Full wwPDB X-ray Structure Validation Report ⓘ

Jun 15, 2024 – 01:31 PM EDT

PDB ID	:	2VKZ
Title	:	Structure of the cerulenin-inhibited fungal fatty acid synthase type I multienzyme complex
Authors	:	Johansson, P.; Wiltschi, B.; Kumari, P.; Kessler, B.; Vonrhein, C.; Vonck, J.; Oesterhelt, D.; Grininger, M.
Deposited on	:	2008-01-07
Resolution	:	4.00 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:

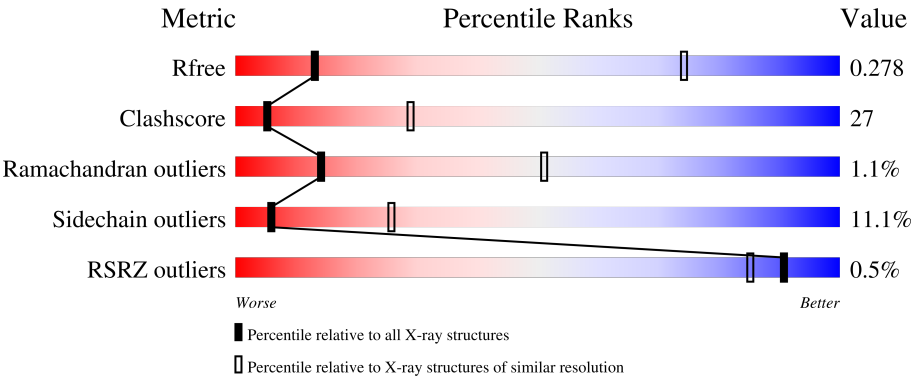
MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.20.1
EDS	:	2.37.1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 4.00 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1087 (4.30-3.70)
Clashscore	141614	1148 (4.30-3.70)
Ramachandran outliers	138981	1108 (4.30-3.70)
Sidechain outliers	138945	1099 (4.30-3.70)
RSRZ outliers	127900	1028 (4.34-3.66)

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	% 50% 31% · 14%
1	B	1887	% 50% 30% 5% 14%
1	C	1887	% 49% 32% 5% 14%
2	G	2051	51% 40% 8% ·

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Mol	Chain	Length	Quality of chain
2	H	2051	
2	I	2051	

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 85959 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.

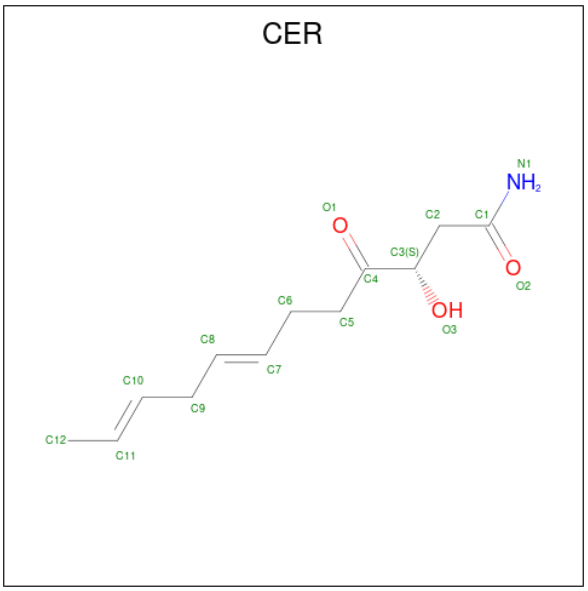
- Molecule 1 is a protein called FATTY ACID SYNTHASE SUBUNIT ALPHA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	1614	Total	C	N	O	S	0	0	0
			12615	7997	2127	2443	48			
1	B	1614	Total	C	N	O	S	0	0	0
			12615	7997	2127	2443	48			
1	C	1614	Total	C	N	O	S	0	0	0
			12615	7997	2127	2443	48			

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

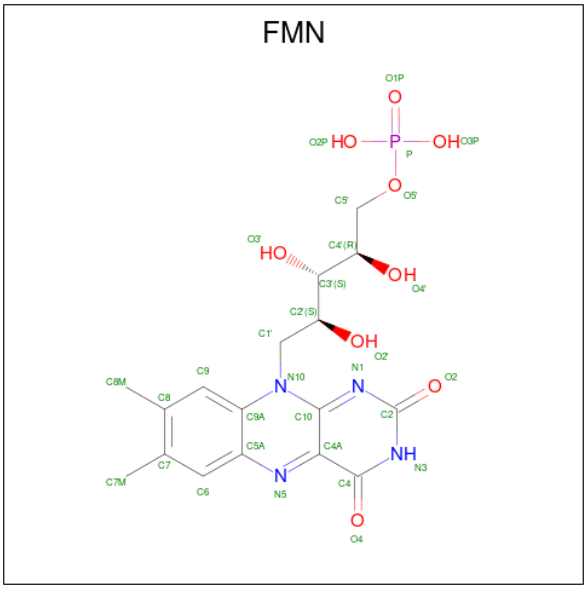
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	G	2033	Total	C	N	O	S	0	0	0
			15995	10253	2660	3026	56			
2	H	2033	Total	C	N	O	S	0	0	0
			15995	10253	2660	3026	56			
2	I	2033	Total	C	N	O	S	0	0	0
			15995	10253	2660	3026	56			

- Molecule 3 is (2S, 3R)-3-HYDROXY-4-OXO-7,10-TRANS,TRANS-DODECADIENAMIDE (three-letter code: CER) (formula: $C_{12}H_{19}NO_3$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total C N O 12 8 1 3	0	0
3	B	1	Total C N O 12 8 1 3	0	0
3	C	1	Total C N O 12 8 1 3	0	0

- Molecule 4 is FLAVIN MONONUCLEOTIDE (three-letter code: FMN) (formula: $C_{17}H_{21}N_4O_9P$).



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

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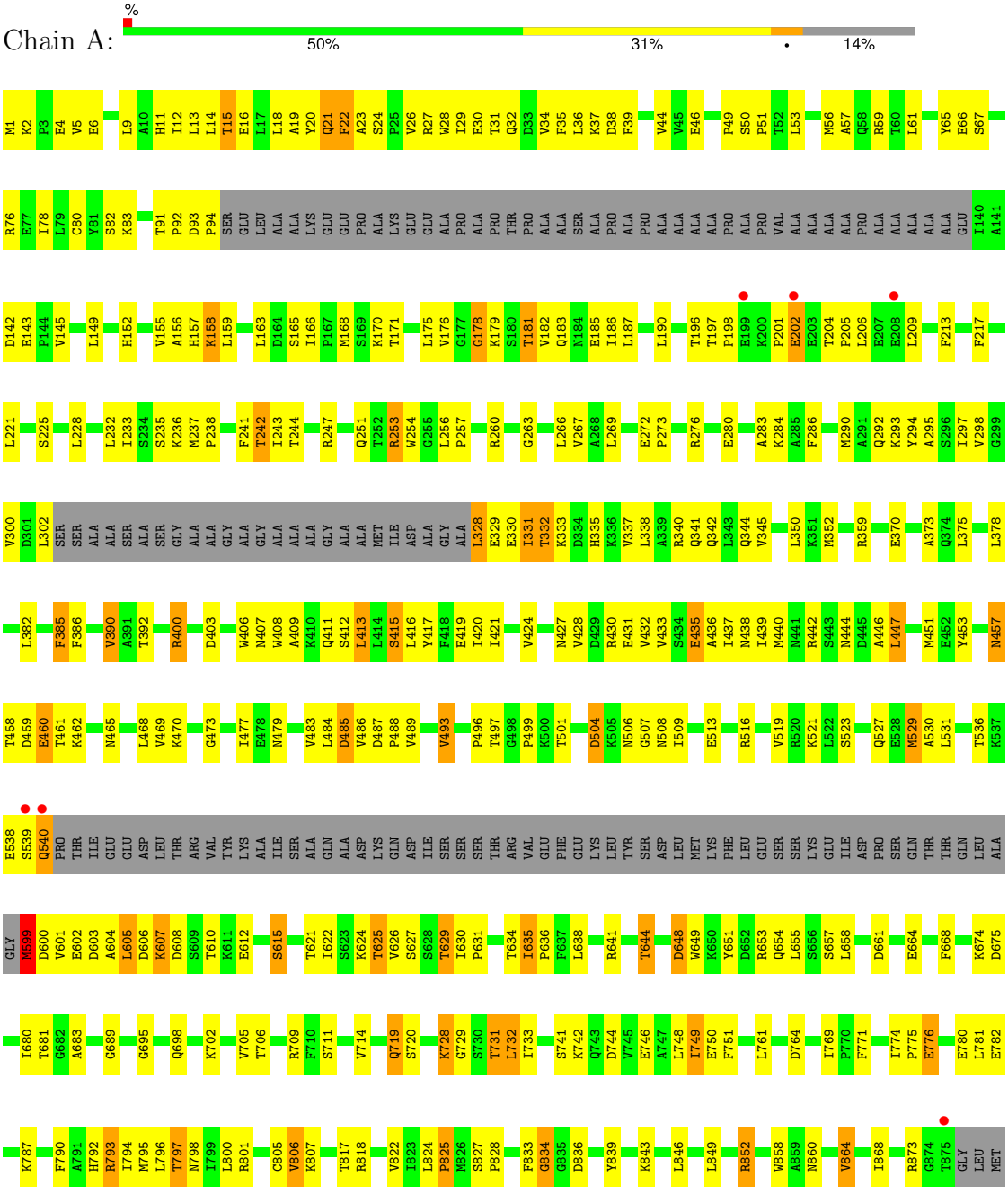
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	H	1	Total	C	N	O	P	0	0
			31	17	4	9	1		
4	I	1	Total	C	N	O	P	0	0
			31	17	4	9	1		

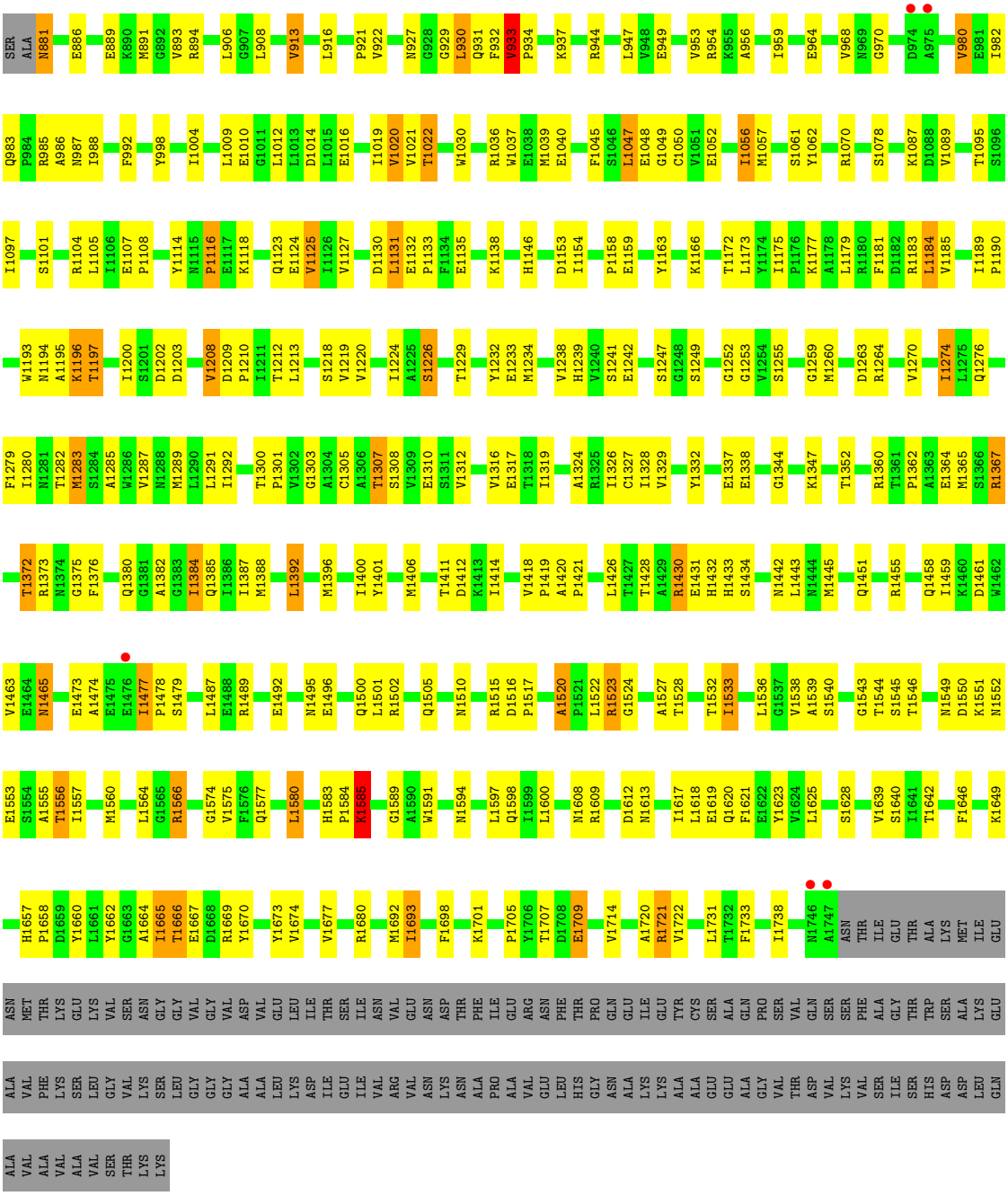
3 Residue-property plots (i)

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

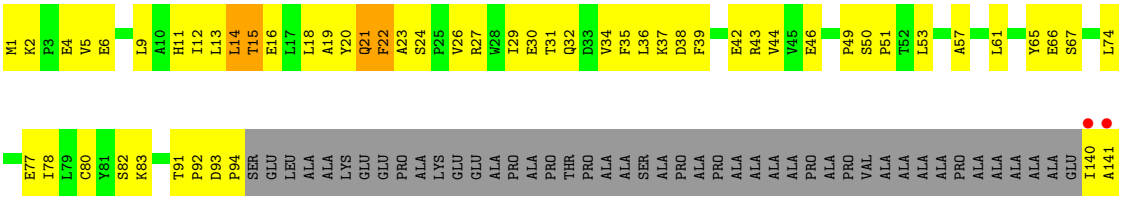
Chain A:

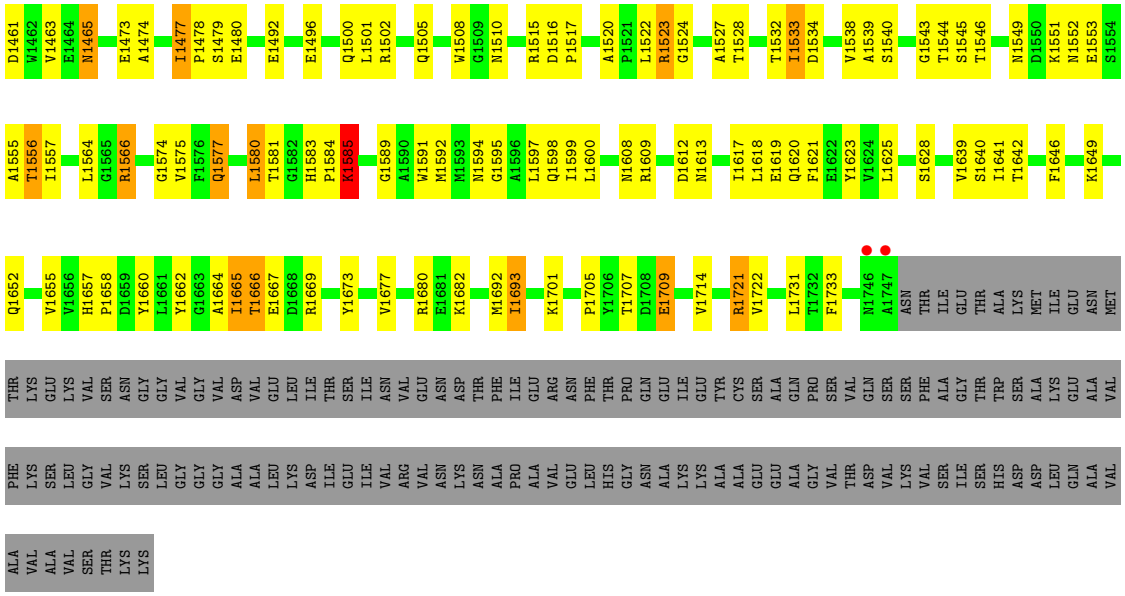




• Molecule 1: FATTY ACID SYNTHASE SUBUNIT ALPHA

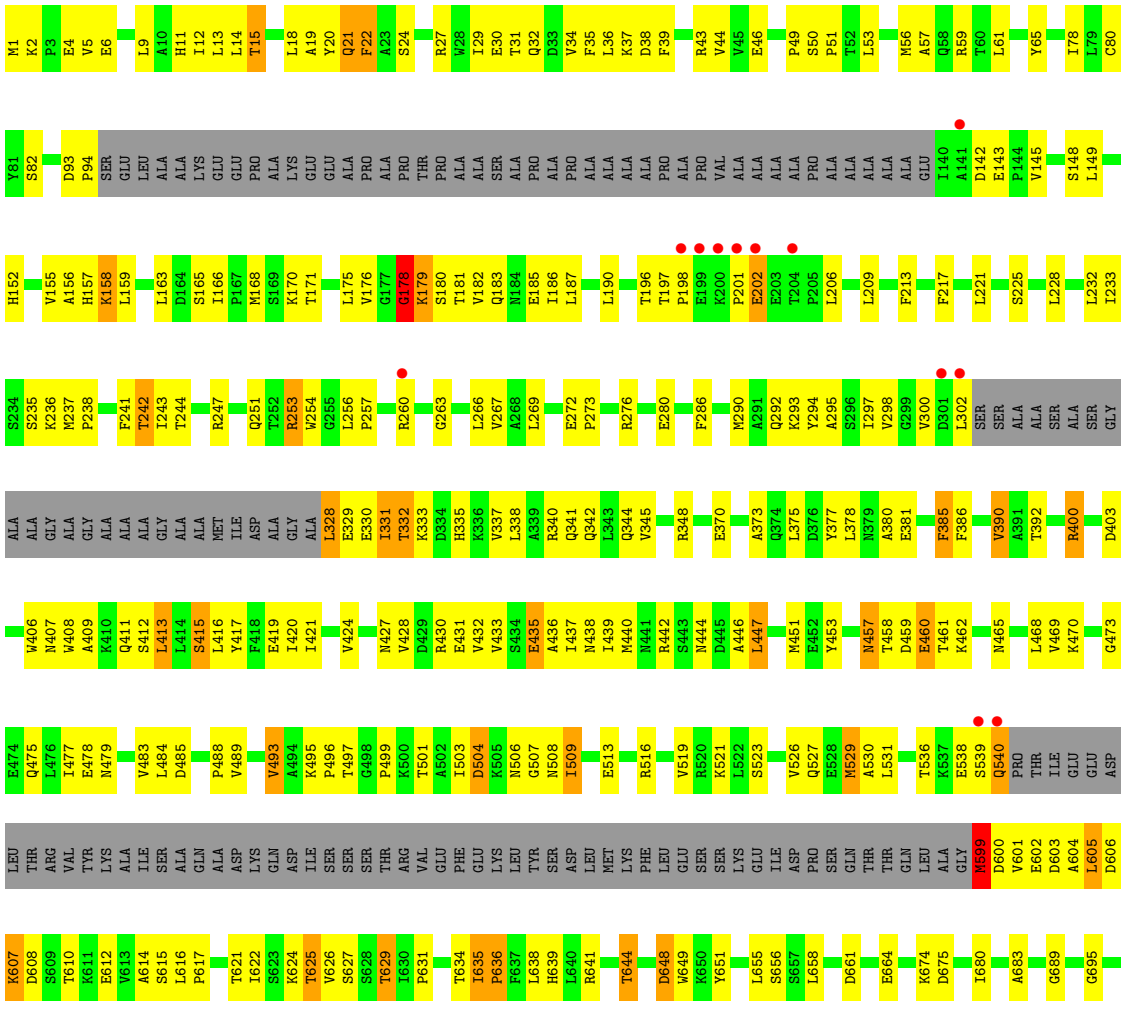
Chain B:

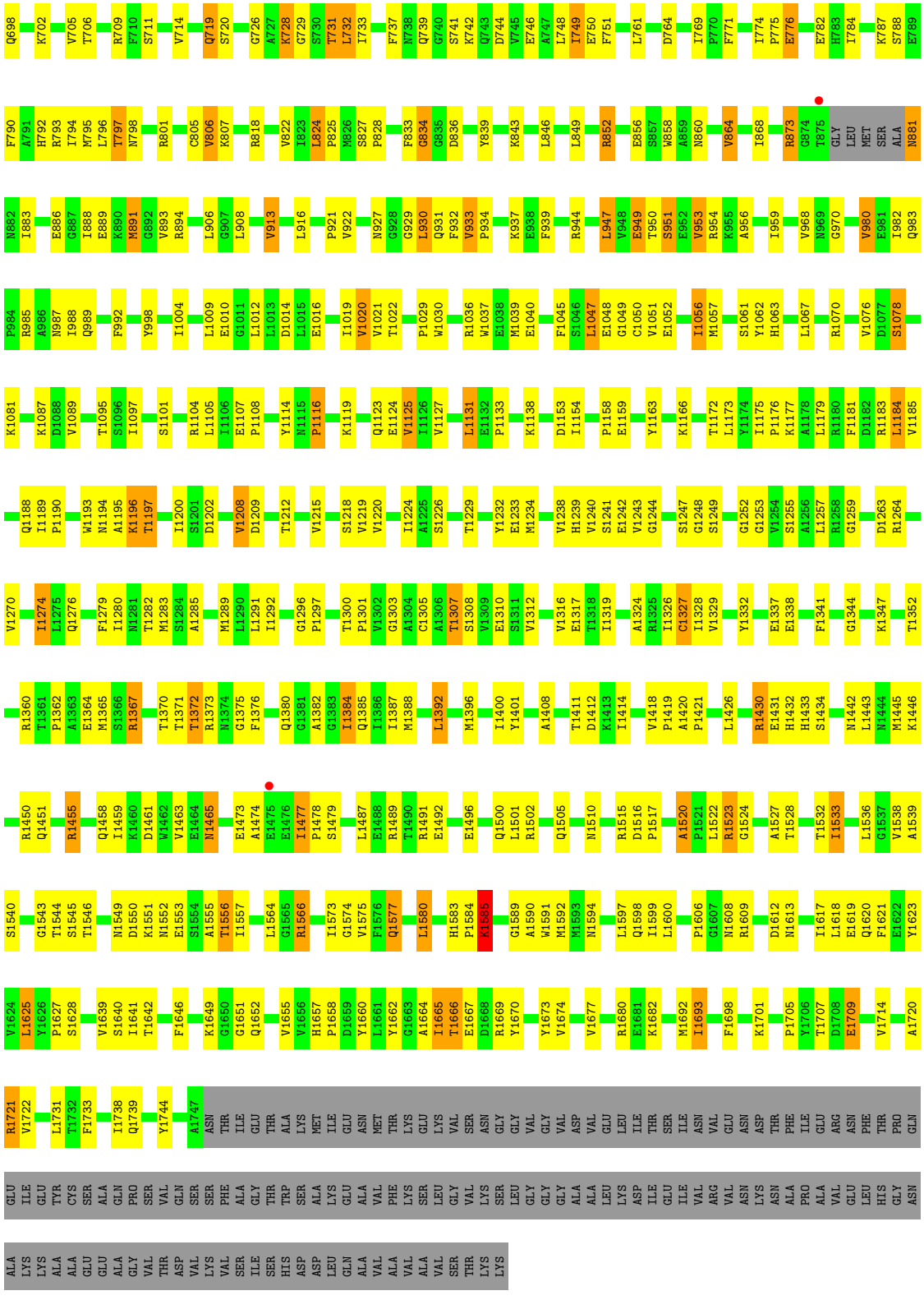




• Molecule 1: FATTY ACID SYNTHASE SUBUNIT ALPHA

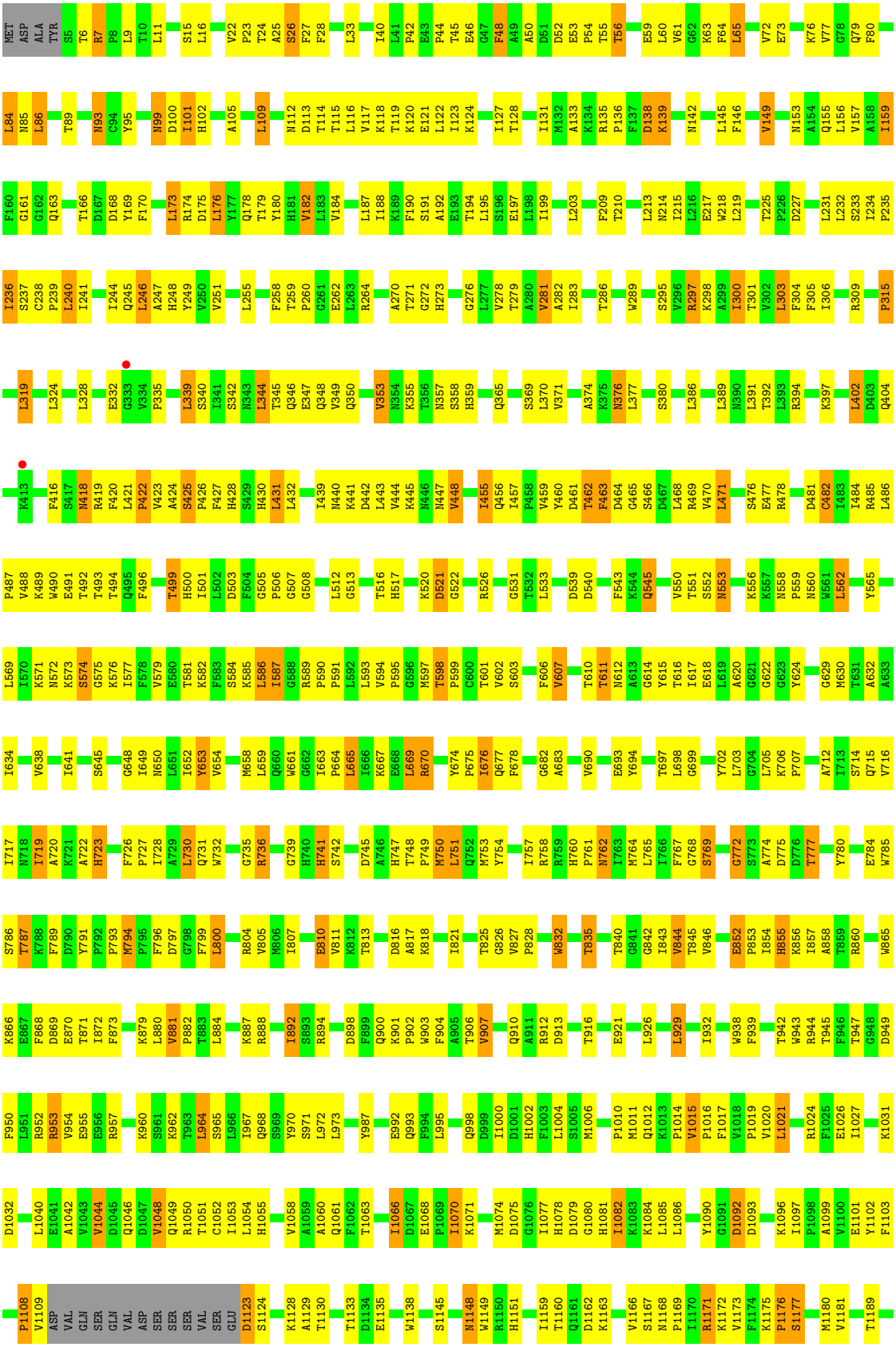
Chain C:

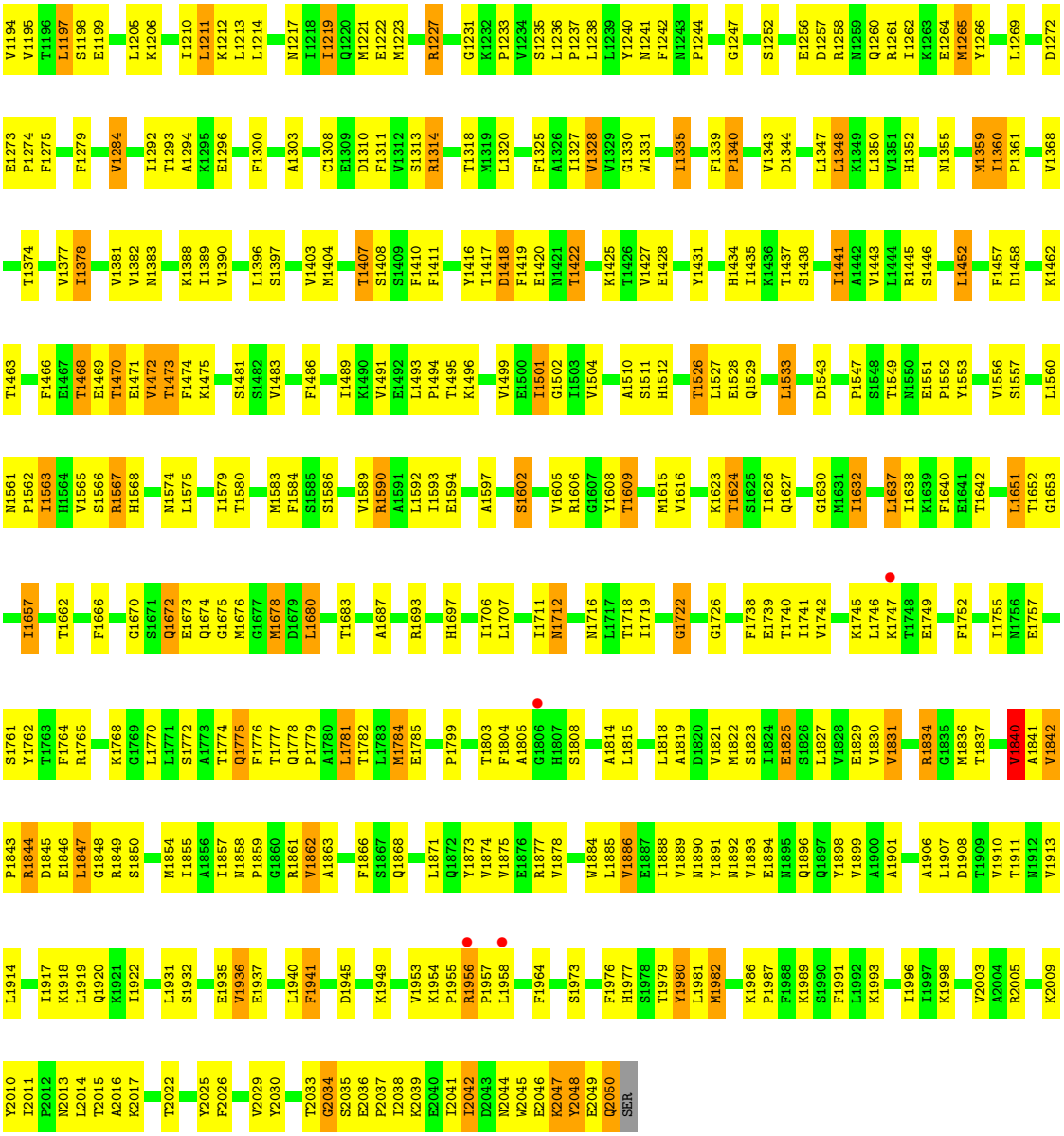




• Molecule 2: FATTY ACID SYNTHASE SUBUNIT BETA

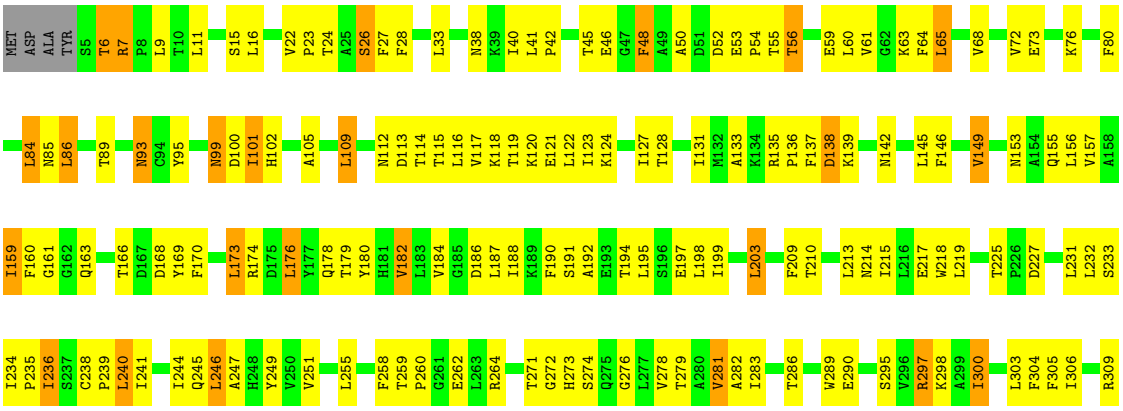
Chain G:

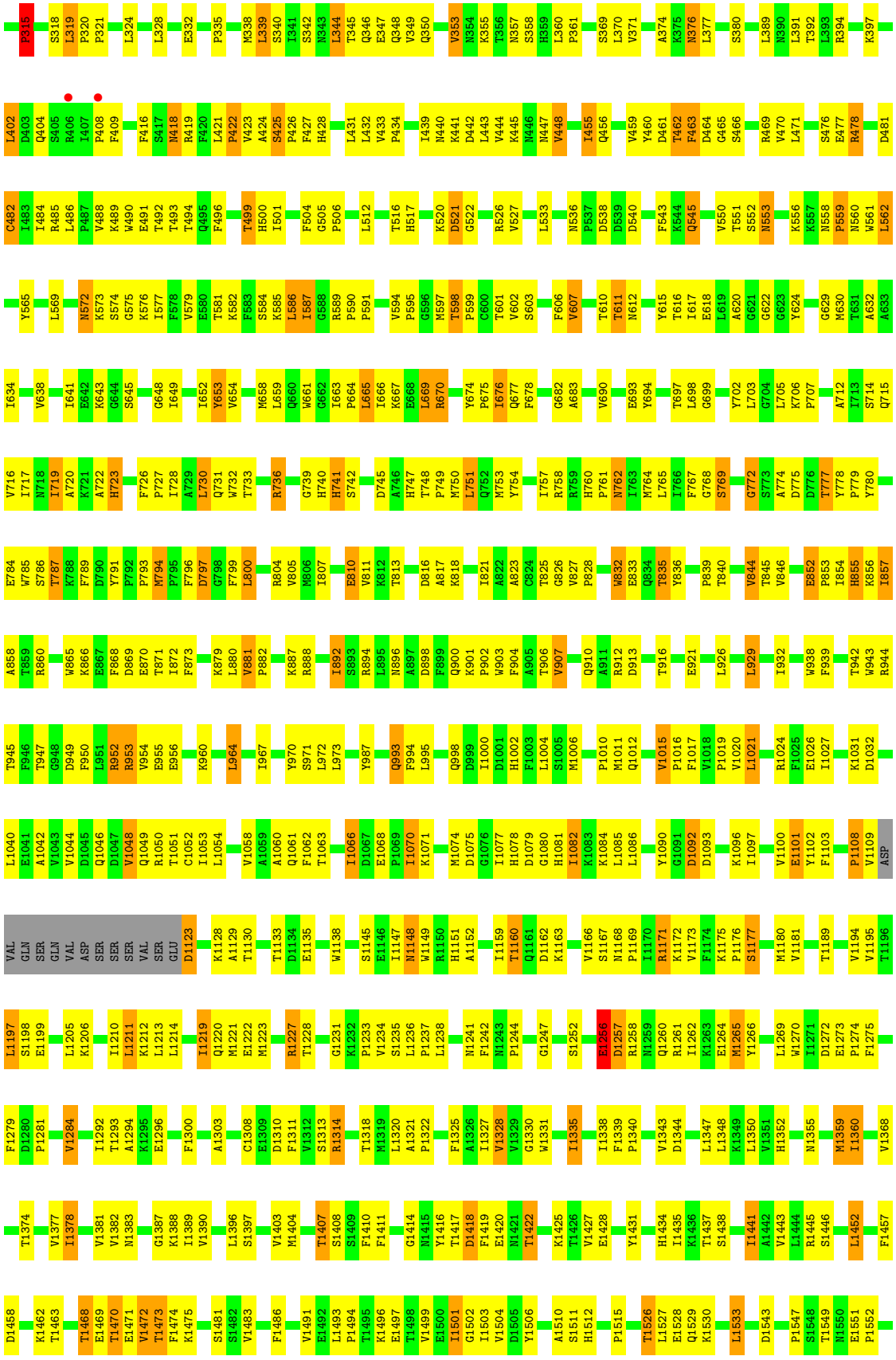


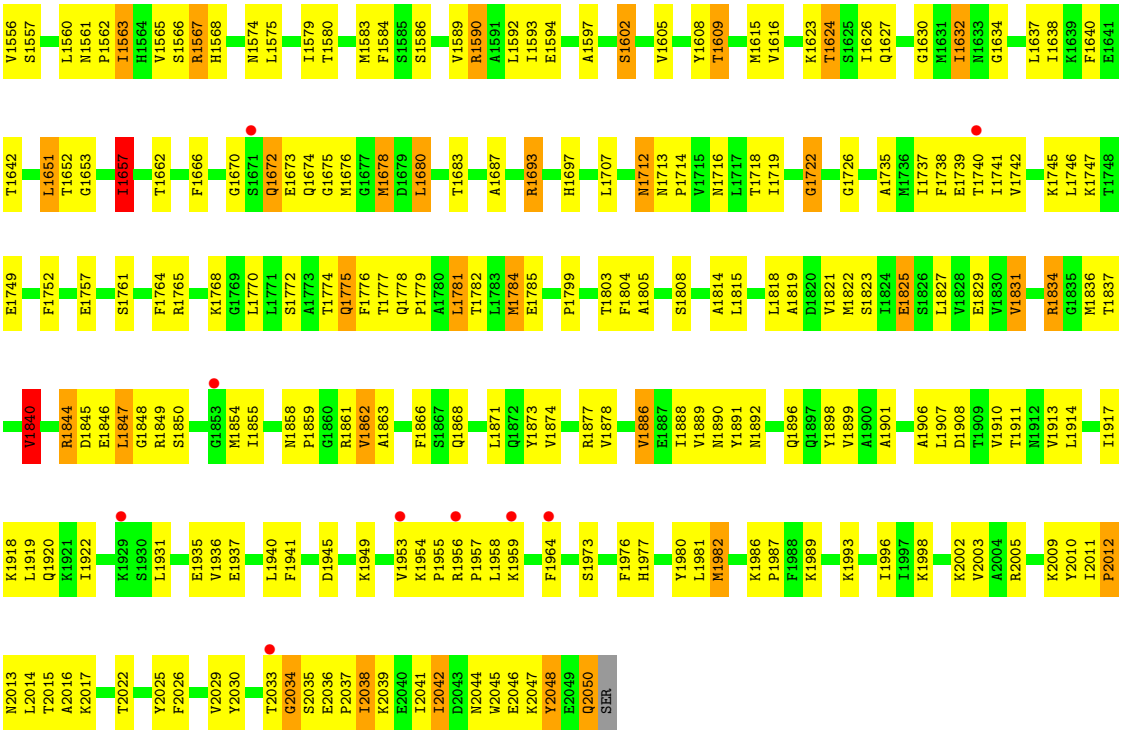


• Molecule 2: FATTY ACID SYNTHASE SUBUNIT BETA

Chain H:

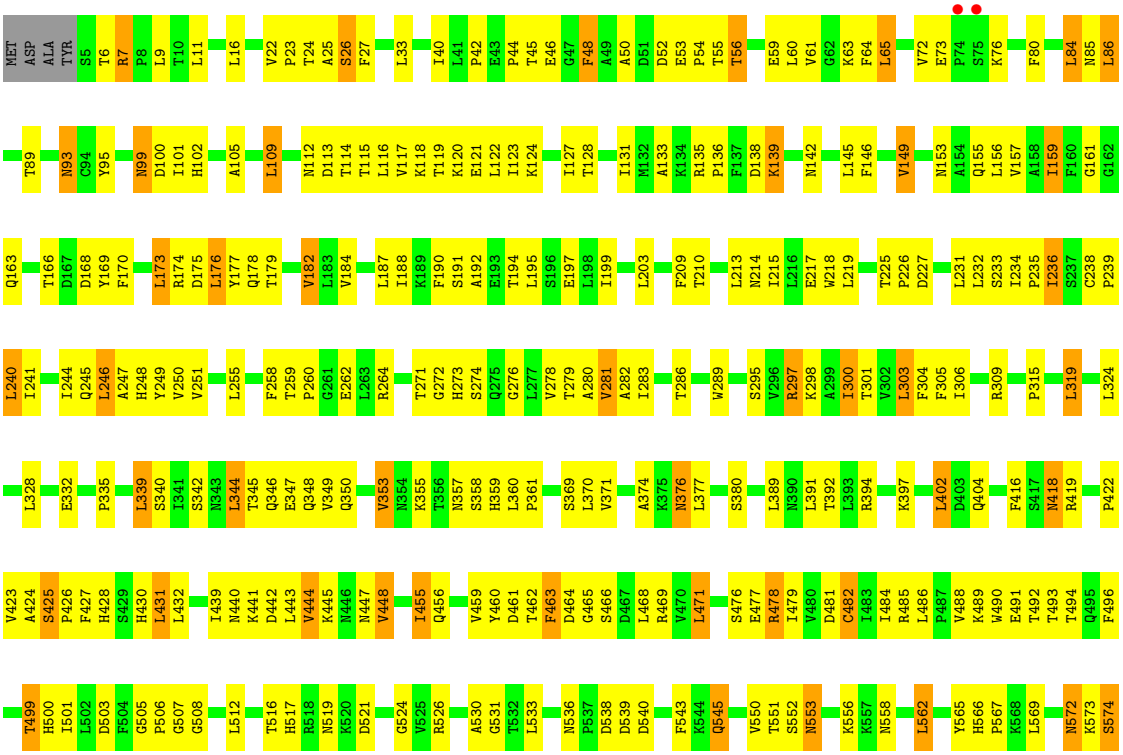


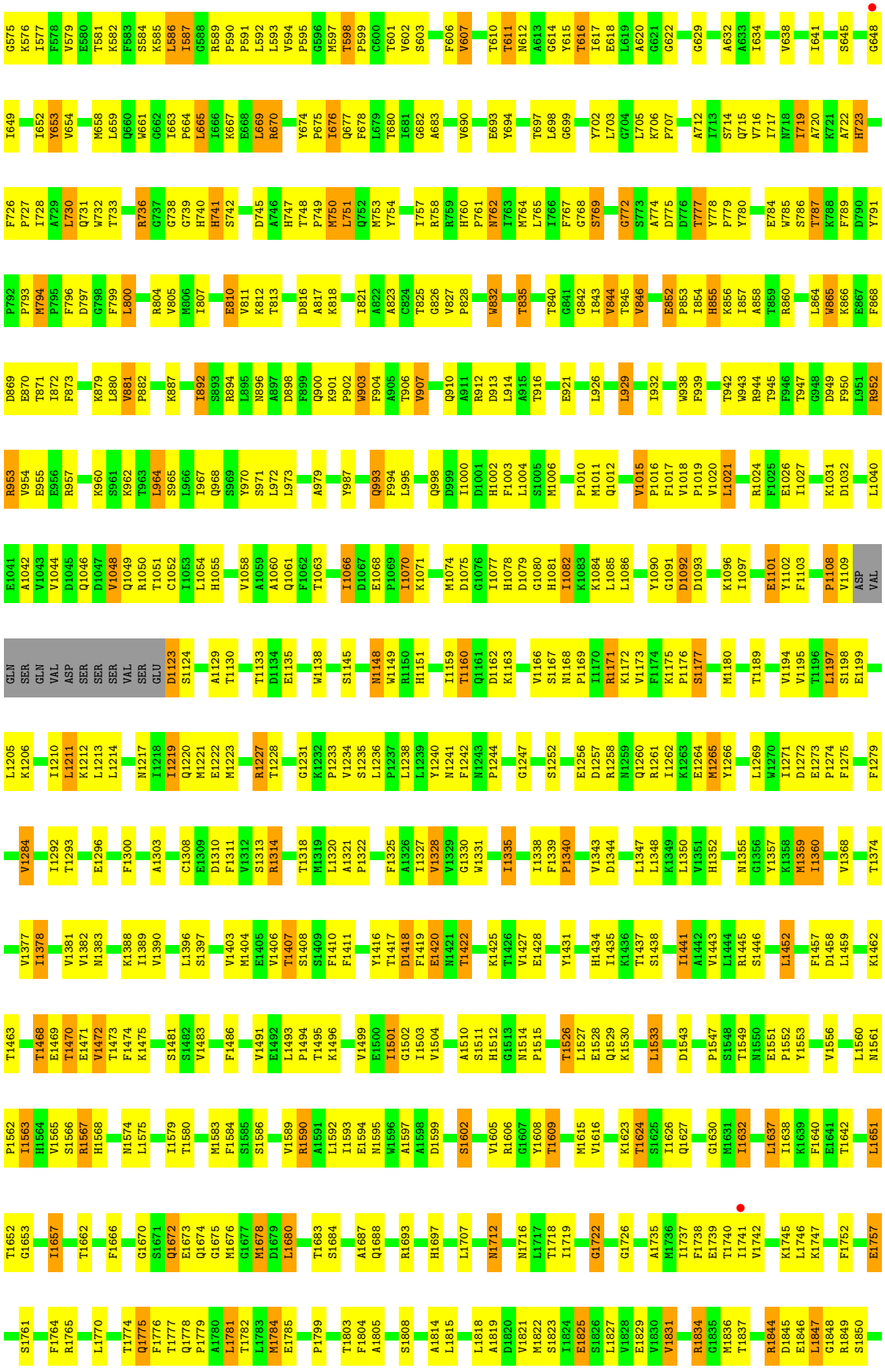


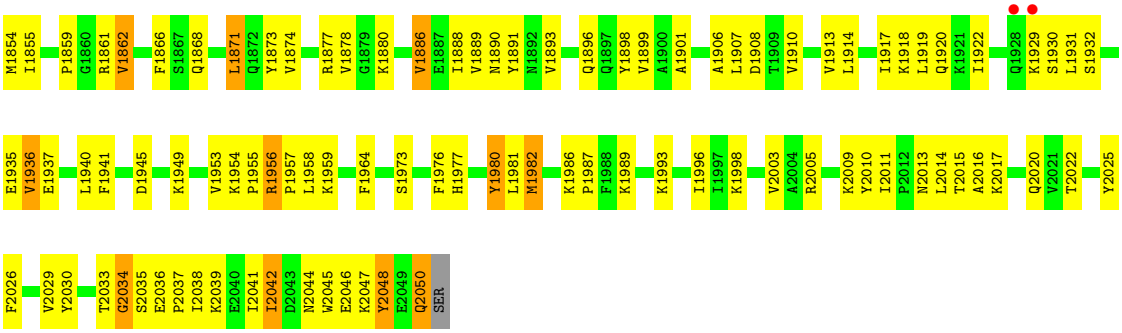


• Molecule 2: FATTY ACID SYNTHASE SUBUNIT BETA

Chain I:




G575 K576 I577 F578 V579 E580 T581 K582 F583 S584 K585 L586 I587 G588 R589 P590 P591 L592 L593 V594 P595 G596 M597 T598 P599 C600 T601 V602 S603 F606 V607 T610 T611 N612 A613 G614 Y615 T616 I617 E618 L619 A620 G621 G622 G629 A632 A633 I634 V638 I641 S645 G648
I649 I652 Y653 V654 M658 L659 Q660 W661 G662 I663 P664 L665 I666 K667 E668 L669 R670 Y674 P675 I676 Q677 F678 L679 T680 I681 G682 A683 V690 V690 E693 Y694 T697 L698 G699 Y702 L703 G704 L705 K706 P707 A712 I713 S714 Q715 V716 I717 N718 I719 A720 K721 A722 H723
F726 P727 I728 A729 L730 Q731 W732 T733 R736 G737 G738 G739 H740 H741 S742 D745 A746 H747 T748 P749 M750 L751 Q752 M753 Y754 I757 R758 R759 H760 P761 N762 I763 M764 L765 I766 F767 G768 S769 G772 S773 A774 D775 D776 T777 Y778 P779 Y780 E784 W785 S786 T787 K788 F789 D790 Y791
P792 P793 M794 P795 F796 D797 G798 F799 L800 R804 V805 M806 I807 E810 V811 K812 T813 D816 A817 K818 I821 A822 A823 C824 T825 G826 V827 P828 W832 T835 T840 G841 G842 I843 V844 T845 V846 E852 P853 I854 H855 K856 I857 A858 T859 R860 L864 W865 K866 E867 F868
D869 E870 T871 I872 F873 K879 L880 V881 P882 K837 I892 S893 R894 L895 N896 A897 D898 F899 Q900 K901 P902 W903 F904 A905 T906 V907 Q910 A911 R912 D913 L914 A915 T916 E921 L926 L929 I932 E852 P853 I854 W938 F939 T942 W943 R944 T945 F946 T947 G948 D949 F950 L951 R952
R953 V954 E955 E956 R957 K960 S961 K962 Y963 L964 S965 L966 I967 Q968 S969 Y970 S971 L972 L973 A979 Y987 Q993 F994 L995 Q998 D999 I1000 D1001 H1002 F1003 L1004 S1005 M1006 P1010 M1011 Q1012 V1015 P1016 F1017 V1018 P1019 V1020 L1021 R1024 F1025 E1026 I1027 K1031 D1032 L1040
E1041 A1042 V1043 V1044 D1045 Q1046 D1047 V1048 Q1049 R1050 T1051 C1052 I1053 L1054 H1055 V1058 A1059 A1060 Q1061 F1062 T1063 I1066 D1067 E1068 P1069 I1070 K1071 M1074 D1075 G1076 I1077 H1078 D1079 G1080 H1081 I1082 K1083 K1084 L1085 L1086 Y1090 G1091 D1092 D1093 K1096 I1097 E1101 Y1102 F1103 P1108 V1109 ASP VAL
GLN SER GLN VAL ASP SER SER SER VAL SER GLU D1123 S1124 A1129 T1130 T1133 D1134 E1135 W1138 S1145 N1148 W1149 R1150 H1151 I1159 T1160 Q1161 D1162 K1163 V1166 S1167 N1168 P1169 I1170 R1171 K1172 V1173 F1174 K1175 P1176 S1177 M1180 T1189 V1194 V1195 T1196 L1197 S1198 E1199
L1205 K1206 I1210 L1211 K1212 L1213 L1214 N1217 I1218 I1219 Q1220 M1221 E1222 M1223 R1227 T1228 G1231 K1232 P1233 V1234 S1235 L1236 P1237 L1238 L1239 Y1240 N1241 F1242 N1243 P1244 G1247 S1252 E1256 D1257 R1258 N1259 Q1260 R1261 I1262 K1263 E1264 M1265 Y1266 L1269 W1270 I1271 D1272 E1273 P1274 F1275 F1279
V1284 I1292 T1293 E1296 F1300 A1303 C1308 E1309 D1310 F1311 V1312 S1313 R1314 T1318 M1319 L1320 A1321 P1322 F1325 A1326 I1327 V1328 V1329 G1330 W1331 I1335 I1338 F1339 P1340 V1343 D1344 L1347 L1348 K1349 L1350 V1351 H1352 N1355 G1356 Y1357 K1358 M1359 I1360 V1368 T1374
V1377 I1378 V1381 V1382 N1383 K1388 I1389 V1390 L1396 S1397 V1403 M1404 E1405 V1406 T1407 S1408 S1409 F1410 F1411 Y1416 T1417 D1418 F1419 E1420 N1421 T1422 K1425 T1426 V1427 E1428 Y1431 H1434 I1435 K1436 T1437 S1438 I1441 A1442 V1443 L1444 R1445 S1446 L1452 F1457 D1458 L1459 K1462
T1463 T1468 E1469 T1470 E1471 V1472 T1473 F1474 K1475 S1481 S1482 V1483 F1486 V1491 E1492 L1493 P1494 T1495 K1496 V1499 E1500 I1501 G1502 I1503 V1504 A1510 S1511 H1512 G1513 N1514 P1515 T1526 L1527 E1528 Q1529 K1530 L1533 D1543 P1547 S1548 T1549 N1550 E1551 P1552 Y1553 V1556 L1560 N1561
P1562 I1563 H1564 V1565 S1566 R1567 H1568 N1574 L1575 I1579 T1580 M1583 F1584 S1585 S1586 V1589 R1590 A1591 L1592 I1593 E1594 N1595 W1596 A1597 A1598 D1599 S1602 V1605 R1606 G1607 Y1608 T1609 M1615 V1616 K1623 T1624 S1625 I1626 Q1627 G1630 M1631 I1632 L1637 I1638 K1639 F1640 E1641 T1642 L1651
T1652 G1653 I1657 T1662 F1666 G1670 S1671 Q1672 E1673 Q1674 G1675 M1676 G1677 M1678 D1679 L1680 T1683 S1684 A1687 Q1688 R1693 H1697 L1707 N1712 N1716 L1717 T1718 I1719 G1722 G1726 A1735 M1736 I1737 F1738 E1739 T1740 I1741 V1742 K1745 L1746 K1747 F1752 E1757
S1761 F1764 R1765 L1770 T1774 Q1775 F1776 T1777 Q1778 P1779 A1780 L1781 T1782 L1783 M1784 E1785 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 R1844 D1845 E1846 L1847 G1848 R1849 S1850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E1935 V1936 E1937 L1940 F1941 D1945 K1949 V1953 K1954 P1955 R1956 P1957 L1958 K1959 F1964 S1973 F1976 H1977 Y1980 L1981 M1982 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 Q2034 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 43 21 2	Depositor
Cell constants a, b, c, α, β, γ	231.90Å 231.90Å 756.80Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	24.99 – 4.00 24.99 – 4.00	Depositor EDS
% Data completeness (in resolution range)	97.3 (24.99-4.00) 97.3 (24.99-4.00)	Depositor EDS
R_{merge}	0.24	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.66 (at 3.97Å)	Xtriage
Refinement program		Depositor
R, R_{free}	0.268 , 0.268 0.276 , 0.278	Depositor DCC
R_{free} test set	8547 reflections (5.06%)	wwPDB-VP
Wilson B-factor (Å^2)	130.2	Xtriage
Anisotropy	0.319	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.24 , 76.1	EDS
L-test for twinning[2]	$< \|L\| > = 0.36$, $< L^2 > = 0.19$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.89	EDS
Total number of atoms	85959	wwPDB-VP
Average B, all atoms (Å^2)	164.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.69% 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, CER

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	0.50	9/12855 (0.1%)	0.61	8/17369 (0.0%)
1	B	0.44	3/12855 (0.0%)	0.62	9/17369 (0.1%)
1	C	0.48	8/12855 (0.1%)	0.61	7/17369 (0.0%)
2	G	0.42	11/16360 (0.1%)	0.58	7/22198 (0.0%)
2	H	0.55	13/16360 (0.1%)	0.61	9/22198 (0.0%)
2	I	0.42	8/16360 (0.0%)	0.59	12/22198 (0.1%)
All	All	0.47	52/87645 (0.1%)	0.60	52/118701 (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	3
2	I	0	1
All	All	0	5

All (52) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	H	1657	ILE	C-N	-32.81	0.58	1.34
2	H	559	PRO	C-N	23.37	1.87	1.34
1	A	485	ASP	C-N	18.89	1.77	1.34
1	C	1430	ARG	C-N	-13.61	1.02	1.34
2	H	1422	THR	C-N	-13.47	1.03	1.34
1	A	992	PHE	C-N	13.35	1.59	1.34
2	H	315	PRO	C-N	13.20	1.64	1.34
1	C	992	PHE	C-N	13.18	1.59	1.34
1	C	181	THR	C-N	-12.39	1.05	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	933	VAL	C-N	12.23	1.57	1.34
2	H	1530	LYS	C-N	11.67	1.60	1.34
2	I	842	GLY	C-N	11.12	1.59	1.34
2	G	315	PRO	C-N	10.45	1.58	1.34
1	A	932	PHE	C-N	-9.64	1.11	1.34
1	C	485	ASP	C-N	9.61	1.56	1.34
2	H	1529	GLN	C-N	-9.44	1.12	1.34
2	H	1256	GLU	C-N	9.35	1.55	1.34
2	H	138	ASP	C-N	9.07	1.54	1.34
2	H	1840	VAL	C-N	8.47	1.53	1.34
1	A	1118	LYS	C-N	-8.42	1.14	1.34
2	G	1657	ILE	C-N	8.15	1.52	1.34
2	I	1530	LYS	C-N	7.92	1.52	1.34
2	I	315	PRO	C-N	7.84	1.52	1.34
1	A	668	PHE	C-N	7.73	1.51	1.34
2	I	1980	TYR	C-N	7.70	1.51	1.34
2	G	1841	ALA	C-N	-7.11	1.17	1.34
1	A	181	THR	C-N	7.05	1.50	1.34
2	G	422	PRO	C-N	6.97	1.50	1.34
2	I	1422	THR	C-N	-6.96	1.18	1.34
2	G	559	PRO	C-N	-6.78	1.18	1.34
2	G	1422	THR	C-N	-6.67	1.18	1.34
1	C	381	GLU	C-N	-6.65	1.18	1.34
2	I	1018	VAL	C-N	-6.57	1.21	1.34
2	G	1256	GLU	C-N	6.43	1.48	1.34
1	C	1520	ALA	C-N	-6.36	1.22	1.34
1	C	932	PHE	C-N	-6.35	1.19	1.34
2	I	903	TRP	C-N	6.33	1.48	1.34
2	H	1053	ILE	C-N	6.30	1.48	1.34
2	H	422	PRO	C-N	6.29	1.48	1.34
2	I	1529	GLN	C-N	-6.27	1.19	1.34
2	G	842	GLY	C-N	6.06	1.48	1.34
2	H	137	PHE	C-N	5.95	1.47	1.34
1	A	1520	ALA	C-N	5.79	1.45	1.34
2	H	1982	MET	C-N	5.67	1.47	1.34
1	B	181	THR	C-N	-5.65	1.21	1.34
2	G	1529	GLN	C-N	-5.50	1.21	1.34
2	G	1840	VAL	C-N	5.48	1.46	1.34
2	G	1980	TYR	C-N	5.38	1.46	1.34
1	C	636	PRO	C-N	-5.29	1.21	1.34
1	B	668	PHE	C-N	5.29	1.46	1.34
1	B	1430	ARG	C-N	-5.19	1.22	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1181	PHE	C-N	5.13	1.45	1.34

All (52) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	H	1657	ILE	O-C-N	-17.23	95.13	122.70
2	H	1657	ILE	CA-C-N	12.14	143.92	117.20
1	B	1116	PRO	O-C-N	-11.67	104.02	122.70
2	H	1657	ILE	C-N-CA	11.19	149.68	121.70
1	C	178	GLY	O-C-N	10.12	138.89	122.70
2	I	1982	MET	O-C-N	-9.44	107.59	122.70
2	G	842	GLY	O-C-N	-8.86	108.52	122.70
2	G	1053	ILE	O-C-N	-8.58	108.97	122.70
1	B	992	PHE	O-C-N	8.47	137.19	121.10
2	I	422	PRO	O-C-N	-8.30	109.42	122.70
2	H	1530	LYS	O-C-N	8.28	135.95	122.70
1	B	992	PHE	C-N-CD	8.15	145.52	128.40
2	I	1982	MET	C-N-CA	8.08	141.89	121.70
1	B	1116	PRO	CA-C-N	8.00	134.79	117.20
1	C	178	GLY	CA-C-N	-7.55	100.59	117.20
2	I	1657	ILE	O-C-N	-7.47	110.75	122.70
1	C	1520	ALA	O-C-N	7.43	135.22	121.10
1	A	1430	ARG	O-C-N	-7.40	110.85	122.70
1	B	1116	PRO	C-N-CA	7.29	139.94	121.70
1	B	599	MET	N-CA-C	-6.93	92.27	111.00
1	C	599	MET	N-CA-C	-6.92	92.32	111.00
1	A	599	MET	N-CA-C	-6.90	92.37	111.00
1	A	992	PHE	C-N-CD	6.65	142.37	128.40
2	I	422	PRO	CA-C-N	6.52	131.55	117.20
2	H	1840	VAL	O-C-N	-6.51	112.29	122.70
2	I	1982	MET	CA-C-N	6.50	131.50	117.20
2	H	1530	LYS	C-N-CA	-6.37	105.79	121.70
1	C	1116	PRO	O-C-N	-6.36	112.52	122.70
2	H	1530	LYS	CA-C-N	-6.32	103.30	117.20
2	I	1530	LYS	O-C-N	6.31	132.79	122.70
1	B	992	PHE	CA-C-N	-6.11	100.00	117.10
2	G	1053	ILE	CA-C-N	6.05	130.50	117.20
1	A	992	PHE	O-C-N	5.97	132.45	121.10
2	G	1842	VAL	O-C-N	5.80	132.12	121.10
2	I	315	PRO	O-C-N	-5.75	113.50	122.70
1	B	540	GLN	N-CA-C	-5.65	95.74	111.00
1	A	540	GLN	N-CA-C	-5.64	95.77	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	C	540	GLN	N-CA-C	-5.63	95.80	111.00
1	B	178	GLY	O-C-N	5.57	131.61	122.70
2	I	422	PRO	C-N-CA	5.52	135.50	121.70
2	G	138	ASP	O-C-N	-5.44	113.99	122.70
1	A	933	VAL	O-C-N	5.44	131.44	121.10
1	A	1520	ALA	O-C-N	5.44	131.44	121.10
2	H	1256	GLU	CA-C-N	-5.39	105.35	117.20
2	I	1657	ILE	CA-C-N	5.34	128.95	117.20
2	G	842	GLY	CA-C-N	5.30	128.86	117.20
1	C	178	GLY	C-N-CA	-5.24	108.61	121.70
1	A	1116	PRO	O-C-N	-5.17	114.43	122.70
2	H	138	ASP	O-C-N	-5.08	114.56	122.70
2	G	138	ASP	C-N-CA	5.05	134.32	121.70
2	I	1657	ILE	C-N-CA	5.03	134.27	121.70
2	I	1530	LYS	CA-C-N	-5.02	106.15	117.20

There are no chirality outliers.

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	G	1108	PRO	Peptide
2	H	1108	PRO	Peptide
2	H	1256	GLU	Mainchain
2	H	1657	ILE	Mainchain
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	12615	0	12589	601	1
1	B	12615	0	12591	582	6
1	C	12615	0	12587	588	0
2	G	15995	0	15975	998	10
2	H	15995	0	15974	997	7
2	I	15995	0	15976	977	12
3	A	12	0	10	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	B	12	0	10	4	0
3	C	12	0	10	4	0
4	G	31	0	19	7	0
4	H	31	0	19	6	0
4	I	31	0	19	8	0
All	All	85959	0	85779	4568	18

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 (4568) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:485:ASP:C	1:A:486:VAL:N	1.77	1.36
2:H:559:PRO:C	2:H:560:ASN:N	1.87	1.26
2:H:1956:ARG:HB2	2:H:1957:PRO:HD3	1.24	1.18
2:G:28:PHE:CE2	2:H:7:ARG:HD2	1.80	1.16
2:G:1859:PRO:HG3	2:G:1871:LEU:HD12	1.29	1.15
2:H:1834:ARG:HG2	2:H:1834:ARG:HH11	1.06	1.15
2:H:490:TRP:HE1	2:H:516:THR:HG22	1.12	1.14
2:H:499:THR:HB	2:H:500:HIS:HD2	1.10	1.12
2:I:490:TRP:HE1	2:I:516:THR:HG22	1.10	1.12
2:G:1956:ARG:HB2	2:G:1957:PRO:HD3	1.23	1.12
2:G:131:ILE:HD12	2:G:182:VAL:HB	1.18	1.12
2:H:131:ILE:HD12	2:H:182:VAL:CB	1.79	1.11
2:I:601:THR:HG21	2:I:618:GLU:O	1.50	1.11
2:I:1956:ARG:HB2	2:I:1957:PRO:HD3	1.23	1.11
1:A:253:ARG:HG3	1:A:254:TRP:HD1	1.15	1.10
1:A:1721:ARG:HG2	1:A:1721:ARG:HH11	1.16	1.10
2:H:601:THR:HG21	2:H:618:GLU:O	1.50	1.10
2:G:601:THR:HG21	2:G:618:GLU:O	1.52	1.10
2:G:499:THR:HB	2:G:500:HIS:HD2	1.08	1.09
2:H:131:ILE:CB	2:H:182:VAL:HG11	1.82	1.09
2:I:297:ARG:HD3	2:I:447:ASN:HD21	1.15	1.09
2:G:131:ILE:HB	2:G:182:VAL:HG11	1.31	1.09
2:G:490:TRP:HE1	2:G:516:THR:HG22	1.12	1.08
2:I:499:THR:HB	2:I:500:HIS:HD2	1.07	1.08
1:C:852:ARG:HG2	1:C:852:ARG:HH11	1.14	1.08
2:H:131:ILE:HG21	2:H:182:VAL:HG12	1.35	1.07
2:H:128:THR:HA	2:H:182:VAL:HG21	1.31	1.07
2:I:1227:ARG:HH11	2:I:1227:ARG:HG3	1.18	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:297:ARG:HD3	2:G:447:ASN:HD21	1.17	1.06
2:G:28:PHE:CZ	2:H:7:ARG:HD2	1.91	1.06
1:C:1367:ARG:NH1	1:C:1372:THR:HB	1.71	1.06
2:I:1834:ARG:HG2	2:I:1834:ARG:HH11	1.16	1.06
2:G:903:TRP:O	2:G:906:THR:HG22	1.57	1.05
1:C:1721:ARG:HG2	1:C:1721:ARG:HH11	1.19	1.05
2:G:1834:ARG:HG2	2:G:1834:ARG:HH11	1.16	1.05
2:I:7:ARG:HH21	2:I:27:PHE:HB3	1.20	1.05
1:B:253:ARG:HG3	1:B:254:TRP:HD1	1.17	1.04
1:A:1367:ARG:NH1	1:A:1372:THR:HB	1.72	1.04
1:C:253:ARG:HG3	1:C:254:TRP:HD1	1.15	1.04
2:G:932:ILE:HD11	2:G:1042:ALA:HB2	1.36	1.04
2:I:1739:GLU:HB2	2:I:1987:PRO:HB3	1.40	1.04
1:B:1367:ARG:NH1	1:B:1372:THR:HB	1.73	1.04
2:H:1227:ARG:HH11	2:H:1227:ARG:HG3	1.19	1.03
2:G:1227:ARG:HG3	2:G:1227:ARG:HH11	1.18	1.03
2:H:297:ARG:HD3	2:H:447:ASN:HD21	1.16	1.03
1:B:1721:ARG:HH11	1:B:1721:ARG:HG2	1.21	1.03
1:B:1722:VAL:HG11	1:B:1731:LEU:HB3	1.37	1.03
1:C:1722:VAL:HG11	1:C:1731:LEU:HB3	1.37	1.02
2:G:7:ARG:HH21	2:G:27:PHE:HB3	1.22	1.02
1:B:599:MET:HB2	1:B:624:LYS:HD2	1.42	1.02
2:H:7:ARG:HH21	2:H:27:PHE:HB3	1.22	1.02
1:A:852:ARG:HG2	1:A:852:ARG:HH11	1.23	1.02
1:B:852:ARG:HH11	1:B:852:ARG:HG2	1.20	1.02
2:H:1739:GLU:HB2	2:H:1987:PRO:HB3	1.42	1.02
2:H:1859:PRO:HG3	2:H:1871:LEU:HD12	1.37	1.01
2:I:1859:PRO:HG3	2:I:1871:LEU:HD12	1.41	1.01
2:H:131:ILE:HB	2:H:182:VAL:CG1	1.89	1.01
1:C:1219:VAL:HA	1:C:1384:ILE:HD11	1.40	1.01
2:H:131:ILE:CD1	2:H:182:VAL:HB	1.91	1.00
1:C:1014:ASP:H	1:C:1510:ASN:HD21	1.03	1.00
2:H:903:TRP:O	2:H:906:THR:HG22	1.59	1.00
1:A:1722:VAL:HG11	1:A:1731:LEU:HB3	1.40	1.00
2:I:741:HIS:NE2	2:I:855:HIS:CE1	2.30	1.00
1:A:599:MET:HB2	1:A:624:LYS:HD2	1.43	0.99
2:H:1567:ARG:HG3	2:H:1567:ARG:HH11	1.27	0.99
1:C:599:MET:HB2	1:C:624:LYS:HD2	1.43	0.99
1:C:253:ARG:HG3	1:C:254:TRP:CD1	1.98	0.99
2:G:499:THR:HB	2:G:500:HIS:CD2	1.97	0.98
2:I:892:ILE:HD11	2:I:903:TRP:CE2	1.98	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:253:ARG:HG3	1:A:254:TRP:CD1	1.98	0.98
1:B:1219:VAL:HA	1:B:1384:ILE:HD11	1.45	0.98
2:H:1803:THR:HG22	2:H:2009:LYS:HA	1.45	0.98
2:H:762:ASN:HD22	2:H:762:ASN:H	1.03	0.98
2:H:131:ILE:HB	2:H:182:VAL:HG11	1.00	0.98
2:I:499:THR:HB	2:I:500:HIS:CD2	1.97	0.98
2:I:903:TRP:O	2:I:906:THR:HG22	1.63	0.98
1:A:400:ARG:HG2	1:A:400:ARG:HH11	1.28	0.97
2:G:892:ILE:HD11	2:G:903:TRP:CE2	1.98	0.97
1:A:400:ARG:HH11	1:A:400:ARG:CG	1.76	0.97
2:H:499:THR:HB	2:H:500:HIS:CD2	1.99	0.97
2:H:1172:LYS:HE3	2:H:1574:ASN:OD1	1.64	0.97
1:B:198:PRO:HG3	1:B:209:LEU:HD21	1.47	0.97
1:B:253:ARG:HG3	1:B:254:TRP:CD1	1.99	0.96
2:H:594:VAL:HB	2:H:617:ILE:HG13	1.44	0.96
2:I:490:TRP:NE1	2:I:516:THR:HG22	1.79	0.96
2:I:762:ASN:H	2:I:762:ASN:HD22	1.08	0.96
1:A:1014:ASP:H	1:A:1510:ASN:HD21	1.10	0.96
2:H:490:TRP:NE1	2:H:516:THR:HG22	1.81	0.96
2:H:131:ILE:HD12	2:H:182:VAL:HB	0.96	0.96
1:A:12:ILE:HD11	2:G:2041:ILE:HD12	1.47	0.95
1:C:198:PRO:HG3	1:C:209:LEU:HD21	1.48	0.95
2:G:490:TRP:NE1	2:G:516:THR:HG22	1.81	0.95
2:H:892:ILE:HD11	2:H:903:TRP:CE2	2.01	0.95
2:H:1567:ARG:HH11	2:H:1567:ARG:CG	1.79	0.95
2:G:1803:THR:HG22	2:G:2009:LYS:HA	1.48	0.95
2:I:594:VAL:HB	2:I:617:ILE:HG13	1.46	0.95
2:I:1567:ARG:HH11	2:I:1567:ARG:HG3	1.29	0.95
2:I:1567:ARG:HH11	2:I:1567:ARG:CG	1.79	0.95
2:H:1199:GLU:OE2	2:H:1567:ARG:NH1	2.00	0.95
2:G:1741:ILE:HD12	2:G:1986:LYS:HD2	1.47	0.95
2:G:1878:VAL:HG11	2:G:1910:VAL:HG22	1.48	0.95
1:A:198:PRO:HG3	1:A:209:LEU:HD21	1.47	0.95
2:I:741:HIS:CE1	2:I:855:HIS:CE1	2.55	0.95
2:G:1567:ARG:HH11	2:G:1567:ARG:CG	1.80	0.95
1:A:444:ASN:HB2	1:A:447:LEU:H	1.31	0.95
2:H:741:HIS:HE1	2:H:845:THR:CG2	1.80	0.95
2:H:835:THR:HG21	2:H:855:HIS:CD2	1.99	0.94
2:G:1739:GLU:HB2	2:G:1987:PRO:HB3	1.43	0.94
2:G:1589:VAL:HA	2:G:1592:LEU:HD12	1.49	0.94
2:H:55:THR:HG22	2:H:56:THR:HG22	1.48	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:444:ASN:HB2	1:B:447:LEU:H	1.31	0.94
1:C:400:ARG:HG2	1:C:400:ARG:HH11	1.33	0.94
2:I:1741:ILE:HD12	2:I:1986:LYS:HD2	1.49	0.94
1:C:2:LYS:HD2	2:I:2050:GLN:HB3	1.50	0.94
2:I:1878:VAL:HG11	2:I:1910:VAL:HG22	1.50	0.94
2:H:1314:ARG:HH11	2:H:1314:ARG:HG3	1.31	0.94
2:G:762:ASN:H	2:G:762:ASN:HD22	1.03	0.93
2:G:942:THR:HB	2:G:1012:GLN:HG2	1.50	0.93
1:A:1219:VAL:HA	1:A:1384:ILE:HD11	1.45	0.93
1:B:529:MET:HA	1:B:529:MET:HE3	1.47	0.93
2:I:741:HIS:HE1	2:I:845:THR:CG2	1.81	0.93
2:H:652:ILE:H	2:H:658:MET:HE3	1.30	0.93
2:H:1845:ASP:HB2	2:H:1849:ARG:H	1.34	0.93
1:B:400:ARG:HH11	1:B:400:ARG:CG	1.81	0.93
2:H:1589:VAL:HA	2:H:1592:LEU:HD12	1.49	0.93
2:I:1314:ARG:HG3	2:I:1314:ARG:HH11	1.32	0.93
1:A:12:ILE:HD11	2:G:2041:ILE:CD1	1.99	0.93
2:I:56:THR:HG23	2:I:59:GLU:HG3	1.49	0.93
2:G:1567:ARG:HH11	2:G:1567:ARG:HG3	1.30	0.93
2:G:128:THR:HA	2:G:182:VAL:HG21	1.51	0.92
1:A:1523:ARG:HH11	1:A:1523:ARG:HG3	1.33	0.92
1:C:1523:ARG:HG3	1:C:1523:ARG:HH11	1.32	0.92
2:I:741:HIS:CE1	2:I:845:THR:CG2	2.52	0.92
2:G:55:THR:HG21	2:G:113:ASP:HB2	1.52	0.92
1:A:152:HIS:CD2	1:A:163:LEU:HB2	2.05	0.92
2:G:741:HIS:NE2	2:G:855:HIS:CE1	2.38	0.92
2:I:55:THR:HG22	2:I:56:THR:HG22	1.51	0.91
2:I:667:LYS:HD2	2:I:697:THR:HG22	1.51	0.91
2:G:1845:ASP:HB2	2:G:1849:ARG:H	1.34	0.91
2:I:741:HIS:CE1	2:I:845:THR:HG22	2.04	0.91
1:A:1721:ARG:HH11	1:A:1721:ARG:CG	1.84	0.91
1:C:400:ARG:HH11	1:C:400:ARG:CG	1.81	0.91
2:G:1314:ARG:HH11	2:G:1314:ARG:HG3	1.32	0.91
1:C:152:HIS:CD2	1:C:163:LEU:HB2	2.05	0.91
2:G:56:THR:HG23	2:G:59:GLU:HG3	1.50	0.91
2:G:741:HIS:CE1	2:G:855:HIS:CE1	2.57	0.91
2:I:1803:THR:HG22	2:I:2009:LYS:HA	1.51	0.91
2:I:707:PRO:HG3	2:I:716:VAL:HG21	1.52	0.91
1:A:1693:ILE:HD11	2:G:998:GLN:HB2	1.51	0.91
1:B:1523:ARG:HH11	1:B:1523:ARG:HG3	1.36	0.91
1:C:793:ARG:HA	1:C:797:THR:HG23	1.52	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1741:ILE:HD12	2:H:1986:LYS:HD2	1.54	0.90
2:I:942:THR:HB	2:I:1012:GLN:HG2	1.52	0.90
2:H:707:PRO:HG3	2:H:716:VAL:HG21	1.54	0.90
2:I:652:ILE:H	2:I:658:MET:HE3	1.36	0.90
2:I:1441:ILE:HD11	2:I:1445:ARG:CZ	2.02	0.90
2:G:55:THR:HG22	2:G:56:THR:HG22	1.52	0.90
2:G:131:ILE:HD12	2:G:182:VAL:CB	2.01	0.89
2:G:1847:LEU:H	2:G:1847:LEU:HD12	1.37	0.89
1:C:444:ASN:HB2	1:C:447:LEU:H	1.33	0.89
2:G:594:VAL:HB	2:G:617:ILE:HG13	1.52	0.89
1:B:793:ARG:HA	1:B:797:THR:HG23	1.54	0.89
1:B:1721:ARG:HH11	1:B:1721:ARG:CG	1.85	0.89
2:I:1589:VAL:HA	2:I:1592:LEU:HD12	1.51	0.89
1:A:253:ARG:HE	1:A:254:TRP:HE1	1.21	0.89
2:G:1441:ILE:HD11	2:G:1445:ARG:CZ	2.02	0.89
2:H:55:THR:HG21	2:H:113:ASP:HB2	1.53	0.89
2:H:1847:LEU:HD12	2:H:1847:LEU:H	1.37	0.89
1:A:529:MET:HA	1:A:529:MET:HE3	1.53	0.89
2:H:56:THR:HG23	2:H:59:GLU:HG3	1.54	0.89
1:A:1474:ALA:HA	1:A:1478:PRO:HG2	1.54	0.88
2:G:667:LYS:HD2	2:G:697:THR:HG22	1.55	0.88
2:H:667:LYS:HD2	2:H:697:THR:HG22	1.55	0.88
1:A:403:ASP:HB2	1:A:1613:ASN:HD21	1.38	0.88
1:A:1367:ARG:HH12	1:A:1372:THR:HB	1.35	0.88
1:B:31:THR:HG23	2:H:2011:ILE:HG21	1.56	0.88
2:H:942:THR:HB	2:H:1012:GLN:HG2	1.54	0.88
2:I:55:THR:HG21	2:I:113:ASP:HB2	1.53	0.88
1:B:152:HIS:CD2	1:B:163:LEU:HB2	2.09	0.88
1:B:1367:ARG:HH12	1:B:1372:THR:HB	1.38	0.88
2:I:1227:ARG:HH11	2:I:1227:ARG:CG	1.87	0.88
1:C:1721:ARG:HH11	1:C:1721:ARG:CG	1.87	0.87
2:G:707:PRO:HG3	2:G:716:VAL:HG21	1.56	0.87
2:H:1441:ILE:HD11	2:H:1445:ARG:CZ	2.04	0.87
2:I:131:ILE:HD12	2:I:182:VAL:HB	1.55	0.87
1:A:793:ARG:HA	1:A:797:THR:HG23	1.53	0.87
1:C:59:ARG:HH11	2:I:1896:GLN:NE2	1.71	0.87
2:I:298:LYS:HG2	2:I:448:VAL:HG22	1.56	0.87
2:I:369:SER:OG	2:I:380:SER:HB3	1.74	0.87
1:C:529:MET:HA	1:C:529:MET:HE3	1.57	0.87
2:H:131:ILE:CG2	2:H:182:VAL:HG12	2.04	0.87
2:I:1845:ASP:HB2	2:I:1849:ARG:H	1.38	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:260:ARG:HH12	1:B:300:VAL:HG21	1.38	0.87
2:I:932:ILE:HD11	2:I:1042:ALA:HB2	1.57	0.87
1:C:253:ARG:HE	1:C:254:TRP:HE1	1.21	0.87
1:A:340:ARG:NH1	1:A:344:GLN:HG2	1.88	0.87
1:B:893:VAL:HG11	1:B:930:LEU:HD23	1.55	0.87
2:H:741:HIS:HE1	2:H:845:THR:HG22	1.38	0.86
1:C:1474:ALA:HA	1:C:1478:PRO:HG2	1.57	0.86
2:H:1878:VAL:HG11	2:H:1910:VAL:HG22	1.55	0.86
2:I:1739:GLU:HB3	2:I:1746:LEU:HD11	1.58	0.86
1:B:1474:ALA:HA	1:B:1478:PRO:HG2	1.58	0.86
2:G:741:HIS:HE1	2:G:845:THR:CG2	1.88	0.86
2:H:1533:LEU:HD13	2:H:1630:GLY:HA2	1.55	0.86
1:B:400:ARG:HH11	1:B:400:ARG:HG2	1.41	0.85
2:H:1739:GLU:HB3	2:H:1746:LEU:HD11	1.56	0.85
2:G:741:HIS:CE1	2:G:845:THR:CG2	2.59	0.85
2:I:1533:LEU:HD13	2:I:1630:GLY:HA2	1.59	0.85
2:H:1425:LYS:HG2	2:H:1471:GLU:HG3	1.58	0.85
2:H:774:ALA:HB1	2:H:1081:HIS:HD2	1.41	0.85
2:G:1425:LYS:HG2	2:G:1471:GLU:HG3	1.57	0.85
2:I:1847:LEU:H	2:I:1847:LEU:HD12	1.40	0.85
1:B:340:ARG:NH1	1:B:344:GLN:HG2	1.91	0.85
2:G:28:PHE:HE2	2:H:7:ARG:HD2	1.36	0.85
2:H:1844:ARG:CG	2:H:1844:ARG:HH11	1.89	0.85
2:G:28:PHE:CZ	2:H:7:ARG:CD	2.59	0.85
2:H:1844:ARG:HH11	2:H:1844:ARG:HG2	1.41	0.85
2:H:297:ARG:HD3	2:H:447:ASN:ND2	1.91	0.84
2:H:932:ILE:HD11	2:H:1042:ALA:HB2	1.58	0.84
2:G:369:SER:OG	2:G:380:SER:HB3	1.75	0.84
2:H:777:THR:CG2	2:H:1081:HIS:NE2	2.41	0.84
1:A:893:VAL:HG11	1:A:930:LEU:HD23	1.59	0.84
2:G:131:ILE:HG21	2:G:182:VAL:HG12	1.57	0.84
1:C:340:ARG:NH1	1:C:344:GLN:HG2	1.91	0.84
2:I:297:ARG:HD3	2:I:447:ASN:ND2	1.92	0.84
2:G:1054:LEU:HB2	4:G:3051:FMN:HM72	1.60	0.84
2:G:652:ILE:H	2:G:658:MET:HE3	1.42	0.84
2:H:369:SER:OG	2:H:380:SER:HB3	1.78	0.84
2:H:2038:ILE:HG22	2:H:2042:ILE:HD11	1.60	0.84
1:C:852:ARG:HG2	1:C:852:ARG:NH1	1.93	0.84
2:I:774:ALA:HB2	2:I:1077:ILE:HA	1.58	0.84
1:B:11:HIS:ND1	2:H:1998:LYS:HA	1.93	0.84
1:C:1303:GLY:HA2	1:C:1649:LYS:HE2	1.58	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:995:LEU:HD23	2:I:1000:ILE:HD13	1.60	0.84
1:C:31:THR:HG23	2:I:2011:ILE:HG21	1.59	0.84
2:H:741:HIS:CE1	2:H:845:THR:HG22	2.12	0.84
2:G:1533:LEU:HD13	2:G:1630:GLY:HA2	1.60	0.83
1:A:980:VAL:HG23	2:G:968:GLN:OE1	1.78	0.83
2:G:774:ALA:HB2	2:G:1077:ILE:HA	1.61	0.83
1:B:253:ARG:HE	1:B:254:TRP:HE1	1.21	0.83
2:G:1227:ARG:HH11	2:G:1227:ARG:CG	1.89	0.83
2:I:774:ALA:HB1	2:I:1081:HIS:HD2	1.43	0.83
2:H:741:HIS:CE1	2:H:845:THR:CG2	2.60	0.83
2:H:1227:ARG:HH11	2:H:1227:ARG:CG	1.90	0.83
2:H:1672:GLN:HG2	2:H:1777:THR:HG23	1.59	0.83
2:I:1844:ARG:HG2	2:I:1844:ARG:HH11	1.43	0.83
1:C:893:VAL:HG11	1:C:930:LEU:HD23	1.59	0.83
2:G:1293:THR:HG23	2:G:1296:GLU:H	1.44	0.83
2:I:598:THR:HG22	2:I:622:GLY:HA3	1.61	0.83
2:I:1425:LYS:HG2	2:I:1471:GLU:HG3	1.61	0.83
1:B:403:ASP:HB2	1:B:1613:ASN:HD21	1.44	0.82
1:A:20:TYR:CG	2:G:2033:THR:OG1	2.32	0.82
2:G:297:ARG:HD3	2:G:447:ASN:ND2	1.94	0.82
2:G:777:THR:CG2	2:G:1081:HIS:NE2	2.41	0.82
2:H:85:ASN:HD22	2:H:135:ARG:HH11	1.26	0.82
1:C:1367:ARG:HH12	1:C:1372:THR:HB	1.37	0.82
2:G:131:ILE:CB	2:G:182:VAL:HG11	2.07	0.82
2:G:298:LYS:HG2	2:G:448:VAL:HG22	1.61	0.82
2:G:1739:GLU:HB3	2:G:1746:LEU:HD11	1.60	0.82
2:I:1672:GLN:HG2	2:I:1777:THR:HG23	1.61	0.82
1:A:36:LEU:HD22	1:A:61:LEU:HD21	1.60	0.82
1:A:1249:SER:HB3	1:A:1280:ILE:HG23	1.62	0.82
1:B:1014:ASP:H	1:B:1510:ASN:HD21	1.28	0.82
2:H:995:LEU:HD23	2:H:1000:ILE:HD13	1.58	0.82
2:I:1931:LEU:HB3	2:I:1935:GLU:HG2	1.62	0.82
2:I:2038:ILE:HG22	2:I:2042:ILE:HD11	1.61	0.82
1:A:335:HIS:HE1	1:B:335:HIS:CE1	1.98	0.82
1:B:12:ILE:HD11	2:H:2041:ILE:CD1	2.10	0.82
1:C:333:LYS:O	1:C:337:VAL:HG23	1.80	0.81
2:G:995:LEU:HD23	2:G:1000:ILE:HD13	1.60	0.81
2:G:1844:ARG:HH11	2:G:1844:ARG:CG	1.93	0.81
2:G:1847:LEU:HD13	2:G:1849:ARG:HD2	1.62	0.81
2:I:128:THR:HA	2:I:182:VAL:HG21	1.62	0.81
2:H:543:PHE:HB2	2:H:545:GLN:HE22	1.45	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1159:ILE:HG12	2:H:1168:ASN:HA	1.61	0.81
2:I:1054:LEU:HB2	4:I:3051:FMN:C7M	2.11	0.81
2:I:1844:ARG:HH11	2:I:1844:ARG:CG	1.93	0.81
1:B:1249:SER:HB3	1:B:1280:ILE:HG23	1.62	0.81
2:G:543:PHE:HB2	2:G:545:GLN:HE22	1.46	0.81
2:I:345:THR:HG22	2:I:347:GLU:H	1.46	0.81
2:I:777:THR:CG2	2:I:1081:HIS:NE2	2.43	0.81
2:G:1931:LEU:HB3	2:G:1935:GLU:HG2	1.61	0.81
1:C:59:ARG:HH11	2:I:1896:GLN:HE22	1.25	0.81
2:H:1149:TRP:HA	2:H:1242:PHE:CE1	2.15	0.81
1:B:93:ASP:HB3	1:B:94:PRO:HD2	1.62	0.81
1:B:881:ASN:HA	1:B:944:ARG:NH2	1.96	0.81
1:A:1203:ASP:HB3	1:B:179:LYS:NZ	1.95	0.81
2:G:2038:ILE:HG22	2:G:2042:ILE:HD11	1.60	0.81
1:A:335:HIS:CE1	1:C:335:HIS:HE1	1.98	0.81
2:I:345:THR:HB	2:I:348:GLN:H	1.46	0.81
1:A:93:ASP:HB3	1:A:94:PRO:HD2	1.63	0.81
2:G:1844:ARG:HH11	2:G:1844:ARG:HG2	1.46	0.81
2:I:1159:ILE:HG12	2:I:1168:ASN:HA	1.63	0.81
1:A:400:ARG:HG2	1:A:400:ARG:NH1	1.91	0.80
2:I:1693:ARG:HD2	2:I:1825:GLU:OE2	1.80	0.80
1:A:333:LYS:O	1:A:337:VAL:HG23	1.82	0.80
1:A:1552:ASN:O	1:A:1556:THR:HG22	1.80	0.80
2:G:1693:ARG:HD2	2:G:1825:GLU:OE2	1.81	0.80
2:I:584:SER:HB3	2:I:591:PRO:HG3	1.63	0.80
1:B:1030:TRP:CD1	1:B:1580:LEU:HD22	2.17	0.80
2:H:298:LYS:HG2	2:H:448:VAL:HG22	1.63	0.80
2:H:1931:LEU:HB3	2:H:1935:GLU:HG2	1.62	0.80
1:A:20:TYR:CE1	2:G:2035:SER:HB2	2.17	0.80
1:A:340:ARG:HH12	1:A:344:GLN:HG2	1.45	0.80
2:I:259:THR:HG22	2:I:262:GLU:HG3	1.63	0.80
2:G:1672:GLN:HG2	2:G:1777:THR:HG23	1.61	0.80
1:B:36:LEU:HD22	1:B:61:LEU:HD21	1.64	0.80
2:H:1159:ILE:HG12	2:H:1169:PRO:HD3	1.63	0.80
1:B:24:SER:CB	2:H:2014:LEU:HD12	2.11	0.80
2:G:741:HIS:CE1	2:G:845:THR:HG22	2.17	0.80
2:H:1847:LEU:HD13	2:H:1849:ARG:HD2	1.63	0.80
2:I:192:ALA:HA	2:I:215:ILE:HD12	1.64	0.80
1:C:1249:SER:HB3	1:C:1280:ILE:HG23	1.63	0.80
2:I:1242:PHE:HE2	2:I:1244:PRO:HG3	1.46	0.80
2:H:598:THR:HG22	2:H:622:GLY:HA3	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:907:VAL:HG21	2:H:921:GLU:HG2	1.64	0.79
2:I:455:ILE:HD11	2:I:469:ARG:HD3	1.63	0.79
2:I:1293:THR:HG23	2:I:1296:GLU:H	1.47	0.79
2:H:1199:GLU:OE2	2:H:1567:ARG:CZ	2.31	0.79
2:I:55:THR:CG2	2:I:113:ASP:HB2	2.12	0.79
1:A:31:THR:HG23	2:G:2011:ILE:HG21	1.64	0.79
2:I:1310:ASP:OD2	2:I:1602:SER:HB3	1.82	0.79
2:H:455:ILE:HD11	2:H:469:ARG:HD3	1.63	0.79
2:H:774:ALA:HB2	2:H:1077:ILE:HA	1.64	0.79
2:I:238:CYS:HB2	2:I:239:PRO:HD3	1.64	0.79
2:I:543:PHE:HB2	2:I:545:GLN:HE22	1.46	0.79
2:G:634:ILE:HD11	2:G:649:ILE:HD11	1.63	0.79
2:I:907:VAL:HG21	2:I:921:GLU:HG2	1.65	0.79
2:G:1314:ARG:HH11	2:G:1314:ARG:CG	1.95	0.79
1:B:260:ARG:NH1	1:B:300:VAL:HG21	1.97	0.79
1:C:403:ASP:HB2	1:C:1613:ASN:HD21	1.46	0.79
2:G:774:ALA:HB1	2:G:1081:HIS:HD2	1.47	0.79
1:B:1303:GLY:HA2	1:B:1649:LYS:HE2	1.63	0.79
2:G:55:THR:CG2	2:G:113:ASP:HB2	2.13	0.79
2:H:105:ALA:HB1	2:H:119:THR:HG23	1.65	0.79
2:H:757:ILE:HG21	2:H:765:LEU:HD13	1.64	0.79
2:I:1847:LEU:HD13	2:I:1849:ARG:HD2	1.64	0.79
1:B:1722:VAL:CG1	1:B:1731:LEU:HB3	2.13	0.78
1:C:1523:ARG:HH11	1:C:1523:ARG:CG	1.96	0.78
2:G:85:ASN:HD22	2:G:135:ARG:HH11	1.28	0.78
2:I:1149:TRP:HA	2:I:1242:PHE:CE1	2.19	0.78
1:C:328:LEU:O	1:C:331:ILE:HG22	1.84	0.78
2:H:345:THR:HB	2:H:348:GLN:H	1.48	0.78
2:H:960:LYS:HE2	2:H:960:LYS:HA	1.65	0.78
2:H:1567:ARG:HG3	2:H:1567:ARG:NH1	1.98	0.78
2:I:85:ASN:HD22	2:I:135:ARG:HH11	1.28	0.78
1:B:12:ILE:HD11	2:H:2041:ILE:HD12	1.63	0.78
2:G:7:ARG:NH2	2:G:27:PHE:HB3	1.99	0.78
2:H:131:ILE:CB	2:H:182:VAL:CG1	2.53	0.78
1:A:328:LEU:O	1:A:331:ILE:HG22	1.84	0.78
1:B:333:LYS:O	1:B:337:VAL:HG23	1.81	0.78
2:I:741:HIS:HE1	2:I:845:THR:HG22	1.41	0.78
1:C:1014:ASP:N	1:C:1510:ASN:HD21	1.82	0.78
2:I:138:ASP:O	2:I:139:LYS:HG3	1.83	0.78
2:I:1770:LEU:HD23	2:I:1776:PHE:CE2	2.19	0.78
1:A:2:LYS:HD2	2:G:2050:GLN:HB3	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:24:SER:O	2:H:1977:HIS:HD2	1.67	0.78
1:B:198:PRO:HG3	1:B:209:LEU:CD2	2.13	0.78
2:H:55:THR:CG2	2:H:113:ASP:HB2	2.13	0.78
2:I:7:ARG:NH2	2:I:27:PHE:HB3	1.97	0.78
2:I:634:ILE:HD11	2:I:649:ILE:HD11	1.66	0.78
2:G:1227:ARG:HD2	2:G:1565:VAL:HG11	1.66	0.77
2:G:1770:LEU:HD23	2:G:1776:PHE:CE2	2.20	0.77
2:H:1693:ARG:HD2	2:H:1825:GLU:OE2	1.83	0.77
1:A:335:HIS:CE1	1:C:335:HIS:CE1	2.72	0.77
2:H:1293:THR:HG23	2:H:1296:GLU:H	1.49	0.77
1:C:1665:ILE:HG13	1:C:1669:ARG:HD3	1.66	0.77
2:G:455:ILE:HD11	2:G:469:ARG:HD3	1.66	0.77
2:G:28:PHE:HZ	2:H:7:ARG:CD	1.97	0.77
2:G:355:LYS:O	2:G:358:SER:HB3	1.84	0.77
2:H:131:ILE:CG2	2:H:182:VAL:CG1	2.63	0.77
2:I:741:HIS:CE1	2:I:855:HIS:NE2	2.52	0.77
1:A:1523:ARG:HH11	1:A:1523:ARG:CG	1.97	0.77
2:H:1310:ASP:OD2	2:H:1602:SER:HB3	1.82	0.77
1:A:24:SER:HB3	2:G:2014:LEU:HD12	1.64	0.77
1:B:1239:HIS:HD2	1:B:1241:SER:OG	1.67	0.77
2:I:1314:ARG:HH11	2:I:1314:ARG:CG	1.98	0.77
1:C:1030:TRP:CD1	1:C:1580:LEU:HD22	2.20	0.77
1:C:1693:ILE:HD11	2:I:998:GLN:HB2	1.67	0.77
2:G:345:THR:HG22	2:G:347:GLU:H	1.47	0.77
2:G:598:THR:HG22	2:G:622:GLY:HA3	1.67	0.77
2:G:1284:VAL:HG13	2:G:1377:VAL:HG22	1.65	0.77
1:B:29:ILE:HG13	2:H:1891:TYR:O	1.85	0.77
1:C:93:ASP:HB3	1:C:94:PRO:HD2	1.65	0.77
1:C:12:ILE:HD11	2:I:2041:ILE:HD12	1.67	0.77
1:C:340:ARG:HH12	1:C:344:GLN:HG2	1.49	0.77
1:C:1030:TRP:NE1	1:C:1580:LEU:HD22	2.00	0.77
2:G:907:VAL:HG21	2:G:921:GLU:HG2	1.65	0.77
1:A:1665:ILE:HG13	1:A:1669:ARG:HD3	1.66	0.76
2:H:1834:ARG:HG2	2:H:1834:ARG:NH1	1.86	0.76
2:I:1567:ARG:HG3	2:I:1567:ARG:NH1	2.00	0.76
2:I:1834:ARG:HG2	2:I:1834:ARG:NH1	1.93	0.76
2:I:1956:ARG:CB	2:I:1957:PRO:HD3	2.09	0.76
1:A:1030:TRP:NE1	1:A:1580:LEU:HD22	1.99	0.76
1:B:1030:TRP:NE1	1:B:1580:LEU:HD22	2.00	0.76
1:A:198:PRO:HG3	1:A:209:LEU:CD2	2.14	0.76
1:C:198:PRO:HG3	1:C:209:LEU:CD2	2.15	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1678:MET:HE3	2:G:1707:LEU:HD22	1.66	0.76
1:C:400:ARG:HG2	1:C:400:ARG:NH1	1.94	0.76
2:H:762:ASN:HD22	2:H:762:ASN:N	1.82	0.76
2:G:146:PHE:HA	2:G:149:VAL:CG1	2.15	0.76
2:G:345:THR:HB	2:G:348:GLN:H	1.50	0.76
2:I:355:LYS:O	2:I:358:SER:HB3	1.85	0.76
1:A:1030:TRP:CD1	1:A:1580:LEU:HD22	2.21	0.76
2:G:964:LEU:HD23	2:G:964:LEU:H	1.50	0.76
2:G:1149:TRP:HA	2:G:1242:PHE:CE1	2.20	0.76
2:H:598:THR:OG1	2:H:599:PRO:HD3	1.86	0.76
2:I:2015:THR:HG22	2:I:2017:LYS:H	1.51	0.76
1:C:24:SER:O	2:I:1977:HIS:HD2	1.68	0.76
1:C:1722:VAL:CG1	1:C:1731:LEU:HB3	2.14	0.76
2:H:1956:ARG:HB2	2:H:1957:PRO:CD	2.12	0.76
1:C:1239:HIS:HD2	1:C:1241:SER:OG	1.68	0.76
2:H:584:SER:HB3	2:H:591:PRO:HG3	1.67	0.76
1:A:988:ILE:HD13	1:A:1048:GLU:CB	2.15	0.75
2:G:2015:THR:HG22	2:G:2017:LYS:H	1.51	0.75
2:H:1314:ARG:HH11	2:H:1314:ARG:CG	1.97	0.75
2:I:707:PRO:CG	2:I:716:VAL:HG21	2.15	0.75
1:B:340:ARG:HH12	1:B:344:GLN:HG2	1.48	0.75
1:B:1523:ARG:HH11	1:B:1523:ARG:CG	1.98	0.75
2:H:192:ALA:HA	2:H:215:ILE:HD12	1.68	0.75
2:I:1054:LEU:HB2	4:I:3051:FMN:HM72	1.66	0.75
1:B:1665:ILE:HG13	1:B:1669:ARG:HD3	1.66	0.75
2:G:1159:ILE:HG12	2:G:1168:ASN:HA	1.67	0.75
2:G:1956:ARG:HB2	2:G:1957:PRO:CD	2.11	0.75
2:H:7:ARG:NH2	2:H:27:PHE:HB3	1.99	0.75
2:I:856:LYS:HG2	2:I:1054:LEU:HD12	1.68	0.75
2:G:960:LYS:HE2	2:G:960:LYS:HA	1.67	0.75
2:H:84:LEU:HD13	2:H:133:ALA:HB2	1.69	0.75
2:H:355:LYS:O	2:H:358:SER:HB3	1.85	0.75
1:B:328:LEU:O	1:B:331:ILE:HG22	1.86	0.75
2:H:259:THR:HG22	2:H:262:GLU:HG3	1.68	0.75
2:H:1770:LEU:HD23	2:H:1776:PHE:CE2	2.22	0.75
1:B:1208:VAL:HG13	1:B:1212:THR:HB	1.68	0.75
2:H:579:VAL:HG23	2:H:1078:HIS:CD2	2.21	0.75
2:H:2015:THR:HG22	2:H:2017:LYS:H	1.51	0.75
1:A:1303:GLY:HA2	1:A:1649:LYS:HE2	1.68	0.75
1:A:1310:GLU:OE1	1:A:1649:LYS:HE3	1.86	0.75
2:G:192:ALA:HA	2:G:215:ILE:HD12	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:572:ASN:HB3	2:G:576:LYS:H	1.52	0.75
2:H:455:ILE:HD11	2:H:469:ARG:CD	2.17	0.75
2:H:741:HIS:CB	2:H:853:PRO:HB2	2.16	0.75
2:I:960:LYS:HE2	2:I:960:LYS:HA	1.67	0.75
2:I:572:ASN:HB3	2:I:576:LYS:H	1.52	0.75
2:I:757:ILE:HG21	2:I:765:LEU:HD13	1.69	0.75
2:I:1129:ALA:HB2	2:I:1138:TRP:CZ3	2.22	0.75
2:I:1956:ARG:HB2	2:I:1957:PRO:CD	2.11	0.75
2:H:943:TRP:CH2	2:H:1016:PRO:HG3	2.22	0.74
2:H:1834:ARG:HH11	2:H:1834:ARG:CG	1.92	0.74
2:I:1159:ILE:HG12	2:I:1169:PRO:HD3	1.67	0.74
2:I:1284:VAL:HG13	2:I:1377:VAL:HG22	1.69	0.74
1:A:427:ASN:HD21	1:A:610:THR:H	1.33	0.74
1:B:1552:ASN:O	1:B:1556:THR:HG22	1.88	0.74
2:H:1678:MET:HE3	2:H:1707:LEU:HD22	1.67	0.74
1:A:20:TYR:CD2	2:G:2033:THR:OG1	2.40	0.74
2:H:1242:PHE:HE2	2:H:1244:PRO:HG3	1.51	0.74
2:H:1672:GLN:HA	2:H:1676:MET:HE1	1.68	0.74
2:I:943:TRP:CH2	2:I:1016:PRO:HG3	2.21	0.74
2:H:1784:MET:HG3	2:H:1785:GLU:N	2.03	0.74
1:A:335:HIS:CE1	1:B:335:HIS:CE1	2.74	0.74
1:A:1239:HIS:HD2	1:A:1241:SER:OG	1.69	0.74
1:B:335:HIS:HE1	1:C:335:HIS:CE1	2.06	0.74
1:C:749:ILE:HD13	1:C:806:VAL:HG12	1.70	0.74
2:H:1129:ALA:HB2	2:H:1138:TRP:CZ3	2.21	0.74
2:H:1672:GLN:HA	2:H:1676:MET:CE	2.18	0.74
2:H:1956:ARG:CB	2:H:1957:PRO:HD3	2.11	0.74
2:I:105:ALA:HB1	2:I:119:THR:HG23	1.67	0.74
2:I:131:ILE:HB	2:I:182:VAL:HG11	1.69	0.74
1:C:1552:ASN:O	1:C:1556:THR:HG22	1.88	0.74
2:G:1310:ASP:OD2	2:G:1602:SER:HB3	1.88	0.74
2:I:835:THR:HG21	2:I:855:HIS:CD2	2.23	0.74
2:I:2035:SER:HB3	2:I:2038:ILE:HG13	1.69	0.74
1:B:1551:LYS:HD2	1:B:1617:ILE:HG21	1.70	0.74
2:G:705:LEU:HD12	2:G:716:VAL:HG13	1.70	0.74
2:I:741:HIS:CE1	2:I:845:THR:HG21	2.22	0.74
2:G:757:ILE:HG21	2:G:765:LEU:HD13	1.67	0.74
1:B:18:LEU:HD21	2:H:1815:LEU:HD12	1.70	0.74
2:I:1889:VAL:HG13	2:I:1977:HIS:HB2	1.69	0.74
1:A:44:VAL:CG1	1:A:78:ILE:HG12	2.18	0.73
1:B:833:PHE:HA	1:B:937:LYS:HD2	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:7:ARG:NH1	2:H:24:THR:HG23	2.03	0.73
2:H:1194:VAL:HG22	2:H:1212:LYS:HB3	1.70	0.73
2:H:1004:LEU:HD21	2:H:1020:VAL:HG23	1.70	0.73
1:A:982:ILE:HD11	2:G:965:SER:HB2	1.69	0.73
1:C:36:LEU:HD22	1:C:61:LEU:HD21	1.68	0.73
2:G:1159:ILE:HG12	2:G:1169:PRO:HD3	1.71	0.73
2:H:705:LEU:HD12	2:H:716:VAL:HG13	1.70	0.73
2:H:1680:LEU:HD13	2:H:1687:ALA:HB2	1.71	0.73
2:I:1784:MET:HG3	2:I:1785:GLU:N	2.02	0.73
2:G:7:ARG:NH1	2:G:24:THR:HG23	2.03	0.73
2:G:105:ALA:HB1	2:G:119:THR:HG23	1.70	0.73
2:I:455:ILE:HD11	2:I:469:ARG:CD	2.19	0.73
1:B:749:ILE:HD13	1:B:806:VAL:HG12	1.70	0.73
2:G:259:THR:HG22	2:G:262:GLU:HG3	1.68	0.73
2:G:777:THR:HG22	2:G:1081:HIS:NE2	2.03	0.73
2:I:7:ARG:NH1	2:I:24:THR:HG23	2.03	0.73
1:A:1551:LYS:HD2	1:A:1617:ILE:HG21	1.70	0.73
2:G:194:THR:HG23	2:G:300:ILE:HD11	1.70	0.73
2:H:345:THR:HG22	2:H:347:GLU:H	1.51	0.73
2:H:1300:PHE:CA	2:H:1556:VAL:HG11	2.19	0.73
1:C:260:ARG:HH12	1:C:300:VAL:HG21	1.52	0.73
2:G:652:ILE:H	2:G:658:MET:CE	2.01	0.73
2:H:194:THR:HG23	2:H:300:ILE:HD11	1.71	0.73
2:H:1331:TRP:CZ2	2:H:1335:ILE:HG13	2.23	0.73
2:H:1355:ASN:HA	2:H:1407:THR:O	1.88	0.73
2:H:7:ARG:HH21	2:H:27:PHE:CB	2.01	0.73
2:H:146:PHE:HA	2:H:149:VAL:CG1	2.18	0.73
2:H:1300:PHE:HA	2:H:1556:VAL:HG11	1.70	0.73
1:B:44:VAL:CG1	1:B:78:ILE:HG12	2.18	0.72
2:H:579:VAL:HG23	2:H:1078:HIS:NE2	2.03	0.72
2:H:1284:VAL:HG13	2:H:1377:VAL:HG22	1.71	0.72
2:I:707:PRO:HG3	2:I:716:VAL:CG2	2.18	0.72
2:G:762:ASN:HD22	2:G:762:ASN:N	1.82	0.72
2:I:579:VAL:HG23	2:I:1078:HIS:CD2	2.24	0.72
1:A:655:LEU:HD22	1:A:916:LEU:HD11	1.71	0.72
1:A:1045:PHE:HB3	1:A:1049:GLY:HA3	1.71	0.72
1:C:1208:VAL:HG13	1:C:1212:THR:HB	1.71	0.72
1:C:1551:LYS:HD2	1:C:1617:ILE:HG21	1.70	0.72
2:G:1889:VAL:HG13	2:G:1977:HIS:HB2	1.72	0.72
2:H:128:THR:HA	2:H:182:VAL:CG2	2.16	0.72
2:H:634:ILE:HD11	2:H:649:ILE:HD11	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1672:GLN:HA	2:I:1676:MET:HE1	1.70	0.72
1:A:1722:VAL:CG1	1:A:1731:LEU:HB3	2.19	0.72
1:C:473:GLY:O	1:C:477:ILE:HG13	1.88	0.72
2:I:191:SER:HA	2:I:194:THR:HG22	1.71	0.72
2:I:194:THR:HG23	2:I:300:ILE:HD11	1.70	0.72
1:A:24:SER:CB	2:G:2014:LEU:HD12	2.19	0.72
1:C:427:ASN:HD21	1:C:610:THR:H	1.38	0.72
2:H:109:LEU:HD11	2:H:116:LEU:HD23	1.72	0.72
1:A:1208:VAL:HG13	1:A:1212:THR:HB	1.70	0.72
1:B:254:TRP:CZ3	1:B:302:LEU:HD13	2.24	0.72
2:I:7:ARG:HH21	2:I:27:PHE:CB	1.99	0.72
2:I:777:THR:HG22	2:I:1081:HIS:NE2	2.04	0.72
2:I:1672:GLN:HA	2:I:1676:MET:CE	2.20	0.72
1:B:24:SER:HB3	2:H:2014:LEU:HD12	1.69	0.72
2:G:584:SER:HB3	2:G:591:PRO:HG3	1.70	0.72
2:H:455:ILE:CD1	2:H:469:ARG:HD3	2.20	0.72
2:H:455:ILE:CG1	2:H:469:ARG:HD3	2.20	0.72
2:I:259:THR:HG22	2:I:262:GLU:CG	2.20	0.72
1:B:473:GLY:O	1:B:477:ILE:HG13	1.89	0.72
2:G:598:THR:OG1	2:G:599:PRO:HD3	1.89	0.72
2:G:1680:LEU:HD13	2:G:1687:ALA:HB2	1.71	0.72
2:H:572:ASN:HB3	2:H:576:LYS:H	1.54	0.72
2:G:131:ILE:CD1	2:G:182:VAL:HB	2.09	0.72
2:H:777:THR:HG22	2:H:1081:HIS:NE2	2.04	0.72
2:G:741:HIS:CE1	2:G:845:THR:HG21	2.24	0.72
2:G:741:HIS:CE1	2:G:855:HIS:NE2	2.58	0.72
2:G:751:LEU:HD23	2:G:791:TYR:CE2	2.25	0.72
2:I:84:LEU:HD13	2:I:133:ALA:HB2	1.71	0.72
2:I:1086:LEU:HG	2:I:1092:ASP:HA	1.72	0.72
1:B:1232:TYR:CZ	1:B:1701:LYS:HD2	2.26	0.71
2:G:161:GLY:H	2:G:505:GLY:HA3	1.54	0.71
2:G:1567:ARG:HG3	2:G:1567:ARG:NH1	2.02	0.71
2:I:2036:GLU:HB2	2:I:2037:PRO:HD3	1.72	0.71
1:B:888:ILE:HD12	1:B:939:PHE:HE2	1.55	0.71
1:C:59:ARG:NH1	2:I:1896:GLN:NE2	2.38	0.71
2:H:652:ILE:H	2:H:658:MET:CE	2.03	0.71
2:H:741:HIS:NE2	2:H:855:HIS:CE1	2.58	0.71
2:I:1419:PHE:O	2:I:1422:THR:HG22	1.90	0.71
2:I:1673:GLU:H	2:I:1676:MET:HE3	1.55	0.71
1:B:1030:TRP:NE1	1:B:1580:LEU:CD2	2.54	0.71
2:G:762:ASN:H	2:G:762:ASN:ND2	1.85	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1638:ILE:HD12	2:G:1657:ILE:HD12	1.71	0.71
2:H:1227:ARG:HD2	2:H:1565:VAL:HG11	1.71	0.71
2:I:1670:GLY:H	2:I:1672:GLN:HE21	1.38	0.71
1:A:733:ILE:HD13	1:A:761:LEU:HD11	1.71	0.71
1:A:982:ILE:HD11	2:G:965:SER:CB	2.21	0.71
1:A:983:GLN:NE2	2:G:962:LYS:HD2	2.05	0.71
1:B:2:LYS:HD2	2:H:2050:GLN:HB3	1.72	0.71
2:G:50:ALA:HB3	2:G:53:GLU:HG3	1.72	0.71
2:G:2036:GLU:HB2	2:G:2037:PRO:HD3	1.73	0.71
2:H:1819:ALA:HA	2:H:2005:ARG:HH11	1.55	0.71
2:I:455:ILE:CG1	2:I:469:ARG:HD3	2.21	0.71
2:I:1331:TRP:CZ2	2:I:1335:ILE:HG13	2.25	0.71
1:C:733:ILE:HD13	1:C:761:LEU:HD11	1.72	0.71
2:H:1054:LEU:HB2	4:H:3051:FMN:C7M	2.21	0.71
2:I:732:TRP:CG	2:I:750:MET:CE	2.73	0.71
1:A:1208:VAL:CG1	1:A:1212:THR:HB	2.21	0.71
1:C:1219:VAL:HG22	1:C:1384:ILE:HD12	1.73	0.71
2:G:238:CYS:HB2	2:G:239:PRO:HD3	1.71	0.71
2:G:949:ASP:HB3	2:G:1006:MET:HE2	1.71	0.71
2:G:1199:GLU:OE2	2:G:1567:ARG:NH1	2.23	0.71
2:G:1672:GLN:HA	2:G:1676:MET:HE1	1.72	0.71
2:G:1917:ILE:HG23	2:G:1922:ILE:HB	1.72	0.71
2:H:238:CYS:HB2	2:H:239:PRO:HD3	1.71	0.71
2:I:1058:VAL:O	2:I:1061:GLN:HG2	1.90	0.71
2:G:109:LEU:HD11	2:G:116:LEU:HD23	1.71	0.71
1:B:18:LEU:HD21	2:H:1815:LEU:CD1	2.20	0.71
1:B:655:LEU:HD22	1:B:916:LEU:HD11	1.72	0.71
2:G:707:PRO:CG	2:G:716:VAL:HG21	2.20	0.71
2:H:964:LEU:HD23	2:H:964:LEU:H	1.56	0.71
1:C:59:ARG:NH1	2:I:1896:GLN:HE22	1.88	0.70
1:C:459:ASP:HB3	1:C:462:LYS:HG3	1.73	0.70
2:I:751:LEU:HD23	2:I:791:TYR:CE2	2.25	0.70
2:I:1242:PHE:CE2	2:I:1244:PRO:HG3	2.26	0.70
1:B:1721:ARG:HG2	1:B:1721:ARG:NH1	2.00	0.70
2:H:707:PRO:CG	2:H:716:VAL:HG21	2.21	0.70
1:A:1:MET:CE	1:A:6:GLU:HA	2.21	0.70
1:C:12:ILE:HD11	2:I:2041:ILE:CD1	2.21	0.70
1:C:631:PRO:HB2	1:C:634:THR:OG1	1.91	0.70
2:G:1672:GLN:HA	2:G:1676:MET:CE	2.21	0.70
2:I:964:LEU:HD23	2:I:964:LEU:H	1.56	0.70
1:C:881:ASN:HA	1:C:944:ARG:NH2	2.06	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:650:ASN:HD21	4:G:3051:FMN:HN3	1.40	0.70
2:I:732:TRP:CG	2:I:750:MET:HE1	2.26	0.70
2:I:1680:LEU:HD13	2:I:1687:ALA:HB2	1.72	0.70
1:B:1208:VAL:CG1	1:B:1212:THR:HB	2.20	0.70
2:G:123:ILE:HD11	2:G:533:LEU:CD2	2.21	0.70
2:G:579:VAL:HG23	2:G:1078:HIS:CD2	2.27	0.70
2:I:455:ILE:CD1	2:I:469:ARG:HD3	2.20	0.70
2:I:748:THR:HB	2:I:749:PRO:HD3	1.74	0.70
1:B:459:ASP:HB3	1:B:462:LYS:HG3	1.73	0.70
2:G:707:PRO:HG3	2:G:716:VAL:CG2	2.22	0.70
2:G:732:TRP:CG	2:G:750:MET:HE1	2.27	0.70
2:G:1956:ARG:CB	2:G:1957:PRO:HD3	2.10	0.70
2:I:146:PHE:HA	2:I:149:VAL:CG1	2.20	0.70
1:A:1312:VAL:HG22	1:A:1329:VAL:HG11	1.73	0.70
1:B:1:MET:CE	1:B:6:GLU:HA	2.21	0.70
1:B:968:VAL:HG23	2:H:1515:PRO:HG3	1.74	0.70
2:G:1242:PHE:HE2	2:G:1244:PRO:HG3	1.55	0.70
1:C:260:ARG:NH1	1:C:300:VAL:HG21	2.06	0.70
2:G:1355:ASN:HA	2:G:1407:THR:O	1.92	0.70
2:H:234:ILE:HG13	2:H:235:PRO:HD3	1.73	0.70
2:I:1264:GLU:HA	2:I:1275:PHE:CE1	2.27	0.70
1:C:655:LEU:HD22	1:C:916:LEU:HD11	1.74	0.70
2:G:455:ILE:HD11	2:G:469:ARG:CD	2.22	0.70
2:H:741:HIS:CE1	2:H:845:THR:HG21	2.26	0.70
1:A:12:ILE:HA	1:A:15:THR:CG2	2.21	0.70
2:G:1331:TRP:CZ2	2:G:1335:ILE:HG13	2.26	0.70
2:G:1673:GLU:H	2:G:1676:MET:HE3	1.57	0.70
2:H:2036:GLU:HB2	2:H:2037:PRO:HD3	1.72	0.70
1:A:1232:TYR:CZ	1:A:1701:LYS:HD2	2.27	0.69
2:G:7:ARG:HH21	2:G:27:PHE:CB	2.01	0.69
2:H:499:THR:CB	2:H:500:HIS:HD2	1.99	0.69
2:H:835:THR:HB	2:H:845:THR:HG23	1.73	0.69
2:H:1673:GLU:H	2:H:1676:MET:HE3	1.57	0.69
2:I:926:LEU:HD13	2:I:947:THR:HG22	1.73	0.69
1:B:427:ASN:HD21	1:B:610:THR:H	1.40	0.69
2:G:1194:VAL:HG22	2:G:1212:LYS:HB3	1.74	0.69
2:H:1670:GLY:H	2:H:1672:GLN:HE21	1.40	0.69
2:I:1862:VAL:HG11	2:I:1866:PHE:CD1	2.26	0.69
1:A:749:ILE:HD13	1:A:806:VAL:HG12	1.72	0.69
1:C:12:ILE:HA	1:C:15:THR:CG2	2.22	0.69
1:C:852:ARG:HH11	1:C:852:ARG:CG	2.00	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1054:LEU:HB2	4:G:3051:FMN:C7M	2.22	0.69
2:H:1195:VAL:CG1	2:H:1211:LEU:HB3	2.23	0.69
2:H:1381:VAL:HG13	2:H:1390:VAL:HG22	1.74	0.69
2:I:652:ILE:H	2:I:658:MET:CE	2.04	0.69
1:A:254:TRP:CZ3	1:A:292:GLN:HG3	2.26	0.69
1:B:254:TRP:CZ3	1:B:292:GLN:HG3	2.27	0.69
2:I:1770:LEU:HD23	2:I:1776:PHE:HE2	1.55	0.69
2:G:84:LEU:HD13	2:G:133:ALA:HB2	1.75	0.69
2:G:964:LEU:H	2:G:964:LEU:CD2	2.05	0.69
2:I:1678:MET:HE3	2:I:1707:LEU:HD22	1.75	0.69
1:C:1208:VAL:CG1	1:C:1212:THR:HB	2.23	0.69
2:G:856:LYS:HG2	2:G:1054:LEU:HD12	1.73	0.69
2:H:1889:VAL:HG13	2:H:1977:HIS:CB	2.22	0.69
2:H:1917:ILE:HG23	2:H:1922:ILE:HB	1.74	0.69
1:A:749:ILE:HD11	1:A:805:CYS:HB3	1.75	0.69
1:A:1721:ARG:HG2	1:A:1721:ARG:NH1	1.97	0.69
1:B:1376:PHE:HB3	1:B:1544:THR:HG22	1.74	0.69
2:G:191:SER:HA	2:G:194:THR:HG22	1.74	0.69
2:I:109:LEU:HD11	2:I:116:LEU:HD23	1.73	0.69
2:I:1194:VAL:HG22	2:I:1212:LYS:HB3	1.75	0.69
1:A:1693:ILE:CD1	2:G:998:GLN:HB2	2.23	0.69
2:G:1172:LYS:HE3	2:G:1574:ASN:OD1	1.92	0.69
2:G:1670:GLY:H	2:G:1672:GLN:HE21	1.39	0.69
2:H:663:ILE:HB	2:H:664:PRO:HD3	1.75	0.69
2:H:751:LEU:HD23	2:H:791:TYR:CE2	2.27	0.69
2:H:1889:VAL:HG13	2:H:1977:HIS:HB2	1.72	0.69
2:H:2022:THR:HG23	2:H:2025:TYR:H	1.58	0.69
2:I:652:ILE:N	2:I:658:MET:HE3	2.08	0.69
1:A:631:PRO:HB2	1:A:634:THR:OG1	1.92	0.69
2:G:1264:GLU:HA	2:G:1275:PHE:CE1	2.28	0.69
2:G:1496:LYS:HE2	2:G:1693:ARG:HH21	1.57	0.69
2:H:305:PHE:CE1	2:H:442:ASP:HB3	2.28	0.69
2:H:1172:LYS:CE	2:H:1574:ASN:OD1	2.40	0.69
2:H:1739:GLU:CB	2:H:1987:PRO:HB3	2.21	0.69
2:I:663:ILE:HB	2:I:664:PRO:HD3	1.75	0.69
2:I:768:GLY:HA3	2:I:800:LEU:HD21	1.74	0.69
2:I:1739:GLU:CB	2:I:1987:PRO:HB3	2.20	0.69
1:A:257:PRO:HD2	1:A:260:ARG:HB2	1.75	0.69
1:A:1376:PHE:HB3	1:A:1544:THR:HG22	1.74	0.69
1:C:1021:VAL:HG11	1:C:1597:LEU:HD11	1.74	0.69
1:C:1219:VAL:HA	1:C:1384:ILE:CD1	2.20	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:663:ILE:HB	2:G:664:PRO:HD3	1.74	0.69
2:H:54:PRO:HG3	2:H:63:LYS:HG3	1.72	0.69
2:H:652:ILE:N	2:H:658:MET:HE3	2.05	0.69
2:I:499:THR:CB	2:I:500:HIS:HD2	1.95	0.69
2:I:1917:ILE:HG23	2:I:1922:ILE:HB	1.74	0.69
2:H:259:THR:HG22	2:H:262:GLU:CG	2.22	0.68
2:H:1419:PHE:O	2:H:1422:THR:HG22	1.93	0.68
2:I:234:ILE:HG13	2:I:235:PRO:HD3	1.73	0.68
1:A:1203:ASP:HB3	1:B:179:LYS:HZ3	1.58	0.68
2:G:1058:VAL:O	2:G:1061:GLN:HG2	1.93	0.68
1:A:1431:GLU:HG3	1:A:1433:HIS:CE1	2.28	0.68
1:C:1045:PHE:HB3	1:C:1049:GLY:HA3	1.74	0.68
2:G:2035:SER:HB3	2:G:2038:ILE:HG13	1.74	0.68
2:H:161:GLY:H	2:H:505:GLY:HA3	1.59	0.68
2:H:1101:GLU:HB3	2:H:1147:ILE:HG22	1.76	0.68
1:C:1376:PHE:HB3	1:C:1544:THR:HG22	1.74	0.68
2:G:1834:ARG:HG2	2:G:1834:ARG:NH1	1.93	0.68
2:I:598:THR:CG2	2:I:622:GLY:HA3	2.23	0.68
2:I:1227:ARG:HG3	2:I:1227:ARG:NH1	2.00	0.68
1:B:400:ARG:HG2	1:B:400:ARG:NH1	2.00	0.68
1:B:1312:VAL:HG22	1:B:1329:VAL:HG11	1.73	0.68
1:C:985:ARG:NH1	2:I:953:ARG:CZ	2.57	0.68
2:I:161:GLY:H	2:I:505:GLY:HA3	1.56	0.68
2:I:187:LEU:HA	2:I:190:PHE:HB3	1.76	0.68
1:C:1014:ASP:H	1:C:1510:ASN:ND2	1.84	0.68
2:G:54:PRO:HG3	2:G:63:LYS:HG3	1.76	0.68
2:G:259:THR:HG22	2:G:262:GLU:CG	2.22	0.68
2:G:732:TRP:CG	2:G:750:MET:CE	2.76	0.68
2:G:1784:MET:HG3	2:G:1785:GLU:N	2.07	0.68
2:I:594:VAL:HG21	2:I:610:THR:HG21	1.75	0.68
2:I:1638:ILE:HD12	2:I:1657:ILE:HD12	1.75	0.68
1:A:1474:ALA:HA	1:A:1478:PRO:CG	2.24	0.68
1:C:987:ASN:HD22	2:I:957:ARG:HD2	1.58	0.68
2:H:648:GLY:HA3	2:H:678:PHE:CE2	2.29	0.68
1:A:332:THR:HG22	1:B:331:ILE:HD11	1.76	0.68
1:A:504:ASP:HB3	1:A:508:ASN:H	1.56	0.68
2:G:455:ILE:CG1	2:G:469:ARG:HD3	2.23	0.68
2:H:187:LEU:HA	2:H:190:PHE:HB3	1.75	0.68
2:I:305:PHE:CE1	2:I:442:ASP:HB3	2.28	0.68
1:B:1219:VAL:HG22	1:B:1384:ILE:HD12	1.75	0.68
1:C:1310:GLU:OE1	1:C:1649:LYS:HE3	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:455:ILE:CD1	2:G:469:ARG:HD3	2.24	0.68
2:H:641:ILE:HG12	2:H:645:SER:HB2	1.76	0.68
1:A:1056:ILE:HD13	1:A:1193:TRP:HD1	1.59	0.68
2:G:1176:PRO:O	2:G:1177:SER:HB3	1.93	0.68
2:H:1058:VAL:O	2:H:1061:GLN:HG2	1.94	0.68
1:A:1303:GLY:H	1:A:1307:THR:HG22	1.59	0.67
1:A:1594:ASN:O	1:A:1598:GLN:HG3	1.94	0.67
1:B:183:GLN:HE21	1:B:202:GLU:HG2	1.59	0.67
1:C:44:VAL:CG1	1:C:78:ILE:HG12	2.24	0.67
1:C:254:TRP:CZ3	1:C:292:GLN:HG3	2.29	0.67
1:C:1303:GLY:H	1:C:1307:THR:HG22	1.60	0.67
2:G:187:LEU:HA	2:G:190:PHE:HB3	1.74	0.67
2:G:1475:LYS:CG	2:G:1481:SER:HB2	2.24	0.67
2:H:707:PRO:HG3	2:H:716:VAL:CG2	2.24	0.67
2:H:1054:LEU:HB2	4:H:3051:FMN:HM72	1.76	0.67
2:H:191:SER:HA	2:H:194:THR:HG22	1.77	0.67
1:C:1232:TYR:CZ	1:C:1701:LYS:HD2	2.29	0.67
1:C:1455:ARG:HH11	1:C:1458:GLN:HE21	1.42	0.67
2:G:163:GLN:HG2	2:G:423:VAL:HG12	1.77	0.67
2:G:1889:VAL:HG13	2:G:1977:HIS:CB	2.24	0.67
2:H:50:ALA:HB3	2:H:53:GLU:HG3	1.76	0.67
2:I:579:VAL:HG23	2:I:1078:HIS:NE2	2.10	0.67
1:C:504:ASP:HB3	1:C:508:ASN:H	1.60	0.67
2:G:1129:ALA:HB2	2:G:1138:TRP:CZ3	2.30	0.67
2:I:598:THR:OG1	2:I:599:PRO:HD3	1.94	0.67
1:A:459:ASP:HB3	1:A:462:LYS:HG3	1.76	0.67
1:B:1303:GLY:H	1:B:1307:THR:HG22	1.59	0.67
1:C:409:ALA:HB2	1:C:442:ARG:HD2	1.76	0.67
1:C:1056:ILE:HD13	1:C:1193:TRP:HD1	1.60	0.67
1:C:1523:ARG:CG	1:C:1523:ARG:NH1	2.57	0.67
2:G:768:GLY:HA3	2:G:800:LEU:HD21	1.76	0.67
2:G:910:GLN:HE21	2:G:912:ARG:HH21	1.42	0.67
2:H:902:PRO:HG2	2:H:929:LEU:HD21	1.74	0.67
2:H:1638:ILE:HD12	2:H:1657:ILE:HD12	1.76	0.67
2:I:904:PHE:HB2	2:I:1017:PHE:CD1	2.28	0.67
2:I:910:GLN:HE21	2:I:912:ARG:HH21	1.40	0.67
1:A:1360:ARG:HH11	1:A:1364:GLU:HG2	1.60	0.67
1:B:1039:MET:O	1:B:1609:ARG:NH2	2.27	0.67
2:G:1741:ILE:HG12	2:G:1746:LEU:HD13	1.77	0.67
1:B:1310:GLU:OE1	1:B:1649:LYS:HE3	1.94	0.67
2:I:1675:GLY:O	2:I:1678:MET:HB2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:328:LEU:O	1:A:328:LEU:HD22	1.94	0.67
1:C:746:GLU:O	1:C:750:GLU:HG3	1.95	0.67
2:H:545:GLN:HE21	2:H:545:GLN:H	1.41	0.67
2:H:594:VAL:HG21	2:H:610:THR:HG21	1.77	0.67
2:H:768:GLY:HA3	2:H:800:LEU:HD21	1.77	0.67
2:I:54:PRO:HG3	2:I:63:LYS:HG3	1.75	0.67
2:G:1004:LEU:HD21	2:G:1020:VAL:HG23	1.77	0.67
2:G:1676:MET:HE1	2:G:1781:LEU:HD21	1.76	0.67
2:G:1770:LEU:HD23	2:G:1776:PHE:HE2	1.58	0.67
2:H:1086:LEU:HG	2:H:1092:ASP:HA	1.77	0.67
2:H:1242:PHE:CE2	2:H:1244:PRO:HG3	2.30	0.67
2:H:1264:GLU:HA	2:H:1275:PHE:CE1	2.29	0.67
2:I:703:LEU:HD21	2:I:705:LEU:HD21	1.76	0.67
2:G:353:VAL:HG23	2:G:357:ASN:ND2	2.10	0.67
2:H:1256:GLU:O	2:H:1257:ASP:HB2	1.93	0.67
2:I:949:ASP:HB3	2:I:1006:MET:HE2	1.77	0.67
2:I:1889:VAL:HG13	2:I:1977:HIS:CB	2.24	0.67
1:A:1030:TRP:NE1	1:A:1580:LEU:CD2	2.57	0.66
1:C:183:GLN:HE21	1:C:202:GLU:HG2	1.61	0.66
1:C:257:PRO:HD2	1:C:260:ARG:HB2	1.76	0.66
1:C:888:ILE:HD12	1:C:939:PHE:HE2	1.60	0.66
2:G:670:ARG:HD3	2:G:699:GLY:O	1.95	0.66
2:H:1159:ILE:CG1	2:H:1169:PRO:HD3	2.24	0.66
2:H:1862:VAL:HG11	2:H:1866:PHE:CD1	2.30	0.66
2:I:50:ALA:HB3	2:I:53:GLU:HG3	1.76	0.66
2:I:163:GLN:HG2	2:I:423:VAL:HG12	1.76	0.66
2:I:1227:ARG:HD2	2:I:1565:VAL:HG11	1.77	0.66
1:A:473:GLY:O	1:A:477:ILE:HG13	1.95	0.66
1:A:1662:TYR:O	1:A:1665:ILE:HG22	1.95	0.66
1:B:328:LEU:O	1:B:328:LEU:HD22	1.95	0.66
1:B:335:HIS:CE1	1:C:335:HIS:CE1	2.82	0.66
1:C:294:TYR:CE1	1:C:298:VAL:HG21	2.29	0.66
1:C:328:LEU:O	1:C:328:LEU:HD22	1.95	0.66
2:H:670:ARG:HD3	2:H:699:GLY:O	1.95	0.66
2:I:1739:GLU:O	2:I:1987:PRO:HG3	1.95	0.66
2:I:1920:GLN:HG2	2:I:1922:ILE:HD11	1.75	0.66
1:A:183:GLN:HE21	1:A:202:GLU:HG2	1.59	0.66
1:B:27:ARG:HB2	2:H:2016:ALA:HB2	1.76	0.66
1:B:1045:PHE:HB3	1:B:1049:GLY:HA3	1.76	0.66
1:C:460:GLU:HG2	1:C:470:LYS:HD3	1.77	0.66
1:C:507:GLY:N	1:C:954:ARG:HG2	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1030:TRP:NE1	1:C:1580:LEU:CD2	2.58	0.66
2:H:910:GLN:HE21	2:H:912:ARG:HH21	1.43	0.66
2:I:750:MET:HG3	2:I:796:PHE:HZ	1.60	0.66
2:I:762:ASN:H	2:I:762:ASN:ND2	1.88	0.66
1:A:864:VAL:HG22	1:A:921:PRO:HB3	1.78	0.66
1:B:12:ILE:HA	1:B:15:THR:CG2	2.25	0.66
2:I:705:LEU:HD12	2:I:716:VAL:HG13	1.75	0.66
1:B:504:ASP:HB3	1:B:508:ASN:H	1.60	0.66
2:G:61:VAL:O	2:G:65:LEU:HB2	1.96	0.66
2:G:1300:PHE:HA	2:G:1556:VAL:HG11	1.77	0.66
2:G:1862:VAL:HG11	2:G:1866:PHE:CD1	2.30	0.66
2:H:741:HIS:CE1	2:H:855:HIS:CE1	2.84	0.66
2:H:826:GLY:HA3	2:H:1061:GLN:HB3	1.75	0.66
2:H:835:THR:HG21	2:H:855:HIS:HD2	1.59	0.66
1:A:988:ILE:HD13	1:A:1048:GLU:HB3	1.76	0.66
2:G:579:VAL:HG23	2:G:1078:HIS:NE2	2.10	0.66
2:H:1173:VAL:HG21	2:H:1221:MET:HE1	1.77	0.66
2:H:1986:LYS:N	2:H:1987:PRO:HD2	2.11	0.66
1:A:836:ASP:HB3	1:A:839:TYR:HB3	1.76	0.66
1:B:497:THR:OG1	1:B:513:GLU:HG2	1.95	0.66
1:B:1540:SER:HA	1:B:1575:VAL:HG22	1.78	0.66
2:G:1920:GLN:HG2	2:G:1922:ILE:HD11	1.78	0.66
2:H:61:VAL:O	2:H:65:LEU:HB2	1.96	0.66
2:H:904:PHE:HB2	2:H:1017:PHE:CD1	2.30	0.66
2:H:1741:ILE:HG12	2:H:1746:LEU:HD13	1.76	0.66
1:B:733:ILE:HD13	1:B:761:LEU:HD11	1.78	0.66
2:G:1419:PHE:O	2:G:1422:THR:HG22	1.95	0.66
2:G:1457:PHE:CZ	2:G:1501:ILE:HD11	2.30	0.66
2:G:1808:SER:H	2:G:2013:ASN:ND2	1.93	0.66
2:H:131:ILE:HG21	2:H:182:VAL:CG1	2.18	0.66
2:I:1173:VAL:HG21	2:I:1221:MET:HE1	1.77	0.66
2:I:1195:VAL:CG1	2:I:1211:LEU:HB3	2.25	0.66
1:A:254:TRP:CH2	1:A:292:GLN:HG3	2.31	0.66
1:B:1219:VAL:HA	1:B:1384:ILE:CD1	2.24	0.66
1:C:295:ALA:HB2	1:C:302:LEU:HD11	1.77	0.66
2:H:1770:LEU:HD23	2:H:1776:PHE:HE2	1.59	0.66
2:I:1381:VAL:HG13	2:I:1390:VAL:HG22	1.78	0.66
2:I:1808:SER:H	2:I:2013:ASN:ND2	1.94	0.66
1:B:501:THR:N	1:B:886:GLU:OE1	2.21	0.66
1:C:1360:ARG:HH11	1:C:1364:GLU:HG2	1.60	0.66
2:G:33:LEU:HD11	2:G:80:PHE:HD2	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:843:ILE:HD11	2:G:1055:HIS:HB3	1.78	0.66
2:G:904:PHE:HB2	2:G:1017:PHE:CD1	2.30	0.66
2:G:1352:HIS:CD2	2:G:1410:PHE:CE2	2.84	0.66
2:I:1819:ALA:HA	2:I:2005:ARG:HH11	1.61	0.66
1:A:497:THR:OG1	1:A:513:GLU:HG2	1.96	0.65
1:B:529:MET:CG	1:B:638:LEU:HG	2.26	0.65
1:C:1:MET:CE	1:C:6:GLU:HA	2.25	0.65
1:C:1317:GLU:OE1	1:C:1317:GLU:HA	1.96	0.65
2:G:652:ILE:N	2:G:658:MET:HE3	2.11	0.65
2:G:1976:PHE:HA	2:G:1981:LEU:HD22	1.78	0.65
2:H:2035:SER:HB3	2:H:2038:ILE:HG13	1.78	0.65
1:B:836:ASP:HB3	1:B:839:TYR:HB3	1.79	0.65
1:C:330:GLU:HA	1:C:333:LYS:HD2	1.79	0.65
1:C:836:ASP:HB3	1:C:839:TYR:HB3	1.77	0.65
1:C:1312:VAL:HG22	1:C:1329:VAL:HG11	1.78	0.65
2:G:1352:HIS:HE1	2:G:1583:MET:HE1	1.60	0.65
2:G:1986:LYS:N	2:G:1987:PRO:HD2	2.12	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:1782:THR:HG22	2:I:1827:LEU:HD21	1.78	0.65
1:A:27:ARG:HB2	2:G:2016:ALA:HB2	1.77	0.65
2:G:597:MET:HA	4:G:3051:FMN:N5	2.10	0.65
1:A:27:ARG:HD2	1:A:30:GLU:OE2	1.97	0.65
1:A:331:ILE:HD11	1:C:332:THR:HG22	1.79	0.65
1:B:460:GLU:HG2	1:B:470:LYS:HD3	1.78	0.65
1:B:1317:GLU:OE1	1:B:1317:GLU:HA	1.96	0.65
1:C:32:GLN:HA	1:C:35:PHE:CE2	2.31	0.65
2:G:234:ILE:HG13	2:G:235:PRO:HD3	1.77	0.65
2:G:259:THR:HG23	2:G:262:GLU:H	1.62	0.65
2:G:902:PRO:HG2	2:G:929:LEU:HD21	1.79	0.65
2:G:1086:LEU:HG	2:G:1092:ASP:HA	1.77	0.65
2:H:1719:ILE:O	2:H:1761:SER:HB2	1.97	0.65
2:I:251:VAL:O	2:I:255:LEU:HB2	1.96	0.65
1:B:257:PRO:HD2	1:B:260:ARG:HB2	1.78	0.65
1:B:749:ILE:HD11	1:B:805:CYS:HB3	1.77	0.65
2:G:736:ARG:NH1	2:G:769:SER:O	2.29	0.65
1:A:331:ILE:CD1	1:C:332:THR:HG22	2.26	0.65
1:A:1219:VAL:HG22	1:A:1384:ILE:HD12	1.77	0.65
2:G:131:ILE:HG21	2:G:182:VAL:CG1	2.26	0.65
2:I:545:GLN:HE21	2:I:545:GLN:H	1.42	0.65
1:A:968:VAL:O	2:G:1512:HIS:HB2	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:435:GLU:O	1:C:439:ILE:HG13	1.96	0.65
2:G:1381:VAL:HG13	2:G:1390:VAL:HG22	1.77	0.65
2:G:1740:THR:HG22	2:G:1742:VAL:HG23	1.78	0.65
1:B:294:TYR:CE1	1:B:298:VAL:HG21	2.32	0.65
1:C:497:THR:OG1	1:C:513:GLU:HG2	1.97	0.65
2:G:826:GLY:HA3	2:G:1061:GLN:HB3	1.77	0.65
2:H:667:LYS:HB2	2:H:698:LEU:HD23	1.79	0.65
2:H:748:THR:HB	2:H:749:PRO:HD3	1.78	0.65
2:H:949:ASP:HB3	2:H:1006:MET:HE2	1.79	0.65
1:A:340:ARG:HH12	1:A:344:GLN:CG	2.09	0.65
1:A:529:MET:CG	1:A:638:LEU:HG	2.27	0.65
1:A:1219:VAL:HA	1:A:1384:ILE:CD1	2.23	0.65
2:G:259:THR:CG2	2:G:262:GLU:H	2.10	0.65
2:G:1242:PHE:CE2	2:G:1244:PRO:HG3	2.31	0.65
1:A:294:TYR:CE1	1:A:298:VAL:HG21	2.32	0.65
1:C:11:HIS:ND1	2:I:1998:LYS:HA	2.12	0.65
1:C:1292:ILE:CD1	1:C:1328:ILE:HD11	2.27	0.65
2:I:1176:PRO:O	2:I:1177:SER:HB3	1.95	0.65
1:B:254:TRP:CH2	1:B:292:GLN:HG3	2.32	0.64
2:H:741:HIS:HB3	2:H:853:PRO:HB2	1.77	0.64
2:H:1195:VAL:HG13	2:H:1211:LEU:HB3	1.80	0.64
2:I:490:TRP:HE1	2:I:516:THR:CG2	2.00	0.64
2:I:1475:LYS:CG	2:I:1481:SER:HB2	2.27	0.64
1:B:599:MET:HB2	1:B:624:LYS:CD	2.24	0.64
1:C:1721:ARG:CG	1:C:1721:ARG:NH1	2.56	0.64
2:G:353:VAL:HG23	2:G:357:ASN:HD22	1.61	0.64
2:G:1906:ALA:O	2:G:1910:VAL:HG23	1.97	0.64
2:H:1859:PRO:O	2:H:1862:VAL:HG13	1.98	0.64
2:I:719:ILE:O	2:I:722:ALA:HB3	1.97	0.64
2:I:1355:ASN:HA	2:I:1407:THR:O	1.97	0.64
1:A:421:ILE:CG1	1:A:469:VAL:HG21	2.28	0.64
1:B:864:VAL:HG22	1:B:921:PRO:HB3	1.77	0.64
1:C:749:ILE:HD11	1:C:805:CYS:HB3	1.78	0.64
2:H:115:THR:HB	2:H:118:LYS:HB2	1.80	0.64
1:C:604:ALA:HB3	1:C:612:GLU:HG2	1.80	0.64
2:G:138:ASP:O	2:G:139:LYS:HG3	1.97	0.64
2:H:259:THR:HG23	2:H:262:GLU:H	1.63	0.64
2:H:1352:HIS:CD2	2:H:1410:PHE:CE2	2.85	0.64
2:H:1906:ALA:O	2:H:1910:VAL:HG23	1.98	0.64
2:I:1265:MET:HE1	2:I:1562:PRO:HG2	1.78	0.64
1:A:1039:MET:O	1:A:1609:ARG:NH2	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:746:GLU:O	1:B:750:GLU:HG3	1.97	0.64
2:G:490:TRP:HE1	2:G:516:THR:CG2	1.99	0.64
2:G:1359:MET:HE3	2:G:1404:MET:HB3	1.79	0.64
2:H:259:THR:CG2	2:H:262:GLU:H	2.10	0.64
2:H:658:MET:HA	2:H:661:TRP:NE1	2.13	0.64
2:H:1823:SER:OG	2:H:1825:GLU:HG2	1.96	0.64
2:I:1422:THR:CG2	2:I:1474:PHE:HB2	2.27	0.64
1:B:504:ASP:HB2	1:B:508:ASN:HB2	1.79	0.64
1:C:1540:SER:HA	1:C:1575:VAL:HG22	1.79	0.64
1:C:1594:ASN:O	1:C:1598:GLN:HG3	1.97	0.64
2:G:1103:PHE:O	2:G:1247:GLY:HA3	1.97	0.64
2:G:1195:VAL:CG1	2:G:1211:LEU:HB3	2.27	0.64
2:I:61:VAL:O	2:I:65:LEU:HB2	1.96	0.64
2:I:826:GLY:HA3	2:I:1061:GLN:HB3	1.78	0.64
1:A:504:ASP:HB2	1:A:508:ASN:HB2	1.78	0.64
1:A:746:GLU:O	1:A:750:GLU:HG3	1.97	0.64
1:A:1022:THR:HG22	1:A:1226:SER:HB2	1.80	0.64
1:C:833:PHE:HA	1:C:937:LYS:HD2	1.78	0.64
2:G:499:THR:CB	2:G:500:HIS:HD2	1.97	0.64
2:H:1808:SER:H	2:H:2013:ASN:HD21	1.46	0.64
2:I:7:ARG:HE	2:I:27:PHE:HB2	1.62	0.64
2:I:1457:PHE:CZ	2:I:1501:ILE:HD11	2.33	0.64
1:B:330:GLU:HA	1:B:333:LYS:HD2	1.80	0.64
1:B:852:ARG:HG2	1:B:852:ARG:NH1	1.98	0.64
1:C:1194:ASN:HB3	1:C:1197:THR:CG2	2.27	0.64
2:G:1739:GLU:CB	2:G:1987:PRO:HB3	2.23	0.64
2:H:232:LEU:O	2:H:232:LEU:HD23	1.98	0.64
2:H:1457:PHE:CZ	2:H:1501:ILE:HD11	2.32	0.64
2:I:648:GLY:HA3	2:I:678:PHE:CE2	2.32	0.64
2:I:1676:MET:HE1	2:I:1781:LEU:HD21	1.79	0.64
2:I:2022:THR:HG23	2:I:2025:TYR:H	1.63	0.64
1:A:1317:GLU:HA	1:A:1317:GLU:OE1	1.96	0.64
1:B:421:ILE:CG1	1:B:469:VAL:HG21	2.27	0.64
2:G:545:GLN:HE21	2:G:545:GLN:H	1.46	0.64
2:H:1205:LEU:O	2:H:1206:LYS:HG3	1.97	0.64
2:H:1676:MET:HE1	2:H:1781:LEU:HD21	1.80	0.64
2:I:892:ILE:HD11	2:I:903:TRP:NE1	2.12	0.64
2:I:964:LEU:H	2:I:964:LEU:CD2	2.11	0.64
1:B:1474:ALA:HA	1:B:1478:PRO:CG	2.27	0.64
2:G:305:PHE:CE1	2:G:442:ASP:HB3	2.32	0.64
2:H:163:GLN:HG2	2:H:423:VAL:HG12	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:703:LEU:HD21	2:H:705:LEU:HD21	1.79	0.64
2:I:670:ARG:HD3	2:I:699:GLY:O	1.98	0.64
1:A:152:HIS:HD2	1:A:163:LEU:HB2	1.61	0.63
1:A:1021:VAL:HG11	1:A:1597:LEU:HD11	1.79	0.63
1:C:24:SER:CB	2:I:2014:LEU:HD12	2.27	0.63
1:C:1474:ALA:HA	1:C:1478:PRO:CG	2.27	0.63
2:G:648:GLY:HA3	2:G:678:PHE:CE2	2.33	0.63
2:H:964:LEU:H	2:H:964:LEU:CD2	2.09	0.63
2:H:1176:PRO:O	2:H:1177:SER:HB3	1.97	0.63
2:H:1266:TYR:CB	2:H:1347:LEU:HD23	2.28	0.63
2:I:641:ILE:HG12	2:I:645:SER:HB2	1.79	0.63
1:A:504:ASP:CB	1:A:508:ASN:H	2.10	0.63
1:B:438:ASN:HD21	1:B:698:GLN:HE21	1.46	0.63
1:C:436:ALA:O	1:C:440:MET:HG3	1.98	0.63
1:C:504:ASP:HB2	1:C:508:ASN:HB2	1.80	0.63
1:C:989:GLN:NE2	2:I:993:GLN:OE1	2.32	0.63
2:G:1205:LEU:O	2:G:1206:LYS:HG3	1.98	0.63
2:G:2022:THR:HG23	2:G:2025:TYR:H	1.63	0.63
2:H:1227:ARG:CG	2:H:1227:ARG:NH1	2.57	0.63
2:H:1808:SER:H	2:H:2013:ASN:ND2	1.95	0.63
2:I:902:PRO:HG2	2:I:929:LEU:HD21	1.79	0.63
2:I:1266:TYR:CB	2:I:1347:LEU:HD23	2.28	0.63
2:I:1279:PHE:HB2	2:I:1340:PRO:HG3	1.79	0.63
2:I:1378:ILE:HD11	2:I:1381:VAL:CG2	2.28	0.63
1:A:956:ALA:O	1:A:959:ILE:HG22	1.98	0.63
1:A:1292:ILE:CD1	1:A:1328:ILE:HD11	2.28	0.63
1:A:1461:ASP:O	1:A:1465:ASN:HB2	1.99	0.63
1:B:992:PHE:CE2	1:B:1399:PRO:HG3	2.34	0.63
1:C:1721:ARG:HG2	1:C:1721:ARG:NH1	2.00	0.63
2:G:7:ARG:HE	2:G:27:PHE:HB2	1.63	0.63
2:G:259:THR:OG1	2:G:260:PRO:HD2	1.97	0.63
2:G:745:ASP:HA	2:G:832:TRP:HH2	1.64	0.63
2:H:353:VAL:HG23	2:H:357:ASN:ND2	2.13	0.63
2:I:1890:ASN:HB2	2:I:1899:VAL:HB	1.81	0.63
2:I:1976:PHE:HA	2:I:1981:LEU:HD22	1.81	0.63
1:A:824:LEU:HD12	1:A:846:LEU:HB3	1.80	0.63
1:A:852:ARG:HG2	1:A:852:ARG:NH1	2.00	0.63
1:B:881:ASN:HA	1:B:944:ARG:HH21	1.63	0.63
1:C:599:MET:HB2	1:C:624:LYS:CD	2.25	0.63
1:C:680:ILE:HG13	1:C:769:ILE:HB	1.80	0.63
2:G:835:THR:HG21	2:G:855:HIS:CD2	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1266:TYR:CB	2:G:1347:LEU:HD23	2.29	0.63
2:H:1422:THR:CG2	2:H:1474:PHE:HB2	2.29	0.63
2:H:1740:THR:HG22	2:H:1742:VAL:HG23	1.79	0.63
2:I:1159:ILE:CG1	2:I:1169:PRO:HD3	2.28	0.63
1:B:421:ILE:HG13	1:B:469:VAL:HG21	1.81	0.63
2:G:1859:PRO:O	2:G:1862:VAL:HG13	1.99	0.63
2:H:598:THR:CG2	2:H:622:GLY:HA3	2.28	0.63
2:I:159:ILE:HD11	2:I:512:LEU:HG	1.80	0.63
2:I:1195:VAL:HG13	2:I:1211:LEU:HB3	1.79	0.63
1:A:330:GLU:HA	1:A:333:LYS:HD2	1.80	0.63
1:B:1:MET:HE3	1:B:5:VAL:HG12	1.81	0.63
1:B:444:ASN:HB3	1:B:446:ALA:H	1.63	0.63
1:B:1721:ARG:CG	1:B:1721:ARG:NH1	2.55	0.63
1:C:158:LYS:HD3	1:C:185:GLU:HB3	1.79	0.63
2:G:115:THR:HB	2:G:118:LYS:HB2	1.80	0.63
2:G:251:VAL:O	2:G:255:LEU:HB2	1.99	0.63
2:H:601:THR:CG2	2:H:618:GLU:O	2.38	0.63
2:H:835:THR:HG22	2:H:845:THR:N	2.14	0.63
2:H:1475:LYS:CG	2:H:1481:SER:HB2	2.29	0.63
2:I:1741:ILE:HG12	2:I:1746:LEU:HD13	1.80	0.63
2:I:1859:PRO:O	2:I:1862:VAL:HG13	1.98	0.63
1:A:233:ILE:HD13	1:A:237:MET:HE2	1.81	0.63
1:A:436:ALA:O	1:A:440:MET:HG3	1.99	0.63
1:A:1194:ASN:HB3	1:A:1197:THR:CG2	2.28	0.63
2:I:241:ILE:HG23	2:I:506:PRO:HG3	1.81	0.63
1:B:27:ARG:HH21	2:H:2015:THR:HA	1.64	0.63
1:C:864:VAL:HG22	1:C:921:PRO:HB3	1.79	0.63
2:G:748:THR:HB	2:G:749:PRO:HD3	1.78	0.63
2:G:1360:ILE:HG23	2:G:1403:VAL:O	1.99	0.63
2:H:892:ILE:HD11	2:H:903:TRP:NE1	2.14	0.63
2:I:1194:VAL:O	2:I:1194:VAL:HG12	1.99	0.63
1:A:460:GLU:HG2	1:A:470:LYS:HD3	1.79	0.63
1:C:742:LYS:HD3	1:C:746:GLU:OE2	1.98	0.63
2:G:490:TRP:O	2:G:494:THR:HG22	1.99	0.63
2:I:115:THR:HB	2:I:118:LYS:HB2	1.80	0.63
2:I:259:THR:HG23	2:I:262:GLU:H	1.64	0.63
2:I:259:THR:OG1	2:I:260:PRO:HD2	1.98	0.63
1:A:411:GLN:HE22	1:A:1628:SER:H	1.47	0.62
1:B:1056:ILE:HD13	1:B:1193:TRP:HD1	1.64	0.62
1:C:956:ALA:O	1:C:959:ILE:HG22	1.98	0.62
2:G:1227:ARG:HG3	2:G:1227:ARG:NH1	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:33:LEU:HD11	2:H:80:PHE:HD2	1.63	0.62
2:H:1874:VAL:O	2:H:1878:VAL:HG12	1.98	0.62
1:A:13:LEU:HB2	2:G:2026:PHE:CE1	2.34	0.62
1:A:158:LYS:HD3	1:A:185:GLU:HB3	1.81	0.62
1:B:529:MET:HG3	1:B:638:LEU:HG	1.80	0.62
2:G:85:ASN:ND2	2:G:135:ARG:HH11	1.97	0.62
2:G:943:TRP:CH2	2:G:1016:PRO:HG3	2.34	0.62
2:G:1173:VAL:HG21	2:G:1221:MET:HE1	1.80	0.62
2:G:1378:ILE:HD11	2:G:1381:VAL:CG2	2.29	0.62
2:H:251:VAL:O	2:H:255:LEU:HB2	1.99	0.62
2:H:1374:THR:HG23	2:H:1396:LEU:HD12	1.81	0.62
2:H:1931:LEU:HD22	2:H:1935:GLU:HG2	1.81	0.62
1:A:440:MET:HE3	1:A:483:VAL:HG21	1.81	0.62
1:A:1259:GLY:HA2	1:A:1263:ASP:HB2	1.81	0.62
1:C:254:TRP:CH2	1:C:292:GLN:HG3	2.34	0.62
1:C:529:MET:CG	1:C:638:LEU:HG	2.30	0.62
2:G:726:PHE:O	2:G:762:ASN:HB2	1.98	0.62
2:H:750:MET:HG3	2:H:796:PHE:HZ	1.64	0.62
2:H:856:LYS:HG2	2:H:1054:LEU:HD12	1.81	0.62
2:I:324:LEU:HD12	2:I:328:LEU:HG	1.82	0.62
2:I:1472:VAL:HG22	2:I:1483:VAL:HG22	1.81	0.62
2:I:1624:THR:HB	2:I:1642:THR:HG23	1.81	0.62
1:C:1431:GLU:HG3	1:C:1433:HIS:CE1	2.33	0.62
2:H:871:THR:HB	2:H:872:ILE:HD12	1.80	0.62
2:H:1472:VAL:HG22	2:H:1483:VAL:HG22	1.79	0.62
2:I:1868:GLN:HG3	2:I:1898:TYR:OH	1.99	0.62
2:I:1906:ALA:O	2:I:1910:VAL:HG23	2.00	0.62
1:A:1292:ILE:HD11	1:A:1328:ILE:HD11	1.81	0.62
1:A:1455:ARG:HH11	1:A:1458:GLN:HE21	1.46	0.62
1:B:507:GLY:N	1:B:954:ARG:HG2	2.15	0.62
1:B:1584:PRO:HG3	1:B:1591:TRP:CZ3	2.35	0.62
1:C:1039:MET:O	1:C:1609:ARG:NH2	2.31	0.62
2:G:1102:TYR:HB3	2:G:1244:PRO:HA	1.80	0.62
2:G:1782:THR:HG22	2:G:1827:LEU:HD21	1.81	0.62
2:G:1819:ALA:HA	2:G:2005:ARG:HH11	1.65	0.62
2:H:601:THR:HG22	2:H:601:THR:O	2.00	0.62
1:B:1455:ARG:HH11	1:B:1458:GLN:HE21	1.47	0.62
1:C:822:VAL:HG12	1:C:824:LEU:HD22	1.82	0.62
2:H:1168:ASN:ND2	2:H:1171:ARG:HB2	2.14	0.62
2:I:464:ASP:HB3	2:I:466:SER:HB3	1.80	0.62
2:I:846:VAL:HG13	2:I:865:TRP:NE1	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1740:THR:HG22	2:I:1742:VAL:HG23	1.79	0.62
1:A:749:ILE:CD1	1:A:805:CYS:HB3	2.29	0.62
1:A:1540:SER:HA	1:A:1575:VAL:HG22	1.81	0.62
1:C:233:ILE:HD13	1:C:237:MET:CE	2.30	0.62
2:G:241:ILE:HG23	2:G:506:PRO:HG3	1.80	0.62
2:G:871:THR:HB	2:G:872:ILE:HD12	1.82	0.62
2:G:1908:ASP:HB2	2:G:1958:LEU:HD21	1.81	0.62
2:H:131:ILE:HD12	2:H:182:VAL:CG1	2.29	0.62
2:I:184:VAL:HG13	2:I:187:LEU:HD21	1.80	0.62
2:I:259:THR:CG2	2:I:262:GLU:H	2.11	0.62
1:C:444:ASN:HB3	1:C:446:ALA:H	1.65	0.62
2:G:159:ILE:HD11	2:G:512:LEU:HG	1.80	0.62
2:G:641:ILE:HG12	2:G:645:SER:HB2	1.80	0.62
2:G:1300:PHE:CA	2:G:1556:VAL:HG11	2.29	0.62
2:H:85:ASN:ND2	2:H:135:ARG:HH11	1.96	0.62
2:I:1805:ALA:HB2	2:I:2011:ILE:HB	1.82	0.62
1:A:20:TYR:HE1	2:G:2035:SER:HB2	1.60	0.62
1:A:1523:ARG:CG	1:A:1523:ARG:NH1	2.57	0.62
1:B:27:ARG:HD2	1:B:30:GLU:OE2	2.00	0.62
1:C:501:THR:N	1:C:886:GLU:OE1	2.21	0.62
2:G:750:MET:HG3	2:G:796:PHE:HZ	1.65	0.62
2:H:490:TRP:O	2:H:494:THR:HG22	2.00	0.62
1:A:1326:ILE:HG12	1:A:1388:MET:HG3	1.82	0.62
2:G:1719:ILE:O	2:G:1761:SER:HB2	2.00	0.62
2:G:1931:LEU:HD22	2:G:1935:GLU:HG2	1.82	0.62
2:H:1149:TRP:CD1	2:H:1213:LEU:HD12	2.34	0.62
2:I:745:ASP:HA	2:I:832:TRP:HH2	1.65	0.62
2:I:1086:LEU:HD12	2:I:1090:TYR:HB2	1.82	0.62
2:I:1823:SER:OG	2:I:1825:GLU:HG2	2.00	0.62
1:C:233:ILE:HD13	1:C:237:MET:HE2	1.80	0.61
1:C:509:ILE:HG12	1:C:951:SER:HB2	1.82	0.61
1:C:1057:MET:SD	1:C:1097:ILE:HG23	2.40	0.61
2:G:719:ILE:O	2:G:722:ALA:HB3	2.00	0.61
2:G:1199:GLU:OE2	2:G:1567:ARG:CZ	2.46	0.61
2:H:100:ASP:OD2	2:H:102:HIS:HD2	1.82	0.61
2:H:159:ILE:HD11	2:H:512:LEU:HG	1.82	0.61
2:H:1675:GLY:O	2:H:1678:MET:HB2	1.99	0.61
1:B:631:PRO:HB2	1:B:634:THR:OG1	2.00	0.61
1:B:1292:ILE:CD1	1:B:1328:ILE:HD11	2.30	0.61
2:H:7:ARG:HE	2:H:27:PHE:HB2	1.64	0.61
2:H:353:VAL:HG23	2:H:357:ASN:HD22	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:158:LYS:HD3	1:B:185:GLU:HB3	1.82	0.61
1:B:340:ARG:HH12	1:B:344:GLN:CG	2.13	0.61
1:B:824:LEU:HD12	1:B:846:LEU:HB3	1.82	0.61
2:H:589:ARG:HB3	2:H:590:PRO:HD2	1.82	0.61
2:H:856:LYS:NZ	2:H:1052:CYS:SG	2.70	0.61
2:I:860:ARG:HB3	2:I:898:ASP:HB3	1.81	0.61
2:I:1054:LEU:HB2	4:I:3051:FMN:HM71	1.82	0.61
1:A:1721:ARG:CG	1:A:1721:ARG:NH1	2.52	0.61
1:B:1555:ALA:HA	1:B:1621:PHE:CE1	2.36	0.61
1:C:20:TYR:CE1	2:I:2035:SER:HB2	2.35	0.61
2:G:1739:GLU:O	2:G:1987:PRO:HG3	2.00	0.61
2:H:565:TYR:CZ	2:H:758:ARG:HD2	2.35	0.61
2:H:835:THR:HG21	2:H:855:HIS:NE2	2.14	0.61
2:H:1378:ILE:HD11	2:H:1381:VAL:CG2	2.31	0.61
2:I:100:ASP:OD2	2:I:102:HIS:HD2	1.83	0.61
2:I:1808:SER:H	2:I:2013:ASN:HD21	1.47	0.61
1:A:24:SER:O	2:G:1977:HIS:HD2	1.84	0.61
1:B:20:TYR:CE1	2:H:2035:SER:HB2	2.35	0.61
1:B:644:THR:HG23	1:B:648:ASP:H	1.65	0.61
1:C:20:TYR:CG	2:I:2033:THR:OG1	2.53	0.61
1:C:1292:ILE:HD11	1:C:1328:ILE:HD11	1.81	0.61
2:G:324:LEU:HD12	2:G:328:LEU:HG	1.81	0.61
2:H:33:LEU:HD11	2:H:80:PHE:CD2	2.35	0.61
2:H:174:ARG:NH2	2:H:225:THR:OG1	2.33	0.61
2:H:1086:LEU:HD12	2:H:1090:TYR:HB2	1.83	0.61
2:H:1279:PHE:HB2	2:H:1340:PRO:HG3	1.81	0.61
2:I:56:THR:HG23	2:I:59:GLU:CG	2.28	0.61
1:A:705:VAL:HG23	1:A:732:LEU:HD21	1.82	0.61
1:B:24:SER:O	2:H:1977:HIS:CD2	2.53	0.61
1:B:1431:GLU:HG3	1:B:1433:HIS:CE1	2.36	0.61
1:B:1693:ILE:HD11	2:H:998:GLN:HB2	1.83	0.61
2:H:603:SER:O	2:H:607:VAL:HG12	2.00	0.61
1:A:644:THR:HG23	1:A:648:ASP:H	1.65	0.61
1:A:822:VAL:HG12	1:A:824:LEU:HD22	1.82	0.61
1:B:1194:ASN:HB3	1:B:1197:THR:CG2	2.30	0.61
1:C:24:SER:HB3	2:I:2014:LEU:HD12	1.82	0.61
1:C:824:LEU:HD12	1:C:846:LEU:HB3	1.82	0.61
2:I:663:ILE:HG13	2:I:694:TYR:HE1	1.66	0.61
2:I:1325:PHE:CZ	2:I:1328:VAL:HG11	2.36	0.61
2:I:1352:HIS:HE1	2:I:1583:MET:HE1	1.65	0.61
1:B:1052:GLU:O	1:B:1056:ILE:HG23	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1594:ASN:O	1:B:1598:GLN:HG3	2.00	0.61
1:A:11:HIS:ND1	2:G:1998:LYS:HA	2.15	0.61
1:A:488:PRO:HG3	1:A:728:LYS:HG3	1.81	0.61
1:A:599:MET:HB2	1:A:624:LYS:CD	2.25	0.61
1:B:1292:ILE:HD11	1:B:1328:ILE:HD11	1.82	0.61
1:B:1360:ARG:HH11	1:B:1364:GLU:HG2	1.66	0.61
2:G:601:THR:O	2:G:601:THR:HG22	2.01	0.61
2:G:1123:ASP:N	2:G:1123:ASP:OD1	2.34	0.61
2:G:1976:PHE:HB3	2:G:1981:LEU:HD21	1.82	0.61
2:H:260:PRO:HD3	2:H:289:TRP:CE2	2.36	0.61
1:A:1:MET:HE3	1:A:5:VAL:HG12	1.82	0.61
2:G:856:LYS:NZ	2:G:1052:CYS:SG	2.69	0.61
2:G:1472:VAL:HG22	2:G:1483:VAL:HG22	1.83	0.61
2:H:184:VAL:HG13	2:H:187:LEU:HD21	1.83	0.61
2:H:1805:ALA:HB2	2:H:2011:ILE:HB	1.83	0.61
2:I:1219:ILE:HD11	2:I:1242:PHE:HB2	1.83	0.61
1:C:504:ASP:CB	1:C:508:ASN:H	2.14	0.60
2:H:846:VAL:HG13	2:H:865:TRP:NE1	2.16	0.60
2:I:565:TYR:CZ	2:I:758:ARG:HD2	2.35	0.60
1:A:32:GLN:HA	1:A:35:PHE:CE2	2.35	0.60
1:B:233:ILE:HD13	1:B:237:MET:HE2	1.82	0.60
1:C:2:LYS:CD	2:I:2050:GLN:HB3	2.30	0.60
2:G:33:LEU:HD11	2:G:80:PHE:CD2	2.35	0.60
2:G:174:ARG:NH2	2:G:225:THR:OG1	2.34	0.60
2:I:33:LEU:HD11	2:I:80:PHE:CD2	2.36	0.60
2:I:856:LYS:NZ	2:I:1052:CYS:SG	2.70	0.60
2:I:1300:PHE:HA	2:I:1556:VAL:HG11	1.84	0.60
1:A:232:LEU:HD22	1:A:269:LEU:HA	1.83	0.60
2:G:607:VAL:HA	2:G:617:ILE:HD13	1.82	0.60
2:G:747:HIS:HE1	2:G:780:TYR:OH	1.84	0.60
2:G:1808:SER:H	2:G:2013:ASN:HD21	1.47	0.60
2:I:1198:SER:HB3	2:I:1205:LEU:HD21	1.82	0.60
2:I:1908:ASP:HB2	2:I:1958:LEU:HD21	1.83	0.60
1:A:20:TYR:OH	2:G:2035:SER:HB2	2.01	0.60
1:B:400:ARG:HH11	1:B:400:ARG:HG3	1.64	0.60
2:G:846:VAL:HG13	2:G:865:TRP:NE1	2.16	0.60
2:H:324:LEU:HD12	2:H:328:LEU:HG	1.84	0.60
2:H:1198:SER:HB3	2:H:1205:LEU:HD21	1.83	0.60
2:H:1219:ILE:HD11	2:H:1242:PHE:HB2	1.83	0.60
2:I:674:TYR:HB3	2:I:676:ILE:HG22	1.84	0.60
2:I:1352:HIS:CD2	2:I:1410:PHE:CE2	2.90	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1360:ILE:HG23	2:I:1403:VAL:O	2.01	0.60
1:B:509:ILE:HG12	1:B:951:SER:HB2	1.82	0.60
1:B:1523:ARG:CG	1:B:1523:ARG:NH1	2.59	0.60
1:C:221:LEU:O	1:C:225:SER:HB3	2.02	0.60
2:G:61:VAL:HG21	2:G:95:TYR:HE1	1.67	0.60
2:G:499:THR:CB	2:G:500:HIS:CD2	2.80	0.60
2:G:926:LEU:HD13	2:G:947:THR:HG22	1.84	0.60
2:G:1325:PHE:CZ	2:G:1328:VAL:HG11	2.37	0.60
2:H:745:ASP:HA	2:H:832:TRP:HH2	1.66	0.60
2:I:667:LYS:HB2	2:I:698:LEU:HD23	1.82	0.60
2:I:817:ALA:O	2:I:821:ILE:HG13	2.01	0.60
2:I:1123:ASP:N	2:I:1123:ASP:OD1	2.35	0.60
2:I:1205:LEU:O	2:I:1206:LYS:HG3	2.00	0.60
1:C:644:THR:HG23	1:C:648:ASP:H	1.65	0.60
2:G:816:ASP:HB3	2:G:1048:VAL:HG21	1.83	0.60
2:G:1822:MET:HE2	2:G:1996:ILE:HG12	1.84	0.60
2:H:1624:THR:HB	2:H:1642:THR:HG23	1.82	0.60
2:I:589:ARG:HB3	2:I:590:PRO:HD2	1.83	0.60
2:I:1976:PHE:HB3	2:I:1981:LEU:HD21	1.83	0.60
1:A:529:MET:HG3	1:A:638:LEU:HG	1.84	0.60
1:A:1194:ASN:O	1:A:1197:THR:HG23	2.02	0.60
1:B:513:GLU:OE2	1:B:873:ARG:NH1	2.33	0.60
2:G:184:VAL:HG13	2:G:187:LEU:HD21	1.84	0.60
2:G:271:THR:OG1	2:G:460:TYR:HB2	2.01	0.60
2:I:33:LEU:HD11	2:I:80:PHE:HD2	1.65	0.60
1:A:233:ILE:HD13	1:A:237:MET:CE	2.32	0.60
1:C:1062:TYR:CD2	1:C:1693:ILE:HG23	2.36	0.60
2:H:1149:TRP:CD1	2:H:1213:LEU:CD1	2.85	0.60
2:H:1739:GLU:O	2:H:1987:PRO:HG3	2.02	0.60
2:I:1986:LYS:N	2:I:1987:PRO:HD2	2.16	0.60
1:B:604:ALA:HB3	1:B:612:GLU:HG2	1.82	0.60
1:B:1657:HIS:ND1	1:B:1658:PRO:HD2	2.17	0.60
1:C:529:MET:HG3	1:C:638:LEU:HG	1.82	0.60
2:G:732:TRP:CD2	2:G:750:MET:CE	2.85	0.60
2:G:892:ILE:HD11	2:G:903:TRP:NE1	2.17	0.60
2:H:719:ILE:O	2:H:722:ALA:HB3	2.02	0.60
1:B:1021:VAL:HG11	1:B:1597:LEU:HD11	1.83	0.60
1:B:1057:MET:SD	1:B:1097:ILE:HG23	2.42	0.60
1:C:1662:TYR:O	1:C:1665:ILE:HG22	2.01	0.60
2:H:1093:ASP:HB3	2:H:1096:LYS:HG3	1.84	0.60
2:I:601:THR:O	2:I:601:THR:HG22	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:741:HIS:CB	2:I:853:PRO:HB2	2.32	0.60
2:I:1874:VAL:O	2:I:1878:VAL:HG12	2.02	0.60
2:I:1989:LYS:O	2:I:1993:LYS:HG3	2.02	0.60
1:B:1189:ILE:HD12	1:B:1380:GLN:HG3	1.82	0.59
1:C:1461:ASP:O	1:C:1465:ASN:HB2	2.02	0.59
1:C:1585:LYS:HB3	3:C:2748:CER:H52	1.84	0.59
2:G:100:ASP:OD2	2:G:102:HIS:HD2	1.85	0.59
2:G:598:THR:CG2	2:G:622:GLY:HA3	2.30	0.59
2:H:1494:PRO:HB2	2:H:1823:SER:HB2	1.84	0.59
2:I:732:TRP:CD2	2:I:750:MET:CE	2.84	0.59
1:A:37:LYS:HB2	1:A:65:TYR:HE1	1.67	0.59
1:A:67:SER:OG	2:I:359:HIS:HE1	1.85	0.59
1:B:80:CYS:SG	1:B:82:SER:HB3	2.42	0.59
1:B:1062:TYR:CD2	1:B:1693:ILE:HG23	2.36	0.59
1:B:1184:LEU:HB2	1:B:1352:THR:HG21	1.83	0.59
2:H:813:THR:HB	2:H:818:LYS:HE3	1.84	0.59
2:I:163:GLN:CG	2:I:423:VAL:HG12	2.32	0.59
2:I:1378:ILE:HD11	2:I:1381:VAL:HG21	1.84	0.59
1:A:435:GLU:O	1:A:439:ILE:HG13	2.03	0.59
1:B:32:GLN:HA	1:B:35:PHE:CE2	2.38	0.59
1:B:680:ILE:HG13	1:B:769:ILE:HB	1.83	0.59
1:C:705:VAL:HG23	1:C:732:LEU:HD21	1.83	0.59
2:G:594:VAL:HG21	2:G:610:THR:HG21	1.84	0.59
2:H:1314:ARG:CG	2:H:1314:ARG:NH1	2.62	0.59
2:I:1575:LEU:HD13	2:I:1579:ILE:HD12	1.84	0.59
1:A:1584:PRO:HG3	1:A:1591:TRP:CZ3	2.37	0.59
1:B:221:LEU:O	1:B:225:SER:HB3	2.02	0.59
1:B:1259:GLY:HA2	1:B:1263:ASP:HB2	1.84	0.59
1:C:56:MET:HG3	2:I:1893:VAL:CG2	2.32	0.59
1:C:421:ILE:CG1	1:C:469:VAL:HG21	2.32	0.59
2:G:565:TYR:CZ	2:G:758:ARG:HD2	2.37	0.59
2:G:754:TYR:CD2	2:G:794:MET:HG3	2.38	0.59
2:G:2038:ILE:O	2:G:2042:ILE:HG12	2.02	0.59
2:H:241:ILE:HG23	2:H:506:PRO:HG3	1.83	0.59
2:H:409:PHE:HB3	2:H:833:GLU:OE1	2.02	0.59
2:H:860:ARG:HB3	2:H:898:ASP:HB3	1.83	0.59
2:H:1223:MET:HE3	2:H:1238:LEU:HD12	1.84	0.59
2:I:658:MET:HA	2:I:661:TRP:NE1	2.17	0.59
1:A:1432:HIS:CE1	1:A:1434:SER:OG	2.55	0.59
1:B:233:ILE:HD13	1:B:237:MET:CE	2.32	0.59
1:B:956:ALA:O	1:B:959:ILE:HG22	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1194:ASN:O	1:C:1197:THR:HG23	2.02	0.59
1:C:1492:GLU:O	1:C:1496:GLU:HG3	2.01	0.59
2:G:443:LEU:HD22	2:G:448:VAL:HG11	1.84	0.59
2:G:1805:ALA:HB2	2:G:2011:ILE:HB	1.84	0.59
2:I:85:ASN:ND2	2:I:135:ARG:HH11	1.99	0.59
2:I:402:LEU:O	2:I:402:LEU:HD13	2.02	0.59
2:I:1149:TRP:CD1	2:I:1213:LEU:HD12	2.37	0.59
1:B:504:ASP:CB	1:B:508:ASN:H	2.15	0.59
1:C:1584:PRO:HG3	1:C:1591:TRP:CZ3	2.38	0.59
2:G:603:SER:O	2:G:607:VAL:HG12	2.03	0.59
2:G:932:ILE:HD11	2:G:1042:ALA:CB	2.24	0.59
2:G:1195:VAL:HG13	2:G:1211:LEU:HB3	1.84	0.59
2:H:817:ALA:O	2:H:821:ILE:HG13	2.02	0.59
1:A:417:TYR:OH	1:A:458:THR:HG22	2.02	0.59
1:A:516:ARG:NH2	1:A:889:GLU:OE1	2.35	0.59
1:B:1585:LYS:HB3	3:B:2748:CER:H52	1.85	0.59
1:C:733:ILE:HD12	1:C:761:LEU:HD21	1.85	0.59
2:H:663:ILE:HG13	2:H:694:TYR:HE1	1.66	0.59
2:H:726:PHE:O	2:H:762:ASN:HB2	2.03	0.59
2:I:99:ASN:HA	2:I:550:VAL:CG2	2.32	0.59
2:I:1086:LEU:HD12	2:I:1090:TYR:CB	2.33	0.59
2:I:1496:LYS:HE2	2:I:1693:ARG:HH21	1.67	0.59
1:A:409:ALA:HB2	1:A:442:ARG:HD2	1.84	0.59
2:G:131:ILE:CG2	2:G:182:VAL:CG1	2.80	0.59
2:H:197:GLU:OE1	2:H:197:GLU:HA	2.02	0.59
2:H:455:ILE:HG13	2:H:469:ARG:HD3	1.83	0.59
1:A:50:SER:HB2	1:A:51:PRO:HD3	1.85	0.59
1:C:1555:ALA:HA	1:C:1621:PHE:CE1	2.38	0.59
2:G:402:LEU:O	2:G:402:LEU:HD13	2.03	0.59
2:G:1086:LEU:HD12	2:G:1090:TYR:HB2	1.84	0.59
2:H:2038:ILE:O	2:H:2042:ILE:HG12	2.03	0.59
1:B:417:TYR:OH	1:B:458:THR:HG22	2.03	0.59
1:B:1474:ALA:O	1:B:1478:PRO:HD2	2.03	0.59
2:G:1210:ILE:HB	2:G:1222:GLU:HB3	1.85	0.59
2:G:1293:THR:CG2	2:G:1296:GLU:H	2.14	0.59
2:G:1374:THR:HG23	2:G:1396:LEU:HD12	1.85	0.59
2:H:259:THR:OG1	2:H:260:PRO:HD2	2.03	0.59
2:H:1130:THR:H	2:H:1133:THR:HG23	1.68	0.59
2:I:174:ARG:NH2	2:I:225:THR:OG1	2.36	0.59
2:I:353:VAL:HG23	2:I:357:ASN:ND2	2.18	0.59
2:I:490:TRP:O	2:I:494:THR:HG22	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1524:GLY:O	1:A:1528:THR:HG23	2.03	0.58
1:A:1585:LYS:HB3	3:A:2748:CER:H52	1.85	0.58
1:B:1234:MET:HG2	1:B:1326:ILE:HD12	1.85	0.58
1:C:488:PRO:HG3	1:C:728:LYS:HG3	1.83	0.58
2:G:1198:SER:HB3	2:G:1205:LEU:HD21	1.85	0.58
2:G:1279:PHE:HB2	2:G:1340:PRO:HG3	1.85	0.58
2:G:1378:ILE:HD11	2:G:1381:VAL:HG21	1.85	0.58
2:H:273:HIS:HB3	2:H:512:LEU:HD22	1.85	0.58
2:I:455:ILE:HG13	2:I:469:ARG:HD3	1.85	0.58
1:A:421:ILE:HG12	1:A:469:VAL:HG21	1.85	0.58
1:A:531:LEU:HD21	1:A:629:THR:HG22	1.85	0.58
1:B:1392:LEU:HD22	1:B:1396:MET:HG3	1.84	0.58
1:C:80:CYS:SG	1:C:82:SER:HB3	2.42	0.58
1:C:749:ILE:CD1	1:C:805:CYS:HB3	2.32	0.58
1:C:1657:HIS:ND1	1:C:1658:PRO:HD2	2.17	0.58
2:G:1149:TRP:CD1	2:G:1213:LEU:HD12	2.38	0.58
2:H:665:LEU:O	2:H:669:LEU:HB2	2.04	0.58
2:H:1010:PRO:O	2:H:1011:MET:HB2	2.03	0.58
2:I:499:THR:CB	2:I:500:HIS:CD2	2.79	0.58
2:I:907:VAL:O	2:I:910:GLN:HB3	2.03	0.58
2:I:1822:MET:CE	2:I:1996:ILE:HG12	2.34	0.58
1:B:37:LYS:HB2	1:B:65:TYR:HE1	1.69	0.58
2:G:28:PHE:CZ	2:H:7:ARG:NE	2.70	0.58
2:G:166:THR:HG22	2:G:168:ASP:N	2.19	0.58
2:I:601:THR:CG2	2:I:618:GLU:O	2.39	0.58
2:I:1227:ARG:CG	2:I:1227:ARG:NH1	2.55	0.58
2:I:1374:THR:HG23	2:I:1396:LEU:HD12	1.83	0.58
1:A:260:ARG:HH12	1:A:300:VAL:HG21	1.68	0.58
1:A:444:ASN:HB3	1:A:446:ALA:H	1.66	0.58
1:B:409:ALA:HB2	1:B:442:ARG:HD2	1.86	0.58
1:C:24:SER:O	2:I:1977:HIS:CD2	2.54	0.58
1:C:1233:GLU:OE2	1:C:1680:ARG:NH2	2.36	0.58
2:H:1103:PHE:O	2:H:1247:GLY:HA3	2.03	0.58
2:H:1360:ILE:HG23	2:H:1403:VAL:O	2.04	0.58
2:I:127:ILE:O	2:I:131:ILE:HG13	2.03	0.58
2:I:736:ARG:NH1	2:I:769:SER:O	2.36	0.58
1:B:436:ALA:O	1:B:440:MET:HG3	2.04	0.58
1:C:232:LEU:HD22	1:C:269:LEU:HA	1.83	0.58
1:C:1009:LEU:HA	1:C:1445:MET:HE2	1.85	0.58
2:G:807:ILE:CG2	2:G:1066:ILE:HA	2.34	0.58
2:G:1597:ALA:HB1	2:G:1638:ILE:CD1	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1823:SER:OG	2:G:1825:GLU:HG2	2.03	0.58
2:H:271:THR:OG1	2:H:460:TYR:HB2	2.03	0.58
2:H:499:THR:CB	2:H:500:HIS:CD2	2.81	0.58
2:H:762:ASN:H	2:H:762:ASN:ND2	1.85	0.58
2:I:1269:LEU:O	2:I:1560:LEU:HD23	2.03	0.58
1:A:986:ALA:HB2	1:A:1047:LEU:HD13	1.85	0.58
1:B:1461:ASP:O	1:B:1465:ASN:HB2	2.03	0.58
1:C:232:LEU:HD13	1:C:272:GLU:HB2	1.85	0.58
1:C:340:ARG:HH12	1:C:344:GLN:CG	2.13	0.58
1:C:421:ILE:HG13	1:C:469:VAL:HG21	1.84	0.58
1:C:1665:ILE:HD11	1:C:1669:ARG:HG2	1.85	0.58
2:G:131:ILE:CG2	2:G:182:VAL:HG12	2.33	0.58
2:G:907:VAL:O	2:G:910:GLN:HB3	2.02	0.58
2:G:1223:MET:HE3	2:G:1238:LEU:HD12	1.85	0.58
2:I:707:PRO:HG2	2:I:730:LEU:HD13	1.85	0.58
1:A:1600:LEU:HD13	1:A:1657:HIS:HA	1.85	0.58
1:B:29:ILE:HG13	2:H:1891:TYR:C	2.23	0.58
1:C:419:GLU:HG2	1:C:424:VAL:HB	1.86	0.58
1:C:968:VAL:O	2:I:1512:HIS:HB2	2.04	0.58
2:G:260:PRO:HD3	2:G:289:TRP:CE2	2.38	0.58
2:G:674:TYR:HB3	2:G:676:ILE:HG22	1.85	0.58
2:G:1159:ILE:CG1	2:G:1169:PRO:HD3	2.33	0.58
2:H:490:TRP:CH2	2:H:512:LEU:HD21	2.39	0.58
2:H:543:PHE:CB	2:H:545:GLN:HE22	2.17	0.58
2:I:942:THR:HG21	2:I:1012:GLN:HA	1.85	0.58
2:I:1719:ILE:O	2:I:1761:SER:HB2	2.01	0.58
1:B:198:PRO:CG	1:B:209:LEU:HD21	2.26	0.58
1:B:286:PHE:O	1:B:290:MET:HG2	2.03	0.58
1:C:1020:VAL:HG13	1:C:1400:ILE:HG23	1.84	0.58
2:G:638:VAL:HA	2:G:641:ILE:HG22	1.86	0.58
2:H:163:GLN:CG	2:H:423:VAL:HG12	2.32	0.58
2:I:1822:MET:HE2	2:I:1996:ILE:HG12	1.86	0.58
1:A:20:TYR:CZ	2:G:2035:SER:HB2	2.39	0.58
1:A:198:PRO:CG	1:A:209:LEU:HD21	2.28	0.58
1:A:987:ASN:HD22	2:G:957:ARG:HD2	1.68	0.58
1:B:232:LEU:HD22	1:B:269:LEU:HA	1.85	0.58
1:B:749:ILE:CD1	1:B:805:CYS:HB3	2.33	0.58
1:B:1473:GLU:O	1:B:1478:PRO:HD3	2.04	0.58
1:B:1662:TYR:O	1:B:1665:ILE:HG22	2.04	0.58
1:C:27:ARG:HH21	2:I:2015:THR:HA	1.68	0.58
1:C:1247:SER:HB2	1:C:1332:TYR:HE2	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:232:LEU:O	2:G:232:LEU:HD23	2.03	0.58
2:G:273:HIS:HB3	2:G:512:LEU:HD22	1.86	0.58
2:G:611:THR:CG2	2:G:641:ILE:HG13	2.34	0.58
2:G:817:ALA:O	2:G:821:ILE:HG13	2.04	0.58
2:G:860:ARG:HB3	2:G:898:ASP:HB3	1.85	0.58
2:G:1359:MET:HE3	2:G:1359:MET:HA	1.86	0.58
2:H:1210:ILE:HB	2:H:1222:GLU:HB3	1.85	0.58
1:A:329:GLU:O	1:A:333:LYS:HG3	2.04	0.57
1:A:1062:TYR:CD2	1:A:1693:ILE:HG23	2.39	0.57
1:A:1189:ILE:HD12	1:A:1380:GLN:HG3	1.86	0.57
1:A:1419:PRO:HB3	1:A:1646:PHE:CZ	2.39	0.57
1:B:419:GLU:HG2	1:B:424:VAL:HB	1.86	0.57
1:B:1247:SER:HB2	1:B:1332:TYR:HE2	1.69	0.57
1:C:433:VAL:O	1:C:437:ILE:HG13	2.04	0.57
1:C:1219:VAL:CA	1:C:1384:ILE:HD11	2.27	0.57
2:G:7:ARG:NH1	2:G:24:THR:HA	2.19	0.57
2:G:56:THR:HG23	2:G:59:GLU:CG	2.29	0.57
2:G:146:PHE:HA	2:G:149:VAL:HG12	1.86	0.57
2:G:376:ASN:HD22	2:G:377:LEU:N	2.02	0.57
2:G:526:ARG:HH11	2:G:558:ASN:HD21	1.49	0.57
2:I:239:PRO:HG3	2:I:304:PHE:HA	1.86	0.57
2:I:376:ASN:HD22	2:I:377:LEU:N	2.02	0.57
1:A:11:HIS:O	1:A:15:THR:HG22	2.04	0.57
1:A:1056:ILE:CD1	1:A:1193:TRP:HD1	2.17	0.57
1:A:1203:ASP:HB3	1:B:179:LYS:HZ1	1.68	0.57
1:A:1247:SER:HB2	1:A:1332:TYR:HE2	1.66	0.57
1:B:232:LEU:HD13	1:B:272:GLU:HB2	1.87	0.57
1:B:1496:GLU:O	1:B:1500:GLN:HG3	2.03	0.57
1:C:1052:GLU:O	1:C:1056:ILE:HG23	2.04	0.57
2:G:658:MET:HA	2:G:661:TRP:NE1	2.19	0.57
2:G:1149:TRP:CD1	2:G:1213:LEU:CD1	2.87	0.57
2:H:722:ALA:HB1	2:H:723:HIS:CE1	2.38	0.57
2:H:1331:TRP:CE2	2:H:1335:ILE:HG13	2.38	0.57
2:I:726:PHE:O	2:I:762:ASN:HB2	2.04	0.57
1:A:1538:VAL:HB	1:A:1639:VAL:HG22	1.86	0.57
1:B:50:SER:HB2	1:B:51:PRO:HD3	1.86	0.57
1:B:1022:THR:HG22	1:B:1226:SER:HB2	1.87	0.57
1:B:1125:VAL:HG21	1:B:1175:ILE:HD12	1.86	0.57
1:C:1056:ILE:CD1	1:C:1193:TRP:HD1	2.16	0.57
2:G:826:GLY:O	2:G:827:VAL:HG23	2.03	0.57
2:G:942:THR:HG21	2:G:1012:GLN:HA	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:124:LYS:HG2	2:H:179:THR:HA	1.86	0.57
1:B:413:LEU:HD13	1:B:451:MET:HG2	1.85	0.57
1:B:705:VAL:HG23	1:B:732:LEU:HD21	1.85	0.57
2:G:163:GLN:CG	2:G:423:VAL:HG12	2.33	0.57
2:H:601:THR:HG22	2:H:620:ALA:H	1.69	0.57
2:H:732:TRP:CG	2:H:750:MET:HE3	2.39	0.57
2:H:907:VAL:O	2:H:910:GLN:HB3	2.03	0.57
2:H:1086:LEU:HD12	2:H:1090:TYR:CB	2.34	0.57
2:H:1231:GLY:O	2:H:1233:PRO:HD3	2.04	0.57
2:H:1567:ARG:HH12	2:H:1568:HIS:HB3	1.70	0.57
2:H:1908:ASP:HB2	2:H:1958:LEU:HD21	1.86	0.57
2:I:145:LEU:O	2:I:149:VAL:HG12	2.03	0.57
2:I:654:VAL:HG23	2:I:683:ALA:HB1	1.87	0.57
1:A:232:LEU:HD13	1:A:272:GLU:HB2	1.85	0.57
1:C:198:PRO:CG	1:C:209:LEU:HD21	2.28	0.57
1:C:771:PHE:CD1	1:C:825:PRO:HG3	2.40	0.57
1:C:1189:ILE:HD12	1:C:1380:GLN:HG3	1.86	0.57
1:C:1600:LEU:HD13	1:C:1657:HIS:HA	1.87	0.57
2:G:932:ILE:CD1	2:G:1042:ALA:HB2	2.24	0.57
2:G:1010:PRO:O	2:G:1011:MET:HB2	2.05	0.57
2:H:89:THR:O	2:H:93:ASN:HB2	2.04	0.57
2:H:736:ARG:NH1	2:H:769:SER:O	2.36	0.57
2:I:1130:THR:H	2:I:1133:THR:HG23	1.69	0.57
1:A:604:ALA:HB3	1:A:612:GLU:HG2	1.86	0.57
1:A:828:PRO:HG3	1:A:868:ILE:HG22	1.86	0.57
1:B:980:VAL:HG21	2:H:952:ARG:HH21	1.70	0.57
1:C:251:GLN:HA	1:C:256:LEU:H	1.69	0.57
1:C:1184:LEU:HB2	1:C:1352:THR:HG21	1.85	0.57
1:C:1473:GLU:O	1:C:1478:PRO:HD3	2.05	0.57
2:G:517:HIS:C	2:G:517:HIS:CD2	2.78	0.57
2:G:1314:ARG:CG	2:G:1314:ARG:NH1	2.61	0.57
2:G:1954:LYS:HD3	2:G:1958:LEU:HD13	1.86	0.57
2:H:522:GLY:HA3	2:H:561:TRP:CZ3	2.40	0.57
2:H:732:TRP:CG	2:H:750:MET:HE1	2.40	0.57
2:H:1782:THR:HG22	2:H:1827:LEU:HD21	1.86	0.57
2:I:813:THR:HB	2:I:818:LYS:HE3	1.85	0.57
2:I:2038:ILE:O	2:I:2042:ILE:HG12	2.04	0.57
1:A:655:LEU:CD2	1:A:916:LEU:HD11	2.35	0.57
1:A:988:ILE:HA	1:A:1048:GLU:HG2	1.84	0.57
2:G:741:HIS:HE1	2:G:845:THR:HG22	1.58	0.57
2:G:1775:GLN:HG2	2:G:1836:MET:SD	2.44	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1778:GLN:HB3	2:G:1831:VAL:HG13	1.85	0.57
2:G:1890:ASN:HB2	2:G:1899:VAL:HB	1.86	0.57
2:H:61:VAL:HG21	2:H:95:TYR:HE1	1.69	0.57
2:H:166:THR:HG22	2:H:168:ASP:N	2.19	0.57
2:I:665:LEU:O	2:I:669:LEU:HB2	2.05	0.57
1:A:680:ILE:HG13	1:A:769:ILE:HB	1.87	0.57
1:A:1285:ALA:O	1:A:1289:MET:HG3	2.04	0.57
1:A:1474:ALA:O	1:A:1478:PRO:HD2	2.04	0.57
1:B:140:ILE:HD13	1:B:255:GLY:O	2.05	0.57
1:B:440:MET:HE3	1:B:483:VAL:HG21	1.87	0.57
2:G:703:LEU:HD21	2:G:705:LEU:HD21	1.86	0.57
2:G:1266:TYR:CG	2:G:1347:LEU:HD23	2.40	0.57
2:H:732:TRP:CD2	2:H:750:MET:CE	2.87	0.57
2:H:1100:VAL:HG21	2:H:1147:ILE:CD1	2.34	0.57
2:H:1123:ASP:OD1	2:H:1123:ASP:N	2.36	0.57
2:H:1575:LEU:HD13	2:H:1579:ILE:HD12	1.85	0.57
2:H:2029:VAL:O	2:H:2033:THR:HG22	2.05	0.57
2:I:273:HIS:HB3	2:I:512:LEU:HD22	1.87	0.57
2:I:353:VAL:HG23	2:I:357:ASN:HD22	1.69	0.57
2:I:1292:ILE:O	2:I:1368:VAL:O	2.23	0.57
1:A:80:CYS:SG	1:A:82:SER:HB3	2.45	0.57
1:A:415:SER:O	1:A:419:GLU:HB2	2.05	0.57
1:C:1474:ALA:O	1:C:1478:PRO:HD2	2.04	0.57
2:G:89:THR:O	2:G:93:ASN:HB2	2.05	0.57
2:G:455:ILE:HG13	2:G:469:ARG:HD3	1.86	0.57
2:G:463:PHE:HD1	2:G:486:LEU:HD13	1.70	0.57
2:G:584:SER:HA	2:G:587:ILE:HG23	1.87	0.57
2:G:667:LYS:HB2	2:G:698:LEU:HD23	1.85	0.57
2:G:1168:ASN:ND2	2:G:1171:ARG:HB2	2.20	0.57
2:G:1547:PRO:HD3	2:G:1584:PHE:CE2	2.40	0.57
2:H:127:ILE:O	2:H:131:ILE:HG13	2.04	0.57
2:H:777:THR:CG2	2:H:1081:HIS:CE1	2.88	0.57
2:H:1589:VAL:HG11	2:H:1640:PHE:CE1	2.39	0.57
2:I:463:PHE:HD1	2:I:486:LEU:HD13	1.70	0.57
2:I:777:THR:CG2	2:I:1081:HIS:CE1	2.88	0.57
2:I:807:ILE:CG2	2:I:1066:ILE:HA	2.35	0.57
2:I:1199:GLU:OE2	2:I:1567:ARG:NH1	2.37	0.57
1:B:529:MET:HE3	1:B:529:MET:CA	2.31	0.57
1:B:742:LYS:HD3	1:B:746:GLU:OE2	2.05	0.57
1:B:1431:GLU:HB3	1:B:1520:ALA:HB2	1.86	0.57
1:C:341:GLN:O	1:C:345:VAL:HG12	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1675:GLY:O	2:G:1678:MET:HB2	2.05	0.57
2:H:1266:TYR:CG	2:H:1347:LEU:HD23	2.40	0.57
2:H:1871:LEU:HD22	2:H:1888:ILE:HD11	1.85	0.57
2:H:1976:PHE:HA	2:H:1981:LEU:HD22	1.86	0.57
2:I:607:VAL:HA	2:I:617:ILE:HD13	1.86	0.57
2:I:1210:ILE:HB	2:I:1222:GLU:HB3	1.85	0.57
2:I:1231:GLY:O	2:I:1233:PRO:HD3	2.05	0.57
2:I:2029:VAL:O	2:I:2033:THR:HG22	2.05	0.57
1:A:263:GLY:O	1:A:267:VAL:HG23	2.05	0.56
1:A:742:LYS:HD3	1:A:746:GLU:OE2	2.05	0.56
1:B:152:HIS:HD2	1:B:163:LEU:HB2	1.66	0.56
1:B:251:GLN:HA	1:B:256:LEU:H	1.70	0.56
1:B:964:GLU:HG2	2:H:1515:PRO:HB3	1.86	0.56
1:B:1524:GLY:O	1:B:1528:THR:HG23	2.05	0.56
2:G:653:TYR:CD1	2:G:659:LEU:HD21	2.39	0.56
2:G:1868:GLN:HG3	2:G:1898:TYR:OH	2.04	0.56
2:H:56:THR:HG23	2:H:59:GLU:CG	2.32	0.56
2:H:517:HIS:C	2:H:517:HIS:CD2	2.78	0.56
2:H:526:ARG:HH11	2:H:558:ASN:HD21	1.53	0.56
2:H:653:TYR:CD1	2:H:659:LEU:HD21	2.40	0.56
2:H:740:HIS:CE1	2:H:852:GLU:OE1	2.58	0.56
2:I:120:LYS:O	2:I:124:LYS:HG3	2.05	0.56
2:I:2030:TYR:CE1	2:I:2034:GLY:HA2	2.39	0.56
1:A:419:GLU:HG2	1:A:424:VAL:HB	1.86	0.56
1:C:20:TYR:HE1	2:I:2035:SER:HB2	1.69	0.56
1:C:626:VAL:HG23	1:C:664:GLU:OE2	2.05	0.56
1:C:1326:ILE:HG12	1:C:1388:MET:HG3	1.86	0.56
1:C:1524:GLY:O	1:C:1528:THR:HG23	2.05	0.56
1:C:1538:VAL:HB	1:C:1639:VAL:HG22	1.86	0.56
2:G:28:PHE:HZ	2:H:7:ARG:NE	2.02	0.56
2:G:654:VAL:HG23	2:G:683:ALA:HB1	1.87	0.56
2:G:1567:ARG:HG3	2:G:1568:HIS:N	2.20	0.56
2:G:1804:PHE:CZ	2:G:2010:TYR:HB2	2.40	0.56
2:H:638:VAL:HA	2:H:641:ILE:HG22	1.86	0.56
2:H:839:PRO:HA	2:H:844:VAL:HG13	1.86	0.56
2:H:926:LEU:HD13	2:H:947:THR:HG22	1.86	0.56
2:H:1352:HIS:HE1	2:H:1583:MET:HE1	1.69	0.56
2:I:89:THR:O	2:I:93:ASN:HB2	2.05	0.56
2:I:197:GLU:OE1	2:I:197:GLU:HA	2.05	0.56
2:I:281:VAL:HG23	2:I:459:VAL:HG11	1.87	0.56
2:I:741:HIS:HB3	2:I:853:PRO:HB2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1223:MET:HE3	2:I:1238:LEU:HD12	1.87	0.56
1:A:1014:ASP:N	1:A:1510:ASN:HD21	1.92	0.56
1:B:152:HIS:CE1	1:B:168:MET:HG3	2.40	0.56
2:G:663:ILE:HG13	2:G:694:TYR:HE1	1.70	0.56
2:G:1086:LEU:HD12	2:G:1090:TYR:CB	2.35	0.56
2:G:1194:VAL:O	2:G:1194:VAL:HG12	2.05	0.56
2:G:1989:LYS:O	2:G:1993:LYS:HG3	2.05	0.56
2:H:702:TYR:CB	2:H:727:PRO:HB2	2.36	0.56
2:I:443:LEU:HD22	2:I:448:VAL:HG11	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:543:PHE:CB	2:I:545:GLN:HE22	2.17	0.56
2:I:1149:TRP:CD1	2:I:1213:LEU:CD1	2.88	0.56
1:B:488:PRO:HG3	1:B:728:LYS:HG3	1.87	0.56
1:C:635:ILE:HG22	1:C:651:TYR:CD1	2.41	0.56
2:G:813:THR:HB	2:G:818:LYS:HE3	1.87	0.56
2:H:376:ASN:HD22	2:H:377:LEU:N	2.03	0.56
2:H:835:THR:HG22	2:H:844:VAL:C	2.26	0.56
2:H:1223:MET:CE	2:H:1238:LEU:HD12	2.35	0.56
2:H:1834:ARG:NH1	2:H:1834:ARG:CG	2.60	0.56
2:I:1722:GLY:N	2:I:1726:GLY:HA3	2.21	0.56
2:I:1804:PHE:CZ	2:I:2010:TYR:HB2	2.40	0.56
1:A:21:GLN:O	2:G:1977:HIS:CD2	2.59	0.56
1:A:1009:LEU:HA	1:A:1445:MET:HE2	1.87	0.56
1:B:411:GLN:HE22	1:B:1628:SER:H	1.52	0.56
1:C:152:HIS:HD2	1:C:163:LEU:HB2	1.63	0.56
2:G:543:PHE:CB	2:G:545:GLN:HE22	2.17	0.56
2:G:758:ARG:NH2	2:G:797:ASP:OD1	2.33	0.56
2:G:1834:ARG:HH11	2:G:1834:ARG:CG	2.03	0.56
2:H:120:LYS:O	2:H:124:LYS:HG3	2.06	0.56
2:H:606:PHE:HZ	2:H:805:VAL:HG11	1.68	0.56
1:A:221:LEU:O	1:A:225:SER:HB3	2.05	0.56
1:A:1057:MET:SD	1:A:1097:ILE:HG23	2.45	0.56
1:B:1419:PRO:HB3	1:B:1646:PHE:CZ	2.40	0.56
1:C:741:SER:HB3	1:C:744:ASP:HB2	1.86	0.56
1:C:1022:THR:HG22	1:C:1226:SER:HB2	1.87	0.56
2:H:1920:GLN:HG2	2:H:1922:ILE:HD11	1.87	0.56
1:B:1009:LEU:HG	1:B:1664:ALA:HB2	1.87	0.56
1:C:695:GLY:HA3	1:C:906:LEU:HD11	1.88	0.56
2:G:634:ILE:HD11	2:G:649:ILE:CD1	2.34	0.56
2:G:1722:GLY:N	2:G:1726:GLY:HA3	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:443:LEU:HD22	2:H:448:VAL:HG11	1.86	0.56
2:H:463:PHE:HD1	2:H:486:LEU:HD13	1.71	0.56
2:H:1890:ASN:HB2	2:H:1899:VAL:HB	1.88	0.56
2:I:835:THR:HG23	2:I:843:ILE:O	2.05	0.56
2:I:1567:ARG:HH12	2:I:1568:HIS:HB3	1.71	0.56
1:A:152:HIS:CE1	1:A:168:MET:HG3	2.41	0.56
1:A:251:GLN:HA	1:A:256:LEU:H	1.68	0.56
1:A:1036:ARG:NH1	1:A:1040:GLU:OE1	2.39	0.56
1:B:644:THR:HG22	1:B:648:ASP:O	2.06	0.56
1:B:1138:LYS:HG3	1:B:1163:TYR:CE1	2.41	0.56
1:B:1492:GLU:O	1:B:1496:GLU:HG3	2.06	0.56
2:G:577:ILE:HD13	2:G:1097:ILE:CD1	2.35	0.56
2:G:589:ARG:HB3	2:G:590:PRO:HD2	1.87	0.56
2:G:599:PRO:HD2	4:G:3051:FMN:H6	1.88	0.56
2:H:607:VAL:HA	2:H:617:ILE:HD13	1.88	0.56
2:H:1868:GLN:HG3	2:H:1898:TYR:OH	2.05	0.56
2:I:601:THR:HG22	2:I:620:ALA:H	1.71	0.56
2:I:702:TYR:CB	2:I:727:PRO:HB2	2.36	0.56
2:I:732:TRP:CG	2:I:750:MET:HE3	2.39	0.56
2:I:774:ALA:HB1	2:I:1081:HIS:CD2	2.33	0.56
2:I:871:THR:HB	2:I:872:ILE:HD12	1.88	0.56
1:B:529:MET:HG2	1:B:638:LEU:CD1	2.35	0.56
1:C:329:GLU:O	1:C:333:LYS:HG3	2.06	0.56
1:C:531:LEU:HD21	1:C:629:THR:HG22	1.88	0.56
1:C:881:ASN:HA	1:C:944:ARG:HH21	1.70	0.56
1:C:1259:GLY:HA2	1:C:1263:ASP:HB2	1.87	0.56
2:G:702:TYR:CB	2:G:727:PRO:HB2	2.35	0.56
2:G:1130:THR:H	2:G:1133:THR:HG23	1.70	0.56
2:G:1422:THR:CG2	2:G:1474:PHE:HB2	2.36	0.56
2:G:1567:ARG:HH12	2:G:1568:HIS:HB3	1.71	0.56
2:H:1100:VAL:HG21	2:H:1147:ILE:HD13	1.88	0.56
2:H:1194:VAL:O	2:H:1194:VAL:HG12	2.05	0.56
2:H:1778:GLN:HB3	2:H:1831:VAL:HG13	1.88	0.56
2:H:1989:LYS:O	2:H:1993:LYS:HG3	2.06	0.56
2:I:1931:LEU:HD22	2:I:1935:GLU:HG2	1.86	0.56
1:A:1052:GLU:O	1:A:1056:ILE:HG23	2.06	0.56
1:A:1665:ILE:CG1	1:A:1669:ARG:HD3	2.36	0.56
1:C:1419:PRO:HB3	1:C:1646:PHE:CZ	2.41	0.56
2:G:120:LYS:O	2:G:124:LYS:HG3	2.05	0.56
2:G:1308:CYS:HB3	2:G:1311:PHE:CD2	2.41	0.56
2:G:1874:VAL:O	2:G:1878:VAL:HG12	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1308:CYS:HB3	2:H:1311:PHE:CD2	2.41	0.56
2:H:1328:VAL:HG23	2:H:1557:SER:HA	1.88	0.56
2:I:577:ILE:HD13	2:I:1097:ILE:CD1	2.36	0.56
2:I:732:TRP:CD1	2:I:750:MET:HE3	2.40	0.56
2:I:826:GLY:HA2	2:I:1060:ALA:HB3	1.88	0.56
2:I:1589:VAL:HG11	2:I:1640:PHE:CE1	2.41	0.56
1:A:295:ALA:HB2	1:A:302:LEU:HD11	1.87	0.55
1:A:1524:GLY:HA2	1:A:1527:ALA:HB3	1.89	0.55
1:B:11:HIS:O	1:B:15:THR:HG22	2.06	0.55
1:B:1233:GLU:OE2	1:B:1680:ARG:NH2	2.40	0.55
1:C:29:ILE:HG13	2:I:1891:TYR:O	2.06	0.55
1:C:1496:GLU:O	1:C:1500:GLN:HG3	2.06	0.55
2:G:732:TRP:CD2	2:G:750:MET:HE1	2.41	0.55
2:G:1475:LYS:HG3	2:G:1481:SER:HB2	1.88	0.55
2:G:1561:ASN:OD1	2:G:1563:ILE:HB	2.05	0.55
2:H:16:LEU:HG	2:H:48:PHE:CZ	2.40	0.55
2:H:239:PRO:HG3	2:H:304:PHE:HA	1.88	0.55
2:H:1493:LEU:HD11	2:H:1499:VAL:CG2	2.36	0.55
2:I:7:ARG:NH1	2:I:24:THR:HA	2.20	0.55
2:I:653:TYR:CD1	2:I:659:LEU:HD21	2.40	0.55
2:I:1308:CYS:HB3	2:I:1311:PHE:CD2	2.40	0.55
1:A:864:VAL:CG2	1:A:921:PRO:HB3	2.36	0.55
1:A:1114:TYR:CD1	1:A:1337:GLU:HG3	2.41	0.55
1:A:1555:ALA:HA	1:A:1621:PHE:CE1	2.41	0.55
1:B:733:ILE:HD12	1:B:761:LEU:HD21	1.88	0.55
1:B:988:ILE:HD13	1:B:1048:GLU:HB3	1.89	0.55
1:B:1538:VAL:HB	1:B:1639:VAL:HG22	1.87	0.55
1:C:335:HIS:HD2	1:C:335:HIS:O	1.89	0.55
2:G:652:ILE:HB	2:G:658:MET:CE	2.36	0.55
2:H:7:ARG:NH1	2:H:24:THR:HA	2.21	0.55
2:I:232:LEU:HD23	2:I:232:LEU:O	2.06	0.55
2:I:1382:VAL:HA	2:I:1422:THR:OG1	2.07	0.55
2:I:1931:LEU:HB3	2:I:1935:GLU:CG	2.35	0.55
1:A:1665:ILE:HD11	1:A:1669:ARG:HG2	1.88	0.55
1:B:433:VAL:O	1:B:437:ILE:HG13	2.07	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	1.88	0.55
1:C:417:TYR:OH	1:C:458:THR:HG22	2.06	0.55
2:G:722:ALA:HB1	2:G:723:HIS:CE1	2.42	0.55
2:G:1931:LEU:HB3	2:G:1935:GLU:CG	2.33	0.55
2:G:2036:GLU:O	2:G:2039:LYS:HG2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:490:TRP:HA	2:H:493:THR:CG2	2.36	0.55
2:H:1822:MET:HE2	2:H:1996:ILE:HG12	1.89	0.55
2:I:124:LYS:HG2	2:I:179:THR:HA	1.87	0.55
2:I:634:ILE:HD11	2:I:649:ILE:CD1	2.35	0.55
1:A:825:PRO:HB2	1:A:843:LYS:NZ	2.21	0.55
1:B:1036:ARG:NH1	1:B:1040:GLU:OE1	2.40	0.55
1:C:1:MET:HE3	1:C:9:LEU:HD12	1.89	0.55
1:C:1347:LYS:O	1:C:1347:LYS:HD3	2.05	0.55
2:G:665:LEU:O	2:G:669:LEU:HB2	2.06	0.55
2:G:1678:MET:CE	2:G:1707:LEU:HD22	2.35	0.55
2:H:1431:TYR:CE1	2:H:1526:THR:HG23	2.41	0.55
1:C:27:ARG:HD2	1:C:30:GLU:OE2	2.06	0.55
1:C:254:TRP:CZ3	1:C:302:LEU:HD13	2.41	0.55
1:C:807:LYS:HG3	1:C:858:TRP:HB3	1.87	0.55
2:G:1475:LYS:HB2	2:G:1481:SER:HB2	1.89	0.55
2:H:1166:VAL:HG12	2:H:1167:SER:N	2.21	0.55
2:H:2038:ILE:HG22	2:H:2042:ILE:CD1	2.36	0.55
2:I:61:VAL:HG21	2:I:95:TYR:HE1	1.72	0.55
2:I:166:THR:HG22	2:I:168:ASP:N	2.21	0.55
2:I:638:VAL:HA	2:I:641:ILE:HG22	1.88	0.55
2:I:926:LEU:HB3	2:I:947:THR:HG22	1.88	0.55
1:A:1238:VAL:HG12	1:A:1239:HIS:N	2.21	0.55
1:C:11:HIS:O	1:C:15:THR:HG22	2.06	0.55
1:C:152:HIS:CE1	1:C:168:MET:HG3	2.41	0.55
1:C:1125:VAL:HG21	1:C:1175:ILE:HD12	1.88	0.55
2:G:197:GLU:OE1	2:G:197:GLU:HA	2.06	0.55
2:G:1496:LYS:HE2	2:G:1693:ARG:NH2	2.20	0.55
2:H:807:ILE:CG2	2:H:1066:ILE:HA	2.36	0.55
2:H:1359:MET:HA	2:H:1359:MET:HE3	1.88	0.55
2:I:2015:THR:HG22	2:I:2017:LYS:N	2.21	0.55
1:A:12:ILE:HD11	2:G:2041:ILE:HD11	1.83	0.55
1:A:332:THR:HG22	1:B:331:ILE:CD1	2.36	0.55
1:A:529:MET:HG2	1:A:638:LEU:CD1	2.36	0.55
1:A:771:PHE:CD1	1:A:825:PRO:HG3	2.42	0.55
1:A:1056:ILE:HD13	1:A:1193:TRP:CD1	2.42	0.55
1:A:1233:GLU:OE2	1:A:1680:ARG:NH2	2.40	0.55
1:A:1473:GLU:O	1:A:1478:PRO:HD3	2.06	0.55
1:B:328:LEU:HD22	1:B:328:LEU:C	2.28	0.55
1:B:1285:ALA:O	1:B:1289:MET:HG3	2.07	0.55
1:B:1432:HIS:CE1	1:B:1434:SER:OG	2.60	0.55
1:C:883:ILE:HD12	1:C:947:LEU:HD12	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:239:PRO:HG3	2:G:304:PHE:HA	1.88	0.55
2:H:584:SER:HA	2:H:587:ILE:HG23	1.89	0.55
2:H:707:PRO:HG2	2:H:730:LEU:HD13	1.89	0.55
2:I:603:SER:O	2:I:607:VAL:HG12	2.06	0.55
2:I:1873:TYR:HE1	2:I:1877:ARG:HH21	1.54	0.55
1:C:635:ILE:HG22	1:C:651:TYR:CG	2.42	0.55
2:G:777:THR:CG2	2:G:1081:HIS:CE1	2.89	0.55
2:G:1822:MET:CE	2:G:1996:ILE:HG12	2.37	0.55
2:H:264:ARG:NH1	2:H:456:GLN:HG3	2.22	0.55
2:H:740:HIS:HA	2:H:854:ILE:HD13	1.89	0.55
2:H:1173:VAL:CG2	2:H:1221:MET:HE1	2.35	0.55
2:H:1822:MET:CE	2:H:1996:ILE:HG12	2.37	0.55
2:I:741:HIS:CE1	2:I:855:HIS:CD2	2.95	0.55
2:I:1427:VAL:O	2:I:1427:VAL:HG12	2.07	0.55
1:A:56:MET:HG3	2:G:1893:VAL:CG2	2.37	0.55
1:A:982:ILE:HG13	2:G:965:SER:N	2.22	0.55
1:C:50:SER:HB2	1:C:51:PRO:HD3	1.88	0.55
2:G:127:ILE:O	2:G:131:ILE:HG13	2.07	0.55
2:G:747:HIS:O	2:G:751:LEU:HB2	2.07	0.55
2:G:835:THR:HG23	2:G:843:ILE:O	2.06	0.55
2:G:1624:THR:HB	2:G:1642:THR:HG23	1.86	0.55
2:H:402:LEU:O	2:H:402:LEU:HD13	2.07	0.55
2:H:1350:LEU:HD11	2:H:1410:PHE:HB3	1.89	0.55
2:H:1567:ARG:CG	2:H:1567:ARG:NH1	2.50	0.55
2:H:1697:HIS:CE1	2:H:1829:GLU:HG2	2.42	0.55
2:H:1844:ARG:CG	2:H:1844:ARG:NH1	2.58	0.55
2:I:1010:PRO:O	2:I:1011:MET:HB2	2.05	0.55
2:I:1168:ASN:ND2	2:I:1171:ARG:HB2	2.22	0.55
1:A:1392:LEU:HD22	1:A:1396:MET:HG3	1.89	0.55
1:B:49:PRO:O	1:B:82:SER:HB2	2.07	0.55
1:B:1123:GLN:HG3	1:B:1124:GLU:N	2.22	0.55
1:B:1566:ARG:HB3	1:B:1623:TYR:CE1	2.42	0.55
1:C:1009:LEU:HD13	1:C:1445:MET:HE1	1.89	0.55
1:C:1455:ARG:NH2	1:C:1459:ILE:HG12	2.22	0.55
2:G:264:ARG:NH1	2:G:456:GLN:HG3	2.22	0.55
2:G:1844:ARG:CG	2:G:1844:ARG:NH1	2.62	0.55
2:H:1475:LYS:HB2	2:H:1481:SER:HB2	1.88	0.55
2:H:2036:GLU:O	2:H:2039:LYS:HG2	2.07	0.55
2:I:260:PRO:HD3	2:I:289:TRP:CE2	2.42	0.55
2:I:1293:THR:HG22	2:I:1296:GLU:CD	2.28	0.55
2:I:1624:THR:HB	2:I:1642:THR:OG1	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1194:ASN:HB3	1:A:1197:THR:HG22	1.88	0.54
1:B:1373:ARG:HB2	1:B:1545:SER:O	2.07	0.54
1:C:1:MET:HE3	1:C:5:VAL:HG12	1.88	0.54
1:C:1501:LEU:O	1:C:1505:GLN:HG3	2.07	0.54
2:G:598:THR:HG23	4:G:3051:FMN:O4	2.06	0.54
2:G:1227:ARG:CG	2:G:1227:ARG:NH1	2.56	0.54
2:G:1313:SER:O	2:G:1314:ARG:HD3	2.07	0.54
2:H:1159:ILE:HG12	2:H:1169:PRO:CD	2.36	0.54
2:I:1382:VAL:HA	2:I:1422:THR:HG1	1.72	0.54
2:I:1493:LEU:HD11	2:I:1499:VAL:CG2	2.37	0.54
1:A:236:LYS:HE2	1:A:273:PRO:O	2.07	0.54
1:A:733:ILE:CD1	1:A:761:LEU:HD11	2.37	0.54
1:A:741:SER:HB3	1:A:744:ASP:HB2	1.89	0.54
1:A:1455:ARG:NH2	1:A:1459:ILE:HG12	2.22	0.54
1:B:263:GLY:O	1:B:267:VAL:HG23	2.07	0.54
1:B:771:PHE:CD1	1:B:825:PRO:HG3	2.42	0.54
1:C:286:PHE:O	1:C:290:MET:HG2	2.07	0.54
1:C:1373:ARG:HB2	1:C:1545:SER:O	2.07	0.54
2:G:464:ASP:HB3	2:G:466:SER:HB3	1.88	0.54
2:G:1859:PRO:CG	2:G:1871:LEU:HD12	2.20	0.54
2:H:1293:THR:HG22	2:H:1296:GLU:CD	2.28	0.54
2:H:1976:PHE:HB3	2:H:1981:LEU:HD21	1.89	0.54
2:I:131:ILE:HD12	2:I:182:VAL:CB	2.33	0.54
2:I:145:LEU:HD21	2:I:156:LEU:HD21	1.89	0.54
2:I:606:PHE:HZ	2:I:805:VAL:HG11	1.71	0.54
2:I:1331:TRP:CE2	2:I:1335:ILE:HG13	2.42	0.54
1:A:430:ARG:NH2	1:A:605:LEU:HD13	2.23	0.54
2:G:332:GLU:OE2	2:G:394:ARG:HD3	2.07	0.54
2:G:462:THR:HB	2:G:482:CYS:SG	2.48	0.54
2:G:1292:ILE:O	2:G:1368:VAL:O	2.25	0.54
2:H:732:TRP:CD2	2:H:750:MET:HE3	2.43	0.54
2:H:1497:GLU:OE1	2:H:2002:LYS:HE3	2.07	0.54
2:H:2015:THR:HG22	2:H:2017:LYS:N	2.21	0.54
2:I:517:HIS:CD2	2:I:517:HIS:C	2.80	0.54
2:I:1567:ARG:CG	2:I:1567:ARG:NH1	2.50	0.54
1:A:20:TYR:CD1	2:G:2033:THR:HG21	2.42	0.54
1:A:733:ILE:HD12	1:A:761:LEU:HD21	1.89	0.54
2:H:490:TRP:HE1	2:H:516:THR:CG2	2.01	0.54
2:H:611:THR:CG2	2:H:641:ILE:HG13	2.38	0.54
2:H:1102:TYR:HB3	2:H:1244:PRO:HA	1.90	0.54
2:I:490:TRP:HA	2:I:493:THR:CG2	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1093:ASP:HB3	2:I:1096:LYS:HG3	1.89	0.54
2:I:1166:VAL:HG12	2:I:1167:SER:N	2.23	0.54
1:A:183:GLN:O	1:A:187:LEU:HG	2.08	0.54
1:A:1657:HIS:ND1	1:A:1658:PRO:HD2	2.21	0.54
1:B:1401:TYR:C	1:B:1658:PRO:HG3	2.27	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
2:G:344:LEU:HB3	2:G:349:VAL:HG23	1.90	0.54
2:G:1575:LEU:HD13	2:G:1579:ILE:HD12	1.89	0.54
2:H:85:ASN:HD22	2:H:135:ARG:NH1	2.02	0.54
2:I:584:SER:HA	2:I:587:ILE:HG23	1.89	0.54
2:I:1475:LYS:HB2	2:I:1481:SER:HB2	1.89	0.54
2:I:1547:PRO:HD3	2:I:1584:PHE:CE2	2.43	0.54
2:I:2046:GLU:C	2:I:2048:TYR:H	2.11	0.54
1:A:328:LEU:HD22	1:A:328:LEU:C	2.28	0.54
1:A:1234:MET:CE	1:A:1326:ILE:HG21	2.38	0.54
1:B:385:PHE:HD2	1:B:787:LYS:HA	1.73	0.54
1:B:824:LEU:HD11	1:B:849:LEU:HD12	1.89	0.54
1:C:1123:GLN:HG3	1:C:1124:GLU:N	2.23	0.54
2:G:807:ILE:HG21	2:G:1066:ILE:HA	1.88	0.54
2:G:1697:HIS:CE1	2:G:1829:GLU:HG2	2.43	0.54
2:G:2030:TYR:CE1	2:G:2034:GLY:HA2	2.43	0.54
2:H:464:ASP:HB3	2:H:466:SER:HB3	1.90	0.54
2:H:1547:PRO:HD3	2:H:1584:PHE:CE2	2.42	0.54
2:I:123:ILE:HD11	2:I:533:LEU:CD2	2.37	0.54
2:I:611:THR:CG2	2:I:641:ILE:HG13	2.37	0.54
2:I:652:ILE:HB	2:I:658:MET:CE	2.37	0.54
2:I:1778:GLN:HB3	2:I:1831:VAL:HG13	1.88	0.54
1:A:1184:LEU:HB2	1:A:1352:THR:HG21	1.89	0.54
1:B:23:ALA:O	2:H:1977:HIS:HA	2.07	0.54
2:G:1428:GLU:HB2	2:G:1468:THR:HG22	1.88	0.54
1:B:236:LYS:HE2	1:B:273:PRO:O	2.07	0.54
1:B:280:GLU:HG2	1:B:280:GLU:O	2.08	0.54
1:B:655:LEU:CD2	1:B:916:LEU:HD11	2.38	0.54
2:G:601:THR:CG2	2:G:618:GLU:O	2.41	0.54
2:H:964:LEU:CD2	2:H:964:LEU:N	2.70	0.54
2:H:1378:ILE:HD11	2:H:1381:VAL:HG21	1.90	0.54
2:I:99:ASN:HA	2:I:550:VAL:HG21	1.90	0.54
2:I:545:GLN:H	2:I:545:GLN:NE2	2.06	0.54
2:I:722:ALA:HB1	2:I:723:HIS:CE1	2.42	0.54
2:I:1452:LEU:HA	2:I:1502:GLY:HA3	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1496:GLU:O	1:A:1500:GLN:HG3	2.07	0.54
1:B:695:GLY:HA3	1:B:906:LEU:HD11	1.90	0.54
1:C:37:LYS:HB2	1:C:65:TYR:HE1	1.72	0.54
1:C:1477:ILE:H	1:C:1478:PRO:CD	2.20	0.54
2:I:826:GLY:O	2:I:827:VAL:HG23	2.07	0.54
1:A:340:ARG:HH12	1:A:344:GLN:NE2	2.06	0.54
1:A:625:THR:HG23	1:A:661:ASP:OD1	2.08	0.54
1:A:644:THR:HG22	1:A:648:ASP:O	2.08	0.54
1:A:1138:LYS:HG3	1:A:1163:TYR:CE1	2.43	0.54
1:B:635:ILE:HG22	1:B:651:TYR:CG	2.43	0.54
1:B:1600:LEU:HD13	1:B:1657:HIS:HA	1.90	0.54
1:C:516:ARG:NH2	1:C:889:GLU:OE1	2.41	0.54
1:C:1682:LYS:HB3	2:I:994:PHE:CE2	2.43	0.54
2:G:1231:GLY:O	2:G:1233:PRO:HD3	2.08	0.54
2:I:332:GLU:OE2	2:I:394:ARG:HD3	2.08	0.54
2:I:868:PHE:HB3	2:I:873:PHE:CE2	2.43	0.54
2:I:1054:LEU:CB	4:I:3051:FMN:C7M	2.85	0.54
2:I:1172:LYS:HE3	2:I:1574:ASN:OD1	2.08	0.54
1:A:1125:VAL:HG21	1:A:1175:ILE:HD12	1.88	0.53
1:B:1010:GLU:HA	1:B:1664:ALA:HA	1.89	0.53
1:C:529:MET:HG2	1:C:638:LEU:CD1	2.39	0.53
1:C:1194:ASN:HB3	1:C:1197:THR:HG22	1.89	0.53
2:H:146:PHE:HA	2:H:149:VAL:HG12	1.89	0.53
2:H:1313:SER:O	2:H:1314:ARG:HD3	2.09	0.53
2:H:1325:PHE:CE1	2:H:1328:VAL:HG11	2.43	0.53
2:I:754:TYR:CD2	2:I:794:MET:HG3	2.42	0.53
1:A:1566:ARG:HB3	1:A:1623:TYR:CE1	2.42	0.53
1:B:807:LYS:HG3	1:B:858:TRP:HB3	1.90	0.53
1:C:825:PRO:HB2	1:C:843:LYS:NZ	2.24	0.53
2:G:1331:TRP:CE2	2:G:1335:ILE:HG13	2.43	0.53
2:H:606:PHE:CE1	2:H:811:VAL:HG13	2.43	0.53
2:H:1177:SER:O	2:H:1180:MET:HG2	2.08	0.53
2:I:615:TYR:CZ	2:I:1074:MET:HB3	2.42	0.53
2:I:1844:ARG:CG	2:I:1844:ARG:NH1	2.61	0.53
2:I:1954:LYS:HD3	2:I:1958:LEU:HD13	1.89	0.53
1:A:1123:GLN:HB2	1:A:1177:LYS:HE2	1.90	0.53
1:A:1153:ASP:OD2	1:B:359:ARG:NH2	2.41	0.53
1:A:1392:LEU:CD2	1:A:1396:MET:HG3	2.38	0.53
1:B:1194:ASN:O	1:B:1197:THR:HG23	2.08	0.53
1:C:236:LYS:HE2	1:C:273:PRO:O	2.08	0.53
2:G:1269:LEU:O	2:G:1560:LEU:HD23	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:281:VAL:HG23	2:H:459:VAL:HG11	1.90	0.53
2:H:674:TYR:HB3	2:H:676:ILE:HG22	1.88	0.53
2:H:826:GLY:O	2:H:827:VAL:HG23	2.07	0.53
2:I:234:ILE:CG1	2:I:235:PRO:HD3	2.38	0.53
2:I:491:GLU:HA	2:I:494:THR:HG22	1.89	0.53
2:I:582:LYS:HE2	2:I:1108:PRO:HB3	1.91	0.53
2:I:873:PHE:CD1	2:I:1026:GLU:HB2	2.43	0.53
1:A:807:LYS:HG3	1:A:858:TRP:HB3	1.91	0.53
1:A:1373:ARG:HB2	1:A:1545:SER:O	2.08	0.53
1:B:1020:VAL:HG13	1:B:1400:ILE:HG23	1.91	0.53
1:B:1392:LEU:CD2	1:B:1396:MET:HG3	2.38	0.53
1:C:263:GLY:O	1:C:267:VAL:HG23	2.08	0.53
1:C:824:LEU:HD11	1:C:849:LEU:HD12	1.90	0.53
2:G:741:HIS:CB	2:G:853:PRO:HB2	2.38	0.53
2:G:892:ILE:HG12	2:G:903:TRP:CG	2.43	0.53
2:G:964:LEU:CD2	2:G:964:LEU:N	2.68	0.53
2:H:55:THR:CG2	2:H:56:THR:HG22	2.30	0.53
2:I:271:THR:OG1	2:I:460:TYR:HB2	2.08	0.53
2:I:1745:LYS:HE2	2:I:1747:LYS:HG2	1.91	0.53
1:A:421:ILE:HG13	1:A:469:VAL:HG21	1.89	0.53
1:B:607:LYS:HG2	1:B:608:ASP:N	2.23	0.53
1:B:751:PHE:CZ	1:B:761:LEU:HD13	2.42	0.53
1:B:1665:ILE:CG1	1:B:1669:ARG:HD3	2.36	0.53
1:C:176:VAL:HG11	1:C:179:LYS:O	2.08	0.53
1:C:385:PHE:HD2	1:C:787:LYS:HA	1.73	0.53
1:C:985:ARG:HH12	2:I:953:ARG:CZ	2.21	0.53
1:C:1401:TYR:C	1:C:1658:PRO:HG3	2.29	0.53
2:G:707:PRO:HG2	2:G:730:LEU:HD13	1.90	0.53
2:H:173:LEU:HD13	2:H:219:LEU:HD21	1.90	0.53
2:H:816:ASP:HB3	2:H:1048:VAL:HG21	1.91	0.53
2:H:1804:PHE:CZ	2:H:2010:TYR:HB2	2.44	0.53
2:I:526:ARG:HH11	2:I:558:ASN:HD21	1.55	0.53
2:I:1102:TYR:HB3	2:I:1244:PRO:HA	1.91	0.53
2:I:1177:SER:O	2:I:1180:MET:HG2	2.09	0.53
2:I:1314:ARG:CG	2:I:1314:ARG:NH1	2.63	0.53
2:I:1567:ARG:HG3	2:I:1568:HIS:N	2.22	0.53
1:A:50:SER:HB2	1:A:51:PRO:CD	2.39	0.53
1:A:529:MET:CE	1:A:894:ARG:HD2	2.38	0.53
1:A:635:ILE:HG22	1:A:651:TYR:CG	2.43	0.53
1:A:1020:VAL:HG13	1:A:1400:ILE:HG23	1.90	0.53
1:A:1665:ILE:HG12	1:A:1666:THR:N	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:825:PRO:HB2	1:C:843:LYS:HZ2	1.73	0.53
2:G:913:ASP:H	2:G:916:THR:CG2	2.22	0.53
2:G:1382:VAL:HA	2:G:1422:THR:OG1	2.08	0.53
2:G:2015:THR:HG22	2:G:2017:LYS:N	2.22	0.53
2:H:652:ILE:HB	2:H:658:MET:CE	2.39	0.53
2:H:1567:ARG:HG3	2:H:1568:HIS:N	2.23	0.53
2:I:1173:VAL:CG2	2:I:1221:MET:HE1	2.39	0.53
2:I:1293:THR:HG22	2:I:1296:GLU:CG	2.39	0.53
2:I:2036:GLU:HG2	2:I:2039:LYS:NZ	2.23	0.53
1:A:1492:GLU:O	1:A:1496:GLU:HG3	2.09	0.53
1:B:1123:GLN:HB2	1:B:1177:LYS:HE2	1.91	0.53
1:B:1577:GLN:HE22	1:B:1591:TRP:C	2.12	0.53
1:C:1012:LEU:HD23	1:C:1445:MET:CE	2.39	0.53
1:C:1037:TRP:HB2	1:C:1598:GLN:OE1	2.09	0.53
2:G:346:GLN:HA	2:G:377:LEU:HD21	1.89	0.53
2:G:606:PHE:HZ	2:G:805:VAL:HG11	1.74	0.53
2:G:1166:VAL:HG12	2:G:1167:SER:N	2.23	0.53
2:H:402:LEU:HD12	2:H:404:GLN:HG2	1.90	0.53
2:H:774:ALA:HB1	2:H:1081:HIS:CD2	2.32	0.53
2:H:1382:VAL:HA	2:H:1422:THR:OG1	2.09	0.53
2:H:1913:VAL:O	2:H:1917:ILE:HG13	2.08	0.53
2:I:1327:ILE:HG12	2:I:1583:MET:HE3	1.91	0.53
1:A:385:PHE:HD2	1:A:787:LYS:HA	1.74	0.53
1:A:1014:ASP:H	1:A:1510:ASN:ND2	1.93	0.53
1:B:12:ILE:HA	1:B:15:THR:HG23	1.90	0.53
1:C:1524:GLY:HA2	1:C:1527:ALA:HB3	1.91	0.53
2:G:85:ASN:HD22	2:G:135:ARG:NH1	2.03	0.53
2:G:490:TRP:CH2	2:G:512:LEU:HD21	2.43	0.53
2:G:750:MET:CG	2:G:796:PHE:HZ	2.21	0.53
2:H:346:GLN:HA	2:H:377:LEU:HD21	1.91	0.53
2:H:1040:LEU:HD21	2:H:1048:VAL:HA	1.89	0.53
2:H:1452:LEU:HA	2:H:1502:GLY:HA3	1.90	0.53
2:H:1954:LYS:HD3	2:H:1958:LEU:HD13	1.90	0.53
2:I:892:ILE:HG12	2:I:903:TRP:CG	2.44	0.53
2:I:1040:LEU:HD21	2:I:1048:VAL:HA	1.90	0.53
2:I:1441:ILE:HD11	2:I:1445:ARG:NH2	2.23	0.53
2:I:1861:ARG:HD2	2:I:1964:PHE:O	2.08	0.53
2:I:2038:ILE:HG22	2:I:2042:ILE:CD1	2.37	0.53
1:A:12:ILE:HA	1:A:15:THR:HG23	1.88	0.53
1:A:1455:ARG:O	1:A:1459:ILE:HG13	2.08	0.53
1:C:1036:ARG:NH1	1:C:1040:GLU:OE1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:281:VAL:HG23	2:G:459:VAL:HG11	1.91	0.53
2:G:1040:LEU:HD21	2:G:1048:VAL:HA	1.90	0.53
2:G:2038:ILE:HG22	2:G:2042:ILE:CD1	2.37	0.53
2:H:1745:LYS:HE2	2:H:1747:LYS:HG2	1.91	0.53
2:I:240:LEU:O	2:I:244:ILE:HG13	2.08	0.53
2:I:871:THR:HG21	2:I:887:LYS:NZ	2.24	0.53
2:I:1266:TYR:CG	2:I:1347:LEU:HD23	2.43	0.53
2:I:2035:SER:HB3	2:I:2038:ILE:CG1	2.37	0.53
1:B:1326:ILE:HG12	1:B:1388:MET:HG3	1.91	0.53
1:C:625:THR:HG23	1:C:661:ASP:OD1	2.09	0.53
1:C:1285:ALA:O	1:C:1289:MET:HG3	2.09	0.53
2:G:102:HIS:HE1	2:G:180:TYR:OH	1.92	0.53
2:G:1173:VAL:CG2	2:G:1221:MET:HE1	2.38	0.53
2:G:1861:ARG:HD2	2:G:1964:PHE:O	2.09	0.53
2:H:234:ILE:CG1	2:H:235:PRO:HD3	2.39	0.53
2:H:455:ILE:HG12	2:H:469:ARG:HG2	1.91	0.53
2:H:1101:GLU:HB2	2:H:1147:ILE:O	2.09	0.53
2:H:1697:HIS:HE1	2:H:1829:GLU:HG2	1.74	0.53
2:I:264:ARG:NH1	2:I:456:GLN:HG3	2.24	0.53
1:A:529:MET:HG2	1:A:638:LEU:HG	1.89	0.52
1:B:340:ARG:HH12	1:B:344:GLN:NE2	2.08	0.52
1:C:864:VAL:CG2	1:C:921:PRO:HB3	2.39	0.52
2:G:55:THR:CG2	2:G:56:THR:HG22	2.33	0.52
2:I:606:PHE:CE1	2:I:811:VAL:HG13	2.44	0.52
2:I:1040:LEU:O	2:I:1046:GLN:HG3	2.09	0.52
1:A:156:ALA:HA	1:A:166:ILE:CD1	2.39	0.52
1:A:341:GLN:O	1:A:345:VAL:HG12	2.09	0.52
1:A:986:ALA:CA	1:A:1047:LEU:HD13	2.39	0.52
1:B:12:ILE:HD11	2:H:2041:ILE:HD11	1.89	0.52
1:B:1234:MET:CE	1:B:1326:ILE:HG21	2.40	0.52
2:H:145:LEU:O	2:H:149:VAL:HG12	2.10	0.52
2:H:1159:ILE:CG1	2:H:1169:PRO:CD	2.87	0.52
2:H:1427:VAL:HG12	2:H:1427:VAL:O	2.08	0.52
2:H:1697:HIS:HE1	2:H:1829:GLU:CG	2.22	0.52
2:H:2026:PHE:CD2	2:H:2045:TRP:HZ3	2.27	0.52
2:I:465:GLY:HA2	2:I:493:THR:HA	1.91	0.52
2:I:598:THR:O	2:I:602:VAL:HB	2.09	0.52
2:I:2036:GLU:O	2:I:2039:LYS:HG2	2.09	0.52
1:B:784:ILE:HG23	1:B:788:SER:HB2	1.92	0.52
1:B:980:VAL:HG21	2:H:952:ARG:NH2	2.24	0.52
1:C:1056:ILE:HD13	1:C:1193:TRP:CD1	2.41	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1305:CYS:SG	1:C:1583:HIS:NE2	2.82	0.52
2:G:615:TYR:CZ	2:G:1074:MET:HB3	2.44	0.52
2:H:194:THR:CG2	2:H:300:ILE:HD11	2.39	0.52
2:H:768:GLY:HA3	2:H:800:LEU:CD2	2.39	0.52
2:I:418:ASN:N	2:I:418:ASN:HD22	2.07	0.52
1:A:335:HIS:HD2	1:A:335:HIS:O	1.92	0.52
1:A:824:LEU:HD11	1:A:849:LEU:HD12	1.89	0.52
1:B:329:GLU:O	1:B:333:LYS:HG3	2.08	0.52
1:C:260:ARG:HH12	1:C:300:VAL:CG2	2.22	0.52
1:C:530:ALA:HA	1:C:636:PRO:HB3	1.91	0.52
1:C:1411:THR:HG22	1:C:1412:ASP:N	2.24	0.52
2:G:490:TRP:HA	2:G:493:THR:CG2	2.40	0.52
2:G:1159:ILE:HG12	2:G:1169:PRO:CD	2.39	0.52
2:G:1359:MET:CE	2:G:1404:MET:HB3	2.39	0.52
2:G:1438:SER:O	2:G:1441:ILE:HG23	2.09	0.52
2:H:955:GLU:HG2	2:H:987:TYR:CE2	2.45	0.52
2:I:1486:PHE:HA	2:I:1504:VAL:O	2.10	0.52
1:A:988:ILE:HD13	1:A:1048:GLU:CA	2.39	0.52
1:C:406:TRP:CE3	1:C:1619:GLU:HG3	2.44	0.52
1:C:465:ASN:O	1:C:469:VAL:HG23	2.10	0.52
2:G:145:LEU:HD21	2:G:156:LEU:HD21	1.91	0.52
2:G:871:THR:HG21	2:G:887:LYS:NZ	2.25	0.52
2:G:1389:ILE:HG13	2:G:1411:PHE:HD1	1.75	0.52
2:H:754:TYR:CD2	2:H:794:MET:HG3	2.44	0.52
2:H:1722:GLY:N	2:H:1726:GLY:HA3	2.24	0.52
2:I:741:HIS:HE1	2:I:855:HIS:NE2	2.06	0.52
2:I:1300:PHE:CA	2:I:1556:VAL:HG11	2.40	0.52
2:I:1350:LEU:HD11	2:I:1410:PHE:HB3	1.91	0.52
2:I:1438:SER:O	2:I:1441:ILE:HG23	2.08	0.52
2:I:1475:LYS:HG3	2:I:1481:SER:HB2	1.92	0.52
2:I:1774:THR:HA	2:I:1777:THR:HB	1.92	0.52
1:A:501:THR:N	1:A:886:GLU:OE1	2.30	0.52
1:A:998:TYR:CE2	1:A:1667:GLU:HB2	2.44	0.52
1:A:1477:ILE:H	1:A:1478:PRO:CD	2.21	0.52
1:B:341:GLN:O	1:B:345:VAL:HG12	2.10	0.52
2:G:1475:LYS:CB	2:G:1481:SER:HB2	2.39	0.52
2:G:1567:ARG:HH11	2:G:1567:ARG:HG2	1.72	0.52
2:G:1593:ILE:HD13	2:G:1626:ILE:HD13	1.92	0.52
2:G:1932:SER:O	2:G:1936:VAL:HG22	2.10	0.52
2:H:1359:MET:HE3	2:H:1404:MET:HB3	1.92	0.52
2:I:702:TYR:HB2	2:I:727:PRO:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:964:LEU:CD2	2:I:964:LEU:N	2.72	0.52
1:A:2:LYS:CD	2:G:2050:GLN:HB3	2.38	0.52
1:A:59:ARG:HH11	2:G:1896:GLN:NE2	2.07	0.52
1:A:430:ARG:NH1	1:A:493:VAL:O	2.40	0.52
1:A:1305:CYS:SG	1:A:1583:HIS:NE2	2.83	0.52
2:G:955:GLU:HG2	2:G:987:TYR:CE2	2.45	0.52
2:G:2026:PHE:CD2	2:G:2045:TRP:HZ3	2.27	0.52
2:H:615:TYR:CZ	2:H:1074:MET:HB3	2.43	0.52
2:H:747:HIS:O	2:H:751:LEU:HB2	2.10	0.52
2:H:1292:ILE:O	2:H:1368:VAL:O	2.27	0.52
2:H:1776:PHE:O	2:H:1779:PRO:HD2	2.09	0.52
2:I:913:ASP:H	2:I:916:THR:CG2	2.23	0.52
2:I:1004:LEU:HD21	2:I:1020:VAL:HG23	1.91	0.52
2:I:1159:ILE:HG12	2:I:1169:PRO:CD	2.39	0.52
1:B:529:MET:HG2	1:B:638:LEU:HG	1.92	0.52
1:B:893:VAL:HG11	1:B:930:LEU:CD2	2.36	0.52
1:C:27:ARG:HB2	2:I:2016:ALA:HB2	1.91	0.52
1:C:607:LYS:HG2	1:C:608:ASP:N	2.24	0.52
2:G:926:LEU:HB3	2:G:947:THR:HG22	1.92	0.52
2:G:1177:SER:O	2:G:1180:MET:HG2	2.09	0.52
2:H:418:ASN:HD22	2:H:418:ASN:N	2.08	0.52
2:H:599:PRO:HD2	4:H:3051:FMN:H6	1.92	0.52
2:I:751:LEU:HD23	2:I:791:TYR:CZ	2.44	0.52
2:I:1597:ALA:HB1	2:I:1638:ILE:CD1	2.39	0.52
2:I:1918:LYS:HG2	2:I:1919:LEU:HD23	1.92	0.52
1:A:521:LYS:HE2	1:A:605:LEU:HD11	1.92	0.52
1:A:705:VAL:CG2	1:A:732:LEU:HD21	2.39	0.52
1:C:340:ARG:HH12	1:C:344:GLN:NE2	2.08	0.52
1:C:705:VAL:CG2	1:C:732:LEU:HD21	2.40	0.52
1:C:1577:GLN:HE22	1:C:1591:TRP:C	2.13	0.52
2:G:121:GLU:HA	2:G:124:LYS:HD2	1.91	0.52
2:G:176:LEU:HD22	2:G:247:ALA:HB1	1.90	0.52
2:G:768:GLY:HA3	2:G:800:LEU:CD2	2.38	0.52
2:G:1093:ASP:HB3	2:G:1096:LYS:HG3	1.90	0.52
2:G:1745:LYS:HD3	2:G:1747:LYS:HE2	1.91	0.52
2:G:1873:TYR:CE1	2:G:1877:ARG:NE	2.75	0.52
2:H:278:VAL:HG11	2:H:303:LEU:HD13	1.92	0.52
2:I:273:HIS:CB	2:I:512:LEU:HD22	2.40	0.52
2:I:747:HIS:O	2:I:751:LEU:HB2	2.10	0.52
2:I:1223:MET:CE	2:I:1238:LEU:HD12	2.40	0.52
1:A:280:GLU:O	1:A:280:GLU:HG2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:607:LYS:HG2	1:A:608:ASP:N	2.25	0.52
1:A:674:LYS:O	1:A:675:ASP:HB2	2.09	0.52
1:A:1183:ARG:NH1	1:A:1344:GLY:HA2	2.24	0.52
1:A:1577:GLN:HE22	1:A:1591:TRP:C	2.13	0.52
1:C:156:ALA:HA	1:C:166:ILE:CD1	2.40	0.52
2:G:278:VAL:HG11	2:G:303:LEU:HD13	1.92	0.52
2:H:281:VAL:HG12	2:H:282:ALA:N	2.24	0.52
2:H:522:GLY:HA3	2:H:561:TRP:CH2	2.45	0.52
2:H:577:ILE:HD13	2:H:1097:ILE:CD1	2.40	0.52
2:H:892:ILE:HG12	2:H:903:TRP:CG	2.45	0.52
2:I:1871:LEU:HD22	2:I:1888:ILE:HD11	1.92	0.52
2:I:2026:PHE:CD2	2:I:2045:TRP:HZ3	2.27	0.52
1:A:881:ASN:HA	1:A:944:ARG:NH2	2.25	0.51
1:B:985:ARG:HH12	2:H:953:ARG:NH2	2.07	0.51
1:B:1056:ILE:CD1	1:B:1193:TRP:HD1	2.22	0.51
1:B:1238:VAL:HG12	1:B:1239:HIS:N	2.25	0.51
1:C:1431:GLU:HB3	1:C:1520:ALA:HB2	1.92	0.51
1:C:1665:ILE:CG1	1:C:1669:ARG:HD3	2.36	0.51
2:G:234:ILE:CG1	2:G:235:PRO:HD3	2.40	0.51
2:G:1774:THR:HA	2:G:1777:THR:HB	1.90	0.51
2:H:654:VAL:HG23	2:H:683:ALA:HB1	1.92	0.51
2:H:1673:GLU:N	2:H:1676:MET:HE3	2.25	0.51
2:I:1745:LYS:HD3	2:I:1747:LYS:HE2	1.93	0.51
1:A:1123:GLN:HG3	1:A:1124:GLU:N	2.24	0.51
1:A:1411:THR:HG22	1:A:1412:ASP:N	2.25	0.51
1:B:1104:ARG:O	1:B:1185:VAL:HG13	2.11	0.51
1:B:1665:ILE:HG12	1:B:1666:THR:N	2.25	0.51
1:C:156:ALA:HA	1:C:166:ILE:HD12	1.92	0.51
1:C:1238:VAL:HG12	1:C:1239:HIS:N	2.25	0.51
1:C:1303:GLY:N	1:C:1307:THR:HG22	2.26	0.51
2:G:376:ASN:HD22	2:G:376:ASN:C	2.13	0.51
2:H:131:ILE:CD1	2:H:182:VAL:CG1	2.88	0.51
2:I:715:GLN:O	2:I:719:ILE:HG12	2.10	0.51
2:I:1697:HIS:CE1	2:I:1829:GLU:HG2	2.45	0.51
2:I:1868:GLN:HG3	2:I:1898:TYR:CZ	2.45	0.51
1:A:1303:GLY:N	1:A:1307:THR:HG22	2.25	0.51
1:A:1411:THR:HG22	1:A:1412:ASP:H	1.76	0.51
1:A:1474:ALA:HA	1:A:1478:PRO:CD	2.41	0.51
1:B:985:ARG:NH1	2:H:953:ARG:CZ	2.73	0.51
1:C:46:GLU:OE1	1:C:53:LEU:HB2	2.11	0.51
1:C:674:LYS:O	1:C:675:ASP:HB2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:124:LYS:HG2	2:G:179:THR:HA	1.90	0.51
2:G:213:LEU:O	2:G:213:LEU:HG	2.10	0.51
2:G:489:LYS:O	2:G:493:THR:HG22	2.10	0.51
2:G:702:TYR:HB2	2:G:727:PRO:HB2	1.93	0.51
2:G:1293:THR:HG22	2:G:1296:GLU:CG	2.40	0.51
2:G:1328:VAL:HG23	2:G:1557:SER:HA	1.92	0.51
2:G:1493:LEU:HD11	2:G:1499:VAL:CG2	2.40	0.51
2:H:318:SER:HB3	2:I:1595:ASN:HD21	1.76	0.51
2:H:545:GLN:H	2:H:545:GLN:NE2	2.07	0.51
2:H:758:ARG:NH2	2:H:797:ASP:OD1	2.35	0.51
2:H:1293:THR:HG22	2:H:1296:GLU:CG	2.41	0.51
2:H:1475:LYS:CB	2:H:1481:SER:HB2	2.40	0.51
1:A:12:ILE:CD1	2:G:2041:ILE:CD1	2.83	0.51
1:B:335:HIS:O	1:B:335:HIS:HD2	1.93	0.51
1:B:1411:THR:HG22	1:B:1412:ASP:N	2.26	0.51
1:C:983:GLN:NE2	2:I:962:LYS:HD2	2.25	0.51
2:G:654:VAL:O	2:G:654:VAL:HG12	2.09	0.51
2:G:1081:HIS:O	2:G:1085:LEU:HB2	2.10	0.51
2:H:582:LYS:HE2	2:H:1108:PRO:HB3	1.92	0.51
2:H:1081:HIS:O	2:H:1085:LEU:HB2	2.10	0.51
2:H:1475:LYS:HG3	2:H:1481:SER:HB2	1.93	0.51
2:H:1491:VAL:HB	2:H:1501:ILE:HD12	1.92	0.51
2:I:652:ILE:N	2:I:652:ILE:HD12	2.25	0.51
2:I:732:TRP:CD2	2:I:750:MET:HE3	2.45	0.51
2:I:732:TRP:CD2	2:I:750:MET:HE1	2.43	0.51
2:I:1475:LYS:CB	2:I:1481:SER:HB2	2.41	0.51
2:G:816:ASP:HB3	2:G:1048:VAL:CG2	2.41	0.51
2:H:1561:ASN:OD1	2:H:1563:ILE:HB	2.10	0.51
2:I:460:TYR:HA	2:I:466:SER:O	2.11	0.51
1:A:157:HIS:HE1	1:A:228:LEU:HD22	1.76	0.51
1:B:338:LEU:O	1:B:342:GLN:HG3	2.10	0.51
1:B:415:SER:O	1:B:419:GLU:HB2	2.10	0.51
1:B:1194:ASN:HB3	1:B:1197:THR:HG22	1.91	0.51
1:B:1477:ILE:H	1:B:1478:PRO:CD	2.24	0.51
1:C:328:LEU:HD22	1:C:328:LEU:C	2.30	0.51
1:C:644:THR:HG22	1:C:648:ASP:O	2.10	0.51
2:G:145:LEU:O	2:G:149:VAL:HG12	2.10	0.51
2:G:1427:VAL:O	2:G:1427:VAL:HG12	2.09	0.51
2:H:55:THR:HB	2:H:59:GLU:OE2	2.10	0.51
2:H:432:LEU:HB3	2:H:484:ILE:HG23	1.92	0.51
2:H:1493:LEU:HD11	2:H:1499:VAL:HG21	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1015:VAL:HG11	2:I:1017:PHE:CE1	2.45	0.51
1:A:1310:GLU:OE1	1:A:1649:LYS:CE	2.56	0.51
2:G:1431:TYR:CE1	2:G:1526:THR:HG23	2.45	0.51
2:G:1579:ILE:HD11	2:G:1615:MET:SD	2.51	0.51
2:G:1589:VAL:HG11	2:G:1640:PHE:CE1	2.45	0.51
2:G:1764:PHE:HB2	2:G:1770:LEU:HD21	1.93	0.51
2:H:260:PRO:HD3	2:H:289:TRP:CZ2	2.46	0.51
2:H:732:TRP:CD1	2:H:750:MET:HE3	2.46	0.51
2:H:1054:LEU:HB3	4:H:3051:FMN:HM82	1.93	0.51
2:H:1716:ASN:OD1	2:H:1765:ARG:HA	2.11	0.51
2:I:306:ILE:HA	2:I:439:ILE:CD1	2.40	0.51
2:I:1428:GLU:HB2	2:I:1468:THR:HG22	1.93	0.51
2:I:1566:SER:HB3	2:I:1568:HIS:CE1	2.45	0.51
1:A:254:TRP:HZ3	1:A:292:GLN:HG3	1.75	0.51
1:A:465:ASN:O	1:A:469:VAL:HG23	2.11	0.51
1:B:864:VAL:CG2	1:B:921:PRO:HB3	2.40	0.51
1:C:513:GLU:OE2	1:C:873:ARG:NH1	2.44	0.51
1:C:1009:LEU:HG	1:C:1664:ALA:HB2	1.93	0.51
1:C:1123:GLN:HB2	1:C:1177:LYS:HE2	1.93	0.51
1:C:1411:THR:HG22	1:C:1412:ASP:H	1.75	0.51
2:G:1986:LYS:HA	2:G:1989:LYS:HB3	1.92	0.51
2:H:533:LEU:HD13	2:H:545:GLN:HG3	1.92	0.51
2:H:667:LYS:HD2	2:H:697:THR:CG2	2.35	0.51
2:H:1236:LEU:HD11	2:H:1262:ILE:HG12	1.92	0.51
2:I:157:VAL:HG11	2:I:496:PHE:CZ	2.46	0.51
2:I:346:GLN:HA	2:I:377:LEU:HD21	1.92	0.51
2:I:950:PHE:O	2:I:954:VAL:HG23	2.11	0.51
1:B:1705:PRO:HB2	1:B:1733:PHE:CE1	2.46	0.51
1:C:733:ILE:CD1	1:C:761:LEU:HD11	2.40	0.51
2:G:16:LEU:HG	2:G:48:PHE:CZ	2.45	0.51
2:G:443:LEU:HD22	2:G:448:VAL:CG1	2.41	0.51
2:G:786:SER:CB	2:G:794:MET:HE2	2.41	0.51
2:G:1382:VAL:HA	2:G:1422:THR:HG1	1.76	0.51
2:H:332:GLU:OE2	2:H:394:ARG:HD3	2.10	0.51
2:H:461:ASP:HB3	2:H:464:ASP:HB2	1.93	0.51
2:H:807:ILE:HG21	2:H:1066:ILE:HA	1.92	0.51
2:H:2046:GLU:C	2:H:2048:TYR:H	2.14	0.51
2:I:807:ILE:HG21	2:I:1066:ILE:HA	1.93	0.51
2:I:1313:SER:O	2:I:1314:ARG:HD3	2.11	0.51
2:I:1359:MET:HA	2:I:1359:MET:HE3	1.92	0.51
1:A:400:ARG:HH11	1:A:400:ARG:HG3	1.67	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:889:GLU:HG3	1:A:893:VAL:O	2.11	0.51
1:B:822:VAL:HG12	1:B:824:LEU:HD22	1.93	0.51
1:B:1455:ARG:NH2	1:B:1459:ILE:HG12	2.26	0.51
1:C:157:HIS:HE1	1:C:228:LEU:HD22	1.75	0.51
1:C:411:GLN:HE22	1:C:1628:SER:H	1.58	0.51
2:G:418:ASN:HD22	2:G:418:ASN:N	2.09	0.51
2:G:751:LEU:HD23	2:G:791:TYR:CZ	2.46	0.51
2:G:868:PHE:HB3	2:G:873:PHE:CE2	2.46	0.51
2:G:1135:GLU:OE2	2:G:1175:LYS:HE3	2.11	0.51
2:G:1452:LEU:HA	2:G:1502:GLY:HA3	1.92	0.51
2:H:233:SER:HA	2:H:424:ALA:CB	2.41	0.51
2:H:460:TYR:HA	2:H:466:SER:O	2.11	0.51
2:H:741:HIS:HB2	2:H:853:PRO:O	2.11	0.51
2:H:1678:MET:CE	2:H:1707:LEU:HD22	2.40	0.51
2:H:2026:PHE:HD2	2:H:2045:TRP:HZ3	1.59	0.51
2:I:1431:TYR:CE1	2:I:1526:THR:HG23	2.46	0.51
1:A:635:ILE:HG22	1:A:651:TYR:CD1	2.46	0.50
1:A:985:ARG:NH1	2:G:953:ARG:CZ	2.74	0.50
1:A:1105:LEU:HD23	1:A:1185:VAL:HG22	1.93	0.50
1:B:50:SER:HB2	1:B:51:PRO:CD	2.40	0.50
1:B:386:PHE:O	1:B:390:VAL:HB	2.11	0.50
1:B:1524:GLY:HA2	1:B:1527:ALA:HB3	1.93	0.50
2:G:194:THR:CG2	2:G:300:ILE:HD11	2.41	0.50
2:G:601:THR:HG22	2:G:620:ALA:H	1.75	0.50
2:G:1223:MET:CE	2:G:1238:LEU:HD12	2.40	0.50
2:G:1697:HIS:HE1	2:G:1829:GLU:HG2	1.74	0.50
2:H:408:PRO:HG3	2:H:836:TYR:CD2	2.46	0.50
2:H:1265:MET:HE1	2:H:1562:PRO:HG2	1.92	0.50
2:H:1422:THR:HG21	2:H:1474:PHE:HB2	1.94	0.50
2:I:1493:LEU:HD11	2:I:1499:VAL:HG21	1.93	0.50
2:I:1776:PHE:O	2:I:1779:PRO:HD2	2.10	0.50
1:A:433:VAL:O	1:A:437:ILE:HG13	2.12	0.50
1:A:1533:ILE:HD11	1:A:1564:LEU:HD13	1.93	0.50
1:B:635:ILE:HG22	1:B:651:TYR:CD1	2.46	0.50
1:B:1158:PRO:HD2	1:B:1159:GLU:OE2	2.10	0.50
1:B:1196:LYS:HE3	1:B:1202:ASP:CG	2.31	0.50
1:B:1411:THR:HG22	1:B:1412:ASP:H	1.75	0.50
1:C:34:VAL:O	1:C:38:ASP:HB2	2.11	0.50
1:C:655:LEU:CD2	1:C:916:LEU:HD11	2.41	0.50
1:C:828:PRO:HG3	1:C:868:ILE:HG22	1.94	0.50
2:G:7:ARG:CZ	2:G:24:THR:HA	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:281:VAL:HG12	2:G:282:ALA:N	2.26	0.50
2:H:1597:ALA:HB1	2:H:1638:ILE:CD1	2.41	0.50
2:H:1861:ARG:HD2	2:H:1964:PHE:O	2.12	0.50
2:I:85:ASN:HD22	2:I:135:ARG:NH1	2.04	0.50
2:I:281:VAL:HG12	2:I:282:ALA:N	2.25	0.50
2:I:611:THR:HA	2:I:615:TYR:O	2.11	0.50
2:I:750:MET:CG	2:I:796:PHE:HZ	2.24	0.50
1:A:20:TYR:CE1	2:G:2033:THR:HG21	2.47	0.50
1:A:24:SER:O	2:G:1977:HIS:CD2	2.65	0.50
1:A:34:VAL:O	1:A:38:ASP:HB2	2.10	0.50
1:A:59:ARG:HH11	2:G:1896:GLN:HE22	1.58	0.50
1:C:176:VAL:CG1	1:C:179:LYS:O	2.59	0.50
2:G:652:ILE:CD1	2:G:658:MET:HE3	2.42	0.50
2:G:1272:ASP:O	2:G:1273:GLU:HG3	2.11	0.50
2:G:1918:LYS:HG2	2:G:1919:LEU:HD23	1.93	0.50
2:H:344:LEU:HB3	2:H:349:VAL:HG23	1.94	0.50
2:H:491:GLU:HA	2:H:494:THR:HG22	1.93	0.50
2:H:1774:THR:HA	2:H:1777:THR:HB	1.93	0.50
2:H:1775:GLN:HG2	2:H:1836:MET:SD	2.51	0.50
2:I:173:LEU:HD13	2:I:219:LEU:HD21	1.94	0.50
2:I:376:ASN:HD22	2:I:376:ASN:C	2.14	0.50
2:I:1027:ILE:O	2:I:1031:LYS:HB2	2.11	0.50
2:I:1945:ASP:O	2:I:1949:LYS:HG3	2.10	0.50
1:A:286:PHE:O	1:A:290:MET:HG2	2.10	0.50
1:B:421:ILE:HG12	1:B:469:VAL:HG21	1.93	0.50
1:B:1303:GLY:N	1:B:1307:THR:HG22	2.25	0.50
1:C:280:GLU:O	1:C:280:GLU:HG2	2.11	0.50
1:C:415:SER:O	1:C:419:GLU:HB2	2.12	0.50
1:C:702:LYS:HE2	1:C:729:GLY:O	2.11	0.50
1:C:1116:PRO:HB2	1:C:1184:LEU:HD12	1.93	0.50
2:G:545:GLN:H	2:G:545:GLN:NE2	2.09	0.50
2:H:463:PHE:CE1	2:H:486:LEU:HD22	2.47	0.50
2:H:1102:TYR:CE2	2:H:1152:ALA:HB2	2.47	0.50
2:H:1148:ASN:ND2	2:H:1151:HIS:H	2.08	0.50
2:H:1389:ILE:HG13	2:H:1411:PHE:HD1	1.76	0.50
2:H:1435:ILE:O	2:H:1435:ILE:HG22	2.10	0.50
2:I:1491:VAL:HB	2:I:1501:ILE:HD12	1.93	0.50
1:A:1004:ILE:HG22	1:A:1660:TYR:CE2	2.46	0.50
1:B:156:ALA:HA	1:B:166:ILE:CD1	2.41	0.50
1:B:156:ALA:HA	1:B:166:ILE:HD12	1.93	0.50
2:G:611:THR:HA	2:G:615:TYR:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:663:ILE:HB	2:G:664:PRO:CD	2.40	0.50
2:G:676:ILE:O	2:G:676:ILE:HG12	2.11	0.50
2:G:732:TRP:CG	2:G:750:MET:HE3	2.46	0.50
2:G:784:GLU:O	2:G:787:THR:HB	2.11	0.50
2:G:1871:LEU:HD22	2:G:1888:ILE:HD11	1.93	0.50
2:H:1382:VAL:HA	2:H:1422:THR:HG1	1.76	0.50
2:H:1428:GLU:HB2	2:H:1468:THR:HG22	1.94	0.50
2:I:955:GLU:HG2	2:I:987:TYR:CE2	2.46	0.50
2:I:1135:GLU:OE2	2:I:1175:LYS:HE3	2.12	0.50
2:I:1716:ASN:OD1	2:I:1765:ARG:HA	2.11	0.50
2:I:2035:SER:HB3	2:I:2038:ILE:CD1	2.40	0.50
1:A:1523:ARG:NH2	1:A:1564:LEU:O	2.45	0.50
1:B:1009:LEU:HA	1:B:1445:MET:HE2	1.93	0.50
1:C:985:ARG:HH12	2:I:953:ARG:NH2	2.09	0.50
1:C:1019:ILE:HG21	1:C:1316:VAL:HG22	1.94	0.50
1:C:1474:ALA:HA	1:C:1478:PRO:CD	2.42	0.50
2:G:774:ALA:HB1	2:G:1081:HIS:CD2	2.37	0.50
2:G:1350:LEU:HD11	2:G:1410:PHE:HB3	1.94	0.50
2:H:826:GLY:HA2	2:H:1060:ALA:HB3	1.94	0.50
2:H:2036:GLU:HG2	2:H:2039:LYS:NZ	2.27	0.50
2:I:712:ALA:O	2:I:715:GLN:HB3	2.12	0.50
2:I:866:LYS:O	2:I:870:GLU:HG3	2.12	0.50
2:I:1953:VAL:O	2:I:1953:VAL:HG12	2.11	0.50
1:A:12:ILE:CD1	2:G:2041:ILE:HD11	2.41	0.50
1:A:359:ARG:NH2	1:C:1153:ASP:OD2	2.43	0.50
1:A:1104:ARG:O	1:A:1185:VAL:HG13	2.12	0.50
1:B:20:TYR:OH	2:H:2035:SER:HB2	2.12	0.50
1:B:825:PRO:HB2	1:B:843:LYS:NZ	2.27	0.50
1:B:1347:LYS:O	1:B:1347:LYS:HD3	2.11	0.50
1:C:13:LEU:HB2	2:I:2026:PHE:CE1	2.45	0.50
2:G:440:ASN:ND2	2:G:477:GLU:HG2	2.26	0.50
2:G:894:ARG:NH1	2:G:898:ASP:OD2	2.43	0.50
2:G:949:ASP:CB	2:G:1006:MET:HE2	2.38	0.50
2:H:121:GLU:HA	2:H:124:LYS:HD2	1.93	0.50
2:H:161:GLY:HA3	2:H:506:PRO:HD2	1.93	0.50
2:H:638:VAL:HG22	2:H:675:PRO:HG2	1.93	0.50
2:I:1986:LYS:HA	2:I:1989:LYS:HB3	1.93	0.50
1:B:408:TRP:CZ3	1:B:1628:SER:HB3	2.47	0.50
1:C:157:HIS:CE1	1:C:228:LEU:HD22	2.47	0.50
1:C:328:LEU:HD13	1:C:329:GLU:N	2.27	0.50
1:C:702:LYS:HD3	1:C:731:THR:CG2	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:24:THR:O	2:G:26:SER:N	2.44	0.50
2:G:60:LEU:O	2:G:63:LYS:HB2	2.12	0.50
2:G:306:ILE:HA	2:G:439:ILE:CD1	2.42	0.50
2:G:606:PHE:CE1	2:G:811:VAL:HG13	2.46	0.50
2:G:682:GLY:O	2:G:683:ALA:HB3	2.12	0.50
2:G:1776:PHE:O	2:G:1779:PRO:HD2	2.12	0.50
2:G:2035:SER:HB3	2:G:2038:ILE:CD1	2.42	0.50
2:H:747:HIS:HE1	2:H:780:TYR:OH	1.95	0.50
2:H:2035:SER:HB3	2:H:2038:ILE:CD1	2.42	0.50
2:I:344:LEU:HB3	2:I:349:VAL:HG23	1.93	0.50
1:A:156:ALA:HA	1:A:166:ILE:HD12	1.93	0.50
1:A:1116:PRO:HB2	1:A:1184:LEU:HD12	1.94	0.50
1:A:1125:VAL:HG21	1:A:1175:ILE:CD1	2.42	0.50
1:A:1347:LYS:O	1:A:1347:LYS:HD3	2.11	0.50
1:A:1459:ILE:O	1:A:1463:VAL:HG23	2.12	0.50
1:B:46:GLU:OE1	1:B:53:LEU:HB2	2.12	0.50
1:C:1566:ARG:HB3	1:C:1623:TYR:CE1	2.46	0.50
1:C:1705:PRO:HB2	1:C:1733:PHE:CE1	2.46	0.50
2:G:428:HIS:CD2	2:G:488:VAL:HG23	2.47	0.50
2:G:1552:PRO:O	2:G:1556:VAL:HG23	2.12	0.50
2:G:1697:HIS:HE1	2:G:1829:GLU:CG	2.25	0.50
2:G:1716:ASN:OD1	2:G:1765:ARG:HA	2.12	0.50
2:G:1845:ASP:HB2	2:G:1849:ARG:N	2.15	0.50
2:H:7:ARG:CZ	2:H:24:THR:HA	2.42	0.50
2:H:441:LYS:O	2:H:444:VAL:HG12	2.12	0.50
2:H:1004:LEU:HD21	2:H:1020:VAL:CG2	2.41	0.50
2:H:2030:TYR:CE1	2:H:2034:GLY:HA2	2.46	0.50
2:I:455:ILE:HG12	2:I:469:ARG:HG2	1.93	0.50
2:I:777:THR:HG23	2:I:1081:HIS:CE1	2.47	0.50
2:I:1673:GLU:N	2:I:1676:MET:HE3	2.25	0.50
1:A:142:ASP:CG	1:A:257:PRO:HB2	2.32	0.49
1:B:413:LEU:HB2	1:B:439:ILE:HD13	1.94	0.49
1:B:1451:GLN:OE1	1:B:1451:GLN:HA	2.12	0.49
1:B:1533:ILE:HG13	1:B:1564:LEU:HB3	1.94	0.49
1:C:267:VAL:O	1:C:290:MET:HE1	2.12	0.49
1:C:1665:ILE:HG12	1:C:1666:THR:N	2.27	0.49
2:G:131:ILE:CB	2:G:182:VAL:CG1	2.85	0.49
2:G:1441:ILE:HD11	2:G:1445:ARG:NH2	2.25	0.49
2:G:1868:GLN:HG3	2:G:1898:TYR:CZ	2.48	0.49
2:G:2029:VAL:O	2:G:2033:THR:HG22	2.12	0.49
2:H:777:THR:HG23	2:H:1081:HIS:CE1	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1227:ARG:HG3	2:H:1227:ARG:NH1	2.01	0.49
2:I:7:ARG:HE	2:I:27:PHE:CB	2.24	0.49
2:I:72:VAL:HG12	2:I:73:GLU:N	2.27	0.49
2:I:1632:ILE:HG23	2:I:1632:ILE:O	2.12	0.49
1:A:335:HIS:O	1:A:338:LEU:HB3	2.12	0.49
1:B:674:LYS:O	1:B:675:ASP:HB2	2.11	0.49
1:B:1125:VAL:HG21	1:B:1175:ILE:CD1	2.42	0.49
1:B:1474:ALA:HA	1:B:1478:PRO:CD	2.41	0.49
2:G:871:THR:HG21	2:G:887:LYS:HZ2	1.77	0.49
2:H:7:ARG:HE	2:H:27:PHE:CB	2.26	0.49
2:H:28:PHE:CE1	2:I:27:PHE:CE2	3.00	0.49
2:H:871:THR:HG21	2:H:887:LYS:NZ	2.26	0.49
2:H:1148:ASN:HD22	2:H:1151:HIS:H	1.60	0.49
2:H:1162:ASP:O	2:H:1163:LYS:HB2	2.11	0.49
2:H:1745:LYS:HD3	2:H:1747:LYS:HE2	1.94	0.49
2:I:24:THR:O	2:I:26:SER:N	2.45	0.49
2:I:60:LEU:O	2:I:63:LYS:HB2	2.11	0.49
2:I:259:THR:HG22	2:I:262:GLU:CB	2.41	0.49
2:I:274:SER:OG	2:I:428:HIS:HE1	1.95	0.49
1:A:1276:GLN:O	1:A:1282:THR:HG21	2.13	0.49
1:C:889:GLU:HG3	1:C:893:VAL:O	2.13	0.49
1:C:1264:ARG:NH1	1:C:1270:VAL:HB	2.27	0.49
1:C:1455:ARG:O	1:C:1459:ILE:HG13	2.12	0.49
2:G:463:PHE:CE1	2:G:486:LEU:HD22	2.47	0.49
2:G:463:PHE:HD2	2:G:463:PHE:O	1.95	0.49
2:G:1425:LYS:HG2	2:G:1471:GLU:CG	2.37	0.49
2:G:1486:PHE:HA	2:G:1504:VAL:O	2.12	0.49
2:G:1493:LEU:HD11	2:G:1499:VAL:HG21	1.93	0.49
2:H:894:ARG:NH1	2:H:898:ASP:OD2	2.41	0.49
2:I:324:LEU:HD12	2:I:324:LEU:O	2.12	0.49
2:I:751:LEU:HA	2:I:794:MET:HE3	1.94	0.49
2:I:1352:HIS:HE1	2:I:1583:MET:CE	2.25	0.49
1:A:1009:LEU:HD13	1:A:1445:MET:HE1	1.94	0.49
1:A:1189:ILE:HG23	1:A:1190:PRO:HD2	1.95	0.49
1:C:790:PHE:CE2	1:C:794:ILE:HD11	2.48	0.49
1:C:1392:LEU:HD22	1:C:1396:MET:HG3	1.93	0.49
2:G:677:GLN:O	2:G:678:PHE:HB3	2.13	0.49
2:G:706:LYS:HE2	2:G:731:GLN:OE1	2.13	0.49
2:G:950:PHE:O	2:G:954:VAL:HG23	2.13	0.49
2:G:1427:VAL:HG22	2:G:1469:GLU:HG2	1.94	0.49
2:H:273:HIS:CB	2:H:512:LEU:HD22	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:682:GLY:O	2:H:683:ALA:HB3	2.13	0.49
2:H:942:THR:HG21	2:H:1012:GLN:HA	1.95	0.49
2:H:1889:VAL:HG13	2:H:1977:HIS:HB3	1.93	0.49
2:I:238:CYS:CB	2:I:239:PRO:HD3	2.40	0.49
2:I:1293:THR:CG2	2:I:1296:GLU:H	2.20	0.49
2:I:1678:MET:CE	2:I:1707:LEU:HD22	2.41	0.49
1:A:20:TYR:CD1	2:G:2033:THR:OG1	2.59	0.49
1:A:46:GLU:OE1	1:A:53:LEU:HB2	2.12	0.49
1:A:1234:MET:HG2	1:A:1326:ILE:HD12	1.94	0.49
1:B:435:GLU:O	1:B:439:ILE:HG13	2.12	0.49
1:B:1305:CYS:SG	1:B:1583:HIS:NE2	2.85	0.49
1:C:50:SER:HB2	1:C:51:PRO:CD	2.43	0.49
1:C:1050:CYS:HB3	1:C:1089:VAL:HG12	1.94	0.49
2:H:598:THR:O	2:H:602:VAL:HB	2.11	0.49
2:H:1303:ALA:HB2	2:H:1556:VAL:HG21	1.93	0.49
1:A:157:HIS:CE1	1:A:228:LEU:HD22	2.48	0.49
1:A:1451:GLN:OE1	1:A:1451:GLN:HA	2.12	0.49
1:B:170:LYS:HD3	1:B:175:LEU:HD23	1.93	0.49
1:B:764:ASP:OD2	1:B:818:ARG:HD3	2.11	0.49
1:B:1362:PRO:HA	1:B:1365:MET:HG3	1.94	0.49
1:B:1600:LEU:HD11	1:B:1655:VAL:HG12	1.94	0.49
2:G:465:GLY:HA2	2:G:493:THR:HA	1.95	0.49
2:H:7:ARG:HH11	2:H:24:THR:HG23	1.75	0.49
2:H:22:VAL:HG11	2:H:27:PHE:HA	1.94	0.49
2:H:138:ASP:O	2:H:139:LYS:HG3	2.12	0.49
2:H:369:SER:O	2:H:370:LEU:HD23	2.13	0.49
2:H:715:GLN:O	2:H:719:ILE:HG12	2.13	0.49
2:H:949:ASP:CB	2:H:1006:MET:HE2	2.42	0.49
2:H:1566:SER:HB3	2:H:1568:HIS:CE1	2.47	0.49
2:I:7:ARG:CZ	2:I:24:THR:HA	2.42	0.49
2:I:16:LEU:HG	2:I:48:PHE:CZ	2.48	0.49
2:I:55:THR:CG2	2:I:56:THR:HG22	2.33	0.49
2:I:161:GLY:HA3	2:I:506:PRO:HD2	1.93	0.49
2:I:1015:VAL:HG13	2:I:1017:PHE:CE2	2.47	0.49
2:I:1265:MET:CE	2:I:1562:PRO:HG2	2.41	0.49
2:I:1435:ILE:HG22	2:I:1435:ILE:O	2.12	0.49
1:A:18:LEU:HD21	2:G:1815:LEU:HD12	1.95	0.49
1:A:256:LEU:HD22	1:A:260:ARG:HB3	1.94	0.49
1:A:328:LEU:HD13	1:A:329:GLU:N	2.27	0.49
1:A:1264:ARG:NH1	1:A:1270:VAL:HB	2.28	0.49
1:A:1705:PRO:HB2	1:A:1733:PHE:CE1	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1105:LEU:HD23	1:B:1185:VAL:HG22	1.94	0.49
1:C:636:PRO:HB2	1:C:638:LEU:O	2.13	0.49
1:C:980:VAL:HG23	2:I:968:GLN:OE1	2.13	0.49
2:G:618:GLU:HG2	2:G:678:PHE:CZ	2.48	0.49
2:G:1266:TYR:HB2	2:G:1347:LEU:HD23	1.95	0.49
2:H:161:GLY:N	2:H:505:GLY:HA3	2.25	0.49
2:H:455:ILE:HD11	2:H:469:ARG:NE	2.27	0.49
2:H:463:PHE:O	2:H:463:PHE:HD2	1.96	0.49
2:H:1873:TYR:HE1	2:H:1877:ARG:HH21	1.59	0.49
2:I:740:HIS:CE1	2:I:852:GLU:OE1	2.65	0.49
2:I:1169:PRO:O	2:I:1173:VAL:HG23	2.13	0.49
2:I:1873:TYR:CE2	2:I:1940:LEU:HD21	2.47	0.49
1:A:21:GLN:HG3	2:G:2013:ASN:HB2	1.93	0.49
1:B:1642:THR:HG22	1:B:1652:GLN:HG3	1.93	0.49
1:C:176:VAL:HG12	1:C:178:GLY:H	1.77	0.49
1:C:982:ILE:HD11	2:I:965:SER:HB2	1.95	0.49
1:C:1114:TYR:CD1	1:C:1337:GLU:HG3	2.48	0.49
2:G:157:VAL:HG11	2:G:496:PHE:CZ	2.47	0.49
2:G:491:GLU:HA	2:G:494:THR:HG22	1.95	0.49
2:G:732:TRP:CD1	2:G:750:MET:HE3	2.47	0.49
2:H:173:LEU:O	2:H:173:LEU:HD22	2.13	0.49
2:H:569:LEU:HD12	2:H:1090:TYR:CD1	2.48	0.49
2:H:702:TYR:HB2	2:H:727:PRO:HB2	1.94	0.49
2:H:932:ILE:HD12	2:H:939:PHE:HD1	1.78	0.49
2:H:1425:LYS:HG2	2:H:1471:GLU:CG	2.38	0.49
2:H:1593:ILE:O	2:H:1597:ALA:HB3	2.12	0.49
2:H:1634:GLY:HA3	2:H:1799:PRO:HA	1.94	0.49
2:H:1666:PHE:CD1	2:H:1814:ALA:HA	2.48	0.49
2:I:11:LEU:HD11	2:I:64:PHE:CD2	2.48	0.49
2:I:573:LYS:HE3	2:I:1101:GLU:OE1	2.12	0.49
2:I:597:MET:H	2:I:601:THR:HB	1.78	0.49
2:I:949:ASP:CB	2:I:1006:MET:HE2	2.43	0.49
1:A:1219:VAL:CA	1:A:1384:ILE:HD11	2.31	0.49
1:A:1362:PRO:HA	1:A:1365:MET:HG3	1.95	0.49
1:B:186:ILE:O	1:B:190:LEU:HG	2.13	0.49
1:C:18:LEU:HD21	2:I:1815:LEU:HD12	1.94	0.49
1:C:20:TYR:CD2	2:I:2033:THR:OG1	2.66	0.49
1:C:267:VAL:HG12	1:C:290:MET:CE	2.42	0.49
1:C:1020:VAL:CG1	1:C:1400:ILE:HG23	2.42	0.49
2:G:161:GLY:N	2:G:505:GLY:HA3	2.24	0.49
2:G:273:HIS:CB	2:G:512:LEU:HD22	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1130:THR:H	2:G:1133:THR:CG2	2.26	0.49
2:H:428:HIS:HD2	2:H:486:LEU:O	1.96	0.49
2:H:1749:GLU:OE2	2:H:1840:VAL:HG13	2.12	0.49
2:I:173:LEU:O	2:I:173:LEU:HD22	2.13	0.49
2:I:306:ILE:HA	2:I:439:ILE:HD13	1.94	0.49
2:I:1567:ARG:HH11	2:I:1567:ARG:HG2	1.70	0.49
1:A:1009:LEU:HG	1:A:1664:ALA:HB2	1.95	0.49
1:A:1022:THR:HG22	1:A:1226:SER:CB	2.43	0.49
1:B:1312:VAL:CG2	1:B:1329:VAL:HG11	2.39	0.49
1:C:32:GLN:NE2	1:C:57:ALA:HA	2.28	0.49
1:C:335:HIS:O	1:C:335:HIS:CD2	2.65	0.49
2:G:173:LEU:O	2:G:173:LEU:HD22	2.13	0.49
2:G:259:THR:HG22	2:G:262:GLU:CB	2.43	0.49
2:G:653:TYR:HD1	2:G:659:LEU:HD21	1.78	0.49
2:G:715:GLN:O	2:G:719:ILE:HG12	2.13	0.49
2:G:807:ILE:HD12	2:G:1063:THR:HG23	1.95	0.49
2:G:1666:PHE:CD1	2:G:1814:ALA:HA	2.48	0.49
2:G:1913:VAL:O	2:G:1917:ILE:HG13	2.12	0.49
2:G:2036:GLU:HG2	2:G:2039:LYS:NZ	2.28	0.49
2:H:860:ARG:HB2	2:H:1049:GLN:HG3	1.94	0.49
2:H:1002:HIS:NE2	2:H:1006:MET:HE3	2.27	0.49
2:I:428:HIS:HD2	2:I:486:LEU:O	1.95	0.49
2:I:881:VAL:N	2:I:882:PRO:CD	2.76	0.49
2:I:1567:ARG:NH1	2:I:1568:HIS:HB3	2.28	0.49
1:A:1021:VAL:HG22	1:A:1387:ILE:HG22	1.95	0.48
1:A:1312:VAL:CG2	1:A:1329:VAL:HG11	2.41	0.48
1:B:182:VAL:O	1:B:186:ILE:HG13	2.12	0.48
1:B:916:LEU:HD22	1:B:922:VAL:HG22	1.94	0.48
1:C:1105:LEU:HD23	1:C:1185:VAL:HG22	1.94	0.48
1:C:1693:ILE:CD1	2:I:998:GLN:HB2	2.40	0.48
2:G:402:LEU:HD12	2:G:404:GLN:HG2	1.95	0.48
2:G:598:THR:O	2:G:602:VAL:HB	2.13	0.48
2:H:465:GLY:HA2	2:H:493:THR:HA	1.95	0.48
2:H:739:GLY:HA2	2:H:1054:LEU:HG	1.95	0.48
2:H:1931:LEU:HB3	2:H:1935:GLU:CG	2.36	0.48
2:I:161:GLY:N	2:I:505:GLY:HA3	2.24	0.48
2:I:663:ILE:HB	2:I:664:PRO:CD	2.42	0.48
2:I:835:THR:HG22	2:I:844:VAL:HA	1.95	0.48
2:I:1697:HIS:HE1	2:I:1829:GLU:CG	2.26	0.48
1:B:187:LEU:HD22	1:B:201:PRO:HB2	1.94	0.48
1:B:465:ASN:O	1:B:469:VAL:HG23	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:11:LEU:HD11	2:G:64:PHE:CD2	2.48	0.48
2:G:376:ASN:C	2:G:376:ASN:ND2	2.67	0.48
2:G:597:MET:H	2:G:601:THR:HB	1.77	0.48
2:G:1745:LYS:HE2	2:G:1747:LYS:HG2	1.95	0.48
2:G:2046:GLU:C	2:G:2048:TYR:H	2.15	0.48
2:H:259:THR:HG22	2:H:262:GLU:CB	2.42	0.48
2:H:306:ILE:HA	2:H:439:ILE:CD1	2.42	0.48
2:H:786:SER:CB	2:H:794:MET:HE2	2.43	0.48
2:H:901:LYS:NZ	2:H:1031:LYS:O	2.46	0.48
2:H:1272:ASP:O	2:H:1273:GLU:HG3	2.13	0.48
2:H:1417:THR:O	2:H:1419:PHE:N	2.45	0.48
2:H:1868:GLN:HG3	2:H:1898:TYR:CZ	2.48	0.48
2:I:629:GLY:O	2:I:632:ALA:HB3	2.13	0.48
2:I:682:GLY:O	2:I:683:ALA:HB3	2.13	0.48
2:I:970:TYR:O	2:I:973:LEU:HB2	2.14	0.48
2:I:1674:GLN:OE1	2:I:1712:ASN:HA	2.13	0.48
1:A:1477:ILE:H	1:A:1478:PRO:HD3	1.78	0.48
1:B:2:LYS:HE2	1:B:4:GLU:CD	2.34	0.48
1:B:157:HIS:HE1	1:B:228:LEU:HD22	1.77	0.48
1:B:413:LEU:C	1:B:415:SER:H	2.17	0.48
1:C:256:LEU:HD22	1:C:260:ARG:HB3	1.95	0.48
1:C:1305:CYS:SG	3:C:2748:CER:C5	3.01	0.48
1:C:1523:ARG:NH2	1:C:1564:LEU:O	2.46	0.48
2:G:7:ARG:HE	2:G:27:PHE:CB	2.25	0.48
2:G:533:LEU:HD13	2:G:545:GLN:HG3	1.94	0.48
2:G:754:TYR:CE2	2:G:794:MET:HG3	2.48	0.48
2:G:1330:GLY:HA2	2:G:1374:THR:HG21	1.94	0.48
2:G:1428:GLU:HG2	2:G:1470:THR:HG22	1.94	0.48
2:H:33:LEU:HD21	2:H:80:PHE:CE2	2.49	0.48
2:H:40:ILE:O	2:H:42:PRO:HD3	2.13	0.48
2:H:463:PHE:CD1	2:H:486:LEU:HD22	2.48	0.48
2:H:955:GLU:HG2	2:H:987:TYR:HE2	1.78	0.48
2:I:278:VAL:HG11	2:I:303:LEU:HD13	1.95	0.48
2:I:786:SER:CB	2:I:794:MET:HE2	2.42	0.48
2:I:1130:THR:H	2:I:1133:THR:CG2	2.25	0.48
2:I:1873:TYR:CE1	2:I:1877:ARG:NE	2.77	0.48
1:A:340:ARG:HH12	1:A:344:GLN:HE21	1.60	0.48
1:B:328:LEU:HD13	1:B:329:GLU:N	2.29	0.48
1:B:332:THR:HG22	1:C:331:ILE:CD1	2.44	0.48
1:B:335:HIS:O	1:B:338:LEU:HB3	2.14	0.48
1:B:702:LYS:HD3	1:B:731:THR:CG2	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:331:ILE:HG23	1:C:332:THR:N	2.28	0.48
2:G:455:ILE:HG12	2:G:469:ARG:HG2	1.94	0.48
2:G:720:ALA:HA	2:G:728:ILE:CD1	2.43	0.48
2:G:1980:TYR:HD1	2:G:1981:LEU:HD12	1.79	0.48
2:H:428:HIS:CD2	2:H:488:VAL:HG23	2.49	0.48
2:H:995:LEU:HB3	2:H:1000:ILE:HD11	1.94	0.48
2:H:1624:THR:HB	2:H:1642:THR:OG1	2.14	0.48
2:I:146:PHE:HA	2:I:149:VAL:HG12	1.92	0.48
2:I:249:TYR:CD2	2:I:283:ILE:HD11	2.48	0.48
2:I:402:LEU:HD12	2:I:404:GLN:HG2	1.94	0.48
2:I:455:ILE:HG13	2:I:455:ILE:O	2.13	0.48
2:I:551:THR:HG22	2:I:552:SER:N	2.29	0.48
2:I:593:LEU:HD21	2:I:800:LEU:HB3	1.95	0.48
2:I:995:LEU:HB3	2:I:1000:ILE:HD11	1.95	0.48
2:I:1850:SER:HB2	2:I:1973:SER:HB2	1.95	0.48
1:A:1714:VAL:HG22	1:A:1738:ILE:HD11	1.96	0.48
1:B:21:GLN:HG3	2:H:2013:ASN:HB2	1.95	0.48
1:B:408:TRP:CH2	1:B:1628:SER:HB3	2.47	0.48
1:B:998:TYR:CE2	1:B:1667:GLU:HB2	2.49	0.48
1:C:988:ILE:HD13	1:C:1048:GLU:CB	2.43	0.48
1:C:1477:ILE:H	1:C:1478:PRO:HD3	1.78	0.48
1:C:1642:THR:HG22	1:C:1652:GLN:HG3	1.96	0.48
2:G:995:LEU:HB3	2:G:1000:ILE:HD11	1.96	0.48
2:G:1344:ASP:O	2:G:1416:TYR:HE2	1.97	0.48
2:G:1567:ARG:CG	2:G:1567:ARG:NH1	2.51	0.48
2:H:145:LEU:HD21	2:H:156:LEU:HD21	1.95	0.48
2:H:1100:VAL:CG2	2:H:1147:ILE:HG21	2.43	0.48
2:H:1918:LYS:HG2	2:H:1919:LEU:HD23	1.96	0.48
2:H:1953:VAL:O	2:H:1953:VAL:HG12	2.14	0.48
2:H:1986:LYS:HA	2:H:1989:LYS:HB3	1.95	0.48
2:I:569:LEU:HD12	2:I:1090:TYR:CD1	2.48	0.48
2:I:1081:HIS:O	2:I:1085:LEU:HB2	2.14	0.48
2:I:1266:TYR:HB2	2:I:1347:LEU:HD23	1.95	0.48
1:A:19:ALA:O	1:A:22:PHE:HB2	2.14	0.48
1:A:20:TYR:CE1	2:G:2033:THR:CG2	2.97	0.48
1:A:444:ASN:HB2	1:A:447:LEU:N	2.14	0.48
1:A:1401:TYR:C	1:A:1658:PRO:HG3	2.33	0.48
1:B:503:ILE:HD12	1:B:950:THR:HG21	1.96	0.48
1:C:430:ARG:NH1	1:C:493:VAL:O	2.44	0.48
1:C:764:ASP:OD2	1:C:818:ARG:HD3	2.12	0.48
2:G:72:VAL:HG12	2:G:73:GLU:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:569:LEU:HD12	2:G:1090:TYR:CD1	2.48	0.48
2:G:593:LEU:HD21	2:G:800:LEU:HB3	1.96	0.48
2:G:1148:ASN:C	2:G:1148:ASN:HD22	2.17	0.48
2:G:1213:LEU:O	2:G:1214:LEU:HD23	2.12	0.48
2:H:99:ASN:HA	2:H:550:VAL:HG21	1.95	0.48
2:H:397:LYS:HB3	2:H:416:PHE:CE2	2.48	0.48
2:H:784:GLU:O	2:H:787:THR:HB	2.13	0.48
2:H:1632:ILE:HG23	2:H:1632:ILE:O	2.13	0.48
2:I:7:ARG:HH11	2:I:24:THR:HG23	1.77	0.48
2:I:121:GLU:HA	2:I:124:LYS:HD2	1.96	0.48
2:I:533:LEU:HG	2:I:533:LEU:O	2.13	0.48
2:I:586:LEU:HD12	2:I:764:MET:SD	2.54	0.48
2:I:1159:ILE:CG1	2:I:1169:PRO:CD	2.90	0.48
2:I:1738:PHE:CE1	2:I:1837:THR:HG23	2.48	0.48
1:A:182:VAL:O	1:A:186:ILE:HG13	2.14	0.48
1:A:420:ILE:HG22	1:A:469:VAL:HG22	1.96	0.48
1:A:485:ASP:C	1:A:486:VAL:CA	2.76	0.48
1:A:988:ILE:HA	1:A:1048:GLU:CG	2.44	0.48
1:C:852:ARG:NH1	1:C:852:ARG:CG	2.66	0.48
1:C:1276:GLN:O	1:C:1282:THR:HG21	2.13	0.48
1:C:1300:THR:HA	1:C:1301:PRO:HD3	1.67	0.48
1:C:1312:VAL:CG2	1:C:1329:VAL:HG11	2.44	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
1:C:1617:ILE:O	1:C:1620:GLN:HG2	2.13	0.48
2:G:240:LEU:O	2:G:244:ILE:HG13	2.13	0.48
2:G:1590:ARG:HG3	2:G:1608:TYR:CD2	2.48	0.48
2:G:2026:PHE:HD2	2:G:2045:TRP:HZ3	1.59	0.48
2:H:751:LEU:HD23	2:H:791:TYR:CZ	2.49	0.48
2:H:1674:GLN:OE1	2:H:1712:ASN:HA	2.12	0.48
2:I:667:LYS:HD2	2:I:697:THR:CG2	2.35	0.48
2:I:762:ASN:HD22	2:I:762:ASN:N	1.88	0.48
2:I:1697:HIS:HE1	2:I:1829:GLU:HG2	1.77	0.48
1:A:539:SER:O	1:A:540:GLN:C	2.52	0.48
1:A:1037:TRP:HB2	1:A:1598:GLN:OE1	2.13	0.48
1:B:625:THR:HG23	1:B:661:ASP:OD1	2.13	0.48
1:B:790:PHE:CE2	1:B:794:ILE:HD11	2.47	0.48
1:B:1056:ILE:HD13	1:B:1193:TRP:CD1	2.45	0.48
1:B:1183:ARG:NH1	1:B:1344:GLY:HA2	2.29	0.48
1:C:888:ILE:HD12	1:C:939:PHE:CE2	2.47	0.48
1:C:1738:ILE:O	1:C:1739:GLN:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:522:GLY:O	2:G:560:ASN:HA	2.13	0.48
2:G:1180:MET:HB2	2:G:1197:LEU:HD21	1.95	0.48
2:H:169:TYR:CG	2:H:170:PHE:N	2.81	0.48
2:H:214:ASN:ND2	2:H:217:GLU:HB2	2.27	0.48
2:H:490:TRP:HA	2:H:493:THR:HG22	1.96	0.48
2:H:597:MET:H	2:H:601:THR:HB	1.78	0.48
2:H:1040:LEU:O	2:H:1046:GLN:HG3	2.13	0.48
2:I:845:THR:HG22	2:I:855:HIS:CD2	2.49	0.48
2:I:1325:PHE:CE1	2:I:1328:VAL:HG11	2.49	0.48
2:I:1586:SER:O	2:I:1590:ARG:HB2	2.14	0.48
1:A:427:ASN:HB2	1:A:468:LEU:HD21	1.95	0.48
1:A:695:GLY:HA3	1:A:906:LEU:HD11	1.94	0.48
1:B:243:ILE:O	1:B:247:ARG:HG3	2.13	0.48
2:G:306:ILE:HA	2:G:439:ILE:HD13	1.96	0.48
2:G:432:LEU:HB3	2:G:484:ILE:HG23	1.96	0.48
2:G:481:ASP:OD2	2:G:485:ARG:NH1	2.47	0.48
2:H:489:LYS:O	2:H:493:THR:HG22	2.13	0.48
2:H:868:PHE:HB3	2:H:873:PHE:CE2	2.48	0.48
2:I:772:GLY:O	2:I:804:ARG:HD3	2.14	0.48
2:I:1159:ILE:HG22	2:I:1160:THR:N	2.28	0.48
1:A:328:LEU:N	1:A:330:GLU:H	2.12	0.48
1:A:927:ASN:O	1:A:929:GLY:N	2.41	0.48
1:A:1639:VAL:HG12	1:A:1640:SER:N	2.28	0.48
1:B:328:LEU:N	1:B:330:GLU:H	2.11	0.48
1:B:683:ALA:HA	1:B:689:GLY:HA3	1.95	0.48
1:B:930:LEU:HD23	1:B:930:LEU:HA	1.67	0.48
1:B:1319:ILE:HA	1:B:1324:ALA:O	2.13	0.48
1:C:386:PHE:O	1:C:390:VAL:HB	2.14	0.48
1:C:751:PHE:CZ	1:C:761:LEU:HD13	2.49	0.48
2:G:173:LEU:HD13	2:G:219:LEU:HD21	1.94	0.48
2:G:461:ASP:HB3	2:G:464:ASP:HB2	1.95	0.48
2:G:1148:ASN:ND2	2:G:1151:HIS:H	2.12	0.48
2:G:1325:PHE:CE1	2:G:1328:VAL:HG11	2.48	0.48
2:H:157:VAL:HG11	2:H:496:PHE:CZ	2.49	0.48
2:H:232:LEU:HD21	2:H:423:VAL:HA	1.95	0.48
2:H:706:LYS:HE2	2:H:731:GLN:OE1	2.14	0.48
2:I:214:ASN:ND2	2:I:217:GLU:HB2	2.28	0.48
2:I:489:LYS:O	2:I:493:THR:HG22	2.13	0.48
2:I:753:MET:O	2:I:757:ILE:HG13	2.14	0.48
2:I:2026:PHE:HD2	2:I:2045:TRP:HZ3	1.60	0.48
1:A:187:LEU:HD22	1:A:201:PRO:HB2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1:MET:HE3	1:B:9:LEU:HD12	1.96	0.47
1:B:1646:PHE:CE1	3:B:2748:CER:H31	2.49	0.47
1:C:182:VAL:O	1:C:186:ILE:HG13	2.14	0.47
1:C:187:LEU:HD22	1:C:201:PRO:HB2	1.96	0.47
1:C:440:MET:HE3	1:C:483:VAL:HG21	1.95	0.47
1:C:529:MET:HG2	1:C:638:LEU:HG	1.95	0.47
1:C:1392:LEU:CD2	1:C:1396:MET:HG3	2.44	0.47
2:G:22:VAL:HG11	2:G:27:PHE:HA	1.96	0.47
2:G:1027:ILE:O	2:G:1031:LYS:HB2	2.14	0.47
2:G:1566:SER:HB3	2:G:1568:HIS:CE1	2.49	0.47
2:H:873:PHE:CD1	2:H:1026:GLU:HB2	2.49	0.47
2:H:943:TRP:CZ2	2:H:1016:PRO:HG3	2.49	0.47
2:H:1590:ARG:NH2	2:H:1594:GLU:OE2	2.47	0.47
2:I:176:LEU:HD22	2:I:247:ALA:HB1	1.96	0.47
2:I:594:VAL:CG2	2:I:610:THR:HG21	2.44	0.47
2:I:900:GLN:NE2	2:I:1051:THR:HA	2.28	0.47
2:I:1002:HIS:NE2	2:I:1006:MET:HE3	2.29	0.47
2:I:1015:VAL:HA	2:I:1016:PRO:HD3	1.74	0.47
2:I:1834:ARG:NH1	2:I:1834:ARG:CG	2.66	0.47
1:A:176:VAL:HG12	1:A:178:GLY:H	1.79	0.47
1:A:1501:LEU:O	1:A:1505:GLN:HG3	2.14	0.47
1:B:256:LEU:HD22	1:B:260:ARG:HB3	1.95	0.47
1:B:1367:ARG:HH12	1:B:1372:THR:CB	2.20	0.47
1:C:427:ASN:HB2	1:C:468:LEU:HD21	1.95	0.47
1:C:1021:VAL:HG11	1:C:1597:LEU:CD1	2.44	0.47
1:C:1125:VAL:HG21	1:C:1175:ILE:CD1	2.43	0.47
2:G:40:ILE:O	2:G:42:PRO:HD3	2.14	0.47
2:G:777:THR:HG23	2:G:1081:HIS:CE1	2.49	0.47
2:H:159:ILE:CG2	2:H:501:ILE:HG22	2.44	0.47
2:H:213:LEU:HG	2:H:213:LEU:O	2.14	0.47
2:H:732:TRP:CD2	2:H:750:MET:HE1	2.49	0.47
2:H:950:PHE:O	2:H:954:VAL:HG23	2.13	0.47
2:H:1749:GLU:OE2	2:H:1840:VAL:CG1	2.62	0.47
1:A:683:ALA:HA	1:A:689:GLY:HA3	1.95	0.47
1:A:852:ARG:HB3	1:A:858:TRP:HZ2	1.80	0.47
1:A:893:VAL:HG11	1:A:930:LEU:CD2	2.38	0.47
1:A:1238:VAL:CG1	1:A:1242:GLU:HB2	2.44	0.47
1:A:1303:GLY:C	1:A:1307:THR:HG22	2.35	0.47
1:B:530:ALA:HA	1:B:636:PRO:HB3	1.97	0.47
1:B:1116:PRO:HB2	1:B:1184:LEU:HD12	1.95	0.47
1:B:1209:ASP:OD2	1:B:1253:GLY:HA2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1010:GLU:HA	1:C:1664:ALA:HA	1.95	0.47
1:C:1516:ASP:HA	1:C:1517:PRO:HD3	1.66	0.47
2:G:428:HIS:HD2	2:G:486:LEU:O	1.97	0.47
2:G:804:ARG:NH2	2:G:1068:GLU:OE1	2.48	0.47
2:G:1417:THR:O	2:G:1419:PHE:N	2.46	0.47
2:G:1624:THR:HB	2:G:1642:THR:OG1	2.15	0.47
2:G:1666:PHE:CD1	2:G:1814:ALA:HB2	2.49	0.47
2:H:589:ARG:HB3	2:H:590:PRO:CD	2.43	0.47
2:H:1417:THR:C	2:H:1419:PHE:H	2.18	0.47
2:H:1438:SER:O	2:H:1441:ILE:HG23	2.13	0.47
2:I:926:LEU:HB3	2:I:947:THR:CG2	2.43	0.47
2:I:1579:ILE:HD11	2:I:1615:MET:SD	2.53	0.47
2:I:1752:PHE:HZ	2:I:1836:MET:HE3	1.80	0.47
1:C:370:GLU:O	1:C:373:ALA:HB3	2.14	0.47
1:C:526:VAL:HG12	1:C:626:VAL:HG11	1.96	0.47
1:C:987:ASN:HD22	2:I:957:ARG:CD	2.26	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	1.96	0.47
1:C:1138:LYS:HG3	1:C:1163:TYR:CE1	2.48	0.47
2:G:33:LEU:HD21	2:G:80:PHE:CE2	2.50	0.47
2:G:169:TYR:CG	2:G:170:PHE:N	2.83	0.47
2:G:512:LEU:O	2:G:516:THR:HG23	2.15	0.47
2:H:597:MET:HA	4:H:3051:FMN:N5	2.30	0.47
2:H:634:ILE:HD11	2:H:649:ILE:CD1	2.40	0.47
2:H:677:GLN:O	2:H:678:PHE:HB3	2.15	0.47
2:H:1472:VAL:CG2	2:H:1483:VAL:HG22	2.44	0.47
2:H:1486:PHE:HA	2:H:1504:VAL:O	2.14	0.47
2:I:233:SER:HA	2:I:424:ALA:CB	2.44	0.47
2:I:562:LEU:HG	2:I:793:PRO:CB	2.44	0.47
2:I:1804:PHE:CD2	2:I:1818:LEU:HD22	2.49	0.47
1:A:1012:LEU:HD23	1:A:1445:MET:CE	2.43	0.47
1:A:1208:VAL:HG11	1:A:1212:THR:HB	1.96	0.47
1:A:1319:ILE:HA	1:A:1324:ALA:O	2.14	0.47
1:B:20:TYR:CG	2:H:2033:THR:OG1	2.67	0.47
1:B:331:ILE:HG23	1:B:332:THR:N	2.29	0.47
1:B:531:LEU:HD21	1:B:629:THR:HG22	1.97	0.47
1:B:1477:ILE:H	1:B:1478:PRO:HD3	1.79	0.47
1:C:142:ASP:CG	1:C:257:PRO:HB2	2.34	0.47
1:C:328:LEU:N	1:C:330:GLU:H	2.12	0.47
1:C:1303:GLY:CA	1:C:1649:LYS:HE2	2.36	0.47
2:G:123:ILE:CD1	2:G:533:LEU:CD2	2.93	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:463:PHE:CD1	2:G:486:LEU:HD22	2.48	0.47
2:G:732:TRP:CD2	2:G:750:MET:HE3	2.48	0.47
2:G:1651:LEU:O	2:G:1652:THR:HG23	2.14	0.47
2:G:1949:LYS:O	2:G:1953:VAL:HG23	2.15	0.47
2:H:376:ASN:HD22	2:H:376:ASN:C	2.18	0.47
2:H:455:ILE:HG13	2:H:455:ILE:O	2.13	0.47
2:H:750:MET:CG	2:H:796:PHE:HZ	2.25	0.47
2:H:860:ARG:H	2:H:1049:GLN:HG3	1.79	0.47
2:H:2037:PRO:O	2:H:2041:ILE:HG13	2.15	0.47
2:I:55:THR:HB	2:I:59:GLU:OE2	2.13	0.47
2:I:350:GLN:HA	2:I:353:VAL:HG13	1.96	0.47
2:I:873:PHE:CE1	2:I:1026:GLU:HB2	2.49	0.47
2:I:1378:ILE:O	2:I:1378:ILE:HG12	2.14	0.47
2:I:2037:PRO:O	2:I:2041:ILE:HG13	2.14	0.47
1:A:983:GLN:HE22	2:G:962:LYS:HD2	1.77	0.47
1:B:157:HIS:CE1	1:B:228:LEU:HD22	2.49	0.47
1:B:1305:CYS:SG	3:B:2748:CER:C5	3.03	0.47
1:C:335:HIS:O	1:C:338:LEU:HB3	2.14	0.47
2:H:355:LYS:HE2	2:H:355:LYS:HB3	1.65	0.47
2:H:579:VAL:CG2	2:H:1078:HIS:CD2	2.95	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	2.49	0.47
2:H:1854:MET:CG	2:H:1901:ALA:HB2	2.45	0.47
2:I:455:ILE:HD11	2:I:469:ARG:NE	2.29	0.47
2:I:553:ASN:O	2:I:556:LYS:HE3	2.15	0.47
2:I:706:LYS:HE2	2:I:731:GLN:OE1	2.15	0.47
2:I:748:THR:CB	2:I:749:PRO:HD3	2.44	0.47
2:I:1103:PHE:O	2:I:1247:GLY:HA3	2.14	0.47
2:I:1389:ILE:HG13	2:I:1411:PHE:HD1	1.80	0.47
2:I:1590:ARG:NH2	2:I:1594:GLU:OE2	2.48	0.47
1:A:243:ILE:O	1:A:247:ARG:HG3	2.14	0.47
1:A:406:TRP:CE3	1:A:1619:GLU:HG3	2.49	0.47
1:A:413:LEU:HD13	1:A:451:MET:HG2	1.97	0.47
1:A:1010:GLU:HA	1:A:1664:ALA:HA	1.97	0.47
1:A:1061:SER:HB2	1:A:1078:SER:HB3	1.96	0.47
1:A:1158:PRO:HD2	1:A:1159:GLU:OE2	2.14	0.47
1:B:34:VAL:O	1:B:38:ASP:HB2	2.14	0.47
1:B:705:VAL:CG2	1:B:732:LEU:HD21	2.43	0.47
1:B:776:GLU:OE1	1:B:795:MET:HE1	2.13	0.47
1:B:827:SER:HA	1:B:828:PRO:HD3	1.73	0.47
1:B:889:GLU:HG3	1:B:893:VAL:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:968:VAL:O	2:H:1512:HIS:HB2	2.14	0.47
1:B:1276:GLN:O	1:B:1282:THR:HG21	2.14	0.47
1:C:186:ILE:O	1:C:190:LEU:HG	2.14	0.47
1:C:254:TRP:HZ3	1:C:292:GLN:HG3	1.77	0.47
1:C:338:LEU:O	1:C:342:GLN:HG3	2.15	0.47
1:C:1183:ARG:NH1	1:C:1344:GLY:HA2	2.30	0.47
1:C:1305:CYS:SG	1:C:1585:LYS:HA	2.55	0.47
2:G:232:LEU:HD21	2:G:423:VAL:HA	1.97	0.47
2:G:369:SER:O	2:G:370:LEU:HD23	2.14	0.47
2:G:629:GLY:O	2:G:632:ALA:HB3	2.15	0.47
2:G:732:TRP:CE2	2:G:750:MET:HE3	2.50	0.47
2:G:1102:TYR:HB3	2:G:1244:PRO:CA	2.44	0.47
2:G:1567:ARG:NH1	2:G:1568:HIS:HB3	2.28	0.47
2:H:11:LEU:HD11	2:H:64:PHE:CD2	2.50	0.47
2:H:176:LEU:HD22	2:H:247:ALA:HB1	1.95	0.47
2:H:606:PHE:HZ	2:H:805:VAL:CG1	2.28	0.47
2:H:741:HIS:HE1	2:H:845:THR:HG21	1.61	0.47
2:H:967:ILE:HD12	2:H:972:LEU:HD22	1.96	0.47
2:H:1130:THR:H	2:H:1133:THR:CG2	2.27	0.47
2:H:1378:ILE:O	2:H:1378:ILE:HG12	2.13	0.47
2:H:1819:ALA:CA	2:H:2005:ARG:HH11	2.26	0.47
2:H:1980:TYR:HD1	2:H:1981:LEU:HD12	1.79	0.47
2:I:22:VAL:HG11	2:I:27:PHE:HA	1.97	0.47
2:I:443:LEU:HD22	2:I:448:VAL:CG1	2.45	0.47
2:I:461:ASP:HB3	2:I:464:ASP:HB2	1.95	0.47
2:I:732:TRP:CE2	2:I:750:MET:HE3	2.50	0.47
2:I:747:HIS:HE1	2:I:780:TYR:OH	1.97	0.47
2:I:768:GLY:HA3	2:I:800:LEU:CD2	2.41	0.47
2:I:955:GLU:HG2	2:I:987:TYR:HE2	1.79	0.47
2:I:1004:LEU:CD2	2:I:1019:PRO:HB2	2.44	0.47
2:I:1148:ASN:ND2	2:I:1151:HIS:H	2.13	0.47
1:A:479:ASN:O	1:A:483:VAL:HG23	2.15	0.47
1:A:529:MET:HE3	1:A:529:MET:CA	2.36	0.47
1:A:988:ILE:HD13	1:A:1048:GLU:HA	1.97	0.47
1:B:142:ASP:CG	1:B:257:PRO:HB2	2.35	0.47
1:B:253:ARG:O	1:B:254:TRP:CD1	2.68	0.47
1:B:1523:ARG:NH2	1:B:1564:LEU:O	2.48	0.47
1:C:1544:THR:O	1:C:1545:SER:HB3	2.15	0.47
2:G:55:THR:HB	2:G:59:GLU:OE2	2.14	0.47
2:G:1159:ILE:CG1	2:G:1169:PRO:CD	2.93	0.47
2:G:1666:PHE:CE1	2:G:1814:ALA:HA	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1873:TYR:CE2	2:G:1940:LEU:HD21	2.49	0.47
2:H:586:LEU:HD12	2:H:764:MET:SD	2.55	0.47
2:H:826:GLY:HA3	2:H:1061:GLN:CB	2.44	0.47
2:H:1004:LEU:CD2	2:H:1019:PRO:HB2	2.44	0.47
2:I:42:PRO:HG2	2:I:52:ASP:CG	2.35	0.47
2:I:194:THR:CG2	2:I:300:ILE:HD11	2.40	0.47
2:I:376:ASN:C	2:I:376:ASN:ND2	2.68	0.47
1:B:1305:CYS:SG	3:B:2748:CER:H51	2.54	0.47
1:C:18:LEU:HD21	2:I:1815:LEU:CD1	2.45	0.47
1:C:237:MET:HG3	1:C:241:PHE:HB3	1.95	0.47
1:C:1012:LEU:HD23	1:C:1445:MET:HE3	1.97	0.47
2:G:730:LEU:C	2:G:730:LEU:HD12	2.35	0.47
2:G:772:GLY:O	2:G:804:ARG:HD3	2.15	0.47
2:G:826:GLY:HA2	2:G:1060:ALA:HB3	1.97	0.47
2:G:1850:SER:HB2	2:G:1973:SER:HB2	1.96	0.47
2:H:127:ILE:HD12	2:H:180:TYR:HD2	1.80	0.47
2:H:131:ILE:CD1	2:H:182:VAL:CB	2.71	0.47
2:I:606:PHE:HZ	2:I:805:VAL:CG1	2.28	0.47
2:I:1553:TYR:OH	2:I:1583:MET:HB3	2.15	0.47
1:A:29:ILE:HG13	2:G:1891:TYR:O	2.15	0.47
1:A:36:LEU:CD2	1:A:61:LEU:HD21	2.37	0.47
1:A:1430:ARG:O	1:A:1430:ARG:HG2	2.15	0.47
1:B:32:GLN:NE2	1:B:57:ALA:HA	2.29	0.47
1:B:254:TRP:HZ3	1:B:292:GLN:HG3	1.76	0.47
1:B:883:ILE:HD12	1:B:947:LEU:HD12	1.97	0.47
1:B:1009:LEU:HD13	1:B:1445:MET:HE1	1.97	0.47
1:C:1189:ILE:HG23	1:C:1190:PRO:HD2	1.97	0.47
2:G:739:GLY:HA2	2:G:1054:LEU:HG	1.97	0.47
2:G:745:ASP:HA	2:G:832:TRP:CH2	2.48	0.47
2:G:881:VAL:N	2:G:882:PRO:CD	2.78	0.47
2:G:1273:GLU:HB3	2:G:1274:PRO:CD	2.45	0.47
2:G:1493:LEU:HB3	2:G:1494:PRO:HD2	1.96	0.47
2:H:238:CYS:CB	2:H:239:PRO:HD3	2.43	0.47
2:H:720:ALA:HA	2:H:728:ILE:CD1	2.45	0.47
2:H:1015:VAL:HG11	2:H:1017:PHE:CE1	2.50	0.47
2:H:1054:LEU:HB2	4:H:3051:FMN:HM71	1.96	0.47
2:H:1273:GLU:HB3	2:H:1274:PRO:CD	2.45	0.47
2:H:1428:GLU:HG2	2:H:1470:THR:HG22	1.97	0.47
2:H:1473:THR:O	2:H:1481:SER:HB3	2.15	0.47
2:H:1764:PHE:HB2	2:H:1770:LEU:HD21	1.97	0.47
2:I:490:TRP:HA	2:I:493:THR:HG22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1148:ASN:C	2:I:1148:ASN:HD22	2.19	0.47
1:A:186:ILE:O	1:A:190:LEU:HG	2.14	0.46
1:A:702:LYS:HD3	1:A:731:THR:CG2	2.44	0.46
1:B:1544:THR:O	1:B:1545:SER:HB3	2.15	0.46
1:C:709:ARG:O	1:C:714:VAL:HG21	2.16	0.46
2:G:249:TYR:CD2	2:G:283:ILE:HD11	2.50	0.46
2:G:1015:VAL:HG11	2:G:1017:PHE:CE1	2.50	0.46
2:G:1417:THR:C	2:G:1419:PHE:H	2.18	0.46
2:G:1738:PHE:CE1	2:G:1837:THR:HG23	2.50	0.46
2:G:2035:SER:HB3	2:G:2038:ILE:CG1	2.41	0.46
2:H:7:ARG:NH2	2:H:24:THR:O	2.48	0.46
2:H:440:ASN:ND2	2:H:477:GLU:HG2	2.30	0.46
2:I:99:ASN:HA	2:I:550:VAL:HG23	1.97	0.46
2:I:533:LEU:HD13	2:I:545:GLN:HG3	1.97	0.46
2:I:573:LYS:C	2:I:575:GLY:H	2.19	0.46
2:I:1344:ASP:O	2:I:1416:TYR:HE2	1.98	0.46
2:I:1913:VAL:O	2:I:1917:ILE:HG13	2.15	0.46
1:A:183:GLN:NE2	1:A:202:GLU:HG2	2.29	0.46
1:A:908:LEU:HA	1:A:913:VAL:HG21	1.96	0.46
1:A:930:LEU:HD23	1:A:930:LEU:HA	1.70	0.46
1:A:1056:ILE:HG13	1:A:1057:MET:N	2.30	0.46
1:A:1238:VAL:CG1	1:A:1239:HIS:N	2.78	0.46
1:B:1133:PRO:HG3	1:B:1166:LYS:HG3	1.97	0.46
1:C:293:LYS:O	1:C:297:ILE:HG13	2.15	0.46
1:C:499:PRO:HD3	1:C:516:ARG:HH21	1.80	0.46
1:C:893:VAL:HG11	1:C:930:LEU:CD2	2.40	0.46
1:C:1303:GLY:C	1:C:1307:THR:HG22	2.35	0.46
1:C:1646:PHE:CE1	3:C:2748:CER:H31	2.50	0.46
2:G:279:THR:O	2:G:283:ILE:HB	2.15	0.46
2:G:598:THR:CB	2:G:599:PRO:HD3	2.46	0.46
2:G:652:ILE:N	2:G:652:ILE:HD12	2.29	0.46
2:G:751:LEU:HA	2:G:794:MET:HE3	1.96	0.46
2:G:1293:THR:HG22	2:G:1296:GLU:CD	2.35	0.46
2:H:101:ILE:H	2:H:101:ILE:HG13	1.30	0.46
2:H:218:TRP:HB3	2:H:225:THR:OG1	2.15	0.46
2:H:736:ARG:H	2:H:736:ARG:HG3	1.55	0.46
2:H:926:LEU:HB3	2:H:947:THR:HG22	1.97	0.46
2:H:1258:ARG:O	2:H:1262:ILE:HG13	2.15	0.46
2:H:1269:LEU:O	2:H:1560:LEU:HD23	2.15	0.46
2:H:1804:PHE:CD2	2:H:1818:LEU:HD22	2.50	0.46
2:I:213:LEU:O	2:I:213:LEU:HG	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:345:THR:HG22	2:I:347:GLU:N	2.23	0.46
2:I:758:ARG:NH2	2:I:797:ASP:OD1	2.38	0.46
2:I:1080:GLY:O	2:I:1084:LYS:HG3	2.15	0.46
2:I:1148:ASN:HD22	2:I:1151:HIS:H	1.63	0.46
1:A:232:LEU:HD13	1:A:272:GLU:CB	2.44	0.46
1:A:702:LYS:HE2	1:A:729:GLY:O	2.15	0.46
1:B:14:LEU:HD11	2:H:1821:VAL:HG11	1.97	0.46
1:B:237:MET:HG3	1:B:241:PHE:HB3	1.97	0.46
1:B:1114:TYR:CD1	1:B:1337:GLU:HG3	2.50	0.46
1:B:1239:HIS:CD2	1:B:1241:SER:H	2.33	0.46
1:B:1303:GLY:C	1:B:1307:THR:HG22	2.35	0.46
1:B:1639:VAL:CG1	1:B:1640:SER:N	2.79	0.46
1:C:420:ILE:HG22	1:C:469:VAL:HG22	1.96	0.46
1:C:908:LEU:HA	1:C:913:VAL:HG21	1.96	0.46
1:C:1004:ILE:HG22	1:C:1660:TYR:CE2	2.49	0.46
2:G:7:ARG:NH2	2:G:24:THR:O	2.48	0.46
2:G:9:LEU:HB2	2:G:27:PHE:HE1	1.81	0.46
2:G:826:GLY:HA3	2:G:1061:GLN:CB	2.44	0.46
2:G:1579:ILE:HG22	2:G:1580:THR:O	2.15	0.46
2:H:72:VAL:HG12	2:H:73:GLU:N	2.30	0.46
2:H:350:GLN:HA	2:H:353:VAL:HG13	1.97	0.46
2:H:598:THR:CB	2:H:599:PRO:HD3	2.44	0.46
2:H:879:LYS:HA	2:H:879:LYS:HD3	1.71	0.46
2:H:1079:ASP:O	2:H:1082:ILE:HG22	2.16	0.46
2:H:1359:MET:CE	2:H:1404:MET:HB3	2.44	0.46
2:H:1552:PRO:O	2:H:1556:VAL:HG23	2.15	0.46
2:H:1945:ASP:O	2:H:1949:LYS:HG3	2.15	0.46
2:I:826:GLY:HA3	2:I:1061:GLN:CB	2.46	0.46
2:I:1417:THR:C	2:I:1419:PHE:H	2.18	0.46
2:I:1593:ILE:HD13	2:I:1626:ILE:HD13	1.97	0.46
1:A:338:LEU:O	1:A:342:GLN:HG3	2.16	0.46
1:A:986:ALA:CB	1:A:1047:LEU:HD13	2.45	0.46
1:A:1544:THR:O	1:A:1545:SER:HB3	2.15	0.46
1:A:1639:VAL:CG1	1:A:1640:SER:N	2.78	0.46
1:A:1646:PHE:CE1	3:A:2748:CER:H31	2.50	0.46
1:B:741:SER:HB3	1:B:744:ASP:HB2	1.97	0.46
1:B:1305:CYS:SG	1:B:1585:LYS:HA	2.56	0.46
1:C:451:MET:HB3	1:C:451:MET:HE2	1.71	0.46
1:C:784:ILE:HG23	1:C:788:SER:HB2	1.98	0.46
1:C:933:VAL:HA	1:C:934:PRO:HD3	1.57	0.46
1:C:1238:VAL:CG1	1:C:1242:GLU:HB2	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:355:LYS:HB3	2:G:355:LYS:HE2	1.64	0.46
2:H:42:PRO:HG2	2:H:52:ASP:CG	2.36	0.46
2:H:573:LYS:HE3	2:H:1101:GLU:OE1	2.15	0.46
2:H:807:ILE:HD12	2:H:1063:THR:HG23	1.96	0.46
2:H:881:VAL:N	2:H:882:PRO:CD	2.79	0.46
2:H:1266:TYR:HB2	2:H:1347:LEU:HD23	1.97	0.46
2:H:1666:PHE:CD1	2:H:1814:ALA:HB2	2.49	0.46
2:H:1908:ASP:HA	2:H:1911:THR:HG22	1.98	0.46
2:I:131:ILE:HG21	2:I:182:VAL:HG12	1.97	0.46
2:I:1272:ASP:O	2:I:1273:GLU:HG3	2.15	0.46
2:I:1624:THR:HB	2:I:1642:THR:CG2	2.43	0.46
2:I:1764:PHE:HB2	2:I:1770:LEU:HD21	1.97	0.46
1:A:26:VAL:CG2	2:G:1890:ASN:ND2	2.78	0.46
1:A:1050:CYS:HB3	1:A:1089:VAL:HG12	1.98	0.46
1:B:183:GLN:NE2	1:B:202:GLU:HG2	2.29	0.46
1:B:451:MET:HE2	1:B:451:MET:HB3	1.73	0.46
1:B:1618:LEU:HD23	1:B:1621:PHE:CE2	2.51	0.46
1:C:2:LYS:HE2	1:C:4:GLU:CD	2.35	0.46
1:C:256:LEU:HA	1:C:257:PRO:HD3	1.72	0.46
2:G:109:LEU:HD11	2:G:116:LEU:CD2	2.41	0.46
2:G:455:ILE:HG13	2:G:455:ILE:O	2.14	0.46
2:G:702:TYR:HB3	2:G:727:PRO:HB2	1.97	0.46
2:G:873:PHE:CD1	2:G:1026:GLU:HB2	2.50	0.46
2:G:1834:ARG:NH1	2:G:1834:ARG:CG	2.68	0.46
2:H:1169:PRO:O	2:H:1173:VAL:HG23	2.15	0.46
2:H:1195:VAL:HG13	2:H:1211:LEU:CB	2.44	0.46
2:H:1441:ILE:HD11	2:H:1445:ARG:NH2	2.27	0.46
2:H:1567:ARG:NH1	2:H:1568:HIS:HB3	2.29	0.46
2:I:584:SER:CB	2:I:591:PRO:HG3	2.41	0.46
2:I:1666:PHE:CD1	2:I:1814:ALA:HA	2.50	0.46
1:A:2:LYS:HE2	1:A:4:GLU:CD	2.36	0.46
1:A:170:LYS:HD3	1:A:175:LEU:HD23	1.97	0.46
1:B:702:LYS:HE2	1:B:729:GLY:O	2.15	0.46
1:B:1303:GLY:CA	1:B:1649:LYS:HE2	2.40	0.46
1:C:243:ILE:O	1:C:247:ARG:HG3	2.16	0.46
1:C:1319:ILE:HA	1:C:1324:ALA:O	2.14	0.46
1:C:1362:PRO:HA	1:C:1365:MET:HG3	1.97	0.46
1:C:1367:ARG:HH12	1:C:1372:THR:CB	2.20	0.46
1:C:1533:ILE:HD11	1:C:1564:LEU:HD13	1.98	0.46
2:G:209:PHE:CE2	2:G:213:LEU:HD22	2.51	0.46
2:G:214:ASN:ND2	2:G:217:GLU:HB2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:309:ARG:HD3	2:G:309:ARG:HA	1.64	0.46
2:G:441:LYS:O	2:G:444:VAL:HG12	2.15	0.46
2:G:669:LEU:HA	2:G:669:LEU:HD12	1.62	0.46
2:G:719:ILE:HG12	2:G:719:ILE:H	1.57	0.46
2:G:844:VAL:HG22	2:G:858:ALA:HB2	1.98	0.46
2:G:1886:VAL:HG22	2:G:1906:ALA:HB1	1.97	0.46
2:H:321:PRO:HD2	2:I:1599:ASP:OD1	2.16	0.46
2:H:582:LYS:HE2	2:H:761:PRO:O	2.16	0.46
2:I:843:ILE:HD11	2:I:1055:HIS:HB3	1.98	0.46
2:I:1071:LYS:HE3	2:I:1075:ASP:OD2	2.14	0.46
2:I:1932:SER:O	2:I:1936:VAL:HG22	2.16	0.46
2:I:2026:PHE:HB3	2:I:2042:ILE:HD13	1.98	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:A:1487:LEU:C	1:A:1487:LEU:HD23	2.35	0.46
1:A:1617:ILE:O	1:A:1620:GLN:HG2	2.16	0.46
1:B:11:HIS:CD2	1:B:11:HIS:C	2.89	0.46
1:B:792:HIS:CE1	1:B:796:LEU:HD23	2.51	0.46
1:C:183:GLN:O	1:C:187:LEU:HG	2.15	0.46
1:C:774:ILE:HA	1:C:775:PRO:HD3	1.74	0.46
1:C:1233:GLU:CD	1:C:1680:ARG:HH21	2.19	0.46
1:C:1263:ASP:HB2	1:C:1270:VAL:HG21	1.98	0.46
1:C:1577:GLN:NE2	1:C:1591:TRP:HB3	2.30	0.46
2:G:553:ASN:O	2:G:556:LYS:HE3	2.16	0.46
2:G:1378:ILE:O	2:G:1378:ILE:HG12	2.13	0.46
2:G:1854:MET:CG	2:G:1901:ALA:HB2	2.46	0.46
2:H:306:ILE:HA	2:H:439:ILE:HD13	1.96	0.46
2:H:481:ASP:OD2	2:H:485:ARG:NH1	2.48	0.46
2:H:553:ASN:O	2:H:556:LYS:HE3	2.16	0.46
2:H:653:TYR:HD1	2:H:659:LEU:HD21	1.80	0.46
2:H:845:THR:HG22	2:H:855:HIS:CD2	2.51	0.46
2:H:1180:MET:HB2	2:H:1197:LEU:HD21	1.98	0.46
2:H:1624:THR:HB	2:H:1642:THR:CG2	2.45	0.46
2:H:1738:PHE:CE1	2:H:1837:THR:HG23	2.50	0.46
2:H:1850:SER:HB2	2:H:1973:SER:HB2	1.97	0.46
2:H:1858:ASN:HA	2:H:1896:GLN:O	2.16	0.46
2:I:109:LEU:HD11	2:I:116:LEU:CD2	2.43	0.46
2:I:109:LEU:HD22	2:I:114:THR:HG23	1.96	0.46
2:I:589:ARG:HB3	2:I:590:PRO:CD	2.43	0.46
2:I:653:TYR:HD1	2:I:659:LEU:HD21	1.79	0.46
2:I:860:ARG:HB2	2:I:1049:GLN:HG3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:37:LYS:HB2	1:A:65:TYR:CE1	2.48	0.46
1:A:49:PRO:O	1:A:82:SER:HB2	2.16	0.46
1:A:427:ASN:ND2	1:A:610:THR:H	2.08	0.46
1:B:1021:VAL:HG22	1:B:1387:ILE:HG22	1.98	0.46
1:B:1595:GLY:O	1:B:1599:ILE:HG13	2.15	0.46
2:G:131:ILE:CG2	2:G:182:VAL:HG11	2.43	0.46
2:G:785:TRP:CG	2:G:786:SER:N	2.83	0.46
2:G:845:THR:HG22	2:G:855:HIS:CD2	2.50	0.46
2:G:955:GLU:HG2	2:G:987:TYR:HE2	1.80	0.46
2:G:1168:ASN:HA	2:G:1169:PRO:HD3	1.81	0.46
2:G:1303:ALA:HB2	2:G:1556:VAL:HG21	1.98	0.46
2:G:2037:PRO:O	2:G:2041:ILE:HG13	2.16	0.46
2:H:60:LEU:O	2:H:63:LYS:HB2	2.16	0.46
2:H:551:THR:HG22	2:H:552:SER:N	2.30	0.46
2:H:1344:ASP:O	2:H:1416:TYR:HE2	1.99	0.46
2:H:1427:VAL:HG22	2:H:1469:GLU:HG2	1.96	0.46
2:H:1491:VAL:HB	2:H:1501:ILE:CD1	2.45	0.46
2:H:1651:LEU:O	2:H:1652:THR:HG23	2.16	0.46
2:H:1846:GLU:C	2:H:1848:GLY:H	2.19	0.46
2:H:1873:TYR:CE1	2:H:1877:ARG:NE	2.77	0.46
2:I:490:TRP:CZ2	2:I:512:LEU:HD21	2.51	0.46
2:I:1180:MET:HB3	2:I:1199:GLU:HG2	1.98	0.46
2:I:1543:ASP:OD1	2:I:1623:LYS:HG2	2.15	0.46
1:A:35:PHE:HA	1:A:39:PHE:HD2	1.81	0.46
1:A:331:ILE:HG23	1:A:332:THR:N	2.31	0.46
1:A:507:GLY:N	1:A:954:ARG:HG2	2.31	0.46
1:C:11:HIS:C	1:C:11:HIS:CD2	2.89	0.46
1:C:1196:LYS:HE3	1:C:1202:ASP:CG	2.37	0.46
1:C:1209:ASP:OD2	1:C:1253:GLY:HA2	2.16	0.46
2:G:123:ILE:HD11	2:G:533:LEU:HD22	1.98	0.46
2:G:970:TYR:O	2:G:973:LEU:HB2	2.16	0.46
2:G:1842:VAL:HA	2:G:1843:PRO:HD2	1.89	0.46
2:H:490:TRP:CZ2	2:H:512:LEU:HD21	2.51	0.46
2:H:702:TYR:HB3	2:H:727:PRO:HB2	1.97	0.46
2:H:1227:ARG:NE	2:H:1565:VAL:HG12	2.30	0.46
2:H:1236:LEU:HA	2:H:1237:PRO:HD3	1.78	0.46
2:H:1374:THR:HG23	2:H:1396:LEU:CD1	2.46	0.46
2:I:740:HIS:HE1	2:I:852:GLU:OE1	1.99	0.46
2:I:860:ARG:H	2:I:1049:GLN:HG3	1.80	0.46
2:I:1031:LYS:O	2:I:1032:ASP:C	2.54	0.46
2:I:1054:LEU:HB3	4:I:3051:FMN:HM82	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1228:THR:HG21	2:I:1234:VAL:HG23	1.98	0.46
1:A:386:PHE:O	1:A:390:VAL:HB	2.16	0.46
1:A:1709:GLU:H	1:A:1709:GLU:HG3	1.46	0.46
1:B:143:GLU:H	1:B:260:ARG:HG2	1.81	0.46
1:B:601:VAL:O	1:B:602:GLU:C	2.54	0.46
1:C:539:SER:O	1:C:540:GLN:C	2.52	0.46
1:C:1459:ILE:O	1:C:1463:VAL:HG23	2.16	0.46
2:G:233:SER:HA	2:G:424:ALA:CB	2.46	0.46
2:G:1002:HIS:NE2	2:G:1006:MET:CE	2.79	0.46
2:G:1311:PHE:HD1	2:G:1320:LEU:O	1.99	0.46
2:G:1435:ILE:O	2:G:1435:ILE:HG22	2.15	0.46
2:H:913:ASP:H	2:H:916:THR:CG2	2.29	0.46
2:H:1021:LEU:HD22	2:H:1021:LEU:HA	1.58	0.46
2:I:232:LEU:HD21	2:I:423:VAL:HA	1.98	0.46
2:I:391:LEU:CD2	2:I:394:ARG:NH2	2.78	0.46
2:I:670:ARG:HD2	2:I:676:ILE:O	2.16	0.46
2:I:751:LEU:HD11	2:I:789:PHE:CD1	2.51	0.46
2:I:785:TRP:CG	2:I:786:SER:N	2.84	0.46
2:I:844:VAL:HG22	2:I:858:ALA:HB2	1.97	0.46
2:I:1222:GLU:HG3	2:I:1235:SER:OG	2.16	0.46
2:I:1561:ASN:OD1	2:I:1563:ILE:HB	2.15	0.46
1:A:411:GLN:NE2	1:A:1628:SER:H	2.13	0.45
1:A:792:HIS:CE1	1:A:796:LEU:HD23	2.51	0.45
1:A:1533:ILE:HG13	1:A:1564:LEU:HB3	1.98	0.45
1:A:1557:ILE:HD11	1:A:1642:THR:HG21	1.97	0.45
1:B:516:ARG:NH2	1:B:889:GLU:OE1	2.49	0.45
1:B:881:ASN:HA	1:B:944:ARG:HH22	1.78	0.45
1:B:1234:MET:HG2	1:B:1326:ILE:CD1	2.46	0.45
1:C:400:ARG:HH11	1:C:400:ARG:HG3	1.72	0.45
1:C:1040:GLU:HB2	1:C:1580:LEU:HD12	1.98	0.45
1:C:1376:PHE:CB	1:C:1544:THR:HG22	2.45	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:159:ILE:CG2	2:G:501:ILE:HG22	2.46	0.45
2:G:1586:SER:O	2:G:1590:ARG:HB2	2.16	0.45
2:H:391:LEU:CD2	2:H:394:ARG:NH2	2.80	0.45
2:H:730:LEU:C	2:H:730:LEU:HD12	2.36	0.45
2:H:1031:LYS:O	2:H:1032:ASP:C	2.54	0.45
2:H:1135:GLU:OE2	2:H:1175:LYS:HE3	2.15	0.45
2:H:1388:LYS:HE3	2:H:1418:ASP:OD2	2.16	0.45
2:H:1593:ILE:HD13	2:H:1626:ILE:HD13	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1666:PHE:CE1	2:H:1814:ALA:HA	2.50	0.45
2:H:1873:TYR:CE1	2:H:1877:ARG:NH2	2.83	0.45
2:H:2026:PHE:HB3	2:H:2042:ILE:HD13	1.98	0.45
2:I:738:GLY:HA3	4:I:3051:FMN:HM81	1.98	0.45
2:I:807:ILE:HD12	2:I:1063:THR:HG23	1.98	0.45
1:A:408:TRP:CZ3	1:A:1628:SER:HB3	2.51	0.45
1:A:764:ASP:OD2	1:A:818:ARG:HD3	2.17	0.45
1:A:1114:TYR:CE1	1:A:1337:GLU:HG3	2.50	0.45
1:B:2:LYS:HE2	1:B:4:GLU:OE1	2.15	0.45
1:B:19:ALA:O	1:B:22:PHE:HB2	2.15	0.45
1:B:26:VAL:HG13	2:H:2013:ASN:ND2	2.31	0.45
1:B:719:GLN:HG3	1:B:720:SER:N	2.31	0.45
1:B:1431:GLU:OE2	1:B:1433:HIS:HE1	2.00	0.45
1:C:170:LYS:HD3	1:C:175:LEU:HD23	1.97	0.45
1:C:430:ARG:NH2	1:C:605:LEU:HD13	2.31	0.45
1:C:529:MET:CE	1:C:894:ARG:HD2	2.46	0.45
1:C:931:GLN:H	1:C:931:GLN:HG3	1.31	0.45
2:G:161:GLY:HA3	2:G:506:PRO:HD2	1.98	0.45
2:G:191:SER:HA	2:G:194:THR:CG2	2.46	0.45
2:G:1219:ILE:HD11	2:G:1242:PHE:HB2	1.98	0.45
2:G:1222:GLU:HG3	2:G:1235:SER:OG	2.16	0.45
2:G:1472:VAL:CG2	2:G:1483:VAL:HG22	2.46	0.45
2:G:1673:GLU:N	2:G:1676:MET:HE3	2.25	0.45
2:G:1976:PHE:HA	2:G:1981:LEU:CD2	2.46	0.45
2:H:246:LEU:HD12	2:H:246:LEU:HA	1.85	0.45
2:H:324:LEU:HD12	2:H:324:LEU:O	2.16	0.45
2:H:612:ASN:HD21	2:H:641:ILE:HA	1.81	0.45
2:H:1579:ILE:HG22	2:H:1580:THR:O	2.16	0.45
2:H:1768:LYS:HE2	2:H:1772:SER:HB3	1.98	0.45
2:I:369:SER:O	2:I:370:LEU:HD23	2.16	0.45
2:I:601:THR:HB	2:I:620:ALA:HB2	1.98	0.45
2:I:669:LEU:HD12	2:I:669:LEU:HA	1.65	0.45
2:I:1359:MET:HE3	2:I:1404:MET:HB3	1.98	0.45
1:A:18:LEU:HD21	2:G:1815:LEU:CD1	2.46	0.45
1:A:751:PHE:CZ	1:A:761:LEU:HD13	2.51	0.45
1:A:1367:ARG:HH12	1:A:1372:THR:CB	2.18	0.45
1:A:1431:GLU:OE2	1:A:1523:ARG:NH1	2.48	0.45
1:B:37:LYS:HB2	1:B:65:TYR:CE1	2.51	0.45
1:B:235:SER:HA	1:B:276:ARG:NH2	2.32	0.45
1:B:444:ASN:HB2	1:B:447:LEU:N	2.15	0.45
1:B:1639:VAL:HG12	1:B:1640:SER:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:827:SER:HA	1:C:828:PRO:HD3	1.70	0.45
1:C:982:ILE:HD11	2:I:965:SER:CB	2.46	0.45
2:G:247:ALA:O	2:G:251:VAL:HG13	2.15	0.45
2:G:460:TYR:HA	2:G:466:SER:O	2.17	0.45
2:G:860:ARG:HB2	2:G:1049:GLN:HG3	1.97	0.45
2:G:1953:VAL:O	2:G:1953:VAL:HG12	2.16	0.45
2:H:249:TYR:CD2	2:H:283:ILE:HD11	2.52	0.45
2:H:439:ILE:HD12	2:H:484:ILE:CD1	2.46	0.45
2:H:1590:ARG:HG3	2:H:1608:TYR:CD2	2.51	0.45
2:H:1776:PHE:C	2:H:1779:PRO:HD2	2.37	0.45
2:I:618:GLU:HG2	2:I:678:PHE:CZ	2.51	0.45
2:I:739:GLY:HA2	2:I:1054:LEU:HG	1.97	0.45
2:I:1180:MET:HB2	2:I:1197:LEU:HD21	1.97	0.45
2:I:1775:GLN:HG2	2:I:1836:MET:SD	2.57	0.45
2:I:1854:MET:CG	2:I:1901:ALA:HB2	2.47	0.45
1:A:168:MET:HA	1:A:206:LEU:HB2	1.98	0.45
1:A:413:LEU:C	1:A:415:SER:H	2.18	0.45
1:A:625:THR:HG23	1:A:627:SER:H	1.82	0.45
1:A:630:ILE:O	1:A:653:ARG:NH2	2.48	0.45
1:A:798:ASN:HA	1:A:801:ARG:HB2	1.98	0.45
1:B:32:GLN:NE2	1:B:57:ALA:CA	2.80	0.45
1:B:988:ILE:HD13	1:B:1048:GLU:CB	2.47	0.45
1:B:1310:GLU:OE1	1:B:1649:LYS:CE	2.62	0.45
1:C:1533:ILE:HG13	1:C:1564:LEU:HB3	1.98	0.45
2:G:582:LYS:HE2	2:G:1108:PRO:HB3	1.97	0.45
2:G:807:ILE:HA	2:G:818:LYS:HG2	1.97	0.45
2:G:1015:VAL:HG13	2:G:1017:PHE:CE2	2.52	0.45
2:G:1148:ASN:HD22	2:G:1151:HIS:H	1.63	0.45
2:G:1314:ARG:HD3	2:G:1314:ARG:HA	1.62	0.45
2:H:463:PHE:C	2:H:463:PHE:CD2	2.90	0.45
2:H:601:THR:CG2	2:H:601:THR:O	2.65	0.45
2:H:835:THR:CB	2:H:845:THR:HG23	2.43	0.45
2:H:1735:ALA:O	2:H:1737:ILE:HG13	2.16	0.45
2:I:463:PHE:CE1	2:I:486:LEU:HD22	2.51	0.45
2:I:1199:GLU:OE2	2:I:1567:ARG:CZ	2.65	0.45
2:I:1327:ILE:HD12	2:I:1327:ILE:HA	1.80	0.45
2:I:1609:THR:O	2:I:1653:GLY:HA3	2.16	0.45
1:A:143:GLU:H	1:A:260:ARG:HG2	1.81	0.45
1:A:293:LYS:O	1:A:297:ILE:HG13	2.16	0.45
1:A:1196:LYS:HE3	1:A:1202:ASP:CG	2.36	0.45
1:B:1019:ILE:HG21	1:B:1316:VAL:HG22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1020:VAL:CG1	1:B:1400:ILE:HG23	2.46	0.45
1:B:1061:SER:HB2	1:B:1078:SER:HB3	1.99	0.45
1:B:1376:PHE:CB	1:B:1544:THR:HG22	2.45	0.45
1:C:776:GLU:OE1	1:C:795:MET:HE1	2.17	0.45
1:C:1104:ARG:O	1:C:1185:VAL:HG13	2.17	0.45
1:C:1682:LYS:HB3	2:I:994:PHE:CD2	2.51	0.45
2:G:357:ASN:OD1	2:G:365:GLN:HB3	2.16	0.45
2:H:24:THR:O	2:H:26:SER:N	2.49	0.45
2:H:319:LEU:HD22	2:H:319:LEU:HA	1.68	0.45
2:H:611:THR:HA	2:H:615:TYR:O	2.16	0.45
2:H:659:LEU:HD12	2:H:659:LEU:HA	1.82	0.45
2:H:754:TYR:CE2	2:H:794:MET:HG3	2.52	0.45
2:H:1027:ILE:O	2:H:1031:LYS:HB2	2.16	0.45
2:H:1383:ASN:HD21	2:H:1418:ASP:CB	2.30	0.45
2:I:894:ARG:NH1	2:I:898:ASP:OD2	2.42	0.45
2:I:938:TRP:CD1	2:I:944:ARG:HG3	2.52	0.45
2:I:1776:PHE:C	2:I:1779:PRO:HD2	2.37	0.45
2:I:1976:PHE:CB	2:I:1981:LEU:CD2	2.94	0.45
2:I:2036:GLU:HG2	2:I:2039:LYS:HZ3	1.82	0.45
1:A:658:LEU:HD13	1:A:916:LEU:HD12	1.99	0.45
1:A:776:GLU:OE1	1:A:795:MET:HE1	2.16	0.45
1:B:332:THR:HG22	1:C:331:ILE:HD11	1.98	0.45
1:B:1533:ILE:HD11	1:B:1564:LEU:HD13	1.98	0.45
1:C:143:GLU:H	1:C:260:ARG:HG2	1.81	0.45
1:C:197:THR:HG22	1:C:198:PRO:O	2.15	0.45
1:C:225:SER:OG	1:C:266:LEU:HD21	2.16	0.45
1:C:1491:ARG:NH1	1:C:1744:TYR:O	2.50	0.45
2:G:142:ASN:HB2	2:G:550:VAL:HG13	1.99	0.45
2:G:315:PRO:O	2:H:1314:ARG:NH2	2.50	0.45
2:G:712:ALA:O	2:G:715:GLN:HB3	2.16	0.45
2:G:1080:GLY:O	2:G:1084:LYS:HG3	2.16	0.45
2:G:1241:ASN:N	2:G:1252:SER:O	2.49	0.45
2:G:1466:PHE:HE2	2:G:1489:ILE:HD13	1.81	0.45
2:G:1976:PHE:CB	2:G:1981:LEU:CD2	2.95	0.45
2:H:618:GLU:HG2	2:H:678:PHE:CZ	2.52	0.45
2:H:785:TRP:CG	2:H:786:SER:N	2.84	0.45
2:H:1085:LEU:HD12	2:H:1085:LEU:HA	1.85	0.45
2:H:1159:ILE:HG22	2:H:1160:THR:N	2.32	0.45
2:H:1325:PHE:O	2:H:1328:VAL:HG12	2.16	0.45
2:I:23:PRO:HG2	2:I:86:LEU:HD11	1.98	0.45
2:I:440:ASN:ND2	2:I:477:GLU:HG2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1195:VAL:HG13	2:I:1211:LEU:CB	2.46	0.45
2:I:1637:LEU:HD23	2:I:1637:LEU:HA	1.79	0.45
1:A:1300:THR:HA	1:A:1301:PRO:HD3	1.70	0.45
1:B:66:GLU:OE1	1:B:66:GLU:HA	2.15	0.45
1:C:21:GLN:HG3	2:I:2013:ASN:HB2	1.98	0.45
1:C:521:LYS:HB3	1:C:523:SER:HB3	1.98	0.45
1:C:1305:CYS:SG	3:C:2748:CER:H51	2.57	0.45
1:C:1670:TYR:O	1:C:1674:VAL:HG23	2.17	0.45
2:G:665:LEU:O	2:G:665:LEU:HD22	2.17	0.45
2:G:754:TYR:CG	2:G:794:MET:HG2	2.51	0.45
2:G:1858:ASN:ND2	2:G:1861:ARG:HG3	2.32	0.45
2:G:1873:TYR:HE1	2:G:1877:ARG:HH21	1.59	0.45
2:H:594:VAL:CG2	2:H:610:THR:HG21	2.45	0.45
2:H:1678:MET:HE3	2:H:1707:LEU:CD2	2.41	0.45
2:H:2035:SER:HB3	2:H:2038:ILE:CG1	2.44	0.45
2:I:478:ARG:O	2:I:482:CYS:HB2	2.17	0.45
2:I:784:GLU:O	2:I:787:THR:HB	2.17	0.45
2:I:1162:ASP:O	2:I:1163:LYS:HB2	2.16	0.45
2:I:1949:LYS:O	2:I:1953:VAL:HG23	2.17	0.45
1:A:1239:HIS:CD2	1:A:1241:SER:H	2.35	0.45
1:A:1443:LEU:HD23	1:A:1443:LEU:HA	1.75	0.45
1:B:1004:ILE:HG22	1:B:1660:TYR:CE2	2.52	0.45
1:B:1239:HIS:HE1	1:B:1714:VAL:O	2.00	0.45
1:B:1459:ILE:O	1:B:1463:VAL:HG23	2.17	0.45
1:B:1584:PRO:CG	1:B:1591:TRP:CZ3	3.00	0.45
2:G:101:ILE:H	2:G:101:ILE:HG13	1.31	0.45
2:G:218:TRP:HB3	2:G:225:THR:OG1	2.16	0.45
2:G:350:GLN:HA	2:G:353:VAL:HG13	1.97	0.45
2:G:455:ILE:HD11	2:G:469:ARG:NE	2.32	0.45
2:G:879:LYS:HD3	2:G:879:LYS:HA	1.68	0.45
2:G:1265:MET:HE1	2:G:1562:PRO:HG2	1.98	0.45
2:H:751:LEU:HA	2:H:794:MET:HE3	1.98	0.45
2:H:1100:VAL:HG23	2:H:1147:ILE:HB	1.99	0.45
2:H:1845:ASP:HB2	2:H:1849:ARG:N	2.15	0.45
2:I:161:GLY:H	2:I:505:GLY:CA	2.28	0.45
2:I:355:LYS:HB3	2:I:355:LYS:HE2	1.70	0.45
2:I:654:VAL:O	2:I:654:VAL:HG12	2.17	0.45
2:I:677:GLN:O	2:I:678:PHE:HB3	2.17	0.45
2:I:943:TRP:CZ2	2:I:1016:PRO:HG3	2.52	0.45
2:I:1002:HIS:NE2	2:I:1006:MET:CE	2.80	0.45
2:I:1258:ARG:O	2:I:1262:ILE:HG13	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1308:CYS:HB3	2:I:1311:PHE:CE2	2.51	0.45
2:I:1417:THR:O	2:I:1419:PHE:N	2.45	0.45
1:A:485:ASP:CA	1:A:486:VAL:N	2.72	0.45
1:B:340:ARG:HH12	1:B:344:GLN:HE21	1.64	0.45
1:B:420:ILE:HG22	1:B:469:VAL:HG22	1.99	0.45
1:B:1617:ILE:O	1:B:1620:GLN:HG2	2.17	0.45
1:C:927:ASN:O	1:C:929:GLY:N	2.41	0.45
2:G:624:TYR:HB2	2:G:630:MET:HE3	1.99	0.45
2:G:1227:ARG:CZ	2:G:1565:VAL:HG12	2.47	0.45
2:G:1491:VAL:HB	2:G:1501:ILE:HD12	1.99	0.45
2:G:1543:ASP:OD1	2:G:1623:LYS:HG2	2.16	0.45
2:H:512:LEU:O	2:H:516:THR:HG23	2.17	0.45
2:H:1327:ILE:HG12	2:H:1583:MET:HE3	1.99	0.45
2:I:653:TYR:OH	2:I:690:VAL:HG11	2.17	0.45
2:I:1491:VAL:HB	2:I:1501:ILE:CD1	2.47	0.45
1:A:204:THR:HA	1:A:205:PRO:HD3	1.85	0.45
1:A:335:HIS:O	1:A:335:HIS:CD2	2.69	0.45
1:A:1516:ASP:HA	1:A:1517:PRO:HD3	1.61	0.45
1:B:32:GLN:HE21	1:B:57:ALA:HB2	1.82	0.45
1:B:43:ARG:O	2:H:1662:THR:HA	2.16	0.45
1:B:44:VAL:HG13	1:B:78:ILE:HG12	1.98	0.45
1:B:67:SER:OG	2:G:359:HIS:HE1	1.99	0.45
1:B:196:THR:O	1:B:213:PHE:HE2	2.00	0.45
1:B:1119:LYS:HE2	1:B:1341:PHE:CG	2.52	0.45
1:B:1300:THR:HA	1:B:1301:PRO:HD3	1.69	0.45
1:B:1592:MET:HE2	1:B:1641:ILE:HG23	1.98	0.45
1:C:478:GLU:OE1	1:C:478:GLU:HA	2.17	0.45
1:C:916:LEU:HD22	1:C:922:VAL:HG22	1.99	0.45
1:C:1061:SER:HB2	1:C:1078:SER:HB3	1.99	0.45
2:G:42:PRO:HG2	2:G:52:ASP:CG	2.38	0.45
2:G:109:LEU:HD23	2:G:109:LEU:HA	1.79	0.45
2:G:1002:HIS:NE2	2:G:1006:MET:HE3	2.32	0.45
2:G:1325:PHE:O	2:G:1328:VAL:HG12	2.17	0.45
2:G:1389:ILE:HG13	2:G:1411:PHE:CD1	2.52	0.45
2:H:315:PRO:O	2:I:1314:ARG:NH2	2.50	0.45
2:H:641:ILE:HG12	2:H:645:SER:CB	2.46	0.45
2:I:231:LEU:HA	2:I:236:ILE:HD12	1.99	0.45
2:I:298:LYS:HG2	2:I:448:VAL:CG2	2.38	0.45
2:I:1256:GLU:O	2:I:1257:ASP:HB2	2.17	0.45
1:A:242:THR:HG22	1:A:243:ILE:H	1.81	0.44
1:A:636:PRO:HB2	1:A:638:LEU:O	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:931:GLN:H	1:A:931:GLN:HG3	1.30	0.44
1:A:1283:MET:O	1:A:1287:VAL:HG23	2.18	0.44
1:B:13:LEU:HB2	2:H:2026:PHE:CE1	2.52	0.44
1:B:411:GLN:NE2	1:B:1628:SER:H	2.15	0.44
1:B:427:ASN:HB2	1:B:468:LEU:HD21	1.99	0.44
1:B:612:GLU:O	1:B:615:SER:HB3	2.17	0.44
1:B:626:VAL:HG23	1:B:664:GLU:OE2	2.17	0.44
1:B:733:ILE:CD1	1:B:761:LEU:HD11	2.46	0.44
1:B:1029:PRO:HA	1:B:1188:GLN:O	2.17	0.44
1:B:1455:ARG:HD2	1:B:1455:ARG:HA	1.86	0.44
1:C:253:ARG:O	1:C:254:TRP:CD1	2.70	0.44
1:C:641:ARG:HD3	1:C:649:TRP:O	2.17	0.44
1:C:1257:LEU:HD23	1:C:1257:LEU:HA	1.83	0.44
2:G:607:VAL:O	2:G:611:THR:HB	2.17	0.44
2:G:717:ILE:O	2:G:720:ALA:HB3	2.18	0.44
2:G:741:HIS:HE1	2:G:855:HIS:NE2	2.13	0.44
2:G:741:HIS:HB3	2:G:853:PRO:HB2	1.98	0.44
2:G:926:LEU:HB3	2:G:947:THR:CG2	2.46	0.44
2:G:1071:LYS:HE3	2:G:1075:ASP:OD2	2.16	0.44
2:G:1294:ALA:HA	2:G:1368:VAL:CG2	2.47	0.44
2:G:1855:ILE:HB	2:G:1907:LEU:HD12	2.00	0.44
2:H:109:LEU:HD22	2:H:114:THR:HG23	1.99	0.44
2:H:443:LEU:HD22	2:H:448:VAL:CG1	2.46	0.44
2:H:1308:CYS:HB3	2:H:1311:PHE:CE2	2.52	0.44
2:H:1321:ALA:HA	2:H:1322:PRO:HD3	1.84	0.44
2:I:272:GLY:HA3	2:I:276:GLY:C	2.37	0.44
2:I:1159:ILE:CG2	2:I:1160:THR:N	2.81	0.44
2:I:1589:VAL:HG21	2:I:1651:LEU:HD12	1.99	0.44
1:A:225:SER:OG	1:A:266:LEU:HD21	2.16	0.44
1:A:1012:LEU:HD23	1:A:1445:MET:HE2	1.99	0.44
1:A:1373:ARG:NE	1:A:1550:ASP:HB2	2.32	0.44
1:A:1666:THR:HG23	1:A:1669:ARG:CB	2.47	0.44
1:B:168:MET:HA	1:B:206:LEU:HB2	2.00	0.44
1:B:256:LEU:HA	1:B:257:PRO:HD3	1.73	0.44
1:B:330:GLU:O	1:B:330:GLU:HG2	2.16	0.44
1:C:1234:MET:HG2	1:C:1326:ILE:HD12	1.98	0.44
1:C:1238:VAL:CG1	1:C:1239:HIS:N	2.80	0.44
2:G:7:ARG:HH11	2:G:24:THR:HG23	1.76	0.44
2:G:463:PHE:C	2:G:463:PHE:CD2	2.90	0.44
2:G:595:PRO:HD3	2:G:800:LEU:HB2	1.99	0.44
2:G:1609:THR:O	2:G:1653:GLY:HA3	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:120:LYS:HB3	2:H:124:LYS:HE3	1.99	0.44
2:H:786:SER:HB2	2:H:794:MET:HE2	1.99	0.44
2:H:854:ILE:HG22	2:H:856:LYS:HG3	1.99	0.44
2:H:1330:GLY:HA2	2:H:1374:THR:HG21	1.98	0.44
2:H:1543:ASP:OD1	2:H:1623:LYS:HG2	2.17	0.44
2:I:191:SER:HA	2:I:194:THR:CG2	2.43	0.44
2:I:441:LYS:O	2:I:444:VAL:HG12	2.17	0.44
2:I:659:LEU:HD12	2:I:659:LEU:HA	1.84	0.44
2:I:1303:ALA:HB2	2:I:1556:VAL:HG21	1.98	0.44
2:I:1314:ARG:HD3	2:I:1314:ARG:HA	1.64	0.44
1:A:27:ARG:HH21	2:G:2015:THR:HA	1.82	0.44
1:A:267:VAL:HG12	1:A:290:MET:CE	2.48	0.44
1:A:1431:GLU:HB3	1:A:1520:ALA:HB2	1.99	0.44
1:B:183:GLN:O	1:B:187:LEU:HG	2.17	0.44
1:B:225:SER:OG	1:B:266:LEU:HD21	2.18	0.44
1:B:479:ASN:O	1:B:483:VAL:HG23	2.17	0.44
1:B:539:SER:O	1:B:540:GLN:C	2.54	0.44
1:B:655:LEU:HD23	1:B:655:LEU:HA	1.82	0.44
1:B:833:PHE:O	1:B:834:GLY:O	2.35	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:231:LEU:HA	2:G:236:ILE:HD12	2.00	0.44
2:G:1015:VAL:HA	2:G:1016:PRO:HD3	1.79	0.44
2:H:161:GLY:H	2:H:505:GLY:CA	2.29	0.44
2:H:427:PHE:HB3	2:H:428:HIS:ND1	2.32	0.44
2:H:607:VAL:O	2:H:611:THR:HB	2.17	0.44
2:I:703:LEU:HD21	2:I:705:LEU:CD2	2.45	0.44
2:I:780:TYR:HB2	2:I:799:PHE:CE2	2.53	0.44
2:I:901:LYS:NZ	2:I:1031:LYS:O	2.51	0.44
2:I:1735:ALA:O	2:I:1737:ILE:HG13	2.17	0.44
2:I:1757:GLU:H	2:I:1757:GLU:HG3	1.50	0.44
1:A:66:GLU:OE1	1:A:66:GLU:HA	2.17	0.44
1:A:1020:VAL:CG1	1:A:1400:ILE:HG23	2.47	0.44
1:A:1056:ILE:CD1	1:A:1193:TRP:CD1	3.00	0.44
1:B:32:GLN:HE22	1:B:57:ALA:N	2.16	0.44
1:B:232:LEU:HD13	1:B:272:GLU:CB	2.47	0.44
1:B:1040:GLU:OE2	1:B:1577:GLN:HB2	2.18	0.44
1:C:625:THR:HG23	1:C:627:SER:H	1.83	0.44
1:C:1022:THR:HG22	1:C:1226:SER:CB	2.47	0.44
1:C:1657:HIS:CG	1:C:1658:PRO:HD2	2.53	0.44
2:G:932:ILE:HD12	2:G:939:PHE:HD1	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1590:ARG:NH2	2:G:1594:GLU:OE2	2.50	0.44
2:G:1752:PHE:HZ	2:G:1836:MET:HE3	1.82	0.44
2:G:1873:TYR:CE1	2:G:1877:ARG:NH2	2.84	0.44
2:G:1908:ASP:HA	2:G:1911:THR:HG22	2.00	0.44
2:G:1945:ASP:O	2:G:1949:LYS:HG3	2.17	0.44
2:H:209:PHE:CE2	2:H:213:LEU:HD22	2.52	0.44
2:H:663:ILE:HB	2:H:664:PRO:CD	2.44	0.44
2:H:778:TYR:N	2:H:779:PRO:CD	2.80	0.44
2:H:1311:PHE:HD1	2:H:1320:LEU:O	2.00	0.44
2:H:1697:HIS:CE1	2:H:1829:GLU:CG	3.00	0.44
2:I:665:LEU:O	2:I:665:LEU:HD22	2.18	0.44
2:I:1054:LEU:CB	4:I:3051:FMN:HM71	2.46	0.44
2:I:1330:GLY:HA2	2:I:1374:THR:HG21	1.99	0.44
2:I:1420:GLU:H	2:I:1420:GLU:HG3	1.41	0.44
2:I:1651:LEU:HD23	2:I:1651:LEU:HA	1.73	0.44
1:B:496:PRO:HB2	1:B:519:VAL:HG12	1.99	0.44
1:C:44:VAL:HG13	1:C:78:ILE:HG12	1.99	0.44
1:C:503:ILE:HD12	1:C:950:THR:HG21	1.98	0.44
2:G:109:LEU:HD22	2:G:114:THR:HG23	2.00	0.44
2:G:297:ARG:O	2:G:301:THR:HG22	2.17	0.44
2:G:490:TRP:HA	2:G:493:THR:HG22	1.98	0.44
2:G:562:LEU:HG	2:G:793:PRO:CB	2.48	0.44
2:G:589:ARG:HB3	2:G:590:PRO:CD	2.48	0.44
2:G:1632:ILE:HG23	2:G:1632:ILE:O	2.16	0.44
2:H:109:LEU:HD11	2:H:116:LEU:CD2	2.43	0.44
2:H:641:ILE:CG1	2:H:645:SER:HB2	2.45	0.44
2:I:9:LEU:HB2	2:I:27:PHE:HE1	1.82	0.44
2:I:245:GLN:HG2	2:I:505:GLY:HA2	2.00	0.44
2:I:468:LEU:O	2:I:471:LEU:HB2	2.18	0.44
2:I:835:THR:HG22	2:I:844:VAL:CA	2.48	0.44
2:I:1590:ARG:HG3	2:I:1608:TYR:CD2	2.53	0.44
2:I:1846:GLU:C	2:I:1848:GLY:H	2.20	0.44
1:A:1022:THR:CG2	1:A:1226:SER:OG	2.66	0.44
1:A:1135:GLU:CD	1:B:242:THR:HG21	2.38	0.44
1:A:1305:CYS:SG	1:A:1585:LYS:HA	2.57	0.44
1:B:267:VAL:HG12	1:B:290:MET:CE	2.48	0.44
1:B:1238:VAL:CG1	1:B:1239:HIS:N	2.81	0.44
1:B:1516:ASP:HA	1:B:1517:PRO:HD3	1.65	0.44
1:C:503:ILE:HD11	1:C:947:LEU:HD22	1.98	0.44
1:C:1557:ILE:HD11	1:C:1642:THR:HG21	2.00	0.44
2:G:551:THR:C	2:G:553:ASN:H	2.20	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:551:THR:HG22	2:G:552:SER:N	2.31	0.44
2:G:751:LEU:HD23	2:G:791:TYR:CD2	2.53	0.44
2:G:751:LEU:HD11	2:G:789:PHE:CD1	2.53	0.44
2:G:1784:MET:HE2	2:G:1784:MET:O	2.17	0.44
2:H:305:PHE:CD1	2:H:442:ASP:HB3	2.53	0.44
2:H:807:ILE:HA	2:H:818:LYS:HG2	1.99	0.44
2:H:1389:ILE:HG13	2:H:1411:PHE:CD1	2.52	0.44
2:I:40:ILE:O	2:I:42:PRO:HD3	2.17	0.44
2:I:159:ILE:CG2	2:I:501:ILE:HG22	2.47	0.44
2:I:305:PHE:CD1	2:I:442:ASP:HB3	2.52	0.44
2:I:720:ALA:HA	2:I:728:ILE:CD1	2.47	0.44
2:I:1257:ASP:O	2:I:1261:ARG:HG3	2.17	0.44
2:I:1896:GLN:HE21	2:I:1896:GLN:HB3	1.58	0.44
1:A:458:THR:OG1	1:A:470:LYS:HD2	2.18	0.44
1:A:1194:ASN:OD1	1:A:1196:LYS:HB2	2.18	0.44
1:A:1220:VAL:O	1:A:1224:ILE:HG12	2.18	0.44
1:B:29:ILE:HG12	2:H:1892:ASN:C	2.37	0.44
1:B:1012:LEU:HD23	1:B:1445:MET:CE	2.48	0.44
1:B:1195:ALA:HB1	1:B:1200:ILE:HD12	1.99	0.44
1:C:1673:TYR:CZ	1:C:1677:VAL:HG21	2.51	0.44
2:H:272:GLY:HA3	2:H:276:GLY:C	2.38	0.44
2:H:376:ASN:C	2:H:376:ASN:ND2	2.70	0.44
2:H:455:ILE:C	2:H:455:ILE:HD12	2.38	0.44
2:H:562:LEU:HG	2:H:793:PRO:CB	2.47	0.44
2:H:1148:ASN:HD22	2:H:1148:ASN:C	2.21	0.44
2:H:1579:ILE:HD11	2:H:1615:MET:SD	2.58	0.44
2:I:184:VAL:HG12	2:I:188:ILE:HG12	1.99	0.44
2:I:297:ARG:O	2:I:301:THR:HG22	2.18	0.44
2:I:517:HIS:CE1	2:I:540:ASP:O	2.71	0.44
2:I:1739:GLU:HB2	2:I:1987:PRO:CB	2.29	0.44
2:I:1976:PHE:HB3	2:I:1981:LEU:CD2	2.48	0.44
1:A:11:HIS:CD2	1:A:11:HIS:C	2.92	0.44
1:A:499:PRO:HD3	1:A:516:ARG:HH21	1.83	0.44
1:A:530:ALA:HA	1:A:636:PRO:HB3	1.99	0.44
1:A:1133:PRO:HG3	1:A:1166:LYS:HG3	1.99	0.44
1:B:20:TYR:CD2	2:H:2033:THR:OG1	2.71	0.44
1:B:42:GLU:O	1:B:77:GLU:N	2.47	0.44
1:B:1037:TRP:HB2	1:B:1598:GLN:OE1	2.18	0.44
1:B:1455:ARG:O	1:B:1459:ILE:HG13	2.18	0.44
1:C:601:VAL:O	1:C:602:GLU:C	2.56	0.44
1:C:706:THR:HB	1:C:737:PHE:HB3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:852:ARG:HB3	1:C:858:TRP:HZ2	1.83	0.44
1:C:1234:MET:CE	1:C:1326:ILE:HG21	2.48	0.44
1:C:1270:VAL:HG11	1:C:1274:ILE:HD13	1.99	0.44
2:G:615:TYR:CE2	2:G:1074:MET:HB3	2.52	0.44
2:G:1257:ASP:O	2:G:1261:ARG:HG3	2.18	0.44
2:G:1551:GLU:HB2	2:G:1552:PRO:HD3	2.00	0.44
2:G:1589:VAL:HG21	2:G:1651:LEU:HD12	1.99	0.44
2:G:1662:THR:HB	2:G:1799:PRO:HG2	1.99	0.44
2:G:1776:PHE:C	2:G:1779:PRO:HD2	2.38	0.44
2:H:184:VAL:HG12	2:H:188:ILE:HG12	2.00	0.44
2:H:732:TRP:CE2	2:H:750:MET:HE3	2.52	0.44
2:H:780:TYR:HB2	2:H:799:PHE:CE2	2.53	0.44
2:H:938:TRP:CE2	2:H:944:ARG:HG3	2.52	0.44
2:H:1228:THR:HG21	2:H:1234:VAL:HG23	2.00	0.44
2:I:142:ASN:HB2	2:I:550:VAL:HG13	1.99	0.44
2:I:1579:ILE:HG22	2:I:1580:THR:O	2.18	0.44
2:I:1666:PHE:CE1	2:I:1814:ALA:HA	2.53	0.44
2:I:1886:VAL:HG22	2:I:1906:ALA:HB1	1.98	0.44
1:B:267:VAL:O	1:B:290:MET:HE1	2.17	0.44
1:B:1430:ARG:O	1:B:1430:ARG:HG2	2.18	0.44
1:C:295:ALA:HB1	1:C:300:VAL:O	2.18	0.44
1:C:833:PHE:O	1:C:834:GLY:O	2.36	0.44
1:C:1181:PHE:CZ	1:C:1341:PHE:HA	2.53	0.44
1:C:1291:LEU:HD21	1:C:1698:PHE:CE1	2.53	0.44
2:G:159:ILE:HD11	2:G:512:LEU:CG	2.48	0.44
2:G:459:VAL:HG12	2:G:468:LEU:HD12	2.00	0.44
2:G:901:LYS:NZ	2:G:1031:LYS:O	2.50	0.44
2:G:1004:LEU:CD2	2:G:1019:PRO:HB2	2.48	0.44
2:G:1352:HIS:HE1	2:G:1583:MET:CE	2.27	0.44
2:H:102:HIS:HE1	2:H:180:TYR:OH	2.00	0.44
2:H:1496:LYS:HE2	2:H:1693:ARG:HH21	1.82	0.44
2:H:1739:GLU:HB2	2:H:1987:PRO:CB	2.30	0.44
2:I:218:TRP:HB3	2:I:225:THR:OG1	2.18	0.44
2:I:246:LEU:O	2:I:250:VAL:HG23	2.18	0.44
2:I:914:LEU:HD21	2:I:1003:PHE:CD2	2.53	0.44
2:I:1493:LEU:HB3	2:I:1494:PRO:CD	2.48	0.44
2:I:1684:SER:O	2:I:1688:GLN:HG3	2.18	0.44
1:A:181:THR:O	1:A:185:GLU:HG3	2.18	0.43
1:A:406:TRP:CE3	1:A:407:ASN:HB2	2.53	0.43
1:B:35:PHE:HA	1:B:39:PHE:HD2	1.83	0.43
1:B:888:ILE:HD12	1:B:939:PHE:CE2	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1129:GLU:OE1	1:C:348:ARG:HD3	2.18	0.43
1:C:178:GLY:O	1:C:180:SER:N	2.50	0.43
1:C:413:LEU:C	1:C:415:SER:H	2.21	0.43
1:C:1332:TYR:HB3	1:C:1382:ALA:CB	2.48	0.43
1:C:1373:ARG:NE	1:C:1550:ASP:HB2	2.33	0.43
2:G:245:GLN:HG2	2:G:505:GLY:HA2	1.99	0.43
2:G:543:PHE:CB	2:G:545:GLN:NE2	2.81	0.43
2:G:726:PHE:HA	2:G:727:PRO:HD3	1.89	0.43
2:G:753:MET:O	2:G:757:ILE:HG13	2.18	0.43
2:G:866:LYS:O	2:G:870:GLU:HG3	2.18	0.43
2:G:1236:LEU:HD11	2:G:1262:ILE:HG12	1.99	0.43
2:H:9:LEU:HB2	2:H:27:PHE:HE1	1.83	0.43
2:H:123:ILE:HD11	2:H:533:LEU:CD2	2.48	0.43
2:H:670:ARG:HD2	2:H:676:ILE:O	2.18	0.43
2:H:1222:GLU:HG3	2:H:1235:SER:OG	2.17	0.43
2:H:1586:SER:O	2:H:1590:ARG:HB2	2.17	0.43
2:I:427:PHE:HB3	2:I:428:HIS:ND1	2.33	0.43
2:I:432:LEU:HB3	2:I:484:ILE:HG23	2.00	0.43
2:I:932:ILE:HD12	2:I:939:PHE:HD1	1.83	0.43
2:I:1427:VAL:HG22	2:I:1469:GLU:HG2	1.99	0.43
2:I:1551:GLU:HB2	2:I:1552:PRO:HD3	2.00	0.43
2:I:1782:THR:CG2	2:I:1827:LEU:HD21	2.45	0.43
1:A:626:VAL:HG23	1:A:664:GLU:OE2	2.18	0.43
1:A:1584:PRO:CG	1:A:1591:TRP:CZ3	3.02	0.43
1:B:1279:PHE:HB2	1:B:1282:THR:HG23	2.00	0.43
1:C:168:MET:HA	1:C:206:LEU:HB2	2.00	0.43
1:C:196:THR:O	1:C:213:PHE:HE2	2.01	0.43
1:C:1279:PHE:HB2	1:C:1282:THR:HG23	2.00	0.43
1:C:1720:ALA:O	1:C:1721:ARG:HG2	2.17	0.43
2:G:195:LEU:O	2:G:199:ILE:HG13	2.18	0.43
2:G:581:THR:O	2:G:585:LYS:HB2	2.18	0.43
2:G:754:TYR:CD2	2:G:794:MET:CG	3.01	0.43
2:G:900:GLN:NE2	2:G:1051:THR:HA	2.32	0.43
2:G:1195:VAL:HG13	2:G:1211:LEU:CB	2.48	0.43
2:G:1227:ARG:CD	2:G:1565:VAL:HG11	2.44	0.43
2:H:666:ILE:HG22	2:H:698:LEU:HD22	2.00	0.43
2:I:428:HIS:CD2	2:I:488:VAL:HG23	2.53	0.43
2:I:751:LEU:HD23	2:I:791:TYR:CD2	2.53	0.43
2:I:938:TRP:CE2	2:I:944:ARG:HG3	2.53	0.43
2:I:1778:GLN:HB2	2:I:1779:PRO:HD3	2.00	0.43
2:I:1976:PHE:HA	2:I:1981:LEU:CD2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:28:TRP:HB3	2:G:1892:ASN:HA	2.00	0.43
1:A:235:SER:HA	1:A:276:ARG:NH2	2.32	0.43
1:A:237:MET:HG3	1:A:241:PHE:HB3	2.00	0.43
1:A:411:GLN:O	1:A:415:SER:HB2	2.18	0.43
1:A:1209:ASP:OD2	1:A:1253:GLY:HA2	2.19	0.43
1:B:807:LYS:C	1:B:807:LYS:HD3	2.39	0.43
1:B:1014:ASP:N	1:B:1510:ASN:HD21	2.06	0.43
1:B:1248:GLY:HA3	1:B:1301:PRO:HD2	1.99	0.43
1:C:340:ARG:HH12	1:C:344:GLN:HE21	1.65	0.43
1:C:421:ILE:HG12	1:C:469:VAL:HG21	1.98	0.43
1:C:627:SER:HB3	1:C:661:ASP:OD1	2.18	0.43
1:C:639:HIS:HB2	1:C:656:SER:OG	2.18	0.43
1:C:988:ILE:HD13	1:C:1048:GLU:HB3	2.01	0.43
1:C:1056:ILE:CD1	1:C:1193:TRP:CD1	2.99	0.43
2:G:1327:ILE:HD12	2:G:1327:ILE:HA	1.79	0.43
2:G:1473:THR:O	2:G:1481:SER:HB3	2.18	0.43
2:G:1768:LYS:HE2	2:G:1772:SER:HB3	2.00	0.43
2:H:369:SER:C	2:H:370:LEU:HD23	2.38	0.43
2:H:439:ILE:HD12	2:H:484:ILE:HD11	1.99	0.43
2:H:732:TRP:CH2	2:H:749:PRO:HG2	2.53	0.43
2:H:772:GLY:O	2:H:804:ARG:HD3	2.18	0.43
2:H:856:LYS:CE	2:H:1052:CYS:SG	3.06	0.43
2:H:970:TYR:O	2:H:973:LEU:HB2	2.18	0.43
2:I:159:ILE:HG12	2:I:512:LEU:HD23	2.01	0.43
2:I:551:THR:C	2:I:553:ASN:H	2.22	0.43
2:I:572:ASN:CB	2:I:576:LYS:H	2.27	0.43
2:I:754:TYR:CG	2:I:794:MET:HG2	2.53	0.43
2:I:843:ILE:HD13	2:I:1055:HIS:O	2.18	0.43
2:I:1241:ASN:N	2:I:1252:SER:O	2.50	0.43
2:I:1624:THR:CB	2:I:1642:THR:HG23	2.47	0.43
1:B:176:VAL:HG12	1:B:178:GLY:H	1.83	0.43
1:B:1244:GLY:C	1:B:1327:CYS:HB2	2.38	0.43
1:C:980:VAL:HG21	2:I:952:ARG:HH21	1.83	0.43
2:G:455:ILE:C	2:G:455:ILE:HD12	2.39	0.43
2:G:967:ILE:HD12	2:G:972:LEU:HD22	2.00	0.43
2:G:1016:PRO:HD2	2:G:1017:PHE:CE2	2.53	0.43
2:G:1040:LEU:O	2:G:1046:GLN:HG3	2.19	0.43
2:G:1162:ASP:O	2:G:1163:LYS:HB2	2.19	0.43
2:G:1223:MET:HE3	2:G:1238:LEU:CD1	2.49	0.43
2:G:1308:CYS:HB3	2:G:1311:PHE:CE2	2.53	0.43
2:G:1674:GLN:OE1	2:G:1712:ASN:HA	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1678:MET:HE3	2:G:1707:LEU:CD2	2.43	0.43
2:G:1804:PHE:CD2	2:G:1818:LEU:HD22	2.53	0.43
2:G:1846:GLU:C	2:G:1848:GLY:H	2.20	0.43
2:H:309:ARG:HD3	2:H:309:ARG:HA	1.63	0.43
2:I:430:HIS:CE1	2:I:431:LEU:HD13	2.53	0.43
2:I:439:ILE:HD12	2:I:484:ILE:CD1	2.48	0.43
2:I:835:THR:HG21	2:I:855:HIS:NE2	2.33	0.43
2:I:1210:ILE:HG22	2:I:1210:ILE:O	2.18	0.43
2:I:1325:PHE:O	2:I:1328:VAL:HG12	2.18	0.43
2:I:1428:GLU:HG2	2:I:1470:THR:HG22	1.99	0.43
1:A:254:TRP:CZ3	1:A:302:LEU:HD13	2.53	0.43
1:A:413:LEU:O	1:A:413:LEU:HG	2.17	0.43
1:A:496:PRO:HB2	1:A:519:VAL:HG12	2.01	0.43
1:A:1291:LEU:HD21	1:A:1698:PHE:CE1	2.53	0.43
1:A:1375:GLY:HA2	1:A:1546:THR:HG22	2.01	0.43
1:A:1553:GLU:HA	1:A:1556:THR:HG23	2.01	0.43
1:A:1556:THR:O	1:A:1560:MET:HG2	2.18	0.43
1:A:1673:TYR:CZ	1:A:1677:VAL:HG21	2.53	0.43
1:B:242:THR:HB	1:B:244:THR:HB	2.01	0.43
1:C:221:LEU:HD23	1:C:221:LEU:HA	1.89	0.43
1:C:235:SER:HA	1:C:276:ARG:NH2	2.33	0.43
1:C:1021:VAL:HG22	1:C:1387:ILE:HG22	2.01	0.43
1:C:1625:LEU:O	1:C:1627:PRO:HD3	2.18	0.43
2:G:156:LEU:HD23	2:G:500:HIS:HB2	1.99	0.43
2:G:272:GLY:HA3	2:G:276:GLY:C	2.38	0.43
2:G:397:LYS:HB3	2:G:416:PHE:CE2	2.53	0.43
2:G:653:TYR:OH	2:G:690:VAL:HG11	2.18	0.43
2:G:1458:ASP:O	2:G:1462:LYS:HE3	2.19	0.43
2:G:1493:LEU:HB3	2:G:1494:PRO:CD	2.48	0.43
2:H:726:PHE:HA	2:H:727:PRO:HD3	1.88	0.43
2:H:745:ASP:HA	2:H:832:TRP:CH2	2.51	0.43
2:H:1015:VAL:HG13	2:H:1017:PHE:CE2	2.53	0.43
2:I:397:LYS:HB3	2:I:416:PHE:CE2	2.53	0.43
2:I:439:ILE:HD12	2:I:484:ILE:HD11	1.99	0.43
2:I:562:LEU:HD23	2:I:562:LEU:HA	1.79	0.43
2:I:852:GLU:H	2:I:852:GLU:HG3	1.39	0.43
2:I:972:LEU:HD23	2:I:979:ALA:HB2	2.00	0.43
2:I:1496:LYS:CE	2:I:1693:ARG:HH21	2.31	0.43
2:I:1651:LEU:O	2:I:1652:THR:HG23	2.17	0.43
1:A:242:THR:HB	1:A:244:THR:HB	2.00	0.43
1:A:627:SER:HB2	1:A:657:SER:CB	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:641:ARG:HD3	1:A:649:TRP:O	2.18	0.43
1:A:790:PHE:CE2	1:A:794:ILE:HD11	2.53	0.43
1:B:1208:VAL:HG11	1:B:1212:THR:HB	1.97	0.43
1:B:1270:VAL:HG11	1:B:1274:ILE:HD13	2.00	0.43
1:C:232:LEU:HD13	1:C:272:GLU:CB	2.48	0.43
1:C:378:LEU:HD12	1:C:378:LEU:HA	1.85	0.43
1:C:930:LEU:HD23	1:C:930:LEU:HA	1.68	0.43
1:C:1234:MET:HE3	1:C:1326:ILE:HG21	2.01	0.43
1:C:1446:LYS:O	1:C:1450:ARG:HG3	2.18	0.43
2:G:99:ASN:HA	2:G:550:VAL:CG2	2.49	0.43
2:G:419:ARG:HG3	2:G:420:PHE:N	2.33	0.43
2:G:1889:VAL:HG13	2:G:1977:HIS:HB3	1.97	0.43
2:H:73:GLU:OE2	2:H:76:LYS:HD2	2.18	0.43
2:H:160:PHE:CE2	2:H:504:PHE:HB2	2.54	0.43
2:H:360:LEU:HA	2:H:361:PRO:HD3	1.90	0.43
2:H:1241:ASN:N	2:H:1252:SER:O	2.51	0.43
2:I:279:THR:O	2:I:283:ILE:HB	2.19	0.43
2:I:871:THR:HG21	2:I:887:LYS:HZ1	1.83	0.43
2:I:1079:ASP:O	2:I:1082:ILE:HG22	2.19	0.43
2:I:1236:LEU:HD22	2:I:1238:LEU:HG	1.99	0.43
2:I:1959:LYS:O	2:I:1959:LYS:HG2	2.19	0.43
1:A:267:VAL:O	1:A:290:MET:HE1	2.19	0.43
1:A:988:ILE:CD1	1:A:1048:GLU:HA	2.48	0.43
1:A:1431:GLU:OE2	1:A:1433:HIS:HE1	2.02	0.43
1:B:370:GLU:O	1:B:373:ALA:HB3	2.19	0.43
1:B:1219:VAL:CA	1:B:1384:ILE:HD11	2.32	0.43
1:B:1233:GLU:CD	1:B:1680:ARG:HH21	2.22	0.43
1:C:49:PRO:O	1:C:82:SER:HB2	2.19	0.43
1:C:1248:GLY:HA3	1:C:1301:PRO:HD2	2.01	0.43
1:C:1375:GLY:HA2	1:C:1546:THR:HG22	1.99	0.43
1:C:1431:GLU:OE2	1:C:1433:HIS:HE1	2.00	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	2.01	0.43
1:C:1599:ILE:HD11	1:C:1606:PRO:HD2	2.01	0.43
2:G:184:VAL:HG12	2:G:188:ILE:HG12	2.00	0.43
2:G:184:VAL:HG12	2:G:184:VAL:O	2.19	0.43
2:G:324:LEU:HD12	2:G:324:LEU:O	2.18	0.43
2:G:573:LYS:C	2:G:575:GLY:H	2.21	0.43
2:G:652:ILE:HD13	2:G:658:MET:HE3	1.99	0.43
2:G:854:ILE:HG22	2:G:856:LYS:HG3	2.01	0.43
2:H:573:LYS:C	2:H:575:GLY:H	2.21	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:629:GLY:O	2:H:632:ALA:HB3	2.18	0.43
2:H:643:LYS:HA	2:H:1163:LYS:HG2	1.99	0.43
2:H:653:TYR:OH	2:H:690:VAL:HG11	2.18	0.43
2:H:1223:MET:HE3	2:H:1238:LEU:CD1	2.46	0.43
2:H:1422:THR:HG23	2:H:1474:PHE:CD1	2.54	0.43
2:I:7:ARG:NH2	2:I:24:THR:O	2.52	0.43
2:I:607:VAL:O	2:I:611:THR:HB	2.18	0.43
1:A:335:HIS:ND1	1:C:335:HIS:HE1	2.17	0.43
1:A:644:THR:HG23	1:A:648:ASP:N	2.34	0.43
1:A:827:SER:HA	1:A:828:PRO:HD3	1.70	0.43
1:A:1009:LEU:CD1	1:A:1445:MET:HE1	2.48	0.43
1:B:681:THR:HA	1:B:706:THR:OG1	2.19	0.43
1:B:1375:GLY:HA2	1:B:1546:THR:HG22	2.01	0.43
1:B:1446:LYS:O	1:B:1450:ARG:HG3	2.19	0.43
1:C:1158:PRO:HD2	1:C:1159:GLU:OE2	2.18	0.43
2:G:324:LEU:O	2:G:328:LEU:HG	2.18	0.43
2:G:601:THR:O	2:G:601:THR:CG2	2.67	0.43
2:G:786:SER:HB3	2:G:794:MET:HE2	2.01	0.43
2:G:860:ARG:H	2:G:1049:GLN:HG3	1.83	0.43
2:G:1004:LEU:HD21	2:G:1020:VAL:CG2	2.48	0.43
2:G:1175:LYS:HG3	2:G:1176:PRO:HD2	2.00	0.43
2:H:654:VAL:O	2:H:654:VAL:HG12	2.18	0.43
2:H:1567:ARG:HH11	2:H:1567:ARG:HG2	1.72	0.43
2:H:1940:LEU:HD12	2:H:1941:PHE:N	2.34	0.43
2:I:169:TYR:CG	2:I:170:PHE:N	2.87	0.43
2:I:425:SER:HA	2:I:426:PRO:HD3	1.78	0.43
2:I:846:VAL:CG1	2:I:865:TRP:NE1	2.82	0.43
2:I:1168:ASN:HA	2:I:1169:PRO:HD3	1.84	0.43
2:I:1552:PRO:O	2:I:1556:VAL:HG23	2.19	0.43
2:I:2030:TYR:CD1	2:I:2034:GLY:HA2	2.54	0.43
1:A:833:PHE:HA	1:A:937:LYS:HD2	2.00	0.43
1:A:933:VAL:HA	1:A:934:PRO:HD3	1.84	0.43
1:A:1431:GLU:CG	1:A:1433:HIS:CE1	3.00	0.43
1:A:1670:TYR:O	1:A:1674:VAL:HG23	2.18	0.43
1:B:460:GLU:CG	1:B:470:LYS:HD3	2.48	0.43
1:B:1431:GLU:CG	1:B:1433:HIS:CE1	3.02	0.43
1:B:1657:HIS:HA	1:B:1658:PRO:HD3	1.89	0.43
1:C:1600:LEU:HD11	1:C:1655:VAL:HG12	2.00	0.43
2:G:15:SER:H	2:G:48:PHE:HE2	1.67	0.43
2:G:28:PHE:CE2	2:H:7:ARG:CD	2.73	0.43
2:G:486:LEU:HA	2:G:487:PRO:HD3	1.90	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:835:THR:HG22	2:G:844:VAL:HA	2.00	0.43
2:G:884:LEU:HD22	2:G:1021:LEU:CD1	2.49	0.43
2:G:1219:ILE:HB	2:G:1240:TYR:HB2	2.01	0.43
2:G:1875:VAL:HG22	2:G:1910:VAL:HG11	2.01	0.43
2:G:2042:ILE:HG12	2:G:2042:ILE:H	1.39	0.43
2:H:543:PHE:CB	2:H:545:GLN:NE2	2.81	0.43
2:H:717:ILE:HG23	2:H:760:HIS:CE1	2.54	0.43
2:H:1862:VAL:HG22	2:H:1863:ALA:N	2.33	0.43
2:I:209:PHE:CE2	2:I:213:LEU:HD22	2.53	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:702:TYR:HB3	2:I:727:PRO:HB2	2.00	0.43
2:I:967:ILE:HD12	2:I:972:LEU:HD22	2.00	0.43
2:I:1561:ASN:HA	2:I:1562:PRO:HD3	1.80	0.43
2:I:1662:THR:HB	2:I:1799:PRO:HG2	2.00	0.43
2:I:1873:TYR:CE1	2:I:1877:ARG:NH2	2.81	0.43
1:A:32:GLN:HE22	1:A:57:ALA:N	2.16	0.43
1:A:44:VAL:HG11	1:A:78:ILE:HG12	1.96	0.43
1:A:196:THR:O	1:A:213:PHE:HE2	2.01	0.43
1:A:460:GLU:CG	1:A:470:LYS:HD3	2.49	0.43
1:A:1107:GLU:HA	1:A:1108:PRO:HD3	1.90	0.43
1:B:260:ARG:HH12	1:B:300:VAL:CG2	2.20	0.43
1:B:335:HIS:C	1:B:335:HIS:CD2	2.92	0.43
1:B:411:GLN:O	1:B:415:SER:HB2	2.18	0.43
1:B:1283:MET:O	1:B:1287:VAL:HG23	2.18	0.43
1:B:1553:GLU:HA	1:B:1556:THR:HG23	2.00	0.43
1:C:852:ARG:NH1	1:C:856:GLU:OE1	2.52	0.43
1:C:1047:LEU:O	1:C:1051:VAL:HG23	2.19	0.43
1:C:1107:GLU:HA	1:C:1108:PRO:HD3	1.89	0.43
1:C:1208:VAL:HG11	1:C:1212:THR:HB	1.98	0.43
1:C:1430:ARG:HG2	1:C:1430:ARG:O	2.19	0.43
2:G:339:LEU:HD23	2:G:419:ARG:O	2.19	0.43
2:G:441:LYS:O	2:G:445:LYS:HG3	2.18	0.43
2:G:634:ILE:CD1	2:G:649:ILE:HD11	2.43	0.43
2:G:1327:ILE:HG12	2:G:1583:MET:HE3	2.01	0.43
2:G:1339:PHE:N	2:G:1340:PRO:CD	2.82	0.43
2:G:1348:LEU:HD12	2:G:1348:LEU:HA	1.81	0.43
2:G:1858:ASN:HA	2:G:1896:GLN:O	2.18	0.43
2:H:595:PRO:HD3	2:H:800:LEU:HB2	2.01	0.43
2:H:1293:THR:CG2	2:H:1296:GLU:H	2.24	0.43
2:I:652:ILE:CD1	2:I:658:MET:HE3	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:950:PHE:O	2:I:953:ARG:HB3	2.19	0.43
1:A:2:LYS:HE2	1:A:4:GLU:OE1	2.19	0.42
1:A:155:VAL:O	1:A:159:LEU:HG	2.19	0.42
1:A:705:VAL:HG23	1:A:732:LEU:CD2	2.48	0.42
1:A:1396:MET:O	1:A:1680:ARG:NH1	2.52	0.42
1:A:1539:ALA:O	1:A:1574:GLY:HA2	2.18	0.42
1:B:335:HIS:O	1:B:335:HIS:CD2	2.70	0.42
1:B:350:LEU:HB2	1:B:352:MET:HG2	2.01	0.42
1:B:430:ARG:NH2	1:B:605:LEU:HD13	2.33	0.42
1:B:1050:CYS:HB3	1:B:1089:VAL:HG12	2.00	0.42
1:B:1263:ASP:HB2	1:B:1270:VAL:HG21	2.00	0.42
1:B:1406:MET:HE1	1:B:1428:THR:HB	2.01	0.42
1:C:1175:ILE:HA	1:C:1176:PRO:HD3	1.89	0.42
1:C:1243:VAL:O	1:C:1296:GLY:HA3	2.18	0.42
1:C:1431:GLU:CG	1:C:1433:HIS:CE1	3.01	0.42
2:G:23:PRO:HG2	2:G:86:LEU:HD11	2.00	0.42
2:H:551:THR:C	2:H:553:ASN:H	2.21	0.42
2:H:1257:ASP:O	2:H:1261:ARG:HG3	2.19	0.42
2:H:1458:ASP:O	2:H:1462:LYS:HE3	2.19	0.42
2:H:1847:LEU:H	2:H:1847:LEU:CD1	2.12	0.42
2:I:7:ARG:CG	2:I:22:VAL:O	2.67	0.42
2:I:516:THR:O	2:I:519:ASN:HB2	2.19	0.42
2:I:736:ARG:H	2:I:736:ARG:HG3	1.57	0.42
2:I:835:THR:HB	2:I:845:THR:HG23	2.01	0.42
2:I:1311:PHE:HD1	2:I:1320:LEU:O	2.02	0.42
2:I:1868:GLN:HG3	2:I:1898:TYR:HH	1.83	0.42
2:I:1878:VAL:CG1	2:I:1910:VAL:HG22	2.36	0.42
1:A:32:GLN:NE2	1:A:57:ALA:HA	2.34	0.42
1:A:1195:ALA:HB1	1:A:1200:ILE:HD12	2.02	0.42
1:A:1495:ASN:HD22	1:A:1495:ASN:HA	1.67	0.42
1:B:12:ILE:CD1	2:H:2041:ILE:HD11	2.49	0.42
1:B:417:TYR:HH	1:B:458:THR:HG22	1.84	0.42
1:B:1119:LYS:HE2	1:B:1341:PHE:CD1	2.54	0.42
1:C:949:GLU:O	1:C:953:VAL:CG1	2.67	0.42
1:C:1239:HIS:HE1	1:C:1714:VAL:O	2.02	0.42
1:C:1308:SER:HB3	1:C:1589:GLY:HA3	2.01	0.42
1:C:1618:LEU:HD23	1:C:1621:PHE:CE2	2.55	0.42
1:C:1657:HIS:CE1	1:C:1658:PRO:HD2	2.54	0.42
2:G:238:CYS:CB	2:G:239:PRO:HD3	2.45	0.42
2:G:612:ASN:HD21	2:G:641:ILE:HA	1.85	0.42
2:G:1320:LEU:HD12	2:G:1320:LEU:HA	1.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:127:ILE:HD12	2:H:180:TYR:CD2	2.54	0.42
2:H:245:GLN:HG2	2:H:505:GLY:HA2	2.00	0.42
2:H:274:SER:OG	2:H:428:HIS:HE1	2.02	0.42
2:H:279:THR:O	2:H:283:ILE:HB	2.20	0.42
2:H:665:LEU:O	2:H:665:LEU:HD22	2.19	0.42
2:H:866:LYS:O	2:H:870:GLU:HG3	2.19	0.42
2:H:938:TRP:CD1	2:H:944:ARG:HG3	2.53	0.42
2:H:1070:ILE:CD1	2:H:1074:MET:HG2	2.49	0.42
2:H:1149:TRP:HA	2:H:1242:PHE:CD1	2.54	0.42
2:H:1335:ILE:O	2:H:1338:ILE:HG12	2.19	0.42
2:I:503:ASP:O	2:I:530:ALA:HB3	2.19	0.42
2:I:538:ASP:HB2	2:I:540:ASP:HB2	2.01	0.42
2:I:810:GLU:OE2	2:I:1070:ILE:N	2.43	0.42
2:I:856:LYS:CE	2:I:1052:CYS:SG	3.07	0.42
2:I:896:ASN:O	2:I:1050:ARG:NH2	2.52	0.42
2:I:1321:ALA:HA	2:I:1322:PRO:HD3	1.83	0.42
2:I:1666:PHE:CD1	2:I:1814:ALA:HB2	2.54	0.42
1:A:290:MET:HB3	1:A:290:MET:HE2	1.93	0.42
1:A:1131:LEU:HD12	1:A:1131:LEU:HA	1.76	0.42
1:A:1132:GLU:HA	1:A:1133:PRO:HD3	1.94	0.42
1:B:155:VAL:HG22	1:B:186:ILE:CG2	2.50	0.42
1:B:280:GLU:O	1:B:284:LYS:HG3	2.20	0.42
1:B:828:PRO:HG3	1:B:868:ILE:HG22	2.00	0.42
1:B:908:LEU:HA	1:B:913:VAL:HG21	2.00	0.42
1:B:1145:LYS:HD3	1:B:1154:ILE:HG12	2.01	0.42
1:B:1420:ALA:HA	1:B:1421:PRO:HD3	1.74	0.42
1:C:330:GLU:HG2	1:C:330:GLU:O	2.18	0.42
1:C:408:TRP:CH2	1:C:1628:SER:HB3	2.55	0.42
1:C:1114:TYR:CE1	1:C:1337:GLU:HG3	2.55	0.42
2:G:421:LEU:HA	2:G:422:PRO:HD3	1.81	0.42
2:G:543:PHE:HB2	2:G:545:GLN:NE2	2.25	0.42
2:G:586:LEU:HD12	2:G:764:MET:SD	2.59	0.42
2:G:1031:LYS:O	2:G:1032:ASP:C	2.57	0.42
2:G:1986:LYS:N	2:G:1987:PRO:CD	2.82	0.42
2:G:2026:PHE:HB3	2:G:2042:ILE:HD13	2.00	0.42
2:H:38:ASN:HA	2:H:41:LEU:HD12	2.01	0.42
2:H:240:LEU:HD12	2:H:240:LEU:HA	1.78	0.42
2:H:258:PHE:N	2:H:258:PHE:CD1	2.87	0.42
2:H:967:ILE:CD1	2:H:972:LEU:HD22	2.50	0.42
2:H:1080:GLY:O	2:H:1084:LYS:HG3	2.19	0.42
2:H:1159:ILE:CG2	2:H:1160:THR:N	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1383:ASN:HD21	2:H:1418:ASP:HB3	1.84	0.42
2:H:1497:GLU:OE1	2:H:2002:LYS:CE	2.66	0.42
2:H:1551:GLU:HB2	2:H:1552:PRO:HD3	2.00	0.42
2:I:190:PHE:O	2:I:194:THR:HG22	2.19	0.42
2:I:234:ILE:HG13	2:I:235:PRO:CD	2.46	0.42
2:I:309:ARG:HA	2:I:309:ARG:HD3	1.61	0.42
2:I:726:PHE:HA	2:I:727:PRO:HD3	1.86	0.42
2:I:778:TYR:N	2:I:779:PRO:CD	2.82	0.42
2:I:1085:LEU:HD12	2:I:1085:LEU:HA	1.82	0.42
1:A:460:GLU:H	1:A:460:GLU:HG3	1.34	0.42
1:B:874:GLY:O	1:B:875:THR:C	2.58	0.42
1:C:21:GLN:HE21	1:C:21:GLN:HB3	1.69	0.42
1:C:183:GLN:NE2	1:C:202:GLU:HG2	2.31	0.42
1:C:406:TRP:CE3	1:C:407:ASN:HB2	2.53	0.42
1:C:798:ASN:HA	1:C:801:ARG:HB2	2.02	0.42
1:C:1219:VAL:CA	1:C:1384:ILE:CD1	2.94	0.42
2:G:503:ASP:OD2	2:G:513:GLY:N	2.50	0.42
2:G:1749:GLU:OE2	2:G:1840:VAL:HG13	2.19	0.42
2:G:1878:VAL:CG1	2:G:1910:VAL:HG22	2.34	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:536:ASN:HD21	2:H:540:ASP:HB3	1.84	0.42
2:H:741:HIS:CE1	2:H:855:HIS:NE2	2.88	0.42
2:H:1159:ILE:HG13	2:H:1169:PRO:CD	2.50	0.42
2:H:1427:VAL:HG22	2:H:1469:GLU:CG	2.50	0.42
2:H:1986:LYS:N	2:H:1987:PRO:CD	2.81	0.42
2:I:120:LYS:HB3	2:I:124:LYS:HE3	2.01	0.42
2:I:441:LYS:O	2:I:445:LYS:HG3	2.19	0.42
2:I:674:TYR:HA	2:I:675:PRO:HD3	1.69	0.42
2:I:1102:TYR:HB3	2:I:1244:PRO:CA	2.49	0.42
2:I:1175:LYS:HG3	2:I:1176:PRO:HD2	2.00	0.42
2:I:1590:ARG:HG3	2:I:1608:TYR:CG	2.54	0.42
2:I:2042:ILE:HG12	2:I:2042:ILE:H	1.36	0.42
1:A:382:LEU:HA	1:A:382:LEU:HD23	1.79	0.42
1:A:1195:ALA:CB	1:A:1213:LEU:HD13	2.49	0.42
1:B:20:TYR:HE1	2:H:2035:SER:HB2	1.82	0.42
1:B:157:HIS:CE1	1:B:269:LEU:HD11	2.55	0.42
1:B:272:GLU:HA	1:B:273:PRO:HD3	1.92	0.42
1:B:1022:THR:HG22	1:B:1226:SER:CB	2.49	0.42
1:B:1234:MET:HE3	1:B:1326:ILE:HG21	2.01	0.42
1:B:1385:GLN:HE21	1:B:1385:GLN:HB3	1.66	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1534:ASP:OD1	1:B:1566:ARG:HD3	2.19	0.42
1:C:32:GLN:NE2	1:C:57:ALA:CA	2.82	0.42
1:C:408:TRP:CZ3	1:C:1628:SER:HB3	2.54	0.42
1:C:413:LEU:O	1:C:413:LEU:HG	2.19	0.42
1:C:1455:ARG:HD2	1:C:1455:ARG:HA	1.82	0.42
1:C:1592:MET:HE2	1:C:1641:ILE:HG23	2.00	0.42
2:G:517:HIS:CE1	2:G:540:ASP:O	2.73	0.42
2:G:638:VAL:HG22	2:G:675:PRO:HG2	2.01	0.42
2:G:1135:GLU:HG2	2:G:1176:PRO:HG2	2.02	0.42
2:H:676:ILE:O	2:H:676:ILE:HG12	2.17	0.42
2:H:751:LEU:HD11	2:H:789:PHE:CD1	2.55	0.42
2:H:1149:TRP:NE1	2:H:1213:LEU:HD12	2.34	0.42
2:H:1294:ALA:HA	2:H:1368:VAL:CG2	2.49	0.42
2:I:463:PHE:CD1	2:I:486:LEU:HD22	2.54	0.42
2:I:730:LEU:C	2:I:730:LEU:HD12	2.40	0.42
2:I:754:TYR:CE2	2:I:794:MET:HG3	2.53	0.42
2:I:786:SER:HB3	2:I:794:MET:HE2	2.01	0.42
2:I:835:THR:HG22	2:I:844:VAL:C	2.40	0.42
1:A:529:MET:HG2	1:A:638:LEU:CG	2.50	0.42
1:A:1420:ALA:HA	1:A:1421:PRO:HD3	1.75	0.42
1:B:706:THR:HB	1:B:737:PHE:HB3	2.01	0.42
1:B:982:ILE:HG23	2:H:956:GLU:HG2	2.01	0.42
1:B:1239:HIS:CD2	1:B:1241:SER:OG	2.59	0.42
1:C:406:TRP:CD2	1:C:1619:GLU:HG3	2.55	0.42
1:C:475:GLN:CD	1:C:614:ALA:HB2	2.40	0.42
1:C:1220:VAL:O	1:C:1224:ILE:HG12	2.19	0.42
1:C:1639:VAL:CG1	1:C:1640:SER:N	2.82	0.42
2:G:786:SER:HB2	2:G:794:MET:HE2	2.00	0.42
2:G:1180:MET:HB3	2:G:1199:GLU:HG2	2.00	0.42
2:H:60:LEU:O	2:H:60:LEU:HD23	2.20	0.42
2:H:345:THR:HG22	2:H:347:GLU:N	2.25	0.42
2:H:900:GLN:NE2	2:H:1051:THR:HA	2.34	0.42
2:I:33:LEU:HD21	2:I:80:PHE:CE2	2.54	0.42
2:I:298:LYS:HA	2:I:448:VAL:CG2	2.49	0.42
2:I:1217:ASN:HD22	2:I:1217:ASN:HA	1.60	0.42
2:I:1359:MET:CE	2:I:1404:MET:HB3	2.50	0.42
1:A:1:MET:HE3	1:A:9:LEU:HD12	2.01	0.42
1:A:181:THR:HG22	1:A:185:GLU:OE2	2.19	0.42
1:A:1019:ILE:HG13	1:A:1316:VAL:HG13	2.01	0.42
1:A:1263:ASP:HB2	1:A:1270:VAL:HG21	2.01	0.42
1:B:242:THR:HG22	1:B:243:ILE:H	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:625:THR:HG23	1:B:627:SER:H	1.84	0.42
1:B:1238:VAL:CG1	1:B:1242:GLU:HB2	2.49	0.42
1:B:1244:GLY:O	1:B:1327:CYS:HB2	2.20	0.42
1:B:1264:ARG:NH1	1:B:1270:VAL:HB	2.35	0.42
1:B:1682:LYS:HB3	2:H:994:PHE:CE2	2.54	0.42
1:C:377:TYR:O	1:C:380:ALA:HB3	2.19	0.42
1:C:438:ASN:HD21	1:C:698:GLN:HE21	1.66	0.42
1:C:1067:LEU:HD23	1:C:1067:LEU:HA	1.76	0.42
2:G:507:GLY:O	2:G:508:GLY:C	2.58	0.42
2:G:810:GLU:OE2	2:G:1070:ILE:N	2.44	0.42
2:G:856:LYS:CE	2:G:1052:CYS:SG	3.08	0.42
2:G:938:TRP:CE2	2:G:944:ARG:HG3	2.54	0.42
2:G:1044:VAL:HG21	2:G:1050:ARG:NE	2.34	0.42
2:G:1149:TRP:NE1	2:G:1213:LEU:HD12	2.35	0.42
2:H:581:THR:O	2:H:585:LYS:HB2	2.20	0.42
2:H:712:ALA:O	2:H:716:VAL:HG23	2.20	0.42
2:H:754:TYR:CG	2:H:794:MET:HG2	2.55	0.42
2:H:804:ARG:NH1	2:H:1062:PHE:O	2.52	0.42
2:H:949:ASP:HB3	2:H:1006:MET:CE	2.47	0.42
2:H:1002:HIS:NE2	2:H:1006:MET:CE	2.82	0.42
2:H:1175:LYS:HG3	2:H:1176:PRO:HD2	2.02	0.42
2:H:1339:PHE:N	2:H:1340:PRO:CD	2.83	0.42
2:I:44:PRO:HA	2:I:53:GLU:OE2	2.19	0.42
2:I:73:GLU:OE2	2:I:76:LYS:HD2	2.18	0.42
2:I:703:LEU:CD2	2:I:705:LEU:HG	2.50	0.42
2:I:740:HIS:HA	2:I:854:ILE:HD13	2.01	0.42
2:I:745:ASP:HA	2:I:832:TRP:CH2	2.49	0.42
2:I:1129:ALA:HB2	2:I:1138:TRP:CH2	2.55	0.42
2:I:1273:GLU:HB3	2:I:1274:PRO:CD	2.50	0.42
2:I:1343:VAL:HG22	2:I:1343:VAL:O	2.20	0.42
2:I:1989:LYS:NZ	2:I:2037:PRO:HG2	2.35	0.42
2:I:2046:GLU:C	2:I:2048:TYR:N	2.73	0.42
1:A:408:TRP:CH2	1:A:1628:SER:HB3	2.55	0.42
1:A:655:LEU:HD23	1:A:655:LEU:HA	1.81	0.42
1:A:800:LEU:HD23	1:A:800:LEU:HA	1.84	0.42
1:A:987:ASN:HD22	2:G:957:ARG:CD	2.30	0.42
1:A:1260:MET:HB2	1:A:1274:ILE:HD12	2.02	0.42
1:B:458:THR:OG1	1:B:470:LYS:HD2	2.20	0.42
1:B:798:ASN:HA	1:B:801:ARG:HB2	2.02	0.42
1:B:1012:LEU:HD23	1:B:1445:MET:HE3	2.00	0.42
1:C:2:LYS:HE2	1:C:4:GLU:OE1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:37:LYS:HB2	1:C:65:TYR:CE1	2.52	0.42
1:C:155:VAL:O	1:C:159:LEU:HG	2.19	0.42
1:C:1310:GLU:OE1	1:C:1649:LYS:CE	2.65	0.42
2:G:7:ARG:NH1	2:G:24:THR:CG2	2.79	0.42
2:G:237:SER:O	2:G:241:ILE:HG13	2.20	0.42
2:G:258:PHE:N	2:G:258:PHE:HD1	2.18	0.42
2:G:732:TRP:CH2	2:G:749:PRO:HG2	2.55	0.42
2:G:827:VAL:HG21	2:G:840:THR:CG2	2.49	0.42
2:G:1014:PRO:HG2	2:G:1032:ASP:HB2	2.01	0.42
2:G:1079:ASP:O	2:G:1082:ILE:HG22	2.19	0.42
2:G:1217:ASN:HD22	2:G:1217:ASN:HA	1.62	0.42
2:G:1383:ASN:OD1	2:G:1388:LYS:HG3	2.20	0.42
2:H:33:LEU:HD13	2:H:68:VAL:HG22	2.02	0.42
2:H:624:TYR:HB2	2:H:630:MET:HE3	2.02	0.42
2:H:844:VAL:HG22	2:H:858:ALA:HB2	2.01	0.42
2:H:1642:THR:HB	2:H:1651:LEU:HB2	2.01	0.42
2:I:732:TRP:CH2	2:I:749:PRO:HG2	2.55	0.42
1:A:155:VAL:HG22	1:A:186:ILE:CG2	2.50	0.42
1:A:335:HIS:CD2	1:A:335:HIS:C	2.92	0.42
1:A:444:ASN:CB	1:A:446:ALA:H	2.32	0.42
1:A:453:TYR:O	1:A:457:ASN:HB2	2.20	0.42
1:A:1332:TYR:HB3	1:A:1382:ALA:CB	2.50	0.42
1:A:1618:LEU:HD23	1:A:1621:PHE:CE2	2.54	0.42
1:B:1:MET:HE3	1:B:6:GLU:HA	2.01	0.42
1:B:20:TYR:CZ	2:H:2035:SER:HB2	2.53	0.42
1:B:31:THR:CG2	2:H:2011:ILE:HG21	2.40	0.42
1:B:44:VAL:HG11	1:B:78:ILE:HG12	2.00	0.42
1:B:780:GLU:O	1:B:781:LEU:C	2.58	0.42
1:B:1189:ILE:HG23	1:B:1190:PRO:HD2	2.01	0.42
1:B:1539:ALA:O	1:B:1574:GLY:HA2	2.20	0.42
1:B:1705:PRO:HB2	1:B:1733:PHE:CD1	2.55	0.42
1:C:1012:LEU:HD23	1:C:1445:MET:HE2	2.02	0.42
1:C:1154:ILE:O	1:C:1154:ILE:HG13	2.20	0.42
1:C:1244:GLY:HA3	1:C:1297:PRO:HD2	2.02	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:2036:GLU:HB2	2:G:2037:PRO:CD	2.48	0.42
2:H:433:VAL:N	2:H:434:PRO:CD	2.83	0.42
2:H:641:ILE:CD1	2:H:645:SER:HB2	2.50	0.42
2:H:995:LEU:HB3	2:H:1000:ILE:CD1	2.50	0.42
2:H:1889:VAL:HG22	2:H:1977:HIS:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:360:LEU:HA	2:I:361:PRO:HD3	1.89	0.42
2:I:879:LYS:HD3	2:I:879:LYS:HA	1.73	0.42
2:I:1135:GLU:HG2	2:I:1176:PRO:HG2	2.02	0.42
2:I:1223:MET:HE3	2:I:1238:LEU:CD1	2.49	0.42
2:I:1593:ILE:O	2:I:1597:ALA:HB3	2.20	0.42
1:A:32:GLN:HE21	1:A:57:ALA:HB2	1.85	0.42
1:A:350:LEU:HD23	1:A:350:LEU:HA	1.89	0.42
1:A:483:VAL:O	1:A:486:VAL:HB	2.20	0.42
1:A:521:LYS:HB3	1:A:523:SER:HB3	2.01	0.42
1:A:780:GLU:O	1:A:781:LEU:C	2.59	0.42
1:A:998:TYR:CD2	1:A:1667:GLU:HG3	2.55	0.42
1:A:1234:MET:HE3	1:A:1326:ILE:HG21	2.02	0.42
1:B:140:ILE:CG2	1:B:141:ALA:N	2.83	0.42
1:B:438:ASN:ND2	1:B:698:GLN:HE21	2.14	0.42
1:B:1175:ILE:HA	1:B:1176:PRO:HD3	1.89	0.42
1:C:19:ALA:O	1:C:22:PHE:HB2	2.19	0.42
1:C:1029:PRO:HA	1:C:1188:GLN:O	2.20	0.42
1:C:1370:THR:HG22	1:C:1371:THR:N	2.35	0.42
2:G:298:LYS:HA	2:G:448:VAL:CG2	2.50	0.42
2:G:427:PHE:HB3	2:G:428:HIS:ND1	2.34	0.42
2:G:468:LEU:O	2:G:471:LEU:HB2	2.20	0.42
2:G:670:ARG:HD2	2:G:676:ILE:O	2.20	0.42
2:G:736:ARG:H	2:G:736:ARG:HG3	1.59	0.42
2:G:1236:LEU:HA	2:G:1237:PRO:HD3	1.76	0.42
2:G:1360:ILE:HA	2:G:1361:PRO:HD3	1.91	0.42
2:G:1383:ASN:HD21	2:G:1418:ASP:HB3	1.85	0.42
2:G:1782:THR:CG2	2:G:1827:LEU:HD21	2.48	0.42
2:H:23:PRO:HG2	2:H:86:LEU:HD11	2.01	0.42
2:H:234:ILE:HG13	2:H:235:PRO:CD	2.47	0.42
2:H:421:LEU:HA	2:H:422:PRO:HD3	1.78	0.42
2:H:1180:MET:HB3	2:H:1199:GLU:HG2	2.02	0.42
2:H:1343:VAL:O	2:H:1343:VAL:HG22	2.20	0.42
2:H:1666:PHE:CD1	2:H:1814:ALA:CB	3.03	0.42
2:H:1855:ILE:HB	2:H:1907:LEU:HD12	2.01	0.42
2:H:2036:GLU:HB2	2:H:2037:PRO:CD	2.47	0.42
2:I:258:PHE:N	2:I:258:PHE:CD1	2.87	0.42
2:I:804:ARG:NH2	2:I:1068:GLU:OE1	2.53	0.42
2:I:1214:LEU:HD11	2:I:1220:GLN:NE2	2.35	0.42
2:I:1335:ILE:O	2:I:1338:ILE:HG12	2.20	0.42
2:I:1738:PHE:HE1	2:I:1837:THR:HG23	1.85	0.42
1:A:32:GLN:NE2	1:A:57:ALA:CA	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1019:ILE:HG21	1:A:1316:VAL:HG22	2.01	0.41
1:A:1279:PHE:HB2	1:A:1282:THR:HG23	2.01	0.41
1:A:1308:SER:HB3	1:A:1589:GLY:HA3	2.01	0.41
1:A:1657:HIS:CG	1:A:1658:PRO:HD2	2.55	0.41
1:B:1019:ILE:HG13	1:B:1316:VAL:HG13	2.02	0.41
1:B:1673:TYR:CZ	1:B:1677:VAL:HG21	2.55	0.41
1:C:12:ILE:HD11	2:I:2041:ILE:HD11	2.01	0.41
1:C:616:LEU:HB2	1:C:617:PRO:HD3	2.01	0.41
1:C:635:ILE:CG2	1:C:651:TYR:CG	3.03	0.41
1:C:1215:VAL:O	1:C:1219:VAL:HG23	2.20	0.41
2:G:439:ILE:HD12	2:G:484:ILE:HD11	2.01	0.41
2:G:638:VAL:HA	2:G:641:ILE:CG2	2.50	0.41
2:G:1128:LYS:HG2	2:G:1181:VAL:HG22	2.02	0.41
2:G:1496:LYS:CE	2:G:1693:ARG:HH21	2.28	0.41
2:G:1579:ILE:CD1	2:G:1615:MET:SD	3.08	0.41
2:H:240:LEU:O	2:H:244:ILE:HG13	2.19	0.41
2:H:258:PHE:N	2:H:258:PHE:HD1	2.18	0.41
2:H:896:ASN:O	2:H:1050:ARG:NH2	2.53	0.41
2:H:2010:TYR:O	2:H:2012:PRO:HD3	2.20	0.41
2:I:441:LYS:HG2	2:I:445:LYS:HE3	2.02	0.41
2:I:512:LEU:O	2:I:516:THR:HG23	2.20	0.41
2:I:659:LEU:O	2:I:663:ILE:HG12	2.20	0.41
2:I:1697:HIS:CE1	2:I:1829:GLU:CG	3.03	0.41
2:I:1815:LEU:O	2:I:1821:VAL:HG23	2.20	0.41
2:I:1980:TYR:HD1	2:I:1981:LEU:HD12	1.85	0.41
1:A:28:TRP:CE2	1:A:53:LEU:HD22	2.55	0.41
1:A:29:ILE:HD13	2:G:1894:GLU:HA	2.01	0.41
1:A:50:SER:CB	1:A:51:PRO:CD	2.98	0.41
1:A:280:GLU:O	1:A:284:LYS:HG3	2.21	0.41
1:A:340:ARG:NH1	1:A:344:GLN:CG	2.70	0.41
1:A:983:GLN:HE21	2:G:962:LYS:HD2	1.80	0.41
1:A:1233:GLU:CD	1:A:1680:ARG:HH21	2.24	0.41
1:B:290:MET:HB3	1:B:290:MET:HE2	1.96	0.41
1:C:12:ILE:O	1:C:15:THR:HG23	2.20	0.41
1:C:889:GLU:C	1:C:891:MET:H	2.24	0.41
1:C:1584:PRO:CG	1:C:1591:TRP:CZ3	3.03	0.41
2:G:717:ILE:HG23	2:G:760:HIS:CE1	2.55	0.41
2:G:992:GLU:OE1	2:G:992:GLU:HA	2.20	0.41
2:G:1553:TYR:OH	2:G:1583:MET:HB3	2.20	0.41
2:G:1755:ILE:HD11	2:G:1762:TYR:HB2	2.03	0.41
2:G:2035:SER:OG	2:G:2037:PRO:HD2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:15:SER:H	2:H:48:PHE:HE2	1.66	0.41
2:H:142:ASN:HB2	2:H:550:VAL:HG13	2.01	0.41
2:H:584:SER:CB	2:H:591:PRO:HG3	2.46	0.41
2:H:1713:ASN:HA	2:H:1714:PRO:HD3	1.89	0.41
2:I:84:LEU:HD23	2:I:84:LEU:HA	1.89	0.41
2:I:524:GLY:HA2	2:I:558:ASN:O	2.20	0.41
2:I:592:LEU:O	2:I:616:THR:HG23	2.19	0.41
2:I:1149:TRP:HA	2:I:1242:PHE:CD1	2.54	0.41
2:I:1495:THR:O	2:I:1496:LYS:HB2	2.20	0.41
1:A:1666:THR:HG23	1:A:1669:ARG:HB2	2.01	0.41
1:B:455:ILE:HD13	1:B:455:ILE:HA	1.84	0.41
1:B:852:ARG:HB3	1:B:858:TRP:HZ2	1.83	0.41
1:B:1047:LEU:O	1:B:1051:VAL:HG23	2.20	0.41
1:C:335:HIS:CD2	1:C:335:HIS:C	2.91	0.41
1:C:792:HIS:CE1	1:C:796:LEU:HD23	2.55	0.41
1:C:1047:LEU:HD23	1:C:1047:LEU:HA	1.89	0.41
1:C:1208:VAL:HG13	1:C:1209:ASP:O	2.20	0.41
2:G:520:LYS:O	2:G:521:ASP:C	2.58	0.41
2:G:667:LYS:HD2	2:G:697:THR:CG2	2.38	0.41
2:G:888:ARG:O	2:G:892:ILE:HB	2.21	0.41
2:G:1258:ARG:O	2:G:1262:ILE:HG13	2.20	0.41
2:G:1359:MET:HB3	2:G:1606:ARG:NH2	2.35	0.41
2:G:1624:THR:HB	2:G:1642:THR:CG2	2.50	0.41
2:H:1314:ARG:HD3	2:H:1314:ARG:HA	1.63	0.41
2:I:195:LEU:O	2:I:199:ILE:HG13	2.20	0.41
2:I:339:LEU:HD23	2:I:419:ARG:O	2.20	0.41
2:I:507:GLY:O	2:I:508:GLY:C	2.59	0.41
2:I:581:THR:O	2:I:585:LYS:HB2	2.20	0.41
2:I:807:ILE:HA	2:I:818:LYS:HG2	2.02	0.41
2:I:1493:LEU:HB3	2:I:1494:PRO:HD2	2.02	0.41
1:A:12:ILE:O	1:A:15:THR:HG23	2.20	0.41
1:A:28:TRP:CZ2	1:A:53:LEU:HD22	2.56	0.41
1:A:330:GLU:O	1:A:330:GLU:HG2	2.20	0.41
1:A:807:LYS:HD3	1:A:807:LYS:C	2.40	0.41
1:A:1154:ILE:O	1:A:1154:ILE:HG13	2.19	0.41
1:A:1305:CYS:SG	3:A:2748:CER:C5	3.08	0.41
1:A:1720:ALA:O	1:A:1721:ARG:HG2	2.21	0.41
1:B:378:LEU:HD12	1:B:378:LEU:HA	1.75	0.41
1:B:992:PHE:CD2	1:B:1399:PRO:HG3	2.55	0.41
1:B:1216:LEU:HD23	1:B:1216:LEU:HA	1.93	0.41
1:B:1448:ARG:HD2	1:B:1508:TRP:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:495:LYS:HA	1:C:496:PRO:HD3	1.86	0.41
1:C:496:PRO:HB2	1:C:519:VAL:HG12	2.02	0.41
1:C:521:LYS:HE2	1:C:605:LEU:HD11	2.02	0.41
1:C:719:GLN:HG3	1:C:720:SER:N	2.35	0.41
2:G:439:ILE:HD12	2:G:484:ILE:CD1	2.50	0.41
2:G:760:HIS:HA	2:G:761:PRO:HD3	1.85	0.41
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:H:455:ILE:HG12	2:H:469:ARG:CG	2.49	0.41
2:H:601:THR:HB	2:H:620:ALA:HB2	2.01	0.41
2:H:1071:LYS:HE3	2:H:1075:ASP:OD2	2.20	0.41
2:H:1752:PHE:HZ	2:H:1836:MET:HE3	1.84	0.41
2:H:1886:VAL:HG22	2:H:1906:ALA:HB1	2.02	0.41
2:I:156:LEU:HD23	2:I:500:HIS:HB2	2.02	0.41
2:I:258:PHE:N	2:I:258:PHE:HD1	2.18	0.41
2:I:654:VAL:CG2	2:I:683:ALA:HB1	2.50	0.41
2:I:949:ASP:HB3	2:I:1006:MET:CE	2.48	0.41
2:I:1021:LEU:HD22	2:I:1021:LEU:HA	1.61	0.41
2:I:1383:ASN:HD21	2:I:1418:ASP:CB	2.34	0.41
2:I:1388:LYS:HE3	2:I:1418:ASP:OD2	2.21	0.41
2:I:1457:PHE:CD2	2:I:1459:LEU:HD23	2.55	0.41
2:I:1458:ASP:O	2:I:1462:LYS:HE3	2.21	0.41
1:A:9:LEU:HD21	2:G:2047:LYS:HD2	2.02	0.41
1:A:12:ILE:O	1:A:16:GLU:HG2	2.20	0.41
1:A:82:SER:OG	1:A:83:LYS:HG3	2.20	0.41
1:A:601:VAL:O	1:A:602:GLU:C	2.59	0.41
1:A:1477:ILE:N	1:A:1478:PRO:CD	2.83	0.41
1:B:2:LYS:CD	2:H:2050:GLN:HB3	2.44	0.41
1:B:453:TYR:O	1:B:457:ASN:HB2	2.21	0.41
1:B:504:ASP:CB	1:B:508:ASN:HB2	2.49	0.41
1:B:949:GLU:O	1:B:953:VAL:HG12	2.21	0.41
1:B:1232:TYR:CE2	1:B:1701:LYS:HD2	2.55	0.41
1:B:1244:GLY:HA3	1:B:1297:PRO:HD2	2.03	0.41
1:B:1257:LEU:HA	1:B:1257:LEU:HD23	1.76	0.41
1:B:1303:GLY:H	1:B:1307:THR:CG2	2.31	0.41
1:B:1308:SER:HB3	1:B:1589:GLY:HA3	2.03	0.41
1:C:242:THR:HB	1:C:244:THR:HB	2.02	0.41
1:C:1408:ALA:O	1:C:1651:GLY:HA2	2.21	0.41
1:C:1443:LEU:HD23	1:C:1443:LEU:HA	1.77	0.41
2:G:1676:MET:HE1	2:G:1781:LEU:CD2	2.47	0.41
2:G:1706:ILE:HD12	2:G:1706:ILE:HA	1.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1862:VAL:HG22	2:G:1863:ALA:N	2.36	0.41
2:H:231:LEU:HA	2:H:236:ILE:HD12	2.03	0.41
2:H:339:LEU:HD23	2:H:419:ARG:O	2.20	0.41
2:H:478:ARG:O	2:H:482:CYS:HB2	2.20	0.41
2:I:177:TYR:CD1	2:I:188:ILE:HG21	2.55	0.41
2:I:566:HIS:ND1	2:I:567:PRO:HD2	2.35	0.41
2:I:572:ASN:HD22	2:I:572:ASN:HA	1.70	0.41
2:I:712:ALA:O	2:I:716:VAL:HG23	2.21	0.41
2:I:780:TYR:HB2	2:I:799:PHE:HE2	1.85	0.41
2:I:786:SER:HB2	2:I:794:MET:HE2	2.02	0.41
2:I:800:LEU:HD23	2:I:800:LEU:H	1.85	0.41
2:I:1940:LEU:HD12	2:I:1941:PHE:N	2.35	0.41
1:A:370:GLU:O	1:A:373:ALA:HB3	2.20	0.41
1:A:529:MET:HE1	1:A:894:ARG:HD2	2.00	0.41
1:A:825:PRO:HB2	1:A:843:LYS:HZ2	1.86	0.41
1:B:238:PRO:CG	1:B:283:ALA:HB2	2.50	0.41
1:B:406:TRP:CD2	1:B:1619:GLU:HG3	2.55	0.41
1:B:495:LYS:HA	1:B:496:PRO:HD3	1.89	0.41
1:B:1066:ASN:HD22	1:B:1071:PRO:HA	1.86	0.41
1:C:155:VAL:HG22	1:C:186:ILE:CG2	2.50	0.41
1:C:1709:GLU:H	1:C:1709:GLU:HG3	1.42	0.41
2:G:490:TRP:CZ2	2:G:512:LEU:HD21	2.55	0.41
2:G:597:MET:HA	4:G:3051:FMN:C5A	2.51	0.41
2:G:754:TYR:CG	2:G:794:MET:CG	3.04	0.41
2:G:1169:PRO:O	2:G:1173:VAL:HG23	2.20	0.41
2:G:1352:HIS:HD2	2:G:1410:PHE:CD2	2.38	0.41
2:G:1495:THR:O	2:G:1496:LYS:HB2	2.20	0.41
2:G:1642:THR:HB	2:G:1651:LEU:HB2	2.01	0.41
2:G:1815:LEU:O	2:G:1821:VAL:HG23	2.20	0.41
2:G:1979:THR:O	2:G:1982:MET:HB2	2.21	0.41
2:H:624:TYR:CD1	2:H:630:MET:HE2	2.56	0.41
2:H:712:ALA:O	2:H:715:GLN:HB3	2.20	0.41
2:H:717:ILE:CG2	2:H:760:HIS:CE1	3.04	0.41
2:H:722:ALA:CB	2:H:723:HIS:CE1	3.04	0.41
2:H:950:PHE:O	2:H:953:ARG:HB3	2.20	0.41
2:H:1236:LEU:HD22	2:H:1238:LEU:HG	2.03	0.41
2:H:1680:LEU:HD13	2:H:1687:ALA:CB	2.45	0.41
2:I:638:VAL:HG22	2:I:675:PRO:HG2	2.03	0.41
2:I:663:ILE:HG13	2:I:694:TYR:CE1	2.51	0.41
2:I:1054:LEU:HD22	4:I:3051:FMN:HM72	2.03	0.41
1:A:32:GLN:O	1:A:36:LEU:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:774:ILE:HA	1:A:775:PRO:HD3	1.76	0.41
1:A:988:ILE:HD13	1:A:1048:GLU:CG	2.50	0.41
1:B:1105:LEU:HD23	1:B:1105:LEU:HA	1.89	0.41
1:B:1126:ILE:CD1	1:B:1172:THR:HG22	2.51	0.41
1:B:1666:THR:HG23	1:B:1669:ARG:CB	2.50	0.41
1:C:35:PHE:HA	1:C:39:PHE:HD2	1.86	0.41
1:C:1119:LYS:HE2	1:C:1341:PHE:CG	2.55	0.41
1:C:1131:LEU:HA	1:C:1131:LEU:HD12	1.69	0.41
1:C:1418:VAL:N	1:C:1419:PRO:CD	2.83	0.41
2:G:246:LEU:HD12	2:G:246:LEU:HA	1.82	0.41
2:G:425:SER:HA	2:G:426:PRO:HD3	1.79	0.41
2:G:571:LYS:HB2	2:G:1099:ALA:HB2	2.02	0.41
2:G:587:ILE:HD11	2:G:589:ARG:HB2	2.03	0.41
2:G:835:THR:HG21	2:G:855:HIS:NE2	2.35	0.41
2:G:843:ILE:CD1	2:G:1055:HIS:HB3	2.50	0.41
2:G:1388:LYS:HE3	2:G:1418:ASP:OD2	2.20	0.41
2:G:1427:VAL:HG22	2:G:1469:GLU:CG	2.51	0.41
2:G:1749:GLU:OE2	2:G:1840:VAL:CG1	2.68	0.41
2:H:11:LEU:HD23	2:H:11:LEU:HA	1.93	0.41
2:H:236:ILE:C	2:H:236:ILE:HD13	2.40	0.41
2:H:821:ILE:HA	2:H:857:ILE:HD11	2.02	0.41
2:H:827:VAL:HG12	2:H:828:PRO:O	2.19	0.41
2:H:1128:LYS:HG2	2:H:1181:VAL:HG22	2.01	0.41
2:H:1503:ILE:HG22	2:H:1504:VAL:C	2.41	0.41
2:I:159:ILE:HD11	2:I:512:LEU:CG	2.49	0.41
2:I:463:PHE:O	2:I:463:PHE:HD2	2.04	0.41
2:I:595:PRO:HD3	2:I:800:LEU:HB2	2.01	0.41
2:I:634:ILE:CD1	2:I:649:ILE:HD11	2.44	0.41
2:I:1357:TYR:HD1	2:I:1406:VAL:HG22	1.85	0.41
2:I:1642:THR:HB	2:I:1651:LEU:HB2	2.03	0.41
2:I:1981:LEU:HD12	2:I:1981:LEU:N	2.36	0.41
1:A:16:GLU:OE2	1:A:16:GLU:HA	2.21	0.41
1:A:91:THR:HA	1:A:92:PRO:HD3	1.81	0.41
1:A:1239:HIS:HE1	1:A:1714:VAL:O	2.03	0.41
1:B:521:LYS:HB3	1:B:523:SER:HB3	2.03	0.41
1:B:949:GLU:O	1:B:953:VAL:CG1	2.68	0.41
1:C:658:LEU:HD13	1:C:916:LEU:HD12	2.02	0.41
1:C:1420:ALA:HA	1:C:1421:PRO:HD3	1.78	0.41
2:G:123:ILE:CD1	2:G:533:LEU:HD23	2.50	0.41
2:G:131:ILE:HD12	2:G:182:VAL:CG1	2.49	0.41
2:G:236:ILE:HG12	2:G:240:LEU:HD22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:270:ALA:O	2:G:459:VAL:HA	2.20	0.41
2:G:1070:ILE:HD13	2:G:1070:ILE:O	2.21	0.41
2:G:1428:GLU:CG	2:G:1468:THR:HG22	2.51	0.41
2:H:159:ILE:HG12	2:H:512:LEU:HD23	2.02	0.41
2:H:320:PRO:HA	2:H:321:PRO:HD3	1.92	0.41
2:H:674:TYR:HA	2:H:675:PRO:HD3	1.73	0.41
2:H:719:ILE:HG12	2:H:719:ILE:H	1.63	0.41
2:H:805:VAL:O	2:H:805:VAL:HG12	2.21	0.41
2:H:1662:THR:HB	2:H:1799:PRO:HG2	2.02	0.41
2:H:1959:LYS:O	2:H:1959:LYS:HG2	2.20	0.41
2:I:705:LEU:HD23	2:I:705:LEU:HA	1.80	0.41
2:I:1374:THR:HG23	2:I:1396:LEU:CD1	2.49	0.41
2:I:2035:SER:OG	2:I:2037:PRO:HD2	2.21	0.41
1:A:152:HIS:HD2	1:A:163:LEU:CB	2.32	0.41
1:A:253:ARG:O	1:A:254:TRP:CD1	2.74	0.41
1:A:438:ASN:HD21	1:A:698:GLN:HE21	1.68	0.41
1:A:612:GLU:O	1:A:615:SER:HB3	2.21	0.41
1:A:719:GLN:HG3	1:A:720:SER:N	2.36	0.41
1:B:444:ASN:CB	1:B:446:ALA:H	2.31	0.41
1:B:1418:VAL:N	1:B:1419:PRO:CD	2.83	0.41
1:B:1618:LEU:HD23	1:B:1621:PHE:HE2	1.85	0.41
1:B:1657:HIS:CG	1:B:1658:PRO:HD2	2.55	0.41
1:B:1709:GLU:H	1:B:1709:GLU:HG3	1.45	0.41
1:C:32:GLN:HE22	1:C:57:ALA:N	2.19	0.41
1:C:453:TYR:O	1:C:457:ASN:HB2	2.19	0.41
1:C:683:ALA:HA	1:C:689:GLY:HA3	2.02	0.41
1:C:739:GLN:HB3	1:C:794:ILE:HG23	2.03	0.41
1:C:949:GLU:O	1:C:953:VAL:HG12	2.21	0.41
1:C:1076:VAL:CG1	1:C:1081:LYS:HA	2.50	0.41
1:C:1239:HIS:CD2	1:C:1241:SER:H	2.38	0.41
1:C:1244:GLY:C	1:C:1327:CYS:HB2	2.41	0.41
1:C:1705:PRO:HB2	1:C:1733:PHE:CD1	2.56	0.41
2:G:258:PHE:N	2:G:258:PHE:CD1	2.87	0.41
2:G:260:PRO:HD3	2:G:289:TRP:CZ2	2.54	0.41
2:G:735:GLY:O	2:G:741:HIS:CD2	2.73	0.41
2:G:748:THR:CB	2:G:749:PRO:HD3	2.47	0.41
2:G:780:TYR:HB2	2:G:799:PHE:CE2	2.56	0.41
2:G:995:LEU:HB3	2:G:1000:ILE:CD1	2.50	0.41
2:G:1210:ILE:O	2:G:1210:ILE:HG22	2.19	0.41
2:G:1352:HIS:CD2	2:G:1410:PHE:CD2	3.09	0.41
2:G:1383:ASN:HD21	2:G:1418:ASP:CB	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1778:GLN:HB2	2:G:1779:PRO:HD3	2.02	0.41
2:G:1884:TRP:HB3	2:G:1885:LEU:H	1.74	0.41
2:G:1889:VAL:HG22	2:G:1977:HIS:O	2.20	0.41
2:G:1981:LEU:HD12	2:G:1981:LEU:N	2.36	0.41
2:G:1989:LYS:NZ	2:G:2037:PRO:HG2	2.35	0.41
2:H:195:LEU:O	2:H:199:ILE:HG13	2.20	0.41
2:H:425:SER:HA	2:H:426:PRO:HD3	1.78	0.41
2:H:615:TYR:CE2	2:H:1074:MET:HB3	2.56	0.41
2:H:753:MET:O	2:H:757:ILE:HG13	2.21	0.41
2:H:804:ARG:NH2	2:H:1068:GLU:OE1	2.54	0.41
2:H:827:VAL:HG21	2:H:840:THR:CG2	2.51	0.41
2:H:892:ILE:HD11	2:H:903:TRP:CD2	2.53	0.41
2:H:1213:LEU:O	2:H:1214:LEU:HD23	2.19	0.41
2:H:1270:TRP:HZ3	2:H:1347:LEU:HD21	1.85	0.41
2:H:1300:PHE:CB	2:H:1556:VAL:HG11	2.50	0.41
2:H:1589:VAL:HG21	2:H:1651:LEU:HD12	2.02	0.41
2:H:1815:LEU:O	2:H:1821:VAL:HG23	2.21	0.41
2:H:1868:GLN:HG3	2:H:1898:TYR:HH	1.83	0.41
2:I:248:HIS:CE1	2:I:531:GLY:HA2	2.55	0.41
2:I:455:ILE:C	2:I:455:ILE:HD12	2.42	0.41
2:I:582:LYS:HE2	2:I:761:PRO:O	2.21	0.41
2:I:827:VAL:HG12	2:I:828:PRO:O	2.20	0.41
2:I:1219:ILE:HB	2:I:1240:TYR:HB2	2.03	0.41
2:I:1503:ILE:HG22	2:I:1504:VAL:C	2.41	0.41
2:I:1514:ASN:HA	2:I:1515:PRO:HD3	1.86	0.41
2:I:1579:ILE:CD1	2:I:1615:MET:SD	3.09	0.41
1:A:36:LEU:O	1:A:76:ARG:NH1	2.53	0.41
1:A:487:ASP:HA	1:A:488:PRO:HD3	1.88	0.41
1:A:908:LEU:O	1:A:913:VAL:HG22	2.21	0.41
1:A:1705:PRO:HB2	1:A:1733:PHE:CD1	2.56	0.41
1:B:32:GLN:HE22	1:B:57:ALA:CA	2.34	0.41
1:B:82:SER:OG	1:B:83:LYS:HG3	2.20	0.41
1:B:187:LEU:CD2	1:B:201:PRO:HB2	2.51	0.41
1:B:197:THR:HG22	1:B:198:PRO:O	2.21	0.41
1:B:427:ASN:ND2	1:B:610:THR:H	2.14	0.41
1:B:489:VAL:HG22	1:B:670:GLY:HA3	2.02	0.41
1:B:504:ASP:O	1:B:954:ARG:HD3	2.21	0.41
1:B:1029:PRO:HG2	1:B:1581:THR:O	2.21	0.41
1:C:237:MET:HA	1:C:238:PRO:HD3	1.93	0.41
1:C:294:TYR:CZ	1:C:298:VAL:HG21	2.55	0.41
1:C:427:ASN:HB2	1:C:468:LEU:CD2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:644:THR:HG23	1:C:648:ASP:N	2.34	0.41
1:C:1019:ILE:HG13	1:C:1316:VAL:HG13	2.03	0.41
1:C:1666:THR:HG23	1:C:1669:ARG:CB	2.51	0.41
2:G:44:PRO:HA	2:G:53:GLU:OE2	2.21	0.41
2:G:339:LEU:HB2	2:G:386:LEU:HD22	2.03	0.41
2:G:455:ILE:HD13	2:G:457:ILE:O	2.21	0.41
2:G:2049:GLU:O	2:G:2050:GLN:C	2.59	0.41
2:H:1063:THR:O	2:H:1063:THR:HG22	2.21	0.41
2:H:1387:GLY:HA2	2:H:1414:GLY:O	2.21	0.41
2:H:1949:LYS:O	2:H:1953:VAL:HG23	2.21	0.41
2:I:118:LYS:O	2:I:121:GLU:HB2	2.20	0.41
2:I:319:LEU:HD22	2:I:319:LEU:HA	1.67	0.41
2:I:717:ILE:O	2:I:720:ALA:HB3	2.21	0.41
2:I:754:TYR:CG	2:I:794:MET:CG	3.04	0.41
2:I:827:VAL:HG21	2:I:840:THR:CG2	2.51	0.41
2:I:1327:ILE:O	2:I:1331:TRP:HB2	2.21	0.41
2:I:2020:GLN:HA	2:I:2020:GLN:NE2	2.36	0.41
1:A:29:ILE:HG21	2:G:1894:GLU:HB2	2.04	0.40
1:A:197:THR:HG22	1:A:198:PRO:O	2.21	0.40
1:A:232:LEU:O	1:A:236:LYS:HB2	2.21	0.40
1:A:681:THR:HA	1:A:706:THR:OG1	2.21	0.40
1:A:1418:VAL:N	1:A:1419:PRO:CD	2.84	0.40
1:B:91:THR:HA	1:B:92:PRO:HD3	1.81	0.40
1:B:483:VAL:O	1:B:483:VAL:HG12	2.21	0.40
1:B:933:VAL:HA	1:B:934:PRO:HD3	1.63	0.40
1:B:989:GLN:NE2	2:H:993:GLN:OE1	2.53	0.40
1:B:998:TYR:CD2	1:B:1667:GLU:HG3	2.56	0.40
1:B:1056:ILE:HG13	1:B:1057:MET:N	2.36	0.40
1:B:1557:ILE:HD11	1:B:1642:THR:HG21	2.03	0.40
1:C:1308:SER:OG	1:C:1590:ALA:N	2.54	0.40
2:G:73:GLU:OE2	2:G:76:LYS:HD2	2.21	0.40
2:G:159:ILE:HG12	2:G:512:LEU:HD23	2.03	0.40
2:G:430:HIS:CE1	2:G:431:LEU:HD13	2.56	0.40
2:G:938:TRP:CD1	2:G:944:ARG:HG3	2.56	0.40
2:G:1343:VAL:O	2:G:1343:VAL:HG22	2.20	0.40
2:H:338:MET:HG3	2:H:423:VAL:HG21	2.02	0.40
2:H:888:ARG:O	2:H:892:ILE:HB	2.21	0.40
2:H:1227:ARG:CZ	2:H:1565:VAL:HG12	2.51	0.40
2:I:247:ALA:O	2:I:251:VAL:HG13	2.21	0.40
2:I:280:ALA:O	2:I:283:ILE:HG22	2.21	0.40
2:I:846:VAL:CG2	2:I:866:LYS:HB2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1676:MET:HE1	2:I:1781:LEU:CD2	2.50	0.40
2:I:1880:LYS:HE3	2:I:1880:LYS:HB2	1.90	0.40
2:I:1889:VAL:HG21	2:I:1901:ALA:HB3	2.03	0.40
2:I:2036:GLU:HB2	2:I:2037:PRO:CD	2.47	0.40
2:I:2039:LYS:HA	2:I:2042:ILE:HG13	2.03	0.40
1:A:23:ALA:O	2:G:1977:HIS:HA	2.20	0.40
1:A:44:VAL:HG13	1:A:78:ILE:HG12	1.99	0.40
1:A:833:PHE:O	1:A:834:GLY:O	2.39	0.40
1:A:1021:VAL:HG11	1:A:1597:LEU:CD1	2.50	0.40
1:A:1146:HIS:O	1:A:1146:HIS:HD2	2.04	0.40
1:A:1665:ILE:HD11	1:A:1669:ARG:CG	2.51	0.40
1:B:1583:HIS:HA	1:B:1584:PRO:HD3	1.84	0.40
1:C:148:SER:O	1:C:152:HIS:HB2	2.21	0.40
1:C:411:GLN:O	1:C:415:SER:HB2	2.21	0.40
1:C:1105:LEU:HD23	1:C:1105:LEU:HA	1.84	0.40
2:G:601:THR:HB	2:G:620:ALA:HB2	2.01	0.40
2:G:638:VAL:O	2:G:641:ILE:HG22	2.20	0.40
2:G:805:VAL:O	2:G:805:VAL:HG12	2.21	0.40
2:G:827:VAL:HG12	2:G:828:PRO:O	2.21	0.40
2:G:1227:ARG:NE	2:G:1565:VAL:HG12	2.36	0.40
2:G:1678:MET:HG2	2:G:1711:ILE:HG12	2.03	0.40
2:G:1940:LEU:HD12	2:G:1941:PHE:N	2.37	0.40
2:H:203:LEU:HD12	2:H:203:LEU:HA	1.91	0.40
2:H:462:THR:HB	2:H:482:CYS:SG	2.61	0.40
2:H:573:LYS:C	2:H:575:GLY:N	2.75	0.40
2:H:590:PRO:HA	2:H:591:PRO:HD3	1.81	0.40
2:H:638:VAL:HA	2:H:641:ILE:CG2	2.52	0.40
2:H:723:HIS:ND1	2:H:723:HIS:N	2.70	0.40
2:H:960:LYS:HA	2:H:960:LYS:CE	2.44	0.40
2:H:1214:LEU:HD11	2:H:1220:GLN:NE2	2.36	0.40
2:H:1506:TYR:CZ	2:H:1515:PRO:HG2	2.56	0.40
2:H:1609:THR:O	2:H:1653:GLY:HA3	2.21	0.40
2:I:246:LEU:HA	2:I:246:LEU:HD12	1.79	0.40
2:I:536:ASN:HD21	2:I:540:ASP:HB3	1.85	0.40
2:I:543:PHE:CB	2:I:545:GLN:NE2	2.82	0.40
2:I:703:LEU:HD23	2:I:705:LEU:HG	2.04	0.40
2:I:816:ASP:HB3	2:I:1048:VAL:HG21	2.03	0.40
2:I:1091:GLY:O	2:I:1093:ASP:N	2.55	0.40
2:I:1339:PHE:N	2:I:1340:PRO:CD	2.85	0.40
2:I:1359:MET:HB3	2:I:1606:ARG:NH2	2.36	0.40
2:I:1889:VAL:HG13	2:I:1977:HIS:HB3	2.00	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:238:PRO:CG	1:A:283:ALA:HB2	2.51	0.40
1:A:852:ARG:NH1	1:A:852:ARG:CG	2.73	0.40
1:B:221:LEU:HD23	1:B:221:LEU:HA	1.94	0.40
1:B:293:LYS:O	1:B:297:ILE:HG13	2.20	0.40
1:B:774:ILE:HA	1:B:775:PRO:HD3	1.74	0.40
1:B:1303:GLY:CA	1:B:1307:THR:HG22	2.52	0.40
1:C:43:ARG:O	2:I:1662:THR:HA	2.22	0.40
1:C:1303:GLY:CA	1:C:1307:THR:HG22	2.52	0.40
2:G:248:HIS:CE1	2:G:531:GLY:HA2	2.56	0.40
2:G:319:LEU:HA	2:G:319:LEU:HD22	1.62	0.40
2:G:391:LEU:CD2	2:G:394:ARG:NH2	2.85	0.40
2:G:441:LYS:HG2	2:G:445:LYS:HE3	2.02	0.40
2:G:573:LYS:C	2:G:575:GLY:N	2.75	0.40
2:G:582:LYS:HE2	2:G:761:PRO:O	2.22	0.40
2:G:852:GLU:H	2:G:852:GLU:HG3	1.40	0.40
2:G:1637:LEU:HD23	2:G:1637:LEU:HA	1.77	0.40
2:G:1875:VAL:HA	2:G:1878:VAL:CG1	2.52	0.40
2:H:517:HIS:HB2	2:H:527:VAL:HG21	2.04	0.40
2:H:517:HIS:CE1	2:H:540:ASP:O	2.75	0.40
2:H:810:GLU:OE2	2:H:1070:ILE:N	2.45	0.40
2:H:912:ARG:HB2	2:H:916:THR:HG23	2.03	0.40
2:H:1166:VAL:CG1	2:H:1167:SER:N	2.85	0.40
2:I:612:ASN:HD21	2:I:641:ILE:HA	1.84	0.40
2:I:864:LEU:HD13	2:I:894:ARG:HB3	2.04	0.40
2:I:1213:LEU:O	2:I:1214:LEU:HD23	2.20	0.40
2:I:1271:ILE:HG22	2:I:1273:GLU:HB2	2.04	0.40
2:I:1855:ILE:HB	2:I:1907:LEU:HD12	2.02	0.40
1:A:157:HIS:CE1	1:A:269:LEU:HD11	2.57	0.40
1:A:916:LEU:HD22	1:A:922:VAL:HG22	2.02	0.40
1:A:1209:ASP:OD1	1:A:1210:PRO:HD2	2.21	0.40
1:A:1406:MET:CE	1:A:1428:THR:HB	2.52	0.40
1:B:12:ILE:O	1:B:16:GLU:HG2	2.20	0.40
1:B:74:LEU:HD12	1:B:74:LEU:O	2.22	0.40
1:B:509:ILE:H	1:B:509:ILE:HG13	1.50	0.40
1:B:1370:THR:HG22	1:B:1371:THR:N	2.36	0.40
1:C:406:TRP:CZ3	1:C:407:ASN:HB2	2.57	0.40
1:C:655:LEU:HA	1:C:655:LEU:HD23	1.79	0.40
1:C:1063:HIS:CE1	1:C:1067:LEU:CD2	3.04	0.40
1:C:1195:ALA:HB1	1:C:1200:ILE:HD12	2.03	0.40
1:C:1639:VAL:HG12	1:C:1640:SER:N	2.35	0.40
2:G:260:PRO:HD3	2:G:289:TRP:CD2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:612:ASN:C	2:G:614:GLY:H	2.24	0.40
2:H:538:ASP:HB2	2:H:540:ASP:HB2	2.03	0.40
2:H:607:VAL:HG23	2:H:617:ILE:CG2	2.51	0.40
2:H:1281:PRO:O	2:H:1378:ILE:HG23	2.22	0.40
2:H:1593:ILE:HD13	2:H:1626:ILE:CD1	2.51	0.40
2:H:1716:ASN:HA	2:H:1770:LEU:HD11	2.04	0.40
2:I:240:LEU:HD12	2:I:240:LEU:HA	1.81	0.40
2:I:717:ILE:CG2	2:I:760:HIS:CE1	3.05	0.40
2:I:812:LYS:HD3	2:I:812:LYS:HA	1.82	0.40
1:A:350:LEU:HB2	1:A:352:MET:HG2	2.03	0.40
1:A:427:ASN:HB2	1:A:468:LEU:CD2	2.51	0.40
1:B:709:ARG:O	1:B:714:VAL:HG21	2.21	0.40
1:B:1577:GLN:NE2	1:B:1591:TRP:HB3	2.36	0.40
1:C:413:LEU:HD13	1:C:451:MET:HG2	2.03	0.40
2:G:119:THR:HG22	2:G:120:LYS:N	2.36	0.40
2:G:533:LEU:O	2:G:533:LEU:HG	2.21	0.40
2:G:606:PHE:HZ	2:G:805:VAL:CG1	2.33	0.40
2:G:1830:VAL:HA	2:G:1991:PHE:HE2	1.86	0.40
2:G:2039:LYS:HA	2:G:2042:ILE:HG13	2.03	0.40
2:H:156:LEU:HD23	2:H:500:HIS:HB2	2.04	0.40
2:H:233:SER:HA	2:H:424:ALA:HB3	2.03	0.40
2:H:283:ILE:HD12	2:H:283:ILE:HA	1.89	0.40
2:H:298:LYS:HA	2:H:448:VAL:CG2	2.52	0.40
2:H:441:LYS:O	2:H:445:LYS:HG3	2.22	0.40
2:H:816:ASP:HB3	2:H:1048:VAL:CG2	2.52	0.40
2:H:1172:LYS:HZ1	2:H:1574:ASN:HA	1.85	0.40
2:H:1327:ILE:HA	2:H:1327:ILE:HD12	1.77	0.40
2:I:225:THR:HA	2:I:226:PRO:HD3	1.98	0.40
2:I:601:THR:O	2:I:601:THR:CG2	2.68	0.40
2:I:612:ASN:C	2:I:614:GLY:H	2.25	0.40

All (18) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1480:GLU:OE2	2:H:290:GLU:CB[6_555]	0.75	1.45
1:B:1480:GLU:CD	2:H:290:GLU:CB[6_555]	1.29	0.91
2:G:77:VAL:CB	2:I:1929:LYS:CD[6_455]	1.32	0.88
1:B:1480:GLU:OE2	2:H:290:GLU:CG[6_555]	1.43	0.77
2:G:77:VAL:CG2	2:I:1929:LYS:NZ[6_455]	1.47	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:77:VAL:CG2	2:I:1929:LYS:CE[6_455]	1.51	0.69
2:G:79:GLN:OE1	2:I:1930:SER:O[6_455]	1.65	0.55
2:G:77:VAL:CB	2:I:1929:LYS:CE[6_455]	1.72	0.48
1:B:1480:GLU:OE1	2:H:290:GLU:CB[6_555]	1.82	0.38
2:G:77:VAL:O	2:I:1929:LYS:CB[6_455]	1.93	0.27
2:G:77:VAL:O	2:I:1929:LYS:CA[6_455]	1.93	0.27
2:G:77:VAL:CG1	2:I:1929:LYS:CD[6_455]	1.95	0.25
2:G:77:VAL:O	2:I:1929:LYS:CG[6_455]	1.98	0.22
2:H:6:THR:CG2	2:I:1935:GLU:OE2[6_455]	2.06	0.14
2:H:6:THR:CG2	2:I:1935:GLU:CD[6_455]	2.06	0.14
2:G:77:VAL:CB	2:I:1929:LYS:CG[6_455]	2.14	0.06
1:A:852:ARG:NH2	1:B:837:GLY:O[7_645]	2.19	0.01
1:B:1480:GLU:OE1	2:H:290:GLU:CA[6_555]	2.19	0.01

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	1604/1887 (85%)	1498 (93%)	92 (6%)	14 (1%)	17	55
1	B	1604/1887 (85%)	1497 (93%)	94 (6%)	13 (1%)	19	58
1	C	1604/1887 (85%)	1499 (94%)	90 (6%)	15 (1%)	17	55
2	G	2029/2051 (99%)	1836 (90%)	167 (8%)	26 (1%)	12	48
2	H	2029/2051 (99%)	1836 (90%)	170 (8%)	23 (1%)	14	51
2	I	2029/2051 (99%)	1833 (90%)	171 (8%)	25 (1%)	13	49
All	All	10899/11814 (92%)	9999 (92%)	784 (7%)	116 (1%)	14	51

All (116) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	504	ASP
1	A	538	GLU

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Mol	Chain	Res	Type
1	A	605	LEU
1	A	834	GLY
1	B	504	ASP
1	B	538	GLU
1	B	605	LEU
1	B	834	GLY
1	C	504	ASP
1	C	538	GLU
1	C	605	LEU
1	C	834	GLY
2	G	521	ASP
2	G	1177	SER
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	1252	GLY
1	A	1585	LYS
1	A	1608	ASN
1	B	179	LYS
1	B	1252	GLY
1	B	1585	LYS
1	B	1608	ASN
1	C	1252	GLY
1	C	1585	LYS
1	C	1608	ASN
2	G	203	LEU
2	G	1044	VAL
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	A	179	LYS

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Mol	Chain	Res	Type
1	C	179	LYS
2	G	112	ASN
2	G	139	LYS
2	G	1101	GLU
2	G	2034	GLY
2	H	112	ASN
2	H	1101	GLU
2	I	374	ALA
2	I	1092	ASP
2	I	1101	GLU
2	I	2034	GLY
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
2	H	769	SER
2	H	1092	ASP
2	H	1257	ASP
2	I	25	ALA
2	I	136	PRO
2	I	769	SER
2	I	823	ALA
2	I	1510	ALA
1	A	178	GLY

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Mol	Chain	Res	Type
1	A	970	GLY
1	C	970	GLY
1	C	1536	LEU
2	G	574	SER
2	I	139	LYS
2	I	574	SER
1	A	1543	GLY
1	B	1543	GLY
1	C	178	GLY
1	C	1543	GLY
2	G	136	PRO
2	G	335	PRO
2	H	136	PRO
2	H	335	PRO
1	B	178	GLY
2	G	1340	PRO
2	G	1956	ARG
2	H	772	GLY
1	C	1240	VAL
2	G	772	GLY
2	G	1176	PRO
2	I	772	GLY
1	B	726	GLY
1	C	726	GLY
2	G	470	VAL
2	H	470	VAL
2	H	2012	PRO
2	I	335	PRO
2	I	1956	ARG
2	I	1340	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	1367/1566 (87%)	1224 (90%)	143 (10%)	7 27

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	B	1367/1566 (87%)	1225 (90%)	142 (10%)	7 28
1	C	1367/1566 (87%)	1227 (90%)	140 (10%)	7 28
2	G	1772/1789 (99%)	1567 (88%)	205 (12%)	5 24
2	H	1772/1789 (99%)	1566 (88%)	206 (12%)	5 24
2	I	1772/1789 (99%)	1562 (88%)	210 (12%)	5 24
All	All	9417/10065 (94%)	8371 (89%)	1046 (11%)	6 26

All (1046) 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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	1255	SER
1	A	1274	ILE
1	A	1283	MET
1	A	1307	THR
1	A	1327	CYS
1	A	1338	GLU
1	A	1367	ARG
1	A	1372	THR

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Mol	Chain	Res	Type
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
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	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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	1255	SER
1	B	1274	ILE
1	B	1283	MET
1	B	1307	THR
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	824	LEU
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

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Mol	Chain	Res	Type
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
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	1255	SER
1	C	1274	ILE
1	C	1283	MET
1	C	1307	THR
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

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Mol	Chain	Res	Type
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
1	C	1585	LYS
1	C	1612	ASP
1	C	1625	LEU
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	210	THR

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Mol	Chain	Res	Type
2	G	227	ASP
2	G	236	ILE
2	G	240	LEU
2	G	246	LEU
2	G	281	VAL
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

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Mol	Chain	Res	Type
2	G	607	VAL
2	G	611	THR
2	G	616	THR
2	G	653	TYR
2	G	665	LEU
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

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Mol	Chain	Res	Type
2	G	971	SER
2	G	993	GLN
2	G	1015	VAL
2	G	1021	LEU
2	G	1024	ARG
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	1348	LEU
2	G	1359	MET
2	G	1360	ILE
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

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Mol	Chain	Res	Type
2	G	1463	THR
2	G	1468	THR
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

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Mol	Chain	Res	Type
2	G	1886	VAL
2	G	1914	LEU
2	G	1936	VAL
2	G	1937	GLU
2	G	1941	PHE
2	G	1982	MET
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

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Mol	Chain	Res	Type
2	H	281	VAL
2	H	286	THR
2	H	295	SER
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

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Mol	Chain	Res	Type
2	H	665	LEU
2	H	669	LEU
2	H	670	ARG
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

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Mol	Chain	Res	Type
2	H	1021	LEU
2	H	1024	ARG
2	H	1048	VAL
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	1348	LEU
2	H	1359	MET
2	H	1360	ILE
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	1982	MET
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

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Mol	Chain	Res	Type
2	I	303	LEU
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	444	VAL
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

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Mol	Chain	Res	Type
2	I	670	ARG
2	I	676	ILE
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	865	TRP
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

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Mol	Chain	Res	Type
2	I	1015	VAL
2	I	1021	LEU
2	I	1024	ARG
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	1348	LEU
2	I	1359	MET
2	I	1360	ILE
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	1982	MET
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 (288) 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	983	GLN
1	A	987	ASN
1	A	989	GLN
1	A	1000	GLN
1	A	1003	GLN

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Mol	Chain	Res	Type
1	A	1063	HIS
1	A	1064	ASN
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	1505	GLN
1	A	1510	ASN
1	A	1542	HIS
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

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Mol	Chain	Res	Type
1	B	738	ASN
1	B	758	ASN
1	B	792	HIS
1	B	898	GLN
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	1505	GLN
1	B	1510	ASN
1	B	1542	HIS
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

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Mol	Chain	Res	Type
1	C	411	GLN
1	C	427	ASN
1	C	438	ASN
1	C	506	ASN
1	C	527	GLN
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	1505	GLN
1	C	1510	ASN
1	C	1542	HIS
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	178	GLN

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Mol	Chain	Res	Type
2	G	359	HIS
2	G	376	ASN
2	G	418	ASN
2	G	428	HIS
2	G	440	ASN
2	G	447	ASN
2	G	500	HIS
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	855	HIS
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	1341	ASN
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

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Mol	Chain	Res	Type
2	H	34	GLN
2	H	85	ASN
2	H	102	HIS
2	H	178	GLN
2	H	359	HIS
2	H	376	ASN
2	H	418	ASN
2	H	428	HIS
2	H	440	ASN
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	1260	GLN
2	H	1341	ASN
2	H	1352	HIS
2	H	1355	ASN
2	H	1367	GLN
2	H	1659	GLN
2	H	1669	GLN
2	H	1672	GLN
2	H	1697	HIS
2	H	1890	ASN
2	H	1896	GLN
2	H	1977	HIS

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Mol	Chain	Res	Type
2	H	2013	ASN
2	H	2020	GLN
2	I	34	GLN
2	I	36	GLN
2	I	85	ASN
2	I	102	HIS
2	I	178	GLN
2	I	359	HIS
2	I	376	ASN
2	I	418	ASN
2	I	428	HIS
2	I	440	ASN
2	I	447	ASN
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	718	ASN
2	I	740	HIS
2	I	741	HIS
2	I	747	HIS
2	I	752	GLN
2	I	762	ASN
2	I	855	HIS
2	I	900	GLN
2	I	910	GLN
2	I	1046	GLN
2	I	1055	HIS
2	I	1148	ASN
2	I	1217	ASN
2	I	1220	GLN
2	I	1260	GLN
2	I	1341	ASN
2	I	1352	HIS
2	I	1355	ASN
2	I	1367	GLN
2	I	1595	ASN
2	I	1669	GLN
2	I	1672	GLN
2	I	1697	HIS

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Mol	Chain	Res	Type
2	I	1868	GLN
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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

6 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	$\#\|Z\| > 2$
4	FMN	G	3051	-	33,33,33	6.45	22 (66%)	48,50,50	1.36	6 (12%)
3	CER	A	2748	1	11,11,15	4.18	3 (27%)	11,13,17	4.44	4 (36%)
4	FMN	I	3051	-	33,33,33	6.45	24 (72%)	48,50,50	1.36	8 (16%)
4	FMN	H	3051	-	33,33,33	6.35	21 (63%)	48,50,50	1.36	7 (14%)
3	CER	C	2748	1	11,11,15	4.19	3 (27%)	11,13,17	4.43	4 (36%)
3	CER	B	2748	1	11,11,15	4.17	3 (27%)	11,13,17	4.27	4 (36%)

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
4	FMN	G	3051	-	-	5/18/18/18	0/3/3/3
3	CER	A	2748	1	-	4/12/12/16	-
4	FMN	I	3051	-	-	5/18/18/18	0/3/3/3
4	FMN	H	3051	-	-	5/18/18/18	0/3/3/3
3	CER	C	2748	1	-	4/12/12/16	-
3	CER	B	2748	1	-	4/12/12/16	-

All (76) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	G	3051	FMN	C6-C7	13.44	1.57	1.39
4	I	3051	FMN	C6-C7	13.08	1.57	1.39
4	H	3051	FMN	C6-C7	12.77	1.57	1.39
4	I	3051	FMN	C6-C5A	12.55	1.59	1.40
4	I	3051	FMN	C9-C8	12.37	1.56	1.39
4	G	3051	FMN	C9-C9A	12.36	1.59	1.39
4	G	3051	FMN	C6-C5A	12.26	1.58	1.40
3	C	2748	CER	O1-C4	12.25	1.41	1.21
3	A	2748	CER	O1-C4	12.23	1.41	1.21
4	H	3051	FMN	C9-C9A	12.22	1.59	1.39
3	B	2748	CER	O1-C4	12.19	1.41	1.21
4	I	3051	FMN	C9-C9A	12.16	1.59	1.39
4	H	3051	FMN	C6-C5A	12.05	1.58	1.40
4	G	3051	FMN	C9-C8	11.92	1.55	1.39
4	H	3051	FMN	C9-C8	11.74	1.55	1.39
4	G	3051	FMN	O4-C4	10.03	1.42	1.23
4	H	3051	FMN	O4-C4	9.91	1.42	1.23
4	I	3051	FMN	O4-C4	9.72	1.42	1.23
4	G	3051	FMN	C4A-N5	9.59	1.51	1.30
4	I	3051	FMN	C4A-N5	9.31	1.50	1.30
4	H	3051	FMN	C4A-N5	9.27	1.50	1.30
4	I	3051	FMN	C9A-C5A	9.10	1.55	1.41
4	G	3051	FMN	C9A-C5A	8.74	1.55	1.41
4	H	3051	FMN	O2-C2	8.56	1.41	1.24
4	I	3051	FMN	O2-C2	8.48	1.41	1.24
4	H	3051	FMN	C9A-C5A	8.40	1.54	1.41
4	G	3051	FMN	O2-C2	8.25	1.40	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	I	3051	FMN	C8-C7	7.51	1.59	1.40
4	G	3051	FMN	C2-N1	7.41	1.53	1.36
4	G	3051	FMN	C10-N1	7.29	1.48	1.33
4	H	3051	FMN	C2-N1	7.25	1.53	1.36
4	H	3051	FMN	C10-N1	7.20	1.47	1.33
4	I	3051	FMN	C2-N1	7.19	1.52	1.36
4	G	3051	FMN	C8-C7	7.10	1.58	1.40
4	H	3051	FMN	C8-C7	6.92	1.57	1.40
4	I	3051	FMN	C10-N1	6.90	1.47	1.33
4	I	3051	FMN	C5A-N5	6.66	1.51	1.39
4	I	3051	FMN	C10-N10	6.66	1.51	1.37
4	H	3051	FMN	C10-N10	6.65	1.51	1.37
4	G	3051	FMN	C10-N10	6.59	1.51	1.37
4	H	3051	FMN	C2-N3	6.57	1.53	1.39
4	G	3051	FMN	C5A-N5	6.52	1.51	1.39
4	H	3051	FMN	C4-N3	6.40	1.50	1.38
4	H	3051	FMN	C5A-N5	6.39	1.51	1.39
4	G	3051	FMN	C2-N3	6.19	1.52	1.39
4	G	3051	FMN	C4-N3	6.06	1.50	1.38
4	I	3051	FMN	C4-N3	6.04	1.50	1.38
4	I	3051	FMN	C2-N3	6.04	1.52	1.39
4	G	3051	FMN	C9A-N10	5.25	1.50	1.41
4	H	3051	FMN	C9A-N10	4.97	1.49	1.41
4	I	3051	FMN	C9A-N10	4.93	1.49	1.41
3	C	2748	CER	C1-N1	4.47	1.47	1.32
3	B	2748	CER	C1-N1	4.46	1.47	1.32
3	A	2748	CER	C1-N1	4.40	1.47	1.32
4	G	3051	FMN	C4A-C10	3.63	1.54	1.44
3	B	2748	CER	C5-C4	3.55	1.56	1.51
3	C	2748	CER	C5-C4	3.52	1.55	1.51
3	A	2748	CER	C5-C4	3.44	1.55	1.51
4	H	3051	FMN	C4A-C10	3.32	1.53	1.44
4	H	3051	FMN	C1'-C2'	3.26	1.57	1.52
4	I	3051	FMN	C4A-C10	3.22	1.53	1.44
4	I	3051	FMN	P-O2P	3.17	1.66	1.54
4	I	3051	FMN	C1'-C2'	3.12	1.57	1.52
4	H	3051	FMN	P-O2P	3.04	1.66	1.54
4	G	3051	FMN	C1'-C2'	3.02	1.56	1.52
4	G	3051	FMN	P-O2P	3.01	1.66	1.54
4	I	3051	FMN	P-O3P	2.96	1.65	1.54
4	H	3051	FMN	P-O3P	2.92	1.65	1.54
4	G	3051	FMN	P-O3P	2.71	1.64	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	G	3051	FMN	C4A-C4	2.45	1.53	1.44
4	I	3051	FMN	C8M-C8	2.43	1.55	1.51
4	H	3051	FMN	C4A-C4	2.33	1.53	1.44
4	I	3051	FMN	C7M-C7	2.25	1.55	1.51
4	I	3051	FMN	C4A-C4	2.23	1.52	1.44
4	I	3051	FMN	C5'-C4'	2.11	1.54	1.51
4	G	3051	FMN	C7M-C7	2.03	1.54	1.51

All (33) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	A	2748	CER	O1-C4-C3	-11.11	108.66	120.07
3	C	2748	CER	O1-C4-C3	-11.09	108.69	120.07
3	B	2748	CER	O1-C4-C3	-10.73	109.06	120.07
3	C	2748	CER	O1-C4-C5	-8.10	107.97	121.68
3	A	2748	CER	O1-C4-C5	-8.05	108.06	121.68
3	B	2748	CER	O1-C4-C5	-7.70	108.64	121.68
4	I	3051	FMN	C4'-C3'-C2'	-3.58	107.62	113.57
4	H	3051	FMN	C4'-C3'-C2'	-3.52	107.71	113.57
4	G	3051	FMN	C4'-C3'-C2'	-3.50	107.74	113.57
3	A	2748	CER	C6-C5-C4	-3.41	108.47	114.00
3	A	2748	CER	C5-C4-C3	-3.36	110.87	117.77
3	C	2748	CER	C6-C5-C4	-3.36	108.56	114.00
3	B	2748	CER	C5-C4-C3	-3.28	111.03	117.77
3	C	2748	CER	C5-C4-C3	-3.27	111.05	117.77
4	I	3051	FMN	C4A-C10-N10	3.15	120.99	116.48
4	G	3051	FMN	C4A-C10-N10	3.15	120.98	116.48
4	H	3051	FMN	C4A-C10-N10	3.12	120.94	116.48
3	B	2748	CER	C6-C5-C4	-3.11	108.95	114.00
4	G	3051	FMN	C10-C4A-N5	-2.81	119.08	124.81
4	H	3051	FMN	C10-C4A-N5	-2.75	119.20	124.81
4	I	3051	FMN	C4-N3-C2	-2.58	121.05	125.64
4	I	3051	FMN	C10-C4A-N5	-2.55	119.59	124.81
4	G	3051	FMN	C4-N3-C2	-2.43	121.33	125.64
4	H	3051	FMN	C4-N3-C2	-2.37	121.44	125.64
4	H	3051	FMN	O2-C2-N1	-2.26	118.04	121.80
4	I	3051	FMN	O4-C4-C4A	-2.20	120.72	126.53
4	G	3051	FMN	C5A-C9A-N10	2.10	119.86	117.97
4	I	3051	FMN	O2-C2-N1	-2.09	118.33	121.80
4	H	3051	FMN	O5'-C5'-C4'	-2.03	103.94	109.36
4	I	3051	FMN	C4A-C4-N3	2.03	118.41	113.25
4	I	3051	FMN	C9A-C5A-N5	-2.01	120.32	122.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	G	3051	FMN	O2-C2-N1	-2.01	118.46	121.80
4	H	3051	FMN	O4-C4-C4A	-2.00	121.24	126.53

There are no chirality outliers.

All (27) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	2748	CER	C2-C3-C4-O1
3	B	2748	CER	C2-C3-C4-O1
3	C	2748	CER	C2-C3-C4-O1
4	G	3051	FMN	C2'-C3'-C4'-C5'
4	G	3051	FMN	O3'-C3'-C4'-C5'
4	H	3051	FMN	C2'-C3'-C4'-C5'
4	H	3051	FMN	O3'-C3'-C4'-C5'
4	I	3051	FMN	C2'-C3'-C4'-C5'
4	I	3051	FMN	O3'-C3'-C4'-C5'
4	I	3051	FMN	C2'-C3'-C4'-O4'
4	H	3051	FMN	O3'-C3'-C4'-O4'
4	I	3051	FMN	O3'-C3'-C4'-O4'
4	H	3051	FMN	C2'-C3'-C4'-O4'
3	A	2748	CER	O2-C1-C2-C3
3	B	2748	CER	O2-C1-C2-C3
3	C	2748	CER	O2-C1-C2-C3
4	G	3051	FMN	C2'-C3'-C4'-O4'
3	A	2748	CER	N1-C1-C2-C3
3	B	2748	CER	N1-C1-C2-C3
3	C	2748	CER	N1-C1-C2-C3
4	G	3051	FMN	O3'-C3'-C4'-O4'
3	C	2748	CER	C5-C6-C7-C8
3	A	2748	CER	C5-C6-C7-C8
3	B	2748	CER	C5-C6-C7-C8
4	G	3051	FMN	C4'-C5'-O5'-P
4	H	3051	FMN	C4'-C5'-O5'-P
4	I	3051	FMN	C4'-C5'-O5'-P

There are no ring outliers.

6 monomers are involved in 32 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	G	3051	FMN	7	0
3	A	2748	CER	3	0

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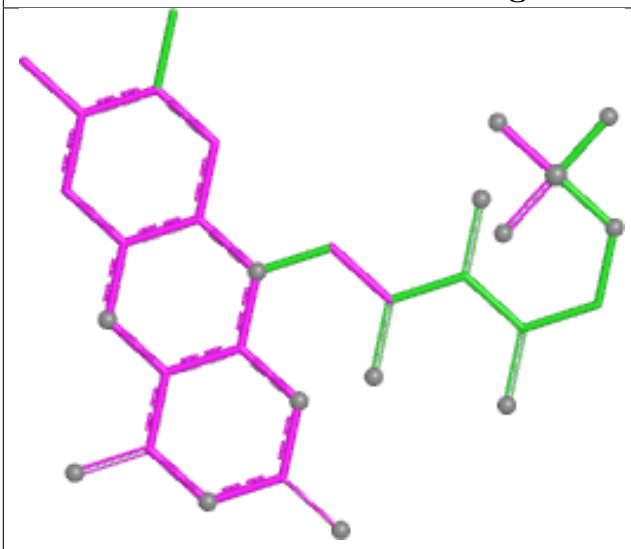
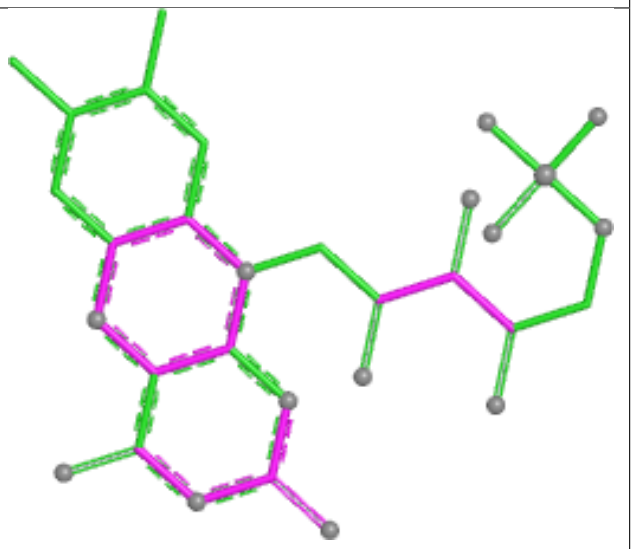
Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	I	3051	FMN	8	0
4	H	3051	FMN	6	0
3	C	2748	CER	4	0
3	B	2748	CER	4	0

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.

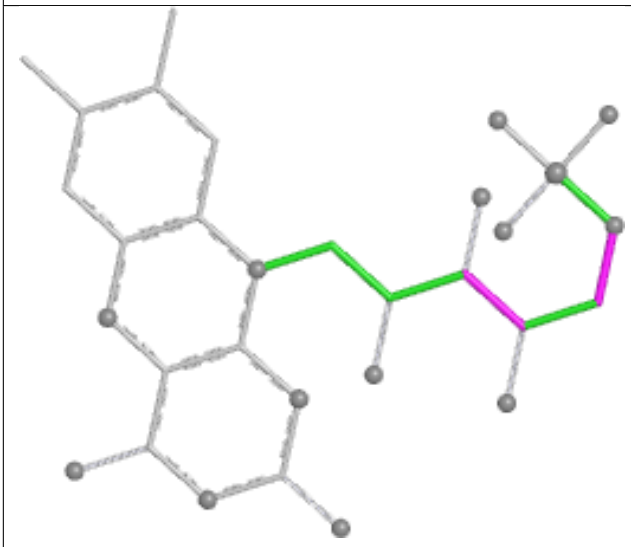
Ligand FMN G 3051



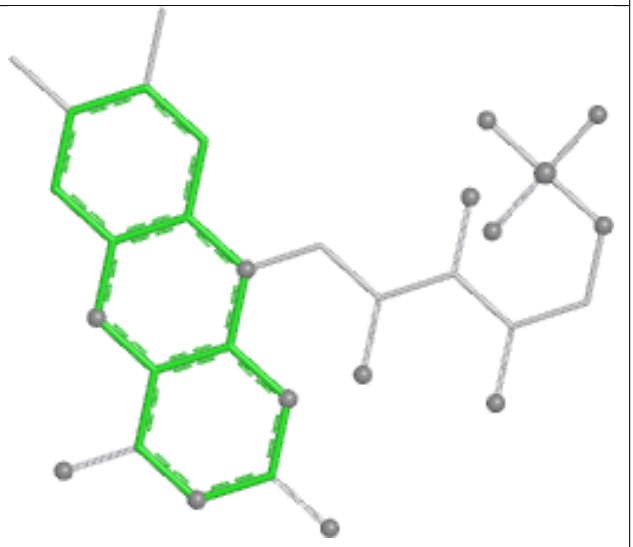
Bond lengths



Bond angles

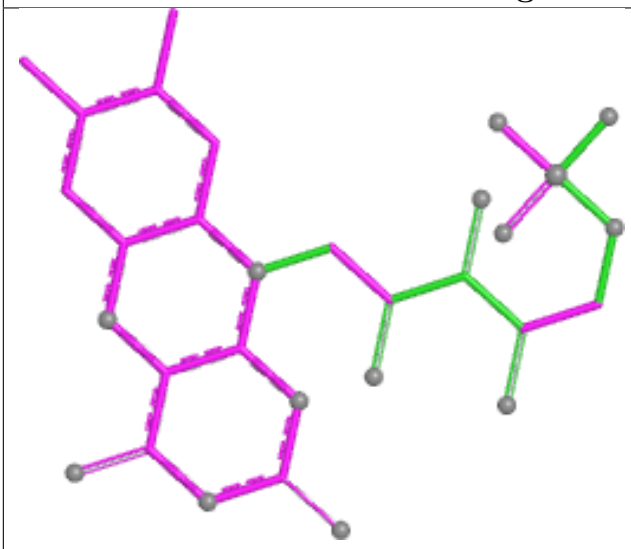


Torsions

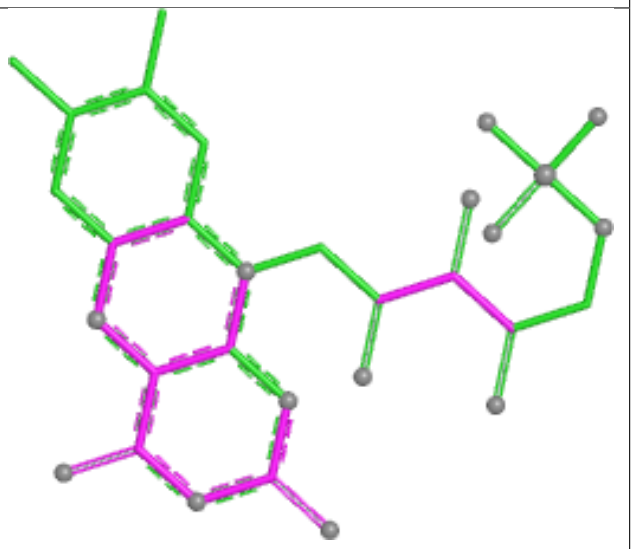


Rings

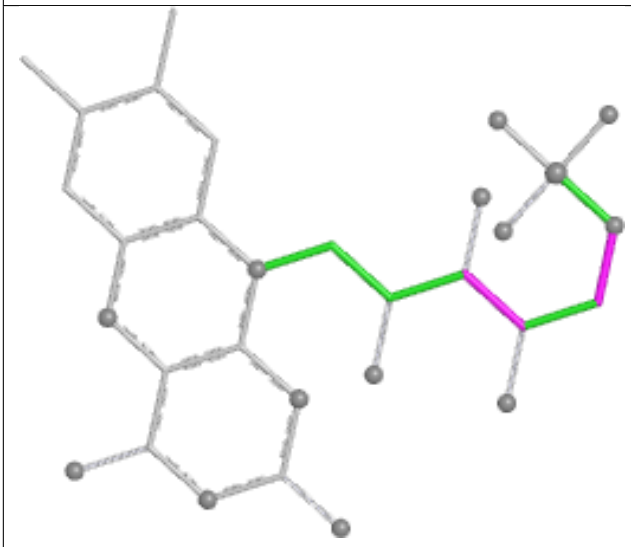
Ligand FMN I 3051



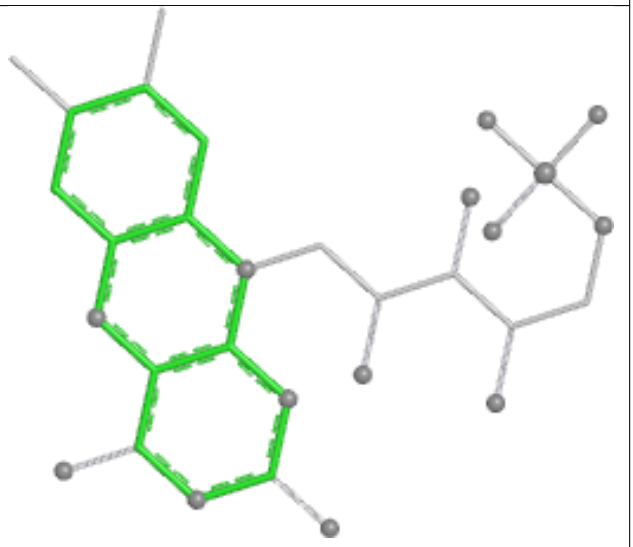
Bond lengths



Bond angles

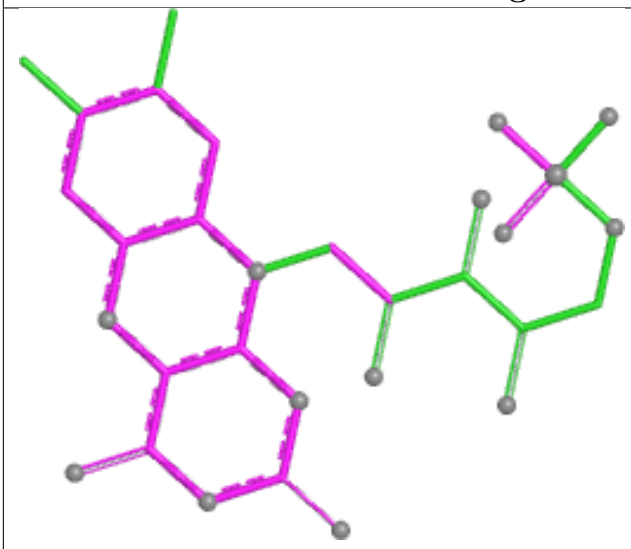


Torsions

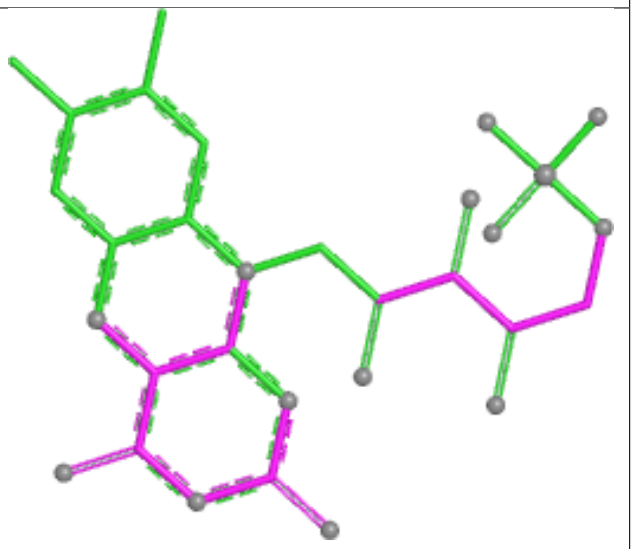


Rings

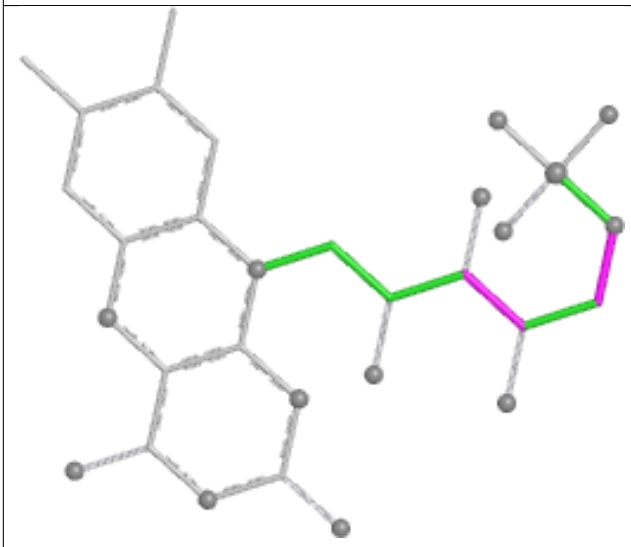
Ligand FMN H 3051



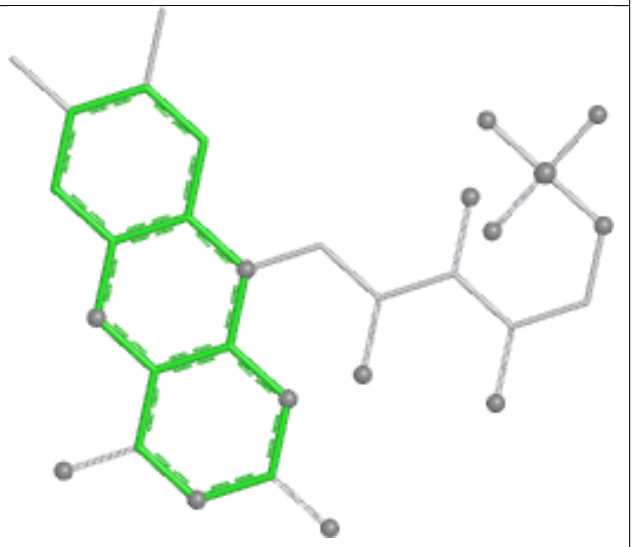
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
2	H	6
1	C	4
1	A	3

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Mol	Chain	Number of breaks
2	G	3
2	I	2

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	H	559:PRO	C	560:ASN	N	1.87
1	A	485:ASP	C	486:VAL	N	1.77
1	H	315:PRO	C	316:ASN	N	1.64
1	H	1530:LYS	C	1531:VAL	N	1.60
1	C	932:PHE	C	933:VAL	N	1.19
1	I	1529:GLN	C	1530:LYS	N	1.19
1	C	381:GLU	C	382:LEU	N	1.18
1	G	559:PRO	C	560:ASN	N	1.18
1	G	1422:THR	C	1423:PHE	N	1.18
1	I	1422:THR	C	1423:PHE	N	1.18
1	G	1841:ALA	C	1842:VAL	N	1.17
1	A	1118:LYS	C	1119:LYS	N	1.14
1	H	1529:GLN	C	1530:LYS	N	1.12
1	A	932:PHE	C	933:VAL	N	1.11
1	C	181:THR	C	182:VAL	N	1.05
1	H	1422:THR	C	1423:PHE	N	1.03
1	C	1430:ARG	C	1431:GLU	N	1.02
1	H	1657:ILE	C	1658:GLU	N	0.58

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	1614/1887 (85%)	-0.42	11 (0%)	87	82	98, 134, 233, 288	0
1	B	1614/1887 (85%)	-0.42	10 (0%)	89	84	99, 133, 233, 296	0
1	C	1614/1887 (85%)	-0.41	14 (0%)	84	77	100, 135, 233, 294	0
2	G	2033/2051 (99%)	-0.42	6 (0%)	94	90	134, 172, 221, 270	0
2	H	2033/2051 (99%)	-0.31	11 (0%)	91	85	133, 173, 218, 268	0
2	I	2033/2051 (99%)	-0.39	6 (0%)	94	90	134, 173, 218, 264	0
All	All	10941/11814 (92%)	-0.39	58 (0%)	91	85	98, 164, 226, 296	0

All (58) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	539	SER	6.2
1	C	875	THR	5.8
1	B	875	THR	5.3
1	B	1747	ALA	5.3
1	A	540	GLN	4.1
2	G	1956	ARG	4.0
1	A	539	SER	4.0
1	B	540	GLN	3.8
2	H	1953	VAL	3.8
2	I	1928	GLN	3.7
1	C	540	GLN	3.7
1	C	539	SER	3.6
2	H	1671	SER	3.5
1	B	976	ALA	3.5
1	A	1747	ALA	3.5
1	A	208	GLU	3.4
2	H	1929	LYS	3.3
1	B	141	ALA	3.3
1	B	599	MET	3.2

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Mol	Chain	Res	Type	RSRZ
1	B	140	ILE	3.1
1	A	974	ASP	3.1
1	C	204	THR	3.0
1	A	1476	GLU	3.0
1	B	1746	ASN	3.0
2	H	1964	PHE	2.9
2	H	2033	THR	2.9
2	H	408	PRO	2.9
1	A	1746	ASN	2.9
2	I	75	SER	2.8
1	C	201	PRO	2.8
1	C	198	PRO	2.7
1	C	141	ALA	2.7
1	A	975	ALA	2.7
1	C	202	GLU	2.7
1	A	875	THR	2.6
2	H	1959	LYS	2.6
1	C	199	GLU	2.6
2	I	648	GLY	2.5
1	C	200	LYS	2.4
1	C	260	ARG	2.4
2	G	1747	LYS	2.4
2	H	1853	GLY	2.3
1	B	600	ASP	2.3
2	I	74	PRO	2.3
2	I	1929	LYS	2.3
2	G	413	LYS	2.3
1	A	199	GLU	2.3
2	H	1740	THR	2.2
1	C	301	ASP	2.2
2	H	1956	ARG	2.2
2	G	1958	LEU	2.1
2	G	1806	GLY	2.1
2	G	333	GLY	2.1
2	H	406	ARG	2.1
2	I	1741	ILE	2.1
1	A	202	GLU	2.1
1	C	1475	GLU	2.1
1	C	302	LEU	2.0

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

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

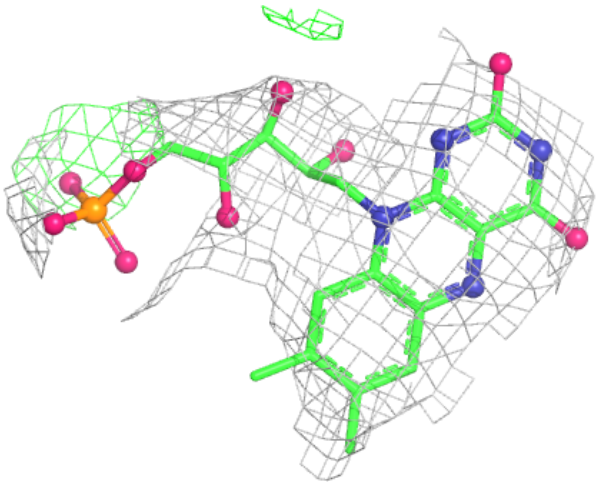
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9'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

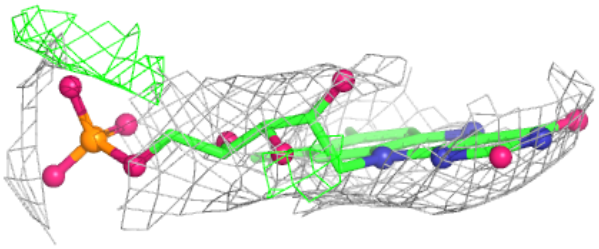
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	CER	A	2748	12/16	0.81	0.32	70,134,243,252	0
4	FMN	I	3051	31/31	0.85	0.41	132,164,181,204	0
4	FMN	G	3051	31/31	0.87	0.33	137,161,187,206	0
4	FMN	H	3051	31/31	0.88	0.26	133,160,184,188	0
3	CER	C	2748	12/16	0.90	0.37	70,134,252,253	0
3	CER	B	2748	12/16	0.91	0.21	70,134,252,253	0

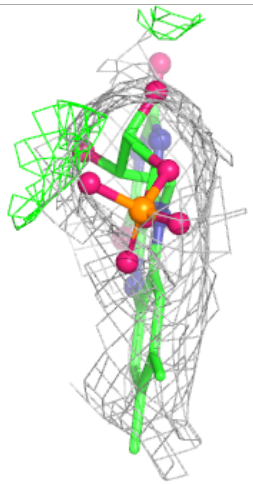
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around FMN 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)

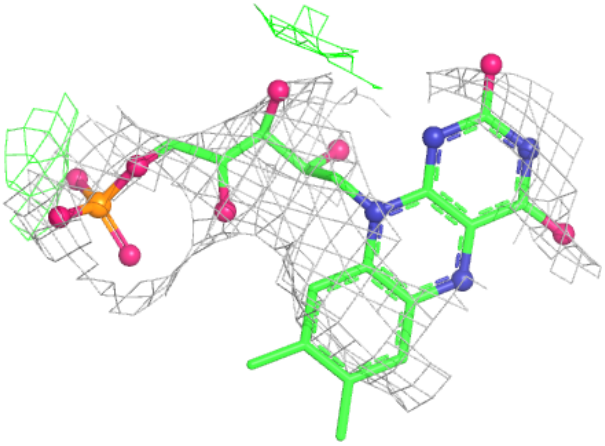


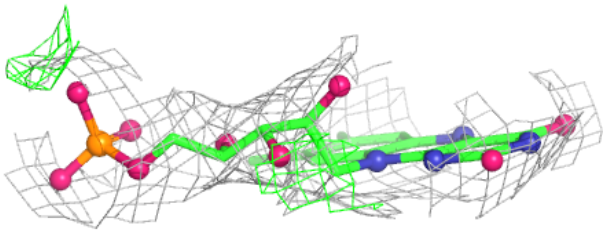


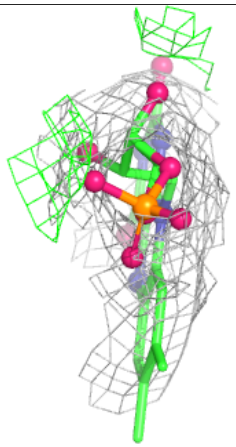


Electron density around FMN G 3051:

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

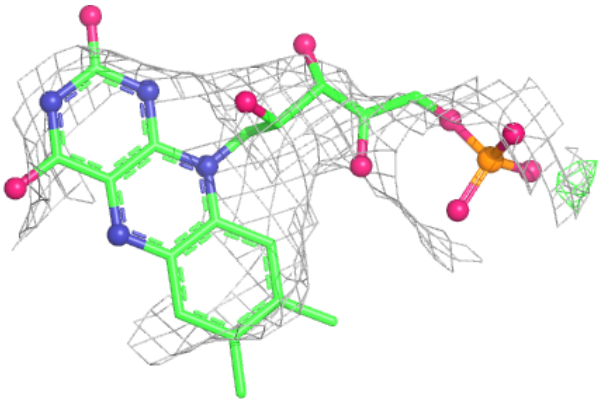


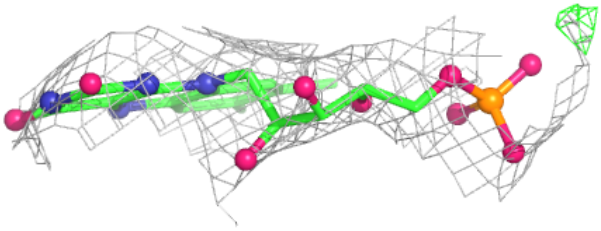


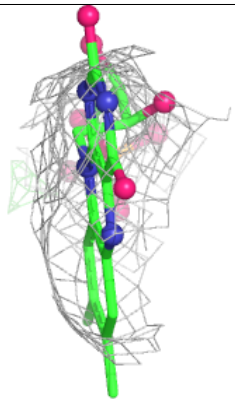


Electron density around FMN H 3051:

$2mF_o$-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.