



Full wwPDB EM Validation Report ⓘ

Dec 17, 2022 – 04:41 pm GMT

PDB ID : 6ZTS
EMDB ID : EMD-22165
Title : Assembly intermediates of orthoreovirus captured in the cell
Authors : Sutton, G.C.; Stuart, D.I.
Deposited on : 2020-07-20
Resolution : Not provided

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev43
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.3

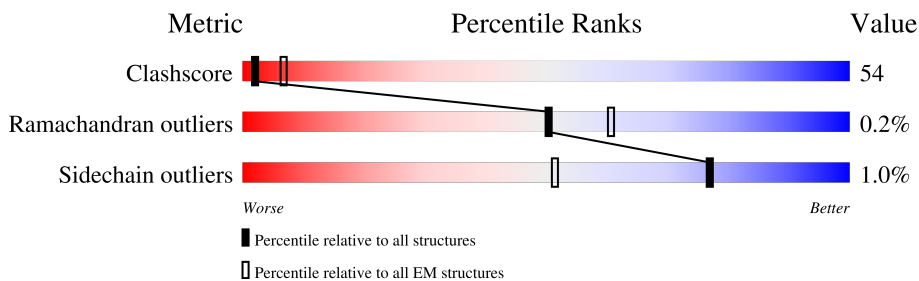
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is unknown.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	975	
1	B	975	

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 15341 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Lambda-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	974	7696	4911	1304	1432	49	0	0
1	B	967	7645	4883	1296	1417	49	0	0

There are 10 discrepancies between the modelled and reference sequences:

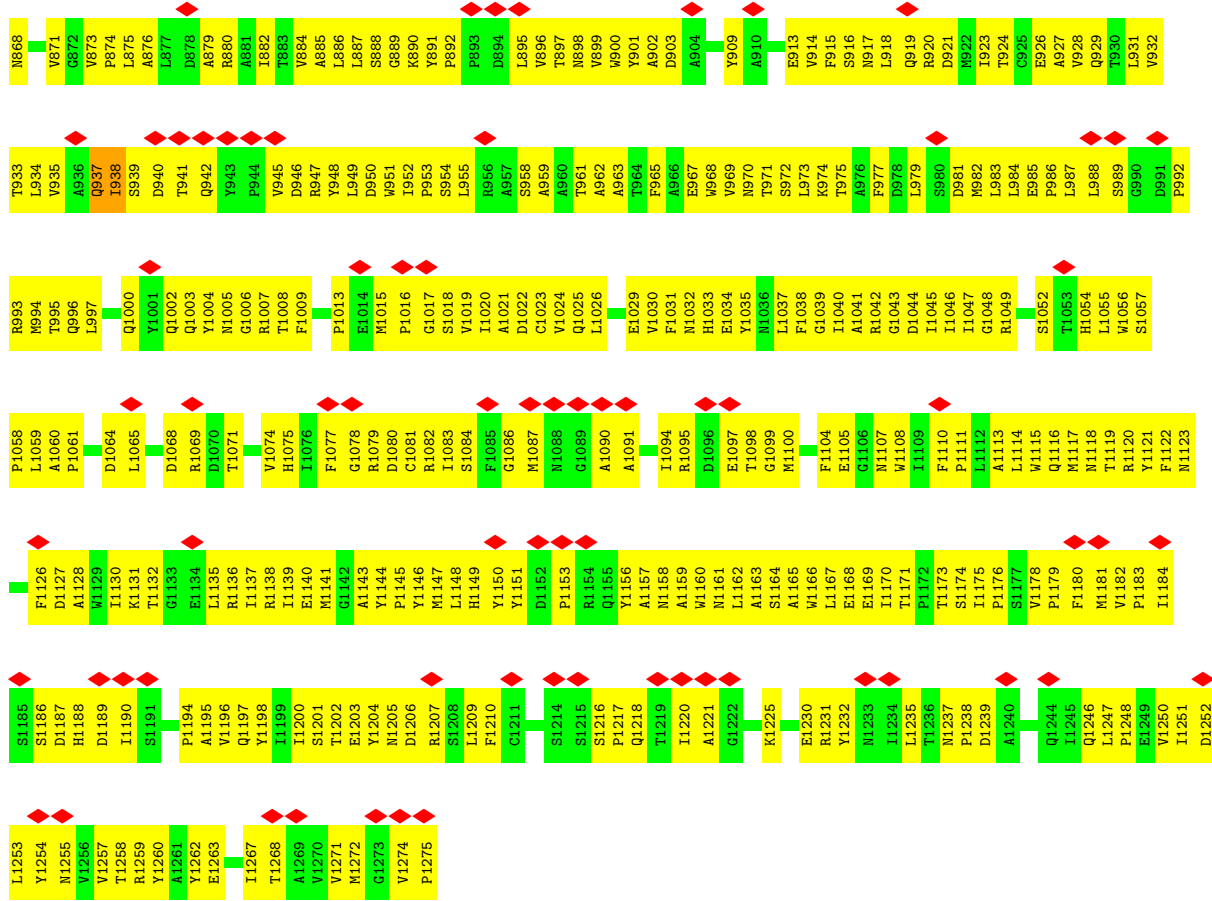
Chain	Residue	Modelled	Actual	Comment	Reference
A	336	LYS	ARG	conflict	UNP A0A023VYS9
A	507	TYR	ARG	conflict	UNP A0A023VYS9
A	973	LEU	MET	conflict	UNP A0A023VYS9
A	1010	ASP	ASN	conflict	UNP A0A023VYS9
A	1163	ALA	THR	conflict	UNP A0A023VYS9
B	336	LYS	ARG	conflict	UNP A0A023VYS9
B	507	TYR	ARG	conflict	UNP A0A023VYS9
B	973	LEU	MET	conflict	UNP A0A023VYS9
B	1010	ASP	ASN	conflict	UNP A0A023VYS9
B	1163	ALA	THR	conflict	UNP A0A023VYS9

3 Residue-property plots

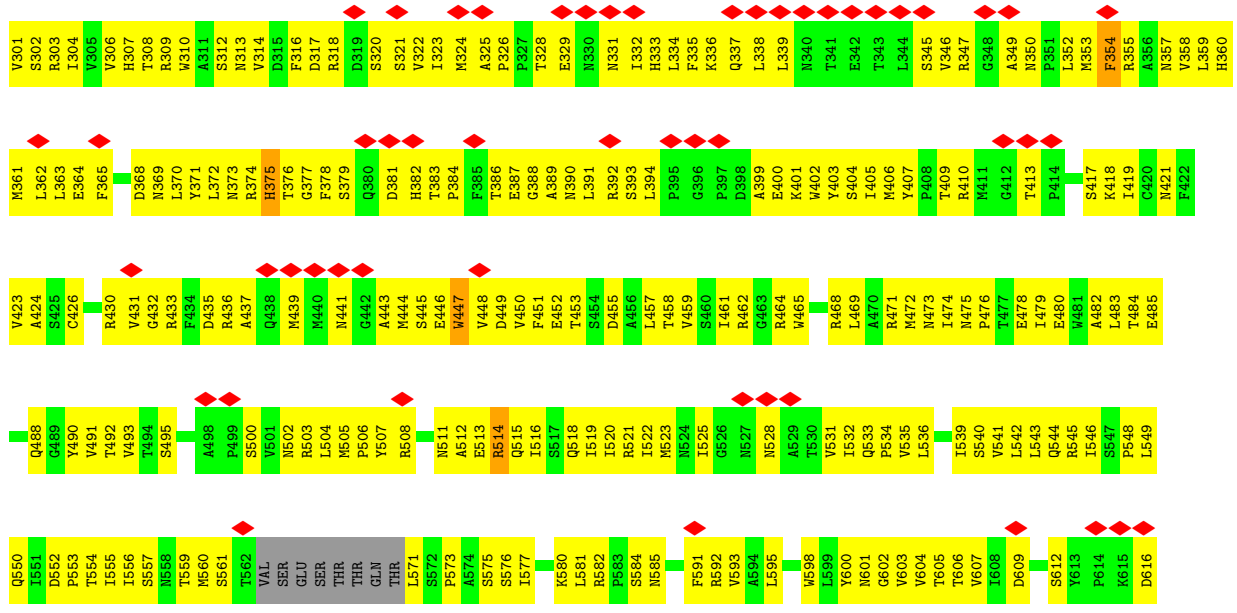
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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: Lambda-1





• Molecule 1: Lambda-1



V1257	A1193	L1130	D1068	Y1004	Y943	R874	L814	P753	C687	G617
T1258	P1194	K1131	R1069	M1005	P944	L875	A615	T754	F688	G618
Y1260	G1133	T1132	D1070	G1006	V945	A876	P816	F757	M689	S619
A1261	A1195	E1134	T1071	R1007	D878	L877	V817	T758	M690	V620
E1263	L1135	E1135	P1072	F1009	R947	A879	E818	M759	I691	T621
Y1198	R1136	R1137	H1075	D1010	Y948	R880	L819	N760	Q692	S622
T1199	I1137	I1138	I1076	V1011	L949	A881	V821	L761	L693	E624
I1200	R1138	T1139	G1077	E1014	I949	I882	I822	T762	I694	E624
S1201	G1078	E1140	F1078	M1015	D950	T883	A823	N763	A699	L626
T1202	R1079	M1141	R1079	P1016	W651	V884	M825	M764	P700	L627
E1203	D1080	G1081	G1080	G1017	I952	A885	L826	R765	I701	D628
M1204	R1082	I1083	I1082	S1018	P953	L886	P827	A766	F629	F629
Y1205	G1086	F1085	F1086	G1017	S954	L887	F928	R767	R703	F630
M1205	M1087	M1087	M1087	V1019	S955	S888	P829	A768	I631	I631
D1206	M1088	M1088	M1088	I1021	R956	G889	P830	V768	L632	L632
R1207	S1084	I1020	A957	I1020	A957	K890	F831	C769	A833	A833
S1208	F1085	E1021	S958	I1021	S958	R891	F831	E770	L634	L634
L1209	G1086	C1022	A959	C1022	S959	Y891	Q832	E770	E707	E707
C1211	M1087	V1024	A960	C1023	A960	R892	V833	L771	A635	A635
T1212	M1088	Q1025	T961	M1030	E967	R893	R840	M772	I708	I708
M1213	G1089	L1026	T962	F1031	W668	D894	D841	K773	I709	I709
S1214	A1090	T1027	A963	H1033	Y901	L895	R842	M774	H710	H710
R1207	A1091	A1028	T964	E1034	A902	V896	V836	N775	R711	R711
S1216	P1092	E1029	T965	Y1035	T971	T897	R837	V776	Y712	Y712
P1217	M1093	M1030	A966	M1036	S972	N898	L838	D777	M713	M713
Q1218	I1094	H1032	E967	Y1036	K974	V899	D839	T786	P714	P714
T1219	R1095	F1033	E968	G1039	F977	W899	R840	Q787	N715	N715
I1220	D1096	I1040	T971	I1040	D978	S915	R841	S788	P716	P716
A1221	G1099	I1041	S972	I1041	L979	R917	R851	L789	S717	S717
G1222	M1100	E1105	L973	I1042	R980	N917	R851	S791	R720	R720
L1224	M1101	G1039	K974	G1043	R920	R920	Q852	S792	Y721	Y721
K1225	V1102	I1044	F977	I1044	D981	R921	Q853	S792	G858	G858
H1226	A1165	I1045	D978	I1045	M982	R921	R854	S792	F659	F659
P1228	A1166	I1046	L979	I1046	L983	R922	R854	S792	E660	E660
Y1229	L1167	I1047	L984	I1047	L984	M922	Q855	S792	E661	E661
I1227	E1168	G1048	E985	I1048	E985	T924	A856	S792	I662	I662
E1230	E1169	R1049	L987	G1048	L987	V928	T858	S792	P663	P663
R1231	Y1175	V1050	L988	R1049	L988	Q929	Q859	S792	M664	M664
Y1232	P1176	Q1051	L1112	V1050	L988	T930	P860	S792	D665	D665
I1234	S1177	Q1051	L1114	Q1051	L988	L931	P860	S792	Q667	Q667
L1235	V1178	Q1051	Q1116	Q1056	L988	V932	A861	S792	I668	I668
T1236	F1179	M1181	M1117	M1057	P992	T933	L862	S792	T670	T670
P1237	F1180	M1181	M1117	P1057	P992	L934	S863	S792	Q671	Q671
P1238	M1181	M1119	M1119	L1059	R993	L934	S863	S792	S672	S672
D1239	V1182	A1120	A1060	L1059	R993	V935	L864	S792	R673	R673
A1240	Y1183	Y1121	P1061	Q936	T995	A936	S865	S792	R674	R674
L1247	L1184	F1122	P1062	P1062	Q937	Q937	S865	S792	A675	A675
P1248	S1185	F1122	P1063	P1063	Q937	Q937	S865	S792	S676	S676
E1249	S1186	Q1125	Q1125	Q1064	A998	S939	T867	S792	A677	A677
V1250	D1187	Q1125	Q1125	D1066	I999	D940	T867	S792	F678	F678
V1251	H1188	F1126	F1126	V1066	Q1000	D940	N868	S792	S679	S679
D1252	D1189	A1128	A1128	F1067	Y1001	T941	L811	S792	P681	P681
L1253	D1189	A1128	A1128	F1067	Q1002	Q942	Q812	S792	H682	H682
Y1254	T1190	W1129	W1129	F1067	Q1002	Q942	Q813	S792	T683	T683
N1255									W684	W684
V1256									R685	R685
									T752	T752
									R686	R686

4 Experimental information

Property	Value	Source
EM reconstruction method	TOMOGRAPHY	Depositor
Imposed symmetry	POINT, Not provided	
Number of tilted images used	41	Depositor
Resolution determination method	Not provided	
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	2	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum voxel value	10.927	Depositor
Minimum voxel value	-5.906	Depositor
Average voxel value	0.059	Depositor
Voxel value standard deviation	0.498	Depositor
Recommended contour level	3.0	Depositor
Tomogram size (\AA)	696.6, 696.6, 696.6	wwPDB
Tomogram dimensions	387, 387, 387	wwPDB
Tomogram angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Grid spacing (\AA)	1.8, 1.8, 1.8	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.40	0/7902	0.57	1/10819 (0.0%)
1	B	0.39	0/7850	0.54	0/10746
All	All	0.39	0/15752	0.55	1/21565 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	7
1	B	0	1
All	All	0	8

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
1	A	825	MET	C-N-CA	10.24	147.29	121.70

There are no chirality outliers.

All (8) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	334	LEU	Peptide
1	A	352	LEU	Peptide
1	A	582	ARG	Peptide
1	A	822	ILE	Peptide
1	A	823	ALA	Peptide
1	A	937	GLN	Peptide
1	A	938	ILE	Peptide
1	B	1111	PRO	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	7696	0	7604	825	0
1	B	7645	0	7559	815	0
All	All	15341	0	15163	1634	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 54.

All (1634) 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:446:GLU:HA	1:B:1261:ALA:H	1.24	1.02
1:B:511:ASN:HA	1:B:514:ARG:HH21	1.25	1.00
1:A:847:VAL:H	1:A:871:VAL:HG11	1.23	0.98
1:A:929:GLN:HB2	1:A:1015:MET:HG2	1.43	0.97
1:A:449:ASP:HA	1:A:1257:VAL:O	1.67	0.95
1:B:1042:ARG:HA	1:B:1142:GLY:O	1.67	0.95
1:A:942:GLN:HE22	1:A:994:MET:HA	1.33	0.94
1:B:333:HIS:HA	1:B:336:LYS:HG2	1.49	0.93
1:A:341:THR:HG23	1:A:350:ASN:HD22	1.33	0.93
1:A:600:TYR:HB3	1:A:603:VAL:HB	1.49	0.93
1:A:1108:TRP:HB2	1:A:1137:ILE:HG12	1.49	0.92
1:B:1108:TRP:HB2	1:B:1137:ILE:HG12	1.53	0.91
1:B:403:TYR:O	1:B:407:TYR:N	2.04	0.90
1:B:1079:ARG:HD2	1:B:1114:LEU:HB3	1.54	0.90
1:B:839:ASP:HB3	1:B:842:ARG:HE	1.38	0.88
1:A:1000:GLN:HE22	1:A:1002:GLN:HB2	1.38	0.87
1:B:1233:ASN:O	1:B:1237:ASN:N	2.06	0.87
1:A:854:ARG:NH2	1:A:862:LEU:O	2.08	0.87
1:A:974:LYS:HA	1:A:979:LEU:HB2	1.57	0.87
1:A:485:GLU:HB3	1:A:720:ARG:HH12	1.39	0.87
1:A:699:ALA:HB1	1:A:702:LEU:HB2	1.54	0.87
1:A:536:LEU:HA	1:A:539:ILE:HD12	1.55	0.86
1:A:354:PHE:HA	1:A:357:ASN:HD21	1.39	0.86
1:A:1079:ARG:NH1	1:A:1114:LEU:H	1.73	0.86
1:B:511:ASN:OD1	1:B:514:ARG:NH2	2.09	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:448:VAL:O	1:A:1258:THR:HA	1.76	0.86
1:B:439:MET:SD	1:B:447:TRP:NE1	2.48	0.85
1:B:301:VAL:HA	1:B:1214:SER:HB2	1.58	0.85
1:B:1003:GLN:OE1	1:B:1005:ASN:ND2	2.11	0.84
1:A:366:VAL:HG21	1:A:1024:VAL:HG12	1.60	0.82
1:A:1187:ASP:OD1	1:A:1188:HIS:ND1	2.12	0.82
1:A:355:ARG:NH2	1:A:952:ILE:O	2.12	0.81
1:B:339:LEU:HD21	1:B:965:PHE:HB2	1.62	0.81
1:B:516:ILE:HA	1:B:519:ILE:HD12	1.62	0.81
1:A:1079:ARG:NH1	1:A:1111:PRO:O	2.13	0.81
1:B:439:MET:SD	1:B:1262:TYR:OH	2.39	0.81
1:B:770:GLU:OE2	1:B:801:LYS:NZ	2.13	0.81
1:B:493:VAL:HB	1:B:1271:VAL:HG12	1.61	0.80
1:A:1147:MET:N	1:A:1178:VAL:O	2.13	0.80
1:A:433:ARG:HD2	1:A:436:ARG:HH21	1.45	0.80
1:A:1032:ASN:O	1:A:1042:ARG:NH1	2.15	0.80
1:A:1095:ARG:HE	1:A:1099:GLY:HA2	1.45	0.80
1:A:879:ALA:HA	1:A:882:ILE:HD12	1.63	0.80
1:A:598:TRP:O	1:A:832:GLN:NE2	2.15	0.80
1:A:1081:CYS:HB3	1:A:1094:ILE:HD11	1.64	0.79
1:B:550:GLN:HE22	1:B:892:PRO:HG3	1.47	0.79
1:B:638:MET:SD	1:B:638:MET:N	2.56	0.79
1:B:965:PHE:HA	1:B:968:TRP:HD1	1.45	0.79
1:A:844:PRO:HA	1:A:1003:GLN:HA	1.65	0.79
1:A:404:SER:HB3	1:A:410:ARG:HB2	1.64	0.79
1:B:392:ARG:O	1:B:403:TYR:OH	1.99	0.79
1:B:654:ASN:ND2	1:B:671:GLN:O	2.14	0.79
1:B:605:THR:N	1:B:873:VAL:O	2.14	0.79
1:B:1154:ARG:HG3	1:B:1155:GLN:HG3	1.65	0.79
1:B:557:SER:O	1:B:561:SER:N	2.15	0.79
1:B:1187:ASP:HA	1:B:1220:ILE:H	1.47	0.78
1:A:896:VAL:O	1:A:900:TRP:N	2.12	0.78
1:B:554:THR:O	1:B:557:SER:OG	1.99	0.78
1:B:1061:PRO:HB2	1:B:1065:LEU:HD11	1.64	0.78
1:A:987:LEU:HG	1:A:992:PRO:HB3	1.66	0.78
1:A:1049:ARG:NH2	1:A:1132:THR:O	2.16	0.78
1:A:1128:ALA:O	1:A:1132:THR:N	2.17	0.77
1:A:373:ASN:HB3	1:A:1260:TYR:H	1.48	0.77
1:A:686:ARG:NH2	1:A:689:MET:SD	2.57	0.77
1:B:731:ASN:HB2	1:B:736:PRO:HA	1.66	0.77
1:B:430:ARG:NH2	1:B:1238:PRO:O	2.17	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1213:ASN:ND2	1:B:1218:GLN:O	2.18	0.77
1:B:543:LEU:HD23	1:B:592:ARG:HB3	1.67	0.77
1:B:1209:LEU:HG	1:B:1225:LYS:HG2	1.65	0.77
1:B:915:PHE:HA	1:B:918:LEU:HG	1.66	0.76
1:A:548:PRO:HB2	1:A:892:PRO:HD2	1.67	0.76
1:B:686:ARG:NH1	1:B:687:CYS:SG	2.57	0.76
1:B:765:ARG:NH1	1:B:803:ILE:O	2.16	0.76
1:B:741:LEU:HG	1:B:743:ILE:H	1.48	0.76
1:A:1048:GLY:HA3	1:A:1136:ARG:HE	1.50	0.76
1:A:351:PRO:HA	1:A:354:PHE:HB2	1.68	0.76
1:B:485:GLU:O	1:B:488:GLN:NE2	2.19	0.76
1:A:1149:HIS:N	1:A:1180:PHE:O	2.19	0.75
1:B:1213:ASN:HB3	1:B:1216:SER:HB3	1.67	0.75
1:A:841:ASP:O	1:A:1005:ASN:N	2.19	0.75
1:A:1045:ILE:HG13	1:A:1047:ILE:HD11	1.68	0.75
1:A:965:PHE:HA	1:A:968:TRP:HD1	1.52	0.75
1:A:1246:GLN:O	1:A:1250:VAL:N	2.19	0.75
1:A:464:ARG:NH1	1:A:1023:CYS:SG	2.60	0.75
1:B:961:THR:O	1:B:964:THR:OG1	2.05	0.74
1:B:445:SER:HB2	1:B:448:VAL:HB	1.69	0.74
1:B:624:GLU:HA	1:B:627:TRP:CD1	2.22	0.74
1:B:741:LEU:HD12	1:B:742:PRO:HD2	1.69	0.74
1:B:745:HIS:O	1:B:746:GLN:NE2	2.20	0.74
1:B:929:GLN:NE2	1:B:1016:PRO:O	2.21	0.74
1:B:1069:ARG:NH1	1:B:1138:ARG:O	2.21	0.74
1:B:452:GLU:O	1:B:1255:ASN:N	2.20	0.74
1:B:1197:GLN:HB3	1:B:1200:ILE:HD11	1.68	0.74
1:A:447:TRP:HB2	1:A:1258:THR:HG22	1.69	0.74
1:B:349:ALA:O	1:B:1175:ILE:N	2.19	0.73
1:B:448:VAL:H	1:B:1259:ARG:H	1.35	0.73
1:B:518:GLN:HA	1:B:521:ARG:HE	1.52	0.73
1:A:929:GLN:NE2	1:A:933:THR:OG1	2.21	0.73
1:B:514:ARG:HH22	1:B:729:SER:N	1.85	0.73
1:A:600:TYR:HB2	1:A:604:VAL:HG22	1.69	0.73
1:A:1030:VAL:HG13	1:A:1248:PRO:HB3	1.71	0.73
1:A:935:VAL:HG22	1:A:941:THR:HB	1.71	0.73
1:B:1028:ALA:O	1:B:1032:ASN:N	2.20	0.73
1:A:563:VAL:HA	1:A:796:THR:HG23	1.69	0.73
1:B:1158:ASN:HD21	1:B:1160:TRP:HB3	1.53	0.73
1:B:1148:LEU:HD13	1:B:1182:VAL:HG11	1.70	0.72
1:B:430:ARG:NH2	1:B:1240:ALA:O	2.21	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:598:TRP:O	1:B:832:GLN:NE2	2.22	0.72
1:A:474:ILE:HD12	1:A:478:GLU:HB3	1.72	0.72
1:A:1080:ASP:HB3	1:A:1097:GLU:HA	1.71	0.72
1:A:1082:ARG:O	1:A:1095:ARG:N	2.21	0.72
1:B:309:ARG:HH22	1:B:318:ARG:H	1.36	0.72
1:B:974:LYS:HD3	1:B:982:MET:HA	1.71	0.72
1:B:446:GLU:HA	1:B:1261:ALA:N	2.04	0.72
1:B:577:ILE:HD12	1:B:580:LYS:HB3	1.72	0.72
1:B:1037:LEU:HA	1:B:1207:ARG:HG3	1.71	0.72
1:A:1146:TYR:HA	1:A:1178:VAL:H	1.55	0.72
1:B:536:LEU:HA	1:B:539:ILE:HD12	1.72	0.72
1:A:1150:TYR:HA	1:A:1182:VAL:HG13	1.70	0.72
1:A:529:ALA:O	1:A:532:ILE:HG12	1.90	0.72
1:B:1231:ARG:NH1	1:B:1251:ILE:O	2.23	0.72
1:B:320:SER:OG	1:B:364:GLU:O	2.08	0.71
1:B:407:TYR:HB2	1:B:410:ARG:HB2	1.72	0.71
1:B:458:THR:HA	1:B:461:ILE:HD12	1.70	0.71
1:B:624:GLU:HA	1:B:627:TRP:HD1	1.54	0.71
1:A:375:HIS:ND1	1:A:1259:ARG:O	2.24	0.71
1:A:937:GLN:NE2	1:A:946:ASP:O	2.22	0.71
1:B:630:PHE:HE1	1:B:772:MET:HG3	1.54	0.71
1:B:621:THR:HA	1:B:785:TRP:HZ2	1.55	0.71
1:A:352:LEU:HD13	1:A:955:LEU:HD22	1.71	0.71
1:B:705:TRP:HA	1:B:708:ILE:HD12	1.72	0.71
1:A:694:ILE:O	1:A:703:ARG:NH1	2.23	0.71
1:A:399:ALA:HA	1:A:402:TRP:CD1	2.25	0.71
1:A:350:ASN:HD21	1:A:352:LEU:HB2	1.55	0.71
1:A:452:GLU:HG2	1:A:1257:VAL:HG21	1.73	0.71
1:A:669:TYR:OH	1:A:682:HIS:O	2.09	0.71
1:A:1159:ALA:HB3	1:A:1197:GLN:HA	1.71	0.71
1:B:1045:ILE:HG23	1:B:1141:MET:HE2	1.73	0.70
1:B:1186:SER:O	1:B:1221:ALA:N	2.24	0.70
1:A:691:ILE:O	1:A:703:ARG:NH1	2.24	0.70
1:B:359:LEU:HD23	1:B:934:LEU:HD12	1.71	0.70
1:B:913:GLU:O	1:B:916:SER:OG	2.09	0.70
1:A:680:THR:N	1:A:683:THR:OG1	2.24	0.70
1:B:1047:ILE:O	1:B:1136:ARG:HA	1.91	0.70
1:A:1115:TRP:HD1	1:A:1119:THR:HG22	1.57	0.69
1:A:1083:ILE:O	1:A:1121:TYR:OH	2.10	0.69
1:B:846:MET:O	1:B:1001:TYR:HA	1.92	0.69
1:A:407:TYR:HB2	1:A:409:THR:HG22	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:503:ARG:HG2	1:A:1263:GLU:HB2	1.74	0.69
1:A:582:ARG:NH1	1:A:584:SER:OG	2.26	0.69
1:B:694:ILE:O	1:B:703:ARG:NH1	2.26	0.69
1:A:927:ALA:O	1:A:931:LEU:HG	1.92	0.69
1:B:1120:ARG:NH1	1:B:1170:ILE:O	2.25	0.69
1:B:500:SER:OG	1:B:502:ASN:OD1	2.11	0.69
1:B:706:ALA:HA	1:B:709:ILE:HD12	1.72	0.69
1:B:1094:ILE:O	1:B:1101:MET:HA	1.92	0.69
1:A:462:ARG:HA	1:A:465:TRP:HB3	1.75	0.69
1:A:507:TYR:CZ	1:A:1267:ILE:HD13	2.27	0.69
1:A:656:MET:HG3	1:A:702:LEU:HD21	1.73	0.69
1:A:360:HIS:CD2	1:A:968:TRP:HB3	2.28	0.69
1:A:450:VAL:HG13	1:A:1257:VAL:HB	1.75	0.69
1:A:805:SER:HA	1:A:889:GLY:H	1.55	0.69
1:A:934:LEU:O	1:A:939:SER:OG	2.11	0.69
1:B:729:SER:HB2	1:B:736:PRO:HB3	1.75	0.69
1:B:1084:SER:OG	1:B:1093:MET:O	2.11	0.69
1:A:352:LEU:HD22	1:A:955:LEU:HB2	1.75	0.69
1:A:763:ASN:O	1:A:767:ARG:NH1	2.26	0.69
1:B:541:VAL:O	1:B:544:GLN:NE2	2.26	0.69
1:A:430:ARG:NH1	1:A:1239:ASP:O	2.21	0.69
1:A:941:THR:OG1	1:A:993:ARG:O	2.11	0.69
1:A:1044:ASP:OD1	1:A:1141:MET:N	2.26	0.69
1:A:331:ASN:HB3	1:A:333:HIS:CE1	2.29	0.68
1:B:382:HIS:CE1	1:B:389:ALA:H	2.10	0.68
1:A:748:ALA:HB2	1:A:813:GLN:HB3	1.76	0.68
1:A:1158:ASN:HD21	1:A:1160:TRP:HB3	1.59	0.68
1:A:884:VAL:O	1:A:888:SER:OG	2.12	0.68
1:B:924:THR:HG23	1:B:983:LEU:HD21	1.75	0.68
1:A:853:SER:OG	1:A:857:ILE:O	2.10	0.68
1:A:838:LEU:O	1:A:842:ARG:NH2	2.23	0.68
1:A:974:LYS:O	1:A:979:LEU:N	2.27	0.68
1:B:1085:PHE:HA	1:B:1092:PRO:HB3	1.74	0.68
1:B:1186:SER:HB3	1:B:1221:ALA:HB3	1.74	0.68
1:A:681:PRO:HA	1:A:684:TRP:CD2	2.29	0.68
1:A:713:TRP:CD2	1:A:714:PRO:HD2	2.29	0.68
1:B:687:CYS:HA	1:B:693:LEU:HD12	1.76	0.68
1:A:613:TYR:O	1:A:615:LYS:NZ	2.26	0.67
1:B:318:ARG:HG2	1:B:371:TYR:CZ	2.29	0.67
1:B:1158:ASN:OD1	1:B:1161:ASN:N	2.27	0.67
1:B:465:TRP:O	1:B:469:LEU:HG	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:854:ARG:HD2	1:A:857:ILE:HD12	1.75	0.67
1:B:733:PHE:CD1	1:B:834:PRO:HD3	2.29	0.67
1:A:465:TRP:O	1:A:469:LEU:HG	1.94	0.67
1:A:776:VAL:HG12	1:A:790:VAL:HG13	1.77	0.67
1:B:680:THR:O	1:B:683:THR:OG1	2.09	0.67
1:B:382:HIS:HB3	1:B:387:GLU:HA	1.76	0.67
1:B:630:PHE:CE1	1:B:772:MET:HG3	2.30	0.67
1:B:670:THR:HG22	1:B:672:SER:H	1.57	0.67
1:A:1032:ASN:OD1	1:A:1042:ARG:NH2	2.27	0.67
1:B:713:TRP:HD1	1:B:837:ARG:HE	1.41	0.67
1:B:732:LEU:HD12	1:B:1011:VAL:HG11	1.76	0.67
1:B:810:TYR:OH	1:B:901:TYR:OH	2.12	0.67
1:B:844:PRO:HG2	1:B:870:THR:HG21	1.77	0.67
1:A:750:VAL:HG22	1:A:752:THR:H	1.60	0.67
1:B:819:LEU:HA	1:B:822:ILE:HD12	1.76	0.67
1:B:1134:GLU:OE2	1:B:1136:ARG:N	2.27	0.67
1:B:987:LEU:HD13	1:B:992:PRO:HA	1.76	0.67
1:A:681:PRO:HA	1:A:684:TRP:CE3	2.30	0.67
1:B:504:LEU:HD11	1:B:1262:TYR:HB3	1.76	0.67
1:B:1147:MET:N	1:B:1178:VAL:O	2.28	0.67
1:A:601:ASN:OD1	1:A:602:GLY:N	2.28	0.66
1:A:1060:ALA:HB2	1:A:1204:TYR:HD1	1.58	0.66
1:A:1203:GLU:HB2	1:A:1205:ASN:HD21	1.60	0.66
1:B:952:ILE:HG23	1:B:1143:ALA:HB3	1.75	0.66
1:A:1059:LEU:O	1:A:1204:TYR:HA	1.95	0.66
1:B:383:THR:N	1:B:386:THR:OG1	2.21	0.66
1:B:573:PRO:O	1:B:576:SER:OG	2.14	0.66
1:B:1252:ASP:OD1	1:B:1255:ASN:ND2	2.25	0.66
1:A:665:ASP:HB2	1:A:669:TYR:HD1	1.60	0.66
1:A:843:VAL:O	1:A:1004:TYR:N	2.29	0.66
1:A:624:GLU:HA	1:A:627:TRP:CD1	2.30	0.66
1:B:720:ARG:NH1	1:B:721:TYR:O	2.28	0.66
1:A:419:ILE:HD12	1:A:419:ILE:H	1.60	0.66
1:A:426:CYS:O	1:A:428:ARG:NH1	2.27	0.66
1:A:511:ASN:HA	1:A:514:ARG:HB2	1.78	0.66
1:A:681:PRO:O	1:A:840:ARG:NH2	2.28	0.66
1:A:896:VAL:HB	1:A:899:VAL:HB	1.78	0.66
1:B:686:ARG:HA	1:B:689:MET:HB2	1.78	0.66
1:A:895:LEU:HG	1:A:900:TRP:CD1	2.31	0.66
1:B:1041:ALA:O	1:B:1143:ALA:HA	1.94	0.66
1:A:776:VAL:HG11	1:A:793:MET:HG3	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:847:VAL:HA	1:A:1000:GLN:O	1.95	0.66
1:B:712:TYR:HB3	1:B:763:ASN:HD21	1.60	0.66
1:B:720:ARG:HH22	1:B:724:PRO:HD2	1.60	0.66
1:A:329:GLU:O	1:A:331:ASN:ND2	2.29	0.65
1:B:306:VAL:HB	1:B:324:MET:SD	2.37	0.65
1:B:1059:LEU:HD11	1:B:1205:ASN:HB2	1.78	0.65
1:B:437:ALA:HB3	1:B:445:SER:HB3	1.77	0.65
1:B:994:MET:SD	1:B:996:GLN:N	2.69	0.65
1:A:472:MET:HB3	1:A:508:ARG:H	1.60	0.65
1:B:962:ALA:O	1:B:966:ALA:N	2.22	0.65
1:A:446:GLU:HB3	1:A:1262:TYR:CZ	2.31	0.65
1:A:809:MET:SD	1:A:810:TYR:N	2.69	0.65
1:B:810:TYR:HA	1:B:814:LEU:HD13	1.78	0.65
1:B:1065:LEU:O	1:B:1136:ARG:NH2	2.29	0.65
1:A:331:ASN:HB3	1:A:333:HIS:HE1	1.60	0.65
1:A:468:ARG:HA	1:A:471:ARG:CZ	2.27	0.65
1:A:627:TRP:O	1:A:631:ILE:HG12	1.97	0.65
1:A:1107:ASN:C	1:A:1108:TRP:HD1	2.00	0.64
1:B:600:TYR:OH	1:B:828:PHE:O	2.14	0.64
1:A:607:VAL:O	1:A:876:ALA:HA	1.96	0.64
1:A:303:ARG:HB2	1:A:1210:PHE:CG	2.33	0.64
1:A:332:ILE:HG12	1:A:335:PHE:H	1.62	0.64
1:A:624:GLU:HA	1:A:627:TRP:HD1	1.62	0.64
1:A:982:MET:HG2	1:A:986:PRO:HD3	1.79	0.64
1:B:1069:ARG:NH1	1:B:1109:ILE:HA	2.12	0.64
1:A:324:MET:HA	1:A:333:HIS:HB3	1.79	0.64
1:B:601:ASN:ND2	1:B:833:VAL:HB	2.13	0.64
1:B:806:MET:HG3	1:B:890:LYS:HA	1.78	0.64
1:B:841:ASP:HA	1:B:1004:TYR:HD2	1.62	0.64
1:A:713:TRP:O	1:A:837:ARG:NH2	2.30	0.64
1:B:418:LYS:NZ	1:B:1225:LYS:O	2.30	0.64
1:B:449:ASP:OD1	1:B:1258:THR:N	2.30	0.64
1:B:473:ASN:HA	1:B:506:PRO:HA	1.80	0.64
1:A:601:ASN:ND2	1:A:833:VAL:O	2.28	0.64
1:A:708:ILE:HG23	1:A:712:TYR:HD2	1.61	0.64
1:A:381:ASP:HB2	1:A:386:THR:HG21	1.78	0.64
1:A:1115:TRP:HA	1:A:1122:PHE:CE2	2.33	0.64
1:B:794:ARG:HA	1:B:797:LEU:HD12	1.80	0.64
1:A:416:VAL:HG13	1:A:421:ASN:HD21	1.62	0.64
1:B:773:LYS:NZ	1:B:794:ARG:O	2.30	0.64
1:A:355:ARG:O	1:A:359:LEU:HG	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1058:PRO:HD3	1:A:1197:GLN:HE22	1.63	0.64
1:B:309:ARG:NH2	1:B:371:TYR:OH	2.31	0.64
1:B:1042:ARG:O	1:B:1144:TYR:OH	2.15	0.64
1:B:1115:TRP:CH2	1:B:1119:THR:HG23	2.33	0.64
1:A:662:ILE:HB	1:A:663:PRO:HD2	1.80	0.64
1:A:841:ASP:HA	1:A:1004:TYR:CD2	2.33	0.64
1:A:845:THR:N	1:A:1002:GLN:O	2.29	0.63
1:A:1247:LEU:HG	1:A:1251:ILE:HG12	1.80	0.63
1:B:773:LYS:HG2	1:B:797:LEU:HD13	1.79	0.63
1:B:951:TRP:HZ3	1:B:1042:ARG:HB3	1.62	0.63
1:B:958:SER:HA	1:B:993:ARG:HH22	1.62	0.63
1:B:1059:LEU:O	1:B:1204:TYR:HA	1.98	0.63
1:B:1187:ASP:HA	1:B:1220:ILE:N	2.11	0.63
1:A:468:ARG:HH11	1:A:471:ARG:HH11	1.45	0.63
1:A:1052:SER:O	1:A:1195:ALA:HB3	1.99	0.63
1:B:691:ILE:O	1:B:703:ARG:NH1	2.32	0.63
1:A:494:THR:HG23	1:A:1274:VAL:HG22	1.80	0.63
1:A:343:THR:HG23	1:A:1170:ILE:HD11	1.79	0.63
1:A:484:THR:HA	1:A:487:ALA:HB3	1.79	0.63
1:A:521:ARG:HA	1:A:524:ASN:HB2	1.80	0.63
1:A:974:LYS:NZ	1:A:981:ASP:O	2.31	0.63
1:B:402:TRP:HA	1:B:405:ILE:HD12	1.81	0.63
1:B:516:ILE:O	1:B:520:ILE:HG12	1.98	0.63
1:A:516:ILE:HA	1:A:519:ILE:HD12	1.81	0.63
1:B:333:HIS:HA	1:B:336:LYS:CG	2.27	0.63
1:B:849:VAL:O	1:B:861:ALA:N	2.31	0.63
1:A:566:SER:HB2	1:A:573:PRO:HD3	1.81	0.62
1:A:473:ASN:O	1:A:508:ARG:NH2	2.31	0.62
1:B:1147:MET:HB2	1:B:1177:SER:OG	2.00	0.62
1:A:1068:ASP:OD1	1:A:1071:THR:N	2.31	0.62
1:B:326:PRO:O	1:B:331:ASN:ND2	2.32	0.62
1:B:869:THR:HG23	1:B:870:THR:H	1.65	0.62
1:B:951:TRP:CZ3	1:B:1042:ARG:HB3	2.34	0.62
1:B:965:PHE:HA	1:B:968:TRP:CD1	2.32	0.62
1:B:1047:ILE:HG23	1:B:1199:ILE:HG13	1.81	0.62
1:B:377:GLY:HA2	1:B:443:ALA:HB3	1.81	0.62
1:B:1189:ASP:HA	1:B:1221:ALA:HB2	1.81	0.62
1:A:673:ARG:HH22	1:B:784:GLY:H	1.47	0.62
1:B:359:LEU:HD12	1:B:359:LEU:H	1.65	0.62
1:B:603:VAL:O	1:B:873:VAL:N	2.22	0.62
1:A:419:ILE:O	1:A:423:VAL:HG23	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:531:VAL:O	1:A:534:PRO:HD2	2.00	0.62
1:B:708:ILE:N	1:B:711:ARG:HH21	1.97	0.62
1:B:882:ILE:O	1:B:886:LEU:HG	2.00	0.62
1:B:1029:GLU:HA	1:B:1032:ASN:HB2	1.82	0.62
1:A:516:ILE:O	1:A:520:ILE:HG12	2.00	0.62
1:A:705:TRP:HA	1:A:708:ILE:HD12	1.81	0.62
1:B:670:THR:HB	1:B:673:ARG:HB2	1.80	0.62
1:A:553:PRO:HA	1:A:556:ILE:HB	1.81	0.62
1:B:897:THR:OG1	1:B:898:ASN:N	2.33	0.62
1:A:506:PRO:HD2	1:A:507:TYR:CZ	2.33	0.62
1:A:913:GLU:O	1:A:917:ASN:N	2.32	0.61
1:B:522:ILE:HA	1:B:525:ILE:HD12	1.81	0.61
1:B:750:VAL:HG21	1:B:814:LEU:HD11	1.80	0.61
1:B:929:GLN:HE22	1:B:1015:MET:HB2	1.65	0.61
1:B:1149:HIS:O	1:B:1182:VAL:N	2.28	0.61
1:B:713:TRP:CD2	1:B:714:PRO:HD2	2.36	0.61
1:B:931:LEU:O	1:B:935:VAL:HG23	2.01	0.61
1:A:518:GLN:O	1:A:522:ILE:HG12	2.00	0.61
1:B:1047:ILE:HG13	1:B:1199:ILE:HG23	1.81	0.61
1:B:1164:SER:HA	1:B:1167:LEU:HD12	1.81	0.61
1:A:457:LEU:O	1:A:461:ILE:N	2.19	0.61
1:A:636:LEU:HD13	1:A:648:ALA:HB2	1.83	0.61
1:A:941:THR:HG23	1:A:942:GLN:H	1.64	0.61
1:B:476:PRO:HA	1:B:479:ILE:HD12	1.82	0.61
1:B:825:MET:SD	1:B:825:MET:N	2.73	0.61
1:B:1233:ASN:OD1	1:B:1236:THR:OG1	2.19	0.61
1:A:385:PHE:HZ	1:A:412:GLY:HA2	1.64	0.61
1:A:483:LEU:O	1:A:487:ALA:N	2.26	0.61
1:A:567:THR:HA	1:A:572:SER:HB2	1.82	0.61
1:A:1156:TYR:HD1	1:A:1194:PRO:HB2	1.65	0.61
1:A:330:ASN:OD1	1:A:1148:LEU:N	2.33	0.61
1:A:418:LYS:HG3	1:A:1217:PRO:HA	1.82	0.61
1:A:858:THR:O	1:A:996:GLN:NE2	2.33	0.61
1:B:1224:ASP:OD1	1:B:1225:LYS:N	2.34	0.61
1:A:662:ILE:HG22	1:A:698:ASP:HB3	1.82	0.61
1:B:355:ARG:NH1	1:B:954:SER:O	2.34	0.61
1:A:649:PHE:CE2	1:A:688:PHE:HB2	2.35	0.61
1:A:705:TRP:NE1	1:A:709:ILE:HD11	2.15	0.60
1:A:1260:TYR:HD2	1:A:1262:TYR:HE2	1.49	0.60
1:B:854:ARG:HH22	1:B:857:ILE:HA	1.65	0.60
1:A:916:SER:HA	1:A:919:GLN:HE21	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1046:ILE:HG13	1:A:1202:THR:HG22	1.83	0.60
1:A:362:LEU:O	1:A:366:VAL:HG23	2.02	0.60
1:A:1122:PHE:HB3	1:A:1126:PHE:CE2	2.36	0.60
1:B:423:VAL:HA	1:B:426:CYS:SG	2.41	0.60
1:B:450:VAL:O	1:B:1256:VAL:HA	2.01	0.60
1:B:694:ILE:HB	1:B:703:ARG:HH11	1.66	0.60
1:B:776:VAL:O	1:B:782:GLN:NE2	2.34	0.60
1:B:892:PRO:HD2	1:B:895:LEU:HD22	1.82	0.60
1:B:1058:PRO:HB3	1:B:1200:ILE:HG23	1.83	0.60
1:B:1258:THR:HG1	1:B:1260:TYR:HH	1.48	0.60
1:B:312:SER:OG	1:B:314:VAL:O	2.19	0.60
1:B:407:TYR:HD2	1:B:410:ARG:HD3	1.66	0.60
1:B:669:TYR:OH	1:B:682:HIS:O	2.18	0.60
1:B:850:THR:HG23	1:B:860:PRO:HA	1.83	0.60
1:A:600:TYR:HE2	1:A:828:PHE:HE2	1.50	0.60
1:A:865:SER:O	1:A:868:ASN:ND2	2.34	0.60
1:B:373:ASN:O	1:B:374:ARG:NH1	2.30	0.60
1:B:449:ASP:HB3	1:B:1256:VAL:HB	1.83	0.60
1:A:521:ARG:HD2	1:A:828:PHE:CD1	2.36	0.60
1:A:646:VAL:HG11	1:A:684:TRP:HB3	1.84	0.60
1:A:1055:LEU:HD11	1:A:1190:ILE:HD11	1.84	0.60
1:A:1186:SER:HB2	1:A:1221:ALA:HA	1.83	0.60
1:A:409:THR:HG23	1:A:410:ARG:HG3	1.84	0.60
1:A:591:PHE:CE2	1:A:882:ILE:HA	2.37	0.60
1:A:604:VAL:HB	1:A:875:LEU:HD11	1.84	0.60
1:A:983:LEU:C	1:A:985:GLU:H	2.03	0.60
1:B:634:LEU:HD21	1:B:768:VAL:HG21	1.83	0.60
1:B:1020:ILE:O	1:B:1024:VAL:HG23	2.02	0.60
1:B:1095:ARG:NH1	1:B:1096:ASP:O	2.33	0.60
1:A:900:TRP:HD1	1:A:901:TYR:CD2	2.19	0.60
1:A:920:ARG:NE	1:A:981:ASP:OD2	2.27	0.60
1:A:397:PRO:O	1:A:402:TRP:NE1	2.34	0.59
1:B:417:SER:O	1:B:421:ASN:N	2.24	0.59
1:B:612:SER:HB2	1:B:632:LEU:HD21	1.83	0.59
1:B:853:SER:HB2	1:B:995:THR:H	1.67	0.59
1:B:1069:ARG:HH22	1:B:1110:PHE:N	2.00	0.59
1:B:1075:HIS:CE1	1:B:1106:GLY:HA3	2.37	0.59
1:B:1119:THR:HG22	1:B:1120:ARG:HD3	1.82	0.59
1:A:1231:ARG:HB2	1:A:1232:TYR:CZ	2.37	0.59
1:B:476:PRO:HA	1:B:479:ILE:HB	1.84	0.59
1:B:479:ILE:O	1:B:483:LEU:HG	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:548:PRO:O	1:B:550:GLN:NE2	2.34	0.59
1:B:782:GLN:N	1:B:782:GLN:OE1	2.36	0.59
1:B:839:ASP:HB3	1:B:842:ARG:NE	2.12	0.59
1:B:1170:ILE:HG12	1:B:1176:PRO:HD2	1.84	0.59
1:B:1175:ILE:HD12	1:B:1176:PRO:HD2	1.84	0.59
1:A:822:ILE:HB	1:A:823:ALA:HA	1.83	0.59
1:B:370:LEU:HD22	1:B:465:TRP:CG	2.37	0.59
1:B:665:ASP:HB3	1:B:686:ARG:CZ	2.31	0.59
1:B:668:ILE:HG22	1:B:673:ARG:NH1	2.17	0.59
1:B:1003:GLN:HB2	1:B:1005:ASN:OD1	2.02	0.59
1:A:359:LEU:O	1:A:363:LEU:HG	2.02	0.59
1:A:514:ARG:NE	1:A:729:SER:O	2.35	0.59
1:A:941:THR:HA	1:A:993:ARG:HD2	1.84	0.59
1:B:352:LEU:HB2	1:B:353:MET:HE2	1.84	0.59
1:B:766:ALA:O	1:B:770:GLU:HG2	2.02	0.59
1:A:357:ASN:OD1	1:A:357:ASN:N	2.36	0.59
1:A:721:TYR:CE2	1:A:824:PRO:HB3	2.37	0.59
1:B:743:ILE:HG22	1:B:744:ASP:H	1.68	0.59
1:A:740:LEU:HB3	1:A:835:TYR:CE1	2.38	0.59
1:B:332:ILE:HD11	1:B:349:ALA:HB2	1.84	0.59
1:B:525:ILE:HG12	1:B:531:VAL:HG11	1.83	0.59
1:A:974:LYS:NZ	1:A:983:LEU:HD12	2.17	0.59
1:B:1051:GLN:HG2	1:B:1196:VAL:HA	1.85	0.59
1:A:473:ASN:OD1	1:A:505:MET:N	2.32	0.59
1:B:390:ASN:O	1:B:433:ARG:HB2	2.03	0.59
1:B:930:THR:HG23	1:B:1021:ALA:HB2	1.84	0.59
1:A:773:LYS:HE2	1:A:797:LEU:HB3	1.85	0.59
1:A:931:LEU:HD11	1:A:984:LEU:HD13	1.84	0.59
1:A:1064:ASP:N	1:A:1064:ASP:OD1	2.32	0.59
1:B:939:SER:HB3	1:B:956:ARG:HG2	1.85	0.59
1:A:577:ILE:HD13	1:A:627:TRP:CD2	2.38	0.58
1:B:333:HIS:CG	1:B:336:LYS:HE3	2.38	0.58
1:B:985:GLU:O	1:B:989:SER:N	2.36	0.58
1:A:438:GLN:OE1	1:A:440:MET:N	2.34	0.58
1:B:854:ARG:NE	1:B:854:ARG:O	2.36	0.58
1:B:1211:CYS:HA	1:B:1225:LYS:HG3	1.84	0.58
1:A:766:ALA:O	1:A:770:GLU:HG2	2.03	0.58
1:A:801:LYS:HG3	1:A:802:LEU:HG	1.84	0.58
1:B:374:ARG:H	1:B:1259:ARG:HH21	1.51	0.58
1:A:763:ASN:HB3	1:A:767:ARG:NH2	2.18	0.58
1:A:807:THR:O	1:A:811:LEU:HG	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:339:LEU:HD11	1:B:965:PHE:HD1	1.69	0.58
1:B:621:THR:HA	1:B:785:TRP:CZ2	2.37	0.58
1:A:471:ARG:HG3	1:A:472:MET:HG3	1.85	0.58
1:A:504:LEU:HG	1:A:506:PRO:HD3	1.84	0.58
1:B:345:SER:OG	1:B:346:VAL:N	2.36	0.58
1:B:350:ASN:OD1	1:B:352:LEU:N	2.35	0.58
1:B:1069:ARG:HH11	1:B:1138:ARG:HB3	1.67	0.58
1:A:680:THR:HG21	1:A:682:HIS:HD1	1.69	0.58
1:A:857:ILE:HD13	1:A:862:LEU:HD13	1.85	0.58
1:A:924:THR:O	1:A:928:VAL:HG23	2.03	0.58
1:A:1216:SER:OG	1:A:1218:GLN:O	2.16	0.58
1:B:941:THR:HG22	1:B:942:GLN:H	1.68	0.58
1:A:1082:ARG:HH21	1:A:1095:ARG:HD2	1.69	0.58
1:B:582:ARG:O	1:B:584:SER:N	2.32	0.58
1:A:863:SER:OG	1:A:866:THR:OG1	2.19	0.58
1:A:1149:HIS:HB2	1:A:1181:MET:SD	2.44	0.58
1:B:1046:ILE:HG13	1:B:1202:THR:HG22	1.86	0.58
1:B:1078:GLY:N	1:B:1081:CYS:SG	2.76	0.58
1:B:690:ASN:HD21	1:B:692:GLN:HG2	1.68	0.58
1:A:453:THR:HA	1:A:1254:TYR:HA	1.86	0.57
1:A:981:ASP:OD1	1:A:981:ASP:N	2.36	0.57
1:B:453:THR:HA	1:B:1254:TYR:HA	1.85	0.57
1:A:317:ASP:OD1	1:A:318:ARG:N	2.37	0.57
1:A:422:PHE:O	1:A:425:SER:OG	2.21	0.57
1:B:304:ILE:HG13	1:B:1210:PHE:HB2	1.86	0.57
1:B:772:MET:O	1:B:776:VAL:HG13	2.04	0.57
1:B:1030:VAL:O	1:B:1034:GLU:N	2.35	0.57
1:B:376:THR:HG21	1:B:392:ARG:HH11	1.68	0.57
1:B:542:LEU:HB3	1:B:545:ARG:HH21	1.68	0.57
1:B:782:GLN:HB2	1:B:785:TRP:CE2	2.39	0.57
1:B:814:LEU:N	1:B:816:PRO:HD2	2.20	0.57
1:A:1060:ALA:HB2	1:A:1204:TYR:CD1	2.38	0.57
1:B:691:ILE:HG21	1:B:710:HIS:HE1	1.69	0.57
1:A:454:SER:O	1:A:1255:ASN:ND2	2.37	0.57
1:A:810:TYR:HA	1:A:814:LEU:HB2	1.87	0.57
1:A:1079:ARG:HH11	1:A:1114:LEU:H	1.52	0.57
1:B:448:VAL:C	1:B:1258:THR:HA	2.25	0.57
1:B:759:ASN:HD21	1:B:761:LEU:HD12	1.69	0.57
1:B:787:GLN:HG3	1:B:789:LEU:HD22	1.87	0.57
1:B:815:ALA:HA	1:B:818:GLU:HG2	1.86	0.57
1:B:1198:TYR:HB2	1:B:1199:ILE:HD12	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:429:ASN:O	1:A:431:VAL:N	2.37	0.57
1:A:1230:GLU:HG3	1:A:1231:ARG:HG2	1.87	0.57
1:B:1127:ASP:OD1	1:B:1127:ASP:N	2.36	0.57
1:A:445:SER:OG	1:A:447:TRP:O	2.15	0.57
1:A:854:ARG:HB3	1:A:857:ILE:HB	1.86	0.57
1:A:1041:ALA:O	1:A:1143:ALA:HA	2.05	0.57
1:A:521:ARG:HD2	1:A:828:PHE:HD1	1.69	0.57
1:A:668:ILE:HG22	1:A:678:PHE:CE2	2.39	0.57
1:A:807:THR:HG22	1:A:811:LEU:HD11	1.87	0.57
1:A:945:VAL:HG12	1:A:946:ASP:H	1.69	0.57
1:B:681:PRO:HB2	1:B:840:ARG:HE	1.70	0.57
1:A:354:PHE:HD2	1:A:952:ILE:HD11	1.70	0.57
1:A:472:MET:HB2	1:A:506:PRO:HA	1.86	0.57
1:A:1166:TRP:NE1	1:A:1176:PRO:HB2	2.20	0.57
1:A:1120:ARG:HD2	1:A:1121:TYR:N	2.20	0.57
1:B:511:ASN:OD1	1:B:729:SER:N	2.35	0.57
1:B:773:LYS:NZ	1:B:798:ASP:OD1	2.35	0.57
1:B:1087:MET:HG3	1:B:1088:ASN:ND2	2.20	0.57
1:A:303:ARG:HB2	1:A:1210:PHE:CD1	2.40	0.56
1:A:432:GLY:C	1:A:450:VAL:HG23	2.26	0.56
1:A:680:THR:HB	1:A:683:THR:HG23	1.87	0.56
1:A:1123:ASN:ND2	1:A:1168:GLU:OE1	2.36	0.56
1:B:318:ARG:N	1:B:371:TYR:OH	2.37	0.56
1:B:894:ASP:OD1	1:B:894:ASP:N	2.38	0.56
1:A:938:ILE:HA	1:A:947:ARG:CZ	2.35	0.56
1:B:376:THR:OG1	1:B:444:MET:SD	2.59	0.56
1:B:403:TYR:O	1:B:406:MET:N	2.38	0.56
1:B:1046:ILE:HG21	1:B:1136:ARG:HH21	1.70	0.56
1:B:1208:SER:O	1:B:1208:SER:OG	2.22	0.56
1:A:332:ILE:HD11	1:A:335:PHE:HB2	1.86	0.56
1:A:375:HIS:N	1:A:1260:TYR:O	2.29	0.56
1:A:515:GLN:O	1:A:519:ILE:HG13	2.05	0.56
1:A:777:ASP:HA	1:A:790:VAL:HG11	1.86	0.56
1:A:967:GLU:O	1:A:971:THR:OG1	2.24	0.56
1:B:555:ILE:HD11	1:B:890:LYS:HD3	1.88	0.56
1:B:556:ILE:HD12	1:B:556:ILE:H	1.69	0.56
1:B:902:ALA:HB2	1:B:1274:VAL:O	2.05	0.56
1:B:961:THR:OG1	1:B:962:ALA:N	2.38	0.56
1:B:1057:SER:O	1:B:1060:ALA:N	2.36	0.56
1:A:694:ILE:HB	1:A:703:ARG:HH11	1.69	0.56
1:A:899:VAL:O	1:A:903:ASP:HB2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1131:LYS:HA	1:A:1198:TYR:HE2	1.69	0.56
1:B:676:SER:O	1:B:679:SER:OG	2.22	0.56
1:A:465:TRP:CE2	1:A:469:LEU:HD11	2.40	0.56
1:A:548:PRO:HD2	1:A:891:TYR:CE1	2.40	0.56
1:A:841:ASP:HB3	1:A:1005:ASN:HB3	1.87	0.56
1:B:810:TYR:N	1:B:891:TYR:OH	2.39	0.56
1:A:370:LEU:HB3	1:A:465:TRP:CZ2	2.41	0.56
1:A:504:LEU:HD11	1:A:506:PRO:HB3	1.88	0.56
1:A:601:ASN:OD1	1:A:833:VAL:N	2.39	0.56
1:B:1007:ARG:NH1	1:B:1008:THR:O	2.38	0.56
1:A:464:ARG:NE	1:A:1022:ASP:OD2	2.38	0.56
1:A:846:MET:HA	1:A:871:VAL:HG21	1.86	0.56
1:A:965:PHE:O	1:A:969:VAL:HG23	2.05	0.56
1:B:473:ASN:OD1	1:B:474:ILE:N	2.38	0.56
1:B:500:SER:H	1:B:503:ARG:NH2	2.04	0.56
1:B:731:ASN:HB3	1:B:734:THR:HG23	1.86	0.56
1:A:484:THR:O	1:A:489:GLY:N	2.38	0.56
1:A:532:ILE:O	1:A:536:LEU:HD23	2.06	0.56
1:A:970:ASN:ND2	1:A:983:LEU:O	2.38	0.56
1:A:1061:PRO:HB2	1:A:1065:LEU:HD12	1.88	0.56
1:A:1260:TYR:CD2	1:A:1262:TYR:HE2	2.24	0.56
1:A:897:THR:OG1	1:A:898:ASN:N	2.39	0.56
1:A:418:LYS:HE2	1:A:1217:PRO:O	2.06	0.56
1:A:863:SER:HG	1:A:866:THR:HG1	1.52	0.56
1:A:864:LEU:HD23	1:A:865:SER:H	1.71	0.56
1:B:519:ILE:O	1:B:523:MET:HG3	2.05	0.56
1:B:632:LEU:O	1:B:636:LEU:HG	2.06	0.56
1:B:666:ASN:HB3	1:B:669:TYR:CD1	2.41	0.56
1:B:1064:ASP:OD1	1:B:1065:LEU:N	2.37	0.56
1:A:320:SER:OG	1:A:364:GLU:O	2.23	0.55
1:A:797:LEU:HD23	1:A:800:LEU:HD12	1.88	0.55
1:B:452:GLU:N	1:B:1255:ASN:O	2.37	0.55
1:B:548:PRO:HB2	1:B:892:PRO:HG2	1.87	0.55
1:A:582:ARG:HB2	1:A:880:ARG:NH2	2.21	0.55
1:A:1148:LEU:HA	1:A:1180:PHE:H	1.69	0.55
1:B:475:ASN:O	1:B:478:GLU:HG2	2.06	0.55
1:B:849:VAL:HB	1:B:999:ILE:HD12	1.88	0.55
1:B:1112:LEU:HB3	1:B:1116:GLN:HE21	1.71	0.55
1:A:807:THR:OG1	1:A:885:ALA:O	2.24	0.55
1:A:855:ASP:OD2	1:B:711:ARG:HB3	2.06	0.55
1:A:1058:PRO:HB3	1:A:1200:ILE:HG22	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:556:ILE:O	1:B:560:MET:N	2.32	0.55
1:B:817:VAL:O	1:B:821:VAL:HG23	2.06	0.55
1:A:686:ARG:HG3	1:A:690:ASN:CG	2.26	0.55
1:A:779:GLN:HA	1:A:782:GLN:CD	2.26	0.55
1:A:1113:ALA:O	1:A:1117:MET:HG3	2.06	0.55
1:A:1115:TRP:HA	1:A:1122:PHE:HE2	1.71	0.55
1:A:646:VAL:HG22	1:A:688:PHE:CE2	2.41	0.55
1:A:1146:TYR:HA	1:A:1178:VAL:N	2.20	0.55
1:B:591:PHE:CE1	1:B:595:LEU:HD21	2.41	0.55
1:B:1126:PHE:HA	1:B:1129:TRP:CD1	2.42	0.55
1:A:514:ARG:HH22	1:A:518:GLN:HE21	1.54	0.55
1:A:593:VAL:HG23	1:A:594:ALA:H	1.72	0.55
1:A:983:LEU:O	1:A:985:GLU:HG3	2.07	0.55
1:A:1079:ARG:HA	1:A:1114:LEU:HD12	1.88	0.55
1:B:325:ALA:O	1:B:331:ASN:ND2	2.39	0.55
1:B:349:ALA:N	1:B:1175:ILE:O	2.39	0.55
1:B:604:VAL:HA	1:B:873:VAL:N	2.21	0.55
1:B:699:ALA:HB1	1:B:702:LEU:HG	1.89	0.55
1:B:773:LYS:HZ2	1:B:797:LEU:HB2	1.72	0.55
1:A:952:ILE:HD12	1:A:953:PRO:HD2	1.89	0.55
1:B:338:LEU:HD11	1:B:361:MET:N	2.22	0.55
1:B:439:MET:HG3	1:B:446:GLU:HB2	1.89	0.55
1:B:468:ARG:N	1:B:471:ARG:HH21	2.05	0.55
1:B:965:PHE:O	1:B:968:TRP:HB2	2.07	0.55
1:B:983:LEU:HD23	1:B:984:LEU:HB2	1.87	0.55
1:B:1104:PHE:HD2	1:B:1129:TRP:CD2	2.24	0.55
1:A:370:LEU:HB3	1:A:465:TRP:CE2	2.40	0.55
1:A:549:LEU:HB2	1:A:891:TYR:HE1	1.72	0.55
1:A:1098:THR:HG23	1:A:1100:MET:HG2	1.89	0.55
1:B:360:HIS:HA	1:B:363:LEU:HD12	1.89	0.55
1:B:546:ILE:HG12	1:B:901:TYR:HE2	1.71	0.55
1:B:684:TRP:CD2	1:B:840:ARG:HB2	2.42	0.55
1:B:850:THR:HA	1:B:861:ALA:H	1.72	0.55
1:A:928:VAL:HG22	1:A:984:LEU:HD21	1.87	0.55
1:A:1026:LEU:O	1:A:1030:VAL:HG23	2.07	0.55
1:B:437:ALA:HB2	1:B:447:TRP:CE3	2.42	0.55
1:B:518:GLN:HG3	1:B:828:PHE:HE1	1.72	0.55
1:B:914:VAL:HA	1:B:917:ASN:ND2	2.22	0.55
1:B:1151:TYR:CD2	1:B:1181:MET:HG2	2.42	0.55
1:A:713:TRP:HB3	1:A:837:ARG:NH2	2.22	0.54
1:A:1156:TYR:HE1	1:A:1196:VAL:HG23	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:322:VAL:HA	1:B:365:PHE:CD2	2.42	0.54
1:B:502:ASN:O	1:B:504:LEU:HG	2.07	0.54
1:B:807:THR:HG22	1:B:811:LEU:HD21	1.89	0.54
1:A:518:GLN:HG3	1:A:732:LEU:HD11	1.88	0.54
1:A:707:GLU:HA	1:A:710:HIS:CD2	2.42	0.54
1:A:1126:PHE:O	1:A:1130:ILE:HG22	2.07	0.54
1:B:632:LEU:O	1:B:635:ALA:N	2.40	0.54
1:B:721:TYR:CD2	1:B:739:LEU:HB2	2.42	0.54
1:B:1032:ASN:HA	1:B:1035:TYR:CE2	2.41	0.54
1:A:488:GLN:HB3	1:A:490:TYR:CD2	2.42	0.54
1:A:657:VAL:HG22	1:A:671:GLN:HG3	1.90	0.54
1:A:1057:SER:OG	1:A:1060:ALA:N	2.40	0.54
1:A:1141:MET:HG2	1:A:1144:TYR:HB3	1.88	0.54
1:B:667:GLN:HE21	1:B:668:ILE:HG13	1.72	0.54
1:B:1079:ARG:HH12	1:B:1118:ASN:HD21	1.53	0.54
1:A:353:MET:O	1:A:357:ASN:ND2	2.40	0.54
1:A:763:ASN:O	1:A:767:ARG:HG2	2.07	0.54
1:B:376:THR:H	1:B:444:MET:HB2	1.72	0.54
1:B:1252:ASP:CG	1:B:1255:ASN:HD21	2.07	0.54
1:A:557:SER:HA	1:A:560:MET:HG3	1.90	0.54
1:A:788:SER:O	1:A:791:SER:OG	2.15	0.54
1:A:818:GLU:HA	1:A:821:VAL:HG23	1.89	0.54
1:A:969:VAL:O	1:A:973:LEU:HG	2.07	0.54
1:B:374:ARG:H	1:B:1259:ARG:HE	1.56	0.54
1:B:540:SER:O	1:B:544:GLN:HG3	2.08	0.54
1:B:600:TYR:CZ	1:B:830:PRO:HA	2.42	0.54
1:B:666:ASN:OD1	1:B:669:TYR:N	2.36	0.54
1:B:792:SER:O	1:B:796:THR:OG1	2.17	0.54
1:B:1019:VAL:HA	1:B:1022:ASP:OD2	2.08	0.54
1:A:574:ALA:HA	1:A:577:ILE:HG22	1.89	0.54
1:A:939:SER:OG	1:A:939:SER:O	2.22	0.54
1:B:600:TYR:CE2	1:B:830:PRO:HA	2.42	0.54
1:B:601:ASN:HB3	1:B:832:GLN:HA	1.90	0.54
1:A:302:SER:N	1:A:307:HIS:HB3	2.22	0.54
1:A:796:THR:O	1:A:800:LEU:HG	2.08	0.54
1:A:977:PHE:H	1:A:979:LEU:HD12	1.73	0.54
1:A:1118:ASN:OD1	1:A:1120:ARG:NE	2.41	0.54
1:A:1160:TRP:O	1:A:1163:ALA:N	2.29	0.54
1:A:1260:TYR:HD2	1:A:1262:TYR:CE2	2.26	0.54
1:B:573:PRO:HG3	1:B:793:MET:SD	2.47	0.54
1:B:1158:ASN:ND2	1:B:1160:TRP:HB3	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:971:THR:O	1:A:975:THR:HG23	2.08	0.54
1:B:518:GLN:O	1:B:522:ILE:HG13	2.07	0.54
1:B:601:ASN:H	1:B:832:GLN:HA	1.72	0.54
1:B:837:ARG:HG3	1:B:838:LEU:HG	1.89	0.54
1:A:549:LEU:HA	1:A:890:LYS:O	2.08	0.54
1:B:474:ILE:HG23	1:B:508:ARG:HH21	1.73	0.54
1:A:385:PHE:CZ	1:A:412:GLY:HA2	2.43	0.54
1:A:937:GLN:OE1	1:A:947:ARG:HA	2.08	0.54
1:A:1079:ARG:HH12	1:A:1111:PRO:C	2.12	0.54
1:A:1151:TYR:N	1:A:1182:VAL:O	2.40	0.54
1:A:1166:TRP:CE3	1:A:1167:LEU:HG	2.43	0.54
1:A:434:PHE:CD2	1:A:435:ASP:HB2	2.43	0.53
1:A:740:LEU:HB3	1:A:835:TYR:HE1	1.74	0.53
1:A:895:LEU:HG	1:A:900:TRP:NE1	2.23	0.53
1:B:508:ARG:HE	1:B:726:VAL:HG13	1.73	0.53
1:B:851:ARG:H	1:B:861:ALA:HB2	1.73	0.53
1:B:1149:HIS:N	1:B:1180:PHE:O	2.34	0.53
1:A:591:PHE:HE2	1:A:882:ILE:HA	1.73	0.53
1:B:375:HIS:HA	1:B:444:MET:HE2	1.89	0.53
1:B:376:THR:N	1:B:444:MET:SD	2.81	0.53
1:B:1032:ASN:HA	1:B:1035:TYR:CZ	2.43	0.53
1:B:1069:ARG:HH22	1:B:1110:PHE:H	1.54	0.53
1:A:582:ARG:HB2	1:A:880:ARG:HH21	1.73	0.53
1:B:686:ARG:O	1:B:690:ASN:N	2.41	0.53
1:B:1156:TYR:CE2	1:B:1158:ASN:HA	2.43	0.53
1:A:375:HIS:HA	1:A:392:ARG:HH22	1.74	0.53
1:A:1186:SER:CB	1:A:1221:ALA:HA	2.38	0.53
1:B:482:ALA:O	1:B:485:GLU:N	2.41	0.53
1:B:629:PHE:CZ	1:B:652:LEU:HB2	2.43	0.53
1:B:636:LEU:O	1:B:638:MET:N	2.41	0.53
1:B:639:THR:OG1	1:B:640:THR:N	2.42	0.53
1:B:1232:TYR:O	1:B:1236:THR:HG23	2.08	0.53
1:A:920:ARG:O	1:A:924:THR:OG1	2.15	0.53
1:A:958:SER:HG	1:A:961:THR:H	1.54	0.53
1:B:325:ALA:CB	1:B:331:ASN:HA	2.38	0.53
1:B:371:TYR:C	1:B:462:ARG:HH21	2.12	0.53
1:A:378:PHE:CZ	1:A:392:ARG:HD3	2.43	0.53
1:A:851:ARG:HA	1:A:997:LEU:HD22	1.89	0.53
1:A:949:LEU:HG	1:A:951:TRP:CE2	2.44	0.53
1:A:1147:MET:HG3	1:A:1179:PRO:HA	1.90	0.53
1:B:301:VAL:CA	1:B:1214:SER:HB2	2.37	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:379:SER:N	1:B:393:SER:HB3	2.22	0.53
1:B:540:SER:OG	1:B:592:ARG:HB2	2.09	0.53
1:B:721:TYR:CG	1:B:739:LEU:HD22	2.44	0.53
1:B:996:GLN:OE1	1:B:997:LEU:N	2.34	0.53
1:A:810:TYR:HA	1:A:814:LEU:HD23	1.90	0.53
1:A:938:ILE:HG23	1:A:948:TYR:H	1.73	0.53
1:B:480:GLU:O	1:B:484:THR:OG1	2.25	0.53
1:B:626:LEU:O	1:B:630:PHE:HB2	2.09	0.53
1:A:514:ARG:O	1:A:518:GLN:HG2	2.08	0.53
1:A:720:ARG:NH1	1:A:722:GLY:O	2.42	0.53
1:B:433:ARG:HG2	1:B:436:ARG:HH11	1.72	0.53
1:B:548:PRO:HD2	1:B:810:TYR:HE1	1.74	0.53
1:A:529:ALA:HA	1:A:532:ILE:HG23	1.91	0.53
1:A:983:LEU:H	1:A:985:GLU:CD	2.11	0.53
1:A:1002:GLN:HA	1:A:1007:ARG:O	2.09	0.53
1:B:316:PHE:HB2	1:B:371:TYR:CD2	2.43	0.53
1:B:616:ASP:HB3	1:B:674:ARG:HD2	1.91	0.53
1:B:656:MET:SD	1:B:660:GLU:HB2	2.49	0.53
1:B:1000:GLN:HB2	1:B:1010:ASP:OD1	2.09	0.53
1:B:920:ARG:O	1:B:924:THR:OG1	2.18	0.53
1:B:1037:LEU:CA	1:B:1207:ARG:HG3	2.39	0.53
1:B:1166:TRP:CZ3	1:B:1170:ILE:HD11	2.44	0.53
1:B:1232:TYR:HB3	1:B:1235:LEU:HD12	1.90	0.53
1:A:312:SER:HB3	1:A:1259:ARG:HH12	1.74	0.52
1:A:592:ARG:HA	1:A:595:LEU:HD12	1.92	0.52
1:A:759:ASN:HD22	1:A:808:PRO:HB3	1.73	0.52
1:B:355:ARG:HB3	1:B:954:SER:HB2	1.91	0.52
1:B:810:TYR:HA	1:B:814:LEU:HB2	1.91	0.52
1:B:1115:TRP:HH2	1:B:1123:ASN:HD21	1.56	0.52
1:A:644:ALA:HA	1:A:647:LYS:HB2	1.91	0.52
1:B:358:VAL:HG12	1:B:362:LEU:HD23	1.91	0.52
1:B:606:THR:HG1	1:B:639:THR:HG1	1.55	0.52
1:B:733:PHE:HD1	1:B:834:PRO:HD3	1.73	0.52
1:A:353:MET:HE3	1:A:356:ALA:H	1.74	0.52
1:B:759:ASN:ND2	1:B:808:PRO:HB2	2.24	0.52
1:A:406:MET:HG3	1:A:452:GLU:HB2	1.91	0.52
1:A:479:ILE:HG13	1:A:483:LEU:HD23	1.90	0.52
1:B:432:GLY:O	1:B:451:PHE:N	2.42	0.52
1:B:792:SER:OG	1:B:793:MET:N	2.43	0.52
1:B:1151:TYR:CZ	1:B:1183:PRO:HB3	2.45	0.52
1:B:1247:LEU:HA	1:B:1249:GLU:N	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:330:ASN:HA	1:A:1148:LEU:H	1.75	0.52
1:A:851:ARG:O	1:A:995:THR:HA	2.09	0.52
1:B:432:GLY:N	1:B:451:PHE:HB2	2.25	0.52
1:B:846:MET:HB3	1:B:1002:GLN:HG2	1.90	0.52
1:B:1095:ARG:HG2	1:B:1099:GLY:HA2	1.91	0.52
1:A:949:LEU:HG	1:A:951:TRP:NE1	2.25	0.52
1:B:400:GLU:O	1:B:403:TYR:HB2	2.08	0.52
1:B:406:MET:SD	1:B:453:THR:OG1	2.68	0.52
1:B:777:ASP:OD1	1:B:794:ARG:NE	2.42	0.52
1:B:1234:ILE:HA	1:B:1238:PRO:HA	1.91	0.52
1:A:340:ASN:HD21	1:A:348:GLY:C	2.13	0.52
1:A:706:ALA:HA	1:A:709:ILE:HD12	1.92	0.52
1:A:713:TRP:O	1:A:715:ASN:ND2	2.43	0.52
1:A:713:TRP:CE3	1:A:714:PRO:HD2	2.45	0.52
1:A:1158:ASN:ND2	1:A:1160:TRP:HB3	2.24	0.52
1:B:448:VAL:HG12	1:B:1259:ARG:O	2.08	0.52
1:A:533:GLN:HG2	1:A:537:GLN:NE2	2.24	0.52
1:A:651:THR:HA	1:A:654:ASN:ND2	2.25	0.52
1:A:1079:ARG:CZ	1:A:1113:ALA:HB3	2.39	0.52
1:B:448:VAL:H	1:B:1259:ARG:N	2.04	0.52
1:B:686:ARG:H	1:B:686:ARG:HD3	1.75	0.52
1:B:844:PRO:HA	1:B:1003:GLN:HA	1.92	0.52
1:B:1005:ASN:OD1	1:B:1006:GLY:N	2.42	0.52
1:B:1071:THR:HG23	1:B:1072:PRO:O	2.09	0.52
1:A:942:GLN:NE2	1:A:994:MET:HA	2.14	0.52
1:A:1034:GLU:OE1	1:A:1207:ARG:NH1	2.34	0.52
1:A:399:ALA:HB1	1:A:403:TYR:CZ	2.45	0.52
1:B:553:PRO:HG3	1:B:884:VAL:HG11	1.92	0.52
1:B:807:THR:O	1:B:811:LEU:HG	2.10	0.52
1:A:381:ASP:OD1	1:A:391:LEU:HB3	2.10	0.51
1:A:550:GLN:OE1	1:A:890:LYS:HG3	2.10	0.51
1:B:401:LYS:O	1:B:404:SER:OG	2.28	0.51
1:A:674:ARG:NH2	1:B:786:THR:OG1	2.42	0.51
1:B:451:PHE:N	1:B:1256:VAL:HG12	2.25	0.51
1:B:717:SER:OG	1:B:744:ASP:HA	2.10	0.51
1:B:880:ARG:O	1:B:884:VAL:HG23	2.10	0.51
1:A:778:ASN:OD1	1:A:779:GLN:N	2.43	0.51
1:A:928:VAL:HA	1:A:931:LEU:HD12	1.92	0.51
1:B:464:ARG:HH22	1:B:1026:LEU:HD21	1.74	0.51
1:B:701:ILE:HG23	1:B:775:LEU:HD11	1.92	0.51
1:B:854:ARG:NH2	1:B:856:ALA:O	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1146:TYR:HE2	1:B:1207:ARG:HH11	1.58	0.51
1:A:559:THR:HA	1:A:562:THR:HG22	1.91	0.51
1:B:999:ILE:HG13	1:B:1000:GLN:H	1.76	0.51
1:B:1036:ASN:O	1:B:1146:TYR:OH	2.28	0.51
1:A:1054:HIS:HB2	1:A:1056:TRP:CD1	2.46	0.51
1:A:1166:TRP:HE1	1:A:1176:PRO:HB2	1.75	0.51
1:B:313:ASN:HD22	1:B:1259:ARG:HH12	1.57	0.51
1:A:1232:TYR:HB3	1:A:1235:LEU:HD12	1.91	0.51
1:B:375:HIS:CD2	1:B:444:MET:HB2	2.46	0.51
1:B:809:MET:HB3	1:B:891:TYR:OH	2.10	0.51
1:B:1166:TRP:CH2	1:B:1175:ILE:HD11	2.44	0.51
1:A:358:VAL:O	1:A:362:LEU:HG	2.10	0.51
1:B:1158:ASN:HB3	1:B:1161:ASN:ND2	2.26	0.51
1:B:1161:ASN:O	1:B:1164:SER:OG	2.24	0.51
1:A:390:ASN:HB2	1:A:433:ARG:HB3	1.93	0.51
1:A:457:LEU:HD12	1:A:457:LEU:H	1.76	0.51
1:A:714:PRO:O	1:A:837:ARG:NE	2.41	0.51
1:A:1058:PRO:O	1:A:1061:PRO:HD3	2.11	0.51
1:B:307:HIS:O	1:B:310:TRP:HZ3	1.94	0.51
1:B:338:LEU:HD21	1:B:361:MET:HB2	1.92	0.51
1:B:607:VAL:N	1:B:875:LEU:O	2.25	0.51
1:B:840:ARG:O	1:B:843:VAL:HB	2.11	0.51
1:B:1247:LEU:HA	1:B:1249:GLU:H	1.76	0.51
1:A:543:LEU:HD23	1:A:592:ARG:HG3	1.92	0.51
1:A:855:ASP:HB2	1:B:711:ARG:HG2	1.93	0.51
1:A:1002:GLN:HG3	1:A:1008:THR:HG22	1.93	0.51
1:B:307:HIS:CE1	1:B:310:TRP:HB3	2.46	0.51
1:A:985:GLU:N	1:A:986:PRO:HD2	2.26	0.51
1:B:628:ASP:HA	1:B:631:ILE:HD12	1.93	0.51
1:B:853:SER:N	1:B:994:MET:HG2	2.25	0.51
1:B:1121:TYR:O	1:B:1125:GLN:HG2	2.11	0.51
1:B:1149:HIS:O	1:B:1181:MET:HA	2.11	0.51
1:A:340:ASN:HB3	1:A:343:THR:O	2.11	0.50
1:A:581:LEU:HG	1:A:880:ARG:NH2	2.27	0.50
1:A:805:SER:OG	1:A:886:LEU:O	2.15	0.50
1:A:915:PHE:O	1:A:919:GLN:HG2	2.11	0.50
1:A:1043:GLY:O	1:A:1144:TYR:HE2	1.94	0.50
1:B:518:GLN:HG3	1:B:828:PHE:CE1	2.46	0.50
1:B:603:VAL:HG13	1:B:831:PHE:CD2	2.46	0.50
1:B:664:MET:O	1:B:686:ARG:NH2	2.43	0.50
1:B:1031:PHE:HE1	1:B:1037:LEU:H	1.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1162:LEU:HD12	1:B:1162:LEU:H	1.76	0.50
1:B:1163:ALA:O	1:B:1167:LEU:HG	2.10	0.50
1:A:335:PHE:HE2	1:A:338:LEU:HD23	1.76	0.50
1:A:721:TYR:HD1	1:A:739:LEU:HD11	1.77	0.50
1:B:685:PRO:HG2	1:B:688:PHE:HB2	1.93	0.50
1:B:713:TRP:HB3	1:B:837:ARG:HH21	1.76	0.50
1:B:850:THR:HG22	1:B:852:GLN:H	1.75	0.50
1:B:1166:TRP:CD1	1:B:1179:PRO:HD3	2.47	0.50
1:A:987:LEU:CG	1:A:992:PRO:HB3	2.39	0.50
1:B:338:LEU:HB3	1:B:357:ASN:HB3	1.92	0.50
1:B:898:ASN:O	1:B:901:TYR:N	2.43	0.50
1:B:1150:TYR:HA	1:B:1182:VAL:HG23	1.93	0.50
1:A:609:ASP:HA	1:A:876:ALA:HB1	1.93	0.50
1:A:785:TRP:HB3	1:A:789:LEU:HD23	1.94	0.50
1:A:807:THR:HG21	1:A:886:LEU:HA	1.92	0.50
1:A:895:LEU:HD23	1:A:901:TYR:CE2	2.46	0.50
1:B:374:ARG:H	1:B:1259:ARG:NH2	2.09	0.50
1:B:545:ARG:CZ	1:B:546:ILE:HB	2.41	0.50
1:B:808:PRO:HA	1:B:811:LEU:HD12	1.93	0.50
1:B:934:LEU:O	1:B:938:ILE:HG23	2.11	0.50
1:A:330:ASN:CB	1:A:1147:MET:HB2	2.42	0.50
1:A:468:ARG:HA	1:A:471:ARG:NE	2.27	0.50
1:A:718:GLN:HA	1:A:739:LEU:O	2.11	0.50
1:B:680:THR:OG1	1:B:683:THR:HG23	2.12	0.50
1:B:956:ARG:HG2	1:B:957:ALA:H	1.76	0.50
1:B:1059:LEU:HD21	1:B:1205:ASN:HB2	1.92	0.50
1:B:1185:SER:HA	1:B:1222:GLY:HA3	1.92	0.50
1:B:1232:TYR:OH	1:B:1253:LEU:HB2	2.12	0.50
1:A:619:SER:OG	1:A:620:VAL:N	2.45	0.50
1:B:378:PHE:C	1:B:393:SER:HB3	2.32	0.50
1:B:394:LEU:HD12	1:B:399:ALA:HB1	1.92	0.50
1:B:668:ILE:HG22	1:B:673:ARG:HH12	1.77	0.50
1:B:949:LEU:HD13	1:B:952:ILE:HD12	1.94	0.50
1:B:1007:ARG:HG3	1:B:1009:PHE:CZ	2.47	0.50
1:A:543:LEU:HD12	1:A:546:ILE:HB	1.94	0.50
1:B:1093:MET:HB3	1:B:1101:MET:C	2.32	0.50
1:A:360:HIS:O	1:A:364:GLU:HG2	2.12	0.50
1:A:510:SER:N	1:A:513:GLU:OE2	2.42	0.50
1:A:537:GLN:O	1:A:541:VAL:HG23	2.11	0.50
1:A:1079:ARG:NH2	1:A:1111:PRO:HB2	2.27	0.50
1:A:1159:ALA:CB	1:A:1197:GLN:HA	2.39	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1062:PRO:HD2	1:B:1065:LEU:HD21	1.94	0.50
1:A:668:ILE:HG23	1:A:673:ARG:HG2	1.94	0.50
1:A:1201:SER:OG	1:A:1203:GLU:O	2.20	0.50
1:B:609:ASP:OD1	1:B:612:SER:OG	2.24	0.50
1:B:1062:PRO:HB2	1:B:1064:ASP:OD1	2.11	0.50
1:A:315:ASP:OD2	1:A:372:LEU:HG	2.12	0.49
1:B:552:ASP:HB2	1:B:890:LYS:NZ	2.27	0.49
1:B:665:ASP:HB3	1:B:686:ARG:NE	2.27	0.49
1:B:773:LYS:O	1:B:776:VAL:HG22	2.11	0.49
1:B:918:LEU:O	1:B:922:MET:HG2	2.12	0.49
1:B:1105:GLU:O	1:B:1108:TRP:NE1	2.44	0.49
1:A:364:GLU:HA	1:A:367:LEU:HG	1.93	0.49
1:A:600:TYR:HA	1:A:831:PHE:O	2.12	0.49
1:A:773:LYS:HZ1	1:A:801:LYS:HD3	1.77	0.49
1:A:1002:GLN:HG2	1:A:1003:GLN:N	2.26	0.49
1:A:1153:PRO:HG3	1:A:1183:PRO:HB2	1.93	0.49
1:B:316:PHE:HE1	1:B:372:LEU:HB2	1.77	0.49
1:A:392:ARG:HG3	1:A:394:LEU:HD11	1.93	0.49
1:A:1022:ASP:O	1:A:1026:LEU:HG	2.12	0.49
1:B:339:LEU:HA	1:B:968:TRP:NE1	2.27	0.49
1:A:438:GLN:HB2	1:A:445:SER:HB2	1.94	0.49
1:A:701:ILE:O	1:A:704:GLN:HB3	2.12	0.49
1:A:810:TYR:OH	1:A:818:GLU:OE2	2.26	0.49
1:A:841:ASP:HA	1:A:1004:TYR:HD2	1.77	0.49
1:A:985:GLU:O	1:A:989:SER:OG	2.16	0.49
1:B:504:LEU:O	1:B:1265:PRO:HD2	2.13	0.49
1:B:846:MET:SD	1:B:1000:GLN:HG2	2.52	0.49
1:B:1037:LEU:HB2	1:B:1038:PHE:CE1	2.46	0.49
1:B:1125:GLN:O	1:B:1129:TRP:NE1	2.46	0.49
1:A:342:GLU:O	1:A:1174:SER:OG	2.30	0.49
1:A:406:MET:HG2	1:A:407:TYR:CE2	2.47	0.49
1:A:514:ARG:NH2	1:A:729:SER:OG	2.45	0.49
1:A:959:ALA:HA	1:A:962:ALA:HB3	1.95	0.49
1:B:999:ILE:HG22	1:B:1011:VAL:HB	1.94	0.49
1:B:1026:LEU:O	1:B:1030:VAL:HG23	2.12	0.49
1:A:437:ALA:HB2	1:A:447:TRP:CZ2	2.48	0.49
1:A:708:ILE:HG12	1:A:711:ARG:NH2	2.27	0.49
1:A:765:ARG:HA	1:A:768:VAL:HG12	1.95	0.49
1:A:836:VAL:HG13	1:A:842:ARG:HH21	1.78	0.49
1:A:1170:ILE:HG13	1:A:1171:THR:H	1.78	0.49
1:B:500:SER:H	1:B:503:ARG:HH21	1.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1120:ARG:NH2	1:B:1168:GLU:O	2.46	0.49
1:A:345:SER:OG	1:A:346:VAL:N	2.45	0.49
1:A:353:MET:CE	1:A:356:ALA:H	2.26	0.49
1:A:634:LEU:HD21	1:A:887:LEU:HD21	1.95	0.49
1:A:680:THR:O	1:A:683:THR:N	2.46	0.49
1:A:773:LYS:NZ	1:A:801:LYS:HD3	2.28	0.49
1:A:972:SER:O	1:A:975:THR:OG1	2.18	0.49
1:A:1058:PRO:O	1:A:1201:SER:OG	2.30	0.49
1:A:1186:SER:OG	1:A:1220:ILE:O	2.22	0.49
1:B:965:PHE:O	1:B:969:VAL:HG23	2.11	0.49
1:B:1080:ASP:C	1:B:1082:ARG:HH11	2.15	0.49
1:A:362:LEU:O	1:A:365:PHE:HB3	2.13	0.49
1:A:449:ASP:OD1	1:A:1258:THR:OG1	2.17	0.49
1:A:456:ALA:HA	1:A:459:VAL:HG23	1.95	0.49
1:A:630:PHE:CD2	1:A:631:ILE:HD13	2.48	0.49
1:A:1054:HIS:HB2	1:A:1056:TRP:HD1	1.78	0.49
1:B:302:SER:OG	1:B:303:ARG:N	2.45	0.49
1:B:607:VAL:O	1:B:876:ALA:HA	2.12	0.49
1:B:985:GLU:O	1:B:989:SER:OG	2.09	0.49
1:B:1114:LEU:HD23	1:B:1114:LEU:H	1.76	0.49
1:A:352:LEU:HD22	1:A:955:LEU:HD13	1.95	0.49
1:A:708:ILE:HG23	1:A:712:TYR:CD2	2.45	0.49
1:A:762:THR:HG23	1:A:765:ARG:NH2	2.27	0.49
1:A:1000:GLN:HE21	1:A:1008:THR:HA	1.77	0.49
1:A:1002:GLN:HG2	1:A:1003:GLN:H	1.78	0.49
1:A:1149:HIS:O	1:A:1181:MET:HA	2.11	0.49
1:A:1255:ASN:O	1:A:1257:VAL:HG23	2.13	0.49
1:A:455:ASP:O	1:A:458:THR:OG1	2.18	0.49
1:A:470:ALA:HA	1:A:504:LEU:HD13	1.94	0.49
1:A:839:ASP:HB3	1:A:842:ARG:NE	2.28	0.49
1:A:1118:ASN:HB3	1:A:1122:PHE:CZ	2.48	0.49
1:A:375:HIS:HB3	1:A:1259:ARG:HB3	1.95	0.48
1:A:851:ARG:HG2	1:A:852:GLN:OE1	2.11	0.48
1:B:437:ALA:HB2	1:B:447:TRP:CD2	2.47	0.48
1:B:444:MET:SD	1:B:1259:ARG:HG3	2.52	0.48
1:A:464:ARG:HD2	1:A:1023:CYS:SG	2.52	0.48
1:A:494:THR:O	1:A:1272:MET:HB2	2.13	0.48
1:A:913:GLU:HG3	1:A:914:VAL:N	2.27	0.48
1:A:1247:LEU:HD21	1:A:1251:ILE:HG23	1.95	0.48
1:B:898:ASN:HB2	1:B:1275:PRO:C	2.33	0.48
1:B:967:GLU:OE2	1:B:971:THR:HG23	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:507:TYR:CE1	1:A:1267:ILE:HG21	2.48	0.48
1:A:1047:ILE:HD13	1:A:1139:ILE:HD13	1.94	0.48
1:B:455:ASP:O	1:B:459:VAL:HG23	2.13	0.48
1:B:700:PRO:C	1:B:704:GLN:HE21	2.15	0.48
1:B:848:GLY:HA2	1:B:863:SER:OG	2.12	0.48
1:B:1170:ILE:HG12	1:B:1175:ILE:HD12	1.94	0.48
1:A:354:PHE:HA	1:A:357:ASN:ND2	2.17	0.48
1:A:514:ARG:HH12	1:A:518:GLN:CG	2.27	0.48
1:A:526:GLY:O	1:A:528:ASN:ND2	2.46	0.48
1:A:593:VAL:HG23	1:A:594:ALA:N	2.27	0.48
1:A:974:LYS:HZ3	1:A:983:LEU:HD12	1.78	0.48
1:B:492:THR:O	1:B:1271:VAL:HA	2.13	0.48
1:A:336:LYS:HD2	1:A:337:GLN:HG3	1.96	0.48
1:A:370:LEU:HD13	1:A:465:TRP:CZ3	2.48	0.48
1:A:801:LYS:HZ2	1:A:802:LEU:HD21	1.77	0.48
1:A:1151:TYR:CD2	1:A:1181:MET:HB3	2.49	0.48
1:B:376:THR:H	1:B:444:MET:CB	2.27	0.48
1:B:987:LEU:HD22	1:B:991:ASP:O	2.13	0.48
1:A:719:ILE:HG23	1:A:739:LEU:HD12	1.95	0.48
1:B:928:VAL:HA	1:B:931:LEU:HB3	1.96	0.48
1:B:940:ASP:HB2	1:B:956:ARG:HD2	1.96	0.48
1:B:1165:ALA:HA	1:B:1168:GLU:CD	2.33	0.48
1:A:343:THR:OG1	1:A:1174:SER:OG	2.13	0.48
1:A:759:ASN:HD22	1:A:808:PRO:CB	2.25	0.48
1:A:982:MET:CG	1:A:986:PRO:HD3	2.44	0.48
1:B:806:MET:HB3	1:B:891:TYR:CE1	2.49	0.48
1:B:864:LEU:HD23	1:B:867:THR:HB	1.96	0.48
1:A:355:ARG:NH2	1:A:950:ASP:HA	2.28	0.48
1:A:514:ARG:HH22	1:A:518:GLN:NE2	2.11	0.48
1:A:600:TYR:CE2	1:A:830:PRO:HA	2.49	0.48
1:A:756:ASP:OD1	1:A:758:THR:HG23	2.14	0.48
1:A:771:LEU:HA	1:A:774:ASN:HD22	1.78	0.48
1:A:1157:ALA:O	1:A:1196:VAL:N	2.29	0.48
1:B:760:GLU:HA	1:B:763:ASN:HB3	1.94	0.48
1:A:458:THR:HB	1:A:462:ARG:CZ	2.44	0.48
1:A:502:ASN:HB3	1:A:1262:TYR:CD1	2.49	0.48
1:A:514:ARG:HB3	1:A:514:ARG:CZ	2.43	0.48
1:A:745:HIS:CD2	1:A:816:PRO:HG2	2.49	0.48
1:A:914:VAL:HA	1:A:917:ASN:HB2	1.94	0.48
1:B:1106:GLY:O	1:B:1136:ARG:HB2	2.14	0.48
1:A:335:PHE:CE2	1:A:338:LEU:HD23	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:375:HIS:HE1	1:A:447:TRP:HA	1.79	0.48
1:A:417:SER:HA	1:A:1217:PRO:HD3	1.94	0.48
1:A:720:ARG:HD2	1:A:721:TYR:O	2.14	0.48
1:A:660:GLU:OE2	1:A:700:PRO:HD2	2.14	0.47
1:A:1081:CYS:HA	1:A:1095:ARG:O	2.13	0.47
1:B:323:ILE:HG13	1:B:334:LEU:HD21	1.96	0.47
1:B:437:ALA:HB1	1:B:439:MET:HG2	1.96	0.47
1:B:511:ASN:HB3	1:B:515:GLN:NE2	2.29	0.47
1:B:779:GLN:H	1:B:782:GLN:NE2	2.12	0.47
1:B:937:GLN:HA	1:B:946:ASP:O	2.14	0.47
1:B:1158:ASN:HD21	1:B:1160:TRP:CB	2.24	0.47
1:A:375:HIS:CD2	1:A:444:MET:HB3	2.49	0.47
1:A:718:GLN:HA	1:A:741:LEU:HG	1.95	0.47
1:A:766:ALA:HB3	1:A:767:ARG:NH1	2.28	0.47
1:A:836:VAL:HG13	1:A:842:ARG:NH2	2.28	0.47
1:A:1020:ILE:HD12	1:A:1020:ILE:H	1.78	0.47
1:A:1044:ASP:CG	1:A:1140:GLU:HA	2.34	0.47
1:B:375:HIS:CG	1:B:376:THR:N	2.82	0.47
1:B:981:ASP:OD1	1:B:981:ASP:N	2.47	0.47
1:B:1068:ASP:O	1:B:1071:THR:HB	2.14	0.47
1:B:1227:ILE:HG23	1:B:1229:VAL:HG13	1.95	0.47
1:B:401:LYS:O	1:B:405:ILE:HG13	2.15	0.47
1:B:721:TYR:CZ	1:B:739:LEU:HD13	2.49	0.47
1:B:735:PRO:HB2	1:B:738:VAL:HG23	1.96	0.47
1:B:1040:ILE:HG23	1:B:1144:TYR:N	2.29	0.47
1:B:1232:TYR:HE1	1:B:1253:LEU:H	1.61	0.47
1:A:504:LEU:HD12	1:A:505:MET:N	2.30	0.47
1:A:686:ARG:HH21	1:A:689:MET:HB2	1.79	0.47
1:A:1209:LEU:HD23	1:A:1225:LYS:HD3	1.96	0.47
1:B:1047:ILE:HD13	1:B:1139:ILE:HG12	1.96	0.47
1:B:1160:TRP:HA	1:B:1163:ALA:HB3	1.96	0.47
1:A:378:PHE:CD2	1:A:392:ARG:HA	2.50	0.47
1:A:1021:ALA:HA	1:A:1024:VAL:HG22	1.96	0.47
1:B:321:SER:OG	1:B:323:ILE:HG12	2.14	0.47
1:B:322:VAL:HA	1:B:365:PHE:HD2	1.78	0.47
1:B:662:ILE:HD12	1:B:663:PRO:HD2	1.95	0.47
1:A:359:LEU:O	1:A:362:LEU:N	2.48	0.47
1:A:446:GLU:HG3	1:A:502:ASN:ND2	2.30	0.47
1:A:549:LEU:HD12	1:A:890:LYS:HB3	1.95	0.47
1:A:619:SER:N	1:A:655:MET:HA	2.30	0.47
1:A:657:VAL:HA	1:A:671:GLN:NE2	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:916:SER:HA	1:A:919:GLN:NE2	2.28	0.47
1:A:1083:ILE:HA	1:A:1094:ILE:HA	1.97	0.47
1:A:1231:ARG:HB3	1:A:1253:LEU:H	1.79	0.47
1:B:1031:PHE:HA	1:B:1034:GLU:O	2.14	0.47
1:A:387:GLU:HG2	1:A:428:ARG:HD3	1.97	0.47
1:A:458:THR:HA	1:A:461:ILE:HB	1.97	0.47
1:A:716:PRO:HA	1:A:741:LEU:O	2.13	0.47
1:A:744:ASP:O	1:A:746:GLN:NE2	2.45	0.47
1:A:965:PHE:HA	1:A:968:TRP:CD1	2.41	0.47
1:A:1068:ASP:HA	1:A:1138:ARG:NH1	2.29	0.47
1:A:1082:ARG:HB2	1:A:1095:ARG:HB3	1.97	0.47
1:A:1165:ALA:O	1:A:1169:GLU:HG3	2.15	0.47
1:B:325:ALA:HB1	1:B:331:ASN:HA	1.97	0.47
1:B:528:ASN:OD1	1:B:531:VAL:HG23	2.15	0.47
1:B:1069:ARG:NH2	1:B:1140:GLU:OE2	2.47	0.47
1:A:345:SER:CB	1:A:347:ARG:H	2.27	0.47
1:A:900:TRP:CD1	1:A:901:TYR:CD2	3.02	0.47
1:A:1246:GLN:HB3	1:A:1250:VAL:HB	1.97	0.47
1:B:920:ARG:HG3	1:B:983:LEU:HD12	1.97	0.47
1:B:935:VAL:O	1:B:938:ILE:HG12	2.15	0.47
1:B:1049:ARG:HE	1:B:1132:THR:C	2.17	0.47
1:A:342:GLU:HB2	1:A:350:ASN:CG	2.35	0.47
1:A:649:PHE:CZ	1:A:688:PHE:HB2	2.49	0.47
1:A:681:PRO:HG3	1:A:843:VAL:HG21	1.97	0.47
1:A:696:PRO:HB3	1:A:703:ARG:HD3	1.97	0.47
1:A:1188:HIS:HE1	1:A:1220:ILE:HA	1.80	0.47
1:B:307:HIS:C	1:B:310:TRP:HZ3	2.19	0.47
1:B:332:ILE:HG13	1:B:335:PHE:HB2	1.97	0.47
1:B:382:HIS:CG	1:B:388:GLY:H	2.33	0.47
1:B:446:GLU:HG2	1:B:1261:ALA:HB3	1.95	0.47
1:B:795:GLY:HA2	1:B:798:ASP:OD2	2.15	0.47
1:B:1187:ASP:HB3	1:B:1218:GLN:O	2.14	0.47
1:A:377:GLY:O	1:A:392:ARG:HD2	2.15	0.47
1:A:458:THR:HB	1:A:462:ARG:NH2	2.29	0.47
1:A:472:MET:HB2	1:A:506:PRO:CA	2.45	0.47
1:A:523:MET:C	1:A:526:GLY:H	2.19	0.47
1:A:524:ASN:OD1	1:A:986:PRO:HG3	2.15	0.47
1:A:656:MET:HG3	1:A:702:LEU:HD11	1.96	0.47
1:A:958:SER:O	1:A:961:THR:OG1	2.23	0.47
1:A:1046:ILE:HG22	1:A:1136:ARG:NH2	2.30	0.47
1:A:1115:TRP:CD1	1:A:1119:THR:HG22	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:949:LEU:O	1:B:952:ILE:N	2.42	0.47
1:B:967:GLU:OE2	1:B:970:ASN:HB3	2.15	0.47
1:B:1069:ARG:NH1	1:B:1138:ARG:HB3	2.30	0.47
1:A:345:SER:OG	1:A:347:ARG:N	2.46	0.46
1:A:372:LEU:HD13	1:A:374:ARG:HH21	1.80	0.46
1:A:447:TRP:HB2	1:A:1258:THR:CG2	2.42	0.46
1:A:570:THR:OG1	1:A:789:LEU:HD22	2.15	0.46
1:A:1020:ILE:O	1:A:1024:VAL:HG13	2.14	0.46
1:A:1041:ALA:HB3	1:A:1144:TYR:CE1	2.51	0.46
1:A:1104:PHE:HB3	1:A:1135:LEU:HD22	1.97	0.46
1:B:334:LEU:HA	1:B:337:GLN:OE1	2.15	0.46
1:B:360:HIS:CE1	1:B:968:TRP:HB3	2.50	0.46
1:B:724:PRO:HA	1:B:728:GLY:CA	2.44	0.46
1:A:920:ARG:NH1	1:A:924:THR:OG1	2.48	0.46
1:A:969:VAL:HG12	1:A:973:LEU:HD11	1.97	0.46
1:A:1039:GLY:O	1:A:1145:PRO:HA	2.16	0.46
1:B:838:LEU:C	1:B:842:ARG:HH21	2.19	0.46
1:A:407:TYR:C	1:A:409:THR:H	2.19	0.46
1:A:708:ILE:O	1:A:712:TYR:N	2.41	0.46
1:A:847:VAL:N	1:A:871:VAL:HG11	2.08	0.46
1:A:1114:LEU:HA	1:A:1117:MET:SD	2.56	0.46
1:B:376:THR:O	1:B:444:MET:HB2	2.15	0.46
1:B:446:GLU:O	1:B:1260:TYR:HD2	1.98	0.46
1:B:549:LEU:HD13	1:B:891:TYR:CE2	2.50	0.46
1:B:959:ALA:CB	1:B:992:PRO:HB3	2.44	0.46
1:A:492:THR:OG1	1:A:1274:VAL:HB	2.15	0.46
1:A:509:ILE:HG13	1:A:727:PHE:HA	1.98	0.46
1:A:630:PHE:HD2	1:A:631:ILE:HD13	1.80	0.46
1:A:650:MET:SD	1:A:685:PRO:HG2	2.55	0.46
1:A:682:HIS:CD2	1:A:1004:TYR:HH	2.34	0.46
1:A:1150:TYR:HA	1:A:1182:VAL:CG1	2.42	0.46
1:B:514:ARG:HH22	1:B:728:GLY:C	2.19	0.46
1:B:713:TRP:CB	1:B:837:ARG:HH21	2.28	0.46
1:B:720:ARG:NH1	1:B:722:GLY:O	2.49	0.46
1:B:969:VAL:O	1:B:973:LEU:HG	2.16	0.46
1:B:1041:ALA:HB3	1:B:1144:TYR:CE1	2.50	0.46
1:A:458:THR:HA	1:A:461:ILE:HD12	1.98	0.46
1:A:533:GLN:HB3	1:A:534:PRO:HD3	1.98	0.46
1:A:606:THR:OG1	1:A:640:THR:N	2.47	0.46
1:A:623:LEU:HA	1:A:626:LEU:HG	1.97	0.46
1:A:687:CYS:HA	1:A:690:ASN:HB2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:807:THR:N	1:A:889:GLY:HA3	2.31	0.46
1:A:854:ARG:HH11	1:A:857:ILE:HD12	1.80	0.46
1:A:1131:LYS:HB2	1:A:1160:TRP:CZ3	2.50	0.46
1:A:1151:TYR:HB3	1:A:1181:MET:HE1	1.98	0.46
1:A:1231:ARG:HA	1:A:1252:ASP:OD1	2.16	0.46
1:B:355:ARG:NH2	1:B:954:SER:H	2.13	0.46
1:B:750:VAL:HG11	1:B:814:LEU:HD11	1.97	0.46
1:A:323:ILE:O	1:A:333:HIS:HB3	2.15	0.46
1:A:370:LEU:HD22	1:A:465:TRP:CD2	2.51	0.46
1:A:446:GLU:HB3	1:A:1262:TYR:CE1	2.50	0.46
1:A:810:TYR:O	1:A:815:ALA:N	2.37	0.46
1:A:811:LEU:O	1:A:816:PRO:HD3	2.15	0.46
1:B:464:ARG:NH1	1:B:1023:CYS:SG	2.81	0.46
1:B:476:PRO:O	1:B:480:GLU:HG3	2.15	0.46
1:B:602:GLY:HA2	1:B:833:VAL:HG23	1.98	0.46
1:B:685:PRO:O	1:B:689:MET:HG3	2.16	0.46
1:B:771:LEU:O	1:B:775:LEU:HD13	2.15	0.46
1:B:841:ASP:HA	1:B:1004:TYR:CD2	2.46	0.46
1:A:307:HIS:H	1:A:324:MET:HE1	1.80	0.46
1:A:484:THR:HG22	1:A:489:GLY:HA2	1.98	0.46
1:A:949:LEU:HB3	1:A:952:ILE:CG2	2.45	0.46
1:B:375:HIS:HA	1:B:444:MET:CE	2.45	0.46
1:B:707:GLU:HA	1:B:710:HIS:ND1	2.30	0.46
1:B:812:GLN:HG2	1:B:813:GLN:HG3	1.98	0.46
1:B:883:THR:HA	1:B:886:LEU:HD12	1.97	0.46
1:A:558:ASN:HB3	1:A:803:ILE:HD11	1.98	0.46
1:A:681:PRO:HB3	1:A:840:ARG:HB2	1.98	0.46
1:A:928:VAL:O	1:A:932:VAL:HG13	2.16	0.46
1:B:600:TYR:HE2	1:B:828:PHE:CE2	2.33	0.46
1:B:844:PRO:O	1:B:870:THR:HG23	2.15	0.46
1:B:1023:CYS:O	1:B:1026:LEU:HB2	2.16	0.46
1:B:1067:PHE:HE2	1:B:1136:ARG:HB3	1.81	0.46
1:B:1069:ARG:HD2	1:B:1109:ILE:HD12	1.97	0.46
1:A:427:VAL:HB	1:A:429:ASN:OD1	2.16	0.46
1:A:434:PHE:HB2	1:A:451:PHE:CE1	2.51	0.46
1:A:772:MET:O	1:A:776:VAL:HG23	2.16	0.46
1:A:988:LEU:HD23	1:A:988:LEU:HA	1.70	0.46
1:B:339:LEU:HA	1:B:968:TRP:HE1	1.80	0.46
1:B:472:MET:C	1:B:506:PRO:HA	2.36	0.46
1:B:476:PRO:O	1:B:479:ILE:HB	2.16	0.46
1:B:1166:TRP:CE2	1:B:1176:PRO:HG2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:327:PRO:O	1:A:1148:LEU:HD11	2.16	0.46
1:A:354:PHE:CZ	1:A:1145:PRO:HD3	2.50	0.46
1:A:433:ARG:CD	1:A:436:ARG:HH21	2.24	0.46
1:A:1107:ASN:C	1:A:1108:TRP:CD1	2.85	0.46
1:B:473:ASN:HD21	1:B:504:LEU:HA	1.81	0.46
1:B:532:ILE:HA	1:B:535:VAL:HG23	1.97	0.46
1:A:523:MET:SD	1:A:526:GLY:HA3	2.56	0.45
1:A:919:GLN:O	1:A:923:ILE:HG12	2.17	0.45
1:A:959:ALA:O	1:A:963:ALA:N	2.32	0.45
1:A:1000:GLN:HA	1:A:1009:PHE:O	2.16	0.45
1:B:606:THR:OG1	1:B:639:THR:OG1	2.24	0.45
1:B:705:TRP:O	1:B:709:ILE:HG13	2.16	0.45
1:B:708:ILE:HG13	1:B:711:ARG:NH2	2.31	0.45
1:B:898:ASN:HA	1:B:1274:VAL:HG12	1.98	0.45
1:A:318:ARG:HE	1:A:977:PHE:HA	1.81	0.45
1:A:361:MET:HA	1:A:364:GLU:OE2	2.15	0.45
1:A:713:TRP:C	1:A:837:ARG:HH21	2.20	0.45
1:A:1000:GLN:NE2	1:A:1002:GLN:HB2	2.20	0.45
1:B:402:TRP:O	1:B:405:ILE:HB	2.14	0.45
1:B:493:VAL:HB	1:B:1271:VAL:CG1	2.40	0.45
1:B:657:VAL:HG22	1:B:671:GLN:NE2	2.31	0.45
1:B:1075:HIS:HB3	1:B:1077:PHE:CZ	2.51	0.45
1:B:1134:GLU:HG2	1:B:1136:ARG:HG3	1.99	0.45
1:A:320:SER:O	1:A:322:VAL:HG23	2.16	0.45
1:A:605:THR:OG1	1:A:873:VAL:O	2.25	0.45
1:A:845:THR:OG1	1:A:1002:GLN:HB3	2.17	0.45
1:A:973:LEU:O	1:A:979:LEU:HD13	2.17	0.45
1:B:543:LEU:HD21	1:B:595:LEU:HD12	1.98	0.45
1:B:582:ARG:HB2	1:B:585:ASN:HD21	1.80	0.45
1:B:600:TYR:HA	1:B:832:GLN:HG2	1.99	0.45
1:B:666:ASN:HB3	1:B:669:TYR:CG	2.52	0.45
1:B:974:LYS:HZ3	1:B:982:MET:HG2	1.80	0.45
1:B:1069:ARG:HD3	1:B:1138:ARG:HB3	1.97	0.45
1:B:418:LYS:NZ	1:B:1224:ASP:OD1	2.49	0.45
1:B:577:ILE:HG13	1:B:581:LEU:HD23	1.97	0.45
1:B:960:ALA:HA	1:B:963:ALA:HB3	1.97	0.45
1:A:332:ILE:C	1:A:333:HIS:CG	2.90	0.45
1:A:687:CYS:HB3	1:A:693:LEU:HD12	1.99	0.45
1:B:560:MET:HA	1:B:799:LYS:NZ	2.32	0.45
1:B:1050:VAL:O	1:B:1197:GLN:NE2	2.48	0.45
1:B:1051:GLN:NE2	1:B:1196:VAL:HG13	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:355:ARG:NH1	1:A:950:ASP:OD1	2.50	0.45
1:A:604:VAL:HB	1:A:875:LEU:CD1	2.47	0.45
1:A:929:GLN:O	1:A:932:VAL:HG22	2.17	0.45
1:B:355:ARG:NE	1:B:950:ASP:HA	2.31	0.45
1:B:374:ARG:H	1:B:1259:ARG:NE	2.14	0.45
1:B:511:ASN:HA	1:B:514:ARG:NH2	2.10	0.45
1:B:618:GLY:HA3	1:B:655:MET:HG2	1.98	0.45
1:B:959:ALA:HB2	1:B:992:PRO:HB3	1.99	0.45
1:B:1049:ARG:HD2	1:B:1051:GLN:HE21	1.81	0.45
1:A:343:THR:HG23	1:A:1170:ILE:CD1	2.46	0.45
1:A:762:THR:HG23	1:A:765:ARG:HH22	1.82	0.45
1:A:873:VAL:HG23	1:A:875:LEU:HD11	1.97	0.45
1:A:1033:HIS:HB2	1:A:1034:GLU:OE2	2.16	0.45
1:A:1075:HIS:N	1:A:1107:ASN:O	2.33	0.45
1:A:1110:PHE:CD1	1:A:1114:LEU:HD22	2.52	0.45
1:A:1188:HIS:CE1	1:A:1220:ILE:HA	2.52	0.45
1:B:473:ASN:CG	1:B:505:MET:H	2.20	0.45
1:B:513:GLU:H	1:B:513:GLU:CD	2.19	0.45
1:B:601:ASN:N	1:B:831:PHE:O	2.47	0.45
1:A:389:ALA:HB2	1:A:431:VAL:HG13	1.99	0.45
1:A:745:HIS:CD2	1:A:813:GLN:HA	2.51	0.45
1:A:1038:PHE:O	1:A:1040:ILE:HG12	2.17	0.45
1:A:1087:MET:N	1:A:1090:ALA:O	2.32	0.45
1:B:400:GLU:HA	1:B:403:TYR:CD2	2.51	0.45
1:A:825:MET:HG3	1:A:909:TYR:OH	2.16	0.45
1:A:926:GLU:OE1	1:A:1018:SER:HA	2.17	0.45
1:A:937:GLN:HG3	1:A:938:ILE:HG12	1.99	0.45
1:B:732:LEU:C	1:B:734:THR:H	2.21	0.45
1:B:769:CYS:SG	1:B:797:LEU:HB3	2.57	0.45
1:B:933:THR:O	1:B:937:GLN:HG3	2.16	0.45
1:B:1043:GLY:O	1:B:1144:TYR:HE2	2.00	0.45
1:B:1203:GLU:OE2	1:B:1205:ASN:ND2	2.34	0.45
1:A:657:VAL:HA	1:A:671:GLN:HE21	1.82	0.45
1:B:548:PRO:HB3	1:B:900:TRP:CE2	2.52	0.45
1:B:606:THR:HA	1:B:875:LEU:HB3	1.99	0.45
1:B:685:PRO:HB2	1:B:687:CYS:SG	2.57	0.45
1:B:1236:THR:OG1	1:B:1237:ASN:N	2.50	0.45
1:A:746:GLN:HB3	1:A:813:GLN:HE21	1.82	0.44
1:A:818:GLU:HA	1:A:821:VAL:CG2	2.47	0.44
1:A:890:LYS:HA	1:A:890:LYS:HD2	1.85	0.44
1:A:1019:VAL:HG23	1:A:1020:ILE:HD12	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:591:PHE:CZ	1:B:595:LEU:HD11	2.51	0.44
1:B:653:ALA:O	1:B:657:VAL:HG23	2.17	0.44
1:A:307:HIS:N	1:A:324:MET:HE1	2.32	0.44
1:A:363:LEU:O	1:A:367:LEU:HG	2.18	0.44
1:A:375:HIS:NE2	1:A:445:SER:O	2.50	0.44
1:A:470:ALA:HA	1:A:504:LEU:CD1	2.46	0.44
1:A:967:GLU:OE2	1:A:971:THR:OG1	2.30	0.44
1:A:1015:MET:SD	1:A:1016:PRO:HD2	2.57	0.44
1:A:1077:PHE:CE1	1:A:1108:TRP:HB3	2.52	0.44
1:B:765:ARG:HD2	1:B:801:LYS:HA	1.99	0.44
1:B:943:TYR:CG	1:B:944:PRO:HD2	2.52	0.44
1:A:502:ASN:ND2	1:A:1262:TYR:HE1	2.15	0.44
1:A:756:ASP:OD1	1:A:757:PHE:N	2.51	0.44
1:A:818:GLU:O	1:A:821:VAL:HB	2.17	0.44
1:A:853:SER:OG	1:A:854:ARG:N	2.50	0.44
1:A:916:SER:O	1:A:920:ARG:HB2	2.16	0.44
1:A:1267:ILE:O	1:A:1271:VAL:HG23	2.17	0.44
1:B:484:THR:HA	1:B:491:VAL:HG12	1.99	0.44
1:B:552:ASP:HB3	1:B:555:ILE:CD1	2.46	0.44
1:B:684:TRP:CE3	1:B:840:ARG:HB2	2.52	0.44
1:B:713:TRP:HB3	1:B:837:ARG:NH2	2.32	0.44
1:B:898:ASN:N	1:B:898:ASN:OD1	2.50	0.44
1:A:434:PHE:HB2	1:A:451:PHE:CZ	2.52	0.44
1:A:601:ASN:CG	1:A:833:VAL:H	2.21	0.44
1:A:705:TRP:HE3	1:A:708:ILE:HD12	1.82	0.44
1:A:1237:ASN:HA	1:A:1238:PRO:HD3	1.83	0.44
1:B:503:ARG:HA	1:B:1263:GLU:O	2.18	0.44
1:B:582:ARG:HH12	1:B:880:ARG:HD2	1.81	0.44
1:B:1007:ARG:NH1	1:B:1008:THR:H	2.16	0.44
1:B:1039:GLY:O	1:B:1145:PRO:HA	2.17	0.44
1:B:1049:ARG:HA	1:B:1197:GLN:O	2.17	0.44
1:B:1069:ARG:CZ	1:B:1109:ILE:HA	2.48	0.44
1:A:519:ILE:HD11	1:A:1013:PRO:HB3	1.98	0.44
1:A:600:TYR:CZ	1:A:830:PRO:HB3	2.53	0.44
1:A:769:CYS:HA	1:A:772:MET:HE2	2.00	0.44
1:B:947:ARG:HH22	1:B:956:ARG:HA	1.82	0.44
1:B:1036:ASN:O	1:B:1038:PHE:N	2.50	0.44
1:B:1156:TYR:HH	1:B:1198:TYR:HH	1.65	0.44
1:A:409:THR:OG1	1:A:410:ARG:N	2.50	0.44
1:A:476:PRO:O	1:A:479:ILE:HG22	2.18	0.44
1:B:433:ARG:CD	1:B:436:ARG:HD2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:433:ARG:HA	1:B:450:VAL:HG12	1.99	0.44
1:B:468:ARG:HA	1:B:471:ARG:HE	1.83	0.44
1:B:479:ILE:HD11	1:B:505:MET:HG2	1.99	0.44
1:B:715:ASN:HA	1:B:716:PRO:HD3	1.87	0.44
1:B:929:GLN:O	1:B:933:THR:OG1	2.28	0.44
1:B:1107:ASN:N	1:B:1108:TRP:HD1	2.16	0.44
1:B:1111:PRO:O	1:B:1112:LEU:HG	2.17	0.44
1:A:509:ILE:CG1	1:A:727:PHE:HA	2.48	0.44
1:A:1164:SER:HA	1:A:1167:LEU:HD12	2.00	0.44
1:B:1056:TRP:CZ3	1:B:1061:PRO:HB3	2.52	0.44
1:B:1058:PRO:HG2	1:B:1180:PHE:CD2	2.53	0.44
1:B:1186:SER:OG	1:B:1188:HIS:O	2.30	0.44
1:B:1187:ASP:HA	1:B:1219:THR:HA	2.00	0.44
1:A:355:ARG:CZ	1:A:950:ASP:HA	2.47	0.44
1:A:1114:LEU:O	1:A:1117:MET:HB2	2.18	0.44
1:A:1162:LEU:HD13	1:A:1162:LEU:HA	1.89	0.44
1:B:495:SER:O	1:B:495:SER:OG	2.35	0.44
1:B:667:GLN:CD	1:B:667:GLN:H	2.21	0.44
1:B:896:VAL:HG12	1:B:898:ASN:OD1	2.18	0.44
1:B:1065:LEU:H	1:B:1065:LEU:HG	1.62	0.44
1:B:1156:TYR:CZ	1:B:1158:ASN:HA	2.52	0.44
1:A:745:HIS:NE2	1:A:746:GLN:O	2.51	0.44
1:B:413:THR:HG21	1:B:424:ALA:N	2.33	0.44
1:B:591:PHE:CE2	1:B:595:LEU:HD11	2.53	0.44
1:B:869:THR:HG23	1:B:870:THR:N	2.31	0.44
1:B:1138:ARG:HG2	1:B:1140:GLU:OE1	2.18	0.44
1:A:915:PHE:HE2	1:A:1268:THR:HA	1.83	0.43
1:A:1015:MET:HG3	1:A:1017:GLY:H	1.83	0.43
1:B:392:ARG:HG2	1:B:394:LEU:HD21	1.99	0.43
1:B:550:GLN:HE22	1:B:892:PRO:CG	2.25	0.43
1:B:712:TYR:HB3	1:B:763:ASN:ND2	2.30	0.43
1:B:804:LYS:H	1:B:804:LYS:HD2	1.82	0.43
1:A:502:ASN:HB3	1:A:1262:TYR:HD1	1.83	0.43
1:A:982:MET:HA	1:A:985:GLU:OE1	2.18	0.43
1:B:435:ASP:C	1:B:436:ARG:HD3	2.37	0.43
1:B:536:LEU:HB3	1:B:593:VAL:HG13	1.99	0.43
1:B:721:TYR:CE2	1:B:739:LEU:HD13	2.53	0.43
1:B:1040:ILE:HA	1:B:1144:TYR:O	2.18	0.43
1:A:325:ALA:HB3	1:A:331:ASN:HA	2.00	0.43
1:A:705:TRP:O	1:A:709:ILE:HG13	2.18	0.43
1:A:840:ARG:HD3	1:A:1004:TYR:CZ	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1071:THR:O	1:A:1074:VAL:HG13	2.19	0.43
1:B:332:ILE:O	1:B:336:LYS:N	2.51	0.43
1:B:432:GLY:H	1:B:451:PHE:HB2	1.83	0.43
1:B:605:THR:O	1:B:875:LEU:N	2.51	0.43
1:B:635:ALA:HB2	1:B:883:THR:OG1	2.18	0.43
1:A:681:PRO:HB2	1:A:1004:TYR:CE1	2.54	0.43
1:A:897:THR:HA	1:A:901:TYR:CD1	2.53	0.43
1:B:383:THR:O	1:B:386:THR:N	2.43	0.43
1:B:824:PRO:HG2	1:B:825:MET:SD	2.58	0.43
1:B:839:ASP:CG	1:B:842:ARG:HG3	2.38	0.43
1:B:1096:ASP:HB3	1:B:1099:GLY:H	1.83	0.43
1:A:472:MET:HB3	1:A:508:ARG:N	2.32	0.43
1:A:515:GLN:O	1:A:518:GLN:HB2	2.19	0.43
1:A:773:LYS:HG3	1:A:797:LEU:HD13	2.00	0.43
1:B:419:ILE:O	1:B:423:VAL:HG23	2.19	0.43
1:B:750:VAL:HB	1:B:809:MET:SD	2.59	0.43
1:B:790:VAL:O	1:B:794:ARG:HB2	2.19	0.43
1:B:905:ILE:HD12	1:B:1274:VAL:H	1.84	0.43
1:B:1146:TYR:OH	1:B:1207:ARG:HD2	2.18	0.43
1:A:717:SER:O	1:A:740:LEU:HA	2.18	0.43
1:A:974:LYS:HZ2	1:A:983:LEU:HD12	1.83	0.43
1:B:707:GLU:C	1:B:711:ARG:HE	2.22	0.43
1:B:905:ILE:CD1	1:B:1274:VAL:HG23	2.49	0.43
1:B:1181:MET:HB3	1:B:1181:MET:HE2	1.83	0.43
1:A:302:SER:C	1:A:305:VAL:HA	2.38	0.43
1:A:484:THR:CG2	1:A:489:GLY:HA2	2.48	0.43
1:A:587:ASP:N	1:A:587:ASP:OD1	2.51	0.43
1:A:680:THR:O	1:A:684:TRP:CD1	2.72	0.43
1:A:717:SER:O	1:A:740:LEU:HD23	2.19	0.43
1:A:841:ASP:C	1:A:1004:TYR:HB3	2.39	0.43
1:A:1159:ALA:N	1:A:1196:VAL:O	2.28	0.43
1:B:533:GLN:N	1:B:534:PRO:HD2	2.34	0.43
1:B:591:PHE:O	1:B:595:LEU:HG	2.18	0.43
1:A:465:TRP:CZ3	1:A:469:LEU:HD21	2.54	0.43
1:A:491:VAL:HA	1:A:902:ALA:HB2	2.01	0.43
1:A:853:SER:HB2	1:A:996:GLN:OE1	2.19	0.43
1:A:1025:GLN:O	1:A:1029:GLU:OE1	2.35	0.43
1:A:1108:TRP:O	1:A:1137:ILE:HA	2.18	0.43
1:B:592:ARG:HA	1:B:595:LEU:HD12	2.01	0.43
1:B:977:PHE:C	1:B:979:LEU:H	2.21	0.43
1:B:1213:ASN:CB	1:B:1216:SER:HB3	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:375:HIS:ND1	1:A:448:VAL:HG22	2.34	0.43
1:A:513:GLU:HA	1:A:516:ILE:HD12	2.00	0.43
1:A:515:GLN:HG2	1:A:732:LEU:HD22	2.00	0.43
1:A:623:LEU:HD12	1:A:626:LEU:HD12	2.01	0.43
1:A:667:GLN:H	1:A:667:GLN:HG3	1.53	0.43
1:A:701:ILE:H	1:A:701:ILE:HG13	1.59	0.43
1:A:1082:ARG:O	1:A:1094:ILE:HG13	2.19	0.43
1:A:1083:ILE:HB	1:A:1121:TYR:CE2	2.53	0.43
1:A:1086:GLY:HA2	1:A:1091:ALA:C	2.39	0.43
1:B:309:ARG:NH2	1:B:318:ARG:H	2.09	0.43
1:B:328:THR:HA	1:B:1150:TYR:CE1	2.54	0.43
1:B:359:LEU:O	1:B:362:LEU:HG	2.19	0.43
1:B:379:SER:OG	1:B:391:LEU:O	2.32	0.43
1:B:601:ASN:HB3	1:B:832:GLN:CA	2.49	0.43
1:B:623:LEU:O	1:B:626:LEU:HB3	2.19	0.43
1:A:507:TYR:CE1	1:A:1267:ILE:HD13	2.54	0.43
1:A:582:ARG:HD2	1:A:584:SER:HB3	2.00	0.43
1:A:769:CYS:SG	1:A:801:LYS:HB3	2.58	0.43
1:A:1084:SER:OG	1:A:1087:MET:SD	2.76	0.43
1:A:1151:TYR:HB3	1:A:1181:MET:CE	2.49	0.43
1:B:376:THR:HG21	1:B:392:ARG:HD2	2.00	0.43
1:B:667:GLN:NE2	1:B:668:ILE:HG13	2.34	0.43
1:A:669:TYR:CD1	1:A:685:PRO:HA	2.54	0.42
1:B:462:ARG:HA	1:B:465:TRP:HB3	2.01	0.42
1:B:847:VAL:O	1:B:847:VAL:HG13	2.19	0.42
1:B:853:SER:HB2	1:B:995:THR:N	2.31	0.42
1:B:1126:PHE:C	1:B:1129:TRP:HD1	2.22	0.42
1:B:1147:MET:HB3	1:B:1179:PRO:HA	2.01	0.42
1:B:1219:THR:O	1:B:1220:ILE:HD13	2.18	0.42
1:A:665:ASP:HB2	1:A:669:TYR:CD1	2.46	0.42
1:A:724:PRO:HA	1:A:728:GLY:N	2.34	0.42
1:A:786:THR:O	1:A:789:LEU:HB3	2.19	0.42
1:A:914:VAL:O	1:A:918:LEU:N	2.34	0.42
1:A:1108:TRP:CD1	1:A:1108:TRP:N	2.87	0.42
1:A:1127:ASP:OD1	1:A:1128:ALA:N	2.45	0.42
1:B:355:ARG:CZ	1:B:950:ASP:HA	2.48	0.42
1:B:370:LEU:HB3	1:B:465:TRP:CE2	2.54	0.42
1:B:739:LEU:HD12	1:B:739:LEU:HA	1.89	0.42
1:B:1036:ASN:ND2	1:B:1205:ASN:HB3	2.34	0.42
1:A:700:PRO:HG2	1:A:701:ILE:HG13	2.01	0.42
1:A:1153:PRO:HD3	1:A:1184:ILE:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:307:HIS:ND1	1:B:310:TRP:HB3	2.35	0.42
1:B:444:MET:HE1	1:B:1259:ARG:HG3	2.02	0.42
1:B:601:ASN:ND2	1:B:835:TYR:HE2	2.17	0.42
1:B:763:ASN:O	1:B:767:ARG:HG2	2.19	0.42
1:B:827:PRO:HA	1:B:917:ASN:HD21	1.85	0.42
1:B:1042:ARG:CA	1:B:1142:GLY:O	2.54	0.42
1:B:1138:ARG:NE	1:B:1202:THR:HG21	2.34	0.42
1:A:303:ARG:HA	1:A:305:VAL:N	2.34	0.42
1:A:330:ASN:HB3	1:A:1147:MET:HB2	2.01	0.42
1:A:334:LEU:O	1:A:337:GLN:N	2.48	0.42
1:A:558:ASN:HD22	1:A:888:SER:HB3	1.83	0.42
1:A:874:PRO:HG3	1:B:790:VAL:HG21	2.01	0.42
1:A:1034:GLU:O	1:A:1037:LEU:HG	2.19	0.42
1:B:439:MET:HB2	1:B:446:GLU:OE1	2.19	0.42
1:B:1049:ARG:HD3	1:B:1131:LYS:O	2.19	0.42
1:A:317:ASP:CG	1:A:319:ASP:H	2.23	0.42
1:A:330:ASN:N	1:A:1148:LEU:O	2.52	0.42
1:A:953:PRO:HG3	1:A:1141:MET:O	2.18	0.42
1:A:1116:GLN:OE1	1:A:1174:SER:N	2.53	0.42
1:A:1119:THR:O	1:A:1123:ASN:ND2	2.52	0.42
1:A:1160:TRP:HB2	1:A:1198:TYR:CZ	2.54	0.42
1:B:465:TRP:CE2	1:B:469:LEU:HD11	2.54	0.42
1:B:559:THR:O	1:B:799:LYS:NZ	2.29	0.42
1:B:691:ILE:O	1:B:694:ILE:N	2.45	0.42
1:B:1115:TRP:HE3	1:B:1122:PHE:CD2	2.37	0.42
1:B:1180:PHE:O	1:B:1182:VAL:HG13	2.19	0.42
1:A:711:ARG:HG3	1:A:712:TYR:CD1	2.55	0.42
1:A:898:ASN:OD1	1:A:899:VAL:N	2.51	0.42
1:B:381:ASP:O	1:B:382:HIS:ND1	2.53	0.42
1:B:430:ARG:HE	1:B:1238:PRO:HB2	1.84	0.42
1:B:637:PRO:HG2	1:B:764:TRP:CE2	2.54	0.42
1:B:773:LYS:HB3	1:B:794:ARG:NH2	2.34	0.42
1:B:1111:PRO:O	1:B:1140:GLU:HB2	2.19	0.42
1:A:517:SER:HB3	1:A:921:ASP:HB3	2.01	0.42
1:A:521:ARG:O	1:A:525:ILE:HG12	2.20	0.42
1:A:562:THR:O	1:A:799:LYS:HB2	2.20	0.42
1:A:600:TYR:HH	1:A:828:PHE:HD2	1.67	0.42
1:A:680:THR:H	1:A:683:THR:CG2	2.33	0.42
1:A:839:ASP:HB3	1:A:842:ARG:CZ	2.50	0.42
1:A:900:TRP:O	1:A:903:ASP:HB3	2.19	0.42
1:A:902:ALA:O	1:A:1275:PRO:HA	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1105:GLU:O	1:A:1108:TRP:NE1	2.53	0.42
1:A:1110:PHE:HD1	1:A:1114:LEU:HD22	1.84	0.42
1:A:1231:ARG:HB2	1:A:1232:TYR:CE2	2.54	0.42
1:B:403:TYR:HD2	1:B:410:ARG:HH21	1.68	0.42
1:B:864:LEU:HD22	1:B:868:ASN:HB3	2.01	0.42
1:B:930:THR:HG1	1:B:1018:SER:HG	1.57	0.42
1:B:1078:GLY:N	1:B:1081:CYS:HG	2.16	0.42
1:B:1107:ASN:HA	1:B:1136:ARG:O	2.19	0.42
1:B:1112:LEU:HD23	1:B:1112:LEU:HA	1.87	0.42
1:B:1115:TRP:CZ3	1:B:1119:THR:HA	2.55	0.42
1:A:431:VAL:HG23	1:A:1254:TYR:OH	2.20	0.42
1:A:822:ILE:CB	1:A:823:ALA:HA	2.48	0.42
1:A:854:ARG:N	1:A:863:SER:HB2	2.34	0.42
1:B:372:LEU:HB3	1:B:374:ARG:HH12	1.84	0.42
1:B:623:LEU:HG	1:B:627:TRP:NE1	2.34	0.42
1:B:685:PRO:HG2	1:B:688:PHE:CB	2.50	0.42
1:B:1064:ASP:C	1:B:1066:VAL:H	2.22	0.42
1:B:1165:ALA:HA	1:B:1168:GLU:OE1	2.20	0.42
1:A:375:HIS:CE1	1:A:448:VAL:HG13	2.54	0.42
1:A:392:ARG:HG3	1:A:394:LEU:CD1	2.50	0.42
1:A:546:ILE:O	1:A:895:LEU:HD21	2.20	0.42
1:A:622:SER:OG	1:A:625:ASN:OD1	2.22	0.42
1:A:713:TRP:HB3	1:A:837:ARG:HH21	1.82	0.42
1:A:781:TYR:CE2	1:A:790:VAL:HG22	2.55	0.42
1:B:325:ALA:HB3	1:B:331:ASN:HA	2.01	0.42
1:B:354:PHE:O	1:B:358:VAL:HG23	2.20	0.42
1:B:441:ASN:HB2	1:B:1261:ALA:HB1	2.00	0.42
1:B:450:VAL:H	1:B:1257:VAL:H	1.68	0.42
1:B:859:GLN:HG3	1:B:860:PRO:HD2	2.02	0.42
1:A:478:GLU:HA	1:A:481:TRP:CE3	2.55	0.42
1:A:643:CYS:O	1:A:647:LYS:N	2.47	0.42
1:A:913:GLU:CD	1:A:917:ASN:HD21	2.24	0.42
1:A:979:LEU:HD12	1:A:979:LEU:H	1.85	0.42
1:A:1069:ARG:HA	1:A:1074:VAL:HG11	2.02	0.42
1:A:1075:HIS:ND1	1:A:1108:TRP:NE1	2.68	0.42
1:B:307:HIS:CE1	1:B:308:THR:O	2.73	0.42
1:B:307:HIS:NE2	1:B:308:THR:O	2.53	0.42
1:B:455:ASP:OD1	1:B:457:LEU:HB3	2.20	0.42
1:B:507:TYR:HB3	1:B:727:PHE:CZ	2.55	0.42
1:B:619:SER:H	1:B:625:ASN:HD22	1.68	0.42
1:B:1153:PRO:HG3	1:B:1184:ILE:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1237:ASN:ND2	1:B:1239:ASP:OD2	2.53	0.42
1:A:592:ARG:H	1:A:592:ARG:HD2	1.85	0.41
1:A:646:VAL:HG22	1:A:688:PHE:CD2	2.55	0.41
1:A:857:ILE:HG22	1:A:859:GLN:H	1.85	0.41
1:A:1031:PHE:CE1	1:A:1035:TYR:HA	2.55	0.41
1:A:1189:ASP:O	1:A:1190:ILE:HG23	2.20	0.41
1:B:307:HIS:CG	1:B:308:THR:N	2.88	0.41
1:B:409:THR:OG1	1:B:431:VAL:HG11	2.20	0.41
1:B:504:LEU:H	1:B:1265:PRO:HD3	1.84	0.41
1:B:559:THR:HG21	1:B:803:ILE:HG12	2.01	0.41
1:A:514:ARG:HH12	1:A:518:GLN:CD	2.24	0.41
1:A:606:THR:HG1	1:A:640:THR:H	1.68	0.41
1:A:780:ARG:C	1:A:783:PRO:HD2	2.39	0.41
1:A:790:VAL:O	1:A:793:MET:HB3	2.20	0.41
1:A:816:PRO:HA	1:A:819:LEU:HG	2.02	0.41
1:A:938:ILE:CG2	1:A:947:ARG:HB3	2.50	0.41
1:A:1087:MET:HB2	1:A:1090:ALA:HB3	2.02	0.41
1:A:1231:ARG:HB3	1:A:1253:LEU:N	2.35	0.41
1:B:326:PRO:HB2	1:B:329:GLU:HB2	2.02	0.41
1:B:490:TYR:HB3	1:B:1274:VAL:HG22	2.01	0.41
1:B:607:VAL:HG22	1:B:875:LEU:C	2.40	0.41
1:B:773:LYS:HA	1:B:776:VAL:HG22	2.02	0.41
1:B:840:ARG:O	1:B:1004:TYR:HB3	2.21	0.41
1:B:999:ILE:HG13	1:B:1000:GLN:N	2.34	0.41
1:B:1067:PHE:HB2	1:B:1071:THR:HG21	2.02	0.41
1:B:1069:ARG:NH2	1:B:1110:PHE:N	2.68	0.41
1:B:1147:MET:O	1:B:1148:LEU:HD23	2.20	0.41
1:A:660:GLU:OE1	1:A:699:ALA:HA	2.19	0.41
1:A:732:LEU:H	1:A:831:PHE:HE1	1.62	0.41
1:A:853:SER:HB2	1:A:996:GLN:NE2	2.35	0.41
1:A:861:ALA:O	1:A:864:LEU:HD22	2.21	0.41
1:A:863:SER:O	1:A:866:THR:N	2.51	0.41
1:A:949:LEU:HB3	1:A:952:ILE:HG22	2.02	0.41
1:B:313:ASN:ND2	1:B:1259:ARG:HH22	2.19	0.41
1:B:669:TYR:HA	1:B:678:PHE:CZ	2.55	0.41
1:B:884:VAL:HA	1:B:887:LEU:HB3	2.02	0.41
1:B:934:LEU:HD22	1:B:937:GLN:NE2	2.34	0.41
1:B:1166:TRP:CE3	1:B:1167:LEU:HD23	2.55	0.41
1:A:673:ARG:NH2	1:B:784:GLY:H	2.17	0.41
1:A:1019:VAL:O	1:A:1022:ASP:HB3	2.20	0.41
1:A:1151:TYR:O	1:A:1184:ILE:HG13	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:468:ARG:HA	1:B:468:ARG:HD2	1.68	0.41
1:B:602:GLY:H	1:B:832:GLN:HA	1.84	0.41
1:B:652:LEU:HD23	1:B:705:TRP:CD1	2.55	0.41
1:B:720:ARG:HH22	1:B:724:PRO:CD	2.28	0.41
1:B:1151:TYR:O	1:B:1183:PRO:HA	2.20	0.41
1:A:327:PRO:HA	1:A:331:ASN:HD21	1.86	0.41
1:A:364:GLU:HG3	1:A:365:PHE:N	2.36	0.41
1:A:533:GLN:HG2	1:A:537:GLN:HE21	1.86	0.41
1:A:596:ALA:O	1:A:599:LEU:HD23	2.20	0.41
1:A:1058:PRO:HB2	1:A:1200:ILE:HA	2.03	0.41
1:B:368:ASP:HB3	1:B:369:ASN:ND2	2.35	0.41
1:B:375:HIS:HD2	1:B:444:MET:N	2.18	0.41
1:B:659:PHE:CD1	1:B:781:TYR:HD1	2.39	0.41
1:B:684:TRP:CE2	1:B:840:ARG:HB2	2.55	0.41
1:B:778:ASN:HB2	1:B:780:ARG:HG3	2.02	0.41
1:B:1107:ASN:C	1:B:1108:TRP:HD1	2.23	0.41
1:B:1259:ARG:HD2	1:B:1260:TYR:H	1.86	0.41
1:A:355:ARG:NH2	1:A:954:SER:H	2.19	0.41
1:A:1147:MET:HG3	1:A:1179:PRO:CA	2.50	0.41
1:B:383:THR:HB	1:B:384:PRO:HD2	2.02	0.41
1:B:407:TYR:CD2	1:B:410:ARG:HD3	2.50	0.41
1:B:545:ARG:HH12	1:B:546:ILE:HD12	1.85	0.41
1:B:556:ILE:HD11	1:B:888:SER:HB3	2.02	0.41
1:B:682:HIS:CD2	1:B:682:HIS:H	2.38	0.41
1:B:691:ILE:HB	1:B:703:ARG:NE	2.36	0.41
1:B:1007:ARG:NH1	1:B:1008:THR:N	2.69	0.41
1:A:342:GLU:HB3	1:A:1173:THR:OG1	2.21	0.41
1:A:1120:ARG:HD2	1:A:1121:TYR:H	1.84	0.41
1:A:1156:TYR:CG	1:A:1157:ALA:N	2.88	0.41
1:A:1203:GLU:HB2	1:A:1205:ASN:ND2	2.32	0.41
1:B:355:ARG:NE	1:B:952:ILE:O	2.51	0.41
1:B:1051:GLN:HB3	1:B:1194:PRO:O	2.20	0.41
1:B:1076:ILE:HA	1:B:1109:ILE:HB	2.02	0.41
1:A:385:PHE:N	1:A:385:PHE:CD1	2.88	0.41
1:A:475:ASN:OD1	1:A:475:ASN:N	2.53	0.41
1:A:790:VAL:C	1:A:794:ARG:HH21	2.23	0.41
1:A:852:GLN:HB3	1:A:853:SER:H	1.74	0.41
1:A:1000:GLN:HE21	1:A:1008:THR:CA	2.34	0.41
1:B:512:ALA:HA	1:B:515:GLN:OE1	2.20	0.41
1:B:660:GLU:OE1	1:B:701:ILE:HB	2.19	0.41
1:B:754:THR:OG1	1:B:806:MET:HA	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:915:PHE:HA	1:B:918:LEU:CG	2.43	0.41
1:B:1095:ARG:CG	1:B:1099:GLY:HA2	2.50	0.41
1:A:473:ASN:HB2	1:A:504:LEU:CD1	2.51	0.41
1:A:475:ASN:HA	1:A:476:PRO:HD3	1.95	0.41
1:A:478:GLU:O	1:A:481:TRP:HE3	2.03	0.41
1:A:548:PRO:HG3	1:A:895:LEU:HD13	2.03	0.41
1:A:680:THR:O	1:A:683:THR:OG1	2.27	0.41
1:A:708:ILE:HG12	1:A:711:ARG:HH22	1.86	0.41
1:A:720:ARG:HE	1:A:720:ARG:HB3	1.64	0.41
1:A:763:ASN:HB3	1:A:767:ARG:HH22	1.86	0.41
1:A:917:ASN:O	1:A:920:ARG:HB3	2.19	0.41
1:A:1170:ILE:HG13	1:A:1171:THR:N	2.36	0.41
1:B:317:ASP:OD1	1:B:318:ARG:N	2.53	0.41
1:B:531:VAL:HG12	1:B:532:ILE:HG13	2.03	0.41
1:B:654:ASN:HD22	1:B:672:SER:HA	1.85	0.41
1:B:681:PRO:HA	1:B:684:TRP:CD1	2.56	0.41
1:B:928:VAL:O	1:B:931:LEU:HB3	2.21	0.41
1:B:1007:ARG:HH11	1:B:1008:THR:H	1.69	0.41
1:B:1022:ASP:O	1:B:1026:LEU:HD23	2.21	0.41
1:B:1160:TRP:HB2	1:B:1198:TYR:CZ	2.56	0.41
1:A:343:THR:HG21	1:A:349:ALA:H	1.85	0.41
1:A:1003:GLN:O	1:A:1006:GLY:N	2.52	0.41
1:A:1075:HIS:N	1:A:1075:HIS:CD2	2.88	0.41
1:A:1170:ILE:HD12	1:A:1170:ILE:HA	1.91	0.41
1:B:338:LEU:HD13	1:B:338:LEU:HA	1.81	0.41
1:B:678:PHE:HA	1:B:683:THR:HG21	2.02	0.41
1:B:805:SER:HB2	1:B:887:LEU:O	2.21	0.41
1:B:1093:MET:HG2	1:B:1103:PRO:N	2.36	0.41
1:B:1138:ARG:O	1:B:1139:ILE:HD13	2.21	0.41
1:B:1258:THR:OG1	1:B:1260:TYR:OH	2.21	0.41
1:A:427:VAL:HG13	1:A:1235:LEU:O	2.21	0.40
1:A:595:LEU:O	1:A:598:TRP:HB2	2.20	0.40
1:A:600:TYR:HE2	1:A:828:PHE:CE2	2.34	0.40
1:A:813:GLN:O	1:A:816:PRO:HD2	2.20	0.40
1:A:1079:ARG:CZ	1:A:1111:PRO:HG2	2.51	0.40
1:A:1160:TRP:HB2	1:A:1198:TYR:CE1	2.56	0.40
1:A:1170:ILE:HG12	1:A:1175:ILE:CA	2.51	0.40
1:B:542:LEU:HA	1:B:545:ARG:HE	1.86	0.40
1:B:603:VAL:HG13	1:B:831:PHE:CE2	2.55	0.40
1:B:759:ASN:HD21	1:B:808:PRO:HB2	1.84	0.40
1:B:764:TRP:O	1:B:768:VAL:HG13	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:810:TYR:HA	1:B:814:LEU:HD22	2.02	0.40
1:B:827:PRO:HA	1:B:917:ASN:ND2	2.36	0.40
1:B:930:THR:HG21	1:B:1020:ILE:HB	2.04	0.40
1:B:1141:MET:HE3	1:B:1141:MET:HB2	1.74	0.40
1:B:1147:MET:HB3	1:B:1147:MET:HE2	1.97	0.40
1:A:351:PRO:HA	1:A:354:PHE:CG	2.56	0.40
1:A:569:GLN:O	1:A:789:LEU:HD13	2.21	0.40
1:A:637:PRO:HG2	1:A:638:MET:HE2	2.02	0.40
1:A:929:GLN:NE2	1:A:929:GLN:O	2.54	0.40
1:A:1164:SER:O	1:A:1167:LEU:N	2.54	0.40
1:B:401:LYS:HE3	1:B:401:LYS:HB3	1.96	0.40
1:B:654:ASN:HA	1:B:657:VAL:HG23	2.03	0.40
1:B:841:ASP:HB3	1:B:1005:ASN:HB3	2.03	0.40
1:B:878:ASP:OD1	1:B:880:ARG:N	2.51	0.40
1:B:986:PRO:O	1:B:990:GLY:N	2.54	0.40
1:B:1116:GLN:HB2	1:B:1117:MET:SD	2.61	0.40
1:A:307:HIS:CG	1:A:308:THR:N	2.89	0.40
1:A:307:HIS:CG	1:A:323:ILE:HG22	2.56	0.40
1:A:345:SER:C	1:A:347:ARG:H	2.24	0.40
1:A:403:TYR:O	1:A:407:TYR:N	2.37	0.40
1:A:642:PRO:O	1:A:645:PRO:HD2	2.21	0.40
1:A:797:LEU:HA	1:A:800:LEU:HD12	2.03	0.40
1:A:949:LEU:HG	1:A:951:TRP:CZ2	2.56	0.40
1:A:1059:LEU:HD12	1:A:1206:ASP:OD1	2.21	0.40
1:A:1078:GLY:O	1:A:1079:ARG:HD3	2.21	0.40
1:A:1164:SER:O	1:A:1167:LEU:HB2	2.21	0.40
1:B:346:VAL:HB	1:B:347:ARG:HG3	2.02	0.40
1:B:637:PRO:HA	1:B:713:TRP:CH2	2.57	0.40
1:B:949:LEU:HB3	1:B:952:ILE:HD12	2.03	0.40
1:B:1147:MET:C	1:B:1179:PRO:HA	2.42	0.40
1:A:364:GLU:HG3	1:A:365:PHE:H	1.86	0.40
1:A:1003:GLN:HB2	1:A:1005:ASN:OD1	2.21	0.40
1:A:1095:ARG:HA	1:A:1100:MET:O	2.21	0.40
1:A:1202:THR:H	1:A:1202:THR:HG1	1.68	0.40
1:B:338:LEU:HD12	1:B:360:HIS:HB3	2.02	0.40
1:B:375:HIS:CD2	1:B:443:ALA:H	2.39	0.40
1:B:403:TYR:HD2	1:B:410:ARG:NH2	2.18	0.40
1:B:430:ARG:HG3	1:B:1238:PRO:HB3	2.03	0.40
1:B:518:GLN:NE2	1:B:830:PRO:O	2.51	0.40
1:B:571:LEU:HB3	1:B:575:SER:OG	2.21	0.40
1:A:334:LEU:HD23	1:A:334:LEU:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:438:GLN:NE2	1:A:443:ALA:O	2.47	0.40
1:A:511:ASN:CA	1:A:514:ARG:HB2	2.50	0.40
1:A:929:GLN:HG2	1:A:1017:GLY:HA2	2.03	0.40
1:A:940:ASP:OD2	1:A:947:ARG:HD2	2.21	0.40
1:A:952:ILE:CD1	1:A:1143:ALA:HB3	2.52	0.40
1:A:1002:GLN:NE2	1:A:1006:GLY:O	2.54	0.40
1:B:333:HIS:CD2	1:B:336:LYS:HE3	2.56	0.40
1:B:545:ARG:NH2	1:B:546:ILE:HB	2.36	0.40
1:B:763:ASN:OD1	1:B:767:ARG:NH1	2.55	0.40
1:B:1178:VAL:O	1:B:1178:VAL:HG13	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	972/975 (100%)	783 (81%)	187 (19%)	2 (0%)	47	47
1	B	963/975 (99%)	806 (84%)	156 (16%)	1 (0%)	51	51
All	All	1935/1950 (99%)	1589 (82%)	343 (18%)	3 (0%)	50	47

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	1111	PRO
1	A	1161	ASN
1	A	582	ARG

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	861/862 (100%)	852 (99%)	9 (1%)	76	76
1	B	854/862 (99%)	846 (99%)	8 (1%)	78	78
All	All	1715/1724 (100%)	1698 (99%)	17 (1%)	77	76

All (17) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	336	LYS
1	A	354	PHE
1	A	481	TRP
1	A	494	THR
1	A	674	ARG
1	A	720	ARG
1	A	807	THR
1	A	842	ARG
1	A	851	ARG
1	B	354	PHE
1	B	375	HIS
1	B	447	TRP
1	B	514	ARG
1	B	686	ARG
1	B	720	ARG
1	B	1082	ARG
1	B	1212	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (43) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	350	ASN
1	A	528	ASN
1	A	654	ASN
1	A	671	GLN
1	A	715	ASN

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Mol	Chain	Res	Type
1	A	745	HIS
1	A	774	ASN
1	A	813	GLN
1	A	917	ASN
1	A	919	GLN
1	A	929	GLN
1	A	1000	GLN
1	A	1125	GLN
1	A	1149	HIS
1	A	1205	ASN
1	B	331	ASN
1	B	360	HIS
1	B	369	ASN
1	B	488	GLN
1	B	524	ASN
1	B	585	ASN
1	B	601	ASN
1	B	671	GLN
1	B	690	ASN
1	B	704	GLN
1	B	710	HIS
1	B	715	ASN
1	B	774	ASN
1	B	852	GLN
1	B	917	ASN
1	B	929	GLN
1	B	937	GLN
1	B	942	GLN
1	B	1036	ASN
1	B	1051	GLN
1	B	1088	ASN
1	B	1107	ASN
1	B	1116	GLN
1	B	1118	ASN
1	B	1155	GLN
1	B	1161	ASN
1	B	1197	GLN
1	B	1255	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

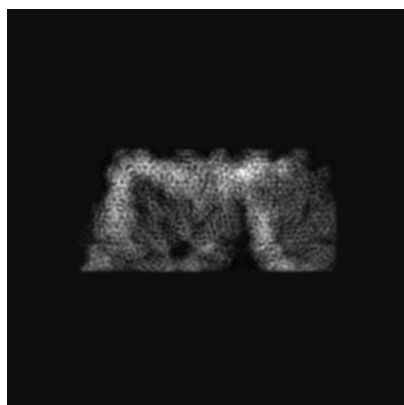
5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

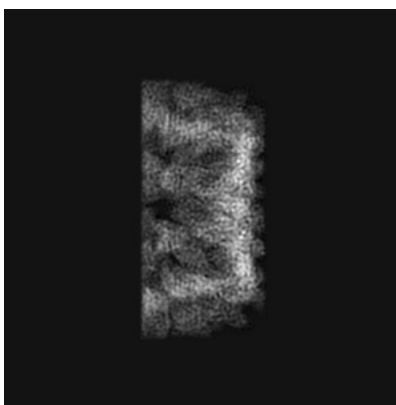
6 Tomogram visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-22165. These allow visual inspection of the internal detail of the tomogram and identification of artifacts.

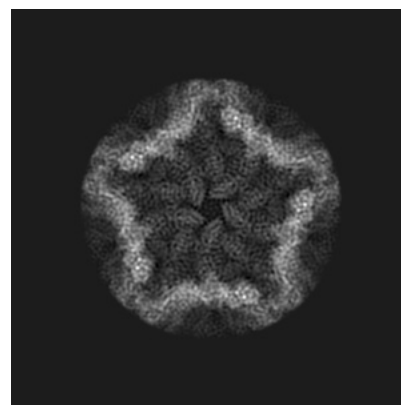
6.1 Orthogonal projections [i](#)



X



Y



Z

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

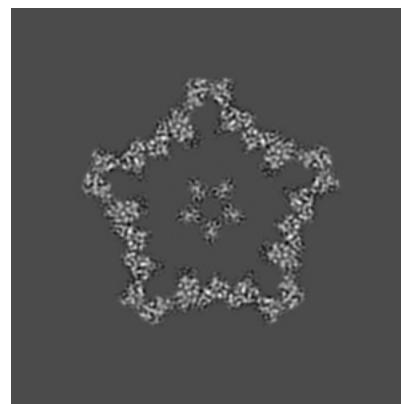
6.2 Central slices [i](#)



X Index: 193



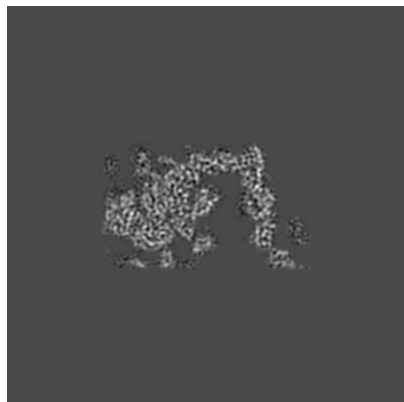
Y Index: 193



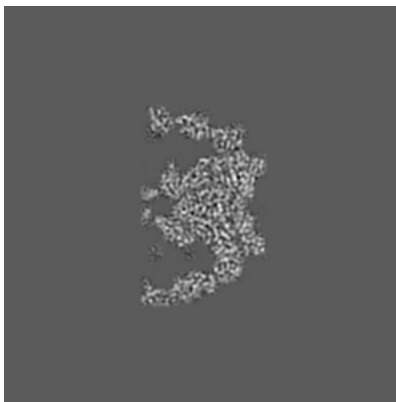
Z Index: 193

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

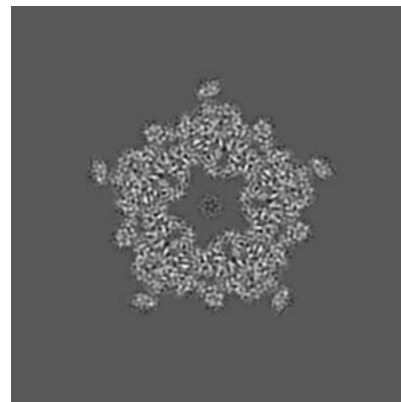
6.3 Largest variance slices [i](#)



X Index: 117



Y Index: 112



Z Index: 230

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

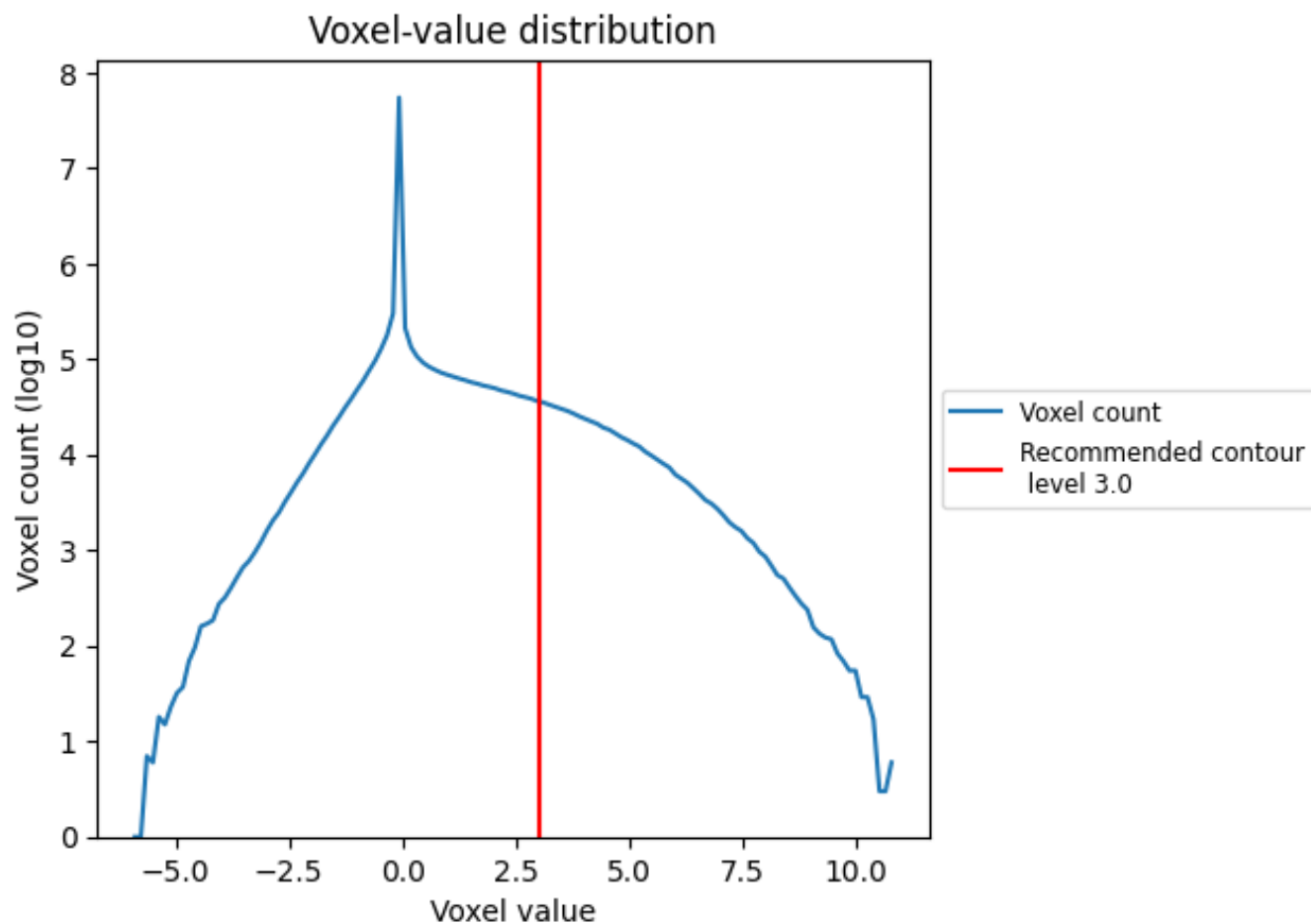
6.4 Mask visualisation [i](#)

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

7 Tomogram analysis [i](#)

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

7.1 Voxel-value distribution [i](#)



The voxel-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic.

8 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-22165 and PDB model 6ZTS. Per-residue inclusion information can be found in section 3 on page 4.

8.1 Map-model overlay [i](#)

This section was not generated.

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

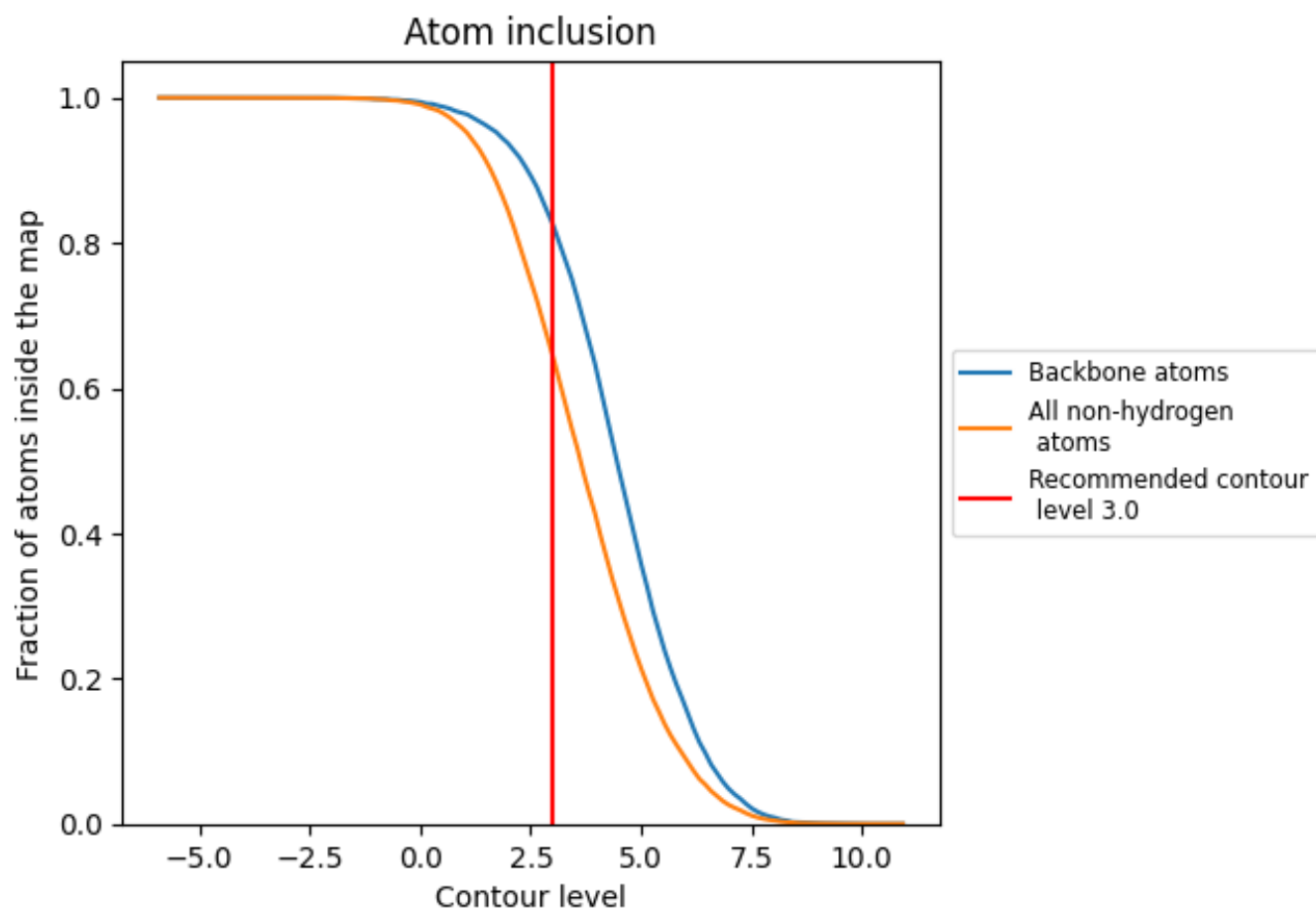


The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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

This section was not generated.






8.4 Atom inclusion [i](#)



At the recommended contour level, 83% of all backbone atoms, 64% of all non-hydrogen atoms, are inside the map.

8.5 Map-model fit summary [i](#)

The table lists the average atom inclusion at the recommended contour level (3.0) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6448	 0.2160
A	 0.6346	 0.2110
B	 0.6550	 0.2220

