



Full wwPDB X-ray Structure Validation Report ⓘ

Dec 5, 2023 – 09:04 am GMT

PDB ID : 2VZ9
Title : Crystal Structure of Mammalian Fatty Acid Synthase in complex with NADP
Authors : Maier, T.; Leibundgut, M.; Ban, N.
Deposited on : 2008-07-31
Resolution : 3.30 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

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

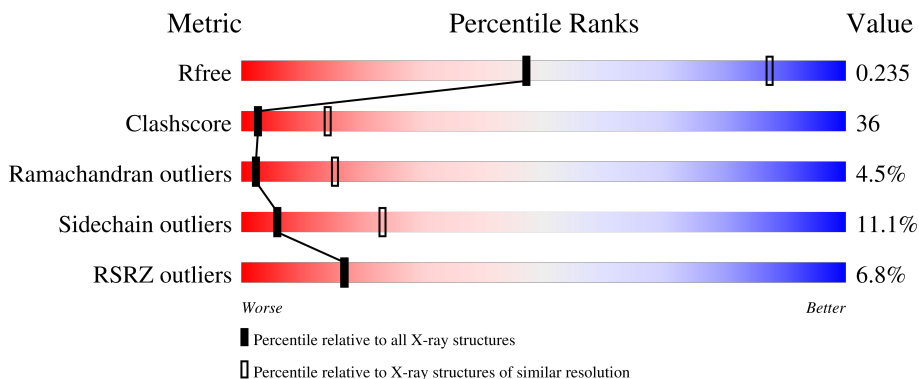
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.30 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1149 (3.34-3.26)
Clashscore	141614	1205 (3.34-3.26)
Ramachandran outliers	138981	1183 (3.34-3.26)
Sidechain outliers	138945	1182 (3.34-3.26)
RSRZ outliers	127900	1115 (3.34-3.26)

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

Mol	Chain	Length	Quality of chain
1	A	2512	<div style="display: flex; align-items: center;"> <div style="width: 5%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 38%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 38%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 7%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 17%; height: 10px; background-color: grey;"></div> </div> <p style="margin-top: 5px;">5% 38% 38% 7% 17%</p>
1	B	2512	<div style="display: flex; align-items: center;"> <div style="width: 6%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 36%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 40%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 7%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 17%; height: 10px; background-color: grey;"></div> </div> <p style="margin-top: 5px;">6% 36% 40% 7% 17%</p>

2 Entry composition [i](#)

There are 2 unique types of molecules in this entry. The entry contains 31949 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

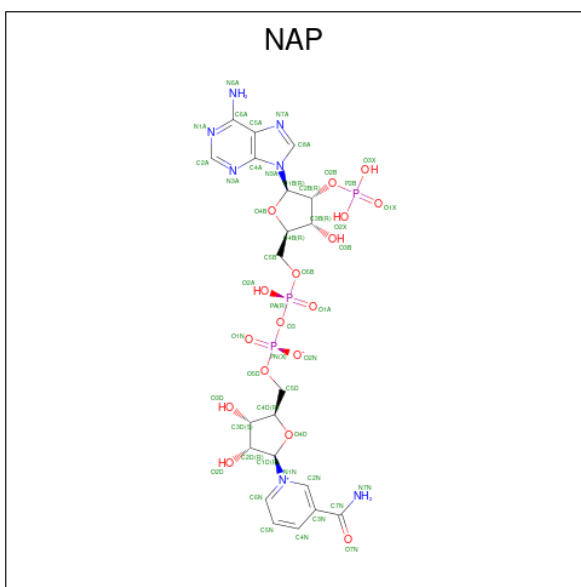
- Molecule 1 is a protein called FATTY ACID SYNTHASE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	2081	Total 15858	C 10015	N 2786	O 2973	S 84	0	0	0
1	B	2086	Total 15899	C 10041	N 2793	O 2981	S 84	0	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	834	ILE	UNK	conflict	UNP A5YV76
B	834	ILE	UNK	conflict	UNP A5YV76

- Molecule 2 is NADP NICOTINAMIDE-ADENINE-DINUCLEOTIDE PHOSPHATE (three-letter code: NAP) (formula: $C_{21}H_{28}N_7O_{17}P_3$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	P		
2	A	1	Total 48	C 21	N 7	O 17	P 3	0	0

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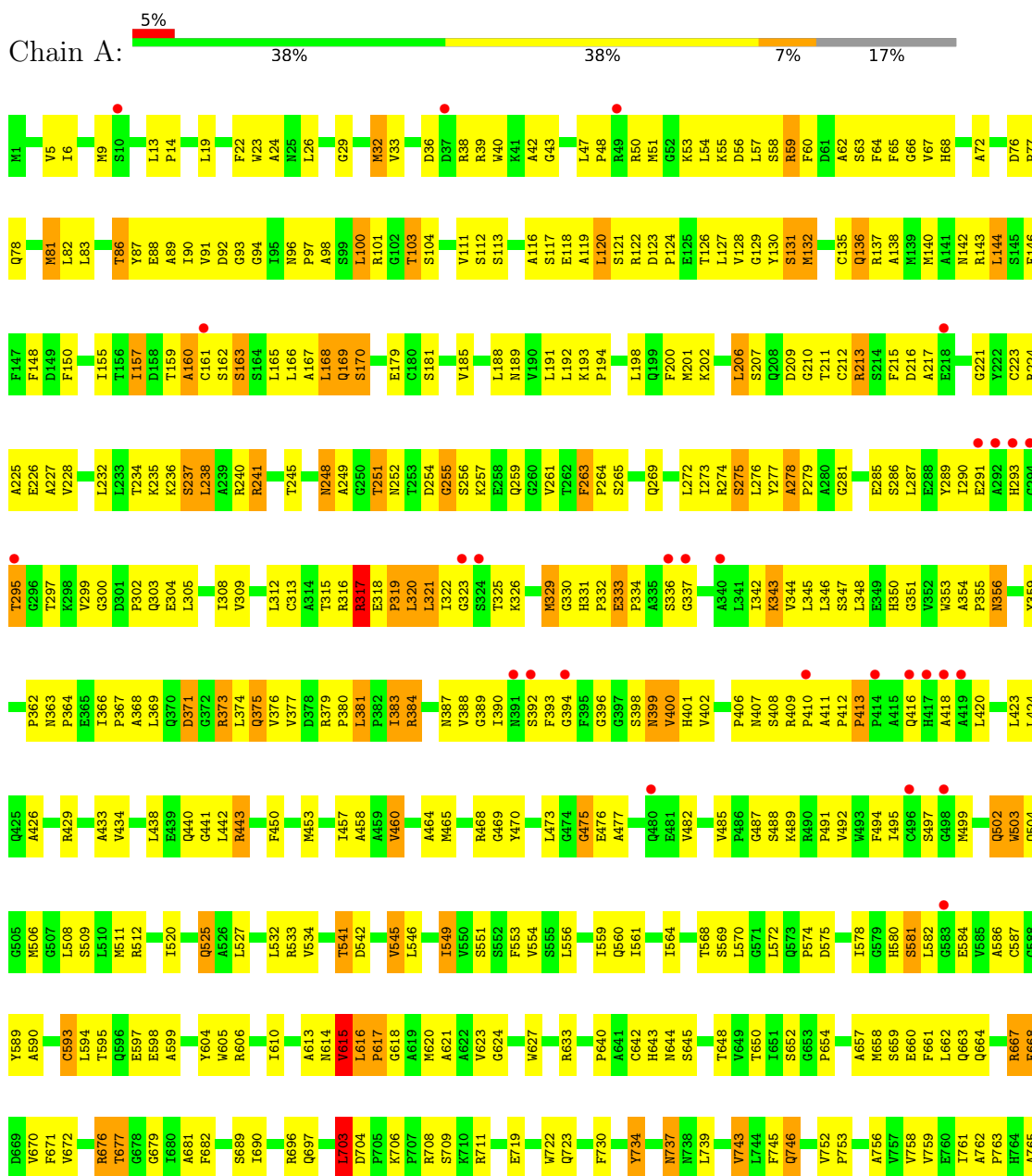
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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	N	O	P	0	0
			48	21	7	17	3		
2	B	1	Total	C	N	O	P	0	0
			48	21	7	17	3		
2	B	1	Total	C	N	O	P	0	0
			48	21	7	17	3		

3 Residue-property plots

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

• Molecule 1: FATTY ACID SYNTHASE



E1703	S1695	Y1553	T1421	G1356	L1289	L1221	M1085	Q1008	L766
K1704	V1626	A1554	S1422	E1357	E1290	D1222	L1086	L1009	L767
A1705	L1627	P1484	F1423	M1358	Q1291	A1223	M1087	L1010	Q768
A1706	L1628	P1556	R1424	P1359	L1292	P1224	M1088	L1011	A769
R1711	L1629	A1557	W1425	G1360	H1293	A1225	V1089	D1014	V770
F1712	T1633	M1486	W1426	F1361	H1294	L1226	G1092	L1015	R773
C1719	V1636	P1488	D1427	L1362	T1295	K1227	V1096	E1016	S774
F1720	V1636	S1469	S1428	T1363	Q1296	A1228	L1097	R1019	L775
A1721	R1562	S1490	L1429	S1364	Q1297	C1229	A1097	A1022	E776
R1724	L1563	L1432	I1432	E1366	Q1298	D1231	S1101	Q1023	S778
D1725	V1565	A1434	A1434	G1368	P1300	T1232	R1107	V1029	I782
V1648	V1566	D1435	D1435	G1369	A1302	A1233	P1108	F1031	P783
S1726	V1567	L1501	A1436	R1370	M1303	E1235	P1109	V1029	L784
S1727	V1568	V1502	S1437	H1371	P1304	E1236	Q1109	F1031	K787
F1728	M1503	L1433	A1437	L1372	A1305	M1237	E1110	L1032	L797
E1729	S1570	M1504	R1439	L1373	P1306	M1237	H1111	L1032	S798
Y1652	V1505	S1374	G1307	S1375	G1307	P1240	L1112	D1033	G801
F1573	Y1506	Q1375	S1308	Q1375	S1308	K1241	I1115	M1034	R802
R1574	V1507	D1376	L1309	D1376	P1181	M1242	M1035	M1035	L805
L1578	D1508	Q1377	G1310	Q1377	R1182	M1242	L1036	L1036	G801
A1579	G1509	W1378	K1311	W1378	L1183	V1244	H1182	H1037	E962
M1511	A1510	E1379	A1312	E1379	L1184	V1244	F1119	M1038	E963
G1512	W1445	A1445	A1312	A1445	L1184	V1244	G1120	M1038	L803
A1513	G1447	G1447	L1315	S1380	A1185	E1246	F1121	S1039	H804
F1514	C1448	C1448	L1316	L1381	A1186	V1247	T1122	I1041	L805
F1514	S1449	S1449	V1317	F1382	A1187	L1248	P1123	A1042	L805
H1515	F1514	S1449	M1318	A1385	C1188	D1251	H1124	A1042	V808
H1516	T1450	S1451	C1139	A1386	Q1189	G1252	H1125	P1043	S809
F1517	G1452	G1452	A1320	L1387	L1190	R1257	E1125	G888	P812
F1518	V1453	W1453	L1321	H1388	Q1191	Q1253	E1126	P1051	P812
L1519	V1454	V1454	L1324	L1389	M1193	L1254	C1129	F1054	G825
Q1520	G1455	M1455	L1324	V1390	M1194	L1255	L1130	F1054	G826
Q1521	M1456	M1456	P1327	F1396	G1194	S1256	L1131	T1055	L815
R1522	V1457	V1457	P1327	Y1397	R1257	R1257	A1131	S1056	D821
R1525	L1460	C1458	A1330	G1398	R1257	P1259	G1132	I1057	F821
Q1527	R1461	C1458	M1333	S1399	L1261	A1280	T1134	D1060	R825
T1528	K1462	K1462	M1334	S1399	L1262	L1262	A1135	P1061	G826
E1529	E1463	E1463	A1335	V1400	Q1201	Q1265	T1136	V1062	P828
H1530	P1464	P1464	A1336	L1401	Q1202	Q1265	Q1137	T1063	S831
V1533	G1465	G1465	T1337	F1402	L1203	P1266	E1138	R1064	P832
M1534	G1466	G1466	L1338	L1403	L1204	V1267	E1139	R1065	H833
R1468	H1467	H1467	K1339	C1404	A1205	M1288	L1140	K1067	K834
R1470	R1468	R1468	E1340	R1406	Q1206	D1271	G1145	L1068	L834
L1471	R1469	R1469	E1340	Q1407	E1207	Y1272	L1146	Y1069	K835
R1472	R1470	R1470	F1343	Q1408	R1208	T1273	A1147	T1107	W836
L1473	C1471	C1471	L1344	P1409	L1210	A1274	L1150	Q1072	D837
V1474	V1472	V1472	L1346	Q1410	L1211	T1275	Q1151	D1073	H838
V1474	V1474	V1474	L1347	D1411	C1212	D1276	THR	T1074	S839
M1475	S1412	S1412	H1347	L1346	D1213	L1282	LYS	T1075	W842
M1476	M1476	M1476	T1348	P1413	D1214	L1282	VAL	Q1076	D843
S1476	L1416	L1416	L1349	L1349	P1215	E1283	ALA	A1077	V844
S1477	L1417	L1417	L1350	L1350	L1217	A1284	GLN	A1078	P845
S1478	S1417	S1417	L1350	A1285	S1218	A1285	GLN	G1004	S846
S1479	V1418	V1418	H1353	Q1286	S1218	Q1286	GLY	P1005	D849
S1481	A1419	A1419	P1354	A1287	L1220	A1287	LEU	D1083	F850
H1552	D1420	D1420	L1355	K1288	L1220	K1288	LYS	R1084	

PHE
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4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	96.15Å 244.89Å 135.37Å 90.00° 101.84° 90.00°	Depositor
Resolution (Å)	30.00 – 3.30 29.97 – 3.34	Depositor EDS
% Data completeness (in resolution range)	84.1 (30.00-3.30) 90.2 (29.97-3.34)	Depositor EDS
R_{merge}	0.16	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.13 (at 3.31Å)	Xtrriage
Refinement program	PHENIX (PHENIX.REFINE)	Depositor
R, R_{free}	0.193 , 0.244 0.184 , 0.235	Depositor DCC
R_{free} test set	4016 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å ²)	117.6	Xtrriage
Anisotropy	0.271	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , 87.4	EDS
L-test for twinning ²	$\langle L \rangle = 0.44$, $\langle L^2 \rangle = 0.26$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	31949	wwPDB-VP
Average B, all atoms (Å ²)	151.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.98% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

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	0.44	0/16199	0.64	3/22016 (0.0%)
1	B	0.41	0/16240	0.61	1/22070 (0.0%)
All	All	0.43	0/32439	0.62	4/44086 (0.0%)

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1216	LEU	CA-CB-CG	5.89	128.85	115.30
1	B	1216	LEU	CA-CB-CG	5.63	128.25	115.30
1	A	703	LEU	N-CA-C	-5.16	97.08	111.00
1	A	321	LEU	CA-CB-CG	5.01	126.82	115.30

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	15858	0	15834	1137	0
1	B	15899	0	15882	1193	0
2	A	96	0	50	12	0
2	B	96	0	50	3	0
All	All	31949	0	31816	2282	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 36.

All (2282) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:333:GLU:HB2	1:B:334:PRO:HD3	1.26	1.17
1:A:333:GLU:HB2	1:A:334:PRO:HD3	1.28	1.13
1:A:616:LEU:HD23	1:A:617:PRO:HD2	1.32	1.10
1:A:123:ASP:HB3	1:A:126:THR:HB	1.18	1.10
1:A:1477:LEU:HD11	1:A:2043:ARG:HD2	1.36	1.06
1:B:1662:ARG:HG2	1:B:1662:ARG:HH11	0.90	1.03
1:B:1216:LEU:HD12	1:B:1218:SER:H	1.20	1.03
1:A:343:LYS:HE3	1:A:354:ALA:HB3	1.40	1.03
1:A:1190:LEU:HD13	1:A:1206:GLN:HE21	1.23	1.02
1:A:112:SER:HB2	1:A:334:PRO:HG3	1.39	1.02
1:B:112:SER:HB2	1:B:334:PRO:HG3	1.38	1.02
1:A:384:ARG:HH11	1:A:384:ARG:HG3	1.22	1.02
1:B:384:ARG:HH11	1:B:384:ARG:HG3	1.20	1.02
1:B:278:ALA:HB3	1:B:279:PRO:HD3	1.40	1.01
1:A:165:LEU:HD23	1:A:400:VAL:HG22	1.42	1.00
1:B:643:HIS:HA	1:B:649:VAL:HG22	1.41	1.00
1:B:1616:MET:HB3	1:B:1800:PHE:CZ	1.97	0.99
1:A:278:ALA:HB3	1:A:279:PRO:HD3	1.44	0.99
1:B:1662:ARG:HG2	1:B:1662:ARG:NH1	1.65	0.98
1:B:1003:TYR:CZ	1:B:1037:HIS:HE1	1.82	0.97
1:B:1220:LEU:HB3	1:B:1257:ARG:HH22	1.30	0.96
1:A:1216:LEU:HD12	1:A:1218:SER:H	1.31	0.95
1:B:1653:THR:HG22	1:B:1810:VAL:HG12	1.48	0.94
1:A:166:LEU:HD12	1:A:251:THR:HG21	1.50	0.94
1:B:165:LEU:HD23	1:B:400:VAL:HG22	1.51	0.93
1:B:1418:VAL:HG13	1:B:1425:TRP:CE2	2.03	0.93
1:B:1184:LEU:H	1:B:1216:LEU:HD21	1.32	0.93
1:B:333:GLU:HB2	1:B:334:PRO:CD	1.99	0.92
1:B:166:LEU:HD12	1:B:251:THR:HG21	1.51	0.92
1:A:1624:THR:HG22	1:A:1857:ARG:HH21	1.35	0.92
1:A:1790:THR:HG22	1:B:1662:ARG:HH22	1.33	0.92
1:A:1003:TYR:CE2	1:A:1037:HIS:HE1	1.87	0.92
1:A:1528:THR:HG22	1:A:1530:HIS:H	1.35	0.91
1:B:1616:MET:HE2	1:B:1650:ILE:HD13	1.53	0.91
1:A:1003:TYR:CZ	1:A:1037:HIS:HE1	1.89	0.90
1:B:1662:ARG:HH11	1:B:1662:ARG:CG	1.82	0.90
1:A:1133:ASN:HD22	1:A:1136:LEU:HD12	1.36	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1182:ARG:HB3	1:A:1216:LEU:HB2	1.52	0.90
1:B:1003:TYR:CE2	1:B:1037:HIS:HE1	1.88	0.90
1:B:1628:LEU:HD13	1:B:1633:THR:HG21	1.54	0.90
1:A:443:ARG:HH11	1:A:443:ARG:HG3	1.38	0.88
1:A:1349:LEU:HD13	1:A:1359:VAL:HG21	1.56	0.88
1:A:126:THR:HG22	1:A:127:LEU:HG	1.56	0.88
1:A:1545:ARG:HH11	1:A:1545:ARG:HG3	1.38	0.87
1:B:1475:SER:HB3	1:B:1505:VAL:HG13	1.53	0.87
1:A:1082:VAL:HG22	1:A:1089:VAL:HG22	1.56	0.87
1:B:1208:ARG:HH11	1:B:1211:LEU:HD22	1.39	0.87
1:B:1838:ALA:HA	1:B:1841:ARG:HG3	1.57	0.87
1:A:333:GLU:HB2	1:A:334:PRO:CD	2.04	0.86
1:B:443:ARG:HH11	1:B:443:ARG:HG3	1.40	0.86
1:A:319:PRO:HD2	1:A:373:ARG:O	1.74	0.86
1:B:1232:THR:HA	1:B:1515:ARG:HH21	1.40	0.86
1:A:1222:ASP:HB3	1:A:1257:ARG:CZ	2.07	0.85
1:A:1838:ALA:HA	1:A:1841:ARG:HG3	1.58	0.85
1:B:1315:LEU:O	1:B:1344:LEU:HD13	1.76	0.85
1:A:123:ASP:CB	1:A:126:THR:HB	2.06	0.85
1:B:1569:THR:HG21	1:B:1622:LEU:HA	1.59	0.85
1:A:502:GLN:HG2	1:A:556:LEU:HD11	1.59	0.84
1:A:527:LEU:HD12	1:A:534:VAL:HG22	1.59	0.84
1:A:1893:LEU:HB3	1:A:1925:GLN:NE2	1.92	0.84
1:B:319:PRO:HD2	1:B:373:ARG:O	1.76	0.84
1:A:82:LEU:O	1:A:86:THR:HG23	1.78	0.84
1:B:782:ILE:HD12	1:B:803:LEU:HD23	1.60	0.84
1:B:1326:ASP:OD1	1:B:1327:PRO:HD2	1.76	0.84
1:B:527:LEU:HD12	1:B:534:VAL:HG22	1.56	0.84
1:A:1009:LEU:HD11	1:A:1030:SER:HB2	1.58	0.83
1:A:1124:HIS:CD2	1:A:1512:GLY:HA2	2.13	0.83
1:B:87:TYR:O	1:B:91:VAL:HG22	1.77	0.83
1:B:1651:VAL:HG13	1:B:1680:VAL:HA	1.60	0.83
1:A:1771:LYS:HE2	1:A:1795:LEU:HD22	1.61	0.83
1:A:782:ILE:HD12	1:A:803:LEU:HD23	1.61	0.83
1:A:1034:ALA:HA	1:A:1037:HIS:CD2	2.12	0.83
1:A:1662:ARG:HH11	1:A:1662:ARG:CG	1.91	0.83
1:A:976:VAL:HG22	1:A:977:ASP:H	1.44	0.82
1:B:82:LEU:O	1:B:86:THR:HG23	1.78	0.82
1:B:1486:MET:O	1:B:1488:PRO:HD3	1.78	0.82
1:A:1505:VAL:HG23	1:A:1513:ALA:HA	1.61	0.82
1:B:680:ILE:HG12	1:B:681:ALA:N	1.94	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1248:LEU:HD11	1:B:1324:LEU:HG	1.61	0.82
1:B:1533:VAL:HG12	1:B:1622:LEU:HB3	1.61	0.82
1:B:1642:LEU:HD12	1:B:1859:GLU:HG3	1.59	0.82
1:A:627:TRP:HB2	1:A:643:HIS:CD2	2.15	0.82
1:A:610:ILE:HA	1:A:690:ILE:HD13	1.60	0.82
1:B:1082:VAL:HG22	1:B:1089:VAL:HG22	1.60	0.81
1:A:1252:GLY:HA3	1:A:1318:ASN:HB3	1.63	0.81
1:B:1009:LEU:HD11	1:B:1030:SER:HB2	1.62	0.81
1:B:1216:LEU:HD12	1:B:1218:SER:N	1.95	0.81
1:A:1220:LEU:HB3	1:A:1257:ARG:HH22	1.42	0.81
1:A:132:MET:HE1	1:B:200:PHE:CE2	2.16	0.81
1:A:1357:GLU:O	1:A:1361:PHE:HD1	1.62	0.81
1:A:1190:LEU:HD13	1:A:1206:GLN:NE2	1.96	0.81
1:A:623:VAL:HG22	1:A:672:VAL:HG22	1.63	0.81
1:A:1418:VAL:HG13	1:A:1425:TRP:CE2	2.14	0.81
1:A:984:GLU:O	1:A:985:PHE:HB2	1.79	0.81
1:A:883:ARG:HH11	1:A:924:ILE:HD11	1.45	0.80
1:A:1428:SER:O	1:A:1432:ILE:HG13	1.82	0.80
1:B:502:GLN:HG2	1:B:556:LEU:HD11	1.61	0.80
1:A:468:ARG:HD3	1:A:485:VAL:HG21	1.62	0.80
1:B:278:ALA:CB	1:B:279:PRO:HD3	2.10	0.80
1:A:217:ALA:HB2	1:A:364:PRO:HD3	1.63	0.80
1:B:944:PHE:CD2	1:B:959:VAL:HG22	2.17	0.80
1:B:1073:ASP:O	1:B:1074:THR:HG22	1.81	0.80
1:B:1282:LEU:HD21	1:B:1296:GLN:HB2	1.64	0.80
1:A:861:VAL:HG22	1:A:934:GLU:HB3	1.64	0.80
1:B:1003:TYR:CZ	1:B:1037:HIS:CE1	2.69	0.79
1:A:200:PHE:CE2	1:B:132:MET:HE1	2.16	0.79
1:A:278:ALA:CB	1:A:279:PRO:HD3	2.12	0.79
1:A:1211:LEU:O	1:A:1214:ASP:HB2	1.80	0.79
1:A:1887:TYR:HD2	1:A:1967:GLY:HA3	1.48	0.79
1:B:420:LEU:HD11	1:B:512:ARG:HB3	1.62	0.79
1:B:1771:LYS:HE2	1:B:1795:LEU:HD22	1.63	0.79
1:A:19:LEU:HD11	1:A:342:ILE:HD13	1.62	0.79
1:A:1265:GLN:HE21	1:A:2026:ARG:HH11	1.30	0.79
1:A:1473:LEU:HD11	1:A:1503:MET:SD	2.22	0.79
1:B:668:GLU:O	1:B:669:ASP:HB2	1.80	0.79
1:B:143:ARG:HG2	1:B:143:ARG:HH11	1.47	0.79
1:A:6:ILE:HG21	1:A:345:LEU:HD11	1.64	0.79
1:B:1616:MET:HB3	1:B:1800:PHE:HZ	1.45	0.78
1:B:23:TRP:CE2	1:B:350:HIS:HD2	2.00	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:671:PHE:CE2	1:A:773:ARG:NH2	2.51	0.78
1:B:1541:LEU:HD13	1:B:1840:PHE:HB3	1.65	0.78
1:A:155:ILE:HD11	1:B:166:LEU:HD11	1.66	0.78
1:B:1299:TRP:HZ3	1:B:1301:PRO:HA	1.46	0.78
1:B:1364:SER:N	1:B:1365:PRO:HD2	1.98	0.78
1:B:1996:TYR:HD1	1:B:2040:ALA:HB1	1.48	0.78
1:A:23:TRP:CE2	1:A:350:HIS:HD2	2.02	0.78
1:B:1428:SER:O	1:B:1432:ILE:HG13	1.83	0.78
1:A:1725:ASP:OD2	1:A:1727:SER:HB3	1.84	0.77
1:B:1119:PHE:HB3	1:B:2105:VAL:HB	1.63	0.77
1:B:620:MET:HG3	1:B:677:THR:HG21	1.64	0.77
1:B:1139:GLU:OE2	1:B:1216:LEU:HD11	1.84	0.77
1:B:23:TRP:CE2	1:B:350:HIS:CD2	2.73	0.77
1:A:1616:MET:HE3	1:A:1650:ILE:HA	1.64	0.77
1:A:1996:TYR:HD1	1:A:2040:ALA:HB1	1.48	0.77
1:B:1887:TYR:HD2	1:B:1967:GLY:HA3	1.49	0.77
1:A:627:TRP:HB2	1:A:643:HIS:HD2	1.50	0.77
1:A:944:PHE:CD2	1:A:959:VAL:HG22	2.19	0.77
1:A:1254:LEU:HD13	1:A:1316:VAL:HG12	1.67	0.77
1:A:984:GLU:HG2	1:A:986:ARG:HE	1.49	0.77
1:B:1184:LEU:H	1:B:1216:LEU:CD2	1.96	0.77
1:B:1893:LEU:HB3	1:B:1925:GLN:NE2	2.00	0.77
1:A:1656:TYR:CE2	1:A:1687:ILE:HD13	2.19	0.77
1:B:6:ILE:HG21	1:B:345:LEU:HD11	1.67	0.77
1:B:1150:LEU:HD13	1:B:1192:LEU:HD23	1.65	0.77
1:A:368:ALA:H	1:A:371:ASP:HB3	1.49	0.77
1:B:1183:LEU:HD13	1:B:1210:LEU:HB3	1.65	0.76
1:A:87:TYR:O	1:A:91:VAL:HG22	1.85	0.76
1:A:1457:VAL:HG21	1:A:1473:LEU:HD22	1.67	0.76
1:A:309:VAL:HG11	1:A:373:ARG:HD2	1.67	0.76
1:A:2075:THR:HB	1:A:2077:ASP:H	1.51	0.76
1:A:168:LEU:HB2	1:A:185:VAL:HG11	1.68	0.76
1:B:861:VAL:HG22	1:B:934:GLU:HB3	1.66	0.76
1:A:1207:GLU:O	1:A:1211:LEU:HB2	1.86	0.76
1:B:883:ARG:HH11	1:B:924:ILE:HD11	1.51	0.76
1:B:1133:ASN:HD22	1:B:1136:LEU:HD12	1.51	0.76
1:A:504:GLN:HA	1:A:541:THR:HG21	1.67	0.76
1:A:1073:ASP:O	1:A:1074:THR:HG22	1.84	0.76
1:B:1034:ALA:HA	1:B:1037:HIS:CD2	2.20	0.76
1:B:1533:VAL:CG1	1:B:1622:LEU:HB3	2.16	0.76
1:A:112:SER:CB	1:A:334:PRO:HG3	2.14	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:112:SER:CB	1:B:334:PRO:HG3	2.14	0.76
1:B:343:LYS:HE3	1:B:354:ALA:HB3	1.65	0.76
1:B:384:ARG:HH11	1:B:384:ARG:CG	1.98	0.76
1:B:1456:MET:HG3	1:B:2036:PHE:HB2	1.68	0.76
1:A:1119:PHE:HB3	1:A:2105:VAL:HB	1.67	0.75
1:B:416:GLN:O	1:B:420:LEU:HB2	1.86	0.75
1:B:1974:VAL:HG22	1:B:1994:PRO:HG2	1.66	0.75
1:A:111:VAL:HG22	1:A:188:LEU:HB2	1.67	0.75
1:A:944:PHE:HD2	1:A:959:VAL:HG22	1.51	0.75
1:A:1429:LEU:HD11	1:A:1443:LEU:HD11	1.69	0.75
1:A:1569:THR:HG21	1:A:1622:LEU:HA	1.68	0.75
1:A:23:TRP:CE2	1:A:350:HIS:CD2	2.74	0.75
1:B:368:ALA:H	1:B:371:ASP:HB3	1.52	0.75
1:A:963:GLU:O	1:A:965:PRO:HD3	1.86	0.75
1:A:1182:ARG:HE	1:A:1217:LEU:H	1.34	0.75
1:A:1974:VAL:HG22	1:A:1994:PRO:HG2	1.69	0.75
1:A:416:GLN:O	1:A:420:LEU:HB2	1.87	0.74
1:B:944:PHE:HD2	1:B:959:VAL:HG22	1.52	0.74
1:B:1926:ALA:O	1:B:1930:ARG:HB2	1.87	0.74
1:A:14:PRO:HG2	1:A:329:MET:HG3	1.69	0.74
1:B:1430:LYS:HE3	1:B:1981:GLU:O	1.87	0.74
1:A:384:ARG:HH11	1:A:384:ARG:CG	1.99	0.74
1:A:1003:TYR:CZ	1:A:1037:HIS:CE1	2.73	0.74
1:B:1007:PHE:HE2	1:B:1030:SER:HA	1.53	0.74
1:B:1222:ASP:HB3	1:B:1257:ARG:CZ	2.17	0.74
1:B:14:PRO:HG2	1:B:329:MET:HG3	1.67	0.74
1:B:1234:LEU:HD22	1:B:1262:LEU:HD22	1.69	0.74
1:A:326:LYS:HE3	1:A:336:SER:HB2	1.70	0.74
1:B:168:LEU:HB2	1:B:185:VAL:HG11	1.69	0.74
1:B:1407:GLN:HE21	1:B:1439:ARG:NH2	1.85	0.74
1:B:1418:VAL:HG21	1:B:1443:LEU:HD13	1.70	0.74
1:B:326:LYS:HE3	1:B:336:SER:HB2	1.69	0.74
1:B:1476:ASN:O	1:B:1477:LEU:HD23	1.88	0.74
1:A:1460:LEU:HD11	1:A:1980:LEU:HD13	1.68	0.73
1:B:1231:ASP:HB3	1:B:1515:ARG:HD2	1.70	0.73
1:A:295:THR:HG22	1:A:331:HIS:HD2	1.52	0.73
1:A:856:CYS:CB	1:B:856:CYS:SG	2.77	0.73
1:B:982:THR:C	1:B:984:GLU:H	1.90	0.73
1:B:1616:MET:CE	1:B:1650:ILE:HD13	2.17	0.73
1:B:19:LEU:HD11	1:B:342:ILE:HD13	1.69	0.73
1:A:47:LEU:HA	1:A:201:MET:HE1	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1223:ALA:HB1	1:A:1224:PRO:HD2	1.70	0.73
1:B:136:GLN:HE22	1:B:138:ALA:H	1.35	0.73
1:B:1223:ALA:HB1	1:B:1224:PRO:HD2	1.68	0.73
1:A:1725:ASP:OD1	1:A:1726:THR:N	2.22	0.73
1:B:322:ILE:HD12	1:B:374:LEU:HD13	1.69	0.73
1:B:1641:THR:HG23	1:B:1644:GLU:OE1	1.87	0.73
1:A:616:LEU:CD2	1:A:617:PRO:HD2	2.15	0.73
1:A:1007:PHE:HE2	1:A:1030:SER:HA	1.54	0.72
1:B:1616:MET:HB3	1:B:1800:PHE:CE1	2.23	0.72
1:A:143:ARG:HG2	1:A:143:ARG:HH11	1.54	0.72
1:A:1208:ARG:HH11	1:A:1211:LEU:HD22	1.54	0.72
1:B:111:VAL:HG22	1:B:188:LEU:HB2	1.70	0.72
1:B:1205:ALA:O	1:B:1209:PRO:HG2	1.90	0.72
1:B:1407:GLN:HG2	1:B:1409:PRO:HD2	1.72	0.72
1:B:1247:VAL:HG11	1:B:1301:PRO:HG3	1.71	0.72
1:B:1732:VAL:O	1:B:1736:THR:HB	1.88	0.72
1:A:1545:ARG:HH11	1:A:1545:ARG:CG	2.02	0.72
1:B:1299:TRP:CZ3	1:B:1301:PRO:HA	2.24	0.72
1:A:504:GLN:HG2	1:A:541:THR:HG22	1.71	0.72
1:A:1857:ARG:HG2	1:A:1871:ILE:HD11	1.72	0.72
1:B:309:VAL:HG11	1:B:373:ARG:HD2	1.69	0.72
1:B:1725:ASP:OD2	1:B:1727:SER:HB3	1.89	0.72
1:A:1439:ARG:HB3	1:A:1440:PRO:HD3	1.72	0.72
1:A:1570:SER:OG	1:A:1602:GLU:HB3	1.90	0.72
1:A:2006:THR:HG21	1:A:2048:ARG:HH22	1.55	0.72
1:B:1254:LEU:HD13	1:B:1316:VAL:HG12	1.71	0.72
1:A:136:GLN:HE22	1:A:138:ALA:H	1.37	0.71
1:B:1353:HIS:HB2	1:B:1354:PRO:HD2	1.72	0.71
1:B:1408:THR:N	1:B:1409:PRO:HD3	2.05	0.71
1:A:1649:PRO:O	1:A:1653:THR:OG1	2.08	0.71
1:A:1661:VAL:HG21	1:A:1810:VAL:HG22	1.71	0.71
1:B:963:GLU:O	1:B:965:PRO:HD3	1.91	0.71
1:B:1299:TRP:NE1	1:B:1306:PRO:HD2	2.04	0.71
1:A:1299:TRP:HE1	1:A:1306:PRO:HD2	1.54	0.71
1:A:1903:TRP:HB2	1:A:2092:LEU:HD13	1.72	0.71
1:A:504:GLN:HG2	1:A:541:THR:CG2	2.20	0.71
1:A:1302:ALA:O	1:A:1304:PRO:HD3	1.91	0.71
1:B:112:SER:HB2	1:B:334:PRO:CG	2.19	0.71
1:A:443:ARG:HG3	1:A:443:ARG:NH1	2.05	0.71
1:B:982:THR:HG23	1:B:983:ALA:H	1.55	0.71
1:B:1903:TRP:HB2	1:B:2092:LEU:HD13	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1439:ARG:HB3	1:B:1440:PRO:HD3	1.73	0.71
1:A:112:SER:HB2	1:A:334:PRO:CG	2.18	0.71
1:B:50:ARG:HD3	1:B:210:GLY:O	1.90	0.71
1:A:1489:SER:H	1:A:1493:LEU:HD22	1.55	0.70
1:A:1836:VAL:HG13	1:A:1854:ILE:HD13	1.73	0.70
1:B:295:THR:HG22	1:B:331:HIS:HD2	1.55	0.70
1:A:166:LEU:HD11	1:B:155:ILE:HD11	1.71	0.70
1:B:1567:TYR:HA	1:B:1857:ARG:HG3	1.73	0.70
1:A:917:VAL:CG1	1:A:1054:PHE:HB2	2.22	0.70
1:B:165:LEU:HB2	1:B:337:GLY:HA3	1.74	0.70
1:B:1528:THR:HG22	1:B:1530:HIS:H	1.57	0.70
1:A:51:MET:HE2	1:A:191:LEU:HD13	1.74	0.70
1:B:1139:GLU:CD	1:B:1218:SER:HB2	2.12	0.70
1:A:215:PHE:CD2	1:A:305:LEU:HD11	2.26	0.70
1:A:502:GLN:CG	1:A:556:LEU:HD11	2.22	0.70
1:B:1836:VAL:HG13	1:B:1854:ILE:HD13	1.74	0.70
1:A:1036:LEU:HD21	1:A:1096:PHE:HE1	1.57	0.70
1:A:1186:ALA:HB1	1:A:1210:LEU:HD13	1.73	0.70
1:B:504:GLN:N	1:B:546:LEU:HD11	2.07	0.70
1:B:782:ILE:HD12	1:B:803:LEU:CD2	2.22	0.70
1:B:1371:HIS:O	1:B:1372:LEU:HG	1.92	0.69
1:A:368:ALA:N	1:A:371:ASP:HB3	2.08	0.69
1:B:1302:ALA:HB3	1:B:1304:PRO:HD2	1.74	0.69
1:A:1216:LEU:HD12	1:A:1218:SER:N	2.06	0.69
1:A:39:ARG:NH1	1:A:57:LEU:HD22	2.07	0.69
1:A:54:LEU:HG	1:A:226:GLU:HG3	1.74	0.69
1:A:1694:ARG:HG3	1:A:1694:ARG:HH11	1.57	0.69
1:B:913:VAL:HG23	1:B:962:TRP:HB2	1.74	0.69
1:B:2053:LEU:HD22	1:B:2054:PRO:HD2	1.74	0.69
1:A:853:GLY:O	1:A:854:SER:HB3	1.92	0.69
1:A:782:ILE:HD12	1:A:803:LEU:CD2	2.22	0.69
1:A:2064:GLY:O	1:A:2066:VAL:N	2.22	0.69
1:A:159:THR:CG2	1:A:398:SER:HB3	2.23	0.69
1:A:1777:ASN:HD22	1:B:1783:ALA:H	1.39	0.69
1:A:1782:MET:HB2	1:B:1778:HIS:O	1.92	0.69
1:B:78:GLN:HB3	1:B:188:LEU:HD13	1.74	0.69
1:B:1034:ALA:O	1:B:1037:HIS:HB2	1.93	0.69
1:A:913:VAL:HG23	1:A:962:TRP:HB2	1.75	0.69
1:A:1003:TYR:CE2	1:A:1037:HIS:CE1	2.78	0.69
1:A:1345:LEU:HD13	1:A:1403:LEU:HD13	1.74	0.69
1:B:1299:TRP:HE1	1:B:1306:PRO:HD2	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1662:ARG:HH11	1:A:1662:ARG:HG2	1.57	0.68
1:B:1180:LEU:HD23	1:B:1189:GLN:HE22	1.58	0.68
1:B:54:LEU:HG	1:B:226:GLU:HG3	1.76	0.68
1:B:333:GLU:CB	1:B:334:PRO:HD3	2.15	0.68
1:B:1036:LEU:HD21	1:B:1096:PHE:HE1	1.58	0.68
1:A:502:GLN:HG2	1:A:556:LEU:CD1	2.22	0.68
1:A:1034:ALA:O	1:A:1037:HIS:HB2	1.93	0.68
1:B:615:VAL:HG22	1:B:686:PHE:HD2	1.57	0.68
1:B:1361:PHE:O	1:B:1362:LEU:HD12	1.94	0.68
1:B:1554:ALA:HB2	1:B:1882:PRO:HG3	1.76	0.68
1:B:1703:GLU:O	1:B:1706:ALA:HB3	1.94	0.68
1:A:941:SER:HB2	1:B:945:GLU:OE2	1.93	0.68
1:A:808:VAL:HG12	1:A:809:SER:N	2.08	0.68
1:A:1146:LEU:HD13	1:A:1189:GLN:HG2	1.75	0.68
1:B:420:LEU:HD11	1:B:512:ARG:HD2	1.76	0.68
1:B:159:THR:CG2	1:B:398:SER:HB3	2.22	0.68
1:B:502:GLN:CG	1:B:556:LEU:HD11	2.23	0.68
1:B:1060:ASP:OD1	1:B:1062:VAL:HG23	1.93	0.68
1:A:50:ARG:HD3	1:A:210:GLY:O	1.94	0.68
1:A:1705:ARG:HG2	1:A:1720:PHE:HD2	1.59	0.68
1:B:1214:ASP:HB3	1:B:1215:PRO:HD3	1.74	0.68
1:A:953:LEU:HD12	1:A:954:ILE:N	2.09	0.68
1:A:1252:GLY:HA2	1:A:1318:ASN:HD22	1.59	0.68
1:B:1363:THR:O	1:B:1363:THR:HG22	1.93	0.68
1:A:976:VAL:O	1:A:978:PRO:HD3	1.93	0.68
1:B:1472:VAL:HG13	1:B:1502:VAL:O	1.94	0.68
1:B:1477:LEU:HD11	1:B:2043:ARG:HD2	1.74	0.68
1:A:1732:VAL:O	1:A:1736:THR:HB	1.93	0.67
1:A:1778:HIS:O	1:B:1782:MET:HB2	1.94	0.67
1:A:1009:LEU:CD1	1:A:1030:SER:HB2	2.23	0.67
1:A:1302:ALA:O	1:A:1303:ASN:HB2	1.92	0.67
1:B:159:THR:O	1:B:159:THR:HG22	1.94	0.67
1:B:550:VAL:HG23	1:B:611:LYS:HD3	1.75	0.67
1:B:917:VAL:CG1	1:B:1054:PHE:HB2	2.24	0.67
1:B:1003:TYR:CE2	1:B:1037:HIS:CE1	2.78	0.67
1:A:1248:LEU:HB3	1:A:1321:LEU:HD23	1.76	0.67
1:B:752:VAL:HG11	1:B:775:LEU:HD21	1.76	0.67
1:B:1457:VAL:HG21	1:B:1473:LEU:HD22	1.77	0.67
1:A:1268:MET:HA	1:A:1268:MET:HE2	1.76	0.67
1:A:1275:THR:CG2	1:A:1299:TRP:HB2	2.24	0.67
1:B:1252:GLY:HA3	1:B:1318:ASN:HB3	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1554:ALA:O	1:B:1556:PRO:HD3	1.93	0.67
1:B:953:LEU:HD12	1:B:954:ILE:N	2.09	0.67
1:B:1454:VAL:HG13	1:B:1503:MET:CE	2.25	0.67
1:A:254:ASP:HB2	1:A:257:LYS:HE2	1.76	0.67
1:A:1234:LEU:HD22	1:A:1262:LEU:HD22	1.76	0.67
1:B:47:LEU:HA	1:B:201:MET:HE1	1.76	0.67
1:B:98:ALA:HA	1:B:101:ARG:HG3	1.77	0.67
1:B:502:GLN:HG2	1:B:556:LEU:CD1	2.24	0.67
1:A:1247:VAL:HG23	1:A:1315:LEU:HD11	1.75	0.67
1:A:1457:VAL:HG11	1:A:1473:LEU:HD22	1.76	0.67
1:B:1387:LEU:HD23	1:B:1406:GLN:HB3	1.76	0.67
1:B:1585:PRO:HB3	1:B:1598:MET:CE	2.25	0.67
1:A:157:ILE:HD11	1:A:167:ALA:HA	1.77	0.67
1:B:570:LEU:HB3	1:B:810:VAL:HB	1.77	0.67
1:B:1705:ARG:HG2	1:B:1720:PHE:HD2	1.60	0.67
1:A:1353:HIS:HB3	1:A:1354:PRO:HD2	1.77	0.66
1:A:2075:THR:HG22	1:A:2076:ASN:H	1.60	0.66
1:B:1887:TYR:CD2	1:B:1967:GLY:HA3	2.30	0.66
1:B:288:GLU:HG3	1:B:385:GLY:O	1.95	0.66
1:B:420:LEU:CD1	1:B:512:ARG:HD2	2.26	0.66
1:A:460:VAL:HG21	1:A:465:MET:HG3	1.78	0.66
1:A:1703:GLU:O	1:A:1706:ALA:HB3	1.94	0.66
1:B:359:TYR:OH	1:B:362:PRO:HG3	1.95	0.66
1:B:1344:LEU:HD12	1:B:1346:LEU:HD21	1.77	0.66
1:B:1725:ASP:OD1	1:B:1726:THR:N	2.28	0.66
1:A:1350:LEU:O	1:A:1356:GLY:HA3	1.95	0.66
1:B:217:ALA:HB2	1:B:364:PRO:HD3	1.78	0.66
1:B:581:SER:HB2	1:B:683:HIS:NE2	2.10	0.66
1:A:289:TYR:HB3	1:A:388:VAL:HG22	1.76	0.66
1:A:1350:LEU:HD22	1:A:1373:LEU:O	1.96	0.66
1:B:2006:THR:HG21	1:B:2048:ARG:HH22	1.60	0.66
1:A:2053:LEU:HD22	1:A:2054:PRO:HD2	1.76	0.66
1:B:2075:THR:HG22	1:B:2076:ASN:H	1.59	0.66
1:A:56:ASP:OD2	1:A:59:ARG:HD3	1.96	0.66
1:A:78:GLN:HB3	1:A:188:LEU:HD13	1.77	0.66
1:B:289:TYR:HB3	1:B:388:VAL:HG22	1.78	0.66
1:B:499:MET:SD	1:B:502:GLN:NE2	2.68	0.66
1:B:1409:PRO:HB2	1:B:1439:ARG:HH12	1.61	0.66
1:B:1653:THR:HG22	1:B:1810:VAL:CG1	2.25	0.66
1:A:77:PRO:O	1:A:81:MET:HG2	1.95	0.66
1:A:1890:THR:HA	1:A:1915:THR:HB	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1036:LEU:CD2	1:B:1096:PHE:HE1	2.09	0.66
1:A:1486:MET:CE	1:A:1506:TYR:HB3	2.26	0.66
1:A:1533:VAL:CG1	1:A:1622:LEU:HB3	2.25	0.65
1:B:215:PHE:CD2	1:B:305:LEU:HD11	2.31	0.65
1:A:64:PHE:HB2	1:A:429:ARG:HH21	1.61	0.65
1:A:545:VAL:HG22	1:A:551:SER:CB	2.26	0.65
1:B:263:PHE:HE2	1:B:303:GLN:HE21	1.44	0.65
1:A:1183:LEU:HB3	1:A:1216:LEU:HD23	1.78	0.65
1:A:1357:GLU:O	1:A:1361:PHE:CD1	2.48	0.65
1:A:1783:ALA:H	1:B:1777:ASN:HD22	1.44	0.65
1:B:82:LEU:HG	1:B:144:LEU:HD13	1.78	0.65
1:A:165:LEU:HB2	1:A:337:GLY:HA3	1.78	0.65
1:A:503:TRP:CD1	1:A:787:LYS:HB2	2.32	0.65
1:A:1484:PRO:O	1:A:1485:GLU:HB2	1.97	0.65
1:B:1009:LEU:CD1	1:B:1030:SER:HB2	2.26	0.65
1:B:1674:HIS:CD2	1:B:1698:THR:OG1	2.50	0.65
1:A:98:ALA:HA	1:A:101:ARG:HG3	1.79	0.65
1:A:1060:ASP:OD1	1:A:1062:VAL:HG23	1.95	0.65
1:B:2064:GLY:O	1:B:2066:VAL:N	2.24	0.65
1:A:118:GLU:HG3	1:B:118:GLU:HG3	1.77	0.65
1:A:254:ASP:CB	1:A:257:LYS:HE2	2.27	0.65
1:A:1483:ALA:N	1:A:1484:PRO:HD3	2.11	0.65
1:A:1888:VAL:HG22	1:A:1913:VAL:HB	1.78	0.65
1:B:254:ASP:CB	1:B:257:LYS:HE2	2.27	0.65
1:B:368:ALA:N	1:B:371:ASP:HB3	2.11	0.65
1:B:443:ARG:HG3	1:B:443:ARG:NH1	2.08	0.65
1:B:1207:GLU:O	1:B:1211:LEU:HB2	1.96	0.65
1:B:1566:VAL:HG12	1:B:1856:VAL:HG21	1.77	0.65
1:A:1140:LEU:HD21	1:A:1354:PRO:HG2	1.77	0.65
1:B:1374:SER:HB2	1:B:1377:GLN:HG3	1.79	0.65
1:B:1975:LEU:HD22	1:B:1977:ASP:OD1	1.96	0.65
1:A:1208:ARG:HH11	1:A:1211:LEU:CD2	2.11	0.64
1:A:1926:ALA:O	1:A:1930:ARG:HB2	1.95	0.64
1:B:662:LEU:HD13	1:B:672:VAL:HG12	1.79	0.64
1:B:1603:PHE:HE2	1:B:1615:GLY:C	2.00	0.64
1:A:366:ILE:HD11	1:A:369:LEU:HD11	1.78	0.64
1:A:1476:ASN:HA	1:A:1486:MET:SD	2.37	0.64
1:A:1574:ARG:HD2	1:A:1588:ILE:HD11	1.79	0.64
1:B:1470:ARG:HG3	1:B:1470:ARG:O	1.97	0.64
1:A:1887:TYR:CD2	1:A:1967:GLY:HA3	2.31	0.64
1:B:1374:SER:O	1:B:1378:TRP:HD1	1.81	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1407:GLN:CG	1:B:1409:PRO:HD2	2.27	0.64
1:B:1658:SER:O	1:B:1767:LEU:HD13	1.97	0.64
1:B:1766:PHE:HD2	1:B:1791:PHE:CE1	2.16	0.64
1:A:333:GLU:CB	1:A:334:PRO:HD3	2.18	0.64
1:A:1653:THR:HG22	1:A:1810:VAL:CG1	2.28	0.64
1:B:157:ILE:HD11	1:B:167:ALA:HA	1.80	0.64
1:B:527:LEU:HD13	1:B:532:LEU:HD23	1.80	0.64
1:B:765:ALA:HB1	1:B:768:GLN:CG	2.28	0.64
1:A:856:CYS:HB3	1:B:856:CYS:SG	2.37	0.64
1:A:1915:THR:CG2	2:A:3002:NAP:H2A	2.28	0.64
1:B:925:LEU:HD22	1:B:931:VAL:HG21	1.80	0.64
1:B:13:LEU:HB3	1:B:14:PRO:HD2	1.79	0.64
1:B:1211:LEU:HG	1:B:1211:LEU:O	1.98	0.64
1:A:51:MET:CE	1:A:191:LEU:HD13	2.27	0.64
1:A:1818:ILE:HA	1:A:1823:VAL:HG13	1.79	0.64
1:B:64:PHE:CE2	1:B:464:ALA:HB1	2.33	0.64
1:A:47:LEU:HA	1:A:201:MET:CE	2.27	0.64
1:B:64:PHE:HE2	1:B:464:ALA:HB1	1.63	0.64
1:B:980:ASP:OD1	1:B:980:ASP:N	2.27	0.64
1:B:1463:GLU:OE1	1:B:1980:LEU:HB2	1.98	0.64
1:B:1614:MET:HG2	1:B:1614:MET:O	1.98	0.64
1:A:1475:SER:HB3	1:A:1505:VAL:HG13	1.79	0.63
1:B:1799:LEU:O	1:B:1802:GLU:N	2.31	0.63
1:A:93:GLY:HA2	1:A:241:ARG:HD2	1.80	0.63
1:A:321:LEU:HD23	1:A:381:LEU:CD1	2.28	0.63
1:A:2101:GLN:HG3	1:A:2102:PRO:HD2	1.80	0.63
1:B:157:ILE:HD12	1:B:166:LEU:HD23	1.80	0.63
1:B:1338:LEU:HD13	1:B:1406:GLN:CG	2.29	0.63
1:A:157:ILE:HD12	1:A:166:LEU:HD23	1.79	0.63
1:B:1736:THR:HG23	1:B:1739:LYS:H	1.63	0.63
1:A:1182:ARG:HE	1:A:1217:LEU:N	1.96	0.63
1:A:1475:SER:O	1:A:1486:MET:HE1	1.99	0.63
1:A:1766:PHE:HD2	1:A:1791:PHE:CE1	2.16	0.63
1:B:1265:GLN:HG2	1:B:2026:ARG:HD2	1.80	0.63
1:B:1532:PHE:HE1	1:B:1534:ASN:HB2	1.64	0.63
1:B:1585:PRO:HB3	1:B:1598:MET:HE3	1.79	0.63
1:B:2075:THR:HG22	1:B:2076:ASN:N	2.14	0.63
1:A:64:PHE:HE2	1:A:464:ALA:HB1	1.64	0.63
1:A:82:LEU:HG	1:A:144:LEU:HD13	1.78	0.63
1:A:1180:LEU:HB2	1:A:1181:PRO:HD3	1.78	0.63
1:B:56:ASP:OD2	1:B:59:ARG:HD3	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:499:MET:SD	1:A:502:GLN:NE2	2.71	0.63
1:A:616:LEU:HD23	1:A:617:PRO:CD	2.18	0.63
1:A:1216:LEU:CD1	1:A:1218:SER:H	2.08	0.63
1:A:1658:SER:O	1:A:1767:LEU:HD13	1.98	0.63
1:B:1408:THR:N	1:B:1409:PRO:CD	2.61	0.63
1:B:1520:GLU:O	1:B:1522:ASP:N	2.32	0.63
1:A:1570:SER:HB3	1:A:1853:VAL:HG22	1.81	0.63
1:B:1303:ASN:N	1:B:1304:PRO:CD	2.61	0.63
1:A:945:GLU:OE2	1:B:941:SER:HB2	1.99	0.63
1:A:1215:PRO:HA	1:A:1220:LEU:CD1	2.29	0.63
1:A:1476:ASN:O	1:A:1477:LEU:HD23	1.98	0.63
1:B:1299:TRP:HZ2	1:B:1305:ALA:HA	1.63	0.63
1:B:1338:LEU:HB2	1:B:1406:GLN:HE21	1.64	0.63
1:A:1126:GLU:HB3	1:A:1129:CYS:SG	2.38	0.63
1:A:252:ASN:ND2	1:A:272:LEU:HB2	2.13	0.62
1:A:1538:ARG:NH2	1:A:1585:PRO:HD3	2.14	0.62
1:A:2070:LEU:HD11	1:A:2076:ASN:HD21	1.63	0.62
1:B:259:GLN:HB2	1:B:263:PHE:CD1	2.34	0.62
1:B:1433:LEU:HD21	1:B:1465:GLY:HA3	1.81	0.62
1:A:48:PRO:HD3	1:A:201:MET:CE	2.29	0.62
1:A:344:VAL:HG11	1:A:388:VAL:HG11	1.79	0.62
1:A:1422:SER:O	1:A:1423:PHE:HB2	1.98	0.62
1:B:1617:VAL:HG21	1:B:1626:VAL:HG11	1.81	0.62
1:B:1818:ILE:HA	1:B:1823:VAL:HG13	1.81	0.62
1:A:13:LEU:HB3	1:A:14:PRO:HD2	1.79	0.62
1:A:606:ARG:NH1	1:A:739:LEU:HG	2.14	0.62
1:B:39:ARG:NH1	1:B:57:LEU:HD22	2.14	0.62
1:B:1890:THR:HA	1:B:1915:THR:HB	1.81	0.62
1:A:423:LEU:HB2	1:A:797:LEU:HD22	1.82	0.62
1:A:1454:VAL:HG13	1:A:1503:MET:CE	2.30	0.62
1:B:304:GLU:HG3	1:B:393:PHE:HE2	1.63	0.62
1:B:1036:LEU:HD21	1:B:1096:PHE:CE1	2.33	0.62
1:B:1455:GLY:HA3	1:B:2039:SER:HB2	1.81	0.62
1:A:304:GLU:HG3	1:A:393:PHE:HE2	1.63	0.62
1:A:359:TYR:OH	1:A:362:PRO:HG3	2.00	0.62
1:A:1036:LEU:HD21	1:A:1096:PHE:CE1	2.35	0.62
1:B:47:LEU:HA	1:B:201:MET:CE	2.29	0.62
1:B:621:ALA:CB	1:B:662:LEU:HD11	2.30	0.62
1:B:627:TRP:HB2	1:B:643:HIS:ND1	2.13	0.62
1:A:1461:ARG:O	1:A:1461:ARG:HG3	1.99	0.62
1:B:859:VAL:HG13	1:B:936:ARG:HG2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:142:ASN:HD22	1:B:396:GLY:HA3	1.64	0.62
1:A:263:PHE:HE2	1:A:303:GLN:HE21	1.48	0.62
1:B:1409:PRO:CB	1:B:1439:ARG:HH12	2.12	0.62
1:B:1422:SER:O	1:B:1423:PHE:HB2	2.00	0.62
1:A:765:ALA:HB1	1:A:768:GLN:CG	2.29	0.62
1:A:1016:GLU:HA	1:A:1043:PRO:HG3	1.81	0.62
1:A:1285:ALA:HB1	1:A:1289:LEU:HG	1.82	0.62
1:B:319:PRO:HB2	1:B:320:LEU:HD23	1.82	0.62
1:B:1016:GLU:HA	1:B:1043:PRO:HG3	1.81	0.62
1:B:1616:MET:HE3	1:B:1650:ILE:HA	1.81	0.62
1:A:64:PHE:CE2	1:A:464:ALA:HB1	2.34	0.62
1:A:1245:VAL:HG11	1:A:1309:LEU:HD11	1.81	0.62
1:A:1564:CYS:SG	1:A:1628:LEU:HD21	2.39	0.62
1:A:295:THR:HG22	1:A:331:HIS:CD2	2.35	0.61
1:B:1007:PHE:CE2	1:B:1030:SER:HA	2.35	0.61
1:B:1554:ALA:CB	1:B:1882:PRO:HB3	2.30	0.61
1:B:2101:GLN:HG3	1:B:2102:PRO:HD2	1.81	0.61
1:A:319:PRO:HB2	1:A:320:LEU:HD23	1.82	0.61
1:A:745:PHE:CE2	1:A:767:LEU:HD13	2.35	0.61
1:A:1318:ASN:O	1:A:1321:LEU:HD22	2.00	0.61
1:A:1229:CYS:HB3	1:A:1403:LEU:HD22	1.82	0.61
1:A:1350:LEU:HD11	1:A:1375:GLN:HG2	1.82	0.61
1:A:1460:LEU:CD1	1:A:1980:LEU:HD13	2.30	0.61
1:B:1603:PHE:HD2	1:B:1603:PHE:N	1.97	0.61
1:B:1628:LEU:CD1	1:B:1633:THR:HG21	2.29	0.61
1:A:302:PRO:HA	1:A:366:ILE:HG21	1.82	0.61
1:A:2098:PHE:O	1:A:2101:GLN:HB2	2.00	0.61
1:A:1130:LEU:O	1:A:1131:ALA:HB3	2.00	0.61
1:A:1252:GLY:H	1:A:1321:LEU:HD21	1.66	0.61
1:B:207:SER:OG	1:B:209:ASP:HB3	2.01	0.61
1:B:1273:THR:HA	1:B:1295:THR:O	2.00	0.61
1:A:111:VAL:CG2	1:A:188:LEU:HB2	2.30	0.61
1:B:82:LEU:HG	1:B:144:LEU:CD1	2.31	0.61
1:B:1720:PHE:N	1:B:1720:PHE:HD1	1.99	0.61
1:A:1036:LEU:CD2	1:A:1096:PHE:HE1	2.12	0.61
1:B:344:VAL:HG11	1:B:388:VAL:HG11	1.83	0.61
1:B:1991:VAL:HG21	1:B:2033:ASN:ND2	2.16	0.61
1:A:878:HIS:HB2	1:A:1007:PHE:CE1	2.34	0.61
1:A:1422:SER:CB	1:A:1424:ARG:HG3	2.30	0.61
1:A:1007:PHE:CE2	1:A:1030:SER:HA	2.36	0.61
1:A:1422:SER:HB3	1:A:1424:ARG:HG3	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1995:LYS:HB3	1:A:2041:MET:SD	2.41	0.61
1:B:1570:SER:HB3	1:B:1853:VAL:HG22	1.83	0.61
1:A:159:THR:O	1:A:159:THR:HG22	2.00	0.61
1:A:1802:GLU:HG2	1:A:1802:GLU:O	2.01	0.61
1:B:1216:LEU:CD1	1:B:1218:SER:H	2.04	0.61
1:B:1888:VAL:HG22	1:B:1913:VAL:HB	1.82	0.61
1:A:259:GLN:HB2	1:A:263:PHE:CD1	2.35	0.60
1:A:890:GLY:HA2	1:A:1029:VAL:HG13	1.83	0.60
1:A:1528:THR:CG2	1:A:1530:HIS:H	2.12	0.60
1:A:1585:PRO:HB3	1:A:1598:MET:CE	2.30	0.60
1:B:252:ASN:ND2	1:B:272:LEU:HB2	2.15	0.60
1:B:1200:LEU:O	1:B:1203:VAL:HG23	2.00	0.60
1:A:1316:VAL:HG13	1:A:1345:LEU:HB3	1.82	0.60
1:B:236:LYS:HG3	1:B:237:SER:H	1.64	0.60
1:B:295:THR:HG22	1:B:331:HIS:CD2	2.36	0.60
1:B:662:LEU:HD22	1:B:672:VAL:CG1	2.32	0.60
1:B:994:LYS:HA	1:B:997:ARG:NH1	2.16	0.60
1:B:1694:ARG:HH11	1:B:1694:ARG:HG3	1.67	0.60
1:B:117:SER:HB3	1:B:135:CYS:HB3	1.82	0.60
1:B:215:PHE:CE2	1:B:305:LEU:HD11	2.36	0.60
1:B:491:PRO:HD2	1:B:756:ALA:HA	1.83	0.60
1:B:1011:LEU:HD21	1:B:1023:GLN:HB2	1.83	0.60
1:A:671:PHE:HE2	1:A:773:ARG:NH2	1.95	0.60
1:A:1476:ASN:ND2	1:A:1486:MET:HE2	2.17	0.60
1:B:861:VAL:CG2	1:B:934:GLU:HB3	2.31	0.60
1:B:1429:LEU:HD11	1:B:1443:LEU:HD11	1.84	0.60
1:B:1736:THR:CG2	1:B:1740:GLY:H	2.14	0.60
1:B:1955:LEU:O	1:B:1958:GLU:HB2	2.01	0.60
1:A:861:VAL:CG2	1:A:934:GLU:HB3	2.32	0.60
1:B:64:PHE:HB2	1:B:429:ARG:HH21	1.65	0.60
1:B:442:LEU:HD23	1:B:473:LEU:HD22	1.84	0.60
1:A:1259:PRO:HB2	1:A:1292:LEU:HD22	1.83	0.60
1:B:353:TRP:HH2	1:B:388:VAL:HG21	1.67	0.60
1:B:1423:PHE:O	1:B:1985:PRO:HB3	2.02	0.60
1:B:1569:THR:CG2	1:B:1622:LEU:HD23	2.31	0.60
1:A:118:GLU:HG3	1:B:118:GLU:CG	2.32	0.60
1:A:207:SER:OG	1:A:209:ASP:HB3	2.02	0.60
1:A:1182:ARG:NH2	1:A:1217:LEU:HB3	2.17	0.60
1:B:1857:ARG:CZ	1:B:1871:ILE:HD11	2.31	0.60
1:B:123:ASP:O	1:B:127:LEU:HB3	2.01	0.60
1:B:1320:ALA:O	1:B:1321:LEU:HG	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:118:GLU:CG	1:B:118:GLU:HG3	2.32	0.60
1:A:856:CYS:O	1:A:856:CYS:SG	2.60	0.60
1:A:925:LEU:HD22	1:A:931:VAL:HG21	1.84	0.60
1:A:1349:LEU:CD1	1:A:1359:VAL:HG11	2.32	0.60
1:B:278:ALA:HB3	1:B:279:PRO:CD	2.24	0.60
1:B:290:ILE:CG2	1:B:322:ILE:HG12	2.32	0.60
1:B:460:VAL:HG21	1:B:465:MET:HG3	1.82	0.60
1:B:1126:GLU:HB3	1:B:1129:CYS:SG	2.42	0.60
1:A:81:MET:HG3	1:A:228:VAL:HG11	1.83	0.59
1:B:384:ARG:HG3	1:B:384:ARG:NH1	2.02	0.59
1:B:1554:ALA:C	1:B:1556:PRO:HD3	2.23	0.59
1:B:273:ILE:O	1:B:277:TYR:HD1	1.85	0.59
1:B:1694:ARG:HG3	1:B:1694:ARG:NH1	2.16	0.59
1:A:663:GLN:O	1:A:667:ARG:HD2	2.03	0.59
1:A:1437:SER:O	1:A:1439:ARG:N	2.35	0.59
1:A:1790:THR:CG2	1:B:1662:ARG:HH22	2.11	0.59
1:A:1644:GLU:HB3	1:A:1825:PRO:CB	2.33	0.59
1:B:1234:LEU:HD11	1:B:1268:MET:HE3	1.85	0.59
1:A:396:GLY:HA3	1:B:142:ASN:HD22	1.68	0.59
1:A:527:LEU:HD13	1:A:532:LEU:HD23	1.85	0.59
1:A:1133:ASN:HD22	1:A:1136:LEU:CD1	2.12	0.59
1:A:1302:ALA:C	1:A:1304:PRO:HD3	2.21	0.59
1:A:1662:ARG:HG2	1:A:1662:ARG:NH1	2.17	0.59
1:B:2098:PHE:O	1:B:2101:GLN:HB2	2.02	0.59
1:A:1043:PRO:HA	1:A:1927:ARG:NH1	2.18	0.59
1:A:1344:LEU:HD12	1:A:1346:LEU:HD21	1.83	0.59
1:A:1363:THR:O	1:A:1365:PRO:HD3	2.03	0.59
1:B:305:LEU:HD23	1:B:308:ILE:HD12	1.84	0.59
1:B:515:ARG:HG2	1:B:815:LEU:O	2.02	0.59
1:B:1231:ASP:CB	1:B:1515:ARG:HD2	2.32	0.59
1:B:1566:VAL:HG12	1:B:1856:VAL:CG2	2.33	0.59
1:A:200:PHE:CB	1:A:206:LEU:HD12	2.33	0.59
1:B:93:GLY:HA2	1:B:241:ARG:HD2	1.84	0.59
1:B:236:LYS:HG3	1:B:237:SER:N	2.17	0.59
1:B:581:SER:HB2	1:B:683:HIS:CE1	2.37	0.59
1:B:620:MET:SD	1:B:682:PHE:HB2	2.43	0.59
1:B:765:ALA:HB1	1:B:768:GLN:HG3	1.84	0.59
1:A:137:ARG:HD2	1:B:137:ARG:NH1	2.17	0.59
1:A:644:ASN:HB3	1:A:770:VAL:HG11	1.85	0.59
1:A:1736:THR:HG23	1:A:1739:LYS:H	1.68	0.59
1:A:1991:VAL:HG21	1:A:2033:ASN:ND2	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1456:MET:CG	1:B:2036:PHE:HB2	2.32	0.59
1:B:1574:ARG:HD2	1:B:1588:ILE:HD11	1.85	0.59
1:A:117:SER:HB2	1:A:135:CYS:HB3	1.85	0.58
1:A:200:PHE:HB3	1:A:206:LEU:HD12	1.83	0.58
1:A:672:VAL:HG12	1:A:672:VAL:O	2.01	0.58
1:A:1496:VAL:HG21	1:A:1511:TRP:CH2	2.38	0.58
1:A:1514:PHE:O	1:A:1515:ARG:NH1	2.35	0.58
1:A:1955:LEU:O	1:A:1958:GLU:HB2	2.02	0.58
1:B:1351:ALA:HB3	1:B:1372:LEU:O	2.03	0.58
1:B:1361:PHE:CE2	1:B:1370:ARG:HD3	2.37	0.58
1:A:82:LEU:HG	1:A:144:LEU:CD1	2.33	0.58
1:A:442:LEU:HD23	1:A:473:LEU:HD22	1.84	0.58
1:A:859:VAL:HG13	1:A:936:ARG:HG2	1.84	0.58
1:A:1711:ARG:HG2	1:A:1712:PHE:CE1	2.37	0.58
1:B:1442:TRP:HB3	1:B:1444:MET:HE1	1.85	0.58
1:B:1603:PHE:N	1:B:1603:PHE:CD2	2.69	0.58
1:B:1711:ARG:HG2	1:B:1712:PHE:CE1	2.38	0.58
1:B:2070:LEU:HD11	1:B:2076:ASN:HD21	1.68	0.58
1:A:1204:LEU:HD11	1:A:1365:PRO:HG2	1.85	0.58
1:A:1533:VAL:HG12	1:A:1622:LEU:HB3	1.85	0.58
1:B:1303:ASN:H	1:B:1304:PRO:CD	2.16	0.58
1:B:1720:PHE:N	1:B:1720:PHE:CD1	2.70	0.58
1:A:1001:TYR:HB3	1:A:1003:TYR:CD1	2.37	0.58
1:A:1472:VAL:HG12	1:A:1473:LEU:N	2.17	0.58
1:B:251:THR:HB	1:B:399:ASN:O	2.03	0.58
1:B:290:ILE:HD13	1:B:308:ILE:HD13	1.85	0.58
1:B:423:LEU:HB2	1:B:797:LEU:HD22	1.84	0.58
1:A:322:ILE:O	1:A:377:VAL:HG23	2.03	0.58
1:A:1528:THR:HG22	1:A:1530:HIS:N	2.14	0.58
1:B:594:LEU:HD13	1:B:599:ALA:HA	1.84	0.58
1:B:1338:LEU:HD13	1:B:1406:GLN:HG3	1.85	0.58
1:B:254:ASP:HB2	1:B:257:LYS:HE2	1.84	0.58
1:B:426:ALA:HA	1:B:458:ALA:HB2	1.86	0.58
1:B:1276:ASP:O	1:B:1299:TRP:N	2.36	0.58
1:B:1364:SER:N	1:B:1365:PRO:CD	2.67	0.58
1:B:1794:ILE:O	1:B:1795:LEU:HD23	2.03	0.58
1:A:36:ASP:HB3	1:A:38:ARG:HG3	1.86	0.58
1:A:553:PHE:CD2	1:A:582:LEU:HD13	2.38	0.58
1:A:423:LEU:HD23	1:A:812:PRO:HG3	1.85	0.58
1:A:1457:VAL:HG21	1:A:1473:LEU:HB3	1.86	0.58
1:B:234:THR:HG22	1:B:235:LYS:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1995:LYS:HB3	1:B:2041:MET:SD	2.44	0.58
1:A:188:LEU:HD22	1:A:228:VAL:HG12	1.85	0.58
1:A:200:PHE:CD2	1:B:132:MET:HE1	2.38	0.58
1:A:997:ARG:HA	1:A:1001:TYR:O	2.04	0.58
1:A:1656:TYR:CD2	1:A:1687:ILE:HD13	2.39	0.58
1:A:1842:TYR:CE2	1:A:1848:HIS:HB3	2.39	0.58
1:B:655:GLN:O	1:B:655:GLN:HG2	2.03	0.58
1:B:1824:GLN:HG3	1:B:1825:PRO:HD2	1.86	0.58
1:A:586:ALA:O	1:A:589:TYR:HB3	2.03	0.58
1:A:1275:THR:HG22	1:A:1299:TRP:HB2	1.85	0.58
1:B:640:PRO:HA	1:B:651:ILE:HG22	1.85	0.58
1:B:1322:ALA:HB1	1:B:1371:HIS:CE1	2.39	0.58
1:B:1461:ARG:HG3	1:B:1461:ARG:O	2.04	0.58
1:A:426:ALA:HA	1:A:458:ALA:HB2	1.85	0.57
1:A:856:CYS:CB	1:B:856:CYS:HG	2.16	0.57
1:B:982:THR:O	1:B:984:GLU:N	2.34	0.57
1:B:1214:ASP:OD2	1:B:1321:LEU:HD21	2.04	0.57
1:B:1802:GLU:O	1:B:1804:GLY:N	2.37	0.57
1:A:765:ALA:HB1	1:A:768:GLN:HG3	1.85	0.57
1:A:1735:HIS:CD2	1:A:1735:HIS:H	2.21	0.57
1:B:48:PRO:HD3	1:B:201:MET:CE	2.34	0.57
1:B:111:VAL:CG2	1:B:188:LEU:HB2	2.33	0.57
1:B:993:TYR:CZ	1:B:1008:GLN:HA	2.39	0.57
1:B:997:ARG:HA	1:B:1001:TYR:O	2.04	0.57
1:B:1222:ASP:HA	1:B:1226:LEU:CD1	2.34	0.57
1:B:1836:VAL:HG13	1:B:1854:ILE:CD1	2.33	0.57
1:A:331:HIS:CE1	1:A:333:GLU:HA	2.39	0.57
1:A:953:LEU:HD12	1:A:954:ILE:H	1.69	0.57
1:A:1208:ARG:HA	1:A:1211:LEU:HB2	1.86	0.57
1:A:1273:THR:HA	1:A:1295:THR:O	2.02	0.57
1:B:662:LEU:HD22	1:B:672:VAL:HG11	1.86	0.57
1:B:1220:LEU:CB	1:B:1257:ARG:HH22	2.10	0.57
1:A:215:PHE:O	1:A:363:ASN:HB2	2.04	0.57
1:A:1137:GLN:NE2	1:A:1396:PHE:CE1	2.72	0.57
1:A:1182:ARG:NE	1:A:1217:LEU:H	2.01	0.57
1:B:1208:ARG:HH11	1:B:1211:LEU:CD2	2.14	0.57
1:B:1353:HIS:NE2	1:B:1398:GLY:HA2	2.19	0.57
1:A:273:ILE:O	1:A:277:TYR:HD1	1.87	0.57
1:A:1345:LEU:HD12	1:A:1402:PHE:O	2.04	0.57
1:A:159:THR:O	1:A:160:ALA:HB3	2.05	0.57
1:A:1476:ASN:HA	1:A:1486:MET:HE1	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1528:THR:HG21	1:A:1552:HIS:HB2	1.87	0.57
1:A:1824:GLN:HG3	1:A:1825:PRO:HD2	1.85	0.57
1:A:91:VAL:HG21	1:A:834:ILE:HD13	1.86	0.57
1:B:38:ARG:HB2	1:B:53:LYS:HD2	1.87	0.57
1:B:1762:GLN:NE2	1:B:1787:LYS:HA	2.19	0.57
1:A:633:ARG:HG2	1:A:633:ARG:O	2.04	0.57
1:A:1418:VAL:O	1:A:1418:VAL:HG12	2.04	0.57
1:A:1673:ILE:HD13	1:A:1684:ALA:CB	2.35	0.57
1:B:1209:PRO:O	1:B:1210:LEU:HG	2.05	0.57
1:A:305:LEU:HD23	1:A:308:ILE:HD12	1.85	0.57
1:A:643:HIS:O	1:A:745:PHE:HB3	2.05	0.57
1:A:1001:TYR:HB3	1:A:1003:TYR:CE1	2.39	0.57
1:B:51:MET:CE	1:B:191:LEU:HD13	2.35	0.57
1:B:1299:TRP:CZ2	1:B:1305:ALA:HA	2.40	0.57
1:A:1674:HIS:NE2	1:A:1756:SER:OG	2.37	0.57
1:A:1836:VAL:HG13	1:A:1854:ILE:CD1	2.35	0.57
1:B:100:LEU:O	1:B:103:THR:OG1	2.23	0.57
1:B:188:LEU:HD22	1:B:228:VAL:HG12	1.87	0.57
1:B:1954:SER:O	1:B:1958:GLU:HG3	2.05	0.57
1:B:2101:GLN:HG3	1:B:2102:PRO:CD	2.35	0.57
1:A:290:ILE:HD13	1:A:308:ILE:HD13	1.87	0.56
1:A:1489:SER:N	1:A:1493:LEU:HD22	2.19	0.56
1:A:1762:GLN:NE2	1:A:1787:LYS:HA	2.20	0.56
1:B:77:PRO:O	1:B:81:MET:HG2	2.04	0.56
1:B:1405:ARG:HH22	1:B:1470:ARG:NH2	2.03	0.56
1:B:1409:PRO:HB2	1:B:1439:ARG:NH1	2.20	0.56
1:B:1647:SER:HA	1:B:1851:LYS:HG3	1.87	0.56
1:A:248:ASN:ND2	1:A:249:ALA:H	2.03	0.56
1:A:627:TRP:CH2	1:A:640:PRO:HB2	2.40	0.56
1:B:455:ASN:HB2	1:B:813:ASN:HD21	1.69	0.56
1:B:1180:LEU:HD23	1:B:1189:GLN:NE2	2.19	0.56
1:B:1565:SER:HB2	1:B:1857:ARG:NH2	2.20	0.56
1:B:1567:TYR:CE1	1:B:1606:ARG:HG3	2.40	0.56
1:A:321:LEU:HD23	1:A:381:LEU:HD12	1.86	0.56
1:A:343:LYS:CE	1:A:354:ALA:HB3	2.26	0.56
1:A:1477:LEU:CD1	1:A:2043:ARG:HD2	2.23	0.56
1:A:1528:THR:HG22	1:A:1529:GLU:N	2.19	0.56
1:A:1672:LEU:N	1:A:1741:VAL:HG11	2.19	0.56
1:A:1736:THR:CG2	1:A:1740:GLY:H	2.18	0.56
1:A:1768:GLU:OE1	1:A:1768:GLU:HA	2.05	0.56
1:A:2101:GLN:HG3	1:A:2102:PRO:CD	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:302:PRO:HA	1:B:366:ILE:HG21	1.85	0.56
1:B:623:VAL:HG12	1:B:624:GLY:N	2.19	0.56
1:B:627:TRP:HB2	1:B:643:HIS:CE1	2.40	0.56
1:B:1265:GLN:HE21	1:B:2026:ARG:HH11	1.54	0.56
1:B:1409:PRO:HG2	1:B:1439:ARG:HH12	1.70	0.56
1:B:1570:SER:OG	1:B:1602:GLU:HB3	2.05	0.56
1:A:564:ILE:HD13	1:A:590:ALA:HB2	1.87	0.56
1:A:1204:LEU:HD21	1:A:1365:PRO:CG	2.34	0.56
1:A:1442:TRP:HB3	1:A:1444:MET:HE1	1.88	0.56
1:B:440:GLN:HG3	1:B:833:HIS:CG	2.39	0.56
1:A:1252:GLY:N	1:A:1321:LEU:HD11	2.20	0.56
1:A:1265:GLN:HE21	1:A:2026:ARG:NH1	2.01	0.56
1:A:1529:GLU:O	1:A:1529:GLU:HG3	2.05	0.56
1:A:1664:ARG:NH1	1:B:1664:ARG:HD3	2.20	0.56
1:B:81:MET:HG3	1:B:228:VAL:HG11	1.87	0.56
1:B:209:ASP:OD2	1:B:213:ARG:NE	2.38	0.56
1:B:1183:LEU:HD22	1:B:1213:ASP:O	2.05	0.56
1:A:251:THR:HB	1:A:399:ASN:O	2.06	0.56
1:A:889:THR:HG21	1:A:1032:LEU:HB2	1.87	0.56
1:A:1289:LEU:HD22	1:A:1294:VAL:HB	1.86	0.56
1:A:1350:LEU:CD1	1:A:1375:GLN:HG2	2.35	0.56
1:A:1397:TYR:CE1	1:A:1399:SER:HB2	2.41	0.56
1:A:1657:TYR:CZ	1:A:1662:ARG:HD2	2.40	0.56
1:A:1794:ILE:O	1:A:1795:LEU:HD23	2.06	0.56
1:B:890:GLY:HA2	1:B:1029:VAL:HG13	1.88	0.56
1:B:1109:GLN:HB3	1:B:1111:HIS:CE1	2.40	0.56
1:B:1413:PRO:CB	1:B:1440:PRO:HB2	2.36	0.56
1:A:118:GLU:CD	1:B:118:GLU:HG3	2.26	0.56
1:A:278:ALA:CB	1:A:279:PRO:CD	2.84	0.56
1:A:883:ARG:HH21	1:A:1107:ARG:HD3	1.71	0.56
1:A:1408:THR:HG23	1:A:1409:PRO:HD2	1.87	0.56
1:A:1851:LYS:HG3	1:A:1852:VAL:N	2.21	0.56
1:B:248:ASN:ND2	1:B:249:ALA:H	2.04	0.56
1:B:572:LEU:HD12	1:B:810:VAL:CG1	2.35	0.56
1:B:1275:THR:CG2	1:B:1299:TRP:HB2	2.36	0.56
1:B:1373:LEU:N	1:B:1373:LEU:HD23	2.21	0.56
1:B:1539:GLY:HA2	1:B:1580:THR:O	2.06	0.56
1:A:1720:PHE:N	1:A:1720:PHE:HD1	2.04	0.56
1:B:468:ARG:HD3	1:B:485:VAL:HG21	1.88	0.56
1:B:1180:LEU:HB2	1:B:1181:PRO:HD3	1.88	0.56
1:A:594:LEU:HD13	1:A:599:ALA:HA	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:207:SER:HB2	1:B:221:GLY:O	2.06	0.56
1:B:527:LEU:HD12	1:B:534:VAL:CG2	2.32	0.56
1:B:620:MET:CG	1:B:677:THR:HG21	2.35	0.56
1:B:1237:MET:SD	1:B:1242:MET:HG3	2.46	0.56
1:A:1109:GLN:HB3	1:A:1111:HIS:CE1	2.41	0.56
1:A:1644:GLU:HB3	1:A:1825:PRO:HB3	1.87	0.56
1:A:1653:THR:HG22	1:A:1810:VAL:HG11	1.86	0.56
1:B:665:LEU:HB2	1:B:672:VAL:HG21	1.87	0.56
1:B:982:THR:C	1:B:984:GLU:N	2.58	0.55
1:B:1133:ASN:ND2	1:B:1136:LEU:HD12	2.18	0.55
1:B:1275:THR:HG22	1:B:1299:TRP:HB2	1.87	0.55
1:B:1661:VAL:HG21	1:B:1810:VAL:HG22	1.87	0.55
1:A:132:MET:HE1	1:B:200:PHE:CD2	2.42	0.55
1:A:379:ARG:O	1:A:381:LEU:HG	2.06	0.55
1:A:581:SER:OG	1:A:582:LEU:N	2.37	0.55
1:A:633:ARG:NH2	1:A:668:GLU:OE1	2.39	0.55
1:A:1628:LEU:HD13	1:A:1633:THR:HG21	1.88	0.55
1:A:1652:TYR:CD1	1:A:1823:VAL:HB	2.40	0.55
1:B:1138:GLU:HG3	1:B:1142:LEU:HD12	1.88	0.55
1:A:122:ARG:O	1:A:124:PRO:HD3	2.05	0.55
1:A:776:GLU:HB3	1:A:778:SER:OG	2.06	0.55
1:A:1456:MET:HG3	1:A:2036:PHE:HB2	1.88	0.55
1:A:1724:ARG:NH1	2:A:3001:NAP:C8A	2.70	0.55
1:A:1969:PHE:CD2	1:A:2017:VAL:HB	2.41	0.55
1:B:353:TRP:CH2	1:B:388:VAL:HG21	2.41	0.55
1:B:1611:ARG:HG2	1:B:1612:ARG:H	1.71	0.55
1:A:128:VAL:HG11	1:A:130:TYR:CZ	2.40	0.55
1:A:287:LEU:HA	1:A:387:ASN:O	2.07	0.55
1:A:1390:VAL:HG22	1:A:1501:LEU:HD21	1.89	0.55
1:A:38:ARG:HB2	1:A:53:LYS:HD2	1.87	0.55
1:A:1606:ARG:HH21	1:A:1860:GLU:HG3	1.71	0.55
1:A:1662:ARG:HH11	1:A:1662:ARG:HG3	1.68	0.55
1:A:1674:HIS:O	1:A:1675:SER:HB2	2.07	0.55
1:B:438:LEU:O	1:B:442:LEU:HG	2.06	0.55
1:B:1124:HIS:CD2	1:B:1512:GLY:HA2	2.41	0.55
1:B:1671:VAL:CG2	1:B:1743:LEU:HB2	2.37	0.55
1:A:1549:SER:O	1:A:1552:HIS:HB3	2.06	0.55
1:A:2075:THR:HG22	1:A:2076:ASN:N	2.22	0.55
1:B:1523:ARG:NH1	1:B:1545:ARG:HE	2.03	0.55
1:A:241:ARG:NH2	1:A:827:THR:O	2.40	0.55
1:A:1231:ASP:HB3	1:A:1515:ARG:HD2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1115:ILE:HD11	1:B:2111:LEU:HD12	1.88	0.55
1:B:1374:SER:O	1:B:1378:TRP:CD1	2.60	0.55
1:B:1671:VAL:HG23	1:B:1743:LEU:HB2	1.88	0.55
1:B:1311:LYS:O	1:B:1312:ALA:HB2	2.07	0.55
1:B:1422:SER:HB3	1:B:1424:ARG:HG3	1.87	0.55
1:B:1514:PHE:O	1:B:1515:ARG:NH1	2.40	0.55
1:B:1652:TYR:CD1	1:B:1823:VAL:HB	2.41	0.55
1:A:207:SER:HB2	1:A:221:GLY:O	2.06	0.55
1:A:293:HIS:O	1:A:326:LYS:HD2	2.06	0.55
1:A:1419:GLU:CD	1:A:1447:GLY:HA3	2.28	0.55
1:A:1720:PHE:N	1:A:1720:PHE:CD1	2.75	0.55
1:B:128:VAL:HG11	1:B:130:TYR:CZ	2.41	0.55
1:B:1183:LEU:HB3	1:B:1216:LEU:HD23	1.89	0.55
1:B:1662:ARG:HD3	1:B:1794:ILE:HG12	1.88	0.55
1:A:887:PRO:HB2	1:A:890:GLY:H	1.72	0.55
1:A:1041:LEU:HG	1:A:1041:LEU:O	2.07	0.55
1:A:1842:TYR:HE2	1:A:1848:HIS:HB3	1.71	0.55
1:B:1001:TYR:HB3	1:B:1003:TYR:CD1	2.42	0.55
1:B:1222:ASP:HA	1:B:1226:LEU:HD11	1.89	0.55
1:B:1418:VAL:CG1	1:B:1425:TRP:CE2	2.86	0.55
1:B:1672:LEU:N	1:B:1741:VAL:HG11	2.22	0.55
1:B:162:SER:OG	1:B:163:SER:N	2.39	0.54
1:B:501:ALA:O	1:B:763:PRO:HG2	2.07	0.54
1:B:635:PRO:O	1:B:637:GLY:N	2.40	0.54
1:B:1735:HIS:H	1:B:1735:HIS:CD2	2.25	0.54
1:A:100:LEU:O	1:A:103:THR:OG1	2.24	0.54
1:A:1486:MET:HE3	1:A:1506:TYR:HB3	1.90	0.54
1:A:1614:MET:HG3	1:A:1649:PRO:CG	2.38	0.54
1:A:1769:ILE:HG23	2:A:3001:NAP:C2N	2.38	0.54
1:B:331:HIS:CE1	1:B:333:GLU:HA	2.42	0.54
1:B:610:ILE:HG21	1:B:680:ILE:HD12	1.90	0.54
1:A:353:TRP:NE1	1:A:383:ILE:HB	2.22	0.54
1:A:527:LEU:HD12	1:A:534:VAL:CG2	2.34	0.54
1:A:598:GLU:OE1	1:A:706:LYS:NZ	2.39	0.54
1:B:136:GLN:NE2	1:B:138:ALA:H	2.04	0.54
1:A:1301:PRO:HG2	1:A:1324:LEU:CD2	2.38	0.54
1:A:1354:PRO:O	1:A:1358:MET:HG3	2.06	0.54
1:A:1801:GLU:C	1:A:1803:GLY:H	2.10	0.54
1:B:1611:ARG:HG2	1:B:1612:ARG:N	2.22	0.54
1:A:87:TYR:CE2	1:A:97:PRO:HG2	2.43	0.54
1:A:384:ARG:HG3	1:A:384:ARG:NH1	2.03	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1338:LEU:HB2	1:A:1406:GLN:HE21	1.72	0.54
1:A:1530:HIS:HB3	1:A:1549:SER:HB3	1.88	0.54
1:B:379:ARG:O	1:B:381:LEU:HG	2.07	0.54
1:B:525:GLN:HA	1:B:525:GLN:NE2	2.23	0.54
1:B:745:PHE:CE2	1:B:767:LEU:HD13	2.43	0.54
1:B:1316:VAL:HG13	1:B:1345:LEU:HB3	1.90	0.54
1:A:333:GLU:CB	1:A:334:PRO:CD	2.84	0.54
1:A:580:HIS:O	1:A:581:SER:HB3	2.07	0.54
1:A:1200:LEU:HA	1:A:1203:VAL:HB	1.88	0.54
1:A:1220:LEU:CB	1:A:1257:ARG:HH22	2.17	0.54
1:A:1771:LYS:O	1:A:1775:SER:HB2	2.08	0.54
1:A:348:LEU:HD13	1:A:406:PRO:HB3	1.89	0.54
1:A:1455:GLY:HA3	1:A:2039:SER:HB2	1.90	0.54
1:A:1734:ARG:C	1:A:1736:THR:H	2.10	0.54
1:B:36:ASP:HB3	1:B:38:ARG:HG3	1.90	0.54
1:B:200:PHE:HB3	1:B:206:LEU:HG	1.90	0.54
1:B:293:HIS:O	1:B:326:LYS:HD2	2.08	0.54
1:B:348:LEU:HD13	1:B:406:PRO:HB3	1.89	0.54
1:B:543:GLU:OE1	1:B:543:GLU:HA	2.07	0.54
1:B:615:VAL:HG22	1:B:686:PHE:CD2	2.40	0.54
1:B:883:ARG:HE	1:B:1107:ARG:HD3	1.72	0.54
1:B:1533:VAL:HG21	1:B:1836:VAL:HG11	1.89	0.54
1:A:889:THR:CG2	1:A:1032:LEU:HB2	2.38	0.54
1:A:1338:LEU:HD13	1:A:1406:GLN:CG	2.37	0.54
1:B:953:LEU:HD12	1:B:954:ILE:H	1.70	0.54
1:B:1330:ALA:O	1:B:1334:MET:HG2	2.08	0.54
1:B:1429:LEU:HD11	1:B:1443:LEU:HD21	1.88	0.54
1:A:287:LEU:HD23	1:A:387:ASN:O	2.08	0.54
1:A:941:SER:N	1:B:945:GLU:OE2	2.41	0.54
1:A:1315:LEU:O	1:A:1344:LEU:HD13	2.07	0.54
1:B:127:LEU:O	1:B:127:LEU:HG	2.07	0.54
1:B:166:LEU:CD1	1:B:251:THR:HG21	2.31	0.54
1:B:606:ARG:NH1	1:B:739:LEU:HG	2.23	0.54
1:A:491:PRO:HD2	1:A:756:ALA:HA	1.90	0.54
1:A:1147:ALA:HB2	1:A:1188:CYS:SG	2.48	0.54
1:A:1301:PRO:HG2	1:A:1324:LEU:HD23	1.89	0.54
1:A:1648:VAL:HB	1:A:1649:PRO:HD3	1.89	0.54
1:B:1243:LYS:HA	1:B:1271:ASP:HB2	1.90	0.54
1:A:118:GLU:HG3	1:B:118:GLU:CD	2.29	0.53
1:A:275:SER:HB2	1:A:276:LEU:HD23	1.88	0.53
1:A:1011:LEU:HD21	1:A:1023:GLN:HB2	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1472:VAL:HG12	1:A:1473:LEU:H	1.72	0.53
1:A:1569:THR:HG23	1:A:1602:GLU:O	2.07	0.53
1:A:1893:LEU:HB3	1:A:1925:GLN:HE21	1.72	0.53
1:B:137:ARG:O	1:B:140:MET:HG2	2.08	0.53
1:B:2002:LEU:O	1:B:2006:THR:HB	2.08	0.53
1:A:1652:TYR:CE1	1:A:1823:VAL:HB	2.43	0.53
1:A:606:ARG:HH12	1:A:739:LEU:HG	1.72	0.53
1:A:993:TYR:CZ	1:A:1008:GLN:HA	2.43	0.53
1:A:1222:ASP:HB3	1:A:1257:ARG:NH1	2.22	0.53
1:A:1476:ASN:HA	1:A:1486:MET:CE	2.38	0.53
1:A:1476:ASN:HB3	1:A:1486:MET:SD	2.49	0.53
1:A:1594:THR:OG1	1:A:1596:ASP:HB2	2.08	0.53
1:B:371:ASP:CG	1:B:371:ASP:O	2.46	0.53
1:B:642:CYS:HB2	1:B:650:THR:HB	1.89	0.53
1:B:1420:ASP:HB3	1:B:1425:TRP:HZ3	1.72	0.53
1:B:1454:VAL:HG13	1:B:1503:MET:HE1	1.90	0.53
1:B:1540:ASP:HB3	1:B:1542:SER:OG	2.09	0.53
1:A:371:ASP:CG	1:A:371:ASP:O	2.46	0.53
1:A:1139:GLU:OE1	1:A:1182:ARG:NH2	2.38	0.53
1:A:1227:LYS:HB2	1:A:1261:LEU:HD22	1.91	0.53
1:A:1353:HIS:CD2	1:A:1398:GLY:HA2	2.44	0.53
1:A:1466:GLY:O	1:A:1469:ILE:HB	2.09	0.53
1:A:1567:TYR:CE1	1:A:1606:ARG:HG3	2.43	0.53
1:B:122:ARG:NH1	1:B:849:ASP:O	2.42	0.53
1:B:278:ALA:CB	1:B:279:PRO:CD	2.81	0.53
1:B:889:THR:HG21	1:B:1032:LEU:HB2	1.91	0.53
1:B:1349:LEU:O	1:B:1372:LEU:HD22	2.09	0.53
1:A:326:LYS:CE	1:A:336:SER:HB2	2.38	0.53
1:A:438:LEU:O	1:A:442:LEU:HG	2.09	0.53
1:A:1569:THR:HG21	1:A:1622:LEU:CA	2.36	0.53
1:A:1746:ASN:ND2	1:A:1753:LEU:HD12	2.24	0.53
1:B:23:TRP:CZ2	1:B:350:HIS:HD2	2.26	0.53
1:B:1532:PHE:CD1	1:B:1532:PHE:C	2.81	0.53
1:B:2006:THR:O	1:B:2010:CYS:HB2	2.08	0.53
1:A:234:THR:HG22	1:A:235:LYS:O	2.09	0.53
1:A:1477:LEU:HB3	1:A:1507:ARG:HE	1.73	0.53
1:A:1585:PRO:HB3	1:A:1598:MET:HE3	1.91	0.53
1:B:586:ALA:O	1:B:589:TYR:HB3	2.08	0.53
1:A:984:GLU:O	1:A:985:PHE:CB	2.51	0.53
1:A:1973:MET:SD	2:A:3002:NAP:H3D	2.49	0.53
1:A:1986:GLU:HB3	1:A:1989:GLN:NE2	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2018:ILE:HG12	1:A:2041:MET:HE2	1.91	0.53
1:B:917:VAL:HG12	1:B:1054:PHE:HB2	1.90	0.53
1:B:1418:VAL:HG13	1:B:1425:TRP:NE1	2.23	0.53
1:B:1420:ASP:HB3	1:B:1425:TRP:CZ3	2.44	0.53
1:B:1719:CYS:C	1:B:1720:PHE:HD1	2.12	0.53
1:B:1995:LYS:HD3	1:B:2038:ASN:OD1	2.09	0.53
1:A:23:TRP:CZ2	1:A:350:HIS:HD2	2.26	0.53
1:A:1254:LEU:HD13	1:A:1316:VAL:CG1	2.38	0.53
1:A:1477:LEU:CD1	1:A:1507:ARG:HH21	2.22	0.53
1:B:39:ARG:NH1	1:B:226:GLU:OE2	2.41	0.53
1:B:287:LEU:HA	1:B:387:ASN:O	2.08	0.53
1:B:680:ILE:CG1	1:B:681:ALA:N	2.70	0.53
1:B:1121:PHE:HB2	1:B:1514:PHE:CE2	2.44	0.53
1:B:1251:ASP:HB3	1:B:1321:LEU:CD2	2.39	0.53
1:B:1456:MET:HG3	1:B:2036:PHE:HD1	1.74	0.53
1:B:1768:GLU:HA	1:B:1768:GLU:OE1	2.08	0.53
1:A:112:SER:O	1:A:137:ARG:NH2	2.42	0.53
1:A:570:LEU:HD21	1:A:815:LEU:HD21	1.91	0.53
1:B:972:THR:HG23	1:B:1081:VAL:HG21	1.90	0.53
1:B:997:ARG:HH21	1:B:2070:LEU:HD12	1.73	0.53
1:B:1371:HIS:O	1:B:1371:HIS:CG	2.62	0.53
1:B:1656:TYR:CE1	1:B:1687:ILE:HD11	2.44	0.53
1:A:6:ILE:HG21	1:A:345:LEU:CD1	2.38	0.52
1:A:1147:ALA:HB1	1:A:1358:MET:CE	2.39	0.52
1:B:424:LEU:CD2	1:B:441:GLY:HA3	2.39	0.52
1:B:1231:ASP:HB3	1:B:1515:ARG:CD	2.39	0.52
1:B:1677:SER:CB	1:B:1704:LYS:HD3	2.38	0.52
1:B:1863:PRO:O	1:B:1865:PRO:HD3	2.09	0.52
1:A:162:SER:OG	1:A:163:SER:N	2.40	0.52
1:A:945:GLU:OE2	1:B:941:SER:N	2.42	0.52
1:A:1183:LEU:HD13	1:A:1210:LEU:O	2.09	0.52
1:A:1395:SER:HB3	1:A:1399:SER:O	2.09	0.52
1:A:1443:LEU:O	1:A:1473:LEU:HA	2.08	0.52
1:B:321:LEU:HD12	1:B:321:LEU:N	2.24	0.52
1:B:624:GLY:O	1:B:625:LEU:HD23	2.09	0.52
1:B:1842:TYR:CE2	1:B:1848:HIS:HB3	2.45	0.52
1:A:161:CYS:HB2	1:A:394:GLY:HA2	1.91	0.52
1:A:831:SER:N	1:A:832:PRO:CD	2.73	0.52
1:A:1454:VAL:HG13	1:A:1503:MET:HE1	1.91	0.52
1:A:1560:GLN:C	1:A:1562:ARG:H	2.13	0.52
1:B:808:VAL:HG12	1:B:809:SER:N	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1343:PHE:O	1:B:1344:LEU:HD22	2.10	0.52
1:B:1456:MET:HG3	1:B:2036:PHE:CD1	2.45	0.52
1:B:287:LEU:HD23	1:B:387:ASN:O	2.09	0.52
1:B:637:GLY:O	1:B:685:TYR:HE2	1.92	0.52
1:B:1451:SER:O	1:B:1453:VAL:N	2.43	0.52
1:B:1657:TYR:HA	1:B:1661:VAL:HG23	1.90	0.52
1:B:1766:PHE:CD2	1:B:1791:PHE:CE1	2.97	0.52
1:A:91:VAL:HG21	1:A:834:ILE:CD1	2.40	0.52
1:A:275:SER:C	1:A:276:LEU:HD23	2.30	0.52
1:A:1424:ARG:O	1:A:1426:VAL:N	2.42	0.52
1:A:1602:GLU:OE2	1:A:1650:ILE:N	2.42	0.52
1:A:1719:CYS:C	1:A:1720:PHE:HD1	2.12	0.52
1:B:1363:THR:O	1:B:1363:THR:CG2	2.58	0.52
1:A:734:TYR:C	1:A:734:TYR:CD2	2.83	0.52
1:A:1489:SER:HA	1:A:1493:LEU:HD22	1.91	0.52
1:B:297:THR:HB	1:B:300:GLY:H	1.74	0.52
1:B:351:GLY:C	1:B:383:ILE:HG22	2.29	0.52
1:B:506:MET:HB3	1:B:559:ILE:HD11	1.90	0.52
1:B:670:VAL:O	1:B:672:VAL:HG23	2.10	0.52
1:B:1234:LEU:HD11	1:B:1268:MET:CE	2.40	0.52
1:B:1499:GLY:O	1:B:1500:ASP:HB3	2.09	0.52
1:B:1580:THR:HG22	1:B:1581:GLY:N	2.25	0.52
1:B:1656:TYR:CE2	1:B:1687:ILE:HD13	2.45	0.52
1:A:137:ARG:NH1	1:B:137:ARG:HD2	2.24	0.52
1:A:228:VAL:HG23	1:A:228:VAL:O	2.08	0.52
1:A:297:THR:HG22	1:A:299:VAL:H	1.75	0.52
1:A:1456:MET:HG3	1:A:2036:PHE:HD1	1.75	0.52
1:A:1470:ARG:HG3	1:A:1470:ARG:O	2.10	0.52
1:A:1502:VAL:HG12	1:A:1503:MET:HG2	1.91	0.52
1:B:1555:LEU:CD2	1:B:1560:GLN:HE21	2.22	0.52
1:B:1670:SER:O	1:B:1742:ASP:HB2	2.10	0.52
1:B:2065:ASP:C	1:B:2070:LEU:HD12	2.30	0.52
1:A:98:ALA:O	1:A:101:ARG:HG3	2.10	0.52
1:A:504:GLN:HG3	1:A:546:LEU:HD11	1.92	0.52
1:A:1986:GLU:HG2	1:A:1989:GLN:OE1	2.09	0.52
1:A:2102:PRO:HD2	1:A:2103:HIS:CD2	2.45	0.52
1:B:275:SER:C	1:B:276:LEU:HD23	2.29	0.52
1:B:1011:LEU:CD2	1:B:1023:GLN:HB2	2.40	0.52
1:B:1734:ARG:C	1:B:1736:THR:H	2.12	0.52
1:B:1771:LYS:O	1:B:1775:SER:HB2	2.09	0.52
1:A:808:VAL:HG12	1:A:809:SER:H	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1300:ASP:O	1:A:1302:ALA:N	2.43	0.52
1:A:1456:MET:CG	1:A:2036:PHE:HB2	2.39	0.52
1:A:1574:ARG:HD2	1:A:1588:ILE:CD1	2.39	0.52
1:B:776:GLU:HB3	1:B:778:SER:OG	2.10	0.52
1:B:276:LEU:HD23	1:B:276:LEU:N	2.25	0.52
1:B:481:GLU:HB3	1:B:805:LEU:HD11	1.92	0.52
1:B:506:MET:HE1	1:B:555:SER:HB3	1.91	0.52
1:B:965:PRO:O	1:B:967:PRO:HD3	2.10	0.52
1:B:979:ALA:HB1	1:B:983:ALA:HB3	1.92	0.52
1:B:1055:THR:HB	1:B:1097:LEU:O	2.10	0.52
1:B:1409:PRO:CG	1:B:1439:ARG:HH12	2.23	0.52
1:A:525:GLN:NE2	1:A:525:GLN:HA	2.24	0.51
1:A:1528:THR:CG2	1:A:1552:HIS:HB2	2.40	0.51
1:B:225:ALA:O	1:B:332:PRO:HA	2.10	0.51
1:B:504:GLN:H	1:B:546:LEU:HD11	1.75	0.51
1:B:606:ARG:HH12	1:B:739:LEU:HG	1.75	0.51
1:B:655:GLN:O	1:B:659:SER:HB3	2.10	0.51
1:B:1470:ARG:O	1:B:1470:ARG:CG	2.57	0.51
1:A:123:ASP:H	1:A:127:LEU:HD12	1.75	0.51
1:A:309:VAL:HG22	1:A:374:LEU:HD21	1.93	0.51
1:A:1123:PRO:HB3	1:A:1510:ALA:HB1	1.92	0.51
1:B:254:ASP:HB3	1:B:257:LYS:HE2	1.92	0.51
1:B:1451:SER:O	1:B:1452:GLY:C	2.49	0.51
1:A:399:ASN:N	1:A:399:ASN:ND2	2.57	0.51
1:A:866:VAL:O	1:A:866:VAL:HG13	2.10	0.51
1:A:994:LYS:HA	1:A:997:ARG:NH1	2.25	0.51
1:B:324:SER:O	1:B:356:ASN:ND2	2.43	0.51
1:B:325:THR:OG1	1:B:343:LYS:HG2	2.09	0.51
1:B:878:HIS:HB2	1:B:1007:PHE:CE1	2.45	0.51
1:B:1130:LEU:O	1:B:1131:ALA:HB3	2.09	0.51
1:A:506:MET:HE2	1:A:559:ILE:CD1	2.40	0.51
1:A:709:SER:OG	1:A:711:ARG:HB2	2.10	0.51
1:A:1480:THR:HG22	1:A:1481:SER:H	1.74	0.51
1:A:1539:GLY:HA2	1:A:1580:THR:O	2.10	0.51
1:A:1781:GLY:O	1:A:1784:VAL:HG23	2.09	0.51
1:B:217:ALA:CB	1:B:364:PRO:HD3	2.40	0.51
1:B:408:SER:O	1:B:409:ARG:HB2	2.11	0.51
1:B:326:LYS:CE	1:B:336:SER:HB2	2.39	0.51
1:B:420:LEU:HD11	1:B:512:ARG:CB	2.35	0.51
1:B:889:THR:CG2	1:B:1032:LEU:HB2	2.41	0.51
1:B:895:THR:HA	1:B:935:VAL:HG11	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1477:LEU:CD1	1:B:2043:ARG:HD2	2.40	0.51
1:A:1673:ILE:HD13	1:A:1684:ALA:HB1	1.92	0.51
1:B:2102:PRO:HD2	1:B:2103:HIS:CD2	2.46	0.51
1:A:322:ILE:HG22	1:A:376:VAL:HA	1.92	0.51
1:A:1766:PHE:CD2	1:A:1791:PHE:CE1	2.98	0.51
1:B:1353:HIS:HB2	1:B:1354:PRO:CD	2.39	0.51
1:A:143:ARG:HG2	1:A:143:ARG:NH1	2.25	0.51
1:A:469:GLY:HA2	1:A:805:LEU:HD21	1.93	0.51
1:A:1122:THR:HG21	1:A:1517:PHE:HZ	1.76	0.51
1:A:1420:ASP:HB3	1:A:1425:TRP:CZ3	2.46	0.51
1:A:1556:PRO:O	1:A:1557:ALA:C	2.49	0.51
1:A:1866:ARG:O	1:A:1867:GLY:O	2.29	0.51
1:A:1954:SER:O	1:A:1958:GLU:HG3	2.09	0.51
1:B:433:ALA:HB2	1:B:835:LYS:O	2.10	0.51
1:B:876:VAL:O	1:B:876:VAL:HG12	2.11	0.51
1:A:1390:VAL:HG22	1:A:1501:LEU:CD2	2.41	0.51
1:B:515:ARG:HH22	1:B:817:PRO:HA	1.76	0.51
1:B:973:ARG:O	1:B:974:ALA:HB3	2.10	0.51
1:B:1303:ASN:H	1:B:1304:PRO:HD3	1.74	0.51
1:A:64:PHE:HB2	1:A:429:ARG:NH2	2.25	0.51
1:A:965:PRO:O	1:A:967:PRO:HD3	2.11	0.50
1:A:2002:LEU:O	1:A:2006:THR:HB	2.11	0.50
1:B:612:GLU:O	1:B:612:GLU:HG2	2.11	0.50
1:B:734:TYR:C	1:B:734:TYR:CD2	2.82	0.50
1:B:983:ALA:O	1:B:985:PHE:N	2.41	0.50
1:B:1382:PHE:HA	1:B:1387:LEU:HD12	1.93	0.50
1:B:1408:THR:H	1:B:1409:PRO:HD3	1.76	0.50
1:B:1430:LYS:CE	1:B:1981:GLU:O	2.56	0.50
1:B:1624:THR:HG22	1:B:1857:ARG:HH21	1.74	0.50
1:B:1889:ILE:HG23	1:B:1969:PHE:HB2	1.93	0.50
1:A:1338:LEU:HD22	1:A:1406:GLN:HE21	1.76	0.50
1:A:1487:HIS:NE2	1:A:1490:SER:HB2	2.26	0.50
1:A:2065:ASP:C	1:A:2070:LEU:HD12	2.32	0.50
1:B:168:LEU:HA	1:B:185:VAL:HG21	1.93	0.50
1:B:265:SER:O	1:B:269:GLN:HG3	2.11	0.50
1:B:1674:HIS:HE1	1:B:1756:SER:OG	1.94	0.50
1:A:325:THR:OG1	1:A:343:LYS:HG2	2.11	0.50
1:A:1454:VAL:HG13	1:A:1503:MET:HE3	1.94	0.50
1:A:1886:SER:HA	1:A:1911:LYS:HB2	1.92	0.50
1:B:6:ILE:HG21	1:B:345:LEU:CD1	2.39	0.50
1:B:1085:ASN:C	1:B:1086:LEU:HD23	2.31	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1279:PRO:HG3	1:B:1298:GLN:HE22	1.75	0.50
1:A:297:THR:HB	1:A:300:GLY:H	1.76	0.50
1:B:248:ASN:HD22	1:B:249:ALA:H	1.59	0.50
1:B:564:ILE:HD13	1:B:590:ALA:HB2	1.91	0.50
1:B:1001:TYR:HB3	1:B:1003:TYR:CE1	2.45	0.50
1:B:1363:THR:HG22	1:B:1367:GLN:HE21	1.76	0.50
1:A:1411:ASP:OD2	1:A:1439:ARG:HB2	2.12	0.50
1:A:1841:ARG:O	1:A:1844:ALA:HB3	2.12	0.50
1:B:143:ARG:HH11	1:B:143:ARG:CG	2.19	0.50
1:B:159:THR:O	1:B:160:ALA:HB3	2.12	0.50
1:B:1431:ASP:C	1:B:1433:LEU:H	2.14	0.50
1:B:1833:ARG:NH2	1:B:1872:ALA:O	2.45	0.50
1:A:289:TYR:HE2	1:A:291:GLU:CA	2.25	0.50
1:A:1651:VAL:HG12	1:A:1683:ALA:HB2	1.94	0.50
1:B:275:SER:HB2	1:B:276:LEU:HD23	1.93	0.50
1:B:866:VAL:HG13	1:B:866:VAL:O	2.12	0.50
1:B:1894:GLY:O	1:B:1896:PHE:N	2.45	0.50
1:A:128:VAL:HG11	1:A:130:TYR:CE2	2.46	0.50
1:A:878:HIS:HB2	1:A:1007:PHE:HE1	1.75	0.50
1:A:1896:PHE:HB2	2:A:3002:NAP:O2N	2.12	0.50
1:B:903:LEU:O	1:B:905:GLN:HG3	2.12	0.50
1:B:1422:SER:CB	1:B:1424:ARG:HG3	2.42	0.50
1:A:112:SER:CB	1:A:334:PRO:CG	2.85	0.50
1:A:662:LEU:C	1:A:664:GLN:N	2.63	0.50
1:A:1556:PRO:O	1:A:1558:SER:N	2.45	0.50
1:A:1857:ARG:CG	1:A:1871:ILE:HD11	2.40	0.50
1:B:276:LEU:O	1:B:281:GLY:HA3	2.12	0.50
1:B:440:GLN:HG3	1:B:833:HIS:CD2	2.47	0.50
1:B:1001:TYR:CD2	1:B:1003:TYR:HE1	2.30	0.50
1:B:1657:TYR:CZ	1:B:1662:ARG:HD2	2.47	0.50
1:B:1886:SER:HA	1:B:1911:LYS:HB2	1.93	0.50
1:A:23:TRP:CZ2	1:A:350:HIS:CD2	3.00	0.50
1:A:72:ALA:HB3	1:A:842:TRP:CZ3	2.47	0.50
1:A:286:SER:HB2	1:A:387:ASN:HD22	1.77	0.50
1:A:1568:TYR:CE2	1:A:1855:GLN:HB2	2.47	0.50
1:A:1734:ARG:O	1:A:1736:THR:N	2.42	0.50
1:A:1735:HIS:CD2	1:A:1735:HIS:N	2.79	0.50
1:B:51:MET:HE2	1:B:191:LEU:HD13	1.93	0.50
1:B:1041:LEU:O	1:B:1041:LEU:HG	2.12	0.50
1:A:5:VAL:HG12	1:A:245:THR:HA	1.94	0.49
1:A:895:THR:HA	1:A:935:VAL:HG11	1.92	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1086:LEU:HB2	1:A:1088:THR:HG23	1.94	0.49
1:A:1343:PHE:O	1:A:1344:LEU:HD22	2.11	0.49
1:A:1420:ASP:HB3	1:A:1425:TRP:HZ3	1.77	0.49
1:A:1894:GLY:O	1:A:1896:PHE:N	2.45	0.49
1:B:9:MET:HE3	1:B:345:LEU:HD12	1.94	0.49
1:B:100:LEU:O	1:B:101:ARG:C	2.50	0.49
1:B:1416:LEU:HD21	1:B:1425:TRP:HB2	1.93	0.49
1:B:1652:TYR:CE1	1:B:1823:VAL:HB	2.47	0.49
1:B:1734:ARG:O	1:B:1736:THR:N	2.43	0.49
1:A:59:ARG:N	1:A:59:ARG:HD2	2.26	0.49
1:A:475:GLY:C	1:A:477:ALA:H	2.15	0.49
1:A:1303:ASN:HA	1:A:1333:ASN:HB2	1.94	0.49
1:A:1470:ARG:O	1:A:1472:VAL:HG23	2.12	0.49
1:A:1504:ASN:HB3	1:A:1511:TRP:HZ3	1.77	0.49
1:A:1528:THR:HG23	1:A:1552:HIS:ND1	2.28	0.49
1:A:1746:ASN:HD21	1:A:1753:LEU:HD12	1.77	0.49
1:A:1785:PHE:HB2	1:B:1774:LEU:CD2	2.43	0.49
1:B:495:ILE:CD1	1:B:578:ILE:HB	2.41	0.49
1:B:1285:ALA:HB1	1:B:1289:LEU:HG	1.94	0.49
1:B:1458:ASN:O	1:B:2027:GLY:HA3	2.13	0.49
1:A:276:LEU:HD23	1:A:276:LEU:N	2.27	0.49
1:A:278:ALA:HB3	1:A:279:PRO:CD	2.29	0.49
1:A:309:VAL:CG2	1:A:374:LEU:HD11	2.42	0.49
1:A:983:ALA:O	1:A:984:GLU:HB3	2.11	0.49
1:A:1672:LEU:HD12	1:A:1696:PHE:O	2.11	0.49
1:B:112:SER:CB	1:B:334:PRO:CG	2.85	0.49
1:B:272:LEU:O	1:B:276:LEU:HG	2.12	0.49
1:B:1568:TYR:CE2	1:B:1855:GLN:HB2	2.47	0.49
1:A:166:LEU:CD1	1:A:251:THR:HG21	2.32	0.49
1:A:1055:THR:HB	1:A:1097:LEU:O	2.13	0.49
1:A:1889:ILE:HG23	1:A:1969:PHE:HB2	1.93	0.49
1:A:2103:HIS:CD2	1:A:2103:HIS:H	2.30	0.49
1:B:59:ARG:HD2	1:B:59:ARG:N	2.28	0.49
1:B:228:VAL:O	1:B:228:VAL:HG23	2.11	0.49
1:B:309:VAL:HG22	1:B:374:LEU:HD21	1.94	0.49
1:B:967:PRO:HB3	1:B:1063:THR:OG1	2.13	0.49
1:B:1232:THR:HA	1:B:1515:ARG:NH2	2.20	0.49
1:B:1885:LYS:HE2	1:B:2012:GLU:HB3	1.95	0.49
1:B:2086:GLN:HG2	1:B:2110:VAL:HG23	1.93	0.49
1:B:2103:HIS:CD2	1:B:2103:HIS:H	2.29	0.49
1:A:1234:LEU:HD21	1:A:1268:MET:HE3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1451:SER:O	1:A:1453:VAL:N	2.45	0.49
1:A:1476:ASN:HD22	1:A:1486:MET:CE	2.25	0.49
1:A:1520:GLU:O	1:A:1522:ASP:N	2.44	0.49
1:A:1626:VAL:HG13	1:A:1627:LEU:N	2.27	0.49
1:A:1885:LYS:HE2	1:A:2012:GLU:HB3	1.94	0.49
1:B:143:ARG:HG2	1:B:143:ARG:NH1	2.21	0.49
1:B:389:GLY:O	1:B:390:ILE:HG13	2.12	0.49
1:B:972:THR:HG23	1:B:1081:VAL:CG2	2.42	0.49
1:B:1123:PRO:HB3	1:B:1510:ALA:HB1	1.94	0.49
1:B:1364:SER:OG	1:B:1370:ARG:HG2	2.12	0.49
1:B:1418:VAL:HG13	1:B:1425:TRP:CD2	2.46	0.49
1:B:1476:ASN:N	1:B:1476:ASN:OD1	2.44	0.49
1:B:1555:LEU:HD11	1:B:1563:LEU:HD22	1.92	0.49
1:B:1863:PRO:O	1:B:1865:PRO:CD	2.61	0.49
1:B:2076:ASN:HA	1:B:2085:PRO:HG2	1.94	0.49
1:A:384:ARG:CG	1:A:384:ARG:NH1	2.66	0.49
1:A:497:SER:OG	1:A:767:LEU:HG	2.13	0.49
1:A:734:TYR:C	1:A:734:TYR:HD2	2.15	0.49
1:A:1001:TYR:CD2	1:A:1003:TYR:HE1	2.29	0.49
1:B:305:LEU:O	1:B:309:VAL:HG23	2.13	0.49
1:B:1150:LEU:HB2	1:B:1192:LEU:HD21	1.94	0.49
1:B:1603:PHE:HD2	1:B:1603:PHE:H	1.59	0.49
1:A:1454:VAL:HA	1:A:1473:LEU:HD13	1.95	0.49
1:B:1395:SER:HB3	1:B:1399:SER:O	2.13	0.49
1:B:1569:THR:HG21	1:B:1622:LEU:CA	2.38	0.49
1:A:1338:LEU:CB	1:A:1406:GLN:HE21	2.26	0.49
1:A:1339:LYS:O	1:A:1340:GLU:HB2	2.12	0.49
1:A:1378:TRP:O	1:A:1382:PHE:CD1	2.65	0.49
1:A:1528:THR:HG22	1:A:1529:GLU:H	1.78	0.49
1:B:581:SER:OG	1:B:582:LEU:N	2.45	0.49
1:B:765:ALA:HB1	1:B:768:GLN:HG2	1.95	0.49
1:B:1694:ARG:HH11	1:B:1694:ARG:CG	2.26	0.49
1:A:495:ILE:CD1	1:A:578:ILE:HB	2.42	0.49
1:A:975:ALA:O	1:A:976:VAL:HB	2.12	0.49
1:A:1433:LEU:HD21	1:A:1465:GLY:HA3	1.95	0.49
1:A:1451:SER:O	1:A:1452:GLY:C	2.51	0.49
1:A:1476:ASN:ND2	1:A:1476:ASN:N	2.60	0.49
1:A:1545:ARG:CG	1:A:1545:ARG:NH1	2.69	0.49
1:B:491:PRO:HA	1:B:575:ASP:OD2	2.13	0.49
1:B:506:MET:HE2	1:B:559:ILE:CD1	2.42	0.49
1:B:734:TYR:C	1:B:734:TYR:HD2	2.16	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1117:GLU:HB2	1:B:2107:SER:HB2	1.94	0.49
1:B:1236:ASN:ND2	1:B:1502:VAL:H	2.11	0.49
1:B:1453:VAL:HG12	1:B:1457:VAL:HG23	1.95	0.49
1:B:1842:TYR:HE2	1:B:1848:HIS:HB3	1.78	0.49
1:B:1969:PHE:CD2	1:B:2017:VAL:HB	2.48	0.49
1:A:408:SER:O	1:A:409:ARG:HB2	2.12	0.49
1:A:1140:LEU:O	1:A:1140:LEU:HD22	2.12	0.49
1:A:2086:GLN:HG2	1:A:2110:VAL:HG23	1.94	0.49
1:B:1086:LEU:HD23	1:B:1086:LEU:N	2.28	0.49
1:B:1647:SER:HB2	1:B:1851:LYS:HG3	1.95	0.49
1:A:988:SER:O	1:A:989:GLN:C	2.51	0.48
1:A:997:ARG:HH21	1:A:2070:LEU:HD12	1.78	0.48
1:A:1989:GLN:HG2	1:A:1990:ASP:N	2.28	0.48
1:B:91:VAL:HG21	1:B:834:ILE:HD13	1.93	0.48
1:B:896:TRP:CD2	1:B:907:LEU:HD11	2.48	0.48
1:B:1247:VAL:HG23	1:B:1315:LEU:HD11	1.95	0.48
1:B:1642:LEU:HG	1:B:1859:GLU:OE2	2.12	0.48
1:B:1736:THR:HG23	1:B:1740:GLY:H	1.78	0.48
1:A:137:ARG:O	1:A:140:MET:HG2	2.13	0.48
1:A:846:SER:O	1:A:849:ASP:HB2	2.13	0.48
1:A:856:CYS:HB2	1:B:856:CYS:HG	1.77	0.48
1:A:1214:ASP:O	1:A:1216:LEU:N	2.41	0.48
1:A:2006:THR:O	1:A:2010:CYS:HB2	2.13	0.48
1:B:475:GLY:C	1:B:477:ALA:H	2.17	0.48
1:B:610:ILE:CG2	1:B:680:ILE:HD12	2.43	0.48
1:B:896:TRP:CG	1:B:907:LEU:HD11	2.49	0.48
1:B:970:PHE:O	1:B:1067:LYS:NZ	2.45	0.48
1:B:1252:GLY:HA2	1:B:1318:ASN:HD22	1.78	0.48
1:B:1413:PRO:HB3	1:B:1440:PRO:HB2	1.94	0.48
1:A:276:LEU:O	1:A:281:GLY:HA3	2.12	0.48
1:A:506:MET:HB3	1:A:559:ILE:HD11	1.93	0.48
1:A:1429:LEU:HD21	1:A:1443:LEU:HD21	1.95	0.48
1:A:2068:VAL:N	2:A:3002:NAP:O1N	2.46	0.48
1:B:112:SER:O	1:B:137:ARG:NH2	2.46	0.48
1:B:143:ARG:CG	1:B:143:ARG:NH1	2.76	0.48
1:B:1504:ASN:HB3	1:B:1511:TRP:HZ3	1.77	0.48
1:A:903:LEU:O	1:A:904:SER:HB3	2.13	0.48
1:A:1489:SER:CA	1:A:1493:LEU:HD22	2.43	0.48
1:A:1666:GLN:O	1:A:1669:GLU:HG3	2.13	0.48
1:B:98:ALA:O	1:B:101:ARG:HG3	2.13	0.48
1:B:662:LEU:HD13	1:B:672:VAL:CG1	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:988:SER:O	1:B:989:GLN:C	2.47	0.48
1:B:1476:ASN:C	1:B:1477:LEU:HD23	2.33	0.48
1:B:1841:ARG:O	1:B:1844:ALA:HB3	2.14	0.48
1:A:148:PHE:HB3	1:A:150:PHE:CE1	2.49	0.48
1:A:353:TRP:CE2	1:A:383:ILE:HB	2.49	0.48
1:A:1416:LEU:HD21	1:A:1425:TRP:HB2	1.94	0.48
1:B:87:TYR:CE2	1:B:97:PRO:HG2	2.48	0.48
1:B:191:LEU:O	1:B:192:LEU:HD23	2.13	0.48
1:B:342:ILE:O	1:B:346:LEU:HG	2.13	0.48
1:B:497:SER:HB2	1:B:762:ALA:HB2	1.94	0.48
1:B:1123:PRO:HA	1:B:1512:GLY:HA3	1.96	0.48
1:B:1246:GLU:CD	1:B:1254:LEU:HB2	2.34	0.48
1:B:1729:GLU:OE1	1:B:1758:ARG:HD2	2.13	0.48
1:A:136:GLN:NE2	1:A:138:ALA:H	2.06	0.48
1:A:290:ILE:HG23	1:A:322:ILE:HG13	1.95	0.48
1:A:642:CYS:HA	1:A:743:VAL:HG23	1.95	0.48
1:A:1240:PRO:HD2	1:A:1462:LYS:HE3	1.95	0.48
1:A:1694:ARG:HH11	1:A:1694:ARG:CG	2.26	0.48
1:B:12:LYS:HD2	1:B:81:MET:CE	2.44	0.48
1:B:1240:PRO:HD2	1:B:1462:LYS:HE3	1.96	0.48
1:B:1672:LEU:HD12	1:B:1696:PHE:O	2.14	0.48
1:B:1697:THR:CG2	1:B:1698:THR:N	2.76	0.48
1:B:2046:GLU:HG2	1:B:2104:PRO:HG2	1.95	0.48
1:A:39:ARG:NH1	1:A:226:GLU:OE2	2.47	0.48
1:A:450:PHE:CE2	1:A:828:PRO:HB2	2.49	0.48
1:A:506:MET:HE2	1:A:559:ILE:HD12	1.96	0.48
1:A:645:SER:OG	1:A:648:THR:N	2.47	0.48
1:A:917:VAL:HG12	1:A:1054:PHE:HB2	1.93	0.48
1:A:1147:ALA:O	1:A:1358:MET:HE1	2.14	0.48
1:A:1483:ALA:N	1:A:1484:PRO:CD	2.76	0.48
1:A:1624:THR:HG22	1:A:1857:ARG:NH2	2.16	0.48
1:A:1671:VAL:HG13	1:A:1673:ILE:HG13	1.94	0.48
1:B:1220:LEU:HB3	1:B:1257:ARG:NH2	2.14	0.48
1:A:236:LYS:C	1:A:238:LEU:H	2.17	0.48
1:A:236:LYS:O	1:A:238:LEU:N	2.42	0.48
1:A:342:ILE:O	1:A:346:LEU:HG	2.13	0.48
1:A:438:LEU:N	1:A:438:LEU:HD23	2.28	0.48
1:A:662:LEU:O	1:A:663:GLN:C	2.52	0.48
1:B:128:VAL:HG11	1:B:130:TYR:OH	2.14	0.48
1:B:289:TYR:HE2	1:B:291:GLU:CA	2.26	0.48
1:B:434:VAL:O	1:B:438:LEU:HG	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:572:LEU:HD23	1:B:572:LEU:C	2.34	0.48
1:B:1390:VAL:HG13	1:B:1501:LEU:HD22	1.95	0.48
1:B:1567:TYR:C	1:B:1856:VAL:HG23	2.34	0.48
1:B:1904:LEU:HA	1:B:1904:LEU:HD23	1.56	0.48
1:A:226:GLU:O	1:A:227:ALA:HB2	2.14	0.48
1:A:1252:GLY:CA	1:A:1318:ASN:HD22	2.25	0.48
1:B:23:TRP:CZ2	1:B:350:HIS:CD2	3.00	0.48
1:B:64:PHE:HB2	1:B:429:ARG:NH2	2.29	0.48
1:B:981:SER:HA	1:B:986:ARG:NH2	2.29	0.48
1:A:100:LEU:O	1:A:101:ARG:C	2.52	0.48
1:A:103:THR:HG22	1:A:104:SER:H	1.77	0.48
1:A:225:ALA:O	1:A:332:PRO:HA	2.14	0.48
1:A:937:LEU:HD12	1:A:937:LEU:HA	1.69	0.48
1:A:1235:GLU:OE2	1:A:1515:ARG:NH1	2.47	0.48
1:A:1299:TRP:NE1	1:A:1306:PRO:HD2	2.25	0.48
1:A:1580:THR:HG22	1:A:1581:GLY:N	2.29	0.48
1:B:1069:TYR:CD1	1:B:1077:ALA:O	2.67	0.48
1:B:1636:VAL:O	1:B:1636:VAL:HG22	2.13	0.48
1:B:2023:SER:O	1:B:2027:GLY:HA2	2.14	0.48
1:A:146:PHE:O	1:B:256:SER:HB3	2.13	0.47
1:A:642:CYS:SG	1:A:743:VAL:CG2	3.02	0.47
1:A:661:PHE:CG	1:A:661:PHE:O	2.67	0.47
1:A:886:PHE:HA	1:A:887:PRO:HD3	1.63	0.47
1:A:1085:ASN:C	1:A:1086:LEU:HD23	2.34	0.47
1:A:1121:PHE:CE2	1:A:1507:ARG:HB2	2.49	0.47
1:A:1265:GLN:HG2	1:A:1266:PRO:HD2	1.94	0.47
1:A:1762:GLN:O	1:A:1763:HIS:HB2	2.12	0.47
1:A:1995:LYS:HD3	1:A:2038:ASN:OD1	2.13	0.47
1:B:297:THR:HG22	1:B:299:VAL:H	1.79	0.47
1:B:883:ARG:HH21	1:B:1107:ARG:HD3	1.79	0.47
1:B:887:PRO:HB2	1:B:890:GLY:H	1.79	0.47
1:B:993:TYR:OH	1:B:1010:VAL:HG23	2.14	0.47
1:B:1578:LEU:C	1:B:1580:THR:H	2.16	0.47
1:B:2003:ASP:O	1:B:2007:ARG:HG3	2.14	0.47
1:A:645:SER:C	1:A:746:GLN:HG3	2.35	0.47
1:A:993:TYR:OH	1:A:1010:VAL:HG23	2.14	0.47
1:A:1446:VAL:HA	1:A:1476:ASN:OD1	2.14	0.47
1:A:1476:ASN:HD22	1:A:1486:MET:HE2	1.79	0.47
1:A:1786:LEU:C	1:A:1788:ASN:H	2.17	0.47
1:A:2076:ASN:HA	1:A:2085:PRO:HG2	1.96	0.47
1:B:506:MET:CE	1:B:559:ILE:HD12	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:606:ARG:O	1:B:610:ILE:HG13	2.13	0.47
1:B:1071:LEU:HD12	1:B:1075:THR:OG1	2.14	0.47
1:B:1363:THR:HG22	1:B:1367:GLN:NE2	2.29	0.47
1:B:1442:TRP:CB	1:B:1444:MET:HE1	2.43	0.47
1:B:1915:THR:CG2	2:B:3002:NAP:H2A	2.43	0.47
1:A:330:GLY:O	1:A:332:PRO:HD3	2.13	0.47
1:A:605:TRP:O	1:A:606:ARG:C	2.53	0.47
1:A:856:CYS:HB2	1:B:856:CYS:SG	2.53	0.47
1:B:211:THR:HG22	1:B:212:CYS:N	2.28	0.47
1:B:1183:LEU:HB3	1:B:1216:LEU:CD2	2.44	0.47
1:B:1228:ALA:HB2	1:B:1517:PHE:CZ	2.49	0.47
1:B:1327:PRO:O	1:B:1331:VAL:HG23	2.14	0.47
1:A:533:ARG:HB2	1:A:533:ARG:HH11	1.79	0.47
1:A:620:MET:SD	1:A:677:THR:HG21	2.54	0.47
1:A:896:TRP:CG	1:A:907:LEU:HD11	2.49	0.47
1:A:1289:LEU:HD22	1:A:1294:VAL:CB	2.44	0.47
1:A:1616:MET:HB3	1:A:1800:PHE:CE2	2.49	0.47
1:A:2046:GLU:HG2	1:A:2104:PRO:HG2	1.95	0.47
1:A:1067:LYS:HB3	1:A:1092:GLY:HA2	1.95	0.47
1:A:1299:TRP:CH2	1:A:1333:ASN:CG	2.88	0.47
1:B:299:VAL:O	1:B:302:PRO:HD2	2.13	0.47
1:B:1153:LYS:HD3	1:B:1195:ASN:HD22	1.79	0.47
1:B:1221:LEU:O	1:B:1226:LEU:HD21	2.14	0.47
1:B:1338:LEU:HD22	1:B:1406:GLN:HG3	1.96	0.47
1:B:1477:LEU:HB3	1:B:1507:ARG:HE	1.79	0.47
1:B:1735:HIS:CD2	1:B:1735:HIS:N	2.83	0.47
1:B:1769:ILE:HG23	2:B:3001:NAP:C2N	2.45	0.47
1:B:1814:LEU:O	1:B:1818:ILE:HG13	2.15	0.47
1:A:277:TYR:CZ	1:A:287:LEU:HD11	2.49	0.47
1:A:433:ALA:HB2	1:A:835:LYS:O	2.15	0.47
1:A:1619:ALA:O	1:A:1620:GLU:HB2	2.15	0.47
1:B:333:GLU:O	1:B:336:SER:HB3	2.14	0.47
1:B:873:HIS:O	1:B:876:VAL:HG23	2.14	0.47
1:B:1022:LEU:HD13	1:B:1034:ALA:HB3	1.97	0.47
1:B:1574:ARG:HD2	1:B:1588:ILE:CD1	2.45	0.47
1:A:504:GLN:HG3	1:A:546:LEU:CD1	2.45	0.47
1:A:782:ILE:HG22	1:A:783:PRO:O	2.14	0.47
1:A:941:SER:CB	1:B:945:GLU:OE2	2.63	0.47
1:A:970:PHE:O	1:A:1067:LYS:HE2	2.15	0.47
1:A:1182:ARG:CB	1:A:1216:LEU:HB2	2.33	0.47
1:A:1223:ALA:O	1:A:1225:ALA:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1473:LEU:HD23	1:A:1502:VAL:O	2.15	0.47
1:A:1578:LEU:C	1:A:1580:THR:H	2.17	0.47
1:A:1774:LEU:CD2	1:B:1785:PHE:HB2	2.45	0.47
1:B:274:ARG:O	1:B:276:LEU:N	2.47	0.47
1:B:330:GLY:O	1:B:332:PRO:HD3	2.14	0.47
1:B:331:HIS:C	1:B:333:GLU:H	2.18	0.47
1:B:633:ARG:O	1:B:633:ARG:HG2	2.14	0.47
1:B:709:SER:OG	1:B:711:ARG:HB2	2.14	0.47
1:B:1276:ASP:OD2	1:B:1281:ALA:HB3	2.14	0.47
1:B:1469:ILE:O	1:B:1469:ILE:CG2	2.61	0.47
1:B:1585:PRO:HB3	1:B:1598:MET:HE1	1.96	0.47
1:B:1781:GLY:O	1:B:1784:VAL:HG23	2.15	0.47
1:A:64:PHE:HB2	1:A:429:ARG:HE	1.80	0.47
1:A:420:LEU:HD11	1:A:512:ARG:HB3	1.96	0.47
1:A:491:PRO:HA	1:A:575:ASP:OD2	2.15	0.47
1:A:1670:SER:OG	1:A:1741:VAL:HA	2.15	0.47
1:B:285:GLU:HG3	1:B:315:THR:OG1	2.15	0.47
1:A:36:ASP:CB	1:A:38:ARG:HG3	2.45	0.47
1:A:424:LEU:CD2	1:A:441:GLY:HA3	2.45	0.47
1:A:912:VAL:HG22	1:A:913:VAL:N	2.29	0.47
1:A:1071:LEU:HD12	1:A:1075:THR:OG1	2.15	0.47
1:A:1680:VAL:N	2:A:3001:NAP:O1N	2.32	0.47
1:B:289:TYR:OH	1:B:323:GLY:HA3	2.13	0.47
1:B:644:ASN:HB2	1:B:648:THR:O	2.14	0.47
1:B:1277:ARG:NH2	1:B:1323:THR:O	2.47	0.47
1:B:1338:LEU:HD13	1:B:1406:GLN:HG2	1.95	0.47
1:B:1762:GLN:O	1:B:1763:HIS:HB2	2.14	0.47
1:B:1766:PHE:O	1:B:1792:HIS:HB2	2.14	0.47
1:A:88:GLU:HB3	1:A:831:SER:HB2	1.97	0.47
1:A:561:ILE:HG23	1:A:589:TYR:CE2	2.50	0.47
1:A:1433:LEU:HD11	1:A:1465:GLY:O	2.15	0.47
1:A:1476:ASN:CB	1:A:1486:MET:SD	3.03	0.47
1:A:1653:THR:HG22	1:A:1810:VAL:HG12	1.96	0.47
1:B:831:SER:N	1:B:832:PRO:CD	2.77	0.47
1:B:1257:ARG:O	1:B:1260:ALA:HB3	2.15	0.47
1:B:1504:ASN:HB3	1:B:1511:TRP:CZ3	2.50	0.47
1:A:91:VAL:CG2	1:A:834:ILE:CD1	2.94	0.46
1:A:289:TYR:HE2	1:A:291:GLU:HA	1.80	0.46
1:A:765:ALA:HB1	1:A:768:GLN:HG2	1.96	0.46
1:A:1348:THR:HG23	1:A:1372:LEU:HD22	1.97	0.46
1:A:1387:LEU:HD22	1:A:1404:CYS:HB3	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1473:LEU:HD21	1:A:1503:MET:SD	2.55	0.46
1:A:1485:GLU:HG2	1:A:1506:TYR:OH	2.15	0.46
1:A:2017:VAL:HG21	1:A:2099:LEU:HD21	1.96	0.46
1:A:2099:LEU:HD23	1:A:2099:LEU:HA	1.70	0.46
1:B:226:GLU:O	1:B:227:ALA:HB2	2.14	0.46
1:B:286:SER:HB2	1:B:387:ASN:HD22	1.79	0.46
1:B:556:LEU:O	1:B:560:GLN:HG3	2.15	0.46
1:B:980:ASP:CG	1:B:982:THR:HG22	2.35	0.46
1:B:1515:ARG:HD3	1:B:1515:ARG:HA	1.56	0.46
1:A:59:ARG:HG3	1:A:838:HIS:HB3	1.96	0.46
1:A:168:LEU:O	1:A:168:LEU:HG	2.14	0.46
1:A:331:HIS:C	1:A:333:GLU:H	2.18	0.46
1:A:509:SER:O	1:A:512:ARG:HG3	2.14	0.46
1:A:837:ASP:OD1	1:A:839:SER:HB3	2.16	0.46
1:A:1133:ASN:ND2	1:A:1136:LEU:HD12	2.17	0.46
1:A:1183:LEU:N	1:A:1216:LEU:HD22	2.29	0.46
1:A:1299:TRP:HE1	1:A:1306:PRO:CD	2.25	0.46
1:A:1420:ASP:CB	1:A:1425:TRP:HZ3	2.28	0.46
1:B:168:LEU:HG	1:B:168:LEU:O	2.14	0.46
1:B:297:THR:HB	1:B:300:GLY:N	2.31	0.46
1:B:1014:ASP:OD1	1:B:1015:LEU:N	2.49	0.46
1:B:1662:ARG:NH1	1:B:1662:ARG:CG	2.50	0.46
1:B:1857:ARG:CZ	1:B:1871:ILE:CD1	2.93	0.46
1:A:48:PRO:HD3	1:A:201:MET:HE3	1.97	0.46
1:A:188:LEU:CD2	1:A:228:VAL:HG12	2.44	0.46
1:A:1136:LEU:HD21	1:A:1217:LEU:HG	1.97	0.46
1:B:305:LEU:HD22	1:B:322:ILE:HD13	1.96	0.46
1:B:509:SER:O	1:B:512:ARG:HG3	2.15	0.46
1:B:1216:LEU:CD1	1:B:1217:LEU:N	2.78	0.46
1:B:1239:SER:C	1:B:1241:LYS:H	2.19	0.46
1:B:1444:MET:HE2	1:B:1444:MET:HB3	1.81	0.46
1:B:1568:TYR:HE2	1:B:1855:GLN:HB2	1.79	0.46
1:B:1762:GLN:HB3	1:B:1763:HIS:CD2	2.50	0.46
1:B:2069:VAL:HG12	1:B:2070:LEU:HD23	1.97	0.46
1:A:248:ASN:HD22	1:A:249:ALA:H	1.61	0.46
1:A:925:LEU:CD2	1:A:931:VAL:HG21	2.46	0.46
1:A:1086:LEU:HD23	1:A:1086:LEU:N	2.31	0.46
1:A:1486:MET:HE1	1:A:1506:TYR:HB3	1.98	0.46
1:A:1568:TYR:HE2	1:A:1855:GLN:HB2	1.80	0.46
1:A:1573:PHE:HD2	2:A:3001:NAP:HO3N	1.61	0.46
1:A:1798:SER:O	1:A:1802:GLU:OE1	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:117:SER:CB	1:B:135:CYS:HB3	2.44	0.46
1:B:209:ASP:CG	1:B:213:ARG:HH21	2.18	0.46
1:B:309:VAL:CG2	1:B:374:LEU:HD11	2.45	0.46
1:B:1420:ASP:CB	1:B:1425:TRP:HZ3	2.28	0.46
1:B:1603:PHE:CE2	1:B:1615:GLY:C	2.85	0.46
1:B:1669:GLU:HG2	1:B:1742:ASP:OD2	2.15	0.46
1:A:1347:HIS:HD1	1:A:1401:LEU:HD13	1.81	0.46
1:A:1439:ARG:O	1:A:1470:ARG:HB3	2.15	0.46
1:B:506:MET:HB3	1:B:559:ILE:CD1	2.46	0.46
1:B:934:GLU:CG	1:B:947:SER:HB2	2.46	0.46
1:B:1460:LEU:O	1:B:1462:LYS:N	2.49	0.46
1:A:494:PHE:CD1	1:A:574:PRO:HB3	2.50	0.46
1:A:900:ALA:HB1	1:A:905:GLN:O	2.16	0.46
1:A:934:GLU:CG	1:A:947:SER:HB2	2.46	0.46
1:A:976:VAL:HG13	1:A:977:ASP:N	2.30	0.46
1:A:1122:THR:HG1	1:A:1517:PHE:HE1	1.60	0.46
1:A:1246:GLU:CD	1:A:1254:LEU:HB2	2.36	0.46
1:A:1466:GLY:HA2	1:A:1469:ILE:CG1	2.46	0.46
1:A:1657:TYR:HA	1:A:1661:VAL:HG23	1.98	0.46
1:A:1671:VAL:HG23	1:A:1743:LEU:HD13	1.98	0.46
1:B:161:CYS:HB2	1:B:394:GLY:HA2	1.97	0.46
1:B:532:LEU:HD22	1:B:604:TYR:CE1	2.51	0.46
1:B:533:ARG:HH11	1:B:533:ARG:HB2	1.81	0.46
1:B:643:HIS:CD2	1:B:746:GLN:HB3	2.50	0.46
1:B:887:PRO:O	1:B:888:GLY:C	2.54	0.46
1:B:912:VAL:HG22	1:B:913:VAL:N	2.31	0.46
1:B:1452:GLY:O	1:B:2036:PHE:CD1	2.68	0.46
1:B:1697:THR:HG23	1:B:1698:THR:N	2.30	0.46
1:A:62:ALA:O	1:A:67:VAL:HG22	2.16	0.46
1:A:142:ASN:ND2	1:B:396:GLY:HA3	2.30	0.46
1:A:440:GLN:HG3	1:A:833:HIS:CG	2.50	0.46
1:A:1064:HIS:O	1:A:1065:ARG:C	2.54	0.46
1:A:1894:GLY:O	1:A:1895:GLY:C	2.53	0.46
1:B:119:ALA:HB2	1:B:850:PHE:CE2	2.51	0.46
1:B:438:LEU:HD23	1:B:438:LEU:N	2.30	0.46
1:B:1036:LEU:CD2	1:B:1096:PHE:CE1	2.94	0.46
1:B:1245:VAL:HB	1:B:1315:LEU:HD13	1.97	0.46
1:B:1311:LYS:O	1:B:1312:ALA:CB	2.63	0.46
1:B:1531:ALA:HA	1:B:1549:SER:H	1.81	0.46
1:B:1556:PRO:O	1:B:1558:SER:N	2.49	0.46
1:B:1647:SER:CB	1:B:1851:LYS:HG3	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2075:THR:CG2	1:B:2076:ASN:H	2.28	0.46
1:A:1416:LEU:HD23	1:A:1429:LEU:CD2	2.45	0.46
1:A:1554:ALA:CB	1:A:1882:PRO:HB3	2.46	0.46
1:A:1724:ARG:HH12	2:A:3001:NAP:C8A	2.27	0.46
1:A:2058:VAL:HG11	1:A:2060:TRP:CE2	2.51	0.46
1:B:384:ARG:CG	1:B:384:ARG:NH1	2.65	0.46
1:B:886:PHE:HA	1:B:887:PRO:HD3	1.64	0.46
1:B:1289:LEU:HD22	1:B:1294:VAL:HB	1.96	0.46
1:B:1567:TYR:O	1:B:1856:VAL:HG23	2.16	0.46
1:A:556:LEU:O	1:A:560:GLN:HG3	2.15	0.46
1:A:1975:LEU:HD22	1:A:1977:ASP:OD1	2.16	0.46
1:B:1361:PHE:CZ	1:B:1370:ARG:HD3	2.51	0.46
1:B:1577:MET:CE	1:B:1582:LYS:HD3	2.46	0.46
1:A:9:MET:HE3	1:A:345:LEU:HD12	1.98	0.46
1:A:506:MET:HE2	1:A:506:MET:HB3	1.85	0.46
1:A:533:ARG:HB2	1:A:533:ARG:NH1	2.31	0.46
1:A:578:ILE:CG2	1:A:745:PHE:HE1	2.29	0.46
1:A:1208:ARG:H	1:A:1209:PRO:CD	2.29	0.46
1:A:1669:GLU:O	1:A:1693:CYS:HB3	2.16	0.46
1:A:1904:LEU:HD23	1:A:1904:LEU:HA	1.58	0.46
1:A:2043:ARG:HA	1:A:2043:ARG:HD3	1.61	0.46
1:B:127:LEU:C	1:B:127:LEU:HD12	2.36	0.46
1:B:209:ASP:CG	1:B:213:ARG:NH2	2.70	0.46
1:B:737:ASN:C	1:B:737:ASN:ND2	2.70	0.46
1:B:2017:VAL:HG21	1:B:2099:LEU:HD21	1.97	0.46
1:B:2099:LEU:HA	1:B:2099:LEU:HD23	1.71	0.46
1:A:240:ARG:HG2	1:A:821:PHE:CD2	2.51	0.45
1:A:356:ASN:HD22	1:A:356:ASN:HA	1.50	0.45
1:A:426:ALA:HA	1:A:458:ALA:CB	2.46	0.45
1:A:1338:LEU:HG	1:A:1339:LYS:N	2.31	0.45
1:A:1360:GLY:CA	1:A:1369:GLY:O	2.64	0.45
1:A:1818:ILE:HG12	1:A:1823:VAL:CG1	2.47	0.45
1:B:23:TRP:O	1:B:24:ALA:C	2.54	0.45
1:B:103:THR:HG22	1:B:104:SER:H	1.81	0.45
1:B:201:MET:HA	1:B:206:LEU:HB2	1.97	0.45
1:B:468:ARG:HG2	1:B:804:HIS:NE2	2.31	0.45
1:B:530:LEU:HD13	1:B:604:TYR:CE2	2.51	0.45
1:B:1360:GLY:O	1:B:1364:SER:OG	2.25	0.45
1:B:1690:SER:HB3	1:B:1822:VAL:HG13	1.98	0.45
1:A:737:ASN:C	1:A:737:ASN:HD22	2.17	0.45
1:A:984:GLU:HG2	1:A:986:ARG:NE	2.27	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1115:ILE:HD11	1:A:2111:LEU:HG	1.99	0.45
1:A:1330:ALA:O	1:A:1334:MET:HG2	2.16	0.45
1:A:1371:HIS:CD2	1:A:1371:HIS:O	2.69	0.45
1:A:1424:ARG:C	1:A:1426:VAL:N	2.70	0.45
1:A:1785:PHE:HB2	1:B:1774:LEU:HD22	1.98	0.45
1:B:1086:LEU:HB2	1:B:1088:THR:HG23	1.99	0.45
1:B:1130:LEU:HD22	1:B:1133:ASN:HD21	1.80	0.45
1:B:1261:LEU:O	1:B:1264:THR:HB	2.16	0.45
1:B:1351:ALA:HB2	1:B:1372:LEU:HB3	1.96	0.45
1:B:1370:ARG:O	1:B:1371:HIS:HB3	2.16	0.45
1:B:1405:ARG:NH1	1:B:1500:ASP:OD1	2.49	0.45
1:B:1647:SER:CA	1:B:1851:LYS:HG3	2.46	0.45
1:B:1674:HIS:CE1	1:B:1756:SER:OG	2.68	0.45
1:A:277:TYR:O	1:A:278:ALA:C	2.54	0.45
1:A:336:SER:OG	1:A:337:GLY:N	2.49	0.45
1:A:470:TYR:CD1	1:A:470:TYR:C	2.90	0.45
1:A:593:CYS:SG	1:A:708:ARG:HA	2.57	0.45
1:A:1130:LEU:O	1:A:1131:ALA:CB	2.65	0.45
1:A:1338:LEU:HD13	1:A:1406:GLN:HG3	1.97	0.45
1:A:1606:ARG:HH21	1:A:1860:GLU:CG	2.29	0.45
1:A:1618:PRO:O	1:A:1619:ALA:HB2	2.17	0.45
1:B:122:ARG:HG3	1:B:123:ASP:H	1.80	0.45
1:B:367:PRO:C	1:B:369:LEU:H	2.20	0.45
1:B:1413:PRO:CA	1:B:1440:PRO:HB2	2.47	0.45
1:B:1418:VAL:O	1:B:1418:VAL:HG12	2.15	0.45
1:B:1442:TRP:CD2	1:B:1472:VAL:HB	2.51	0.45
1:B:1473:LEU:N	1:B:1473:LEU:HD23	2.32	0.45
1:B:1746:ASN:ND2	1:B:1753:LEU:HD12	2.32	0.45
1:B:1837:GLU:O	1:B:1840:PHE:HB2	2.16	0.45
1:A:169:GLN:HE21	1:A:169:GLN:C	2.19	0.45
1:A:621:ALA:O	1:A:650:THR:HA	2.15	0.45
1:A:892:LEU:HD22	1:A:1057:ILE:HD12	1.98	0.45
1:A:1345:LEU:O	1:A:1346:LEU:HD23	2.17	0.45
1:A:1470:ARG:O	1:A:1470:ARG:CG	2.65	0.45
1:A:1585:PRO:O	1:A:1595:ARG:NH1	2.49	0.45
1:B:399:ASN:N	1:B:399:ASN:ND2	2.63	0.45
1:B:581:SER:CB	1:B:683:HIS:NE2	2.78	0.45
1:B:925:LEU:CD2	1:B:931:VAL:HG21	2.45	0.45
1:B:1216:LEU:HD12	1:B:1217:LEU:N	2.31	0.45
1:B:1282:LEU:HD21	1:B:1296:GLN:CB	2.41	0.45
1:B:1616:MET:C	1:B:1800:PHE:HZ	2.20	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:762:ALA:HB1	1:A:763:PRO:HD2	1.99	0.45
1:A:1237:MET:SD	1:A:1242:MET:HG3	2.56	0.45
1:B:19:LEU:HD23	1:B:19:LEU:HA	1.76	0.45
1:B:40:TRP:CZ3	1:B:194:PRO:HA	2.51	0.45
1:B:51:MET:HE1	1:B:191:LEU:HD13	1.98	0.45
1:B:62:ALA:O	1:B:67:VAL:HG22	2.17	0.45
1:B:136:GLN:NE2	1:B:138:ALA:N	2.64	0.45
1:B:289:TYR:HH	1:B:323:GLY:HA3	1.82	0.45
1:B:605:TRP:O	1:B:606:ARG:C	2.55	0.45
1:B:1572:ASN:OD1	1:B:1851:LYS:NZ	2.49	0.45
1:B:1894:GLY:O	1:B:1895:GLY:C	2.54	0.45
1:A:475:GLY:O	1:A:477:ALA:N	2.48	0.45
1:A:549:ILE:HG13	1:A:553:PHE:CE1	2.52	0.45
1:A:1251:ASP:HB2	1:A:1321:LEU:HG	1.97	0.45
1:A:1369:GLY:C	1:A:1371:HIS:H	2.20	0.45
1:A:1408:THR:CG2	1:A:1409:PRO:HD2	2.46	0.45
1:A:1662:ARG:HH12	1:B:1790:THR:CG2	2.29	0.45
1:A:1766:PHE:O	1:A:1792:HIS:HB2	2.17	0.45
1:B:234:THR:HG22	1:B:235:LYS:N	2.31	0.45
1:B:782:ILE:CD1	1:B:803:LEU:HD23	2.40	0.45
1:B:1351:ALA:HB2	1:B:1372:LEU:CB	2.47	0.45
1:B:1454:VAL:HA	1:B:1473:LEU:HD13	1.98	0.45
1:B:1538:ARG:NH2	1:B:1585:PRO:HG2	2.32	0.45
1:B:1631:HIS:CD2	1:B:1803:GLY:HA3	2.51	0.45
1:A:23:TRP:O	1:A:24:ALA:C	2.54	0.45
1:A:297:THR:HB	1:A:300:GLY:N	2.32	0.45
1:A:1118:LYS:HB3	1:A:1519:LEU:HD13	1.99	0.45
1:A:1236:ASN:HA	1:A:1502:VAL:HG21	1.98	0.45
1:B:258:GLU:H	1:B:259:GLN:NE2	2.15	0.45
1:B:403:ILE:C	1:B:404:LEU:HD23	2.37	0.45
1:B:561:ILE:HG23	1:B:589:TYR:CE2	2.51	0.45
1:B:1338:LEU:CB	1:B:1406:GLN:HE21	2.29	0.45
1:B:1339:LYS:O	1:B:1340:GLU:HB2	2.17	0.45
1:B:1627:LEU:HD22	1:B:1627:LEU:HA	1.67	0.45
1:B:1801:GLU:C	1:B:1803:GLY:H	2.20	0.45
1:A:157:ILE:HD11	1:A:167:ALA:CA	2.44	0.45
1:A:305:LEU:O	1:A:309:VAL:HG23	2.16	0.45
1:A:572:LEU:C	1:A:572:LEU:HD23	2.37	0.45
1:A:642:CYS:HB2	1:A:650:THR:HB	1.99	0.45
1:A:759:VAL:O	1:A:759:VAL:HG23	2.17	0.45
1:A:1350:LEU:HD13	1:A:1374:SER:HA	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1067:LYS:HB3	1:B:1092:GLY:HA2	1.98	0.45
1:B:1326:ASP:HA	1:B:1327:PRO:HD2	1.70	0.45
1:B:1419:GLU:CD	1:B:1447:GLY:HA3	2.37	0.45
1:B:1674:HIS:HD2	1:B:1698:THR:OG1	1.97	0.45
1:B:1786:LEU:C	1:B:1788:ASN:H	2.20	0.45
1:B:1800:PHE:C	1:B:1800:PHE:CD2	2.90	0.45
1:B:2104:PRO:HD2	1:B:2105:VAL:H	1.82	0.45
1:A:136:GLN:NE2	1:A:138:ALA:N	2.65	0.45
1:A:168:LEU:HA	1:A:185:VAL:HG21	1.98	0.45
1:A:737:ASN:C	1:A:737:ASN:ND2	2.69	0.45
1:A:873:HIS:O	1:A:876:VAL:HG23	2.16	0.45
1:A:984:GLU:HG2	1:A:986:ARG:HG3	1.99	0.45
1:A:1272:TYR:HB3	1:A:1294:VAL:HG22	1.99	0.45
1:A:1387:LEU:HD23	1:A:1406:GLN:HB3	1.98	0.45
1:B:426:ALA:HA	1:B:458:ALA:CB	2.46	0.45
1:B:1387:LEU:HD22	1:B:1404:CYS:HB3	1.98	0.45
1:B:1424:ARG:O	1:B:1426:VAL:N	2.49	0.45
1:B:1560:GLN:HA	1:B:1563:LEU:HB2	1.98	0.45
1:B:1812:GLU:HA	1:B:1815:LYS:HB2	1.97	0.45
1:A:58:SER:HB3	1:A:844:VAL:CG2	2.47	0.45
1:A:363:ASN:HA	1:A:364:PRO:HD3	1.81	0.45
1:A:768:GLN:CD	1:A:783:PRO:HG3	2.36	0.45
1:A:1385:ALA:O	1:A:1386:SER:HB2	2.16	0.45
1:B:903:LEU:O	1:B:904:SER:HB3	2.17	0.45
1:B:1412:SER:HA	1:B:1413:PRO:HD3	1.61	0.45
1:A:94:GLY:HA3	1:A:453:MET:HG2	1.97	0.44
1:A:606:ARG:O	1:A:610:ILE:HG13	2.18	0.44
1:A:970:PHE:O	1:A:1067:LYS:NZ	2.48	0.44
1:A:1111:HIS:O	1:A:1112:LEU:HD23	2.17	0.44
1:A:1147:ALA:HB1	1:A:1358:MET:HE2	2.00	0.44
1:A:1515:ARG:HA	1:A:1515:ARG:HD3	1.62	0.44
1:A:1535:VAL:HG12	1:A:1537:SER:H	1.82	0.44
1:A:2003:ASP:O	1:A:2007:ARG:HG3	2.17	0.44
1:B:506:MET:HE2	1:B:559:ILE:HD12	1.99	0.44
1:B:542:ASP:O	1:B:545:VAL:HG12	2.17	0.44
1:B:1000:GLY:HA2	1:B:1106:ARG:NH2	2.32	0.44
1:B:1028:TRP:O	1:B:1032:LEU:HB2	2.17	0.44
1:B:1221:LEU:O	1:B:1221:LEU:HG	2.17	0.44
1:B:2018:ILE:HG12	1:B:2041:MET:HE2	1.99	0.44
1:A:211:THR:HG22	1:A:212:CYS:N	2.32	0.44
1:A:366:ILE:O	1:A:366:ILE:CG1	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:396:GLY:HA3	1:B:142:ASN:ND2	2.31	0.44
1:A:1255:TYR:HA	1:A:1272:TYR:CE2	2.52	0.44
1:A:1373:LEU:HD22	1:A:1377:GLN:OE1	2.16	0.44
1:A:1411:ASP:HB2	1:A:1440:PRO:HD3	2.00	0.44
1:A:1473:LEU:N	1:A:1473:LEU:HD23	2.32	0.44
1:A:1698:THR:HA	1:A:1721:ALA:O	2.17	0.44
1:A:1857:ARG:HH11	1:A:1869:PRO:HG2	1.82	0.44
1:A:2084:LEU:HD12	1:A:2112:ALA:HA	1.99	0.44
1:B:206:LEU:HD23	1:B:206:LEU:HA	1.70	0.44
1:B:512:ARG:NH1	1:B:793:LEU:HD23	2.33	0.44
1:B:534:VAL:HG13	1:B:554:VAL:HG12	1.99	0.44
1:B:668:GLU:O	1:B:669:ASP:CB	2.60	0.44
1:B:1472:VAL:HG12	1:B:1473:LEU:N	2.32	0.44
1:B:1898:LEU:HD23	1:B:1898:LEU:HA	1.78	0.44
1:B:2053:LEU:CD2	1:B:2054:PRO:HD2	2.47	0.44
1:A:903:LEU:O	1:A:905:GLN:HG3	2.18	0.44
1:B:123:ASP:HA	1:B:124:PRO:HD3	1.70	0.44
1:B:1662:ARG:NH1	1:B:1792:HIS:ND1	2.66	0.44
1:A:261:VAL:HG22	1:B:146:PHE:CD1	2.53	0.44
1:A:654:PRO:HB2	1:A:657:ALA:HB3	1.99	0.44
1:A:1413:PRO:HA	1:A:1440:PRO:O	2.18	0.44
1:A:1472:VAL:HG13	1:A:1502:VAL:O	2.16	0.44
1:B:169:GLN:HE21	1:B:169:GLN:C	2.21	0.44
1:B:254:ASP:O	1:B:255:GLY:O	2.36	0.44
1:B:642:CYS:O	1:B:649:VAL:HG13	2.18	0.44
1:A:252:ASN:HD21	1:A:272:LEU:HB2	1.80	0.44
1:A:285:GLU:HG3	1:A:315:THR:OG1	2.17	0.44
1:A:1361:PHE:CZ	1:A:1370:ARG:NE	2.85	0.44
1:A:1574:ARG:O	1:A:1578:LEU:HG	2.18	0.44
1:A:1814:LEU:O	1:A:1818:ILE:HG13	2.17	0.44
1:A:1973:MET:O	1:A:1973:MET:HG3	2.18	0.44
1:B:148:PHE:HB3	1:B:150:PHE:CE1	2.53	0.44
1:B:161:CYS:HB3	1:B:331:HIS:HE1	1.82	0.44
1:B:994:LYS:HE2	1:B:1924:TYR:CE2	2.52	0.44
1:B:1036:LEU:HD13	1:B:1051:PRO:HG3	1.99	0.44
1:B:1251:ASP:CB	1:B:1321:LEU:HD22	2.47	0.44
1:B:1265:GLN:HE21	1:B:2026:ARG:NH1	2.16	0.44
1:B:1345:LEU:HD12	1:B:1402:PHE:O	2.17	0.44
1:A:22:PHE:CE2	1:A:26:LEU:HD11	2.53	0.44
1:A:103:THR:HG22	1:A:104:SER:N	2.32	0.44
1:A:136:GLN:HE22	1:A:138:ALA:N	2.09	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:169:GLN:HE21	1:A:170:SER:N	2.15	0.44
1:A:1011:LEU:CD2	1:A:1023:GLN:HB2	2.47	0.44
1:A:1234:LEU:HD22	1:A:1262:LEU:CD2	2.46	0.44
1:A:1234:LEU:HD13	1:A:1242:MET:SD	2.58	0.44
1:A:1673:ILE:CD1	1:A:1684:ALA:HB1	2.48	0.44
1:A:1812:GLU:HA	1:A:1815:LYS:HB2	1.99	0.44
1:B:55:LYS:HB3	1:B:55:LYS:HE2	1.77	0.44
1:B:165:LEU:HD22	1:B:392:SER:HB2	1.98	0.44
1:B:699:ARG:O	1:B:703:LEU:HD23	2.18	0.44
1:B:784:LEU:HD23	1:B:784:LEU:HA	1.73	0.44
1:B:1389:LEU:HA	1:B:1389:LEU:HD23	1.76	0.44
1:B:1424:ARG:C	1:B:1426:VAL:N	2.71	0.44
1:B:1472:VAL:HG12	1:B:1473:LEU:H	1.82	0.44
1:B:1535:VAL:O	1:B:1535:VAL:HG12	2.18	0.44
1:B:1538:ARG:CZ	1:B:1585:PRO:HG2	2.47	0.44
1:B:1656:TYR:CD1	1:B:1687:ILE:HD11	2.53	0.44
1:B:2031:GLN:HB3	1:B:2034:TYR:HB3	1.99	0.44
1:A:40:TRP:CZ3	1:A:194:PRO:HA	2.52	0.44
1:A:132:MET:HE1	1:B:200:PHE:HE2	1.77	0.44
1:A:191:LEU:O	1:A:192:LEU:HD23	2.18	0.44
1:A:508:LEU:HD23	1:A:508:LEU:HA	1.81	0.44
1:A:752:VAL:HG11	1:A:775:LEU:HD21	2.00	0.44
1:A:801:GLY:O	1:A:804:HIS:HB3	2.17	0.44
1:A:1390:VAL:HG13	1:A:1501:LEU:HD22	1.99	0.44
1:A:1488:PRO:O	1:A:1489:SER:HB2	2.17	0.44
1:A:1726:THR:O	1:A:1726:THR:CG2	2.66	0.44
1:A:1941:VAL:O	1:A:1941:VAL:HG12	2.16	0.44
1:B:64:PHE:HB2	1:B:429:ARG:HE	1.82	0.44
1:B:78:GLN:HE21	1:B:190:VAL:H	1.65	0.44
1:B:497:SER:HB2	1:B:762:ALA:CB	2.47	0.44
1:B:737:ASN:C	1:B:737:ASN:HD22	2.18	0.44
1:B:1137:GLN:HG2	1:B:1396:PHE:CZ	2.53	0.44
1:B:1733:LEU:HD23	1:B:1733:LEU:HA	1.84	0.44
1:B:1897:GLY:HA2	1:B:1971:LEU:HD12	2.00	0.44
1:A:440:GLN:HG3	1:A:833:HIS:CD2	2.53	0.44
1:A:844:VAL:O	1:A:845:PRO:C	2.56	0.44
1:A:1476:ASN:ND2	1:A:1486:MET:CE	2.81	0.44
1:A:1476:ASN:HD22	1:A:1476:ASN:N	2.15	0.44
1:A:1837:GLU:O	1:A:1840:PHE:HB2	2.18	0.44
1:B:159:THR:HG22	1:B:398:SER:HB3	1.98	0.44
1:B:368:ALA:HB1	1:B:374:LEU:HG	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1444:MET:HB2	1:B:1474:VAL:HB	2.00	0.44
1:B:1656:TYR:CD2	1:B:1687:ILE:HD13	2.53	0.44
1:B:1996:TYR:CD2	1:B:1996:TYR:C	2.91	0.44
1:A:83:LEU:HD23	1:A:144:LEU:HD12	1.99	0.44
1:A:896:TRP:CD2	1:A:907:LEU:HD11	2.53	0.44
1:A:1456:MET:HG3	1:A:2036:PHE:CD1	2.53	0.44
1:A:1651:VAL:HG13	1:A:1679:GLY:C	2.38	0.44
1:B:1187:ALA:HB2	1:B:1210:LEU:HD13	1.99	0.44
1:B:1360:GLY:O	1:B:1364:SER:CB	2.66	0.44
1:B:1449:SER:HB3	1:B:2047:LYS:NZ	2.33	0.44
1:B:1532:PHE:HA	1:B:1546:TRP:HZ3	1.83	0.44
1:B:1941:VAL:O	1:B:1941:VAL:HG12	2.16	0.44
1:A:399:ASN:ND2	1:A:399:ASN:H	2.16	0.43
1:A:584:GLU:O	1:A:587:CYS:HB2	2.18	0.43
1:A:1243:LYS:HA	1:A:1271:ASP:HB2	2.00	0.43
1:A:1774:LEU:HD22	1:B:1785:PHE:HB2	1.99	0.43
1:B:276:LEU:HD12	1:B:401:HIS:HB3	2.00	0.43
1:B:336:SER:OG	1:B:337:GLY:N	2.51	0.43
1:B:506:MET:HB3	1:B:506:MET:HE2	1.89	0.43
1:B:642:CYS:HA	1:B:743:VAL:HG23	2.00	0.43
1:B:643:HIS:CD2	1:B:746:GLN:CB	3.02	0.43
1:B:1477:LEU:HD12	1:B:1507:ARG:HH21	1.82	0.43
1:A:159:THR:HG22	1:A:398:SER:HB3	2.00	0.43
1:A:287:LEU:HD13	1:A:312:LEU:HD13	2.00	0.43
1:A:316:ARG:O	1:A:317:ARG:O	2.35	0.43
1:A:389:GLY:O	1:A:390:ILE:HG13	2.18	0.43
1:A:784:LEU:HD23	1:A:784:LEU:HA	1.73	0.43
1:A:1231:ASP:O	1:A:1232:THR:C	2.56	0.43
1:A:1418:VAL:HG21	1:A:1443:LEU:HD13	2.00	0.43
1:A:1442:TRP:CB	1:A:1444:MET:HE1	2.48	0.43
1:A:1616:MET:HB3	1:A:1800:PHE:HE2	1.83	0.43
1:B:157:ILE:HD11	1:B:167:ALA:CA	2.46	0.43
1:B:801:GLY:O	1:B:804:HIS:HB3	2.17	0.43
1:B:837:ASP:OD1	1:B:839:SER:HB3	2.18	0.43
1:B:883:ARG:HG3	1:B:1107:ARG:CZ	2.48	0.43
1:B:982:THR:HG23	1:B:983:ALA:N	2.28	0.43
1:A:128:VAL:HG12	1:A:129:GLY:H	1.83	0.43
1:A:411:ALA:HA	1:A:412:PRO:HD3	1.83	0.43
1:A:613:ALA:O	1:A:615:VAL:N	2.51	0.43
1:A:1038:MET:HE3	1:A:1041:LEU:HD23	1.99	0.43
1:A:1389:LEU:HD23	1:A:1389:LEU:HA	1.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1418:VAL:HG13	1:A:1425:TRP:CZ2	2.52	0.43
1:A:1460:LEU:HD11	1:A:1980:LEU:CD1	2.42	0.43
1:A:1657:TYR:CZ	1:A:1662:ARG:CD	3.00	0.43
1:A:1810:VAL:HG12	1:A:1810:VAL:O	2.18	0.43
1:A:2023:SER:O	1:A:2027:GLY:HA2	2.17	0.43
1:A:2066:VAL:HG22	1:A:2088:ILE:CD1	2.48	0.43
1:B:5:VAL:HG12	1:B:245:THR:HA	2.00	0.43
1:B:277:TYR:O	1:B:278:ALA:C	2.56	0.43
1:B:680:ILE:HG12	1:B:681:ALA:H	1.76	0.43
1:B:739:LEU:HD23	1:B:739:LEU:HA	1.78	0.43
1:B:761:ILE:O	1:B:761:ILE:HG22	2.18	0.43
1:B:1598:MET:O	1:B:1599:LEU:HD23	2.18	0.43
1:B:1666:GLN:O	1:B:1669:GLU:HB2	2.18	0.43
1:B:1671:VAL:HG23	1:B:1743:LEU:HD13	2.00	0.43
1:A:19:LEU:HA	1:A:19:LEU:HD23	1.76	0.43
1:A:272:LEU:O	1:A:276:LEU:HG	2.18	0.43
1:A:333:GLU:O	1:A:336:SER:HB3	2.18	0.43
1:A:399:ASN:H	1:A:399:ASN:HD22	1.65	0.43
1:A:1069:TYR:CD1	1:A:1077:ALA:O	2.71	0.43
1:A:1614:MET:HG3	1:A:1649:PRO:HG3	1.99	0.43
1:A:1662:ARG:HH12	1:B:1790:THR:HG21	1.84	0.43
1:A:1769:ILE:HG23	2:A:3001:NAP:H2N	2.01	0.43
1:B:264:PRO:HG2	1:B:300:GLY:HA2	1.99	0.43
1:B:289:TYR:HE2	1:B:291:GLU:HA	1.83	0.43
1:B:762:ALA:HB1	1:B:763:PRO:HD2	1.99	0.43
1:B:998:LEU:HA	1:B:998:LEU:HD23	1.87	0.43
1:B:1133:ASN:HB2	1:B:1136:LEU:HB2	2.00	0.43
1:B:1443:LEU:O	1:B:1473:LEU:HA	2.19	0.43
1:B:1845:GLN:HB2	1:B:1847:LYS:HG3	2.00	0.43
1:B:2058:VAL:HG22	1:B:2098:PHE:HD2	1.83	0.43
1:A:854:SER:OG	1:A:855:SER:N	2.52	0.43
1:A:899:LEU:HD12	1:A:899:LEU:O	2.18	0.43
1:A:1216:LEU:HD11	1:A:1218:SER:HB3	2.00	0.43
1:A:1236:ASN:ND2	1:A:1502:VAL:H	2.16	0.43
1:A:1252:GLY:HA3	1:A:1318:ASN:CB	2.43	0.43
1:A:1413:PRO:HA	1:A:1440:PRO:HB2	1.99	0.43
1:A:1472:VAL:CG1	1:A:1473:LEU:N	2.82	0.43
1:A:1568:TYR:HB2	1:A:1604:SER:OG	2.18	0.43
1:A:1651:VAL:HG12	1:A:1683:ALA:CB	2.48	0.43
1:B:65:PHE:CE2	1:B:83:LEU:HB3	2.54	0.43
1:B:594:LEU:HD23	1:B:594:LEU:HA	1.70	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:615:VAL:CG2	1:B:686:PHE:HD2	2.27	0.43
1:B:1183:LEU:CD1	1:B:1210:LEU:HB3	2.44	0.43
1:B:1405:ARG:HH22	1:B:1470:ARG:HH22	1.66	0.43
1:B:1413:PRO:HA	1:B:1440:PRO:O	2.17	0.43
1:B:1538:ARG:NH2	1:B:1585:PRO:CG	2.82	0.43
1:A:1001:TYR:CD2	1:A:1003:TYR:CE1	3.06	0.43
1:A:1559:CYS:O	1:A:1562:ARG:HB2	2.18	0.43
1:A:1818:ILE:HG12	1:A:1823:VAL:HG11	2.01	0.43
1:A:1841:ARG:O	1:A:1845:GLN:HG3	2.19	0.43
1:B:409:ARG:HA	1:B:410:PRO:HD3	1.67	0.43
1:B:455:ASN:HB2	1:B:813:ASN:ND2	2.34	0.43
1:B:765:ALA:HB2	1:B:783:PRO:HB3	2.00	0.43
1:B:768:GLN:CD	1:B:783:PRO:HG3	2.39	0.43
1:B:782:ILE:HG22	1:B:783:PRO:O	2.19	0.43
1:B:1424:ARG:C	1:B:1426:VAL:H	2.21	0.43
1:B:1896:PHE:HB2	2:B:3002:NAP:O2N	2.19	0.43
1:A:67:VAL:HG23	1:A:67:VAL:O	2.19	0.43
1:A:504:GLN:N	1:A:546:LEU:HD11	2.34	0.43
1:A:594:LEU:HD23	1:A:594:LEU:HA	1.69	0.43
1:A:703:LEU:O	1:A:703:LEU:HG	2.19	0.43
1:A:981:SER:HA	1:A:986:ARG:NH2	2.34	0.43
1:A:1036:LEU:HD13	1:A:1051:PRO:HG3	2.00	0.43
1:A:1184:LEU:HD23	1:A:1184:LEU:HA	1.81	0.43
1:A:1552:HIS:CG	1:A:1552:HIS:O	2.71	0.43
1:A:1796:LEU:HD12	1:A:1796:LEU:HA	1.88	0.43
1:A:2058:VAL:HG22	1:A:2098:PHE:HD2	1.83	0.43
1:B:103:THR:HG22	1:B:104:SER:N	2.33	0.43
1:B:159:THR:CG2	1:B:398:SER:CB	2.94	0.43
1:B:321:LEU:HD23	1:B:381:LEU:CD1	2.49	0.43
1:B:494:PHE:CD1	1:B:574:PRO:HB3	2.53	0.43
1:B:508:LEU:HD23	1:B:508:LEU:HA	1.85	0.43
1:B:532:LEU:HD22	1:B:604:TYR:HE1	1.84	0.43
1:B:844:VAL:O	1:B:846:SER:N	2.52	0.43
1:B:988:SER:O	1:B:991:ASP:N	2.52	0.43
1:B:1554:ALA:HB2	1:B:1882:PRO:CG	2.46	0.43
1:B:1562:ARG:HB3	1:B:1627:LEU:HD13	1.99	0.43
1:B:1617:VAL:HG13	1:B:1618:PRO:HD2	2.01	0.43
1:B:1973:MET:O	1:B:1973:MET:HG3	2.19	0.43
1:A:494:PHE:CZ	1:A:574:PRO:HG3	2.54	0.43
1:A:1014:ASP:OD1	1:A:1015:LEU:N	2.51	0.43
1:A:1015:LEU:HD23	1:A:1015:LEU:HA	1.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1068:LEU:CD1	1:A:1078:ALA:HB2	2.49	0.43
1:A:1119:PHE:HD1	1:A:1516:HIS:CD2	2.36	0.43
1:A:1312:ALA:O	1:A:1339:LYS:HB2	2.19	0.43
1:A:1956:ILE:HD12	1:A:1956:ILE:HA	1.84	0.43
1:B:608:TYR:O	1:B:611:LYS:N	2.51	0.43
1:B:915:GLU:O	1:B:916:ASP:HB2	2.18	0.43
1:B:1231:ASP:O	1:B:1234:LEU:N	2.50	0.43
1:B:1480:THR:HG22	1:B:1481:SER:H	1.83	0.43
1:B:1893:LEU:HB3	1:B:1925:GLN:HE21	1.79	0.43
1:B:2075:THR:CG2	1:B:2076:ASN:N	2.82	0.43
1:A:90:ILE:HG12	1:A:232:LEU:HD22	2.00	0.43
1:A:202:LYS:HB2	1:B:129:GLY:HA3	2.01	0.43
1:A:876:VAL:O	1:A:876:VAL:HG12	2.19	0.43
1:A:1653:THR:HG21	1:A:1807:TRP:CH2	2.53	0.43
1:B:193:LYS:O	1:B:193:LYS:HG3	2.19	0.43
1:B:193:LYS:HA	1:B:194:PRO:HD3	1.87	0.43
1:B:521:LEU:O	1:B:524:ASP:HB2	2.19	0.43
1:B:1501:LEU:H	1:B:1501:LEU:HG	1.52	0.43
1:B:1544:ILE:HD12	1:B:1837:GLU:HA	2.00	0.43
1:B:1857:ARG:NE	1:B:1871:ILE:HD11	2.34	0.43
1:B:2043:ARG:NH1	1:B:2046:GLU:OE1	2.51	0.43
1:A:254:ASP:HB3	1:A:257:LYS:HE2	2.00	0.43
1:A:2086:GLN:NE2	1:A:2108:SER:OG	2.49	0.43
1:B:1231:ASP:O	1:B:1232:THR:C	2.58	0.43
1:B:1288:LYS:O	1:B:1291:GLN:HG2	2.19	0.43
1:A:434:VAL:O	1:A:438:LEU:HG	2.19	0.42
1:A:624:GLY:HA3	1:A:671:PHE:HB3	2.01	0.42
1:A:652:SER:OG	1:A:681:ALA:HB1	2.19	0.42
1:A:808:VAL:CG1	1:A:809:SER:N	2.77	0.42
1:A:1405:ARG:HH22	1:A:1470:ARG:NH2	2.16	0.42
1:A:1894:GLY:O	1:A:1897:GLY:N	2.53	0.42
1:A:1974:VAL:O	1:A:1991:VAL:HG22	2.19	0.42
1:A:1996:TYR:CD2	1:A:1996:TYR:C	2.92	0.42
1:B:36:ASP:CB	1:B:38:ARG:HG3	2.49	0.42
1:B:1068:LEU:CD1	1:B:1078:ALA:HB2	2.49	0.42
1:B:1119:PHE:CZ	1:B:1514:PHE:HB3	2.53	0.42
1:B:1459:CYS:CB	1:B:2032:ALA:HA	2.49	0.42
1:B:2105:VAL:O	1:B:2106:LEU:HD23	2.19	0.42
1:A:36:ASP:HB3	1:A:38:ARG:CG	2.49	0.42
1:A:578:ILE:HG22	1:A:745:PHE:HE1	1.84	0.42
1:A:1733:LEU:HA	1:A:1733:LEU:HD23	1.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1735:HIS:H	1:A:1735:HIS:HD2	1.64	0.42
1:A:1932:TRP:O	1:A:1937:VAL:HB	2.18	0.42
1:B:22:PHE:CE2	1:B:26:LEU:HD11	2.54	0.42
1:B:136:GLN:HE22	1:B:138:ALA:N	2.09	0.42
1:B:363:ASN:HA	1:B:364:PRO:HD3	1.80	0.42
1:B:423:LEU:HD23	1:B:812:PRO:HG3	2.00	0.42
1:B:900:ALA:HB1	1:B:905:GLN:O	2.19	0.42
1:B:1220:LEU:HD21	1:B:1318:ASN:HD21	1.83	0.42
1:B:1453:VAL:O	1:B:1456:MET:N	2.53	0.42
1:B:1944:SER:HB2	1:B:1958:GLU:OE2	2.19	0.42
1:B:1975:LEU:HD21	1:B:2034:TYR:CD1	2.54	0.42
1:A:265:SER:O	1:A:269:GLN:HG3	2.20	0.42
1:A:1073:ASP:O	1:A:1074:THR:CG2	2.62	0.42
1:A:1221:LEU:HG	1:A:1221:LEU:O	2.20	0.42
1:A:1424:ARG:C	1:A:1426:VAL:H	2.22	0.42
1:A:1435:ASP:CG	1:A:1438:SER:HB3	2.40	0.42
1:A:1466:GLY:HA2	1:A:1469:ILE:HG13	2.01	0.42
1:A:1603:PHE:N	1:A:1603:PHE:CD2	2.87	0.42
1:A:1729:GLU:OE1	1:A:1758:ARG:HD2	2.19	0.42
1:B:970:PHE:O	1:B:1067:LYS:HE2	2.19	0.42
1:B:972:THR:CG2	1:B:1081:VAL:HG21	2.49	0.42
1:B:1918:SER:HB3	1:B:1921:ARG:HD3	2.01	0.42
1:A:76:ASP:CG	1:A:116:ALA:HB3	2.40	0.42
1:A:234:THR:HG22	1:A:235:LYS:N	2.35	0.42
1:A:351:GLY:C	1:A:383:ILE:HG22	2.40	0.42
1:A:532:LEU:HD22	1:A:604:TYR:CE1	2.55	0.42
1:A:1565:SER:O	1:A:1605:GLY:HA3	2.19	0.42
1:A:1697:THR:CG2	1:A:1698:THR:N	2.81	0.42
1:A:1791:PHE:CD2	1:A:1791:PHE:C	2.92	0.42
1:B:67:VAL:O	1:B:68:HIS:C	2.57	0.42
1:B:82:LEU:HA	1:B:85:VAL:HG22	2.02	0.42
1:B:89:ALA:O	1:B:92:ASP:HB3	2.19	0.42
1:B:213:ARG:HD3	1:B:218:GLU:O	2.19	0.42
1:B:1733:LEU:O	1:B:1736:THR:HG22	2.19	0.42
1:B:2066:VAL:HG22	1:B:2088:ILE:CD1	2.50	0.42
1:A:65:PHE:CE2	1:A:83:LEU:HB3	2.54	0.42
1:A:98:ALA:CA	1:A:101:ARG:HG3	2.48	0.42
1:A:143:ARG:NH1	1:A:143:ARG:CG	2.83	0.42
1:A:851:PRO:HB2	1:B:122:ARG:HA	2.01	0.42
1:A:1617:VAL:O	1:A:1617:VAL:HG12	2.19	0.42
1:B:276:LEU:CD1	1:B:401:HIS:HB3	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:525:GLN:NE2	1:B:525:GLN:CA	2.82	0.42
1:B:1253:GLN:HB3	1:B:1255:TYR:CE2	2.53	0.42
1:B:1378:TRP:O	1:B:1382:PHE:CD1	2.73	0.42
1:B:1555:LEU:HD12	1:B:1559:CYS:SG	2.59	0.42
1:B:2053:LEU:HA	1:B:2053:LEU:HD23	1.72	0.42
1:A:47:LEU:HD21	1:A:198:LEU:HA	2.01	0.42
1:A:739:LEU:HD23	1:A:739:LEU:HA	1.76	0.42
1:A:1246:GLU:HG3	1:A:1316:VAL:HB	2.00	0.42
1:A:1976:ARG:HB2	1:A:2033:ASN:HD21	1.85	0.42
1:B:540:SER:OG	1:B:545:VAL:HG21	2.20	0.42
1:B:550:VAL:CG2	1:B:611:LYS:HD3	2.48	0.42
1:B:1312:ALA:HB3	1:B:1337:THR:O	2.20	0.42
1:B:1533:VAL:N	1:B:1546:TRP:CZ3	2.88	0.42
1:B:1860:GLU:HB2	1:B:1865:PRO:HG2	2.01	0.42
1:A:55:LYS:HE2	1:A:55:LYS:HB3	1.74	0.42
1:A:275:SER:CB	1:A:276:LEU:HD23	2.49	0.42
1:A:494:PHE:CE2	1:A:574:PRO:HG3	2.54	0.42
1:A:623:VAL:HA	1:A:671:PHE:O	2.19	0.42
1:A:945:GLU:OE2	1:B:941:SER:CB	2.67	0.42
1:A:1584:SER:C	1:A:1586:ASP:H	2.23	0.42
1:A:2105:VAL:O	1:A:2106:LEU:HD23	2.18	0.42
1:B:128:VAL:O	1:B:131:SER:OG	2.34	0.42
1:B:454:LEU:HD23	1:B:454:LEU:HA	1.80	0.42
1:B:876:VAL:HA	1:B:884:VAL:HG11	2.01	0.42
1:B:1009:LEU:HD22	1:B:1023:GLN:O	2.20	0.42
1:B:1685:ILE:O	1:B:1686:ALA:C	2.58	0.42
1:A:276:LEU:HD12	1:A:401:HIS:HB3	2.02	0.42
1:A:290:ILE:HG23	1:A:290:ILE:O	2.18	0.42
1:A:542:ASP:C	1:A:542:ASP:OD1	2.58	0.42
1:A:1184:LEU:H	1:A:1216:LEU:CD2	2.33	0.42
1:A:1222:ASP:HA	1:A:1226:LEU:CD1	2.49	0.42
1:B:185:VAL:O	1:B:230:ALA:HA	2.19	0.42
1:B:412:PRO:HA	1:B:413:PRO:HD3	1.89	0.42
1:B:892:LEU:HD22	1:B:1057:ILE:HD12	2.00	0.42
1:B:1073:ASP:O	1:B:1074:THR:CG2	2.61	0.42
1:B:1429:LEU:HD21	1:B:1443:LEU:HD21	2.00	0.42
1:B:1473:LEU:HD11	1:B:1503:MET:SD	2.60	0.42
1:B:1496:VAL:HG21	1:B:1511:TRP:CH2	2.55	0.42
1:B:1540:ASP:C	1:B:1542:SER:H	2.21	0.42
1:B:1565:SER:HB2	1:B:1857:ARG:CZ	2.50	0.42
1:B:1671:VAL:HG23	1:B:1743:LEU:CD1	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:189:ASN:HB2	1:A:334:PRO:HD2	2.02	0.42
1:A:299:VAL:O	1:A:302:PRO:HD2	2.19	0.42
1:A:506:MET:HB3	1:A:559:ILE:CD1	2.49	0.42
1:A:506:MET:CE	1:A:559:ILE:HD12	2.49	0.42
1:A:677:THR:HG22	1:A:682:PHE:CE2	2.55	0.42
1:A:761:ILE:O	1:A:761:ILE:HG22	2.19	0.42
1:A:1228:ALA:HB2	1:A:1517:PHE:CE2	2.55	0.42
1:A:1476:ASN:CA	1:A:1486:MET:SD	3.07	0.42
1:A:1477:LEU:HD12	1:A:1507:ARG:HH21	1.83	0.42
1:A:1522:ASP:O	1:A:1524:PRO:HD3	2.20	0.42
1:A:1697:THR:HG23	1:A:1698:THR:N	2.34	0.42
1:A:1739:LYS:O	1:A:1761:ALA:HB2	2.19	0.42
1:A:2104:PRO:HD2	1:A:2105:VAL:H	1.84	0.42
1:B:23:TRP:NE1	1:B:350:HIS:CD2	2.87	0.42
1:B:47:LEU:HD21	1:B:198:LEU:HA	2.01	0.42
1:B:470:TYR:CD1	1:B:470:TYR:C	2.92	0.42
1:B:491:PRO:HG2	1:B:753:PRO:HG2	2.02	0.42
1:B:638:ILE:HD11	1:B:657:ALA:O	2.20	0.42
1:B:1147:ALA:C	1:B:1149:ALA:H	2.23	0.42
1:B:1238:ALA:HB2	1:B:1468:ARG:HD3	2.02	0.42
1:B:1243:LYS:HD3	1:B:1311:LYS:HB3	2.01	0.42
1:B:1312:ALA:O	1:B:1339:LYS:HB2	2.20	0.42
1:B:1454:VAL:HG13	1:B:1503:MET:HE3	2.02	0.42
1:A:1121:PHE:HE1	1:A:1512:GLY:O	2.03	0.42
1:A:1124:HIS:NE2	1:A:1512:GLY:HA2	2.35	0.42
1:A:1316:VAL:HA	1:A:1345:LEU:O	2.20	0.42
1:A:1897:GLY:HA2	1:A:1971:LEU:HD12	2.02	0.42
1:B:84:GLU:O	1:B:88:GLU:HG3	2.20	0.42
1:B:327:SER:OG	1:B:356:ASN:ND2	2.53	0.42
1:B:550:VAL:CG2	1:B:608:TYR:HA	2.50	0.42
1:B:759:VAL:O	1:B:759:VAL:HG23	2.20	0.42
1:B:1015:LEU:HD23	1:B:1015:LEU:HA	1.74	0.42
1:B:1244:VAL:HB	1:B:1272:TYR:HD1	1.84	0.42
1:B:1390:VAL:HG22	1:B:1501:LEU:HD21	2.02	0.42
1:B:1538:ARG:NH1	1:B:1585:PRO:HG2	2.35	0.42
1:B:1556:PRO:C	1:B:1558:SER:H	2.23	0.42
1:B:1578:LEU:C	1:B:1580:THR:N	2.73	0.42
1:A:1302:ALA:O	1:A:1303:ASN:CB	2.65	0.41
1:A:1469:ILE:O	1:A:1469:ILE:CG2	2.68	0.41
1:A:1504:ASN:HB3	1:A:1511:TRP:CZ3	2.54	0.41
1:A:1859:GLU:CG	1:A:1860:GLU:H	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2031:GLN:HB3	1:A:2034:TYR:HB3	2.01	0.41
1:B:47:LEU:HA	1:B:48:PRO:HD3	1.85	0.41
1:B:355:PRO:CG	1:B:380:PRO:HG3	2.50	0.41
1:B:362:PRO:HB3	1:B:369:LEU:HB3	2.02	0.41
1:B:1068:LEU:HD13	1:B:1078:ALA:HB2	2.01	0.41
1:B:1115:ILE:HD11	1:B:2111:LEU:CD1	2.49	0.41
1:B:1251:ASP:HB3	1:B:1321:LEU:HD22	2.01	0.41
1:B:1350:LEU:N	1:B:1350:LEU:HD23	2.34	0.41
1:B:1442:TRP:HB3	1:B:1444:MET:CE	2.50	0.41
1:B:1563:LEU:HD12	1:B:1563:LEU:HA	1.88	0.41
1:B:1799:LEU:O	1:B:1801:GLU:N	2.54	0.41
1:B:1922:THR:H	1:B:1922:THR:HG1	1.64	0.41
1:A:67:VAL:O	1:A:68:HIS:C	2.58	0.41
1:A:120:LEU:HA	1:A:127:LEU:HD13	2.02	0.41
1:A:264:PRO:HG2	1:A:300:GLY:HA2	2.03	0.41
1:A:274:ARG:O	1:A:276:LEU:N	2.53	0.41
1:A:1235:GLU:OE2	1:A:1515:ARG:CZ	2.68	0.41
1:A:1419:GLU:OE2	1:A:1447:GLY:HA3	2.20	0.41
1:A:1949:LEU:HD21	1:A:1953:ARG:NH2	2.35	0.41
1:A:2043:ARG:NH1	1:A:2046:GLU:OE1	2.53	0.41
1:B:94:GLY:HA3	1:B:453:MET:HG2	2.01	0.41
1:B:283:ASP:C	1:B:285:GLU:H	2.22	0.41
1:B:819:VAL:O	1:B:821:PHE:N	2.53	0.41
1:B:1394:ARG:HA	1:B:1400:VAL:HG22	2.02	0.41
1:B:1746:ASN:HD21	1:B:1753:LEU:HD12	1.85	0.41
1:A:89:ALA:O	1:A:92:ASP:HB3	2.21	0.41
1:A:91:VAL:O	1:A:457:ILE:HD11	2.20	0.41
1:A:765:ALA:HB2	1:A:783:PRO:HB3	2.02	0.41
1:A:874:TYR:CD1	1:A:1006:PHE:CE2	3.08	0.41
1:A:915:GLU:O	1:A:916:ASP:HB2	2.20	0.41
1:A:1252:GLY:N	1:A:1321:LEU:HD21	2.35	0.41
1:A:1578:LEU:C	1:A:1580:THR:N	2.74	0.41
1:A:1616:MET:HE2	1:A:1650:ILE:HD13	2.01	0.41
1:A:1644:GLU:HB3	1:A:1825:PRO:CG	2.50	0.41
1:B:98:ALA:CA	1:B:101:ARG:HG3	2.47	0.41
1:B:147:PHE:CD2	1:B:147:PHE:C	2.94	0.41
1:B:350:HIS:O	1:B:352:VAL:HG12	2.21	0.41
1:B:366:ILE:O	1:B:366:ILE:CG1	2.68	0.41
1:B:1477:LEU:CD1	1:B:1507:ARG:HH21	2.33	0.41
1:B:2058:VAL:HG11	1:B:2060:TRP:CE2	2.54	0.41
1:A:14:PRO:HB2	1:A:32:MET:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:33:VAL:HG13	1:A:51:MET:C	2.39	0.41
1:A:256:SER:HB3	1:B:146:PHE:O	2.19	0.41
1:A:313:CYS:HA	1:A:315:THR:HG22	2.03	0.41
1:A:377:VAL:HG13	1:A:381:LEU:CD1	2.50	0.41
1:A:495:ILE:HG12	1:A:758:VAL:HG13	2.01	0.41
1:A:1068:LEU:HD13	1:A:1078:ALA:HB2	2.01	0.41
1:A:1432:ILE:O	1:A:1432:ILE:HG22	2.21	0.41
1:A:1435:ASP:OD2	1:A:1438:SER:HB3	2.20	0.41
1:A:1530:HIS:CB	1:A:1549:SER:HB3	2.51	0.41
1:A:1678:GLY:O	1:A:1682:GLN:HG3	2.20	0.41
1:B:40:TRP:CH2	1:B:51:MET:HE3	2.56	0.41
1:B:83:LEU:HD23	1:B:83:LEU:HA	1.89	0.41
1:B:595:THR:OG1	1:B:598:GLU:HG3	2.20	0.41
1:B:1220:LEU:CD2	1:B:1318:ASN:HD21	2.33	0.41
1:B:1305:ALA:HA	1:B:1306:PRO:HD2	1.83	0.41
1:B:1433:LEU:HD11	1:B:1465:GLY:O	2.20	0.41
1:B:1448:CYS:C	1:B:1450:THR:H	2.24	0.41
1:A:1147:ALA:HB1	1:A:1358:MET:HE1	2.02	0.41
1:B:9:MET:HE1	1:B:345:LEU:HB2	2.01	0.41
1:B:188:LEU:CD2	1:B:228:VAL:HG12	2.49	0.41
1:B:988:SER:H	1:B:991:ASP:HB2	1.85	0.41
1:B:1473:LEU:HG	1:B:1503:MET:HA	2.02	0.41
1:B:1506:TYR:OH	1:B:1509:GLY:HA2	2.21	0.41
1:B:1698:THR:HB	1:B:1723:SER:HB3	2.01	0.41
1:B:2018:ILE:HG21	1:B:2041:MET:HB3	2.03	0.41
1:A:355:PRO:CG	1:A:380:PRO:HG3	2.51	0.41
1:A:564:ILE:HG12	1:A:761:ILE:HD13	2.03	0.41
1:A:644:ASN:HB3	1:A:770:VAL:CG1	2.51	0.41
1:A:719:GLU:HA	1:A:722:TRP:NE1	2.36	0.41
1:A:782:ILE:CD1	1:A:803:LEU:HD23	2.41	0.41
1:A:1442:TRP:HB3	1:A:1444:MET:CE	2.51	0.41
1:A:1680:VAL:CG1	1:A:1681:GLY:N	2.84	0.41
1:B:41:LYS:HD2	1:B:44:LEU:HD22	2.02	0.41
1:B:290:ILE:HG23	1:B:290:ILE:O	2.21	0.41
1:B:475:GLY:O	1:B:477:ALA:N	2.51	0.41
1:B:581:SER:HA	1:B:738:ASN:HD21	1.85	0.41
1:B:719:GLU:HA	1:B:722:TRP:NE1	2.35	0.41
1:B:1146:LEU:HD22	1:B:1192:LEU:HD12	2.02	0.41
1:B:1818:ILE:HG12	1:B:1823:VAL:CG1	2.51	0.41
1:B:1932:TRP:O	1:B:1937:VAL:HB	2.21	0.41
1:B:1984:THR:C	1:B:1986:GLU:H	2.22	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:36:ASP:C	1:A:38:ARG:H	2.24	0.41
1:A:40:TRP:CE3	1:A:194:PRO:HG3	2.56	0.41
1:A:128:VAL:O	1:A:131:SER:OG	2.39	0.41
1:A:305:LEU:HD23	1:A:305:LEU:HA	1.76	0.41
1:A:502:GLN:OE1	1:A:676:ARG:HD3	2.21	0.41
1:A:719:GLU:HA	1:A:722:TRP:CE2	2.55	0.41
1:A:831:SER:N	1:A:832:PRO:HD3	2.35	0.41
1:A:1422:SER:O	1:A:1423:PHE:CB	2.68	0.41
1:A:1898:LEU:HD23	1:A:1898:LEU:HA	1.72	0.41
1:B:14:PRO:HB2	1:B:32:MET:HB2	2.02	0.41
1:B:48:PRO:HD3	1:B:201:MET:HE3	2.02	0.41
1:B:132:MET:HE3	1:B:132:MET:HB3	1.65	0.41
1:B:291:GLU:OE2	1:B:325:THR:N	2.53	0.41
1:B:827:THR:HA	1:B:828:PRO:HD3	1.96	0.41
1:B:1554:ALA:HB3	1:B:1882:PRO:HB3	2.02	0.41
1:B:2022:VAL:HG13	1:B:2026:ARG:HG2	2.03	0.41
1:A:63:SER:O	1:A:66:GLY:N	2.49	0.41
1:A:96:ASN:ND2	1:A:98:ALA:HB3	2.36	0.41
1:A:132:MET:CE	1:B:200:PHE:CE2	2.96	0.41
1:A:165:LEU:HD23	1:A:400:VAL:CG2	2.30	0.41
1:A:305:LEU:CD2	1:A:308:ILE:HD12	2.51	0.41
1:A:618:GLY:N	1:A:679:GLY:O	2.50	0.41
1:A:976:VAL:CG2	1:A:977:ASP:H	2.23	0.41
1:A:997:ARG:HE	1:A:2070:LEU:CD1	2.34	0.41
1:A:1004:GLY:O	1:A:1008:GLN:HG3	2.20	0.41
1:A:1124:HIS:CD2	1:A:1511:TRP:O	2.73	0.41
1:A:1614:MET:O	1:A:1614:MET:HG2	2.19	0.41
1:A:1762:GLN:HB3	1:A:1763:HIS:CD2	2.55	0.41
1:B:169:GLN:HG3	1:B:249:ALA:HB1	2.02	0.41
1:B:197:SER:OG	1:B:224:ARG:HD3	2.21	0.41
1:B:533:ARG:HB2	1:B:533:ARG:NH1	2.35	0.41
1:B:1127:SER:HA	1:B:1394:ARG:HB3	2.02	0.41
1:B:1214:ASP:HB3	1:B:1215:PRO:CD	2.47	0.41
1:B:1541:LEU:CD1	1:B:1840:PHE:HB3	2.44	0.41
1:A:81:MET:HG2	1:A:81:MET:H	1.72	0.41
1:A:193:LYS:HG3	1:A:193:LYS:O	2.21	0.41
1:A:193:LYS:HA	1:A:194:PRO:HD3	1.88	0.41
1:A:409:ARG:HA	1:A:410:PRO:HD3	1.68	0.41
1:A:412:PRO:HA	1:A:413:PRO:HD3	1.89	0.41
1:A:511:MET:HB2	1:A:511:MET:HE2	1.81	0.41
1:A:1001:TYR:HD2	1:A:1003:TYR:CE1	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1022:LEU:O	1:A:1077:ALA:HB1	2.20	0.41
1:A:1214:ASP:C	1:A:1216:LEU:N	2.74	0.41
1:A:1307:GLY:C	1:A:1309:LEU:H	2.24	0.41
1:A:1321:LEU:HD12	1:A:1321:LEU:HA	1.90	0.41
1:A:1535:VAL:CG1	1:A:1537:SER:H	2.34	0.41
1:A:1569:THR:CG2	1:A:1622:LEU:HD23	2.51	0.41
1:A:1654:THR:HG21	2:A:3001:NAP:C4N	2.51	0.41
1:A:1765:ARG:CD	1:A:1765:ARG:N	2.84	0.41
1:A:1893:LEU:CB	1:A:1925:GLN:NE2	2.75	0.41
1:A:1921:ARG:HE	1:A:1921:ARG:HB2	1.47	0.41
1:B:25:ASN:CB	1:B:32:MET:SD	3.09	0.41
1:B:40:TRP:HB2	1:B:41:LYS:H	1.66	0.41
1:B:59:ARG:HE	1:B:841:ALA:HB2	1.86	0.41
1:B:132:MET:HG2	1:B:136:GLN:HB2	2.02	0.41
1:B:214:SER:HB3	1:B:327:SER:HB3	2.03	0.41
1:B:305:LEU:HD23	1:B:305:LEU:HA	1.79	0.41
1:B:399:ASN:H	1:B:399:ASN:HD22	1.69	0.41
1:B:610:ILE:HA	1:B:690:ILE:HD13	2.02	0.41
1:B:898:THR:HG22	1:B:937:LEU:HD22	2.02	0.41
1:B:1214:ASP:CG	1:B:1321:LEU:HD21	2.40	0.41
1:B:1540:ASP:C	1:B:1542:SER:N	2.73	0.41
1:B:1569:THR:HG23	1:B:1602:GLU:O	2.20	0.41
1:B:1695:VAL:HG12	1:B:1696:PHE:N	2.36	0.41
1:B:1999:THR:HG23	1:B:2018:ILE:HD11	2.02	0.41
1:A:92:ASP:O	1:A:241:ARG:NH1	2.52	0.41
1:A:119:ALA:HB2	1:A:850:PHE:CE2	2.56	0.41
1:A:200:PHE:CE2	1:B:132:MET:CE	2.98	0.41
1:A:545:VAL:HG22	1:A:551:SER:HB3	2.02	0.41
1:A:1216:LEU:HG	1:A:1219:GLY:H	1.86	0.41
1:A:1338:LEU:HD22	1:A:1406:GLN:HG3	2.03	0.41
1:B:12:LYS:HD2	1:B:81:MET:HE2	2.03	0.41
1:B:59:ARG:HH21	1:B:841:ALA:HB2	1.86	0.41
1:B:128:VAL:HG12	1:B:130:TYR:CE2	2.56	0.41
1:B:287:LEU:HD13	1:B:312:LEU:HD13	2.02	0.41
1:B:494:PHE:CZ	1:B:574:PRO:HG3	2.56	0.41
1:B:737:ASN:ND2	1:B:737:ASN:O	2.52	0.41
1:B:1651:VAL:HG12	1:B:1683:ALA:CB	2.51	0.41
1:B:1868:LEU:HA	1:B:1869:PRO:HD3	1.76	0.41
1:B:1999:THR:OG1	1:B:2041:MET:HG2	2.20	0.41
1:B:2043:ARG:HD3	1:B:2043:ARG:HA	1.61	0.41
1:B:2086:GLN:NE2	1:B:2108:SER:OG	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:429:ARG:HA	1:A:429:ARG:HD2	1.98	0.40
1:A:534:VAL:HG13	1:A:554:VAL:HG12	2.04	0.40
1:A:898:THR:HG22	1:A:937:LEU:HD22	2.02	0.40
1:A:1371:HIS:O	1:A:1372:LEU:HD23	2.20	0.40
1:A:1496:VAL:HG21	1:A:1511:TRP:CZ3	2.57	0.40
1:A:1653:THR:CG2	1:A:1810:VAL:HG12	2.52	0.40
1:A:1733:LEU:O	1:A:1736:THR:HG22	2.20	0.40
1:A:1734:ARG:C	1:A:1736:THR:N	2.75	0.40
1:A:1999:THR:HG23	1:A:2018:ILE:HD11	2.03	0.40
1:A:2069:VAL:HG12	1:A:2070:LEU:HD23	2.03	0.40
1:B:76:ASP:CG	1:B:116:ALA:HB3	2.41	0.40
1:B:82:LEU:HD22	1:B:188:LEU:HD11	2.03	0.40
1:B:96:ASN:HD21	1:B:98:ALA:HB3	1.85	0.40
1:B:236:LYS:C	1:B:238:LEU:H	2.24	0.40
1:B:288:GLU:CD	1:B:385:GLY:H	2.24	0.40
1:B:411:ALA:HA	1:B:412:PRO:HD3	1.85	0.40
1:B:416:GLN:C	1:B:418:ALA:H	2.25	0.40
1:B:570:LEU:HD11	1:B:800:VAL:HG22	2.03	0.40
1:B:1001:TYR:CD2	1:B:1003:TYR:CE1	3.08	0.40
1:B:1227:LYS:O	1:B:1231:ASP:HB2	2.21	0.40
1:B:1698:THR:HA	1:B:1721:ALA:O	2.20	0.40
1:B:2072:THR:HB	1:B:2073:MET:H	1.69	0.40
1:A:254:ASP:O	1:A:255:GLY:O	2.39	0.40
1:A:289:TYR:HH	1:A:323:GLY:HA3	1.84	0.40
1:A:473:LEU:N	1:A:473:LEU:HD23	2.36	0.40
1:A:1345:LEU:HD12	1:A:1345:LEU:HA	1.93	0.40
1:B:317:ARG:O	1:B:319:PRO:HD3	2.21	0.40
1:B:623:VAL:CG1	1:B:624:GLY:N	2.84	0.40
1:B:1001:TYR:HD2	1:B:1003:TYR:CE1	2.39	0.40
1:B:1038:MET:HE3	1:B:1041:LEU:HD23	2.03	0.40
1:B:1153:LYS:CD	1:B:1195:ASN:HD22	2.35	0.40
1:B:1236:ASN:HD21	1:B:1502:VAL:H	1.69	0.40
1:B:1247:VAL:CG1	1:B:1301:PRO:HG3	2.45	0.40
1:B:1322:ALA:HB1	1:B:1371:HIS:HE1	1.83	0.40
1:B:1858:GLU:HG3	1:B:1859:GLU:N	2.37	0.40
1:A:368:ALA:HB1	1:A:374:LEU:HG	2.03	0.40
1:A:416:GLN:C	1:A:418:ALA:H	2.24	0.40
1:B:232:LEU:HD12	1:B:233:LEU:N	2.36	0.40
1:B:274:ARG:C	1:B:276:LEU:N	2.75	0.40
1:B:719:GLU:HA	1:B:722:TRP:CE2	2.56	0.40
1:B:944:PHE:CD1	1:B:944:PHE:C	2.94	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:979:ALA:O	1:B:980:ASP:O	2.40	0.40
1:A:98:ALA:HA	1:A:101:ARG:CG	2.50	0.40
1:A:368:ALA:CA	1:A:371:ASP:HB3	2.51	0.40
1:A:1223:ALA:CB	1:A:1224:PRO:HD2	2.39	0.40
1:A:1472:VAL:CG1	1:A:1473:LEU:H	2.33	0.40
1:B:30:VAL:O	1:B:32:MET:HG2	2.21	0.40
1:B:316:ARG:O	1:B:317:ARG:O	2.40	0.40
1:B:461:SER:HA	1:B:462:PRO:HD3	1.84	0.40
1:B:879:CYS:O	1:B:1002:ASP:HB2	2.21	0.40
1:B:1185:ALA:O	1:B:1189:GLN:HG3	2.22	0.40
1:B:1279:PRO:HG3	1:B:1298:GLN:NE2	2.35	0.40
1:B:1343:PHE:CE2	1:B:1405:ARG:HD2	2.57	0.40
1:B:1443:LEU:C	1:B:1444:MET:HE3	2.41	0.40
1:B:1818:ILE:HG12	1:B:1823:VAL:HG11	2.03	0.40
1:B:1894:GLY:O	1:B:1897:GLY:N	2.54	0.40
1:A:165:LEU:HD22	1:A:392:SER:HB2	2.03	0.40
1:A:375:GLN:O	1:A:376:VAL:C	2.59	0.40
1:A:1486:MET:HE3	1:A:1506:TYR:CB	2.50	0.40
1:A:1657:TYR:CZ	1:A:1799:LEU:HD11	2.57	0.40
1:A:1976:ARG:HB2	1:A:2033:ASN:ND2	2.36	0.40
2:A:3001:NAP:H52N	2:A:3001:NAP:H52A	2.03	0.40
1:B:47:LEU:HD22	1:B:197:SER:HB3	2.04	0.40
1:B:159:THR:CG2	1:B:159:THR:O	2.65	0.40
1:B:166:LEU:HB2	1:B:400:VAL:HG11	2.04	0.40
1:B:537:LEU:HD23	1:B:537:LEU:HA	1.74	0.40
1:B:980:ASP:HB2	1:B:981:SER:H	1.44	0.40
1:B:1453:VAL:O	1:B:1454:VAL:C	2.59	0.40
1:B:1493:LEU:HD23	1:B:1494:GLN:HE21	1.87	0.40
1:B:1612:ARG:CG	1:B:1642:LEU:HD21	2.51	0.40
1:B:1726:THR:O	1:B:1726:THR:CG2	2.69	0.40
1:B:1796:LEU:HD12	1:B:1796:LEU:HA	1.89	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	2075/2512 (83%)	1683 (81%)	296 (14%)	96 (5%)	2	15
1	B	2080/2512 (83%)	1713 (82%)	276 (13%)	91 (4%)	2	16
All	All	4155/5024 (83%)	3396 (82%)	572 (14%)	187 (4%)	2	15

All (187) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	278	ALA
1	A	317	ARG
1	A	333	GLU
1	A	614	ASN
1	A	854	SER
1	A	976	VAL
1	A	985	PHE
1	A	1150	LEU
1	A	1224	PRO
1	A	1303	ASN
1	A	1436	ALA
1	A	1438	SER
1	A	1485	GLU
1	A	1611	ARG
1	A	1750	GLU
1	A	1802	GLU
1	A	1803	GLY
1	A	1895	GLY
1	A	2065	ASP
1	A	2073	MET
1	B	278	ALA
1	B	317	ARG
1	B	333	GLU
1	B	370	GLN
1	B	636	PRO
1	B	669	ASP
1	B	820	GLU
1	B	973	ARG
1	B	980	ASP
1	B	984	GLU
1	B	1224	PRO
1	B	1452	GLY
1	B	1521	GLN

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Mol	Chain	Res	Type
1	B	1596	ASP
1	B	1750	GLU
1	B	1800	PHE
1	B	1803	GLY
1	B	1864	ALA
1	B	1895	GLY
1	B	2065	ASP
1	A	163	SER
1	A	255	GLY
1	A	413	PRO
1	A	475	GLY
1	A	541	THR
1	A	615	VAL
1	A	853	GLY
1	A	1362	LEU
1	A	1425	TRP
1	A	1452	GLY
1	A	1557	ALA
1	A	1596	ASP
1	A	1622	LEU
1	A	1862	GLY
1	A	1867	GLY
1	B	163	SER
1	B	255	GLY
1	B	475	GLY
1	B	488	SER
1	B	881	ASP
1	B	983	ALA
1	B	1182	ARG
1	B	1321	LEU
1	B	1354	PRO
1	B	1371	HIS
1	B	1461	ARG
1	B	1679	GLY
1	B	1861	GLN
1	B	1862	GLY
1	A	42	ALA
1	A	43	GLY
1	A	216	ASP
1	A	237	SER
1	A	238	LEU
1	A	275	SER

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Mol	Chain	Res	Type
1	A	318	GLU
1	A	476	GLU
1	A	487	GLY
1	A	488	SER
1	A	581	SER
1	A	984	GLU
1	A	1014	ASP
1	A	1301	PRO
1	A	1327	PRO
1	A	1409	PRO
1	A	1423	PHE
1	A	1467	HIS
1	A	1538	ARG
1	A	1678	GLY
1	A	1735	HIS
1	A	1861	GLN
1	B	42	ALA
1	B	43	GLY
1	B	161	CYS
1	B	238	LEU
1	B	275	SER
1	B	318	GLU
1	B	413	PRO
1	B	476	GLU
1	B	614	ASN
1	B	1301	PRO
1	B	1425	TRP
1	B	1437	SER
1	B	1467	HIS
1	B	1557	ALA
1	B	1649	PRO
1	B	1735	HIS
1	B	1979	VAL
1	A	160	ALA
1	A	213	ARG
1	A	367	PRO
1	A	373	ARG
1	A	617	PRO
1	A	1056	SER
1	A	1308	SER
1	A	1311	LYS
1	A	1461	ARG

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Mol	Chain	Res	Type
1	A	1558	SER
1	A	1587	SER
1	A	1649	PRO
1	A	2066	VAL
1	A	2112	ALA
1	B	367	PRO
1	B	487	GLY
1	B	503	TRP
1	B	845	PRO
1	B	978	PRO
1	B	1293	HIS
1	B	1312	ALA
1	B	1432	ILE
1	B	1587	SER
1	B	1863	PRO
1	B	2066	VAL
1	B	2102	PRO
1	A	319	PRO
1	A	503	TRP
1	A	667	ARG
1	A	881	ASP
1	A	1073	ASP
1	A	1978	ALA
1	A	2009	ALA
1	A	2102	PRO
1	B	60	PHE
1	B	319	PRO
1	B	373	ARG
1	B	753	PRO
1	B	974	ALA
1	B	1014	ASP
1	B	1302	ALA
1	B	1327	PRO
1	B	1423	PHE
1	B	1676	GLY
1	A	60	PHE
1	A	753	PRO
1	A	1208	ARG
1	A	1310	GLY
1	B	124	PRO
1	B	237	SER
1	B	637	GLY

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Mol	Chain	Res	Type
1	B	654	PRO
1	B	977	ASP
1	B	1181	PRO
1	B	1304	PRO
1	B	1692	GLY
1	B	1734	ARG
1	B	2009	ALA
1	A	29	GLY
1	A	845	PRO
1	A	1215	PRO
1	B	1408	THR
1	A	1240	PRO
1	A	1870	PRO
1	B	29	GLY
1	B	1240	PRO
1	B	2104	PRO
1	A	1306	PRO
1	A	1464	PRO
1	A	1651	VAL
1	A	1692	GLY
1	A	2104	PRO
1	B	1770	GLY
1	A	2074	GLY
1	B	692	PRO
1	B	1342	GLY
1	A	868	PRO
1	A	1145	GLY
1	B	352	VAL

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	1717/2072 (83%)	1522 (89%)	195 (11%)	5 22
1	B	1722/2072 (83%)	1534 (89%)	188 (11%)	6 24
All	All	3439/4144 (83%)	3056 (89%)	383 (11%)	6 23

All (383) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	32	MET
1	A	59	ARG
1	A	81	MET
1	A	86	THR
1	A	100	LEU
1	A	103	THR
1	A	113	SER
1	A	120	LEU
1	A	121	SER
1	A	131	SER
1	A	132	MET
1	A	136	GLN
1	A	144	LEU
1	A	157	ILE
1	A	168	LEU
1	A	169	GLN
1	A	170	SER
1	A	179	GLU
1	A	181	SER
1	A	206	LEU
1	A	213	ARG
1	A	223	CYS
1	A	224	ARG
1	A	237	SER
1	A	241	ARG
1	A	248	ASN
1	A	251	THR
1	A	263	PHE
1	A	295	THR
1	A	317	ARG
1	A	320	LEU
1	A	329	MET
1	A	343	LYS
1	A	347	SER
1	A	356	ASN
1	A	371	ASP
1	A	375	GLN
1	A	381	LEU
1	A	383	ILE
1	A	384	ARG
1	A	399	ASN
1	A	400	VAL

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Mol	Chain	Res	Type
1	A	402	VAL
1	A	407	ASN
1	A	443	ARG
1	A	460	VAL
1	A	482	VAL
1	A	489	LYS
1	A	492	VAL
1	A	502	GLN
1	A	520	ILE
1	A	525	GLN
1	A	545	VAL
1	A	549	ILE
1	A	568	THR
1	A	569	SER
1	A	593	CYS
1	A	595	THR
1	A	597	GLU
1	A	615	VAL
1	A	616	LEU
1	A	658	MET
1	A	659	SER
1	A	660	GLU
1	A	668	GLU
1	A	670	VAL
1	A	676	ARG
1	A	677	THR
1	A	689	SER
1	A	696	ARG
1	A	697	GLN
1	A	703	LEU
1	A	704	ASP
1	A	723	GLN
1	A	730	PHE
1	A	734	TYR
1	A	737	ASN
1	A	743	VAL
1	A	746	GLN
1	A	776	GLU
1	A	778	SER
1	A	798	SER
1	A	825	ARG
1	A	846	SER

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Mol	Chain	Res	Type
1	A	858	SER
1	A	866	VAL
1	A	894	LEU
1	A	910	THR
1	A	931	VAL
1	A	937	LEU
1	A	947	SER
1	A	953	LEU
1	A	959	VAL
1	A	980	ASP
1	A	981	SER
1	A	985	PHE
1	A	1011	LEU
1	A	1019	ARG
1	A	1038	MET
1	A	1039	SER
1	A	1062	VAL
1	A	1063	THR
1	A	1068	LEU
1	A	1069	TYR
1	A	1072	GLN
1	A	1084	ARG
1	A	1087	ASN
1	A	1088	THR
1	A	1101	SER
1	A	1107	ARG
1	A	1112	LEU
1	A	1122	THR
1	A	1140	LEU
1	A	1216	LEU
1	A	1265	GLN
1	A	1268	MET
1	A	1275	THR
1	A	1276	ASP
1	A	1290	GLU
1	A	1299	TRP
1	A	1319	CYS
1	A	1324	LEU
1	A	1333	ASN
1	A	1346	LEU
1	A	1350	LEU
1	A	1374	SER

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Mol	Chain	Res	Type
1	A	1421	THR
1	A	1444	MET
1	A	1449	SER
1	A	1473	LEU
1	A	1476	ASN
1	A	1480	THR
1	A	1481	SER
1	A	1505	VAL
1	A	1537	SER
1	A	1545	ARG
1	A	1551	LEU
1	A	1561	ASP
1	A	1573	PHE
1	A	1574	ARG
1	A	1583	LEU
1	A	1587	SER
1	A	1596	ASP
1	A	1601	MET
1	A	1614	MET
1	A	1617	VAL
1	A	1629	LEU
1	A	1636	VAL
1	A	1639	THR
1	A	1653	THR
1	A	1662	ARG
1	A	1671	VAL
1	A	1697	THR
1	A	1699	VAL
1	A	1720	PHE
1	A	1726	THR
1	A	1736	THR
1	A	1756	SER
1	A	1760	LEU
1	A	1765	ARG
1	A	1766	PHE
1	A	1768	GLU
1	A	1782	MET
1	A	1790	THR
1	A	1797	ASP
1	A	1800	PHE
1	A	1815	LYS
1	A	1818	ILE

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Mol	Chain	Res	Type
1	A	1823	VAL
1	A	1841	ARG
1	A	1860	GLU
1	A	1873	LEU
1	A	1877	SER
1	A	1899	GLN
1	A	1906	LEU
1	A	1916	SER
1	A	1922	THR
1	A	1927	ARG
1	A	1930	ARG
1	A	1944	SER
1	A	1956	ILE
1	A	1980	LEU
1	A	1984	THR
1	A	1988	PHE
1	A	1991	VAL
1	A	2006	THR
1	A	2026	ARG
1	A	2043	ARG
1	A	2075	THR
1	A	2079	VAL
1	A	2084	LEU
1	A	2088	ILE
1	A	2105	VAL
1	A	2107	SER
1	A	2111	LEU
1	B	32	MET
1	B	59	ARG
1	B	81	MET
1	B	86	THR
1	B	100	LEU
1	B	103	THR
1	B	113	SER
1	B	120	LEU
1	B	126	THR
1	B	127	LEU
1	B	128	VAL
1	B	131	SER
1	B	132	MET
1	B	136	GLN
1	B	144	LEU

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Mol	Chain	Res	Type
1	B	157	ILE
1	B	168	LEU
1	B	169	GLN
1	B	170	SER
1	B	179	GLU
1	B	181	SER
1	B	224	ARG
1	B	237	SER
1	B	241	ARG
1	B	248	ASN
1	B	251	THR
1	B	259	GLN
1	B	263	PHE
1	B	276	LEU
1	B	295	THR
1	B	317	ARG
1	B	320	LEU
1	B	329	MET
1	B	343	LYS
1	B	347	SER
1	B	352	VAL
1	B	356	ASN
1	B	371	ASP
1	B	375	GLN
1	B	381	LEU
1	B	383	ILE
1	B	384	ARG
1	B	398	SER
1	B	399	ASN
1	B	400	VAL
1	B	402	VAL
1	B	407	ASN
1	B	443	ARG
1	B	460	VAL
1	B	489	LYS
1	B	492	VAL
1	B	502	GLN
1	B	504	GLN
1	B	520	ILE
1	B	525	GLN
1	B	549	ILE
1	B	568	THR

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Mol	Chain	Res	Type
1	B	569	SER
1	B	593	CYS
1	B	597	GLU
1	B	615	VAL
1	B	664	GLN
1	B	675	VAL
1	B	680	ILE
1	B	689	SER
1	B	697	GLN
1	B	730	PHE
1	B	734	TYR
1	B	737	ASN
1	B	743	VAL
1	B	746	GLN
1	B	798	SER
1	B	819	VAL
1	B	821	PHE
1	B	825	ARG
1	B	856	CYS
1	B	866	VAL
1	B	894	LEU
1	B	910	THR
1	B	931	VAL
1	B	937	LEU
1	B	947	SER
1	B	959	VAL
1	B	972	THR
1	B	980	ASP
1	B	982	THR
1	B	985	PHE
1	B	1011	LEU
1	B	1019	ARG
1	B	1038	MET
1	B	1039	SER
1	B	1062	VAL
1	B	1063	THR
1	B	1068	LEU
1	B	1069	TYR
1	B	1072	GLN
1	B	1084	ARG
1	B	1087	ASN
1	B	1088	THR

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Mol	Chain	Res	Type
1	B	1101	SER
1	B	1102	SER
1	B	1107	ARG
1	B	1122	THR
1	B	1184	LEU
1	B	1216	LEU
1	B	1264	THR
1	B	1275	THR
1	B	1299	TRP
1	B	1321	LEU
1	B	1333	ASN
1	B	1346	LEU
1	B	1373	LEU
1	B	1386	SER
1	B	1421	THR
1	B	1433	LEU
1	B	1443	LEU
1	B	1444	MET
1	B	1449	SER
1	B	1456	MET
1	B	1473	LEU
1	B	1476	ASN
1	B	1477	LEU
1	B	1480	THR
1	B	1481	SER
1	B	1505	VAL
1	B	1528	THR
1	B	1532	PHE
1	B	1543	SER
1	B	1549	SER
1	B	1573	PHE
1	B	1574	ARG
1	B	1583	LEU
1	B	1587	SER
1	B	1603	PHE
1	B	1612	ARG
1	B	1614	MET
1	B	1627	LEU
1	B	1636	VAL
1	B	1639	THR
1	B	1653	THR
1	B	1662	ARG

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Mol	Chain	Res	Type
1	B	1666	GLN
1	B	1671	VAL
1	B	1694	ARG
1	B	1697	THR
1	B	1699	VAL
1	B	1720	PHE
1	B	1726	THR
1	B	1736	THR
1	B	1756	SER
1	B	1760	LEU
1	B	1765	ARG
1	B	1768	GLU
1	B	1782	MET
1	B	1789	VAL
1	B	1790	THR
1	B	1797	ASP
1	B	1818	ILE
1	B	1823	VAL
1	B	1841	ARG
1	B	1856	VAL
1	B	1857	ARG
1	B	1860	GLU
1	B	1868	LEU
1	B	1871	ILE
1	B	1873	LEU
1	B	1877	SER
1	B	1899	GLN
1	B	1906	LEU
1	B	1916	SER
1	B	1922	THR
1	B	1927	ARG
1	B	1930	ARG
1	B	1944	SER
1	B	1956	ILE
1	B	1974	VAL
1	B	1979	VAL
1	B	1984	THR
1	B	1988	PHE
1	B	1991	VAL
1	B	2006	THR
1	B	2026	ARG
1	B	2043	ARG

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Mol	Chain	Res	Type
1	B	2079	VAL
1	B	2084	LEU
1	B	2088	ILE
1	B	2105	VAL
1	B	2107	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (98) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	25	ASN
1	A	136	GLN
1	A	142	ASN
1	A	169	GLN
1	A	199	GLN
1	A	248	ASN
1	A	259	GLN
1	A	306	ASN
1	A	350	HIS
1	A	356	ASN
1	A	387	ASN
1	A	399	ASN
1	A	425	GLN
1	A	440	GLN
1	A	525	GLN
1	A	560	GLN
1	A	643	HIS
1	A	644	ASN
1	A	697	GLN
1	A	737	ASN
1	A	833	HIS
1	A	1023	GLN
1	A	1037	HIS
1	A	1111	HIS
1	A	1124	HIS
1	A	1133	ASN
1	A	1191	GLN
1	A	1206	GLN
1	A	1236	ASN
1	A	1265	GLN
1	A	1298	GLN
1	A	1318	ASN
1	A	1353	HIS

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Mol	Chain	Res	Type
1	A	1406	GLN
1	A	1407	GLN
1	A	1467	HIS
1	A	1476	ASN
1	A	1504	ASN
1	A	1516	HIS
1	A	1735	HIS
1	A	1763	HIS
1	A	1777	ASN
1	A	1855	GLN
1	A	2028	ASN
1	A	2076	ASN
1	A	2086	GLN
1	A	2103	HIS
1	B	25	ASN
1	B	136	GLN
1	B	142	ASN
1	B	199	GLN
1	B	248	ASN
1	B	259	GLN
1	B	306	ASN
1	B	350	HIS
1	B	356	ASN
1	B	387	ASN
1	B	399	ASN
1	B	425	GLN
1	B	440	GLN
1	B	504	GLN
1	B	525	GLN
1	B	560	GLN
1	B	614	ASN
1	B	643	HIS
1	B	697	GLN
1	B	723	GLN
1	B	737	ASN
1	B	738	ASN
1	B	746	GLN
1	B	833	HIS
1	B	1023	GLN
1	B	1037	HIS
1	B	1111	HIS
1	B	1124	HIS

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Mol	Chain	Res	Type
1	B	1133	ASN
1	B	1189	GLN
1	B	1195	ASN
1	B	1236	ASN
1	B	1265	GLN
1	B	1293	HIS
1	B	1298	GLN
1	B	1318	ASN
1	B	1347	HIS
1	B	1407	GLN
1	B	1494	GLN
1	B	1530	HIS
1	B	1560	GLN
1	B	1674	HIS
1	B	1735	HIS
1	B	1763	HIS
1	B	1777	ASN
1	B	1855	GLN
1	B	1983	GLN
1	B	2028	ASN
1	B	2076	ASN
1	B	2086	GLN
1	B	2103	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

4 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	NAP	B	3001	-	45,52,52	1.32	3 (6%)	56,80,80	1.41	5 (8%)
2	NAP	B	3002	-	45,52,52	1.37	4 (8%)	56,80,80	1.23	4 (7%)
2	NAP	A	3002	-	45,52,52	1.24	3 (6%)	56,80,80	1.14	3 (5%)
2	NAP	A	3001	-	45,52,52	1.38	3 (6%)	56,80,80	1.22	3 (5%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	NAP	B	3001	-	-	2/31/67/67	0/5/5/5
2	NAP	B	3002	-	-	8/31/67/67	0/5/5/5
2	NAP	A	3002	-	-	8/31/67/67	0/5/5/5
2	NAP	A	3001	-	-	11/31/67/67	0/5/5/5

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	3002	NAP	C2N-N1N	5.09	1.41	1.35
2	A	3001	NAP	C2A-N3A	5.03	1.40	1.32
2	B	3001	NAP	C2N-N1N	4.97	1.41	1.35
2	A	3002	NAP	C2N-N1N	4.68	1.40	1.35
2	B	3002	NAP	C2A-N3A	4.46	1.39	1.32
2	A	3001	NAP	C2N-N1N	4.40	1.40	1.35
2	B	3001	NAP	C2A-N3A	4.17	1.38	1.32
2	A	3002	NAP	C2A-N3A	3.83	1.38	1.32
2	A	3001	NAP	C2A-N1A	3.20	1.39	1.33
2	B	3001	NAP	C2A-N1A	3.16	1.39	1.33
2	B	3002	NAP	C6N-N1N	2.35	1.41	1.35
2	A	3002	NAP	C2A-N1A	2.18	1.38	1.33
2	B	3002	NAP	C2A-N1A	2.12	1.37	1.33

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	3001	NAP	N3A-C2A-N1A	-5.95	119.37	128.68
2	A	3002	NAP	N3A-C2A-N1A	-5.42	120.20	128.68
2	B	3001	NAP	N3A-C2A-N1A	-5.30	120.39	128.68
2	B	3002	NAP	N3A-C2A-N1A	-5.02	120.84	128.68
2	B	3001	NAP	C3N-C7N-N7N	-4.36	112.52	117.75
2	B	3002	NAP	C6N-N1N-C2N	-3.29	118.97	121.97
2	B	3001	NAP	O7N-C7N-C3N	2.76	122.93	119.63
2	B	3001	NAP	PN-O3-PA	-2.55	124.08	132.83
2	A	3001	NAP	C3B-C2B-C1B	2.38	107.36	102.89
2	A	3002	NAP	C3D-C2D-C1D	2.36	104.53	100.98
2	B	3002	NAP	C3N-C7N-N7N	-2.33	114.95	117.75
2	B	3001	NAP	C5D-C4D-C3D	-2.17	107.03	115.18
2	B	3002	NAP	C3D-C2D-C1D	2.17	104.25	100.98
2	A	3002	NAP	C3N-C7N-N7N	-2.12	115.21	117.75
2	A	3001	NAP	O2B-C2B-C1B	-2.03	102.80	110.10

There are no chirality outliers.

All (29) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	3001	NAP	C5B-O5B-PA-O3
2	A	3001	NAP	C2B-O2B-P2B-O2X
2	A	3001	NAP	O4D-C1D-N1N-C6N
2	A	3002	NAP	C5B-O5B-PA-O3
2	A	3002	NAP	C3B-C4B-C5B-O5B
2	A	3002	NAP	O4D-C4D-C5D-O5D
2	B	3002	NAP	C3B-C4B-C5B-O5B
2	B	3002	NAP	C3B-C2B-O2B-P2B
2	A	3001	NAP	O4B-C4B-C5B-O5B
2	A	3002	NAP	C3D-C4D-C5D-O5D
2	B	3002	NAP	O4D-C4D-C5D-O5D
2	A	3002	NAP	O4B-C4B-C5B-O5B
2	B	3002	NAP	O4B-C4B-C5B-O5B
2	B	3002	NAP	C3D-C4D-C5D-O5D
2	A	3001	NAP	C3B-C4B-C5B-O5B
2	B	3001	NAP	O4B-C4B-C5B-O5B
2	B	3002	NAP	PA-O3-PN-O5D
2	A	3001	NAP	C2B-O2B-P2B-O1X
2	B	3001	NAP	C4B-C5B-O5B-PA
2	A	3001	NAP	C5B-O5B-PA-O1A
2	A	3001	NAP	C5B-O5B-PA-O2A

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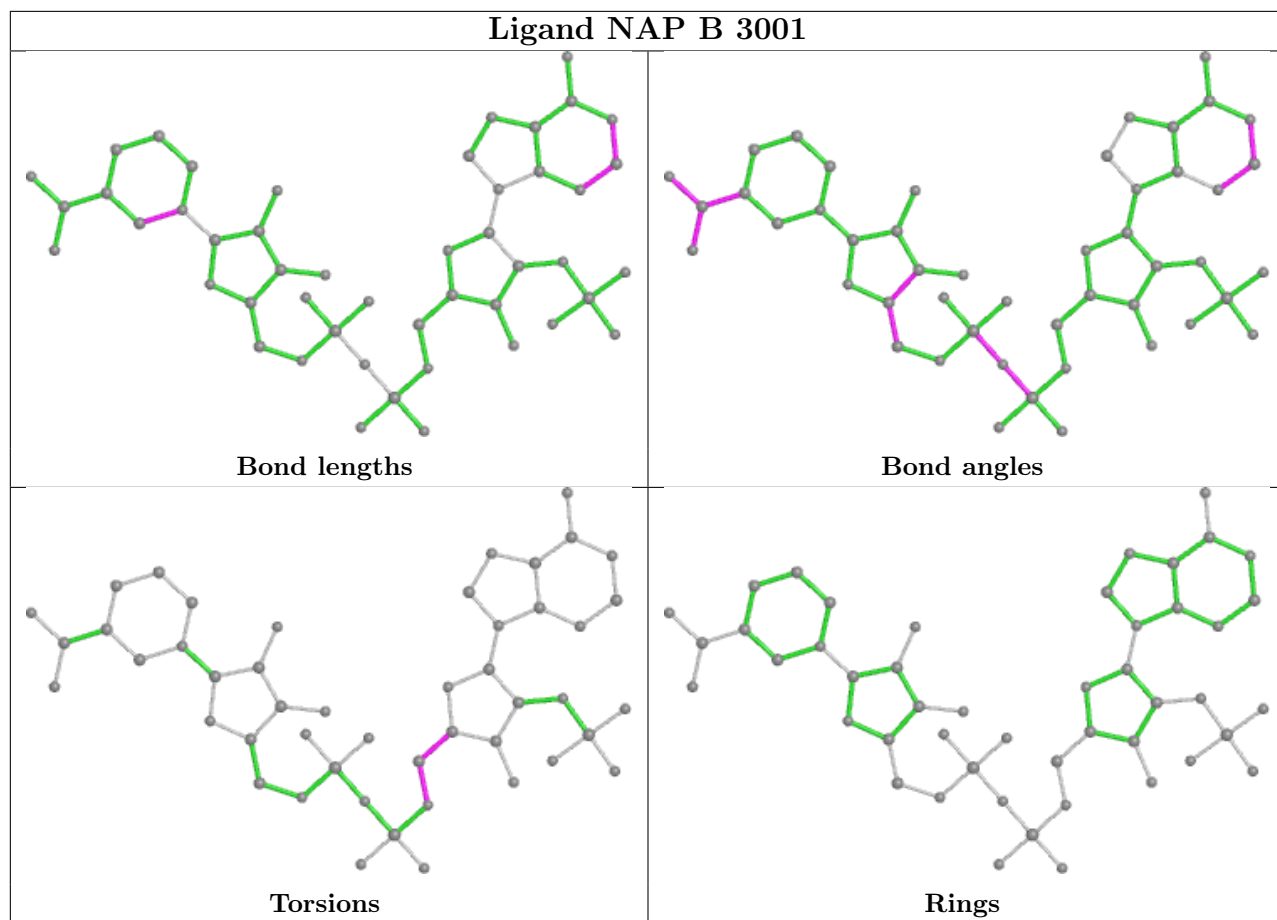
Mol	Chain	Res	Type	Atoms
2	A	3002	NAP	C5B-O5B-PA-O2A
2	B	3002	NAP	C1B-C2B-O2B-P2B
2	A	3001	NAP	PA-O3-PN-O2N
2	A	3002	NAP	PN-O3-PA-O1A
2	B	3002	NAP	C5B-O5B-PA-O3
2	A	3001	NAP	PA-O3-PN-O1N
2	A	3001	NAP	C5D-O5D-PN-O1N
2	A	3002	NAP	C4B-C5B-O5B-PA

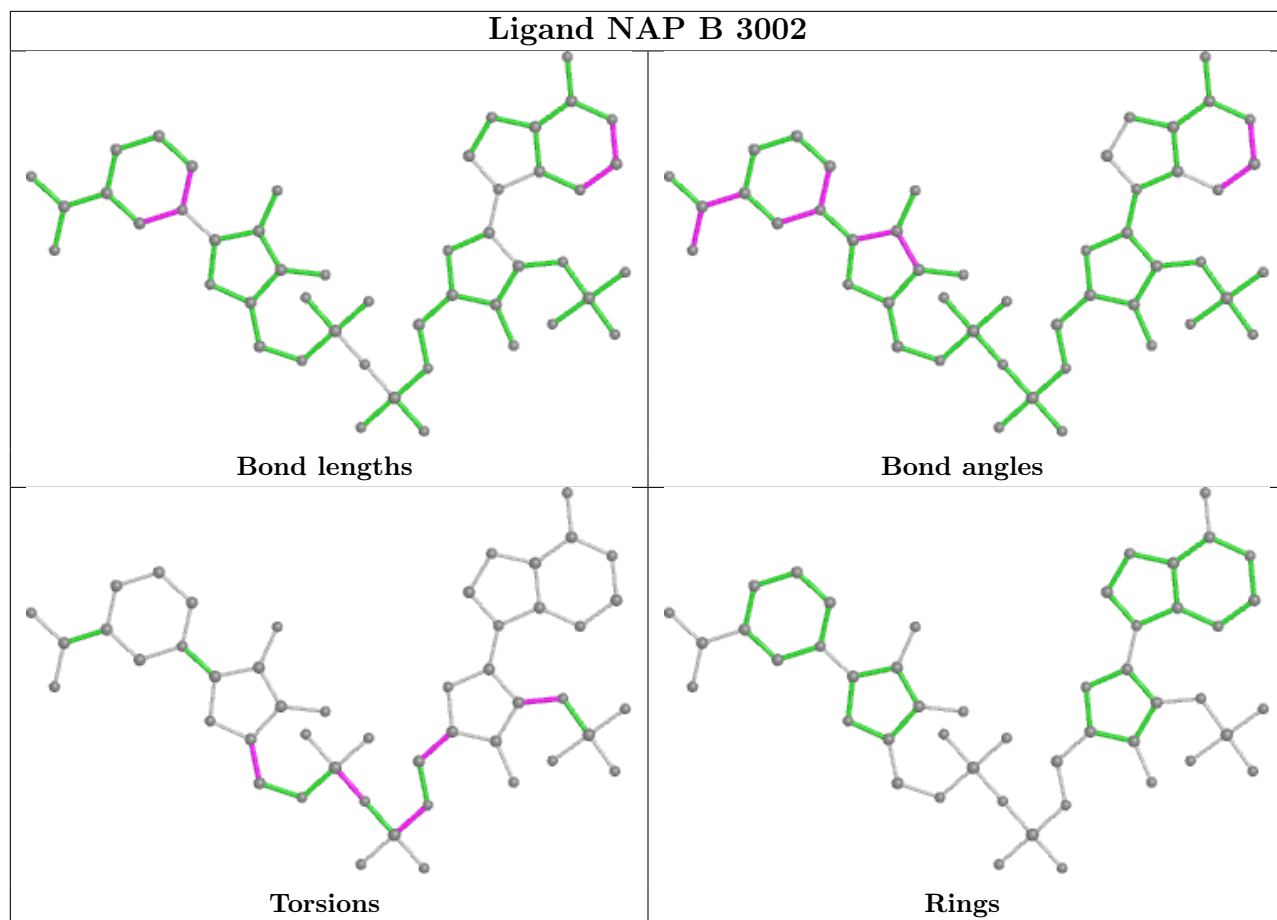
There are no ring outliers.

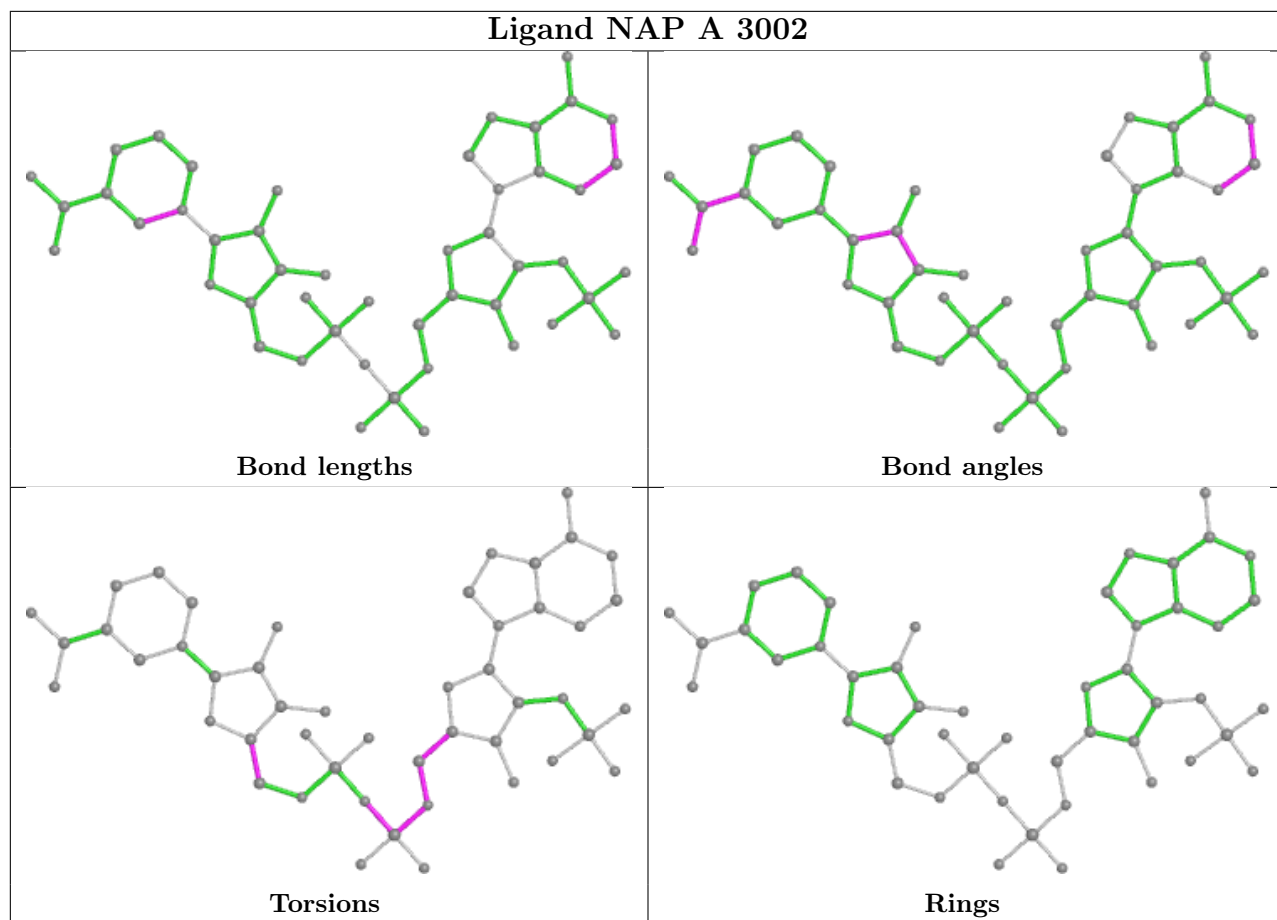
4 monomers are involved in 15 short contacts:

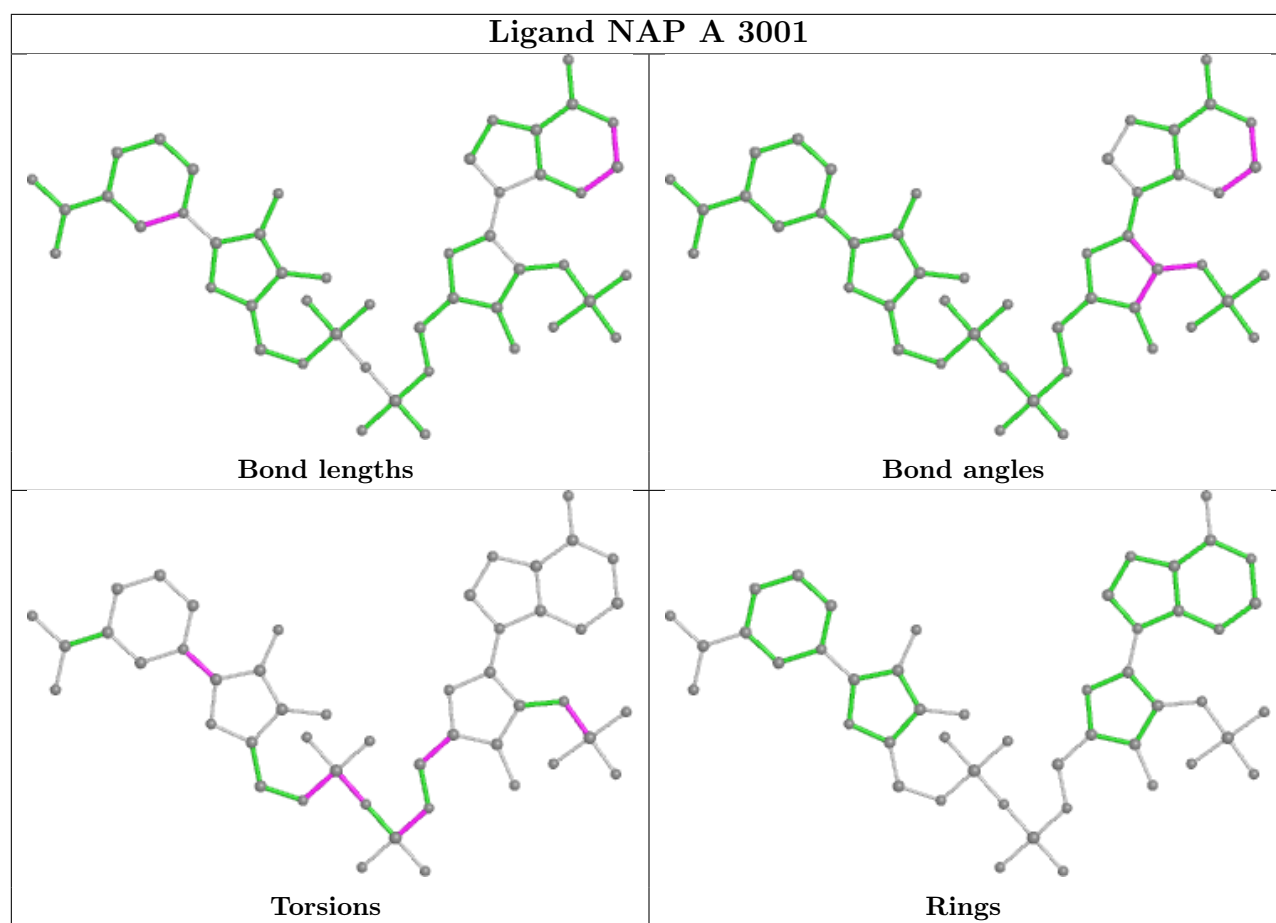
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	3001	NAP	1	0
2	B	3002	NAP	2	0
2	A	3002	NAP	4	0
2	A	3001	NAP	8	0

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









5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [\(i\)](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2		OWAB(Å ²)	Q<0.9
1	A	2081/2512 (82%)	0.04	129 (6%)	20 20	73, 131, 230, 299	0
1	B	2086/2512 (83%)	0.22	155 (7%)	14 14	72, 166, 228, 299	0
All	All	4167/5024 (82%)	0.13	284 (6%)	17 17	72, 145, 229, 299	0

All (284) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	416	GLN	9.6
1	A	977	ASP	9.3
1	A	976	VAL	9.0
1	A	1297	GLY	7.1
1	B	672	VAL	6.8
1	A	1188	CYS	6.7
1	A	1406	GLN	6.5
1	A	975	ALA	6.3
1	B	667	ARG	6.2
1	A	1189	GLN	6.2
1	B	665	LEU	6.0
1	B	1191	GLN	5.9
1	B	496	CYS	5.9
1	B	1486	MET	5.8
1	A	978	PRO	5.7
1	B	581	SER	5.6
1	B	415	ALA	5.6
1	B	1863	PRO	5.6
1	A	1190	LEU	5.4
1	B	419	ALA	5.3
1	B	498	GLY	5.3
1	A	1181	PRO	5.2
1	A	1202	GLN	5.2
1	B	671	PHE	5.1

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Mol	Chain	Res	Type	RSRZ
1	B	417	HIS	5.1
1	A	1205	ALA	5.1
1	B	579	GLY	5.0
1	A	1212	CYS	5.0
1	B	663	GLN	4.9
1	B	580	HIS	4.7
1	B	673	LYS	4.7
1	B	654	PRO	4.7
1	A	979	ALA	4.7
1	B	583	GLY	4.6
1	B	653	GLY	4.6
1	A	1287	ALA	4.6
1	B	10	SER	4.5
1	B	1408	THR	4.5
1	B	364	PRO	4.4
1	B	414	PRO	4.4
1	A	1204	LEU	4.4
1	A	2039	SER	4.3
1	B	497	SER	4.2
1	A	1318	ASN	4.2
1	A	1407	GLN	4.1
1	A	336	SER	4.1
1	A	1180	LEU	4.1
1	B	622	ALA	4.0
1	A	1195	ASN	4.0
1	B	1147	ALA	4.0
1	A	1308	SER	4.0
1	B	1407	GLN	4.0
1	A	1485	GLU	3.9
1	B	49	ARG	3.9
1	A	1187	ALA	3.9
1	B	392	SER	3.9
1	B	161	CYS	3.8
1	A	416	GLN	3.8
1	B	1193	ASN	3.8
1	B	790	ARG	3.7
1	B	1439	ARG	3.7
1	A	1367	GLN	3.7
1	B	1195	ASN	3.7
1	B	658	MET	3.7
1	A	980	ASP	3.7
1	B	476	GLU	3.6

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Mol	Chain	Res	Type	RSRZ
1	B	1458	ASN	3.6
1	A	1192	LEU	3.6
1	B	315	THR	3.6
1	A	1408	THR	3.6
1	B	1455	GLY	3.6
1	A	2024	CYS	3.5
1	B	11	GLY	3.5
1	B	674	GLU	3.5
1	A	1311	LYS	3.5
1	B	1570	SER	3.5
1	B	1148	GLN	3.5
1	A	1296	GLN	3.4
1	A	414	PRO	3.4
1	A	392	SER	3.4
1	A	323	GLY	3.4
1	B	2024	CYS	3.4
1	B	1149	ALA	3.4
1	B	1368	GLY	3.4
1	B	669	ASP	3.4
1	B	128	VAL	3.4
1	B	670	VAL	3.4
1	B	488	SER	3.4
1	B	557	THR	3.4
1	A	1033	ASP	3.4
1	A	1486	MET	3.4
1	A	1191	GLN	3.3
1	B	1199	GLU	3.3
1	B	1485	GLU	3.3
1	B	2039	SER	3.3
1	A	1193	ASN	3.2
1	A	496	CYS	3.2
1	B	1189	GLN	3.2
1	B	975	ALA	3.2
1	B	676	ARG	3.2
1	B	539	LEU	3.2
1	B	1204	LEU	3.2
1	B	2021	SER	3.1
1	B	560	GLN	3.1
1	B	293	HIS	3.1
1	B	831	SER	3.1
1	A	293	HIS	3.1
1	B	623	VAL	3.1

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Mol	Chain	Res	Type	RSRZ
1	A	418	ALA	3.1
1	A	1452	GLY	3.1
1	B	1201	GLY	3.1
1	A	2038	ASN	3.1
1	B	1437	SER	3.1
1	B	1468	ARG	3.1
1	A	1987	PHE	3.0
1	B	1297	GLY	3.0
1	A	1583	LEU	3.0
1	B	410	PRO	3.0
1	A	1206	GLN	3.0
1	B	1202	GLN	3.0
1	A	1468	ARG	3.0
1	B	409	ARG	3.0
1	A	1455	GLY	3.0
1	B	2114	LYS	3.0
1	B	189	ASN	2.9
1	A	1380	SER	2.9
1	B	1190	LEU	2.9
1	B	336	SER	2.9
1	B	2023	SER	2.9
1	B	418	ALA	2.9
1	B	929	GLY	2.9
1	B	2025	GLY	2.9
1	A	1481	SER	2.8
1	B	1681	GLY	2.8
1	B	1409	PRO	2.8
1	B	1467	HIS	2.8
1	B	324	SER	2.8
1	A	1434	ALA	2.8
1	B	1406	GLN	2.8
1	A	292	ALA	2.8
1	A	324	SER	2.8
1	B	1203	VAL	2.8
1	B	1572	ASN	2.8
1	A	1291	GLN	2.8
1	B	1	MET	2.7
1	B	558	SER	2.7
1	A	1203	VAL	2.7
1	A	1305	ALA	2.7
1	A	1207	GLU	2.7
1	A	1290	GLU	2.7

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Mol	Chain	Res	Type	RSRZ
1	A	49	ARG	2.7
1	A	1307	GLY	2.7
1	A	1317	CYS	2.7
1	A	1587	SER	2.7
1	A	1863	PRO	2.7
1	B	1527	GLN	2.7
1	A	1482	PRO	2.7
1	B	413	PRO	2.7
1	B	104	SER	2.6
1	A	583	GLY	2.6
1	A	1484	PRO	2.6
1	B	316	ARG	2.6
1	B	1602	GLU	2.6
1	A	1208	ARG	2.6
1	A	1288	LYS	2.6
1	B	337	GLY	2.6
1	B	624	GLY	2.6
1	A	1201	GLY	2.6
1	B	1861	GLN	2.6
1	A	1282	LEU	2.6
1	A	1480	THR	2.6
1	B	1319	CYS	2.5
1	B	1208	ARG	2.5
1	A	161	CYS	2.5
1	B	660	GLU	2.5
1	B	1206	GLN	2.5
1	A	294	GLY	2.5
1	B	1296	GLN	2.5
1	B	928	THR	2.5
1	B	1194	GLY	2.5
1	B	722	TRP	2.5
1	A	1483	ALA	2.5
1	B	1487	HIS	2.5
1	B	213	ARG	2.5
1	A	1527	GLN	2.5
1	B	1340	GLU	2.5
1	B	584	GLU	2.4
1	B	868	PRO	2.4
1	B	1503	MET	2.4
1	A	340	ALA	2.4
1	B	762	ALA	2.4
1	A	295	THR	2.4

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Mol	Chain	Res	Type	RSRZ
1	A	1194	GLY	2.4
1	A	1146	LEU	2.4
1	A	1458	ASN	2.4
1	A	1510	ALA	2.4
1	B	755	HIS	2.4
1	A	1437	SER	2.4
1	A	984	GLU	2.4
1	B	2078	THR	2.4
1	A	2020	SER	2.4
1	A	1336	ALA	2.4
1	A	1507	ARG	2.4
1	B	332	PRO	2.4
1	B	621	ALA	2.4
1	A	337	GLY	2.3
1	A	1681	GLY	2.3
1	B	489	LYS	2.3
1	A	2078	THR	2.3
1	A	1586	ASP	2.3
1	A	1136	LEU	2.3
1	B	360	HIS	2.3
1	B	543	GLU	2.3
1	A	10	SER	2.3
1	B	1875	GLY	2.3
1	B	1286	GLN	2.3
1	A	974	ALA	2.3
1	A	498	GLY	2.3
1	A	1509	GLY	2.3
1	A	1371	HIS	2.3
1	A	417	HIS	2.3
1	B	906	ASN	2.3
1	A	1135	ALA	2.3
1	A	1347	HIS	2.3
1	A	391	ASN	2.2
1	A	1409	PRO	2.2
1	B	412	PRO	2.2
1	B	1318	ASN	2.2
1	A	1467	HIS	2.2
1	A	1866	ARG	2.2
1	A	1209	PRO	2.2
1	B	1862	GLY	2.2
1	A	291	GLU	2.2
1	B	1452	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
1	B	1410	GLN	2.2
1	A	1679	GLY	2.2
1	B	330	GLY	2.2
1	B	2027	GLY	2.2
1	A	1284	ALA	2.2
1	B	1235	GLU	2.2
1	B	664	GLN	2.2
1	A	928	THR	2.2
1	B	2111	LEU	2.2
1	A	1479	SER	2.2
1	B	422	ARG	2.2
1	B	888	GLY	2.2
1	B	1146	LEU	2.1
1	B	1312	ALA	2.1
1	A	37	ASP	2.1
1	B	92	ASP	2.1
1	A	1337	THR	2.1
1	A	480	GLN	2.1
1	A	1525	GLU	2.1
1	A	1354	PRO	2.1
1	A	1071	LEU	2.1
1	B	292	ALA	2.1
1	A	1319	CYS	2.1
1	B	499	MET	2.1
1	A	1862	GLY	2.1
1	B	728	ARG	2.1
1	B	1970	ASN	2.1
1	A	1451	SER	2.1
1	B	646	LYS	2.1
1	B	1111	HIS	2.1
1	B	1347	HIS	2.1
1	B	391	ASN	2.1
1	A	410	PRO	2.1
1	B	236	LYS	2.1
1	A	2079	VAL	2.1
1	B	1205	ALA	2.1
1	A	394	GLY	2.1
1	B	1456	MET	2.1
1	B	1459	CYS	2.0
1	A	889	THR	2.0
1	A	1398	GLY	2.0
1	B	353	TRP	2.0

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Mol	Chain	Res	Type	RSRZ
1	A	419	ALA	2.0
1	B	889	THR	2.0
1	A	1375	GLN	2.0
1	A	1540	ASP	2.0
1	B	129	GLY	2.0
1	B	2035	GLY	2.0
1	B	1484	PRO	2.0
1	A	218	GLU	2.0

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

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

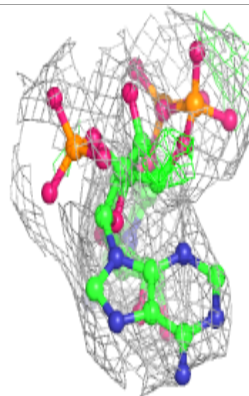
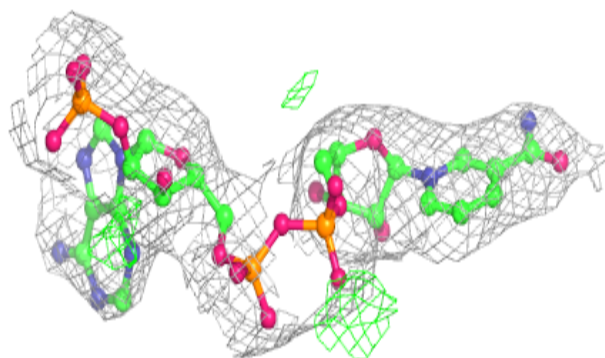
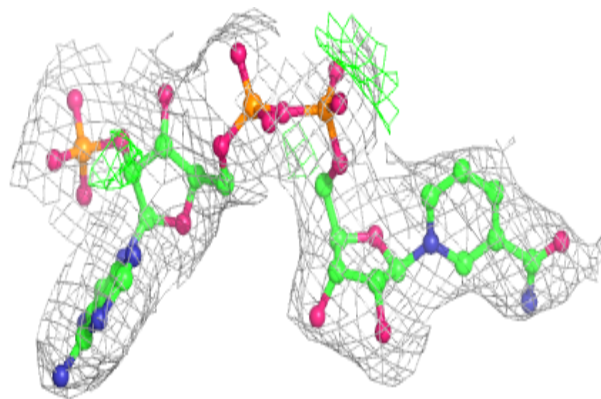
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
2	NAP	A	3001	48/48	0.90	0.32	100,122,179,189	0
2	NAP	B	3001	48/48	0.92	0.26	99,123,160,163	0
2	NAP	A	3002	48/48	0.95	0.20	96,135,161,194	0
2	NAP	B	3002	48/48	0.95	0.18	99,122,153,198	0

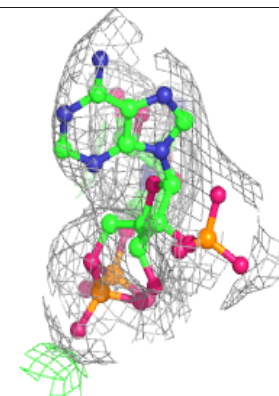
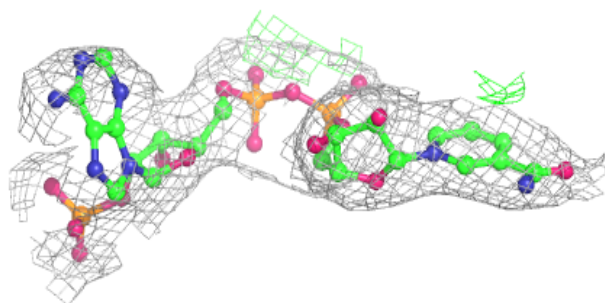
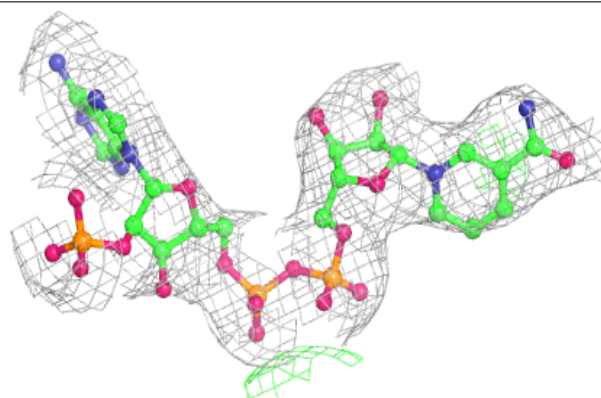
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around NAP A 3001:

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

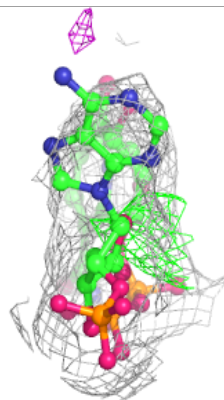
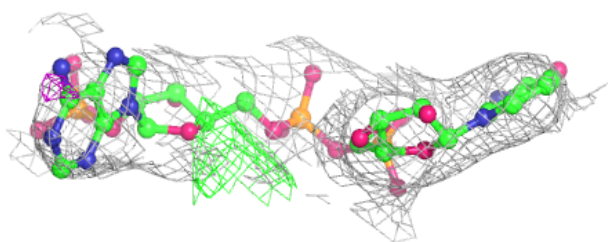
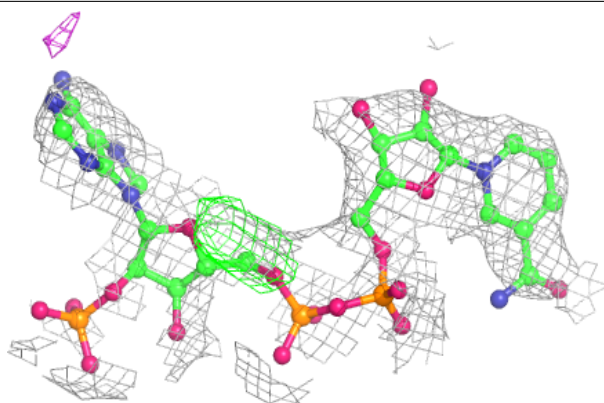
**Electron density around NAP B 3001:**

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

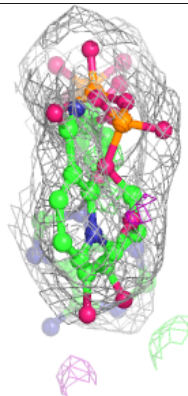
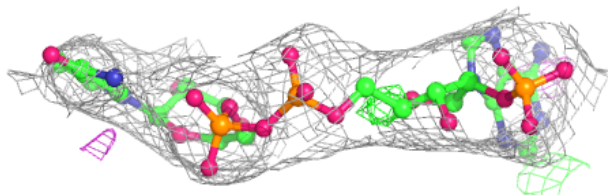
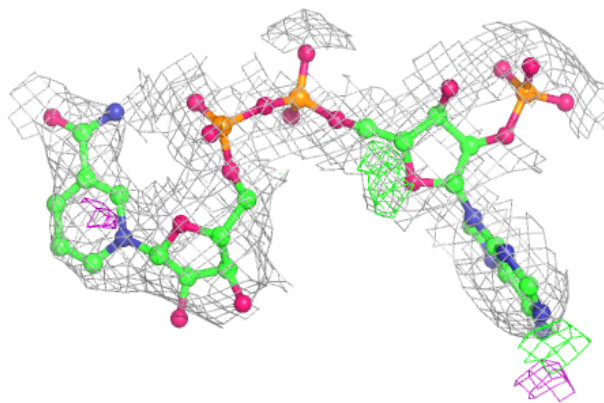


Electron density around NAP A 3002:

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

**Electron density around NAP B 3002:**

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



6.5 Other polymers [i](#)

There are no such residues in this entry.