



Full wwPDB X-ray Structure Validation Report ⓘ

Apr 29, 2024 – 06:12 pm BST

PDB ID : 1EA0
Title : Alpha subunit of A. brasilense glutamate synthase
Authors : Binda, C.; Bossi, R.T.; Vanoni, M.A.; Mattevi, A.
Deposited on : 2000-11-02
Resolution : 3.00 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 : 1.8.4, CSD as541be (2020)
Xtrriage (Phenix) : **NOT EXECUTED**
EDS : **NOT EXECUTED**
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36.2

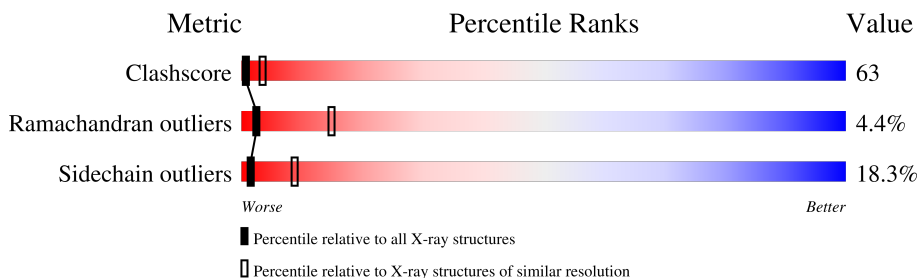
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.00 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))
Clashscore	141614	2416 (3.00-3.00)
Ramachandran outliers	138981	2333 (3.00-3.00)
Sidechain outliers	138945	2336 (3.00-3.00)

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 $\leq 5\%$.

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	1479	 26% 50% 19% . .
1	B	1479	 31% 47% 16% . .

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	OMT	A	2473	-	X	-	-
2	OMT	B	2473	-	X	-	-
5	F3S	A	2476	-	-	X	-
5	F3S	B	2476	-	-	X	-

2 Entry composition [i](#)

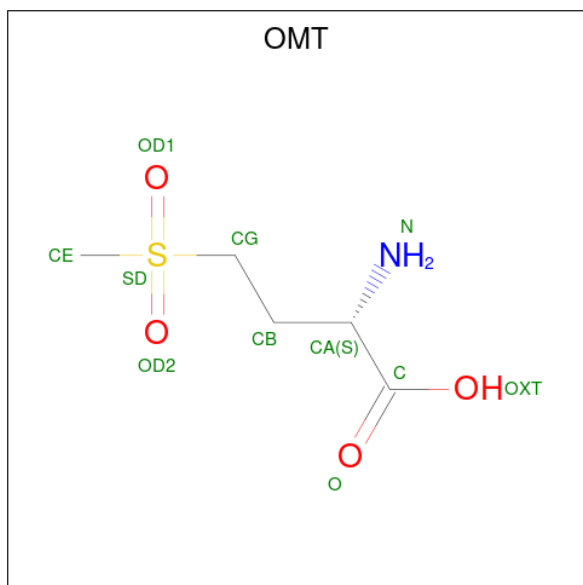
There are 5 unique types of molecules in this entry. The entry contains 22478 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 GLUTAMATE SYNTHASE [NADPH] LARGE CHAIN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	1452	Total 11180	C 7018	N 2005	O 2098	S 59	0	0	0
1	B	1452	Total 11180	C 7018	N 2005	O 2098	S 59	0	0	0

- Molecule 2 is S-DIOXYMETHIONINE (three-letter code: OMT) (formula: C₅H₁₁NO₄S).



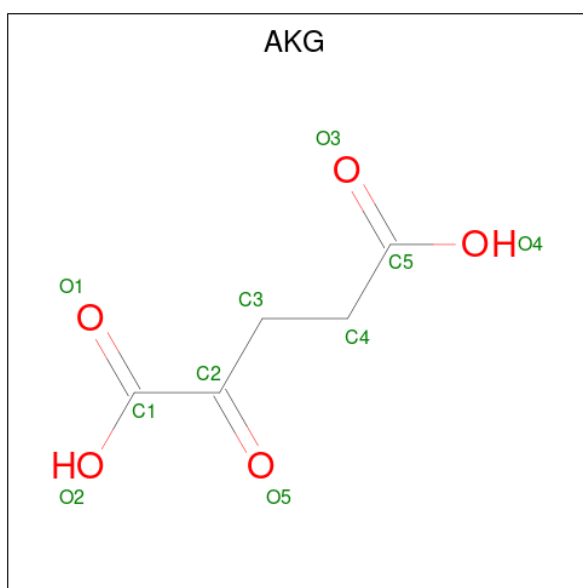
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	S		
2	A	1	Total 11	C 5	N 1	O 4	S 1	0	0
2	B	1	Total 11	C 5	N 1	O 4	S 1	0	0

- Molecule 3 is FLAVIN MONONUCLEOTIDE (three-letter code: FMN) (formula: C₁₇H₂₁N₄O₉P).



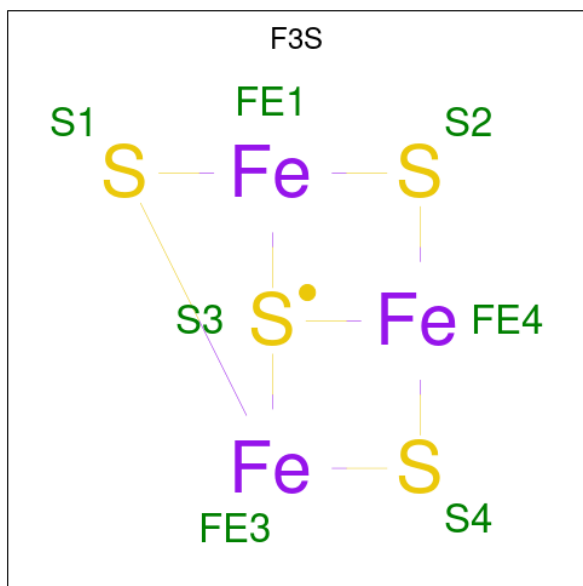
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	
3	A	1	Total	C	N	O	P	0	0
			31	17	4	9	1		
3	B	1	Total	C	N	O	P	0	0
			31	17	4	9	1		

- Molecule 4 is 2-OXOGLUTARIC ACID (three-letter code: AKG) (formula: $C_5H_6O_5$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	A	1	Total	C	O	0	0
			10	5	5		
4	B	1	Total	C	O	0	0
			10	5	5		

- Molecule 5 is FE3-S4 CLUSTER (three-letter code: F3S) (formula: Fe₃S₄).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
5	A	1	Total	Fe	S	0	0
			7	3	4		
5	B	1	Total	Fe	S	0	0
			7	3	4		

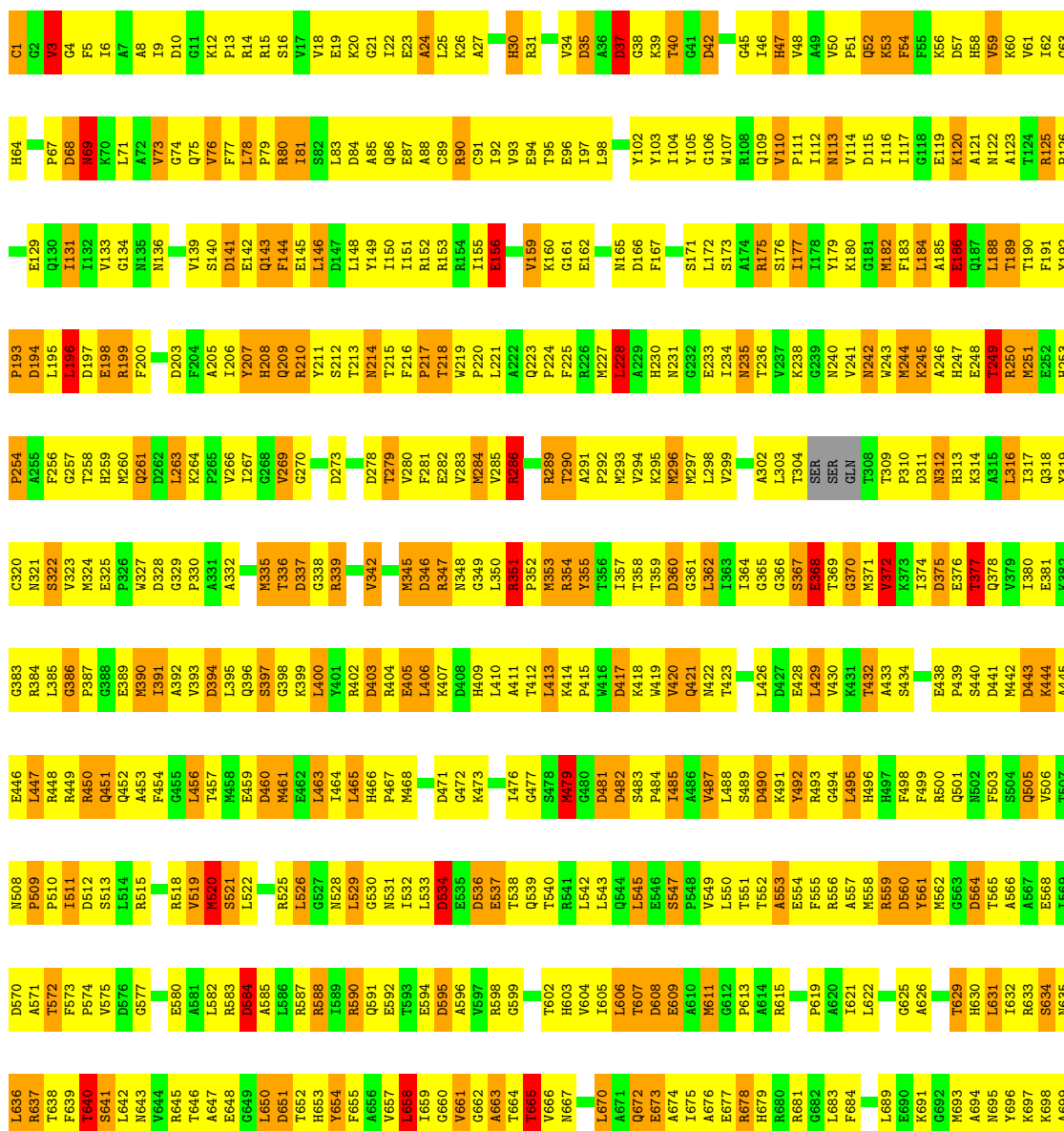
3 Residue-property plots

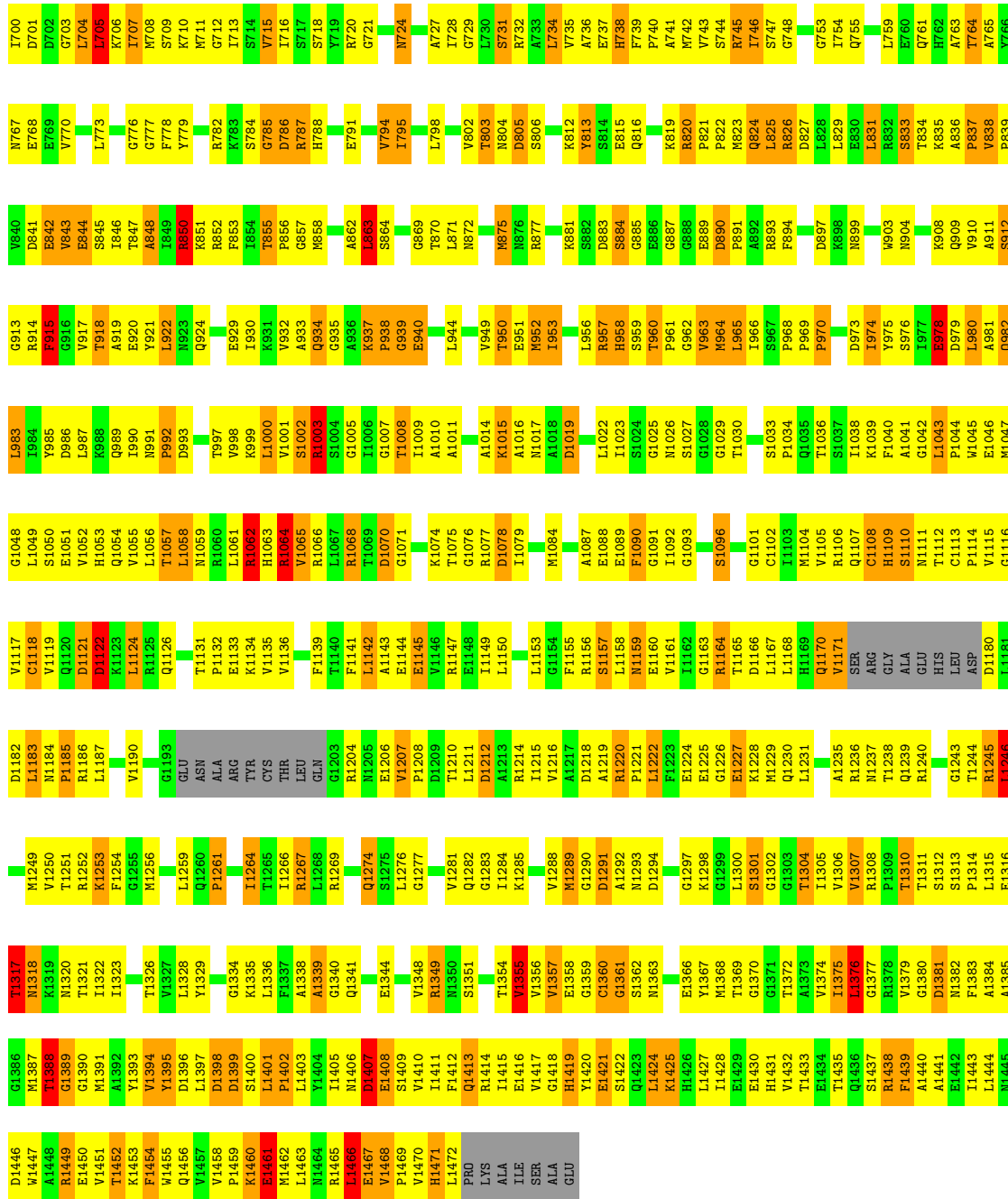
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. Residues are color-coded 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. 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.

Note EDS was not executed.

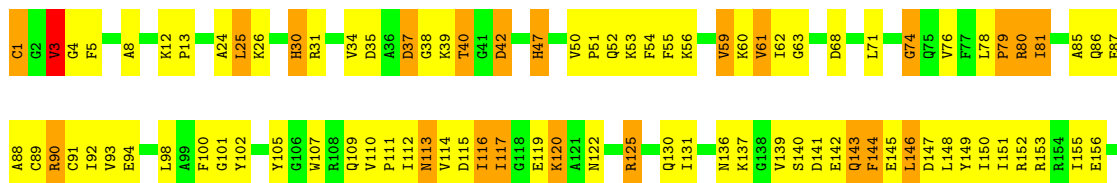
- Molecule 1: GLUTAMATE SYNTHASE [NADPH] LARGE CHAIN

Chain A: 





● Molecule 1: GLUTAMATE SYNTHASE [NADPH] LARGE CHAIN



S1157	S1158	E1159	E1160	E1161	E1162	G1163	R1164	R1165	R1166	R1167	R1168	R1169	Q1170	V1171	SER	GLY	ARG	ALA	ALA	GLU	GLU	HIS	LEU	ASP	V1119	Q1120	D1121	R1122	K1123	P1124	R1125	R1126	Q1127	F1128	F1129	G1130	T1131	G1132	ASN	ALA	ARG	ARG	TVR	CYS	THR	THR	LEU	GLN	G1203	R1204	N1205	E1206	V1207	P1208	D1209	T1210	L1211	D1212	I1215	V1216	A1217	D1218																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
A954	A955	R956	R957	R958	R959	R960	V963	D990	M964	L965	L966	L967	L968	L969	L970	L971	L972	L973	L974	L975	L976	L977	L978	L979	L980	A981	Q982	Q983	L984	L985	L986	L987	L988	L989	L990	L991	L992	L993	L994	L995	L996	L997	L998	L999	L1000	L1001	S1002	R1003	S1004	G1005	I1006	G1007	T1008	I1009	A1010	A1011	G1012	G1013	A1014	K1015	R1016	N1017																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
A1018	L1022	M1026	T1030	G1031	G1032	S1033	P1034	I1038	K1039	F1040	A1041	G1042	P1044	W1045	E1046	G1047	G1048	L1049	S1050	E1051	V1052	H1053	Q1054	Q1055	L1056	L1057	L1058	M1059	R1060	N991	L1061	L1062	H1063	R1064	V1065	R1066	L1067	L1068	D1070	G1071	K1074	T1075	G1076	R1077	D1078	I1079	A1080	I1081	W1084	E1088	G1154	L1155	G1156	R1156																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
F1090	G1091	I1092	G1093	T1094	L1095	S1096	L1097	C1102	M1103	M1104	H1105	R1106	Q1107	H1108	H1109	N1111	T1112	C1113	P1114	V1115	V1119	Q1120	D1121	R1122	K1123	P1124	R1125	R1126	Q1127	F1128	F1129	G1130	T1131	G1132	ASN	ALA	ARG	ARG	TVR	CYS	THR	THR	LEU	GLN	G1203	R1204	N1205	E1206	V1207	P1208	D1209	T1210	L1211	D1212	I1215	V1216	A1217	D1218																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
A854	A855	R856	R857	R858	R859	R860	V863	D890	M864	L865	L866	L867	L868	L869	L870	L871	L872	L873	L874	L875	L876	L877	L878	L879	L880	A881	Q882	Q883	L884	L885	L886	L887	L888	L889	L890	L891	L892	L893	L894	L895	L896	L897	L898	L899	L900	L901	L902	L903	L904	L905	L906	L907	L908	L909	L910	L911	L912	L913	L914	L915	L916	L917	L918	L919	L920	L921	L922	L923	L924	L925	L926	L927	L928	L929	L930	L931	L932	L933	L934	L935	L936	L937	L938	L939	L940	L941	L942	L943	L944	L945	L946	L947	L948	L949	L950	L951	L952	L953	L954	L955	L956	L957	L958	L959	L960	L961	L962	L963	L964	L965	L966	L967	L968	L969	L970	L971	L972	L973	L974	L975	L976	L977	L978	L979	L980	L981	L982	L983	L984	L985	L986	L987	L988	L989	L990	L991	L992	L993	L994	L995	L996	L997	L998	L999	L1000	L1001	L1002	L1003	L1004	L1005	L1006	L1007	L1008	L1009	L1010	L1011	L1012	L1013	L1014	L1015	L1016	L1017	L1018	L1019	L1020	L1021	L1022	L1023	L1024	L1025	L1026	L1027	L1028	L1029	L1030	L1031	L1032	L1033	L1034	L1035	L1036	L1037	L1038	L1039	L1040	L1041	L1042	L1043	L1044	L1045	L1046	L1047	L1048	L1049	L1050	L1051	L1052	L1053	L1054	L1055	L1056	L1057	L1058	L1059	L1060	L1061	L1062	L1063	L1064	L1065	L1066	L1067	L1068	L1069	L1070	L1071	L1072	L1073	L1074	L1075	L1076	L1077	L1078	L1079	L1080	L1081	L1082	L1083	L1084	L1085	L1086	L1087	L1088	L1089	L1090	L1091	L1092	L1093	L1094	L1095	L1096	L1097	L1098	L1099	L1100	L1101	L1102	L1103	L1104	L1105	L1106	L1107	L1108	L1109	L1110	L1111	L1112	L1113	L1114	L1115	L1116	L1117	L1118	L1119	L1120	L1121	L1122	L1123	L1124	L1125	L1126	L1127	L1128	L1129	L1130	L1131	L1132	L1133	L1134	L1135	L1136	L1137	L1138	L1139	L1140	L1141	L1142	L1143	L1144	L1145	L1146	L1147	L1148	L1149	L1150	L1151	L1152	L1153	L1154	L1155	L1156	L1157	L1158	L1159	L1160	L1161	L1162	L1163	L1164	L1165	L1166	L1167	L1168	L1169	L1170	L1171	L1172	L1173	L1174	L1175	L1176	L1177	L1178	L1179	L1180	L1181	L1182	L1183	L1184	L1185	L1186	L1187	L1188	L1189	L1190	L1191	L1192	L1193	L1194	L1195	L1196	L1197	L1198	L1199	L1200	L1201	L1202	L1203	L1204	L1205	L1206	L1207	L1208	L1209	L1210	L1211	L1212	L1213	L1214	L1215	L1216	L1217	L1218	L1219	L1220	L1221	L1222	L1223	L1224	L1225	L1226	L1227	L1228	L1229	L1230	L1231	L1232	L1233	L1234	L1235	L1236	L1237	L1238	L1239	L1240	L1241	L1242	L1243	L1244	L1245	L1246	L1247	L1248	L1249	L1250	L1251	L1252	L1253	L1254	L1255	L1256	L1257	L1258	L1259	L1260	L1261	L1262	L1263	L1264	L1265	L1266	L1267	L1268	L1269	L1270	L1271	L1272	L1273	L1274	L1275	L1276	L1277	L1278	L1279	L1280	L1281	L1282	L1283	L1284	L1285	L1286	L1287	L1288	L1289	L1290	L1291	L1292	L1293	L1294	L1295	L1296	L1297	L1298	L1299	L1300	L1301	L1302	L1303	L1304	L1305	L1306	L1307	L1308	L1309	L1310	L1311	L1312	L1313	L1314	L1315	L1316	L1317	L1318	L1319	L1320	L1321	L1322	L1323	L1324	L1325	L1326	L1327	L1328	L1329	L1330	L1331	L1332	L1333	L1334	L1335	L1336	L1337	L1338	L1339	L1340	L1341	L1342	L1343	L1344	L1345	L1346	L1347	L1348	L1349	L1350	L1351	L1352	L1353	L1354	L1355	L1356	L1357	L1358	L1359	L1360	L1361	L1362	L1363	L1364	L1365	L1366	L1367	L1368	L1369	L1370	L1371	L1372	L1373	L1374	L1375	L1376	L1377	L1378	L1379	L1380	L1381	L1382	L1383	L1384	L1385	L1386	L1387	L1388	L1389	L1390	L1391	L1392	L1393	L1394	L1395	L1396	L1397	L1398	L1399	L1400	L1401	L1402	L1403	L1404	L1405	L1406	L1407	L1408	L1409	L1410	L1411	L1412	L1413	L1414	L1415	L1416	L1417	L1418	L1419	L1420	L1421	L1422	L1423	L1424	L1425	L1426	L1427	L1428	L1429	L1430	L1431	L1432	L1433	L1434	L1435	L1436	L1437	L1438	L1439	L1440	L1441	L1442	L1443	L1444	L1445	L1446	L1447	L1448	L1449	L1450	L1451	L1452	L1453	L1454	L1455	L1456	L1457	L1458	L1459	L1460	L1461	L1462	L1463	L1464	L1465	L1466	L1467	L1468	L1469	L1470	L1471	L1472	L1473	L1474	L1475	L1476	L1477	L1478	L1479	L1480	L1481	L1482	L1483	L1484	L1485	L1486	L1487	L1488	L1489	L1490	L1491	L1492	L1493	L1494	L1495	L1496	L1497	L1498	L1499	L1500	L1501	L1502	L1503	L1504	L1505	L1506	L1507	L1508	L1509	L1510	L1511	L1512	L1513	L1514	L1515	L1516	L1517	L1518	L1519	L1520	L1521	L1522	L1523	L1524	L1525	L1526	L1527	L1528	L1529	L1530	L1531	L1532	L1533	L1534	L1535	L1536	L1537	L1538	L1539	L1540	L1541	L1542	L1543	L1544	L1545	L1546	L1547	L1548	L1549	L1550	L1551	L1552	L1553	L1554	L1555	L1556	L1557	L1558	L1559	L1560	L1561	L1562	L1563	L1564	L1565	L1566	L1567	L1568	L1569	L1570	L1571	L1572	L1573	L1574	L1575	L1576	L1577	L1578	L1579	L1580	L1581	L1582	L1583	L1584	L1585	L1586	L1587	L1588	L1589	L1590	L1591	L1592	L1593	L1594	L1595	L1596	L1597	L1598	L1599	L1600	L1601	L1602	L1603	L1604	L1605	L1606	L1607	L1608	L1609	L1610	L1611	L1612	L1613	L1614	L1615	L1616	L1617	L1618	L1619	L1620	L1621	L1622	L1623	L1624	L1625	L1626	L1627	L1628	L1629	L1630	L1631	L1632	L1633	L1634	L1635	L1636	L1637	L1638	L1639	L1640	L1641	L1642	L1643	L1644	L1645	L1646	L1647	L1648	L1649	L1650	L1651	L1652	L1653	L1654	L1655	L1656	L1657	L1658	L1659	L1660	L1661	L1662	L1663	L1664	L1665	L1666	L1667	L1668	L1669	L1670	L1671	L1672	L1673	L1674	L1675	L1676	L1677	L1678	L1679	L1680	L1681	L1682	L1683	L1684	L1685	L1686	L1687	L1688	L1689	L1690	L1691	L1692	L1693	L1694	L1695	L1696	L1697	L1698	L1699	L1700	L1701	L1702	L1703	L1704	L1705	L1706	L1707	L1708	L1709	L1710	L1711	L1712	L1713	L1714	L1715	L1716	L1717	L1718	L1719	L1720	L1721	L1722	L1723	L1724	L1725	L1726	L1727	L1728	L1729	L1730	L1731	L1732	L1733	L1734	L1735	L1736	L1737	L1738	L1739	L1740	L1741	L1742	L1743	L1744	L1745	L1746	L1747	L1748	L1749	L1750	L1751	L1752	L1753	L1754	L1755	L1756	L1757	L1758	L1759	L1760	L1761	L1762	L1763	L1764	L1765	L1766	L1767	L1768	L1769	L1770	L1771	L1772	L1773	L1774	L1775	L1776	L1777	L1778	L1779	L1780	L1781	L1782	L1783	L1784	L1785	L1786	L1787	L1788	L1789	L1790	L1791	L1792	L1793	L1794	L1795	L1796	L1797	L1798	L1799	L1800	L1801	L1802	L1803	L1804	L1805	L1806	L1807	L1808	L1809	L1810	L1811	L1812	L1813	L1814	L1815	L1816	L1817	L1818	L1819	L1820	L1821	L1822	L1823	L1824	L1825	L1826	L1827	L1828	L1829	L1830	L1831	L1832	L1833	L1834	L1835	L1836	L1837	L1838	L1839	L1840	L1841	L1842	L1843	L1844	L1845	L1846	L1847	L1848	L1849	L1850	L1851	L1852	L1853	L1854	L1855	L1856	L1857	L1858	L1859	L1860	L1861	L1862	L1863	L1864	L1865	L1866	L1867	L1868	L1869	L1870	L1871	L1872	L1873	L1874	L1875	L1876	L1877	L1878	L1879	L1880	L1881	L1882	L1883	L1884	L1885	L1886	L1887	L1888	L1889	L1890	L1891	L1892	L1893	L1894	L1895	L1896	L1897	L1898	L1899	L1900	L1901	L1902	L1903	L1904	L1905	L1906	L1907	L1908	L1909	L1910	L1911	L1912	L1913	L1914	L1915	L1916	L1917	L1918	L1919	L1920	L1921	L1922	L1923	L1924	L1925	L1926	L1927	L1928	L1929	L1930	L1931	L1932	L1933	L1934	L1935	L1936	L1937	L1938	L1939	L1940	L1941	L1942	L1943	L1944	L1945	L1946	L1947	L1948	L1949	L1950	L1951	L1952	L1953	L1954	L1955	L1956	L1957	L1958	L1959	L1960	L1961	L1962	L1963	L1964	L1965	L1966	L1967	L1968	L1969	L1970	L1971	L1972	L1973	L1974	L1975	L1976	L1977	L1978	L1979	L1980	L1981	L1982	L1983	L1984	L1985	L1986	L1987	L1988	L1989	L1990	L1991	L1992	L1993	L1994	L1995	L1996	L1997	L1998	L1999	L2

4 Data and refinement statistics

Xtrriage (Phenix) and EDS were not executed - this section is therefore incomplete.

Property	Value	Source
Space group	P 31 2 1	Depositor
Cell constants a, b, c, α , β , γ	233.61Å 233.61Å 305.09Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	20.00 – 3.00	Depositor
% Data completeness (in resolution range)	98.6 (20.00-3.00)	Depositor
R_{merge}	0.09	Depositor
R_{sym}	0.09	Depositor
Refinement program	REFMAC	Depositor
R, R_{free}	0.256 , 0.287	Depositor
Estimated twinning fraction	No twinning to report.	Xtrriage
Total number of atoms	22478	wwPDB-VP
Average B, all atoms (Å ²)	57.0	wwPDB-VP

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: FMN, AKG, OMT, F3S

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	1.06	7/11383 (0.1%)	1.58	198/15390 (1.3%)
1	B	1.10	7/11383 (0.1%)	1.58	192/15390 (1.2%)
All	All	1.08	14/22766 (0.1%)	1.58	390/30780 (1.3%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	1	2
1	B	0	2
All	All	1	4

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	838	VAL	CA-CB	-7.71	1.38	1.54
1	A	746	ILE	CA-CB	-7.47	1.37	1.54
1	A	848	ALA	CA-CB	-6.51	1.38	1.52
1	A	1065	VAL	CB-CG2	-6.15	1.40	1.52
1	A	3	VAL	CA-CB	-5.67	1.42	1.54
1	B	1394	VAL	CB-CG1	-5.54	1.41	1.52
1	B	1216	VAL	CB-CG1	-5.49	1.41	1.52
1	A	910	VAL	CA-CB	-5.46	1.43	1.54
1	B	500	ARG	C-O	-5.21	1.13	1.23
1	B	1136	VAL	CA-CB	-5.15	1.44	1.54
1	B	222	ALA	CA-CB	-5.10	1.41	1.52
1	B	1051	GLU	CD-OE2	5.02	1.31	1.25
1	B	862	ALA	CA-CB	-5.02	1.42	1.52
1	A	741	ALA	CA-CB	-5.01	1.42	1.52

All (390) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	1062	ARG	NE-CZ-NH1	-12.86	113.87	120.30
1	A	608	ASP	CB-CG-OD2	12.18	129.26	118.30
1	A	141	ASP	CB-CG-OD2	11.98	129.08	118.30
1	B	888	GLY	N-CA-C	-11.68	83.89	113.10
1	B	890	ASP	CB-CG-OD1	11.31	128.48	118.30
1	B	683	LEU	CB-CG-CD2	-11.18	92.00	111.00
1	B	1056	LEU	CB-CG-CD1	-10.57	93.03	111.00
1	A	1019	ASP	CB-CG-OD2	10.48	127.73	118.30
1	B	1466	LEU	CB-CG-CD1	-10.39	93.33	111.00
1	B	852	ARG	NE-CZ-NH2	-10.34	115.13	120.30
1	B	456	LEU	CB-CG-CD2	-10.27	93.54	111.00
1	A	1003	ARG	NE-CZ-NH1	10.21	125.41	120.30
1	A	805	ASP	CB-CG-OD2	10.16	127.44	118.30
1	B	460	ASP	CB-CG-OD2	9.91	127.22	118.30
1	B	394	ASP	CB-CG-OD2	9.79	127.11	118.30
1	A	479	MET	CG-SD-CE	9.65	115.63	100.20
1	B	608	ASP	CB-CG-OD1	-9.64	109.62	118.30
1	A	1064	ARG	NE-CZ-NH1	-9.62	115.49	120.30
1	A	351	ARG	NE-CZ-NH2	9.59	125.10	120.30
1	B	940	GLU	N-CA-C	9.59	136.89	111.00
1	A	460	ASP	CB-CG-OD2	9.47	126.82	118.30
1	A	1062	ARG	NE-CZ-NH1	-9.47	115.56	120.30
1	B	1218	ASP	CB-CG-OD2	9.44	126.80	118.30
1	A	1003	ARG	NE-CZ-NH2	-9.44	115.58	120.30
1	A	584	ASP	CB-CG-OD2	9.42	126.78	118.30
1	B	915	PHE	CA-C-N	9.37	134.94	116.20
1	B	584	ASP	CB-CG-OD2	9.26	126.64	118.30
1	B	608	ASP	CB-CG-OD2	9.21	126.59	118.30
1	B	938	PRO	C-N-CA	-9.20	102.99	122.30
1	B	1355	VAL	CB-CA-C	-9.20	93.92	111.40
1	A	890	ASP	CB-CG-OD1	9.17	126.56	118.30
1	A	940	GLU	N-CA-C	9.16	135.74	111.00
1	A	394	ASP	CB-CG-OD2	9.09	126.48	118.30
1	A	1355	VAL	CB-CA-C	-9.03	94.25	111.40
1	B	1164	ARG	NE-CZ-NH1	-8.90	115.85	120.30
1	B	228	LEU	CB-CG-CD1	-8.82	96.01	111.00
1	A	1062	ARG	NE-CZ-NH2	8.78	124.69	120.30
1	A	403	ASP	CB-CG-OD2	8.69	126.12	118.30
1	A	351	ARG	NE-CZ-NH1	-8.57	116.01	120.30
1	B	915	PHE	CB-CG-CD2	-8.57	114.80	120.80
1	A	1218	ASP	CB-CG-OD2	8.56	126.00	118.30
1	B	915	PHE	CB-CG-CD1	8.48	126.74	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	1349	ARG	NE-CZ-NH1	-8.38	116.11	120.30
1	A	534	ASP	CB-CG-OD2	8.37	125.83	118.30
1	A	228	LEU	CB-CG-CD1	-8.33	96.85	111.00
1	A	337	ASP	CB-CG-OD1	8.32	125.79	118.30
1	B	369	THR	C-N-CA	-8.29	104.90	122.30
1	B	337	ASP	N-CA-C	-8.28	88.66	111.00
1	A	545	LEU	CA-CB-CG	-8.26	96.29	115.30
1	B	1390	GLY	N-CA-C	-8.23	92.52	113.10
1	B	979	ASP	CB-CG-OD2	8.21	125.69	118.30
1	B	1466	LEU	CA-CB-CG	8.17	134.08	115.30
1	B	182	MET	CG-SD-CE	-8.15	87.16	100.20
1	A	1466	LEU	CB-CG-CD1	-8.08	97.27	111.00
1	A	746	ILE	CG1-CB-CG2	7.99	128.97	111.40
1	B	650	LEU	CB-CG-CD2	-7.96	97.47	111.00
1	B	678	ARG	NE-CZ-NH1	-7.90	116.35	120.30
1	A	286	ARG	NE-CZ-NH1	-7.89	116.36	120.30
1	A	1466	LEU	CA-CB-CG	7.87	133.41	115.30
1	A	482	ASP	CB-CG-OD1	7.84	125.36	118.30
1	A	805	ASP	CB-CG-OD1	-7.82	111.27	118.30
1	A	372	VAL	CB-CA-C	-7.81	96.55	111.40
1	B	826	ARG	NE-CZ-NH1	-7.71	116.44	120.30
1	B	536	ASP	CB-CG-OD2	7.69	125.22	118.30
1	A	965	LEU	CB-CG-CD2	-7.68	97.95	111.00
1	B	705	LEU	CB-CG-CD2	-7.64	98.00	111.00
1	B	805	ASP	CB-CG-OD2	7.62	125.16	118.30
1	B	360	ASP	CB-CG-OD2	7.61	125.15	118.30
1	A	360	ASP	CB-CG-OD2	7.60	125.14	118.30
1	B	689	LEU	CB-CG-CD1	-7.59	98.10	111.00
1	B	560	ASP	CB-CG-OD1	7.55	125.09	118.30
1	A	1376	LEU	CA-CB-CG	-7.54	97.96	115.30
1	A	993	ASP	CB-CG-OD2	7.49	125.04	118.30
1	B	689	LEU	CA-CB-CG	-7.47	98.12	115.30
1	B	91	CYS	CA-CB-SG	-7.45	100.59	114.00
1	A	608	ASP	CB-CG-OD1	-7.45	111.60	118.30
1	B	993	ASP	CB-CG-OD2	7.43	124.99	118.30
1	B	175	ARG	NE-CZ-NH1	-7.41	116.60	120.30
1	B	746	ILE	CG1-CB-CG2	7.40	127.69	111.40
1	A	1147	ARG	NE-CZ-NH1	-7.40	116.60	120.30
1	B	915	PHE	C-N-CA	-7.39	106.78	122.30
1	B	228	LEU	CB-CA-C	-7.37	96.19	110.20
1	A	354	ARG	NE-CZ-NH1	-7.34	116.63	120.30
1	A	490	ASP	N-CA-CB	-7.33	97.40	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1390	GLY	N-CA-C	-7.33	94.78	113.10
1	A	584	ASP	CB-CG-OD1	-7.33	111.71	118.30
1	B	1168	LEU	CA-CB-CG	7.31	132.11	115.30
1	A	915	PHE	C-N-CA	-7.25	107.07	122.30
1	B	826	ARG	NE-CZ-NH2	7.17	123.88	120.30
1	A	835	LYS	CD-CE-NZ	7.14	128.11	111.70
1	B	263	LEU	CA-CB-CG	-7.13	98.90	115.30
1	B	1153	LEU	CA-CB-CG	-7.13	98.90	115.30
1	B	339	ARG	NE-CZ-NH1	-7.13	116.74	120.30
1	A	263	LEU	CA-CB-CG	-7.12	98.92	115.30
1	A	490	ASP	CB-CG-OD1	-7.11	111.90	118.30
1	A	595	ASP	CB-CG-OD2	7.11	124.70	118.30
1	B	500	ARG	NE-CZ-NH2	-7.08	116.76	120.30
1	A	519	VAL	CB-CA-C	-7.06	97.98	111.40
1	B	368	GLU	CA-CB-CG	7.06	128.93	113.40
1	B	1062	ARG	NE-CZ-NH2	7.04	123.82	120.30
1	B	835	LYS	CD-CE-NZ	7.04	127.89	111.70
1	B	963	VAL	CB-CA-C	-7.02	98.06	111.40
1	B	913	GLY	N-CA-C	-7.00	95.60	113.10
1	A	613	PRO	N-CD-CG	-7.00	92.70	103.20
1	A	1056	LEU	CB-CG-CD1	-6.97	99.16	111.00
1	B	1003	ARG	NE-CZ-NH2	-6.96	116.82	120.30
1	B	850	ARG	NE-CZ-NH2	-6.95	116.82	120.30
1	B	368	GLU	N-CA-CB	6.94	123.09	110.60
1	B	1153	LEU	CB-CG-CD2	-6.93	99.22	111.00
1	A	1068	ARG	NE-CZ-NH1	-6.93	116.84	120.30
1	B	337	ASP	C-N-CA	-6.90	107.81	122.30
1	A	837	PRO	N-CD-CG	-6.90	92.86	103.20
1	B	683	LEU	CA-CB-CG	-6.89	99.46	115.30
1	A	346	ASP	CB-CG-OD1	6.88	124.49	118.30
1	A	564	ASP	CB-CG-OD2	6.88	124.49	118.30
1	A	1252	ARG	NE-CZ-NH1	-6.84	116.88	120.30
1	B	481	ASP	CB-CG-OD2	6.81	124.43	118.30
1	B	831	LEU	CA-CB-CG	6.80	130.95	115.30
1	B	607	THR	N-CA-C	6.80	129.36	111.00
1	A	228	LEU	CB-CA-C	-6.80	97.29	110.20
1	A	505	GLN	C-N-CA	-6.78	104.75	121.70
1	A	536	ASP	CB-CG-OD2	6.75	124.38	118.30
1	A	963	VAL	CB-CA-C	-6.75	98.58	111.40
1	B	184	LEU	CB-CG-CD1	6.75	122.47	111.00
1	B	915	PHE	CA-C-O	-6.75	105.94	120.10
1	B	897	ASP	CB-CG-OD2	6.73	124.36	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	681	ARG	N-CA-C	-6.71	92.87	111.00
1	B	1121	ASP	CB-CG-OD2	6.71	124.34	118.30
1	A	850	ARG	NE-CZ-NH2	-6.64	116.98	120.30
1	A	590	ARG	NE-CZ-NH1	-6.62	116.99	120.30
1	B	1269	ARG	NE-CZ-NH2	-6.59	117.00	120.30
1	B	704	LEU	N-CA-CB	-6.59	97.23	110.40
1	A	481	ASP	CB-CG-OD2	6.56	124.20	118.30
1	B	570	ASP	CB-CG-OD1	6.53	124.18	118.30
1	B	726	GLU	N-CA-C	-6.53	93.37	111.00
1	A	337	ASP	N-CA-C	-6.53	93.38	111.00
1	B	704	LEU	CB-CG-CD1	6.52	122.09	111.00
1	B	42	ASP	CB-CG-OD2	6.52	124.17	118.30
1	A	803	THR	CA-CB-CG2	-6.47	103.34	112.40
1	A	887	GLY	N-CA-C	6.47	129.28	113.10
1	B	883	ASP	CB-CG-OD1	6.47	124.12	118.30
1	B	196	LEU	CA-CB-CG	-6.47	100.42	115.30
1	A	938	PRO	C-N-CA	-6.47	108.72	122.30
1	B	595	ASP	CB-CG-OD2	6.46	124.11	118.30
1	B	529	LEU	CA-CB-CG	-6.44	100.48	115.30
1	A	715	VAL	CB-CA-C	-6.42	99.21	111.40
1	B	590	ARG	NE-CZ-NH1	-6.40	117.10	120.30
1	A	1078	ASP	CB-CG-OD2	6.39	124.06	118.30
1	B	1125	ARG	NE-CZ-NH1	-6.37	117.12	120.30
1	B	637	ARG	NE-CZ-NH1	-6.34	117.13	120.30
1	B	1058	LEU	CB-CG-CD2	-6.34	100.22	111.00
1	B	1138	LEU	CB-CG-CD1	-6.34	100.22	111.00
1	B	346	ASP	CB-CG-OD2	6.34	124.01	118.30
1	A	978	GLU	CA-CB-CG	-6.34	99.46	113.40
1	B	141	ASP	CB-CG-OD2	6.33	124.00	118.30
1	A	1376	LEU	CB-CG-CD1	6.32	121.74	111.00
1	A	3	VAL	CB-CA-C	-6.30	99.42	111.40
1	A	964	MET	CB-CA-C	-6.30	97.81	110.40
1	A	106	GLY	N-CA-C	6.26	128.75	113.10
1	B	214	ASN	CB-CA-C	-6.25	97.89	110.40
1	A	520	MET	CB-CG-SD	-6.25	93.64	112.40
1	A	443	ASP	CB-CG-OD2	6.24	123.91	118.30
1	A	110	VAL	CA-CB-CG1	-6.23	101.56	110.90
1	B	182	MET	CB-CA-C	-6.21	97.97	110.40
1	B	1222	LEU	CB-CG-CD1	-6.19	100.47	111.00
1	A	915	PHE	N-CA-C	6.16	127.64	111.00
1	A	91	CYS	CA-CB-SG	-6.16	102.92	114.00
1	A	286	ARG	NE-CZ-NH2	6.16	123.38	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	1053	HIS	CB-CA-C	-6.16	98.09	110.40
1	A	141	ASP	CB-CG-OD1	-6.13	112.79	118.30
1	A	560	ASP	CB-CG-OD1	6.12	123.81	118.30
1	B	986	ASP	CB-CG-OD2	6.12	123.81	118.30
1	B	50	VAL	CB-CA-C	-6.11	99.79	111.40
1	B	125	ARG	NE-CZ-NH2	-6.11	117.25	120.30
1	A	199	ARG	NE-CZ-NH2	-6.10	117.25	120.30
1	A	1074	LYS	CB-CA-C	-6.09	98.21	110.40
1	A	1122	ASP	CB-CG-OD2	6.09	123.78	118.30
1	B	90	ARG	NE-CZ-NH1	-6.09	117.26	120.30
1	B	519	VAL	CB-CA-C	-6.09	99.84	111.40
1	A	1070	ASP	CB-CG-OD2	6.08	123.78	118.30
1	B	732	ARG	NE-CZ-NH2	-6.07	117.26	120.30
1	A	289	ARG	NE-CZ-NH1	-6.07	117.27	120.30
1	B	732	ARG	CG-CD-NE	-6.06	99.08	111.80
1	B	684	PHE	N-CA-C	-6.05	94.65	111.00
1	B	203	ASP	CB-CG-OD2	6.05	123.75	118.30
1	B	890	ASP	CB-CG-OD2	-6.05	112.85	118.30
1	B	250	ARG	CB-CA-C	-6.02	98.36	110.40
1	A	1180	ASP	CB-CG-OD2	6.02	123.72	118.30
1	B	1013	VAL	CG1-CB-CG2	-6.02	101.27	110.90
1	B	965	LEU	CB-CG-CD2	-6.02	100.77	111.00
1	B	3	VAL	CB-CA-C	-6.01	99.98	111.40
1	B	978	GLU	CA-CB-CG	-6.01	100.18	113.40
1	A	940	GLU	C-N-CA	-6.00	109.70	122.30
1	B	296	MET	CA-CB-CG	-6.00	103.10	113.30
1	B	850	ARG	NE-CZ-NH1	6.00	123.30	120.30
1	A	672	GLN	N-CA-C	-6.00	94.81	111.00
1	B	640	THR	CB-CA-C	-5.99	95.42	111.60
1	A	196	LEU	CB-CG-CD1	-5.99	100.81	111.00
1	B	887	GLY	N-CA-C	5.99	128.07	113.10
1	B	74	GLY	N-CA-C	-5.98	98.15	113.10
1	A	843	VAL	CB-CA-C	-5.97	100.06	111.40
1	A	283	VAL	CB-CA-C	-5.94	100.11	111.40
1	A	1068	ARG	NE-CZ-NH2	5.94	123.27	120.30
1	A	490	ASP	CB-CG-OD2	5.93	123.64	118.30
1	B	1374	VAL	CB-CA-C	-5.93	100.13	111.40
1	B	803	THR	CA-CB-CG2	-5.92	104.12	112.40
1	A	1294	ASP	CB-CG-OD2	5.90	123.61	118.30
1	A	511	ILE	CB-CA-C	-5.90	99.80	111.60
1	B	461	MET	CG-SD-CE	5.90	109.64	100.20
1	B	956	LEU	CB-CG-CD2	-5.90	100.97	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	125	ARG	NE-CZ-NH1	5.90	123.25	120.30
1	B	782	ARG	N-CA-C	-5.90	95.08	111.00
1	A	471	ASP	CB-CG-OD2	5.89	123.60	118.30
1	B	1399	ASP	CB-CG-OD2	5.88	123.59	118.30
1	A	980	LEU	CB-CA-C	-5.88	99.03	110.20
1	B	564	ASP	CB-CG-OD2	5.88	123.59	118.30
1	B	1180	ASP	CB-CG-OD2	5.88	123.59	118.30
1	B	522	LEU	CA-CB-CG	5.88	128.81	115.30
1	A	850	ARG	CA-CB-CG	5.87	126.31	113.40
1	A	193	PRO	N-CD-CG	-5.86	94.41	103.20
1	B	337	ASP	CB-CG-OD1	5.85	123.57	118.30
1	B	651	ASP	CB-CG-OD2	5.84	123.56	118.30
1	A	456	LEU	CB-CG-CD2	-5.84	101.07	111.00
1	A	354	ARG	CG-CD-NE	-5.84	99.54	111.80
1	A	831	LEU	CA-CB-CG	5.83	128.72	115.30
1	A	50	VAL	CB-CA-C	-5.82	100.34	111.40
1	B	651	ASP	CB-CA-C	-5.82	98.76	110.40
1	A	42	ASP	CB-CG-OD2	5.80	123.52	118.30
1	B	1003	ARG	NE-CZ-NH1	5.79	123.20	120.30
1	A	194	ASP	CB-CG-OD2	5.79	123.51	118.30
1	A	311	ASP	CB-CG-OD1	5.78	123.50	118.30
1	A	1171	VAL	CA-CB-CG1	-5.78	102.23	110.90
1	B	79	PRO	N-CA-C	-5.77	97.10	112.10
1	B	1407	ASP	CB-CA-C	-5.77	98.86	110.40
1	B	485	ILE	CG1-CB-CG2	-5.77	98.71	111.40
1	A	1306	VAL	CB-CA-C	-5.76	100.45	111.40
1	B	1396	ASP	CB-CG-OD2	5.75	123.48	118.30
1	A	746	ILE	CB-CA-C	-5.74	100.11	111.60
1	A	368	GLU	N-CA-CB	5.73	120.92	110.60
1	A	1000	LEU	CB-CG-CD1	-5.73	101.25	111.00
1	B	714	SER	CB-CA-C	-5.73	99.21	110.10
1	A	337	ASP	C-N-CA	-5.71	110.30	122.30
1	B	1407	ASP	CB-CG-OD2	5.71	123.44	118.30
1	B	403	ASP	CB-CG-OD2	5.71	123.44	118.30
1	A	794	VAL	CB-CA-C	5.69	122.21	111.40
1	A	1468	VAL	CB-CA-C	-5.69	100.59	111.40
1	A	1218	ASP	CB-CG-OD1	-5.68	113.19	118.30
1	A	577	GLY	N-CA-C	5.68	127.29	113.10
1	A	1212	ASP	CB-CG-OD2	5.67	123.41	118.30
1	B	385	LEU	CA-CB-CG	5.66	128.33	115.30
1	B	992	PRO	N-CD-CG	-5.63	94.75	103.20
1	B	945	PRO	N-CD-CG	-5.62	94.76	103.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	608	ASP	N-CA-CB	-5.61	100.51	110.60
1	A	1183	LEU	CB-CG-CD1	-5.60	101.48	111.00
1	A	182	MET	CG-SD-CE	-5.60	91.25	100.20
1	B	545	LEU	CA-CB-CG	-5.60	102.43	115.30
1	B	1212	ASP	CB-CG-OD2	5.59	123.33	118.30
1	B	471	ASP	CB-CG-OD2	5.59	123.33	118.30
1	B	940	GLU	C-N-CA	-5.59	110.57	122.30
1	B	407	LYS	CD-CE-NZ	5.58	124.54	111.70
1	B	941	GLY	N-CA-C	5.58	127.06	113.10
1	A	863	LEU	CA-CB-CG	5.57	128.12	115.30
1	B	283	VAL	CB-CA-C	-5.57	100.81	111.40
1	A	1	CYS	CA-CB-SG	-5.56	104.00	114.00
1	A	534	ASP	CB-CG-OD1	-5.56	113.30	118.30
1	B	1064	ARG	NE-CZ-NH1	-5.55	117.52	120.30
1	B	505	GLN	C-N-CA	-5.54	107.85	121.70
1	B	745	ARG	NE-CZ-NH1	-5.54	117.53	120.30
1	A	214	ASN	CB-CA-C	-5.54	99.33	110.40
1	B	194	ASP	CB-CG-OD2	5.53	123.28	118.30
1	B	490	ASP	N-CA-CB	-5.53	100.65	110.60
1	A	406	LEU	CB-CG-CD1	-5.53	101.61	111.00
1	B	298	LEU	CB-CG-CD1	-5.51	101.63	111.00
1	A	1108	CYS	CB-CA-C	5.51	121.41	110.40
1	B	1187	LEU	CB-CG-CD1	-5.49	101.66	111.00
1	B	624	THR	OG1-CB-CG2	-5.49	97.37	110.00
1	A	251	MET	CB-CG-SD	-5.48	95.95	112.40
1	A	1399	ASP	CB-CG-OD2	5.48	123.23	118.30
1	B	441	ASP	CB-CG-OD2	5.48	123.23	118.30
1	A	1407	ASP	CB-CA-C	-5.47	99.46	110.40
1	B	838	VAL	CB-CA-C	-5.47	101.01	111.40
1	A	14	ARG	NE-CZ-NH2	-5.47	117.57	120.30
1	B	456	LEU	CA-CB-CG	-5.46	102.73	115.30
1	A	73	VAL	CB-CA-C	-5.46	101.02	111.40
1	A	934	GLN	CB-CA-C	-5.46	99.48	110.40
1	B	863	LEU	CB-CA-C	5.46	120.58	110.20
1	A	650	LEU	CB-CG-CD1	-5.46	101.73	111.00
1	A	992	PRO	N-CD-CG	-5.45	95.03	103.20
1	A	182	MET	CA-CB-CG	-5.45	104.04	113.30
1	B	918	THR	N-CA-CB	-5.44	99.96	110.30
1	B	701	ASP	CB-CG-OD2	5.44	123.20	118.30
1	A	125	ARG	NE-CZ-NH2	-5.43	117.59	120.30
1	B	463	LEU	CA-CB-CG	-5.43	102.82	115.30
1	A	665	THR	N-CA-CB	-5.41	100.02	110.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	311	ASP	CB-CG-OD1	5.41	123.17	118.30
1	A	290	THR	CB-CA-C	-5.41	97.00	111.60
1	A	156	GLU	CA-CB-CG	5.40	125.29	113.40
1	B	968	PRO	N-CD-CG	-5.40	95.10	103.20
1	A	738	HIS	N-CA-C	5.39	125.56	111.00
1	B	1183	LEU	CB-CG-CD1	-5.39	101.84	111.00
1	B	658	LEU	CB-CG-CD2	-5.39	101.84	111.00
1	A	1147	ARG	NE-CZ-NH2	5.37	122.98	120.30
1	A	131	ILE	CG1-CB-CG2	-5.36	99.61	111.40
1	A	482	ASP	CB-CG-OD2	-5.35	113.48	118.30
1	A	3	VAL	N-CA-C	-5.35	96.55	111.00
1	B	529	LEU	CB-CG-CD2	-5.35	101.91	111.00
1	A	609	GLU	C-N-CA	-5.35	108.33	121.70
1	B	1043	LEU	CA-CB-CG	-5.34	103.01	115.30
1	A	1321	THR	OG1-CB-CG2	-5.34	97.72	110.00
1	A	986	ASP	CB-CG-OD2	5.34	123.10	118.30
1	A	339	ARG	NE-CZ-NH2	-5.34	117.63	120.30
1	B	671	ALA	N-CA-C	-5.33	96.60	111.00
1	A	69	ASN	CB-CA-C	-5.33	99.75	110.40
1	A	159	VAL	CB-CA-C	-5.33	101.28	111.40
1	B	650	LEU	CA-CB-CG	5.33	127.55	115.30
1	A	186	GLU	CA-CB-CG	-5.32	101.71	113.40
1	B	871	LEU	CB-CG-CD1	5.32	120.04	111.00
1	B	90	ARG	N-CA-CB	5.31	120.16	110.60
1	B	948	LYS	CB-CG-CD	-5.31	97.80	111.60
1	A	263	LEU	CB-CG-CD1	-5.31	101.98	111.00
1	A	827	ASP	CB-CG-OD2	5.30	123.07	118.30
1	A	64	HIS	N-CA-C	-5.28	96.74	111.00
1	A	448	ARG	CB-CA-C	5.28	120.96	110.40
1	B	262	ASP	CB-CG-OD2	5.28	123.05	118.30
1	A	1259	LEU	CB-CG-CD2	5.27	119.96	111.00
1	B	1074	LYS	CB-CA-C	-5.26	99.87	110.40
1	A	940	GLU	O-C-N	-5.26	114.26	123.20
1	A	850	ARG	NE-CZ-NH1	5.25	122.92	120.30
1	A	1096	SER	N-CA-CB	5.25	118.37	110.50
1	B	1268	LEU	CB-CA-C	-5.24	100.24	110.20
1	B	1	CYS	CA-CB-SG	-5.24	104.58	114.00
1	B	943	GLN	CB-CA-C	-5.23	99.93	110.40
1	A	1065	VAL	N-CA-CB	-5.22	100.01	111.50
1	B	663	ALA	N-CA-CB	-5.22	102.79	110.10
1	B	1043	LEU	CB-CG-CD1	5.22	119.87	111.00
1	A	90	ARG	NE-CZ-NH1	-5.21	117.69	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	918	THR	N-CA-CB	-5.21	100.39	110.30
1	A	196	LEU	CB-CG-CD2	-5.21	102.14	111.00
1	A	296	MET	CA-CB-CG	-5.21	104.45	113.30
1	B	957	ARG	NE-CZ-NH1	-5.21	117.70	120.30
1	A	881	LYS	CD-CE-NZ	5.20	123.66	111.70
1	A	922	LEU	CB-CG-CD2	5.19	119.82	111.00
1	B	670	LEU	CB-CG-CD2	-5.19	102.18	111.00
1	A	284	MET	CG-SD-CE	-5.18	91.91	100.20
1	A	250	ARG	CB-CA-C	-5.18	100.05	110.40
1	A	877	ARG	NE-CZ-NH1	-5.17	117.72	120.30
1	A	1388	THR	N-CA-C	5.17	124.95	111.00
1	B	1070	ASP	CB-CG-OD2	5.17	122.95	118.30
1	A	400	LEU	CB-CG-CD1	-5.16	102.23	111.00
1	B	827	ASP	CB-CG-OD2	5.16	122.94	118.30
1	B	915	PHE	CA-CB-CG	-5.16	101.52	113.90
1	B	1269	ARG	CG-CD-NE	-5.16	100.97	111.80
1	A	658	LEU	CB-CG-CD1	5.15	119.76	111.00
1	B	520	MET	CB-CG-SD	-5.15	96.94	112.40
1	A	773	LEU	CA-CB-CG	-5.15	103.46	115.30
1	B	279	THR	N-CA-CB	-5.15	100.52	110.30
1	A	339	ARG	N-CA-CB	-5.13	101.36	110.60
1	A	1246	LEU	CA-CB-CG	-5.13	103.50	115.30
1	A	651	ASP	CB-CA-C	-5.12	100.15	110.40
1	A	1222	LEU	CA-CB-CG	-5.12	103.51	115.30
1	A	640	THR	CB-CA-C	-5.12	97.77	111.60
1	A	1118	CYS	CB-CA-C	5.12	120.64	110.40
1	B	1465	ARG	C-N-CA	-5.12	108.90	121.70
1	B	377	THR	N-CA-CB	-5.12	100.58	110.30
1	A	345	MET	CA-CB-CG	-5.11	104.61	113.30
1	A	738	HIS	CB-CA-C	-5.11	100.19	110.40
1	A	641	SER	N-CA-C	-5.10	97.23	111.00
1	B	3	VAL	N-CA-C	-5.09	97.25	111.00
1	A	375	ASP	CB-CG-OD1	5.08	122.87	118.30
1	A	957	ARG	NE-CZ-NH2	5.08	122.84	120.30
1	A	825	LEU	CB-CG-CD2	5.08	119.64	111.00
1	A	386	GLY	N-CA-C	-5.07	100.42	113.10
1	B	861	GLY	N-CA-C	-5.07	100.43	113.10
1	A	485	ILE	CG1-CB-CG2	-5.07	100.25	111.40
1	A	588	ARG	NE-CZ-NH1	-5.07	117.77	120.30
1	A	785	GLY	N-CA-C	5.06	125.76	113.10
1	A	661	VAL	N-CA-C	-5.06	97.34	111.00
1	A	384	ARG	NE-CZ-NH2	-5.05	117.77	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	1398	ASP	CB-CG-OD2	5.05	122.84	118.30
1	A	1307	VAL	CB-CA-C	-5.04	101.82	111.40
1	A	395	LEU	CB-CG-CD1	-5.03	102.45	111.00
1	B	672	GLN	N-CA-C	-5.03	97.42	111.00
1	A	391	ILE	N-CA-C	-5.02	97.45	111.00
1	A	1110	SER	N-CA-CB	-5.02	102.97	110.50
1	A	37	ASP	CB-CG-OD2	5.02	122.81	118.30
1	A	529	LEU	CA-CB-CG	-5.02	103.76	115.30
1	B	914	ARG	NE-CZ-NH1	-5.02	117.79	120.30
1	A	487	VAL	CB-CA-C	-5.01	101.88	111.40
1	B	522	LEU	CB-CG-CD1	-5.00	102.49	111.00
1	B	1057	THR	CA-CB-CG2	-5.00	105.39	112.40

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	A	915	PHE	CA

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1002	SER	Mainchain
1	A	325	GLU	Mainchain
1	B	1168	LEU	Mainchain
1	B	725	PHE	Mainchain

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	11180	0	11210	1498	0
1	B	11180	0	11212	1318	0
2	A	11	0	10	2	0
2	B	11	0	10	1	0
3	A	31	0	19	4	0
3	B	31	0	19	6	0
4	A	10	0	4	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	B	10	0	4	2	0
5	A	7	0	0	2	0
5	B	7	0	0	3	0
All	All	22478	0	22488	2814	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 63.

All (2814) 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:B:182:MET:CE	1:B:217:PRO:HB2	1.30	1.59
1:A:182:MET:HE3	1:A:217:PRO:CB	1.34	1.57
1:B:1449:ARG:HH11	1:B:1449:ARG:CB	0.97	1.56
1:B:182:MET:HE3	1:B:217:PRO:CB	1.09	1.54
1:A:182:MET:CE	1:A:217:PRO:HB2	1.45	1.47
1:B:1289:MET:CE	1:B:1289:MET:SD	2.02	1.47
1:A:253:HIS:ND1	1:A:254:PRO:HD2	1.17	1.46
1:A:1449:ARG:HB2	1:A:1449:ARG:NH1	1.18	1.45
1:A:522:LEU:HD21	1:A:705:LEU:CD2	1.47	1.44
1:A:825:LEU:CD1	1:A:1186:ARG:HH12	1.32	1.43
1:A:1449:ARG:HH11	1:A:1449:ARG:CB	1.32	1.43
1:B:182:MET:CE	1:B:217:PRO:CB	1.89	1.39
1:A:825:LEU:HD13	1:A:1186:ARG:NH1	1.35	1.36
1:A:505:GLN:NE2	1:A:1001:VAL:H	1.23	1.34
1:B:430:VAL:HG13	1:B:554:GLU:CB	1.59	1.33
1:B:253:HIS:CG	1:B:254:PRO:HD2	1.62	1.32
1:A:290:THR:CG2	1:A:292:PRO:HD2	1.57	1.31
1:B:729:GLY:O	1:B:748:GLY:HA3	1.31	1.29
1:A:253:HIS:CG	1:A:254:PRO:HD2	1.67	1.28
1:B:825:LEU:CD1	1:B:1186:ARG:HH12	1.46	1.28
1:A:253:HIS:ND1	1:A:254:PRO:CD	1.94	1.27
1:B:825:LEU:HD13	1:B:1186:ARG:NH1	1.46	1.27
1:A:430:VAL:HG13	1:A:554:GLU:CB	1.64	1.25
1:B:1449:ARG:HB2	1:B:1449:ARG:NH1	0.93	1.25
1:A:875:MET:CE	1:A:1139:PHE:CE2	2.22	1.23
1:B:452:GLN:HE21	1:B:764:THR:CG2	1.50	1.23
1:B:1047:MET:HG2	1:B:1186:ARG:CZ	1.69	1.22
1:B:746:ILE:CG2	1:B:1182:ASP:H	1.54	1.21
1:A:875:MET:HE1	1:A:1139:PHE:CE2	1.74	1.21
1:B:182:MET:HE3	1:B:217:PRO:CA	1.69	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:59:VAL:HG21	1:A:105:TYR:CD2	1.77	1.20
1:A:375:ASP:OD2	1:A:377:THR:HB	1.35	1.18
1:B:182:MET:HE2	1:B:217:PRO:HB2	1.23	1.18
1:B:1047:MET:SD	1:B:1186:ARG:NH2	2.16	1.18
1:A:515:ARG:HD2	1:A:1367:TYR:CE1	1.80	1.17
1:A:838:VAL:HG13	1:A:839:PRO:HD2	1.23	1.17
1:B:253:HIS:ND1	1:B:254:PRO:HD2	1.57	1.16
1:A:778:PHE:CE2	1:A:1039:LYS:HD2	1.80	1.16
1:B:710:LYS:HG2	1:B:939:GLY:HA3	1.25	1.16
1:A:139:VAL:HG12	1:A:140:SER:H	1.01	1.15
1:A:182:MET:HE3	1:A:217:PRO:CA	1.77	1.15
1:B:139:VAL:HG12	1:B:140:SER:N	1.60	1.15
1:A:746:ILE:CG2	1:A:1182:ASP:H	1.58	1.15
1:A:1391:MET:HE2	1:A:1458:VAL:HG22	1.25	1.15
1:B:1111:ASN:OD1	1:B:1119:VAL:HG23	1.45	1.14
1:A:1111:ASN:OD1	1:A:1119:VAL:HG23	1.44	1.14
1:B:999:LYS:CG	1:B:1022:LEU:HD23	1.78	1.14
1:B:1401:LEU:HD12	1:B:1401:LEU:O	1.45	1.13
1:A:526:LEU:HD12	1:A:526:LEU:N	1.63	1.13
1:A:381:GLU:OE1	1:A:402:ARG:NH1	1.81	1.13
1:B:1115:VAL:O	1:B:1115:VAL:HG12	1.49	1.13
1:A:825:LEU:CD1	1:A:1186:ARG:NH1	1.98	1.12
1:A:1212:ASP:O	1:A:1216:VAL:HG23	1.47	1.12
1:A:515:ARG:CD	1:A:1367:TYR:CE1	2.30	1.12
1:B:452:GLN:HE21	1:B:764:THR:HG21	0.98	1.12
1:A:253:HIS:CE1	1:A:254:PRO:HD2	1.85	1.12
1:B:30:HIS:CD2	1:B:31:ARG:HG3	1.85	1.10
1:A:387:PRO:HD3	1:A:1344:GLU:OE2	1.51	1.10
1:B:290:THR:HG23	1:B:292:PRO:HD2	1.27	1.09
1:A:1221:PRO:HB2	1:A:1229:MET:HE2	1.14	1.09
1:B:405:GLU:OE1	1:B:405:GLU:N	1.86	1.09
1:A:182:MET:CE	1:A:217:PRO:CB	2.13	1.09
1:A:715:VAL:O	1:A:715:VAL:HG12	1.44	1.09
1:B:999:LYS:HG3	1:B:1022:LEU:HD23	1.19	1.09
1:B:182:MET:HE3	1:B:217:PRO:HB3	1.27	1.09
1:B:430:VAL:HG13	1:B:554:GLU:HB3	1.31	1.09
1:B:430:VAL:CG1	1:B:554:GLU:HB2	1.82	1.09
1:A:59:VAL:CG2	1:A:105:TYR:CD2	2.34	1.08
1:B:746:ILE:HG23	1:B:1182:ASP:HB3	1.32	1.08
1:A:452:GLN:HE21	1:A:764:THR:CG2	1.66	1.08
1:A:522:LEU:HD21	1:A:705:LEU:HD21	1.22	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1391:MET:CE	1:A:1458:VAL:HG22	1.83	1.08
1:B:238:LYS:O	1:B:242:ASN:ND2	1.86	1.08
1:B:728:ILE:HD12	1:B:1047:MET:CE	1.82	1.08
1:A:522:LEU:CD2	1:A:705:LEU:HD21	1.83	1.08
1:B:746:ILE:HG21	1:B:1182:ASP:N	1.69	1.08
1:A:826:ARG:HH11	1:A:826:ARG:HG2	1.18	1.08
1:A:1376:LEU:N	1:A:1376:LEU:HD23	1.62	1.08
1:B:1349:ARG:HG2	1:B:1349:ARG:HH11	0.97	1.08
1:A:452:GLN:HE21	1:A:764:THR:HG23	1.13	1.07
1:A:960:THR:HG22	1:A:963:VAL:HG23	1.32	1.07
1:B:515:ARG:HD2	1:B:1367:TYR:CE2	1.86	1.07
1:B:430:VAL:CG1	1:B:554:GLU:CB	2.32	1.07
1:A:236:THR:HG21	1:A:328:ASP:H	1.00	1.07
1:A:746:ILE:HG21	1:A:1182:ASP:H	1.12	1.07
1:B:236:THR:HG21	1:B:328:ASP:H	1.17	1.07
1:A:430:VAL:HG13	1:A:554:GLU:HB3	1.17	1.07
1:A:513:SER:HB3	1:A:520:MET:HE2	1.31	1.07
1:A:345:MET:HG3	1:A:346:ASP:H	1.18	1.06
1:B:227:MET:HE3	1:B:282:GLU:HA	1.37	1.06
1:B:1047:MET:HE2	1:B:1186:ARG:HH22	1.16	1.06
1:A:522:LEU:HD21	1:A:705:LEU:HD23	1.33	1.06
1:A:236:THR:CG2	1:A:328:ASP:H	1.69	1.06
1:B:295:LYS:HD2	1:B:390:MET:HE3	1.36	1.06
1:B:417:ASP:O	1:B:419:TRP:N	1.89	1.06
1:A:290:THR:HG22	1:A:292:PRO:HD2	1.29	1.05
1:B:139:VAL:HG11	1:B:143:GLN:HB3	1.36	1.05
1:B:515:ARG:CD	1:B:1367:TYR:CE2	2.39	1.05
1:B:505:GLN:NE2	1:B:1000:LEU:HB3	1.72	1.05
1:B:513:SER:HB3	1:B:520:MET:HE1	1.36	1.05
1:A:235:ASN:HD22	1:A:236:THR:N	1.52	1.05
1:A:974:ILE:HD11	1:A:983:LEU:HD12	1.34	1.05
1:A:353:MET:HE2	1:A:366:GLY:O	1.57	1.04
1:B:113:ASN:ND2	1:B:115:ASP:H	1.54	1.04
1:A:1115:VAL:O	1:A:1115:VAL:HG12	1.55	1.04
1:B:1047:MET:CE	1:B:1186:ARG:HH22	1.70	1.04
1:A:182:MET:HE2	1:A:217:PRO:HB2	1.40	1.04
1:B:299:VAL:HG12	1:B:299:VAL:O	1.53	1.04
1:B:912:SER:HB2	1:B:968:PRO:HD2	1.39	1.04
1:B:999:LYS:HG3	1:B:1022:LEU:CD2	1.87	1.04
1:B:1062:ARG:HG3	1:B:1062:ARG:O	1.58	1.04
1:B:1317:THR:HG22	1:B:1318:ASN:N	1.71	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:295:LYS:NZ	1:A:299:VAL:O	1.90	1.03
1:B:746:ILE:HG21	1:B:1182:ASP:H	0.87	1.03
1:B:1221:PRO:HD2	1:B:1229:MET:HE1	1.39	1.03
1:B:236:THR:CG2	1:B:328:ASP:H	1.70	1.03
1:A:113:ASN:ND2	1:A:115:ASP:H	1.56	1.03
1:A:238:LYS:O	1:A:242:ASN:ND2	1.91	1.03
1:A:505:GLN:NE2	1:A:1001:VAL:N	2.06	1.03
1:B:825:LEU:HD13	1:B:1186:ARG:HH12	1.04	1.03
1:A:1210:THR:HG22	1:A:1211:LEU:H	0.91	1.02
1:A:405:GLU:OE1	1:A:405:GLU:N	1.92	1.02
1:A:522:LEU:CD2	1:A:705:LEU:CD2	2.37	1.02
1:B:1076:GLY:HA3	1:B:1145:GLU:HG2	1.36	1.02
1:A:102:TYR:CE2	1:A:144:PHE:CE1	2.48	1.02
1:A:113:ASN:C	1:A:113:ASN:HD22	1.59	1.02
1:B:1131:THR:HG23	1:B:1133:GLU:OE1	1.57	1.02
1:A:1184:ASN:HB3	1:A:1185:PRO:HD3	1.39	1.01
1:B:464:ILE:HD11	1:B:779:TYR:CE2	1.93	1.01
1:A:1210:THR:HG22	1:A:1211:LEU:N	1.74	1.01
1:B:1401:LEU:HD12	1:B:1401:LEU:C	1.74	1.01
1:A:1008:THR:HG22	1:A:1009:ILE:N	1.74	1.01
1:A:1221:PRO:CB	1:A:1229:MET:HE2	1.90	1.01
1:A:1317:THR:CG2	1:A:1358:GLU:OE1	2.08	1.00
1:A:145:GLU:OE1	1:A:173:SER:HB2	1.57	1.00
1:B:100:PHE:O	1:B:137:LYS:HE3	1.60	1.00
1:A:672:GLN:HG3	1:A:693:MET:CE	1.91	1.00
1:A:875:MET:CE	1:A:1139:PHE:HE2	1.73	1.00
1:A:290:THR:HG22	1:A:292:PRO:CD	1.90	1.00
1:B:290:THR:CG2	1:B:292:PRO:HD2	1.92	1.00
1:B:1449:ARG:HH11	1:B:1449:ARG:HB3	1.26	1.00
1:A:430:VAL:CG1	1:A:554:GLU:HB3	1.92	0.99
1:B:1349:ARG:HG2	1:B:1349:ARG:NH1	1.71	0.99
1:A:1393:TYR:O	1:A:1394:VAL:HG23	1.62	0.99
1:B:963:VAL:HG12	1:B:964:MET:N	1.76	0.99
1:A:295:LYS:NZ	1:A:299:VAL:HG12	1.78	0.99
1:A:310:PRO:HG3	1:A:404:ARG:NH2	1.75	0.99
1:A:958:HIS:O	1:A:1369:THR:HG22	1.62	0.99
1:A:1210:THR:CG2	1:A:1211:LEU:H	1.76	0.99
1:A:248:GLU:HA	1:A:251:MET:HG2	1.41	0.99
1:B:787:ARG:HH12	1:B:821:PRO:HG2	1.25	0.99
1:B:389:GLU:HB3	1:B:403:ASP:OD2	1.61	0.98
1:B:728:ILE:HD12	1:B:1047:MET:HE3	1.45	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:381:GLU:OE1	1:B:402:ARG:NH1	1.96	0.98
1:B:501:GLN:HE21	1:B:653:HIS:CD2	1.81	0.98
1:B:913:GLY:HA2	1:B:1349:ARG:HD3	1.44	0.98
1:A:875:MET:HE2	1:A:1139:PHE:CE2	1.95	0.98
1:A:430:VAL:CG1	1:A:554:GLU:CB	2.42	0.98
1:A:139:VAL:HG12	1:A:140:SER:N	1.76	0.98
1:B:1184:ASN:HB3	1:B:1185:PRO:HD3	1.42	0.98
1:A:1387:MET:HG2	1:A:1387:MET:O	1.64	0.97
1:B:603:HIS:HA	1:B:640:THR:HG22	1.44	0.97
1:B:1210:THR:HG22	1:B:1211:LEU:H	1.28	0.97
1:B:139:VAL:HG12	1:B:140:SER:H	1.19	0.96
1:A:778:PHE:CZ	1:A:1039:LYS:HD2	1.99	0.96
1:A:505:GLN:HE22	1:A:1001:VAL:N	1.62	0.96
1:A:1449:ARG:O	1:A:1452:THR:HB	1.66	0.96
1:B:1039:LYS:O	1:B:1040:PHE:CD1	2.19	0.96
1:B:1317:THR:CG2	1:B:1358:GLU:OE1	2.13	0.96
1:A:959:SER:HA	1:A:1369:THR:CG2	1.94	0.96
1:B:317:ILE:O	1:B:321:ASN:ND2	1.99	0.96
1:B:652:THR:HG22	1:B:703:GLY:HA3	1.47	0.96
1:A:266:VAL:HG12	1:A:279:THR:CG2	1.96	0.95
1:A:1447:TRP:CE2	1:A:1451:VAL:HG22	1.99	0.95
1:A:447:LEU:HD21	1:A:674:ALA:HA	1.46	0.95
1:B:565:THR:HG22	1:B:602:THR:HB	1.44	0.95
1:B:430:VAL:HG13	1:B:554:GLU:HB2	1.36	0.95
1:B:603:HIS:CA	1:B:640:THR:HG22	1.95	0.95
1:B:1349:ARG:HH11	1:B:1349:ARG:CG	1.72	0.95
1:B:746:ILE:O	1:B:747:SER:O	1.85	0.95
1:B:652:THR:CG2	1:B:703:GLY:HA3	1.97	0.95
1:B:387:PRO:HD3	1:B:1344:GLU:OE2	1.67	0.95
1:B:513:SER:HB3	1:B:520:MET:CE	1.95	0.95
1:B:734:LEU:CD1	1:B:738:HIS:HD2	1.80	0.95
1:A:345:MET:HG3	1:A:346:ASP:N	1.72	0.95
1:B:30:HIS:ND1	1:B:1238:THR:HA	1.82	0.95
1:A:734:LEU:CD1	1:A:738:HIS:HD2	1.79	0.94
1:B:452:GLN:NE2	1:B:764:THR:HG21	1.82	0.94
1:A:52:GLN:HE22	1:A:71:LEU:H	1.16	0.94
1:A:291:ALA:HB3	1:A:292:PRO:HD3	1.46	0.94
1:B:950:THR:HG22	1:B:951:GLU:N	1.78	0.94
1:B:959:SER:HA	1:B:1369:THR:CG2	1.96	0.94
1:B:310:PRO:HG3	1:B:404:ARG:NH2	1.82	0.94
1:B:242:ASN:H	1:B:242:ASN:HD22	1.10	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:426:LEU:HD22	1:A:543:LEU:HB3	1.47	0.94
1:A:999:LYS:HG3	1:A:1022:LEU:HD23	1.49	0.94
1:B:531:ASN:HB3	1:B:534:ASP:HB2	1.49	0.93
1:B:253:HIS:H	1:B:260:MET:HE1	1.31	0.93
1:B:447:LEU:HD12	1:B:451:GLN:HG3	1.50	0.93
1:B:1008:THR:HG22	1:B:1009:ILE:N	1.83	0.93
1:A:214:ASN:O	1:A:1015:LYS:HE2	1.67	0.93
1:B:145:GLU:OE1	1:B:173:SER:HB2	1.68	0.93
1:B:1170:GLN:O	1:B:1170:GLN:HG2	1.68	0.93
1:A:958:HIS:O	1:A:1369:THR:CG2	2.17	0.93
1:A:1366:GLU:HG2	1:A:1367:TYR:CD2	2.04	0.93
1:B:253:HIS:CG	1:B:254:PRO:CD	2.51	0.93
1:B:920:GLU:HB3	1:B:1256:MET:HE2	1.50	0.92
1:A:510:PRO:HD2	1:A:970:PRO:HB3	1.52	0.92
1:A:672:GLN:HG3	1:A:693:MET:HE2	1.51	0.92
1:A:838:VAL:CG1	1:A:839:PRO:HD2	2.00	0.92
1:B:950:THR:HG22	1:B:952:MET:H	1.32	0.92
1:B:1449:ARG:HB2	1:B:1449:ARG:CZ	1.98	0.92
1:A:1076:GLY:HA3	1:A:1145:GLU:HG2	1.51	0.92
1:B:464:ILE:HD11	1:B:779:TYR:CZ	2.05	0.92
3:B:2474:FMN:H1'2	3:B:2474:FMN:O4'	1.69	0.92
1:A:464:ILE:HD11	1:A:779:TYR:CE1	2.05	0.91
1:B:452:GLN:NE2	1:B:764:THR:CG2	2.33	0.91
1:A:182:MET:HE3	1:A:217:PRO:C	1.90	0.91
1:A:404:ARG:HB3	1:A:405:GLU:OE1	1.69	0.91
1:B:464:ILE:CD1	1:B:779:TYR:CE2	2.54	0.91
1:B:313:HIS:O	1:B:317:ILE:HG13	1.68	0.91
1:A:218:THR:HG23	1:A:220:PRO:HD2	1.52	0.91
1:A:950:THR:HG22	1:A:951:GLU:N	1.83	0.91
1:B:1366:GLU:HG2	1:B:1367:TYR:CD1	2.05	0.91
1:B:706:LYS:NZ	1:B:940:GLU:OE1	2.01	0.91
1:B:950:THR:CG2	1:B:951:GLU:N	2.32	0.91
1:A:59:VAL:CG2	1:A:105:TYR:HD2	1.82	0.91
1:A:299:VAL:O	1:A:299:VAL:HG12	1.69	0.90
1:B:254:PRO:HG2	1:B:255:ALA:H	1.36	0.90
1:B:1317:THR:HG21	1:B:1358:GLU:OE1	1.69	0.90
1:A:826:ARG:HG2	1:A:826:ARG:NH1	1.83	0.90
1:B:825:LEU:CD1	1:B:1186:ARG:NH1	2.17	0.90
1:A:153:ARG:NH2	1:A:263:LEU:O	2.04	0.90
1:A:266:VAL:O	1:A:279:THR:HG21	1.71	0.90
1:B:704:LEU:O	1:B:706:LYS:N	2.04	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:266:VAL:HG12	1:A:279:THR:HG23	1.51	0.90
1:A:505:GLN:HE22	1:A:1001:VAL:H	0.93	0.90
1:B:155:ILE:O	1:B:159:VAL:HG23	1.71	0.90
1:B:838:VAL:HG13	1:B:839:PRO:HD2	1.54	0.90
1:B:826:ARG:HG2	1:B:826:ARG:HH11	1.35	0.90
1:A:584:ASP:OD1	1:A:584:ASP:N	2.04	0.90
1:B:213:THR:HB	1:B:1008:THR:HG23	1.52	0.90
1:B:588:ARG:O	1:B:592:GLU:HG3	1.72	0.89
1:A:102:TYR:CE2	1:A:144:PHE:HE1	1.88	0.89
1:A:582:LEU:H	1:A:755:GLN:HE22	1.17	0.89
1:B:526:LEU:N	1:B:526:LEU:HD12	1.88	0.89
1:A:403:ASP:OD1	1:A:407:LYS:NZ	2.05	0.89
1:B:652:THR:HG21	1:B:703:GLY:CA	2.03	0.89
1:A:290:THR:CG2	1:A:292:PRO:CD	2.46	0.89
1:A:710:LYS:HG2	1:A:939:GLY:HA3	1.55	0.89
1:B:950:THR:HG22	1:B:952:MET:N	1.88	0.89
1:A:387:PRO:CD	1:A:1344:GLU:OE2	2.20	0.89
1:A:950:THR:CG2	1:A:951:GLU:N	2.35	0.89
1:A:52:GLN:NE2	1:A:71:LEU:H	1.70	0.88
1:B:570:ASP:OD1	1:B:572:THR:HB	1.73	0.88
1:B:768:GLU:HG2	1:B:769:GLU:H	1.34	0.88
1:A:227:MET:HE3	1:A:282:GLU:HA	1.55	0.88
1:B:139:VAL:HG11	1:B:143:GLN:CB	2.03	0.88
1:B:437:GLY:HA2	1:B:690:GLU:OE2	1.73	0.88
1:B:731:SER:HA	1:B:748:GLY:H	1.37	0.88
1:A:295:LYS:HZ3	1:A:299:VAL:HG12	1.38	0.88
1:A:862:ALA:O	1:A:1118:CYS:HB2	1.71	0.88
1:B:734:LEU:CD1	1:B:738:HIS:CD2	2.57	0.88
1:A:511:ILE:HG22	1:A:512:ASP:N	1.86	0.88
1:A:960:THR:HG22	1:A:963:VAL:CG2	2.03	0.88
1:B:218:THR:HG23	1:B:220:PRO:HD2	1.55	0.88
1:B:218:THR:HG21	1:B:221:LEU:HG	1.56	0.88
1:B:501:GLN:HE21	1:B:653:HIS:HD2	0.90	0.88
1:B:515:ARG:HH22	1:B:966:ILE:HB	1.37	0.88
1:A:236:THR:HG21	1:A:328:ASP:N	1.86	0.88
1:A:353:MET:CE	1:A:366:GLY:O	2.22	0.88
1:A:392:ALA:O	1:A:400:LEU:HD12	1.74	0.88
1:A:838:VAL:HG13	1:A:839:PRO:CD	2.03	0.87
1:A:1401:LEU:O	1:A:1401:LEU:HD12	1.74	0.87
1:A:582:LEU:H	1:A:755:GLN:NE2	1.71	0.87
1:B:253:HIS:ND1	1:B:254:PRO:CD	2.37	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:918:THR:HG22	1:B:921:TYR:H	1.38	0.87
1:A:146:LEU:HD12	1:A:146:LEU:O	1.75	0.87
1:A:372:VAL:HG12	1:A:372:VAL:O	1.74	0.87
1:B:139:VAL:CG1	1:B:140:SER:H	1.87	0.87
1:B:426:LEU:CD2	1:B:543:LEU:HB3	2.04	0.87
1:B:430:VAL:CG1	1:B:554:GLU:HB3	2.02	0.87
1:B:139:VAL:CG1	1:B:140:SER:N	2.35	0.87
1:B:501:GLN:NE2	1:B:653:HIS:HD2	1.73	0.87
1:A:52:GLN:HE22	1:A:71:LEU:N	1.73	0.87
1:A:724:ASN:ND2	1:A:724:ASN:H	1.73	0.87
1:A:825:LEU:HD11	1:A:1186:ARG:HH12	1.41	0.86
1:A:513:SER:CB	1:A:520:MET:HE2	2.04	0.86
1:A:825:LEU:HD13	1:A:1186:ARG:HH11	1.38	0.86
1:B:30:HIS:HD2	1:B:31:ARG:HG3	1.38	0.86
1:B:377:THR:HG22	1:B:378:GLN:HG3	1.56	0.86
1:A:290:THR:HG23	1:A:292:PRO:HD2	1.56	0.86
1:A:479:MET:HG3	1:A:1104:MET:CE	2.05	0.86
1:B:505:GLN:HE22	1:B:1000:LEU:HB3	1.36	0.86
1:B:734:LEU:HD11	1:B:738:HIS:CD2	2.10	0.86
1:A:430:VAL:HG13	1:A:554:GLU:HB2	1.56	0.86
1:B:568:GLU:C	1:B:569:ILE:HD13	1.97	0.86
1:A:6:ILE:HG12	1:A:364:ILE:HG23	1.57	0.86
1:B:1047:MET:HG2	1:B:1186:ARG:NH2	1.91	0.86
1:A:113:ASN:ND2	1:A:113:ASN:C	2.27	0.85
1:A:734:LEU:CD1	1:A:738:HIS:CD2	2.58	0.85
1:B:652:THR:HG21	1:B:703:GLY:HA2	1.59	0.85
1:A:482:ASP:OD1	1:A:788:HIS:HD2	1.59	0.85
1:A:537:GLU:HG3	1:A:538:THR:N	1.92	0.85
1:A:843:VAL:HG12	1:A:844:GLU:N	1.89	0.85
1:A:1338:ALA:O	1:A:1340:GLY:N	2.08	0.85
1:B:659:ILE:HA	1:B:663:ALA:HB3	1.54	0.85
1:B:1047:MET:CG	1:B:1186:ARG:NH2	2.38	0.85
1:B:1128:PHE:CZ	1:B:1130:GLY:HA3	2.11	0.85
1:A:724:ASN:H	1:A:724:ASN:HD22	1.25	0.85
1:B:746:ILE:HG23	1:B:1182:ASP:CB	2.05	0.85
1:A:1311:THR:HG23	1:A:1312:SER:N	1.89	0.85
1:A:704:LEU:O	1:A:706:LYS:N	2.10	0.85
1:A:513:SER:HB3	1:A:520:MET:CE	2.06	0.85
1:A:838:VAL:HG12	1:A:839:PRO:N	1.92	0.85
1:B:52:GLN:HE22	1:B:71:LEU:HB2	1.42	0.85
1:B:253:HIS:CE1	1:B:254:PRO:HD2	2.11	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:417:ASP:O	1:B:418:LYS:C	2.12	0.85
1:A:746:ILE:HG23	1:A:1182:ASP:HB3	1.58	0.84
1:A:1425:LYS:HD3	1:A:1447:TRP:CE2	2.12	0.84
1:A:588:ARG:O	1:A:592:GLU:HG3	1.78	0.84
1:B:52:GLN:HE22	1:B:71:LEU:H	1.24	0.84
1:A:482:ASP:OD1	1:A:788:HIS:CD2	2.29	0.84
1:A:604:VAL:HG23	1:A:640:THR:HG21	1.58	0.84
1:A:937:LYS:HE3	1:A:1033:SER:HB2	1.59	0.84
1:B:843:VAL:HG12	1:B:844:GLU:N	1.92	0.84
1:A:409:HIS:O	1:A:412:THR:HB	1.76	0.84
1:A:659:ILE:HG21	1:A:716:ILE:HD11	1.59	0.84
1:A:342:VAL:HG11	1:A:390:MET:HE2	1.59	0.84
1:A:1115:VAL:O	1:A:1115:VAL:CG1	2.24	0.84
1:B:777:GLY:O	1:B:788:HIS:HE1	1.60	0.84
1:A:142:GLU:H	1:A:142:GLU:CD	1.80	0.83
1:A:364:ILE:HD12	1:A:374:ILE:HD11	1.60	0.83
1:A:729:GLY:O	1:A:748:GLY:HA3	1.78	0.83
1:A:731:SER:HA	1:A:748:GLY:H	1.42	0.83
1:B:734:LEU:HD12	1:B:738:HIS:HD2	1.43	0.83
1:B:787:ARG:NH1	1:B:821:PRO:HG2	1.94	0.83
1:B:1062:ARG:O	1:B:1062:ARG:CG	2.26	0.83
1:A:235:ASN:HD22	1:A:235:ASN:C	1.80	0.83
1:A:526:LEU:N	1:A:526:LEU:CD1	2.40	0.83
1:A:838:VAL:CG1	1:A:839:PRO:CD	2.56	0.83
1:A:1062:ARG:NH2	1:A:1088:GLU:OE2	2.12	0.83
1:A:430:VAL:CG1	1:A:554:GLU:HB2	2.08	0.83
1:A:515:ARG:HH22	1:A:966:ILE:HB	1.42	0.83
1:A:1388:THR:CG2	1:A:1388:THR:O	2.27	0.83
1:A:434:SER:OG	1:A:438:GLU:OE2	1.97	0.83
1:A:950:THR:HG22	1:A:952:MET:H	1.42	0.83
1:B:113:ASN:C	1:B:113:ASN:HD22	1.78	0.83
1:A:734:LEU:HD11	1:A:738:HIS:CD2	2.12	0.83
1:A:1391:MET:CE	1:A:1458:VAL:CG2	2.56	0.83
1:A:982:GLN:HE22	1:A:1240:ARG:HD2	1.43	0.83
1:B:1115:VAL:O	1:B:1115:VAL:CG1	2.22	0.82
1:A:266:VAL:O	1:A:279:THR:CG2	2.28	0.82
1:A:670:LEU:O	1:A:670:LEU:HD22	1.78	0.82
1:A:426:LEU:CD2	1:A:543:LEU:HB3	2.09	0.82
1:A:459:GLU:O	1:A:463:LEU:HB2	1.78	0.82
1:A:912:SER:HB2	1:A:968:PRO:HD2	1.62	0.82
1:B:1349:ARG:NH1	1:B:1349:ARG:CG	2.34	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:59:VAL:HG22	1:A:105:TYR:HD2	1.44	0.82
1:A:1447:TRP:CE2	1:A:1451:VAL:CG2	2.61	0.82
1:B:1370:GLY:N	1:B:1389:GLY:O	2.12	0.82
1:A:464:ILE:HD11	1:A:779:TYR:CZ	2.13	0.82
1:A:526:LEU:HD12	1:A:526:LEU:H	1.45	0.82
1:A:397:SER:HB2	1:A:399:LYS:HG3	1.61	0.82
1:A:746:ILE:HG21	1:A:1182:ASP:N	1.94	0.82
1:B:253:HIS:CD2	1:B:254:PRO:HD2	2.14	0.82
1:B:959:SER:HA	1:B:1369:THR:HG21	1.61	0.82
1:B:1471:HIS:O	1:B:1472:LEU:HB2	1.80	0.82
1:B:430:VAL:HG11	1:B:554:GLU:HB2	1.61	0.82
1:B:299:VAL:O	1:B:299:VAL:CG1	2.28	0.82
1:B:746:ILE:C	1:B:747:SER:O	2.16	0.82
1:B:1039:LYS:O	1:B:1040:PHE:HD1	1.63	0.82
1:B:1184:ASN:HB3	1:B:1185:PRO:CD	2.10	0.81
1:A:405:GLU:H	1:A:405:GLU:CD	1.81	0.81
1:A:452:GLN:NE2	1:A:764:THR:CG2	2.42	0.81
1:A:950:THR:HG22	1:A:952:MET:N	1.95	0.81
1:B:240:ASN:HD21	1:B:327:TRP:HA	1.45	0.81
1:B:815:GLU:OE1	1:B:815:GLU:HA	1.80	0.81
1:A:932:VAL:O	1:A:933:ALA:HB2	1.78	0.81
1:B:866:GLU:OE2	1:B:1125:ARG:NH2	2.14	0.81
1:A:253:HIS:CG	1:A:254:PRO:CD	2.52	0.81
1:B:242:ASN:ND2	1:B:242:ASN:H	1.79	0.81
1:A:531:ASN:OD1	1:A:533:LEU:HB2	1.81	0.81
1:A:1376:LEU:HB3	1:A:1439:PHE:HE2	1.45	0.81
1:B:973:ASP:OD2	1:B:1298:LYS:HE3	1.79	0.81
1:A:515:ARG:HD2	1:A:1367:TYR:HE1	1.46	0.81
1:A:447:LEU:HD12	1:A:451:GLN:HG3	1.62	0.80
1:B:426:LEU:HD11	1:B:558:MET:HG3	1.62	0.80
1:B:824:GLN:O	1:B:827:ASP:HB2	1.81	0.80
1:A:290:THR:HG22	1:A:291:ALA:N	1.95	0.80
1:A:454:PHE:CG	1:A:648:GLU:HB2	2.17	0.80
1:A:746:ILE:CG2	1:A:1182:ASP:N	2.43	0.80
1:B:302:ALA:HA	1:B:347:ARG:HH12	1.46	0.80
1:B:310:PRO:HG3	1:B:404:ARG:HH22	1.45	0.80
1:A:734:LEU:HD11	1:A:738:HIS:HD2	1.46	0.80
1:A:1184:ASN:HB3	1:A:1185:PRO:CD	2.11	0.80
1:A:1290:GLY:O	1:A:1291:ASP:HB3	1.82	0.80
1:B:963:VAL:CG1	1:B:964:MET:N	2.45	0.80
1:B:582:LEU:H	1:B:755:GLN:NE2	1.80	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:710:LYS:CG	1:B:939:GLY:HA3	2.10	0.80
1:A:787:ARG:HH12	1:A:821:PRO:HB2	1.47	0.79
1:B:652:THR:CG2	1:B:703:GLY:CA	2.59	0.79
1:A:1322:ILE:HG23	1:A:1323:ILE:HG23	1.64	0.79
1:B:1047:MET:HG2	1:B:1186:ARG:NH1	1.97	0.79
1:A:974:ILE:HD11	1:A:983:LEU:CD1	2.13	0.79
1:A:1401:LEU:HD12	1:A:1401:LEU:C	2.03	0.79
1:B:778:PHE:CZ	1:B:1039:LYS:HD2	2.18	0.79
1:B:1131:THR:HB	1:B:1134:LYS:HG3	1.64	0.79
1:B:1388:THR:CG2	1:B:1388:THR:O	2.29	0.79
1:A:47:HIS:CE1	1:A:176:SER:HB3	2.18	0.79
1:A:317:ILE:HG22	1:A:321:ASN:HD21	1.47	0.79
1:B:235:ASN:HD22	1:B:236:THR:N	1.80	0.79
1:B:447:LEU:HD21	1:B:674:ALA:HA	1.64	0.79
1:B:555:PHE:CD1	1:B:555:PHE:C	2.55	0.79
1:A:501:GLN:HE21	1:A:653:HIS:HD2	1.30	0.79
1:B:466:HIS:CE1	1:B:684:PHE:CE1	2.70	0.79
1:B:974:ILE:HD11	1:B:983:LEU:HD12	1.62	0.79
1:A:704:LEU:O	1:A:705:LEU:C	2.20	0.79
1:A:973:ASP:OD2	1:A:1298:LYS:HE3	1.81	0.79
1:A:90:ARG:NH1	1:A:129:GLU:OE1	2.16	0.79
1:B:1047:MET:CG	1:B:1186:ARG:CZ	2.56	0.79
1:B:1121:ASP:OD2	1:B:1124:LEU:HB2	1.82	0.79
1:A:875:MET:HE2	1:A:1139:PHE:CZ	2.18	0.79
1:B:37:ASP:OD2	1:B:40:THR:HB	1.82	0.79
1:A:230:HIS:HE1	1:A:234:ILE:HG13	1.45	0.78
1:A:580:GLU:O	1:A:584:ASP:OD1	2.01	0.78
1:A:447:LEU:HD21	1:A:674:ALA:CA	2.14	0.78
1:B:1318:ASN:HD22	1:B:1318:ASN:H	1.30	0.78
1:A:375:ASP:OD2	1:A:377:THR:CB	2.26	0.78
1:A:1043:LEU:HD23	1:A:1044:PRO:HD2	1.66	0.78
1:A:959:SER:HA	1:A:1369:THR:HG23	1.63	0.78
1:B:1317:THR:CG2	1:B:1318:ASN:N	2.44	0.78
1:A:450:ARG:O	1:A:452:GLN:N	2.17	0.78
1:A:1401:LEU:CD1	1:A:1405:ILE:HB	2.13	0.78
1:B:266:VAL:HG12	1:B:279:THR:CG2	2.14	0.78
1:B:565:THR:CG2	1:B:602:THR:HB	2.13	0.78
1:A:139:VAL:CG1	1:A:140:SER:H	1.90	0.78
1:A:24:ALA:HB1	1:A:207:TYR:CE2	2.19	0.78
1:A:177:ILE:HD13	1:A:179:TYR:HE1	1.49	0.78
1:A:213:THR:HB	1:A:1008:THR:HG23	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:950:THR:CG2	1:B:952:MET:H	1.96	0.78
1:A:310:PRO:HG3	1:A:404:ARG:HH22	1.43	0.77
1:B:260:MET:O	1:B:263:LEU:HB2	1.84	0.77
1:B:218:THR:O	1:B:218:THR:HG22	1.82	0.77
1:A:236:THR:CG2	1:A:328:ASP:N	2.45	0.77
1:B:522:LEU:HD21	1:B:705:LEU:CD2	2.14	0.77
1:B:531:ASN:OD1	1:B:533:LEU:HB2	1.83	0.77
1:B:746:ILE:CG2	1:B:1182:ASP:N	2.37	0.77
1:A:930:ILE:HD13	1:A:983:LEU:HD13	1.65	0.77
1:A:1395:TYR:CE1	1:A:1397:LEU:HD21	2.20	0.77
1:B:249:THR:HG22	1:B:250:ARG:HG2	1.67	0.77
1:A:551:THR:OG1	1:A:554:GLU:HG2	1.84	0.77
1:B:580:GLU:O	1:B:584:ASP:OD1	2.03	0.77
1:B:1131:THR:HG22	1:B:1134:LYS:H	1.49	0.77
1:A:1391:MET:HE1	1:A:1458:VAL:CG2	2.15	0.77
1:B:826:ARG:NH1	1:B:1046:GLU:OE2	2.18	0.77
1:A:1008:THR:CG2	1:A:1009:ILE:N	2.44	0.77
1:B:505:GLN:NE2	1:B:1001:VAL:H	1.83	0.77
1:B:515:ARG:HD2	1:B:1367:TYR:HE2	1.49	0.77
1:B:551:THR:OG1	1:B:554:GLU:HG2	1.85	0.77
1:B:731:SER:CA	1:B:748:GLY:H	1.98	0.77
1:B:1449:ARG:CB	1:B:1449:ARG:NH1	1.80	0.77
1:A:113:ASN:HD21	1:A:115:ASP:H	1.31	0.76
1:A:1356:VAL:HG22	1:A:1374:VAL:HG21	1.67	0.76
1:B:572:THR:CG2	1:B:573:PHE:N	2.47	0.76
1:B:985:TYR:HE1	1:B:1207:VAL:HG13	1.50	0.76
1:A:528:ASN:HB3	1:A:542:LEU:HD22	1.66	0.76
1:B:658:LEU:HD23	1:B:666:VAL:HG21	1.67	0.76
1:A:890:ASP:O	1:A:893:ARG:HB2	1.84	0.76
1:A:959:SER:HA	1:A:1369:THR:HG21	1.67	0.76
1:A:413:LEU:O	1:A:414:LYS:HD2	1.85	0.76
1:B:826:ARG:HG2	1:B:826:ARG:NH1	1.99	0.76
1:B:1043:LEU:HD23	1:B:1044:PRO:HD2	1.67	0.76
1:A:447:LEU:HD13	1:A:670:LEU:HD21	1.65	0.76
1:A:450:ARG:O	1:A:453:ALA:N	2.19	0.76
1:B:153:ARG:NH2	1:B:263:LEU:O	2.18	0.76
1:B:582:LEU:H	1:B:755:GLN:HE22	1.30	0.76
1:B:1084:MET:SD	1:B:1168:LEU:HD21	2.25	0.76
1:A:1131:THR:HB	1:A:1134:LYS:HG3	1.68	0.76
1:B:982:GLN:HE22	1:B:1240:ARG:HD2	1.49	0.76
1:A:1220:ARG:HG3	1:A:1224:GLU:HG3	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1471:HIS:O	1:A:1472:LEU:HB2	1.85	0.76
1:A:182:MET:CE	1:A:217:PRO:C	2.54	0.76
1:A:643:ASN:HB3	1:A:665:THR:HG22	1.68	0.76
1:A:260:MET:O	1:A:263:LEU:N	2.19	0.76
1:B:426:LEU:CD1	1:B:558:MET:HG3	2.16	0.76
1:B:522:LEU:HD21	1:B:705:LEU:HD21	1.68	0.76
1:A:829:LEU:HD13	1:A:1168:LEU:HD13	1.67	0.75
1:A:1374:VAL:O	1:A:1375:ILE:CG1	2.34	0.75
1:A:826:ARG:NH1	1:A:1046:GLU:OE2	2.19	0.75
1:B:417:ASP:C	1:B:419:TRP:N	2.38	0.75
1:A:999:LYS:HG3	1:A:1022:LEU:CD2	2.17	0.75
1:B:438:GLU:OE1	1:B:672:GLN:NE2	2.20	0.75
1:B:452:GLN:CG	1:B:765:ALA:HB2	2.17	0.75
1:A:298:LEU:HD23	1:A:324:MET:HG2	1.68	0.75
1:A:452:GLN:CG	1:A:765:ALA:HB2	2.16	0.75
1:B:175:ARG:HH11	1:B:175:ARG:HG3	1.52	0.75
1:B:820:ARG:HB3	1:B:821:PRO:CD	2.16	0.75
1:A:536:ASP:OD1	1:A:536:ASP:O	2.05	0.75
1:B:317:ILE:HG22	1:B:321:ASN:HD21	1.52	0.75
1:B:584:ASP:OD1	1:B:584:ASP:N	2.14	0.75
1:A:207:TYR:N	1:A:207:TYR:CD1	2.54	0.75
1:A:643:ASN:HB3	1:A:665:THR:CG2	2.16	0.75
1:A:950:THR:CG2	1:A:951:GLU:H	1.98	0.75
1:A:1317:THR:HG22	1:A:1318:ASN:N	2.00	0.75
1:A:1394:VAL:O	1:A:1394:VAL:HG12	1.87	0.75
1:A:443:ASP:O	1:A:445:ALA:N	2.20	0.74
1:A:536:ASP:OD1	1:A:538:THR:HG22	1.85	0.74
1:A:1413:GLN:HG3	1:A:1414:ARG:O	1.87	0.74
1:B:375:ASP:OD2	1:B:377:THR:HB	1.87	0.74
1:A:60:LYS:O	1:A:63:GLY:N	2.19	0.74
1:A:139:VAL:HG11	1:A:143:GLN:CB	2.17	0.74
1:B:59:VAL:CG2	1:B:105:TYR:CD2	2.70	0.74
1:A:643:ASN:HD22	1:A:665:THR:CB	2.01	0.74
1:B:536:ASP:C	1:B:536:ASP:OD1	2.25	0.74
1:B:1084:MET:SD	1:B:1168:LEU:CD2	2.75	0.74
1:A:595:ASP:O	1:A:596:ALA:C	2.21	0.74
1:B:746:ILE:O	1:B:747:SER:C	2.22	0.74
1:B:139:VAL:CG1	1:B:143:GLN:CB	2.66	0.74
1:B:450:ARG:O	1:B:453:ALA:N	2.20	0.74
1:B:731:SER:HA	1:B:747:SER:CA	2.17	0.74
1:A:528:ASN:CB	1:A:542:LEU:HD22	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:824:GLN:HE21	1:A:824:GLN:CA	1.99	0.74
1:B:602:THR:C	1:B:640:THR:CG2	2.56	0.74
1:A:342:VAL:HG13	1:A:392:ALA:HB2	1.69	0.74
1:A:1131:THR:HG22	1:A:1133:GLU:N	2.02	0.74
1:A:355:TYR:C	1:A:355:TYR:CD1	2.61	0.74
1:A:515:ARG:HD2	1:A:1367:TYR:CZ	2.22	0.74
1:A:862:ALA:O	1:A:1118:CYS:CB	2.35	0.74
1:B:1131:THR:HG22	1:B:1133:GLU:N	2.03	0.74
1:A:102:TYR:CD2	1:A:144:PHE:HE1	2.06	0.73
1:A:536:ASP:OD1	1:A:536:ASP:C	2.25	0.73
1:A:731:SER:CA	1:A:748:GLY:H	2.01	0.73
1:B:1289:MET:CE	1:B:1289:MET:HB2	2.17	0.73
1:A:609:GLU:OE2	1:A:645:ARG:HD3	1.88	0.73
1:B:295:LYS:NZ	1:B:299:VAL:O	2.17	0.73
1:A:724:ASN:ND2	1:A:724:ASN:N	2.36	0.73
1:A:1394:VAL:HG11	1:A:1401:LEU:CD2	2.17	0.73
1:B:891:PRO:HA	1:B:894:PHE:CE2	2.24	0.73
1:A:513:SER:CB	1:A:520:MET:CE	2.64	0.73
1:A:727:ALA:HB3	1:A:744:SER:HB2	1.69	0.73
1:A:728:ILE:HD12	1:A:1047:MET:CE	2.17	0.73
1:A:824:GLN:HA	1:A:824:GLN:NE2	2.01	0.73
1:B:146:LEU:HD12	1:B:146:LEU:O	1.88	0.73
1:B:746:ILE:HG22	1:B:747:SER:O	1.88	0.73
1:A:182:MET:HE3	1:A:217:PRO:HB2	1.00	0.73
1:A:290:THR:CG2	1:A:291:ALA:N	2.51	0.73
1:A:295:LYS:CE	1:A:299:VAL:HG12	2.18	0.73
1:A:1401:LEU:HD11	1:A:1405:ILE:HB	1.71	0.73
1:B:465:LEU:HD12	1:B:465:LEU:O	1.89	0.73
1:A:465:LEU:C	1:A:465:LEU:HD12	2.08	0.73
1:A:573:PHE:HB2	1:A:574:PRO:HD2	1.71	0.73
1:B:214:ASN:O	1:B:1015:LYS:HE2	1.88	0.73
1:B:665:THR:HG22	1:B:665:THR:O	1.89	0.73
1:A:464:ILE:CD1	1:A:779:TYR:CE1	2.71	0.73
1:A:1460:LYS:O	1:A:1462:MET:N	2.21	0.73
1:B:1113:CYS:O	1:B:1115:VAL:N	2.22	0.73
1:B:511:ILE:HG22	1:B:512:ASP:N	2.03	0.73
1:B:787:ARG:HH12	1:B:821:PRO:CG	2.00	0.73
1:A:1062:ARG:HG3	1:A:1062:ARG:O	1.89	0.72
1:A:1425:LYS:HD3	1:A:1447:TRP:NE1	2.03	0.72
1:B:1289:MET:HB2	1:B:1289:MET:HE3	1.69	0.72
1:A:1447:TRP:CZ2	1:A:1451:VAL:HG22	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:405:GLU:H	1:B:405:GLU:CD	1.90	0.72
1:B:731:SER:HA	1:B:747:SER:HA	1.71	0.72
1:B:290:THR:CG2	1:B:292:PRO:CD	2.68	0.72
1:B:780:ARG:HH21	1:B:1105:VAL:HG23	1.53	0.72
1:B:829:LEU:HD13	1:B:1168:LEU:HD13	1.70	0.72
1:B:838:VAL:HG12	1:B:839:PRO:N	2.02	0.72
1:A:850:ARG:HH11	1:A:850:ARG:HG3	1.53	0.72
1:B:52:GLN:NE2	1:B:71:LEU:H	1.87	0.72
1:B:838:VAL:CG1	1:B:839:PRO:HD2	2.19	0.72
1:A:918:THR:HG23	1:A:1256:MET:SD	2.30	0.72
1:B:223:GLN:HB3	1:B:224:PRO:HA	1.72	0.72
1:B:236:THR:HG21	1:B:328:ASP:N	2.00	0.72
1:B:820:ARG:CB	1:B:821:PRO:CD	2.67	0.72
1:A:976:SER:OG	1:A:978:GLU:HG3	1.90	0.72
1:A:189:THR:HG22	1:A:190:THR:N	2.04	0.72
1:B:781:PHE:CE2	1:B:791:GLU:HB3	2.25	0.72
1:A:290:THR:HG22	1:A:292:PRO:N	2.05	0.72
1:A:875:MET:HE1	1:A:1139:PHE:CD2	2.25	0.72
1:A:1356:VAL:HG11	1:A:1431:HIS:HB2	1.71	0.72
1:B:493:ARG:NH2	1:B:786:ASP:OD1	2.21	0.72
1:B:1076:GLY:CA	1:B:1145:GLU:HG2	2.18	0.72
1:B:1184:ASN:O	1:B:1187:LEU:N	2.22	0.72
1:B:1369:THR:HG22	1:B:1369:THR:O	1.89	0.72
1:B:3:VAL:HG22	1:B:231:ASN:HB2	1.72	0.72
1:B:529:LEU:HD23	1:B:529:LEU:N	1.92	0.72
1:B:1417:VAL:HG12	1:B:1419:HIS:H	1.54	0.72
1:B:959:SER:HA	1:B:1369:THR:HG23	1.69	0.72
1:B:1369:THR:C	1:B:1389:GLY:O	2.28	0.72
1:A:985:TYR:HE1	1:A:1207:VAL:HG13	1.53	0.71
1:B:218:THR:CG2	1:B:221:LEU:HG	2.20	0.71
1:B:731:SER:HA	1:B:748:GLY:N	2.04	0.71
1:B:780:ARG:NH2	1:B:1105:VAL:HG23	2.04	0.71
1:A:515:ARG:CD	1:A:1367:TYR:HE1	1.96	0.71
1:A:1230:GLN:NE2	1:A:1267:ARG:HD3	2.05	0.71
1:B:1164:ARG:NH1	1:B:1166:ASP:OD2	2.23	0.71
1:B:525:ARG:HG2	1:B:542:LEU:HD13	1.71	0.71
1:B:603:HIS:N	1:B:640:THR:HG22	2.05	0.71
1:A:1289:MET:CE	1:A:1289:MET:H	2.03	0.71
1:B:242:ASN:ND2	1:B:242:ASN:N	2.37	0.71
1:B:88:ALA:O	1:B:92:ILE:HG13	1.91	0.71
1:A:454:PHE:HE2	1:A:647:ALA:CB	2.03	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1317:THR:HG23	1:A:1358:GLU:OE1	1.88	0.71
1:B:500:ARG:NH2	1:B:1040:PHE:HA	2.05	0.71
1:B:704:LEU:O	1:B:705:LEU:C	2.25	0.71
1:B:875:MET:CE	1:B:1139:PHE:CE2	2.73	0.71
1:A:746:ILE:HG23	1:A:1182:ASP:H	1.54	0.71
1:B:588:ARG:O	1:B:592:GLU:CG	2.38	0.71
1:B:842:GLU:HB3	1:B:1156:ARG:HD3	1.72	0.71
1:A:312:ASN:OD1	1:A:312:ASN:N	2.22	0.71
1:A:1131:THR:HG23	1:A:1133:GLU:OE1	1.90	0.71
1:B:593:THR:O	1:B:597:VAL:HG23	1.91	0.71
1:B:295:LYS:NZ	1:B:299:VAL:HG12	2.06	0.71
1:B:907:ILE:HG23	1:B:927:GLU:HG2	1.73	0.71
1:B:1047:MET:CE	1:B:1186:ARG:NH2	2.44	0.71
1:B:426:LEU:HD22	1:B:543:LEU:HB3	1.73	0.70
1:B:59:VAL:HG21	1:B:105:TYR:CD2	2.26	0.70
1:B:266:VAL:O	1:B:279:THR:CG2	2.39	0.70
1:B:459:GLU:O	1:B:463:LEU:HB2	1.91	0.70
1:B:958:HIS:O	1:B:1369:THR:HG22	1.90	0.70
1:A:96:GLU:HA	1:A:96:GLU:OE1	1.89	0.70
1:B:454:PHE:CE2	1:B:647:ALA:HB3	2.26	0.70
1:B:1053:HIS:ND1	1:B:1062:ARG:NH1	2.39	0.70
1:B:1053:HIS:CE1	1:B:1062:ARG:HH11	2.08	0.70
1:B:1253:LYS:HG3	1:B:1253:LYS:O	1.91	0.70
1:A:140:SER:O	1:A:143:GLN:N	2.24	0.70
1:A:183:PHE:CE1	1:A:188:LEU:HA	2.26	0.70
1:A:177:ILE:HD13	1:A:179:TYR:CE1	2.26	0.70
1:A:838:VAL:CG1	1:A:839:PRO:N	2.54	0.70
1:B:1039:LYS:C	1:B:1040:PHE:CD1	2.65	0.70
1:A:734:LEU:HD12	1:A:738:HIS:HD2	1.54	0.70
1:A:997:THR:HG22	1:A:998:VAL:N	2.05	0.70
1:B:739:PHE:O	1:B:740:PRO:O	2.10	0.70
1:B:1121:ASP:OD1	1:B:1122:ASP:N	2.25	0.70
1:B:1212:ASP:O	1:B:1216:VAL:HG23	1.90	0.70
1:B:1394:VAL:O	1:B:1394:VAL:HG12	1.91	0.70
1:A:113:ASN:HD22	1:A:114:VAL:N	1.89	0.70
1:A:1076:GLY:HA3	1:A:1145:GLU:CG	2.22	0.70
1:A:1311:THR:CG2	1:A:1312:SER:N	2.55	0.70
1:B:1076:GLY:HA3	1:B:1145:GLU:CG	2.17	0.70
1:A:875:MET:HE1	1:A:1139:PHE:HE2	1.33	0.70
1:A:1221:PRO:CG	1:A:1229:MET:CE	2.70	0.70
1:B:465:LEU:HD12	1:B:465:LEU:C	2.12	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:802:VAL:HG23	1:B:1137:ASN:HB2	1.73	0.70
1:B:985:TYR:CE1	1:B:1207:VAL:CG1	2.75	0.70
1:A:218:THR:HG21	1:A:221:LEU:HG	1.73	0.69
1:A:413:LEU:O	1:A:414:LYS:CD	2.40	0.69
1:B:353:MET:HG2	1:B:385:LEU:HD23	1.72	0.69
1:B:447:LEU:HD12	1:B:451:GLN:CG	2.22	0.69
1:B:603:HIS:N	1:B:640:THR:CG2	2.54	0.69
1:B:1102:CYS:HG	5:B:2476:F3S:FE1	1.09	0.69
1:B:1414:ARG:NH2	1:B:1455:TRP:CZ2	2.60	0.69
1:A:501:GLN:HE21	1:A:653:HIS:CD2	2.10	0.69
1:A:1019:ASP:OD2	1:A:1204:ARG:HB2	1.93	0.69
1:A:1121:ASP:OD2	1:A:1124:LEU:HB2	1.92	0.69
1:B:447:LEU:CD1	1:B:451:GLN:HG3	2.22	0.69
1:B:419:TRP:O	1:B:540:THR:HG21	1.92	0.69
1:B:1053:HIS:CE1	1:B:1062:ARG:NH1	2.60	0.69
1:B:1105:VAL:HG13	1:B:1107:GLN:HG3	1.74	0.69
1:B:242:ASN:HD22	1:B:242:ASN:N	1.87	0.69
1:B:1054:GLN:O	1:B:1057:THR:N	2.26	0.69
1:B:753:GLY:O	1:B:754:ILE:C	2.25	0.69
1:A:59:VAL:HG21	1:A:105:TYR:CE2	2.27	0.69
1:A:454:PHE:CD2	1:A:648:GLU:HB2	2.28	0.69
1:B:985:TYR:CE1	1:B:1207:VAL:HG13	2.27	0.69
1:A:313:HIS:O	1:A:317:ILE:HG13	1.93	0.69
1:A:496:HIS:O	1:A:653:HIS:HE1	1.76	0.69
1:A:515:ARG:NE	1:A:1367:TYR:CE1	2.60	0.69
1:B:122:ASN:OD1	1:B:125:ARG:NH1	2.26	0.69
1:B:309:THR:HB	1:B:314:LYS:HE3	1.74	0.69
1:B:1090:PHE:CD1	1:B:1090:PHE:N	2.60	0.69
1:B:1401:LEU:C	1:B:1401:LEU:CD1	2.55	0.69
1:A:1221:PRO:HG2	1:A:1229:MET:CE	2.23	0.69
1:B:528:ASN:C	1:B:529:LEU:HD23	2.13	0.69
1:B:1447:TRP:CE2	1:B:1451:VAL:HG22	2.28	0.69
1:B:107:TRP:N	1:B:107:TRP:CD1	2.59	0.69
1:B:302:ALA:HB2	1:B:347:ARG:NH1	2.07	0.69
1:A:208:HIS:CD2	1:A:209:GLN:O	2.46	0.68
1:A:240:ASN:HD21	1:A:327:TRP:HA	1.58	0.68
1:B:236:THR:CG2	1:B:328:ASP:N	2.52	0.68
1:A:9:ILE:HG13	1:A:361:GLY:O	1.93	0.68
1:A:1415:ILE:HG21	1:A:1421:GLU:HB2	1.75	0.68
1:A:358:THR:HB	1:A:360:ASP:OD1	1.92	0.68
1:B:386:GLY:O	1:B:389:GLU:HG3	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:208:HIS:CE1	1:A:223:GLN:OE1	2.45	0.68
1:A:426:LEU:HD23	1:A:426:LEU:H	1.59	0.68
1:A:1276:LEU:HD12	1:A:1277:GLY:N	2.08	0.68
1:A:1362:SER:HA	1:A:1380:GLY:HA3	1.74	0.68
1:B:602:THR:C	1:B:640:THR:HG22	2.14	0.68
1:B:1348:VAL:O	1:B:1348:VAL:HG13	1.91	0.68
1:A:52:GLN:HE22	1:A:71:LEU:HB2	1.59	0.68
1:A:732:ARG:H	1:A:747:SER:CB	2.07	0.68
1:A:913:GLY:HA2	1:A:1349:ARG:HD3	1.76	0.68
1:A:1338:ALA:HB3	1:A:1357:VAL:HG22	1.74	0.68
1:B:211:TYR:HD1	1:B:212:SER:H	1.42	0.68
1:B:604:VAL:HG23	1:B:640:THR:HG21	1.73	0.68
1:B:826:ARG:HG2	1:B:1046:GLU:OE2	1.93	0.68
1:B:932:VAL:O	1:B:933:ALA:HB2	1.92	0.68
1:B:1449:ARG:O	1:B:1452:THR:HB	1.93	0.68
1:A:414:LYS:HB3	1:A:415:PRO:CD	2.23	0.68
1:A:461:MET:HE1	1:A:465:LEU:HD23	1.75	0.68
1:A:1317:THR:HG21	1:A:1358:GLU:OE1	1.92	0.68
1:B:794:VAL:HG12	1:B:795:ILE:N	2.06	0.68
1:A:152:ARG:O	1:A:156:GLU:HB2	1.94	0.68
1:B:182:MET:CE	1:B:217:PRO:C	2.62	0.68
1:B:250:ARG:O	1:B:531:ASN:ND2	2.27	0.68
1:B:732:ARG:H	1:B:747:SER:HB3	1.57	0.68
1:B:1170:GLN:O	1:B:1170:GLN:CG	2.39	0.68
1:A:248:GLU:HA	1:A:251:MET:CG	2.22	0.68
1:A:387:PRO:HD3	1:A:1344:GLU:CD	2.15	0.68
1:A:447:LEU:CD1	1:A:451:GLN:HG3	2.23	0.68
1:A:985:TYR:CE1	1:A:1207:VAL:HG13	2.28	0.68
1:B:253:HIS:N	1:B:260:MET:HE1	2.09	0.68
1:A:359:THR:HG23	1:A:378:GLN:O	1.94	0.68
1:A:505:GLN:HE21	1:A:1001:VAL:H	1.33	0.68
1:B:389:GLU:CB	1:B:403:ASP:OD2	2.40	0.68
1:B:442:MET:HG3	1:B:673:GLU:OE2	1.92	0.68
1:B:999:LYS:HG2	1:B:1022:LEU:HD23	1.72	0.68
1:A:8:ALA:HA	1:A:362:LEU:HD12	1.75	0.67
1:A:520:MET:HE1	1:A:705:LEU:HB3	1.74	0.67
1:B:522:LEU:CD2	1:B:705:LEU:HD21	2.24	0.67
1:A:310:PRO:CG	1:A:404:ARG:NH2	2.56	0.67
1:A:461:MET:CE	1:A:465:LEU:HD23	2.24	0.67
1:A:918:THR:HG22	1:A:920:GLU:H	1.59	0.67
1:A:4:GLY:HA3	1:A:207:TYR:CZ	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:289:ARG:NH2	1:A:532:ILE:O	2.27	0.67
1:A:506:VAL:HG11	1:A:980:LEU:HD22	1.75	0.67
1:A:850:ARG:HH11	1:A:850:ARG:CG	2.08	0.67
1:A:1388:THR:O	1:A:1388:THR:HG22	1.93	0.67
1:A:1412:PHE:HA	1:A:1456:GLN:O	1.94	0.67
1:B:266:VAL:HG12	1:B:279:THR:HG23	1.76	0.67
1:A:777:GLY:O	1:A:788:HIS:HE1	1.77	0.67
1:A:1220:ARG:N	1:A:1221:PRO:HD2	2.10	0.67
1:B:843:VAL:CG1	1:B:844:GLU:N	2.58	0.67
1:A:336:THR:OG1	1:A:337:ASP:O	2.13	0.67
1:A:454:PHE:HE2	1:A:647:ALA:HB3	1.58	0.67
1:B:731:SER:O	1:B:735:VAL:HG23	1.93	0.67
1:A:960:THR:CG2	1:A:963:VAL:CG2	2.73	0.67
1:B:98:LEU:O	1:B:101:GLY:N	2.25	0.67
1:B:113:ASN:HD22	1:B:114:VAL:N	1.92	0.67
1:B:1388:THR:O	1:B:1388:THR:HG22	1.94	0.67
1:A:746:ILE:O	1:A:747:SER:O	2.13	0.67
1:B:838:VAL:CG1	1:B:839:PRO:CD	2.73	0.67
1:B:559:ARG:HD2	1:B:605:ILE:CD1	2.25	0.67
1:A:139:VAL:HG11	1:A:143:GLN:HB3	1.77	0.67
1:A:661:VAL:HG12	1:A:661:VAL:O	1.94	0.67
1:B:113:ASN:HD22	1:B:115:ASP:H	1.41	0.67
1:B:417:ASP:C	1:B:419:TRP:H	1.96	0.67
1:B:454:PHE:HE2	1:B:647:ALA:HB3	1.58	0.67
1:B:666:VAL:CG1	1:B:667:ASN:N	2.58	0.67
1:B:746:ILE:HD11	1:B:1186:ARG:NH2	2.10	0.67
1:B:1059:ASN:N	1:B:1059:ASN:HD22	1.91	0.67
1:A:746:ILE:HG22	1:A:747:SER:N	2.09	0.66
1:A:1458:VAL:HG13	1:A:1459:PRO:HD2	1.76	0.66
1:A:1466:LEU:O	1:A:1467:GLU:C	2.33	0.66
1:B:496:HIS:ND1	1:B:654:TYR:HD1	1.93	0.66
1:B:732:ARG:H	1:B:747:SER:CB	2.07	0.66
1:B:302:ALA:CA	1:B:347:ARG:HH12	2.08	0.66
1:B:704:LEU:C	1:B:706:LYS:N	2.49	0.66
1:A:354:ARG:NH2	1:A:1292:ALA:O	2.29	0.66
1:A:122:ASN:OD1	1:A:125:ARG:NH1	2.25	0.66
1:A:414:LYS:HB3	1:A:415:PRO:HD3	1.76	0.66
1:A:1396:ASP:C	1:A:1396:ASP:OD1	2.34	0.66
1:B:289:ARG:NH2	1:B:532:ILE:O	2.28	0.66
1:B:559:ARG:HD2	1:B:605:ILE:HD13	1.78	0.66
1:B:1102:CYS:SG	5:B:2476:F3S:S2	2.93	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1003:ARG:HG3	1:A:1003:ARG:HH11	1.61	0.66
1:B:515:ARG:HD2	1:B:1367:TYR:CZ	2.31	0.66
1:A:454:PHE:CE2	1:A:647:ALA:HB3	2.30	0.66
1:A:1222:LEU:C	1:A:1222:LEU:HD12	2.16	0.66
1:B:113:ASN:ND2	1:B:113:ASN:C	2.49	0.66
1:B:478:SER:O	1:B:1106:ARG:NH1	2.28	0.66
1:A:731:SER:HA	1:A:748:GLY:N	2.11	0.66
1:A:1230:GLN:NE2	1:A:1267:ARG:CD	2.59	0.66
1:B:461:MET:CE	1:B:465:LEU:HD23	2.26	0.66
1:B:780:ARG:NH2	1:B:1105:VAL:CG2	2.59	0.66
1:A:172:LEU:HG	1:A:172:LEU:O	1.94	0.66
1:A:381:GLU:CD	1:A:402:ARG:NH1	2.48	0.66
1:A:447:LEU:HD12	1:A:447:LEU:C	2.14	0.66
1:A:1144:GLU:HG3	1:A:1144:GLU:O	1.95	0.66
1:B:908:LYS:HD2	1:B:921:TYR:CD1	2.31	0.66
1:B:1413:GLN:HG3	1:B:1414:ARG:O	1.96	0.66
1:A:420:VAL:HA	1:A:540:THR:HG21	1.78	0.65
1:A:1394:VAL:HG11	1:A:1401:LEU:HD22	1.76	0.65
1:B:603:HIS:CA	1:B:640:THR:CG2	2.71	0.65
1:B:1274:GLN:HE21	1:B:1293:ASN:HB3	1.61	0.65
1:A:452:GLN:HG3	1:A:765:ALA:HB2	1.77	0.65
1:A:491:LYS:NZ	1:A:785:GLY:HA3	2.11	0.65
1:B:909:GLN:NE2	1:B:929:GLU:OE1	2.28	0.65
1:B:1164:ARG:HD2	1:B:1166:ASP:OD1	1.96	0.65
1:A:102:TYR:CD2	1:A:144:PHE:CE1	2.82	0.65
1:A:1105:VAL:HG13	1:A:1107:GLN:HG3	1.76	0.65
1:A:1297:GLY:O	1:A:1328:LEU:HA	1.95	0.65
1:B:139:VAL:CG1	1:B:143:GLN:HB2	2.25	0.65
1:B:450:ARG:O	1:B:451:GLN:C	2.35	0.65
1:B:454:PHE:HE2	1:B:647:ALA:CB	2.09	0.65
1:B:734:LEU:HD11	1:B:738:HIS:HD2	1.51	0.65
1:A:251:MET:HB2	1:A:533:LEU:HD12	1.78	0.65
1:A:1050:SER:O	1:A:1054:GLN:HG3	1.97	0.65
1:B:572:THR:HG21	1:B:615:ARG:HB3	1.78	0.65
1:A:1207:VAL:HG13	1:A:1208:PRO:HD2	1.77	0.65
1:A:1221:PRO:HD2	1:A:1229:MET:HE1	1.78	0.65
1:A:62:ILE:O	1:A:62:ILE:HG22	1.96	0.65
1:B:56:LYS:HG2	1:B:71:LEU:HD22	1.79	0.65
1:B:218:THR:HG22	1:B:221:LEU:H	1.62	0.65
1:A:491:LYS:O	1:A:492:TYR:C	2.35	0.65
1:A:621:ILE:HG13	1:A:658:LEU:HD13	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1311:THR:HG23	1:A:1312:SER:H	1.60	0.65
1:B:734:LEU:HD12	1:B:738:HIS:CD2	2.25	0.65
1:B:960:THR:HG22	1:B:963:VAL:HG23	1.77	0.65
1:B:1058:LEU:O	1:B:1058:LEU:HD22	1.95	0.65
1:A:746:ILE:HG22	1:A:747:SER:O	1.97	0.65
1:A:1431:HIS:O	1:A:1435:THR:HG22	1.95	0.65
1:B:1131:THR:HB	1:B:1134:LYS:CG	2.26	0.65
1:B:1131:THR:CG2	1:B:1133:GLU:OE1	2.42	0.65
1:A:728:ILE:HD12	1:A:1047:MET:HE3	1.78	0.64
1:A:958:HIS:ND1	1:A:958:HIS:N	2.45	0.64
1:A:1391:MET:HE1	1:A:1458:VAL:HG21	1.77	0.64
1:B:602:THR:C	1:B:640:THR:HG23	2.17	0.64
1:B:657:VAL:O	1:B:658:LEU:C	2.32	0.64
1:A:253:HIS:H	1:A:260:MET:HE1	1.62	0.64
1:A:317:ILE:HG22	1:A:321:ASN:ND2	2.11	0.64
1:A:453:ALA:O	1:A:761:GLN:HG3	1.98	0.64
1:A:824:GLN:CA	1:A:824:GLN:NE2	2.57	0.64
1:A:1395:TYR:CE1	1:A:1397:LEU:CD2	2.80	0.64
1:B:950:THR:CG2	1:B:951:GLU:H	2.07	0.64
1:A:1291:ASP:C	1:A:1291:ASP:OD1	2.35	0.64
1:A:227:MET:CE	1:A:282:GLU:HG2	2.28	0.64
1:A:253:HIS:CE1	1:A:254:PRO:CD	2.62	0.64
1:A:426:LEU:CD1	1:A:558:MET:HG3	2.28	0.64
1:B:990:ILE:HG13	1:B:990:ILE:O	1.97	0.64
1:B:1401:LEU:N	1:B:1402:PRO:CD	2.59	0.64
1:A:52:GLN:CD	1:A:71:LEU:H	2.01	0.64
1:A:253:HIS:ND1	1:A:254:PRO:N	2.45	0.64
1:A:370:GLY:HA3	1:A:1237:ASN:HB3	1.80	0.64
1:A:74:GLY:CA	1:A:172:LEU:HD13	2.27	0.64
1:A:974:ILE:CD1	1:A:983:LEU:HD12	2.19	0.64
1:B:569:ILE:HD13	1:B:569:ILE:N	2.12	0.64
1:B:1164:ARG:HB3	1:B:1167:LEU:HD12	1.80	0.64
1:A:345:MET:CE	1:A:385:LEU:HB2	2.28	0.64
1:A:182:MET:HE3	1:A:217:PRO:HB3	1.68	0.64
1:A:209:GLN:HG3	1:A:210:ARG:N	2.13	0.64
1:A:216:PHE:CZ	1:B:81:ILE:HD13	2.32	0.64
1:A:512:ASP:OD2	1:A:1367:TYR:OH	2.12	0.64
1:A:985:TYR:CE1	1:A:1207:VAL:CG1	2.80	0.64
1:A:1449:ARG:HB2	1:A:1449:ARG:CZ	2.19	0.64
1:B:1131:THR:HG22	1:B:1134:LYS:N	2.12	0.64
1:A:52:GLN:HE22	1:A:71:LEU:CB	2.11	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:295:LYS:HD2	1:B:390:MET:CE	2.19	0.64
1:B:452:GLN:HG3	1:B:765:ALA:HB2	1.78	0.64
1:A:302:ALA:HA	1:A:347:ARG:HH12	1.62	0.64
1:A:643:ASN:HD22	1:A:665:THR:CG2	2.10	0.64
1:A:1435:THR:HG23	1:A:1437:SER:H	1.63	0.64
1:B:555:PHE:HD1	1:B:556:ARG:N	1.96	0.64
1:A:359:THR:HG23	1:A:378:GLN:HB3	1.79	0.63
1:A:426:LEU:HD11	1:A:558:MET:HG3	1.79	0.63
1:A:891:PRO:HB3	1:A:894:PHE:CE2	2.34	0.63
1:A:1349:ARG:HG2	1:A:1349:ARG:HH11	1.62	0.63
1:A:1447:TRP:CD2	1:A:1451:VAL:HG22	2.33	0.63
1:B:482:ASP:OD1	1:B:788:HIS:HD2	1.81	0.63
1:B:693:MET:HA	1:B:693:MET:CE	2.27	0.63
1:A:386:GLY:O	1:A:389:GLU:HG3	1.98	0.63
1:A:465:LEU:HD12	1:A:465:LEU:O	1.98	0.63
1:A:1112:THR:O	1:A:1114:PRO:HD3	1.97	0.63
1:A:1282:GLN:HA	1:A:1302:GLY:O	1.99	0.63
1:A:1375:ILE:C	1:A:1376:LEU:HD23	2.19	0.63
1:B:443:ASP:OD2	1:B:445:ALA:HB3	1.97	0.63
1:B:820:ARG:HB3	1:B:821:PRO:HD2	1.78	0.63
1:B:947:PHE:O	1:B:947:PHE:HD1	1.80	0.63
1:A:37:ASP:C	1:A:37:ASP:OD1	2.33	0.63
1:A:248:GLU:O	1:A:250:ARG:N	2.31	0.63
1:A:452:GLN:HG3	1:A:764:THR:HG22	1.79	0.63
1:A:815:GLU:HA	1:A:815:GLU:OE1	1.98	0.63
1:B:37:ASP:C	1:B:37:ASP:OD1	2.37	0.63
1:B:52:GLN:HE22	1:B:71:LEU:CB	2.09	0.63
1:B:182:MET:HE3	1:B:217:PRO:C	2.19	0.63
1:B:296:MET:O	1:B:297:MET:C	2.33	0.63
1:B:319:TYR:O	1:B:322:SER:OG	2.09	0.63
1:B:885:GLY:C	1:B:887:GLY:H	2.01	0.63
1:B:1369:THR:CG2	1:B:1369:THR:O	2.46	0.63
1:A:295:LYS:HD3	1:A:295:LYS:C	2.19	0.63
1:A:442:MET:HE1	1:A:447:LEU:HA	1.78	0.63
1:A:958:HIS:O	1:A:1369:THR:HG21	1.99	0.63
1:A:1395:TYR:CZ	1:A:1397:LEU:HD21	2.34	0.63
1:B:339:ARG:HG3	1:B:396:GLN:HG3	1.80	0.63
1:A:1164:ARG:NH1	1:A:1166:ASP:OD2	2.31	0.63
1:A:1220:ARG:HB3	1:A:1221:PRO:HD3	1.81	0.63
1:B:351:ARG:HA	1:B:351:ARG:HE	1.64	0.63
1:B:409:HIS:O	1:B:412:THR:HB	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:609:GLU:O	1:B:611:MET:N	2.30	0.63
1:A:116:ILE:HD13	1:A:190:THR:CG2	2.29	0.63
1:A:1007:GLY:O	1:A:1010:ALA:HB3	1.99	0.63
1:B:492:TYR:OH	1:B:648:GLU:OE2	2.14	0.63
1:A:446:GLU:O	1:A:447:LEU:C	2.36	0.63
1:A:843:VAL:CG1	1:A:844:GLU:N	2.59	0.63
1:A:978:GLU:O	1:A:981:ALA:HB3	1.99	0.63
1:A:1417:VAL:HG12	1:A:1419:HIS:H	1.64	0.63
1:B:152:ARG:O	1:B:156:GLU:HB2	1.99	0.63
1:B:442:MET:HE3	1:B:446:GLU:HB3	1.81	0.63
1:B:453:ALA:O	1:B:761:GLN:HG3	1.97	0.63
1:B:528:ASN:CB	1:B:542:LEU:HD22	2.29	0.63
1:B:1131:THR:CG2	1:B:1133:GLU:HB2	2.29	0.63
1:B:1389:GLY:HA2	1:B:1459:PRO:HG2	1.81	0.63
1:A:369:THR:HG22	1:A:1293:ASN:HD21	1.62	0.63
1:A:938:PRO:HG2	1:A:1041:ALA:HB1	1.81	0.63
1:B:643:ASN:HB3	1:B:665:THR:CG2	2.29	0.63
1:B:1112:THR:O	1:B:1114:PRO:HD3	1.99	0.63
1:B:1290:GLY:O	1:B:1291:ASP:HB3	1.99	0.63
1:A:227:MET:HE2	1:A:282:GLU:HG2	1.80	0.63
1:A:235:ASN:C	1:A:235:ASN:ND2	2.52	0.63
1:A:403:ASP:OD2	1:A:407:LYS:NZ	2.32	0.63
1:A:1300:LEU:HD12	1:A:1301:SER:H	1.64	0.63
1:A:1376:LEU:HB3	1:A:1439:PHE:CE2	2.32	0.63
1:B:52:GLN:HE22	1:B:71:LEU:N	1.96	0.63
1:B:266:VAL:O	1:B:279:THR:HG23	1.98	0.63
1:B:602:THR:O	1:B:640:THR:HG22	1.99	0.63
1:B:1447:TRP:O	1:B:1451:VAL:HG23	1.98	0.63
1:A:30:HIS:HE1	1:A:368:GLU:OE1	1.81	0.62
1:A:146:LEU:HD12	1:A:146:LEU:C	2.16	0.62
1:A:394:ASP:C	1:A:394:ASP:OD1	2.37	0.62
1:A:662:GLY:O	1:A:720:ARG:HD3	1.98	0.62
1:A:1450:GLU:OE1	1:A:1453:LYS:NZ	2.24	0.62
1:B:1159:ASN:O	1:B:1161:VAL:N	2.32	0.62
1:B:1466:LEU:O	1:B:1467:GLU:C	2.37	0.62
1:A:57:ASP:O	1:A:60:LYS:N	2.32	0.62
1:A:731:SER:HA	1:A:747:SER:HB2	1.80	0.62
1:A:746:ILE:HG23	1:A:1182:ASP:CB	2.29	0.62
1:A:1289:MET:H	1:A:1289:MET:HE2	1.64	0.62
1:A:1449:ARG:NH1	1:A:1449:ARG:CB	2.14	0.62
1:B:59:VAL:HG22	1:B:105:TYR:CD2	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:423:THR:OG1	1:B:540:THR:HG22	2.00	0.62
1:A:24:ALA:CB	1:A:207:TYR:CE2	2.82	0.62
1:A:317:ILE:O	1:A:321:ASN:ND2	2.29	0.62
1:A:643:ASN:HD22	1:A:665:THR:HG21	1.65	0.62
1:B:538:THR:O	1:B:538:THR:HG23	1.97	0.62
1:A:643:ASN:HD22	1:A:665:THR:HB	1.64	0.62
1:B:510:PRO:HD2	1:B:970:PRO:HB3	1.81	0.62
1:A:143:GLN:C	1:A:143:GLN:HE21	2.01	0.62
1:A:515:ARG:NH2	1:A:966:ILE:HB	2.13	0.62
1:A:603:HIS:HA	1:A:640:THR:HG22	1.81	0.62
1:B:518:ARG:NH2	1:B:1382:ASN:HD22	1.98	0.62
1:A:80:ARG:HD3	1:A:125:ARG:O	1.98	0.62
1:B:394:ASP:C	1:B:394:ASP:OD1	2.38	0.62
1:A:403:ASP:CG	1:A:407:LYS:HZ3	2.02	0.62
1:A:675:ILE:O	1:A:678:ARG:HB2	1.98	0.62
1:A:1356:VAL:HG22	1:A:1374:VAL:CG2	2.30	0.62
1:B:745:ARG:O	1:B:746:ILE:HG13	1.98	0.62
1:B:806:SER:OG	1:B:809:THR:N	2.31	0.62
1:A:908:LYS:HE2	1:A:924:GLN:O	2.00	0.62
1:A:970:PRO:HG2	1:A:970:PRO:O	2.00	0.62
1:B:171:SER:OG	1:B:177:ILE:HA	2.00	0.62
1:B:1394:VAL:HG11	1:B:1401:LEU:HD22	1.79	0.62
1:A:364:ILE:CD1	1:A:374:ILE:HD11	2.30	0.62
1:A:1221:PRO:CG	1:A:1229:MET:HE1	2.29	0.62
1:B:260:MET:O	1:B:263:LEU:N	2.31	0.62
1:A:299:VAL:O	1:A:299:VAL:CG1	2.43	0.61
1:A:466:HIS:ND1	1:A:678:ARG:NH1	2.46	0.61
1:A:525:ARG:C	1:A:526:LEU:HD12	2.21	0.61
1:A:732:ARG:NH1	1:B:94:GLU:OE2	2.28	0.61
1:B:146:LEU:HD12	1:B:146:LEU:C	2.19	0.61
1:B:243:TRP:HA	1:B:243:TRP:CE3	2.35	0.61
1:B:353:MET:HG2	1:B:385:LEU:CD2	2.29	0.61
1:B:479:MET:HG3	1:B:1104:MET:CE	2.30	0.61
1:B:521:SER:OG	1:B:522:LEU:N	2.33	0.61
1:A:94:GLU:O	1:A:95:THR:C	2.35	0.61
1:A:746:ILE:C	1:A:747:SER:O	2.35	0.61
1:A:1062:ARG:O	1:A:1062:ARG:CG	2.43	0.61
1:B:249:THR:HG23	1:B:249:THR:O	1.98	0.61
1:B:355:TYR:CD1	1:B:355:TYR:C	2.72	0.61
1:B:693:MET:HA	1:B:693:MET:HE3	1.82	0.61
1:B:794:VAL:HG21	1:B:817:VAL:HG23	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1348:VAL:O	1:A:1348:VAL:HG13	1.99	0.61
1:A:1374:VAL:O	1:A:1375:ILE:HG13	1.98	0.61
1:B:74:GLY:CA	1:B:172:LEU:HD13	2.30	0.61
1:B:439:PRO:HG2	1:B:439:PRO:O	1.99	0.61
1:A:295:LYS:HD3	1:A:295:LYS:O	2.01	0.61
1:A:355:TYR:C	1:A:355:TYR:HD1	2.03	0.61
1:A:423:THR:OG1	1:A:540:THR:HG22	2.00	0.61
1:A:1221:PRO:CB	1:A:1229:MET:CE	2.73	0.61
1:B:182:MET:CE	1:B:217:PRO:HB3	1.95	0.61
1:B:353:MET:HE2	1:B:366:GLY:O	2.00	0.61
1:B:450:ARG:O	1:B:452:GLN:N	2.34	0.61
1:B:515:ARG:NE	1:B:1367:TYR:CE2	2.68	0.61
1:B:768:GLU:HG2	1:B:769:GLU:N	2.09	0.61
1:A:102:TYR:HE2	1:A:144:PHE:CE1	2.13	0.61
1:A:629:THR:O	1:A:630:HIS:C	2.37	0.61
1:A:1221:PRO:HG2	1:A:1229:MET:HE1	1.82	0.61
1:B:482:ASP:OD1	1:B:788:HIS:CD2	2.53	0.61
1:B:918:THR:HG22	1:B:921:TYR:N	2.13	0.61
1:B:976:SER:OG	1:B:978:GLU:HG3	2.00	0.61
1:B:1212:ASP:CG	1:B:1243:GLY:H	2.04	0.61
1:B:1401:LEU:N	1:B:1402:PRO:HD2	2.16	0.61
1:A:107:TRP:N	1:A:107:TRP:CD1	2.69	0.61
1:B:526:LEU:HD12	1:B:526:LEU:H	1.66	0.61
1:B:1383:PHE:O	1:B:1384:ALA:HB3	2.00	0.61
1:B:279:THR:HG22	1:B:280:VAL:N	2.16	0.61
1:B:499:PHE:HE1	1:B:742:MET:CE	2.14	0.61
1:B:1169:HIS:ND1	1:B:1169:HIS:N	2.49	0.61
1:A:355:TYR:CD1	1:A:355:TYR:O	2.54	0.61
1:A:734:LEU:HD12	1:A:734:LEU:C	2.21	0.61
1:A:45:GLY:HA2	1:A:180:LYS:HA	1.81	0.61
1:A:511:ILE:HG22	1:A:512:ASP:H	1.61	0.61
1:A:531:ASN:HB3	1:A:534:ASP:HB2	1.83	0.61
1:A:1395:TYR:CE2	1:A:1443:ILE:HD13	2.35	0.61
1:B:182:MET:CE	1:B:217:PRO:CA	2.58	0.61
1:B:235:ASN:HD21	1:B:328:ASP:HB3	1.64	0.61
1:B:658:LEU:HD23	1:B:666:VAL:CG2	2.29	0.61
1:B:1121:ASP:OD1	1:B:1123:LYS:N	2.33	0.61
1:B:1135:VAL:O	1:B:1136:VAL:C	2.33	0.61
1:B:1210:THR:HG22	1:B:1211:LEU:N	2.09	0.61
1:A:143:GLN:HE21	1:A:143:GLN:CA	2.14	0.61
1:A:320:CYS:O	1:A:323:VAL:N	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:691:LYS:O	1:B:691:LYS:HG3	2.00	0.61
1:A:743:VAL:CG1	1:A:745:ARG:HG3	2.31	0.60
1:A:1374:VAL:O	1:A:1375:ILE:HG12	2.01	0.60
1:B:24:ALA:O	1:B:26:LYS:N	2.34	0.60
1:B:142:GLU:H	1:B:142:GLU:CD	2.05	0.60
1:B:447:LEU:HD12	1:B:447:LEU:C	2.22	0.60
1:B:515:ARG:CD	1:B:1367:TYR:HE2	2.04	0.60
1:B:594:GLU:OE1	1:B:598:ARG:NH2	2.34	0.60
1:B:908:LYS:HD2	1:B:921:TYR:CE1	2.36	0.60
1:B:930:ILE:HD13	1:B:983:LEU:HD13	1.83	0.60
1:B:1084:MET:SD	1:B:1168:LEU:HD23	2.41	0.60
1:A:293:MET:HG2	1:A:410:LEU:HD23	1.82	0.60
1:A:450:ARG:O	1:A:451:GLN:C	2.37	0.60
1:A:479:MET:HG3	1:A:1104:MET:HE3	1.80	0.60
1:A:493:ARG:NH2	1:A:786:ASP:OD1	2.32	0.60
1:A:572:THR:CG2	1:A:615:ARG:HB3	2.31	0.60
1:B:102:TYR:CE1	1:B:144:PHE:CE1	2.89	0.60
1:B:505:GLN:NE2	1:B:1000:LEU:CB	2.59	0.60
1:B:913:GLY:HA2	1:B:1349:ARG:CD	2.27	0.60
1:A:499:PHE:HE2	1:A:742:MET:HE1	1.65	0.60
1:B:183:PHE:CE1	1:B:188:LEU:HA	2.37	0.60
1:A:295:LYS:HE2	1:A:299:VAL:CG1	2.31	0.60
1:A:1315:LEU:HB3	1:A:1320:ASN:HD22	1.67	0.60
1:A:208:HIS:CD2	1:A:208:HIS:C	2.74	0.60
1:A:1170:GLN:OE1	1:A:1183:LEU:HB2	2.01	0.60
1:A:1432:VAL:HG22	1:A:1440:ALA:HB3	1.84	0.60
1:B:266:VAL:O	1:B:279:THR:HG21	2.01	0.60
1:B:447:LEU:HD21	1:B:674:ALA:CA	2.29	0.60
1:B:957:ARG:HH11	1:B:965:LEU:HD12	1.65	0.60
1:A:47:HIS:HE1	1:A:176:SER:HB3	1.63	0.60
1:A:731:SER:N	1:A:748:GLY:H	2.00	0.60
1:A:1388:THR:O	1:A:1388:THR:HG23	2.01	0.60
1:A:208:HIS:CE1	1:A:223:GLN:CD	2.75	0.60
1:A:260:MET:O	1:A:263:LEU:HB2	2.02	0.60
1:A:403:ASP:CG	1:A:407:LYS:NZ	2.54	0.60
1:A:479:MET:HG3	1:A:1104:MET:SD	2.42	0.60
1:A:565:THR:CG2	1:A:602:THR:HB	2.31	0.60
1:A:652:THR:HG21	1:A:703:GLY:HA3	1.84	0.60
1:A:950:THR:HG23	1:A:951:GLU:H	1.66	0.60
1:A:1311:THR:CG2	1:A:1312:SER:H	2.14	0.60
1:B:513:SER:CB	1:B:520:MET:HE1	2.23	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:670:LEU:O	1:B:670:LEU:HD22	2.01	0.60
1:B:938:PRO:O	1:B:939:GLY:C	2.35	0.60
1:A:249:THR:CG2	1:A:250:ARG:HG2	2.31	0.60
1:A:531:ASN:O	1:A:532:ILE:C	2.38	0.60
1:A:575:VAL:HG13	1:A:759:LEU:HD22	1.84	0.60
1:A:704:LEU:C	1:A:706:LYS:N	2.55	0.60
1:A:1090:PHE:N	1:A:1090:PHE:CD1	2.69	0.60
1:A:1171:VAL:O	1:A:1171:VAL:HG12	2.00	0.60
1:A:1221:PRO:HB2	1:A:1229:MET:CE	2.09	0.60
1:B:312:ASN:HB2	1:B:411:ALA:HB1	1.83	0.60
1:B:390:MET:HG3	1:B:406:LEU:HD23	1.84	0.60
1:B:570:ASP:O	1:B:588:ARG:NH2	2.34	0.60
1:B:1009:ILE:O	1:B:1010:ALA:C	2.37	0.60
1:A:369:THR:HG23	1:A:370:GLY:N	2.17	0.60
1:A:443:ASP:O	1:A:444:LYS:C	2.39	0.60
1:A:1038:ILE:O	1:A:1038:ILE:HG22	2.02	0.60
1:A:1401:LEU:HD11	1:A:1405:ILE:HD12	1.82	0.60
1:A:1412:PHE:N	1:A:1412:PHE:CD1	2.70	0.60
1:B:572:THR:HG23	1:B:573:PHE:N	2.17	0.60
1:A:351:ARG:HA	1:A:351:ARG:HE	1.66	0.60
1:A:1393:TYR:O	1:A:1394:VAL:CG2	2.44	0.60
1:B:119:GLU:O	1:B:120:LYS:C	2.38	0.60
1:B:248:GLU:HA	1:B:251:MET:HG2	1.84	0.60
1:B:417:ASP:O	1:B:420:VAL:N	2.33	0.60
1:B:508:ASN:HB2	1:B:509:PRO:HD2	1.84	0.60
1:B:625:GLY:O	1:B:626:ALA:C	2.39	0.60
1:B:728:ILE:HD12	1:B:1047:MET:HE1	1.81	0.60
1:B:1171:VAL:O	1:B:1171:VAL:HG12	2.02	0.60
1:A:731:SER:O	1:A:735:VAL:HG23	2.02	0.59
1:A:732:ARG:H	1:A:747:SER:HB3	1.65	0.59
1:A:761:GLN:O	1:A:764:THR:HB	2.02	0.59
1:A:1424:LEU:HD23	1:A:1428:ILE:HG13	1.83	0.59
1:B:464:ILE:CD1	1:B:779:TYR:CZ	2.81	0.59
1:A:312:ASN:HB2	1:A:411:ALA:HB1	1.83	0.59
1:A:182:MET:CE	1:A:217:PRO:HB3	2.27	0.59
1:A:253:HIS:CE1	1:A:254:PRO:CG	2.85	0.59
1:B:560:ASP:O	1:B:562:MET:N	2.36	0.59
1:B:989:GLN:O	1:B:1245:ARG:HD3	2.01	0.59
1:A:377:THR:HG22	1:A:378:GLN:HG3	1.84	0.59
1:A:515:ARG:NE	1:A:1367:TYR:HE1	1.99	0.59
1:B:572:THR:HG22	1:B:573:PHE:N	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:223:GLN:HB3	1:A:224:PRO:HA	1.85	0.59
1:A:466:HIS:CE1	1:A:684:PHE:CE1	2.91	0.59
1:A:607:THR:HB	1:A:645:ARG:HB2	1.84	0.59
1:A:918:THR:CG2	1:A:1256:MET:SD	2.90	0.59
1:B:149:TYR:CD2	1:B:286:ARG:HG3	2.37	0.59
1:B:227:MET:HE2	1:B:282:GLU:CG	2.32	0.59
1:B:559:ARG:NH1	1:B:568:GLU:OE2	2.35	0.59
1:B:1420:TYR:O	1:B:1422:SER:N	2.36	0.59
1:A:842:GLU:HB3	1:A:1156:ARG:HD3	1.84	0.59
1:A:1131:THR:HB	1:A:1134:LYS:CG	2.32	0.59
1:A:1356:VAL:HG11	1:A:1431:HIS:CG	2.38	0.59
1:B:182:MET:HE1	1:B:217:PRO:C	2.23	0.59
1:B:857:GLY:O	3:B:2474:FMN:C4A	2.50	0.59
1:A:728:ILE:HD12	1:A:1047:MET:HE1	1.83	0.59
1:B:120:LYS:CA	1:B:120:LYS:HE2	2.31	0.59
1:B:225:PHE:HB3	1:B:278:ASP:OD2	2.02	0.59
1:B:1420:TYR:OH	1:B:1466:LEU:HD22	2.02	0.59
1:A:208:HIS:ND1	1:A:223:GLN:OE1	2.35	0.59
1:A:603:HIS:CA	1:A:640:THR:HG22	2.32	0.59
1:A:826:ARG:NH1	1:A:826:ARG:CG	2.58	0.59
1:B:947:PHE:O	1:B:947:PHE:CD1	2.56	0.59
1:A:89:CYS:O	1:A:93:VAL:HG23	2.03	0.59
1:A:1425:LYS:CD	1:A:1447:TRP:CE2	2.86	0.59
1:B:446:GLU:O	1:B:447:LEU:C	2.40	0.59
1:B:447:LEU:CD1	1:B:451:GLN:CG	2.80	0.59
1:B:938:PRO:O	1:B:940:GLU:N	2.36	0.59
1:B:1052:VAL:O	1:B:1053:HIS:C	2.38	0.59
1:B:1109:HIS:ND1	1:B:1109:HIS:N	2.44	0.59
1:B:1131:THR:HG21	1:B:1133:GLU:HB2	1.83	0.59
3:B:2474:FMN:O4'	3:B:2474:FMN:C1'	2.10	0.59
1:A:259:HIS:O	1:A:260:MET:C	2.39	0.59
1:A:515:ARG:HD3	1:A:1367:TYR:CE1	2.31	0.59
1:B:227:MET:HE2	1:B:282:GLU:HG2	1.83	0.59
1:B:1132:PRO:O	1:B:1136:VAL:HG23	2.02	0.59
1:A:139:VAL:CG1	1:A:143:GLN:CB	2.81	0.58
1:A:249:THR:HG22	1:A:250:ARG:HG2	1.85	0.58
1:A:316:LEU:O	1:A:319:TYR:HB3	2.02	0.58
1:A:547:SER:C	1:A:549:VAL:H	2.05	0.58
1:B:193:PRO:O	1:B:194:ASP:C	2.40	0.58
1:B:397:SER:HB2	1:B:399:LYS:HG3	1.84	0.58
1:B:490:ASP:CG	1:B:787:ARG:HH21	2.06	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:551:THR:O	1:B:554:GLU:HG2	2.03	0.58
1:B:589:ILE:HD12	1:B:627:VAL:HG23	1.85	0.58
1:A:139:VAL:CG1	1:A:143:GLN:HB2	2.32	0.58
1:A:251:MET:HE3	1:A:533:LEU:HD11	1.83	0.58
1:A:330:PRO:HA	1:A:350:LEU:HB2	1.84	0.58
1:A:345:MET:CE	1:A:385:LEU:CB	2.81	0.58
1:A:884:SER:OG	1:A:885:GLY:N	2.33	0.58
1:A:1008:THR:HG22	1:A:1009:ILE:H	1.64	0.58
1:A:1221:PRO:CG	1:A:1229:MET:HE2	2.32	0.58
1:B:657:VAL:HG12	1:B:658:LEU:N	2.14	0.58
1:B:869:GLY:O	1:B:873:VAL:HG23	2.03	0.58
1:A:693:MET:O	1:A:694:ALA:C	2.37	0.58
1:B:875:MET:HE1	1:B:1139:PHE:CD2	2.38	0.58
1:B:913:GLY:CA	1:B:1349:ARG:HD3	2.27	0.58
1:B:1221:PRO:HD2	1:B:1229:MET:CE	2.26	0.58
1:A:24:ALA:O	1:A:26:LYS:N	2.36	0.58
1:A:359:THR:HG23	1:A:378:GLN:CA	2.33	0.58
1:A:1375:ILE:O	1:A:1375:ILE:HG22	2.02	0.58
1:B:31:ARG:NH1	1:B:368:GLU:OE1	2.37	0.58
1:A:56:LYS:O	1:A:57:ASP:C	2.42	0.58
1:A:57:ASP:O	1:A:58:HIS:C	2.41	0.58
1:A:145:GLU:O	1:A:146:LEU:C	2.41	0.58
1:A:511:ILE:CG2	1:A:512:ASP:N	2.59	0.58
1:A:558:MET:O	1:A:560:ASP:N	2.36	0.58
1:A:1317:THR:CG2	1:A:1318:ASN:N	2.64	0.58
1:B:4:GLY:HA3	1:B:207:TYR:CZ	2.39	0.58
1:B:653:HIS:O	1:B:654:TYR:C	2.39	0.58
1:A:825:LEU:HD12	1:A:1186:ARG:NH1	2.13	0.58
1:A:1307:VAL:HG12	1:A:1322:ILE:CD1	2.33	0.58
1:A:1425:LYS:HE2	1:A:1447:TRP:CD1	2.38	0.58
1:B:303:LEU:HD11	1:B:314:LYS:HG2	1.85	0.58
1:B:322:SER:O	1:B:528:ASN:ND2	2.35	0.58
1:B:875:MET:HE1	1:B:1139:PHE:CE2	2.39	0.58
1:B:1121:ASP:OD1	1:B:1121:ASP:C	2.42	0.58
1:B:1274:GLN:NE2	1:B:1293:ASN:HB3	2.17	0.58
1:A:236:THR:HG23	1:A:240:ASN:HD21	1.69	0.58
1:A:531:ASN:O	1:A:533:LEU:N	2.36	0.58
1:B:499:PHE:HE1	1:B:742:MET:HE1	1.68	0.58
1:B:997:THR:HG22	1:B:998:VAL:N	2.19	0.58
1:A:5:PHE:O	1:A:365:GLY:N	2.34	0.58
1:A:76:VAL:HG13	1:A:129:GLU:O	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:102:TYR:HA	1:A:136:ASN:OD1	2.04	0.58
1:A:291:ALA:HB3	1:A:292:PRO:CD	2.27	0.58
1:A:570:ASP:OD1	1:A:572:THR:HB	2.04	0.58
1:A:914:ARG:NH2	1:A:973:ASP:OD1	2.35	0.58
1:A:1251:THR:OG1	1:A:1281:VAL:HG11	2.04	0.58
1:B:573:PHE:HB2	1:B:574:PRO:HD2	1.85	0.58
1:B:838:VAL:CG1	1:B:839:PRO:N	2.66	0.58
1:B:838:VAL:O	1:B:1151:ALA:HB1	2.04	0.58
1:B:850:ARG:O	1:B:853:PHE:HB2	2.03	0.58
1:B:958:HIS:O	1:B:1369:THR:CG2	2.51	0.58
1:B:1222:LEU:H	1:B:1229:MET:HE2	1.67	0.58
1:A:150:ILE:HG22	1:A:150:ILE:O	2.02	0.58
1:A:606:LEU:C	1:A:607:THR:HG22	2.24	0.58
1:A:695:ASN:O	1:A:696:TYR:C	2.37	0.58
1:A:1221:PRO:CD	1:A:1229:MET:HE1	2.33	0.58
1:A:1285:LYS:HA	1:A:1304:THR:O	2.04	0.58
1:A:1289:MET:HE2	1:A:1289:MET:N	2.19	0.58
1:B:78:LEU:HB3	1:B:79:PRO:HD2	1.86	0.58
1:B:1336:LEU:HB3	1:B:1355:VAL:HG13	1.84	0.58
1:A:582:LEU:O	1:A:585:ALA:HB3	2.03	0.58
1:A:663:ALA:O	1:A:720:ARG:NE	2.35	0.58
1:A:672:GLN:HG3	1:A:693:MET:HE1	1.84	0.58
1:A:734:LEU:HD12	1:A:734:LEU:O	2.04	0.58
1:B:528:ASN:HB2	1:B:542:LEU:HD22	1.86	0.58
1:B:643:ASN:HB3	1:B:665:THR:HG21	1.85	0.58
1:B:918:THR:O	1:B:919:ALA:C	2.42	0.58
1:A:244:MET:O	1:A:246:ALA:N	2.36	0.57
1:B:484:PRO:HG3	1:B:823:MET:HG3	1.85	0.57
1:A:582:LEU:HB3	1:A:755:GLN:HE21	1.69	0.57
1:A:957:ARG:HD2	1:A:965:LEU:HD12	1.87	0.57
1:A:1447:TRP:CD2	1:A:1451:VAL:CG2	2.87	0.57
1:B:607:THR:HB	1:B:645:ARG:HB2	1.86	0.57
1:A:236:THR:HG23	1:A:240:ASN:ND2	2.19	0.57
1:A:457:THR:O	1:A:460:ASP:HB2	2.04	0.57
1:A:823:MET:O	1:A:824:GLN:NE2	2.36	0.57
1:B:211:TYR:O	1:B:212:SER:HB3	2.05	0.57
1:B:461:MET:HE1	1:B:465:LEU:HD23	1.84	0.57
1:B:515:ARG:NH2	1:B:966:ILE:HB	2.16	0.57
1:B:845:SER:O	1:B:848:ALA:HB3	2.04	0.57
1:B:1291:ASP:C	1:B:1291:ASP:OD1	2.42	0.57
1:A:893:ARG:HG2	1:A:903:TRP:HB2	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:218:THR:HG22	1:A:221:LEU:H	1.69	0.57
1:A:982:GLN:NE2	1:A:1240:ARG:HD2	2.16	0.57
1:B:295:LYS:HE2	1:B:299:VAL:CG1	2.35	0.57
1:B:731:SER:N	1:B:748:GLY:H	2.02	0.57
1:B:739:PHE:C	1:B:740:PRO:O	2.43	0.57
1:B:1368:MET:HB3	1:B:1387:MET:HG3	1.86	0.57
1:A:319:TYR:O	1:A:322:SER:OG	2.17	0.57
1:A:447:LEU:HD12	1:A:447:LEU:O	2.04	0.57
1:A:894:PHE:CD2	1:A:924:GLN:HG3	2.39	0.57
1:A:1282:GLN:CA	1:A:1302:GLY:O	2.52	0.57
1:A:1335:LYS:HA	1:A:1354:THR:O	2.05	0.57
1:B:100:PHE:O	1:B:137:LYS:CE	2.46	0.57
1:B:648:GLU:CG	1:B:648:GLU:O	2.51	0.57
1:B:1318:ASN:H	1:B:1318:ASN:ND2	2.01	0.57
1:A:447:LEU:CD2	1:A:674:ALA:HA	2.30	0.57
1:A:570:ASP:O	1:A:572:THR:N	2.37	0.57
1:B:136:ASN:OD1	1:B:136:ASN:N	2.38	0.57
1:B:312:ASN:OD1	1:B:312:ASN:N	2.25	0.57
1:A:419:TRP:O	1:A:422:ASN:HB2	2.05	0.57
1:A:547:SER:C	1:A:549:VAL:N	2.58	0.57
1:A:913:GLY:O	1:A:915:PHE:N	2.35	0.57
1:B:52:GLN:NE2	1:B:71:LEU:HB2	2.17	0.57
1:B:295:LYS:HZ3	1:B:299:VAL:HG12	1.68	0.57
1:B:777:GLY:O	1:B:788:HIS:CE1	2.51	0.57
1:A:45:GLY:HA3	1:A:224:PRO:HD2	1.85	0.57
1:A:61:VAL:O	1:A:61:VAL:CG1	2.51	0.57
1:A:139:VAL:HG12	1:A:143:GLN:HB2	1.87	0.57
1:A:260:MET:O	1:A:263:LEU:CB	2.52	0.57
1:A:447:LEU:HD13	1:A:670:LEU:CD2	2.33	0.57
1:A:560:ASP:O	1:A:562:MET:N	2.38	0.57
1:A:857:GLY:HA2	1:A:883:ASP:O	2.05	0.57
1:B:950:THR:HG23	1:B:951:GLU:H	1.69	0.57
1:A:551:THR:HG23	1:A:554:GLU:OE2	2.05	0.57
1:B:248:GLU:O	1:B:250:ARG:N	2.37	0.57
1:A:555:PHE:C	1:A:555:PHE:CD1	2.78	0.56
1:A:894:PHE:CE2	1:A:924:GLN:HG3	2.40	0.56
1:B:37:ASP:OD1	1:B:38:GLY:N	2.38	0.56
1:B:40:THR:O	1:B:40:THR:HG22	2.04	0.56
1:B:235:ASN:ND2	1:B:328:ASP:O	2.38	0.56
1:B:1220:ARG:N	1:B:1221:PRO:CD	2.67	0.56
3:B:2474:FMN:O4'	3:B:2474:FMN:H9	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:102:TYR:CE2	1:A:144:PHE:CD1	2.93	0.56
1:A:251:MET:SD	1:A:532:ILE:HD11	2.44	0.56
1:A:1076:GLY:CA	1:A:1145:GLU:HG2	2.29	0.56
1:B:80:ARG:HD3	1:B:125:ARG:O	2.05	0.56
1:B:823:MET:O	1:B:824:GLN:NE2	2.37	0.56
1:B:857:GLY:HA2	1:B:883:ASP:O	2.06	0.56
1:A:15:ARG:HD2	1:A:200:PHE:O	2.06	0.56
1:A:386:GLY:H	1:A:389:GLU:HG3	1.71	0.56
1:A:969:PRO:HD2	1:A:970:PRO:HD2	1.88	0.56
1:A:1010:ALA:HB2	1:A:1052:VAL:HG22	1.88	0.56
1:A:1075:THR:CG2	1:A:1076:GLY:N	2.66	0.56
1:A:1212:ASP:CG	1:A:1243:GLY:H	2.07	0.56
1:A:1288:VAL:O	1:A:1288:VAL:HG12	2.05	0.56
1:B:236:THR:HG22	1:B:328:ASP:H	1.62	0.56
1:B:239:GLY:O	1:B:243:TRP:CD1	2.59	0.56
1:B:466:HIS:ND1	1:B:678:ARG:NH1	2.53	0.56
1:B:513:SER:CB	1:B:520:MET:CE	2.79	0.56
1:B:660:GLY:HA2	1:B:721:GLY:H	1.68	0.56
1:B:1247:SER:OG	1:B:1280:ALA:HA	2.04	0.56
1:A:18:VAL:O	1:A:19:GLU:C	2.42	0.56
1:A:149:TYR:O	1:A:150:ILE:C	2.42	0.56
1:A:250:ARG:NH1	1:A:530:GLY:HA2	2.20	0.56
1:A:621:ILE:HG12	1:A:657:VAL:CG1	2.36	0.56
1:A:732:ARG:HD2	1:B:94:GLU:OE1	2.06	0.56
1:B:1:CYS:SG	1:B:211:TYR:HB2	2.45	0.56
1:B:1122:ASP:O	1:B:1126:GLN:HG3	2.04	0.56
1:B:1251:THR:OG1	1:B:1281:VAL:HG11	2.05	0.56
1:B:1348:VAL:O	1:B:1348:VAL:CG1	2.53	0.56
1:A:293:MET:HG2	1:A:410:LEU:CD2	2.35	0.56
1:A:409:HIS:O	1:A:413:LEU:HD23	2.06	0.56
1:A:652:THR:CG2	1:A:703:GLY:HA3	2.35	0.56
1:B:3:VAL:CG2	1:B:231:ASN:HB2	2.36	0.56
1:B:466:HIS:HB3	1:B:467:PRO:HD3	1.87	0.56
1:B:797:THR:HG21	1:B:812:LYS:HG2	1.86	0.56
1:A:296:MET:O	1:A:297:MET:C	2.40	0.56
1:A:711:MET:O	1:A:713:ILE:N	2.39	0.56
1:B:209:GLN:HG3	1:B:210:ARG:N	2.20	0.56
1:B:521:SER:C	1:B:522:LEU:HD23	2.26	0.56
1:B:1366:GLU:CG	1:B:1367:TYR:CD1	2.84	0.56
1:A:531:ASN:C	1:A:533:LEU:N	2.57	0.56
1:A:1446:ASP:O	1:A:1447:TRP:C	2.42	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:116:ILE:HD13	1:B:190:THR:CG2	2.35	0.56
1:B:570:ASP:OD1	1:B:572:THR:N	2.38	0.56
1:B:1366:GLU:HG2	1:B:1367:TYR:CE1	2.41	0.56
1:B:1393:TYR:CD2	1:B:1424:LEU:HD12	2.41	0.56
1:A:140:SER:O	1:A:141:ASP:C	2.44	0.56
1:B:1075:THR:HG23	1:B:1145:GLU:OE2	2.06	0.56
1:A:494:GLY:O	1:A:495:LEU:C	2.42	0.56
1:A:706:LYS:O	1:A:707:ILE:C	2.43	0.56
1:A:961:PRO:O	1:A:963:VAL:N	2.39	0.56
1:A:1226:GLY:O	1:A:1227:GLU:O	2.23	0.56
1:B:116:ILE:HD13	1:B:190:THR:HG22	1.88	0.56
1:B:162:GLU:HB3	1:B:164:ILE:HD12	1.88	0.56
1:B:449:ARG:HD3	1:B:765:ALA:O	2.06	0.56
1:B:918:THR:HG23	1:B:1256:MET:CE	2.36	0.56
1:B:1159:ASN:C	1:B:1161:VAL:H	2.09	0.56
1:A:246:ALA:O	1:A:247:HIS:C	2.42	0.56
1:A:481:ASP:C	1:A:481:ASP:OD1	2.44	0.56
1:A:677:GLU:C	1:A:677:GLU:OE1	2.44	0.56
1:A:711:MET:O	1:A:713:ILE:HG13	2.06	0.56
1:A:1163:GLY:O	1:A:1165:THR:N	2.39	0.56
1:A:813:TYR:O	1:A:816:GLN:HB2	2.06	0.55
1:A:1026:ASN:CG	1:A:1027:SER:N	2.60	0.55
1:B:985:TYR:CD1	1:B:1207:VAL:HG11	2.42	0.55
1:B:1222:LEU:C	1:B:1222:LEU:HD12	2.24	0.55
1:B:1326:THR:HG22	1:B:1329:TYR:HB2	1.89	0.55
1:A:51:PRO:HG3	1:A:200:PHE:CE2	2.41	0.55
1:A:230:HIS:CE1	1:A:234:ILE:HG13	2.35	0.55
1:A:670:LEU:O	1:A:670:LEU:CD2	2.53	0.55
1:A:823:MET:C	1:A:824:GLN:HE21	2.10	0.55
1:A:897:ASP:C	1:A:897:ASP:OD1	2.42	0.55
1:A:1054:GLN:O	1:A:1057:THR:N	2.39	0.55
1:A:1222:LEU:HD12	1:A:1222:LEU:O	2.07	0.55
1:A:1400:SER:O	1:A:1401:LEU:C	2.44	0.55
1:B:387:PRO:CD	1:B:1344:GLU:OE2	2.47	0.55
1:B:938:PRO:HG2	1:B:1041:ALA:HB1	1.88	0.55
1:A:392:ALA:O	1:A:400:LEU:CD1	2.53	0.55
1:A:1053:HIS:CE1	1:A:1062:ARG:HH11	2.24	0.55
1:B:254:PRO:HG2	1:B:255:ALA:N	2.10	0.55
1:B:481:ASP:C	1:B:481:ASP:OD1	2.44	0.55
1:B:1432:VAL:O	1:B:1433:THR:C	2.45	0.55
1:A:37:ASP:OD2	1:A:40:THR:HB	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:177:ILE:CD1	1:A:179:TYR:HE1	2.17	0.55
1:A:1111:ASN:OD1	1:A:1119:VAL:CG2	2.37	0.55
1:A:1305:ILE:O	1:A:1336:LEU:HD12	2.06	0.55
1:B:571:ALA:HB2	1:B:606:LEU:CD2	2.37	0.55
1:B:675:ILE:O	1:B:678:ARG:HB2	2.07	0.55
1:A:96:GLU:OE1	1:A:96:GLU:CA	2.54	0.55
1:A:932:VAL:O	1:A:933:ALA:CB	2.45	0.55
1:B:235:ASN:HB3	1:B:508:ASN:ND2	2.22	0.55
1:A:155:ILE:O	1:A:159:VAL:HG23	2.07	0.55
1:A:171:SER:OG	1:A:177:ILE:HA	2.06	0.55
1:A:938:PRO:O	1:A:940:GLU:N	2.40	0.55
1:A:1230:GLN:O	1:A:1231:LEU:HD23	2.06	0.55
1:B:148:LEU:HD22	1:B:172:LEU:HG	1.87	0.55
1:B:666:VAL:HG12	1:B:667:ASN:N	2.18	0.55
1:B:1045:TRP:O	1:B:1046:GLU:C	2.44	0.55
1:B:1093:GLY:O	1:B:1096:SER:N	2.39	0.55
1:A:75:GLN:C	1:A:76:VAL:HG12	2.27	0.55
1:A:269:VAL:HG23	1:A:270:GLY:N	2.22	0.55
1:B:269:VAL:HG23	1:B:270:GLY:N	2.21	0.55
1:B:612:GLY:O	1:B:762:HIS:CE1	2.60	0.55
1:A:235:ASN:ND2	1:A:236:THR:N	2.38	0.55
1:B:710:LYS:HG2	1:B:939:GLY:CA	2.18	0.55
1:A:973:ASP:OD2	1:A:1298:LYS:CE	2.54	0.55
1:B:621:ILE:HG13	1:B:658:LEU:CD1	2.37	0.55
1:B:776:GLY:O	1:B:782:ARG:HD2	2.07	0.55
1:A:1289:MET:H	1:A:1289:MET:HE3	1.72	0.55
1:A:1401:LEU:C	1:A:1401:LEU:CD1	2.74	0.55
1:B:1093:GLY:O	1:B:1094:THR:C	2.45	0.55
1:B:1322:ILE:HG23	1:B:1323:ILE:HG23	1.88	0.55
1:A:149:TYR:HE1	1:A:282:GLU:OE1	1.91	0.54
1:A:193:PRO:O	1:A:194:ASP:C	2.43	0.54
1:A:430:VAL:HG11	1:A:554:GLU:HB2	1.88	0.54
1:A:1131:THR:CG2	1:A:1133:GLU:OE1	2.54	0.54
1:B:60:LYS:O	1:B:63:GLY:N	2.39	0.54
1:B:223:GLN:HB3	1:B:224:PRO:CA	2.37	0.54
1:B:515:ARG:CZ	1:B:1367:TYR:HE2	2.20	0.54
1:B:820:ARG:CB	1:B:821:PRO:HD2	2.37	0.54
1:B:1008:THR:HG22	1:B:1009:ILE:H	1.70	0.54
1:A:22:ILE:O	1:A:23:GLU:C	2.45	0.54
1:A:631:LEU:HD13	1:A:636:LEU:HB3	1.90	0.54
1:A:824:GLN:HE21	1:A:824:GLN:HA	1.65	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1212:ASP:OD2	1:A:1243:GLY:C	2.44	0.54
1:B:61:VAL:O	1:B:61:VAL:HG12	2.08	0.54
1:B:744:SER:O	1:B:746:ILE:N	2.40	0.54
1:A:240:ASN:HB3	1:A:327:TRP:CZ2	2.41	0.54
1:A:313:HIS:H	1:A:313:HIS:CD2	2.24	0.54
1:A:452:GLN:NE2	1:A:764:THR:HG21	2.21	0.54
1:A:468:MET:HG2	1:A:699:ALA:CB	2.38	0.54
1:A:826:ARG:HH11	1:A:826:ARG:CG	1.97	0.54
1:A:1300:LEU:HD12	1:A:1301:SER:N	2.22	0.54
1:A:1316:GLU:O	1:A:1317:THR:C	2.45	0.54
1:B:676:ALA:O	1:B:677:GLU:C	2.45	0.54
1:B:953:ILE:HG22	1:B:954:ALA:N	2.22	0.54
1:A:572:THR:HG23	1:A:615:ARG:HB3	1.90	0.54
1:A:629:THR:O	1:A:632:ILE:N	2.39	0.54
1:A:950:THR:CG2	1:A:952:MET:H	2.15	0.54
1:A:1302:GLY:HA2	1:A:1334:GLY:N	2.23	0.54
1:A:1356:VAL:HG11	1:A:1431:HIS:CB	2.36	0.54
1:B:295:LYS:CE	1:B:299:VAL:HG12	2.37	0.54
1:B:1077:ARG:O	1:B:1078:ASP:C	2.45	0.54
1:A:846:ILE:O	1:A:847:THR:C	2.45	0.54
1:B:403:ASP:C	1:B:403:ASP:OD1	2.46	0.54
1:B:1055:VAL:O	1:B:1056:LEU:C	2.41	0.54
1:A:67:PRO:HG3	1:A:105:TYR:OH	2.08	0.54
1:A:249:THR:OG1	1:A:635:ASN:HB3	2.07	0.54
1:A:442:MET:HG2	1:A:446:GLU:HG2	1.88	0.54
1:A:1077:ARG:O	1:A:1078:ASP:C	2.44	0.54
1:A:1304:THR:HG23	1:A:1335:LYS:HB2	1.89	0.54
1:A:1336:LEU:HB3	1:A:1355:VAL:HG13	1.88	0.54
1:A:1394:VAL:O	1:A:1394:VAL:CG1	2.55	0.54
1:B:1121:ASP:O	1:B:1125:ARG:HG3	2.07	0.54
1:A:35:ASP:HB3	1:A:37:ASP:H	1.71	0.54
1:A:518:ARG:NH2	1:A:1382:ASN:HD22	2.06	0.54
1:A:643:ASN:ND2	1:A:665:THR:HB	2.23	0.54
1:A:1222:LEU:H	1:A:1229:MET:CE	2.20	0.54
1:A:1290:GLY:O	1:A:1291:ASP:CB	2.53	0.54
1:B:47:HIS:CE1	1:B:176:SER:HB3	2.42	0.54
1:B:529:LEU:HB3	1:B:638:THR:OG1	2.08	0.54
1:B:1054:GLN:O	1:B:1057:THR:HB	2.08	0.54
1:A:92:ILE:O	1:A:93:VAL:C	2.45	0.54
1:A:561:TYR:CD1	1:A:561:TYR:O	2.61	0.54
1:A:664:THR:HA	1:A:720:ARG:NE	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:937:LYS:HE3	1:A:1033:SER:CB	2.34	0.54
1:A:937:LYS:HB2	1:A:940:GLU:HG3	1.89	0.54
1:A:1369:THR:C	1:A:1389:GLY:O	2.46	0.54
1:B:62:ILE:HG22	1:B:62:ILE:O	2.08	0.54
1:B:720:ARG:C	1:B:722:GLY:H	2.11	0.54
1:B:824:GLN:CA	1:B:824:GLN:HE21	2.20	0.54
1:B:1131:THR:O	1:B:1134:LYS:N	2.41	0.54
1:A:236:THR:OG1	1:A:718:SER:HB3	2.07	0.54
1:A:481:ASP:HB2	1:A:1038:ILE:O	2.08	0.54
1:A:787:ARG:HH12	1:A:821:PRO:CB	2.17	0.54
1:A:853:PHE:CE1	1:A:1079:ILE:HD13	2.42	0.54
1:A:1093:GLY:O	1:A:1096:SER:N	2.41	0.54
1:A:1320:ASN:C	1:A:1341:GLN:HG3	2.28	0.54
1:B:249:THR:OG1	1:B:635:ASN:HB3	2.08	0.54
1:B:743:VAL:CG1	1:B:745:ARG:HG3	2.38	0.54
1:B:897:ASP:C	1:B:897:ASP:OD1	2.45	0.54
1:B:1438:ARG:O	1:B:1439:PHE:C	2.45	0.54
1:A:251:MET:CE	1:A:533:LEU:HD11	2.37	0.54
1:A:573:PHE:HB2	1:A:574:PRO:CD	2.36	0.54
1:A:1061:LEU:O	1:A:1064:ARG:HB2	2.08	0.54
1:B:260:MET:O	1:B:263:LEU:CB	2.56	0.54
1:A:61:VAL:O	1:A:61:VAL:HG12	2.07	0.53
1:A:302:ALA:HA	1:A:347:ARG:NH1	2.23	0.53
1:A:515:ARG:CZ	1:A:1367:TYR:HE1	2.20	0.53
1:A:746:ILE:O	1:A:747:SER:C	2.43	0.53
1:A:1427:LEU:O	1:A:1430:GLU:N	2.41	0.53
1:B:602:THR:O	1:B:640:THR:CG2	2.57	0.53
1:B:1388:THR:O	1:B:1388:THR:HG23	2.06	0.53
1:B:1470:VAL:O	1:B:1470:VAL:CG1	2.55	0.53
1:A:708:MET:O	1:A:710:LYS:N	2.41	0.53
1:A:976:SER:O	1:A:979:ASP:HB2	2.08	0.53
1:B:731:SER:HB2	1:B:747:SER:HB2	1.89	0.53
1:B:746:ILE:HG12	1:B:1182:ASP:O	2.08	0.53
1:B:1424:LEU:HD21	1:B:1428:ILE:HD11	1.89	0.53
1:A:625:GLY:O	1:A:626:ALA:C	2.42	0.53
1:B:443:ASP:O	1:B:446:GLU:N	2.40	0.53
1:A:253:HIS:CE1	1:A:254:PRO:HG2	2.44	0.53
1:A:1016:ALA:O	1:A:1017:ASN:HB2	2.08	0.53
1:A:1121:ASP:OD1	1:A:1122:ASP:N	2.42	0.53
1:B:249:THR:O	1:B:249:THR:CG2	2.55	0.53
1:A:565:THR:HG22	1:A:602:THR:HB	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:571:ALA:HB2	1:A:606:LEU:CD2	2.39	0.53
1:A:1057:THR:HG22	1:A:1190:VAL:HG11	1.91	0.53
1:A:1435:THR:HG23	1:A:1437:SER:N	2.23	0.53
1:B:295:LYS:CD	1:B:390:MET:HE3	2.24	0.53
1:B:443:ASP:O	1:B:445:ALA:N	2.41	0.53
1:B:891:PRO:HA	1:B:894:PHE:CD2	2.43	0.53
1:B:917:VAL:HG13	1:B:922:LEU:HD21	1.90	0.53
1:B:1146:VAL:O	1:B:1147:ARG:C	2.46	0.53
1:A:369:THR:HG22	1:A:1293:ASN:ND2	2.23	0.53
1:A:572:THR:CG2	1:A:615:ARG:NE	2.72	0.53
1:A:843:VAL:HG12	1:A:844:GLU:H	1.70	0.53
1:B:40:THR:O	1:B:40:THR:CG2	2.57	0.53
1:B:348:ASN:HB2	1:B:350:LEU:HG	1.89	0.53
1:B:857:GLY:O	3:B:2474:FMN:C10	2.56	0.53
1:B:1221:PRO:HB2	1:B:1229:MET:HE2	1.90	0.53
1:B:1468:VAL:O	1:B:1468:VAL:HG12	2.07	0.53
1:A:562:MET:HE3	1:A:566:ALA:HB2	1.90	0.53
1:A:838:VAL:HG12	1:A:839:PRO:CD	2.32	0.53
1:A:1220:ARG:N	1:A:1221:PRO:CD	2.71	0.53
1:B:978:GLU:HG3	1:B:979:ASP:H	1.73	0.53
1:A:119:GLU:O	1:A:120:LYS:C	2.47	0.53
1:A:608:ASP:OD2	1:A:646:THR:HA	2.09	0.53
1:A:826:ARG:HG2	1:A:1046:GLU:OE2	2.07	0.53
1:A:1374:VAL:C	1:A:1375:ILE:HG13	2.28	0.53
1:A:1438:ARG:O	1:A:1439:PHE:C	2.45	0.53
1:B:240:ASN:ND2	1:B:327:TRP:CD2	2.77	0.53
1:B:615:ARG:HG2	1:B:615:ARG:HH11	1.73	0.53
1:B:1316:GLU:O	1:B:1317:THR:C	2.46	0.53
1:A:660:GLY:HA2	1:A:721:GLY:H	1.74	0.53
1:A:1274:GLN:HE21	1:A:1293:ASN:HB3	1.74	0.53
1:A:1385:ALA:HB2	1:A:1406:ASN:HD22	1.74	0.53
1:B:693:MET:O	1:B:694:ALA:C	2.44	0.53
1:B:1161:VAL:O	1:B:1161:VAL:CG1	2.57	0.53
1:B:1401:LEU:HB3	1:B:1402:PRO:HD3	1.91	0.53
1:A:31:ARG:NH1	1:A:368:GLU:OE2	2.42	0.53
1:A:317:ILE:CG2	1:A:321:ASN:HD21	2.19	0.53
1:A:1307:VAL:HG12	1:A:1322:ILE:HD13	1.89	0.53
1:B:256:PHE:O	1:B:259:HIS:HB2	2.08	0.53
1:B:447:LEU:HD11	1:B:451:GLN:NE2	2.23	0.53
1:B:830:GLU:HG2	1:B:831:LEU:N	2.24	0.53
1:B:1051:GLU:O	1:B:1052:VAL:C	2.46	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:250:ARG:O	1:A:531:ASN:ND2	2.42	0.52
1:B:281:PHE:O	1:B:285:VAL:HG23	2.09	0.52
1:B:602:THR:O	1:B:640:THR:HA	2.09	0.52
1:B:1003:ARG:HG3	1:B:1004:SER:N	2.24	0.52
1:B:1058:LEU:O	1:B:1058:LEU:CD2	2.57	0.52
1:B:1452:THR:HG22	1:B:1453:LYS:HG3	1.91	0.52
1:A:389:GLU:HA	1:A:403:ASP:OD2	2.09	0.52
1:A:587:ARG:O	1:A:590:ARG:HB2	2.09	0.52
1:A:1316:GLU:O	1:A:1318:ASN:N	2.42	0.52
1:B:500:ARG:HD2	1:B:728:ILE:CG2	2.39	0.52
1:B:549:VAL:O	1:B:697:LYS:HE3	2.10	0.52
1:B:1233:TYR:O	1:B:1268:LEU:HA	2.09	0.52
1:B:1323:ILE:HD12	1:B:1327:VAL:HG21	1.91	0.52
1:A:393:VAL:HG12	1:A:394:ASP:N	2.23	0.52
1:A:753:GLY:O	1:A:754:ILE:C	2.45	0.52
1:A:1375:ILE:HB	1:A:1394:VAL:HG22	1.91	0.52
1:B:295:LYS:CB	1:B:390:MET:HE1	2.39	0.52
1:B:1047:MET:HE2	1:B:1186:ARG:NH2	2.02	0.52
1:B:1050:SER:O	1:B:1051:GLU:C	2.46	0.52
1:B:1432:VAL:O	1:B:1436:GLN:N	2.40	0.52
1:A:659:ILE:HA	1:A:663:ALA:HB3	1.91	0.52
1:A:731:SER:CA	1:A:747:SER:HB2	2.40	0.52
1:A:804:ASN:O	1:A:805:ASP:HB3	2.08	0.52
1:A:1420:TYR:OH	1:A:1466:LEU:HD22	2.09	0.52
1:B:574:PRO:HD3	1:B:615:ARG:HH12	1.74	0.52
1:B:1075:THR:CG2	1:B:1076:GLY:N	2.73	0.52
1:B:1326:THR:HG22	1:B:1326:THR:O	2.10	0.52
1:B:1338:ALA:O	1:B:1340:GLY:N	2.43	0.52
1:B:1396:ASP:C	1:B:1396:ASP:OD1	2.45	0.52
1:A:73:VAL:O	1:A:172:LEU:HA	2.09	0.52
1:A:143:GLN:O	1:A:143:GLN:NE2	2.41	0.52
1:A:1061:LEU:O	1:A:1063:HIS:N	2.43	0.52
1:A:1113:CYS:O	1:A:1115:VAL:N	2.43	0.52
1:A:1122:ASP:O	1:A:1126:GLN:HG3	2.09	0.52
1:A:1219:ALA:O	1:A:1220:ARG:C	2.47	0.52
1:B:349:GLY:HA3	1:B:387:PRO:HG3	1.91	0.52
1:B:484:PRO:HG3	1:B:823:MET:CG	2.40	0.52
1:B:575:VAL:HG23	1:B:614:ALA:O	2.08	0.52
1:B:763:ALA:O	1:B:765:ALA:N	2.42	0.52
1:B:855:THR:HG22	1:B:855:THR:O	2.09	0.52
1:B:1470:VAL:O	1:B:1470:VAL:HG13	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:845:SER:O	1:A:848:ALA:HB3	2.09	0.52
1:A:1011:ALA:O	1:A:1014:ALA:HB3	2.09	0.52
1:B:494:GLY:O	1:B:495:LEU:C	2.48	0.52
1:B:1088:GLU:HG2	1:B:1162:ILE:HD13	1.92	0.52
1:B:1428:ILE:HG22	1:B:1428:ILE:O	2.10	0.52
1:A:294:VAL:O	1:A:295:LYS:C	2.47	0.52
1:A:432:THR:O	1:A:434:SER:N	2.43	0.52
1:A:560:ASP:O	1:A:561:TYR:C	2.46	0.52
1:A:651:ASP:OD1	1:A:651:ASP:N	2.43	0.52
1:B:236:THR:HG22	1:B:328:ASP:N	2.24	0.52
1:B:419:TRP:O	1:B:540:THR:CB	2.58	0.52
1:B:629:THR:O	1:B:632:ILE:N	2.42	0.52
1:B:1394:VAL:HG11	1:B:1401:LEU:CD2	2.40	0.52
1:A:1007:GLY:N	1:A:1051:GLU:OE2	2.41	0.52
1:A:1398:ASP:O	1:A:1399:ASP:C	2.47	0.52
1:B:295:LYS:HE2	1:B:299:VAL:HG12	1.92	0.52
1:B:342:VAL:HG12	1:B:343:GLY:N	2.24	0.52
1:B:672:GLN:HG3	1:B:693:MET:SD	2.50	0.52
1:A:175:ARG:NH2	1:A:203:ASP:OD2	2.42	0.52
1:A:281:PHE:O	1:A:285:VAL:HG23	2.11	0.52
1:A:528:ASN:HB2	1:A:542:LEU:HD22	1.90	0.52
1:A:782:ARG:C	1:A:784:SER:H	2.12	0.52
1:A:1155:PHE:N	1:A:1155:PHE:CD1	2.77	0.52
1:A:1354:THR:HA	1:A:1372:THR:O	2.10	0.52
1:A:105:TYR:H	1:A:105:TYR:HD1	1.57	0.51
1:A:248:GLU:C	1:A:250:ARG:H	2.13	0.51
1:A:414:LYS:CB	1:A:415:PRO:CD	2.87	0.51
1:A:572:THR:CG2	1:A:573:PHE:N	2.73	0.51
1:A:1207:VAL:HG13	1:A:1208:PRO:CD	2.39	0.51
1:A:1438:ARG:O	1:A:1440:ALA:N	2.42	0.51
1:B:437:GLY:O	1:B:438:GLU:C	2.48	0.51
1:B:621:ILE:HG12	1:B:657:VAL:CG1	2.40	0.51
1:A:227:MET:CE	1:A:282:GLU:CG	2.88	0.51
1:A:266:VAL:O	1:A:279:THR:HG23	2.08	0.51
1:A:729:GLY:C	1:A:748:GLY:HA3	2.29	0.51
1:A:1375:ILE:O	1:A:1377:GLY:N	2.39	0.51
1:B:628:HIS:O	1:B:629:THR:C	2.47	0.51
1:A:250:ARG:NE	1:A:639:PHE:CE1	2.73	0.51
1:A:672:GLN:CG	1:A:693:MET:CE	2.79	0.51
1:A:997:THR:CG2	1:A:998:VAL:N	2.73	0.51
1:A:1250:VAL:HG13	1:A:1254:PHE:HD2	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:5:PHE:CE2	1:B:365:GLY:HA3	2.45	0.51
1:B:302:ALA:CA	1:B:347:ARG:NH1	2.72	0.51
1:B:555:PHE:CD1	1:B:556:ARG:N	2.77	0.51
1:B:1018:ALA:O	1:B:1065:VAL:HG23	2.11	0.51
1:B:446:GLU:O	1:B:449:ARG:N	2.43	0.51
1:B:511:ILE:CG2	1:B:512:ASP:N	2.73	0.51
1:B:528:ASN:HB3	1:B:542:LEU:HD22	1.92	0.51
1:A:133:VAL:CG1	1:A:134:GLY:N	2.74	0.51
1:A:1135:VAL:O	1:A:1136:VAL:C	2.45	0.51
1:A:1184:ASN:O	1:A:1187:LEU:N	2.44	0.51
1:B:61:VAL:O	1:B:61:VAL:CG1	2.58	0.51
1:B:485:ILE:O	1:B:486:ALA:C	2.48	0.51
1:B:831:LEU:HD13	1:B:1084:MET:HE3	1.93	0.51
1:B:1077:ARG:HG2	1:B:1078:ASP:N	2.26	0.51
1:B:1245:ARG:HG3	1:B:1245:ARG:O	2.10	0.51
1:A:449:ARG:O	1:A:450:ARG:O	2.28	0.51
1:A:522:LEU:CG	1:A:705:LEU:HD21	2.38	0.51
1:A:705:LEU:HD23	1:A:705:LEU:N	2.26	0.51
1:A:776:GLY:O	1:A:782:ARG:HD2	2.10	0.51
1:B:1092:ILE:HG22	1:B:1092:ILE:O	2.10	0.51
1:A:1:CYS:HB3	2:A:2473:OMT:HE3	1.93	0.51
1:A:706:LYS:NZ	1:A:940:GLU:OE1	2.40	0.51
1:A:731:SER:HA	1:A:747:SER:CA	2.40	0.51
1:B:537:GLU:HG3	1:B:538:THR:N	2.08	0.51
1:B:985:TYR:CE1	1:B:1207:VAL:HG11	2.44	0.51
1:A:218:THR:HG22	1:A:218:THR:O	2.08	0.51
1:A:342:VAL:HG11	1:A:390:MET:CE	2.37	0.51
1:A:479:MET:HG3	1:A:1104:MET:HE1	1.92	0.51
1:A:710:LYS:CG	1:A:939:GLY:HA3	2.34	0.51
1:A:957:ARG:HD2	1:A:965:LEU:CD1	2.41	0.51
1:B:704:LEU:C	1:B:706:LYS:H	2.14	0.51
1:B:763:ALA:O	1:B:764:THR:C	2.48	0.51
1:B:1289:MET:CE	1:B:1289:MET:CB	2.87	0.51
1:B:1438:ARG:O	1:B:1441:ALA:N	2.43	0.51
1:B:1447:TRP:CD2	1:B:1451:VAL:HG22	2.45	0.51
1:A:159:VAL:HG21	1:A:167:PHE:CD2	2.46	0.51
1:A:175:ARG:HH22	1:A:203:ASP:CG	2.14	0.51
1:A:244:MET:O	1:A:245:LYS:C	2.44	0.51
1:A:791:GLU:O	1:A:795:ILE:HG13	2.11	0.51
1:A:855:THR:O	1:A:855:THR:HG22	2.10	0.51
1:A:893:ARG:HG2	1:A:903:TRP:CB	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1143:ALA:O	1:A:1144:GLU:C	2.45	0.51
1:A:1401:LEU:N	1:A:1402:PRO:HD2	2.26	0.51
1:A:1417:VAL:CG1	1:A:1418:GLY:N	2.73	0.51
1:B:74:GLY:HA2	1:B:172:LEU:HD13	1.92	0.51
1:B:131:ILE:HG23	1:B:131:ILE:O	2.09	0.51
1:A:1220:ARG:HG3	1:A:1224:GLU:CG	2.38	0.51
1:A:1415:ILE:CG2	1:A:1421:GLU:HB2	2.41	0.51
1:B:496:HIS:O	1:B:653:HIS:HE1	1.94	0.51
1:B:503:PHE:N	1:B:503:PHE:CD1	2.79	0.51
1:B:746:ILE:CG2	1:B:1182:ASP:HB3	2.22	0.51
1:A:209:GLN:HG3	1:A:210:ARG:H	1.76	0.50
1:A:244:MET:HA	1:A:247:HIS:HB2	1.92	0.50
1:A:521:SER:OG	1:A:522:LEU:N	2.44	0.50
1:A:556:ARG:O	1:A:557:ALA:C	2.44	0.50
1:A:1253:LYS:HG3	1:A:1253:LYS:O	2.11	0.50
1:B:447:LEU:O	1:B:451:GLN:HG3	2.11	0.50
1:B:875:MET:HE2	1:B:1139:PHE:HE2	1.76	0.50
1:B:1376:LEU:HB3	1:B:1439:PHE:HE2	1.75	0.50
1:A:1:CYS:HB3	2:A:2473:OMT:CE	2.41	0.50
1:A:359:THR:HG23	1:A:378:GLN:CB	2.41	0.50
1:A:547:SER:OG	1:A:549:VAL:HB	2.11	0.50
1:A:707:ILE:HA	1:A:710:LYS:HD2	1.92	0.50
1:A:1054:GLN:O	1:A:1055:VAL:C	2.49	0.50
1:B:302:ALA:CB	1:B:347:ARG:NH1	2.73	0.50
1:B:679:HIS:NE2	1:B:687:MET:O	2.42	0.50
1:B:846:ILE:O	1:B:847:THR:C	2.48	0.50
1:A:94:GLU:HG2	1:A:104:ILE:HD13	1.92	0.50
1:A:1110:SER:C	1:A:1112:THR:HG23	2.32	0.50
1:A:1359:GLY:O	1:A:1360:CYS:CB	2.58	0.50
1:B:485:ILE:O	1:B:488:LEU:N	2.43	0.50
1:B:499:PHE:CE1	1:B:742:MET:HE1	2.46	0.50
1:B:536:ASP:OD1	1:B:536:ASP:O	2.28	0.50
1:B:868:HIS:O	1:B:869:GLY:C	2.49	0.50
1:B:1183:LEU:O	1:B:1187:LEU:HG	2.11	0.50
1:A:235:ASN:ND2	1:A:236:THR:HB	2.27	0.50
1:A:509:PRO:HB3	1:A:975:TYR:HD1	1.77	0.50
1:A:763:ALA:O	1:A:767:ASN:HB2	2.11	0.50
1:B:556:ARG:O	1:B:557:ALA:C	2.48	0.50
1:B:1406:ASN:C	1:B:1406:ASN:OD1	2.48	0.50
1:A:228:LEU:HD22	1:A:278:ASP:HA	1.94	0.50
1:A:309:THR:CG2	1:A:314:LYS:HG3	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:594:GLU:O	1:A:595:ASP:C	2.48	0.50
1:A:657:VAL:O	1:A:658:LEU:C	2.48	0.50
1:B:243:TRP:CD1	1:B:325:GLU:OE1	2.65	0.50
1:B:337:ASP:C	1:B:337:ASP:OD1	2.49	0.50
1:B:351:ARG:HH12	1:B:978:GLU:CD	2.14	0.50
1:B:979:ASP:O	1:B:980:LEU:C	2.49	0.50
1:B:1058:LEU:C	1:B:1059:ASN:HD22	2.15	0.50
1:A:24:ALA:C	1:A:26:LYS:N	2.65	0.50
1:A:62:ILE:O	1:A:62:ILE:CG2	2.60	0.50
1:A:105:TYR:N	1:A:105:TYR:CD1	2.80	0.50
1:A:369:THR:O	1:A:371:MET:N	2.43	0.50
1:A:394:ASP:OD1	1:A:396:GLN:N	2.43	0.50
1:A:404:ARG:CB	1:A:405:GLU:OE1	2.51	0.50
1:A:643:ASN:HB3	1:A:665:THR:HG21	1.93	0.50
1:A:676:ALA:O	1:A:679:HIS:N	2.45	0.50
1:A:731:SER:HA	1:A:747:SER:CB	2.42	0.50
1:A:746:ILE:HG23	1:A:1182:ASP:N	2.21	0.50
1:B:197:ASP:OD1	1:B:199:ARG:HB2	2.11	0.50
1:B:476:ILE:HA	1:B:1034:PRO:HA	1.94	0.50
1:B:720:ARG:O	1:B:722:GLY:N	2.45	0.50
1:B:1002:SER:HB2	1:B:1048:GLY:HA3	1.93	0.50
1:B:1068:ARG:NE	1:B:1089:GLU:OE1	2.38	0.50
1:B:1131:THR:CG2	1:B:1133:GLU:N	2.72	0.50
1:A:1:CYS:SG	1:A:211:TYR:HD2	2.35	0.50
1:A:54:PHE:HA	1:A:199:ARG:HD2	1.94	0.50
1:A:244:MET:C	1:A:246:ALA:N	2.65	0.50
1:A:359:THR:HG23	1:A:378:GLN:C	2.32	0.50
1:A:484:PRO:HG3	1:A:823:MET:HG3	1.94	0.50
1:A:1023:ILE:HD12	1:A:1023:ILE:N	2.27	0.50
1:A:1424:LEU:O	1:A:1425:LYS:C	2.49	0.50
1:B:260:MET:O	1:B:261:GLN:C	2.48	0.50
1:B:797:THR:HG23	1:B:812:LYS:HE2	1.94	0.50
1:B:911:ALA:O	1:B:912:SER:C	2.49	0.50
1:B:1460:LYS:O	1:B:1462:MET:N	2.44	0.50
1:A:80:ARG:HG3	1:A:80:ARG:O	2.12	0.50
1:A:248:GLU:C	1:A:250:ARG:N	2.64	0.50
1:A:970:PRO:O	1:A:970:PRO:CG	2.60	0.50
1:A:1075:THR:O	1:A:1076:GLY:C	2.50	0.50
1:A:1421:GLU:HG3	1:A:1451:VAL:HG11	1.94	0.50
1:B:451:GLN:OE1	1:B:773:LEU:HD11	2.11	0.50
1:B:505:GLN:NE2	1:B:1001:VAL:N	2.55	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:746:ILE:CG2	1:B:1182:ASP:CB	2.86	0.50
1:B:953:ILE:O	1:B:954:ALA:C	2.50	0.50
1:A:30:HIS:ND1	1:A:1238:THR:HA	2.26	0.50
1:A:52:GLN:NE2	1:A:71:LEU:HB2	2.27	0.50
1:A:312:ASN:HB2	1:A:411:ALA:CB	2.41	0.50
1:A:443:ASP:O	1:A:446:GLU:N	2.28	0.50
1:A:466:HIS:HB3	1:A:467:PRO:HD3	1.94	0.50
1:A:652:THR:HG21	1:A:703:GLY:CA	2.41	0.50
1:A:731:SER:HB2	1:A:747:SER:HB2	1.94	0.50
1:A:798:LEU:O	1:A:802:VAL:HG22	2.12	0.50
1:A:1108:CYS:SG	5:A:2476:F3S:S4	2.94	0.50
1:A:1318:ASN:H	1:A:1318:ASN:HD22	1.60	0.50
1:B:236:THR:OG1	1:B:718:SER:HB3	2.12	0.50
1:B:355:TYR:CD1	1:B:355:TYR:O	2.65	0.50
1:B:569:ILE:HG22	1:B:589:ILE:HG22	1.93	0.50
1:B:1207:VAL:HG13	1:B:1208:PRO:HD2	1.92	0.50
1:B:1435:THR:HG23	1:B:1437:SER:CB	2.42	0.50
1:A:225:PHE:HB3	1:A:278:ASP:OD2	2.12	0.49
1:A:353:MET:O	1:A:353:MET:HG3	2.12	0.49
1:A:621:ILE:HG12	1:A:657:VAL:HG12	1.93	0.49
1:A:1243:GLY:O	1:A:1244:THR:C	2.49	0.49
1:B:1204:ARG:O	1:B:1206:GLU:N	2.45	0.49
1:A:24:ALA:O	1:A:27:ALA:N	2.27	0.49
1:A:339:ARG:HG3	1:A:396:GLN:HG3	1.93	0.49
1:A:359:THR:CG2	1:A:378:GLN:HA	2.42	0.49
1:A:442:MET:CE	1:A:447:LEU:HA	2.41	0.49
1:B:419:TRP:O	1:B:540:THR:CG2	2.59	0.49
1:B:670:LEU:HD22	1:B:670:LEU:C	2.31	0.49
1:B:696:TYR:CZ	1:B:700:ILE:CD1	2.94	0.49
1:B:949:VAL:C	1:B:950:THR:O	2.48	0.49
1:B:1407:ASP:O	1:B:1408:GLU:C	2.50	0.49
1:A:90:ARG:HB3	1:A:107:TRP:CH2	2.48	0.49
1:A:508:ASN:HB2	1:A:509:PRO:HD2	1.95	0.49
1:A:1400:SER:O	1:A:1403:LEU:N	2.27	0.49
1:B:479:MET:HG3	1:B:1104:MET:SD	2.52	0.49
1:A:47:HIS:HE1	1:A:176:SER:CB	2.25	0.49
1:A:51:PRO:HG3	1:A:200:PHE:CD2	2.48	0.49
1:A:236:THR:HG22	1:A:328:ASP:N	2.26	0.49
1:A:492:TYR:CG	1:A:761:GLN:HG2	2.47	0.49
1:B:113:ASN:HD21	1:B:115:ASP:H	1.47	0.49
1:B:290:THR:CG2	1:B:291:ALA:N	2.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:354:ARG:NH2	1:B:1292:ALA:O	2.46	0.49
1:B:515:ARG:HD3	1:B:1367:TYR:CE2	2.40	0.49
1:B:1059:ASN:O	1:B:1060:ARG:HB2	2.12	0.49
1:A:213:THR:O	1:A:214:ASN:ND2	2.43	0.49
1:A:291:ALA:CB	1:A:292:PRO:HD3	2.31	0.49
1:A:636:LEU:O	1:A:637:ARG:C	2.50	0.49
1:A:960:THR:CG2	1:A:963:VAL:HG21	2.42	0.49
1:A:1054:GLN:O	1:A:1057:THR:HB	2.12	0.49
1:A:1368:MET:HB3	1:A:1387:MET:HG3	1.94	0.49
1:B:30:HIS:HD2	1:B:31:ARG:N	2.10	0.49
1:B:621:ILE:HG13	1:B:658:LEU:HD12	1.93	0.49
1:A:110:VAL:O	1:A:112:ILE:HG23	2.13	0.49
1:A:1349:ARG:CG	1:A:1349:ARG:NH1	2.75	0.49
1:B:111:PRO:C	1:B:112:ILE:HG23	2.33	0.49
1:B:302:ALA:HB2	1:B:347:ARG:HH11	1.77	0.49
1:B:495:LEU:HD12	1:B:495:LEU:HA	1.36	0.49
1:B:1184:ASN:O	1:B:1186:ARG:N	2.46	0.49
1:B:1211:LEU:HG	1:B:1215:ILE:HD11	1.94	0.49
1:A:243:TRP:HA	1:A:243:TRP:CE3	2.47	0.49
1:A:664:THR:HA	1:A:720:ARG:HE	1.77	0.49
1:A:689:LEU:HG	1:A:689:LEU:O	2.11	0.49
1:B:24:ALA:C	1:B:26:LYS:N	2.65	0.49
1:B:253:HIS:CE1	1:B:254:PRO:CD	2.88	0.49
1:B:838:VAL:HG12	1:B:839:PRO:CD	2.40	0.49
1:B:850:ARG:HD2	1:B:878:ILE:HD12	1.94	0.49
1:B:991:ASN:C	1:B:991:ASN:OD1	2.51	0.49
1:B:1310:THR:HG22	1:B:1311:THR:HG22	1.95	0.49
1:A:266:VAL:CG1	1:A:279:THR:HG23	2.33	0.49
1:A:485:ILE:HG12	1:A:488:LEU:HD12	1.95	0.49
1:A:499:PHE:HE2	1:A:742:MET:CE	2.26	0.49
1:A:537:GLU:C	1:A:539:GLN:H	2.15	0.49
1:A:969:PRO:HD2	1:A:970:PRO:CD	2.42	0.49
1:A:1401:LEU:O	1:A:1401:LEU:CD1	2.53	0.49
1:B:242:ASN:HA	1:B:245:LYS:HG3	1.94	0.49
1:B:629:THR:O	1:B:630:HIS:C	2.51	0.49
1:B:690:GLU:H	1:B:690:GLU:CD	2.15	0.49
1:B:698:LYS:HG2	1:B:698:LYS:O	2.13	0.49
1:B:1068:ARG:NH2	1:B:1089:GLU:OE1	2.46	0.49
1:A:492:TYR:C	1:A:492:TYR:CD1	2.86	0.49
1:A:676:ALA:O	1:A:677:GLU:C	2.50	0.49
1:A:1038:ILE:O	1:A:1038:ILE:CG2	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1281:VAL:HA	1:A:1301:SER:O	2.13	0.49
1:B:452:GLN:HG3	1:B:764:THR:HG22	1.94	0.49
1:B:582:LEU:CB	1:B:755:GLN:HE21	2.26	0.49
1:A:83:LEU:O	1:A:84:ASP:C	2.50	0.49
1:A:116:ILE:HD13	1:A:190:THR:HG21	1.94	0.49
1:A:197:ASP:OD1	1:A:199:ARG:N	2.37	0.49
1:A:653:HIS:O	1:A:654:TYR:C	2.51	0.49
1:A:1447:TRP:HA	1:A:1447:TRP:CE3	2.48	0.49
1:B:290:THR:O	1:B:294:VAL:HG23	2.12	0.49
1:B:417:ASP:HA	1:B:420:VAL:HG12	1.95	0.49
1:B:1417:VAL:HG12	1:B:1419:HIS:N	2.26	0.49
1:A:253:HIS:ND1	1:A:254:PRO:CG	2.71	0.48
1:A:1395:TYR:CD2	1:A:1443:ILE:HD13	2.48	0.48
1:B:353:MET:CE	1:B:366:GLY:O	2.60	0.48
1:B:823:MET:C	1:B:824:GLN:HE21	2.17	0.48
1:B:1401:LEU:HD11	1:B:1405:ILE:HB	1.94	0.48
1:A:191:PHE:CE1	1:A:192:TYR:CE1	3.01	0.48
1:A:482:ASP:OD1	1:A:788:HIS:HB3	2.13	0.48
1:A:918:THR:HG22	1:A:920:GLU:N	2.26	0.48
1:A:1030:THR:HG21	1:A:1033:SER:HB3	1.95	0.48
1:A:1440:ALA:O	1:A:1443:ILE:N	2.42	0.48
1:B:211:TYR:HD1	1:B:212:SER:N	2.08	0.48
1:B:254:PRO:O	1:B:257:GLY:N	2.37	0.48
1:B:1159:ASN:C	1:B:1161:VAL:N	2.66	0.48
1:A:85:ALA:O	1:A:86:GLN:C	2.48	0.48
1:A:353:MET:HE2	1:A:366:GLY:C	2.32	0.48
1:A:661:VAL:O	1:A:661:VAL:CG1	2.61	0.48
1:A:1326:THR:HG22	1:A:1329:TYR:HB2	1.95	0.48
1:A:1376:LEU:CB	1:A:1439:PHE:HE2	2.19	0.48
1:A:1417:VAL:HG12	1:A:1418:GLY:N	2.27	0.48
1:A:1441:ALA:O	1:A:1444:LEU:HB2	2.13	0.48
1:B:389:GLU:CA	1:B:403:ASP:OD2	2.61	0.48
1:B:810:PHE:O	1:B:813:TYR:HB3	2.13	0.48
1:B:1278:ALA:O	1:B:1279:PHE:HB2	2.12	0.48
1:A:53:LYS:O	1:A:54:PHE:C	2.50	0.48
1:A:74:GLY:HA2	1:A:172:LEU:HD13	1.96	0.48
1:A:87:GLU:O	1:A:90:ARG:N	2.47	0.48
1:A:97:ILE:HD13	1:A:133:VAL:HG21	1.95	0.48
1:A:345:MET:HE1	1:A:385:LEU:HB2	1.94	0.48
1:A:430:VAL:HG22	1:A:557:ALA:HB3	1.95	0.48
1:A:454:PHE:CD2	1:A:648:GLU:HA	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:909:GLN:NE2	1:A:929:GLU:OE1	2.46	0.48
1:A:1219:ALA:C	1:A:1221:PRO:HD2	2.34	0.48
1:A:1359:GLY:O	1:A:1360:CYS:HB3	2.12	0.48
1:A:1366:GLU:HG2	1:A:1367:TYR:CE2	2.47	0.48
1:B:110:VAL:CG2	1:B:130:GLN:HG3	2.43	0.48
1:B:175:ARG:HG3	1:B:175:ARG:NH1	2.23	0.48
1:B:572:THR:CG2	1:B:615:ARG:HB3	2.42	0.48
1:B:594:GLU:O	1:B:597:VAL:N	2.45	0.48
1:B:1163:GLY:O	1:B:1165:THR:N	2.45	0.48
1:B:1236:ARG:C	1:B:1238:THR:H	2.15	0.48
1:B:1407:ASP:O	1:B:1409:SER:N	2.46	0.48
1:B:1420:TYR:O	1:B:1421:GLU:C	2.46	0.48
1:A:369:THR:CG2	1:A:370:GLY:N	2.76	0.48
1:A:538:THR:O	1:A:538:THR:HG23	2.13	0.48
1:A:1184:ASN:O	1:A:1186:ARG:N	2.46	0.48
1:B:1212:ASP:OD1	1:B:1243:GLY:N	2.34	0.48
1:B:1427:LEU:O	1:B:1430:GLU:N	2.46	0.48
1:A:15:ARG:HG3	1:A:19:GLU:HG3	1.94	0.48
1:A:1068:ARG:NE	1:A:1089:GLU:OE1	2.39	0.48
1:A:1428:ILE:O	1:A:1428:ILE:HG22	2.14	0.48
1:B:1008:THR:O	1:B:1011:ALA:HB3	2.14	0.48
1:A:3:VAL:HG22	1:A:231:ASN:HB2	1.96	0.48
1:A:68:ASP:OD1	1:A:68:ASP:N	2.44	0.48
1:A:160:LYS:O	1:A:161:GLY:C	2.50	0.48
1:A:345:MET:HG2	1:A:349:GLY:HA2	1.95	0.48
1:A:858:MET:HA	3:A:2474:FMN:N5	2.29	0.48
1:B:474:GLU:O	1:B:475:ALA:C	2.52	0.48
1:B:731:SER:HA	1:B:747:SER:CB	2.43	0.48
1:B:978:GLU:O	1:B:981:ALA:HB3	2.12	0.48
1:B:1105:VAL:HG22	1:B:1105:VAL:O	2.14	0.48
1:A:496:HIS:O	1:A:653:HIS:CE1	2.61	0.48
1:A:754:ILE:O	1:A:755:GLN:C	2.48	0.48
1:A:1210:THR:CG2	1:A:1211:LEU:N	2.47	0.48
1:A:1230:GLN:HE21	1:A:1267:ARG:HD3	1.76	0.48
1:B:595:ASP:O	1:B:596:ALA:C	2.51	0.48
1:B:1131:THR:CG2	1:B:1133:GLU:H	2.27	0.48
1:B:393:VAL:HG12	1:B:394:ASP:N	2.29	0.48
1:B:442:MET:HE3	1:B:442:MET:HB3	1.73	0.48
1:B:582:LEU:HB2	1:B:755:GLN:HE21	1.79	0.48
1:B:856:PRO:HB3	3:B:2474:FMN:H3'	1.95	0.48
1:B:1424:LEU:HD23	1:B:1428:ILE:HG13	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1396:ASP:OD1	1:A:1396:ASP:O	2.30	0.48
1:B:105:TYR:N	1:B:105:TYR:CD1	2.81	0.48
1:B:227:MET:HE3	1:B:282:GLU:CA	2.28	0.48
1:B:430:VAL:HG22	1:B:557:ALA:HB3	1.94	0.48
1:B:1077:ARG:CG	1:B:1078:ASP:N	2.77	0.48
1:B:1325:ASN:O	1:B:1326:THR:HB	2.14	0.48
1:A:12:LYS:HA	1:A:13:PRO:HD3	1.72	0.47
1:A:345:MET:HE2	1:A:385:LEU:CB	2.43	0.47
1:A:561:TYR:CD1	1:A:561:TYR:C	2.86	0.47
1:B:162:GLU:CB	1:B:164:ILE:HD12	2.44	0.47
1:B:452:GLN:CG	1:B:764:THR:HG22	2.43	0.47
1:B:472:GLY:O	1:B:473:LYS:HG3	2.14	0.47
1:B:1396:ASP:OD1	1:B:1396:ASP:O	2.32	0.47
1:A:189:THR:CG2	1:A:190:THR:N	2.63	0.47
1:A:513:SER:HB2	1:A:520:MET:CE	2.43	0.47
1:A:552:THR:HG22	1:A:552:THR:O	2.14	0.47
1:A:631:LEU:N	1:A:631:LEU:HD23	2.29	0.47
1:A:1070:ASP:C	1:A:1070:ASP:OD1	2.52	0.47
1:A:1412:PHE:HD2	1:A:1455:TRP:CZ3	2.33	0.47
1:A:1447:TRP:O	1:A:1451:VAL:HG23	2.14	0.47
1:B:235:ASN:HB3	1:B:508:ASN:HD21	1.79	0.47
1:B:501:GLN:OE1	1:B:710:LYS:NZ	2.43	0.47
1:B:550:LEU:HB3	1:B:554:GLU:HG3	1.96	0.47
1:B:875:MET:HE3	1:B:880:ALA:HB3	1.96	0.47
1:B:1057:THR:HG22	1:B:1058:LEU:N	2.22	0.47
1:B:1221:PRO:CD	1:B:1229:MET:HE1	2.27	0.47
1:A:203:ASP:OD1	1:A:203:ASP:N	2.44	0.47
1:A:990:ILE:HG23	1:A:991:ASN:N	2.29	0.47
1:A:1091:GLY:C	1:A:1092:ILE:HG13	2.34	0.47
1:A:1374:VAL:C	1:A:1375:ILE:CG1	2.82	0.47
1:A:1396:ASP:OD1	1:A:1399:ASP:N	2.47	0.47
1:A:1425:LYS:CE	1:A:1447:TRP:CD1	2.97	0.47
1:B:630:HIS:O	1:B:631:LEU:C	2.49	0.47
1:B:727:ALA:HB3	1:B:744:SER:HB2	1.95	0.47
1:B:953:ILE:O	1:B:955:ARG:N	2.47	0.47
1:A:31:ARG:HD2	1:A:368:GLU:OE2	2.15	0.47
1:A:242:ASN:HD22	1:A:242:ASN:H	1.61	0.47
1:A:429:LEU:HG	1:A:429:LEU:O	2.14	0.47
1:A:528:ASN:C	1:A:529:LEU:HD23	2.35	0.47
1:A:531:ASN:C	1:A:533:LEU:H	2.18	0.47
1:A:672:GLN:O	1:A:673:GLU:C	2.52	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:683:LEU:HA	1:A:683:LEU:HD23	1.55	0.47
1:A:1117:VAL:HG12	1:A:1118:CYS:N	2.29	0.47
1:A:1124:LEU:HA	1:A:1124:LEU:HD12	1.28	0.47
1:A:1369:THR:HG22	1:A:1369:THR:O	2.13	0.47
1:B:210:ARG:HA	2:B:2473:OMT:HE2	1.97	0.47
1:B:465:LEU:HD21	1:B:675:ILE:HG13	1.95	0.47
1:B:515:ARG:NE	1:B:1367:TYR:HE2	2.09	0.47
1:B:963:VAL:CG1	1:B:964:MET:H	2.25	0.47
1:B:1113:CYS:O	1:B:1114:PRO:C	2.48	0.47
1:A:9:ILE:HG13	1:A:361:GLY:C	2.35	0.47
1:A:218:THR:CG2	1:A:221:LEU:H	2.27	0.47
1:A:442:MET:CE	1:A:447:LEU:CA	2.92	0.47
1:A:1369:THR:CG2	1:A:1369:THR:O	2.63	0.47
1:B:37:ASP:OD1	1:B:39:LYS:N	2.34	0.47
1:B:704:LEU:O	1:B:707:ILE:N	2.48	0.47
1:B:1170:GLN:HB2	1:B:1183:LEU:HD12	1.96	0.47
1:A:78:LEU:HD12	1:A:129:GLU:HG3	1.97	0.47
1:A:110:VAL:HG12	1:A:111:PRO:N	2.28	0.47
1:A:253:HIS:CD2	1:A:254:PRO:HD2	2.40	0.47
1:A:353:MET:CE	1:A:366:GLY:C	2.82	0.47
1:A:1029:GLY:HA3	3:A:2474:FMN:HM81	1.97	0.47
1:A:1424:LEU:HD21	1:A:1428:ILE:HD11	1.97	0.47
1:B:139:VAL:HG12	1:B:143:GLN:HB2	1.97	0.47
1:B:189:THR:O	1:B:189:THR:HG23	2.14	0.47
1:B:447:LEU:CD1	1:B:451:GLN:CD	2.83	0.47
1:B:826:ARG:HD2	1:B:1078:ASP:OD1	2.14	0.47
1:B:1216:VAL:HG11	1:B:1249:MET:CE	2.45	0.47
1:A:136:ASN:OD1	1:A:136:ASN:N	2.47	0.47
1:A:182:MET:CE	1:A:217:PRO:O	2.62	0.47
1:A:317:ILE:C	1:A:321:ASN:HD22	2.18	0.47
1:A:509:PRO:O	1:A:509:PRO:HG2	2.14	0.47
1:A:526:LEU:HB3	1:A:641:SER:HB3	1.97	0.47
1:A:550:LEU:HD13	1:A:555:PHE:HA	1.95	0.47
1:A:657:VAL:HG12	1:A:658:LEU:N	2.30	0.47
1:A:917:VAL:HG13	1:A:922:LEU:HD21	1.95	0.47
1:A:953:ILE:O	1:A:956:LEU:HB2	2.15	0.47
1:A:1149:ILE:O	1:A:1149:ILE:CG2	2.59	0.47
1:A:1212:ASP:HB3	1:A:1245:ARG:HB3	1.96	0.47
1:A:1244:THR:O	1:A:1245:ARG:C	2.51	0.47
1:A:1414:ARG:NH2	1:A:1455:TRP:CZ2	2.82	0.47
1:B:227:MET:CE	1:B:282:GLU:HG2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:290:THR:HG22	1:B:293:MET:H	1.78	0.47
1:B:589:ILE:O	1:B:593:THR:OG1	2.28	0.47
1:B:743:VAL:HG12	1:B:744:SER:N	2.30	0.47
1:B:824:GLN:NE2	1:B:824:GLN:CA	2.78	0.47
1:B:864:SER:HG	1:B:867:ALA:H	1.59	0.47
1:B:908:LYS:HB3	1:B:921:TYR:CZ	2.49	0.47
1:B:1047:MET:O	1:B:1048:GLY:C	2.53	0.47
1:B:1075:THR:O	1:B:1076:GLY:C	2.50	0.47
1:A:227:MET:HE3	1:A:282:GLU:CG	2.44	0.47
1:A:231:ASN:HB3	1:A:332:ALA:HB3	1.96	0.47
1:A:281:PHE:CZ	1:A:335:MET:HG2	2.50	0.47
1:A:335:MET:HE3	1:A:342:VAL:HB	1.96	0.47
1:A:454:PHE:CD2	1:A:648:GLU:CA	2.98	0.47
1:A:559:ARG:NH1	1:A:568:GLU:OE2	2.48	0.47
1:A:603:HIS:N	1:A:640:THR:HG22	2.30	0.47
1:A:863:LEU:HB3	1:A:1118:CYS:HB3	1.97	0.47
1:A:1243:GLY:O	1:A:1246:LEU:N	2.47	0.47
1:A:1458:VAL:HG13	1:A:1459:PRO:CD	2.42	0.47
1:B:147:ASP:O	1:B:151:ILE:HG13	2.15	0.47
1:B:150:ILE:HG21	1:B:259:HIS:CG	2.50	0.47
1:B:286:ARG:HD3	1:B:286:ARG:HA	1.55	0.47
1:B:347:ARG:HH11	1:B:347:ARG:HB2	1.79	0.47
1:B:477:GLY:O	1:B:478:SER:HB3	2.15	0.47
1:B:525:ARG:HG3	1:B:544:GLN:HG3	1.97	0.47
1:B:634:SER:O	1:B:635:ASN:C	2.52	0.47
1:A:468:MET:HG2	1:A:699:ALA:HB1	1.97	0.47
1:A:1075:THR:HG22	1:A:1077:ARG:N	2.30	0.47
1:B:25:LEU:HD21	1:B:207:TYR:HB2	1.97	0.47
1:B:227:MET:CE	1:B:282:GLU:CG	2.93	0.47
1:B:621:ILE:HG12	1:B:657:VAL:HG11	1.97	0.47
1:B:1219:ALA:HA	1:B:1229:MET:CE	2.45	0.47
1:A:47:HIS:HB3	1:A:206:ILE:HB	1.96	0.47
1:A:446:GLU:O	1:A:449:ARG:N	2.48	0.47
1:A:894:PHE:HD1	1:A:904:ASN:ND2	2.13	0.47
1:A:1383:PHE:O	1:A:1384:ALA:HB3	2.15	0.47
1:B:912:SER:CB	1:B:968:PRO:O	2.62	0.47
1:A:250:ARG:NH2	1:A:639:PHE:CE1	2.79	0.46
1:A:313:HIS:CD2	1:A:313:HIS:N	2.83	0.46
1:A:935:GLY:HA3	1:A:1025:GLY:O	2.15	0.46
1:A:1212:ASP:OD1	1:A:1243:GLY:N	2.24	0.46
1:A:1326:THR:HG22	1:A:1326:THR:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:30:HIS:CE1	1:B:368:GLU:OE2	2.68	0.46
1:B:1184:ASN:N	1:B:1185:PRO:HD2	2.30	0.46
1:A:15:ARG:O	1:A:16:SER:C	2.53	0.46
1:A:87:GLU:O	1:A:88:ALA:C	2.53	0.46
1:A:191:PHE:HE1	1:A:192:TYR:CE1	2.33	0.46
1:A:207:TYR:N	1:A:207:TYR:HD1	2.08	0.46
1:A:316:LEU:O	1:A:317:ILE:C	2.53	0.46
1:A:348:ASN:HB2	1:A:350:LEU:HG	1.96	0.46
1:A:376:GLU:O	1:A:378:GLN:N	2.49	0.46
1:A:417:ASP:O	1:A:418:LYS:C	2.52	0.46
1:A:498:PHE:CD1	1:A:498:PHE:N	2.82	0.46
1:A:1412:PHE:HD2	1:A:1455:TRP:CE3	2.33	0.46
1:B:12:LYS:HA	1:B:13:PRO:HD3	1.75	0.46
1:B:85:ALA:O	1:B:86:GLN:C	2.53	0.46
1:B:496:HIS:CD2	1:B:497:HIS:HD2	2.33	0.46
1:B:520:MET:HA	1:B:714:SER:O	2.15	0.46
1:B:720:ARG:C	1:B:722:GLY:N	2.69	0.46
1:B:1401:LEU:O	1:B:1401:LEU:CD1	2.38	0.46
1:B:1463:LEU:HD23	1:B:1463:LEU:HA	1.71	0.46
1:A:57:ASP:O	1:A:60:LYS:HB2	2.15	0.46
1:A:98:LEU:HD23	1:A:98:LEU:HA	1.82	0.46
1:A:603:HIS:N	1:A:640:THR:CG2	2.78	0.46
1:A:673:GLU:O	1:A:674:ALA:C	2.53	0.46
1:A:724:ASN:HD22	1:A:724:ASN:N	2.02	0.46
1:A:1005:GLY:O	1:A:1009:ILE:HD12	2.16	0.46
1:B:30:HIS:CE1	1:B:1237:ASN:O	2.68	0.46
1:B:839:PRO:HG2	1:B:842:GLU:OE1	2.15	0.46
1:B:1061:LEU:O	1:B:1064:ARG:HB2	2.15	0.46
1:B:1424:LEU:O	1:B:1425:LYS:C	2.53	0.46
1:A:5:PHE:CE2	1:A:365:GLY:HA3	2.50	0.46
1:A:949:VAL:C	1:A:950:THR:O	2.50	0.46
1:B:209:GLN:HG3	1:B:210:ARG:H	1.80	0.46
1:B:820:ARG:HB3	1:B:821:PRO:HD3	1.94	0.46
1:B:824:GLN:NE2	1:B:824:GLN:HA	2.30	0.46
1:B:875:MET:O	1:B:876:ASN:C	2.47	0.46
1:B:1131:THR:HG22	1:B:1133:GLU:CA	2.46	0.46
1:A:9:ILE:O	1:A:398:GLY:HA2	2.15	0.46
1:A:316:LEU:C	1:A:316:LEU:HD12	2.36	0.46
1:A:345:MET:CE	1:A:385:LEU:HB3	2.45	0.46
1:A:345:MET:CG	1:A:346:ASP:N	2.55	0.46
1:A:491:LYS:HZ1	1:A:785:GLY:HA3	1.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:565:THR:HG22	1:A:565:THR:O	2.15	0.46
1:A:572:THR:HG22	1:A:615:ARG:NE	2.30	0.46
1:A:583:ARG:CZ	1:A:587:ARG:HH12	2.27	0.46
1:A:602:THR:C	1:A:640:THR:CG2	2.83	0.46
1:A:787:ARG:NH1	1:A:821:PRO:HB2	2.24	0.46
1:A:850:ARG:O	1:A:853:PHE:HB2	2.15	0.46
1:A:871:LEU:O	1:A:872:ASN:C	2.52	0.46
1:A:940:GLU:O	1:A:969:PRO:HA	2.15	0.46
1:A:1236:ARG:C	1:A:1238:THR:H	2.17	0.46
1:B:389:GLU:HA	1:B:403:ASP:OD2	2.15	0.46
1:B:457:THR:O	1:B:461:MET:HG2	2.15	0.46
1:B:842:GLU:HB3	1:B:1156:ARG:CD	2.43	0.46
1:A:52:GLN:O	1:A:56:LYS:HB2	2.16	0.46
1:A:572:THR:HG21	1:A:615:ARG:NE	2.30	0.46
1:A:969:PRO:CD	1:A:970:PRO:HD2	2.46	0.46
1:A:1376:LEU:N	1:A:1376:LEU:CD2	2.33	0.46
1:A:1432:VAL:O	1:A:1433:THR:C	2.53	0.46
1:B:24:ALA:C	1:B:26:LYS:H	2.19	0.46
1:B:615:ARG:HG2	1:B:615:ARG:NH1	2.30	0.46
1:B:677:GLU:C	1:B:677:GLU:OE1	2.54	0.46
1:B:1141:PHE:O	1:B:1142:LEU:C	2.54	0.46
1:B:1143:ALA:O	1:B:1146:VAL:N	2.47	0.46
1:B:1210:THR:CG2	1:B:1211:LEU:H	2.07	0.46
1:B:1357:VAL:CG1	1:B:1359:GLY:O	2.63	0.46
1:B:1452:THR:O	1:B:1452:THR:CG2	2.64	0.46
1:A:81:ILE:HD13	1:B:216:PHE:CE1	2.50	0.46
1:A:260:MET:HA	1:A:263:LEU:HB2	1.98	0.46
1:A:456:LEU:HD23	1:A:456:LEU:HA	1.65	0.46
1:A:472:GLY:O	1:A:473:LYS:HG3	2.16	0.46
1:A:536:ASP:OD1	1:A:538:THR:N	2.49	0.46
1:A:833:SER:OG	1:A:834:THR:N	2.49	0.46
1:A:1132:PRO:O	1:A:1133:GLU:C	2.52	0.46
1:B:89:CYS:O	1:B:93:VAL:HG23	2.16	0.46
1:B:125:ARG:HG3	1:B:219:TRP:CZ2	2.51	0.46
1:B:260:MET:HE2	1:B:260:MET:HB2	1.70	0.46
1:B:430:VAL:HG13	1:B:554:GLU:CA	2.37	0.46
1:B:787:ARG:O	1:B:788:HIS:ND1	2.49	0.46
1:B:1076:GLY:N	1:B:1145:GLU:OE2	2.49	0.46
1:A:965:LEU:HD23	1:A:965:LEU:HA	1.33	0.46
1:A:1214:ARG:O	1:A:1215:ILE:C	2.53	0.46
1:B:290:THR:HG22	1:B:292:PRO:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:447:LEU:HD11	1:B:451:GLN:CD	2.36	0.46
1:B:673:GLU:O	1:B:674:ALA:C	2.54	0.46
1:B:1114:PRO:HB2	1:B:1115:VAL:HG23	1.97	0.46
1:B:1212:ASP:OD2	1:B:1243:GLY:CA	2.63	0.46
1:B:1424:LEU:CD2	1:B:1428:ILE:HD11	2.46	0.46
1:A:345:MET:HE2	1:A:385:LEU:HB2	1.98	0.46
1:A:353:MET:HG2	1:A:385:LEU:HD23	1.97	0.46
1:A:391:ILE:O	1:A:391:ILE:CG2	2.63	0.46
1:A:393:VAL:CG1	1:A:394:ASP:N	2.77	0.46
1:A:1044:PRO:HG2	1:A:1047:MET:HE3	1.97	0.46
1:A:1102:CYS:SG	1:A:1104:MET:N	2.89	0.46
1:B:304:THR:CG2	1:B:518:ARG:HD2	2.46	0.46
1:B:416:TRP:O	1:B:419:TRP:HB2	2.16	0.46
1:B:419:TRP:O	1:B:540:THR:OG1	2.27	0.46
1:B:629:THR:O	1:B:632:ILE:HB	2.16	0.46
1:B:766:TYR:C	1:B:768:GLU:H	2.18	0.46
1:B:878:ILE:HG21	1:B:1136:VAL:HG13	1.97	0.46
1:B:1010:ALA:HB2	1:B:1052:VAL:HG22	1.97	0.46
1:B:1057:THR:HG22	1:B:1190:VAL:HG11	1.98	0.46
1:B:1077:ARG:O	1:B:1079:ILE:N	2.48	0.46
1:A:805:ASP:OD1	1:A:805:ASP:O	2.33	0.46
1:B:359:THR:HG23	1:B:378:GLN:O	2.16	0.46
1:B:417:ASP:HA	1:B:420:VAL:CG1	2.46	0.46
1:B:608:ASP:OD2	1:B:647:ALA:N	2.42	0.46
1:B:632:ILE:HD12	1:B:632:ILE:HG23	1.66	0.46
1:B:833:SER:OG	1:B:834:THR:N	2.48	0.46
1:B:1440:ALA:O	1:B:1441:ALA:C	2.53	0.46
1:A:357:ILE:HD11	1:A:400:LEU:HD21	1.98	0.45
1:A:443:ASP:C	1:A:445:ALA:N	2.70	0.45
1:A:833:SER:HB3	1:A:1153:LEU:HD22	1.98	0.45
1:A:842:GLU:HG2	1:A:1156:ARG:HH11	1.80	0.45
1:A:918:THR:O	1:A:919:ALA:C	2.51	0.45
1:A:1264:ILE:HG22	1:A:1284:ILE:HA	1.98	0.45
1:B:107:TRP:H	1:B:107:TRP:HD1	1.60	0.45
1:B:447:LEU:CD1	1:B:447:LEU:C	2.84	0.45
1:A:248:GLU:OE2	1:A:266:VAL:N	2.44	0.45
1:A:606:LEU:C	1:A:607:THR:CG2	2.83	0.45
1:A:1236:ARG:C	1:A:1238:THR:N	2.67	0.45
1:A:1397:LEU:HD22	1:A:1453:LYS:HD2	1.97	0.45
1:B:266:VAL:HG12	1:B:266:VAL:O	2.15	0.45
1:B:558:MET:C	1:B:560:ASP:N	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1070:ASP:C	1:B:1070:ASP:OD1	2.55	0.45
1:B:1204:ARG:O	1:B:1205:ASN:C	2.51	0.45
1:B:1424:LEU:HD22	1:B:1447:TRP:HH2	1.80	0.45
1:A:370:GLY:CA	1:A:1237:ASN:HB3	2.45	0.45
1:A:555:PHE:HD1	1:A:556:ARG:N	2.14	0.45
1:A:1045:TRP:O	1:A:1046:GLU:C	2.54	0.45
1:A:1310:THR:O	1:A:1313:SER:N	2.33	0.45
1:A:1315:LEU:HB3	1:A:1320:ASN:ND2	2.31	0.45
1:A:1438:ARG:O	1:A:1441:ALA:N	2.49	0.45
1:B:211:TYR:CD1	1:B:212:SER:N	2.80	0.45
1:B:428:GLU:O	1:B:429:LEU:C	2.51	0.45
1:B:487:VAL:HG13	1:B:498:PHE:HE2	1.81	0.45
1:B:572:THR:HG23	1:B:616:ALA:O	2.15	0.45
1:B:798:LEU:O	1:B:801:ALA:HB3	2.16	0.45
1:B:848:ALA:O	1:B:849:ILE:C	2.54	0.45
1:A:498:PHE:H	1:A:498:PHE:HD1	1.64	0.45
1:A:582:LEU:CB	1:A:755:GLN:HE21	2.30	0.45
1:A:974:ILE:O	1:A:974:ILE:HG22	2.16	0.45
1:A:1049:LEU:HD21	1:A:1087:ALA:HB2	1.98	0.45
1:A:1231:LEU:O	1:A:1266:ILE:HA	2.16	0.45
1:B:700:ILE:O	1:B:703:GLY:N	2.49	0.45
1:B:702:ASP:O	1:B:703:GLY:C	2.55	0.45
1:B:792:GLY:O	1:B:793:GLY:C	2.51	0.45
1:B:1207:VAL:HG13	1:B:1208:PRO:CD	2.46	0.45
1:B:1468:VAL:HG12	1:B:1469:PRO:O	2.17	0.45
1:A:292:PRO:O	1:A:293:MET:C	2.55	0.45
1:A:295:LYS:C	1:A:295:LYS:CD	2.83	0.45
1:A:1401:LEU:N	1:A:1402:PRO:CD	2.79	0.45
1:A:1416:GLU:OE1	1:A:1471:HIS:CD2	2.70	0.45
1:B:731:SER:HA	1:B:747:SER:HB2	1.99	0.45
1:B:1080:VAL:O	1:B:1081:ILE:C	2.54	0.45
1:A:179:TYR:HD2	1:A:192:TYR:CD2	2.34	0.45
1:A:251:MET:HB2	1:A:533:LEU:CD1	2.43	0.45
1:A:351:ARG:HH12	1:A:978:GLU:CD	2.19	0.45
1:A:510:PRO:CD	1:A:970:PRO:HB3	2.37	0.45
1:A:608:ASP:O	1:A:611:MET:N	2.44	0.45
1:A:1245:ARG:O	1:A:1246:LEU:C	2.55	0.45
1:B:102:TYR:HA	1:B:136:ASN:OD1	2.16	0.45
1:B:689:LEU:O	1:B:690:GLU:C	2.55	0.45
1:B:806:SER:OG	1:B:809:THR:CB	2.64	0.45
1:B:883:ASP:O	1:B:884:SER:C	2.55	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:991:ASN:HA	1:B:992:PRO:HD2	1.83	0.45
1:B:1432:VAL:HG12	1:B:1433:THR:N	2.31	0.45
1:A:103:TYR:HD2	1:A:105:TYR:CE1	2.35	0.45
1:A:359:THR:CG2	1:A:378:GLN:CA	2.95	0.45
1:A:554:GLU:OE2	1:A:697:LYS:HE3	2.17	0.45
1:A:805:ASP:O	1:A:805:ASP:CG	2.49	0.45
1:A:1274:GLN:NE2	1:A:1293:ASN:HB3	2.30	0.45
1:B:413:LEU:O	1:B:414:LYS:HD2	2.16	0.45
1:B:414:LYS:HB3	1:B:415:PRO:CD	2.47	0.45
1:B:486:ALA:O	1:B:487:VAL:C	2.51	0.45
1:B:739:PHE:O	1:B:740:PRO:C	2.55	0.45
1:B:790:TRP:CZ2	1:B:1074:LYS:HG2	2.51	0.45
1:B:1026:ASN:HB3	1:B:1043:LEU:N	2.31	0.45
1:A:21:GLY:O	1:A:22:ILE:C	2.49	0.45
1:A:102:TYR:HE2	1:A:144:PHE:CD1	2.34	0.45
1:A:131:ILE:HG23	1:A:131:ILE:O	2.16	0.45
1:A:228:LEU:HA	1:A:228:LEU:HD12	1.29	0.45
1:A:386:GLY:N	1:A:389:GLU:OE2	2.48	0.45
1:A:449:ARG:HD3	1:A:765:ALA:O	2.17	0.45
1:A:459:GLU:O	1:A:463:LEU:CB	2.59	0.45
1:A:1084:MET:SD	1:A:1168:LEU:HD21	2.57	0.45
1:A:1468:VAL:O	1:A:1468:VAL:HG12	2.15	0.45
1:B:266:VAL:HG12	1:B:279:THR:HG22	1.97	0.45
1:B:426:LEU:HD23	1:B:543:LEU:HB3	1.93	0.45
1:B:443:ASP:O	1:B:444:LYS:C	2.54	0.45
1:B:612:GLY:O	1:B:762:HIS:HE1	1.99	0.45
1:B:671:ALA:O	1:B:675:ILE:HD12	2.17	0.45
1:B:696:TYR:CZ	1:B:700:ILE:HD11	2.52	0.45
1:B:1216:VAL:HG11	1:B:1249:MET:HE1	1.98	0.45
1:A:110:VAL:HG12	1:A:111:PRO:O	2.17	0.45
1:A:266:VAL:HG12	1:A:266:VAL:O	2.16	0.45
1:A:704:LEU:C	1:A:706:LYS:H	2.20	0.45
1:A:734:LEU:HD12	1:A:738:HIS:CD2	2.41	0.45
1:A:1052:VAL:O	1:A:1053:HIS:C	2.51	0.45
1:A:1062:ARG:HH11	1:A:1062:ARG:HD3	1.53	0.45
1:A:1084:MET:SD	1:A:1168:LEU:CD2	3.05	0.45
1:A:1109:HIS:ND1	1:A:1109:HIS:N	2.45	0.45
1:B:230:HIS:HE1	1:B:234:ILE:HG13	1.82	0.45
1:B:263:LEU:HA	1:B:263:LEU:HD12	1.11	0.45
1:B:381:GLU:CD	1:B:402:ARG:NH1	2.67	0.45
1:B:402:ARG:O	1:B:403:ASP:C	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:984:ILE:O	1:B:988:LYS:HG3	2.17	0.45
1:B:1094:THR:O	1:B:1097:LEU:HB2	2.17	0.45
1:B:1170:GLN:OE1	1:B:1183:LEU:HB2	2.17	0.45
1:B:1210:THR:CG2	1:B:1211:LEU:N	2.75	0.45
1:A:495:LEU:HD12	1:A:495:LEU:HA	1.53	0.45
1:A:500:ARG:NH2	1:A:1041:ALA:O	2.48	0.45
1:A:562:MET:CE	1:A:566:ALA:HB2	2.46	0.45
1:A:636:LEU:C	1:A:638:THR:N	2.68	0.45
1:A:857:GLY:N	1:A:883:ASP:HB3	2.31	0.45
1:B:165:ASN:O	1:B:166:ASP:CB	2.65	0.45
1:B:175:ARG:NH1	1:B:175:ARG:CG	2.79	0.45
1:B:342:VAL:HG11	1:B:390:MET:HE2	1.99	0.45
1:B:1113:CYS:C	1:B:1115:VAL:N	2.69	0.45
1:A:56:LYS:HE2	1:A:67:PRO:O	2.17	0.44
1:A:59:VAL:HG12	1:A:60:LYS:N	2.32	0.44
1:A:510:PRO:HD2	1:A:970:PRO:CB	2.34	0.44
1:A:660:GLY:HA2	1:A:721:GLY:N	2.32	0.44
1:A:961:PRO:C	1:A:963:VAL:H	2.20	0.44
1:A:979:ASP:O	1:A:980:LEU:C	2.55	0.44
1:A:992:PRO:HA	1:A:1204:ARG:NH2	2.32	0.44
1:A:1057:THR:HG22	1:A:1058:LEU:N	2.27	0.44
1:B:30:HIS:HD2	1:B:31:ARG:H	1.65	0.44
1:B:304:THR:HG21	1:B:518:ARG:HD2	1.98	0.44
1:B:871:LEU:O	1:B:872:ASN:C	2.54	0.44
1:B:918:THR:HG23	1:B:1256:MET:SD	2.56	0.44
1:B:1374:VAL:HG12	1:B:1375:ILE:N	2.32	0.44
1:B:1400:SER:C	1:B:1402:PRO:HD2	2.38	0.44
1:B:1435:THR:HG23	1:B:1437:SER:HB2	1.98	0.44
1:A:184:LEU:HB3	1:A:186:GLU:HG3	1.99	0.44
1:A:227:MET:HE2	1:A:282:GLU:CG	2.47	0.44
1:A:560:ASP:C	1:A:562:MET:N	2.70	0.44
1:A:572:THR:HG21	1:A:615:ARG:HE	1.82	0.44
1:A:636:LEU:HD12	1:A:636:LEU:HA	1.60	0.44
1:A:1393:TYR:C	1:A:1394:VAL:HG23	2.34	0.44
1:B:211:TYR:O	1:B:212:SER:CB	2.58	0.44
1:B:317:ILE:HG22	1:B:321:ASN:ND2	2.27	0.44
1:B:440:SER:O	1:B:441:ASP:OD1	2.36	0.44
1:B:561:TYR:CD1	1:B:561:TYR:C	2.90	0.44
1:B:819:LYS:HD3	1:B:819:LYS:HA	1.60	0.44
1:B:1075:THR:HG22	1:B:1076:GLY:N	2.31	0.44
1:B:1102:CYS:SG	5:B:2476:F3S:S1	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1260:GLN:O	1:B:1261:PRO:C	2.56	0.44
1:A:216:PHE:HA	1:A:217:PRO:HD3	1.73	0.44
1:A:316:LEU:O	1:A:319:TYR:N	2.50	0.44
1:A:526:LEU:CD1	1:A:526:LEU:H	2.17	0.44
1:A:989:GLN:O	1:A:1245:ARG:HD3	2.16	0.44
1:A:1360:CYS:O	1:A:1361:GLY:O	2.35	0.44
1:A:1415:ILE:HG21	1:A:1421:GLU:CB	2.44	0.44
1:A:1460:LYS:O	1:A:1461:GLU:C	2.55	0.44
1:B:30:HIS:CD2	1:B:31:ARG:N	2.86	0.44
1:B:78:LEU:HB3	1:B:79:PRO:CD	2.48	0.44
1:B:312:ASN:HB2	1:B:411:ALA:CB	2.46	0.44
1:B:622:LEU:HD12	1:B:622:LEU:HA	1.59	0.44
1:B:689:LEU:O	1:B:689:LEU:HD12	2.18	0.44
1:B:728:ILE:CD1	1:B:1047:MET:CE	2.74	0.44
1:B:957:ARG:HD2	1:B:965:LEU:CD1	2.48	0.44
1:B:964:MET:O	1:B:965:LEU:HD23	2.18	0.44
1:B:985:TYR:O	1:B:988:LYS:N	2.50	0.44
1:B:1016:ALA:O	1:B:1017:ASN:HB2	2.17	0.44
1:B:1400:SER:O	1:B:1401:LEU:C	2.56	0.44
1:A:197:ASP:OD2	1:A:199:ARG:NH2	2.50	0.44
1:A:309:THR:HG22	1:A:310:PRO:O	2.17	0.44
1:A:918:THR:O	1:A:921:TYR:N	2.51	0.44
1:B:196:LEU:HA	1:B:196:LEU:HD23	1.55	0.44
1:B:303:LEU:HG	1:B:303:LEU:O	2.17	0.44
1:B:456:LEU:HD23	1:B:456:LEU:HA	1.11	0.44
1:A:52:GLN:NE2	1:A:71:LEU:N	2.44	0.44
1:A:81:ILE:HD13	1:B:216:PHE:CZ	2.53	0.44
1:A:353:MET:HA	1:A:366:GLY:O	2.18	0.44
1:A:489:SER:OG	1:A:490:ASP:N	2.48	0.44
1:A:636:LEU:O	1:A:638:THR:N	2.51	0.44
1:A:648:GLU:HG2	1:A:654:TYR:CE2	2.53	0.44
1:A:819:LYS:HD3	1:A:819:LYS:HA	1.73	0.44
1:A:908:LYS:HD2	1:A:921:TYR:CD1	2.53	0.44
1:A:1170:GLN:HG2	1:A:1170:GLN:O	2.16	0.44
1:B:228:LEU:HD22	1:B:278:ASP:HA	1.98	0.44
1:B:528:ASN:O	1:B:529:LEU:HD23	2.17	0.44
1:B:582:LEU:O	1:B:585:ALA:HB3	2.17	0.44
1:B:670:LEU:HD23	1:B:670:LEU:HA	1.48	0.44
1:B:986:ASP:O	1:B:987:LEU:C	2.55	0.44
1:A:30:HIS:N	1:A:30:HIS:CD2	2.85	0.44
1:A:357:ILE:HD11	1:A:400:LEU:CD2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:369:THR:C	1:A:371:MET:H	2.20	0.44
1:A:420:VAL:O	1:A:422:ASN:N	2.50	0.44
1:A:736:ALA:O	1:A:737:GLU:C	2.53	0.44
1:A:991:ASN:HA	1:A:992:PRO:HD2	1.84	0.44
1:A:1435:THR:HG23	1:A:1437:SER:CB	2.47	0.44
1:A:1447:TRP:CE2	1:A:1451:VAL:HG21	2.52	0.44
1:B:293:MET:HG2	1:B:410:LEU:HD23	2.00	0.44
1:B:1003:ARG:NH1	1:B:1004:SER:O	2.50	0.44
1:B:1184:ASN:CB	1:B:1185:PRO:CD	2.80	0.44
1:B:1329:TYR:HD1	1:B:1348:VAL:HG13	1.82	0.44
1:B:1366:GLU:CG	1:B:1367:TYR:CE1	3.00	0.44
1:A:6:ILE:HD13	1:A:20:LYS:HB2	1.99	0.44
1:A:419:TRP:CE2	1:A:537:GLU:HB3	2.53	0.44
1:A:839:PRO:HG2	1:A:842:GLU:HB2	1.99	0.44
1:A:964:MET:O	1:A:965:LEU:HD23	2.18	0.44
1:A:1053:HIS:ND1	1:A:1062:ARG:HD3	2.33	0.44
1:A:1348:VAL:O	1:A:1348:VAL:CG1	2.65	0.44
1:B:8:ALA:HA	1:B:362:LEU:HD12	2.00	0.44
1:B:1006:ILE:HG23	1:B:1007:GLY:N	2.32	0.44
1:B:1050:SER:O	1:B:1051:GLU:O	2.36	0.44
1:A:125:ARG:HG3	1:A:219:TRP:CZ2	2.53	0.44
1:A:420:VAL:CG1	1:A:421:GLN:N	2.81	0.44
1:A:442:MET:CE	1:A:447:LEU:N	2.81	0.44
1:A:559:ARG:HD2	1:A:605:ILE:CD1	2.48	0.44
1:A:1001:VAL:O	1:A:1002:SER:C	2.55	0.44
1:A:1047:MET:O	1:A:1048:GLY:C	2.56	0.44
1:B:165:ASN:O	1:B:166:ASP:HB2	2.18	0.44
1:B:485:ILE:HD13	1:B:485:ILE:HG21	1.68	0.44
1:B:643:ASN:HB3	1:B:665:THR:HG22	1.98	0.44
1:B:1236:ARG:C	1:B:1238:THR:N	2.70	0.44
1:B:1420:TYR:OH	1:B:1466:LEU:CD2	2.65	0.44
1:B:1447:TRP:O	1:B:1450:GLU:N	2.51	0.44
1:A:173:SER:HG	1:A:176:SER:H	1.62	0.44
1:A:248:GLU:O	1:A:249:THR:C	2.56	0.44
1:A:479:MET:HB3	1:A:1106:ARG:NH1	2.31	0.44
1:A:634:SER:O	1:A:635:ASN:HB2	2.16	0.44
1:A:1156:ARG:O	1:A:1157:SER:CB	2.62	0.44
1:B:508:ASN:HB2	1:B:509:PRO:CD	2.47	0.44
1:B:622:LEU:HD13	1:B:739:PHE:HZ	1.82	0.44
1:B:643:ASN:HD22	1:B:665:THR:HG21	1.83	0.44
1:B:869:GLY:O	1:B:870:THR:C	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1244:THR:OG1	1:B:1278:ALA:HB3	2.18	0.44
1:A:454:PHE:N	1:A:454:PHE:CD1	2.81	0.43
1:A:463:LEU:HA	1:A:463:LEU:HD23	1.48	0.43
1:A:521:SER:C	1:A:522:LEU:HD23	2.38	0.43
1:A:731:SER:O	1:A:734:LEU:HB3	2.18	0.43
1:A:944:LEU:HA	1:A:944:LEU:HD12	1.72	0.43
1:A:1149:ILE:O	1:A:1149:ILE:HG22	2.12	0.43
1:B:59:VAL:HG22	1:B:105:TYR:HD2	1.78	0.43
1:B:98:LEU:HD23	1:B:98:LEU:HA	1.62	0.43
1:B:175:ARG:HH11	1:B:175:ARG:CG	2.19	0.43
1:B:515:ARG:H	1:B:515:ARG:HG3	1.63	0.43
1:B:571:ALA:HB2	1:B:606:LEU:HD22	1.98	0.43
1:B:885:GLY:C	1:B:887:GLY:N	2.68	0.43
1:B:1190:VAL:C	1:B:1192:PRO:HD3	2.38	0.43
1:A:295:LYS:HE2	1:A:299:VAL:HG11	1.98	0.43
1:A:360:ASP:OD1	1:A:360:ASP:N	2.49	0.43
1:A:858:MET:HA	3:A:2474:FMN:C5A	2.48	0.43
1:A:987:LEU:HD23	1:A:987:LEU:HA	1.70	0.43
1:A:1394:VAL:HG11	1:A:1401:LEU:HD23	1.98	0.43
1:B:289:ARG:NH1	1:B:535:GLU:HB2	2.33	0.43
1:B:310:PRO:CG	1:B:404:ARG:NH2	2.66	0.43
1:B:364:ILE:HD12	1:B:374:ILE:HD11	2.00	0.43
1:B:463:LEU:HD23	1:B:463:LEU:HA	1.20	0.43
1:B:511:ILE:HG21	1:B:511:ILE:HD13	1.76	0.43
1:B:580:GLU:O	1:B:581:ALA:C	2.56	0.43
1:B:843:VAL:HG11	1:B:1147:ARG:HB3	2.00	0.43
1:B:918:THR:HG23	1:B:1256:MET:HE2	2.00	0.43
1:B:934:GLN:HE21	1:B:934:GLN:HB2	1.58	0.43
1:B:1164:ARG:HB3	1:B:1167:LEU:CD1	2.47	0.43
1:A:438:GLU:OE1	1:A:553:ALA:HB2	2.18	0.43
1:A:831:LEU:HD13	1:A:1084:MET:HE3	2.00	0.43
1:A:850:ARG:CG	1:A:850:ARG:NH1	2.76	0.43
1:A:937:LYS:CE	1:A:1033:SER:HB2	2.40	0.43
1:A:1159:ASN:O	1:A:1161:VAL:N	2.50	0.43
1:A:1212:ASP:OD2	1:A:1243:GLY:CA	2.67	0.43
1:A:1425:LYS:CD	1:A:1447:TRP:CD1	3.02	0.43
1:A:1468:VAL:HG12	1:A:1469:PRO:O	2.18	0.43
1:B:219:TRP:N	1:B:220:PRO:CD	2.81	0.43
1:B:313:HIS:CD2	1:B:313:HIS:H	2.34	0.43
1:B:500:ARG:NH2	1:B:1039:LYS:O	2.50	0.43
1:B:558:MET:O	1:B:560:ASP:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:700:ILE:C	1:B:703:GLY:H	2.22	0.43
1:B:1068:ARG:HA	1:B:1089:GLU:O	2.17	0.43
1:A:16:SER:O	1:A:20:LYS:CG	2.66	0.43
1:A:452:GLN:NE2	1:A:764:THR:HG23	1.99	0.43
1:A:509:PRO:HB3	1:A:975:TYR:CD1	2.53	0.43
1:A:602:THR:C	1:A:640:THR:HG22	2.38	0.43
1:A:871:LEU:HA	1:A:871:LEU:HD23	1.68	0.43
1:A:990:ILE:O	1:A:990:ILE:HG13	2.19	0.43
1:A:1026:ASN:ND2	1:A:1027:SER:N	2.66	0.43
1:A:1141:PHE:O	1:A:1142:LEU:C	2.55	0.43
1:A:1156:ARG:HE	1:A:1156:ARG:HB2	1.72	0.43
1:B:146:LEU:C	1:B:146:LEU:CD1	2.87	0.43
1:B:207:TYR:CD1	1:B:207:TYR:N	2.85	0.43
1:B:943:GLN:HE21	1:B:1033:SER:HA	1.83	0.43
1:B:978:GLU:H	1:B:978:GLU:HG2	1.21	0.43
1:B:1184:ASN:C	1:B:1186:ARG:N	2.71	0.43
1:B:1216:VAL:CG1	1:B:1249:MET:HE2	2.48	0.43
1:B:1336:LEU:HD23	1:B:1355:VAL:CG1	2.48	0.43
1:B:1427:LEU:O	1:B:1428:ILE:C	2.56	0.43
1:A:120:LYS:O	1:A:123:ALA:HB3	2.18	0.43
1:A:191:PHE:O	1:A:191:PHE:CD1	2.72	0.43
1:A:387:PRO:HD2	1:A:1344:GLU:OE2	2.14	0.43
1:A:572:THR:CG2	1:A:615:ARG:HE	2.32	0.43
1:A:633:ARG:NH2	1:A:737:GLU:O	2.38	0.43
1:A:1395:TYR:HE1	1:A:1397:LEU:HG	1.82	0.43
1:B:677:GLU:OE2	1:B:681:ARG:NH1	2.52	0.43
1:B:701:ASP:C	1:B:703:GLY:N	2.69	0.43
1:B:763:ALA:C	1:B:765:ALA:N	2.72	0.43
1:B:1467:GLU:O	1:B:1469:PRO:HD3	2.18	0.43
1:A:261:GLN:HE21	1:A:264:LYS:HD2	1.83	0.43
1:A:309:THR:HB	1:A:314:LYS:HE3	1.99	0.43
1:A:852:ARG:NH1	1:A:1088:GLU:O	2.50	0.43
1:A:897:ASP:OD1	1:A:899:ASN:N	2.50	0.43
1:A:983:LEU:HD22	1:A:987:LEU:HG	2.01	0.43
1:A:1003:ARG:HH11	1:A:1003:ARG:CG	2.29	0.43
1:B:208:HIS:CD2	1:B:208:HIS:C	2.92	0.43
1:B:254:PRO:CG	1:B:255:ALA:H	2.21	0.43
1:B:295:LYS:HB3	1:B:390:MET:HE1	2.00	0.43
1:B:308:THR:O	1:B:308:THR:CG2	2.67	0.43
1:B:611:MET:HE3	1:B:611:MET:HB3	1.67	0.43
1:B:850:ARG:NH1	1:B:878:ILE:HB	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1164:ARG:HH11	1:B:1166:ASP:CG	2.21	0.43
1:A:114:VAL:HG11	1:A:125:ARG:NH1	2.33	0.43
1:A:302:ALA:CA	1:A:347:ARG:NH1	2.81	0.43
1:A:545:LEU:HA	1:A:545:LEU:HD23	1.19	0.43
1:A:551:THR:H	1:A:554:GLU:CG	2.32	0.43
1:A:575:VAL:HG13	1:A:759:LEU:CD2	2.47	0.43
1:A:621:ILE:HG12	1:A:657:VAL:HG11	2.00	0.43
1:A:1011:ALA:O	1:A:1014:ALA:N	2.52	0.43
1:A:1058:LEU:HA	1:A:1058:LEU:HD23	1.88	0.43
1:A:1131:THR:HG22	1:A:1133:GLU:H	1.81	0.43
1:A:1139:PHE:N	1:A:1139:PHE:CD1	2.86	0.43
1:A:1315:LEU:HD13	1:A:1320:ASN:ND2	2.33	0.43
1:A:1363:ASN:HD22	1:A:1363:ASN:HA	1.60	0.43
1:A:1395:TYR:CE2	1:A:1443:ILE:CD1	3.01	0.43
1:B:251:MET:CE	1:B:533:LEU:HD11	2.49	0.43
1:B:317:ILE:C	1:B:321:ASN:HD22	2.18	0.43
1:B:345:MET:HG3	1:B:346:ASP:N	2.32	0.43
1:B:520:MET:HE3	1:B:705:LEU:HB3	2.01	0.43
1:B:647:ALA:HB2	1:B:669:TYR:OH	2.19	0.43
1:B:897:ASP:OD1	1:B:899:ASN:N	2.52	0.43
1:B:913:GLY:CA	1:B:1349:ARG:CD	2.94	0.43
1:B:1032:ALA:O	1:B:1033:SER:HB2	2.19	0.43
1:B:1124:LEU:HA	1:B:1124:LEU:HD12	1.30	0.43
1:A:666:VAL:HG12	1:A:667:ASN:N	2.34	0.43
1:B:390:MET:HG3	1:B:406:LEU:CD2	2.48	0.43
1:B:1129:VAL:O	1:B:1129:VAL:HG23	2.19	0.43
1:A:869:GLY:O	1:A:870:THR:C	2.54	0.43
1:A:1228:LYS:C	1:A:1229:MET:HG2	2.39	0.43
1:A:1351:SER:OG	1:A:1369:THR:HB	2.18	0.43
1:B:228:LEU:HA	1:B:228:LEU:HD12	1.88	0.43
1:B:235:ASN:HD22	1:B:236:THR:H	1.61	0.43
1:B:251:MET:HE2	1:B:533:LEU:HD11	2.00	0.43
1:B:454:PHE:CG	1:B:648:GLU:HB2	2.53	0.43
1:B:609:GLU:C	1:B:611:MET:H	2.22	0.43
1:B:794:VAL:CG2	1:B:817:VAL:HG23	2.49	0.43
1:B:802:VAL:CG2	1:B:1137:ASN:HB2	2.46	0.43
1:B:1097:LEU:HD23	1:B:1097:LEU:HA	1.69	0.43
1:B:1132:PRO:O	1:B:1133:GLU:C	2.56	0.43
1:B:1366:GLU:OE2	1:B:1367:TYR:CE1	2.71	0.43
1:A:52:GLN:NE2	1:A:71:LEU:CB	2.78	0.43
1:A:56:LYS:CG	1:A:71:LEU:HD22	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:216:PHE:CE1	1:B:81:ILE:HD13	2.54	0.43
1:A:246:ALA:C	1:A:248:GLU:N	2.70	0.43
1:A:992:PRO:HA	1:A:1204:ARG:HH22	1.84	0.43
1:A:1113:CYS:HB3	1:A:1119:VAL:CG1	2.49	0.43
1:A:1139:PHE:N	1:A:1139:PHE:HD1	2.15	0.43
1:A:1458:VAL:CG1	1:A:1459:PRO:CD	2.97	0.43
1:B:562:MET:CE	1:B:605:ILE:HD11	2.49	0.43
1:B:660:GLY:HA2	1:B:721:GLY:N	2.33	0.43
1:B:814:SER:O	1:B:818:ASN:N	2.47	0.43
1:A:330:PRO:HB3	1:A:350:LEU:HB3	2.01	0.42
1:A:337:ASP:O	1:A:338:GLY:C	2.56	0.42
1:A:353:MET:O	1:A:353:MET:CG	2.67	0.42
1:A:565:THR:HG22	1:A:603:HIS:HD2	1.83	0.42
1:A:929:GLU:HA	1:A:997:THR:HB	2.01	0.42
1:A:1339:ALA:HB2	1:A:1435:THR:OG1	2.19	0.42
1:A:1420:TYR:OH	1:A:1466:LEU:CD2	2.66	0.42
1:B:81:ILE:O	1:B:81:ILE:CG2	2.67	0.42
1:B:290:THR:HG22	1:B:292:PRO:CD	2.48	0.42
1:B:743:VAL:HG11	1:B:745:ARG:HG3	2.00	0.42
1:B:824:GLN:O	1:B:827:ASP:CB	2.58	0.42
1:B:1424:LEU:HD23	1:B:1424:LEU:C	2.39	0.42
1:A:46:ILE:HG12	1:A:48:VAL:HG13	2.01	0.42
1:A:90:ARG:HB3	1:A:107:TRP:CZ2	2.54	0.42
1:A:605:ILE:HA	1:A:643:ASN:O	2.20	0.42
1:A:622:LEU:HD13	1:A:739:PHE:HZ	1.84	0.42
1:A:1156:ARG:O	1:A:1157:SER:HB3	2.17	0.42
1:A:1158:LEU:HA	1:A:1158:LEU:HD12	1.62	0.42
1:A:1264:ILE:HG22	1:A:1283:GLY:O	2.19	0.42
1:B:403:ASP:OD1	1:B:407:LYS:HG3	2.18	0.42
1:B:550:LEU:HA	1:B:554:GLU:OE2	2.19	0.42
1:B:571:ALA:C	1:B:618:ILE:HD12	2.40	0.42
1:B:651:ASP:OD1	1:B:651:ASP:N	2.38	0.42
1:B:756:LYS:O	1:B:757:LYS:C	2.58	0.42
1:B:770:VAL:O	1:B:770:VAL:CG1	2.67	0.42
1:B:928:LEU:HA	1:B:928:LEU:HD23	1.65	0.42
1:B:1011:ALA:O	1:B:1014:ALA:N	2.52	0.42
1:B:1047:MET:HB2	1:B:1048:GLY:H	1.77	0.42
1:A:195:LEU:HA	1:A:195:LEU:HD23	1.57	0.42
1:A:515:ARG:HH22	1:A:966:ILE:CB	2.23	0.42
1:A:522:LEU:HA	1:A:716:ILE:HG22	2.01	0.42
1:A:1159:ASN:C	1:A:1161:VAL:H	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1425:LYS:HD2	1:A:1447:TRP:CD2	2.54	0.42
1:A:1447:TRP:NE1	1:A:1451:VAL:HG21	2.34	0.42
1:B:116:ILE:HD11	1:B:191:PHE:HB2	2.01	0.42
1:B:252:GLU:HA	1:B:260:MET:CE	2.50	0.42
1:B:442:MET:HB2	1:B:673:GLU:HG2	2.01	0.42
1:B:586:LEU:HD23	1:B:586:LEU:HA	1.85	0.42
1:B:754:ILE:HG22	1:B:755:GLN:N	2.34	0.42
1:B:918:THR:CG2	1:B:1256:MET:HE2	2.49	0.42
1:B:1131:THR:O	1:B:1132:PRO:C	2.58	0.42
1:A:121:ALA:C	1:A:123:ALA:N	2.73	0.42
1:A:133:VAL:HG12	1:A:134:GLY:N	2.34	0.42
1:A:194:ASP:HB3	1:A:200:PHE:CE1	2.54	0.42
1:A:629:THR:O	1:A:631:LEU:N	2.53	0.42
1:A:911:ALA:O	1:A:912:SER:C	2.57	0.42
1:A:1161:VAL:HG13	1:A:1161:VAL:O	2.18	0.42
1:B:409:HIS:O	1:B:413:LEU:HD23	2.18	0.42
1:B:420:VAL:HA	1:B:540:THR:HG21	2.01	0.42
1:B:540:THR:O	1:B:542:LEU:HG	2.20	0.42
1:B:732:ARG:H	1:B:747:SER:HA	1.85	0.42
1:B:965:LEU:HD23	1:B:965:LEU:HA	1.69	0.42
1:B:1346:PHE:O	1:B:1347:ALA:HB3	2.17	0.42
1:B:1435:THR:HG23	1:B:1437:SER:N	2.34	0.42
1:A:295:LYS:CE	1:A:299:VAL:CG1	2.89	0.42
1:A:515:ARG:H	1:A:515:ARG:HG3	1.52	0.42
1:A:820:ARG:CB	1:A:821:PRO:CD	2.96	0.42
1:A:1430:GLU:O	1:A:1431:HIS:C	2.58	0.42
1:A:1450:GLU:O	1:A:1451:VAL:C	2.57	0.42
1:A:1463:LEU:HA	1:A:1463:LEU:HD23	1.66	0.42
1:B:533:LEU:HA	1:B:533:LEU:HD23	1.42	0.42
1:B:560:ASP:O	1:B:561:TYR:C	2.58	0.42
1:B:840:VAL:O	1:B:841:ASP:C	2.56	0.42
1:B:1281:VAL:HA	1:B:1301:SER:O	2.20	0.42
1:B:1420:TYR:C	1:B:1422:SER:N	2.69	0.42
1:A:240:ASN:O	1:A:241:VAL:C	2.58	0.42
1:A:591:GLN:O	1:A:594:GLU:N	2.52	0.42
1:A:893:ARG:O	1:A:904:ASN:HB2	2.20	0.42
1:A:903:TRP:CD1	1:A:903:TRP:N	2.86	0.42
1:A:917:VAL:CG1	1:A:922:LEU:HD21	2.50	0.42
3:A:2474:FMN:H9	3:A:2474:FMN:H1'2	1.70	0.42
1:B:51:PRO:HD2	1:B:55:PHE:HD2	1.84	0.42
1:B:53:LYS:O	1:B:54:PHE:C	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:216:PHE:HA	1:B:217:PRO:HD3	1.76	0.42
1:B:254:PRO:CG	1:B:255:ALA:N	2.81	0.42
1:B:267:ILE:HG12	1:B:279:THR:HG21	2.01	0.42
1:B:375:ASP:OD2	1:B:377:THR:CB	2.61	0.42
1:B:757:LYS:O	1:B:758:VAL:C	2.53	0.42
1:B:828:LEU:HD23	1:B:828:LEU:HA	1.79	0.42
1:B:885:GLY:O	1:B:887:GLY:N	2.52	0.42
1:A:143:GLN:CA	1:A:143:GLN:NE2	2.78	0.42
1:A:309:THR:HG21	1:A:314:LYS:HG3	2.02	0.42
1:A:691:LYS:O	1:A:691:LYS:HG3	2.20	0.42
1:A:969:PRO:N	1:A:970:PRO:HD2	2.35	0.42
1:A:1394:VAL:CG1	1:A:1401:LEU:HD23	2.49	0.42
1:B:248:GLU:C	1:B:250:ARG:N	2.73	0.42
1:B:550:LEU:HD13	1:B:555:PHE:HA	2.01	0.42
1:B:787:ARG:H	1:B:787:ARG:HG3	1.23	0.42
1:B:1431:HIS:O	1:B:1432:VAL:C	2.54	0.42
1:A:112:ILE:HA	1:A:191:PHE:O	2.20	0.42
1:A:447:LEU:CD1	1:A:451:GLN:CG	2.96	0.42
1:A:949:VAL:O	1:A:950:THR:O	2.37	0.42
1:A:985:TYR:CE1	1:A:1207:VAL:HG11	2.52	0.42
1:A:985:TYR:CD1	1:A:1207:VAL:HG11	2.54	0.42
1:B:242:ASN:C	1:B:244:MET:N	2.72	0.42
1:B:244:MET:O	1:B:245:LYS:C	2.57	0.42
1:B:558:MET:C	1:B:560:ASP:H	2.23	0.42
1:B:826:ARG:NH1	1:B:826:ARG:CG	2.67	0.42
1:B:868:HIS:O	1:B:870:THR:N	2.53	0.42
1:B:878:ILE:HG21	1:B:878:ILE:HD13	1.66	0.42
1:B:948:LYS:C	1:B:950:THR:H	2.23	0.42
1:B:1066:ARG:NH1	1:B:1089:GLU:OE2	2.53	0.42
1:B:1155:PHE:CZ	1:B:1167:LEU:HD21	2.54	0.42
1:B:1274:GLN:NE2	1:B:1294:ASP:H	2.18	0.42
1:B:1282:GLN:HA	1:B:1302:GLY:O	2.20	0.42
1:B:1417:VAL:CG1	1:B:1419:HIS:H	2.28	0.42
1:A:165:ASN:O	1:A:166:ASP:HB2	2.20	0.42
1:A:227:MET:HE3	1:A:282:GLU:CA	2.40	0.42
1:A:284:MET:CE	1:A:294:VAL:HG13	2.50	0.42
1:A:352:PRO:HB2	1:A:367:SER:O	2.20	0.42
1:A:386:GLY:H	1:A:389:GLU:CG	2.33	0.42
1:A:419:TRP:CE3	1:A:537:GLU:HA	2.55	0.42
1:A:653:HIS:O	1:A:655:PHE:N	2.53	0.42
1:A:770:VAL:O	1:A:770:VAL:HG12	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1131:THR:HG21	1:A:1133:GLU:HB2	2.01	0.42
1:A:1424:LEU:HD23	1:A:1424:LEU:C	2.40	0.42
1:B:353:MET:HE2	1:B:353:MET:HA	2.01	0.42
1:B:438:GLU:HG3	1:B:693:MET:CG	2.50	0.42
1:B:505:GLN:HE22	1:B:1001:VAL:N	2.17	0.42
1:B:1043:LEU:HD23	1:B:1047:MET:HE3	2.01	0.42
1:A:37:ASP:OD1	1:A:38:GLY:N	2.53	0.42
1:A:376:GLU:HG3	1:A:1310:THR:OG1	2.20	0.42
1:A:420:VAL:HG12	1:A:421:GLN:N	2.35	0.42
1:A:428:GLU:O	1:A:429:LEU:C	2.52	0.42
1:A:505:GLN:NE2	1:A:1000:LEU:HB3	2.35	0.42
1:A:583:ARG:NE	1:A:587:ARG:NH1	2.68	0.42
1:A:842:GLU:OE1	1:A:1156:ARG:NH1	2.52	0.42
1:A:1022:LEU:HA	1:A:1068:ARG:O	2.19	0.42
1:A:1274:GLN:H	1:A:1274:GLN:HG2	1.35	0.42
1:A:1276:LEU:HD12	1:A:1276:LEU:C	2.36	0.42
1:A:1349:ARG:NH1	1:A:1367:TYR:O	2.52	0.42
1:A:1370:GLY:N	1:A:1389:GLY:O	2.53	0.42
1:B:24:ALA:O	1:B:25:LEU:C	2.57	0.42
1:B:105:TYR:HD1	1:B:105:TYR:H	1.68	0.42
1:B:227:MET:HE2	1:B:282:GLU:HG3	2.00	0.42
1:B:253:HIS:CE1	1:B:254:PRO:CG	3.03	0.42
1:B:404:ARG:HB3	1:B:405:GLU:OE1	2.20	0.42
1:B:457:THR:HA	1:B:773:LEU:HB3	2.02	0.42
1:B:574:PRO:HG2	1:B:574:PRO:O	2.19	0.42
1:B:608:ASP:OD2	1:B:646:THR:HA	2.20	0.42
1:B:1358:GLU:HA	1:B:1376:LEU:HB2	2.02	0.42
1:A:250:ARG:HH21	1:A:639:PHE:HE1	1.62	0.41
1:A:256:PHE:O	1:A:257:GLY:C	2.56	0.41
1:A:280:VAL:O	1:A:281:PHE:C	2.58	0.41
1:A:468:MET:O	1:A:472:GLY:N	2.51	0.41
1:A:558:MET:C	1:A:560:ASP:N	2.72	0.41
1:A:696:TYR:CZ	1:A:700:ILE:HD11	2.55	0.41
1:A:821:PRO:HA	1:A:822:PRO:HD3	1.84	0.41
1:A:894:PHE:CD1	1:A:904:ASN:ND2	2.88	0.41
1:A:1246:LEU:O	1:A:1249:MET:HB2	2.20	0.41
1:A:1407:ASP:O	1:A:1409:SER:N	2.53	0.41
1:B:232:GLY:HA3	1:B:330:PRO:O	2.20	0.41
1:B:632:ILE:HD13	1:B:632:ILE:HA	1.92	0.41
1:B:656:ALA:O	1:B:657:VAL:C	2.58	0.41
1:B:745:ARG:C	1:B:746:ILE:HG13	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:957:ARG:HD2	1:B:965:LEU:HD12	2.02	0.41
1:A:565:THR:CG2	1:A:603:HIS:HD2	2.33	0.41
1:A:1039:LYS:O	1:A:1040:PHE:CD1	2.73	0.41
1:A:1170:GLN:HB2	1:A:1183:LEU:HD12	2.02	0.41
1:A:1236:ARG:O	1:A:1238:THR:N	2.53	0.41
1:A:1349:ARG:HH11	1:A:1349:ARG:CG	2.22	0.41
1:A:1356:VAL:CG1	1:A:1431:HIS:CG	3.03	0.41
1:B:5:PHE:CZ	1:B:365:GLY:HA3	2.55	0.41
1:B:42:ASP:HB2	1:B:210:ARG:O	2.20	0.41
1:B:250:ARG:NE	1:B:639:PHE:CE1	2.83	0.41
1:B:444:LYS:HE3	1:B:681:ARG:HH12	1.85	0.41
1:B:751:LEU:HA	1:B:751:LEU:HD23	1.49	0.41
1:B:1468:VAL:O	1:B:1469:PRO:C	2.57	0.41
1:A:139:VAL:CG1	1:A:140:SER:N	2.54	0.41
1:A:286:ARG:HA	1:A:286:ARG:HD3	1.60	0.41
1:A:631:LEU:HA	1:A:631:LEU:HD22	1.39	0.41
1:A:1101:GLY:O	1:A:1102:CYS:C	2.57	0.41
1:B:182:MET:CG	1:B:182:MET:O	2.66	0.41
1:B:218:THR:CG2	1:B:221:LEU:H	2.30	0.41
1:B:355:TYR:C	1:B:355:TYR:HD1	2.20	0.41
1:B:500:ARG:HD2	1:B:728:ILE:HG21	2.02	0.41
1:B:547:SER:C	1:B:549:VAL:H	2.22	0.41
1:B:559:ARG:O	1:B:559:ARG:HG3	2.17	0.41
1:B:631:LEU:HD22	1:B:631:LEU:HA	1.74	0.41
1:B:970:PRO:O	1:B:970:PRO:HG2	2.19	0.41
1:B:987:LEU:HD23	1:B:987:LEU:HA	1.80	0.41
1:A:78:LEU:HB3	1:A:79:PRO:HD2	2.00	0.41
1:A:273:ASP:N	1:A:273:ASP:OD1	2.54	0.41
1:A:358:THR:CB	1:A:360:ASP:OD1	2.65	0.41
1:A:420:VAL:C	1:A:422:ASN:H	2.23	0.41
1:A:447:LEU:CD1	1:A:670:LEU:HD21	2.44	0.41
1:A:855:THR:O	1:A:855:THR:CG2	2.69	0.41
1:A:978:GLU:HG3	1:A:979:ASP:H	1.86	0.41
1:A:1226:GLY:O	1:A:1227:GLU:C	2.59	0.41
1:A:1375:ILE:HD13	1:A:1375:ILE:HG21	1.75	0.41
1:A:1384:ALA:O	1:A:1385:ALA:C	2.57	0.41
1:B:87:GLU:O	1:B:90:ARG:N	2.54	0.41
1:B:552:THR:O	1:B:552:THR:HG22	2.19	0.41
1:B:588:ARG:HH11	1:B:588:ARG:HD3	1.68	0.41
1:B:695:ASN:O	1:B:696:TYR:C	2.57	0.41
1:B:807:TYR:O	1:B:810:PHE:HB3	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:856:PRO:HG2	1:B:1093:GLY:HA3	2.02	0.41
1:B:957:ARG:NH2	4:B:2475:AKG:O4	2.40	0.41
1:B:1252:ARG:HH11	1:B:1252:ARG:HD3	1.68	0.41
1:A:97:ILE:HA	1:A:151:ILE:HD13	2.01	0.41
1:A:111:PRO:C	1:A:112:ILE:HG23	2.40	0.41
1:A:304:THR:HG21	1:A:518:ARG:HD2	2.03	0.41
1:A:476:ILE:CG2	1:A:477:GLY:N	2.83	0.41
1:A:695:ASN:O	1:A:698:LYS:N	2.53	0.41
1:A:890:ASP:HA	1:A:891:PRO:HD3	1.85	0.41
1:A:956:LEU:HA	1:A:956:LEU:HD23	1.70	0.41
1:A:1009:ILE:O	1:A:1010:ALA:C	2.59	0.41
1:A:1354:THR:HG23	1:A:1372:THR:HB	2.01	0.41
1:B:175:ARG:NH2	1:B:203:ASP:OD2	2.54	0.41
1:B:481:ASP:HB2	1:B:1038:ILE:HG22	2.02	0.41
1:B:504:SER:HB2	1:B:508:ASN:OD1	2.21	0.41
1:B:661:VAL:O	1:B:661:VAL:HG12	2.21	0.41
1:B:666:VAL:HG13	1:B:667:ASN:N	2.34	0.41
1:B:732:ARG:O	1:B:733:ALA:C	2.59	0.41
1:B:875:MET:SD	1:B:1139:PHE:CE2	3.14	0.41
1:B:1135:VAL:O	1:B:1138:LEU:N	2.54	0.41
1:B:1347:ALA:O	1:B:1348:VAL:C	2.54	0.41
1:B:1359:GLY:O	1:B:1360:CYS:HB3	2.20	0.41
1:B:1412:PHE:CD1	1:B:1412:PHE:N	2.88	0.41
1:A:443:ASP:OD2	1:A:445:ALA:HB3	2.21	0.41
1:A:555:PHE:CD1	1:A:556:ARG:N	2.89	0.41
1:A:1057:THR:CG2	1:A:1190:VAL:HG11	2.50	0.41
1:A:1230:GLN:C	1:A:1231:LEU:HD23	2.41	0.41
1:A:1349:ARG:HG2	1:A:1349:ARG:NH1	2.31	0.41
1:B:1161:VAL:O	1:B:1161:VAL:HG12	2.21	0.41
1:A:193:PRO:O	1:A:196:LEU:N	2.52	0.41
1:A:198:GLU:H	1:A:198:GLU:HG3	1.72	0.41
1:A:309:THR:HB	1:A:314:LYS:CE	2.51	0.41
1:A:745:ARG:C	1:A:746:ILE:HG13	2.40	0.41
1:A:856:PRO:C	1:A:883:ASP:HB3	2.41	0.41
1:A:1113:CYS:C	1:A:1115:VAL:N	2.71	0.41
1:A:1235:ALA:HA	1:A:1239:GLN:OE1	2.21	0.41
1:B:325:GLU:HA	1:B:326:PRO:HD3	1.92	0.41
1:B:526:LEU:N	1:B:526:LEU:CD1	2.64	0.41
1:B:739:PHE:HB3	1:B:740:PRO:HD2	2.03	0.41
1:B:919:ALA:CB	1:B:1281:VAL:CG1	2.98	0.41
1:B:1058:LEU:HA	1:B:1058:LEU:HD23	1.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1222:LEU:N	1:B:1229:MET:HE2	2.32	0.41
1:B:1317:THR:HG22	1:B:1318:ASN:CA	2.46	0.41
1:A:406:LEU:O	1:A:409:HIS:HB3	2.21	0.41
1:A:672:GLN:HG3	1:A:693:MET:SD	2.60	0.41
1:A:864:SER:HB3	1:A:1116:GLY:O	2.21	0.41
1:B:30:HIS:HE2	1:B:31:ARG:HD2	1.86	0.41
1:B:802:VAL:CG2	1:B:1134:LYS:O	2.69	0.41
1:A:52:GLN:HE21	1:A:52:GLN:HB3	1.56	0.41
1:A:77:PHE:HB3	1:A:126:PRO:CB	2.50	0.41
1:A:149:TYR:HE2	1:A:263:LEU:HD21	1.86	0.41
1:A:303:LEU:HD11	1:A:314:LYS:HG2	2.01	0.41
1:A:329:GLY:O	1:A:330:PRO:C	2.56	0.41
1:A:350:LEU:HD23	1:A:350:LEU:HA	1.55	0.41
1:A:452:GLN:CG	1:A:764:THR:HG22	2.48	0.41
1:A:454:PHE:CD2	1:A:648:GLU:CB	3.00	0.41
1:A:562:MET:HE1	1:A:605:ILE:HD11	2.01	0.41
1:A:706:LYS:NZ	1:A:1034:PRO:HG2	2.36	0.41
1:A:782:ARG:C	1:A:784:SER:N	2.70	0.41
1:A:784:SER:HB3	1:A:785:GLY:H	1.66	0.41
1:A:842:GLU:O	1:A:1156:ARG:HG2	2.21	0.41
1:A:843:VAL:CG1	1:A:844:GLU:H	2.31	0.41
1:A:862:ALA:O	1:A:1118:CYS:HB3	2.18	0.41
1:A:914:ARG:HH22	1:A:973:ASP:CG	2.23	0.41
1:A:969:PRO:CD	1:A:970:PRO:CD	2.99	0.41
1:A:1059:ASN:N	1:A:1059:ASN:HD22	2.19	0.41
1:A:1458:VAL:HA	1:A:1459:PRO:HD3	1.66	0.41
1:A:1466:LEU:O	1:A:1468:VAL:N	2.54	0.41
1:B:240:ASN:HB3	1:B:327:TRP:CZ2	2.56	0.41
1:B:438:GLU:OE2	1:B:553:ALA:HB3	2.20	0.41
1:B:570:ASP:OD1	1:B:570:ASP:C	2.59	0.41
1:B:937:LYS:N	1:B:938:PRO:HD3	2.35	0.41
1:B:974:ILE:HD13	1:B:974:ILE:HG21	1.74	0.41
1:B:999:LYS:CG	1:B:1022:LEU:CD2	2.64	0.41
1:B:1043:LEU:O	1:B:1044:PRO:C	2.58	0.41
1:B:1113:CYS:C	1:B:1115:VAL:H	2.23	0.41
1:B:1222:LEU:HD12	1:B:1222:LEU:O	2.20	0.41
1:B:1250:VAL:HG13	1:B:1259:LEU:HD12	2.01	0.41
1:B:1335:LYS:HA	1:B:1354:THR:O	2.21	0.41
1:B:1435:THR:CG2	1:B:1437:SER:CB	2.99	0.41
1:A:266:VAL:HG12	1:A:279:THR:HG22	1.94	0.41
1:A:461:MET:CE	1:A:461:MET:HA	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:864:SER:HB3	1:A:1117:VAL:O	2.21	0.41
1:A:930:ILE:CD1	1:A:983:LEU:HD13	2.43	0.41
1:B:284:MET:HE2	1:B:294:VAL:HG13	2.03	0.41
1:B:815:GLU:O	1:B:816:GLN:C	2.59	0.41
1:B:1153:LEU:HD23	1:B:1153:LEU:HA	1.42	0.41
1:A:24:ALA:C	1:A:26:LYS:H	2.23	0.40
1:A:42:ASP:OD1	1:A:212:SER:OG	2.38	0.40
1:A:485:ILE:HD13	1:A:485:ILE:HG21	1.72	0.40
1:A:503:PHE:CE2	1:A:938:PRO:HB3	2.56	0.40
1:A:622:LEU:HA	1:A:739:PHE:HE1	1.86	0.40
1:A:701:ASP:C	1:A:703:GLY:N	2.71	0.40
1:A:1458:VAL:CG1	1:A:1459:PRO:HD2	2.48	0.40
1:B:120:LYS:HE2	1:B:120:LYS:HA	2.00	0.40
1:B:240:ASN:HB3	1:B:327:TRP:CH2	2.56	0.40
1:B:410:LEU:HD12	1:B:410:LEU:N	2.36	0.40
1:B:561:TYR:CD1	1:B:561:TYR:O	2.74	0.40
1:B:806:SER:HG	1:B:809:THR:HB	1.85	0.40
1:B:853:PHE:CZ	1:B:1079:ILE:HD13	2.55	0.40
1:A:320:CYS:O	1:A:322:SER:N	2.54	0.40
1:A:348:ASN:O	1:A:349:GLY:C	2.59	0.40
1:A:464:ILE:CD1	1:A:779:TYR:CZ	2.94	0.40
1:A:492:TYR:CD2	1:A:761:GLN:HG2	2.57	0.40
1:A:528:ASN:O	1:A:529:LEU:HD23	2.21	0.40
1:A:635:ASN:O	1:A:636:LEU:HD13	2.20	0.40
1:A:1131:THR:CG2	1:A:1133:GLU:HB2	2.52	0.40
1:B:80:ARG:O	1:B:80:ARG:HG3	2.21	0.40
1:B:186:GLU:H	1:B:186:GLU:HG3	1.05	0.40
1:B:330:PRO:HA	1:B:350:LEU:HB2	2.03	0.40
1:B:406:LEU:O	1:B:409:HIS:HB3	2.21	0.40
1:B:499:PHE:CE1	1:B:742:MET:CE	3.00	0.40
1:B:621:ILE:HG12	1:B:657:VAL:HG12	2.04	0.40
1:B:657:VAL:O	1:B:661:VAL:HG23	2.22	0.40
1:B:787:ARG:HH12	1:B:821:PRO:CB	2.34	0.40
1:B:1062:ARG:HH11	1:B:1062:ARG:HD3	1.40	0.40
1:B:1147:ARG:HH11	1:B:1147:ARG:HD3	1.75	0.40
1:A:183:PHE:HE1	1:A:188:LEU:HA	1.79	0.40
1:A:318:GLN:O	1:A:322:SER:OG	2.40	0.40
1:A:390:MET:HG3	1:A:406:LEU:HD23	2.02	0.40
1:A:397:SER:O	1:A:398:GLY:C	2.58	0.40
1:A:606:LEU:O	1:A:607:THR:HG22	2.21	0.40
1:A:836:ALA:HB1	1:A:837:PRO:CD	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1401:LEU:HD11	1:A:1405:ILE:CD1	2.50	0.40
1:B:143:GLN:HE21	1:B:143:GLN:C	2.24	0.40
1:B:325:GLU:H	1:B:325:GLU:HG3	1.48	0.40
1:B:536:ASP:OD1	1:B:538:THR:N	2.54	0.40
1:B:575:VAL:HG13	1:B:759:LEU:HD22	2.03	0.40
1:B:1054:GLN:O	1:B:1055:VAL:C	2.60	0.40
1:B:1357:VAL:CG1	1:B:1359:GLY:H	2.35	0.40
1:A:355:TYR:CZ	1:A:383:GLY:HA3	2.56	0.40
1:A:491:LYS:HZ2	1:A:785:GLY:HA3	1.83	0.40
1:A:501:GLN:OE1	1:A:710:LYS:NZ	2.47	0.40
1:A:595:ASP:O	1:A:596:ALA:O	2.38	0.40
1:A:803:THR:O	1:A:803:THR:CG2	2.62	0.40
1:A:833:SER:HB2	1:A:1167:LEU:HD22	2.03	0.40
1:A:1374:VAL:HG12	1:A:1375:ILE:H	1.86	0.40
1:A:1395:TYR:HD2	1:A:1454:PHE:CE1	2.39	0.40
1:A:1440:ALA:O	1:A:1441:ALA:C	2.58	0.40
1:B:56:LYS:CG	1:B:71:LEU:HD22	2.48	0.40
1:B:298:LEU:HD23	1:B:324:MET:HG2	2.04	0.40
1:B:313:HIS:CD2	1:B:313:HIS:N	2.89	0.40
1:B:412:THR:O	1:B:412:THR:CG2	2.68	0.40
1:B:694:ALA:O	1:B:695:ASN:C	2.58	0.40
1:B:860:MET:HE2	1:B:868:HIS:ND1	2.36	0.40
1:B:942:GLY:HA2	4:B:2475:AKG:O5	2.20	0.40
1:B:969:PRO:N	1:B:970:PRO:CD	2.84	0.40
1:B:1354:THR:HA	1:B:1372:THR:O	2.21	0.40
1:A:6:ILE:HB	1:A:205:ALA:HB3	2.03	0.40
1:A:10:ASP:C	1:A:10:ASP:OD1	2.59	0.40
1:A:148:LEU:O	1:A:151:ILE:HB	2.21	0.40
1:A:185:ALA:O	1:A:186:GLU:C	2.58	0.40
1:A:233:GLU:O	1:A:329:GLY:HA3	2.21	0.40
1:A:894:PHE:CZ	1:A:924:GLN:HG3	2.56	0.40
1:A:1108:CYS:SG	5:A:2476:F3S:S2	3.20	0.40
1:A:1150:LEU:HD21	1:A:1158:LEU:HD12	2.04	0.40
1:A:1411:ILE:O	1:A:1411:ILE:CG1	2.66	0.40
1:B:117:ILE:HD12	1:B:117:ILE:HG21	1.49	0.40
1:B:230:HIS:CE1	1:B:234:ILE:HG13	2.55	0.40
1:B:495:LEU:O	1:B:497:HIS:N	2.55	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	1444/1479 (98%)	1152 (80%)	227 (16%)	65 (4%)	2	14
1	B	1444/1479 (98%)	1170 (81%)	211 (15%)	63 (4%)	2	15
All	All	2888/2958 (98%)	2322 (80%)	438 (15%)	128 (4%)	2	15

All (128) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	25	LEU
1	A	444	LYS
1	A	451	GLN
1	A	705	LEU
1	A	712	GLY
1	A	950	THR
1	A	1062	ARG
1	A	1227	GLU
1	A	1339	ALA
1	A	1375	ILE
1	A	1376	LEU
1	A	1388	THR
1	A	1394	VAL
1	A	1408	GLU
1	A	1461	GLU
1	A	1467	GLU
1	B	249	THR
1	B	255	ALA
1	B	418	LYS
1	B	561	TYR
1	B	705	LEU
1	B	740	PRO
1	B	950	THR
1	B	1164	ARG
1	B	1467	GLU

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Mol	Chain	Res	Type
1	A	53	LYS
1	A	54	PHE
1	A	249	THR
1	A	370	GLY
1	A	561	TYR
1	A	599	GLY
1	A	663	ALA
1	A	709	SER
1	A	745	ARG
1	A	939	GLY
1	A	1042	GLY
1	A	1160	GLU
1	A	1164	ARG
1	A	1317	THR
1	A	1439	PHE
1	A	1454	PHE
1	A	1460	LYS
1	B	25	LEU
1	B	421	GLN
1	B	444	LYS
1	B	451	GLN
1	B	562	MET
1	B	577	GLY
1	B	610	ALA
1	B	747	SER
1	B	764	THR
1	B	868	HIS
1	B	884	SER
1	B	886	GLU
1	B	1160	GLU
1	B	1381	ASP
1	B	1408	GLU
1	B	1421	GLU
1	B	1432	VAL
1	B	1433	THR
1	B	1452	THR
1	B	1461	GLU
1	A	24	ALA
1	A	377	THR
1	A	432	THR
1	A	433	ALA
1	A	629	THR

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Mol	Chain	Res	Type
1	A	740	PRO
1	A	974	ILE
1	A	1361	GLY
1	A	1381	ASP
1	A	1407	ASP
1	A	1438	ARG
1	B	663	ALA
1	B	721	GLY
1	B	745	ARG
1	B	869	GLY
1	B	1062	ARG
1	B	1071	GLY
1	B	1114	PRO
1	B	1142	LEU
1	B	1339	ALA
1	B	1438	ARG
1	B	1439	PHE
1	A	208	HIS
1	A	245	LYS
1	A	421	GLN
1	A	450	ARG
1	A	492	TYR
1	A	553	ALA
1	A	844	GLU
1	A	915	PHE
1	B	326	PRO
1	B	475	ALA
1	B	496	HIS
1	B	856	PRO
1	B	974	ILE
1	B	1376	LEU
1	B	1407	ASP
1	B	1424	LEU
1	A	69	ASN
1	A	521	SER
1	A	654	TYR
1	A	962	GLY
1	A	1395	TYR
1	B	254	PRO
1	B	388	GLY
1	B	450	ARG
1	B	559	ARG

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Mol	Chain	Res	Type
1	B	1078	ASP
1	A	217	PRO
1	B	290	THR
1	B	619	PRO
1	B	780	ARG
1	A	707	ILE
1	A	1185	PRO
1	B	61	VAL
1	A	619	PRO
1	A	1071	GLY
1	A	1261	PRO
1	A	1389	GLY
1	B	116	ILE
1	B	455	GLY
1	B	1394	VAL
1	A	372	VAL
1	B	774	PRO
1	B	953	ILE
1	B	657	VAL

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	1184/1206 (98%)	970 (82%)	214 (18%)	1 9
1	B	1184/1206 (98%)	965 (82%)	219 (18%)	1 8
All	All	2368/2412 (98%)	1935 (82%)	433 (18%)	1 9

All (433) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	3	VAL
1	A	30	HIS
1	A	34	VAL
1	A	35	ASP

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Mol	Chain	Res	Type
1	A	37	ASP
1	A	39	LYS
1	A	40	THR
1	A	47	HIS
1	A	52	GLN
1	A	59	VAL
1	A	68	ASP
1	A	69	ASN
1	A	76	VAL
1	A	78	LEU
1	A	80	ARG
1	A	81	ILE
1	A	109	GLN
1	A	113	ASN
1	A	117	ILE
1	A	120	LYS
1	A	143	GLN
1	A	144	PHE
1	A	146	LEU
1	A	156	GLU
1	A	162	GLU
1	A	175	ARG
1	A	177	ILE
1	A	184	LEU
1	A	186	GLU
1	A	188	LEU
1	A	189	THR
1	A	196	LEU
1	A	198	GLU
1	A	207	TYR
1	A	209	GLN
1	A	210	ARG
1	A	215	THR
1	A	218	THR
1	A	228	LEU
1	A	235	ASN
1	A	242	ASN
1	A	244	MET
1	A	249	THR
1	A	254	PRO
1	A	258	THR
1	A	261	GLN

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Mol	Chain	Res	Type
1	A	267	ILE
1	A	269	VAL
1	A	279	THR
1	A	286	ARG
1	A	312	ASN
1	A	316	LEU
1	A	322	SER
1	A	335	MET
1	A	336	THR
1	A	342	VAL
1	A	347	ARG
1	A	351	ARG
1	A	353	MET
1	A	355	TYR
1	A	362	LEU
1	A	367	SER
1	A	368	GLU
1	A	377	THR
1	A	380	ILE
1	A	390	MET
1	A	397	SER
1	A	405	GLU
1	A	413	LEU
1	A	417	ASP
1	A	420	VAL
1	A	429	LEU
1	A	439	PRO
1	A	440	SER
1	A	441	ASP
1	A	447	LEU
1	A	461	MET
1	A	463	LEU
1	A	465	LEU
1	A	479	MET
1	A	483	SER
1	A	487	VAL
1	A	495	LEU
1	A	509	PRO
1	A	519	VAL
1	A	520	MET
1	A	526	LEU
1	A	534	ASP

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Mol	Chain	Res	Type
1	A	537	GLU
1	A	547	SER
1	A	559	ARG
1	A	564	ASP
1	A	572	THR
1	A	584	ASP
1	A	598	ARG
1	A	606	LEU
1	A	607	THR
1	A	611	MET
1	A	631	LEU
1	A	634	SER
1	A	636	LEU
1	A	637	ARG
1	A	640	THR
1	A	642	LEU
1	A	650	LEU
1	A	658	LEU
1	A	665	THR
1	A	670	LEU
1	A	673	GLU
1	A	678	ARG
1	A	704	LEU
1	A	705	LEU
1	A	724	ASN
1	A	731	SER
1	A	734	LEU
1	A	764	THR
1	A	768	GLU
1	A	786	ASP
1	A	787	ARG
1	A	794	VAL
1	A	795	ILE
1	A	806	SER
1	A	812	LYS
1	A	813	TYR
1	A	820	ARG
1	A	824	GLN
1	A	826	ARG
1	A	833	SER
1	A	841	ASP
1	A	842	GLU

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Mol	Chain	Res	Type
1	A	850	ARG
1	A	851	LYS
1	A	855	THR
1	A	863	LEU
1	A	875	MET
1	A	884	SER
1	A	889	GLU
1	A	912	SER
1	A	934	GLN
1	A	937	LYS
1	A	952	MET
1	A	953	ILE
1	A	958	HIS
1	A	960	THR
1	A	970	PRO
1	A	978	GLU
1	A	982	GLN
1	A	983	LEU
1	A	1003	ARG
1	A	1008	THR
1	A	1015	LYS
1	A	1036	THR
1	A	1043	LEU
1	A	1057	THR
1	A	1058	LEU
1	A	1062	ARG
1	A	1064	ARG
1	A	1065	VAL
1	A	1066	ARG
1	A	1090	PHE
1	A	1109	HIS
1	A	1121	ASP
1	A	1122	ASP
1	A	1124	LEU
1	A	1142	LEU
1	A	1145	GLU
1	A	1157	SER
1	A	1159	ASN
1	A	1170	GLN
1	A	1206	GLU
1	A	1207	VAL
1	A	1220	ARG

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Mol	Chain	Res	Type
1	A	1225	GLU
1	A	1245	ARG
1	A	1246	LEU
1	A	1253	LYS
1	A	1261	PRO
1	A	1264	ILE
1	A	1267	ARG
1	A	1269	ARG
1	A	1274	GLN
1	A	1289	MET
1	A	1291	ASP
1	A	1301	SER
1	A	1304	THR
1	A	1308	ARG
1	A	1310	THR
1	A	1314	PRO
1	A	1317	THR
1	A	1318	ASN
1	A	1349	ARG
1	A	1355	VAL
1	A	1357	VAL
1	A	1360	CYS
1	A	1379	VAL
1	A	1381	ASP
1	A	1398	ASP
1	A	1401	LEU
1	A	1402	PRO
1	A	1408	GLU
1	A	1410	VAL
1	A	1413	GLN
1	A	1419	HIS
1	A	1421	GLU
1	A	1422	SER
1	A	1424	LEU
1	A	1425	LYS
1	A	1449	ARG
1	A	1452	THR
1	A	1461	GLU
1	A	1465	ARG
1	A	1466	LEU
1	A	1470	VAL
1	A	1471	HIS

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Mol	Chain	Res	Type
1	B	3	VAL
1	B	30	HIS
1	B	34	VAL
1	B	35	ASP
1	B	37	ASP
1	B	40	THR
1	B	47	HIS
1	B	59	VAL
1	B	68	ASP
1	B	76	VAL
1	B	80	ARG
1	B	81	ILE
1	B	109	GLN
1	B	113	ASN
1	B	117	ILE
1	B	120	LYS
1	B	143	GLN
1	B	144	PHE
1	B	146	LEU
1	B	173	SER
1	B	175	ARG
1	B	184	LEU
1	B	186	GLU
1	B	188	LEU
1	B	189	THR
1	B	198	GLU
1	B	209	GLN
1	B	210	ARG
1	B	215	THR
1	B	217	PRO
1	B	218	THR
1	B	235	ASN
1	B	242	ASN
1	B	249	THR
1	B	254	PRO
1	B	258	THR
1	B	260	MET
1	B	261	GLN
1	B	263	LEU
1	B	269	VAL
1	B	274	SER
1	B	279	THR

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Mol	Chain	Res	Type
1	B	286	ARG
1	B	290	THR
1	B	296	MET
1	B	297	MET
1	B	308	THR
1	B	312	ASN
1	B	316	LEU
1	B	322	SER
1	B	325	GLU
1	B	347	ARG
1	B	351	ARG
1	B	353	MET
1	B	355	TYR
1	B	362	LEU
1	B	367	SER
1	B	377	THR
1	B	380	ILE
1	B	385	LEU
1	B	389	GLU
1	B	397	SER
1	B	402	ARG
1	B	413	LEU
1	B	417	ASP
1	B	420	VAL
1	B	422	ASN
1	B	423	THR
1	B	426	LEU
1	B	429	LEU
1	B	439	PRO
1	B	447	LEU
1	B	461	MET
1	B	462	GLU
1	B	481	ASP
1	B	483	SER
1	B	487	VAL
1	B	490	ASP
1	B	492	TYR
1	B	495	LEU
1	B	496	HIS
1	B	500	ARG
1	B	501	GLN
1	B	519	VAL

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Mol	Chain	Res	Type
1	B	520	MET
1	B	522	LEU
1	B	526	LEU
1	B	531	ASN
1	B	534	ASP
1	B	537	GLU
1	B	538	THR
1	B	542	LEU
1	B	555	PHE
1	B	559	ARG
1	B	562	MET
1	B	564	ASP
1	B	572	THR
1	B	576	ASP
1	B	584	ASP
1	B	593	THR
1	B	606	LEU
1	B	607	THR
1	B	608	ASP
1	B	631	LEU
1	B	636	LEU
1	B	637	ARG
1	B	640	THR
1	B	642	LEU
1	B	643	ASN
1	B	658	LEU
1	B	665	THR
1	B	670	LEU
1	B	673	GLU
1	B	681	ARG
1	B	704	LEU
1	B	714	SER
1	B	717	SER
1	B	731	SER
1	B	746	ILE
1	B	751	LEU
1	B	764	THR
1	B	770	VAL
1	B	786	ASP
1	B	787	ARG
1	B	805	ASP
1	B	813	TYR

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Mol	Chain	Res	Type
1	B	820	ARG
1	B	823	MET
1	B	824	GLN
1	B	826	ARG
1	B	833	SER
1	B	841	ASP
1	B	850	ARG
1	B	855	THR
1	B	859	SER
1	B	884	SER
1	B	889	GLU
1	B	898	LYS
1	B	912	SER
1	B	918	THR
1	B	934	GLN
1	B	937	LYS
1	B	950	THR
1	B	952	MET
1	B	958	HIS
1	B	960	THR
1	B	978	GLU
1	B	983	LEU
1	B	1002	SER
1	B	1003	ARG
1	B	1008	THR
1	B	1015	LYS
1	B	1030	THR
1	B	1043	LEU
1	B	1057	THR
1	B	1058	LEU
1	B	1059	ASN
1	B	1062	ARG
1	B	1064	ARG
1	B	1065	VAL
1	B	1077	ARG
1	B	1090	PHE
1	B	1104	MET
1	B	1105	VAL
1	B	1109	HIS
1	B	1114	PRO
1	B	1121	ASP
1	B	1122	ASP

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Mol	Chain	Res	Type
1	B	1124	LEU
1	B	1131	THR
1	B	1142	LEU
1	B	1145	GLU
1	B	1147	ARG
1	B	1157	SER
1	B	1159	ASN
1	B	1167	LEU
1	B	1169	HIS
1	B	1170	GLN
1	B	1186	ARG
1	B	1204	ARG
1	B	1212	ASP
1	B	1229	MET
1	B	1230	GLN
1	B	1237	ASN
1	B	1238	THR
1	B	1245	ARG
1	B	1246	LEU
1	B	1247	SER
1	B	1253	LYS
1	B	1261	PRO
1	B	1264	ILE
1	B	1269	ARG
1	B	1289	MET
1	B	1298	LYS
1	B	1308	ARG
1	B	1317	THR
1	B	1318	ASN
1	B	1344	GLU
1	B	1349	ARG
1	B	1355	VAL
1	B	1360	CYS
1	B	1379	VAL
1	B	1381	ASP
1	B	1388	THR
1	B	1398	ASP
1	B	1400	SER
1	B	1401	LEU
1	B	1408	GLU
1	B	1409	SER
1	B	1410	VAL

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Mol	Chain	Res	Type
1	B	1421	GLU
1	B	1422	SER
1	B	1435	THR
1	B	1449	ARG
1	B	1452	THR
1	B	1465	ARG
1	B	1466	LEU
1	B	1470	VAL
1	B	1471	HIS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (75) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	30	HIS
1	A	47	HIS
1	A	52	GLN
1	A	113	ASN
1	A	143	GLN
1	A	163	GLN
1	A	208	HIS
1	A	214	ASN
1	A	230	HIS
1	A	235	ASN
1	A	240	ASN
1	A	261	GLN
1	A	313	HIS
1	A	321	ASN
1	A	452	GLN
1	A	505	GLN
1	A	635	ASN
1	A	643	ASN
1	A	653	HIS
1	A	724	ASN
1	A	738	HIS
1	A	755	GLN
1	A	788	HIS
1	A	824	GLN
1	A	943	GLN
1	A	982	GLN
1	A	1026	ASN
1	A	1059	ASN
1	A	1205	ASN

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Mol	Chain	Res	Type
1	A	1230	GLN
1	A	1274	GLN
1	A	1293	ASN
1	A	1318	ASN
1	A	1320	ASN
1	A	1363	ASN
1	A	1382	ASN
1	A	1419	HIS
1	A	1471	HIS
1	B	30	HIS
1	B	47	HIS
1	B	52	GLN
1	B	113	ASN
1	B	143	GLN
1	B	208	HIS
1	B	214	ASN
1	B	231	ASN
1	B	235	ASN
1	B	240	ASN
1	B	242	ASN
1	B	247	HIS
1	B	259	HIS
1	B	301	GLN
1	B	321	ASN
1	B	452	GLN
1	B	497	HIS
1	B	505	GLN
1	B	643	ASN
1	B	653	HIS
1	B	738	HIS
1	B	755	GLN
1	B	762	HIS
1	B	788	HIS
1	B	816	GLN
1	B	824	GLN
1	B	943	GLN
1	B	982	GLN
1	B	1059	ASN
1	B	1137	ASN
1	B	1205	ASN
1	B	1274	GLN
1	B	1318	ASN

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Mol	Chain	Res	Type
1	B	1363	ASN
1	B	1382	ASN
1	B	1419	HIS
1	B	1471	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

8 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	FMN	A	2474	-	33,33,33	1.47	5 (15%)	48,50,50	2.73	20 (41%)
2	OMT	B	2473	-	9,10,10	4.16	5 (55%)	11,14,14	5.80	5 (45%)
2	OMT	A	2473	-	9,10,10	4.29	5 (55%)	11,14,14	4.49	6 (54%)
4	AKG	A	2475	-	9,9,9	3.09	4 (44%)	11,11,11	2.92	4 (36%)
3	FMN	B	2474	-	33,33,33	1.36	4 (12%)	48,50,50	2.59	20 (41%)
5	F3S	A	2476	1	0,9,9	-	-	-	-	-
4	AKG	B	2475	-	9,9,9	3.48	4 (44%)	11,11,11	2.80	4 (36%)
5	F3S	B	2476	1	0,9,9	-	-	-	-	-

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	FMN	A	2474	-	-	7/18/18/18	0/3/3/3
2	OMT	B	2473	-	-	5/10/10/10	-
2	OMT	A	2473	-	-	5/10/10/10	-
4	AKG	A	2475	-	-	2/9/9/9	-
3	FMN	B	2474	-	-	5/18/18/18	0/3/3/3
5	F3S	A	2476	1	-	-	0/3/3/3
4	AKG	B	2475	-	-	1/9/9/9	-
5	F3S	B	2476	1	-	-	0/3/3/3

All (27) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	2473	OMT	CB-CG	-6.99	1.45	1.52
2	B	2473	OMT	CG-SD	-6.88	1.69	1.78
2	A	2473	OMT	CG-SD	-6.69	1.69	1.78
4	B	2475	AKG	O5-C2	6.49	1.36	1.23
2	B	2473	OMT	CB-CG	-5.99	1.46	1.52
4	A	2475	AKG	O5-C2	5.99	1.35	1.23
2	B	2473	OMT	OD1-SD	5.92	1.57	1.44
4	B	2475	AKG	O1-C1	5.78	1.38	1.22
2	A	2473	OMT	OD2-SD	5.39	1.56	1.44
2	B	2473	OMT	OD2-SD	4.86	1.55	1.44
4	A	2475	AKG	O1-C1	4.61	1.34	1.22
2	A	2473	OMT	OD1-SD	4.59	1.54	1.44
4	A	2475	AKG	O3-C5	4.25	1.36	1.22
2	A	2473	OMT	O-C	4.16	1.34	1.22
4	B	2475	AKG	O3-C5	4.14	1.35	1.22
2	B	2473	OMT	O-C	3.29	1.32	1.22
3	B	2474	FMN	C10-N1	3.24	1.39	1.33
3	A	2474	FMN	C4A-N5	3.08	1.36	1.30
4	B	2475	AKG	C3-C2	3.01	1.54	1.51
3	B	2474	FMN	C9A-N10	-2.98	1.35	1.41
4	A	2475	AKG	C3-C2	2.83	1.54	1.51
3	A	2474	FMN	C9A-C5A	-2.71	1.36	1.41
3	B	2474	FMN	C4A-N5	2.68	1.36	1.30
3	A	2474	FMN	C10-N1	2.65	1.38	1.33
3	A	2474	FMN	O4'-C4'	-2.51	1.38	1.43
3	B	2474	FMN	C9A-C5A	-2.38	1.37	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	2474	FMN	C9A-N10	-2.28	1.37	1.41

All (59) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2473	OMT	OD2-SD-CG	-16.70	96.65	108.34
2	A	2473	OMT	OD2-SD-CE	-11.66	97.19	108.91
3	A	2474	FMN	O5'-P-O1P	-7.87	84.41	106.47
4	B	2475	AKG	C4-C3-C2	-7.64	98.63	113.03
4	A	2475	AKG	C4-C3-C2	-7.23	99.42	113.03
3	B	2474	FMN	C4'-C3'-C2'	-7.07	98.65	113.36
3	B	2474	FMN	O4'-C4'-C3'	-6.46	93.39	109.10
2	B	2473	OMT	OD1-SD-CE	-6.37	102.50	108.91
3	A	2474	FMN	O4'-C4'-C5'	-6.24	95.89	109.92
2	A	2473	OMT	CE-SD-CG	5.84	127.72	105.21
3	A	2474	FMN	O4'-C4'-C3'	-5.67	95.31	109.10
3	A	2474	FMN	O3P-P-O5'	5.46	121.28	106.73
2	B	2473	OMT	OD1-SD-CG	5.09	111.91	108.34
3	A	2474	FMN	O2P-P-O5'	5.07	120.21	106.73
3	B	2474	FMN	C1'-N10-C9A	-4.95	112.26	120.51
3	B	2474	FMN	C5'-C4'-C3'	4.70	121.29	112.20
2	A	2473	OMT	OD2-SD-CG	-4.18	105.42	108.34
3	A	2474	FMN	C9A-C5A-N5	-4.04	118.04	122.43
4	A	2475	AKG	O1-C1-C2	4.02	127.09	121.72
3	B	2474	FMN	C4-C4A-C10	3.99	123.49	116.79
3	B	2474	FMN	C4-N3-C2	-3.98	118.28	125.64
3	A	2474	FMN	C4-N3-C2	-3.83	118.57	125.64
3	A	2474	FMN	O3P-P-O1P	-3.75	95.99	110.68
3	A	2474	FMN	C4'-C3'-C2'	-3.75	105.57	113.36
3	B	2474	FMN	C8M-C8-C9	3.74	126.41	119.49
3	A	2474	FMN	O2-C2-N3	-3.63	111.58	118.65
3	B	2474	FMN	O2-C2-N3	-3.60	111.64	118.65
3	B	2474	FMN	O3P-P-O2P	-3.56	94.03	107.64
3	A	2474	FMN	C4-C4A-C10	3.38	122.46	116.79
2	B	2473	OMT	CE-SD-CG	3.34	118.08	105.21
3	B	2474	FMN	C8M-C8-C7	-3.29	114.00	120.74
4	A	2475	AKG	C3-C2-C1	3.29	122.07	115.97
2	A	2473	OMT	OD2-SD-OD1	-3.24	110.16	117.09
2	A	2473	OMT	OD1-SD-CE	-3.24	105.65	108.91
3	B	2474	FMN	O2'-C2'-C1'	-3.18	102.10	109.80
2	B	2473	OMT	CB-CA-N	3.16	118.44	110.17
3	A	2474	FMN	C1'-N10-C9A	-3.07	115.39	120.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	B	2475	AKG	C3-C4-C5	3.06	120.19	113.60
3	A	2474	FMN	N3-C2-N1	2.99	125.25	119.38
3	B	2474	FMN	O3P-P-O5'	2.96	114.60	106.73
3	B	2474	FMN	O2P-P-O5'	2.92	114.51	106.73
3	B	2474	FMN	C4A-C10-N1	-2.86	118.09	124.73
3	A	2474	FMN	C5A-C9A-N10	2.84	120.89	117.95
2	A	2473	OMT	CB-CA-N	2.83	117.58	110.17
4	B	2475	AKG	C3-C2-C1	2.68	120.95	115.97
3	B	2474	FMN	N3-C2-N1	2.67	124.63	119.38
4	A	2475	AKG	O5-C2-C1	-2.67	115.56	119.43
3	B	2474	FMN	C9A-C5A-N5	-2.65	119.55	122.43
4	B	2475	AKG	O3-C5-C4	-2.27	115.80	123.08
3	A	2474	FMN	C5A-N5-C4A	2.26	121.83	118.07
3	A	2474	FMN	O3P-P-O2P	2.23	116.16	107.64
3	A	2474	FMN	O2'-C2'-C1'	-2.22	104.42	109.80
3	A	2474	FMN	C10-C4A-N5	-2.20	120.20	124.86
3	B	2474	FMN	N10-C10-N1	2.11	124.42	118.35
3	B	2474	FMN	C10-C4A-N5	-2.10	120.41	124.86
3	A	2474	FMN	C5'-C4'-C3'	2.09	116.24	112.20
3	B	2474	FMN	C4A-C4-N3	2.08	118.48	113.19
3	B	2474	FMN	O2'-C2'-C3'	2.06	114.10	109.10
3	A	2474	FMN	C4A-C10-N1	-2.05	119.97	124.73

There are no chirality outliers.

All (25) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	2473	OMT	C-CA-CB-CG
2	A	2473	OMT	CB-CG-SD-OD1
2	A	2473	OMT	CB-CG-SD-OD2
2	B	2473	OMT	N-CA-CB-CG
2	B	2473	OMT	C-CA-CB-CG
2	B	2473	OMT	CB-CG-SD-OD1
2	B	2473	OMT	CB-CG-SD-OD2
3	A	2474	FMN	O4'-C4'-C5'-O5'
3	A	2474	FMN	C5'-O5'-P-O1P
3	A	2474	FMN	C5'-O5'-P-O3P
3	B	2474	FMN	C2'-C3'-C4'-O4'
3	B	2474	FMN	O3'-C3'-C4'-O4'
3	A	2474	FMN	O3'-C3'-C4'-O4'
3	A	2474	FMN	C2'-C3'-C4'-O4'
3	A	2474	FMN	O3'-C3'-C4'-C5'

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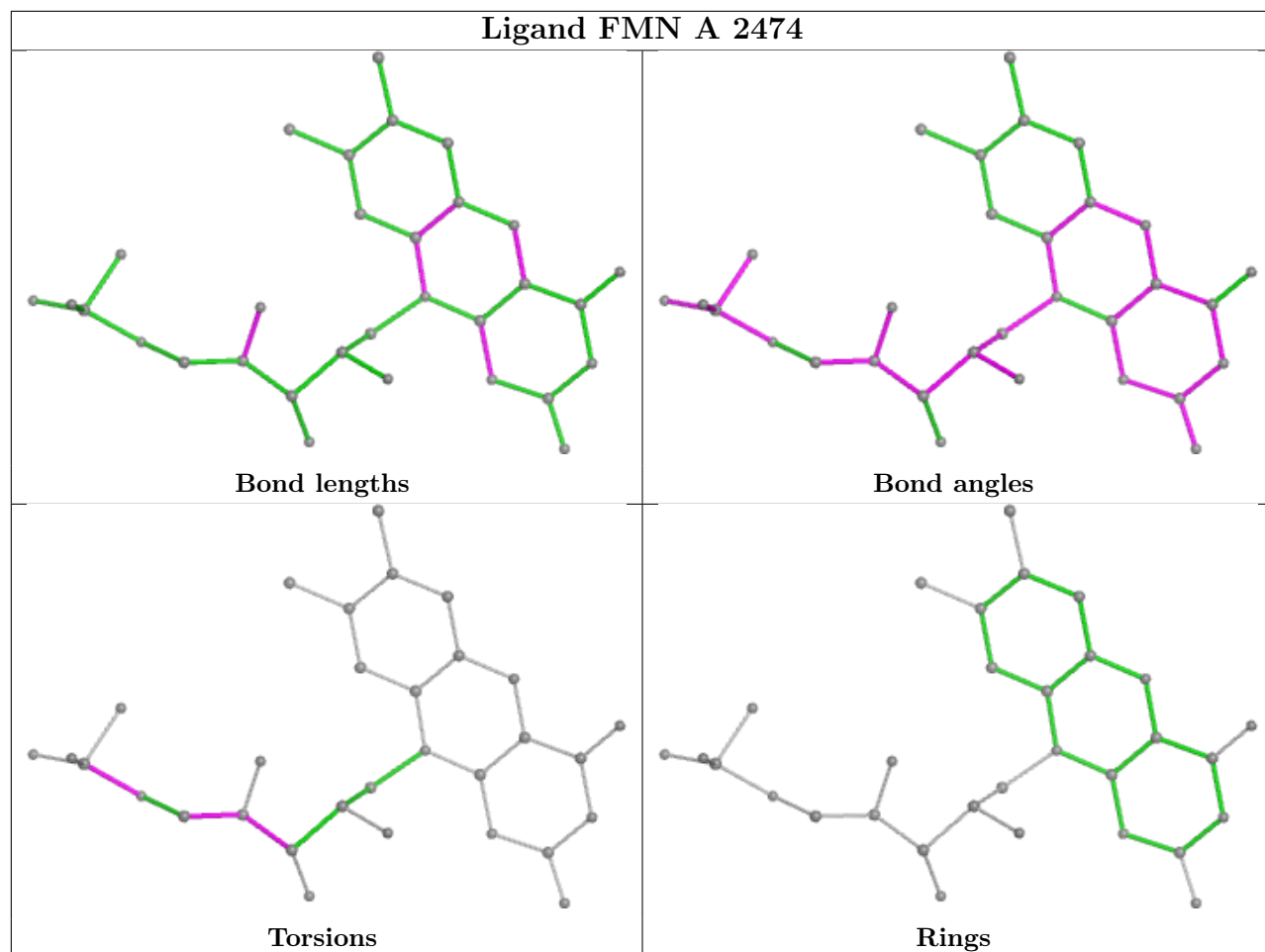
Mol	Chain	Res	Type	Atoms
3	B	2474	FMN	O3'-C3'-C4'-C5'
3	A	2474	FMN	C2'-C3'-C4'-C5'
3	B	2474	FMN	C2'-C3'-C4'-C5'
2	A	2473	OMT	CB-CG-SD-CE
2	B	2473	OMT	CB-CG-SD-CE
4	B	2475	AKG	C2-C3-C4-C5
4	A	2475	AKG	C3-C4-C5-O4
3	B	2474	FMN	C5'-O5'-P-O2P
2	A	2473	OMT	CA-CB-CG-SD
4	A	2475	AKG	C3-C4-C5-O3

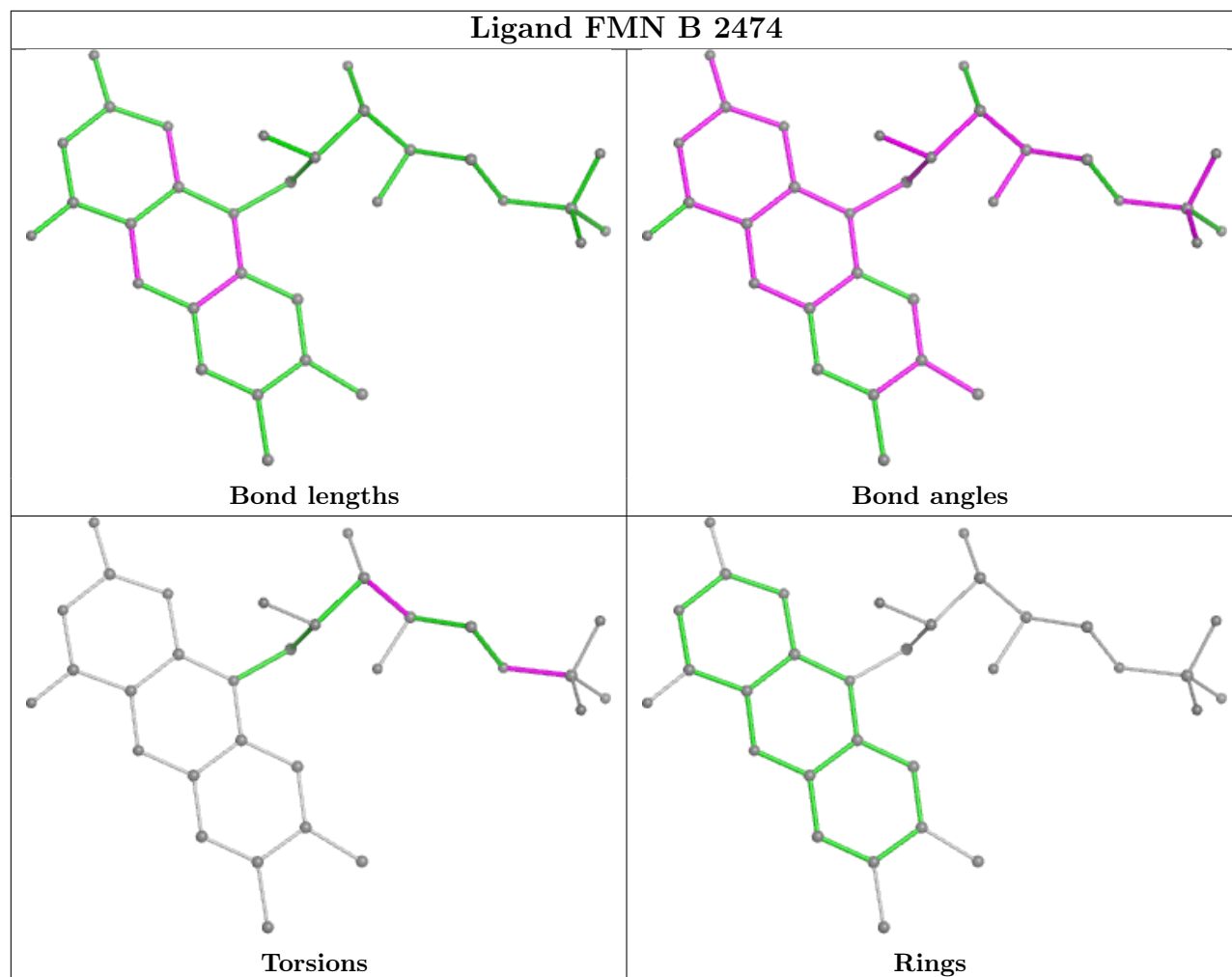
There are no ring outliers.

7 monomers are involved in 20 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	A	2474	FMN	4	0
2	B	2473	OMT	1	0
2	A	2473	OMT	2	0
3	B	2474	FMN	6	0
5	A	2476	F3S	2	0
4	B	2475	AKG	2	0
5	B	2476	F3S	3	0

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





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data [i](#)

6.1 Protein, DNA and RNA chains [i](#)

EDS was not executed - this section is therefore empty.

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

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates [i](#)

EDS was not executed - this section is therefore empty.

6.4 Ligands [i](#)

EDS was not executed - this section is therefore empty.

6.5 Other polymers [i](#)

EDS was not executed - this section is therefore empty.