



Full wwPDB EM Validation Report ⓘ

Nov 6, 2022 – 04:26 PM EST

PDB ID : 6CNF
EMDB ID : EMD-7533
Title : Yeast RNA polymerase III elongation complex
Authors : Han, Y.; He, Y.
Deposited on : 2018-03-08
Resolution : 4.50 Å (reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev43
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.2

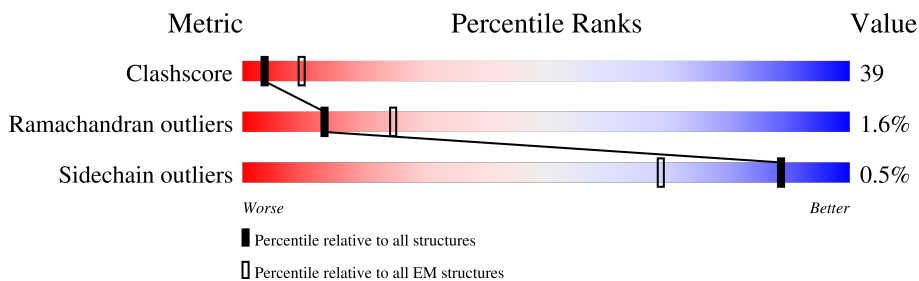
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 4.50 Å.

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




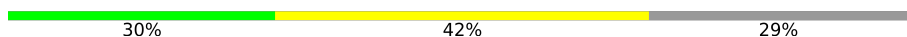
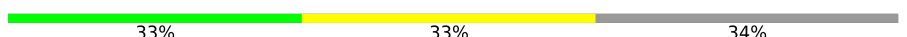


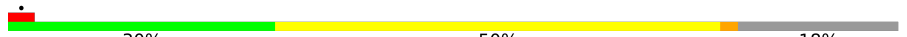
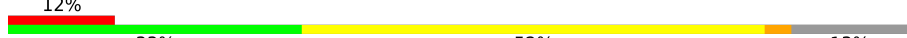


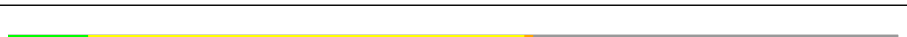
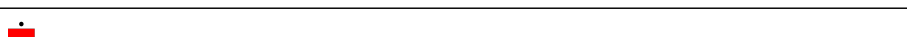
Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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

Mol	Chain	Length	Quality of chain
1	A	1460	
2	B	1149	
3	C	335	
4	D	161	
5	E	215	
6	F	155	
7	G	212	
8	H	146	

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Mol	Chain	Length	Quality of chain
9	I	110	 12% 24% 62%
10	J	70	 44% 51%
11	K	142	 30% 42% 29%
12	L	70	 33% 33% 34%
13	M	282	 18% 39% 42%
14	N	422	 11% 15% 74%
15	O	654	 30% 50% 18%
16	P	317	 12% 33% 52% 13%
17	Q	251	 14% 8% 78%
18	R	736	 33% 37% 29%
19	S	594	 6% 22% 15% 63%
20	X	79	 9% 49% 41%
21	Y	79	 14% 57% 28%

2 Entry composition [i](#)

There are 22 unique types of molecules in this entry. The entry contains 47675 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called DNA-directed RNA polymerase III subunit RPC1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	1428	11159	7029	1972	2099	59	0	0

- Molecule 2 is a protein called DNA-directed RNA polymerase III subunit RPC2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	1114	8788	5558	1516	1654	60	0	0

- Molecule 3 is a protein called DNA-directed RNA polymerases I and III subunit RPAC1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	335	2655	1681	454	511	9	0	0

- Molecule 4 is a protein called DNA-directed RNA polymerase III subunit RPC9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	D	119	977	628	156	187	6	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	E	215	1759	1116	310	321	12	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	F	83	671	429	114	125	3	0	0

- Molecule 7 is a protein called DNA-directed RNA polymerase III subunit RPC8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	G	184	Total	C	N	O	S	0	0
			1484	972	239	267	6		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	H	140	Total	C	N	O	S	0	0
			1120	703	188	224	5		

- Molecule 9 is a protein called DNA-directed RNA polymerase III subunit RPC10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	I	42	Total	C	N	O	S	0	0
			321	204	47	64	6		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	J	67	Total	C	N	O	S	0	0
			549	350	95	98	6		

- Molecule 11 is a protein called DNA-directed RNA polymerases I and III subunit RPAC2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	K	101	Total	C	N	O	S	0	0
			792	496	130	161	5		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	L	46	Total	C	N	O	S	0	0
			363	224	72	63	4		

- Molecule 13 is a protein called DNA-directed RNA polymerase III subunit RPC5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	M	164	Total	C	N	O	S	0	0
			1338	857	227	253	1		

- Molecule 14 is a protein called DNA-directed RNA polymerase III subunit RPC4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	N	110	845	536	152	154	3	0	0

- Molecule 15 is a protein called DNA-directed RNA polymerase III subunit RPC3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	O	539	4329	2756	741	813	19	0	0

- Molecule 16 is a protein called DNA-directed RNA polymerase III subunit RPC6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	P	277	2242	1438	368	425	11	0	0

- Molecule 17 is a protein called DNA-directed RNA polymerase III subunit RPC7,DNA-directed RNA polymerase III subunit RPC7,DNA-directed RNA polymerase III subunit RPC7,DNA-directed RNA polymerase III subunit RPC7,DNA-directed RNA polymerase III subunit RPC7.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
17	Q	54	368	238	64	66	0	0

- Molecule 18 is a protein called Transcription factor IIIB 70 kDa subunit,TATA-box-binding protein,Transcription factor IIIB 70 kDa subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	R	522	4131	2621	733	757	20	0	0

There are 16 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
R	383	ALA	-	linker	UNP P29056
R	384	MET	-	linker	UNP P29056
R	385	PRO	-	linker	UNP P29056
R	386	TRP	-	linker	UNP P29056
R	567	GLY	-	linker	UNP P13393
R	568	SER	-	linker	UNP P13393
R	569	GLY	-	linker	UNP P13393
R	570	SER	-	linker	UNP P13393
R	571	GLY	-	linker	UNP P13393

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Chain	Residue	Modelled	Actual	Comment	Reference
R	572	SER	-	linker	UNP P13393
R	573	GLY	-	linker	UNP P13393
R	574	SER	-	linker	UNP P13393
R	575	GLY	-	linker	UNP P13393
R	576	SER	-	linker	UNP P13393
R	577	GLY	-	linker	UNP P13393
R	578	SER	CYS	engineered mutation	UNP P29056

- Molecule 19 is a protein called Transcription factor TFIIB component B",Transcription factor TFIIB component B",Transcription factor TFIIB component B",Transcription factor TFIIB component B",Transcription factor TFIIB component B",Transcription factor TFIIB component B".

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
19	S	217	1649	1035	286	321	7	0	0

- Molecule 20 is a DNA chain called DNA (79-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
20	X	47	959	463	164	286	46	0	0

- Molecule 21 is a DNA chain called DNA (79-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
21	Y	57	1169	560	220	333	56	0	0

- Molecule 22 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
22	A	2	Total	Zn	0
			2	2	
22	B	1	Total	Zn	0
			1	1	
22	I	1	Total	Zn	0
			1	1	
22	J	1	Total	Zn	0
			1	1	
22	L	1	Total	Zn	0
			1	1	

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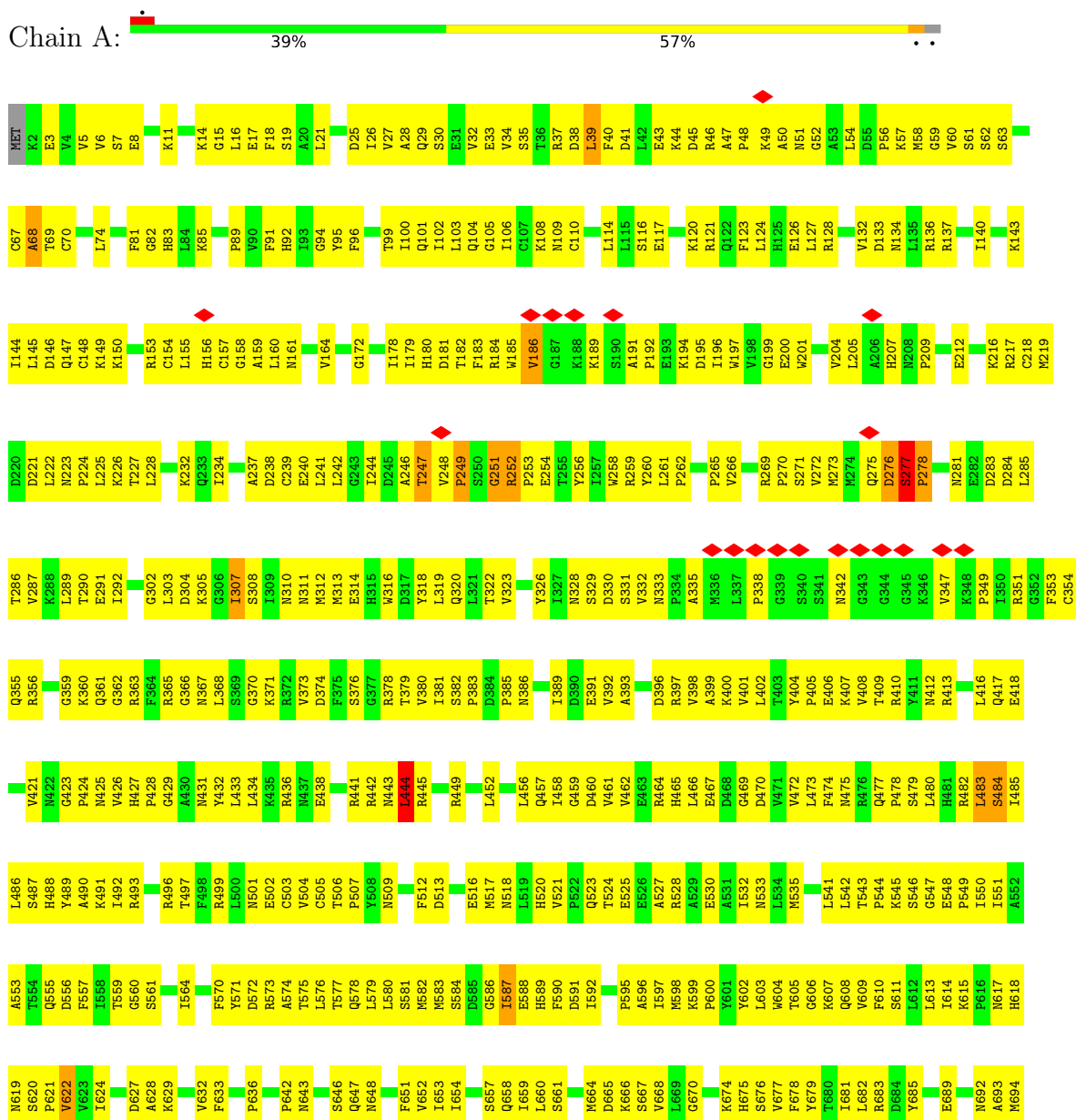
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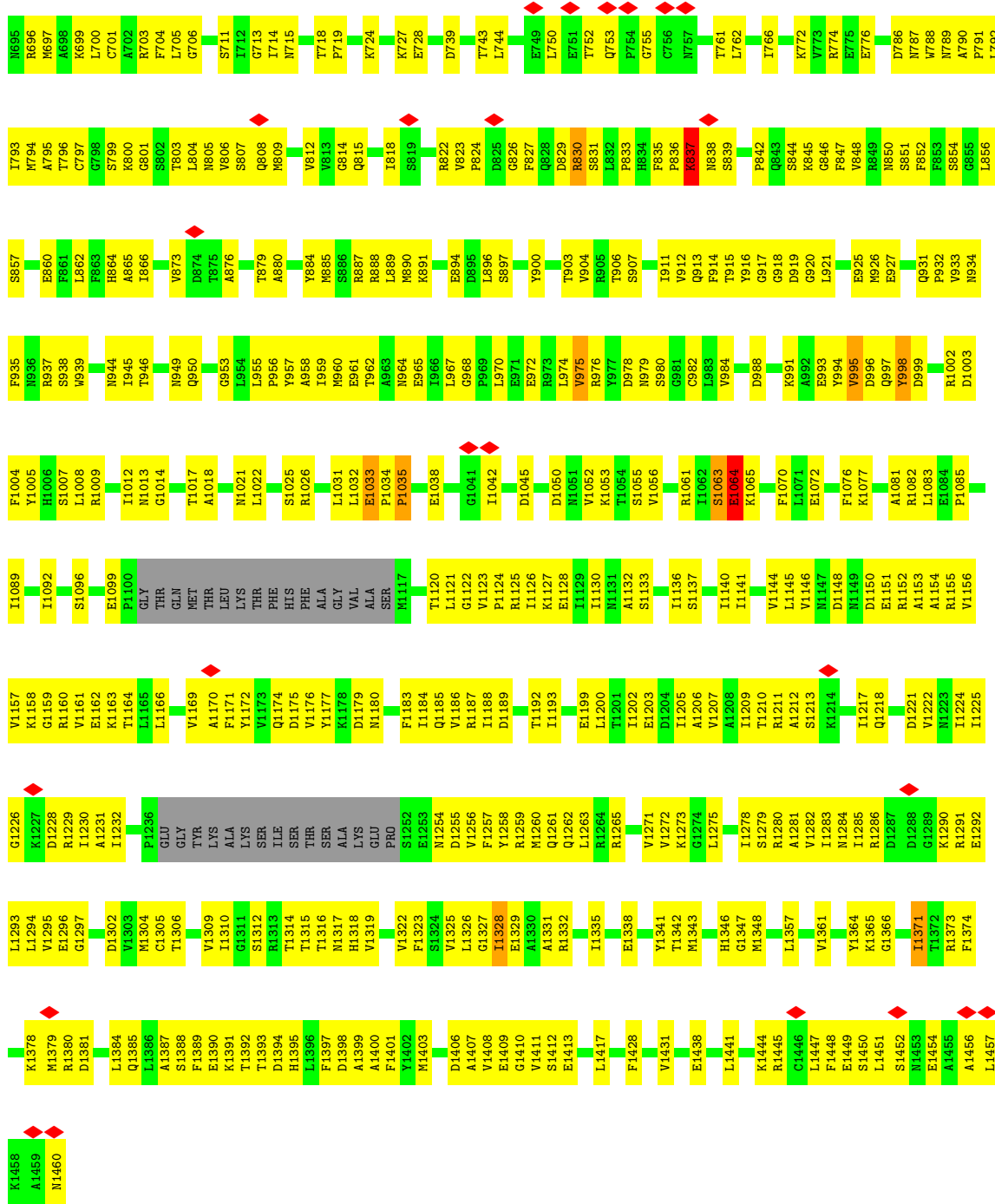
Mol	Chain	Residues	Atoms		AltConf
			Total	Zn	
22	R	1	1	1	0

3 Residue-property plots

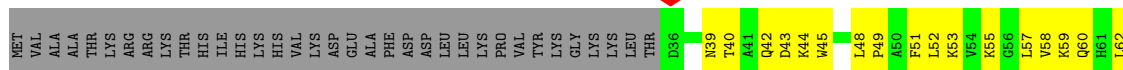
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: DNA-directed RNA polymerase III subunit RPC1

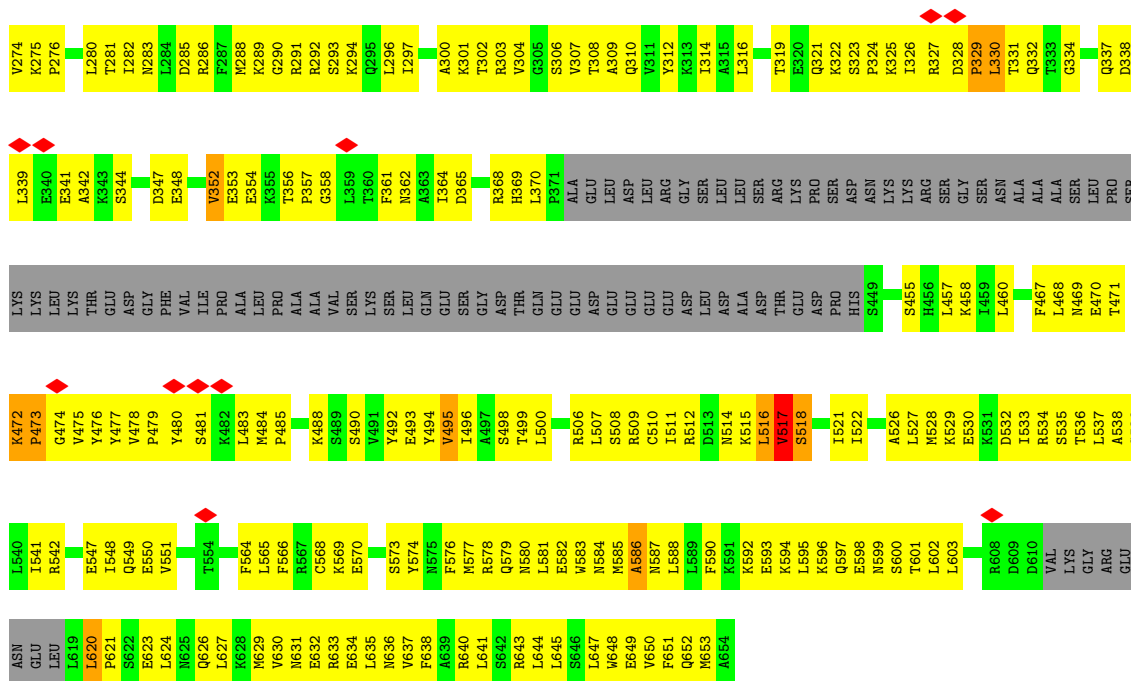




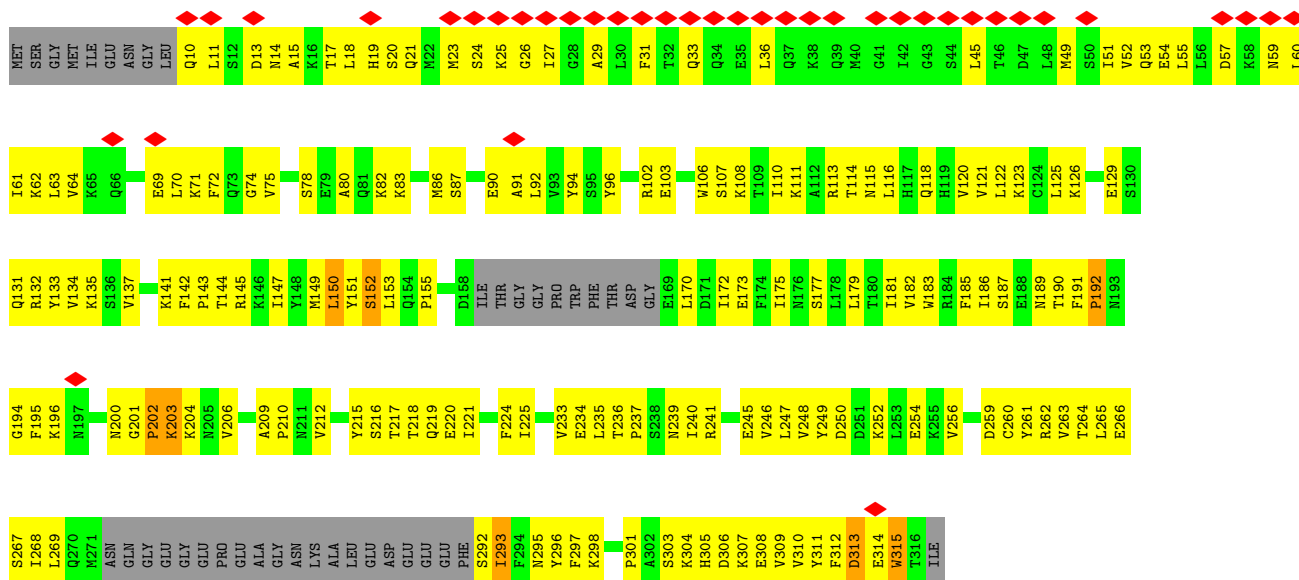
• Molecule 2: DNA-directed RNA polymerase III subunit RPC2



R1067	R1068	K1069	V1070	Y1073	S1076	D1077	L1078	L1079	L1080	E1081	R1082	L1083	M1084	S1085	S1086	S1087	D1088	E1091	V1092	D1093	V1094	C1095	G1099	M1100	M1101	M1102	M1103	M1104	M1105	M1106	C1107	T1108	T1109	C1110	K1111	S1112	A1113	E1114	M1115	I1116	I1117	T1120	Y1123	K1126	L1127	L1128	F1129	Q1130	L1131	L1132	L1133	S1134	M1135	M1136	I1137	R1067	R1068	K1069	V1070	Y1073	S1076	D1077	L1078	L1079	L1080	E1081	R1082	L1083	M1084	S1085	S1086	S1087	D1088	E1091	V1092	D1093	V1094	C1095	G1099	M1100	M1101	M1102	M1103	M1104	M1105	M1106	C1107	T1108	T1109	C1110	K1111	S1112	A1113	E1114	M1115	I1116	I1117	T1120	Y1123	K1126	L1127	L1128	F1129	Q1130	L1131	L1132	L1133	S1134	M1135	M1136	I1137	D63	S64	F65	M66	Y67	F68	D72	I76	I77	Q81	L82	I83	L84	S85	D86	V87	D88	P89	E90	F91	Y92	L93	K94	Y95	V96	D97	I98	R99	V100	G101	K102	S107	T108	K109	D110	L111	L112	H116	D122	M123	T124	Y125	S126	A127	P128	I129	Y130	V131	D132	I133	E134	Y135	R136	G138	R139	M140	I141	I142	M143	H144	K145	D146	I147	E148	I149	G150	R151	M152	P153	L154	M155	D156	R157	S158	M159	Y164	D165	D166	E168	S169	K170	I171	M172	V173	G174	K175	L176	N177	E178	C177	P178	L179	Y184	F185	I186	V187	H188	G189	T190	E191	K192	V193	I194	Q197	E198	L263	S264	D265	L266	E267	L268	L271	G274	S277	S278	Y279	Q280	G281	M282	F283	V284	N285	L287	S288	E289	T292	Q298	Q299	Q300	A301	L302	E303	R306	A307	K308	V309	R313	R314	Q315	K316	L317	T318	I319	L320	Q321	G323	I324	E325	A326	I327	A328	T329	I332	A333	V337	E338	A339	L340	D341	F342	R343	E344	K345	A346	L347	Y348	M351	M352	M353	R354	R355	N362	P363	K364	M365	L366	D367	D368	R369	D370	S371	Y372	K375	R376	R377	L378	E378	L379	A380	G381	Q382	L383	I384	S385	L386	L387	F388	E389	F392	F395	N396	F399	K400	L401	S402	D403	D404	K405	K479	S480	L407	K408	K409	P410	M411	R412	A413	M414	E415	Y416	D417	A418	L419	L420	S421	I422	H425	S426	M427	M428	I429	T430	M434	R435	S438	T439	M442	H449	E450	R451	V454	T455	H456	V457	L458	S459	R460	L461	Y463	I464	S465	M469	R472	I473	Q476	F477	E478	K479	S480	R481	S484	G485	P486	R487	A488	L489	Q490	Q493	F494	G495	M496	L497	C498	T499	A500	E501	T502	P503	E504	G509	L510	V511	L514	A515	L516	N517	T518	H519	L520	F521	T522	D523	D524	E525	E526	P528	I529	K530	K531	L532	C533	Y534	V535	L536	G537	V538	E539	D540	C609	R610	P611	L612	I613	G614	V615	S616	Q619	S620	R621	V622	K623	D624	I625	H626	L627	R628	G629	L630	L631	L635	D636	F637	D638	D639	F640	L643	G644	L645	V646	E647	Y648	L649	D650	V651	E652	E653	F654	N655	Y658	L659	A660	V667	P668	S669	M670	T671	H672	L673	E674	I675	E676	I680	L681	G682	A683	V684	I685	G686	L687	L688	P689	Y690	P691	H692	H693	Q694	S695	H696	M697	Q702	A709	I710	I713	A714	R715	N716	Q717	R720	I721	L722	M723	L724	L725	Y726	L727	M728	R729	F731	Q732	P733	M734	V735	K737	T738	K739	T740	I741	E742	L743	H821	Q822	S823	G825	E831	V832	I841	S842	R843	G844	R845	Q846	R847	R848	R849	R850	R851	R852	R853	R854	R855	R856	R857	R858	R859	R860	R861	R862	R863	R864	R865	R866	R867	R868	R869	R870	R871	R872	R873	R874	R875	R876	R877	R878	R879	R880	R881	R882	R883	R884	R885	R886	R887	R888	R889	R890	R891	R892	R893	R894	R895	R896	R897	R898	R899	R900	R901	R902	R903	R904	R905	R906	R907	R908	R909	R910	R911	R912	R913	R914	R915	R916	R917	R918	R919	R920	R921	R922	R923	R924	R925	R926	R927	R928	R929	R930	R931	R932	R933	R934	R935	R936	R937	R938	R939	R940	R941	R942	R943	R944	R945	R946	R947	R948	R949	R950	R951	R952	R953	R954	R955	R956	R957	R958	R959	R960	R961	R962	R963	R964	R965	R966	R967	R968	R969	R970	R971	R972	R973	R974	R975	R976	R977	R978	R979	R980	R981	R982	R983	R984	R985	R986	R987	R988	R989	R990	R991	R992	R993	R994	R995	R996	R997	R998	R999	G920
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• Molecule 16: DNA-directed RNA polymerase III subunit RPC6



• Molecule 17: DNA-directed RNA polymerase III subunit RPC7, DNA-directed RNA polymerase III subunit RPC7, DNA-directed RNA polymerase III subunit RPC7, DNA-directed RNA polymerase III subunit RPC7, DNA-directed RNA polymerase III subunit RPC7



A64
C66
T66
A67
A68
T69
A70
T71
A72
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G74
T75
T76
G77
A78
A79

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	47141	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY; CTF amplitude correction was performed following 3D auto refinement in relion.	Depositor
Microscope	JEOL 3200FS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	68.9	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.197	Depositor
Minimum map value	-0.096	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.008	Depositor
Recommended contour level	0.035	Depositor
Map size (\AA)	339.84, 339.84, 339.84	wwPDB
Map dimensions	288, 288, 288	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.18, 1.18, 1.18	Depositor

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:
ZN

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.36	0/11358	0.61	0/15345
2	B	0.37	0/8943	0.62	0/12068
3	C	0.35	0/2711	0.60	0/3676
4	D	0.27	0/991	0.52	0/1328
5	E	0.32	0/1795	0.55	0/2416
6	F	0.34	0/683	0.56	0/923
7	G	0.30	0/1523	0.53	0/2066
8	H	0.33	0/1138	0.59	0/1540
9	I	0.35	0/328	0.69	0/445
10	J	0.44	0/558	0.57	0/750
11	K	0.35	0/803	0.57	0/1083
12	L	0.33	0/365	0.62	0/485
13	M	0.31	0/1369	0.58	0/1851
14	N	0.28	0/855	0.61	0/1149
15	O	0.33	0/4394	0.62	0/5928
16	P	0.29	0/2282	0.55	1/3075 (0.0%)
17	Q	0.35	0/281	0.50	0/381
18	R	0.31	1/4200 (0.0%)	0.49	0/5659
19	S	0.29	0/1464	0.52	0/1971
20	X	0.66	0/1072	1.09	1/1651 (0.1%)
21	Y	0.62	0/1313	0.98	1/2022 (0.0%)
All	All	0.36	1/48426 (0.0%)	0.62	3/65812 (0.0%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	R	173	LEU	C-N	8.59	1.50	1.34

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	X	63	DC	O4'-C4'-C3'	-7.84	101.29	106.00
16	P	152	SER	N-CA-CB	5.95	119.42	110.50
21	Y	61	DA	O4'-C4'-C3'	-5.12	102.45	104.50

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	11159	0	11285	1008	0
2	B	8788	0	8901	770	0
3	C	2655	0	2628	218	0
4	D	977	0	983	91	0
5	E	1759	0	1788	113	0
6	F	671	0	692	53	0
7	G	1484	0	1485	140	0
8	H	1120	0	1089	92	0
9	I	321	0	303	41	0
10	J	549	0	559	50	0
11	K	792	0	790	78	0
12	L	363	0	387	26	0
13	M	1338	0	1307	142	0
14	N	845	0	891	77	0
15	O	4329	0	4497	448	0
16	P	2242	0	2265	234	0
17	Q	368	0	308	27	0
18	R	4131	0	4230	269	0
19	S	1649	0	1455	111	0
20	X	959	0	539	59	0
21	Y	1169	0	645	66	0
22	A	2	0	0	0	0
22	B	1	0	0	0	0
22	I	1	0	0	0	0
22	J	1	0	0	0	0
22	L	1	0	0	0	0
22	R	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	47675	0	47027	3654	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 39.

All (3654) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:484:SER:HB2	2:B:1069:CYS:SG	1.40	1.58
15:O:330:LEU:CD1	15:O:331:THR:HG23	1.27	1.58
15:O:330:LEU:CD1	15:O:331:THR:H	1.20	1.54
1:A:1145:LEU:CD1	1:A:1146:VAL:H	1.20	1.52
2:B:590:ILE:HA	2:B:601:ILE:CD1	1.45	1.45
1:A:1145:LEU:HD12	1:A:1146:VAL:N	1.23	1.42
15:O:330:LEU:HD12	15:O:331:THR:N	1.13	1.41
6:F:115:THR:CG2	6:F:116:ASP:H	1.16	1.32
16:P:203:LYS:CG	16:P:206:VAL:HA	1.57	1.32
15:O:182:SER:O	15:O:187:ILE:HG12	1.13	1.28
15:O:182:SER:HB2	15:O:187:ILE:CG2	1.63	1.27
1:A:1032:LEU:O	1:A:1033:GLU:HG3	1.25	1.26
1:A:154:CYS:HB3	1:A:157:CYS:SG	1.77	1.24
16:P:135:LYS:HB3	16:P:151:TYR:CD1	1.73	1.23
19:S:516:ILE:O	19:S:520:LYS:HG3	1.38	1.23
1:A:18:PHE:CE1	2:B:1139:PRO:HB3	1.73	1.22
15:O:472:LYS:HB3	15:O:475:VAL:CG1	1.68	1.22
7:G:59:LEU:HD11	7:G:64:GLY:CA	1.70	1.21
15:O:182:SER:CB	15:O:187:ILE:CG2	2.18	1.21
2:B:590:ILE:CA	2:B:601:ILE:HD11	1.67	1.21
18:R:222:GLY:HA3	18:R:258:ARG:NH2	1.55	1.21
6:F:115:THR:HG22	6:F:116:ASP:N	1.32	1.20
15:O:330:LEU:CD1	15:O:331:THR:CG2	2.18	1.20
2:B:600:HIS:O	2:B:601:ILE:HD13	1.03	1.19
13:M:85:LEU:O	13:M:173:ILE:HD12	1.40	1.19
18:R:91:SER:OG	18:R:96:ILE:HD11	1.44	1.18
16:P:264:THR:O	16:P:265:LEU:HG	1.44	1.17
15:O:182:SER:CB	15:O:187:ILE:HG23	1.72	1.17
13:M:84:SER:O	13:M:85:LEU:HD12	1.45	1.16
1:A:33:GLU:HG3	1:A:83:HIS:HE2	1.11	1.16
15:O:583:TRP:HH2	16:P:312:PHE:CD1	1.63	1.15
15:O:328:ASP:OD1	15:O:329:PRO:HD3	1.44	1.15
1:A:484:SER:CB	2:B:1069:CYS:SG	2.35	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:330:LEU:HD11	15:O:331:THR:HG23	1.16	1.14
1:A:953:GLY:HA2	1:A:1063:SER:CB	1.78	1.13
2:B:170:LYS:O	2:B:174:LEU:HB2	1.47	1.13
1:A:33:GLU:HG3	1:A:83:HIS:NE2	1.63	1.12
1:A:424:PRO:HD3	1:A:444:LEU:HD23	1.28	1.11
2:B:600:HIS:O	2:B:601:ILE:CD1	1.98	1.11
16:P:203:LYS:HG3	16:P:206:VAL:CA	1.79	1.11
2:B:418:ALA:HB1	2:B:421:SER:HB2	1.18	1.10
18:R:7:CYS:SG	18:R:28:CYS:HB3	1.91	1.10
1:A:402:LEU:HD23	1:A:466:LEU:HD11	1.10	1.10
1:A:402:LEU:HD23	1:A:466:LEU:CD1	1.80	1.09
15:O:182:SER:HB3	15:O:187:ILE:HG23	1.18	1.09
2:B:558:ASN:HA	2:B:602:ALA:HB1	1.35	1.08
1:A:622:VAL:HA	1:A:685:TYR:CE2	1.88	1.08
1:A:1064:GLU:HG2	1:A:1065:LYS:H	0.95	1.08
4:D:14:TYR:OH	4:D:124:VAL:HG21	1.51	1.08
15:O:330:LEU:HD13	15:O:331:THR:HG23	1.32	1.08
1:A:402:LEU:CD2	1:A:466:LEU:HD11	1.83	1.08
1:A:18:PHE:CE1	2:B:1139:PRO:CB	2.38	1.06
2:B:299:GLN:HG2	2:B:322:GLU:HB2	1.09	1.06
1:A:953:GLY:HA2	1:A:1063:SER:HB2	1.36	1.06
1:A:153:ARG:HD3	15:O:339:LEU:HG	1.36	1.05
7:G:87:GLY:O	7:G:146:ILE:HB	1.57	1.05
18:R:222:GLY:CA	18:R:258:ARG:HH21	1.69	1.05
19:S:483:GLU:O	19:S:487:GLU:HB2	1.54	1.05
15:O:583:TRP:CH2	16:P:312:PHE:CD1	2.44	1.04
15:O:584:ASN:ND2	16:P:310:VAL:HG22	1.72	1.04
1:A:18:PHE:HE1	2:B:1139:PRO:CB	1.71	1.04
2:B:525:GLU:O	2:B:603:THR:HG21	1.57	1.04
3:C:228:ARG:O	3:C:299:ILE:HB	1.57	1.04
1:A:1448:PHE:CE1	4:D:14:TYR:HD2	1.75	1.03
2:B:795:LEU:HB2	2:B:894:ALA:O	1.56	1.03
15:O:182:SER:HB2	15:O:187:ILE:HG21	1.09	1.02
3:C:17:SER:O	3:C:18:THR:HG22	1.60	1.02
16:P:152:SER:O	19:S:520:LYS:HE2	1.59	1.02
1:A:1064:GLU:HG2	1:A:1065:LYS:N	1.74	1.01
2:B:590:ILE:HA	2:B:601:ILE:HD12	1.41	1.01
15:O:583:TRP:HH2	16:P:312:PHE:CE1	1.77	1.01
2:B:590:ILE:HA	2:B:601:ILE:HD11	1.03	1.01
15:O:182:SER:O	15:O:187:ILE:CG1	2.09	1.00
16:P:152:SER:O	19:S:520:LYS:HG2	1.60	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:579:ARG:HH12	2:B:647:GLU:HG3	1.24	1.00
3:C:84:TYR:HB2	3:C:205:LYS:O	1.61	0.99
16:P:203:LYS:HG3	16:P:206:VAL:HA	1.01	0.99
1:A:1009:ARG:O	1:A:1013:ASN:HB2	1.60	0.99
2:B:558:ASN:HA	2:B:602:ALA:CB	1.92	0.99
1:A:482:ARG:HD3	1:A:544:PRO:HG3	1.40	0.99
18:R:222:GLY:CA	18:R:258:ARG:NH2	2.25	0.99
15:O:517:VAL:HG22	15:O:518:SER:N	1.76	0.99
16:P:135:LYS:HB3	16:P:151:TYR:HD1	0.85	0.99
2:B:558:ASN:H	2:B:602:ALA:CB	1.74	0.98
2:B:590:ILE:HG13	2:B:601:ILE:HD11	1.44	0.98
18:R:620:SER:O	18:R:624:GLU:HB3	1.61	0.98
4:D:119:GLU:OE2	4:D:127:LEU:HD11	1.64	0.98
14:N:290:ILE:O	14:N:294:LEU:HB2	1.64	0.98
16:P:135:LYS:CB	16:P:151:TYR:HD1	1.76	0.98
15:O:472:LYS:HB3	15:O:475:VAL:HG12	0.99	0.98
1:A:483:LEU:HD13	1:A:507:PRO:HB3	1.43	0.98
2:B:415:GLU:HG3	2:B:416:TYR:H	1.28	0.98
1:A:30:SER:HB3	1:A:82:GLY:O	1.63	0.97
1:A:277:SER:HB3	1:A:278:PRO:CD	1.91	0.97
15:O:573:SER:HA	15:O:576:PHE:CD2	1.99	0.97
1:A:953:GLY:HA2	1:A:1063:SER:OG	1.65	0.96
2:B:558:ASN:N	2:B:602:ALA:HB2	1.80	0.96
6:F:135:ARG:HH12	7:G:58:GLN:NE2	1.61	0.96
15:O:330:LEU:HD12	15:O:331:THR:CA	1.93	0.96
15:O:472:LYS:CB	15:O:475:VAL:HG12	1.95	0.96
2:B:549:LEU:HD23	2:B:549:LEU:O	1.66	0.96
2:B:590:ILE:CA	2:B:601:ILE:CD1	2.32	0.95
1:A:1256:VAL:O	1:A:1260:MET:HB2	1.66	0.95
3:C:239:ILE:HG22	3:C:288:LYS:HD3	1.48	0.95
1:A:1032:LEU:O	1:A:1033:GLU:CG	2.13	0.95
2:B:587:PHE:CD2	2:B:588:ILE:N	2.34	0.95
16:P:293:ILE:H	16:P:293:ILE:HD13	1.32	0.95
2:B:415:GLU:O	2:B:416:TYR:C	2.04	0.95
15:O:471:THR:O	15:O:473:PRO:HD3	1.66	0.95
1:A:1064:GLU:CG	1:A:1065:LYS:H	1.80	0.95
9:I:8:CYS:HB3	9:I:29:CYS:SG	2.08	0.94
1:A:474:PHE:O	1:A:485:ILE:HD13	1.66	0.94
15:O:297:ILE:O	15:O:301:LYS:HB2	1.68	0.94
19:S:458:PHE:O	19:S:462:GLU:HB2	1.68	0.93
2:B:590:ILE:CG1	2:B:601:ILE:HD11	1.97	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:83:GLU:O	7:G:149:ARG:HA	1.67	0.93
18:R:257:GLN:O	18:R:261:GLU:HB2	1.69	0.93
1:A:277:SER:HB3	1:A:278:PRO:HD2	1.49	0.93
7:G:59:LEU:CD1	7:G:64:GLY:C	2.37	0.93
18:R:400:VAL:HA	18:R:480:ASP:O	1.69	0.92
1:A:1448:PHE:HE1	4:D:14:TYR:HD2	1.17	0.92
1:A:18:PHE:CD1	2:B:1139:PRO:HA	2.04	0.92
1:A:178:ILE:HD11	1:A:222:LEU:HB2	1.50	0.92
15:O:200:LEU:HB3	15:O:280:LEU:HB3	1.50	0.92
8:H:118:PHE:HB2	8:H:121:LEU:HB2	1.51	0.92
13:M:154:GLU:HA	13:M:174:GLU:O	1.69	0.91
19:S:516:ILE:HG22	19:S:520:LYS:HE3	1.51	0.91
20:X:62:DC:H4'	20:X:63:DC:OP1	1.69	0.91
16:P:152:SER:CA	19:S:520:LYS:HE2	2.01	0.91
19:S:517:GLU:HA	19:S:520:LYS:HD2	1.52	0.91
2:B:558:ASN:N	2:B:602:ALA:CB	2.33	0.91
2:B:1106:TRP:HE1	7:G:162:SER:HA	1.35	0.91
2:B:590:ILE:CB	2:B:601:ILE:HD11	1.99	0.91
19:S:470:GLU:O	19:S:474:ARG:HB3	1.69	0.91
7:G:59:LEU:HD11	7:G:64:GLY:C	1.89	0.90
2:B:776:SER:HB2	2:B:928:GLN:HE21	1.36	0.90
1:A:520:HIS:HE1	2:B:1062:LEU:HD21	1.34	0.90
1:A:590:PHE:HB2	11:K:106:GLN:HE22	1.36	0.90
1:A:1145:LEU:HB2	1:A:1309:VAL:HA	1.51	0.90
16:P:152:SER:C	19:S:520:LYS:HE2	1.91	0.90
18:R:558:PRO:O	18:R:562:GLU:HB2	1.71	0.90
1:A:483:LEU:CD1	1:A:507:PRO:HB3	2.02	0.89
7:G:59:LEU:HD11	7:G:64:GLY:N	1.86	0.89
13:M:84:SER:C	13:M:85:LEU:HD12	1.92	0.89
18:R:418:ALA:HA	18:R:429:ILE:O	1.71	0.89
1:A:232:LYS:HD3	16:P:315:TRP:CZ2	2.07	0.89
2:B:1094:VAL:O	2:B:1116:ILE:HA	1.73	0.89
16:P:201:GLY:N	16:P:202:PRO:HD3	1.88	0.89
1:A:277:SER:CB	1:A:278:PRO:CD	2.49	0.88
1:A:251:GLY:O	1:A:252:ARG:O	1.91	0.88
1:A:363:ARG:HA	1:A:367:ASN:HB2	1.53	0.88
15:O:573:SER:HA	15:O:576:PHE:HD2	1.35	0.88
16:P:203:LYS:CG	16:P:206:VAL:CA	2.44	0.88
1:A:424:PRO:HD3	1:A:444:LEU:CD2	2.03	0.88
1:A:829:ASP:O	1:A:830:ARG:HG2	1.73	0.88
5:E:99:HIS:O	5:E:103:LYS:HB2	1.72	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:182:SER:HB3	15:O:187:ILE:CG2	1.94	0.88
1:A:946:THR:OG1	1:A:1065:LYS:HB3	1.72	0.87
2:B:600:HIS:C	2:B:601:ILE:HD13	1.95	0.87
15:O:588:LEU:HG	15:O:637:VAL:HG23	1.55	0.87
15:O:330:LEU:HD11	15:O:331:THR:CG2	1.97	0.87
1:A:248:VAL:N	1:A:249:PRO:HD3	1.89	0.87
2:B:772:VAL:HG13	2:B:943:ILE:HG23	1.56	0.87
1:A:18:PHE:HD1	2:B:1139:PRO:HA	1.37	0.87
14:N:395:ILE:HD12	14:N:411:ARG:HA	1.56	0.87
15:O:636:ASN:O	15:O:640:ARG:HB2	1.75	0.87
2:B:418:ALA:CB	2:B:421:SER:HB2	2.02	0.87
2:B:129:ILE:HD11	2:B:152:MET:HB2	1.57	0.86
2:B:376:ARG:HH21	2:B:607:ARG:HH12	1.22	0.86
1:A:1176:VAL:O	1:A:1183:PHE:HB2	1.74	0.86
2:B:589:SER:O	2:B:590:ILE:HB	1.76	0.86
2:B:992:VAL:HG21	3:C:278:GLU:OE1	1.76	0.86
1:A:1448:PHE:CE1	4:D:14:TYR:CD2	2.64	0.86
1:A:988:ASP:HA	1:A:991:LYS:HB3	1.58	0.86
15:O:583:TRP:CH2	16:P:312:PHE:CE1	2.61	0.86
1:A:1145:LEU:HD12	1:A:1146:VAL:CA	2.06	0.86
15:O:328:ASP:O	15:O:329:PRO:O	1.94	0.86
1:A:579:LEU:HD21	1:A:704:PHE:HD1	1.41	0.85
3:C:70:ILE:HG13	3:C:74:GLU:HB2	1.57	0.85
7:G:59:LEU:CD1	7:G:64:GLY:CA	2.54	0.85
2:B:590:ILE:HG13	2:B:601:ILE:CD1	2.06	0.85
6:F:115:THR:CG2	6:F:116:ASP:N	1.95	0.85
1:A:1378:LYS:HG3	1:A:1379:MET:H	1.41	0.85
2:B:558:ASN:CA	2:B:602:ALA:CB	2.54	0.85
18:R:222:GLY:HA3	18:R:258:ARG:HH21	1.30	0.85
1:A:424:PRO:CD	1:A:444:LEU:HD23	2.06	0.85
2:B:418:ALA:HB1	2:B:421:SER:CB	2.06	0.85
16:P:33:GLN:NE2	16:P:49:MET:SD	2.50	0.85
16:P:311:TYR:HA	17:Q:40:PRO:HA	1.59	0.85
2:B:555:VAL:HG12	2:B:564:SER:H	1.42	0.84
1:A:33:GLU:CG	1:A:83:HIS:HE2	1.89	0.84
1:A:232:LYS:HD3	16:P:315:TRP:CH2	2.13	0.84
3:C:33:VAL:O	3:C:34:GLU:HB2	1.74	0.84
1:A:201:TRP:HB3	1:A:205:LEU:HD13	1.60	0.83
2:B:529:ILE:HD11	2:B:575:PHE:HE1	1.42	0.83
1:A:49:LYS:HD2	1:A:54:LEU:HB3	1.60	0.83
2:B:558:ASN:CA	2:B:602:ALA:HB1	2.08	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:573:ARG:HH21	11:K:87:GLU:HB3	1.40	0.83
1:A:579:LEU:HD21	1:A:704:PHE:CD1	2.14	0.83
4:D:110:LEU:HB3	4:D:120:LYS:HE3	1.60	0.83
15:O:324:PRO:HB3	15:O:327:ARG:HB3	1.60	0.83
15:O:328:ASP:OD1	15:O:329:PRO:CD	2.26	0.83
1:A:1145:LEU:HA	1:A:1310:ILE:H	1.44	0.82
3:C:256:ILE:HD13	3:C:265:ALA:HB1	1.60	0.82
11:K:88:PHE:HB3	11:K:106:GLN:HG2	1.60	0.82
2:B:934:ASN:HB3	2:B:1004:LEU:HD23	1.59	0.82
13:M:112:TYR:HD1	13:M:119:TRP:HE1	1.27	0.82
15:O:125:GLU:HB2	15:O:128:HIS:HB2	1.61	0.82
1:A:181:ASP:HB2	1:A:219:MET:HB3	1.61	0.82
1:A:1184:ILE:HB	1:A:1232:ILE:HB	1.61	0.82
1:A:724:LYS:O	1:A:728:GLU:HB2	1.79	0.82
1:A:836:PRO:O	1:A:837:LYS:O	1.97	0.82
2:B:299:GLN:HG2	2:B:322:GLU:CB	2.03	0.82
1:A:962:THR:O	1:A:965:GLU:HB3	1.79	0.82
1:A:1145:LEU:O	1:A:1310:ILE:HG22	1.80	0.82
18:R:121:ARG:HB2	18:R:124:ASN:HD22	1.45	0.82
1:A:482:ARG:HD2	1:A:1092:ILE:HG12	1.61	0.81
18:R:467:ARG:HG3	18:R:610:LEU:HD22	1.62	0.81
2:B:731:PRO:HB2	2:B:750:PRO:HG2	1.60	0.81
1:A:329:SER:HB3	1:A:355:GLN:HE21	1.45	0.81
1:A:393:ALA:HB3	1:A:499:ARG:HB2	1.60	0.81
1:A:794:MET:HA	1:A:797:CYS:HB2	1.59	0.81
10:J:10:CYS:SG	10:J:43:ARG:NE	2.52	0.81
15:O:517:VAL:HG22	15:O:518:SER:H	1.46	0.81
15:O:221:LYS:H	15:O:224:LYS:HB3	1.44	0.81
15:O:330:LEU:CG	15:O:331:THR:H	1.90	0.81
16:P:31:PHE:HD2	16:P:72:PHE:HB2	1.46	0.81
2:B:298:GLN:HB2	13:M:186:ILE:HG21	1.62	0.81
15:O:171:VAL:O	15:O:175:LEU:HB3	1.80	0.81
15:O:573:SER:O	15:O:576:PHE:CD2	2.33	0.81
2:B:364:LYS:HG3	2:B:365:MET:H	1.46	0.81
7:G:119:CYS:HB2	7:G:128:TRP:HB3	1.63	0.81
18:R:94:LEU:HD23	18:R:149:ARG:HH21	1.45	0.81
4:D:64:ASN:HD21	7:G:102:LEU:HB3	1.44	0.80
7:G:59:LEU:HG	7:G:60:LYS:N	1.94	0.80
5:E:29:PHE:HB2	5:E:65:THR:HB	1.63	0.80
8:H:58:THR:HB	8:H:143:LEU:HB3	1.61	0.80
15:O:297:ILE:O	15:O:301:LYS:CB	2.29	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:152:SER:O	19:S:520:LYS:CG	2.29	0.80
3:C:137:ASN:HA	3:C:202:ILE:O	1.82	0.80
16:P:152:SER:O	19:S:520:LYS:CE	2.29	0.80
2:B:667:VAL:HG12	2:B:669:SER:H	1.45	0.80
16:P:195:PHE:HB3	16:P:201:GLY:O	1.81	0.80
15:O:578:ARG:HG2	15:O:648:TRP:HH2	1.46	0.80
1:A:45:ASP:OD1	1:A:46:ARG:N	2.13	0.80
2:B:473:ILE:O	2:B:511:VAL:HA	1.81	0.80
1:A:814:GLY:H	1:A:848:VAL:HG13	1.46	0.80
15:O:105:LYS:HB2	15:O:121:TYR:HB2	1.62	0.80
1:A:269:ARG:NH2	1:A:286:THR:H	1.80	0.79
1:A:573:ARG:NH2	11:K:87:GLU:HB3	1.97	0.79
2:B:609:CYS:HB3	2:B:648:TYR:HB3	1.62	0.79
19:S:483:GLU:O	19:S:487:GLU:CB	2.31	0.79
16:P:134:VAL:C	16:P:151:TYR:HB2	2.02	0.79
1:A:30:SER:HB2	1:A:82:GLY:HA2	1.64	0.79
1:A:829:ASP:O	1:A:830:ARG:CG	2.30	0.79
2:B:320:LEU:HA	2:B:324:ILE:HG13	1.64	0.79
19:S:506:GLN:O	19:S:510:LYS:HB2	1.82	0.79
1:A:399:ALA:HA	1:A:466:LEU:HD12	1.65	0.79
6:F:76:LYS:HD3	6:F:79:ARG:HH21	1.45	0.79
15:O:330:LEU:HD12	15:O:331:THR:CB	2.13	0.79
16:P:33:GLN:NE2	19:S:372:MET:SD	2.56	0.79
13:M:94:PRO:HB3	14:N:391:LEU:HA	1.65	0.79
15:O:172:GLU:O	15:O:176:SER:HB2	1.83	0.79
1:A:571:TYR:HB3	1:A:575:THR:HG23	1.64	0.79
16:P:152:SER:HA	19:S:520:LYS:HE2	1.62	0.79
2:B:124:THR:HA	2:B:187:VAL:HA	1.65	0.78
5:E:152:LYS:HE2	5:E:154:ILE:HD11	1.65	0.78
1:A:622:VAL:HA	1:A:685:TYR:CD2	2.17	0.78
1:A:654:ILE:HG12	1:A:659:ILE:HA	1.65	0.78
2:B:1012:CYS:SG	3:C:293:ARG:NH2	2.56	0.78
16:P:201:GLY:N	16:P:202:PRO:CD	2.45	0.78
16:P:252:LYS:HD2	16:P:266:GLU:HG2	1.62	0.78
12:L:48:CYS:SG	12:L:51:CYS:O	2.41	0.78
16:P:203:LYS:CB	16:P:206:VAL:HA	2.12	0.78
1:A:1305:CYS:SG	5:E:11:ARG:NH1	2.57	0.78
15:O:48:LEU:HD22	15:O:581:LEU:HD11	1.65	0.78
13:M:89:GLN:HE21	13:M:178:GLN:HE22	1.29	0.78
14:N:290:ILE:O	14:N:294:LEU:CB	2.31	0.78
18:R:521:TYR:HB3	18:R:530:LEU:HB2	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:109:ASN:OD1	1:A:110:CYS:N	2.15	0.78
15:O:134:GLY:H	17:Q:58:TYR:HD1	1.31	0.78
1:A:30:SER:HA	1:A:81:PHE:O	1.84	0.78
1:A:49:LYS:HG3	1:A:56:PRO:HD3	1.65	0.78
1:A:549:PRO:HG3	1:A:679:TYR:HB2	1.66	0.78
15:O:60:ARG:HB2	15:O:90:SER:OG	1.83	0.78
16:P:52:VAL:HG13	16:P:61:ILE:HD11	1.66	0.78
16:P:252:LYS:CD	16:P:266:GLU:HG2	2.13	0.78
1:A:29:GLN:HE22	2:B:1133:LEU:HD21	1.49	0.78
1:A:1448:PHE:HE1	4:D:14:TYR:CD2	2.01	0.78
7:G:59:LEU:HD11	7:G:64:GLY:HA2	1.65	0.78
1:A:957:TYR:HB2	1:A:1033:GLU:O	1.83	0.77
15:O:338:ASP:HB3	15:O:341:GLU:HB3	1.66	0.77
5:E:123:LEU:HD21	5:E:126:SER:HB2	1.64	0.77
18:R:469:ILE:HG21	18:R:476:ALA:HB3	1.66	0.77
3:C:43:ASN:HB2	3:C:55:ASP:HB3	1.66	0.77
12:L:31:CYS:HB2	12:L:35:SER:H	1.48	0.77
20:X:77:DC:O2	21:Y:3:DG:N2	2.17	0.77
1:A:1145:LEU:CB	1:A:1309:VAL:HA	2.15	0.77
1:A:953:GLY:CA	1:A:1063:SER:OG	2.31	0.77
2:B:299:GLN:CG	2:B:322:GLU:HB2	2.04	0.77
2:B:698:ARG:HH21	2:B:952:ARG:HG2	1.50	0.77
15:O:41:THR:HA	16:P:315:TRP:HD1	1.47	0.77
1:A:247:THR:C	1:A:249:PRO:HD3	2.05	0.77
1:A:1380:ARG:HH11	1:A:1385:GLN:HE22	1.31	0.77
16:P:195:PHE:CB	16:P:201:GLY:O	2.32	0.77
16:P:203:LYS:HD3	16:P:203:LYS:H	1.49	0.77
1:A:30:SER:CB	1:A:82:GLY:C	2.52	0.77
2:B:267:GLU:O	2:B:271:LEU:HB2	1.84	0.77
1:A:502:GLU:HG2	2:B:767:ILE:HG13	1.65	0.77
16:P:11:LEU:O	16:P:15:ALA:HB2	1.85	0.77
2:B:186:ILE:HA	2:B:191:GLU:HA	1.67	0.77
2:B:728:MET:SD	2:B:753:GLN:NE2	2.58	0.77
1:A:483:LEU:HD11	1:A:550:ILE:HG21	1.66	0.76
1:A:621:PRO:HG2	1:A:689:GLU:OE1	1.85	0.76
2:B:198:GLU:HA	2:B:377:LEU:HA	1.65	0.76
2:B:613:ILE:HA	2:B:646:VAL:HG12	1.65	0.76
5:E:155:ARG:HB2	5:E:188:LEU:HD21	1.66	0.76
11:K:89:CYS:HA	11:K:104:ARG:O	1.85	0.76
1:A:1186:VAL:H	1:A:1230:ILE:HG12	1.51	0.76
16:P:90:GLU:O	16:P:94:TYR:HB3	1.86	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:127:LEU:HB2	4:D:133:HIS:HB3	1.67	0.76
1:A:1033:GLU:HB3	1:A:1034:PRO:HD2	1.68	0.76
2:B:741:ILE:HG23	2:B:746:TYR:HB3	1.68	0.76
3:C:248:GLN:HB3	3:C:256:ILE:HD11	1.66	0.76
2:B:797:ARG:HG2	2:B:803:GLN:HG2	1.67	0.76
3:C:17:SER:O	3:C:18:THR:CG2	2.34	0.76
15:O:577:MET:O	15:O:580:ASN:HB3	1.85	0.76
19:S:443:SER:HB2	19:S:451:ARG:HB3	1.66	0.76
1:A:116:SER:HA	1:A:120:LYS:HE3	1.68	0.76
1:A:353:PHE:O	1:A:356:ARG:HG2	1.85	0.76
2:B:583:LYS:HG2	2:B:584:VAL:HG13	1.67	0.76
1:A:1151:GLU:HG3	1:A:1152:ARG:HG3	1.66	0.76
3:C:92:ILE:HD11	10:J:2:ILE:HD13	1.67	0.76
7:G:189:GLU:HG3	7:G:191:PRO:HD3	1.67	0.76
18:R:258:ARG:HA	18:R:261:GLU:HB3	1.66	0.75
14:N:400:ALA:HB3	14:N:405:SER:HA	1.68	0.75
15:O:124:GLU:HG3	15:O:126:GLY:H	1.50	0.75
1:A:1124:PRO:O	1:A:1127:LYS:HB2	1.87	0.75
15:O:584:ASN:HD21	16:P:310:VAL:HG22	1.52	0.75
16:P:133:TYR:O	16:P:151:TYR:N	2.19	0.75
1:A:974:LEU:HD21	1:A:998:TYR:HB3	1.68	0.75
2:B:735:MET:HB2	2:B:754:ASN:HD21	1.51	0.75
18:R:222:GLY:HA2	18:R:258:ARG:HH21	1.51	0.75
14:N:287:HIS:O	14:N:291:LEU:HB2	1.86	0.75
18:R:392:THR:O	18:R:488:GLY:HA2	1.87	0.75
15:O:517:VAL:CG2	15:O:521:ILE:HB	2.16	0.75
15:O:629:MET:O	15:O:633:ARG:CB	2.34	0.75
1:A:30:SER:HB2	1:A:82:GLY:C	2.07	0.75
1:A:1441:LEU:HD21	7:G:54:VAL:HG12	1.67	0.75
15:O:516:LEU:HD12	15:O:565:LEU:HD23	1.69	0.75
15:O:648:TRP:NE1	15:O:652:GLN:OE1	2.20	0.75
7:G:124:GLU:O	7:G:125:GLU:HB3	1.85	0.75
15:O:629:MET:O	15:O:633:ARG:HB2	1.86	0.75
18:R:222:GLY:HA3	18:R:258:ARG:CZ	2.17	0.75
2:B:976:GLY:HA2	2:B:981:GLY:HA3	1.67	0.74
7:G:129:ILE:HG23	7:G:138:LEU:HA	1.67	0.74
1:A:402:LEU:CG	1:A:466:LEU:HD11	2.18	0.74
15:O:620:LEU:HD12	15:O:621:PRO:HD2	1.67	0.74
1:A:410:ARG:HH12	6:F:106:PRO:HA	1.52	0.74
19:S:516:ILE:O	19:S:520:LYS:CG	2.29	0.74
8:H:129:TYR:O	8:H:131:ASN:N	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:517:VAL:CG2	15:O:518:SER:N	2.50	0.74
2:B:454:VAL:HG13	2:B:455:THR:HG23	1.69	0.74
1:A:332:VAL:HG13	1:A:333:ASN:H	1.51	0.74
15:O:213:ASP:O	15:O:216:GLN:N	2.21	0.74
1:A:1174:GLN:H	1:A:1186:VAL:HG12	1.53	0.74
2:B:337:VAL:CG2	2:B:345:LYS:HB3	2.17	0.74
4:D:14:TYR:CE1	4:D:124:VAL:HG11	2.23	0.74
1:A:805:ASN:ND2	2:B:950:PRO:O	2.20	0.74
1:A:1034:PRO:O	1:A:1035:PRO:O	2.06	0.74
2:B:337:VAL:HG21	2:B:345:LYS:HB3	1.70	0.74
15:O:200:LEU:HA	15:O:281:THR:O	1.88	0.74
11:K:93:ILE:HG22	11:K:95:HIS:H	1.53	0.73
15:O:212:GLU:HG2	15:O:334:GLY:HA2	1.70	0.73
18:R:239:ARG:NH1	19:S:291:UNK:O	2.21	0.73
2:B:590:ILE:HG13	2:B:601:ILE:CG1	2.17	0.73
16:P:45:LEU:HG	19:S:372:MET:HG2	1.70	0.73
16:P:216:SER:OG	16:P:261:TYR:N	2.21	0.73
16:P:221:ILE:O	16:P:225:ILE:N	2.20	0.73
1:A:30:SER:HB2	1:A:82:GLY:CA	2.16	0.73
1:A:850:ASN:HB3	1:A:854:SER:OG	1.87	0.73
2:B:125:TYR:HB3	2:B:186:ILE:HG23	1.71	0.73
2:B:332:ILE:HG13	2:B:333:ALA:H	1.51	0.73
1:A:475:ASN:HB2	1:A:485:ILE:HD11	1.70	0.73
3:C:19:ASP:HB3	3:C:29:ASN:HD22	1.52	0.73
1:A:221:ASP:O	1:A:226:LYS:NZ	2.22	0.73
1:A:632:VAL:O	1:A:648:ASN:ND2	2.22	0.73
2:B:97:ASP:HB3	2:B:132:ASP:HB2	1.71	0.73
3:C:107:LYS:HB3	3:C:185:VAL:HG23	1.70	0.73
12:L:27:LEU:HD11	12:L:37:LYS:HB2	1.70	0.73
15:O:289:LYS:HE2	15:O:323:SER:HB3	1.70	0.73
2:B:87:VAL:HG11	2:B:407:LEU:HD13	1.69	0.73
2:B:780:ARG:NH1	10:J:9:SER:O	2.22	0.73
8:H:21:ASN:OD1	8:H:22:LYS:N	2.22	0.73
2:B:496:MET:HG2	2:B:610:ARG:HD2	1.70	0.73
13:M:236:VAL:O	13:M:240:GLU:HB2	1.89	0.73
1:A:829:ASP:C	1:A:830:ARG:CG	2.56	0.73
1:A:789:ASN:HD21	1:A:792:LEU:HD13	1.53	0.73
1:A:1163:LYS:HG3	1:A:1164:THR:H	1.53	0.73
16:P:172:ILE:HG22	16:P:173:GLU:H	1.54	0.73
4:D:103:PHE:O	4:D:106:LEU:HB3	1.88	0.72
1:A:1140:ILE:HA	1:A:1295:VAL:O	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:124:ASN:HB3	18:R:160:THR:HG21	1.71	0.72
1:A:573:ARG:HH12	1:A:592:ILE:HG12	1.54	0.72
2:B:227:ARG:HH11	2:B:449:MET:HG3	1.54	0.72
16:P:69:GLU:HG3	16:P:70:LEU:H	1.54	0.72
2:B:844:ASN:HA	2:B:870:PRO:HB3	1.72	0.72
3:C:140:CYS:HB2	3:C:196:LEU:HD13	1.71	0.72
18:R:189:LEU:HB2	18:R:195:LYS:HZ1	1.55	0.72
1:A:402:LEU:HB3	1:A:466:LEU:HD11	1.70	0.72
1:A:1122:GLY:O	1:A:1125:ARG:HG2	1.90	0.72
1:A:1332:ARG:NH2	5:E:200:ARG:HE	1.87	0.72
5:E:28:TYR:HA	5:E:64:PRO:HA	1.71	0.72
8:H:131:ASN:HA	8:H:134:ASN:HD22	1.54	0.72
1:A:3:GLU:HB3	7:G:37:LYS:HG3	1.72	0.72
1:A:33:GLU:CG	1:A:83:HIS:NE2	2.47	0.72
1:A:328:ASN:OD1	1:A:329:SER:N	2.21	0.72
2:B:89:PRO:HA	19:S:383:ARG:HH11	1.54	0.72
2:B:325:GLU:O	2:B:329:THR:N	2.22	0.72
1:A:470:ASP:O	1:A:489:TYR:HA	1.90	0.72
2:B:109:LYS:NZ	2:B:111:TYR:O	2.20	0.72
2:B:415:GLU:HG3	2:B:416:TYR:N	2.03	0.72
2:B:524:ASP:HB3	2:B:588:ILE:HD11	1.71	0.72
7:G:203:ASP:HB3	7:G:211:TRP:HE1	1.54	0.72
15:O:570:GLU:HA	15:O:573:SER:HB3	1.72	0.72
10:J:9:SER:OG	10:J:45:CYS:SG	2.45	0.72
19:S:458:PHE:O	19:S:462:GLU:CB	2.37	0.72
1:A:33:GLU:N	1:A:83:HIS:CE1	2.58	0.72
18:R:202:ALA:O	18:R:205:LEU:HB3	1.88	0.72
1:A:34:VAL:HG13	1:A:35:SER:H	1.55	0.71
1:A:181:ASP:OD1	1:A:182:THR:N	2.22	0.71
15:O:182:SER:O	15:O:183:MET:O	2.08	0.71
18:R:79:THR:O	18:R:83:ALA:HB2	1.89	0.71
2:B:558:ASN:CA	2:B:602:ALA:HB2	2.19	0.71
5:E:77:SER:O	5:E:105:PHE:HB3	1.90	0.71
5:E:86:PRO:HA	5:E:113:GLN:HB3	1.72	0.71
15:O:52:LEU:HB3	15:O:127:ILE:HG21	1.70	0.71
15:O:472:LYS:CB	15:O:475:VAL:CG1	2.61	0.71
1:A:109:ASN:HD22	1:A:159:ALA:HB3	1.53	0.71
1:A:464:ARG:NH1	1:A:467:GLU:OE1	2.23	0.71
1:A:483:LEU:HD13	1:A:507:PRO:CB	2.18	0.71
1:A:632:VAL:HG11	1:A:796:THR:HA	1.72	0.71
18:R:398:ALA:HB3	18:R:449:VAL:HB	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:X:77:DC:N3	21:Y:3:DG:N1	2.38	0.71
2:B:234:ILE:HB	2:B:240:ILE:HG22	1.72	0.71
2:B:587:PHE:CG	2:B:588:ILE:N	2.53	0.71
16:P:131:GLN:HB3	16:P:133:TYR:HD2	1.55	0.71
15:O:578:ARG:HG2	15:O:648:TRP:CH2	2.25	0.71
16:P:191:PHE:HB2	16:P:192:PRO:HD2	1.72	0.71
15:O:365:ASP:N	15:O:476:TYR:OH	2.21	0.71
16:P:132:ARG:O	16:P:151:TYR:CD2	2.44	0.71
18:R:91:SER:OG	18:R:96:ILE:CD1	2.34	0.71
1:A:38:ASP:O	1:A:40:PHE:N	2.24	0.71
5:E:172:GLU:HG2	5:E:173:SER:H	1.55	0.71
7:G:104:ILE:HG23	7:G:105:PHE:H	1.54	0.71
18:R:191:LEU:HB2	18:R:195:LYS:HD2	1.73	0.71
1:A:1328:ILE:O	1:A:1331:ALA:N	2.23	0.71
2:B:201:SER:OG	2:B:376:ARG:NH1	2.24	0.71
2:B:412:ARG:NH1	2:B:413:ALA:O	2.24	0.71
16:P:203:LYS:HG3	16:P:206:VAL:CB	2.21	0.71
21:Y:1:DA:H2''	21:Y:2:DC:H5'	1.71	0.71
2:B:610:ARG:O	2:B:648:TYR:HA	1.90	0.70
13:M:182:PHE:O	13:M:183:PHE:HD1	1.74	0.70
2:B:228:LYS:HD3	2:B:244:HIS:HE2	1.55	0.70
2:B:615:VAL:HA	2:B:620:SER:HA	1.72	0.70
12:L:31:CYS:SG	12:L:34:CYS:HB2	2.31	0.70
18:R:467:ARG:HA	18:R:602:LEU:HD21	1.73	0.70
1:A:431:ASN:OD1	1:A:432:TYR:N	2.23	0.70
1:A:921:LEU:HD23	1:A:932:PRO:HG2	1.73	0.70
3:C:275:VAL:HG21	3:C:293:ARG:HD3	1.73	0.70
15:O:636:ASN:O	15:O:640:ARG:CB	2.39	0.70
16:P:92:LEU:O	16:P:96:TYR:CB	2.39	0.70
18:R:628:ILE:HG21	19:S:499:ASN:HD21	1.55	0.70
1:A:363:ARG:HH21	2:B:1046:LEU:HD21	1.56	0.70
8:H:1:MET:HG3	8:H:3:ASN:H	1.55	0.70
15:O:53:VAL:O	15:O:57:LEU:N	2.20	0.70
16:P:92:LEU:O	16:P:96:TYR:HB3	1.92	0.70
8:H:116:TYR:HB2	8:H:123:MET:HB3	1.72	0.70
16:P:64:VAL:HB	16:P:71:LYS:HB2	1.73	0.70
1:A:330:ASP:OD1	1:A:331:SER:N	2.25	0.70
1:A:900:TYR:CE1	6:F:136:ARG:HD3	2.27	0.70
5:E:95:THR:O	5:E:99:HIS:ND1	2.24	0.70
15:O:573:SER:HG	15:O:576:PHE:HE2	1.39	0.70
18:R:189:LEU:O	18:R:191:LEU:HG	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:286:THR:O	1:A:290:THR:HB	1.92	0.70
1:A:829:ASP:C	1:A:830:ARG:HG3	2.12	0.70
8:H:60:ALA:O	8:H:141:TYR:HB2	1.91	0.70
15:O:234:ASP:O	15:O:238:ARG:N	2.25	0.70
16:P:236:THR:HG23	16:P:239:ASN:H	1.57	0.70
18:R:195:LYS:O	18:R:199:VAL:N	2.24	0.70
18:R:257:GLN:O	18:R:261:GLU:CB	2.38	0.70
1:A:81:PHE:CD2	1:A:265:PRO:HD3	2.27	0.70
2:B:816:ASP:OD1	2:B:822:GLN:NE2	2.25	0.70
6:F:115:THR:HG23	6:F:116:ASP:H	1.48	0.70
13:M:117:HIS:HB2	13:M:119:TRP:NE1	2.07	0.70
1:A:668:VAL:HB	1:A:677:VAL:HG23	1.72	0.70
1:A:1329:GLU:OE2	1:A:1332:ARG:NH2	2.24	0.70
3:C:231:PRO:HA	3:C:293:ARG:HG2	1.73	0.70
8:H:116:TYR:O	8:H:122:LEU:HA	1.92	0.70
15:O:517:VAL:O	15:O:518:SER:HB3	1.91	0.70
18:R:519:LEU:HB3	18:R:532:ILE:HB	1.74	0.70
1:A:277:SER:CB	1:A:278:PRO:HD3	2.21	0.69
2:B:760:MET:HG2	2:B:762:TYR:H	1.57	0.69
9:I:9:ASN:HD22	13:M:92:ASN:HA	1.56	0.69
12:L:51:CYS:SG	12:L:53:HIS:HB3	2.32	0.69
15:O:583:TRP:HZ3	17:Q:41:LEU:CD2	2.05	0.69
1:A:67:CYS:HB3	1:A:70:CYS:O	1.92	0.69
1:A:1034:PRO:O	1:A:1035:PRO:C	2.29	0.69
2:B:514:LEU:HB3	2:B:518:THR:HG21	1.74	0.69
2:B:529:ILE:HD11	2:B:575:PHE:CE1	2.26	0.69
2:B:579:ARG:NH1	2:B:647:GLU:HG3	2.04	0.69
2:B:612:LEU:HD21	2:B:649:LEU:HD12	1.74	0.69
3:C:153:PRO:HA	3:C:156:LEU:HB2	1.74	0.69
4:D:7:ARG:HE	4:D:10:PHE:HZ	1.39	0.69
7:G:39:ILE:HD12	7:G:40:PRO:HD2	1.74	0.69
11:K:117:LEU:O	11:K:121:LEU:HB2	1.92	0.69
15:O:80:VAL:HG11	15:O:87:ASP:HB2	1.74	0.69
15:O:547:GLU:HG2	15:O:548:ILE:H	1.55	0.69
2:B:197:GLN:NE2	2:B:476:GLN:OE1	2.25	0.69
2:B:756:THR:N	10:J:48:ARG:HH12	1.89	0.69
2:B:1004:LEU:HB2	2:B:1013:LEU:HD12	1.74	0.69
15:O:40:ARG:HG2	15:O:587:ASN:OD1	1.92	0.69
15:O:140:ILE:HD11	15:O:160:VAL:HG21	1.74	0.69
18:R:255:LEU:O	18:R:258:ARG:N	2.25	0.69
1:A:432:TYR:HE1	1:A:443:ASN:ND2	1.89	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1254:ASN:ND2	9:I:15:THR:OG1	2.25	0.69
2:B:263:LEU:HD12	2:B:297:THR:HG22	1.74	0.69
2:B:534:TYR:HA	2:B:538:VAL:HG22	1.74	0.69
4:D:126:GLN:O	4:D:127:LEU:HG	1.92	0.69
17:Q:41:LEU:O	17:Q:44:ASN:ND2	2.25	0.69
18:R:225:GLY:HA2	18:R:228:ILE:HD12	1.74	0.69
1:A:272:VAL:HG11	1:A:281:ASN:HD22	1.57	0.69
2:B:244:HIS:CE1	2:B:333:ALA:HB2	2.27	0.69
8:H:99:GLY:HA3	8:H:118:PHE:HD1	1.57	0.69
14:N:371:LEU:HD23	14:N:382:ILE:HB	1.74	0.69
7:G:112:GLN:HG2	7:G:115:LEU:HD13	1.75	0.69
13:M:85:LEU:O	13:M:173:ILE:CD1	2.31	0.69
16:P:254:GLU:HB3	16:P:262:ARG:HB2	1.72	0.69
18:R:650:ALA:HB2	19:S:517:GLU:CD	2.13	0.69
2:B:616:SER:N	2:B:619:GLN:O	2.25	0.69
10:J:52:THR:HG22	10:J:53:HIS:H	1.56	0.69
16:P:11:LEU:O	16:P:15:ALA:CB	2.39	0.69
18:R:463:ARG:NH1	18:R:601:ASN:O	2.23	0.69
1:A:172:GLY:HA3	1:A:331:SER:HB3	1.75	0.69
1:A:374:ASP:OD1	2:B:1038:ARG:NE	2.24	0.69
1:A:386:ASN:HA	1:A:699:LYS:HG2	1.73	0.69
1:A:444:LEU:HD21	1:A:449:ARG:HD3	1.74	0.69
2:B:765:TYR:CD1	2:B:924:ILE:HG13	2.27	0.69
2:B:771:LEU:O	2:B:923:GLY:N	2.22	0.69
2:B:987:MET:HA	2:B:990:ILE:HB	1.73	0.69
3:C:165:ARG:N	3:C:189:PRO:O	2.22	0.69
6:F:115:THR:HG22	6:F:116:ASP:H	0.52	0.69
16:P:206:VAL:HG11	16:P:210:PRO:HB3	1.75	0.69
18:R:632:ALA:O	18:R:636:LEU:HB2	1.92	0.69
1:A:615:LYS:HG3	1:A:620:SER:OG	1.91	0.69
1:A:622:VAL:CA	1:A:685:TYR:CE2	2.72	0.69
1:A:955:LEU:HB2	1:A:958:ALA:HB3	1.75	0.69
2:B:167:ASP:O	2:B:169:SER:N	2.24	0.69
2:B:591:TYR:HB3	2:B:653:GLU:HA	1.75	0.69
2:B:1006:SER:HB3	2:B:1010:GLY:H	1.58	0.69
1:A:99:THR:HA	1:A:102:ILE:HG22	1.74	0.69
15:O:41:THR:HA	16:P:315:TRP:CD1	2.28	0.69
19:S:460:ASN:OD1	19:S:464:LYS:NZ	2.23	0.69
2:B:1095:CYS:HB2	2:B:1107:CYS:SG	2.33	0.68
18:R:171:THR:OG1	18:R:172:GLU:OE1	2.11	0.68
5:E:178:ILE:N	5:E:213:ILE:O	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:84:ILE:HA	7:G:148:PHE:O	1.93	0.68
7:G:124:GLU:O	7:G:125:GLU:CB	2.41	0.68
15:O:79:LEU:HD22	15:O:91:VAL:HG13	1.75	0.68
3:C:126:PHE:HB3	3:C:131:THR:HG21	1.74	0.68
15:O:110:THR:HA	15:O:116:LYS:HA	1.75	0.68
1:A:590:PHE:HB2	11:K:106:GLN:NE2	2.07	0.68
15:O:51:GLU:O	15:O:55:ALA:N	2.21	0.68
16:P:151:TYR:OH	18:R:647:ALA:O	2.12	0.68
1:A:429:GLY:C	1:A:465:HIS:HD1	1.97	0.68
5:E:180:ARG:HH12	5:E:191:LYS:HA	1.57	0.68
7:G:59:LEU:CD1	7:G:65:SER:N	2.56	0.68
13:M:83:GLU:O	13:M:84:SER:O	2.11	0.68
1:A:520:HIS:CE1	2:B:1062:LEU:HD21	2.24	0.68
2:B:1132:LEU:HD22	2:B:1137:ILE:HD13	1.74	0.68
4:D:115:LEU:HA	4:D:138:VAL:HG21	1.76	0.68
9:I:8:CYS:CB	9:I:29:CYS:SG	2.81	0.68
15:O:46:LEU:HA	15:O:49:TYR:HD2	1.59	0.68
15:O:166:LEU:HB3	15:O:169:LEU:HD11	1.75	0.68
15:O:471:THR:O	15:O:473:PRO:CD	2.40	0.68
7:G:59:LEU:HD13	7:G:64:GLY:C	2.13	0.68
13:M:77:LYS:HA	14:N:360:VAL:HG22	1.76	0.68
13:M:182:PHE:O	13:M:183:PHE:CD1	2.47	0.68
18:R:189:LEU:HB2	18:R:195:LYS:NZ	2.09	0.68
21:Y:12:DA:H2"	21:Y:13:DA:C8	2.28	0.68
1:A:406:GLU:HB3	1:A:462:VAL:O	1.94	0.68
3:C:35:LYS:O	3:C:39:ASP:CB	2.42	0.68
4:D:13:ASP:OD1	4:D:17:LEU:N	2.22	0.68
7:G:16:ASP:O	7:G:19:HIS:ND1	2.25	0.68
15:O:163:VAL:O	15:O:167:GLY:N	2.27	0.68
16:P:189:ASN:HD21	16:P:216:SER:HA	1.58	0.68
1:A:18:PHE:CD1	2:B:1139:PRO:CA	2.76	0.68
1:A:958:ALA:O	1:A:961:GLU:HB2	1.94	0.68
1:A:1038:GLU:HB3	1:A:1042:ILE:HD11	1.75	0.68
2:B:622:VAL:HG12	2:B:624:ASP:H	1.58	0.68
4:D:119:GLU:HA	4:D:122:GLN:HB3	1.75	0.68
7:G:59:LEU:HD11	7:G:64:GLY:H	1.57	0.68
15:O:517:VAL:HG21	15:O:521:ILE:HB	1.76	0.68
18:R:266:LYS:HG2	18:R:283:GLY:HA3	1.76	0.68
2:B:587:PHE:HD2	2:B:588:ILE:H	1.33	0.67
7:G:49:TYR:HB2	7:G:75:VAL:HG23	1.75	0.67
1:A:273:MET:HG3	1:A:275:GLN:HB3	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1213:SER:HB2	1:A:1217:ILE:HB	1.75	0.67
2:B:298:GLN:HG2	13:M:186:ILE:HG21	1.73	0.67
6:F:115:THR:HG23	6:F:116:ASP:N	2.07	0.67
18:R:144:ILE:HD12	18:R:154:VAL:HG11	1.74	0.67
21:Y:14:DC:H1'	21:Y:15:DT:H5'	1.76	0.67
1:A:485:ILE:HG22	1:A:535:MET:SD	2.34	0.67
2:B:1002:ASP:OD1	2:B:1003:MET:N	2.27	0.67
3:C:116:VAL:HA	3:C:130:ASN:HD21	1.59	0.67
16:P:149:MET:O	16:P:150:LEU:O	2.12	0.67
1:A:572:ASP:OD1	1:A:575:THR:HG22	1.94	0.67
18:R:245:VAL:HA	18:R:248:SER:HB3	1.75	0.67
1:A:30:SER:HB3	1:A:82:GLY:C	2.15	0.67
11:K:47:ILE:HG12	11:K:65:ILE:HG12	1.77	0.67
1:A:41:ASP:OD2	1:A:50:ALA:N	2.28	0.67
2:B:43:ASP:OD1	2:B:44:LYS:N	2.26	0.67
2:B:864:THR:OG1	2:B:865:GLN:N	2.27	0.67
15:O:182:SER:O	15:O:183:MET:C	2.31	0.67
16:P:96:TYR:OH	16:P:113:ARG:NH1	2.27	0.67
1:A:269:ARG:CZ	1:A:286:THR:H	2.07	0.67
2:B:49:PRO:O	2:B:53:LYS:N	2.28	0.67
2:B:769:ASP:OD2	2:B:952:ARG:NH2	2.28	0.67
15:O:195:CYS:SG	15:O:196:GLU:N	2.64	0.67
1:A:400:LYS:HA	1:A:465:HIS:CD2	2.30	0.67
15:O:573:SER:CA	15:O:576:PHE:CD2	2.78	0.67
2:B:552:ASN:OD1	2:B:553:TYR:HD2	1.78	0.67
2:B:902:GLN:HE21	2:B:904:ARG:HE	1.43	0.67
11:K:136:THR:HA	11:K:139:ILE:HG22	1.75	0.67
16:P:21:GLN:O	16:P:26:GLY:N	2.27	0.67
20:X:23:DT:H2'	20:X:24:DT:C6	2.28	0.67
7:G:122:THR:O	7:G:124:GLU:N	2.28	0.67
13:M:95:ARG:HB3	13:M:101:PRO:HB3	1.77	0.67
1:A:572:ASP:H	1:A:575:THR:CG2	2.08	0.66
1:A:1272:VAL:HG13	1:A:1273:LYS:H	1.59	0.66
10:J:7:CYS:SG	10:J:11:GLY:N	2.65	0.66
18:R:581:ASN:ND2	18:R:583:HIS:O	2.28	0.66
2:B:342:PHE:O	2:B:346:ALA:HB2	1.95	0.66
2:B:1028:LYS:HG2	2:B:1029:HIS:H	1.60	0.66
5:E:6:GLU:O	5:E:10:SER:CB	2.43	0.66
18:R:397:VAL:HG12	18:R:484:GLN:HB2	1.77	0.66
2:B:141:ILE:HG23	2:B:142:ILE:H	1.61	0.66
2:B:169:SER:O	2:B:173:LYS:N	2.27	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:14:TYR:CZ	4:D:124:VAL:HG21	2.30	0.66
1:A:15:GLY:H	1:A:1408:VAL:HG12	1.61	0.66
1:A:1409:GLU:H	1:A:1413:GLU:HG2	1.59	0.66
1:A:1445:ARG:HG3	1:A:1447:LEU:HD12	1.78	0.66
13:M:85:LEU:HG	14:N:398:SER:HB3	1.78	0.66
15:O:125:GLU:OE1	15:O:128:HIS:ND1	2.28	0.66
15:O:470:GLU:H	15:O:479:PRO:HD3	1.60	0.66
1:A:269:ARG:HH22	1:A:283:ASP:C	1.99	0.66
1:A:1148:ASP:HB2	1:A:1290:LYS:HA	1.76	0.66
1:A:676:SER:HB2	1:A:679:TYR:HB3	1.77	0.66
1:A:957:TYR:HD1	1:A:1031:LEU:HD13	1.60	0.66
1:A:1406:ASP:CG	1:A:1407:ALA:H	1.99	0.66
3:C:30:GLU:HG3	11:K:84:PRO:HG3	1.77	0.66
13:M:111:ARG:HB3	13:M:243:ILE:HG23	1.77	0.66
13:M:154:GLU:CA	13:M:174:GLU:O	2.44	0.66
5:E:24:LYS:HB2	5:E:30:ILE:HD11	1.77	0.66
15:O:190:LEU:HG	15:O:193:GLN:HB3	1.77	0.66
1:A:999:ASP:OD1	1:A:1002:ARG:NH1	2.29	0.66
11:K:62:SER:OG	11:K:104:ARG:NH1	2.28	0.66
15:O:206:LEU:HD22	15:O:252:ILE:HG23	1.78	0.66
1:A:425:ASN:OD1	1:A:426:VAL:N	2.25	0.66
1:A:595:PRO:HA	1:A:604:TRP:NE1	2.10	0.66
2:B:247:ILE:HD12	2:B:309:VAL:HA	1.78	0.66
16:P:61:ILE:HA	16:P:74:GLY:HA2	1.78	0.66
16:P:102:ARG:HD2	16:P:155:PRO:HG3	1.78	0.66
3:C:35:LYS:O	3:C:39:ASP:HB2	1.95	0.66
4:D:135:TYR:HD1	4:D:141:CYS:HB3	1.61	0.66
2:B:303:GLU:O	2:B:307:ALA:N	2.26	0.65
16:P:293:ILE:HD13	16:P:293:ILE:N	2.07	0.65
19:S:494:THR:HB	19:S:497:ASP:HB2	1.78	0.65
2:B:660:ALA:HB3	2:B:673:LEU:HB3	1.77	0.65
11:K:59:THR:O	11:K:106:GLN:HA	1.96	0.65
13:M:117:HIS:HB2	13:M:119:TRP:HE1	1.59	0.65
15:O:328:ASP:O	15:O:329:PRO:C	2.34	0.65
15:O:516:LEU:HA	15:O:566:PHE:O	1.95	0.65
16:P:264:THR:C	16:P:265:LEU:HG	2.15	0.65
15:O:288:MET:SD	15:O:291:ARG:NH2	2.69	0.65
15:O:314:ILE:HG21	15:O:369:HIS:CD2	2.32	0.65
1:A:353:PHE:N	1:A:355:GLN:OE1	2.29	0.65
2:B:234:ILE:HA	2:B:240:ILE:HA	1.77	0.65
11:K:88:PHE:HB3	11:K:106:GLN:CG	2.25	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:242:LYS:O	15:O:246:LYS:N	2.20	0.65
18:R:206:ALA:O	18:R:210:SER:N	2.25	0.65
18:R:394:GLN:HB3	21:Y:67:DA:H5''	1.77	0.65
1:A:95:TYR:O	1:A:99:THR:N	2.26	0.65
1:A:921:LEU:HA	1:A:1082:ARG:HA	1.79	0.65
2:B:81:GLN:HG2	2:B:82:LEU:HG	1.78	0.65
3:C:255:VAL:HG22	3:C:256:ILE:H	1.61	0.65
5:E:88:VAL:HG23	5:E:117:THR:HG22	1.77	0.65
13:M:96:LEU:H	13:M:101:PRO:HA	1.62	0.65
18:R:118:GLN:HE21	20:X:24:DT:H4'	1.61	0.65
5:E:32:GLN:HA	5:E:35:VAL:HG12	1.79	0.65
5:E:55:ARG:NH1	5:E:113:GLN:OE1	2.29	0.65
13:M:152:GLY:HA3	13:M:177:ALA:HA	1.77	0.65
13:M:164:LYS:HE3	13:M:259:ILE:HD11	1.79	0.65
15:O:573:SER:HA	15:O:576:PHE:CE2	2.31	0.65
15:O:643:ARG:HH21	17:Q:43:ILE:HA	1.60	0.65
16:P:135:LYS:NZ	16:P:153:LEU:O	2.27	0.65
18:R:152:VAL:HG22	18:R:154:VAL:H	1.61	0.65
1:A:1170:ALA:HA	1:A:1188:ILE:HG12	1.78	0.65
3:C:19:ASP:HB3	3:C:29:ASN:ND2	2.10	0.65
3:C:56:LEU:HB3	3:C:298:PHE:HB2	1.76	0.65
16:P:215:TYR:OH	16:P:262:ARG:NE	2.30	0.65
1:A:232:LYS:CD	16:P:315:TRP:CZ2	2.80	0.65
2:B:541:ILE:HA	2:B:544:ILE:HD12	1.79	0.65
4:D:126:GLN:NE2	4:D:127:LEU:H	1.95	0.65
5:E:185:ALA:O	5:E:189:GLY:N	2.29	0.65
8:H:6:PHE:CE2	8:H:8:ASP:HB2	2.31	0.65
11:K:69:ASP:OD1	11:K:70:HIS:N	2.25	0.65
1:A:793:ILE:O	1:A:797:CYS:N	2.29	0.65
13:M:135:LYS:HE3	13:M:140:TRP:HE1	1.61	0.65
15:O:467:PHE:HD1	15:O:468:LEU:HD13	1.62	0.65
16:P:152:SER:O	19:S:520:LYS:CD	2.45	0.65
2:B:84:LEU:HD21	19:S:383:ARG:HH12	1.61	0.65
16:P:45:LEU:HA	19:S:372:MET:HE2	1.77	0.65
1:A:366:GLY:O	2:B:1061:ARG:NH1	2.22	0.64
1:A:1050:ASP:O	1:A:1053:LYS:N	2.29	0.64
1:A:1145:LEU:O	1:A:1310:ILE:CG2	2.44	0.64
3:C:76:PRO:HB2	3:C:210:LEU:HD11	1.79	0.64
7:G:5:SER:O	7:G:73:ARG:HA	1.97	0.64
8:H:95:TYR:N	8:H:144:ILE:O	2.29	0.64
16:P:263:VAL:HG12	16:P:265:LEU:H	1.60	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:224:PRO:HA	1:A:227:THR:HG22	1.79	0.64
1:A:434:LEU:HB3	1:A:461:VAL:HB	1.79	0.64
1:A:583:MET:HG3	1:A:700:LEU:HB2	1.78	0.64
2:B:298:GLN:CB	13:M:186:ILE:HG21	2.27	0.64
2:B:355:ARG:NH2	2:B:367:ASP:OD2	2.30	0.64
16:P:107:SER:O	16:P:110:ILE:N	2.30	0.64
1:A:479:SER:HB2	2:B:1066:GLU:HA	1.78	0.64
2:B:694:ASN:OD1	2:B:916:HIS:NE2	2.30	0.64
2:B:849:THR:N	2:B:865:GLN:O	2.30	0.64
4:D:129:ALA:HB1	4:D:153:MET:HB3	1.80	0.64
6:F:86:THR:HB	6:F:89:GLU:H	1.60	0.64
6:F:136:ARG:HB2	6:F:144:GLU:HB3	1.79	0.64
8:H:95:TYR:HB3	8:H:144:ILE:HB	1.79	0.64
1:A:1166:LEU:O	1:A:1170:ALA:N	2.30	0.64
1:A:1332:ARG:HH22	5:E:200:ARG:HE	1.43	0.64
2:B:210:ASP:HB3	2:B:213:LYS:HD2	1.79	0.64
11:K:80:ILE:HG22	11:K:86:VAL:HG11	1.80	0.64
15:O:330:LEU:HD12	15:O:331:THR:CG2	2.05	0.64
16:P:203:LYS:CE	16:P:206:VAL:HG22	2.27	0.64
2:B:376:ARG:HH21	2:B:607:ARG:NH1	1.93	0.64
3:C:164:ALA:HA	3:C:167:LEU:HD13	1.78	0.64
4:D:6:GLU:HG3	7:G:42:VAL:HG23	1.80	0.64
15:O:184:LYS:HA	15:O:187:ILE:HD11	1.78	0.64
18:R:289:SER:HB2	18:R:535:SER:HB3	1.78	0.64
1:A:18:PHE:CE1	2:B:1139:PRO:CA	2.80	0.64
1:A:1145:LEU:HD12	1:A:1146:VAL:H	0.50	0.64
1:A:1448:PHE:HZ	4:D:16:VAL:HG23	1.62	0.64
2:B:369:ARG:HG3	2:B:369:ARG:O	1.97	0.64
12:L:48:CYS:SG	12:L:53:HIS:O	2.56	0.64
15:O:172:GLU:O	15:O:176:SER:CB	2.45	0.64
15:O:352:VAL:HG13	15:O:353:GLU:H	1.63	0.64
1:A:484:SER:HB2	2:B:1069:CYS:CB	2.28	0.64
1:A:572:ASP:H	1:A:575:THR:HG22	1.62	0.64
1:A:675:HIS:HB3	1:A:937:ARG:HH22	1.61	0.64
1:A:1092:ILE:O	1:A:1096:SER:HB2	1.98	0.64
2:B:143:MET:SD	19:S:399:GLU:HB2	2.37	0.64
2:B:1002:ASP:HB3	2:B:1019:PHE:HE1	1.61	0.64
5:E:6:GLU:O	5:E:10:SER:HB2	1.97	0.64
13:M:164:LYS:HG3	14:N:300:LYS:HD3	1.79	0.64
11:K:95:HIS:HE1	11:K:98:GLU:HB3	1.63	0.64
14:N:394:VAL:HB	14:N:412:VAL:HB	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:141:ILE:HA	15:O:144:MET:HB2	1.79	0.64
15:O:307:VAL:HG13	15:O:308:THR:H	1.63	0.64
1:A:183:PHE:CD2	1:A:184:ARG:HG3	2.32	0.64
1:A:222:LEU:HG	1:A:226:LYS:HD2	1.79	0.64
3:C:80:ALA:HA	3:C:208:CYS:HA	1.80	0.64
3:C:228:ARG:HE	3:C:299:ILE:HD13	1.62	0.64
14:N:363:ILE:HA	14:N:373:VAL:HG22	1.79	0.64
16:P:10:GLN:HB3	16:P:13:ASP:HB3	1.80	0.64
18:R:211:LYS:NZ	18:R:280:VAL:O	2.27	0.64
19:S:434:MET:HE1	19:S:482:ASP:HB3	1.79	0.64
1:A:109:ASN:ND2	1:A:157:CYS:SG	2.71	0.64
1:A:361:GLN:O	1:A:367:ASN:ND2	2.31	0.64
14:N:287:HIS:O	14:N:291:LEU:CB	2.45	0.64
21:Y:59:DG:H2'	21:Y:60:DT:H71	1.80	0.64
1:A:154:CYS:SG	1:A:155:LEU:N	2.70	0.63
2:B:775:LYS:HB2	2:B:927:LYS:O	1.98	0.63
3:C:45:SER:H	3:C:54:PHE:HA	1.62	0.63
8:H:24:CYS:SG	8:H:25:ARG:N	2.71	0.63
8:H:125:LEU:HD13	8:H:130:ARG:HH11	1.62	0.63
9:I:34:PRO:O	9:I:35:ILE:HG13	1.97	0.63
10:J:17:LYS:HD3	10:J:41:LEU:HD11	1.79	0.63
16:P:108:LYS:HA	16:P:111:LYS:HD3	1.81	0.63
1:A:402:LEU:CB	1:A:466:LEU:HD11	2.28	0.63
1:A:436:ARG:HH11	1:A:459:GLY:HA3	1.62	0.63
2:B:295:ILE:O	2:B:300:GLN:NE2	2.27	0.63
16:P:152:SER:HA	19:S:520:LYS:CE	2.28	0.63
16:P:266:GLU:O	16:P:269:LEU:N	2.30	0.63
2:B:259:ALA:HB1	2:B:302:LEU:HD23	1.81	0.63
2:B:481:ARG:O	2:B:487:ARG:NH2	2.31	0.63
2:B:558:ASN:H	2:B:602:ALA:HB2	1.42	0.63
2:B:725:LEU:HD23	2:B:788:ARG:HD2	1.81	0.63
2:B:780:ARG:HA	3:C:103:LEU:HD11	1.80	0.63
15:O:249:PHE:O	15:O:252:ILE:HB	1.97	0.63
1:A:81:PHE:HZ	2:B:1130:GLN:HG2	1.63	0.63
1:A:574:ALA:H	3:C:20:PHE:HZ	1.47	0.63
1:A:848:VAL:HB	1:A:860:GLU:HB2	1.79	0.63
1:A:1156:VAL:O	1:A:1159:GLY:N	2.30	0.63
2:B:887:SER:HA	12:L:46:VAL:HG11	1.81	0.63
8:H:12:VAL:HG13	8:H:26:ILE:HD11	1.81	0.63
13:M:230:SER:O	13:M:234:HIS:N	2.26	0.63
15:O:330:LEU:CD1	15:O:331:THR:CB	2.76	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:313:MET:O	1:A:316:TRP:N	2.31	0.63
2:B:137:ARG:HG2	2:B:141:ILE:HG21	1.81	0.63
2:B:553:TYR:HA	2:B:597:MET:HB3	1.81	0.63
2:B:1054:ARG:HG2	2:B:1055:SER:H	1.64	0.63
4:D:125:ASN:OD1	4:D:126:GLN:N	2.27	0.63
13:M:159:TYR:O	14:N:307:PHE:N	2.28	0.63
15:O:159:ILE:O	15:O:163:VAL:HG23	1.98	0.63
1:A:19:SER:O	2:B:1138:ALA:N	2.32	0.63
1:A:1022:LEU:HA	1:A:1025:SER:HB3	1.79	0.63
2:B:220:VAL:HG12	2:B:229:SER:HA	1.79	0.63
2:B:267:GLU:O	2:B:271:LEU:CB	2.46	0.63
2:B:855:PRO:O	18:R:106:GLN:NE2	2.32	0.63
7:G:9:ASP:OD1	7:G:10:LEU:N	2.29	0.63
12:L:31:CYS:HB2	12:L:35:SER:N	2.14	0.63
15:O:134:GLY:HA2	15:O:137:ILE:HD12	1.80	0.63
18:R:551:GLN:O	18:R:555:ALA:HB2	1.98	0.63
19:S:432:LEU:O	19:S:476:LYS:NZ	2.30	0.63
1:A:18:PHE:HA	2:B:1138:ALA:O	1.98	0.63
1:A:791:PRO:O	1:A:795:ALA:N	2.29	0.63
2:B:248:ALA:HB3	2:B:308:LYS:HE2	1.81	0.63
2:B:295:ILE:HD13	9:I:28:SER:HB3	1.80	0.63
2:B:723:THR:HA	2:B:790:LYS:HG2	1.80	0.63
2:B:910:ASP:N	2:B:922:CYS:SG	2.68	0.63
2:B:1008:ILE:O	3:C:65:ASN:ND2	2.32	0.63
4:D:14:TYR:OH	4:D:124:VAL:CG2	2.40	0.63
5:E:141:VAL:HG23	5:E:142:VAL:H	1.64	0.63
15:O:132:TYR:OH	15:O:291:ARG:NH1	2.31	0.63
1:A:606:GLY:HA2	1:A:609:VAL:HG12	1.79	0.63
1:A:864:HIS:HE2	2:B:695:GLN:HA	1.64	0.63
1:A:1099:GLU:OE1	1:A:1099:GLU:N	2.31	0.63
2:B:696:SER:HA	2:B:699:ASN:HD22	1.63	0.63
2:B:775:LYS:HA	2:B:778:ILE:HG22	1.81	0.63
2:B:832:VAL:HB	12:L:60:ARG:HA	1.81	0.63
5:E:83:CYS:SG	5:E:84:ASP:N	2.71	0.63
10:J:17:LYS:O	10:J:21:TYR:N	2.21	0.63
13:M:112:TYR:H	13:M:243:ILE:HG12	1.64	0.63
15:O:73:ARG:HB2	15:O:121:TYR:HE1	1.64	0.63
1:A:354:CYS:SG	1:A:1393:THR:OG1	2.57	0.62
2:B:213:LYS:HD3	2:B:216:VAL:HG23	1.80	0.62
2:B:521:THR:OG1	2:B:609:CYS:SG	2.57	0.62
2:B:914:SER:HB3	2:B:918:GLN:HB2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:151:TYR:CD2	16:P:151:TYR:O	2.52	0.62
16:P:203:LYS:HE2	16:P:206:VAL:HG22	1.81	0.62
1:A:61:SER:HB2	1:A:271:SER:HB3	1.79	0.62
1:A:1128:GLU:O	1:A:1132:ALA:N	2.20	0.62
1:A:1411:VAL:HG13	1:A:1412:SER:H	1.64	0.62
2:B:298:GLN:HG2	13:M:186:ILE:CG2	2.28	0.62
2:B:818:ILE:O	2:B:822:GLN:N	2.32	0.62
5:E:79:TRP:HE1	5:E:81:GLU:HB3	1.65	0.62
15:O:127:ILE:O	15:O:131:LEU:N	2.29	0.62
15:O:206:LEU:HA	15:O:209:THR:HB	1.81	0.62
15:O:549:GLN:HB2	15:O:565:LEU:HB2	1.82	0.62
18:R:83:ALA:O	18:R:87:LEU:HB2	1.99	0.62
1:A:572:ASP:N	1:A:575:THR:HG22	2.14	0.62
3:C:239:ILE:CG2	3:C:288:LYS:HD3	2.26	0.62
5:E:153:HIS:HB3	5:E:196:VAL:HG21	1.80	0.62
18:R:246:ALA:HA	19:S:405:LEU:HD11	1.81	0.62
1:A:1003:ASP:O	1:A:1007:SER:CB	2.46	0.62
1:A:1145:LEU:CD1	1:A:1146:VAL:N	2.05	0.62
1:A:1285:ILE:HA	1:A:1291:ARG:HG2	1.80	0.62
3:C:85:PHE:CE2	3:C:94:ASP:HB2	2.34	0.62
7:G:10:LEU:HA	7:G:69:ASN:HA	1.81	0.62
1:A:469:GLY:N	1:A:490:ALA:O	2.32	0.62
15:O:140:ILE:O	15:O:144:MET:N	2.33	0.62
1:A:232:LYS:HD3	16:P:315:TRP:HZ2	1.64	0.62
1:A:303:LEU:HG	15:O:538:ALA:HB1	1.80	0.62
1:A:896:LEU:HD12	1:A:906:THR:HA	1.82	0.62
1:A:1145:LEU:CA	1:A:1310:ILE:HG22	2.30	0.62
3:C:88:ASN:HB3	12:L:60:ARG:NH1	2.14	0.62
15:O:239:SER:HA	15:O:242:LYS:HD3	1.82	0.62
15:O:587:ASN:O	15:O:590:PHE:N	2.32	0.62
18:R:485:ASN:OD1	18:R:486:ILE:N	2.33	0.62
1:A:370:GLY:O	2:B:1061:ARG:NH1	2.32	0.62
1:A:535:MET:HG3	2:B:1073:TYR:CD2	2.35	0.62
1:A:978:ASP:HB2	1:A:984:VAL:N	2.15	0.62
7:G:10:LEU:HD12	7:G:69:ASN:HB3	1.81	0.62
14:N:306:VAL:O	14:N:415:LYS:HA	1.99	0.62
16:P:194:GLY:O	16:P:196:LYS:NZ	2.25	0.62
18:R:639:GLU:HG3	18:R:642:ARG:HH21	1.65	0.62
1:A:59:GLY:HA3	1:A:266:VAL:HB	1.81	0.62
1:A:850:ASN:ND2	1:A:860:GLU:OE2	2.31	0.62
2:B:589:SER:OG	2:B:590:ILE:N	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:277:ARG:O	3:C:277:ARG:HG3	1.99	0.62
15:O:328:ASP:O	15:O:330:LEU:HG	1.99	0.62
18:R:94:LEU:HD11	18:R:146:PHE:CD1	2.35	0.62
1:A:432:TYR:HE1	1:A:443:ASN:CG	2.03	0.62
1:A:915:THR:HG23	1:A:918:GLY:HA2	1.81	0.62
1:A:1145:LEU:HA	1:A:1310:ILE:HG22	1.82	0.62
1:A:1438:GLU:HA	1:A:1441:LEU:HD13	1.82	0.62
4:D:24:GLU:HG3	4:D:29:TRP:HA	1.82	0.62
15:O:316:LEU:HA	15:O:319:THR:HG22	1.81	0.62
16:P:27:ILE:HB	16:P:31:PHE:HB2	1.82	0.62
1:A:1449:GLU:O	4:D:117:LYS:NZ	2.33	0.62
2:B:1054:ARG:NH2	21:Y:25:DA:OP1	2.33	0.62
2:B:1101:MET:SD	2:B:1126:LYS:HG3	2.40	0.62
3:C:4:ILE:O	3:C:14:ASN:ND2	2.28	0.62
4:D:133:HIS:CE1	7:G:211:TRP:HB3	2.34	0.62
9:I:24:LEU:HG	9:I:33:PHE:HB2	1.82	0.62
14:N:287:HIS:HD2	14:N:384:LYS:HE2	1.65	0.62
15:O:31:VAL:HG12	15:O:32:MET:HG3	1.82	0.62
18:R:94:LEU:HD11	18:R:146:PHE:HD1	1.64	0.62
1:A:232:LYS:CE	16:P:315:TRP:CZ2	2.83	0.61
1:A:482:ARG:CD	1:A:1092:ILE:HG12	2.30	0.61
1:A:1045:ASP:HB2	1:A:1053:LYS:HD3	1.82	0.61
2:B:248:ALA:O	2:B:249:GLU:HG3	2.00	0.61
3:C:121:PRO:HA	3:C:125:LYS:HE3	1.82	0.61
4:D:127:LEU:O	4:D:129:ALA:N	2.31	0.61
14:N:397:LEU:HG	14:N:408:LEU:HA	1.82	0.61
1:A:542:LEU:HA	1:A:549:PRO:HA	1.81	0.61
2:B:204:ARG:HH12	2:B:376:ARG:HH12	1.48	0.61
2:B:536:LEU:HD22	2:B:571:PHE:HD1	1.64	0.61
2:B:1106:TRP:CD1	7:G:163:PRO:HD3	2.35	0.61
5:E:64:PRO:HD3	5:E:77:SER:HA	1.81	0.61
5:E:113:GLN:O	5:E:114:ASN:ND2	2.32	0.61
5:E:200:ARG:HD2	5:E:208:TYR:CZ	2.35	0.61
13:M:228:THR:HA	13:M:232:LEU:HD22	1.81	0.61
15:O:161:GLN:HB2	17:Q:61:PHE:HD1	1.65	0.61
1:A:248:VAL:HG23	1:A:248:VAL:O	2.01	0.61
1:A:314:GLU:O	1:A:318:TYR:CB	2.47	0.61
1:A:1009:ARG:O	1:A:1013:ASN:CB	2.43	0.61
6:F:115:THR:HG22	6:F:116:ASP:CA	2.29	0.61
14:N:287:HIS:CD2	14:N:384:LYS:HE2	2.34	0.61
1:A:379:THR:HG21	1:A:497:THR:HA	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:553:TYR:HB3	2:B:598:ALA:N	2.15	0.61
2:B:773:LEU:HD11	2:B:912:PHE:HE2	1.65	0.61
2:B:1112:SER:HB2	2:B:1114:GLU:HG2	1.83	0.61
15:O:102:ARG:NH2	15:O:282:ILE:O	2.31	0.61
1:A:261:LEU:HD12	1:A:262:PRO:HD2	1.83	0.61
1:A:365:ARG:HD3	1:A:887:ARG:HH21	1.66	0.61
6:F:86:THR:OG1	6:F:136:ARG:NH2	2.33	0.61
2:B:77:ILE:HD13	2:B:98:ILE:HG12	1.82	0.61
2:B:588:ILE:O	2:B:588:ILE:HG22	2.00	0.61
2:B:650:ASP:OD1	2:B:651:VAL:N	2.34	0.61
1:A:442:ARG:HG2	18:R:30:VAL:HG22	1.82	0.61
1:A:483:LEU:O	1:A:486:LEU:CD1	2.49	0.61
1:A:907:SER:OG	1:A:1409:GLU:HB3	2.00	0.61
1:A:978:ASP:N	1:A:982:CYS:O	2.30	0.61
1:A:1177:TYR:OH	1:A:1260:MET:SD	2.55	0.61
19:S:363:GLN:HB2	19:S:378:THR:HG21	1.83	0.61
7:G:204:GLY:HA2	7:G:210:TRP:HB2	1.83	0.61
15:O:222:HIS:CE1	15:O:244:ASN:HB3	2.35	0.61
18:R:144:ILE:HA	18:R:154:VAL:HG11	1.82	0.61
18:R:402:LEU:HD11	18:R:441:ILE:HD11	1.80	0.61
1:A:1207:VAL:HA	1:A:1210:THR:HG22	1.83	0.61
2:B:239:LYS:HG2	2:B:241:TYR:CE2	2.35	0.61
16:P:145:ARG:HB3	16:P:147:ILE:HG23	1.81	0.61
1:A:205:LEU:HD12	1:A:212:GLU:HG2	1.83	0.60
1:A:269:ARG:NH1	1:A:285:LEU:HB2	2.15	0.60
1:A:790:ALA:HB1	1:A:794:MET:HE2	1.83	0.60
2:B:209:ALA:HA	2:B:215:ILE:HG23	1.83	0.60
18:R:91:SER:OG	18:R:101:THR:HG22	2.01	0.60
19:S:418:ASP:HB3	19:S:449:ARG:HH22	1.63	0.60
1:A:1213:SER:O	1:A:1217:ILE:N	2.34	0.60
7:G:46:ILE:HD11	7:G:77:PHE:HB2	1.82	0.60
8:H:93:TYR:HB2	8:H:143:LEU:HG	1.83	0.60
13:M:71:ILE:HG12	14:N:367:LYS:HZ2	1.63	0.60
14:N:384:LYS:HA	14:N:416:ILE:HD11	1.81	0.60
15:O:599:ASN:O	15:O:603:LEU:N	2.23	0.60
16:P:308:GLU:OE1	16:P:308:GLU:N	2.33	0.60
18:R:28:CYS:SG	18:R:29:GLY:N	2.74	0.60
18:R:633:ASP:HA	18:R:636:LEU:HB3	1.83	0.60
1:A:906:THR:OG1	1:A:907:SER:N	2.35	0.60
7:G:10:LEU:HD21	7:G:67:TYR:HB3	1.82	0.60
7:G:207:LEU:HD22	7:G:210:TRP:CD1	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:134:ASP:O	13:M:138:SER:N	2.34	0.60
16:P:149:MET:C	16:P:150:LEU:O	2.36	0.60
18:R:531:LEU:HB2	18:R:539:VAL:HB	1.81	0.60
1:A:385:PRO:HD2	2:B:765:TYR:CD1	2.36	0.60
1:A:1136:ILE:HD12	1:A:1318:HIS:HB3	1.84	0.60
2:B:860:VAL:HG13	2:B:861:ASN:H	1.67	0.60
2:B:934:ASN:OD1	2:B:935:ASP:N	2.35	0.60
18:R:468:ILE:HG23	18:R:472:ILE:HD12	1.81	0.60
1:A:116:SER:OG	1:A:117:GLU:OE1	2.16	0.60
1:A:402:LEU:HB3	1:A:466:LEU:CD1	2.31	0.60
1:A:413:ARG:NH1	1:A:456:LEU:O	2.35	0.60
2:B:667:VAL:HB	2:B:670:MET:HG3	1.82	0.60
2:B:727:LEU:HD11	2:B:786:GLU:HB2	1.83	0.60
3:C:165:ARG:NH1	3:C:190:ASP:OD1	2.35	0.60
7:G:27:THR:HA	7:G:30:LEU:HD12	1.83	0.60
8:H:39:THR:HB	8:H:124:ARG:HB3	1.82	0.60
11:K:85:ASP:O	11:K:107:THR:OG1	2.20	0.60
18:R:398:ALA:HA	18:R:484:GLN:H	1.65	0.60
1:A:11:LYS:HG3	2:B:1117:ILE:HD13	1.84	0.60
1:A:184:ARG:O	1:A:189:LYS:NZ	2.31	0.60
2:B:247:ILE:HG13	2:B:248:ALA:H	1.66	0.60
2:B:658:TYR:CE2	2:B:670:MET:HG2	2.36	0.60
3:C:66:ALA:O	3:C:70:ILE:HG22	2.01	0.60
15:O:98:LEU:HB3	15:O:103:CYS:HB2	1.84	0.60
15:O:263:LEU:HB3	15:O:272:ARG:HH21	1.67	0.60
16:P:206:VAL:HB	16:P:210:PRO:HD3	1.83	0.60
1:A:956:PRO:HB2	1:A:1031:LEU:HD11	1.83	0.60
1:A:1120:THR:O	1:A:1125:ARG:HD2	2.02	0.60
2:B:417:ASP:O	2:B:419:LEU:N	2.34	0.60
2:B:544:ILE:HG22	2:B:546:SER:H	1.64	0.60
2:B:589:SER:O	2:B:590:ILE:CB	2.47	0.60
2:B:611:PRO:HG3	2:B:648:TYR:HE1	1.67	0.60
2:B:842:TYR:HB2	2:B:881:ILE:HD11	1.82	0.60
3:C:32:ASN:O	3:C:33:VAL:HG23	2.02	0.60
10:J:35:ALA:O	10:J:39:LEU:N	2.34	0.60
15:O:123:ASN:O	15:O:126:GLY:N	2.34	0.60
16:P:107:SER:O	16:P:110:ILE:HG22	2.00	0.60
11:K:88:PHE:O	11:K:105:ILE:HA	2.02	0.60
18:R:607:ASP:OD1	18:R:610:LEU:N	2.32	0.60
1:A:134:ASN:ND2	1:A:1381:ASP:OD1	2.35	0.60
1:A:1141:ILE:HB	1:A:1295:VAL:HB	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:166:ALA:HB1	2:B:170:LYS:HB2	1.83	0.60
9:I:16:SER:HA	9:I:22:TYR:HA	1.82	0.60
1:A:553:ALA:HB1	1:A:557:PHE:HB2	1.84	0.60
2:B:244:HIS:CG	2:B:246:SER:HG	2.20	0.60
2:B:717:GLN:HE21	2:B:727:LEU:HD22	1.66	0.60
4:D:58:ILE:O	4:D:62:VAL:N	2.24	0.60
10:J:60:PHE:O	10:J:63:TYR:N	2.35	0.60
15:O:330:LEU:CD1	15:O:331:THR:N	2.02	0.60
18:R:632:ALA:O	18:R:636:LEU:CB	2.50	0.60
1:A:100:ILE:O	1:A:104:GLN:HB2	2.02	0.59
1:A:890:MET:O	1:A:894:GLU:N	2.35	0.59
1:A:1158:LYS:O	1:A:1162:GLU:HB2	2.02	0.59
2:B:48:LEU:HD21	2:B:743:LEU:HD21	1.83	0.59
2:B:489:LEU:HD11	2:B:499:THR:HG22	1.84	0.59
2:B:555:VAL:O	2:B:561:LEU:HA	2.02	0.59
15:O:471:THR:OG1	15:O:477:TYR:N	2.35	0.59
1:A:1202:ILE:O	1:A:1205:ILE:HG13	2.01	0.59
2:B:95:TYR:OH	2:B:396:ASN:ND2	2.34	0.59
2:B:227:ARG:NH1	2:B:449:MET:HG3	2.17	0.59
2:B:300:GLN:N	2:B:300:GLN:OE1	2.35	0.59
4:D:15:GLU:O	4:D:19:PHE:N	2.35	0.59
5:E:66:GLU:HG3	5:E:67:GLU:H	1.66	0.59
14:N:366:HIS:HB3	14:N:370:LYS:HB2	1.85	0.59
15:O:102:ARG:O	15:O:123:ASN:ND2	2.34	0.59
15:O:507:LEU:O	15:O:511:ILE:HG12	2.02	0.59
15:O:583:TRP:HZ3	17:Q:41:LEU:HD21	1.67	0.59
16:P:111:LYS:O	16:P:115:ASN:N	2.33	0.59
18:R:463:ARG:NH1	18:R:598:ASP:O	2.35	0.59
5:E:116:ILE:O	5:E:116:ILE:HG22	2.02	0.59
11:K:68:GLU:HG3	11:K:69:ASP:H	1.67	0.59
15:O:527:LEU:HD12	15:O:528:MET:HG2	1.83	0.59
15:O:584:ASN:HB3	15:O:588:LEU:HB2	1.84	0.59
18:R:402:LEU:HB3	18:R:476:ALA:HB1	1.83	0.59
21:Y:13:DA:C5	21:Y:14:DC:N4	2.70	0.59
3:C:59:ILE:HD12	3:C:60:ASP:O	2.03	0.59
7:G:59:LEU:HD21	7:G:64:GLY:HA2	1.83	0.59
14:N:307:PHE:CD1	14:N:416:ILE:HG22	2.37	0.59
18:R:408:LEU:HB3	18:R:428:VAL:HG23	1.82	0.59
2:B:464:ILE:HG12	2:B:687:LEU:HD11	1.83	0.59
5:E:180:ARG:N	5:E:215:MET:O	2.31	0.59
13:M:134:ASP:HA	13:M:137:GLU:HB2	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:237:PRO:HA	16:P:240:ILE:HB	1.84	0.59
18:R:213:TRP:CB	18:R:285:ALA:HB1	2.33	0.59
1:A:63:SER:HB2	1:A:74:LEU:HD12	1.84	0.59
2:B:327:ILE:HD11	13:M:231:LEU:HB2	1.84	0.59
4:D:17:LEU:HD22	4:D:66:LEU:HB3	1.84	0.59
5:E:25:ASP:OD1	5:E:25:ASP:N	2.35	0.59
8:H:125:LEU:CD1	8:H:130:ARG:HH11	2.15	0.59
15:O:633:ARG:NE	16:P:308:GLU:OE2	2.35	0.59
16:P:312:PHE:HD1	17:Q:41:LEU:HD11	1.66	0.59
19:S:439:PHE:HB2	19:S:451:ARG:HH21	1.68	0.59
19:S:506:GLN:O	19:S:510:LYS:CB	2.49	0.59
1:A:643:ASN:HB2	1:A:651:PHE:CZ	2.37	0.59
1:A:995:VAL:HG23	1:A:996:ASP:H	1.68	0.59
1:A:1160:ARG:HA	1:A:1273:LYS:HE3	1.84	0.59
1:A:1265:ARG:HH21	2:B:285:VAL:HG22	1.66	0.59
2:B:101:GLY:HA2	2:B:109:LYS:HD3	1.83	0.59
15:O:239:SER:O	15:O:243:MET:N	2.28	0.59
15:O:352:VAL:O	15:O:357:PRO:HD2	2.02	0.59
18:R:467:ARG:HD3	18:R:602:LEU:HG	1.84	0.59
1:A:103:LEU:HD11	1:A:222:LEU:HD22	1.84	0.59
1:A:752:THR:HA	1:A:761:THR:HG21	1.83	0.59
14:N:364:ARG:HH11	14:N:365:VAL:H	1.48	0.59
18:R:505:HIS:O	18:R:509:SER:N	2.36	0.59
1:A:18:PHE:HE1	2:B:1139:PRO:HB2	1.65	0.59
1:A:109:ASN:ND2	1:A:159:ALA:HB3	2.18	0.59
1:A:976:ARG:HH22	1:A:995:VAL:N	2.01	0.59
2:B:177:CYS:SG	2:B:714:ALA:HB1	2.42	0.59
2:B:337:VAL:HG23	2:B:345:LYS:HE2	1.84	0.59
2:B:710:ILE:HG12	2:B:1026:LYS:O	2.02	0.59
2:B:1092:VAL:HG22	2:B:1126:LYS:HD3	1.84	0.59
7:G:147:ARG:NH2	7:G:211:TRP:HB2	2.18	0.59
16:P:187:SER:HA	16:P:263:VAL:HG21	1.85	0.59
16:P:301:PRO:HB2	16:P:303:SER:HB3	1.83	0.59
18:R:646:GLU:OE1	19:S:510:LYS:HE3	2.03	0.59
1:A:1125:ARG:HG3	1:A:1126:ILE:N	2.18	0.59
1:A:1157:VAL:HG12	1:A:1160:ARG:HD2	1.84	0.59
2:B:472:ARG:HH21	2:B:511:VAL:HG11	1.67	0.59
2:B:798:TYR:O	2:B:801:HIS:N	2.28	0.59
13:M:112:TYR:HD1	13:M:119:TRP:NE1	1.97	0.59
15:O:105:LYS:HB3	15:O:210:PRO:HG3	1.84	0.59
18:R:178:PRO:HG3	18:R:220:PRO:HB3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:609:GLU:O	18:R:613:HIS:N	2.36	0.59
1:A:277:SER:OG	1:A:278:PRO:HD3	2.03	0.58
1:A:678:PHE:CE2	1:A:694:MET:HG2	2.38	0.58
1:A:1282:VAL:O	1:A:1293:LEU:HA	2.03	0.58
2:B:131:VAL:HG21	2:B:149:ILE:HG23	1.85	0.58
2:B:554:GLY:O	2:B:599:VAL:N	2.27	0.58
3:C:33:VAL:HG12	3:C:34:GLU:N	2.18	0.58
5:E:31:THR:HG22	5:E:34:GLU:HG2	1.85	0.58
11:K:95:HIS:ND1	11:K:97:SER:OG	2.31	0.58
11:K:117:LEU:O	11:K:121:LEU:CB	2.51	0.58
1:A:572:ASP:N	1:A:575:THR:CG2	2.66	0.58
1:A:588:GLU:O	11:K:104:ARG:NH2	2.36	0.58
1:A:600:PRO:HD2	8:H:96:VAL:HG22	1.85	0.58
1:A:1153:ALA:HA	1:A:1156:VAL:HB	1.85	0.58
5:E:161:LYS:NZ	5:E:193:GLY:O	2.28	0.58
15:O:364:ILE:HA	15:O:476:TYR:CZ	2.38	0.58
15:O:492:TYR:O	15:O:495:VAL:HG23	2.03	0.58
16:P:293:ILE:H	16:P:293:ILE:CD1	1.99	0.58
2:B:1043:ARG:NH1	18:R:35:ASN:OD1	2.36	0.58
3:C:6:GLY:HA3	3:C:13:THR:HB	1.85	0.58
3:C:30:GLU:HG2	11:K:82:LYS:O	2.03	0.58
6:F:147:SER:HB3	6:F:150:GLU:HG3	1.84	0.58
8:H:39:THR:O	8:H:123:MET:HA	2.03	0.58
8:H:61:SER:HB2	8:H:139:ASN:HD22	1.68	0.58
18:R:270:LEU:O	18:R:273:GLN:NE2	2.33	0.58
1:A:577:THR:HG23	11:K:88:PHE:CD1	2.38	0.58
1:A:1373:ARG:HD3	1:A:1390:GLU:CD	2.24	0.58
1:A:1449:GLU:OE2	4:D:10:PHE:N	2.36	0.58
2:B:59:LYS:HZ1	2:B:519:HIS:HA	1.67	0.58
2:B:84:LEU:HD13	2:B:91:PHE:CD2	2.39	0.58
2:B:126:SER:OG	2:B:151:ARG:HB3	2.03	0.58
2:B:257:LEU:HD23	2:B:268:ILE:HG23	1.85	0.58
3:C:216:HIS:HB3	3:C:218:LYS:HG2	1.86	0.58
3:C:227:TYR:HB3	3:C:300:PHE:HD1	1.68	0.58
3:C:294:VAL:HG13	3:C:297:HIS:HB3	1.84	0.58
3:C:303:GLU:HG3	10:J:43:ARG:HH12	1.69	0.58
4:D:11:LEU:HD21	4:D:16:VAL:HG21	1.83	0.58
7:G:88:TRP:HA	7:G:146:ILE:HD12	1.84	0.58
9:I:8:CYS:SG	9:I:29:CYS:HB2	2.43	0.58
15:O:183:MET:O	15:O:187:ILE:CG1	2.52	0.58
15:O:303:ARG:HA	16:P:265:LEU:HD21	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:221:ILE:O	16:P:225:ILE:HG12	2.03	0.58
18:R:546:ARG:NH1	18:R:586:PRO:O	2.37	0.58
1:A:1448:PHE:CD2	4:D:11:LEU:HG	2.38	0.58
2:B:235:THR:HG22	2:B:236:LYS:HG3	1.85	0.58
15:O:630:VAL:O	15:O:634:GLU:HG2	2.04	0.58
18:R:395:ASN:HB2	21:Y:67:DA:H5'	1.84	0.58
18:R:435:PRO:HD2	18:R:461:ALA:HB2	1.86	0.58
19:S:442:ILE:HG21	19:S:454:VAL:HG11	1.84	0.58
1:A:196:ILE:O	1:A:199:GLY:N	2.36	0.58
1:A:363:ARG:NH2	2:B:1046:LEU:HD21	2.19	0.58
1:A:694:MET:O	1:A:697:MET:HB3	2.04	0.58
2:B:211:GLU:O	2:B:212:LYS:HG2	2.03	0.58
2:B:590:ILE:CB	2:B:601:ILE:CD1	2.72	0.58
2:B:818:ILE:HG13	2:B:821:HIS:H	1.67	0.58
6:F:116:ASP:OD2	6:F:119:ARG:NH1	2.36	0.58
13:M:113:LYS:HE2	13:M:118:LEU:HB2	1.84	0.58
13:M:159:TYR:HE2	14:N:309:LEU:HB2	1.69	0.58
15:O:183:MET:O	15:O:187:ILE:HG12	2.04	0.58
2:B:142:ILE:HG13	19:S:396:LYS:HA	1.84	0.58
2:B:232:TYR:HB2	2:B:242:LEU:HD23	1.85	0.58
2:B:529:ILE:HD12	2:B:532:LEU:HD23	1.85	0.58
2:B:552:ASN:OD1	2:B:553:TYR:CD2	2.56	0.58
7:G:112:GLN:HE22	7:G:128:TRP:HD1	1.50	0.58
15:O:106:TYR:H	15:O:210:PRO:HD3	1.69	0.58
15:O:578:ARG:HA	15:O:648:TRP:CZ3	2.39	0.58
15:O:629:MET:O	15:O:633:ARG:HB3	2.04	0.58
2:B:217:GLN:HE21	2:B:232:TYR:HB3	1.68	0.58
3:C:113:LEU:HD21	3:C:132:ILE:HD12	1.86	0.58
4:D:14:TYR:CE1	4:D:124:VAL:CG1	2.87	0.58
8:H:102:TYR:CZ	8:H:115:TYR:HB3	2.39	0.58
13:M:104:HIS:ND1	13:M:105:PRO:O	2.36	0.58
15:O:186:THR:O	15:O:187:ILE:C	2.42	0.58
15:O:581:LEU:HD22	15:O:648:TRP:CZ2	2.39	0.58
1:A:579:LEU:CD2	1:A:704:PHE:CD1	2.86	0.58
1:A:1141:ILE:O	1:A:1294:LEU:HA	2.04	0.58
1:A:1169:VAL:O	1:A:1188:ILE:HG23	2.03	0.58
2:B:610:ARG:NH2	2:B:674:GLU:OE1	2.37	0.58
4:D:130:ASN:OD1	4:D:133:HIS:ND1	2.37	0.58
15:O:597:GLN:HA	15:O:600:SER:HB2	1.85	0.58
16:P:83:LYS:HA	16:P:86:MET:HG2	1.83	0.58
18:R:94:LEU:HB2	18:R:96:ILE:HG23	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:433:ARG:HD3	19:S:473:LEU:HD23	1.86	0.58
1:A:1064:GLU:CG	1:A:1065:LYS:N	2.47	0.58
2:B:694:ASN:OD1	2:B:954:THR:OG1	2.22	0.58
3:C:257:GLY:N	3:C:266:TYR:O	2.34	0.58
13:M:148:LEU:HD23	13:M:179:LEU:HG	1.86	0.58
15:O:233:SER:O	15:O:236:LYS:HG2	2.04	0.58
1:A:436:ARG:N	1:A:460:ASP:OD1	2.37	0.57
1:A:724:LYS:O	1:A:728:GLU:CB	2.51	0.57
4:D:20:LEU:O	4:D:24:GLU:CB	2.52	0.57
8:H:15:VAL:HG12	8:H:17:PRO:HD3	1.84	0.57
8:H:138:GLU:OE1	8:H:138:GLU:N	2.37	0.57
1:A:123:PHE:CD2	1:A:144:ILE:HD13	2.40	0.57
1:A:668:VAL:HA	1:A:676:SER:HA	1.85	0.57
1:A:1130:ILE:HG22	1:A:1371:ILE:HG21	1.87	0.57
15:O:634:GLU:HA	15:O:637:VAL:HG12	1.87	0.57
1:A:201:TRP:HB3	1:A:205:LEU:CD1	2.33	0.57
1:A:501:ASN:O	1:A:504:VAL:HG22	2.05	0.57
1:A:571:TYR:HB3	1:A:575:THR:CG2	2.34	0.57
2:B:77:ILE:HG21	2:B:98:ILE:HD11	1.85	0.57
2:B:459:SER:N	2:B:469:MET:SD	2.61	0.57
8:H:129:TYR:O	8:H:131:ASN:OD1	2.22	0.57
10:J:55:ASP:OD1	10:J:57:ILE:HG22	2.04	0.57
18:R:439:ALA:HA	18:R:450:THR:H	1.70	0.57
1:A:37:ARG:HG2	1:A:38:ASP:H	1.68	0.57
1:A:653:ILE:HG23	1:A:660:LEU:HB2	1.87	0.57
2:B:298:GLN:CG	13:M:186:ILE:HG21	2.34	0.57
2:B:415:GLU:CG	2:B:416:TYR:H	2.01	0.57
2:B:756:THR:H	10:J:48:ARG:HH12	1.51	0.57
18:R:123:GLN:HG2	18:R:150:LEU:HD21	1.84	0.57
1:A:997:GLN:O	1:A:999:ASP:N	2.34	0.57
2:B:192:LYS:HG2	2:B:457:VAL:HA	1.85	0.57
3:C:256:ILE:HA	3:C:267:VAL:HA	1.86	0.57
5:E:32:GLN:O	5:E:36:GLU:N	2.38	0.57
7:G:59:LEU:CD1	7:G:64:GLY:HA2	2.29	0.57
14:N:373:VAL:HB	14:N:382:ILE:HG22	1.85	0.57
15:O:365:ASP:H	15:O:476:TYR:HH	1.51	0.57
15:O:578:ARG:HA	15:O:648:TRP:HZ3	1.69	0.57
2:B:64:SER:HB3	2:B:381:GLY:HA3	1.86	0.57
2:B:279:TYR:HA	2:B:282:ILE:HD12	1.86	0.57
2:B:362:ASN:ND2	2:B:365:MET:SD	2.75	0.57
4:D:126:GLN:HE21	4:D:127:LEU:H	1.51	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:105:LYS:HG2	15:O:123:ASN:HA	1.85	0.57
15:O:221:LYS:N	15:O:224:LYS:HB3	2.18	0.57
1:A:584:SER:O	1:A:586:GLY:N	2.37	0.57
4:D:142:ASP:OD1	4:D:143:ALA:N	2.35	0.57
15:O:58:GLY:O	15:O:62:ALA:N	2.37	0.57
15:O:197:MET:HB2	15:O:286:ARG:HG3	1.87	0.57
16:P:132:ARG:O	16:P:151:TYR:HD2	1.87	0.57
18:R:218:ARG:CZ	21:Y:71:DT:H5'	2.35	0.57
1:A:524:THR:HG22	2:B:1081:GLU:HB2	1.86	0.57
1:A:1361:VAL:HA	1:A:1364:TYR:HB2	1.86	0.57
4:D:102:SER:O	4:D:106:LEU:N	2.38	0.57
5:E:93:MET:SD	5:E:120:ALA:HA	2.45	0.57
9:I:30:PRO:HD3	13:M:135:LYS:HE2	1.84	0.57
18:R:79:THR:O	18:R:83:ALA:CB	2.52	0.57
18:R:485:ASN:ND2	20:X:13:DT:O4'	2.38	0.57
1:A:706:GLY:HA2	2:B:762:TYR:HA	1.86	0.57
2:B:192:LYS:HZ2	2:B:438:SER:HB2	1.70	0.57
2:B:882:ASP:OD2	3:C:93:GLN:NE2	2.36	0.57
16:P:203:LYS:HB2	16:P:206:VAL:HA	1.86	0.57
18:R:521:TYR:HE2	18:R:523:MET:HB2	1.69	0.57
6:F:80:ALA:O	6:F:81:THR:OG1	2.21	0.56
15:O:285:ASP:OD1	15:O:286:ARG:N	2.34	0.56
15:O:601:THR:HG23	15:O:602:LEU:H	1.69	0.56
16:P:235:LEU:HD21	16:P:239:ASN:HB3	1.87	0.56
18:R:18:ASN:HD21	18:R:20:ASN:ND2	2.02	0.56
20:X:63:DC:N3	21:Y:18:DG:N2	2.53	0.56
1:A:16:LEU:HD11	1:A:1417:LEU:HD11	1.88	0.56
1:A:402:LEU:O	1:A:466:LEU:HG	2.05	0.56
2:B:552:ASN:OD1	2:B:568:PRO:HB3	2.05	0.56
2:B:575:PHE:HE2	2:B:589:SER:O	1.88	0.56
2:B:585:SER:O	2:B:586:GLU:HB2	2.04	0.56
4:D:64:ASN:ND2	7:G:102:LEU:HB3	2.19	0.56
15:O:322:LYS:HG2	15:O:357:PRO:HB3	1.87	0.56
15:O:329:PRO:O	15:O:330:LEU:HG	2.05	0.56
18:R:162:LEU:HD12	18:R:515:LEU:HD21	1.86	0.56
18:R:455:GLU:OE1	18:R:546:ARG:NH2	2.39	0.56
1:A:18:PHE:CE1	2:B:1139:PRO:HA	2.37	0.56
1:A:30:SER:OG	1:A:83:HIS:HB3	2.04	0.56
1:A:424:PRO:HD3	1:A:444:LEU:CG	2.35	0.56
1:A:502:GLU:CD	1:A:502:GLU:H	2.05	0.56
1:A:611:SER:OG	1:A:658:GLN:HA	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:666:LYS:HG2	1:A:667:SER:H	1.69	0.56
1:A:703:ARG:HH22	11:K:93:ILE:HB	1.70	0.56
1:A:788:TRP:HA	1:A:793:ILE:HD11	1.86	0.56
1:A:903:THR:HA	1:A:914:PHE:O	2.05	0.56
1:A:1144:VAL:HG12	1:A:1292:GLU:HG3	1.87	0.56
2:B:299:GLN:HE21	2:B:322:GLU:HB3	1.70	0.56
2:B:521:THR:O	2:B:606:GLY:N	2.34	0.56
2:B:915:ARG:NH1	2:B:960:GLU:OE2	2.38	0.56
2:B:916:HIS:CG	2:B:957:LYS:HB2	2.40	0.56
2:B:1038:ARG:NH1	2:B:1050:PRO:HB3	2.20	0.56
2:B:1063:GLY:O	2:B:1067:ARG:N	2.27	0.56
3:C:62:SER:O	3:C:65:ASN:N	2.38	0.56
6:F:79:ARG:NH1	6:F:145:ASP:O	2.39	0.56
16:P:202:PRO:HD2	16:P:204:LYS:HE2	1.87	0.56
18:R:615:LEU:HD13	18:R:619:ALA:HB3	1.87	0.56
1:A:1008:LEU:HD11	1:A:1070:PHE:HE2	1.69	0.56
2:B:198:GLU:OE2	2:B:375:LYS:HB3	2.05	0.56
2:B:343:ARG:O	2:B:346:ALA:HB3	2.06	0.56
3:C:14:ASN:ND2	3:C:295:ARG:HH12	2.03	0.56
15:O:292:ARG:HH22	15:O:650:VAL:HA	1.71	0.56
1:A:216:LYS:HG3	1:A:217:ARG:H	1.69	0.56
1:A:287:VAL:O	1:A:290:THR:HG22	2.04	0.56
2:B:658:TYR:O	2:B:671:THR:OG1	2.24	0.56
15:O:286:ARG:NE	15:O:321:GLN:O	2.38	0.56
18:R:558:PRO:O	18:R:562:GLU:CB	2.49	0.56
19:S:470:GLU:O	19:S:474:ARG:CB	2.49	0.56
1:A:571:TYR:HA	1:A:575:THR:HG21	1.88	0.56
1:A:575:THR:HG23	1:A:576:LEU:N	2.21	0.56
2:B:138:GLY:H	2:B:141:ILE:HG21	1.69	0.56
2:B:658:TYR:HD2	2:B:670:MET:HA	1.71	0.56
2:B:914:SER:OG	2:B:957:LYS:NZ	2.21	0.56
6:F:75:PRO:HG2	6:F:78:GLN:HG2	1.87	0.56
7:G:2:PHE:N	7:G:76:VAL:O	2.39	0.56
18:R:7:CYS:SG	18:R:28:CYS:CB	2.82	0.56
18:R:198:VAL:HG13	18:R:231:ALA:HB3	1.87	0.56
19:S:416:TYR:OH	21:Y:76:DT:H5''	2.05	0.56
1:A:355:GLN:H	1:A:355:GLN:CD	2.09	0.56
1:A:368:LEU:O	1:A:371:LYS:HG3	2.06	0.56
2:B:415:GLU:O	2:B:416:TYR:O	2.21	0.56
3:C:31:TRP:CG	3:C:32:ASN:N	2.72	0.56
8:H:128:ASN:CG	8:H:129:TYR:H	2.08	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:592:LYS:HD2	15:O:638:PHE:CZ	2.41	0.56
15:O:635:LEU:HB3	17:Q:47:ILE:HD13	1.87	0.56
18:R:468:ILE:HG13	18:R:610:LEU:HD11	1.87	0.56
1:A:559:THR:HG21	2:B:947:HIS:CE1	2.41	0.56
1:A:561:SER:HB3	1:A:664:MET:HE3	1.87	0.56
1:A:608:GLN:O	1:A:611:SER:N	2.39	0.56
13:M:136:ALA:HA	13:M:142:GLY:H	1.71	0.56
18:R:620:SER:O	18:R:624:GLU:CB	2.45	0.56
1:A:81:PHE:CZ	2:B:1130:GLN:HG2	2.40	0.56
1:A:555:GLN:HE22	2:B:768:GLU:HG3	1.68	0.56
1:A:997:GLN:C	1:A:999:ASP:H	2.08	0.56
1:A:1323:PHE:HA	1:A:1327:GLY:HA2	1.88	0.56
2:B:136:THR:HG22	2:B:142:ILE:HG22	1.88	0.56
2:B:873:TYR:OH	2:B:877:GLU:O	2.23	0.56
7:G:53:THR:HG21	7:G:71:THR:HG22	1.88	0.56
10:J:45:CYS:O	10:J:48:ARG:HG2	2.06	0.56
16:P:31:PHE:O	16:P:72:PHE:N	2.39	0.56
1:A:81:PHE:CD2	1:A:265:PRO:CD	2.89	0.56
1:A:196:ILE:O	1:A:200:GLU:HG3	2.06	0.56
1:A:1072:GLU:O	1:A:1076:PHE:HB2	2.05	0.56
1:A:1315:THR:HG22	1:A:1316:THR:H	1.71	0.56
3:C:67:PHE:O	3:C:71:MET:HB2	2.06	0.56
5:E:20:LYS:O	5:E:23:VAL:HG12	2.06	0.56
9:I:23:THR:HA	9:I:35:ILE:HG22	1.87	0.56
15:O:640:ARG:O	15:O:643:ARG:HB2	2.06	0.56
16:P:313:ASP:OD1	16:P:313:ASP:N	2.37	0.56
1:A:57:LYS:HA	1:A:68:ALA:HB3	1.88	0.55
1:A:714:ILE:HG23	1:A:715:ASN:N	2.21	0.55
1:A:786:ASP:OD1	1:A:787:ASN:N	2.39	0.55
2:B:172:ALA:HA	10:J:63:TYR:CE1	2.42	0.55
2:B:525:GLU:HG3	2:B:528:PRO:HD2	1.87	0.55
2:B:782:PHE:HA	10:J:8:PHE:CZ	2.41	0.55
8:H:8:ASP:OD1	8:H:9:ILE:N	2.39	0.55
11:K:76:LEU:HG	11:K:80:ILE:HD11	1.88	0.55
13:M:85:LEU:O	13:M:173:ILE:O	2.25	0.55
15:O:467:PHE:CD1	15:O:468:LEU:HD13	2.41	0.55
18:R:397:VAL:O	18:R:484:GLN:N	2.39	0.55
1:A:238:ASP:HA	1:A:241:LEU:HD12	1.88	0.55
1:A:400:LYS:HA	1:A:465:HIS:HD2	1.67	0.55
1:A:412:ASN:HB3	1:A:416:LEU:HD22	1.88	0.55
1:A:427:HIS:O	1:A:429:GLY:N	2.38	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:475:ASN:HB3	1:A:518:ASN:HB2	1.87	0.55
2:B:97:ASP:OD2	2:B:99:ARG:NH1	2.39	0.55
2:B:378:GLU:OE2	2:B:382:GLN:HB2	2.06	0.55
2:B:493:GLN:HG3	2:B:497:LEU:HD12	1.88	0.55
2:B:909:GLY:HA2	2:B:921:VAL:HG13	1.88	0.55
3:C:80:ALA:HB3	3:C:102:GLY:HA2	1.88	0.55
3:C:229:LEU:HB3	3:C:293:ARG:NH1	2.20	0.55
8:H:110:ASP:O	8:H:128:ASN:HA	2.06	0.55
11:K:106:GLN:HG3	11:K:106:GLN:O	2.06	0.55
15:O:190:LEU:HD11	15:O:199:TYR:HE2	1.71	0.55
19:S:430:LYS:O	19:S:434:MET:HG2	2.06	0.55
5:E:21:GLU:HB3	5:E:35:VAL:HG21	1.87	0.55
7:G:59:LEU:HD11	7:G:65:SER:N	2.19	0.55
7:G:98:LYS:HE2	7:G:106:ASP:HB2	1.88	0.55
14:N:306:VAL:HG23	14:N:415:LYS:HD3	1.88	0.55
18:R:401:THR:N	18:R:479:THR:O	2.35	0.55
1:A:17:GLU:O	2:B:1138:ALA:O	2.25	0.55
1:A:147:GLN:NE2	1:A:150:LYS:HD2	2.21	0.55
1:A:314:GLU:O	1:A:318:TYR:HB3	2.07	0.55
1:A:621:PRO:HD2	1:A:689:GLU:OE2	2.07	0.55
1:A:1003:ASP:O	1:A:1007:SER:HB3	2.05	0.55
1:A:1145:LEU:CG	1:A:1146:VAL:H	2.02	0.55
2:B:228:LYS:HD3	2:B:244:HIS:NE2	2.20	0.55
3:C:101:ILE:O	3:C:104:VAL:HG12	2.07	0.55
7:G:87:GLY:HA3	7:G:148:PHE:HE2	1.71	0.55
8:H:114:VAL:HB	8:H:125:LEU:HG	1.87	0.55
15:O:327:ARG:C	15:O:329:PRO:HD2	2.27	0.55
15:O:498:SER:HB3	16:P:296:TYR:CD1	2.42	0.55
1:A:581:SER:HB2	11:K:90:GLY:HA3	1.88	0.55
1:A:1260:MET:HA	1:A:1263:LEU:HD12	1.89	0.55
2:B:205:ILE:HG22	2:B:355:ARG:HH11	1.71	0.55
3:C:84:TYR:CE2	3:C:207:HIS:HE1	2.25	0.55
3:C:215:ASP:OD2	12:L:70:ARG:NH2	2.40	0.55
6:F:135:ARG:HH12	7:G:58:GLN:HE21	1.45	0.55
18:R:172:GLU:HG3	18:R:506:GLY:HA3	1.89	0.55
20:X:23:DT:O4	21:Y:56:DA:N6	2.40	0.55
1:A:81:PHE:CD2	1:A:265:PRO:CG	2.89	0.55
1:A:504:VAL:O	1:A:507:PRO:HD2	2.07	0.55
1:A:921:LEU:HG	1:A:1081:ALA:O	2.06	0.55
1:A:1456:ALA:O	1:A:1460:ASN:ND2	2.39	0.55
2:B:1088:ASP:OD2	2:B:1123:TYR:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:59:ILE:HD13	3:C:63:ILE:HD11	1.89	0.55
3:C:105:PRO:HB2	3:C:187:ALA:HB2	1.89	0.55
8:H:38:LEU:HD21	8:H:40:LEU:HB2	1.88	0.55
9:I:29:CYS:HA	13:M:183:PHE:HE2	1.71	0.55
15:O:89:ASP:O	15:O:93:THR:N	2.33	0.55
2:B:989:LYS:HA	2:B:992:VAL:HG12	1.89	0.55
4:D:17:LEU:HB2	4:D:66:LEU:HD23	1.87	0.55
10:J:36:LEU:HD22	10:J:47:ARG:HG3	1.89	0.55
14:N:364:ARG:HG3	14:N:365:VAL:N	2.21	0.55
15:O:538:ALA:O	15:O:541:ILE:HG22	2.06	0.55
18:R:12:PHE:HD1	18:R:25:CYS:HB3	1.72	0.55
1:A:1451:LEU:HB3	4:D:107:MET:HB3	1.87	0.55
2:B:993:ASP:OD1	2:B:994:GLN:N	2.40	0.55
8:H:5:LEU:HG	8:H:133:ASN:HB3	1.87	0.55
13:M:72:GLU:HB2	14:N:364:ARG:HE	1.72	0.55
15:O:133:SER:O	15:O:137:ILE:N	2.35	0.55
15:O:579:GLN:HG2	16:P:315:TRP:CZ3	2.42	0.55
18:R:459:LYS:HD2	18:R:595:VAL:HB	1.89	0.55
1:A:432:TYR:OH	18:R:20:ASN:ND2	2.40	0.55
2:B:848:PRO:HB2	2:B:851:SER:HB3	1.89	0.55
3:C:154:LYS:HA	3:C:157:TYR:O	2.07	0.55
4:D:155:GLU:O	4:D:158:SER:OG	2.24	0.55
9:I:14:ILE:HD13	9:I:24:LEU:HB3	1.88	0.55
12:L:29:TYR:O	12:L:38:LEU:N	2.38	0.55
15:O:356:THR:HB	15:O:357:PRO:HD3	1.88	0.55
18:R:455:GLU:HG2	18:R:588:THR:HG23	1.88	0.55
1:A:457:GLN:N	1:A:460:ASP:OD2	2.40	0.55
1:A:632:VAL:HG21	1:A:796:THR:HG23	1.88	0.55
1:A:827:PHE:HB3	2:B:655:ASN:OD1	2.07	0.55
1:A:988:ASP:OD1	1:A:993:GLU:N	2.33	0.55
2:B:574:GLN:HE22	14:N:422:ILE:HG12	1.71	0.55
3:C:136:LEU:HD12	3:C:167:LEU:HA	1.88	0.55
1:A:1072:GLU:O	1:A:1076:PHE:CB	2.55	0.54
1:A:1347:GLY:O	1:A:1348:MET:HG2	2.07	0.54
2:B:611:PRO:HG3	2:B:648:TYR:CE1	2.42	0.54
2:B:687:LEU:O	2:B:915:ARG:NH2	2.40	0.54
7:G:92:CYS:SG	7:G:98:LYS:N	2.63	0.54
8:H:11:GLN:O	8:H:29:ALA:N	2.39	0.54
13:M:159:TYR:HD1	13:M:172:PRO:HA	1.72	0.54
13:M:160:ALA:HA	14:N:306:VAL:HA	1.89	0.54
15:O:46:LEU:HA	15:O:49:TYR:CD2	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:402:LEU:HD12	18:R:445:GLY:HA2	1.88	0.54
18:R:510:SER:N	18:R:520:ILE:O	2.31	0.54
1:A:11:LYS:HG3	2:B:1117:ILE:HG21	1.87	0.54
1:A:418:GLU:O	1:A:421:VAL:HG12	2.07	0.54
1:A:541:LEU:HG	1:A:551:ILE:HD11	1.88	0.54
1:A:911:ILE:HG22	5:E:174:GLN:O	2.07	0.54
2:B:207:VAL:H	2:B:355:ARG:HH22	1.54	0.54
2:B:887:SER:HB3	12:L:55:ILE:HG22	1.88	0.54
3:C:58:ASN:N	3:C:296:ASN:O	2.39	0.54
11:K:138:LYS:O	11:K:142:MET:N	2.40	0.54
14:N:307:PHE:CG	14:N:416:ILE:HG22	2.41	0.54
15:O:171:VAL:O	15:O:175:LEU:CB	2.53	0.54
15:O:203:ILE:HG22	15:O:207:HIS:CD2	2.41	0.54
15:O:570:GLU:O	15:O:574:TYR:N	2.40	0.54
16:P:183:TRP:HD1	16:P:247:LEU:HD23	1.72	0.54
16:P:203:LYS:HD3	16:P:203:LYS:N	2.20	0.54
19:S:291:UNK:O	19:S:293:UNK:N	2.41	0.54
1:A:114:LEU:HD11	1:A:148:CYS:HB2	1.89	0.54
1:A:356:ARG:HE	1:A:363:ARG:HH22	1.55	0.54
1:A:1189:ASP:OD2	1:A:1192:THR:N	2.41	0.54
6:F:76:LYS:HD2	6:F:79:ARG:HE	1.72	0.54
10:J:53:HIS:ND1	10:J:53:HIS:O	2.41	0.54
13:M:90:TYR:HE2	13:M:93:ARG:H	1.56	0.54
13:M:187:ASP:O	13:M:191:VAL:N	2.37	0.54
15:O:170:THR:OG1	15:O:173:ASP:N	2.28	0.54
15:O:650:VAL:HG13	15:O:651:PHE:H	1.72	0.54
1:A:409:THR:H	1:A:412:ASN:HD22	1.54	0.54
1:A:1053:LYS:O	1:A:1056:VAL:N	2.40	0.54
1:A:1150:ASP:OD1	1:A:1291:ARG:HD2	2.06	0.54
1:A:1203:GLU:HA	1:A:1206:ALA:HB3	1.89	0.54
2:B:141:ILE:HG23	2:B:142:ILE:N	2.22	0.54
5:E:188:LEU:HD23	5:E:190:LEU:HD11	1.90	0.54
11:K:65:ILE:N	11:K:101:LEU:O	2.36	0.54
13:M:90:TYR:HB3	13:M:179:LEU:HB3	1.89	0.54
15:O:133:SER:HB2	17:Q:58:TYR:CE1	2.41	0.54
2:B:552:ASN:OD1	2:B:553:TYR:N	2.40	0.54
3:C:33:VAL:HG12	3:C:34:GLU:H	1.73	0.54
3:C:48:ASP:HB2	3:C:51:GLU:H	1.71	0.54
15:O:517:VAL:O	15:O:565:LEU:HG	2.08	0.54
16:P:54:GLU:HA	16:P:57:ASP:HB3	1.89	0.54
18:R:424:ARG:HH12	21:Y:64:DA:H4'	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:446:TYR:O	19:S:449:ARG:HB3	2.06	0.54
1:A:200:GLU:HG2	15:O:515:LYS:HD3	1.90	0.54
1:A:533:ASN:HD22	6:F:94:LEU:HD22	1.73	0.54
1:A:683:ARG:HH22	1:A:925:GLU:HA	1.72	0.54
1:A:1222:VAL:HA	1:A:1231:ALA:O	2.07	0.54
2:B:244:HIS:HB3	2:B:247:ILE:HG22	1.89	0.54
2:B:1079:LEU:O	2:B:1083:LEU:N	2.31	0.54
3:C:173:GLY:C	3:C:175:GLN:H	2.10	0.54
7:G:104:ILE:HG12	7:G:105:PHE:CD1	2.43	0.54
13:M:92:ASN:HD21	13:M:181:PRO:HD3	1.73	0.54
13:M:93:ARG:HH21	13:M:105:PRO:HB3	1.73	0.54
15:O:471:THR:OG1	15:O:477:TYR:HB3	2.07	0.54
16:P:241:ARG:O	16:P:245:GLU:HG2	2.07	0.54
18:R:204:LYS:HA	18:R:207:GLN:HB2	1.90	0.54
1:A:92:HIS:CD2	1:A:94:GLY:H	2.26	0.54
2:B:757:VAL:HG11	2:B:1022:ILE:HD12	1.90	0.54
2:B:990:ILE:HG22	2:B:991:LEU:HD12	1.90	0.54
10:J:16:ASP:OD1	10:J:17:LYS:HG3	2.07	0.54
13:M:121:ILE:N	13:M:148:LEU:O	2.36	0.54
14:N:389:THR:HG23	14:N:390:PHE:H	1.73	0.54
15:O:472:LYS:O	15:O:475:VAL:N	2.31	0.54
15:O:537:LEU:HD11	15:O:566:PHE:CE2	2.42	0.54
18:R:505:HIS:O	18:R:508:PHE:N	2.40	0.54
1:A:124:LEU:HD22	1:A:128:ARG:HH12	1.71	0.54
2:B:558:ASN:H	2:B:602:ALA:CA	2.20	0.54
15:O:125:GLU:CB	15:O:128:HIS:HB2	2.34	0.54
15:O:573:SER:OG	15:O:576:PHE:HE2	1.89	0.54
16:P:149:MET:O	16:P:150:LEU:C	2.46	0.54
1:A:407:LYS:HG2	1:A:461:VAL:HG22	1.89	0.54
1:A:475:ASN:HB2	1:A:485:ILE:CD1	2.38	0.54
1:A:542:LEU:HD13	1:A:682:LEU:HD23	1.90	0.54
1:A:800:LYS:HB3	2:B:951:SER:OG	2.07	0.54
2:B:337:VAL:HG23	2:B:338:GLU:H	1.73	0.54
2:B:533:CYS:SG	2:B:538:VAL:HG11	2.48	0.54
2:B:612:LEU:HD13	2:B:672:HIS:HB3	1.90	0.54
2:B:782:PHE:HD1	10:J:8:PHE:CD2	2.26	0.54
7:G:88:TRP:O	7:G:99:VAL:HA	2.08	0.54
1:A:1161:VAL:HG22	1:A:1275:LEU:HD13	1.89	0.54
1:A:1180:ASN:HB3	9:I:21:VAL:H	1.72	0.54
3:C:256:ILE:HG22	3:C:267:VAL:HG22	1.90	0.54
3:C:278:GLU:O	3:C:281:ARG:HG2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:126:GLN:C	4:D:127:LEU:HG	2.27	0.54
4:D:127:LEU:O	4:D:127:LEU:HD12	2.07	0.54
7:G:104:ILE:HG12	7:G:105:PHE:HD1	1.73	0.54
7:G:150:ILE:HG21	7:G:196:LEU:HD23	1.90	0.54
9:I:5:CYS:HB3	9:I:10:ASN:H	1.73	0.54
15:O:196:GLU:HG3	15:O:197:MET:H	1.73	0.54
15:O:516:LEU:HD12	15:O:565:LEU:CD2	2.36	0.54
16:P:266:GLU:OE2	16:P:269:LEU:HD13	2.07	0.54
19:S:420:TRP:CE3	19:S:424:GLU:HG2	2.43	0.54
1:A:1163:LYS:HB2	1:A:1279:SER:O	2.07	0.53
2:B:883:GLN:HE21	12:L:57:LEU:HD21	1.72	0.53
2:B:903:ASN:ND2	3:C:95:GLU:OE2	2.42	0.53
2:B:1026:LYS:NZ	2:B:1030:MET:SD	2.79	0.53
4:D:126:GLN:HG3	4:D:127:LEU:N	2.24	0.53
20:X:23:DT:C6	20:X:24:DT:H72	2.43	0.53
1:A:114:LEU:HD22	1:A:161:ASN:HD21	1.72	0.53
1:A:153:ARG:HD3	15:O:339:LEU:CG	2.24	0.53
1:A:513:ASP:OD1	2:B:911:LYS:NZ	2.41	0.53
1:A:636:PRO:HA	1:A:647:GLN:HE22	1.73	0.53
2:B:296:TYR:CD2	13:M:186:ILE:HD11	2.43	0.53
2:B:722:ASP:OD1	2:B:723:THR:N	2.41	0.53
6:F:73:ALA:HA	6:F:143:PHE:CD2	2.43	0.53
14:N:371:LEU:HD13	14:N:384:LYS:HD3	1.90	0.53
15:O:197:MET:HB3	15:O:321:GLN:OE1	2.07	0.53
15:O:471:THR:OG1	15:O:475:VAL:O	2.20	0.53
18:R:211:LYS:HE2	18:R:282:ASP:HB3	1.89	0.53
1:A:262:PRO:HG2	2:B:1134:SER:O	2.08	0.53
1:A:543:THR:N	1:A:548:GLU:O	2.38	0.53
2:B:131:VAL:HG23	2:B:147:VAL:HB	1.90	0.53
2:B:1095:CYS:SG	2:B:1115:ASN:HB3	2.49	0.53
3:C:60:ASP:HB3	11:K:78:TYR:CZ	2.44	0.53
10:J:6:ARG:HB3	10:J:11:GLY:HA2	1.91	0.53
13:M:93:ARG:NH2	13:M:105:PRO:HB3	2.23	0.53
13:M:246:THR:OG1	14:N:404:SER:HA	2.07	0.53
15:O:255:LYS:HB3	15:O:256:PRO:HD3	1.90	0.53
15:O:492:TYR:CZ	15:O:495:VAL:HB	2.43	0.53
16:P:175:ILE:HG22	16:P:179:LEU:HD13	1.90	0.53
16:P:268:ILE:HD12	16:P:297:PHE:HZ	1.72	0.53
1:A:85:LYS:NZ	1:A:260:TYR:OH	2.39	0.53
1:A:147:GLN:HE22	1:A:150:LYS:HD2	1.72	0.53
1:A:232:LYS:NZ	16:P:315:TRP:CZ2	2.75	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:627:ASP:HA	1:A:652:VAL:O	2.09	0.53
1:A:1391:LYS:O	1:A:1395:HIS:ND1	2.38	0.53
1:A:1448:PHE:CD1	4:D:14:TYR:CD2	2.95	0.53
3:C:97:LEU:O	3:C:101:ILE:HD12	2.08	0.53
9:I:33:PHE:CD1	9:I:34:PRO:HD2	2.43	0.53
15:O:164:ILE:HG12	15:O:282:ILE:HG12	1.91	0.53
1:A:218:CYS:SG	15:O:551:VAL:HA	2.48	0.53
1:A:703:ARG:NH2	11:K:93:ILE:HB	2.23	0.53
1:A:1284:ASN:N	1:A:1292:GLU:O	2.27	0.53
2:B:623:LYS:O	2:B:625:ILE:N	2.37	0.53
3:C:77:SER:O	3:C:211:GLY:N	2.33	0.53
7:G:141:ASP:OD1	7:G:142:VAL:N	2.42	0.53
14:N:309:LEU:HD23	14:N:418:VAL:HG21	1.89	0.53
16:P:92:LEU:O	16:P:96:TYR:HB2	2.09	0.53
18:R:239:ARG:HD2	18:R:243:GLU:OE1	2.09	0.53
1:A:126:GLU:OE2	1:A:136:ARG:NH2	2.42	0.53
1:A:441:ARG:HH12	2:B:1040:ARG:NH1	2.06	0.53
1:A:968:GLY:O	1:A:972:GLU:HG2	2.07	0.53
1:A:1387:ALA:O	1:A:1392:THR:HG22	2.08	0.53
2:B:523:ASP:O	2:B:523:ASP:OD1	2.25	0.53
2:B:914:SER:O	2:B:915:ARG:HG2	2.08	0.53
3:C:88:ASN:O	12:L:60:ARG:HD3	2.09	0.53
13:M:163:VAL:HG22	13:M:168:VAL:HG22	1.90	0.53
15:O:326:ILE:O	15:O:329:PRO:HD2	2.08	0.53
15:O:590:PHE:O	15:O:594:LYS:N	2.33	0.53
19:S:382:ASP:HB3	19:S:385:LYS:HG2	1.90	0.53
1:A:396:ASP:OD1	1:A:397:ARG:N	2.41	0.53
2:B:328:ALA:O	2:B:332:ILE:HG23	2.09	0.53
2:B:502:THR:HG23	2:B:510:LEU:HD11	1.90	0.53
2:B:1092:VAL:HG12	2:B:1094:VAL:HG13	1.91	0.53
3:C:84:TYR:HE2	3:C:207:HIS:HE1	1.55	0.53
13:M:226:ARG:HG3	13:M:227:LEU:H	1.74	0.53
16:P:55:LEU:O	16:P:60:LEU:N	2.35	0.53
16:P:106:TRP:CG	16:P:107:SER:N	2.76	0.53
16:P:218:THR:HG21	16:P:259:ASP:HB3	1.90	0.53
18:R:132:VAL:HG12	18:R:161:PHE:HE1	1.74	0.53
1:A:81:PHE:CE2	1:A:265:PRO:CG	2.91	0.53
1:A:427:HIS:HB3	1:A:428:PRO:HD3	1.90	0.53
1:A:559:THR:HG21	2:B:947:HIS:HE1	1.74	0.53
1:A:964:ASN:HA	1:A:967:LEU:HB2	1.90	0.53
1:A:1329:GLU:HG2	5:E:198:ILE:HG21	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:265:ASP:HA	2:B:268:ILE:HD12	1.90	0.53
2:B:590:ILE:HG13	2:B:601:ILE:HG12	1.91	0.53
2:B:904:ARG:HH12	2:B:1033:ASP:CG	2.11	0.53
2:B:1106:TRP:NE1	7:G:163:PRO:HD3	2.24	0.53
7:G:111:PRO:O	7:G:199:SER:OG	2.27	0.53
8:H:43:ASN:OD1	8:H:45:GLU:N	2.42	0.53
15:O:155:LEU:O	15:O:159:ILE:HG12	2.09	0.53
15:O:211:ILE:HD13	15:O:214:LEU:HD21	1.91	0.53
18:R:486:ILE:N	18:R:543:ALA:O	2.42	0.53
1:A:41:ASP:OD1	1:A:49:LYS:N	2.42	0.53
1:A:818:ILE:HD11	1:A:824:PRO:HD2	1.89	0.53
2:B:1003:MET:SD	3:C:293:ARG:NH2	2.82	0.53
3:C:222:VAL:HA	3:C:304:SER:HA	1.91	0.53
5:E:135:PHE:HB3	5:E:140:LEU:HD13	1.91	0.53
16:P:51:ILE:O	16:P:55:LEU:HG	2.09	0.53
1:A:222:LEU:HA	1:A:226:LYS:HZ2	1.72	0.53
1:A:1391:LYS:NZ	21:Y:17:DG:OP1	2.42	0.53
3:C:240:LYS:HD2	3:C:262:SER:HA	1.90	0.53
3:C:255:VAL:HG13	3:C:256:ILE:N	2.24	0.53
4:D:128:PRO:O	4:D:129:ALA:C	2.48	0.53
15:O:470:GLU:N	15:O:479:PRO:HD3	2.24	0.53
18:R:483:ILE:HD13	18:R:486:ILE:HD11	1.91	0.53
1:A:482:ARG:O	1:A:482:ARG:HG2	2.09	0.52
1:A:622:VAL:O	1:A:657:SER:OG	2.23	0.52
2:B:52:LEU:HD13	2:B:743:LEU:HD23	1.90	0.52
4:D:20:LEU:O	4:D:24:GLU:HB2	2.09	0.52
15:O:249:PHE:CE2	15:O:330:LEU:HD13	2.43	0.52
15:O:509:ARG:O	15:O:512:ARG:HB3	2.08	0.52
16:P:218:THR:OG1	16:P:219:GLN:OE1	2.20	0.52
18:R:195:LYS:HA	18:R:198:VAL:HB	1.90	0.52
20:X:26:DT:H2'	20:X:27:DC:C6	2.44	0.52
1:A:383:PRO:HG3	1:A:512:PHE:CZ	2.43	0.52
1:A:513:ASP:OD1	2:B:919:LYS:HG2	2.09	0.52
2:B:915:ARG:HD2	2:B:1023:TYR:HD2	1.73	0.52
3:C:238:PRO:O	3:C:239:ILE:HG13	2.09	0.52
13:M:231:LEU:HA	13:M:235:LYS:H	1.73	0.52
15:O:104:VAL:HA	15:O:122:TYR:HA	1.91	0.52
15:O:248:ASP:O	15:O:252:ILE:HG12	2.10	0.52
15:O:626:GLN:HA	15:O:629:MET:HB2	1.92	0.52
18:R:273:GLN:HB2	19:S:277:UNK:H	1.74	0.52
1:A:108:LYS:HE2	1:A:180:HIS:CD2	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:178:PRO:HD3	10:J:63:TYR:OH	2.09	0.52
2:B:306:GLY:O	2:B:309:VAL:HG12	2.09	0.52
2:B:531:LYS:O	2:B:535:VAL:HG23	2.09	0.52
3:C:84:TYR:CB	3:C:205:LYS:O	2.47	0.52
3:C:229:LEU:HD23	3:C:293:ARG:HH12	1.75	0.52
4:D:72:PHE:O	7:G:145:LYS:NZ	2.42	0.52
6:F:115:THR:O	6:F:116:ASP:OD1	2.27	0.52
8:H:16:ASP:O	8:H:18:GLY:N	2.37	0.52
10:J:41:LEU:HD23	10:J:47:ARG:HA	1.91	0.52
13:M:255:PHE:O	13:M:259:ILE:HG12	2.09	0.52
14:N:316:PHE:HA	14:N:377:ASN:ND2	2.25	0.52
15:O:105:LYS:HE3	15:O:123:ASN:HA	1.91	0.52
15:O:549:GLN:HB2	15:O:565:LEU:CB	2.39	0.52
18:R:256:GLN:HA	18:R:259:LEU:HB3	1.91	0.52
1:A:238:ASP:OD1	1:A:239:CYS:N	2.41	0.52
2:B:458:LEU:HG	2:B:469:MET:SD	2.50	0.52
2:B:558:ASN:N	2:B:602:ALA:HB1	2.19	0.52
3:C:197:ARG:HE	10:J:61:LEU:HB3	1.74	0.52
7:G:59:LEU:HG	7:G:60:LYS:H	1.72	0.52
7:G:88:TRP:HB3	7:G:144:GLU:O	2.10	0.52
8:H:56:THR:HB	8:H:145:ARG:HG2	1.92	0.52
14:N:371:LEU:HD22	14:N:384:LYS:HD3	1.92	0.52
15:O:529:LYS:HG3	15:O:532:ASP:H	1.75	0.52
16:P:221:ILE:O	16:P:224:PHE:HB3	2.10	0.52
17:Q:56:VAL:HA	17:Q:59:ILE:HD12	1.92	0.52
18:R:478:PHE:O	18:R:599:PRO:HB3	2.07	0.52
19:S:312:UNK:O	19:S:316:UNK:N	2.43	0.52
1:A:912:VAL:HG12	1:A:1364:TYR:CD1	2.45	0.52
2:B:607:ARG:NH2	2:B:650:ASP:OD2	2.39	0.52
2:B:858:ASN:OD1	2:B:859:ASN:N	2.43	0.52
3:C:85:PHE:HE2	3:C:94:ASP:HB2	1.72	0.52
3:C:260:GLU:HB3	3:C:263:ASP:HB2	1.91	0.52
7:G:115:LEU:H	7:G:199:SER:HB3	1.74	0.52
8:H:103:LYS:HB3	8:H:115:TYR:HD2	1.74	0.52
15:O:152:HIS:HA	15:O:155:LEU:HD12	1.90	0.52
16:P:78:SER:O	16:P:82:LYS:HB2	2.09	0.52
18:R:395:ASN:OD1	18:R:452:ALA:N	2.43	0.52
1:A:314:GLU:O	1:A:318:TYR:HB2	2.08	0.52
1:A:338:PRO:HG2	1:A:342:ASN:HB2	1.91	0.52
1:A:999:ASP:HA	1:A:1002:ARG:HB2	1.92	0.52
2:B:343:ARG:HE	2:B:541:ILE:HG12	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:199:TYR:O	15:O:283:ASN:N	2.41	0.52
16:P:62:LYS:HG2	16:P:75:VAL:HB	1.92	0.52
16:P:153:LEU:HB3	16:P:155:PRO:HD3	1.90	0.52
16:P:252:LYS:HD3	16:P:266:GLU:HG2	1.91	0.52
1:A:310:ASN:HA	15:O:564:PHE:CE2	2.44	0.52
1:A:856:LEU:HD13	2:B:692:HIS:O	2.10	0.52
1:A:916:TYR:CE1	1:A:1089:ILE:HG21	2.44	0.52
1:A:1456:ALA:HB2	4:D:116:PHE:HA	1.92	0.52
2:B:177:CYS:SG	2:B:179:LEU:N	2.83	0.52
2:B:347:LEU:HD22	2:B:561:LEU:HD22	1.91	0.52
2:B:824:LEU:HA	2:B:831:GLU:OE1	2.10	0.52
9:I:32:GLU:HG3	13:M:132:ASN:HB2	1.91	0.52
10:J:31:ASP:HB2	10:J:34:THR:OG1	2.10	0.52
13:M:133:LYS:O	13:M:137:GLU:N	2.42	0.52
15:O:640:ARG:NH1	17:Q:44:ASN:OD1	2.43	0.52
18:R:395:ASN:H	18:R:487:VAL:HB	1.74	0.52
3:C:52:ALA:HB2	3:C:310:PRO:HG2	1.90	0.52
11:K:93:ILE:HG22	11:K:95:HIS:N	2.23	0.52
15:O:76:VAL:HA	15:O:79:LEU:HD13	1.91	0.52
15:O:590:PHE:O	15:O:593:GLU:N	2.42	0.52
16:P:134:VAL:O	16:P:151:TYR:HB2	2.10	0.52
1:A:46:ARG:HE	1:A:278:PRO:HA	1.74	0.52
1:A:485:ILE:C	1:A:486:LEU:HD12	2.30	0.52
1:A:1014:GLY:HA2	1:A:1017:THR:HG22	1.90	0.52
2:B:405:LYS:HA	2:B:408:LYS:HE2	1.91	0.52
15:O:125:GLU:HB2	15:O:128:HIS:CB	2.37	0.52
15:O:517:VAL:HG13	15:O:518:SER:H	1.74	0.52
1:A:32:VAL:C	1:A:83:HIS:CE1	2.83	0.52
1:A:1003:ASP:O	1:A:1007:SER:HB2	2.10	0.52
1:A:1164:THR:OG1	1:A:1272:VAL:HG12	2.10	0.52
4:D:114:LYS:HB2	4:D:145:PHE:CZ	2.45	0.52
13:M:76:LEU:HB3	13:M:168:VAL:HB	1.92	0.52
15:O:90:SER:HA	15:O:93:THR:HB	1.92	0.52
15:O:472:LYS:O	15:O:474:GLY:N	2.43	0.52
16:P:53:GLN:NE2	19:S:363:GLN:HA	2.25	0.52
1:A:573:ARG:HH21	11:K:87:GLU:CB	2.15	0.51
1:A:998:TYR:O	1:A:1002:ARG:N	2.32	0.51
1:A:1136:ILE:HG12	1:A:1137:SER:O	2.10	0.51
3:C:40:PHE:HD2	11:K:134:LYS:HG3	1.75	0.51
3:C:100:ARG:HE	10:J:5:VAL:HG13	1.75	0.51
12:L:28:LYS:NZ	12:L:40:LEU:O	2.31	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:568:CYS:SG	15:O:569:LYS:N	2.82	0.51
16:P:31:PHE:HB3	16:P:72:PHE:O	2.09	0.51
18:R:511:TYR:HB2	18:R:519:LEU:HG	1.92	0.51
18:R:619:ALA:O	18:R:623:LYS:HB3	2.10	0.51
1:A:693:ALA:HA	1:A:696:ARG:HH11	1.75	0.51
1:A:1409:GLU:N	1:A:1413:GLU:HG2	2.24	0.51
2:B:112:LEU:HD11	2:B:127:ALA:HA	1.93	0.51
2:B:524:ASP:CB	2:B:588:ILE:HD11	2.38	0.51
18:R:213:TRP:HB3	18:R:285:ALA:HB1	1.92	0.51
1:A:528:ARG:HH12	6:F:118:LEU:HB2	1.75	0.51
1:A:1259:ARG:O	1:A:1263:LEU:HG	2.09	0.51
2:B:45:TRP:CE2	2:B:739:LYS:HD3	2.44	0.51
2:B:776:SER:HB2	2:B:928:GLN:NE2	2.16	0.51
7:G:153:GLU:OE2	7:G:194:TYR:HA	2.10	0.51
12:L:53:HIS:NE2	12:L:55:ILE:HG12	2.25	0.51
20:X:11:DA:C8	20:X:12:DT:H73	2.45	0.51
1:A:815:GLN:HG2	1:A:847:PHE:HD1	1.75	0.51
1:A:1161:VAL:HG13	1:A:1275:LEU:HB2	1.92	0.51
2:B:137:ARG:HG2	2:B:141:ILE:HG12	1.93	0.51
2:B:204:ARG:NH1	2:B:376:ARG:HH22	2.07	0.51
2:B:932:PRO:HB2	2:B:1004:LEU:HB3	1.93	0.51
11:K:63:PHE:O	11:K:103:ILE:HG22	2.10	0.51
13:M:178:GLN:OE1	14:N:392:GLN:NE2	2.43	0.51
16:P:306:ASP:HB2	16:P:308:GLU:OE1	2.10	0.51
1:A:32:VAL:HG11	1:A:57:LYS:HD2	1.92	0.51
1:A:474:PHE:C	1:A:485:ILE:HD13	2.30	0.51
1:A:595:PRO:HD3	8:H:79:TRP:CD2	2.45	0.51
1:A:931:GLN:O	1:A:933:VAL:N	2.38	0.51
1:A:974:LEU:HD11	1:A:998:TYR:CG	2.45	0.51
1:A:1448:PHE:CE2	4:D:11:LEU:HG	2.46	0.51
2:B:156:LEU:HD22	2:B:184:TYR:CZ	2.46	0.51
2:B:557:LEU:O	2:B:560:THR:HB	2.11	0.51
2:B:587:PHE:HE2	2:B:602:ALA:O	1.93	0.51
2:B:864:THR:HA	2:B:866:TYR:CE2	2.46	0.51
3:C:81:GLU:OE2	12:L:70:ARG:NH1	2.43	0.51
6:F:111:LEU:HD23	6:F:112:GLU:O	2.10	0.51
7:G:203:ASP:HB3	7:G:211:TRP:NE1	2.24	0.51
13:M:88:PHE:HB2	14:N:395:ILE:CG2	2.40	0.51
15:O:547:GLU:OE1	15:O:569:LYS:HG3	2.10	0.51
18:R:219:ARG:HH11	18:R:220:PRO:HD2	1.75	0.51
19:S:420:TRP:CD1	19:S:457:LYS:HD2	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:421:THR:HG23	19:S:424:GLU:H	1.76	0.51
1:A:186:VAL:HG22	1:A:189:LYS:HD3	1.93	0.51
1:A:389:ILE:HG13	1:A:501:ASN:ND2	2.25	0.51
1:A:789:ASN:OD1	1:A:789:ASN:N	2.43	0.51
1:A:999:ASP:O	1:A:1003:ASP:HB2	2.10	0.51
2:B:129:ILE:HG22	2:B:131:VAL:HG13	1.93	0.51
2:B:429:ILE:HG23	2:B:430:THR:H	1.76	0.51
2:B:738:THR:H	2:B:741:ILE:HD13	1.76	0.51
3:C:321:LEU:HD21	11:K:124:LEU:HD21	1.92	0.51
5:E:88:VAL:HG21	5:E:112:TYR:CE1	2.45	0.51
6:F:103:MET:SD	7:G:65:SER:OG	2.68	0.51
8:H:9:ILE:HA	8:H:55:LEU:O	2.10	0.51
19:S:407:ASN:HD21	21:Y:73:DT:H3'	1.75	0.51
1:A:200:GLU:HA	15:O:515:LYS:HD2	1.92	0.51
1:A:307:ILE:HB	1:A:311:ASN:OD1	2.10	0.51
1:A:401:VAL:HG12	18:R:18:ASN:HB2	1.92	0.51
1:A:1209:ILE:O	1:A:1212:ALA:N	2.41	0.51
2:B:128:PRO:HA	2:B:151:ARG:HG2	1.92	0.51
2:B:253:ILE:HG22	2:B:286:ASN:ND2	2.25	0.51
2:B:321:GLN:H	2:B:324:ILE:HB	1.76	0.51
2:B:613:ILE:N	2:B:673:LEU:O	2.33	0.51
13:M:86:HIS:CD2	13:M:175:ARG:HB2	2.45	0.51
15:O:634:GLU:HA	15:O:637:VAL:CG1	2.40	0.51
16:P:31:PHE:CD2	16:P:72:PHE:HB2	2.36	0.51
16:P:295:ASN:HD21	16:P:298:LYS:HB3	1.75	0.51
18:R:523:MET:O	18:R:527:LYS:HA	2.11	0.51
1:A:25:ASP:HA	1:A:28:ALA:HB3	1.93	0.51
1:A:67:CYS:O	1:A:69:THR:N	2.44	0.51
1:A:222:LEU:HA	1:A:226:LYS:NZ	2.25	0.51
1:A:715:ASN:HA	1:A:718:THR:HB	1.92	0.51
1:A:911:ILE:HG23	5:E:176:PRO:HD3	1.92	0.51
2:B:172:ALA:HA	10:J:63:TYR:HE1	1.76	0.51
2:B:544:ILE:HD11	2:B:563:GLY:HA2	1.93	0.51
3:C:88:ASN:ND2	3:C:202:ILE:HG12	2.26	0.51
5:E:6:GLU:O	5:E:10:SER:HB3	2.11	0.51
5:E:31:THR:HG23	5:E:34:GLU:H	1.75	0.51
6:F:135:ARG:NH1	7:G:58:GLN:NE2	2.45	0.51
7:G:207:LEU:HD23	7:G:209:SER:H	1.74	0.51
10:J:7:CYS:SG	10:J:10:CYS:HB2	2.51	0.51
16:P:265:LEU:HD12	16:P:268:ILE:HG12	1.92	0.51
18:R:540:LEU:HD11	18:R:552:ALA:HB3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:124:LEU:HB3	1:A:128:ARG:HH12	1.76	0.51
1:A:464:ARG:HB3	1:A:467:GLU:OE2	2.11	0.51
1:A:557:PHE:HA	1:A:701:CYS:SG	2.51	0.51
1:A:598:MET:C	8:H:96:VAL:HG21	2.31	0.51
1:A:949:ASN:HA	1:A:1061:ARG:NH2	2.26	0.51
1:A:1207:VAL:O	1:A:1211:ARG:HG2	2.11	0.51
2:B:527:GLU:HG3	2:B:531:LYS:HE3	1.92	0.51
2:B:590:ILE:CG1	2:B:601:ILE:CG1	2.89	0.51
2:B:986:ASP:OD1	2:B:987:MET:N	2.43	0.51
5:E:99:HIS:O	5:E:103:LYS:CB	2.54	0.51
15:O:211:ILE:HA	15:O:214:LEU:HG	1.92	0.51
15:O:361:PHE:HB3	15:O:480:TYR:CE2	2.46	0.51
16:P:111:LYS:HA	16:P:114:THR:HG22	1.93	0.51
2:B:778:ILE:HD11	2:B:905:ARG:HG2	1.92	0.51
2:B:1036:HIS:NE2	2:B:1054:ARG:HA	2.26	0.51
15:O:290:GLY:O	15:O:293:SER:HB2	2.11	0.51
20:X:22:DT:H2''	20:X:23:DT:O4'	2.10	0.51
21:Y:11:DC:H1'	21:Y:12:DA:C8	2.46	0.51
1:A:238:ASP:HB2	1:A:241:LEU:HB2	1.92	0.50
1:A:487:SER:OG	1:A:532:ILE:HA	2.10	0.50
1:A:570:PHE:HB3	1:A:603:LEU:HD13	1.93	0.50
1:A:582:MET:CE	1:A:703:ARG:HB3	2.41	0.50
1:A:1205:ILE:O	1:A:1209:ILE:HG12	2.11	0.50
2:B:55:LYS:HD2	2:B:59:LYS:HZ2	1.76	0.50
2:B:435:ARG:O	2:B:439:THR:OG1	2.28	0.50
2:B:489:LEU:HG	2:B:493:GLN:OE1	2.10	0.50
2:B:1002:ASP:HB3	2:B:1019:PHE:CE1	2.44	0.50
5:E:11:ARG:O	5:E:14:ARG:N	2.44	0.50
18:R:12:PHE:CD1	18:R:25:CYS:HB3	2.46	0.50
18:R:218:ARG:NH1	21:Y:71:DT:H5'	2.26	0.50
18:R:610:LEU:HA	18:R:613:HIS:CD2	2.46	0.50
21:Y:57:DA:C6	21:Y:58:DA:C6	3.00	0.50
1:A:124:LEU:HD22	1:A:128:ARG:HH22	1.76	0.50
1:A:815:GLN:HE21	1:A:847:PHE:HB2	1.76	0.50
1:A:1166:LEU:HA	1:A:1169:VAL:HB	1.92	0.50
2:B:264:SER:C	2:B:266:LEU:H	2.14	0.50
2:B:914:SER:HA	2:B:1024:TYR:CD2	2.46	0.50
3:C:213:GLY:HA2	3:C:219:PHE:HB2	1.93	0.50
5:E:112:TYR:CG	5:E:116:ILE:HG12	2.45	0.50
6:F:89:GLU:OE1	6:F:90:ARG:N	2.44	0.50
6:F:92:ARG:HH12	7:G:61:PRO:HB3	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:96:VAL:HA	8:H:142:LEU:O	2.11	0.50
9:I:13:LEU:HD21	9:I:27:ARG:HB2	1.94	0.50
16:P:49:MET:HE2	19:S:364:LEU:HD11	1.94	0.50
16:P:209:ALA:O	16:P:212:VAL:HG12	2.11	0.50
19:S:406:TYR:HB2	19:S:410:SER:HB2	1.94	0.50
1:A:91:PHE:CE2	1:A:96:PHE:HD1	2.30	0.50
1:A:121:ARG:HA	1:A:124:LEU:HD12	1.92	0.50
1:A:409:THR:H	1:A:412:ASN:ND2	2.10	0.50
1:A:753:GLN:O	1:A:755:GLY:N	2.39	0.50
1:A:822:ARG:NH2	1:A:845:LYS:HB2	2.26	0.50
1:A:1022:LEU:O	1:A:1026:ARG:N	2.43	0.50
3:C:31:TRP:CE2	11:K:123:ASP:HB3	2.46	0.50
16:P:133:TYR:C	16:P:151:TYR:HB3	2.32	0.50
16:P:200:ASN:C	16:P:202:PRO:HD3	2.31	0.50
18:R:394:GLN:HE21	21:Y:68:DA:H5'	1.75	0.50
18:R:644:LYS:O	18:R:648:ASP:N	2.40	0.50
1:A:21:LEU:HD11	2:B:1133:LEU:HD11	1.93	0.50
1:A:133:ASP:OD1	1:A:134:ASN:N	2.40	0.50
1:A:194:LYS:HA	1:A:197:TRP:HB3	1.93	0.50
1:A:472:VAL:HG22	1:A:521:VAL:HG12	1.93	0.50
1:A:1225:ILE:H	1:A:1229:ARG:HE	1.58	0.50
2:B:244:HIS:NE2	2:B:333:ALA:HB2	2.25	0.50
2:B:338:GLU:HA	2:B:345:LYS:NZ	2.26	0.50
2:B:1076:SER:OG	2:B:1077:GLN:N	2.44	0.50
4:D:70:LYS:HD2	4:D:160:TYR:CE2	2.46	0.50
13:M:229:GLY:O	13:M:232:LEU:HB3	2.11	0.50
15:O:648:TRP:CZ2	15:O:652:GLN:HB3	2.47	0.50
19:S:384:HIS:HA	19:S:387:ALA:HB3	1.93	0.50
21:Y:18:DG:N7	21:Y:19:DC:C4	2.79	0.50
1:A:43:GLU:O	1:A:44:LYS:HG2	2.11	0.50
1:A:398:VAL:O	1:A:402:LEU:N	2.45	0.50
1:A:628:ALA:O	1:A:651:PHE:HA	2.11	0.50
1:A:857:SER:N	1:A:860:GLU:OE2	2.43	0.50
2:B:205:ILE:HD13	2:B:352:MET:HB2	1.94	0.50
2:B:211:GLU:HG3	2:B:212:LYS:H	1.77	0.50
2:B:639:ASP:OD1	2:B:643:LEU:HD13	2.12	0.50
2:B:880:HIS:N	2:B:901:ARG:O	2.36	0.50
5:E:153:HIS:CD2	5:E:198:ILE:HG12	2.47	0.50
8:H:11:GLN:HA	8:H:53:ASP:O	2.10	0.50
11:K:95:HIS:CE1	11:K:98:GLU:HB3	2.45	0.50
16:P:49:MET:HE1	19:S:364:LEU:HD21	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:378:ARG:HH22	1:A:477:GLN:HE21	1.58	0.50
1:A:541:LEU:HD22	1:A:682:LEU:HD22	1.93	0.50
2:B:149:ILE:O	2:B:426:SER:HB2	2.12	0.50
2:B:354:ARG:CZ	2:B:549:LEU:HG	2.42	0.50
2:B:738:THR:O	2:B:741:ILE:N	2.45	0.50
3:C:197:ARG:HB3	3:C:198:PRO:HD2	1.93	0.50
4:D:115:LEU:HD23	4:D:138:VAL:HG11	1.92	0.50
5:E:67:GLU:HA	5:E:70:SER:OG	2.11	0.50
5:E:100:ILE:O	5:E:104:ASN:ND2	2.44	0.50
5:E:112:TYR:N	5:E:135:PHE:O	2.23	0.50
13:M:89:GLN:HB3	14:N:394:VAL:HG13	1.93	0.50
14:N:315:ALA:HB1	14:N:376:GLY:HA3	1.94	0.50
16:P:195:PHE:HB2	16:P:201:GLY:O	2.12	0.50
1:A:228:LEU:HD11	1:A:259:ARG:HD2	1.94	0.50
1:A:1317:ASN:O	1:A:1318:HIS:ND1	2.45	0.50
2:B:99:ARG:NE	2:B:102:LYS:O	2.31	0.50
2:B:694:ASN:HD21	2:B:916:HIS:CE1	2.30	0.50
3:C:89:THR:CG2	3:C:200:GLN:HA	2.40	0.50
6:F:135:ARG:NE	6:F:143:PHE:HE1	2.10	0.50
10:J:66:LEU:HA	12:L:35:SER:OG	2.12	0.50
15:O:498:SER:HB3	16:P:296:TYR:HD1	1.75	0.50
15:O:527:LEU:HD21	16:P:246:VAL:HG11	1.93	0.50
1:A:533:ASN:ND2	6:F:94:LEU:HD22	2.27	0.50
1:A:933:VAL:HG22	1:A:1004:PHE:HE1	1.76	0.50
4:D:22:ASP:O	4:D:26:LYS:HG2	2.12	0.50
4:D:127:LEU:HD22	4:D:137:ILE:HD11	1.93	0.50
5:E:86:PRO:HB3	5:E:114:ASN:HB2	1.92	0.50
6:F:97:ARG:O	6:F:101:ILE:HG12	2.12	0.50
14:N:283:LEU:O	14:N:286:ASP:HB3	2.11	0.50
15:O:626:GLN:O	15:O:630:VAL:HG12	2.12	0.50
21:Y:23:DG:H2 [?]	21:Y:24:DG:C8	2.46	0.50
1:A:474:PHE:CZ	1:A:517:MET:HG3	2.47	0.50
1:A:1121:LEU:HB3	1:A:1346:HIS:NE2	2.27	0.50
1:A:1136:ILE:CD1	1:A:1318:HIS:HB3	2.42	0.50
2:B:904:ARG:NH2	2:B:1033:ASP:OD1	2.33	0.50
2:B:1057:ASP:OD1	2:B:1058:GLY:N	2.44	0.50
5:E:46:TYR:CZ	5:E:58:MET:HA	2.46	0.50
13:M:253:GLU:HA	13:M:256:LYS:HB2	1.93	0.50
15:O:47:PHE:CE2	15:O:586:ALA:HB1	2.46	0.50
15:O:197:MET:O	15:O:283:ASN:ND2	2.45	0.50
15:O:518:SER:O	15:O:522:ILE:HG12	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:573:SER:CA	15:O:576:PHE:CE2	2.95	0.50
18:R:520:ILE:HD11	20:X:11:DA:H4'	1.93	0.50
1:A:133:ASP:O	1:A:137:ARG:N	2.40	0.49
1:A:423:GLY:HA2	1:A:444:LEU:CD2	2.42	0.49
1:A:1188:ILE:HB	1:A:1228:ASP:CB	2.42	0.49
1:A:1188:ILE:HB	1:A:1228:ASP:HB3	1.94	0.49
1:A:1302:ASP:N	1:A:1302:ASP:OD1	2.45	0.49
2:B:205:ILE:HG22	2:B:355:ARG:NH1	2.27	0.49
2:B:613:ILE:HG13	2:B:675:ILE:HG22	1.93	0.49
2:B:717:GLN:NE2	2:B:727:LEU:HD22	2.27	0.49
4:D:152:GLU:HA	4:D:155:GLU:HG2	1.94	0.49
5:E:90:VAL:O	5:E:94:LYS:HG2	2.11	0.49
6:F:83:PRO:O	6:F:151:LEU:HG	2.12	0.49
8:H:11:GLN:HB3	8:H:29:ALA:HB3	1.94	0.49
11:K:60:SER:HA	11:K:106:GLN:HA	1.94	0.49
15:O:69:VAL:HG22	15:O:122:TYR:CD1	2.47	0.49
1:A:483:LEU:CD1	1:A:550:ILE:HG21	2.40	0.49
1:A:994:TYR:O	5:E:197:LYS:NZ	2.35	0.49
1:A:1034:PRO:C	1:A:1035:PRO:O	2.49	0.49
2:B:65:PHE:HZ	2:B:154:ILE:HA	1.78	0.49
3:C:21:PRO:HG3	3:C:30:GLU:HB2	1.93	0.49
3:C:86:PHE:N	3:C:203:SER:O	2.41	0.49
5:E:17:ARG:O	5:E:21:GLU:HG2	2.12	0.49
13:M:113:LYS:HG3	13:M:116:SER:O	2.12	0.49
13:M:154:GLU:CB	13:M:174:GLU:O	2.60	0.49
15:O:576:PHE:CD1	15:O:576:PHE:C	2.86	0.49
18:R:467:ARG:O	18:R:471:LYS:CB	2.60	0.49
1:A:38:ASP:C	1:A:40:PHE:H	2.11	0.49
1:A:81:PHE:HD2	1:A:265:PRO:HD3	1.75	0.49
1:A:252:ARG:HB2	1:A:253:PRO:HD2	1.94	0.49
1:A:423:GLY:HA2	1:A:444:LEU:HD23	1.94	0.49
1:A:434:LEU:O	1:A:461:VAL:N	2.40	0.49
2:B:909:GLY:O	2:B:1031:VAL:HB	2.13	0.49
8:H:63:LEU:O	8:H:89:LEU:N	2.40	0.49
8:H:63:LEU:O	8:H:88:SER:HB2	2.12	0.49
9:I:29:CYS:HA	13:M:135:LYS:HE2	1.94	0.49
9:I:32:GLU:N	13:M:130:PHE:O	2.45	0.49
15:O:492:TYR:HB2	15:O:574:TYR:CE1	2.47	0.49
18:R:219:ARG:NH1	18:R:221:ALA:H	2.09	0.49
18:R:477:LYS:HB3	18:R:599:PRO:HB2	1.94	0.49
1:A:94:GLY:HA3	1:A:1397:PHE:CE1	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:316:TRP:O	1:A:319:LEU:HB3	2.12	0.49
1:A:610:PHE:CE1	1:A:613:LEU:HD23	2.46	0.49
2:B:116:HIS:CD2	2:B:175:ASN:O	2.66	0.49
2:B:143:MET:HE3	19:S:397:VAL:HG13	1.94	0.49
2:B:281:ASP:HA	2:B:284:ALA:HB3	1.95	0.49
2:B:351:MET:HE3	2:B:354:ARG:HD3	1.93	0.49
2:B:536:LEU:HD23	2:B:536:LEU:O	2.11	0.49
3:C:78:VAL:HG22	3:C:208:CYS:SG	2.53	0.49
5:E:67:GLU:O	5:E:71:LYS:N	2.39	0.49
13:M:110:ALA:HA	13:M:120:GLU:O	2.12	0.49
18:R:502:ALA:O	18:R:506:GLY:N	2.41	0.49
19:S:364:LEU:HB3	19:S:374:ILE:HD12	1.93	0.49
1:A:580:LEU:HB3	11:K:88:PHE:CE1	2.46	0.49
1:A:925:GLU:CD	1:A:1081:ALA:HA	2.31	0.49
2:B:575:PHE:HZ	2:B:588:ILE:HG22	1.77	0.49
2:B:776:SER:HB3	3:C:217:ALA:HB2	1.94	0.49
5:E:26:ARG:NH1	5:E:188:LEU:O	2.45	0.49
5:E:191:LYS:N	5:E:194:GLU:OE1	2.43	0.49
7:G:52:LEU:HD12	7:G:53:THR:HG22	1.93	0.49
11:K:132:GLU:O	11:K:136:THR:HG22	2.12	0.49
13:M:118:LEU:HB3	13:M:149:LYS:HD2	1.95	0.49
13:M:126:ASP:HB3	13:M:128:GLN:HG2	1.93	0.49
15:O:251:LYS:HA	15:O:254:ASN:HB2	1.93	0.49
15:O:578:ARG:O	15:O:581:LEU:HB3	2.12	0.49
16:P:217:THR:HB	16:P:220:GLU:HB3	1.95	0.49
18:R:213:TRP:HB2	18:R:285:ALA:HB1	1.95	0.49
18:R:425:PHE:HD1	21:Y:63:DT:H1'	1.77	0.49
19:S:423:GLU:O	19:S:426:ILE:HG12	2.13	0.49
20:X:6:DC:H2''	20:X:7:DA:OP2	2.13	0.49
1:A:18:PHE:O	1:A:1403:MET:HA	2.13	0.49
1:A:774:ARG:HH21	1:A:808:GLN:HE21	1.61	0.49
2:B:140:ASN:HB3	19:S:395:GLU:H	1.78	0.49
2:B:234:ILE:CD1	2:B:238:GLY:H	2.25	0.49
2:B:540:ASP:OD1	2:B:541:ILE:N	2.45	0.49
2:B:716:ASN:ND2	2:B:720:ARG:HD2	2.28	0.49
2:B:795:LEU:HA	2:B:804:ASP:OD2	2.12	0.49
2:B:1036:HIS:NE2	2:B:1058:GLY:HA2	2.27	0.49
8:H:112:ILE:O	8:H:126:GLU:HA	2.13	0.49
13:M:106:PHE:O	13:M:107:ILE:HG22	2.13	0.49
15:O:312:TYR:HE1	15:O:468:LEU:HD11	1.78	0.49
15:O:492:TYR:CE1	15:O:495:VAL:HB	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:581:LEU:HB2	15:O:648:TRP:CZ3	2.48	0.49
16:P:59:ASN:OD1	16:P:80:ALA:HB1	2.12	0.49
18:R:229:LEU:O	18:R:233:ARG:HB2	2.12	0.49
19:S:418:ASP:HB3	19:S:449:ARG:NH2	2.28	0.49
19:S:425:MET:O	19:S:428:PHE:HB3	2.12	0.49
1:A:360:LYS:HA	1:A:365:ARG:NH2	2.28	0.49
1:A:1145:LEU:C	1:A:1310:ILE:HG22	2.32	0.49
1:A:1163:LYS:HD3	1:A:1278:ILE:O	2.12	0.49
1:A:1278:ILE:HG12	1:A:1297:GLY:HA3	1.95	0.49
2:B:97:ASP:OD1	2:B:98:ILE:N	2.46	0.49
2:B:306:GLY:HA3	2:B:324:ILE:HG23	1.94	0.49
2:B:630:LEU:HD13	2:B:635:LEU:HD23	1.95	0.49
2:B:1106:TRP:NE1	7:G:161:LYS:O	2.45	0.49
3:C:256:ILE:HA	3:C:268:LYS:H	1.76	0.49
4:D:119:GLU:HG3	4:D:123:ILE:HG23	1.93	0.49
5:E:22:MET:HE3	5:E:26:ARG:HH21	1.77	0.49
7:G:155:PHE:HA	7:G:193:ALA:O	2.13	0.49
8:H:61:SER:HA	8:H:141:TYR:CD2	2.48	0.49
15:O:291:ARG:HH11	15:O:649:GLU:HG2	1.77	0.49
15:O:507:LEU:O	15:O:511:ILE:N	2.31	0.49
15:O:637:VAL:HG13	15:O:638:PHE:H	1.78	0.49
18:R:267:ALA:HB1	18:R:270:LEU:HD22	1.94	0.49
18:R:425:PHE:CD1	21:Y:63:DT:H1'	2.48	0.49
18:R:617:GLU:HG2	18:R:621:LYS:HE2	1.95	0.49
19:S:387:ALA:O	19:S:391:ASN:N	2.38	0.49
1:A:54:LEU:CD1	1:A:286:THR:HG21	2.43	0.49
1:A:101:GLN:HB3	1:A:145:LEU:HD11	1.94	0.49
1:A:619:ASN:O	1:A:621:PRO:HD3	2.12	0.49
1:A:1123:VAL:N	1:A:1124:PRO:HD2	2.27	0.49
1:A:1284:ASN:OD1	1:A:1285:ILE:N	2.36	0.49
2:B:45:TRP:NE1	2:B:739:LYS:HD3	2.27	0.49
2:B:116:HIS:HB2	2:B:176:GLU:HB2	1.94	0.49
2:B:368:ASP:O	2:B:370:ASP:N	2.46	0.49
2:B:575:PHE:CE2	2:B:589:SER:O	2.66	0.49
2:B:811:VAL:HG22	2:B:817:PRO:HD3	1.94	0.49
2:B:1004:LEU:HD12	2:B:1017:ILE:HD12	1.95	0.49
7:G:38:ILE:HD11	7:G:194:TYR:CB	2.43	0.49
13:M:154:GLU:OE1	13:M:175:ARG:HG2	2.13	0.49
13:M:164:LYS:HB3	13:M:169:TYR:HE2	1.78	0.49
14:N:395:ILE:HD11	14:N:408:LEU:HD21	1.94	0.49
15:O:455:SER:HA	15:O:458:LYS:HD3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:484:MET:O	15:O:488:LYS:HG2	2.12	0.49
16:P:62:LYS:HD3	16:P:83:LYS:HE2	1.93	0.49
18:R:650:ALA:HB2	19:S:517:GLU:OE2	2.11	0.49
20:X:74:DA:C6	20:X:75:DG:C6	3.01	0.49
1:A:8:GLU:OE1	1:A:8:GLU:N	2.46	0.49
1:A:81:PHE:CE2	1:A:265:PRO:HG2	2.48	0.49
1:A:376:SER:HB2	2:B:1060:LEU:HD12	1.94	0.49
1:A:794:MET:HA	1:A:797:CYS:CB	2.36	0.49
1:A:833:PRO:HB2	2:B:659:ILE:HD12	1.95	0.49
2:B:399:PHE:HA	2:B:402:SER:HB3	1.95	0.49
2:B:552:ASN:ND2	2:B:565:ILE:O	2.44	0.49
3:C:69:ARG:NH2	11:K:70:HIS:HB2	2.28	0.49
7:G:59:LEU:CD2	7:G:64:GLY:HA2	2.42	0.49
15:O:510:CYS:SG	15:O:514:ASN:ND2	2.86	0.49
1:A:379:THR:HG22	1:A:380:VAL:N	2.27	0.49
1:A:432:TYR:CE1	1:A:443:ASN:CG	2.86	0.49
1:A:675:HIS:CB	1:A:937:ARG:HH22	2.26	0.49
1:A:1444:LYS:O	7:G:49:TYR:OH	2.28	0.49
2:B:756:THR:HG23	2:B:940:PRO:HA	1.95	0.49
3:C:230:LEU:HD13	3:C:297:HIS:CE1	2.47	0.49
4:D:3:VAL:HG13	7:G:7:ILE:HG22	1.94	0.49
5:E:26:ARG:NH2	5:E:187:TYR:O	2.45	0.49
10:J:45:CYS:SG	10:J:46:CYS:N	2.85	0.49
11:K:70:HIS:HD1	11:K:91:TYR:HE2	1.59	0.49
11:K:122:LYS:O	11:K:125:MET:HB2	2.13	0.49
13:M:106:PHE:CD2	13:M:107:ILE:HB	2.47	0.49
16:P:268:ILE:HD12	16:P:297:PHE:CZ	2.48	0.49
18:R:424:ARG:NH1	21:Y:64:DA:OP1	2.46	0.49
18:R:433:ARG:NH1	19:S:470:GLU:OE1	2.46	0.49
18:R:516:PHE:HB2	20:X:11:DA:H5'	1.94	0.49
1:A:57:LYS:HA	1:A:67:CYS:O	2.13	0.48
1:A:485:ILE:CG2	1:A:535:MET:SD	3.00	0.48
2:B:83:ILE:HG13	2:B:93:LEU:HB3	1.95	0.48
2:B:244:HIS:ND1	2:B:332:ILE:HD12	2.28	0.48
2:B:733:GLN:NE2	2:B:747:ASP:HB2	2.28	0.48
2:B:1081:GLU:HA	2:B:1085:ILE:HB	1.95	0.48
7:G:138:LEU:HD12	7:G:139:TYR:O	2.13	0.48
14:N:286:ASP:OD2	14:N:384:LYS:HB3	2.13	0.48
15:O:190:LEU:HD11	15:O:199:TYR:CE2	2.48	0.48
15:O:500:LEU:HD21	15:O:539:SER:OG	2.13	0.48
15:O:506:ARG:HB3	16:P:250:ASP:OD1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:219:ARG:HD2	18:R:220:PRO:HD2	1.95	0.48
1:A:666:LYS:HA	1:A:670:GLY:HA3	1.94	0.48
1:A:873:VAL:HG21	2:B:487:ARG:HG2	1.95	0.48
1:A:957:TYR:CD1	1:A:1031:LEU:HD13	2.46	0.48
1:A:1172:TYR:OH	1:A:1187:ARG:HD3	2.13	0.48
2:B:158:SER:O	2:B:164:TYR:HB2	2.12	0.48
2:B:590:ILE:CA	2:B:601:ILE:HD12	2.21	0.48
8:H:61:SER:HB2	8:H:139:ASN:ND2	2.27	0.48
13:M:88:PHE:HB2	14:N:395:ILE:HG23	1.95	0.48
13:M:121:ILE:HG21	13:M:179:LEU:HD21	1.95	0.48
13:M:158:GLN:HG2	14:N:308:GLN:HG2	1.96	0.48
15:O:297:ILE:O	15:O:301:LYS:HB3	2.12	0.48
15:O:347:ASP:OD1	15:O:348:GLU:N	2.45	0.48
16:P:63:LEU:HD11	16:P:70:LEU:HD13	1.95	0.48
16:P:106:TRP:CZ3	16:P:108:LYS:HB3	2.48	0.48
1:A:808:GLN:HB3	1:A:852:PHE:HE2	1.78	0.48
2:B:734:PRO:HB3	2:B:1023:TYR:CD2	2.48	0.48
2:B:916:HIS:CD2	2:B:957:LYS:HB2	2.48	0.48
3:C:35:LYS:O	3:C:39:ASP:HB3	2.11	0.48
4:D:6:GLU:OE2	7:G:42:VAL:HA	2.13	0.48
7:G:34:PHE:O	7:G:37:LYS:HB2	2.13	0.48
12:L:30:ILE:O	12:L:56:LEU:HB2	2.13	0.48
15:O:35:SER:O	15:O:36:SER:HB3	2.13	0.48
15:O:52:LEU:HD11	15:O:131:LEU:HD12	1.95	0.48
15:O:623:GLU:O	15:O:627:LEU:HG	2.13	0.48
16:P:106:TRP:CD1	16:P:145:ARG:HA	2.49	0.48
18:R:636:LEU:HD22	19:S:502:LEU:HD21	1.94	0.48
20:X:21:DC:H42	21:Y:58:DA:N6	2.12	0.48
1:A:38:ASP:CG	1:A:39:LEU:H	2.17	0.48
1:A:373:VAL:HG11	2:B:1082:ARG:HD3	1.95	0.48
1:A:602:TYR:N	3:C:23:PHE:O	2.47	0.48
1:A:822:ARG:CZ	1:A:845:LYS:HB2	2.43	0.48
1:A:1224:ILE:HG12	1:A:1226:GLY:N	2.28	0.48
2:B:430:THR:O	2:B:434:ASN:ND2	2.47	0.48
2:B:494:PHE:CE1	2:B:680:ILE:HD12	2.49	0.48
2:B:601:ILE:HG22	2:B:601:ILE:O	2.13	0.48
3:C:36:PHE:HE1	3:C:59:ILE:HG22	1.77	0.48
3:C:113:LEU:HD11	3:C:132:ILE:HD11	1.95	0.48
3:C:165:ARG:HB2	3:C:189:PRO:HB2	1.94	0.48
15:O:583:TRP:CZ3	17:Q:41:LEU:HD21	2.46	0.48
16:P:245:GLU:O	16:P:248:VAL:HB	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:419:GLU:HB2	18:R:429:ILE:HD13	1.94	0.48
18:R:521:TYR:HD2	18:R:530:LEU:HD13	1.77	0.48
1:A:378:ARG:NH2	1:A:477:GLN:HE21	2.11	0.48
1:A:803:THR:HA	1:A:806:VAL:HG12	1.94	0.48
1:A:896:LEU:HD21	1:A:912:VAL:HG21	1.95	0.48
1:A:949:ASN:OD1	1:A:950:GLN:N	2.47	0.48
2:B:187:VAL:HG21	2:B:438:SER:HB3	1.95	0.48
2:B:556:TYR:CE2	2:B:561:LEU:HB2	2.48	0.48
2:B:591:TYR:CZ	2:B:600:HIS:HB2	2.49	0.48
2:B:1094:VAL:HG21	2:B:1143:LEU:HD11	1.95	0.48
3:C:30:GLU:OE2	11:K:84:PRO:HD3	2.13	0.48
3:C:88:ASN:CG	3:C:202:ILE:HG12	2.34	0.48
3:C:163:TYR:HA	3:C:191:ILE:O	2.13	0.48
9:I:2:LEU:HD12	9:I:11:MET:HE2	1.94	0.48
13:M:83:GLU:OE1	14:N:400:ALA:HA	2.13	0.48
13:M:109:ALA:HB3	13:M:122:ASP:HB2	1.95	0.48
13:M:148:LEU:HA	13:M:181:PRO:HA	1.95	0.48
15:O:45:ASP:N	15:O:582:GLU:OE2	2.47	0.48
16:P:55:LEU:HD22	16:P:60:LEU:HD12	1.95	0.48
16:P:83:LYS:HA	16:P:86:MET:CG	2.44	0.48
16:P:122:LEU:HD23	16:P:125:LEU:HD12	1.96	0.48
16:P:190:THR:HA	16:P:215:TYR:CE1	2.48	0.48
1:A:408:VAL:HA	1:A:412:ASN:HD22	1.79	0.48
1:A:1077:LYS:O	1:A:1081:ALA:N	2.46	0.48
1:A:1447:LEU:HB3	1:A:1450:SER:HB3	1.96	0.48
2:B:140:ASN:HD22	19:S:394:LYS:HA	1.78	0.48
2:B:435:ARG:O	2:B:439:THR:CB	2.62	0.48
15:O:58:GLY:HA2	15:O:62:ALA:HB2	1.95	0.48
16:P:264:THR:O	16:P:265:LEU:CG	2.38	0.48
18:R:397:VAL:N	18:R:485:ASN:O	2.46	0.48
18:R:483:ILE:HG21	18:R:486:ILE:HG13	1.95	0.48
20:X:24:DT:C6	20:X:25:DT:H72	2.49	0.48
1:A:26:ILE:HG23	1:A:262:PRO:HB3	1.94	0.48
1:A:225:LEU:HD21	15:O:541:ILE:O	2.14	0.48
1:A:580:LEU:HB3	11:K:88:PHE:HE1	1.77	0.48
1:A:830:ARG:NH2	2:B:655:ASN:O	2.47	0.48
1:A:896:LEU:HD23	1:A:1357:LEU:HD11	1.96	0.48
1:A:1171:PHE:CE2	1:A:1172:TYR:HD2	2.32	0.48
2:B:135:TYR:CZ	2:B:143:MET:HB3	2.48	0.48
2:B:152:MET:SD	2:B:153:PRO:HD2	2.54	0.48
2:B:554:GLY:HA2	2:B:564:SER:CB	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:930:ASP:O	2:B:931:MET:HG2	2.12	0.48
2:B:1009:THR:O	11:K:74:ASN:ND2	2.47	0.48
3:C:107:LYS:HG3	3:C:307:ALA:O	2.13	0.48
13:M:89:GLN:HG3	14:N:392:GLN:HE21	1.78	0.48
15:O:202:GLN:N	15:O:280:LEU:HG	2.28	0.48
15:O:239:SER:O	15:O:242:LYS:HB2	2.14	0.48
15:O:484:MET:HB2	15:O:485:PRO:HD3	1.96	0.48
16:P:116:LEU:HB3	16:P:120:VAL:HG21	1.95	0.48
18:R:107:TRP:O	18:R:111:ALA:N	2.38	0.48
18:R:140:HIS:ND1	18:R:140:HIS:O	2.47	0.48
18:R:275:PHE:HD1	18:R:278:ASN:H	1.60	0.48
18:R:640:SER:OG	19:S:506:GLN:NE2	2.45	0.48
19:S:444:GLN:NE2	19:S:490:LYS:HE3	2.29	0.48
1:A:103:LEU:HD21	1:A:108:LYS:HE3	1.96	0.48
1:A:189:LYS:HE2	1:A:191:ALA:HB2	1.95	0.48
1:A:794:MET:SD	2:B:947:HIS:ND1	2.86	0.48
5:E:86:PRO:CB	5:E:114:ASN:HB2	2.43	0.48
5:E:88:VAL:HG21	5:E:112:TYR:HE1	1.79	0.48
8:H:104:PHE:HE1	8:H:114:VAL:HG13	1.79	0.48
10:J:36:LEU:CD2	10:J:47:ARG:HG3	2.44	0.48
15:O:261:GLN:O	15:O:275:LYS:HB2	2.14	0.48
18:R:472:ILE:HD11	18:R:614:LEU:HB3	1.96	0.48
1:A:51:ASN:OD1	1:A:52:GLY:N	2.46	0.48
1:A:192:PRO:HA	1:A:195:ASP:HB2	1.96	0.48
1:A:240:GLU:N	1:A:244:ILE:O	2.47	0.48
1:A:427:HIS:NE2	1:A:492:ILE:HG13	2.28	0.48
1:A:491:LYS:HD3	1:A:493:ARG:NH2	2.29	0.48
1:A:790:ALA:HB3	1:A:791:PRO:HD3	1.94	0.48
1:A:1199:GLU:H	1:A:1273:LYS:HE2	1.78	0.48
1:A:1325:VAL:HG23	1:A:1326:LEU:H	1.78	0.48
1:A:1332:ARG:O	1:A:1335:ILE:HG22	2.13	0.48
2:B:191:GLU:HG3	2:B:458:LEU:HB3	1.96	0.48
5:E:79:TRP:NE1	5:E:81:GLU:HB3	2.27	0.48
5:E:107:THR:HB	5:E:131:THR:HG22	1.95	0.48
8:H:6:PHE:CZ	8:H:8:ASP:HB2	2.49	0.48
15:O:183:MET:O	15:O:187:ILE:HG13	2.14	0.48
15:O:353:GLU:HB2	15:O:481:SER:HB3	1.96	0.48
16:P:185:PHE:HE2	16:P:217:THR:HG21	1.78	0.48
17:Q:60:ASN:O	17:Q:64:THR:OG1	2.22	0.48
19:S:307:UNK:O	19:S:311:UNK:CB	2.61	0.48
1:A:32:VAL:CG1	1:A:57:LYS:HD2	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:489:TYR:CE1	1:A:532:ILE:HG12	2.49	0.48
1:A:600:PRO:HD2	8:H:96:VAL:CG2	2.44	0.48
1:A:939:TRP:HA	1:A:1070:PHE:CD1	2.48	0.48
1:A:1304:MET:HE2	1:A:1314:THR:OG1	2.14	0.48
1:A:1373:ARG:NH1	1:A:1390:GLU:OE2	2.47	0.48
2:B:129:ILE:O	2:B:148:GLU:HA	2.14	0.48
2:B:241:TYR:HB3	2:B:250:GLU:HA	1.95	0.48
2:B:426:SER:C	2:B:428:ASN:H	2.16	0.48
2:B:614:ILE:HA	2:B:672:HIS:CD2	2.49	0.48
3:C:260:GLU:O	3:C:264:GLU:N	2.47	0.48
5:E:5:ASN:O	5:E:8:ASN:N	2.47	0.48
7:G:190:LYS:C	7:G:192:PRO:HD3	2.34	0.48
15:O:517:VAL:HG21	15:O:521:ILE:CB	2.44	0.48
16:P:203:LYS:HG3	16:P:206:VAL:HG13	1.96	0.48
18:R:229:LEU:O	18:R:233:ARG:CB	2.62	0.48
1:A:560:GLY:HA3	1:A:705:LEU:HD22	1.95	0.47
1:A:1193:ILE:HG12	1:A:1200:LEU:HD11	1.96	0.47
2:B:519:HIS:HB3	2:B:609:CYS:HB2	1.96	0.47
2:B:909:GLY:N	2:B:922:CYS:SG	2.86	0.47
3:C:231:PRO:HB3	3:C:275:VAL:HG22	1.96	0.47
3:C:256:ILE:HG22	3:C:267:VAL:HA	1.96	0.47
5:E:96:PHE:O	5:E:100:ILE:HG12	2.14	0.47
7:G:63:ASP:OD2	7:G:65:SER:HB2	2.14	0.47
7:G:203:ASP:OD1	7:G:204:GLY:N	2.42	0.47
8:H:35:GLN:O	8:H:126:GLU:HG3	2.14	0.47
8:H:107:VAL:O	8:H:111:LEU:HB2	2.14	0.47
15:O:496:ILE:HA	15:O:499:THR:HB	1.96	0.47
18:R:274:LYS:O	18:R:275:PHE:CG	2.67	0.47
20:X:76:DG:C5	20:X:77:DC:C4	3.01	0.47
1:A:404:TYR:CD1	1:A:405:PRO:HD2	2.48	0.47
1:A:1332:ARG:CZ	5:E:200:ARG:HH21	2.26	0.47
2:B:579:ARG:HH12	2:B:647:GLU:CG	2.11	0.47
4:D:21:THR:O	4:D:25:LYS:HB2	2.14	0.47
7:G:162:SER:HB3	7:G:165:GLU:HB2	1.95	0.47
10:J:8:PHE:CG	10:J:49:MET:HE1	2.50	0.47
13:M:96:LEU:N	13:M:101:PRO:HA	2.26	0.47
13:M:140:TRP:HB2	13:M:185:TYR:CD1	2.48	0.47
15:O:300:ALA:O	15:O:304:VAL:HG22	2.15	0.47
16:P:292:SER:HB2	16:P:293:ILE:HD13	1.95	0.47
18:R:452:ALA:HB1	18:R:458:SER:HB2	1.95	0.47
1:A:81:PHE:CD2	1:A:265:PRO:HG3	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:302:GLY:C	1:A:304:ASP:H	2.17	0.47
1:A:1454:GLU:HA	1:A:1457:LEU:HD12	1.96	0.47
2:B:132:ASP:HA	2:B:145:LYS:O	2.14	0.47
2:B:385:SER:HG	2:B:386:LEU:H	1.62	0.47
2:B:693:HIS:HB3	2:B:955:VAL:HG23	1.95	0.47
2:B:864:THR:O	2:B:865:GLN:C	2.51	0.47
2:B:1067:ARG:O	2:B:1070:VAL:HG22	2.14	0.47
2:B:1106:TRP:C	2:B:1116:ILE:HD11	2.34	0.47
7:G:153:GLU:HG2	7:G:195:ALA:H	1.79	0.47
9:I:7:SER:OG	9:I:8:CYS:N	2.45	0.47
18:R:86:LYS:O	18:R:90:VAL:HG12	2.15	0.47
1:A:308:SER:O	1:A:312:MET:HB2	2.15	0.47
1:A:1256:VAL:O	1:A:1260:MET:CB	2.50	0.47
1:A:1281:ALA:HB2	1:A:1295:VAL:HG22	1.95	0.47
7:G:22:THR:O	7:G:26:ILE:HG12	2.14	0.47
13:M:112:TYR:OH	13:M:114:PRO:HA	2.15	0.47
15:O:310:GLN:HE21	15:O:314:ILE:HG23	1.79	0.47
18:R:131:TYR:HA	18:R:134:CYS:SG	2.53	0.47
19:S:381:VAL:HG22	19:S:383:ARG:H	1.79	0.47
20:X:65:DA:H2''	20:X:66:DG:H8	1.79	0.47
1:A:433:LEU:HD13	1:A:452:LEU:HD21	1.96	0.47
1:A:483:LEU:HD12	1:A:507:PRO:HB3	1.90	0.47
1:A:664:MET:O	1:A:667:SER:OG	2.29	0.47
1:A:1285:ILE:HG23	1:A:1291:ARG:HG2	1.96	0.47
2:B:409:LYS:O	2:B:411:ASN:N	2.45	0.47
2:B:568:PRO:O	2:B:571:PHE:HB3	2.15	0.47
2:B:1132:LEU:O	2:B:1135:MET:N	2.48	0.47
3:C:88:ASN:OD1	3:C:89:THR:N	2.48	0.47
3:C:239:ILE:O	3:C:244:ALA:HB2	2.15	0.47
15:O:105:LYS:HE3	15:O:124:GLU:H	1.79	0.47
15:O:239:SER:HA	15:O:242:LYS:HB2	1.96	0.47
15:O:496:ILE:HG12	15:O:499:THR:HG21	1.96	0.47
16:P:203:LYS:HG3	16:P:206:VAL:CG1	2.45	0.47
20:X:13:DT:H2''	20:X:14:DA:O4'	2.14	0.47
20:X:62:DC:C4'	20:X:63:DC:OP1	2.53	0.47
1:A:200:GLU:HA	15:O:515:LYS:CD	2.44	0.47
1:A:379:THR:HG22	1:A:380:VAL:H	1.79	0.47
1:A:727:LYS:HD2	1:A:812:VAL:HB	1.96	0.47
1:A:978:ASP:HB3	1:A:982:CYS:HB2	1.96	0.47
1:A:1005:TYR:O	1:A:1008:LEU:N	2.47	0.47
5:E:151:PRO:HB2	5:E:199:ILE:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:71:GLU:HA	6:F:141:GLY:O	2.14	0.47
8:H:7:ASP:OD1	8:H:58:THR:OG1	2.24	0.47
15:O:273:ILE:HG12	15:O:274:VAL:N	2.28	0.47
18:R:231:ALA:HA	18:R:234:MET:HB3	1.96	0.47
1:A:351:ARG:HB2	1:A:355:GLN:NE2	2.30	0.47
1:A:478:PRO:O	1:A:480:LEU:HD12	2.14	0.47
1:A:547:GLY:O	1:A:674:LYS:HE2	2.14	0.47
1:A:550:ILE:HG23	1:A:551:ILE:HG23	1.95	0.47
1:A:815:GLN:H	1:A:847:PHE:HA	1.80	0.47
1:A:850:ASN:HD22	1:A:856:LEU:HA	1.80	0.47
1:A:1306:THR:O	1:A:1309:VAL:HG22	2.14	0.47
1:A:1312:SER:OG	5:E:147:HIS:O	2.26	0.47
2:B:134:GLU:OE2	19:S:396:LYS:NZ	2.48	0.47
2:B:392:PHE:O	2:B:395:PHE:HB3	2.15	0.47
2:B:401:LEU:HA	2:B:404:ASP:HB2	1.97	0.47
2:B:420:LEU:HD11	18:R:149:ARG:O	2.15	0.47
2:B:612:LEU:HD11	2:B:649:LEU:CD1	2.45	0.47
2:B:758:ALA:O	2:B:943:ILE:HD12	2.15	0.47
2:B:1106:TRP:CZ3	2:B:1111:LYS:HB2	2.49	0.47
3:C:132:ILE:HG23	3:C:169:PHE:HE1	1.79	0.47
5:E:41:ASP:HA	5:E:44:ALA:HB3	1.97	0.47
5:E:178:ILE:HG21	5:E:185:ALA:HB2	1.96	0.47
7:G:86:THR:HA	7:G:146:ILE:O	2.15	0.47
7:G:89:ILE:HG23	7:G:142:VAL:HG12	1.95	0.47
7:G:121:TYR:HD1	7:G:127:ALA:O	1.98	0.47
8:H:13:SER:HB3	8:H:27:GLU:O	2.15	0.47
13:M:251:THR:OG1	13:M:254:GLN:NE2	2.47	0.47
15:O:174:TYR:CE2	15:O:178:VAL:HG21	2.50	0.47
15:O:584:ASN:O	15:O:588:LEU:N	2.48	0.47
16:P:14:ASN:HA	16:P:17:THR:HG22	1.96	0.47
16:P:177:SER:O	16:P:181:ILE:HG12	2.14	0.47
16:P:203:LYS:HG2	16:P:206:VAL:H	1.79	0.47
18:R:13:GLU:OE1	18:R:25:CYS:HA	2.14	0.47
18:R:198:VAL:HG13	18:R:231:ALA:CB	2.44	0.47
18:R:273:GLN:HB2	19:S:277:UNK:N	2.30	0.47
20:X:78:DG:N2	21:Y:3:DG:N3	2.62	0.47
1:A:477:GLN:HB2	1:A:478:PRO:HD3	1.97	0.47
1:A:483:LEU:CD1	1:A:507:PRO:CB	2.83	0.47
1:A:980:SER:HB3	5:E:163:GLU:HG2	1.97	0.47
2:B:84:LEU:HB2	2:B:91:PHE:HD2	1.80	0.47
2:B:615:VAL:HG22	2:B:671:THR:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:901:ARG:NH2	3:C:94:ASP:OD1	2.47	0.47
3:C:31:TRP:CZ2	11:K:123:ASP:HB3	2.49	0.47
6:F:108:PHE:HE2	6:F:131:PRO:HG3	1.77	0.47
11:K:60:SER:HB3	11:K:104:ARG:HH22	1.79	0.47
13:M:113:LYS:HD3	13:M:241:ALA:HB2	1.97	0.47
15:O:306:SER:HA	15:O:309:ALA:HB3	1.95	0.47
15:O:579:GLN:CG	16:P:315:TRP:CZ3	2.98	0.47
15:O:581:LEU:HD22	15:O:648:TRP:CH2	2.49	0.47
16:P:151:TYR:O	16:P:151:TYR:CG	2.68	0.47
18:R:466:ALA:HA	18:R:469:ILE:HD12	1.96	0.47
19:S:446:TYR:HB2	19:S:449:ARG:HB3	1.96	0.47
20:X:75:DG:O6	21:Y:4:DC:N4	2.48	0.47
1:A:613:LEU:HD11	1:A:696:ARG:HG3	1.97	0.47
1:A:851:SER:O	1:A:854:SER:OG	2.20	0.47
1:A:919:ASP:OD2	1:A:921:LEU:HB2	2.14	0.47
1:A:979:ASN:ND2	5:E:160:GLU:OE2	2.47	0.47
1:A:1136:ILE:HG21	1:A:1318:HIS:ND1	2.30	0.47
2:B:496:MET:CG	2:B:610:ARG:HD2	2.41	0.47
2:B:636:ASP:OD1	2:B:637:PHE:N	2.47	0.47
2:B:724:LEU:HD21	2:B:726:TYR:CE2	2.48	0.47
3:C:33:VAL:O	3:C:34:GLU:CB	2.51	0.47
3:C:270:ALA:O	3:C:271:ARG:HG2	2.14	0.47
3:C:319:ARG:HB2	11:K:132:GLU:OE2	2.14	0.47
8:H:4:THR:HA	8:H:60:ALA:CB	2.45	0.47
9:I:13:LEU:O	9:I:24:LEU:HB2	2.15	0.47
13:M:135:LYS:HZ2	13:M:140:TRP:HZ2	1.59	0.47
15:O:353:GLU:H	15:O:481:SER:HB3	1.79	0.47
18:R:440:LEU:O	18:R:447:MET:HB2	2.15	0.47
18:R:615:LEU:HD12	18:R:616:ASN:O	2.14	0.47
21:Y:12:DA:C5	21:Y:13:DA:C6	3.03	0.47
1:A:30:SER:CB	1:A:82:GLY:O	2.42	0.47
1:A:482:ARG:HH11	1:A:544:PRO:HD3	1.80	0.47
1:A:542:LEU:HD21	1:A:679:TYR:CE1	2.50	0.47
1:A:545:LYS:HG3	1:A:546:SER:N	2.30	0.47
1:A:1177:TYR:HD1	1:A:1183:PHE:H	1.62	0.47
1:A:1272:VAL:HG13	1:A:1273:LYS:N	2.28	0.47
1:A:1380:ARG:NH1	1:A:1385:GLN:HE22	2.08	0.47
2:B:234:ILE:HD12	2:B:238:GLY:H	1.79	0.47
2:B:615:VAL:HG22	2:B:671:THR:C	2.35	0.47
2:B:710:ILE:HD11	2:B:1026:LYS:HB3	1.97	0.47
2:B:967:GLY:O	2:B:971:GLY:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:139:GLU:HB3	13:M:140:TRP:CE3	2.50	0.47
15:O:106:TYR:N	15:O:210:PRO:HD3	2.30	0.47
15:O:291:ARG:HH12	15:O:652:GLN:NE2	2.13	0.47
15:O:324:PRO:HG3	15:O:327:ARG:HH21	1.79	0.47
15:O:631:ASN:O	15:O:634:GLU:N	2.48	0.47
16:P:246:VAL:O	16:P:250:ASP:N	2.34	0.47
18:R:116:PHE:CZ	18:R:164:MET:HB3	2.50	0.47
20:X:10:DT:H2"	20:X:11:DA:N7	2.30	0.47
1:A:204:VAL:HG21	15:O:517:VAL:HA	1.96	0.46
1:A:212:GLU:O	1:A:216:LYS:HB2	2.14	0.46
1:A:285:LEU:HD21	1:A:353:PHE:HD1	1.80	0.46
1:A:314:GLU:OE1	1:A:314:GLU:N	2.48	0.46
1:A:399:ALA:CA	1:A:466:LEU:HD12	2.42	0.46
1:A:815:GLN:HA	1:A:846:GLY:O	2.15	0.46
1:A:1180:ASN:N	9:I:21:VAL:HA	2.29	0.46
1:A:1255:ASP:O	1:A:1258:TYR:N	2.48	0.46
2:B:776:SER:HA	2:B:779:ASP:HB2	1.96	0.46
2:B:849:THR:HG22	2:B:865:GLN:O	2.14	0.46
3:C:21:PRO:HB2	3:C:27:ALA:HB1	1.96	0.46
5:E:107:THR:OG1	5:E:131:THR:HG23	2.16	0.46
7:G:4:LEU:HD11	7:G:73:ARG:HB3	1.96	0.46
15:O:130:LEU:O	15:O:133:SER:OG	2.30	0.46
15:O:455:SER:HA	15:O:458:LYS:HB2	1.97	0.46
15:O:478:VAL:HG12	15:O:479:PRO:O	2.15	0.46
18:R:6:ASN:O	18:R:8:HIS:ND1	2.42	0.46
18:R:207:GLN:O	18:R:211:LYS:N	2.35	0.46
1:A:269:ARG:HH22	1:A:284:ASP:N	2.13	0.46
1:A:413:ARG:O	1:A:417:GLN:HG2	2.15	0.46
1:A:479:SER:O	2:B:1065:MET:CE	2.64	0.46
1:A:525:GLU:O	1:A:528:ARG:N	2.47	0.46
1:A:1213:SER:HB2	1:A:1218:GLN:H	1.80	0.46
1:A:1452:SER:HB2	4:D:117:LYS:NZ	2.29	0.46
2:B:122:ASP:HA	2:B:189:GLY:CA	2.45	0.46
2:B:137:ARG:H	2:B:141:ILE:HG21	1.79	0.46
2:B:490:GLN:OE1	2:B:490:GLN:N	2.44	0.46
2:B:613:ILE:HD12	2:B:673:LEU:HD11	1.97	0.46
3:C:71:MET:HG2	3:C:222:VAL:HG21	1.97	0.46
7:G:110:ILE:HA	7:G:198:GLY:H	1.80	0.46
15:O:98:LEU:O	15:O:102:ARG:N	2.49	0.46
16:P:134:VAL:CA	16:P:151:TYR:HB2	2.45	0.46
17:Q:36:PHE:N	17:Q:37:PRO:HD2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:244:ILE:HD11	1:A:1401:PHE:CZ	2.49	0.46
1:A:418:GLU:O	1:A:421:VAL:N	2.44	0.46
1:A:713:GLY:HA3	2:B:1001:LYS:HD2	1.96	0.46
1:A:885:MET:O	1:A:889:LEU:CB	2.64	0.46
1:A:1431:VAL:HG13	7:G:57:GLY:O	2.14	0.46
2:B:240:ILE:HG13	2:B:286:ASN:HD22	1.80	0.46
2:B:321:GLN:O	2:B:324:ILE:HB	2.15	0.46
2:B:385:SER:OG	2:B:386:LEU:N	2.47	0.46
2:B:659:ILE:HG22	2:B:660:ALA:O	2.14	0.46
2:B:934:ASN:HD21	2:B:938:ILE:HD11	1.80	0.46
3:C:84:TYR:CE2	3:C:207:HIS:CE1	3.04	0.46
11:K:124:LEU:O	11:K:127:LEU:HB2	2.15	0.46
13:M:112:TYR:CZ	13:M:114:PRO:HA	2.51	0.46
14:N:286:ASP:O	14:N:290:ILE:HG22	2.16	0.46
14:N:376:GLY:H	14:N:379:VAL:HG12	1.81	0.46
15:O:576:PHE:CD1	15:O:577:MET:N	2.84	0.46
18:R:138:LYS:NZ	18:R:173:LEU:O	2.20	0.46
18:R:219:ARG:N	21:Y:72:DA:OP1	2.49	0.46
18:R:551:GLN:O	18:R:555:ALA:CB	2.63	0.46
20:X:72:DT:H2"	20:X:73:DA:C8	2.51	0.46
1:A:197:TRP:HA	1:A:200:GLU:OE1	2.14	0.46
1:A:269:ARG:CZ	1:A:285:LEU:HB2	2.46	0.46
1:A:356:ARG:HG3	1:A:363:ARG:HH12	1.80	0.46
1:A:587:ILE:HA	11:K:53:ALA:HB2	1.96	0.46
1:A:1012:ILE:HD11	1:A:1070:PHE:CE2	2.50	0.46
1:A:1179:ASP:OD1	9:I:35:ILE:HB	2.16	0.46
2:B:72:ASP:O	2:B:76:ILE:HG12	2.14	0.46
2:B:84:LEU:HG	2:B:85:SER:O	2.16	0.46
2:B:95:TYR:CD1	2:B:133:ILE:HG12	2.49	0.46
2:B:345:LYS:HA	2:B:348:TYR:HB3	1.98	0.46
2:B:575:PHE:O	2:B:578:LEU:HB2	2.15	0.46
2:B:1082:ARG:O	2:B:1087:SER:OG	2.34	0.46
3:C:62:SER:HB3	11:K:75:ALA:HA	1.98	0.46
7:G:123:PRO:O	7:G:124:GLU:HB2	2.16	0.46
10:J:17:LYS:HD3	10:J:41:LEU:CD1	2.46	0.46
14:N:302:GLU:HB3	14:N:410:GLY:HA2	1.98	0.46
15:O:190:LEU:HD21	15:O:199:TYR:CE2	2.49	0.46
15:O:457:LEU:HD21	15:O:476:TYR:OH	2.15	0.46
16:P:131:GLN:HB3	16:P:133:TYR:CD2	2.43	0.46
19:S:439:PHE:HA	19:S:442:ILE:HD12	1.97	0.46
1:A:543:THR:HB	1:A:550:ILE:HB	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:714:ILE:CG2	1:A:715:ASN:N	2.78	0.46
1:A:804:LEU:O	1:A:807:SER:HB3	2.15	0.46
1:A:1185:GLN:HA	1:A:1230:ILE:HG13	1.96	0.46
1:A:1315:THR:HG22	1:A:1316:THR:N	2.30	0.46
1:A:1395:HIS:O	1:A:1399:ALA:HB2	2.16	0.46
2:B:556:TYR:HA	2:B:560:THR:O	2.16	0.46
2:B:800:ASN:HA	2:B:855:PRO:HB3	1.97	0.46
3:C:172:GLN:H	3:C:175:GLN:HB3	1.81	0.46
6:F:98:ALA:O	6:F:101:ILE:N	2.49	0.46
7:G:55:GLU:N	7:G:55:GLU:OE1	2.49	0.46
13:M:89:GLN:NE2	13:M:178:GLN:HE22	2.06	0.46
15:O:123:ASN:CG	15:O:124:GLU:HG2	2.35	0.46
15:O:302:THR:O	16:P:265:LEU:HD11	2.16	0.46
15:O:468:LEU:H	15:O:483:LEU:HD13	1.80	0.46
15:O:522:ILE:O	15:O:526:ALA:N	2.21	0.46
18:R:129:CYS:O	18:R:132:VAL:HG22	2.15	0.46
18:R:434:GLU:HA	18:R:436:LYS:H	1.81	0.46
1:A:864:HIS:NE2	2:B:695:GLN:HA	2.29	0.46
1:A:1017:THR:OG1	1:A:1032:LEU:HD22	2.16	0.46
1:A:1342:THR:HG23	1:A:1343:MET:H	1.81	0.46
2:B:338:GLU:OE1	2:B:339:ALA:N	2.48	0.46
2:B:554:GLY:O	2:B:599:VAL:HG12	2.16	0.46
2:B:640:PHE:O	2:B:645:LEU:N	2.36	0.46
2:B:649:LEU:HD13	2:B:653:GLU:OE1	2.16	0.46
3:C:56:LEU:O	3:C:297:HIS:HD2	1.98	0.46
3:C:71:MET:O	3:C:75:VAL:HG22	2.15	0.46
4:D:55:LEU:O	4:D:58:ILE:HG13	2.15	0.46
15:O:253:ILE:O	15:O:256:PRO:HD2	2.16	0.46
15:O:263:LEU:HB3	15:O:272:ARG:NH2	2.30	0.46
15:O:595:LEU:HD12	15:O:598:GLU:HG3	1.98	0.46
16:P:141:LYS:HG2	16:P:142:PHE:H	1.81	0.46
19:S:413:ARG:NH1	20:X:9:DA:H3'	2.31	0.46
20:X:68:DT:H2''	20:X:69:DG:C8	2.50	0.46
21:Y:69:DT:H73	21:Y:70:DA:N6	2.29	0.46
1:A:223:ASN:HD22	1:A:225:LEU:HB3	1.81	0.46
1:A:228:LEU:HD21	1:A:232:LYS:HE3	1.96	0.46
1:A:542:LEU:HD21	1:A:679:TYR:HE1	1.79	0.46
1:A:818:ILE:HD11	1:A:823:VAL:HA	1.97	0.46
1:A:1395:HIS:O	1:A:1399:ALA:CB	2.63	0.46
2:B:207:VAL:HG23	2:B:355:ARG:NH1	2.31	0.46
2:B:422:ILE:O	2:B:426:SER:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:702:GLN:OE1	2:B:917:GLY:N	2.48	0.46
2:B:775:LYS:HA	2:B:778:ILE:CG2	2.45	0.46
3:C:171:PRO:HB2	3:C:176:SER:HB2	1.98	0.46
3:C:278:GLU:HB3	3:C:281:ARG:HG2	1.97	0.46
7:G:51:LEU:HD12	7:G:72:PHE:HB3	1.98	0.46
7:G:124:GLU:OE1	7:G:124:GLU:HA	2.15	0.46
8:H:65:LEU:HG	8:H:66:GLU:H	1.81	0.46
9:I:2:LEU:HA	9:I:11:MET:HE1	1.97	0.46
9:I:21:VAL:C	9:I:23:THR:H	2.19	0.46
15:O:196:GLU:HG3	15:O:197:MET:N	2.30	0.46
16:P:116:LEU:HB3	16:P:120:VAL:CG2	2.46	0.46
16:P:170:LEU:HD23	16:P:172:ILE:H	1.80	0.46
18:R:439:ALA:HB3	18:R:465:TYR:CZ	2.51	0.46
18:R:650:ALA:CB	19:S:517:GLU:CD	2.83	0.46
20:X:16:DT:H2'	20:X:17:DA:C8	2.51	0.46
21:Y:56:DA:H1'	21:Y:57:DA:H5'	1.97	0.46
1:A:885:MET:HA	1:A:888:ARG:HE	1.81	0.46
1:A:1385:GLN:O	1:A:1388:SER:N	2.47	0.46
1:A:1410:GLY:O	1:A:1413:GLU:HB3	2.15	0.46
2:B:81:GLN:OE1	2:B:81:GLN:N	2.49	0.46
2:B:214:GLY:HA3	2:B:234:ILE:CG2	2.46	0.46
2:B:574:GLN:NE2	14:N:422:ILE:HG12	2.31	0.46
2:B:727:LEU:HD21	2:B:786:GLU:HB2	1.96	0.46
2:B:804:ASP:HB2	2:B:847:VAL:HG12	1.98	0.46
2:B:810:ARG:H	2:B:821:HIS:CD2	2.32	0.46
3:C:178:THR:HG23	3:C:179:PHE:CD2	2.51	0.46
3:C:190:ASP:O	3:C:191:ILE:HG13	2.16	0.46
3:C:255:VAL:HG22	3:C:256:ILE:N	2.30	0.46
7:G:2:PHE:CD2	7:G:79:PRO:HB3	2.50	0.46
8:H:115:TYR:HA	8:H:123:MET:O	2.16	0.46
15:O:134:GLY:N	17:Q:58:TYR:HD1	2.07	0.46
20:X:8:DT:H1'	20:X:9:DA:H5'	1.98	0.46
21:Y:11:DC:H2'	21:Y:11:DC:OP2	2.16	0.46
1:A:232:LYS:CD	16:P:315:TRP:CH2	2.92	0.46
1:A:1032:LEU:C	1:A:1033:GLU:HG3	2.20	0.46
1:A:1373:ARG:HG3	1:A:1374:PHE:N	2.31	0.46
2:B:155:MET:HB2	2:B:185:PHE:CE1	2.51	0.46
2:B:868:GLU:OE1	2:B:868:GLU:N	2.45	0.46
7:G:99:VAL:O	7:G:108:ILE:HB	2.16	0.46
10:J:7:CYS:SG	10:J:10:CYS:N	2.89	0.46
12:L:29:TYR:CB	12:L:58:LYS:HA	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:124:GLU:HG3	15:O:126:GLY:N	2.26	0.46
15:O:358:GLY:HA2	15:O:361:PHE:HB2	1.98	0.46
16:P:295:ASN:ND2	16:P:298:LYS:HB3	2.30	0.46
1:A:140:ILE:O	1:A:143:LYS:N	2.49	0.46
1:A:224:PRO:HD2	1:A:316:TRP:HH2	1.80	0.46
1:A:381:ILE:HG22	1:A:382:SER:H	1.81	0.46
1:A:607:LYS:HD2	1:A:659:ILE:HG21	1.97	0.46
1:A:624:ILE:N	1:A:657:SER:OG	2.48	0.46
1:A:1394:ASP:O	1:A:1398:ASP:CB	2.64	0.46
2:B:538:VAL:HG12	2:B:565:ILE:HB	1.98	0.46
2:B:540:ASP:OD1	2:B:541:ILE:HG22	2.16	0.46
2:B:823:SER:O	2:B:823:SER:OG	2.34	0.46
3:C:191:ILE:HG23	10:J:15:GLY:HA3	1.96	0.46
3:C:329:LYS:NZ	11:K:122:LYS:HD2	2.31	0.46
8:H:104:PHE:CE1	8:H:114:VAL:HG13	2.50	0.46
13:M:89:GLN:HE21	13:M:178:GLN:NE2	2.05	0.46
14:N:385:GLY:O	14:N:416:ILE:HA	2.16	0.46
15:O:54:LYS:HA	15:O:58:GLY:CA	2.46	0.46
15:O:583:TRP:CZ3	17:Q:41:LEU:CD2	2.94	0.46
1:A:356:ARG:CG	1:A:363:ARG:HH12	2.29	0.45
1:A:405:PRO:HD3	1:A:523:GLN:NE2	2.31	0.45
1:A:703:ARG:NH2	11:K:93:ILE:O	2.48	0.45
1:A:876:ALA:O	1:A:879:THR:OG1	2.28	0.45
1:A:1278:ILE:HG23	1:A:1297:GLY:HA3	1.98	0.45
2:B:343:ARG:NH2	2:B:546:SER:OG	2.42	0.45
3:C:3:ASN:O	3:C:294:VAL:HA	2.16	0.45
3:C:228:ARG:O	3:C:299:ILE:CB	2.47	0.45
6:F:101:ILE:HG13	6:F:120:ILE:HD11	1.98	0.45
18:R:11:GLU:N	18:R:11:GLU:OE1	2.49	0.45
1:A:473:LEU:HA	1:A:487:SER:HA	1.98	0.45
1:A:636:PRO:HA	1:A:647:GLN:NE2	2.31	0.45
1:A:667:SER:OG	1:A:668:VAL:N	2.50	0.45
1:A:864:HIS:HE2	2:B:695:GLN:CB	2.29	0.45
1:A:1262:GLN:HA	1:A:1265:ARG:HB3	1.97	0.45
2:B:204:ARG:CZ	2:B:376:ARG:HH22	2.29	0.45
2:B:660:ALA:N	2:B:672:HIS:O	2.36	0.45
2:B:675:ILE:HG13	2:B:676:GLU:N	2.31	0.45
2:B:916:HIS:CD2	2:B:957:LYS:H	2.35	0.45
2:B:1006:SER:HB3	2:B:1010:GLY:N	2.29	0.45
2:B:1129:PHE:CE2	2:B:1141:LEU:HD11	2.51	0.45
5:E:86:PRO:CA	5:E:113:GLN:HB3	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:42:LYS:HG3	10:J:43:ARG:H	1.80	0.45
12:L:29:TYR:HB3	12:L:59:ALA:H	1.81	0.45
13:M:131:TYR:OH	13:M:143:VAL:HA	2.16	0.45
13:M:257:ASP:O	13:M:261:LYS:HG3	2.16	0.45
15:O:468:LEU:HB3	15:O:469:ASN:H	1.55	0.45
16:P:295:ASN:HD21	16:P:298:LYS:HD3	1.81	0.45
16:P:307:LYS:N	16:P:308:GLU:OE1	2.49	0.45
18:R:104:ALA:O	18:R:108:TYR:N	2.33	0.45
18:R:467:ARG:CZ	18:R:603:GLU:HG3	2.46	0.45
18:R:469:ILE:HG22	18:R:474:PHE:O	2.15	0.45
1:A:58:MET:HG2	1:A:266:VAL:HG23	1.98	0.45
1:A:232:LYS:HD3	16:P:315:TRP:HH2	1.73	0.45
1:A:284:ASP:O	1:A:287:VAL:N	2.49	0.45
1:A:629:LYS:HG3	1:A:651:PHE:CE1	2.51	0.45
1:A:1002:ARG:O	1:A:1005:TYR:N	2.50	0.45
1:A:1378:LYS:CG	1:A:1379:MET:H	2.18	0.45
2:B:248:ALA:HB3	2:B:308:LYS:HG2	1.99	0.45
2:B:621:ARG:HG2	2:B:644:GLY:O	2.16	0.45
2:B:772:VAL:HG13	2:B:943:ILE:CG2	2.37	0.45
3:C:152:ASP:C	3:C:154:LYS:H	2.19	0.45
5:E:181:ALA:HA	5:E:186:LEU:HD21	1.98	0.45
7:G:203:ASP:O	7:G:205:MET:HG2	2.16	0.45
13:M:159:TYR:CG	13:M:170:LEU:HD21	2.52	0.45
14:N:310:PRO:HD3	14:N:418:VAL:HB	1.97	0.45
15:O:202:GLN:HA	15:O:280:LEU:HA	1.99	0.45
15:O:292:ARG:NH2	15:O:653:MET:O	2.49	0.45
16:P:120:VAL:HA	16:P:123:LYS:HE3	1.98	0.45
18:R:132:VAL:HG12	18:R:161:PHE:CE1	2.51	0.45
18:R:478:PHE:HB3	18:R:599:PRO:HA	1.98	0.45
18:R:540:LEU:HD22	18:R:549:ILE:HA	1.98	0.45
18:R:587:THR:O	18:R:590:THR:OG1	2.31	0.45
18:R:610:LEU:HA	18:R:613:HIS:HD2	1.81	0.45
20:X:16:DT:H2''	20:X:17:DA:O4'	2.17	0.45
1:A:365:ARG:CD	1:A:887:ARG:HH21	2.29	0.45
1:A:665:ASP:OD1	1:A:797:CYS:HA	2.15	0.45
1:A:1431:VAL:HB	6:F:133:VAL:HG13	1.98	0.45
2:B:241:TYR:HE1	2:B:252:PRO:HG3	1.81	0.45
2:B:681:LEU:HD21	2:B:691:PRO:HG2	1.98	0.45
4:D:102:SER:HA	4:D:105:GLU:HB2	1.98	0.45
5:E:162:ARG:O	5:E:166:LYS:HG2	2.17	0.45
5:E:200:ARG:HD2	5:E:208:TYR:CE2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:84:TYR:HD1	6:F:152:ILE:HG23	1.81	0.45
15:O:94:THR:O	15:O:98:LEU:HG	2.16	0.45
15:O:338:ASP:O	15:O:342:ALA:N	2.30	0.45
15:O:516:LEU:O	15:O:516:LEU:HG	2.15	0.45
16:P:202:PRO:HD2	16:P:204:LYS:CE	2.45	0.45
1:A:15:GLY:O	1:A:16:LEU:HD12	2.17	0.45
1:A:285:LEU:HD21	1:A:353:PHE:CD1	2.51	0.45
1:A:356:ARG:HE	1:A:363:ARG:NH2	2.14	0.45
1:A:391:GLU:HA	1:A:488:HIS:HB3	1.98	0.45
1:A:580:LEU:HD23	11:K:88:PHE:CE1	2.51	0.45
1:A:864:HIS:HE2	2:B:695:GLN:CA	2.29	0.45
2:B:89:PRO:HA	19:S:383:ARG:HD2	1.99	0.45
2:B:462:SER:HB3	2:B:709:ALA:O	2.16	0.45
2:B:614:ILE:HG12	2:B:672:HIS:CD2	2.52	0.45
3:C:89:THR:HG21	3:C:200:GLN:HA	1.99	0.45
3:C:120:LEU:HA	3:C:121:PRO:HD3	1.77	0.45
9:I:20:GLY:C	9:I:22:TYR:H	2.20	0.45
15:O:39:GLN:O	15:O:47:PHE:HZ	2.00	0.45
15:O:650:VAL:HG13	15:O:651:PHE:CD2	2.52	0.45
16:P:60:LEU:O	16:P:75:VAL:HG12	2.17	0.45
18:R:121:ARG:HB2	18:R:124:ASN:ND2	2.24	0.45
18:R:422:PRO:HB2	18:R:634:PHE:CZ	2.51	0.45
19:S:517:GLU:HA	19:S:520:LYS:CD	2.35	0.45
21:Y:2:DC:H2"	21:Y:3:DG:OP2	2.17	0.45
1:A:146:ASP:OD1	1:A:147:GLN:N	2.49	0.45
1:A:483:LEU:O	1:A:486:LEU:HD11	2.15	0.45
1:A:598:MET:HB2	8:H:96:VAL:HB	1.99	0.45
1:A:615:LYS:CG	1:A:620:SER:OG	2.64	0.45
1:A:835:PHE:CE2	1:A:844:SER:HA	2.51	0.45
1:A:887:ARG:O	1:A:890:MET:HB3	2.17	0.45
1:A:1221:ASP:OD1	1:A:1222:VAL:N	2.49	0.45
2:B:738:THR:HB	2:B:741:ILE:HD12	1.98	0.45
2:B:738:THR:HA	2:B:976:GLY:O	2.16	0.45
2:B:757:VAL:HA	2:B:942:ILE:O	2.17	0.45
2:B:843:ILE:HG22	2:B:871:VAL:HG12	1.98	0.45
4:D:114:LYS:HB2	4:D:145:PHE:CE1	2.52	0.45
5:E:86:PRO:O	5:E:115:ASN:HB3	2.16	0.45
6:F:81:THR:HG22	6:F:82:THR:N	2.31	0.45
7:G:96:GLY:HA2	7:G:112:GLN:HG3	1.97	0.45
10:J:9:SER:OG	10:J:10:CYS:N	2.50	0.45
12:L:28:LYS:HB3	12:L:29:TYR:CD2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:155:ASN:OD1	13:M:155:ASN:N	2.49	0.45
15:O:468:LEU:HG	15:O:478:VAL:CG1	2.47	0.45
15:O:579:GLN:HG2	16:P:315:TRP:CH2	2.52	0.45
16:P:118:GLN:HE21	16:P:122:LEU:HD11	1.80	0.45
21:Y:18:DG:O6	21:Y:19:DC:N4	2.50	0.45
1:A:30:SER:CB	1:A:82:GLY:CA	2.90	0.45
1:A:40:PHE:O	1:A:47:ALA:HA	2.16	0.45
1:A:133:ASP:CG	1:A:134:ASN:H	2.18	0.45
1:A:410:ARG:NE	6:F:104:ASN:OD1	2.49	0.45
2:B:59:LYS:O	2:B:63:ASP:N	2.39	0.45
2:B:76:ILE:HD12	2:B:389:GLU:OE1	2.16	0.45
2:B:95:TYR:HD1	2:B:133:ILE:HG12	1.80	0.45
2:B:415:GLU:O	2:B:417:ASP:N	2.50	0.45
2:B:1095:CYS:O	2:B:1099:GLY:HA2	2.17	0.45
8:H:1:MET:HG2	8:H:3:ASN:ND2	2.31	0.45
13:M:149:LYS:HB3	13:M:182:PHE:HE1	1.82	0.45
15:O:573:SER:C	15:O:576:PHE:CD2	2.90	0.45
15:O:600:SER:HA	15:O:603:LEU:HD12	1.98	0.45
15:O:623:GLU:OE1	15:O:624:LEU:HD12	2.17	0.45
18:R:262:PHE:O	18:R:265:THR:OG1	2.29	0.45
20:X:67:DT:H2''	20:X:68:DT:OP2	2.16	0.45
21:Y:64:DA:H2'	21:Y:65:DC:C6	2.51	0.45
1:A:289:LEU:HA	1:A:292:ILE:HB	1.99	0.45
1:A:366:GLY:HA3	2:B:1061:ARG:HH22	1.82	0.45
1:A:583:MET:HA	1:A:700:LEU:HB2	1.98	0.45
1:A:678:PHE:CZ	1:A:694:MET:HG2	2.51	0.45
1:A:968:GLY:O	1:A:970:LEU:N	2.48	0.45
2:B:767:ILE:HG22	2:B:768:GLU:N	2.31	0.45
2:B:911:LYS:HD3	2:B:1029:HIS:HB2	1.97	0.45
3:C:110:PRO:C	3:C:112:MET:H	2.19	0.45
7:G:157:ASP:OD1	7:G:158:VAL:N	2.45	0.45
15:O:167:GLY:O	15:O:281:THR:HG23	2.17	0.45
18:R:97:PRO:HD2	18:R:100:ILE:HD12	1.97	0.45
18:R:604:ASP:OD1	18:R:605:VAL:N	2.50	0.45
1:A:14:LYS:HB2	2:B:1144:GLU:OE2	2.17	0.45
1:A:1154:ALA:HB1	1:A:1283:ILE:HD12	1.99	0.45
2:B:59:LYS:HA	2:B:62:LEU:HB2	1.99	0.45
2:B:244:HIS:CE1	2:B:333:ALA:CB	2.97	0.45
2:B:796:LYS:HE2	2:B:798:TYR:CE1	2.52	0.45
2:B:961:LEU:HD21	2:B:1019:PHE:C	2.37	0.45
3:C:96:VAL:O	3:C:100:ARG:HG2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:19:PHE:O	4:D:22:ASP:HB2	2.16	0.45
7:G:201:GLN:OE1	7:G:201:GLN:N	2.42	0.45
13:M:72:GLU:OE1	14:N:364:ARG:NH2	2.43	0.45
15:O:328:ASP:OD1	15:O:328:ASP:N	2.49	0.45
18:R:142:MET:SD	18:R:219:ARG:NH2	2.90	0.45
18:R:397:VAL:HB	18:R:485:ASN:HB3	1.99	0.45
1:A:108:LYS:N	1:A:108:LYS:HD2	2.31	0.45
1:A:679:TYR:OH	1:A:927:GLU:HA	2.16	0.45
1:A:814:GLY:HA2	1:A:848:VAL:H	1.82	0.45
1:A:1448:PHE:HZ	4:D:16:VAL:CG2	2.29	0.45
1:A:1448:PHE:HD1	4:D:14:TYR:CE2	2.35	0.45
2:B:281:ASP:OD1	2:B:282:ILE:N	2.50	0.45
2:B:464:ILE:HD11	2:B:746:TYR:CE1	2.52	0.45
2:B:780:ARG:HE	3:C:217:ALA:HB1	1.81	0.45
7:G:53:THR:CG2	7:G:71:THR:HG22	2.47	0.45
13:M:113:LYS:HZ1	13:M:237:ALA:HB1	1.81	0.45
16:P:18:LEU:HD11	16:P:36:LEU:HD11	1.99	0.45
16:P:26:GLY:O	16:P:31:PHE:HB2	2.17	0.45
16:P:60:LEU:O	16:P:75:VAL:N	2.48	0.45
16:P:102:ARG:HB3	16:P:155:PRO:HG2	1.99	0.45
16:P:217:THR:O	16:P:218:THR:OG1	2.35	0.45
21:Y:22:DT:H2"	21:Y:23:DG:H8	1.82	0.45
1:A:904:VAL:HG13	1:A:912:VAL:HG23	1.99	0.44
1:A:1448:PHE:CD1	4:D:14:TYR:CE2	3.05	0.44
2:B:909:GLY:HA2	2:B:921:VAL:CG1	2.46	0.44
2:B:1091:GLU:HA	2:B:1120:THR:HA	1.99	0.44
3:C:15:THR:HG22	3:C:16:THR:N	2.32	0.44
3:C:20:PHE:CE2	3:C:22:GLY:HA3	2.52	0.44
3:C:222:VAL:HG11	3:C:225:ALA:HB2	1.99	0.44
6:F:143:PHE:O	6:F:144:GLU:HB2	2.17	0.44
15:O:596:LYS:O	15:O:600:SER:N	2.50	0.44
16:P:311:TYR:CD2	17:Q:37:PRO:HG2	2.52	0.44
18:R:130:LEU:HD23	18:R:146:PHE:CE1	2.52	0.44
1:A:128:ARG:NH2	1:A:240:GLU:OE2	2.49	0.44
1:A:484:SER:N	2:B:1069:CYS:SG	2.90	0.44
1:A:801:GLY:N	2:B:951:SER:OG	2.50	0.44
1:A:815:GLN:NE2	1:A:847:PHE:HB2	2.32	0.44
1:A:862:LEU:HD22	2:B:494:PHE:HD1	1.81	0.44
1:A:1171:PHE:CD2	1:A:1172:TYR:HD2	2.36	0.44
1:A:1187:ARG:HA	1:A:1228:ASP:O	2.17	0.44
2:B:539:GLU:OE1	2:B:539:GLU:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:886:MET:HG2	2:B:896:ILE:HG12	1.99	0.44
3:C:211:GLY:HA3	3:C:219:PHE:CE2	2.52	0.44
4:D:5:GLU:OE2	4:D:8:ASN:HA	2.17	0.44
5:E:65:THR:HG23	5:E:66:GLU:HG2	1.99	0.44
6:F:151:LEU:HD23	6:F:152:ILE:N	2.32	0.44
9:I:33:PHE:CE2	9:I:35:ILE:HA	2.52	0.44
15:O:141:ILE:HA	15:O:144:MET:CB	2.45	0.44
15:O:271:LEU:HD23	15:O:272:ARG:N	2.32	0.44
15:O:362:ASN:HD21	15:O:478:VAL:HG23	1.82	0.44
16:P:103:GLU:OE1	16:P:103:GLU:N	2.45	0.44
16:P:126:LYS:O	16:P:129:GLU:HB3	2.17	0.44
16:P:309:VAL:HG21	16:P:311:TYR:CZ	2.52	0.44
18:R:287:PRO:HD2	18:R:290:PHE:HE1	1.83	0.44
18:R:529:VAL:HG11	20:X:12:DT:H4'	1.99	0.44
18:R:601:ASN:HB3	18:R:604:ASP:OD2	2.16	0.44
20:X:65:DA:H2"	20:X:66:DG:C8	2.53	0.44
1:A:291:GLU:OE1	1:A:322:THR:HG21	2.18	0.44
1:A:506:THR:OG1	1:A:507:PRO:HD3	2.18	0.44
1:A:597:ILE:HG12	1:A:603:LEU:HB2	1.99	0.44
1:A:646:SER:O	8:H:25:ARG:NH2	2.51	0.44
1:A:697:MET:O	1:A:700:LEU:HB3	2.17	0.44
1:A:884:TYR:CE2	1:A:888:ARG:HD3	2.52	0.44
1:A:1052:VAL:O	1:A:1055:SER:HB3	2.17	0.44
3:C:157:TYR:CG	3:C:198:PRO:HD3	2.52	0.44
10:J:42:LYS:HG3	10:J:43:ARG:N	2.32	0.44
13:M:115:LYS:O	13:M:175:ARG:NH2	2.49	0.44
15:O:39:GLN:O	15:O:47:PHE:CZ	2.70	0.44
15:O:507:LEU:HD12	15:O:508:SER:N	2.31	0.44
16:P:87:SER:O	16:P:91:ALA:N	2.50	0.44
16:P:313:ASP:C	16:P:315:TRP:H	2.21	0.44
18:R:598:ASP:HB3	18:R:601:ASN:OD1	2.17	0.44
18:R:636:LEU:HD13	19:S:502:LEU:HD21	1.98	0.44
1:A:57:LYS:HB2	1:A:69:THR:HG23	1.99	0.44
1:A:739:ASP:O	1:A:743:THR:N	2.28	0.44
1:A:920:GLY:O	1:A:1083:LEU:N	2.28	0.44
1:A:1164:THR:CB	1:A:1271:VAL:HA	2.48	0.44
1:A:1175:ASP:OD1	1:A:1184:ILE:HA	2.17	0.44
1:A:1392:THR:OG1	1:A:1393:THR:N	2.50	0.44
2:B:87:VAL:O	19:S:383:ARG:NH1	2.50	0.44
2:B:740:THR:O	2:B:743:LEU:HB2	2.17	0.44
4:D:134:LEU:HD12	4:D:135:TYR:N	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:80:VAL:HG23	5:E:109:ILE:HD11	1.98	0.44
7:G:97:ILE:HD13	7:G:140:PHE:CZ	2.53	0.44
8:H:38:LEU:CD2	8:H:40:LEU:HB2	2.47	0.44
8:H:79:TRP:CH2	8:H:81:PRO:HA	2.53	0.44
10:J:52:THR:HG22	10:J:53:HIS:N	2.30	0.44
11:K:61:ALA:HB1	11:K:63:PHE:CE1	2.53	0.44
11:K:68:GLU:HG3	11:K:69:ASP:N	2.31	0.44
15:O:490:SER:O	15:O:493:GLU:HG2	2.18	0.44
20:X:70:DG:H2''	20:X:71:DT:OP2	2.16	0.44
20:X:73:DA:H2''	20:X:74:DA:H8	1.82	0.44
1:A:216:LYS:HG3	1:A:217:ARG:N	2.32	0.44
1:A:371:LYS:NZ	2:B:1049:GLN:OE1	2.36	0.44
1:A:408:VAL:HG13	1:A:458:ILE:O	2.17	0.44
1:A:521:VAL:C	2:B:1082:ARG:HH22	2.20	0.44
2:B:58:VAL:HG12	2:B:62:LEU:HD13	1.99	0.44
2:B:244:HIS:CE1	2:B:246:SER:HG	2.34	0.44
2:B:619:GLN:OE1	2:B:619:GLN:N	2.51	0.44
2:B:843:ILE:CG2	2:B:871:VAL:HG12	2.47	0.44
2:B:1040:ARG:HB3	18:R:35:ASN:HD21	1.82	0.44
3:C:195:LYS:NZ	10:J:58:GLU:OE2	2.48	0.44
5:E:115:ASN:OD1	5:E:116:ILE:N	2.51	0.44
7:G:55:GLU:OE2	7:G:69:ASN:N	2.51	0.44
7:G:190:LYS:NZ	7:G:192:PRO:HG3	2.32	0.44
15:O:273:ILE:HG23	15:O:274:VAL:O	2.18	0.44
18:R:432:ILE:HG13	18:R:434:GLU:H	1.81	0.44
1:A:6:VAL:O	7:G:33:LYS:NZ	2.50	0.44
1:A:157:CYS:SG	1:A:158:GLY:N	2.91	0.44
1:A:239:CYS:O	1:A:242:LEU:N	2.51	0.44
1:A:792:LEU:HD21	8:H:19:ARG:NH2	2.33	0.44
1:A:900:TYR:CD1	1:A:1085:PRO:HG2	2.53	0.44
1:A:1257:PHE:O	1:A:1260:MET:HB3	2.17	0.44
2:B:178:PRO:HD2	2:B:715:TYR:HD2	1.83	0.44
2:B:735:MET:HB2	2:B:754:ASN:ND2	2.28	0.44
3:C:216:HIS:NE2	12:L:70:ARG:HB2	2.33	0.44
6:F:117:PRO:O	6:F:120:ILE:HG13	2.18	0.44
13:M:253:GLU:O	13:M:257:ASP:N	2.45	0.44
16:P:247:LEU:O	16:P:252:LYS:N	2.50	0.44
18:R:251:ALA:HB3	18:R:254:THR:OG1	2.18	0.44
19:S:413:ARG:CZ	20:X:9:DA:H3'	2.47	0.44
1:A:43:GLU:O	1:A:45:ASP:N	2.51	0.44
1:A:381:ILE:HG22	1:A:382:SER:N	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:483:LEU:HD22	1:A:486:LEU:HD11	1.99	0.44
1:A:842:PRO:C	1:A:844:SER:H	2.20	0.44
2:B:247:ILE:HG13	2:B:248:ALA:N	2.31	0.44
2:B:426:SER:O	2:B:428:ASN:N	2.50	0.44
2:B:647:GLU:OE1	2:B:647:GLU:N	2.51	0.44
2:B:987:MET:CA	2:B:990:ILE:HB	2.47	0.44
3:C:33:VAL:CG1	3:C:34:GLU:H	2.29	0.44
3:C:85:PHE:HB2	12:L:65:VAL:HG13	1.98	0.44
3:C:121:PRO:O	3:C:124:GLU:HB2	2.18	0.44
5:E:17:ARG:HG3	5:E:35:VAL:HG22	2.00	0.44
8:H:65:LEU:HB2	8:H:89:LEU:HB2	1.98	0.44
10:J:34:THR:HA	10:J:37:SER:HB2	1.99	0.44
13:M:87:VAL:HG13	13:M:176:VAL:HG13	2.00	0.44
18:R:219:ARG:HH11	18:R:220:PRO:CD	2.29	0.44
18:R:219:ARG:HB2	18:R:514:GLU:OE1	2.18	0.44
18:R:546:ARG:HH12	18:R:591:TYR:HE2	1.66	0.44
1:A:60:VAL:HG23	1:A:74:LEU:HD23	1.99	0.44
1:A:865:ALA:HA	2:B:696:SER:OG	2.18	0.44
1:A:891:LYS:HE3	2:B:1064:GLU:OE2	2.18	0.44
1:A:1366:GLY:HA3	5:E:179:GLN:HG3	2.00	0.44
1:A:1406:ASP:CG	1:A:1407:ALA:N	2.69	0.44
2:B:135:TYR:CD2	2:B:419:LEU:HD11	2.53	0.44
2:B:246:SER:OG	2:B:247:ILE:N	2.51	0.44
2:B:317:LEU:O	2:B:320:LEU:HG	2.18	0.44
3:C:5:VAL:HG23	3:C:7:ILE:HD11	1.99	0.44
3:C:67:PHE:CE1	3:C:318:VAL:HG22	2.53	0.44
5:E:153:HIS:CE1	5:E:184:VAL:HG11	2.53	0.44
9:I:30:PRO:HB3	13:M:135:LYS:HD3	1.99	0.44
18:R:583:HIS:NE2	18:R:585:LEU:O	2.51	0.44
20:X:70:DG:H1'	20:X:71:DT:O5'	2.17	0.44
21:Y:3:DG:H1'	21:Y:4:DC:H5'	1.98	0.44
1:A:153:ARG:HA	1:A:160:LEU:HA	1.99	0.44
1:A:251:GLY:C	1:A:252:ARG:O	2.55	0.44
1:A:323:VAL:O	1:A:326:TYR:HB3	2.18	0.44
1:A:516:GLU:OE2	2:B:1034:LYS:HD3	2.17	0.44
1:A:692:ASN:O	1:A:696:ARG:HG2	2.18	0.44
1:A:949:ASN:HD21	8:H:135:LEU:HD23	1.81	0.44
2:B:410:PRO:HA	2:B:414:MET:SD	2.58	0.44
2:B:901:ARG:NE	3:C:93:GLN:HE21	2.15	0.44
3:C:33:VAL:CG1	3:C:34:GLU:N	2.80	0.44
5:E:111:VAL:HG13	5:E:135:PHE:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:114:VAL:O	8:H:124:ARG:HA	2.18	0.44
14:N:291:LEU:O	14:N:294:LEU:HB3	2.17	0.44
15:O:220:GLU:HG2	15:O:221:LYS:H	1.83	0.44
15:O:239:SER:O	15:O:243:MET:HG2	2.18	0.44
15:O:602:LEU:HD22	15:O:626:GLN:HE21	1.83	0.44
16:P:14:ASN:HB3	16:P:51:ILE:HD13	2.00	0.44
19:S:422:VAL:O	19:S:426:ILE:HG23	2.18	0.44
19:S:434:MET:HB2	19:S:435:TRP:CE3	2.53	0.44
1:A:205:LEU:O	1:A:209:PRO:HG3	2.18	0.43
1:A:237:ALA:N	15:O:70:ALA:O	2.46	0.43
1:A:320:GLN:HA	1:A:323:VAL:HG12	2.00	0.43
1:A:371:LYS:HE3	2:B:1087:SER:HB3	2.00	0.43
1:A:429:GLY:O	1:A:465:HIS:ND1	2.32	0.43
1:A:524:THR:H	2:B:1081:GLU:HG3	1.82	0.43
1:A:571:TYR:HH	1:A:704:PHE:HZ	1.63	0.43
2:B:185:PHE:CZ	2:B:384:ILE:HD11	2.53	0.43
2:B:405:LYS:HG2	2:B:408:LYS:HE2	1.99	0.43
2:B:1006:SER:OG	2:B:1009:THR:N	2.50	0.43
5:E:48:ASP:O	5:E:51:GLY:N	2.50	0.43
5:E:145:THR:HG21	5:E:187:TYR:CZ	2.53	0.43
7:G:88:TRP:HD1	7:G:89:ILE:O	2.01	0.43
7:G:104:ILE:HG23	7:G:105:PHE:N	2.29	0.43
11:K:47:ILE:HG21	11:K:63:PHE:HB3	2.00	0.43
13:M:159:TYR:CE2	14:N:309:LEU:HB2	2.51	0.43
14:N:365:VAL:HG13	14:N:370:LYS:O	2.18	0.43
15:O:73:ARG:CB	15:O:121:TYR:HE1	2.29	0.43
15:O:126:GLY:C	15:O:128:HIS:N	2.71	0.43
15:O:580:ASN:O	15:O:581:LEU:C	2.57	0.43
16:P:256:VAL:O	16:P:260:CYS:HB3	2.18	0.43
16:P:314:GLU:O	16:P:315:TRP:HB2	2.18	0.43
18:R:431:ARG:HG3	18:R:438:THR:HA	1.99	0.43
21:Y:61:DA:H5'	21:Y:61:DA:C8	2.52	0.43
21:Y:69:DT:H6	21:Y:69:DT:H2'	1.60	0.43
1:A:575:THR:CG2	1:A:576:LEU:N	2.81	0.43
1:A:1261:GLN:HG2	2:B:288:GLU:HG2	1.99	0.43
1:A:1286:ARG:N	1:A:1290:LYS:O	2.31	0.43
2:B:59:LYS:HZ1	2:B:519:HIS:CG	2.35	0.43
2:B:203:ASN:N	2:B:220:VAL:O	2.34	0.43
2:B:629:LYS:O	2:B:635:LEU:HB2	2.18	0.43
2:B:779:ASP:CG	3:C:216:HIS:HD1	2.21	0.43
3:C:21:PRO:HB3	3:C:28:GLU:N	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:133:GLU:HG2	5:E:135:PHE:CE2	2.54	0.43
14:N:292:ARG:O	14:N:296:LYS:HG2	2.18	0.43
14:N:304:PHE:HD2	14:N:396:ALA:HB3	1.83	0.43
15:O:38:GLU:C	15:O:40:ARG:H	2.22	0.43
15:O:620:LEU:HD23	15:O:623:GLU:HB2	2.00	0.43
17:Q:56:VAL:O	17:Q:60:ASN:N	2.35	0.43
20:X:8:DT:H6	20:X:8:DT:H2'	1.68	0.43
21:Y:63:DT:H73	21:Y:64:DA:H62	1.83	0.43
1:A:83:HIS:O	1:A:83:HIS:CG	2.70	0.43
1:A:351:ARG:HB2	1:A:355:GLN:CD	2.39	0.43
1:A:409:THR:N	1:A:412:ASN:HD22	2.14	0.43
1:A:572:ASP:OD1	1:A:575:THR:CG2	2.65	0.43
1:A:762:LEU:O	1:A:766:ILE:HG22	2.18	0.43
1:A:949:ASN:HA	1:A:1061:ARG:HH21	1.82	0.43
2:B:274:GLY:HA2	2:B:549:LEU:HD13	2.00	0.43
2:B:405:LYS:HA	2:B:408:LYS:HG3	2.00	0.43
2:B:1049:GLN:HB2	2:B:1050:PRO:HD2	1.99	0.43
3:C:239:ILE:HG21	3:C:288:LYS:HB3	1.98	0.43
3:C:278:GLU:HB3	3:C:281:ARG:CD	2.48	0.43
7:G:115:LEU:N	7:G:199:SER:HB3	2.33	0.43
13:M:72:GLU:OE1	14:N:364:ARG:NE	2.49	0.43
15:O:127:ILE:HG23	15:O:130:LEU:HB2	2.00	0.43
15:O:218:LEU:HD21	15:O:248:ASP:HB2	2.00	0.43
16:P:191:PHE:HB3	16:P:203:LYS:HD2	2.00	0.43
18:R:159:ALA:O	18:R:163:LYS:HG2	2.17	0.43
1:A:359:GLY:O	1:A:362:GLY:N	2.43	0.43
1:A:380:VAL:O	1:A:497:THR:OG1	2.36	0.43
1:A:661:SER:HB2	8:H:122:LEU:HD11	2.00	0.43
1:A:1145:LEU:HB3	1:A:1309:VAL:HG12	1.99	0.43
2:B:48:LEU:HB3	2:B:49:PRO:HD3	2.00	0.43
2:B:554:GLY:HA2	2:B:564:SER:HB2	1.99	0.43
2:B:933:PHE:CZ	2:B:1005:TYR:HB2	2.54	0.43
3:C:40:PHE:CD2	11:K:134:LYS:HG3	2.52	0.43
3:C:99:HIS:HA	12:L:69:ALA:HB1	2.00	0.43
8:H:43:ASN:HD21	8:H:46:LEU:HD13	1.83	0.43
10:J:36:LEU:HA	10:J:39:LEU:HB3	2.00	0.43
14:N:299:ASN:CG	14:N:301:PRO:HD3	2.38	0.43
15:O:53:VAL:HG21	15:O:65:ILE:HD12	2.01	0.43
15:O:532:ASP:O	15:O:536:THR:HG22	2.18	0.43
16:P:142:PHE:HA	16:P:143:PRO:HD3	1.87	0.43
19:S:390:GLU:HG2	19:S:393:TYR:CE2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:15:GLY:C	1:A:16:LEU:HD12	2.39	0.43
1:A:401:VAL:O	2:B:1039:ALA:HB2	2.19	0.43
1:A:1202:ILE:O	1:A:1205:ILE:N	2.52	0.43
1:A:1445:ARG:HG3	1:A:1447:LEU:H	1.83	0.43
2:B:384:ILE:O	2:B:388:PHE:HB3	2.18	0.43
2:B:498:CYS:SG	2:B:500:ALA:N	2.92	0.43
2:B:781:GLY:HA2	3:C:99:HIS:HE1	1.83	0.43
2:B:841:ILE:HD13	2:B:872:ILE:HG13	2.00	0.43
2:B:849:THR:HG22	2:B:865:GLN:HB3	2.01	0.43
2:B:891:ASN:HD21	2:B:893:GLN:CD	2.22	0.43
2:B:912:PHE:HE1	2:B:1026:LYS:HG3	1.84	0.43
3:C:17:SER:C	3:C:18:THR:HG22	2.33	0.43
7:G:115:LEU:HA	7:G:200:CYS:O	2.19	0.43
13:M:84:SER:C	13:M:85:LEU:CD1	2.75	0.43
15:O:312:TYR:CD1	15:O:468:LEU:HD21	2.53	0.43
15:O:579:GLN:O	15:O:583:TRP:CD1	2.71	0.43
15:O:632:GLU:HA	15:O:635:LEU:HD12	2.01	0.43
18:R:533:PHE:CZ	21:Y:69:DT:H1'	2.53	0.43
19:S:446:TYR:CB	19:S:449:ARG:HB3	2.48	0.43
20:X:5:DA:H4'	20:X:6:DC:OP1	2.18	0.43
1:A:897:SER:O	1:A:904:VAL:HG23	2.19	0.43
1:A:1032:LEU:O	1:A:1033:GLU:CB	2.64	0.43
1:A:1202:ILE:O	1:A:1206:ALA:N	2.31	0.43
2:B:145:LYS:HG3	19:S:399:GLU:HB3	2.01	0.43
2:B:531:LYS:HA	2:B:534:TYR:HD2	1.83	0.43
2:B:1026:LYS:C	2:B:1027:LEU:HD12	2.39	0.43
3:C:247:PHE:CE1	3:C:289:VAL:HG21	2.53	0.43
8:H:41:ASP:CG	8:H:122:LEU:H	2.21	0.43
9:I:5:CYS:SG	9:I:9:ASN:N	2.92	0.43
10:J:44:TYR:HA	10:J:47:ARG:HB3	2.00	0.43
11:K:110:GLU:OE2	11:K:111:THR:HG23	2.18	0.43
13:M:83:GLU:C	13:M:84:SER:O	2.57	0.43
14:N:364:ARG:O	14:N:371:LEU:HD12	2.17	0.43
15:O:581:LEU:O	15:O:585:MET:HB2	2.19	0.43
16:P:179:LEU:O	16:P:182:VAL:HG12	2.19	0.43
18:R:402:LEU:HD13	18:R:476:ALA:HB1	2.00	0.43
19:S:466:PRO:O	19:S:470:GLU:HG2	2.18	0.43
1:A:7:SER:HA	7:G:33:LYS:HZ3	1.84	0.43
1:A:18:PHE:CD1	2:B:1139:PRO:CB	2.97	0.43
1:A:33:GLU:CA	1:A:83:HIS:CE1	3.02	0.43
1:A:126:GLU:OE1	1:A:127:LEU:HD12	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:505:CYS:O	1:A:509:ASN:N	2.51	0.43
1:A:933:VAL:HG11	1:A:935:PHE:CZ	2.54	0.43
1:A:1338:GLU:O	1:A:1341:TYR:N	2.52	0.43
2:B:58:VAL:HA	2:B:60:GLN:OE1	2.18	0.43
2:B:383:LEU:HB3	2:B:442:TRP:CH2	2.54	0.43
2:B:395:PHE:HE1	2:B:425:HIS:O	2.01	0.43
2:B:476:GLN:HG2	2:B:477:PHE:H	1.84	0.43
2:B:529:ILE:HD13	2:B:584:VAL:HG11	2.00	0.43
3:C:190:ASP:O	10:J:16:ASP:HB3	2.17	0.43
3:C:230:LEU:HD22	3:C:297:HIS:ND1	2.34	0.43
4:D:23:LEU:O	4:D:27:HIS:N	2.47	0.43
7:G:151:GLU:N	7:G:197:LEU:O	2.36	0.43
9:I:5:CYS:HB3	9:I:10:ASN:N	2.34	0.43
9:I:11:MET:HG3	9:I:12:LEU:O	2.19	0.43
13:M:227:LEU:O	13:M:232:LEU:HD13	2.18	0.43
15:O:496:ILE:HA	15:O:499:THR:CB	2.48	0.43
15:O:538:ALA:O	15:O:542:ARG:HG3	2.18	0.43
16:P:14:ASN:O	16:P:18:LEU:CB	2.66	0.43
16:P:142:PHE:CE2	16:P:144:THR:HB	2.53	0.43
16:P:186:ILE:HG22	16:P:263:VAL:HG22	2.00	0.43
19:S:438:ASP:O	19:S:442:ILE:HG13	2.19	0.43
1:A:240:GLU:N	1:A:240:GLU:OE1	2.49	0.43
1:A:256:TYR:CE1	1:A:1401:PHE:HD1	2.37	0.43
2:B:39:ASN:HB3	2:B:42:GLN:HB2	2.00	0.43
2:B:729:THR:HG22	2:B:730:TYR:CE1	2.54	0.43
3:C:19:ASP:O	3:C:29:ASN:HB3	2.19	0.43
3:C:89:THR:HG22	3:C:201:GLU:H	1.83	0.43
3:C:256:ILE:C	3:C:268:LYS:HG2	2.39	0.43
4:D:12:SER:OG	4:D:14:TYR:CE2	2.72	0.43
4:D:20:LEU:O	4:D:24:GLU:HB3	2.18	0.43
8:H:6:PHE:HE2	8:H:8:ASP:HB2	1.81	0.43
13:M:173:ILE:O	13:M:173:ILE:HG13	2.18	0.43
15:O:262:ILE:O	15:O:274:VAL:HA	2.19	0.43
15:O:517:VAL:O	15:O:518:SER:CB	2.59	0.43
18:R:399:THR:O	18:R:481:PHE:HA	2.19	0.43
19:S:382:ASP:O	19:S:383:ARG:HB3	2.18	0.43
1:A:89:PRO:HB3	1:A:228:LEU:HD13	2.00	0.43
1:A:105:GLY:HA2	1:A:148:CYS:SG	2.58	0.43
1:A:610:PHE:O	1:A:613:LEU:HB3	2.19	0.43
1:A:714:ILE:HG13	1:A:718:THR:OG1	2.19	0.43
1:A:955:LEU:O	1:A:959:ILE:HG13	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1305:CYS:SG	5:E:141:VAL:HG11	2.58	0.43
2:B:536:LEU:HD22	2:B:571:PHE:CD1	2.50	0.43
3:C:247:PHE:O	3:C:250:CYS:HB3	2.19	0.43
7:G:147:ARG:NH2	7:G:208:VAL:HA	2.33	0.43
7:G:152:ARG:O	7:G:197:LEU:HG	2.19	0.43
13:M:99:ARG:HG3	13:M:100:LYS:N	2.34	0.43
14:N:389:THR:HG23	14:N:390:PHE:N	2.34	0.43
15:O:460:LEU:HD22	15:O:476:TYR:HB2	2.00	0.43
15:O:530:GLU:HA	15:O:533:ILE:HB	2.00	0.43
15:O:645:LEU:O	15:O:649:GLU:HG3	2.19	0.43
18:R:467:ARG:NH1	18:R:603:GLU:HG3	2.34	0.43
19:S:409:GLY:N	21:Y:73:DT:H5''	2.34	0.43
1:A:148:CYS:SG	1:A:149:LYS:N	2.92	0.43
1:A:578:GLN:HG2	1:A:582:MET:SD	2.59	0.43
1:A:590:PHE:HA	1:A:617:ASN:OD1	2.19	0.43
1:A:629:LYS:HG3	1:A:651:PHE:HE1	1.83	0.43
1:A:1018:ALA:O	1:A:1021:ASN:HB2	2.19	0.43
1:A:1397:PHE:CZ	2:B:1135:MET:SD	3.11	0.43
1:A:1448:PHE:HD1	4:D:14:TYR:HE2	1.67	0.43
2:B:55:LYS:HG2	2:B:59:LYS:HD3	2.00	0.43
2:B:316:LYS:HD3	13:M:226:ARG:HE	1.84	0.43
2:B:372:VAL:HG11	2:B:608:ILE:HD12	2.00	0.43
2:B:385:SER:O	2:B:389:GLU:HG2	2.18	0.43
2:B:628:ARG:HA	2:B:631:LEU:HG	2.01	0.43
3:C:220:SER:OG	3:C:222:VAL:O	2.33	0.43
4:D:126:GLN:CG	4:D:127:LEU:N	2.82	0.43
5:E:126:SER:O	5:E:128:PRO:HD3	2.18	0.43
7:G:39:ILE:HG23	7:G:42:VAL:HG13	2.01	0.43
13:M:72:GLU:H	14:N:364:ARG:HE	1.66	0.43
15:O:124:GLU:CG	15:O:126:GLY:H	2.25	0.43
15:O:252:ILE:O	15:O:255:LYS:HB3	2.19	0.43
15:O:289:LYS:HZ2	15:O:325:LYS:HD3	1.84	0.43
15:O:330:LEU:HD13	15:O:331:THR:CG2	2.20	0.43
15:O:550:GLU:N	15:O:550:GLU:OE1	2.52	0.43
15:O:650:VAL:HG13	15:O:651:PHE:N	2.32	0.43
18:R:171:THR:HG23	18:R:173:LEU:HG	2.01	0.43
19:S:434:MET:SD	19:S:477:LEU:HD11	2.59	0.43
19:S:507:ASN:HA	19:S:510:LYS:HB3	2.00	0.43
20:X:78:DG:C5	20:X:79:DT:C4	3.06	0.43
21:Y:16:DT:H6	21:Y:16:DT:H2'	1.62	0.43
1:A:528:ARG:O	1:A:532:ILE:HG22	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:826:GLY:H	1:A:831:SER:HA	1.84	0.42
1:A:1033:GLU:HB3	1:A:1034:PRO:CD	2.44	0.42
1:A:1171:PHE:HB3	1:A:1188:ILE:HA	2.00	0.42
1:A:1397:PHE:O	1:A:1400:ALA:N	2.52	0.42
2:B:566:ARG:HG3	2:B:567:PHE:CG	2.54	0.42
2:B:967:GLY:HA2	2:B:974:GLU:OE2	2.19	0.42
3:C:6:GLY:H	3:C:14:ASN:HB3	1.83	0.42
13:M:76:LEU:HA	13:M:168:VAL:O	2.19	0.42
13:M:159:TYR:CD2	13:M:170:LEU:HD11	2.54	0.42
14:N:305:MET:HG2	14:N:414:GLY:HA3	2.01	0.42
15:O:56:HIS:CG	15:O:57:LEU:HG	2.54	0.42
15:O:292:ARG:HH12	15:O:650:VAL:CB	2.32	0.42
15:O:332:GLN:HE22	15:O:337:GLN:CG	2.32	0.42
15:O:641:LEU:O	15:O:644:LEU:N	2.52	0.42
18:R:96:ILE:HG22	18:R:141:HIS:CE1	2.54	0.42
18:R:550:TYR:HA	18:R:553:PHE:HB3	2.01	0.42
21:Y:77:DG:H1'	21:Y:78:DA:C8	2.54	0.42
1:A:212:GLU:H	1:A:212:GLU:CD	2.22	0.42
1:A:308:SER:HA	15:O:534:ARG:CD	2.49	0.42
1:A:438:GLU:O	1:A:438:GLU:HG2	2.19	0.42
1:A:614:ILE:O	1:A:622:VAL:HG21	2.19	0.42
1:A:633:PHE:CZ	1:A:643:ASN:HB3	2.55	0.42
1:A:818:ILE:HG21	1:A:866:ILE:HG22	2.01	0.42
1:A:1380:ARG:HH11	1:A:1385:GLN:NE2	2.08	0.42
1:A:1394:ASP:O	1:A:1398:ASP:HB3	2.18	0.42
2:B:124:THR:OG1	2:B:187:VAL:HG12	2.19	0.42
2:B:516:LEU:HD11	2:B:683:ALA:HA	2.01	0.42
4:D:129:ALA:HB3	4:D:157:ILE:HB	2.00	0.42
5:E:18:THR:O	5:E:22:MET:HB2	2.19	0.42
5:E:111:VAL:HG12	5:E:112:TYR:O	2.18	0.42
8:H:56:THR:O	8:H:144:ILE:HA	2.18	0.42
8:H:101:ALA:HB2	8:H:116:TYR:HE1	1.83	0.42
11:K:46:LYS:HD2	11:K:46:LYS:HA	1.90	0.42
13:M:117:HIS:CG	13:M:118:LEU:H	2.37	0.42
13:M:259:ILE:O	13:M:262:GLU:HG2	2.19	0.42
15:O:133:SER:O	15:O:136:ILE:N	2.52	0.42
15:O:506:ARG:O	16:P:249:TYR:HB3	2.18	0.42
16:P:45:LEU:HD22	19:S:366:LEU:HB3	2.01	0.42
16:P:137:VAL:HG21	16:P:149:MET:HG2	2.00	0.42
16:P:190:THR:HA	16:P:215:TYR:CZ	2.54	0.42
16:P:312:PHE:CD1	17:Q:41:LEU:HD11	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:52:ARG:O	17:Q:55:ALA:N	2.52	0.42
18:R:419:GLU:HB2	18:R:429:ILE:HB	2.00	0.42
20:X:3:DC:H2''	20:X:4:DA:H2'	2.00	0.42
20:X:66:DG:N1	21:Y:15:DT:O2	2.51	0.42
20:X:73:DA:C6	20:X:74:DA:C6	3.07	0.42
1:A:333:ASN:O	1:A:335:ALA:N	2.46	0.42
1:A:595:PRO:HA	1:A:604:TRP:CE2	2.54	0.42
1:A:605:THR:OG1	8:H:119:GLY:O	2.25	0.42
1:A:1325:VAL:HG23	1:A:1326:LEU:N	2.35	0.42
2:B:319:ILE:O	2:B:324:ILE:HA	2.18	0.42
2:B:698:ARG:HE	2:B:952:ARG:HB3	1.83	0.42
2:B:763:SER:O	2:B:765:TYR:N	2.52	0.42
3:C:31:TRP:HE3	11:K:82:LYS:HD2	1.83	0.42
3:C:334:THR:HG23	11:K:48:LYS:HG3	2.01	0.42
7:G:119:CYS:HA	7:G:129:ILE:O	2.20	0.42
7:G:204:GLY:HA3	7:G:211:TRP:CG	2.53	0.42
8:H:37:LYS:H	8:H:126:GLU:HG2	1.84	0.42
15:O:80:VAL:HG21	15:O:87:ASP:OD1	2.18	0.42
15:O:168:SER:C	15:O:169:LEU:HD12	2.39	0.42
15:O:294:LYS:HA	15:O:297:ILE:HD12	2.01	0.42
15:O:353:GLU:N	15:O:481:SER:HB3	2.34	0.42
15:O:478:VAL:HG13	15:O:479:PRO:HD2	1.99	0.42
16:P:215:TYR:O	16:P:216:SER:OG	2.32	0.42
16:P:221:ILE:HA	16:P:224:PHE:HB3	2.00	0.42
18:R:407:ASP:OD2	18:R:410:THR:OG1	2.36	0.42
18:R:422:PRO:HA	18:R:426:ALA:HA	2.01	0.42
18:R:424:ARG:NH1	21:Y:64:DA:H4'	2.33	0.42
18:R:516:PHE:CD1	18:R:517:PRO:HD2	2.54	0.42
1:A:289:LEU:HA	1:A:292:ILE:HD12	2.00	0.42
1:A:496:ARG:O	1:A:497:THR:HB	2.19	0.42
1:A:527:ALA:O	1:A:530:GLU:HB3	2.20	0.42
1:A:794:MET:CA	1:A:797:CYS:HB2	2.40	0.42
1:A:837:LYS:O	1:A:839:SER:N	2.52	0.42
2:B:60:GLN:HG2	2:B:520:ILE:HD12	2.01	0.42
2:B:680:ILE:HG23	2:B:681:LEU:HD12	2.02	0.42
3:C:78:VAL:HA	3:C:210:LEU:HA	2.01	0.42
5:E:11:ARG:HH21	5:E:138:ALA:HA	1.85	0.42
8:H:63:LEU:HD23	8:H:90:ALA:HB2	2.01	0.42
15:O:54:LYS:HA	15:O:58:GLY:N	2.35	0.42
15:O:259:LEU:HD22	15:O:262:ILE:HD12	2.01	0.42
18:R:512:GLU:HB2	18:R:515:LEU:HB3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:X:5:DA:C5	20:X:6:DC:C4	3.08	0.42
1:A:18:PHE:CD1	2:B:1139:PRO:HB3	2.42	0.42
1:A:668:VAL:O	1:A:677:VAL:N	2.50	0.42
1:A:972:GLU:O	1:A:975:VAL:HG13	2.18	0.42
1:A:1145:LEU:HA	1:A:1310:ILE:N	2.23	0.42
1:A:1172:TYR:CZ	1:A:1187:ARG:HB2	2.54	0.42
2:B:212:LYS:O	2:B:214:GLY:N	2.52	0.42
2:B:325:GLU:O	2:B:328:ALA:N	2.52	0.42
2:B:969:LEU:HB3	2:B:994:GLN:OE1	2.18	0.42
2:B:1045:VAL:HG13	18:R:38:VAL:O	2.20	0.42
6:F:90:ARG:O	6:F:94:LEU:HB2	2.20	0.42
8:H:125:LEU:HD13	8:H:130:ARG:NH1	2.31	0.42
13:M:122:ASP:HB3	13:M:145:VAL:CG2	2.49	0.42
15:O:115:LYS:HB3	15:O:116:LYS:H	1.73	0.42
15:O:307:VAL:HG13	15:O:308:THR:N	2.31	0.42
16:P:20:SER:O	16:P:24:SER:CB	2.67	0.42
18:R:182:ILE:HD13	18:R:199:VAL:HG13	2.02	0.42
21:Y:66:DT:H2'	21:Y:67:DA:C8	2.54	0.42
1:A:91:PHE:O	1:A:258:TRP:HD1	2.02	0.42
1:A:389:ILE:HD11	1:A:503:CYS:HB2	2.01	0.42
1:A:493:ARG:HB2	1:A:499:ARG:HH21	1.83	0.42
1:A:572:ASP:H	1:A:575:THR:HG21	1.81	0.42
1:A:904:VAL:CG1	1:A:913:GLN:HB3	2.50	0.42
2:B:682:GLY:H	2:B:685:ALA:HB3	1.85	0.42
3:C:31:TRP:HH2	11:K:127:LEU:HG	1.84	0.42
3:C:32:ASN:CG	3:C:33:VAL:H	2.23	0.42
3:C:244:ALA:O	3:C:247:PHE:HB3	2.19	0.42
6:F:79:ARG:HB3	6:F:146:TRP:CZ2	2.55	0.42
7:G:21:ASP:HB3	7:G:24:SER:HB2	2.01	0.42
7:G:109:PHE:O	7:G:197:LEU:HA	2.20	0.42
9:I:35:ILE:HD12	9:I:36:GLU:HG2	1.99	0.42
13:M:80:GLY:N	13:M:261:LYS:HE2	2.34	0.42
15:O:41:THR:O	16:P:315:TRP:NE1	2.53	0.42
15:O:94:THR:O	15:O:97:SER:HB2	2.20	0.42
15:O:274:VAL:O	15:O:276:PRO:HD3	2.19	0.42
15:O:494:TYR:O	15:O:496:ILE:N	2.52	0.42
15:O:577:MET:HG3	15:O:651:PHE:CE2	2.54	0.42
21:Y:62:DT:H6	21:Y:62:DT:H2'	1.59	0.42
1:A:349:PRO:HA	1:A:351:ARG:NH1	2.35	0.42
1:A:399:ALA:HA	1:A:466:LEU:CD1	2.43	0.42
1:A:472:VAL:HG13	1:A:520:HIS:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:677:VAL:O	1:A:681:ILE:HG13	2.20	0.42
1:A:970:LEU:HD13	1:A:1005:TYR:CZ	2.55	0.42
1:A:1153:ALA:O	1:A:1157:VAL:HG22	2.20	0.42
1:A:1188:ILE:H	1:A:1228:ASP:HB2	1.85	0.42
1:A:1319:VAL:HA	1:A:1322:VAL:HG23	2.02	0.42
2:B:63:ASP:O	2:B:67:TYR:N	2.37	0.42
2:B:289:GLU:O	2:B:292:LYS:HG2	2.19	0.42
4:D:133:HIS:HE1	7:G:212:GLU:H	1.67	0.42
13:M:187:ASP:O	13:M:191:VAL:HG23	2.19	0.42
15:O:352:VAL:HG13	15:O:353:GLU:N	2.33	0.42
18:R:269:LYS:HA	18:R:272:VAL:HG12	2.01	0.42
18:R:282:ASP:OD1	18:R:283:GLY:N	2.51	0.42
21:Y:74:DG:C4	21:Y:75:DT:C4	3.08	0.42
1:A:38:ASP:N	1:A:38:ASP:OD1	2.53	0.42
1:A:284:ASP:OD1	1:A:285:LEU:N	2.50	0.42
1:A:891:LYS:NZ	1:A:1389:PHE:HA	2.35	0.42
1:A:925:GLU:OE2	1:A:1081:ALA:HA	2.20	0.42
1:A:934:ASN:ND2	1:A:937:ARG:HE	2.18	0.42
1:A:944:ASN:OD1	1:A:945:ILE:N	2.52	0.42
1:A:1448:PHE:CZ	4:D:16:VAL:HG23	2.49	0.42
2:B:39:ASN:OD1	2:B:40:THR:N	2.53	0.42
2:B:135:TYR:O	2:B:142:ILE:HA	2.19	0.42
2:B:609:CYS:HA	2:B:649:LEU:O	2.20	0.42
2:B:658:TYR:CD2	2:B:670:MET:HA	2.53	0.42
3:C:15:THR:O	3:C:16:THR:C	2.58	0.42
4:D:24:GLU:OE2	4:D:30:ASP:N	2.34	0.42
4:D:157:ILE:O	4:D:161:ALA:N	2.52	0.42
8:H:136:LYS:O	8:H:136:LYS:HG2	2.18	0.42
11:K:68:GLU:HG2	11:K:72:LEU:HD23	2.02	0.42
11:K:71:THR:OG1	11:K:72:LEU:N	2.52	0.42
11:K:99:ASN:O	11:K:100:LEU:HD12	2.19	0.42
15:O:361:PHE:HB3	15:O:480:TYR:HE2	1.84	0.42
15:O:468:LEU:HG	15:O:478:VAL:HG13	2.01	0.42
15:O:527:LEU:HD23	16:P:246:VAL:HG21	2.01	0.42
15:O:601:THR:HG23	15:O:602:LEU:N	2.34	0.42
16:P:108:LYS:HA	16:P:111:LYS:HB2	2.02	0.42
16:P:135:LYS:CB	16:P:151:TYR:CD1	2.67	0.42
19:S:390:GLU:OE1	19:S:394:LYS:HE3	2.19	0.42
1:A:252:ARG:O	1:A:254:GLU:N	2.52	0.42
1:A:378:ARG:HH22	1:A:477:GLN:NE2	2.18	0.42
1:A:378:ARG:NH1	1:A:518:ASN:HD21	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:404:TYR:CE1	1:A:528:ARG:HD2	2.55	0.42
1:A:493:ARG:HB2	1:A:499:ARG:NH2	2.35	0.42
1:A:744:LEU:HB2	1:A:750:LEU:HD11	2.01	0.42
1:A:774:ARG:NH2	1:A:804:LEU:HD11	2.35	0.42
1:A:794:MET:HB3	1:A:799:SER:OG	2.20	0.42
1:A:799:SER:OG	1:A:800:LYS:N	2.53	0.42
1:A:1175:ASP:HB2	9:I:41:TYR:OH	2.20	0.42
2:B:202:LYS:HD3	2:B:222:SER:OG	2.20	0.42
2:B:236:LYS:O	2:B:239:LYS:HB3	2.20	0.42
2:B:252:PRO:O	2:B:256:VAL:HG23	2.20	0.42
2:B:502:THR:CG2	2:B:510:LEU:HD11	2.50	0.42
2:B:556:TYR:HB3	2:B:559:GLY:HA2	2.02	0.42
2:B:558:ASN:H	2:B:602:ALA:HA	1.85	0.42
2:B:652:ASN:O	2:B:655:ASN:HB3	2.20	0.42
2:B:760:MET:C	2:B:946:PRO:HD3	2.40	0.42
2:B:831:GLU:OE1	2:B:831:GLU:N	2.53	0.42
3:C:97:LEU:HD11	3:C:202:ILE:HD13	2.01	0.42
3:C:123:ASP:OD1	3:C:124:GLU:N	2.53	0.42
5:E:106:GLN:O	5:E:107:THR:HB	2.20	0.42
5:E:145:THR:HG23	5:E:146:HIS:N	2.35	0.42
13:M:71:ILE:HG21	14:N:367:LYS:NZ	2.35	0.42
15:O:108:GLN:N	15:O:108:GLN:OE1	2.53	0.42
15:O:471:THR:HB	15:O:477:TYR:O	2.19	0.42
15:O:574:TYR:CD1	15:O:651:PHE:HE1	2.38	0.42
18:R:104:ALA:HA	18:R:107:TRP:HB2	2.01	0.42
18:R:195:LYS:O	18:R:198:VAL:HB	2.19	0.42
18:R:467:ARG:O	18:R:471:LYS:HB3	2.20	0.42
21:Y:8:DA:H2''	21:Y:9:DA:C8	2.55	0.42
21:Y:72:DA:C5	21:Y:73:DT:C4	3.08	0.42
1:A:106:ILE:CD1	1:A:234:ILE:HG12	2.49	0.42
1:A:305:LYS:O	15:O:535:SER:OG	2.37	0.42
1:A:579:LEU:O	1:A:582:MET:N	2.52	0.42
1:A:809:MET:HE2	2:B:953:MET:HA	2.02	0.42
1:A:809:MET:O	1:A:851:SER:HB2	2.20	0.42
1:A:1133:SER:OG	20:X:64:DA:H5''	2.20	0.42
1:A:1144:VAL:HG23	1:A:1310:ILE:CG2	2.50	0.42
1:A:1144:VAL:HA	1:A:1292:GLU:HG3	2.02	0.42
2:B:197:GLN:HE22	2:B:451:ARG:HD2	1.84	0.42
2:B:460:ARG:CZ	2:B:720:ARG:HH12	2.33	0.42
2:B:725:LEU:HB3	2:B:788:ARG:HB2	2.01	0.42
2:B:915:ARG:HD2	2:B:1023:TYR:CD2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:22:ASP:O	4:D:26:LYS:N	2.41	0.42
5:E:31:THR:O	5:E:34:GLU:HB2	2.19	0.42
5:E:183:PRO:O	5:E:187:TYR:N	2.48	0.42
6:F:86:THR:HB	6:F:89:GLU:N	2.32	0.42
7:G:38:ILE:HD11	7:G:194:TYR:HB3	2.02	0.42
8:H:65:LEU:HD13	8:H:89:LEU:HD12	2.02	0.42
8:H:100:THR:OG1	8:H:138:GLU:HA	2.20	0.42
14:N:396:ALA:C	14:N:397:LEU:HD12	2.41	0.42
15:O:282:ILE:H	15:O:282:ILE:HD12	1.85	0.42
15:O:291:ARG:HG3	15:O:292:ARG:N	2.35	0.42
16:P:86:MET:HB3	16:P:90:GLU:CB	2.49	0.42
16:P:121:VAL:O	16:P:125:LEU:HG	2.20	0.42
16:P:191:PHE:CB	16:P:203:LYS:HD2	2.50	0.42
16:P:304:LYS:HG3	16:P:305:HIS:CD2	2.55	0.42
18:R:238:ARG:HE	19:S:286:UNK:CB	2.33	0.42
18:R:416:ARG:HG2	18:R:613:HIS:O	2.20	0.42
19:S:413:ARG:HG3	20:X:9:DA:OP1	2.20	0.42
21:Y:61:DA:C4	21:Y:62:DT:N3	2.87	0.42
1:A:27:VAL:HA	1:A:30:SER:OG	2.19	0.41
1:A:270:PRO:HG3	2:B:1046:LEU:HD13	2.02	0.41
1:A:399:ALA:CB	1:A:466:LEU:HB2	2.50	0.41
1:A:464:ARG:HH11	1:A:467:GLU:CD	2.24	0.41
1:A:968:GLY:C	1:A:970:LEU:H	2.23	0.41
1:A:1092:ILE:O	1:A:1096:SER:CB	2.68	0.41
1:A:1128:GLU:HG2	1:A:1136:ILE:HG13	2.02	0.41
1:A:1144:VAL:HG23	1:A:1310:ILE:HG23	2.02	0.41
1:A:1179:ASP:OD1	9:I:36:GLU:N	2.51	0.41
2:B:340:LEU:HD23	2:B:340:LEU:HA	1.87	0.41
2:B:987:MET:O	2:B:991:LEU:N	2.48	0.41
2:B:1038:ARG:HH21	2:B:1041:GLY:H	1.67	0.41
3:C:229:LEU:HB3	3:C:293:ARG:HH12	1.85	0.41
4:D:5:GLU:HB3	7:G:6:LYS:HB3	2.02	0.41
7:G:4:LEU:HD21	7:G:73:ARG:HE	1.85	0.41
7:G:82:GLY:HA2	7:G:150:ILE:O	2.20	0.41
11:K:77:ARG:HD2	11:K:91:TYR:HE1	1.85	0.41
13:M:75:PRO:HA	14:N:362:SER:OG	2.20	0.41
15:O:92:LYS:NZ	17:Q:1082:UNK:HA	2.35	0.41
16:P:183:TRP:HZ2	16:P:266:GLU:HB3	1.85	0.41
16:P:233:VAL:HG23	16:P:234:GLU:O	2.20	0.41
18:R:195:LYS:O	18:R:199:VAL:HG23	2.20	0.41
19:S:430:LYS:HD3	19:S:482:ASP:OD2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:91:PHE:HB2	1:A:224:PRO:HG3	2.02	0.41
1:A:479:SER:O	2:B:1065:MET:HE2	2.21	0.41
1:A:711:SER:OG	2:B:1017:ILE:HA	2.20	0.41
1:A:1305:CYS:HB2	5:E:141:VAL:HG21	2.01	0.41
1:A:1342:THR:HG23	1:A:1343:MET:N	2.35	0.41
1:A:1411:VAL:HG13	1:A:1412:SER:N	2.32	0.41
1:A:1448:PHE:CZ	4:D:16:VAL:CG2	3.03	0.41
2:B:240:ILE:CG1	2:B:286:ASN:HD22	2.33	0.41
2:B:797:ARG:NH1	18:R:99:TYR:HE2	2.18	0.41
2:B:1060:LEU:HD23	2:B:1060:LEU:HA	1.80	0.41
3:C:247:PHE:HD1	3:C:285:PHE:CD2	2.39	0.41
7:G:51:LEU:HD11	7:G:70:VAL:HG21	2.02	0.41
8:H:4:THR:HA	8:H:60:ALA:HB1	2.01	0.41
13:M:122:ASP:HB3	13:M:145:VAL:HG21	2.02	0.41
13:M:183:PHE:C	13:M:185:TYR:N	2.72	0.41
15:O:47:PHE:CZ	15:O:590:PHE:CE2	3.08	0.41
15:O:101:LEU:HD21	15:O:130:LEU:HD11	2.00	0.41
15:O:203:ILE:HG22	15:O:207:HIS:HD2	1.83	0.41
15:O:341:GLU:HA	15:O:344:SER:HB2	2.02	0.41
15:O:638:PHE:HD1	17:Q:58:TYR:CE2	2.37	0.41
18:R:438:THR:HG22	18:R:439:ALA:O	2.20	0.41
19:S:417:THR:HG22	19:S:453:GLN:NE2	2.34	0.41
1:A:29:GLN:HG2	2:B:1109:THR:HB	2.03	0.41
1:A:37:ARG:CG	1:A:38:ASP:H	2.33	0.41
1:A:347:VAL:HG12	1:A:349:PRO:HD2	2.03	0.41
1:A:378:ARG:NH2	1:A:516:GLU:OE1	2.54	0.41
1:A:582:MET:HE1	1:A:703:ARG:HB3	2.03	0.41
1:A:918:GLY:HA3	5:E:208:TYR:CE1	2.55	0.41
1:A:1260:MET:O	1:A:1263:LEU:HB2	2.21	0.41
2:B:151:ARG:N	2:B:430:THR:OG1	2.52	0.41
2:B:576:ARG:O	2:B:580:ARG:HG2	2.20	0.41
2:B:593:ASN:ND2	2:B:596:GLN:HB3	2.35	0.41
2:B:736:VAL:HG11	2:B:960:GLU:HG3	2.01	0.41
2:B:1129:PHE:CZ	2:B:1141:LEU:HD21	2.54	0.41
3:C:117:ASP:OD1	3:C:118:SER:N	2.52	0.41
7:G:207:LEU:HB3	7:G:210:TRP:CE2	2.55	0.41
9:I:24:LEU:HG	9:I:33:PHE:CG	2.55	0.41
11:K:85:ASP:OD1	11:K:108:TYR:HB2	2.20	0.41
13:M:184:LYS:HA	13:M:184:LYS:HD2	1.83	0.41
15:O:174:TYR:O	15:O:178:VAL:HG23	2.20	0.41
15:O:472:LYS:HB3	15:O:475:VAL:HG11	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:1079:UNK:O	17:Q:1083:UNK:N	2.54	0.41
18:R:138:LYS:HE3	18:R:175:LEU:O	2.21	0.41
18:R:417:ASN:HA	19:S:437:THR:HG22	2.02	0.41
18:R:495:PRO:HA	18:R:534:VAL:O	2.20	0.41
1:A:269:ARG:NE	1:A:286:THR:OG1	2.38	0.41
1:A:1199:GLU:HB3	5:E:3:GLN:HE22	1.85	0.41
2:B:209:ALA:HB2	2:B:366:ILE:HG21	2.01	0.41
2:B:234:ILE:HD11	2:B:237:ASN:N	2.35	0.41
2:B:627:LEU:HD23	2:B:627:LEU:HA	1.88	0.41
2:B:762:TYR:OH	2:B:930:ASP:HB3	2.20	0.41
2:B:860:VAL:HG13	2:B:861:ASN:N	2.33	0.41
3:C:100:ARG:HH12	10:J:2:ILE:HB	1.84	0.41
3:C:133:VAL:HA	3:C:207:HIS:HA	2.03	0.41
3:C:251:PHE:CB	3:C:255:VAL:HG21	2.51	0.41
5:E:82:PHE:CD1	5:E:111:VAL:HB	2.55	0.41
5:E:90:VAL:O	5:E:93:MET:HB2	2.20	0.41
10:J:6:ARG:HB3	10:J:11:GLY:CA	2.49	0.41
15:O:160:VAL:O	15:O:163:VAL:HB	2.19	0.41
15:O:292:ARG:O	15:O:296:LEU:HG	2.21	0.41
15:O:472:LYS:HA	15:O:473:PRO:HD2	1.68	0.41
15:O:632:GLU:O	15:O:635:LEU:HB2	2.20	0.41
20:X:25:DT:C6	20:X:26:DT:H72	2.55	0.41
20:X:29:DG:C8	20:X:29:DG:H5'	2.55	0.41
20:X:74:DA:H2''	20:X:75:DG:H8	1.85	0.41
21:Y:14:DC:C2	21:Y:15:DT:C2	3.08	0.41
1:A:62:SER:OG	1:A:63:SER:N	2.53	0.41
1:A:181:ASP:OD2	1:A:219:MET:HA	2.20	0.41
1:A:378:ARG:NE	1:A:516:GLU:OE1	2.53	0.41
1:A:404:TYR:OH	1:A:525:GLU:OE2	2.26	0.41
1:A:557:PHE:CE1	2:B:767:ILE:HD11	2.55	0.41
1:A:582:MET:HE2	1:A:703:ARG:HB3	2.02	0.41
1:A:665:ASP:CG	1:A:797:CYS:HA	2.40	0.41
1:A:837:LYS:HE2	1:A:837:LYS:HB3	1.39	0.41
1:A:960:MET:O	1:A:964:ASN:N	2.49	0.41
1:A:1229:ARG:HH12	1:A:1231:ALA:HB2	1.85	0.41
1:A:1365:LYS:O	5:E:177:ARG:HB2	2.21	0.41
2:B:66:ASN:CG	2:B:159:ASN:H	2.22	0.41
2:B:549:LEU:O	2:B:549:LEU:CD2	2.54	0.41
2:B:689:PRO:HD3	2:B:915:ARG:CZ	2.50	0.41
2:B:824:LEU:HB2	2:B:825:GLY:H	1.40	0.41
2:B:987:MET:O	2:B:990:ILE:HB	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:21:PRO:HD3	3:C:29:ASN:O	2.20	0.41
7:G:15:PRO:HA	7:G:18:PHE:CE2	2.55	0.41
9:I:6:PRO:HG2	9:I:31:TYR:CZ	2.55	0.41
9:I:23:THR:OG1	9:I:24:LEU:N	2.54	0.41
13:M:142:GLY:HA2	13:M:185:TYR:OH	2.20	0.41
13:M:183:PHE:CD2	13:M:185:TYR:HD2	2.37	0.41
14:N:374:LYS:HD3	14:N:378:VAL:HG23	2.03	0.41
15:O:75:SER:HB2	15:O:119:TYR:CE1	2.55	0.41
15:O:135:LEU:O	15:O:138:ASP:HB3	2.21	0.41
15:O:369:HIS:CG	15:O:370:LEU:N	2.88	0.41
15:O:369:HIS:O	15:O:370:LEU:HB2	2.20	0.41
18:R:190:ASP:O	18:R:191:LEU:HB2	2.19	0.41
18:R:441:ILE:HD12	18:R:447:MET:HB3	2.01	0.41
18:R:455:GLU:HB2	18:R:591:TYR:HB2	2.02	0.41
20:X:64:DA:C6	20:X:65:DA:C6	3.09	0.41
21:Y:60:DT:C2	21:Y:61:DA:N7	2.89	0.41
1:A:413:ARG:O	1:A:417:GLN:N	2.39	0.41
1:A:607:LYS:HG3	8:H:120:GLY:HA3	2.02	0.41
1:A:618:HIS:CE1	8:H:77:ARG:HH12	2.39	0.41
1:A:913:GLN:NE2	1:A:917:GLY:H	2.17	0.41
2:B:399:PHE:HA	2:B:402:SER:CB	2.50	0.41
2:B:774:ASN:HA	2:B:931:MET:HE1	2.03	0.41
2:B:947:HIS:O	2:B:950:PRO:HD2	2.20	0.41
2:B:957:LYS:NZ	2:B:1022:ILE:HD13	2.36	0.41
2:B:1055:SER:OG	2:B:1056:ARG:N	2.51	0.41
3:C:41:GLU:O	3:C:57:ILE:HG22	2.20	0.41
4:D:61:ASN:OD1	7:G:103:GLY:HA3	2.20	0.41
5:E:1:MET:HG3	5:E:4:GLU:H	1.85	0.41
8:H:99:GLY:HA3	8:H:118:PHE:HA	2.03	0.41
15:O:265:VAL:O	15:O:273:ILE:N	2.26	0.41
15:O:328:ASP:N	15:O:329:PRO:CD	2.83	0.41
15:O:478:VAL:HB	15:O:480:TYR:CZ	2.56	0.41
15:O:638:PHE:CD1	17:Q:58:TYR:HE2	2.38	0.41
18:R:460:LEU:HD23	18:R:464:LYS:HE2	2.02	0.41
19:S:439:PHE:HB2	19:S:451:ARG:NH2	2.34	0.41
21:Y:67:DA:H1'	21:Y:68:DA:C5	2.55	0.41
1:A:11:LYS:HD2	2:B:1145:ASP:HA	2.03	0.41
1:A:614:ILE:HG21	1:A:624:ILE:HD12	2.02	0.41
1:A:988:ASP:HA	1:A:991:LYS:CB	2.41	0.41
2:B:68:PHE:CE1	2:B:385:SER:HA	2.56	0.41
2:B:193:VAL:HG12	2:B:194:ILE:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:224:THR:OG1	2:B:225:HIS:N	2.52	0.41
2:B:232:TYR:CE1	2:B:253:ILE:HB	2.56	0.41
2:B:263:LEU:HD21	2:B:296:TYR:CD1	2.55	0.41
2:B:458:LEU:HA	2:B:469:MET:SD	2.61	0.41
2:B:630:LEU:HA	2:B:635:LEU:HB2	2.03	0.41
2:B:732:GLN:NE2	10:J:49:MET:HG2	2.35	0.41
3:C:44:ILE:HA	3:C:54:PHE:HB2	2.03	0.41
3:C:70:ILE:HD11	3:C:320:ILE:HB	2.03	0.41
5:E:117:THR:HG23	5:E:120:ALA:H	1.86	0.41
7:G:84:ILE:CG2	7:G:147:ARG:HB3	2.51	0.41
8:H:6:PHE:CG	8:H:7:ASP:N	2.88	0.41
9:I:21:VAL:O	9:I:23:THR:N	2.47	0.41
15:O:32:MET:O	15:O:34:ILE:N	2.54	0.41
15:O:583:TRP:CZ2	16:P:312:PHE:O	2.74	0.41
16:P:19:HIS:O	16:P:23:MET:HG2	2.20	0.41
16:P:87:SER:H	16:P:90:GLU:HB2	1.85	0.41
18:R:402:LEU:HA	18:R:477:LYS:O	2.19	0.41
21:Y:24:DG:H2''	21:Y:25:DA:C8	2.56	0.41
1:A:363:ARG:HD3	2:B:1127:LEU:HD21	2.02	0.41
1:A:556:ASP:OD1	2:B:947:HIS:NE2	2.53	0.41
1:A:574:ALA:HB1	11:K:77:ARG:HH22	1.85	0.41
1:A:926:MET:HG3	1:A:932:PRO:HG3	2.02	0.41
1:A:1319:VAL:O	1:A:1322:VAL:N	2.54	0.41
1:A:1451:LEU:HG	4:D:107:MET:SD	2.61	0.41
2:B:52:LEU:HD11	2:B:57:LEU:HD12	2.03	0.41
2:B:879:SER:HA	2:B:902:GLN:HB3	2.02	0.41
8:H:5:LEU:HB2	8:H:59:ILE:HD12	2.03	0.41
15:O:75:SER:H	15:O:78:GLU:HB3	1.86	0.41
15:O:220:GLU:HG2	15:O:221:LYS:N	2.35	0.41
16:P:25:LYS:HG3	16:P:26:GLY:N	2.36	0.41
18:R:142:MET:HG3	18:R:144:ILE:HG22	2.03	0.41
18:R:267:ALA:O	18:R:271:SER:N	2.47	0.41
18:R:514:GLU:HG2	19:S:408:TYR:CZ	2.55	0.41
18:R:521:TYR:CE2	18:R:523:MET:HB2	2.51	0.41
18:R:590:THR:O	18:R:594:LYS:HG3	2.21	0.41
19:S:420:TRP:CH2	19:S:449:ARG:HG2	2.56	0.41
20:X:67:DT:H6	20:X:67:DT:H2'	1.65	0.41
1:A:127:LEU:HD11	1:A:140:ILE:HG21	2.02	0.41
1:A:283:ASP:O	1:A:287:VAL:HG23	2.21	0.41
1:A:402:LEU:HD23	1:A:466:LEU:HD13	1.87	0.41
1:A:589:HIS:HA	11:K:104:ARG:NH2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:591:ASP:OD1	1:A:591:ASP:N	2.52	0.41
1:A:927:GLU:H	1:A:932:PRO:HA	1.85	0.41
1:A:1155:ARG:O	1:A:1158:LYS:HB3	2.21	0.41
2:B:68:PHE:HE1	2:B:385:SER:HA	1.85	0.41
2:B:552:ASN:CG	2:B:553:TYR:H	2.23	0.41
2:B:556:TYR:OH	2:B:561:LEU:HD12	2.20	0.41
2:B:1038:ARG:HD3	2:B:1059:GLY:N	2.35	0.41
2:B:1054:ARG:NE	21:Y:24:DG:OP1	2.42	0.41
3:C:5:VAL:HG12	3:C:14:ASN:O	2.21	0.41
3:C:76:PRO:HB3	3:C:115:TRP:CZ2	2.56	0.41
3:C:216:HIS:CG	3:C:218:LYS:HE3	2.56	0.41
3:C:245:ARG:O	3:C:248:GLN:HG2	2.21	0.41
5:E:2:ASP:O	5:E:5:ASN:HB2	2.21	0.41
5:E:23:VAL:HG22	5:E:28:TYR:HB2	2.03	0.41
5:E:85:GLU:CD	5:E:86:PRO:HD2	2.41	0.41
8:H:61:SER:CB	8:H:139:ASN:HD22	2.32	0.41
11:K:110:GLU:CD	11:K:111:THR:H	2.23	0.41
13:M:72:GLU:O	14:N:364:ARG:HG2	2.21	0.41
15:O:132:TYR:OH	15:O:652:GLN:NE2	2.44	0.41
15:O:175:LEU:HA	15:O:178:VAL:HB	2.01	0.41
15:O:291:ARG:HH22	15:O:652:GLN:HE21	1.68	0.41
15:O:314:ILE:HD12	15:O:368:ARG:HB2	2.01	0.41
15:O:354:GLU:OE2	15:O:477:TYR:HE2	2.03	0.41
15:O:529:LYS:O	15:O:533:ILE:HG12	2.20	0.41
15:O:638:PHE:CD1	17:Q:58:TYR:CE2	3.09	0.41
16:P:69:GLU:HG3	16:P:70:LEU:N	2.31	0.41
18:R:14:ARG:HH22	18:R:36:PRO:HG2	1.84	0.41
18:R:167:LYS:HA	18:R:167:LYS:HD3	1.90	0.41
18:R:241:HIS:O	18:R:245:VAL:HG22	2.20	0.41
18:R:287:PRO:HA	18:R:288:PRO:HD3	1.96	0.41
18:R:439:ALA:HA	18:R:450:THR:N	2.35	0.41
19:S:449:ARG:HD3	19:S:449:ARG:HA	1.87	0.41
20:X:8:DT:C4	20:X:9:DA:N6	2.88	0.41
20:X:63:DC:H2''	20:X:64:DA:N7	2.36	0.41
20:X:79:DT:N3	21:Y:1:DA:N1	2.69	0.41
21:Y:53:DG:H1'	21:Y:54:DA:H5'	2.03	0.41
21:Y:56:DA:C6	21:Y:57:DA:C6	3.08	0.41
1:A:45:ASP:CG	1:A:46:ARG:N	2.74	0.41
1:A:108:LYS:HG2	1:A:180:HIS:NE2	2.36	0.41
1:A:155:LEU:HD11	1:A:156:HIS:HD2	1.85	0.41
1:A:366:GLY:CA	2:B:1061:ARG:HH22	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:51:PHE:HD1	2:B:637:PHE:CZ	2.39	0.41
2:B:143:MET:HA	19:S:397:VAL:O	2.21	0.41
2:B:332:ILE:HG13	2:B:333:ALA:N	2.27	0.41
2:B:343:ARG:NE	2:B:541:ILE:HG12	2.36	0.41
2:B:969:LEU:HA	10:J:47:ARG:NH1	2.35	0.41
2:B:1101:MET:HE3	2:B:1101:MET:HB2	1.94	0.41
2:B:1114:GLU:HG3	2:B:1115:ASN:N	2.36	0.41
3:C:142:ARG:HB2	3:C:198:PRO:HG3	2.03	0.41
4:D:11:LEU:H	7:G:3:ILE:HG22	1.84	0.41
7:G:148:PHE:CE1	7:G:150:ILE:HD11	2.56	0.41
7:G:207:LEU:HB3	7:G:210:TRP:CD2	2.56	0.41
14:N:304:PHE:HB2	14:N:411:ARG:O	2.21	0.41
15:O:68:LEU:HD21	15:O:121:TYR:C	2.42	0.41
15:O:353:GLU:HB3	15:O:361:PHE:HE2	1.86	0.41
15:O:517:VAL:HG21	15:O:521:ILE:CG2	2.51	0.41
18:R:434:GLU:HA	18:R:435:PRO:HA	1.89	0.41
19:S:425:MET:HG2	19:S:429:TYR:CE2	2.56	0.41
20:X:6:DC:C2	20:X:7:DA:C5	3.09	0.41
20:X:77:DC:H2"	20:X:78:DG:C8	2.55	0.41
1:A:5:VAL:HG23	7:G:38:ILE:O	2.20	0.40
1:A:48:PRO:C	1:A:49:LYS:HG2	2.42	0.40
1:A:207:HIS:C	1:A:209:PRO:HD3	2.41	0.40
1:A:329:SER:OG	1:A:330:ASP:N	2.54	0.40
1:A:937:ARG:HG3	1:A:938:SER:N	2.36	0.40
1:A:997:GLN:C	1:A:999:ASP:N	2.73	0.40
1:A:1280:ARG:HG3	1:A:1296:GLU:OE1	2.21	0.40
2:B:101:GLY:O	2:B:109:LYS:HA	2.22	0.40
2:B:140:ASN:HD22	19:S:394:LYS:HG2	1.86	0.40
2:B:926:VAL:HG13	2:B:930:ASP:HB2	2.03	0.40
3:C:6:GLY:N	3:C:13:THR:O	2.55	0.40
3:C:9:TYR:HB3	3:C:280:LEU:HB3	2.04	0.40
3:C:32:ASN:OD1	3:C:33:VAL:N	2.54	0.40
6:F:133:VAL:HG23	6:F:146:TRP:C	2.41	0.40
6:F:135:ARG:HH22	7:G:58:GLN:HE21	1.69	0.40
6:F:143:PHE:CG	6:F:144:GLU:N	2.87	0.40
8:H:12:VAL:HB	8:H:53:ASP:H	1.87	0.40
10:J:42:LYS:HG3	10:J:43:ARG:HG3	2.02	0.40
15:O:185:TYR:CD2	15:O:185:TYR:O	2.74	0.40
15:O:584:ASN:ND2	16:P:310:VAL:CG2	2.63	0.40
20:X:13:DT:C4	20:X:14:DA:C6	3.09	0.40
1:A:164:VAL:HA	1:A:179:ILE:O	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:443:ASN:O	1:A:445:ARG:N	2.55	0.40
1:A:561:SER:HA	1:A:564:ILE:HG22	2.03	0.40
1:A:642:PRO:HG3	8:H:115:TYR:CE2	2.56	0.40
1:A:719:PRO:O	1:A:724:LYS:NZ	2.54	0.40
2:B:65:PHE:O	2:B:68:PHE:HB3	2.21	0.40
2:B:138:GLY:O	2:B:141:ILE:HG22	2.21	0.40
2:B:603:THR:O	2:B:603:THR:OG1	2.24	0.40
2:B:961:LEU:HD22	2:B:1018:PHE:CZ	2.57	0.40
2:B:1038:ARG:NH2	2:B:1041:GLY:H	2.20	0.40
3:C:31:TRP:CD1	3:C:32:ASN:N	2.89	0.40
3:C:54:PHE:CZ	3:C:300:PHE:CD2	3.09	0.40
3:C:55:ASP:OD1	3:C:56:LEU:N	2.54	0.40
3:C:240:LYS:HB2	3:C:261:GLY:O	2.21	0.40
6:F:86:THR:C	6:F:88:TYR:H	2.24	0.40
11:K:60:SER:HB3	11:K:104:ARG:NH2	2.35	0.40
14:N:365:VAL:HG12	14:N:366:HIS:O	2.21	0.40
15:O:573:SER:O	15:O:576:PHE:CE2	2.74	0.40
16:P:106:TRP:HB2	16:P:147:ILE:HG22	2.04	0.40
16:P:252:LYS:HD3	16:P:266:GLU:CG	2.50	0.40
18:R:96:ILE:HG22	18:R:141:HIS:NE2	2.35	0.40
18:R:557:TYR:HA	18:R:560:LEU:HD12	2.02	0.40
21:Y:10:DC:H2''	21:Y:11:DC:C5	2.56	0.40
21:Y:70:DA:H2''	21:Y:71:DT:O5'	2.19	0.40
1:A:126:GLU:O	1:A:132:VAL:HG21	2.22	0.40
1:A:205:LEU:HA	1:A:212:GLU:HG2	2.03	0.40
1:A:329:SER:HB3	1:A:355:GLN:NE2	2.24	0.40
1:A:392:VAL:HG23	1:A:488:HIS:CD2	2.55	0.40
1:A:571:TYR:CA	1:A:575:THR:HG21	2.50	0.40
1:A:633:PHE:HZ	1:A:643:ASN:HB3	1.86	0.40
1:A:880:ALA:HA	21:Y:20:DC:O4'	2.22	0.40
1:A:885:MET:O	1:A:889:LEU:HB3	2.22	0.40
1:A:1384:LEU:HD12	1:A:1413:GLU:OE1	2.22	0.40
1:A:1428:PHE:CD1	6:F:134:ILE:HG23	2.57	0.40
2:B:341:ASP:HB3	13:M:151:VAL:HG11	2.02	0.40
2:B:612:LEU:O	2:B:646:VAL:HB	2.21	0.40
2:B:637:PHE:C	2:B:639:ASP:H	2.25	0.40
2:B:1129:PHE:HE2	2:B:1141:LEU:HD11	1.87	0.40
3:C:70:ILE:O	3:C:75:VAL:HG13	2.20	0.40
3:C:142:ARG:HG3	3:C:157:TYR:HE1	1.87	0.40
8:H:134:ASN:O	8:H:135:LEU:HD12	2.22	0.40
11:K:79:VAL:HG21	11:K:124:LEU:HD12	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:124:LEU:HA	11:K:127:LEU:HD12	2.03	0.40
13:M:111:ARG:HB3	13:M:243:ILE:CG2	2.46	0.40
13:M:126:ASP:HB2	13:M:129:ALA:HB2	2.03	0.40
15:O:271:LEU:HD23	15:O:272:ARG:H	1.87	0.40
15:O:647:LEU:O	15:O:650:VAL:HG12	2.21	0.40
16:P:29:ALA:O	16:P:71:LYS:HB3	2.21	0.40
17:Q:1072:UNK:O	17:Q:1074:UNK:N	2.54	0.40
18:R:388:GLY:HA3	18:R:576:SER:HB2	2.02	0.40
18:R:514:GLU:HG2	19:S:408:TYR:CE1	2.56	0.40
1:A:433:LEU:O	1:A:442:ARG:N	2.39	0.40
1:A:483:LEU:HD13	1:A:507:PRO:CG	2.51	0.40
1:A:596:ALA:HB2	1:A:608:GLN:OE1	2.21	0.40
1:A:772:LYS:O	1:A:776:GLU:HB2	2.21	0.40
1:A:857:SER:O	1:A:860:GLU:HG2	2.21	0.40
2:B:241:TYR:CE1	2:B:252:PRO:HG3	2.56	0.40
2:B:325:GLU:HG3	2:B:329:THR:N	2.35	0.40
2:B:379:LEU:HA	2:B:379:LEU:HD23	1.91	0.40
2:B:465:SER:O	2:B:469:MET:N	2.43	0.40
2:B:914:SER:C	2:B:916:HIS:H	2.25	0.40
2:B:1013:LEU:HD23	2:B:1013:LEU:HA	1.85	0.40
2:B:1031:VAL:O	2:B:1034:LYS:N	2.54	0.40
4:D:25:LYS:HA	4:D:29:TRP:HB2	2.02	0.40
13:M:89:GLN:HB2	14:N:392:GLN:HB3	2.03	0.40
13:M:160:ALA:HA	14:N:306:VAL:HG12	2.03	0.40
14:N:311:THR:O	14:N:314:PRO:HD3	2.21	0.40
15:O:52:LEU:O	15:O:56:HIS:N	2.45	0.40
15:O:515:LYS:HE2	15:O:515:LYS:HB3	1.85	0.40
18:R:134:CYS:HB2	18:R:139:THR:OG1	2.22	0.40
18:R:498:LEU:HA	18:R:501:LEU:HB3	2.03	0.40
1:A:164:VAL:HB	1:A:180:HIS:HB3	2.04	0.40
1:A:185:TRP:HA	1:A:189:LYS:HZ3	1.87	0.40
1:A:246:ALA:O	1:A:247:THR:HG23	2.22	0.40
2:B:81:GLN:O	2:B:94:LYS:HA	2.21	0.40
2:B:192:LYS:NZ	2:B:438:SER:O	2.36	0.40
2:B:254:ALA:O	2:B:258:LYS:HG2	2.22	0.40
2:B:736:VAL:HA	2:B:974:GLU:O	2.20	0.40
2:B:795:LEU:CB	2:B:894:ALA:O	2.45	0.40
3:C:133:VAL:HB	3:C:207:HIS:CD2	2.57	0.40
3:C:153:PRO:HB3	3:C:197:ARG:HH12	1.87	0.40
4:D:1:MET:HG3	4:D:2:LYS:N	2.37	0.40
7:G:87:GLY:CA	7:G:148:PHE:HE2	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:108:ILE:HG23	7:G:196:LEU:HB2	2.04	0.40
7:G:111:PRO:HD2	7:G:198:GLY:H	1.87	0.40
8:H:5:LEU:HD13	8:H:60:ALA:HA	2.04	0.40
9:I:29:CYS:HB3	13:M:183:PHE:CE2	2.56	0.40
13:M:147:THR:HB	13:M:182:PHE:O	2.21	0.40
14:N:364:ARG:CG	14:N:365:VAL:N	2.83	0.40
15:O:170:THR:HB	15:O:276:PRO:O	2.22	0.40
15:O:184:LYS:HD3	15:O:187:ILE:HD11	2.03	0.40
15:O:292:ARG:HH12	15:O:650:VAL:HB	1.86	0.40
15:O:329:PRO:C	15:O:330:LEU:HG	2.42	0.40
18:R:536:GLY:O	18:R:538:ILE:HG12	2.21	0.40
20:X:73:DA:H2''	20:X:74:DA:C8	2.56	0.40
21:Y:58:DA:H2''	21:Y:59:DG:C8	2.57	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	1422/1460 (97%)	1106 (78%)	292 (20%)	24 (2%)	9	43
2	B	1112/1149 (97%)	901 (81%)	194 (17%)	17 (2%)	10	46
3	C	333/335 (99%)	282 (85%)	44 (13%)	7 (2%)	7	39
4	D	113/161 (70%)	87 (77%)	24 (21%)	2 (2%)	8	42
5	E	213/215 (99%)	182 (85%)	29 (14%)	2 (1%)	17	56
6	F	81/155 (52%)	66 (82%)	13 (16%)	2 (2%)	5	35
7	G	178/212 (84%)	145 (82%)	30 (17%)	3 (2%)	9	43
8	H	136/146 (93%)	112 (82%)	23 (17%)	1 (1%)	22	62
9	I	40/110 (36%)	30 (75%)	7 (18%)	3 (8%)	1	15
10	J	65/70 (93%)	54 (83%)	11 (17%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
11	K	99/142 (70%)	77 (78%)	22 (22%)	0	100	100
12	L	44/70 (63%)	33 (75%)	11 (25%)	0	100	100
13	M	160/282 (57%)	127 (79%)	31 (19%)	2 (1%)	12	48
14	N	106/422 (25%)	82 (77%)	24 (23%)	0	100	100
15	O	533/654 (82%)	401 (75%)	116 (22%)	16 (3%)	4	31
16	P	271/317 (86%)	219 (81%)	47 (17%)	5 (2%)	8	42
17	Q	33/251 (13%)	28 (85%)	5 (15%)	0	100	100
18	R	514/736 (70%)	439 (85%)	72 (14%)	3 (1%)	25	65
19	S	172/594 (29%)	157 (91%)	14 (8%)	1 (1%)	25	65
All	All	5625/7481 (75%)	4528 (80%)	1009 (18%)	88 (2%)	13	45

All (88) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	249	PRO
1	A	252	ARG
1	A	587	ILE
1	A	837	LYS
1	A	1033	GLU
1	A	1064	GLU
2	B	369	ARG
2	B	418	ALA
2	B	590	ILE
7	G	123	PRO
8	H	130	ARG
9	I	21	VAL
13	M	84	SER
13	M	107	ILE
15	O	146	VAL
15	O	183	MET
15	O	329	PRO
15	O	473	PRO
16	P	150	LEU
16	P	315	TRP
18	R	154	VAL
1	A	251	GLY
1	A	277	SER
1	A	307	ILE
1	A	838	ASN

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Mol	Chain	Res	Type
1	A	975	VAL
2	B	87	VAL
3	C	33	VAL
5	E	147	HIS
7	G	124	GLU
9	I	35	ILE
15	O	330	LEU
15	O	518	SER
16	P	267	SER
1	A	39	LEU
1	A	278	PRO
1	A	995	VAL
1	A	998	TYR
1	A	1035	PRO
1	A	1371	ILE
2	B	168	GLU
2	B	344	GLU
2	B	416	TYR
2	B	586	GLU
2	B	589	SER
3	C	16	THR
3	C	87	ASN
3	C	255	VAL
6	F	144	GLU
7	G	191	PRO
15	O	163	VAL
18	R	274	LYS
1	A	276	ASP
1	A	444	LEU
1	A	483	LEU
1	A	1328	ILE
2	B	277	SER
2	B	713	ILE
2	B	767	ILE
3	C	88	ASN
4	D	128	PRO
9	I	23	THR
15	O	186	THR
15	O	517	VAL
16	P	202	PRO
19	S	491	ASN
2	B	624	ASP

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Mol	Chain	Res	Type
3	C	62	SER
4	D	64	ASN
15	O	39	GLN
1	A	68	ALA
6	F	116	ASP
15	O	472	LYS
15	O	586	ALA
2	B	142	ILE
1	A	599	LYS
2	B	215	ILE
3	C	101	ILE
1	A	186	VAL
2	B	601	ILE
2	B	1137	ILE
15	O	88	VAL
15	O	352	VAL
16	P	192	PRO
5	E	125	PRO
15	O	495	VAL
15	O	620	LEU
18	R	435	PRO

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	1232/1257 (98%)	1222 (99%)	10 (1%)	81	89
2	B	975/1006 (97%)	970 (100%)	5 (0%)	88	93
3	C	296/296 (100%)	295 (100%)	1 (0%)	92	95
4	D	110/145 (76%)	110 (100%)	0	100	100
5	E	197/197 (100%)	197 (100%)	0	100	100
6	F	73/137 (53%)	73 (100%)	0	100	100
7	G	164/190 (86%)	162 (99%)	2 (1%)	71	84
8	H	123/128 (96%)	121 (98%)	2 (2%)	62	79

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
9	I	38/98 (39%)	38 (100%)	0	100	100
10	J	62/65 (95%)	62 (100%)	0	100	100
11	K	91/130 (70%)	91 (100%)	0	100	100
12	L	40/57 (70%)	40 (100%)	0	100	100
13	M	142/249 (57%)	142 (100%)	0	100	100
14	N	92/360 (26%)	92 (100%)	0	100	100
15	O	495/593 (84%)	491 (99%)	4 (1%)	81	89
16	P	255/285 (90%)	252 (99%)	3 (1%)	71	84
17	Q	31/195 (16%)	31 (100%)	0	100	100
18	R	450/623 (72%)	450 (100%)	0	100	100
19	S	157/494 (32%)	157 (100%)	0	100	100
All	All	5023/6505 (77%)	4996 (100%)	27 (0%)	89	93

All (27) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	247	THR
1	A	276	ASP
1	A	277	SER
1	A	444	LEU
1	A	484	SER
1	A	622	VAL
1	A	830	ARG
1	A	837	LYS
1	A	1063	SER
1	A	1064	GLU
2	B	298	GLN
2	B	603	THR
2	B	772	VAL
2	B	824	LEU
2	B	863	GLN
3	C	103	LEU
7	G	58	GLN
7	G	59	LEU
8	H	129	TYR
8	H	130	ARG
15	O	181	ASP
15	O	187	ILE

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Mol	Chain	Res	Type
15	O	516	LEU
15	O	517	VAL
16	P	203	LYS
16	P	293	ILE
16	P	313	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (93) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	29	GLN
1	A	92	HIS
1	A	147	GLN
1	A	156	HIS
1	A	281	ASN
1	A	386	ASN
1	A	412	ASN
1	A	477	GLN
1	A	518	ASN
1	A	520	HIS
1	A	523	GLN
1	A	533	ASN
1	A	566	HIS
1	A	589	HIS
1	A	808	GLN
1	A	815	GLN
1	A	828	GLN
1	A	850	ASN
1	A	913	GLN
1	A	1385	GLN
2	B	116	HIS
2	B	140	ASN
2	B	275	ASN
2	B	286	ASN
2	B	299	GLN
2	B	396	ASN
2	B	423	ASN
2	B	441	ASN
2	B	456	HIS
2	B	519	HIS
2	B	558	ASN
2	B	595	HIS
2	B	626	HIS

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Mol	Chain	Res	Type
2	B	693	HIS
2	B	699	ASN
2	B	717	GLN
2	B	754	ASN
2	B	800	ASN
2	B	883	GLN
2	B	902	GLN
2	B	928	GLN
2	B	1148	GLN
3	C	29	ASN
3	C	207	HIS
3	C	296	ASN
4	D	8	ASN
4	D	64	ASN
4	D	126	GLN
5	E	3	GLN
5	E	54	GLN
5	E	104	ASN
5	E	114	ASN
5	E	153	HIS
5	E	174	GLN
7	G	28	HIS
7	G	58	GLN
7	G	112	GLN
8	H	133	ASN
8	H	134	ASN
13	M	86	HIS
13	M	92	ASN
13	M	178	GLN
13	M	190	ASN
13	M	254	GLN
14	N	288	GLN
14	N	377	ASN
14	N	392	GLN
15	O	43	ASN
15	O	100	GLN
15	O	147	ASN
15	O	193	GLN
15	O	222	HIS
15	O	310	GLN
15	O	337	GLN
15	O	549	GLN

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Mol	Chain	Res	Type
15	O	584	ASN
15	O	607	ASN
15	O	626	GLN
16	P	33	GLN
16	P	37	GLN
16	P	67	ASN
16	P	117	HIS
16	P	118	GLN
16	P	131	GLN
16	P	189	ASN
16	P	305	HIS
18	R	20	ASN
18	R	118	GLN
18	R	184	HIS
18	R	394	GLN
18	R	414	HIS
19	S	444	GLN
19	S	499	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 7 ligands modelled in this entry, 7 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](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
19	S	1
17	Q	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	S	319:UNK	C	360:THR	N	39.73
1	Q	70:PHE	C	1070:UNK	N	13.87

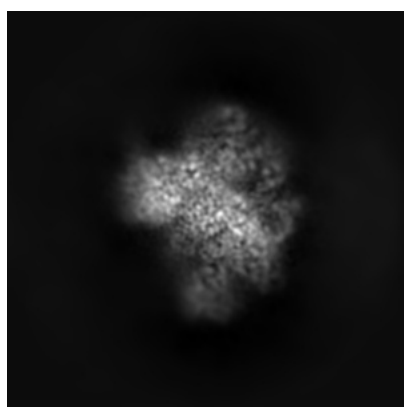
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-7533. These allow visual inspection of the internal detail of the map and identification of artifacts.

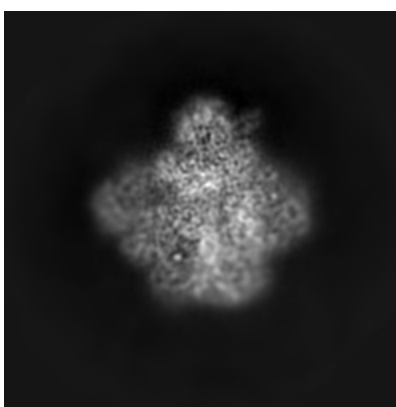
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

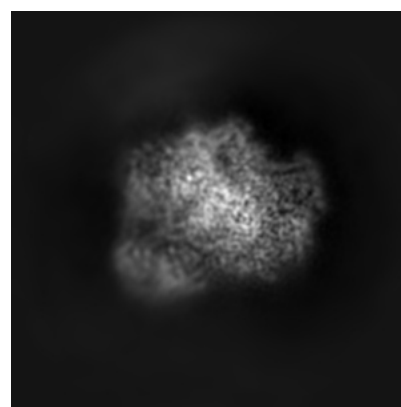
6.1.1 Primary map



X



Y

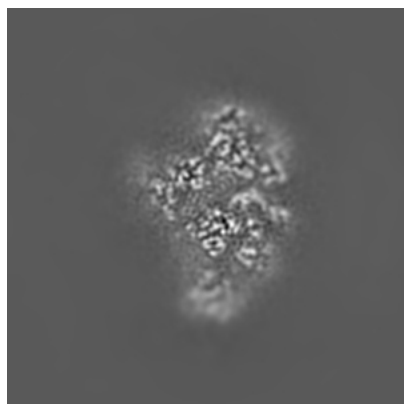


Z

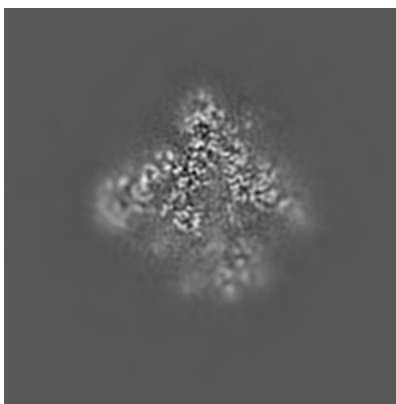
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

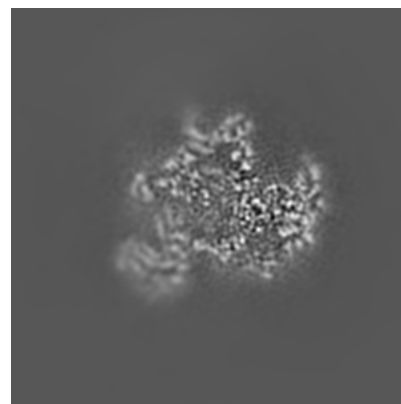
6.2.1 Primary map



X Index: 144



Y Index: 144

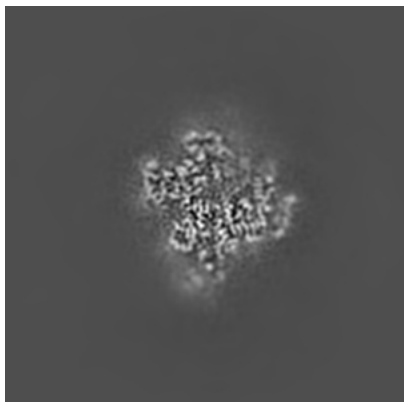


Z Index: 144

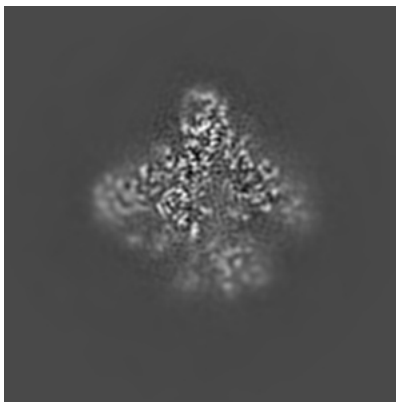
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

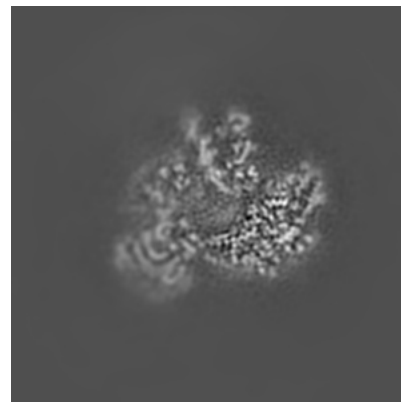
6.3.1 Primary map



X Index: 169



Y Index: 147



Z Index: 150

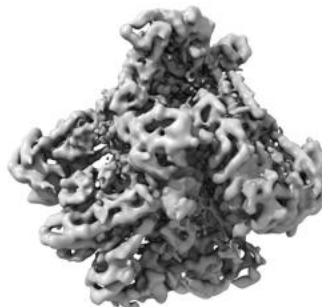
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views [i](#)

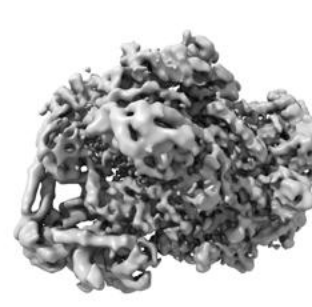
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.035. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

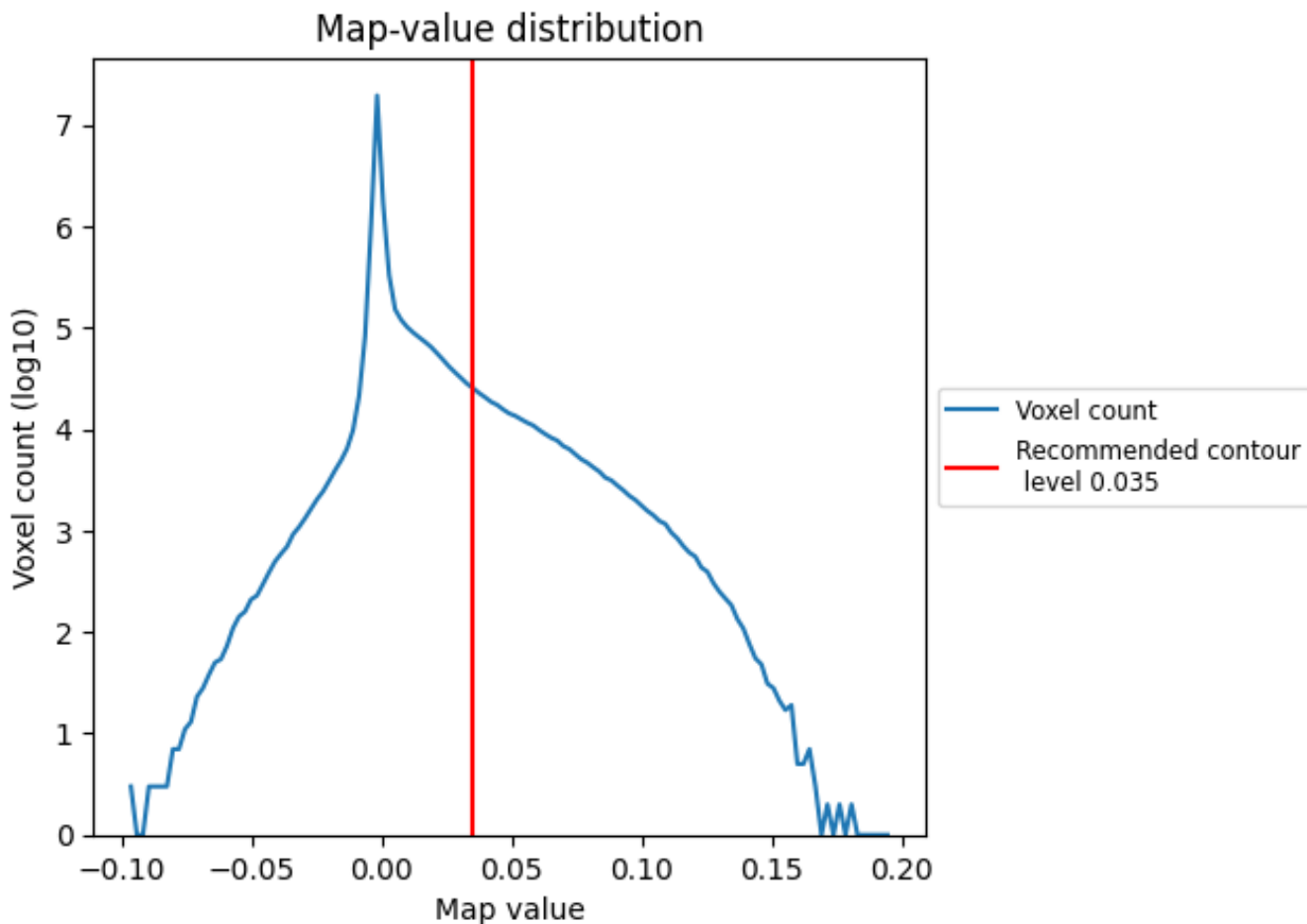
6.5 Mask visualisation

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

7 Map analysis [i](#)

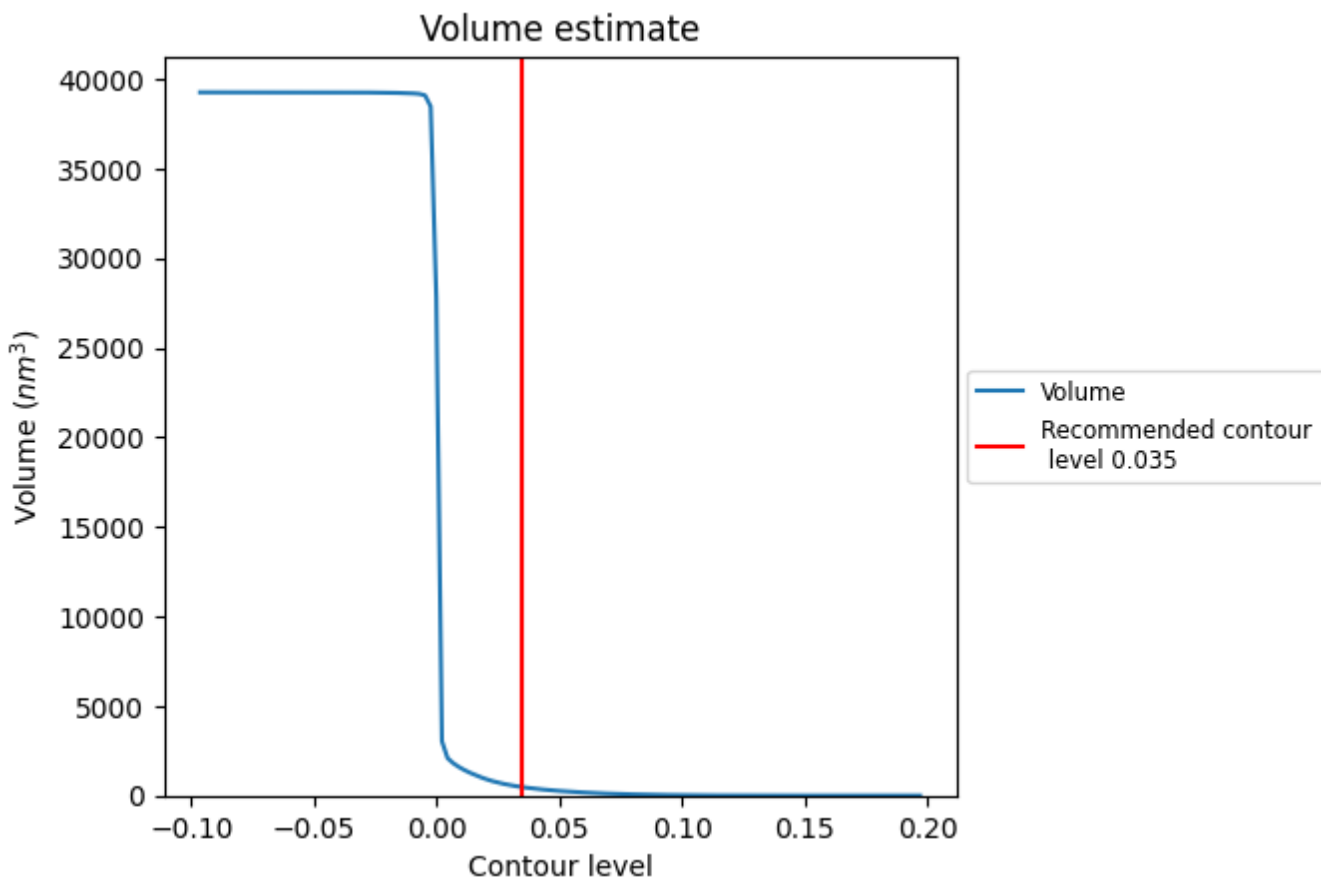
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

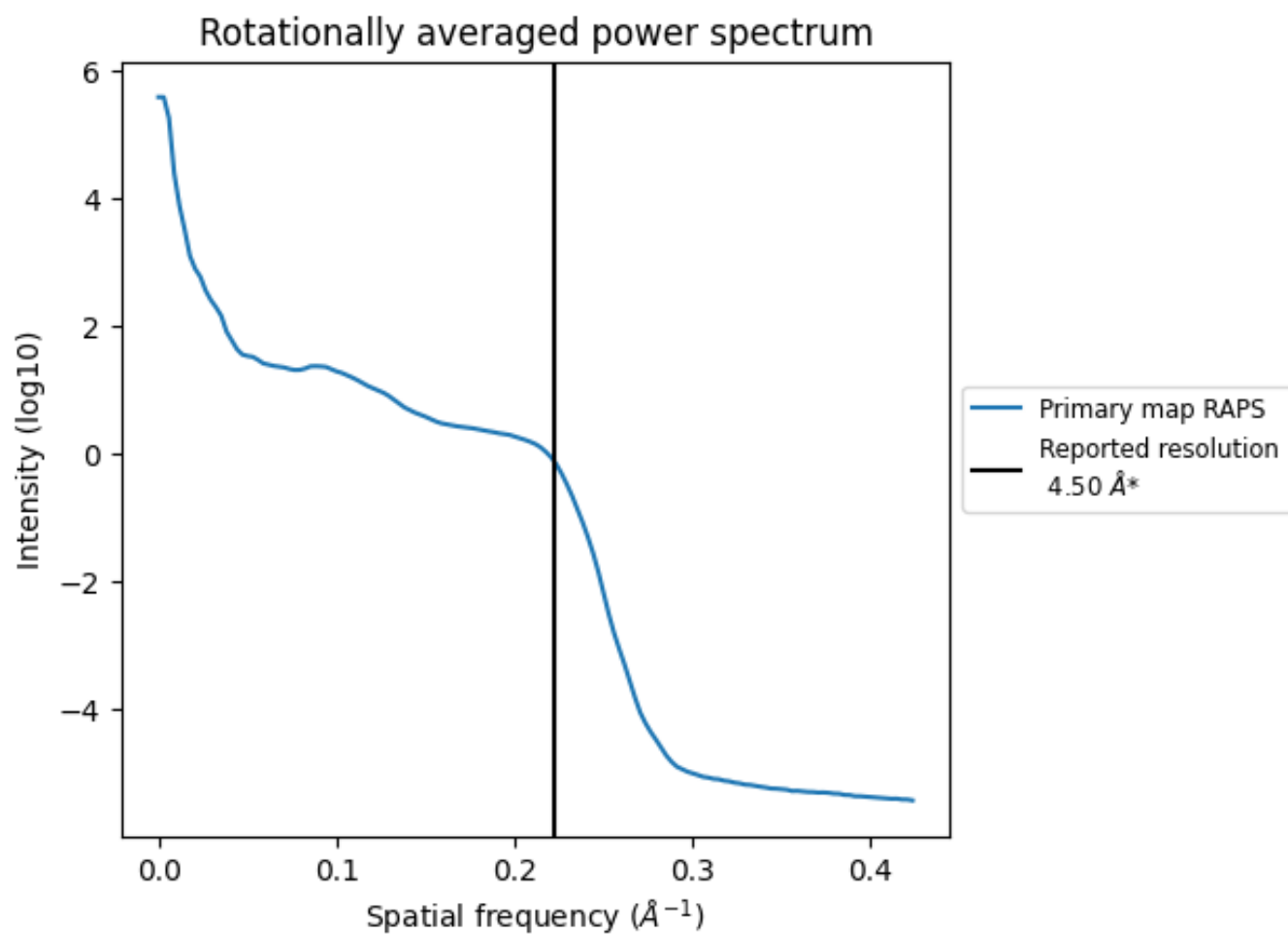
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 470 nm³; this corresponds to an approximate mass of 424 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)

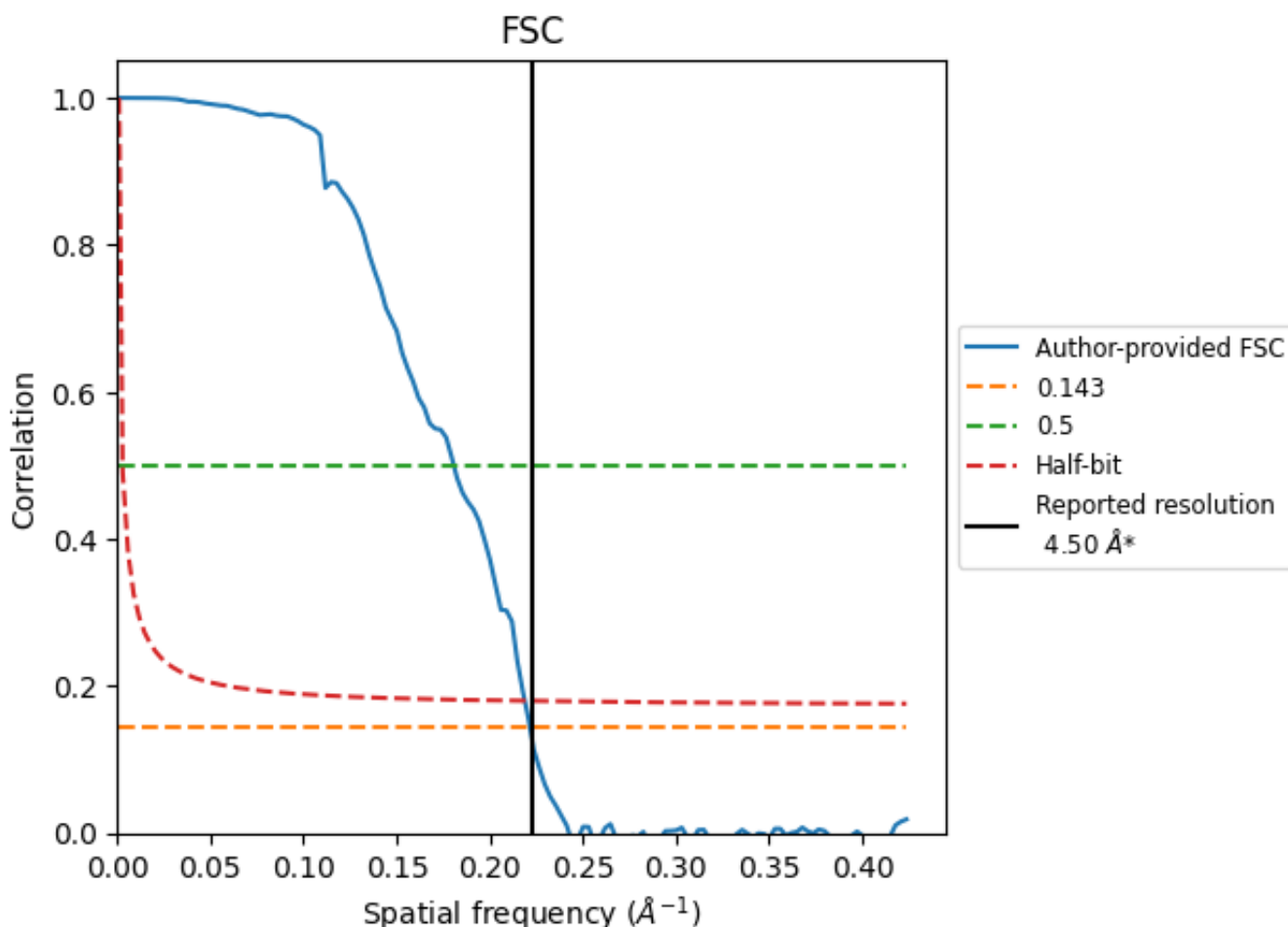


*Reported resolution corresponds to spatial frequency of 0.222\AA^{-1}

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.222 Å⁻¹

8.2 Resolution estimates [i](#)

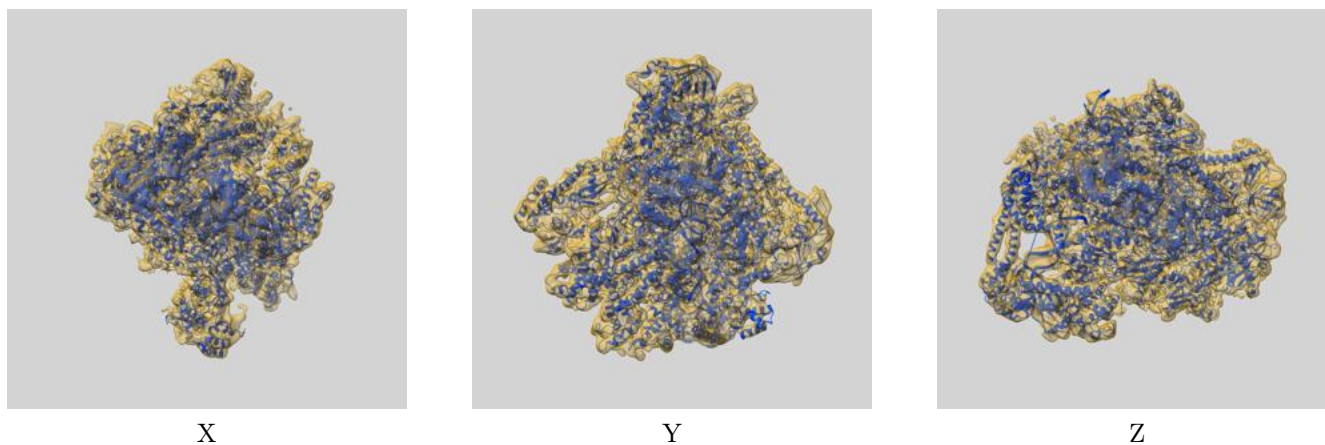
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.50	-	-
Author-provided FSC curve	4.51	5.53	4.57
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

9 Map-model fit [i](#)

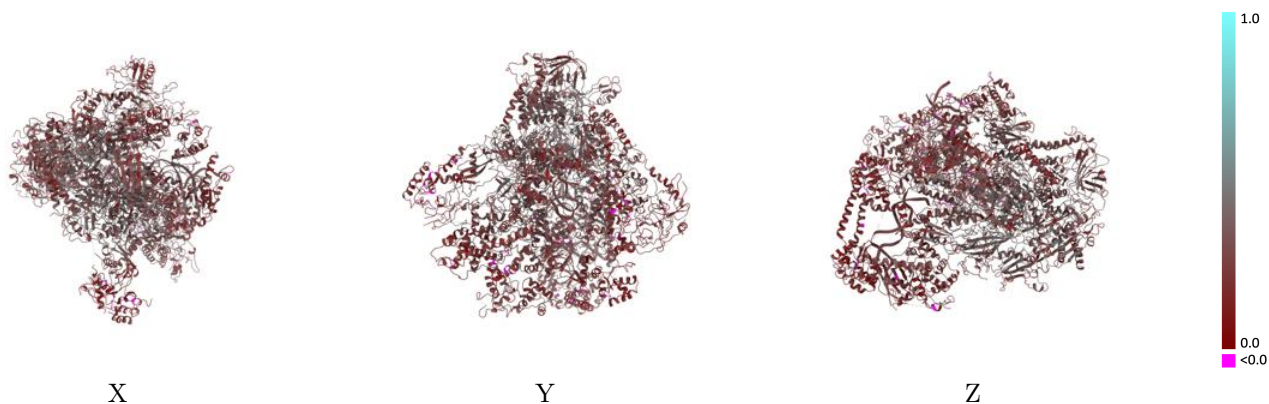
This section contains information regarding the fit between EMDB map EMD-7533 and PDB model 6CNF. Per-residue inclusion information can be found in section 3 on page 9.

9.1 Map-model overlay [i](#)



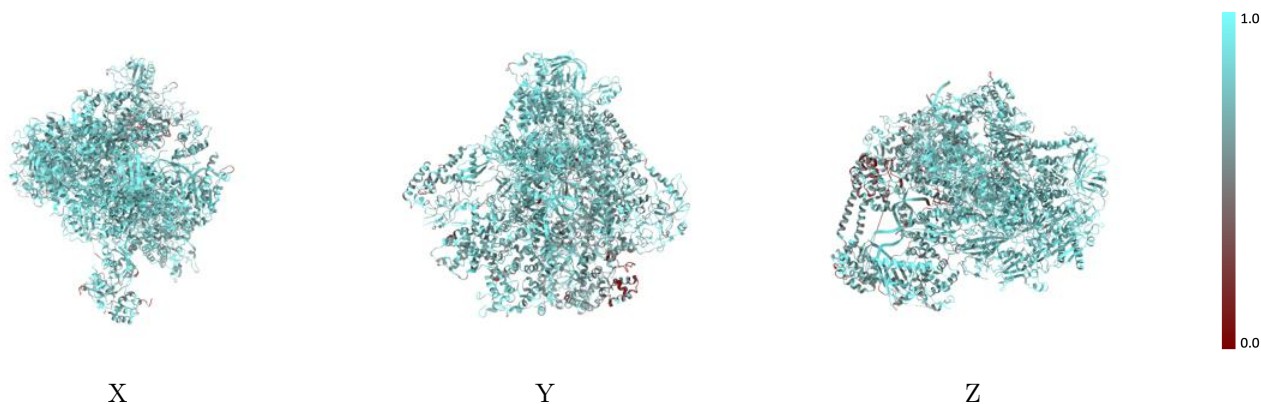
The images above show the 3D surface view of the map at the recommended contour level 0.035 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



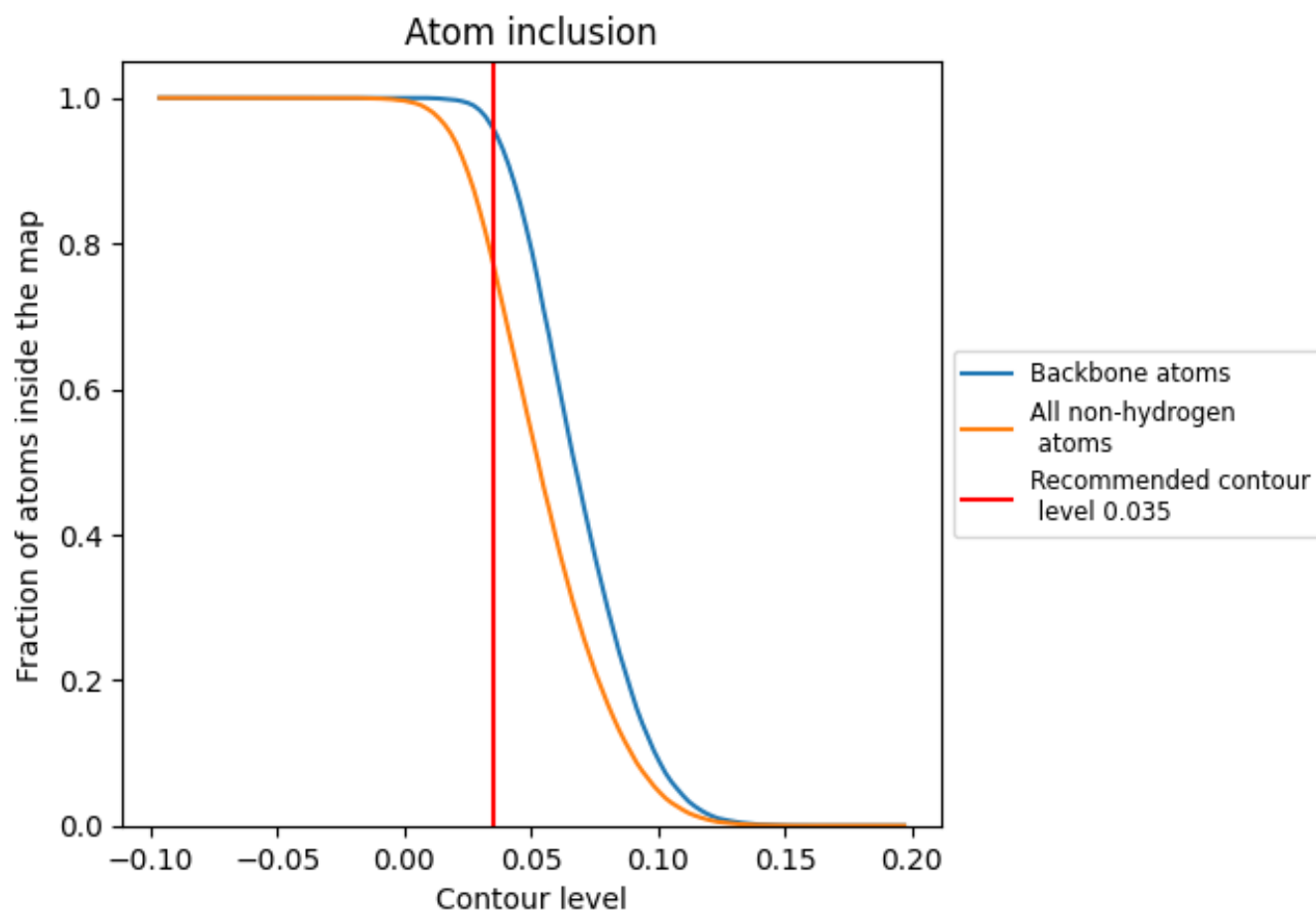
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.035).













































9.4 Atom inclusion [i](#)



At the recommended contour level, 96% of all backbone atoms, 77% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.035) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7722	 0.2950
A	 0.7881	 0.3320
B	 0.7875	 0.3390
C	 0.8497	 0.3350
D	 0.7267	 0.1820
E	 0.7873	 0.2910
F	 0.8637	 0.3640
G	 0.7800	 0.2340
H	 0.8342	 0.3170
I	 0.7760	 0.2400
J	 0.8408	 0.3440
K	 0.8289	 0.3360
L	 0.8376	 0.3490
M	 0.7080	 0.2280
N	 0.7527	 0.2430
O	 0.7260	 0.2560
P	 0.6671	 0.2290
Q	 0.8795	 0.3320
R	 0.7003	 0.2270
S	 0.6268	 0.2160
X	 0.9197	 0.2960
Y	 0.8922	 0.3150

