



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 31, 2023 – 09:58 AM EDT

PDB ID : 3I4N
Title : 8-oxoguanine containing RNA polymerase II elongation complex E
Authors : Damsma, G.E.; Cramer, P.
Deposited on : 2009-07-02
Resolution : 3.90 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtrriage (Phenix) : 1.13
EDS : 2.36
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

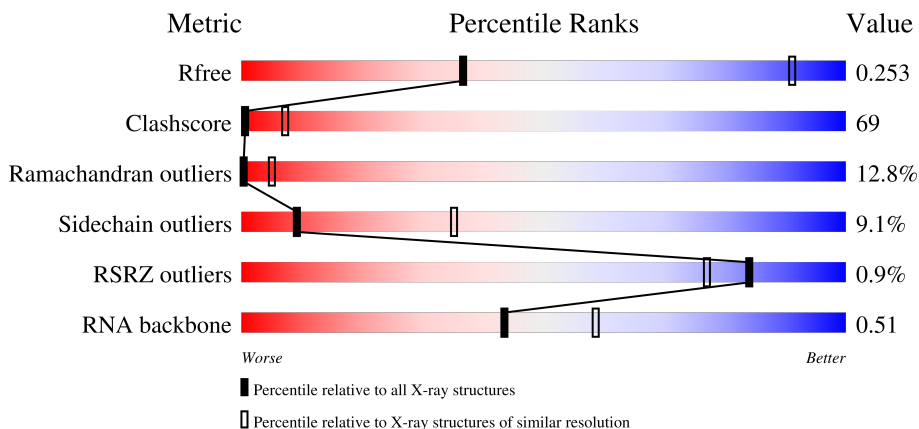
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.90 Å.

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



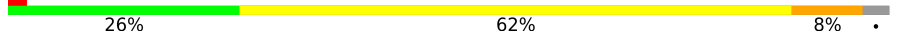
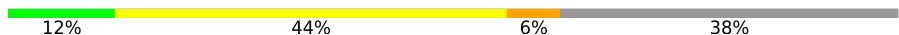
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1002 (4.14-3.66)
Clashscore	141614	1004 (4.12-3.68)
Ramachandran outliers	138981	1021 (4.14-3.66)
Sidechain outliers	138945	1014 (4.14-3.66)
RSRZ outliers	127900	1275 (4.20-3.60)
RNA backbone	3102	1040 (4.76-3.00)

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

Mol	Chain	Length	Quality of chain
1	A	1733	
2	B	1224	
3	C	324	
4	D	221	

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Mol	Chain	Length	Quality of chain
5	E	215	
6	F	155	
7	G	171	
8	H	146	
9	I	122	
10	J	70	
11	K	120	
12	L	70	
13	T	26	
14	N	12	
15	P	16	

2 Entry composition [i](#)

There are 17 unique types of molecules in this entry. The entry contains 32307 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called DNA-directed RNA polymerase II subunit RPB1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	1429	11240	7079	1966	2133	62	0	0	0

- Molecule 2 is a protein called DNA-directed RNA polymerase II subunit RPB2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	1125	8942	5659	1571	1657	55	0	0	0

- Molecule 3 is a protein called DNA-directed RNA polymerase II subunit RPB3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	C	270	2125	1336	353	422	14	0	0	0

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	-5	HIS	-	EXPRESSION TAG	UNP P16370
C	-4	HIS	-	EXPRESSION TAG	UNP P16370
C	-3	HIS	-	EXPRESSION TAG	UNP P16370
C	-2	HIS	-	EXPRESSION TAG	UNP P16370
C	-1	HIS	-	EXPRESSION TAG	UNP P16370
C	0	HIS	-	EXPRESSION TAG	UNP P16370

- Molecule 4 is a protein called DNA-directed RNA polymerase II subunit RPB4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	D	182	1465	904	262	296	3	0	0	0

- Molecule 5 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	E	214	1752	1111	309	321	11	0	0	0

- Molecule 6 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
6	F	88	712	455	120	134	3	0	0	0

- Molecule 7 is a protein called DNA-directed RNA polymerase II subunit RPB7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
7	G	171	1340	861	222	249	8	0	0	0

- Molecule 8 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
8	H	137	1101	693	185	218	5	0	0	0

- Molecule 9 is a protein called DNA-directed RNA polymerase II subunit RPB9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
9	I	117	952	586	173	182	11	0	0	0

- Molecule 10 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	J	65	532	339	93	94	6	0	0	0

- Molecule 11 is a protein called DNA-directed RNA polymerase II subunit RPB11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
11	K	116	929	596	158	173	2	0	0	0

- Molecule 12 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	L	47	Total	C	N	O	S	0	0	0
			370	228	73	65	4			

- Molecule 13 is a DNA chain called DNA (5'-D(*AP*G*CP*TP*CP*AP*AP*GP*TP*AP*CP*TP*TP*AP*(8OG)P*GP*CP*CP*(BRU)P*GP*GP*TP*CP*AP*TP*T)-3').

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
13	T	20	Total	Br	C	N	O	P	0	0	0
			407	1	194	72	121	19			

- Molecule 14 is a DNA chain called DNA (5'-D(*AP*GP*TP*AP*CP*TP*TP*GP*AP*GP*CP*T)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	N	11	Total	C	N	O	P	0	0	0
			224	108	42	64	10			

- Molecule 15 is a RNA chain called RNA (5'-R(*UP*GP*CP*AP*UP*C*UP*UP*CP*CP*AP*GP*GP*CP*AP*U)-3').

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	P	10	Total	C	N	O	P	0	0	0
			207	94	35	69	9			

- Molecule 16 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
16	A	1	Total	Mg	0	0
			1	1		

- Molecule 17 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
17	A	2	Total	Zn	0	0
			2	2		
17	B	1	Total	Zn	0	0
			1	1		
17	C	1	Total	Zn	0	0
			1	1		
17	I	2	Total	Zn	0	0
			2	2		

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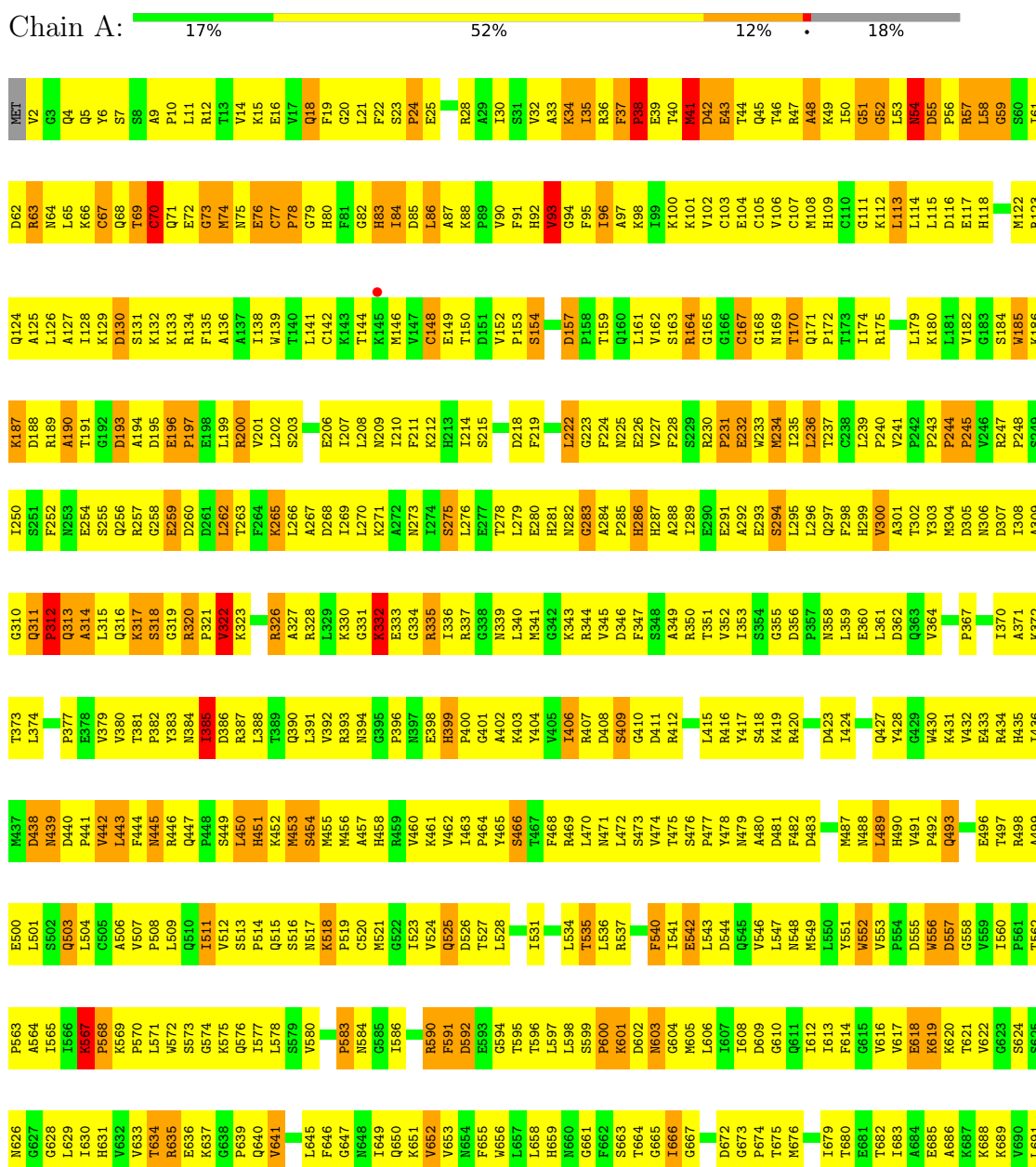
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
17	J	1	Total 1	Zn 1	0	0
17	L	1	Total 1	Zn 1	0	0

3 Residue-property plots

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

- Molecule 1: DNA-directed RNA polymerase II subunit RPB1



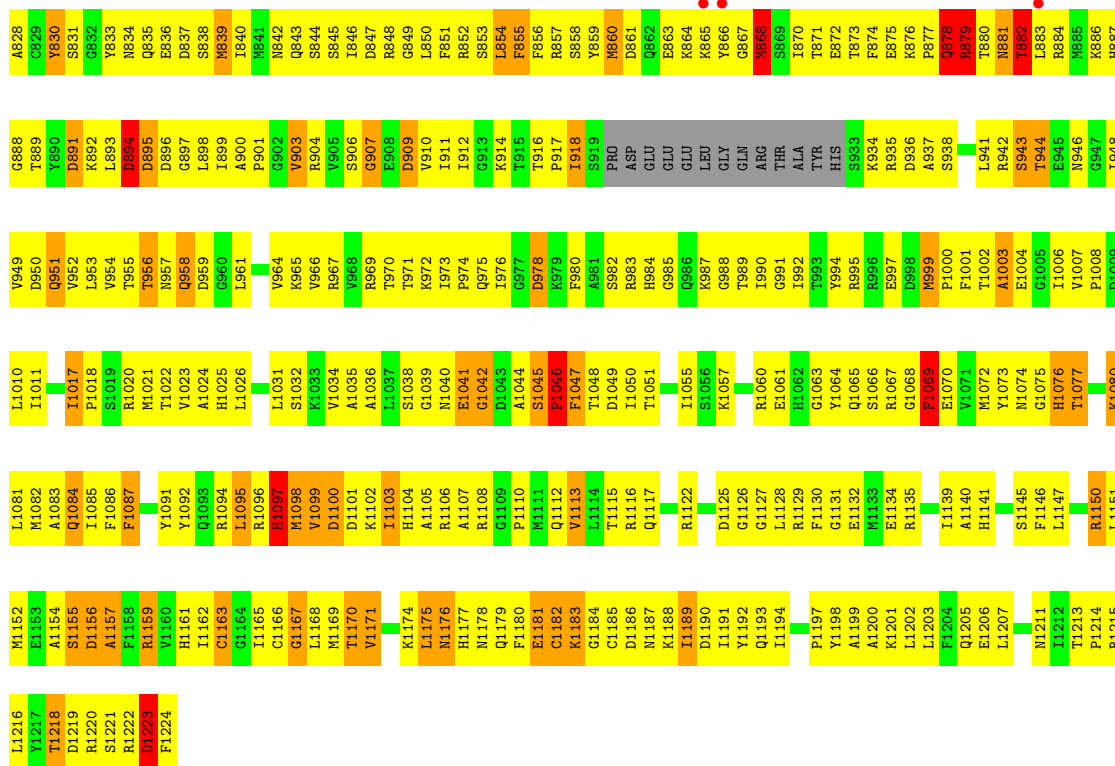
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TYR	THR	SER	GLY	Y1453	S1392	D1323	D1257	L1193	S1071	Q1011	R944	I978	A817	S754	V693
SER	PRO	ASP	ALA	R1454	M1393	P1324	H1258	L1197	I1072	D1012	E945	E879	M818	F755	K694
THR	SER	THR	GLY	G1395	R1394	T1325	M1269	D1198	G1073	D1013	V946	K880	G819	V756	E695
SER	PRO	TYR	GLY	L1396	K1261	R1326	K1262	A1201	P1075	V1015	V948	L883	R820	N757	E696
PRO	SER	PRO	ALA	L1397	K1262	I1327	K1263	M1202	P1076	T1016	D949	D884	G822	V758	A697
TYR	THR	THR	THR	T1328	E1264	Y1328	I1263	M1203	Q1077	F1018	G950	T885	E822	A759	A698
TYR	THR	THR	THR	T1329	M1265	M1330	M1265	K1204	Q1078	F1019	E951	I886	I825	M761	N700
PRO	PRO	PRO	ILE	S1401	T1266	M1331	T1266	L1441	T1080	C1020	A952	G887	D826	S762	L701
THR	SER	THR	GLY	F1402	M1267	F1332	M1267	L1443	L1081	G1021	N953	G888	T827	A763	L702
THR	TYR	THR	ASP	E1403	L1268	I1333	L1268	L1444	ASN	L1021	N954	S889	A828	V765	T703
PRO	SER	PRO	ALA	E1404	E1269	D1334	E1269	L1445	THR	R1023	P955	D890	V829	A764	A704
TYR	PRO	TYR	GLN	T1405	R1270	M1209	M1209	V1446	PHE	S1024	V958	F893	T831	H706	K705
TYR	THR	TYR	ASP	V1406	I1271	M1210	M1210	I1447	HIS	R1025	N959	E894	A832	G707	H706
PRO	SER	GLY	GLY	I1407	L1272	Q1211	Q1211	I1448	PHE	L1026	I960	K895	E833	G768	G707
PRO	PRO	ALA	ALA	I1408	L1273	A1449	A1449	A1449	ALA	A1027	R961	R896	T834	E771	M708
THR	THR	THR	VAL	R1409	G1213	G1213	G1213	S1450	GLY	T1028	R962	R897	G836	G772	T709
PRO	SER	THR	THR	A1412	E1214	E1214	E1214	E1151	VAL	R1029	I963	R898	Y836	K773	L710
PRO	SER	PRO	PRO	G1413	R1215	R1215	R1215	I1152	ALA	R1030	I964	V899	R837	R774	E712
TYR	PRO	TYR	TYR	A1343	E1216	E1216	E1216	Y1153	SER	L1031	Q965	D900	Q838	I775	S713
TYR	THR	TYR	GLY	G1344	K1217	K1217	K1217	Y1154	LYS	L1032	N966	L901	R839	A776	F714
PRO	SER	PRO	PHE	R1345	Q1218	Q1218	Q1218	D1155	K1093	Q1033	A967	L902	R840	F777	E715
PRO	PRO	PRO	GLY	A1416	T1279	T1279	T1279	P1156	K1094	E1034	Q968	N903	L841	F778	E716
THR	SER	PRO	VAL	E1417	E1280	A1346	E1280	D1157	T1095	Y1035	Q969	T904	V842	F779	M717
SER	TYR	TYR	GLY	L1418	M1284	L1348	M1284	P1158	S1096	R1036	T970	V760	K843	V718	V718
PRO	SER	PRO	SER	D1419	M1285	L1348	M1285	R1159	G1097	L1037	F971	L908	A844	V719	V719
TYR	PRO	TYR	VAL	D1420	M1285	N1222	M1222	S1160	V1098	L1038	H972	L909	L846	R720	R720
ALA	PRO	ALA	ALA	E1351	D1288	L1224	L1224	T1161	P1099	K1039	I973	H872	E846	F721	F721
TYR	THR	TYR	GLY	V1352	R1289	L1224	L1224	V1162	R1100	Q1040	D847	P910	R847	L784	L722
SER	SER	PRO	PHE	R1422	K1290	V1226	V1226	I1163	L1101	A1041	I848	R785	L848	V785	A725
PRO	PRO	PRO	ASP	G1423	V1291	I1227	I1227	P1164	K1102	F1042	K977	H786	M849	H786	A725
PRO	TYR	TYR	ASP	V1425	P1292	M1228	M1228	E1165	E1103	D1043	P978	K977	V850	K977	K726
PRO	PRO	PRO	VAL	A1426	S1293	S1229	S1229	D1166	I1104	V1044	S916	S916	V850	S787	D727
TYR	PRO	TYR	LYS	M1427	P1294	E1230	E1230	E1167	L1105	V1045	D980	S917	H851	F788	D727
TYR	THR	TYR	ASP	I1295	T1295	D1231	D1231	E1168	M1106	V1046	L981	Y852	R853	K728	K728
TYR	TYR	TYR	GLY	G1296	G1296	N1232	N1232	I1169	V1107	S1047	T982	I919	D853	A729	A729
PRO	PRO	PRO	LEU	E1297	E1297	D1233	D1233	I1170	A1108	I1048	L920	L920	M854	G730	G730
PRO	PRO	PRO	MET	M1364	M1364	L1236	L1236	Q1171	M1111	I1049	X984	G921	T856	R731	R731
TYR	TYR	TYR	PHE	Q1432	V1299	I1237	I1237	L1172	K1112	A1050	D985	D922	R857	E795	L732
PRO	PRO	PRO	SER	R1365	K1300	I1238	I1238	H1173	T1113	A1051	I986	L923	M858	A733	A733
PRO	PRO	PRO	PRO	H1367	E1301	I1238	I1238	F1174	P1113	Q1052	L936	K924	S859	K797	E734
TYR	THR	TYR	ALA	M1368	P1302	R1239	R1239	S1175	P1114	F1053	L933	L925	L860	G798	V735
SER	SER	TYR	VAL	I1436	E1303	G1240	G1240	S1176	S1115	L1054	Q994	Q926	G861	V736	M736
PRO	PRO	PRO	ASP	G1437	M1304	R1241	R1241	L1177	L1116	R1056	E995	V927	M862	L737	L737
TYR	TYR	TYR	GLY	L1371	V1305	V1242	V1242	D1178	T1117	S1056	N996	L928	N862	K738	K738
TYR	TYR	TYR	GLY	V1372	L1306	V1243	V1243	E1179	T1118	V1057	L997	L929	R864	D739	D739
PRO	PRO	PRO	SER	D1373	E1307	R1244	R1244	GLU	Y1119	V1058	L998	D930	Q865	L740	L740
PRO	PRO	PRO	ASN	F1441	T1308	P1245	P1245	ALA	L1120	H1059	V999	E931	R866	M741	M741
TYR	TYR	TYR	ALA	D1442	D1309	K1246	K1246	GLU	E1121	P1060	L1000	E932	I867	W742	W742
SER	SER	TYR	ALA	V1443	G1310	SER	SER	GLN	P1122	Q1061	Y868	E932	Y868	G807	V743
PRO	PRO	PRO	MET	M1444	V1311	LEU	LEU	SER	P1122	E1062	G1002	Y933	Y868	K744	K744
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TYR	TYR	TYR	ALA	L1313	L1313	ALA	ALA	ASP	H1324	M1003	K1003	L936	E370	M746	M746
PRO	PRO	PRO	GLY	D1447	G1379	L1313	L1313	GLU	A1125	V1064	V937	M1004	D871	V747	V747
PRO	PRO	PRO	GLY	S1383	S1383	GLU	GLU	Q1187	A1126	G1065	K938	Q938	D871	M748	M748
SER	PRO	PRO	PHE	E1448	E1315	THR	THR	Q1188	D1127	V1065	I1006	D939	M873	A749	A749
TYR	TYR	TYR	THR	V1316	V1316	GLU	GLU	S1189	Q1128	E1067	I1007	R940	D874	G750	G750
TYR	TYR	TYR	ALA	M1317	M1317	GLU	GLU	P1190	A1254	A1068	Q1008	K941	D874	S751	S751
PRO	PRO	PRO	TYR	N1390	N1390	T1318	T1318	W1191	Q1130	A1069	M1009	F942	A876	F815	F815

THR	THR
SER	SER
PRO	PRO
ASN	ASN
TYR	TYR
SER	SER
PRO	PRO
THR	THR
LYS	LYS
SER	SER
TYR	TYR
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GLY	GLY
GLY	GLY
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ASN	ASN
ARG	ARG

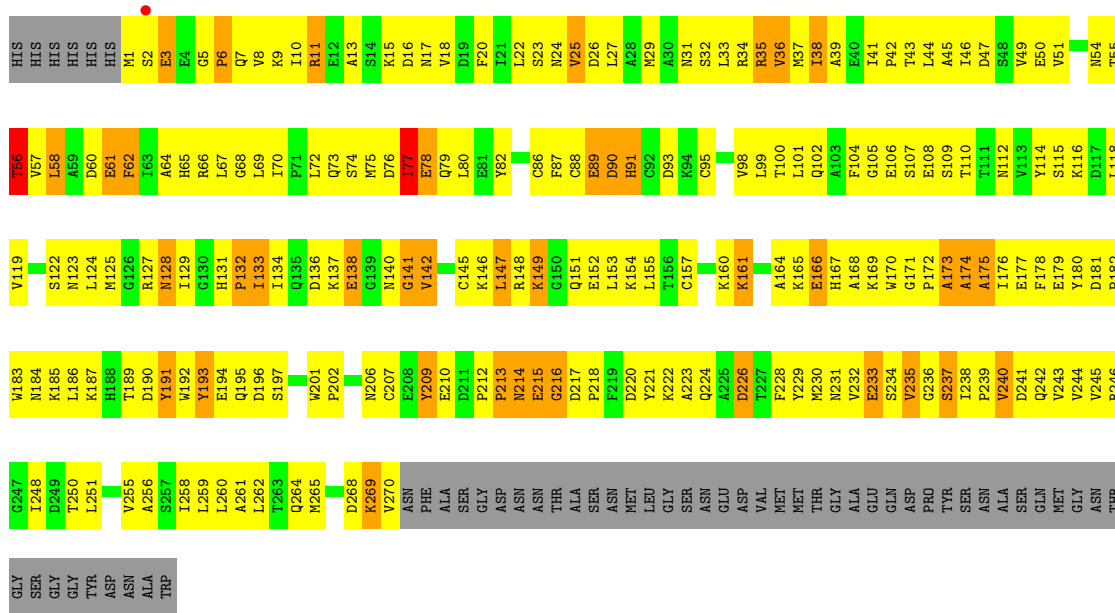
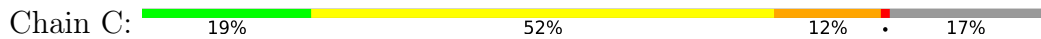
• Molecule 2: DNA-directed RNA polymerase II subunit RPB2



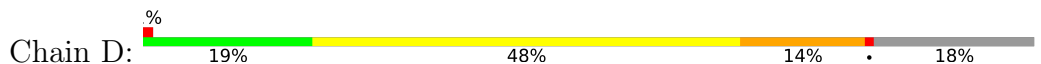
MET	MET	I62	I63	C64	E65	F66	G67	H68	I69	J70	K71	L72	M73	N74	O75	P76	Q77	R78	S79	T80	U81	V82	W83	X84	Y85	Z86	A87	B88	C89	D90	E91	F92	G93	H94	I95	J96	K97	L98	M99	N100	O101	P102	Q103	R104	S105	T106	U107	V108	W109	X110	Y111	Z112	A113	B114	C115	D116	E117	F118	G119	H120	I121	J122	K123	L124	M125	N126	O127	P128	Q129	R130	S131	T132	U133	V134	W135	X136	Y137	Z138	A139	B140	C141	D142	E143	F144	G145	H146	I147	J148	K149	L150	M151	N152	O153	P154	Q155	R156	S157	T158	U159	V160	W161	X162	Y163	Z164	A165	B166	C167	D168	E169	F170	G171	H172	I173	J174	K175	L176	M177	N178	O179	P180	Q181	R182	S183	T184	U185	V186	W187	X188	Y189	Z190	A191	B192	C193	D194	E195	F196	G197	H198	I199	J200	K201	L202	M203	N204	O205	P206	Q207	R208	S209	T210	U211	V212	W213	X214	Y215	Z216	A217	B218	C219	D220	E221	F222	G223	H224	I225	J226	K227	L228	M229	N230	O231	P232	Q233	R234	S235	T236	U237	V238	W239	X240	Y241	Z242	A243	B244	C245	D246	E247	F248	G249	H250	I251	J252	K253	L254	M255	N256	O257	P258	Q259	R260	S261	T262	U263	V264	W265	X266	Y267	Z268	A269	B270	C271	D272	E273	F274	G275	H276	I277	J278	K279	L280	M281	N282	O283	P284	Q285	R286	S287	T288	U289	V290	W291	X292	Y293	Z294	A295	B296	C297	D298	E299	F300	G301	H302	I303	J304	K305	L306	M307	N308	O309	P310	Q311	R312	S313	T314	U315	V316	W317	X318	Y319	Z320	A321	B322	C323	D324	E325	F326	G327	H328	I329	J330	K331	L332	M333	N334	O335	P336	Q337	R338	S339	T340	U341	V342	W343	X344	Y345	Z346	A347	B348	C349	D350	E351	F352	G353	H354	I355	J356	K357	L358	M359	N360	O361	P362	Q363	R364	S365	T366	U367	V368	W369	X370	Y371	Z372	A373	B374	C375	D376	E377	F378	G379	H380	I381	J382	K383	L384	M385	N386	O387	P388	Q389	R390	S391	T392	U393	V394	W395	X396	Y397	Z398	A399	B400	C401	D402	E403	F404	G405	H406	I407	J408	K409	L410	M411	N412	O413	P414	Q415	R416	S417	T418	U419	V420	W421	X422	Y423	Z424	A425	B426	C427	D428	E429	F430	G431	H432	I433	J434	K435	L436	M437	N438	O439	P440	Q441	R442	S443	T444	U445	V446	W447	X448	Y449	Z450	A451	B452	C453	D454	E455	F456	G457	H458	I459	J460	K461	L462	M463	N464	O465	P466	Q467	R468	S469	T470	U471	V472	W473	X474	Y475	Z476	A477	B478	C479	D480	E481	F482	G483	H484	I485	J486	K487	L488	M489	N490	O491	P492	Q493	R494	S495	T496	U497	V498	W499	X500	Y501	Z502	A503	B504	C505	D506	E507	F508	G509	H510	I511	J512	K513	L514	M515	N516	O517	P518	Q519	R520	S521	T522	U523	V524	W525	X526	Y527	Z528	A529	B530	C531	D532	E533	F534	G535	H536	I537	J538	K539	L540	M541	N542	O543	P544	Q545	R546	S547	T548	U549	V550	W551	X552	Y553	Z554	A555	B556	C557	D558	E559	F560	G561	H562	I563	J564	K565	L566	M567	N568	O569	P570	Q571	R572	S573	T574	U575	V576	W577	X578	Y579	Z580	A581	B582	C583	D584	E585	F586	G587	H588	I589	J590	K591	L592	M593	N594	O595	P596	Q597	R598	S599	T600	U601	V602	W603	X604	Y605	Z606	A607	B608	C609	D610	E611	F612	G613	H614	I615	J616	K617	L618	M619	N620	O621	P622	Q623	R624	S625	T626	U627	V628	W629	X630	Y631	Z632	A633	B634	C635	D636	E637	F638	G639	H640	I641	J642	K643	L644	M645	N646	O647	P648	Q649	R650	S651	T652	U653	V654	W655	X656	Y657	Z658	A659	B660	C661	D662	E663	F664	G665	H666	I667	J668	K669	L670	M671	N672	O673	P674	Q675	R676	S677	T678	U679	V680	W681	X682	Y683	Z684	A685	B686	C687	D688	E689	F690	G691	H692	I693	J694	K695	L696	M697	N698	O699	P700	Q701	R702	S703	T704	U705	V706	W707	X708	Y709	Z710	A711	B712	C713	D714	E715	F716	G717	H718	I719	J720	K721	L722	M723	N724	O725	P726	Q727	R728	S729	T730	U731	V732	W733	X734	Y735	Z736	A737	B738	C739	D740	E741	F742	G743	H744	I745	J746	K747	L748	M749	N750	O751	P752	Q753	R754	S755	T756	U757	V758	W759	X760	Y761	Z762	A763	B764	C765	D766	E767	F768	G769	H770	I771	J772	K773	L774	M775	N776	O777	P778	Q779	R780	S781	T782	U783	V784	W785	X786	Y787	Z788	A789	B790	C791	D792	E793	F794	G795	H796	I797	J798	K799	L800	M801	N802	O803	P804	Q805	R806	S807	T808	U809	V810	W811	X812	Y813	Z814	A815	B816	C817	D818	E819	F820	G821	H822	I823	J824	K825	L826	M827	N828	O829	P830	Q831	R832	S833	T834	U835	V836	W837	X838	Y839	Z840	A841	B842	C843	D844	E845	F846	G847	H848	I849	J850	K851	L852	M853	N854	O855	P856	Q857	R858	S859	T860	U861	V862	W863	X864	Y865	Z866	A867	B868	C869	D870	E871	F872	G873	H874	I875	J876	K877	L878	M879	N880	O881	P882	Q883	R884	S885	T886	U887	V888	W889	X890	Y891	Z892	A893	B894	C895	D896	E897	F898	G899	H900	I901	J902	K903	L904	M905	N906	O907	P908	Q909	R910	S911	T912	U913	V914	W915	X916	Y917	Z918	A919	B920	C921	D922	E923	F924	G925	H926	I927	J928	K929	L930	M931	N932	O933	P934	Q935	R936	S937	T938	U939	V940	W941	X942	Y943	Z944	A945	B946	C947	D948	E949	F950	G951	H952	I953	J954	K955	L956	M957	N958	O959	P960	Q961	R962	S963	T964	U965	V966	W967	X968	Y969	Z970	A971	B972	C973	D974	E975	F976	G977	H978	I979	J980	K981	L982	M983	N984	O985	P986	Q987	R988	S989	T990	U991	V992	W993	X994	Y995	Z996	A997	B998	C999	D1000
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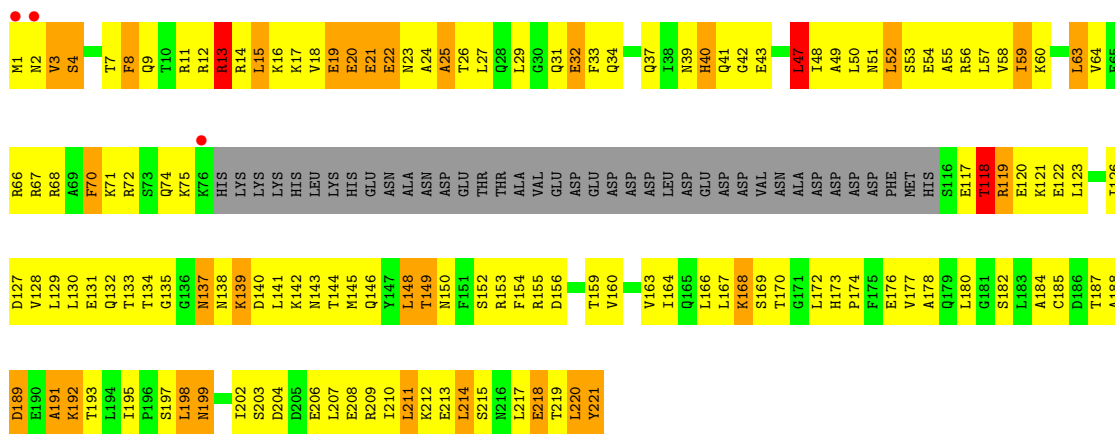


• Molecule 3: DNA-directed RNA polymerase II subunit RPB3



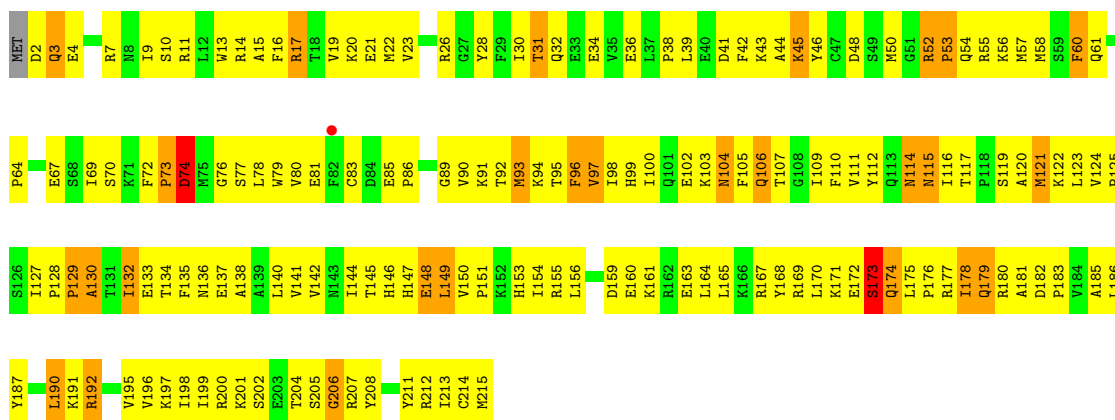
• Molecule 4: DNA-directed RNA polymerase II subunit RPB4





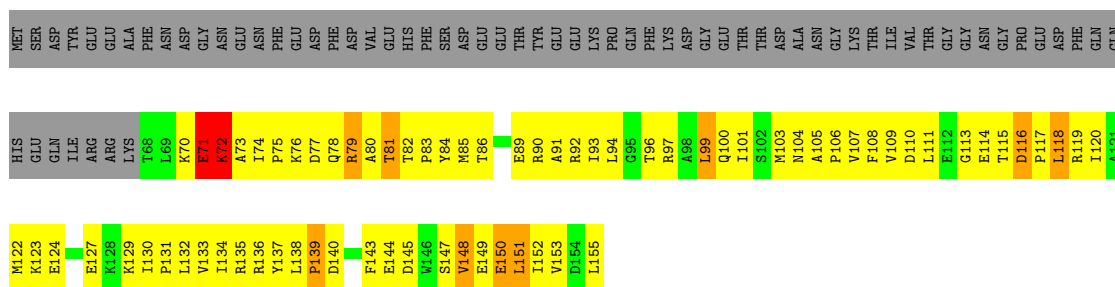
● Molecule 5: DNA-directed RNA polymerases I, II, and III subunit RPABC1

Chain E: 23% 63% 13%



● Molecule 6: DNA-directed RNA polymerases I, II, and III subunit RPABC2

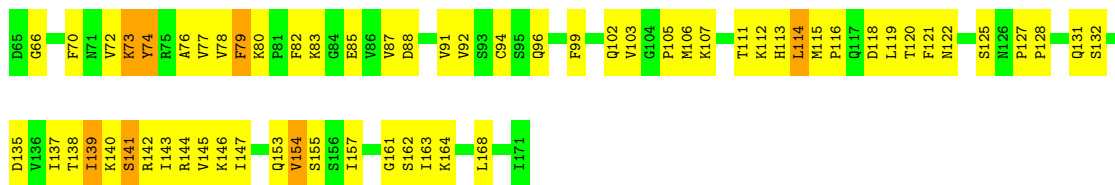
Chain F: 10% 39% 6% 43%



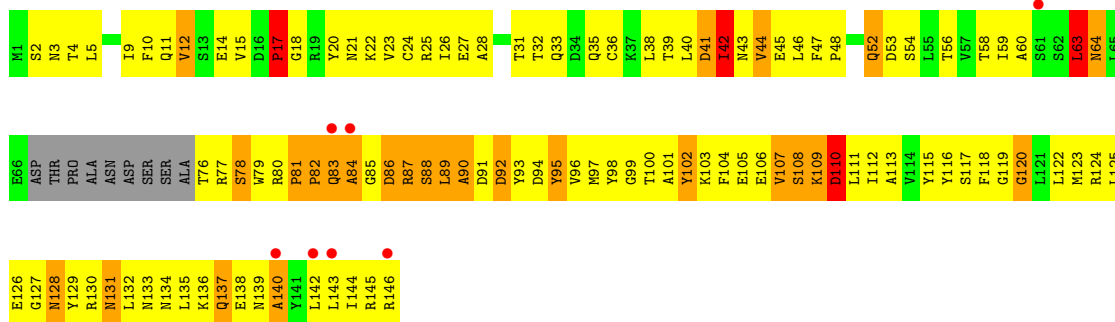
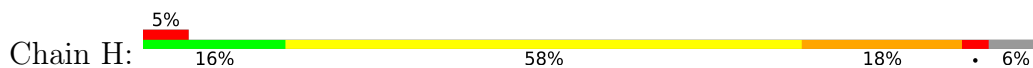
● Molecule 7: DNA-directed RNA polymerase II subunit RPB7

Chain G: 35% 57% 8%

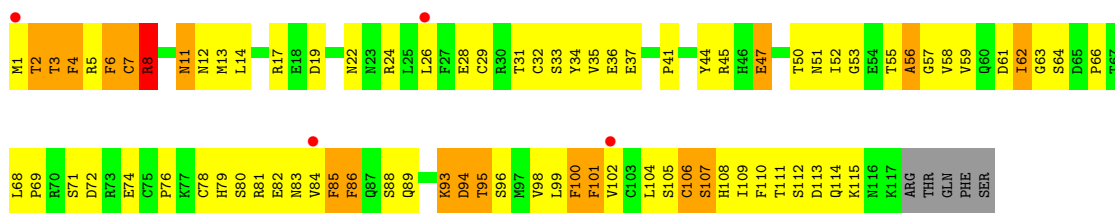




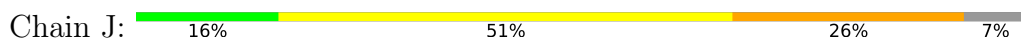
• Molecule 8: DNA-directed RNA polymerases I, II, and III subunit RPABC3



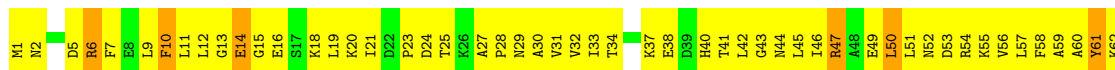
• Molecule 9: DNA-directed RNA polymerase II subunit RPB9



• Molecule 10: DNA-directed RNA polymerases I, II, and III subunit RPABC5

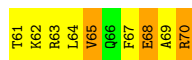
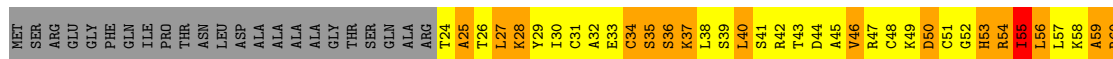


• Molecule 11: DNA-directed RNA polymerase II subunit RPB11

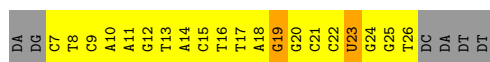




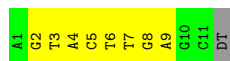
- Molecule 12: DNA-directed RNA polymerases I, II, and III subunit RPABC4



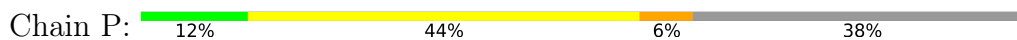
- Molecule 13: DNA (5'-D(*AP*G*CP*TP*CP*AP*AP*GP*TP*AP*CP*TP*TP*AP*(8OG)P*GP*CP*CP*(BRU)P*GP*GP*TP*CP*AP*TP*T)-3')



- Molecule 14: DNA (5'-D(*AP*GP*TP*AP*CP*TP*TP*GP*AP*GP*CP*T)-3')



- Molecule 15: RNA (5'-R(*UP*GP*CP*AP*UP*C*UP*UP*CP*CP*AP*GP*GP*CP*AP*U)-3')



4 Data and refinement statistics i

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α , β , γ	221.17Å 394.15Å 282.34Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	50.00 – 3.90 49.81 – 3.90	Depositor EDS
% Data completeness (in resolution range)	99.6 (50.00-3.90) 100.0 (49.81-3.90)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.08	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.80 (at 3.88Å)	Xtrriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.228 , 0.266 0.214 , 0.253	Depositor DCC
R_{free} test set	4364 reflections (2.01%)	wwPDB-VP
Wilson B-factor (Å ²)	128.1	Xtrriage
Anisotropy	0.540	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , 95.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.29$	Xtrriage
Estimated twinning fraction	0.017 for 1/2*h-1/2*k,-3/2*h-1/2*k,-l 0.019 for 1/2*h+1/2*k,3/2*h-1/2*k,-l	Xtrriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	32307	wwPDB-VP
Average B, all atoms (Å ²)	145.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.79% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: MG, BRU, ZN, 8OG

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	0.43	0/11441	0.73	1/15473 (0.0%)
2	B	0.41	0/9116	0.69	1/12291 (0.0%)
3	C	0.42	0/2163	0.72	0/2930
4	D	0.39	0/1475	0.64	0/1976
5	E	0.39	0/1788	0.66	0/2406
6	F	0.46	0/724	0.82	0/977
7	G	0.44	0/1368	0.68	0/1844
8	H	0.38	0/1119	0.69	0/1514
9	I	0.36	0/970	0.66	0/1305
10	J	0.43	0/541	0.71	0/727
11	K	0.44	0/947	0.68	0/1279
12	L	0.45	0/372	0.75	0/495
13	T	0.61	0/405	0.84	0/618
14	N	0.67	0/251	0.93	0/386
15	P	0.54	0/230	0.82	0/356
All	All	0.42	0/32910	0.71	2/44577 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	B	0	1

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	882	THR	N-CA-C	5.61	126.14	111.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	567	LYS	C-N-CD	5.18	139.27	128.40

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	B	797	TYR	Sidechain

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	11240	0	11313	1726	0
2	B	8942	0	8987	1312	0
3	C	2125	0	2090	327	0
4	D	1465	0	1489	212	0
5	E	1752	0	1776	229	0
6	F	712	0	738	127	0
7	G	1340	0	1357	167	0
8	H	1101	0	1075	211	0
9	I	952	0	913	140	0
10	J	532	0	542	113	0
11	K	929	0	939	132	0
12	L	370	0	394	89	0
13	T	407	0	225	43	0
14	N	224	0	126	11	0
15	P	207	0	109	9	0
16	A	1	0	0	0	0
17	A	2	0	0	0	0
17	B	1	0	0	0	0
17	C	1	0	0	0	0
17	I	2	0	0	0	0
17	J	1	0	0	0	0
17	L	1	0	0	0	0
All	All	32307	0	32073	4433	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 69.

All (4433) 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)
2:B:577:ALA:HB1	2:B:589:VAL:HG11	1.19	1.14
1:A:320:ARG:HB2	1:A:320:ARG:HH11	1.07	1.14
8:H:33:GLN:HE21	8:H:35:GLN:HB2	1.12	1.13
1:A:899:VAL:HB	1:A:929:LEU:HD11	1.25	1.12
1:A:590:ARG:HH21	1:A:620:LYS:HB3	1.06	1.12
7:G:138:THR:HG22	7:G:139:ILE:H	1.05	1.12
2:B:999:MET:HG3	2:B:1000:PRO:HD2	1.32	1.12
2:B:638:PHE:HA	2:B:690:VAL:HG22	1.31	1.11
3:C:66:ARG:HH12	10:J:2:ILE:HG21	0.96	1.10
7:G:122:ASN:HD22	7:G:125:SER:HB3	1.11	1.10
2:B:806:THR:HG22	2:B:808:ALA:H	1.11	1.10
1:A:1244:ARG:HB3	1:A:1245:PRO:HA	1.21	1.09
1:A:567:LYS:HG3	8:H:95:TYR:HA	1.32	1.08
6:F:109:VAL:HG12	6:F:110:ASP:H	1.13	1.08
1:A:41:MET:HB2	1:A:49:LYS:HA	1.35	1.08
5:E:180:ARG:HH21	5:E:192:ARG:HB2	1.12	1.08
1:A:768:GLN:HG2	1:A:816:HIS:HA	1.35	1.08
1:A:1420:ASP:HB3	1:A:1422:ARG:HG3	1.33	1.07
2:B:1095:LEU:H	2:B:1095:LEU:HD12	1.14	1.07
1:A:1006:ILE:HD11	5:E:163:GLU:HG3	1.38	1.06
7:G:49:LEU:HD21	7:G:77:VAL:HG23	1.30	1.05
2:B:642:ASP:HA	2:B:649:LYS:HA	1.36	1.05
1:A:1017:LEU:HB2	5:E:206:GLY:H	1.14	1.04
1:A:1424:VAL:HG13	1:A:1436:ILE:HD11	1.38	1.04
2:B:165:VAL:HG11	2:B:448:ILE:HD12	1.36	1.04
3:C:66:ARG:NH1	10:J:2:ILE:HG21	1.72	1.04
2:B:186:GLU:HG3	10:J:62:ARG:HH22	1.22	1.04
1:A:981:LEU:HD21	1:A:1039:LYS:HA	1.39	1.03
2:B:340:ALA:HB3	2:B:343:ILE:HG12	1.33	1.03
6:F:130:ILE:O	6:F:148:VAL:HG21	1.58	1.03
2:B:287:ARG:HG2	2:B:292:ILE:HA	1.41	1.02
10:J:64:ASN:HB3	10:J:65:PRO:CD	1.88	1.02
9:I:7:CYS:HB3	9:I:14:LEU:HD21	1.42	1.02
3:C:101:LEU:HD13	3:C:118:LEU:HD23	1.41	1.01
1:A:108:MET:HB3	1:A:210:ILE:HD13	1.40	1.01
2:B:603:LEU:HB3	2:B:609:ILE:HD11	1.40	1.01
1:A:901:LEU:H	1:A:926:GLN:NE2	1.59	1.01
2:B:1099:VAL:HG13	2:B:1100:ASP:H	1.25	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:934:LYS:HG2	2:B:934:LYS:O	1.62	0.99
12:L:34:CYS:HB3	12:L:51:CYS:SG	2.03	0.99
1:A:563:PRO:HG3	1:A:572:TRP:CZ2	1.97	0.99
1:A:53:LEU:HD23	1:A:54:ASN:N	1.77	0.99
3:C:43:THR:HG22	3:C:44:LEU:H	1.25	0.98
1:A:1409:LEU:HD13	2:B:1207:LEU:HD11	1.42	0.98
11:K:46:ILE:O	11:K:50:LEU:HB2	1.64	0.98
1:A:1002:GLY:HA3	1:A:1007:ILE:HG21	1.42	0.98
12:L:32:ALA:HB2	12:L:55:ILE:HG13	1.43	0.98
1:A:14:VAL:H	1:A:1432:GLN:HE22	1.12	0.97
5:E:22:MET:HE3	5:E:26:ARG:HH11	1.27	0.97
2:B:882:THR:HG22	2:B:884:ARG:HB2	1.45	0.97
7:G:62:LEU:HB3	7:G:63:PRO:HD2	1.45	0.97
12:L:61:THR:HG22	12:L:63:ARG:H	1.26	0.97
4:D:134:THR:HG22	4:D:135:GLY:H	1.28	0.97
1:A:567:LYS:HE2	8:H:47:PHE:HB2	1.45	0.97
1:A:763:ALA:O	1:A:803:SER:HB3	1.65	0.97
2:B:746:SER:HB2	2:B:1046:PRO:HG2	1.46	0.97
2:B:1002:THR:CG2	2:B:1006:ILE:HG13	1.94	0.97
3:C:45:ALA:HA	3:C:72:LEU:HD12	1.45	0.96
2:B:497:ARG:HH22	2:B:775:LYS:HE2	1.26	0.96
1:A:1445:ILE:H	1:A:1445:ILE:HD12	1.31	0.96
10:J:48:ARG:HE	10:J:49:MET:HE2	1.25	0.95
1:A:1254:ALA:O	1:A:1255:GLU:HB2	1.66	0.95
11:K:65:HIS:HD2	11:K:67:PHE:H	1.01	0.95
1:A:637:LYS:HB3	1:A:641:VAL:HG21	1.48	0.95
2:B:723:VAL:HG12	2:B:724:ASP:H	1.28	0.95
1:A:93:VAL:HG13	1:A:301:ALA:HB1	1.47	0.94
8:H:25:ARG:HA	8:H:41:ASP:HA	1.47	0.94
1:A:855:THR:HG21	1:A:857:ARG:HE	1.33	0.94
2:B:637:LEU:HD12	2:B:693:ILE:HD12	1.48	0.94
1:A:49:LYS:HZ1	1:A:61:ILE:H	1.11	0.94
11:K:65:HIS:CD2	11:K:67:PHE:H	1.85	0.94
3:C:244:VAL:O	3:C:248:ILE:HG13	1.68	0.94
2:B:611:PRO:HG2	2:B:685:LEU:HD21	1.50	0.94
1:A:1227:ILE:HG22	1:A:1228:TRP:H	1.33	0.93
1:A:666:ILE:HD12	1:A:667:GLY:H	1.31	0.93
2:B:217:ARG:HE	2:B:405:ARG:HB2	1.32	0.93
4:D:47:LEU:HD13	4:D:48:ILE:H	1.32	0.93
1:A:1100:ARG:HH21	1:A:1351:GLU:HG2	1.29	0.93
2:B:559:SER:HA	2:B:563:MET:HB3	1.48	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:399:HIS:HB3	1:A:400:PRO:HD3	1.48	0.92
8:H:64:ASN:HB2	8:H:88:SER:HB2	1.50	0.92
1:A:754:SER:H	1:A:757:ASN:HD22	1.17	0.92
2:B:273:LEU:HB2	2:B:276:ILE:HD12	1.50	0.92
1:A:40:THR:HG22	1:A:41:MET:HG3	1.52	0.92
1:A:390:GLN:O	1:A:394:ASN:HB2	1.69	0.92
1:A:1369:ALA:O	1:A:1372:VAL:HG12	1.68	0.91
1:A:1160:SER:HA	1:A:1170:ILE:HD13	1.52	0.91
1:A:808:LEU:HD23	1:A:813:PHE:HA	1.52	0.91
2:B:944:THR:HG21	2:B:1122:ARG:NH2	1.85	0.91
1:A:1116:LEU:HB3	1:A:1308:THR:CG2	2.01	0.91
1:A:590:ARG:NH2	1:A:620:LYS:HB3	1.86	0.91
2:B:430:ARG:O	2:B:434:ARG:HD2	1.71	0.91
4:D:53:SER:H	4:D:148:LEU:CD2	1.84	0.90
5:E:22:MET:CE	5:E:26:ARG:HH11	1.83	0.90
12:L:26:THR:HG23	12:L:62:LYS:NZ	1.86	0.90
3:C:57:VAL:HG11	10:J:60:PHE:HB3	1.52	0.90
13:T:16:DT:H2''	13:T:17:DT:H5'	1.51	0.90
1:A:239:LEU:HD12	1:A:240:PRO:HD2	1.52	0.90
1:A:1189:SER:O	1:A:1241:ARG:HD3	1.72	0.90
12:L:40:LEU:HD13	12:L:44:ASP:HB3	1.51	0.90
1:A:49:LYS:HZ1	1:A:61:ILE:N	1.70	0.90
1:A:1332:PHE:H	1:A:1332:PHE:HD2	1.13	0.90
7:G:15:PRO:HA	7:G:18:PHE:CD1	2.07	0.90
11:K:31:VAL:HG12	11:K:32:VAL:H	1.36	0.90
2:B:654:ARG:H	2:B:657:HIS:HD2	1.17	0.89
1:A:828:ALA:HB2	2:B:530:GLY:HA2	1.53	0.89
10:J:64:ASN:HB3	10:J:65:PRO:HD2	1.51	0.89
1:A:567:LYS:CG	8:H:95:TYR:HA	2.02	0.89
2:B:1150:ARG:HG3	2:B:1150:ARG:HH11	1.37	0.89
7:G:138:THR:HG22	7:G:139:ILE:N	1.88	0.89
3:C:73:GLN:HE21	3:C:75:MET:H	1.21	0.89
4:D:168:LYS:HG3	4:D:177:VAL:HG11	1.53	0.89
1:A:567:LYS:HB2	8:H:96:VAL:H	1.38	0.89
1:A:665:GLY:O	1:A:667:GLY:N	2.06	0.89
1:A:1343:ALA:HB2	5:E:150:VAL:HG22	1.54	0.89
12:L:30:ILE:O	12:L:56:LEU:HA	1.72	0.89
1:A:1057:VAL:HG12	1:A:1058:VAL:H	1.38	0.88
2:B:515:HIS:H	2:B:518:HIS:HD2	1.18	0.88
3:C:61:GLU:HA	3:C:64:ALA:HB3	1.54	0.88
3:C:66:ARG:HH12	10:J:2:ILE:CG2	1.84	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:111:LEU:HD12	6:F:111:LEU:H	1.38	0.88
1:A:902:LEU:HG	1:A:926:GLN:HG3	1.56	0.88
7:G:34:VAL:HG12	7:G:45:ILE:HG21	1.54	0.88
1:A:1244:ARG:HB3	1:A:1245:PRO:CA	2.03	0.88
2:B:364:ILE:O	2:B:365:THR:HB	1.72	0.88
2:B:882:THR:CG2	2:B:884:ARG:HB2	2.02	0.88
10:J:12:LYS:O	10:J:14:VAL:HG23	1.74	0.88
8:H:135:LEU:HD13	8:H:137:GLN:NE2	1.89	0.88
1:A:565:ILE:O	1:A:570:PRO:HA	1.74	0.88
1:A:308:ILE:HG22	1:A:309:ALA:H	1.39	0.88
1:A:320:ARG:HB2	1:A:320:ARG:NH1	1.89	0.87
1:A:946:VAL:HG13	5:E:201:LYS:HB3	1.54	0.87
1:A:1121:GLU:HG2	1:A:1122:PRO:HD2	1.56	0.87
4:D:11:ARG:HD2	4:D:31:GLN:HE22	1.38	0.87
9:I:111:THR:HG22	9:I:113:ASP:H	1.39	0.87
1:A:600:PRO:HG2	1:A:601:LYS:H	1.38	0.87
1:A:351:THR:HG22	2:B:1103:ILE:HA	1.56	0.87
5:E:114:ASN:O	5:E:115:ASN:HB3	1.73	0.87
1:A:42:ASP:O	1:A:44:THR:N	2.08	0.87
1:A:340:LEU:HD13	1:A:1429:ILE:HG23	1.57	0.87
1:A:962:ARG:HA	1:A:965:GLN:HB2	1.56	0.87
8:H:102:TYR:H	8:H:102:TYR:HD2	1.15	0.87
2:B:168:GLY:H	2:B:450:ALA:HB1	1.40	0.87
2:B:800:GLN:HB3	10:J:52:THR:HG21	1.56	0.87
1:A:43:GLU:HB2	1:A:46:THR:HB	1.57	0.86
2:B:637:LEU:O	2:B:690:VAL:HG13	1.75	0.86
6:F:136:ARG:O	6:F:143:PHE:HB2	1.74	0.86
1:A:22:PHE:HB2	2:B:1211:ASN:OD1	1.75	0.86
5:E:117:THR:HG22	5:E:119:SER:H	1.37	0.86
2:B:46:GLN:HG3	2:B:47:GLN:H	1.39	0.86
11:K:12:LEU:H	11:K:12:LEU:HD12	1.40	0.86
11:K:47:ARG:HB3	11:K:47:ARG:HH11	1.39	0.86
3:C:148:ARG:H	3:C:151:GLN:HG3	1.40	0.86
3:C:38:ILE:HA	3:C:173:ALA:HB2	1.58	0.86
1:A:666:ILE:H	2:B:1026:LEU:HD13	1.39	0.86
4:D:71:LYS:HG2	4:D:74:GLN:NE2	1.89	0.86
9:I:26:LEU:HD23	9:I:37:GLU:HA	1.55	0.86
1:A:466:SER:HB3	2:B:1103:ILE:HG12	1.57	0.86
2:B:1165:ILE:HD11	4:D:17:LYS:HD3	1.57	0.86
2:B:126:SER:OG	2:B:172:ILE:HD11	1.75	0.85
2:B:842:ASN:HD22	2:B:845:SER:HB3	1.40	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:T:13:DT:H2''	13:T:14:DA:OP2	1.74	0.85
6:F:109:VAL:HG12	6:F:110:ASP:N	1.89	0.85
2:B:880:THR:HB	2:B:934:LYS:HD3	1.57	0.85
7:G:122:ASN:ND2	7:G:125:SER:HB3	1.91	0.85
1:A:537:ARG:HD2	8:H:20:TYR:HE1	1.41	0.85
1:A:1261:LYS:O	1:A:1264:GLU:HB3	1.76	0.85
2:B:776:GLN:OE1	15:P:9:C:H4'	1.76	0.85
14:N:3:DT:H1'	14:N:4:DA:C8	2.12	0.85
1:A:470:LEU:HD13	1:A:487:MET:HE1	1.59	0.85
2:B:115:GLN:HG2	2:B:193:LYS:HB2	1.57	0.85
1:A:180:LYS:NZ	1:A:294:SER:HB3	1.92	0.85
12:L:61:THR:HG21	12:L:63:ARG:HE	1.42	0.85
1:A:30:ILE:HG23	2:B:1170:THR:HG23	1.59	0.85
12:L:32:ALA:CB	12:L:55:ILE:HG13	2.07	0.85
1:A:196:GLU:HB2	1:A:197:PRO:HD2	1.58	0.85
2:B:1181:GLU:O	2:B:1182:CYS:HB3	1.74	0.85
1:A:2:VAL:HG11	2:B:1157:ALA:HB1	1.59	0.84
1:A:70:CYS:O	1:A:72:GLU:HG2	1.77	0.84
2:B:953:LEU:HD21	2:B:965:LYS:HB2	1.59	0.84
6:F:103:MET:CE	7:G:66:GLY:H	1.88	0.84
1:A:98:LYS:O	1:A:102:VAL:HG23	1.77	0.84
6:F:86:THR:OG1	6:F:89:GLU:HG3	1.77	0.84
7:G:7:LEU:HB2	7:G:74:TYR:CE2	2.11	0.84
8:H:128:ASN:H	8:H:130:ARG:NH1	1.75	0.84
1:A:269:ILE:HG12	1:A:299:HIS:HB3	1.59	0.84
1:A:372:LYS:HA	1:A:435:HIS:ND1	1.91	0.84
3:C:6:PRO:HB2	11:K:101:LEU:HD12	1.57	0.84
2:B:521:LEU:HD22	2:B:633:VAL:HG12	1.57	0.84
12:L:55:ILE:HD13	12:L:55:ILE:H	1.41	0.84
1:A:1323:ASP:OD1	1:A:1325:THR:HG22	1.78	0.84
4:D:118:THR:HG21	4:D:121:LYS:HD2	1.57	0.84
13:T:15:DC:H2''	13:T:16:DT:H71	1.57	0.84
2:B:622:LYS:HE2	9:I:59:VAL:HG22	1.57	0.84
2:B:882:THR:HG21	2:B:935:ARG:HA	1.59	0.84
3:C:43:THR:HG22	3:C:44:LEU:N	1.92	0.84
1:A:35:ILE:HG22	1:A:84:ILE:HD12	1.58	0.84
1:A:746:MET:CE	2:B:1018:PRO:HG2	2.07	0.84
2:B:167:ILE:HG22	2:B:453:ILE:HD12	1.59	0.84
8:H:15:VAL:HG13	8:H:26:ILE:HG12	1.60	0.84
1:A:225:ASN:ND2	1:A:228:PHE:H	1.75	0.84
1:A:1047:SER:O	1:A:1050:GLU:HB3	1.77	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:664:THR:HG1	2:B:678:GLU:N	1.75	0.84
1:A:442:VAL:HG12	1:A:490:HIS:O	1.78	0.83
5:E:180:ARG:NH2	5:E:192:ARG:HB2	1.94	0.83
12:L:26:THR:HG23	12:L:62:LYS:HZ3	1.44	0.83
2:B:824:ILE:HG22	2:B:1087:PHE:HE2	1.41	0.83
1:A:470:LEU:HD23	1:A:470:LEU:H	1.44	0.83
2:B:515:HIS:HD2	2:B:517:THR:H	1.22	0.83
2:B:1159:ARG:HB3	2:B:1159:ARG:NH1	1.93	0.83
4:D:139:LYS:HE2	4:D:143:ASN:HD21	1.42	0.83
10:J:48:ARG:HD2	10:J:49:MET:N	1.92	0.83
1:A:188:ASP:HB3	1:A:191:THR:HB	1.60	0.83
1:A:779:PHE:HE1	1:A:785:PRO:HD3	1.42	0.83
2:B:1096:ARG:O	2:B:1097:HIS:HB2	1.78	0.83
1:A:384:ASN:OD1	1:A:388:LEU:HD12	1.78	0.82
2:B:469:GLN:HG3	2:B:470:LYS:H	1.45	0.82
5:E:197:LYS:HE2	5:E:199:ILE:HD11	1.60	0.82
2:B:515:HIS:H	2:B:518:HIS:CD2	1.96	0.82
13:T:24:DG:H2'	13:T:25:DG:C8	2.14	0.82
1:A:84:ILE:HD11	1:A:270:LEU:HD13	1.62	0.82
3:C:32:SER:O	3:C:36:VAL:HG23	1.80	0.82
2:B:640:VAL:HG22	2:B:651:LEU:HD23	1.61	0.82
1:A:49:LYS:NZ	1:A:61:ILE:H	1.78	0.81
1:A:857:ARG:HD3	1:A:861:GLY:O	1.79	0.81
4:D:34:GLN:O	4:D:47:LEU:HD23	1.79	0.81
8:H:26:ILE:HG22	8:H:27:GLU:H	1.45	0.81
10:J:8:PHE:H	10:J:49:MET:HE1	1.45	0.81
5:E:78:LEU:HA	5:E:107:THR:HB	1.63	0.81
1:A:567:LYS:HB3	1:A:568:PRO:HD3	1.62	0.81
1:A:1242:VAL:HG12	1:A:1243:VAL:H	1.44	0.81
2:B:706:GLN:HE21	2:B:730:ARG:HH11	1.29	0.81
4:D:18:VAL:O	4:D:19:GLU:HB2	1.79	0.81
8:H:81:PRO:HB2	8:H:82:PRO:CD	2.11	0.81
10:J:35:ALA:O	10:J:39:LEU:HD12	1.80	0.81
1:A:255:SER:OG	2:B:918:ILE:CG2	2.27	0.81
2:B:193:LYS:NZ	12:L:32:ALA:HB1	1.96	0.81
13:T:9:DC:H2''	13:T:10:DA:C8	2.15	0.81
2:B:1072:MET:HE3	2:B:1085:ILE:HB	1.61	0.81
3:C:20:PHE:HE1	3:C:22:LEU:HB2	1.45	0.81
4:D:8:PHE:HZ	4:D:37:GLN:HB2	1.46	0.81
8:H:100:THR:OG1	8:H:138:GLU:HG3	1.81	0.81
2:B:229:ALA:HB1	2:B:231:PRO:HD2	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:288:ALA:HA	2:B:331:LEU:HD12	1.62	0.81
2:B:1099:VAL:HG13	2:B:1100:ASP:N	1.96	0.81
2:B:1165:ILE:CD1	4:D:17:LYS:HD3	2.10	0.81
3:C:142:VAL:H	10:J:16:ASP:HB3	1.46	0.81
2:B:378:LEU:O	2:B:382:ILE:HG13	1.81	0.81
2:B:1072:MET:CE	2:B:1085:ILE:HB	2.11	0.81
1:A:320:ARG:HH11	1:A:320:ARG:CB	1.91	0.81
3:C:177:GLU:HB2	3:C:231:ASN:HB3	1.62	0.81
4:D:155:ARG:HD3	4:D:221:TYR:CZ	2.16	0.81
5:E:17:ARG:HB2	5:E:17:ARG:HH11	1.43	0.81
12:L:55:ILE:O	12:L:56:LEU:HB2	1.81	0.81
2:B:503:GLY:HA3	2:B:507:LYS:HE2	1.61	0.80
2:B:639:ILE:HD11	2:B:691:GLU:HG3	1.61	0.80
4:D:8:PHE:HD2	7:G:6:ASP:HB2	1.45	0.80
1:A:535:THR:HG21	1:A:616:VAL:HA	1.63	0.80
3:C:66:ARG:HH21	10:J:5:VAL:HG23	1.46	0.80
1:A:903:ASN:HD22	1:A:904:THR:H	1.26	0.80
1:A:1435:PRO:HA	1:A:1439:GLY:O	1.82	0.80
2:B:1115:THR:HG22	2:B:1117:GLN:HG3	1.63	0.80
5:E:178:ILE:HB	5:E:212:ARG:HD2	1.63	0.80
1:A:741:ASN:ND2	1:A:744:LYS:H	1.80	0.80
2:B:827:ILE:HD12	2:B:1086:PHE:HD2	1.46	0.80
2:B:1159:ARG:HB3	2:B:1159:ARG:HH11	1.46	0.80
5:E:17:ARG:HB2	5:E:17:ARG:NH1	1.97	0.80
7:G:27:LYS:HE2	7:G:54:ILE:HB	1.63	0.80
1:A:855:THR:CG2	1:A:857:ARG:HE	1.94	0.80
1:A:1187:GLN:O	1:A:1244:ARG:HG3	1.81	0.80
1:A:1187:GLN:HG3	1:A:1188:GLN:HG3	1.64	0.80
4:D:71:LYS:HG2	4:D:74:GLN:HE21	1.45	0.80
6:F:103:MET:HE2	7:G:66:GLY:H	1.43	0.80
11:K:21:ILE:HG22	11:K:31:VAL:HG11	1.64	0.80
1:A:1394:THR:HG21	1:A:1398:MET:SD	2.22	0.80
13:T:10:DA:H2"	13:T:11:DA:C8	2.16	0.80
4:D:40:HIS:CD2	7:G:73:LYS:HG2	2.17	0.80
1:A:524:VAL:HG12	1:A:525:GLN:N	1.97	0.79
5:E:156:LEU:HD12	5:E:195:VAL:HB	1.62	0.79
1:A:41:MET:CB	1:A:49:LYS:HA	2.11	0.79
1:A:445:ASN:HB2	1:A:455:MET:HG2	1.64	0.79
2:B:186:GLU:HG3	10:J:62:ARG:NH2	1.97	0.79
2:B:193:LYS:HD3	2:B:787:VAL:HG11	1.65	0.79
2:B:746:SER:CB	2:B:1046:PRO:HG2	2.13	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:577:ILE:O	1:A:580:VAL:HG23	1.83	0.79
5:E:19:VAL:O	5:E:23:VAL:HG23	1.82	0.79
1:A:323:LYS:H	1:A:323:LYS:HD2	1.47	0.79
1:A:825:ILE:HD11	2:B:512:ARG:HD3	1.65	0.79
1:A:1447:GLU:OE2	7:G:23:LYS:HB2	1.83	0.79
3:C:8:VAL:O	3:C:9:LYS:HG3	1.81	0.79
4:D:180:LEU:HD23	4:D:195:ILE:HD12	1.63	0.79
6:F:82:THR:HG22	6:F:84:TYR:H	1.47	0.79
1:A:117:GLU:H	1:A:117:GLU:CD	1.86	0.79
1:A:809:THR:H	1:A:812:GLU:HB2	1.46	0.79
2:B:364:ILE:HG12	2:B:585:VAL:HG13	1.65	0.79
4:D:71:LYS:HA	4:D:74:GLN:HG3	1.65	0.79
1:A:829:VAL:HG11	2:B:508:LEU:HD22	1.63	0.79
1:A:1004:ASN:ND2	5:E:167:ARG:HD2	1.97	0.79
5:E:31:THR:HG23	5:E:34:GLU:HB2	1.65	0.79
8:H:100:THR:HG23	8:H:138:GLU:HA	1.65	0.79
1:A:472:LEU:O	1:A:475:THR:HB	1.82	0.79
2:B:1183:LYS:O	2:B:1185:CYS:N	2.15	0.78
2:B:745:PRO:O	2:B:748:ILE:HG12	1.84	0.78
12:L:30:ILE:O	12:L:56:LEU:HD23	1.83	0.78
2:B:821:GLN:HE22	2:B:851:PHE:H	1.30	0.78
5:E:4:GLU:HB3	5:E:7:ARG:HE	1.48	0.78
6:F:99:LEU:O	6:F:103:MET:HG2	1.83	0.78
1:A:392:VAL:HG13	1:A:415:LEU:HD11	1.65	0.78
2:B:516:ASN:HD22	2:B:516:ASN:N	1.77	0.78
2:B:777:ALA:HA	2:B:1095:LEU:HA	1.64	0.78
10:J:44:TYR:H	10:J:44:TYR:HD2	1.29	0.78
1:A:93:VAL:HG22	1:A:301:ALA:HA	1.65	0.78
1:A:590:ARG:HB3	1:A:605:MET:H	1.48	0.78
1:A:1267:MET:HA	1:A:1271:ILE:HD12	1.63	0.78
2:B:830:TYR:HE2	2:B:1000:PRO:HD3	1.48	0.78
1:A:1057:VAL:HG12	1:A:1058:VAL:N	1.98	0.78
2:B:277:LYS:HG3	2:B:338:GLY:HA2	1.66	0.78
1:A:849:MET:HE1	1:A:1061:GLY:HA2	1.63	0.78
1:A:1030:ARG:HG3	1:A:1034:GLU:OE2	1.83	0.78
4:D:213:GLU:O	4:D:217:LEU:HG	1.84	0.78
1:A:560:ILE:HD11	8:H:79:TRP:H	1.47	0.78
2:B:217:ARG:NE	2:B:405:ARG:HB2	1.98	0.78
2:B:345:LYS:O	2:B:347:LYS:HG2	1.84	0.78
1:A:372:LYS:HA	1:A:435:HIS:HD1	1.48	0.78
1:A:779:PHE:CE1	1:A:785:PRO:HD3	2.17	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:T:21:DC:H2'	13:T:22:DC:H5'	1.64	0.78
1:A:1130:GLN:HG3	1:A:1134:ILE:HD11	1.65	0.77
2:B:345:LYS:O	2:B:347:LYS:N	2.17	0.77
4:D:8:PHE:CD2	7:G:6:ASP:HB2	2.18	0.77
7:G:13:LEU:HD23	7:G:14:HIS:H	1.49	0.77
1:A:266:LEU:HD21	1:A:303:TYR:CE1	2.20	0.77
7:G:128:PRO:O	7:G:138:THR:HG23	1.83	0.77
2:B:46:GLN:HB2	2:B:408:LEU:HD21	1.64	0.77
2:B:826:ALA:HB2	2:B:1008:PRO:HB3	1.67	0.77
1:A:1008:GLN:O	1:A:1011:GLN:HB3	1.85	0.77
1:A:1227:ILE:HG22	1:A:1228:TRP:N	1.99	0.77
2:B:244:LEU:HD11	2:B:366:GLN:HE22	1.49	0.77
2:B:577:ALA:HB1	2:B:589:VAL:CG1	2.10	0.77
2:B:852:ARG:HH22	12:L:70:ARG:C	1.88	0.77
2:B:879:ARG:NH1	2:B:883:LEU:HD23	1.98	0.77
4:D:8:PHE:CZ	4:D:37:GLN:HB2	2.19	0.77
1:A:896:ARG:NH2	1:A:1030:ARG:HE	1.82	0.77
2:B:212:LEU:HD23	2:B:480:SER:HB2	1.65	0.77
13:T:15:DC:C2'	13:T:16:DT:H71	2.14	0.77
1:A:305:ASP:OD2	1:A:326:ARG:HD2	1.84	0.77
2:B:1065:GLN:HE21	2:B:1067:ARG:H	1.32	0.77
7:G:127:PRO:HG2	7:G:138:THR:HG21	1.67	0.77
3:C:116:LYS:HD3	3:C:140:ASN:HA	1.65	0.77
1:A:1027:ALA:O	1:A:1031:VAL:HG23	1.84	0.77
2:B:430:ARG:O	2:B:434:ARG:CD	2.32	0.77
4:D:173:HIS:HD2	4:D:174:PRO:HD2	1.48	0.77
8:H:40:LEU:HB2	8:H:123:MET:HE3	1.65	0.77
1:A:1081:LEU:HD11	1:A:1098:VAL:H	1.48	0.77
1:A:1268:LEU:O	1:A:1269:GLU:HG3	1.85	0.77
2:B:879:ARG:O	2:B:934:LYS:HE2	1.85	0.77
1:A:382:PRO:HD3	1:A:428:TYR:HD2	1.49	0.77
2:B:120:ARG:NE	2:B:955:THR:HG21	1.99	0.77
3:C:238:ILE:HD13	3:C:246:ARG:HH11	1.50	0.77
7:G:115:MET:HB2	7:G:116:PRO:HD2	1.66	0.77
11:K:50:LEU:HD11	11:K:75:ILE:HD13	1.67	0.77
1:A:55:ASP:C	1:A:57:ARG:H	1.84	0.76
1:A:899:VAL:HB	1:A:929:LEU:CD1	2.11	0.76
2:B:497:ARG:NH2	2:B:775:LYS:HE2	2.00	0.76
5:E:23:VAL:HG13	5:E:78:LEU:HD13	1.66	0.76
8:H:91:ASP:O	8:H:93:TYR:N	2.16	0.76
2:B:794:ASN:C	2:B:795:ILE:HD12	2.06	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:57:ILE:HA	10:J:60:PHE:HD2	1.50	0.76
1:A:995:GLU:HA	1:A:995:GLU:OE1	1.84	0.76
1:A:1116:LEU:HB3	1:A:1308:THR:HG22	1.66	0.76
2:B:810:GLU:HB2	2:B:815:ARG:HH22	1.48	0.76
2:B:661:LEU:HD23	2:B:679:TYR:O	1.85	0.76
4:D:134:THR:HG22	4:D:135:GLY:N	1.99	0.76
2:B:549:THR:HB	2:B:628:THR:OG1	1.85	0.76
2:B:579:ARG:HA	2:B:589:VAL:HG22	1.68	0.76
4:D:57:LEU:HD11	4:D:160:VAL:HG21	1.66	0.76
5:E:180:ARG:HH21	5:E:192:ARG:CB	1.97	0.76
10:J:5:VAL:HG12	10:J:6:ARG:HG3	1.67	0.76
4:D:24:ALA:C	4:D:26:THR:H	1.88	0.76
1:A:230:ARG:H	1:A:233:TRP:HE3	1.34	0.76
1:A:903:ASN:HD22	1:A:904:THR:N	1.84	0.76
2:B:430:ARG:O	2:B:434:ARG:HG3	1.86	0.76
9:I:74:GLU:HA	9:I:80:SER:O	1.86	0.76
1:A:7:SER:HB3	2:B:1175:LEU:HD22	1.68	0.76
9:I:105:SER:O	9:I:106:CYS:HB3	1.85	0.76
1:A:534:LEU:O	1:A:574:GLY:HA3	1.86	0.76
7:G:153:GLN:HG2	7:G:154:VAL:HG23	1.68	0.76
8:H:130:ARG:HB3	8:H:134:ASN:HB2	1.66	0.76
1:A:1325:THR:O	5:E:148:GLU:HB2	1.86	0.76
2:B:1150:ARG:HH11	2:B:1150:ARG:CG	1.99	0.76
1:A:672:ASP:HB3	1:A:675:THR:HB	1.68	0.75
2:B:123:THR:OG1	2:B:458:LYS:HE2	1.86	0.75
2:B:579:ARG:HB2	2:B:586:TRP:NE1	2.00	0.75
3:C:101:LEU:O	3:C:102:GLN:HG3	1.85	0.75
1:A:317:LYS:HA	2:B:471:LYS:HE2	1.68	0.75
1:A:910:PRO:HB3	1:A:917:SER:H	1.51	0.75
1:A:1130:GLN:O	1:A:1134:ILE:HG13	1.85	0.75
7:G:138:THR:CG2	7:G:139:ILE:H	1.89	0.75
8:H:26:ILE:O	8:H:27:GLU:HG3	1.86	0.75
10:J:64:ASN:HD22	10:J:65:PRO:HD3	1.48	0.75
1:A:1100:ARG:HH21	1:A:1351:GLU:CG	1.99	0.75
2:B:806:THR:HG22	2:B:808:ALA:N	1.95	0.75
2:B:1095:LEU:HD12	2:B:1095:LEU:N	1.98	0.75
1:A:107:CYS:N	1:A:114:LEU:HD21	2.01	0.75
2:B:168:GLY:HA2	2:B:454:THR:OG1	1.87	0.75
2:B:866:TYR:O	2:B:868:MET:N	2.19	0.75
4:D:144:THR:O	4:D:148:LEU:HB2	1.86	0.75
8:H:84:ALA:HB2	8:H:87:ARG:HD2	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:23:SER:HA	1:A:233:TRP:NE1	2.02	0.75
1:A:695:LYS:HA	1:A:698:GLN:HB2	1.67	0.75
1:A:683:ILE:HD13	1:A:801:GLU:HG3	1.69	0.75
1:A:816:HIS:CD2	2:B:764:SER:HB2	2.22	0.75
5:E:124:VAL:HA	5:E:132:ILE:HD12	1.68	0.75
11:K:45:LEU:HG	11:K:94:ILE:HD13	1.68	0.75
1:A:898:ARG:HD2	1:A:899:VAL:H	1.52	0.75
1:A:1148:ILE:HD11	1:A:1198:ASP:HA	1.69	0.75
2:B:577:ALA:CB	2:B:589:VAL:HG11	2.10	0.75
2:B:789:MET:HE2	2:B:965:LYS:HB3	1.68	0.75
1:A:135:PHE:HD1	1:A:222:LEU:HD22	1.51	0.75
2:B:101:MET:HB2	2:B:169:ARG:HH22	1.52	0.75
2:B:293:PRO:HG2	2:B:296:GLU:HB3	1.68	0.75
1:A:380:VAL:HG12	1:A:428:TYR:HA	1.69	0.75
2:B:710:LEU:HA	2:B:733:HIS:HB3	1.67	0.75
10:J:23:ASN:C	10:J:25:LEU:H	1.90	0.75
1:A:302:THR:HA	1:A:305:ASP:O	1.87	0.74
1:A:1100:ARG:NH2	1:A:1351:GLU:HG2	2.01	0.74
2:B:770:GLN:OE1	2:B:983:ARG:HA	1.87	0.74
3:C:7:GLN:HG2	11:K:104:ASN:ND2	2.01	0.74
9:I:6:PHE:HB3	9:I:12:ASN:O	1.86	0.74
1:A:12:ARG:HB2	2:B:1218:THR:HG22	1.68	0.74
1:A:148:CYS:O	1:A:168:GLY:HA2	1.86	0.74
1:A:697:ALA:HB2	1:A:702:LEU:HD12	1.69	0.74
9:I:111:THR:HG22	9:I:113:ASP:N	2.01	0.74
13:T:18:DA:H1'	13:T:19:8OG:H5'	1.69	0.74
2:B:326:ASP:OD2	2:B:328:GLU:HB3	1.86	0.74
2:B:497:ARG:HH22	2:B:775:LYS:CE	1.99	0.74
2:B:636:PRO:O	2:B:743:ILE:HD11	1.88	0.74
4:D:148:LEU:O	4:D:152:SER:HB3	1.87	0.74
11:K:107:THR:O	11:K:111:LEU:HG	1.87	0.74
1:A:438:ASP:O	1:A:439:ASN:HB2	1.85	0.74
4:D:159:THR:O	4:D:163:VAL:HG23	1.87	0.74
5:E:97:VAL:HG13	5:E:127:ILE:HD13	1.69	0.74
1:A:1193:LEU:HB2	1:A:1260:LEU:HD11	1.69	0.74
3:C:238:ILE:CG2	3:C:242:GLN:HB2	2.17	0.74
3:C:174:ALA:O	10:J:10:CYS:HB2	1.88	0.74
2:B:866:TYR:HB2	2:B:870:ILE:HB	1.68	0.74
2:B:1002:THR:HG23	2:B:1006:ILE:HG13	1.68	0.74
2:B:1201:LYS:HE2	2:B:1205:GLN:OE1	1.87	0.74
1:A:403:LYS:O	1:A:415:LEU:HB2	1.88	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:591:PHE:HA	1:A:595:THR:HG21	1.70	0.74
2:B:807:ARG:HG2	2:B:1045:SER:OG	1.86	0.74
2:B:911:ILE:HD11	2:B:941:LEU:HD13	1.70	0.74
10:J:1:MET:H1	10:J:57:ILE:H	1.33	0.74
14:N:3:DT:H4'	14:N:4:DA:H5'	1.70	0.74
2:B:1159:ARG:HD3	2:B:1193:GLN:HG3	1.70	0.74
3:C:76:ASP:O	3:C:78:GLU:N	2.21	0.74
3:C:259:LEU:HD21	11:K:91:CYS:HB3	1.68	0.74
1:A:135:PHE:CD1	1:A:222:LEU:HD22	2.22	0.74
1:A:808:LEU:HG	1:A:812:GLU:HB3	1.70	0.74
1:A:933:TYR:O	1:A:937:VAL:HG23	1.88	0.74
6:F:75:PRO:HG2	6:F:77:ASP:O	1.87	0.74
1:A:1009:ASN:HA	1:A:1012:ARG:NH1	2.02	0.73
1:A:567:LYS:HG3	8:H:94:ASP:O	1.88	0.73
1:A:825:ILE:HD11	2:B:512:ARG:HB3	1.70	0.73
2:B:351:TYR:O	2:B:355:ILE:HG13	1.89	0.73
2:B:661:LEU:HD11	2:B:684:LEU:HD11	1.68	0.73
2:B:830:TYR:CE2	2:B:1000:PRO:HD3	2.23	0.73
2:B:859:TYR:CZ	2:B:941:LEU:HD12	2.23	0.73
8:H:99:GLY:HA3	8:H:118:PHE:HA	1.69	0.73
2:B:60:GLN:O	2:B:63:ILE:HG22	1.88	0.73
3:C:115:SER:HB3	3:C:142:VAL:HB	1.69	0.73
8:H:130:ARG:N	8:H:130:ARG:HD2	2.03	0.73
1:A:71:GLN:HG3	1:A:72:GLU:H	1.54	0.73
1:A:215:SER:HB3	1:A:218:ASP:OD2	1.87	0.73
2:B:526:GLU:HG2	2:B:538:ASN:HD22	1.54	0.73
3:C:101:LEU:CD1	3:C:118:LEU:HD23	2.15	0.73
3:C:148:ARG:N	3:C:151:GLN:HG3	2.02	0.73
11:K:82:ASP:OD1	11:K:84:LYS:HG3	1.88	0.73
8:H:81:PRO:HG2	8:H:82:PRO:HD2	1.69	0.73
11:K:65:HIS:HD2	11:K:67:PHE:N	1.84	0.73
1:A:825:ILE:CD1	2:B:512:ARG:HB3	2.18	0.73
1:A:87:ALA:HB1	1:A:276:LEU:HD23	1.70	0.73
1:A:849:MET:HB2	1:A:1062:GLU:O	1.89	0.73
1:A:896:ARG:HH21	1:A:1030:ARG:NE	1.87	0.73
1:A:919:ILE:HG23	1:A:925:LEU:HD12	1.70	0.73
7:G:102:GLN:HG3	7:G:106:MET:O	1.88	0.73
13:T:7:DC:H2''	13:T:8:DT:C5	2.24	0.73
1:A:709:THR:HG22	1:A:711:ARG:H	1.54	0.73
2:B:220:GLY:O	2:B:222:ILE:HG13	1.89	0.73
4:D:60:LYS:O	4:D:64:VAL:HG23	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:129:TYR:HA	8:H:131:ASN:ND2	2.04	0.73
2:B:216:GLU:HB3	2:B:500:THR:HG23	1.70	0.73
2:B:613:VAL:HG22	2:B:628:THR:HA	1.70	0.73
3:C:98:VAL:C	3:C:99:LEU:HD23	2.09	0.73
1:A:701:LEU:HD21	9:I:114:GLN:HB2	1.71	0.73
2:B:230:ALA:N	2:B:231:PRO:HD2	2.04	0.73
4:D:137:ASN:ND2	4:D:137:ASN:H	1.87	0.73
9:I:82:GLU:HB3	9:I:104:LEU:HD12	1.71	0.73
1:A:1198:ASP:HB3	1:A:1201:ALA:HB3	1.71	0.72
2:B:906:SER:O	2:B:941:LEU:HD23	1.89	0.72
5:E:92:THR:O	5:E:95:THR:HB	1.89	0.72
7:G:13:LEU:HD21	7:G:17:PHE:HB2	1.70	0.72
1:A:845:LEU:HD12	1:A:1069:ALA:HB2	1.71	0.72
1:A:963:ILE:HD13	1:A:1049:ILE:HG12	1.71	0.72
2:B:95:ILE:HB	2:B:130:VAL:HG22	1.71	0.72
2:B:335:GLY:HA3	2:B:348:ARG:HB2	1.71	0.72
3:C:62:PHE:O	3:C:66:ARG:HG3	1.89	0.72
11:K:21:ILE:HG23	11:K:33:ILE:HG12	1.71	0.72
1:A:167:CYS:HB2	1:A:169:ASN:ND2	2.03	0.72
1:A:847:ASP:OD2	1:A:858:ASN:HB2	1.89	0.72
1:A:1345:ARG:HG3	1:A:1376:THR:HG21	1.71	0.72
7:G:88:ASP:HB3	7:G:144:ARG:HA	1.70	0.72
1:A:37:PHE:HD1	1:A:37:PHE:H	1.38	0.72
1:A:855:THR:HG21	1:A:857:ARG:NE	2.04	0.72
5:E:61:GLN:HG3	5:E:78:LEU:O	1.90	0.72
1:A:774:ARG:NH1	1:A:797:LYS:HG3	2.04	0.72
1:A:1002:GLY:HA3	1:A:1007:ILE:CG2	2.19	0.72
4:D:139:LYS:HE2	4:D:143:ASN:ND2	2.03	0.72
8:H:44:VAL:HG13	8:H:48:PRO:HA	1.72	0.72
1:A:38:PRO:HA	1:A:270:LEU:HD23	1.70	0.72
1:A:567:LYS:HD2	8:H:95:TYR:CD2	2.25	0.72
1:A:1308:THR:HG23	1:A:1309:ASP:N	2.03	0.72
2:B:112:LEU:HD12	2:B:113:TYR:H	1.54	0.72
6:F:109:VAL:CG1	6:F:110:ASP:H	1.97	0.72
1:A:100:LYS:HE2	1:A:104:GLU:OE2	1.89	0.72
1:A:646:PHE:O	1:A:650:GLN:HB2	1.90	0.72
1:A:1332:PHE:N	1:A:1332:PHE:CD2	2.55	0.72
1:A:71:GLN:HG3	1:A:72:GLU:N	2.04	0.72
1:A:332:LYS:H	1:A:337:ARG:HB3	1.55	0.72
1:A:524:VAL:HG12	1:A:525:GLN:H	1.54	0.72
2:B:23:ALA:H	2:B:654:ARG:HB3	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:175:ALA:HB2	10:J:10:CYS:HB2	1.70	0.72
1:A:53:LEU:HD23	1:A:54:ASN:H	1.53	0.72
1:A:751:SER:O	1:A:752:LYS:HG2	1.89	0.72
1:A:885:THR:O	1:A:940:ARG:HD2	1.88	0.72
1:A:1045:VAL:O	1:A:1049:ILE:HG13	1.90	0.72
2:B:118:ARG:HG2	2:B:204:ILE:HD13	1.72	0.72
7:G:40:GLY:HA2	7:G:157:ILE:HD11	1.72	0.72
8:H:36:CYS:HA	8:H:126:GLU:O	1.89	0.72
1:A:71:GLN:CG	1:A:72:GLU:H	2.00	0.72
2:B:435:THR:O	2:B:435:THR:HG22	1.89	0.72
2:B:801:LYS:O	10:J:52:THR:HG23	1.89	0.72
5:E:52:ARG:HB3	5:E:53:PRO:HD2	1.71	0.72
8:H:38:LEU:HD12	8:H:124:ARG:O	1.90	0.72
12:L:32:ALA:HB3	12:L:33:GLU:OE2	1.89	0.72
1:A:1237:ILE:HG22	1:A:1238:ILE:N	2.05	0.71
1:A:1315:GLU:C	1:A:1317:MET:H	1.92	0.71
3:C:128:ASN:O	3:C:129:ILE:HG13	1.90	0.71
8:H:89:LEU:C	8:H:91:ASP:H	1.91	0.71
1:A:265:LYS:HE2	1:A:302:THR:HG23	1.72	0.71
1:A:567:LYS:HG3	8:H:95:TYR:CA	2.17	0.71
2:B:1085:ILE:N	2:B:1085:ILE:HD12	2.05	0.71
1:A:32:VAL:HG21	1:A:68:GLN:NE2	2.05	0.71
1:A:34:LYS:CB	1:A:36:ARG:HH21	2.03	0.71
1:A:849:MET:CE	1:A:1061:GLY:HA2	2.20	0.71
2:B:1183:LYS:HA	2:B:1186:ASP:HA	1.70	0.71
6:F:72:LYS:HA	6:F:72:LYS:HE3	1.72	0.71
1:A:55:ASP:CG	1:A:55:ASP:O	2.29	0.71
1:A:629:LEU:O	1:A:633:VAL:HG23	1.89	0.71
2:B:277:LYS:O	2:B:278:GLN:HB2	1.88	0.71
2:B:999:MET:HA	2:B:999:MET:CE	2.20	0.71
7:G:62:LEU:HB3	7:G:63:PRO:CD	2.18	0.71
1:A:1161:THR:HG22	1:A:1163:ILE:H	1.55	0.71
2:B:954:VAL:HG13	2:B:964:VAL:HG22	1.72	0.71
3:C:20:PHE:CE1	3:C:22:LEU:HB2	2.25	0.71
1:A:382:PRO:HD3	1:A:428:TYR:CD2	2.25	0.71
3:C:147:LEU:HB2	3:C:151:GLN:HB2	1.71	0.71
3:C:268:ASP:O	3:C:269:LYS:HB2	1.90	0.71
7:G:9:LEU:HD12	7:G:10:ASN:N	2.04	0.71
1:A:822:GLU:O	1:A:825:ILE:HG22	1.90	0.71
1:A:1436:ILE:HD13	2:B:1139:ILE:HG23	1.73	0.71
2:B:179:CYS:SG	2:B:181:LEU:HD12	2.30	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:124:VAL:N	5:E:125:PRO:HD2	2.04	0.71
6:F:80:ALA:HB3	6:F:144:GLU:OE2	1.91	0.71
1:A:590:ARG:HH21	1:A:620:LYS:CB	1.96	0.71
8:H:128:ASN:H	8:H:130:ARG:HH11	1.39	0.71
12:L:40:LEU:HD22	12:L:44:ASP:CG	2.11	0.71
1:A:868:TYR:HD2	1:A:1058:VAL:HG21	1.55	0.71
1:A:901:LEU:H	1:A:926:GLN:HE21	1.37	0.71
2:B:313:MET:O	2:B:316:PRO:HD2	1.91	0.71
2:B:603:LEU:HD12	2:B:609:ILE:HG12	1.73	0.71
4:D:208:GLU:HG3	4:D:212:LYS:HE3	1.73	0.71
11:K:68:PHE:HB3	11:K:70:ARG:HH11	1.55	0.71
2:B:359:GLU:O	2:B:362:PRO:HD3	1.91	0.71
6:F:135:ARG:HG2	6:F:137:TYR:CE1	2.26	0.71
7:G:143:ILE:HG22	7:G:144:ARG:N	2.05	0.71
1:A:92:HIS:HB2	1:A:236:LEU:HD21	1.71	0.70
1:A:853:ASP:O	1:A:854:ASN:HB2	1.91	0.70
1:A:868:TYR:OH	1:A:1366:ARG:HD3	1.90	0.70
3:C:193:TYR:HD2	3:C:197:SER:HB3	1.54	0.70
3:C:256:ALA:HA	3:C:259:LEU:HD23	1.72	0.70
1:A:332:LYS:CA	1:A:337:ARG:HD2	2.21	0.70
1:A:888:GLY:O	1:A:940:ARG:NH2	2.24	0.70
2:B:900:ALA:HB3	12:L:61:THR:OG1	1.91	0.70
2:B:1065:GLN:HG3	2:B:1067:ARG:H	1.56	0.70
2:B:1215:ARG:NH1	4:D:15:LEU:HD21	2.05	0.70
6:F:97:ARG:O	6:F:101:ILE:HG13	1.92	0.70
1:A:7:SER:CB	2:B:1175:LEU:HD22	2.20	0.70
1:A:10:PRO:HB3	4:D:3:VAL:HA	1.73	0.70
1:A:315:LEU:HD13	2:B:471:LYS:HB3	1.72	0.70
1:A:896:ARG:HH21	1:A:1030:ARG:HE	1.35	0.70
3:C:56:THR:HG21	3:C:145:CYS:SG	2.32	0.70
9:I:58:VAL:HG13	9:I:62:ILE:HD12	1.72	0.70
2:B:898:LEU:HD13	2:B:952:VAL:HG11	1.73	0.70
8:H:32:THR:HG22	8:H:33:GLN:H	1.57	0.70
7:G:1:MET:SD	7:G:79:PHE:HD1	2.14	0.70
11:K:68:PHE:HB3	11:K:70:ARG:NH1	2.06	0.70
1:A:526:ASP:HB2	2:B:835:GLN:OE1	1.91	0.70
2:B:464:GLY:O	2:B:477:ALA:HA	1.91	0.70
3:C:239:PRO:HB2	3:C:241:ASP:OD1	1.90	0.70
7:G:34:VAL:HG11	7:G:74:TYR:HE1	1.56	0.70
1:A:35:ILE:CG2	1:A:84:ILE:HD12	2.21	0.70
1:A:828:ALA:CB	2:B:530:GLY:HA2	2.22	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:589:VAL:HG12	2:B:590:HIS:N	2.06	0.70
6:F:90:ARG:HG3	6:F:91:ALA:N	2.06	0.70
1:A:84:ILE:O	1:A:84:ILE:HG23	1.92	0.70
2:B:101:MET:HB2	2:B:169:ARG:NH2	2.07	0.70
2:B:824:ILE:HG22	2:B:1087:PHE:CE2	2.27	0.70
8:H:64:ASN:HD22	8:H:88:SER:CB	2.04	0.70
1:A:49:LYS:NZ	1:A:61:ILE:HG13	2.06	0.70
2:B:850:LEU:HD12	2:B:851:PHE:N	2.06	0.70
2:B:978:ASP:OD2	2:B:1098:MET:HG2	1.91	0.70
5:E:100:ILE:HG23	5:E:105:PHE:HB2	1.73	0.70
1:A:852:TYR:CD2	1:A:1060:PRO:HB2	2.27	0.69
2:B:54:PHE:O	2:B:58:THR:HB	1.92	0.69
2:B:60:GLN:HE22	2:B:94:LYS:HA	1.57	0.69
4:D:47:LEU:HD13	4:D:48:ILE:N	2.04	0.69
5:E:16:PHE:CZ	5:E:20:LYS:HE2	2.27	0.69
6:F:106:PRO:HB2	6:F:108:PHE:CE2	2.27	0.69
1:A:353:ILE:HD13	1:A:487:MET:HE2	1.72	0.69
1:A:447:GLN:HE22	13:T:20:DG:H4'	1.55	0.69
1:A:852:TYR:CD1	6:F:136:ARG:HB3	2.28	0.69
1:A:1006:ILE:CD1	5:E:163:GLU:HG3	2.20	0.69
1:A:1210:GLY:O	1:A:1214:GLU:HG2	1.92	0.69
2:B:465:ASN:N	2:B:465:ASN:ND2	2.40	0.69
3:C:73:GLN:HE21	3:C:75:MET:N	1.89	0.69
6:F:73:ALA:HB1	6:F:143:PHE:O	1.91	0.69
10:J:44:TYR:HA	10:J:47:ARG:HB2	1.73	0.69
1:A:14:VAL:N	1:A:1432:GLN:HE22	1.87	0.69
1:A:602:ASP:HB3	1:A:616:VAL:HG23	1.74	0.69
2:B:291:ILE:HD13	2:B:300:HIS:NE2	2.07	0.69
2:B:1065:GLN:HE21	2:B:1067:ARG:N	1.89	0.69
3:C:18:VAL:HG23	3:C:240:VAL:HG12	1.74	0.69
3:C:89:GLU:O	3:C:90:ASP:HB3	1.90	0.69
12:L:60:ARG:HH21	12:L:65:VAL:HG21	1.57	0.69
1:A:567:LYS:CB	1:A:568:PRO:HD3	2.23	0.69
1:A:825:ILE:HG23	1:A:826:ASP:N	2.08	0.69
1:A:1120:LEU:H	1:A:1120:LEU:HD12	1.57	0.69
2:B:243:ALA:HB2	2:B:251:ILE:HG12	1.74	0.69
2:B:465:ASN:N	2:B:465:ASN:HD22	1.89	0.69
2:B:821:GLN:HE22	2:B:851:PHE:N	1.90	0.69
5:E:168:TYR:HB3	5:E:170:LEU:HG	1.74	0.69
1:A:443:LEU:HD23	1:A:501:LEU:CD2	2.22	0.69
1:A:1420:ASP:O	1:A:1421:CYS:HB2	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:183:TRP:CZ2	3:C:207:CYS:HB3	2.28	0.69
5:E:124:VAL:HG13	5:E:132:ILE:HG13	1.73	0.69
5:E:190:LEU:HD12	5:E:214:CYS:HB2	1.75	0.69
1:A:53:LEU:HD23	1:A:54:ASN:HB3	1.74	0.69
1:A:1161:THR:HG22	1:A:1163:ILE:HG13	1.74	0.69
2:B:326:ASP:C	2:B:328:GLU:H	1.95	0.69
2:B:1202:LEU:O	2:B:1206:GLU:HG3	1.92	0.69
3:C:261:ALA:O	3:C:265:MET:HB2	1.92	0.69
7:G:45:ILE:HA	7:G:78:VAL:HG12	1.73	0.69
7:G:96:GLN:O	7:G:112:LYS:HD3	1.92	0.69
7:G:125:SER:OG	7:G:128:PRO:HA	1.92	0.69
8:H:14:GLU:HG2	8:H:15:VAL:N	2.08	0.69
8:H:82:PRO:HG3	11:K:54:ARG:HH11	1.56	0.69
1:A:72:GLU:HB3	1:A:76:GLU:HG2	1.75	0.69
1:A:106:VAL:HG13	1:A:112:LYS:O	1.93	0.69
1:A:596:THR:C	1:A:598:LEU:H	1.97	0.69
2:B:121:ASN:HA	2:B:207:GLY:HA2	1.75	0.69
2:B:169:ARG:HB2	2:B:454:THR:HG23	1.75	0.69
3:C:238:ILE:HG23	3:C:242:GLN:HB2	1.75	0.69
1:A:49:LYS:HZ3	1:A:61:ILE:HG13	1.58	0.69
1:A:356:ASP:HB2	1:A:469:ARG:HH12	1.58	0.69
1:A:1151:GLU:HG2	9:I:45:ARG:HB2	1.75	0.69
1:A:1312:ASN:O	1:A:1316:VAL:HG23	1.93	0.69
2:B:25:ILE:HD11	2:B:653:VAL:O	1.92	0.69
2:B:563:MET:CE	2:B:580:VAL:HB	2.23	0.69
2:B:1017:ILE:HB	2:B:1018:PRO:HD3	1.74	0.69
9:I:58:VAL:HG13	9:I:62:ILE:CD1	2.23	0.69
1:A:353:ILE:HG21	1:A:487:MET:HE3	1.74	0.68
1:A:567:LYS:CE	8:H:47:PHE:HB2	2.23	0.68
1:A:898:ARG:HD2	1:A:899:VAL:N	2.08	0.68
1:A:1032:LEU:O	1:A:1036:ARG:HD3	1.94	0.68
2:B:289:LEU:HD13	2:B:375:ALA:CB	2.23	0.68
2:B:613:VAL:HG13	2:B:627:PHE:O	1.92	0.68
3:C:36:VAL:HG21	3:C:251:LEU:HD13	1.74	0.68
3:C:251:LEU:O	3:C:255:VAL:HG23	1.94	0.68
1:A:12:ARG:HD2	2:B:1218:THR:HB	1.73	0.68
1:A:1208:THR:HB	1:A:1211:GLN:HG3	1.75	0.68
5:E:145:THR:HG21	5:E:187:TYR:CE2	2.28	0.68
7:G:119:LEU:HD12	7:G:131:GLN:O	1.93	0.68
1:A:382:PRO:HB3	1:A:428:TYR:HE2	1.56	0.68
1:A:442:VAL:O	1:A:457:ALA:HA	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:722:LEU:HD23	1:A:799:PHE:CD1	2.28	0.68
1:A:1081:LEU:HD11	1:A:1097:GLY:HA3	1.75	0.68
1:A:1116:LEU:HB3	1:A:1308:THR:HG21	1.75	0.68
2:B:309:GLN:OE1	9:I:52:ILE:HD11	1.93	0.68
5:E:202:SER:OG	5:E:204:THR:HG22	1.94	0.68
1:A:11:LEU:HD12	2:B:1193:GLN:O	1.92	0.68
1:A:547:LEU:HD22	11:K:58:PHE:CE1	2.28	0.68
1:A:1348:LEU:O	1:A:1352:VAL:HG23	1.93	0.68
7:G:44:TYR:HE1	7:G:157:ILE:H	1.40	0.68
1:A:1063:MET:CG	1:A:1436:ILE:HG23	2.24	0.68
1:A:573:SER:O	1:A:576:GLN:HB2	1.93	0.68
1:A:1345:ARG:NH1	5:E:200:ARG:HH22	1.92	0.68
2:B:90:ILE:HG23	2:B:133:LYS:O	1.93	0.68
2:B:253:THR:HG22	2:B:254:LEU:H	1.58	0.68
2:B:952:VAL:HG22	2:B:966:VAL:HG13	1.74	0.68
2:B:1095:LEU:H	2:B:1095:LEU:CD1	1.96	0.68
4:D:40:HIS:HD2	7:G:73:LYS:HG2	1.57	0.68
11:K:55:LYS:HB3	11:K:81:TYR:CD1	2.28	0.68
2:B:620:ARG:NH1	9:I:68:LEU:HD21	2.08	0.68
8:H:109:LYS:HD2	8:H:111:LEU:HD11	1.76	0.68
9:I:99:LEU:O	9:I:111:THR:HG23	1.94	0.68
1:A:741:ASN:HD22	1:A:744:LYS:H	1.42	0.68
1:A:960:ILE:HA	1:A:963:ILE:HG22	1.76	0.68
2:B:326:ASP:CG	2:B:328:GLU:HB3	2.14	0.68
2:B:1069:PHE:HA	2:B:1085:ILE:O	1.94	0.68
2:B:1084:GLN:OE1	3:C:189:THR:HG22	1.92	0.68
3:C:43:THR:CG2	3:C:44:LEU:H	1.95	0.68
3:C:238:ILE:CD1	3:C:246:ARG:HH11	2.07	0.68
11:K:31:VAL:HG12	11:K:32:VAL:N	2.06	0.68
1:A:717:ASN:HA	1:A:720:ARG:NH1	2.09	0.68
2:B:824:ILE:CG2	2:B:1087:PHE:HE2	2.06	0.68
3:C:34:ARG:HA	3:C:37:MET:HE2	1.76	0.68
4:D:47:LEU:O	4:D:48:ILE:HD13	1.92	0.68
5:E:22:MET:HE3	5:E:26:ARG:NH1	2.06	0.68
6:F:84:TYR:CE2	6:F:152:ILE:HD12	2.29	0.68
1:A:1081:LEU:CD1	1:A:1098:VAL:H	2.07	0.68
2:B:219:ALA:HB2	2:B:405:ARG:NH1	2.08	0.68
2:B:563:MET:HE3	2:B:580:VAL:HB	1.76	0.68
2:B:1099:VAL:CG1	2:B:1100:ASP:H	2.05	0.68
6:F:74:ILE:HG23	6:F:75:PRO:HD2	1.75	0.68
2:B:211:VAL:HG23	2:B:483:LEU:HB2	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:654:ARG:H	2:B:657:HIS:CD2	2.08	0.67
2:B:701:ILE:HD11	2:B:703:ILE:HD11	1.74	0.67
1:A:180:LYS:HZ1	1:A:294:SER:HB3	1.57	0.67
1:A:528:LEU:O	1:A:531:ILE:HG22	1.95	0.67
1:A:903:ASN:ND2	1:A:904:THR:N	2.41	0.67
1:A:1308:THR:HG23	1:A:1310:GLY:H	1.59	0.67
2:B:1224:PHE:CE1	5:E:171:LYS:HG3	2.29	0.67
1:A:102:VAL:HB	1:A:211:PHE:CZ	2.30	0.67
1:A:526:ASP:HB2	2:B:835:GLN:CD	2.15	0.67
1:A:1223:ASP:HA	1:A:1243:VAL:HG11	1.76	0.67
1:A:1276:VAL:HG12	1:A:1277:GLU:H	1.58	0.67
2:B:31:TRP:CZ3	2:B:34:ILE:HD12	2.28	0.67
2:B:521:LEU:HB3	2:B:633:VAL:HG11	1.75	0.67
1:A:33:ALA:HB3	1:A:82:GLY:HA3	1.77	0.67
1:A:709:THR:HG21	9:I:93:LYS:O	1.95	0.67
1:A:836:TYR:CE2	1:A:840:ARG:HD2	2.29	0.67
1:A:866:PHE:C	1:A:867:ILE:HD12	2.14	0.67
1:A:129:LYS:O	1:A:130:ASP:HB2	1.93	0.67
3:C:3:GLU:CB	11:K:104:ASN:HD21	2.07	0.67
9:I:71:SER:OG	9:I:83:ASN:HB2	1.93	0.67
1:A:608:ILE:HB	1:A:613:ILE:HD11	1.76	0.67
1:A:732:LEU:O	1:A:736:ASN:HB2	1.95	0.67
2:B:289:LEU:HD13	2:B:375:ALA:HB2	1.76	0.67
2:B:942:ARG:HH22	13:T:23:BRU:H5''	1.58	0.67
1:A:265:LYS:HE2	1:A:302:THR:CG2	2.24	0.67
1:A:1144:LYS:HB2	1:A:1268:LEU:O	1.94	0.67
1:A:1224:LEU:HD11	1:A:1240:CYS:HB2	1.76	0.67
2:B:579:ARG:HB2	2:B:586:TRP:HE1	1.56	0.67
2:B:1174:LYS:O	2:B:1176:ASN:N	2.28	0.67
14:N:2:DG:H4'	14:N:3:DT:OP1	1.93	0.67
1:A:963:ILE:HD11	1:A:1048:ASN:CB	2.25	0.67
1:A:1175:SER:O	1:A:1176:LEU:HB2	1.94	0.67
2:B:800:GLN:HB3	10:J:52:THR:CG2	2.24	0.67
5:E:136:ASN:O	5:E:140:LEU:HG	1.95	0.67
11:K:21:ILE:HG22	11:K:31:VAL:CG1	2.24	0.67
1:A:335:ARG:CD	2:B:1202:LEU:HD23	2.25	0.67
2:B:430:ARG:O	2:B:434:ARG:CG	2.43	0.67
2:B:1150:ARG:HA	2:B:1154:ALA:HB3	1.77	0.67
1:A:2:VAL:HG11	2:B:1157:ALA:CB	2.25	0.67
1:A:58:LEU:HD22	1:A:80:HIS:O	1.95	0.67
1:A:630:ILE:HD11	1:A:646:PHE:HZ	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:647:GLY:O	1:A:651:LYS:HG3	1.94	0.67
1:A:1127:ASP:CG	1:A:1130:GLN:HB2	2.15	0.67
1:A:1372:VAL:O	1:A:1376:THR:HG22	1.95	0.67
2:B:35:SER:O	2:B:39:ARG:HG3	1.94	0.67
3:C:184:ASN:ND2	3:C:187:LYS:HA	2.09	0.67
7:G:23:LYS:HG3	7:G:56:ILE:CD1	2.24	0.67
2:B:769:TYR:CE1	15:P:11:U:H2'	2.30	0.66
2:B:785:TYR:CE1	2:B:795:ILE:HG12	2.30	0.66
1:A:284:ALA:C	1:A:286:HIS:H	1.96	0.66
1:A:399:HIS:CB	1:A:400:PRO:HD3	2.24	0.66
1:A:406:ILE:HG13	1:A:431:LYS:HB2	1.75	0.66
1:A:504:LEU:HD11	6:F:91:ALA:HB1	1.77	0.66
1:A:1052:GLN:HA	1:A:1055:ARG:NH1	2.10	0.66
1:A:869:GLY:O	5:E:204:THR:HG21	1.95	0.66
2:B:102:VAL:HG11	12:L:54:ARG:NH2	2.09	0.66
2:B:294:ASP:O	2:B:296:GLU:N	2.29	0.66
2:B:416:LEU:HD11	2:B:466:TRP:CZ2	2.30	0.66
2:B:827:ILE:HD12	2:B:1086:PHE:CD2	2.29	0.66
2:B:999:MET:HA	2:B:999:MET:HE3	1.75	0.66
4:D:117:GLU:O	4:D:118:THR:HG23	1.94	0.66
1:A:335:ARG:HH11	2:B:1202:LEU:CD2	2.07	0.66
1:A:873:MET:C	1:A:1058:VAL:HG23	2.16	0.66
2:B:575:PRO:HG2	2:B:576:ASP:H	1.59	0.66
2:B:583:ASN:HD21	2:B:628:THR:HG22	1.60	0.66
2:B:792:MET:HA	2:B:856:PHE:O	1.96	0.66
2:B:1215:ARG:C	2:B:1216:LEU:HD23	2.15	0.66
8:H:26:ILE:HG22	8:H:27:GLU:N	2.10	0.66
2:B:114:PRO:HG2	2:B:115:GLN:H	1.61	0.66
2:B:639:ILE:HD11	2:B:691:GLU:CG	2.26	0.66
3:C:8:VAL:HG12	3:C:9:LYS:H	1.60	0.66
8:H:125:LEU:HG	8:H:126:GLU:H	1.59	0.66
11:K:53:ASP:HB3	11:K:56:VAL:HG23	1.75	0.66
1:A:310:GLY:O	1:A:312:PRO:HD2	1.94	0.66
1:A:1120:LEU:HD22	1:A:1124:HIS:O	1.96	0.66
7:G:23:LYS:HG3	7:G:56:ILE:HD11	1.78	0.66
1:A:335:ARG:HD2	2:B:1206:GLU:OE1	1.94	0.66
1:A:541:ILE:HD13	1:A:549:MET:CE	2.26	0.66
1:A:746:MET:HE3	2:B:1018:PRO:HG2	1.78	0.66
2:B:164:LYS:HE2	2:B:164:LYS:N	2.11	0.66
2:B:253:THR:HG22	2:B:254:LEU:N	2.11	0.66
2:B:343:ILE:HD12	2:B:347:LYS:HE2	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1048:THR:OG1	2:B:1050:ILE:HD13	1.96	0.66
5:E:156:LEU:HA	5:E:160:GLU:OE1	1.95	0.66
1:A:265:LYS:HD3	1:A:303:TYR:HA	1.76	0.66
2:B:276:ILE:HA	2:B:337:ARG:O	1.95	0.66
2:B:800:GLN:HB2	2:B:821:GLN:HA	1.76	0.66
4:D:56:ARG:HB2	4:D:148:LEU:HD22	1.77	0.66
5:E:153:HIS:HB3	5:E:196:VAL:CG1	2.26	0.66
9:I:35:VAL:HG12	9:I:36:GLU:N	2.11	0.66
9:I:76:PRO:HD2	9:I:108:HIS:HD2	1.60	0.66
10:J:64:ASN:CB	10:J:65:PRO:CD	2.71	0.66
1:A:407:ARG:HG2	1:A:430:TRP:CH2	2.31	0.66
1:A:832:ALA:HA	13:T:18:DA:C8	2.30	0.66
2:B:102:VAL:HG23	2:B:112:LEU:HB2	1.77	0.66
3:C:242:GLN:C	3:C:244:VAL:H	1.98	0.66
4:D:32:GLU:OE1	7:G:41:LYS:HE2	1.96	0.66
2:B:723:VAL:HG12	2:B:724:ASP:N	2.08	0.66
2:B:934:LYS:O	2:B:934:LYS:CG	2.41	0.66
2:B:1084:GLN:HG2	3:C:201:TRP:CZ2	2.30	0.66
5:E:55:ARG:C	5:E:57:MET:H	1.99	0.66
9:I:71:SER:HG	9:I:101:PHE:HD2	1.44	0.66
1:A:356:ASP:OD1	1:A:358:ASN:N	2.27	0.65
2:B:57:TYR:H	2:B:57:TYR:HD1	1.41	0.65
2:B:314:LEU:O	2:B:318:VAL:HG23	1.96	0.65
2:B:546:SER:OG	2:B:631:GLY:N	2.27	0.65
2:B:599:THR:O	2:B:603:LEU:HB2	1.96	0.65
2:B:980:PHE:HE2	2:B:1094:ARG:HB2	1.61	0.65
2:B:1183:LYS:C	2:B:1186:ASP:H	1.99	0.65
4:D:53:SER:H	4:D:148:LEU:HD21	1.59	0.65
4:D:134:THR:CG2	4:D:135:GLY:H	2.07	0.65
13:T:9:DC:H2"	13:T:10:DA:H8	1.58	0.65
1:A:43:GLU:HG3	1:A:48:ALA:HB3	1.78	0.65
1:A:528:LEU:HD23	1:A:751:SER:HB3	1.78	0.65
1:A:575:LYS:HD2	8:H:120:GLY:HA2	1.79	0.65
1:A:666:ILE:HD12	1:A:667:GLY:N	2.06	0.65
1:A:1111:MET:HE1	1:A:1331:SER:HA	1.77	0.65
4:D:155:ARG:HH11	4:D:155:ARG:HG3	1.62	0.65
4:D:180:LEU:CD2	4:D:195:ILE:HD12	2.26	0.65
5:E:124:VAL:N	5:E:125:PRO:CD	2.59	0.65
8:H:33:GLN:NE2	8:H:35:GLN:HB2	1.98	0.65
9:I:82:GLU:O	9:I:104:LEU:HG	1.97	0.65
1:A:174:ILE:HG22	1:A:175:ARG:N	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:572:TRP:HA	1:A:576:GLN:OE1	1.96	0.65
2:B:778:MET:HE2	2:B:1094:ARG:HG2	1.77	0.65
3:C:176:ILE:HG22	3:C:177:GLU:N	2.11	0.65
4:D:173:HIS:CD2	4:D:174:PRO:HD2	2.31	0.65
8:H:81:PRO:CG	8:H:82:PRO:HD2	2.26	0.65
1:A:12:ARG:O	2:B:1194:ILE:HG22	1.96	0.65
1:A:321:PRO:O	1:A:322:VAL:HG12	1.96	0.65
1:A:541:ILE:HD13	1:A:549:MET:HE3	1.79	0.65
2:B:243:ALA:HA	2:B:250:PHE:O	1.95	0.65
2:B:460:ALA:HB1	2:B:466:TRP:CZ3	2.30	0.65
4:D:137:ASN:HD22	4:D:137:ASN:N	1.94	0.65
4:D:155:ARG:HD3	4:D:221:TYR:CE1	2.32	0.65
9:I:4:PHE:HE1	9:I:6:PHE:HE2	1.43	0.65
1:A:682:THR:CG2	1:A:728:LYS:HE3	2.27	0.65
2:B:708:GLU:HG3	2:B:709:ASP:H	1.61	0.65
2:B:857:ARG:HH21	2:B:942:ARG:NH2	1.92	0.65
8:H:64:ASN:CG	8:H:90:ALA:H	1.99	0.65
10:J:14:VAL:O	10:J:14:VAL:HG12	1.96	0.65
1:A:1424:VAL:HG13	1:A:1436:ILE:CD1	2.20	0.65
3:C:68:GLY:O	3:C:169:LYS:HB2	1.97	0.65
10:J:30:LEU:HD11	10:J:38:ARG:NH1	2.11	0.65
1:A:851:HIS:O	1:A:853:ASP:N	2.30	0.65
1:A:1036:ARG:HG2	1:A:1036:ARG:HH11	1.61	0.65
2:B:578:THR:H	2:B:589:VAL:CG1	2.10	0.65
2:B:872:GLU:OE1	2:B:914:LYS:HE3	1.96	0.65
2:B:1180:PHE:HB3	2:B:1191:ILE:HD12	1.78	0.65
3:C:82:TYR:CZ	3:C:161:LYS:HG2	2.32	0.65
1:A:427:GLN:HB2	1:A:430:TRP:CE2	2.32	0.65
2:B:1069:PHE:H	2:B:1069:PHE:HD1	1.44	0.65
1:A:35:ILE:HA	1:A:52:GLY:O	1.97	0.65
1:A:93:VAL:CG2	1:A:301:ALA:HA	2.26	0.65
1:A:743:VAL:O	1:A:747:VAL:HG23	1.97	0.65
2:B:387:LEU:O	2:B:392:ARG:HB2	1.97	0.65
6:F:75:PRO:O	6:F:77:ASP:O	2.15	0.65
1:A:306:ASN:ND2	1:A:322:VAL:HG12	2.12	0.65
1:A:332:LYS:HA	1:A:337:ARG:HD2	1.79	0.65
1:A:416:ARG:HG3	1:A:417:TYR:CE2	2.32	0.65
1:A:666:ILE:N	2:B:1026:LEU:HD13	2.08	0.65
1:A:832:ALA:HA	13:T:18:DA:N7	2.11	0.65
1:A:868:TYR:CE1	1:A:1064:VAL:HG11	2.31	0.65
1:A:886:ILE:HG23	1:A:887:GLY:N	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1223:ASP:HA	1:A:1243:VAL:CG1	2.27	0.65
1:A:1259:MET:HG3	1:A:1262:LYS:HZ2	1.62	0.65
2:B:25:ILE:HG23	2:B:658:ILE:HD11	1.79	0.65
2:B:172:ILE:HD13	2:B:178:ASN:HD22	1.61	0.65
2:B:999:MET:HE2	2:B:1000:PRO:HD3	1.77	0.65
3:C:39:ALA:O	3:C:164:ALA:HB3	1.97	0.65
4:D:180:LEU:HD21	4:D:198:LEU:HD11	1.79	0.65
7:G:13:LEU:HD23	7:G:14:HIS:N	2.11	0.65
9:I:111:THR:HG22	9:I:112:SER:N	2.12	0.65
1:A:1074:GLU:C	1:A:1076:ALA:H	2.01	0.64
2:B:283:VAL:HG21	2:B:317:CYS:O	1.97	0.64
2:B:999:MET:HG3	2:B:1000:PRO:CD	2.20	0.64
3:C:181:ASP:OD2	3:C:185:LYS:N	2.30	0.64
5:E:114:ASN:O	5:E:115:ASN:CB	2.45	0.64
6:F:118:LEU:HD12	6:F:118:LEU:O	1.97	0.64
8:H:80:ARG:HH11	11:K:57:LEU:HD21	1.62	0.64
1:A:981:LEU:CD2	1:A:1039:LYS:HA	2.23	0.64
1:A:65:LEU:HD22	1:A:71:GLN:OE1	1.97	0.64
1:A:356:ASP:HB2	1:A:469:ARG:NH1	2.11	0.64
1:A:384:ASN:O	1:A:386:ASP:N	2.31	0.64
2:B:956:THR:HG22	2:B:957:ASN:H	1.63	0.64
3:C:5:GLY:O	3:C:7:GLN:HG3	1.98	0.64
6:F:79:ARG:HG2	6:F:79:ARG:NH1	2.11	0.64
9:I:50:THR:HG22	9:I:51:ASN:N	2.11	0.64
10:J:2:ILE:CG2	10:J:3:VAL:N	2.59	0.64
11:K:19:LEU:HD22	11:K:33:ILE:HG21	1.79	0.64
11:K:61:TYR:C	11:K:61:TYR:CD2	2.70	0.64
1:A:868:TYR:CD2	1:A:1058:VAL:HG21	2.32	0.64
2:B:1007:VAL:CG2	2:B:1008:PRO:HD2	2.27	0.64
9:I:76:PRO:HD2	9:I:108:HIS:CD2	2.32	0.64
2:B:516:ASN:N	2:B:516:ASN:ND2	2.45	0.64
2:B:854:LEU:O	2:B:855:PHE:HB2	1.96	0.64
2:B:1001:PHE:CE1	2:B:1073:TYR:HB2	2.31	0.64
6:F:119:ARG:HH11	6:F:119:ARG:HG3	1.62	0.64
8:H:42:ILE:HG12	8:H:95:TYR:CE1	2.32	0.64
1:A:172:PRO:HB3	1:A:185:TRP:CD2	2.33	0.64
1:A:182:VAL:HG22	1:A:201:VAL:HA	1.78	0.64
1:A:630:ILE:HG23	1:A:631:HIS:N	2.13	0.64
1:A:903:ASN:ND2	1:A:904:THR:H	1.94	0.64
1:A:1155:ASP:OD2	1:A:1161:THR:HA	1.98	0.64
2:B:68:THR:OG1	2:B:91:SER:HB3	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:637:LEU:C	2:B:690:VAL:HG13	2.18	0.64
3:C:232:VAL:HG21	3:C:244:VAL:HG22	1.78	0.64
7:G:15:PRO:HA	7:G:18:PHE:CE1	2.32	0.64
2:B:1084:GLN:N	2:B:1084:GLN:NE2	2.46	0.64
1:A:567:LYS:HD3	1:A:568:PRO:HD3	1.80	0.64
1:A:1072:ILE:HD11	1:A:1368:MET:HA	1.80	0.64
2:B:706:GLN:NE2	2:B:730:ARG:HH11	1.94	0.64
1:A:68:GLN:O	1:A:70:CYS:N	2.28	0.64
1:A:1063:MET:HG3	1:A:1436:ILE:HG23	1.80	0.64
1:A:1211:GLN:O	1:A:1214:GLU:HB2	1.98	0.64
2:B:23:ALA:HB1	2:B:24:PRO:HD2	1.78	0.64
2:B:165:VAL:HG11	2:B:448:ILE:CD1	2.18	0.64
3:C:24:ASN:HA	3:C:226:ASP:HB3	1.79	0.64
4:D:68:ARG:O	4:D:72:ARG:HG3	1.98	0.64
1:A:1066:VAL:O	1:A:1070:GLN:HG3	1.98	0.64
1:A:1293:SER:OG	1:A:1295:THR:HG23	1.98	0.64
2:B:53:GLN:HG2	2:B:547:VAL:CG2	2.28	0.64
2:B:593:PRO:HG2	2:B:617:ARG:CZ	2.28	0.64
2:B:755:ILE:HG23	2:B:809:MET:CE	2.28	0.64
2:B:882:THR:HG22	2:B:884:ARG:H	1.61	0.64
1:A:69:THR:C	1:A:71:GLN:N	2.49	0.63
1:A:947:PHE:CE2	1:A:954:TRP:CE2	2.86	0.63
1:A:1141:THR:OG1	1:A:1205:LYS:HD3	1.97	0.63
1:A:1441:PHE:CE2	6:F:89:GLU:HG2	2.34	0.63
2:B:1007:VAL:HG22	2:B:1008:PRO:HD2	1.80	0.63
3:C:166:GLU:C	11:K:6:ARG:HH11	2.01	0.63
5:E:167:ARG:O	5:E:168:TYR:HD2	1.81	0.63
1:A:993:LEU:HD23	1:A:1022:LEU:HD11	1.79	0.63
1:A:1343:ALA:O	1:A:1346:ALA:HB3	1.97	0.63
2:B:865:LYS:HD2	2:B:961:LEU:HD21	1.80	0.63
5:E:124:VAL:HG13	5:E:132:ILE:CG1	2.28	0.63
1:A:1404:GLU:HB2	1:A:1408:ILE:CD1	2.29	0.63
1:A:1444:MET:HB3	7:G:59:GLY:O	1.97	0.63
2:B:127:GLY:C	2:B:128:LEU:HD12	2.19	0.63
2:B:520:GLY:H	2:B:748:ILE:HG22	1.62	0.63
2:B:983:ARG:HD2	2:B:1091:TYR:HB3	1.80	0.63
2:B:1072:MET:HE3	2:B:1085:ILE:HD13	1.79	0.63
3:C:66:ARG:HH22	10:J:2:ILE:CG2	2.12	0.63
3:C:169:LYS:NZ	12:L:69:ALA:HB3	2.12	0.63
7:G:106:MET:HG2	7:G:107:LYS:N	2.13	0.63
1:A:111:GLY:O	1:A:214:ILE:HA	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:285:PRO:HG2	1:A:288:ALA:HB3	1.80	0.63
1:A:443:LEU:HD11	1:A:455:MET:HB3	1.81	0.63
1:A:860:LEU:HD13	1:A:1393:ASN:HD22	1.63	0.63
2:B:130:VAL:HG23	2:B:167:ILE:HD13	1.80	0.63
2:B:363:HIS:O	2:B:364:ILE:HB	1.97	0.63
2:B:806:THR:HG23	2:B:1046:PRO:HD3	1.81	0.63
2:B:955:THR:CG2	2:B:956:THR:N	2.60	0.63
8:H:100:THR:HG22	8:H:101:ALA:N	2.14	0.63
1:A:76:GLU:O	1:A:78:PRO:HD3	1.98	0.63
1:A:79:GLY:HA3	1:A:243:PRO:HG3	1.79	0.63
1:A:986:ILE:HD12	1:A:1032:LEU:HD11	1.80	0.63
2:B:53:GLN:HG2	2:B:547:VAL:HG23	1.79	0.63
2:B:785:TYR:HA	2:B:788:ARG:HG3	1.80	0.63
3:C:112:ASN:HB2	3:C:114:TYR:HE1	1.63	0.63
4:D:40:HIS:HB2	7:G:73:LYS:HD3	1.80	0.63
9:I:4:PHE:CD1	9:I:4:PHE:C	2.70	0.63
10:J:7:CYS:O	10:J:11:GLY:HA2	1.97	0.63
1:A:1115:SER:C	1:A:1308:THR:HG22	2.19	0.63
1:A:1260:LEU:HD12	1:A:1260:LEU:O	1.97	0.63
2:B:558:LEU:C	2:B:560:GLU:H	2.01	0.63
2:B:860:MET:HG2	2:B:861:ASP:N	2.12	0.63
2:B:1050:ILE:HD12	2:B:1050:ILE:N	2.14	0.63
7:G:28:THR:O	7:G:32:GLU:HG3	1.98	0.63
8:H:89:LEU:O	8:H:91:ASP:N	2.29	0.63
1:A:825:ILE:CG2	1:A:826:ASP:N	2.61	0.63
2:B:469:GLN:CG	2:B:470:LYS:H	2.11	0.63
2:B:810:GLU:HA	2:B:815:ARG:HH12	1.64	0.63
2:B:847:ASP:C	2:B:849:GLY:H	2.02	0.63
5:E:106:GLN:HA	5:E:130:ALA:CB	2.29	0.63
1:A:103:CYS:SG	1:A:207:ILE:HD12	2.39	0.63
1:A:1276:VAL:HG12	1:A:1277:GLU:N	2.14	0.63
2:B:593:PRO:HA	2:B:596:LEU:HB3	1.81	0.63
3:C:241:ASP:O	3:C:245:VAL:HG23	1.99	0.63
5:E:15:ALA:O	5:E:19:VAL:HG23	1.99	0.63
5:E:128:PRO:HA	5:E:129:PRO:O	1.99	0.63
1:A:767:GLN:HB2	1:A:799:PHE:HD1	1.64	0.63
1:A:1152:ILE:HD11	9:I:44:TYR:HD2	1.63	0.63
2:B:123:THR:O	2:B:125:SER:N	2.32	0.63
2:B:186:GLU:CG	10:J:62:ARG:HH22	2.05	0.63
2:B:527:THR:OG1	2:B:528:PRO:HD2	1.99	0.63
2:B:615:MET:HB3	2:B:626:ILE:HG12	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:899:ILE:HG21	2:B:949:VAL:HG21	1.80	0.63
3:C:39:ALA:HA	3:C:164:ALA:HB3	1.78	0.63
4:D:66:ARG:HD2	4:D:133:THR:HB	1.80	0.63
5:E:100:ILE:HG22	5:E:100:ILE:O	1.99	0.63
8:H:82:PRO:HG3	11:K:54:ARG:HD2	1.81	0.63
1:A:504:LEU:HD11	6:F:91:ALA:CB	2.29	0.62
1:A:913:LEU:HD12	1:A:914:GLU:H	1.62	0.62
2:B:579:ARG:HG2	2:B:579:ARG:HH11	1.64	0.62
2:B:653:VAL:CG2	2:B:689:LEU:HB3	2.28	0.62
2:B:847:ASP:OD2	3:C:167:HIS:HD2	1.82	0.62
10:J:64:ASN:ND2	10:J:65:PRO:HD3	2.14	0.62
1:A:35:ILE:HD12	1:A:241:VAL:HG21	1.81	0.62
1:A:523:ILE:HD12	1:A:622:VAL:HG21	1.82	0.62
1:A:590:ARG:HB3	1:A:605:MET:N	2.13	0.62
1:A:814:PHE:CE1	2:B:519:TRP:HA	2.34	0.62
1:A:1158:PRO:HB2	1:A:1188:GLN:HE22	1.64	0.62
2:B:878:GLN:O	2:B:934:LYS:HE2	1.99	0.62
7:G:143:ILE:CG2	7:G:144:ARG:N	2.62	0.62
8:H:84:ALA:CB	8:H:87:ARG:HD2	2.29	0.62
9:I:50:THR:HG22	9:I:51:ASN:H	1.64	0.62
12:L:61:THR:HG21	12:L:63:ARG:NE	2.14	0.62
1:A:25:GLU:OE1	1:A:25:GLU:N	2.32	0.62
1:A:474:VAL:HA	1:A:521:MET:HE2	1.81	0.62
1:A:675:THR:OG1	1:A:736:ASN:ND2	2.32	0.62
2:B:281:PRO:O	2:B:283:VAL:N	2.33	0.62
9:I:17:ARG:HG3	9:I:28:GLU:OE1	1.99	0.62
11:K:42:LEU:HD23	11:K:42:LEU:C	2.19	0.62
1:A:768:GLN:CG	1:A:816:HIS:HA	2.23	0.62
1:A:902:LEU:HD11	1:A:923:LEU:HD21	1.79	0.62
1:A:1017:LEU:HB2	5:E:206:GLY:N	2.00	0.62
1:A:1412:ALA:HA	1:A:1417:GLU:OE2	1.99	0.62
2:B:847:ASP:HB3	3:C:167:HIS:CD2	2.35	0.62
3:C:75:MET:HB3	3:C:128:ASN:HB3	1.81	0.62
7:G:114:LEU:HG	7:G:162:SER:HB3	1.81	0.62
1:A:754:SER:N	1:A:757:ASN:HD22	1.96	0.62
1:A:1340:GLY:O	1:A:1342:GLU:N	2.32	0.62
2:B:244:LEU:HD21	2:B:366:GLN:NE2	2.14	0.62
2:B:351:TYR:CE1	2:B:355:ILE:HD11	2.35	0.62
3:C:6:PRO:HB3	3:C:25:VAL:HG12	1.82	0.62
3:C:132:PRO:O	3:C:134:ILE:HG13	2.00	0.62
13:T:21:DC:H2''	13:T:22:DC:C5'	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:50:ILE:O	1:A:52:GLY:N	2.33	0.62
1:A:115:LEU:CD1	1:A:141:LEU:HB3	2.30	0.62
1:A:259:GLU:OE1	1:A:263:THR:HG21	1.99	0.62
1:A:427:GLN:HB2	1:A:430:TRP:CD2	2.34	0.62
1:A:1279:ILE:HG22	1:A:1279:ILE:O	1.99	0.62
1:A:1341:ILE:HG23	1:A:1342:GLU:N	2.14	0.62
2:B:1002:THR:HG21	2:B:1006:ILE:HG13	1.80	0.62
2:B:1162:ILE:HD11	2:B:1194:ILE:HD13	1.81	0.62
3:C:46:ILE:HG23	3:C:157:CYS:HB3	1.81	0.62
7:G:1:MET:SD	7:G:79:PHE:CD1	2.92	0.62
1:A:255:SER:OG	2:B:918:ILE:HG21	1.98	0.62
1:A:963:ILE:HD11	1:A:1048:ASN:HB3	1.82	0.62
1:A:1074:GLU:HB3	1:A:1075:PRO:CD	2.29	0.62
1:A:1293:SER:HB2	1:A:1299:VAL:HG23	1.82	0.62
1:A:1445:ILE:H	1:A:1445:ILE:CD1	1.99	0.62
2:B:244:LEU:HD13	2:B:247:GLY:O	2.00	0.62
2:B:1115:THR:O	2:B:1116:ARG:HB2	1.99	0.62
5:E:31:THR:CG2	5:E:34:GLU:HB2	2.29	0.62
5:E:54:GLN:O	5:E:57:MET:HB3	1.99	0.62
5:E:138:ALA:HA	5:E:141:VAL:HG23	1.82	0.62
8:H:93:TYR:HB3	8:H:144:ILE:O	2.00	0.62
13:T:10:DA:H2''	13:T:11:DA:H8	1.61	0.62
1:A:335:ARG:HA	1:A:339:ASN:HD22	1.64	0.62
1:A:463:ILE:HD11	1:A:469:ARG:HG3	1.82	0.62
1:A:606:LEU:HG	1:A:613:ILE:HD12	1.81	0.62
1:A:857:ARG:NH2	6:F:139:PRO:HG3	2.14	0.62
2:B:20:ASP:C	2:B:22:SER:H	2.01	0.62
2:B:331:LEU:HD23	2:B:353:LYS:HG2	1.81	0.62
2:B:899:ILE:CG2	2:B:949:VAL:HG21	2.29	0.62
4:D:59:ILE:O	4:D:63:LEU:HB2	2.00	0.62
6:F:103:MET:O	6:F:104:ASN:HB2	2.00	0.62
12:L:53:HIS:HB3	12:L:55:ILE:CD1	2.30	0.62
13:T:24:DG:H2'	13:T:25:DG:H8	1.65	0.62
1:A:438:ASP:OD1	1:A:462:VAL:HG23	2.00	0.62
1:A:744:LYS:O	1:A:748:MET:HG3	2.00	0.62
1:A:834:THR:HG21	1:A:1077:THR:HG23	1.81	0.62
1:A:901:LEU:HB2	1:A:926:GLN:HG2	1.80	0.62
2:B:211:VAL:CG2	2:B:483:LEU:HB2	2.29	0.62
2:B:276:ILE:HD13	2:B:280:ILE:HD11	1.82	0.62
1:A:1140:HIS:HA	1:A:1275:GLY:HA3	1.82	0.62
2:B:521:LEU:HD13	2:B:633:VAL:HB	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:100:THR:HG22	3:C:101:LEU:H	1.64	0.62
3:C:258:ILE:HD11	11:K:42:LEU:HD11	1.81	0.62
7:G:1:MET:SD	7:G:2:PHE:N	2.72	0.62
8:H:109:LYS:HD2	8:H:111:LEU:CD1	2.30	0.62
10:J:48:ARG:NE	10:J:49:MET:HE2	2.08	0.62
12:L:34:CYS:O	12:L:34:CYS:SG	2.58	0.62
1:A:335:ARG:O	1:A:339:ASN:HB2	1.99	0.61
1:A:954:TRP:HB3	1:A:955:PRO:HD2	1.82	0.61
2:B:838:SER:HB2	2:B:989:THR:O	1.99	0.61
3:C:124:LEU:O	3:C:127:ARG:HG2	2.00	0.61
11:K:7:PHE:O	11:K:11:LEU:HD23	1.99	0.61
1:A:335:ARG:HD2	2:B:1202:LEU:HD23	1.82	0.61
1:A:1160:SER:HA	1:A:1170:ILE:CD1	2.28	0.61
2:B:100:PRO:HD2	2:B:180:TYR:CE1	2.36	0.61
2:B:167:ILE:HD12	2:B:167:ILE:N	2.14	0.61
2:B:193:LYS:HZ1	12:L:32:ALA:HB1	1.65	0.61
2:B:593:PRO:HG2	2:B:617:ARG:NH2	2.15	0.61
9:I:78:CYS:O	9:I:80:SER:N	2.32	0.61
1:A:1187:GLN:HG3	1:A:1188:GLN:N	2.15	0.61
2:B:114:PRO:HG3	2:B:181:LEU:HD11	1.82	0.61
2:B:611:PRO:CG	2:B:685:LEU:HD21	2.27	0.61
2:B:1096:ARG:O	2:B:1097:HIS:CB	2.46	0.61
4:D:118:THR:OG1	4:D:121:LYS:HB2	2.00	0.61
6:F:103:MET:HE2	7:G:66:GLY:N	2.14	0.61
11:K:93:SER:O	11:K:97:LYS:HG3	2.00	0.61
1:A:93:VAL:HG23	1:A:304:MET:HE3	1.82	0.61
1:A:184:SER:HB3	1:A:199:LEU:HD23	1.83	0.61
2:B:1215:ARG:O	2:B:1216:LEU:HD23	2.00	0.61
4:D:13:ARG:O	4:D:13:ARG:HD3	1.99	0.61
1:A:40:THR:HB	1:A:41:MET:CE	2.30	0.61
1:A:65:LEU:O	1:A:71:GLN:HA	2.00	0.61
1:A:68:GLN:C	1:A:70:CYS:H	2.04	0.61
1:A:224:PHE:CE2	1:A:231:PRO:HG3	2.35	0.61
2:B:882:THR:HG22	2:B:884:ARG:CB	2.26	0.61
2:B:899:ILE:HD11	2:B:911:ILE:HA	1.81	0.61
6:F:77:ASP:O	6:F:78:GLN:HB2	2.01	0.61
6:F:85:MET:O	6:F:155:LEU:HD21	2.00	0.61
8:H:32:THR:HG22	8:H:33:GLN:N	2.15	0.61
1:A:67:CYS:O	1:A:68:GLN:HB2	2.00	0.61
1:A:744:LYS:HG2	1:A:748:MET:CE	2.31	0.61
2:B:860:MET:HG3	2:B:965:LYS:HG2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:18:GLN:HG2	1:A:1418:LEU:HD13	1.83	0.61
1:A:93:VAL:HG21	1:A:301:ALA:O	2.01	0.61
1:A:1214:GLU:OE1	1:A:1214:GLU:HA	2.00	0.61
2:B:20:ASP:O	2:B:22:SER:N	2.30	0.61
2:B:25:ILE:HD11	2:B:653:VAL:C	2.20	0.61
2:B:485:ARG:NH2	2:B:782:LEU:HD11	2.16	0.61
2:B:766:ARG:HG2	2:B:766:ARG:NH1	2.15	0.61
2:B:842:ASN:HD22	2:B:845:SER:CB	2.10	0.61
3:C:50:GLU:HG2	12:L:64:LEU:HD22	1.82	0.61
3:C:112:ASN:HB2	3:C:114:TYR:CE1	2.36	0.61
7:G:30:LEU:HD13	7:G:72:VAL:HG11	1.83	0.61
8:H:24:CYS:HB2	8:H:44:VAL:HG21	1.82	0.61
8:H:81:PRO:CB	8:H:82:PRO:CD	2.77	0.61
1:A:825:ILE:HD11	2:B:512:ARG:CB	2.31	0.61
1:A:1308:THR:HG21	1:A:1310:GLY:O	2.01	0.61
2:B:169:ARG:HB3	2:B:169:ARG:HH11	1.65	0.61
2:B:604:ARG:C	2:B:606:LYS:H	2.03	0.61
2:B:980:PHE:CE2	2:B:1094:ARG:HB2	2.34	0.61
3:C:22:LEU:HD13	3:C:230:MET:HE3	1.83	0.61
1:A:332:LYS:H	1:A:337:ARG:CB	2.13	0.61
1:A:531:ILE:CD1	1:A:653:VAL:HG21	2.30	0.61
1:A:858:ASN:C	1:A:858:ASN:HD22	2.04	0.61
1:A:875:ALA:HB2	1:A:1366:ARG:HD2	1.83	0.61
1:A:1420:ASP:CB	1:A:1422:ARG:HG3	2.22	0.61
3:C:58:LEU:HD22	3:C:58:LEU:N	2.16	0.61
5:E:69:ILE:HA	5:E:72:PHE:O	2.01	0.61
7:G:145:VAL:HG12	7:G:146:LYS:N	2.15	0.61
8:H:12:VAL:HB	8:H:52:GLN:N	2.15	0.61
8:H:104:PHE:CZ	8:H:136:LYS:HA	2.36	0.61
1:A:438:ASP:OD2	1:A:461:LYS:HD2	2.00	0.61
1:A:560:ILE:CD1	8:H:79:TRP:H	2.12	0.61
1:A:726:ARG:O	1:A:729:ALA:HB3	2.00	0.61
1:A:1213:GLY:HA2	1:A:1216:ILE:HG13	1.82	0.61
7:G:49:LEU:HG	7:G:76:ALA:HA	1.82	0.61
12:L:49:LYS:O	12:L:50:ASP:HB2	1.99	0.61
1:A:30:ILE:HG23	2:B:1170:THR:CG2	2.30	0.60
1:A:1291:VAL:HG13	1:A:1292:PRO:HD2	1.83	0.60
1:A:1343:ALA:CB	5:E:150:VAL:HG22	2.30	0.60
2:B:180:TYR:HD1	2:B:180:TYR:H	1.48	0.60
2:B:190:TYR:CE1	2:B:196:PRO:HG3	2.36	0.60
2:B:244:LEU:O	2:B:249:ARG:HG2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:591:ARG:O	2:B:593:PRO:HD3	2.01	0.60
3:C:193:TYR:CD2	3:C:197:SER:HB3	2.35	0.60
5:E:173:SER:O	5:E:175:LEU:N	2.33	0.60
7:G:7:LEU:HB2	7:G:74:TYR:HE2	1.64	0.60
7:G:39:THR:HG22	7:G:41:LYS:H	1.66	0.60
8:H:40:LEU:HD22	8:H:123:MET:HE1	1.83	0.60
9:I:4:PHE:C	9:I:4:PHE:HD1	2.04	0.60
1:A:418:SER:O	1:A:420:ARG:N	2.28	0.60
1:A:709:THR:HB	1:A:712:GLU:H	1.65	0.60
1:A:885:THR:O	1:A:885:THR:HG22	2.01	0.60
1:A:1114:PRO:C	1:A:1330:ASN:HD21	2.05	0.60
1:A:1258:HIS:HB3	1:A:1259:MET:HE3	1.83	0.60
2:B:571:PRO:HG2	2:B:572:HIS:ND1	2.15	0.60
5:E:44:ALA:O	5:E:45:LYS:HB2	2.00	0.60
1:A:299:HIS:HA	1:A:302:THR:HG22	1.81	0.60
1:A:340:LEU:HD21	2:B:1199:ALA:HB3	1.83	0.60
1:A:666:ILE:HD11	2:B:1067:ARG:O	2.01	0.60
1:A:809:THR:HG23	1:A:812:GLU:OE1	2.00	0.60
1:A:996:ASN:O	1:A:998:LEU:HD12	2.02	0.60
2:B:57:TYR:CD1	2:B:57:TYR:N	2.70	0.60
2:B:193:LYS:HZ3	12:L:32:ALA:HB1	1.67	0.60
2:B:485:ARG:CZ	2:B:782:LEU:HD11	2.31	0.60
3:C:18:VAL:HG23	3:C:240:VAL:CG1	2.31	0.60
5:E:179:GLN:HB2	5:E:182:ASP:HB2	1.83	0.60
1:A:71:GLN:CG	1:A:72:GLU:N	2.64	0.60
1:A:313:GLN:O	1:A:314:ALA:C	2.40	0.60
1:A:451:HIS:CD2	1:A:1074:GLU:HG3	2.37	0.60
1:A:635:ARG:HH11	1:A:635:ARG:HA	1.65	0.60
1:A:1244:ARG:CB	1:A:1245:PRO:HA	2.14	0.60
2:B:273:LEU:HD12	2:B:280:ILE:HD12	1.83	0.60
3:C:46:ILE:CG2	3:C:157:CYS:HB3	2.31	0.60
3:C:261:ALA:HA	3:C:264:GLN:OE1	2.02	0.60
6:F:106:PRO:HB2	6:F:108:PHE:HE2	1.66	0.60
7:G:146:LYS:HB2	7:G:168:LEU:HD11	1.83	0.60
11:K:65:HIS:CD2	11:K:67:PHE:HB2	2.37	0.60
1:A:55:ASP:C	1:A:57:ARG:N	2.55	0.60
1:A:69:THR:O	1:A:71:GLN:N	2.34	0.60
1:A:523:ILE:HG23	1:A:527:THR:HB	1.83	0.60
2:B:850:LEU:HD12	2:B:851:PHE:H	1.67	0.60
5:E:42:PHE:HZ	5:E:58:MET:HE1	1.66	0.60
5:E:111:VAL:HG12	5:E:137:GLU:HG2	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:103:MET:CE	7:G:66:GLY:N	2.63	0.60
11:K:47:ARG:HH11	11:K:47:ARG:CB	2.13	0.60
1:A:87:ALA:HB2	1:A:273:ASN:OD1	2.02	0.60
1:A:524:VAL:CG1	1:A:525:GLN:H	2.15	0.60
1:A:853:ASP:OD1	1:A:855:THR:HG22	2.01	0.60
1:A:925:LEU:HD13	1:A:983:ILE:HD12	1.84	0.60
1:A:1220:PHE:CE2	1:A:1263:ILE:HG23	2.36	0.60
1:A:1424:VAL:O	1:A:1428:VAL:HG23	2.00	0.60
1:A:1445:ILE:HD12	1:A:1445:ILE:N	2.09	0.60
2:B:288:ALA:HA	2:B:331:LEU:CD1	2.32	0.60
2:B:467:GLY:O	2:B:469:GLN:N	2.35	0.60
2:B:766:ARG:HG3	2:B:1022:THR:HG23	1.82	0.60
2:B:1097:HIS:N	2:B:1098:MET:HE2	2.16	0.60
3:C:102:GLN:HG2	3:C:154:LYS:HG2	1.82	0.60
3:C:107:SER:C	3:C:109:SER:H	2.03	0.60
12:L:61:THR:HG22	12:L:63:ARG:N	2.08	0.60
1:A:186:LYS:O	1:A:187:LYS:HB3	2.01	0.60
1:A:280:GLU:C	1:A:282:ASN:H	2.04	0.60
2:B:190:TYR:HD2	10:J:62:ARG:O	1.85	0.60
2:B:258:LEU:HG	2:B:258:LEU:O	2.02	0.60
2:B:393:LYS:HA	2:B:393:LYS:HE3	1.83	0.60
2:B:603:LEU:HD13	2:B:608:ASP:HB3	1.82	0.60
2:B:1000:PRO:O	2:B:1007:VAL:HG23	2.02	0.60
2:B:1186:ASP:O	4:D:17:LYS:HE2	2.01	0.60
3:C:13:ALA:O	11:K:114:LEU:HD22	2.01	0.60
9:I:7:CYS:HB2	9:I:34:TYR:CD2	2.37	0.60
1:A:105:CYS:O	1:A:114:LEU:HG	2.02	0.60
1:A:401:GLY:C	1:A:435:HIS:HD2	2.05	0.60
1:A:567:LYS:HD2	8:H:95:TYR:CG	2.36	0.60
1:A:993:LEU:CD2	1:A:1022:LEU:HD11	2.32	0.60
1:A:1101:LEU:HB2	1:A:1355:VAL:HG11	1.82	0.60
2:B:638:PHE:HA	2:B:690:VAL:CG2	2.20	0.60
2:B:642:ASP:HB3	2:B:649:LYS:HD2	1.83	0.60
2:B:882:THR:O	2:B:883:LEU:HB2	2.02	0.60
12:L:38:LEU:HD23	12:L:56:LEU:HD21	1.84	0.60
1:A:224:PHE:CD2	1:A:231:PRO:HG3	2.37	0.60
1:A:282:ASN:O	1:A:284:ALA:N	2.35	0.60
1:A:381:THR:HG23	1:A:382:PRO:HD2	1.83	0.60
1:A:542:GLU:HG3	1:A:544:ASP:OD1	2.02	0.60
1:A:590:ARG:HG3	1:A:590:ARG:NH1	2.17	0.60
1:A:918:GLU:HG3	1:A:918:GLU:O	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:95:ILE:CB	2:B:130:VAL:HG22	2.31	0.60
2:B:230:ALA:N	2:B:231:PRO:CD	2.64	0.60
2:B:327:ARG:O	2:B:331:LEU:HD13	2.01	0.60
2:B:641:GLU:HB2	2:B:643:ASP:OD2	2.02	0.60
2:B:882:THR:CG2	2:B:935:ARG:HA	2.32	0.60
3:C:236:GLY:O	3:C:238:ILE:N	2.35	0.60
4:D:22:GLU:H	4:D:22:GLU:CD	2.05	0.60
6:F:89:GLU:O	6:F:93:ILE:HG13	2.01	0.60
12:L:27:LEU:HD23	12:L:27:LEU:N	2.16	0.60
1:A:12:ARG:CZ	2:B:1192:TYR:HE2	2.15	0.60
1:A:262:LEU:HD21	1:A:303:TYR:CE1	2.36	0.60
1:A:1063:MET:SD	1:A:1436:ILE:HG23	2.42	0.60
1:A:1081:LEU:CD1	1:A:1098:VAL:HG23	2.32	0.60
5:E:17:ARG:HH11	5:E:17:ARG:CB	2.14	0.60
5:E:161:LYS:HD2	5:E:195:VAL:HG23	1.83	0.60
7:G:91:VAL:HG23	7:G:141:SER:O	2.02	0.60
8:H:104:PHE:CE2	8:H:136:LYS:HG2	2.37	0.60
9:I:58:VAL:O	9:I:58:VAL:HG12	1.99	0.60
1:A:93:VAL:CG2	1:A:304:MET:HE3	2.32	0.59
1:A:276:LEU:HD13	1:A:293:GLU:HA	1.83	0.59
1:A:471:ASN:OD1	1:A:472:LEU:N	2.35	0.59
1:A:1242:VAL:HG12	1:A:1243:VAL:N	2.15	0.59
2:B:365:THR:OG1	2:B:367:LEU:HG	2.02	0.59
4:D:123:LEU:HD11	4:D:150:ASN:OD1	2.02	0.59
5:E:100:ILE:CG2	5:E:105:PHE:HB2	2.31	0.59
7:G:6:ASP:HB3	7:G:73:LYS:HZ1	1.66	0.59
8:H:139:ASN:O	8:H:140:ALA:HB2	2.02	0.59
10:J:1:MET:N	10:J:56:LEU:HB2	2.17	0.59
1:A:92:HIS:CD2	1:A:304:MET:HE1	2.37	0.59
1:A:248:PRO:O	1:A:260:ASP:HB2	2.02	0.59
1:A:322:VAL:O	1:A:322:VAL:CG1	2.50	0.59
1:A:1315:GLU:O	1:A:1317:MET:N	2.35	0.59
2:B:596:LEU:O	2:B:600:LEU:HG	2.02	0.59
2:B:870:ILE:HG22	2:B:917:PRO:HG2	1.83	0.59
3:C:18:VAL:HG12	3:C:18:VAL:O	2.02	0.59
4:D:170:THR:CG2	4:D:172:LEU:HG	2.32	0.59
8:H:81:PRO:HB2	8:H:82:PRO:HD2	1.84	0.59
1:A:12:ARG:HB2	2:B:1218:THR:CG2	2.32	0.59
1:A:19:PHE:O	1:A:1416:ALA:HA	2.01	0.59
1:A:24:PRO:HB3	1:A:237:THR:HB	1.84	0.59
1:A:49:LYS:NZ	1:A:61:ILE:N	2.41	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:56:PRO:O	1:A:57:ARG:HG3	2.03	0.59
1:A:227:VAL:C	1:A:228:PHE:HD2	2.05	0.59
1:A:865:GLN:HE21	1:A:1370:LEU:HA	1.67	0.59
1:A:1149:ALA:CB	9:I:47:GLU:HA	2.33	0.59
1:A:1315:GLU:C	1:A:1317:MET:N	2.55	0.59
2:B:51:PHE:O	2:B:55:VAL:HG23	2.02	0.59
2:B:638:PHE:CB	2:B:651:LEU:HD22	2.32	0.59
5:E:55:ARG:C	5:E:57:MET:N	2.55	0.59
8:H:12:VAL:HB	8:H:52:GLN:H	1.66	0.59
1:A:55:ASP:N	1:A:56:PRO:HD3	2.16	0.59
1:A:524:VAL:CG1	1:A:525:GLN:N	2.64	0.59
1:A:1116:LEU:HD13	1:A:1329:THR:HB	1.84	0.59
2:B:446:LEU:O	2:B:447:ALA:HB3	2.03	0.59
2:B:821:GLN:HE22	2:B:850:LEU:HD12	1.66	0.59
2:B:955:THR:OG1	12:L:55:ILE:HA	2.03	0.59
3:C:36:VAL:CG2	3:C:251:LEU:HD13	2.32	0.59
4:D:40:HIS:HB2	7:G:73:LYS:NZ	2.17	0.59
4:D:71:LYS:HA	4:D:74:GLN:CG	2.32	0.59
4:D:137:ASN:ND2	4:D:137:ASN:N	2.48	0.59
5:E:180:ARG:NH2	5:E:192:ARG:HD2	2.18	0.59
7:G:138:THR:HG22	7:G:139:ILE:HG13	1.83	0.59
1:A:62:ASP:O	1:A:63:ARG:C	2.41	0.59
1:A:341:MET:CE	1:A:843:LYS:NZ	2.66	0.59
1:A:356:ASP:OD2	11:K:65:HIS:HE1	1.84	0.59
1:A:434:ARG:HG2	1:A:434:ARG:HH11	1.68	0.59
1:A:852:TYR:CE2	1:A:1060:PRO:HB2	2.37	0.59
2:B:555:ILE:HD11	2:B:587:HIS:CE1	2.38	0.59
2:B:658:ILE:HG22	2:B:662:MET:HE2	1.84	0.59
1:A:172:PRO:HG3	1:A:185:TRP:CZ2	2.38	0.59
1:A:466:SER:O	2:B:1103:ILE:HD11	2.02	0.59
1:A:645:LEU:O	1:A:649:ILE:HG13	2.02	0.59
1:A:1324:PRO:HB2	5:E:142:VAL:HG11	1.83	0.59
1:A:1373:ASP:HA	1:A:1376:THR:CG2	2.32	0.59
1:A:1402:PHE:O	1:A:1403:GLU:HB2	2.03	0.59
2:B:579:ARG:N	2:B:589:VAL:HG13	2.17	0.59
3:C:47:ASP:HA	12:L:69:ALA:HB3	1.84	0.59
3:C:88:CYS:SG	3:C:91:HIS:C	2.80	0.59
3:C:166:GLU:HB3	3:C:170:TRP:HZ3	1.67	0.59
4:D:52:LEU:HD12	4:D:182:SER:HB2	1.83	0.59
5:E:198:ILE:N	5:E:198:ILE:HD12	2.18	0.59
12:L:55:ILE:O	12:L:56:LEU:CB	2.48	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:37:PHE:N	1:A:37:PHE:CD1	2.68	0.59
1:A:233:TRP:C	1:A:235:ILE:H	2.04	0.59
1:A:1290:LYS:O	1:A:1291:VAL:HG23	2.02	0.59
1:A:1313:LEU:O	1:A:1315:GLU:N	2.35	0.59
1:A:1345:ARG:NH1	5:E:200:ARG:NH2	2.50	0.59
2:B:383:ASN:C	2:B:387:LEU:HD13	2.22	0.59
2:B:410:GLY:HA2	2:B:413:LEU:HD12	1.85	0.59
2:B:597:MET:HA	2:B:597:MET:CE	2.33	0.59
2:B:853:SER:O	2:B:854:LEU:HD23	2.02	0.59
2:B:1040:ASN:O	2:B:1042:GLY:N	2.35	0.59
3:C:137:LYS:HB2	3:C:138:GLU:OE1	2.03	0.59
8:H:118:PHE:O	8:H:120:GLY:N	2.35	0.59
11:K:18:LYS:NZ	11:K:38:GLU:HG2	2.17	0.59
1:A:445:ASN:CB	1:A:455:MET:HG2	2.32	0.59
1:A:590:ARG:O	1:A:591:PHE:HB2	2.02	0.59
1:A:825:ILE:HD11	2:B:512:ARG:CD	2.31	0.59
1:A:1164:PRO:HG2	1:A:1165:GLU:H	1.68	0.59
1:A:1377:THR:OG1	1:A:1378:GLN:N	2.36	0.59
2:B:174:LEU:HD22	2:B:202:TYR:CE1	2.37	0.59
2:B:175:ARG:HG2	2:B:175:ARG:HH11	1.67	0.59
2:B:642:ASP:HB3	2:B:649:LYS:CD	2.33	0.59
3:C:93:ASP:OD1	3:C:122:SER:HB2	2.03	0.59
3:C:165:LYS:O	11:K:6:ARG:NH1	2.36	0.59
5:E:198:ILE:HD11	5:E:212:ARG:HB2	1.85	0.59
8:H:44:VAL:O	8:H:44:VAL:HG12	2.03	0.59
9:I:102:VAL:HA	9:I:108:HIS:O	2.03	0.59
1:A:466:SER:HB2	2:B:1099:VAL:CG2	2.33	0.59
1:A:468:PHE:CZ	1:A:489:LEU:HD23	2.37	0.59
1:A:477:PRO:HG2	1:A:521:MET:CE	2.33	0.59
1:A:541:ILE:N	1:A:572:TRP:O	2.35	0.59
2:B:188:ASP:O	2:B:192:LEU:HD12	2.02	0.59
2:B:1006:ILE:HD13	10:J:44:TYR:CE2	2.37	0.59
4:D:204:ASP:O	4:D:208:GLU:HB2	2.02	0.59
11:K:102:LYS:O	11:K:106:GLU:HG3	2.03	0.59
12:L:26:THR:HG23	12:L:62:LYS:HZ1	1.66	0.59
1:A:346:ASP:OD1	2:B:1108:ARG:HA	2.02	0.59
1:A:531:ILE:HD12	1:A:653:VAL:HG21	1.83	0.59
1:A:738:LYS:NZ	3:C:194:GLU:HA	2.18	0.59
1:A:898:ARG:HD3	1:A:933:TYR:CD1	2.37	0.59
1:A:1404:GLU:CB	1:A:1408:ILE:HG13	2.33	0.59
2:B:642:ASP:CA	2:B:649:LYS:HG3	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:773:MET:CE	2:B:985:GLY:HA2	2.32	0.59
3:C:169:LYS:HZ3	12:L:69:ALA:HB3	1.67	0.59
4:D:49:ALA:HB1	4:D:178:ALA:HB2	1.84	0.59
9:I:6:PHE:HD1	9:I:11:ASN:OD1	1.86	0.59
1:A:219:PHE:CD2	1:A:231:PRO:HD2	2.37	0.58
1:A:323:LYS:HD2	1:A:323:LYS:N	2.17	0.58
1:A:848:ILE:HA	1:A:857:ARG:O	2.03	0.58
1:A:1057:VAL:CG1	1:A:1058:VAL:H	2.14	0.58
1:A:1146:VAL:HG11	1:A:1207:LEU:HD12	1.86	0.58
2:B:911:ILE:HD11	2:B:941:LEU:CD1	2.33	0.58
3:C:186:LEU:HD21	3:C:224:GLN:O	2.04	0.58
4:D:144:THR:HG21	7:G:46:LEU:HD13	1.83	0.58
11:K:23:PRO:HA	11:K:31:VAL:HG13	1.83	0.58
11:K:45:LEU:HG	11:K:94:ILE:CD1	2.32	0.58
1:A:40:THR:HB	1:A:41:MET:HE2	1.85	0.58
1:A:56:PRO:O	1:A:57:ARG:CG	2.51	0.58
1:A:233:TRP:C	1:A:235:ILE:N	2.55	0.58
1:A:345:VAL:HG21	2:B:1150:ARG:NH2	2.17	0.58
2:B:335:GLY:CA	2:B:348:ARG:HB2	2.32	0.58
2:B:582:VAL:HG22	2:B:626:ILE:CG2	2.33	0.58
2:B:839:MET:HG3	2:B:1010:LEU:HD11	1.83	0.58
2:B:1001:PHE:CZ	2:B:1073:TYR:HB2	2.38	0.58
10:J:44:TYR:CD2	10:J:44:TYR:N	2.68	0.58
12:L:30:ILE:HD11	12:L:59:ALA:HB2	1.85	0.58
1:A:41:MET:H	1:A:41:MET:HE3	1.68	0.58
1:A:845:LEU:CD2	1:A:1374:VAL:HG21	2.33	0.58
1:A:1074:GLU:HB3	1:A:1075:PRO:HD3	1.84	0.58
1:A:1107:VAL:HG12	1:A:1107:VAL:O	2.03	0.58
2:B:336:ARG:HE	2:B:348:ARG:NH1	2.00	0.58
2:B:781:PHE:HE2	2:B:793:ALA:HB1	1.69	0.58
2:B:1002:THR:HG21	2:B:1006:ILE:CD1	2.33	0.58
2:B:1178:ASN:O	2:B:1179:GLN:C	2.42	0.58
3:C:107:SER:O	3:C:109:SER:N	2.30	0.58
3:C:167:HIS:CE1	12:L:70:ARG:HA	2.38	0.58
4:D:40:HIS:CB	7:G:73:LYS:NZ	2.65	0.58
1:A:107:CYS:H	1:A:114:LEU:HD21	1.69	0.58
1:A:567:LYS:CG	1:A:568:PRO:HD3	2.34	0.58
2:B:171:PRO:HD2	2:B:457:LEU:CD1	2.33	0.58
2:B:519:TRP:HE1	2:B:635:ARG:NH2	2.02	0.58
2:B:622:LYS:HE2	9:I:59:VAL:CG2	2.31	0.58
2:B:811:TYR:N	2:B:811:TYR:CD1	2.70	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:105:GLY:HA3	3:C:148:ARG:O	2.02	0.58
8:H:23:VAL:HG22	8:H:43:ASN:HA	1.85	0.58
8:H:129:TYR:H	8:H:130:ARG:HH11	1.52	0.58
9:I:13:MET:CE	9:I:14:LEU:H	2.16	0.58
1:A:69:THR:C	1:A:71:GLN:H	2.05	0.58
1:A:450:LEU:HD13	1:A:1074:GLU:HG2	1.84	0.58
1:A:506:ALA:HB1	1:A:508:PRO:HD2	1.85	0.58
1:A:897:TYR:HD2	1:A:936:LEU:HD13	1.69	0.58
2:B:65:GLU:HG3	2:B:66:ASP:N	2.18	0.58
2:B:121:ASN:HA	2:B:207:GLY:CA	2.34	0.58
2:B:654:ARG:N	2:B:657:HIS:HD2	1.97	0.58
3:C:166:GLU:HB3	3:C:170:TRP:CZ3	2.38	0.58
3:C:238:ILE:HG22	3:C:243:VAL:HG23	1.85	0.58
14:N:4:DA:H2''	14:N:5:DC:C6	2.39	0.58
1:A:332:LYS:HG3	1:A:333:GLU:HG2	1.85	0.58
1:A:547:LEU:HD22	11:K:58:PHE:CD1	2.39	0.58
2:B:120:ARG:HE	2:B:955:THR:HG21	1.68	0.58
2:B:648:HIS:CG	2:B:649:LYS:H	2.20	0.58
2:B:1222:ARG:O	2:B:1223:ASP:HB2	2.03	0.58
3:C:3:GLU:HG3	11:K:104:ASN:OD1	2.03	0.58
3:C:80:LEU:HD11	3:C:95:CYS:C	2.24	0.58
3:C:173:ALA:O	3:C:174:ALA:CB	2.52	0.58
4:D:167:LEU:O	4:D:170:THR:OG1	2.21	0.58
10:J:1:MET:H1	10:J:57:ILE:N	2.01	0.58
10:J:23:ASN:O	10:J:25:LEU:N	2.36	0.58
11:K:50:LEU:HD11	11:K:75:ILE:CD1	2.33	0.58
1:A:115:LEU:O	1:A:122:MET:HG2	2.04	0.58
1:A:212:LYS:HG2	1:A:232:GLU:HB2	1.85	0.58
1:A:243:PRO:HB2	1:A:244:PRO:HD2	1.86	0.58
1:A:332:LYS:N	1:A:337:ARG:HB3	2.19	0.58
1:A:396:PRO:HB3	1:A:403:LYS:HA	1.84	0.58
1:A:1201:ALA:O	1:A:1203:ASN:N	2.35	0.58
2:B:115:GLN:HG2	2:B:193:LYS:CB	2.30	0.58
2:B:857:ARG:NH2	2:B:942:ARG:CZ	2.67	0.58
6:F:147:SER:OG	6:F:150:GLU:HG3	2.04	0.58
7:G:34:VAL:HG11	7:G:74:TYR:CE1	2.37	0.58
8:H:4:THR:HA	8:H:60:ALA:HB2	1.85	0.58
12:L:68:GLU:H	12:L:68:GLU:CD	2.07	0.58
1:A:20:GLY:O	1:A:21:LEU:HD23	2.04	0.58
1:A:619:LYS:HD2	1:A:750:GLY:O	2.04	0.58
2:B:980:PHE:HE1	2:B:990:ILE:HD11	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:15:LYS:HG2	3:C:15:LYS:O	2.03	0.58
3:C:174:ALA:O	3:C:175:ALA:HB2	2.04	0.58
3:C:243:VAL:O	3:C:243:VAL:HG12	2.03	0.58
4:D:130:LEU:O	4:D:132:GLN:N	2.35	0.58
1:A:152:VAL:CG1	1:A:153:PRO:HD2	2.33	0.58
1:A:353:ILE:HG21	1:A:487:MET:HG3	1.85	0.58
1:A:385:ILE:HG22	1:A:386:ASP:N	2.18	0.58
1:A:590:ARG:CG	1:A:590:ARG:HH11	2.17	0.58
1:A:596:THR:O	1:A:598:LEU:N	2.33	0.58
1:A:1227:ILE:CG2	1:A:1228:TRP:H	2.12	0.58
2:B:229:ALA:CB	2:B:231:PRO:HD2	2.33	0.58
2:B:331:LEU:CD2	2:B:353:LYS:HG2	2.33	0.58
10:J:48:ARG:HD2	10:J:48:ARG:C	2.23	0.58
13:T:11:DA:H2''	13:T:12:DG:H8	1.69	0.58
1:A:115:LEU:HG	1:A:142:CYS:HB3	1.85	0.58
1:A:447:GLN:NE2	13:T:20:DG:H4'	2.19	0.58
2:B:284:ILE:HD13	2:B:333:PHE:CD2	2.39	0.58
2:B:639:ILE:CG2	2:B:641:GLU:HG2	2.34	0.58
2:B:842:ASN:ND2	2:B:845:SER:HB3	2.14	0.58
2:B:866:TYR:HD1	2:B:870:ILE:O	1.86	0.58
2:B:1065:GLN:HB2	3:C:201:TRP:CZ3	2.39	0.58
2:B:1084:GLN:HG2	3:C:201:TRP:HZ2	1.66	0.58
3:C:100:THR:HG22	3:C:101:LEU:N	2.19	0.58
3:C:174:ALA:O	10:J:10:CYS:O	2.22	0.58
4:D:25:ALA:C	4:D:27:LEU:H	2.06	0.58
6:F:152:ILE:HG22	6:F:153:VAL:H	1.68	0.58
8:H:15:VAL:HG22	8:H:26:ILE:HD13	1.85	0.58
1:A:306:ASN:HD22	1:A:322:VAL:HG12	1.68	0.57
1:A:794:PRO:HG2	1:A:795:GLU:OE2	2.03	0.57
1:A:1377:THR:O	1:A:1379:GLY:N	2.36	0.57
2:B:801:LYS:N	10:J:52:THR:HG23	2.18	0.57
6:F:79:ARG:HG2	6:F:79:ARG:HH11	1.69	0.57
1:A:341:MET:HE3	1:A:843:LYS:HZ1	1.68	0.57
2:B:31:TRP:CE3	2:B:31:TRP:HA	2.39	0.57
2:B:133:LYS:HE3	2:B:135:ARG:HH21	1.70	0.57
2:B:181:LEU:HD23	2:B:189:LEU:HD22	1.86	0.57
2:B:351:TYR:CZ	2:B:355:ILE:HD11	2.39	0.57
2:B:508:LEU:O	2:B:509:ALA:HB2	2.03	0.57
2:B:975:GLN:O	2:B:990:ILE:HD12	2.04	0.57
4:D:153:ARG:HB3	4:D:154:PHE:CD1	2.39	0.57
5:E:99:HIS:CE1	5:E:103:LYS:HG3	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:111:VAL:CG1	5:E:137:GLU:HG2	2.34	0.57
6:F:111:LEU:HD12	6:F:111:LEU:N	2.15	0.57
8:H:100:THR:HG23	8:H:138:GLU:CA	2.33	0.57
9:I:100:PHE:N	9:I:100:PHE:HD1	2.02	0.57
1:A:477:PRO:HG2	1:A:521:MET:HE2	1.85	0.57
2:B:236:HIS:CE1	2:B:389:ALA:HA	2.39	0.57
2:B:570:VAL:HG21	2:B:573:GLN:HB3	1.85	0.57
8:H:14:GLU:O	8:H:26:ILE:HG23	2.03	0.57
8:H:81:PRO:CB	8:H:82:PRO:HD2	2.34	0.57
1:A:79:GLY:CA	1:A:243:PRO:HG3	2.34	0.57
1:A:372:LYS:HA	1:A:435:HIS:CE1	2.38	0.57
1:A:709:THR:HG22	1:A:710:LEU:N	2.19	0.57
1:A:729:ALA:HA	1:A:732:LEU:HD12	1.87	0.57
1:A:1152:ILE:CD1	9:I:44:TYR:HD2	2.17	0.57
1:A:1213:GLY:HA2	1:A:1216:ILE:CG1	2.34	0.57
1:A:1394:THR:CG2	1:A:1398:MET:SD	2.92	0.57
2:B:31:TRP:CE3	2:B:34:ILE:HD12	2.39	0.57
2:B:498:THR:O	2:B:536:VAL:HA	2.05	0.57
2:B:997:GLU:CD	2:B:997:GLU:H	2.08	0.57
8:H:127:GLY:O	8:H:128:ASN:HB2	2.04	0.57
10:J:57:ILE:HA	10:J:60:PHE:CD2	2.37	0.57
1:A:53:LEU:CD2	1:A:54:ASN:HB3	2.34	0.57
1:A:740:LEU:HD12	1:A:741:ASN:N	2.20	0.57
1:A:1187:GLN:HG3	1:A:1188:GLN:H	1.68	0.57
2:B:278:GLN:HG2	2:B:279:ASP:H	1.69	0.57
2:B:309:GLN:O	2:B:312:GLU:HB3	2.04	0.57
2:B:333:PHE:CE1	2:B:337:ARG:NH2	2.73	0.57
4:D:24:ALA:C	4:D:26:THR:N	2.58	0.57
1:A:469:ARG:NH1	1:A:469:ARG:HB3	2.19	0.57
1:A:1100:ARG:HH12	1:A:1111:MET:HE3	1.68	0.57
1:A:1149:ALA:HB2	9:I:47:GLU:HA	1.86	0.57
1:A:1284:MET:O	1:A:1285:MET:HG2	2.04	0.57
2:B:899:ILE:HD11	2:B:910:VAL:O	2.05	0.57
2:B:1200:ALA:HA	2:B:1203:LEU:HB3	1.87	0.57
6:F:111:LEU:H	6:F:111:LEU:CD1	2.13	0.57
7:G:116:PRO:HG2	7:G:119:LEU:HB2	1.86	0.57
10:J:24:LEU:HA	10:J:28:ASP:HB2	1.86	0.57
1:A:335:ARG:HH11	2:B:1202:LEU:HD23	1.68	0.57
1:A:537:ARG:HH12	8:H:122:LEU:HG	1.70	0.57
1:A:786:HIS:HE1	2:B:519:TRP:CZ2	2.22	0.57
2:B:167:ILE:HG22	2:B:453:ILE:CD1	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:589:VAL:HG12	2:B:590:HIS:H	1.69	0.57
2:B:899:ILE:CD1	2:B:911:ILE:HA	2.35	0.57
3:C:35:ARG:NH1	11:K:41:THR:OG1	2.37	0.57
3:C:58:LEU:H	3:C:58:LEU:CD2	2.18	0.57
6:F:70:LYS:C	6:F:72:LYS:H	2.07	0.57
7:G:59:GLY:HA3	7:G:70:PHE:CD2	2.39	0.57
7:G:153:GLN:O	7:G:154:VAL:C	2.42	0.57
11:K:6:ARG:O	11:K:9:LEU:HG	2.05	0.57
1:A:341:MET:HE1	2:B:1135:ARG:NH1	2.19	0.57
1:A:567:LYS:HZ3	8:H:95:TYR:CB	2.18	0.57
1:A:594:GLY:H	1:A:603:ASN:ND2	2.02	0.57
1:A:774:ARG:NH2	1:A:797:LYS:HB2	2.19	0.57
1:A:913:LEU:HD11	1:A:981:LEU:O	2.04	0.57
1:A:1103:GLU:O	1:A:1108:ALA:HB2	2.05	0.57
1:A:1373:ASP:O	1:A:1377:THR:HG23	2.05	0.57
3:C:123:ASN:CG	3:C:125:MET:H	2.08	0.57
6:F:86:THR:HG23	6:F:89:GLU:OE1	2.04	0.57
7:G:119:LEU:HD12	7:G:132:SER:HB2	1.86	0.57
8:H:125:LEU:HG	8:H:126:GLU:N	2.20	0.57
11:K:63:VAL:HG23	11:K:63:VAL:O	2.05	0.57
1:A:409:SER:O	1:A:411:ASP:N	2.38	0.57
1:A:808:LEU:HD23	1:A:813:PHE:CA	2.33	0.57
1:A:947:PHE:N	1:A:947:PHE:CD1	2.73	0.57
1:A:1011:GLN:O	1:A:1015:VAL:HG23	2.05	0.57
1:A:1258:HIS:HB3	1:A:1259:MET:CE	2.35	0.57
2:B:601:ARG:HD3	2:B:605:ARG:HH21	1.69	0.57
2:B:638:PHE:HB3	2:B:651:LEU:HD22	1.87	0.57
3:C:241:ASP:O	3:C:244:VAL:HB	2.04	0.57
5:E:17:ARG:O	5:E:21:GLU:HG3	2.04	0.57
5:E:182:ASP:O	5:E:185:ALA:HB3	2.05	0.57
9:I:69:PRO:HG2	9:I:85:PHE:CD2	2.39	0.57
10:J:1:MET:N	10:J:56:LEU:N	2.53	0.57
1:A:108:MET:HA	1:A:210:ILE:CG2	2.35	0.57
1:A:1005:GLU:HG3	1:A:1006:ILE:N	2.19	0.57
2:B:181:LEU:HD23	2:B:189:LEU:CD2	2.35	0.57
2:B:635:ARG:HB2	2:B:636:PRO:HD2	1.86	0.57
2:B:882:THR:C	2:B:884:ARG:H	2.09	0.57
4:D:51:ASN:OD1	4:D:54:GLU:HB3	2.05	0.57
5:E:144:ILE:HG13	5:E:145:THR:H	1.69	0.57
12:L:26:THR:HG22	12:L:27:LEU:N	2.20	0.57
1:A:564:ALA:O	8:H:97:MET:HA	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1121:GLU:CG	1:A:1122:PRO:HD2	2.34	0.56
2:B:299:GLU:HG2	2:B:571:PRO:HG3	1.87	0.56
2:B:594:ALA:HA	2:B:617:ARG:NH1	2.18	0.56
2:B:1146:PHE:CE1	2:B:1150:ARG:HD3	2.39	0.56
3:C:25:VAL:HG22	3:C:228:PHE:HE1	1.70	0.56
1:A:32:VAL:HG21	1:A:68:GLN:HE22	1.70	0.56
1:A:52:GLY:O	1:A:56:PRO:HG2	2.05	0.56
1:A:340:LEU:CD2	2:B:1199:ALA:HB3	2.36	0.56
1:A:899:VAL:HG13	1:A:908:LEU:HD21	1.87	0.56
2:B:615:MET:HA	2:B:625:LYS:O	2.05	0.56
2:B:980:PHE:HD2	2:B:1094:ARG:HA	1.70	0.56
3:C:2:SER:O	3:C:3:GLU:HB2	2.06	0.56
3:C:51:VAL:HB	12:L:65:VAL:HG23	1.85	0.56
3:C:242:GLN:C	3:C:244:VAL:N	2.58	0.56
6:F:103:MET:HE1	7:G:66:GLY:H	1.69	0.56
7:G:79:PHE:HZ	7:G:106:MET:HE2	1.70	0.56
10:J:2:ILE:O	10:J:53:HIS:NE2	2.38	0.56
1:A:78:PRO:HB2	2:B:1201:LYS:HE3	1.87	0.56
1:A:150:THR:HG22	1:A:150:THR:O	2.05	0.56
1:A:186:LYS:O	1:A:194:ALA:HB1	2.05	0.56
1:A:252:PHE:O	1:A:256:GLN:HB2	2.06	0.56
1:A:427:GLN:HB2	1:A:430:TRP:CD1	2.39	0.56
1:A:446:ARG:HB2	1:A:487:MET:SD	2.45	0.56
1:A:889:SER:HA	1:A:1297:GLU:N	2.21	0.56
1:A:901:LEU:HG	1:A:926:GLN:HE21	1.69	0.56
1:A:947:PHE:N	1:A:947:PHE:HD1	2.02	0.56
1:A:979:SER:OG	1:A:980:ASP:N	2.37	0.56
2:B:364:ILE:CG1	2:B:585:VAL:HG13	2.33	0.56
2:B:686:ASN:C	2:B:688:GLY:H	2.09	0.56
3:C:66:ARG:NH1	10:J:2:ILE:CG2	2.56	0.56
3:C:73:GLN:HB3	3:C:131:HIS:H	1.70	0.56
3:C:101:LEU:C	3:C:102:GLN:HG3	2.26	0.56
5:E:9:ILE:HD11	5:E:53:PRO:HD3	1.85	0.56
5:E:180:ARG:HB2	5:E:215:MET:OXT	2.04	0.56
7:G:9:LEU:HD12	7:G:10:ASN:H	1.70	0.56
7:G:85:GLU:HB3	7:G:147:ILE:HD12	1.87	0.56
8:H:64:ASN:HD22	8:H:88:SER:HB2	1.68	0.56
10:J:36:LEU:HB2	10:J:47:ARG:NH1	2.20	0.56
13:T:15:DC:H2"	13:T:16:DT:C7	2.33	0.56
1:A:22:PHE:HE2	1:A:30:ILE:HD12	1.71	0.56
1:A:90:VAL:HG12	1:A:297:GLN:NE2	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:767:GLN:OE1	1:A:799:PHE:HB2	2.04	0.56
1:A:871:ASP:OD2	1:A:873:MET:HB2	2.06	0.56
1:A:1042:PHE:CE2	1:A:1046:LEU:HD11	2.41	0.56
2:B:224:GLN:NE2	2:B:403:LYS:HD3	2.20	0.56
10:J:27:GLU:C	10:J:29:GLU:H	2.08	0.56
1:A:358:ASN:ND2	2:B:833:TYR:OH	2.39	0.56
1:A:463:ILE:HB	1:A:464:PRO:HD2	1.86	0.56
1:A:466:SER:HB2	2:B:1099:VAL:HG21	1.87	0.56
1:A:717:ASN:HA	1:A:720:ARG:HH12	1.70	0.56
1:A:818:MET:HA	2:B:514:LEU:HB3	1.88	0.56
2:B:95:ILE:CG1	2:B:130:VAL:HG22	2.36	0.56
2:B:365:THR:HG23	2:B:367:LEU:H	1.70	0.56
2:B:766:ARG:HG2	2:B:766:ARG:HH11	1.70	0.56
3:C:57:VAL:HG11	10:J:60:PHE:CB	2.31	0.56
3:C:112:ASN:CB	3:C:114:TYR:CE1	2.89	0.56
3:C:167:HIS:HA	11:K:6:ARG:HH12	1.71	0.56
5:E:171:LYS:HG2	5:E:174:GLN:OE1	2.06	0.56
6:F:138:LEU:O	6:F:140:ASP:N	2.38	0.56
7:G:48:VAL:HA	7:G:76:ALA:HB2	1.86	0.56
11:K:55:LYS:HB3	11:K:81:TYR:HD1	1.69	0.56
1:A:341:MET:CE	1:A:843:LYS:HZ1	2.18	0.56
1:A:341:MET:HE3	1:A:843:LYS:NZ	2.20	0.56
1:A:353:ILE:CD1	1:A:487:MET:HE2	2.36	0.56
1:A:860:LEU:CD1	1:A:1393:ASN:HD22	2.18	0.56
1:A:986:ILE:CD1	1:A:1032:LEU:HD11	2.36	0.56
2:B:562:GLY:HA3	2:B:590:HIS:ND1	2.20	0.56
2:B:846:ILE:HG23	2:B:974:PRO:HG2	1.87	0.56
3:C:213:PRO:HG2	3:C:214:ASN:H	1.71	0.56
4:D:50:LEU:HD11	7:G:4:ILE:HD11	1.88	0.56
4:D:130:LEU:C	4:D:132:GLN:H	2.08	0.56
7:G:14:HIS:ND1	7:G:15:PRO:HD2	2.20	0.56
1:A:41:MET:SD	1:A:42:ASP:N	2.78	0.56
1:A:90:VAL:CG1	1:A:297:GLN:HA	2.36	0.56
1:A:583:PRO:HG2	1:A:586:ILE:HG13	1.87	0.56
1:A:1259:MET:C	1:A:1261:LYS:H	2.09	0.56
2:B:370:PHE:HD2	2:B:373:ARG:HD2	1.71	0.56
2:B:652:LYS:O	2:B:689:LEU:HD22	2.05	0.56
2:B:1159:ARG:NE	2:B:1193:GLN:HE21	2.04	0.56
2:B:1180:PHE:HB3	2:B:1191:ILE:CD1	2.35	0.56
1:A:244:PRO:HG2	1:A:245:PRO:HD3	1.86	0.56
1:A:560:ILE:HD11	8:H:79:TRP:N	2.18	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:11:ARG:H	3:C:20:PHE:HA	1.69	0.56
3:C:123:ASN:HD21	3:C:125:MET:HA	1.70	0.56
4:D:27:LEU:HD22	4:D:173:HIS:ND1	2.21	0.56
4:D:118:THR:CG2	4:D:121:LYS:HD2	2.32	0.56
5:E:145:THR:HG21	5:E:187:TYR:CD2	2.41	0.56
1:A:427:GLN:HB2	1:A:430:TRP:CG	2.40	0.56
1:A:446:ARG:HB3	1:A:478:TYR:HB3	1.88	0.56
1:A:993:LEU:HD22	1:A:1046:LEU:CD2	2.36	0.56
1:A:1019:CYS:O	1:A:1022:LEU:HB3	2.05	0.56
2:B:294:ASP:C	2:B:296:GLU:H	2.09	0.56
2:B:309:GLN:CD	9:I:52:ILE:HD11	2.26	0.56
2:B:611:PRO:HB3	2:B:685:LEU:HD11	1.87	0.56
5:E:144:ILE:HG13	5:E:145:THR:N	2.20	0.56
6:F:76:LYS:HA	6:F:79:ARG:HD3	1.87	0.56
8:H:17:PRO:HB3	8:H:24:CYS:SG	2.45	0.56
1:A:901:LEU:N	1:A:926:GLN:NE2	2.43	0.56
1:A:1198:ASP:HB3	1:A:1201:ALA:CB	2.35	0.56
1:A:1220:PHE:O	1:A:1221:LYS:HB2	2.06	0.56
2:B:29:ASP:CG	2:B:658:ILE:HD13	2.25	0.56
2:B:32:ALA:O	2:B:35:SER:HB2	2.05	0.56
2:B:405:ARG:HA	2:B:631:GLY:O	2.06	0.56
2:B:555:ILE:HG22	2:B:556:THR:N	2.19	0.56
5:E:124:VAL:H	5:E:125:PRO:HD2	1.69	0.56
5:E:156:LEU:HD12	5:E:195:VAL:CB	2.33	0.56
8:H:111:LEU:HA	8:H:127:GLY:O	2.06	0.56
1:A:93:VAL:CG1	1:A:301:ALA:HB1	2.28	0.55
1:A:116:ASP:C	1:A:118:HIS:N	2.55	0.55
1:A:298:PHE:CZ	1:A:314:ALA:HB2	2.41	0.55
1:A:567:LYS:HZ2	8:H:95:TYR:N	2.04	0.55
1:A:696:GLU:OE2	1:A:702:LEU:HD21	2.06	0.55
1:A:1009:ASN:HA	1:A:1012:ARG:HH11	1.68	0.55
1:A:1120:LEU:HD11	1:A:1304:TRP:O	2.05	0.55
2:B:844:SER:O	2:B:847:ASP:HB2	2.05	0.55
8:H:102:TYR:OH	8:H:122:LEU:HD22	2.06	0.55
1:A:613:ILE:O	1:A:614:PHE:HB3	2.04	0.55
1:A:960:ILE:O	1:A:963:ILE:HG22	2.06	0.55
1:A:1107:VAL:CG2	1:A:1383:SER:HB3	2.36	0.55
2:B:510:LYS:CB	2:B:511:PRO:HD3	2.36	0.55
2:B:1192:TYR:CD2	2:B:1218:THR:HG21	2.41	0.55
3:C:42:PRO:HB3	3:C:161:LYS:HE3	1.89	0.55
3:C:66:ARG:CZ	10:J:2:ILE:HG21	2.34	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:156:ASP:HB3	4:D:159:THR:OG1	2.06	0.55
6:F:136:ARG:O	6:F:143:PHE:CB	2.52	0.55
8:H:102:TYR:CD2	8:H:102:TYR:N	2.68	0.55
9:I:100:PHE:N	9:I:100:PHE:CD1	2.72	0.55
11:K:49:GLU:HG3	11:K:94:ILE:CG1	2.36	0.55
13:T:19:8OG:H2"	13:T:19:8OG:N3	2.20	0.55
1:A:189:ARG:O	1:A:190:ALA:HB3	2.06	0.55
1:A:897:TYR:CD2	1:A:936:LEU:HD13	2.40	0.55
1:A:1267:MET:O	1:A:1271:ILE:HB	2.07	0.55
2:B:102:VAL:O	2:B:102:VAL:HG12	2.06	0.55
2:B:542:MET:HG2	2:B:747:MET:CE	2.36	0.55
2:B:616:ILE:CG1	2:B:697:GLU:HA	2.36	0.55
2:B:770:GLN:CD	2:B:983:ARG:HA	2.27	0.55
2:B:773:MET:SD	2:B:987:LYS:HG2	2.46	0.55
2:B:873:THR:O	2:B:914:LYS:HA	2.05	0.55
5:E:98:ILE:O	5:E:102:GLU:HG3	2.07	0.55
5:E:109:ILE:HG22	5:E:110:PHE:N	2.21	0.55
12:L:53:HIS:O	12:L:55:ILE:HD13	2.07	0.55
1:A:606:LEU:HB3	1:A:614:PHE:CD2	2.42	0.55
1:A:675:THR:O	1:A:679:ILE:HG13	2.07	0.55
1:A:825:ILE:CG2	1:A:826:ASP:H	2.18	0.55
2:B:785:TYR:CD1	2:B:795:ILE:HG12	2.42	0.55
5:E:23:VAL:HG13	5:E:78:LEU:CD1	2.36	0.55
5:E:78:LEU:HD23	5:E:79:TRP:N	2.21	0.55
1:A:511:ILE:HG21	1:A:634:THR:HG21	1.87	0.55
2:B:629:ASP:HB3	2:B:632:ARG:HE	1.71	0.55
3:C:73:GLN:NE2	3:C:74:SER:H	2.04	0.55
3:C:100:THR:HG22	3:C:102:GLN:HE21	1.71	0.55
9:I:95:THR:HG22	9:I:96:SER:O	2.07	0.55
12:L:38:LEU:CD1	12:L:49:LYS:HG2	2.36	0.55
1:A:144:THR:O	1:A:146:MET:HG3	2.07	0.55
1:A:845:LEU:O	1:A:846:GLU:C	2.45	0.55
1:A:1030:ARG:HG3	1:A:1034:GLU:CD	2.27	0.55
1:A:1161:THR:C	1:A:1163:ILE:H	2.08	0.55
2:B:243:ALA:CB	2:B:251:ILE:HG12	2.36	0.55
2:B:289:LEU:HD22	2:B:371:GLU:O	2.07	0.55
2:B:345:LYS:HA	2:B:348:ARG:HG2	1.88	0.55
2:B:616:ILE:CD1	2:B:625:LYS:HB2	2.36	0.55
3:C:50:GLU:HG2	3:C:50:GLU:O	2.06	0.55
5:E:167:ARG:O	5:E:168:TYR:CD2	2.60	0.55
9:I:85:PHE:CD2	9:I:85:PHE:N	2.63	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:79:GLU:HG3	11:K:80:GLY:H	1.72	0.55
1:A:108:MET:HB3	1:A:210:ILE:CD1	2.27	0.55
1:A:1057:VAL:CG1	1:A:1058:VAL:N	2.70	0.55
2:B:590:HIS:CD2	2:B:596:LEU:HD22	2.42	0.55
10:J:23:ASN:C	10:J:25:LEU:N	2.59	0.55
13:T:7:DC:H2''	13:T:8:DT:C7	2.36	0.55
13:T:18:DA:H3'	13:T:18:DA:OP1	2.06	0.55
1:A:34:LYS:HB3	1:A:36:ARG:HH21	1.72	0.55
1:A:381:THR:CG2	1:A:382:PRO:HD2	2.37	0.55
1:A:496:GLU:O	1:A:499:ALA:HB3	2.06	0.55
1:A:506:ALA:HB3	1:A:509:LEU:HD12	1.88	0.55
1:A:512:VAL:HA	1:A:519:PRO:HA	1.88	0.55
1:A:1237:ILE:CG2	1:A:1238:ILE:N	2.69	0.55
2:B:999:MET:HE2	2:B:1000:PRO:CD	2.37	0.55
3:C:212:PRO:HB3	3:C:213:PRO:HD2	1.87	0.55
4:D:40:HIS:HB2	7:G:73:LYS:CD	2.37	0.55
4:D:138:ASN:HD21	7:G:35:GLU:HB3	1.71	0.55
5:E:103:LYS:HB3	5:E:105:PHE:CE2	2.42	0.55
11:K:79:GLU:HG3	11:K:80:GLY:N	2.22	0.55
12:L:43:THR:HG22	12:L:43:THR:O	2.07	0.55
1:A:399:HIS:HB3	1:A:400:PRO:CD	2.29	0.55
1:A:470:LEU:H	1:A:470:LEU:CD2	2.18	0.55
1:A:1015:VAL:HG12	1:A:1019:CYS:SG	2.46	0.55
1:A:1130:GLN:HG3	1:A:1134:ILE:CD1	2.36	0.55
1:A:1272:THR:C	1:A:1273:LEU:HD12	2.27	0.55
1:A:1341:ILE:O	1:A:1344:GLY:N	2.40	0.55
1:A:1396:ALA:HA	1:A:1399:ARG:NH2	2.22	0.55
2:B:565:PRO:O	2:B:567:GLU:N	2.39	0.55
2:B:1159:ARG:HE	2:B:1193:GLN:HE21	1.54	0.55
3:C:175:ALA:HB2	10:J:10:CYS:CB	2.37	0.55
5:E:13:TRP:CZ3	5:E:39:LEU:HB2	2.41	0.55
5:E:117:THR:HG22	5:E:119:SER:N	2.14	0.55
6:F:108:PHE:HE1	6:F:131:PRO:HG3	1.72	0.55
7:G:17:PHE:N	7:G:17:PHE:CD2	2.74	0.55
9:I:109:ILE:HG22	9:I:109:ILE:O	2.07	0.55
1:A:267:ALA:O	1:A:271:LYS:HG3	2.06	0.55
1:A:1173:HIS:CD2	1:A:1227:ILE:HG23	2.42	0.55
2:B:217:ARG:HD2	2:B:217:ARG:C	2.27	0.55
2:B:343:ILE:O	2:B:345:LYS:N	2.39	0.55
2:B:449:ASN:O	2:B:451:LYS:N	2.40	0.55
2:B:562:GLY:O	2:B:590:HIS:ND1	2.38	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:570:VAL:CG2	2:B:573:GLN:HB3	2.37	0.55
2:B:839:MET:HG3	2:B:1010:LEU:CD1	2.37	0.55
2:B:948:ILE:CD1	12:L:67:PHE:HE2	2.20	0.55
2:B:1122:ARG:HB3	13:T:22:DC:OP1	2.06	0.55
3:C:7:GLN:HG2	11:K:104:ASN:HD22	1.72	0.55
1:A:18:GLN:NE2	1:A:228:PHE:CE1	2.75	0.54
1:A:458:HIS:CE1	1:A:507:VAL:HG21	2.43	0.54
1:A:890:ASP:H	1:A:1296:GLY:HA3	1.72	0.54
1:A:1404:GLU:HB2	1:A:1408:ILE:HG13	1.88	0.54
2:B:378:LEU:O	2:B:378:LEU:HD12	2.07	0.54
2:B:483:LEU:HD11	2:B:491:THR:HG23	1.88	0.54
2:B:515:HIS:CD2	2:B:517:THR:H	2.14	0.54
2:B:696:GLU:O	2:B:699:GLU:HB2	2.06	0.54
2:B:776:GLN:O	2:B:1095:LEU:HB3	2.07	0.54
2:B:857:ARG:HH21	2:B:942:ARG:CZ	2.20	0.54
2:B:898:LEU:HD13	2:B:952:VAL:CG1	2.36	0.54
2:B:1063:GLY:O	3:C:202:PRO:HG2	2.07	0.54
9:I:6:PHE:N	9:I:6:PHE:CD2	2.71	0.54
1:A:567:LYS:HZ3	8:H:95:TYR:HB2	1.71	0.54
2:B:405:ARG:NE	2:B:629:ASP:OD2	2.37	0.54
2:B:488:TYR:CE2	2:B:813:LYS:HB2	2.42	0.54
2:B:520:GLY:N	2:B:748:ILE:HG22	2.22	0.54
2:B:1031:LEU:HA	2:B:1055:ILE:HD13	1.90	0.54
2:B:1038:SER:O	10:J:33:GLY:HA3	2.07	0.54
9:I:106:CYS:O	9:I:107:SER:HB2	2.05	0.54
1:A:79:GLY:HA3	1:A:243:PRO:CG	2.36	0.54
1:A:279:LEU:HB3	1:A:289:ILE:HG12	1.89	0.54
1:A:548:ASN:HA	11:K:60:ALA:HB1	1.90	0.54
1:A:1028:THR:O	1:A:1032:LEU:HD12	2.07	0.54
1:A:1054:LEU:O	1:A:1057:VAL:HG23	2.07	0.54
1:A:1158:PRO:O	1:A:1159:ARG:HG2	2.08	0.54
2:B:284:ILE:HG23	2:B:324:ILE:CD1	2.36	0.54
2:B:562:GLY:HA3	2:B:590:HIS:CE1	2.42	0.54
2:B:906:SER:HA	2:B:946:ASN:HB2	1.90	0.54
2:B:953:LEU:HD23	2:B:965:LYS:O	2.07	0.54
4:D:70:PHE:O	4:D:74:GLN:HG3	2.07	0.54
5:E:52:ARG:HB3	5:E:53:PRO:CD	2.38	0.54
8:H:82:PRO:HG3	11:K:54:ARG:NH1	2.23	0.54
1:A:54:ASN:HB2	1:A:247:ARG:HH12	1.73	0.54
1:A:233:TRP:O	1:A:235:ILE:N	2.40	0.54
1:A:418:SER:C	1:A:420:ARG:H	2.10	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1389:PHE:CD1	1:A:1389:PHE:C	2.80	0.54
2:B:326:ASP:C	2:B:328:GLU:N	2.61	0.54
2:B:948:ILE:HD11	12:L:67:PHE:HE2	1.73	0.54
2:B:1039:GLY:HA2	10:J:51:LEU:HD21	1.88	0.54
2:B:1182:CYS:O	2:B:1183:LYS:O	2.24	0.54
3:C:13:ALA:O	11:K:114:LEU:HD13	2.06	0.54
3:C:148:ARG:HG2	3:C:149:LYS:H	1.71	0.54
7:G:47:CYS:O	7:G:76:ALA:HB1	2.07	0.54
8:H:11:GLN:O	8:H:28:ALA:HB1	2.08	0.54
1:A:963:ILE:HD13	1:A:1049:ILE:CG1	2.36	0.54
2:B:29:ASP:HB3	2:B:658:ILE:HD13	1.89	0.54
2:B:65:GLU:HG3	2:B:66:ASP:OD1	2.06	0.54
2:B:648:HIS:CG	2:B:649:LYS:N	2.76	0.54
2:B:837:ASP:OD2	2:B:1020:ARG:NH2	2.41	0.54
2:B:1049:ASP:C	2:B:1050:ILE:HD12	2.28	0.54
5:E:124:VAL:HA	5:E:132:ILE:CD1	2.36	0.54
5:E:129:PRO:O	5:E:130:ALA:C	2.46	0.54
9:I:35:VAL:HG12	9:I:36:GLU:H	1.71	0.54
9:I:99:LEU:C	9:I:100:PHE:HD1	2.10	0.54
1:A:254:GLU:HB2	2:B:935:ARG:NH2	2.22	0.54
1:A:663:SER:OG	1:A:664:THR:N	2.40	0.54
1:A:711:ARG:O	1:A:714:PHE:HB3	2.07	0.54
2:B:29:ASP:HB3	2:B:658:ILE:CD1	2.38	0.54
2:B:388:CYS:C	2:B:390:LEU:N	2.59	0.54
3:C:43:THR:O	3:C:77:ILE:HG13	2.08	0.54
3:C:147:LEU:N	3:C:147:LEU:HD23	2.23	0.54
11:K:27:ALA:HB1	11:K:28:PRO:HD2	1.90	0.54
1:A:61:ILE:HG22	1:A:62:ASP:H	1.73	0.54
1:A:383:TYR:N	1:A:383:TYR:CD2	2.74	0.54
1:A:630:ILE:HD11	1:A:646:PHE:CZ	2.43	0.54
1:A:896:ARG:HD3	1:A:897:TYR:CE1	2.43	0.54
1:A:1370:LEU:O	1:A:1373:ASP:HB2	2.08	0.54
7:G:49:LEU:CD2	7:G:77:VAL:HG23	2.21	0.54
7:G:88:ASP:HB3	7:G:144:ARG:CB	2.38	0.54
1:A:1151:GLU:HG2	9:I:45:ARG:CB	2.37	0.54
2:B:215:GLN:OE1	2:B:479:VAL:HG22	2.07	0.54
2:B:266:ALA:O	2:B:268:THR:HG22	2.08	0.54
3:C:41:ILE:HB	3:C:172:PRO:HG3	1.89	0.54
7:G:88:ASP:HB3	7:G:144:ARG:CA	2.36	0.54
8:H:82:PRO:O	8:H:84:ALA:N	2.38	0.54
10:J:2:ILE:HG22	10:J:3:VAL:N	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:32:GLU:CD	10:J:32:GLU:H	2.11	0.54
14:N:6:DT:H2''	14:N:7:DT:OP2	2.06	0.54
1:A:193:ASP:O	1:A:194:ALA:HB3	2.08	0.54
1:A:345:VAL:HG21	2:B:1150:ARG:HH22	1.73	0.54
1:A:488:ASN:OD1	2:B:1128:LEU:HD13	2.08	0.54
1:A:783:THR:HG21	1:A:815:PHE:CZ	2.42	0.54
1:A:1158:PRO:CB	1:A:1188:GLN:HE22	2.20	0.54
4:D:60:LYS:CE	4:D:126:ILE:HD11	2.38	0.54
6:F:70:LYS:O	6:F:72:LYS:HD2	2.08	0.54
11:K:53:ASP:OD1	11:K:55:LYS:HB2	2.07	0.54
12:L:30:ILE:HG22	12:L:31:CYS:H	1.71	0.54
15:P:3:U:H2'	15:P:4:C:C6	2.43	0.54
1:A:9:ALA:HB3	2:B:1193:GLN:HB2	1.89	0.54
1:A:24:PRO:HD3	1:A:233:TRP:CD1	2.42	0.54
1:A:41:MET:O	1:A:42:ASP:O	2.26	0.54
1:A:456:MET:HE2	1:A:507:VAL:HA	1.89	0.54
1:A:567:LYS:HG2	1:A:568:PRO:N	2.23	0.54
1:A:741:ASN:ND2	1:A:744:LYS:N	2.54	0.54
1:A:1015:VAL:O	1:A:1017:LEU:N	2.41	0.54
1:A:1104:ILE:HG21	1:A:1352:VAL:HG22	1.90	0.54
2:B:613:VAL:CG2	2:B:628:THR:HA	2.38	0.54
3:C:191:TYR:HB3	3:C:201:TRP:CD1	2.43	0.54
4:D:64:VAL:HG22	4:D:129:LEU:HD22	1.89	0.54
7:G:34:VAL:CG1	7:G:45:ILE:HG21	2.32	0.54
7:G:87:VAL:HB	7:G:103:VAL:HG11	1.90	0.54
7:G:127:PRO:HG3	7:G:139:ILE:CD1	2.38	0.54
8:H:10:PHE:O	8:H:54:SER:HA	2.08	0.54
13:T:18:DA:H1'	13:T:19:8OG:C5'	2.37	0.54
1:A:21:LEU:HD11	1:A:1414:ALA:HA	1.90	0.53
1:A:537:ARG:HD2	8:H:20:TYR:CE1	2.31	0.53
1:A:547:LEU:HB3	11:K:58:PHE:CE1	2.43	0.53
1:A:863:VAL:HG11	1:A:866:PHE:CE2	2.42	0.53
2:B:484:ASN:ND2	2:B:486:TYR:HE1	2.06	0.53
2:B:503:GLY:CA	2:B:507:LYS:HE2	2.35	0.53
2:B:510:LYS:CG	2:B:511:PRO:HD3	2.37	0.53
2:B:773:MET:HE1	2:B:985:GLY:HA2	1.90	0.53
5:E:22:MET:HG3	5:E:187:TYR:CD1	2.43	0.53
7:G:41:LYS:HD3	7:G:42:PHE:CE1	2.42	0.53
8:H:76:THR:HG23	8:H:77:ARG:HG3	1.88	0.53
11:K:49:GLU:HA	11:K:52:ASN:HD22	1.72	0.53
1:A:211:PHE:HA	1:A:214:ILE:HG13	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:798:GLY:HA2	1:A:815:PHE:CD1	2.44	0.53
1:A:993:LEU:HD22	1:A:1046:LEU:HD23	1.90	0.53
2:B:67:SER:OG	2:B:68:THR:N	2.42	0.53
2:B:701:ILE:HB	2:B:739:THR:OG1	2.07	0.53
2:B:756:ILE:O	2:B:759:PRO:HD3	2.08	0.53
2:B:992:ILE:HD11	11:K:66:PRO:HB2	1.90	0.53
3:C:50:GLU:CG	12:L:64:LEU:HD22	2.39	0.53
10:J:36:LEU:HB2	10:J:47:ARG:HH12	1.72	0.53
1:A:98:LYS:HE2	1:A:224:PHE:CZ	2.42	0.53
1:A:798:GLY:HA2	1:A:815:PHE:HD1	1.73	0.53
1:A:1050:GLU:O	1:A:1053:PHE:HB3	2.08	0.53
1:A:1081:LEU:CD1	1:A:1097:GLY:HA3	2.38	0.53
1:A:1239:ARG:C	1:A:1240:CYS:SG	2.86	0.53
2:B:583:ASN:HD21	2:B:628:THR:CG2	2.21	0.53
3:C:25:VAL:HG22	3:C:228:PHE:CE1	2.43	0.53
8:H:100:THR:HG23	8:H:138:GLU:CB	2.38	0.53
10:J:3:VAL:HG21	10:J:18:TRP:CB	2.38	0.53
1:A:923:LEU:O	1:A:927:VAL:HG23	2.09	0.53
1:A:1215:ARG:HG2	1:A:1215:ARG:HH11	1.73	0.53
1:A:1423:GLY:HA3	1:A:1426:GLU:HG2	1.90	0.53
2:B:46:GLN:HG3	2:B:47:GLN:N	2.18	0.53
2:B:642:ASP:N	2:B:649:LYS:HG3	2.24	0.53
4:D:141:LEU:HD22	7:G:46:LEU:O	2.07	0.53
4:D:195:ILE:HG22	4:D:198:LEU:HG	1.89	0.53
5:E:138:ALA:HA	5:E:141:VAL:CG2	2.39	0.53
1:A:102:VAL:HB	1:A:211:PHE:HZ	1.71	0.53
1:A:317:LYS:O	1:A:318:SER:CB	2.56	0.53
1:A:475:THR:HG23	1:A:476:SER:N	2.24	0.53
1:A:567:LYS:CB	1:A:568:PRO:CD	2.87	0.53
1:A:1178:ASP:O	1:A:1179:GLU:HG3	2.09	0.53
1:A:1373:ASP:HA	1:A:1376:THR:HG22	1.90	0.53
2:B:1003:ALA:HA	3:C:178:PHE:O	2.09	0.53
2:B:1166:CYS:SG	2:B:1185:CYS:SG	3.06	0.53
3:C:133:ILE:HG21	3:C:236:GLY:HA3	1.90	0.53
11:K:108:GLU:O	11:K:112:GLN:HG2	2.08	0.53
12:L:39:SER:O	12:L:40:LEU:HB2	2.09	0.53
13:T:11:DA:H2''	13:T:12:DG:C8	2.43	0.53
1:A:125:ALA:C	1:A:127:ALA:H	2.12	0.53
1:A:286:HIS:O	1:A:288:ALA:N	2.41	0.53
1:A:322:VAL:O	1:A:322:VAL:HG13	2.08	0.53
1:A:535:THR:CG2	1:A:616:VAL:HA	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:756:ILE:O	1:A:759:ALA:HB3	2.09	0.53
1:A:1153:TYR:HB2	1:A:1192:LEU:HD23	1.91	0.53
1:A:1366:ARG:HG2	1:A:1366:ARG:HH11	1.73	0.53
2:B:549:THR:HG22	2:B:550:ASP:N	2.23	0.53
2:B:603:LEU:CD1	2:B:608:ASP:HB3	2.39	0.53
2:B:616:ILE:CG2	2:B:700:SER:OG	2.56	0.53
2:B:711:GLU:HB2	2:B:712:PRO:CD	2.38	0.53
8:H:89:LEU:C	8:H:91:ASP:N	2.62	0.53
9:I:85:PHE:N	9:I:85:PHE:HD2	2.04	0.53
10:J:57:ILE:O	10:J:60:PHE:HB2	2.09	0.53
1:A:289:ILE:O	1:A:292:ALA:N	2.31	0.53
1:A:1075:PRO:O	1:A:1079:MET:HG3	2.09	0.53
1:A:1201:ALA:C	1:A:1203:ASN:H	2.11	0.53
1:A:1220:PHE:CD1	1:A:1224:LEU:HD23	2.44	0.53
1:A:1291:VAL:HG13	1:A:1292:PRO:CD	2.39	0.53
2:B:216:GLU:HA	2:B:406:LEU:HD23	1.91	0.53
2:B:706:GLN:NE2	2:B:730:ARG:HD3	2.24	0.53
5:E:185:ALA:O	5:E:190:LEU:HB2	2.09	0.53
11:K:30:ALA:HB2	11:K:76:GLN:HG3	1.90	0.53
11:K:42:LEU:HD21	11:K:46:ILE:CD1	2.39	0.53
12:L:30:ILE:HG22	12:L:31:CYS:N	2.24	0.53
1:A:75:ASN:O	1:A:76:GLU:CB	2.57	0.53
1:A:265:LYS:CE	1:A:302:THR:HG23	2.39	0.53
1:A:286:HIS:C	1:A:288:ALA:H	2.11	0.53
1:A:456:MET:CE	1:A:507:VAL:HG13	2.39	0.53
1:A:658:LEU:HD23	1:A:659:HIS:CE1	2.44	0.53
1:A:699:ALA:HB1	9:I:114:GLN:HE21	1.74	0.53
2:B:616:ILE:HG23	2:B:700:SER:OG	2.09	0.53
3:C:236:GLY:O	3:C:237:SER:C	2.46	0.53
4:D:63:LEU:O	4:D:129:LEU:HD11	2.08	0.53
5:E:83:CYS:C	5:E:85:GLU:H	2.11	0.53
5:E:182:ASP:HB3	5:E:185:ALA:HB2	1.91	0.53
8:H:40:LEU:HD22	8:H:123:MET:CE	2.39	0.53
9:I:55:THR:HG23	9:I:86:PHE:HZ	1.73	0.53
10:J:20:SER:O	10:J:24:LEU:HG	2.08	0.53
1:A:42:ASP:OD2	1:A:45:GLN:HA	2.09	0.53
1:A:57:ARG:O	1:A:58:LEU:O	2.27	0.53
1:A:150:THR:HG23	1:A:165:GLY:O	2.09	0.53
1:A:219:PHE:CE1	1:A:230:ARG:HD3	2.44	0.53
1:A:326:ARG:HG3	1:A:327:ALA:N	2.24	0.53
1:A:537:ARG:HH22	8:H:122:LEU:CD1	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:29:ASP:OD1	2:B:658:ILE:HD13	2.09	0.53
2:B:203:PHE:N	2:B:203:PHE:CD1	2.77	0.53
2:B:687:GLU:HB3	2:B:689:LEU:HG	1.91	0.53
2:B:999:MET:HG2	2:B:1007:VAL:HG22	1.91	0.53
4:D:70:PHE:O	4:D:74:GLN:NE2	2.42	0.53
5:E:176:PRO:O	5:E:212:ARG:HA	2.09	0.53
1:A:266:LEU:HD21	1:A:303:TYR:CZ	2.44	0.53
1:A:503:GLN:C	1:A:504:LEU:HD12	2.29	0.53
1:A:600:PRO:CG	1:A:601:LYS:H	2.13	0.53
1:A:777:PHE:CD1	1:A:781:ASP:HA	2.44	0.53
1:A:1264:GLU:HG3	1:A:1265:ASN:N	2.24	0.53
1:A:1449:SER:HB2	1:A:1453:TYR:CE1	2.44	0.53
2:B:190:TYR:CE2	10:J:62:ARG:HD3	2.44	0.53
2:B:221:ASN:N	2:B:241:ARG:O	2.41	0.53
2:B:284:ILE:HG23	2:B:324:ILE:HD13	1.91	0.53
3:C:66:ARG:NH2	10:J:3:VAL:O	2.42	0.53
3:C:182:PRO:HD2	3:C:210:GLU:OE1	2.09	0.53
4:D:126:ILE:HD13	4:D:145:MET:CE	2.39	0.53
5:E:110:PHE:HE2	5:E:112:TYR:HB3	1.73	0.53
7:G:13:LEU:CD2	7:G:14:HIS:N	2.73	0.53
13:T:22:DC:H2'	13:T:23:BRU:H6	1.90	0.53
1:A:41:MET:HE3	1:A:41:MET:N	2.24	0.52
1:A:88:LYS:HE3	1:A:280:GLU:OE2	2.09	0.52
1:A:108:MET:CB	1:A:210:ILE:HD13	2.26	0.52
1:A:569:LYS:O	1:A:571:LEU:HD13	2.09	0.52
1:A:836:TYR:CZ	1:A:840:ARG:HD2	2.44	0.52
2:B:863:GLU:OE2	2:B:873:THR:HA	2.09	0.52
2:B:1165:ILE:HD13	4:D:17:LYS:HD3	1.90	0.52
3:C:89:GLU:O	3:C:90:ASP:CB	2.57	0.52
4:D:118:THR:CB	4:D:121:LYS:HB2	2.38	0.52
5:E:91:LYS:C	5:E:93:MET:H	2.13	0.52
1:A:57:ARG:HG2	1:A:57:ARG:HH11	1.74	0.52
1:A:350:ARG:HH11	1:A:350:ARG:HG3	1.73	0.52
1:A:452:LYS:HE3	2:B:1141:HIS:CE1	2.44	0.52
1:A:664:THR:HG22	1:A:665:GLY:N	2.24	0.52
2:B:259:TYR:HB2	2:B:268:THR:HG23	1.90	0.52
2:B:291:ILE:HG22	2:B:291:ILE:O	2.08	0.52
2:B:582:VAL:HB	2:B:587:HIS:HD2	1.74	0.52
2:B:990:ILE:HG22	2:B:991:GLY:N	2.24	0.52
2:B:1084:GLN:HE21	2:B:1084:GLN:H	1.57	0.52
2:B:1150:ARG:CG	2:B:1150:ARG:NH1	2.67	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1167:GLY:HA3	2:B:1216:LEU:H	1.74	0.52
3:C:152:GLU:HG2	3:C:153:LEU:H	1.72	0.52
5:E:22:MET:O	5:E:26:ARG:HB2	2.09	0.52
9:I:111:THR:CG2	9:I:112:SER:N	2.71	0.52
1:A:164:ARG:HG3	1:A:165:GLY:N	2.24	0.52
1:A:279:LEU:O	1:A:289:ILE:HD11	2.09	0.52
1:A:315:LEU:HD22	1:A:319:GLY:O	2.08	0.52
1:A:689:LYS:HE2	1:A:721:PHE:CZ	2.45	0.52
1:A:904:THR:O	1:A:904:THR:HG22	2.09	0.52
2:B:65:GLU:HG3	2:B:66:ASP:H	1.74	0.52
2:B:227:LYS:HB2	2:B:395:GLN:OE1	2.08	0.52
2:B:549:THR:HG22	2:B:550:ASP:H	1.75	0.52
2:B:601:ARG:C	2:B:603:LEU:H	2.11	0.52
2:B:723:VAL:CG1	2:B:724:ASP:H	2.11	0.52
3:C:75:MET:O	3:C:246:ARG:NH2	2.42	0.52
6:F:119:ARG:HG3	6:F:119:ARG:NH1	2.24	0.52
7:G:140:LYS:O	7:G:141:SER:C	2.47	0.52
13:T:10:DA:C2	13:T:11:DA:C4	2.97	0.52
1:A:16:GLU:HG3	2:B:1220:ARG:HA	1.91	0.52
1:A:390:GLN:O	1:A:394:ASN:N	2.42	0.52
1:A:897:TYR:N	1:A:897:TYR:CD1	2.77	0.52
2:B:188:ASP:C	2:B:192:LEU:HD12	2.30	0.52
2:B:546:SER:HA	2:B:612:GLU:OE2	2.10	0.52
2:B:559:SER:CA	2:B:563:MET:HB3	2.29	0.52
2:B:871:THR:HG22	2:B:872:GLU:N	2.24	0.52
3:C:167:HIS:ND1	3:C:169:LYS:HG2	2.25	0.52
4:D:52:LEU:HA	4:D:148:LEU:HD21	1.91	0.52
5:E:110:PHE:CE2	5:E:112:TYR:HB3	2.44	0.52
5:E:207:ARG:HB3	5:E:207:ARG:HH11	1.75	0.52
6:F:116:ASP:O	6:F:120:ILE:HG13	2.09	0.52
7:G:45:ILE:HD13	7:G:78:VAL:CG1	2.40	0.52
8:H:44:VAL:CG1	8:H:48:PRO:HA	2.40	0.52
10:J:24:LEU:HD12	10:J:39:LEU:HD11	1.90	0.52
12:L:41:SER:O	12:L:44:ASP:HB2	2.10	0.52
1:A:262:LEU:HD21	1:A:303:TYR:HE1	1.75	0.52
1:A:401:GLY:C	1:A:435:HIS:CD2	2.83	0.52
1:A:591:PHE:HA	1:A:595:THR:CG2	2.37	0.52
1:A:655:PHE:O	1:A:658:LEU:HB3	2.09	0.52
1:A:683:ILE:HD13	1:A:801:GLU:CG	2.38	0.52
1:A:884:ASP:HB3	1:A:896:ARG:HH12	1.74	0.52
1:A:899:VAL:HG13	1:A:908:LEU:CD2	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:542:MET:SD	2:B:747:MET:HE2	2.49	0.52
2:B:744:HIS:HD2	2:B:746:SER:OG	1.93	0.52
2:B:847:ASP:C	2:B:849:GLY:N	2.63	0.52
3:C:147:LEU:HD12	3:C:151:GLN:O	2.10	0.52
4:D:41:GLN:HB2	4:D:43:GLU:HG3	1.92	0.52
4:D:154:PHE:CD1	4:D:154:PHE:N	2.78	0.52
5:E:55:ARG:O	5:E:57:MET:N	2.43	0.52
5:E:153:HIS:O	5:E:154:ILE:HG13	2.09	0.52
6:F:127:GLU:O	6:F:129:LYS:HG3	2.09	0.52
7:G:99:PHE:HZ	7:G:163:ILE:HD13	1.74	0.52
9:I:82:GLU:HB3	9:I:104:LEU:CD1	2.40	0.52
1:A:157:ASP:C	1:A:159:THR:H	2.12	0.52
1:A:172:PRO:HD3	1:A:185:TRP:NE1	2.24	0.52
1:A:567:LYS:HB3	1:A:568:PRO:CD	2.37	0.52
1:A:944:ARG:NE	1:A:1298:TYR:HE1	2.07	0.52
1:A:1001:ARG:O	1:A:1002:GLY:O	2.28	0.52
3:C:33:LEU:O	3:C:34:ARG:C	2.48	0.52
3:C:235:VAL:HG12	10:J:13:VAL:HG23	1.91	0.52
4:D:54:GLU:O	4:D:58:VAL:HG23	2.10	0.52
1:A:108:MET:O	1:A:109:HIS:HB2	2.09	0.52
1:A:188:ASP:CB	1:A:191:THR:HB	2.33	0.52
1:A:196:GLU:CB	1:A:197:PRO:HD2	2.36	0.52
1:A:317:LYS:O	1:A:318:SER:HB3	2.09	0.52
1:A:898:ARG:O	1:A:1029:ARG:NH1	2.43	0.52
1:A:1036:ARG:HG2	1:A:1036:ARG:NH1	2.25	0.52
1:A:1236:LEU:C	1:A:1237:ILE:HG13	2.29	0.52
2:B:196:PRO:HG2	2:B:197:PHE:H	1.74	0.52
2:B:361:LEU:HD21	2:B:377:PHE:CD2	2.44	0.52
2:B:1095:LEU:C	2:B:1096:ARG:O	2.46	0.52
3:C:152:GLU:HG2	3:C:153:LEU:N	2.24	0.52
4:D:51:ASN:O	4:D:52:LEU:C	2.48	0.52
4:D:56:ARG:NH2	4:D:155:ARG:HA	2.25	0.52
8:H:76:THR:O	8:H:77:ARG:HB2	2.09	0.52
9:I:69:PRO:HB2	9:I:85:PHE:CE2	2.45	0.52
1:A:15:LYS:HG3	2:B:1219:ASP:HA	1.92	0.52
1:A:350:ARG:HG3	1:A:350:ARG:NH1	2.24	0.52
1:A:475:THR:CG2	1:A:476:SER:N	2.72	0.52
1:A:973:ILE:O	1:A:973:ILE:HG22	2.09	0.52
1:A:1118:VAL:O	1:A:1305:VAL:HG13	2.09	0.52
1:A:1127:ASP:HB3	1:A:1130:GLN:CB	2.39	0.52
1:A:1156:PRO:HA	1:A:1190:PRO:HB3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1289:ARG:HD2	1:A:1303:GLU:OE2	2.09	0.52
2:B:613:VAL:HG13	2:B:627:PHE:C	2.30	0.52
3:C:125:MET:HG3	3:C:127:ARG:NH2	2.25	0.52
5:E:31:THR:HG23	5:E:34:GLU:CB	2.38	0.52
1:A:18:GLN:HB2	2:B:1215:ARG:HB2	1.91	0.52
1:A:320:ARG:NH2	15:P:3:U:O2'	2.42	0.52
1:A:531:ILE:HD11	1:A:578:LEU:HD11	1.91	0.52
1:A:645:LEU:HG	1:A:649:ILE:HD11	1.91	0.52
1:A:896:ARG:HD3	1:A:897:TYR:HE1	1.74	0.52
1:A:896:ARG:HB3	1:A:897:TYR:CD1	2.45	0.52
1:A:936:LEU:O	1:A:939:ASP:HB2	2.10	0.52
1:A:1115:SER:O	1:A:1116:LEU:HB2	2.10	0.52
2:B:205:ILE:N	2:B:205:ILE:HD12	2.25	0.52
2:B:806:THR:HB	2:B:809:MET:HG3	1.92	0.52
6:F:130:ILE:HG22	6:F:132:LEU:HG	1.91	0.52
9:I:26:LEU:HD23	9:I:37:GLU:CA	2.36	0.52
1:A:2:VAL:HG11	2:B:1157:ALA:C	2.31	0.52
1:A:396:PRO:HB3	1:A:402:ALA:O	2.09	0.52
1:A:399:HIS:CB	1:A:400:PRO:CD	2.88	0.52
1:A:537:ARG:HH22	8:H:122:LEU:HG	1.74	0.52
1:A:629:LEU:HD11	1:A:645:LEU:HD21	1.92	0.52
1:A:722:LEU:HD21	1:A:794:PRO:HB3	1.92	0.52
1:A:858:ASN:ND2	1:A:860:LEU:H	2.08	0.52
1:A:1152:ILE:HG23	1:A:1193:LEU:HD13	1.92	0.52
2:B:254:LEU:CD1	2:B:273:LEU:HD23	2.40	0.52
2:B:620:ARG:NH2	9:I:89:GLN:NE2	2.57	0.52
2:B:750:GLY:O	2:B:751:VAL:C	2.47	0.52
2:B:1084:GLN:N	2:B:1084:GLN:HE21	2.07	0.52
10:J:3:VAL:HG21	10:J:18:TRP:HB2	1.92	0.52
10:J:64:ASN:HB3	10:J:65:PRO:HD3	1.84	0.52
12:L:28:LYS:HB2	12:L:39:SER:HB2	1.91	0.52
1:A:1162:VAL:HG11	9:I:41:PRO:HG3	1.91	0.51
1:A:1173:HIS:ND1	1:A:1173:HIS:O	2.43	0.51
2:B:113:TYR:HB3	2:B:114:PRO:HD2	1.91	0.51
2:B:192:LEU:O	2:B:193:LYS:HB2	2.09	0.51
2:B:269:ILE:CG2	2:B:282:ILE:HD13	2.40	0.51
2:B:294:ASP:HB2	9:I:12:ASN:HA	1.92	0.51
2:B:521:LEU:HD13	2:B:633:VAL:CG1	2.40	0.51
2:B:770:GLN:HG2	2:B:983:ARG:O	2.09	0.51
4:D:53:SER:H	4:D:148:LEU:HD22	1.71	0.51
9:I:62:ILE:O	9:I:62:ILE:HG12	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:200:ARG:HG3	1:A:201:VAL:N	2.25	0.51
1:A:337:ARG:HD3	2:B:1132:GLU:OE1	2.09	0.51
1:A:560:ILE:HD12	8:H:79:TRP:HB3	1.92	0.51
1:A:685:GLU:OE2	1:A:686:ALA:HB2	2.11	0.51
1:A:700:ASN:HB2	9:I:98:VAL:HG21	1.92	0.51
1:A:1151:GLU:OE2	9:I:45:ARG:HD2	2.10	0.51
1:A:1154:TYR:HD1	1:A:1191:TRP:CZ3	2.28	0.51
2:B:68:THR:OG1	2:B:91:SER:CB	2.58	0.51
2:B:102:VAL:HB	2:B:110:HIS:HB3	1.92	0.51
2:B:216:GLU:HB3	2:B:500:THR:CG2	2.37	0.51
2:B:314:LEU:O	2:B:317:CYS:HB3	2.11	0.51
2:B:327:ARG:O	2:B:327:ARG:HG2	2.10	0.51
2:B:360:PHE:O	2:B:361:LEU:C	2.49	0.51
2:B:806:THR:HG22	2:B:807:ARG:N	2.24	0.51
2:B:1162:ILE:HD11	2:B:1194:ILE:CD1	2.41	0.51
3:C:18:VAL:O	3:C:20:PHE:HD2	1.93	0.51
3:C:176:ILE:HG22	3:C:177:GLU:H	1.74	0.51
5:E:124:VAL:CG1	5:E:132:ILE:HG13	2.39	0.51
7:G:137:ILE:HG21	7:G:143:ILE:HD11	1.93	0.51
1:A:10:PRO:HG2	2:B:1191:ILE:O	2.09	0.51
1:A:12:ARG:CB	2:B:1218:THR:HG22	2.38	0.51
1:A:630:ILE:HG23	1:A:631:HIS:H	1.74	0.51
1:A:672:ASP:OD2	1:A:674:PRO:HG2	2.10	0.51
1:A:942:PHE:HZ	5:E:207:ARG:HG3	1.75	0.51
1:A:1163:ILE:HG22	1:A:1165:GLU:HG2	1.91	0.51
2:B:38:PHE:CD1	2:B:811:TYR:HD2	2.29	0.51
2:B:100:PRO:HD2	2:B:180:TYR:HE1	1.73	0.51
2:B:176:SER:O	2:B:182:SER:HB3	2.10	0.51
2:B:547:VAL:HG12	2:B:612:GLU:OE2	2.10	0.51
2:B:558:LEU:O	2:B:560:GLU:N	2.38	0.51
2:B:616:ILE:HD12	2:B:616:ILE:N	2.25	0.51
4:D:51:ASN:O	4:D:52:LEU:O	2.27	0.51
4:D:63:LEU:HD12	4:D:129:LEU:HG	1.92	0.51
4:D:150:ASN:HB3	7:G:142:ARG:HH22	1.75	0.51
7:G:88:ASP:OD2	7:G:88:ASP:N	2.42	0.51
7:G:143:ILE:CG2	7:G:144:ARG:H	2.23	0.51
11:K:12:LEU:H	11:K:12:LEU:CD1	2.18	0.51
12:L:68:GLU:OE1	12:L:68:GLU:N	2.27	0.51
1:A:72:GLU:O	1:A:73:GLY:O	2.29	0.51
1:A:332:LYS:HB2	1:A:337:ARG:HH11	1.75	0.51
1:A:816:HIS:HE2	2:B:764:SER:H	1.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:830:LYS:HE2	1:A:1081:LEU:HB2	1.91	0.51
2:B:44:VAL:HG23	2:B:48:LEU:HD11	1.90	0.51
2:B:46:GLN:HE22	2:B:496:ARG:CB	2.24	0.51
2:B:210:LYS:HD3	2:B:482:VAL:HG12	1.93	0.51
2:B:274:PRO:HG2	2:B:359:GLU:HB3	1.92	0.51
2:B:1067:ARG:NH2	3:C:194:GLU:OE2	2.43	0.51
3:C:123:ASN:C	3:C:125:MET:H	2.12	0.51
3:C:146:LYS:C	3:C:147:LEU:HD23	2.30	0.51
3:C:166:GLU:C	11:K:6:ARG:NH1	2.64	0.51
5:E:181:ALA:O	5:E:182:ASP:C	2.49	0.51
8:H:11:GLN:HA	8:H:53:ASP:O	2.09	0.51
8:H:129:TYR:HA	8:H:131:ASN:HD21	1.75	0.51
11:K:10:PHE:N	11:K:10:PHE:CD2	2.78	0.51
1:A:35:ILE:HG22	1:A:35:ILE:O	2.11	0.51
1:A:443:LEU:HD23	1:A:501:LEU:HD21	1.90	0.51
1:A:592:ASP:N	1:A:595:THR:OG1	2.44	0.51
1:A:844:ALA:HB2	1:A:1389:PHE:CE2	2.46	0.51
1:A:889:SER:HB3	1:A:1297:GLU:CG	2.41	0.51
1:A:1039:LYS:HE3	1:A:1043:ASP:OD2	2.10	0.51
1:A:1191:TRP:CE3	1:A:1191:TRP:HA	2.44	0.51
2:B:214:ALA:HB3	2:B:497:ARG:O	2.10	0.51
2:B:283:VAL:CG2	2:B:317:CYS:O	2.59	0.51
2:B:293:PRO:O	2:B:297:ILE:HG13	2.11	0.51
2:B:376:PHE:CZ	2:B:569:TYR:HB3	2.46	0.51
2:B:547:VAL:N	2:B:612:GLU:OE2	2.41	0.51
2:B:648:HIS:CD2	2:B:649:LYS:H	2.28	0.51
4:D:7:THR:HG23	4:D:9:GLN:H	1.75	0.51
4:D:187:THR:HG22	4:D:189:ASP:H	1.75	0.51
5:E:52:ARG:CG	5:E:52:ARG:HH11	2.23	0.51
9:I:50:THR:CG2	9:I:52:ILE:HG12	2.41	0.51
10:J:1:MET:N	10:J:57:ILE:H	2.07	0.51
10:J:7:CYS:SG	10:J:49:MET:HE3	2.50	0.51
1:A:108:MET:HA	1:A:210:ILE:HG21	1.91	0.51
1:A:268:ASP:HB3	1:A:299:HIS:CE1	2.46	0.51
1:A:1166:ASP:O	1:A:1168:GLU:N	2.43	0.51
2:B:65:GLU:OE1	2:B:418:LYS:HE3	2.10	0.51
2:B:244:LEU:HD21	2:B:366:GLN:HE21	1.76	0.51
2:B:1081:LEU:O	2:B:1083:ALA:N	2.44	0.51
3:C:260:LEU:O	3:C:264:GLN:HG3	2.10	0.51
4:D:207:LEU:O	4:D:211:LEU:HB2	2.11	0.51
5:E:67:GLU:O	5:E:70:SER:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:4:THR:HA	8:H:60:ALA:CB	2.40	0.51
8:H:118:PHE:C	8:H:120:GLY:H	2.14	0.51
9:I:4:PHE:CE1	9:I:6:PHE:HE2	2.27	0.51
1:A:230:ARG:HG3	1:A:233:TRP:CZ3	2.46	0.51
1:A:265:LYS:HG3	1:A:265:LYS:O	2.11	0.51
1:A:1313:LEU:C	1:A:1315:GLU:H	2.14	0.51
2:B:128:LEU:HD12	2:B:128:LEU:N	2.25	0.51
2:B:288:ALA:O	2:B:331:LEU:HD11	2.11	0.51
2:B:875:GLU:HG3	2:B:877:PRO:HD3	1.92	0.51
3:C:77:ILE:N	3:C:129:ILE:HD11	2.26	0.51
4:D:123:LEU:HG	4:D:149:THR:HG21	1.91	0.51
11:K:68:PHE:CB	11:K:70:ARG:HH11	2.21	0.51
1:A:384:ASN:O	1:A:387:ARG:N	2.43	0.51
1:A:556:TRP:CE3	1:A:558:GLY:HA2	2.46	0.51
1:A:899:VAL:CG1	1:A:908:LEU:HD21	2.40	0.51
2:B:798:TYR:CZ	3:C:62:PHE:HE2	2.28	0.51
2:B:837:ASP:O	2:B:988:GLY:HA2	2.10	0.51
2:B:1001:PHE:CE2	3:C:34:ARG:NE	2.79	0.51
2:B:1161:HIS:NE2	2:B:1175:LEU:HD21	2.25	0.51
3:C:3:GLU:HG3	11:K:104:ASN:ND2	2.26	0.51
3:C:33:LEU:HG	3:C:37:MET:HE1	1.91	0.51
8:H:31:THR:O	8:H:31:THR:HG22	2.10	0.51
9:I:86:PHE:CE1	9:I:100:PHE:HB2	2.46	0.51
9:I:101:PHE:N	9:I:101:PHE:CD1	2.78	0.51
1:A:146:MET:HB3	1:A:171:GLN:O	2.11	0.51
1:A:666:ILE:HG23	2:B:1026:LEU:CB	2.41	0.51
3:C:215:GLU:O	3:C:216:GLY:C	2.49	0.51
4:D:202:ILE:HD11	4:D:206:GLU:HB3	1.93	0.51
7:G:1:MET:HE1	7:G:80:LYS:H	1.74	0.51
11:K:10:PHE:HA	11:K:37:LYS:HB3	1.92	0.51
1:A:180:LYS:HZ2	1:A:294:SER:HB3	1.76	0.51
1:A:817:ALA:O	1:A:820:GLY:N	2.44	0.51
1:A:1167:GLU:O	1:A:1170:ILE:HG13	2.10	0.51
1:A:1215:ARG:HG2	1:A:1215:ARG:NH1	2.25	0.51
1:A:1335:ILE:HG23	1:A:1339:LEU:HD12	1.93	0.51
2:B:326:ASP:O	2:B:328:GLU:N	2.43	0.51
2:B:1106:ARG:HD3	2:B:1127:GLY:CA	2.41	0.51
5:E:117:THR:HB	5:E:120:ALA:HB2	1.93	0.51
9:I:78:CYS:SG	9:I:105:SER:HB2	2.51	0.51
1:A:440:ASP:O	1:A:442:VAL:HG22	2.11	0.50
1:A:699:ALA:CB	9:I:114:GLN:HE21	2.24	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:719:VAL:O	1:A:720:ARG:C	2.48	0.50
2:B:63:ILE:HD12	2:B:421:PHE:CE2	2.46	0.50
2:B:613:VAL:HG13	2:B:628:THR:HA	1.93	0.50
2:B:944:THR:HG21	2:B:1122:ARG:HH21	1.68	0.50
3:C:107:SER:C	3:C:109:SER:N	2.65	0.50
4:D:53:SER:CB	4:D:152:SER:HB2	2.41	0.50
5:E:149:LEU:N	5:E:149:LEU:HD23	2.26	0.50
8:H:84:ALA:HA	8:H:87:ARG:CG	2.41	0.50
8:H:89:LEU:CB	8:H:91:ASP:OD1	2.59	0.50
8:H:101:ALA:HA	8:H:116:TYR:HA	1.92	0.50
9:I:13:MET:HE3	9:I:14:LEU:H	1.75	0.50
12:L:24:THR:O	12:L:25:ALA:HB3	2.11	0.50
1:A:35:ILE:CD1	1:A:241:VAL:HG21	2.41	0.50
1:A:149:GLU:HB2	1:A:164:ARG:HH21	1.76	0.50
1:A:152:VAL:HG13	1:A:153:PRO:HD2	1.92	0.50
1:A:170:THR:HG22	1:A:171:GLN:N	2.25	0.50
1:A:472:LEU:O	1:A:475:THR:CB	2.57	0.50
1:A:1273:LEU:HD12	1:A:1273:LEU:N	2.25	0.50
2:B:185:THR:O	2:B:186:GLU:C	2.49	0.50
2:B:778:MET:CE	2:B:853:SER:HB3	2.41	0.50
2:B:1034:VAL:C	2:B:1036:ALA:H	2.13	0.50
5:E:128:PRO:HA	5:E:129:PRO:C	2.31	0.50
6:F:70:LYS:O	6:F:72:LYS:N	2.35	0.50
15:P:4:C:H2'	15:P:5:C:C6	2.46	0.50
1:A:149:GLU:HB2	1:A:164:ARG:NH2	2.27	0.50
1:A:225:ASN:ND2	1:A:228:PHE:N	2.53	0.50
1:A:560:ILE:CG1	8:H:79:TRP:H	2.24	0.50
1:A:698:GLN:NE2	9:I:99:LEU:HD11	2.26	0.50
1:A:803:SER:OG	1:A:806:ARG:HG3	2.12	0.50
1:A:1118:VAL:HG12	1:A:1327:ILE:HG13	1.92	0.50
2:B:60:GLN:NE2	2:B:94:LYS:HA	2.26	0.50
2:B:542:MET:HG2	2:B:747:MET:HE3	1.94	0.50
2:B:597:MET:HE3	2:B:600:LEU:HD12	1.93	0.50
3:C:100:THR:CG2	3:C:102:GLN:NE2	2.75	0.50
4:D:185:CYS:O	4:D:211:LEU:HD22	2.10	0.50
8:H:39:THR:O	8:H:123:MET:HG3	2.11	0.50
9:I:8:ARG:HG3	9:I:34:TYR:CE1	2.45	0.50
10:J:1:MET:H1	10:J:56:LEU:HB2	1.75	0.50
1:A:269:ILE:CG1	1:A:299:HIS:HB3	2.35	0.50
1:A:310:GLY:C	1:A:312:PRO:HD2	2.31	0.50
1:A:919:ILE:HG21	1:A:983:ILE:CD1	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1070:GLN:O	1:A:1074:GLU:HB2	2.11	0.50
1:A:1120:LEU:O	1:A:1323:ASP:HB2	2.11	0.50
2:B:340:ALA:CB	2:B:343:ILE:HG12	2.24	0.50
2:B:703:ILE:HG23	2:B:741:CYS:HA	1.92	0.50
2:B:827:ILE:O	2:B:1085:ILE:HG23	2.11	0.50
2:B:880:THR:CB	2:B:934:LYS:HD3	2.38	0.50
4:D:19:GLU:O	4:D:20:GLU:C	2.50	0.50
4:D:24:ALA:O	4:D:26:THR:N	2.44	0.50
8:H:81:PRO:HB2	8:H:82:PRO:HD3	1.91	0.50
9:I:111:THR:HG21	9:I:113:ASP:HB2	1.93	0.50
1:A:326:ARG:HH22	1:A:1407:GLU:HG2	1.76	0.50
1:A:802:ASN:ND2	2:B:728:ARG:HB2	2.27	0.50
1:A:901:LEU:HD22	1:A:919:ILE:HG22	1.92	0.50
1:A:1156:PRO:HA	1:A:1190:PRO:CB	2.42	0.50
2:B:313:MET:CE	2:B:390:LEU:HD11	2.42	0.50
2:B:358:LYS:HA	2:B:366:GLN:HB3	1.92	0.50
2:B:521:LEU:HD13	2:B:633:VAL:CB	2.42	0.50
4:D:26:THR:O	4:D:26:THR:HG22	2.12	0.50
4:D:67:ARG:CA	4:D:133:THR:HG21	2.41	0.50
4:D:185:CYS:HB2	4:D:211:LEU:HD21	1.92	0.50
4:D:191:ALA:CB	4:D:207:LEU:HD21	2.42	0.50
4:D:206:GLU:O	4:D:210:ILE:HG13	2.11	0.50
6:F:73:ALA:HB1	6:F:143:PHE:H	1.76	0.50
7:G:4:ILE:HA	7:G:76:ALA:O	2.12	0.50
8:H:63:LEU:HD13	8:H:64:ASN:H	1.77	0.50
11:K:31:VAL:CG1	11:K:32:VAL:H	2.18	0.50
11:K:49:GLU:HG3	11:K:94:ILE:HG12	1.93	0.50
12:L:47:ARG:NH2	12:L:54:ARG:HE	2.09	0.50
1:A:404:TYR:HB2	1:A:433:GLU:HB2	1.94	0.50
1:A:734:GLU:C	1:A:736:ASN:H	2.14	0.50
1:A:775:ILE:HD12	1:A:818:MET:SD	2.52	0.50
1:A:863:VAL:HG11	1:A:866:PHE:CD2	2.46	0.50
1:A:886:ILE:CG2	1:A:887:GLY:N	2.74	0.50
2:B:179:CYS:SG	2:B:181:LEU:HB2	2.51	0.50
2:B:461:LEU:H	2:B:461:LEU:CD1	2.24	0.50
2:B:579:ARG:CA	2:B:589:VAL:HG22	2.40	0.50
2:B:847:ASP:HB3	3:C:167:HIS:NE2	2.26	0.50
11:K:53:ASP:HB3	11:K:56:VAL:CG2	2.40	0.50
1:A:42:ASP:C	1:A:44:THR:N	2.65	0.50
1:A:102:VAL:HG11	1:A:211:PHE:CE2	2.47	0.50
1:A:113:LEU:O	1:A:114:LEU:HD23	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:113:LEU:C	1:A:114:LEU:HD23	2.32	0.50
1:A:343:LYS:HD3	2:B:1155:SER:OG	2.11	0.50
1:A:567:LYS:CD	1:A:568:PRO:HD3	2.41	0.50
1:A:767:GLN:HA	1:A:799:PHE:HA	1.93	0.50
1:A:896:ARG:NH2	1:A:1030:ARG:HH21	2.10	0.50
1:A:1011:GLN:NE2	1:A:1015:VAL:CG2	2.75	0.50
1:A:1067:LEU:O	1:A:1068:ALA:C	2.48	0.50
1:A:1155:ASP:OD2	1:A:1161:THR:HG23	2.11	0.50
1:A:1209:MET:CE	1:A:1236:LEU:HB3	2.42	0.50
2:B:842:ASN:ND2	2:B:845:SER:H	2.10	0.50
5:E:124:VAL:HG13	5:E:132:ILE:CB	2.42	0.50
5:E:153:HIS:HB3	5:E:196:VAL:HG11	1.94	0.50
6:F:117:PRO:C	6:F:119:ARG:H	2.15	0.50
1:A:41:MET:CB	1:A:50:ILE:H	2.25	0.50
1:A:95:PHE:CD1	1:A:234:MET:HG2	2.47	0.50
1:A:344:ARG:HA	2:B:1129:ARG:HA	1.93	0.50
1:A:551:TYR:CD2	11:K:62:LYS:HD3	2.47	0.50
1:A:555:ASP:O	1:A:556:TRP:C	2.50	0.50
1:A:568:PRO:HD2	1:A:569:LYS:H	1.76	0.50
1:A:590:ARG:HG3	1:A:590:ARG:HH11	1.77	0.50
1:A:598:LEU:O	1:A:599:SER:C	2.50	0.50
1:A:771:GLU:O	1:A:773:LYS:HG3	2.11	0.50
1:A:1093:LYS:O	1:A:1094:VAL:HG13	2.12	0.50
2:B:67:SER:O	2:B:68:THR:O	2.30	0.50
2:B:370:PHE:HE2	2:B:373:ARG:HH11	1.57	0.50
2:B:641:GLU:C	2:B:643:ASP:H	2.14	0.50
2:B:1163:CYS:SG	2:B:1165:ILE:HB	2.51	0.50
4:D:202:ILE:HG23	4:D:207:LEU:HB2	1.93	0.50
5:E:94:LYS:HG3	5:E:98:ILE:CD1	2.41	0.50
6:F:74:ILE:HD12	6:F:144:GLU:HG3	1.93	0.50
7:G:18:PHE:HA	7:G:22:MET:CE	2.42	0.50
8:H:83:GLN:C	8:H:85:GLY:H	2.15	0.50
1:A:374:LEU:O	1:A:436:ILE:HG12	2.11	0.50
1:A:590:ARG:HB2	1:A:605:MET:HB3	1.94	0.50
2:B:96:TYR:N	2:B:129:PHE:O	2.43	0.50
2:B:357:GLN:O	2:B:366:GLN:HA	2.12	0.50
2:B:1189:ILE:HD11	7:G:39:THR:HG23	1.93	0.50
3:C:182:PRO:HG3	3:C:206:ASN:O	2.12	0.50
4:D:168:LYS:HG3	4:D:177:VAL:CG1	2.35	0.50
5:E:45:LYS:HB3	5:E:46:TYR:CD1	2.47	0.50
8:H:100:THR:O	8:H:117:SER:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:16:ASP:OD1	10:J:17:LYS:HD2	2.11	0.50
11:K:49:GLU:OE2	11:K:97:LYS:HE3	2.12	0.50
1:A:63:ARG:HG3	1:A:63:ARG:O	2.12	0.49
1:A:335:ARG:HD3	2:B:1202:LEU:HD23	1.93	0.49
1:A:700:ASN:ND2	9:I:115:LYS:HD2	2.27	0.49
1:A:781:ASP:O	1:A:790:ASP:N	2.46	0.49
1:A:1299:VAL:HG12	1:A:1300:LYS:N	2.27	0.49
2:B:284:ILE:HG12	2:B:324:ILE:HD12	1.94	0.49
2:B:526:GLU:HG2	2:B:526:GLU:O	2.11	0.49
2:B:563:MET:HE1	2:B:580:VAL:HB	1.94	0.49
2:B:758:PHE:CZ	2:B:1044:ALA:HA	2.47	0.49
3:C:8:VAL:HG12	3:C:9:LYS:N	2.25	0.49
5:E:134:THR:C	5:E:135:PHE:HD1	2.15	0.49
8:H:15:VAL:HG13	8:H:26:ILE:CG1	2.37	0.49
8:H:100:THR:HG22	8:H:101:ALA:H	1.76	0.49
8:H:102:TYR:CE2	8:H:115:TYR:HB3	2.47	0.49
1:A:32:VAL:O	1:A:57:ARG:CD	2.61	0.49
1:A:280:GLU:C	1:A:282:ASN:N	2.65	0.49
1:A:393:ARG:CB	1:A:393:ARG:HH11	2.26	0.49
1:A:596:THR:O	1:A:597:LEU:HB2	2.12	0.49
1:A:676:MET:O	1:A:679:ILE:HB	2.11	0.49
2:B:39:ARG:NH2	2:B:665:GLU:HG2	2.27	0.49
2:B:165:VAL:HG12	2:B:166:PHE:N	2.27	0.49
2:B:360:PHE:HD2	2:B:374:LYS:HD3	1.77	0.49
2:B:604:ARG:HG3	2:B:611:PRO:HA	1.93	0.49
2:B:661:LEU:HG	2:B:679:TYR:CD2	2.47	0.49
2:B:1084:GLN:OE1	3:C:189:THR:CG2	2.60	0.49
7:G:74:TYR:H	7:G:74:TYR:HD2	1.59	0.49
9:I:50:THR:HG22	9:I:52:ILE:H	1.77	0.49
1:A:208:LEU:HD23	1:A:209:ASN:N	2.27	0.49
1:A:243:PRO:CB	1:A:244:PRO:HD2	2.40	0.49
1:A:427:GLN:O	1:A:430:TRP:HB2	2.12	0.49
1:A:492:PRO:O	1:A:493:GLN:NE2	2.45	0.49
1:A:523:ILE:HD11	1:A:649:ILE:HB	1.93	0.49
1:A:546:VAL:HG13	1:A:577:ILE:HG21	1.93	0.49
1:A:590:ARG:HD3	1:A:592:ASP:OD2	2.12	0.49
1:A:666:ILE:HG23	2:B:1026:LEU:HB2	1.94	0.49
1:A:865:GLN:NE2	1:A:1370:LEU:HA	2.28	0.49
1:A:944:ARG:CZ	1:A:1298:TYR:HE1	2.25	0.49
1:A:1265:ASN:O	1:A:1266:THR:C	2.51	0.49
1:A:1341:ILE:CG2	1:A:1342:GLU:N	2.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:213:ILE:HD11	2:B:497:ARG:H	1.77	0.49
2:B:244:LEU:HD11	2:B:366:GLN:NE2	2.21	0.49
2:B:313:MET:HE2	2:B:390:LEU:HD11	1.93	0.49
2:B:377:PHE:O	2:B:380:TYR:N	2.45	0.49
2:B:707:PRO:HG2	2:B:708:GLU:H	1.77	0.49
2:B:857:ARG:NH2	2:B:942:ARG:NH2	2.60	0.49
2:B:1001:PHE:CD2	3:C:34:ARG:NH2	2.80	0.49
2:B:1002:THR:CG2	2:B:1006:ILE:CG1	2.80	0.49
2:B:1077:THR:HG22	11:K:44:ASN:ND2	2.26	0.49
3:C:258:ILE:O	3:C:262:LEU:HG	2.11	0.49
4:D:29:LEU:HD22	7:G:82:PHE:CE2	2.47	0.49
5:E:186:LEU:N	5:E:186:LEU:HD23	2.27	0.49
7:G:23:LYS:HG3	7:G:56:ILE:HD12	1.95	0.49
1:A:100:LYS:O	1:A:104:GLU:HG3	2.13	0.49
1:A:331:GLY:O	1:A:332:LYS:O	2.31	0.49
1:A:464:PRO:HG2	1:A:465:TYR:HD1	1.77	0.49
1:A:524:VAL:HG12	1:A:525:GLN:CG	2.41	0.49
1:A:567:LYS:CD	8:H:95:TYR:HA	2.42	0.49
1:A:666:ILE:HD11	2:B:1086:PHE:HE1	1.77	0.49
1:A:683:ILE:HG21	1:A:801:GLU:CD	2.32	0.49
1:A:971:PHE:O	1:A:973:ILE:N	2.45	0.49
1:A:1161:THR:C	1:A:1163:ILE:N	2.65	0.49
1:A:1443:VAL:CG1	6:F:132:LEU:HD13	2.42	0.49
2:B:455:SER:O	2:B:456:GLY:C	2.49	0.49
2:B:604:ARG:C	2:B:606:LYS:N	2.64	0.49
2:B:766:ARG:HG3	2:B:1022:THR:CG2	2.42	0.49
2:B:801:LYS:O	10:J:52:THR:CG2	2.59	0.49
2:B:1020:ARG:HH11	2:B:1020:ARG:HG3	1.76	0.49
3:C:58:LEU:N	3:C:58:LEU:CD2	2.73	0.49
5:E:73:PRO:HB2	5:E:74:ASP:OD1	2.11	0.49
5:E:100:ILE:HG23	5:E:105:PHE:CD1	2.47	0.49
6:F:99:LEU:O	6:F:99:LEU:HD12	2.13	0.49
8:H:105:GLU:O	8:H:112:ILE:HG23	2.13	0.49
9:I:55:THR:HG22	9:I:58:VAL:HG21	1.94	0.49
12:L:36:SER:O	12:L:37:LYS:C	2.51	0.49
15:P:6:A:H2'	15:P:7:G:C8	2.46	0.49
1:A:159:THR:O	1:A:159:THR:HG22	2.12	0.49
1:A:174:ILE:HG22	1:A:175:ARG:H	1.76	0.49
1:A:189:ARG:O	1:A:190:ALA:CB	2.60	0.49
1:A:359:LEU:O	1:A:471:ASN:ND2	2.45	0.49
1:A:964:ILE:O	1:A:967:ALA:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1124:HIS:ND1	1:A:1124:HIS:N	2.60	0.49
1:A:1391:ARG:HG3	1:A:1392:SER:N	2.26	0.49
2:B:100:PRO:CG	2:B:180:TYR:HE1	2.25	0.49
2:B:278:GLN:CG	2:B:279:ASP:H	2.25	0.49
2:B:461:LEU:N	2:B:461:LEU:HD12	2.27	0.49
2:B:583:ASN:ND2	2:B:628:THR:HG22	2.28	0.49
3:C:132:PRO:O	3:C:133:ILE:C	2.49	0.49
8:H:89:LEU:HB3	8:H:91:ASP:OD1	2.13	0.49
12:L:47:ARG:HH11	12:L:47:ARG:HG3	1.78	0.49
1:A:202:LEU:HA	1:A:206:GLU:OE1	2.13	0.49
1:A:311:GLN:HB2	1:A:312:PRO:HD3	1.95	0.49
1:A:489:LEU:C	1:A:489:LEU:HD12	2.32	0.49
1:A:524:VAL:HG12	1:A:525:GLN:HG3	1.94	0.49
1:A:1356:ILE:HD12	1:A:1368:MET:SD	2.53	0.49
1:A:1430:LEU:HB3	1:A:1432:GLN:HG3	1.95	0.49
2:B:36:ALA:HA	2:B:39:ARG:HD2	1.94	0.49
2:B:901:PRO:O	2:B:949:VAL:HB	2.12	0.49
4:D:195:ILE:HG22	4:D:195:ILE:O	2.12	0.49
5:E:178:ILE:CG2	5:E:212:ARG:HB3	2.43	0.49
5:E:197:LYS:CE	5:E:199:ILE:HD11	2.35	0.49
1:A:39:GLU:OE1	1:A:50:ILE:HD12	2.13	0.49
1:A:262:LEU:CD2	1:A:303:TYR:HE1	2.25	0.49
1:A:311:GLN:O	1:A:312:PRO:C	2.50	0.49
1:A:332:LYS:O	1:A:333:GLU:CB	2.60	0.49
1:A:537:ARG:NH1	8:H:120:GLY:O	2.46	0.49
1:A:600:PRO:C	1:A:602:ASP:H	2.16	0.49
1:A:745:GLN:N	1:A:748:MET:HE2	2.27	0.49
1:A:1280:GLU:O	1:A:1309:ASP:HB3	2.12	0.49
2:B:44:VAL:O	2:B:45:SER:C	2.51	0.49
2:B:56:ASP:HB2	2:B:57:TYR:HD1	1.77	0.49
2:B:258:LEU:O	2:B:258:LEU:CG	2.60	0.49
2:B:510:LYS:HB2	2:B:511:PRO:HD3	1.94	0.49
2:B:582:VAL:HB	2:B:587:HIS:CD2	2.47	0.49
2:B:616:ILE:HD13	2:B:625:LYS:HB2	1.95	0.49
4:D:40:HIS:CB	7:G:73:LYS:HZ2	2.26	0.49
4:D:203:SER:OG	4:D:206:GLU:HB2	2.13	0.49
8:H:118:PHE:CZ	8:H:142:LEU:HD22	2.48	0.49
1:A:390:GLN:O	1:A:394:ASN:CB	2.53	0.49
1:A:567:LYS:CG	1:A:568:PRO:CD	2.91	0.49
1:A:841:LEU:HD21	1:A:1371:LEU:HD22	1.95	0.49
1:A:1100:ARG:HH12	1:A:1111:MET:CE	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1344:GLY:O	1:A:1345:ARG:C	2.50	0.49
2:B:23:ALA:N	2:B:654:ARG:HB3	2.25	0.49
2:B:180:TYR:CD1	2:B:180:TYR:N	2.80	0.49
2:B:734:HIS:O	2:B:735:ALA:HB3	2.13	0.49
2:B:737:THR:CG2	9:I:66:PRO:HA	2.42	0.49
2:B:778:MET:HE2	2:B:1094:ARG:CG	2.43	0.49
2:B:864:LYS:HD2	2:B:872:GLU:OE2	2.13	0.49
2:B:916:THR:HB	2:B:935:ARG:CG	2.43	0.49
3:C:44:LEU:HB2	3:C:77:ILE:HD11	1.94	0.49
3:C:82:TYR:CE1	3:C:161:LYS:HG2	2.47	0.49
5:E:16:PHE:O	5:E:19:VAL:N	2.46	0.49
8:H:101:ALA:HB2	8:H:116:TYR:CZ	2.48	0.49
9:I:44:TYR:CD1	9:I:45:ARG:N	2.80	0.49
1:A:9:ALA:CB	2:B:1193:GLN:HB2	2.43	0.49
1:A:32:VAL:O	1:A:57:ARG:HD3	2.13	0.49
1:A:547:LEU:HD22	11:K:58:PHE:HE1	1.73	0.49
1:A:899:VAL:HG22	1:A:1029:ARG:HG2	1.94	0.49
1:A:1226:VAL:HG22	1:A:1240:CYS:HB3	1.95	0.49
1:A:1316:VAL:O	1:A:1316:VAL:HG12	2.13	0.49
2:B:125:SER:HB3	2:B:171:PRO:HA	1.95	0.49
2:B:311:LEU:O	2:B:312:GLU:C	2.51	0.49
2:B:401:PHE:HD2	2:B:521:LEU:HD12	1.76	0.49
2:B:821:GLN:NE2	2:B:851:PHE:HA	2.28	0.49
2:B:1060:ARG:HA	2:B:1060:ARG:HD2	1.53	0.49
3:C:98:VAL:O	3:C:99:LEU:HD23	2.13	0.49
3:C:148:ARG:HG2	3:C:149:LYS:N	2.28	0.49
4:D:40:HIS:HB2	7:G:73:LYS:CE	2.43	0.49
6:F:82:THR:HG22	6:F:84:TYR:N	2.23	0.49
11:K:18:LYS:HZ3	11:K:38:GLU:HG2	1.76	0.49
1:A:86:LEU:HD13	1:A:90:VAL:HG23	1.95	0.49
1:A:187:LYS:O	1:A:188:ASP:HB2	2.13	0.49
1:A:288:ALA:HA	1:A:291:GLU:OE2	2.12	0.49
1:A:364:VAL:O	1:A:364:VAL:HG13	2.12	0.49
1:A:590:ARG:NH1	1:A:590:ARG:CG	2.74	0.49
1:A:591:PHE:HA	1:A:595:THR:CB	2.43	0.49
1:A:753:GLY:HA2	1:A:757:ASN:ND2	2.28	0.49
1:A:1074:GLU:C	1:A:1076:ALA:N	2.66	0.49
1:A:1451:VAL:C	1:A:1453:TYR:H	2.15	0.49
2:B:40:GLU:OE1	2:B:682:SER:HB2	2.13	0.49
2:B:171:PRO:HD2	2:B:457:LEU:HD13	1.94	0.49
2:B:172:ILE:HG22	2:B:173:MET:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:190:TYR:CE2	10:J:62:ARG:HB3	2.48	0.49
2:B:273:LEU:HD12	2:B:276:ILE:HD12	1.93	0.49
2:B:273:LEU:CB	2:B:276:ILE:HD12	2.35	0.49
2:B:873:THR:CG2	2:B:874:PHE:N	2.75	0.49
3:C:41:ILE:CG2	3:C:172:PRO:HG3	2.43	0.49
7:G:88:ASP:CB	7:G:144:ARG:HA	2.39	0.49
8:H:118:PHE:N	8:H:118:PHE:CD1	2.81	0.49
11:K:55:LYS:HB2	11:K:81:TYR:HE1	1.77	0.49
11:K:67:PHE:C	11:K:68:PHE:HD2	2.16	0.49
1:A:83:HIS:C	1:A:83:HIS:CD2	2.87	0.48
1:A:594:GLY:N	1:A:603:ASN:ND2	2.60	0.48
1:A:867:ILE:HG22	1:A:872:GLY:N	2.28	0.48
1:A:1239:ARG:HH11	1:A:1239:ARG:HB3	1.78	0.48
2:B:38:PHE:CD1	2:B:811:TYR:CD2	3.01	0.48
2:B:171:PRO:HD2	2:B:457:LEU:HD12	1.94	0.48
2:B:497:ARG:HH22	2:B:775:LYS:CD	2.26	0.48
2:B:525:ALA:O	2:B:768:THR:HG23	2.13	0.48
2:B:635:ARG:HB2	2:B:636:PRO:CD	2.42	0.48
2:B:651:LEU:C	2:B:653:VAL:H	2.17	0.48
2:B:801:LYS:N	10:J:52:THR:CG2	2.75	0.48
2:B:1002:THR:HG21	2:B:1006:ILE:CG1	2.41	0.48
2:B:1215:ARG:CZ	4:D:15:LEU:HD21	2.43	0.48
2:B:1219:ASP:C	2:B:1219:ASP:OD1	2.52	0.48
3:C:36:VAL:HG21	3:C:251:LEU:HB2	1.94	0.48
4:D:14:ARG:O	4:D:16:LYS:HG2	2.13	0.48
4:D:56:ARG:CA	4:D:148:LEU:HD13	2.43	0.48
4:D:214:LEU:O	4:D:218:GLU:HB2	2.13	0.48
5:E:106:GLN:HA	5:E:130:ALA:HB2	1.95	0.48
7:G:132:SER:HB3	7:G:135:ASP:HB2	1.95	0.48
9:I:7:CYS:SG	9:I:8:ARG:O	2.71	0.48
12:L:46:VAL:O	12:L:56:LEU:HD11	2.13	0.48
1:A:9:ALA:O	1:A:10:PRO:C	2.49	0.48
1:A:186:LYS:O	1:A:187:LYS:CB	2.61	0.48
1:A:231:PRO:C	1:A:233:TRP:H	2.15	0.48
1:A:427:GLN:HG3	1:A:430:TRP:CZ2	2.48	0.48
1:A:443:LEU:CD1	1:A:455:MET:HB3	2.42	0.48
1:A:491:VAL:HG12	1:A:492:PRO:O	2.13	0.48
1:A:666:ILE:CD1	1:A:667:GLY:N	2.73	0.48
1:A:680:THR:HG23	2:B:729:ILE:CD1	2.43	0.48
1:A:731:ARG:HA	1:A:734:GLU:HB3	1.94	0.48
1:A:914:GLU:HB2	1:A:979:SER:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:639:ILE:HG22	2:B:641:GLU:HG2	1.95	0.48
2:B:810:GLU:HA	2:B:815:ARG:NH1	2.28	0.48
2:B:864:LYS:HB2	2:B:872:GLU:CD	2.33	0.48
2:B:918:ILE:HG13	2:B:935:ARG:CZ	2.43	0.48
2:B:1081:LEU:C	2:B:1083:ALA:N	2.65	0.48
2:B:1104:HIS:CG	2:B:1122:ARG:HB2	2.48	0.48
3:C:55:THR:O	3:C:56:THR:O	2.31	0.48
3:C:164:ALA:HA	3:C:167:HIS:O	2.13	0.48
3:C:179:GLU:HG2	3:C:180:TYR:N	2.28	0.48
4:D:202:ILE:CG2	4:D:207:LEU:HB2	2.43	0.48
6:F:89:GLU:HB3	6:F:134:ILE:HD11	1.95	0.48
6:F:101:ILE:HG23	6:F:107:VAL:HG22	1.94	0.48
7:G:26:LEU:HD12	7:G:56:ILE:HD13	1.95	0.48
12:L:38:LEU:HD13	12:L:49:LYS:HG2	1.94	0.48
1:A:7:SER:C	1:A:9:ALA:H	2.16	0.48
1:A:598:LEU:O	1:A:598:LEU:HD23	2.14	0.48
1:A:598:LEU:HA	8:H:122:LEU:HD13	1.96	0.48
1:A:787:PHE:CE1	1:A:796:SER:HA	2.49	0.48
1:A:889:SER:HB3	1:A:1297:GLU:HG2	1.94	0.48
1:A:913:LEU:HD12	1:A:914:GLU:N	2.28	0.48
1:A:1041:ALA:O	1:A:1045:VAL:HG23	2.13	0.48
2:B:411:PRO:O	2:B:414:ALA:HB3	2.13	0.48
2:B:418:LYS:HG2	2:B:422:LYS:HE3	1.96	0.48
2:B:579:ARG:CB	2:B:586:TRP:HE1	2.24	0.48
2:B:681:TRP:HA	2:B:684:LEU:HD12	1.95	0.48
2:B:755:ILE:HG23	2:B:809:MET:HE3	1.95	0.48
2:B:843:GLN:O	2:B:844:SER:C	2.52	0.48
2:B:1001:PHE:CD1	2:B:1001:PHE:C	2.87	0.48
2:B:1150:ARG:NH1	2:B:1150:ARG:HB3	2.28	0.48
4:D:54:GLU:OE2	4:D:164:ILE:HD11	2.14	0.48
5:E:64:PRO:HB2	5:E:69:ILE:HD11	1.94	0.48
6:F:148:VAL:HG23	6:F:149:GLU:H	1.78	0.48
7:G:6:ASP:HB3	7:G:73:LYS:NZ	2.28	0.48
9:I:11:ASN:C	9:I:12:ASN:HD22	2.17	0.48
1:A:10:PRO:HA	4:D:1:MET:HB2	1.94	0.48
1:A:492:PRO:HB3	1:A:501:LEU:HD12	1.95	0.48
1:A:1356:ILE:HG21	1:A:1363:VAL:HG21	1.95	0.48
2:B:22:SER:HA	2:B:654:ARG:CB	2.43	0.48
2:B:67:SER:HB2	2:B:92:PHE:CD1	2.48	0.48
2:B:435:THR:C	2:B:437:GLU:H	2.16	0.48
2:B:459:TYR:C	2:B:459:TYR:CD2	2.87	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:653:VAL:HG13	2:B:657:HIS:CG	2.49	0.48
2:B:821:GLN:NE2	2:B:850:LEU:HD12	2.28	0.48
2:B:895:ASP:C	2:B:897:GLY:H	2.16	0.48
2:B:1068:GLY:O	2:B:1069:PHE:O	2.31	0.48
5:E:22:MET:HE1	5:E:26:ARG:HH11	1.74	0.48
12:L:39:SER:O	12:L:40:LEU:CB	2.60	0.48
12:L:47:ARG:HG2	12:L:52:GLY:O	2.13	0.48
1:A:963:ILE:HD11	1:A:1048:ASN:HB2	1.95	0.48
1:A:1120:LEU:O	1:A:1323:ASP:N	2.47	0.48
1:A:1142:THR:HB	1:A:1271:ILE:O	2.14	0.48
1:A:1356:ILE:HG21	1:A:1363:VAL:CG2	2.44	0.48
2:B:169:ARG:CB	2:B:454:THR:HG23	2.43	0.48
2:B:1072:MET:HE2	2:B:1087:PHE:HB2	1.95	0.48
3:C:35:ARG:HB3	3:C:35:ARG:HH11	1.78	0.48
3:C:160:LYS:O	3:C:161:LYS:O	2.31	0.48
3:C:259:LEU:HD21	11:K:91:CYS:CB	2.41	0.48
5:E:78:LEU:HD11	5:E:109:ILE:HD11	1.95	0.48
5:E:202:SER:HB3	5:E:205:SER:O	2.13	0.48
6:F:74:ILE:CG2	6:F:75:PRO:HD2	2.42	0.48
6:F:89:GLU:HB3	6:F:134:ILE:CD1	2.44	0.48
8:H:40:LEU:HG	8:H:41:ASP:O	2.13	0.48
8:H:41:ASP:O	8:H:42:ILE:HG13	2.14	0.48
8:H:42:ILE:HG22	8:H:44:VAL:HG22	1.95	0.48
9:I:6:PHE:CD1	9:I:11:ASN:OD1	2.64	0.48
11:K:65:HIS:CD2	11:K:67:PHE:N	2.67	0.48
1:A:71:GLN:C	1:A:73:GLY:H	2.16	0.48
1:A:90:VAL:HG11	1:A:297:GLN:HA	1.96	0.48
1:A:105:CYS:SG	1:A:139:TRP:HA	2.54	0.48
1:A:353:ILE:HD13	1:A:487:MET:CE	2.40	0.48
1:A:452:LYS:HG3	2:B:1140:ALA:CB	2.44	0.48
1:A:474:VAL:HG22	1:A:474:VAL:O	2.12	0.48
1:A:833:GLU:HG2	1:A:1102:LYS:HD2	1.94	0.48
1:A:960:ILE:HA	1:A:963:ILE:CG2	2.43	0.48
1:A:1005:GLU:O	1:A:1006:ILE:C	2.51	0.48
2:B:1107:ALA:O	2:B:1108:ARG:HB3	2.13	0.48
5:E:77:SER:O	5:E:105:PHE:HB3	2.13	0.48
5:E:100:ILE:HG23	5:E:105:PHE:CB	2.42	0.48
7:G:15:PRO:CA	7:G:18:PHE:CD1	2.91	0.48
7:G:79:PHE:CE2	7:G:105:PRO:HD2	2.49	0.48
10:J:14:VAL:HG12	10:J:50:ILE:HD11	1.95	0.48
13:T:15:DC:H2'	13:T:16:DT:H71	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:33:ALA:O	1:A:83:HIS:HD2	1.97	0.48
1:A:381:THR:HG22	1:A:383:TYR:H	1.79	0.48
1:A:427:GLN:O	1:A:428:TYR:C	2.52	0.48
1:A:658:LEU:HD12	2:B:830:TYR:CD1	2.49	0.48
1:A:915:SER:O	1:A:919:ILE:HG13	2.13	0.48
2:B:181:LEU:CD2	2:B:189:LEU:HD22	2.43	0.48
2:B:213:ILE:HD12	2:B:214:ALA:H	1.78	0.48
2:B:254:LEU:HD11	2:B:273:LEU:HD23	1.96	0.48
2:B:340:ALA:C	2:B:342:GLY:H	2.17	0.48
2:B:600:LEU:O	2:B:609:ILE:HD11	2.14	0.48
2:B:1187:ASN:OD1	2:B:1190:ASP:N	2.43	0.48
3:C:73:GLN:HE21	3:C:74:SER:H	1.62	0.48
4:D:192:LYS:HE3	4:D:204:ASP:OD1	2.14	0.48
5:E:2:ASP:O	5:E:3:GLN:HG2	2.14	0.48
5:E:100:ILE:HG23	5:E:105:PHE:CG	2.49	0.48
9:I:69:PRO:HB2	9:I:85:PHE:HE2	1.77	0.48
11:K:18:LYS:NZ	11:K:37:LYS:O	2.47	0.48
12:L:33:GLU:C	12:L:35:SER:H	2.17	0.48
12:L:58:LYS:O	12:L:58:LYS:HG2	2.12	0.48
1:A:130:ASP:C	1:A:132:LYS:H	2.17	0.48
1:A:540:PHE:HA	1:A:572:TRP:O	2.12	0.48
1:A:608:ILE:C	1:A:610:GLY:N	2.67	0.48
1:A:814:PHE:HE1	2:B:519:TRP:HA	1.77	0.48
1:A:843:LYS:HZ1	2:B:1135:ARG:HH12	1.62	0.48
1:A:958:VAL:CG2	1:A:1053:PHE:HA	2.44	0.48
1:A:1001:ARG:HD2	6:F:81:THR:O	2.14	0.48
2:B:274:PRO:O	2:B:275:TYR:HB2	2.13	0.48
2:B:299:GLU:CG	2:B:571:PRO:HG3	2.43	0.48
2:B:589:VAL:CG1	2:B:590:HIS:N	2.75	0.48
2:B:635:ARG:O	2:B:692:TYR:HA	2.13	0.48
2:B:653:VAL:HG13	2:B:657:HIS:CD2	2.48	0.48
2:B:814:PHE:O	2:B:817:LEU:N	2.47	0.48
2:B:855:PHE:CD2	2:B:972:LYS:HE3	2.48	0.48
3:C:33:LEU:HG	3:C:37:MET:CE	2.44	0.48
3:C:66:ARG:NH2	10:J:2:ILE:CG2	2.76	0.48
4:D:163:VAL:O	4:D:166:LEU:HB3	2.13	0.48
5:E:90:VAL:O	5:E:90:VAL:HG22	2.13	0.48
5:E:91:LYS:C	5:E:93:MET:N	2.65	0.48
5:E:133:GLU:HG2	5:E:135:PHE:HE1	1.79	0.48
5:E:147:HIS:HD2	5:E:149:LEU:H	1.61	0.48
6:F:94:LEU:CD2	6:F:122:MET:HA	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:130:ILE:O	6:F:148:VAL:CG2	2.46	0.48
6:F:135:ARG:NH2	6:F:145:ASP:OD2	2.46	0.48
8:H:56:THR:HB	8:H:145:ARG:HG2	1.96	0.48
10:J:7:CYS:SG	10:J:49:MET:CE	3.02	0.48
11:K:42:LEU:HD22	11:K:71:PHE:HZ	1.79	0.48
11:K:85:ASP:O	11:K:88:LYS:HB2	2.14	0.48
1:A:556:TRP:C	1:A:558:GLY:H	2.16	0.48
1:A:919:ILE:HD13	1:A:983:ILE:CD1	2.44	0.48
1:A:1273:LEU:N	1:A:1273:LEU:CD1	2.76	0.48
2:B:743:ILE:HD13	2:B:743:ILE:N	2.28	0.48
2:B:865:LYS:CD	2:B:961:LEU:HD21	2.43	0.48
2:B:1187:ASN:O	2:B:1188:LYS:CB	2.62	0.48
3:C:3:GLU:HB3	11:K:104:ASN:HD21	1.78	0.48
3:C:29:MET:O	3:C:32:SER:HB2	2.14	0.48
5:E:78:LEU:HD23	5:E:78:LEU:C	2.34	0.48
8:H:43:ASN:HB3	8:H:95:TYR:OH	2.13	0.48
8:H:107:VAL:HG21	8:H:124:ARG:NH2	2.29	0.48
8:H:142:LEU:C	8:H:143:LEU:HD12	2.34	0.48
12:L:38:LEU:HD11	12:L:49:LYS:HE2	1.96	0.48
1:A:21:LEU:HD21	1:A:1413:GLY:C	2.34	0.48
1:A:299:HIS:C	1:A:301:ALA:H	2.18	0.48
1:A:308:ILE:HG22	1:A:309:ALA:N	2.19	0.48
1:A:345:VAL:HG23	1:A:346:ASP:O	2.13	0.48
1:A:958:VAL:HG11	1:A:1049:ILE:HG23	1.95	0.48
1:A:971:PHE:C	1:A:973:ILE:H	2.17	0.48
1:A:1348:LEU:HD21	1:A:1375:MET:SD	2.54	0.48
1:A:1404:GLU:HB3	1:A:1408:ILE:HG13	1.96	0.48
2:B:67:SER:HB2	2:B:92:PHE:HD1	1.79	0.48
2:B:126:SER:CB	2:B:172:ILE:HD11	2.43	0.48
2:B:361:LEU:N	2:B:362:PRO:CD	2.77	0.48
2:B:1156:ASP:O	2:B:1157:ALA:HB3	2.14	0.48
3:C:77:ILE:HG22	3:C:78:GLU:N	2.29	0.48
3:C:209:TYR:N	3:C:209:TYR:CD1	2.82	0.48
4:D:40:HIS:HB3	7:G:73:LYS:NZ	2.28	0.48
6:F:99:LEU:HD12	6:F:99:LEU:C	2.34	0.48
6:F:134:ILE:O	6:F:134:ILE:HG22	2.12	0.48
6:F:148:VAL:O	6:F:149:GLU:C	2.51	0.48
8:H:42:ILE:O	8:H:44:VAL:HG23	2.13	0.48
9:I:19:ASP:OD1	9:I:22:ASN:HB2	2.13	0.48
1:A:853:ASP:OD1	1:A:855:THR:CG2	2.62	0.47
1:A:1035:TYR:O	1:A:1037:LEU:N	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:843:GLN:N	2:B:994:TYR:O	2.31	0.47
2:B:973:ILE:CG2	2:B:974:PRO:HD2	2.44	0.47
2:B:1017:ILE:CB	2:B:1018:PRO:HD3	2.41	0.47
3:C:195:GLN:HB3	3:C:196:ASP:H	1.51	0.47
4:D:137:ASN:H	4:D:137:ASN:HD22	1.51	0.47
8:H:100:THR:N	8:H:117:SER:O	2.41	0.47
1:A:6:TYR:CD1	1:A:7:SER:N	2.82	0.47
1:A:323:LYS:H	1:A:323:LYS:CD	2.24	0.47
1:A:347:PHE:HB3	1:A:491:VAL:HB	1.96	0.47
1:A:361:LEU:HA	1:A:471:ASN:ND2	2.29	0.47
1:A:444:PHE:CB	1:A:458:HIS:HD2	2.27	0.47
1:A:500:GLU:O	1:A:504:LEU:HD13	2.14	0.47
1:A:886:ILE:CG2	1:A:952:ALA:HB2	2.44	0.47
2:B:466:TRP:N	2:B:475:SER:HB2	2.29	0.47
2:B:593:PRO:O	2:B:596:LEU:N	2.47	0.47
2:B:616:ILE:HD12	2:B:616:ILE:H	1.79	0.47
2:B:807:ARG:NH1	2:B:807:ARG:HB3	2.28	0.47
2:B:882:THR:HG22	2:B:884:ARG:N	2.29	0.47
6:F:138:LEU:CD2	6:F:139:PRO:HD2	2.43	0.47
7:G:96:GLN:HA	7:G:121:PHE:CZ	2.50	0.47
11:K:24:ASP:H	11:K:31:VAL:HA	1.79	0.47
12:L:55:ILE:HG12	12:L:56:LEU:N	2.28	0.47
13:T:15:DC:H2''	13:T:16:DT:OP2	2.14	0.47
1:A:608:ILE:C	1:A:610:GLY:H	2.16	0.47
1:A:774:ARG:O	1:A:775:ILE:C	2.52	0.47
1:A:784:LEU:C	1:A:786:HIS:H	2.17	0.47
2:B:616:ILE:HG12	2:B:697:GLU:HA	1.96	0.47
2:B:814:PHE:O	2:B:816:GLU:N	2.47	0.47
2:B:826:ALA:CB	2:B:1008:PRO:HB3	2.42	0.47
2:B:880:THR:HG22	2:B:880:THR:O	2.14	0.47
2:B:891:ASP:C	2:B:893:LEU:H	2.16	0.47
3:C:105:GLY:O	3:C:149:LYS:O	2.31	0.47
3:C:124:LEU:HD23	3:C:124:LEU:HA	1.72	0.47
4:D:23:ASN:O	7:G:83:LYS:HD2	2.14	0.47
4:D:118:THR:HB	4:D:121:LYS:HB2	1.96	0.47
6:F:119:ARG:O	6:F:122:MET:HB2	2.14	0.47
8:H:92:ASP:C	8:H:93:TYR:CD1	2.87	0.47
9:I:111:THR:CG2	9:I:113:ASP:HB2	2.45	0.47
11:K:55:LYS:CB	11:K:81:TYR:CE1	2.97	0.47
12:L:31:CYS:HB2	12:L:48:CYS:SG	2.53	0.47
13:T:11:DA:H2''	13:T:12:DG:O5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:7:SER:HB2	2:B:1175:LEU:HD22	1.94	0.47
1:A:116:ASP:C	1:A:118:HIS:H	2.16	0.47
1:A:228:PHE:N	1:A:228:PHE:CD2	2.83	0.47
1:A:311:GLN:HB2	1:A:312:PRO:CD	2.44	0.47
1:A:350:ARG:HB2	1:A:488:ASN:OD1	2.15	0.47
1:A:774:ARG:CZ	1:A:797:LYS:CB	2.92	0.47
1:A:1114:PRO:O	1:A:1115:SER:O	2.31	0.47
2:B:286:PHE:HA	2:B:289:LEU:HD12	1.96	0.47
2:B:755:ILE:HG23	2:B:809:MET:HE2	1.96	0.47
2:B:840:ILE:CG2	2:B:994:TYR:HD1	2.26	0.47
2:B:1065:GLN:HB3	2:B:1069:PHE:O	2.14	0.47
2:B:1165:ILE:HG22	4:D:15:LEU:HA	1.97	0.47
5:E:136:ASN:OD1	5:E:137:GLU:N	2.47	0.47
7:G:119:LEU:CD1	7:G:132:SER:HB2	2.44	0.47
7:G:164:LYS:O	7:G:164:LYS:HG2	2.13	0.47
8:H:63:LEU:HD13	8:H:64:ASN:N	2.29	0.47
10:J:25:LEU:O	10:J:29:GLU:HA	2.15	0.47
11:K:55:LYS:HD2	11:K:81:TYR:HD1	1.78	0.47
1:A:265:LYS:O	1:A:269:ILE:HG13	2.14	0.47
1:A:442:VAL:HG11	1:A:489:LEU:HD11	1.97	0.47
1:A:707:GLY:O	1:A:708:MET:HG3	2.14	0.47
1:A:870:GLU:HG2	5:E:208:TYR:CD2	2.49	0.47
1:A:1242:VAL:CG1	1:A:1243:VAL:H	2.14	0.47
2:B:99:LYS:HB3	2:B:100:PRO:HD2	1.96	0.47
2:B:455:SER:O	2:B:458:LYS:HB2	2.13	0.47
2:B:558:LEU:C	2:B:560:GLU:N	2.68	0.47
3:C:176:ILE:CG2	3:C:177:GLU:N	2.78	0.47
6:F:109:VAL:HG11	6:F:123:LYS:CD	2.44	0.47
8:H:86:ASP:O	8:H:87:ARG:O	2.32	0.47
10:J:57:ILE:CA	10:J:60:PHE:HD2	2.24	0.47
1:A:84:ILE:O	1:A:84:ILE:CG2	2.61	0.47
1:A:265:LYS:HD3	1:A:303:TYR:CA	2.44	0.47
1:A:326:ARG:NH2	1:A:1407:GLU:HG2	2.29	0.47
1:A:384:ASN:O	1:A:385:ILE:C	2.53	0.47
1:A:709:THR:HG23	9:I:94:ASP:HA	1.97	0.47
1:A:733:ALA:O	1:A:737:LEU:HG	2.14	0.47
1:A:1121:GLU:HB3	1:A:1124:HIS:CD2	2.49	0.47
1:A:1423:GLY:H	1:A:1426:GLU:HG3	1.80	0.47
2:B:276:ILE:O	2:B:278:GLN:N	2.40	0.47
2:B:363:HIS:C	2:B:365:THR:H	2.17	0.47
2:B:891:ASP:O	2:B:893:LEU:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1034:VAL:HG21	2:B:1055:ILE:HG23	1.97	0.47
2:B:1047:PHE:CD1	2:B:1047:PHE:N	2.82	0.47
2:B:1065:GLN:NE2	2:B:1067:ARG:H	2.06	0.47
2:B:1112:GLN:HG2	2:B:1113:VAL:N	2.29	0.47
4:D:22:GLU:OE1	4:D:22:GLU:N	2.37	0.47
6:F:79:ARG:HH22	6:F:150:GLU:CD	2.17	0.47
9:I:85:PHE:HD2	9:I:85:PHE:H	1.50	0.47
1:A:116:ASP:OD2	1:A:164:ARG:HD2	2.15	0.47
1:A:170:THR:CG2	1:A:171:GLN:N	2.76	0.47
1:A:174:ILE:CG2	1:A:175:ARG:N	2.78	0.47
1:A:444:PHE:HD1	1:A:489:LEU:HB2	1.80	0.47
1:A:446:ARG:HD2	1:A:480:ALA:HB2	1.95	0.47
1:A:477:PRO:HG3	1:A:520:CYS:O	2.15	0.47
1:A:515:GLN:HA	1:A:1367:HIS:NE2	2.30	0.47
1:A:777:PHE:C	1:A:779:PHE:H	2.16	0.47
1:A:834:THR:HG21	1:A:1077:THR:CB	2.45	0.47
1:A:940:ARG:HG2	1:A:940:ARG:HH11	1.80	0.47
1:A:1081:LEU:HD11	1:A:1098:VAL:N	2.25	0.47
1:A:1115:SER:O	1:A:1311:VAL:HG22	2.15	0.47
1:A:1214:GLU:O	1:A:1218:GLN:HG2	2.15	0.47
1:A:1265:ASN:C	1:A:1267:MET:N	2.66	0.47
1:A:1360:GLY:O	1:A:1361:SER:O	2.32	0.47
2:B:240:ILE:HG21	2:B:381:MET:HE1	1.95	0.47
2:B:352:ALA:HA	2:B:355:ILE:HD12	1.97	0.47
2:B:363:HIS:O	2:B:364:ILE:CB	2.63	0.47
2:B:1057:LYS:O	2:B:1061:GLU:HG3	2.14	0.47
2:B:1201:LYS:HE2	2:B:1205:GLN:CD	2.35	0.47
3:C:43:THR:O	3:C:44:LEU:HB2	2.14	0.47
3:C:167:HIS:HE1	12:L:70:ARG:HA	1.80	0.47
3:C:233:GLU:HB3	3:C:234:SER:H	1.53	0.47
4:D:29:LEU:HB3	7:G:82:PHE:CE2	2.50	0.47
4:D:67:ARG:HA	4:D:133:THR:CG2	2.45	0.47
5:E:52:ARG:HH11	5:E:52:ARG:HG3	1.78	0.47
5:E:79:TRP:HE1	5:E:81:GLU:HB2	1.79	0.47
6:F:73:ALA:HB2	6:F:143:PHE:CD2	2.50	0.47
7:G:44:TYR:CD2	7:G:105:PRO:HB2	2.49	0.47
7:G:112:LYS:O	7:G:115:MET:HG2	2.14	0.47
8:H:103:LYS:HG2	8:H:104:PHE:N	2.30	0.47
9:I:98:VAL:HG12	9:I:99:LEU:N	2.28	0.47
1:A:203:SER:OG	1:A:206:GLU:HB2	2.15	0.47
1:A:244:PRO:CB	1:A:245:PRO:HD3	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:469:ARG:HB3	1:A:469:ARG:HH11	1.80	0.47
1:A:511:ILE:CG2	1:A:634:THR:HG21	2.44	0.47
1:A:552:TRP:CE3	1:A:651:LYS:HB3	2.50	0.47
1:A:600:PRO:HG2	1:A:601:LYS:N	2.18	0.47
1:A:726:ARG:HD2	1:A:765:VAL:O	2.15	0.47
1:A:883:LEU:O	1:A:886:ILE:HG22	2.15	0.47
1:A:1445:ILE:HD13	7:G:70:PHE:CZ	2.50	0.47
2:B:29:ASP:CB	2:B:658:ILE:HD13	2.44	0.47
2:B:46:GLN:NE2	2:B:496:ARG:HB3	2.30	0.47
3:C:35:ARG:HD3	11:K:41:THR:HA	1.96	0.47
4:D:119:ARG:HD3	4:D:221:TYR:CD2	2.50	0.47
8:H:12:VAL:HG13	8:H:26:ILE:HG21	1.96	0.47
11:K:49:GLU:HA	11:K:52:ASN:ND2	2.30	0.47
11:K:101:LEU:C	11:K:101:LEU:HD23	2.35	0.47
13:T:15:DC:C2'	13:T:16:DT:C7	2.88	0.47
1:A:154:SER:OG	1:A:162:VAL:HG23	2.15	0.47
1:A:541:ILE:HD11	1:A:656:TRP:NE1	2.28	0.47
1:A:1327:ILE:HG23	5:E:147:HIS:HE1	1.80	0.47
2:B:269:ILE:HG21	2:B:282:ILE:HD13	1.96	0.47
2:B:435:THR:C	2:B:437:GLU:N	2.68	0.47
2:B:542:MET:CE	2:B:636:PRO:HG3	2.45	0.47
2:B:957:ASN:O	2:B:959:ASP:N	2.48	0.47
2:B:1223:ASP:HB3	2:B:1224:PHE:H	1.50	0.47
5:E:212:ARG:HH11	5:E:212:ARG:HG3	1.79	0.47
6:F:72:LYS:HE3	6:F:72:LYS:CA	2.44	0.47
7:G:88:ASP:HB2	7:G:143:ILE:O	2.15	0.47
7:G:91:VAL:HB	7:G:139:ILE:O	2.13	0.47
8:H:43:ASN:OD1	8:H:46:LEU:N	2.48	0.47
1:A:284:ALA:C	1:A:286:HIS:N	2.65	0.47
1:A:552:TRP:NE1	11:K:62:LYS:HB2	2.30	0.47
1:A:852:TYR:CD2	1:A:1060:PRO:CB	2.96	0.47
1:A:1058:VAL:O	1:A:1060:PRO:HD3	2.15	0.47
1:A:1284:MET:HA	1:A:1306:LEU:HD23	1.97	0.47
2:B:54:PHE:CZ	2:B:59:LEU:HD13	2.50	0.47
2:B:195:CYS:HB2	2:B:784:ASN:HB3	1.97	0.47
2:B:687:GLU:O	2:B:689:LEU:N	2.48	0.47
2:B:745:PRO:O	2:B:747:MET:N	2.48	0.47
2:B:746:SER:HB3	2:B:1046:PRO:CB	2.45	0.47
3:C:221:TYR:CE1	3:C:222:LYS:HG3	2.50	0.47
8:H:116:TYR:HE2	8:H:140:ALA:CB	2.27	0.47
9:I:80:SER:OG	9:I:105:SER:HB2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:226:GLU:O	1:A:226:GLU:HG2	2.15	0.46
1:A:299:HIS:O	1:A:301:ALA:N	2.48	0.46
1:A:316:GLN:O	1:A:317:LYS:C	2.53	0.46
1:A:317:LYS:HG2	2:B:471:LYS:NZ	2.29	0.46
1:A:567:LYS:CB	8:H:96:VAL:H	2.18	0.46
1:A:701:LEU:O	1:A:702:LEU:HG	2.14	0.46
1:A:821:ARG:HB2	1:A:821:ARG:NH1	2.30	0.46
1:A:921:GLY:O	1:A:923:LEU:N	2.48	0.46
2:B:170:LEU:O	2:B:172:ILE:N	2.48	0.46
2:B:289:LEU:HD22	2:B:375:ALA:HB2	1.97	0.46
2:B:487:THR:O	2:B:490:SER:HB3	2.15	0.46
2:B:492:LEU:O	2:B:495:LEU:N	2.48	0.46
2:B:687:GLU:CB	2:B:689:LEU:HG	2.44	0.46
2:B:693:ILE:HD13	2:B:701:ILE:HD13	1.97	0.46
2:B:1023:VAL:O	2:B:1026:LEU:N	2.48	0.46
2:B:1097:HIS:H	2:B:1098:MET:HE2	1.79	0.46
3:C:88:CYS:SG	3:C:91:HIS:CA	3.03	0.46
9:I:53:GLY:O	9:I:89:GLN:HB2	2.15	0.46
11:K:44:ASN:N	11:K:61:TYR:CE1	2.83	0.46
1:A:441:PRO:HD2	1:A:498:ARG:NH2	2.30	0.46
1:A:482:PHE:CD2	1:A:482:PHE:N	2.80	0.46
1:A:1081:LEU:HD12	1:A:1098:VAL:HG23	1.97	0.46
1:A:1237:ILE:HG22	1:A:1238:ILE:H	1.78	0.46
2:B:26:THR:O	2:B:29:ASP:HB2	2.15	0.46
3:C:169:LYS:HE3	3:C:170:TRP:CZ2	2.50	0.46
5:E:147:HIS:CD2	5:E:149:LEU:H	2.33	0.46
7:G:106:MET:CG	7:G:107:LYS:N	2.78	0.46
8:H:40:LEU:CD1	8:H:123:MET:HB2	2.45	0.46
8:H:101:ALA:HB2	8:H:116:TYR:CE2	2.49	0.46
8:H:110:ASP:O	8:H:128:ASN:HB2	2.15	0.46
11:K:7:PHE:HA	11:K:10:PHE:CE2	2.49	0.46
11:K:78:THR:O	11:K:81:TYR:HB3	2.14	0.46
1:A:693:VAL:O	1:A:693:VAL:HG12	2.15	0.46
1:A:709:THR:HB	1:A:712:GLU:HG3	1.96	0.46
1:A:847:ASP:O	1:A:858:ASN:HA	2.16	0.46
1:A:873:MET:HG3	1:A:1056:SER:O	2.15	0.46
1:A:1002:GLY:CA	1:A:1007:ILE:HG21	2.29	0.46
1:A:1444:MET:O	6:F:132:LEU:HA	2.15	0.46
2:B:102:VAL:CG2	2:B:112:LEU:HB2	2.44	0.46
2:B:118:ARG:CG	2:B:204:ILE:HD13	2.43	0.46
2:B:120:ARG:NH1	12:L:54:ARG:HH11	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:312:GLU:O	2:B:315:LYS:HB2	2.15	0.46
2:B:792:MET:HG2	2:B:855:PHE:HE1	1.79	0.46
2:B:896:ASP:OD1	2:B:898:LEU:HB2	2.16	0.46
3:C:11:ARG:NH2	3:C:206:ASN:OD1	2.47	0.46
3:C:181:ASP:CG	3:C:186:LEU:HD13	2.36	0.46
4:D:118:THR:O	4:D:120:GLU:N	2.47	0.46
6:F:96:THR:O	6:F:100:GLN:HG3	2.16	0.46
7:G:88:ASP:HB3	7:G:144:ARG:HB2	1.97	0.46
7:G:96:GLN:HA	7:G:121:PHE:CE2	2.50	0.46
8:H:80:ARG:HH12	11:K:57:LEU:HD11	1.80	0.46
12:L:26:THR:CG2	12:L:27:LEU:N	2.79	0.46
1:A:215:SER:HB3	1:A:218:ASP:HB2	1.96	0.46
1:A:215:SER:HB3	1:A:218:ASP:CG	2.34	0.46
1:A:269:ILE:HG23	1:A:300:VAL:CG2	2.46	0.46
1:A:332:LYS:HB2	1:A:337:ARG:HD2	1.96	0.46
1:A:402:ALA:HB1	1:A:433:GLU:O	2.16	0.46
1:A:596:THR:C	1:A:598:LEU:N	2.63	0.46
1:A:834:THR:HG21	1:A:1077:THR:CA	2.46	0.46
1:A:1067:LEU:O	1:A:1069:ALA:N	2.48	0.46
1:A:1345:ARG:NH1	1:A:1373:ASP:OD1	2.48	0.46
1:A:1423:GLY:CA	1:A:1426:GLU:HG2	2.46	0.46
2:B:768:THR:O	2:B:771:SER:HB2	2.16	0.46
2:B:847:ASP:O	2:B:849:GLY:N	2.49	0.46
3:C:5:GLY:O	3:C:7:GLN:N	2.48	0.46
5:E:129:PRO:O	5:E:130:ALA:O	2.33	0.46
11:K:42:LEU:HD21	11:K:46:ILE:HD12	1.97	0.46
12:L:55:ILE:CG1	12:L:56:LEU:H	2.29	0.46
14:N:5:DC:H2'	14:N:6:DT:H72	1.98	0.46
15:P:6:A:H2'	15:P:7:G:H8	1.80	0.46
1:A:23:SER:O	1:A:25:GLU:N	2.49	0.46
1:A:37:PHE:HB2	1:A:52:GLY:HA3	1.98	0.46
1:A:227:VAL:C	1:A:228:PHE:CD2	2.88	0.46
1:A:537:ARG:O	1:A:540:PHE:CE1	2.68	0.46
1:A:542:GLU:O	1:A:546:VAL:HG23	2.16	0.46
1:A:725:ALA:HA	1:A:728:LYS:HE2	1.96	0.46
1:A:840:ARG:HH12	1:A:1102:LYS:HE3	1.81	0.46
1:A:901:LEU:HD11	1:A:983:ILE:HD13	1.97	0.46
1:A:1015:VAL:CG1	1:A:1019:CYS:SG	3.03	0.46
1:A:1152:ILE:HG22	1:A:1193:LEU:HA	1.96	0.46
1:A:1213:GLY:O	1:A:1216:ILE:N	2.49	0.46
1:A:1371:LEU:O	1:A:1375:MET:HG3	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:388:CYS:O	2:B:390:LEU:N	2.48	0.46
2:B:496:ARG:HD2	2:B:751:VAL:CG2	2.45	0.46
2:B:653:VAL:HA	2:B:657:HIS:CD2	2.50	0.46
2:B:831:SER:HB3	2:B:994:TYR:OH	2.15	0.46
2:B:975:GLN:HE22	2:B:1100:ASP:CG	2.18	0.46
2:B:1073:TYR:CE2	2:B:1080:LYS:HG2	2.50	0.46
2:B:1077:THR:HG22	11:K:44:ASN:HD21	1.81	0.46
2:B:1166:CYS:SG	2:B:1166:CYS:O	2.73	0.46
3:C:3:GLU:HG3	11:K:104:ASN:CG	2.35	0.46
3:C:17:ASN:OD1	3:C:233:GLU:HG2	2.15	0.46
3:C:31:ASN:OD1	3:C:34:ARG:HD3	2.16	0.46
3:C:115:SER:O	3:C:118:LEU:HG	2.15	0.46
5:E:23:VAL:O	5:E:28:TYR:HD1	1.98	0.46
6:F:117:PRO:C	6:F:119:ARG:N	2.69	0.46
8:H:145:ARG:O	8:H:146:ARG:HB2	2.15	0.46
1:A:42:ASP:OD1	1:A:47:ARG:HA	2.15	0.46
1:A:675:THR:HG21	1:A:736:ASN:ND2	2.30	0.46
1:A:829:VAL:O	1:A:832:ALA:N	2.49	0.46
1:A:853:ASP:OD1	1:A:855:THR:N	2.49	0.46
1:A:1215:ARG:O	1:A:1218:GLN:HG3	2.16	0.46
1:A:1289:ARG:HH12	1:A:1326:ARG:NH1	2.13	0.46
1:A:1389:PHE:CD1	1:A:1390:ASN:N	2.83	0.46
1:A:1404:GLU:HB2	1:A:1408:ILE:CG1	2.46	0.46
2:B:642:ASP:HB3	2:B:649:LYS:CG	2.45	0.46
2:B:762:ASN:OD1	2:B:1022:THR:HA	2.16	0.46
2:B:785:TYR:HE2	10:J:60:PHE:CE1	2.33	0.46
2:B:955:THR:HG22	2:B:956:THR:N	2.29	0.46
2:B:1069:PHE:CD1	2:B:1069:PHE:N	2.82	0.46
2:B:1098:MET:CE	2:B:1098:MET:H	2.29	0.46
3:C:69:LEU:N	3:C:69:LEU:HD12	2.31	0.46
3:C:76:ASP:OD2	3:C:128:ASN:N	2.47	0.46
3:C:167:HIS:CD2	3:C:168:ALA:H	2.32	0.46
4:D:140:ASP:O	4:D:143:ASN:N	2.49	0.46
4:D:154:PHE:HA	4:D:219:THR:HB	1.98	0.46
4:D:187:THR:HG22	4:D:188:ALA:N	2.31	0.46
5:E:116:ILE:HG22	5:E:117:THR:N	2.31	0.46
6:F:113:GLY:O	6:F:115:THR:HG23	2.15	0.46
8:H:22:LYS:HD3	8:H:45:GLU:OE2	2.16	0.46
8:H:82:PRO:HG3	11:K:54:ARG:CD	2.45	0.46
11:K:20:LYS:HB3	11:K:34:THR:HB	1.97	0.46
1:A:95:PHE:O	1:A:96:ILE:C	2.54	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:142:CYS:C	1:A:144:THR:H	2.18	0.46
1:A:332:LYS:HB2	1:A:337:ARG:NH1	2.30	0.46
1:A:830:LYS:HG3	1:A:1098:VAL:HG11	1.98	0.46
1:A:1211:GLN:O	1:A:1212:VAL:C	2.54	0.46
2:B:69:LEU:HB3	2:B:70:ILE:H	1.63	0.46
2:B:213:ILE:HG12	2:B:497:ARG:HB3	1.98	0.46
2:B:855:PHE:HD2	2:B:972:LYS:HE3	1.79	0.46
2:B:911:ILE:CG2	2:B:966:VAL:HG11	2.46	0.46
2:B:971:THR:OG1	3:C:61:GLU:HG3	2.14	0.46
2:B:1085:ILE:N	2:B:1085:ILE:CD1	2.74	0.46
2:B:1130:PHE:CE1	2:B:1134:GLU:HB3	2.51	0.46
3:C:76:ASP:O	3:C:77:ILE:C	2.54	0.46
3:C:82:TYR:CE2	3:C:161:LYS:HG2	2.51	0.46
3:C:123:ASN:ND2	3:C:125:MET:HG2	2.30	0.46
3:C:154:LYS:O	3:C:155:LEU:HD23	2.15	0.46
4:D:142:LYS:O	4:D:146:GLN:HG3	2.15	0.46
5:E:121:MET:C	5:E:123:LEU:H	2.19	0.46
7:G:137:ILE:CG2	7:G:143:ILE:HD11	2.45	0.46
8:H:113:ALA:HB1	8:H:125:LEU:O	2.16	0.46
10:J:9:SER:HB2	10:J:45:CYS:HB2	1.97	0.46
10:J:24:LEU:O	10:J:30:LEU:HB2	2.16	0.46
1:A:52:GLY:N	1:A:56:PRO:HG3	2.31	0.46
1:A:367:PRO:HG2	1:A:370:ILE:HD12	1.96	0.46
1:A:432:VAL:O	1:A:432:VAL:HG12	2.15	0.46
1:A:439:ASN:N	1:A:460:VAL:O	2.46	0.46
1:A:553:VAL:HG22	1:A:652:VAL:CG2	2.46	0.46
1:A:877:HIS:CG	1:A:1056:SER:HA	2.51	0.46
1:A:949:ASP:HB3	1:A:951:GLU:H	1.80	0.46
1:A:1042:PHE:HE2	1:A:1046:LEU:HD11	1.78	0.46
1:A:1166:ASP:O	1:A:1167:GLU:C	2.53	0.46
1:A:1325:THR:CG2	1:A:1326:ARG:HG3	2.46	0.46
2:B:215:GLN:HA	2:B:215:GLN:NE2	2.31	0.46
2:B:251:ILE:O	2:B:251:ILE:HG22	2.16	0.46
2:B:746:SER:HB3	2:B:1046:PRO:HB2	1.98	0.46
2:B:1072:MET:CE	2:B:1087:PHE:HB2	2.45	0.46
2:B:1181:GLU:N	2:B:1188:LYS:HG3	2.31	0.46
3:C:173:ALA:O	3:C:174:ALA:HB2	2.16	0.46
5:E:100:ILE:O	5:E:100:ILE:CG2	2.63	0.46
5:E:163:GLU:OE2	5:E:167:ARG:HG2	2.15	0.46
6:F:90:ARG:HG3	6:F:91:ALA:H	1.79	0.46
8:H:112:ILE:CG2	8:H:113:ALA:N	2.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:50:THR:CG2	9:I:51:ASN:N	2.79	0.46
1:A:14:VAL:H	1:A:1432:GLN:NE2	1.96	0.46
1:A:65:LEU:O	1:A:66:LYS:C	2.54	0.46
1:A:127:ALA:O	1:A:129:LYS:N	2.49	0.46
1:A:230:ARG:O	1:A:231:PRO:C	2.54	0.46
1:A:377:PRO:CD	1:A:493:GLN:OE1	2.64	0.46
1:A:575:LYS:HB3	1:A:612:ILE:CG2	2.45	0.46
1:A:618:GLU:O	1:A:620:LYS:N	2.49	0.46
1:A:640:GLN:O	1:A:641:VAL:C	2.53	0.46
1:A:667:GLY:HA3	3:C:192:TRP:CH2	2.50	0.46
1:A:726:ARG:HD3	1:A:766:GLY:HA2	1.98	0.46
1:A:786:HIS:CE1	2:B:519:TRP:CZ2	3.02	0.46
1:A:883:LEU:HD11	1:A:1017:LEU:HD11	1.98	0.46
1:A:1004:ASN:ND2	1:A:1007:ILE:HG12	2.31	0.46
1:A:1041:ALA:O	1:A:1044:TRP:HB3	2.15	0.46
1:A:1126:ALA:O	1:A:1128:GLN:N	2.49	0.46
1:A:1178:ASP:C	1:A:1179:GLU:HG3	2.36	0.46
1:A:1187:GLN:HA	1:A:1244:ARG:CD	2.45	0.46
2:B:120:ARG:NH1	12:L:54:ARG:NH1	2.64	0.46
2:B:515:HIS:O	2:B:518:HIS:HB2	2.16	0.46
2:B:591:ARG:O	2:B:593:PRO:CD	2.64	0.46
2:B:773:MET:SD	2:B:987:LYS:HE3	2.55	0.46
2:B:794:ASN:O	2:B:795:ILE:HD12	2.15	0.46
2:B:830:TYR:HE2	2:B:1000:PRO:CD	2.22	0.46
2:B:860:MET:HG2	2:B:861:ASP:H	1.78	0.46
3:C:27:LEU:HD11	3:C:178:PHE:HE2	1.80	0.46
8:H:80:ARG:NH1	11:K:57:LEU:HD11	2.31	0.46
9:I:6:PHE:HA	9:I:14:LEU:HG	1.98	0.46
1:A:255:SER:OG	2:B:918:ILE:HG23	2.14	0.46
1:A:332:LYS:HA	1:A:337:ARG:HB3	1.98	0.46
1:A:353:ILE:HD11	1:A:480:ALA:HB1	1.97	0.46
1:A:700:ASN:HB2	9:I:98:VAL:CG2	2.46	0.46
1:A:725:ALA:O	1:A:728:LYS:HG2	2.15	0.46
1:A:817:ALA:O	1:A:818:MET:C	2.53	0.46
1:A:1308:THR:CG2	1:A:1310:GLY:O	2.63	0.46
2:B:25:ILE:HG23	2:B:658:ILE:CD1	2.44	0.46
2:B:67:SER:O	2:B:68:THR:C	2.54	0.46
2:B:244:LEU:HB2	2:B:249:ARG:HA	1.98	0.46
2:B:390:LEU:O	2:B:392:ARG:N	2.48	0.46
2:B:707:PRO:O	2:B:708:GLU:C	2.54	0.46
2:B:857:ARG:O	2:B:967:ARG:HA	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:859:TYR:H	2:B:859:TYR:HD1	1.62	0.46
2:B:969:ARG:HG2	2:B:970:THR:N	2.31	0.46
2:B:1050:ILE:N	2:B:1050:ILE:CD1	2.79	0.46
3:C:118:LEU:HD12	3:C:132:PRO:HG3	1.98	0.46
3:C:138:GLU:HB2	3:C:140:ASN:ND2	2.31	0.46
3:C:176:ILE:HG22	3:C:177:GLU:O	2.16	0.46
4:D:63:LEU:O	4:D:63:LEU:HD13	2.16	0.46
6:F:138:LEU:HD23	6:F:138:LEU:HA	1.73	0.46
8:H:40:LEU:HD13	8:H:123:MET:SD	2.56	0.46
8:H:131:ASN:C	8:H:133:ASN:H	2.19	0.46
1:A:280:GLU:O	1:A:282:ASN:N	2.48	0.45
1:A:513:SER:OG	1:A:515:GLN:HG2	2.15	0.45
1:A:626:ASN:O	1:A:631:HIS:CD2	2.70	0.45
1:A:666:ILE:CD1	1:A:667:GLY:H	2.13	0.45
1:A:761:MET:HA	1:A:804:TYR:HB2	1.97	0.45
1:A:774:ARG:CZ	1:A:797:LYS:HG3	2.45	0.45
1:A:833:GLU:HG3	1:A:1102:LYS:NZ	2.31	0.45
1:A:1389:PHE:CG	1:A:1390:ASN:N	2.83	0.45
2:B:101:MET:HB3	2:B:109:THR:CG2	2.46	0.45
2:B:435:THR:O	2:B:437:GLU:N	2.49	0.45
2:B:453:ILE:O	2:B:454:THR:C	2.53	0.45
2:B:689:LEU:O	2:B:690:VAL:HG23	2.15	0.45
2:B:879:ARG:HD3	2:B:879:ARG:HA	1.51	0.45
2:B:889:THR:HG23	2:B:891:ASP:OD2	2.16	0.45
3:C:100:THR:HG22	3:C:102:GLN:NE2	2.31	0.45
3:C:147:LEU:HB2	3:C:151:GLN:CB	2.42	0.45
3:C:232:VAL:HG11	3:C:244:VAL:CG2	2.46	0.45
4:D:128:VAL:O	4:D:132:GLN:HG3	2.16	0.45
4:D:192:LYS:HZ3	4:D:199:ASN:HA	1.81	0.45
9:I:19:ASP:HB2	9:I:24:ARG:HG3	1.98	0.45
9:I:72:ASP:HB2	9:I:81:ARG:HB3	1.98	0.45
1:A:208:LEU:HD23	1:A:208:LEU:C	2.36	0.45
1:A:507:VAL:HG13	1:A:521:MET:HE1	1.97	0.45
1:A:606:LEU:HD11	1:A:608:ILE:HG13	1.99	0.45
1:A:689:LYS:HE2	1:A:721:PHE:CE2	2.51	0.45
1:A:768:GLN:NE2	1:A:816:HIS:ND1	2.65	0.45
1:A:836:TYR:CD2	1:A:840:ARG:HD2	2.51	0.45
1:A:857:ARG:NH1	6:F:139:PRO:HB2	2.32	0.45
1:A:899:VAL:HG22	1:A:908:LEU:HD21	1.98	0.45
1:A:1445:ILE:HD12	7:G:59:GLY:O	2.17	0.45
2:B:57:TYR:HD1	2:B:57:TYR:N	2.09	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:102:VAL:N	2:B:110:HIS:O	2.44	0.45
2:B:221:ASN:OD1	2:B:242:SER:HA	2.16	0.45
2:B:261:ARG:HH11	2:B:261:ARG:HG3	1.81	0.45
2:B:265:SER:O	2:B:266:ALA:HB3	2.16	0.45
2:B:324:ILE:HG12	2:B:329:THR:HG22	1.98	0.45
2:B:680:THR:OG1	2:B:681:TRP:N	2.48	0.45
2:B:762:ASN:HD21	2:B:1024:ALA:HB3	1.82	0.45
2:B:912:ILE:O	2:B:938:SER:HA	2.16	0.45
2:B:942:ARG:O	2:B:944:THR:N	2.50	0.45
2:B:1084:GLN:C	2:B:1085:ILE:HD12	2.37	0.45
3:C:123:ASN:C	3:C:125:MET:N	2.69	0.45
4:D:16:LYS:C	4:D:18:VAL:H	2.19	0.45
6:F:80:ALA:H	6:F:144:GLU:CD	2.20	0.45
11:K:43:GLY:HA3	11:K:61:TYR:CE1	2.51	0.45
12:L:55:ILE:HG12	12:L:56:LEU:H	1.82	0.45
1:A:44:THR:O	1:A:45:GLN:HB2	2.17	0.45
1:A:52:GLY:H	1:A:56:PRO:HG3	1.80	0.45
1:A:146:MET:O	1:A:170:THR:HG23	2.15	0.45
1:A:230:ARG:O	1:A:232:GLU:N	2.49	0.45
1:A:283:GLY:O	1:A:285:PRO:HD3	2.16	0.45
1:A:1004:ASN:ND2	5:E:167:ARG:CD	2.74	0.45
2:B:43:LEU:HA	2:B:43:LEU:HD23	1.78	0.45
2:B:97:VAL:HG22	2:B:128:LEU:HG	1.97	0.45
2:B:240:ILE:HG23	2:B:240:ILE:O	2.16	0.45
2:B:253:THR:CG2	2:B:254:LEU:N	2.80	0.45
2:B:261:ARG:HG3	2:B:261:ARG:NH1	2.31	0.45
2:B:383:ASN:O	2:B:387:LEU:HD13	2.16	0.45
2:B:779:GLY:O	2:B:795:ILE:HA	2.16	0.45
2:B:858:SER:HA	2:B:966:VAL:O	2.16	0.45
2:B:1159:ARG:CD	2:B:1193:GLN:HE21	2.28	0.45
2:B:1166:CYS:O	2:B:1168:LEU:N	2.41	0.45
3:C:11:ARG:HD3	3:C:209:TYR:OH	2.16	0.45
3:C:77:ILE:O	3:C:79:GLN:N	2.50	0.45
3:C:238:ILE:CD1	3:C:246:ARG:NH1	2.78	0.45
4:D:119:ARG:HD3	4:D:221:TYR:CE2	2.52	0.45
7:G:96:GLN:O	7:G:112:LYS:CD	2.63	0.45
1:A:639:PRO:CD	1:A:640:GLN:H	2.28	0.45
1:A:1120:LEU:H	1:A:1120:LEU:CD1	2.20	0.45
1:A:1127:ASP:HB3	1:A:1130:GLN:HB2	1.99	0.45
1:A:1144:LYS:HD2	1:A:1268:LEU:O	2.17	0.45
1:A:1341:ILE:HG23	1:A:1342:GLU:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:402:GLY:CA	2:B:695:ALA:HB3	2.46	0.45
2:B:605:ARG:HB3	2:B:688:GLY:HA2	1.99	0.45
2:B:620:ARG:NH2	9:I:89:GLN:HE22	2.15	0.45
2:B:661:LEU:HD11	2:B:684:LEU:CD1	2.43	0.45
2:B:661:LEU:CD1	2:B:684:LEU:HD11	2.42	0.45
2:B:806:THR:HG21	2:B:808:ALA:HB3	1.98	0.45
2:B:815:ARG:O	10:J:54:VAL:HG21	2.16	0.45
2:B:942:ARG:O	2:B:943:SER:C	2.55	0.45
2:B:1087:PHE:C	2:B:1087:PHE:CD2	2.88	0.45
3:C:15:LYS:O	3:C:240:VAL:CG2	2.65	0.45
3:C:17:ASN:N	3:C:240:VAL:HG11	2.32	0.45
4:D:117:GLU:OE2	4:D:155:ARG:O	2.33	0.45
4:D:191:ALA:HB3	4:D:207:LEU:HD21	1.99	0.45
5:E:78:LEU:HD21	5:E:109:ILE:HD12	1.99	0.45
8:H:83:GLN:O	8:H:85:GLY:N	2.49	0.45
9:I:33:SER:O	9:I:35:VAL:HG23	2.16	0.45
14:N:4:DA:H2''	14:N:5:DC:H6	1.81	0.45
1:A:38:PRO:CA	1:A:270:LEU:HD23	2.44	0.45
1:A:262:LEU:HD12	1:A:328:ARG:NH2	2.32	0.45
1:A:300:VAL:O	1:A:300:VAL:HG12	2.16	0.45
1:A:332:LYS:CA	1:A:337:ARG:HB3	2.46	0.45
1:A:560:ILE:CD1	8:H:79:TRP:HB3	2.46	0.45
1:A:777:PHE:C	1:A:779:PHE:N	2.69	0.45
1:A:836:TYR:HB2	13:T:18:DA:H5'	1.97	0.45
1:A:929:LEU:HD23	1:A:983:ILE:HG21	1.99	0.45
1:A:939:ASP:O	1:A:942:PHE:N	2.46	0.45
2:B:63:ILE:O	2:B:67:SER:HB3	2.16	0.45
2:B:287:ARG:NH1	2:B:324:ILE:O	2.49	0.45
2:B:343:ILE:CG2	2:B:347:LYS:HG3	2.47	0.45
2:B:529:GLU:OE2	2:B:769:TYR:CD1	2.70	0.45
2:B:542:MET:HE3	2:B:636:PRO:HG3	1.99	0.45
2:B:751:VAL:HG13	2:B:812:LEU:HD22	1.99	0.45
2:B:766:ARG:HH21	15:P:11:U:H3	1.65	0.45
2:B:911:ILE:O	2:B:911:ILE:HG22	2.16	0.45
2:B:1161:HIS:CE1	2:B:1175:LEU:HD21	2.52	0.45
3:C:49:VAL:HG21	3:C:64:ALA:HA	1.98	0.45
3:C:168:ALA:O	3:C:171:GLY:N	2.47	0.45
4:D:51:ASN:OD1	4:D:54:GLU:CB	2.65	0.45
5:E:60:PHE:C	5:E:60:PHE:CD2	2.88	0.45
5:E:172:GLU:HG3	5:E:213:ILE:CD1	2.47	0.45
7:G:119:LEU:HA	7:G:131:GLN:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:9:ILE:HG12	8:H:56:THR:HA	1.98	0.45
8:H:59:ILE:HG12	8:H:142:LEU:HD12	1.96	0.45
9:I:99:LEU:C	9:I:100:PHE:CD1	2.90	0.45
10:J:53:HIS:CE1	10:J:55:ASP:HA	2.51	0.45
12:L:32:ALA:H	12:L:55:ILE:HG13	1.82	0.45
1:A:347:PHE:N	1:A:347:PHE:CD1	2.85	0.45
1:A:783:THR:O	1:A:784:LEU:HD23	2.16	0.45
1:A:1017:LEU:HD12	1:A:1017:LEU:O	2.16	0.45
1:A:1259:MET:HG3	1:A:1262:LYS:NZ	2.28	0.45
1:A:1341:ILE:HD12	1:A:1379:GLY:O	2.17	0.45
2:B:95:ILE:HG13	2:B:130:VAL:HG22	1.98	0.45
2:B:120:ARG:NE	2:B:955:THR:CG2	2.74	0.45
2:B:282:ILE:HD11	2:B:317:CYS:SG	2.56	0.45
2:B:365:THR:HG23	2:B:367:LEU:N	2.30	0.45
2:B:766:ARG:HA	2:B:766:ARG:HD3	1.80	0.45
2:B:801:LYS:O	2:B:822:ASN:ND2	2.50	0.45
2:B:936:ASP:OD1	2:B:937:ALA:N	2.49	0.45
5:E:42:PHE:HZ	5:E:58:MET:CE	2.29	0.45
7:G:138:THR:CG2	7:G:139:ILE:N	2.60	0.45
8:H:130:ARG:N	8:H:130:ARG:CD	2.74	0.45
9:I:7:CYS:O	9:I:8:ARG:O	2.34	0.45
10:J:56:LEU:O	10:J:59:LYS:N	2.50	0.45
11:K:55:LYS:HB3	11:K:81:TYR:CE1	2.51	0.45
1:A:49:LYS:NZ	1:A:61:ILE:CG1	2.78	0.45
1:A:79:GLY:H	2:B:1205:GLN:HE22	1.63	0.45
1:A:95:PHE:HD1	1:A:234:MET:HA	1.82	0.45
1:A:134:ARG:HG2	1:A:138:ILE:HD11	1.99	0.45
1:A:452:LYS:HE3	2:B:1141:HIS:ND1	2.32	0.45
1:A:562:THR:HA	1:A:563:PRO:HD3	1.79	0.45
1:A:971:PHE:HE2	1:A:1040:GLN:HG2	1.82	0.45
1:A:1123:GLY:O	1:A:1125:ALA:N	2.49	0.45
1:A:1431:GLY:HA3	2:B:1152:MET:SD	2.56	0.45
2:B:58:THR:O	2:B:62:ILE:HG13	2.17	0.45
2:B:100:PRO:CD	2:B:180:TYR:HE1	2.29	0.45
2:B:582:VAL:HG22	2:B:626:ILE:HG21	1.99	0.45
2:B:616:ILE:HG13	2:B:697:GLU:HA	1.98	0.45
2:B:640:VAL:HG23	2:B:740:HIS:HA	1.99	0.45
2:B:658:ILE:HG22	2:B:659:ALA:N	2.32	0.45
2:B:1002:THR:O	2:B:1003:ALA:C	2.55	0.45
3:C:114:TYR:HB3	3:C:140:ASN:O	2.17	0.45
4:D:130:LEU:HD13	4:D:142:LYS:HG3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:46:TYR:CE2	5:E:58:MET:HA	2.51	0.45
5:E:124:VAL:HG13	5:E:132:ILE:HB	1.97	0.45
5:E:147:HIS:O	5:E:148:GLU:C	2.55	0.45
5:E:202:SER:C	5:E:204:THR:H	2.19	0.45
7:G:20:PRO:HG2	7:G:21:ARG:H	1.81	0.45
1:A:12:ARG:HD2	2:B:1218:THR:CB	2.43	0.45
1:A:541:ILE:HG22	1:A:546:VAL:HG23	1.99	0.45
1:A:683:ILE:HG21	1:A:801:GLU:HG3	1.99	0.45
1:A:834:THR:HG21	1:A:1077:THR:CG2	2.46	0.45
1:A:850:VAL:HG21	1:A:1058:VAL:HG11	1.99	0.45
1:A:883:LEU:CD2	1:A:1021:LEU:HB2	2.46	0.45
1:A:902:LEU:HD11	1:A:923:LEU:CD2	2.44	0.45
1:A:1127:ASP:HB3	1:A:1130:GLN:HB3	1.99	0.45
2:B:211:VAL:O	2:B:211:VAL:HG12	2.16	0.45
2:B:234:ILE:CG2	2:B:235:SER:N	2.79	0.45
2:B:515:HIS:CD2	2:B:516:ASN:H	2.34	0.45
2:B:611:PRO:HB3	2:B:685:LEU:CD1	2.47	0.45
2:B:638:PHE:CA	2:B:690:VAL:HG22	2.23	0.45
2:B:755:ILE:O	2:B:755:ILE:HG22	2.17	0.45
2:B:995:ARG:HH12	3:C:165:LYS:HG2	1.82	0.45
2:B:1112:GLN:HG2	2:B:1113:VAL:H	1.81	0.45
2:B:1171:VAL:HA	2:B:1182:CYS:HB2	1.99	0.45
3:C:46:ILE:HG13	3:C:72:LEU:HD11	1.98	0.45
4:D:8:PHE:CD2	7:G:6:ASP:O	2.70	0.45
5:E:73:PRO:HB2	5:E:74:ASP:H	1.61	0.45
8:H:64:ASN:CB	8:H:88:SER:HB2	2.34	0.45
9:I:1:MET:CE	9:I:4:PHE:HB3	2.46	0.45
9:I:1:MET:HE1	9:I:4:PHE:HD2	1.82	0.45
1:A:76:GLU:O	1:A:78:PRO:CD	2.65	0.45
1:A:270:LEU:O	1:A:273:ASN:HB3	2.17	0.45
1:A:332:LYS:CG	1:A:333:GLU:HG2	2.46	0.45
1:A:600:PRO:HA	8:H:25:ARG:NH2	2.31	0.45
1:A:722:LEU:H	1:A:722:LEU:HD12	1.82	0.45
1:A:744:LYS:HG2	1:A:748:MET:HE2	1.97	0.45
1:A:767:GLN:NE2	1:A:774:ARG:HB2	2.32	0.45
1:A:1259:MET:HA	1:A:1262:LYS:HG3	1.98	0.45
2:B:128:LEU:HB2	2:B:167:ILE:O	2.17	0.45
2:B:653:VAL:HG22	2:B:689:LEU:HD22	1.99	0.45
2:B:899:ILE:HG23	2:B:903:VAL:HG21	1.97	0.45
3:C:65:HIS:O	3:C:69:LEU:HD13	2.17	0.45
4:D:7:THR:HB	7:G:42:PHE:CE2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:41:GLN:OE1	4:D:41:GLN:HA	2.17	0.45
4:D:55:ALA:HB3	4:D:148:LEU:HD11	1.98	0.45
4:D:119:ARG:CG	4:D:221:TYR:HE2	2.29	0.45
7:G:115:MET:SD	7:G:119:LEU:HD23	2.56	0.45
8:H:5:LEU:CD1	8:H:135:LEU:HD12	2.47	0.45
13:T:20:DG:H2''	13:T:21:DC:H5'	1.99	0.45
1:A:40:THR:HB	1:A:41:MET:HE3	1.97	0.45
1:A:106:VAL:HG12	1:A:107:CYS:N	2.32	0.45
1:A:162:VAL:HG12	1:A:163:SER:N	2.32	0.45
1:A:225:ASN:HD22	1:A:228:PHE:H	1.56	0.45
1:A:507:VAL:N	1:A:508:PRO:CD	2.79	0.45
1:A:567:LYS:HE2	8:H:46:LEU:O	2.17	0.45
1:A:880:LYS:HA	1:A:954:TRP:O	2.17	0.45
1:A:896:ARG:HH21	1:A:1030:ARG:CZ	2.29	0.45
1:A:1100:ARG:O	1:A:1104:ILE:HG13	2.17	0.45
1:A:1237:ILE:CG2	1:A:1238:ILE:H	2.30	0.45
1:A:1293:SER:HB2	1:A:1299:VAL:CG2	2.47	0.45
1:A:1377:THR:O	1:A:1378:GLN:C	2.55	0.45
1:A:1395:GLY:HA3	1:A:1419:ASP:OD2	2.16	0.45
2:B:953:LEU:HD23	2:B:953:LEU:H	1.81	0.45
3:C:239:PRO:O	3:C:241:ASP:N	2.50	0.45
5:E:90:VAL:O	5:E:93:MET:HB3	2.17	0.45
5:E:186:LEU:O	5:E:187:TYR:C	2.55	0.45
6:F:99:LEU:HD21	7:G:64:THR:O	2.16	0.45
11:K:78:THR:O	11:K:79:GLU:O	2.35	0.45
12:L:52:GLY:O	12:L:54:ARG:N	2.50	0.45
1:A:52:GLY:C	1:A:56:PRO:HG2	2.37	0.44
1:A:153:PRO:HA	1:A:161:LEU:HA	1.99	0.44
1:A:326:ARG:CG	1:A:327:ALA:N	2.78	0.44
1:A:464:PRO:HG2	1:A:465:TYR:CD1	2.52	0.44
1:A:755:PHE:HA	1:A:758:ILE:HD12	1.98	0.44
1:A:932:GLU:O	1:A:936:LEU:HG	2.17	0.44
1:A:942:PHE:C	1:A:942:PHE:CD2	2.91	0.44
1:A:946:VAL:C	1:A:947:PHE:HD1	2.20	0.44
1:A:1152:ILE:CG2	1:A:1193:LEU:HD13	2.46	0.44
1:A:1325:THR:OG1	5:E:146:HIS:O	2.33	0.44
1:A:1339:LEU:O	5:E:183:PRO:HB2	2.16	0.44
2:B:116:GLU:C	2:B:118:ARG:N	2.71	0.44
2:B:313:MET:CE	2:B:386:LEU:HD22	2.47	0.44
2:B:344:LYS:O	2:B:345:LYS:O	2.34	0.44
2:B:461:LEU:CD1	2:B:461:LEU:N	2.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1034:VAL:C	2:B:1036:ALA:N	2.71	0.44
2:B:1150:ARG:HG3	2:B:1150:ARG:NH1	2.18	0.44
3:C:38:ILE:H	3:C:38:ILE:HG13	1.44	0.44
5:E:23:VAL:HB	5:E:30:ILE:HD11	1.99	0.44
5:E:78:LEU:HD21	5:E:80:VAL:HG23	1.98	0.44
7:G:154:VAL:HG12	7:G:155:SER:N	2.32	0.44
8:H:38:LEU:HD13	8:H:125:LEU:HD13	1.99	0.44
8:H:64:ASN:HA	8:H:90:ALA:HB2	1.99	0.44
1:A:18:GLN:CB	2:B:1215:ARG:HB2	2.47	0.44
1:A:75:ASN:O	1:A:76:GLU:HB2	2.17	0.44
1:A:202:LEU:HD13	1:A:207:ILE:HD11	1.99	0.44
1:A:1161:THR:CG2	1:A:1163:ILE:HG13	2.45	0.44
2:B:460:ALA:HB1	2:B:466:TRP:CE3	2.53	0.44
2:B:649:LYS:HD3	2:B:736:THR:O	2.16	0.44
2:B:846:ILE:CG2	2:B:974:PRO:HG2	2.47	0.44
2:B:1050:ILE:HG22	2:B:1051:THR:N	2.33	0.44
3:C:99:LEU:HD23	3:C:99:LEU:N	2.31	0.44
4:D:39:ASN:HD22	4:D:41:GLN:HB2	1.82	0.44
6:F:79:ARG:HH11	6:F:79:ARG:CG	2.28	0.44
7:G:145:VAL:HG12	7:G:146:LYS:H	1.81	0.44
8:H:100:THR:CB	8:H:138:GLU:HG3	2.47	0.44
9:I:55:THR:HG23	9:I:86:PHE:CZ	2.52	0.44
11:K:90:ALA:O	11:K:93:SER:HB3	2.17	0.44
1:A:332:LYS:CB	1:A:337:ARG:HD2	2.47	0.44
1:A:478:TYR:O	1:A:479:ASN:CB	2.65	0.44
1:A:630:ILE:CD1	1:A:646:PHE:CZ	2.99	0.44
1:A:637:LYS:HG3	1:A:641:VAL:HG11	1.98	0.44
1:A:754:SER:O	1:A:755:PHE:C	2.55	0.44
1:A:874:ASP:O	1:A:876:ALA:N	2.51	0.44
2:B:306:ASN:C	2:B:308:TRP:H	2.21	0.44
2:B:601:ARG:C	2:B:603:LEU:N	2.70	0.44
2:B:830:TYR:CE2	2:B:1000:PRO:CD	2.97	0.44
2:B:1152:MET:C	2:B:1157:ALA:HB2	2.38	0.44
3:C:112:ASN:HB3	3:C:114:TYR:CE1	2.52	0.44
3:C:138:GLU:OE1	3:C:138:GLU:N	2.50	0.44
5:E:10:SER:O	5:E:13:TRP:HB3	2.17	0.44
8:H:64:ASN:ND2	8:H:88:SER:C	2.71	0.44
8:H:106:GLU:O	8:H:108:SER:N	2.50	0.44
9:I:4:PHE:HD1	9:I:5:ARG:N	2.15	0.44
10:J:9:SER:CB	10:J:45:CYS:HB2	2.47	0.44
13:T:8:DT:H2''	13:T:9:DC:OP2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:54:ASN:C	1:A:56:PRO:HD3	2.38	0.44
1:A:293:GLU:O	1:A:296:LEU:N	2.48	0.44
1:A:682:THR:HG23	1:A:728:LYS:HE3	1.98	0.44
1:A:784:LEU:HB3	1:A:785:PRO:HD2	1.99	0.44
1:A:1072:ILE:HG23	1:A:1356:ILE:HD11	1.99	0.44
1:A:1095:THR:HG22	1:A:1100:ARG:HB2	2.00	0.44
1:A:1197:LEU:HD11	1:A:1238:ILE:HD11	1.99	0.44
1:A:1239:ARG:HB3	1:A:1239:ARG:NH1	2.32	0.44
1:A:1244:ARG:CB	1:A:1245:PRO:CA	2.86	0.44
2:B:269:ILE:HD11	2:B:386:LEU:HD21	1.97	0.44
2:B:451:LYS:O	2:B:455:SER:OG	2.32	0.44
2:B:834:ASN:HA	2:B:839:MET:HA	1.98	0.44
2:B:953:LEU:HD23	2:B:953:LEU:N	2.33	0.44
2:B:1045:SER:O	2:B:1046:PRO:O	2.36	0.44
4:D:7:THR:HB	7:G:42:PHE:HE2	1.83	0.44
14:N:3:DT:H3'	14:N:3:DT:OP2	2.17	0.44
1:A:22:PHE:CE1	2:B:1213:THR:HG22	2.52	0.44
1:A:244:PRO:HB2	1:A:245:PRO:HD3	1.98	0.44
1:A:278:THR:O	1:A:278:THR:HG22	2.17	0.44
1:A:299:HIS:C	1:A:301:ALA:N	2.71	0.44
1:A:630:ILE:CG2	1:A:631:HIS:N	2.80	0.44
1:A:645:LEU:CG	1:A:649:ILE:HD11	2.48	0.44
1:A:1018:PHE:O	1:A:1021:LEU:HB3	2.16	0.44
1:A:1159:ARG:O	1:A:1160:SER:HB3	2.17	0.44
1:A:1278:ASN:HD22	1:A:1312:ASN:HB2	1.81	0.44
1:A:1289:ARG:NH1	1:A:1326:ARG:NH1	2.65	0.44
2:B:797:TYR:CE1	2:B:971:THR:HG23	2.53	0.44
2:B:801:LYS:HD2	2:B:815:ARG:HB3	1.99	0.44
2:B:877:PRO:HB2	2:B:934:LYS:HD2	2.00	0.44
2:B:997:GLU:HB3	3:C:35:ARG:NH1	2.32	0.44
2:B:1115:THR:CG2	2:B:1117:GLN:HG3	2.42	0.44
3:C:20:PHE:CZ	3:C:230:MET:HB2	2.53	0.44
3:C:77:ILE:C	3:C:79:GLN:H	2.21	0.44
3:C:172:PRO:CD	3:C:173:ALA:H	2.31	0.44
4:D:18:VAL:O	4:D:19:GLU:CB	2.58	0.44
4:D:60:LYS:HE3	4:D:126:ILE:HD11	1.99	0.44
4:D:145:MET:O	4:D:149:THR:N	2.50	0.44
4:D:166:LEU:HD11	4:D:210:ILE:HG23	1.99	0.44
9:I:1:MET:HE1	9:I:4:PHE:CD2	2.53	0.44
10:J:56:LEU:O	10:J:57:ILE:C	2.54	0.44
13:T:11:DA:C2	13:T:12:DG:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:275:SER:O	1:A:279:LEU:HG	2.17	0.44
1:A:341:MET:CE	2:B:1135:ARG:NH1	2.80	0.44
1:A:1259:MET:HG3	1:A:1262:LYS:CE	2.48	0.44
1:A:1364:ASN:O	1:A:1365:TYR:C	2.56	0.44
1:A:1398:MET:O	1:A:1400:CYS:N	2.50	0.44
2:B:20:ASP:C	2:B:22:SER:N	2.68	0.44
2:B:496:ARG:HD2	2:B:751:VAL:HG23	2.00	0.44
2:B:684:LEU:HD23	2:B:689:LEU:HD12	1.99	0.44
2:B:705:MET:CE	2:B:742:GLU:HG2	2.48	0.44
3:C:235:VAL:HG11	10:J:6:ARG:NH2	2.32	0.44
9:I:105:SER:O	9:I:106:CYS:CB	2.59	0.44
13:T:25:DG:H2''	13:T:26:DT:H5'	1.99	0.44
1:A:54:ASN:CB	1:A:247:ARG:HH22	2.31	0.44
1:A:72:GLU:HB3	1:A:76:GLU:CG	2.45	0.44
1:A:101:LYS:HA	1:A:104:GLU:OE1	2.17	0.44
1:A:230:ARG:O	1:A:233:TRP:N	2.51	0.44
1:A:442:VAL:CG2	1:A:460:VAL:HG23	2.48	0.44
1:A:682:THR:HG22	1:A:728:LYS:HE3	1.98	0.44
1:A:1127:ASP:CB	1:A:1130:GLN:HB2	2.47	0.44
1:A:1271:ILE:O	1:A:1271:ILE:HG22	2.16	0.44
1:A:1272:THR:HG22	1:A:1273:LEU:N	2.32	0.44
2:B:189:LEU:O	2:B:192:LEU:N	2.50	0.44
2:B:213:ILE:HD11	2:B:497:ARG:CA	2.48	0.44
2:B:348:ARG:O	2:B:351:TYR:HB3	2.18	0.44
2:B:357:GLN:HG2	2:B:366:GLN:O	2.17	0.44
2:B:388:CYS:C	2:B:390:LEU:H	2.21	0.44
2:B:616:ILE:HD12	2:B:625:LYS:HB2	1.99	0.44
2:B:870:ILE:CG2	2:B:917:PRO:HG2	2.48	0.44
3:C:67:LEU:HD11	3:C:155:LEU:CD1	2.47	0.44
4:D:126:ILE:HD13	4:D:145:MET:HE3	2.00	0.44
5:E:50:MET:N	5:E:50:MET:HE2	2.32	0.44
5:E:154:ILE:HG22	5:E:155:ARG:O	2.17	0.44
7:G:17:PHE:O	7:G:19:GLY:N	2.44	0.44
9:I:69:PRO:HG2	9:I:85:PHE:CE2	2.52	0.44
1:A:40:THR:CG2	1:A:41:MET:HE2	2.48	0.44
1:A:208:LEU:HD21	1:A:212:LYS:HE3	1.99	0.44
1:A:407:ARG:HB3	1:A:430:TRP:CZ2	2.53	0.44
1:A:914:GLU:C	1:A:916:GLY:H	2.22	0.44
1:A:1115:SER:O	1:A:1116:LEU:CB	2.65	0.44
1:A:1138:ILE:C	1:A:1275:GLY:HA2	2.37	0.44
1:A:1170:ILE:HG13	1:A:1170:ILE:H	1.62	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1291:VAL:HG13	1:A:1292:PRO:N	2.33	0.44
2:B:266:ALA:C	2:B:268:THR:H	2.18	0.44
2:B:305:VAL:O	2:B:305:VAL:HG12	2.18	0.44
2:B:803:LEU:CD1	2:B:1032:SER:HB3	2.48	0.44
2:B:1004:GLU:HB2	2:B:1006:ILE:HG12	1.98	0.44
3:C:67:LEU:HD23	3:C:70:ILE:CD1	2.47	0.44
3:C:87:PHE:N	3:C:87:PHE:CD1	2.85	0.44
5:E:95:THR:O	5:E:99:HIS:HB2	2.17	0.44
5:E:121:MET:O	5:E:124:VAL:HG23	2.18	0.44
6:F:84:TYR:CD2	6:F:152:ILE:HB	2.52	0.44
6:F:114:GLU:HA	6:F:114:GLU:OE2	2.18	0.44
6:F:116:ASP:HB3	6:F:119:ARG:HB2	2.00	0.44
7:G:27:LYS:O	7:G:31:LEU:HG	2.17	0.44
8:H:84:ALA:HA	8:H:87:ARG:HG3	2.00	0.44
8:H:100:THR:CG2	8:H:101:ALA:N	2.80	0.44
10:J:27:GLU:C	10:J:29:GLU:N	2.71	0.44
11:K:1:MET:HG3	11:K:2:ASN:N	2.33	0.44
12:L:34:CYS:O	12:L:35:SER:C	2.55	0.44
12:L:38:LEU:O	12:L:39:SER:HB3	2.18	0.44
1:A:23:SER:HA	1:A:233:TRP:CD1	2.53	0.44
1:A:64:ASN:O	1:A:65:LEU:C	2.55	0.44
1:A:157:ASP:C	1:A:159:THR:N	2.71	0.44
1:A:552:TRP:HE1	11:K:62:LYS:HB2	1.83	0.44
1:A:577:ILE:HA	1:A:580:VAL:HG23	1.99	0.44
1:A:767:GLN:HE21	1:A:774:ARG:CB	2.31	0.44
1:A:853:ASP:OD1	1:A:855:THR:CB	2.66	0.44
1:A:1021:LEU:O	1:A:1024:SER:HB3	2.18	0.44
1:A:1436:ILE:O	1:A:1437:GLY:C	2.56	0.44
2:B:186:GLU:HA	2:B:186:GLU:OE2	2.17	0.44
2:B:361:LEU:O	2:B:363:HIS:O	2.36	0.44
2:B:737:THR:HG22	9:I:66:PRO:HA	2.00	0.44
3:C:184:ASN:HD21	3:C:187:LYS:HA	1.79	0.44
3:C:215:GLU:O	3:C:217:ASP:N	2.50	0.44
4:D:155:ARG:HH11	4:D:155:ARG:CG	2.28	0.44
5:E:177:ARG:C	5:E:212:ARG:HD3	2.38	0.44
6:F:94:LEU:HD21	6:F:122:MET:HA	2.00	0.44
10:J:37:SER:OG	10:J:47:ARG:NH2	2.49	0.44
12:L:61:THR:HG22	12:L:62:LYS:N	2.33	0.44
1:A:22:PHE:HE2	1:A:30:ILE:CD1	2.31	0.43
1:A:339:ASN:O	1:A:343:LYS:HG2	2.17	0.43
1:A:456:MET:HB2	1:A:478:TYR:OH	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:606:LEU:CG	1:A:613:ILE:HD12	2.47	0.43
1:A:817:ALA:O	1:A:819:GLY:N	2.50	0.43
1:A:1220:PHE:O	1:A:1221:LYS:CB	2.65	0.43
1:A:1230:GLU:C	1:A:1232:ASN:N	2.71	0.43
2:B:758:PHE:HB3	2:B:761:HIS:CD2	2.53	0.43
2:B:843:GLN:HB3	2:B:995:ARG:HG3	2.00	0.43
2:B:854:LEU:HB3	2:B:855:PHE:H	1.70	0.43
2:B:999:MET:CG	2:B:1000:PRO:HD2	2.24	0.43
4:D:191:ALA:C	4:D:193:THR:H	2.21	0.43
4:D:218:GLU:O	4:D:219:THR:C	2.56	0.43
6:F:72:LYS:HB3	6:F:73:ALA:H	1.53	0.43
7:G:115:MET:HB2	7:G:116:PRO:CD	2.43	0.43
8:H:42:ILE:HG22	8:H:44:VAL:CG2	2.48	0.43
8:H:64:ASN:OD1	8:H:90:ALA:N	2.35	0.43
1:A:133:LYS:O	1:A:136:ALA:HB3	2.18	0.43
1:A:332:LYS:O	1:A:333:GLU:HB2	2.17	0.43
1:A:899:VAL:CG2	1:A:908:LEU:HD21	2.48	0.43
1:A:1164:PRO:C	1:A:1166:ASP:N	2.71	0.43
1:A:1164:PRO:O	1:A:1166:ASP:N	2.51	0.43
2:B:39:ARG:CZ	2:B:665:GLU:HG2	2.49	0.43
2:B:68:THR:HG22	2:B:69:LEU:N	2.32	0.43
2:B:258:LEU:HB2	2:B:385:LEU:HD21	2.00	0.43
2:B:270:LYS:HG2	2:B:281:PRO:HA	2.00	0.43
2:B:416:LEU:HD11	2:B:466:TRP:CE2	2.53	0.43
2:B:436:VAL:O	2:B:436:VAL:HG12	2.17	0.43
2:B:1084:GLN:NE2	2:B:1084:GLN:H	2.13	0.43
3:C:58:LEU:HD22	3:C:58:LEU:H	1.78	0.43
3:C:123:ASN:ND2	3:C:125:MET:HA	2.32	0.43
3:C:220:ASP:OD1	3:C:223:ALA:N	2.51	0.43
4:D:39:ASN:O	4:D:42:GLY:N	2.50	0.43
7:G:127:PRO:HB3	7:G:139:ILE:HD11	2.00	0.43
9:I:7:CYS:C	9:I:8:ARG:O	2.56	0.43
11:K:88:LYS:O	11:K:91:CYS:HB2	2.18	0.43
1:A:116:ASP:O	1:A:118:HIS:N	2.52	0.43
1:A:179:LEU:HD13	1:A:297:GLN:HG3	2.00	0.43
1:A:184:SER:HB3	1:A:199:LEU:CD2	2.47	0.43
1:A:239:LEU:HA	1:A:240:PRO:HD2	1.86	0.43
1:A:402:ALA:CB	1:A:434:ARG:HA	2.49	0.43
1:A:445:ASN:HB2	1:A:454:SER:O	2.19	0.43
1:A:453:MET:HE3	1:A:513:SER:HB2	2.01	0.43
1:A:556:TRP:CZ3	1:A:558:GLY:HA2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:682:THR:HG22	1:A:682:THR:O	2.18	0.43
1:A:858:ASN:C	1:A:858:ASN:ND2	2.72	0.43
1:A:947:PHE:HE2	1:A:954:TRP:CD1	2.36	0.43
1:A:1430:LEU:CB	1:A:1432:GLN:HG3	2.48	0.43
2:B:204:ILE:C	2:B:205:ILE:HD12	2.39	0.43
2:B:370:PHE:HE2	2:B:373:ARG:NH1	2.16	0.43
2:B:766:ARG:HA	2:B:769:TYR:HD2	1.82	0.43
4:D:37:GLN:OE1	7:G:5:LYS:HD2	2.18	0.43
5:E:7:ARG:HD2	5:E:7:ARG:C	2.38	0.43
5:E:178:ILE:HG22	5:E:212:ARG:HB3	2.01	0.43
7:G:13:LEU:HD22	7:G:14:HIS:O	2.17	0.43
1:A:55:ASP:N	1:A:56:PRO:CD	2.80	0.43
1:A:107:CYS:SG	1:A:148:CYS:HB2	2.58	0.43
1:A:295:LEU:O	1:A:298:PHE:HB3	2.18	0.43
1:A:727:ASP:O	1:A:730:GLY:N	2.51	0.43
1:A:941:LYS:O	1:A:945:GLU:HB2	2.18	0.43
1:A:1130:GLN:HE21	1:A:1134:ILE:HD11	1.83	0.43
2:B:510:LYS:CB	2:B:511:PRO:CD	2.96	0.43
2:B:572:HIS:O	2:B:573:GLN:C	2.56	0.43
2:B:597:MET:HA	2:B:597:MET:HE2	1.99	0.43
2:B:889:THR:HG22	2:B:891:ASP:HB2	2.01	0.43
2:B:1002:THR:O	2:B:1004:GLU:N	2.52	0.43
2:B:1099:VAL:O	2:B:1101:ASP:N	2.52	0.43
3:C:22:LEU:HD23	3:C:23:SER:N	2.34	0.43
3:C:46:ILE:HD12	3:C:67:LEU:O	2.17	0.43
4:D:56:ARG:HH21	4:D:155:ARG:HA	1.83	0.43
4:D:170:THR:HG22	4:D:172:LEU:HG	2.00	0.43
5:E:11:ARG:C	5:E:13:TRP:N	2.70	0.43
5:E:173:SER:C	5:E:175:LEU:H	2.21	0.43
7:G:18:PHE:HA	7:G:22:MET:HE2	2.00	0.43
8:H:118:PHE:C	8:H:120:GLY:N	2.72	0.43
13:T:11:DA:C2	13:T:12:DG:C5	3.06	0.43
1:A:87:ALA:CB	1:A:276:LEU:HD23	2.43	0.43
1:A:298:PHE:HZ	1:A:314:ALA:HB2	1.82	0.43
1:A:492:PRO:HB3	1:A:501:LEU:CD1	2.49	0.43
1:A:515:GLN:HB2	1:A:1071:SER:HB3	2.00	0.43
1:A:645:LEU:HG	1:A:649:ILE:CD1	2.48	0.43
1:A:664:THR:CG2	1:A:665:GLY:N	2.81	0.43
1:A:728:LYS:O	1:A:732:LEU:HG	2.19	0.43
1:A:853:ASP:OD1	1:A:855:THR:HB	2.18	0.43
1:A:1161:THR:HG22	1:A:1163:ILE:N	2.27	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1293:SER:OG	1:A:1294:PRO:HD2	2.19	0.43
1:A:1341:ILE:C	1:A:1344:GLY:H	2.22	0.43
1:A:1376:THR:O	1:A:1377:THR:C	2.57	0.43
2:B:44:VAL:CG2	2:B:48:LEU:HD11	2.49	0.43
2:B:49:ASP:HA	2:B:52:ASN:HD22	1.84	0.43
2:B:401:PHE:HA	2:B:404:LYS:HG3	2.00	0.43
2:B:687:GLU:O	2:B:688:GLY:C	2.55	0.43
2:B:811:TYR:N	2:B:811:TYR:HD1	2.13	0.43
2:B:830:TYR:CZ	2:B:1000:PRO:HB3	2.53	0.43
2:B:854:LEU:O	2:B:855:PHE:CB	2.63	0.43
2:B:950:ASP:O	2:B:951:GLN:CB	2.66	0.43
3:C:27:LEU:HD11	3:C:178:PHE:CE2	2.54	0.43
3:C:212:PRO:CB	3:C:213:PRO:HD2	2.48	0.43
4:D:39:ASN:ND2	4:D:41:GLN:HB2	2.34	0.43
4:D:120:GLU:HA	4:D:123:LEU:HD12	2.00	0.43
5:E:151:PRO:HB3	5:E:200:ARG:HB3	2.00	0.43
5:E:196:VAL:HG12	5:E:197:LYS:N	2.33	0.43
6:F:81:THR:HB	6:F:136:ARG:HH11	1.84	0.43
6:F:105:ALA:HB1	6:F:106:PRO:CD	2.49	0.43
8:H:40:LEU:HD13	8:H:123:MET:CE	2.48	0.43
8:H:127:GLY:O	8:H:128:ASN:CB	2.66	0.43
9:I:74:GLU:O	9:I:74:GLU:HG3	2.18	0.43
12:L:32:ALA:H	12:L:55:ILE:CG1	2.32	0.43
13:T:12:DG:N2	14:N:6:DT:C2	2.87	0.43
13:T:15:DC:H2''	13:T:16:DT:C6	2.53	0.43
1:A:206:GLU:O	1:A:210:ILE:HG13	2.19	0.43
1:A:262:LEU:CD2	1:A:303:TYR:CE1	3.00	0.43
1:A:441:PRO:HD2	1:A:498:ARG:CZ	2.48	0.43
1:A:744:LYS:HG2	1:A:748:MET:SD	2.58	0.43
1:A:1213:GLY:HA2	1:A:1216:ILE:HD12	2.01	0.43
2:B:69:LEU:HD11	2:B:425:THR:HG22	2.00	0.43
2:B:502:ILE:HG22	2:B:507:LYS:HB2	2.01	0.43
2:B:558:LEU:HD21	2:B:600:LEU:HD11	2.00	0.43
2:B:639:ILE:CD1	2:B:691:GLU:HG3	2.41	0.43
2:B:762:ASN:ND2	2:B:1024:ALA:HB3	2.34	0.43
2:B:876:LYS:HD2	2:B:893:LEU:O	2.17	0.43
3:C:269:LYS:O	3:C:270:VAL:HG22	2.18	0.43
4:D:207:LEU:HA	4:D:210:ILE:HD12	2.01	0.43
9:I:13:MET:HG3	9:I:14:LEU:N	2.33	0.43
9:I:68:LEU:HB3	9:I:84:VAL:HG23	2.00	0.43
12:L:38:LEU:HD11	12:L:49:LYS:HG2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:44:ASP:O	12:L:45:ALA:HB3	2.18	0.43
1:A:500:GLU:CD	2:B:1145:SER:HB2	2.39	0.43
1:A:1013:ASP:HB3	5:E:207:ARG:O	2.19	0.43
1:A:1168:GLU:O	1:A:1172:LEU:HG	2.19	0.43
1:A:1209:MET:O	1:A:1210:GLY:C	2.56	0.43
1:A:1402:PHE:CD1	1:A:1403:GLU:HG3	2.53	0.43
2:B:68:THR:CG2	2:B:69:LEU:N	2.82	0.43
2:B:335:GLY:O	2:B:339:THR:HG21	2.19	0.43
2:B:763:GLN:HG2	2:B:765:PRO:HD2	1.99	0.43
5:E:46:TYR:CD2	5:E:58:MET:HG2	2.54	0.43
5:E:198:ILE:HD12	5:E:198:ILE:H	1.83	0.43
7:G:35:GLU:OE2	7:G:48:VAL:HG23	2.19	0.43
8:H:5:LEU:O	8:H:133:ASN:HB3	2.19	0.43
8:H:82:PRO:CG	11:K:54:ARG:HD2	2.46	0.43
8:H:95:TYR:CE2	8:H:97:MET:HG3	2.53	0.43
10:J:14:VAL:CG1	10:J:50:ILE:HD11	2.49	0.43
1:A:244:PRO:CG	1:A:245:PRO:HD3	2.48	0.43
1:A:452:LYS:HG3	2:B:1140:ALA:HB1	1.99	0.43
1:A:489:LEU:HD12	1:A:490:HIS:N	2.33	0.43
1:A:525:GLN:OE1	2:B:836:GLU:HG2	2.19	0.43
1:A:784:LEU:HD11	1:A:815:PHE:CE2	2.54	0.43
1:A:942:PHE:C	1:A:942:PHE:HD2	2.22	0.43
1:A:1116:LEU:HA	1:A:1329:THR:HA	2.01	0.43
1:A:1120:LEU:HD12	1:A:1120:LEU:N	2.28	0.43
1:A:1213:GLY:HA2	1:A:1216:ILE:CD1	2.48	0.43
1:A:1434:ALA:HA	1:A:1435:PRO:HD3	1.89	0.43
2:B:378:LEU:CD1	2:B:382:ILE:HD11	2.49	0.43
2:B:483:LEU:HD11	2:B:491:THR:CG2	2.49	0.43
2:B:502:ILE:HG22	2:B:507:LYS:HG3	2.01	0.43
2:B:560:GLU:O	2:B:561:TRP:CD1	2.72	0.43
3:C:29:MET:HE2	11:K:98:LEU:HD23	2.01	0.43
3:C:190:ASP:O	3:C:191:TYR:C	2.57	0.43
4:D:60:LYS:NZ	4:D:122:GLU:OE2	2.52	0.43
5:E:89:GLY:C	5:E:91:LYS:H	2.21	0.43
6:F:82:THR:HA	6:F:83:PRO:HD3	1.66	0.43
6:F:93:ILE:HG23	6:F:132:LEU:HD12	2.00	0.43
6:F:108:PHE:CD2	6:F:108:PHE:N	2.85	0.43
9:I:98:VAL:HG12	9:I:99:LEU:H	1.84	0.43
11:K:43:GLY:HA3	11:K:61:TYR:HE1	1.84	0.43
14:N:8:DG:H2''	14:N:9:DA:OP2	2.18	0.43
1:A:57:ARG:O	1:A:68:GLN:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:153:PRO:HB3	1:A:161:LEU:CD2	2.49	0.43
1:A:254:GLU:O	1:A:255:SER:OG	2.29	0.43
1:A:332:LYS:C	1:A:334:GLY:H	2.22	0.43
1:A:483:ASP:HB2	2:B:987:LYS:CB	2.49	0.43
1:A:541:ILE:HD13	1:A:549:MET:HE1	2.00	0.43
1:A:590:ARG:HG2	1:A:591:PHE:N	2.32	0.43
1:A:993:LEU:HD23	1:A:1022:LEU:HD21	2.01	0.43
1:A:1094:VAL:HG12	1:A:1113:THR:HG21	1.99	0.43
1:A:1348:LEU:HD23	1:A:1372:VAL:HG23	2.00	0.43
2:B:210:LYS:HG3	2:B:461:LEU:O	2.18	0.43
2:B:273:LEU:O	2:B:276:ILE:HB	2.19	0.43
2:B:293:PRO:HG2	2:B:296:GLU:CB	2.45	0.43
2:B:566:LEU:HD22	2:B:586:TRP:O	2.19	0.43
2:B:864:LYS:HG3	2:B:872:GLU:OE1	2.18	0.43
2:B:1181:GLU:H	2:B:1188:LYS:HG3	1.83	0.43
3:C:229:TYR:CD1	3:C:229:TYR:N	2.87	0.43
4:D:9:GLN:HE22	4:D:31:GLN:HB3	1.84	0.43
5:E:90:VAL:HG23	5:E:120:ALA:HA	2.01	0.43
5:E:155:ARG:O	5:E:156:LEU:HD23	2.19	0.43
6:F:74:ILE:HG22	6:F:75:PRO:N	2.33	0.43
6:F:138:LEU:HD22	6:F:139:PRO:HD2	2.00	0.43
9:I:55:THR:O	9:I:58:VAL:HG23	2.19	0.43
10:J:36:LEU:HD22	10:J:41:LEU:HD12	2.01	0.43
1:A:506:ALA:CB	1:A:508:PRO:HD2	2.49	0.43
1:A:531:ILE:N	1:A:653:VAL:HG11	2.34	0.43
1:A:540:PHE:CD1	1:A:540:PHE:N	2.87	0.43
1:A:586:ILE:HD11	1:A:633:VAL:HA	2.00	0.43
1:A:699:ALA:HB1	9:I:114:GLN:NE2	2.34	0.43
1:A:867:ILE:HD12	1:A:867:ILE:N	2.33	0.43
1:A:886:ILE:HG23	1:A:887:GLY:H	1.80	0.43
1:A:939:ASP:O	1:A:940:ARG:C	2.57	0.43
1:A:1341:ILE:CG2	1:A:1342:GLU:H	2.32	0.43
2:B:603:LEU:HB3	2:B:609:ILE:CD1	2.29	0.43
2:B:700:SER:O	2:B:701:ILE:HG22	2.18	0.43
2:B:816:GLU:N	2:B:816:GLU:OE1	2.49	0.43
3:C:31:ASN:O	3:C:32:SER:C	2.58	0.43
3:C:77:ILE:HA	3:C:129:ILE:HD11	2.01	0.43
3:C:174:ALA:O	3:C:175:ALA:CB	2.67	0.43
4:D:214:LEU:O	4:D:218:GLU:N	2.50	0.43
7:G:114:LEU:HD12	7:G:114:LEU:HA	1.90	0.43
9:I:88:SER:HB3	9:I:95:THR:HG21	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:12:LEU:HD23	11:K:16:GLU:O	2.19	0.43
1:A:123:ARG:O	1:A:124:GLN:C	2.57	0.42
1:A:179:LEU:CD1	1:A:297:GLN:HG3	2.49	0.42
1:A:380:VAL:HG13	1:A:385:ILE:CD1	2.48	0.42
1:A:477:PRO:HG2	1:A:521:MET:HG2	2.00	0.42
1:A:730:GLY:O	1:A:731:ARG:C	2.56	0.42
1:A:811:GLN:O	1:A:812:GLU:C	2.57	0.42
1:A:1202:MET:HE1	1:A:1207:LEU:HB3	2.00	0.42
1:A:1303:GLU:HG3	1:A:1303:GLU:O	2.19	0.42
1:A:1453:TYR:O	1:A:1454:MET:HB3	2.19	0.42
2:B:35:SER:HA	2:B:811:TYR:HE2	1.84	0.42
2:B:459:TYR:CE1	2:B:469:GLN:HB3	2.54	0.42
2:B:469:GLN:CG	2:B:470:LYS:N	2.80	0.42
2:B:498:THR:N	2:B:537:LYS:O	2.52	0.42
2:B:727:LYS:HE2	2:B:1049:ASP:OD1	2.20	0.42
2:B:731:VAL:HG12	2:B:732:SER:N	2.33	0.42
2:B:758:PHE:HZ	2:B:1031:LEU:HD22	1.84	0.42
2:B:797:TYR:O	10:J:1:MET:HG2	2.19	0.42
2:B:888:GLY:O	2:B:889:THR:C	2.56	0.42
2:B:1070:GLU:OE1	10:J:44:TYR:OH	2.36	0.42
2:B:1162:ILE:HG22	2:B:1163:CYS:N	2.33	0.42
3:C:24:ASN:CA	3:C:226:ASP:HB3	2.47	0.42
3:C:55:THR:O	3:C:55:THR:HG22	2.19	0.42
3:C:124:LEU:CD2	3:C:129:ILE:O	2.68	0.42
4:D:39:ASN:ND2	4:D:41:GLN:CG	2.82	0.42
4:D:153:ARG:NH2	4:D:184:ALA:HA	2.34	0.42
4:D:219:THR:HG22	4:D:220:LEU:O	2.19	0.42
5:E:136:ASN:OD1	5:E:138:ALA:N	2.52	0.42
7:G:38:CYS:HA	7:G:43:GLY:O	2.19	0.42
7:G:62:LEU:CB	7:G:63:PRO:CD	2.91	0.42
8:H:10:PHE:CD1	8:H:10:PHE:N	2.87	0.42
1:A:53:LEU:HD23	1:A:54:ASN:CB	2.46	0.42
1:A:293:GLU:O	1:A:295:LEU:N	2.52	0.42
1:A:335:ARG:HA	1:A:339:ASN:ND2	2.32	0.42
1:A:353:ILE:O	1:A:353:ILE:HG13	2.19	0.42
1:A:373:THR:HG21	2:B:1105:ALA:HB3	2.00	0.42
1:A:751:SER:O	1:A:752:LYS:CG	2.65	0.42
1:A:864:ILE:HG21	1:A:1374:VAL:HG22	2.02	0.42
1:A:1100:ARG:O	1:A:1100:ARG:HD2	2.19	0.42
1:A:1135:ARG:C	1:A:1137:ALA:H	2.22	0.42
1:A:1140:HIS:CA	1:A:1275:GLY:HA3	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1166:ASP:OD2	1:A:1239:ARG:NE	2.45	0.42
1:A:1376:THR:HG23	1:A:1377:THR:H	1.85	0.42
2:B:332:ASP:C	2:B:334:ILE:H	2.22	0.42
2:B:351:TYR:CD1	2:B:355:ILE:HD11	2.54	0.42
2:B:654:ARG:C	2:B:656:GLY:N	2.71	0.42
2:B:882:THR:HG21	2:B:935:ARG:CA	2.40	0.42
2:B:891:ASP:C	2:B:893:LEU:N	2.72	0.42
3:C:58:LEU:HD12	3:C:62:PHE:CD1	2.54	0.42
4:D:119:ARG:HG3	4:D:221:TYR:HE2	1.84	0.42
5:E:31:THR:OG1	5:E:34:GLU:N	2.35	0.42
5:E:154:ILE:O	5:E:196:VAL:HA	2.20	0.42
6:F:75:PRO:C	6:F:77:ASP:N	2.70	0.42
6:F:116:ASP:OD1	6:F:118:LEU:N	2.52	0.42
7:G:111:THR:HG22	7:G:113:HIS:H	1.84	0.42
8:H:143:LEU:HD12	8:H:143:LEU:N	2.34	0.42
9:I:55:THR:HG22	9:I:55:THR:O	2.20	0.42
9:I:55:THR:O	9:I:56:ALA:C	2.58	0.42
9:I:86:PHE:HE1	9:I:100:PHE:HB2	1.84	0.42
1:A:12:ARG:HD2	2:B:1218:THR:CG2	2.48	0.42
1:A:25:GLU:O	1:A:28:ARG:N	2.52	0.42
1:A:705:LYS:O	1:A:706:HIS:C	2.57	0.42
1:A:722:LEU:HD12	1:A:722:LEU:N	2.33	0.42
1:A:781:ASP:HB3	1:A:790:ASP:H	1.83	0.42
1:A:814:PHE:O	1:A:817:ALA:HB3	2.20	0.42
1:A:1400:CYS:O	1:A:1405:THR:HA	2.19	0.42
1:A:1409:LEU:O	1:A:1412:ALA:HB3	2.19	0.42
2:B:420:LEU:O	2:B:423:LYS:N	2.48	0.42
2:B:824:ILE:HG12	10:J:48:ARG:HH12	1.84	0.42
2:B:893:LEU:HD22	2:B:897:GLY:O	2.20	0.42
2:B:1065:GLN:HG3	2:B:1067:ARG:N	2.31	0.42
3:C:69:LEU:N	3:C:69:LEU:CD1	2.81	0.42
3:C:86:CYS:SG	3:C:87:PHE:N	2.92	0.42
3:C:131:HIS:HA	3:C:132:PRO:HD3	1.76	0.42
3:C:136:ASP:CB	3:C:141:GLY:H	2.32	0.42
6:F:71:GLU:O	6:F:72:LYS:C	2.57	0.42
6:F:74:ILE:HG22	6:F:75:PRO:O	2.19	0.42
6:F:82:THR:HG23	6:F:83:PRO:HD2	2.01	0.42
7:G:145:VAL:CG1	7:G:146:LYS:N	2.81	0.42
8:H:58:THR:C	8:H:59:ILE:HG13	2.40	0.42
12:L:36:SER:O	12:L:37:LYS:O	2.37	0.42
12:L:58:LYS:O	12:L:59:ALA:O	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:T:16:DT:H2''	13:T:17:DT:C5'	2.37	0.42
1:A:38:PRO:CD	1:A:39:GLU:H	2.32	0.42
1:A:90:VAL:HG13	1:A:297:GLN:HA	2.01	0.42
1:A:398:GLU:O	1:A:399:HIS:C	2.57	0.42
1:A:567:LYS:CG	8:H:94:ASP:O	2.64	0.42
1:A:578:LEU:HD23	1:A:612:ILE:CD1	2.50	0.42
1:A:692:ASP:C	1:A:694:THR:H	2.21	0.42
1:A:709:THR:HG22	1:A:710:LEU:H	1.84	0.42
1:A:1243:VAL:HG22	1:A:1244:ARG:N	2.34	0.42
1:A:1369:ALA:HA	1:A:1372:VAL:HG12	2.01	0.42
1:A:1450:LEU:HD11	7:G:18:PHE:O	2.18	0.42
2:B:205:ILE:O	2:B:206:ASN:C	2.57	0.42
2:B:298:LEU:N	2:B:298:LEU:CD2	2.82	0.42
2:B:449:ASN:C	2:B:451:LYS:N	2.70	0.42
2:B:700:SER:O	2:B:701:ILE:CG2	2.68	0.42
2:B:766:ARG:NH2	15:P:11:U:H3	2.17	0.42
2:B:828:ALA:HB2	2:B:1085:ILE:HG23	2.02	0.42
2:B:880:THR:O	2:B:881:ASN:HB2	2.20	0.42
2:B:955:THR:HG23	2:B:956:THR:N	2.33	0.42
2:B:975:GLN:HG2	2:B:976:ILE:H	1.84	0.42
4:D:208:GLU:O	4:D:209:ARG:C	2.58	0.42
6:F:108:PHE:CE1	6:F:131:PRO:HG3	2.54	0.42
6:F:150:GLU:O	6:F:151:LEU:C	2.57	0.42
7:G:1:MET:O	7:G:2:PHE:O	2.36	0.42
7:G:45:ILE:HD13	7:G:78:VAL:HG11	2.01	0.42
14:N:4:DA:H2''	14:N:5:DC:C5	2.54	0.42
1:A:96:ILE:HG22	1:A:97:ALA:N	2.34	0.42
1:A:222:LEU:HB3	1:A:223:GLY:H	1.72	0.42
1:A:862:ASN:HA	5:E:174:GLN:HB3	2.01	0.42
1:A:971:PHE:C	1:A:973:ILE:N	2.72	0.42
1:A:1019:CYS:HA	1:A:1022:LEU:HB3	2.02	0.42
1:A:1054:LEU:HD13	6:F:84:TYR:OH	2.19	0.42
1:A:1121:GLU:O	1:A:1122:PRO:C	2.57	0.42
1:A:1129:GLU:O	1:A:1130:GLN:C	2.57	0.42
1:A:1202:MET:SD	1:A:1207:LEU:HD12	2.60	0.42
2:B:247:GLY:C	2:B:249:ARG:H	2.23	0.42
2:B:510:LYS:HD2	2:B:511:PRO:HD3	2.00	0.42
2:B:593:PRO:CA	2:B:596:LEU:HB3	2.49	0.42
2:B:653:VAL:HG22	2:B:689:LEU:HD13	2.02	0.42
2:B:806:THR:O	2:B:809:MET:HG3	2.20	0.42
2:B:821:GLN:HE22	2:B:851:PHE:CA	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:955:THR:HG23	2:B:956:THR:H	1.84	0.42
3:C:238:ILE:HG12	3:C:246:ARG:NH1	2.35	0.42
4:D:53:SER:HB3	4:D:153:ARG:H	1.84	0.42
4:D:156:ASP:O	4:D:160:VAL:HG23	2.20	0.42
4:D:210:ILE:O	4:D:213:GLU:HB2	2.19	0.42
7:G:21:ARG:HG2	7:G:24:GLN:HG2	2.02	0.42
7:G:99:PHE:O	7:G:99:PHE:CD1	2.73	0.42
7:G:153:GLN:HG2	7:G:154:VAL:N	2.34	0.42
8:H:3:ASN:O	8:H:60:ALA:HB1	2.20	0.42
8:H:11:GLN:O	8:H:28:ALA:CB	2.67	0.42
8:H:139:ASN:O	8:H:140:ALA:CB	2.67	0.42
10:J:16:ASP:O	10:J:18:TRP:N	2.52	0.42
12:L:28:LYS:HD2	12:L:39:SER:OG	2.18	0.42
1:A:464:PRO:O	1:A:465:TYR:HB2	2.20	0.42
1:A:474:VAL:HG23	1:A:521:MET:HE1	2.02	0.42
1:A:637:LYS:HB3	1:A:641:VAL:CG2	2.33	0.42
1:A:857:ARG:CD	1:A:861:GLY:O	2.60	0.42
1:A:859:SER:HB2	1:A:1422:ARG:HB2	2.01	0.42
1:A:867:ILE:HG12	1:A:1000:LEU:HD11	2.01	0.42
1:A:946:VAL:HG22	5:E:201:LYS:HD2	2.02	0.42
1:A:1011:GLN:NE2	1:A:1015:VAL:HG21	2.35	0.42
1:A:1152:ILE:HD11	9:I:44:TYR:CD2	2.47	0.42
1:A:1164:PRO:C	1:A:1166:ASP:H	2.23	0.42
1:A:1189:SER:OG	1:A:1256:GLU:OE1	2.32	0.42
2:B:46:GLN:NE2	2:B:496:ARG:CB	2.82	0.42
2:B:227:LYS:H	2:B:395:GLN:CD	2.23	0.42
2:B:294:ASP:C	2:B:296:GLU:N	2.72	0.42
2:B:459:TYR:CZ	2:B:469:GLN:HB3	2.55	0.42
2:B:806:THR:CG2	2:B:1046:PRO:HD3	2.47	0.42
2:B:992:ILE:CD1	11:K:66:PRO:HB2	2.49	0.42
2:B:1110:PRO:HG3	2:B:1125:ASP:HB3	2.01	0.42
3:C:100:THR:HG21	3:C:102:GLN:NE2	2.35	0.42
3:C:166:GLU:HG3	11:K:10:PHE:HZ	1.84	0.42
4:D:52:LEU:O	4:D:53:SER:OG	2.36	0.42
4:D:119:ARG:HB2	4:D:221:TYR:CE2	2.53	0.42
5:E:78:LEU:CA	5:E:107:THR:HB	2.41	0.42
6:F:70:LYS:C	6:F:72:LYS:N	2.72	0.42
7:G:51:TYR:C	7:G:51:TYR:CD2	2.93	0.42
7:G:53:ASN:N	7:G:53:ASN:HD22	2.17	0.42
7:G:111:THR:O	7:G:112:LYS:C	2.57	0.42
8:H:5:LEU:HD13	8:H:135:LEU:HD12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:129:TYR:H	8:H:130:ARG:NH1	2.14	0.42
9:I:50:THR:HG23	9:I:52:ILE:HG12	2.02	0.42
10:J:35:ALA:O	10:J:38:ARG:HB3	2.19	0.42
10:J:42:LYS:HE2	10:J:43:ARG:H	1.85	0.42
11:K:79:GLU:CG	11:K:80:GLY:N	2.82	0.42
12:L:70:ARG:HG2	12:L:70:ARG:HH11	1.84	0.42
1:A:443:LEU:HD22	1:A:443:LEU:HA	1.87	0.42
1:A:640:GLN:HA	1:A:640:GLN:OE1	2.19	0.42
1:A:680:THR:HG23	2:B:729:ILE:HD11	2.01	0.42
1:A:715:GLU:OE1	1:A:774:ARG:HD3	2.19	0.42
1:A:768:GLN:HG2	1:A:816:HIS:CA	2.26	0.42
1:A:1074:GLU:H	1:A:1075:PRO:HD2	1.85	0.42
1:A:1119:TYR:O	1:A:1120:LEU:O	2.38	0.42
1:A:1161:THR:O	1:A:1163:ILE:N	2.53	0.42
2:B:122:LEU:O	2:B:206:ASN:N	2.53	0.42
2:B:257:LYS:N	2:B:270:LYS:O	2.53	0.42
2:B:469:GLN:HG3	2:B:470:LYS:N	2.23	0.42
2:B:653:VAL:HG22	2:B:689:LEU:HB3	2.02	0.42
2:B:831:SER:CB	2:B:994:TYR:OH	2.68	0.42
2:B:969:ARG:HD3	3:C:61:GLU:OE2	2.20	0.42
2:B:1116:ARG:HD2	2:B:1198:TYR:CD1	2.55	0.42
3:C:3:GLU:HG3	11:K:104:ASN:HD21	1.85	0.42
3:C:26:ASP:O	3:C:29:MET:HB3	2.20	0.42
3:C:114:TYR:CD2	3:C:140:ASN:HB3	2.55	0.42
4:D:137:ASN:C	4:D:139:LYS:H	2.23	0.42
5:E:96:PHE:O	5:E:99:HIS:HB3	2.18	0.42
6:F:77:ASP:O	6:F:78:GLN:CB	2.65	0.42
7:G:29:LYS:O	7:G:30:LEU:C	2.58	0.42
9:I:76:PRO:HD3	9:I:110:PHE:CD2	2.54	0.42
9:I:80:SER:OG	9:I:105:SER:CB	2.68	0.42
11:K:79:GLU:C	11:K:81:TYR:H	2.23	0.42
1:A:332:LYS:C	1:A:333:GLU:HG2	2.40	0.42
1:A:351:THR:HG21	2:B:1103:ILE:HG13	2.01	0.42
1:A:370:ILE:CG2	1:A:374:LEU:HG	2.50	0.42
1:A:531:ILE:HD13	1:A:653:VAL:HG21	1.98	0.42
1:A:785:PRO:HG2	1:A:786:HIS:CD2	2.54	0.42
1:A:867:ILE:CG1	1:A:1000:LEU:HD11	2.50	0.42
1:A:1114:PRO:O	1:A:1330:ASN:ND2	2.53	0.42
1:A:1115:SER:OG	1:A:1116:LEU:N	2.51	0.42
1:A:1293:SER:HB3	1:A:1297:GLU:O	2.20	0.42
1:A:1438:THR:O	6:F:92:ARG:NH1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1450:LEU:O	1:A:1450:LEU:HG	2.19	0.42
2:B:53:GLN:CG	2:B:547:VAL:CG2	2.96	0.42
2:B:281:PRO:HB3	2:B:320:ASP:OD2	2.18	0.42
2:B:642:ASP:CA	2:B:649:LYS:HA	2.27	0.42
2:B:659:ALA:HA	2:B:662:MET:HE2	2.02	0.42
2:B:800:GLN:CB	10:J:52:THR:CG2	2.96	0.42
2:B:839:MET:CE	2:B:1010:LEU:HD11	2.50	0.42
2:B:1034:VAL:O	2:B:1036:ALA:N	2.52	0.42
2:B:1065:GLN:NE2	2:B:1066:SER:N	2.67	0.42
3:C:213:PRO:O	3:C:214:ASN:HB3	2.19	0.42
4:D:64:VAL:HG22	4:D:129:LEU:CD2	2.49	0.42
7:G:1:MET:HE1	7:G:3:PHE:HE1	1.85	0.42
9:I:53:GLY:HA2	9:I:56:ALA:HB2	2.02	0.42
1:A:115:LEU:CD1	1:A:142:CYS:HB3	2.50	0.42
1:A:134:ARG:C	1:A:136:ALA:N	2.73	0.42
1:A:444:PHE:HB3	1:A:458:HIS:CD2	2.55	0.42
1:A:528:LEU:HD23	1:A:751:SER:CB	2.45	0.42
1:A:537:ARG:HH22	8:H:122:LEU:CG	2.32	0.42
1:A:896:ARG:HB3	1:A:897:TYR:HD1	1.85	0.42
1:A:1402:PHE:O	1:A:1403:GLU:CB	2.68	0.42
2:B:449:ASN:O	2:B:450:ALA:C	2.58	0.42
2:B:610:ASN:HA	2:B:611:PRO:HD3	1.92	0.42
2:B:895:ASP:C	2:B:897:GLY:N	2.73	0.42
2:B:1023:VAL:C	2:B:1025:HIS:N	2.73	0.42
3:C:31:ASN:O	3:C:34:ARG:HB3	2.20	0.42
4:D:67:ARG:HA	4:D:133:THR:HG21	2.02	0.42
5:E:156:LEU:HD12	5:E:195:VAL:CG1	2.50	0.42
8:H:4:THR:HG22	8:H:5:LEU:N	2.35	0.42
8:H:98:TYR:HE1	8:H:139:ASN:HA	1.85	0.42
12:L:49:LYS:O	12:L:50:ASP:CB	2.66	0.42
1:A:62:ASP:O	1:A:62:ASP:OD1	2.38	0.42
1:A:168:GLY:O	1:A:169:ASN:C	2.58	0.42
1:A:362:ASP:O	1:A:458:HIS:HA	2.20	0.42
1:A:391:LEU:O	1:A:394:ASN:HB3	2.20	0.42
1:A:440:ASP:O	1:A:460:VAL:HG23	2.20	0.42
1:A:456:MET:HE1	1:A:507:VAL:HG13	2.00	0.42
1:A:474:VAL:C	1:A:477:PRO:HD2	2.39	0.42
1:A:521:MET:O	1:A:624:SER:HB3	2.20	0.42
1:A:528:LEU:HD11	1:A:619:LYS:H	1.85	0.42
1:A:616:VAL:HG12	1:A:617:VAL:N	2.34	0.42
1:A:626:ASN:C	1:A:628:GLY:H	2.21	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:675:THR:HG21	1:A:736:ASN:CG	2.41	0.42
1:A:744:LYS:C	1:A:748:MET:HE2	2.40	0.42
1:A:765:VAL:HG23	1:A:802:ASN:O	2.20	0.42
1:A:879:GLU:OE2	1:A:959:ASN:HB2	2.20	0.42
1:A:885:THR:HG23	1:A:893:PHE:HE1	1.85	0.42
1:A:1017:LEU:HD23	5:E:204:THR:C	2.40	0.42
1:A:1277:GLU:O	1:A:1279:ILE:HD12	2.20	0.42
1:A:1314:SER:C	1:A:1315:GLU:HG3	2.40	0.42
2:B:906:SER:O	2:B:907:GLY:O	2.38	0.42
2:B:956:THR:HG22	2:B:957:ASN:N	2.34	0.42
3:C:16:ASP:O	3:C:17:ASN:CG	2.59	0.42
5:E:13:TRP:O	5:E:16:PHE:N	2.53	0.42
5:E:16:PHE:CD1	5:E:58:MET:HE2	2.54	0.42
5:E:134:THR:O	5:E:135:PHE:CD1	2.73	0.42
5:E:207:ARG:HB3	5:E:207:ARG:NH1	2.34	0.42
7:G:153:GLN:CG	7:G:154:VAL:HG23	2.43	0.42
8:H:12:VAL:HG13	8:H:26:ILE:CG2	2.50	0.42
8:H:26:ILE:CG2	8:H:27:GLU:H	2.24	0.42
8:H:84:ALA:HA	8:H:87:ARG:HB2	2.01	0.42
9:I:19:ASP:CB	9:I:24:ARG:HG3	2.50	0.42
1:A:293:GLU:C	1:A:295:LEU:N	2.73	0.41
1:A:315:LEU:CD1	2:B:471:LYS:HB3	2.45	0.41
1:A:562:THR:HB	8:H:98:TYR:CE2	2.55	0.41
1:A:779:PHE:HD1	1:A:784:LEU:HA	1.85	0.41
1:A:800:VAL:HG11	1:A:808:LEU:HD11	2.02	0.41
1:A:840:ARG:HH22	1:A:1106:ASN:HD21	1.67	0.41
1:A:885:THR:O	1:A:885:THR:CG2	2.67	0.41
1:A:898:ARG:HA	1:A:933:TYR:CD1	2.55	0.41
1:A:1010:ALA:HA	1:A:1013:ASP:OD2	2.20	0.41
1:A:1033:GLN:O	1:A:1036:ARG:NH1	2.53	0.41
1:A:1191:TRP:HD1	1:A:1256:GLU:CB	2.32	0.41
2:B:44:VAL:HG23	2:B:48:LEU:CD1	2.50	0.41
2:B:235:SER:HB3	2:B:258:LEU:HG	2.02	0.41
2:B:980:PHE:HE2	2:B:1094:ARG:CB	2.29	0.41
2:B:1100:ASP:OD2	11:K:1:MET:HB2	2.20	0.41
2:B:1177:HIS:O	2:B:1178:ASN:HB2	2.18	0.41
3:C:67:LEU:HD23	3:C:70:ILE:HD11	2.02	0.41
5:E:98:ILE:HG22	5:E:102:GLU:CD	2.41	0.41
5:E:167:ARG:HA	5:E:167:ARG:HD3	1.76	0.41
6:F:85:MET:HG2	6:F:89:GLU:HB2	2.02	0.41
8:H:108:SER:O	8:H:110:ASP:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:41:MET:HE1	1:A:42:ASP:HB2	2.02	0.41
1:A:334:GLY:O	1:A:335:ARG:C	2.58	0.41
1:A:481:ASP:OD2	1:A:481:ASP:N	2.53	0.41
1:A:537:ARG:NH1	8:H:122:LEU:HG	2.34	0.41
1:A:636:GLU:OE2	1:A:962:ARG:NH1	2.53	0.41
1:A:745:GLN:HA	1:A:748:MET:CE	2.50	0.41
1:A:838:GLN:O	1:A:841:LEU:HB2	2.20	0.41
2:B:23:ALA:O	2:B:654:ARG:HB3	2.20	0.41
2:B:610:ASN:C	2:B:612:GLU:H	2.23	0.41
2:B:664:THR:CG2	2:B:678:GLU:N	2.83	0.41
2:B:781:PHE:O	2:B:782:LEU:HG	2.20	0.41
2:B:1011:ILE:O	2:B:1011:ILE:HG22	2.19	0.41
2:B:1047:PHE:O	2:B:1048:THR:HG23	2.20	0.41
2:B:1064:TYR:O	2:B:1065:GLN:C	2.59	0.41
2:B:1072:MET:HE3	2:B:1085:ILE:CB	2.41	0.41
2:B:1135:ARG:HG2	2:B:1139:ILE:HD11	2.02	0.41
3:C:124:LEU:HD21	3:C:129:ILE:O	2.20	0.41
3:C:213:PRO:O	3:C:214:ASN:CB	2.68	0.41
3:C:269:LYS:HD3	3:C:270:VAL:HG13	2.01	0.41
4:D:53:SER:OG	4:D:54:GLU:N	2.52	0.41
4:D:68:ARG:C	4:D:70:PHE:H	2.22	0.41
9:I:2:THR:O	9:I:3:THR:C	2.58	0.41
9:I:61:ASP:C	9:I:63:GLY:H	2.23	0.41
10:J:6:ARG:HB3	10:J:11:GLY:O	2.20	0.41
11:K:13:GLY:O	11:K:14:GLU:O	2.38	0.41
13:T:12:DG:H2''	13:T:13:DT:O5'	2.20	0.41
1:A:134:ARG:C	1:A:136:ALA:H	2.23	0.41
1:A:705:LYS:HB2	1:A:708:MET:CE	2.49	0.41
1:A:767:GLN:NE2	1:A:797:LYS:O	2.53	0.41
1:A:846:GLU:OE1	1:A:1425:SER:OG	2.38	0.41
1:A:894:GLU:HG2	1:A:933:TYR:OH	2.21	0.41
1:A:910:PRO:HB3	1:A:917:SER:N	2.29	0.41
1:A:946:VAL:HG13	5:E:201:LYS:CB	2.38	0.41
1:A:1107:VAL:HG21	1:A:1383:SER:HB3	2.02	0.41
1:A:1330:ASN:O	1:A:1332:PHE:N	2.53	0.41
2:B:26:THR:HA	2:B:708:GLU:OE1	2.20	0.41
2:B:886:LYS:HB3	2:B:887:HIS:H	1.73	0.41
2:B:982:SER:HB3	2:B:1092:TYR:CE2	2.55	0.41
2:B:1001:PHE:HD2	3:C:34:ARG:HH21	1.64	0.41
5:E:52:ARG:CG	5:E:52:ARG:NH1	2.81	0.41
5:E:89:GLY:HA2	5:E:117:THR:OG1	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:116:ASP:OD1	6:F:119:ARG:N	2.54	0.41
8:H:24:CYS:HB2	8:H:44:VAL:CG2	2.48	0.41
8:H:41:ASP:O	8:H:42:ILE:CB	2.67	0.41
1:A:92:HIS:O	1:A:94:GLY:N	2.53	0.41
1:A:343:LYS:HB3	2:B:1117:GLN:OE1	2.21	0.41
1:A:377:PRO:HD2	1:A:493:GLN:OE1	2.20	0.41
1:A:500:GLU:OE2	1:A:1438:THR:HG21	2.21	0.41
1:A:516:SER:O	1:A:518:LYS:HB3	2.20	0.41
1:A:543:LEU:HD12	1:A:547:LEU:HG	2.03	0.41
1:A:1037:LEU:HD13	1:A:1041:ALA:CB	2.50	0.41
1:A:1276:VAL:CG1	1:A:1277:GLU:H	2.29	0.41
1:A:1444:MET:O	6:F:133:VAL:N	2.53	0.41
2:B:344:LYS:O	2:B:345:LYS:C	2.59	0.41
2:B:355:ILE:HG13	2:B:355:ILE:H	1.71	0.41
2:B:593:PRO:CG	2:B:617:ARG:NH2	2.83	0.41
2:B:619:ILE:CG2	9:I:61:ASP:HB2	2.51	0.41
2:B:685:LEU:HG	2:B:686:ASN:N	2.33	0.41
2:B:745:PRO:C	2:B:747:MET:N	2.72	0.41
2:B:868:MET:O	2:B:870:ILE:HG13	2.19	0.41
2:B:1183:LYS:C	2:B:1185:CYS:N	2.73	0.41
4:D:2:ASN:O	4:D:4:SER:N	2.44	0.41
4:D:155:ARG:CG	4:D:155:ARG:NH1	2.84	0.41
6:F:90:ARG:HG2	6:F:155:LEU:HD13	2.02	0.41
7:G:20:PRO:CG	7:G:21:ARG:H	2.33	0.41
8:H:63:LEU:CD1	8:H:64:ASN:N	2.84	0.41
12:L:27:LEU:HB2	12:L:28:LYS:H	1.78	0.41
1:A:188:ASP:O	1:A:195:ASP:HA	2.20	0.41
1:A:218:ASP:O	1:A:219:PHE:C	2.59	0.41
1:A:483:ASP:HB2	2:B:987:LYS:HB3	2.01	0.41
1:A:614:PHE:CB	8:H:122:LEU:HD21	2.50	0.41
1:A:865:GLN:OE1	1:A:869:GLY:N	2.44	0.41
1:A:930:ASP:O	1:A:931:GLU:C	2.58	0.41
1:A:1035:TYR:O	1:A:1036:ARG:C	2.58	0.41
1:A:1317:MET:C	1:A:1319:VAL:H	2.24	0.41
1:A:1431:GLY:HA3	2:B:1197:PRO:HD3	2.02	0.41
1:A:1446:ASP:O	1:A:1447:GLU:C	2.58	0.41
2:B:119:LEU:HD22	2:B:789:MET:HB2	2.02	0.41
2:B:343:ILE:HG23	2:B:347:LYS:HE2	2.01	0.41
2:B:744:HIS:CG	2:B:745:PRO:HD2	2.55	0.41
2:B:795:ILE:HD12	2:B:795:ILE:N	2.36	0.41
2:B:880:THR:HB	2:B:934:LYS:CD	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:893:LEU:C	2:B:894:ASP:O	2.58	0.41
2:B:957:ASN:O	2:B:958:GLN:C	2.58	0.41
2:B:1074:ASN:O	2:B:1076:HIS:N	2.53	0.41
3:C:209:TYR:H	3:C:209:TYR:HD1	1.69	0.41
6:F:73:ALA:CB	6:F:143:PHE:H	2.34	0.41
6:F:118:LEU:O	6:F:122:MET:CG	2.68	0.41
12:L:53:HIS:C	12:L:55:ILE:HD13	2.41	0.41
1:A:16:GLU:CG	2:B:1220:ARG:HA	2.51	0.41
1:A:58:LEU:O	1:A:59:GLY:O	2.39	0.41
1:A:441:PRO:HG3	1:A:498:ARG:HB2	2.02	0.41
1:A:455:MET:HE3	2:B:1134:GLU:HG3	2.02	0.41
1:A:523:ILE:CD1	1:A:649:ILE:HG21	2.51	0.41
1:A:552:TRP:HE3	1:A:651:LYS:HB3	1.85	0.41
1:A:622:VAL:O	1:A:622:VAL:HG22	2.20	0.41
1:A:870:GLU:O	1:A:871:ASP:HB3	2.19	0.41
1:A:874:ASP:OD1	1:A:874:ASP:C	2.59	0.41
1:A:1325:THR:HG22	1:A:1326:ARG:HG3	2.01	0.41
1:A:1420:ASP:O	1:A:1421:CYS:CB	2.64	0.41
2:B:116:GLU:C	2:B:118:ARG:H	2.24	0.41
2:B:255:GLN:O	2:B:271:ALA:HB1	2.20	0.41
2:B:278:GLN:HG2	2:B:279:ASP:N	2.35	0.41
2:B:303:TYR:HH	2:B:586:TRP:HH2	1.65	0.41
2:B:705:MET:HE1	2:B:742:GLU:HG2	2.02	0.41
2:B:1003:ALA:O	3:C:177:GLU:HG2	2.21	0.41
4:D:130:LEU:C	4:D:132:GLN:N	2.73	0.41
4:D:153:ARG:HD3	4:D:154:PHE:CE1	2.54	0.41
5:E:205:SER:O	5:E:206:GLY:C	2.59	0.41
8:H:77:ARG:O	8:H:78:SER:O	2.38	0.41
9:I:35:VAL:CG1	9:I:36:GLU:N	2.79	0.41
11:K:98:LEU:O	11:K:99:GLY:C	2.59	0.41
1:A:515:GLN:HB2	1:A:1071:SER:CB	2.51	0.41
1:A:567:LYS:HG2	1:A:568:PRO:CD	2.51	0.41
1:A:874:ASP:N	1:A:1058:VAL:HG23	2.36	0.41
1:A:967:ALA:HA	1:A:1044:TRP:CZ3	2.56	0.41
1:A:1118:VAL:O	1:A:1118:VAL:HG23	2.20	0.41
1:A:1135:ARG:HB2	1:A:1306:LEU:HD11	2.02	0.41
1:A:1230:GLU:C	1:A:1232:ASN:H	2.23	0.41
1:A:1434:ALA:O	1:A:1436:ILE:N	2.53	0.41
2:B:51:PHE:O	2:B:54:PHE:HB3	2.21	0.41
2:B:224:GLN:O	2:B:238:ALA:HA	2.20	0.41
2:B:467:GLY:N	2:B:475:SER:HB3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:582:VAL:O	2:B:582:VAL:HG12	2.21	0.41
2:B:656:GLY:O	2:B:657:HIS:C	2.59	0.41
2:B:757:PRO:HG2	2:B:984:HIS:CE1	2.55	0.41
2:B:766:ARG:HH11	2:B:766:ARG:CG	2.31	0.41
2:B:797:TYR:O	10:J:1:MET:CG	2.69	0.41
3:C:43:THR:CG2	3:C:44:LEU:N	2.60	0.41
3:C:99:LEU:HA	3:C:119:VAL:O	2.20	0.41
4:D:176:GLU:HG2	4:D:197:SER:OG	2.20	0.41
5:E:14:ARG:HB3	5:E:141:VAL:O	2.19	0.41
5:E:112:TYR:CZ	5:E:136:ASN:HB2	2.55	0.41
5:E:112:TYR:HE1	5:E:136:ASN:HD22	1.68	0.41
5:E:159:ASP:O	5:E:160:GLU:C	2.59	0.41
5:E:164:LEU:HD11	5:E:211:TYR:CE1	2.56	0.41
5:E:165:LEU:HD21	5:E:175:LEU:HD11	2.03	0.41
5:E:172:GLU:O	5:E:175:LEU:HB2	2.21	0.41
5:E:190:LEU:HA	5:E:190:LEU:HD22	1.84	0.41
6:F:89:GLU:OE2	6:F:134:ILE:HG21	2.20	0.41
6:F:109:VAL:CG2	6:F:124:GLU:HG2	2.50	0.41
8:H:89:LEU:HB2	8:H:91:ASP:OD1	2.21	0.41
8:H:128:ASN:OD1	8:H:128:ASN:O	2.38	0.41
9:I:61:ASP:O	9:I:63:GLY:N	2.54	0.41
1:A:239:LEU:HD12	1:A:239:LEU:HA	1.65	0.41
1:A:565:ILE:HD13	8:H:46:LEU:HD12	2.03	0.41
1:A:635:ARG:HH21	1:A:877:HIS:HA	1.84	0.41
1:A:913:LEU:HD21	1:A:915:SER:OG	2.20	0.41
1:A:921:GLY:O	1:A:922:ASP:C	2.58	0.41
1:A:1301:GLU:O	1:A:1302:PRO:O	2.39	0.41
1:A:1342:GLU:CD	5:E:198:ILE:HG21	2.41	0.41
2:B:120:ARG:CD	2:B:955:THR:HG21	2.50	0.41
2:B:705:MET:HE3	2:B:742:GLU:HB2	2.02	0.41
2:B:840:ILE:HB	2:B:1011:ILE:HB	2.02	0.41
2:B:1020:ARG:HG3	2:B:1020:ARG:NH1	2.34	0.41
3:C:20:PHE:HE2	3:C:232:VAL:HG23	1.86	0.41
3:C:79:GLN:HG3	3:C:127:ARG:HD2	2.03	0.41
3:C:221:TYR:CD1	3:C:222:LYS:HG3	2.55	0.41
4:D:71:LYS:HA	4:D:74:GLN:HB2	2.02	0.41
4:D:130:LEU:CD1	4:D:142:LYS:HG3	2.51	0.41
5:E:38:PRO:HG2	5:E:41:ASP:OD2	2.21	0.41
5:E:94:LYS:HE2	5:E:98:ILE:HD11	2.02	0.41
6:F:96:THR:O	6:F:99:LEU:HB3	2.21	0.41
9:I:29:CYS:SG	9:I:31:THR:HB	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:111:THR:CG2	9:I:112:SER:H	2.33	0.41
10:J:14:VAL:O	10:J:14:VAL:CG1	2.68	0.41
10:J:44:TYR:HD2	10:J:44:TYR:N	2.03	0.41
10:J:56:LEU:HB3	10:J:60:PHE:CE2	2.55	0.41
1:A:298:PHE:O	1:A:301:ALA:HB3	2.21	0.41
1:A:319:GLY:O	1:A:320:ARG:C	2.60	0.41
1:A:349:ALA:C	2:B:1128:LEU:HD11	2.41	0.41
1:A:351:THR:CG2	2:B:1103:ILE:HG13	2.51	0.41
1:A:360:GLU:C	1:A:471:ASN:HD22	2.24	0.41
1:A:371:ALA:HB2	1:A:462:VAL:HG13	2.03	0.41
1:A:383:TYR:N	1:A:383:TYR:HD2	2.15	0.41
1:A:427:GLN:HB2	1:A:430:TRP:NE1	2.35	0.41
1:A:434:ARG:HG2	1:A:434:ARG:NH1	2.33	0.41
1:A:535:THR:HG23	1:A:575:LYS:HG2	2.02	0.41
1:A:600:PRO:HG2	1:A:601:LYS:HG3	2.03	0.41
1:A:614:PHE:HB2	8:H:122:LEU:HD21	2.02	0.41
1:A:741:ASN:HD22	1:A:744:LYS:N	2.14	0.41
1:A:886:ILE:CG2	1:A:887:GLY:H	2.34	0.41
1:A:897:TYR:HD1	1:A:897:TYR:H	1.67	0.41
1:A:919:ILE:HD13	1:A:983:ILE:HD12	2.03	0.41
1:A:944:ARG:CZ	1:A:1298:TYR:CE1	3.04	0.41
1:A:1006:ILE:HD12	5:E:167:ARG:HB2	2.03	0.41
1:A:1026:LEU:HD23	1:A:1026:LEU:HA	1.72	0.41
1:A:1094:VAL:O	1:A:1095:THR:C	2.60	0.41
1:A:1139:GLU:O	1:A:1140:HIS:C	2.60	0.41
1:A:1224:LEU:HD12	1:A:1241:ARG:O	2.21	0.41
1:A:1276:VAL:CG1	1:A:1277:GLU:N	2.82	0.41
2:B:114:PRO:O	2:B:116:GLU:N	2.54	0.41
2:B:221:ASN:HA	2:B:241:ARG:O	2.21	0.41
2:B:306:ASN:C	2:B:308:TRP:N	2.74	0.41
2:B:311:LEU:O	2:B:314:LEU:N	2.54	0.41
2:B:323:VAL:O	2:B:323:VAL:HG12	2.20	0.41
2:B:326:ASP:OD1	2:B:329:THR:N	2.47	0.41
2:B:332:ASP:OD1	2:B:348:ARG:CZ	2.69	0.41
2:B:334:ILE:HB	2:B:352:ALA:HB2	2.02	0.41
2:B:571:PRO:HG2	2:B:572:HIS:CE1	2.56	0.41
2:B:619:ILE:HD13	9:I:64:SER:OG	2.21	0.41
2:B:620:ARG:NH2	9:I:86:PHE:CD2	2.89	0.41
2:B:686:ASN:C	2:B:688:GLY:N	2.74	0.41
2:B:859:TYR:OH	2:B:941:LEU:HD12	2.21	0.41
2:B:918:ILE:HD12	2:B:935:ARG:NH1	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:999:MET:HG2	2:B:1007:VAL:CG2	2.50	0.41
2:B:999:MET:HB3	2:B:1007:VAL:HG21	2.03	0.41
2:B:1041:GLU:O	2:B:1042:GLY:C	2.59	0.41
2:B:1169:MET:O	2:B:1170:THR:C	2.58	0.41
3:C:101:LEU:HD13	3:C:118:LEU:CD2	2.31	0.41
5:E:74:ASP:OD1	5:E:74:ASP:N	2.50	0.41
6:F:75:PRO:C	6:F:77:ASP:H	2.24	0.41
6:F:85:MET:HB3	6:F:155:LEU:HD11	2.02	0.41
6:F:90:ARG:CG	6:F:91:ALA:N	2.81	0.41
7:G:20:PRO:HG2	7:G:21:ARG:N	2.36	0.41
7:G:114:LEU:HD23	7:G:161:GLY:O	2.20	0.41
8:H:32:THR:CG2	8:H:33:GLN:N	2.80	0.41
9:I:82:GLU:HB3	9:I:104:LEU:CG	2.50	0.41
9:I:94:ASP:O	9:I:95:THR:O	2.38	0.41
10:J:2:ILE:HG23	10:J:3:VAL:H	1.85	0.41
11:K:40:HIS:O	11:K:41:THR:C	2.59	0.41
11:K:51:LEU:HD13	11:K:59:ALA:HB3	2.03	0.41
12:L:29:TYR:HA	12:L:57:LEU:O	2.20	0.41
1:A:112:LYS:HG2	1:A:113:LEU:N	2.36	0.41
1:A:227:VAL:O	1:A:228:PHE:HD2	2.04	0.41
1:A:355:GLY:HA3	1:A:482:PHE:CZ	2.56	0.41
1:A:416:ARG:NH1	1:A:417:TYR:HE2	2.19	0.41
1:A:574:GLY:O	1:A:575:LYS:C	2.59	0.41
1:A:783:THR:HG21	1:A:815:PHE:CE2	2.56	0.41
1:A:818:MET:N	2:B:514:LEU:HD23	2.35	0.41
1:A:825:ILE:HD13	2:B:512:ARG:HB3	2.00	0.41
1:A:1224:LEU:HG	1:A:1226:VAL:HG23	2.02	0.41
1:A:1225:PHE:HZ	1:A:1227:ILE:HD11	1.85	0.41
2:B:98:THR:O	2:B:126:SER:CB	2.69	0.41
2:B:662:MET:HA	2:B:665:GLU:HB2	2.03	0.41
2:B:758:PHE:HB3	2:B:761:HIS:HD2	1.87	0.41
2:B:785:TYR:CE2	10:J:60:PHE:CE1	3.08	0.41
2:B:843:GLN:NE2	2:B:847:ASP:OD1	2.52	0.41
2:B:911:ILE:HG23	2:B:966:VAL:HG11	2.02	0.41
2:B:1060:ARG:NE	3:C:202:PRO:HG3	2.36	0.41
4:D:53:SER:O	4:D:57:LEU:HG	2.21	0.41
4:D:189:ASP:O	4:D:193:THR:CB	2.69	0.41
6:F:113:GLY:O	6:F:114:GLU:C	2.59	0.41
6:F:118:LEU:O	6:F:122:MET:HG3	2.20	0.41
8:H:82:PRO:HG2	8:H:83:GLN:H	1.86	0.41
10:J:45:CYS:O	10:J:48:ARG:NE	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:7:PHE:HA	11:K:10:PHE:HE2	1.86	0.41
1:A:68:GLN:C	1:A:70:CYS:N	2.72	0.40
1:A:130:ASP:O	1:A:132:LYS:N	2.54	0.40
1:A:317:LYS:HG2	2:B:471:LYS:HZ1	1.85	0.40
1:A:497:THR:O	1:A:500:GLU:HB2	2.21	0.40
1:A:584:ASN:HA	1:A:609:ASP:O	2.22	0.40
1:A:630:ILE:CD1	1:A:646:PHE:HZ	2.31	0.40
1:A:1191:TRP:HD1	1:A:1256:GLU:HB3	1.86	0.40
1:A:1444:MET:HE2	1:A:1444:MET:HB2	1.91	0.40
2:B:56:ASP:HB2	2:B:57:TYR:CD1	2.56	0.40
2:B:345:LYS:C	2:B:348:ARG:HG2	2.42	0.40
2:B:684:LEU:O	2:B:689:LEU:HB2	2.21	0.40
2:B:863:GLU:O	2:B:961:LEU:HD22	2.21	0.40
2:B:1102:LYS:CA	2:B:1122:ARG:NH1	2.84	0.40
3:C:3:GLU:CG	11:K:104:ASN:HD21	2.33	0.40
4:D:57:LEU:CD1	4:D:160:VAL:HG21	2.44	0.40
4:D:123:LEU:HG	4:D:149:THR:CG2	2.51	0.40
6:F:117:PRO:HG2	6:F:118:LEU:H	1.86	0.40
9:I:1:MET:HE2	9:I:4:PHE:HB3	2.03	0.40
11:K:68:PHE:N	11:K:68:PHE:CD2	2.89	0.40
1:A:40:THR:CB	1:A:41:MET:HE2	2.49	0.40
1:A:51:GLY:HA2	1:A:56:PRO:HA	2.03	0.40
1:A:335:ARG:HA	1:A:335:ARG:HE	1.85	0.40
1:A:335:ARG:NH1	2:B:1202:LEU:CD2	2.79	0.40
1:A:596:THR:C	1:A:597:LEU:HD12	2.41	0.40
1:A:605:MET:HG2	1:A:621:THR:CG2	2.51	0.40
1:A:804:TYR:HE1	2:B:1021:MET:HE3	1.85	0.40
1:A:814:PHE:CD1	2:B:519:TRP:HE3	2.39	0.40
1:A:953:ASN:C	1:A:954:TRP:CD1	2.95	0.40
1:A:982:THR:C	1:A:984:LYS:N	2.75	0.40
1:A:1050:GLU:HG3	1:A:1051:ALA:N	2.35	0.40
1:A:1127:ASP:OD1	1:A:1130:GLN:HB2	2.20	0.40
1:A:1170:ILE:HG22	1:A:1174:PHE:CE1	2.57	0.40
2:B:258:LEU:O	2:B:259:TYR:O	2.39	0.40
2:B:782:LEU:HD12	2:B:788:ARG:HH11	1.86	0.40
2:B:901:PRO:HA	2:B:949:VAL:HG12	2.03	0.40
3:C:114:TYR:HE2	10:J:19:GLU:OE2	2.05	0.40
5:E:207:ARG:NH1	5:E:207:ARG:CB	2.84	0.40
8:H:135:LEU:HD13	8:H:137:GLN:HE21	1.81	0.40
9:I:7:CYS:CB	9:I:14:LEU:HD21	2.31	0.40
12:L:32:ALA:HB2	12:L:55:ILE:CG1	2.32	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:33:ALA:O	1:A:83:HIS:CD2	2.74	0.40
1:A:73:GLY:O	1:A:74:MET:C	2.60	0.40
1:A:91:PHE:HB3	1:A:96:ILE:CG1	2.51	0.40
1:A:320:ARG:HA	1:A:321:PRO:HD3	1.94	0.40
1:A:672:ASP:O	1:A:673:GLY:C	2.59	0.40
1:A:1192:LEU:HD13	1:A:1239:ARG:NH1	2.36	0.40
2:B:50:SER:OG	2:B:411:PRO:HD3	2.21	0.40
2:B:497:ARG:HH12	2:B:775:LYS:HE2	1.86	0.40
2:B:640:VAL:HG12	2:B:640:VAL:O	2.21	0.40
2:B:658:ILE:HG22	2:B:662:MET:CE	2.49	0.40
2:B:749:LEU:HB3	2:B:753:ALA:HB3	2.02	0.40
2:B:785:TYR:N	2:B:785:TYR:CD2	2.89	0.40
2:B:944:THR:HG21	2:B:1122:ARG:CZ	2.48	0.40
2:B:1146:PHE:O	2:B:1147:LEU:C	2.60	0.40
3:C:54:ASN:HB2	3:C:153:LEU:HD12	2.02	0.40
3:C:112:ASN:N	3:C:112:ASN:HD22	2.19	0.40
4:D:31:GLN:C	4:D:33:PHE:H	2.23	0.40
4:D:56:ARG:HA	4:D:148:LEU:HD13	2.02	0.40
4:D:75:LYS:HE2	4:D:75:LYS:HB3	1.92	0.40
4:D:187:THR:C	4:D:189:ASP:N	2.75	0.40
4:D:189:ASP:O	4:D:193:THR:HB	2.20	0.40
5:E:32:GLN:HG3	5:E:36:GLU:OE2	2.22	0.40
5:E:161:LYS:O	5:E:164:LEU:N	2.54	0.40
5:E:190:LEU:HD13	5:E:191:LYS:H	1.87	0.40
7:G:127:PRO:CB	7:G:139:ILE:HD11	2.51	0.40
9:I:68:LEU:HB3	9:I:84:VAL:CG2	2.52	0.40
11:K:6:ARG:HA	11:K:6:ARG:HD3	1.90	0.40
1:A:72:GLU:CB	1:A:76:GLU:HG2	2.48	0.40
1:A:78:PRO:CB	2:B:1201:LYS:HE3	2.49	0.40
1:A:230:ARG:N	1:A:233:TRP:HE3	2.11	0.40
1:A:269:ILE:CG2	1:A:300:VAL:HG22	2.51	0.40
1:A:284:ALA:O	1:A:286:HIS:N	2.47	0.40
1:A:334:GLY:O	1:A:336:ILE:N	2.55	0.40
1:A:356:ASP:OD2	11:K:65:HIS:CE1	2.70	0.40
1:A:438:ASP:O	1:A:439:ASN:CB	2.64	0.40
1:A:473:SER:OG	1:A:646:PHE:HD2	2.04	0.40
1:A:514:PRO:HB2	1:A:875:ALA:HB3	2.04	0.40
1:A:546:VAL:HG21	1:A:572:TRP:CE3	2.57	0.40
1:A:556:TRP:C	1:A:558:GLY:N	2.74	0.40
1:A:608:ILE:CB	1:A:613:ILE:HD11	2.48	0.40
1:A:688:LYS:HA	1:A:691:LEU:HB3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:873:MET:C	1:A:1058:VAL:CG2	2.89	0.40
1:A:1067:LEU:HD12	1:A:1367:HIS:CE1	2.57	0.40
2:B:276:ILE:HG22	2:B:278:GLN:O	2.21	0.40
2:B:293:PRO:C	2:B:294:ASP:O	2.58	0.40
2:B:349:ILE:O	2:B:353:LYS:HG3	2.22	0.40
2:B:582:VAL:CG2	2:B:626:ILE:HB	2.51	0.40
2:B:903:VAL:HG12	2:B:904:ARG:N	2.37	0.40
2:B:1135:ARG:HG3	2:B:1147:LEU:HD11	2.03	0.40
3:C:183:TRP:O	3:C:184:ASN:C	2.59	0.40
3:C:233:GLU:O	3:C:240:VAL:HG13	2.22	0.40
3:C:242:GLN:O	3:C:244:VAL:N	2.54	0.40
4:D:7:THR:HG21	4:D:32:GLU:OE2	2.20	0.40
8:H:138:GLU:O	8:H:139:ASN:C	2.58	0.40
11:K:28:PRO:O	11:K:29:ASN:C	2.58	0.40
12:L:47:ARG:HG3	12:L:47:ARG:NH1	2.36	0.40
1:A:77:CYS:C	1:A:78:PRO:O	2.59	0.40
1:A:341:MET:CE	1:A:843:LYS:HZ2	2.35	0.40
1:A:417:TYR:O	1:A:418:SER:C	2.60	0.40
1:A:418:SER:C	1:A:420:ARG:N	2.72	0.40
1:A:481:ASP:OD1	1:A:483:ASP:OD1	2.39	0.40
1:A:565:ILE:O	1:A:565:ILE:HG22	2.22	0.40
1:A:590:ARG:HD2	1:A:605:MET:HB2	2.04	0.40
1:A:720:ARG:NH1	1:A:720:ARG:HB2	2.36	0.40
1:A:734:GLU:C	1:A:736:ASN:N	2.74	0.40
1:A:833:GLU:HG3	1:A:1102:LYS:HZ1	1.86	0.40
1:A:977:LYS:HB3	1:A:978:PRO:HD2	2.03	0.40
1:A:1277:GLU:C	1:A:1279:ILE:H	2.25	0.40
1:A:1342:GLU:OE2	5:E:212:ARG:NH1	2.55	0.40
2:B:95:ILE:HA	2:B:129:PHE:O	2.22	0.40
2:B:167:ILE:N	2:B:167:ILE:CD1	2.82	0.40
2:B:167:ILE:CG2	2:B:453:ILE:HD12	2.40	0.40
2:B:170:LEU:HD12	2:B:171:PRO:N	2.37	0.40
2:B:195:CYS:HB2	2:B:784:ASN:OD1	2.22	0.40
2:B:253:THR:CG2	2:B:254:LEU:H	2.28	0.40
2:B:326:ASP:OD1	2:B:328:GLU:HB3	2.21	0.40
2:B:467:GLY:O	2:B:468:GLU:C	2.59	0.40
2:B:705:MET:HB3	2:B:706:GLN:H	1.70	0.40
2:B:791:THR:HG22	2:B:858:SER:HB2	2.04	0.40
2:B:797:TYR:HE1	2:B:971:THR:HG23	1.87	0.40
2:B:834:ASN:HB3	2:B:840:ILE:HG13	2.03	0.40
2:B:995:ARG:NH1	3:C:165:LYS:HG2	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1006:ILE:HD13	10:J:44:TYR:CZ	2.56	0.40
2:B:1197:PRO:C	2:B:1199:ALA:N	2.74	0.40
3:C:131:HIS:O	3:C:133:ILE:N	2.54	0.40
4:D:39:ASN:HD21	4:D:41:GLN:CG	2.33	0.40
4:D:130:LEU:HA	4:D:134:THR:OG1	2.22	0.40
5:E:153:HIS:C	5:E:154:ILE:HG13	2.42	0.40
5:E:173:SER:C	5:E:175:LEU:N	2.75	0.40
10:J:7:CYS:CB	10:J:49:MET:HE3	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 X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	1421/1733 (82%)	929 (65%)	311 (22%)	181 (13%)	0	5
2	B	1111/1224 (91%)	712 (64%)	251 (23%)	148 (13%)	0	4
3	C	268/324 (83%)	165 (62%)	69 (26%)	34 (13%)	0	5
4	D	178/221 (80%)	125 (70%)	29 (16%)	24 (14%)	0	4
5	E	212/215 (99%)	145 (68%)	42 (20%)	25 (12%)	0	6
6	F	86/155 (56%)	60 (70%)	21 (24%)	5 (6%)	1	21
7	G	169/171 (99%)	133 (79%)	25 (15%)	11 (6%)	1	19
8	H	133/146 (91%)	78 (59%)	26 (20%)	29 (22%)	0	1
9	I	115/122 (94%)	72 (63%)	29 (25%)	14 (12%)	0	6
10	J	63/70 (90%)	35 (56%)	14 (22%)	14 (22%)	0	1
11	K	114/120 (95%)	80 (70%)	31 (27%)	3 (3%)	5	35
12	L	45/70 (64%)	18 (40%)	13 (29%)	14 (31%)	0	0
All	All	3915/4571 (86%)	2552 (65%)	861 (22%)	502 (13%)	0	5

All (502) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	4	GLN
1	A	41	MET
1	A	43	GLU
1	A	48	ALA
1	A	54	ASN
1	A	58	LEU
1	A	67	CYS
1	A	69	THR
1	A	73	GLY
1	A	76	GLU
1	A	84	ILE
1	A	130	ASP
1	A	154	SER
1	A	167	CYS
1	A	187	LYS
1	A	193	ASP
1	A	259	GLU
1	A	311	GLN
1	A	312	PRO
1	A	317	LYS
1	A	318	SER
1	A	385	ILE
1	A	410	GLY
1	A	439	ASN
1	A	536	LEU
1	A	567	LYS
1	A	583	PRO
1	A	603	ASN
1	A	641	VAL
1	A	666	ILE
1	A	775	ILE
1	A	846	GLU
1	A	852	TYR
1	A	875	ALA
1	A	916	GLY
1	A	968	GLN
1	A	973	ILE
1	A	1002	GLY
1	A	1016	THR
1	A	1036	ARG
1	A	1114	PRO
1	A	1115	SER

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Mol	Chain	Res	Type
1	A	1116	LEU
1	A	1120	LEU
1	A	1122	PRO
1	A	1167	GLU
1	A	1176	LEU
1	A	1177	LEU
1	A	1178	ASP
1	A	1202	MET
1	A	1212	VAL
1	A	1223	ASP
1	A	1233	ASP
1	A	1244	ARG
1	A	1255	GLU
1	A	1314	SER
1	A	1341	ILE
1	A	1361	SER
1	A	1365	TYR
1	A	1378	GLN
2	B	46	GLN
2	B	68	THR
2	B	108	VAL
2	B	124	TYR
2	B	186	GLU
2	B	229	ALA
2	B	282	ILE
2	B	344	LYS
2	B	345	LYS
2	B	346	GLU
2	B	365	THR
2	B	367	LEU
2	B	391	ASP
2	B	468	GLU
2	B	469	GLN
2	B	509	ALA
2	B	511	PRO
2	B	543	SER
2	B	566	LEU
2	B	575	PRO
2	B	629	ASP
2	B	705	MET
2	B	707	PRO
2	B	708	GLU

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Mol	Chain	Res	Type
2	B	712	PRO
2	B	723	VAL
2	B	751	VAL
2	B	855	PHE
2	B	867	GLY
2	B	879	ARG
2	B	882	THR
2	B	907	GLY
2	B	958	GLN
2	B	1041	GLU
2	B	1045	SER
2	B	1046	PRO
2	B	1069	PHE
2	B	1097	HIS
2	B	1156	ASP
2	B	1171	VAL
2	B	1175	LEU
2	B	1181	GLU
2	B	1183	LYS
3	C	6	PRO
3	C	56	THR
3	C	60	ASP
3	C	77	ILE
3	C	90	ASP
3	C	110	THR
3	C	133	ILE
3	C	141	GLY
3	C	149	LYS
3	C	161	LYS
3	C	173	ALA
3	C	174	ALA
3	C	175	ALA
3	C	215	GLU
3	C	216	GLY
3	C	237	SER
3	C	269	LYS
4	D	3	VAL
4	D	12	ARG
4	D	19	GLU
4	D	52	LEU
4	D	169	SER
5	E	43	LYS

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Mol	Chain	Res	Type
5	E	45	LYS
5	E	73	PRO
5	E	106	GLN
5	E	115	ASN
5	E	129	PRO
5	E	130	ALA
5	E	174	GLN
5	E	192	ARG
5	E	206	GLY
6	F	71	GLU
6	F	72	LYS
6	F	81	THR
6	F	139	PRO
7	G	2	PHE
7	G	120	THR
7	G	139	ILE
7	G	154	VAL
8	H	42	ILE
8	H	78	SER
8	H	84	ALA
8	H	87	ARG
8	H	92	ASP
8	H	128	ASN
8	H	131	ASN
8	H	140	ALA
9	I	8	ARG
9	I	11	ASN
9	I	79	HIS
9	I	95	THR
9	I	106	CYS
10	J	2	ILE
10	J	64	ASN
11	K	14	GLU
11	K	79	GLU
12	L	40	LEU
12	L	42	ARG
12	L	50	ASP
12	L	55	ILE
12	L	59	ALA
12	L	60	ARG
1	A	57	ARG
1	A	70	CYS

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Mol	Chain	Res	Type
1	A	74	MET
1	A	93	VAL
1	A	96	ILE
1	A	131	SER
1	A	148	CYS
1	A	281	HIS
1	A	283	GLY
1	A	313	GLN
1	A	332	LYS
1	A	399	HIS
1	A	419	LYS
1	A	556	TRP
1	A	591	PHE
1	A	600	PRO
1	A	619	LYS
1	A	706	HIS
1	A	719	VAL
1	A	752	LYS
1	A	780	VAL
1	A	789	LYS
1	A	871	ASP
1	A	922	ASP
1	A	969	GLN
1	A	972	HIS
1	A	1050	GLU
1	A	1064	VAL
1	A	1140	HIS
1	A	1206	ASP
1	A	1221	LYS
1	A	1279	ILE
1	A	1302	PRO
1	A	1316	VAL
1	A	1393	ASN
1	A	1437	GLY
2	B	21	GLU
2	B	45	SER
2	B	48	LEU
2	B	56	ASP
2	B	65	GLU
2	B	134	LYS
2	B	135	ARG
2	B	257	LYS

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Mol	Chain	Res	Type
2	B	259	TYR
2	B	277	LYS
2	B	278	GLN
2	B	312	GLU
2	B	327	ARG
2	B	341	LEU
2	B	364	ILE
2	B	450	ALA
2	B	470	LYS
2	B	483	LEU
2	B	506	GLY
2	B	512	ARG
2	B	577	ALA
2	B	709	ASP
2	B	727	LYS
2	B	752	ALA
2	B	754	SER
2	B	894	ASP
2	B	943	SER
2	B	951	GLN
2	B	956	THR
2	B	1075	GLY
2	B	1099	VAL
2	B	1100	ASP
2	B	1131	GLY
2	B	1167	GLY
2	B	1184	GLY
2	B	1223	ASP
3	C	61	GLU
3	C	78	GLU
3	C	128	ASN
3	C	240	VAL
4	D	20	GLU
4	D	47	LEU
4	D	119	ARG
4	D	131	GLU
4	D	192	LYS
4	D	218	GLU
4	D	220	LEU
5	E	3	GLN
5	E	76	GLY
5	E	97	VAL

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Mol	Chain	Res	Type
5	E	121	MET
6	F	150	GLU
7	G	63	PRO
7	G	64	THR
7	G	114	LEU
8	H	18	GLY
8	H	63	LEU
8	H	81	PRO
8	H	82	PRO
8	H	90	ALA
8	H	119	GLY
8	H	137	GLN
9	I	2	THR
9	I	3	THR
9	I	32	CYS
9	I	56	ALA
10	J	17	LYS
10	J	24	LEU
10	J	32	GLU
11	K	15	GLY
12	L	28	LYS
12	L	37	LYS
12	L	53	HIS
12	L	56	LEU
1	A	5	GLN
1	A	38	PRO
1	A	42	ASP
1	A	77	CYS
1	A	86	LEU
1	A	128	ILE
1	A	222	LEU
1	A	232	GLU
1	A	287	HIS
1	A	423	ASP
1	A	424	ILE
1	A	568	PRO
1	A	601	LYS
1	A	604	GLY
1	A	661	GLY
1	A	847	ASP
1	A	885	THR
1	A	979	SER

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Mol	Chain	Res	Type
1	A	1067	LEU
1	A	1105	LEU
1	A	1124	HIS
1	A	1127	ASP
1	A	1165	GLU
1	A	1229	SER
1	A	1331	SER
1	A	1405	THR
1	A	1450	LEU
2	B	37	PHE
2	B	100	PRO
2	B	184	ALA
2	B	265	SER
2	B	295	GLY
2	B	304	ASP
2	B	333	PHE
2	B	343	ILE
2	B	368	GLU
2	B	409	ALA
2	B	559	SER
2	B	591	ARG
2	B	711	GLU
2	B	746	SER
2	B	815	ARG
2	B	848	ARG
2	B	878	GLN
2	B	892	LYS
2	B	909	ASP
2	B	1003	ALA
2	B	1035	ALA
2	B	1082	MET
2	B	1126	GLY
2	B	1155	SER
2	B	1157	ALA
2	B	1176	ASN
3	C	132	PRO
3	C	142	VAL
3	C	213	PRO
4	D	21	GLU
4	D	25	ALA
4	D	32	GLU
4	D	59	ILE

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Mol	Chain	Res	Type
4	D	139	LYS
4	D	168	LYS
4	D	198	LEU
4	D	199	ASN
5	E	48	ASP
5	E	74	ASP
5	E	93	MET
5	E	104	ASN
5	E	173	SER
7	G	141	SER
8	H	2	SER
8	H	107	VAL
8	H	108	SER
8	H	109	LYS
8	H	110	ASP
9	I	47	GLU
10	J	6	ARG
10	J	18	TRP
1	A	55	ASP
1	A	59	GLY
1	A	63	ARG
1	A	126	LEU
1	A	164	ARG
1	A	190	ALA
1	A	196	GLU
1	A	257	ARG
1	A	286	HIS
1	A	300	VAL
1	A	322	VAL
1	A	330	LYS
1	A	409	SER
1	A	525	GLN
1	A	535	THR
1	A	557	ASP
1	A	592	ASP
1	A	738	LYS
1	A	765	VAL
1	A	854	ASN
1	A	1005	GLU
1	A	1068	ALA
1	A	1240	CYS
1	A	1242	VAL

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Mol	Chain	Res	Type
1	A	1366	ARG
1	A	1377	THR
1	A	1399	ARG
1	A	1402	PHE
2	B	41	LYS
2	B	115	GLN
2	B	131	ASP
2	B	267	ARG
2	B	531	GLN
2	B	642	ASP
2	B	688	GLY
2	B	699	GLU
2	B	868	MET
2	B	881	ASN
2	B	891	ASP
2	B	1017	ILE
3	C	108	GLU
3	C	191	TYR
3	C	214	ASN
4	D	4	SER
4	D	13	ARG
4	D	118	THR
5	E	122	LYS
5	E	179	GLN
7	G	118	ASP
8	H	17	PRO
8	H	41	ASP
8	H	52	GLN
8	H	83	GLN
9	I	93	LYS
9	I	107	SER
10	J	9	SER
10	J	14	VAL
10	J	33	GLY
12	L	35	SER
1	A	35	ILE
1	A	52	GLY
1	A	113	LEU
1	A	234	MET
1	A	294	SER
1	A	917	SER
1	A	958	VAL

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Mol	Chain	Res	Type
1	A	986	ILE
1	A	1006	ILE
1	A	1133	LEU
1	A	1211	GLN
2	B	24	PRO
2	B	49	ASP
2	B	171	PRO
2	B	283	VAL
2	B	311	LEU
2	B	456	GLY
2	B	480	SER
2	B	510	LYS
2	B	579	ARG
2	B	594	ALA
2	B	643	ASP
2	B	655	LYS
2	B	793	ALA
2	B	1042	GLY
3	C	11	ARG
4	D	191	ALA
5	E	56	LYS
5	E	148	GLU
7	G	20	PRO
8	H	21	ASN
8	H	132	LEU
10	J	13	VAL
10	J	42	LYS
12	L	36	SER
12	L	46	VAL
1	A	24	PRO
1	A	170	THR
1	A	314	ALA
1	A	517	ASN
1	A	652	VAL
1	A	704	ALA
1	A	818	MET
1	A	845	LEU
1	A	1454	MET
2	B	67	SER
2	B	219	ALA
2	B	903	VAL
2	B	1080	LYS

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Mol	Chain	Res	Type
2	B	1214	PRO
3	C	3	GLU
3	C	36	VAL
3	C	89	GLU
3	C	218	PRO
10	J	55	ASP
12	L	25	ALA
1	A	231	PRO
1	A	244	PRO
1	A	910	PRO
2	B	436	VAL
2	B	478	GLY
2	B	503	GLY
3	C	25	VAL
8	H	120	GLY
1	A	258	GLY
2	B	315	LYS
2	B	780	VAL
9	I	62	ILE
1	A	250	ILE
2	B	305	VAL
2	B	636	PRO
2	B	744	HIS
5	E	86	PRO
7	G	92	VAL
9	I	57	GLY
10	J	57	ILE
1	A	51	GLY
1	A	197	PRO
1	A	718	VAL
1	A	1162	VAL
2	B	114	PRO
2	B	464	GLY
2	B	658	ILE
5	E	53	PRO
8	H	12	VAL
1	A	78	PRO
2	B	334	ILE
3	C	10	ILE
8	H	44	VAL

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	1249/1520 (82%)	1126 (90%)	123 (10%)	8	31
2	B	974/1061 (92%)	888 (91%)	86 (9%)	10	37
3	C	238/280 (85%)	219 (92%)	19 (8%)	12	41
4	D	164/200 (82%)	145 (88%)	19 (12%)	5	26
5	E	196/197 (100%)	182 (93%)	14 (7%)	14	44
6	F	78/137 (57%)	70 (90%)	8 (10%)	7	30
7	G	152/152 (100%)	144 (95%)	8 (5%)	22	52
8	H	121/128 (94%)	111 (92%)	10 (8%)	11	39
9	I	111/116 (96%)	102 (92%)	9 (8%)	11	40
10	J	60/65 (92%)	55 (92%)	5 (8%)	11	39
11	K	99/102 (97%)	89 (90%)	10 (10%)	7	30
12	L	41/57 (72%)	34 (83%)	7 (17%)	2	14
All	All	3483/4015 (87%)	3165 (91%)	318 (9%)	9	35

All (318) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	18	GLN
1	A	34	LYS
1	A	37	PHE
1	A	38	PRO
1	A	41	MET
1	A	54	ASN
1	A	70	CYS
1	A	83	HIS
1	A	85	ASP
1	A	93	VAL
1	A	157	ASP
1	A	185	TRP
1	A	200	ARG
1	A	236	LEU

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Mol	Chain	Res	Type
1	A	245	PRO
1	A	262	LEU
1	A	265	LYS
1	A	275	SER
1	A	307	ASP
1	A	312	PRO
1	A	320	ARG
1	A	322	VAL
1	A	326	ARG
1	A	332	LYS
1	A	335	ARG
1	A	352	VAL
1	A	379	VAL
1	A	385	ILE
1	A	406	ILE
1	A	408	ASP
1	A	412	ARG
1	A	438	ASP
1	A	442	VAL
1	A	443	LEU
1	A	445	ASN
1	A	449	SER
1	A	450	LEU
1	A	451	HIS
1	A	453	MET
1	A	454	SER
1	A	466	SER
1	A	489	LEU
1	A	493	GLN
1	A	503	GLN
1	A	511	ILE
1	A	518	LYS
1	A	540	PHE
1	A	542	GLU
1	A	552	TRP
1	A	557	ASP
1	A	590	ARG
1	A	618	GLU
1	A	634	THR
1	A	635	ARG
1	A	711	ARG
1	A	720	ARG

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Mol	Chain	Res	Type
1	A	727	ASP
1	A	740	LEU
1	A	774	ARG
1	A	779	PHE
1	A	821	ARG
1	A	833	GLU
1	A	842	VAL
1	A	858	ASN
1	A	871	ASP
1	A	903	ASN
1	A	918	GLU
1	A	920	LEU
1	A	929	LEU
1	A	940	ARG
1	A	942	PHE
1	A	947	PHE
1	A	948	VAL
1	A	949	ASP
1	A	976	THR
1	A	995	GLU
1	A	1001	ARG
1	A	1017	LEU
1	A	1019	CYS
1	A	1029	ARG
1	A	1035	TYR
1	A	1037	LEU
1	A	1067	LEU
1	A	1077	THR
1	A	1111	MET
1	A	1120	LEU
1	A	1122	PRO
1	A	1124	HIS
1	A	1128	GLN
1	A	1166	ASP
1	A	1170	ILE
1	A	1178	ASP
1	A	1206	ASP
1	A	1233	ASP
1	A	1239	ARG
1	A	1240	CYS
1	A	1245	PRO
1	A	1255	GLU

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Mol	Chain	Res	Type
1	A	1257	ASP
1	A	1259	MET
1	A	1260	LEU
1	A	1264	GLU
1	A	1280	GLU
1	A	1288	ASP
1	A	1295	THR
1	A	1297	GLU
1	A	1300	LYS
1	A	1308	THR
1	A	1314	SER
1	A	1332	PHE
1	A	1333	ILE
1	A	1336	MET
1	A	1359	ASP
1	A	1364	ASN
1	A	1366	ARG
1	A	1389	PHE
1	A	1391	ARG
1	A	1393	ASN
1	A	1394	THR
1	A	1400	CYS
1	A	1443	VAL
1	A	1445	ILE
1	A	1454	MET
2	B	20	ASP
2	B	31	TRP
2	B	57	TYR
2	B	61	ASP
2	B	100	PRO
2	B	164	LYS
2	B	166	PHE
2	B	167	ILE
2	B	169	ARG
2	B	175	ARG
2	B	180	TYR
2	B	194	GLU
2	B	203	PHE
2	B	217	ARG
2	B	268	THR
2	B	272	THR
2	B	332	ASP

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Mol	Chain	Res	Type
2	B	364	ILE
2	B	365	THR
2	B	371	GLU
2	B	378	LEU
2	B	393	LYS
2	B	396	ASP
2	B	429	PHE
2	B	465	ASN
2	B	466	TRP
2	B	473	MET
2	B	485	ARG
2	B	502	ILE
2	B	510	LYS
2	B	516	ASN
2	B	555	ILE
2	B	563	MET
2	B	572	HIS
2	B	582	VAL
2	B	591	ARG
2	B	603	LEU
2	B	609	ILE
2	B	615	MET
2	B	616	ILE
2	B	636	PRO
2	B	680	THR
2	B	694	ASP
2	B	737	THR
2	B	742	GLU
2	B	743	ILE
2	B	776	GLN
2	B	785	TYR
2	B	790	ASP
2	B	811	TYR
2	B	830	TYR
2	B	839	MET
2	B	854	LEU
2	B	860	MET
2	B	868	MET
2	B	878	GLN
2	B	879	ARG
2	B	894	ASP
2	B	895	ASP

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Mol	Chain	Res	Type
2	B	909	ASP
2	B	918	ILE
2	B	944	THR
2	B	978	ASP
2	B	999	MET
2	B	1046	PRO
2	B	1047	PHE
2	B	1069	PHE
2	B	1076	HIS
2	B	1077	THR
2	B	1084	GLN
2	B	1087	PHE
2	B	1095	LEU
2	B	1097	HIS
2	B	1098	MET
2	B	1103	ILE
2	B	1113	VAL
2	B	1150	ARG
2	B	1151	LEU
2	B	1159	ARG
2	B	1163	CYS
2	B	1170	THR
2	B	1182	CYS
2	B	1189	ILE
2	B	1218	THR
2	B	1221	SER
2	B	1223	ASP
3	C	1	MET
3	C	35	ARG
3	C	38	ILE
3	C	56	THR
3	C	58	LEU
3	C	62	PHE
3	C	77	ILE
3	C	91	HIS
3	C	104	PHE
3	C	106	GLU
3	C	138	GLU
3	C	147	LEU
3	C	166	GLU
3	C	193	TYR
3	C	209	TYR

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Mol	Chain	Res	Type
3	C	226	ASP
3	C	233	GLU
3	C	235	VAL
3	C	250	THR
4	D	8	PHE
4	D	13	ARG
4	D	15	LEU
4	D	21	GLU
4	D	22	GLU
4	D	40	HIS
4	D	47	LEU
4	D	63	LEU
4	D	70	PHE
4	D	118	THR
4	D	127	ASP
4	D	137	ASN
4	D	148	LEU
4	D	149	THR
4	D	189	ASP
4	D	211	LEU
4	D	214	LEU
4	D	215	SER
4	D	221	TYR
5	E	17	ARG
5	E	31	THR
5	E	52	ARG
5	E	60	PHE
5	E	74	ASP
5	E	96	PHE
5	E	104	ASN
5	E	114	ASN
5	E	132	ILE
5	E	149	LEU
5	E	169	ARG
5	E	173	SER
5	E	178	ILE
5	E	190	LEU
6	F	71	GLU
6	F	72	LYS
6	F	79	ARG
6	F	99	LEU
6	F	116	ASP

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Mol	Chain	Res	Type
6	F	118	LEU
6	F	148	VAL
6	F	151	LEU
7	G	1	MET
7	G	13	LEU
7	G	21	ARG
7	G	52	ASP
7	G	73	LYS
7	G	74	TYR
7	G	79	PHE
7	G	94	CYS
8	H	17	PRO
8	H	42	ILE
8	H	63	LEU
8	H	64	ASN
8	H	86	ASP
8	H	88	SER
8	H	89	LEU
8	H	95	TYR
8	H	102	TYR
8	H	110	ASP
9	I	4	PHE
9	I	6	PHE
9	I	7	CYS
9	I	8	ARG
9	I	85	PHE
9	I	86	PHE
9	I	94	ASP
9	I	100	PHE
9	I	101	PHE
10	J	23	ASN
10	J	43	ARG
10	J	44	TYR
10	J	46	CYS
10	J	48	ARG
11	K	5	ASP
11	K	6	ARG
11	K	10	PHE
11	K	25	THR
11	K	47	ARG
11	K	50	LEU
11	K	61	TYR

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Mol	Chain	Res	Type
11	K	81	TYR
11	K	111	LEU
11	K	114	LEU
12	L	27	LEU
12	L	34	CYS
12	L	54	ARG
12	L	55	ILE
12	L	65	VAL
12	L	68	GLU
12	L	70	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (120) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	68	GLN
1	A	83	HIS
1	A	92	HIS
1	A	109	HIS
1	A	169	ASN
1	A	225	ASN
1	A	256	GLN
1	A	299	HIS
1	A	306	ASN
1	A	339	ASN
1	A	358	ASN
1	A	399	HIS
1	A	435	HIS
1	A	445	ASN
1	A	447	GLN
1	A	493	GLN
1	A	603	ASN
1	A	659	HIS
1	A	700	ASN
1	A	736	ASN
1	A	741	ASN
1	A	757	ASN
1	A	767	GLN
1	A	768	GLN
1	A	786	HIS
1	A	851	HIS
1	A	858	ASN
1	A	903	ASN

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Mol	Chain	Res	Type
1	A	926	GLN
1	A	935	GLN
1	A	968	GLN
1	A	975	HIS
1	A	1106	ASN
1	A	1130	GLN
1	A	1140	HIS
1	A	1188	GLN
1	A	1203	ASN
1	A	1278	ASN
1	A	1312	ASN
1	A	1364	ASN
1	A	1393	ASN
1	A	1427	ASN
1	A	1432	GLN
2	B	46	GLN
2	B	60	GLN
2	B	178	ASN
2	B	224	GLN
2	B	236	HIS
2	B	366	GLN
2	B	465	ASN
2	B	484	ASN
2	B	499	ASN
2	B	515	HIS
2	B	516	ASN
2	B	518	HIS
2	B	538	ASN
2	B	587	HIS
2	B	686	ASN
2	B	706	GLN
2	B	744	HIS
2	B	763	GLN
2	B	786	ASN
2	B	821	GLN
2	B	842	ASN
2	B	862	GLN
2	B	951	GLN
2	B	975	GLN
2	B	1015	HIS
2	B	1065	GLN
2	B	1076	HIS

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Mol	Chain	Res	Type
2	B	1084	GLN
2	B	1117	GLN
2	B	1178	ASN
2	B	1179	GLN
2	B	1193	GLN
3	C	24	ASN
3	C	65	HIS
3	C	73	GLN
3	C	79	GLN
3	C	102	GLN
3	C	112	ASN
3	C	140	ASN
3	C	167	HIS
3	C	252	GLN
4	D	2	ASN
4	D	9	GLN
4	D	31	GLN
4	D	39	ASN
4	D	40	HIS
4	D	74	GLN
4	D	137	ASN
4	D	138	ASN
4	D	143	ASN
5	E	32	GLN
5	E	99	HIS
5	E	101	GLN
5	E	104	ASN
5	E	114	ASN
5	E	147	HIS
6	F	100	GLN
7	G	53	ASN
7	G	122	ASN
7	G	126	ASN
8	H	33	GLN
8	H	131	ASN
8	H	137	GLN
9	I	12	ASN
9	I	89	GLN
9	I	90	GLN
9	I	108	HIS
9	I	114	GLN
10	J	64	ASN

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Mol	Chain	Res	Type
11	K	29	ASN
11	K	44	ASN
11	K	52	ASN
11	K	65	HIS
11	K	76	GLN
11	K	104	ASN
11	K	110	ASN
12	L	53	HIS

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
15	P	9/16 (56%)	2 (22%)	0

All (2) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
15	P	10	A
15	P	11	U

There are no RNA pucker outliers to report.

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

2 non-standard protein/DNA/RNA residues are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
13	8OG	T	19	15,13	22,25,26	1.04	1 (4%)	30,37,40	1.47	3 (10%)
13	BRU	T	23	15,13	18,21,22	3.92	1 (5%)	26,30,33	0.98	2 (7%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the

Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
13	8OG	T	19	15,13	-	2/7/21/22	0/3/3/3
13	BRU	T	23	15,13	-	1/7/21/22	0/2/2/2

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
13	T	23	BRU	BR-C5	-16.55	1.49	1.88
13	T	19	8OG	C8-N7	-3.92	1.30	1.38

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	T	19	8OG	N7-C8-N9	5.56	113.18	106.58
13	T	19	8OG	C5-N7-C8	-3.67	104.19	109.47
13	T	23	BRU	C6-C5-C4	-2.58	118.05	120.67
13	T	19	8OG	C4-C5-N7	2.46	110.81	106.08
13	T	23	BRU	O3'-C3'-C2'	-2.17	103.15	110.90

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
13	T	19	8OG	O4'-C4'-C5'-O5'
13	T	19	8OG	C3'-C4'-C5'-O5'
13	T	23	BRU	C2'-C1'-N1-C2

There are no ring outliers.

2 monomers are involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
13	T	19	8OG	3	0
13	T	23	BRU	2	0

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 9 ligands modelled in this entry, 9 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data i

6.1 Protein, DNA and RNA chains i

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	1429/1733 (82%)	-0.21	3 (0%) 95 93	73, 132, 187, 200	0
2	B	1125/1224 (91%)	-0.05	15 (1%) 77 68	79, 146, 196, 200	0
3	C	270/324 (83%)	-0.21	1 (0%) 92 87	92, 133, 183, 200	0
4	D	182/221 (82%)	-0.18	3 (1%) 72 62	122, 160, 195, 200	0
5	E	214/215 (99%)	-0.21	1 (0%) 91 85	111, 170, 198, 200	0
6	F	88/155 (56%)	-0.26	0 100 100	77, 110, 145, 175	0
7	G	171/171 (100%)	-0.16	0 100 100	113, 140, 176, 182	0
8	H	137/146 (93%)	0.28	7 (5%) 28 23	147, 178, 198, 200	0
9	I	117/122 (95%)	-0.01	4 (3%) 45 35	126, 178, 197, 200	0
10	J	65/70 (92%)	-0.30	0 100 100	112, 129, 171, 180	0
11	K	116/120 (96%)	-0.23	2 (1%) 70 60	96, 135, 160, 199	0
12	L	47/70 (67%)	-0.14	0 100 100	128, 169, 190, 200	0
13	T	18/26 (69%)	0.30	0 100 100	182, 200, 200, 200	0
14	N	11/12 (91%)	0.80	0 100 100	196, 200, 200, 200	0
15	P	10/16 (62%)	-0.14	0 100 100	199, 200, 200, 200	0
All	All	4000/4625 (86%)	-0.14	36 (0%) 84 77	73, 142, 196, 200	0

All (36) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	B	471	LYS	7.2
2	B	504	ARG	4.0
9	I	1	MET	3.9
4	D	76	LYS	3.5
8	H	140	ALA	3.4
2	B	503	GLY	3.3
2	B	722	ASP	3.2

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Mol	Chain	Res	Type	RSRZ
2	B	883	LEU	3.1
2	B	470	LYS	3.0
11	K	116	ALA	2.9
8	H	142	LEU	2.9
2	B	505	ASP	2.8
2	B	468	GLU	2.8
2	B	507	LYS	2.7
11	K	115	ALA	2.6
2	B	341	LEU	2.6
8	H	146	ARG	2.5
2	B	339	THR	2.5
8	H	84	ALA	2.4
4	D	1	MET	2.3
8	H	83	GLN	2.3
2	B	723	VAL	2.3
2	B	865	LYS	2.3
2	B	724	ASP	2.2
8	H	143	LEU	2.2
9	I	102	VAL	2.2
3	C	2	SER	2.2
4	D	2	ASN	2.1
1	A	145	LYS	2.1
1	A	1150	SER	2.1
8	H	61	SER	2.1
9	I	84	VAL	2.1
1	A	1455	PRO	2.1
5	E	82	PHE	2.0
2	B	866	TYR	2.0
9	I	26	LEU	2.0

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
13	BRU	T	23	20/21	0.71	0.23	198,199,200,200	0
13	8OG	T	19	23/24	0.91	0.17	186,193,198,199	0

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
16	MG	A	2458	1/1	0.93	0.09	200,200,200,200	0
17	ZN	I	1122	1/1	0.95	0.05	198,198,198,198	0
17	ZN	A	2456	1/1	0.97	0.06	150,150,150,150	0
17	ZN	B	2225	1/1	0.99	0.22	106,106,106,106	0
17	ZN	A	2457	1/1	0.99	0.15	107,107,107,107	0
17	ZN	J	1066	1/1	0.99	0.27	135,135,135,135	0
17	ZN	L	1071	1/1	0.99	0.08	158,158,158,158	0
17	ZN	I	1121	1/1	1.00	0.12	140,140,140,140	0
17	ZN	C	1269	1/1	1.00	0.14	101,101,101,101	0

6.5 Other polymers [i](#)

There are no such residues in this entry.