ASN:HD22	2:I:1151:HIS:H	1.63	0.46
2:I:1561:ASN:OD1	2:I:1563:ILE:HB	2.16	0.46
2:I:1651:LEU:HD23	2:I:1651:LEU:HA	1.73	0.46
2:I:2037:PRO:O	2:I:2041:ILE:HG13	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:420:ILE:HG22	1:A:469:VAL:HG22	1.96	0.46
1:A:1022:THR:HG22	1:A:1226:SER:CB	2.43	0.46
1:A:1234:MET:HE3	1:A:1326:ILE:HG21	1.97	0.46
1:B:11:HIS:CD2	1:B:11:HIS:C	2.89	0.46
1:B:776:GLU:OE1	1:B:795:MET:HE1	2.16	0.46
1:B:792:HIS:CE1	1:B:796:LEU:HD23	2.51	0.46
1:C:182:VAL:O	1:C:186:ILE:HG13	2.15	0.46
1:C:1040:GLU:HB2	1:C:1580:LEU:HD12	1.98	0.46
2:G:218:TRP:HB3	2:G:225:THR:OG1	2.16	0.46
2:H:72:VAL:HG12	2:H:73:GLU:N	2.31	0.46
2:H:599:PRO:HD2	3:H:3051:FMN:H6	1.98	0.46
2:H:1764:PHE:HB2	2:H:1770:LEU:HD21	1.97	0.46
2:I:106:ALA:HB2	2:I:545:GLN:HG2	1.98	0.46
2:I:860:ARG:H	2:I:1049:GLN:HG3	1.80	0.46
2:I:1272:ASP:O	2:I:1273:GLU:HG3	2.15	0.46
1:A:225:SER:OG	1:A:266:LEU:HD21	2.16	0.46
1:A:338:LEU:O	1:A:342:GLN:HG3	2.16	0.46
1:A:825:PRO:HB2	1:A:843:LYS:HZ2	1.79	0.46
1:A:1196:LYS:HE3	1:A:1202:ASP:CG	2.36	0.46
1:B:143:GLU:H	1:B:260:ARG:HG2	1.81	0.46
1:C:41:THR:HG21	2:I:1663:THR:HB	1.97	0.46
1:C:1308:SER:HB3	1:C:1589:GLY:CA	2.44	0.46
1:C:1459:ILE:O	1:C:1463:VAL:HG23	2.16	0.46
1:C:1673:TYR:CZ	1:C:1677:VAL:HG21	2.51	0.46
2:G:751:LEU:HA	2:G:794:MET:HE3	1.97	0.46
2:G:2037:PRO:O	2:G:2041:ILE:HG13	2.16	0.46
2:I:232:LEU:HD21	2:I:423:VAL:HA	1.98	0.46
2:I:807:ILE:HD12	2:I:1063:THR:HG23	1.98	0.46
2:I:1102:TYR:HB3	2:I:1244:PRO:HA	1.98	0.46
2:I:1148:ASN:ND2	2:I:1151:HIS:H	2.13	0.46
2:I:1666:PHE:CD1	2:I:1814:ALA:HA	2.51	0.46
2:I:1782:THR:CG2	2:I:1827:LEU:HD21	2.45	0.46
1:A:702:LYS:HE2	1:A:729:GLY:O	2.15	0.46
1:B:601:VAL:O	1:B:602:GLU:C	2.54	0.46
1:B:1639:VAL:HG12	1:B:1640:SER:N	2.30	0.46
1:C:1367:ARG:HH12	1:C:1372:THR:CB	2.20	0.46
1:C:1682:LYS:HB3	2:I:994:PHE:CE2	2.50	0.46
2:G:9:LEU:HB2	2:G:27:PHE:HE1	1.81	0.46
2:G:490:TRP:HA	2:G:493:THR:HG22	1.98	0.46
2:G:675:PRO:HD3	2:G:1164:MET:HE2	1.97	0.46
2:G:1159:ILE:CG1	2:G:1169:PRO:CD	2.93	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1873:TYR:HE1	2:G:1877:ARG:HH21	1.60	0.46
2:G:1889:VAL:HG13	2:G:1977:HIS:HB3	1.97	0.46
2:H:324:LEU:HD12	2:H:324:LEU:O	2.16	0.46
2:H:821:ILE:HA	2:H:857:ILE:HD11	1.97	0.46
2:H:1552:PRO:O	2:H:1556:VAL:HG23	2.15	0.46
2:H:1567:ARG:HH11	2:H:1567:ARG:HG2	1.72	0.46
2:I:1417:THR:C	2:I:1419:PHE:H	2.18	0.46
2:I:1624:THR:HB	2:I:1642:THR:CG2	2.43	0.46
2:I:1932:SER:O	2:I:1936:VAL:HG22	2.16	0.46
1:A:1353:LEU:HD23	1:A:1353:LEU:HA	1.62	0.46
1:B:13:LEU:HB2	2:H:2026:PHE:CE1	2.51	0.46
1:B:719:GLN:HG3	1:B:720:SER:N	2.31	0.46
1:B:1639:VAL:CG1	1:B:1640:SER:N	2.79	0.46
1:C:776:GLU:OE1	1:C:795:MET:HE1	2.15	0.46
1:C:1196:LYS:HE3	1:C:1202:ASP:CG	2.37	0.46
2:G:131:ILE:HD12	2:G:182:VAL:CB	2.42	0.46
2:G:551:THR:HG22	2:G:552:SER:N	2.31	0.46
2:G:582:LYS:HE2	2:G:1108:PRO:HB3	1.97	0.46
2:G:702:TYR:HB3	2:G:727:PRO:HB2	1.97	0.46
2:H:218:TRP:HB3	2:H:225:THR:OG1	2.16	0.46
2:H:345:THR:HG22	2:H:347:GLU:N	2.25	0.46
2:H:650:ASN:HD21	3:H:3051:FMN:HN3	1.64	0.46
2:H:730:LEU:C	2:H:730:LEU:HD12	2.36	0.46
2:H:845:THR:HG22	2:H:855:HIS:CD2	2.51	0.46
2:H:1015:VAL:HG11	2:H:1017:PHE:CE1	2.50	0.46
2:I:231:LEU:HA	2:I:236:ILE:HD12	1.98	0.46
2:I:618:GLU:HG2	2:I:678:PHE:CZ	2.51	0.46
2:I:785:TRP:CG	2:I:786:SER:N	2.84	0.46
2:I:1031:LYS:O	2:I:1032:ASP:C	2.54	0.46
2:I:1776:PHE:C	2:I:1779:PRO:HD2	2.37	0.46
2:I:1886:VAL:HG22	2:I:1906:ALA:HB1	1.98	0.46
1:A:792:HIS:CE1	1:A:796:LEU:HD23	2.52	0.45
1:A:893:VAL:HG11	1:A:930:LEU:CD2	2.37	0.45
1:B:479:ASN:O	1:B:483:VAL:HG23	2.16	0.45
1:C:225:SER:OG	1:C:266:LEU:HD21	2.16	0.45
1:C:406:TRP:CE3	1:C:1619:GLU:HG3	2.51	0.45
2:G:826:GLY:HA2	2:G:1060:ALA:HB3	1.97	0.45
2:G:845:THR:HG22	2:G:855:HIS:CD2	2.50	0.45
2:G:970:TYR:O	2:G:973:LEU:HB2	2.16	0.45
2:H:319:LEU:HD22	2:H:319:LEU:HA	1.68	0.45
2:H:817:ALA:HA	2:H:1048:VAL:HG11	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1031:LYS:O	2:H:1032:ASP:C	2.54	0.45
2:H:1079:ASP:O	2:H:1082:ILE:HG22	2.16	0.45
2:H:1327:ILE:HD12	2:H:1327:ILE:HA	1.76	0.45
2:H:1428:GLU:HG2	2:H:1470:THR:HG22	1.97	0.45
2:I:22:VAL:HG11	2:I:27:PHE:HA	1.97	0.45
2:I:23:PRO:HG2	2:I:86:LEU:HD11	1.98	0.45
2:I:745:ASP:HA	2:I:832:TRP:CH2	2.49	0.45
2:I:1236:LEU:HA	2:I:1237:PRO:HD3	1.74	0.45
2:I:1239:LEU:O	2:I:1254:VAL:HG23	2.15	0.45
1:A:168:MET:HA	1:A:206:LEU:HB2	1.98	0.45
1:A:764:ASP:OD2	1:A:818:ARG:HD3	2.17	0.45
1:A:988:ILE:HD13	1:A:1048:GLU:CB	2.47	0.45
1:B:9:LEU:CD2	2:H:2041:ILE:HD13	2.47	0.45
1:B:183:GLN:O	1:B:187:LEU:HG	2.17	0.45
1:B:196:THR:O	1:B:213:PHE:HE2	2.00	0.45
1:B:460:GLU:H	1:B:460:GLU:HG3	1.34	0.45
2:G:209:PHE:CE2	2:G:213:LEU:HD22	2.51	0.45
2:G:712:ALA:O	2:G:715:GLN:HB3	2.16	0.45
2:G:817:ALA:HA	2:G:1048:VAL:HG11	1.98	0.45
2:G:881:VAL:N	2:G:882:PRO:CD	2.78	0.45
2:G:1222:GLU:HG3	2:G:1235:SER:OG	2.17	0.45
2:G:1609:THR:O	2:G:1653:GLY:HA3	2.16	0.45
2:H:913:ASP:H	2:H:916:THR:CG2	2.29	0.45
2:H:1330:GLY:HA2	2:H:1374:THR:HG21	1.98	0.45
2:H:1388:LYS:HE3	2:H:1418:ASP:OD2	2.16	0.45
2:H:1417:THR:O	2:H:1419:PHE:N	2.45	0.45
2:H:1858:ASN:HA	2:H:1896:GLN:O	2.16	0.45
2:I:490:TRP:CZ2	2:I:512:LEU:HD21	2.51	0.45
2:I:739:GLY:HA2	2:I:1054:LEU:HG	1.97	0.45
2:I:1323:MET:CE	2:I:1605:VAL:HG22	2.45	0.45
2:I:1589:VAL:HG21	2:I:1651:LEU:HD12	1.99	0.45
2:I:2026:PHE:HB3	2:I:2042:ILE:HD13	1.98	0.45
1:A:49:PRO:O	1:A:82:SER:HB2	2.16	0.45
1:A:335:HIS:O	1:A:335:HIS:CD2	2.69	0.45
1:A:460:GLU:H	1:A:460:GLU:HG3	1.34	0.45
1:C:290:MET:HB3	1:C:290:MET:HE2	1.92	0.45
2:G:624:TYR:HB2	2:G:630:MET:HE3	1.98	0.45
2:G:1472:VAL:CG2	2:G:1483:VAL:HG22	2.46	0.45
2:G:1491:VAL:HB	2:G:1501:ILE:HD12	1.98	0.45
2:H:490:TRP:CZ2	2:H:512:LEU:HD21	2.51	0.45
2:H:597:MET:HA	3:H:3051:FMN:C5A	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:611:THR:HA	2:H:615:TYR:O	2.16	0.45
2:H:1027:ILE:O	2:H:1031:LYS:HB2	2.16	0.45
2:H:1223:MET:HE3	2:H:1238:LEU:CD1	2.46	0.45
2:H:1473:THR:O	2:H:1481:SER:HB3	2.15	0.45
2:H:1579:ILE:HG22	2:H:1580:THR:O	2.16	0.45
2:H:1590:ARG:HG3	2:H:1608:TYR:CD2	2.51	0.45
2:I:355:LYS:HB3	2:I:355:LYS:HE2	1.70	0.45
2:I:463:PHE:CE1	2:I:486:LEU:HD22	2.51	0.45
2:I:1156:CYS:SG	2:I:1250:PRO:HD2	2.56	0.45
2:I:1846:GLU:C	2:I:1848:GLY:H	2.20	0.45
1:A:776:GLU:OE1	1:A:795:MET:HE1	2.15	0.45
1:B:183:GLN:NE2	1:B:202:GLU:HG2	2.29	0.45
1:B:237:MET:HG3	1:B:241:PHE:HB3	1.97	0.45
1:B:825:PRO:HB2	1:B:843:LYS:HZ2	1.81	0.45
1:B:1061:SER:HB2	1:B:1078:SER:HB3	1.98	0.45
1:C:183:GLN:O	1:C:187:LEU:HG	2.16	0.45
1:C:1208:VAL:HG11	1:C:1212:THR:HB	1.98	0.45
1:C:1375:GLY:HA2	1:C:1546:THR:HG22	1.98	0.45
1:C:1670:TYR:O	1:C:1674:VAL:HG23	2.17	0.45
2:G:315:PRO:O	2:H:1314:ARG:NH2	2.49	0.45
2:G:463:PHE:C	2:G:463:PHE:CD2	2.90	0.45
2:G:675:PRO:HG3	2:G:1163:LYS:O	2.15	0.45
2:G:1080:GLY:O	2:G:1084:LYS:HG3	2.16	0.45
2:G:1102:TYR:HB3	2:G:1244:PRO:HA	1.98	0.45
2:G:1293:THR:HG22	2:G:1296:GLU:CD	2.35	0.45
2:G:1854:MET:CG	2:G:1901:ALA:HB2	2.46	0.45
2:G:1953:VAL:O	2:G:1953:VAL:HG12	2.16	0.45
2:H:1472:VAL:CG2	2:H:1483:VAL:HG22	2.43	0.45
2:H:1651:LEU:O	2:H:1652:THR:HG23	2.16	0.45
2:H:1697:HIS:CE1	2:H:1829:GLU:CG	3.00	0.45
2:H:1735:ALA:O	2:H:1737:ILE:HG13	2.16	0.45
2:I:533:LEU:HD13	2:I:545:GLN:HG3	1.97	0.45
2:I:938:TRP:CD1	2:I:944:ARG:HG3	2.52	0.45
2:I:1775:GLN:HG2	2:I:1836:MET:SD	2.57	0.45
1:A:2:LYS:HE2	1:A:4:GLU:CD	2.36	0.45
1:A:1373:ARG:NE	1:A:1550:ASP:HB2	2.32	0.45
1:B:1021:VAL:HG22	1:B:1387:ILE:HG22	1.98	0.45
1:C:170:LYS:HD3	1:C:175:LEU:HD23	1.97	0.45
1:C:1233:GLU:CD	1:C:1680:ARG:HH21	2.19	0.45
1:C:1234:MET:HG2	1:C:1326:ILE:HD12	1.98	0.45
2:G:161:GLY:HA3	2:G:506:PRO:HD2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:460:TYR:HA	2:G:466:SER:O	2.17	0.45
2:G:553:ASN:O	2:G:556:LYS:HE3	2.16	0.45
2:H:161:GLY:H	2:H:505:GLY:CA	2.29	0.45
2:H:843:ILE:HD11	2:H:1055:HIS:HB3	1.98	0.45
2:I:653:TYR:HD1	2:I:659:LEU:HD21	1.79	0.45
2:I:751:LEU:HA	2:I:794:MET:HE3	1.98	0.45
2:I:786:SER:HB2	2:I:794:MET:HE2	1.99	0.45
2:I:1002:HIS:NE2	2:I:1006:MET:CE	2.80	0.45
2:I:1949:LYS:O	2:I:1953:VAL:HG23	2.17	0.45
1:A:35:PHE:HA	1:A:39:PHE:HD2	1.81	0.45
1:A:143:GLU:H	1:A:260:ARG:HG2	1.81	0.45
1:B:378:LEU:HD12	1:B:378:LEU:HA	1.75	0.45
1:B:427:ASN:ND2	1:B:610:THR:H	2.12	0.45
1:B:612:GLU:O	1:B:615:SER:HB3	2.17	0.45
1:B:1617:ILE:O	1:B:1620:GLN:HG2	2.17	0.45
1:C:709:ARG:O	1:C:714:VAL:HG21	2.16	0.45
1:C:1022:THR:HG22	1:C:1226:SER:CB	2.47	0.45
1:C:1056:ILE:CD1	1:C:1193:TRP:CD1	2.99	0.45
1:C:1362:PRO:HA	1:C:1365:MET:HG3	1.97	0.45
1:C:1533:ILE:HG13	1:C:1564:LEU:HB3	1.98	0.45
1:C:1720:ALA:O	1:C:1721:ARG:HG2	2.17	0.45
2:H:427:PHE:HB3	2:H:428:HIS:ND1	2.32	0.45
2:H:1776:PHE:C	2:H:1779:PRO:HD2	2.37	0.45
2:I:440:ASN:ND2	2:I:477:GLU:HG2	2.31	0.45
2:I:601:THR:HB	2:I:620:ALA:HB2	1.98	0.45
2:I:677:GLN:O	2:I:678:PHE:HB3	2.17	0.45
2:I:720:ALA:HA	2:I:728:ILE:CD1	2.47	0.45
2:I:860:ARG:HB2	2:I:1049:GLN:HG3	1.97	0.45
2:I:1162:ASP:O	2:I:1163:LYS:HB2	2.16	0.45
2:I:1491:VAL:HB	2:I:1501:ILE:CD1	2.47	0.45
1:A:242:THR:HG22	1:A:243:ILE:H	1.81	0.45
1:A:256:LEU:HA	1:A:257:PRO:HD3	1.73	0.45
1:A:331:ILE:HG23	1:A:332:THR:N	2.31	0.45
1:A:1644:PHE:CD1	1:A:1644:PHE:N	2.85	0.45
1:B:32:GLN:NE2	1:B:57:ALA:CA	2.80	0.45
1:B:1020:VAL:CG1	1:B:1400:ILE:HG23	2.45	0.45
1:C:197:THR:HG22	1:C:198:PRO:O	2.16	0.45
1:C:1431:GLU:OE2	1:C:1433:HIS:HE1	2.00	0.45
2:G:350:GLN:HA	2:G:353:VAL:HG13	1.97	0.45
2:G:357:ASN:OD1	2:G:365:GLN:HB3	2.16	0.45
2:G:597:MET:HA	3:G:3051:FMN:C5A	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:835:THR:CG2	2:G:845:THR:HG23	2.46	0.45
2:G:960:LYS:HA	2:G:960:LYS:CE	2.44	0.45
2:G:1281:PRO:O	2:G:1378:ILE:HG23	2.17	0.45
2:G:1632:ILE:HG23	2:G:1632:ILE:O	2.16	0.45
2:G:1858:ASN:ND2	2:G:1861:ARG:HG3	2.32	0.45
2:H:60:LEU:O	2:H:63:LYS:HB2	2.16	0.45
2:H:618:GLU:HG2	2:H:678:PHE:CZ	2.52	0.45
2:H:1311:PHE:HD1	2:H:1320:LEU:O	1.99	0.45
2:H:1325:PHE:O	2:H:1328:VAL:HG12	2.16	0.45
2:H:1680:LEU:HD13	2:H:1687:ALA:CB	2.45	0.45
2:H:2035:SER:HB3	2:H:2038:ILE:CG1	2.44	0.45
2:I:624:TYR:HB2	2:I:630:MET:HE3	1.99	0.45
2:I:659:LEU:HD12	2:I:659:LEU:HA	1.84	0.45
1:A:625:THR:HG23	1:A:627:SER:H	1.82	0.45
1:A:1133:PRO:HG3	1:A:1166:LYS:HG3	1.99	0.45
1:A:1300:THR:HA	1:A:1301:PRO:HD3	1.70	0.45
1:B:235:SER:HA	1:B:276:ARG:NH2	2.32	0.45
1:B:930:LEU:HD23	1:B:930:LEU:HA	1.67	0.45
1:B:1234:MET:HG2	1:B:1326:ILE:CD1	2.46	0.45
1:C:774:ILE:HA	1:C:775:PRO:HD3	1.74	0.45
1:C:1432:HIS:CE1	1:C:1434:SER:OG	2.69	0.45
1:C:1573:ILE:HG23	1:C:1627:PRO:HG3	1.98	0.45
2:G:598:THR:CB	2:G:599:PRO:HD3	2.46	0.45
2:G:754:TYR:CG	2:G:794:MET:HG2	2.51	0.45
2:G:844:VAL:HG22	2:G:858:ALA:HB2	1.98	0.45
2:G:1662:THR:HB	2:G:1799:PRO:HG2	1.99	0.45
2:H:443:LEU:HD22	2:H:448:VAL:CG1	2.46	0.45
2:H:732:TRP:CD1	2:H:750:MET:HE3	2.51	0.45
2:H:1175:LYS:HA	2:H:1176:PRO:HD3	1.84	0.45
2:I:441:LYS:O	2:I:444:VAL:HG12	2.17	0.45
2:I:1428:GLU:HG2	2:I:1470:THR:HG22	1.99	0.45
1:A:413:LEU:HD13	1:A:451:MET:HG2	1.97	0.45
1:B:420:ILE:HG22	1:B:469:VAL:HG22	1.99	0.45
1:B:1004:ILE:HG22	1:B:1660:TYR:CE2	2.52	0.45
1:B:1459:ILE:O	1:B:1463:VAL:HG23	2.17	0.45
1:B:1592:MET:HE2	1:B:1641:ILE:HG23	1.99	0.45
1:C:253:ARG:O	1:C:254:TRP:CD1	2.70	0.45
1:C:916:LEU:HD22	1:C:922:VAL:HG22	1.99	0.45
1:C:1238:VAL:CG1	1:C:1239:HIS:N	2.80	0.45
2:G:573:LYS:C	2:G:575:GLY:H	2.21	0.45
2:G:595:PRO:HD3	2:G:800:LEU:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:665:LEU:O	2:G:665:LEU:HD22	2.17	0.45
2:G:871:THR:HG21	2:G:887:LYS:HZ2	1.82	0.45
2:G:932:ILE:HD12	2:G:939:PHE:HD1	1.82	0.45
2:G:1002:HIS:NE2	2:G:1006:MET:CE	2.79	0.45
2:G:1015:VAL:HG13	2:G:1017:PHE:CE2	2.52	0.45
2:G:1945:ASP:O	2:G:1949:LYS:HG3	2.17	0.45
2:H:99:ASN:HA	2:H:550:VAL:HG21	1.99	0.45
2:H:249:TYR:CD2	2:H:283:ILE:HD11	2.52	0.45
2:H:785:TRP:CG	2:H:786:SER:N	2.84	0.45
2:I:159:ILE:CG2	2:I:501:ILE:HG22	2.47	0.45
2:I:901:LYS:NZ	2:I:1031:LYS:O	2.50	0.45
2:I:1228:THR:HG21	2:I:1234:VAL:HG23	1.98	0.45
2:I:1422:THR:HG23	2:I:1474:PHE:HB2	1.94	0.45
2:I:1854:MET:CG	2:I:1901:ALA:HB2	2.47	0.45
1:A:386:PHE:O	1:A:390:VAL:HB	2.16	0.45
1:A:798:ASN:HA	1:A:801:ARG:HB2	1.98	0.45
1:A:1020:VAL:CG1	1:A:1400:ILE:HG23	2.47	0.45
1:A:1431:GLU:HB3	1:A:1520:ALA:HB2	1.99	0.45
1:B:1239:HIS:HE1	1:B:1714:VAL:O	2.00	0.45
1:B:1533:ILE:HD11	1:B:1564:LEU:HD13	1.98	0.45
1:C:24:SER:O	2:I:1977:HIS:HD2	2.00	0.45
1:C:784:ILE:HG23	1:C:788:SER:HB2	1.98	0.45
2:G:245:GLN:HG2	2:G:505:GLY:HA2	1.99	0.45
2:G:1311:PHE:HD1	2:G:1320:LEU:O	1.99	0.45
2:G:1417:THR:O	2:G:1419:PHE:N	2.46	0.45
2:H:24:THR:O	2:H:26:SER:N	2.49	0.45
2:H:209:PHE:CE2	2:H:213:LEU:HD22	2.52	0.45
2:H:376:ASN:C	2:H:376:ASN:ND2	2.70	0.45
2:H:439:ILE:HD12	2:H:484:ILE:HD11	1.99	0.45
2:H:562:LEU:HG	2:H:793:PRO:CB	2.47	0.45
2:H:938:TRP:CE2	2:H:944:ARG:HG3	2.52	0.45
2:H:1389:ILE:HG13	2:H:1411:PHE:CD1	2.52	0.45
2:H:1547:PRO:HD3	2:H:1584:PHE:CE2	2.52	0.45
2:H:2026:PHE:HB3	2:H:2042:ILE:HD13	1.98	0.45
2:I:9:LEU:HB2	2:I:27:PHE:HE1	1.82	0.45
2:I:184:VAL:HG12	2:I:188:ILE:HG12	1.99	0.45
2:I:784:GLU:O	2:I:787:THR:HB	2.17	0.45
1:A:1516:ASP:HA	1:A:1517:PRO:HD3	1.61	0.44
1:B:335:HIS:HE1	1:C:335:HIS:ND1	2.16	0.44
1:C:37:LYS:HB2	1:C:65:TYR:CE1	2.52	0.44
1:C:248:LYS:HB2	1:C:248:LYS:HE3	1.84	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:627:SER:HB2	1:C:657:SER:HB3	1.99	0.44
1:C:641:ARG:HD3	1:C:649:TRP:O	2.17	0.44
1:C:1181:PHE:CZ	1:C:1341:PHE:HA	2.52	0.44
1:C:1263:ASP:HB2	1:C:1270:VAL:HG21	1.98	0.44
1:C:1431:GLU:CG	1:C:1433:HIS:CE1	3.00	0.44
2:G:297:ARG:O	2:G:301:THR:HG22	2.16	0.44
2:G:615:TYR:CE2	2:G:1074:MET:HB3	2.52	0.44
2:G:900:GLN:NE2	2:G:1051:THR:HA	2.32	0.44
2:G:1071:LYS:HE3	2:G:1075:ASP:OD2	2.16	0.44
2:G:1219:ILE:HD11	2:G:1242:PHE:HB2	1.98	0.44
2:G:1579:ILE:HG22	2:G:1580:THR:O	2.16	0.44
2:H:1159:ILE:HG22	2:H:1160:THR:N	2.32	0.44
2:H:1768:LYS:HE2	2:H:1772:SER:HB3	1.98	0.44
2:H:1784:MET:HB2	2:H:1784:MET:HE2	1.79	0.44
2:H:1846:GLU:C	2:H:1848:GLY:H	2.19	0.44
2:I:40:ILE:O	2:I:42:PRO:HD3	2.17	0.44
2:I:305:PHE:CD1	2:I:442:ASP:HB3	2.52	0.44
2:I:780:TYR:HB2	2:I:799:PHE:CE2	2.53	0.44
2:I:1222:GLU:HG3	2:I:1235:SER:OG	2.16	0.44
1:A:413:LEU:O	1:A:413:LEU:HG	2.17	0.44
1:B:330:GLU:O	1:B:330:GLU:HG2	2.16	0.44
1:B:444:ASN:HB2	1:B:447:LEU:N	2.15	0.44
1:B:893:VAL:HG11	1:B:930:LEU:CD2	2.36	0.44
1:B:931:GLN:H	1:B:931:GLN:HG3	1.32	0.44
1:B:1029:PRO:HA	1:B:1188:GLN:O	2.17	0.44
1:B:1103:ILE:HD11	1:B:1582:GLY:N	2.31	0.44
1:B:1248:GLY:HA3	1:B:1301:PRO:HD2	1.99	0.44
2:G:240:LEU:HD12	2:G:240:LEU:HA	1.83	0.44
2:G:319:LEU:HD22	2:G:319:LEU:HA	1.62	0.44
2:G:419:ARG:HG3	2:G:420:PHE:N	2.33	0.44
2:G:1804:PHE:CD2	2:G:1818:LEU:HD22	2.53	0.44
2:H:109:LEU:HD22	2:H:114:THR:HG23	1.99	0.44
2:H:369:SER:C	2:H:370:LEU:HD23	2.38	0.44
2:H:663:ILE:HB	2:H:664:PRO:CD	2.44	0.44
2:I:161:GLY:H	2:I:505:GLY:CA	2.28	0.44
2:I:478:ARG:O	2:I:482:CYS:HB2	2.17	0.44
2:I:1175:LYS:HA	2:I:1176:PRO:HD3	1.84	0.44
1:A:26:VAL:HG13	2:G:2013:ASN:ND2	2.33	0.44
1:A:44:VAL:HG11	1:A:78:ILE:HG12	1.96	0.44
1:A:183:GLN:NE2	1:A:202:GLU:HG2	2.29	0.44
1:A:233:ILE:HD13	1:A:237:MET:HE3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:635:ILE:CG2	1:A:651:TYR:CG	3.00	0.44
1:A:1375:GLY:HA2	1:A:1546:THR:HG22	1.99	0.44
1:A:1420:ALA:HA	1:A:1421:PRO:HD3	1.75	0.44
1:B:267:VAL:O	1:B:290:MET:HE1	2.17	0.44
1:B:1040:GLU:OE2	1:B:1577:GLN:HB2	2.18	0.44
1:B:1181:PHE:CZ	1:B:1341:PHE:HA	2.53	0.44
1:B:1239:HIS:CD2	1:B:1241:SER:OG	2.59	0.44
1:B:1455:ARG:O	1:B:1459:ILE:HG13	2.17	0.44
1:C:625:THR:HG23	1:C:627:SER:H	1.82	0.44
2:G:156:LEU:HD23	2:G:500:HIS:HB2	2.00	0.44
2:G:589:ARG:HB3	2:G:590:PRO:CD	2.48	0.44
2:G:1908:ASP:HA	2:G:1911:THR:HG22	1.99	0.44
2:H:512:LEU:O	2:H:516:THR:HG23	2.17	0.44
2:H:653:TYR:HD1	2:H:659:LEU:HD21	1.80	0.44
2:H:670:ARG:HD2	2:H:676:ILE:O	2.18	0.44
2:H:676:ILE:O	2:H:676:ILE:HG12	2.17	0.44
2:H:1180:MET:HB2	2:H:1197:LEU:HD21	1.98	0.44
2:I:432:LEU:HB3	2:I:484:ILE:HG23	1.99	0.44
2:I:732:TRP:CD2	2:I:750:MET:HE3	2.52	0.44
2:I:748:THR:CB	2:I:749:PRO:HD3	2.44	0.44
2:I:892:ILE:HD11	2:I:903:TRP:CD2	2.50	0.44
2:I:1258:ARG:O	2:I:1262:ILE:HG13	2.17	0.44
2:I:1637:LEU:HD23	2:I:1637:LEU:HA	1.79	0.44
1:A:774:ILE:HA	1:A:775:PRO:HD3	1.76	0.44
1:A:790:PHE:CE2	1:A:794:ILE:HD11	2.53	0.44
1:A:1050:CYS:HB3	1:A:1089:VAL:HG12	1.98	0.44
1:B:232:LEU:HD13	1:B:272:GLU:CB	2.47	0.44
1:B:427:ASN:HB2	1:B:468:LEU:HD21	1.99	0.44
1:B:1208:VAL:HG11	1:B:1212:THR:HB	1.97	0.44
1:B:1300:THR:HA	1:B:1301:PRO:HD3	1.69	0.44
1:C:980:VAL:H	2:I:968:GLN:NE2	2.15	0.44
2:G:298:LYS:HG2	2:G:448:VAL:CG2	2.40	0.44
2:G:717:ILE:O	2:G:720:ALA:HB3	2.18	0.44
2:G:786:SER:HB2	2:G:794:MET:HE2	2.00	0.44
2:G:1172:LYS:HE3	2:G:1574:ASN:OD1	2.18	0.44
2:G:1294:ALA:HA	2:G:1368:VAL:CG2	2.47	0.44
2:G:1466:PHE:HE2	2:G:1489:ILE:HD13	1.81	0.44
2:G:1590:ARG:NH2	2:G:1594:GLU:OE2	2.50	0.44
2:H:582:LYS:HE2	2:H:761:PRO:O	2.16	0.44
2:H:772:GLY:O	2:H:804:ARG:HD3	2.17	0.44
2:H:1236:LEU:HA	2:H:1237:PRO:HD3	1.79	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:653:TYR:OH	2:I:690:VAL:HG11	2.17	0.44
2:I:670:ARG:HD2	2:I:676:ILE:O	2.16	0.44
2:I:826:GLY:HA3	2:I:1061:GLN:CB	2.46	0.44
2:I:943:TRP:CZ2	2:I:1016:PRO:HG3	2.52	0.44
2:I:1004:LEU:HD21	2:I:1019:PRO:HB2	1.99	0.44
1:A:627:SER:HB2	1:A:657:SER:CB	2.48	0.44
1:A:641:ARG:HD3	1:A:649:TRP:O	2.18	0.44
1:A:1022:THR:CG2	1:A:1226:SER:OG	2.66	0.44
1:A:1283:MET:O	1:A:1287:VAL:HG23	2.17	0.44
1:B:32:GLN:HE21	1:B:57:ALA:HB2	1.82	0.44
1:B:1249:SER:HB3	1:B:1280:ILE:HG12	1.99	0.44
1:B:1263:ASP:HB2	1:B:1270:VAL:HG21	2.00	0.44
1:B:1303:GLY:C	1:B:1307:THR:HG22	2.38	0.44
1:B:1431:GLU:OE2	1:B:1433:HIS:HE1	1.99	0.44
2:G:669:LEU:HA	2:G:669:LEU:HD12	1.63	0.44
2:G:1236:LEU:HA	2:G:1237:PRO:HD3	1.76	0.44
2:G:1325:PHE:O	2:G:1328:VAL:HG12	2.17	0.44
2:H:234:ILE:HG13	2:H:235:PRO:CD	2.47	0.44
2:H:612:ASN:HD21	2:H:641:ILE:HA	1.81	0.44
2:H:641:ILE:HG12	2:H:645:SER:CB	2.46	0.44
2:I:369:SER:O	2:I:370:LEU:HD23	2.17	0.44
2:I:468:LEU:O	2:I:471:LEU:HB2	2.18	0.44
2:I:517:HIS:CE1	2:I:540:ASP:O	2.71	0.44
2:I:654:VAL:O	2:I:654:VAL:HG12	2.17	0.44
2:I:665:LEU:O	2:I:665:LEU:HD22	2.17	0.44
1:A:267:VAL:HG12	1:A:290:MET:CE	2.47	0.44
1:A:451:MET:HE3	1:A:476:LEU:HG	1.98	0.44
1:A:751:PHE:CZ	1:A:761:LEU:HD13	2.51	0.44
1:A:933:VAL:HA	1:A:934:PRO:HD3	1.65	0.44
1:A:1239:HIS:CD2	1:A:1241:SER:H	2.35	0.44
1:B:168:MET:HA	1:B:206:LEU:HB2	2.00	0.44
1:B:1516:ASP:HA	1:B:1517:PRO:HD3	1.65	0.44
1:C:67:SER:OG	2:H:359:HIS:CE1	2.61	0.44
1:C:521:LYS:HB3	1:C:523:SER:HB3	1.99	0.44
1:C:1104:ARG:O	1:C:1185:VAL:HG13	2.17	0.44
1:C:1270:VAL:HG11	1:C:1274:ILE:HD13	1.99	0.44
1:C:1557:ILE:HD11	1:C:1642:THR:HG21	2.00	0.44
1:C:1657:HIS:CG	1:C:1658:PRO:HD2	2.53	0.44
2:G:324:LEU:HD12	2:G:324:LEU:O	2.18	0.44
2:G:459:VAL:HG12	2:G:468:LEU:HD12	2.00	0.44
2:G:860:ARG:H	2:G:1049:GLN:HG3	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:926:LEU:HB3	2:G:947:THR:CG2	2.46	0.44
2:G:1493:LEU:HB3	2:G:1494:PRO:CD	2.48	0.44
2:G:1846:GLU:C	2:G:1848:GLY:H	2.21	0.44
2:H:455:ILE:C	2:H:455:ILE:HD12	2.38	0.44
2:H:594:VAL:CG2	2:H:610:THR:HG21	2.46	0.44
2:H:607:VAL:O	2:H:611:THR:HB	2.17	0.44
2:H:1347:LEU:HD12	2:H:1347:LEU:HA	1.86	0.44
2:H:1561:ASN:HA	2:H:1562:PRO:HD3	1.83	0.44
2:I:101:ILE:H	2:I:101:ILE:HG13	1.30	0.44
2:I:938:TRP:CE2	2:I:944:ARG:HG3	2.52	0.44
2:I:1180:MET:HB3	2:I:1199:GLU:HG2	1.98	0.44
1:A:1443:LEU:HD23	1:A:1443:LEU:HA	1.75	0.44
1:B:18:LEU:HD21	2:H:1815:LEU:HD12	1.99	0.44
1:B:335:HIS:O	1:B:335:HIS:CD2	2.70	0.44
1:B:1385:GLN:HE21	1:B:1385:GLN:HB3	1.66	0.44
1:C:196:THR:O	1:C:213:PHE:HE2	2.01	0.44
1:C:235:SER:HA	1:C:276:ARG:NH2	2.33	0.44
1:C:340:ARG:HH12	1:C:344:GLN:HE21	1.65	0.44
1:C:413:LEU:C	1:C:415:SER:H	2.21	0.44
1:C:639:HIS:HB2	1:C:656:SER:OG	2.18	0.44
1:C:1158:PRO:HD2	1:C:1159:GLU:OE2	2.18	0.44
1:C:1243:VAL:O	1:C:1296:GLY:HA3	2.18	0.44
1:C:1487:LEU:HD23	1:C:1487:LEU:C	2.38	0.44
2:G:120:LYS:HB3	2:G:124:LYS:HE3	1.99	0.44
2:G:142:ASN:HB2	2:G:550:VAL:HG13	1.99	0.44
2:G:231:LEU:HA	2:G:236:ILE:HD12	2.00	0.44
2:G:272:GLY:HA3	2:G:276:GLY:C	2.38	0.44
2:G:754:TYR:CD2	2:G:794:MET:CG	3.01	0.44
2:G:1321:ALA:HA	2:G:1322:PRO:HD3	1.86	0.44
2:H:463:PHE:C	2:H:463:PHE:CD2	2.90	0.44
2:H:601:THR:CG2	2:H:601:THR:O	2.65	0.44
2:H:826:GLY:HA3	2:H:1061:GLN:CB	2.44	0.44
2:H:938:TRP:CD1	2:H:944:ARG:HG3	2.53	0.44
2:H:1222:GLU:HG3	2:H:1235:SER:OG	2.17	0.44
2:I:719:ILE:HG12	2:I:719:ILE:H	1.58	0.44
2:I:1102:TYR:CE2	2:I:1152:ALA:HB2	2.53	0.44
2:I:1168:ASN:HA	2:I:1169:PRO:HD3	1.84	0.44
2:I:1210:ILE:O	2:I:1210:ILE:HG22	2.18	0.44
2:I:1236:LEU:HB2	2:I:1265:MET:SD	2.57	0.44
2:I:1493:LEU:HB3	2:I:1494:PRO:CD	2.48	0.44
2:I:1579:ILE:HG22	2:I:1580:THR:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1676:MET:HE1	2:I:1781:LEU:CD2	2.46	0.44
1:A:24:SER:HB3	2:G:2014:LEU:HD12	1.98	0.44
1:A:254:TRP:CZ3	1:A:302:LEU:HD13	2.53	0.44
1:A:1431:GLU:CG	1:A:1433:HIS:CE1	3.00	0.44
1:A:1670:TYR:O	1:A:1674:VAL:HG23	2.18	0.44
1:B:26:VAL:HG13	2:H:2013:ASN:ND2	2.33	0.44
1:B:225:SER:OG	1:B:266:LEU:HD21	2.18	0.44
1:C:295:ALA:HB1	1:C:300:VAL:O	2.18	0.44
1:C:478:GLU:OE1	1:C:478:GLU:HA	2.18	0.44
1:C:601:VAL:O	1:C:602:GLU:C	2.56	0.44
1:C:852:ARG:HB3	1:C:858:TRP:HZ2	1.83	0.44
2:G:967:ILE:HD12	2:G:972:LEU:HD22	1.99	0.44
2:G:1257:ASP:O	2:G:1261:ARG:HG3	2.17	0.44
2:G:1752:PHE:HZ	2:G:1836:MET:HE3	1.82	0.44
2:G:1855:ILE:HB	2:G:1907:LEU:HD12	2.00	0.44
2:G:1873:TYR:CE1	2:G:1877:ARG:NH2	2.84	0.44
2:H:73:GLU:OE2	2:H:76:LYS:HD2	2.18	0.44
2:H:120:LYS:HB3	2:H:124:LYS:HE3	1.99	0.44
2:H:439:ILE:HD12	2:H:484:ILE:CD1	2.47	0.44
2:H:852:GLU:H	2:H:852:GLU:HG3	1.37	0.44
2:H:856:LYS:CE	2:H:1052:CYS:SG	3.06	0.44
2:I:209:PHE:CE2	2:I:213:LEU:HD22	2.53	0.44
2:I:439:ILE:HD12	2:I:484:ILE:CD1	2.48	0.44
2:I:760:HIS:HA	2:I:761:PRO:HD3	1.82	0.44
2:I:1494:PRO:HB2	2:I:1823:SER:HB2	1.99	0.44
2:I:1590:ARG:HG3	2:I:1608:TYR:CD2	2.53	0.44
2:I:1778:GLN:HB2	2:I:1779:PRO:HD3	2.00	0.44
1:B:32:GLN:HE22	1:B:57:ALA:N	2.15	0.44
1:B:176:VAL:HG12	1:B:178:GLY:H	1.83	0.44
1:B:267:VAL:HG12	1:B:290:MET:CE	2.48	0.44
1:B:496:PRO:HB2	1:B:519:VAL:HG12	1.99	0.44
1:B:1037:TRP:HB2	1:B:1598:GLN:OE1	2.18	0.44
1:B:1244:GLY:C	1:B:1327:CYS:HB2	2.38	0.44
1:C:655:LEU:HD23	1:C:655:LEU:HA	1.79	0.44
1:C:1234:MET:CE	1:C:1326:ILE:HG21	2.48	0.44
1:C:1373:ARG:NE	1:C:1550:ASP:HB2	2.33	0.44
2:G:455:ILE:HD11	2:G:469:ARG:NE	2.32	0.44
2:G:753:MET:O	2:G:757:ILE:HG13	2.18	0.44
2:H:272:GLY:HA3	2:H:276:GLY:C	2.38	0.44
2:H:391:LEU:CD2	2:H:394:ARG:NH2	2.80	0.44
2:H:572:ASN:CB	2:H:576:LYS:H	2.28	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:653:TYR:OH	2:H:690:VAL:HG11	2.18	0.44
2:H:1101:GLU:HB2	2:H:1147:ILE:O	2.17	0.44
2:H:1551:GLU:HB2	2:H:1552:PRO:HD3	2.00	0.44
2:I:272:GLY:HA3	2:I:276:GLY:C	2.37	0.44
2:I:297:ARG:O	2:I:301:THR:HG22	2.18	0.44
2:I:427:PHE:HB3	2:I:428:HIS:ND1	2.33	0.44
2:I:1236:LEU:HD22	2:I:1238:LEU:HG	1.99	0.44
2:I:1330:GLY:HA2	2:I:1374:THR:HG21	1.99	0.44
1:A:1291:LEU:HD21	1:A:1698:PHE:CE1	2.53	0.43
1:A:1539:ALA:O	1:A:1574:GLY:HA2	2.18	0.43
1:A:1666:THR:HG23	1:A:1669:ARG:CB	2.47	0.43
1:A:1717:ASP:HA	1:A:1718:PRO:HD3	1.83	0.43
1:B:42:GLU:O	1:B:77:GLU:N	2.47	0.43
1:B:833:PHE:O	1:B:834:GLY:O	2.35	0.43
1:C:21:GLN:O	2:I:1977:HIS:CD2	2.71	0.43
2:G:522:GLY:HA3	2:G:561:TRP:CH2	2.53	0.43
2:G:653:TYR:OH	2:G:690:VAL:HG11	2.17	0.43
2:G:719:ILE:HG12	2:G:719:ILE:H	1.57	0.43
2:G:1016:PRO:HD2	2:G:1017:PHE:CE2	2.53	0.43
2:G:1551:GLU:HB2	2:G:1552:PRO:HD3	2.00	0.43
2:G:1674:GLN:OE1	2:G:1712:ASN:HA	2.18	0.43
2:G:1776:PHE:C	2:G:1779:PRO:HD2	2.38	0.43
2:H:15:SER:H	2:H:48:PHE:HE2	1.66	0.43
2:H:573:LYS:C	2:H:575:GLY:H	2.21	0.43
2:H:871:THR:HG21	2:H:887:LYS:HZ2	1.83	0.43
2:H:1148:ASN:HD22	2:H:1148:ASN:C	2.21	0.43
2:I:218:TRP:HB3	2:I:225:THR:OG1	2.18	0.43
2:I:425:SER:HA	2:I:426:PRO:HD3	1.78	0.43
2:I:751:LEU:HD23	2:I:791:TYR:CD2	2.53	0.43
2:I:1159:ILE:CG2	2:I:1160:THR:N	2.81	0.43
2:I:1651:LEU:O	2:I:1652:THR:HG23	2.17	0.43
1:A:11:HIS:CD2	1:A:11:HIS:C	2.92	0.43
1:A:235:SER:HA	1:A:276:ARG:NH2	2.32	0.43
1:A:1556:THR:O	1:A:1560:MET:HG2	2.18	0.43
1:B:1022:THR:HG22	1:B:1226:SER:CB	2.48	0.43
1:B:1644:PHE:N	1:B:1644:PHE:CD1	2.86	0.43
1:C:406:TRP:CE3	1:C:407:ASN:HB2	2.53	0.43
1:C:833:PHE:O	1:C:834:GLY:O	2.36	0.43
1:C:1009:LEU:HA	1:C:1445:MET:HE2	1.99	0.43
2:G:184:VAL:HG12	2:G:188:ILE:HG12	2.00	0.43
2:G:397:LYS:HB2	2:G:398:ALA:H	1.68	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:674:TYR:HA	2:G:675:PRO:HD3	1.71	0.43
2:G:901:LYS:NZ	2:G:1031:LYS:O	2.50	0.43
2:H:590:PRO:HA	2:H:591:PRO:HD3	1.82	0.43
2:H:778:TYR:N	2:H:779:PRO:CD	2.80	0.43
2:H:1294:ALA:HA	2:H:1368:VAL:CG2	2.48	0.43
2:I:397:LYS:HB3	2:I:416:PHE:CE2	2.53	0.43
2:I:597:MET:HA	3:I:3051:FMN:C5A	2.47	0.43
2:I:732:TRP:CE2	2:I:750:MET:HE3	2.53	0.43
2:I:1257:ASP:O	2:I:1261:ARG:HG3	2.18	0.43
2:I:1662:THR:HB	2:I:1799:PRO:HG2	2.00	0.43
2:I:1735:ALA:O	2:I:1737:ILE:HG13	2.17	0.43
2:I:1808:SER:OG	2:I:1977:HIS:HE1	2.01	0.43
1:A:451:MET:HB3	1:A:451:MET:HE2	1.79	0.43
1:A:1442:ASN:HD22	1:A:1442:ASN:HA	1.62	0.43
1:B:242:THR:HG22	1:B:243:ILE:H	1.83	0.43
1:B:335:HIS:CD2	1:B:335:HIS:C	2.92	0.43
1:B:807:LYS:C	1:B:807:LYS:HD3	2.39	0.43
1:B:852:ARG:HB3	1:B:858:TRP:HZ2	1.83	0.43
1:C:1021:VAL:HG22	1:C:1387:ILE:HG22	2.01	0.43
1:C:1291:LEU:HD21	1:C:1698:PHE:CE1	2.53	0.43
1:C:1303:GLY:C	1:C:1307:THR:HG22	2.38	0.43
2:G:42:PRO:HG2	2:G:52:ASP:CG	2.38	0.43
2:G:195:LEU:O	2:G:199:ILE:HG13	2.18	0.43
2:G:751:LEU:HD23	2:G:791:TYR:CD2	2.53	0.43
2:G:1102:TYR:CE2	2:G:1152:ALA:HB2	2.53	0.43
2:G:1175:LYS:HG3	2:G:1176:PRO:HD2	2.01	0.43
2:H:666:ILE:HG22	2:H:698:LEU:HD22	2.00	0.43
2:H:1149:TRP:HA	2:H:1242:PHE:CD1	2.54	0.43
2:I:674:TYR:HA	2:I:675:PRO:HD3	1.69	0.43
2:I:754:TYR:CG	2:I:794:MET:HG2	2.53	0.43
1:A:32:GLN:NE2	1:A:57:ALA:HA	2.33	0.43
1:A:335:HIS:CD2	1:A:335:HIS:C	2.92	0.43
1:A:458:THR:OG1	1:A:470:LYS:HD2	2.18	0.43
1:A:1194:ASN:OD1	1:A:1196:LYS:HB2	2.18	0.43
1:B:908:LEU:HA	1:B:913:VAL:HG21	2.00	0.43
1:B:987:ASN:HD21	2:H:993:GLN:HE22	1.66	0.43
1:B:990:LEU:HD23	1:B:990:LEU:HA	1.77	0.43
1:B:1238:VAL:CG1	1:B:1239:HIS:N	2.81	0.43
1:B:1685:TYR:CZ	2:H:993:GLN:OE1	2.72	0.43
1:C:825:PRO:HB2	1:C:843:LYS:HZ2	1.83	0.43
2:G:397:LYS:HB3	2:G:416:PHE:CE2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:581:THR:O	2:G:585:LYS:HB2	2.18	0.43
2:G:599:PRO:HD2	3:G:3051:FMN:H6	2.00	0.43
2:G:659:LEU:HD12	2:G:659:LEU:HA	1.81	0.43
2:G:1040:LEU:O	2:G:1046:GLN:HG3	2.18	0.43
2:G:1180:MET:HB3	2:G:1199:GLU:HG2	2.01	0.43
2:G:1589:VAL:HG21	2:G:1651:LEU:HD12	1.99	0.43
2:G:1782:THR:CG2	2:G:1827:LEU:HD21	2.48	0.43
2:H:551:THR:C	2:H:553:ASN:H	2.21	0.43
2:H:652:ILE:CD1	2:H:658:MET:HE3	2.47	0.43
2:H:654:VAL:O	2:H:654:VAL:HG12	2.18	0.43
2:H:807:ILE:HA	2:H:818:LYS:HG2	1.98	0.43
2:H:854:ILE:HG22	2:H:856:LYS:HG3	1.99	0.43
2:H:1015:VAL:HG13	2:H:1017:PHE:CE2	2.53	0.43
2:H:1021:LEU:HA	2:H:1021:LEU:HD22	1.58	0.43
2:H:1228:THR:HG21	2:H:1234:VAL:HG23	2.00	0.43
2:H:1458:ASP:O	2:H:1462:LYS:HE3	2.19	0.43
2:H:1637:LEU:HD23	2:H:1637:LEU:HA	1.76	0.43
2:I:428:HIS:CD2	2:I:488:VAL:HG23	2.53	0.43
2:I:430:HIS:CE1	2:I:431:LEU:HD13	2.54	0.43
1:A:32:GLN:HE22	1:A:57:ALA:N	2.16	0.43
1:A:985:ARG:NH1	2:G:953:ARG:NH2	2.65	0.43
1:B:20:TYR:CD2	2:H:1985:VAL:HG21	2.54	0.43
1:B:1050:CYS:HB3	1:B:1089:VAL:HG12	2.00	0.43
1:B:1430:ARG:O	1:B:1430:ARG:HG2	2.18	0.43
1:C:49:PRO:O	1:C:82:SER:HB2	2.19	0.43
2:G:1162:ASP:O	2:G:1163:LYS:HB2	2.19	0.43
2:G:1219:ILE:HB	2:G:1240:TYR:HB2	2.01	0.43
2:G:1496:LYS:CE	2:G:1693:ARG:HH21	2.26	0.43
2:H:160:PHE:CE2	2:H:504:PHE:HB2	2.54	0.43
2:H:245:GLN:HG2	2:H:505:GLY:HA2	2.01	0.43
2:H:246:LEU:HD12	2:H:246:LEU:HA	1.85	0.43
2:H:309:ARG:HD3	2:H:309:ARG:HA	1.63	0.43
2:H:643:LYS:HA	2:H:1163:LYS:HG2	1.99	0.43
2:H:1383:ASN:HD21	2:H:1418:ASP:CB	2.30	0.43
2:I:73:GLU:OE2	2:I:76:LYS:HD2	2.18	0.43
2:I:319:LEU:HD22	2:I:319:LEU:HA	1.67	0.43
2:I:607:VAL:O	2:I:611:THR:HB	2.18	0.43
2:I:754:TYR:CE2	2:I:794:MET:HG3	2.53	0.43
2:I:856:LYS:CE	2:I:1052:CYS:SG	3.07	0.43
2:I:1175:LYS:HG3	2:I:1176:PRO:HD2	2.00	0.43
2:I:1311:PHE:HD1	2:I:1320:LEU:O	2.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:332:THR:HG22	1:B:331:ILE:CD1	2.48	0.43
1:B:526:VAL:HG12	1:B:626:VAL:HG11	1.99	0.43
1:B:1195:ALA:HB1	1:B:1200:ILE:HD12	1.99	0.43
1:C:232:LEU:HD13	1:C:272:GLU:CB	2.48	0.43
1:C:1310:GLU:OE1	1:C:1649:LYS:CE	2.65	0.43
1:C:1491:ARG:NH1	1:C:1744:TYR:O	2.51	0.43
1:C:1539:ALA:O	1:C:1574:GLY:HA2	2.18	0.43
1:C:1553:GLU:HA	1:C:1556:THR:HG23	2.00	0.43
1:C:1592:MET:HE2	1:C:1641:ILE:HG23	2.01	0.43
2:G:23:PRO:HG2	2:G:86:LEU:HD11	2.00	0.43
2:G:562:LEU:HG	2:G:793:PRO:CB	2.48	0.43
2:H:745:ASP:HA	2:H:832:TRP:CH2	2.51	0.43
2:H:754:TYR:CE2	2:H:794:MET:HG3	2.52	0.43
2:I:44:PRO:HA	2:I:53:GLU:OE2	2.19	0.43
2:I:159:ILE:HG12	2:I:512:LEU:HD23	2.00	0.43
2:I:191:SER:HA	2:I:194:THR:CG2	2.43	0.43
2:I:240:LEU:HD12	2:I:240:LEU:HA	1.80	0.43
2:I:439:ILE:HD12	2:I:484:ILE:HD11	1.99	0.43
2:I:594:VAL:CG2	2:I:610:THR:HG21	2.44	0.43
2:I:810:GLU:OE2	2:I:1070:ILE:N	2.43	0.43
2:I:1561:ASN:HA	2:I:1562:PRO:HD3	1.80	0.43
1:A:1673:TYR:CZ	1:A:1677:VAL:HG21	2.53	0.43
1:B:256:LEU:HA	1:B:257:PRO:HD3	1.73	0.43
1:B:774:ILE:HA	1:B:775:PRO:HD3	1.74	0.43
1:B:1189:ILE:HG23	1:B:1190:PRO:HD2	2.00	0.43
1:C:1220:VAL:O	1:C:1224:ILE:HG12	2.19	0.43
1:C:1248:GLY:HA3	1:C:1301:PRO:HD2	2.01	0.43
1:C:1625:LEU:O	1:C:1627:PRO:HD3	2.18	0.43
2:G:441:LYS:O	2:G:445:LYS:HG3	2.18	0.43
2:G:751:LEU:HD11	2:G:789:PHE:CD1	2.53	0.43
2:G:810:GLU:OE2	2:G:1070:ILE:N	2.44	0.43
2:G:835:THR:HG22	2:G:844:VAL:CA	2.49	0.43
2:G:1858:ASN:HA	2:G:1896:GLN:O	2.18	0.43
2:H:536:ASN:HD21	2:H:540:ASP:HB3	1.84	0.43
2:H:595:PRO:HD3	2:H:800:LEU:HB2	2.00	0.43
2:H:705:LEU:HD23	2:H:705:LEU:HA	1.78	0.43
2:H:758:ARG:HD3	2:H:758:ARG:HA	1.88	0.43
2:H:1199:GLU:OE2	2:H:1567:ARG:NH1	2.52	0.43
2:I:33:LEU:HD21	2:I:80:PHE:CE2	2.54	0.43
2:I:142:ASN:HB2	2:I:550:VAL:HG13	1.99	0.43
2:I:246:LEU:O	2:I:250:VAL:HG23	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:572:ASN:CB	2:I:576:LYS:H	2.27	0.43
2:I:703:LEU:HD21	2:I:705:LEU:CD2	2.45	0.43
2:I:914:LEU:HD21	2:I:1003:PHE:CD2	2.53	0.43
2:I:972:LEU:HD23	2:I:979:ALA:HB2	2.00	0.43
2:I:1427:VAL:HG22	2:I:1469:GLU:HG2	1.99	0.43
1:A:411:GLN:O	1:A:415:SER:HB2	2.19	0.43
1:A:430:ARG:CZ	1:A:605:LEU:HD13	2.49	0.43
1:A:521:LYS:HB3	1:A:523:SER:HB3	2.01	0.43
1:A:888:ILE:HD12	1:A:939:PHE:CE2	2.45	0.43
1:A:1019:ILE:HG13	1:A:1316:VAL:HG13	2.01	0.43
1:B:681:THR:HA	1:B:706:THR:OG1	2.19	0.43
1:B:828:PRO:HG3	1:B:868:ILE:HG22	2.00	0.43
1:B:1131:LEU:HD12	1:B:1131:LEU:HA	1.73	0.43
1:C:330:GLU:O	1:C:330:GLU:HG2	2.18	0.43
1:C:1047:LEU:O	1:C:1051:VAL:HG23	2.19	0.43
2:G:109:LEU:HD22	2:G:114:THR:HG23	2.00	0.43
2:G:938:TRP:CE2	2:G:944:ARG:HG3	2.54	0.43
2:G:1768:LYS:HE2	2:G:1772:SER:HB3	2.00	0.43
2:H:184:VAL:HG12	2:H:188:ILE:HG12	2.00	0.43
2:H:305:PHE:CD1	2:H:442:ASP:HB3	2.53	0.43
2:H:780:TYR:HB2	2:H:799:PHE:CE2	2.53	0.43
2:H:786:SER:HB2	2:H:794:MET:HE2	2.01	0.43
2:H:1070:ILE:CD1	2:H:1074:MET:HG2	2.49	0.43
2:H:1156:CYS:SG	2:H:1250:PRO:HD2	2.59	0.43
2:I:245:GLN:HG2	2:I:505:GLY:HA2	2.00	0.43
2:I:279:THR:O	2:I:283:ILE:HB	2.19	0.43
2:I:503:ASP:O	2:I:530:ALA:HB3	2.19	0.43
2:I:778:TYR:N	2:I:779:PRO:CD	2.82	0.43
2:I:786:SER:HB3	2:I:794:MET:HE2	2.00	0.43
2:I:932:ILE:HD12	2:I:939:PHE:HD1	1.83	0.43
2:I:1417:THR:O	2:I:1419:PHE:N	2.45	0.43
2:I:1684:SER:O	2:I:1688:GLN:HG3	2.18	0.43
2:I:2030:TYR:CD1	2:I:2034:GLY:HA2	2.54	0.43
1:A:66:GLU:OE1	1:A:66:GLU:HA	2.18	0.43
1:A:248:LYS:HB2	1:A:248:LYS:HE3	1.82	0.43
1:A:1219:VAL:CA	1:A:1384:ILE:HD11	2.32	0.43
1:A:1618:LEU:HD23	1:A:1621:PHE:CE2	2.54	0.43
1:B:35:PHE:HA	1:B:39:PHE:HD2	1.83	0.43
1:B:370:GLU:O	1:B:373:ALA:HB3	2.19	0.43
1:B:1283:MET:O	1:B:1287:VAL:HG23	2.18	0.43
1:C:256:LEU:HA	1:C:257:PRO:HD3	1.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:184:VAL:HG12	2:G:184:VAL:O	2.19	0.43
2:G:607:VAL:O	2:G:611:THR:HB	2.17	0.43
2:G:866:LYS:O	2:G:870:GLU:HG3	2.18	0.43
2:G:884:LEU:HD22	2:G:1021:LEU:CD1	2.49	0.43
2:G:1021:LEU:HD22	2:G:1021:LEU:HA	1.60	0.43
2:G:1195:VAL:HG13	2:G:1211:LEU:CB	2.48	0.43
2:G:1651:LEU:HD23	2:G:1651:LEU:HA	1.73	0.43
2:H:900:GLN:NE2	2:H:1051:THR:HA	2.34	0.43
2:H:1374:THR:HG23	2:H:1396:LEU:CD1	2.46	0.43
2:H:1889:VAL:HG22	2:H:1977:HIS:O	2.19	0.43
2:I:7:ARG:CG	2:I:22:VAL:O	2.67	0.43
2:I:551:THR:C	2:I:553:ASN:H	2.22	0.43
2:I:562:LEU:HD23	2:I:562:LEU:HA	1.80	0.43
1:A:242:THR:HB	1:A:244:THR:HB	2.00	0.43
1:A:267:VAL:O	1:A:290:MET:HE1	2.19	0.43
1:A:1019:ILE:HG21	1:A:1316:VAL:HG22	2.01	0.43
1:A:1332:TYR:HB3	1:A:1382:ALA:CB	2.49	0.43
1:B:242:THR:HB	1:B:244:THR:HB	2.01	0.43
1:B:350:LEU:HB2	1:B:352:MET:HG2	2.01	0.43
1:B:411:GLN:O	1:B:415:SER:HB2	2.18	0.43
1:B:625:THR:HG23	1:B:627:SER:H	1.84	0.43
1:B:1270:VAL:HG11	1:B:1274:ILE:HD13	2.00	0.43
1:C:335:HIS:CD2	1:C:335:HIS:C	2.91	0.43
1:C:616:LEU:HB2	1:C:617:PRO:HD3	2.01	0.43
2:G:1494:PRO:HB2	2:G:1823:SER:HB2	2.00	0.43
2:G:2026:PHE:HB3	2:G:2042:ILE:HD13	2.00	0.43
2:H:258:PHE:CD1	2:H:258:PHE:N	2.87	0.43
2:H:629:GLY:O	2:H:632:ALA:HB3	2.18	0.43
2:H:732:TRP:CH2	2:H:749:PRO:HG2	2.53	0.43
2:H:748:THR:CB	2:H:749:PRO:HD3	2.46	0.43
2:H:1080:GLY:O	2:H:1084:LYS:HG3	2.19	0.43
2:H:1642:THR:HB	2:H:1651:LEU:HB2	2.01	0.43
2:H:1896:GLN:HE21	2:H:1896:GLN:HB3	1.60	0.43
2:I:198:LEU:HD13	2:I:198:LEU:HA	1.93	0.43
2:I:573:LYS:C	2:I:575:GLY:N	2.72	0.43
2:I:615:TYR:CE2	2:I:1074:MET:HB3	2.53	0.43
2:I:993:GLN:HE21	2:I:993:GLN:HB3	1.61	0.43
1:A:44:VAL:HG13	1:A:78:ILE:HG12	1.99	0.42
1:A:155:VAL:O	1:A:159:LEU:HG	2.19	0.42
1:A:521:LYS:HE2	1:A:605:LEU:HD11	2.01	0.42
1:A:1396:MET:O	1:A:1680:ARG:NH1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:335:HIS:CE1	1:C:335:HIS:ND1	2.87	0.42
1:B:980:VAL:H	2:H:968:GLN:CD	2.22	0.42
1:B:1233:GLU:CD	1:B:1680:ARG:HH21	2.22	0.42
1:C:706:THR:HB	1:C:737:PHE:HB3	2.00	0.42
2:G:427:PHE:HB3	2:G:428:HIS:ND1	2.34	0.42
2:G:455:ILE:C	2:G:455:ILE:HD12	2.39	0.42
2:G:551:THR:C	2:G:553:ASN:H	2.20	0.42
2:H:960:LYS:HA	2:H:960:LYS:CE	2.44	0.42
2:H:1579:ILE:HD11	2:H:1615:MET:SD	2.58	0.42
2:H:1651:LEU:HD23	2:H:1651:LEU:HA	1.79	0.42
2:H:1757:GLU:H	2:H:1757:GLU:HG3	1.51	0.42
2:I:583:PHE:CD2	2:I:764:MET:HE3	2.54	0.42
2:I:702:TYR:HB3	2:I:727:PRO:HB2	1.99	0.42
2:I:1551:GLU:HB2	2:I:1552:PRO:HD3	2.00	0.42
2:I:1980:TYR:HD1	2:I:1981:LEU:HD12	1.83	0.42
1:A:340:ARG:NH1	1:A:344:GLN:CG	2.70	0.42
1:A:1009:LEU:HA	1:A:1445:MET:HE2	2.01	0.42
1:A:1056:ILE:CD1	1:A:1193:TRP:CD1	3.00	0.42
1:A:1195:ALA:CB	1:A:1213:LEU:HD13	2.49	0.42
1:A:1553:GLU:HA	1:A:1556:THR:HG23	2.01	0.42
1:B:1238:VAL:CG1	1:B:1242:GLU:HB2	2.49	0.42
1:B:1280:ILE:HD13	1:B:1302:VAL:HG22	2.01	0.42
1:B:1553:GLU:HA	1:B:1556:THR:HG23	2.00	0.42
1:C:18:LEU:HD21	2:I:1815:LEU:HD12	2.00	0.42
1:C:406:TRP:CD2	1:C:1619:GLU:HG3	2.55	0.42
1:C:451:MET:HB3	1:C:451:MET:HE2	1.73	0.42
1:C:949:GLU:O	1:C:953:VAL:CG1	2.67	0.42
2:G:238:CYS:CB	2:G:239:PRO:HD3	2.45	0.42
2:G:1339:PHE:N	2:G:1340:PRO:CD	2.82	0.42
2:G:1458:ASP:O	2:G:1462:LYS:HE3	2.19	0.42
2:H:240:LEU:O	2:H:244:ILE:HG13	2.19	0.42
2:H:274:SER:OG	2:H:428:HIS:HE1	2.02	0.42
2:H:543:PHE:CB	2:H:545:GLN:NE2	2.82	0.42
2:H:601:THR:HB	2:H:620:ALA:HB2	2.01	0.42
2:H:703:LEU:HD21	2:H:705:LEU:CD2	2.49	0.42
2:I:814:SER:HB2	2:I:1040:LEU:CD1	2.48	0.42
2:I:1666:PHE:CE1	2:I:1814:ALA:HA	2.53	0.42
1:A:499:PRO:HD3	1:A:516:ARG:HH21	1.83	0.42
1:A:1175:ILE:HA	1:A:1176:PRO:HD3	1.86	0.42
1:B:24:SER:CB	2:H:2014:LEU:HD12	2.49	0.42
1:B:37:LYS:HB2	1:B:65:TYR:CE1	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1446:LYS:O	1:B:1450:ARG:HG3	2.19	0.42
1:C:377:TYR:O	1:C:380:ALA:HB3	2.19	0.42
1:C:1061:SER:HB2	1:C:1078:SER:HB3	1.99	0.42
1:C:1446:LYS:O	1:C:1450:ARG:HG3	2.18	0.42
2:G:258:PHE:N	2:G:258:PHE:CD1	2.87	0.42
2:G:1389:ILE:HG13	2:G:1411:PHE:CD1	2.52	0.42
2:G:1473:THR:O	2:G:1481:SER:HB3	2.18	0.42
2:H:9:LEU:HB2	2:H:27:PHE:HE1	1.83	0.42
2:H:717:ILE:HG23	2:H:760:HIS:CE1	2.54	0.42
2:H:1980:TYR:HD1	2:H:1981:LEU:HD12	1.84	0.42
2:I:298:LYS:HA	2:I:448:VAL:CG2	2.50	0.42
2:I:1308:CYS:HB3	2:I:1311:PHE:CE2	2.54	0.42
2:I:1325:PHE:O	2:I:1328:VAL:HG12	2.18	0.42
2:I:1845:ASP:HB2	2:I:1849:ARG:N	2.20	0.42
1:A:1220:VAL:O	1:A:1224:ILE:HG12	2.18	0.42
1:B:458:THR:OG1	1:B:470:LYS:HD2	2.20	0.42
1:B:1244:GLY:O	1:B:1327:CYS:HB2	2.19	0.42
1:B:1455:ARG:HD2	1:B:1455:ARG:HA	1.86	0.42
1:B:1618:LEU:HD23	1:B:1621:PHE:HE2	1.85	0.42
1:C:27:ARG:HB2	2:I:2016:ALA:HB2	2.00	0.42
1:C:32:GLN:NE2	1:C:57:ALA:CA	2.82	0.42
1:C:168:MET:HA	1:C:206:LEU:HB2	2.00	0.42
1:C:428:VAL:HG12	1:C:606:ASP:O	2.20	0.42
1:C:798:ASN:HA	1:C:801:ARG:HB2	2.01	0.42
1:C:852:ARG:NH1	1:C:856:GLU:OE1	2.52	0.42
1:C:1105:LEU:HD23	1:C:1105:LEU:HA	1.85	0.42
1:C:1114:TYR:CE1	1:C:1337:GLU:HG3	2.55	0.42
2:G:339:LEU:HD23	2:G:419:ARG:O	2.19	0.42
2:G:579:VAL:CG2	2:G:1078:HIS:CD2	3.01	0.42
2:G:1156:CYS:SG	2:G:1250:PRO:HD2	2.60	0.42
2:G:1323:MET:CE	2:G:1605:VAL:HG22	2.49	0.42
2:G:1979:THR:O	2:G:1982:MET:HB2	2.19	0.42
2:H:478:ARG:O	2:H:482:CYS:HB2	2.20	0.42
2:H:652:ILE:HD13	2:H:658:MET:HE3	2.02	0.42
2:H:665:LEU:O	2:H:665:LEU:HD22	2.19	0.42
2:H:827:VAL:HG12	2:H:828:PRO:O	2.19	0.42
2:H:835:THR:HG23	2:H:843:ILE:O	2.18	0.42
2:H:950:PHE:O	2:H:953:ARG:HB3	2.19	0.42
2:H:1002:HIS:NE2	2:H:1006:MET:CE	2.82	0.42
2:H:1149:TRP:NE1	2:H:1213:LEU:HD12	2.34	0.42
2:H:1159:ILE:CG2	2:H:1160:THR:N	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1427:VAL:HG22	2:H:1469:GLU:CG	2.49	0.42
2:H:1862:VAL:HG22	2:H:1863:ALA:N	2.34	0.42
2:I:169:TYR:CG	2:I:170:PHE:N	2.86	0.42
2:I:298:LYS:HG2	2:I:448:VAL:CG2	2.38	0.42
2:I:538:ASP:HB2	2:I:540:ASP:HB2	2.01	0.42
2:I:579:VAL:CG2	2:I:1078:HIS:CD2	3.01	0.42
2:I:732:TRP:CH2	2:I:749:PRO:HG2	2.55	0.42
2:I:1101:GLU:HG2	2:I:1148:ASN:HA	2.01	0.42
2:I:1541:VAL:HG22	2:I:1625:SER:HB2	2.01	0.42
2:I:1672:GLN:HA	2:I:1676:MET:HE3	1.95	0.42
2:I:2036:GLU:HG2	2:I:2039:LYS:HZ3	1.83	0.42
1:A:12:ILE:O	1:A:15:THR:HG23	2.19	0.42
1:A:1431:GLU:OE2	1:A:1433:HIS:HE1	2.02	0.42
1:B:1145:LYS:HD3	1:B:1154:ILE:HG12	2.02	0.42
1:B:1657:HIS:CG	1:B:1658:PRO:HD2	2.55	0.42
1:B:1682:LYS:O	2:H:994:PHE:HD2	2.02	0.42
1:C:20:TYR:CE2	2:I:1985:VAL:HG11	2.54	0.42
1:C:44:VAL:HG13	1:C:78:ILE:HG12	1.98	0.42
1:C:1682:LYS:O	2:I:994:PHE:HD2	2.03	0.42
2:G:246:LEU:HD12	2:G:246:LEU:HA	1.82	0.42
2:G:324:LEU:O	2:G:328:LEU:HG	2.18	0.42
2:G:667:LYS:HD2	2:G:697:THR:CG2	2.38	0.42
2:G:1015:VAL:HA	2:G:1016:PRO:HD3	1.78	0.42
2:G:1135:GLU:HG2	2:G:1176:PRO:HG2	2.02	0.42
2:G:1223:MET:HE3	2:G:1238:LEU:CD1	2.49	0.42
2:G:1279:PHE:CD2	2:G:1340:PRO:HG3	2.48	0.42
2:G:1495:THR:O	2:G:1496:LYS:HB2	2.19	0.42
2:H:176:LEU:CD2	2:H:184:VAL:HG21	2.50	0.42
2:H:520:LYS:O	2:H:521:ASP:C	2.58	0.42
2:H:970:TYR:O	2:H:973:LEU:HB2	2.18	0.42
2:H:1159:ILE:HG13	2:H:1169:PRO:CD	2.50	0.42
2:I:7:ARG:NH2	2:I:24:THR:O	2.52	0.42
2:I:339:LEU:HD23	2:I:419:ARG:O	2.20	0.42
2:I:441:LYS:O	2:I:445:LYS:HG3	2.20	0.42
2:I:612:ASN:HD21	2:I:641:ILE:HA	1.84	0.42
2:I:967:ILE:HD12	2:I:972:LEU:HD22	2.00	0.42
2:I:1101:GLU:CB	2:I:1147:ILE:O	2.68	0.42
2:I:1214:LEU:HD11	2:I:1220:GLN:NE2	2.35	0.42
2:I:1347:LEU:HD12	2:I:1347:LEU:HA	1.91	0.42
2:I:1359:MET:CE	2:I:1404:MET:HB3	2.50	0.42
1:A:12:ILE:O	1:A:16:GLU:HG2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:196:THR:O	1:A:213:PHE:HE2	2.01	0.42
1:A:406:TRP:CE3	1:A:407:ASN:HB2	2.54	0.42
1:A:406:TRP:CD2	1:A:1619:GLU:HG3	2.55	0.42
1:A:444:ASN:HB2	1:A:447:LEU:N	2.14	0.42
1:B:59:ARG:NH1	2:H:1896:GLN:HE22	2.17	0.42
1:B:155:VAL:HG22	1:B:186:ILE:CG2	2.50	0.42
1:B:706:THR:HB	1:B:737:PHE:HB3	2.01	0.42
1:B:874:GLY:O	1:B:875:THR:C	2.58	0.42
1:B:1534:ASP:OD1	1:B:1566:ARG:HD3	2.19	0.42
1:C:242:THR:HB	1:C:244:THR:HB	2.02	0.42
1:C:1338:GLU:H	1:C:1338:GLU:HG2	1.57	0.42
1:C:1516:ASP:HA	1:C:1517:PRO:HD3	1.66	0.42
2:G:15:SER:H	2:G:48:PHE:HE2	1.67	0.42
2:G:439:ILE:HD12	2:G:484:ILE:HD11	2.00	0.42
2:G:638:VAL:HG22	2:G:675:PRO:HG2	2.02	0.42
2:G:854:ILE:HG22	2:G:856:LYS:HG3	2.01	0.42
2:G:1044:VAL:HG21	2:G:1050:ARG:NE	2.34	0.42
2:G:1056:GLY:HA2	2:G:1057:PRO:HD3	1.92	0.42
2:G:1210:ILE:O	2:G:1210:ILE:HG22	2.20	0.42
2:G:1383:ASN:OD1	2:G:1388:LYS:HG3	2.20	0.42
2:G:1697:HIS:CE1	2:G:1829:GLU:CG	3.02	0.42
2:H:142:ASN:HB2	2:H:550:VAL:HG13	2.01	0.42
2:H:726:PHE:HA	2:H:727:PRO:HD3	1.88	0.42
2:H:963:THR:HB	2:H:964:LEU:H	1.72	0.42
2:H:967:ILE:CD1	2:H:972:LEU:HD22	2.50	0.42
2:H:1015:VAL:HA	2:H:1016:PRO:HD3	1.79	0.42
2:H:1303:ALA:HB2	2:H:1556:VAL:HG21	2.01	0.42
2:H:1335:ILE:O	2:H:1338:ILE:HG12	2.19	0.42
2:I:463:PHE:CD1	2:I:486:LEU:HD22	2.54	0.42
2:I:592:LEU:O	2:I:616:THR:HG23	2.19	0.42
2:I:804:ARG:NH2	2:I:1068:GLU:OE1	2.53	0.42
2:I:1666:PHE:CD1	2:I:1814:ALA:HB2	2.54	0.42
1:A:382:LEU:HD23	1:A:382:LEU:HA	1.79	0.42
1:A:666:ALA:O	1:A:670:GLY:HA2	2.19	0.42
1:B:20:TYR:CE1	2:H:2035:SER:HB2	2.55	0.42
1:B:90:TYR:O	2:H:1537:ILE:HD11	2.20	0.42
1:B:411:GLN:HE22	1:B:1628:SER:N	2.16	0.42
1:B:1705:PRO:HB2	1:B:1733:PHE:CD1	2.55	0.42
1:C:626:VAL:HG23	1:C:664:GLU:OE2	2.20	0.42
1:C:719:GLN:HG3	1:C:720:SER:N	2.35	0.42
1:C:1219:VAL:CA	1:C:1384:ILE:CD1	2.94	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1239:HIS:HE1	1:C:1714:VAL:O	2.02	0.42
2:G:543:PHE:CB	2:G:545:GLN:NE2	2.81	0.42
2:G:814:SER:CB	2:G:1040:LEU:HD13	2.50	0.42
2:G:827:VAL:HG21	2:G:840:THR:CG2	2.49	0.42
2:G:879:LYS:HD3	2:G:879:LYS:HA	1.68	0.42
2:H:581:THR:O	2:H:585:LYS:HB2	2.20	0.42
2:H:1180:MET:HB3	2:H:1199:GLU:HG2	2.02	0.42
2:H:1293:THR:CG2	2:H:1296:GLU:H	2.24	0.42
2:H:1781:LEU:HD22	2:H:1781:LEU:HA	1.83	0.42
2:I:258:PHE:N	2:I:258:PHE:CD1	2.87	0.42
2:I:730:LEU:C	2:I:730:LEU:HD12	2.40	0.42
2:I:896:ASN:O	2:I:1050:ARG:NH2	2.52	0.42
2:I:950:PHE:O	2:I:953:ARG:HB3	2.19	0.42
2:I:1552:PRO:O	2:I:1556:VAL:HG23	2.19	0.42
2:I:1838:MET:O	2:I:1974:VAL:HG21	2.20	0.42
2:I:1959:LYS:O	2:I:1959:LYS:HG2	2.19	0.42
1:A:28:TRP:CE2	1:A:53:LEU:HD22	2.55	0.42
1:A:32:GLN:NE2	1:A:57:ALA:CA	2.83	0.42
1:A:496:PRO:HB2	1:A:519:VAL:HG12	2.01	0.42
1:B:280:GLU:O	1:B:284:LYS:HG3	2.20	0.42
1:B:290:MET:HB3	1:B:290:MET:HE2	1.95	0.42
1:B:451:MET:HE2	1:B:451:MET:HB3	1.74	0.42
1:B:888:ILE:HD12	1:B:939:PHE:CE2	2.45	0.42
1:B:949:GLU:O	1:B:953:VAL:CG1	2.68	0.42
1:B:1008:GLU:HG2	1:B:1446:LYS:HA	2.02	0.42
1:C:183:GLN:NE2	1:C:202:GLU:HG2	2.31	0.42
1:C:455:ILE:HD13	1:C:455:ILE:HA	1.85	0.42
1:C:827:SER:HA	1:C:828:PRO:HD3	1.70	0.42
1:C:1420:ALA:HA	1:C:1421:PRO:HD3	1.78	0.42
1:C:1618:LEU:HD23	1:C:1621:PHE:CE2	2.55	0.42
2:G:106:ALA:HB2	2:G:545:GLN:HG2	2.02	0.42
2:G:191:SER:HA	2:G:194:THR:CG2	2.46	0.42
2:G:584:SER:CB	2:G:591:PRO:HG3	2.47	0.42
2:G:586:LEU:HD12	2:G:764:MET:SD	2.59	0.42
2:G:892:ILE:HD11	2:G:903:TRP:CD2	2.51	0.42
2:G:1666:PHE:CD1	2:G:1814:ALA:CB	3.02	0.42
2:G:1875:VAL:HG22	2:G:1910:VAL:HG11	2.01	0.42
2:G:2036:GLU:HB2	2:G:2037:PRO:CD	2.47	0.42
2:H:1339:PHE:N	2:H:1340:PRO:CD	2.83	0.42
2:H:1541:VAL:HG22	2:H:1625:SER:HB2	2.01	0.42
2:H:1676:MET:HE1	2:H:1781:LEU:CD2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1752:PHE:HZ	2:H:1836:MET:HE3	1.84	0.42
2:H:1855:ILE:HB	2:H:1907:LEU:HD12	2.01	0.42
2:H:1940:LEU:HD12	2:H:1941:PHE:N	2.34	0.42
2:I:190:PHE:O	2:I:194:THR:HG22	2.19	0.42
2:I:581:THR:O	2:I:585:LYS:HB2	2.20	0.42
2:I:1590:ARG:HG3	2:I:1608:TYR:CG	2.54	0.42
1:A:998:TYR:CD2	1:A:1667:GLU:HG3	2.55	0.42
1:A:1303:GLY:C	1:A:1307:THR:HG22	2.40	0.42
1:A:1657:HIS:CG	1:A:1658:PRO:HD2	2.55	0.42
1:B:36:LEU:CD2	1:B:61:LEU:HD21	2.42	0.42
1:B:44:VAL:HG13	1:B:78:ILE:HG12	1.98	0.42
1:B:400:ARG:CG	1:B:400:ARG:NH1	2.51	0.42
1:B:1119:LYS:HE2	1:B:1341:PHE:CD1	2.54	0.42
1:C:19:ALA:O	1:C:22:PHE:HB2	2.19	0.42
1:C:155:VAL:HG22	1:C:186:ILE:CG2	2.50	0.42
1:C:453:TYR:O	1:C:457:ASN:HB2	2.19	0.42
1:C:792:HIS:CE1	1:C:796:LEU:HD23	2.55	0.42
1:C:1076:VAL:CG1	1:C:1081:LYS:HA	2.50	0.42
1:C:1304:ALA:O	1:C:1307:THR:CG2	2.68	0.42
1:C:1418:VAL:N	1:C:1419:PRO:CD	2.83	0.42
1:C:1600:LEU:HD11	1:C:1655:VAL:HG12	2.01	0.42
2:G:237:SER:O	2:G:241:ILE:HG13	2.20	0.42
2:G:298:LYS:HA	2:G:448:VAL:CG2	2.50	0.42
2:G:468:LEU:O	2:G:471:LEU:HB2	2.20	0.42
2:G:490:TRP:CZ2	2:G:512:LEU:HD21	2.55	0.42
2:G:571:LYS:HB2	2:G:1099:ALA:HB2	2.02	0.42
2:G:856:LYS:CE	2:G:1052:CYS:SG	3.07	0.42
2:I:258:PHE:N	2:I:258:PHE:HD1	2.18	0.42
2:I:524:GLY:HA2	2:I:558:ASN:O	2.20	0.42
2:I:740:HIS:CE1	2:I:852:GLU:OE1	2.73	0.42
2:I:1457:PHE:CD2	2:I:1459:LEU:HD23	2.55	0.42
1:B:238:PRO:CG	1:B:283:ALA:HB2	2.50	0.42
1:B:539:SER:O	1:B:540:GLN:C	2.54	0.42
1:B:1264:ARG:NH1	1:B:1270:VAL:HB	2.34	0.42
1:B:1338:GLU:H	1:B:1338:GLU:HG2	1.58	0.42
1:B:1665:ILE:HD11	1:B:1669:ARG:CG	2.50	0.42
1:C:42:GLU:O	1:C:77:GLU:N	2.50	0.42
1:C:683:ALA:HA	1:C:689:GLY:HA3	2.02	0.42
1:C:1029:PRO:HG2	1:C:1581:THR:O	2.20	0.42
1:C:1430:ARG:O	1:C:1430:ARG:HG2	2.19	0.42
1:C:1639:VAL:HG12	1:C:1640:SER:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1657:HIS:CE1	1:C:1658:PRO:HD2	2.54	0.42
2:G:507:GLY:O	2:G:508:GLY:C	2.58	0.42
2:G:601:THR:O	2:G:601:THR:CG2	2.66	0.42
2:G:670:ARG:HD2	2:G:676:ILE:O	2.20	0.42
2:G:732:TRP:CH2	2:G:749:PRO:HG2	2.55	0.42
2:G:1541:VAL:HG22	2:G:1625:SER:HB2	2.02	0.42
2:G:1989:LYS:NZ	2:G:2037:PRO:HG2	2.35	0.42
2:H:279:THR:O	2:H:283:ILE:HB	2.19	0.42
2:H:712:ALA:O	2:H:715:GLN:HB3	2.20	0.42
2:H:1321:ALA:HA	2:H:1322:PRO:HD3	1.84	0.42
2:H:1819:ALA:CA	2:H:2005:ARG:HH11	2.26	0.42
2:I:156:LEU:HD23	2:I:500:HIS:HB2	2.02	0.42
2:I:248:HIS:CE1	2:I:531:GLY:HA2	2.55	0.42
2:I:703:LEU:CD2	2:I:705:LEU:HG	2.50	0.42
2:I:1079:ASP:O	2:I:1082:ILE:HG22	2.19	0.42
2:I:1195:VAL:HG13	2:I:1211:LEU:CB	2.46	0.42
2:I:1738:PHE:HE1	2:I:1837:THR:HG23	1.85	0.42
1:A:91:THR:HA	1:A:92:PRO:HD3	1.81	0.41
1:A:93:ASP:CB	1:A:94:PRO:HD2	2.37	0.41
1:A:530:ALA:HA	1:A:636:PRO:HB3	2.01	0.41
1:A:1260:MET:HB2	1:A:1274:ILE:HD12	2.02	0.41
1:A:1263:ASP:HB2	1:A:1270:VAL:HG21	2.01	0.41
1:B:82:SER:OG	1:B:83:LYS:HG3	2.20	0.41
1:B:988:ILE:H	1:B:988:ILE:HG12	1.69	0.41
1:B:1543:GLY:HA2	1:B:1550:ASP:OD1	2.20	0.41
1:B:1666:THR:HG23	1:B:1669:ARG:CB	2.49	0.41
1:C:1154:ILE:O	1:C:1154:ILE:HG13	2.20	0.41
1:C:1644:PHE:CD1	1:C:1644:PHE:N	2.88	0.41
2:G:258:PHE:N	2:G:258:PHE:HD1	2.18	0.41
2:G:520:LYS:O	2:G:521:ASP:C	2.58	0.41
2:G:786:SER:HB3	2:G:794:MET:HE2	2.01	0.41
2:G:995:LEU:HB3	2:G:1000:ILE:CD1	2.50	0.41
2:G:1079:ASP:O	2:G:1082:ILE:HG22	2.19	0.41
2:G:1169:PRO:O	2:G:1173:VAL:HG23	2.20	0.41
2:G:1579:ILE:CD1	2:G:1615:MET:SD	3.08	0.41
2:G:1778:GLN:HB2	2:G:1779:PRO:HD3	2.02	0.41
2:H:712:ALA:O	2:H:716:VAL:HG23	2.20	0.41
2:H:754:TYR:CG	2:H:794:MET:HG2	2.55	0.41
2:H:810:GLU:OE2	2:H:1070:ILE:N	2.45	0.41
2:I:360:LEU:HA	2:I:361:PRO:HD3	1.89	0.41
2:I:659:LEU:O	2:I:663:ILE:HG12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1002:HIS:NE2	2:I:1006:MET:HE3	2.35	0.41
2:I:1593:ILE:O	2:I:1597:ALA:HB3	2.20	0.41
2:I:1842:VAL:HA	2:I:1843:PRO:HD2	1.80	0.41
2:I:1862:VAL:HG22	2:I:1863:ALA:N	2.35	0.41
2:I:1940:LEU:HD12	2:I:1941:PHE:N	2.35	0.41
2:I:1989:LYS:NZ	2:I:2037:PRO:HG2	2.35	0.41
1:A:2:LYS:HE2	1:A:4:GLU:OE1	2.19	0.41
1:A:21:GLN:O	2:G:1977:HIS:CD2	2.74	0.41
1:A:29:ILE:HD13	2:G:1894:GLU:HA	2.02	0.41
1:A:237:MET:HG3	1:A:241:PHE:HB3	2.00	0.41
1:A:370:GLU:O	1:A:373:ALA:HB3	2.20	0.41
1:A:453:TYR:O	1:A:457:ASN:HB2	2.20	0.41
1:A:1154:ILE:O	1:A:1154:ILE:HG13	2.19	0.41
1:A:1406:MET:HE1	1:A:1428:THR:HB	2.03	0.41
1:B:157:HIS:CE1	1:B:269:LEU:HD11	2.55	0.41
1:B:1056:ILE:HG13	1:B:1057:MET:N	2.35	0.41
1:C:444:ASN:HB2	1:C:447:LEU:N	2.17	0.41
1:C:927:ASN:O	1:C:929:GLY:N	2.41	0.41
1:C:1280:ILE:HD13	1:C:1302:VAL:HG22	2.02	0.41
1:C:1639:VAL:CG1	1:C:1640:SER:N	2.82	0.41
2:G:260:PRO:HD3	2:G:289:TRP:CZ2	2.55	0.41
2:G:345:THR:HG22	2:G:347:GLU:N	2.25	0.41
2:G:601:THR:HB	2:G:620:ALA:HB2	2.02	0.41
2:G:612:ASN:HD21	2:G:641:ILE:HA	1.84	0.41
2:G:1352:HIS:HD2	2:G:1410:PHE:CD2	2.38	0.41
2:G:1383:ASN:HD21	2:G:1418:ASP:CB	2.33	0.41
2:G:1986:LYS:N	2:G:1987:PRO:CD	2.82	0.41
2:H:38:ASN:HA	2:H:41:LEU:HD12	2.02	0.41
2:H:1257:ASP:O	2:H:1261:ARG:HG3	2.19	0.41
2:H:1590:ARG:HG3	2:H:1608:TYR:CG	2.55	0.41
2:H:1593:ILE:HD13	2:H:1626:ILE:CD1	2.51	0.41
2:H:2039:LYS:HA	2:H:2042:ILE:HG13	2.03	0.41
2:I:120:LYS:HB3	2:I:124:LYS:HE3	2.00	0.41
2:I:717:ILE:O	2:I:720:ALA:HB3	2.20	0.41
2:I:732:TRP:CB	2:I:750:MET:HE1	2.49	0.41
2:I:827:VAL:HG12	2:I:828:PRO:O	2.20	0.41
2:I:1135:GLU:HG2	2:I:1176:PRO:HG2	2.02	0.41
1:A:529:MET:HG2	1:A:638:LEU:CG	2.50	0.41
1:A:807:LYS:HD3	1:A:807:LYS:C	2.40	0.41
1:A:931:GLN:H	1:A:931:GLN:HG3	1.30	0.41
1:A:1195:ALA:HB1	1:A:1200:ILE:HD12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1239:HIS:HE1	1:A:1714:VAL:O	2.04	0.41
1:B:41:THR:HG21	2:H:1663:THR:HB	2.01	0.41
1:B:44:VAL:HG11	1:B:78:ILE:HG12	2.00	0.41
1:C:2:LYS:HE2	1:C:4:GLU:OE1	2.19	0.41
1:C:12:ILE:HD11	2:I:2041:ILE:HD11	2.01	0.41
1:C:155:VAL:O	1:C:159:LEU:HG	2.19	0.41
1:C:413:LEU:HD13	1:C:451:MET:HG2	2.03	0.41
1:C:635:ILE:CG2	1:C:651:TYR:CG	3.01	0.41
1:C:1257:LEU:HD23	1:C:1257:LEU:HA	1.84	0.41
1:C:1370:THR:HG22	1:C:1371:THR:N	2.35	0.41
2:G:455:ILE:HD13	2:G:457:ILE:O	2.20	0.41
2:G:638:VAL:HA	2:G:641:ILE:CG2	2.50	0.41
2:G:717:ILE:HG23	2:G:760:HIS:CE1	2.56	0.41
2:G:1258:ARG:O	2:G:1262:ILE:HG13	2.20	0.41
2:H:455:ILE:HG12	2:H:469:ARG:CG	2.49	0.41
2:H:705:LEU:CD1	2:H:716:VAL:HG13	2.46	0.41
2:H:732:TRP:CE2	2:H:750:MET:HE3	2.55	0.41
2:H:812:LYS:HD3	2:H:812:LYS:HA	1.82	0.41
2:H:844:VAL:HG22	2:H:858:ALA:HB2	2.01	0.41
2:H:1128:LYS:HG2	2:H:1181:VAL:HG22	2.02	0.41
2:H:1223:MET:HE2	2:H:1223:MET:HB2	1.99	0.41
2:I:38:ASN:HA	2:I:41:LEU:HD12	2.02	0.41
2:I:1273:GLU:HB3	2:I:1274:PRO:CD	2.50	0.41
2:I:1493:LEU:HB3	2:I:1494:PRO:HD2	2.02	0.41
2:I:1680:LEU:HD13	2:I:1687:ALA:CB	2.48	0.41
1:A:916:LEU:HD22	1:A:922:VAL:HG22	2.02	0.41
1:A:1720:ALA:O	1:A:1721:ARG:HG2	2.21	0.41
1:B:293:LYS:O	1:B:297:ILE:HG13	2.21	0.41
1:B:406:TRP:CE3	1:B:1619:GLU:HG3	2.55	0.41
1:B:444:ASN:CB	1:B:446:ALA:H	2.31	0.41
1:B:780:GLU:O	1:B:781:LEU:C	2.58	0.41
1:B:1257:LEU:HD23	1:B:1257:LEU:HA	1.76	0.41
1:B:1396:MET:O	1:B:1680:ARG:NH1	2.52	0.41
1:C:294:TYR:CZ	1:C:298:VAL:HG21	2.55	0.41
1:C:931:GLN:H	1:C:931:GLN:HG3	1.31	0.41
1:C:949:GLU:O	1:C:953:VAL:HG12	2.21	0.41
1:C:1215:VAL:O	1:C:1219:VAL:HG23	2.20	0.41
1:C:1477:ILE:N	1:C:1478:PRO:CD	2.83	0.41
2:G:73:GLU:OE2	2:G:76:LYS:HD2	2.20	0.41
2:G:421:LEU:HA	2:G:422:PRO:HD3	1.81	0.41
2:G:638:VAL:O	2:G:641:ILE:HG22	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:846:VAL:HG13	2:G:865:TRP:CD1	2.55	0.41
2:G:950:PHE:O	2:G:953:ARG:HB3	2.20	0.41
2:G:1842:VAL:HA	2:G:1843:PRO:HD2	1.86	0.41
2:H:60:LEU:O	2:H:60:LEU:HD23	2.20	0.41
2:H:827:VAL:HG21	2:H:840:THR:CG2	2.51	0.41
2:H:1071:LYS:HE3	2:H:1075:ASP:OD2	2.20	0.41
2:H:1175:LYS:HG3	2:H:1176:PRO:HD2	2.02	0.41
2:I:397:LYS:HB2	2:I:398:ALA:H	1.68	0.41
2:I:516:THR:O	2:I:519:ASN:HB2	2.19	0.41
2:I:559:PRO:HB3	2:I:564:GLU:HG3	2.02	0.41
2:I:566:HIS:ND1	2:I:567:PRO:HD2	2.35	0.41
2:I:599:PRO:HD2	3:I:3051:FMN:H6	2.02	0.41
2:I:601:THR:O	2:I:601:THR:CG2	2.68	0.41
2:I:846:VAL:CG1	2:I:865:TRP:NE1	2.82	0.41
2:I:1458:ASP:O	2:I:1462:LYS:HE3	2.21	0.41
2:I:2020:GLN:HA	2:I:2020:GLN:NE2	2.36	0.41
1:A:155:VAL:HG22	1:A:186:ILE:CG2	2.50	0.41
1:A:350:LEU:HB2	1:A:352:MET:HG2	2.03	0.41
1:A:1625:LEU:O	1:A:1627:PRO:HD3	2.21	0.41
1:B:12:ILE:O	1:B:16:GLU:HG2	2.20	0.41
1:B:187:LEU:CD2	1:B:201:PRO:HB2	2.51	0.41
1:B:495:LYS:HA	1:B:496:PRO:HD3	1.88	0.41
1:B:1244:GLY:HA3	1:B:1297:PRO:HD2	2.03	0.41
1:B:1418:VAL:N	1:B:1419:PRO:CD	2.83	0.41
1:C:400:ARG:CG	1:C:400:ARG:NH1	2.51	0.41
1:C:413:LEU:O	1:C:413:LEU:HG	2.19	0.41
1:C:503:ILE:HD11	1:C:947:LEU:HD22	2.03	0.41
1:C:1029:PRO:HA	1:C:1188:GLN:O	2.20	0.41
1:C:1239:HIS:CD2	1:C:1241:SER:H	2.38	0.41
2:G:517:HIS:CE1	2:G:540:ASP:O	2.73	0.41
2:G:612:ASN:C	2:G:614:GLY:H	2.24	0.41
2:G:938:TRP:CD1	2:G:944:ARG:HG3	2.56	0.41
2:G:1815:LEU:O	2:G:1821:VAL:HG23	2.20	0.41
2:G:1862:VAL:HG22	2:G:1863:ALA:N	2.36	0.41
2:H:503:ASP:OD2	2:H:513:GLY:N	2.52	0.41
2:H:601:THR:HG22	2:H:620:ALA:N	2.36	0.41
2:H:1213:LEU:O	2:H:1214:LEU:HD23	2.19	0.41
2:H:1281:PRO:O	2:H:1378:ILE:HG23	2.20	0.41
2:H:1320:LEU:HD12	2:H:1320:LEU:HA	1.85	0.41
2:H:1383:ASN:HD21	2:H:1418:ASP:HB3	1.84	0.41
2:H:1666:PHE:CD1	2:H:1814:ALA:CB	3.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:195:LEU:O	2:I:199:ILE:HG13	2.21	0.41
2:I:463:PHE:C	2:I:463:PHE:CD2	2.94	0.41
2:I:712:ALA:O	2:I:716:VAL:HG23	2.21	0.41
2:I:1388:LYS:HE3	2:I:1418:ASP:OD2	2.21	0.41
1:A:1338:GLU:H	1:A:1338:GLU:HG2	1.55	0.41
1:A:1666:THR:HG23	1:A:1669:ARG:HB2	2.01	0.41
1:B:50:SER:CB	1:B:51:PRO:CD	2.99	0.41
1:B:197:THR:HG22	1:B:198:PRO:O	2.20	0.41
1:B:644:THR:HG23	1:B:648:ASP:N	2.35	0.41
1:B:798:ASN:HA	1:B:801:ARG:HB2	2.02	0.41
1:B:1009:LEU:CD1	1:B:1445:MET:HE1	2.51	0.41
1:C:427:ASN:HB2	1:C:468:LEU:CD2	2.51	0.41
1:C:1208:VAL:HG13	1:C:1209:ASP:O	2.21	0.41
1:C:1391:ASP:OD2	1:C:1502:ARG:NH2	2.54	0.41
1:C:1543:GLY:HA2	1:C:1550:ASP:OD1	2.21	0.41
1:C:1599:ILE:HD11	1:C:1606:PRO:HD2	2.01	0.41
1:C:1685:TYR:CE1	2:I:993:GLN:OE1	2.73	0.41
2:G:1624:THR:HB	2:G:1642:THR:CG2	2.50	0.41
2:G:1642:THR:HB	2:G:1651:LEU:HB2	2.02	0.41
2:H:23:PRO:HG2	2:H:86:LEU:HD11	2.01	0.41
2:H:33:LEU:HD13	2:H:68:VAL:HG22	2.02	0.41
2:H:106:ALA:HB2	2:H:545:GLN:HG2	2.01	0.41
2:H:195:LEU:O	2:H:199:ILE:HG13	2.20	0.41
2:H:231:LEU:HA	2:H:236:ILE:HD12	2.03	0.41
2:H:433:VAL:N	2:H:434:PRO:CD	2.83	0.41
2:H:641:ILE:CD1	2:H:645:SER:HB2	2.50	0.41
2:H:719:ILE:HG12	2:H:719:ILE:H	1.62	0.41
2:H:740:HIS:CE1	2:H:852:GLU:OE1	2.74	0.41
2:H:896:ASN:O	2:H:1050:ARG:NH2	2.53	0.41
2:H:995:LEU:HB3	2:H:1000:ILE:CD1	2.50	0.41
2:H:1949:LYS:O	2:H:1953:VAL:HG23	2.21	0.41
2:H:1986:LYS:N	2:H:1987:PRO:CD	2.82	0.41
2:I:507:GLY:O	2:I:508:GLY:C	2.59	0.41
2:I:590:PRO:HA	2:I:591:PRO:HD3	1.79	0.41
2:I:846:VAL:CG2	2:I:866:LYS:HB2	2.51	0.41
2:I:1173:VAL:HG13	2:I:1568:HIS:HB2	2.02	0.41
2:I:1213:LEU:O	2:I:1214:LEU:HD23	2.20	0.41
2:I:1357:TYR:HD1	2:I:1406:VAL:HG22	1.85	0.41
2:I:1855:ILE:HB	2:I:1907:LEU:HD12	2.02	0.41
1:A:28:TRP:CZ2	1:A:53:LEU:HD22	2.56	0.41
1:A:36:LEU:O	1:A:76:ARG:NH1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:50:SER:CB	1:A:51:PRO:CD	2.97	0.41
1:A:280:GLU:O	1:A:284:LYS:HG3	2.21	0.41
1:A:612:GLU:O	1:A:615:SER:HB3	2.21	0.41
1:A:1233:GLU:CD	1:A:1680:ARG:HH21	2.24	0.41
1:A:1573:ILE:HG23	1:A:1627:PRO:HG3	2.03	0.41
1:B:709:ARG:O	1:B:714:VAL:HG21	2.21	0.41
1:B:906:LEU:HD23	1:B:906:LEU:HA	1.88	0.41
1:B:1029:PRO:HG2	1:B:1581:THR:O	2.20	0.41
1:B:1431:GLU:CG	1:B:1433:HIS:CE1	3.02	0.41
1:B:1673:TYR:CZ	1:B:1677:VAL:HG21	2.55	0.41
1:C:12:ILE:O	1:C:15:THR:HG23	2.20	0.41
1:C:1244:GLY:C	1:C:1327:CYS:HB2	2.41	0.41
2:G:339:LEU:HB2	2:G:386:LEU:HD22	2.03	0.41
2:G:441:LYS:HG2	2:G:445:LYS:HE3	2.02	0.41
2:G:1149:TRP:NE1	2:G:1213:LEU:HD12	2.35	0.41
2:G:1173:VAL:HG13	2:G:1568:HIS:HB2	2.02	0.41
2:G:1388:LYS:HE3	2:G:1418:ASP:OD2	2.20	0.41
2:G:2035:SER:OG	2:G:2037:PRO:HD2	2.21	0.41
2:H:258:PHE:N	2:H:258:PHE:HD1	2.18	0.41
2:H:339:LEU:HD23	2:H:419:ARG:O	2.20	0.41
2:H:1085:LEU:HD12	2:H:1085:LEU:HA	1.85	0.41
2:H:1214:LEU:HD11	2:H:1220:GLN:NE2	2.36	0.41
2:I:118:LYS:O	2:I:121:GLU:HB2	2.20	0.41
2:I:654:VAL:CG2	2:I:683:ALA:HB1	2.50	0.41
2:I:758:ARG:HD3	2:I:758:ARG:HA	1.86	0.41
2:I:1107:SER:HA	2:I:1108:PRO:HD3	1.96	0.41
2:I:1348:LEU:HD12	2:I:1348:LEU:HA	1.86	0.41
2:I:1503:ILE:HG22	2:I:1504:VAL:C	2.41	0.41
2:I:1819:ALA:CA	2:I:2005:ARG:HH11	2.33	0.41
1:A:413:LEU:HB2	1:A:439:ILE:HD13	2.03	0.41
1:A:681:THR:HA	1:A:706:THR:OG1	2.21	0.41
1:A:706:THR:HB	1:A:737:PHE:HB3	2.02	0.41
1:A:1209:ASP:OD1	1:A:1210:PRO:HD2	2.21	0.41
1:B:32:GLN:HE22	1:B:57:ALA:CA	2.34	0.41
1:B:91:THR:HA	1:B:92:PRO:HD3	1.81	0.41
1:B:140:ILE:CG2	1:B:141:ALA:N	2.83	0.41
1:B:620:SER:HB2	1:B:668:PHE:HB3	2.02	0.41
1:B:1066:ASN:HD22	1:B:1071:PRO:HA	1.86	0.41
1:B:1304:ALA:O	1:B:1307:THR:CG2	2.69	0.41
1:B:1495:ASN:HD22	1:B:1495:ASN:HA	1.65	0.41
1:C:11:HIS:HE1	2:I:1996:ILE:O	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:496:PRO:HB2	1:C:519:VAL:HG12	2.02	0.41
2:G:159:ILE:HG12	2:G:512:LEU:HD23	2.03	0.41
2:G:270:ALA:O	2:G:459:VAL:HA	2.21	0.41
2:G:425:SER:HA	2:G:426:PRO:HD3	1.79	0.41
2:G:1031:LYS:O	2:G:1032:ASP:C	2.57	0.41
2:G:1070:ILE:HD13	2:G:1070:ILE:O	2.21	0.41
2:G:1383:ASN:HD21	2:G:1418:ASP:HB3	1.85	0.41
2:H:159:ILE:HG12	2:H:512:LEU:HD23	2.02	0.41
2:H:1217:ASN:HD22	2:H:1217:ASN:HA	1.66	0.41
2:H:1815:LEU:O	2:H:1821:VAL:HG23	2.21	0.41
2:H:1873:TYR:CE2	2:H:1940:LEU:HD21	2.56	0.41
2:H:2010:TYR:O	2:H:2012:PRO:HD3	2.20	0.41
2:I:463:PHE:HD2	2:I:463:PHE:O	2.04	0.41
2:I:582:LYS:HE2	2:I:761:PRO:O	2.21	0.41
2:I:1335:ILE:O	2:I:1338:ILE:HG12	2.20	0.41
2:I:1868:GLN:HG3	2:I:1898:TYR:HH	1.85	0.41
2:I:1889:VAL:HG13	2:I:1977:HIS:HB3	2.00	0.41
2:I:1908:ASP:HA	2:I:1911:THR:HG22	2.03	0.41
1:A:41:THR:HG21	2:G:1663:THR:HB	2.02	0.41
1:A:197:THR:HG22	1:A:198:PRO:O	2.21	0.41
1:A:238:PRO:CG	1:A:283:ALA:HB2	2.51	0.41
1:A:330:GLU:O	1:A:330:GLU:HG2	2.20	0.41
1:A:427:ASN:HB2	1:A:468:LEU:CD2	2.51	0.41
1:A:983:GLN:OE1	1:A:1087:LYS:HD3	2.21	0.41
1:A:1146:HIS:HD2	1:A:1146:HIS:O	2.04	0.41
1:B:403:ASP:HB2	1:B:1613:ASN:ND2	2.14	0.41
1:B:949:GLU:O	1:B:953:VAL:HG12	2.21	0.41
1:B:979:GLN:HA	2:H:968:GLN:OE1	2.21	0.41
1:B:1019:ILE:HG13	1:B:1316:VAL:HG13	2.03	0.41
1:B:1047:LEU:O	1:B:1051:VAL:HG23	2.21	0.41
1:B:1539:ALA:O	1:B:1574:GLY:HA2	2.20	0.41
1:C:526:VAL:HG12	1:C:626:VAL:HG11	2.03	0.41
1:C:889:GLU:C	1:C:891:MET:H	2.23	0.41
1:C:906:LEU:HD23	1:C:906:LEU:HA	1.91	0.41
1:C:933:VAL:HA	1:C:934:PRO:HD3	1.65	0.41
1:C:988:ILE:H	1:C:988:ILE:HG12	1.73	0.41
2:G:486:LEU:HA	2:G:487:PRO:HD3	1.91	0.41
2:G:503:ASP:OD2	2:G:513:GLY:N	2.51	0.41
2:G:643:LYS:HA	2:G:1163:LYS:HG2	2.03	0.41
2:G:705:LEU:HA	2:G:705:LEU:HD23	1.72	0.41
2:G:735:GLY:O	2:G:741:HIS:CD2	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:754:TYR:CG	2:G:794:MET:CG	3.04	0.41
2:G:888:ARG:O	2:G:892:ILE:HB	2.20	0.41
2:G:992:GLU:OE1	2:G:992:GLU:HA	2.20	0.41
2:G:1239:LEU:O	2:G:1254:VAL:HG23	2.20	0.41
2:G:1501:ILE:HD13	2:G:1501:ILE:HG21	1.79	0.41
2:H:236:ILE:C	2:H:236:ILE:HD13	2.41	0.41
2:H:355:LYS:HE2	2:H:355:LYS:HB3	1.65	0.41
2:H:462:THR:HB	2:H:482:CYS:SG	2.61	0.41
2:H:624:TYR:HB2	2:H:630:MET:HE3	2.02	0.41
2:H:641:ILE:CG1	2:H:645:SER:HB2	2.45	0.41
2:H:669:LEU:HD12	2:H:669:LEU:HA	1.66	0.41
2:H:717:ILE:CG2	2:H:760:HIS:CE1	3.04	0.41
2:H:846:VAL:HG13	2:H:865:TRP:CD1	2.56	0.41
2:H:873:PHE:CE1	2:H:1026:GLU:HB2	2.56	0.41
2:H:1004:LEU:HD21	2:H:1019:PRO:HB2	2.03	0.41
2:H:1431:TYR:CE1	2:H:1526:THR:CG2	3.04	0.41
2:H:1543:ASP:OD1	2:H:1623:LYS:HG2	2.21	0.41
2:H:1662:THR:HB	2:H:1799:PRO:HG2	2.02	0.41
2:H:1739:GLU:HB2	2:H:1987:PRO:CB	2.30	0.41
2:H:1778:GLN:CB	2:H:1831:VAL:HG13	2.51	0.41
2:H:1989:LYS:HZ1	2:H:2037:PRO:HG2	1.86	0.41
2:I:369:SER:C	2:I:370:LEU:HD23	2.41	0.41
2:I:421:LEU:HA	2:I:422:PRO:HD3	1.79	0.41
2:I:643:LYS:HA	2:I:1163:LYS:HG2	2.01	0.41
2:I:666:ILE:HG22	2:I:698:LEU:HD22	2.03	0.41
2:I:667:LYS:HD2	2:I:697:THR:CG2	2.35	0.41
2:I:754:TYR:CD1	2:I:794:MET:HG2	2.56	0.41
2:I:807:ILE:HA	2:I:818:LYS:HG2	2.02	0.41
2:I:1219:ILE:H	2:I:1219:ILE:HG12	1.63	0.41
2:I:1327:ILE:O	2:I:1331:TRP:HB2	2.21	0.41
2:I:1579:ILE:CD1	2:I:1615:MET:SD	3.09	0.41
1:A:32:GLN:O	1:A:36:LEU:HB2	2.21	0.41
1:A:253:ARG:O	1:A:254:TRP:CD1	2.74	0.41
1:A:455:ILE:HD13	1:A:455:ILE:HA	1.84	0.41
1:A:601:VAL:O	1:A:602:GLU:C	2.59	0.41
1:A:780:GLU:O	1:A:781:LEU:C	2.59	0.41
1:B:982:ILE:HD11	2:H:955:GLU:OE2	2.21	0.41
1:B:998:TYR:CD2	1:B:1667:GLU:HG3	2.56	0.41
1:B:1194:ASN:OD1	1:B:1196:LYS:HB2	2.21	0.41
1:C:420:ILE:CD1	1:C:472:LEU:HD23	2.51	0.41
1:C:658:LEU:HD13	1:C:916:LEU:HD12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1244:GLY:HA3	1:C:1297:PRO:HD2	2.02	0.41
1:C:1443:LEU:HD23	1:C:1443:LEU:HA	1.76	0.41
2:G:7:ARG:NH1	2:G:24:THR:CG2	2.79	0.41
2:G:748:THR:CB	2:G:749:PRO:HD3	2.47	0.41
2:G:1830:VAL:HA	2:G:1991:PHE:HE2	1.86	0.41
2:G:1834:ARG:NH1	2:G:1834:ARG:CG	2.68	0.41
2:G:1890:ASN:HD22	2:G:1890:ASN:HA	1.69	0.41
2:H:538:ASP:HB2	2:H:540:ASP:HB2	2.03	0.41
2:H:603:SER:HA	2:H:604:PRO:HD2	1.95	0.41
2:H:879:LYS:HD3	2:H:879:LYS:HA	1.71	0.41
2:H:1063:THR:O	2:H:1063:THR:HG22	2.21	0.41
2:I:7:ARG:NH1	2:I:24:THR:CG2	2.80	0.41
2:I:177:TYR:CD1	2:I:188:ILE:HG21	2.56	0.41
2:I:512:LEU:O	2:I:516:THR:HG23	2.20	0.41
2:I:587:ILE:HD11	2:I:589:ARG:HB2	2.03	0.41
2:I:1129:ALA:HB2	2:I:1138:TRP:CH2	2.55	0.41
2:I:1624:THR:CB	2:I:1642:THR:HG23	2.48	0.41
2:I:2035:SER:OG	2:I:2037:PRO:HD2	2.21	0.41
2:I:2046:GLU:C	2:I:2048:TYR:N	2.73	0.41
1:A:24:SER:O	2:G:1977:HIS:HD2	2.04	0.40
1:A:32:GLN:HE21	1:A:57:ALA:HB2	1.85	0.40
1:A:232:LEU:O	1:A:236:LYS:HB2	2.21	0.40
1:A:930:LEU:HD23	1:A:930:LEU:HA	1.70	0.40
1:B:483:VAL:O	1:B:483:VAL:HG12	2.21	0.40
1:B:827:SER:HA	1:B:828:PRO:HD3	1.73	0.40
1:B:1274:ILE:H	1:B:1274:ILE:HG13	1.55	0.40
1:C:1131:LEU:HD12	1:C:1131:LEU:HA	1.69	0.40
1:C:1194:ASN:OD1	1:C:1196:LYS:HB2	2.21	0.40
1:C:1353:LEU:HD23	1:C:1353:LEU:HA	1.62	0.40
2:G:248:HIS:CE1	2:G:531:GLY:HA2	2.56	0.40
2:G:439:ILE:HD12	2:G:484:ILE:CD1	2.50	0.40
2:G:524:GLY:HA2	2:G:558:ASN:O	2.22	0.40
2:G:1878:VAL:CG1	2:G:1910:VAL:HG22	2.33	0.40
2:H:44:PRO:HA	2:H:53:GLU:OE2	2.21	0.40
2:H:751:LEU:HD11	2:H:789:PHE:CD1	2.55	0.40
2:H:805:VAL:O	2:H:805:VAL:HG12	2.20	0.40
2:H:866:LYS:O	2:H:870:GLU:HG3	2.19	0.40
2:H:888:ARG:O	2:H:892:ILE:HB	2.21	0.40
2:H:1168:ASN:HA	2:H:1169:PRO:HD3	1.79	0.40
2:H:1173:VAL:HG13	2:H:1568:HIS:HB2	2.03	0.40
2:H:1270:TRP:HZ3	2:H:1347:LEU:HD21	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1387:GLY:HA2	2:H:1414:GLY:O	2.21	0.40
2:H:1886:VAL:HG22	2:H:1906:ALA:HB1	2.02	0.40
2:I:595:PRO:HD3	2:I:800:LEU:HB2	2.02	0.40
2:I:641:ILE:HG12	2:I:645:SER:CB	2.49	0.40
2:I:800:LEU:H	2:I:800:LEU:HD23	1.85	0.40
2:I:827:VAL:HG21	2:I:840:THR:CG2	2.51	0.40
2:I:1219:ILE:HB	2:I:1240:TYR:HB2	2.03	0.40
2:I:1339:PHE:N	2:I:1340:PRO:CD	2.85	0.40
2:I:1642:THR:HB	2:I:1651:LEU:HB2	2.03	0.40
2:I:1815:LEU:O	2:I:1821:VAL:HG23	2.20	0.40
2:I:2042:ILE:HG12	2:I:2042:ILE:H	1.36	0.40
1:A:800:LEU:HA	1:A:800:LEU:HD23	1.84	0.40
1:A:874:GLY:O	1:A:875:THR:C	2.60	0.40
1:A:908:LEU:O	1:A:913:VAL:HG22	2.21	0.40
1:B:1126:ILE:CD1	1:B:1172:THR:HG22	2.51	0.40
1:B:1557:ILE:HD11	1:B:1642:THR:HG21	2.03	0.40
1:C:1050:CYS:HB3	1:C:1089:VAL:CG1	2.51	0.40
1:C:1408:ALA:O	1:C:1651:GLY:HA2	2.21	0.40
1:C:1585:LYS:H	1:C:1585:LYS:CD	2.34	0.40
1:C:1717:ASP:HA	1:C:1718:PRO:HD3	1.85	0.40
2:G:44:PRO:HA	2:G:53:GLU:OE2	2.21	0.40
2:G:159:ILE:HD11	2:G:512:LEU:CD2	2.52	0.40
2:G:582:LYS:HE2	2:G:761:PRO:O	2.22	0.40
2:G:827:VAL:HG12	2:G:828:PRO:O	2.21	0.40
2:G:1018:VAL:HA	2:G:1019:PRO:HD3	1.92	0.40
2:G:1043:VAL:O	2:G:1044:VAL:C	2.60	0.40
2:G:1491:VAL:HB	2:G:1501:ILE:CD1	2.51	0.40
2:G:1905:ARG:HA	2:G:1958:LEU:CD2	2.51	0.40
2:G:1974:VAL:HA	2:G:1975:PRO:HD3	1.92	0.40
2:G:2049:GLU:O	2:G:2050:GLN:C	2.60	0.40
2:H:585:LYS:HD2	2:H:585:LYS:HA	1.88	0.40
2:H:1044:VAL:HG21	2:H:1050:ARG:NE	2.37	0.40
2:I:259:THR:HG22	2:I:262:GLU:H	1.85	0.40
2:I:1495:THR:O	2:I:1496:LYS:HB2	2.20	0.40
1:A:460:GLU:CG	1:A:470:LYS:HD3	2.49	0.40
1:B:1154:ILE:O	1:B:1154:ILE:HG13	2.22	0.40
1:C:822:VAL:HG12	1:C:824:LEU:CD2	2.49	0.40
2:G:780:TYR:HB2	2:G:799:PHE:CE2	2.56	0.40
2:G:1100:VAL:HG21	2:G:1147:ILE:HD13	2.04	0.40
2:G:1428:GLU:CG	2:G:1468:THR:HG22	2.51	0.40
2:H:259:THR:HG22	2:H:262:GLU:H	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:517:HIS:CE1	2:H:540:ASP:O	2.74	0.40
2:H:720:ALA:HA	2:H:728:ILE:HD11	2.04	0.40
2:H:753:MET:O	2:H:757:ILE:HG13	2.21	0.40
2:H:1589:VAL:HG21	2:H:1651:LEU:HD12	2.02	0.40
2:I:135:ARG:N	2:I:136:PRO:HD3	2.36	0.40
2:I:441:LYS:HG2	2:I:445:LYS:HE3	2.02	0.40
2:I:1383:ASN:HD21	2:I:1418:ASP:CB	2.34	0.40
2:I:1616:VAL:HG22	2:I:1650:VAL:HG11	2.03	0.40
2:I:1847:LEU:H	2:I:1847:LEU:CD1	2.14	0.40
2:I:2039:LYS:HA	2:I:2042:ILE:HG13	2.03	0.40
1:A:16:GLU:HA	1:A:16:GLU:OE2	2.21	0.40
1:A:157:HIS:CE1	1:A:269:LEU:HD11	2.57	0.40
1:A:719:GLN:HG3	1:A:720:SER:N	2.36	0.40
1:A:1153:ASP:OD2	1:B:359:ARG:NH2	2.55	0.40
1:A:1418:VAL:N	1:A:1419:PRO:CD	2.84	0.40
1:A:1705:PRO:HB2	1:A:1733:PHE:CD1	2.56	0.40
1:B:20:TYR:HE1	2:H:2035:SER:HB2	1.87	0.40
1:B:21:GLN:O	2:H:1977:HIS:CD2	2.75	0.40
1:B:453:TYR:O	1:B:457:ASN:HB2	2.21	0.40
1:B:1448:ARG:HD2	1:B:1508:TRP:O	2.21	0.40
1:C:35:PHE:HA	1:C:39:PHE:HD2	1.86	0.40
1:C:1014:ASP:H	1:C:1510:ASN:ND2	2.03	0.40
1:C:1705:PRO:HB2	1:C:1733:PHE:CD1	2.56	0.40
2:G:119:THR:HG22	2:G:120:LYS:N	2.36	0.40
2:G:430:HIS:CE1	2:G:431:LEU:HD13	2.57	0.40
2:G:827:VAL:HG21	2:G:840:THR:HG22	2.04	0.40
2:G:1352:HIS:CD2	2:G:1410:PHE:CD2	3.09	0.40
2:G:1359:MET:HB3	2:G:1606:ARG:NH2	2.36	0.40
2:G:1755:ILE:HD11	2:G:1762:TYR:HB2	2.02	0.40
2:H:7:ARG:HA	2:H:8:PRO:HD3	1.91	0.40
2:H:184:VAL:HG11	2:H:247:ALA:HB1	2.04	0.40
2:H:298:LYS:HG2	2:H:448:VAL:CG2	2.45	0.40
2:H:499:THR:CG2	2:H:500:HIS:CD2	3.05	0.40
2:H:624:TYR:CD1	2:H:630:MET:HE2	2.56	0.40
2:H:804:ARG:NH2	2:H:1068:GLU:OE1	2.54	0.40
2:H:1270:TRP:C	2:H:1271:ILE:HD13	2.42	0.40
2:H:1609:THR:O	2:H:1653:GLY:HA3	2.21	0.40
2:H:1775:GLN:H	2:H:1775:GLN:HG3	1.68	0.40
2:H:1873:TYR:CE1	2:H:1877:ARG:NH2	2.83	0.40
2:H:2036:GLU:HB2	2:H:2037:PRO:CD	2.47	0.40
2:I:499:THR:CG2	2:I:500:HIS:CD2	3.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:638:VAL:HG22	2:I:675:PRO:HG2	2.03	0.40
2:I:912:ARG:HB2	2:I:916:THR:HG23	2.04	0.40
2:I:1085:LEU:HA	2:I:1085:LEU:HD12	1.82	0.40
2:I:1271:ILE:HG22	2:I:1273:GLU:HB2	2.03	0.40
2:I:1793:LYS:HA	2:I:1798:ILE:HG12	2.04	0.40
2:I:1889:VAL:HG21	2:I:1901:ALA:HB3	2.04	0.40
2:I:1967:ILE:HA	2:I:1968:PRO:HD3	1.94	0.40
1:A:82:SER:OG	1:A:83:LYS:HG3	2.20	0.40
1:A:626:VAL:HG23	1:A:664:GLU:OE2	2.21	0.40
1:A:1280:ILE:HD13	1:A:1302:VAL:HG22	2.03	0.40
1:A:1406:MET:CE	1:A:1428:THR:HB	2.51	0.40
1:A:1642:THR:HG22	1:A:1652:GLN:HG3	2.03	0.40
1:A:1657:HIS:HA	1:A:1658:PRO:HD3	1.92	0.40
1:B:294:TYR:CZ	1:B:298:VAL:HG21	2.57	0.40
1:B:413:LEU:O	1:B:413:LEU:HG	2.21	0.40
1:B:636:PRO:HB2	1:B:638:LEU:O	2.21	0.40
1:B:1232:TYR:CE2	1:B:1701:LYS:HD2	2.56	0.40
1:C:32:GLN:HE22	1:C:57:ALA:N	2.19	0.40
1:C:1195:ALA:CB	1:C:1213:LEU:HD13	2.51	0.40
2:G:142:ASN:CB	2:G:550:VAL:HG13	2.52	0.40
2:G:236:ILE:HG12	2:G:240:LEU:HD22	2.02	0.40
2:G:320:PRO:HA	2:G:321:PRO:HD3	1.90	0.40
2:G:338:MET:HG3	2:G:423:VAL:HG21	2.04	0.40
2:G:682:GLY:HA3	3:G:3051:FMN:O2	2.20	0.40
2:G:751:LEU:HD11	2:G:789:PHE:CG	2.57	0.40
2:G:1128:LYS:HG2	2:G:1181:VAL:HG22	2.03	0.40
2:G:1427:VAL:HG22	2:G:1469:GLU:CG	2.51	0.40
2:H:57:PRO:O	2:H:61:VAL:HG23	2.22	0.40
2:H:389:LEU:HD22	2:H:393:LEU:HG	2.03	0.40
2:H:441:LYS:O	2:H:445:LYS:HG3	2.22	0.40
2:H:723:HIS:ND1	2:H:723:HIS:N	2.70	0.40
2:H:949:ASP:HB3	2:H:1006:MET:CE	2.47	0.40
2:H:1880:LYS:HB2	2:H:1880:LYS:HE3	1.92	0.40
2:I:246:LEU:HA	2:I:246:LEU:HD12	1.78	0.40
2:I:247:ALA:O	2:I:251:VAL:HG13	2.21	0.40
2:I:283:ILE:HD12	2:I:283:ILE:HA	1.94	0.40
2:I:290:GLU:OE1	2:I:290:GLU:N	2.41	0.40
2:I:543:PHE:CB	2:I:545:GLN:NE2	2.82	0.40
2:I:598:THR:CB	2:I:599:PRO:HD3	2.52	0.40
2:I:732:TRP:HB2	2:I:750:MET:HE1	2.03	0.40
2:I:1100:VAL:HG21	2:I:1147:ILE:HD12	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1352:HIS:CE1	2:I:1583:MET:CE	2.86	0.40
2:I:2026:PHE:HD2	2:I:2045:TRP:CZ3	2.39	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	1603/1887 (85%)	1498 (93%)	91 (6%)	14 (1%)	17	52
1	B	1603/1887 (85%)	1495 (93%)	95 (6%)	13 (1%)	19	54
1	C	1603/1887 (85%)	1498 (93%)	90 (6%)	15 (1%)	17	52
2	G	2029/2051 (99%)	1841 (91%)	163 (8%)	25 (1%)	13	44
2	H	2029/2051 (99%)	1841 (91%)	166 (8%)	22 (1%)	14	46
2	I	2029/2051 (99%)	1837 (90%)	168 (8%)	24 (1%)	13	44
All	All	10896/11814 (92%)	10010 (92%)	773 (7%)	113 (1%)	15	49

All (113) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	504	ASP
1	A	538	GLU
1	A	605	LEU
1	A	834	GLY
1	A	1252	GLY
1	A	1585	LYS
1	B	504	ASP
1	B	538	GLU
1	B	605	LEU
1	B	834	GLY

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Mol	Chain	Res	Type
1	B	1252	GLY
1	B	1585	LYS
1	C	504	ASP
1	C	538	GLU
1	C	605	LEU
1	C	834	GLY
1	C	1252	GLY
1	C	1585	LYS
2	G	521	ASP
2	G	1418	ASP
2	G	1955	PRO
2	H	521	ASP
2	H	1418	ASP
2	H	1955	PRO
2	I	521	ASP
2	I	1418	ASP
2	I	1955	PRO
1	A	179	LYS
1	A	1608	ASN
1	B	179	LYS
1	B	1608	ASN
1	C	179	LYS
1	C	1608	ASN
2	G	203	LEU
2	G	1044	VAL
2	G	1177	SER
2	G	1722	GLY
2	H	203	LEU
2	H	1044	VAL
2	H	1177	SER
2	H	1722	GLY
2	I	203	LEU
2	I	1044	VAL
2	I	1177	SER
2	I	1722	GLY
1	B	1545	SER
2	G	112	ASN
2	G	1101	GLU
2	G	2034	GLY
2	H	112	ASN
2	H	1101	GLU
2	I	374	ALA

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Mol	Chain	Res	Type
2	I	1092	ASP
2	I	1101	GLU
2	I	2034	GLY
1	A	1545	SER
2	G	25	ALA
2	G	26	SER
2	G	374	ALA
2	G	742	SER
2	G	769	SER
2	G	1092	ASP
2	G	1510	ALA
2	H	26	SER
2	H	374	ALA
2	H	742	SER
2	H	823	ALA
2	H	1510	ALA
2	H	2034	GLY
2	I	26	SER
2	I	112	ASN
2	I	742	SER
1	A	1130	ASP
1	A	1477	ILE
1	A	1536	LEU
1	B	970	GLY
1	B	1477	ILE
1	C	1477	ILE
1	C	1545	SER
2	H	769	SER
2	H	1092	ASP
2	I	25	ALA
2	I	769	SER
2	I	823	ALA
2	I	1510	ALA
1	A	970	GLY
1	C	970	GLY
1	C	1536	LEU
2	G	574	SER
2	G	1340	PRO
2	H	136	PRO
2	I	136	PRO
2	I	574	SER
1	A	178	GLY

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Mol	Chain	Res	Type
1	B	178	GLY
1	C	178	GLY
2	G	136	PRO
2	G	335	PRO
2	H	335	PRO
2	G	1956	ARG
2	H	772	GLY
1	C	1240	VAL
2	G	772	GLY
2	I	772	GLY
2	I	1340	PRO
2	I	1956	ARG
1	B	726	GLY
1	C	726	GLY
2	G	470	VAL
2	G	1176	PRO
2	H	470	VAL
2	H	2012	PRO
2	I	335	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 X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	1366/1565 (87%)	1220 (89%)	146 (11%)	6	26
1	B	1366/1565 (87%)	1222 (90%)	144 (10%)	7	26
1	C	1366/1565 (87%)	1224 (90%)	142 (10%)	7	27
2	G	1772/1789 (99%)	1564 (88%)	208 (12%)	5	22
2	H	1772/1789 (99%)	1564 (88%)	208 (12%)	5	22
2	I	1772/1789 (99%)	1562 (88%)	210 (12%)	5	20
All	All	9414/10062 (94%)	8356 (89%)	1058 (11%)	6	24

All (1058) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	14	LEU
1	A	15	THR
1	A	21	GLN
1	A	22	PHE
1	A	145	VAL
1	A	149	LEU
1	A	158	LYS
1	A	165	SER
1	A	171	THR
1	A	202	GLU
1	A	217	PHE
1	A	242	THR
1	A	253	ARG
1	A	328	LEU
1	A	331	ILE
1	A	332	THR
1	A	375	LEU
1	A	378	LEU
1	A	385	PHE
1	A	390	VAL
1	A	392	THR
1	A	400	ARG
1	A	412	SER
1	A	413	LEU
1	A	415	SER
1	A	416	LEU
1	A	428	VAL
1	A	431	GLU
1	A	432	VAL
1	A	435	GLU
1	A	447	LEU
1	A	457	ASN
1	A	460	GLU
1	A	461	THR
1	A	484	LEU
1	A	489	VAL
1	A	493	VAL
1	A	506	ASN
1	A	509	ILE
1	A	527	GLN
1	A	529	MET
1	A	536	THR
1	A	599	MET

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Mol	Chain	Res	Type
1	A	600	ASP
1	A	603	ASP
1	A	606	ASP
1	A	607	LYS
1	A	615	SER
1	A	621	THR
1	A	622	ILE
1	A	625	THR
1	A	629	THR
1	A	635	ILE
1	A	644	THR
1	A	648	ASP
1	A	654	GLN
1	A	711	SER
1	A	719	GLN
1	A	728	LYS
1	A	731	THR
1	A	732	LEU
1	A	748	LEU
1	A	749	ILE
1	A	776	GLU
1	A	782	GLU
1	A	793	ARG
1	A	797	THR
1	A	806	VAL
1	A	817	THR
1	A	825	PRO
1	A	852	ARG
1	A	860	ASN
1	A	864	VAL
1	A	873	ARG
1	A	881	ASN
1	A	891	MET
1	A	913	VAL
1	A	930	LEU
1	A	933	VAL
1	A	947	LEU
1	A	949	GLU
1	A	953	VAL
1	A	964	GLU
1	A	980	VAL
1	A	1016	GLU

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Mol	Chain	Res	Type
1	A	1020	VAL
1	A	1022	THR
1	A	1047	LEU
1	A	1056	ILE
1	A	1070	ARG
1	A	1087	LYS
1	A	1095	THR
1	A	1101	SER
1	A	1125	VAL
1	A	1127	VAL
1	A	1131	LEU
1	A	1172	THR
1	A	1173	LEU
1	A	1179	LEU
1	A	1184	LEU
1	A	1196	LYS
1	A	1197	THR
1	A	1208	VAL
1	A	1218	SER
1	A	1226	SER
1	A	1229	THR
1	A	1251	MET
1	A	1255	SER
1	A	1274	ILE
1	A	1283	MET
1	A	1307	THR
1	A	1308	SER
1	A	1327	CYS
1	A	1338	GLU
1	A	1367	ARG
1	A	1372	THR
1	A	1384	ILE
1	A	1385	GLN
1	A	1392	LEU
1	A	1414	ILE
1	A	1426	LEU
1	A	1442	ASN
1	A	1465	ASN
1	A	1479	SER
1	A	1489	ARG
1	A	1502	ARG
1	A	1515	ARG

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Mol	Chain	Res	Type
1	A	1522	LEU
1	A	1523	ARG
1	A	1532	THR
1	A	1533	ILE
1	A	1549	ASN
1	A	1556	THR
1	A	1566	ARG
1	A	1580	LEU
1	A	1585	LYS
1	A	1612	ASP
1	A	1625	LEU
1	A	1644	PHE
1	A	1665	ILE
1	A	1666	THR
1	A	1692	MET
1	A	1693	ILE
1	A	1707	THR
1	A	1709	GLU
1	A	1721	ARG
1	B	14	LEU
1	B	15	THR
1	B	21	GLN
1	B	22	PHE
1	B	145	VAL
1	B	149	LEU
1	B	158	LYS
1	B	165	SER
1	B	171	THR
1	B	202	GLU
1	B	217	PHE
1	B	242	THR
1	B	253	ARG
1	B	300	VAL
1	B	328	LEU
1	B	331	ILE
1	B	332	THR
1	B	375	LEU
1	B	385	PHE
1	B	390	VAL
1	B	392	THR
1	B	400	ARG
1	B	401	THR

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Mol	Chain	Res	Type
1	B	412	SER
1	B	413	LEU
1	B	415	SER
1	B	416	LEU
1	B	428	VAL
1	B	432	VAL
1	B	435	GLU
1	B	447	LEU
1	B	457	ASN
1	B	460	GLU
1	B	461	THR
1	B	484	LEU
1	B	489	VAL
1	B	493	VAL
1	B	499	PRO
1	B	506	ASN
1	B	509	ILE
1	B	510	THR
1	B	527	GLN
1	B	529	MET
1	B	536	THR
1	B	599	MET
1	B	600	ASP
1	B	603	ASP
1	B	606	ASP
1	B	607	LYS
1	B	615	SER
1	B	621	THR
1	B	622	ILE
1	B	625	THR
1	B	629	THR
1	B	635	ILE
1	B	644	THR
1	B	648	ASP
1	B	711	SER
1	B	719	GLN
1	B	728	LYS
1	B	731	THR
1	B	732	LEU
1	B	748	LEU
1	B	749	ILE
1	B	776	GLU

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Mol	Chain	Res	Type
1	B	782	GLU
1	B	793	ARG
1	B	797	THR
1	B	806	VAL
1	B	852	ARG
1	B	860	ASN
1	B	864	VAL
1	B	873	ARG
1	B	881	ASN
1	B	891	MET
1	B	913	VAL
1	B	930	LEU
1	B	933	VAL
1	B	947	LEU
1	B	949	GLU
1	B	953	VAL
1	B	964	GLU
1	B	980	VAL
1	B	1016	GLU
1	B	1020	VAL
1	B	1047	LEU
1	B	1056	ILE
1	B	1070	ARG
1	B	1078	SER
1	B	1080	THR
1	B	1087	LYS
1	B	1095	THR
1	B	1101	SER
1	B	1125	VAL
1	B	1127	VAL
1	B	1131	LEU
1	B	1172	THR
1	B	1173	LEU
1	B	1179	LEU
1	B	1184	LEU
1	B	1196	LYS
1	B	1197	THR
1	B	1208	VAL
1	B	1218	SER
1	B	1229	THR
1	B	1251	MET
1	B	1255	SER

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Mol	Chain	Res	Type
1	B	1274	ILE
1	B	1283	MET
1	B	1307	THR
1	B	1308	SER
1	B	1327	CYS
1	B	1338	GLU
1	B	1367	ARG
1	B	1372	THR
1	B	1384	ILE
1	B	1385	GLN
1	B	1392	LEU
1	B	1414	ILE
1	B	1426	LEU
1	B	1442	ASN
1	B	1465	ASN
1	B	1479	SER
1	B	1502	ARG
1	B	1515	ARG
1	B	1522	LEU
1	B	1523	ARG
1	B	1532	THR
1	B	1533	ILE
1	B	1549	ASN
1	B	1556	THR
1	B	1566	ARG
1	B	1577	GLN
1	B	1580	LEU
1	B	1585	LYS
1	B	1612	ASP
1	B	1625	LEU
1	B	1665	ILE
1	B	1666	THR
1	B	1692	MET
1	B	1693	ILE
1	B	1707	THR
1	B	1709	GLU
1	B	1721	ARG
1	C	14	LEU
1	C	15	THR
1	C	21	GLN
1	C	22	PHE
1	C	145	VAL

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Mol	Chain	Res	Type
1	C	149	LEU
1	C	158	LYS
1	C	165	SER
1	C	171	THR
1	C	202	GLU
1	C	217	PHE
1	C	242	THR
1	C	253	ARG
1	C	328	LEU
1	C	331	ILE
1	C	332	THR
1	C	375	LEU
1	C	385	PHE
1	C	390	VAL
1	C	392	THR
1	C	400	ARG
1	C	412	SER
1	C	413	LEU
1	C	415	SER
1	C	416	LEU
1	C	428	VAL
1	C	431	GLU
1	C	432	VAL
1	C	435	GLU
1	C	447	LEU
1	C	457	ASN
1	C	460	GLU
1	C	461	THR
1	C	484	LEU
1	C	489	VAL
1	C	493	VAL
1	C	506	ASN
1	C	509	ILE
1	C	527	GLN
1	C	529	MET
1	C	536	THR
1	C	599	MET
1	C	600	ASP
1	C	603	ASP
1	C	606	ASP
1	C	607	LYS
1	C	615	SER

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Mol	Chain	Res	Type
1	C	621	THR
1	C	622	ILE
1	C	625	THR
1	C	629	THR
1	C	635	ILE
1	C	644	THR
1	C	648	ASP
1	C	711	SER
1	C	719	GLN
1	C	728	LYS
1	C	731	THR
1	C	732	LEU
1	C	748	LEU
1	C	749	ILE
1	C	776	GLU
1	C	782	GLU
1	C	797	THR
1	C	806	VAL
1	C	852	ARG
1	C	860	ASN
1	C	864	VAL
1	C	873	ARG
1	C	881	ASN
1	C	891	MET
1	C	913	VAL
1	C	930	LEU
1	C	933	VAL
1	C	947	LEU
1	C	949	GLU
1	C	951	SER
1	C	953	VAL
1	C	980	VAL
1	C	1016	GLU
1	C	1020	VAL
1	C	1047	LEU
1	C	1056	ILE
1	C	1070	ARG
1	C	1078	SER
1	C	1087	LYS
1	C	1095	THR
1	C	1101	SER
1	C	1125	VAL

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Mol	Chain	Res	Type
1	C	1127	VAL
1	C	1131	LEU
1	C	1172	THR
1	C	1173	LEU
1	C	1179	LEU
1	C	1184	LEU
1	C	1196	LYS
1	C	1197	THR
1	C	1208	VAL
1	C	1218	SER
1	C	1229	THR
1	C	1251	MET
1	C	1255	SER
1	C	1274	ILE
1	C	1283	MET
1	C	1307	THR
1	C	1308	SER
1	C	1327	CYS
1	C	1338	GLU
1	C	1367	ARG
1	C	1372	THR
1	C	1384	ILE
1	C	1385	GLN
1	C	1392	LEU
1	C	1414	ILE
1	C	1426	LEU
1	C	1442	ASN
1	C	1455	ARG
1	C	1465	ASN
1	C	1479	SER
1	C	1489	ARG
1	C	1502	ARG
1	C	1515	ARG
1	C	1522	LEU
1	C	1523	ARG
1	C	1532	THR
1	C	1533	ILE
1	C	1549	ASN
1	C	1556	THR
1	C	1566	ARG
1	C	1577	GLN
1	C	1580	LEU

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Mol	Chain	Res	Type
1	C	1585	LYS
1	C	1612	ASP
1	C	1625	LEU
1	C	1644	PHE
1	C	1665	ILE
1	C	1666	THR
1	C	1692	MET
1	C	1693	ILE
1	C	1707	THR
1	C	1709	GLU
1	C	1721	ARG
2	G	6	THR
2	G	7	ARG
2	G	45	THR
2	G	46	GLU
2	G	48	PHE
2	G	56	THR
2	G	65	LEU
2	G	84	LEU
2	G	86	LEU
2	G	93	ASN
2	G	99	ASN
2	G	101	ILE
2	G	109	LEU
2	G	117	VAL
2	G	122	LEU
2	G	149	VAL
2	G	153	ASN
2	G	155	GLN
2	G	159	ILE
2	G	173	LEU
2	G	175	ASP
2	G	176	LEU
2	G	178	GLN
2	G	182	VAL
2	G	186	ASP
2	G	210	THR
2	G	227	ASP
2	G	236	ILE
2	G	240	LEU
2	G	246	LEU
2	G	281	VAL

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Mol	Chain	Res	Type
2	G	286	THR
2	G	295	SER
2	G	297	ARG
2	G	300	ILE
2	G	303	LEU
2	G	319	LEU
2	G	339	LEU
2	G	340	SER
2	G	342	SER
2	G	344	LEU
2	G	353	VAL
2	G	371	VAL
2	G	376	ASN
2	G	389	LEU
2	G	392	THR
2	G	402	LEU
2	G	418	ASN
2	G	425	SER
2	G	431	LEU
2	G	448	VAL
2	G	455	ILE
2	G	462	THR
2	G	463	PHE
2	G	471	LEU
2	G	476	SER
2	G	478	ARG
2	G	482	CYS
2	G	492	THR
2	G	499	THR
2	G	539	ASP
2	G	545	GLN
2	G	553	ASN
2	G	562	LEU
2	G	574	SER
2	G	586	LEU
2	G	587	ILE
2	G	598	THR
2	G	607	VAL
2	G	611	THR
2	G	616	THR
2	G	653	TYR
2	G	665	LEU

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Mol	Chain	Res	Type
2	G	669	LEU
2	G	670	ARG
2	G	676	ILE
2	G	693	GLU
2	G	714	SER
2	G	719	ILE
2	G	723	HIS
2	G	730	LEU
2	G	736	ARG
2	G	741	HIS
2	G	750	MET
2	G	751	LEU
2	G	762	ASN
2	G	767	PHE
2	G	775	ASP
2	G	777	THR
2	G	787	THR
2	G	794	MET
2	G	800	LEU
2	G	810	GLU
2	G	825	THR
2	G	832	TRP
2	G	835	THR
2	G	844	VAL
2	G	852	GLU
2	G	855	HIS
2	G	857	ILE
2	G	869	ASP
2	G	880	LEU
2	G	881	VAL
2	G	892	ILE
2	G	907	VAL
2	G	929	LEU
2	G	945	THR
2	G	952	ARG
2	G	953	ARG
2	G	964	LEU
2	G	971	SER
2	G	993	GLN
2	G	1015	VAL
2	G	1021	LEU
2	G	1024	ARG

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Mol	Chain	Res	Type
2	G	1048	VAL
2	G	1066	ILE
2	G	1070	ILE
2	G	1082	ILE
2	G	1109	VAL
2	G	1123	ASP
2	G	1124	SER
2	G	1145	SER
2	G	1148	ASN
2	G	1160	THR
2	G	1171	ARG
2	G	1189	THR
2	G	1197	LEU
2	G	1211	LEU
2	G	1219	ILE
2	G	1227	ARG
2	G	1260	GLN
2	G	1265	MET
2	G	1284	VAL
2	G	1314	ARG
2	G	1318	THR
2	G	1328	VAL
2	G	1335	ILE
2	G	1342	THR
2	G	1343	VAL
2	G	1348	LEU
2	G	1359	MET
2	G	1360	ILE
2	G	1375	THR
2	G	1378	ILE
2	G	1397	SER
2	G	1407	THR
2	G	1408	SER
2	G	1420	GLU
2	G	1434	HIS
2	G	1437	THR
2	G	1441	ILE
2	G	1443	VAL
2	G	1446	SER
2	G	1452	LEU
2	G	1463	THR
2	G	1468	THR

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Mol	Chain	Res	Type
2	G	1470	THR
2	G	1472	VAL
2	G	1473	THR
2	G	1501	ILE
2	G	1511	SER
2	G	1526	THR
2	G	1527	LEU
2	G	1528	GLU
2	G	1533	LEU
2	G	1549	THR
2	G	1563	ILE
2	G	1567	ARG
2	G	1590	ARG
2	G	1602	SER
2	G	1605	VAL
2	G	1609	THR
2	G	1616	VAL
2	G	1624	THR
2	G	1627	GLN
2	G	1632	ILE
2	G	1637	LEU
2	G	1651	LEU
2	G	1672	GLN
2	G	1678	MET
2	G	1680	LEU
2	G	1683	THR
2	G	1712	ASN
2	G	1718	THR
2	G	1757	GLU
2	G	1775	GLN
2	G	1781	LEU
2	G	1784	MET
2	G	1825	GLU
2	G	1831	VAL
2	G	1834	ARG
2	G	1840	VAL
2	G	1844	ARG
2	G	1847	LEU
2	G	1857	ILE
2	G	1862	VAL
2	G	1886	VAL
2	G	1914	LEU

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Mol	Chain	Res	Type
2	G	1936	VAL
2	G	1937	GLU
2	G	1941	PHE
2	G	2003	VAL
2	G	2042	ILE
2	G	2044	ASN
2	G	2047	LYS
2	G	2048	TYR
2	G	2050	GLN
2	H	6	THR
2	H	7	ARG
2	H	45	THR
2	H	46	GLU
2	H	48	PHE
2	H	56	THR
2	H	65	LEU
2	H	84	LEU
2	H	86	LEU
2	H	93	ASN
2	H	99	ASN
2	H	101	ILE
2	H	109	LEU
2	H	117	VAL
2	H	122	LEU
2	H	149	VAL
2	H	153	ASN
2	H	155	GLN
2	H	159	ILE
2	H	173	LEU
2	H	176	LEU
2	H	178	GLN
2	H	182	VAL
2	H	186	ASP
2	H	198	LEU
2	H	210	THR
2	H	227	ASP
2	H	236	ILE
2	H	240	LEU
2	H	246	LEU
2	H	281	VAL
2	H	286	THR
2	H	295	SER

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Mol	Chain	Res	Type
2	H	297	ARG
2	H	300	ILE
2	H	315	PRO
2	H	319	LEU
2	H	339	LEU
2	H	340	SER
2	H	342	SER
2	H	344	LEU
2	H	353	VAL
2	H	371	VAL
2	H	376	ASN
2	H	389	LEU
2	H	392	THR
2	H	402	LEU
2	H	418	ASN
2	H	425	SER
2	H	431	LEU
2	H	448	VAL
2	H	455	ILE
2	H	462	THR
2	H	463	PHE
2	H	471	LEU
2	H	476	SER
2	H	478	ARG
2	H	482	CYS
2	H	492	THR
2	H	499	THR
2	H	545	GLN
2	H	553	ASN
2	H	562	LEU
2	H	572	ASN
2	H	574	SER
2	H	586	LEU
2	H	587	ILE
2	H	598	THR
2	H	607	VAL
2	H	611	THR
2	H	616	THR
2	H	653	TYR
2	H	665	LEU
2	H	669	LEU
2	H	670	ARG

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Mol	Chain	Res	Type
2	H	676	ILE
2	H	693	GLU
2	H	714	SER
2	H	719	ILE
2	H	723	HIS
2	H	730	LEU
2	H	733	THR
2	H	736	ARG
2	H	741	HIS
2	H	751	LEU
2	H	762	ASN
2	H	767	PHE
2	H	775	ASP
2	H	777	THR
2	H	787	THR
2	H	794	MET
2	H	797	ASP
2	H	800	LEU
2	H	810	GLU
2	H	825	THR
2	H	832	TRP
2	H	835	THR
2	H	844	VAL
2	H	852	GLU
2	H	855	HIS
2	H	857	ILE
2	H	869	ASP
2	H	880	LEU
2	H	881	VAL
2	H	892	ILE
2	H	907	VAL
2	H	929	LEU
2	H	945	THR
2	H	952	ARG
2	H	953	ARG
2	H	964	LEU
2	H	971	SER
2	H	993	GLN
2	H	1015	VAL
2	H	1021	LEU
2	H	1024	ARG
2	H	1048	VAL

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Mol	Chain	Res	Type
2	H	1066	ILE
2	H	1070	ILE
2	H	1082	ILE
2	H	1109	VAL
2	H	1123	ASP
2	H	1145	SER
2	H	1148	ASN
2	H	1160	THR
2	H	1171	ARG
2	H	1189	THR
2	H	1197	LEU
2	H	1211	LEU
2	H	1219	ILE
2	H	1227	ARG
2	H	1260	GLN
2	H	1265	MET
2	H	1284	VAL
2	H	1314	ARG
2	H	1318	THR
2	H	1328	VAL
2	H	1335	ILE
2	H	1342	THR
2	H	1343	VAL
2	H	1348	LEU
2	H	1359	MET
2	H	1360	ILE
2	H	1375	THR
2	H	1378	ILE
2	H	1397	SER
2	H	1407	THR
2	H	1408	SER
2	H	1420	GLU
2	H	1434	HIS
2	H	1437	THR
2	H	1441	ILE
2	H	1443	VAL
2	H	1446	SER
2	H	1452	LEU
2	H	1463	THR
2	H	1468	THR
2	H	1470	THR
2	H	1472	VAL

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Mol	Chain	Res	Type
2	H	1473	THR
2	H	1501	ILE
2	H	1511	SER
2	H	1526	THR
2	H	1527	LEU
2	H	1528	GLU
2	H	1533	LEU
2	H	1549	THR
2	H	1563	ILE
2	H	1567	ARG
2	H	1590	ARG
2	H	1602	SER
2	H	1605	VAL
2	H	1609	THR
2	H	1616	VAL
2	H	1624	THR
2	H	1627	GLN
2	H	1632	ILE
2	H	1637	LEU
2	H	1651	LEU
2	H	1672	GLN
2	H	1678	MET
2	H	1680	LEU
2	H	1683	THR
2	H	1693	ARG
2	H	1712	ASN
2	H	1718	THR
2	H	1757	GLU
2	H	1775	GLN
2	H	1781	LEU
2	H	1784	MET
2	H	1825	GLU
2	H	1831	VAL
2	H	1834	ARG
2	H	1840	VAL
2	H	1844	ARG
2	H	1847	LEU
2	H	1862	VAL
2	H	1886	VAL
2	H	1914	LEU
2	H	1936	VAL
2	H	1937	GLU

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Mol	Chain	Res	Type
2	H	2003	VAL
2	H	2038	ILE
2	H	2042	ILE
2	H	2044	ASN
2	H	2047	LYS
2	H	2048	TYR
2	H	2050	GLN
2	I	6	THR
2	I	7	ARG
2	I	45	THR
2	I	46	GLU
2	I	48	PHE
2	I	56	THR
2	I	65	LEU
2	I	84	LEU
2	I	86	LEU
2	I	93	ASN
2	I	99	ASN
2	I	101	ILE
2	I	109	LEU
2	I	117	VAL
2	I	122	LEU
2	I	149	VAL
2	I	153	ASN
2	I	155	GLN
2	I	159	ILE
2	I	173	LEU
2	I	175	ASP
2	I	176	LEU
2	I	178	GLN
2	I	182	VAL
2	I	210	THR
2	I	227	ASP
2	I	236	ILE
2	I	240	LEU
2	I	246	LEU
2	I	281	VAL
2	I	286	THR
2	I	295	SER
2	I	297	ARG
2	I	300	ILE
2	I	303	LEU

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Mol	Chain	Res	Type
2	I	319	LEU
2	I	339	LEU
2	I	340	SER
2	I	342	SER
2	I	344	LEU
2	I	353	VAL
2	I	371	VAL
2	I	376	ASN
2	I	389	LEU
2	I	392	THR
2	I	402	LEU
2	I	418	ASN
2	I	425	SER
2	I	431	LEU
2	I	448	VAL
2	I	455	ILE
2	I	462	THR
2	I	463	PHE
2	I	471	LEU
2	I	476	SER
2	I	478	ARG
2	I	479	ILE
2	I	482	CYS
2	I	492	THR
2	I	499	THR
2	I	539	ASP
2	I	545	GLN
2	I	553	ASN
2	I	562	LEU
2	I	572	ASN
2	I	574	SER
2	I	586	LEU
2	I	587	ILE
2	I	598	THR
2	I	607	VAL
2	I	611	THR
2	I	616	THR
2	I	653	TYR
2	I	665	LEU
2	I	669	LEU
2	I	670	ARG
2	I	676	ILE

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Mol	Chain	Res	Type
2	I	680	THR
2	I	693	GLU
2	I	714	SER
2	I	719	ILE
2	I	723	HIS
2	I	730	LEU
2	I	733	THR
2	I	736	ARG
2	I	741	HIS
2	I	750	MET
2	I	751	LEU
2	I	762	ASN
2	I	767	PHE
2	I	775	ASP
2	I	777	THR
2	I	787	THR
2	I	794	MET
2	I	800	LEU
2	I	810	GLU
2	I	825	THR
2	I	832	TRP
2	I	835	THR
2	I	844	VAL
2	I	846	VAL
2	I	852	GLU
2	I	855	HIS
2	I	857	ILE
2	I	869	ASP
2	I	880	LEU
2	I	881	VAL
2	I	892	ILE
2	I	907	VAL
2	I	929	LEU
2	I	945	THR
2	I	952	ARG
2	I	953	ARG
2	I	964	LEU
2	I	971	SER
2	I	993	GLN
2	I	1015	VAL
2	I	1021	LEU
2	I	1024	ARG

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Mol	Chain	Res	Type
2	I	1048	VAL
2	I	1066	ILE
2	I	1070	ILE
2	I	1082	ILE
2	I	1109	VAL
2	I	1123	ASP
2	I	1124	SER
2	I	1145	SER
2	I	1148	ASN
2	I	1160	THR
2	I	1171	ARG
2	I	1189	THR
2	I	1197	LEU
2	I	1211	LEU
2	I	1219	ILE
2	I	1227	ARG
2	I	1260	GLN
2	I	1265	MET
2	I	1284	VAL
2	I	1314	ARG
2	I	1318	THR
2	I	1328	VAL
2	I	1335	ILE
2	I	1342	THR
2	I	1343	VAL
2	I	1348	LEU
2	I	1359	MET
2	I	1360	ILE
2	I	1375	THR
2	I	1378	ILE
2	I	1397	SER
2	I	1407	THR
2	I	1408	SER
2	I	1420	GLU
2	I	1434	HIS
2	I	1437	THR
2	I	1441	ILE
2	I	1443	VAL
2	I	1446	SER
2	I	1452	LEU
2	I	1463	THR
2	I	1468	THR

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Mol	Chain	Res	Type
2	I	1470	THR
2	I	1472	VAL
2	I	1473	THR
2	I	1501	ILE
2	I	1511	SER
2	I	1526	THR
2	I	1527	LEU
2	I	1528	GLU
2	I	1533	LEU
2	I	1549	THR
2	I	1563	ILE
2	I	1567	ARG
2	I	1590	ARG
2	I	1602	SER
2	I	1605	VAL
2	I	1609	THR
2	I	1616	VAL
2	I	1624	THR
2	I	1627	GLN
2	I	1632	ILE
2	I	1637	LEU
2	I	1651	LEU
2	I	1672	GLN
2	I	1678	MET
2	I	1680	LEU
2	I	1683	THR
2	I	1712	ASN
2	I	1718	THR
2	I	1757	GLU
2	I	1775	GLN
2	I	1781	LEU
2	I	1784	MET
2	I	1825	GLU
2	I	1831	VAL
2	I	1834	ARG
2	I	1844	ARG
2	I	1847	LEU
2	I	1862	VAL
2	I	1871	LEU
2	I	1886	VAL
2	I	1914	LEU
2	I	1936	VAL

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Mol	Chain	Res	Type
2	I	1937	GLU
2	I	2003	VAL
2	I	2042	ILE
2	I	2044	ASN
2	I	2047	LYS
2	I	2048	TYR
2	I	2050	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (276) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	11	HIS
1	A	21	GLN
1	A	32	GLN
1	A	58	GLN
1	A	63	ASN
1	A	157	HIS
1	A	183	GLN
1	A	214	GLN
1	A	271	ASN
1	A	335	HIS
1	A	341	GLN
1	A	344	GLN
1	A	374	GLN
1	A	411	GLN
1	A	427	ASN
1	A	438	ASN
1	A	506	ASN
1	A	527	GLN
1	A	618	ASN
1	A	694	GLN
1	A	738	ASN
1	A	758	ASN
1	A	792	HIS
1	A	860	ASN
1	A	898	GLN
1	A	987	ASN
1	A	989	GLN
1	A	1000	GLN
1	A	1003	GLN
1	A	1063	HIS
1	A	1064	ASN

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Mol	Chain	Res	Type
1	A	1066	ASN
1	A	1146	HIS
1	A	1239	HIS
1	A	1385	GLN
1	A	1432	HIS
1	A	1433	HIS
1	A	1442	ASN
1	A	1458	GLN
1	A	1482	GLN
1	A	1495	ASN
1	A	1510	ASN
1	A	1549	ASN
1	A	1563	HIS
1	A	1577	GLN
1	A	1610	ASN
1	A	1652	GLN
1	A	1690	ASN
1	B	11	HIS
1	B	21	GLN
1	B	32	GLN
1	B	58	GLN
1	B	63	ASN
1	B	157	HIS
1	B	183	GLN
1	B	214	GLN
1	B	271	ASN
1	B	335	HIS
1	B	341	GLN
1	B	344	GLN
1	B	374	GLN
1	B	407	ASN
1	B	411	GLN
1	B	427	ASN
1	B	438	ASN
1	B	506	ASN
1	B	527	GLN
1	B	618	ASN
1	B	694	GLN
1	B	738	ASN
1	B	758	ASN
1	B	792	HIS
1	B	898	GLN

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Mol	Chain	Res	Type
1	B	987	ASN
1	B	989	GLN
1	B	1000	GLN
1	B	1003	GLN
1	B	1063	HIS
1	B	1064	ASN
1	B	1066	ASN
1	B	1146	HIS
1	B	1239	HIS
1	B	1385	GLN
1	B	1432	HIS
1	B	1433	HIS
1	B	1442	ASN
1	B	1458	GLN
1	B	1482	GLN
1	B	1495	ASN
1	B	1510	ASN
1	B	1549	ASN
1	B	1563	HIS
1	B	1577	GLN
1	B	1610	ASN
1	B	1652	GLN
1	B	1690	ASN
1	C	11	HIS
1	C	21	GLN
1	C	32	GLN
1	C	58	GLN
1	C	63	ASN
1	C	157	HIS
1	C	183	GLN
1	C	214	GLN
1	C	271	ASN
1	C	335	HIS
1	C	341	GLN
1	C	344	GLN
1	C	374	GLN
1	C	407	ASN
1	C	411	GLN
1	C	427	ASN
1	C	438	ASN
1	C	506	ASN
1	C	527	GLN

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Mol	Chain	Res	Type
1	C	618	ASN
1	C	694	GLN
1	C	738	ASN
1	C	758	ASN
1	C	792	HIS
1	C	860	ASN
1	C	898	GLN
1	C	987	ASN
1	C	989	GLN
1	C	1000	GLN
1	C	1003	GLN
1	C	1063	HIS
1	C	1064	ASN
1	C	1066	ASN
1	C	1146	HIS
1	C	1239	HIS
1	C	1385	GLN
1	C	1432	HIS
1	C	1433	HIS
1	C	1442	ASN
1	C	1458	GLN
1	C	1482	GLN
1	C	1495	ASN
1	C	1510	ASN
1	C	1549	ASN
1	C	1563	HIS
1	C	1577	GLN
1	C	1610	ASN
1	C	1652	GLN
1	C	1690	ASN
2	G	34	GLN
2	G	36	GLN
2	G	85	ASN
2	G	102	HIS
2	G	359	HIS
2	G	376	ASN
2	G	418	ASN
2	G	428	HIS
2	G	430	HIS
2	G	440	ASN
2	G	447	ASN
2	G	500	HIS

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Mol	Chain	Res	Type
2	G	517	HIS
2	G	545	GLN
2	G	558	ASN
2	G	572	ASN
2	G	612	ASN
2	G	650	ASN
2	G	718	ASN
2	G	740	HIS
2	G	741	HIS
2	G	747	HIS
2	G	752	GLN
2	G	762	ASN
2	G	900	GLN
2	G	910	GLN
2	G	1046	GLN
2	G	1148	ASN
2	G	1217	ASN
2	G	1220	GLN
2	G	1260	GLN
2	G	1352	HIS
2	G	1355	ASN
2	G	1367	GLN
2	G	1384	GLN
2	G	1595	ASN
2	G	1659	GLN
2	G	1669	GLN
2	G	1672	GLN
2	G	1697	HIS
2	G	1890	ASN
2	G	1896	GLN
2	G	1977	HIS
2	G	2013	ASN
2	G	2020	GLN
2	H	34	GLN
2	H	85	ASN
2	H	102	HIS
2	H	359	HIS
2	H	376	ASN
2	H	418	ASN
2	H	428	HIS
2	H	430	HIS
2	H	440	ASN

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Mol	Chain	Res	Type
2	H	447	ASN
2	H	500	HIS
2	H	517	HIS
2	H	545	GLN
2	H	558	ASN
2	H	572	ASN
2	H	612	ASN
2	H	650	ASN
2	H	718	ASN
2	H	740	HIS
2	H	741	HIS
2	H	747	HIS
2	H	752	GLN
2	H	762	ASN
2	H	900	GLN
2	H	910	GLN
2	H	1039	HIS
2	H	1046	GLN
2	H	1148	ASN
2	H	1217	ASN
2	H	1220	GLN
2	H	1352	HIS
2	H	1355	ASN
2	H	1367	GLN
2	H	1595	ASN
2	H	1672	GLN
2	H	1697	HIS
2	H	1890	ASN
2	H	1896	GLN
2	H	1977	HIS
2	H	2013	ASN
2	H	2020	GLN
2	I	34	GLN
2	I	85	ASN
2	I	102	HIS
2	I	359	HIS
2	I	376	ASN
2	I	418	ASN
2	I	428	HIS
2	I	430	HIS
2	I	440	ASN
2	I	447	ASN

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Mol	Chain	Res	Type
2	I	500	HIS
2	I	517	HIS
2	I	545	GLN
2	I	558	ASN
2	I	572	ASN
2	I	612	ASN
2	I	650	ASN
2	I	718	ASN
2	I	740	HIS
2	I	741	HIS
2	I	747	HIS
2	I	752	GLN
2	I	762	ASN
2	I	900	GLN
2	I	910	GLN
2	I	1046	GLN
2	I	1055	HIS
2	I	1148	ASN
2	I	1151	HIS
2	I	1217	ASN
2	I	1220	GLN
2	I	1260	GLN
2	I	1352	HIS
2	I	1355	ASN
2	I	1367	GLN
2	I	1384	GLN
2	I	1595	ASN
2	I	1669	GLN
2	I	1672	GLN
2	I	1697	HIS
2	I	1890	ASN
2	I	1896	GLN
2	I	1977	HIS
2	I	2013	ASN
2	I	2020	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

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

3 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	$\#\|Z\| > 2$
1	GVL	C	180	1	15,18,19	0.77	0	20,26,28	0.98	1 (5%)
1	GVL	B	180	1	15,18,19	0.70	0	20,26,28	0.86	1 (5%)
1	GVL	A	180	1	15,18,19	0.73	0	20,26,28	0.81	0

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
1	GVL	C	180	1	-	6/21/25/27	-
1	GVL	B	180	1	-	6/21/25/27	-
1	GVL	A	180	1	-	6/21/25/27	-

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	C	180	GVL	C30-C29-C32	2.47	113.10	108.82
1	B	180	GVL	O35-C34-C32	2.20	121.15	119.04

There are no chirality outliers.

All (18) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	A	180	GVL	CB-O25-P24-O23
1	A	180	GVL	CB-O25-P24-O27
1	A	180	GVL	C28-O27-P24-O26
1	B	180	GVL	CB-O25-P24-O23

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Mol	Chain	Res	Type	Atoms
1	B	180	GVL	CB-O25-P24-O27
1	B	180	GVL	C28-O27-P24-O26
1	C	180	GVL	CB-O25-P24-O23
1	C	180	GVL	CB-O25-P24-O27
1	C	180	GVL	C28-O27-P24-O26
1	A	180	GVL	C28-O27-P24-O25
1	B	180	GVL	C28-O27-P24-O25
1	C	180	GVL	C28-O27-P24-O25
1	A	180	GVL	CB-O25-P24-O26
1	A	180	GVL	C28-O27-P24-O23
1	B	180	GVL	CB-O25-P24-O26
1	C	180	GVL	CB-O25-P24-O26
1	C	180	GVL	C28-O27-P24-O23
1	B	180	GVL	C28-O27-P24-O23

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)

3 ligands 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	$\#\|Z\| > 2$
3	FMN	I	3051	-	33,33,33	6.32	23 (69%)	48,50,50	1.31	7 (14%)
3	FMN	G	3051	-	33,33,33	6.33	21 (63%)	48,50,50	1.29	5 (10%)
3	FMN	H	3051	-	33,33,33	6.23	21 (63%)	48,50,50	1.30	8 (16%)

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
3	FMN	I	3051	-	-	5/18/18/18	0/3/3/3
3	FMN	G	3051	-	-	5/18/18/18	0/3/3/3
3	FMN	H	3051	-	-	5/18/18/18	0/3/3/3

All (65) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	G	3051	FMN	C6-C7	12.52	1.57	1.39
3	G	3051	FMN	C9-C9A	12.31	1.59	1.39
3	I	3051	FMN	C6-C7	12.16	1.57	1.39
3	I	3051	FMN	C9-C9A	12.11	1.59	1.39
3	H	3051	FMN	C9-C9A	12.09	1.59	1.39
3	I	3051	FMN	C6-C5A	12.03	1.58	1.40
3	G	3051	FMN	C6-C5A	11.96	1.58	1.40
3	H	3051	FMN	C6-C7	11.92	1.57	1.39
3	H	3051	FMN	C6-C5A	11.69	1.58	1.40
3	I	3051	FMN	C9-C8	11.62	1.56	1.39
3	G	3051	FMN	C9-C8	11.09	1.55	1.39
3	H	3051	FMN	C9-C8	10.96	1.55	1.39
3	G	3051	FMN	C4A-N5	10.66	1.51	1.30
3	I	3051	FMN	C4A-N5	10.34	1.50	1.30
3	H	3051	FMN	C4A-N5	10.32	1.50	1.30
3	G	3051	FMN	O4-C4	9.95	1.42	1.23
3	H	3051	FMN	O4-C4	9.87	1.42	1.23
3	I	3051	FMN	O4-C4	9.71	1.42	1.23
3	H	3051	FMN	O2-C2	9.15	1.41	1.24
3	I	3051	FMN	O2-C2	9.04	1.41	1.24
3	G	3051	FMN	O2-C2	8.86	1.40	1.24
3	I	3051	FMN	C9A-C5A	8.73	1.55	1.41
3	G	3051	FMN	C9A-C5A	8.35	1.55	1.41
3	H	3051	FMN	C9A-C5A	8.06	1.54	1.41
3	I	3051	FMN	C8-C7	7.26	1.59	1.40
3	G	3051	FMN	C10-N1	7.10	1.47	1.33
3	H	3051	FMN	C10-N1	7.08	1.47	1.33
3	G	3051	FMN	C2-N1	7.05	1.53	1.36
3	G	3051	FMN	C8-C7	6.90	1.58	1.40
3	H	3051	FMN	C2-N1	6.90	1.53	1.36
3	I	3051	FMN	C10-N1	6.88	1.47	1.33
3	I	3051	FMN	C2-N1	6.82	1.53	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	H	3051	FMN	C8-C7	6.66	1.57	1.40
3	G	3051	FMN	C10-N10	6.51	1.51	1.37
3	H	3051	FMN	C10-N10	6.51	1.51	1.37
3	I	3051	FMN	C10-N10	6.49	1.51	1.37
3	H	3051	FMN	C4-N3	6.41	1.50	1.38
3	I	3051	FMN	C5A-N5	6.34	1.51	1.39
3	G	3051	FMN	C4-N3	6.21	1.50	1.38
3	G	3051	FMN	C5A-N5	6.17	1.51	1.39
3	H	3051	FMN	C2-N3	6.14	1.53	1.39
3	I	3051	FMN	C4-N3	6.11	1.50	1.38
3	H	3051	FMN	C5A-N5	6.09	1.51	1.39
3	G	3051	FMN	C2-N3	5.84	1.52	1.39
3	I	3051	FMN	C2-N3	5.72	1.52	1.39
3	G	3051	FMN	C9A-N10	5.16	1.50	1.41
3	I	3051	FMN	C9A-N10	4.89	1.49	1.41
3	H	3051	FMN	C9A-N10	4.87	1.49	1.41
3	G	3051	FMN	C4A-C10	3.65	1.55	1.44
3	H	3051	FMN	C4A-C10	3.29	1.53	1.44
3	I	3051	FMN	C4A-C10	3.24	1.53	1.44
3	H	3051	FMN	C1'-C2'	3.16	1.57	1.52
3	I	3051	FMN	C1'-C2'	3.02	1.56	1.52
3	I	3051	FMN	P-O2P	3.01	1.66	1.54
3	G	3051	FMN	C1'-C2'	2.98	1.56	1.52
3	H	3051	FMN	P-O2P	2.92	1.66	1.54
3	G	3051	FMN	P-O2P	2.91	1.66	1.54
3	I	3051	FMN	P-O3P	2.86	1.65	1.54
3	H	3051	FMN	P-O3P	2.78	1.65	1.54
3	G	3051	FMN	P-O3P	2.60	1.64	1.54
3	G	3051	FMN	C4A-C4	2.46	1.53	1.44
3	H	3051	FMN	C4A-C4	2.36	1.53	1.44
3	I	3051	FMN	C8M-C8	2.26	1.55	1.51
3	I	3051	FMN	C4A-C4	2.22	1.52	1.44
3	I	3051	FMN	C7M-C7	2.09	1.55	1.51

All (20) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	I	3051	FMN	C4A-C10-N10	3.16	121.10	116.48
3	H	3051	FMN	C4A-C10-N10	3.01	120.89	116.48
3	G	3051	FMN	C4A-C10-N10	3.00	120.87	116.48
3	H	3051	FMN	C4'-C3'-C2'	-2.76	107.62	113.36
3	G	3051	FMN	C4'-C3'-C2'	-2.75	107.65	113.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	I	3051	FMN	C4'-C3'-C2'	-2.73	107.68	113.36
3	G	3051	FMN	C10-C4A-N5	-2.69	119.14	124.86
3	H	3051	FMN	C10-C4A-N5	-2.64	119.25	124.86
3	I	3051	FMN	C10-C4A-N5	-2.52	119.50	124.86
3	I	3051	FMN	C4-N3-C2	-2.49	121.03	125.64
3	G	3051	FMN	C4-N3-C2	-2.35	121.30	125.64
3	H	3051	FMN	O2-C2-N1	-2.29	118.03	121.83
3	H	3051	FMN	C4-N3-C2	-2.26	121.47	125.64
3	I	3051	FMN	O4-C4-C4A	-2.21	120.74	126.60
3	I	3051	FMN	O2-C2-N1	-2.08	118.38	121.83
3	I	3051	FMN	C4A-C4-N3	2.08	118.47	113.19
3	H	3051	FMN	C4-C4A-C10	2.04	120.22	116.79
3	H	3051	FMN	O5'-C5'-C4'	-2.02	103.96	109.36
3	H	3051	FMN	O4-C4-C4A	-2.02	121.24	126.60
3	G	3051	FMN	O2-C2-N1	-2.02	118.49	121.83

There are no chirality outliers.

All (15) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	G	3051	FMN	C2'-C3'-C4'-C5'
3	G	3051	FMN	O3'-C3'-C4'-C5'
3	H	3051	FMN	C2'-C3'-C4'-C5'
3	H	3051	FMN	O3'-C3'-C4'-C5'
3	I	3051	FMN	C2'-C3'-C4'-C5'
3	I	3051	FMN	O3'-C3'-C4'-C5'
3	H	3051	FMN	O3'-C3'-C4'-O4'
3	I	3051	FMN	O3'-C3'-C4'-O4'
3	I	3051	FMN	C2'-C3'-C4'-O4'
3	H	3051	FMN	C2'-C3'-C4'-O4'
3	G	3051	FMN	C2'-C3'-C4'-O4'
3	G	3051	FMN	O3'-C3'-C4'-O4'
3	G	3051	FMN	C4'-C5'-O5'-P
3	H	3051	FMN	C4'-C5'-O5'-P
3	I	3051	FMN	C4'-C5'-O5'-P

There are no ring outliers.

3 monomers are involved in 19 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	I	3051	FMN	6	0

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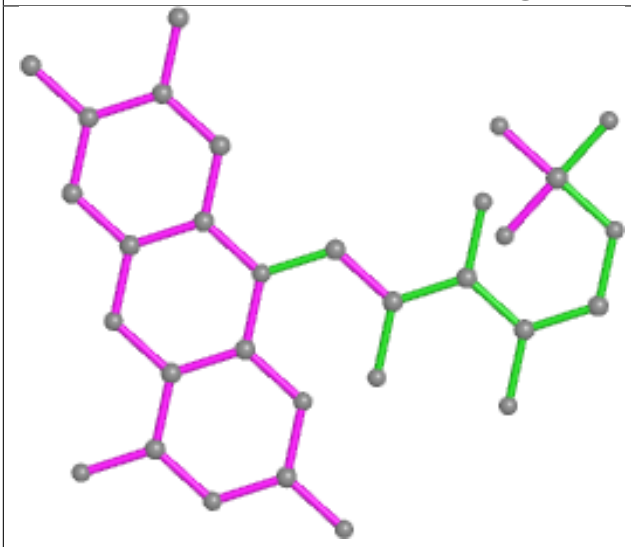
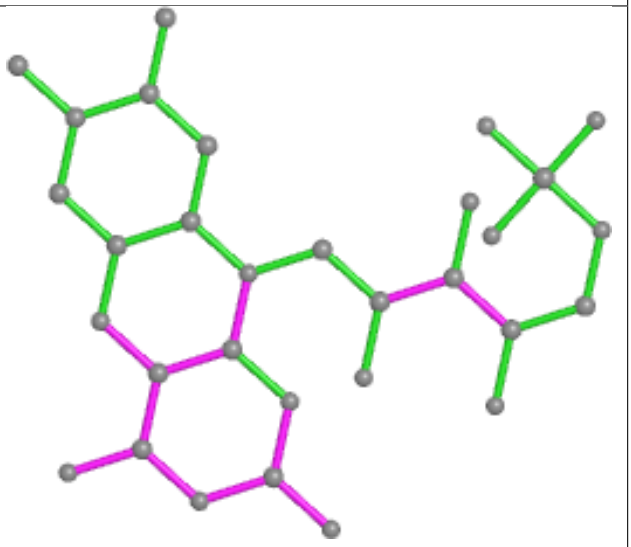
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	G	3051	FMN	7	0
3	H	3051	FMN	6	0

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 then 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.

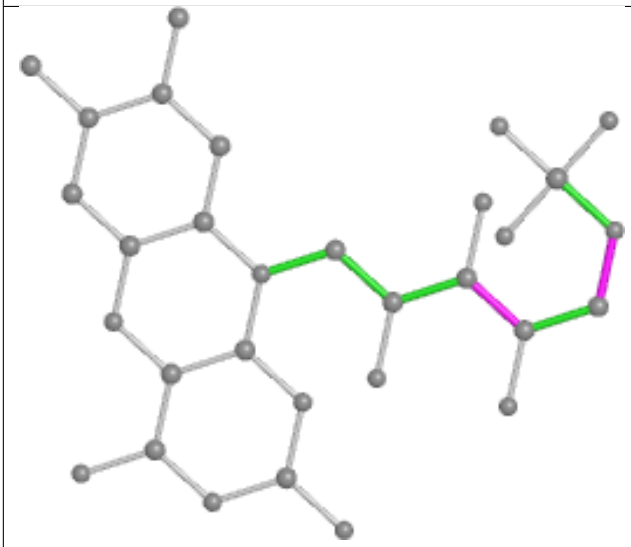
Ligand FMN I 3051



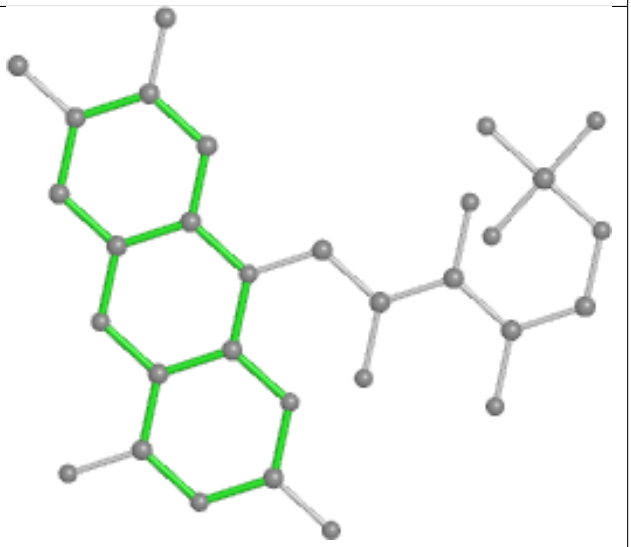
Bond lengths



Bond angles

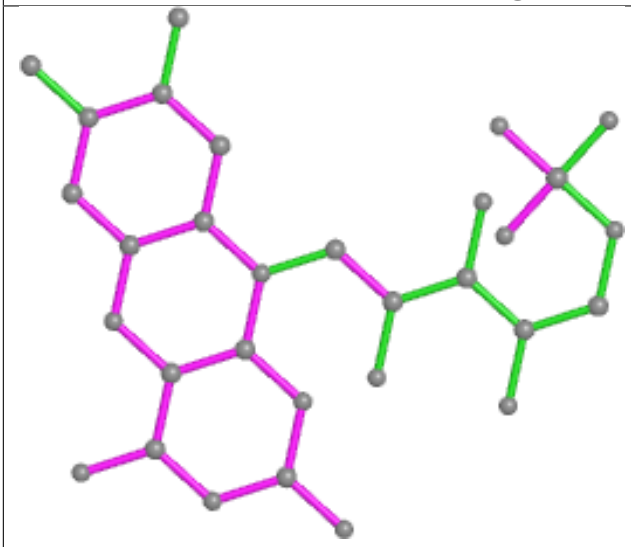


Torsions

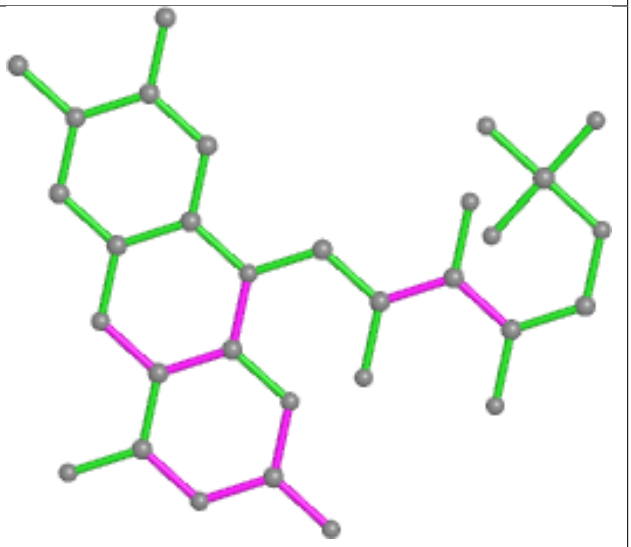


Rings

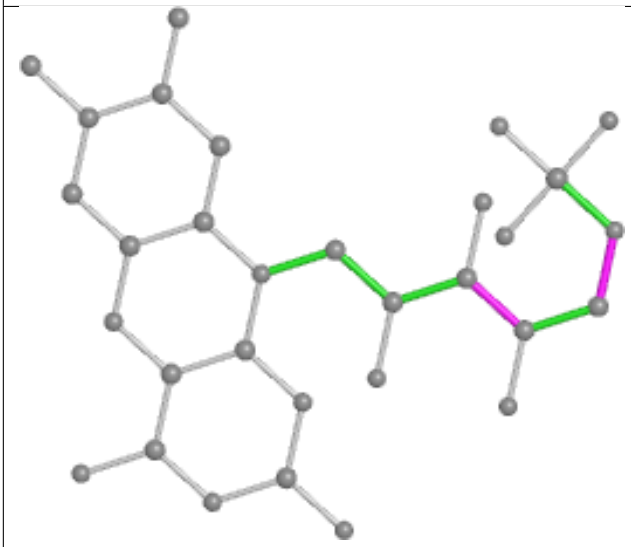
Ligand FMN G 3051



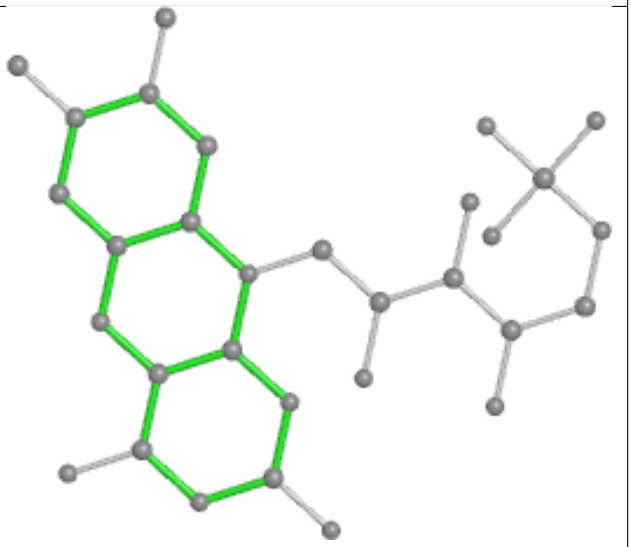
Bond lengths



Bond angles

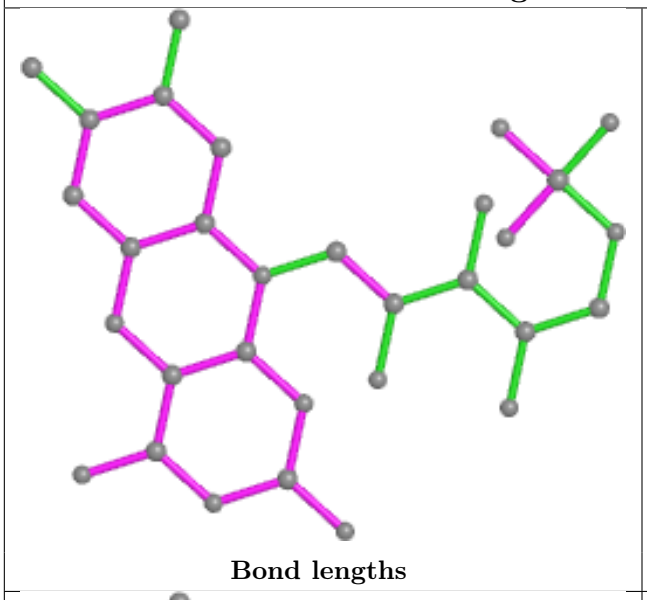


Torsions

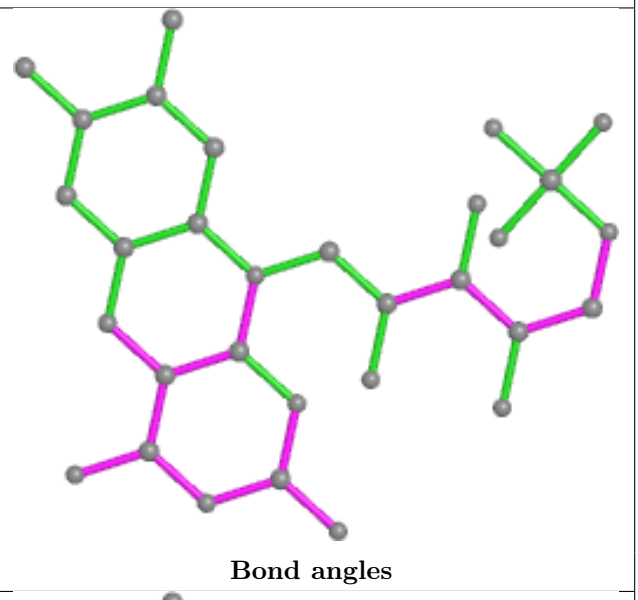


Rings

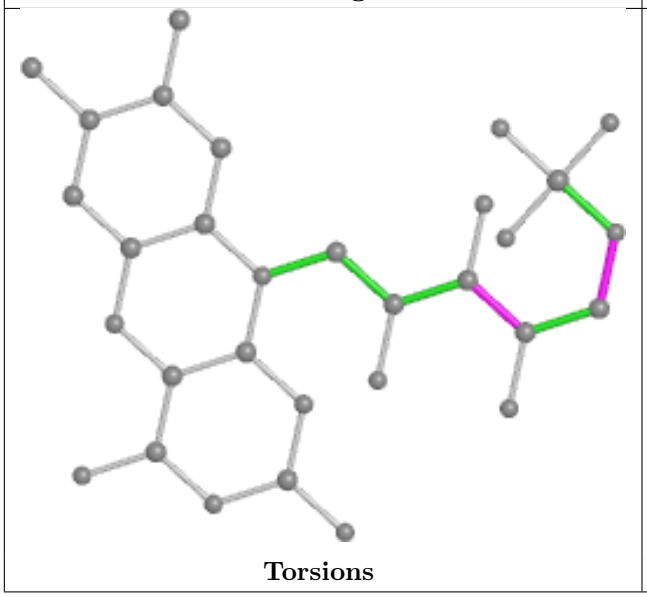
Ligand FMN H 3051



Bond lengths



Bond angles



Torsions

Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	1613/1887 (85%)	-0.60	29 (1%)	68	47	28, 59, 126, 166	0
1	B	1613/1887 (85%)	-0.59	26 (1%)	72	51	30, 59, 127, 170	0
1	C	1613/1887 (85%)	-0.59	31 (1%)	66	46	29, 61, 126, 170	0
2	G	2033/2051 (99%)	-0.52	18 (0%)	84	69	39, 73, 114, 151	0
2	H	2033/2051 (99%)	-0.54	17 (0%)	86	72	41, 73, 113, 152	0
2	I	2033/2051 (99%)	-0.53	14 (0%)	87	75	42, 74, 113, 150	0
All	All	10938/11814 (92%)	-0.56	135 (1%)	79	61	28, 69, 119, 170	0

All (135) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	977	TYR	5.6
1	C	976	ALA	5.2
2	H	35	GLU	5.2
1	C	975	ALA	5.2
1	C	1475	GLU	4.7
2	H	2050	GLN	4.6
1	A	978	ALA	4.4
2	I	1929	LYS	4.4
1	C	972	SER	4.3
2	H	25	ALA	4.2
1	B	977	TYR	4.0
1	B	177	GLY	3.9
1	A	1476	GLU	3.8
1	C	1480	GLU	3.8
1	B	976	ALA	3.8
1	A	1483	ASN	3.7
2	G	2043	ASP	3.7
1	A	977	TYR	3.7
1	C	218	SER	3.6

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Mol	Chain	Res	Type	RSRZ
1	C	1746	ASN	3.6
1	A	600	ASP	3.5
1	B	196	THR	3.4
1	A	976	ALA	3.4
1	A	975	ALA	3.4
1	A	164	ASP	3.4
1	A	292	GLN	3.4
2	G	1930	SER	3.4
1	C	1476	GLU	3.4
1	C	971	ASN	3.3
1	A	258	SER	3.3
2	H	75	SER	3.3
1	A	539	SER	3.3
1	A	1746	ASN	3.2
1	B	164	ASP	3.2
1	A	299	GLY	3.2
2	I	1930	SER	3.2
2	I	2050	GLN	3.1
1	A	248	LYS	3.1
2	H	1745	LYS	3.1
1	C	142	ASP	3.0
1	A	1480	GLU	3.0
2	I	1740	THR	3.0
1	C	203	GLU	3.0
2	G	2050	GLN	3.0
2	G	25	ALA	3.0
1	B	972	SER	3.0
1	C	539	SER	2.9
2	G	1956	ARG	2.9
1	A	599	MET	2.9
1	B	537	LYS	2.9
1	A	274	ALA	2.9
1	B	169	SER	2.9
1	B	178	GLY	2.9
2	G	1933	LEU	2.9
2	I	25	ALA	2.9
1	A	196	THR	2.9
2	I	35	GLU	2.8
2	H	1742	VAL	2.8
1	A	252	THR	2.7
1	A	601	VAL	2.7
1	A	177	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
2	I	1956	ARG	2.7
2	H	1925	ILE	2.7
1	C	174	ASP	2.7
1	B	143	GLU	2.7
1	A	972	SER	2.6
1	C	1068	LYS	2.6
1	B	188	GLY	2.6
1	B	539	SER	2.6
2	H	1740	THR	2.6
1	C	143	GLU	2.6
1	B	274	ALA	2.6
2	G	1955	PRO	2.6
1	C	289	SER	2.5
2	G	2049	GLU	2.5
2	G	1962	ARG	2.5
2	H	1743	ASP	2.5
1	C	538	GLU	2.5
2	H	327	SER	2.5
1	C	177	GLY	2.4
1	A	203	GLU	2.4
1	B	301	ASP	2.4
1	B	538	GLU	2.4
1	B	600	ASP	2.4
1	B	296	SER	2.4
1	A	218	SER	2.4
1	C	292	GLN	2.4
1	C	162	SER	2.3
2	G	290	GLU	2.3
2	H	76	LYS	2.3
1	C	196	THR	2.3
1	A	174	ASP	2.3
1	A	1475	GLU	2.3
1	B	973	ALA	2.3
1	B	208	GLU	2.3
2	G	51	ASP	2.3
1	C	274	ALA	2.3
1	C	301	ASP	2.3
1	C	178	GLY	2.3
1	B	1068	LYS	2.3
2	G	1475	LYS	2.3
2	G	138	ASP	2.3
2	H	93	ASN	2.3

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Mol	Chain	Res	Type	RSRZ
1	B	198	PRO	2.3
2	H	138	ASP	2.2
2	H	287	ASP	2.2
1	C	144	PRO	2.2
2	G	77	VAL	2.2
1	C	299	GLY	2.2
2	G	552	SER	2.2
2	I	1400	GLY	2.2
2	G	1928	GLN	2.2
1	A	301	ASP	2.2
2	G	1920	GLN	2.2
1	A	142	ASP	2.2
1	C	197	THR	2.2
1	B	1475	GLU	2.1
1	C	164	ASP	2.1
2	I	1475	LYS	2.1
1	A	1747	ALA	2.1
1	C	211	GLU	2.1
1	B	192	LYS	2.1
1	B	240	GLY	2.1
2	I	1744	GLY	2.1
1	C	275	ALA	2.1
2	I	2043	ASP	2.1
2	I	552	SER	2.1
2	I	1682	LYS	2.0
2	H	1415	ASN	2.0
2	H	142	ASN	2.0
2	I	1415	ASN	2.0
2	G	112	ASN	2.0
1	B	215	ASP	2.0
2	H	400	SER	2.0
1	B	251	GLN	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
1	GVL	C	180	19/20	0.76	0.38	49,130,161,187	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
1	GVL	B	180	19/20	0.82	0.30	48,119,172,190	0
1	GVL	A	180	19/20	0.86	0.26	44,125,164,189	0

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

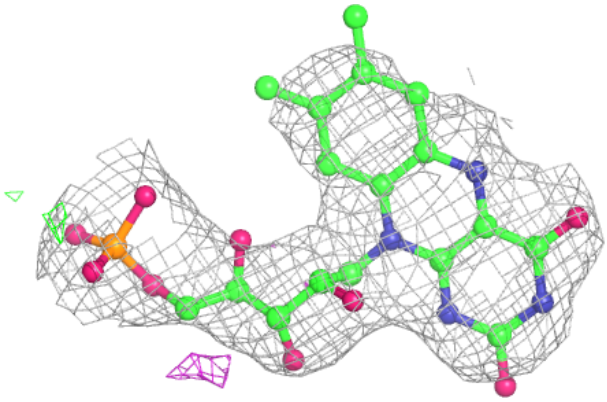
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

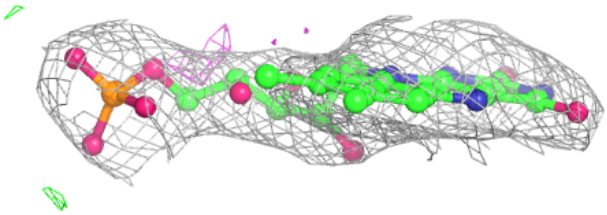
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	FMN	G	3051	31/31	0.96	0.14	31,55,81,100	0
3	FMN	I	3051	31/31	0.96	0.13	26,57,75,97	0
3	FMN	H	3051	31/31	0.97	0.14	27,54,78,82	0

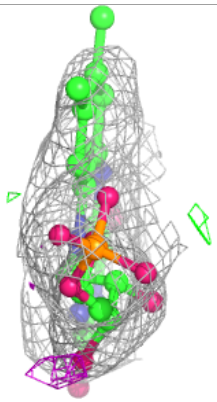
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around FMN G 3051:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

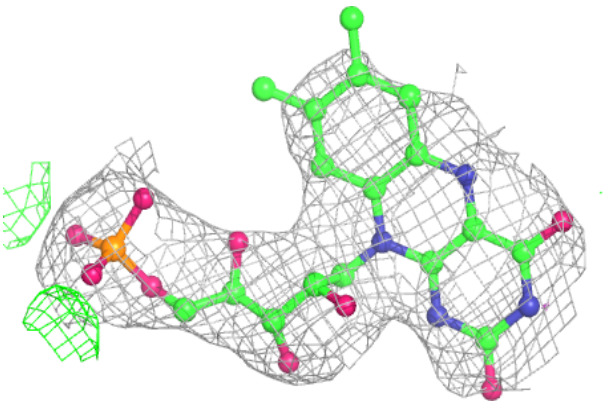


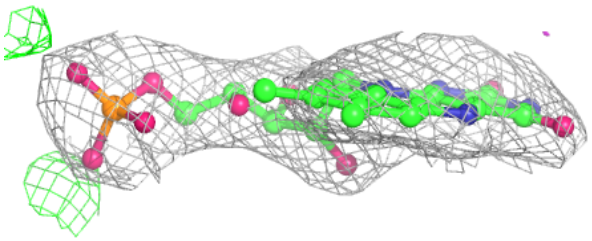


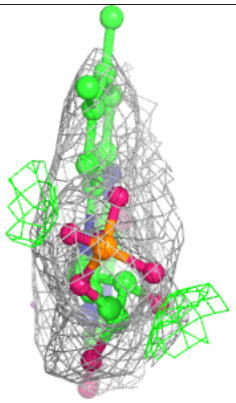


Electron density around FMN I 3051:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

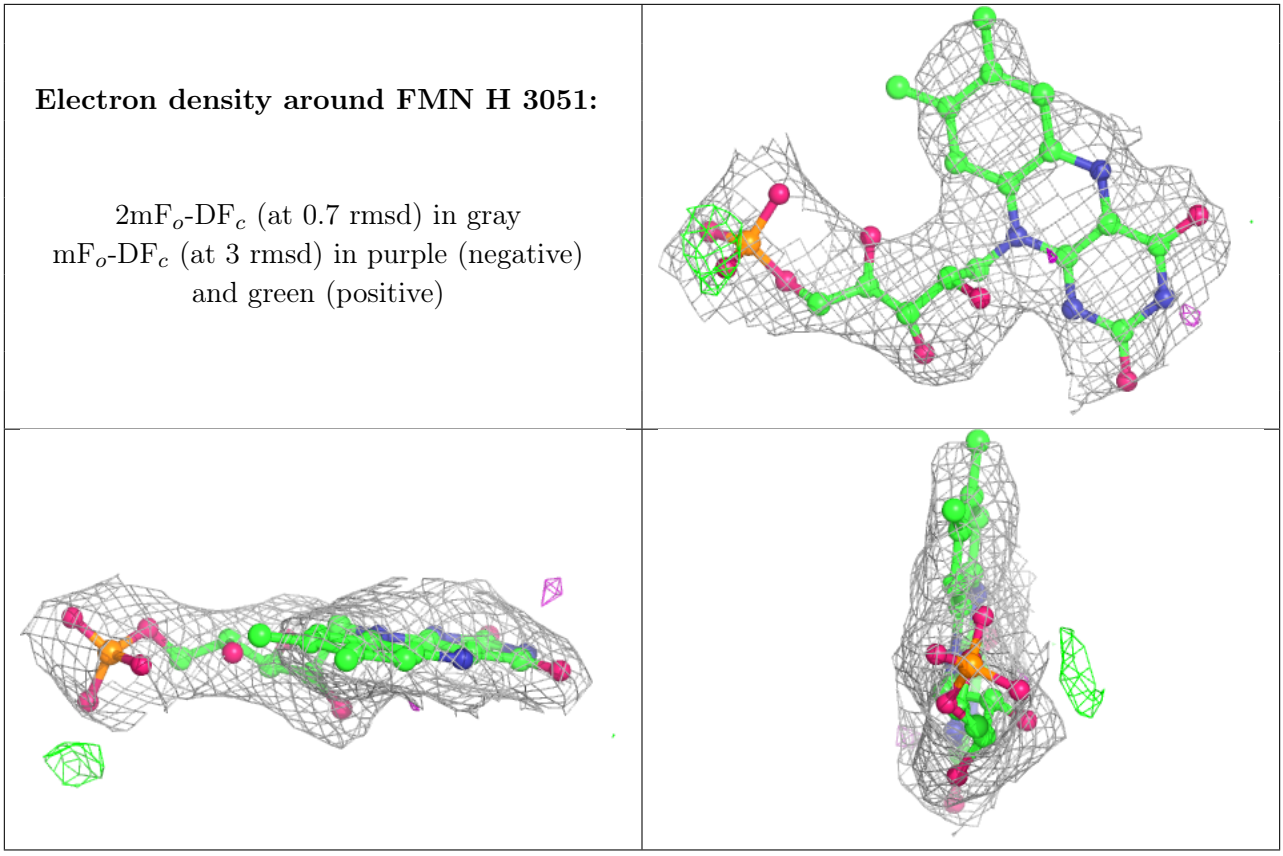






Electron density around FMN H 3051:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



6.5 Other polymers (i)

There are no such residues in this entry.