



Full wwPDB EM Validation Report ⓘ

Jul 15, 2024 – 07:31 am BST

PDB ID : 8BH3
EMDB ID : EMD-16044
Title : DNA-PK Ku80 mediated dimer bound to PAXX
Authors : Hardwick, S.W.; Chaplin, A.K.
Deposited on : 2022-10-28
Resolution : 4.55 Å (reported)

This is a Full wwPDB EM 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/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

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

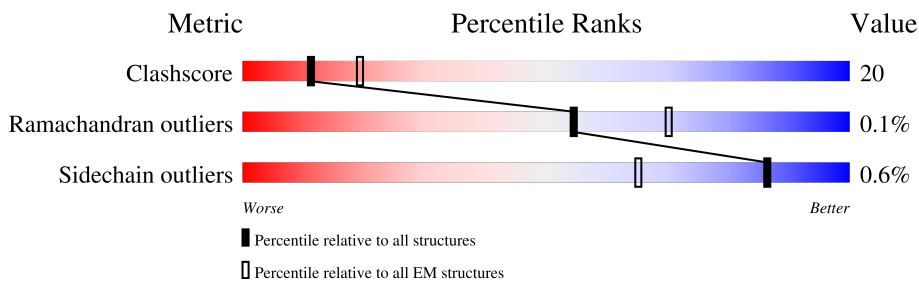
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 4.55 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	4128	
1	S	4128	
2	B	609	
2	T	609	
3	C	732	
3	L	732	
4	D	204	
4	M	204	

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Mol	Chain	Length	Quality of chain
5	G	336	<p>18% 43% 16% 40%</p>
5	H	336	<p>26% 44% 12% 42%</p>
5	P	336	<p>25% 51% 8% 40%</p>
5	Q	336	<p>26% 48% 9% 42%</p>
6	I	911	<p>17% 10% 73%</p>
6	R	911	<p>17% 10% 73%</p>
7	j	25	<p>100%</p>
8	i	27	<p>100%</p>
9	d	26	<p>96%</p>
10	e	28	<p>96%</p>

2 Entry composition [i](#)

There are 10 unique types of molecules in this entry. The entry contains 89245 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called DNA-dependent protein kinase catalytic subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	3550	Total	C	N	O	S	0	0
			27927	17939	4728	5074	186		
1	S	3540	Total	C	N	O	S	0	0
			27999	18001	4725	5087	186		

- Molecule 2 is a protein called X-ray repair cross-complementing protein 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	507	Total	C	N	O	S	0	0
			4038	2587	686	747	18		
2	T	502	Total	C	N	O	S	0	0
			4014	2569	680	747	18		

- Molecule 3 is a protein called X-ray repair cross-complementing protein 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	668	Total	C	N	O	S	0	0
			5292	3382	884	1000	26		
3	L	652	Total	C	N	O	S	0	0
			5174	3304	871	973	26		

- Molecule 4 is a protein called Protein PAXX.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	D	147	Total	C	N	O	S	0	0
			1075	689	183	197	6		
4	M	164	Total	C	N	O	S	0	0
			1195	754	207	228	6		

- Molecule 5 is a protein called DNA repair protein XRCC4.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	G	201	Total	C	N	O	S	0	0
			1628	1031	278	312	7		
5	H	194	Total	C	N	O	S	0	0
			1589	1009	271	302	7		
5	P	201	Total	C	N	O	S	0	0
			1628	1031	278	312	7		
5	Q	194	Total	C	N	O	S	0	0
			1589	1009	271	302	7		

- Molecule 6 is a protein called DNA ligase 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	I	246	Total	C	N	O	S	0	0
			1977	1256	336	372	13		
6	R	246	Total	C	N	O	S	0	0
			1958	1240	332	373	13		

- Molecule 7 is a DNA chain called DNA (25-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
7	j	25	Total	C	N	O	P	0	0
			509	244	86	154	25		

- Molecule 8 is a DNA chain called DNA (27-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
8	i	27	Total	C	N	O	P	0	0
			552	265	102	158	27		

- Molecule 9 is a DNA chain called DNA (26-MER).

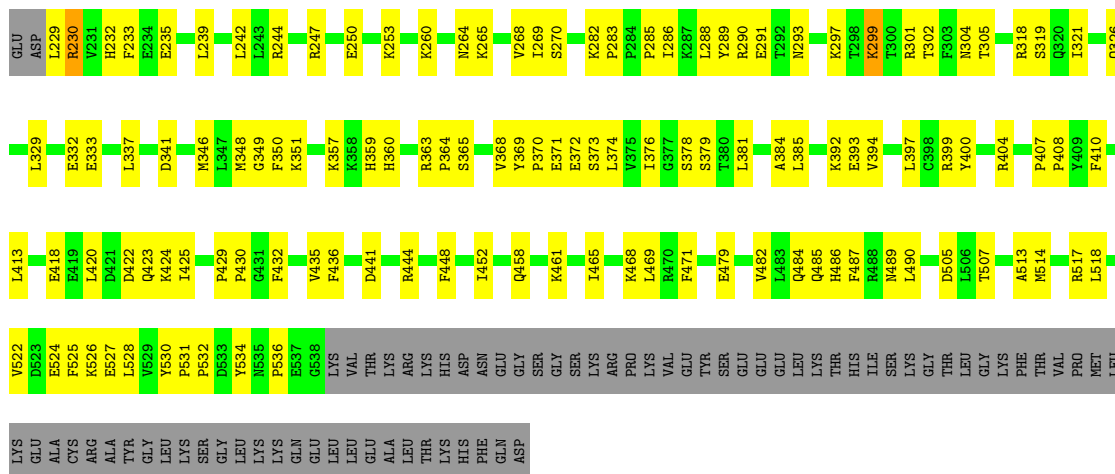
Mol	Chain	Residues	Atoms					AltConf	Trace
9	d	26	Total	C	N	O	P	0	0
			528	253	89	160	26		

- Molecule 10 is a DNA chain called DNA (28-MER).

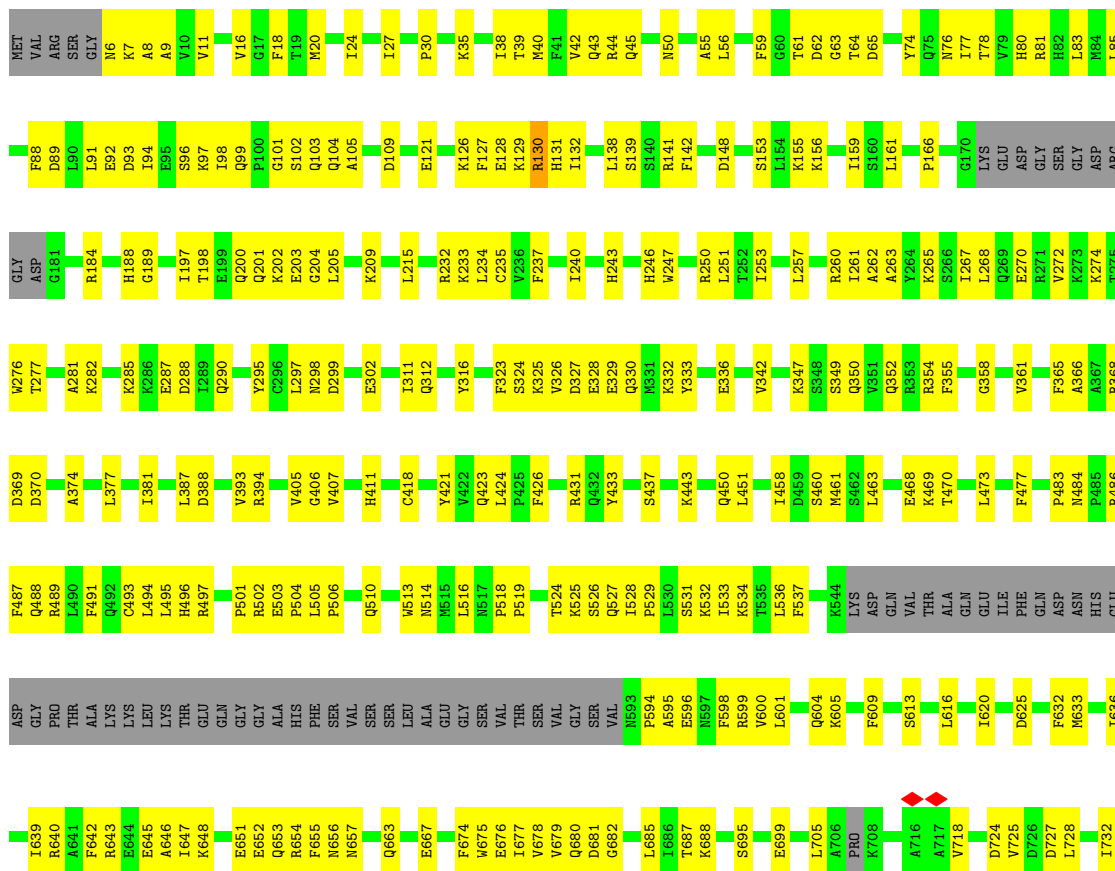
Mol	Chain	Residues	Atoms					AltConf	Trace
10	e	28	Total	C	N	O	P	0	0
			573	275	107	163	28		

H1385	H1386	V1389	Q1390	V1391	D1397	V1398	V1399	V1400	N1401	H1402	H1403	H1404	A1405	L1406	S1409	P1410	Y1411	K1412	D1413	I1414	L1415	E1416	L1417	H1418	L1419	R1420	E1421	K1422	L1423	T1424	Q1426	D1444	R1445	S1446	R1447	L1448	V1452	L1458	H1459	R1460	N1466	L1467	P1469	D1474	V1479	L1483	L1484													
H1304	D1305	I1306	I1307	C1312	F1313	GLY	THR	GLY	ALA	GLY	ASN	ARG	T1322	E1326	R1329	Y1330	N1331	Y1332	S1333	K1334	V1337	V1338	V1339	R1340	I1341	M1342	E1343	S1352	W1356	K1357	L1358	K1360	K1361	H1367	L1368	M1369	R1370	V1371	L1372	V1373	Q1374	L1376	C1377	E1378	P1379	V1382	G1383	F1384												
K1213	F1219	I1221	E1225	Q1231	S1233	G1234	I1235	L1236	T1240	LEU	LEU	TYR	LEU	ARG	GLY	PRO	PHE	S1249	I1253	L1254	C1255	L1256	L1257	D1258	L1259	L1260	L1261	A1262	E1265	G1266	Y1267	T1275	A1278	L1279	Q1280	V1281	L1282	G1283	T1284	A1293	F1296	F1297	L1298	E1299	S1300	I1301	L1212													
I1181	D1182	L1183	C1185	R1186	I1187	I1188	I1189	K1140	N1146	R1152	L1153	P1154	R1155	C1164	L1165	L1166	D1167	L1168	V1169	K1170	W1171	L1172	A1173	W1174	L1175	C1176	G1177	E1182	C1183	R1184	S1187	L1190	F1191	Y1192	K1193	F1194	V1196	L1197	L1198	P1199	G1200	R1202	F1296	F1297	L1298	E1299	S1300	I1301	L1212											
Q1048	K1051	N1055	T1056	K1057	S1058	R1062	L1063	Y1064	S1065	H1069	R1075	L1076	G1077	A1078	S1079	L1080	A1081	F1082	I1085	F1096	R1087	R1090	L1095	V1096	E1097	Q1098	F1099	V1100	F1101	E1102	A1103	V1105	I1106	Y1107	M1108	E1109	H1115	A1116	D1117	E1118	L1121	G1122	T1123	L1124	Q1125	Q1126	C1128	L1212												
T965	F966	L972	A973	C974	D975	V976	D977	Q978	T980	R981	Q982	R913	V914	E915	E916	L917	A918	L919	T920	A921	S922	D923	E924	Q925	T926	K927	V928	E932	L933	L934	H935	F936	M937	V938	M939	F940	M941	L942	K944	A945	T946	Q947	G952	A955	P956	R957	M958	Y959	Q960	L961	L962	F964	A895	R964						
K832	H833	L834	K835	K838	H839	L840	SER	SER	ASN	GLU	ALA	ILE	S847	L848	D849	E850	R851	H852	M853	R854	P787	Y788	Y789	K790	D791	L792	L793	G798	K801	T802	S803	ALA	LEU	SER	ASP	GLU	THR	THR	SER	SER	ASP	GLU	M879	M880	K881	S882	Y883	D887	R888	E889	K890	R891	L892	S893	F894	A895				
G759	L760	S761	T763	I680	P764	L765	A766	E767	V768	G769	L770	W776	T780	D781	R782	H783	V784	M785	Q786	P787	Y788	Y789	K790	D791	L792	L793	G798	K801	T802	S803	ALA	LEU	SER	ASP	GLU	THR	THR	SER	ASN	TRP	GLU	VAL	SER	ALA	LEU	SER	ARG	ALA	ALA	E742	GLN	LYS	GLY	F826	L831					
R675	K678	K679	I680	K681	V682	G685	V686	SER	VAL	PRD	LYS	SER	LEU	LYS	HIS	SER	SER	GLU	D697	K700	S702	C703	L706	F707	E636	F708	K709	F710	R801	T802	S803	ALA	LEU	SER	ASP	GLU	THR	THR	SER	ASN	TRP	GLU	VAL	SER	ALA	LEU	SER	ARG	ALA	E742	GLN	LYS	GLY	F826	L831					
E446	P447	Q448	Y449	S450	K452	M453	Q454	L455	A460	I461	A462	K463	Y385	Y386	E387	L388	V389	Q390	R391	N477	C478	I479	V482	G486	R489	I490	ASP	C491	S492	K493	P498	LYS	GLY	PRO	GLU	SER	GLU	L573	K574	Q415	S416	V417	HIS	ALA	ALA	GLY	GLU	VAL	GLU	VAL	ARG	GLN	THR	GLY	LYS	ASP	GLU	ALA	P522	T523
L359	S360	I361	Y265	A270	L274	F275	H278	Q281	L286	F294	E295	V296	L297	L298	K299	W300	C301	A302	H303	T304	N305	L308	K309	S314	A315	L316	E317	S318	F319	L320	V323	M326	V327	N330	Q344	I348	I349	ARG	ASN	VAL	ASP	SER	ASN	K356	L357	E358														
Y524	K525	D526	Y527	D528	L530	F531	R532	H533	L534	A537	M540	M541	D542	S543	I544	D547	GLU	ALA	PHE	PHE	SER	VAL	ASN	P635	SER	SER	E636	K637	E640	F641	E643	P644	W645	S571	V572	L573	K574	Q415	S416	V417	HIS	ALA	ALA	GLY	GLU	VAL	GLU	VAL	ARG	GLN	THR	GLY	LYS	ASP	GLU	ALA	P522	T523		
GLY	VAL	TRP	MET	ILE	PRO	THR	SER	ASP	PRD	ALA	A610	H613	P614	A615	F620	M625	L626	V627	E628	R631	E632	P635	SER	SER	E636	K637	E640	F641	E643	P644	W645	S571	V572	L573	K574	Q415	S416	V417	HIS	ALA	ALA	GLY	GLU	VAL	GLU	VAL	ARG	GLN	THR	GLY	LYS	ASP	GLU	ALA	P522	T523				

L1489	K1489	L1490	G1490	L1491	I1491	L1492	S1664	PRO	GLY
L1492	PRD	L1493	ASP	L1494	GLY	L1495	ASP	L1496	ASP
L1497	GLY	L1498	ASP	L1499	GLY	L1500	PRD	L1501	S1502
L1502	S1502	L1503	G1513	L1504	G1513	L1505	L1514	L1506	L1515
L1507	L1515	L1508	L1516	L1509	E1516	L1510	E1516	L1511	E1517
L1512	E1517	L1513	R1527	L1514	R1527	L1515	V1529	L1516	S1530
L1517	E1529	L1518	D1602	L1519	D1602	L1520	V1529	L1521	S1530
L1522	V1529	L1523	Q1603	L1524	Q1603	L1525	S1530	L1526	L1531
L1527	S1530	L1528	F1604	L1529	F1604	L1530	P1605	L1531	L1532
L1532	L1531	L1533	R1606	L1534	R1606	L1535	F1606	L1536	E1607
L1537	E1607	L1538	R1608	L1539	R1608	L1540	A1536	L1541	V1537
L1542	V1537	L1543	L1544	L1545	L1544	L1546	L1545	L1547	L1548
L1547	L1548	L1548	Q1611	L1549	Q1611	L1550	L1612	L1551	L1613
L1552	L1612	L1553	L1613	L1554	L1613	L1555	L1614	L1556	L1614
L1557	L1614	L1558	L1615	L1559	L1615	L1560	L1616	L1561	L1617
L1562	L1616	L1563	L1617	L1564	L1617	L1565	L1707	L1566	L1707
L1567	L1707	L1568	E1708	L1569	E1708	L1570	E1709	L1571	L1710
L1572	E1709	L1573	L1710	L1574	L1710	L1575	L1711	L1576	L1711
L1577	L1711	L1578	L1712	L1579	L1712	L1580	L1713	L1581	L1713
L1582	L1713	L1583	L1714	L1584	L1714	L1585	L1715	L1586	L1715
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L1592	L1717	L1593	L1718	L1594	L1718	L1595	L1719	L1596	L1719
L1597	L1719	L1598	L1720	L1599	L1720	L1600	L1721	L1601	L1721
L1602	L1721	L1603	L1722	L1604	L1722	L1605	L1723	L1606	L1723
L1607	L1723	L1608	L1724	L1609	L1724	L1609	L1725	L1610	L1725
L1612	L1725	L1613	L1726	L1614	L1726	L1615	L1727	L1616	L1727
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L1622	L1729	L1623	L1730	L1624	L1730	L1625	L1731	L1626	L1731
L1627	L1731	L1628	L1732	L1629	L1732	L1629	L1733	L1630	L1733
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L1637	L1735	L1638	L1736	L1639	L1736	L1640	L1737	L1641	L1737
L1642	L1737	L1643	L1738	L1644	L1738	L1645	L1739	L1646	L1739
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L1657	L1743	L1658	L1744	L1659	L1744	L1660	L1745	L1661	L1745
L1662	L1745	L1663	L1746	L1664	L1746	L1665	L1747	L1666	L1747
L1667	L1747	L1668	L1748	L1669	L1748	L1670	L1749	L1671	L1749
L1672	L1749	L1673	L1750	L1674	L1750	L1675	L1751	L1676	L1751
L1677	L1751	L1678	L1752	L1679	L1752	L1680	L1753	L1681	L1753
L1682	L1753	L1683	L1754	L1684	L1754	L1685	L1755	L1686	L1755
L1687	L1755	L1688	L1756	L1689	L1756	L1690	L1757	L1691	L1757
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L1707	L1763	L1708	L1764	L1709	L1764	L1710	L1765	L1711	L1765
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L1737	L1775	L1738	L1776	L1739	L1776	L1740	L1777	L1741	L1777
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L1747	L1779	L1748	L1780	L1749	L1780	L1750	L1781	L1751	L1781
L1752	L1781	L1753	L1782	L1754	L1782	L1755	L1783	L1756	L1783
L1757	L1783	L1758	L1784	L1759	L1784	L1760	L1785	L1761	L1785
L1762	L1785	L1763	L1786	L1764	L1786	L1765	L1787	L1766	L1787
L1767	L1787	L1768	L1788	L1769	L1788	L1770	L1789	L1771	L1789
L1772	L1789	L1773	L1790	L1774	L1790	L1775	L1791	L1776	L1791
L1777	L1791	L1778	L1792	L1779	L1792	L1780	L1793	L1781	L1793
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L1792	L1797	L1793	L1798	L1794	L1798	L1795	L1799	L1796	L1799
L1797	L1799	L1798	L1800	L1799	L1800	L1800	L1801	L1801	L1801
L1802	L1801	L1803	L1802	L1804	L1802	L1805	L1803	L1806	L1806
L1807	L1806	L1808	L1807	L1809	L1807	L1810	L1808	L1811	L1811
L1812	L1808	L1813	L1809	L1811	L1809	L1812	L1812	L1815	L1815
L1817	L1815	L1818	L1816	L1817	L1816	L1818	L1817	L1821	L1821
L1822	L1817	L1823	L1818	L1820	L1818	L1821	L1819	L1822	L1819
L1827	L1819	L1828	L1820	L1822	L1820	L1825	L1821	L1828	L1828
L1832	L1822	L1833	L1823	L1826	L1823	L1831	L1824	L1835	L1835
L1837	L1824	L1838	L1824	L1830	L1824	L1833	L1825	L1838	L1838
L1842	L1825	L1843	L1825	L1831	L1825	L1835	L1826	L1840	L1840
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L1852	L1827	L1853	L1827	L1835	L1827	L1837	L1828	L1846	L1846
L1857	L1828	L1858	L1828	L1837	L1828	L1841	L1829	L1849	L1849
L1862	L1829	L1863	L1829	L1837	L1829	L1843	L1830	L1852	L1852
L1867	L1830	L1868	L1830	L1839	L1830	L1845	L1831	L1855	L1855
L1872	L1831	L1873	L1831	L1841	L1831	L1847	L1832	L1858	L1858
L1877	L1832	L1878	L1832	L1843	L1832	L1849	L1833	L1861	L1861
L1882	L1833	L1883	L1833	L1845	L1833	L1851	L1834	L1864	L1864
L1887	L1834	L1888	L1834	L1847	L1834	L1853	L1835	L1867	L1867
L1892	L1835	L1893	L1835	L1849	L1835	L1855	L1836	L1870	L1870
L1897	L1836	L1898	L1836	L1851	L1836	L1857	L1837	L1873	L1873
L1902	L1837	L1903	L1837	L1853	L1837	L1859	L1838	L1876	L1876
L1907	L1838	L1908	L1838	L1855	L1838	L1861	L1839	L1877	L1877
L1912	L1839	L1913	L1839	L1857	L1839	L1863	L1840	L1878	L1878
L1917	L1840	L1918	L1840	L1859	L1840	L1865	L1841	L1879	L1879
L1922	L1841	L1923	L1841	L1861	L1841	L1867	L1842	L1880	L1880
L1927	L1842	L1928	L1842	L1863	L1842	L1869	L1843	L1881	L1881
L1932	L1843	L1933	L1843	L1865	L1843	L1871	L1844	L1884	L1884
L1937	L1844	L1938	L1844	L1867	L1844	L1873	L1845	L1885	L1885
L1942	L1845	L1943	L1845	L1869	L1845	L1875	L1846	L1888	L1888
L1947	L1846	L1948	L1846	L1871	L1846	L1877	L1847	L1889	L1889
L1952	L1847	L1953	L1847	L1873	L1847	L1879	L1848	L1890	L1890
L1957	L1848	L1958	L1848	L1875	L1848	L1881	L1849	L1891	L1891
L1962	L1849	L1963	L1849	L1877	L1849	L1883	L1850	L1894	L1894
L1967	L1850	L1968	L1850	L1879	L1850	L1885	L1851	L1895	L1895
L1972	L1851	L1973	L1851	L1881	L1851	L1887	L1852	L1898	L1898
L1977	L1852	L1978	L1852	L1883	L1852	L1889	L1853	L1901	L1901
L1982	L1853	L1983	L1853	L1885	L1853	L1891	L1854	L1904	L1904
L1987	L1854	L1988	L1854	L1887	L1854	L1893	L1855	L1907	L1907
L1992	L1855	L1993	L1855	L1889	L1855	L1895	L1856	L1910	L1910
L1997	L1856	L1998	L1856	L1891	L1856	L1897	L1857	L1913	L1913
L2002	L1857	L2003	L1857	L1893	L1857	L1899	L1858	L1916	L1916
L2007	L1858	L2008	L1858	L1895	L1858	L1901	L1859	L1919	L1919
L2012	L1859	L2013	L1859	L1897	L1859	L1903	L1860	L1922	L1922
L2017	L1860	L2018	L1860	L1899	L1860	L1905	L1861	L1925	L1925
L2022	L1861	L2023	L1861	L1901	L1861	L1907	L1862	L1928	L1928
L2027	L1862	L2028	L1862	L1903	L1862	L1909	L1863	L1931	L1931
L2032	L1863	L2033	L1863	L1905	L1863	L1911	L1864	L1934	L1934
L2037	L1864	L2038	L1864	L1907	L1864	L1913	L1865	L1937	L1937
L2042	L1865	L2043	L1865	L1909	L1865	L1915	L1866	L1940	L1940
L2047	L1866	L2048	L1866	L1911	L1866	L1917	L1867	L1943	L1943
L2052	L1867	L2053	L1867	L1913	L1867	L1919	L1868	L1946	L1946
L2057	L1868	L2058	L1868	L1915	L1868	L1921	L1869	L1949	L1949
L2062	L1869	L2063	L1869	L1917	L1869	L1923	L1870	L1952	L1952
L2067	L1870	L2068	L1870	L1919	L1870	L1925	L1871	L1955	L1955
L2072	L1871	L2073	L1871	L1921	L1871	L1927	L1872	L1958	L1958
L2077	L1872	L2078	L1872	L1923	L1872	L1929	L1873	L1961	L1961
L2082	L1873	L2083	L1873	L1925	L1873	L1931	L1874	L1964	L1964
L2087	L1874	L2088	L1874	L1927	L1874	L1933	L1875	L1967	L1967
L2092	L1875	L2093	L1875	L1929	L1875	L1935	L1876	L1970	L1970
L2097	L1876	L2098	L1876	L1931	L1876	L1937	L1877	L1973	L1973
L2102	L1877	L2103	L1877	L1933	L1877	L1939	L1878	L1976	L1976
L2107	L1878	L2108	L1878	L1935	L1878	L1941	L1879	L1979	L1979
L2112	L1879	L2113	L1879	L1937	L1879	L1943	L1880	L1982	L1982
L2117	L1880	L2118	L1880	L1939	L1880	L1945	L1881	L1985	L1985
L2122	L1881	L2123	L1881	L1941	L1881	L1947	L1882	L1988	L1988
L2127	L1882	L2128	L1882	L1943	L1882	L1949	L1883	L1991	L19

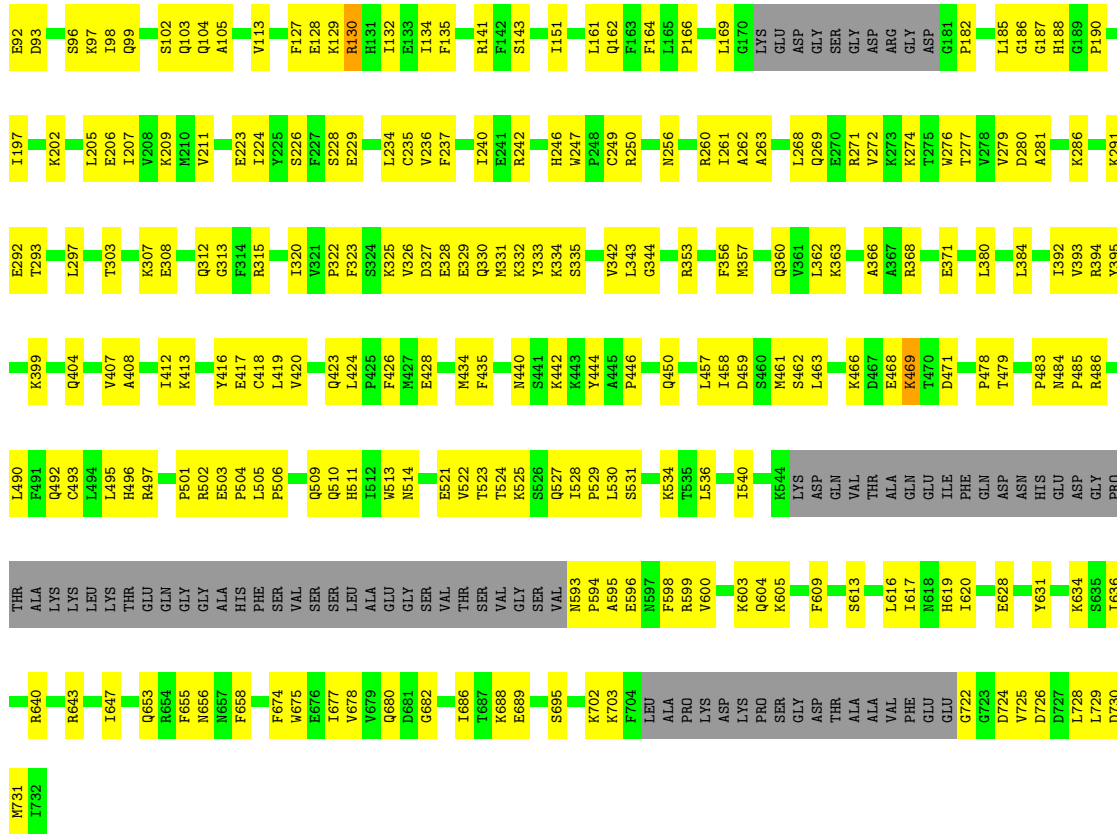


• Molecule 3: X-ray repair cross-complementing protein 5

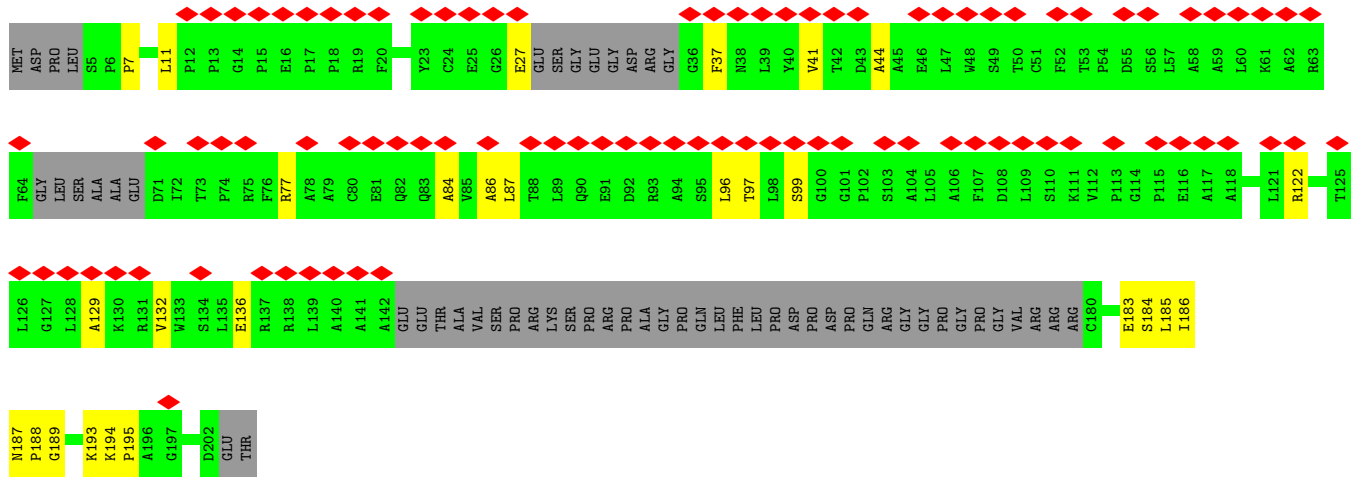


• Molecule 3: X-ray repair cross-complementing protein 5

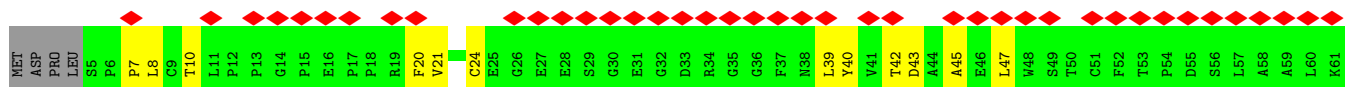




• Molecule 4: Protein PAXX



• Molecule 4: Protein PAXX



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	35211	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	52.1	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	130000	Depositor
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.940	Depositor
Minimum map value	-0.499	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.024	Depositor
Recommended contour level	0.061	Depositor
Map size (Å)	704.16003, 704.16003, 704.16003	wwPDB
Map dimensions	540, 540, 540	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.304, 1.304, 1.304	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.27	0/28471	0.50	0/38509
1	S	0.26	0/28549	0.49	0/38591
2	B	0.27	0/4118	0.50	0/5556
2	T	0.26	0/4092	0.50	0/5516
3	C	0.25	0/5393	0.46	0/7273
3	L	0.25	0/5272	0.47	0/7107
4	D	0.25	0/1101	0.47	0/1500
4	M	0.27	0/1223	0.51	0/1665
5	G	0.24	0/1657	0.47	0/2228
5	H	0.24	0/1616	0.45	0/2170
5	P	0.24	0/1657	0.46	0/2228
5	Q	0.24	0/1616	0.45	0/2170
6	I	0.25	0/2021	0.49	0/2727
6	R	0.24	0/1999	0.49	0/2697
7	j	0.53	0/570	1.03	0/876
8	i	0.60	0/620	0.99	0/953
9	d	0.63	0/591	1.05	1/908 (0.1%)
10	e	0.56	0/644	0.96	1/990 (0.1%)
All	All	0.27	0/91210	0.51	2/123664 (0.0%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	e	39	DA	O4'-C4'-C3'	-5.48	102.31	104.50
9	d	19	DA	O4'-C4'-C3'	-5.10	102.46	104.50

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	27927	0	27803	1226	0
1	S	27999	0	28062	1170	0
2	B	4038	0	4071	210	0
2	T	4014	0	4065	180	0
3	C	5292	0	5264	222	0
3	L	5174	0	5164	215	0
4	D	1075	0	1060	20	0
4	M	1195	0	1157	21	0
5	G	1628	0	1620	45	0
5	H	1589	0	1587	35	0
5	P	1628	0	1620	22	0
5	Q	1589	0	1587	23	0
6	I	1977	0	1923	91	0
6	R	1958	0	1905	72	0
7	j	509	0	271	0	0
8	i	552	0	301	0	0
9	d	528	0	282	0	0
10	e	573	0	312	0	0
All	All	89245	0	88054	3398	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 20.

All (3398) 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)
6:R:814:ARG:H	6:R:850:ALA:H	1.08	0.95
2:T:318:ARG:HB2	2:T:329:LEU:O	1.68	0.94
1:A:174:VAL:O	1:A:177:LEU:HB2	1.69	0.92
2:T:400:TYR:O	2:T:408:PRO:HA	1.68	0.92
1:A:67:VAL:HB	1:A:85:ILE:HD13	1.54	0.89
1:A:3510:GLN:HB3	1:A:3515:GLN:HE22	1.38	0.86
1:S:73:LEU:H	1:S:82:ARG:HH22	1.21	0.86
1:S:4090:ARG:HH22	1:S:4106:CYS:HA	1.40	0.86
1:A:2254:ARG:NH2	1:A:2292:CYS:SG	2.49	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3464:LYS:HD2	1:A:3997:LEU:HD11	1.60	0.84
1:S:3580:ASN:H	1:S:3734:ARG:HH22	1.23	0.84
1:A:1228:GLY:HA2	1:A:1256:TRP:HE1	1.42	0.83
1:A:2121:ASP:HB3	1:A:2127:LYS:HG2	1.59	0.83
1:S:2225:HIS:HB2	1:S:2231:PHE:HB2	1.61	0.82
6:I:814:ARG:H	6:I:850:ALA:H	1.24	0.82
1:S:380:ASP:O	1:S:383:PHE:HB3	1.80	0.82
6:R:814:ARG:H	6:R:850:ALA:N	1.77	0.81
2:B:407:PRO:HG2	3:C:486:ARG:HE	1.46	0.80
2:T:260:LYS:HG2	2:T:268:VAL:HG12	1.64	0.80
1:A:1076:LEU:HB3	1:A:1123:THR:HG22	1.64	0.80
1:S:3266:SER:HB3	1:S:3273:LEU:HA	1.63	0.80
1:S:360:SER:HA	1:S:363:ILE:HD12	1.64	0.80
1:S:71:LYS:HB3	1:S:82:ARG:HH21	1.47	0.79
1:S:2254:ARG:HE	1:S:2294:ILE:HG13	1.45	0.79
2:T:171:ASN:HB3	2:T:205:LEU:HB3	1.65	0.79
1:S:901:MET:HG2	1:S:903:PRO:HD3	1.63	0.79
1:A:1848:ILE:HG12	1:A:1915:LEU:HD11	1.65	0.78
4:M:7:PRO:HB3	4:M:77:ARG:HE	1.48	0.78
1:A:2291:GLN:NE2	1:A:2292:CYS:SG	2.57	0.78
2:B:291:GLU:HB3	6:I:690:VAL:HG23	1.64	0.78
3:L:297:LEU:HD12	3:L:303:THR:HB	1.66	0.78
1:S:1104:LEU:HD23	1:S:1134:LEU:HD13	1.66	0.78
1:A:972:LEU:HD22	1:A:984:TYR:HE2	1.48	0.78
1:A:1917:LYS:HE3	3:L:726:ASP:HA	1.65	0.78
1:A:4008:GLU:HG3	1:A:4011:PHE:HB2	1.66	0.77
1:S:2785:ILE:HD12	1:S:2790:LEU:HD21	1.67	0.77
1:S:2399:GLU:HA	1:S:2402:LEU:HD23	1.66	0.77
1:A:114:VAL:HA	1:A:119:ARG:HH21	1.49	0.76
1:A:1017:ILE:HG21	1:A:1066:LEU:HD21	1.67	0.76
1:S:3809:THR:OG1	1:S:3929:MET:SD	2.41	0.76
1:A:1261:LEU:HD11	1:A:1337:VAL:HG22	1.67	0.76
1:S:1848:ILE:HG12	1:S:1915:LEU:HD11	1.67	0.76
1:S:3915:HIS:HB2	1:S:3920:ILE:HB	1.68	0.76
1:S:3090:TYR:HB3	1:S:3095:ASP:HB2	1.67	0.76
5:H:159:GLN:HG3	6:I:843:LEU:HD21	1.68	0.76
1:S:1300:SER:HA	1:S:1304:HIS:HB2	1.66	0.75
1:A:3929:MET:HG2	1:A:3940:ILE:HG13	1.68	0.75
6:R:800:GLU:HA	6:R:805:TRP:HB2	1.68	0.75
2:B:95:ASN:HD21	2:B:99:PHE:H	1.34	0.75
1:A:1201:ASN:HD21	1:A:1206:LEU:HB2	1.51	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:736:LEU:HB3	1:S:740:ILE:HD11	1.69	0.74
2:B:213:ILE:HG12	2:B:231:VAL:HA	1.69	0.74
1:S:364:ARG:HA	1:S:415:GLN:HE22	1.52	0.74
3:L:689:GLU:HA	3:L:695:SER:HB3	1.69	0.74
3:L:20:MET:HB2	3:L:30:PRO:HB2	1.70	0.74
1:S:531:PHE:HA	1:S:534:LEU:HB2	1.70	0.74
1:A:1145:LEU:HB3	1:A:1165:LEU:HB2	1.70	0.74
1:S:1023:SER:HA	1:S:1026:ARG:HE	1.51	0.74
1:A:990:GLN:HB3	1:A:2781:PRO:HD3	1.70	0.74
1:A:1196:PRO:HG3	1:A:1203:SER:HB2	1.68	0.74
2:B:230:ARG:HG3	2:B:232:HIS:H	1.51	0.74
1:S:2424:MET:O	1:S:2432:GLN:NE2	2.20	0.74
1:A:935:HIS:HD2	1:A:987:LEU:HD11	1.54	0.73
1:S:753:GLN:NE2	1:S:791:ASP:O	2.21	0.73
2:T:34:GLY:HA2	2:T:160:LYS:HG3	1.69	0.73
2:B:318:ARG:HH22	2:B:331:LYS:HA	1.53	0.73
2:T:74:LYS:HZ3	2:T:81:ASP:H	1.36	0.73
1:S:67:VAL:HB	1:S:71:LYS:HD3	1.71	0.73
1:S:4055:ASN:HB2	1:S:4095:GLU:HA	1.71	0.73
1:A:1414:ILE:O	1:A:1418:HIS:ND1	2.22	0.72
1:S:3357:ARG:O	1:S:3360:LEU:HB3	1.88	0.72
6:I:800:GLU:HA	6:I:805:TRP:HB2	1.70	0.72
2:T:218:ARG:HH22	2:T:229:LEU:HA	1.53	0.72
3:C:139:SER:HB3	3:C:201:GLN:HE21	1.54	0.72
1:A:76:ILE:O	1:A:79:ARG:N	2.22	0.72
1:S:1107:TYR:HD2	1:S:1134:LEU:HD11	1.54	0.72
2:T:173:ASP:HB2	2:T:216:PHE:HB3	1.69	0.72
1:A:2317:ALA:HA	1:A:2366:LYS:HE3	1.72	0.72
1:S:1372:LEU:O	1:S:1375:THR:HB	1.89	0.72
1:A:2380:ASN:ND2	2:B:192:ASP:OD1	2.21	0.72
1:A:128:LEU:HA	1:A:173:LYS:HZ1	1.55	0.71
3:L:328:GLU:OE2	2:T:486:HIS:ND1	2.23	0.71
2:B:474:ARG:NH1	2:B:475:SER:OG	2.23	0.71
5:Q:33:VAL:HG22	5:Q:46:THR:HG22	1.71	0.71
1:S:3835:PRO:HA	1:S:3839:TYR:HB2	1.70	0.71
1:S:1915:LEU:HD13	1:S:1918:LEU:HD12	1.71	0.71
1:S:3506:LEU:HD21	1:S:3554:PHE:HB2	1.72	0.71
1:A:82:ARG:HA	1:A:85:ILE:HD12	1.71	0.71
6:I:814:ARG:H	6:I:850:ALA:N	1.87	0.71
1:A:879:MET:HG3	1:A:881:LYS:H	1.55	0.71
1:S:754:MET:HA	1:S:757:LYS:HG2	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:1368:LEU:HB3	1:S:1372:LEU:HD23	1.71	0.71
2:B:346:MET:HB3	2:B:399:ARG:HB3	1.71	0.71
1:A:1514:LEU:HA	1:A:1517:LEU:HD12	1.72	0.71
2:B:263:LEU:HB2	2:B:267:ILE:HB	1.72	0.71
1:A:1452:VAL:HG22	1:A:1517:LEU:HD11	1.71	0.71
1:A:2228:ARG:HA	1:A:2231:PHE:HB3	1.71	0.71
1:S:3677:PRO:HB2	1:S:3682:GLU:HB2	1.73	0.70
1:S:2375:ALA:HB3	1:S:2404:ARG:HD3	1.71	0.70
1:A:469:ALA:HA	1:A:475:LEU:HD12	1.74	0.70
1:A:1915:LEU:HD13	1:A:1918:LEU:HD12	1.73	0.70
1:A:3493:TRP:H	1:A:3709:GLY:HA2	1.57	0.70
5:H:99:LYS:HE2	5:H:108:LEU:HB3	1.73	0.70
1:S:131:LEU:HD22	1:S:177:LEU:HD11	1.73	0.70
1:A:972:LEU:HD22	1:A:984:TYR:CE2	2.27	0.70
1:A:2287:PRO:HB3	1:A:2326:ILE:HD12	1.73	0.70
1:S:863:GLY:HA3	1:S:3168:TYR:HB2	1.71	0.70
1:A:3171:ALA:HA	1:A:3179:TRP:HZ2	1.57	0.70
1:S:1184:ARG:NH2	1:S:1262:ALA:O	2.24	0.70
1:S:867:ASN:HB3	1:S:3129:LEU:HD13	1.74	0.70
1:S:3236:PHE:HD2	1:S:3269:ARG:HH22	1.40	0.70
1:S:1000:LYS:HG3	1:S:1004:GLN:HE21	1.56	0.70
2:B:299:LYS:HB2	2:B:301:ARG:HH21	1.56	0.69
1:S:2776:ARG:NH2	1:S:2782:ASP:OD2	2.25	0.69
1:S:3796:MET:H	1:S:3801:GLY:HA2	1.55	0.69
1:A:2514:ASN:HD22	1:A:2517:LEU:HG	1.58	0.69
5:G:161:ARG:HH22	6:I:847:PHE:HB3	1.57	0.69
1:A:3281:CYS:O	1:A:3285:HIS:ND1	2.25	0.69
3:C:680:GLN:NE2	3:C:681:ASP:OD2	2.25	0.69
3:L:188:HIS:HE1	3:L:478:PRO:HD2	1.57	0.69
3:L:327:ASP:OD1	6:R:711:ASN:ND2	2.21	0.69
1:S:2254:ARG:HH22	1:S:2292:CYS:HB2	1.55	0.69
3:C:647:ILE:HA	3:C:652:GLU:HG2	1.75	0.69
3:L:605:LYS:HB2	3:L:609:PHE:HZ	1.57	0.69
1:A:755:ALA:O	1:A:759:GLY:N	2.25	0.69
1:A:3444:ALA:HB1	1:A:3482:LEU:HD21	1.74	0.69
1:A:3838:GLU:HG2	1:A:4122:GLU:HB3	1.74	0.69
1:S:36:ARG:O	1:S:40:GLN:NE2	2.26	0.69
2:T:171:ASN:HB2	2:T:207:LYS:HB2	1.74	0.69
1:S:2278:GLY:O	1:S:2282:ALA:N	2.25	0.69
1:A:741:ILE:HG23	1:A:748:TYR:HD2	1.58	0.69
5:P:179:ARG:NH2	6:R:804:SER:OG	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:2869:LEU:HB2	1:S:2899:ARG:HH21	1.58	0.69
1:S:2962:ARG:NH2	1:S:2967:GLU:OE1	2.26	0.69
5:G:147:GLU:OE1	5:H:148:ASN:ND2	2.25	0.69
1:S:645:TRP:O	1:S:649:PHE:HB3	1.92	0.69
1:A:998:ASN:OD1	1:A:999:LYS:NZ	2.26	0.69
6:R:666:VAL:HA	6:R:701:ILE:HB	1.73	0.69
1:S:3244:ASP:OD1	1:S:3282:ARG:NH2	2.26	0.69
1:S:2893:LEU:HD22	1:S:2926:LEU:HG	1.75	0.68
5:G:161:ARG:NH1	5:G:165:CYS:SG	2.66	0.68
1:A:935:HIS:CD2	1:A:987:LEU:HD11	2.28	0.68
1:A:1685:ASP:HB3	1:A:1688:LEU:HG	1.74	0.68
2:T:81:ASP:O	2:T:110:ASN:ND2	2.26	0.68
1:A:2527:HIS:HB3	1:A:2530:ARG:HD3	1.75	0.68
6:I:665:CYS:HB3	6:I:700:VAL:HA	1.76	0.68
1:A:38:LEU:HD11	1:A:85:ILE:HG13	1.75	0.68
3:C:93:ASP:HA	3:C:97:LYS:HG2	1.76	0.68
5:H:41:SER:HA	5:H:123:ILE:HD11	1.74	0.68
1:A:3256:MET:SD	1:A:3287:ARG:NH2	2.66	0.68
1:A:2391:GLY:O	1:A:2431:ARG:NH2	2.27	0.68
1:A:3266:SER:HA	1:A:3272:TRP:CD1	2.29	0.68
6:R:695:PRO:HA	6:R:717:LYS:HZ1	1.59	0.68
1:S:916:GLU:HA	1:S:919:LEU:HB3	1.74	0.68
1:A:1477:HIS:HB3	1:A:1481:THR:HG23	1.76	0.68
3:L:18:PHE:HB2	3:L:102:SER:HA	1.76	0.68
1:A:1183:CYS:SG	1:A:1186:LYS:NZ	2.67	0.68
1:A:2278:GLY:O	1:A:2282:ALA:N	2.24	0.68
1:S:2354:ASN:ND2	1:S:2357:GLU:OE2	2.26	0.68
1:A:919:LEU:HD22	1:A:972:LEU:HD12	1.75	0.67
1:S:2383:PHE:HB3	1:S:2418:LYS:HE3	1.76	0.67
6:I:666:VAL:HA	6:I:701:ILE:HB	1.76	0.67
1:A:1820:VAL:HA	1:A:1824:LEU:HD23	1.77	0.67
1:A:2920:VAL:HG12	1:A:2947:ILE:HG23	1.77	0.67
1:S:2416:LYS:NZ	2:T:97:VAL:O	2.27	0.67
1:A:63:PHE:O	1:A:67:VAL:HG12	1.94	0.67
1:A:2357:GLU:HA	1:A:2360:PHE:HB3	1.75	0.67
3:L:6:ASN:HB3	3:L:128:GLU:HB2	1.76	0.67
1:S:73:LEU:H	1:S:82:ARG:NH2	1.92	0.67
1:S:3110:PHE:HD1	1:S:3128:LYS:HZ3	1.43	0.67
1:A:2375:ALA:HB3	1:A:2404:ARG:HD3	1.77	0.67
1:S:1751:GLU:O	1:S:1754:GLN:NE2	2.27	0.67
2:T:191:GLY:HA2	2:T:194:ARG:HE	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:T:95:ASN:HD21	2:T:99:PHE:H	1.40	0.67
1:A:10:CYS:SG	1:A:11:SER:N	2.68	0.67
2:B:294:GLU:HB3	3:C:298:ASN:HD21	1.60	0.67
3:C:272:VAL:HG22	3:C:274:LYS:H	1.60	0.67
3:L:423:GLN:NE2	3:L:424:LEU:O	2.28	0.67
1:A:1483:LEU:HD21	1:A:1515:LEU:HD23	1.76	0.67
1:A:3750:PHE:HB3	1:A:3802:LEU:HD11	1.75	0.67
6:I:663:GLU:HB3	6:I:697:THR:HA	1.77	0.67
3:L:7:LYS:O	3:L:128:GLU:N	2.27	0.67
1:S:1750:LEU:HD21	1:S:1759:LEU:HD23	1.77	0.67
6:I:813:PHE:HA	6:I:850:ALA:O	1.95	0.66
4:M:186:ILE:HG13	2:T:242:LEU:HD23	1.77	0.66
1:S:2090:ARG:NH2	1:S:2091:HIS:O	2.28	0.66
1:S:2372:PRO:O	1:S:2404:ARG:NH1	2.28	0.66
1:A:188:GLU:O	1:A:192:ASN:ND2	2.28	0.66
1:A:332:GLU:OE2	1:A:336:ASN:ND2	2.28	0.66
1:S:139:ARG:HA	1:S:142:ARG:HH21	1.59	0.66
1:S:2208:ASP:OD1	1:S:2209:GLU:N	2.28	0.66
1:S:2824:LYS:O	1:S:2829:LYS:NZ	2.27	0.66
1:A:933:LEU:HD22	1:A:2797:VAL:HG21	1.77	0.66
1:A:2362:VAL:HG12	1:A:2366:LYS:HZ2	1.61	0.66
1:A:174:VAL:HA	1:A:177:LEU:HD23	1.78	0.66
3:C:687:THR:HB	3:C:699:GLU:HG3	1.78	0.66
3:L:291:LYS:NZ	3:L:292:GLU:O	2.29	0.66
1:S:1651:LYS:HD2	1:S:1654:GLN:HE21	1.61	0.66
1:A:1725:GLN:HE22	1:A:1769:GLU:HB2	1.61	0.66
5:H:87:ASN:HB3	5:H:97:PHE:HA	1.76	0.66
1:S:3506:LEU:HD22	1:S:3555:VAL:HG13	1.76	0.66
1:A:168:ASP:H	1:A:171:LEU:HD12	1.61	0.66
1:A:3625:LEU:HD22	1:A:3630:ARG:HE	1.61	0.66
3:C:727:ASP:OD2	1:S:1960:LYS:NZ	2.26	0.66
1:A:71:LYS:O	1:A:73:LEU:N	2.29	0.66
1:S:90:CYS:HA	1:S:136:GLN:HE22	1.60	0.66
3:C:368:ARG:HE	3:C:369:ASP:H	1.44	0.66
1:S:50:VAL:HG13	1:S:51:LEU:HG	1.76	0.66
1:A:2395:THR:OG1	1:A:2431:ARG:NE	2.28	0.66
1:S:175:TYR:HB2	1:S:223:CYS:HB3	1.77	0.66
1:A:1000:LYS:HA	1:A:1004:GLN:HE21	1.61	0.66
1:A:3142:ILE:O	1:A:3147:LYS:NZ	2.28	0.66
1:A:3758:LEU:HB2	1:A:3795:PRO:HB3	1.78	0.66
1:A:3806:LEU:HD23	1:A:3808:ASN:H	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:M:75:ARG:NH2	4:M:103:SER:O	2.29	0.66
1:A:527:TYR:O	1:A:530:LEU:HB3	1.96	0.65
1:A:1279:LEU:HD22	1:A:1356:TRP:HE1	1.60	0.65
1:A:1727:ARG:HH12	1:A:1772:HIS:HB2	1.61	0.65
2:B:272:GLY:N	2:B:369:TYR:O	2.28	0.65
1:A:1052:SER:O	1:A:1055:ASN:ND2	2.28	0.65
3:C:407:VAL:HB	3:C:424:LEU:HD11	1.78	0.65
4:D:11:LEU:HD13	4:D:87:LEU:HD22	1.77	0.65
1:A:1673:THR:HA	1:A:1676:ILE:HD12	1.78	0.65
1:S:1037:LEU:HD11	1:S:1056:THR:HG22	1.79	0.65
1:A:1326:GLU:HG3	1:A:1329:ARG:HG2	1.78	0.65
1:A:3720:ALA:HB3	1:A:3743:HIS:HA	1.77	0.65
1:S:469:ALA:HA	1:S:475:LEU:HD12	1.76	0.65
1:S:974:CYS:HB3	1:S:1028:PHE:HD2	1.61	0.65
1:A:2331:MET:O	1:A:2334:LYS:NZ	2.28	0.65
2:B:468:LYS:O	2:B:517:ARG:NE	2.29	0.65
3:C:678:VAL:O	3:C:682:GLY:N	2.29	0.65
1:A:1568:ASN:HA	1:A:1600:MET:HE2	1.78	0.65
1:A:2333:ARG:HH12	1:A:2371:PHE:HE1	1.43	0.65
1:A:978:GLN:HE22	1:A:2597:PHE:HA	1.60	0.65
1:A:1382:ILE:HD11	1:A:1385:ASN:HD22	1.62	0.65
1:A:3585:PHE:HE2	1:A:3664:ASN:HA	1.62	0.65
2:B:121:GLN:O	2:B:130:ARG:NH1	2.30	0.65
1:A:1407:LYS:HA	1:A:1412:LYS:HD2	1.78	0.65
1:A:1726:SER:OG	1:A:1727:ARG:NH1	2.29	0.65
3:L:268:LEU:O	2:T:444:ARG:NH2	2.30	0.65
1:S:1910:GLU:O	1:S:1913:LYS:NZ	2.30	0.65
1:S:3163:THR:O	1:S:3167:ARG:NH1	2.29	0.65
2:T:88:TYR:HH	2:T:170:THR:HG1	1.43	0.65
1:A:925:GLN:HG3	1:A:2800:ARG:HH12	1.63	0.65
1:A:3422:GLN:OE1	1:A:3423:GLN:NE2	2.30	0.65
1:S:174:VAL:HA	1:S:177:LEU:HD12	1.79	0.65
1:S:2401:VAL:O	1:S:2441:LYS:NZ	2.30	0.65
1:A:2196:TRP:HB2	1:A:2199:LEU:HB2	1.77	0.64
3:L:313:GLY:N	2:T:286:ILE:O	2.29	0.64
1:S:2252:PRO:O	1:S:2291:GLN:NE2	2.30	0.64
1:S:2388:LYS:NZ	2:T:157:VAL:O	2.28	0.64
1:S:3741:ARG:HA	1:S:3747:GLU:HA	1.79	0.64
1:A:1649:LEU:HD13	1:A:1652:ILE:HD11	1.80	0.64
2:B:218:ARG:HA	2:B:221:ILE:HG12	1.79	0.64
3:C:688:LYS:NZ	3:C:695:SER:OG	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2161:ALA:HA	1:A:2164:TRP:HB2	1.79	0.64
3:L:315:ARG:HH11	3:L:320:ILE:HG13	1.62	0.64
1:S:915:THR:HA	1:S:934:LEU:HD11	1.79	0.64
1:S:2135:ASN:ND2	1:S:2137:ILE:O	2.31	0.64
1:A:1488:TYR:HD1	1:A:1559:PHE:HZ	1.45	0.64
4:M:24:CYS:HB3	4:M:39:LEU:HD23	1.79	0.64
2:T:76:ILE:HG21	2:T:247:ARG:HA	1.77	0.64
1:A:1611:GLN:HE21	1:A:1614:GLN:HG2	1.62	0.64
3:L:308:GLU:O	2:T:290:ARG:NH2	2.29	0.64
1:S:919:LEU:HG	1:S:920:THR:HG23	1.79	0.64
1:A:3380:ARG:O	1:A:3384:HIS:ND1	2.31	0.64
3:C:6:ASN:HB3	3:C:128:GLU:HB2	1.78	0.64
3:L:44:ARG:NH2	3:L:45:GLN:OE1	2.30	0.64
1:S:3675:LYS:NZ	1:S:3676:PRO:O	2.31	0.64
1:S:4083:GLY:HA3	1:S:4088:ASN:HB3	1.77	0.64
1:A:71:LYS:HA	1:A:78:PHE:CG	2.32	0.64
1:A:637:LYS:O	1:A:679:LYS:NZ	2.30	0.64
6:I:814:ARG:N	6:I:850:ALA:H	1.94	0.64
2:T:513:ALA:HB1	2:T:517:ARG:HH12	1.63	0.64
1:A:3958:LEU:HG	1:A:4115:ASN:HD22	1.63	0.64
1:A:2869:LEU:O	1:A:2899:ARG:NH1	2.31	0.64
2:B:210:GLY:HA2	2:B:233:PHE:HA	1.80	0.64
1:S:128:LEU:HD11	1:S:170:VAL:HB	1.80	0.64
1:S:2532:PRO:O	1:S:2538:ARG:NH1	2.30	0.64
1:S:1397:ASP:OD1	1:S:1398:VAL:N	2.30	0.64
1:S:3369:ASP:OD2	1:S:3372:LYS:NZ	2.31	0.64
1:A:2466:SER:OG	1:A:2469:CYS:SG	2.55	0.63
3:C:676:GLU:HG3	3:C:677:ILE:HD12	1.80	0.63
1:S:174:VAL:O	1:S:177:LEU:HB2	1.98	0.63
1:A:675:ARG:NH1	1:A:735:SER:O	2.29	0.63
1:A:3581:PRO:HB3	1:A:3629:ARG:HG3	1.79	0.63
1:A:3822:GLN:HA	1:A:3825:LYS:HB3	1.80	0.63
3:L:522:VAL:HA	3:L:525:LYS:HD2	1.80	0.63
1:S:1425:ALA:HB2	1:S:1467:ILE:HG13	1.79	0.63
1:S:3620:PRO:O	1:S:3630:ARG:NH1	2.31	0.63
1:S:3996:GLY:O	1:S:4000:ASN:ND2	2.31	0.63
2:T:418:GLU:HB2	2:T:430:PRO:HB3	1.80	0.63
1:A:487:LEU:HD11	1:A:575:ILE:HG21	1.79	0.63
1:A:538:ASP:HA	1:A:541:MET:HG3	1.79	0.63
1:A:2168:LEU:HA	1:A:2171:LEU:HD12	1.80	0.63
2:B:173:ASP:HB2	2:B:216:PHE:HB3	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:816:HIS:N	6:I:851:LYS:H	1.95	0.63
3:L:497:ARG:HD3	3:L:501:PRO:HA	1.80	0.63
1:S:529:ASP:OD1	1:S:530:LEU:N	2.32	0.63
1:S:2425:ARG:NH1	1:S:2457:PRO:O	2.32	0.63
1:S:2595:TRP:O	1:S:2765:GLN:NE2	2.31	0.63
1:S:3730:ALA:HA	1:S:3734:ARG:HA	1.80	0.63
1:A:406:ARG:O	1:A:409:GLN:NE2	2.31	0.63
3:L:643:ARG:NH2	3:L:656:ASN:OD1	2.31	0.63
1:S:3069:MET:HA	1:S:3075:LYS:HB2	1.79	0.63
1:S:3176:MET:HA	1:S:3179:TRP:HB2	1.79	0.63
1:A:1538:LEU:N	1:A:1553:PHE:O	2.27	0.63
1:A:2935:GLU:HG3	1:A:2938:VAL:HG22	1.81	0.63
5:G:22:VAL:HG21	5:G:71:ARG:HH22	1.61	0.63
6:I:746:MET:O	6:I:751:LYS:NZ	2.30	0.63
3:L:636:ILE:O	3:L:640:ARG:HG2	1.98	0.63
6:R:818:VAL:H	6:R:851:LYS:HB3	1.63	0.63
1:S:4055:ASN:HD21	1:S:4091:ALA:HB1	1.62	0.63
1:A:1949:ILE:HD13	1:A:2096:PRO:HB2	1.80	0.63
1:A:3236:PHE:HD2	1:A:3269:ARG:HH22	1.47	0.63
6:R:715:SER:O	6:R:745:HIS:NE2	2.32	0.63
1:S:28:ALA:O	1:S:32:HIS:ND1	2.32	0.63
1:S:261:ASP:HB3	1:S:265:TYR:HA	1.81	0.63
1:S:2281:MET:HE3	1:S:2329:TYR:HB2	1.80	0.63
1:S:2924:VAL:HG11	1:S:2989:ALA:HB1	1.80	0.63
1:S:3962:ARG:HH22	1:S:4125:GLU:HB3	1.64	0.63
1:A:2376:ASP:OD1	1:A:2377:ARG:NH1	2.31	0.63
1:A:3090:TYR:HB3	1:A:3095:ASP:HB2	1.80	0.63
3:L:250:ARG:HH22	2:T:536:PRO:HB2	1.63	0.63
1:S:2723:THR:HA	1:S:2726:LEU:HD13	1.81	0.63
2:B:91:GLU:OE1	2:B:137:HIS:N	2.32	0.63
5:H:175:ASP:OD2	6:I:783:ASN:ND2	2.32	0.63
3:L:521:GLU:HG3	3:L:525:LYS:HE3	1.80	0.63
1:S:2339:GLU:OE2	1:S:2377:ARG:NH2	2.31	0.63
1:S:3000:ASP:O	1:S:3004:HIS:ND1	2.31	0.63
1:A:2348:GLN:OE1	1:A:2353:GLN:NE2	2.32	0.62
1:S:2253:TYR:H	1:S:2256:ILE:HD13	1.63	0.62
1:A:1795:VAL:HG23	1:A:1835:ALA:HB1	1.81	0.62
1:A:3369:ASP:OD2	1:A:3372:LYS:NZ	2.31	0.62
3:C:65:ASP:HB3	3:C:78:THR:HG23	1.80	0.62
6:I:816:HIS:H	6:I:850:ALA:HA	1.64	0.62
3:L:344:GLY:HA3	2:T:471:PHE:HE1	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:R:814:ARG:N	6:R:850:ALA:H	1.90	0.62
1:S:893:SER:O	1:S:944:LYS:NZ	2.29	0.62
1:A:736:LEU:HD12	1:A:740:ILE:HG21	1.81	0.62
1:A:1603:GLN:OE1	1:A:1606:ARG:NH2	2.32	0.62
6:R:663:GLU:HB3	6:R:697:THR:HA	1.82	0.62
1:S:1490:GLY:O	1:S:1502:SER:N	2.31	0.62
1:S:3603:LYS:H	1:S:3606:ILE:HB	1.64	0.62
1:A:139:ARG:HA	1:A:142:ARG:HH21	1.64	0.62
1:A:3945:ALA:HB3	1:A:3948:SER:HB3	1.81	0.62
2:B:171:ASN:HB2	2:B:207:LYS:HB2	1.81	0.62
1:S:850:GLU:HB2	1:S:854:ARG:HH21	1.64	0.62
1:S:1583:MET:HG2	1:S:1625:HIS:HB3	1.81	0.62
1:S:2512:ASP:N	1:S:2518:GLN:OE1	2.33	0.62
1:S:3052:LEU:HD11	1:S:3061:LEU:HD21	1.80	0.62
1:S:3239:LYS:HA	1:S:3242:MET:HE2	1.81	0.62
1:S:3266:SER:HA	1:S:3272:TRP:CD1	2.35	0.62
2:T:260:LYS:HG2	2:T:268:VAL:CG1	2.30	0.62
1:A:762:TYR:HD2	1:A:765:LEU:HG	1.64	0.62
1:A:1594:SER:O	1:A:1598:ASN:ND2	2.33	0.62
1:A:3266:SER:HB3	1:A:3273:LEU:HA	1.82	0.62
1:A:3725:ARG:HB3	1:A:3739:ILE:HD12	1.80	0.62
5:H:37:THR:HG22	5:H:39:GLY:H	1.64	0.62
6:I:798:ASP:HB3	6:I:802:ARG:HH12	1.65	0.62
1:S:3193:ILE:HD13	1:S:3196:LYS:HZ3	1.63	0.62
1:A:67:VAL:CB	1:A:85:ILE:HD13	2.26	0.62
1:A:1512:SER:HA	1:A:1515:LEU:HD12	1.82	0.62
3:L:62:ASP:HA	3:L:103:GLN:HG2	1.81	0.62
1:S:2586:PHE:HB3	1:S:2776:ARG:HB3	1.80	0.62
1:A:767:GLU:OE1	1:A:854:ARG:NE	2.33	0.62
1:A:1396:PRO:HB3	1:A:1457:GLN:HE21	1.64	0.62
6:I:884:ARG:HE	6:I:886:PHE:HE1	1.46	0.62
1:S:87:LYS:HE3	1:S:831:LEU:HB2	1.82	0.62
1:A:1605:PHE:O	1:A:1608:ARG:NH2	2.33	0.62
2:B:479:GLU:HA	3:C:426:PHE:HB3	1.82	0.62
3:L:269:GLN:O	3:L:271:ARG:NH1	2.33	0.62
1:S:390:GLN:HE22	1:S:1737:ASN:HB2	1.65	0.62
1:S:782:ARG:HH11	1:S:786:GLN:HB2	1.65	0.62
1:A:645:TRP:HB3	1:A:649:PHE:HB2	1.81	0.62
3:C:246:HIS:HB2	3:C:262:ALA:HB1	1.81	0.62
5:H:4:LYS:HG2	5:H:75:LEU:HA	1.81	0.62
3:L:13:CYS:HB3	3:L:134:ILE:HG13	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:M:91:GLU:N	4:M:91:GLU:OE1	2.32	0.62
6:R:746:MET:O	6:R:751:LYS:NZ	2.33	0.62
1:S:3119:VAL:HA	1:S:3125:ARG:HE	1.64	0.62
1:S:3172:LYS:HD2	1:S:3248:LYS:HB3	1.80	0.62
1:S:3680:LEU:HD12	1:S:3724:GLU:HB3	1.81	0.62
1:A:1019:ASP:O	1:A:1026:ARG:NH2	2.32	0.61
1:A:2365:ASN:HD22	1:A:2396:LEU:HG	1.65	0.61
2:B:59:PRO:HA	2:B:62:MET:SD	2.40	0.61
1:S:1011:GLU:HA	1:S:1014:LEU:HG	1.80	0.61
1:S:4041:ARG:HA	1:S:4044:ILE:HG12	1.80	0.61
1:A:477:ASN:OD1	1:A:478:CYS:N	2.32	0.61
1:A:1412:LYS:O	1:A:1416:GLU:N	2.25	0.61
1:A:2372:PRO:O	1:A:2404:ARG:NH1	2.33	0.61
6:R:654:LYS:N	6:R:660:GLU:OE2	2.33	0.61
1:S:477:ASN:OD1	1:S:478:CYS:N	2.33	0.61
1:S:675:ARG:HA	1:S:678:LYS:HE2	1.82	0.61
1:A:337:LYS:HG2	1:A:369:PHE:HZ	1.66	0.61
1:A:802:THR:OG1	1:A:852:ARG:NH2	2.33	0.61
1:A:1505:LEU:HA	1:A:1508:LYS:HE2	1.82	0.61
1:A:2484:TYR:HB3	1:A:2499:PHE:HB2	1.81	0.61
2:B:165:ARG:NH1	4:D:185:LEU:O	2.33	0.61
1:S:832:LYS:HG3	1:S:834:LEU:H	1.66	0.61
1:A:1102:GLU:HA	1:A:1154:PRO:HB3	1.83	0.61
1:A:1370:ARG:O	1:A:1374:GLN:NE2	2.34	0.61
1:A:2271:SER:HA	1:A:2274:ILE:HD12	1.82	0.61
1:A:3831:ASP:HB3	1:A:3832:PRO:HD3	1.83	0.61
1:S:2548:PRO:HB3	1:S:2847:THR:HA	1.82	0.61
1:A:1849:ASP:OD1	1:A:1850:VAL:N	2.33	0.61
1:A:2322:VAL:O	1:A:2326:ILE:HG12	2.01	0.61
1:A:3996:GLY:O	1:A:4000:ASN:ND2	2.32	0.61
2:B:36:ASP:OD2	2:B:165:ARG:NH2	2.33	0.61
2:B:485:GLN:O	2:B:489:ASN:ND2	2.33	0.61
3:C:81:ARG:NH2	3:C:85:LEU:O	2.34	0.61
2:T:105:LEU:HD23	2:T:106:GLN:HG3	1.83	0.61
1:A:889:GLU:OE2	1:A:3889:ARG:NH2	2.34	0.61
1:A:1751:GLU:O	1:A:1788:ARG:NH1	2.34	0.61
1:A:2389:PHE:HB3	1:A:2393:LEU:HB2	1.82	0.61
2:B:495:LEU:HD23	2:B:497:LEU:HD11	1.81	0.61
6:I:864:ILE:HD12	6:I:904:GLN:HB3	1.82	0.61
1:S:2313:LYS:HA	1:S:2316:TYR:CZ	2.36	0.61
1:A:1919:CYS:O	1:A:1922:ALA:HB3	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:R:716:ASN:HA	6:R:745:HIS:HE2	1.65	0.61
1:S:1415:LEU:O	1:S:1419:LEU:N	2.31	0.61
1:S:2223:VAL:HG22	1:S:2231:PHE:HE1	1.65	0.61
1:A:801:LYS:NZ	1:A:3114:TYR:O	2.34	0.61
1:A:850:GLU:HB2	1:A:854:ARG:HH12	1.65	0.61
2:B:428:THR:HG23	3:C:354:ARG:HH12	1.64	0.61
3:C:643:ARG:NH2	3:C:687:THR:O	2.34	0.61
3:C:687:THR:HG22	3:C:688:LYS:H	1.66	0.61
6:I:812:MET:N	6:I:848:HIS:HB2	2.14	0.61
1:S:1663:THR:HG22	1:S:1664:SER:H	1.65	0.61
1:S:3262:LEU:HD22	1:S:3272:TRP:HZ2	1.66	0.61
1:S:3962:ARG:NH1	1:S:4124:TRP:O	2.32	0.61
2:T:381:LEU:HD23	2:T:385:LEU:HD23	1.83	0.61
1:A:1082:PHE:HA	1:A:1085:ILE:HG12	1.82	0.60
1:A:1156:GLY:O	1:A:1171:TRP:NE1	2.33	0.60
1:A:1722:PHE:O	1:A:1768:ARG:NH1	2.31	0.60
1:A:2367:VAL:O	1:A:2371:PHE:N	2.34	0.60
1:A:3628:PHE:HB2	1:A:3675:LYS:H	1.66	0.60
2:B:339:ARG:HH22	2:B:404:ARG:HB3	1.65	0.60
4:M:119:PRO:HA	4:M:122:ARG:HG2	1.83	0.60
1:A:682:TYR:O	1:A:700:LYS:NZ	2.32	0.60
1:A:2512:ASP:HB2	1:A:2518:GLN:HG2	1.83	0.60
3:C:96:SER:O	3:C:99:GLN:NE2	2.32	0.60
4:D:84:ALA:HB1	4:D:99:SER:HB2	1.82	0.60
3:L:274:LYS:NZ	2:T:321:ILE:O	2.34	0.60
1:S:1406:LEU:HD23	1:S:1415:LEU:HD22	1.83	0.60
1:S:1483:LEU:HD13	1:S:1515:LEU:HD23	1.83	0.60
1:A:1413:ASP:OD1	1:A:1414:ILE:N	2.33	0.60
1:A:1574:ASN:HD21	1:A:1577:LEU:HB2	1.66	0.60
1:A:3879:PRO:O	1:A:3965:ARG:NH1	2.28	0.60
2:B:200:LEU:HD11	2:B:221:ILE:HB	1.82	0.60
5:G:176:LEU:HA	5:G:179:ARG:HD3	1.84	0.60
6:I:660:GLU:HG2	6:I:686:GLY:HA3	1.83	0.60
3:L:261:ILE:HA	3:L:366:ALA:HA	1.83	0.60
3:L:426:PHE:HB3	2:T:479:GLU:HA	1.84	0.60
1:S:2803:ILE:O	1:S:2806:LYS:HG2	2.01	0.60
1:S:3767:LEU:HA	1:S:3770:VAL:HG22	1.82	0.60
1:A:2245:TRP:HB2	1:A:2249:LEU:HD11	1.82	0.60
1:A:2978:LYS:NZ	1:A:2980:ASP:OD1	2.34	0.60
1:S:1592:MET:N	1:S:1592:MET:SD	2.73	0.60
1:S:4121:TRP:HB3	1:S:4124:TRP:HB2	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1388:ASP:HA	1:A:1392:MET:HG2	1.81	0.60
4:M:193:LYS:O	2:T:244:ARG:NH1	2.31	0.60
6:R:845:LEU:HB2	6:R:852:VAL:HG12	1.84	0.60
1:S:625:ASN:O	1:S:628:GLU:HG2	2.02	0.60
1:S:1820:VAL:HA	1:S:1824:LEU:HD23	1.84	0.60
1:S:3867:THR:HA	1:S:4118:GLY:HA2	1.83	0.60
1:A:28:ALA:O	1:A:32:HIS:ND1	2.34	0.60
1:A:1650:ALA:HA	1:A:1695:LEU:HD11	1.82	0.60
1:A:2512:ASP:N	1:A:2518:GLN:OE1	2.34	0.60
1:S:29:LEU:O	1:S:33:GLN:NE2	2.34	0.60
1:S:2287:PRO:HG2	1:S:2330:VAL:HA	1.84	0.60
1:A:196:LEU:HB3	1:A:200:PHE:CZ	2.37	0.60
1:A:2371:PHE:HD2	1:A:2374:LEU:HD23	1.67	0.60
1:A:3590:ASN:OD1	1:A:3593:ARG:NH2	2.35	0.60
3:C:524:THR:HA	3:C:527:GLN:HG2	1.83	0.60
5:G:148:ASN:ND2	5:H:144:LEU:O	2.34	0.60
1:S:295:GLU:OE1	1:S:299:LYS:NZ	2.35	0.60
1:S:493:LYS:HD2	1:S:524:TYR:HD1	1.66	0.60
1:A:332:GLU:HB2	1:A:335:LYS:HD2	1.84	0.60
1:A:658:THR:OG1	1:A:659:ARG:NH1	2.35	0.60
2:B:59:PRO:HB3	2:B:205:LEU:HD23	1.84	0.60
2:B:86:VAL:HG22	2:B:104:VAL:HG23	1.84	0.60
3:C:643:ARG:NH1	3:C:656:ASN:OD1	2.30	0.60
3:L:688:LYS:HG3	3:L:695:SER:HA	1.83	0.60
1:S:1118:GLU:HG3	1:S:1121:LEU:HB2	1.84	0.60
1:A:3136:THR:HG23	1:A:3139:GLN:HE21	1.66	0.60
2:B:261:LEU:HA	2:B:345:LEU:HB2	1.84	0.60
6:R:693:PRO:HB2	6:R:718:HIS:CE1	2.36	0.60
1:S:1039:TRP:NE1	1:S:1043:GLN:OE1	2.33	0.60
1:S:1184:ARG:HH22	1:S:1265:GLU:HB3	1.67	0.60
2:B:420:LEU:HB3	2:B:424:LYS:HA	1.84	0.59
3:C:7:LYS:O	3:C:128:GLU:N	2.31	0.59
3:L:12:LEU:HD23	3:L:54:ILE:HD11	1.84	0.59
3:L:128:GLU:OE1	3:L:242:ARG:NH1	2.34	0.59
3:L:628:GLU:HG3	3:L:631:TYR:HB3	1.83	0.59
1:S:1299:GLU:O	1:S:1304:HIS:ND1	2.34	0.59
1:S:2495:SER:HA	1:S:2498:ILE:HD12	1.83	0.59
1:S:3686:TRP:HH2	1:S:3719:ILE:HG22	1.67	0.59
1:A:1369:MET:SD	1:A:1418:HIS:NE2	2.76	0.59
1:A:2310:VAL:HG21	1:A:2359:LYS:HD2	1.84	0.59
1:A:3675:LYS:NZ	1:A:3676:PRO:O	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:59:PHE:HB2	3:L:77:ILE:HG12	1.83	0.59
3:L:509:GLN:OE1	3:L:511:HIS:NE2	2.31	0.59
1:S:128:LEU:HD13	1:S:173:LYS:HZ1	1.67	0.59
1:S:1413:ASP:OD1	1:S:1414:ILE:N	2.33	0.59
1:A:1017:ILE:HG23	1:A:1077:GLY:HA3	1.84	0.59
1:A:1357:LYS:O	1:A:1360:LYS:HB3	2.02	0.59
1:A:1583:MET:O	1:A:1586:SER:OG	2.21	0.59
1:A:2168:LEU:HD23	1:A:2171:LEU:HD12	1.84	0.59
1:A:4086:ASP:HA	1:A:4089:ILE:HG12	1.84	0.59
2:B:34:GLY:HA3	2:B:162:SER:HB3	1.83	0.59
2:B:353:LEU:HD23	2:B:395:ALA:HB2	1.84	0.59
3:L:613:SER:O	3:L:617:ILE:HG12	2.02	0.59
1:S:763:THR:HB	1:S:851:ILE:HG13	1.83	0.59
1:S:1646:LEU:HD23	1:S:1649:LEU:HD21	1.83	0.59
1:S:3874:ARG:HD3	1:S:4126:PRO:HB2	1.84	0.59
1:A:326:MET:O	1:A:330:ASN:ND2	2.36	0.59
1:A:1675:TYR:HA	1:A:1678:LEU:HD12	1.83	0.59
1:A:1824:LEU:HD13	1:A:1827:LEU:HD21	1.83	0.59
3:L:291:LYS:NZ	2:T:301:ARG:O	2.32	0.59
5:Q:102:LYS:HD2	5:Q:103:ASP:HB2	1.85	0.59
1:S:76:ILE:O	1:S:79:ARG:N	2.34	0.59
1:S:114:VAL:HA	1:S:119:ARG:HH21	1.67	0.59
1:S:958:MET:O	1:S:962:TYR:N	2.34	0.59
1:A:225:LYS:HG2	1:A:274:LEU:HB2	1.84	0.59
1:A:635:PRO:HB3	1:A:672:ILE:HD11	1.85	0.59
1:A:863:GLY:HA3	1:A:3168:TYR:HB2	1.84	0.59
1:A:2348:GLN:OE1	1:A:2352:HIS:NE2	2.34	0.59
1:S:449:TYR:O	1:S:454:GLN:NE2	2.36	0.59
1:S:887:ASP:OD2	1:S:891:ARG:NE	2.34	0.59
1:A:420:VAL:O	1:A:424:LEU:N	2.33	0.59
1:A:1840:PHE:O	1:A:1844:VAL:HG23	2.02	0.59
1:A:2211:LEU:HD23	1:A:2214:ARG:HH22	1.67	0.59
2:B:352:PRO:HA	2:B:394:VAL:HA	1.84	0.59
1:S:1412:LYS:O	1:S:1416:GLU:N	2.27	0.59
1:S:2161:ALA:HA	1:S:2164:TRP:HB2	1.84	0.59
2:T:76:ILE:HD13	2:T:247:ARG:HG3	1.84	0.59
1:A:1066:LEU:HD23	1:A:1078:ALA:HB2	1.83	0.59
1:A:1834:ASP:OD1	1:A:1835:ALA:N	2.36	0.59
2:B:94:LYS:HE2	2:B:104:VAL:HG13	1.83	0.59
1:S:898:PHE:HB2	1:S:901:MET:O	2.02	0.59
1:S:1101:PHE:HA	1:S:1104:LEU:HD12	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:2737:GLU:HB3	1:S:2740:SER:HB2	1.84	0.59
1:S:2940:ARG:HH22	1:S:3981:TYR:HB3	1.67	0.59
1:S:3311:ASN:HB2	1:S:3314:SER:HA	1.85	0.59
2:T:101:ASN:ND2	2:T:140:ASP:O	2.36	0.59
1:A:1083:ASN:O	1:A:1087:ARG:NH1	2.36	0.59
1:A:1178:ARG:HH21	1:A:1184:ARG:HA	1.68	0.59
1:A:1331:ASN:HA	1:A:1334:LYS:HE3	1.84	0.59
1:A:2574:ASN:O	1:A:2787:HIS:ND1	2.36	0.59
2:B:320:GLN:HG3	3:C:276:TRP:CE3	2.38	0.59
2:B:399:ARG:HG2	2:B:408:PRO:HB2	1.85	0.59
1:S:3930:VAL:HA	1:S:3937:VAL:HA	1.85	0.59
1:A:105:VAL:HG23	1:A:108:LYS:HE2	1.84	0.59
1:A:417:VAL:HA	1:A:420:VAL:HG12	1.85	0.59
1:A:901:MET:HG2	1:A:903:PRO:HD3	1.85	0.59
1:A:3736:LYS:HB2	1:A:3752:VAL:HB	1.84	0.59
1:S:1389:VAL:HG23	1:S:1391:VAL:HG22	1.85	0.59
1:A:1798:LEU:HD22	1:A:1827:LEU:HD13	1.85	0.59
2:B:302:THR:HG22	2:B:311:LEU:HD12	1.83	0.59
3:L:688:LYS:NZ	3:L:695:SER:OG	2.36	0.59
1:S:2986:PRO:O	1:S:2991:LYS:NZ	2.35	0.59
1:A:984:TYR:CD1	1:A:987:LEU:HD12	2.38	0.58
1:A:3949:ALA:HB1	1:A:3957:GLU:HB3	1.84	0.58
6:I:709:VAL:O	6:I:713:ILE:HG12	2.03	0.58
1:S:225:LYS:HG2	1:S:274:LEU:HB2	1.85	0.58
1:S:1693:VAL:HG13	1:S:1696:LEU:HD12	1.85	0.58
1:A:958:MET:HB3	1:A:961:LEU:HB2	1.86	0.58
1:A:1238:GLN:HE21	1:A:1296:PHE:HZ	1.52	0.58
1:S:1776:GLU:O	1:S:1779:GLN:NE2	2.37	0.58
1:S:3593:ARG:NH2	1:S:3661:ASP:OD1	2.36	0.58
2:T:126:GLN:HA	2:T:129:LYS:HE2	1.84	0.58
1:A:993:HIS:ND1	1:A:2779:ASP:OD1	2.34	0.58
1:A:2965:TYR:HB3	1:A:3001:CYS:HB2	1.86	0.58
2:B:397:LEU:HD22	3:C:463:LEU:HD12	1.85	0.58
5:G:121:GLU:HA	5:G:124:ARG:HE	1.67	0.58
6:I:812:MET:H	6:I:848:HIS:HB2	1.69	0.58
3:L:249:CYS:SG	3:L:250:ARG:N	2.72	0.58
1:S:3575:LEU:HD13	1:S:3578:LEU:HD12	1.85	0.58
2:T:217:TYR:HA	2:T:220:ILE:HG22	1.86	0.58
1:A:2824:LYS:O	1:A:2829:LYS:NZ	2.37	0.58
3:L:450:GLN:NE2	3:L:536:LEU:O	2.32	0.58
3:L:596:GLU:HA	3:L:599:ARG:HD2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:793:LEU:HD21	1:S:866:ILE:HG22	1.84	0.58
1:S:2470:ARG:NH1	1:S:2513:GLU:OE2	2.27	0.58
1:A:1069:HIS:HD2	1:A:1074:LYS:HG2	1.68	0.58
2:B:170:THR:OG1	2:B:172:GLU:OE1	2.22	0.58
2:B:396:ALA:HB3	2:B:413:LEU:HB2	1.85	0.58
3:C:596:GLU:OE2	3:C:599:ARG:NH1	2.36	0.58
6:I:810:LEU:HD22	6:I:848:HIS:HD2	1.69	0.58
2:T:74:LYS:HD2	2:T:111:PRO:HG3	1.85	0.58
1:A:848:LEU:HD21	1:A:852:ARG:HH21	1.69	0.58
1:A:2090:ARG:NH2	1:A:2091:HIS:O	2.36	0.58
1:A:3510:GLN:HB3	1:A:3515:GLN:NE2	2.15	0.58
5:H:43:TRP:HD1	5:H:116:VAL:HG12	1.68	0.58
6:I:654:LYS:N	6:I:660:GLU:OE2	2.37	0.58
6:I:728:GLU:OE1	6:I:741:ARG:NH2	2.36	0.58
1:S:131:LEU:HB2	1:S:173:LYS:HD2	1.86	0.58
1:S:1538:LEU:N	1:S:1553:PHE:O	2.34	0.58
1:S:1583:MET:O	1:S:1586:SER:OG	2.22	0.58
1:A:3617:LEU:HA	1:A:3633:ILE:HG22	1.85	0.58
3:L:141:ARG:HH22	3:L:143:SER:HB3	1.69	0.58
1:S:933:LEU:HD13	1:S:2793:PRO:HB2	1.86	0.58
1:S:2322:VAL:O	1:S:2326:ILE:HG12	2.03	0.58
1:S:2330:VAL:HG13	1:S:2333:ARG:HH22	1.68	0.58
1:S:3113:ASN:HB3	1:S:3128:LYS:HZ2	1.69	0.58
2:T:67:ILE:HA	2:T:70:VAL:HG22	1.85	0.58
1:A:337:LYS:HG2	1:A:369:PHE:CZ	2.38	0.58
2:B:297:LYS:H	3:C:298:ASN:HB3	1.68	0.58
1:S:435:LEU:HA	1:S:438:LEU:HD12	1.86	0.58
1:S:1080:LEU:HB3	1:S:1126:GLN:HG3	1.84	0.58
1:S:1082:PHE:HA	1:S:1085:ILE:HG12	1.86	0.58
1:S:2350:LYS:HA	1:S:2354:ASN:OD1	2.04	0.58
1:S:3506:LEU:HD11	1:S:3554:PHE:HB3	1.86	0.58
1:S:3666:LEU:HA	1:S:3669:LYS:HZ3	1.69	0.58
1:A:24:ARG:NH1	1:A:25:CYS:HB3	2.19	0.58
3:C:620:ILE:HD13	3:C:639:ILE:HD11	1.86	0.58
3:C:728:LEU:HD13	1:S:1917:LYS:HG2	1.85	0.58
3:L:129:LYS:NZ	3:L:130:ARG:O	2.36	0.58
1:S:2532:PRO:HD2	1:S:2538:ARG:HA	1.84	0.58
1:S:2806:LYS:HB2	1:S:2857:CYS:HB2	1.85	0.58
1:S:2819:GLU:O	1:S:2822:LYS:NZ	2.33	0.58
1:S:2999:LEU:HD22	1:S:3014:CYS:HA	1.86	0.58
2:T:230:ARG:HD3	2:T:232:HIS:H	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2353:GLN:HB3	1:A:2360:PHE:HB2	1.84	0.58
2:B:447:PRO:HD3	3:C:243:HIS:HB2	1.86	0.58
3:C:595:ALA:HB1	3:C:599:ARG:HH22	1.69	0.58
6:I:746:MET:HE3	6:I:751:LYS:HG2	1.86	0.58
1:S:275:PHE:HE2	1:S:319:PHE:HB2	1.69	0.58
1:S:582:THR:HG23	1:S:615:ALA:HB3	1.86	0.58
1:S:2452:ARG:HB2	1:S:2498:ILE:HD11	1.86	0.58
1:S:3254:LEU:HD23	1:S:3287:ARG:HH12	1.69	0.58
1:S:3628:PHE:HB2	1:S:3675:LYS:HB3	1.85	0.58
1:S:3793:VAL:HG23	1:S:3803:ILE:HG22	1.83	0.58
1:A:18:THR:O	1:A:22:ALA:N	2.34	0.57
1:A:305:ASN:O	1:A:308:LEU:N	2.36	0.57
1:A:983:LEU:HB3	1:A:2591:ILE:HD11	1.85	0.57
1:A:993:HIS:NE2	1:A:1035:GLU:OE2	2.37	0.57
1:A:1322:THR:O	1:A:1326:GLU:N	2.37	0.57
1:A:2928:LYS:O	1:A:2931:ARG:HD3	2.03	0.57
2:B:34:GLY:HA2	2:B:160:LYS:HG3	1.86	0.57
3:C:104:GLN:O	3:C:141:ARG:NH1	2.36	0.57
3:C:184:ARG:NH2	3:C:514:ASN:O	2.36	0.57
1:S:305:ASN:O	1:S:308:LEU:N	2.37	0.57
1:S:925:GLN:HA	1:S:2769:VAL:HG13	1.85	0.57
1:S:1231:GLN:HE21	1:S:1235:ILE:HD11	1.67	0.57
1:S:3580:ASN:H	1:S:3734:ARG:NH2	1.97	0.57
1:S:3870:SER:OG	1:S:4117:LEU:O	2.22	0.57
1:A:947:GLN:HB2	1:A:2577:PHE:HE1	1.69	0.57
1:A:2246:LYS:NZ	1:A:2284:ASP:OD1	2.37	0.57
2:B:458:GLN:HE21	2:B:528:LEU:HB3	1.68	0.57
2:B:507:THR:OG1	3:C:394:ARG:NH1	2.37	0.57
4:D:27:GLU:HA	4:D:37:PHE:HB2	1.86	0.57
1:S:248:ILE:HA	1:S:251:PHE:HD2	1.69	0.57
1:S:1249:SER:OG	1:S:1312:CYS:SG	2.58	0.57
1:S:1841:SER:HA	1:S:1844:VAL:HG13	1.86	0.57
1:S:2392:VAL:O	1:S:2395:THR:HB	2.04	0.57
1:A:649:PHE:CE2	1:A:653:LEU:HD11	2.39	0.57
1:A:2243:GLU:HA	1:A:2246:LYS:HE3	1.87	0.57
1:S:1095:LEU:O	1:S:1099:PHE:N	2.35	0.57
1:S:2291:GLN:OE1	1:S:2291:GLN:N	2.37	0.57
1:S:2937:ASP:HB2	1:S:3979:LEU:HD23	1.86	0.57
1:A:955:ALA:O	1:A:957:PRO:HD3	2.04	0.57
1:A:1115:HIS:HD2	1:A:1182:GLU:HB3	1.70	0.57
1:A:1354:GLU:HB3	1:A:1357:LYS:HD3	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2935:GLU:OE2	1:A:2936:TYR:N	2.38	0.57
1:A:3723:ASP:HB2	1:A:3741:ARG:HB2	1.86	0.57
2:B:82:LEU:HB3	2:B:108:LEU:HD22	1.85	0.57
2:B:168:LEU:HG	2:B:202:LEU:HD13	1.85	0.57
3:L:65:ASP:HB3	3:L:78:THR:HG23	1.86	0.57
1:S:2326:ILE:O	1:S:2330:VAL:N	2.36	0.57
1:S:2577:PHE:HB2	1:S:2783:ILE:HB	1.86	0.57
1:S:2891:ARG:HH12	1:S:3897:PHE:HB3	1.70	0.57
1:A:105:VAL:O	1:A:108:LYS:HB3	2.05	0.57
1:A:3304:VAL:HG21	1:A:3333:THR:HG21	1.86	0.57
2:B:305:THR:HB	3:C:288:ASP:HA	1.85	0.57
3:L:6:ASN:N	3:L:128:GLU:OE1	2.37	0.57
1:S:888:ARG:HH12	1:S:3889:ARG:HG3	1.70	0.57
1:S:2225:HIS:HB3	1:S:2227:LYS:HE2	1.87	0.57
1:S:2234:ASN:HA	1:S:2237:ILE:HD12	1.85	0.57
1:S:2331:MET:HE2	1:S:2338:GLU:HG2	1.86	0.57
2:T:82:LEU:HB3	2:T:108:LEU:HD22	1.86	0.57
2:T:304:ASN:OD1	2:T:305:THR:N	2.35	0.57
1:A:217:LEU:HB2	1:A:220:LEU:HB2	1.86	0.57
1:A:880:MET:HG2	1:A:3934:THR:HB	1.87	0.57
1:A:898:PHE:H	1:A:902:LYS:HE3	1.69	0.57
1:A:1147:LYS:HG3	1:A:1149:LYS:HG2	1.87	0.57
1:A:3444:ALA:HA	1:A:3482:LEU:HD11	1.85	0.57
2:B:462:MET:HE2	2:B:465:ILE:HD12	1.87	0.57
3:L:59:PHE:HA	3:L:77:ILE:HA	1.87	0.57
3:L:368:ARG:NH1	2:T:448:PHE:O	2.35	0.57
3:L:497:ARG:NH2	3:L:503:GLU:O	2.36	0.57
1:S:895:ALA:HA	1:S:904:VAL:HA	1.85	0.57
1:S:2460:GLU:OE1	1:S:2460:GLU:N	2.38	0.57
1:S:3170:ASP:HB3	1:S:3174:ASP:HB2	1.86	0.57
1:S:3483:MET:HE1	1:S:3512:VAL:HG22	1.87	0.57
3:C:18:PHE:HB2	3:C:102:SER:HA	1.87	0.57
3:C:643:ARG:HD3	3:C:655:PHE:CD2	2.40	0.57
6:I:865:ILE:HG12	6:I:889:LEU:HD13	1.86	0.57
1:S:801:LYS:NZ	1:S:3114:TYR:O	2.37	0.57
1:S:1062:ARG:NH1	1:S:1065:SER:OG	2.37	0.57
1:S:1282:LEU:HD13	1:S:1359:LEU:HB3	1.85	0.57
6:I:693:PRO:HB2	6:I:718:HIS:CE1	2.40	0.57
3:L:293:THR:O	3:L:307:LYS:NZ	2.34	0.57
5:Q:183:VAL:O	5:Q:186:GLU:HG3	2.05	0.57
1:S:1849:ASP:OD1	1:S:1850:VAL:N	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:149:ILE:HD11	1:A:183:GLU:HB2	1.86	0.57
1:A:1458:LEU:HD13	1:A:1467:ILE:HG21	1.86	0.57
1:A:3227:ILE:HA	1:A:3230:LEU:HD12	1.86	0.57
2:B:484:GLN:OE1	2:B:488:ARG:NH1	2.38	0.57
6:I:782:LYS:NZ	6:I:783:ASN:O	2.38	0.57
3:L:325:LYS:HZ3	3:L:328:GLU:HB3	1.70	0.57
1:S:709:LYS:NZ	1:S:1332:TYR:OH	2.30	0.57
1:S:2158:ARG:HH21	1:S:2196:TRP:HB3	1.70	0.57
1:S:2531:LEU:HD22	1:S:2538:ARG:HG3	1.87	0.57
1:A:793:LEU:HB3	1:A:870:LEU:HA	1.87	0.57
1:A:1149:LYS:O	1:A:1151:ARG:NH1	2.38	0.57
6:I:665:CYS:HB2	6:I:697:THR:HG21	1.87	0.57
1:S:760:LEU:HD11	1:S:798:GLY:HA3	1.87	0.57
1:S:1709:GLU:HA	1:S:1712:ARG:HG2	1.87	0.57
1:S:1878:ASP:HB3	1:S:1947:CYS:HA	1.87	0.57
1:S:2367:VAL:O	1:S:2371:PHE:N	2.37	0.57
1:A:720:GLN:OE1	1:A:720:GLN:N	2.36	0.56
1:A:4006:VAL:HG11	1:A:4009:PRO:HB3	1.86	0.56
2:B:469:LEU:HD21	2:B:518:LEU:HG	1.86	0.56
1:S:18:THR:O	1:S:22:ALA:N	2.35	0.56
1:S:3617:LEU:HA	1:S:3633:ILE:HG22	1.87	0.56
2:T:39:ILE:HB	2:T:166:ILE:HG12	1.87	0.56
1:A:1440:ASP:HB2	1:A:1445:ARG:HH21	1.69	0.56
1:A:3609:MET:HA	1:A:3612:ARG:HE	1.70	0.56
5:P:21:GLN:NE2	5:P:35:THR:OG1	2.38	0.56
5:P:51:GLU:HG2	5:P:110:SER:HB3	1.87	0.56
1:S:1570:GLU:HG3	1:S:1571:LEU:HD22	1.87	0.56
1:S:2261:SER:O	1:S:2270:ASN:ND2	2.32	0.56
1:S:2365:ASN:ND2	1:S:2399:GLU:OE2	2.27	0.56
1:S:3069:MET:HG3	1:S:3075:LYS:HD3	1.86	0.56
2:T:423:GLN:HG3	2:T:425:ILE:HG12	1.86	0.56
1:A:240:GLU:HB2	1:A:242:PRO:HD2	1.86	0.56
1:A:895:ALA:HA	1:A:904:VAL:HA	1.86	0.56
1:A:1058:SER:HA	1:A:1061:LYS:HE2	1.87	0.56
1:A:2215:LEU:HA	1:A:2218:PHE:HD2	1.71	0.56
1:A:2274:ILE:HD13	1:A:2319:ALA:HB2	1.87	0.56
1:A:3236:PHE:HE2	1:A:3269:ARG:HH12	1.53	0.56
2:B:488:ARG:HG3	2:B:501:GLU:HB3	1.87	0.56
3:C:468:GLU:O	3:C:469:LYS:HG2	2.05	0.56
6:I:814:ARG:N	6:I:849:GLY:HA2	2.20	0.56
5:Q:181:ILE:HG12	6:R:795:LEU:HD22	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:348:ILE:HG22	1:S:349:ILE:HG13	1.87	0.56
1:S:1626:TRP:HZ2	1:S:1674:THR:HG21	1.70	0.56
1:S:2234:ASN:O	1:S:2238:ILE:HG12	2.06	0.56
1:S:2830:ASN:OD1	1:S:2834:GLN:NE2	2.39	0.56
2:T:48:MET:SD	2:T:48:MET:N	2.70	0.56
2:T:121:GLN:O	2:T:130:ARG:NH1	2.39	0.56
1:A:345:PHE:HB3	1:A:366:TYR:CZ	2.40	0.56
1:A:979:VAL:HA	1:A:982:GLN:HG2	1.87	0.56
1:A:1793:THR:O	1:A:1797:LEU:HG	2.05	0.56
1:A:3130:GLN:HB3	1:A:3178:ILE:HG12	1.87	0.56
1:A:3789:ARG:NH1	1:A:3936:GLY:O	2.38	0.56
2:B:444:ARG:NH2	3:C:268:LEU:O	2.36	0.56
1:S:1614:GLN:HA	1:S:1617:LYS:HE2	1.87	0.56
1:S:3472:ILE:HG12	1:S:3479:THR:HB	1.85	0.56
1:A:436:GLU:HA	1:A:439:VAL:HG22	1.87	0.56
1:A:1095:LEU:O	1:A:1099:PHE:N	2.29	0.56
1:A:1104:LEU:HD13	1:A:1134:LEU:HD13	1.87	0.56
1:A:2304:VAL:O	1:A:2348:GLN:NE2	2.38	0.56
1:A:2526:SER:O	1:A:2538:ARG:NH2	2.39	0.56
2:B:352:PRO:HD2	2:B:355:LEU:HD12	1.87	0.56
3:L:74:TYR:HB3	3:L:77:ILE:HD12	1.87	0.56
3:L:328:GLU:HA	3:L:331:MET:HG2	1.88	0.56
1:S:1782:PHE:HA	1:S:1785:ILE:HG12	1.87	0.56
1:S:2930:TYR:HB2	1:S:2939:LEU:HD21	1.88	0.56
1:A:71:LYS:C	1:A:73:LEU:N	2.56	0.56
1:A:650:SER:HA	1:A:653:LEU:HD12	1.88	0.56
3:L:312:GLN:HB2	2:T:285:PRO:HB2	1.88	0.56
1:S:734:LEU:HA	1:S:776:TRP:HH2	1.70	0.56
1:S:1423:ILE:HG13	1:S:1425:ALA:H	1.71	0.56
1:S:1606:ARG:HA	1:S:1608:ARG:HH21	1.71	0.56
1:A:638:GLN:HG3	1:A:640:GLU:H	1.71	0.56
1:A:1108:MET:SD	1:A:1178:ARG:NH1	2.76	0.56
1:A:2495:SER:HA	1:A:2498:ILE:HD12	1.87	0.56
1:S:168:ASP:H	1:S:171:LEU:HD12	1.71	0.56
1:S:1205:ASN:HB3	1:S:1275:THR:HA	1.88	0.56
1:S:1649:LEU:HA	1:S:1652:ILE:HD12	1.88	0.56
1:S:2094:MET:HB2	1:S:2097:LEU:HD12	1.88	0.56
1:S:2283:ASN:HB3	1:S:2285:LEU:HG	1.87	0.56
1:S:2353:GLN:HA	1:S:2356:MET:HG3	1.87	0.56
1:A:117:LYS:NZ	3:C:302:GLU:OE1	2.39	0.56
1:A:386:VAL:HG22	1:A:431:TYR:HE2	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1684:LEU:O	1:A:1689:LYS:NZ	2.39	0.56
6:I:677:ASP:OD1	6:I:678:LEU:N	2.38	0.56
1:A:166:ILE:HG13	1:A:167:PRO:HD3	1.88	0.56
1:A:3756:GLU:N	1:A:3798:SER:O	2.39	0.56
1:S:3912:CYS:HA	1:S:3915:HIS:CD2	2.41	0.56
1:A:938:VAL:HA	1:A:941:MET:HG3	1.88	0.56
1:A:2302:ALA:O	1:A:2306:ASN:ND2	2.39	0.56
2:B:217:TYR:O	2:B:221:ILE:N	2.28	0.56
2:B:298:THR:HG1	3:C:295:TYR:HD2	1.54	0.56
2:B:534:TYR:OH	3:C:260:ARG:NH2	2.37	0.56
3:C:724:ASP:O	3:C:728:LEU:N	2.39	0.56
6:I:725:TRP:HA	6:I:741:ARG:HH22	1.70	0.56
3:L:9:ALA:HB3	3:L:130:ARG:HG3	1.87	0.56
6:R:860:VAL:HG22	6:R:862:HIS:H	1.70	0.56
1:S:880:MET:HG2	1:S:3934:THR:HB	1.87	0.56
1:S:1687:HIS:O	1:S:1745:LYS:NZ	2.39	0.56
1:A:770:LEU:HD23	1:A:773:LEU:HD21	1.88	0.55
2:B:44:ALA:O	2:B:138:GLY:N	2.38	0.55
3:C:9:ALA:N	3:C:129:LYS:O	2.38	0.55
5:G:44:THR:O	5:G:114:GLU:N	2.36	0.55
6:I:668:SER:HB3	6:I:702:ALA:HA	1.88	0.55
3:L:484:ASN:OD1	3:L:486:ARG:HG2	2.05	0.55
3:L:725:VAL:HG13	3:L:729:LEU:HD13	1.87	0.55
1:A:2227:LYS:O	1:A:2228:ARG:HG3	2.06	0.55
1:A:3550:LYS:O	1:A:3553:GLU:HG2	2.06	0.55
1:A:3967:PHE:O	1:A:3970:LEU:HD22	2.07	0.55
2:B:41:LEU:HB3	2:B:88:TYR:HE1	1.71	0.55
2:B:297:LYS:NZ	3:C:297:LEU:O	2.40	0.55
3:L:640:ARG:HH12	3:L:682:GLY:HA2	1.72	0.55
1:S:1338:VAL:O	1:S:1342:MET:HG2	2.06	0.55
1:S:1769:GLU:H	1:S:1772:HIS:CE1	2.24	0.55
1:S:3183:ILE:HG13	1:S:3242:MET:SD	2.46	0.55
1:A:163:LYS:HG2	2:B:301:ARG:HA	1.88	0.55
1:A:643:GLU:HG3	1:A:644:PRO:HD3	1.87	0.55
1:A:1034:ARG:HG3	1:A:1085:ILE:HA	1.87	0.55
1:A:1639:LEU:HA	1:A:1642:LYS:HD2	1.88	0.55
1:A:3259:LEU:O	1:A:3276:TRP:NE1	2.39	0.55
5:G:8:ILE:HD11	5:G:18:HIS:HB2	1.89	0.55
5:H:179:ARG:NH2	6:I:782:LYS:O	2.38	0.55
6:I:703:GLY:O	6:I:722:LYS:NZ	2.39	0.55
1:S:36:ARG:HD3	1:S:2426:HIS:CD2	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:2395:THR:HA	1:S:2398:LEU:HD12	1.87	0.55
1:S:2563:LEU:HD13	1:S:2795:GLN:HB3	1.87	0.55
1:A:1150:LYS:HA	1:A:1162:SER:HA	1.89	0.55
1:A:2981:TRP:HB2	1:A:2984:GLY:H	1.71	0.55
1:A:3142:ILE:HA	1:A:3145:ILE:HG12	1.89	0.55
2:B:38:LEU:HD11	2:B:165:ARG:NH2	2.22	0.55
6:R:816:HIS:H	6:R:850:ALA:CA	2.20	0.55
1:S:955:ALA:C	1:S:957:PRO:HD3	2.27	0.55
1:S:1780:SER:HB2	1:S:1784:ARG:HH12	1.70	0.55
1:S:2279:ILE:O	1:S:2283:ASN:ND2	2.39	0.55
1:A:128:LEU:HD21	1:A:170:VAL:HG23	1.89	0.55
1:A:616:LYS:NZ	1:A:2033:ASP:O	2.37	0.55
1:A:1662:ASN:OD1	1:A:1663:THR:N	2.39	0.55
2:B:160:LYS:NZ	2:B:161:MET:O	2.40	0.55
2:B:290:ARG:NH2	6:I:693:PRO:O	2.40	0.55
3:C:732:ILE:HA	1:S:1913:LYS:HZ2	1.71	0.55
6:R:812:MET:H	6:R:848:HIS:HB2	1.71	0.55
1:S:486:GLY:O	1:S:490:ILE:HG12	2.06	0.55
1:S:835:LYS:HA	1:S:838:LYS:HG2	1.88	0.55
1:S:2575:PRO:HA	1:S:2786:LYS:HA	1.89	0.55
1:S:4086:ASP:OD1	1:S:4087:HIS:N	2.39	0.55
1:A:1181:THR:HG22	1:A:1262:ALA:HB2	1.88	0.55
1:A:2547:SER:HB3	1:A:2550:ILE:HG12	1.89	0.55
1:A:4121:TRP:HD1	1:A:4123:GLY:H	1.55	0.55
5:G:99:LYS:HG2	5:G:108:LEU:HD13	1.89	0.55
3:L:619:HIS:HD1	3:L:620:ILE:HD13	1.70	0.55
3:L:643:ARG:HD2	3:L:655:PHE:HD2	1.72	0.55
5:P:150:ARG:NH1	5:P:154:ASP:OD2	2.39	0.55
1:S:958:MET:HB3	1:S:961:LEU:HB2	1.89	0.55
1:S:1048:GLN:OE1	1:S:1051:LYS:NZ	2.30	0.55
1:S:2287:PRO:HB3	1:S:2326:ILE:HD12	1.88	0.55
1:S:3048:LYS:HB3	1:S:3061:LEU:HD22	1.88	0.55
1:S:3369:ASP:HB3	1:S:3372:LYS:HG2	1.88	0.55
1:A:2532:PRO:O	1:A:2538:ARG:NH1	2.40	0.55
1:A:3072:GLU:HA	1:A:3075:LYS:HE2	1.89	0.55
1:A:3755:GLY:HA2	1:A:3799:ARG:HA	1.89	0.55
2:B:492:ALA:O	2:B:496:ASP:N	2.40	0.55
3:L:468:GLU:O	3:L:469:LYS:HG3	2.07	0.55
1:S:1296:PHE:O	1:S:1300:SER:N	2.39	0.55
1:S:2773:ARG:HG3	1:S:2789:SER:HB2	1.89	0.55
1:S:3259:LEU:HG	1:S:3276:TRP:CZ2	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1457:GLN:HG3	1:A:1460:ARG:NH2	2.22	0.55
1:A:1663:THR:O	1:A:1665:HIS:ND1	2.39	0.55
1:A:1871:MET:HE1	1:A:1940:TYR:N	2.22	0.55
1:A:2850:PHE:HB3	1:A:2883:SER:HB2	1.88	0.55
1:A:3321:LEU:HB3	1:A:3324:ARG:HH21	1.72	0.55
2:B:305:THR:OG1	3:C:290:GLN:HG3	2.07	0.55
3:C:327:ASP:OD1	3:C:328:GLU:N	2.40	0.55
3:L:643:ARG:HE	3:L:647:ILE:HD11	1.72	0.55
1:S:73:LEU:HG	1:S:75:SER:H	1.69	0.55
1:S:1406:LEU:HD11	1:S:1411:TYR:HB2	1.89	0.55
1:S:3898:LEU:HG	1:S:3901:ARG:HH21	1.71	0.55
2:T:45:SER:OG	2:T:46:LYS:N	2.40	0.55
2:T:346:MET:HB2	2:T:399:ARG:HB3	1.88	0.55
1:A:978:GLN:NE2	1:A:2596:ARG:O	2.40	0.55
1:A:1564:SER:O	1:A:1568:ASN:ND2	2.40	0.55
1:S:2330:VAL:HG22	1:S:2331:MET:HG3	1.88	0.55
1:S:3806:LEU:HD21	1:S:3938:ILE:HD12	1.88	0.55
2:T:363:ARG:HB3	2:T:436:PHE:CD2	2.42	0.55
1:A:1417:THR:O	1:A:1421:GLU:N	2.32	0.54
1:A:1570:GLU:HG3	1:A:1571:LEU:HD22	1.88	0.54
1:A:3516:HIS:O	1:A:3519:GLU:HG3	2.07	0.54
1:A:3806:LEU:HD22	1:A:3809:THR:HB	1.89	0.54
5:G:28:LEU:HB3	5:G:67:VAL:HG22	1.89	0.54
3:L:29:SER:HB3	3:L:32:GLU:HG2	1.89	0.54
3:L:486:ARG:HD2	2:T:407:PRO:HB3	1.89	0.54
4:M:10:THR:HG22	4:M:21:VAL:HG22	1.89	0.54
4:M:86:ALA:HB3	4:M:97:THR:HB	1.89	0.54
1:S:358:GLU:HA	1:S:361:ILE:HD12	1.89	0.54
1:S:3559:LYS:HA	1:S:3562:LEU:HG	1.89	0.54
1:A:1697:PRO:HA	1:A:1753:SER:HB3	1.89	0.54
1:A:3693:GLU:HG2	1:A:3695:LEU:H	1.72	0.54
3:L:394:ARG:NH1	2:T:507:THR:OG1	2.39	0.54
1:S:414:LEU:HB2	1:S:460:ALA:HB1	1.89	0.54
1:A:1661:PHE:HD1	1:A:1665:HIS:HB2	1.72	0.54
1:A:2383:PHE:HB3	1:A:2418:LYS:HE3	1.89	0.54
1:A:3493:TRP:CZ3	1:A:3521:ILE:HA	2.42	0.54
3:C:287:GLU:OE1	3:C:287:GLU:N	2.40	0.54
5:G:28:LEU:HD21	5:G:70:LEU:HD23	1.89	0.54
1:S:169:THR:HA	1:S:172:GLU:HG2	1.89	0.54
1:A:463:LYS:HB3	1:A:544:ILE:HD13	1.89	0.54
1:A:1117:ASP:OD1	1:A:1118:GLU:N	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1368:LEU:HB2	1:A:1372:LEU:HD23	1.87	0.54
1:A:2253:TYR:H	1:A:2256:ILE:HD12	1.73	0.54
1:A:2261:SER:O	1:A:2270:ASN:ND2	2.39	0.54
1:A:2986:PRO:O	1:A:2991:LYS:NZ	2.39	0.54
1:A:3114:TYR:HB2	1:A:3128:LYS:HG2	1.90	0.54
6:I:902:GLU:OE1	6:I:904:GLN:NE2	2.41	0.54
1:S:1164:CYS:SG	1:S:1165:LEU:N	2.81	0.54
1:S:2090:ARG:N	1:S:2180:GLU:OE1	2.41	0.54
1:S:2791:ILE:HA	1:S:2794:LEU:HD12	1.89	0.54
1:A:169:THR:HA	1:A:172:GLU:HG2	1.89	0.54
1:A:3657:SER:N	1:A:3660:ASN:OD1	2.41	0.54
5:G:10:LEU:HD13	5:G:17:THR:HA	1.89	0.54
5:P:179:ARG:NH2	6:R:803:TYR:O	2.30	0.54
6:R:747:CYS:O	6:R:751:LYS:N	2.34	0.54
1:S:2162:LYS:HG3	1:S:2163:HIS:ND1	2.22	0.54
1:A:1868:THR:O	1:A:1871:MET:HB2	2.08	0.54
1:A:3604:LYS:NZ	1:A:3605:ASN:OD1	2.38	0.54
2:B:62:MET:HA	2:B:65:GLN:HG3	1.89	0.54
3:C:270:GLU:OE2	3:C:484:ASN:ND2	2.35	0.54
3:C:347:LYS:HB3	3:C:350:GLN:HG3	1.90	0.54
6:I:764:SER:OG	6:I:767:ILE:O	2.25	0.54
6:I:796:ILE:O	6:I:800:GLU:HG2	2.07	0.54
1:S:1146:ASN:HB3	1:S:1199:PRO:HB3	1.89	0.54
1:S:1322:THR:O	1:S:1326:GLU:N	2.41	0.54
1:S:3580:ASN:ND2	1:S:3582:GLU:OE1	2.40	0.54
2:T:42:VAL:HA	2:T:169:PHE:HB2	1.89	0.54
1:A:888:ARG:HH21	1:A:3889:ARG:HB3	1.72	0.54
1:A:3110:PHE:CD2	1:A:3135:LEU:HD11	2.43	0.54
2:B:469:LEU:HD11	2:B:518:LEU:HD11	1.90	0.54
6:I:814:ARG:H	6:I:849:GLY:HA2	1.71	0.54
6:R:889:LEU:HD13	6:R:905:GLU:H	1.72	0.54
1:S:1017:ILE:HG23	1:S:1077:GLY:HA3	1.90	0.54
1:S:1444:ASP:OD1	1:S:1445:ARG:N	2.40	0.54
1:S:3172:LYS:O	1:S:3173:MET:HE2	2.08	0.54
1:A:356:ASN:HB3	1:A:358:GLU:HG2	1.90	0.54
1:A:584:GLU:N	1:A:613:HIS:O	2.38	0.54
1:A:1164:CYS:SG	1:A:1165:LEU:N	2.81	0.54
1:A:1257:LEU:HA	1:A:1260:LEU:HD12	1.88	0.54
1:A:2578:GLU:OE1	1:A:2578:GLU:N	2.41	0.54
1:A:2924:VAL:HG11	1:A:2989:ALA:HB1	1.90	0.54
1:A:3011:LEU:HD12	1:A:3050:LYS:HD2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:260:ARG:NH2	3:C:370:ASP:OD2	2.41	0.54
1:S:196:LEU:HB3	1:S:200:PHE:CZ	2.43	0.54
1:S:1379:PRO:O	1:S:1382:ILE:HG12	2.08	0.54
1:S:3312:VAL:O	1:S:3316:LEU:N	2.34	0.54
1:S:4086:ASP:HA	1:S:4089:ILE:HG12	1.89	0.54
1:A:928:VAL:HB	1:A:2769:VAL:HG11	1.88	0.54
1:A:984:TYR:HD1	1:A:987:LEU:HD12	1.73	0.54
1:A:1228:GLY:HA2	1:A:1256:TRP:NE1	2.17	0.54
1:A:2876:VAL:HG11	1:A:2892:LEU:HD11	1.90	0.54
1:A:3159:ARG:HG2	1:A:3230:LEU:HD13	1.89	0.54
2:B:120:ASP:HA	2:B:123:LYS:HB3	1.90	0.54
3:C:62:ASP:HA	3:C:103:GLN:HG2	1.90	0.54
3:C:643:ARG:HH21	3:C:685:LEU:HD22	1.73	0.54
1:S:635:PRO:HB3	1:S:672:ILE:HD11	1.89	0.54
1:S:864:GLY:HA3	1:S:3170:ASP:OD1	2.08	0.54
1:S:936:SER:HB2	1:S:2790:LEU:HD22	1.90	0.54
1:S:1603:GLN:OE1	1:S:1606:ARG:NH1	2.41	0.54
1:S:3506:LEU:O	1:S:3551:ASN:ND2	2.40	0.54
1:S:3614:TYR:O	1:S:3619:ASP:N	2.34	0.54
1:A:1690:GLY:HA2	1:A:1693:VAL:HG22	1.88	0.54
1:A:2388:LYS:NZ	2:B:154:PHE:O	2.41	0.54
1:S:785:MET:HA	1:S:788:TYR:CZ	2.42	0.54
1:A:960:GLN:HA	1:A:963:LYS:HE2	1.90	0.53
1:A:1172:LEU:HD11	1:A:1187:SER:HB2	1.89	0.53
1:A:1231:GLN:H	1:A:1232:PRO:HD2	1.73	0.53
1:A:3190:LEU:HD21	1:A:3231:ILE:HD12	1.91	0.53
4:D:132:VAL:HG11	4:M:8:LEU:HD21	1.90	0.53
5:G:56:ALA:HB1	5:G:63:LYS:HE3	1.90	0.53
3:L:185:LEU:O	3:L:514:ASN:ND2	2.34	0.53
1:S:1029:CYS:HA	1:S:1032:CYS:SG	2.47	0.53
1:S:1331:ASN:HA	1:S:1334:LYS:HE3	1.90	0.53
1:S:2470:ARG:O	1:S:2473:MET:HG2	2.08	0.53
2:T:270:SER:HB3	2:T:374:LEU:HB2	1.89	0.53
2:T:465:ILE:HG12	2:T:518:LEU:HD22	1.90	0.53
1:A:702:SER:O	1:A:706:LEU:HG	2.08	0.53
1:A:3938:ILE:HG13	1:A:3940:ILE:HD11	1.89	0.53
3:L:162:GLN:HG2	3:L:223:GLU:HB3	1.90	0.53
3:L:462:SER:HA	2:T:350:PHE:HB2	1.89	0.53
1:S:1426:GLN:NE2	1:S:1468:LEU:HD13	2.23	0.53
1:S:2195:SER:O	1:S:2722:ARG:NH1	2.42	0.53
1:S:2831:ASN:O	1:S:2835:LYS:HG2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:2965:TYR:HD2	1:S:3253:SER:HB2	1.73	0.53
1:S:3158:LYS:HG3	1:S:3159:ARG:HD3	1.89	0.53
1:S:3450:MET:HG3	1:S:3468:LEU:HD11	1.90	0.53
1:S:3719:ILE:HA	1:S:3742:GLY:HA2	1.90	0.53
1:A:634:LEU:HD23	1:A:672:ILE:HG13	1.91	0.53
1:A:3483:MET:HA	1:A:3486:GLU:HG3	1.90	0.53
2:B:234:GLU:OE1	2:B:234:GLU:N	2.40	0.53
3:L:277:THR:O	2:T:319:SER:N	2.34	0.53
3:L:524:THR:HA	3:L:527:GLN:HG2	1.91	0.53
3:L:686:ILE:HD12	3:L:702:LYS:HG3	1.91	0.53
6:R:737:PRO:O	6:R:739:GLN:NE2	2.41	0.53
1:S:670:LEU:HB2	1:S:732:PHE:HZ	1.73	0.53
1:S:1959:LEU:HD12	1:S:2123:PRO:HG2	1.90	0.53
1:S:4055:ASN:ND2	1:S:4091:ALA:O	2.42	0.53
2:T:239:LEU:HA	2:T:242:LEU:HD12	1.89	0.53
1:A:71:LYS:O	1:A:72:SER:C	2.45	0.53
1:A:433:PRO:O	1:A:436:GLU:HG3	2.08	0.53
1:A:720:GLN:HE21	1:A:1122:GLY:N	2.07	0.53
1:A:850:GLU:HG3	1:A:854:ARG:HH22	1.72	0.53
1:A:978:GLN:NE2	1:A:2597:PHE:HA	2.24	0.53
1:A:1436:LEU:HD12	1:A:1445:ARG:HG2	1.89	0.53
1:A:2548:PRO:HB2	1:A:2848:PHE:CD1	2.44	0.53
1:A:2563:LEU:HD22	1:A:2795:GLN:HB3	1.91	0.53
2:B:165:ARG:HH22	4:D:188:PRO:HD3	1.74	0.53
2:B:525:PHE:HA	2:B:528:LEU:HB2	1.90	0.53
3:C:61:THR:OG1	3:C:63:GLY:O	2.27	0.53
3:L:23:SER:HB3	3:L:29:SER:HA	1.90	0.53
1:S:1115:HIS:NE2	1:S:1182:GLU:HB3	2.23	0.53
1:S:1673:THR:HA	1:S:1676:ILE:HD12	1.90	0.53
1:S:2482:ASP:HA	1:S:2485:ARG:CZ	2.39	0.53
1:S:2893:LEU:HD21	1:S:2922:ARG:HB2	1.91	0.53
1:S:3684:SER:HB3	1:S:3687:MET:HB2	1.90	0.53
1:A:13:LEU:HB2	1:A:59:PHE:CZ	2.43	0.53
1:A:1270:PHE:HB3	1:A:1276:VAL:HG12	1.91	0.53
1:A:1645:VAL:HA	1:A:1648:LEU:HG	1.91	0.53
1:A:3883:LEU:HD13	1:A:3966:GLN:HB3	1.91	0.53
1:S:1190:LEU:HA	1:S:1193:LYS:HG2	1.90	0.53
1:S:1686:LEU:HD11	1:S:1738:ASN:HB3	1.90	0.53
1:S:3686:TRP:CH2	1:S:3719:ILE:HG22	2.44	0.53
1:S:4073:ALA:HB1	1:S:4076:ASP:HB3	1.90	0.53
1:A:3058:ASP:OD1	1:A:3059:GLN:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3228:SER:HA	1:A:3231:ILE:HG12	1.91	0.53
1:S:1420:ARG:HH22	1:S:1469:PRO:HD3	1.74	0.53
1:S:1754:GLN:HE21	1:S:1785:ILE:HG22	1.73	0.53
1:S:2466:SER:OG	1:S:2469:CYS:SG	2.61	0.53
1:S:2824:LYS:HE3	1:S:2828:GLU:HB3	1.91	0.53
1:S:3236:PHE:HB3	1:S:3272:TRP:CH2	2.44	0.53
2:T:357:LYS:HB2	2:T:360:HIS:CG	2.44	0.53
1:A:3633:ILE:HG13	1:A:3634:GLN:H	1.73	0.53
1:A:4006:VAL:HB	1:A:4009:PRO:HD3	1.90	0.53
5:H:5:ILE:HG13	5:H:21:GLN:HB3	1.91	0.53
3:L:333:TYR:HD2	2:T:482:VAL:HG22	1.73	0.53
3:L:459:ASP:OD1	2:T:392:LYS:NZ	2.36	0.53
1:S:107:ILE:O	1:S:111:CYS:N	2.34	0.53
1:S:2122:LEU:HB2	1:S:2126:MET:CE	2.38	0.53
1:A:450:SER:O	1:A:454:GLN:HG3	2.09	0.53
1:A:2361:ILE:HD11	1:A:2393:LEU:HD22	1.90	0.53
1:A:2532:PRO:HD2	1:A:2538:ARG:HA	1.90	0.53
2:B:363:ARG:NH1	2:B:364:PRO:O	2.42	0.53
5:G:99:LYS:HB2	5:G:108:LEU:HB2	1.91	0.53
1:S:304:THR:OG1	1:S:305:ASN:OD1	2.27	0.53
1:S:789:TYR:HD1	1:S:792:ILE:HD12	1.74	0.53
1:S:1282:LEU:HB3	1:S:1359:LEU:HD22	1.91	0.53
1:S:1684:LEU:HB2	1:S:1689:LYS:HE3	1.89	0.53
1:S:2173:ALA:HB1	1:S:2214:ARG:HH12	1.74	0.53
1:S:2184:TYR:CZ	1:S:2734:ARG:HD2	2.43	0.53
1:A:67:VAL:HB	1:A:85:ILE:CD1	2.32	0.53
1:A:207:GLN:HB3	1:A:217:LEU:HD22	1.90	0.53
1:A:415:GLN:HA	1:A:463:LYS:HD2	1.90	0.53
1:A:1595:ALA:HA	1:A:1598:ASN:HD21	1.74	0.53
1:A:2414:GLN:OE1	1:A:2414:GLN:N	2.40	0.53
1:A:2440:TYR:HA	1:A:2443:MET:CE	2.39	0.53
1:A:2485:ARG:NH2	1:A:2529:THR:O	2.42	0.53
1:A:3699:LEU:HB2	1:A:3719:ILE:HD12	1.91	0.53
1:A:3974:MET:SD	1:A:3976:GLU:N	2.75	0.53
2:B:250:GLU:HG3	4:D:187:ASN:HD21	1.73	0.53
2:B:274:TYR:HB2	2:B:367:PHE:HD2	1.73	0.53
3:L:531:SER:HA	3:L:534:LYS:HG2	1.90	0.53
1:S:994:TRP:CD1	1:S:2581:LEU:HD21	2.44	0.53
1:S:1063:LEU:HG	1:S:1078:ALA:HB1	1.91	0.53
1:S:1769:GLU:O	1:S:1822:ARG:NH1	2.41	0.53
1:S:2897:LEU:HD23	1:S:3973:PRO:HG3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:3676:PRO:HB3	1:S:3726:VAL:HG11	1.90	0.53
1:S:3924:HIS:CE1	1:S:3926:ASN:HB2	2.44	0.53
2:T:218:ARG:NH2	2:T:229:LEU:HA	2.23	0.53
1:A:348:ILE:HG21	1:A:362:ALA:HB2	1.91	0.53
1:A:1128:CYS:HA	1:A:1131:ILE:HG12	1.90	0.53
1:A:2260:PHE:HE1	1:A:2302:ALA:HB3	1.73	0.53
1:A:3718:ARG:H	1:A:3743:HIS:HB3	1.74	0.53
2:B:94:LYS:H	2:B:103:TYR:HA	1.73	0.53
6:I:889:LEU:HD23	6:I:904:GLN:HA	1.91	0.53
3:L:96:SER:O	3:L:99:GLN:NE2	2.38	0.53
1:S:831:LEU:HD12	1:S:833:HIS:H	1.73	0.53
1:S:1117:ASP:OD1	1:S:1118:GLU:N	2.40	0.53
1:A:741:ILE:HG22	1:A:745:VAL:HG12	1.90	0.52
1:A:914:VAL:O	1:A:918:ALA:N	2.34	0.52
1:A:1134:LEU:O	1:A:1138:ILE:HG12	2.09	0.52
1:A:1586:SER:HB2	1:A:1632:TRP:HH2	1.74	0.52
1:A:3173:MET:CE	1:A:3174:ASP:H	2.21	0.52
1:A:3496:ILE:HA	1:A:3499:ILE:HG23	1.91	0.52
2:B:350:PHE:CE2	3:C:458:ILE:HG12	2.44	0.52
3:C:328:GLU:O	3:C:332:LYS:N	2.42	0.52
1:S:1196:PRO:O	1:S:1202:ARG:NH1	2.42	0.52
1:S:2356:MET:HE1	1:S:2359:LYS:H	1.75	0.52
1:S:3262:LEU:O	1:S:3266:SER:N	2.42	0.52
1:A:64:GLY:O	1:A:67:VAL:HG13	2.07	0.52
1:A:71:LYS:O	1:A:73:LEU:HB2	2.09	0.52
1:A:384:MET:HE3	1:A:388:LEU:HD11	1.90	0.52
1:A:2817:LEU:HD23	1:A:2865:HIS:CE1	2.44	0.52
1:A:3049:LEU:HD22	1:A:3085:GLU:HB2	1.91	0.52
1:A:3992:ARG:NH1	1:A:4051:LEU:O	2.43	0.52
2:B:422:ASP:N	2:B:422:ASP:OD1	2.42	0.52
5:G:21:GLN:HG2	5:G:21:GLN:O	2.09	0.52
1:S:986:PRO:HB3	1:S:2777:HIS:CD2	2.44	0.52
1:S:2371:PHE:HB3	1:S:2374:LEU:HD23	1.92	0.52
1:S:3125:ARG:O	1:S:3129:LEU:HG	2.10	0.52
1:S:3949:ALA:HB1	1:S:3957:GLU:HB3	1.91	0.52
1:A:857:GLN:CD	1:A:3139:GLN:HE22	2.12	0.52
1:A:2830:ASN:OD1	1:A:2834:GLN:NE2	2.42	0.52
1:A:2865:HIS:HB2	1:A:2868:LEU:HG	1.91	0.52
1:A:3170:ASP:HB3	1:A:3174:ASP:HB2	1.90	0.52
3:C:265:LYS:HD2	3:C:268:LEU:HD21	1.92	0.52
6:I:725:TRP:NE1	6:I:736:VAL:O	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:928:VAL:HB	1:S:2769:VAL:HG11	1.91	0.52
1:A:1255:CYS:HA	1:A:1258:ASP:OD2	2.10	0.52
1:A:1949:ILE:HA	1:A:2100:LEU:HD11	1.90	0.52
2:B:271:VAL:HG12	2:B:370:PRO:HA	1.91	0.52
2:B:500:PRO:O	2:B:502:GLN:NE2	2.39	0.52
3:C:261:ILE:HA	3:C:366:ALA:HA	1.91	0.52
3:L:616:LEU:O	3:L:620:ILE:HG12	2.08	0.52
4:M:7:PRO:HB3	4:M:77:ARG:NE	2.23	0.52
1:S:2547:SER:HB3	1:S:2550:ILE:HG12	1.89	0.52
1:A:236:LYS:O	1:A:281:GLN:NE2	2.42	0.52
1:A:362:ALA:O	1:A:366:TYR:HD1	1.92	0.52
1:A:1963:GLN:HB2	1:A:2125:TRP:CE3	2.45	0.52
1:A:2405:VAL:HG22	1:A:2441:LYS:HD2	1.91	0.52
2:B:107:GLU:O	2:B:115:ARG:NH2	2.42	0.52
5:H:87:ASN:ND2	5:H:96:PHE:O	2.34	0.52
3:L:490:LEU:HA	2:T:337:LEU:HD23	1.92	0.52
6:R:665:CYS:HB2	6:R:697:THR:HG21	1.92	0.52
1:S:167:PRO:HA	1:S:171:LEU:HD12	1.92	0.52
1:S:392:CYS:HB2	1:S:438:LEU:HD22	1.92	0.52
1:S:2233:HIS:CE1	1:S:2728:LEU:HA	2.45	0.52
1:A:710:PHE:O	1:A:714:VAL:HG22	2.10	0.52
1:A:2920:VAL:HA	1:A:2923:TRP:HB2	1.92	0.52
1:A:3179:TRP:HZ3	1:A:3241:LYS:HB3	1.74	0.52
2:B:102:ILE:HD12	2:B:146:VAL:HG12	1.91	0.52
3:C:679:VAL:HG21	3:C:705:LEU:HD21	1.90	0.52
5:G:152:LEU:HA	5:H:151:LEU:HD21	1.91	0.52
6:R:675:LYS:HA	6:R:678:LEU:HD12	1.90	0.52
1:S:417:VAL:HA	1:S:420:VAL:HG12	1.91	0.52
1:S:955:ALA:O	1:S:957:PRO:HD3	2.10	0.52
1:S:1426:GLN:HE22	1:S:1468:LEU:HD13	1.75	0.52
1:S:2349:LEU:O	1:S:2353:GLN:HB2	2.09	0.52
2:T:458:GLN:HB3	2:T:525:PHE:HE1	1.75	0.52
1:A:786:GLN:HA	1:A:789:TYR:CE2	2.45	0.52
1:A:3337:ILE:HG21	1:A:3360:LEU:HD22	1.91	0.52
2:B:187:ARG:HH21	2:B:220:ILE:HD11	1.74	0.52
2:B:510:LYS:HB3	2:B:513:ALA:HB3	1.91	0.52
3:C:9:ALA:HB3	3:C:130:ARG:HG3	1.91	0.52
5:G:192:ARG:NH2	6:I:768:ASP:OD1	2.43	0.52
5:H:183:VAL:O	5:H:187:LYS:HG2	2.10	0.52
3:L:326:VAL:O	3:L:329:GLU:HG3	2.10	0.52
3:L:678:VAL:O	3:L:682:GLY:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:327:VAL:HA	1:S:330:ASN:HB2	1.92	0.52
1:S:420:VAL:O	1:S:424:LEU:N	2.39	0.52
1:S:956:PRO:HA	1:S:959:TYR:HB2	1.91	0.52
1:S:1098:GLN:OE1	1:S:1152:ARG:N	2.43	0.52
1:S:1447:ARG:HH12	1:S:1448:LEU:HG	1.75	0.52
1:S:2133:LEU:HG	1:S:2171:LEU:HD11	1.91	0.52
1:S:3720:ALA:HB3	1:S:3743:HIS:HA	1.92	0.52
2:T:214:SER:HB3	2:T:218:ARG:CZ	2.39	0.52
1:A:752:LEU:HD22	1:A:776:TRP:CZ3	2.45	0.52
2:B:319:SER:N	3:C:277:THR:O	2.40	0.52
6:I:741:ARG:NH1	6:I:742:PHE:HB3	2.24	0.52
3:L:61:THR:HG21	3:L:78:THR:HB	1.91	0.52
3:L:418:CYS:SG	3:L:419:LEU:N	2.83	0.52
1:S:533:HIS:O	1:S:537:SER:OG	2.25	0.52
1:S:893:SER:HA	1:S:906:PHE:HA	1.92	0.52
1:S:3110:PHE:CD2	1:S:3135:LEU:HD11	2.45	0.52
1:S:3966:GLN:HA	1:S:3969:ASN:HB2	1.90	0.52
2:T:45:SER:HA	2:T:138:GLY:HA2	1.91	0.52
1:A:14:ARG:HH12	1:A:3070:HIS:HA	1.73	0.52
1:A:181:LEU:HB2	1:A:230:LEU:HD11	1.92	0.52
1:A:498:PRO:HG2	1:A:2596:ARG:HB2	1.92	0.52
1:A:1111:LEU:HD13	1:A:1186:LYS:HE3	1.92	0.52
1:A:1296:PHE:HA	1:A:1299:GLU:HG3	1.92	0.52
1:A:3278:GLN:HA	1:A:3281:CYS:SG	2.49	0.52
1:A:3389:VAL:O	1:A:3393:GLU:HG3	2.08	0.52
1:A:3500:SER:HA	1:A:3503:VAL:HG12	1.92	0.52
1:A:3964:THR:HG22	1:A:3967:PHE:CD2	2.45	0.52
2:B:94:LYS:HB2	2:B:103:TYR:CD2	2.45	0.52
3:L:182:PRO:HG2	3:L:190:PRO:HD2	1.91	0.52
1:S:214:GLU:OE2	2:T:404:ARG:NH2	2.42	0.52
1:S:3718:ARG:H	1:S:3743:HIS:HB3	1.75	0.52
2:T:213:ILE:HG13	2:T:218:ARG:HH21	1.75	0.52
1:A:723:ASP:C	1:A:725:LEU:H	2.12	0.52
1:A:1452:VAL:O	1:A:1456:LYS:HG2	2.10	0.52
1:A:2394:LYS:HB2	1:A:2431:ARG:NH2	2.25	0.52
1:A:3490:VAL:HG23	1:A:3494:GLN:HG2	1.91	0.52
3:C:45:GLN:OE1	3:C:50:ASN:ND2	2.42	0.52
3:C:489:ARG:NH1	3:C:506:PRO:O	2.39	0.52
3:C:497:ARG:HD3	3:C:501:PRO:HA	1.90	0.52
3:L:272:VAL:HG12	3:L:274:LYS:H	1.75	0.52
3:L:731:MET:SD	3:L:731:MET:N	2.83	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:2464:HIS:O	1:S:2470:ARG:NE	2.43	0.52
2:T:235:GLU:OE1	2:T:235:GLU:N	2.43	0.52
1:A:934:LEU:HA	1:A:937:MET:HG2	1.91	0.51
1:A:1621:THR:O	1:A:1625:HIS:ND1	2.42	0.51
1:A:1693:VAL:HG21	1:A:1746:PHE:HE1	1.75	0.51
1:A:2429:ASP:OD1	1:A:2430:GLU:N	2.43	0.51
1:A:4085:LYS:O	1:A:4089:ILE:HG23	2.10	0.51
1:S:1096:VAL:O	1:S:1100:VAL:HG13	2.11	0.51
1:S:1306:ILE:HG13	1:S:1307:ILE:HG22	1.91	0.51
1:S:1589:ASN:HB3	1:S:1592:MET:SD	2.50	0.51
1:S:2122:LEU:HB2	1:S:2126:MET:HE2	1.93	0.51
1:S:3359:ILE:HD12	1:S:3362:LEU:HB2	1.91	0.51
1:S:4038:TRP:HE3	1:S:4043:LYS:HE3	1.75	0.51
1:A:542:ASP:OD1	1:A:543:SER:N	2.42	0.51
1:A:1062:ARG:HH22	1:A:3745:GLU:HB3	1.73	0.51
1:A:1923:PHE:HD1	1:A:1941:HIS:HB3	1.74	0.51
1:A:2090:ARG:NE	1:A:2092:GLU:OE2	2.37	0.51
1:A:2575:PRO:HA	1:A:2786:LYS:HA	1.93	0.51
2:B:165:ARG:NH2	4:D:188:PRO:HD3	2.25	0.51
3:C:510:GLN:HA	3:C:513:TRP:HD1	1.74	0.51
3:C:595:ALA:HA	3:C:598:PHE:CZ	2.45	0.51
3:C:687:THR:HG22	3:C:688:LYS:N	2.25	0.51
1:S:1200:GLY:O	1:S:1202:ARG:NH2	2.41	0.51
1:S:3088:LEU:HD23	1:S:3138:ILE:HD12	1.92	0.51
1:S:4087:HIS:C	1:S:4090:ARG:HD2	2.30	0.51
1:A:342:MET:N	1:A:342:MET:SD	2.82	0.51
1:A:456:VAL:HA	1:A:459:ARG:HD2	1.93	0.51
1:A:895:ALA:HB2	1:A:904:VAL:HG22	1.92	0.51
1:A:3327:ASN:HB2	1:A:3388:ALA:HB2	1.92	0.51
1:A:3924:HIS:N	1:A:3927:ASN:OD1	2.33	0.51
3:C:138:LEU:HD22	3:C:204:GLY:HA3	1.91	0.51
3:C:251:LEU:HB2	3:C:261:ILE:HD13	1.91	0.51
6:R:665:CYS:HB3	6:R:700:VAL:HA	1.91	0.51
1:S:640:GLU:HA	1:S:643:GLU:HG3	1.92	0.51
1:S:3114:TYR:HB2	1:S:3128:LYS:HG2	1.92	0.51
2:T:90:THR:HA	2:T:137:HIS:HA	1.92	0.51
1:A:183:GLU:HG2	1:A:184:VAL:H	1.75	0.51
1:A:526:ASP:OD1	1:A:526:ASP:N	2.42	0.51
1:A:865:GLN:OE1	1:A:3171:ALA:N	2.43	0.51
1:A:2866:ALA:HA	1:A:2869:LEU:HD12	1.93	0.51
1:A:3828:TYR:HE2	1:A:3879:PRO:HD3	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:706:ASN:O	6:I:710:LYS:NZ	2.40	0.51
1:S:425:ASP:N	1:S:425:ASP:OD1	2.42	0.51
1:S:702:SER:O	1:S:706:LEU:HG	2.11	0.51
1:S:3268:THR:OG1	1:S:3269:ARG:NH1	2.43	0.51
1:S:3496:ILE:HD12	1:S:3707:GLY:HA3	1.91	0.51
1:A:3364:GLY:HA3	1:A:3373:VAL:HA	1.92	0.51
1:A:3588:TRP:NE1	1:A:3609:MET:O	2.34	0.51
1:A:3626:GLY:HA2	1:A:3677:PRO:HD3	1.92	0.51
3:C:640:ARG:HH12	3:C:685:LEU:HB2	1.75	0.51
6:I:743:MET:HG3	6:I:754:PHE:HE2	1.74	0.51
3:L:23:SER:HB3	3:L:30:PRO:HD3	1.93	0.51
3:L:76:ASN:HB2	3:L:105:ALA:HB2	1.92	0.51
1:S:681:LYS:NZ	1:S:739:ASN:OD1	2.44	0.51
1:S:2341:LEU:HD13	1:S:2344:LEU:HD12	1.92	0.51
1:S:3100:LYS:HA	1:S:3103:ILE:HG22	1.93	0.51
1:S:3570:ASP:HB3	1:S:3685:PRO:HG3	1.92	0.51
1:A:414:LEU:HB2	1:A:460:ALA:HB1	1.90	0.51
1:A:730:LEU:HA	1:A:733:LEU:HD12	1.93	0.51
1:A:2295:GLN:NE2	1:A:2298:GLU:HG2	2.25	0.51
1:A:2466:SER:HG	1:A:2469:CYS:HG	1.52	0.51
3:L:197:ILE:HG13	3:L:202:LYS:HE2	1.93	0.51
1:S:360:SER:HB2	1:S:364:ARG:HH12	1.76	0.51
1:S:664:SER:HA	1:S:667:TYR:CD1	2.45	0.51
1:S:675:ARG:NH1	1:S:679:LYS:HB2	2.25	0.51
1:S:801:LYS:HZ3	1:S:3125:ARG:HH12	1.59	0.51
1:S:978:GLN:HA	1:S:981:ARG:HH21	1.76	0.51
1:S:2321:GLU:HA	1:S:2366:LYS:HD2	1.92	0.51
2:T:143:LEU:HA	2:T:146:VAL:HG22	1.92	0.51
1:A:528:VAL:HB	1:A:633:ILE:HD11	1.92	0.51
1:A:2197:THR:H	1:A:2722:ARG:NH2	2.09	0.51
1:A:2753:ARG:O	1:A:2756:GLU:HG3	2.10	0.51
1:A:2823:PHE:HD1	1:A:2824:LYS:HE3	1.76	0.51
1:A:3046:ARG:NE	1:A:3046:ARG:HA	2.26	0.51
6:R:740:PRO:HG2	6:R:762:GLY:HA2	1.92	0.51
1:S:385:TYR:HA	1:S:388:LEU:HD12	1.93	0.51
1:S:664:SER:HA	1:S:667:TYR:HD1	1.75	0.51
1:S:1837:ARG:NH2	1:S:1884:LEU:HB2	2.25	0.51
1:S:2430:GLU:HA	1:S:2433:LYS:HE2	1.92	0.51
1:S:2522:ARG:NH2	1:S:2564:GLU:HB2	2.26	0.51
1:A:65:LEU:O	1:A:69:VAL:HG22	2.11	0.51
1:A:1296:PHE:O	1:A:1300:SER:N	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1504:ASP:O	1:A:1508:LYS:N	2.39	0.51
1:A:2257:PHE:HA	1:A:2260:PHE:CE2	2.45	0.51
1:A:2791:ILE:HA	1:A:2794:LEU:HD12	1.92	0.51
1:A:2837:LEU:O	1:A:2841:ASN:ND2	2.44	0.51
1:A:3425:ARG:HH11	1:A:3996:GLY:HA3	1.75	0.51
1:A:3493:TRP:HZ3	1:A:3521:ILE:HA	1.76	0.51
1:S:631:ARG:NH1	1:S:632:GLU:HB3	2.26	0.51
1:S:881:LYS:HZ1	1:S:3934:THR:HG1	1.54	0.51
1:S:3324:ARG:O	1:S:3328:ILE:HG12	2.10	0.51
1:S:3842:TRP:HB3	1:S:3855:TYR:CD1	2.45	0.51
1:S:3874:ARG:NH2	1:S:4117:LEU:O	2.44	0.51
2:T:91:GLU:HG2	2:T:137:HIS:H	1.75	0.51
1:A:2382:VAL:O	1:A:2386:LEU:HG	2.11	0.51
3:C:59:PHE:HD2	3:C:105:ALA:HB3	1.75	0.51
5:G:158:VAL:HG21	5:H:155:TRP:NE1	2.26	0.51
1:S:994:TRP:CG	1:S:2581:LEU:HD21	2.46	0.51
1:S:1124:ILE:HG13	1:S:1125:GLN:N	2.26	0.51
1:S:1297:PHE:HA	1:S:1301:ILE:HG12	1.93	0.51
1:S:1341:ILE:HD12	1:S:1368:LEU:HD21	1.93	0.51
1:S:2102:LYS:NZ	1:S:2152:ASN:O	2.44	0.51
1:S:2435:CYS:HA	1:S:2438:ILE:HD12	1.93	0.51
1:S:2572:TYR:HE1	1:S:2791:ILE:HD11	1.75	0.51
1:S:3454:LEU:HD22	1:S:3461:ALA:HB1	1.92	0.51
1:S:3789:ARG:HE	1:S:3938:ILE:HD11	1.76	0.51
1:A:410:MET:HA	1:A:413:PHE:HD2	1.75	0.51
1:A:1294:VAL:O	1:A:1367:HIS:NE2	2.41	0.51
1:A:1558:TYR:O	1:A:1562:LEU:HG	2.10	0.51
1:A:1606:ARG:HA	1:A:1608:ARG:HH21	1.76	0.51
1:A:2572:TYR:HE1	1:A:2791:ILE:HD11	1.75	0.51
1:A:3144:PHE:HA	1:A:3147:LYS:HD3	1.93	0.51
1:A:4073:ALA:HB1	1:A:4076:ASP:HB3	1.92	0.51
2:B:203:MET:HE3	2:B:237:SER:HB2	1.92	0.51
2:B:480:ASN:HB2	3:C:426:PHE:CE2	2.45	0.51
3:C:155:LYS:HE2	3:C:215:LEU:HA	1.92	0.51
3:C:265:LYS:HE3	3:C:268:LEU:HD11	1.93	0.51
3:C:732:ILE:H	1:S:1913:LYS:HD3	1.75	0.51
5:G:151:LEU:HD12	5:H:148:ASN:OD1	2.11	0.51
6:I:658:ILE:HD11	6:I:734:SER:HA	1.93	0.51
3:L:412:ILE:HG23	3:L:417:GLU:HG2	1.93	0.51
3:L:440:ASN:O	3:L:442:LYS:NZ	2.33	0.51
1:S:73:LEU:HB3	1:S:78:PHE:CD2	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:73:LEU:N	1:S:82:ARG:HH22	2.01	0.51
1:S:129:ASP:HA	1:S:132:ILE:HG12	1.92	0.51
1:S:3034:PRO:O	1:S:3038:GLU:N	2.41	0.51
1:S:3171:ALA:HA	1:S:3179:TRP:HZ2	1.76	0.51
1:A:923:ASP:O	1:A:926:THR:N	2.42	0.50
1:A:2440:TYR:HA	1:A:2443:MET:HE1	1.93	0.50
1:A:3880:ALA:O	1:A:3885:ARG:NH2	2.40	0.50
5:P:7:ARG:H	5:P:76:SER:HB2	1.76	0.50
6:R:725:TRP:NE1	6:R:736:VAL:O	2.42	0.50
1:S:356:ASN:HB3	1:S:358:GLU:HG2	1.93	0.50
1:S:2414:GLN:OE1	1:S:2414:GLN:N	2.42	0.50
1:S:2508:GLN:NE2	1:S:2549:LYS:HE2	2.26	0.50
1:S:2737:GLU:O	1:S:2741:LEU:N	2.37	0.50
2:T:106:GLN:HB3	2:T:115:ARG:HH21	1.76	0.50
1:A:128:LEU:HA	1:A:173:LYS:NZ	2.25	0.50
1:A:2773:ARG:HH22	1:A:2785:ILE:HG21	1.75	0.50
1:A:3046:ARG:NH1	1:A:3085:GLU:OE2	2.43	0.50
1:A:3898:LEU:HD23	1:A:3901:ARG:HH12	1.76	0.50
1:A:4113:ASP:O	1:A:4117:LEU:HG	2.11	0.50
3:C:205:LEU:HG	3:C:209:LYS:HD2	1.92	0.50
1:S:923:ASP:O	1:S:926:THR:N	2.44	0.50
1:S:2921:LEU:O	1:S:2925:GLU:HG3	2.10	0.50
1:S:3913:ILE:HD13	1:S:3987:ALA:HB3	1.92	0.50
1:A:1916:ILE:HG13	1:A:1917:LYS:N	2.27	0.50
1:A:2893:LEU:HB3	1:A:2926:LEU:HD13	1.92	0.50
1:A:3700:GLU:OE2	1:A:3716:HIS:ND1	2.45	0.50
5:G:21:GLN:HG2	5:G:33:VAL:HG13	1.92	0.50
5:G:158:VAL:HG21	5:H:155:TRP:HE1	1.77	0.50
1:S:667:TYR:HA	1:S:732:PHE:CE2	2.46	0.50
1:S:726:LEU:HD12	1:S:729:CYS:HB2	1.93	0.50
1:S:1474:ASP:N	1:S:1474:ASP:OD1	2.44	0.50
1:S:1750:LEU:HD21	1:S:1759:LEU:HA	1.93	0.50
1:S:1827:LEU:O	1:S:1831:CYS:N	2.45	0.50
1:S:2133:LEU:HD22	1:S:2146:LEU:HB3	1.93	0.50
1:S:3239:LYS:HB3	1:S:3262:LEU:HD11	1.93	0.50
1:S:3420:CYS:HB2	1:S:3446:VAL:HG11	1.93	0.50
1:A:1171:TRP:O	1:A:1175:HIS:ND1	2.44	0.50
1:A:1675:TYR:O	1:A:1678:LEU:HB2	2.12	0.50
1:A:2090:ARG:HH21	1:A:2092:GLU:HG3	1.77	0.50
1:A:2271:SER:O	1:A:2274:ILE:HB	2.11	0.50
1:A:3912:CYS:HA	1:A:3915:HIS:NE2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:197:ILE:O	3:C:202:LYS:NZ	2.44	0.50
5:G:148:ASN:ND2	5:H:148:ASN:HB2	2.26	0.50
3:L:656:ASN:HB3	3:L:688:LYS:HB2	1.94	0.50
5:P:176:LEU:HD23	6:R:805:TRP:CH2	2.46	0.50
5:Q:177:TYR:O	5:Q:181:ILE:HD12	2.11	0.50
6:R:746:MET:HG2	6:R:751:LYS:HG3	1.94	0.50
1:S:1326:GLU:HB3	1:S:1329:ARG:NE	2.26	0.50
1:S:2440:TYR:HA	1:S:2443:MET:CE	2.42	0.50
2:T:59:PRO:HB3	2:T:205:LEU:HD11	1.93	0.50
3:C:405:VAL:O	3:C:423:GLN:NE2	2.44	0.50
6:I:722:LYS:HB2	6:I:742:PHE:HB2	1.93	0.50
1:S:432:THR:OG1	1:S:433:PRO:HD3	2.11	0.50
1:S:2209:GLU:HB2	1:S:2248:CYS:HB2	1.94	0.50
1:S:3940:ILE:HG22	1:S:3941:ASP:H	1.76	0.50
2:T:74:LYS:HE2	2:T:81:ASP:HB2	1.94	0.50
2:T:282:LYS:HD2	2:T:283:PRO:HD2	1.91	0.50
1:A:192:ASN:O	1:A:196:LEU:HG	2.12	0.50
1:A:409:GLN:HG2	1:A:413:PHE:CE2	2.46	0.50
1:A:1115:HIS:HB3	1:A:1180:GLN:HG3	1.93	0.50
2:B:295:PRO:O	3:C:298:ASN:ND2	2.45	0.50
3:C:654:ARG:HA	3:C:657:ASN:HD21	1.76	0.50
3:L:186:GLY:N	3:L:228:SER:OG	2.43	0.50
3:L:353:ARG:HA	3:L:356:PHE:CD2	2.46	0.50
4:M:195:PRO:HG3	2:T:244:ARG:HD3	1.94	0.50
1:S:110:THR:O	1:S:114:VAL:N	2.36	0.50
1:S:897:PRO:HA	1:S:902:LYS:HE3	1.93	0.50
1:S:2254:ARG:NE	1:S:2294:ILE:HG13	2.21	0.50
1:A:1389:VAL:HG22	1:A:1390:GLN:H	1.77	0.50
1:A:2737:GLU:O	1:A:2741:LEU:N	2.41	0.50
3:C:496:HIS:CG	3:C:506:PRO:HD3	2.47	0.50
6:I:666:VAL:HG11	6:I:679:GLU:HG2	1.94	0.50
1:S:542:ASP:OD1	1:S:543:SER:N	2.42	0.50
1:S:573:LEU:HD21	1:S:649:PHE:HD1	1.75	0.50
1:S:861:SER:N	1:S:3136:THR:HG21	2.26	0.50
1:S:2207:LYS:HA	1:S:2210:VAL:HG12	1.94	0.50
1:S:2331:MET:HE1	1:S:2337:LEU:H	1.77	0.50
1:S:3258:LEU:O	1:S:3261:GLU:HG3	2.12	0.50
1:A:125:ILE:H	1:A:125:ILE:HD12	1.77	0.50
1:A:887:ASP:HB2	1:A:961:LEU:HD21	1.92	0.50
1:A:1457:GLN:HG3	1:A:1460:ARG:HH21	1.77	0.50
1:A:2269:ASP:O	1:A:2272:VAL:HG22	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2430:GLU:N	1:A:2430:GLU:OE1	2.45	0.50
1:A:2544:SER:HA	1:A:2842:ARG:HH12	1.77	0.50
1:A:3506:LEU:HG	1:A:3515:GLN:HG3	1.93	0.50
3:C:44:ARG:HH12	3:C:488:GLN:HG3	1.77	0.50
3:C:88:PHE:HA	3:C:91:LEU:HD12	1.94	0.50
3:L:599:ARG:O	3:L:603:LYS:NZ	2.31	0.50
3:L:725:VAL:O	3:L:729:LEU:N	2.43	0.50
6:R:722:LYS:HB2	6:R:742:PHE:HB2	1.94	0.50
1:S:360:SER:HB2	1:S:364:ARG:NH1	2.26	0.50
1:S:571:SER:O	1:S:574:LYS:HG2	2.12	0.50
1:S:1055:ASN:OD1	1:S:1058:SER:N	2.39	0.50
1:S:2196:TRP:HB2	1:S:2199:LEU:HD13	1.94	0.50
1:S:2257:PHE:HA	1:S:2260:PHE:CZ	2.46	0.50
1:S:3179:TRP:O	1:S:3183:ILE:HG12	2.11	0.50
1:S:3467:ARG:HH22	1:S:3474:ARG:HH11	1.59	0.50
1:A:741:ILE:HA	1:A:748:TYR:HE2	1.77	0.50
1:A:1066:LEU:HA	1:A:1069:HIS:CD2	2.47	0.50
1:A:1864:ASP:OD1	1:A:1864:ASP:N	2.45	0.50
1:A:1948:ALA:HA	1:A:1951:VAL:HG22	1.93	0.50
3:L:434:MET:O	2:T:253:LYS:NZ	2.44	0.50
1:S:541:MET:SD	1:S:560:LEU:HB2	2.52	0.50
1:S:985:GLU:HG2	1:S:986:PRO:HD3	1.94	0.50
1:S:1873:TYR:O	1:S:1877:LEU:HD23	2.12	0.50
2:T:341:ASP:OD2	2:T:399:ARG:NH1	2.45	0.50
2:T:422:ASP:N	2:T:422:ASP:OD1	2.43	0.50
1:A:789:TYR:HD1	1:A:792:ILE:HD12	1.76	0.49
1:A:1413:ASP:O	1:A:1416:GLU:HB3	2.12	0.49
1:A:1876:ILE:HG13	1:A:1877:LEU:HD22	1.94	0.49
1:A:2094:MET:HB2	1:A:2097:LEU:HD12	1.93	0.49
2:B:399:ARG:NH2	3:C:516:LEU:O	2.45	0.49
5:Q:179:ARG:NH2	6:R:782:LYS:O	2.32	0.49
1:S:1868:THR:O	1:S:1871:MET:HB2	2.12	0.49
1:S:2357:GLU:HA	1:S:2360:PHE:HB3	1.94	0.49
1:A:672:ILE:O	1:A:676:ASN:ND2	2.44	0.49
1:A:1086:TYR:CE1	1:A:1133:HIS:HB3	2.47	0.49
1:A:1407:LYS:HG3	1:A:1412:LYS:HE3	1.94	0.49
1:A:2356:MET:HE1	1:A:2359:LYS:H	1.77	0.49
1:A:2363:CYS:HA	1:A:2366:LYS:HE2	1.94	0.49
1:A:2988:GLU:HA	1:A:2991:LYS:HE2	1.93	0.49
1:A:3160:LEU:O	1:A:3167:ARG:NH2	2.44	0.49
1:A:3178:ILE:O	1:A:3182:ILE:HG12	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:35:ARG:O	2:B:162:SER:OG	2.29	0.49
3:C:605:LYS:HB2	3:C:609:PHE:HE2	1.76	0.49
3:L:656:ASN:CG	3:L:689:GLU:H	2.15	0.49
3:L:677:ILE:HA	3:L:680:GLN:HG2	1.94	0.49
1:S:479:ILE:HA	1:S:482:VAL:HG22	1.94	0.49
1:S:939:MET:HE2	1:S:939:MET:HA	1.95	0.49
1:S:1367:HIS:HB2	1:S:1370:ARG:HH22	1.76	0.49
1:S:1949:ILE:HG12	1:S:2100:LEU:HD22	1.94	0.49
1:S:2168:LEU:HA	1:S:2171:LEU:HD12	1.93	0.49
1:S:2439:ILE:O	1:S:2443:MET:HE3	2.12	0.49
1:S:2822:LYS:HZ3	1:S:2823:PHE:HE2	1.60	0.49
1:S:3126:LEU:O	1:S:3130:GLN:NE2	2.45	0.49
1:S:3228:SER:HA	1:S:3231:ILE:HG12	1.94	0.49
1:S:3998:LEU:O	1:S:4002:MET:HG2	2.13	0.49
1:A:418:ALA:HB2	1:A:464:VAL:HG12	1.93	0.49
1:A:989:MET:SD	1:A:990:GLN:HG3	2.52	0.49
1:A:1560:TYR:O	1:A:1564:SER:OG	2.20	0.49
1:A:2422:GLN:HA	1:A:2425:ARG:HG3	1.94	0.49
2:B:102:ILE:HG21	2:B:149:VAL:HG21	1.92	0.49
5:H:143:HIS:O	5:H:146:LYS:HG3	2.12	0.49
6:R:817:THR:H	6:R:851:LYS:HB2	1.78	0.49
1:S:296:VAL:HA	1:S:299:LYS:HG2	1.94	0.49
1:S:1740:VAL:HA	1:S:1743:MET:HG2	1.93	0.49
1:S:1844:VAL:HG23	1:S:1845:VAL:H	1.76	0.49
1:S:2724:ASP:OD1	1:S:2724:ASP:N	2.43	0.49
1:S:3354:ASP:OD1	1:S:3354:ASP:N	2.46	0.49
2:T:365:SER:HB2	2:T:435:VAL:HG12	1.94	0.49
2:T:531:PRO:HD2	2:T:534:TYR:HD2	1.78	0.49
1:A:345:PHE:HB3	1:A:366:TYR:CE1	2.48	0.49
1:A:762:TYR:CD2	1:A:764:PRO:HD2	2.47	0.49
1:A:2455:LEU:HD12	1:A:2458:VAL:HB	1.94	0.49
1:A:3962:ARG:HD2	1:A:4124:TRP:CZ2	2.47	0.49
1:S:2376:ASP:HA	1:S:2379:MET:HG2	1.94	0.49
1:S:2587:GLN:O	1:S:2777:HIS:N	2.46	0.49
1:S:3499:ILE:HA	1:S:3502:MET:SD	2.52	0.49
1:S:3842:TRP:HB3	1:S:3855:TYR:HD1	1.78	0.49
1:A:163:LYS:NZ	2:B:311:LEU:O	2.39	0.49
1:A:371:GLY:HA2	1:A:423:TYR:CE2	2.47	0.49
1:A:1256:TRP:CE2	1:A:1260:LEU:HD11	2.47	0.49
1:A:2402:LEU:HD12	1:A:2441:LYS:HD3	1.95	0.49
2:B:388:LYS:O	2:B:392:LYS:HG2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:68:LEU:HD13	3:L:113:VAL:HG22	1.94	0.49
3:L:594:PRO:HG2	3:L:619:HIS:HD2	1.78	0.49
1:S:80:GLU:O	1:S:83:GLU:HG3	2.12	0.49
1:S:540:MET:O	1:S:544:ILE:HG12	2.11	0.49
1:S:1447:ARG:NH1	1:S:1448:LEU:HG	2.27	0.49
1:S:1626:TRP:CZ2	1:S:1674:THR:HG21	2.47	0.49
1:S:1712:ARG:HA	1:S:1715:GLU:OE1	2.13	0.49
1:S:1754:GLN:HE22	1:S:1788:ARG:CZ	2.26	0.49
1:S:3245:SER:O	1:S:3249:GLN:NE2	2.45	0.49
1:A:1851:LEU:HB3	1:A:1852:LYS:HZ2	1.78	0.49
1:A:2216:LEU:HD11	1:A:2249:LEU:HD22	1.95	0.49
1:A:3267:LYS:HA	1:A:3273:LEU:HD22	1.95	0.49
4:D:86:ALA:HB3	4:D:97:THR:HB	1.94	0.49
4:D:184:SER:OG	4:D:187:ASN:O	2.31	0.49
5:Q:36:LEU:HD11	5:Q:95:PHE:HB2	1.94	0.49
6:R:817:THR:N	6:R:851:LYS:HB2	2.27	0.49
6:R:864:ILE:HA	6:R:889:LEU:HD11	1.94	0.49
1:S:740:ILE:HG13	1:S:741:ILE:HG23	1.94	0.49
1:A:460:ALA:O	1:A:464:VAL:HG13	2.12	0.49
1:A:752:LEU:O	1:A:755:ALA:HB3	2.13	0.49
1:A:917:LEU:O	1:A:927:LYS:NZ	2.38	0.49
1:A:1016:GLY:O	1:A:1026:ARG:HG2	2.12	0.49
1:A:2379:MET:HA	1:A:2382:VAL:HG12	1.94	0.49
1:A:3496:ILE:O	1:A:3499:ILE:HG12	2.12	0.49
3:L:344:GLY:HA3	2:T:471:PHE:CE1	2.47	0.49
3:L:492:GLN:HE21	3:L:506:PRO:HB2	1.77	0.49
1:S:297:LEU:HD13	1:S:316:LEU:HA	1.95	0.49
1:S:2512:ASP:HB2	1:S:2518:GLN:HG2	1.93	0.49
1:A:12:LEU:HA	1:A:41:GLU:OE2	2.12	0.49
1:A:785:MET:HA	1:A:788:TYR:CZ	2.48	0.49
1:A:3136:THR:HA	1:A:3139:GLN:HG3	1.94	0.49
1:A:4094:PRO:HB2	1:A:4098:LEU:HD13	1.94	0.49
3:C:645:GLU:HA	3:C:648:LYS:HE2	1.93	0.49
3:L:35:LYS:HA	3:L:38:ILE:HG12	1.94	0.49
3:L:322:PRO:HB3	2:T:288:LEU:HD11	1.94	0.49
1:S:71:LYS:HB3	1:S:82:ARG:NH2	2.23	0.49
1:S:392:CYS:HA	1:S:395:MET:HB3	1.94	0.49
1:S:1419:LEU:HD21	1:S:1467:ILE:HB	1.94	0.49
1:S:2257:PHE:HA	1:S:2260:PHE:CE2	2.47	0.49
1:A:3064:PHE:HA	1:A:3067:LYS:HD2	1.94	0.49
1:A:3419:PHE:O	1:A:3423:GLN:HG2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3468:LEU:O	1:A:3472:ILE:HG12	2.12	0.49
1:A:3871:PHE:HB2	1:A:4117:LEU:HA	1.94	0.49
3:L:497:ARG:HH11	3:L:501:PRO:HA	1.77	0.49
1:S:938:VAL:HA	1:S:941:MET:HG3	1.95	0.49
1:S:1034:ARG:HB2	1:S:1085:ILE:HG22	1.95	0.49
1:S:1558:TYR:O	1:S:1562:LEU:HG	2.12	0.49
1:S:3314:SER:OG	1:S:3318:LYS:HG3	2.13	0.49
1:S:3964:THR:HG23	1:S:3966:GLN:H	1.77	0.49
1:A:19:LEU:HD22	1:A:34:LEU:HA	1.94	0.49
1:A:25:CYS:SG	1:A:26:GLY:N	2.85	0.49
1:A:67:VAL:O	1:A:68:PHE:C	2.52	0.49
1:A:72:SER:HA	1:A:119:ARG:HH12	1.78	0.49
1:A:1379:PRO:O	1:A:1382:ILE:HG12	2.13	0.49
1:A:1614:GLN:O	1:A:1618:LEU:HD23	2.13	0.49
1:A:2212:ALA:O	1:A:2216:LEU:HG	2.12	0.49
1:A:2251:ILE:HD11	1:A:2285:LEU:HD13	1.93	0.49
1:A:2752:LYS:HD3	1:A:2755:LYS:HE3	1.95	0.49
1:A:2856:SER:HB3	1:A:2885:GLN:HE21	1.78	0.49
1:A:2916:LEU:HD13	1:A:2946:GLU:OE1	2.13	0.49
2:B:250:GLU:O	2:B:250:GLU:HG2	2.13	0.49
2:B:411:VAL:HG12	2:B:436:PHE:HA	1.95	0.49
3:C:237:PHE:HA	3:C:240:ILE:HG12	1.95	0.49
5:G:7:ARG:H	5:G:76:SER:HB2	1.77	0.49
4:M:20:PHE:CD1	4:M:43:ASP:HB3	2.48	0.49
5:P:20:LEU:HD12	5:P:22:VAL:HG13	1.95	0.49
1:S:1935:GLU:O	1:S:1939:LEU:HG	2.13	0.49
1:S:3097:ASP:OD1	1:S:3098:ARG:N	2.39	0.49
1:S:4113:ASP:O	1:S:4117:LEU:HG	2.13	0.49
1:A:2328:ARG:HB2	1:A:2370:SER:O	2.13	0.48
1:A:2443:MET:SD	1:A:2444:PRO:HD3	2.53	0.48
1:A:3478:GLU:O	1:A:3482:LEU:HG	2.12	0.48
3:C:270:GLU:HG3	3:C:487:PHE:HE2	1.78	0.48
3:L:595:ALA:HA	3:L:598:PHE:CE2	2.48	0.48
1:S:114:VAL:O	1:S:119:ARG:HB2	2.13	0.48
1:S:149:ILE:O	1:S:153:PHE:N	2.38	0.48
1:S:172:GLU:HG3	1:S:220:LEU:HG	1.95	0.48
1:S:738:HIS:O	1:S:742:GLU:HG3	2.13	0.48
1:S:1779:GLN:O	1:S:1783:ARG:HG2	2.13	0.48
1:S:3443:PRO:HA	1:S:3446:VAL:HG22	1.95	0.48
1:A:1348:LEU:O	1:A:1352:SER:OG	2.28	0.48
1:A:1725:GLN:NE2	1:A:1769:GLU:HB2	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2164:TRP:O	1:A:2167:PRO:HD2	2.13	0.48
1:A:2180:GLU:HG3	1:A:2184:TYR:HD2	1.78	0.48
1:A:3496:ILE:HD12	1:A:3707:GLY:N	2.28	0.48
2:B:484:GLN:O	2:B:488:ARG:HD3	2.13	0.48
3:C:324:SER:OG	3:C:325:LYS:N	2.45	0.48
4:M:40:TYR:HD2	4:M:47:LEU:HD11	1.77	0.48
1:S:1015:ASP:OD1	1:S:1016:GLY:N	2.44	0.48
1:S:1630:ASP:HA	1:S:1633:TRP:CZ2	2.48	0.48
1:S:2151:ILE:HG12	1:S:2192:THR:HG21	1.95	0.48
1:S:2233:HIS:CE1	1:S:2237:ILE:HD11	2.48	0.48
1:S:2382:VAL:O	1:S:2386:LEU:HG	2.13	0.48
1:S:2497:GLU:HA	1:S:2500:LYS:HD2	1.94	0.48
1:S:2792:THR:OG1	1:S:2793:PRO:HD3	2.13	0.48
1:S:3771:MET:O	1:S:3775:LEU:HG	2.12	0.48
2:T:64:ILE:O	2:T:68:GLN:HG2	2.13	0.48
1:A:924:ARG:HH21	1:A:2766:ASP:HB3	1.78	0.48
1:A:2981:TRP:HD1	1:A:2984:GLY:HA2	1.77	0.48
1:A:3158:LYS:HG3	1:A:3159:ARG:HD3	1.94	0.48
2:B:460:GLY:HA2	2:B:463:LYS:HD2	1.95	0.48
3:C:674:PHE:HB2	3:C:675:TRP:CE3	2.48	0.48
3:L:363:LYS:NZ	3:L:416:TYR:OH	2.26	0.48
1:S:782:ARG:HD2	1:S:786:GLN:HB2	1.95	0.48
1:S:1038:LYS:HG2	1:S:1042:LYS:HD3	1.95	0.48
1:A:1513:GLY:HA2	1:A:1516:GLU:OE2	2.14	0.48
1:A:2283:ASN:HB3	1:A:2285:LEU:HG	1.96	0.48
1:A:2573:PRO:O	1:A:2786:LYS:NZ	2.30	0.48
1:A:2987:THR:HG23	1:A:2990:GLU:H	1.77	0.48
2:B:203:MET:CE	2:B:239:LEU:HG	2.43	0.48
2:B:434:LEU:HG	2:B:436:PHE:HE1	1.79	0.48
5:H:22:VAL:HG13	5:H:35:THR:H	1.79	0.48
6:R:813:PHE:HA	6:R:850:ALA:HB3	1.94	0.48
1:S:801:LYS:HZ3	1:S:3125:ARG:HH22	1.59	0.48
1:S:848:LEU:O	1:S:852:ARG:HG3	2.14	0.48
1:S:914:VAL:HA	1:S:917:LEU:HD12	1.94	0.48
1:S:2256:ILE:H	1:S:2256:ILE:HD12	1.78	0.48
2:T:168:LEU:HD23	2:T:168:LEU:H	1.77	0.48
1:A:614:PRO:HB2	1:A:617:PRO:HG3	1.95	0.48
1:A:898:PHE:HB2	1:A:901:MET:O	2.12	0.48
1:A:1878:ASP:OD1	1:A:1879:VAL:N	2.47	0.48
1:A:2258:GLU:HA	1:A:2261:SER:OG	2.13	0.48
1:A:3048:LYS:O	1:A:3052:LEU:HD23	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:41:LEU:HB3	2:B:88:TYR:CE1	2.48	0.48
3:L:496:HIS:CD2	3:L:506:PRO:HD3	2.48	0.48
3:L:528:ILE:O	3:L:531:SER:OG	2.25	0.48
1:S:19:LEU:HD22	1:S:34:LEU:HA	1.94	0.48
1:S:358:GLU:HG3	1:S:359:LEU:HD12	1.96	0.48
1:S:898:PHE:O	1:S:902:LYS:NZ	2.36	0.48
1:S:960:GLN:O	1:S:964:ARG:HG2	2.13	0.48
1:S:990:GLN:HG3	1:S:2779:ASP:C	2.34	0.48
1:S:1415:LEU:HA	1:S:1418:HIS:HB2	1.95	0.48
1:S:2257:PHE:HB2	1:S:2299:TYR:HE1	1.78	0.48
1:S:2378:PHE:O	1:S:2382:VAL:N	2.31	0.48
1:S:2531:LEU:HB3	1:S:2538:ARG:NE	2.29	0.48
1:S:3728:VAL:HG22	1:S:3736:LYS:HG3	1.95	0.48
2:T:288:LEU:HD13	2:T:293:ASN:HA	1.94	0.48
2:T:299:LYS:NZ	2:T:301:ARG:HD2	2.29	0.48
1:A:15:LEU:O	1:A:19:LEU:HG	2.14	0.48
1:A:1340:ARG:O	1:A:1343:GLU:HG2	2.14	0.48
1:A:1455:CYS:HA	1:A:1458:LEU:HD12	1.95	0.48
1:A:1731:PRO:HA	1:A:1736:PHE:CD2	2.49	0.48
1:A:2371:PHE:CD2	1:A:2374:LEU:HD23	2.48	0.48
1:A:3515:GLN:HA	1:A:3518:VAL:HG12	1.95	0.48
2:B:537:GLU:OE1	3:C:250:ARG:NH1	2.47	0.48
3:C:411:HIS:N	3:C:418:CYS:O	2.43	0.48
3:L:493:CYS:HB2	2:T:337:LEU:HD21	1.96	0.48
5:Q:174:THR:HG23	6:R:792:MET:HG2	1.95	0.48
1:S:865:GLN:HA	1:S:868:LYS:HZ3	1.78	0.48
1:S:2167:PRO:O	1:S:2170:GLN:HG3	2.13	0.48
1:S:2187:VAL:HG23	1:S:2728:LEU:HD21	1.96	0.48
1:S:2368:THR:HG21	1:S:2400:VAL:HA	1.95	0.48
1:A:343:GLU:HG2	1:A:344:GLN:N	2.28	0.48
1:A:2187:VAL:HA	1:A:2190:VAL:HG12	1.96	0.48
1:A:2439:ILE:HA	1:A:2442:MET:HG3	1.96	0.48
1:A:2452:ARG:NH1	1:A:2497:GLU:OE1	2.45	0.48
1:A:3126:LEU:O	1:A:3130:GLN:HG2	2.13	0.48
1:A:3172:LYS:NZ	1:A:3248:LYS:O	2.47	0.48
1:A:3181:ASP:O	1:A:3185:ASN:ND2	2.47	0.48
1:A:3263:HIS:HB2	1:A:3276:TRP:CE2	2.48	0.48
3:C:24:ILE:HB	3:C:27:ILE:HB	1.96	0.48
3:C:323:PHE:CE2	3:C:328:GLU:HB3	2.48	0.48
1:S:67:VAL:CB	1:S:71:LYS:HD3	2.41	0.48
1:S:1576:ASP:HA	1:S:1579:VAL:HB	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:1718:ILE:HA	1:S:1721:HIS:ND1	2.28	0.48
1:S:1747:LEU:HD21	1:S:1778:PHE:HD1	1.78	0.48
1:S:1778:PHE:CE2	1:S:1782:PHE:HE2	2.32	0.48
1:S:3736:LYS:HB2	1:S:3752:VAL:HG12	1.94	0.48
2:T:59:PRO:HA	2:T:62:MET:HG3	1.95	0.48
2:T:98:ASN:O	2:T:100:LYS:NZ	2.47	0.48
1:A:655:LEU:O	1:A:659:ARG:HG2	2.14	0.48
1:A:1755:SER:HB3	1:A:1758:LEU:HD12	1.96	0.48
1:A:2500:LYS:HA	1:A:2503:LYS:HZ2	1.79	0.48
1:A:3679:ASN:HA	1:A:3726:VAL:HG22	1.96	0.48
2:B:106:GLN:HB3	2:B:115:ARG:HH21	1.79	0.48
3:C:11:VAL:HG23	3:C:55:ALA:HB3	1.95	0.48
3:C:44:ARG:NH1	3:C:488:GLN:HG3	2.29	0.48
3:C:148:ASP:N	3:C:148:ASP:OD1	2.46	0.48
5:H:194:LEU:O	5:H:197:LYS:HG3	2.14	0.48
3:L:593:ASN:HB2	1:S:1723:PRO:HG3	1.95	0.48
1:S:910:PHE:CE1	1:S:2807:GLN:HG3	2.49	0.48
1:A:899:ARG:HH12	1:A:2566:THR:HA	1.77	0.48
1:A:1783:ARG:HE	1:A:1830:HIS:CG	2.32	0.48
1:A:3389:VAL:HG11	1:A:3449:LYS:HD3	1.96	0.48
1:A:3588:TRP:CE2	1:A:3609:MET:HE2	2.49	0.48
3:C:64:THR:OG1	3:C:76:ASN:N	2.46	0.48
3:C:198:THR:HG22	3:C:200:GLN:H	1.79	0.48
3:C:431:ARG:HH21	3:C:433:TYR:HE2	1.62	0.48
3:C:528:ILE:O	3:C:532:LYS:HG3	2.14	0.48
3:L:360:GLN:HE22	3:L:362:LEU:HG	1.79	0.48
3:L:613:SER:O	3:L:616:LEU:HG	2.13	0.48
5:P:22:VAL:HA	5:P:32:PHE:HB2	1.96	0.48
1:S:22:ALA:HA	1:S:24:ARG:HH11	1.79	0.48
1:S:246:ARG:HA	1:S:249:PHE:HD2	1.78	0.48
1:S:847:SER:N	1:S:850:GLU:OE2	2.47	0.48
1:S:978:GLN:NE2	1:S:2597:PHE:HA	2.29	0.48
1:S:1102:GLU:HA	1:S:1154:PRO:HB3	1.95	0.48
1:S:1194:PHE:HA	1:S:1197:LEU:HD23	1.94	0.48
1:S:1416:GLU:O	1:S:1419:LEU:HB3	2.13	0.48
1:S:1878:ASP:OD1	1:S:1879:VAL:N	2.47	0.48
1:S:3831:ASP:HB3	1:S:3832:PRO:HD3	1.96	0.48
2:T:371:GLU:OE2	2:T:373:SER:OG	2.31	0.48
1:A:35:ILE:HD12	1:A:80:GLU:HB3	1.95	0.48
1:A:245:SER:O	1:A:249:PHE:HD1	1.96	0.48
1:A:1231:GLN:O	1:A:1235:ILE:N	2.37	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1794:GLN:O	1:A:1798:LEU:HG	2.13	0.48
1:A:1935:GLU:O	1:A:1939:LEU:HG	2.14	0.48
1:A:3629:ARG:O	1:A:3633:ILE:HG12	2.14	0.48
2:B:343:PRO:HA	2:B:401:THR:HB	1.96	0.48
3:C:61:THR:N	3:C:76:ASN:O	2.40	0.48
3:C:189:GLY:HA2	3:C:519:PRO:HB3	1.96	0.48
3:C:347:LYS:HG3	3:C:349:SER:H	1.78	0.48
5:Q:175:ASP:HB3	5:Q:179:ARG:CZ	2.43	0.48
1:S:627:VAL:HG22	1:S:669:LEU:HD23	1.96	0.48
1:S:1000:LYS:HA	1:S:1004:GLN:NE2	2.29	0.48
1:S:1210:ASP:HA	1:S:1213:LYS:HD2	1.96	0.48
1:S:2166:SER:OG	1:S:2167:PRO:HD3	2.13	0.48
1:S:2245:TRP:HE3	1:S:2249:LEU:HD21	1.79	0.48
1:S:2346:ALA:HA	1:S:2349:LEU:HD12	1.96	0.48
1:S:2938:VAL:O	1:S:2942:ILE:HG12	2.14	0.48
2:T:95:ASN:ND2	2:T:99:PHE:H	2.10	0.48
1:A:2281:MET:HE1	1:A:2287:PRO:HG3	1.96	0.47
1:A:2402:LEU:HD13	1:A:2438:ILE:HG13	1.95	0.47
1:A:2799:GLN:OE1	1:A:2799:GLN:N	2.46	0.47
4:D:129:ALA:HA	4:M:128:LEU:HD22	1.96	0.47
6:I:713:ILE:HD13	6:I:720:VAL:HG21	1.96	0.47
3:L:40:MET:O	3:L:43:GLN:HG2	2.14	0.47
3:L:132:ILE:HG23	3:L:161:LEU:HG	1.96	0.47
6:R:837:ARG:HH21	6:R:840:ILE:HG21	1.79	0.47
1:S:1919:CYS:O	1:S:1922:ALA:HB3	2.14	0.47
1:S:2201:THR:HG23	1:S:2203:THR:HG22	1.96	0.47
1:S:2864:GLN:HG3	1:S:2865:HIS:CE1	2.49	0.47
1:A:409:GLN:HG2	1:A:413:PHE:HE2	1.79	0.47
1:A:1099:PHE:HD1	1:A:1152:ARG:HH21	1.63	0.47
1:A:2303:LEU:HA	1:A:2306:ASN:HD22	1.79	0.47
1:A:3634:GLN:HA	1:A:3638:LYS:NZ	2.28	0.47
2:B:411:VAL:HA	2:B:437:LEU:HG	1.96	0.47
2:B:482:VAL:HG13	3:C:333:TYR:HB3	1.95	0.47
1:S:200:PHE:CZ	1:S:227:LEU:HD13	2.49	0.47
1:S:1191:PHE:O	1:S:1195:VAL:HG23	2.14	0.47
1:S:1260:LEU:HD21	1:S:1293:ALA:HB2	1.95	0.47
1:S:1419:LEU:HG	1:S:1467:ILE:HD13	1.96	0.47
1:S:1783:ARG:HE	1:S:1830:HIS:HB2	1.79	0.47
1:S:1844:VAL:HG23	1:S:1845:VAL:N	2.30	0.47
1:S:2412:TYR:CZ	1:S:2450:GLU:HB2	2.49	0.47
1:S:2941:GLY:O	1:S:2944:THR:OG1	2.31	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:3925:LEU:HB2	1:S:3962:ARG:HH21	1.80	0.47
2:T:131:PHE:O	2:T:135:MET:HB3	2.14	0.47
1:A:1428:ILE:O	1:A:1432:CYS:N	2.46	0.47
1:A:2231:PHE:O	1:A:2235:LEU:HG	2.15	0.47
1:A:2354:ASN:ND2	1:A:2357:GLU:OE2	2.45	0.47
1:A:2801:ASP:HB3	1:A:2804:ILE:HG12	1.96	0.47
1:A:2923:TRP:O	1:A:2926:LEU:HB3	2.14	0.47
2:B:413:LEU:HD12	2:B:432:PHE:HB3	1.96	0.47
3:C:16:VAL:HG22	3:C:101:GLY:H	1.79	0.47
3:L:331:MET:SD	2:T:489:ASN:HB3	2.54	0.47
3:L:407:VAL:HB	3:L:424:LEU:HD11	1.95	0.47
3:L:674:PHE:HB2	3:L:675:TRP:CE3	2.50	0.47
1:S:850:GLU:HA	1:S:853:ILE:HG12	1.97	0.47
1:S:959:TYR:O	1:S:963:LYS:HG3	2.15	0.47
1:S:1406:LEU:HD12	1:S:1409:SER:HB3	1.96	0.47
1:S:1484:LEU:HB2	1:S:1531:LEU:HD13	1.95	0.47
1:S:2410:GLU:OE2	1:S:2413:PHE:N	2.33	0.47
1:S:2833:THR:HG21	1:S:2867:ALA:HB1	1.96	0.47
1:S:3967:PHE:O	1:S:3970:LEU:HD22	2.14	0.47
1:A:159:GLU:HA	2:B:301:ARG:HH12	1.80	0.47
1:A:179:GLY:C	1:A:230:LEU:HD23	2.34	0.47
1:A:1215:GLU:HB3	1:A:1218:SER:HB2	1.96	0.47
1:A:2340:SER:O	1:A:2344:LEU:HG	2.14	0.47
1:A:3008:TRP:HB2	1:A:3051:LEU:HD23	1.96	0.47
1:A:3564:GLN:NE2	1:A:3697:ASN:HB3	2.29	0.47
1:A:3915:HIS:HE1	1:A:3961:PHE:HA	1.78	0.47
1:A:4002:MET:SD	1:A:4044:ILE:HG22	2.54	0.47
3:C:43:GLN:NE2	3:C:491:PHE:O	2.40	0.47
3:C:605:LYS:HB2	3:C:609:PHE:CE2	2.49	0.47
5:H:179:ARG:HD3	6:I:781:ILE:HD12	1.95	0.47
1:S:382:ASP:HA	1:S:385:TYR:HB3	1.96	0.47
1:S:2231:PHE:O	1:S:2235:LEU:HG	2.14	0.47
1:S:3863:ASN:H	1:S:3866:GLU:HG3	1.78	0.47
1:S:4090:ARG:NH2	1:S:4106:CYS:HA	2.20	0.47
2:T:206:LYS:N	2:T:235:GLU:HB3	2.30	0.47
2:T:239:LEU:HD23	2:T:242:LEU:HD12	1.95	0.47
1:A:115:TYR:HB2	1:A:130:LEU:HD22	1.96	0.47
1:A:560:LEU:O	1:A:564:LEU:HG	2.14	0.47
1:A:1008:ALA:O	1:A:1011:GLU:HG2	2.14	0.47
1:A:1039:TRP:NE1	1:A:1043:GLN:OE1	2.44	0.47
1:A:1058:SER:O	1:A:1062:ARG:HG2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2141:ASN:O	1:A:2144:LEU:HG	2.14	0.47
1:A:2147:ALA:O	1:A:2151:ILE:HG13	2.14	0.47
1:A:3320:ILE:HG22	1:A:3391:ALA:HB1	1.95	0.47
1:A:4086:ASP:N	1:A:4086:ASP:OD1	2.47	0.47
3:L:93:ASP:HA	3:L:97:LYS:HD3	1.97	0.47
3:L:485:PRO:HG2	3:L:486:ARG:NH2	2.29	0.47
3:L:605:LYS:HB2	3:L:609:PHE:CZ	2.45	0.47
5:P:61:MET:HB2	5:P:65:LYS:HZ1	1.79	0.47
5:Q:21:GLN:HB2	5:Q:126:LEU:HD11	1.95	0.47
5:Q:179:ARG:HH11	6:R:778:PHE:HD1	1.61	0.47
1:S:326:MET:O	1:S:330:ASN:N	2.47	0.47
1:S:921:ALA:H	1:S:927:LYS:HZ2	1.63	0.47
1:S:1715:GLU:HA	1:S:1718:ILE:HG12	1.96	0.47
1:S:2328:ARG:HG2	1:S:2329:TYR:CE1	2.50	0.47
1:S:2385:LEU:HD13	1:S:2389:PHE:HE2	1.79	0.47
1:S:2431:ARG:HA	1:S:2434:VAL:HG22	1.96	0.47
1:S:3306:LEU:O	1:S:3307:LEU:C	2.52	0.47
2:T:461:LYS:NZ	2:T:524:GLU:OE1	2.40	0.47
1:A:80:GLU:HA	1:A:83:GLU:OE1	2.15	0.47
1:A:103:TYR:O	1:A:106:GLU:HB2	2.14	0.47
1:A:981:ARG:O	1:A:984:TYR:N	2.44	0.47
1:A:1208:LEU:HD21	1:A:1276:VAL:HB	1.96	0.47
1:A:1740:VAL:HA	1:A:1743:MET:HG3	1.95	0.47
1:A:2235:LEU:HD13	1:A:2275:GLN:HG2	1.96	0.47
1:A:3814:ASP:OD1	1:A:3815:LEU:N	2.47	0.47
1:A:3985:VAL:HG12	1:A:3989:ARG:NE	2.29	0.47
2:B:338:LYS:HE2	3:C:486:ARG:NH2	2.30	0.47
3:C:83:LEU:HD12	3:C:121:GLU:HB2	1.95	0.47
3:C:496:HIS:NE2	3:C:504:PRO:O	2.47	0.47
3:L:17:GLY:HA2	3:L:103:GLN:O	2.14	0.47
3:L:58:LEU:O	3:L:78:THR:N	2.44	0.47
1:S:114:VAL:O	1:S:119:ARG:NE	2.45	0.47
1:S:220:LEU:HD12	1:S:220:LEU:H	1.79	0.47
1:S:2455:LEU:HD21	1:S:2498:ILE:HG12	1.97	0.47
1:S:3679:ASN:HA	1:S:3726:VAL:HG22	1.97	0.47
1:A:1420:ARG:NH2	1:A:1465:HIS:O	2.47	0.47
1:A:1468:LEU:HD12	1:A:1469:PRO:HD2	1.96	0.47
1:A:1601:LEU:HD23	1:A:1651:LYS:HB3	1.97	0.47
1:A:1872:GLY:HA2	1:A:1875:LYS:HG2	1.95	0.47
1:A:2154:GLU:HA	1:A:2157:PHE:CE1	2.50	0.47
1:A:2786:LYS:O	1:A:2789:SER:OG	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2860:ASP:O	1:A:2864:GLN:HG3	2.15	0.47
1:A:2866:ALA:HB1	1:A:2899:ARG:HD2	1.96	0.47
1:A:3190:LEU:HD22	1:A:3235:LYS:HD2	1.96	0.47
1:A:3571:PHE:O	1:A:3575:LEU:HG	2.14	0.47
2:B:357:LYS:HB2	2:B:360:HIS:CG	2.48	0.47
3:C:9:ALA:O	3:C:131:HIS:N	2.41	0.47
3:C:91:LEU:HD13	3:C:495:LEU:HD13	1.97	0.47
3:L:33:GLN:O	3:L:37:VAL:HG23	2.15	0.47
3:L:202:LYS:O	3:L:206:GLU:HG2	2.14	0.47
3:L:246:HIS:HB2	3:L:262:ALA:HB1	1.97	0.47
3:L:323:PHE:CE2	3:L:328:GLU:HB2	2.50	0.47
6:R:727:LEU:O	6:R:731:LYS:HG2	2.14	0.47
1:S:125:ILE:H	1:S:125:ILE:HD12	1.79	0.47
1:S:240:GLU:HG3	1:S:243:GLN:HG2	1.96	0.47
1:S:429:GLU:O	1:S:432:THR:OG1	2.30	0.47
1:S:649:PHE:O	1:S:653:LEU:HB2	2.15	0.47
1:S:1401:ASN:HA	1:S:1404:LYS:HE2	1.97	0.47
1:S:2817:LEU:HD22	1:S:2865:HIS:CD2	2.48	0.47
1:S:2860:ASP:HA	1:S:2863:CYS:SG	2.55	0.47
1:S:3311:ASN:HB3	1:S:3315:TYR:CZ	2.49	0.47
2:T:79:ASP:N	2:T:79:ASP:OD1	2.47	0.47
2:T:172:GLU:HG3	2:T:175:PRO:HD3	1.95	0.47
1:A:1253:THR:O	1:A:1257:LEU:HG	2.14	0.47
1:A:2324:GLY:HA3	1:A:2370:SER:OG	2.15	0.47
1:A:2470:ARG:O	1:A:2473:MET:HG2	2.15	0.47
1:A:2724:ASP:N	1:A:2724:ASP:OD1	2.47	0.47
1:A:2762:LYS:HA	1:A:2765:GLN:HE21	1.79	0.47
1:A:3231:ILE:HG13	1:A:3232:ARG:N	2.30	0.47
1:A:3483:MET:HA	1:A:3486:GLU:CG	2.45	0.47
2:B:367:PHE:CE2	2:B:369:TYR:HB2	2.50	0.47
3:C:312:GLN:NE2	3:C:324:SER:O	2.34	0.47
3:C:377:LEU:O	3:C:381:ILE:HG12	2.14	0.47
3:L:61:THR:OG1	3:L:63:GLY:O	2.33	0.47
6:R:739:GLN:H	6:R:742:PHE:HE2	1.61	0.47
1:S:865:GLN:HE22	1:S:3170:ASP:HA	1.80	0.47
1:S:994:TRP:CZ2	1:S:1000:LYS:HD3	2.50	0.47
1:S:1399:CYS:O	1:S:1403:MET:HG2	2.15	0.47
1:S:1773:VAL:HG12	1:S:1773:VAL:O	2.14	0.47
1:S:1801:VAL:HA	1:S:1804:MET:HG3	1.96	0.47
1:S:2246:LYS:NZ	1:S:2284:ASP:H	2.12	0.47
1:S:2294:ILE:HD12	1:S:2294:ILE:H	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:2954:GLN:HA	1:S:2957:LEU:HD12	1.97	0.47
1:S:3525:TYR:OH	1:S:3712:LEU:N	2.36	0.47
2:T:487:PHE:O	2:T:490:LEU:N	2.48	0.47
1:A:344:GLN:O	1:A:348:ILE:HG12	2.15	0.47
1:A:1729:PHE:HB3	1:A:1735:ARG:HG3	1.97	0.47
1:A:3085:GLU:HA	1:A:3088:LEU:HD12	1.96	0.47
1:A:3761:ASP:HB3	1:A:3793:VAL:HG11	1.97	0.47
1:A:3927:ASN:HB3	1:A:3941:ASP:HB2	1.97	0.47
3:C:234:LEU:HD21	3:C:483:PRO:HB3	1.96	0.47
4:D:136:GLU:OE2	4:M:131:ARG:NH1	2.48	0.47
5:H:185:ASN:O	5:H:188:LYS:HG3	2.15	0.47
6:R:818:VAL:HG12	6:R:851:LYS:N	2.29	0.47
1:S:151:GLU:OE1	1:S:151:GLU:N	2.38	0.47
1:S:225:LYS:HE3	1:S:270:ALA:O	2.14	0.47
1:S:2139:PRO:O	1:S:2143:ARG:HG3	2.14	0.47
1:S:2246:LYS:HZ1	1:S:2283:ASN:HA	1.80	0.47
1:S:2443:MET:N	1:S:2444:PRO:HD2	2.30	0.47
1:S:2548:PRO:HB2	1:S:2848:PHE:CD1	2.49	0.47
1:S:3873:LYS:O	1:S:3877:LYS:N	2.46	0.47
2:T:146:VAL:HA	2:T:149:VAL:HG22	1.97	0.47
2:T:351:LYS:HE2	2:T:351:LYS:HB2	1.78	0.47
1:A:209:THR:O	1:A:212:VAL:HG22	2.14	0.47
1:A:1737:ASN:O	1:A:1740:VAL:HG22	2.15	0.47
1:A:2335:ASN:ND2	1:A:2337:LEU:HD23	2.31	0.47
1:A:3075:LYS:O	1:A:3079:GLU:OE1	2.33	0.47
1:A:3793:VAL:HG23	1:A:3803:ILE:HG13	1.97	0.47
1:A:4041:ARG:O	1:A:4044:ILE:HG12	2.15	0.47
2:B:203:MET:CE	2:B:237:SER:HB2	2.45	0.47
2:B:212:ASP:HB3	2:B:215:LEU:HD22	1.97	0.47
3:C:450:GLN:HG2	3:C:536:LEU:HB3	1.97	0.47
3:C:595:ALA:HA	3:C:598:PHE:CE2	2.50	0.47
5:G:48:SER:OG	5:G:49:GLU:N	2.48	0.47
5:H:174:THR:HB	6:I:787:GLN:HE22	1.80	0.47
6:R:710:LYS:O	6:R:714:LEU:HG	2.14	0.47
1:S:127:ALA:O	1:S:131:LEU:HG	2.14	0.47
1:S:1128:CYS:HA	1:S:1131:ILE:HG12	1.97	0.47
1:S:1574:ASN:ND2	1:S:1578:ALA:H	2.13	0.47
1:S:1871:MET:HE3	1:S:1939:LEU:HB2	1.97	0.47
1:S:2953:THR:HG1	1:S:2994:TRP:HE1	1.61	0.47
1:S:2999:LEU:CD2	1:S:3014:CYS:HA	2.45	0.47
1:A:532:ARG:O	1:A:536:SER:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1008:ALA:HA	1:A:1011:GLU:OE2	2.14	0.46
1:A:1504:ASP:HB3	1:A:1507:CYS:HB2	1.97	0.46
1:A:2353:GLN:HG2	1:A:2359:LYS:HZ3	1.80	0.46
1:A:3870:SER:HA	1:A:3873:LYS:HE2	1.97	0.46
6:I:706:ASN:HB2	6:I:709:VAL:HG23	1.96	0.46
3:L:279:VAL:HG12	3:L:286:LYS:N	2.29	0.46
3:L:327:ASP:O	3:L:331:MET:HG2	2.15	0.46
6:R:759:ASP:N	6:R:759:ASP:OD1	2.46	0.46
1:S:1177:GLY:H	1:S:1184:ARG:HG3	1.79	0.46
1:A:1625:HIS:HA	1:A:1628:LYS:HD3	1.97	0.46
1:A:1863:PHE:CD1	3:C:718:VAL:HG23	2.49	0.46
1:A:2735:ASP:N	1:A:2735:ASP:OD1	2.49	0.46
1:A:3011:LEU:O	1:A:3047:SER:OG	2.32	0.46
1:A:3422:GLN:N	1:A:3425:ARG:HH21	2.12	0.46
2:B:303:PHE:HE2	2:B:308:GLY:HA2	1.79	0.46
1:S:156:PHE:O	1:S:159:GLU:HG2	2.15	0.46
1:S:1107:TYR:CD2	1:S:1134:LEU:HD11	2.43	0.46
1:S:3119:VAL:HG13	1:S:3120:LEU:HD23	1.96	0.46
1:S:3589:SER:HB3	1:S:3664:ASN:HD21	1.80	0.46
1:A:69:VAL:O	1:A:70:ARG:C	2.53	0.46
1:A:290:TYR:CE2	1:A:291:VAL:HG13	2.50	0.46
1:A:649:PHE:O	1:A:653:LEU:HG	2.16	0.46
1:A:1333:SER:O	1:A:1337:VAL:HG23	2.15	0.46
1:A:3420:CYS:SG	1:A:3446:VAL:HG11	2.56	0.46
1:A:3428:GLU:OE1	1:A:3474:ARG:NH1	2.49	0.46
1:A:3834:ALA:HB1	1:A:3839:TYR:HE1	1.81	0.46
1:A:3922:ASP:O	1:A:3959:MET:HE1	2.16	0.46
3:C:61:THR:HG21	3:C:78:THR:HB	1.96	0.46
3:L:236:VAL:HG23	3:L:237:PHE:CD2	2.50	0.46
3:L:280:ASP:OD1	3:L:281:ALA:N	2.47	0.46
6:R:748:PRO:HA	6:R:751:LYS:HD2	1.97	0.46
1:S:117:LYS:HG2	1:S:118:ASP:H	1.80	0.46
1:S:2154:GLU:HA	1:S:2157:PHE:CE1	2.50	0.46
1:S:2347:LYS:O	1:S:2351:GLN:N	2.41	0.46
1:S:3454:LEU:HD11	1:S:3462:ARG:HA	1.97	0.46
1:A:1139:GLU:HA	1:A:1197:LEU:HD11	1.96	0.46
1:A:1406:LEU:O	1:A:1412:LYS:HB3	2.16	0.46
1:A:3173:MET:HE3	1:A:3174:ASP:H	1.80	0.46
1:A:4054:ALA:HA	1:A:4096:SER:HA	1.97	0.46
2:B:363:ARG:HD3	2:B:436:PHE:CE2	2.50	0.46
2:B:482:VAL:HG22	3:C:333:TYR:CD2	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:132:ILE:O	3:C:161:LEU:HA	2.16	0.46
3:C:253:ILE:HB	3:C:257:LEU:HB2	1.97	0.46
6:I:815:ARG:H	6:I:850:ALA:N	2.12	0.46
3:L:151:ILE:HD11	3:L:211:VAL:HG13	1.96	0.46
1:S:382:ASP:O	1:S:385:TYR:HB3	2.16	0.46
1:S:450:SER:HB3	1:S:453:MET:HE3	1.96	0.46
1:S:903:PRO:HB3	1:S:2819:GLU:HB2	1.96	0.46
1:S:943:GLY:O	1:S:946:THR:OG1	2.27	0.46
1:S:1076:LEU:HB3	1:S:1123:THR:OG1	2.16	0.46
1:S:1165:LEU:O	1:S:1169:VAL:HG23	2.15	0.46
1:S:1173:LEU:HB2	1:S:1191:PHE:CE1	2.51	0.46
1:S:1722:PHE:CE1	1:S:1739:TYR:HB3	2.49	0.46
1:S:2133:LEU:HD13	1:S:2146:LEU:HD22	1.96	0.46
1:S:2571:ASP:O	1:S:2787:HIS:ND1	2.48	0.46
1:S:2735:ASP:OD1	1:S:2735:ASP:N	2.46	0.46
1:S:3085:GLU:OE1	1:S:3085:GLU:N	2.41	0.46
1:S:3972:LEU:HB3	1:S:3973:PRO:HD3	1.98	0.46
1:A:391:ARG:NH1	1:A:1737:ASN:OD1	2.49	0.46
1:A:479:ILE:HA	1:A:482:VAL:HG22	1.97	0.46
1:A:523:THR:OG1	1:A:524:TYR:N	2.48	0.46
1:A:719:LYS:HZ1	1:A:1026:ARG:HH22	1.61	0.46
2:B:325:ARG:HB2	3:C:88:PHE:CE1	2.50	0.46
3:C:491:PHE:HD1	3:C:494:LEU:HD12	1.80	0.46
3:C:653:GLN:HA	3:C:656:ASN:ND2	2.30	0.46
5:G:160:GLY:O	5:G:164:LYS:HG2	2.16	0.46
3:L:188:HIS:CE1	3:L:478:PRO:HD2	2.44	0.46
6:R:754:PHE:HA	6:R:757:GLU:HG2	1.98	0.46
1:S:244:THR:O	1:S:248:ILE:HG12	2.15	0.46
1:S:1279:LEU:HD22	1:S:1356:TRP:HE1	1.81	0.46
1:S:1611:GLN:HB2	1:S:1613:HIS:ND1	2.30	0.46
1:S:1737:ASN:HA	1:S:1740:VAL:HG22	1.98	0.46
1:S:1840:PHE:CE2	1:S:1844:VAL:HG12	2.50	0.46
1:S:2395:THR:O	1:S:2398:LEU:HB2	2.15	0.46
1:A:3749:PRO:HB2	1:A:3805:TRP:HB3	1.96	0.46
1:A:4040:PRO:O	1:A:4044:ILE:HG23	2.16	0.46
2:B:158:GLN:OE1	2:B:158:GLN:N	2.49	0.46
2:B:344:GLY:H	2:B:401:THR:HB	1.81	0.46
3:C:233:LYS:HE2	3:C:235:CYS:HB3	1.98	0.46
3:C:461:MET:CE	3:C:526:SER:HB3	2.46	0.46
3:C:528:ILE:O	3:C:531:SER:OG	2.24	0.46
1:S:1023:SER:HA	1:S:1026:ARG:NE	2.23	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:1135:CYS:HA	1:S:1138:ILE:HG22	1.96	0.46
1:S:2356:MET:SD	1:S:2357:GLU:N	2.89	0.46
1:S:3123:GLN:CD	1:S:3123:GLN:H	2.19	0.46
1:A:2356:MET:SD	1:A:2357:GLU:N	2.89	0.46
1:A:3036:TYR:O	1:A:3039:THR:OG1	2.27	0.46
1:A:3527:GLN:OE1	1:A:3697:ASN:ND2	2.49	0.46
1:A:3675:LYS:HA	1:A:3675:LYS:HD2	1.80	0.46
2:B:530:TYR:CZ	2:B:536:PRO:HB3	2.51	0.46
3:C:460:SER:HA	3:C:525:LYS:HE2	1.98	0.46
3:L:342:VAL:HA	3:L:393:VAL:HA	1.97	0.46
3:L:368:ARG:HD2	3:L:368:ARG:HA	1.80	0.46
3:L:496:HIS:CG	3:L:506:PRO:HD3	2.50	0.46
5:Q:4:LYS:HA	5:Q:4:LYS:HD2	1.83	0.46
5:Q:188:LYS:HD2	5:Q:188:LYS:HA	1.70	0.46
1:S:790:LYS:HA	1:S:869:ASN:HB3	1.96	0.46
1:S:1031:ARG:NH1	1:S:1032:CYS:HB3	2.30	0.46
1:S:1367:HIS:HB2	1:S:1370:ARG:HH12	1.80	0.46
1:S:2439:ILE:HA	1:S:2442:MET:HG3	1.98	0.46
1:S:2894:GLU:HG2	1:S:3973:PRO:HG2	1.98	0.46
1:S:3575:LEU:HD22	1:S:3681:LYS:NZ	2.31	0.46
1:S:3809:THR:OG1	1:S:3930:VAL:O	2.34	0.46
2:T:90:THR:HG23	2:T:92:LYS:O	2.16	0.46
2:T:176:HIS:CD2	2:T:182:LYS:HG2	2.51	0.46
1:A:828:LYS:HB2	1:A:830:VAL:HG22	1.97	0.46
1:A:1290:LEU:O	1:A:1294:VAL:HG23	2.15	0.46
1:A:2595:TRP:CE2	1:A:2762:LYS:HD2	2.50	0.46
1:A:2747:GLY:HA2	1:A:2750:GLU:OE1	2.16	0.46
2:B:318:ARG:HG2	3:C:276:TRP:HB3	1.98	0.46
3:C:16:VAL:O	3:C:101:GLY:N	2.48	0.46
5:H:3:ARG:HD3	5:H:21:GLN:HB2	1.98	0.46
3:L:335:SER:OG	3:L:399:LYS:O	2.34	0.46
5:P:172:LEU:HD13	6:R:809:PRO:HD2	1.98	0.46
6:R:787:GLN:HG3	6:R:791:GLU:OE2	2.16	0.46
1:S:894:PHE:HZ	1:S:2787:HIS:HD2	1.64	0.46
1:S:1075:ARG:NH2	1:S:1117:ASP:OD2	2.48	0.46
1:S:1605:PHE:HE2	1:S:2042:GLN:HA	1.79	0.46
1:S:2187:VAL:HA	1:S:2190:VAL:HG22	1.98	0.46
1:S:3589:SER:HB2	1:S:3593:ARG:CZ	2.45	0.46
1:S:3714:GLU:N	1:S:3714:GLU:OE1	2.49	0.46
2:T:48:MET:HA	2:T:59:PRO:HB2	1.98	0.46
2:T:151:ALA:HB2	2:T:193:LEU:HD11	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:300:TRP:CE3	1:A:308:LEU:HD21	2.51	0.46
1:A:389:ILE:HG22	1:A:393:LYS:NZ	2.31	0.46
1:A:923:ASP:O	1:A:926:THR:OG1	2.28	0.46
1:A:1148:ALA:O	1:A:1162:SER:OG	2.24	0.46
1:A:1261:LEU:HD23	1:A:1336:THR:HG22	1.98	0.46
1:A:1715:GLU:HA	1:A:1718:ILE:HG12	1.97	0.46
1:A:3554:PHE:O	1:A:3558:ILE:HG12	2.15	0.46
1:A:3732:LEU:HG	1:A:3733:ARG:HG2	1.97	0.46
1:A:3924:HIS:HD2	1:A:3926:ASN:H	1.64	0.46
1:A:4102:THR:HA	1:A:4105:LYS:HE2	1.97	0.46
2:B:64:ILE:O	2:B:68:GLN:HG2	2.15	0.46
3:C:247:TRP:HB3	3:C:263:ALA:HB3	1.98	0.46
3:C:656:ASN:CG	3:C:688:LYS:HA	2.37	0.46
5:G:185:ASN:O	5:G:189:THR:HG23	2.16	0.46
3:L:89:ASP:O	3:L:92:GLU:HG2	2.15	0.46
3:L:496:HIS:NE2	3:L:504:PRO:O	2.49	0.46
1:S:38:LEU:HD21	1:S:63:PHE:CE2	2.50	0.46
1:S:584:GLU:HB2	1:S:613:HIS:ND1	2.31	0.46
1:S:923:ASP:OD2	1:S:926:THR:OG1	2.28	0.46
1:S:2880:CYS:HB2	1:S:2885:GLN:O	2.15	0.46
1:S:3364:GLY:HA3	1:S:3373:VAL:HA	1.97	0.46
2:T:413:LEU:HD12	2:T:432:PHE:HB3	1.98	0.46
1:A:14:ARG:HH22	1:A:3071:GLY:N	2.13	0.46
1:A:117:LYS:O	1:A:120:ALA:N	2.38	0.46
1:A:475:LEU:O	1:A:479:ILE:HG12	2.15	0.46
1:A:894:PHE:N	1:A:905:ILE:O	2.47	0.46
1:A:1202:ARG:HA	1:A:1202:ARG:HD3	1.76	0.46
1:A:1389:VAL:O	1:A:1392:MET:HG3	2.16	0.46
1:A:1780:SER:O	1:A:1784:ARG:HG3	2.15	0.46
1:A:2313:LYS:HA	1:A:2316:TYR:CZ	2.51	0.46
1:A:2485:ARG:CZ	1:A:2529:THR:HG22	2.46	0.46
1:A:3150:ASN:HD21	1:A:3158:LYS:HE2	1.80	0.46
2:B:287:LYS:HA	3:C:312:GLN:HA	1.97	0.46
2:B:423:GLN:HB2	2:B:425:ILE:HG12	1.98	0.46
3:C:188:HIS:NE2	3:C:232:ARG:HD2	2.31	0.46
6:I:716:ASN:HA	6:I:745:HIS:CE1	2.50	0.46
3:L:250:ARG:HG2	3:L:260:ARG:HA	1.98	0.46
5:Q:118:ASN:HB3	5:Q:121:GLU:HB2	1.98	0.46
1:S:139:ARG:HH22	1:S:230:LEU:HD11	1.81	0.46
1:S:1209:LYS:O	1:S:1213:LYS:HG3	2.16	0.46
1:S:1331:ASN:OD1	1:S:1385:ASN:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:1710:LEU:O	1:S:1714:LEU:HG	2.16	0.46
1:S:2232:ARG:HD2	1:S:2235:LEU:HD12	1.96	0.46
1:S:2936:TYR:HE1	1:S:2957:LEU:HB3	1.81	0.46
1:S:3063:THR:O	1:S:3067:LYS:HG2	2.16	0.46
1:A:152:LEU:O	1:A:155:LYS:HG2	2.16	0.45
1:A:238:MET:HA	1:A:243:GLN:HG3	1.98	0.45
1:A:420:VAL:HG13	1:A:421:LEU:HD22	1.97	0.45
1:A:752:LEU:HD22	1:A:776:TRP:HZ3	1.81	0.45
1:A:1023:SER:HA	1:A:1026:ARG:HG3	1.97	0.45
1:A:1776:GLU:HA	1:A:1779:GLN:HG3	1.98	0.45
1:A:3444:ALA:HB2	1:A:3478:GLU:HG3	1.98	0.45
1:A:3585:PHE:CE2	1:A:3664:ASN:HA	2.48	0.45
2:B:399:ARG:HE	2:B:410:PHE:HE1	1.62	0.45
3:C:725:VAL:HG22	1:S:1917:LYS:HE2	1.98	0.45
3:L:127:PHE:O	3:L:130:ARG:NH1	2.49	0.45
3:L:328:GLU:O	3:L:332:LYS:N	2.49	0.45
5:P:188:LYS:HD2	6:R:768:ASP:OD1	2.16	0.45
1:S:560:LEU:O	1:S:564:LEU:HG	2.16	0.45
1:S:1731:PRO:HA	1:S:1736:PHE:CD2	2.51	0.45
1:S:2481:HIS:O	1:S:2485:ARG:NE	2.48	0.45
2:T:289:TYR:CE2	2:T:291:GLU:HB2	2.51	0.45
2:T:513:ALA:HB1	2:T:517:ARG:NH1	2.29	0.45
1:A:865:GLN:HB2	1:A:3168:TYR:CG	2.52	0.45
1:A:2349:LEU:O	1:A:2353:GLN:HB2	2.16	0.45
1:A:3506:LEU:HA	1:A:3515:GLN:HE21	1.80	0.45
1:A:3772:ASN:OD1	1:A:3788:LEU:N	2.48	0.45
1:A:4084:SER:HB3	1:A:4085:LYS:HZ2	1.81	0.45
2:B:106:GLN:NE2	2:B:118:GLU:OE1	2.49	0.45
3:L:276:TRP:CE3	2:T:318:ARG:HB3	2.50	0.45
3:L:521:GLU:O	3:L:525:LYS:HG3	2.15	0.45
1:S:1137:ILE:HG22	1:S:1140:LYS:HZ1	1.81	0.45
1:S:1329:ARG:HA	1:S:1332:TYR:HB2	1.98	0.45
1:S:1574:ASN:HD21	1:S:1578:ALA:H	1.65	0.45
1:S:2440:TYR:HA	1:S:2443:MET:HE1	1.98	0.45
1:S:3778:ASP:HB3	1:S:3781:CYS:HB2	1.99	0.45
1:S:3964:THR:OG1	1:S:4127:TRP:O	2.35	0.45
1:S:4102:THR:O	1:S:4105:LYS:HG3	2.15	0.45
2:T:143:LEU:HG	2:T:176:HIS:CE1	2.52	0.45
2:T:182:LYS:HA	2:T:185:ARG:NE	2.31	0.45
2:T:321:ILE:HG13	2:T:326:GLN:HG3	1.98	0.45
1:A:243:GLN:OE1	1:A:246:ARG:NH1	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:385:TYR:O	1:A:389:ILE:HG12	2.16	0.45
1:A:714:VAL:HG23	1:A:733:LEU:HD21	1.97	0.45
1:A:860:GLY:HA3	1:A:3136:THR:HB	1.98	0.45
1:A:1015:ASP:OD1	1:A:1016:GLY:N	2.45	0.45
1:A:2344:LEU:HD23	1:A:2347:LYS:HZ1	1.80	0.45
1:A:3139:GLN:HA	1:A:3142:ILE:HG12	1.98	0.45
1:A:3588:TRP:NE1	1:A:3613:MET:HB2	2.32	0.45
3:L:30:PRO:HB3	3:L:166:PRO:HB3	1.98	0.45
1:S:460:ALA:O	1:S:464:VAL:HG13	2.16	0.45
1:S:489:ARG:O	1:S:492:SER:OG	2.32	0.45
1:S:786:GLN:HA	1:S:789:TYR:CD2	2.51	0.45
1:S:1013:ILE:O	1:S:1017:ILE:HB	2.17	0.45
1:S:1663:THR:O	1:S:1665:HIS:ND1	2.49	0.45
1:S:1867:ILE:O	1:S:1871:MET:HG2	2.16	0.45
1:S:2155:GLU:H	1:S:2155:GLU:CD	2.16	0.45
1:S:2354:ASN:HA	1:S:2357:GLU:HG2	1.98	0.45
1:S:3964:THR:H	1:S:3967:PHE:HD2	1.65	0.45
1:S:3971:MET:SD	1:S:3974:MET:HB2	2.56	0.45
1:A:130:LEU:HD23	1:A:134:LEU:HD23	1.97	0.45
1:A:326:MET:SD	1:A:327:VAL:HG23	2.57	0.45
1:A:628:GLU:HA	1:A:631:ARG:HG2	1.98	0.45
1:A:649:PHE:O	1:A:652:GLU:HG3	2.17	0.45
1:A:1862:THR:N	1:A:1864:ASP:OD1	2.49	0.45
1:A:2147:ALA:HA	1:A:2150:VAL:HG12	1.99	0.45
1:A:2216:LEU:HD23	1:A:2219:LEU:HD21	1.97	0.45
1:A:2311:ARG:NH1	1:A:2312:TYR:HB2	2.32	0.45
1:A:2464:HIS:O	1:A:2470:ARG:NE	2.49	0.45
1:A:2833:THR:HG21	1:A:2867:ALA:HB1	1.99	0.45
1:A:3129:LEU:HA	1:A:3132:VAL:HG22	1.97	0.45
1:A:3264:LYS:O	1:A:3267:LYS:NZ	2.40	0.45
1:A:3809:THR:OG1	1:A:3929:MET:HB3	2.16	0.45
3:C:56:LEU:HD23	3:C:80:HIS:CD2	2.52	0.45
3:C:59:PHE:HB2	3:C:77:ILE:HG12	1.98	0.45
3:C:531:SER:HA	3:C:534:LYS:HG2	1.98	0.45
5:G:176:LEU:O	5:G:179:ARG:HG2	2.17	0.45
3:L:343:LEU:HD11	3:L:394:ARG:HB2	1.98	0.45
3:L:463:LEU:HG	2:T:349:GLY:HA3	1.98	0.45
1:S:645:TRP:HB3	1:S:649:PHE:HB2	1.98	0.45
1:S:655:LEU:O	1:S:659:ARG:HG2	2.16	0.45
1:S:893:SER:H	1:S:944:LYS:HZ2	1.64	0.45
1:S:947:GLN:HB2	1:S:2577:PHE:CE2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:2184:TYR:CE2	1:S:2734:ARG:HD2	2.51	0.45
1:S:2219:LEU:HD12	1:S:2220:MET:N	2.31	0.45
1:A:26:GLY:HA2	1:A:77:GLU:OE2	2.17	0.45
1:A:202:GLY:O	1:A:205:LYS:HG3	2.16	0.45
1:A:1565:GLU:HA	1:A:1568:ASN:HD22	1.81	0.45
1:A:2376:ASP:HB3	1:A:2404:ARG:HH22	1.81	0.45
1:A:2548:PRO:HB3	1:A:2847:THR:HA	1.98	0.45
1:A:3619:ASP:OD1	1:A:3619:ASP:N	2.49	0.45
2:B:191:GLY:HA2	2:B:194:ARG:HE	1.82	0.45
2:B:269:ILE:HA	2:B:375:VAL:HG11	1.99	0.45
3:C:30:PRO:HB3	3:C:166:PRO:HB3	1.99	0.45
3:C:89:ASP:O	3:C:92:GLU:HG2	2.16	0.45
6:I:659:PHE:CZ	6:I:729:CYS:HB3	2.51	0.45
1:S:153:PHE:CE1	1:S:189:MET:HG3	2.51	0.45
1:S:858:MET:O	1:S:862:LEU:HG	2.17	0.45
1:S:894:PHE:O	1:S:905:ILE:N	2.38	0.45
1:S:986:PRO:HB3	1:S:2777:HIS:HD2	1.81	0.45
1:S:2751:GLN:O	1:S:2755:LYS:HG2	2.16	0.45
1:S:3304:VAL:O	1:S:3305:SER:C	2.54	0.45
1:A:242:PRO:HB2	1:A:246:ARG:HH22	1.82	0.45
1:A:623:PHE:O	1:A:626:LEU:HG	2.17	0.45
1:A:985:GLU:HA	1:A:988:VAL:HG22	1.98	0.45
1:A:1574:ASN:ND2	1:A:1578:ALA:H	2.15	0.45
1:A:2896:ALA:HA	1:A:2899:ARG:HG2	1.99	0.45
1:A:3120:LEU:HA	1:A:3122:HIS:CE1	2.51	0.45
1:A:3140:GLU:O	1:A:3143:SER:OG	2.34	0.45
1:A:3259:LEU:HD12	1:A:3262:LEU:HD12	1.99	0.45
1:A:3274:VAL:O	1:A:3278:GLN:OE1	2.35	0.45
1:A:3416:LEU:HD21	1:A:3446:VAL:HG12	1.97	0.45
2:B:71:TYR:CE1	2:B:83:LEU:HD13	2.52	0.45
6:I:739:GLN:HG2	6:I:741:ARG:HD2	1.99	0.45
3:L:435:PHE:CD2	2:T:429:PRO:HB3	2.52	0.45
5:Q:87:ASN:HB2	5:Q:97:PHE:HA	1.98	0.45
1:S:583:LEU:HD21	1:S:662:LEU:HD11	1.98	0.45
1:S:1045:THR:OG1	1:S:1048:GLN:HG2	2.17	0.45
1:S:2817:LEU:HD13	1:S:2865:HIS:CE1	2.51	0.45
2:T:94:LYS:HE3	2:T:103:TYR:CE1	2.52	0.45
1:A:236:LYS:HE3	1:A:246:ARG:NH2	2.32	0.45
1:A:947:GLN:HB2	1:A:2577:PHE:CE1	2.49	0.45
1:A:1330:TYR:CE2	1:A:1334:LYS:HE2	2.52	0.45
1:A:1418:HIS:O	1:A:1422:LYS:N	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1580:LEU:O	1:A:1584:GLN:HG2	2.17	0.45
1:A:2167:PRO:O	1:A:2170:GLN:HG3	2.17	0.45
1:A:2264:ASP:HB3	1:A:2309:PHE:CE2	2.51	0.45
1:A:2748:VAL:O	1:A:2752:LYS:HG2	2.15	0.45
1:A:2782:ASP:OD1	1:A:2782:ASP:N	2.48	0.45
1:A:3184:THR:HA	1:A:3187:CYS:SG	2.57	0.45
1:A:3269:ARG:HG3	1:A:3272:TRP:HB3	1.99	0.45
1:A:3303:THR:HB	1:A:3307:LEU:HG	1.98	0.45
3:C:496:HIS:CD2	3:C:506:PRO:HD3	2.52	0.45
3:C:613:SER:O	3:C:616:LEU:HG	2.17	0.45
3:L:357:MET:HA	2:T:364:PRO:HG3	1.99	0.45
4:M:84:ALA:HB1	4:M:99:SER:HB2	1.98	0.45
5:Q:101:LEU:HD23	5:Q:101:LEU:H	1.82	0.45
6:R:659:PHE:HZ	6:R:729:CYS:HB3	1.81	0.45
1:S:296:VAL:HG22	1:S:300:TRP:CD1	2.52	0.45
1:S:475:LEU:O	1:S:479:ILE:HG12	2.17	0.45
1:S:1221:ILE:HD12	1:S:1225:GLU:HA	1.98	0.45
1:S:1479:VAL:O	1:S:1483:LEU:HG	2.16	0.45
1:S:3126:LEU:O	1:S:3130:GLN:HG2	2.17	0.45
1:S:3277:VAL:HG22	1:S:3306:LEU:HD23	1.98	0.45
1:S:4008:GLU:HG3	1:S:4011:PHE:HB2	1.98	0.45
2:T:48:MET:HG2	2:T:60:PHE:HB2	1.97	0.45
2:T:173:ASP:HB3	2:T:217:TYR:CE2	2.52	0.45
2:T:230:ARG:NH1	2:T:233:PHE:H	2.14	0.45
1:A:134:LEU:HD11	1:A:177:LEU:HD11	1.99	0.45
1:A:718:MET:HA	1:A:721:TYR:CD2	2.52	0.45
1:A:1131:ILE:HA	1:A:1134:LEU:HD12	1.99	0.45
1:A:1637:SER:HB2	1:A:1641:THR:OG1	2.16	0.45
1:A:1800:SER:O	1:A:1803:GLU:HG3	2.17	0.45
1:A:2253:TYR:CE1	1:A:2288:TYR:HA	2.52	0.45
1:A:2332:GLU:HB2	1:A:2334:LYS:NZ	2.32	0.45
1:A:2354:ASN:HA	1:A:2357:GLU:OE2	2.17	0.45
1:A:3075:LYS:O	1:A:3078:LEU:HB2	2.17	0.45
2:B:458:GLN:HB3	2:B:525:PHE:HE1	1.81	0.45
3:C:44:ARG:HG3	3:C:237:PHE:CZ	2.52	0.45
3:C:326:VAL:O	3:C:329:GLU:HG3	2.16	0.45
3:L:187:GLY:HA3	3:L:514:ASN:HB3	1.98	0.45
1:S:195:ASN:OD1	1:S:198:ARG:NH2	2.43	0.45
1:S:584:GLU:N	1:S:613:HIS:O	2.38	0.45
1:S:1864:ASP:N	1:S:1864:ASP:OD1	2.47	0.45
1:S:2321:GLU:HA	1:S:2366:LYS:CE	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:2438:ILE:O	1:S:2441:LYS:HG2	2.15	0.45
1:S:3633:ILE:HG13	1:S:3634:GLN:N	2.30	0.45
2:T:35:ARG:O	2:T:162:SER:N	2.38	0.45
1:A:529:ASP:O	1:A:532:ARG:HG2	2.16	0.45
1:A:653:LEU:HD22	1:A:669:LEU:HD13	1.99	0.45
1:A:1153:LEU:HD22	1:A:1160:SER:HB2	1.98	0.45
1:A:1205:ASN:OD1	1:A:1205:ASN:N	2.49	0.45
1:A:1271:ILE:O	1:A:1274:ARG:HD2	2.17	0.45
1:A:1431:LEU:HB3	1:A:1447:ARG:CZ	2.47	0.45
1:A:1576:ASP:OD1	1:A:1576:ASP:N	2.50	0.45
1:A:1649:LEU:HA	1:A:1652:ILE:HG12	1.97	0.45
1:A:2771:LEU:HD23	1:A:2771:LEU:H	1.81	0.45
1:A:4120:THR:HG21	1:A:4126:PRO:HB3	1.99	0.45
3:C:39:THR:HA	3:C:42:VAL:HG12	1.98	0.45
3:C:127:PHE:O	3:C:130:ARG:NH1	2.50	0.45
3:C:461:MET:HE1	3:C:526:SER:HB3	1.98	0.45
3:C:598:PHE:HA	3:C:601:LEU:HB3	1.99	0.45
5:H:70:LEU:HD13	5:H:108:LEU:HD11	1.99	0.45
6:I:739:GLN:HA	6:I:758:TYR:CE2	2.52	0.45
6:I:741:ARG:HH11	6:I:742:PHE:HB3	1.81	0.45
3:L:65:ASP:N	3:L:77:ILE:O	2.40	0.45
3:L:162:GLN:NE2	3:L:235:CYS:O	2.43	0.45
3:L:466:LYS:NZ	3:L:471:ASP:O	2.47	0.45
3:L:722:GLY:O	3:L:726:ASP:N	2.39	0.45
5:P:6:SER:HB2	5:P:76:SER:HB2	1.98	0.45
1:S:1368:LEU:HA	1:S:1371:VAL:HG22	1.99	0.45
1:S:1538:LEU:HD13	1:S:1553:PHE:CZ	2.52	0.45
1:S:1756:PRO:HA	1:S:1759:LEU:HD12	1.99	0.45
1:S:2312:TYR:HD2	1:S:2314:GLU:HG3	1.81	0.45
1:S:2440:TYR:HD1	1:S:2476:ILE:HD13	1.81	0.45
1:S:3015:SER:HA	1:S:3044:MET:HG3	1.98	0.45
2:T:60:PHE:O	2:T:64:ILE:HG12	2.16	0.45
2:T:526:LYS:O	2:T:530:TYR:N	2.50	0.45
1:A:245:SER:OG	1:A:246:ARG:N	2.50	0.45
1:A:710:PHE:O	1:A:713:GLU:HG3	2.17	0.45
1:A:865:GLN:HB2	1:A:3168:TYR:CD2	2.51	0.45
1:A:1506:SER:HA	1:A:1509:GLN:NE2	2.32	0.45
1:A:3150:ASN:ND2	1:A:3158:LYS:HE2	2.32	0.45
2:B:364:PRO:HD3	3:C:358:GLY:O	2.16	0.45
3:C:6:ASN:OD1	3:C:126:LYS:NZ	2.36	0.45
3:C:600:VAL:O	3:C:604:GLN:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:R:720:VAL:N	6:R:743:MET:HE1	2.32	0.45
1:S:32:HIS:O	1:S:36:ARG:HG2	2.17	0.45
1:S:200:PHE:CE2	1:S:227:LEU:HD22	2.51	0.45
1:S:447:PRO:HD3	1:S:527:TYR:CE1	2.52	0.45
1:S:910:PHE:O	1:S:914:VAL:HG12	2.16	0.45
1:S:985:GLU:HA	1:S:988:VAL:HG22	1.99	0.45
1:S:1672:PHE:O	1:S:1675:TYR:HB3	2.16	0.45
1:S:2215:LEU:HA	1:S:2218:PHE:CD2	2.52	0.45
1:S:2365:ASN:HD22	1:S:2396:LEU:HG	1.82	0.45
1:S:2936:TYR:CE1	1:S:2957:LEU:HB3	2.52	0.45
1:S:2962:ARG:HH11	1:S:3252:PHE:HD2	1.65	0.45
1:A:384:MET:O	1:A:387:GLU:HG3	2.17	0.44
1:A:1801:VAL:HA	1:A:1804:MET:HG3	1.99	0.44
1:A:3075:LYS:HA	1:A:3078:LEU:HD12	1.99	0.44
1:A:3275:SER:HA	1:A:3278:GLN:OE1	2.16	0.44
3:C:326:VAL:O	3:C:330:GLN:HG3	2.17	0.44
5:G:166:VAL:O	5:G:169:LYS:NZ	2.48	0.44
3:L:353:ARG:HA	3:L:356:PHE:HD2	1.82	0.44
6:R:665:CYS:O	6:R:701:ILE:N	2.41	0.44
1:S:229:SER:HA	1:S:278:HIS:HE1	1.82	0.44
1:S:244:THR:O	1:S:247:GLU:HB3	2.17	0.44
1:S:1167:ASP:HA	1:S:1170:LYS:NZ	2.33	0.44
1:S:1536:ALA:O	1:S:1555:HIS:ND1	2.48	0.44
1:S:1568:ASN:HA	1:S:1600:MET:HE2	1.97	0.44
1:S:2866:ALA:HA	1:S:2869:LEU:HG	2.00	0.44
1:S:3114:TYR:CD1	1:S:3128:LYS:HG2	2.51	0.44
1:S:3578:LEU:HD11	1:S:3681:LYS:HD2	1.99	0.44
2:T:392:LYS:O	2:T:393:GLU:HG3	2.17	0.44
1:A:241:ASP:N	1:A:242:PRO:HD2	2.33	0.44
1:A:655:LEU:O	1:A:658:THR:OG1	2.28	0.44
1:A:997:ASN:HA	1:A:1043:GLN:HE21	1.82	0.44
1:A:1401:ASN:HA	1:A:1404:LYS:HE2	2.00	0.44
1:A:2225:HIS:CD2	1:A:2230:VAL:HG23	2.52	0.44
1:A:3171:ALA:HA	1:A:3179:TRP:CZ2	2.45	0.44
1:A:3493:TRP:HZ3	1:A:3521:ILE:HG12	1.82	0.44
1:A:3812:LEU:HB2	1:A:3925:LEU:HD21	1.99	0.44
2:B:61:ASP:O	2:B:64:ILE:HG22	2.17	0.44
3:C:74:TYR:HD1	3:C:109:ASP:HB3	1.81	0.44
4:D:44:ALA:HB1	4:M:122:ARG:HB2	1.99	0.44
3:L:33:GLN:HA	3:L:36:LYS:HD2	1.99	0.44
3:L:135:PHE:HE1	3:L:164:PHE:CD1	2.34	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:547:ASP:OD1	1:S:547:ASP:N	2.47	0.44
1:S:793:LEU:HD12	1:S:870:LEU:HB2	1.99	0.44
1:S:934:LEU:HD23	1:S:937:MET:SD	2.57	0.44
1:S:1528:LEU:O	1:S:1532:LEU:HD23	2.17	0.44
1:S:2287:PRO:HB3	1:S:2326:ILE:CD1	2.47	0.44
1:S:2402:LEU:HD11	1:S:2437:ASP:HB2	1.99	0.44
1:S:2472:GLN:O	1:S:2476:ILE:HG12	2.17	0.44
2:T:125:GLN:HA	2:T:128:GLN:HG2	2.00	0.44
1:A:294:PHE:CE2	1:A:298:LEU:HD11	2.53	0.44
1:A:486:GLY:O	1:A:490:ILE:HG12	2.17	0.44
1:A:1092:GLU:HG3	1:A:1095:LEU:HG	1.99	0.44
1:A:1428:ILE:HA	1:A:1431:LEU:HB2	1.99	0.44
1:A:1687:HIS:O	1:A:1745:LYS:NZ	2.50	0.44
1:A:2166:SER:OG	1:A:2167:PRO:HD3	2.17	0.44
1:A:3472:ILE:HA	1:A:3479:THR:HG21	1.98	0.44
2:B:350:PHE:N	3:C:461:MET:O	2.35	0.44
3:C:7:LYS:H	3:C:128:GLU:HB2	1.83	0.44
3:C:468:GLU:C	3:C:470:THR:H	2.20	0.44
3:C:496:HIS:CD2	3:C:505:LEU:HA	2.52	0.44
3:L:428:GLU:OE2	2:T:484:GLN:NE2	2.50	0.44
1:S:220:LEU:O	1:S:224:LEU:HG	2.17	0.44
1:S:314:SER:O	1:S:317:GLU:HG3	2.17	0.44
1:S:364:ARG:HG3	1:S:415:GLN:NE2	2.31	0.44
1:S:395:MET:HG3	1:S:413:PHE:HE2	1.82	0.44
1:S:1255:CYS:HA	1:S:1258:ASP:OD2	2.17	0.44
1:S:1576:ASP:O	1:S:1580:LEU:N	2.36	0.44
1:S:1772:HIS:CE1	1:S:1773:VAL:HG23	2.52	0.44
1:S:3493:TRP:CD1	1:S:3521:ILE:HA	2.53	0.44
1:S:3771:MET:HA	1:S:3774:ILE:HD12	2.00	0.44
1:S:3974:MET:HG2	1:S:3976:GLU:H	1.81	0.44
2:T:527:GLU:OE1	2:T:532:PRO:HG3	2.18	0.44
1:A:19:LEU:HD22	1:A:34:LEU:HD23	1.99	0.44
1:A:89:LEU:O	1:A:133:LYS:NZ	2.48	0.44
1:A:100:ILE:H	1:A:100:ILE:HD12	1.83	0.44
1:A:225:LYS:HZ1	1:A:273:ARG:HE	1.66	0.44
1:A:1336:THR:HA	1:A:1339:VAL:HG12	1.99	0.44
1:A:1710:LEU:H	1:A:1710:LEU:HD12	1.83	0.44
1:A:1762:MET:HA	1:A:1765:VAL:HG22	1.99	0.44
1:A:2891:ARG:O	1:A:2894:GLU:HG3	2.17	0.44
2:B:256:LEU:HB2	2:B:273:ILE:HB	1.99	0.44
2:B:261:LEU:O	2:B:268:VAL:HA	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:505:ASP:OD2	3:C:394:ARG:NH1	2.35	0.44
3:C:200:GLN:O	3:C:203:GLU:HG2	2.17	0.44
5:G:3:ARG:NH2	5:G:126:LEU:HD22	2.33	0.44
3:L:256:ASN:ND2	2:T:522:VAL:HG21	2.32	0.44
3:L:458:ILE:HA	2:T:350:PHE:CE2	2.52	0.44
5:Q:115:LYS:HA	5:Q:115:LYS:HD2	1.74	0.44
1:S:63:PHE:HA	1:S:66:LEU:CB	2.48	0.44
1:S:451:PRO:O	1:S:455:LEU:HG	2.17	0.44
1:S:682:TYR:O	1:S:700:LYS:NZ	2.50	0.44
1:S:932:GLU:O	1:S:2773:ARG:NH2	2.51	0.44
1:S:1279:LEU:HA	1:S:1282:LEU:HB2	2.00	0.44
1:S:2246:LYS:HZ3	1:S:2284:ASP:H	1.66	0.44
1:S:2486:ASP:N	1:S:2486:ASP:OD1	2.47	0.44
1:S:3602:ASN:HA	1:S:3606:ILE:HG13	1.98	0.44
2:T:193:LEU:HD12	2:T:198:ILE:HG13	1.98	0.44
2:T:485:GLN:O	2:T:489:ASN:ND2	2.50	0.44
1:A:669:LEU:HA	1:A:672:ILE:HG22	1.99	0.44
1:A:2306:ASN:HA	1:A:2309:PHE:HB2	2.00	0.44
2:B:317:LYS:HD2	3:C:281:ALA:HA	2.00	0.44
3:C:646:ALA:HA	3:C:651:GLU:HG3	2.00	0.44
3:L:237:PHE:HD1	3:L:240:ILE:HD11	1.82	0.44
5:Q:172:LEU:O	5:Q:176:LEU:HG	2.18	0.44
6:R:706:ASN:O	6:R:710:LYS:HG2	2.17	0.44
1:S:460:ALA:HA	1:S:463:LYS:HD2	1.99	0.44
1:S:1384:PHE:HB3	1:S:1386:ILE:HG12	2.00	0.44
1:S:1960:LYS:HD2	1:S:1960:LYS:O	2.18	0.44
1:S:3735:PRO:HB2	1:S:3751:LEU:HD23	1.99	0.44
1:S:3958:LEU:HD12	1:S:3958:LEU:O	2.17	0.44
1:S:3979:LEU:O	1:S:3983:ILE:HG12	2.18	0.44
2:T:468:LYS:HD2	2:T:468:LYS:HA	1.82	0.44
1:A:668:LYS:O	1:A:671:SER:OG	2.29	0.44
1:A:741:ILE:HA	1:A:748:TYR:CE2	2.53	0.44
1:A:890:LYS:HD3	1:A:890:LYS:HA	1.76	0.44
1:A:921:ALA:N	1:A:927:LYS:HZ1	2.16	0.44
1:A:1922:ALA:HB1	1:A:1940:TYR:CE1	2.52	0.44
1:A:3078:LEU:HA	1:A:3082:TYR:HD2	1.82	0.44
1:A:3577:GLN:OE1	1:A:3629:ARG:HB3	2.18	0.44
1:A:3729:MET:HB2	1:A:3735:PRO:HG2	2.00	0.44
2:B:103:TYR:CD2	2:B:135:MET:HE1	2.53	0.44
2:B:463:LYS:HG2	3:C:387:LEU:HD21	1.99	0.44
3:C:8:ALA:HA	3:C:129:LYS:H	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:41:VAL:HG21	4:D:96:LEU:HD13	2.00	0.44
6:I:710:LYS:O	6:I:714:LEU:HG	2.18	0.44
6:I:757:GLU:HG3	6:I:758:TYR:CD2	2.53	0.44
6:R:746:MET:HB2	6:R:750:THR:HB	1.99	0.44
6:R:772:ASN:O	6:R:776:GLU:HG2	2.18	0.44
1:S:153:PHE:CZ	1:S:189:MET:HG3	2.53	0.44
1:S:710:PHE:O	1:S:713:GLU:HG3	2.17	0.44
1:S:2305:ASN:O	1:S:2308:SER:OG	2.26	0.44
1:S:2761:LEU:HA	1:S:2764:LYS:HE2	1.99	0.44
1:S:3581:PRO:HG3	1:S:3632:PHE:HD2	1.81	0.44
1:S:3588:TRP:HB2	1:S:3613:MET:SD	2.58	0.44
1:S:3622:ALA:HB2	1:S:3633:ILE:HD13	1.99	0.44
1:S:3750:PHE:HE1	1:S:3804:GLU:HG3	1.83	0.44
1:S:4006:VAL:HG21	1:S:4009:PRO:HB3	2.00	0.44
2:T:131:PHE:CE1	2:T:135:MET:HG2	2.53	0.44
2:T:348:MET:HE1	2:T:399:ARG:HE	1.83	0.44
1:A:705:ALA:O	1:A:709:LYS:HD3	2.18	0.44
1:A:1356:TRP:O	1:A:1359:LEU:HB2	2.18	0.44
1:A:1611:GLN:HB2	1:A:1613:HIS:HD1	1.83	0.44
1:A:2173:ALA:HA	1:A:2215:LEU:HD21	1.99	0.44
1:A:2335:ASN:OD1	1:A:2336:ILE:N	2.50	0.44
1:A:3809:THR:HA	1:A:3931:ALA:HA	2.00	0.44
2:B:143:LEU:O	2:B:146:VAL:HG22	2.18	0.44
5:G:194:LEU:O	5:G:197:LYS:HG3	2.18	0.44
5:P:176:LEU:HA	6:R:805:TRP:HH2	1.83	0.44
1:S:1023:SER:CA	1:S:1026:ARG:HE	2.24	0.44
1:S:1916:ILE:H	1:S:1916:ILE:HG13	1.64	0.44
1:S:3130:GLN:HB3	1:S:3178:ILE:HG21	2.00	0.44
1:A:23:ASP:OD1	1:A:23:ASP:N	2.50	0.44
1:A:66:LEU:O	1:A:67:VAL:C	2.56	0.44
1:A:203:GLU:O	1:A:207:GLN:HG2	2.18	0.44
1:A:409:GLN:N	1:A:409:GLN:OE1	2.51	0.44
1:A:446:PHE:CG	1:A:530:LEU:HD22	2.53	0.44
1:A:478:CYS:SG	1:A:479:ILE:N	2.91	0.44
1:A:1189:GLU:HB3	1:A:1193:LYS:NZ	2.32	0.44
1:A:1354:GLU:HA	1:A:1357:LYS:HB3	2.00	0.44
1:A:1769:GLU:HB3	1:A:1772:HIS:HB3	1.99	0.44
1:A:2830:ASN:O	1:A:2834:GLN:HG2	2.18	0.44
1:A:2955:SER:O	1:A:2958:LEU:HG	2.18	0.44
1:A:3137:GLU:HG2	1:A:3189:PHE:HE2	1.83	0.44
1:A:3493:TRP:O	1:A:3709:GLY:N	2.42	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3980:MET:SD	1:A:3981:TYR:N	2.91	0.44
3:C:528:ILE:HB	3:C:529:PRO:HD3	1.99	0.44
6:I:682:ILE:HA	6:I:730:PHE:HZ	1.83	0.44
6:I:743:MET:CE	6:I:746:MET:HB3	2.48	0.44
1:S:764:PRO:O	1:S:768:VAL:HG22	2.17	0.44
1:S:1949:ILE:HG23	1:S:2100:LEU:HD22	1.99	0.44
1:S:2892:LEU:HD13	1:S:2895:GLU:OE2	2.17	0.44
1:S:3509:ASP:N	1:S:3509:ASP:OD1	2.50	0.44
1:S:3915:HIS:HE1	1:S:3961:PHE:HA	1.83	0.44
1:A:581:LEU:HA	1:A:620:PHE:CE1	2.52	0.44
1:A:1169:VAL:O	1:A:1173:LEU:HG	2.17	0.44
1:A:2132:LYS:O	1:A:2135:ASN:ND2	2.51	0.44
1:A:3289:ARG:HG3	1:A:3290:SER:N	2.33	0.44
1:A:3410:ILE:O	1:A:3414:MET:HG2	2.18	0.44
1:A:3834:ALA:HB3	1:A:3835:PRO:HD3	1.99	0.44
2:B:89:GLY:O	2:B:139:SER:N	2.51	0.44
2:B:465:ILE:HG23	2:B:518:LEU:HD22	2.00	0.44
2:B:513:ALA:O	2:B:516:LYS:HG3	2.18	0.44
3:C:130:ARG:HB3	3:C:159:ILE:HG12	2.00	0.44
1:S:42:CYS:HA	1:S:88:PHE:CZ	2.53	0.44
1:S:1527:ARG:O	1:S:1530:SER:OG	2.28	0.44
1:S:1605:PHE:O	1:S:1608:ARG:NH2	2.50	0.44
1:S:2271:SER:O	1:S:2274:ILE:HB	2.18	0.44
1:S:3410:ILE:O	1:S:3414:MET:HG2	2.18	0.44
1:S:3588:TRP:CE2	1:S:3640:PHE:HZ	2.35	0.44
1:A:575:ILE:HG13	1:A:576:VAL:N	2.33	0.43
1:A:2196:TRP:NE1	1:A:2200:ALA:HB3	2.33	0.43
1:A:2362:VAL:HG12	1:A:2366:LYS:NZ	2.31	0.43
1:A:2363:CYS:O	1:A:2367:VAL:HG22	2.18	0.43
1:A:2831:ASN:O	1:A:2835:LYS:HG3	2.18	0.43
1:A:3127:THR:HA	1:A:3130:GLN:HG2	1.99	0.43
1:A:3289:ARG:HG3	1:A:3290:SER:H	1.83	0.43
1:A:3588:TRP:CZ3	1:A:3640:PHE:HZ	2.35	0.43
1:A:3657:SER:OG	1:A:3658:ASP:N	2.49	0.43
1:A:3733:ARG:NH2	1:A:3755:GLY:H	2.16	0.43
1:S:348:ILE:HG13	1:S:362:ALA:HB2	2.00	0.43
1:S:651:TYR:O	1:S:655:LEU:HG	2.18	0.43
1:S:935:HIS:HD2	1:S:987:LEU:HD11	1.83	0.43
1:S:1261:LEU:HD21	1:S:1337:VAL:HA	2.00	0.43
1:S:2164:TRP:O	1:S:2167:PRO:HD2	2.18	0.43
1:S:2406:GLU:H	1:S:2406:GLU:HG2	1.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:3413:TYR:HD2	1:S:3453:ALA:HB2	1.82	0.43
1:S:3476:PRO:O	1:S:3480:LEU:HB2	2.17	0.43
2:T:369:TYR:CG	2:T:370:PRO:HD2	2.52	0.43
1:A:746:ARG:O	1:A:750:PRO:HD3	2.18	0.43
1:A:2175:GLU:OE1	1:A:2182:ILE:HG23	2.18	0.43
1:A:2241:LEU:HA	1:A:2244:CYS:SG	2.58	0.43
1:A:2855:VAL:HG23	1:A:2885:GLN:HG3	2.00	0.43
1:A:3354:ASP:N	1:A:3354:ASP:OD1	2.52	0.43
1:A:3676:PRO:HG2	1:A:3726:VAL:HG21	1.99	0.43
2:B:190:ALA:O	2:B:193:LEU:HG	2.19	0.43
3:C:496:HIS:CE1	3:C:503:GLU:HB2	2.53	0.43
3:L:329:GLU:O	3:L:334:LYS:NZ	2.50	0.43
5:P:188:LYS:HA	5:P:191:ILE:HB	2.00	0.43
1:S:1131:ILE:HA	1:S:1134:LEU:HD12	2.00	0.43
1:S:2279:ILE:H	1:S:2279:ILE:HD12	1.83	0.43
1:S:2421:VAL:O	1:S:2425:ARG:HB2	2.18	0.43
1:S:3047:SER:O	1:S:3051:LEU:HG	2.18	0.43
1:S:3177:ASN:OD1	1:S:3178:ILE:N	2.47	0.43
1:S:4010:SER:H	1:S:4038:TRP:HE1	1.65	0.43
2:T:158:GLN:OE1	2:T:158:GLN:N	2.49	0.43
2:T:318:ARG:CB	2:T:329:LEU:O	2.54	0.43
1:A:60:SER:O	1:A:64:GLY:N	2.51	0.43
1:A:935:HIS:CE1	1:A:2773:ARG:HH21	2.37	0.43
1:A:1021:VAL:O	1:A:1026:ARG:NH1	2.51	0.43
1:A:1428:ILE:HD12	1:A:1431:LEU:HD12	1.99	0.43
1:A:1771:GLN:HE22	1:A:1774:MET:HA	1.83	0.43
1:A:1819:PHE:O	1:A:1823:SER:OG	2.36	0.43
1:A:2388:LYS:NZ	2:B:157:VAL:O	2.48	0.43
1:A:3122:HIS:O	1:A:3126:LEU:HG	2.18	0.43
1:A:3319:ASN:OD1	1:A:3322:ALA:N	2.49	0.43
1:A:3519:GLU:HA	1:A:3522:THR:HG22	1.99	0.43
1:A:3588:TRP:HE1	1:A:3609:MET:C	2.18	0.43
1:A:3633:ILE:HG13	1:A:3634:GLN:N	2.33	0.43
2:B:230:ARG:HG3	2:B:232:HIS:N	2.27	0.43
3:C:595:ALA:HB1	3:C:599:ARG:NH2	2.33	0.43
5:H:28:LEU:HD13	5:H:71:ARG:HH12	1.84	0.43
5:P:179:ARG:HD3	6:R:805:TRP:CH2	2.53	0.43
1:S:714:VAL:HG12	1:S:717:LYS:NZ	2.33	0.43
1:S:758:LEU:O	1:S:761:SER:OG	2.29	0.43
1:S:1352:SER:HB3	1:S:1356:TRP:HB2	1.99	0.43
1:S:2522:ARG:HG3	1:S:2561:PHE:CE1	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:3050:LYS:HA	1:S:3050:LYS:HD3	1.76	0.43
1:S:3964:THR:HG22	1:S:3967:PHE:CD2	2.54	0.43
2:T:368:VAL:HG21	2:T:413:LEU:HD11	2.00	0.43
2:T:392:LYS:O	2:T:394:VAL:HG13	2.17	0.43
1:A:275:PHE:HE2	1:A:319:PHE:HB2	1.84	0.43
1:A:575:ILE:O	1:A:579:LEU:HG	2.17	0.43
1:A:974:CYS:HB2	1:A:1024:THR:HG22	2.00	0.43
1:A:1736:PHE:O	1:A:1740:VAL:HG13	2.18	0.43
1:A:1872:GLY:O	1:A:1876:ILE:HG12	2.18	0.43
1:A:2581:LEU:HD23	1:A:2781:PRO:HD2	2.01	0.43
1:A:3244:ASP:OD1	1:A:3245:SER:N	2.51	0.43
1:A:3413:TYR:CB	1:A:3453:ALA:HB2	2.48	0.43
1:A:3503:VAL:HG13	1:A:3536:SER:HB3	2.00	0.43
1:A:3581:PRO:HG3	1:A:3629:ARG:HA	1.98	0.43
1:A:3772:ASN:HD21	1:A:3788:LEU:HB3	1.84	0.43
1:A:3829:LEU:HA	1:A:3833:ARG:HB2	2.00	0.43
2:B:338:LYS:HE2	3:C:486:ARG:HH22	1.82	0.43
2:B:445:LYS:HD3	2:B:445:LYS:HA	1.72	0.43
5:G:179:ARG:NH2	6:I:805:TRP:HB3	2.34	0.43
3:L:226:SER:N	3:L:229:GLU:OE2	2.50	0.43
1:S:727:ALA:HB1	1:S:765:LEU:HD11	1.99	0.43
1:S:784:VAL:HG13	1:S:785:MET:SD	2.58	0.43
1:S:1357:LYS:HG3	1:S:1361:LYS:HZ3	1.84	0.43
1:S:1780:SER:HB2	1:S:1784:ARG:NH1	2.32	0.43
1:S:2435:CYS:O	1:S:2439:ILE:HG12	2.18	0.43
1:S:2571:ASP:HA	1:S:2574:ASN:HB2	2.00	0.43
1:S:3122:HIS:O	1:S:3126:LEU:HG	2.19	0.43
1:A:32:HIS:O	1:A:35:ILE:HG22	2.19	0.43
1:A:473:PRO:HA	1:A:476:ARG:NE	2.34	0.43
1:A:925:GLN:HA	1:A:2769:VAL:HG13	1.99	0.43
1:A:1307:ILE:HG12	1:A:1311:LYS:HD2	2.00	0.43
1:A:1710:LEU:O	1:A:1714:LEU:HG	2.19	0.43
1:A:2255:LEU:HA	1:A:2258:GLU:OE2	2.18	0.43
1:A:2731:ARG:HD3	1:A:2731:ARG:HA	1.68	0.43
1:A:3718:ARG:H	1:A:3743:HIS:CB	2.31	0.43
3:C:342:VAL:HA	3:C:393:VAL:HG12	1.99	0.43
3:L:479:THR:HB	2:T:410:PHE:CD2	2.53	0.43
5:P:191:ILE:HG23	5:P:195:HIS:CE1	2.53	0.43
6:R:727:LEU:O	6:R:731:LYS:NZ	2.52	0.43
6:R:752:GLU:HG3	6:R:756:ARG:NH2	2.33	0.43
1:S:1400:VAL:HG11	1:S:1460:ARG:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:2102:LYS:NZ	1:S:2155:GLU:OE2	2.44	0.43
1:S:2484:TYR:C	1:S:2485:ARG:HD2	2.39	0.43
1:S:3035:PHE:HA	1:S:3038:GLU:HB2	2.00	0.43
1:S:3263:HIS:HB2	1:S:3276:TRP:CZ2	2.54	0.43
1:S:3283:LEU:O	1:S:3287:ARG:HG3	2.19	0.43
2:T:485:GLN:HG3	2:T:489:ASN:HD21	1.83	0.43
1:A:1353:PRO:HD2	1:A:1356:TRP:CZ3	2.54	0.43
1:A:1603:GLN:O	1:A:1603:GLN:NE2	2.52	0.43
1:A:1727:ARG:HH12	1:A:1772:HIS:CB	2.30	0.43
1:A:2310:VAL:HG13	1:A:2316:TYR:CE1	2.53	0.43
1:A:2967:GLU:O	1:A:2971:GLN:HG2	2.18	0.43
1:A:3511:ALA:O	1:A:3514:VAL:HG12	2.19	0.43
1:A:3519:GLU:O	1:A:3523:ASP:HB2	2.18	0.43
2:B:214:SER:HA	2:B:218:ARG:HG3	2.00	0.43
3:L:292:GLU:OE2	2:T:301:ARG:NH1	2.48	0.43
3:L:413:LYS:HD2	3:L:413:LYS:HA	1.88	0.43
3:L:510:GLN:HA	3:L:513:TRP:HD1	1.82	0.43
1:S:382:ASP:N	1:S:382:ASP:OD1	2.49	0.43
1:S:637:LYS:HE2	1:S:641:PHE:HE2	1.83	0.43
1:S:1626:TRP:CE2	1:S:1671:VAL:HG12	2.52	0.43
1:S:1693:VAL:HG11	1:S:1746:PHE:CE1	2.53	0.43
1:S:2090:ARG:HH21	1:S:2092:GLU:HG3	1.84	0.43
1:S:2295:GLN:HE21	1:S:2299:TYR:HA	1.83	0.43
1:S:2526:SER:HA	1:S:2531:LEU:HD12	2.00	0.43
1:S:2936:TYR:OH	1:S:2940:ARG:HB3	2.19	0.43
1:A:709:LYS:HA	1:A:712:LYS:HZ3	1.83	0.43
1:A:785:MET:HA	1:A:788:TYR:OH	2.19	0.43
1:A:1361:LYS:HE3	1:A:1411:TYR:CZ	2.52	0.43
1:A:1386:ILE:HG13	1:A:1387:GLY:H	1.84	0.43
1:A:1802:TYR:O	1:A:1805:PHE:HB3	2.19	0.43
1:A:3326:GLN:O	1:A:3329:LEU:HG	2.19	0.43
5:G:121:GLU:HA	5:G:124:ARG:HG2	2.01	0.43
5:G:161:ARG:NH2	6:I:847:PHE:HB3	2.29	0.43
6:I:719:ASP:HA	6:I:746:MET:HA	2.01	0.43
3:L:76:ASN:ND2	3:L:104:GLN:O	2.50	0.43
6:R:721:VAL:HG13	6:R:742:PHE:CE1	2.54	0.43
1:S:384:MET:HA	1:S:387:GLU:HG3	2.01	0.43
1:S:767:GLU:HA	1:S:770:LEU:HD12	2.01	0.43
1:S:1379:PRO:HB3	1:S:1385:ASN:ND2	2.33	0.43
1:S:1936:ARG:HH11	1:S:1937:ARG:NH1	2.16	0.43
1:S:2223:VAL:HG22	1:S:2231:PHE:CE1	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:3580:ASN:ND2	1:S:3582:GLU:HB2	2.33	0.43
1:S:3591:ASP:O	1:S:3595:GLU:HG2	2.18	0.43
1:S:3834:ALA:HB3	1:S:3835:PRO:HD3	1.99	0.43
1:A:181:LEU:HD13	1:A:234:PHE:HZ	1.84	0.43
1:A:366:TYR:HD2	1:A:384:MET:CE	2.32	0.43
1:A:529:ASP:OD1	1:A:529:ASP:N	2.52	0.43
1:A:1111:LEU:HD12	1:A:1127:CYS:HB2	2.00	0.43
1:A:2295:GLN:HE21	1:A:2299:TYR:N	2.16	0.43
1:A:3045:ILE:HG13	1:A:3046:ARG:NH1	2.33	0.43
1:A:3467:ARG:HD2	1:A:4000:ASN:ND2	2.33	0.43
2:B:90:THR:HG23	2:B:92:LYS:O	2.19	0.43
2:B:143:LEU:HG	2:B:176:HIS:CD2	2.53	0.43
2:B:410:PHE:HB3	2:B:437:LEU:HD12	2.00	0.43
2:B:421:ASP:OD1	2:B:425:ILE:N	2.34	0.43
2:B:466:VAL:O	2:B:470:ARG:HG3	2.18	0.43
3:C:234:LEU:HB3	3:C:237:PHE:HD2	1.84	0.43
3:C:604:GLN:HE21	3:C:605:LYS:HZ2	1.65	0.43
5:H:32:PHE:CD1	5:H:74:LEU:HD11	2.54	0.43
6:I:753:HIS:O	6:I:757:GLU:HG2	2.17	0.43
3:L:129:LYS:HA	3:L:129:LYS:HD2	1.87	0.43
1:S:62:ASP:O	1:S:66:LEU:CB	2.66	0.43
1:S:913:ARG:NH1	1:S:917:LEU:HD11	2.34	0.43
1:S:1339:VAL:O	1:S:1343:GLU:OE1	2.37	0.43
1:S:1697:PRO:HG3	1:S:1749:ALA:O	2.18	0.43
1:S:2196:TRP:CD1	1:S:2199:LEU:HB2	2.54	0.43
1:S:2506:LEU:HB3	1:S:2525:TRP:HZ2	1.84	0.43
1:S:2806:LYS:NZ	1:S:2853:PRO:HA	2.33	0.43
1:S:2892:LEU:HA	1:S:2895:GLU:OE2	2.19	0.43
1:S:2991:LYS:HA	1:S:2994:TRP:CE3	2.54	0.43
1:S:3182:ILE:O	1:S:3186:ARG:HG2	2.18	0.43
1:S:3424:LEU:HD21	1:S:3443:PRO:HG3	2.00	0.43
2:T:441:ASP:N	2:T:441:ASP:OD1	2.52	0.43
1:A:341:PHE:HB3	1:A:345:PHE:CE2	2.54	0.43
1:A:802:THR:HG1	1:A:852:ARG:NH2	2.17	0.43
1:A:3094:ASP:OD1	1:A:3192:LYS:NZ	2.36	0.43
1:A:3330:LEU:HD23	1:A:3384:HIS:CD2	2.54	0.43
1:A:3881:ASP:O	1:A:3885:ARG:HG3	2.18	0.43
1:A:4089:ILE:O	1:A:4091:ALA:N	2.52	0.43
2:B:94:LYS:HD3	2:B:103:TYR:CZ	2.53	0.43
2:B:142:SER:HB3	2:B:145:GLU:HG2	2.01	0.43
3:C:497:ARG:HH11	3:C:501:PRO:HA	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:I:753:HIS:N	6:I:756:ARG:HH21	2.17	0.43
1:S:1596:VAL:O	1:S:1600:MET:HG2	2.19	0.43
1:S:1748:ASP:OD1	1:S:1749:ALA:N	2.52	0.43
1:S:1760:GLU:OE1	1:S:1804:MET:HG2	2.19	0.43
1:S:1851:LEU:O	1:S:1870:LYS:NZ	2.41	0.43
1:S:1876:ILE:HG13	1:S:1877:LEU:HD22	2.01	0.43
1:S:2121:ASP:HA	1:S:2127:LYS:HD3	2.01	0.43
1:S:2274:ILE:HD11	1:S:2306:ASN:ND2	2.34	0.43
1:S:2517:LEU:HA	1:S:2520:ILE:HG22	2.01	0.43
1:S:3037:GLN:O	1:S:3041:LEU:HG	2.18	0.43
2:T:176:HIS:CG	2:T:182:LYS:HE3	2.53	0.43
1:A:307:GLU:HG2	1:A:308:LEU:N	2.33	0.43
1:A:578:LYS:HZ3	1:A:2036:LEU:HA	1.84	0.43
1:A:888:ARG:NH2	1:A:3889:ARG:HH11	2.17	0.43
1:A:1016:GLY:HA3	1:A:1026:ARG:HA	2.01	0.43
1:A:1151:ARG:HH11	1:A:1163:LEU:HB2	1.84	0.43
1:A:1151:ARG:HB2	1:A:1163:LEU:HD12	2.01	0.43
1:A:2937:ASP:O	1:A:2940:ARG:HG2	2.19	0.43
1:A:3177:ASN:OD1	1:A:3177:ASN:N	2.52	0.43
1:A:3476:PRO:HA	1:A:3479:THR:OG1	2.19	0.43
1:A:3494:GLN:HB3	1:A:3709:GLY:N	2.34	0.43
1:A:3880:ALA:HB2	1:A:3965:ARG:NH2	2.34	0.43
2:B:118:GLU:O	2:B:121:GLN:HG2	2.17	0.43
4:D:183:GLU:OE2	4:D:189:GLY:N	2.52	0.43
6:I:654:LYS:HB2	6:I:684:GLU:O	2.19	0.43
6:I:743:MET:HE3	6:I:744:ILE:N	2.33	0.43
3:L:332:LYS:HZ1	3:L:334:LYS:HG3	1.84	0.43
3:L:457:LEU:HD13	3:L:529:PRO:HB2	2.00	0.43
5:P:162:PHE:HA	5:P:165:CYS:SG	2.59	0.43
1:S:125:ILE:N	1:S:126:PRO:HD2	2.34	0.43
1:S:851:ILE:O	1:S:855:VAL:HG23	2.18	0.43
1:S:972:LEU:HB3	1:S:984:TYR:CE2	2.54	0.43
1:S:1104:LEU:O	1:S:1108:MET:HG2	2.19	0.43
1:S:1267:TYR:CE1	1:S:1281:VAL:HG21	2.53	0.43
1:S:2273:GLY:O	1:S:2276:LEU:HB2	2.17	0.43
1:S:2405:VAL:HG22	1:S:2441:LYS:HE3	2.00	0.43
1:S:2451:LEU:HD23	1:S:2455:LEU:HD23	2.00	0.43
1:S:2452:ARG:HE	1:S:2497:GLU:CD	2.22	0.43
1:S:2923:TRP:CZ3	1:S:2942:ILE:HD12	2.54	0.43
1:A:529:ASP:HA	1:A:532:ARG:HG2	2.00	0.42
1:A:629:PHE:O	1:A:632:GLU:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1294:VAL:HA	1:A:1297:PHE:CD2	2.54	0.42
1:A:1389:VAL:HG13	1:A:1391:VAL:HG12	2.00	0.42
1:A:2139:PRO:HB2	1:A:2142:ILE:HG12	2.01	0.42
1:A:3718:ARG:O	1:A:3743:HIS:N	2.51	0.42
3:C:130:ARG:HB3	3:C:159:ILE:HG23	2.01	0.42
3:C:633:MET:HA	3:C:636:ILE:HG12	2.01	0.42
3:L:234:LEU:HD21	3:L:483:PRO:HB3	2.00	0.42
5:Q:180:PHE:HA	5:Q:183:VAL:HG12	2.01	0.42
1:S:110:THR:O	1:S:114:VAL:HG23	2.19	0.42
1:S:118:ASP:O	1:S:122:LYS:HG2	2.19	0.42
1:S:974:CYS:HB3	1:S:1028:PHE:CD2	2.49	0.42
1:S:976:VAL:O	1:S:976:VAL:HG13	2.19	0.42
1:S:1602:ASP:HB2	1:S:1606:ARG:HH21	1.83	0.42
1:S:1620:THR:O	1:S:1623:LEU:HB2	2.18	0.42
1:S:2438:ILE:O	1:S:2442:MET:HG3	2.19	0.42
1:S:3981:TYR:HE2	1:S:4105:LYS:HB3	1.84	0.42
1:A:309:LYS:O	1:A:313:LEU:HG	2.19	0.42
1:A:408:TYR:N	1:A:409:GLN:OE1	2.52	0.42
1:A:648:SER:O	1:A:651:TYR:HB3	2.19	0.42
1:A:1238:GLN:HB2	1:A:1239:PRO:HD3	2.01	0.42
1:A:1278:ALA:O	1:A:1282:LEU:N	2.52	0.42
1:A:1539:SER:HA	1:A:1552:HIS:ND1	2.34	0.42
1:A:2750:GLU:HG3	1:A:2753:ARG:HH11	1.83	0.42
1:A:3007:GLU:O	1:A:3011:LEU:N	2.43	0.42
1:A:3014:CYS:SG	1:A:3043:TYR:HB3	2.59	0.42
1:A:3148:GLN:HE22	1:A:3150:ASN:HB2	1.83	0.42
1:A:3992:ARG:HD2	1:A:3992:ARG:HA	1.85	0.42
1:A:3992:ARG:HH12	1:A:4053:GLY:N	2.16	0.42
2:B:497:LEU:O	6:I:707:ILE:HG13	2.19	0.42
3:C:40:MET:HG2	3:C:44:ARG:NH1	2.34	0.42
3:C:632:PHE:O	3:C:636:ILE:HG23	2.19	0.42
3:C:642:PHE:HD2	3:C:655:PHE:CE1	2.36	0.42
3:L:342:VAL:HA	3:L:393:VAL:HG12	2.01	0.42
3:L:655:PHE:HA	3:L:658:PHE:HB2	2.01	0.42
1:S:344:GLN:O	1:S:348:ILE:HG12	2.18	0.42
1:S:1184:ARG:HH22	1:S:1265:GLU:CB	2.29	0.42
1:S:1769:GLU:O	1:S:1772:HIS:ND1	2.52	0.42
1:S:2174:SER:O	1:S:2174:SER:OG	2.31	0.42
1:S:2281:MET:HE3	1:S:2329:TYR:HD2	1.84	0.42
1:S:2405:VAL:O	1:S:2408:MET:HG2	2.20	0.42
1:S:3547:THR:HG23	1:S:3550:LYS:HD2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:3981:TYR:CE2	1:S:4105:LYS:HB3	2.54	0.42
1:A:1013:ILE:O	1:A:1017:ILE:HB	2.19	0.42
1:A:1403:MET:HA	1:A:1406:LEU:HD12	2.01	0.42
1:A:3090:TYR:HE2	1:A:3102:TYR:CE2	2.37	0.42
1:A:3090:TYR:O	1:A:3095:ASP:N	2.46	0.42
1:A:3443:PRO:HA	1:A:3446:VAL:HG22	2.01	0.42
1:A:3571:PHE:CE2	1:A:3575:LEU:HD11	2.55	0.42
1:A:3966:GLN:HA	1:A:3969:ASN:HB2	2.00	0.42
2:B:35:ARG:HG2	2:B:36:ASP:H	1.83	0.42
2:B:479:GLU:OE1	2:B:484:GLN:HG2	2.19	0.42
2:B:523:ASP:HA	2:B:526:LYS:HB3	2.01	0.42
3:C:406:GLY:HA3	3:C:421:TYR:CE2	2.55	0.42
5:G:122:VAL:O	5:G:126:LEU:HG	2.19	0.42
6:I:876:LYS:HA	6:I:876:LYS:HD3	1.82	0.42
3:L:479:THR:HG21	2:T:397:LEU:HD21	2.01	0.42
3:L:600:VAL:O	3:L:604:GLN:HB3	2.19	0.42
1:S:117:LYS:O	1:S:120:ALA:N	2.39	0.42
1:S:229:SER:HA	1:S:278:HIS:CE1	2.54	0.42
1:S:914:VAL:HG13	1:S:934:LEU:HD21	2.00	0.42
1:S:1871:MET:HE1	1:S:1940:TYR:N	2.34	0.42
1:S:1911:LEU:H	1:S:1911:LEU:HD12	1.84	0.42
1:S:2158:ARG:HD2	1:S:2158:ARG:HA	1.87	0.42
1:S:2748:VAL:O	1:S:2752:LYS:HG2	2.20	0.42
2:T:205:LEU:HD12	2:T:205:LEU:HA	1.86	0.42
1:A:225:LYS:HD2	1:A:270:ALA:HB1	2.00	0.42
1:A:410:MET:N	1:A:411:PRO:HD2	2.34	0.42
1:A:480:SER:HA	1:A:567:GLU:OE2	2.19	0.42
1:A:637:LYS:HD2	1:A:637:LYS:HA	1.74	0.42
1:A:1168:LEU:HA	1:A:1171:TRP:HB3	2.02	0.42
1:A:1367:HIS:O	1:A:1370:ARG:HG2	2.18	0.42
1:A:1827:LEU:HD12	1:A:1828:LEU:N	2.35	0.42
1:A:2318:ALA:O	1:A:2321:GLU:HG2	2.19	0.42
1:A:3239:LYS:O	1:A:3242:MET:HB3	2.19	0.42
1:A:3911:ILE:O	1:A:3915:HIS:CD2	2.73	0.42
1:A:3995:PRO:HG3	1:A:4051:LEU:HB3	2.01	0.42
2:B:303:PHE:CE2	2:B:308:GLY:HA2	2.54	0.42
2:B:330:GLU:H	2:B:333:GLU:HB2	1.84	0.42
5:G:122:VAL:O	5:G:125:GLU:HG2	2.19	0.42
6:I:706:ASN:O	6:I:710:LYS:HG2	2.19	0.42
3:L:492:GLN:O	3:L:495:LEU:HG	2.19	0.42
6:R:816:HIS:H	6:R:850:ALA:C	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:23:ASP:HB3	1:S:34:LEU:HD11	2.01	0.42
1:S:53:LEU:O	1:S:57:LEU:HG	2.19	0.42
1:S:62:ASP:O	1:S:66:LEU:N	2.49	0.42
1:S:301:CYS:HA	1:S:309:LYS:HA	2.00	0.42
1:S:571:SER:O	1:S:575:ILE:HG12	2.19	0.42
1:S:913:ARG:HH11	1:S:917:LEU:HD11	1.84	0.42
1:S:1102:GLU:H	1:S:1102:GLU:CD	2.21	0.42
1:S:3487:ILE:HD11	1:S:3516:HIS:HB2	2.01	0.42
2:T:219:ASP:N	2:T:219:ASP:OD1	2.48	0.42
1:A:242:PRO:HB2	1:A:246:ARG:NH2	2.34	0.42
1:A:1418:HIS:HA	1:A:1421:GLU:HB3	2.00	0.42
1:A:1448:LEU:HD23	1:A:1448:LEU:HA	1.90	0.42
1:A:1611:GLN:HB2	1:A:1613:HIS:ND1	2.35	0.42
1:A:2090:ARG:HD2	1:A:2090:ARG:HA	1.79	0.42
1:A:2554:PHE:CD2	1:A:2854:PHE:HE1	2.36	0.42
1:A:2722:ARG:HD2	1:A:2722:ARG:N	2.35	0.42
1:A:3101:TYR:O	1:A:3104:GLN:NE2	2.53	0.42
2:B:94:LYS:N	2:B:103:TYR:HA	2.34	0.42
2:B:219:ASP:N	2:B:219:ASP:OD1	2.53	0.42
2:B:418:GLU:OE1	3:C:437:SER:HB2	2.19	0.42
3:L:37:VAL:O	3:L:40:MET:HG3	2.19	0.42
3:L:595:ALA:HA	3:L:598:PHE:CZ	2.53	0.42
1:S:385:TYR:O	1:S:388:LEU:HB2	2.19	0.42
1:S:1087:ARG:HD3	1:S:1090:ARG:HH21	1.85	0.42
1:S:1671:VAL:O	1:S:1675:TYR:N	2.38	0.42
1:S:2145:PHE:O	1:S:2149:LEU:HD23	2.20	0.42
1:S:2409:THR:OG1	1:S:2410:GLU:N	2.52	0.42
1:S:3059:GLN:HB3	1:S:3062:LEU:HD23	2.02	0.42
1:S:3078:LEU:HD23	1:S:3082:TYR:CD2	2.54	0.42
2:T:269:ILE:HG23	2:T:378:SER:HB3	2.00	0.42
1:A:338:LEU:HD12	1:A:339:GLN:HG3	2.01	0.42
1:A:397:LEU:O	1:A:399:GLN:NE2	2.53	0.42
1:A:455:LEU:HB3	1:A:459:ARG:HH21	1.84	0.42
1:A:525:LYS:O	1:A:528:VAL:HG22	2.19	0.42
1:A:736:LEU:HB3	1:A:740:ILE:CG2	2.49	0.42
1:A:1115:HIS:CE1	1:A:1180:GLN:HA	2.54	0.42
1:A:2142:ILE:HA	1:A:2145:PHE:CD2	2.54	0.42
1:A:2269:ASP:N	1:A:2269:ASP:OD1	2.51	0.42
1:A:2925:GLU:HA	1:A:2928:LYS:HG3	2.01	0.42
1:A:3589:SER:HA	1:A:3592:VAL:HG12	2.02	0.42
1:A:3603:LYS:HE3	1:A:3603:LYS:HB3	1.91	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:153:SER:O	3:C:156:LYS:HG2	2.19	0.42
3:L:205:LEU:HG	3:L:209:LYS:HD2	2.01	0.42
6:R:825:VAL:HG23	6:R:878:PHE:HZ	1.85	0.42
1:S:374:LYS:NZ	1:S:425:ASP:OD1	2.47	0.42
1:S:628:GLU:HA	1:S:631:ARG:CD	2.49	0.42
1:S:1233:SER:HA	1:S:1236:LEU:HB2	2.01	0.42
1:S:2306:ASN:HA	1:S:2309:PHE:CD2	2.55	0.42
1:S:3053:LEU:HD23	1:S:3092:LEU:HD22	2.00	0.42
1:S:3909:ALA:HB2	1:S:3980:MET:SD	2.59	0.42
1:A:160:LEU:HD11	1:A:178:LEU:HD21	2.02	0.42
1:A:461:ILE:O	1:A:464:VAL:HG22	2.20	0.42
1:A:720:GLN:HE21	1:A:1122:GLY:H	1.68	0.42
1:A:913:ARG:HA	1:A:916:GLU:OE2	2.19	0.42
1:A:1086:TYR:HA	1:A:1089:PHE:HB3	2.02	0.42
1:A:1877:LEU:HB3	1:A:1881:TYR:HE2	1.84	0.42
1:A:2182:ILE:O	1:A:2186:VAL:HG23	2.20	0.42
1:A:2247:ASP:OD1	1:A:2247:ASP:N	2.51	0.42
1:A:2376:ASP:HB3	1:A:2404:ARG:NH2	2.34	0.42
1:A:2531:LEU:HD23	1:A:2531:LEU:HA	1.89	0.42
1:A:3493:TRP:CZ3	1:A:3521:ILE:HG12	2.55	0.42
1:A:3867:THR:HG23	1:A:4118:GLY:N	2.35	0.42
2:B:38:LEU:HD11	2:B:165:ARG:HH21	1.85	0.42
2:B:288:LEU:HA	2:B:295:PRO:HA	2.02	0.42
2:B:388:LYS:HE3	3:C:451:LEU:HB3	2.01	0.42
3:C:347:LYS:NZ	3:C:388:ASP:HB3	2.35	0.42
3:C:493:CYS:HB3	3:C:505:LEU:HD22	2.01	0.42
5:G:183:VAL:HG21	6:I:805:TRP:CZ2	2.55	0.42
3:L:408:ALA:HB1	3:L:419:LEU:HD21	2.02	0.42
3:L:643:ARG:HD2	3:L:655:PHE:CD2	2.53	0.42
1:S:303:HIS:O	1:S:309:LYS:NZ	2.31	0.42
1:S:389:ILE:O	1:S:393:LYS:HG2	2.20	0.42
1:S:980:THR:O	1:S:983:LEU:HG	2.19	0.42
1:S:1782:PHE:HD1	1:S:1785:ILE:HD11	1.84	0.42
1:S:1961:PHE:HB2	1:S:2125:TRP:CZ2	2.54	0.42
1:S:2227:LYS:HE2	1:S:2227:LYS:HB2	1.90	0.42
1:S:2825:THR:O	1:S:2829:LYS:HG3	2.19	0.42
1:S:3179:TRP:CE3	1:S:3242:MET:HG3	2.53	0.42
1:S:3235:LYS:HB3	1:S:3239:LYS:NZ	2.34	0.42
2:T:112:GLY:O	2:T:116:ILE:HG12	2.20	0.42
2:T:194:ARG:HA	2:T:198:ILE:O	2.19	0.42
2:T:332:GLU:HG2	2:T:333:GLU:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:304:THR:OG1	1:A:305:ASN:N	2.52	0.42
1:A:571:SER:HA	1:A:574:LYS:HG2	2.02	0.42
1:A:629:PHE:O	1:A:633:ILE:HG12	2.20	0.42
1:A:1019:ASP:OD1	1:A:1019:ASP:N	2.52	0.42
1:A:1177:GLY:H	1:A:1184:ARG:HG3	1.85	0.42
1:A:1184:ARG:HH12	1:A:1265:GLU:HG3	1.84	0.42
1:A:2165:LEU:HD11	1:A:2200:ALA:HB1	2.00	0.42
1:A:2365:ASN:HD21	1:A:2399:GLU:CD	2.22	0.42
1:A:2587:GLN:O	1:A:2777:HIS:N	2.52	0.42
1:A:2840:PHE:HA	1:A:2843:PHE:CD2	2.55	0.42
1:A:3137:GLU:O	1:A:3140:GLU:HG2	2.20	0.42
1:A:3574:ALA:O	1:A:3578:LEU:HG	2.19	0.42
1:A:3980:MET:HE3	1:A:3980:MET:H	1.84	0.42
2:B:490:LEU:HG	3:C:316:TYR:CE2	2.54	0.42
5:G:150:ARG:O	5:G:153:ARG:HG2	2.19	0.42
3:L:66:ASN:OD1	3:L:69:SER:HB2	2.20	0.42
6:R:754:PHE:O	6:R:758:TYR:N	2.43	0.42
1:S:87:LYS:HE2	1:S:91:ILE:HD13	2.00	0.42
1:S:446:PHE:CG	1:S:530:LEU:HD22	2.55	0.42
1:S:801:LYS:NZ	1:S:3125:ARG:HH12	2.17	0.42
1:S:887:ASP:OD1	1:S:960:GLN:NE2	2.52	0.42
1:S:890:LYS:HD3	1:S:890:LYS:HA	1.81	0.42
1:S:1019:ASP:OD1	1:S:1026:ARG:HD2	2.19	0.42
1:S:1211:VAL:HG12	1:S:1219:PHE:HZ	1.84	0.42
1:S:1527:ARG:O	1:S:1531:LEU:HG	2.19	0.42
1:S:1750:LEU:HD13	1:S:1758:LEU:HB2	2.02	0.42
1:S:2120:ARG:HD3	1:S:2120:ARG:HA	1.79	0.42
1:S:2950:LYS:HB3	1:S:2952:ILE:HG22	2.01	0.42
1:S:3134:ALA:O	1:S:3138:ILE:HG22	2.20	0.42
1:S:3263:HIS:HB2	1:S:3276:TRP:CH2	2.54	0.42
2:T:60:PHE:O	2:T:63:SER:OG	2.31	0.42
2:T:174:ASN:O	2:T:177:GLY:N	2.53	0.42
2:T:264:ASN:OD1	2:T:265:LYS:N	2.48	0.42
1:A:893:SER:N	1:A:944:LYS:HZ2	2.17	0.42
1:A:1151:ARG:NH1	1:A:1163:LEU:O	2.48	0.42
1:A:1393:ALA:O	1:A:1396:PRO:HD2	2.19	0.42
1:A:1525:CYS:O	1:A:1528:LEU:HG	2.19	0.42
1:A:1835:ALA:HA	1:A:1838:GLU:OE2	2.20	0.42
1:A:1921:ASP:OD1	1:A:1921:ASP:N	2.50	0.42
1:A:2762:LYS:HA	1:A:2765:GLN:NE2	2.35	0.42
2:B:87:PHE:HE2	2:B:105:LEU:HD22	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:529:PRO:O	3:C:533:ILE:HG12	2.19	0.42
6:I:813:PHE:HA	6:I:850:ALA:H	1.85	0.42
3:L:98:ILE:O	3:L:99:GLN:NE2	2.53	0.42
6:R:797:ALA:HB1	6:R:801:TYR:CZ	2.54	0.42
1:S:90:CYS:SG	1:S:133:LYS:HB2	2.60	0.42
1:S:412:SER:O	1:S:415:GLN:HG3	2.20	0.42
1:S:526:ASP:N	1:S:526:ASP:OD1	2.52	0.42
1:S:1458:LEU:HD11	1:S:1466:ASN:HD21	1.85	0.42
1:S:2555:LEU:HD11	1:S:2854:PHE:HD1	1.85	0.42
1:S:3299:THR:HG23	1:S:3299:THR:O	2.20	0.42
2:T:100:LYS:HA	2:T:100:LYS:HD3	1.86	0.42
1:A:749:VAL:O	1:A:753:GLN:HG2	2.20	0.42
1:A:1444:ASP:N	1:A:1444:ASP:OD1	2.51	0.42
1:A:1506:SER:HA	1:A:1509:GLN:HE21	1.85	0.42
1:A:1742:CYS:HA	1:A:1745:LYS:HD2	2.02	0.42
1:A:2466:SER:N	1:A:2470:ARG:HH21	2.18	0.42
1:A:2517:LEU:HA	1:A:2520:ILE:HG22	2.02	0.42
1:A:2863:CYS:HB2	1:A:2895:GLU:OE2	2.20	0.42
1:A:3130:GLN:NE2	1:A:3174:ASP:OD1	2.41	0.42
1:A:3588:TRP:CD1	1:A:3613:MET:HB2	2.55	0.42
1:A:3620:PRO:HB3	1:A:3638:LYS:NZ	2.35	0.42
2:B:75:ILE:HG21	3:C:316:TYR:CE1	2.55	0.42
2:B:92:LYS:HE2	2:B:135:MET:SD	2.60	0.42
2:B:260:LYS:NZ	2:B:270:SER:HB3	2.35	0.42
3:C:639:ILE:HD13	3:C:639:ILE:HA	1.93	0.42
3:C:674:PHE:HD2	3:C:675:TRP:CD2	2.37	0.42
3:L:332:LYS:HZ2	3:L:334:LYS:HA	1.83	0.42
5:Q:3:ARG:NH1	5:Q:21:GLN:O	2.53	0.42
1:S:637:LYS:HD2	1:S:637:LYS:HA	1.86	0.42
1:S:669:LEU:HD12	1:S:670:LEU:N	2.35	0.42
1:S:1651:LYS:O	1:S:1654:GLN:HG3	2.20	0.42
1:S:2327:LEU:HG	1:S:2371:PHE:CG	2.55	0.42
1:S:2372:PRO:HB3	1:S:2403:CYS:O	2.20	0.42
1:S:2534:ASN:HB3	1:S:2537:ASP:HB2	2.02	0.42
1:S:3137:GLU:HA	1:S:3140:GLU:OE2	2.19	0.42
1:S:3413:TYR:CD1	1:S:3449:LYS:HB3	2.55	0.42
1:S:3956:PRO:HG2	1:S:4121:TRP:HB2	2.02	0.42
2:T:174:ASN:N	2:T:175:PRO:HD3	2.35	0.42
1:A:31:GLY:HA3	1:A:77:GLU:HB2	2.01	0.41
1:A:740:ILE:HG22	1:A:741:ILE:HD12	2.02	0.41
1:A:1479:VAL:HG21	1:A:1518:ALA:HA	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1803:GLU:HA	1:A:1806:ARG:CZ	2.49	0.41
1:A:3150:ASN:ND2	1:A:3197:LEU:HD13	2.35	0.41
1:A:3568:ILE:H	1:A:3568:ILE:HD12	1.85	0.41
2:B:57:LEU:HB3	2:B:61:ASP:CB	2.50	0.41
2:B:211:PHE:N	2:B:231:VAL:O	2.53	0.41
5:G:20:LEU:HD13	5:G:34:ILE:HD13	2.02	0.41
5:H:21:GLN:HE21	5:H:126:LEU:HG	1.85	0.41
6:I:810:LEU:HB3	6:I:848:HIS:HB3	2.02	0.41
3:L:461:MET:HA	3:L:522:VAL:HG13	2.01	0.41
3:L:686:ILE:HD11	3:L:703:LYS:HA	2.02	0.41
1:S:116:THR:HG21	1:S:155:LYS:HZ3	1.84	0.41
1:S:286:LEU:HD13	1:S:319:PHE:CE1	2.55	0.41
1:S:1280:GLN:O	1:S:1284:THR:HB	2.20	0.41
1:S:1780:SER:CB	1:S:1784:ARG:HH12	2.33	0.41
1:S:2169:LEU:HD21	1:S:2211:LEU:HB2	2.02	0.41
1:S:2514:ASN:HB3	1:S:2517:LEU:HD12	2.01	0.41
1:S:3232:ARG:HA	1:S:3235:LYS:HE2	2.02	0.41
1:S:3300:VAL:HG13	1:S:3300:VAL:O	2.20	0.41
1:S:3575:LEU:HD12	1:S:3752:VAL:HG11	2.02	0.41
1:A:40:GLN:OE1	1:A:2427:ARG:NE	2.47	0.41
1:A:655:LEU:O	1:A:659:ARG:NH1	2.52	0.41
1:A:1438:GLY:O	1:A:1445:ARG:NH2	2.33	0.41
1:A:2168:LEU:HB3	1:A:2193:ILE:HD11	2.01	0.41
1:A:2237:ILE:HD13	1:A:2237:ILE:HA	1.90	0.41
1:A:2358:ASP:O	1:A:2362:VAL:HG23	2.20	0.41
1:A:2750:GLU:O	1:A:2753:ARG:HG2	2.21	0.41
1:A:3052:LEU:HD21	1:A:3058:ASP:OD1	2.21	0.41
1:A:3997:LEU:HA	1:A:4000:ASN:HD22	1.84	0.41
2:B:166:ILE:HD13	2:B:166:ILE:HA	1.92	0.41
2:B:288:LEU:N	3:C:311:ILE:O	2.44	0.41
2:B:341:ASP:OD1	2:B:341:ASP:N	2.52	0.41
2:B:355:LEU:HD11	3:C:473:LEU:HB3	2.01	0.41
3:C:336:GLU:H	3:C:336:GLU:CD	2.24	0.41
3:C:374:ALA:O	3:C:377:LEU:HG	2.20	0.41
4:D:7:PRO:HB3	4:D:77:ARG:HG3	2.02	0.41
5:H:181:ILE:HD13	5:H:181:ILE:HA	1.95	0.41
3:L:291:LYS:HE2	2:T:302:THR:HG22	2.02	0.41
3:L:446:PRO:HB3	2:T:384:ALA:HB2	2.03	0.41
3:L:457:LEU:HD11	3:L:530:LEU:HG	2.01	0.41
5:P:97:PHE:HZ	5:P:108:LEU:HD22	1.85	0.41
1:S:58:VAL:HG21	1:S:3098:ARG:HE	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:89:LEU:C	1:S:133:LYS:HZ1	2.24	0.41
1:S:461:ILE:O	1:S:464:VAL:HG22	2.20	0.41
1:S:614:PRO:HB3	1:S:620:PHE:CE1	2.55	0.41
1:S:1133:HIS:O	1:S:1137:ILE:HG12	2.20	0.41
1:S:1298:LEU:HG	1:S:1367:HIS:CE1	2.55	0.41
1:S:1452:VAL:HA	1:S:1517:LEU:HD11	2.03	0.41
1:S:1611:GLN:HB2	1:S:1613:HIS:HD1	1.85	0.41
1:S:2246:LYS:NZ	1:S:2284:ASP:OD1	2.41	0.41
1:S:3277:VAL:HG22	1:S:3306:LEU:CD2	2.50	0.41
1:S:3300:VAL:HG13	1:S:3303:THR:HA	2.02	0.41
1:S:3988:LEU:HA	1:S:3991:PHE:CD2	2.55	0.41
2:T:202:LEU:HD11	2:T:211:PHE:HE1	1.85	0.41
1:A:168:ASP:OD2	1:A:170:VAL:HG22	2.20	0.41
1:A:1787:ARG:HE	1:A:1830:HIS:HE1	1.68	0.41
1:A:2570:PRO:O	1:A:2573:PRO:HD2	2.20	0.41
1:A:3088:LEU:HD23	1:A:3138:ILE:HD12	2.02	0.41
1:A:3090:TYR:O	1:A:3094:ASP:N	2.53	0.41
1:A:3100:LYS:HA	1:A:3103:ILE:HG22	2.02	0.41
1:A:3103:ILE:HD11	1:A:3135:LEU:HA	2.03	0.41
1:A:3183:ILE:HD12	1:A:3238:MET:HB3	2.01	0.41
1:A:3457:ASN:N	1:A:3457:ASN:OD1	2.53	0.41
1:A:3483:MET:SD	1:A:3511:ALA:HB1	2.60	0.41
1:A:3875:GLU:HB2	1:A:3965:ARG:HE	1.84	0.41
1:A:3998:LEU:HD21	1:A:4051:LEU:HG	2.02	0.41
2:B:154:PHE:O	2:B:157:VAL:HG12	2.19	0.41
2:B:403:ARG:HG2	2:B:406:ILE:HD12	2.01	0.41
3:C:94:ILE:HA	3:C:98:ILE:HD13	2.01	0.41
3:C:142:PHE:HZ	3:C:203:GLU:HG3	1.85	0.41
6:I:722:LYS:HD2	6:I:722:LYS:HA	1.86	0.41
6:I:810:LEU:HD13	6:I:847:PHE:CE2	2.55	0.41
3:L:169:LEU:HD22	3:L:224:ILE:O	2.19	0.41
1:S:697:ASP:HB2	1:S:700:LYS:HG3	2.03	0.41
1:S:893:SER:H	1:S:944:LYS:NZ	2.18	0.41
1:S:966:PHE:HB2	1:S:1011:GLU:OE1	2.21	0.41
1:S:1793:THR:O	1:S:1797:LEU:HD13	2.20	0.41
1:S:2121:ASP:OD1	1:S:2121:ASP:N	2.53	0.41
1:S:2138:VAL:HG13	1:S:2143:ARG:HG2	2.01	0.41
1:S:2206:PRO:HA	1:S:2209:GLU:OE2	2.20	0.41
1:S:2379:MET:HA	1:S:2382:VAL:HG12	2.02	0.41
1:S:2569:SER:HB3	1:S:2572:TYR:HB2	2.01	0.41
1:S:2760:GLU:HG2	1:S:2761:LEU:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:2881:LEU:HA	1:S:2886:GLN:OE1	2.19	0.41
1:S:3530:VAL:HG12	1:S:3562:LEU:HD22	2.02	0.41
2:T:71:TYR:CD1	2:T:83:LEU:HD13	2.55	0.41
1:A:709:LYS:HA	1:A:712:LYS:NZ	2.36	0.41
1:A:737:PRO:O	1:A:740:ILE:HG22	2.21	0.41
1:A:860:GLY:HA3	1:A:3136:THR:CB	2.51	0.41
1:A:903:PRO:HG3	1:A:2816:ILE:HD13	2.02	0.41
1:A:1307:ILE:HD12	1:A:1307:ILE:HA	1.91	0.41
1:A:1728:GLU:HG3	1:A:1729:PHE:CD1	2.55	0.41
1:A:1759:LEU:HD12	1:A:1797:LEU:HD22	2.01	0.41
1:A:2304:VAL:O	1:A:2307:MET:HB2	2.19	0.41
1:A:2380:ASN:N	1:A:2380:ASN:OD1	2.52	0.41
1:A:3392:ALA:HB1	1:A:3409:VAL:HA	2.01	0.41
1:A:3508:LYS:O	1:A:3551:ASN:ND2	2.54	0.41
2:B:289:TYR:HD2	2:B:292:THR:H	1.68	0.41
2:B:463:LYS:HA	3:C:387:LEU:HD11	2.02	0.41
3:C:43:GLN:HE21	3:C:495:LEU:HB2	1.84	0.41
3:L:327:ASP:O	3:L:330:GLN:HG3	2.20	0.41
3:L:640:ARG:NH1	3:L:682:GLY:HA2	2.35	0.41
4:M:42:THR:HB	4:M:47:LEU:HD12	2.01	0.41
6:R:812:MET:O	6:R:850:ALA:HB3	2.20	0.41
1:S:386:VAL:HG13	1:S:431:TYR:OH	2.21	0.41
1:S:1069:HIS:CE1	1:S:3745:GLU:HG2	2.56	0.41
1:S:1172:LEU:HD11	1:S:1187:SER:HB2	2.02	0.41
1:S:1489:LYS:HD2	1:S:1492:ALA:HB3	2.02	0.41
1:S:1565:GLU:HG2	1:S:1566:THR:N	2.36	0.41
1:S:3811:THR:HA	1:S:3929:MET:HA	2.02	0.41
1:A:38:LEU:HD11	1:A:85:ILE:CG1	2.46	0.41
1:A:451:PRO:HA	1:A:454:GLN:NE2	2.36	0.41
1:A:584:GLU:C	1:A:613:HIS:HB3	2.40	0.41
1:A:1115:HIS:CD2	1:A:1182:GLU:H	2.38	0.41
1:A:1357:LYS:HG3	1:A:1411:TYR:OH	2.21	0.41
1:A:1761:LEU:O	1:A:1764:GLU:HG3	2.21	0.41
1:A:3620:PRO:HB3	1:A:3638:LYS:HZ2	1.85	0.41
2:B:109:ASP:OD1	2:B:110:ASN:N	2.53	0.41
2:B:318:ARG:HB3	3:C:276:TRP:CE3	2.55	0.41
2:B:525:PHE:HA	2:B:528:LEU:HD12	2.03	0.41
3:C:297:LEU:HB3	3:C:299:ASP:OD1	2.19	0.41
3:C:365:PHE:CE2	3:C:418:CYS:HB3	2.55	0.41
3:C:443:LYS:HE3	3:C:443:LYS:HB2	1.90	0.41
4:D:194:LYS:HD3	4:D:195:PRO:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:183:VAL:HG21	6:I:805:TRP:HZ2	1.86	0.41
6:I:668:SER:O	6:I:703:GLY:N	2.53	0.41
6:I:841:LYS:HD3	6:I:867:GLU:H	1.84	0.41
5:P:61:MET:HB2	5:P:65:LYS:NZ	2.35	0.41
1:S:157:TYR:O	1:S:160:LEU:HG	2.21	0.41
1:S:682:TYR:CZ	1:S:700:LYS:HG2	2.55	0.41
1:S:709:LYS:HB2	1:S:709:LYS:HE3	1.89	0.41
1:S:1184:ARG:HH21	1:S:1262:ALA:HA	1.84	0.41
1:S:1278:ALA:HB3	1:S:1356:TRP:CD1	2.55	0.41
1:S:1466:ASN:OD1	1:S:1466:ASN:N	2.53	0.41
1:S:1761:LEU:O	1:S:1764:GLU:HG3	2.20	0.41
1:S:1844:VAL:O	1:S:1848:ILE:HG13	2.21	0.41
1:S:2168:LEU:O	1:S:2172:ALA:N	2.39	0.41
1:S:2505:VAL:O	1:S:2509:GLY:N	2.49	0.41
1:S:3137:GLU:HA	1:S:3140:GLU:CD	2.40	0.41
1:S:3838:GLU:O	1:S:3842:TRP:HB2	2.20	0.41
1:A:327:VAL:HG13	1:A:333:MET:HB2	2.02	0.41
1:A:741:ILE:HG23	1:A:748:TYR:CD2	2.47	0.41
1:A:924:ARG:NH2	1:A:2766:ASP:O	2.53	0.41
1:A:1133:HIS:O	1:A:1137:ILE:HG12	2.20	0.41
1:A:1816:ARG:NE	3:C:625:ASP:OD1	2.51	0.41
1:A:2233:HIS:CE1	1:A:2728:LEU:HA	2.56	0.41
1:A:2339:GLU:HA	1:A:2342:CYS:SG	2.60	0.41
1:A:2750:GLU:HA	1:A:2753:ARG:HG2	2.02	0.41
1:A:2981:TRP:CD1	1:A:2984:GLY:HA2	2.54	0.41
1:A:3592:VAL:N	1:A:3609:MET:HE1	2.36	0.41
1:A:4083:GLY:HA3	1:A:4088:ASN:HB3	2.02	0.41
1:A:4125:GLU:HG3	1:A:4128:MET:HB2	2.03	0.41
3:C:45:GLN:HA	3:C:50:ASN:ND2	2.35	0.41
3:C:477:PHE:CE1	3:C:518:PRO:HA	2.56	0.41
3:C:633:MET:O	3:C:636:ILE:HG12	2.20	0.41
5:G:159:GLN:OE1	5:H:158:VAL:HG21	2.21	0.41
6:I:878:PHE:O	6:I:881:THR:OG1	2.26	0.41
3:L:523:THR:HG22	3:L:527:GLN:NE2	2.35	0.41
1:S:112:THR:OG1	1:S:155:LYS:NZ	2.53	0.41
1:S:907:LEU:HA	1:S:910:PHE:HD2	1.85	0.41
1:S:1106:ILE:O	1:S:1109:GLU:HG3	2.21	0.41
1:S:1253:THR:O	1:S:1257:LEU:HG	2.20	0.41
1:S:1601:LEU:HD13	1:S:1651:LYS:HB3	2.02	0.41
1:S:2106:ARG:HA	1:S:2106:ARG:CZ	2.50	0.41
1:S:2427:ARG:HH21	1:S:2464:HIS:CE1	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:3078:LEU:HD23	1:S:3082:TYR:HD2	1.85	0.41
1:S:3104:GLN:NE2	1:S:3105:ASN:OD1	2.53	0.41
1:S:3118:ASP:OD1	1:S:3119:VAL:N	2.54	0.41
1:S:3380:ARG:O	1:S:3384:HIS:ND1	2.54	0.41
1:S:3744:ASP:N	1:S:3744:ASP:OD1	2.49	0.41
2:T:165:ARG:HA	2:T:199:PHE:O	2.20	0.41
1:A:801:LYS:HZ2	1:A:3115:SER:HA	1.86	0.41
1:A:984:TYR:O	1:A:988:VAL:HG13	2.21	0.41
1:A:996:THR:HG23	1:A:1043:GLN:NE2	2.36	0.41
1:A:1166:LEU:O	1:A:1170:LYS:HG2	2.21	0.41
1:A:1827:LEU:O	1:A:1831:CYS:N	2.53	0.41
1:A:1839:PHE:CE2	1:A:1843:ILE:HD13	2.56	0.41
1:A:2332:GLU:HB2	1:A:2334:LYS:HZ1	1.86	0.41
1:A:2377:ARG:HB2	1:A:2378:PHE:CE2	2.55	0.41
1:A:2930:TYR:HB2	1:A:2939:LEU:HD21	2.02	0.41
1:A:3151:LEU:H	1:A:3151:LEU:HD23	1.86	0.41
1:A:3234:CYS:O	1:A:3238:MET:HG2	2.21	0.41
1:A:3321:LEU:HA	1:A:3324:ARG:HE	1.84	0.41
1:A:3390:GLN:O	1:A:3394:GLU:HG2	2.20	0.41
1:A:3552:LYS:HA	1:A:3552:LYS:HD3	1.88	0.41
1:A:3959:MET:CE	1:A:4124:TRP:HE1	2.33	0.41
2:B:203:MET:SD	2:B:239:LEU:HG	2.61	0.41
2:B:234:GLU:HG2	2:B:236:SER:H	1.85	0.41
2:B:303:PHE:HB2	2:B:309:GLY:O	2.20	0.41
5:G:70:LEU:HD12	5:G:70:LEU:HA	1.88	0.41
3:L:333:TYR:OH	2:T:505:ASP:OD2	2.35	0.41
1:S:104:SER:O	1:S:108:LYS:N	2.38	0.41
1:S:1582:LEU:HD12	1:S:1593:VAL:HG12	2.02	0.41
1:S:2168:LEU:HB3	1:S:2193:ILE:HD11	2.02	0.41
1:S:2927:ALA:O	1:S:2931:ARG:HG2	2.21	0.41
2:T:468:LYS:HE2	2:T:517:ARG:HB3	2.02	0.41
2:T:469:LEU:HG	2:T:514:MET:SD	2.61	0.41
1:A:586:GLN:HB2	1:A:613:HIS:ND1	2.36	0.41
1:A:990:GLN:HB3	1:A:2781:PRO:CD	2.47	0.41
1:A:1537:VAL:HA	1:A:1554:SER:HA	2.01	0.41
1:A:1565:GLU:HG2	1:A:1566:THR:N	2.35	0.41
1:A:1638:PRO:O	1:A:1641:THR:OG1	2.30	0.41
1:A:1711:ARG:O	1:A:1714:LEU:HB2	2.20	0.41
1:A:1770:GLN:NE2	1:A:1775:GLU:OE2	2.53	0.41
1:A:2185:MET:O	1:A:2189:ILE:HG12	2.20	0.41
1:A:3603:LYS:NZ	1:A:3647:GLY:H	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3763:ARG:NH1	1:A:4007:LYS:HA	2.36	0.41
2:B:131:PHE:O	2:B:135:MET:N	2.52	0.41
3:C:282:LYS:HB2	3:C:282:LYS:HE2	1.88	0.41
6:I:729:CYS:SG	6:I:736:VAL:N	2.87	0.41
3:L:207:ILE:O	3:L:211:VAL:HG23	2.21	0.41
3:L:332:LYS:HG2	2:T:486:HIS:HE1	1.85	0.41
3:L:343:LEU:N	3:L:392:ILE:O	2.43	0.41
6:R:731:LYS:HA	6:R:731:LYS:HD3	1.93	0.41
1:S:146:GLU:CD	1:S:146:GLU:H	2.24	0.41
1:S:297:LEU:HB3	1:S:316:LEU:HD12	2.02	0.41
1:S:384:MET:O	1:S:387:GLU:HG3	2.21	0.41
1:S:452:LYS:HG3	1:S:453:MET:HE3	2.02	0.41
1:S:853:ILE:HG13	1:S:854:ARG:N	2.36	0.41
1:S:1081:ALA:O	1:S:1085:ILE:HG23	2.20	0.41
1:S:1121:LEU:HG	1:S:1123:THR:H	1.86	0.41
1:S:1374:GLN:HA	1:S:1377:CYS:SG	2.61	0.41
1:S:1665:HIS:H	1:S:1668:PHE:HB3	1.85	0.41
1:S:2185:MET:O	1:S:2189:ILE:HG12	2.20	0.41
1:S:2349:LEU:HB3	1:S:2360:PHE:CE2	2.56	0.41
1:S:2548:PRO:HB2	1:S:2848:PHE:HD1	1.86	0.41
1:S:2572:TYR:CE1	1:S:2791:ILE:HD11	2.53	0.41
1:S:2576:MET:HB2	1:S:2783:ILE:HG22	2.03	0.41
1:S:2928:LYS:HG2	1:S:2931:ARG:NH2	2.36	0.41
1:S:2940:ARG:O	1:S:2944:THR:HG23	2.20	0.41
1:S:3101:TYR:O	1:S:3104:GLN:HG3	2.21	0.41
1:S:3167:ARG:N	1:S:3167:ARG:HD2	2.35	0.41
1:S:3472:ILE:HA	1:S:3479:THR:HG21	2.02	0.41
2:T:230:ARG:HH2	2:T:233:PHE:HD2	1.69	0.41
1:A:377:ASN:HB3	1:A:380:ASP:HB2	2.02	0.41
1:A:717:LYS:HD2	1:A:717:LYS:HA	1.79	0.41
1:A:770:LEU:O	1:A:773:LEU:HG	2.20	0.41
1:A:840:LEU:H	1:A:840:LEU:HD23	1.85	0.41
1:A:910:PHE:O	1:A:914:VAL:HG12	2.20	0.41
1:A:1049:GLN:O	1:A:1055:ASN:HB3	2.20	0.41
1:A:1086:TYR:CD1	1:A:1133:HIS:HB3	2.56	0.41
1:A:1118:GLU:HG2	1:A:1120:SER:H	1.86	0.41
1:A:1256:TRP:CZ2	1:A:1260:LEU:HD11	2.55	0.41
1:A:1913:LYS:HB3	3:L:730:ASP:HA	2.02	0.41
1:A:1948:ALA:O	1:A:1952:ILE:HG12	2.20	0.41
1:A:2105:HIS:ND1	1:A:2156:VAL:HG23	2.36	0.41
1:A:2167:PRO:O	1:A:2171:LEU:HG	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2174:SER:O	1:A:2174:SER:OG	2.34	0.41
1:A:2303:LEU:HD13	1:A:2323:LEU:HD21	2.03	0.41
1:A:2920:VAL:O	1:A:2923:TRP:HB2	2.21	0.41
1:A:2969:ALA:HB2	1:A:3001:CYS:SG	2.60	0.41
1:A:3762:GLN:NE2	1:A:3795:PRO:HD2	2.35	0.41
1:A:3789:ARG:HH12	1:A:3931:ALA:HB3	1.86	0.41
1:A:3820:MET:SD	1:A:3824:GLU:HB3	2.61	0.41
2:B:250:GLU:CG	4:D:187:ASN:HD21	2.33	0.41
2:B:353:LEU:HB2	2:B:393:GLU:OE2	2.21	0.41
3:C:497:ARG:NH2	3:C:503:GLU:O	2.49	0.41
5:H:135:ALA:O	5:H:138:GLN:HG3	2.20	0.41
6:I:682:ILE:HA	6:I:730:PHE:CZ	2.56	0.41
6:I:721:VAL:HG13	6:I:742:PHE:CD2	2.55	0.41
6:I:816:HIS:HA	6:I:851:LYS:HB2	2.02	0.41
6:I:902:GLU:HB3	6:I:904:GLN:HE21	1.86	0.41
3:L:327:ASP:HB3	3:L:331:MET:HE3	2.03	0.41
3:L:458:ILE:HA	2:T:350:PHE:HE2	1.85	0.41
3:L:653:GLN:HA	3:L:656:ASN:HB2	2.02	0.41
3:L:724:ASP:O	3:L:728:LEU:N	2.52	0.41
5:P:135:ALA:HA	5:P:138:GLN:HG2	2.02	0.41
6:R:748:PRO:HA	6:R:751:LYS:HB2	2.03	0.41
1:S:184:VAL:HG23	1:S:186:PRO:HD3	2.02	0.41
1:S:294:PHE:CE2	1:S:298:LEU:HD11	2.55	0.41
1:S:703:CYS:HB3	1:S:707:PHE:CE2	2.55	0.41
1:S:802:THR:HG21	1:S:922:SER:H	1.86	0.41
1:S:881:LYS:HZ3	1:S:881:LYS:HG3	1.63	0.41
1:S:883:TYR:CE1	1:S:3120:LEU:HD22	2.56	0.41
1:S:1062:ARG:HH12	1:S:3745:GLU:HG3	1.86	0.41
1:S:1513:GLY:O	1:S:1517:LEU:HG	2.21	0.41
1:S:1884:LEU:HD22	1:S:1885:PRO:HD2	2.02	0.41
1:S:1921:ASP:OD1	1:S:1921:ASP:N	2.54	0.41
1:S:2137:ILE:O	1:S:2137:ILE:HG23	2.21	0.41
1:S:2276:LEU:O	1:S:2280:VAL:HG23	2.21	0.41
1:S:2328:ARG:HB2	1:S:2370:SER:O	2.21	0.41
1:S:2757:ILE:HA	1:S:2760:GLU:OE1	2.21	0.41
1:S:3005:LEU:HD13	1:S:3253:SER:HB3	2.03	0.41
1:S:3061:LEU:O	1:S:3065:ILE:HG12	2.21	0.41
1:S:3106:GLY:O	1:S:3110:PHE:HD2	2.03	0.41
1:S:3291:GLN:O	1:S:3291:GLN:HG3	2.21	0.41
1:S:3347:CYS:O	1:S:3351:ILE:HG13	2.21	0.41
1:S:3442:TYR:O	1:S:3446:VAL:HG13	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:3480:LEU:HA	1:S:3483:MET:HB2	2.03	0.41
1:S:3893:SER:H	1:S:3896:ALA:HB3	1.86	0.41
1:S:3962:ARG:NH2	1:S:4125:GLU:OE1	2.53	0.41
2:T:109:ASP:O	2:T:115:ARG:NH1	2.54	0.41
2:T:230:ARG:HD3	2:T:232:HIS:N	2.35	0.41
2:T:420:LEU:HB3	2:T:424:LYS:HA	2.02	0.41
1:A:81:CYS:O	1:A:85:ILE:HG13	2.20	0.41
1:A:153:PHE:HZ	1:A:192:ASN:HB2	1.85	0.41
1:A:207:GLN:HG3	1:A:217:LEU:HB3	2.03	0.41
1:A:296:VAL:HA	1:A:299:LYS:HG2	2.02	0.41
1:A:745:VAL:O	1:A:749:VAL:HG23	2.21	0.41
1:A:1454:ALA:HA	1:A:1457:GLN:OE1	2.20	0.41
1:A:1723:PRO:HG3	3:C:594:PRO:HD3	2.02	0.41
1:A:2481:HIS:ND1	1:A:2499:PHE:HE1	2.18	0.41
1:A:2525:TRP:CZ3	1:A:2545:LEU:HD21	2.56	0.41
1:A:3742:GLY:N	1:A:3746:ARG:O	2.53	0.41
1:A:3837:CYS:SG	1:A:3873:LYS:HG2	2.61	0.41
2:B:182:LYS:HA	2:B:185:ARG:HG2	2.03	0.41
2:B:326:GLN:HE21	2:B:328:ILE:HD11	1.86	0.41
4:D:122:ARG:HE	4:M:45:ALA:HB2	1.86	0.41
5:H:3:ARG:NH1	5:H:21:GLN:OE1	2.54	0.41
3:L:371:GLU:HG3	2:T:452:ILE:HD13	2.02	0.41
3:L:395:TYR:HB3	3:L:404:GLN:HG2	2.01	0.41
5:Q:128:CYS:O	5:Q:131:LEU:HG	2.21	0.41
6:R:707:ILE:HA	6:R:710:LYS:HG2	2.02	0.41
1:S:217:LEU:O	1:S:217:LEU:HD12	2.21	0.41
1:S:247:GLU:HG2	1:S:251:PHE:CE2	2.56	0.41
1:S:573:LEU:HD11	1:S:645:TRP:CD1	2.56	0.41
1:S:851:ILE:O	1:S:854:ARG:HG2	2.21	0.41
1:S:1741:ASP:O	1:S:1744:LYS:HG2	2.21	0.41
1:S:2102:LYS:HZ2	1:S:2153:THR:HG22	1.86	0.41
1:S:2365:ASN:O	1:S:2368:THR:HG22	2.21	0.41
1:S:2746:LYS:O	1:S:2749:ALA:HB3	2.21	0.41
1:S:3169:PRO:O	1:S:3170:ASP:HB2	2.21	0.41
1:S:3455:LYS:HA	1:S:3490:VAL:HG23	2.02	0.41
1:S:3898:LEU:HG	1:S:3901:ARG:NH2	2.35	0.41
1:S:4038:TRP:CH2	1:S:4040:PRO:HG3	2.56	0.41
1:A:1100:VAL:HG23	1:A:1101:PHE:N	2.36	0.40
1:A:1183:CYS:O	1:A:1186:LYS:HG2	2.21	0.40
1:A:1528:LEU:O	1:A:1532:LEU:HG	2.21	0.40
1:A:1851:LEU:HB3	1:A:1852:LYS:NZ	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2145:PHE:O	1:A:2149:LEU:HD23	2.21	0.40
1:A:3369:ASP:HB3	1:A:3372:LYS:HG2	2.04	0.40
1:A:3535:ILE:HD12	1:A:3535:ILE:HA	1.91	0.40
2:B:70:VAL:HG13	4:D:186:ILE:HD11	2.04	0.40
3:C:267:ILE:HB	3:C:361:VAL:HB	2.03	0.40
5:G:73:ALA:HB1	5:G:86:PHE:HZ	1.86	0.40
6:I:663:GLU:HA	6:I:688:TYR:HB2	2.02	0.40
6:I:863:VAL:HG11	6:I:886:PHE:HA	2.02	0.40
3:L:9:ALA:HB2	3:L:127:PHE:CG	2.57	0.40
6:R:697:THR:HB	6:R:718:HIS:HE2	1.86	0.40
1:S:627:VAL:HG11	1:S:665:GLY:HA2	2.03	0.40
1:S:887:ASP:HB2	1:S:961:LEU:HD21	2.03	0.40
1:S:985:GLU:HG2	1:S:986:PRO:CD	2.51	0.40
1:S:1017:ILE:HD12	1:S:1017:ILE:H	1.85	0.40
1:S:1881:TYR:CE1	1:S:1951:VAL:HA	2.55	0.40
1:S:2175:GLU:OE1	1:S:2182:ILE:HG23	2.21	0.40
1:S:2510:LEU:HA	1:S:2521:ILE:HD13	2.03	0.40
1:S:2835:LYS:HA	1:S:2835:LYS:HD3	1.90	0.40
1:S:2965:TYR:CD2	1:S:3253:SER:HB2	2.54	0.40
1:S:3097:ASP:O	1:S:3100:LYS:HG3	2.21	0.40
1:S:3120:LEU:HD12	1:S:3895:GLU:HB2	2.04	0.40
1:A:528:VAL:HG11	1:A:632:GLU:OE2	2.20	0.40
1:A:528:VAL:HG23	1:A:529:ASP:N	2.36	0.40
1:A:914:VAL:HA	1:A:917:LEU:HB2	2.03	0.40
1:A:994:TRP:CZ3	1:A:2582:SER:HB2	2.56	0.40
1:A:1071:ASN:HD22	1:A:1074:LYS:NZ	2.19	0.40
1:A:1081:ALA:O	1:A:1085:ILE:HG23	2.21	0.40
1:A:1787:ARG:NE	1:A:1830:HIS:HE1	2.19	0.40
1:A:2485:ARG:HH22	1:A:2530:ARG:HA	1.87	0.40
1:A:2940:ARG:O	1:A:2944:THR:HG23	2.21	0.40
1:A:3154:GLN:OE1	1:A:3227:ILE:HG13	2.21	0.40
1:A:3263:HIS:HB2	1:A:3276:TRP:CZ2	2.57	0.40
1:A:3292:GLY:O	1:A:3296:GLN:HB2	2.21	0.40
1:A:3293:CYS:SG	1:A:3340:ALA:HB1	2.62	0.40
1:A:3981:TYR:O	1:A:3985:VAL:HG23	2.21	0.40
1:A:4055:ASN:ND2	1:A:4091:ALA:O	2.53	0.40
3:C:20:MET:O	3:C:30:PRO:HD2	2.21	0.40
3:C:35:LYS:HA	3:C:38:ILE:HG12	2.03	0.40
3:C:138:LEU:HB3	3:C:201:GLN:HA	2.03	0.40
3:C:352:GLN:HB2	3:C:355:PHE:CE2	2.57	0.40
3:C:598:PHE:CE2	3:C:616:LEU:HB3	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:663:GLN:HG3	3:C:667:GLU:OE1	2.21	0.40
6:I:657:ASN:HA	6:I:660:GLU:HG3	2.03	0.40
3:L:34:ALA:HB1	3:L:135:PHE:HD2	1.86	0.40
3:L:420:VAL:HG21	2:T:359:HIS:HB3	2.02	0.40
3:L:497:ARG:HH21	3:L:505:LEU:HD23	1.86	0.40
6:R:712:ILE:HD13	6:R:712:ILE:HA	1.98	0.40
1:S:197:PHE:O	1:S:201:LEU:HG	2.22	0.40
1:S:237:SER:HA	1:S:281:GLN:HG3	2.03	0.40
1:S:670:LEU:HB2	1:S:732:PHE:CZ	2.55	0.40
1:S:1417:THR:O	1:S:1421:GLU:N	2.45	0.40
1:S:1641:THR:O	1:S:1645:VAL:HG13	2.21	0.40
1:S:1881:TYR:OH	1:S:1954:CYS:HB3	2.21	0.40
1:S:2921:LEU:O	1:S:2924:VAL:HG12	2.22	0.40
1:S:3234:CYS:O	1:S:3238:MET:HG2	2.21	0.40
1:S:4009:PRO:HA	1:S:4038:TRP:HZ2	1.86	0.40
1:S:4101:GLU:HG2	1:S:4102:THR:N	2.36	0.40
1:A:49:ALA:O	1:A:53:LEU:HG	2.21	0.40
1:A:163:LYS:HE2	2:B:302:THR:H	1.87	0.40
1:A:1149:LYS:HB2	1:A:1151:ARG:NH2	2.37	0.40
1:A:1261:LEU:HD21	1:A:1337:VAL:HA	2.03	0.40
1:A:1784:ARG:HA	1:A:1787:ARG:NE	2.36	0.40
1:A:2817:LEU:HD23	1:A:2865:HIS:NE2	2.36	0.40
1:A:3416:LEU:HD22	1:A:3449:LYS:HD2	2.02	0.40
1:A:3912:CYS:HA	1:A:3915:HIS:CD2	2.56	0.40
1:A:4055:ASN:O	1:A:4059:ILE:HG12	2.21	0.40
2:B:69:SER:OG	2:B:243:LEU:HA	2.22	0.40
2:B:79:ASP:N	2:B:79:ASP:OD1	2.54	0.40
2:B:196:THR:OG1	2:B:198:ILE:HG12	2.21	0.40
2:B:214:SER:HA	2:B:218:ARG:CG	2.52	0.40
2:B:270:SER:O	2:B:371:GLU:HG2	2.21	0.40
2:B:490:LEU:O	2:B:493:LEU:HG	2.20	0.40
3:C:285:LYS:HB3	3:C:287:GLU:OE1	2.22	0.40
5:G:176:LEU:HD23	5:G:179:ARG:HD3	2.03	0.40
5:H:43:TRP:NE1	5:H:119:PRO:HB3	2.36	0.40
5:P:28:LEU:HD23	5:P:70:LEU:HB3	2.03	0.40
5:Q:38:ASP:N	5:Q:38:ASP:OD1	2.53	0.40
6:R:759:ASP:CG	6:R:763:ASP:HB3	2.41	0.40
1:S:320:LEU:HA	1:S:323:VAL:HG22	2.03	0.40
1:S:493:LYS:HE3	1:S:522:PRO:O	2.21	0.40
1:S:737:PRO:HG2	1:S:740:ILE:HG12	2.02	0.40
1:S:1171:TRP:O	1:S:1175:HIS:ND1	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:1714:LEU:HD13	1:S:1758:LEU:HD21	2.02	0.40
1:S:2238:ILE:HA	1:S:2241:LEU:HG	2.02	0.40
1:S:2273:GLY:HA2	1:S:2276:LEU:HD12	2.02	0.40
1:S:2531:LEU:HD23	1:S:2531:LEU:HA	1.88	0.40
1:S:3389:VAL:O	1:S:3393:GLU:HG3	2.21	0.40
1:S:3772:ASN:OD1	1:S:3788:LEU:HB3	2.21	0.40
2:T:78:SER:HB2	2:T:250:GLU:OE2	2.22	0.40
2:T:102:ILE:HD12	2:T:146:VAL:HG12	2.02	0.40
2:T:176:HIS:O	2:T:183:ALA:HB2	2.22	0.40
1:A:207:GLN:O	1:A:215:PRO:HA	2.21	0.40
1:A:221:ALA:O	1:A:224:LEU:HG	2.20	0.40
1:A:232:CYS:SG	1:A:281:GLN:HG3	2.61	0.40
1:A:446:PHE:CZ	1:A:530:LEU:HB2	2.57	0.40
1:A:472:GLY:O	1:A:475:LEU:HB3	2.21	0.40
1:A:849:GLU:HG2	1:A:850:GLU:N	2.36	0.40
1:A:1000:LYS:HA	1:A:1000:LYS:HD3	1.95	0.40
1:A:1009:LEU:HD12	1:A:1010:LEU:N	2.37	0.40
1:A:1012:ALA:HA	1:A:1015:ASP:OD2	2.21	0.40
1:A:2493:ASN:OD1	1:A:2494:ASP:N	2.54	0.40
1:A:3604:LYS:HG3	1:A:3605:ASN:H	1.85	0.40
1:A:3988:LEU:HD23	1:A:4100:GLU:HA	2.03	0.40
2:B:381:LEU:HD11	3:C:537:PHE:HB3	2.03	0.40
3:L:380:LEU:O	3:L:384:LEU:HD23	2.21	0.40
3:L:540:ILE:HD11	2:T:376:ILE:HD13	2.03	0.40
4:M:187:ASN:HB3	4:M:190:PHE:CD1	2.57	0.40
5:Q:66:TYR:HE1	5:Q:108:LEU:HA	1.86	0.40
1:S:860:GLY:HA3	1:S:3136:THR:OG1	2.22	0.40
1:S:983:LEU:O	1:S:986:PRO:HD2	2.21	0.40
1:S:990:GLN:HG2	1:S:2781:PRO:HD3	2.03	0.40
1:S:1685:ASP:HB3	1:S:1688:LEU:HG	2.02	0.40
1:S:1713:VAL:HA	1:S:1716:GLN:HG2	2.04	0.40
1:S:1715:GLU:O	1:S:1719:VAL:HG23	2.21	0.40
1:S:2044:ASP:O	1:S:2048:GLY:N	2.55	0.40
1:S:2427:ARG:HE	1:S:2464:HIS:HE2	1.68	0.40
1:S:2471:GLU:HB3	1:S:2517:LEU:HD21	2.01	0.40
1:S:2892:LEU:O	1:S:2895:GLU:HG2	2.21	0.40
1:S:3302:LYS:C	1:S:3304:VAL:H	2.24	0.40
1:S:3419:PHE:O	1:S:3423:GLN:HG2	2.22	0.40
1:A:106:GLU:O	1:A:110:THR:HG23	2.22	0.40
1:A:313:LEU:HD23	1:A:316:LEU:HD12	2.04	0.40
1:A:487:LEU:HD13	1:A:575:ILE:HD13	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:733:LEU:O	1:A:736:LEU:HD23	2.22	0.40
1:A:851:ILE:O	1:A:855:VAL:HG23	2.21	0.40
1:A:1420:ARG:HG2	1:A:1467:ILE:HD12	2.02	0.40
1:A:2318:ALA:HA	1:A:2321:GLU:HG2	2.04	0.40
1:A:2739:LEU:HD12	1:A:2740:SER:N	2.37	0.40
1:A:2950:LYS:HB3	1:A:2952:ILE:HG22	2.03	0.40
1:A:3513:ALA:HA	1:A:3516:HIS:ND1	2.36	0.40
2:B:357:LYS:HB2	2:B:360:HIS:CD2	2.57	0.40
5:G:72:LYS:HZ1	5:G:99:LYS:HE2	1.86	0.40
3:L:247:TRP:HB3	3:L:263:ALA:HB3	2.03	0.40
3:L:444:TYR:CD1	2:T:379:SER:HB3	2.56	0.40
1:S:217:LEU:HD13	1:S:221:ALA:HB3	2.03	0.40
1:S:243:GLN:HA	1:S:246:ARG:HH11	1.86	0.40
1:S:300:TRP:HE3	1:S:308:LEU:HD21	1.87	0.40
1:S:738:HIS:HB2	1:S:780:ILE:HD11	2.04	0.40
1:S:781:ASP:HB2	1:S:783:HIS:ND1	2.37	0.40
1:S:913:ARG:O	1:S:916:GLU:HG3	2.22	0.40
1:S:1038:LYS:HB3	1:S:1038:LYS:HE2	1.73	0.40
1:S:1627:LYS:NZ	1:S:1670:GLU:HB2	2.36	0.40
1:S:1881:TYR:OH	1:S:1955:VAL:HG23	2.21	0.40
1:S:2216:LEU:O	1:S:2219:LEU:HG	2.22	0.40
1:S:2801:ASP:OD2	1:S:2804:ILE:HG12	2.21	0.40
1:S:3119:VAL:HA	1:S:3125:ARG:NE	2.32	0.40
1:S:3131:SER:O	1:S:3135:LEU:HG	2.22	0.40
1:S:3781:CYS:O	1:S:3785:ALA:N	2.55	0.40
2:T:372:GLU:OE1	2:T:378:SER:N	2.55	0.40
2:T:525:PHE:HA	2:T:528:LEU:HD12	2.04	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	3476/4128 (84%)	3213 (92%)	259 (8%)	4 (0%)	51	85
1	S	3464/4128 (84%)	3210 (93%)	252 (7%)	2 (0%)	51	85
2	B	505/609 (83%)	471 (93%)	34 (7%)	0	100	100
2	T	498/609 (82%)	470 (94%)	28 (6%)	0	100	100
3	C	660/732 (90%)	619 (94%)	41 (6%)	0	100	100
3	L	644/732 (88%)	615 (96%)	29 (4%)	0	100	100
4	D	139/204 (68%)	137 (99%)	2 (1%)	0	100	100
4	M	160/204 (78%)	160 (100%)	0	0	100	100
5	G	199/336 (59%)	195 (98%)	4 (2%)	0	100	100
5	H	190/336 (56%)	188 (99%)	2 (1%)	0	100	100
5	P	199/336 (59%)	196 (98%)	3 (2%)	0	100	100
5	Q	190/336 (56%)	188 (99%)	2 (1%)	0	100	100
6	I	242/911 (27%)	219 (90%)	23 (10%)	0	100	100
6	R	242/911 (27%)	216 (89%)	26 (11%)	0	100	100
All	All	10808/14512 (74%)	10097 (93%)	705 (6%)	6 (0%)	54	85

All (6) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	72	SER
1	S	3304	VAL
1	A	68	PHE
1	A	1231	GLN
1	A	66	LEU
1	S	956	PRO

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	2999/3671 (82%)	2984 (100%)	15 (0%)	88	93

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	S	3045/3671 (83%)	3030 (100%)	15 (0%)	88	93
2	B	443/548 (81%)	441 (100%)	2 (0%)	88	93
2	T	446/548 (81%)	441 (99%)	5 (1%)	73	85
3	C	581/649 (90%)	579 (100%)	2 (0%)	92	95
3	L	570/649 (88%)	566 (99%)	4 (1%)	84	90
4	D	110/160 (69%)	109 (99%)	1 (1%)	78	87
4	M	120/160 (75%)	118 (98%)	2 (2%)	60	78
5	G	180/303 (59%)	177 (98%)	3 (2%)	60	78
5	H	177/303 (58%)	174 (98%)	3 (2%)	60	78
5	P	180/303 (59%)	180 (100%)	0	100	100
5	Q	177/303 (58%)	176 (99%)	1 (1%)	86	92
6	I	218/808 (27%)	217 (100%)	1 (0%)	88	93
6	R	217/808 (27%)	214 (99%)	3 (1%)	67	81
All	All	9463/12884 (73%)	9406 (99%)	57 (1%)	86	92

All (57) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	24	ARG
1	A	67	VAL
1	A	205	LYS
1	A	899	ARG
1	A	1178	ARG
1	A	1727	ARG
1	A	2120	ARG
1	A	2207	LYS
1	A	2311	ARG
1	A	2931	ARG
1	A	3113	ASN
1	A	3725	ARG
1	A	4014	LYS
1	A	4075	ARG
1	A	4090	ARG
2	B	258	ARG
2	B	516	LYS
3	C	130	ARG
3	C	502	ARG

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Mol	Chain	Res	Type
4	D	193	LYS
5	G	4	LYS
5	G	161	ARG
5	G	197	LYS
5	H	146	LYS
5	H	188	LYS
5	H	197	LYS
6	I	741	ARG
3	L	130	ARG
3	L	469	LYS
3	L	502	ARG
3	L	634	LYS
4	M	138	ARG
4	M	194	LYS
5	Q	102	LYS
6	R	741	ARG
6	R	782	LYS
6	R	885	LYS
1	S	24	ARG
1	S	631	ARG
1	S	675	ARG
1	S	1026	ARG
1	S	1031	ARG
1	S	1155	ARG
1	S	1329	ARG
1	S	1447	ARG
1	S	1727	ARG
1	S	2207	LYS
1	S	2416	LYS
1	S	3100	LYS
1	S	3621	LYS
1	S	4090	ARG
1	S	4105	LYS
2	T	114	LYS
2	T	152	ASN
2	T	230	ARG
2	T	297	LYS
2	T	299	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (48) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	192	ASN
1	A	330	ASN
1	A	454	GLN
1	A	978	GLN
1	A	1069	HIS
1	A	1598	ASN
1	A	1611	GLN
1	A	1665	HIS
1	A	1725	GLN
1	A	1771	GLN
1	A	2291	GLN
1	A	2295	GLN
1	A	2306	ASN
1	A	2365	ASN
1	A	3105	ASN
1	A	3112	GLN
1	A	3139	GLN
1	A	3515	GLN
1	A	3915	HIS
1	A	3924	HIS
1	A	4000	ASN
2	B	176	HIS
2	B	489	ASN
3	C	330	GLN
3	C	604	GLN
4	D	187	ASN
5	G	148	ASN
6	I	848	HIS
6	I	904	GLN
3	L	188	HIS
5	P	21	GLN
6	R	718	HIS
1	S	33	GLN
1	S	136	GLN
1	S	415	GLN
1	S	561	ASN
1	S	753	GLN
1	S	865	GLN
1	S	990	GLN
1	S	1426	GLN
1	S	1654	GLN
1	S	1754	GLN
1	S	2234	ASN

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Mol	Chain	Res	Type
1	S	3113	ASN
1	S	3166	ASN
1	S	3915	HIS
1	S	4000	ASN
2	T	95	ASN

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](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

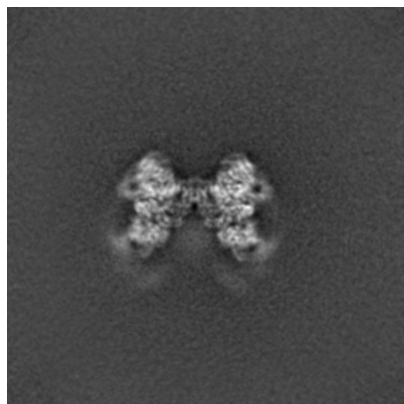
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-16044. These allow visual inspection of the internal detail of the map and identification of artifacts.

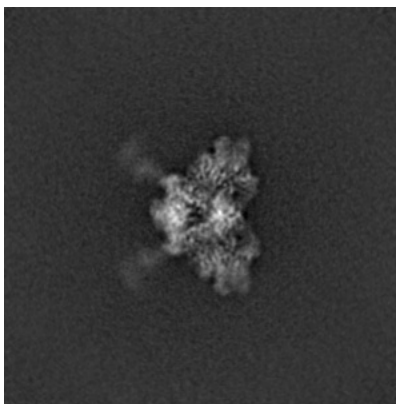
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

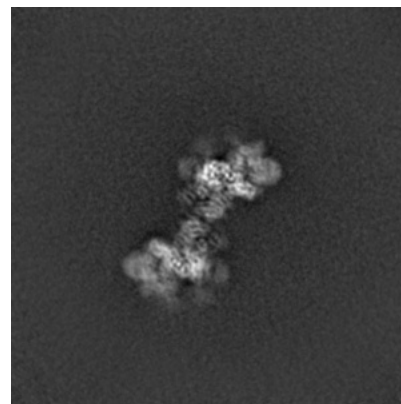
6.1.1 Primary map



X

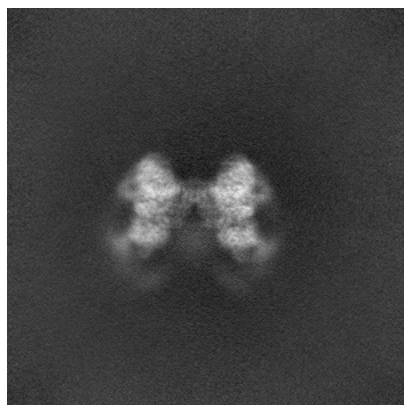


Y

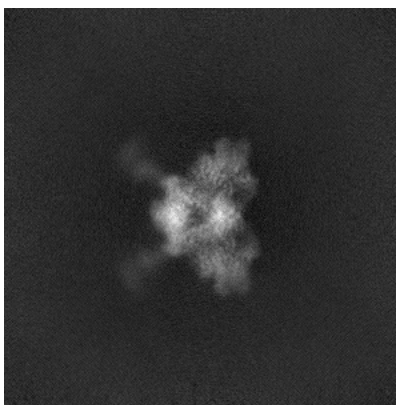


Z

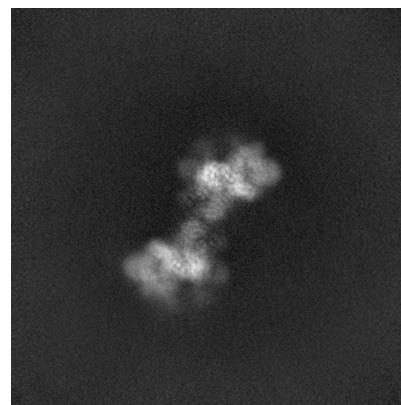
6.1.2 Raw map



X



Y

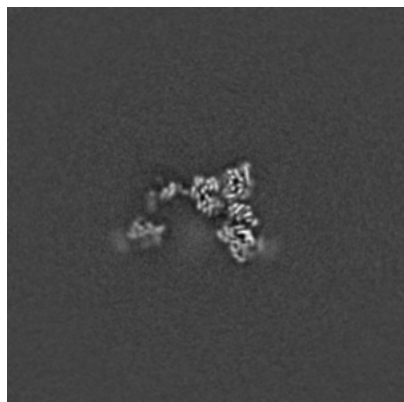


Z

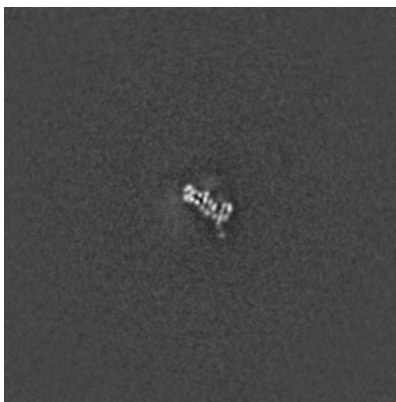
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

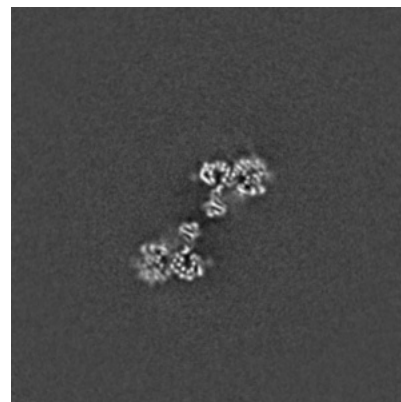
6.2.1 Primary map



X Index: 270



Y Index: 270



Z Index: 270

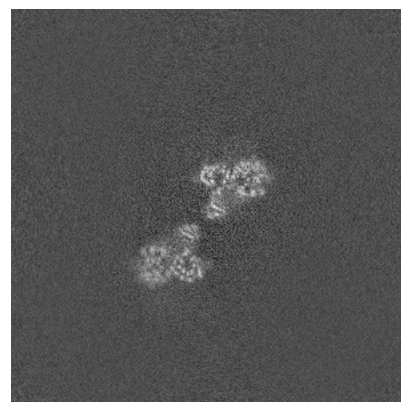
6.2.2 Raw map



X Index: 270



Y Index: 270



Z Index: 270

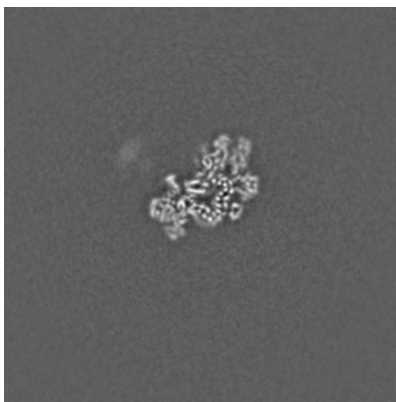
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

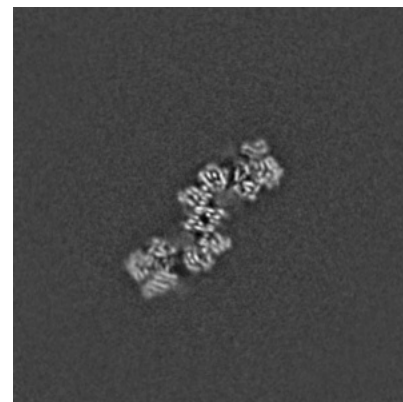
6.3.1 Primary map



X Index: 263

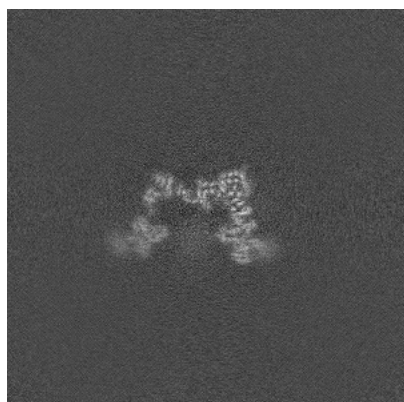


Y Index: 312

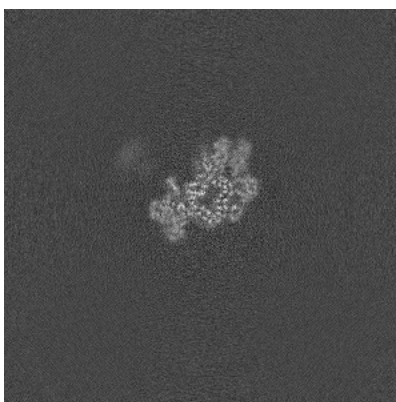


Z Index: 289

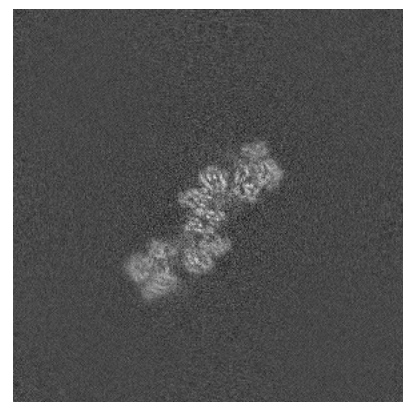
6.3.2 Raw map



X Index: 263



Y Index: 313

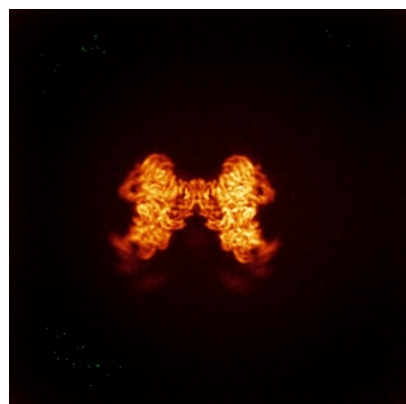


Z Index: 289

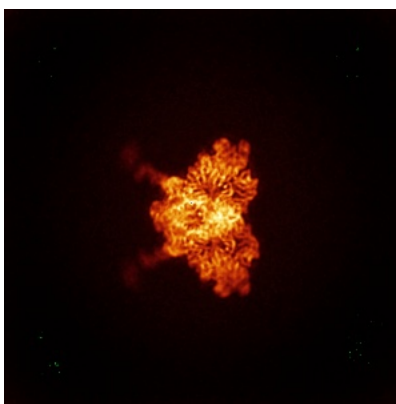
The images above show the largest variance slices of the map in three orthogonal directions.

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

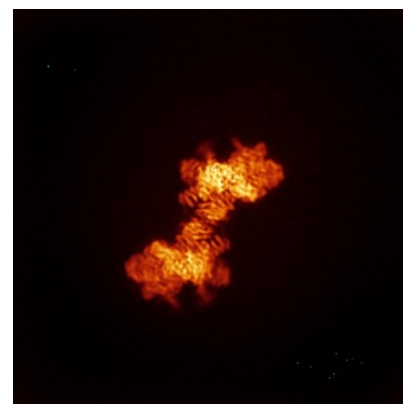
6.4.1 Primary map



X

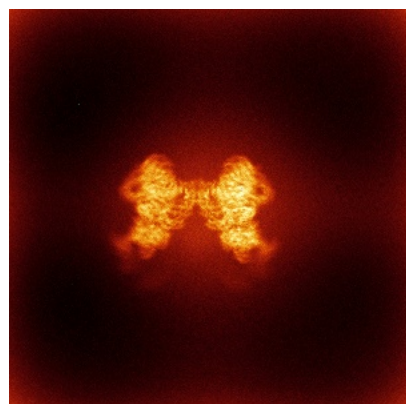


Y

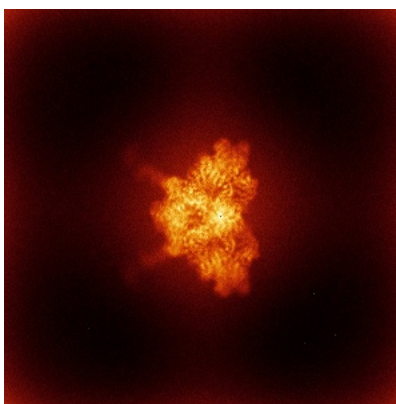


Z

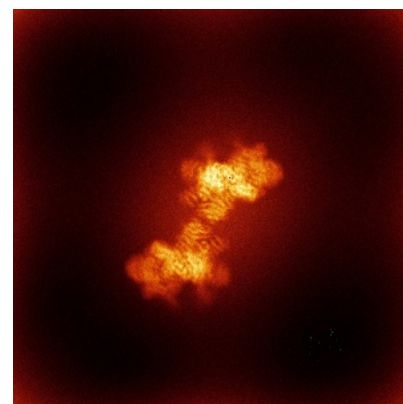
6.4.2 Raw map



X



Y



Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



X



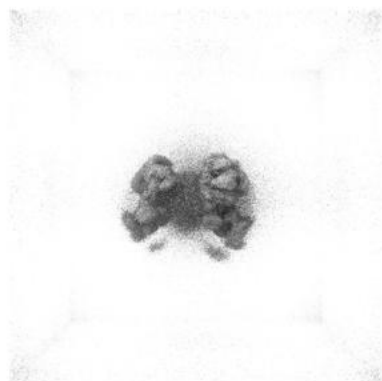
Y



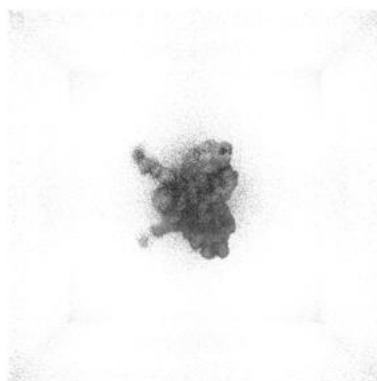
Z

The images above show the 3D surface view of the map at the recommended contour level 0.061. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

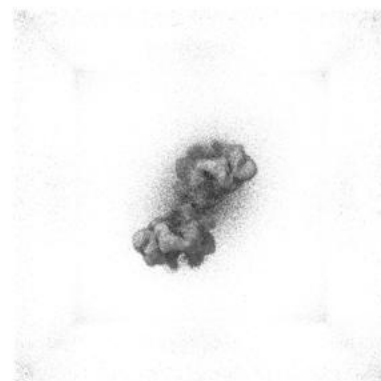
6.5.2 Raw map



X



Y



Z

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

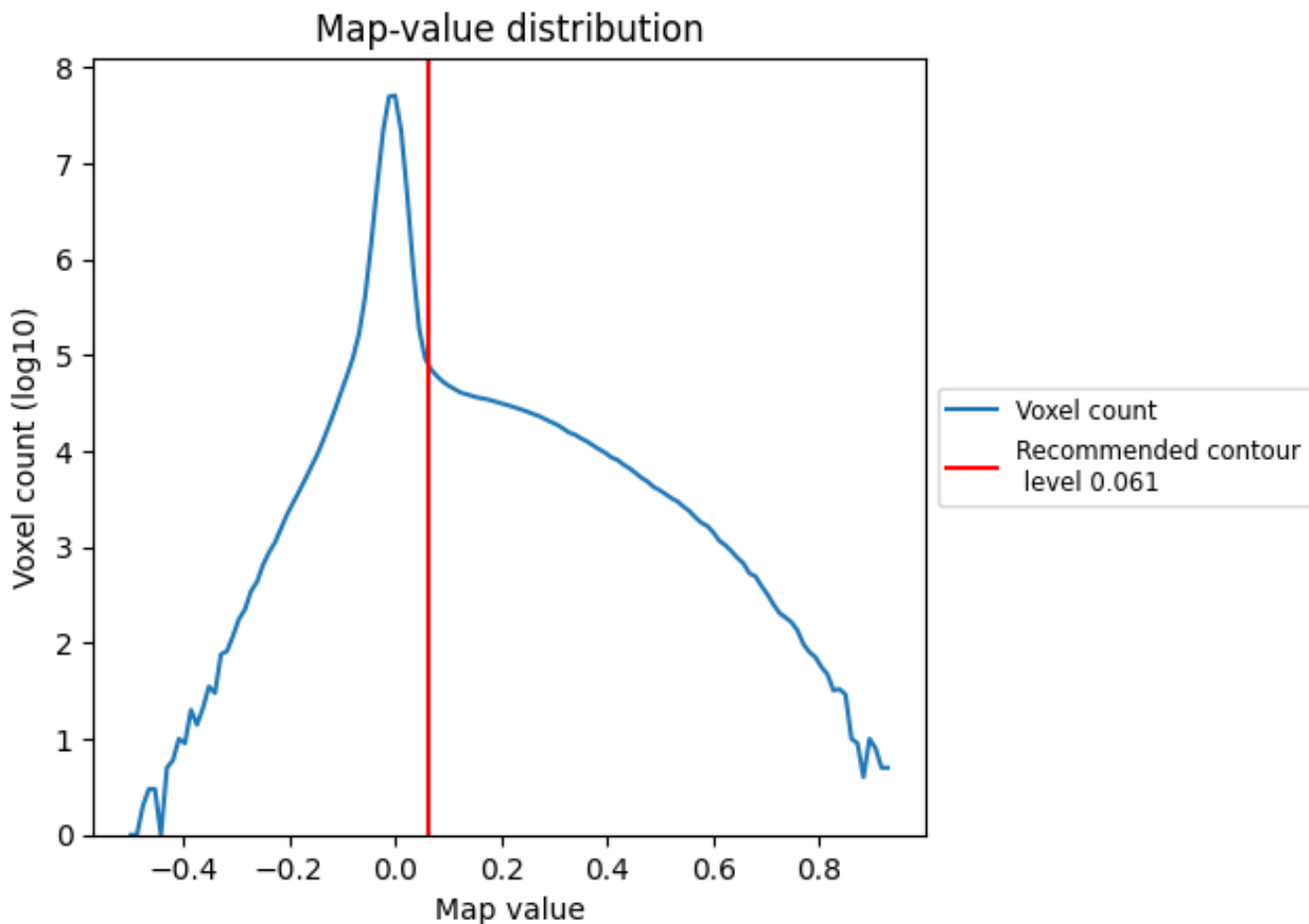
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

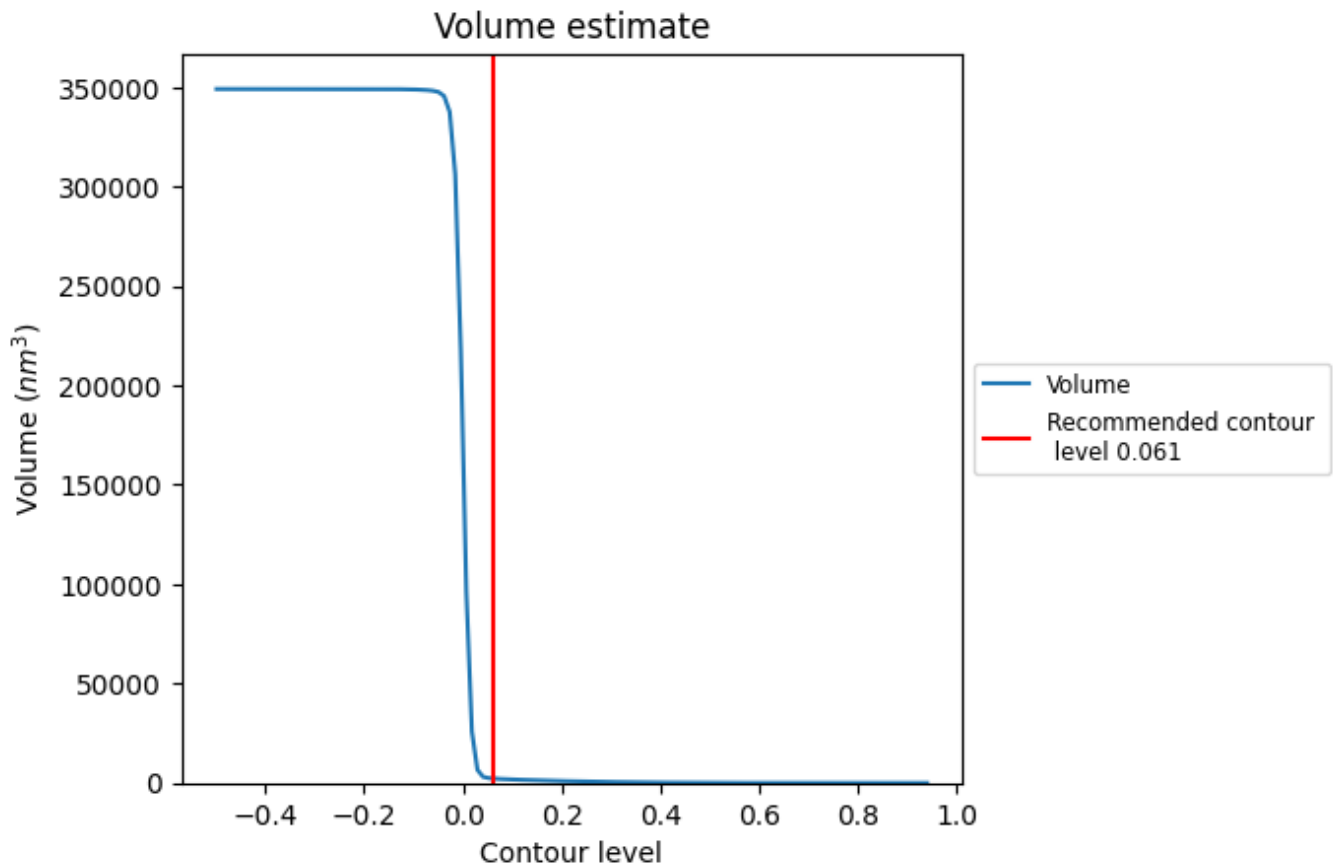
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

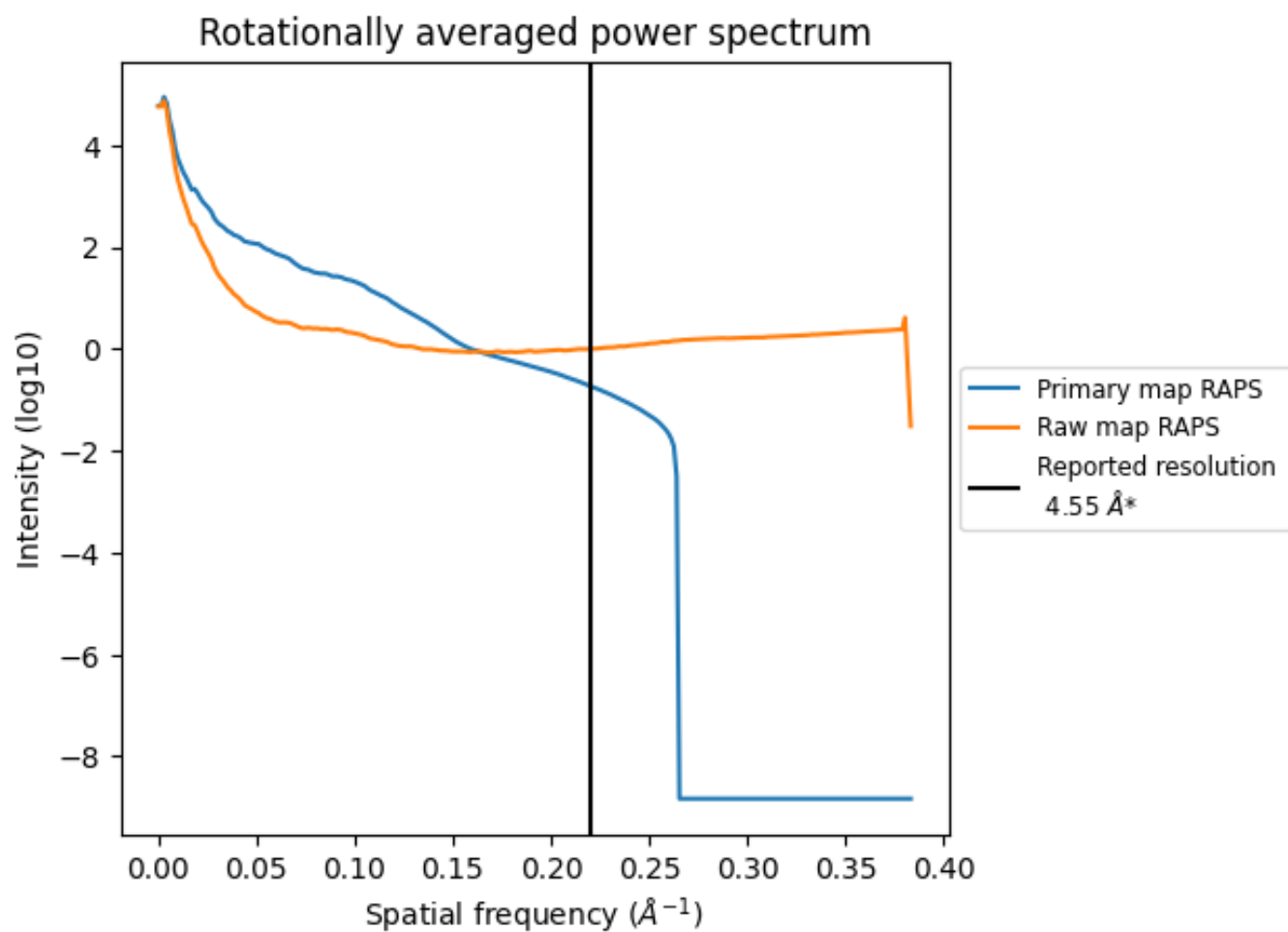
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2251 nm³; this corresponds to an approximate mass of 2033 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)

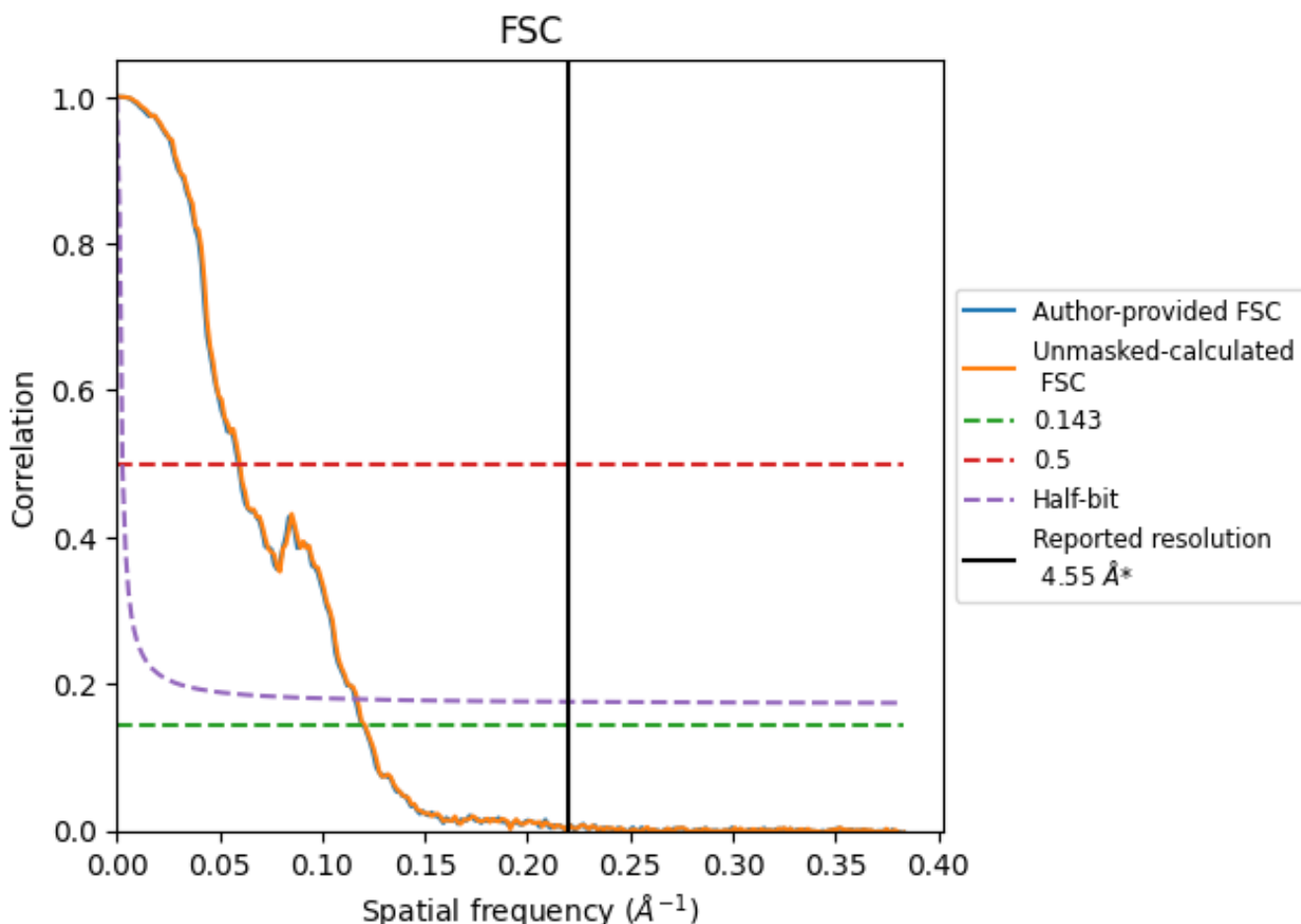


*Reported resolution corresponds to spatial frequency of 0.220 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.220 Å⁻¹

8.2 Resolution estimates [i](#)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.55	-	-
Author-provided FSC curve	8.33	16.86	8.61
Unmasked-calculated*	8.27	16.69	8.54

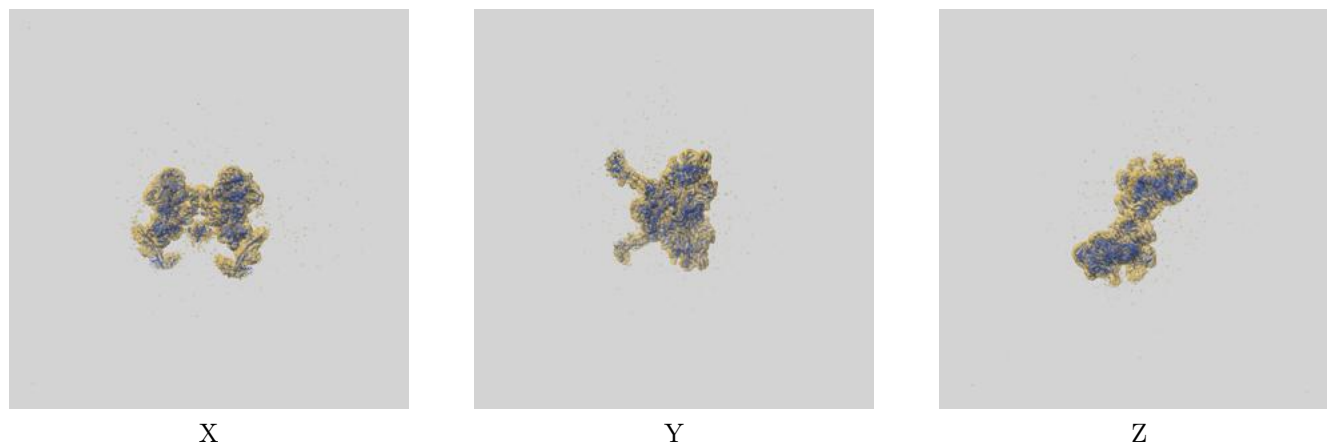
*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from author-provided FSC intersecting FSC 0.143 CUT-OFF 8.33 differs from the reported value 4.55 by more than 10 %

The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 8.27 differs from the reported value 4.55 by more than 10 %

9 Map-model fit [i](#)

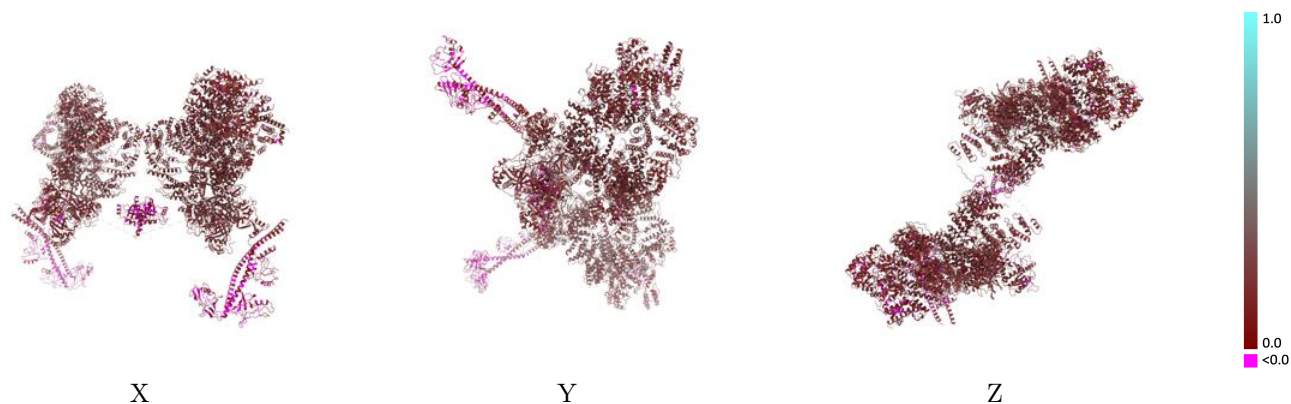
This section contains information regarding the fit between EMDB map EMD-16044 and PDB model 8BH3. Per-residue inclusion information can be found in section 3 on page 6.

9.1 Map-model overlay [i](#)



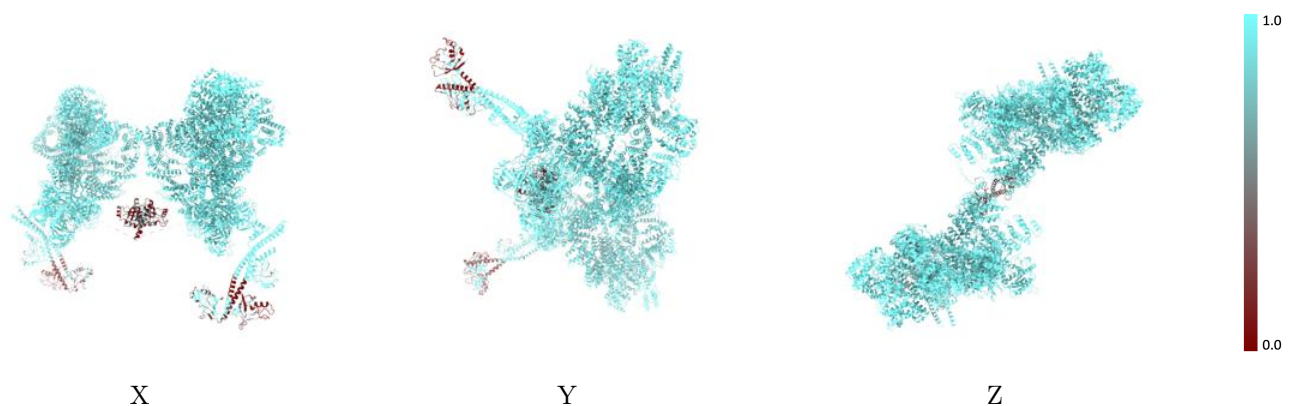
The images above show the 3D surface view of the map at the recommended contour level 0.061 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



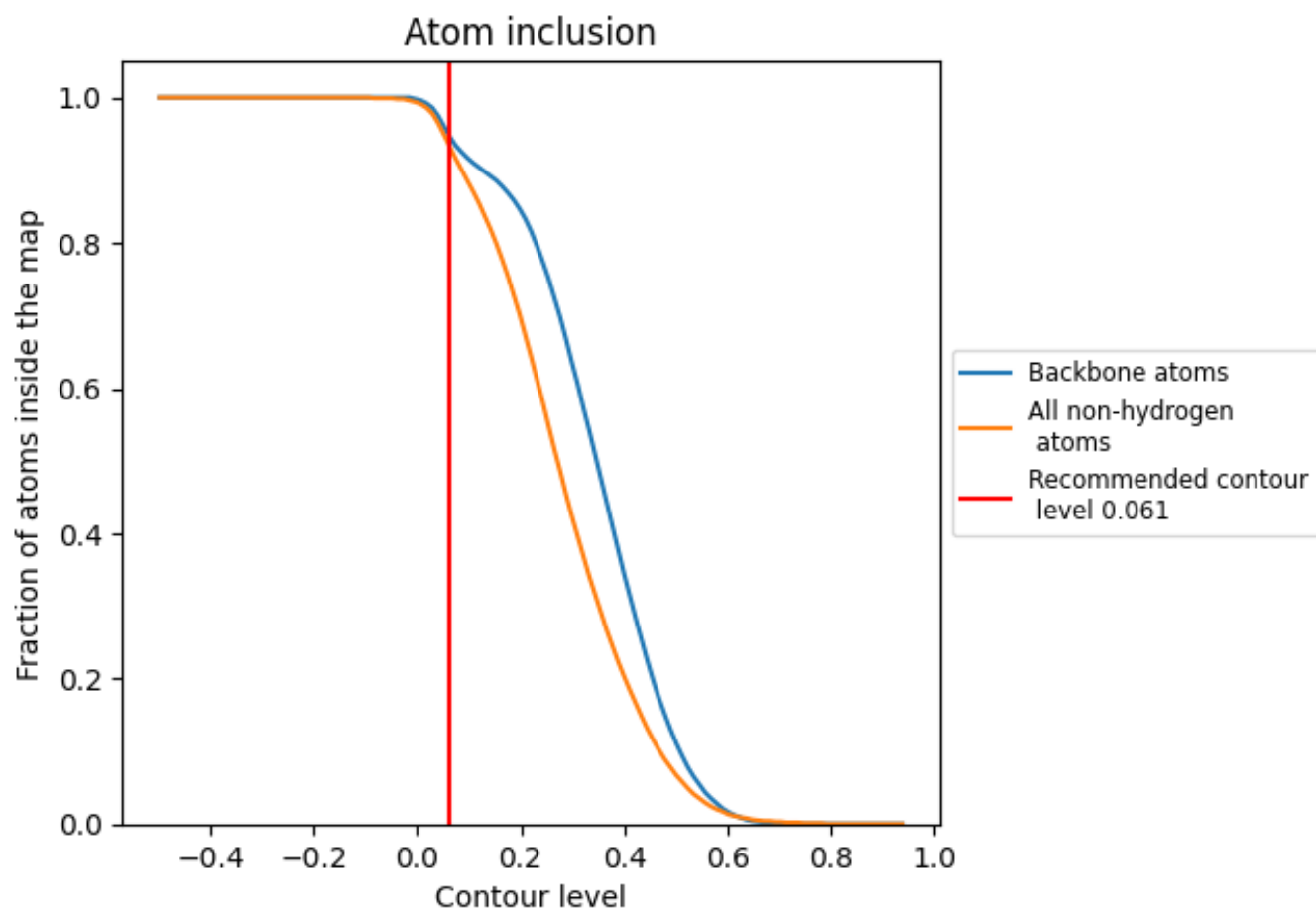
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.061).







































9.4 Atom inclusion [i](#)



At the recommended contour level, 95% of all backbone atoms, 94% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.061) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9360	 0.1850
A	 0.9770	 0.2080
B	 0.9830	 0.2240
C	 0.9910	 0.2020
D	 0.3570	 0.0660
G	 0.6710	 0.0690
H	 0.5320	 0.0630
I	 0.9650	 0.1450
L	 0.9950	 0.1760
M	 0.3810	 0.0790
P	 0.5560	 0.0560
Q	 0.5170	 0.0730
R	 0.9550	 0.1280
S	 0.9800	 0.1910
T	 0.9870	 0.1920
d	 0.9920	 0.2600
e	 0.9970	 0.2720
i	 1.0000	 0.2550
j	 0.9900	 0.2460

