



Full wwPDB EM Validation Report ⓘ

Nov 29, 2022 – 04:58 PM JST

PDB ID : 7WOO
EMDB ID : EMD-32653
Title : Cryo-EM structure of the inner ring protomer of the *Saccharomyces cerevisiae* nuclear pore complex
Authors : Li, Z.Q.; Chen, S.J.B.; Zhao, L.; Sui, S.F.
Deposited on : 2022-01-22
Resolution : 3.71 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.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

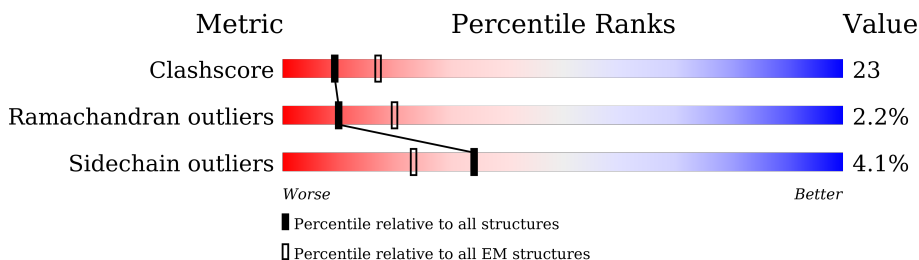
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.71 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	839	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">83%</div> </div>
1	Z	839	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">53%</div> </div>
2	C	1391	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">95%</div> </div>
3	D	1502	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">80%</div> </div>
4	E	1655	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">14%</div> </div>
5	F	1683	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">33%</div> </div>
6	G	472	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">24%</div> </div>
6	J	472	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">30%</div> </div>

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Mol	Chain	Length	Quality of chain
7	H	541	<p>28% 29% 14% 55%</p>
7	K	541	<p>34% 19% 23% 53%</p>
8	I	823	<p>10% 13% 7% 77%</p>
8	L	823	<p>14% 12% 10% 77%</p>

2 Entry composition [i](#)

There are 8 unique types of molecules in this entry. The entry contains 66949 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 Nucleoporin NIC96.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	732	Total	C	N	O	S	0	0
			5723	3631	975	1101	16		
1	Z	746	Total	C	N	O	S	0	0
			5776	3660	981	1120	15		

- Molecule 2 is a protein called Nucleoporin NUP157.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	C	1325	Total	C	N	O	S	0	0
			10452	6664	1736	2018	34		

- Molecule 3 is a protein called Nucleoporin NUP170.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	D	1398	Total	C	N	O	S	0	0
			10976	7018	1811	2115	32		

- Molecule 4 is a protein called Nucleoporin NUP188.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	E	1552	Total	C	N	O	S	0	0
			12362	8017	1981	2337	27		

- Molecule 5 is a protein called Nucleoporin NUP192.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	F	1622	Total	C	N	O	S	0	0
			12232	7805	2031	2365	31		

- Molecule 6 is a protein called Nucleoporin NUP49/NSP49.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	G	200	Total	C	N	O	S	0	0
			1533	973	251	307	2		
6	J	195	Total	C	N	O	S	0	0
			1492	938	251	302	1		

- Molecule 7 is a protein called Nucleoporin NUP57.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	H	246	Total	C	N	O	S	0	0
			1811	1128	332	348	3		
7	K	254	Total	C	N	O	S	0	0
			1808	1126	334	345	3		

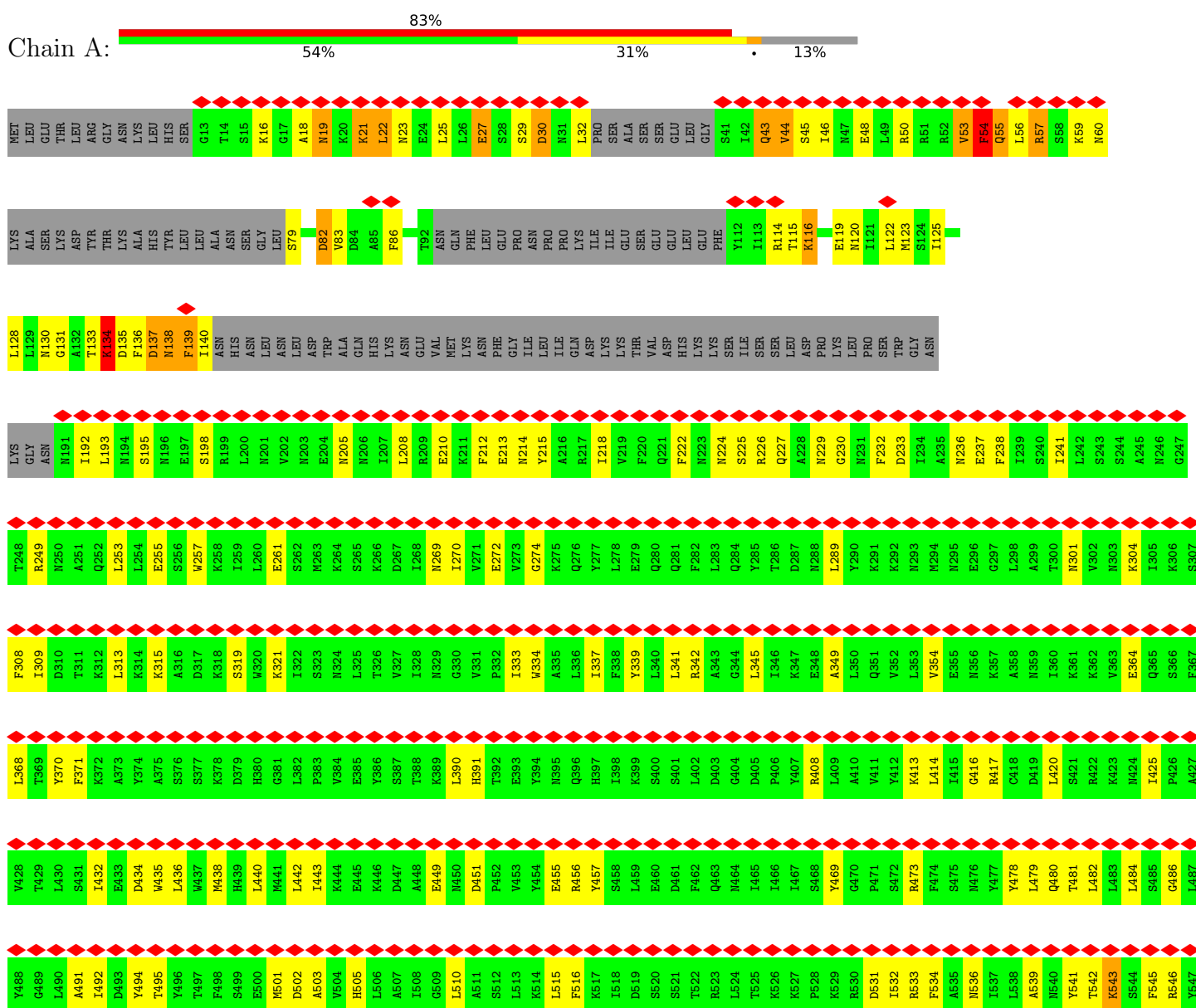
- Molecule 8 is a protein called Nucleoporin NSP1.

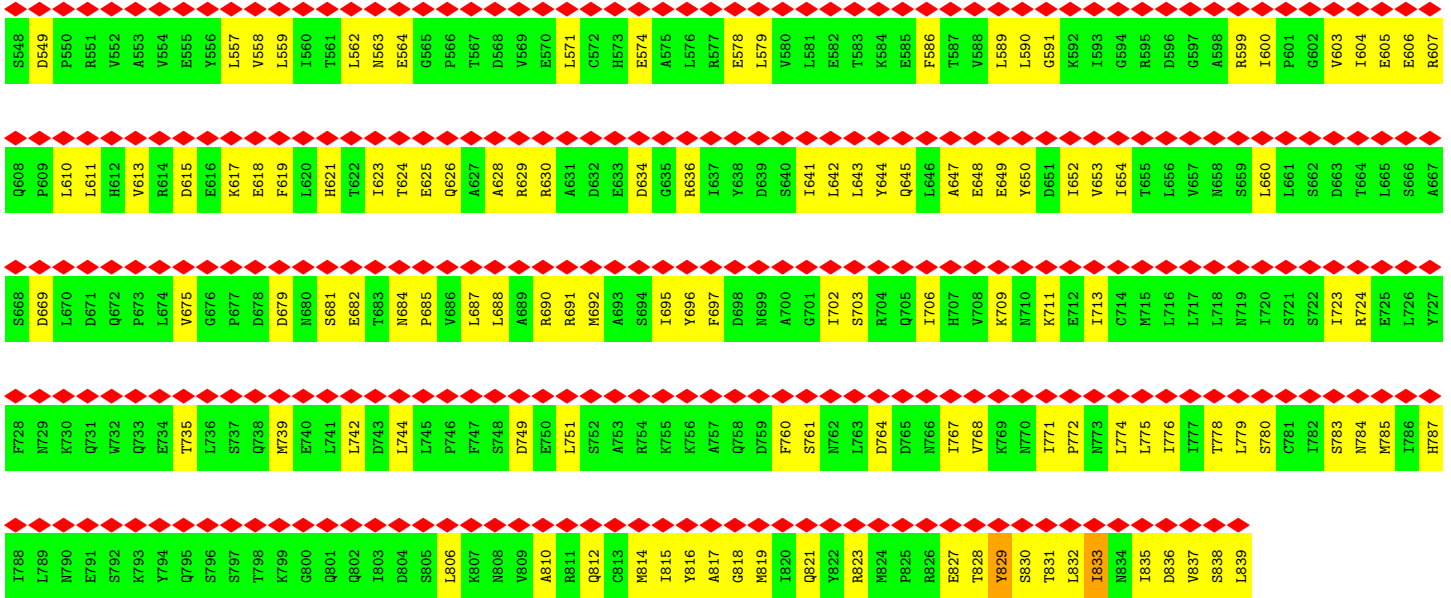
Mol	Chain	Residues	Atoms					AltConf	Trace
8	I	187	Total	C	N	O	S	0	0
			1418	862	244	311	1		
8	L	187	Total	C	N	O	S	0	0
			1366	830	240	295	1		

3 Residue-property plots

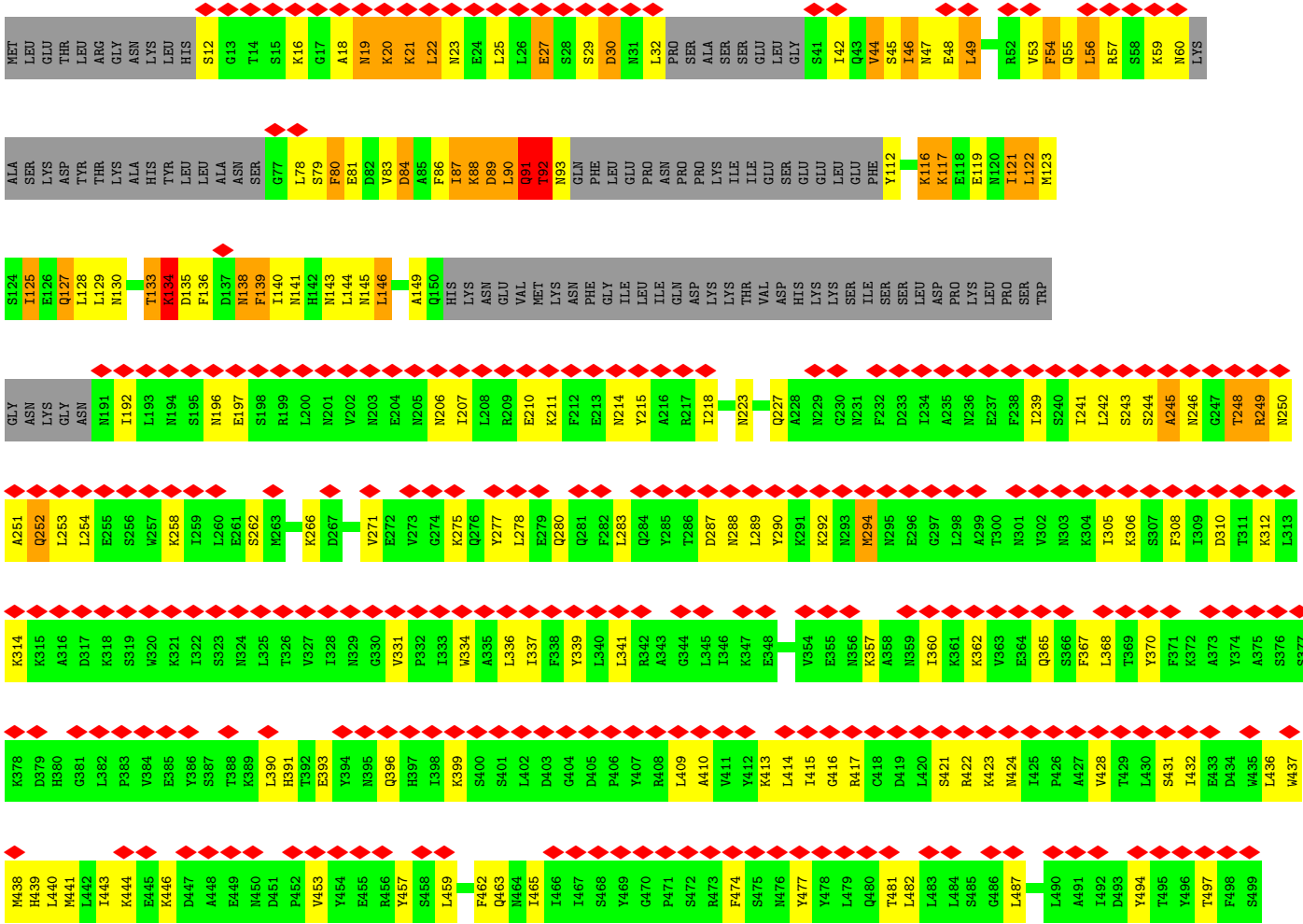
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

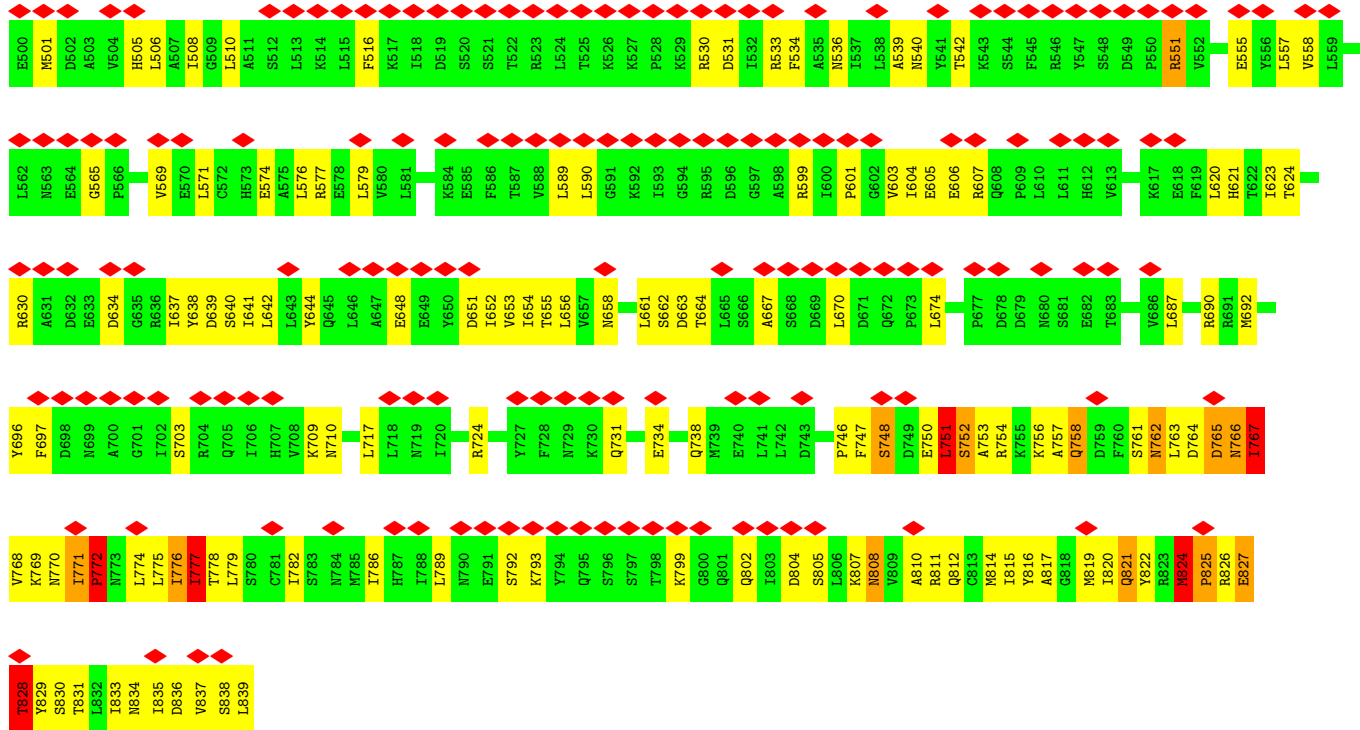
- Molecule 1: Nucleoporin NIC96



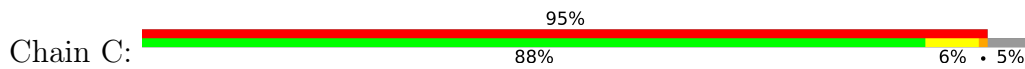


• Molecule 1: Nucleoporin NIC96





• Molecule 2: Nucleoporin NUP157



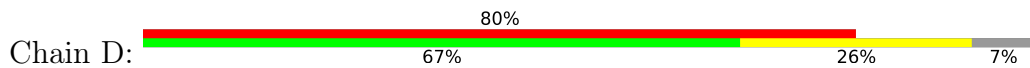
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TYR	GLY	ALA	GLY	MET	T68	I69	E70	S71	E72	L73	R74	D75	V76	T77	T78	H79	V80	R81	I82	S83	G84	L85	T86	S87	S88	E89	P90	L91	Q92	L93	A94	S95	E96	F97	V98	A99	D100	L101	S102	F103	R104	D105	L106	M107	T108	P109	I110	L111	D112	M113	P114	D115	Y116	Y117	S118	K119	G120		
L121	D122	Y123	M124	F125	S126	D127	E128	G129	V130	G131	L132	G133	A134	F135	T136	F137	Q138	R140	Q141	Q142	V143	T144	M145	I146	P147	D148	E149	V150	L151	S152	Q153	V154	S155	M156	T157	E158	I159	K160	S161	D162	M163	G164	I165	I166	L167	E168	L169	M170	Y171	C172	M173	I174	T175	S176	D177	K178	K179	L180	
I181	L182	M183	H184	I185	H186	M187	S188	L189	E190	Y191	H192	C193	I194	D195	E196	I197	E198	H199	T200	L201	L202	K203	V204	K205	L206	V207	R208	P209	S210	P211	N212	T213	F214	V215	S216	S217	V218	E219	N220	L221	L222	L223	V224	A225	T226	L227	F228	D229	T230	Y231	L232	L233	T234	T235	S236	F237	N238	D239	R240
T241	H242	E243	L244	N245	L246	F247	N248	T249	G250	L251	K252	V253	N254	V255	T256	G257	N259	V260	S261	N262	L263	L264	S265	V266	E267	R268	T269	G270	Q271	L272	F273	F274	T275	G276	A277	L278	D279	G280	L281	L282	L283	L284	E285	L286	Q287	Y288	N289	C290	S291	E292	V293	L294	F295	N296	S297	K298	D299	N300	
K301	I302	G303	L304	T305	K306	S307	N308	L309	A310	N311	L312	L313	P314	T315	K316	L317	I318	P319	S320	I321	P322	G323	G324	K325	L326	I327	Q328	K329	V330	L331	E332	L333	D334	A335	G336	T337	E338	E339	F340	R341	I342	S343	F344	K345	E346	V347	D348	I349	V350	A351	G352	V353	H354	H355	T356	L357	N358	T359	K360
S361	I362	V363	R364	S365	V366	L367	I368	T369	S370	N371	G372	L373	V374	G375	P376	V377	L378	I379	D380	A381	A382	H383	I384	R385	R386	G387	M388	N389	A390	L391	G392	V393	K394	N395	S396	F397	L398	L399	S400	M401	R402	A403	F404	K405	A406	A407	K408	I409	V410	S411	I412	S413	M414	C415	E416	M417	N418	D419	L420

C1141	L1081	I1021	P961	I901	R841	G781	S721	A661	V601	S541	G481	F421
D1142	P1082	E1022	K962	L902	E842	S782	Q722	L662	A602	A542	P482	L422
S1143	Y1083	Q1023	T963	C903	Y843	M783	I723	A663	V603	P443	L483	A423
S1144	L1084	S1024	V964	Y904	F844	A784	M724	F664	L604	D544	S484	V424
T1145	K1085	P1025	G965	R905	F845	I785	E725	F665	T605	Y545	T485	I425
S1146	E1086	S1026	F966	A906	D846	T786	E726	S666	S606	G546	Q486	T426
F1147	R1087	L967	L967	G907	L847	A787	R727	A667	M607	I547	K487	T427
A1088	E1088	A1028	K848	E908	K848	S788	V728	G668	A608	L548	A488	T428
E1089	E1089	M1029	F849	H909	F849	D789	F729	I669	L609	K549	S489	G429
K1150	K1090	F970	R869	L910	H850	A790	V730	P670	E610	N550	S490	V430
A971	S1091	A971	D851	E911	D851	E791	F731	G671	I611	Y551	T491	R431
L1092	L1092	I1032	D872	A912	L852	S792	K732	V672	B612	G552	Y492	L432
E1093	E1093	F1033	K873	A913	F853	I793	R733	E673	C613	K553	I493	Y433
V1154	I1094	S1034	I874	Q914	T854	A794	A734	E674	B614	K554	I494	F434
Q1155	S1095	P1035	D875	K915	P855	M795	S735	I675	R615	V555	T495	K435
N1096	N1096	A1036	K876	F916	N856	M796	K736	K676	T616	E556	T496	G436
S1157	L1097	S1037	G877	E917	A857	A797	T737	P677	P617	N557	C497	S437
E1158	L1098	S1038	N878	M918	K858	L798	E738	K678	D618	T558	A498	I438
M1159	W1099	L1039	Q879	I919	T859	I799	K739	S679	E619	A559	S499	S439
I1160	F1100	K1040	A880	D920	K860	L800	M740	S680	V620	L560	T500	R440
H1161	Y1101	K1041	Q881	S921	L862	L801	D741	R681	F621	L561	I501	R441
E1162	L1102	R1042	E882	K922	L863	I802	A742	E682	E622	I502	I502	S442
L1163	F1103	Y983	Y883	I923	I863	M803	F743	S883	S623	S503	S503	I443
F1164	K1104	Y984	K864	S924	K864	S804	G744	G684	L624	P504	P504	G444
L1165	E1105	S985	E865	R925	E865	I805	I745	S685	I625	D565	G505	S445
I1166	E1106	R886	L866	N926	L866	K806	S746	V686	E626	E566	I506	L446
A1167	H1107	G887	L867	H927	L867	D807	I747	P687	M627	I567	Y507	K447
S1168	F1108	M1048	L868	L928	L868	A808	T748	P688	P628	F508	F508	L448
L1169	L1109	M1049	E869	D929	E869	L809	R749	I689	L629	E569	T509	D449
Q1170	E1110	S1050	V670	T930	V670	S810	P750	S690	P630	I570	C510	S450
D1171	A1111	M1051	V671	A931	V671	L811	Q751	Q891	F631	V571	V511	V451
D1172	A1112	N1052	N872	I932	N872	I812	V752	N692	I632	P572	R512	K452
L1173	D1113	R1053	A873	D933	A873	M813	E753	L693	H633	L573	K513	F453
L1174	V1114	F1054	N874	L934	N874	B614	V754	F694	S634	T574	R514	P454
M1175	L1115	K985	L875	Y835	L875	F615	Y755	D895	Y635	R575	A515	P455
L1176	Y1116	V996	A876	E936	A876	B616	L756	K696	G636	S576	N516	T456
F1177	A1117	Y1057	S877	R937	S877	E617	S757	S697	L637	F577	S457	S457
R1178	L1118	C1058	G878	C938	G878	D818	S758	E698	S638	N578	G518	I458
M1179	A1119	F1059	T879	A939	T879	I619	I759	E699	E639	Y579	E519	S459
E1180	S1120	Y1060	S880	E940	S880	D820	S760	C700	A640	T580	L520	S460
T1181	S1121	D1061	A881	N941	A881	A621	V761	D701	C641	S881	S521	S461
R1182	I1122	W1062	D882	I942	D882	F822	L762	G702	S642	S882	K522	L462
I1183	F1123	L1063	Y883	E943	Y883	K623	A763	I703	T643	P683	G523	E463
D1184	D1124	V1064	L884	L944	L884	S824	D764	V704	A644	Q584	I524	Q464
E1185	L1125	A1065	V885	C945	V885	L825	F765	L705	L645	G585	T525	N465
L1186	K1126	M1066	N886	E946	N886	L826	F766	S706	E646	N526	N526	K466
Y1187	L1127	K1067	V887	L947	V887	M827	M767	F707	L647	A687	K527	S467
R1188	S1128	R1068	L888	R948	L888	T828	I768	R708	A648	N588	A528	F468
K1189	E1129	Q1069	K889	R949	K889	L829	H769	F709	C649	E589	L529	I469
Q1190	E1010	D1070	E890	V950	E890	M830	R770	Y710	K650	F590	L530	I470
L1191	I1011	Y1071	R891	N951	R891	G631	F771	G711	F651	A591	E531	G471
T1192	V1012	L1072	F892	D952	F892	A832	S772	S712	N652	S192	N632	H472
L1193	L1073	L1073	G893	I953	G893	G633	F773	A713	K653	Q593	K533	H473
K1194	S1014	R1074	S894	N954	S894	G634	V774	L714	S654	Y594	E534	P474
L1195	A1135	L1075	F895	Y955	F895	V635	S775	L715	E555	S595	E535	L475
M1196	D1016	D1076	C956	K956	C956	B636	F776	I716	H656	A596	H536	L476
G1197	L1017	S1077	H897	L957	H897	D637	V777	T717	I657	E597	K537	M476
R1198	A1138	Q1078	S898	N958	S898	S638	P778	R718	K658	E598	T477	H477
V1199	G1139	F1079	A899	Y959	A899	K639	P779	L719	S659	L599	Y539	D479
L1200	L1140	V1080	D900	Q960	D900	T640	K780	F720	S660	K600	V540	T480

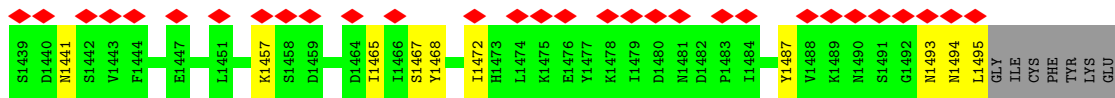
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L1205	I1265	L1325	R1385
F1206	S1266	S1326	D1386
N1207	N1267	N1327	H1387
D1208	T1268	I1328	H1388
C1209	L1269	I1329	G1389
A1210	I1270	E1330	L1390
D1211	R1271	M1331	K1391
P1212	I1272	S1332	
L1213	G1273	E1333	
D1214	K1274	G1334	
Y1215	T1275	M1335	
Y1216	T1276	V1336	
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I1222	V1282	E1342	
F1223	F1283	M1343	
K1224	P1284	V1344	
V1225	V1285	V1345	
S1226	H1286	L1346	
Q1227	F1287	I1347	
F1228	L1288	K1348	
K1229	M1289	L1349	
D1230	N1290	W1350	
E1231	K1291	Y1351	
K1232	I1292	Q1352	
V1233	L1293	S1353	
I1234	E1294	D1354	
Q1235	S1295	S1355	
G1236	F1296	D1356	
E1237	L1297	L1357	
W1238	I1298	L1358	
N1239	K1299	G1359	
R1240	S1300	S1360	
L1241	S1301	I1361	
L1242	A1302	A1362	
D1243	A1303	P1363	
S1244	D1304	E1364	
M1245	G1305	Q1365	
K1246	S1306	I1366	
N1247	V1307	K1367	
A1248	C1308	L1368	
P1249	S1309	L1369	
S1250	M1310	E1370	
P1251	F1311	K1371	
D1252	L1312	Y1372	
G1253	L1313	D1373	
V1254	A1314	P1374	
S1255	G1315	M1375	
V1256	V1316	T1376	
G1257	S1317	D1377	
E1258	H1318	P1378	
E1259	L1319	V1379	
S1260	K1320	Q1380	

● Molecule 3: Nucleoporin NUP170

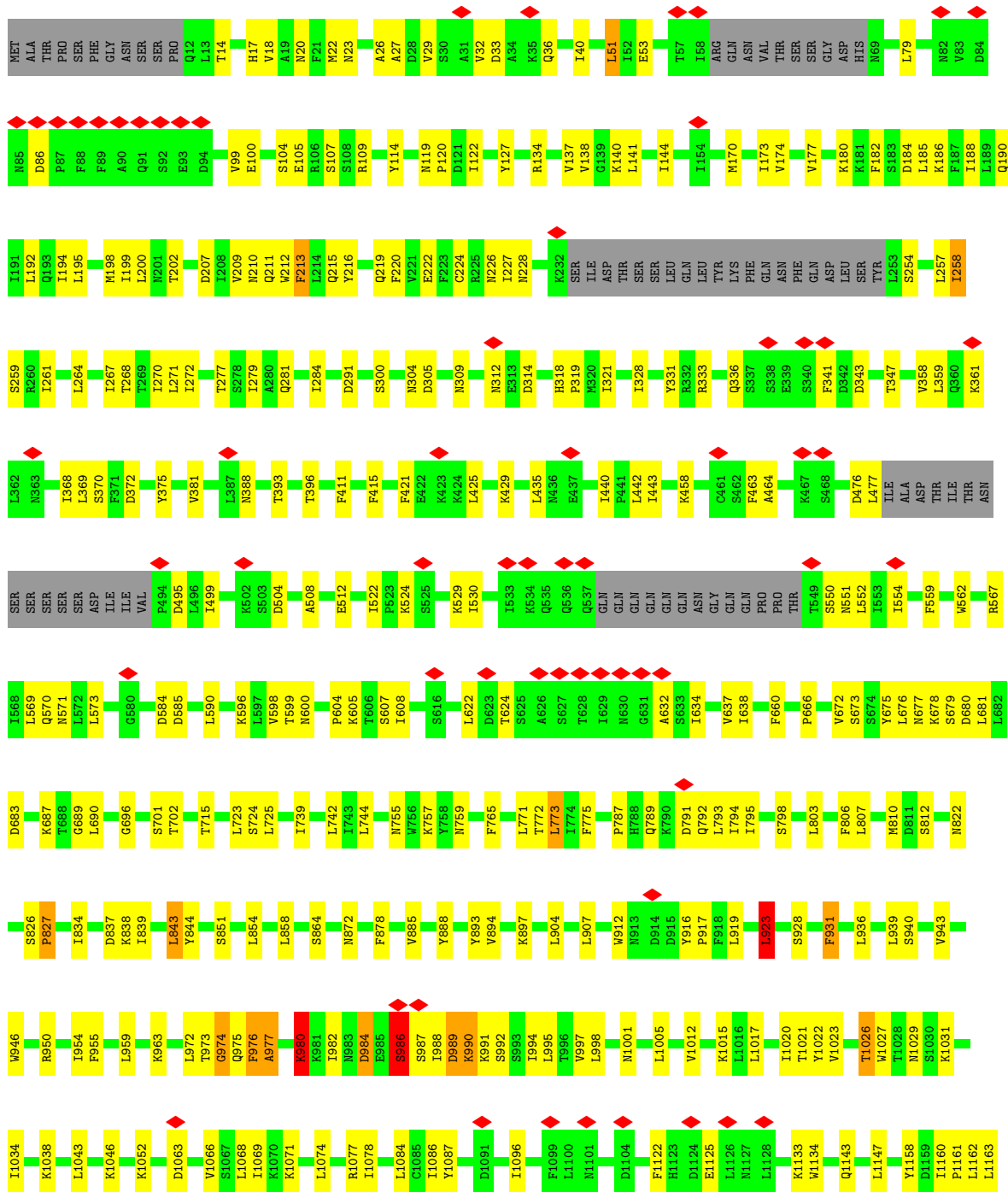


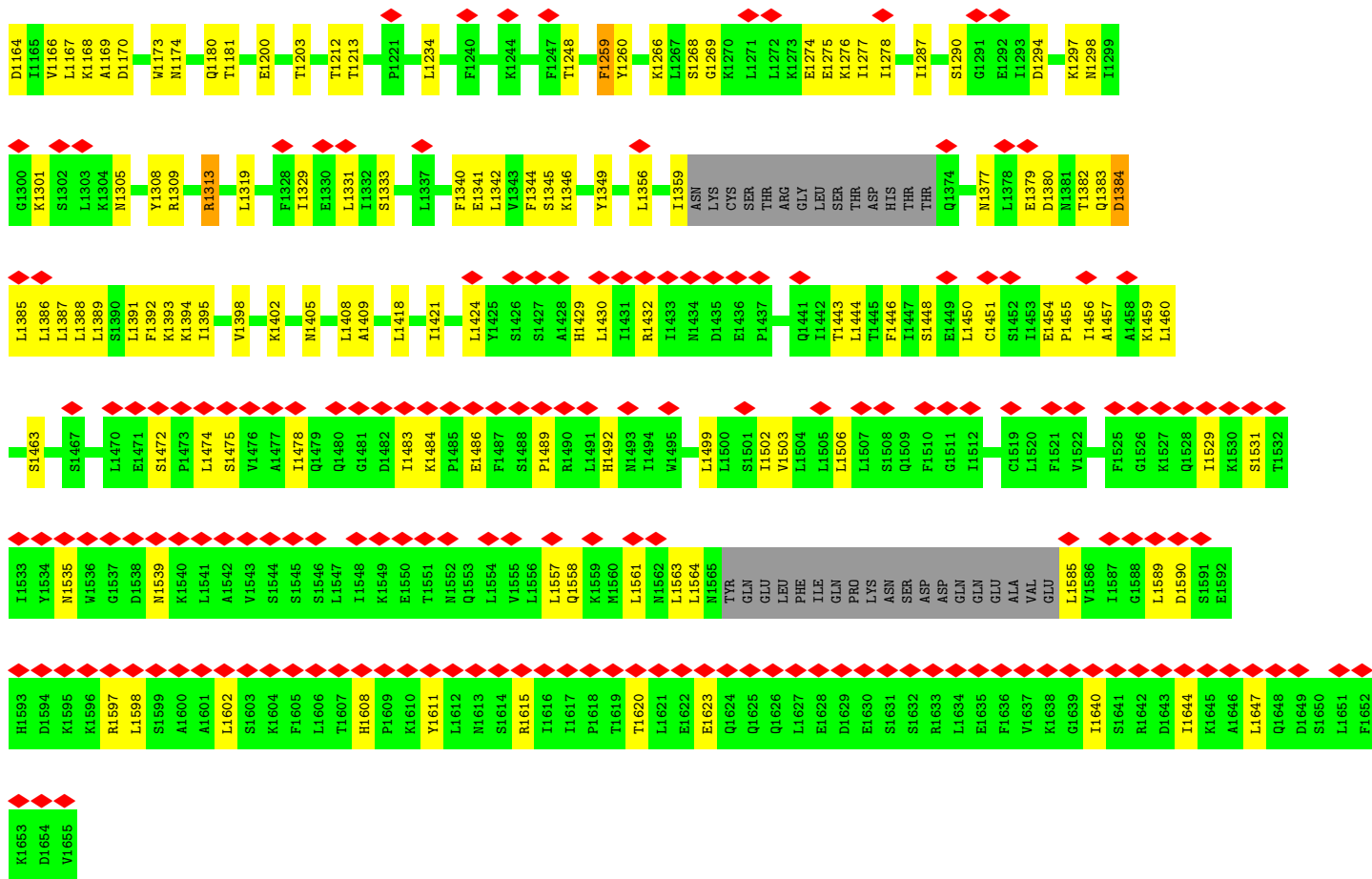
MET	THR	L121	R181	F241	S301	I361	V421	L481
PHE	GLY	D122	C182	N242	D302	D362	K422	I482
GLN	SER	E123	W183	F243	D303	Q363	I423	H483
SER	ASN	R124	I184	A244	W304	Q364	S424	Q484
PRO	LEU	S125	T185	I245	F305	R365	S425	Q485
PHE	MET	Y126	I186	S246	N306	G366	V426	Q486
HIS	ARG	Y127	D187	L247	S307	I367	A427	E487
ASN	ALA	N128	N188	D248	K308	I368	P428	Q488
ASN	GLY	K129	K189	K249	C309	Y369	E429	A489
PRO	PRO	S130	L190	A250	S310	S370	E430	K490
ALA	ALA	V131	I191	T251	K311	L371	M431	R491
ALA	THR	D132	L192	N252	V312	S372	M432	S492
GLY	GLU	Y133	W193	E253	C313	S373	M433	F493
THR	GLY	N134	N194	L254	L314	K374	L434	P494
PHE	SER	F135	I195	S255	T315	S375	F435	P495
SER	ASP	S136	N196	V256	K316	T376	L436	F496
ASP	SER	R137	N197	F257	S317	I377	V437	S497
SER	PRO	E138	D198	F258	A318	R378	A438	M498
SER	TYR	K139	N199	T259	L319	A379	L439	L499
TYR	PRO	N140	E200	H260	L320	Y380	T440	M500
LEU	LEU	G141	Y201	L261	S321	V381	V441	S501
THR	ASN	L142	Q202	S262	L322	I382	G442	S502
ASN	GLU	G143	W203	V263	L323	T383	G443	E503
HIS	HIS	A144	V204	P264	P324	E384	V444	P504
GLN	GLU	F145	D205	V265	T325	K385	R445	V505
VAL	VAL	T146	D206	Q266	N326	S386	L446	V506
GLU	PRO	P147	M207	G267	M327	L387	Y447	L507
ARG	ARG	F148	K208	I268	L328	E388	F448	K508
GLY	GLY	E149	H209	D269	S329	G389	M449	P509
LEU	LEU	K150	T210	V270	Q330	P390	G450	P510
LEU	GLU	Q151	I211	I271	I331	M391	S451	K511
ALA	ALA	D152	Q212	L272	P332	S392	M452	K512
ALA	SER	V153	R213	I273	G333	I393	G453	S513
SER	SER	F154	V214	V274	V334	E394	R454	S514
THR	THR	M155	A215	S275	D335	P395	P455	V515
THR	LYS	I156	L216	H276	F336	A396	M456	L516
LYS	ALA	P157	W217	E277	I337	Y397	L457	L517
ALA	GLN	D158	R218	R278	Q338	I398	E458	E518
GLN	GLN	E159	F219	S279	A339	S399	A459	T519
GLN	GLN	I160	K220	G280	L340	R400	L460	T520
PRO	THR	L161	P221	R281	F341	I401	R461	K521
THR	HIS	H162	N222	I282	E342	L402	L462	A522
HIS	LEU	E163	T223	F283	D343	G403	E463	S523
LEU	ASN	F164	F224	F284	N344	T404	S464	T524
ASN	SER	S165	V225	A285	S345	T405	I465	I525
SER	TYR	T166	P226	G286	N346	T406	K466	I526
TYR	PRO	S167	A227	Q287	G347	A407	P467	S527
PRO	PRO	Q168	V228	A288	N348	R408	P468	P528
ILE	ILE	I169	K229	S289	G349	A409	P469	G529
LEU	LEU	K170	H230	G290	G350	A410	S470	I530
LEU	ASN	T171	L231	L291	F351	P411	S471	F531
ASN	SER	D172	L232	N292	S352	I412	V472	F532
SER	TYR	M173	L233	I293	Q353	L413	T473	S533
TYR	PRO	G174	E234	W294	E354	G414	P474	A534
PRO	PRO	I175	S235	E295	T355	P415	E475	V535
ILE	ILE	F176	T236	L296	I356	K416	V476	I536
ILE	ILE	P177	T237	H297	F357	Y417	I477	K537
ILE	ILE	L179	E239	S299	Q358	L418	Q478	S538
		N180	L240	G300	L360	I420	E480	Q540

S1360	M1361	M1362	R1232	Q1143	Y1083	Y1021	S961	Q901	Y841	S721	D661	T601	Q541
M1365	L1366	L1367	S1237	K1144	V1084	D1022	L962	S902	Y842	V722	L662	A602	T642
L1376	L1377	K1376	R1238	S1145	A1085	S1023	I963	I903	L843	S723	I663	G603	H643
V1378	Q1379	Q1380	G1241	Y1146	M1086	L1024	R964	K904	S844	T724	D664	P604	Q644
S1381	E1382	S1249	F1242	E1147	G1087	M1025	R965	E905	S845	V725	N665	V605	Q645
F1388	E1389	Q1250	C1243	A1149	F1088	H1027	I966	G906	S846	S726	P666	Q606	E646
L1390	F1391	Q1251	M1244	L1150	E1090	L1028	L968	L907	N847	L728	P668	I608	K648
F1397	R1398	K1252	K1245	K1151	M1091	K1029	S969	S908	L848	L729	P669	I609	E649
L1400	F1399	E1253	V1246	Y1152	D1092	M1030	I970	F909	L849	S730	V670	P610	N650
P1403	E1404	R1254	S1247	M1153	D1093	A1031	I971	N911	N850	K731	L671	L611	S651
E1405	H1406	I1255	P1248	D1154	R1094	T1032	R972	V912	F852	P732	N672	S612	S652
I1407	S1409	H1256	L1249	L1155	K1095	A1033	R973	L913	F853	L733	Y673	G613	V653
G1410	S1411	R1257	E1148	Q1096	Q1097	L1034	N974	Y914	I854	T734	G674	L614	V654
S1411	T1418	S1287	L1183	Y1098	Y1097	L1035	I975	E915	T855	S735	A675	F615	G655
T1419	A1419	I1288	E1117	K1100	Y1098	E1036	T976	E916	Y856	T736	A676	M616	G656
A1420	V1421	I1289	L1179	R1101	K1100	Q1037	K977	S917	G857	A737	E677	A617	T657
S1422	F1423	I1290	L1177	I1102	K1100	T1038	G978	E918	D858	T738	A678	T618	A658
F1423	M1426	K1290	L1176	I1103	I1102	V1039	A979	V919	S859	T739	C679	T619	T659
M1426	I1429	D1291	D1176	L1104	I1103	D1040	S980	E920	I860	N740	S680	K620	A660
L1430	L1431	D1292	E1178	Y1105	V1104	D1041	I981	G821	S861	L741	T681	P621	G661
E1432	L1433	T1293	L1175	D1106	Y1105	L1042	E982	F922	Q862	Q742	A682	Q622	S662
L1433	E1435	Y1203	L1174	L1107	D1107	S1043	Y983	D923	I863	Q743	L683	G623	K663
T1436	S1437	Y1204	L1173	L1108	V1108	I1044	T984	N924	S864	S744	F684	F624	T664
D1438		S1205	L1172	L1109	F1109	E1045	A985	Q925	A865	I745	V685	A625	V665
		R1206	L1183	D1110	F1109	K1046	T986	Y926	P866	T746	T686	M626	V666
		R1207	L1182	D1111	D1110	L1047	A987	L927	Y867	G747	C687	E627	Q667
		S1208	L1181	T1111	K1048	K1048	L988	G928	V668	F748	K688	F628	Q668
		K1208	L1180	L1112	E1049	E1049	Q989	F929	L869	S749	S689	A629	P669
		K1209	L1179	L1113	A1050	A1050	Q990	K930	A870	K750	N690	T630	V670
		F1351	L1177	Y1115	V1051	V1051	R991	D931	N871	P751	K691	Q631	T671
		M1351	L1176	D1116	S1052	S1052	C992	I932	N872	S752	S692	Y632	L672
		F1351	L1175	D1117	M1053	M1053	G993	I933	S873	P753	E693	T633	Q673
		F1351	L1174	E1117	M1054	M1054	S994	S934	N874	A754	K694	S634	H674
		F1351	L1173	L1118	L1055	L1055	F995	F935	G875	N755	L695	E635	K675
		F1351	L1172	L1119	S1056	S1056	F996	V936	R876	K756	R696	T636	L676
		F1351	L1171	E1120	V1057	V1057	S997	S937	V877	E757	S697	L637	F677
		F1351	L1170	K1121	V1057	V1057	A998	L938	I878	D758	N698	R638	V678
		F1351	L1169	K1122	Y1059	Y1059	S999	D939	D879	F759	A699	V639	S679
		F1351	L1168	K1123	Y1060	Y1060	D1000	V940	K880	D760	L700	A640	V680
		F1351	L1167	K1124	P1061	P1061	I1001	Q941	T881	L761	T701	V641	P681
		F1351	L1166	S1124	K1062	K1062	L1002	K942	E882	D762	F702	L642	D682
		F1351	L1165	S1125	S1063	S1063	G1003	D943	E883	D763	L703	T643	Y683
		F1351	L1164	T1127	I1064	I1064	F1004	L944	V884	V764	T704	S644	G684
		F1351	L1163	Q1128	R1065	R1065	R1005	V945	A885	I765	M705	T645	E685
		F1351	L1162	M1129	E1066	E1066	A1006	K946	N886	L766	G706	S646	L686
		F1351	L1161	Q1130	F1066	F1066	I1007	L947	Q887	S767	I707	I647	K687
		F1351	L1160	I1131	M1069	M1069	E1008	D948	A888	P768	P708	E648	T688
		F1351	L1159	I1132	H1069	H1069	S990	F949	E889	R769	G709	I649	H689
		F1351	L1158	I1133	L1010	L1010	S990	Q950	S890	F770	G710	Y650	G690
		F1351	L1157	S1134	R1011	R1011	R1012	D951	I891	Y771	V711	K651	K691
		F1351	L1156	M1135	R1012	R1012	A1013	L952	A892	G772	D712	Y652	Y692
		F1351	L1155	D1136	A1013	A1013	K1014	F953	I893	I773	I713	R653	V693
		F1351	L1154	D1137	K1014	K1014	E1015	A954	N894	A774	K714	T654	E694
		F1351	L1153	D1137	E1015	E1015	I1016	A955	A895	L775	P715	P655	N695
		F1351	L1152	D1137	I1016	I1016	I1017	N956	N896	L776	V716	D656	A696
		F1351	L1151	D1137	G1017	G1017	G1017	D957	I897	T777	Y717	E657	T697
		F1351	L1150	D1137	L1018	L1018	L1018	K958	K958	T778	N718	I658	F698
		F1351	L1149	D1137	L1019	L1019	M1020	N959	M999	R779	R719	F659	L699
		F1351	L1148	D1137	Q1082	Q1082		K960	V900	L780	Y720	E660	E600

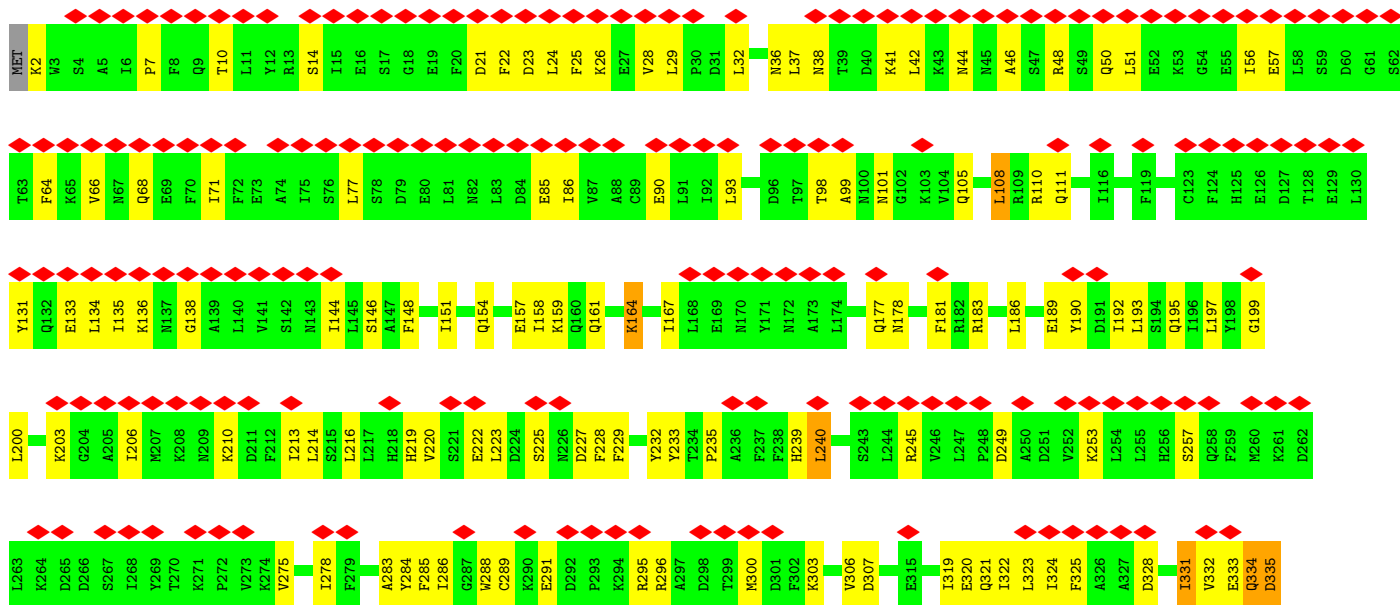


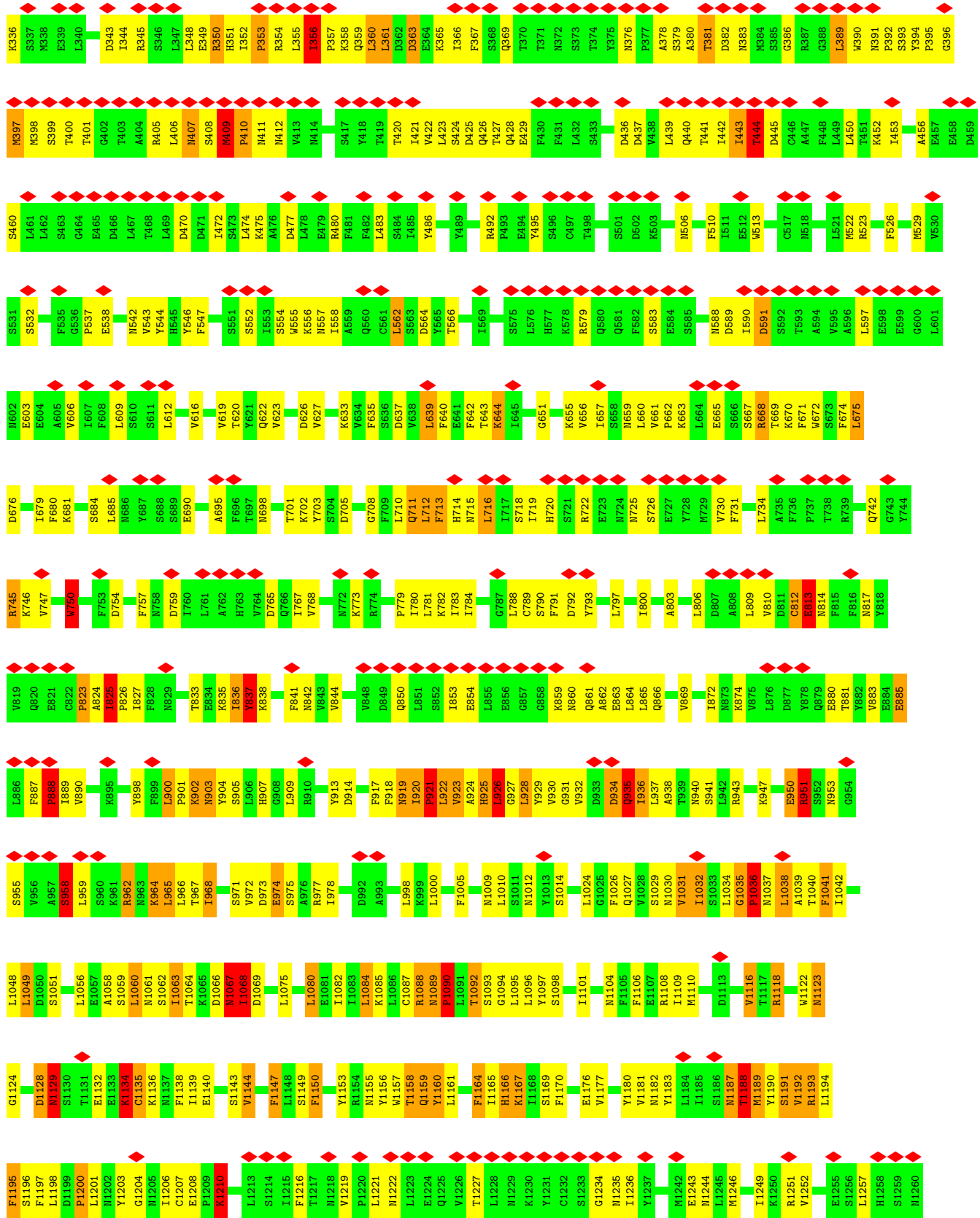
• Molecule 4: Nucleoporin NUP188

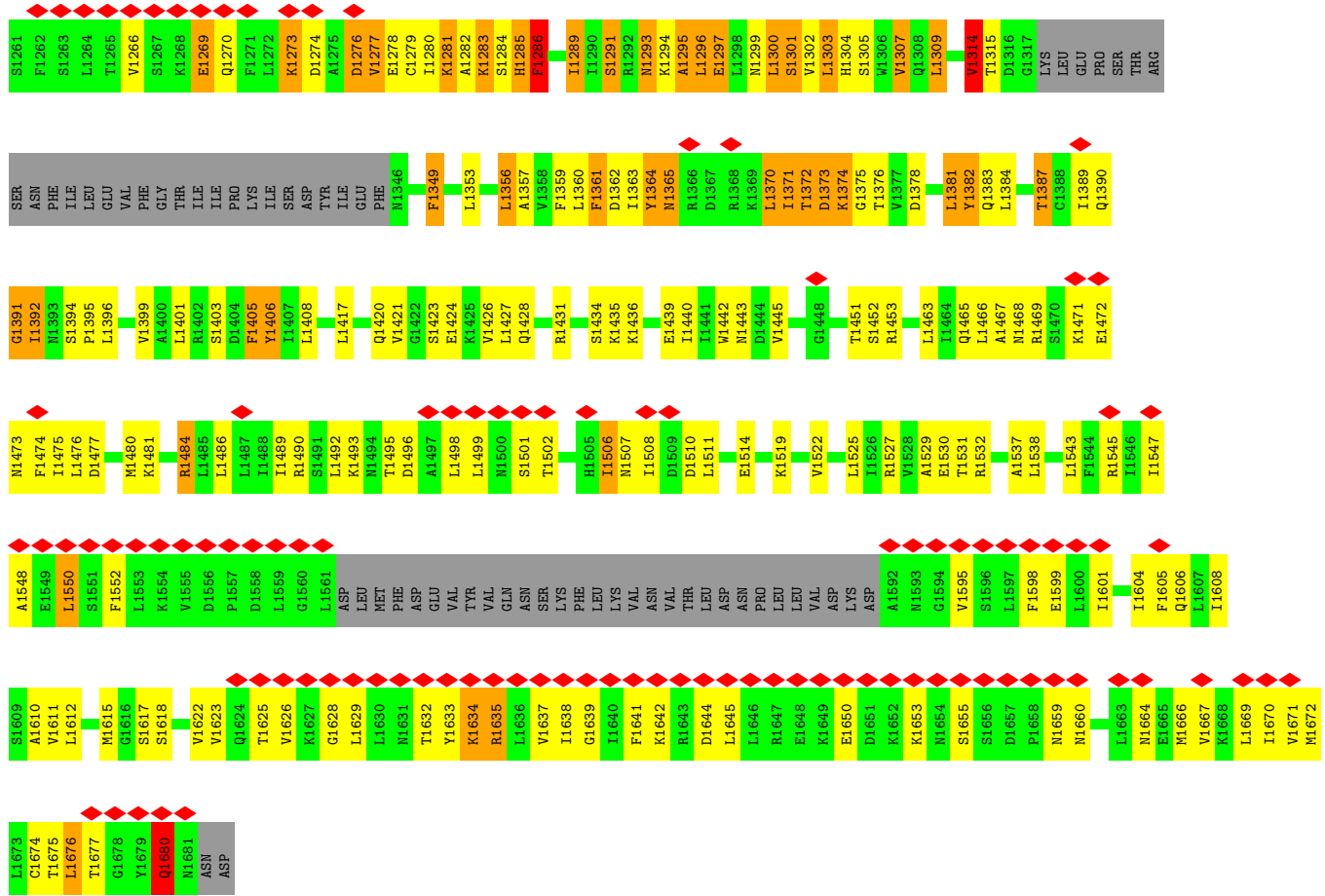




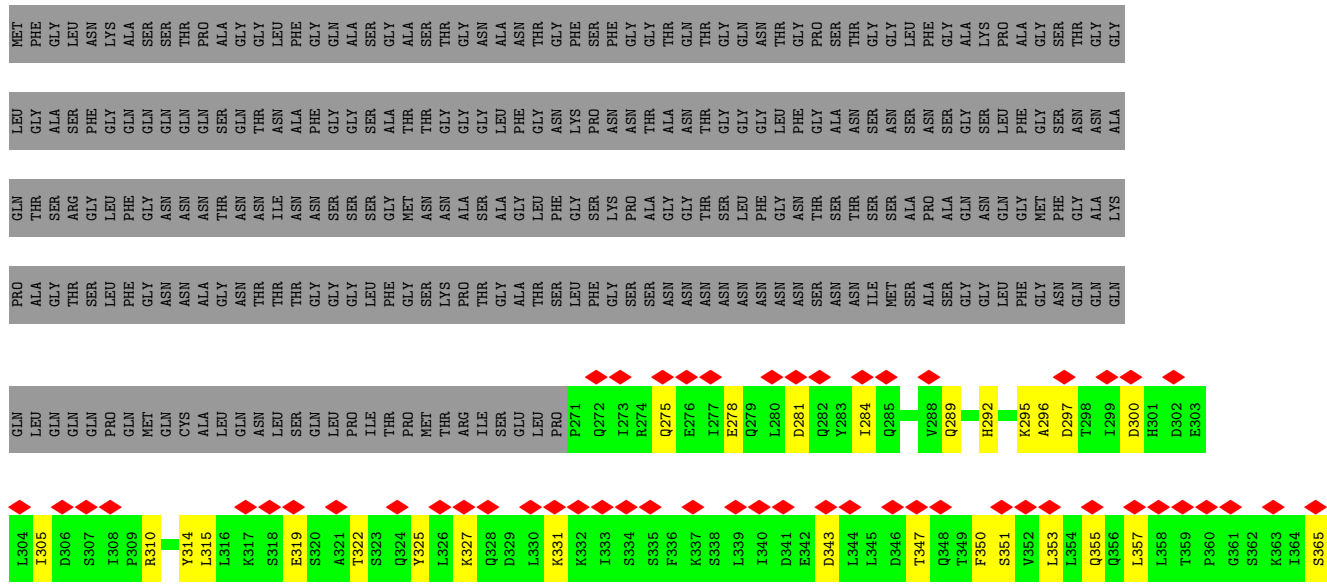
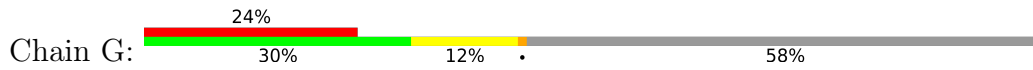
• Molecule 5: Nucleoporin NUP192

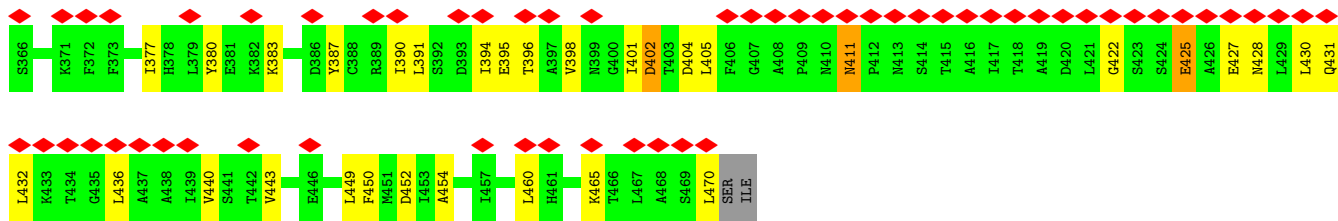




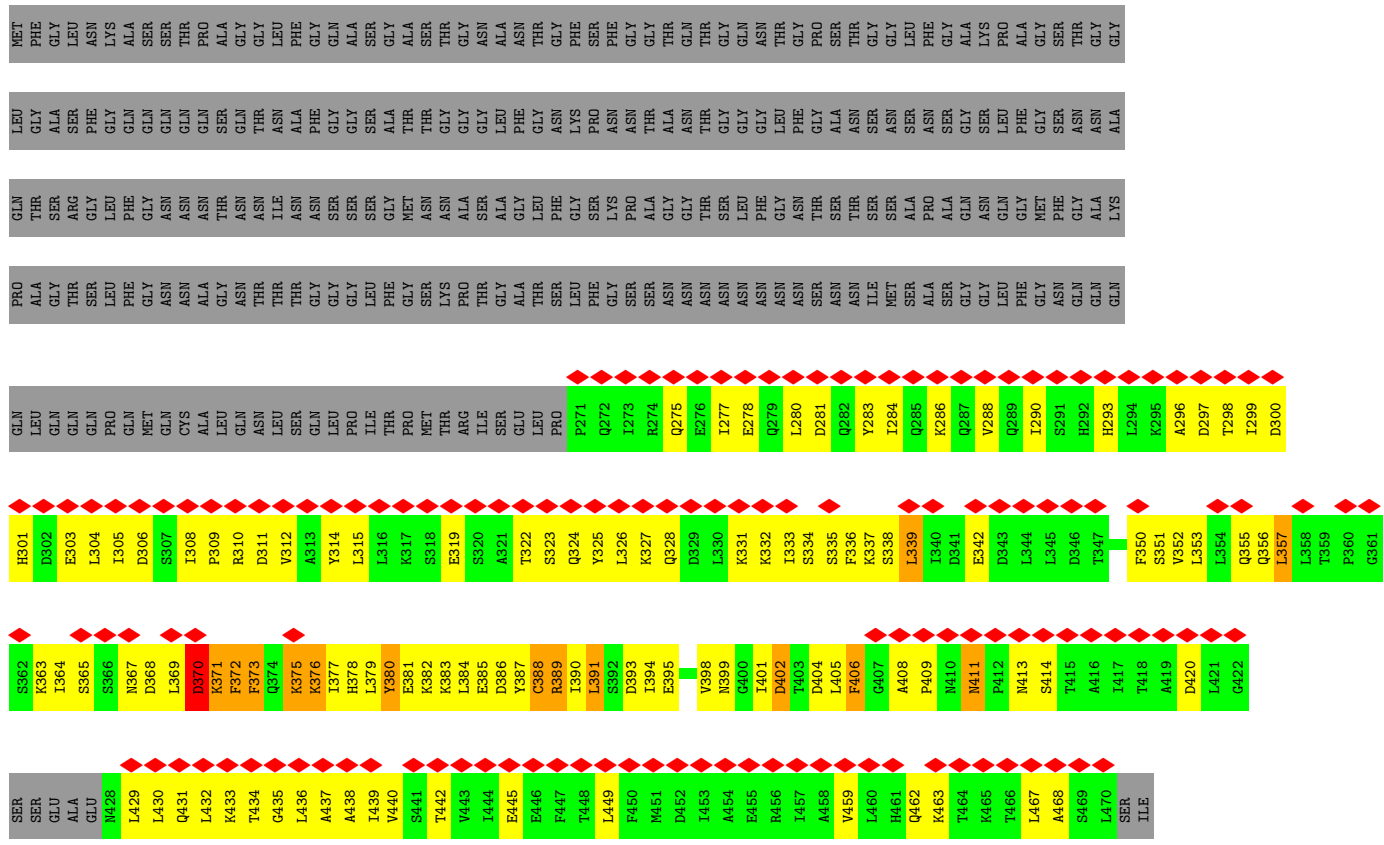


● Molecule 6: Nucleoporin NUP49/NSP49

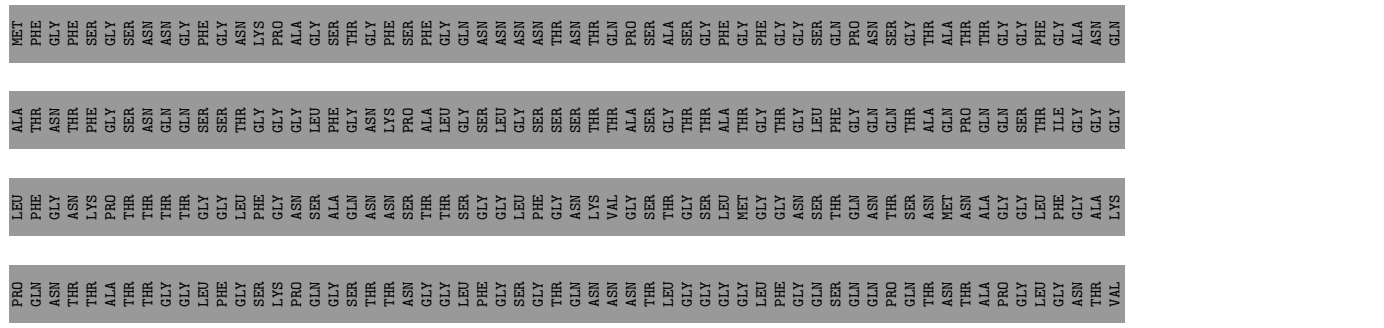
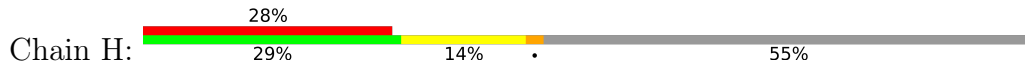




• Molecule 6: Nucleoporin NUP49/NSP49



• Molecule 7: Nucleoporin NUP57



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	1266268	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	2.677	Depositor
Minimum map value	-1.782	Depositor
Average map value	0.008	Depositor
Map value standard deviation	0.043	Depositor
Recommended contour level	0.24	Depositor
Map size (\AA)	467.59998, 467.59998, 467.59998	wwPDB
Map dimensions	350, 350, 350	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.336, 1.336, 1.336	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	0.36	0/5813	0.58	5/7867 (0.1%)
1	Z	0.46	0/5862	0.82	9/7942 (0.1%)
2	C	0.66	0/10658	0.90	24/14443 (0.2%)
3	D	0.46	0/11192	0.63	5/15173 (0.0%)
4	E	0.43	0/12583	0.68	8/17054 (0.0%)
5	F	0.63	6/12435 (0.0%)	1.18	93/16887 (0.6%)
6	G	0.35	0/1553	0.62	1/2104 (0.0%)
6	J	0.49	0/1509	1.01	11/2042 (0.5%)
7	H	0.61	2/1832 (0.1%)	0.88	10/2482 (0.4%)
7	K	0.56	1/1829 (0.1%)	0.96	12/2485 (0.5%)
8	I	0.59	0/1431	0.93	4/1940 (0.2%)
8	L	0.40	0/1378	0.74	1/1873 (0.1%)
All	All	0.53	9/68075 (0.0%)	0.85	183/92292 (0.2%)

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	Z	0	1
5	F	0	3
6	G	0	1
7	H	0	1
7	K	0	2
All	All	0	8

All (9) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	F	750	TRP	C-N	10.13	1.53	1.34
7	H	427	LEU	C-N	9.99	1.53	1.34
7	H	425	ARG	C-N	8.96	1.49	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	K	326	LYS	C-N	8.60	1.50	1.34
5	F	1235	ASN	C-N	8.56	1.53	1.34
5	F	1394	SER	C-N	8.47	1.50	1.34
5	F	409	MET	C-N	8.27	1.50	1.34
5	F	356	ILE	C-N	7.34	1.48	1.34
5	F	1182	ASN	C-O	6.52	1.35	1.23

All (183) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	F	1090	PRO	CA-N-CD	-37.80	58.58	111.50
7	H	425	ARG	C-N-CA	-13.39	94.18	122.30
6	J	388	CYS	CB-CA-C	-12.59	85.22	110.40
5	F	1036	PRO	N-CA-CB	10.85	116.32	103.30
5	F	1089	ASN	C-N-CD	10.13	149.68	128.40
8	I	800	HIS	CB-CA-C	10.06	130.51	110.40
1	Z	772	PRO	CA-N-CD	-10.04	97.44	111.50
5	F	1067	ASN	CB-CA-C	-9.88	90.65	110.40
2	C	104	ARG	NE-CZ-NH1	9.61	125.11	120.30
5	F	837	TYR	CB-CA-C	9.41	129.22	110.40
5	F	1235	ASN	CA-C-N	9.20	137.45	117.20
5	F	823	PRO	N-CA-C	9.07	135.68	112.10
5	F	1089	ASN	CB-CA-C	8.77	127.94	110.40
5	F	711	GLN	CB-CA-C	8.75	127.89	110.40
1	Z	91	GLN	CB-CA-C	-8.72	92.97	110.40
5	F	1235	ASN	CA-C-O	-8.67	101.90	120.10
4	E	51	LEU	CA-CB-CG	8.39	134.60	115.30
7	K	450	PRO	N-CA-C	8.24	133.53	112.10
7	H	476	GLN	CB-CA-C	8.24	126.88	110.40
2	C	268	ARG	NE-CZ-NH1	8.22	124.41	120.30
5	F	1068	ILE	N-CA-C	-8.16	88.97	111.00
5	F	921	PRO	CA-N-CD	-8.12	100.14	111.50
5	F	1056	LEU	CA-CB-CG	8.11	133.94	115.30
5	F	1506	ILE	CG1-CB-CG2	-7.94	93.92	111.40
6	J	335	SER	O-C-N	7.83	135.23	122.70
2	C	512	ARG	NE-CZ-NH1	7.72	124.16	120.30
5	F	1090	PRO	N-CA-CB	7.70	112.54	103.30
5	F	750	TRP	CA-C-N	7.55	138.25	117.10
2	C	1221	ARG	NE-CZ-NH2	7.52	124.06	120.30
2	C	1130	ARG	NE-CZ-NH1	7.44	124.02	120.30
5	F	644	LYS	C-N-CA	7.36	140.09	121.70
5	F	668	ARG	NE-CZ-NH1	7.34	123.97	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	E	759	ASN	CB-CA-C	7.33	125.06	110.40
8	I	736	ASN	CB-CA-C	7.31	125.02	110.40
5	F	935	GLN	N-CA-CB	7.30	123.75	110.60
2	C	1277	ARG	NE-CZ-NH1	7.24	123.92	120.30
5	F	966	LEU	CA-CB-CG	7.18	131.82	115.30
5	F	1391	GLY	C-N-CA	7.17	139.62	121.70
5	F	1286	PHE	CB-CA-C	7.16	124.72	110.40
2	C	770	ARG	NE-CZ-NH1	7.15	123.88	120.30
5	F	1090	PRO	C-N-CA	-7.15	103.83	121.70
5	F	921	PRO	N-CA-CB	-7.09	94.79	103.30
5	F	1090	PRO	CA-CB-CG	-7.08	90.54	104.00
5	F	1164	PHE	CB-CA-C	-7.05	96.31	110.40
5	F	668	ARG	NE-CZ-NH2	-7.04	116.78	120.30
3	D	1232	ARG	NE-CZ-NH1	6.99	123.80	120.30
5	F	888	PRO	N-CA-C	6.87	129.96	112.10
5	F	797	LEU	CA-CB-CG	6.86	131.08	115.30
5	F	1234	GLY	O-C-N	6.83	133.63	122.70
1	Z	750	GLU	C-N-CA	6.77	138.62	121.70
5	F	716	LEU	CA-CB-CG	6.67	130.63	115.30
4	E	858	LEU	CA-CB-CG	-6.54	100.26	115.30
5	F	1378	ASP	CB-CA-C	6.53	123.46	110.40
2	C	364	ARG	NE-CZ-NH1	6.49	123.54	120.30
7	H	476	GLN	N-CA-CB	-6.48	98.94	110.60
2	C	693	LEU	C-N-CA	6.42	137.75	121.70
5	F	1049	LEU	CA-CB-CG	6.42	130.06	115.30
4	E	213	PHE	CB-CA-C	6.39	123.19	110.40
7	K	341	LYS	N-CA-C	-6.39	93.74	111.00
5	F	1182	ASN	CB-CA-C	-6.35	97.69	110.40
1	Z	506	LEU	CA-CB-CG	6.33	129.86	115.30
3	D	1012	ARG	NE-CZ-NH1	6.31	123.45	120.30
5	F	968	ILE	CG1-CB-CG2	-6.27	97.61	111.40
6	J	335	SER	CA-C-N	-6.27	103.41	117.20
5	F	1378	ASP	C-N-CA	6.26	135.45	122.30
5	F	1408	LEU	CB-CG-CD2	6.24	121.60	111.00
5	F	1061	ASN	CB-CA-C	6.21	122.82	110.40
7	K	423	LYS	C-N-CA	6.20	137.20	121.70
5	F	1222	ASN	C-N-CA	6.18	137.16	121.70
6	J	402	ASP	CB-CA-C	-6.18	98.04	110.40
5	F	1406	TYR	CA-CB-CG	6.17	125.13	113.40
2	C	1182	ARG	NE-CZ-NH1	6.15	123.38	120.30
5	F	1080	LEU	CA-CB-CG	6.15	129.45	115.30
6	J	335	SER	C-N-CA	6.15	137.07	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	F	935	GLN	CA-C-O	-6.14	107.20	120.10
4	E	435	LEU	CA-CB-CG	6.10	129.32	115.30
5	F	833	THR	CA-C-N	-6.09	103.79	117.20
8	I	731	GLY	C-N-CA	6.09	136.92	121.70
2	C	727	ARG	NE-CZ-NH2	-6.06	117.27	120.30
7	H	459	LEU	CA-CB-CG	6.05	129.21	115.30
5	F	344	ILE	C-N-CA	6.04	136.79	121.70
5	F	639	LEU	CB-CA-C	6.04	121.67	110.20
5	F	793	TYR	CA-CB-CG	6.01	124.83	113.40
5	F	925	HIS	C-N-CA	6.01	136.72	121.70
1	A	55	GLN	CB-CA-C	6.01	122.41	110.40
8	L	779	THR	C-N-CA	5.99	136.68	121.70
2	C	718	ARG	NE-CZ-NH1	5.99	123.29	120.30
5	F	1134	LYS	N-CA-CB	5.98	121.36	110.60
7	H	475	SER	O-C-N	5.96	132.24	122.70
7	K	424	ASN	CB-CA-C	5.96	122.31	110.40
5	F	1010	LEU	CB-CG-CD2	-5.93	100.92	111.00
2	C	431	ARG	NE-CZ-NH1	5.92	123.26	120.30
3	D	1128	GLN	N-CA-CB	5.91	121.23	110.60
7	K	446	ARG	CG-CD-NE	-5.90	99.40	111.80
7	K	450	PRO	CB-CA-C	-5.89	97.28	112.00
5	F	1234	GLY	CA-C-N	-5.88	104.27	117.20
5	F	644	LYS	O-C-N	5.87	132.09	122.70
5	F	750	TRP	O-C-N	-5.85	109.98	121.10
5	F	833	THR	O-C-N	5.84	132.05	122.70
2	C	385	ARG	NE-CZ-NH1	5.84	123.22	120.30
5	F	865	LEU	CB-CG-CD1	-5.83	101.09	111.00
7	H	426	GLY	O-C-N	5.82	132.02	122.70
5	F	1090	PRO	N-CD-CG	5.82	111.93	103.20
7	H	425	ARG	CA-C-O	-5.80	107.93	120.10
5	F	750	TRP	CA-CB-CG	5.76	124.65	113.70
5	F	186	LEU	CA-CB-CG	5.76	128.55	115.30
1	A	114	ARG	N-CA-CB	5.76	120.96	110.60
2	C	718	ARG	NE-CZ-NH2	-5.75	117.42	120.30
5	F	443	ILE	CG1-CB-CG2	-5.75	98.75	111.40
1	Z	54	PHE	CB-CA-C	-5.72	98.96	110.40
5	F	1158	THR	CB-CA-C	5.71	127.03	111.60
5	F	1088	ARG	O-C-N	5.71	131.83	122.70
1	Z	294	MET	CA-CB-CG	5.68	122.95	113.30
5	F	1075	LEU	CB-CG-CD1	-5.65	101.39	111.00
1	Z	283	LEU	CA-CB-CG	5.64	128.28	115.30
5	F	833	THR	C-N-CA	5.63	135.79	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	H	427	LEU	CA-C-N	5.63	132.87	117.10
5	F	366	ILE	C-N-CA	5.58	135.65	121.70
1	A	54	PHE	CB-CA-C	-5.58	99.25	110.40
5	F	77	LEU	CA-CB-CG	5.57	128.12	115.30
5	F	1401	LEU	CB-CG-CD2	5.56	120.45	111.00
7	K	320	GLU	C-N-CA	5.55	135.56	121.70
4	E	1384	ASP	CB-CA-C	5.53	121.45	110.40
5	F	1116	VAL	CG1-CB-CG2	-5.53	102.06	110.90
5	F	1188	THR	C-N-CA	5.51	135.49	121.70
5	F	889	ILE	CA-C-N	5.50	129.31	117.20
5	F	803	ALA	N-CA-CB	5.49	117.79	110.10
5	F	1314	VAL	N-CA-C	5.49	125.83	111.00
1	A	43	GLN	O-C-N	-5.48	113.93	122.70
5	F	193	LEU	CA-CB-CG	5.47	127.87	115.30
7	K	413	LEU	CA-CB-CG	5.45	127.83	115.30
5	F	803	ALA	C-N-CA	-5.45	108.08	121.70
5	F	356	ILE	C-N-CA	5.43	144.83	122.00
5	F	903	ASN	C-N-CA	5.41	135.22	121.70
6	J	380	TYR	CB-CA-C	5.39	121.19	110.40
2	C	1198	ARG	NE-CZ-NH1	5.38	122.99	120.30
7	K	452	GLY	C-N-CA	5.37	135.13	121.70
1	A	43	GLN	C-N-CA	-5.36	108.29	121.70
5	F	1075	LEU	CA-CB-CG	5.36	127.63	115.30
5	F	781	LEU	CA-CB-CG	5.34	127.59	115.30
6	J	406	PHE	C-N-CA	-5.34	111.09	122.30
5	F	1160	TYR	CB-CG-CD2	5.33	124.20	121.00
7	H	444	LEU	CA-CB-CG	5.33	127.55	115.30
5	F	827	ILE	C-N-CA	5.33	135.01	121.70
6	J	370	ASP	CA-CB-CG	5.31	125.08	113.40
5	F	1010	LEU	CA-CB-CG	5.30	127.50	115.30
7	K	451	ALA	N-CA-C	5.30	125.30	111.00
7	K	431	ILE	C-N-CA	-5.29	108.48	121.70
1	Z	642	LEU	CA-CB-CG	5.27	127.43	115.30
5	F	345	ARG	N-CA-CB	5.26	120.06	110.60
5	F	1382	TYR	CB-CG-CD1	5.25	124.15	121.00
8	I	753	GLU	CB-CA-C	-5.25	99.91	110.40
4	E	212	TRP	O-C-N	5.24	131.08	122.70
4	E	585	ASP	CB-CG-OD2	5.23	123.01	118.30
5	F	812	CYS	C-N-CA	5.23	134.77	121.70
2	C	1386	ARG	NE-CZ-NH1	5.21	122.91	120.30
3	D	1284	ARG	NE-CZ-NH1	5.21	122.91	120.30
5	F	1208	GLU	N-CA-C	-5.21	96.93	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	C	749	ARG	NE-CZ-NH1	5.18	122.89	120.30
2	C	1240	ARG	NE-CZ-NH1	5.18	122.89	120.30
2	C	104	ARG	NE-CZ-NH2	-5.17	117.71	120.30
7	K	321	ALA	N-CA-CB	5.17	117.34	110.10
5	F	597	LEU	CA-CB-CG	5.17	127.19	115.30
6	J	380	TYR	CB-CG-CD1	-5.16	117.90	121.00
5	F	108	LEU	CA-CB-CG	5.16	127.16	115.30
7	H	506	ILE	C-N-CA	5.16	134.60	121.70
5	F	1088	ARG	NE-CZ-NH1	-5.16	117.72	120.30
2	C	386	ARG	NE-CZ-NH1	5.14	122.87	120.30
5	F	675	LEU	CA-CB-CG	5.14	127.13	115.30
5	F	562	LEU	CA-CB-CG	5.09	127.01	115.30
1	Z	751	LEU	N-CA-CB	-5.08	100.24	110.40
5	F	1087	CYS	CA-CB-SG	5.07	123.13	114.00
3	D	528	PRO	CA-N-CD	-5.06	104.41	111.50
5	F	880	GLU	CB-CA-C	-5.06	100.28	110.40
6	J	373	PHE	N-CA-CB	5.06	119.70	110.60
6	J	370	ASP	CB-CA-C	5.05	120.50	110.40
2	C	1057	TYR	CB-CG-CD2	-5.05	117.97	121.00
2	C	116	TYR	CB-CG-CD2	-5.03	117.98	121.00
5	F	436	ASP	CB-CG-OD1	5.03	122.83	118.30
2	C	708	ARG	NE-CZ-NH1	5.03	122.81	120.30
5	F	240	LEU	CA-CB-CG	5.02	126.84	115.30
6	G	402	ASP	CB-CG-OD1	5.01	122.81	118.30
5	F	1405	PHE	C-N-CA	-5.01	109.18	121.70

There are no chirality outliers.

All (8) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
5	F	1188	THR	Mainchain
5	F	360	LEU	Mainchain
5	F	813	GLU	Mainchain
6	G	422	GLY	Mainchain
7	H	509	ILE	Mainchain
7	K	380	LEU	Mainchain
7	K	488	THR	Mainchain
1	Z	748	SER	Mainchain

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	5723	0	5587	285	0
1	Z	5776	0	5607	420	0
2	C	10452	0	10392	49	0
3	D	10976	0	10827	406	0
4	E	12362	0	12566	349	0
5	F	12232	0	11559	829	0
6	G	1533	0	1515	118	0
6	J	1492	0	1465	274	0
7	H	1811	0	1697	146	0
7	K	1808	0	1614	305	0
8	I	1418	0	1293	170	0
8	L	1366	0	1211	166	0
All	All	66949	0	65333	3007	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 23.

All (3007) 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:Z:810:ALA:CB	1:Z:836:ASP:HA	1.26	1.59
3:D:955:PRO:CB	3:D:994:SER:CB	1.78	1.59
7:H:522:TYR:CB	1:Z:54:PHE:CB	1.82	1.56
5:F:841:PHE:CD2	5:F:918:PHE:HE1	1.21	1.55
5:F:1357:ALA:HB2	5:F:1381:LEU:CB	1.19	1.53
7:K:538:LYS:HA	8:L:822:LYS:CB	1.10	1.53
6:J:325:TYR:CE2	7:K:390:HIS:HA	1.44	1.52
5:F:376:ASN:CB	5:F:381:THR:CA	1.83	1.51
6:J:383:LYS:NZ	8:L:756:ASN:CA	1.73	1.50
7:H:420:ALA:HB1	8:I:745:TYR:CE1	1.49	1.46
1:A:772:PRO:CB	1:A:828:THR:HG21	1.47	1.44
7:H:418:GLN:NE2	8:I:718:THR:CG2	1.81	1.43
6:J:357:LEU:HB3	7:K:423:LYS:CE	1.46	1.43
7:K:483:VAL:O	7:K:492:ASP:CB	1.66	1.43
7:K:321:ALA:CA	7:K:348:ILE:HD11	1.50	1.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Z:753:ALA:HB1	1:Z:815:ILE:C	1.35	1.42
1:Z:757:ALA:CB	1:Z:819:MET:O	1.68	1.41
6:G:404:ASP:CB	6:G:425:GLU:CB	1.97	1.40
8:I:818:ILE:O	8:I:821:ILE:CG2	1.68	1.40
5:F:1353:LEU:CB	5:F:1384:LEU:CB	2.01	1.39
7:K:389:LYS:HA	7:K:393:ASP:CB	1.49	1.39
1:Z:746:PRO:CB	1:Z:753:ALA:HA	1.52	1.39
5:F:1116:VAL:HG11	5:F:1150:PHE:CE2	1.58	1.38
7:K:389:LYS:CA	7:K:393:ASP:HB3	1.49	1.38
5:F:841:PHE:CD2	5:F:918:PHE:CE1	2.11	1.38
7:K:483:VAL:CB	7:K:493:SER:O	1.72	1.37
5:F:334:GLN:NE2	5:F:859:LYS:NZ	1.73	1.36
7:K:538:LYS:CA	8:L:822:LYS:CB	2.01	1.36
4:E:1022:TYR:CE2	4:E:1026:THR:HG21	1.60	1.36
5:F:228:PHE:H	5:F:361:LEU:CB	1.37	1.36
5:F:334:GLN:HE21	5:F:859:LYS:NZ	1.24	1.35
5:F:1227:THR:CB	7:H:475:SER:OG	1.74	1.35
1:Z:810:ALA:CB	1:Z:836:ASP:CA	2.02	1.35
1:A:128:LEU:HD22	4:E:1260:TYR:CE2	1.61	1.35
6:J:383:LYS:NZ	8:L:756:ASN:HA	1.03	1.34
5:F:376:ASN:CB	5:F:381:THR:HA	0.88	1.34
5:F:1357:ALA:CB	5:F:1381:LEU:CB	2.05	1.34
5:F:902:LYS:HE2	7:H:414:LYS:CD	1.58	1.33
6:G:331:LYS:HE2	1:Z:49:LEU:CD1	1.56	1.33
5:F:1633:TYR:CE2	5:F:1635:ARG:HB2	1.63	1.33
1:Z:810:ALA:HB1	1:Z:836:ASP:CA	1.57	1.31
7:H:418:GLN:HE21	8:I:718:THR:CG2	1.38	1.30
8:L:775:THR:O	8:L:779:THR:CB	1.78	1.29
5:F:902:LYS:CE	7:H:414:LYS:HD2	1.62	1.29
5:F:1116:VAL:HG11	5:F:1150:PHE:CZ	1.68	1.29
5:F:1084:LEU:HA	5:F:1156:TYR:OH	1.29	1.28
1:A:140:ILE:CG2	4:E:1393:LYS:HD3	1.62	1.28
5:F:334:GLN:HG3	5:F:854:GLU:OE2	1.24	1.28
6:J:357:LEU:CB	7:K:423:LYS:HE3	1.60	1.28
1:A:128:LEU:HD13	4:E:1260:TYR:CZ	1.67	1.28
6:J:333:ILE:O	6:J:336:PHE:CB	1.82	1.27
1:A:43:GLN:O	1:A:44:VAL:CB	1.68	1.27
5:F:675:LEU:O	5:F:679:ILE:HG12	1.13	1.27
1:Z:753:ALA:CB	1:Z:815:ILE:C	2.02	1.27
7:K:321:ALA:N	7:K:348:ILE:HD11	1.47	1.27
3:D:242:MET:SD	3:D:298:TYR:CE2	2.28	1.27

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:128:LEU:HD22	4:E:1260:TYR:CD2	1.67	1.26
1:A:59:LYS:C	8:L:807:LEU:CB	2.03	1.26
7:K:321:ALA:HA	7:K:348:ILE:CG1	1.65	1.25
6:J:383:LYS:NZ	8:L:756:ASN:CG	1.89	1.25
6:J:405:LEU:O	6:J:409:PRO:CD	1.84	1.25
1:Z:810:ALA:HB3	1:Z:836:ASP:O	1.30	1.24
1:Z:251:ALA:O	1:Z:253:LEU:N	1.70	1.24
5:F:800:ILE:HG12	5:F:885:GLU:OE1	1.37	1.23
1:Z:746:PRO:CB	1:Z:816:TYR:CB	2.16	1.23
1:A:772:PRO:HB3	1:A:828:THR:CG2	1.68	1.22
6:G:431:GLN:HA	7:H:503:ASN:CB	1.67	1.22
1:Z:753:ALA:HB1	1:Z:816:TYR:N	1.54	1.22
6:G:327:LYS:NZ	1:Z:46:ILE:HB	1.54	1.21
7:H:418:GLN:NE2	8:I:718:THR:HG21	1.55	1.21
5:F:1129:ASN:ND2	5:F:1132:GLU:HB3	1.56	1.21
1:A:814:MET:HG3	1:A:833:ILE:CD1	1.71	1.19
5:F:800:ILE:CG1	5:F:885:GLU:OE1	1.90	1.19
6:J:383:LYS:HZ1	8:L:756:ASN:CA	1.39	1.19
1:Z:824:MET:HG2	1:Z:825:PRO:CD	1.70	1.19
3:D:1244:ASN:CB	1:Z:826:ARG:CB	2.21	1.19
6:J:364:ILE:HA	7:K:424:ASN:ND2	1.55	1.19
1:Z:241:ILE:HG22	1:Z:245:ALA:CB	1.72	1.19
1:Z:807:LYS:HA	1:Z:836:ASP:O	1.41	1.19
4:E:1022:TYR:CD2	4:E:1026:THR:HG21	1.76	1.19
4:E:1022:TYR:CE2	4:E:1026:THR:CG2	2.25	1.19
6:G:430:LEU:CB	8:I:780:THR:HA	1.74	1.17
8:I:773:SER:O	8:I:777:ASN:CB	1.90	1.17
1:Z:757:ALA:HB2	1:Z:819:MET:C	1.64	1.17
7:H:418:GLN:NE2	8:I:718:THR:HG23	1.42	1.16
6:J:383:LYS:NZ	8:L:756:ASN:CB	2.07	1.16
4:E:1309:ARG:O	4:E:1313:ARG:HG3	1.45	1.16
8:I:810:ASN:OD1	1:Z:59:LYS:CB	1.94	1.16
5:F:354:ARG:HB2	5:F:356:ILE:HG22	1.29	1.15
5:F:1529:ALA:HB2	5:F:1611:VAL:HG13	1.22	1.15
1:Z:814:MET:CB	1:Z:833:ILE:HD13	1.76	1.15
3:D:1238:ARG:HA	1:Z:830:SER:HB3	1.28	1.14
7:H:425:ARG:C	7:H:427:LEU:H	1.48	1.14
7:K:444:LEU:O	7:K:447:SER:CB	1.95	1.14
7:K:446:ARG:HH22	7:K:455:LYS:NZ	1.44	1.14
6:J:398:VAL:HG21	7:K:462:ARG:CA	1.78	1.14
1:A:775:LEU:HB3	1:A:832:LEU:CD1	1.79	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Z:753:ALA:CB	1:Z:816:TYR:N	2.11	1.12
7:K:321:ALA:CA	7:K:348:ILE:CD1	2.27	1.12
5:F:675:LEU:O	5:F:679:ILE:CG1	1.96	1.12
7:K:336:ASP:O	7:K:340:GLU:HB2	1.48	1.11
1:Z:810:ALA:CA	1:Z:836:ASP:HA	1.80	1.11
5:F:734:LEU:CD2	5:F:817:ASN:OD1	1.98	1.11
5:F:1203:TYR:CB	5:F:1299:ASN:HD21	1.63	1.11
1:Z:824:MET:CG	1:Z:825:PRO:HD3	1.80	1.11
5:F:922:LEU:HD23	7:H:400:LYS:CE	1.81	1.11
1:Z:810:ALA:HB3	1:Z:836:ASP:C	1.69	1.11
5:F:334:GLN:NE2	5:F:859:LYS:HZ2	1.30	1.11
1:Z:746:PRO:CB	1:Z:753:ALA:CA	2.29	1.11
5:F:841:PHE:HD2	5:F:918:PHE:CE1	1.55	1.10
3:D:1493:ASN:HA	5:F:1471:LYS:HD2	1.32	1.10
6:G:289:GLN:HE22	6:J:352:VAL:HG22	0.95	1.10
7:K:321:ALA:HA	7:K:348:ILE:CD1	1.80	1.10
5:F:800:ILE:CD1	5:F:885:GLU:OE1	1.98	1.10
5:F:1550:LEU:CD2	5:F:1552:PHE:CZ	2.34	1.10
6:G:289:GLN:NE2	6:J:352:VAL:HG22	1.67	1.10
6:J:380:TYR:HE2	8:L:751:LEU:HD21	1.09	1.10
5:F:334:GLN:CG	5:F:854:GLU:OE2	1.99	1.10
5:F:690:GLU:CD	8:I:722:LEU:HD21	1.69	1.10
1:Z:753:ALA:HB1	1:Z:815:ILE:O	1.52	1.10
1:A:783:SER:HA	1:A:839:LEU:HA	1.26	1.09
6:J:432:LEU:CB	8:L:782:ILE:O	2.00	1.09
6:J:431:GLN:HA	7:K:500:GLU:H	1.10	1.09
6:G:327:LYS:HZ3	1:Z:46:ILE:HB	0.96	1.09
6:J:432:LEU:CB	8:L:782:ILE:C	2.20	1.09
1:Z:757:ALA:HB1	1:Z:819:MET:O	1.40	1.08
6:J:405:LEU:O	6:J:409:PRO:HD3	0.93	1.08
1:Z:814:MET:CB	1:Z:833:ILE:CD1	2.32	1.08
5:F:922:LEU:HD23	7:H:400:LYS:NZ	1.68	1.08
5:F:1529:ALA:CB	5:F:1611:VAL:HG13	1.84	1.08
5:F:1550:LEU:CD1	5:F:1604:ILE:HD13	1.84	1.07
1:Z:824:MET:CB	1:Z:825:PRO:HD3	1.85	1.07
1:A:55:GLN:CB	7:K:521:THR:CB	2.32	1.07
6:G:331:LYS:HE2	1:Z:49:LEU:HD11	1.29	1.07
7:H:426:GLY:HA2	8:I:736:ASN:N	1.69	1.07
6:J:383:LYS:HZ2	8:L:756:ASN:CB	1.66	1.07
7:K:482:MET:CB	8:L:784:ILE:HA	1.83	1.07
7:K:317:ASN:CB	7:K:346:GLN:HB3	1.83	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:837:TYR:HB2	5:F:918:PHE:CE2	1.90	1.07
1:A:814:MET:HG3	1:A:833:ILE:HD11	1.07	1.06
3:D:242:MET:SD	3:D:298:TYR:CD2	2.48	1.06
5:F:228:PHE:N	5:F:361:LEU:CB	2.18	1.06
7:H:420:ALA:CB	8:I:745:TYR:CE1	2.36	1.06
6:G:430:LEU:CB	8:I:780:THR:HG22	1.83	1.06
7:H:412:ILE:HG23	7:H:415:LEU:HD22	1.38	1.06
7:H:532:ALA:HB2	8:I:818:ILE:HD12	1.34	1.06
4:E:227:ILE:HD11	4:E:258:ILE:HD13	1.37	1.06
7:K:513:LEU:HD21	8:L:800:HIS:CE1	1.90	1.06
5:F:1034:LEU:HD22	5:F:1092:THR:HB	1.37	1.06
7:K:535:LYS:HA	8:L:818:ILE:CB	1.86	1.06
7:H:535:LYS:CB	8:I:821:ILE:HD11	1.86	1.06
7:H:412:ILE:HG23	7:H:415:LEU:CD2	1.86	1.05
1:A:772:PRO:CA	1:A:828:THR:HG21	1.86	1.05
6:J:383:LYS:NZ	8:L:756:ASN:OD1	1.87	1.05
1:A:128:LEU:HD13	4:E:1260:TYR:OH	1.53	1.05
6:J:398:VAL:HG21	7:K:462:ARG:CB	1.86	1.05
1:A:814:MET:CG	1:A:833:ILE:HD11	1.86	1.05
5:F:928:LEU:H	5:F:928:LEU:HD12	1.15	1.05
5:F:841:PHE:CE2	5:F:918:PHE:CE1	2.44	1.05
1:Z:241:ILE:HG22	1:Z:245:ALA:HB1	1.33	1.05
4:E:977:ALA:O	7:K:460:TRP:CB	2.04	1.04
6:J:383:LYS:HZ2	8:L:756:ASN:CG	1.49	1.04
5:F:1203:TYR:CB	5:F:1299:ASN:ND2	2.20	1.04
2:C:1258:GLN:HG2	2:C:1299:LYS:CE	1.86	1.04
1:Z:751:LEU:O	1:Z:753:ALA:N	1.89	1.03
1:A:53:VAL:HG21	8:L:799:SER:OG	1.57	1.03
4:E:1022:TYR:CD2	4:E:1026:THR:CG2	2.40	1.03
6:J:325:TYR:CE2	7:K:390:HIS:CA	2.41	1.03
1:A:140:ILE:HG22	4:E:1393:LYS:NZ	1.73	1.03
2:C:318:ILE:H	2:C:318:ILE:HD12	1.17	1.03
5:F:350:ARG:O	5:F:393:SER:CB	2.06	1.03
4:E:1319:LEU:HD21	4:E:1398:VAL:CG2	1.88	1.02
5:F:159:LYS:HE3	5:F:363:ASP:HA	1.39	1.02
5:F:690:GLU:CD	8:I:722:LEU:CD2	2.28	1.02
4:E:1394:LYS:O	4:E:1398:VAL:HG23	1.58	1.02
1:Z:753:ALA:HB1	1:Z:816:TYR:CA	1.90	1.02
1:Z:810:ALA:HB3	1:Z:836:ASP:CA	1.86	1.02
5:F:1116:VAL:CG1	5:F:1150:PHE:CE2	2.42	1.02
8:I:739:GLN:O	8:I:741:ARG:N	1.91	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:27:GLU:OE2	1:A:30:ASP:HB3	1.58	1.02
1:Z:817:ALA:O	1:Z:821:GLN:N	1.91	1.02
1:A:59:LYS:CB	8:L:807:LEU:CB	2.38	1.01
1:A:814:MET:CG	1:A:833:ILE:CD1	2.37	1.01
5:F:920:ILE:HG21	5:F:924:ALA:O	1.59	1.01
6:G:331:LYS:CE	1:Z:49:LEU:HD11	1.91	1.01
1:Z:27:GLU:OE2	1:Z:30:ASP:HB3	1.58	1.01
1:Z:811:ARG:N	1:Z:836:ASP:CB	2.24	1.01
1:A:140:ILE:HG21	4:E:1393:LYS:HD3	1.05	1.01
7:K:482:MET:CB	8:L:784:ILE:CA	2.38	1.01
3:D:242:MET:SD	3:D:298:TYR:HE2	1.78	1.01
3:D:401:ILE:HG21	3:D:462:LEU:HB3	1.43	1.01
8:I:798:ASN:O	8:I:801:PHE:N	1.92	1.01
5:F:1129:ASN:HD21	5:F:1132:GLU:CB	1.73	1.00
5:F:1550:LEU:CD2	5:F:1552:PHE:CE2	2.44	1.00
4:E:210:ASN:HA	4:E:213:PHE:CB	1.90	1.00
5:F:228:PHE:CD1	5:F:360:LEU:O	2.15	1.00
5:F:909:LEU:CB	7:H:404:ARG:HA	1.91	1.00
7:K:321:ALA:HA	7:K:348:ILE:HG12	1.43	1.00
1:Z:824:MET:HG2	1:Z:825:PRO:HD2	1.36	1.00
4:E:1022:TYR:O	4:E:1026:THR:HG23	1.59	1.00
6:G:431:GLN:CA	7:H:503:ASN:CB	2.39	1.00
3:D:938:LEU:HB2	3:D:940:VAL:HG22	1.41	1.00
5:F:887:PHE:N	5:F:888:PRO:HD2	1.77	1.00
5:F:1167:LYS:HA	5:F:1167:LYS:HE3	1.44	0.99
1:A:140:ILE:HG21	4:E:1393:LYS:CD	1.91	0.99
1:Z:810:ALA:HB1	1:Z:836:ASP:HA	1.01	0.99
5:F:228:PHE:CE1	5:F:360:LEU:O	2.15	0.99
5:F:1529:ALA:HB2	5:F:1611:VAL:CG1	1.92	0.99
5:F:1550:LEU:HD22	5:F:1552:PHE:CE2	1.97	0.99
6:G:289:GLN:HE22	6:J:352:VAL:CG2	1.76	0.99
7:H:420:ALA:HB1	8:I:745:TYR:CZ	1.98	0.99
6:J:380:TYR:CE2	8:L:751:LEU:HD21	1.98	0.99
1:Z:757:ALA:HB2	1:Z:819:MET:O	1.46	0.99
6:G:331:LYS:CE	1:Z:49:LEU:CD1	2.41	0.98
5:F:1084:LEU:HA	5:F:1156:TYR:HH	1.16	0.98
6:J:365:SER:H	7:K:424:ASN:ND2	1.60	0.98
7:H:418:GLN:HE21	8:I:718:THR:HG23	0.86	0.98
1:Z:753:ALA:CA	1:Z:816:TYR:HA	1.92	0.98
5:F:1550:LEU:HD21	5:F:1552:PHE:CZ	1.98	0.98
7:K:446:ARG:HH22	7:K:455:LYS:CE	1.76	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:538:LYS:CB	8:L:818:ILE:O	2.13	0.97
3:D:1238:ARG:HA	1:Z:830:SER:CB	1.94	0.97
1:A:128:LEU:CD2	4:E:1260:TYR:CE2	2.47	0.97
1:Z:807:LYS:CA	1:Z:836:ASP:O	2.12	0.97
6:J:281:ASP:HA	6:J:284:ILE:HD12	1.46	0.97
1:Z:249:ARG:O	1:Z:251:ALA:N	1.98	0.97
1:Z:817:ALA:O	1:Z:821:GLN:CB	2.13	0.97
1:Z:824:MET:HG2	1:Z:825:PRO:HD3	1.43	0.97
1:A:775:LEU:HB3	1:A:832:LEU:HD11	1.44	0.97
5:F:951:ARG:HH21	5:F:953:ASN:H	1.08	0.97
6:G:331:LYS:HE2	1:Z:49:LEU:HD12	1.47	0.97
5:F:968:ILE:HG13	7:H:392:LEU:HD13	1.46	0.97
7:H:493:SER:O	8:I:784:ILE:O	1.83	0.97
5:F:1085:LYS:O	5:F:1089:ASN:CB	2.12	0.96
5:F:1550:LEU:HD22	5:F:1552:PHE:CZ	1.97	0.96
1:Z:133:THR:HG22	1:Z:134:LYS:N	1.77	0.96
7:H:426:GLY:CA	8:I:736:ASN:N	2.27	0.96
5:F:334:GLN:NE2	5:F:859:LYS:HZ3	1.56	0.96
5:F:1216:PHE:HE2	5:F:1282:ALA:CB	1.77	0.96
5:F:1034:LEU:CD2	5:F:1092:THR:HB	1.95	0.96
7:K:298:SER:HA	7:K:306:THR:HA	1.47	0.96
7:K:526:VAL:O	7:K:530:ASP:HB2	1.66	0.96
6:G:430:LEU:O	7:H:503:ASN:CB	2.13	0.95
6:J:380:TYR:HE2	8:L:751:LEU:CD2	1.79	0.95
6:J:325:TYR:HE2	7:K:390:HIS:HA	1.17	0.95
6:J:383:LYS:HZ2	8:L:756:ASN:CA	1.54	0.95
5:F:1129:ASN:HD21	5:F:1132:GLU:HB3	0.83	0.95
6:J:431:GLN:HA	7:K:500:GLU:N	1.81	0.95
1:Z:810:ALA:C	1:Z:836:ASP:CB	2.35	0.95
4:E:227:ILE:HD11	4:E:258:ILE:CD1	1.96	0.95
1:A:751:LEU:HD22	2:C:1313:LEU:HA	1.49	0.95
3:D:528:PRO:HG3	3:D:624:PHE:CE2	2.02	0.95
6:J:383:LYS:CD	8:L:756:ASN:OD1	2.13	0.95
1:Z:824:MET:CG	1:Z:825:PRO:CD	2.43	0.94
7:K:321:ALA:H	7:K:348:ILE:HD11	1.09	0.94
1:Z:824:MET:HB2	1:Z:825:PRO:HD3	1.47	0.94
5:F:920:ILE:CG2	5:F:924:ALA:O	2.15	0.94
6:J:398:VAL:HG21	7:K:462:ARG:HA	1.50	0.94
5:F:1550:LEU:HD11	5:F:1604:ILE:HD13	1.48	0.94
8:I:814:LEU:HD21	1:Z:59:LYS:CB	1.97	0.94
5:F:968:ILE:CG1	7:H:392:LEU:HD13	1.97	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:J:383:LYS:HD2	8:L:756:ASN:OD1	1.68	0.94
5:F:350:ARG:O	5:F:393:SER:HB3	1.68	0.94
6:J:383:LYS:CE	8:L:756:ASN:OD1	2.16	0.94
1:A:772:PRO:HB3	1:A:828:THR:HG21	0.95	0.93
8:I:818:ILE:O	8:I:821:ILE:HG22	0.76	0.93
5:F:1068:ILE:HD12	5:F:1150:PHE:CD2	2.04	0.93
6:J:383:LYS:HZ3	8:L:756:ASN:CG	1.65	0.93
1:Z:753:ALA:HA	1:Z:816:TYR:CB	1.98	0.93
6:G:465:LYS:HB2	1:Z:20:LYS:NZ	1.81	0.93
5:F:354:ARG:CB	5:F:356:ILE:HG22	1.98	0.93
6:J:433:LYS:N	7:K:499:GLY:HA3	1.84	0.93
5:F:1012:ASN:O	8:I:787:GLU:HG2	1.68	0.92
8:I:818:ILE:C	8:I:821:ILE:HG22	1.87	0.92
1:Z:241:ILE:CG2	1:Z:245:ALA:HB2	1.99	0.92
3:D:1467:SER:HB2	1:Z:621:HIS:NE2	1.84	0.92
6:G:327:LYS:NZ	1:Z:46:ILE:CB	2.31	0.92
3:D:515:VAL:HG12	3:D:644:SER:HB3	1.52	0.92
6:J:388:CYS:HB2	7:K:455:LYS:HD2	1.51	0.92
1:A:140:ILE:CG2	4:E:1393:LYS:CD	2.47	0.92
5:F:800:ILE:HD11	5:F:885:GLU:OE1	1.69	0.92
7:K:456:THR:O	7:K:458:GLU:N	2.03	0.92
3:D:483:HIS:HB2	3:D:486:GLN:HG2	1.52	0.91
4:E:1398:VAL:O	4:E:1398:VAL:HG12	1.69	0.91
4:E:687:LYS:CB	5:F:1391:GLY:HA3	2.00	0.91
1:Z:116:LYS:HB3	1:Z:116:LYS:HZ3	1.33	0.91
6:J:388:CYS:O	6:J:388:CYS:SG	2.28	0.91
4:E:989:ASP:O	4:E:991:LYS:N	2.03	0.91
7:K:525:GLU:O	7:K:529:LYS:HB3	1.70	0.91
5:F:334:GLN:HG2	5:F:860:ASN:ND2	1.85	0.91
5:F:837:TYR:HB2	5:F:918:PHE:HE2	1.30	0.91
7:H:425:ARG:C	7:H:427:LEU:N	2.21	0.91
7:K:321:ALA:H	7:K:348:ILE:CD1	1.83	0.91
3:D:118:THR:HB	3:D:623:GLY:HA2	1.50	0.91
3:D:971:ILE:HD11	3:D:984:THR:HB	1.52	0.91
5:F:711:GLN:OE1	5:F:779:PRO:HA	1.69	0.91
7:K:379:ILE:O	7:K:382:LYS:CB	2.19	0.91
1:Z:362:LYS:O	1:Z:365:GLN:HB2	1.71	0.91
1:A:59:LYS:CA	8:L:807:LEU:CB	2.48	0.90
4:E:1029:ASN:ND2	7:K:475:SER:CB	2.35	0.90
3:D:716:VAL:HG11	3:D:889:GLU:HB2	1.53	0.90
6:G:295:LYS:HG2	6:J:363:LYS:NZ	1.86	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Z:810:ALA:C	1:Z:836:ASP:HA	1.91	0.90
6:J:342:GLU:OE1	6:J:375:LYS:NZ	2.04	0.90
1:Z:810:ALA:HB3	1:Z:836:ASP:HA	1.46	0.90
2:C:1258:GLN:HG2	2:C:1299:LYS:NZ	1.87	0.90
7:K:484:PHE:O	7:K:492:ASP:CB	2.20	0.90
1:Z:810:ALA:CB	1:Z:836:ASP:O	2.20	0.90
6:J:364:ILE:CA	7:K:424:ASN:ND2	2.35	0.90
5:F:1038:LEU:C	5:F:1040:THR:H	1.74	0.89
7:K:326:LYS:CB	7:K:327:PRO:HD2	2.02	0.89
1:Z:817:ALA:O	1:Z:821:GLN:CA	2.20	0.89
5:F:887:PHE:H	5:F:888:PRO:HD2	1.37	0.89
5:F:1167:LYS:HA	5:F:1167:LYS:CE	1.99	0.89
7:K:446:ARG:NH1	7:K:446:ARG:O	2.06	0.89
5:F:750:TRP:HZ2	5:F:901:PRO:CB	1.86	0.89
5:F:967:THR:O	7:H:392:LEU:HD21	1.72	0.89
1:Z:753:ALA:CB	1:Z:816:TYR:CA	2.50	0.89
5:F:1672:MET:CB	1:Z:149:ALA:HB2	2.03	0.89
1:Z:127:GLN:HA	1:Z:127:GLN:HE21	1.38	0.89
3:D:499:LEU:HB2	3:D:502:SER:HB3	1.55	0.88
5:F:1116:VAL:HG11	5:F:1150:PHE:HE2	1.32	0.88
5:F:657:ILE:O	5:F:712:LEU:HD12	1.73	0.88
5:F:922:LEU:CD2	7:H:400:LYS:HE3	2.02	0.88
7:K:446:ARG:NH2	7:K:455:LYS:NZ	2.21	0.88
6:J:387:TYR:HA	8:L:762:LEU:HD22	1.55	0.88
5:F:1187:ASN:CB	5:F:1190:TYR:CB	2.52	0.88
1:A:27:GLU:OE2	1:A:30:ASP:CB	2.21	0.88
1:Z:27:GLU:OE2	1:Z:30:ASP:CB	2.21	0.88
6:G:292:HIS:ND1	6:J:352:VAL:HG11	1.87	0.88
7:H:535:LYS:CB	8:I:821:ILE:CD1	2.51	0.88
6:J:433:LYS:CB	7:K:499:GLY:HA2	2.03	0.88
5:F:968:ILE:HG13	7:H:392:LEU:CD1	2.03	0.88
1:Z:117:LYS:NZ	1:Z:117:LYS:HB3	1.87	0.88
6:J:459:VAL:O	6:J:463:LYS:HB2	1.73	0.88
5:F:1084:LEU:HA	5:F:1156:TYR:CZ	2.09	0.87
5:F:1294:LYS:O	5:F:1295:ALA:O	1.90	0.87
5:F:914:ASP:HA	5:F:917:PHE:CB	2.03	0.87
3:D:175:ILE:HD11	3:D:642:LEU:HB2	1.55	0.87
3:D:944:LEU:HD12	3:D:947:LEU:HD12	1.57	0.87
5:F:935:GLN:O	5:F:938:ALA:N	2.07	0.87
3:D:910:LEU:HD23	3:D:913:LEU:HD12	1.57	0.87
5:F:1251:ARG:HH22	5:F:1276:ASP:HB2	1.39	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:J:429:LEU:CB	6:J:434:THR:OG1	2.23	0.86
4:E:504:ASP:HA	4:E:522:ILE:O	1.73	0.86
3:D:830:SER:HB3	3:D:934:SER:HB3	1.58	0.86
7:H:426:GLY:HA2	8:I:736:ASN:H	1.38	0.86
5:F:734:LEU:HD21	5:F:817:ASN:OD1	1.74	0.86
1:Z:241:ILE:CG2	1:Z:245:ALA:CB	2.50	0.86
4:E:182:PHE:CE2	5:F:1189:MET:CB	2.59	0.86
7:K:455:LYS:HD3	7:K:455:LYS:N	1.91	0.86
1:Z:811:ARG:CA	1:Z:836:ASP:CB	2.53	0.86
5:F:354:ARG:HB2	5:F:356:ILE:CG2	2.04	0.86
1:Z:746:PRO:O	1:Z:812:GLN:O	1.93	0.86
5:F:389:LEU:H	5:F:389:LEU:HD12	1.41	0.86
5:F:968:ILE:HG23	7:H:392:LEU:HD11	1.56	0.86
7:K:315:LYS:HA	7:K:347:THR:HA	1.58	0.86
1:Z:807:LYS:CB	1:Z:837:VAL:O	2.24	0.85
1:A:751:LEU:CD2	2:C:1313:LEU:HD23	2.04	0.85
3:D:430:GLU:CD	3:D:528:PRO:HD3	1.95	0.85
5:F:1167:LYS:O	5:F:1167:LYS:HD3	1.76	0.85
1:A:57:ARG:HG2	1:A:57:ARG:HH11	1.38	0.85
3:D:768:PRO:HA	3:D:771:TYR:HB2	1.57	0.85
5:F:401:THR:CB	5:F:411:ASN:CB	2.53	0.85
7:K:321:ALA:HA	7:K:348:ILE:HD11	1.42	0.85
7:K:404:ARG:HA	7:K:404:ARG:NE	1.88	0.85
6:G:430:LEU:CB	8:I:780:THR:CA	2.53	0.85
1:A:783:SER:CA	1:A:839:LEU:HA	2.06	0.85
5:F:922:LEU:HD23	7:H:400:LYS:HE3	1.58	0.85
6:J:365:SER:N	7:K:424:ASN:ND2	2.25	0.85
5:F:1216:PHE:CE2	5:F:1282:ALA:CB	2.59	0.85
8:I:822:LYS:HZ1	8:I:822:LYS:HA	1.42	0.85
3:D:528:PRO:HG3	3:D:624:PHE:CD2	2.11	0.85
6:J:324:GLN:HA	6:J:327:LYS:HE2	1.56	0.85
6:J:405:LEU:CD2	7:K:469:ARG:HE	1.89	0.85
3:D:537:LYS:HE2	3:D:572:LEU:HD23	1.57	0.84
6:J:371:LYS:O	6:J:371:LYS:NZ	2.10	0.84
6:J:432:LEU:CB	8:L:782:ILE:CA	2.55	0.84
1:A:140:ILE:HG22	4:E:1393:LYS:HZ2	1.41	0.84
1:A:50:ARG:HA	1:A:53:VAL:HG12	1.58	0.84
5:F:1037:ASN:H	5:F:1040:THR:CB	1.91	0.84
1:Z:49:LEU:O	1:Z:49:LEU:HD22	1.76	0.84
1:Z:242:LEU:HA	1:Z:245:ALA:HB3	1.58	0.84
4:E:687:LYS:CB	5:F:1391:GLY:CA	2.56	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:772:PRO:CB	1:A:828:THR:CG2	2.39	0.84
6:G:295:LYS:CG	6:J:363:LYS:NZ	2.40	0.84
6:J:323:SER:HA	6:J:326:LEU:HD12	1.57	0.84
1:Z:811:ARG:HA	1:Z:836:ASP:CB	2.07	0.84
1:A:787:HIS:CE1	1:A:838:SER:O	2.31	0.83
5:F:1134:LYS:C	5:F:1136:LYS:H	1.81	0.83
6:G:465:LYS:HB2	1:Z:20:LYS:HZ3	1.42	0.83
4:E:1163:LEU:O	4:E:1167:LEU:HB2	1.78	0.83
5:F:1634:LYS:HD2	5:F:1635:ARG:HD3	1.58	0.83
1:Z:747:PHE:HA	1:Z:812:GLN:CB	2.09	0.83
1:Z:756:LYS:CB	1:Z:816:TYR:CB	2.57	0.83
5:F:929:TYR:O	5:F:932:VAL:HG13	1.79	0.83
1:Z:46:ILE:HD12	1:Z:46:ILE:O	1.78	0.83
1:Z:753:ALA:CB	1:Z:816:TYR:HA	2.09	0.82
1:Z:753:ALA:CA	1:Z:816:TYR:CA	2.57	0.82
5:F:690:GLU:CG	8:I:722:LEU:HD21	2.08	0.82
1:A:775:LEU:CB	1:A:832:LEU:CD1	2.57	0.82
6:J:390:ILE:HB	8:L:762:LEU:HD11	1.62	0.82
6:J:333:ILE:O	6:J:336:PHE:CA	2.28	0.82
5:F:1251:ARG:HH22	5:F:1276:ASP:CB	1.92	0.82
6:G:465:LYS:CB	1:Z:20:LYS:NZ	2.42	0.82
5:F:227:ASP:HA	5:F:379:SER:CB	2.10	0.82
5:F:1116:VAL:CG1	5:F:1150:PHE:HE2	1.87	0.82
3:D:1457:LYS:O	1:Z:651:ASP:CB	2.27	0.82
1:Z:782:ILE:CB	1:Z:839:LEU:C	2.48	0.81
1:A:46:ILE:HA	8:L:792:GLN:H	1.45	0.81
2:C:1258:GLN:HG2	2:C:1299:LYS:HZ1	1.42	0.81
4:E:923:LEU:HD11	4:E:931:PHE:HE2	1.44	0.81
5:F:914:ASP:HA	5:F:917:PHE:HB3	1.59	0.81
1:Z:753:ALA:HA	1:Z:816:TYR:CA	2.10	0.81
4:E:227:ILE:CD1	4:E:258:ILE:CD1	2.58	0.81
5:F:1109:ILE:HD11	5:F:1160:TYR:OH	1.80	0.81
3:D:1377:ASN:ND2	1:Z:758:GLN:HE21	1.76	0.81
1:A:772:PRO:HB3	1:A:828:THR:CB	2.09	0.81
3:D:734:LEU:HB3	3:D:739:THR:HG21	1.60	0.81
5:F:1357:ALA:HB2	5:F:1381:LEU:CA	2.10	0.81
6:G:430:LEU:CB	8:I:780:THR:CG2	2.58	0.81
1:Z:251:ALA:O	1:Z:252:GLN:C	2.19	0.81
4:E:258:ILE:CG2	4:E:261:ILE:HD11	2.10	0.81
6:J:369:LEU:HD13	7:K:419:LEU:HD22	1.62	0.80
1:Z:774:LEU:HA	1:Z:777:ILE:HG22	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:400:LYS:HD2	7:K:400:LYS:O	1.80	0.80
1:A:128:LEU:CD1	4:E:1260:TYR:CZ	2.60	0.80
5:F:1068:ILE:CD1	5:F:1150:PHE:CD2	2.63	0.80
8:I:814:LEU:CD2	1:Z:59:LYS:CB	2.59	0.80
6:J:386:ASP:HA	6:J:389:ARG:HB2	1.63	0.80
7:K:337:GLN:O	7:K:341:LYS:HE2	1.79	0.80
7:K:446:ARG:NH2	7:K:455:LYS:HZ1	1.79	0.80
8:I:805:ARG:CB	1:Z:88:LYS:NZ	2.45	0.80
1:Z:804:ASP:O	1:Z:808:ASN:HB3	1.81	0.80
5:F:1106:PHE:CD2	5:F:1164:PHE:CE2	2.69	0.80
3:D:160:ILE:HG23	3:D:191:ILE:HG21	1.64	0.80
7:H:412:ILE:CG2	7:H:415:LEU:HD23	2.11	0.80
5:F:1216:PHE:HE2	5:F:1282:ALA:HB2	1.47	0.80
3:D:368:ILE:HB	3:D:380:TYR:HB2	1.63	0.80
6:J:333:ILE:C	6:J:336:PHE:CB	2.50	0.80
8:L:643:LYS:HG3	8:L:647:GLN:HE22	1.47	0.80
1:Z:251:ALA:O	1:Z:254:LEU:N	2.15	0.80
1:Z:779:LEU:CB	1:Z:835:ILE:CB	2.60	0.80
5:F:1068:ILE:CD1	5:F:1150:PHE:HD2	1.95	0.79
7:K:385:GLN:HA	7:K:385:GLN:HE21	1.48	0.79
5:F:935:GLN:O	5:F:937:LEU:N	2.14	0.79
6:J:384:LEU:HD23	6:J:384:LEU:O	1.82	0.79
8:I:822:LYS:HA	8:I:822:LYS:CE	2.12	0.79
1:Z:810:ALA:CB	1:Z:836:ASP:C	2.37	0.79
2:C:1388:HIS:O	4:E:1331:LEU:CD1	2.31	0.79
4:E:988:ILE:O	4:E:990:LYS:N	2.16	0.79
6:J:353:LEU:HG	7:K:419:LEU:HD11	1.64	0.79
7:K:337:GLN:O	7:K:341:LYS:CE	2.30	0.79
6:J:305:ILE:HD11	8:L:668:VAL:HG12	1.61	0.79
1:Z:824:MET:CB	1:Z:825:PRO:CD	2.60	0.79
3:D:1376:LYS:CB	1:Z:762:ASN:CA	2.60	0.79
7:H:532:ALA:HB2	8:I:818:ILE:CD1	2.12	0.79
5:F:734:LEU:HD22	5:F:817:ASN:OD1	1.81	0.79
1:Z:753:ALA:HB1	1:Z:816:TYR:HA	1.61	0.79
5:F:928:LEU:H	5:F:928:LEU:CD1	1.92	0.79
6:J:325:TYR:CD2	7:K:390:HIS:HA	2.15	0.79
6:G:449:LEU:HD23	1:Z:84:ASP:CG	2.03	0.78
7:H:423:LYS:O	8:I:735:ASN:CB	2.31	0.78
1:Z:116:LYS:HB3	1:Z:116:LYS:NZ	1.95	0.78
7:K:314:ASN:HB2	7:K:361:ARG:HH12	1.46	0.78
3:D:515:VAL:HB	3:D:604:PRO:HG3	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1376:LYS:CB	1:Z:762:ASN:HA	2.13	0.78
5:F:1436:LYS:O	5:F:1440:ILE:HB	1.83	0.78
7:K:310:ALA:HB3	7:K:352:ILE:HB	1.64	0.78
5:F:922:LEU:CD2	7:H:400:LYS:CE	2.58	0.78
5:F:1134:LYS:O	5:F:1136:LYS:N	2.16	0.78
1:Z:133:THR:CG2	1:Z:134:LYS:N	2.46	0.78
6:G:295:LYS:HG2	6:J:363:LYS:HZ1	1.47	0.78
1:Z:663:ASP:O	1:Z:667:ALA:HB3	1.84	0.78
1:A:775:LEU:CB	1:A:832:LEU:HD11	2.13	0.78
5:F:1035:GLY:O	5:F:1042:ILE:CB	2.32	0.78
6:J:333:ILE:HA	6:J:336:PHE:CB	2.13	0.78
4:E:182:PHE:HE2	5:F:1189:MET:CB	1.96	0.78
5:F:1633:TYR:CZ	5:F:1635:ARG:HB2	2.19	0.78
7:K:358:LEU:HD22	8:L:662:ILE:HD13	1.64	0.78
1:A:82:ASP:OD1	1:A:82:ASP:N	2.14	0.77
3:D:445:ARG:HB2	3:D:466:LYS:HB2	1.67	0.77
1:A:53:VAL:CG2	8:L:799:SER:OG	2.31	0.77
1:A:253:LEU:HD22	1:A:502:ASP:HB3	1.67	0.77
5:F:1606:GLN:O	5:F:1610:ALA:HB2	1.83	0.77
6:J:319:GLU:HA	6:J:322:THR:HG22	1.66	0.77
3:D:263:VAL:HB	3:D:311:LYS:HE3	1.65	0.77
5:F:1139:ILE:HG12	5:F:1291:SER:OG	1.84	0.77
1:Z:91:GLN:O	1:Z:93:ASN:N	2.18	0.77
1:A:779:LEU:CB	1:A:835:ILE:CB	2.61	0.77
2:C:1258:GLN:CG	2:C:1299:LYS:CE	2.62	0.77
3:D:395:PRO:HB3	3:D:418:LEU:HD23	1.65	0.77
1:Z:768:VAL:HA	1:Z:771:ILE:HD12	1.66	0.77
3:D:1468:TYR:H	1:Z:621:HIS:CE1	2.02	0.77
5:F:968:ILE:HG23	7:H:392:LEU:CD1	2.14	0.77
5:F:1435:LYS:NZ	5:F:1484:ARG:NH2	2.32	0.77
6:G:465:LYS:CB	1:Z:20:LYS:HZ1	1.98	0.77
3:D:744:SER:HA	3:D:758:ASP:HB2	1.67	0.77
3:D:1238:ARG:HG2	1:Z:830:SER:HB2	1.66	0.77
8:I:737:ASN:OD1	8:I:738:ASP:OD1	2.01	0.77
4:E:973:THR:OG1	4:E:974:GLY:N	2.14	0.77
5:F:1038:LEU:O	5:F:1040:THR:N	2.18	0.77
4:E:1022:TYR:CE2	4:E:1026:THR:HG22	2.18	0.77
6:G:465:LYS:HE3	1:Z:20:LYS:HZ3	1.49	0.77
1:Z:810:ALA:HB2	1:Z:839:LEU:CA	2.15	0.77
1:Z:810:ALA:HB1	1:Z:835:ILE:O	1.84	0.76
4:E:1359:ILE:HG21	1:Z:453:VAL:HG11	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:327:LYS:HZ2	1:Z:46:ILE:HA	1.50	0.76
7:H:412:ILE:CG2	7:H:415:LEU:CD2	2.62	0.76
1:Z:810:ALA:C	1:Z:836:ASP:CA	2.54	0.76
8:I:822:LYS:HA	8:I:822:LYS:NZ	1.99	0.76
1:A:128:LEU:HD13	4:E:1260:TYR:CE2	2.20	0.76
4:E:1319:LEU:HD21	4:E:1398:VAL:HG23	1.67	0.76
5:F:1216:PHE:HE2	5:F:1282:ALA:HB1	1.48	0.76
7:K:483:VAL:CB	7:K:493:SER:C	2.53	0.76
5:F:1370:LEU:O	5:F:1371:ILE:HG12	1.86	0.76
5:F:1357:ALA:CA	5:F:1381:LEU:CB	2.63	0.76
6:J:387:TYR:CB	8:L:759:SER:OG	2.33	0.76
1:Z:146:LEU:O	1:Z:146:LEU:HD12	1.85	0.76
5:F:506:ASN:O	5:F:510:PHE:HB2	1.84	0.76
5:F:1606:GLN:HB3	1:Z:141:ASN:HD22	1.50	0.76
6:J:398:VAL:HB	7:K:462:ARG:O	1.85	0.76
7:K:321:ALA:C	7:K:348:ILE:HD11	2.06	0.76
3:D:509:PHE:HA	3:D:517:LEU:HG	1.68	0.76
1:Z:810:ALA:HB2	1:Z:839:LEU:HA	1.68	0.76
3:D:298:TYR:CE1	3:D:311:LYS:HE2	2.21	0.75
8:I:805:ARG:CB	1:Z:88:LYS:CE	2.64	0.75
7:K:359:ASN:HA	7:K:362:ASN:HD22	1.49	0.75
1:A:120:ASN:OD1	6:J:413:ASN:ND2	2.20	0.75
3:D:1249:LEU:CB	5:F:1502:THR:O	2.34	0.75
5:F:159:LYS:NZ	5:F:363:ASP:CB	2.49	0.75
7:K:313:TYR:HA	7:K:349:PRO:HB3	1.68	0.75
6:J:376:LYS:NZ	8:L:756:ASN:HD22	1.84	0.75
7:K:538:LYS:CB	8:L:821:ILE:CG2	2.64	0.75
5:F:1442:TRP:CE2	5:F:1484:ARG:HB3	2.21	0.75
7:K:446:ARG:HH22	7:K:455:LYS:HZ1	1.30	0.75
1:A:16:LYS:HE2	6:J:467:LEU:O	1.86	0.75
1:A:226:ARG:NH2	1:A:230:GLY:O	2.20	0.75
3:D:508:LYS:HG3	3:D:517:LEU:H	1.50	0.75
5:F:1034:LEU:O	5:F:1095:LEU:HD11	1.85	0.75
7:K:538:LYS:CB	8:L:821:ILE:HG23	2.16	0.75
4:E:923:LEU:HD11	4:E:931:PHE:CE2	2.21	0.75
1:Z:133:THR:HG22	1:Z:134:LYS:H	1.48	0.75
3:D:402:ILE:HG21	3:D:406:THR:H	1.51	0.75
3:D:576:LEU:HD22	3:D:601:THR:HB	1.69	0.75
5:F:227:ASP:CB	5:F:361:LEU:CB	2.65	0.75
5:F:922:LEU:HD23	7:H:400:LYS:HZ1	1.49	0.75
7:K:446:ARG:NH2	7:K:455:LYS:CE	2.50	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:128:LEU:CD2	4:E:1260:TYR:CD2	2.62	0.75
7:H:420:ALA:HB1	8:I:745:TYR:HE1	1.48	0.75
7:H:425:ARG:O	7:H:427:LEU:N	2.19	0.74
1:A:137:ASP:HB2	4:E:1386:LEU:HA	1.69	0.74
1:A:233:ASP:OD2	1:A:236:ASN:ND2	2.21	0.74
7:H:412:ILE:HA	7:H:415:LEU:HB2	1.67	0.74
6:J:365:SER:H	7:K:424:ASN:HD21	1.33	0.74
1:Z:116:LYS:HE2	1:Z:116:LYS:O	1.88	0.74
1:Z:44:VAL:CB	1:Z:47:ASN:ND2	2.50	0.74
1:A:192:ILE:HD12	1:A:571:LEU:HD11	1.68	0.74
5:F:1216:PHE:CZ	5:F:1282:ALA:HA	2.21	0.74
1:Z:753:ALA:HB2	1:Z:816:TYR:N	2.02	0.74
1:Z:810:ALA:HB1	1:Z:836:ASP:N	2.03	0.74
1:A:783:SER:HA	1:A:839:LEU:CA	2.12	0.74
3:D:490:LYS:HE2	3:D:533:SER:HB3	1.70	0.74
3:D:1241:GLY:HA2	1:Z:826:ARG:O	1.87	0.74
5:F:750:TRP:CZ2	5:F:901:PRO:CB	2.70	0.74
7:K:287:GLN:O	7:K:291:GLN:N	2.18	0.74
1:Z:117:LYS:HB3	1:Z:117:LYS:HZ1	1.52	0.74
5:F:1274:ASP:HA	5:F:1277:VAL:HB	1.68	0.74
5:F:1550:LEU:HD21	5:F:1552:PHE:CE2	2.19	0.74
6:G:431:GLN:CB	7:H:503:ASN:N	2.51	0.74
6:J:350:PHE:CD1	7:K:419:LEU:HD12	2.23	0.74
7:K:513:LEU:CD2	8:L:800:HIS:CE1	2.69	0.74
6:G:357:LEU:O	8:I:732:ALA:O	2.06	0.74
6:J:364:ILE:HA	7:K:424:ASN:HD22	1.52	0.73
7:K:379:ILE:O	7:K:382:LYS:N	2.20	0.73
7:K:387:GLN:HA	7:K:387:GLN:HE21	1.51	0.73
4:E:224:CYS:O	4:E:228:ASN:HB2	1.87	0.73
5:F:951:ARG:HH21	5:F:953:ASN:N	1.84	0.73
3:D:1238:ARG:CA	1:Z:830:SER:HB3	2.13	0.73
4:E:1359:ILE:CG2	1:Z:453:VAL:HG11	2.18	0.73
5:F:1635:ARG:O	5:F:1639:GLY:HA3	1.89	0.73
3:D:413:LEU:HD11	3:D:444:VAL:HG11	1.69	0.73
3:D:472:VAL:HG23	3:D:474:PRO:HD2	1.70	0.73
5:F:1216:PHE:CE2	5:F:1282:ALA:HB2	2.23	0.73
1:Z:365:GLN:O	1:Z:368:LEU:HB2	1.87	0.73
1:A:128:LEU:HB3	4:E:1260:TYR:HE2	1.54	0.73
2:C:1258:GLN:HG2	2:C:1299:LYS:HE2	1.69	0.73
4:E:182:PHE:CZ	5:F:1189:MET:CB	2.71	0.73
5:F:968:ILE:CG1	7:H:392:LEU:CD1	2.65	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:1669:LEU:CB	1:Z:145:ASN:CB	2.67	0.73
1:Z:822:TYR:O	1:Z:828:THR:HG23	1.88	0.73
6:J:398:VAL:CG2	7:K:462:ARG:HA	2.19	0.73
1:Z:754:ARG:HA	1:Z:819:MET:CB	2.17	0.73
1:A:60:ASN:N	8:L:807:LEU:CB	2.52	0.73
3:D:155:ASN:HA	3:D:646:SER:HB3	1.71	0.73
5:F:951:ARG:NH2	5:F:953:ASN:H	1.84	0.73
7:K:312:VAL:HG23	7:K:352:ILE:HG13	1.71	0.73
5:F:424:SER:O	5:F:428:GLN:NE2	2.21	0.72
5:F:1283:LYS:HA	5:F:1283:LYS:CE	2.17	0.72
3:D:750:LYS:HB2	3:D:751:PRO:HD3	1.71	0.72
1:Z:771:ILE:HG22	1:Z:772:PRO:CD	2.19	0.72
5:F:159:LYS:HE3	5:F:363:ASP:CA	2.15	0.72
1:Z:822:TYR:O	1:Z:828:THR:CG2	2.37	0.72
6:J:432:LEU:CB	8:L:782:ILE:HA	2.19	0.72
6:J:433:LYS:H	7:K:499:GLY:HA3	1.52	0.72
7:K:404:ARG:HA	7:K:404:ARG:HE	1.55	0.72
7:K:520:ILE:HA	7:K:523:LEU:HB2	1.71	0.72
1:A:634:ASP:O	1:A:636:ARG:NH1	2.22	0.72
8:L:637:LEU:HD21	8:L:640:LEU:HD23	1.72	0.72
4:E:984:ASP:N	4:E:984:ASP:OD1	2.17	0.72
5:F:354:ARG:CZ	5:F:354:ARG:HB3	2.20	0.72
5:F:1363:ILE:HG22	1:Z:125:ILE:CD1	2.19	0.72
1:Z:127:GLN:HE21	1:Z:127:GLN:CA	2.01	0.72
4:E:258:ILE:HG23	4:E:261:ILE:HD11	1.70	0.72
1:A:315:LYS:HE3	1:A:321:LYS:HA	1.72	0.72
1:Z:753:ALA:C	1:Z:816:TYR:HA	2.09	0.72
3:D:915:GLU:OE1	3:D:980:SER:HB3	1.90	0.71
6:J:389:ARG:O	6:J:389:ARG:NH1	2.23	0.71
5:F:334:GLN:HE22	5:F:859:LYS:NZ	1.83	0.71
6:J:303:GLU:HG2	6:J:304:LEU:HD12	1.70	0.71
7:K:448:GLU:HA	7:K:448:GLU:OE2	1.89	0.71
5:F:1027:GLN:HG2	5:F:1036:PRO:HA	1.71	0.71
6:G:470:LEU:CB	7:H:538:LYS:NZ	2.50	0.71
1:A:775:LEU:HB3	1:A:832:LEU:HD12	1.72	0.71
3:D:268:ILE:HG21	3:D:284:PHE:HE2	1.54	0.71
5:F:837:TYR:CB	5:F:918:PHE:CE2	2.71	0.71
5:F:1435:LYS:CE	5:F:1484:ARG:NH2	2.53	0.71
6:J:376:LYS:O	6:J:376:LYS:HD2	1.89	0.71
7:K:378:HIS:O	7:K:381:GLU:CB	2.38	0.71
3:D:451:SER:H	3:D:458:GLU:HB3	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:I:724:ASP:O	8:I:727:SER:HB2	1.89	0.71
8:I:822:LYS:HA	8:I:822:LYS:HE3	1.70	0.71
6:G:470:LEU:HB2	7:H:538:LYS:NZ	2.05	0.71
1:Z:746:PRO:CB	1:Z:753:ALA:N	2.53	0.71
3:D:935:PHE:HD2	3:D:936:VAL:HG22	1.55	0.71
5:F:376:ASN:CB	5:F:382:ASP:H	2.04	0.71
5:F:1550:LEU:CD1	5:F:1604:ILE:CD1	2.68	0.71
4:E:227:ILE:CD1	4:E:258:ILE:HD13	2.17	0.71
5:F:1080:LEU:HG	5:F:1156:TYR:HD2	1.56	0.71
1:A:59:LYS:O	8:L:807:LEU:CB	2.39	0.70
3:D:528:PRO:CG	3:D:624:PHE:CE2	2.74	0.70
6:G:296:ALA:HB2	6:J:363:LYS:HD2	1.71	0.70
8:L:800:HIS:O	8:L:804:LEU:HB3	1.91	0.70
1:A:140:ILE:HG22	4:E:1393:LYS:HZ3	1.56	0.70
6:J:383:LYS:HE3	8:L:759:SER:HB2	1.73	0.70
1:Z:753:ALA:O	1:Z:816:TYR:HA	1.92	0.70
1:Z:601:PRO:HB3	1:Z:605:GLU:HB2	1.74	0.70
1:Z:746:PRO:CB	1:Z:752:SER:C	2.60	0.70
5:F:887:PHE:N	5:F:888:PRO:CD	2.54	0.70
7:K:317:ASN:CA	7:K:346:GLN:HB3	2.21	0.70
4:E:1309:ARG:O	4:E:1313:ARG:CG	2.35	0.70
6:G:295:LYS:CD	6:J:363:LYS:HZ3	2.05	0.70
1:Z:44:VAL:O	1:Z:47:ASN:HB2	1.91	0.70
5:F:1088:ARG:HH11	5:F:1088:ARG:HG3	1.56	0.70
6:J:429:LEU:HA	6:J:434:THR:H	1.57	0.70
1:A:16:LYS:HA	1:A:19:ASN:HD22	1.57	0.70
2:C:318:ILE:H	2:C:318:ILE:CD1	1.96	0.70
3:D:937:SER:HB3	3:D:941:GLN:HB2	1.73	0.70
5:F:841:PHE:CE2	5:F:918:PHE:CD1	2.79	0.70
5:F:900:LEU:C	5:F:900:LEU:HD12	2.12	0.70
5:F:1294:LYS:O	5:F:1295:ALA:C	2.28	0.70
6:J:376:LYS:HZ1	8:L:756:ASN:HD22	1.40	0.70
7:K:505:ARG:HA	7:K:508:LYS:HB3	1.73	0.70
5:F:1216:PHE:HZ	5:F:1282:ALA:HA	1.55	0.70
4:E:1029:ASN:HD21	7:K:475:SER:CB	2.04	0.70
7:H:412:ILE:O	7:H:415:LEU:HB3	1.92	0.70
3:D:475:GLU:O	3:D:486:GLN:NE2	2.24	0.69
5:F:328:ASP:HB3	5:F:331:ILE:HD11	1.74	0.69
5:F:1024:LEU:HA	5:F:1048:LEU:HB3	1.73	0.69
1:A:301:ASN:HB3	1:A:345:LEU:HD13	1.74	0.69
3:D:545:GLN:HG3	3:D:572:LEU:HD13	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:1356:LEU:HB2	1:Z:453:VAL:CG2	2.21	0.69
7:H:426:GLY:CA	8:I:736:ASN:H	1.98	0.69
7:H:508:LYS:HG3	7:H:510:VAL:HG13	1.74	0.69
1:Z:29:SER:HA	1:Z:32:LEU:HG	1.74	0.69
3:D:222:ASN:H	3:D:301:SER:HB2	1.57	0.69
3:D:763:ASP:HB3	3:D:765:ILE:HD11	1.74	0.69
5:F:333:GLU:O	5:F:335:ASP:N	2.23	0.69
5:F:914:ASP:OD1	5:F:917:PHE:HB2	1.91	0.69
6:J:383:LYS:HZ3	8:L:756:ASN:CB	1.94	0.69
1:Z:767:ILE:O	1:Z:771:ILE:N	2.20	0.69
3:D:617:ALA:HA	3:D:630:THR:HG21	1.73	0.69
7:K:310:ALA:O	7:K:352:ILE:N	2.25	0.69
7:K:426:GLY:HA2	8:L:738:ASP:HB3	1.72	0.69
1:A:29:SER:HA	1:A:32:LEU:HG	1.75	0.69
5:F:1157:TRP:CD1	5:F:1160:TYR:CE1	2.81	0.69
3:D:860:ILE:HG21	3:D:893:ILE:HG13	1.72	0.69
1:Z:16:LYS:HA	1:Z:19:ASN:HD22	1.57	0.69
1:Z:748:SER:OG	1:Z:752:SER:HB3	1.92	0.69
1:A:669:ASP:O	1:A:724:ARG:NH2	2.25	0.69
1:A:682:GLU:HG2	1:A:691:ARG:HH22	1.58	0.69
1:A:775:LEU:HD13	1:A:832:LEU:HD11	1.75	0.69
2:C:1388:HIS:O	4:E:1331:LEU:HD11	1.92	0.69
5:F:376:ASN:CB	5:F:382:ASP:N	2.55	0.69
6:G:327:LYS:NZ	1:Z:46:ILE:HA	2.08	0.69
1:Z:782:ILE:CB	1:Z:839:LEU:O	2.41	0.69
1:A:775:LEU:HD13	1:A:832:LEU:CD1	2.23	0.69
5:F:376:ASN:CB	5:F:381:THR:C	2.59	0.69
1:A:814:MET:HG2	1:A:833:ILE:HG12	1.75	0.69
5:F:376:ASN:CB	5:F:381:THR:N	2.55	0.69
8:I:821:ILE:HD13	8:I:821:ILE:C	2.13	0.69
1:Z:810:ALA:HB1	1:Z:835:ILE:C	2.12	0.69
5:F:1036:PRO:CB	5:F:1042:ILE:CB	2.70	0.68
1:A:133:THR:O	1:A:136:PHE:N	2.25	0.68
1:A:816:TYR:HA	1:A:819:MET:HG2	1.75	0.68
3:D:828:ILE:HD13	3:D:925:GLN:HA	1.73	0.68
5:F:968:ILE:HG12	7:H:392:LEU:HD13	1.74	0.68
5:F:1633:TYR:HE2	5:F:1635:ARG:HB2	1.47	0.68
5:F:926:LEU:HD12	5:F:926:LEU:O	1.93	0.68
5:F:967:THR:O	7:H:392:LEU:CD2	2.40	0.68
1:Z:753:ALA:HB2	1:Z:815:ILE:C	2.08	0.68
7:K:483:VAL:H	7:K:493:SER:C	1.96	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Z:242:LEU:CA	1:Z:245:ALA:HB3	2.18	0.68
5:F:1116:VAL:HG11	5:F:1150:PHE:HZ	1.51	0.68
8:I:738:ASP:HB2	8:I:740:LYS:HE2	1.74	0.68
3:D:421:VAL:HG21	3:D:490:LYS:HB3	1.74	0.68
6:G:465:LYS:HB2	1:Z:20:LYS:HZ1	1.57	0.68
6:G:430:LEU:C	7:H:503:ASN:CB	2.61	0.68
5:F:1303:LEU:O	5:F:1303:LEU:HD13	1.94	0.68
6:G:396:THR:CB	1:Z:89:ASP:OD2	2.41	0.68
5:F:320:GLU:OE1	5:F:351:HIS:CE1	2.47	0.68
8:L:728:THR:HB	8:L:734:ALA:HB2	1.76	0.68
1:A:364:GLU:OE1	1:A:408:ARG:NH1	2.26	0.68
5:F:661:VAL:HG11	5:F:712:LEU:CD1	2.23	0.68
6:G:470:LEU:HB2	7:H:538:LYS:HZ3	1.57	0.68
6:J:297:ASP:OD2	7:K:362:ASN:ND2	2.27	0.68
1:Z:774:LEU:HD23	1:Z:774:LEU:C	2.14	0.68
5:F:750:TRP:HE1	5:F:754:ASP:HB2	1.59	0.67
6:G:289:GLN:OE1	6:J:352:VAL:HA	1.94	0.67
5:F:249:ASP:OD2	5:F:295:ARG:NH1	2.27	0.67
5:F:334:GLN:HE21	5:F:859:LYS:HZ2	0.83	0.67
5:F:1359:PHE:CE1	5:F:1363:ILE:HG23	2.29	0.67
1:Z:133:THR:O	1:Z:136:PHE:N	2.25	0.67
1:A:57:ARG:HG2	1:A:57:ARG:NH1	2.01	0.67
1:A:249:ARG:NH1	1:A:494:TYR:OH	2.27	0.67
7:H:412:ILE:O	7:H:415:LEU:CB	2.42	0.67
7:K:451:ALA:HB3	7:K:453:LEU:HD12	1.76	0.67
7:K:513:LEU:CD2	8:L:800:HIS:HE1	2.07	0.67
1:Z:724:ARG:NH1	1:Z:724:ARG:O	2.27	0.67
6:G:327:LYS:NZ	1:Z:46:ILE:CA	2.57	0.67
1:Z:746:PRO:O	1:Z:812:GLN:C	2.33	0.67
6:J:365:SER:N	7:K:424:ASN:HD22	1.91	0.67
3:D:235:SER:HB2	3:D:240:LEU:HD13	1.77	0.67
3:D:261:LEU:HD13	3:D:311:LYS:HB2	1.75	0.67
5:F:667:SER:HA	5:F:670:LYS:HB3	1.77	0.67
6:J:405:LEU:HA	6:J:408:ALA:HB3	1.76	0.67
7:K:429:LEU:C	7:K:429:LEU:HD12	2.15	0.67
7:H:527:LEU:HD23	7:H:527:LEU:C	2.15	0.67
2:C:784:ALA:HB3	3:D:1357:LYS:H	1.59	0.67
5:F:860:ASN:HD22	5:F:861:GLN:HG3	1.60	0.67
5:F:1134:LYS:C	5:F:1136:LYS:N	2.45	0.67
7:H:532:ALA:CB	8:I:818:ILE:HD12	2.20	0.67
6:J:357:LEU:CB	7:K:423:LYS:CE	2.43	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:308:LEU:HD13	7:K:355:PHE:HE2	1.58	0.67
1:Z:810:ALA:HB2	1:Z:839:LEU:CB	2.24	0.67
1:A:218:ILE:HD11	1:A:241:ILE:HD12	1.77	0.66
6:G:295:LYS:C	6:J:363:LYS:NZ	2.48	0.66
7:K:326:LYS:CB	7:K:327:PRO:CD	2.72	0.66
7:K:538:LYS:C	8:L:822:LYS:CB	2.64	0.66
3:D:753:PRO:HD2	3:D:756:LYS:HD2	1.77	0.66
5:F:1642:LYS:HA	5:F:1645:LEU:HD23	1.77	0.66
6:J:380:TYR:CE2	8:L:751:LEU:CD2	2.68	0.66
4:E:440:ILE:HG12	4:E:590:LEU:HD13	1.77	0.66
5:F:159:LYS:HZ2	5:F:363:ASP:CB	2.07	0.66
7:K:513:LEU:HD21	8:L:800:HIS:HE1	1.53	0.66
5:F:690:GLU:OE1	8:I:722:LEU:HD23	1.95	0.66
5:F:926:LEU:HD12	5:F:926:LEU:C	2.15	0.66
1:Z:49:LEU:HD22	1:Z:49:LEU:C	2.15	0.66
5:F:883:VAL:O	8:I:761:ASN:ND2	2.28	0.66
6:G:331:LYS:HE2	1:Z:49:LEU:CG	2.25	0.66
3:D:292:ASN:ND2	3:D:380:TYR:OH	2.28	0.66
3:D:583:TYR:HE2	3:D:628:PHE:HB2	1.59	0.66
4:E:1398:VAL:O	4:E:1398:VAL:CG1	2.42	0.66
5:F:711:GLN:OE1	5:F:779:PRO:CA	2.44	0.66
5:F:1116:VAL:CG1	5:F:1150:PHE:CZ	2.64	0.66
6:G:295:LYS:CG	6:J:363:LYS:HZ3	2.07	0.66
6:J:404:ASP:O	6:J:408:ALA:N	2.29	0.66
6:J:405:LEU:CD2	7:K:469:ARG:NE	2.59	0.66
1:Z:746:PRO:CB	1:Z:752:SER:O	2.44	0.66
4:E:209:VAL:O	4:E:213:PHE:CB	2.44	0.66
1:Z:87:ILE:HD13	1:Z:87:ILE:N	2.10	0.66
5:F:1303:LEU:O	5:F:1303:LEU:HD22	1.96	0.66
3:D:260:HIS:CG	3:D:261:LEU:HA	2.31	0.65
7:K:399:LEU:HD12	7:K:399:LEU:O	1.96	0.65
5:F:809:LEU:HG	5:F:810:VAL:HG13	1.77	0.65
5:F:837:TYR:CB	5:F:918:PHE:HE2	2.04	0.65
3:D:863:ILE:HG21	3:D:887:GLN:HA	1.79	0.65
6:J:370:ASP:HA	6:J:373:PHE:HB2	1.78	0.65
7:K:352:ILE:HG21	7:K:358:LEU:HG	1.78	0.65
7:K:404:ARG:HG3	8:L:704:GLN:NE2	2.11	0.65
3:D:580:VAL:O	3:D:595:ASN:N	2.29	0.65
3:D:611:LEU:HD11	3:D:640:ALA:HB2	1.78	0.65
5:F:690:GLU:OE2	8:I:722:LEU:HD21	1.96	0.65
6:G:449:LEU:HD21	1:Z:84:ASP:O	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:387:GLN:HA	7:K:387:GLN:NE2	2.11	0.65
1:A:192:ILE:HA	1:A:195:SER:HB3	1.79	0.65
3:D:943:ASP:O	3:D:947:LEU:HG	1.96	0.65
5:F:1442:TRP:CD2	5:F:1484:ARG:HD2	2.31	0.65
6:J:339:LEU:CB	7:K:405:ASN:OD1	2.44	0.65
7:K:291:GLN:HA	7:K:294:LYS:HB2	1.79	0.65
1:Z:116:LYS:HE2	1:Z:116:LYS:C	2.17	0.65
1:Z:644:TYR:HB3	1:Z:653:VAL:HG22	1.77	0.65
3:D:362:ASP:HB2	3:D:369:TYR:HE2	1.61	0.65
5:F:1128:ASP:OD2	5:F:1206:ILE:HG23	1.96	0.65
5:F:1314:VAL:HG11	5:F:1373:ASP:HB3	1.78	0.65
7:H:404:ARG:O	7:H:408:ILE:HB	1.96	0.65
8:I:792:GLN:HB2	8:I:795:LYS:HG3	1.79	0.65
1:Z:827:GLU:HA	1:Z:827:GLU:OE2	1.97	0.65
3:D:449:ASN:HD22	3:D:463:GLU:HG2	1.61	0.65
3:D:971:ILE:HD11	3:D:984:THR:CB	2.26	0.65
4:E:1405:ASN:HB3	4:E:1455:PRO:HG2	1.78	0.65
5:F:900:LEU:HD12	5:F:900:LEU:O	1.97	0.65
5:F:1406:TYR:HH	5:F:1452:SER:HG	1.43	0.65
6:G:350:PHE:CE2	7:H:418:GLN:NE2	2.65	0.65
6:J:333:ILE:CA	6:J:336:PHE:CB	2.74	0.65
3:D:454:ARG:HB3	3:D:455:PHE:HD1	1.62	0.65
5:F:336:LYS:NZ	5:F:703:TYR:OH	2.29	0.65
5:F:382:ASP:HB3	5:F:386:GLY:H	1.62	0.65
5:F:355:LEU:N	5:F:355:LEU:HD12	2.11	0.65
5:F:844:VAL:HG22	5:F:862:ALA:HA	1.79	0.65
5:F:1633:TYR:CE2	5:F:1635:ARG:CB	2.59	0.65
7:K:527:LEU:O	7:K:531:ALA:CB	2.45	0.65
1:Z:804:ASP:O	1:Z:808:ASN:CB	2.45	0.65
3:D:915:GLU:OE1	3:D:980:SER:CB	2.44	0.65
4:E:1022:TYR:O	4:E:1026:THR:CG2	2.41	0.65
5:F:22:PHE:O	5:F:26:LYS:NZ	2.30	0.65
5:F:249:ASP:O	5:F:253:LYS:HB2	1.97	0.65
5:F:555:TRP:HB2	5:F:633:LYS:HD3	1.77	0.65
6:G:296:ALA:HA	6:J:363:LYS:HE3	1.79	0.65
6:G:327:LYS:HZ3	1:Z:46:ILE:CB	1.88	0.65
6:G:430:LEU:CB	8:I:780:THR:CB	2.75	0.65
8:I:643:LYS:HG3	8:I:647:GLN:HE22	1.62	0.65
1:Z:410:ALA:HB2	1:Z:428:VAL:HG11	1.79	0.65
1:A:449:GLU:O	1:A:456:ARG:NH2	2.31	0.64
5:F:914:ASP:CA	5:F:917:PHE:HB3	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:331:LYS:CE	1:Z:49:LEU:HD12	2.20	0.64
3:D:1376:LYS:CB	1:Z:762:ASN:N	2.60	0.64
4:E:1319:LEU:HD21	4:E:1398:VAL:HG22	1.79	0.64
5:F:1424:GLU:O	5:F:1428:GLN:HB2	1.97	0.64
8:I:786:ASN:O	8:I:786:ASN:ND2	2.29	0.64
5:F:690:GLU:OE1	8:I:722:LEU:CD2	2.44	0.64
3:D:919:VAL:HG21	3:D:927:LEU:H	1.62	0.64
4:E:687:LYS:CB	5:F:1391:GLY:HA2	2.27	0.64
5:F:1283:LYS:O	5:F:1284:SER:C	2.32	0.64
5:F:1084:LEU:CA	5:F:1156:TYR:OH	2.25	0.64
1:A:776:ILE:HG23	1:A:831:THR:HG22	1.79	0.64
3:D:260:HIS:CD2	3:D:261:LEU:HD23	2.33	0.64
5:F:718:SER:O	5:F:722:ARG:NH2	2.30	0.64
5:F:1129:ASN:CG	5:F:1132:GLU:HB3	2.17	0.64
8:I:731:GLY:C	8:I:733:ALA:H	2.01	0.64
1:Z:590:LEU:HD23	1:Z:604:ILE:HG21	1.79	0.64
1:A:772:PRO:CA	1:A:828:THR:CG2	2.72	0.64
5:F:1088:ARG:HG3	5:F:1088:ARG:NH1	2.12	0.64
5:F:1543:LEU:C	5:F:1543:LEU:HD12	2.18	0.64
1:Z:821:GLN:CB	1:Z:829:TYR:CB	2.76	0.64
3:D:529:GLY:O	3:D:581:PRO:HD3	1.98	0.64
1:Z:824:MET:SD	1:Z:824:MET:N	2.70	0.64
5:F:1435:LYS:HZ3	5:F:1484:ARG:NH2	1.94	0.64
6:J:377:ILE:HG22	6:J:378:HIS:HD2	1.62	0.64
5:F:177:GLN:NE2	5:F:178:ASN:OD1	2.31	0.64
5:F:350:ARG:O	5:F:393:SER:HB2	1.94	0.64
5:F:442:ILE:HG23	5:F:443:ILE:HG13	1.80	0.64
6:J:322:THR:O	6:J:326:LEU:HG	1.98	0.64
7:K:355:PHE:HD1	7:K:358:LEU:HD12	1.61	0.64
1:Z:45:SER:O	1:Z:48:GLU:N	2.31	0.64
1:A:210:GLU:O	1:A:213:GLU:N	2.31	0.63
2:C:885:VAL:HG13	2:C:901:ILE:HG23	1.79	0.63
5:F:1216:PHE:CE2	5:F:1282:ALA:HB1	2.29	0.63
3:D:581:PRO:HA	3:D:594:GLU:HA	1.79	0.63
3:D:1494:ASN:O	5:F:1471:LYS:HE2	1.98	0.63
4:E:1377:ASN:CB	4:E:1380:ASP:CB	2.76	0.63
5:F:389:LEU:HD12	5:F:389:LEU:N	2.11	0.63
5:F:1363:ILE:CG2	1:Z:125:ILE:HD12	2.28	0.63
6:J:334:SER:O	6:J:337:LYS:N	2.27	0.63
1:Z:577:ARG:HH21	1:Z:630:ARG:HE	1.46	0.63
5:F:1309:LEU:O	5:F:1309:LEU:HD22	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Z:439:HIS:HD1	1:Z:457:TYR:HH	1.47	0.63
4:E:258:ILE:HG22	4:E:261:ILE:CG1	2.28	0.63
5:F:321:GLN:HA	5:F:324:ILE:HG12	1.81	0.63
6:J:389:ARG:HG2	6:J:389:ARG:HH11	1.63	0.63
4:E:1418:LEU:HG	4:E:1421:ILE:HD12	1.81	0.63
5:F:36:ASN:HD22	5:F:110:ARG:HH11	1.46	0.63
5:F:101:ASN:OD1	5:F:105:GLN:NE2	2.31	0.63
5:F:841:PHE:HD2	5:F:918:PHE:HE1	0.69	0.63
8:L:703:GLN:HA	8:L:706:GLU:OE1	1.98	0.63
5:F:656:VAL:HG13	5:F:657:ILE:HG13	1.80	0.63
6:J:357:LEU:HB3	7:K:423:LYS:HE2	1.68	0.63
7:K:505:ARG:O	7:K:509:ILE:N	2.28	0.63
5:F:1297:GLU:OE1	5:F:1297:GLU:HA	1.96	0.63
1:Z:92:THR:O	1:Z:92:THR:OG1	2.15	0.63
3:D:412:ILE:HG13	3:D:413:LEU:HD12	1.79	0.63
5:F:334:GLN:CB	5:F:860:ASN:CG	2.59	0.63
7:H:511:GLU:CB	8:I:800:HIS:CE1	2.82	0.63
3:D:377:ILE:HD11	3:D:420:ILE:HD13	1.79	0.63
5:F:971:SER:HB3	7:H:392:LEU:HD21	1.80	0.63
5:F:1305:SER:C	5:F:1307:VAL:H	2.03	0.63
8:I:778:LYS:O	8:I:778:LYS:HD3	1.98	0.63
6:J:315:LEU:HD23	8:L:679:LEU:HG	1.81	0.63
8:L:640:LEU:HA	8:L:643:LYS:HB3	1.80	0.63
4:E:421:PHE:O	4:E:425:LEU:HB2	1.99	0.62
6:J:333:ILE:O	6:J:336:PHE:C	2.37	0.62
2:C:811:LEU:CD1	2:C:867:LEU:HD21	2.30	0.62
3:D:557:THR:HG21	3:D:571:THR:HG21	1.81	0.62
3:D:932:ILE:HG23	3:D:933:ILE:HG13	1.82	0.62
5:F:1363:ILE:C	5:F:1363:ILE:HD12	2.19	0.62
7:K:419:LEU:HD23	7:K:419:LEU:O	1.97	0.62
1:Z:422:ARG:HE	1:Z:424:ASN:H	1.48	0.62
5:F:657:ILE:HG23	5:F:660:LEU:HB3	1.80	0.62
5:F:1635:ARG:O	5:F:1639:GLY:CA	2.46	0.62
6:J:390:ILE:HG12	8:L:766:ILE:HD12	1.80	0.62
7:K:338:ALA:HA	7:K:341:LYS:HE2	1.80	0.62
1:Z:196:ASN:HD21	1:Z:530:ARG:HE	1.44	0.62
3:D:242:MET:SD	3:D:298:TYR:HD2	2.17	0.62
3:D:412:ILE:HB	3:D:476:VAL:HG21	1.82	0.62
4:E:1640:ILE:O	4:E:1644:ILE:HB	1.99	0.62
1:Z:44:VAL:O	1:Z:47:ASN:CB	2.46	0.62
7:H:521:THR:HA	7:H:524:ASN:HB2	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:L:643:LYS:O	8:L:647:GLN:NE2	2.33	0.62
8:L:685:MET:HA	8:L:688:HIS:ND1	2.14	0.62
1:A:123:MET:O	6:J:414:SER:HB2	2.00	0.62
1:A:654:ILE:HD11	1:A:696:TYR:HD2	1.63	0.62
4:E:1143:GLN:HA	4:E:1158:TYR:HA	1.81	0.62
5:F:603:GLU:HA	5:F:606:VAL:HG12	1.82	0.62
1:A:337:ILE:HG23	1:A:349:ALA:HB1	1.81	0.62
1:A:775:LEU:CB	1:A:832:LEU:HD12	2.27	0.62
4:E:258:ILE:HG22	4:E:261:ILE:HG13	1.81	0.62
5:F:1399:VAL:O	5:F:1399:VAL:HG12	2.00	0.62
7:H:426:GLY:HA2	8:I:736:ASN:CA	2.30	0.62
1:Z:814:MET:CB	1:Z:833:ILE:HD12	2.28	0.62
1:A:56:LEU:CB	8:L:804:LEU:HD13	2.30	0.62
1:A:60:ASN:CB	8:L:803:ALA:O	2.47	0.62
3:D:850:ASN:HD22	3:D:904:LYS:HD3	1.64	0.62
6:J:293:HIS:HB3	7:K:359:ASN:HD21	1.63	0.62
7:K:365:GLN:HB3	8:L:669:LEU:HD13	1.81	0.62
8:L:682:ASP:O	8:L:685:MET:HG2	2.00	0.62
1:Z:146:LEU:HD12	1:Z:146:LEU:C	2.17	0.62
1:A:313:LEU:HD11	1:A:339:TYR:HE2	1.64	0.62
4:E:980:LYS:O	4:E:980:LYS:HD2	2.00	0.62
5:F:1469:ARG:HH12	5:F:1530:GLU:HG2	1.65	0.62
7:K:295:CYS:O	7:K:299:TRP:HB2	2.00	0.62
1:A:742:LEU:HD13	1:A:744:LEU:HD12	1.82	0.62
5:F:38:ASN:HD22	5:F:41:LYS:HB2	1.63	0.62
5:F:334:GLN:HE22	5:F:859:LYS:CD	2.13	0.62
5:F:690:GLU:CD	8:I:722:LEU:HD23	2.19	0.62
5:F:1314:VAL:HG11	5:F:1373:ASP:CB	2.29	0.62
5:F:1314:VAL:HG23	5:F:1314:VAL:O	1.98	0.62
6:J:301:HIS:CE1	8:L:665:TRP:HB3	2.35	0.62
7:K:359:ASN:O	7:K:363:GLN:HG2	2.00	0.62
8:L:637:LEU:HD23	8:L:640:LEU:H	1.65	0.62
1:Z:753:ALA:HA	1:Z:816:TYR:HA	1.72	0.62
1:A:542:THR:HA	1:A:545:PHE:CE1	2.35	0.61
6:G:452:ASP:CB	1:Z:84:ASP:OD2	2.48	0.61
7:K:527:LEU:O	7:K:531:ALA:HB2	2.00	0.61
3:D:929:PHE:O	3:D:932:ILE:HG22	1.99	0.61
3:D:518:GLU:HA	3:D:536:ILE:HD12	1.82	0.61
3:D:971:ILE:CD1	3:D:984:THR:HB	2.29	0.61
4:E:567:ARG:O	4:E:571:ASN:ND2	2.33	0.61
5:F:1156:TYR:O	5:F:1159:GLN:N	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:317:ASN:HA	7:K:346:GLN:HB3	1.82	0.61
1:Z:310:ASP:HA	1:Z:314:LYS:HB3	1.80	0.61
3:D:483:HIS:HB2	3:D:486:GLN:CG	2.28	0.61
5:F:138:GLY:H	5:F:206:ILE:HD11	1.64	0.61
5:F:195:GLN:NE2	5:F:232:TYR:O	2.33	0.61
6:J:325:TYR:HE2	7:K:390:HIS:CA	1.96	0.61
1:A:137:ASP:CB	4:E:1386:LEU:HG	2.30	0.61
3:D:470:SER:HB3	3:D:475:GLU:HG2	1.82	0.61
6:G:427:GLU:CB	8:I:779:THR:HG21	2.31	0.61
1:Z:814:MET:HA	1:Z:817:ALA:HB3	1.82	0.61
1:A:557:LEU:HG	1:A:579:LEU:HD11	1.83	0.61
2:C:867:LEU:HD22	2:C:888:LEU:HD21	1.82	0.61
4:E:679:SER:OG	4:E:680:ASP:N	2.34	0.61
4:E:982:ILE:HG22	4:E:982:ILE:O	2.00	0.61
6:J:357:LEU:HB3	7:K:423:LYS:HE3	0.67	0.61
3:D:147:PRO:HB2	3:D:580:VAL:HG21	1.82	0.61
4:E:215:GLN:NE2	4:E:219:GLN:OE1	2.34	0.61
6:G:431:GLN:CB	7:H:503:ASN:CB	2.78	0.61
7:K:456:THR:C	7:K:458:GLU:H	2.03	0.61
3:D:421:VAL:HG22	3:D:491:ARG:HB3	1.82	0.61
5:F:303:LYS:O	5:F:307:ASP:HB2	2.00	0.61
3:D:927:LEU:HD13	3:D:973:ARG:HH22	1.66	0.61
5:F:690:GLU:HG3	8:I:722:LEU:HG	1.82	0.61
6:J:327:LYS:O	6:J:331:LYS:HG3	2.01	0.61
7:K:312:VAL:HG12	7:K:361:ARG:HH21	1.66	0.61
1:Z:459:LEU:O	1:Z:463:GLN:HB2	2.01	0.61
5:F:1435:LYS:HE2	5:F:1484:ARG:HH21	1.65	0.61
5:F:1653:LYS:HG2	5:F:1655:SER:H	1.66	0.61
7:H:386:LEU:O	8:I:690:GLN:NE2	2.33	0.61
8:I:739:GLN:C	8:I:741:ARG:H	1.97	0.61
4:E:673:SER:O	4:E:677:ASN:ND2	2.33	0.60
5:F:922:LEU:H	5:F:922:LEU:HD12	1.65	0.60
1:Z:46:ILE:HD12	1:Z:46:ILE:C	2.21	0.60
3:D:1241:GLY:CA	1:Z:826:ARG:O	2.48	0.60
5:F:398:MET:O	5:F:400:THR:HG23	2.01	0.60
7:K:308:LEU:HB3	7:K:355:PHE:CE2	2.36	0.60
3:D:454:ARG:HB3	3:D:455:PHE:CD1	2.37	0.60
6:J:308:ILE:HD11	7:K:369:VAL:HG13	1.83	0.60
1:Z:56:LEU:HD22	1:Z:60:ASN:HD21	1.65	0.60
1:Z:207:ILE:HB	1:Z:246:ASN:CB	2.31	0.60
3:D:237:THR:O	3:D:266:GLN:HA	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:987:SER:OG	4:E:987:SER:O	2.15	0.60
4:E:1620:THR:HB	4:E:1623:GLU:HB2	1.83	0.60
5:F:759:ASP:O	5:F:773:LYS:NZ	2.34	0.60
5:F:1118:ARG:HG2	5:F:1118:ARG:HH11	1.66	0.60
5:F:1157:TRP:CD1	5:F:1160:TYR:HE1	2.19	0.60
7:H:450:PRO:O	7:H:454:GLY:N	2.35	0.60
3:D:298:TYR:CD1	3:D:311:LYS:HE2	2.37	0.60
5:F:389:LEU:C	5:F:389:LEU:HD13	2.22	0.60
5:F:920:ILE:HB	5:F:924:ALA:C	2.21	0.60
7:H:436:MET:O	7:H:440:PHE:HB3	2.02	0.60
6:J:432:LEU:CA	8:L:782:ILE:O	2.50	0.60
6:J:433:LYS:N	7:K:499:GLY:CA	2.63	0.60
7:K:385:GLN:HE21	7:K:385:GLN:CA	2.12	0.60
1:Z:218:ILE:HD11	1:Z:241:ILE:HD12	1.84	0.60
1:A:57:ARG:HH11	1:A:57:ARG:CG	2.08	0.60
1:A:590:LEU:HD23	1:A:604:ILE:HG21	1.84	0.60
7:K:523:LEU:O	7:K:527:LEU:CB	2.49	0.60
1:Z:777:ILE:HG23	1:Z:777:ILE:O	2.00	0.60
1:A:208:LEU:O	1:A:212:PHE:HB2	2.02	0.60
5:F:29:LEU:HD13	5:F:134:LEU:HG	1.84	0.60
6:J:371:LYS:O	6:J:371:LYS:HD2	2.01	0.60
1:A:510:LEU:HD22	1:A:515:LEU:HD22	1.82	0.60
3:D:789:VAL:HG11	3:D:952:LEU:HD11	1.84	0.60
3:D:1467:SER:HA	1:Z:621:HIS:HE1	1.67	0.60
3:D:1493:ASN:OD1	5:F:1471:LYS:HG2	2.02	0.60
5:F:668:ARG:HH22	5:F:719:ILE:HA	1.66	0.60
5:F:1349:PHE:N	5:F:1349:PHE:CD1	2.70	0.60
6:J:364:ILE:CA	7:K:424:ASN:HD22	2.07	0.60
5:F:332:VAL:HG13	5:F:335:ASP:HA	1.84	0.60
7:H:361:ARG:NH2	8:I:666:ASP:OD2	2.35	0.60
8:L:776:PHE:HA	8:L:779:THR:CB	2.32	0.60
1:Z:751:LEU:C	1:Z:753:ALA:H	2.03	0.60
1:Z:753:ALA:CB	1:Z:815:ILE:O	2.29	0.60
1:A:613:VAL:HG11	1:A:619:PHE:HB2	1.84	0.60
3:D:449:ASN:HD21	3:D:461:ARG:HB2	1.65	0.60
3:D:989:GLN:HA	3:D:998:ALA:HA	1.82	0.60
7:K:444:LEU:HA	7:K:447:SER:CB	2.32	0.60
1:Z:287:ASP:HA	1:Z:290:TYR:HB3	1.83	0.60
1:A:193:LEU:HA	1:A:539:ALA:HB1	1.84	0.59
3:D:863:ILE:CG2	3:D:887:GLN:HA	2.32	0.59
5:F:1084:LEU:CA	5:F:1156:TYR:CZ	2.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:334:GLN:NE2	5:F:859:LYS:CD	2.65	0.59
5:F:661:VAL:O	5:F:667:SER:OG	2.21	0.59
5:F:1032:ILE:HG22	5:F:1032:ILE:O	2.01	0.59
8:L:702:ARG:O	8:L:706:GLU:OE1	2.20	0.59
5:F:633:LYS:HZ2	5:F:635:PHE:HB2	1.67	0.59
5:F:1139:ILE:CG1	5:F:1291:SER:OG	2.49	0.59
7:K:298:SER:CA	7:K:306:THR:HA	2.27	0.59
1:Z:393:GLU:HA	1:Z:396:GLN:HG2	1.84	0.59
1:Z:766:ASN:O	1:Z:769:LYS:CB	2.50	0.59
1:A:128:LEU:CG	4:E:1260:TYR:CE2	2.86	0.59
2:C:318:ILE:HD12	2:C:318:ILE:N	2.01	0.59
2:C:811:LEU:HD11	2:C:867:LEU:HD21	1.83	0.59
3:D:268:ILE:HG21	3:D:284:PHE:CE2	2.36	0.59
5:F:405:ARG:NH1	5:F:407:ASN:HB3	2.17	0.59
6:J:324:GLN:OE1	6:J:328:GLN:NE2	2.35	0.59
6:J:351:SER:O	6:J:355:GLN:NE2	2.36	0.59
1:Z:531:ASP:OD2	1:Z:540:ASN:ND2	2.36	0.59
1:A:814:MET:CG	1:A:833:ILE:CG1	2.81	0.59
1:A:814:MET:HG2	1:A:833:ILE:CD1	2.28	0.59
3:D:641:VAL:HB	3:D:648:GLU:HG2	1.83	0.59
5:F:725:ASN:ND2	5:F:789:CYS:SG	2.76	0.59
1:Z:501:MET:O	1:Z:505:HIS:ND1	2.34	0.59
1:Z:771:ILE:HB	1:Z:772:PRO:HD2	1.83	0.59
1:A:16:LYS:HD3	6:J:468:ALA:HA	1.84	0.59
1:A:775:LEU:CG	1:A:832:LEU:HD11	2.33	0.59
3:D:713:ILE:HD12	3:D:769:ARG:HD3	1.83	0.59
3:D:744:SER:HA	3:D:758:ASP:CB	2.33	0.59
4:E:757:LYS:HG3	5:F:1195:PHE:HB2	1.85	0.59
5:F:235:PRO:O	5:F:239:HIS:ND1	2.35	0.59
2:C:786:THR:CB	2:C:789:ASP:OD2	2.50	0.59
4:E:258:ILE:HG22	4:E:261:ILE:HD11	1.84	0.59
5:F:323:LEU:HD11	5:F:483:LEU:HD23	1.84	0.59
5:F:353:PRO:HA	5:F:393:SER:HA	1.85	0.59
5:F:837:TYR:CG	5:F:918:PHE:CE2	2.90	0.59
5:F:935:GLN:CB	5:F:998:LEU:HD23	2.33	0.59
7:K:379:ILE:HG21	8:L:680:TYR:CE1	2.38	0.59
1:Z:227:GLN:NE2	1:Z:606:GLU:O	2.30	0.59
1:A:123:MET:CB	6:J:413:ASN:HB3	2.32	0.59
4:E:1031:LYS:NZ	4:E:1084:LEU:O	2.36	0.59
5:F:510:PHE:HA	5:F:513:TRP:HB3	1.85	0.59
5:F:51:LEU:HD23	5:F:71:ILE:HG13	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:292:HIS:ND1	6:J:352:VAL:CG1	2.63	0.59
6:G:295:LYS:CB	6:J:363:LYS:NZ	2.65	0.59
7:H:412:ILE:HG23	7:H:415:LEU:HD23	1.67	0.59
4:E:793:LEU:HD11	4:E:1162:LEU:HD21	1.83	0.58
6:G:401:ILE:O	6:G:405:LEU:HB2	2.03	0.58
1:A:589:LEU:HA	1:A:603:VAL:HG22	1.84	0.58
3:D:353:GLN:HB3	3:D:372:SER:HB2	1.84	0.58
5:F:1434:SER:OG	5:F:1435:LYS:N	2.36	0.58
7:K:312:VAL:CG2	7:K:352:ILE:HG13	2.33	0.58
1:Z:531:ASP:OD1	1:Z:531:ASP:N	2.36	0.58
1:Z:767:ILE:O	1:Z:770:ASN:N	2.36	0.58
1:A:440:LEU:HA	1:A:443:ILE:HD12	1.85	0.58
5:F:1093:SER:O	5:F:1096:LEU:CB	2.51	0.58
5:F:1110:MET:HE3	5:F:1157:TRP:HZ2	1.68	0.58
5:F:1116:VAL:HG21	5:F:1150:PHE:HZ	1.67	0.58
5:F:1246:MET:CB	5:F:1279:CYS:CB	2.81	0.58
5:F:1303:LEU:HD22	5:F:1303:LEU:C	2.23	0.58
5:F:1468:ASN:ND2	5:F:1530:GLU:OE1	2.36	0.58
7:K:321:ALA:C	7:K:348:ILE:CD1	2.69	0.58
4:E:267:ILE:HA	4:E:270:ILE:HD12	1.85	0.58
5:F:679:ILE:O	5:F:679:ILE:HG22	2.03	0.58
5:F:746:LYS:HD2	5:F:898:TYR:H	1.68	0.58
5:F:883:VAL:O	8:I:761:ASN:CG	2.41	0.58
5:F:1031:VAL:CB	6:G:314:TYR:HB3	2.34	0.58
5:F:1538:LEU:HD11	5:F:1543:LEU:HD23	1.84	0.58
1:A:22:LEU:O	1:A:25:LEU:HB3	2.04	0.58
3:D:491:ARG:HG3	3:D:521:LYS:HB2	1.86	0.58
5:F:2:LYS:HG2	5:F:7:PRO:HG2	1.84	0.58
5:F:1084:LEU:CA	5:F:1156:TYR:HH	2.05	0.58
1:Z:22:LEU:O	1:Z:25:LEU:HB3	2.04	0.58
1:Z:751:LEU:C	1:Z:753:ALA:N	2.57	0.58
1:A:46:ILE:HA	8:L:792:GLN:N	2.16	0.58
5:F:492:ARG:HH12	5:F:495:TYR:H	1.51	0.58
8:L:774:ASN:HD22	8:L:777:ASN:HD22	1.51	0.58
8:L:793:LEU:O	8:L:796:ILE:N	2.36	0.58
3:D:860:ILE:CG2	3:D:893:ILE:HG13	2.33	0.58
3:D:1467:SER:HA	1:Z:621:HIS:CE1	2.38	0.58
4:E:1022:TYR:CZ	4:E:1026:THR:HG22	2.37	0.58
5:F:199:GLY:O	5:F:203:LYS:NZ	2.37	0.58
5:F:227:ASP:CA	5:F:379:SER:CB	2.79	0.58
5:F:1473:ASN:HB2	5:F:1475:ILE:H	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:1508:ILE:HA	5:F:1511:LEU:HB3	1.85	0.58
1:Z:133:THR:O	1:Z:135:ASP:N	2.37	0.58
1:A:236:ASN:ND2	1:A:261:GLU:OE1	2.35	0.58
3:D:119:PRO:HB3	3:D:739:THR:HG22	1.84	0.58
3:D:298:TYR:HE1	3:D:311:LYS:CE	2.17	0.58
3:D:507:LEU:HG	3:D:512:LYS:HB3	1.85	0.58
8:I:795:LYS:HZ2	8:I:795:LYS:C	2.04	0.58
6:J:332:LYS:HE3	7:K:402:GLN:HG3	1.86	0.58
7:K:429:LEU:HD12	7:K:429:LEU:O	2.03	0.58
2:C:121:LEU:HD23	2:C:123:TYR:CZ	2.38	0.58
5:F:334:GLN:CG	5:F:854:GLU:CD	2.72	0.58
5:F:1005:PHE:O	5:F:1009:ASN:HB2	2.03	0.58
5:F:1129:ASN:OD1	5:F:1132:GLU:N	2.36	0.58
5:F:1492:LEU:O	5:F:1495:THR:OG1	2.22	0.58
6:G:449:LEU:HA	1:Z:84:ASP:OD2	2.03	0.58
7:H:426:GLY:HA3	8:I:736:ASN:N	2.18	0.58
1:Z:421:SER:O	1:Z:423:LYS:NZ	2.37	0.58
1:A:133:THR:O	1:A:135:ASP:N	2.37	0.58
5:F:914:ASP:CB	5:F:917:PHE:HB3	2.34	0.58
6:G:295:LYS:HB3	6:J:363:LYS:HZ2	1.68	0.58
3:D:799:THR:HA	3:D:803:PHE:HB2	1.85	0.57
1:Z:44:VAL:O	1:Z:47:ASN:N	2.37	0.57
3:D:853:PHE:CE2	3:D:900:VAL:HG21	2.39	0.57
7:H:397:ARG:NH2	8:I:698:GLN:OE1	2.37	0.57
8:I:785:ASN:CB	1:Z:112:TYR:HA	2.34	0.57
8:I:823:LYS:HD2	8:I:823:LYS:O	2.04	0.57
7:K:313:TYR:HD1	7:K:349:PRO:HB3	1.68	0.57
5:F:1014:SER:H	8:I:788:ASP:H	1.49	0.57
5:F:1435:LYS:NZ	5:F:1484:ARG:HH22	2.00	0.57
8:I:737:ASN:OD1	8:I:738:ASP:CG	2.41	0.57
7:K:444:LEU:O	7:K:447:SER:N	2.38	0.57
7:K:513:LEU:HD11	8:L:800:HIS:ND1	2.20	0.57
8:L:765:LEU:O	8:L:769:ILE:HB	2.03	0.57
1:A:706:ILE:HB	1:A:711:LYS:HE2	1.86	0.57
3:D:298:TYR:CE1	3:D:311:LYS:CE	2.87	0.57
5:F:579:ARG:HH11	5:F:698:ASN:HB3	1.69	0.57
5:F:841:PHE:CD2	5:F:918:PHE:CD1	2.89	0.57
6:J:308:ILE:HB	6:J:309:PRO:HD3	1.86	0.57
1:Z:810:ALA:CB	1:Z:835:ILE:O	2.51	0.57
3:D:328:LEU:HD11	3:D:334:VAL:HG22	1.86	0.57
3:D:515:VAL:HB	3:D:604:PRO:CG	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:753:PRO:HG2	3:D:756:LYS:HE3	1.87	0.57
5:F:712:LEU:HG	5:F:716:LEU:HD23	1.86	0.57
5:F:1063:ILE:HG22	5:F:1063:ILE:O	2.05	0.57
5:F:1467:ALA:HB1	5:F:1473:ASN:HB3	1.84	0.57
4:E:888:TYR:O	4:E:897:LYS:NZ	2.37	0.57
5:F:354:ARG:HB3	5:F:354:ARG:NH1	2.20	0.57
5:F:1118:ARG:HG2	5:F:1118:ARG:NH1	2.19	0.57
5:F:1650:GLU:OE1	5:F:1659:ASN:ND2	2.37	0.57
1:A:23:ASN:C	1:A:25:LEU:H	2.08	0.57
1:A:417:ARG:NH2	1:A:442:LEU:O	2.38	0.57
1:A:559:LEU:HA	1:A:562:LEU:HD13	1.86	0.57
3:D:853:PHE:HE2	3:D:900:VAL:HG21	1.70	0.57
5:F:702:LYS:HA	5:F:767:ILE:HD11	1.87	0.57
7:H:397:ARG:HB2	8:I:697:LEU:HD21	1.86	0.57
1:A:751:LEU:HD22	2:C:1313:LEU:HD23	1.86	0.57
5:F:397:MET:N	5:F:397:MET:SD	2.77	0.57
5:F:590:ILE:HG13	5:F:591:ASP:H	1.69	0.57
5:F:712:LEU:HG	5:F:716:LEU:CD2	2.35	0.57
8:L:799:SER:O	8:L:803:ALA:HB3	2.05	0.57
1:A:435:TRP:HA	1:A:438:MET:SD	2.44	0.57
1:A:775:LEU:HB3	1:A:832:LEU:CG	2.34	0.57
4:E:812:SER:O	4:E:872:ASN:ND2	2.38	0.57
4:E:837:ASP:HB3	4:E:839:ILE:H	1.69	0.57
6:J:398:VAL:CB	7:K:462:ARG:O	2.53	0.57
1:Z:23:ASN:C	1:Z:25:LEU:H	2.08	0.57
1:Z:824:MET:HB2	1:Z:825:PRO:CD	2.30	0.57
3:D:832:VAL:H	3:D:929:PHE:HE2	1.52	0.56
4:E:216:TYR:HD1	4:E:220:PHE:HB2	1.70	0.56
4:E:997:VAL:O	4:E:1001:ASN:ND2	2.38	0.56
5:F:28:VAL:O	5:F:32:LEU:N	2.30	0.56
5:F:353:PRO:O	5:F:356:ILE:CG2	2.53	0.56
5:F:620:THR:HG23	5:F:627:VAL:HG21	1.87	0.56
5:F:750:TRP:NE1	5:F:754:ASP:HB2	2.20	0.56
8:I:818:ILE:HD13	8:I:818:ILE:N	2.20	0.56
7:K:321:ALA:N	7:K:348:ILE:CD1	2.39	0.56
7:K:427:LEU:N	7:K:428:PRO:HD3	2.20	0.56
3:D:186:ILE:HG22	3:D:189:LYS:HB2	1.87	0.56
3:D:481:LEU:HD23	3:D:488:GLN:HB3	1.86	0.56
3:D:485:GLN:HA	3:D:577:PHE:CZ	2.40	0.56
3:D:527:SER:HB3	3:D:528:PRO:HD2	1.87	0.56
3:D:970:ILE:HG23	3:D:975:ILE:HD12	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:358:VAL:HG13	4:E:359:LEU:HG	1.87	0.56
5:F:562:LEU:O	5:F:566:THR:OG1	2.23	0.56
5:F:1123:ASN:HB3	5:F:1143:SER:OG	2.05	0.56
6:G:465:LYS:HE3	1:Z:20:LYS:NZ	2.18	0.56
7:H:358:LEU:O	7:H:362:ASN:ND2	2.38	0.56
8:I:778:LYS:HZ2	8:I:778:LYS:HA	1.70	0.56
6:J:398:VAL:HG23	7:K:466:LEU:HD11	1.87	0.56
3:D:242:MET:CE	3:D:298:TYR:CD2	2.88	0.56
3:D:535:VAL:HB	3:D:575:LYS:HB2	1.87	0.56
3:D:773:ILE:O	3:D:777:ILE:HG12	2.04	0.56
4:E:986:SER:O	4:E:986:SER:OG	2.22	0.56
4:E:1319:LEU:CD2	4:E:1398:VAL:CG2	2.76	0.56
4:E:1443:THR:O	4:E:1446:PHE:HB2	2.06	0.56
4:E:1611:TYR:O	4:E:1615:ARG:HB2	2.04	0.56
5:F:909:LEU:O	7:H:403:SER:HB2	2.05	0.56
5:F:1110:MET:HE1	5:F:1161:LEU:HD11	1.87	0.56
5:F:1118:ARG:HH11	5:F:1118:ARG:CG	2.18	0.56
5:F:1270:GLN:O	5:F:1274:ASP:HB2	2.06	0.56
5:F:1435:LYS:O	5:F:1439:GLU:N	2.28	0.56
5:F:1666:MET:O	5:F:1670:ILE:HB	2.05	0.56
6:G:295:LYS:CB	6:J:363:LYS:HZ2	2.19	0.56
1:Z:277:TYR:O	1:Z:280:GLN:NE2	2.37	0.56
1:Z:638:TYR:HA	1:Z:641:ILE:HG22	1.88	0.56
5:F:668:ARG:HD2	5:F:716:LEU:HD13	1.88	0.56
5:F:1431:ARG:HD2	5:F:1474:PHE:H	1.70	0.56
6:G:402:ASP:OD2	7:H:462:ARG:NH1	2.38	0.56
6:J:309:PRO:HA	6:J:312:VAL:CG2	2.35	0.56
6:J:391:LEU:HD13	7:K:455:LYS:HA	1.86	0.56
6:J:405:LEU:HD22	7:K:469:ARG:HE	1.67	0.56
6:J:405:LEU:HD23	7:K:469:ARG:HE	1.66	0.56
1:Z:241:ILE:CG2	1:Z:245:ALA:HB1	2.22	0.56
3:D:611:LEU:CD1	3:D:640:ALA:HB2	2.35	0.56
4:E:1644:ILE:HD13	4:E:1647:LEU:HD21	1.86	0.56
5:F:661:VAL:HG11	5:F:712:LEU:HD12	1.87	0.56
5:F:825:ILE:HG22	5:F:890:VAL:HG13	1.87	0.56
5:F:1501:SER:OG	5:F:1502:THR:N	2.38	0.56
6:J:296:ALA:O	6:J:299:ILE:HG12	2.06	0.56
1:Z:80:PHE:CD1	1:Z:80:PHE:N	2.73	0.56
3:D:398:ILE:O	3:D:402:ILE:HG12	2.06	0.56
3:D:985:ALA:O	3:D:988:LEU:CB	2.54	0.56
4:E:972:LEU:HD23	4:E:995:LEU:HD11	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:537:PRO:HA	5:F:622:GLN:HB3	1.86	0.56
5:F:1550:LEU:HD13	5:F:1552:PHE:CE1	2.40	0.56
8:I:822:LYS:HZ1	8:I:822:LYS:CA	2.18	0.56
7:K:389:LYS:CB	7:K:393:ASP:HB3	2.32	0.56
1:Z:409:LEU:O	1:Z:413:LYS:HB2	2.04	0.56
1:A:16:LYS:HG2	6:J:468:ALA:HA	1.87	0.56
4:E:765:PHE:HB3	4:E:843:LEU:HD22	1.88	0.56
7:H:418:GLN:HE22	8:I:718:THR:CG2	2.03	0.56
1:Z:334:TRP:HA	1:Z:337:ILE:HD12	1.87	0.56
1:Z:692:MET:O	1:Z:696:TYR:HB2	2.06	0.56
2:C:1388:HIS:C	4:E:1331:LEU:HD11	2.26	0.56
3:D:449:ASN:HB3	3:D:463:GLU:HG2	1.86	0.56
4:E:928:SER:HA	4:E:931:PHE:HB2	1.88	0.56
5:F:552:SER:O	5:F:557:ASN:ND2	2.37	0.56
5:F:690:GLU:CG	8:I:722:LEU:CD2	2.80	0.56
6:J:319:GLU:HA	6:J:322:THR:CG2	2.36	0.56
7:K:404:ARG:O	7:K:407:GLU:N	2.37	0.56
7:K:446:ARG:HH22	7:K:455:LYS:HZ3	1.48	0.56
1:Z:251:ALA:C	1:Z:253:LEU:N	2.51	0.56
5:F:1251:ARG:NH2	5:F:1276:ASP:CB	2.66	0.56
5:F:1595:VAL:O	5:F:1599:GLU:HB2	2.06	0.56
6:G:351:SER:O	6:G:355:GLN:NE2	2.39	0.56
7:K:297:GLU:HB3	7:K:304:THR:OG1	2.04	0.56
7:K:538:LYS:O	8:L:822:LYS:CB	2.54	0.56
8:L:658:TYR:O	8:L:662:ILE:HG22	2.06	0.56
3:D:545:GLN:HG3	3:D:572:LEU:CD1	2.36	0.56
3:D:710:VAL:HG22	3:D:711:VAL:H	1.71	0.56
5:F:333:GLU:HA	5:F:420:THR:CB	2.36	0.56
5:F:679:ILE:O	5:F:745:ARG:NH1	2.39	0.56
5:F:869:VAL:HA	5:F:872:ILE:HD12	1.86	0.56
5:F:1403:SER:OG	5:F:1451:THR:O	2.22	0.56
5:F:1598:PHE:HA	5:F:1601:ILE:HB	1.86	0.56
8:I:778:LYS:HD3	8:I:778:LYS:C	2.26	0.56
6:J:388:CYS:HA	6:J:391:LEU:HB2	1.89	0.56
1:Z:289:LEU:HD21	1:Z:312:LYS:HG2	1.88	0.56
1:Z:652:ILE:HA	1:Z:655:THR:HG22	1.87	0.56
1:A:46:ILE:HA	8:L:792:GLN:CB	2.36	0.55
1:A:779:LEU:C	1:A:835:ILE:CB	2.74	0.55
5:F:637:ASP:HA	5:F:640:PHE:HD2	1.71	0.55
5:F:1176:GLU:OE1	5:F:1176:GLU:N	2.39	0.55
3:D:441:VAL:HA	3:D:490:LYS:HB2	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:134:ARG:NH2	4:E:198:MET:O	2.39	0.55
5:F:885:GLU:HG3	5:F:885:GLU:O	2.07	0.55
6:G:391:LEU:O	6:G:395:GLU:HB2	2.06	0.55
1:A:776:ILE:HD11	1:A:828:THR:HA	1.88	0.55
3:D:222:ASN:O	3:D:301:SER:N	2.40	0.55
4:E:277:THR:HG22	4:E:381:VAL:HG21	1.88	0.55
4:E:331:TYR:OH	4:E:388:ASN:ND2	2.40	0.55
4:E:1450:LEU:HD22	4:E:1456:ILE:HG21	1.88	0.55
6:G:449:LEU:HA	1:Z:84:ASP:CG	2.26	0.55
7:H:533:ILE:HA	7:H:536:LYS:HB2	1.87	0.55
6:J:384:LEU:HD23	6:J:384:LEU:C	2.26	0.55
1:Z:249:ARG:C	1:Z:251:ALA:H	2.02	0.55
1:A:607:ARG:HD2	1:A:610:LEU:HD12	1.87	0.55
3:D:654:THR:HB	3:D:655:PRO:HD2	1.87	0.55
3:D:1237:SER:CB	1:Z:829:TYR:CB	2.84	0.55
4:E:312:ASN:ND2	4:E:314:ASP:O	2.39	0.55
5:F:657:ILE:HG12	5:F:660:LEU:HD13	1.87	0.55
5:F:902:LYS:HD3	5:F:903:ASN:H	1.71	0.55
5:F:1063:ILE:HB	5:F:1066:ASP:HB3	1.87	0.55
3:D:508:LYS:HB3	3:D:516:LEU:HA	1.87	0.55
4:E:264:LEU:O	4:E:268:THR:OG1	2.23	0.55
5:F:1243:GLU:HB3	5:F:1283:LYS:HD2	1.89	0.55
5:F:1435:LYS:CE	5:F:1484:ARG:HH21	2.18	0.55
6:G:411:ASN:OD1	6:G:411:ASN:N	2.37	0.55
6:J:309:PRO:HA	6:J:312:VAL:HB	1.88	0.55
1:Z:589:LEU:HA	1:Z:603:VAL:HG22	1.88	0.55
1:A:814:MET:CG	1:A:833:ILE:HG12	2.35	0.55
3:D:139:LYS:HE3	3:D:600:GLU:HB2	1.88	0.55
3:D:484:GLN:HG2	3:D:568:GLN:OE1	2.07	0.55
3:D:911:ASN:HA	3:D:914:TYR:CD2	2.42	0.55
4:E:318:HIS:H	4:E:321:ILE:HD11	1.71	0.55
4:E:1309:ARG:HH21	4:E:1313:ARG:HH12	1.55	0.55
4:E:1585:LEU:N	4:E:1590:ASP:OD2	2.40	0.55
5:F:1606:GLN:HB3	1:Z:141:ASN:ND2	2.19	0.55
5:F:1674:CYS:HA	5:F:1677:THR:OG1	2.07	0.55
6:G:357:LEU:O	8:I:732:ALA:C	2.44	0.55
6:J:405:LEU:HD11	7:K:470:ALA:HA	1.87	0.55
8:L:640:LEU:HD13	8:L:643:LYS:HG2	1.88	0.55
8:L:672:GLY:HA2	8:L:675:GLN:HG2	1.87	0.55
1:Z:766:ASN:C	1:Z:770:ASN:HD22	2.09	0.55
1:A:309:ILE:HG23	1:A:313:LEU:HD12	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:492:ILE:HD11	1:A:510:LEU:HD12	1.89	0.55
1:A:642:LEU:HA	1:A:645:GLN:NE2	2.22	0.55
3:D:175:ILE:HG12	3:D:182:CYS:SG	2.47	0.55
3:D:903:ILE:HG23	3:D:953:PHE:CE1	2.42	0.55
3:D:956:ASN:O	3:D:960:LYS:N	2.37	0.55
5:F:355:LEU:H	5:F:355:LEU:CD1	2.20	0.55
5:F:554:SER:OG	5:F:555:TRP:N	2.39	0.55
5:F:1068:ILE:HG22	5:F:1068:ILE:O	2.05	0.55
5:F:1376:THR:O	5:F:1376:THR:OG1	2.24	0.55
6:J:324:GLN:OE1	6:J:327:LYS:HE3	2.06	0.55
1:Z:25:LEU:O	1:Z:25:LEU:HD23	2.07	0.55
3:D:155:ASN:HA	3:D:646:SER:CB	2.36	0.55
3:D:475:GLU:OE2	3:D:487:GLU:N	2.40	0.55
3:D:507:LEU:HG	3:D:512:LYS:CB	2.37	0.55
4:E:258:ILE:HG22	4:E:261:ILE:CD1	2.37	0.55
4:E:1356:LEU:HB2	1:Z:453:VAL:HG21	1.88	0.55
5:F:227:ASP:CB	5:F:379:SER:CB	2.84	0.55
5:F:788:LEU:HD12	5:F:874:LYS:HE2	1.88	0.55
5:F:928:LEU:HD12	5:F:928:LEU:N	2.01	0.55
5:F:1040:THR:O	5:F:1042:ILE:N	2.40	0.55
5:F:1356:LEU:HG	5:F:1356:LEU:O	2.03	0.55
7:K:400:LYS:HD2	7:K:400:LYS:C	2.20	0.55
7:K:431:ILE:O	7:K:435:LYS:CB	2.55	0.55
8:L:682:ASP:HA	8:L:685:MET:CE	2.37	0.55
8:L:792:GLN:HA	8:L:796:ILE:HB	1.88	0.55
1:Z:288:ASN:O	1:Z:292:LYS:HB2	2.06	0.55
5:F:334:GLN:NE2	5:F:859:LYS:CE	2.68	0.55
5:F:1067:ASN:HD22	5:F:1069:ASP:HB2	1.71	0.55
6:G:295:LYS:C	6:J:363:LYS:HZ2	2.11	0.55
8:I:674:GLU:OE1	8:I:675:GLN:NE2	2.40	0.55
6:J:398:VAL:HG21	7:K:462:ARG:C	2.28	0.55
3:D:467:PHE:CG	3:D:473:THR:HG23	2.42	0.55
4:E:20:ASN:ND2	4:E:894:VAL:O	2.40	0.55
4:E:137:VAL:HA	4:E:140:LYS:HG2	1.88	0.55
5:F:1088:ARG:HH12	8:I:785:ASN:HA	1.72	0.55
5:F:1309:LEU:HD22	5:F:1309:LEU:C	2.27	0.55
5:F:1362:ASP:CB	1:Z:125:ILE:HG21	2.37	0.55
7:H:529:LYS:HB2	8:I:814:LEU:HD11	1.88	0.55
1:A:128:LEU:CD1	4:E:1260:TYR:CE2	2.88	0.54
1:A:660:LEU:HG	1:A:685:PRO:HB3	1.88	0.54
3:D:187:ASP:O	3:D:210:THR:HA	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:1286:PHE:O	5:F:1286:PHE:HD1	1.89	0.54
6:G:281:ASP:HA	6:G:284:ILE:HD12	1.89	0.54
8:I:751:LEU:HA	8:I:754:ASN:HD22	1.72	0.54
6:J:334:SER:C	6:J:337:LYS:H	2.09	0.54
1:A:25:LEU:HD23	1:A:25:LEU:O	2.07	0.54
1:A:215:TYR:HB3	1:A:505:HIS:NE2	2.23	0.54
3:D:1238:ARG:HA	1:Z:830:SER:HB2	1.87	0.54
4:E:14:THR:HB	4:E:17:HIS:HB2	1.88	0.54
5:F:10:THR:O	5:F:14:SER:HB3	2.06	0.54
5:F:837:TYR:CG	5:F:918:PHE:HE2	2.25	0.54
5:F:1038:LEU:C	5:F:1040:THR:N	2.45	0.54
5:F:1200:PRO:O	5:F:1299:ASN:OD1	2.26	0.54
5:F:1445:VAL:HG12	5:F:1453:ARG:HG3	1.89	0.54
5:F:1473:ASN:OD1	5:F:1476:LEU:N	2.34	0.54
8:I:752:ASP:OD1	8:I:756:ASN:ND2	2.40	0.54
8:I:795:LYS:C	8:I:795:LYS:HD3	2.28	0.54
1:Z:197:GLU:O	1:Z:530:ARG:NH2	2.40	0.54
1:A:501:MET:HA	1:A:541:TYR:CE1	2.41	0.54
1:A:814:MET:CG	1:A:833:ILE:HD13	2.35	0.54
3:D:164:PHE:HA	3:D:186:ILE:HD12	1.88	0.54
3:D:528:PRO:HG3	3:D:624:PHE:HE2	1.67	0.54
3:D:691:LYS:O	3:D:696:ARG:NH2	2.41	0.54
4:E:723:LEU:HD23	4:E:794:ILE:HD12	1.88	0.54
5:F:788:LEU:HA	5:F:791:PHE:HB3	1.88	0.54
5:F:837:TYR:CD2	5:F:918:PHE:HE2	2.26	0.54
6:G:465:LYS:HE3	1:Z:20:LYS:CE	2.37	0.54
7:K:352:ILE:HG21	7:K:358:LEU:CG	2.38	0.54
1:Z:661:LEU:HB2	1:Z:717:LEU:HD13	1.89	0.54
3:D:402:ILE:HG13	3:D:406:THR:HB	1.88	0.54
3:D:1377:ASN:CG	1:Z:758:GLN:HE21	2.11	0.54
5:F:225:SER:HA	5:F:383:ASN:HD21	1.73	0.54
5:F:579:ARG:HH22	5:F:701:THR:HG21	1.71	0.54
5:F:1364:TYR:HD1	5:F:1364:TYR:O	1.90	0.54
6:J:305:ILE:HD11	8:L:668:VAL:CG1	2.35	0.54
6:J:398:VAL:CG2	7:K:462:ARG:CB	2.76	0.54
7:K:379:ILE:O	7:K:382:LYS:CA	2.55	0.54
1:A:775:LEU:CD1	1:A:832:LEU:HD11	2.37	0.54
3:D:605:VAL:HG13	3:D:641:VAL:HG13	1.88	0.54
4:E:227:ILE:CD1	4:E:258:ILE:HD11	2.36	0.54
4:E:1022:TYR:CZ	4:E:1026:THR:CG2	2.89	0.54
5:F:46:ALA:O	5:F:50:GLN:HB3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:133:GLU:HA	5:F:136:LYS:HD3	1.88	0.54
5:F:349:GLU:O	5:F:480:ARG:NH2	2.40	0.54
1:Z:262:SER:O	1:Z:266:LYS:NZ	2.41	0.54
1:Z:462:PHE:HA	1:Z:465:ILE:HD12	1.89	0.54
1:Z:463:GLN:HE21	1:Z:487:LEU:HD11	1.72	0.54
1:A:116:LYS:O	1:A:116:LYS:HD3	2.08	0.54
1:A:814:MET:HG2	1:A:833:ILE:CG1	2.37	0.54
3:D:103:LEU:HG	3:D:107:TYR:CE2	2.41	0.54
3:D:443:GLY:HA2	3:D:490:LYS:HG3	1.90	0.54
4:E:210:ASN:CA	4:E:213:PHE:CB	2.76	0.54
4:E:333:ARG:NH1	4:E:341:PHE:O	2.40	0.54
5:F:389:LEU:H	5:F:389:LEU:CD1	2.16	0.54
8:L:645:THR:O	8:L:649:THR:HG23	2.08	0.54
2:C:786:THR:H	2:C:789:ASP:HB2	1.72	0.54
2:C:1258:GLN:CG	2:C:1299:LYS:HE3	2.36	0.54
3:D:784:ILE:O	3:D:949:PHE:HB2	2.08	0.54
5:F:354:ARG:CB	5:F:354:ARG:CZ	2.86	0.54
6:J:405:LEU:CD1	7:K:470:ALA:HA	2.38	0.54
1:Z:779:LEU:CB	1:Z:835:ILE:HA	2.37	0.54
1:A:391:HIS:NE2	1:A:416:GLY:O	2.33	0.54
3:D:403:GLY:O	3:D:408:ARG:NE	2.37	0.54
4:E:180:LYS:NZ	4:E:184:ASP:OD1	2.40	0.54
5:F:1498:LEU:HG	5:F:1514:GLU:HB3	1.88	0.54
1:Z:789:LEU:HB3	1:Z:799:LYS:HD2	1.90	0.54
1:A:691:ARG:O	1:A:695:ILE:HG12	2.07	0.54
3:D:222:ASN:HB3	3:D:301:SER:HA	1.90	0.54
3:D:662:LEU:HB3	3:D:667:LEU:HD13	1.90	0.54
4:E:885:VAL:HG21	4:E:923:LEU:HD21	1.90	0.54
5:F:1550:LEU:CD1	5:F:1604:ILE:HG21	2.38	0.54
5:F:1635:ARG:O	5:F:1639:GLY:N	2.40	0.54
7:H:298:SER:HA	7:H:306:THR:HA	1.90	0.54
7:H:426:GLY:HA3	8:I:735:ASN:C	2.27	0.54
6:J:382:LYS:HE2	6:J:382:LYS:N	2.22	0.54
7:K:433:GLU:HB2	8:L:741:ARG:HH11	1.73	0.54
3:D:284:PHE:CE1	3:D:296:LEU:HG	2.42	0.54
1:A:545:PHE:HD2	1:A:549:ASP:HB2	1.74	0.53
4:E:463:PHE:O	4:E:554:ILE:HA	2.07	0.53
5:F:1363:ILE:HG23	1:Z:125:ILE:HD12	1.89	0.53
5:F:1363:ILE:CG2	1:Z:125:ILE:CD1	2.85	0.53
6:G:295:LYS:HD3	6:J:363:LYS:HZ3	1.72	0.53
8:I:814:LEU:HD21	1:Z:59:LYS:CA	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:814:MET:HG3	1:A:833:ILE:HD13	1.79	0.53
4:E:757:LYS:HA	5:F:1195:PHE:CD2	2.43	0.53
4:E:1290:SER:OG	4:E:1297:LYS:NZ	2.40	0.53
4:E:1319:LEU:HD22	4:E:1394:LYS:HB3	1.90	0.53
5:F:334:GLN:HG3	5:F:854:GLU:CD	2.18	0.53
5:F:1283:LYS:CE	5:F:1283:LYS:CA	2.84	0.53
8:I:785:ASN:CB	1:Z:112:TYR:CB	2.85	0.53
1:Z:674:LEU:HD21	1:Z:724:ARG:HG3	1.90	0.53
2:C:197:ILE:HD13	2:C:224:VAL:HG11	1.91	0.53
3:D:440:THR:OG1	3:D:444:VAL:HG12	2.07	0.53
5:F:44:ASN:OD1	5:F:44:ASN:N	2.40	0.53
5:F:333:GLU:C	5:F:335:ASP:N	2.61	0.53
1:A:255:GLU:OE2	1:A:480:GLN:NE2	2.40	0.53
2:C:172:CYS:HB2	2:C:183:TRP:CE2	2.44	0.53
2:C:786:THR:N	2:C:789:ASP:HB2	2.24	0.53
4:E:29:VAL:HG12	4:E:32:VAL:HG11	1.91	0.53
4:E:170:MET:HA	4:E:173:ILE:HG22	1.89	0.53
5:F:1014:SER:N	8:I:788:ASP:O	2.41	0.53
7:K:321:ALA:HA	7:K:348:ILE:HG13	1.76	0.53
7:K:337:GLN:O	7:K:341:LYS:CD	2.56	0.53
4:E:826:SER:OG	4:E:844:TYR:OH	2.26	0.53
4:E:1531:SER:O	4:E:1535:ASN:ND2	2.42	0.53
5:F:286:ILE:HA	5:F:289:CYS:HB2	1.91	0.53
5:F:824:ALA:O	5:F:826:PRO:N	2.41	0.53
5:F:1024:LEU:HD22	5:F:1049:LEU:HD23	1.90	0.53
6:G:296:ALA:HA	6:J:363:LYS:CE	2.39	0.53
1:Z:127:GLN:HA	1:Z:127:GLN:NE2	2.16	0.53
3:D:585:ILE:HG21	3:D:593:VAL:HB	1.90	0.53
4:E:1341:GLU:OE1	4:E:1346:LYS:NZ	2.42	0.53
5:F:427:THR:OG1	5:F:428:GLN:NE2	2.41	0.53
5:F:835:LYS:O	5:F:838:LYS:N	2.42	0.53
5:F:909:LEU:O	7:H:403:SER:C	2.47	0.53
5:F:917:PHE:CE2	5:F:922:LEU:HD21	2.43	0.53
7:K:367:GLU:O	7:K:371:GLN:HG3	2.09	0.53
8:L:751:LEU:HA	8:L:755:LEU:HD13	1.90	0.53
1:A:625:GLU:OE1	1:A:629:ARG:NH2	2.33	0.53
3:D:606:GLN:N	3:D:642:LEU:O	2.36	0.53
4:E:607:SER:OG	4:E:608:ILE:N	2.40	0.53
4:E:715:THR:HB	4:E:742:LEU:HD22	1.90	0.53
4:E:1234:LEU:HD12	4:E:1287:ILE:HG13	1.90	0.53
4:E:1259:PHE:CD1	4:E:1259:PHE:C	2.82	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:1382:THR:OG1	4:E:1383:GLN:NE2	2.41	0.53
5:F:159:LYS:CE	5:F:363:ASP:HA	2.26	0.53
5:F:333:GLU:C	5:F:335:ASP:H	2.11	0.53
5:F:936:ILE:O	5:F:940:ASN:ND2	2.42	0.53
5:F:1634:LYS:O	5:F:1638:ILE:N	2.34	0.53
6:G:327:LYS:HZ2	1:Z:46:ILE:CA	2.18	0.53
7:K:394:THR:HB	7:K:398:ILE:HG13	1.90	0.53
7:K:427:LEU:N	7:K:428:PRO:CD	2.72	0.53
1:A:767:ILE:O	1:A:771:ILE:HG12	2.08	0.53
3:D:515:VAL:CG1	3:D:644:SER:HB3	2.32	0.53
3:D:576:LEU:HD13	3:D:601:THR:O	2.08	0.53
5:F:320:GLU:OE1	5:F:351:HIS:HE1	1.92	0.53
6:G:465:LYS:HB3	1:Z:20:LYS:NZ	2.20	0.53
6:J:389:ARG:CB	6:J:389:ARG:CZ	2.84	0.53
6:J:429:LEU:HA	6:J:434:THR:N	2.24	0.53
6:J:433:LYS:CB	7:K:499:GLY:CA	2.81	0.53
7:K:311:PHE:CD2	7:K:341:LYS:NZ	2.58	0.53
3:D:150:LYS:HD3	3:D:153:VAL:CG2	2.39	0.53
4:E:258:ILE:O	4:E:261:ILE:N	2.41	0.53
5:F:1370:LEU:O	5:F:1371:ILE:CG1	2.56	0.53
8:I:752:ASP:O	8:I:756:ASN:ND2	2.42	0.53
7:K:483:VAL:H	7:K:494:MET:N	2.07	0.53
1:Z:87:ILE:N	1:Z:87:ILE:CD1	2.72	0.53
1:Z:623:ILE:HG23	1:Z:624:THR:HG23	1.91	0.53
1:A:289:LEU:HD22	1:A:308:PHE:HA	1.91	0.53
1:A:451:ASP:O	1:A:456:ARG:NE	2.38	0.53
1:A:681:SER:HB2	1:A:691:ARG:HD3	1.91	0.53
4:E:107:SER:HB2	4:E:190:GLN:HE22	1.74	0.53
5:F:902:LYS:CE	7:H:414:LYS:CD	2.46	0.53
6:J:310:ARG:HG2	6:J:314:TYR:CZ	2.44	0.53
6:J:390:ILE:N	6:J:390:ILE:CD1	2.72	0.53
7:K:511:GLU:O	7:K:515:ASN:ND2	2.42	0.53
1:Z:127:GLN:CA	1:Z:127:GLN:NE2	2.72	0.53
1:Z:799:LYS:HA	1:Z:802:GLN:HE21	1.73	0.53
1:A:83:VAL:HA	1:A:86:PHE:CD2	2.43	0.52
1:A:812:GLN:HA	1:A:815:ILE:HD12	1.91	0.52
3:D:470:SER:HB3	3:D:475:GLU:CG	2.39	0.52
3:D:775:LEU:O	3:D:779:ARG:HG3	2.08	0.52
4:E:864:SER:OG	4:E:1147:LEU:O	2.24	0.52
5:F:1037:ASN:N	5:F:1040:THR:CB	2.69	0.52
5:F:1098:SER:O	5:F:1101:ILE:HB	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:1672:MET:CB	1:Z:149:ALA:CB	2.84	0.52
6:G:427:GLU:HG2	8:I:779:THR:HG21	1.90	0.52
7:K:385:GLN:CA	7:K:385:GLN:NE2	2.72	0.52
1:Z:289:LEU:HD23	1:Z:308:PHE:HA	1.91	0.52
1:Z:807:LYS:O	1:Z:836:ASP:O	2.27	0.52
1:A:48:GLU:O	7:K:514:THR:HG23	2.09	0.52
1:A:590:LEU:HD13	1:A:624:THR:HG23	1.92	0.52
1:A:772:PRO:HA	1:A:828:THR:HG21	1.87	0.52
2:C:693:LEU:HB3	2:C:694:PHE:HD1	1.74	0.52
4:E:368:ILE:HG22	4:E:369:LEU:HD12	1.92	0.52
4:E:1170:ASP:O	4:E:1174:ASN:ND2	2.42	0.52
5:F:812:CYS:SG	5:F:813:GLU:N	2.83	0.52
5:F:1360:LEU:CD1	5:F:1360:LEU:N	2.73	0.52
7:H:303:THR:OG1	7:H:329:HIS:O	2.22	0.52
6:J:384:LEU:HD21	7:K:455:LYS:HG2	1.91	0.52
6:J:388:CYS:CB	7:K:455:LYS:HD2	2.32	0.52
1:A:643:LEU:O	1:A:647:ALA:N	2.38	0.52
2:C:1261:PHE:CZ	2:C:1265:ILE:HD11	2.43	0.52
4:E:584:ASP:N	4:E:584:ASP:OD1	2.38	0.52
4:E:739:ILE:HG21	4:E:795:ILE:HG22	1.92	0.52
4:E:789:GLN:OE1	4:E:792:GLN:NE2	2.40	0.52
4:E:954:ILE:HG12	4:E:1015:LYS:HG2	1.92	0.52
4:E:1563:LEU:HD12	4:E:1564:LEU:HG	1.92	0.52
5:F:920:ILE:HG13	5:F:924:ALA:HA	1.89	0.52
5:F:1522:VAL:HA	5:F:1525:LEU:HD12	1.91	0.52
8:I:778:LYS:HG2	8:I:794:ILE:CB	2.39	0.52
6:J:311:ASP:HA	6:J:314:TYR:CD2	2.43	0.52
6:J:324:GLN:O	6:J:328:GLN:HG2	2.09	0.52
1:Z:536:ASN:O	1:Z:540:ASN:ND2	2.42	0.52
3:D:421:VAL:HG13	3:D:491:ARG:CB	2.40	0.52
3:D:664:ASP:O	3:D:667:LEU:N	2.42	0.52
4:E:989:ASP:O	4:E:992:SER:N	2.36	0.52
4:E:1409:ALA:HB1	4:E:1459:LYS:HG3	1.90	0.52
5:F:210:LYS:HG2	5:F:214:LEU:HD13	1.92	0.52
5:F:922:LEU:N	5:F:922:LEU:CD1	2.72	0.52
5:F:1392:ILE:CB	5:F:1405:PHE:CE2	2.93	0.52
5:F:1634:LYS:HD3	5:F:1638:ILE:HD12	1.91	0.52
8:I:805:ARG:CB	1:Z:88:LYS:HZ1	2.22	0.52
1:A:274:GLY:HA2	1:A:484:LEU:HD22	1.91	0.52
3:D:1467:SER:HB2	1:Z:621:HIS:CE1	2.45	0.52
4:E:724:SER:HA	4:E:1166:VAL:HA	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:1094:GLY:O	5:F:1098:SER:N	2.42	0.52
5:F:1529:ALA:HB1	5:F:1611:VAL:HG13	1.83	0.52
6:J:406:PHE:O	6:J:409:PRO:HD2	2.09	0.52
3:D:186:ILE:CG2	3:D:189:LYS:HB2	2.40	0.52
3:D:662:LEU:HB3	3:D:667:LEU:CD1	2.40	0.52
4:E:33:ASP:OD1	4:E:33:ASP:N	2.42	0.52
5:F:154:GLN:HA	5:F:157:GLU:HG3	1.92	0.52
5:F:757:PHE:HD1	5:F:780:ILE:HD11	1.74	0.52
5:F:1027:GLN:CG	5:F:1036:PRO:HA	2.37	0.52
5:F:1251:ARG:NH2	5:F:1276:ASP:HB3	2.25	0.52
8:I:781:ASN:HD22	8:I:781:ASN:N	2.08	0.52
8:I:814:LEU:HD23	1:Z:59:LYS:CB	2.39	0.52
6:J:364:ILE:HG22	6:J:367:ASN:HD21	1.75	0.52
6:J:432:LEU:HA	8:L:782:ILE:O	2.10	0.52
7:K:352:ILE:HG21	7:K:358:LEU:CD2	2.40	0.52
8:L:692:LYS:HD2	8:L:695:GLN:HE21	1.75	0.52
1:A:140:ILE:CG2	4:E:1393:LYS:NZ	2.61	0.52
3:D:944:LEU:O	3:D:947:LEU:HB2	2.10	0.52
5:F:389:LEU:N	5:F:389:LEU:CD1	2.72	0.52
5:F:1360:LEU:C	5:F:1362:ASP:H	2.13	0.52
5:F:1605:PHE:HA	5:F:1608:ILE:HG12	1.91	0.52
7:H:522:TYR:CB	1:Z:54:PHE:C	2.77	0.52
6:J:332:LYS:HG2	7:K:398:ILE:HG21	1.91	0.52
7:K:309:ARG:HG3	7:K:353:TYR:CZ	2.44	0.52
4:E:141:LEU:HA	4:E:144:ILE:HD12	1.92	0.52
4:E:827:PRO:HB3	4:E:893:TYR:CZ	2.44	0.52
4:E:1005:LEU:HD13	4:E:1046:LYS:HZ1	1.75	0.52
5:F:690:GLU:HG2	8:I:722:LEU:HD21	1.92	0.52
5:F:711:GLN:HG2	5:F:779:PRO:HB3	1.92	0.52
5:F:1664:ASN:HA	5:F:1667:VAL:HG12	1.92	0.52
8:I:795:LYS:CA	8:I:795:LYS:NZ	2.73	0.52
8:L:692:LYS:HD2	8:L:695:GLN:NE2	2.25	0.52
1:Z:414:LEU:HD11	1:Z:438:MET:HB2	1.92	0.52
1:A:687:LEU:HD23	1:A:690:ARG:HH11	1.74	0.52
3:D:233:LEU:HD11	3:D:282:ILE:HD13	1.92	0.52
3:D:969:SER:O	3:D:972:ASN:HB2	2.10	0.52
4:E:976:PHE:CZ	7:K:457:ASN:HB3	2.44	0.52
5:F:837:TYR:CD2	5:F:918:PHE:CE2	2.97	0.52
5:F:1227:THR:HA	7:H:472:ASN:HB3	1.92	0.52
7:H:314:ASN:HB2	7:H:361:ARG:HH12	1.75	0.52
7:K:387:GLN:NE2	7:K:387:GLN:CA	2.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:444:LEU:C	7:K:447:SER:CB	2.75	0.52
3:D:792:THR:HA	3:D:830:SER:HB2	1.92	0.52
4:E:1268:SER:OG	4:E:1269:GLY:N	2.42	0.52
5:F:639:LEU:HA	5:F:642:PHE:HB3	1.91	0.52
5:F:836:ILE:N	5:F:836:ILE:CD1	2.72	0.52
5:F:958:SER:HB3	5:F:962:ARG:HA	1.91	0.52
6:G:295:LYS:C	6:J:363:LYS:HZ1	2.12	0.52
7:H:391:GLU:O	7:H:395:ALA:HB3	2.10	0.52
6:J:442:THR:CB	7:K:509:ILE:CD1	2.88	0.52
1:Z:215:TYR:HA	1:Z:218:ILE:HD12	1.92	0.52
3:D:160:ILE:CG2	3:D:191:ILE:HG21	2.37	0.51
4:E:681:LEU:HA	4:E:690:LEU:CB	2.40	0.51
5:F:177:GLN:O	5:F:181:PHE:HB2	2.10	0.51
5:F:328:ASP:O	5:F:331:ILE:HD11	2.09	0.51
5:F:543:VAL:HA	5:F:546:TYR:HB2	1.91	0.51
5:F:690:GLU:HG3	8:I:722:LEU:CG	2.40	0.51
5:F:1067:ASN:N	5:F:1067:ASN:OD1	2.42	0.51
6:G:387:TYR:HA	6:G:390:ILE:HB	1.92	0.51
8:I:818:ILE:CD1	8:I:818:ILE:N	2.72	0.51
1:Z:482:LEU:O	1:Z:487:LEU:N	2.43	0.51
1:Z:767:ILE:HD12	1:Z:768:VAL:H	1.74	0.51
1:A:641:ILE:HG23	1:A:653:VAL:HG13	1.91	0.51
3:D:263:VAL:HB	3:D:311:LYS:CE	2.37	0.51
3:D:501:SER:O	3:D:508:LYS:NZ	2.41	0.51
4:E:207:ASP:OD1	4:E:207:ASP:N	2.40	0.51
5:F:1150:PHE:CD1	5:F:1150:PHE:C	2.83	0.51
7:H:309:ARG:NE	7:H:353:TYR:OH	2.37	0.51
6:J:433:LYS:CA	7:K:499:GLY:CA	2.88	0.51
7:K:337:GLN:O	7:K:341:LYS:HD3	2.10	0.51
8:L:675:GLN:O	8:L:679:LEU:HD13	2.10	0.51
1:Z:391:HIS:NE2	1:Z:417:ARG:O	2.42	0.51
1:Z:431:SER:OG	1:Z:432:ILE:N	2.42	0.51
1:A:128:LEU:HB3	4:E:1260:TYR:CE2	2.40	0.51
3:D:915:GLU:OE2	3:D:980:SER:OG	2.23	0.51
5:F:157:GLU:OE1	5:F:183:ARG:NH1	2.42	0.51
5:F:355:LEU:N	5:F:355:LEU:CD1	2.72	0.51
5:F:809:LEU:HD13	5:F:1252:VAL:HG23	1.93	0.51
5:F:1427:LEU:HD22	5:F:1466:LEU:HG	1.91	0.51
5:F:1496:ASP:HA	5:F:1499:LEU:HG	1.93	0.51
5:F:1550:LEU:HD12	5:F:1604:ILE:HD13	1.87	0.51
6:J:383:LYS:CE	8:L:756:ASN:HA	2.23	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:J:390:ILE:CG1	8:L:766:ILE:HD12	2.40	0.51
1:Z:670:LEU:HD13	1:Z:724:ARG:HD3	1.92	0.51
2:C:885:VAL:CG1	2:C:901:ILE:HG23	2.39	0.51
3:D:240:LEU:HB3	3:D:263:VAL:CG1	2.40	0.51
3:D:484:GLN:HG3	3:D:564:THR:O	2.10	0.51
3:D:484:GLN:NE2	3:D:565:VAL:HA	2.24	0.51
5:F:343:ASP:OD2	5:F:702:LYS:NZ	2.38	0.51
5:F:1177:VAL:HA	5:F:1180:TYR:CB	2.41	0.51
5:F:1363:ILE:HD12	5:F:1364:TYR:N	2.25	0.51
7:H:397:ARG:NH1	8:I:701:GLU:OE1	2.43	0.51
1:Z:139:PHE:CD1	1:Z:139:PHE:C	2.84	0.51
1:A:817:ALA:HB2	1:A:832:LEU:HD13	1.92	0.51
3:D:863:ILE:HD12	3:D:887:GLN:HG3	1.92	0.51
4:E:86:ASP:OD1	4:E:86:ASP:N	2.44	0.51
4:E:508:ALA:HB1	4:E:512:GLU:HG2	1.93	0.51
5:F:929:TYR:O	5:F:931:GLY:N	2.43	0.51
5:F:1132:GLU:HG3	5:F:1135:CYS:HB2	1.93	0.51
5:F:1439:GLU:HA	5:F:1442:TRP:HB3	1.93	0.51
6:J:382:LYS:N	6:J:382:LYS:CE	2.73	0.51
7:K:321:ALA:HB2	7:K:346:GLN:HA	1.92	0.51
1:Z:734:GLU:OE2	1:Z:738:GLN:NE2	2.43	0.51
1:A:48:GLU:HA	7:K:514:THR:HG21	1.93	0.51
1:A:139:PHE:CD1	1:A:139:PHE:C	2.84	0.51
3:D:377:ILE:HB	3:D:393:ILE:HB	1.93	0.51
4:E:1340:PHE:O	4:E:1344:PHE:HB2	2.11	0.51
4:E:1342:LEU:HA	4:E:1346:LYS:HD3	1.92	0.51
5:F:544:TYR:HA	5:F:547:PHE:HD2	1.76	0.51
5:F:920:ILE:HB	5:F:924:ALA:CA	2.41	0.51
5:F:950:GLU:N	5:F:950:GLU:OE2	2.43	0.51
1:A:760:PHE:CZ	1:A:768:VAL:HG13	2.45	0.51
3:D:832:VAL:HG23	3:D:929:PHE:CE2	2.46	0.51
4:E:550:SER:OG	4:E:551:ASN:N	2.44	0.51
5:F:378:ALA:O	5:F:383:ASN:HA	2.11	0.51
7:K:308:LEU:HB3	7:K:355:PHE:CZ	2.46	0.51
1:Z:23:ASN:C	1:Z:25:LEU:N	2.64	0.51
1:A:621:HIS:ND1	1:A:625:GLU:OE2	2.32	0.51
3:D:170:LYS:NZ	3:D:212:GLN:O	2.37	0.51
3:D:242:MET:O	3:D:259:THR:OG1	2.21	0.51
3:D:568:GLN:HE21	3:D:573:GLN:HG2	1.76	0.51
3:D:790:PHE:HB3	3:D:933:ILE:HG21	1.92	0.51
3:D:887:GLN:OE1	3:D:887:GLN:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:332:VAL:CG1	5:F:335:ASP:HA	2.40	0.51
5:F:838:LYS:HA	5:F:841:PHE:HB2	1.92	0.51
5:F:1012:ASN:O	8:I:787:GLU:CG	2.52	0.51
6:J:437:ALA:O	6:J:439:ILE:N	2.44	0.51
8:L:643:LYS:HG3	8:L:647:GLN:NE2	2.22	0.51
2:C:1258:GLN:CD	2:C:1299:LYS:HE3	2.31	0.51
3:D:421:VAL:HG13	3:D:491:ARG:HB3	1.92	0.51
5:F:841:PHE:HZ	5:F:922:LEU:HD22	1.75	0.51
5:F:914:ASP:HA	5:F:917:PHE:H	1.76	0.51
5:F:1300:LEU:HD23	5:F:1300:LEU:C	2.31	0.51
7:K:389:LYS:CB	7:K:393:ASP:CB	2.88	0.51
1:A:123:MET:O	6:J:414:SER:CB	2.59	0.51
3:D:528:PRO:CG	3:D:624:PHE:HE2	2.21	0.51
4:E:182:PHE:HZ	5:F:1189:MET:CB	2.23	0.51
5:F:334:GLN:NE2	5:F:859:LYS:HD2	2.26	0.51
5:F:452:LYS:HE3	5:F:456:ALA:HB2	1.92	0.51
5:F:1510:ASP:N	5:F:1510:ASP:OD1	2.42	0.51
5:F:1532:ARG:NH1	5:F:1615:MET:SD	2.84	0.51
8:I:794:ILE:HA	8:I:797:LEU:HD13	1.93	0.51
7:K:365:GLN:HA	7:K:368:ASN:HD22	1.76	0.51
1:A:193:LEU:HB3	1:A:546:ARG:HH12	1.76	0.50
1:A:837:VAL:HG11	2:C:1142:ASP:HB2	1.93	0.50
4:E:757:LYS:HA	5:F:1195:PHE:HD2	1.76	0.50
4:E:810:MET:SD	4:E:810:MET:N	2.84	0.50
4:E:1402:LYS:NZ	4:E:1454:GLU:OE1	2.43	0.50
5:F:726:SER:O	5:F:726:SER:OG	2.27	0.50
5:F:836:ILE:N	5:F:836:ILE:HD12	2.26	0.50
6:G:350:PHE:CZ	7:H:418:GLN:NE2	2.79	0.50
8:I:643:LYS:O	8:I:647:GLN:NE2	2.44	0.50
1:Z:278:LEU:HD22	1:Z:437:TRP:HB2	1.92	0.50
1:A:787:HIS:HE1	1:A:838:SER:O	1.90	0.50
2:C:970:PHE:CE2	2:C:974:ILE:HD11	2.46	0.50
3:D:353:GLN:OE1	3:D:374:LYS:HB2	2.11	0.50
3:D:970:ILE:HG23	3:D:975:ILE:CD1	2.40	0.50
5:F:713:PHE:HA	5:F:716:LEU:HB2	1.93	0.50
5:F:1370:LEU:O	5:F:1371:ILE:CB	2.59	0.50
5:F:1618:SER:HB2	1:Z:634:ASP:O	2.10	0.50
5:F:1674:CYS:C	5:F:1676:LEU:H	2.13	0.50
6:J:310:ARG:NE	6:J:314:TYR:OH	2.44	0.50
6:J:404:ASP:O	6:J:408:ALA:HB2	2.11	0.50
6:J:462:GLN:HE22	8:L:812:THR:HG23	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:535:LYS:CA	8:L:818:ILE:CB	2.75	0.50
1:A:224:ASN:OD1	1:A:607:ARG:NH2	2.41	0.50
1:A:414:LEU:HD21	1:A:438:MET:HB2	1.94	0.50
2:C:317:LEU:HB2	2:C:318:ILE:HD12	1.92	0.50
3:D:507:LEU:HA	3:D:512:LYS:O	2.12	0.50
5:F:355:LEU:HD12	5:F:355:LEU:H	1.74	0.50
5:F:681:LYS:HE3	5:F:685:LEU:HA	1.93	0.50
5:F:968:ILE:CG2	7:H:392:LEU:HD11	2.36	0.50
7:K:355:PHE:CD1	7:K:358:LEU:HD12	2.45	0.50
8:L:647:GLN:HA	8:L:650:GLU:HG2	1.93	0.50
8:L:671:LYS:O	8:L:675:GLN:HG2	2.10	0.50
1:Z:251:ALA:O	1:Z:253:LEU:CA	2.54	0.50
1:Z:639:ASP:OD1	1:Z:639:ASP:N	2.43	0.50
1:A:626:GLN:O	1:A:630:ARG:HG2	2.11	0.50
3:D:586:LEU:HD21	3:D:592:TYR:HD1	1.76	0.50
3:D:828:ILE:CD1	3:D:925:GLN:HA	2.41	0.50
3:D:873:SER:CB	3:D:877:VAL:HB	2.42	0.50
4:E:1259:PHE:O	4:E:1259:PHE:HD1	1.94	0.50
4:E:1294:ASP:O	4:E:1298:ASN:N	2.42	0.50
5:F:1088:ARG:NH1	5:F:1088:ARG:CG	2.73	0.50
5:F:1373:ASP:O	5:F:1376:THR:N	2.28	0.50
8:I:742:GLN:HB3	8:I:746:LYS:HZ2	1.76	0.50
8:L:637:LEU:HD22	8:L:640:LEU:HB2	1.92	0.50
1:A:27:GLU:OE2	1:A:30:ASP:HB2	2.11	0.50
1:A:684:ASN:HB3	1:A:687:LEU:HB2	1.93	0.50
3:D:518:GLU:HA	3:D:536:ILE:CD1	2.41	0.50
5:F:665:GLU:HB2	5:F:720:HIS:NE2	2.25	0.50
5:F:1167:LYS:HD3	5:F:1167:LYS:C	2.30	0.50
5:F:1472:GLU:OE1	5:F:1531:THR:OG1	2.25	0.50
5:F:1502:THR:H	5:F:1510:ASP:HB2	1.77	0.50
6:G:465:LYS:HB3	1:Z:20:LYS:CE	2.42	0.50
6:G:470:LEU:CB	7:H:538:LYS:HZ1	1.94	0.50
6:J:389:ARG:NH1	6:J:389:ARG:CG	2.72	0.50
6:J:390:ILE:N	6:J:390:ILE:HD12	2.26	0.50
7:K:313:TYR:CD1	7:K:349:PRO:HB3	2.45	0.50
7:K:336:ASP:HB3	7:K:340:GLU:OE1	2.11	0.50
7:K:375:ILE:O	7:K:379:ILE:HG22	2.11	0.50
7:K:456:THR:C	7:K:458:GLU:N	2.64	0.50
1:A:599:ARG:NH1	1:A:605:GLU:OE2	2.44	0.50
3:D:358:GLN:OE1	3:D:422:LYS:HG3	2.11	0.50
4:E:1275:GLU:HA	4:E:1278:ILE:HD12	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:H:359:ASN:HA	7:H:362:ASN:HD22	1.75	0.50
7:H:412:ILE:HG22	7:H:415:LEU:HD23	1.94	0.50
6:J:281:ASP:O	6:J:284:ILE:HB	2.11	0.50
7:K:536:LYS:HA	7:K:539:ASN:HB2	1.94	0.50
5:F:838:LYS:O	5:F:842:ASN:HB2	2.12	0.50
5:F:1674:CYS:C	5:F:1676:LEU:N	2.65	0.50
1:A:137:ASP:OD2	4:E:1385:LEU:HD12	2.11	0.50
4:E:200:LEU:HD13	4:E:271:LEU:HD22	1.94	0.50
7:H:317:ASN:HA	7:H:346:GLN:HB3	1.94	0.50
7:K:402:GLN:HE21	7:K:402:GLN:C	2.14	0.50
8:L:650:GLU:HG3	8:L:651:SER:N	2.27	0.50
1:Z:440:LEU:HA	1:Z:443:ILE:HG12	1.94	0.50
1:Z:771:ILE:CB	1:Z:772:PRO:HD2	2.42	0.50
1:A:516:PHE:HZ	1:A:532:ILE:HG22	1.76	0.50
1:A:814:MET:HB2	1:A:836:ASP:OD2	2.11	0.50
4:E:185:LEU:HD23	4:E:188:ILE:HD11	1.94	0.50
5:F:900:LEU:HD22	5:F:904:TYR:CZ	2.47	0.50
8:I:750:THR:O	8:I:753:GLU:HB3	2.11	0.50
6:J:277:ILE:CD1	6:J:280:LEU:HD23	2.42	0.50
7:K:289:GLN:O	7:K:292:VAL:HB	2.11	0.50
8:L:667:GLN:NE2	8:L:668:VAL:HG23	2.26	0.50
1:Z:533:ARG:HH21	1:Z:534:PHE:HB3	1.76	0.50
1:Z:771:ILE:HG22	1:Z:772:PRO:HD3	1.94	0.50
4:E:411:PHE:O	4:E:415:PHE:HB3	2.11	0.49
4:E:1429:HIS:HD2	4:E:1474:LEU:HD22	1.77	0.49
5:F:669:THR:HA	5:F:672:TRP:HB2	1.94	0.49
5:F:1370:LEU:O	5:F:1371:ILE:HB	2.12	0.49
7:H:443:LEU:HA	7:H:446:ARG:HB2	1.94	0.49
8:I:739:GLN:C	8:I:741:ARG:N	2.61	0.49
8:I:822:LYS:CE	8:I:822:LYS:CA	2.84	0.49
6:J:370:ASP:HA	6:J:373:PHE:CB	2.40	0.49
7:K:429:LEU:HB2	8:L:741:ARG:CZ	2.42	0.49
8:L:637:LEU:CD2	8:L:640:LEU:H	2.24	0.49
8:L:692:LYS:O	8:L:695:GLN:HG3	2.11	0.49
1:Z:136:PHE:C	1:Z:136:PHE:CD1	2.85	0.49
1:Z:576:LEU:HA	1:Z:579:LEU:HB2	1.94	0.49
3:D:449:ASN:HB3	3:D:463:GLU:CG	2.41	0.49
3:D:932:ILE:CG2	3:D:933:ILE:HG13	2.41	0.49
4:E:477:LEU:HA	4:E:499:ILE:HA	1.94	0.49
4:E:725:LEU:HD23	4:E:1167:LEU:HA	1.93	0.49
5:F:50:GLN:NE2	5:F:57:GLU:OE2	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:616:VAL:HG12	5:F:656:VAL:HG21	1.92	0.49
5:F:684:SER:HB3	5:F:695:ALA:HB2	1.94	0.49
5:F:1529:ALA:HB2	5:F:1611:VAL:CG2	2.42	0.49
8:I:740:LYS:O	8:I:743:GLN:NE2	2.45	0.49
6:J:309:PRO:O	6:J:312:VAL:HB	2.12	0.49
6:J:364:ILE:C	7:K:424:ASN:HD22	2.15	0.49
3:D:412:ILE:HG22	3:D:476:VAL:HB	1.93	0.49
5:F:555:TRP:HA	5:F:558:ILE:HG12	1.94	0.49
5:F:668:ARG:O	5:F:672:TRP:HB2	2.12	0.49
5:F:1543:LEU:O	5:F:1547:ILE:HG22	2.12	0.49
6:G:427:GLU:CG	8:I:779:THR:HG21	2.41	0.49
6:G:431:GLN:CB	7:H:503:ASN:H	2.22	0.49
8:I:795:LYS:HE3	8:I:799:SER:HB3	1.94	0.49
8:L:696:SER:O	8:L:699:TYR:HB2	2.11	0.49
1:Z:25:LEU:HD23	1:Z:25:LEU:C	2.33	0.49
1:A:764:ASP:O	1:A:768:VAL:HG23	2.12	0.49
1:A:818:GLY:O	1:A:821:GLN:NE2	2.40	0.49
3:D:119:PRO:HB3	3:D:739:THR:CG2	2.42	0.49
3:D:442:GLY:HA2	3:D:488:GLN:HG2	1.94	0.49
4:E:114:TYR:HB2	4:E:194:ILE:HD11	1.93	0.49
4:E:476:ASP:OD1	4:E:476:ASP:N	2.45	0.49
5:F:806:LEU:O	5:F:814:ASN:CB	2.60	0.49
5:F:1357:ALA:HA	5:F:1381:LEU:CB	2.42	0.49
5:F:1469:ARG:HH22	5:F:1530:GLU:HB3	1.76	0.49
5:F:1667:VAL:HA	5:F:1670:ILE:HG22	1.95	0.49
8:I:822:LYS:NZ	8:I:822:LYS:CA	2.73	0.49
6:J:433:LYS:CA	7:K:499:GLY:HA3	2.42	0.49
7:K:315:LYS:HA	7:K:347:THR:CA	2.38	0.49
1:A:23:ASN:C	1:A:25:LEU:N	2.64	0.49
1:A:205:ASN:OD1	1:A:208:LEU:HB2	2.12	0.49
1:A:505:HIS:HE1	1:A:541:TYR:OH	1.96	0.49
1:A:558:VAL:HG22	1:A:611:LEU:HD21	1.93	0.49
3:D:375:SER:HB3	3:D:420:ILE:HG13	1.94	0.49
4:E:1017:LEU:O	4:E:1021:THR:OG1	2.26	0.49
5:F:900:LEU:HD13	5:F:904:TYR:CE1	2.47	0.49
5:F:913:TYR:O	5:F:917:PHE:N	2.46	0.49
5:F:1092:THR:O	5:F:1092:THR:OG1	2.23	0.49
5:F:1139:ILE:HG12	5:F:1291:SER:CB	2.42	0.49
5:F:1628:GLY:O	5:F:1632:THR:HB	2.13	0.49
8:I:816:LYS:HE2	8:I:816:LYS:N	2.28	0.49
1:Z:116:LYS:HZ3	1:Z:116:LYS:CB	2.17	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Z:820:ILE:O	1:Z:821:GLN:C	2.49	0.49
3:D:491:ARG:CB	3:D:520:THR:HB	2.42	0.49
3:D:631:GLN:NE2	3:D:656:ASP:OD2	2.44	0.49
3:D:653:ARG:HG3	3:D:657:GLU:HB2	1.93	0.49
4:E:27:ALA:O	4:E:119:ASN:ND2	2.45	0.49
4:E:186:LYS:HE2	4:E:834:ILE:HG23	1.95	0.49
4:E:822:ASN:O	4:E:826:SER:HB3	2.13	0.49
4:E:995:LEU:HA	4:E:998:LEU:HB2	1.95	0.49
5:F:973:ASP:O	5:F:975:SER:N	2.44	0.49
5:F:1477:ASP:O	5:F:1481:LYS:N	2.45	0.49
5:F:1550:LEU:HD21	5:F:1552:PHE:HZ	1.66	0.49
5:F:1641:PHE:HA	5:F:1644:ASP:HB2	1.95	0.49
7:H:309:ARG:NH2	7:H:334:GLU:OE2	2.45	0.49
7:H:418:GLN:CD	8:I:718:THR:HG21	2.26	0.49
7:H:511:GLU:CB	8:I:800:HIS:HE1	2.24	0.49
7:H:522:TYR:CB	1:Z:55:GLN:N	2.75	0.49
6:J:398:VAL:CG2	7:K:462:ARG:CA	2.69	0.49
7:K:310:ALA:CB	7:K:352:ILE:HB	2.38	0.49
7:K:504:ASP:O	7:K:507:ASN:N	2.44	0.49
1:Z:771:ILE:CG2	1:Z:772:PRO:HD2	2.42	0.49
1:A:54:PHE:HA	1:A:57:ARG:HD3	1.94	0.49
5:F:334:GLN:HG2	5:F:860:ASN:HD21	1.73	0.49
5:F:472:ILE:HG23	5:F:474:LEU:H	1.76	0.49
5:F:665:GLU:HA	5:F:668:ARG:HG2	1.94	0.49
5:F:959:LEU:CB	6:G:325:TYR:HB2	2.43	0.49
7:H:344:SER:O	7:H:347:THR:OG1	2.31	0.49
3:D:175:ILE:CD1	3:D:642:LEU:HB2	2.36	0.49
3:D:499:LEU:CB	3:D:502:SER:HB3	2.35	0.49
3:D:586:LEU:HD11	3:D:592:TYR:HA	1.94	0.49
3:D:753:PRO:HD2	3:D:756:LYS:CD	2.40	0.49
3:D:896:MET:O	3:D:900:VAL:HG23	2.13	0.49
3:D:971:ILE:HD11	3:D:984:THR:CG2	2.43	0.49
3:D:1494:ASN:O	5:F:1471:LYS:CE	2.59	0.49
5:F:288:TRP:O	5:F:295:ARG:NH2	2.45	0.49
5:F:334:GLN:HE22	5:F:859:LYS:HZ3	1.46	0.49
5:F:1269:GLU:O	5:F:1273:LYS:HB3	2.13	0.49
6:G:449:LEU:HD23	1:Z:84:ASP:OD1	2.12	0.49
6:J:350:PHE:HD1	7:K:419:LEU:HD12	1.73	0.49
8:L:774:ASN:HA	8:L:777:ASN:HB2	1.95	0.49
4:E:1460:LEU:O	4:E:1463:SER:OG	2.31	0.49
5:F:159:LYS:CE	5:F:363:ASP:CA	2.88	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:914:ASP:HA	5:F:917:PHE:HB2	1.93	0.49
7:H:315:LYS:HA	7:H:347:THR:HA	1.95	0.49
6:J:376:LYS:NZ	8:L:756:ASN:ND2	2.57	0.49
7:K:430:GLY:C	7:K:432:ALA:N	2.65	0.49
1:Z:140:ILE:HA	1:Z:143:ASN:HB3	1.93	0.49
1:A:270:ILE:HD13	1:A:486:GLY:HA3	1.95	0.49
3:D:1468:TYR:N	1:Z:621:HIS:CE1	2.77	0.49
4:E:795:ILE:O	4:E:798:SER:OG	2.29	0.49
4:E:994:ILE:HG13	4:E:995:LEU:HD12	1.95	0.49
5:F:161:GLN:HA	5:F:164:LYS:HG3	1.94	0.49
5:F:914:ASP:CA	5:F:917:PHE:CB	2.85	0.49
5:F:1373:ASP:O	5:F:1375:GLY:N	2.45	0.49
5:F:1671:VAL:HG13	1:Z:149:ALA:HB1	1.94	0.49
6:G:395:GLU:HA	6:G:398:VAL:HB	1.95	0.49
6:G:436:LEU:HD13	7:H:503:ASN:CB	2.43	0.49
1:Z:211:LYS:CB	1:Z:246:ASN:O	2.60	0.49
3:D:449:ASN:ND2	3:D:461:ARG:HB2	2.27	0.48
3:D:578:VAL:O	3:D:596:ALA:HA	2.12	0.48
3:D:745:ILE:HG13	3:D:746:THR:H	1.77	0.48
3:D:836:LYS:HB2	3:D:914:TYR:CD1	2.47	0.48
5:F:835:LYS:HD3	5:F:835:LYS:N	2.28	0.48
5:F:1465:GLN:HG3	5:F:1527:ARG:NH2	2.28	0.48
6:J:364:ILE:C	7:K:424:ASN:ND2	2.65	0.48
6:J:380:TYR:O	6:J:380:TYR:CD1	2.66	0.48
7:K:538:LYS:CB	8:L:821:ILE:HG22	2.42	0.48
1:Z:223:ASN:ND2	1:Z:555:GLU:OE2	2.35	0.48
1:Z:275:LYS:NZ	1:Z:441:MET:SD	2.81	0.48
1:A:341:LEU:HD21	1:A:371:PHE:HZ	1.78	0.48
1:A:642:LEU:HA	1:A:645:GLN:CD	2.33	0.48
3:D:421:VAL:HG21	3:D:490:LYS:CB	2.41	0.48
3:D:453:GLY:O	3:D:456:ASN:N	2.45	0.48
3:D:539:SER:HA	3:D:545:GLN:NE2	2.29	0.48
4:E:1598:LEU:O	4:E:1602:LEU:HB2	2.13	0.48
5:F:866:GLN:HA	5:F:869:VAL:HG12	1.95	0.48
5:F:923:VAL:HG23	5:F:925:HIS:H	1.77	0.48
6:G:428:ASN:HD21	6:G:432:LEU:HD23	1.78	0.48
8:L:638:ASP:HA	8:L:641:VAL:CG2	2.42	0.48
2:C:914:GLN:HE21	2:C:953:ILE:HG23	1.78	0.48
3:D:503:GLU:OE1	3:D:508:LYS:HD3	2.14	0.48
3:D:919:VAL:CG2	3:D:927:LEU:H	2.26	0.48
4:E:570:GLN:HE21	4:E:622:LEU:HB3	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:1304:HIS:CG	5:F:1304:HIS:O	2.66	0.48
6:G:449:LEU:HD23	1:Z:84:ASP:CB	2.42	0.48
8:I:795:LYS:CE	8:I:799:SER:HB3	2.43	0.48
6:J:370:ASP:HA	6:J:373:PHE:CG	2.48	0.48
1:Z:305:ILE:HG21	1:Z:336:LEU:HA	1.94	0.48
1:A:315:LYS:HD2	1:A:319:SER:OG	2.13	0.48
1:A:571:LEU:O	1:A:574:GLU:HG3	2.13	0.48
3:D:539:SER:HA	3:D:545:GLN:HE22	1.78	0.48
4:E:573:LEU:HD22	4:E:637:VAL:HG13	1.96	0.48
4:E:1063:ASP:N	4:E:1063:ASP:OD1	2.44	0.48
5:F:922:LEU:HD12	5:F:922:LEU:N	2.23	0.48
5:F:951:ARG:NE	5:F:951:ARG:CA	2.76	0.48
1:Z:761:SER:C	1:Z:763:LEU:H	2.15	0.48
1:A:140:ILE:HG22	4:E:1393:LYS:CE	2.43	0.48
1:A:413:LYS:HD2	1:A:425:ILE:HD11	1.94	0.48
3:D:927:LEU:HD13	3:D:973:ARG:NH2	2.29	0.48
4:E:134:ARG:NH1	4:E:198:MET:SD	2.87	0.48
4:E:1259:PHE:C	4:E:1259:PHE:HD1	2.16	0.48
4:E:1384:ASP:HA	4:E:1388:LEU:HB2	1.96	0.48
5:F:291:GLU:HG3	5:F:295:ARG:HG2	1.95	0.48
5:F:1463:LEU:HD12	5:F:1463:LEU:HA	1.73	0.48
6:J:324:GLN:HA	6:J:327:LYS:CE	2.35	0.48
6:J:389:ARG:CZ	6:J:389:ARG:HB3	2.44	0.48
1:Z:494:TYR:O	1:Z:497:THR:OG1	2.27	0.48
1:A:25:LEU:HD23	1:A:25:LEU:C	2.33	0.48
3:D:481:LEU:CD2	3:D:488:GLN:HB3	2.43	0.48
4:E:936:LEU:O	4:E:940:SER:OG	2.26	0.48
5:F:971:SER:OG	5:F:972:VAL:N	2.46	0.48
7:H:292:VAL:HG22	8:I:644:TRP:HZ3	1.79	0.48
8:I:795:LYS:HZ3	8:I:795:LYS:HA	1.78	0.48
7:K:535:LYS:O	7:K:539:ASN:N	2.43	0.48
3:D:491:ARG:HA	3:D:520:THR:HB	1.96	0.48
3:D:976:THR:CB	3:D:981:ILE:CB	2.91	0.48
5:F:927:GLY:HA3	5:F:978:ILE:HD11	1.95	0.48
5:F:1058:ALA:C	5:F:1060:LEU:H	2.16	0.48
6:J:283:TYR:O	6:J:286:LYS:HG2	2.14	0.48
6:J:445:GLU:O	6:J:449:LEU:HB2	2.13	0.48
1:A:829:TYR:CD1	1:A:829:TYR:C	2.85	0.48
3:D:503:GLU:HB2	3:D:507:LEU:N	2.29	0.48
4:E:675:TYR:HA	4:E:678:LYS:HG2	1.96	0.48
5:F:837:TYR:CG	5:F:918:PHE:CZ	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:1529:ALA:HB2	5:F:1611:VAL:HG22	1.95	0.48
6:G:465:LYS:HE3	1:Z:20:LYS:HE2	1.94	0.48
8:I:750:THR:O	8:I:754:ASN:ND2	2.46	0.48
8:I:814:LEU:HD21	1:Z:59:LYS:HA	1.96	0.48
6:J:390:ILE:HG23	6:J:394:ILE:HG23	1.94	0.48
7:K:433:GLU:HB3	7:K:437:TRP:CZ3	2.49	0.48
1:Z:341:LEU:HD22	1:Z:415:ILE:HD11	1.96	0.48
1:Z:753:ALA:HB2	1:Z:815:ILE:CB	2.43	0.48
1:Z:767:ILE:HD12	1:Z:768:VAL:HG23	1.95	0.48
1:A:18:ALA:HA	1:A:21:LYS:HB2	1.96	0.48
1:A:128:LEU:CD1	4:E:1260:TYR:OH	2.44	0.48
1:A:342:ARG:NE	1:A:434:ASP:OD1	2.41	0.48
1:A:723:ILE:HG23	1:A:735:THR:HG23	1.96	0.48
2:C:1216:TYR:HB2	2:C:1241:LEU:HD13	1.95	0.48
3:D:585:ILE:HG12	3:D:591:LYS:HB2	1.94	0.48
3:D:628:PHE:O	3:D:779:ARG:HD2	2.14	0.48
4:E:878:PHE:HZ	4:E:917:PRO:HB3	1.77	0.48
5:F:275:VAL:HA	5:F:278:ILE:HB	1.96	0.48
5:F:320:GLU:CD	5:F:351:HIS:CE1	2.87	0.48
5:F:965:LEU:O	5:F:965:LEU:HG	2.13	0.48
5:F:1031:VAL:CB	6:G:314:TYR:O	2.61	0.48
5:F:1300:LEU:HD23	5:F:1301:SER:HA	1.96	0.48
6:J:384:LEU:CD2	7:K:455:LYS:HG2	2.43	0.48
6:J:398:VAL:CG2	7:K:462:ARG:O	2.62	0.48
7:K:314:ASN:H	7:K:349:PRO:HA	1.79	0.48
8:L:774:ASN:HB3	8:L:795:LYS:HE2	1.96	0.48
8:L:777:ASN:HD22	8:L:795:LYS:HA	1.79	0.48
3:D:538:SER:OG	3:D:545:GLN:HB2	2.14	0.48
3:D:910:LEU:HA	3:D:913:LEU:HD12	1.96	0.48
3:D:1238:ARG:CG	1:Z:830:SER:HB2	2.40	0.48
4:E:1022:TYR:CD2	4:E:1026:THR:HG22	2.38	0.48
4:E:1499:LEU:HA	4:E:1502:ILE:HG12	1.95	0.48
5:F:925:HIS:HA	5:F:928:LEU:CD1	2.44	0.48
5:F:929:TYR:C	5:F:931:GLY:H	2.17	0.48
5:F:1027:GLN:HG3	5:F:1027:GLN:O	2.13	0.48
5:F:1147:PHE:C	5:F:1147:PHE:CD1	2.85	0.48
5:F:1493:LYS:HD2	5:F:1493:LYS:HA	1.66	0.48
6:G:380:TYR:HA	6:G:383:LYS:HE3	1.95	0.48
7:H:426:GLY:CA	8:I:735:ASN:C	2.83	0.48
8:I:778:LYS:HA	8:I:778:LYS:NZ	2.29	0.48
8:I:805:ARG:CB	1:Z:88:LYS:HZ3	2.24	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Z:18:ALA:HA	1:Z:21:LYS:HB2	1.95	0.48
1:Z:641:ILE:HD13	1:Z:656:LEU:HD12	1.96	0.48
1:Z:771:ILE:HG22	1:Z:772:PRO:HD2	1.94	0.48
1:A:255:GLU:HB3	1:A:480:GLN:HE21	1.79	0.47
3:D:315:THR:HG22	3:D:317:SER:H	1.79	0.47
3:D:426:VAL:CG2	3:D:437:VAL:HG23	2.44	0.47
4:E:18:VAL:HA	4:E:40:ILE:HD11	1.96	0.47
4:E:1345:SER:O	4:E:1349:TYR:HB2	2.14	0.47
5:F:1289:ILE:HD12	5:F:1289:ILE:HA	1.64	0.47
7:K:313:TYR:HA	7:K:349:PRO:CB	2.40	0.47
1:A:301:ASN:HA	1:A:304:LYS:HE3	1.96	0.47
3:D:442:GLY:O	3:D:468:PRO:HG3	2.15	0.47
4:E:1163:LEU:HB3	4:E:1173:TRP:HH2	1.78	0.47
5:F:1439:GLU:O	5:F:1443:ASN:N	2.34	0.47
5:F:1550:LEU:CD1	5:F:1552:PHE:CZ	2.97	0.47
6:G:315:LEU:HD23	8:I:679:LEU:HD23	1.95	0.47
8:L:769:ILE:HA	8:L:772:VAL:HG12	1.95	0.47
1:Z:116:LYS:HE2	1:Z:116:LYS:CA	2.44	0.47
1:Z:123:MET:SD	1:Z:123:MET:C	2.93	0.47
1:Z:271:VAL:HG22	1:Z:459:LEU:HD22	1.96	0.47
1:Z:786:ILE:CD1	1:Z:838:SER:HA	2.44	0.47
3:D:517:LEU:HB2	3:D:540:GLN:OE1	2.14	0.47
3:D:789:VAL:HG11	3:D:952:LEU:CD1	2.44	0.47
3:D:917:SER:OG	3:D:975:ILE:HA	2.15	0.47
4:E:1260:TYR:O	4:E:1260:TYR:CD1	2.67	0.47
5:F:951:ARG:NE	5:F:951:ARG:HA	2.29	0.47
5:F:1370:LEU:C	5:F:1371:ILE:HG12	2.33	0.47
6:J:300:ASP:HA	6:J:303:GLU:OE1	2.14	0.47
7:K:427:LEU:H	7:K:428:PRO:HD3	1.79	0.47
7:K:538:LYS:CB	8:L:822:LYS:CB	2.85	0.47
1:Z:810:ALA:O	1:Z:836:ASP:CB	2.62	0.47
3:D:445:ARG:HH11	3:D:466:LYS:HB3	1.79	0.47
4:E:105:GLU:O	4:E:109:ARG:N	2.47	0.47
4:E:725:LEU:HG	4:E:1169:ALA:HB3	1.97	0.47
4:E:954:ILE:HD11	4:E:1015:LYS:HE3	1.97	0.47
4:E:1031:LYS:HB2	4:E:1034:ILE:HG12	1.96	0.47
5:F:161:GLN:HB2	5:F:183:ARG:HH12	1.79	0.47
5:F:609:LEU:HA	5:F:612:LEU:HB2	1.96	0.47
6:J:326:LEU:HD22	8:L:689:SER:OG	2.14	0.47
2:C:888:LEU:HA	2:C:892:PHE:CD2	2.49	0.47
3:D:182:CYS:SG	3:D:195:ILE:HD11	2.55	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:893:ILE:O	3:D:897:ILE:HG13	2.15	0.47
5:F:710:LEU:HA	5:F:713:PHE:HB3	1.96	0.47
5:F:900:LEU:HD22	5:F:904:TYR:CE2	2.49	0.47
5:F:1486:LEU:HA	5:F:1489:ILE:HB	1.96	0.47
6:G:353:LEU:HD11	6:G:365:SER:HB2	1.97	0.47
7:H:492:ASP:O	7:H:493:SER:CB	2.62	0.47
6:J:311:ASP:HA	6:J:314:TYR:CG	2.48	0.47
8:L:818:ILE:HA	8:L:821:ILE:HG22	1.97	0.47
1:Z:710:ASN:OD1	1:Z:710:ASN:N	2.48	0.47
1:A:687:LEU:HA	1:A:690:ARG:HG2	1.96	0.47
3:D:1376:LYS:CB	1:Z:762:ASN:CB	2.93	0.47
4:E:803:LEU:HG	4:E:807:LEU:HD12	1.96	0.47
4:E:1200:GLU:HA	4:E:1203:THR:HG22	1.97	0.47
5:F:110:ARG:NH2	5:F:190:TYR:OH	2.47	0.47
5:F:1392:ILE:CB	5:F:1405:PHE:HE2	2.28	0.47
8:I:738:ASP:O	8:I:740:LYS:HG3	2.14	0.47
7:K:446:ARG:C	7:K:446:ARG:HD3	2.34	0.47
1:A:133:THR:O	1:A:134:LYS:C	2.52	0.47
2:C:285:GLU:HB2	2:C:304:LEU:HD11	1.96	0.47
3:D:412:ILE:HG13	3:D:413:LEU:CD1	2.43	0.47
3:D:568:GLN:NE2	3:D:573:GLN:HG2	2.30	0.47
3:D:911:ASN:HA	3:D:914:TYR:CE2	2.49	0.47
4:E:51:LEU:HA	4:E:109:ARG:HD3	1.97	0.47
4:E:141:LEU:HD11	4:E:195:LEU:HD13	1.97	0.47
4:E:604:PRO:HG3	4:E:666:PRO:HG2	1.95	0.47
4:E:1166:VAL:HG23	4:E:1167:LEU:HD23	1.96	0.47
4:E:1608:HIS:HB3	4:E:1611:TYR:HB3	1.97	0.47
5:F:46:ALA:O	5:F:50:GLN:CB	2.62	0.47
5:F:219:HIS:NE2	5:F:222:GLU:OE2	2.48	0.47
5:F:665:GLU:HG2	5:F:668:ARG:HG3	1.97	0.47
5:F:850:GLN:HA	5:F:853:ILE:HD12	1.97	0.47
5:F:907:HIS:CB	7:H:410:LYS:HD3	2.44	0.47
5:F:938:ALA:O	5:F:941:SER:OG	2.22	0.47
5:F:1058:ALA:C	5:F:1060:LEU:N	2.67	0.47
5:F:1506:ILE:HG22	5:F:1507:ASN:H	1.79	0.47
6:G:404:ASP:CB	6:G:425:GLU:O	2.63	0.47
7:H:472:ASN:O	7:H:476:GLN:CB	2.63	0.47
8:I:792:GLN:O	8:I:794:ILE:N	2.46	0.47
8:I:795:LYS:CA	8:I:795:LYS:HZ3	2.28	0.47
6:J:277:ILE:HD12	6:J:280:LEU:HD23	1.97	0.47
6:J:376:LYS:HD2	6:J:376:LYS:C	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:J:389:ARG:HH11	6:J:389:ARG:CG	2.23	0.47
8:L:661:LYS:HE2	8:L:665:TRP:CH2	2.50	0.47
1:Z:133:THR:O	1:Z:134:LYS:C	2.52	0.47
1:Z:539:ALA:HA	1:Z:542:THR:HG22	1.97	0.47
1:Z:551:ARG:HH12	1:Z:607:ARG:HH12	1.63	0.47
1:Z:807:LYS:CB	1:Z:836:ASP:O	2.63	0.47
1:A:193:LEU:HB3	1:A:546:ARG:NH1	2.30	0.47
1:A:615:ASP:HB2	1:A:618:GLU:HG3	1.97	0.47
1:A:688:LEU:O	1:A:692:MET:HG2	2.14	0.47
3:D:447:TYR:O	3:D:462:LEU:HD12	2.15	0.47
3:D:1465:ILE:HG23	3:D:1487:TYR:CZ	2.49	0.47
5:F:21:ASP:HB2	5:F:24:LEU:HB2	1.97	0.47
5:F:711:GLN:NE2	5:F:714:HIS:HB2	2.29	0.47
5:F:1423:SER:HA	5:F:1426:VAL:HG12	1.97	0.47
6:G:295:LYS:NZ	6:J:363:LYS:HZ3	2.12	0.47
7:K:358:LEU:O	7:K:362:ASN:ND2	2.48	0.47
8:L:643:LYS:CG	8:L:647:GLN:HE22	2.23	0.47
2:C:1389:GLY:HA2	4:E:1331:LEU:CD1	2.45	0.47
3:D:149:GLU:OE2	3:D:653:ARG:NH1	2.37	0.47
3:D:903:ILE:HG12	3:D:953:PHE:CG	2.50	0.47
4:E:33:ASP:OD2	4:E:946:TRP:NE1	2.40	0.47
4:E:1380:ASP:C	4:E:1382:THR:N	2.68	0.47
5:F:623:VAL:HG11	5:F:626:ASP:HB2	1.97	0.47
5:F:1622:VAL:HA	5:F:1625:THR:HG22	1.97	0.47
8:I:694:ASP:OD2	8:I:698:GLN:NE2	2.37	0.47
7:K:312:VAL:CG1	7:K:361:ARG:HH21	2.27	0.47
1:Z:574:GLU:HA	1:Z:577:ARG:HB2	1.96	0.47
1:A:16:LYS:CD	6:J:468:ALA:HA	2.45	0.47
1:A:817:ALA:CB	1:A:832:LEU:HD13	2.45	0.47
3:D:830:SER:CB	3:D:934:SER:HB3	2.38	0.47
5:F:655:LYS:HG3	5:F:708:GLY:HA2	1.95	0.47
5:F:1210:LYS:HB2	5:F:1289:ILE:HD11	1.96	0.47
5:F:1249:ILE:HA	5:F:1252:VAL:HG12	1.95	0.47
6:J:383:LYS:HZ1	8:L:756:ASN:HA	0.47	0.47
1:Z:138:ASN:C	1:Z:138:ASN:HD22	2.19	0.47
4:E:1052:LYS:HZ2	4:E:1068:LEU:HD23	1.79	0.46
4:E:1484:LYS:HZ2	4:E:1486:GLU:HB2	1.80	0.46
4:E:1558:GLN:NE2	4:E:1590:ASP:OD1	2.48	0.46
5:F:228:PHE:CE2	5:F:359:GLN:HA	2.50	0.46
5:F:657:ILE:O	5:F:712:LEU:CD1	2.56	0.46
5:F:1104:ASN:O	5:F:1108:ARG:NH1	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:1281:LYS:HD2	5:F:1281:LYS:HA	1.54	0.46
5:F:1635:ARG:HA	5:F:1635:ARG:HD2	1.55	0.46
6:J:432:LEU:CA	8:L:782:ILE:HA	2.45	0.46
7:K:402:GLN:CA	7:K:402:GLN:NE2	2.76	0.46
7:K:413:LEU:HG	8:L:749:GLN:HE21	1.80	0.46
3:D:260:HIS:NE2	3:D:261:LEU:HD23	2.30	0.46
3:D:361:ILE:HD12	3:D:368:ILE:HG12	1.97	0.46
3:D:611:LEU:CG	3:D:640:ALA:HB2	2.45	0.46
3:D:797:ARG:NH2	3:D:799:THR:OG1	2.49	0.46
5:F:10:THR:O	5:F:14:SER:CB	2.63	0.46
5:F:975:SER:HA	5:F:978:ILE:HG22	1.97	0.46
5:F:1014:SER:N	8:I:788:ASP:H	2.12	0.46
5:F:1167:LYS:HE3	5:F:1167:LYS:CA	2.27	0.46
5:F:1283:LYS:NZ	5:F:1286:PHE:HB3	2.30	0.46
7:H:312:VAL:HG12	7:H:361:ARG:HH21	1.80	0.46
8:I:788:ASP:N	8:I:788:ASP:OD1	2.49	0.46
6:J:293:HIS:CB	7:K:359:ASN:HD21	2.27	0.46
6:J:433:LYS:CA	7:K:499:GLY:HA2	2.44	0.46
7:K:310:ALA:HB3	7:K:352:ILE:CB	2.40	0.46
8:L:664:SER:HA	8:L:667:GLN:HE21	1.80	0.46
1:A:269:ASN:HB3	1:A:272:GLU:HB2	1.96	0.46
1:A:420:LEU:HD13	1:A:457:TYR:HB2	1.97	0.46
3:D:125:SER:OG	3:D:734:LEU:HD13	2.15	0.46
4:E:207:ASP:O	4:E:211:GLN:HB2	2.15	0.46
4:E:284:ILE:HD11	4:E:328:ILE:HD12	1.96	0.46
4:E:1160:ILE:HG13	4:E:1161:PRO:HD3	1.98	0.46
5:F:425:ASP:OD1	5:F:425:ASP:N	2.48	0.46
5:F:538:GLU:O	5:F:542:ASN:ND2	2.49	0.46
5:F:902:LYS:HE2	7:H:414:LYS:HD2	0.67	0.46
8:I:821:ILE:HD13	8:I:821:ILE:O	2.16	0.46
1:Z:192:ILE:HG22	1:Z:539:ALA:HB3	1.97	0.46
1:Z:210:GLU:O	1:Z:214:ASN:ND2	2.49	0.46
1:Z:306:LYS:HE2	1:Z:331:VAL:HG22	1.97	0.46
1:A:810:ALA:HB1	1:A:836:ASP:OD1	2.15	0.46
3:D:495:PHE:O	3:D:499:LEU:HG	2.16	0.46
4:E:458:LYS:HG3	4:E:562:TRP:HE1	1.81	0.46
4:E:1503:VAL:HA	4:E:1506:LEU:HG	1.96	0.46
5:F:322:ILE:HA	5:F:325:PHE:HB3	1.97	0.46
5:F:750:TRP:CG	5:F:750:TRP:O	2.68	0.46
5:F:1364:TYR:O	5:F:1364:TYR:CD1	2.68	0.46
6:G:310:ARG:NE	6:G:314:TYR:OH	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:J:281:ASP:HA	6:J:284:ILE:CD1	2.31	0.46
6:J:371:LYS:C	6:J:371:LYS:CE	2.84	0.46
6:J:434:THR:OG1	6:J:435:GLY:N	2.47	0.46
3:D:430:GLU:HA	3:D:624:PHE:CD2	2.50	0.46
3:D:608:ILE:CD1	3:D:641:VAL:HG22	2.46	0.46
3:D:713:ILE:HD12	3:D:769:ARG:CG	2.46	0.46
4:E:596:LYS:O	4:E:600:ASN:ND2	2.49	0.46
5:F:154:GLN:HG3	5:F:190:TYR:HE2	1.81	0.46
5:F:320:GLU:CD	5:F:351:HIS:HD1	2.19	0.46
5:F:439:LEU:HA	5:F:442:ILE:HG22	1.97	0.46
5:F:1406:TYR:OH	5:F:1452:SER:O	2.33	0.46
8:I:822:LYS:HG3	8:I:822:LYS:O	2.15	0.46
6:J:353:LEU:HD12	7:K:423:LYS:HG2	1.98	0.46
7:K:301:PRO:HB3	7:K:353:TYR:O	2.16	0.46
7:K:379:ILE:C	7:K:382:LYS:H	2.19	0.46
7:K:447:SER:CB	8:L:751:LEU:CD1	2.94	0.46
1:Z:697:PHE:HA	1:Z:703:SER:HB3	1.96	0.46
1:Z:807:LYS:CB	1:Z:837:VAL:C	2.84	0.46
2:C:229:ASP:CG	2:C:252:LYS:HE2	2.36	0.46
3:D:234:ILE:HD12	3:D:243:PHE:CE2	2.51	0.46
3:D:430:GLU:OE2	3:D:528:PRO:HA	2.16	0.46
4:E:1029:ASN:HD22	7:K:475:SER:CB	2.26	0.46
4:E:1086:ILE:HD11	4:E:1096:ILE:HB	1.97	0.46
5:F:319:ILE:HD11	5:F:477:ASP:HB2	1.97	0.46
5:F:526:PHE:HA	5:F:529:MET:HB3	1.97	0.46
5:F:1110:MET:CE	5:F:1157:TRP:CZ2	2.99	0.46
7:K:399:LEU:HD12	7:K:399:LEU:C	2.35	0.46
1:Z:768:VAL:HA	1:Z:771:ILE:CD1	2.41	0.46
1:A:563:ASN:O	1:A:564:GLU:HG3	2.15	0.46
3:D:503:GLU:OE1	3:D:503:GLU:N	2.45	0.46
3:D:519:THR:HG21	3:D:605:VAL:N	2.31	0.46
3:D:863:ILE:CD1	3:D:887:GLN:HG3	2.46	0.46
4:E:100:GLU:O	4:E:104:SER:OG	2.26	0.46
5:F:303:LYS:HA	5:F:306:VAL:HG22	1.96	0.46
5:F:334:GLN:HE21	5:F:859:LYS:HZ3	1.26	0.46
5:F:750:TRP:O	5:F:750:TRP:CD1	2.69	0.46
5:F:1136:LYS:CB	5:F:1207:CYS:HA	2.45	0.46
7:H:386:LEU:HG	8:I:690:GLN:HE21	1.81	0.46
6:J:371:LYS:C	6:J:371:LYS:HZ2	2.09	0.46
6:J:431:GLN:C	7:K:499:GLY:H	2.19	0.46
1:Z:820:ILE:O	1:Z:822:TYR:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:238:PHE:HZ	1:A:505:HIS:CD2	2.34	0.46
3:D:462:LEU:HD21	3:D:465:ILE:CG2	2.46	0.46
4:E:559:PHE:HZ	4:E:567:ARG:HH22	1.64	0.46
4:E:851:SER:O	4:E:851:SER:OG	2.33	0.46
5:F:671:PHE:HA	5:F:674:PHE:HB2	1.96	0.46
5:F:1067:ASN:ND2	5:F:1069:ASP:HB2	2.31	0.46
5:F:1139:ILE:HD12	5:F:1139:ILE:H	1.80	0.46
6:J:357:LEU:CD2	7:K:423:LYS:HE3	2.45	0.46
7:K:314:ASN:O	7:K:348:ILE:N	2.48	0.46
1:A:761:SER:CB	2:C:1355:SER:OG	2.64	0.46
3:D:515:VAL:HA	3:D:644:SER:HB3	1.97	0.46
4:E:1134:TRP:NE1	4:E:1170:ASP:OD2	2.40	0.46
5:F:98:THR:HG22	5:F:99:ALA:H	1.81	0.46
5:F:917:PHE:CD1	5:F:917:PHE:O	2.69	0.46
5:F:1363:ILE:C	5:F:1363:ILE:CD1	2.85	0.46
5:F:1480:MET:HG2	5:F:1537:ALA:HB1	1.98	0.46
7:K:483:VAL:O	7:K:493:SER:N	2.48	0.46
1:Z:86:PHE:N	1:Z:86:PHE:CD1	2.79	0.46
1:Z:555:GLU:HA	1:Z:607:ARG:HH21	1.81	0.46
3:D:1000:ASP:N	3:D:1000:ASP:OD1	2.49	0.46
4:E:393:THR:H	4:E:396:THR:HG22	1.80	0.46
5:F:564:ASP:N	5:F:564:ASP:OD1	2.49	0.46
8:I:778:LYS:HB2	8:I:794:ILE:CB	2.46	0.46
7:K:288:ILE:O	7:K:292:VAL:HG23	2.16	0.46
7:K:426:GLY:CA	8:L:738:ASP:HB3	2.45	0.46
7:K:429:LEU:HB2	8:L:741:ARG:NH2	2.31	0.46
1:Z:390:LEU:HD21	1:Z:416:GLY:HA2	1.96	0.46
1:A:140:ILE:CG2	4:E:1393:LYS:CE	2.94	0.45
1:A:210:GLU:OE2	1:A:214:ASN:ND2	2.49	0.45
1:A:469:TYR:HB3	1:A:473:ARG:HB2	1.97	0.45
2:C:914:GLN:HE21	2:C:953:ILE:CG2	2.29	0.45
3:D:665:ASN:CG	3:D:666:PRO:HD3	2.36	0.45
3:D:1494:ASN:O	5:F:1471:LYS:NZ	2.49	0.45
4:E:1038:LYS:HD2	4:E:1038:LYS:HA	1.78	0.45
5:F:159:LYS:CE	5:F:363:ASP:CB	2.93	0.45
5:F:1080:LEU:HG	5:F:1156:TYR:CD2	2.45	0.45
5:F:1608:ILE:HA	5:F:1612:LEU:HD13	1.98	0.45
7:H:318:GLU:CB	7:H:346:GLN:HA	2.46	0.45
6:J:405:LEU:HD22	7:K:469:ARG:NE	2.26	0.45
7:K:444:LEU:O	7:K:447:SER:CA	2.61	0.45
7:K:522:TYR:HA	7:K:525:GLU:HG2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Z:774:LEU:HD23	1:Z:774:LEU:O	2.14	0.45
1:A:354:VAL:HA	1:A:368:LEU:HD11	1.98	0.45
3:D:111:LEU:HD22	3:D:775:LEU:HD21	1.97	0.45
4:E:23:ASN:HD22	4:E:838:LYS:HD2	1.81	0.45
5:F:56:ILE:HD13	5:F:86:ILE:HD13	1.97	0.45
5:F:1034:LEU:HD22	5:F:1092:THR:CB	2.28	0.45
5:F:1036:PRO:CB	5:F:1042:ILE:H	2.30	0.45
5:F:1110:MET:HE3	5:F:1157:TRP:CZ2	2.48	0.45
5:F:1285:HIS:ND1	5:F:1285:HIS:C	2.70	0.45
7:H:314:ASN:HB2	7:H:361:ARG:HH22	1.82	0.45
7:H:412:ILE:CA	7:H:415:LEU:HB2	2.42	0.45
8:I:793:LEU:HA	8:I:796:ILE:HG13	1.97	0.45
8:I:795:LYS:HZ3	8:I:795:LYS:CB	2.29	0.45
6:J:275:GLN:NE2	6:J:278:GLU:OE1	2.49	0.45
7:K:315:LYS:CG	7:K:347:THR:HG22	2.46	0.45
8:L:684:VAL:HA	8:L:687:GLU:OE1	2.16	0.45
1:A:545:PHE:CD2	1:A:549:ASP:HB2	2.50	0.45
1:A:739:MET:O	1:A:742:LEU:HB2	2.16	0.45
1:A:749:ASP:HB2	2:C:1274:LYS:HZ3	1.81	0.45
3:D:789:VAL:HG21	3:D:952:LEU:CD1	2.47	0.45
4:E:279:ILE:HG23	4:E:281:GLN:HG2	1.97	0.45
4:E:624:THR:HG23	4:E:632:ALA:HB2	1.97	0.45
5:F:444:THR:HB	5:F:445:ASP:H	1.53	0.45
5:F:672:TRP:CD1	5:F:675:LEU:HD22	2.51	0.45
5:F:1090:PRO:HD3	5:F:1093:SER:OG	2.16	0.45
1:Z:88:LYS:O	1:Z:92:THR:HG23	2.15	0.45
1:A:138:ASN:HD22	1:A:138:ASN:C	2.19	0.45
1:A:679:ASP:HB3	1:A:684:ASN:HB2	1.99	0.45
2:C:229:ASP:CG	2:C:252:LYS:CE	2.85	0.45
4:E:174:VAL:HA	4:E:177:VAL:HG12	1.97	0.45
6:J:380:TYR:CD1	6:J:383:LYS:HD3	2.51	0.45
7:K:315:LYS:HB2	8:L:670:VAL:HB	1.99	0.45
7:K:404:ARG:CG	8:L:704:GLN:NE2	2.80	0.45
1:Z:555:GLU:OE1	1:Z:607:ARG:NH2	2.49	0.45
1:A:195:SER:OG	1:A:536:ASN:OD1	2.34	0.45
3:D:641:VAL:HB	3:D:648:GLU:CG	2.45	0.45
4:E:982:ILE:HD12	4:E:982:ILE:N	2.31	0.45
5:F:690:GLU:CG	8:I:722:LEU:CG	2.95	0.45
5:F:1048:LEU:O	5:F:1051:SER:OG	2.26	0.45
5:F:1157:TRP:O	5:F:1158:THR:C	2.55	0.45
5:F:1617:SER:O	5:F:1617:SER:OG	2.28	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:289:GLN:OE1	6:J:352:VAL:HG13	2.16	0.45
7:H:295:CYS:HA	7:H:298:SER:HB2	1.99	0.45
8:I:778:LYS:CG	8:I:794:ILE:CB	2.94	0.45
8:I:794:ILE:HA	8:I:797:LEU:CD1	2.46	0.45
7:K:466:LEU:O	7:K:470:ALA:N	2.40	0.45
1:Z:831:THR:HA	1:Z:834:ASN:HB2	1.98	0.45
1:A:48:GLU:CA	7:K:514:THR:HG21	2.47	0.45
1:A:630:ARG:O	1:A:634:ASP:N	2.41	0.45
1:A:654:ILE:HG13	1:A:706:ILE:HG21	1.98	0.45
3:D:100:PRO:HG2	3:D:898:LYS:NZ	2.32	0.45
3:D:393:ILE:HD11	3:D:460:LEU:HB2	1.98	0.45
4:E:504:ASP:OD1	4:E:524:LYS:NZ	2.49	0.45
4:E:696:GLY:HA2	5:F:1383:GLN:CB	2.47	0.45
4:E:772:THR:HA	4:E:775:PHE:HB2	1.99	0.45
4:E:1472:SER:HB2	4:E:1475:SER:H	1.81	0.45
5:F:1680:GLN:OE1	5:F:1680:GLN:HA	2.12	0.45
8:I:685:MET:O	8:I:688:HIS:ND1	2.44	0.45
7:K:316:VAL:H	7:K:347:THR:HA	1.81	0.45
7:K:466:LEU:O	7:K:469:ARG:N	2.49	0.45
1:Z:239:ILE:HD12	1:Z:258:LYS:HD3	1.99	0.45
1:A:128:LEU:CB	4:E:1260:TYR:HE2	2.26	0.45
3:D:434:LEU:HD22	3:D:447:TYR:HB3	1.99	0.45
3:D:437:VAL:HA	3:D:446:LEU:O	2.16	0.45
3:D:476:VAL:HG13	3:D:488:GLN:HG3	1.99	0.45
3:D:763:ASP:O	3:D:765:ILE:HG12	2.17	0.45
3:D:789:VAL:HA	3:D:949:PHE:CE1	2.51	0.45
3:D:873:SER:OG	3:D:877:VAL:HB	2.17	0.45
4:E:912:TRP:CD1	4:E:917:PRO:HD3	2.52	0.45
4:E:1356:LEU:CB	1:Z:453:VAL:CG2	2.94	0.45
5:F:859:LYS:HD2	5:F:860:ASN:H	1.81	0.45
5:F:920:ILE:HB	5:F:924:ALA:HA	1.97	0.45
5:F:1138:PHE:C	5:F:1140:GLU:H	2.20	0.45
5:F:1219:VAL:O	5:F:1221:LEU:N	2.44	0.45
7:H:298:SER:OG	7:H:305:LYS:O	2.25	0.45
7:H:470:ALA:O	7:H:474:SER:HB2	2.17	0.45
7:H:508:LYS:HD2	7:H:508:LYS:HA	1.43	0.45
6:J:384:LEU:C	6:J:384:LEU:CD2	2.85	0.45
1:Z:658:ASN:O	1:Z:662:SER:HB2	2.17	0.45
1:Z:767:ILE:H	1:Z:767:ILE:HG13	1.47	0.45
1:Z:771:ILE:CG2	1:Z:772:PRO:CD	2.93	0.45
4:E:53:GLU:HB2	4:E:140:LYS:HD2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:359:GLN:CB	5:F:421:ILE:HA	2.47	0.45
5:F:588:ASN:HB3	5:F:768:VAL:HG12	1.98	0.45
5:F:792:ASP:OD2	5:F:1244:ASN:ND2	2.43	0.45
5:F:900:LEU:C	5:F:900:LEU:CD1	2.82	0.45
5:F:1166:HIS:ND1	5:F:1166:HIS:C	2.70	0.45
6:J:284:ILE:O	6:J:288:VAL:HG23	2.17	0.45
1:Z:599:ARG:NE	1:Z:605:GLU:OE1	2.39	0.45
3:D:654:THR:O	3:D:658:ILE:HG13	2.16	0.45
4:E:1180:GLN:NE2	4:E:1181:THR:O	2.40	0.45
5:F:1472:GLU:OE2	5:F:1473:ASN:ND2	2.50	0.45
5:F:1638:ILE:HA	5:F:1641:PHE:CD2	2.52	0.45
6:J:389:ARG:NH1	6:J:389:ARG:CA	2.79	0.45
6:J:389:ARG:CZ	6:J:389:ARG:C	2.85	0.45
7:K:389:LYS:CA	7:K:393:ASP:CB	2.39	0.45
8:L:802:ASP:O	8:L:806:SER:CB	2.65	0.45
1:Z:542:THR:HG21	1:Z:557:LEU:HD21	1.99	0.45
1:A:775:LEU:HD22	1:A:832:LEU:HD11	1.99	0.45
3:D:615:PHE:CE2	3:D:627:GLU:HG2	2.52	0.45
5:F:320:GLU:OE2	5:F:351:HIS:ND1	2.50	0.45
7:H:527:LEU:C	7:H:527:LEU:CD2	2.85	0.45
6:J:404:ASP:O	6:J:408:ALA:CB	2.65	0.45
7:K:395:ALA:O	7:K:399:LEU:HB3	2.17	0.45
1:Z:239:ILE:O	1:Z:243:SER:OG	2.30	0.45
1:A:137:ASP:HB2	4:E:1386:LEU:HG	1.98	0.44
3:D:234:ILE:O	3:D:240:LEU:HD12	2.16	0.44
4:E:755:ASN:CB	5:F:1376:THR:OG1	2.64	0.44
4:E:955:PHE:O	4:E:959:LEU:HB2	2.17	0.44
4:E:963:LYS:HB2	4:E:963:LYS:HE3	1.84	0.44
4:E:1395:ILE:HD12	4:E:1398:VAL:HB	2.00	0.44
4:E:1421:ILE:HA	4:E:1424:LEU:HD23	1.99	0.44
5:F:23:ASP:OD1	5:F:23:ASP:N	2.47	0.44
5:F:943:ARG:HB3	5:F:947:LYS:NZ	2.32	0.44
5:F:1495:THR:HA	5:F:1498:LEU:HB2	1.97	0.44
6:G:427:GLU:HB3	8:I:779:THR:HG21	1.99	0.44
7:H:451:ALA:O	7:H:455:LYS:N	2.45	0.44
8:I:795:LYS:HZ3	8:I:795:LYS:HB2	1.82	0.44
6:J:286:LYS:O	6:J:290:ILE:HG12	2.18	0.44
6:J:372:PHE:O	6:J:372:PHE:CD1	2.69	0.44
7:K:389:LYS:HA	7:K:393:ASP:HB3	0.61	0.44
1:Z:27:GLU:OE2	1:Z:30:ASP:HB2	2.11	0.44
1:Z:54:PHE:HA	1:Z:57:ARG:CZ	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Z:661:LEU:HA	1:Z:664:THR:HG22	1.99	0.44
1:A:54:PHE:HA	1:A:57:ARG:CD	2.47	0.44
1:A:123:MET:CB	6:J:413:ASN:CB	2.95	0.44
1:A:125:ILE:CB	4:E:1212:THR:OG1	2.65	0.44
1:A:128:LEU:CB	4:E:1260:TYR:CE2	3.00	0.44
1:A:212:PHE:CE2	1:A:541:TYR:CZ	3.05	0.44
1:A:675:VAL:HA	1:A:684:ASN:HD21	1.81	0.44
3:D:123:GLU:HG2	3:D:124:ARG:H	1.82	0.44
3:D:910:LEU:HD23	3:D:913:LEU:CD1	2.38	0.44
3:D:937:SER:HB3	3:D:941:GLN:CB	2.43	0.44
4:E:495:ASP:HB2	4:E:529:LYS:HG3	1.99	0.44
6:G:289:GLN:CD	6:J:352:VAL:HG22	2.32	0.44
6:J:364:ILE:HG23	7:K:424:ASN:HB3	1.99	0.44
1:Z:12:SER:O	1:Z:12:SER:OG	2.31	0.44
1:A:739:MET:SD	1:A:778:THR:OG1	2.63	0.44
3:D:399:SER:O	3:D:407:ALA:HB2	2.17	0.44
3:D:445:ARG:O	3:D:465:ILE:HA	2.18	0.44
3:D:527:SER:HB2	3:D:614:LEU:HD22	1.99	0.44
4:E:1071:LYS:HD3	4:E:1071:LYS:HA	1.82	0.44
5:F:159:LYS:HE3	5:F:363:ASP:CB	2.45	0.44
5:F:253:LYS:NZ	5:F:257:SER:OG	2.44	0.44
5:F:378:ALA:O	5:F:383:ASN:OD1	2.35	0.44
5:F:1118:ARG:NH1	5:F:1118:ARG:CG	2.80	0.44
5:F:1285:HIS:O	5:F:1285:HIS:CG	2.70	0.44
6:J:389:ARG:NH1	6:J:389:ARG:C	2.71	0.44
8:L:638:ASP:HA	8:L:641:VAL:HG23	1.99	0.44
1:Z:766:ASN:O	1:Z:769:LYS:N	2.50	0.44
1:Z:792:SER:OG	1:Z:799:LYS:NZ	2.43	0.44
1:A:16:LYS:CG	6:J:468:ALA:HA	2.47	0.44
1:A:333:ILE:HG13	1:A:334:TRP:N	2.33	0.44
1:A:644:TYR:O	1:A:648:GLU:N	2.51	0.44
3:D:716:VAL:HB	3:D:885:ALA:HB1	1.99	0.44
3:D:878:ILE:HG22	3:D:879:ASP:H	1.83	0.44
3:D:908:SER:O	3:D:911:ASN:HB3	2.17	0.44
4:E:300:SER:O	4:E:304:ASN:HB2	2.16	0.44
4:E:1020:ILE:HA	4:E:1023:VAL:HG12	1.98	0.44
5:F:48:ARG:NH1	5:F:85:GLU:OE2	2.48	0.44
5:F:210:LYS:HE2	5:F:210:LYS:HB3	1.78	0.44
5:F:389:LEU:C	5:F:389:LEU:CD1	2.86	0.44
5:F:841:PHE:HE2	5:F:918:PHE:CE1	2.22	0.44
5:F:1084:LEU:CB	5:F:1156:TYR:CE1	3.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:1359:PHE:O	5:F:1359:PHE:CG	2.69	0.44
7:H:313:TYR:HD1	7:H:349:PRO:HB3	1.82	0.44
7:H:455:LYS:O	7:H:459:LEU:HB2	2.17	0.44
6:J:300:ASP:O	6:J:304:LEU:HD13	2.17	0.44
6:J:372:PHE:CD2	6:J:372:PHE:C	2.89	0.44
1:A:589:LEU:O	1:A:604:ILE:HG22	2.17	0.44
4:E:442:LEU:HD23	4:E:442:LEU:HA	1.86	0.44
5:F:148:PHE:HA	5:F:151:ILE:HG12	1.99	0.44
5:F:365:LYS:HA	5:F:369:GLN:CB	2.47	0.44
5:F:663:LYS:HA	5:F:720:HIS:CE1	2.53	0.44
5:F:905:SER:CB	8:I:753:GLU:HB2	2.48	0.44
5:F:1026:PHE:HD2	5:F:1034:LEU:HD11	1.83	0.44
5:F:1026:PHE:HE1	5:F:1049:LEU:HD11	1.83	0.44
5:F:1084:LEU:CB	5:F:1156:TYR:CZ	3.00	0.44
5:F:1606:GLN:O	5:F:1610:ALA:CB	2.60	0.44
7:K:430:GLY:C	7:K:432:ALA:H	2.20	0.44
1:Z:357:LYS:HA	1:Z:360:ILE:HB	2.00	0.44
1:Z:807:LYS:C	1:Z:836:ASP:O	2.56	0.44
3:D:617:ALA:HB1	3:D:782:ARG:HH22	1.82	0.44
4:E:1122:PHE:HA	4:E:1125:GLU:HG2	1.99	0.44
4:E:1379:GLU:OE1	4:E:1383:GLN:NE2	2.50	0.44
5:F:56:ILE:HG13	5:F:66:VAL:HG21	2.00	0.44
5:F:351:HIS:O	5:F:351:HIS:CG	2.70	0.44
5:F:881:THR:HA	5:F:885:GLU:HB3	2.00	0.44
5:F:1068:ILE:CD1	5:F:1150:PHE:CE2	3.00	0.44
5:F:1191:SER:HB3	5:F:1192:VAL:H	1.51	0.44
5:F:1286:PHE:O	5:F:1286:PHE:CD1	2.70	0.44
1:Z:822:TYR:HB3	1:Z:824:MET:CE	2.48	0.44
1:A:193:LEU:CD1	1:A:578:GLU:HG3	2.48	0.44
1:A:628:ALA:HB1	1:A:644:TYR:CE2	2.53	0.44
3:D:331:ILE:O	3:D:334:VAL:HG23	2.18	0.44
3:D:445:ARG:NH1	3:D:466:LYS:HB3	2.32	0.44
3:D:735:SER:O	3:D:739:THR:OG1	2.32	0.44
4:E:22:MET:HA	4:E:26:ALA:HB3	1.99	0.44
4:E:119:ASN:N	4:E:119:ASN:OD1	2.50	0.44
4:E:1087:TYR:HB2	4:E:1213:THR:HG21	2.00	0.44
4:E:1359:ILE:HD12	4:E:1430:LEU:HD23	2.00	0.44
5:F:148:PHE:HE2	5:F:216:LEU:HD11	1.83	0.44
5:F:616:VAL:O	5:F:620:THR:OG1	2.24	0.44
5:F:1543:LEU:HD12	5:F:1543:LEU:O	2.18	0.44
5:F:1623:VAL:HA	5:F:1626:VAL:HG22	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:I:778:LYS:C	8:I:778:LYS:CD	2.85	0.44
7:K:315:LYS:CD	7:K:347:THR:HG22	2.48	0.44
7:K:413:LEU:HD21	8:L:749:GLN:HB3	2.00	0.44
3:D:353:GLN:HG2	3:D:374:LYS:H	1.82	0.44
3:D:929:PHE:HA	3:D:932:ILE:HG22	1.99	0.44
3:D:1494:ASN:N	5:F:1471:LYS:HE2	2.32	0.44
4:E:773:LEU:O	4:E:773:LEU:HD22	2.18	0.44
4:E:1305:ASN:OD1	4:E:1305:ASN:N	2.51	0.44
4:E:1475:SER:HA	4:E:1478:ILE:HD12	2.00	0.44
5:F:452:LYS:HA	5:F:452:LYS:HD2	1.70	0.44
5:F:1490:ARG:HE	5:F:1493:LYS:HB3	1.83	0.44
6:J:377:ILE:HG22	6:J:378:HIS:CD2	2.47	0.44
6:J:389:ARG:HH22	6:J:393:ASP:HB2	1.82	0.44
7:K:444:LEU:CA	7:K:447:SER:CB	2.95	0.44
8:L:637:LEU:O	8:L:641:VAL:HG23	2.18	0.44
1:Z:757:ALA:HA	1:Z:820:ILE:CB	2.47	0.44
1:A:137:ASP:OD2	4:E:1386:LEU:HG	2.16	0.44
1:A:341:LEU:HD21	1:A:371:PHE:CZ	2.53	0.44
5:F:659:ASN:N	5:F:659:ASN:OD1	2.51	0.44
5:F:1363:ILE:HG22	1:Z:125:ILE:HD11	1.97	0.44
6:J:277:ILE:HG12	8:L:641:VAL:HG22	1.99	0.44
6:J:391:LEU:CD1	7:K:455:LYS:HA	2.48	0.44
1:Z:391:HIS:HE2	1:Z:417:ARG:HB3	1.82	0.44
1:A:222:PHE:HD1	1:A:232:PHE:HB3	1.83	0.43
1:A:253:LEU:HG	1:A:257:TRP:CD1	2.53	0.43
1:A:760:PHE:HD2	1:A:823:ARG:HH11	1.66	0.43
3:D:713:ILE:CD1	3:D:769:ARG:HD3	2.48	0.43
3:D:936:VAL:O	3:D:936:VAL:HG12	2.18	0.43
4:E:773:LEU:HD23	4:E:773:LEU:HA	1.50	0.43
4:E:806:PHE:HE2	4:E:854:LEU:HD21	1.82	0.43
4:E:1430:LEU:O	4:E:1432:ARG:NH1	2.51	0.43
5:F:662:PRO:HA	5:F:668:ARG:HE	1.83	0.43
5:F:672:TRP:CE2	5:F:716:LEU:HD12	2.53	0.43
5:F:935:GLN:C	5:F:937:LEU:N	2.71	0.43
5:F:1227:THR:HA	7:H:472:ASN:CB	2.47	0.43
6:G:436:LEU:CD1	7:H:503:ASN:CB	2.96	0.43
7:H:394:THR:HA	8:I:697:LEU:HD22	2.00	0.43
7:H:511:GLU:HA	7:H:514:THR:CB	2.48	0.43
7:K:385:GLN:HA	7:K:385:GLN:NE2	2.23	0.43
8:L:682:ASP:HA	8:L:685:MET:HE2	2.00	0.43
1:Z:196:ASN:HD21	1:Z:530:ARG:NE	2.13	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:585:ILE:O	3:D:589:HIS:HB2	2.17	0.43
5:F:1349:PHE:N	5:F:1349:PHE:HD1	2.15	0.43
1:Z:436:LEU:HD21	1:Z:481:THR:HG23	2.00	0.43
1:Z:767:ILE:CD1	1:Z:768:VAL:HG23	2.49	0.43
3:D:568:GLN:NE2	3:D:570:VAL:O	2.52	0.43
3:D:608:ILE:CD1	3:D:641:VAL:HG13	2.48	0.43
3:D:781:LEU:HD11	3:D:903:ILE:HG21	2.00	0.43
3:D:799:THR:HG23	3:D:803:PHE:O	2.18	0.43
4:E:216:TYR:CD1	4:E:220:PHE:HB2	2.51	0.43
5:F:547:PHE:HE2	5:F:619:VAL:HG11	1.82	0.43
5:F:726:SER:HA	5:F:730:VAL:HG22	2.01	0.43
5:F:742:GLN:HG3	5:F:747:VAL:HA	2.01	0.43
5:F:920:ILE:CG2	5:F:926:LEU:HG	2.48	0.43
8:I:795:LYS:C	8:I:795:LYS:CD	2.85	0.43
6:J:372:PHE:O	6:J:372:PHE:CG	2.70	0.43
6:J:406:PHE:O	6:J:406:PHE:CD1	2.70	0.43
1:Z:56:LEU:HD22	1:Z:60:ASN:ND2	2.32	0.43
1:A:227:GLN:NE2	1:A:606:GLU:O	2.50	0.43
1:A:619:PHE:O	1:A:623:ILE:HG22	2.18	0.43
1:A:703:SER:OG	1:A:711:LYS:NZ	2.39	0.43
1:A:771:ILE:HD13	1:A:774:LEU:HD12	2.00	0.43
2:C:79:HIS:CE1	2:C:704:VAL:HG11	2.54	0.43
3:D:235:SER:CB	3:D:240:LEU:HD13	2.45	0.43
3:D:909:PHE:O	3:D:913:LEU:HG	2.18	0.43
3:D:1377:ASN:HD21	1:Z:758:GLN:HE21	1.59	0.43
4:E:36:GLN:HE22	4:E:943:VAL:HA	1.83	0.43
4:E:919:LEU:HA	4:E:919:LEU:HD12	1.86	0.43
4:E:1408:LEU:HD21	4:E:1456:ILE:HD11	2.00	0.43
5:F:583:SER:O	5:F:583:SER:OG	2.28	0.43
5:F:1000:LEU:HD13	5:F:1000:LEU:HA	1.82	0.43
5:F:1257:LEU:HD23	5:F:1257:LEU:HA	1.84	0.43
5:F:1519:LYS:HA	5:F:1522:VAL:HG12	2.00	0.43
6:G:350:PHE:HE2	7:H:418:GLN:HE22	1.63	0.43
7:H:303:THR:HG23	7:H:353:TYR:CZ	2.53	0.43
6:J:383:LYS:CD	8:L:756:ASN:CG	2.85	0.43
8:L:664:SER:O	8:L:668:VAL:HG23	2.18	0.43
1:A:198:SER:HB3	1:A:543:LYS:HE2	2.01	0.43
1:A:591:GLY:HA3	1:A:600:ILE:O	2.18	0.43
1:A:735:THR:O	1:A:739:MET:HG2	2.18	0.43
3:D:394:GLU:O	3:D:398:ILE:HG13	2.17	0.43
3:D:1467:SER:CA	1:Z:621:HIS:CE1	3.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:598:VAL:HG11	4:E:638:ILE:HD11	2.00	0.43
4:E:950:ARG:HG3	4:E:1012:VAL:HA	2.01	0.43
4:E:1444:LEU:O	4:E:1448:SER:N	2.49	0.43
5:F:213:ILE:HB	5:F:240:LEU:HD13	2.00	0.43
5:F:421:ILE:C	5:F:423:LEU:N	2.72	0.43
5:F:1110:MET:CE	5:F:1157:TRP:HZ2	2.29	0.43
5:F:1305:SER:C	5:F:1307:VAL:N	2.69	0.43
6:G:297:ASP:HA	6:G:300:ASP:HB2	1.99	0.43
7:H:386:LEU:HD21	8:I:687:GLU:HA	2.00	0.43
7:H:412:ILE:O	7:H:415:LEU:HB2	2.17	0.43
8:I:798:ASN:O	8:I:801:PHE:CB	2.66	0.43
8:L:667:GLN:O	8:L:670:VAL:HG22	2.18	0.43
1:Z:505:HIS:HA	1:Z:508:ILE:HD12	2.00	0.43
3:D:118:THR:HB	3:D:623:GLY:CA	2.35	0.43
3:D:491:ARG:HB2	3:D:521:LYS:H	1.84	0.43
3:D:508:LYS:CG	3:D:516:LEU:HA	2.49	0.43
3:D:986:THR:C	3:D:988:LEU:H	2.20	0.43
4:E:530:ILE:HA	4:E:552:LEU:O	2.19	0.43
4:E:1274:GLU:HA	4:E:1277:ILE:HD12	1.99	0.43
5:F:227:ASP:CA	5:F:361:LEU:CB	2.97	0.43
5:F:320:GLU:CD	5:F:351:HIS:ND1	2.72	0.43
5:F:676:ASP:HA	5:F:679:ILE:HB	1.99	0.43
5:F:905:SER:CB	8:I:749:GLN:O	2.66	0.43
5:F:1283:LYS:HA	5:F:1283:LYS:NZ	2.33	0.43
6:G:452:ASP:CB	1:Z:84:ASP:CG	2.87	0.43
7:K:395:ALA:O	7:K:399:LEU:HD23	2.19	0.43
8:L:695:GLN:NE2	8:L:696:SER:OG	2.51	0.43
8:L:809:ASP:HA	8:L:812:THR:HB	2.00	0.43
1:Z:786:ILE:HD11	1:Z:838:SER:HA	2.01	0.43
1:A:649:GLU:OE1	1:A:652:ILE:HD12	2.19	0.43
3:D:214:VAL:HA	3:D:233:LEU:O	2.18	0.43
3:D:451:SER:HB2	3:D:458:GLU:HB2	2.01	0.43
3:D:509:PHE:CD1	3:D:515:VAL:HG23	2.54	0.43
4:E:291:ASP:OD1	4:E:291:ASP:N	2.52	0.43
5:F:783:ILE:HG13	5:F:784:ILE:H	1.83	0.43
5:F:1088:ARG:HH11	5:F:1088:ARG:CG	2.23	0.43
5:F:1489:ILE:HA	5:F:1492:LEU:HD12	2.01	0.43
8:I:731:GLY:C	8:I:733:ALA:N	2.71	0.43
8:I:795:LYS:C	8:I:795:LYS:NZ	2.72	0.43
6:J:379:LEU:HG	6:J:379:LEU:O	2.19	0.43
6:J:406:PHE:CD1	6:J:406:PHE:C	2.85	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:454:GLY:C	7:K:456:THR:H	2.22	0.43
8:L:637:LEU:CD2	8:L:640:LEU:HB2	2.48	0.43
1:Z:444:LYS:HA	1:Z:444:LYS:HD3	1.89	0.43
1:A:131:GLY:HA2	1:A:134:LYS:HD3	2.01	0.43
1:A:436:LEU:HD21	1:A:481:THR:HG23	2.00	0.43
3:D:484:GLN:NE2	3:D:566:LYS:H	2.16	0.43
3:D:713:ILE:HD12	3:D:769:ARG:CD	2.48	0.43
4:E:40:ILE:HD12	4:E:40:ILE:HA	1.90	0.43
4:E:605:LYS:O	4:E:605:LYS:NZ	2.37	0.43
4:E:787:PRO:HG2	4:E:1143:GLN:HE21	1.84	0.43
5:F:131:TYR:O	5:F:135:ILE:HG12	2.19	0.43
5:F:334:GLN:HB3	5:F:860:ASN:CG	2.37	0.43
5:F:900:LEU:HD13	5:F:904:TYR:CD1	2.53	0.43
5:F:1618:SER:CB	1:Z:634:ASP:O	2.67	0.43
8:I:805:ARG:CB	1:Z:88:LYS:HE2	2.47	0.43
6:J:305:ILE:HG21	8:L:665:TRP:NE1	2.34	0.43
6:J:435:GLY:O	6:J:440:VAL:CB	2.67	0.43
8:L:682:ASP:OD1	8:L:685:MET:HE3	2.19	0.43
1:Z:78:LEU:HB3	1:Z:83:VAL:CG2	2.48	0.43
1:A:138:ASN:C	1:A:138:ASN:ND2	2.72	0.43
1:A:531:ASP:OD2	1:A:536:ASN:ND2	2.41	0.43
3:D:447:TYR:O	3:D:463:GLU:N	2.52	0.43
4:E:185:LEU:HD23	4:E:185:LEU:HA	1.89	0.43
4:E:305:ASP:O	4:E:309:ASN:CB	2.67	0.43
4:E:1387:LEU:O	4:E:1391:LEU:N	2.51	0.43
4:E:1561:LEU:HD13	4:E:1585:LEU:HD11	2.01	0.43
5:F:135:ILE:HG23	5:F:206:ILE:HA	2.01	0.43
5:F:229:PHE:O	5:F:233:TYR:N	2.52	0.43
5:F:522:MET:SD	5:F:523:ARG:N	2.92	0.43
5:F:680:PHE:HA	5:F:745:ARG:HH12	1.83	0.43
5:F:909:LEU:O	7:H:403:SER:CB	2.66	0.43
5:F:1362:ASP:CB	1:Z:125:ILE:CG2	2.97	0.43
5:F:1550:LEU:HD11	5:F:1604:ILE:HG21	2.00	0.43
8:I:792:GLN:HG2	1:Z:42:ILE:HD12	1.49	0.43
8:I:821:ILE:CD1	8:I:821:ILE:C	2.85	0.43
6:J:365:SER:N	7:K:424:ASN:HD21	2.04	0.43
1:Z:138:ASN:C	1:Z:138:ASN:ND2	2.72	0.43
1:Z:474:PHE:HB3	1:Z:477:TYR:HB3	2.00	0.43
1:Z:637:ILE:O	1:Z:640:SER:OG	2.28	0.43
3:D:401:ILE:CG2	3:D:462:LEU:HB3	2.30	0.43
3:D:491:ARG:HG3	3:D:521:LYS:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:582:ASP:O	3:D:585:ILE:HG22	2.19	0.43
3:D:766:LEU:HD22	3:D:889:GLU:HA	2.01	0.43
5:F:300:MET:HG3	5:F:303:LYS:HE2	2.00	0.43
5:F:841:PHE:CZ	5:F:922:LEU:HB2	2.54	0.43
5:F:925:HIS:HA	5:F:928:LEU:HD11	2.00	0.43
5:F:1545:ARG:HA	5:F:1548:ALA:HB3	2.01	0.43
6:J:311:ASP:CG	7:K:376:LEU:HD21	2.39	0.43
6:J:334:SER:HA	6:J:337:LYS:HB2	2.01	0.43
6:J:431:GLN:O	8:L:782:ILE:HA	2.19	0.43
7:K:437:TRP:HB3	8:L:744:ALA:HB3	2.00	0.43
8:L:664:SER:O	8:L:667:GLN:HG3	2.19	0.43
1:Z:136:PHE:CD1	1:Z:136:PHE:O	2.71	0.43
1:Z:709:LYS:NZ	1:Z:764:ASP:HB3	2.34	0.43
1:A:681:SER:HA	1:A:687:LEU:HB3	2.01	0.42
3:D:793:PHE:CZ	3:D:934:SER:HB2	2.54	0.42
4:E:370:SER:O	4:E:372:ASP:N	2.48	0.42
4:E:916:TYR:CZ	4:E:963:LYS:HB2	2.54	0.42
4:E:1276:LYS:HA	4:E:1276:LYS:HD2	1.71	0.42
5:F:606:VAL:HA	5:F:609:LEU:HG	2.01	0.42
5:F:731:PHE:CD2	5:F:790:SER:HA	2.54	0.42
6:G:296:ALA:CB	6:J:363:LYS:HD2	2.45	0.42
6:G:449:LEU:HA	1:Z:84:ASP:OD1	2.19	0.42
8:L:733:ALA:HA	8:L:737:ASN:HD21	1.84	0.42
1:Z:510:LEU:HB3	1:Z:516:PHE:HB2	2.00	0.42
1:A:225:SER:O	1:A:229:ASN:N	2.51	0.42
3:D:822:ILE:HG22	3:D:824:GLN:H	1.84	0.42
3:D:884:VAL:HB	3:D:887:GLN:OE1	2.19	0.42
5:F:200:LEU:HA	5:F:200:LEU:HD13	1.79	0.42
5:F:825:ILE:O	5:F:825:ILE:HG23	2.19	0.42
5:F:935:GLN:CB	5:F:998:LEU:CD2	2.97	0.42
6:J:371:LYS:C	6:J:371:LYS:CD	2.88	0.42
7:K:311:PHE:HD1	7:K:351:GLN:HG3	1.85	0.42
7:K:321:ALA:O	7:K:339:MET:HE3	2.19	0.42
7:K:402:GLN:C	7:K:402:GLN:NE2	2.72	0.42
1:A:681:SER:OG	1:A:691:ARG:NH1	2.52	0.42
1:A:709:LYS:O	1:A:713:ILE:HG12	2.18	0.42
3:D:375:SER:O	3:D:420:ILE:HD12	2.18	0.42
3:D:648:GLU:HG3	3:D:650:TYR:HE1	1.83	0.42
3:D:988:LEU:HA	3:D:992:CYS:CB	2.49	0.42
4:E:982:ILE:HD12	4:E:982:ILE:H	1.85	0.42
4:E:1356:LEU:CB	1:Z:453:VAL:HG21	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:158:ILE:HA	5:F:183:ARG:CZ	2.49	0.42
5:F:437:ASP:HA	5:F:440:GLN:HG3	2.01	0.42
6:G:440:VAL:HA	6:G:443:VAL:HB	2.01	0.42
7:H:420:ALA:CB	8:I:745:TYR:CD1	2.96	0.42
7:H:444:LEU:HA	7:H:447:SER:HB3	2.02	0.42
7:H:532:ALA:HA	8:I:821:ILE:HG13	2.01	0.42
7:K:525:GLU:O	7:K:529:LYS:CB	2.56	0.42
8:L:640:LEU:CD1	8:L:643:LYS:HG2	2.49	0.42
1:Z:551:ARG:NH2	1:Z:606:GLU:OE2	2.46	0.42
1:Z:687:LEU:HD23	1:Z:690:ARG:HD2	2.01	0.42
3:D:168:GLN:N	3:D:187:ASP:OD2	2.38	0.42
3:D:381:VAL:O	3:D:385:LYS:HA	2.19	0.42
3:D:491:ARG:HB2	3:D:520:THR:HB	2.01	0.42
3:D:605:VAL:HG11	3:D:608:ILE:HD11	2.01	0.42
3:D:611:LEU:HG	3:D:640:ALA:HB2	2.01	0.42
3:D:1367:LEU:HD23	3:D:1398:PHE:CE1	2.54	0.42
4:E:319:PRO:HG2	4:E:361:LYS:HD3	2.00	0.42
5:F:390:TRP:CB	5:F:393:SER:HB3	2.50	0.42
5:F:426:GLN:HA	5:F:429:GLU:HG3	2.00	0.42
5:F:1508:ILE:HG22	5:F:1511:LEU:HD23	2.02	0.42
7:H:415:LEU:HD12	7:H:415:LEU:HA	1.79	0.42
8:I:815:GLU:HB3	8:I:816:LYS:HE3	2.02	0.42
6:J:283:TYR:CD2	6:J:286:LYS:HE2	2.55	0.42
6:J:311:ASP:OD2	7:K:376:LEU:HD11	2.20	0.42
1:Z:117:LYS:HB3	1:Z:117:LYS:HZ2	1.79	0.42
1:Z:432:ILE:HD12	1:Z:432:ILE:HA	1.90	0.42
1:Z:779:LEU:CB	1:Z:835:ILE:CA	2.97	0.42
1:A:140:ILE:HG23	4:E:1393:LYS:HD3	1.84	0.42
1:A:532:ILE:HG22	1:A:532:ILE:O	2.19	0.42
2:C:888:LEU:HA	2:C:892:PHE:HD2	1.85	0.42
3:D:467:PHE:CD1	3:D:473:THR:HG23	2.54	0.42
3:D:919:VAL:HG12	3:D:920:GLU:N	2.34	0.42
3:D:1241:GLY:O	1:Z:826:ARG:CB	2.67	0.42
4:E:343:ASP:O	4:E:347:THR:OG1	2.36	0.42
4:E:976:PHE:HZ	7:K:457:ASN:HB3	1.83	0.42
5:F:917:PHE:O	5:F:919:ASN:N	2.52	0.42
6:G:343:ASP:O	6:G:347:THR:OG1	2.30	0.42
6:J:298:THR:HA	8:L:658:TYR:CE1	2.54	0.42
7:K:365:GLN:O	7:K:369:VAL:HG23	2.20	0.42
1:A:370:TYR:CD2	1:A:390:LEU:HD13	2.54	0.42
1:A:516:PHE:CE2	1:A:534:PHE:HB2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:295:GLU:CD	3:D:316:LYS:HE3	2.40	0.42
3:D:367:ILE:HA	3:D:380:TYR:O	2.20	0.42
3:D:667:LEU:HD12	3:D:669:PHE:HB2	2.00	0.42
3:D:684:PHE:O	3:D:688:LYS:HB2	2.19	0.42
4:E:569:LEU:HD22	4:E:634:ILE:HD11	2.01	0.42
4:E:683:ASP:OD1	4:E:689:GLY:N	2.36	0.42
5:F:1090:PRO:CD	5:F:1093:SER:HB3	2.50	0.42
5:F:1545:ARG:HA	5:F:1545:ARG:HD2	1.91	0.42
6:G:465:LYS:CE	1:Z:20:LYS:HE2	2.49	0.42
7:H:365:GLN:HA	7:H:368:ASN:HD22	1.84	0.42
7:K:358:LEU:HD22	8:L:662:ILE:CD1	2.41	0.42
1:Z:116:LYS:C	1:Z:116:LYS:CE	2.85	0.42
1:Z:122:LEU:HD23	1:Z:122:LEU:HA	1.73	0.42
1:Z:254:LEU:HG	1:Z:258:LYS:HE2	2.02	0.42
1:Z:599:ARG:HH22	1:Z:620:LEU:HD21	1.84	0.42
1:A:679:ASP:OD2	1:A:684:ASN:ND2	2.50	0.42
1:A:776:ILE:CD1	1:A:828:THR:HG23	2.49	0.42
2:C:899:ALA:HB3	2:C:941:ASN:HD22	1.83	0.42
3:D:514:SER:O	3:D:515:VAL:HG13	2.20	0.42
3:D:681:THR:O	3:D:685:VAL:HG23	2.20	0.42
4:E:443:ILE:HD12	4:E:590:LEU:HD11	2.01	0.42
4:E:599:THR:HG23	4:E:660:PHE:HA	2.02	0.42
4:E:1539:ASN:ND2	4:E:1611:TYR:OH	2.48	0.42
7:K:483:VAL:CB	7:K:494:MET:HA	2.49	0.42
7:K:483:VAL:N	7:K:493:SER:C	2.70	0.42
1:Z:239:ILE:HG23	1:Z:258:LYS:HZ2	1.84	0.42
1:A:478:TYR:O	1:A:482:LEU:HG	2.20	0.42
4:E:36:GLN:NE2	4:E:36:GLN:O	2.53	0.42
4:E:120:PRO:HB3	4:E:127:TYR:CG	2.54	0.42
4:E:421:PHE:O	4:E:425:LEU:CB	2.68	0.42
5:F:296:ARG:H	5:F:296:ARG:HG3	1.71	0.42
5:F:1293:ASN:ND2	5:F:1293:ASN:C	2.73	0.42
5:F:1305:SER:O	5:F:1307:VAL:N	2.49	0.42
6:G:295:LYS:HB3	6:J:363:LYS:NZ	2.33	0.42
6:G:377:ILE:HD12	6:G:377:ILE:HA	1.96	0.42
7:H:462:ARG:HA	7:H:465:ILE:HB	2.02	0.42
7:K:455:LYS:HD3	7:K:455:LYS:H	1.75	0.42
8:L:671:LYS:O	8:L:675:GLN:NE2	2.47	0.42
1:Z:654:ILE:HG22	1:Z:710:ASN:HB2	2.01	0.42
1:A:137:ASP:HB2	4:E:1386:LEU:CA	2.43	0.42
1:A:215:TYR:CD2	1:A:238:PHE:HE1	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:381:VAL:HB	3:D:457:ILE:CG2	2.50	0.42
4:E:222:GLU:O	4:E:226:ASN:HB2	2.20	0.42
4:E:1043:LEU:HB3	4:E:1078:ILE:HD11	2.00	0.42
5:F:864:LEU:HD12	5:F:864:LEU:HA	1.81	0.42
5:F:929:TYR:C	5:F:931:GLY:N	2.73	0.42
5:F:1144:VAL:HG11	5:F:1291:SER:OG	2.20	0.42
5:F:1550:LEU:HD12	5:F:1604:ILE:HG21	2.01	0.42
5:F:1634:LYS:HA	5:F:1637:VAL:HG22	2.00	0.42
8:I:672:GLY:HA2	8:I:675:GLN:HG2	2.00	0.42
8:I:822:LYS:NZ	8:I:822:LYS:CB	2.82	0.42
6:J:371:LYS:O	6:J:371:LYS:CD	2.68	0.42
7:K:462:ARG:O	7:K:466:LEU:HD12	2.20	0.42
8:L:749:GLN:NE2	8:L:752:ASP:OD2	2.51	0.42
1:Z:121:ILE:HD12	1:Z:121:ILE:HA	1.64	0.42
1:Z:367:PHE:O	1:Z:370:TYR:HB2	2.20	0.42
1:A:775:LEU:CD1	1:A:832:LEU:CD1	2.95	0.42
2:C:1388:HIS:O	4:E:1331:LEU:HD13	2.19	0.42
3:D:292:ASN:OD1	3:D:293:ILE:N	2.53	0.42
3:D:680:SER:OG	3:D:772:GLY:HA2	2.20	0.42
3:D:873:SER:HB3	3:D:877:VAL:HB	2.01	0.42
3:D:976:THR:CB	3:D:981:ILE:CA	2.97	0.42
3:D:988:LEU:CB	3:D:1001:ILE:CB	2.98	0.42
4:E:429:LYS:HA	4:E:429:LYS:HD2	1.80	0.42
4:E:672:VAL:HG12	4:E:676:LEU:HD12	2.02	0.42
5:F:968:ILE:HA	7:H:392:LEU:HD11	2.02	0.42
5:F:1177:VAL:C	5:F:1180:TYR:CB	2.88	0.42
6:J:304:LEU:O	6:J:308:ILE:HG12	2.19	0.42
6:J:334:SER:C	6:J:336:PHE:H	2.15	0.42
7:K:352:ILE:HG21	7:K:358:LEU:HD21	2.01	0.42
8:L:794:ILE:HA	8:L:797:LEU:HB3	2.02	0.42
1:Z:776:ILE:C	1:Z:778:THR:H	2.23	0.42
1:A:785:MET:SD	1:A:806:LEU:HD11	2.60	0.41
2:C:693:LEU:HB3	2:C:694:PHE:CD1	2.54	0.41
3:D:131:VAL:HG21	3:D:467:PHE:H	1.84	0.41
3:D:508:LYS:HE3	3:D:518:GLU:HG2	2.01	0.41
3:D:662:LEU:HD23	3:D:662:LEU:HA	1.88	0.41
4:E:199:ILE:O	4:E:202:THR:OG1	2.38	0.41
4:E:1266:LYS:HD3	4:E:1266:LYS:HA	1.74	0.41
5:F:285:PHE:O	5:F:289:CYS:N	2.49	0.41
5:F:640:PHE:O	5:F:643:THR:C	2.58	0.41
5:F:917:PHE:HZ	7:H:400:LYS:HZ2	1.66	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:1196:SER:HB2	5:F:1198:LEU:H	1.84	0.41
5:F:1198:LEU:HD22	5:F:1201:LEU:HD13	2.02	0.41
6:G:398:VAL:HA	6:G:401:ILE:HG12	2.01	0.41
6:J:290:ILE:HD12	7:K:356:GLU:OE2	2.20	0.41
1:Z:641:ILE:HD12	1:Z:641:ILE:HA	1.88	0.41
1:A:432:ILE:HD12	1:A:435:TRP:HB3	2.02	0.41
3:D:135:PHE:CZ	3:D:485:GLN:HB2	2.55	0.41
4:E:989:ASP:C	4:E:991:LYS:N	2.72	0.41
5:F:672:TRP:O	5:F:675:LEU:HB3	2.19	0.41
5:F:1068:ILE:HD12	5:F:1150:PHE:HD2	1.52	0.41
8:L:659:THR:HA	8:L:662:ILE:HG22	2.02	0.41
2:C:1389:GLY:HA2	4:E:1331:LEU:HD11	2.02	0.41
3:D:402:ILE:CG2	3:D:406:THR:H	2.29	0.41
3:D:846:ILE:HG13	3:D:907:LEU:CD1	2.51	0.41
4:E:1483:ILE:HG21	4:E:1492:HIS:CE1	2.56	0.41
5:F:765:ASP:OD1	5:F:765:ASP:N	2.51	0.41
5:F:1251:ARG:HH22	5:F:1276:ASP:HB3	1.73	0.41
6:J:327:LYS:HG3	6:J:328:GLN:NE2	2.34	0.41
6:J:381:GLU:HA	6:J:381:GLU:OE2	2.19	0.41
6:J:389:ARG:NH1	6:J:389:ARG:HA	2.35	0.41
7:K:311:PHE:CD1	7:K:351:GLN:HG3	2.55	0.41
7:K:352:ILE:CG2	7:K:358:LEU:HG	2.47	0.41
7:K:503:ASN:HB2	7:K:506:ILE:CD1	2.50	0.41
1:Z:436:LEU:HA	1:Z:439:HIS:HB2	2.02	0.41
1:Z:807:LYS:CB	1:Z:837:VAL:HA	2.50	0.41
1:A:682:GLU:HG2	1:A:691:ARG:NH2	2.30	0.41
1:A:780:SER:O	1:A:784:ASN:ND2	2.53	0.41
3:D:178:GLU:HB3	3:D:230:HIS:NE2	2.35	0.41
4:E:268:THR:O	4:E:272:ILE:HG13	2.21	0.41
4:E:464:ALA:HB1	4:E:552:LEU:HD21	2.01	0.41
4:E:923:LEU:C	4:E:923:LEU:CD2	2.87	0.41
5:F:42:LEU:HD12	5:F:42:LEU:HA	1.95	0.41
5:F:189:GLU:HA	5:F:192:ILE:HG12	2.02	0.41
5:F:321:GLN:O	5:F:325:PHE:CB	2.68	0.41
5:F:470:ASP:N	5:F:470:ASP:OD1	2.53	0.41
5:F:589:ASP:OD1	5:F:589:ASP:N	2.52	0.41
5:F:866:GLN:OE1	5:F:940:ASN:HB2	2.20	0.41
5:F:1027:GLN:CG	5:F:1027:GLN:O	2.69	0.41
6:J:411:ASN:OD1	6:J:411:ASN:N	2.41	0.41
7:K:454:GLY:O	7:K:456:THR:N	2.52	0.41
1:Z:558:VAL:HG21	1:Z:607:ARG:HE	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:182:CYS:HB2	3:D:193:TRP:CE2	2.56	0.41
4:E:1066:VAL:HA	4:E:1069:ILE:HD12	2.02	0.41
4:E:1389:LEU:HA	4:E:1392:PHE:HD2	1.85	0.41
5:F:348:LEU:HD22	5:F:483:LEU:HD22	2.03	0.41
5:F:386:GLY:HA3	5:F:392:PRO:O	2.20	0.41
5:F:885:GLU:O	5:F:885:GLU:CG	2.68	0.41
8:I:816:LYS:N	8:I:816:LYS:CE	2.83	0.41
6:J:306:ASP:O	6:J:309:PRO:HD2	2.20	0.41
6:J:371:LYS:NZ	6:J:371:LYS:C	2.70	0.41
1:Z:90:LEU:HD23	1:Z:90:LEU:HA	1.69	0.41
3:D:903:ILE:HG12	3:D:953:PHE:CD1	2.56	0.41
5:F:159:LYS:HA	5:F:159:LYS:HD3	1.82	0.41
5:F:164:LYS:HA	5:F:167:ILE:HG12	2.02	0.41
5:F:220:VAL:HA	5:F:223:LEU:HG	2.01	0.41
5:F:450:LEU:HA	5:F:453:ILE:HG12	2.02	0.41
5:F:719:ILE:HG12	5:F:731:PHE:CD2	2.56	0.41
5:F:1158:THR:HG22	5:F:1197:PHE:CD2	2.55	0.41
5:F:1193:ARG:HA	5:F:1193:ARG:HD3	1.85	0.41
5:F:1282:ALA:O	5:F:1286:PHE:N	2.47	0.41
7:H:313:TYR:O	7:H:361:ARG:NH2	2.53	0.41
8:L:676:ILE:HD13	8:L:679:LEU:HD22	2.01	0.41
1:Z:49:LEU:C	1:Z:49:LEU:HD13	2.40	0.41
3:D:274:VAL:HG23	3:D:283:PHE:HB2	2.02	0.41
4:E:192:LEU:HD23	4:E:195:LEU:HD23	2.01	0.41
4:E:369:LEU:HD23	4:E:375:TYR:CD2	2.56	0.41
5:F:108:LEU:O	5:F:111:GLN:HB3	2.20	0.41
5:F:633:LYS:NZ	5:F:635:PHE:HB2	2.35	0.41
7:K:305:LYS:O	7:K:307:LYS:HE2	2.20	0.41
1:Z:822:TYR:HB3	1:Z:824:MET:SD	2.60	0.41
1:A:650:TYR:CG	1:A:702:ILE:HG23	2.55	0.41
3:D:135:PHE:HD1	3:D:596:ALA:HB3	1.86	0.41
3:D:421:VAL:HG22	3:D:491:ARG:N	2.35	0.41
3:D:617:ALA:HA	3:D:630:THR:CG2	2.47	0.41
3:D:788:HIS:ND1	3:D:946:LYS:HA	2.35	0.41
4:E:331:TYR:HD1	4:E:331:TYR:HA	1.72	0.41
4:E:1133:LYS:HD2	4:E:1133:LYS:HA	1.90	0.41
5:F:245:ARG:NH2	5:F:284:TYR:O	2.45	0.41
5:F:321:GLN:O	5:F:325:PHE:HB3	2.21	0.41
8:I:694:ASP:O	8:I:698:GLN:NE2	2.54	0.41
8:I:822:LYS:HE3	8:I:822:LYS:CA	2.44	0.41
6:J:389:ARG:O	6:J:389:ARG:CZ	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:315:LYS:HG3	7:K:347:THR:HG22	2.02	0.41
7:K:506:ILE:HG13	7:K:507:ASN:H	1.85	0.41
1:Z:206:ASN:OD1	1:Z:206:ASN:N	2.53	0.41
1:A:232:PHE:CZ	1:A:237:GLU:HG3	2.56	0.41
1:A:479:LEU:HD12	1:A:491:ALA:HB1	2.02	0.41
3:D:585:ILE:HG23	3:D:586:LEU:HD12	2.03	0.41
3:D:791:MET:O	3:D:830:SER:OG	2.27	0.41
4:E:22:MET:HE1	4:E:122:ILE:HG21	2.03	0.41
4:E:744:LEU:HD12	4:E:744:LEU:HA	1.90	0.41
5:F:26:LYS:HZ3	5:F:26:LYS:HG2	1.72	0.41
5:F:37:LEU:HD22	5:F:146:SER:HB2	2.02	0.41
5:F:68:GLN:HA	5:F:71:ILE:HD13	2.03	0.41
5:F:144:ILE:HD13	5:F:197:LEU:HD23	2.01	0.41
5:F:633:LYS:HA	5:F:633:LYS:HD2	1.82	0.41
5:F:835:LYS:HD2	5:F:835:LYS:HA	1.75	0.41
5:F:920:ILE:CB	5:F:924:ALA:O	2.69	0.41
5:F:1550:LEU:HD23	5:F:1550:LEU:HA	1.88	0.41
7:H:394:THR:O	7:H:398:ILE:HB	2.21	0.41
8:I:795:LYS:NZ	8:I:799:SER:HB3	2.35	0.41
6:J:371:LYS:O	6:J:371:LYS:CE	2.68	0.41
7:K:509:ILE:HA	7:K:512:ILE:HB	2.01	0.41
1:Z:249:ARG:C	1:Z:251:ALA:N	2.65	0.41
1:Z:571:LEU:HA	1:Z:574:GLU:HG3	2.03	0.41
1:A:776:ILE:HD11	1:A:828:THR:HG23	2.03	0.41
3:D:716:VAL:HG13	3:D:767:SER:HB3	2.02	0.41
3:D:778:THR:O	3:D:782:ARG:HB2	2.20	0.41
4:E:904:LEU:HD23	4:E:907:LEU:HD23	2.02	0.41
4:E:1529:ILE:HG21	4:E:1589:LEU:HD21	2.03	0.41
5:F:25:PHE:HB3	5:F:26:LYS:NZ	2.36	0.41
5:F:486:TYR:HD1	5:F:532:SER:HB3	1.86	0.41
5:F:1097:TYR:OH	5:F:1164:PHE:CD1	2.49	0.41
5:F:1300:LEU:HD23	5:F:1301:SER:N	2.36	0.41
6:J:381:GLU:OE2	6:J:381:GLU:CA	2.69	0.41
6:J:420:ASP:HB2	6:J:436:LEU:HD22	2.04	0.41
7:K:330:VAL:C	7:K:331:LEU:HD12	2.41	0.41
7:K:433:GLU:HB2	8:L:741:ARG:HE	1.85	0.41
7:K:503:ASN:HB2	7:K:506:ILE:HD13	2.03	0.41
1:A:451:ASP:OD1	1:A:455:GLU:HB2	2.22	0.40
1:A:533:ARG:HE	1:A:534:PHE:N	2.19	0.40
1:A:586:PHE:CD2	1:A:642:LEU:HD11	2.56	0.40
1:A:603:VAL:O	1:A:606:GLU:HG2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:212:GLN:N	3:D:235:SER:O	2.47	0.40
3:D:328:LEU:CD1	3:D:334:VAL:HG22	2.50	0.40
3:D:1431:LYS:HE2	3:D:1435:GLU:OE1	2.20	0.40
4:E:923:LEU:CD1	4:E:931:PHE:HE2	2.26	0.40
4:E:1319:LEU:CD2	4:E:1398:VAL:HG22	2.46	0.40
5:F:90:GLU:HA	5:F:93:LEU:HB2	2.03	0.40
5:F:460:SER:HB2	5:F:475:LYS:HB3	2.02	0.40
5:F:863:GLU:HA	5:F:866:GLN:HE21	1.87	0.40
5:F:964:LYS:CG	5:F:964:LYS:O	2.69	0.40
5:F:971:SER:HB3	7:H:392:LEU:CD2	2.50	0.40
5:F:1082:ILE:HA	5:F:1082:ILE:HD13	1.87	0.40
5:F:1626:VAL:HA	5:F:1629:LEU:HB3	2.03	0.40
8:I:815:GLU:HB3	8:I:816:LYS:CE	2.51	0.40
8:I:818:ILE:HD12	8:I:818:ILE:HA	1.80	0.40
6:J:356:GLN:HB3	7:K:423:LYS:NZ	2.36	0.40
6:J:402:ASP:HB2	7:K:466:LEU:CD2	2.51	0.40
7:K:446:ARG:O	7:K:446:ARG:CD	2.69	0.40
8:L:653:SER:O	8:L:657:GLN:HG2	2.21	0.40
8:L:679:LEU:O	8:L:682:ASP:HB2	2.20	0.40
8:L:800:HIS:O	8:L:804:LEU:CB	2.65	0.40
3:D:371:LEU:HD21	3:D:420:ILE:HG22	2.04	0.40
3:D:586:LEU:HD11	3:D:593:VAL:H	1.86	0.40
3:D:673:TYR:O	3:D:677:GLU:HB2	2.22	0.40
4:E:79:LEU:HD11	4:E:99:VAL:HG22	2.04	0.40
4:E:1305:ASN:HA	4:E:1308:TYR:CZ	2.56	0.40
4:E:1329:ILE:O	4:E:1333:SER:HB3	2.21	0.40
5:F:651:GLY:HA3	5:F:705:ASP:HA	2.03	0.40
5:F:662:PRO:HG3	5:F:715:ASN:ND2	2.36	0.40
5:F:914:ASP:CG	5:F:917:PHE:CB	2.89	0.40
5:F:974:GLU:OE1	5:F:977:ARG:NH2	2.51	0.40
5:F:1431:ARG:HD2	5:F:1474:PHE:N	2.36	0.40
8:I:795:LYS:NZ	8:I:795:LYS:CB	2.84	0.40
7:K:315:LYS:HD2	7:K:347:THR:HG22	2.03	0.40
7:K:408:ILE:O	7:K:412:ILE:HG13	2.22	0.40
7:K:529:LYS:HB3	7:K:529:LYS:HE3	1.98	0.40
7:K:538:LYS:CB	8:L:818:ILE:CA	2.98	0.40
8:L:703:GLN:OE1	8:L:704:GLN:N	2.54	0.40
1:Z:757:ALA:CB	1:Z:819:MET:C	2.39	0.40
1:A:697:PHE:CD1	1:A:697:PHE:N	2.88	0.40
3:D:422:LYS:HE2	3:D:524:THR:OG1	2.21	0.40
3:D:574:HIS:HD1	3:D:576:LEU:HD12	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:924:ASN:O	3:D:925:GLN:HB2	2.21	0.40
4:E:1046:LYS:HZ3	4:E:1074:LEU:HD11	1.86	0.40
4:E:1168:LYS:O	4:E:1174:ASN:ND2	2.45	0.40
4:E:1380:ASP:C	4:E:1382:THR:H	2.24	0.40
5:F:245:ARG:HH22	5:F:288:TRP:N	2.18	0.40
5:F:409:MET:CB	5:F:410:PRO:HD2	2.51	0.40
5:F:661:VAL:CG1	5:F:712:LEU:HD12	2.50	0.40
5:F:1080:LEU:O	5:F:1156:TYR:CE2	2.74	0.40
6:G:319:GLU:HA	6:G:322:THR:HG22	2.03	0.40
6:J:309:PRO:HA	6:J:312:VAL:CB	2.50	0.40
6:J:357:LEU:HD22	7:K:423:LYS:HE3	2.03	0.40
1:A:687:LEU:O	1:A:691:ARG:HG3	2.22	0.40
1:A:696:TYR:CD1	1:A:702:ILE:HG21	2.57	0.40
3:D:157:PRO:HD2	3:D:160:ILE:HD12	2.03	0.40
4:E:939:LEU:HB3	4:E:997:VAL:HG11	2.04	0.40
4:E:1451:CYS:HA	4:E:1457:ALA:HB2	2.04	0.40
5:F:283:ALA:HA	5:F:441:THR:HG21	2.04	0.40
5:F:1157:TRP:CD1	5:F:1161:LEU:HD13	2.56	0.40
5:F:1360:LEU:N	5:F:1360:LEU:HD12	2.37	0.40
5:F:1364:TYR:HB2	5:F:1374:LYS:CB	2.51	0.40
5:F:1442:TRP:NE1	5:F:1484:ARG:HB3	2.36	0.40
5:F:1660:ASN:O	5:F:1664:ASN:ND2	2.54	0.40
6:G:275:GLN:NE2	6:G:278:GLU:OE1	2.40	0.40
6:G:450:PHE:O	6:G:454:ALA:HB2	2.21	0.40
8:I:775:THR:OG1	8:I:776:PHE:N	2.55	0.40
8:I:778:LYS:HZ2	8:I:778:LYS:CA	2.34	0.40
7:K:339:MET:HG3	7:K:339:MET:O	2.22	0.40
8:L:658:TYR:HE1	8:L:665:TRP:HZ3	1.70	0.40
8:L:674:GLU:OE1	8:L:675:GLN:NE2	2.55	0.40
8:L:816:LYS:HD2	8:L:816:LYS:HA	1.83	0.40
1:A:495:THR:HG22	1:A:503:ALA:HB2	2.03	0.40
3:D:484:GLN:HE22	3:D:566:LYS:H	1.70	0.40
3:D:491:ARG:CA	3:D:520:THR:HB	2.51	0.40
5:F:918:PHE:HA	5:F:922:LEU:HD11	2.04	0.40
6:G:305:ILE:HD12	6:G:305:ILE:HA	1.91	0.40
6:G:391:LEU:HA	6:G:394:ILE:HG12	2.03	0.40
7:K:427:LEU:N	7:K:427:LEU:HD22	2.36	0.40
7:K:429:LEU:C	7:K:429:LEU:CD1	2.85	0.40
1:Z:305:ILE:HD12	1:Z:339:TYR:HB3	2.02	0.40
1:Z:565:GLY:O	1:Z:569:VAL:N	2.51	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	722/839 (86%)	700 (97%)	20 (3%)	2 (0%)	41	74
1	Z	736/839 (88%)	675 (92%)	39 (5%)	22 (3%)	4	32
2	C	1323/1391 (95%)	1269 (96%)	41 (3%)	13 (1%)	15	51
3	D	1396/1502 (93%)	1275 (91%)	113 (8%)	8 (1%)	25	61
4	E	1538/1655 (93%)	1376 (90%)	149 (10%)	13 (1%)	19	56
5	F	1616/1683 (96%)	1203 (74%)	317 (20%)	96 (6%)	1	19
6	G	198/472 (42%)	188 (95%)	9 (4%)	1 (0%)	29	65
6	J	191/472 (40%)	175 (92%)	13 (7%)	3 (2%)	9	43
7	H	242/541 (45%)	202 (84%)	36 (15%)	4 (2%)	9	42
7	K	252/541 (47%)	209 (83%)	32 (13%)	11 (4%)	2	24
8	I	185/823 (22%)	158 (85%)	16 (9%)	11 (6%)	1	19
8	L	185/823 (22%)	164 (89%)	15 (8%)	6 (3%)	4	31
All	All	8584/11581 (74%)	7594 (88%)	800 (9%)	190 (2%)	10	38

All (190) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	44	VAL
2	C	319	PRO
2	C	468	PHE
2	C	476	ASN
2	C	694	PHE
2	C	1255	SER
3	D	528	PRO
3	D	665	ASN
3	D	1000	ASP
3	D	1128	GLN
3	D	1134	SER
4	E	923	LEU

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Mol	Chain	Res	Type
4	E	986	SER
4	E	989	ASP
4	E	990	LYS
5	F	353	PRO
5	F	357	PRO
5	F	380	ALA
5	F	391	ASN
5	F	394	TYR
5	F	395	PRO
5	F	410	PRO
5	F	823	PRO
5	F	825	ILE
5	F	885	GLU
5	F	888	PRO
5	F	919	ASN
5	F	921	PRO
5	F	934	ASP
5	F	935	GLN
5	F	1031	VAL
5	F	1036	PRO
5	F	1090	PRO
5	F	1183	TYR
5	F	1187	ASN
5	F	1188	THR
5	F	1195	PHE
5	F	1295	ALA
5	F	1314	VAL
5	F	1371	ILE
5	F	1381	LEU
5	F	1387	THR
5	F	1392	ILE
5	F	1395	PRO
5	F	1680	GLN
6	G	425	GLU
7	H	506	ILE
7	H	507	ASN
8	I	732	ALA
8	I	740	LYS
8	I	793	LEU
8	I	799	SER
6	J	338	SER
6	J	339	LEU

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Mol	Chain	Res	Type
6	J	438	ALA
7	K	321	ALA
7	K	449	ASP
7	K	450	PRO
7	K	457	ASN
8	L	780	THR
8	L	781	ASN
1	Z	44	VAL
1	Z	92	THR
1	Z	248	THR
1	Z	249	ARG
1	Z	250	ASN
1	Z	252	GLN
1	Z	751	LEU
1	Z	752	SER
1	Z	765	ASP
1	Z	767	ILE
1	Z	824	MET
2	C	526	ASN
4	E	259	SER
4	E	701	SER
4	E	1248	THR
5	F	361	LEU
5	F	396	GLY
5	F	412	ASN
5	F	922	LEU
5	F	926	LEU
5	F	936	ILE
5	F	958	SER
5	F	964	LYS
5	F	974	GLU
5	F	1039	ALA
5	F	1041	PHE
5	F	1059	SER
5	F	1062	SER
5	F	1124	GLY
5	F	1134	LYS
5	F	1135	CYS
5	F	1189	MET
5	F	1204	GLY
5	F	1210	LYS
5	F	1374	LYS

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Mol	Chain	Res	Type
5	F	1389	ILE
5	F	1421	VAL
7	H	319	THR
7	H	424	ASN
8	I	728	THR
7	K	405	ASN
7	K	501	GLU
7	K	504	ASP
7	K	505	ARG
8	L	779	THR
1	Z	245	ALA
1	Z	821	GLN
1	A	134	LYS
2	C	75	ASP
2	C	334	ASP
2	C	479	ASP
4	E	980	LYS
5	F	335	ASP
5	F	350	ARG
5	F	358	LYS
5	F	367	PHE
5	F	381	THR
5	F	406	LEU
5	F	591	ASP
5	F	902	LYS
5	F	1030	ASN
5	F	1035	GLY
5	F	1038	LEU
5	F	1064	THR
5	F	1084	LEU
5	F	1123	ASN
5	F	1193	ARG
5	F	1200	PRO
5	F	1269	GLU
5	F	1370	LEU
5	F	1396	LEU
5	F	1675	THR
8	I	738	ASP
8	I	789	GLU
8	I	790	ASN
7	K	392	LEU
8	L	783	ASP

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Mol	Chain	Res	Type
1	Z	134	LYS
1	Z	825	PRO
2	C	315	THR
2	C	1252	ASP
3	D	1441	ASN
5	F	363	ASP
5	F	444	THR
5	F	930	VAL
5	F	951	ARG
5	F	1067	ASN
5	F	1129	ASN
5	F	1236	ILE
5	F	1361	PHE
5	F	1372	THR
5	F	1676	LEU
7	K	455	LYS
1	Z	91	GLN
1	Z	648	GLU
1	Z	762	ASN
1	Z	771	ILE
1	Z	777	ILE
3	D	998	ALA
4	E	702	THR
4	E	977	ALA
4	E	1027	TRP
5	F	1122	TRP
5	F	1194	LEU
5	F	1420	GLN
1	Z	244	SER
1	Z	828	THR
5	F	352	ILE
5	F	713	PHE
5	F	923	VAL
5	F	1296	LEU
5	F	1307	VAL
5	F	1365	ASN
5	F	1390	GLN
8	I	798	ASN
8	L	704	GLN
2	C	684	GLY
4	E	1489	PRO
8	L	794	ILE

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Mol	Chain	Res	Type
8	I	782	ILE
7	K	427	LEU
3	D	993	GLY
4	E	974	GLY
5	F	1032	ILE
5	F	1063	ILE
5	F	422	VAL
5	F	1266	VAL
8	I	791	ILE
2	C	469	ILE

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	609/762 (80%)	583 (96%)	26 (4%)	29	58
1	Z	611/762 (80%)	556 (91%)	55 (9%)	9	37
2	C	1177/1250 (94%)	1152 (98%)	25 (2%)	53	74
3	D	1215/1353 (90%)	1202 (99%)	13 (1%)	73	85
4	E	1421/1557 (91%)	1396 (98%)	25 (2%)	59	77
5	F	1260/1538 (82%)	1164 (92%)	96 (8%)	13	43
6	G	167/377 (44%)	165 (99%)	2 (1%)	71	84
6	J	162/377 (43%)	147 (91%)	15 (9%)	9	35
7	H	171/439 (39%)	166 (97%)	5 (3%)	42	66
7	K	153/439 (35%)	134 (88%)	19 (12%)	4	24
8	I	152/674 (23%)	135 (89%)	17 (11%)	6	28
8	L	138/674 (20%)	137 (99%)	1 (1%)	84	91
All	All	7236/10202 (71%)	6937 (96%)	299 (4%)	34	59

All (299) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	19	ASN
1	A	21	LYS
1	A	22	LEU
1	A	27	GLU
1	A	30	ASP
1	A	45	SER
1	A	53	VAL
1	A	54	PHE
1	A	57	ARG
1	A	79	SER
1	A	82	ASP
1	A	115	THR
1	A	116	LYS
1	A	119	GLU
1	A	122	LEU
1	A	130	ASN
1	A	134	LYS
1	A	137	ASP
1	A	138	ASN
1	A	139	PHE
1	A	543	LYS
1	A	617	LYS
1	A	827	GLU
1	A	829	TYR
1	A	830	SER
1	A	833	ILE
2	C	68	THR
2	C	85	LEU
2	C	294	LEU
2	C	315	THR
2	C	318	ILE
2	C	326	LEU
2	C	331	LEU
2	C	337	THR
2	C	462	LEU
2	C	476	ASN
2	C	520	LEU
2	C	530	LEU
2	C	577	PHE
2	C	691	GLN
2	C	695	ASP
2	C	826	LEU
2	C	828	THR

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Mol	Chain	Res	Type
2	C	896	CYS
2	C	1034	SER
2	C	1252	ASP
2	C	1253	VAL
2	C	1262	LEU
2	C	1299	LYS
2	C	1301	SER
2	C	1387	HIS
3	D	445	ARG
3	D	528	PRO
3	D	980	SER
3	D	982	GLU
3	D	990	GLU
3	D	995	PHE
3	D	1000	ASP
3	D	1115	VAL
3	D	1118	LEU
3	D	1129	ASN
3	D	1160	HIS
3	D	1472	ILE
3	D	1495	LEU
4	E	138	VAL
4	E	254	SER
4	E	257	LEU
4	E	258	ILE
4	E	336	GLN
4	E	771	LEU
4	E	773	LEU
4	E	791	ASP
4	E	827	PRO
4	E	843	LEU
4	E	923	LEU
4	E	931	PHE
4	E	975	GLN
4	E	976	PHE
4	E	980	LYS
4	E	984	ASP
4	E	986	SER
4	E	1026	THR
4	E	1077	ARG
4	E	1164	ASP
4	E	1259	PHE

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Mol	Chain	Res	Type
4	E	1301	LYS
4	E	1313	ARG
4	E	1557	LEU
4	E	1597	ARG
5	F	64	PHE
5	F	164	LYS
5	F	331	ILE
5	F	334	GLN
5	F	356	ILE
5	F	389	LEU
5	F	397	MET
5	F	399	SER
5	F	407	ASN
5	F	408	SER
5	F	409	MET
5	F	444	THR
5	F	556	LYS
5	F	644	LYS
5	F	712	LEU
5	F	745	ARG
5	F	750	TRP
5	F	782	LYS
5	F	813	GLU
5	F	825	ILE
5	F	836	ILE
5	F	837	TYR
5	F	888	PRO
5	F	900	LEU
5	F	920	ILE
5	F	921	PRO
5	F	926	LEU
5	F	928	LEU
5	F	934	ASP
5	F	950	GLU
5	F	951	ARG
5	F	955	SER
5	F	958	SER
5	F	962	ARG
5	F	965	LEU
5	F	1029	SER
5	F	1041	PHE
5	F	1060	LEU

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Mol	Chain	Res	Type
5	F	1068	ILE
5	F	1090	PRO
5	F	1092	THR
5	F	1118	ARG
5	F	1128	ASP
5	F	1129	ASN
5	F	1144	VAL
5	F	1147	PHE
5	F	1149	SER
5	F	1150	PHE
5	F	1153	TYR
5	F	1155	ASN
5	F	1159	GLN
5	F	1165	ILE
5	F	1166	HIS
5	F	1167	LYS
5	F	1169	SER
5	F	1170	PHE
5	F	1181	VAL
5	F	1191	SER
5	F	1192	VAL
5	F	1210	LYS
5	F	1273	LYS
5	F	1276	ASP
5	F	1277	VAL
5	F	1278	GLU
5	F	1280	ILE
5	F	1281	LYS
5	F	1283	LYS
5	F	1285	HIS
5	F	1286	PHE
5	F	1289	ILE
5	F	1291	SER
5	F	1293	ASN
5	F	1296	LEU
5	F	1297	GLU
5	F	1300	LEU
5	F	1301	SER
5	F	1302	VAL
5	F	1303	LEU
5	F	1309	LEU
5	F	1314	VAL

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Mol	Chain	Res	Type
5	F	1315	THR
5	F	1349	PHE
5	F	1356	LEU
5	F	1361	PHE
5	F	1364	TYR
5	F	1365	ASN
5	F	1372	THR
5	F	1373	ASP
5	F	1382	TYR
5	F	1387	THR
5	F	1417	LEU
5	F	1484	ARG
5	F	1550	LEU
5	F	1634	LYS
5	F	1635	ARG
5	F	1680	GLN
6	G	411	ASN
6	G	460	LEU
7	H	325	THR
7	H	418	GLN
7	H	507	ASN
7	H	508	LYS
7	H	529	LYS
8	I	688	HIS
8	I	727	SER
8	I	736	ASN
8	I	740	LYS
8	I	778	LYS
8	I	792	GLN
8	I	795	LYS
8	I	797	LEU
8	I	808	ASP
8	I	810	ASN
8	I	812	THR
8	I	815	GLU
8	I	818	ILE
8	I	819	ASN
8	I	821	ILE
8	I	822	LYS
8	I	823	LYS
6	J	357	LEU
6	J	368	ASP

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Mol	Chain	Res	Type
6	J	370	ASP
6	J	371	LYS
6	J	372	PHE
6	J	375	LYS
6	J	376	LYS
6	J	385	GLU
6	J	389	ARG
6	J	391	LEU
6	J	395	GLU
6	J	399	ASN
6	J	401	ILE
6	J	411	ASN
6	J	430	LEU
7	K	341	LYS
7	K	384	THR
7	K	385	GLN
7	K	387	GLN
7	K	391	GLU
7	K	393	ASP
7	K	394	THR
7	K	398	ILE
7	K	399	LEU
7	K	400	LYS
7	K	402	GLN
7	K	404	ARG
7	K	423	LYS
7	K	443	LEU
7	K	446	ARG
7	K	449	ASP
7	K	453	LEU
7	K	455	LYS
7	K	529	LYS
8	L	703	GLN
1	Z	19	ASN
1	Z	20	LYS
1	Z	21	LYS
1	Z	22	LEU
1	Z	27	GLU
1	Z	30	ASP
1	Z	46	ILE
1	Z	49	LEU
1	Z	53	VAL

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Mol	Chain	Res	Type
1	Z	56	LEU
1	Z	79	SER
1	Z	80	PHE
1	Z	81	GLU
1	Z	84	ASP
1	Z	87	ILE
1	Z	88	LYS
1	Z	89	ASP
1	Z	90	LEU
1	Z	92	THR
1	Z	116	LYS
1	Z	117	LYS
1	Z	119	GLU
1	Z	121	ILE
1	Z	122	LEU
1	Z	125	ILE
1	Z	127	GLN
1	Z	128	LEU
1	Z	129	LEU
1	Z	130	ASN
1	Z	133	THR
1	Z	134	LYS
1	Z	138	ASN
1	Z	139	PHE
1	Z	144	LEU
1	Z	146	LEU
1	Z	248	THR
1	Z	294	MET
1	Z	399	LYS
1	Z	446	LYS
1	Z	551	ARG
1	Z	731	GLN
1	Z	758	GLN
1	Z	765	ASP
1	Z	766	ASN
1	Z	767	ILE
1	Z	772	PRO
1	Z	775	LEU
1	Z	776	ILE
1	Z	777	ILE
1	Z	793	LYS
1	Z	805	SER

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Mol	Chain	Res	Type
1	Z	808	ASN
1	Z	824	MET
1	Z	827	GLU
1	Z	828	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (115) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	19	ASN
1	A	130	ASN
1	A	138	ASN
1	A	540	ASN
1	A	733	GLN
1	A	787	HIS
2	C	199	HIS
2	C	691	GLN
2	C	827	ASN
2	C	914	GLN
2	C	941	ASN
2	C	1387	HIS
3	D	449	ASN
3	D	484	GLN
3	D	850	ASN
3	D	1086	ASN
3	D	1129	ASN
4	E	36	GLN
4	E	190	GLN
4	E	210	ASN
4	E	299	ASN
4	E	388	ASN
4	E	571	ASN
4	E	600	ASN
4	E	636	GLN
4	E	677	ASN
4	E	759	ASN
4	E	763	GLN
4	E	770	HIS
4	E	822	ASN
4	E	1001	ASN
4	E	1029	ASN
4	E	1383	GLN
4	E	1429	HIS

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Mol	Chain	Res	Type
4	E	1493	ASN
4	E	1535	ASN
4	E	1539	ASN
4	E	1558	GLN
5	F	38	ASN
5	F	163	ASN
5	F	177	GLN
5	F	195	GLN
5	F	258	GLN
5	F	334	GLN
5	F	428	GLN
5	F	539	ASN
5	F	542	ASN
5	F	714	HIS
5	F	725	ASN
5	F	1293	ASN
5	F	1299	ASN
5	F	1365	ASN
5	F	1541	ASN
6	G	328	GLN
6	G	355	GLN
6	G	428	ASN
7	H	362	ASN
7	H	365	GLN
7	H	368	ASN
7	H	377	ASN
7	H	524	ASN
8	I	647	GLN
8	I	654	HIS
8	I	690	GLN
8	I	695	GLN
8	I	743	GLN
8	I	754	ASN
8	I	781	ASN
8	I	786	ASN
8	I	800	HIS
8	I	819	ASN
6	J	324	GLN
6	J	328	GLN
6	J	355	GLN
6	J	367	ASN
6	J	374	GLN

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Mol	Chain	Res	Type
6	J	378	HIS
6	J	399	ASN
7	K	359	ASN
7	K	362	ASN
7	K	365	GLN
7	K	368	ASN
7	K	377	ASN
7	K	385	GLN
7	K	387	GLN
7	K	402	GLN
7	K	424	ASN
7	K	515	ASN
7	K	539	ASN
8	L	647	GLN
8	L	654	HIS
8	L	695	GLN
8	L	704	GLN
8	L	749	GLN
8	L	754	ASN
8	L	774	ASN
8	L	800	HIS
1	Z	19	ASN
1	Z	60	ASN
1	Z	127	GLN
1	Z	130	ASN
1	Z	138	ASN
1	Z	141	ASN
1	Z	196	ASN
1	Z	214	ASN
1	Z	396	GLN
1	Z	463	GLN
1	Z	464	ASN
1	Z	621	HIS
1	Z	658	ASN
1	Z	738	GLN
1	Z	758	GLN
1	Z	770	ASN
1	Z	802	GLN
1	Z	834	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

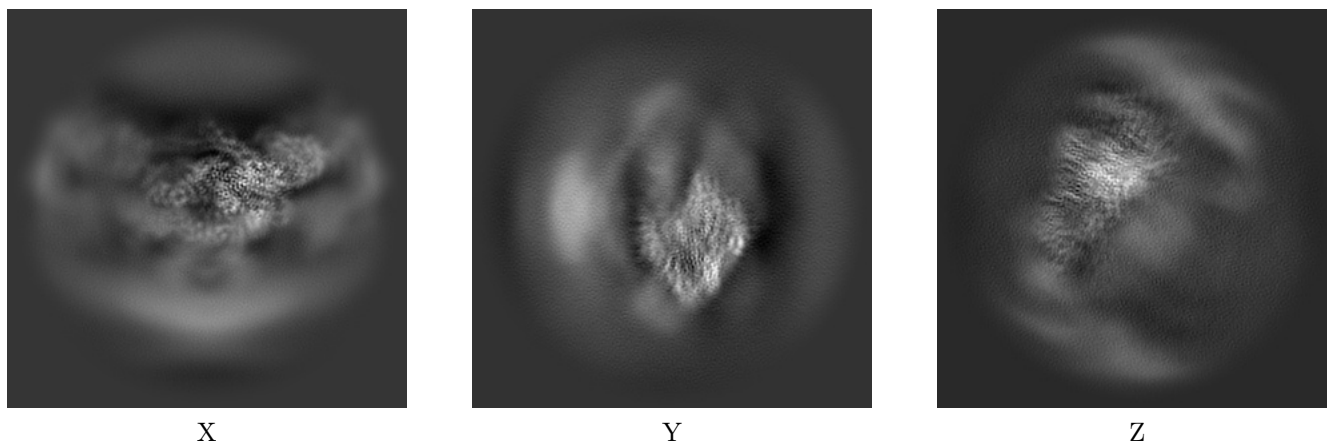
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-32653. These allow visual inspection of the internal detail of the map and identification of artifacts.

No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

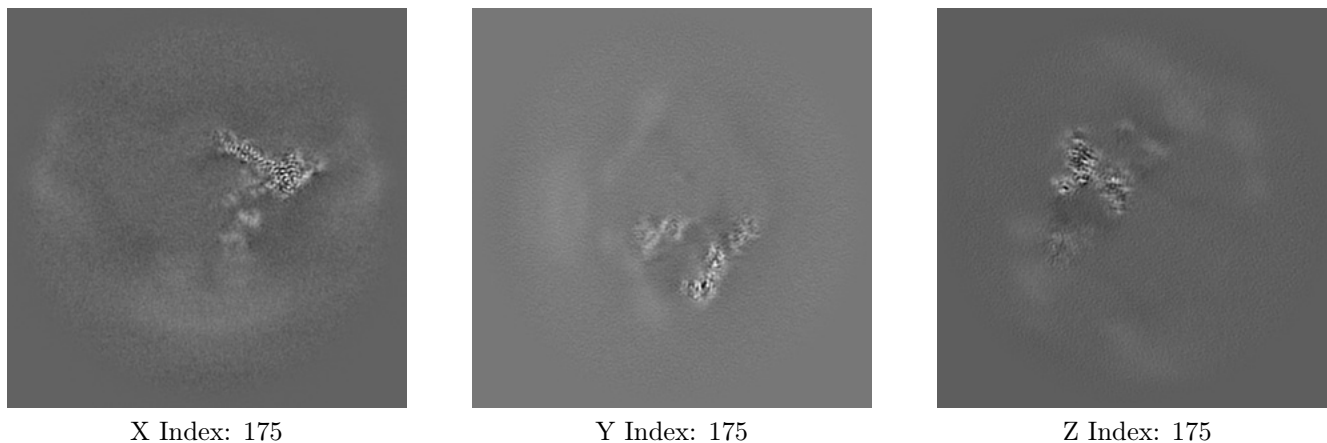
6.1.1 Primary map



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

6.2 Central slices [i](#)

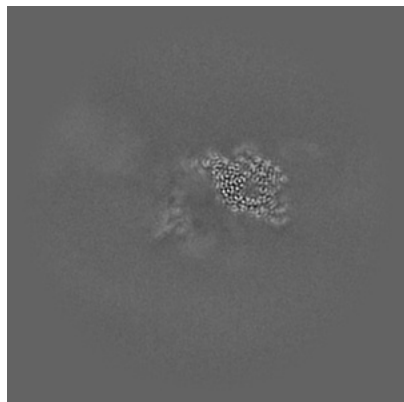
6.2.1 Primary map



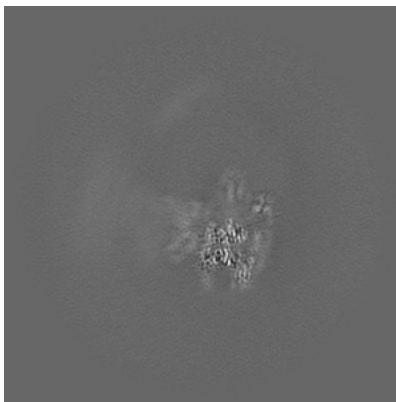
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

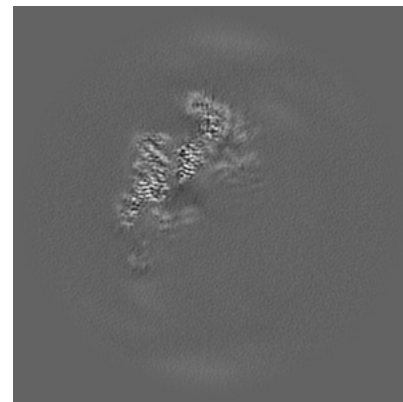
6.3.1 Primary map



X Index: 124



Y Index: 203



Z Index: 204

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

6.4 Orthogonal surface views [i](#)

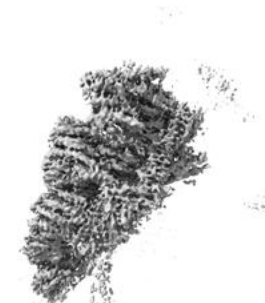
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.24. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

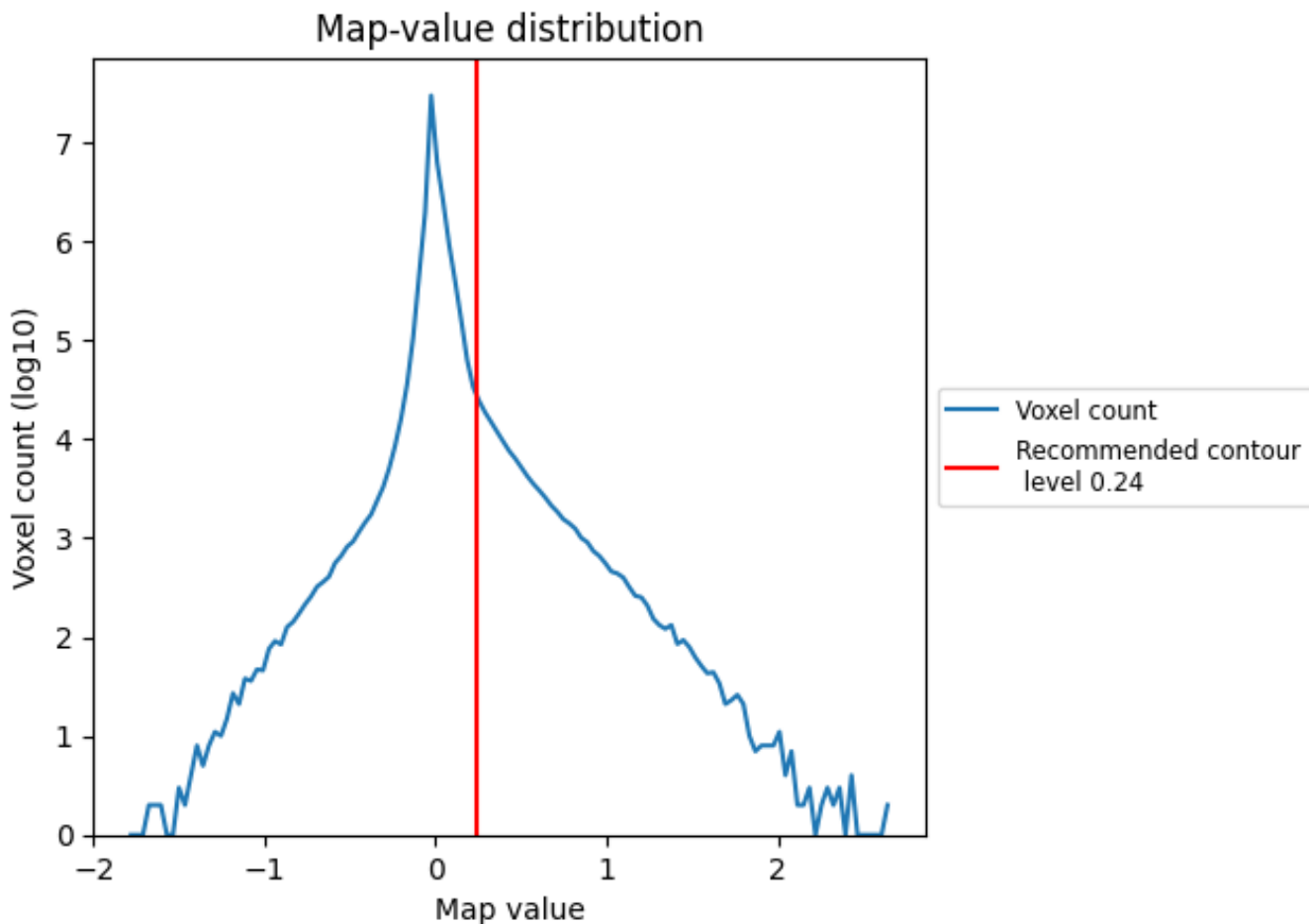
6.5 Mask visualisation

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

7 Map analysis [i](#)

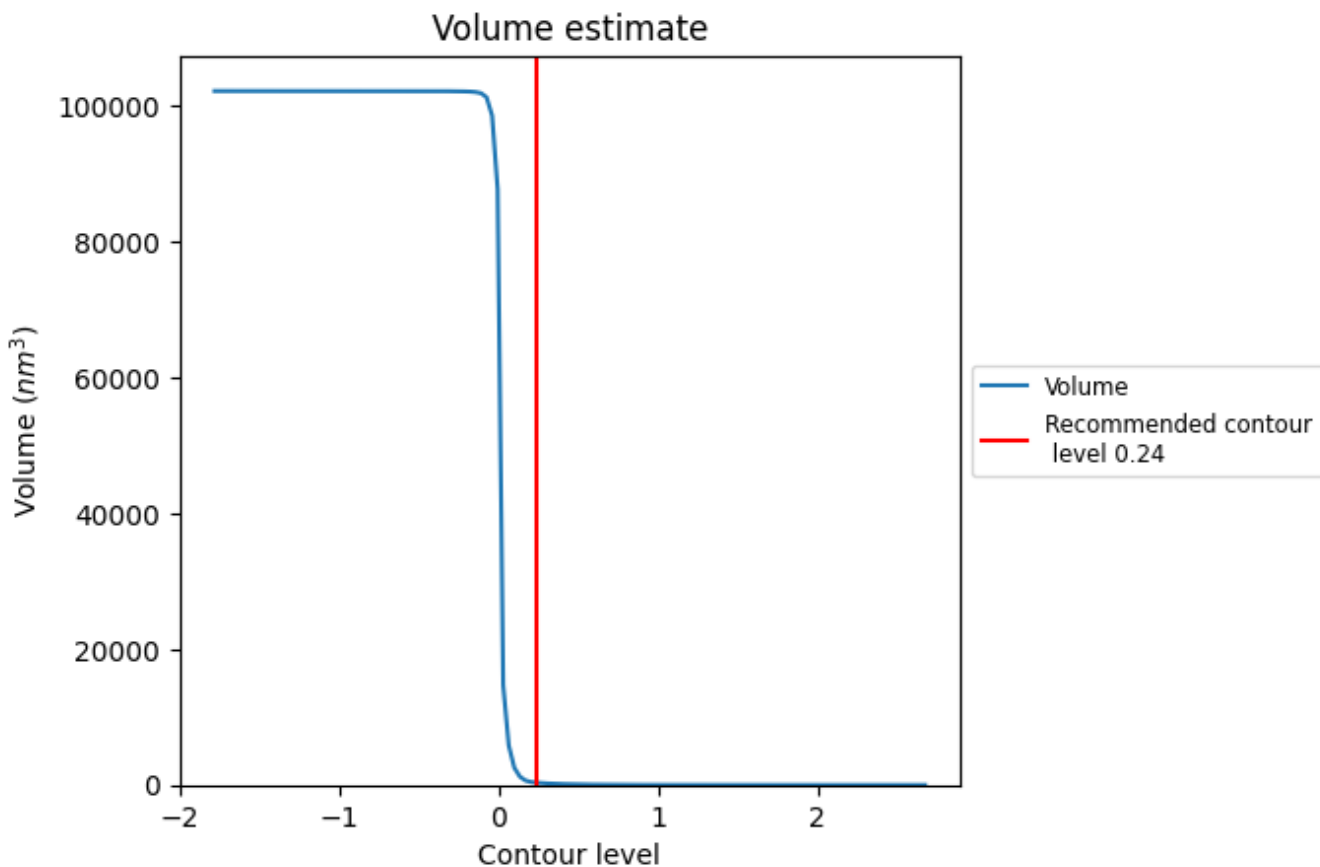
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

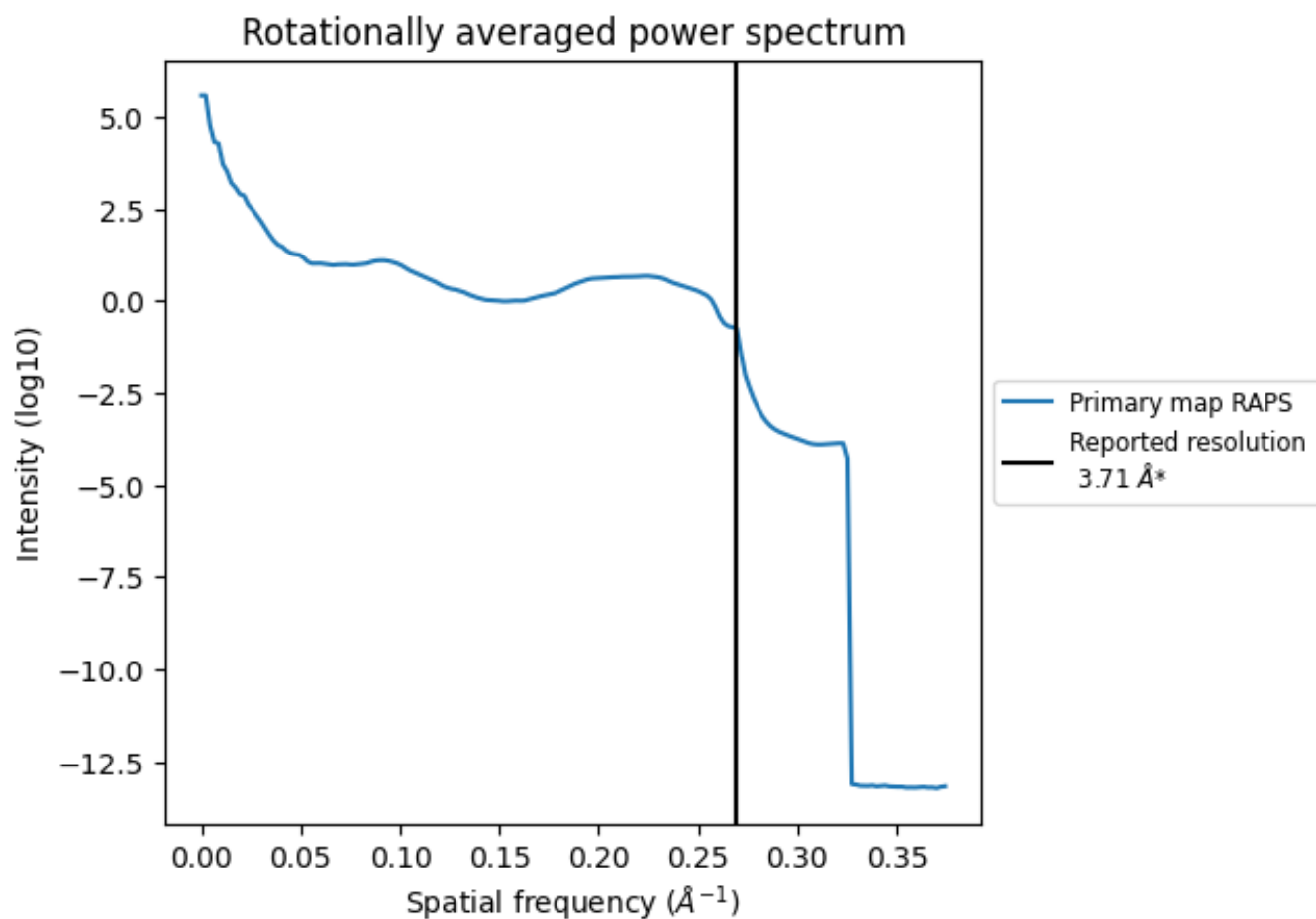
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 332 nm^3 ; this corresponds to an approximate mass of 300 kDa.

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

7.3 Rotationally averaged power spectrum i



*Reported resolution corresponds to spatial frequency of 0.270 Å⁻¹

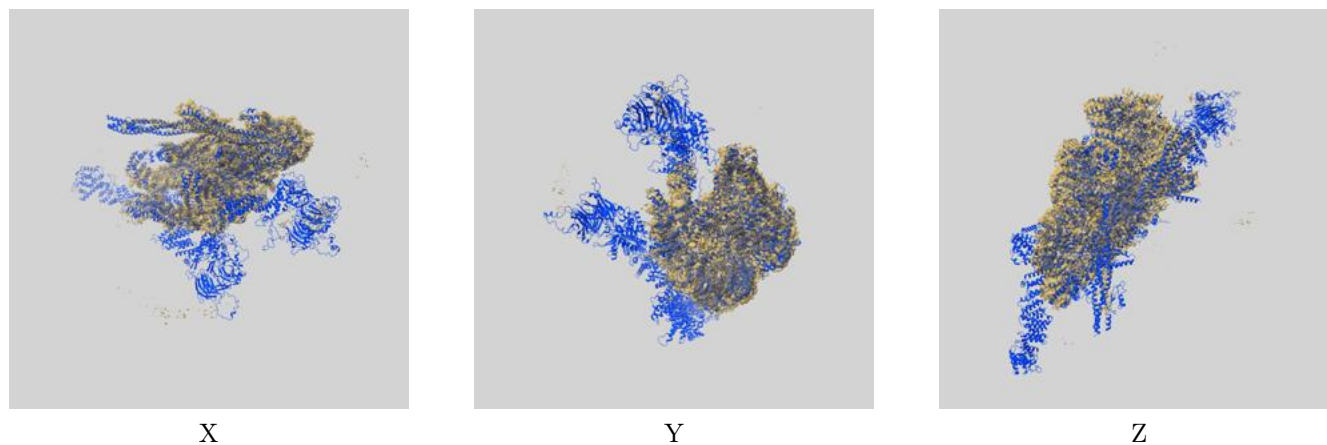
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit [i](#)

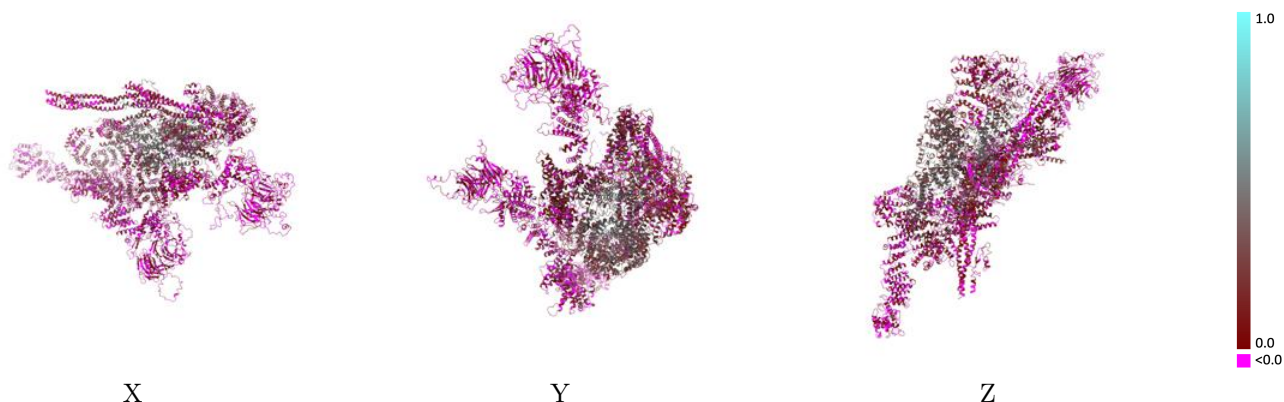
This section contains information regarding the fit between EMDB map EMD-32653 and PDB model 7WOO. Per-residue inclusion information can be found in section 3 on page 6.

9.1 Map-model overlay [i](#)



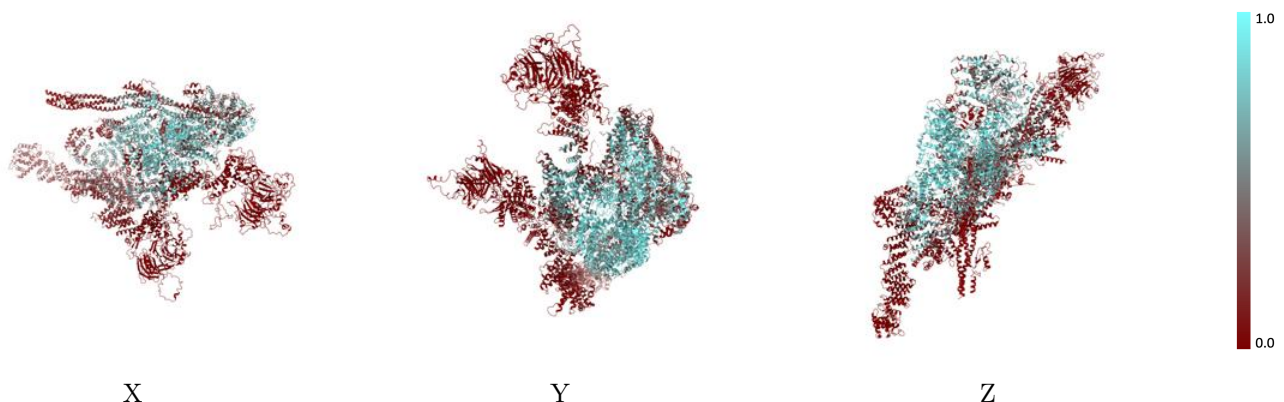
The images above show the 3D surface view of the map at the recommended contour level 0.24 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



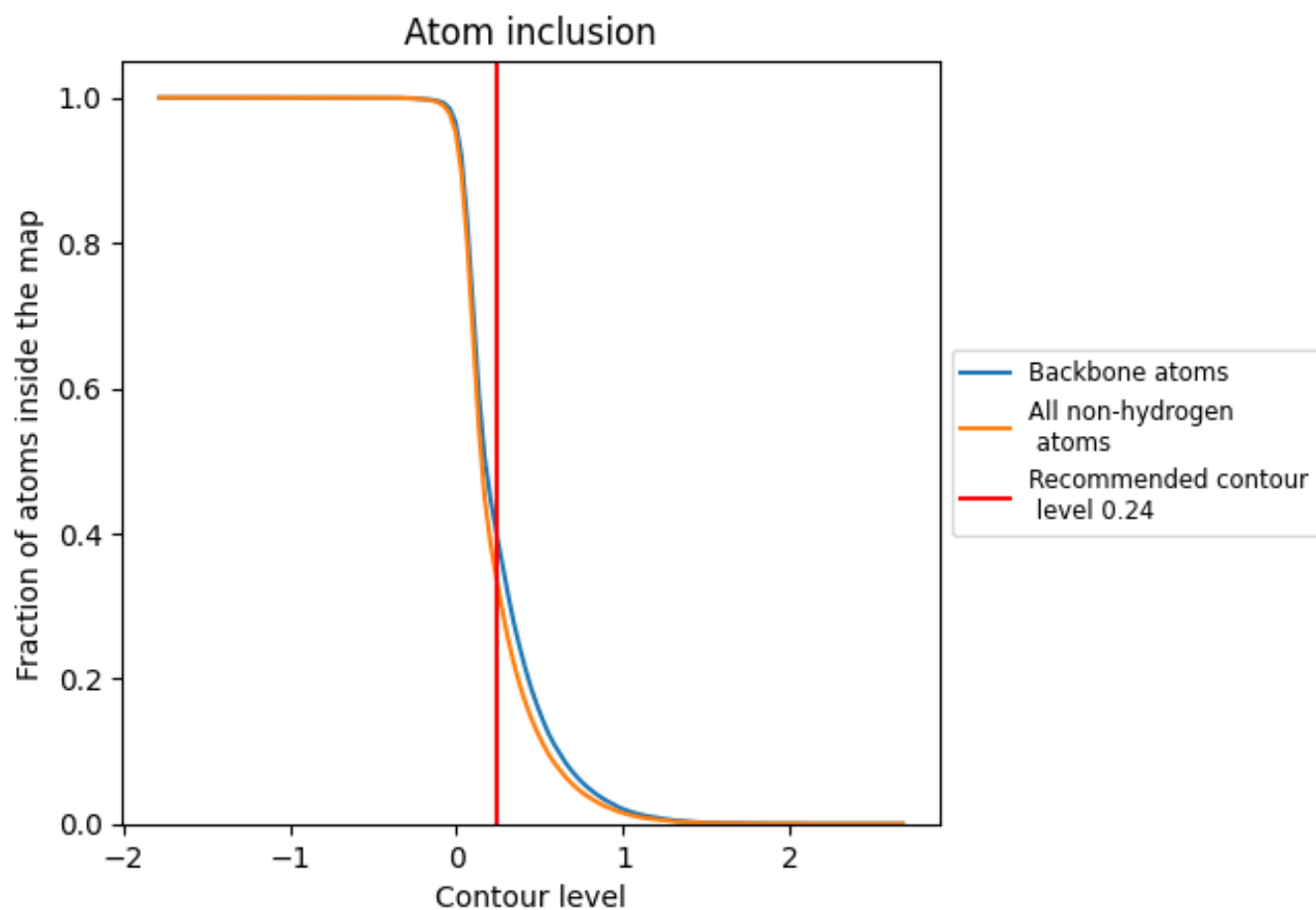
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.24).



























9.4 Atom inclusion [i](#)



At the recommended contour level, 40% of all backbone atoms, 34% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.24) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.3366	 0.1340
A	 0.0352	 0.0150
C	 0.0006	 0.0220
D	 0.1244	 0.0320
E	 0.7097	 0.3120
F	 0.5687	 0.2180
G	 0.3909	 0.0730
H	 0.3423	 0.0980
I	 0.4901	 0.1220
J	 0.2858	 0.1480
K	 0.2424	 0.1210
L	 0.3038	 0.0820
Z	 0.3468	 0.1290

