



Full wwPDB EM Validation Report ⓘ

Mar 20, 2024 – 01:16 PM JST

PDB ID : 7D7D
EMDB ID : EMD-30605
Title : CryoEM structure of gp45-dependent transcription activation complex
Authors : Shi, J.; Wen, A.; Jin, S.; Feng, Y.
Deposited on : 2020-10-03
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:

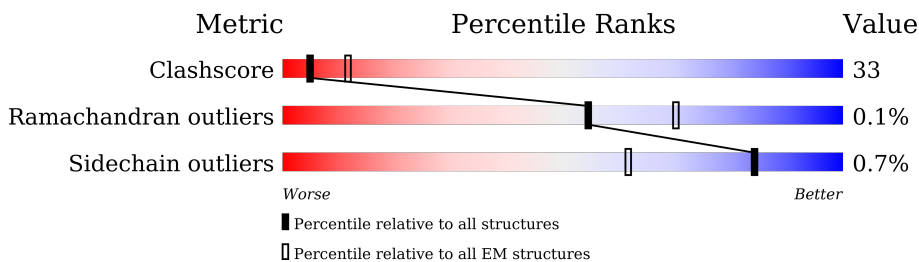
EMDB validation analysis : 0.0.1.dev70
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

1 Overall quality at a glance

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.






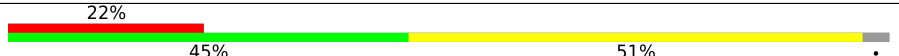
Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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	329	
1	B	329	
2	C	1342	
3	D	1407	
4	T	59	
5	F	185	
6	N	59	
7	K	132	

Continued on next page...

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Mol	Chain	Length	Quality of chain
8	E	91	
9	G	236	
9	H	236	
9	I	236	

2 Entry composition [i](#)

There are 11 unique types of molecules in this entry. The entry contains 33755 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 subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	219	Total	C	N	O	S	0	0
			1686	1056	298	326	6		
1	B	219	Total	C	N	O	S	0	0
			1689	1056	298	329	6		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	C	1340	Total	C	N	O	S	0	0
			10567	6631	1841	2052	43		

- Molecule 3 is a protein called DNA-directed RNA polymerase subunit beta'.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	D	1335	Total	C	N	O	S	0	0
			10384	6524	1851	1959	50		

- Molecule 4 is a DNA chain called DNA (template strand).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
4	T	46	Total	C	N	O	P	0	0
			939	451	158	284	46		

- Molecule 5 is a protein called gp55.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	F	137	Total	C	N	O	S	0	0
			1128	720	189	214	5		

- Molecule 6 is a DNA chain called DNA (nontemplate strand).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
6	N	48	990	471	192	279	48	0	0

- Molecule 7 is a protein called RNA polymerase-associated protein Gp33.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	K	71	558	356	89	110	3	0	0

There are 20 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
K	-19	MET	-	initiating methionine	UNP P13338
K	-18	GLY	-	expression tag	UNP P13338
K	-17	SER	-	expression tag	UNP P13338
K	-16	SER	-	expression tag	UNP P13338
K	-15	HIS	-	expression tag	UNP P13338
K	-14	HIS	-	expression tag	UNP P13338
K	-13	HIS	-	expression tag	UNP P13338
K	-12	HIS	-	expression tag	UNP P13338
K	-11	HIS	-	expression tag	UNP P13338
K	-10	HIS	-	expression tag	UNP P13338
K	-9	SER	-	expression tag	UNP P13338
K	-8	SER	-	expression tag	UNP P13338
K	-7	GLY	-	expression tag	UNP P13338
K	-6	LEU	-	expression tag	UNP P13338
K	-5	VAL	-	expression tag	UNP P13338
K	-4	PRO	-	expression tag	UNP P13338
K	-3	ARG	-	expression tag	UNP P13338
K	-2	GLY	-	expression tag	UNP P13338
K	-1	SER	-	expression tag	UNP P13338
K	0	HIS	-	expression tag	UNP P13338

- Molecule 8 is a protein called DNA-directed RNA polymerase subunit omega.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	E	71	564	345	108	110	1	0	0

- Molecule 9 is a protein called DNA polymerase clamp.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	G	228	Total	C	N	O	S	0	0
			1749	1113	288	342	6		
9	H	228	Total	C	N	O	S	0	0
			1749	1113	288	342	6		
9	I	228	Total	C	N	O	S	0	0
			1749	1113	288	342	6		

There are 24 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	229	LEU	-	expression tag	UNP P04525
G	230	GLU	-	expression tag	UNP P04525
G	231	HIS	-	expression tag	UNP P04525
G	232	HIS	-	expression tag	UNP P04525
G	233	HIS	-	expression tag	UNP P04525
G	234	HIS	-	expression tag	UNP P04525
G	235	HIS	-	expression tag	UNP P04525
G	236	HIS	-	expression tag	UNP P04525
H	229	LEU	-	expression tag	UNP P04525
H	230	GLU	-	expression tag	UNP P04525
H	231	HIS	-	expression tag	UNP P04525
H	232	HIS	-	expression tag	UNP P04525
H	233	HIS	-	expression tag	UNP P04525
H	234	HIS	-	expression tag	UNP P04525
H	235	HIS	-	expression tag	UNP P04525
H	236	HIS	-	expression tag	UNP P04525
I	229	LEU	-	expression tag	UNP P04525
I	230	GLU	-	expression tag	UNP P04525
I	231	HIS	-	expression tag	UNP P04525
I	232	HIS	-	expression tag	UNP P04525
I	233	HIS	-	expression tag	UNP P04525
I	234	HIS	-	expression tag	UNP P04525
I	235	HIS	-	expression tag	UNP P04525
I	236	HIS	-	expression tag	UNP P04525

- Molecule 10 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
10	D	1	Total	Mg	0
			1	1	

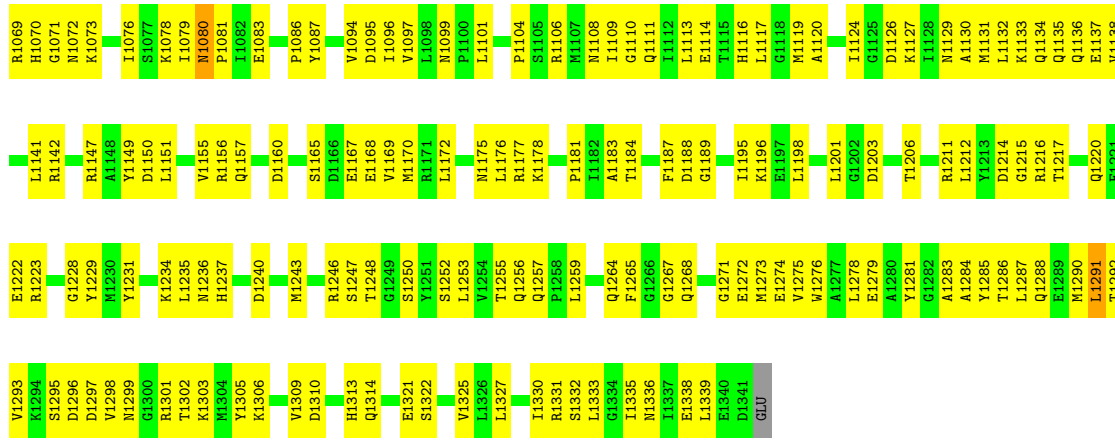
- Molecule 11 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
11	D	2	Total	Zn	0
			2	2	

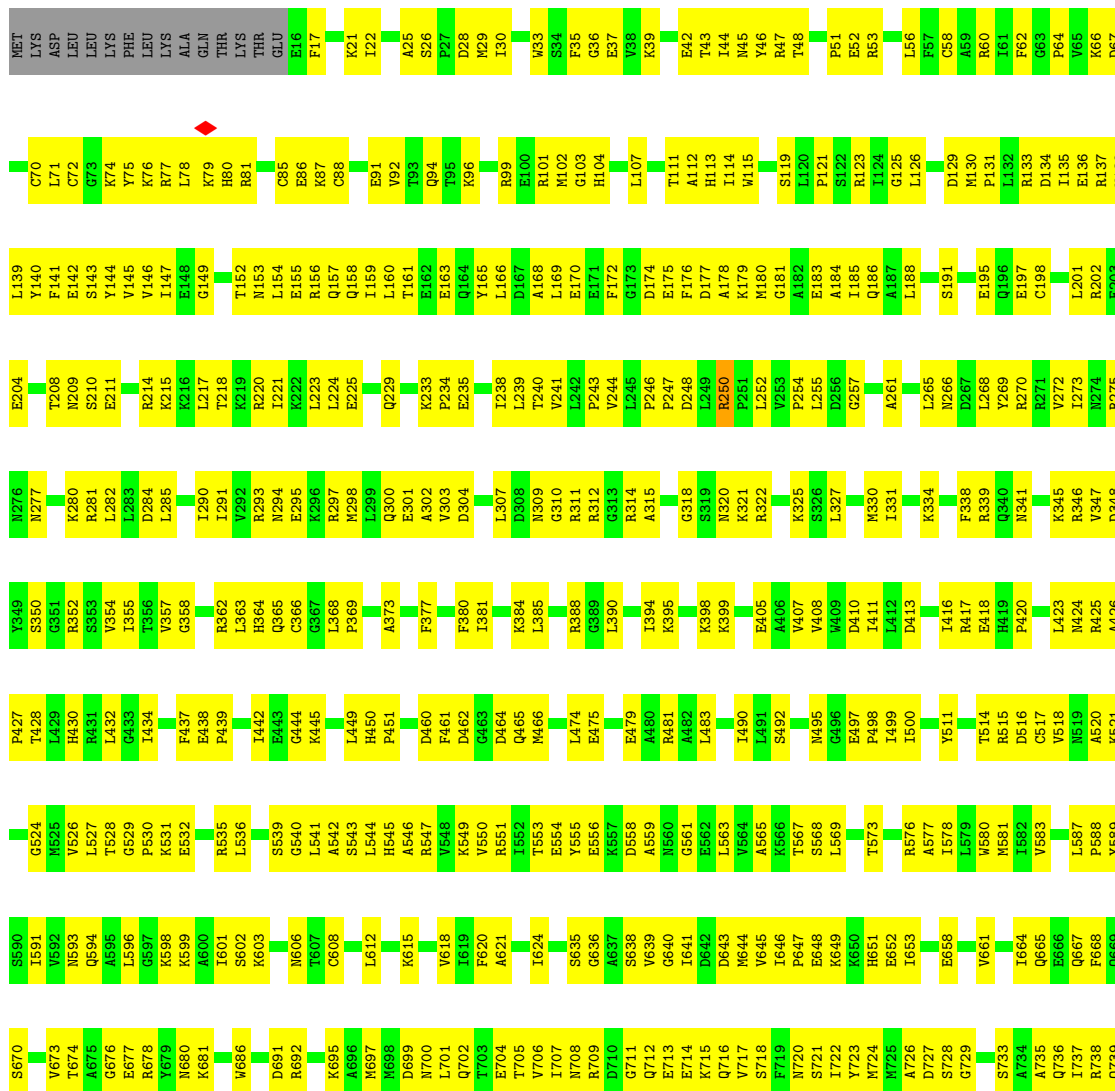
● Molecule 2: DNA-directed RNA polymerase subunit beta

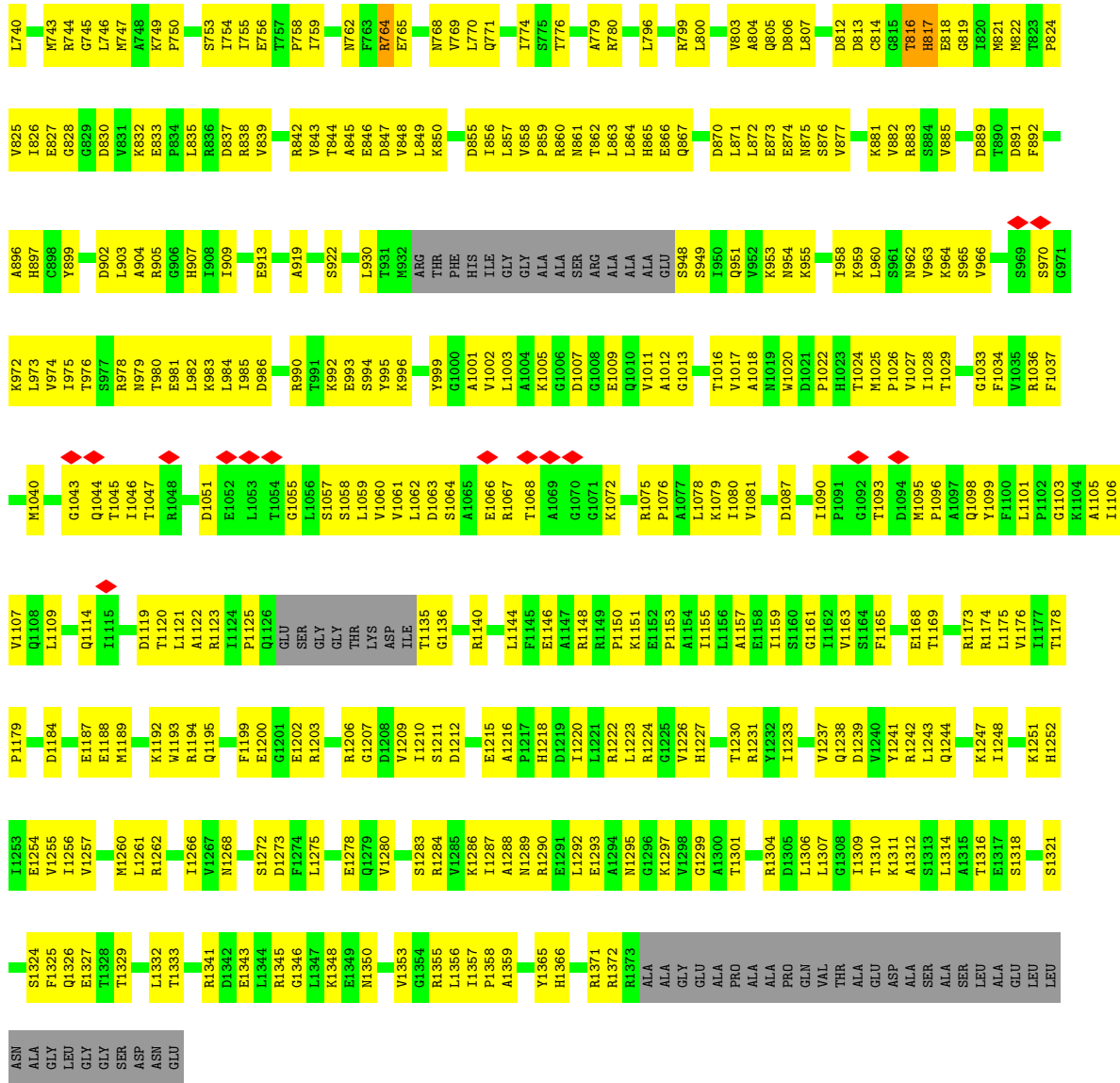


ME1	V2	Y3	S4	Y5	TC	E7	K8	K9	R10	R11	R12	K13	D14	R18	L27	L28	L32	D33	S34	K37	F38	I39	E40	Q41	D42	P43	E44	G45	Q46	A52	F53	R54	S55	V56	N59	Q60	S61	Y62	N65	S66	E67	L68	Q69	Y70	V71	S72	Y73	R74	L75	G76	E77	P78					
V79	F80	D81	V82	Q83	E84	C85	Q86	R87	R88	G89	Y92	S93	A94	R95	L96	R97	V98	K99	L100	R101	L102	V103	Y105	E106	R107	E108	V114	K115	D116	K118	E119	Q120	E121	V122	Y123	M124	G125	E126	I127	P128	T131	D132	M133	G134	T135	F136	M139	G140	R141	Y142	H150						
F157	D158	S159	K163	L167	G168	K169	Y172	N173	P178	Y179	G181	S182	W183	L184	E185	F186	E187	F188	D189	M193	L194	R195	V196	R197	I198	R199	R200	R201	E119	K203	L204	P205	A206	T207	L208	L209	L210	R211	A212	L213	N214	Y215	T216	T217	Q219	V296	V297	L223	F224	F225	F230						
E231	L232	M235	K236	L237	Q238	L241	V242	E244	R245	L246	D247	T250	D254	W183	L184	E256	V261	Y262	V263	E264	R267	R268	L269	T270	A271	R272	H273	L274	R275	Q276	L277	D281	V282	K283	L284	L285	E286	V287	P288	V289	Y291	L292	K295	Q219	V296	V297	L223	D300	Y301	L302	D303						
E304	S305	T306	L309	L310	C311	N314	N315	S318	L319	D320	L321	K324	L325	S326	Q327	S328	G329	H330	K331	R332	I333	F337	L338	V339	D340	L341	D342	H343	G344	P345	Y346	L347	S348	E349	T350	L351	R352	V353	P355	T356	N357	D358	R359	L360	S361	V364	V365	L366	Y367	R368	M369						
M370	R371	P376	R378	E379	L384	L388	E392	D393	R394	Y395	D396	L397	S398	A399	V400	G401	A495	I498	L409	L410	R411	E412	E413	I414	K422	D423	L424	I425	L426	D427	V428	K431	L432	I433	T434	R436	M437	V442	D443	D444	I445	D446	H447	N450	R451	R452	L453	R454	R455	R465							
L468	V469	R470	A473	R474	E477	R478	L479	S480	L484	M488	M489	L490	D491	M492	A495	F504	F505	F506	G507	S508	S509	M515	D516	I426	D427	Q517	L521	S522	E523	I524	T525	H526	K527	R528	R529	I530	S531	A532	L538	T539	R540	E541	R542	R543	D549	H551											
P552	T553	H554	C559	P560	I561	E562	P567	L571	I572	S573	S574	L575	Q576	V577	N582	E583	Y584	G585	F586	L587	E588	T589	Q659	Y591	R592	K593	V594	T595	D596	G597	V598	V599	T600	D601	E602	I603	H604	Y605	L606	S607	I615	I616	A617	Q618	A619	N620	S621	M622	L623	D624							
E625	E626	G627	H628	L633	C636	R637	S638	K639	G640	S642	L643	L644	F645	S646	Q649	V650	D651	Y652	M653	D654	V655	S656	T657	Q658	V660	S661	S662	L667	I667	I667	D672	D675	A676	M677	R678	M681	M685	M686	Q688	Q688	T692	L693	R694	A695	Q696	K697	P698	L699	G701								
T702	G703	M704	E705	D711	T715	A716	L717	A718	K719	R720	V724	W725	L726	W727	S646	Q649	V650	D651	Y652	M653	D654	V655	S656	T657	Q658	V660	S661	S662	L667	I667	I667	D672	D675	A676	M677	R678	M681	M685	M686	Q688	Q688	T692	L693	R694	A695	Q696	K697	P698	L699	G701							
T702	G703	M704	E705	D711	T715	A716	L717	A718	K719	R720	V724	W725	L726	W727	S646	Q649	V650	D651	Y652	M653	D654	V655	S656	T657	Q658	V660	S661	S662	L667	I667	I667	D672	D675	A676	M677	R678	M681	M685	M686	Q688	Q688	T692	L693	R694	A695	Q696	K697	P698	L699	G701							
V782	L783	S788	T789	D790	L791	G792	E793	L794	A795	Q798	R801	V802	A803	F804	M805	R806	W807	Y810	N811	F812	E813	D814	S815	I816	Q818	W887	R888	K890	E825	D826	R827	F828	I831	H832	L753	T754	K755	Y756	S759	N760	Q761	R841	D842	T843	K844	L845	E848	E849	I850	R851	A852	D853					
I854	P855	M856	V857	G858	A860	A861	L862	S863	D866	E867	S868	G869	I870	V871	Y872	A875	E876	V877	T878	G879	G880	D881	I882	L883	K886	L887	R888	K890	E892	P893	Q894	L895	T896	P897	E898	E899	K900	L901	L902	R903	A904	I905	F906	G907	E908	K909	A910	S911	D912	V913	K914	L918	R919	V920			
P921	D930	V931	Q932	R933	F934	R935	L936	S937	K941	D942	K943	R944	A945	L946	E947	I948	E949	M951	Q952	L953	K954	Q955	K958	D959	L960	S961	E962	P889	Q965	L966	L967	L971	F972	S973	R974	I975	E976	A977	V978	L979	V980	A981	G982	G983	V984	E985	A986	V987	K988	D990	L991	K992	M1066	A1067	G1068		
P983	R984	D995	V996	V997	L998	E999	L1000	R936	G1001	D937	K941	D942	K943	R944	A945	L946	E947	I948	E949	M951	Q952	L953	K954	Q955	K958	D959	L960	S961	E962	P889	Q965	L966	L967	L971	F972	S973	R974	I975	E976	A977	V978	L979	V980	A981	G982	G983	V984	E985	A986	V987	K988	D990	L991	K992	M1066	A1067	G1068

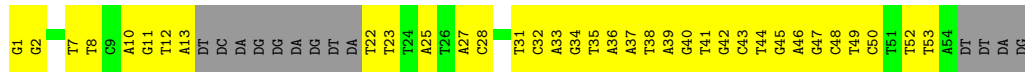


• Molecule 3: DNA-directed RNA polymerase subunit beta'

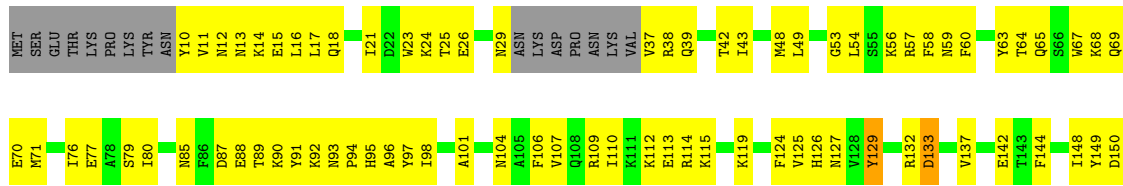
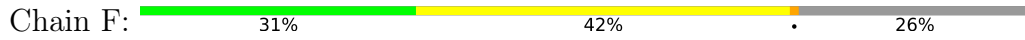


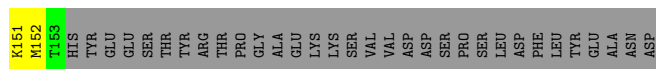


- Molecule 4: DNA (template strand)

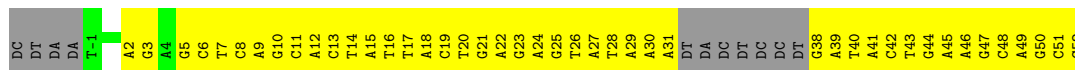
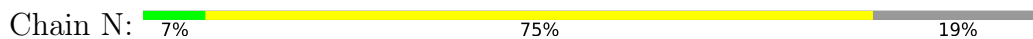


- Molecule 5: gp55

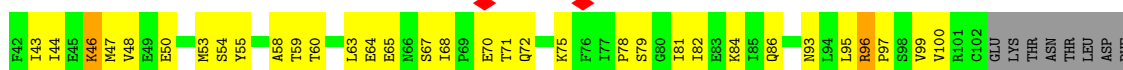
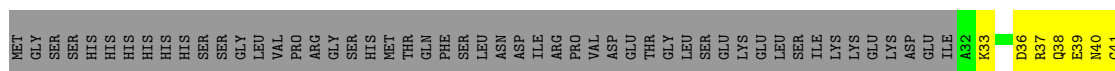
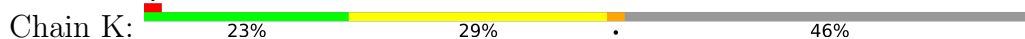




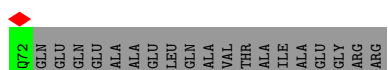
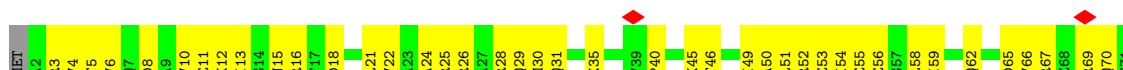
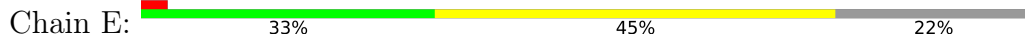
• Molecule 6: DNA (nontemplate strand)



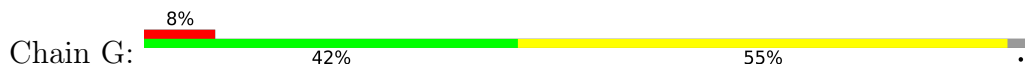
• Molecule 7: RNA polymerase-associated protein Gp33



• Molecule 8: DNA-directed RNA polymerase subunit omega

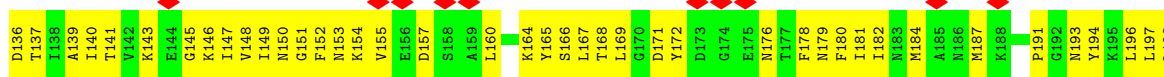
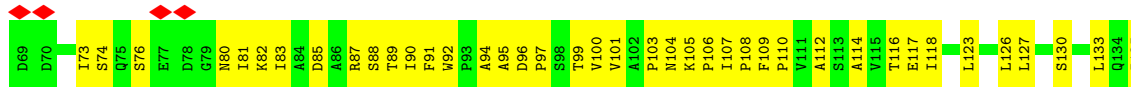
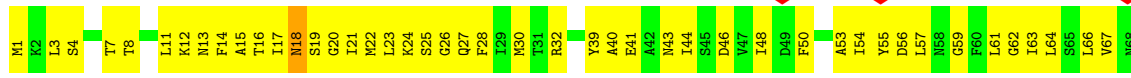


• Molecule 9: DNA polymerase clamp

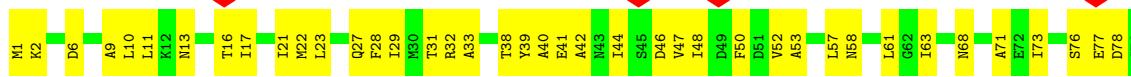




• Molecule 9: DNA polymerase clamp



• Molecule 9: DNA polymerase clamp



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	8981	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	59	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	0.287	Depositor
Minimum map value	-0.180	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.006	Depositor
Recommended contour level	0.02	Depositor
Map size (Å)	334.592, 334.592, 334.592	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.307, 1.307, 1.307	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, MG

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	0.45	0/1706	0.58	0/2312
1	B	0.41	0/1708	0.56	0/2315
2	C	0.47	0/10736	0.55	0/14487
3	D	0.44	0/10541	0.55	0/14232
4	T	0.94	0/1048	1.10	0/1613
5	F	0.47	0/1149	0.54	0/1546
6	N	0.89	0/1113	1.01	0/1713
7	K	0.34	0/566	0.48	0/763
8	E	0.32	0/566	0.50	0/762
9	G	0.31	0/1778	0.51	0/2410
9	H	0.34	0/1778	0.51	0/2410
9	I	0.31	0/1778	0.52	0/2410
All	All	0.48	0/34467	0.59	0/46973

There are no bond length outliers.

There are no bond angle outliers.

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	1686	0	1726	112	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	B	1689	0	1725	142	0
2	C	10567	0	10585	720	0
3	D	10384	0	10607	677	0
4	T	939	0	526	54	0
5	F	1128	0	1105	80	0
6	N	990	0	540	75	0
7	K	558	0	550	45	0
8	E	564	0	579	35	0
9	G	1749	0	1755	138	0
9	H	1749	0	1755	171	0
9	I	1749	0	1755	102	0
10	D	1	0	0	0	0
11	D	2	0	0	0	0
All	All	33755	0	33208	2193	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 33.

All (2193) 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)
9:H:141:THR:CG2	9:H:179:ASN:HA	1.61	1.29
3:D:1161:GLY:HA3	3:D:1178:THR:O	1.37	1.21
9:H:141:THR:HG22	9:H:179:ASN:HA	1.33	1.09
1:B:33:ARG:NH1	2:C:1081:PRO:HG3	1.68	1.08
5:F:10:TYR:HD1	5:F:49:LEU:HD11	1.19	1.06
9:H:146:LYS:HE2	9:H:171:ASP:HB3	1.38	1.06
3:D:814:CYS:SG	3:D:816:THR:HG22	1.98	1.04
1:B:33:ARG:HH11	2:C:1081:PRO:HG3	1.22	1.03
1:B:215:GLU:HA	1:B:218:ARG:HD2	1.40	1.03
4:T:40:DG:N2	6:N:13:DC:C2	2.30	1.00
1:A:180:VAL:HA	1:A:207:THR:HG22	1.42	1.00
1:B:190:ALA:O	1:B:198:LEU:HB2	1.60	0.99
3:D:705:THR:HG21	3:D:716:GLN:OE1	1.60	0.99
9:H:146:LYS:HG2	9:H:171:ASP:HA	1.47	0.96
3:D:814:CYS:SG	3:D:816:THR:CG2	2.56	0.93
3:D:518:VAL:HA	3:D:547:ARG:HH22	1.33	0.93
9:H:141:THR:CG2	9:H:179:ASN:CA	2.46	0.93
5:F:10:TYR:CD1	5:F:49:LEU:HD11	2.05	0.91
9:G:143:LYS:HE2	9:G:148:VAL:HG11	1.52	0.91
3:D:667:GLN:HE22	3:D:673:VAL:HB	1.36	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:705:THR:HG21	3:D:716:GLN:CD	1.92	0.90
7:K:46:LYS:O	7:K:50:GLU:HB2	1.70	0.90
2:C:976:ARG:O	2:C:980:VAL:HG23	1.72	0.89
9:G:142:VAL:HB	9:G:177:THR:HG23	1.55	0.89
3:D:647:PRO:HG3	3:D:697:MET:HB2	1.55	0.89
9:I:39:TYR:HB3	9:I:217:VAL:HB	1.55	0.89
9:H:81:ILE:HD12	9:H:92:TRP:HD1	1.38	0.88
2:C:207:THR:HG23	2:C:350:THR:HG22	1.55	0.87
3:D:818:GLU:HA	3:D:881:LYS:HZ3	1.39	0.87
9:H:141:THR:HG22	9:H:179:ASN:CA	2.04	0.86
9:H:146:LYS:HA	9:H:171:ASP:HA	1.57	0.85
9:H:118:ILE:O	9:H:193:ASN:HA	1.76	0.85
9:G:166:SER:HB2	9:H:89:THR:HB	1.58	0.85
9:H:22:MET:HG3	9:H:24:LYS:HD3	1.56	0.85
3:D:1161:GLY:CA	3:D:1178:THR:O	2.24	0.85
2:C:962:GLU:HA	2:C:965:GLN:HE21	1.42	0.83
3:D:490:ILE:HA	3:D:500:ILE:HD11	1.60	0.83
2:C:104:ILE:HB	2:C:115:LYS:HB3	1.60	0.83
3:D:850:LYS:HB2	3:D:855:ASP:HB2	1.61	0.83
8:E:46:THR:HA	8:E:49:ILE:HD12	1.58	0.83
1:B:104:LYS:NZ	1:B:105:SER:O	2.11	0.83
7:K:63:LEU:HA	7:K:68:ILE:HD12	1.61	0.82
9:H:141:THR:HG21	9:H:179:ASN:HA	1.58	0.82
3:D:1093:THR:HG22	3:D:1095:MET:H	1.44	0.82
3:D:138:VAL:HG11	3:D:185:ILE:HD11	1.59	0.82
2:C:230:PHE:HB2	2:C:333:ILE:HB	1.59	0.82
3:D:984:LEU:HB3	3:D:993:GLU:HB2	1.59	0.82
1:B:57:THR:O	1:B:58:GLU:HG3	1.79	0.82
2:C:107:ARG:HG3	2:C:108:GLU:HG2	1.59	0.81
1:B:103:ASN:HA	1:B:141:SER:HA	1.60	0.81
2:C:949:GLU:HA	2:C:952:GLN:HE21	1.46	0.81
2:C:1313:HIS:H	8:E:31:GLN:HE22	1.29	0.81
7:K:81:ILE:HA	7:K:84:LYS:HZ3	1.45	0.81
3:D:706:VAL:HG13	3:D:713:GLU:HG3	1.63	0.80
1:B:210:THR:HG23	1:B:211:ILE:HG12	1.62	0.80
2:C:78:PRO:HB3	2:C:92:TYR:HE1	1.46	0.80
3:D:1040:MET:HB3	3:D:1046:ILE:HD13	1.63	0.80
3:D:1079:LYS:HA	3:D:1098:GLN:HE21	1.47	0.80
3:D:1206:ARG:HH21	3:D:1223:LEU:HA	1.46	0.80
3:D:1220:ILE:O	3:D:1224:ARG:HB2	1.82	0.80
2:C:901:LEU:HD12	7:K:60:THR:HG23	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:130:SER:OG	9:I:184:MET:SD	2.40	0.79
9:H:147:ILE:HG13	9:H:172:TYR:HB2	1.64	0.79
8:E:4:VAL:HG23	8:E:5:THR:HG23	1.64	0.79
2:C:217:THR:HA	2:C:220:ILE:HD12	1.65	0.79
2:C:301:TYR:HB2	2:C:311:CYS:HB3	1.63	0.79
3:D:362:ARG:H	3:D:365:GLN:HE21	1.31	0.78
9:H:146:LYS:HG2	9:H:171:ASP:CA	2.13	0.78
2:C:595:THR:HG22	2:C:596:ASP:H	1.49	0.78
2:C:841:ARG:HG2	2:C:1046:VAL:HG12	1.65	0.77
2:C:988:LYS:HG2	2:C:1000:LEU:HD22	1.64	0.77
3:D:1163:VAL:HB	3:D:1200:GLU:HA	1.66	0.77
9:H:146:LYS:CG	9:H:171:ASP:HA	2.15	0.77
3:D:254:PRO:HG2	3:D:261:ALA:HB3	1.65	0.77
9:H:141:THR:CB	9:H:179:ASN:HA	2.14	0.77
9:H:141:THR:HB	9:H:178:PHE:O	1.84	0.77
2:C:517:GLN:H	2:C:761:GLN:HE22	1.32	0.76
1:B:80:GLU:N	1:B:80:GLU:OE1	2.18	0.76
2:C:636:CYS:SG	2:C:637:ARG:N	2.59	0.76
9:I:146:LYS:HD3	9:I:171:ASP:HA	1.68	0.76
9:H:85:ASP:HB3	9:H:88:SER:H	1.50	0.76
3:D:818:GLU:HA	3:D:881:LYS:NZ	2.00	0.76
9:I:1:MET:HG3	9:I:46:ASP:HB3	1.67	0.76
9:G:90:ILE:HG12	9:I:165:TYR:HD1	1.49	0.76
9:H:147:ILE:CG1	9:H:172:TYR:HB2	2.16	0.75
5:F:10:TYR:HB3	5:F:49:LEU:HD21	1.68	0.75
1:A:17:GLU:O	1:A:25:LYS:NZ	2.20	0.75
3:D:1155:ILE:N	3:D:1211:SER:OG	2.20	0.75
3:D:973:LEU:HD23	3:D:1003:LEU:HD22	1.69	0.74
3:D:1046:ILE:HG22	3:D:1061:VAL:HG13	1.67	0.74
9:G:135:ILE:HD11	9:G:164:LYS:HB2	1.69	0.74
3:D:75:TYR:HD2	3:D:92:VAL:HG21	1.53	0.74
3:D:813:ASP:OD1	3:D:883:ARG:NH1	2.20	0.74
1:B:33:ARG:HH11	2:C:1081:PRO:CG	1.99	0.74
2:C:1274:GLU:OE1	2:C:1274:GLU:N	2.19	0.74
3:D:857:LEU:HD11	3:D:871:LEU:HD11	1.70	0.74
1:A:61:ILE:HG22	1:A:62:ASP:H	1.53	0.74
1:A:102:LEU:HD12	1:A:115:ILE:HG13	1.67	0.74
2:C:623:LEU:HD13	2:C:627:GLY:H	1.51	0.74
2:C:903:ARG:NH1	7:K:70:GLU:OE2	2.20	0.74
3:D:1280:VAL:HG11	3:D:1284:ARG:HH21	1.53	0.74
2:C:131:THR:HG23	2:C:133:ASN:H	1.51	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:12:ARG:HE	2:C:1181:PRO:HB2	1.50	0.73
1:B:176:CYS:SG	3:D:535:ARG:NH2	2.60	0.73
2:C:591:TYR:O	2:C:603:ILE:HA	1.88	0.73
9:G:113:SER:N	9:G:198:LEU:O	2.21	0.73
3:D:705:THR:HG21	3:D:716:GLN:NE2	2.02	0.73
3:D:225:GLU:O	3:D:229:GLN:HB2	1.88	0.73
9:G:109:PHE:HE2	9:G:112:ALA:HB2	1.53	0.73
2:C:590:PRO:HB2	2:C:655:VAL:HG21	1.70	0.73
2:C:600:THR:HG23	2:C:602:GLU:H	1.53	0.73
3:D:1341:ARG:NH2	3:D:1343:GLU:OE1	2.21	0.73
2:C:220:ILE:HA	2:C:223:LEU:HD12	1.71	0.73
2:C:988:LYS:HA	2:C:992:LEU:HD13	1.71	0.73
1:B:79:LEU:HD12	1:B:82:LEU:HD12	1.70	0.73
2:C:255:ILE:HB	2:C:263:VAL:HG23	1.71	0.73
3:D:913:GLU:OE1	3:D:913:GLU:N	2.18	0.73
2:C:199:ASP:HA	6:N:38:DG:H21	1.54	0.72
2:C:615:VAL:HG23	2:C:650:VAL:HA	1.70	0.72
9:G:32:ARG:HG2	9:G:103:PRO:HG3	1.72	0.72
6:N:41:DA:C2	6:N:42:DC:C2	2.78	0.72
9:H:17:ILE:HD12	9:H:40:ALA:HB2	1.70	0.72
9:H:147:ILE:HG13	9:H:172:TYR:CB	2.18	0.72
9:H:152:PHE:HB3	9:H:160:LEU:HD22	1.71	0.72
2:C:114:VAL:HG11	2:C:117:ILE:HG23	1.72	0.72
2:C:857:VAL:O	7:K:93:ASN:ND2	2.23	0.72
3:D:275:ARG:HH11	3:D:302:ALA:HB2	1.55	0.72
3:D:1024:THR:HA	3:D:1125:PRO:HA	1.72	0.72
9:G:121:GLU:O	9:G:125:GLN:HB2	1.88	0.72
2:C:582:ASN:N	2:C:586:PHE:O	2.22	0.72
9:G:85:ASP:OD1	9:G:86:ALA:N	2.22	0.72
9:H:147:ILE:CD1	9:H:172:TYR:HB2	2.20	0.72
2:C:183:TRP:CZ3	6:N:38:DG:H2'	2.25	0.71
9:H:96:ASP:HB3	9:H:99:THR:HG23	1.71	0.71
2:C:250:THR:HA	2:C:268:ARG:HA	1.71	0.71
2:C:638:SER:N	2:C:641:GLU:OE2	2.23	0.71
9:I:32:ARG:HB3	9:I:103:PRO:HG3	1.70	0.71
9:G:147:ILE:HG13	9:G:172:TYR:HB2	1.73	0.71
9:H:176:ASN:HB3	9:H:228:PHE:HA	1.73	0.71
3:D:515:ARG:HH22	3:D:717:VAL:HG22	1.55	0.71
1:A:67:GLU:HG3	1:A:171:LEU:HD23	1.71	0.71
1:B:95:LYS:O	1:B:148:ARG:NH2	2.23	0.71
2:C:270:THR:OG1	2:C:273:HIS:ND1	2.21	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:72:CYS:N	3:D:88:CYS:SG	2.63	0.71
3:D:515:ARG:NH2	3:D:718:SER:O	2.24	0.71
1:A:114:ASP:OD1	1:A:114:ASP:N	2.22	0.71
2:C:599:VAL:H	2:C:627:GLY:HA3	1.56	0.71
2:C:821:ARG:NH1	2:C:825:GLU:OE2	2.24	0.71
2:C:65:ASN:HB3	2:C:105:TYR:HB2	1.73	0.70
6:N:11:DC:H5''	7:K:71:THR:HB	1.74	0.70
2:C:77:GLU:H	2:C:95:PRO:HD2	1.55	0.70
2:C:104:ILE:O	2:C:115:LYS:N	2.23	0.70
2:C:798:GLN:NE2	2:C:827:ARG:O	2.24	0.70
2:C:1291:LEU:O	3:D:345:LYS:NZ	2.21	0.70
2:C:436:ARG:NH1	2:C:436:ARG:O	2.22	0.70
9:H:149:ILE:HB	9:H:167:LEU:HB3	1.72	0.70
2:C:236:LYS:HZ2	2:C:289:VAL:H	1.38	0.70
2:C:180:ARG:NH2	2:C:392:GLU:O	2.25	0.70
9:I:130:SER:HA	9:I:135:ILE:HB	1.73	0.70
2:C:244:GLU:OE2	2:C:247:ARG:NH2	2.24	0.70
2:C:303:ASP:N	2:C:308:GLU:O	2.24	0.70
9:G:168:THR:HB	9:H:87:ARG:HG2	1.74	0.70
3:D:640:GLY:N	3:D:643:ASP:OD2	2.20	0.70
3:D:676:GLY:O	3:D:680:ASN:ND2	2.25	0.70
3:D:1087:ASP:HB3	3:D:1096:PRO:HG2	1.73	0.70
9:G:134:GLN:HB2	9:G:153:ASN:HD21	1.57	0.70
3:D:824:PRO:HD3	3:D:835:LEU:HB2	1.73	0.69
1:B:104:LYS:O	1:B:140:ILE:N	2.26	0.69
3:D:1090:ILE:HG12	3:D:1096:PRO:HA	1.73	0.69
2:C:74:ARG:NH2	2:C:121:GLU:OE2	2.25	0.69
2:C:267:ARG:NH1	2:C:268:ARG:O	2.25	0.69
2:C:1058:ARG:NH1	2:C:1240:ASP:OD2	2.24	0.69
3:D:705:THR:CG2	3:D:716:GLN:OE1	2.39	0.69
1:B:105:SER:HA	1:B:139:SER:HA	1.74	0.69
2:C:562:GLU:OE1	2:C:574:SER:HB3	1.92	0.69
4:T:35:DT:H2''	4:T:36:DA:C8	2.26	0.69
2:C:302:ILE:HA	2:C:309:LEU:HA	1.75	0.69
2:C:560:PRO:HG2	2:C:561:ILE:HG23	1.75	0.69
3:D:1096:PRO:HB2	3:D:1098:GLN:HE22	1.58	0.69
3:D:1268:ASN:ND2	3:D:1301:THR:OG1	2.20	0.69
9:G:197:LEU:HD12	9:G:208:LYS:HD3	1.73	0.69
1:A:14:VAL:HB	1:A:27:THR:HB	1.75	0.69
3:D:130:MET:HE1	3:D:157:GLN:HB3	1.73	0.69
3:D:638:SER:OG	3:D:639:VAL:N	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:91:TYR:CD1	6:N:27:DA:H2'	2.28	0.69
9:H:136:ASP:OD1	9:H:154:LYS:N	2.24	0.69
3:D:712:GLN:OE1	3:D:712:GLN:N	2.21	0.69
9:I:186:ASN:HD22	9:I:218:VAL:HG23	1.58	0.69
3:D:720:ASN:O	3:D:724:MET:N	2.24	0.68
1:A:18:GLN:NE2	1:A:20:SER:O	2.27	0.68
2:C:3:TYR:O	2:C:8:LYS:NZ	2.27	0.68
8:E:40:PRO:O	8:E:52:ARG:NH2	2.25	0.68
1:A:12:ARG:NH1	1:A:13:LEU:O	2.27	0.68
2:C:517:GLN:OE1	2:C:760:ASN:N	2.21	0.68
3:D:551:ARG:HH22	3:D:567:THR:HG21	1.59	0.68
3:D:1239:ASP:OD1	3:D:1242:ARG:NH1	2.26	0.68
9:I:108:PRO:O	9:I:208:LYS:NZ	2.25	0.68
9:H:147:ILE:HD11	9:H:172:TYR:HB2	1.76	0.68
9:I:71:ALA:HA	9:I:85:ASP:HA	1.76	0.68
5:F:142:GLU:OE1	5:F:142:GLU:N	2.26	0.68
1:A:232:VAL:HG21	1:B:218:ARG:HG2	1.75	0.68
3:D:527:LEU:HB2	3:D:550:VAL:HG12	1.76	0.68
2:C:18:ARG:O	2:C:1156:ARG:NH1	2.27	0.68
2:C:303:ASP:HB2	2:C:310:ILE:HG23	1.75	0.68
9:H:181:ILE:HD12	9:H:223:ASP:HB3	1.75	0.68
2:C:1272:GLU:OE1	2:C:1272:GLU:N	2.26	0.67
3:D:762:ASN:OD1	3:D:765:GLU:N	2.27	0.67
3:D:1343:GLU:HG3	3:D:1345:ARG:HE	1.59	0.67
9:G:37:THR:HG23	9:G:219:ALA:HB3	1.76	0.67
1:A:77:ASP:OD2	1:A:80:GLU:N	2.25	0.67
1:B:77:ASP:OD1	1:B:78:ILE:N	2.26	0.67
9:G:177:THR:HG22	9:G:178:PHE:H	1.57	0.67
1:B:48:LEU:HD12	1:B:183:ILE:HD11	1.77	0.67
3:D:395:LYS:HA	3:D:398:LYS:HD2	1.76	0.67
7:K:71:THR:OG1	7:K:72:GLN:OE1	2.10	0.67
9:G:124:GLN:HB2	9:G:191:PRO:HB3	1.75	0.67
3:D:648:GLU:OE1	3:D:648:GLU:N	2.23	0.67
3:D:951:GLN:HG3	3:D:1016:THR:HB	1.76	0.67
9:H:133:LEU:HD13	9:H:164:LYS:HB3	1.77	0.67
3:D:475:GLU:OE1	3:D:475:GLU:N	2.21	0.67
9:G:116:THR:HG21	9:G:147:ILE:HG21	1.77	0.67
9:I:58:ASN:HA	9:I:61:LEU:HD12	1.76	0.67
2:C:1336:ASN:HB2	3:D:25:ALA:HB2	1.77	0.67
9:H:146:LYS:HG2	9:H:171:ASP:CB	2.25	0.67
2:C:1222:GLU:OE1	2:C:1222:GLU:N	2.26	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:822:MET:HB3	3:D:838:ARG:HD3	1.77	0.67
2:C:365:GLU:HA	2:C:368:ARG:HD3	1.77	0.67
2:C:539:THR:HB	2:C:542:ARG:HB2	1.76	0.67
2:C:837:ALA:HB3	5:F:137:VAL:HG11	1.76	0.67
2:C:1138:VAL:HA	2:C:1141:LEU:HD12	1.77	0.67
4:T:25:DA:OP2	5:F:114:ARG:NH1	2.27	0.67
9:H:81:ILE:HD12	9:H:92:TRP:CD1	2.26	0.67
1:B:5:VAL:N	1:B:7:GLU:OE1	2.28	0.66
1:B:33:ARG:NH1	2:C:1081:PRO:CG	2.53	0.66
3:D:1163:VAL:HG13	3:D:1175:LEU:HD21	1.77	0.66
9:H:141:THR:HG21	9:H:179:ASN:CA	2.21	0.66
1:B:67:GLU:N	1:B:67:GLU:OE1	2.28	0.66
2:C:588:GLU:HB2	2:C:605:TYR:HB3	1.75	0.66
2:C:598:VAL:HA	2:C:627:GLY:HA3	1.77	0.66
9:H:3:LEU:HD12	9:H:64:LEU:HD11	1.75	0.66
1:B:194:GLN:O	1:B:195:ARG:NH1	2.28	0.66
2:C:678:ARG:NH1	2:C:681:MET:SD	2.68	0.66
4:T:12:DT:H2'	4:T:13:DA:C8	2.30	0.66
3:D:653:ILE:HG12	3:D:692:ARG:HH21	1.60	0.66
3:D:1176:VAL:HG13	3:D:1187:GLU:HG3	1.77	0.66
9:H:182:ILE:HG13	9:H:220:LEU:HD23	1.77	0.66
2:C:803:ALA:HB3	2:C:1097:VAL:HG12	1.76	0.66
9:H:148:VAL:HG12	9:H:168:THR:HG22	1.78	0.66
3:D:424:ASN:OD1	3:D:425:ARG:N	2.27	0.66
9:H:135:ILE:HD11	9:H:165:TYR:HB3	1.77	0.66
1:A:219:ARG:NH2	1:B:6:THR:OG1	2.28	0.66
3:D:113:HIS:CE1	3:D:115:TRP:HB2	2.31	0.66
2:C:10:ARG:NH2	2:C:790:ASP:OD2	2.27	0.66
3:D:183:GLU:O	3:D:186:GLN:HG2	1.96	0.66
3:D:395:LYS:HG3	3:D:399:LYS:HE2	1.77	0.66
1:A:38:THR:OG1	1:B:45:ARG:NE	2.22	0.66
2:C:321:LEU:HA	2:C:324:LYS:HE2	1.77	0.66
3:D:615:LYS:NZ	8:E:5:THR:OG1	2.24	0.66
1:B:153:VAL:HG12	1:B:175:ALA:HB3	1.79	0.65
1:B:86:LYS:HE2	1:B:173:VAL:HG13	1.78	0.65
2:C:193:ASN:HB3	2:C:195:PHE:HE2	1.59	0.65
2:C:667:LEU:HA	2:C:702:THR:HG21	1.77	0.65
9:H:23:LEU:HG	9:H:48:ILE:HD13	1.77	0.65
1:A:155:ALA:N	1:A:174:ASP:OD1	2.28	0.65
3:D:1168:GLU:HG3	3:D:1169:THR:HG23	1.77	0.65
2:C:207:THR:CG2	2:C:350:THR:HG22	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:91:ARG:HH21	1:A:210:THR:HA	1.60	0.65
2:C:183:TRP:H	6:N:38:DG:H22	1.45	0.65
3:D:318:GLY:N	3:D:322:ARG:O	2.28	0.65
3:D:833:GLU:OE1	3:D:838:ARG:NH1	2.29	0.65
5:F:85:ASN:OD1	5:F:85:ASN:N	2.28	0.65
1:A:34:GLY:O	1:B:45:ARG:NH2	2.30	0.65
3:D:156:ARG:NH2	3:D:191:SER:OG	2.30	0.65
3:D:518:VAL:O	3:D:547:ARG:NH1	2.28	0.65
8:E:12:LYS:NZ	8:E:59:ILE:O	2.27	0.65
1:B:78:ILE:HG13	1:B:79:LEU:N	2.11	0.65
2:C:242:VAL:H	2:C:245:ARG:HH12	1.44	0.65
2:C:988:LYS:HE3	2:C:1000:LEU:HD13	1.78	0.65
2:C:13:LYS:NZ	2:C:1149:TYR:O	2.30	0.65
3:D:362:ARG:H	3:D:365:GLN:NE2	1.95	0.65
3:D:410:ASP:OD1	3:D:411:ILE:N	2.29	0.65
3:D:974:VAL:HG22	3:D:1002:VAL:HA	1.78	0.65
9:H:26:GLY:O	9:H:48:ILE:N	2.24	0.65
9:H:205:GLY:HA3	9:H:220:LEU:HD12	1.79	0.65
2:C:801:ARG:HG2	2:C:1094:VAL:HG23	1.79	0.64
2:C:1138:VAL:HG22	2:C:1142:ARG:HE	1.62	0.64
7:K:37:ARG:NH2	7:K:75:LYS:HD3	2.13	0.64
1:B:16:ILE:HG12	1:B:26:VAL:HG13	1.79	0.64
2:C:727:VAL:HG22	2:C:773:LEU:HD13	1.79	0.64
3:D:524:GLY:N	3:D:547:ARG:O	2.27	0.64
3:D:965:SER:HA	3:D:975:ILE:HA	1.77	0.64
2:C:1278:LEU:HD23	2:C:1287:LEU:HD13	1.79	0.64
3:D:417:ARG:HB3	8:E:45:LYS:HE2	1.79	0.64
9:G:1:MET:N	9:G:73:ILE:O	2.30	0.64
9:G:30:MET:HB2	9:G:39:TYR:CE1	2.32	0.64
3:D:111:THR:O	3:D:239:LEU:N	2.26	0.64
1:B:91:ARG:HB3	1:B:122:GLU:HB3	1.79	0.64
2:C:1335:ILE:HG22	3:D:22:ILE:HD11	1.78	0.64
3:D:866:GLU:OE1	3:D:866:GLU:N	2.31	0.64
2:C:343:HIS:HA	2:C:437:ASN:HD21	1.61	0.64
3:D:37:GLU:HB2	3:D:104:HIS:CE1	2.33	0.64
3:D:835:LEU:HD23	3:D:877:VAL:HG23	1.79	0.64
3:D:1179:PRO:HD3	3:D:1184:ASP:HA	1.80	0.64
9:G:118:ILE:HG22	9:G:194:TYR:HB2	1.80	0.64
2:C:574:SER:OG	2:C:575:LEU:N	2.29	0.64
2:C:593:LYS:NZ	2:C:652:TYR:OH	2.29	0.64
2:C:1119:MET:HB2	2:C:1228:GLY:HA2	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:831:ILE:O	2:C:832:HIS:ND1	2.30	0.64
3:D:850:LYS:HE3	3:D:875:ASN:HB3	1.80	0.64
2:C:178:PRO:HD2	2:C:183:TRP:HD1	1.63	0.63
2:C:232:ILE:HG21	2:C:326:SER:HB3	1.80	0.63
2:C:1168:GLU:OE1	2:C:1168:GLU:N	2.30	0.63
3:D:294:ASN:OD1	3:D:297:ARG:NH2	2.30	0.63
3:D:986:ASP:HB3	3:D:992:LYS:HG2	1.81	0.63
2:C:339:ASN:HB3	2:C:343:HIS:H	1.61	0.63
2:C:1246:ARG:NH1	2:C:1265:PHE:O	2.30	0.63
3:D:363:LEU:HA	3:D:450:HIS:ND1	2.14	0.63
3:D:1238:GLN:HB3	3:D:1242:ARG:HH22	1.62	0.63
5:F:126:HIS:O	5:F:127:ASN:ND2	2.30	0.63
2:C:254:ASP:HB2	2:C:261:VAL:HG21	1.79	0.63
1:B:155:ALA:N	1:B:174:ASP:OD1	2.31	0.63
2:C:951:MET:SD	2:C:955:GLN:NE2	2.72	0.63
3:D:1173:ARG:HB2	3:D:1192:LYS:HD2	1.80	0.63
9:G:30:MET:HB2	9:G:39:TYR:HE1	1.63	0.63
9:I:63:ILE:HD12	9:I:90:ILE:HD13	1.80	0.63
3:D:394:ILE:HG22	3:D:398:LYS:HE3	1.79	0.63
9:H:212:GLU:OE1	9:H:212:GLU:N	2.31	0.63
1:A:180:VAL:HA	1:A:207:THR:CG2	2.25	0.63
1:A:196:THR:HG22	1:A:197:ASP:H	1.64	0.63
2:C:348:SER:HA	2:C:351:LEU:HD12	1.81	0.63
2:C:560:PRO:O	3:D:780:ARG:NH2	2.32	0.63
2:C:1104:PRO:O	3:D:736:GLN:NE2	2.32	0.63
2:C:1246:ARG:NE	3:D:348:ASP:OD1	2.31	0.63
4:T:1:DG:H1'	4:T:2:DG:C8	2.33	0.63
6:N:18:DA:H1'	6:N:19:DC:H5'	1.81	0.63
1:A:181:GLU:HG3	1:A:207:THR:HA	1.81	0.63
3:D:475:GLU:HG3	8:E:24:ALA:HB1	1.80	0.63
8:E:8:ASP:O	8:E:11:GLU:HG3	1.98	0.63
1:B:214:GLU:HA	1:B:217:ILE:HD12	1.81	0.63
2:C:13:LYS:O	2:C:1183:ALA:N	2.29	0.63
2:C:33:ASP:OD1	2:C:34:SER:N	2.32	0.63
3:D:111:THR:HG23	3:D:300:GLN:HE22	1.62	0.63
3:D:240:THR:HG23	3:D:241:VAL:HG23	1.79	0.63
9:I:147:ILE:HG13	9:I:172:TYR:HB2	1.79	0.63
2:C:365:GLU:HA	2:C:368:ARG:HH11	1.64	0.62
3:D:210:SER:HB2	4:T:2:DG:H5''	1.80	0.62
3:D:842:ARG:HH21	3:D:1251:LYS:HG3	1.64	0.62
9:G:180:PHE:HZ	9:G:228:PHE:HZ	1.46	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:57:THR:O	1:B:58:GLU:CG	2.47	0.62
1:B:73:GLY:O	1:B:134:THR:N	2.22	0.62
1:B:191:ARG:HA	1:B:198:LEU:HD13	1.81	0.62
2:C:131:THR:HG22	2:C:135:THR:H	1.63	0.62
2:C:133:ASN:O	2:C:527:LYS:NZ	2.33	0.62
2:C:801:ARG:HB2	2:C:1229:TYR:CZ	2.34	0.62
2:C:1267:GLY:O	3:D:346:ARG:NH1	2.32	0.62
2:C:13:LYS:HE2	2:C:1151:LEU:HB3	1.80	0.62
2:C:848:GLU:HG3	2:C:888:THR:HA	1.81	0.62
5:F:64:THR:H	5:F:68:LYS:HE3	1.64	0.62
9:I:196:LEU:HD11	9:I:207:ALA:HB1	1.81	0.62
1:B:193:GLU:HG2	1:B:194:GLN:HG2	1.81	0.62
2:C:1273:MET:HA	2:C:1276:TRP:CE3	2.35	0.62
3:D:1045:THR:HG23	3:D:1046:ILE:HG23	1.81	0.62
1:A:94:GLY:N	1:A:120:ASP:OD2	2.31	0.62
2:C:818:VAL:O	2:C:1079:ILE:HA	2.00	0.62
8:E:29:GLN:HB3	8:E:35:LYS:HD2	1.80	0.62
2:C:528:ARG:NH2	2:C:576:SER:O	2.28	0.62
2:C:590:PRO:HA	2:C:604:HIS:O	1.98	0.62
2:C:1108:ASN:OD1	2:C:1111:GLN:NE2	2.33	0.62
3:D:563:LEU:HD23	3:D:563:LEU:H	1.65	0.62
9:G:83:ILE:HG23	9:G:90:ILE:HB	1.82	0.62
9:H:15:ALA:HA	9:H:18:ASN:O	2.00	0.62
1:A:61:ILE:HG23	1:A:142:MET:HB3	1.81	0.62
2:C:675:ASP:OD2	2:C:677:ASN:N	2.33	0.62
2:C:951:MET:O	2:C:955:GLN:NE2	2.27	0.62
2:C:993:PRO:HG2	2:C:996:ARG:HB2	1.82	0.62
2:C:1286:THR:N	3:D:479:GLU:OE2	2.31	0.62
9:H:146:LYS:CA	9:H:171:ASP:HA	2.29	0.62
9:I:52:VAL:HG21	9:I:81:ILE:HD11	1.81	0.62
3:D:183:GLU:HG3	3:D:184:ALA:H	1.65	0.62
7:K:37:ARG:HH22	7:K:75:LYS:HD3	1.63	0.62
3:D:527:LEU:HD21	3:D:536:LEU:HD12	1.82	0.61
4:T:42:DG:C2	4:T:43:DC:C2	2.88	0.61
5:F:150:ASP:OD1	5:F:151:LYS:N	2.33	0.61
9:G:38:THR:HG22	9:G:218:VAL:HG13	1.82	0.61
2:C:1126:ASP:OD1	2:C:1126:ASP:N	2.33	0.61
2:C:1133:LYS:O	2:C:1135:GLN:NE2	2.32	0.61
3:D:126:LEU:HD11	3:D:223:LEU:HD13	1.82	0.61
3:D:1063:ASP:OD2	3:D:1066:GLU:N	2.29	0.61
3:D:1173:ARG:NH2	3:D:1192:LYS:O	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1174:ARG:HG2	3:D:1175:LEU:H	1.66	0.61
9:I:140:ILE:HB	9:I:180:PHE:HB2	1.82	0.61
2:C:256:GLU:N	2:C:286:GLU:OE2	2.32	0.61
3:D:905:ARG:HH21	8:E:16:ARG:HH21	1.48	0.61
3:D:1157:ALA:HB2	3:D:1210:ILE:HD11	1.82	0.61
2:C:1023:HIS:HA	2:C:1026:GLU:HG2	1.82	0.61
3:D:125:GLY:O	3:D:130:MET:N	2.27	0.61
2:C:1291:LEU:HB2	3:D:345:LYS:HD2	1.82	0.61
3:D:475:GLU:H	3:D:475:GLU:CD	2.04	0.61
3:D:812:ASP:O	3:D:897:HIS:ND1	2.24	0.61
3:D:963:VAL:HA	3:D:975:ILE:HD11	1.82	0.61
2:C:1286:THR:HG23	3:D:479:GLU:OE2	2.01	0.61
3:D:850:LYS:N	3:D:855:ASP:O	2.34	0.61
5:F:87:ASP:OD1	5:F:88:GLU:N	2.33	0.61
6:N:46:DA:H2"	6:N:47:DG:H8	1.65	0.61
9:H:116:THR:HB	9:H:147:ILE:HD13	1.82	0.61
1:A:17:GLU:HB2	1:A:25:LYS:HE2	1.82	0.61
2:C:83:GLN:H	2:C:83:GLN:CD	2.04	0.61
2:C:314:ASN:HD21	2:C:352:ARG:HD2	1.66	0.61
1:B:102:LEU:N	1:B:142:MET:O	2.26	0.60
2:C:28:LEU:HD21	2:C:524:ILE:HG13	1.81	0.60
2:C:66:SER:HA	2:C:104:ILE:HA	1.83	0.60
3:D:848:VAL:HG12	3:D:858:VAL:HG12	1.83	0.60
2:C:255:ILE:HB	2:C:263:VAL:CG2	2.31	0.60
9:I:28:PHE:CZ	9:I:41:GLU:HB2	2.37	0.60
1:B:107:ILE:HA	1:B:133:LEU:O	2.00	0.60
2:C:646:SER:N	2:C:649:GLN:OE1	2.24	0.60
2:C:60:GLN:HA	2:C:67:GLU:HA	1.82	0.60
2:C:76:GLY:HA3	2:C:95:PRO:HG2	1.82	0.60
2:C:606:LEU:HD12	2:C:611:GLU:OE1	2.01	0.60
2:C:646:SER:OG	2:C:649:GLN:N	2.34	0.60
3:D:1356:LEU:O	3:D:1366:HIS:NE2	2.34	0.60
4:T:22:DT:H2"	4:T:23:DT:C6	2.36	0.60
9:I:33:ALA:HB2	9:I:38:THR:HB	1.82	0.60
1:B:224:LEU:O	1:B:228:LEU:HG	2.01	0.60
2:C:84:GLU:HA	2:C:87:ILE:HD12	1.82	0.60
3:D:137:ARG:HG2	3:D:142:GLU:HB2	1.84	0.60
3:D:958:ILE:HD11	3:D:1017:VAL:HG11	1.82	0.60
2:C:102:LEU:HG	2:C:118:LYS:HB3	1.83	0.60
2:C:150:HIS:CE1	2:C:454:ARG:HG3	2.37	0.60
2:C:183:TRP:H	6:N:38:DG:N2	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:890:LYS:O	2:C:914:LYS:NZ	2.29	0.60
2:C:894:GLN:N	2:C:894:GLN:OE1	2.32	0.60
2:C:1134:GLN:HE22	2:C:1136:GLN:NE2	1.99	0.60
5:F:23:TRP:NE1	5:F:38:ARG:O	2.34	0.60
7:K:95:LEU:HB2	7:K:99:VAL:HG21	1.82	0.60
3:D:821:MET:HG2	3:D:881:LYS:HG3	1.83	0.60
7:K:44:ILE:HD11	7:K:59:THR:HA	1.84	0.60
9:H:133:LEU:HD11	9:I:90:ILE:HG23	1.84	0.60
1:A:100:LEU:HD23	1:A:115:ILE:HG21	1.84	0.60
1:A:111:THR:HG23	1:A:113:ALA:H	1.67	0.60
2:C:159:SER:HB2	2:C:442:VAL:HG11	1.83	0.60
2:C:470:ARG:NH2	4:T:25:DA:N3	2.50	0.60
2:C:705:GLU:OE1	2:C:705:GLU:N	2.34	0.60
2:C:879:GLY:HA2	2:C:920:VAL:HB	1.82	0.60
2:C:1214:ASP:OD2	2:C:1217:THR:N	2.33	0.60
3:D:1034:PHE:HD1	3:D:1036:ARG:HH12	1.49	0.60
5:F:39:GLN:OE1	5:F:39:GLN:N	2.34	0.60
9:H:76:SER:N	9:H:80:ASN:O	2.28	0.60
9:H:118:ILE:HG13	9:H:169:LEU:HD21	1.83	0.60
1:A:186:ASN:OD1	1:A:186:ASN:N	2.31	0.59
2:C:173:ASN:OD1	2:C:173:ASN:N	2.34	0.59
2:C:310:ILE:HD12	2:C:325:LEU:HD13	1.84	0.59
2:C:1184:THR:HG23	2:C:1189:GLY:HA2	1.84	0.59
2:C:1214:ASP:OD1	2:C:1215:GLY:N	2.35	0.59
2:C:974:ARG:O	2:C:978:VAL:HG23	2.02	0.59
2:C:1066:MET:HG3	2:C:1234:LYS:HA	1.84	0.59
3:D:621:ALA:HA	3:D:624:ILE:HD12	1.85	0.59
9:H:81:ILE:O	9:H:91:PHE:HA	2.02	0.59
9:I:27:GLN:HG2	9:I:47:VAL:HG22	1.84	0.59
1:A:212:ASP:OD1	1:A:214:GLU:N	2.35	0.59
1:B:44:ARG:HA	1:B:47:LEU:HD12	1.84	0.59
2:C:898:GLU:HA	7:K:60:THR:HG21	1.83	0.59
2:C:1196:LYS:HD2	2:C:1206:THR:HG22	1.83	0.59
9:G:1:MET:O	9:G:73:ILE:N	2.32	0.59
9:G:157:ASP:OD2	9:G:161:THR:N	2.34	0.59
9:I:152:PHE:CD1	9:I:160:LEU:HB3	2.37	0.59
9:G:73:ILE:HG12	9:G:83:ILE:HD13	1.83	0.59
9:H:123:LEU:HD23	9:H:191:PRO:HA	1.83	0.59
2:C:1165:SER:N	2:C:1168:GLU:OE2	2.36	0.59
9:G:176:ASN:HB3	9:G:228:PHE:HA	1.85	0.59
9:H:39:TYR:O	9:H:216:TYR:HA	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:44:GLU:O	2:C:46:GLN:N	2.33	0.59
2:C:83:GLN:OE1	2:C:83:GLN:N	2.22	0.59
2:C:596:ASP:N	2:C:596:ASP:OD1	2.35	0.59
2:C:778:GLU:N	2:C:781:ASP:OD1	2.34	0.59
9:G:180:PHE:HE1	9:G:226:HIS:HB3	1.67	0.59
2:C:639:LYS:H	2:C:641:GLU:HG3	1.67	0.59
2:C:18:ARG:HH21	2:C:18:ARG:CG	2.16	0.59
3:D:608:CYS:O	3:D:612:LEU:HB2	2.03	0.59
9:H:19:SER:O	9:H:55:TYR:O	2.20	0.59
9:H:27:GLN:O	9:H:44:ILE:N	2.33	0.59
2:C:994:ARG:HA	2:C:997:TRP:NE1	2.17	0.59
3:D:275:ARG:NE	5:F:70:GLU:OE2	2.29	0.59
4:T:40:DG:C2	6:N:13:DC:C2	2.91	0.59
9:G:140:ILE:HG22	9:G:178:PHE:HE1	1.68	0.59
9:H:141:THR:O	9:H:148:VAL:HG22	2.03	0.59
2:C:753:LEU:HB2	2:C:767:GLN:HB2	1.85	0.58
2:C:811:ASN:O	2:C:1099:ASN:ND2	2.26	0.58
3:D:554:GLU:OE1	3:D:589:TYR:N	2.35	0.58
9:G:157:ASP:OD2	9:G:162:ARG:N	2.26	0.58
1:B:37:HIS:CE1	2:C:1216:ARG:HD2	2.38	0.58
2:C:1214:ASP:CG	2:C:1216:ARG:H	2.06	0.58
3:D:270:ARG:NH2	5:F:113:GLU:OE2	2.36	0.58
3:D:819:GLY:HA3	3:D:882:VAL:O	2.02	0.58
2:C:292:ILE:HA	2:C:295:LYS:HE2	1.84	0.58
2:C:1005:GLU:CD	2:C:1006:GLU:H	2.06	0.58
2:C:263:VAL:HG21	2:C:269:ILE:HG12	1.85	0.58
2:C:582:ASN:OD1	2:C:583:GLU:N	2.36	0.58
2:C:41:GLN:NE2	2:C:73:TYR:O	2.24	0.58
3:D:495:ASN:O	3:D:497:GLU:N	2.37	0.58
4:T:33:DA:N6	6:N:20:DT:O4	2.37	0.58
2:C:935:THR:HG22	2:C:1048:LYS:HE3	1.86	0.58
2:C:999:GLU:OE1	2:C:999:GLU:N	2.36	0.58
2:C:1073:LYS:HE2	3:D:462:ASP:HB3	1.85	0.58
3:D:235:GLU:OE1	3:D:235:GLU:N	2.37	0.58
3:D:310:GLY:HA2	3:D:315:ALA:HB2	1.85	0.58
3:D:705:THR:HG23	3:D:707:ILE:CD1	2.33	0.58
3:D:975:ILE:HD13	3:D:980:THR:HB	1.86	0.58
9:G:126:LEU:HA	9:G:129:VAL:HG22	1.85	0.58
9:H:39:TYR:OH	9:H:106:PRO:HA	2.04	0.58
9:I:194:TYR:CD2	9:I:209:PHE:HB3	2.38	0.58
2:C:197:ARG:HH21	2:C:203:LYS:HB2	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:874:GLU:OE2	3:D:875:ASN:ND2	2.35	0.58
3:D:1188:GLU:OE1	3:D:1188:GLU:N	2.37	0.58
9:H:140:ILE:HA	9:H:148:VAL:O	2.03	0.58
9:I:112:ALA:HA	9:I:199:TRP:HB2	1.85	0.58
9:G:20:GLY:HA3	9:G:54:ILE:O	2.03	0.58
3:D:644:MET:N	3:D:644:MET:SD	2.77	0.58
3:D:645:VAL:HG11	3:D:701:LEU:HB2	1.84	0.58
9:G:28:PHE:HZ	9:G:41:GLU:HB2	1.69	0.58
2:C:588:GLU:HA	2:C:606:LEU:O	2.03	0.58
3:D:355:ILE:HG22	3:D:461:PHE:HE1	1.67	0.58
3:D:1272:SER:OG	3:D:1273:ASP:N	2.37	0.58
4:T:52:DT:H2''	4:T:53:DT:C6	2.38	0.58
9:H:141:THR:HG21	9:H:179:ASN:CB	2.34	0.58
9:I:76:SER:N	9:I:80:ASN:O	2.33	0.58
2:C:811:ASN:HA	2:C:815:SER:HB2	1.86	0.57
2:C:990:ASP:OD1	2:C:991:LYS:N	2.36	0.57
2:C:1002:LEU:HD21	2:C:1007:LYS:HD2	1.84	0.57
3:D:827:GLU:OE1	3:D:832:LYS:NZ	2.33	0.57
7:K:47:MET:HB3	7:K:58:ALA:HB1	1.85	0.57
9:H:145:GLY:O	9:H:171:ASP:HB2	2.02	0.57
2:C:207:THR:HG23	2:C:350:THR:CG2	2.32	0.57
2:C:944:ARG:O	2:C:948:ILE:HG12	2.04	0.57
3:D:208:THR:HG22	3:D:210:SER:H	1.68	0.57
1:B:93:GLN:O	1:B:148:ARG:NH2	2.37	0.57
2:C:74:ARG:HG2	2:C:97:ARG:HB2	1.86	0.57
2:C:1281:TYR:CE1	3:D:483:LEU:O	2.58	0.57
3:D:357:VAL:HG23	3:D:358:GLY:H	1.68	0.57
9:G:199:TRP:HE3	9:G:205:GLY:HA2	1.69	0.57
2:C:866:ASP:OD1	2:C:869:GLY:N	2.30	0.57
2:C:1134:GLN:HE22	2:C:1136:GLN:HE21	1.51	0.57
3:D:166:LEU:O	3:D:170:GLU:HG3	2.05	0.57
3:D:265:LEU:HD21	3:D:330:MET:HE3	1.86	0.57
3:D:720:ASN:ND2	3:D:722:ILE:HB	2.18	0.57
5:F:91:TYR:HD1	6:N:27:DA:H2'	1.67	0.57
1:B:188:GLU:OE2	1:B:200:LYS:HD2	2.04	0.57
3:D:85:CYS:SG	3:D:86:GLU:N	2.77	0.57
3:D:368:LEU:HD12	3:D:369:PRO:HD2	1.85	0.57
3:D:830:ASP:OD1	3:D:830:ASP:N	2.34	0.57
3:D:1064:SER:HA	3:D:1067:ARG:HB2	1.86	0.57
3:D:1343:GLU:HG3	3:D:1345:ARG:NE	2.18	0.57
5:F:88:GLU:N	5:F:88:GLU:OE1	2.31	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:73:TYR:HD2	2:C:96:LEU:HD11	1.70	0.57
2:C:207:THR:HA	2:C:210:LEU:HD12	1.87	0.57
2:C:344:GLY:HA3	2:C:346:TYR:CZ	2.40	0.57
2:C:633:LEU:HB3	2:C:644:LEU:HD13	1.86	0.57
6:N:16:DT:H2''	6:N:17:DT:C5	2.39	0.57
9:G:138:ILE:HB	9:G:149:ILE:HD11	1.86	0.57
1:B:74:VAL:HA	1:B:132:HIS:O	2.04	0.57
2:C:211:ARG:NH1	2:C:357:ASN:O	2.38	0.57
2:C:857:VAL:HG23	2:C:862:LEU:HD21	1.85	0.57
3:D:1346:GLY:O	3:D:1350:ASN:ND2	2.38	0.57
5:F:93:ASN:HD21	5:F:96:ALA:H	1.51	0.57
2:C:1080:ASN:N	2:C:1080:ASN:OD1	2.37	0.57
2:C:1131:MET:HA	2:C:1134:GLN:HE21	1.70	0.57
3:D:553:THR:HA	3:D:567:THR:HA	1.87	0.57
5:F:59:ASN:OD1	5:F:60:PHE:N	2.36	0.57
6:N:24:DA:H2''	6:N:25:DG:H8	1.70	0.57
7:K:55:TYR:O	7:K:59:THR:HG22	2.04	0.57
3:D:183:GLU:HG3	3:D:184:ALA:N	2.20	0.57
3:D:1153:PRO:O	3:D:1194:ARG:NH2	2.27	0.57
6:N:14:DT:H2''	6:N:15:DA:C8	2.40	0.57
2:C:180:ARG:O	2:C:396:ASP:N	2.38	0.56
2:C:540:ARG:HH21	2:C:567:PRO:HG3	1.70	0.56
2:C:735:LYS:NZ	2:C:747:GLY:O	2.29	0.56
2:C:1246:ARG:HA	2:C:1265:PHE:CE2	2.40	0.56
3:D:44:ILE:HG22	3:D:46:TYR:H	1.70	0.56
9:I:194:TYR:HB3	9:I:209:PHE:HD2	1.70	0.56
2:C:202:ARG:CZ	2:C:369:MET:HG2	2.35	0.56
2:C:347:ILE:HD11	2:C:433:ILE:HD11	1.87	0.56
2:C:593:LYS:HD3	2:C:604:HIS:CE1	2.39	0.56
3:D:244:VAL:HB	3:D:269:TYR:HE1	1.70	0.56
4:T:33:DA:H2''	4:T:34:DG:C8	2.39	0.56
4:T:34:DG:H2''	4:T:35:DT:H71	1.86	0.56
8:E:22:VAL:HG12	8:E:25:ARG:HH21	1.69	0.56
1:A:171:LEU:H	1:A:171:LEU:HD12	1.70	0.56
2:C:84:GLU:OE1	2:C:84:GLU:N	2.29	0.56
2:C:813:GLU:HB3	3:D:461:PHE:HB2	1.88	0.56
2:C:848:GLU:HG2	2:C:888:THR:HG22	1.87	0.56
2:C:875:ALA:O	2:C:877:VAL:HG13	2.05	0.56
2:C:1297:ASP:O	2:C:1301:ARG:N	2.28	0.56
3:D:85:CYS:SG	3:D:88:CYS:N	2.75	0.56
5:F:12:ASN:ND2	5:F:15:GLU:H	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:141:THR:HB	9:H:179:ASN:HA	1.83	0.56
9:H:167:LEU:HD13	9:I:88:SER:HB3	1.86	0.56
9:H:197:LEU:O	9:H:207:ALA:HA	2.05	0.56
1:A:30:PRO:HB2	1:A:198:LEU:HD22	1.86	0.56
2:C:866:ASP:OD1	2:C:870:ILE:N	2.24	0.56
3:D:833:GLU:OE2	3:D:838:ARG:N	2.39	0.56
9:G:1:MET:HG2	9:G:73:ILE:HB	1.86	0.56
2:C:688:GLN:OE1	2:C:1235:LEU:HD11	2.06	0.56
2:C:1211:ARG:O	2:C:1212:LEU:HD23	2.06	0.56
3:D:366:CYS:O	3:D:439:PRO:HA	2.05	0.56
3:D:598:LYS:O	3:D:601:ILE:HG12	2.05	0.56
5:F:87:ASP:OD1	5:F:89:THR:N	2.39	0.56
9:I:177:THR:HG22	9:I:227:ASP:HB2	1.88	0.56
3:D:114:ILE:HD11	3:D:311:ARG:HB2	1.86	0.56
3:D:1202:GLU:OE1	3:D:1202:GLU:N	2.36	0.56
1:A:218:ARG:HH21	1:B:233:ASP:H	1.54	0.56
2:C:62:TYR:CE2	2:C:480:SER:HB2	2.40	0.56
2:C:183:TRP:N	6:N:38:DG:H22	2.03	0.56
2:C:349:GLU:OE1	2:C:349:GLU:N	2.29	0.56
2:C:749:ASP:HB3	2:C:751:TYR:HE2	1.71	0.56
2:C:1255:THR:OG1	2:C:1322:SER:HB3	2.06	0.56
3:D:667:GLN:O	3:D:670:SER:OG	2.22	0.56
5:F:13:ASN:ND2	5:F:93:ASN:OD1	2.38	0.56
9:I:9:ALA:O	9:I:13:ASN:ND2	2.38	0.56
2:C:702:THR:N	2:C:705:GLU:OE2	2.39	0.56
2:C:1273:MET:HB3	3:D:428:THR:HB	1.87	0.56
3:D:140:TYR:OH	3:D:312:ARG:HD2	2.06	0.56
3:D:290:ILE:HA	3:D:293:ARG:NH1	2.21	0.56
7:K:40:ASN:HA	7:K:43:ILE:HD12	1.88	0.56
2:C:843:THR:HG23	2:C:844:LYS:O	2.06	0.56
2:C:1031:ALA:O	2:C:1035:LYS:HG3	2.05	0.56
2:C:1138:VAL:HG13	2:C:1142:ARG:HH21	1.71	0.56
6:N:46:DA:H2''	6:N:47:DG:C8	2.41	0.56
9:G:28:PHE:CZ	9:G:41:GLU:HB2	2.40	0.56
9:G:92:TRP:CD2	9:G:93:PRO:HD2	2.41	0.56
4:T:46:DA:H1'	4:T:47:DG:C8	2.40	0.56
9:H:181:ILE:O	9:H:224:SER:OG	2.22	0.56
9:I:189:MET:SD	9:I:189:MET:N	2.71	0.56
2:C:1253:LEU:O	2:C:1256:GLN:NE2	2.29	0.55
2:C:1298:VAL:HG23	2:C:1299:ASN:H	1.71	0.55
3:D:121:PRO:HD2	3:D:123:ARG:NH2	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1212:ASP:OD1	3:D:1212:ASP:N	2.37	0.55
7:K:82:ILE:O	7:K:86:GLN:HG3	2.06	0.55
9:H:149:ILE:O	9:H:167:LEU:N	2.37	0.55
2:C:53:PHE:HE1	2:C:468:LEU:HD11	1.72	0.55
2:C:1131:MET:O	2:C:1134:GLN:NE2	2.40	0.55
3:D:86:GLU:N	3:D:86:GLU:OE1	2.39	0.55
3:D:102:MET:HG2	3:D:246:PRO:HD3	1.88	0.55
3:D:1140:ARG:HH12	3:D:1144:LEU:HD22	1.71	0.55
9:G:120:ALA:N	9:G:193:ASN:OD1	2.37	0.55
9:G:151:GLY:O	9:G:164:LYS:N	2.22	0.55
2:C:12:ARG:NE	2:C:1181:PRO:HB2	2.20	0.55
3:D:70:CYS:SG	3:D:71:LEU:N	2.75	0.55
3:D:99:ARG:HA	3:D:248:ASP:HB2	1.88	0.55
3:D:364:HIS:ND1	3:D:364:HIS:O	2.40	0.55
3:D:821:MET:HA	3:D:881:LYS:HA	1.88	0.55
9:G:1:MET:H2	9:G:72:GLU:CD	2.09	0.55
9:H:194:TYR:CD2	9:H:209:PHE:HB3	2.41	0.55
1:A:83:LEU:HD23	2:C:694:ARG:HH21	1.71	0.55
1:B:135:ASP:HB2	1:B:138:ALA:HB2	1.88	0.55
2:C:801:ARG:N	2:C:1095:ASP:OD2	2.39	0.55
3:D:331:ILE:HG23	3:D:338:PHE:HE2	1.71	0.55
3:D:528:THR:HG23	3:D:532:GLU:OE2	2.06	0.55
3:D:1058:SER:HB2	3:D:1106:ILE:HD11	1.87	0.55
3:D:1206:ARG:NH2	3:D:1222:ARG:O	2.39	0.55
9:G:152:PHE:HB2	9:G:160:LEU:HD22	1.89	0.55
9:H:150:ASN:HA	9:H:166:SER:HA	1.88	0.55
2:C:531:SER:OG	2:C:532:ALA:N	2.39	0.55
2:C:897:PRO:HA	2:C:900:LYS:HB2	1.88	0.55
3:D:517:CYS:HB2	3:D:545:HIS:HD1	1.70	0.55
9:G:179:ASN:HB3	9:G:225:THR:HG22	1.86	0.55
2:C:883:LEU:HD13	2:C:920:VAL:HG22	1.88	0.55
2:C:1203:ASP:OD1	2:C:1203:ASP:N	2.38	0.55
3:D:551:ARG:NH1	3:D:567:THR:OG1	2.39	0.55
3:D:813:ASP:HB2	3:D:897:HIS:CE1	2.40	0.55
9:I:17:ILE:HD12	9:I:40:ALA:HB2	1.88	0.55
3:D:211:GLU:OE2	3:D:214:ARG:NE	2.40	0.55
3:D:1033:GLY:O	3:D:1114:GLN:HA	2.06	0.55
1:B:41:ASN:ND2	2:C:1217:THR:HA	2.21	0.55
1:B:102:LEU:HB3	1:B:142:MET:HG2	1.88	0.55
1:B:109:PRO:HA	1:B:132:HIS:CD2	2.42	0.55
2:C:59:ILE:O	2:C:68:LEU:N	2.24	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:498:ILE:HG13	2:C:499:SER:H	1.72	0.55
3:D:709:ARG:C	3:D:711:GLY:H	2.09	0.55
6:N:7:DT:H2''	6:N:8:DC:C5	2.42	0.55
6:N:45:DA:H2'	6:N:45:DA:OP2	2.07	0.55
8:E:67:ARG:O	8:E:70:GLN:NE2	2.39	0.55
2:C:93:SER:OG	2:C:94:ALA:N	2.40	0.55
2:C:832:HIS:CE1	2:C:1058:ARG:HD2	2.41	0.55
2:C:840:SER:HA	2:C:886:LYS:NZ	2.21	0.55
2:C:921:PRO:HA	5:F:133:ASP:CB	2.37	0.55
2:C:1332:SER:OG	2:C:1333:LEU:N	2.40	0.55
3:D:568:SER:OG	3:D:569:LEU:N	2.39	0.55
3:D:755:ILE:H	3:D:755:ILE:HD12	1.71	0.55
3:D:1075:ARG:HH22	3:D:1168:GLU:HG2	1.71	0.55
2:C:320:ASP:OD1	2:C:320:ASP:N	2.40	0.54
3:D:183:GLU:HA	3:D:186:GLN:NE2	2.22	0.54
3:D:844:THR:HB	3:D:864:LEU:HD11	1.89	0.54
3:D:1157:ALA:O	3:D:1207:GLY:N	2.36	0.54
9:H:145:GLY:O	9:H:172:TYR:N	2.40	0.54
2:C:67:GLU:HB3	2:C:103:VAL:HG23	1.88	0.54
2:C:698:PRO:HB3	2:C:1231:TYR:CD2	2.43	0.54
9:H:25:SER:HA	9:H:48:ILE:HB	1.89	0.54
2:C:241:LEU:N	2:C:283:LYS:O	2.41	0.54
2:C:761:GLN:N	2:C:761:GLN:OE1	2.40	0.54
2:C:860:ALA:O	2:C:863:SER:OG	2.24	0.54
3:D:543:SER:OG	3:D:544:LEU:N	2.40	0.54
3:D:804:ALA:O	3:D:806:ASP:N	2.41	0.54
3:D:978:ARG:O	3:D:996:LYS:NZ	2.33	0.54
7:K:43:ILE:O	7:K:46:LYS:HB3	2.07	0.54
8:E:26:ARG:NE	8:E:30:MET:SD	2.80	0.54
9:H:200:ALA:HB1	9:H:226:HIS:CG	2.43	0.54
9:I:39:TYR:CE2	9:I:107:ILE:HB	2.41	0.54
2:C:212:ALA:HA	2:C:359:ARG:HG3	1.88	0.54
2:C:859:GLU:HA	2:C:862:LEU:HD23	1.89	0.54
3:D:67:ASP:HB2	3:D:94:GLN:HA	1.89	0.54
6:N:51:DC:H2''	6:N:52:DC:C5	2.42	0.54
7:K:33:LYS:H	9:I:155:VAL:HG21	1.72	0.54
3:D:1034:PHE:HB3	3:D:1036:ARG:NH1	2.23	0.54
9:G:119:LYS:HA	9:G:193:ASN:HA	1.88	0.54
2:C:28:LEU:HD22	2:C:527:LYS:HD2	1.90	0.54
7:K:81:ILE:HD12	7:K:84:LYS:HZ3	1.73	0.54
2:C:882:ILE:HG13	2:C:919:ARG:HD3	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:996:ARG:NH1	2:C:999:GLU:HB2	2.23	0.54
3:D:56:LEU:HD21	3:D:273:ILE:HD12	1.90	0.54
3:D:143:SER:OG	3:D:160:LEU:O	2.22	0.54
3:D:426:ALA:HB3	3:D:427:PRO:HD3	1.89	0.54
3:D:1029:THR:H	3:D:1121:LEU:HD23	1.73	0.54
9:G:205:GLY:HA3	9:G:220:LEU:HD12	1.89	0.54
9:I:53:ALA:HB1	9:I:100:VAL:HG11	1.89	0.54
2:C:446:ASP:HA	2:C:451:ARG:HD2	1.89	0.54
2:C:1292:THR:HG23	2:C:1293:VAL:HG23	1.89	0.54
3:D:201:LEU:HD22	3:D:217:LEU:HD11	1.89	0.54
3:D:492:SER:HB2	3:D:499:ILE:HD13	1.89	0.54
3:D:661:VAL:HA	3:D:664:ILE:HG22	1.90	0.54
9:G:59:GLY:O	9:G:63:ILE:HG12	2.09	0.54
2:C:1223:ARG:HH22	3:D:721:SER:H	1.56	0.53
3:D:665:GLN:HE22	3:D:678:ARG:CZ	2.21	0.53
3:D:1178:THR:HG22	3:D:1184:ASP:HB3	1.91	0.53
9:H:105:LYS:HE2	9:H:108:PRO:HD3	1.89	0.53
9:H:180:PHE:CE2	9:H:198:LEU:HB3	2.42	0.53
2:C:615:VAL:HG12	2:C:638:SER:HB3	1.90	0.53
3:D:114:ILE:HD12	3:D:304:ASP:OD1	2.09	0.53
3:D:423:LEU:HD13	3:D:437:PHE:HD2	1.73	0.53
3:D:1005:LYS:HD2	3:D:1009:GLU:HG2	1.89	0.53
2:C:277:LEU:O	2:C:281:ASP:N	2.42	0.53
8:E:50:ALA:O	8:E:54:ILE:HG13	2.08	0.53
9:H:39:TYR:CE2	9:H:41:GLU:HB3	2.44	0.53
9:H:116:THR:HG23	9:H:196:LEU:HB3	1.91	0.53
2:C:905:ILE:HD13	7:K:82:ILE:HG23	1.90	0.53
2:C:935:THR:HG22	2:C:1048:LYS:HB2	1.91	0.53
3:D:247:PRO:HA	3:D:250:ARG:CZ	2.37	0.53
3:D:1193:TRP:O	3:D:1195:GLN:NE2	2.38	0.53
5:F:93:ASN:ND2	5:F:96:ALA:H	2.06	0.53
5:F:149:TYR:O	5:F:152:MET:HB3	2.08	0.53
8:E:13:ILE:HG21	8:E:18:ASP:HB3	1.91	0.53
8:E:51:LEU:HA	8:E:54:ILE:HD12	1.91	0.53
1:A:83:LEU:HD23	2:C:694:ARG:HE	1.74	0.53
2:C:223:LEU:HD22	2:C:426:ILE:HG21	1.91	0.53
2:C:361:SER:O	2:C:365:GLU:HG2	2.08	0.53
3:D:1057:SER:O	3:D:1057:SER:OG	2.26	0.53
9:H:200:ALA:HB1	9:H:226:HIS:ND1	2.23	0.53
9:I:140:ILE:HD13	9:I:196:LEU:HD21	1.91	0.53
3:D:865:HIS:HE1	3:D:867:GLN:HB2	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:T:35:DT:H2''	4:T:36:DA:N7	2.22	0.53
1:A:10:LYS:O	1:A:30:PRO:HD2	2.09	0.53
3:D:107:LEU:HB2	3:D:240:THR:O	2.09	0.53
3:D:905:ARG:O	3:D:907:HIS:N	2.39	0.53
3:D:1233:ILE:O	3:D:1237:VAL:HG22	2.08	0.53
3:D:1353:VAL:HG21	3:D:1355:ARG:HE	1.74	0.53
9:H:136:ASP:OD2	9:H:155:VAL:N	2.41	0.53
9:I:23:LEU:HB3	9:I:48:ILE:HD13	1.89	0.53
2:C:329:GLY:HA2	2:C:331:LYS:HE3	1.91	0.53
3:D:982:LEU:HD22	3:D:995:TYR:HD2	1.72	0.53
3:D:1044:GLN:HG3	3:D:1068:THR:OG1	2.09	0.53
3:D:1275:LEU:HB2	3:D:1278:GLU:HG2	1.90	0.53
1:A:37:HIS:HB2	1:B:45:ARG:NH2	2.24	0.53
2:C:37:LYS:HA	2:C:40:GLU:OE1	2.09	0.53
2:C:411:ARG:HG2	2:C:412:GLU:H	1.74	0.53
3:D:423:LEU:HD13	3:D:437:PHE:CD2	2.44	0.53
3:D:800:LEU:O	3:D:803:VAL:HG12	2.09	0.53
4:T:42:DG:H2''	4:T:43:DC:OP2	2.09	0.53
9:H:112:ALA:HB2	9:H:197:LEU:HB3	1.91	0.53
1:A:19:VAL:HG11	1:A:23:HIS:CD2	2.44	0.52
2:C:128:PRO:HG2	2:C:506:PHE:CD1	2.45	0.52
2:C:576:SER:OG	2:C:577:VAL:N	2.38	0.52
2:C:831:ILE:C	2:C:832:HIS:HD1	2.13	0.52
3:D:517:CYS:HB2	3:D:545:HIS:ND1	2.24	0.52
3:D:746:LEU:HG	3:D:758:PRO:HB3	1.91	0.52
5:F:16:LEU:HD22	5:F:43:ILE:HD12	1.90	0.52
6:N:26:DT:OP1	6:N:27:DA:N6	2.42	0.52
7:K:63:LEU:O	7:K:68:ILE:N	2.39	0.52
9:G:176:ASN:HB3	9:G:227:ASP:O	2.08	0.52
9:H:109:PHE:CG	9:H:208:LYS:HD2	2.45	0.52
9:H:141:THR:HG22	9:H:179:ASN:C	2.29	0.52
1:A:45:ARG:HH12	2:C:1216:ARG:HG2	1.74	0.52
9:H:13:ASN:O	9:H:16:THR:OG1	2.22	0.52
9:I:196:LEU:HA	9:I:208:LYS:O	2.09	0.52
1:A:10:LYS:HA	1:B:227:GLN:HE22	1.75	0.52
1:A:92:VAL:O	1:A:148:ARG:NH2	2.42	0.52
2:C:599:VAL:H	2:C:627:GLY:CA	2.22	0.52
2:C:618:GLN:HE21	3:D:769:VAL:HB	1.75	0.52
2:C:715:THR:OG1	2:C:716:ALA:N	2.41	0.52
2:C:1331:ARG:HD2	3:D:33:TRP:CZ2	2.45	0.52
3:D:26:SER:OG	3:D:28:ASP:HB3	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:91:GLU:HG3	3:D:92:VAL:H	1.74	0.52
3:D:430:HIS:CD2	3:D:432:LEU:H	2.28	0.52
3:D:1230:THR:OG1	3:D:1231:ARG:N	2.42	0.52
3:D:1365:TYR:CD2	3:D:1366:HIS:HD2	2.27	0.52
5:F:10:TYR:CD1	5:F:49:LEU:CD1	2.88	0.52
9:I:1:MET:HB2	9:I:47:VAL:O	2.10	0.52
2:C:178:PRO:HD2	2:C:183:TRP:CD1	2.43	0.52
2:C:255:ILE:HG13	2:C:269:ILE:HD11	1.90	0.52
2:C:890:LYS:HG2	2:C:912:ASP:C	2.30	0.52
9:I:27:GLN:O	9:I:44:ILE:N	2.36	0.52
1:B:66:HIS:CD2	1:B:68:TYR:H	2.27	0.52
3:D:198:CYS:O	3:D:202:ARG:HG2	2.09	0.52
3:D:555:TYR:CE1	3:D:565:ALA:HB2	2.44	0.52
7:K:53:MET:HG2	7:K:54:SER:H	1.74	0.52
9:H:126:LEU:HG	9:H:127:LEU:HD23	1.90	0.52
9:I:39:TYR:CG	9:I:107:ILE:HD12	2.45	0.52
1:A:151:GLY:H	1:A:177:TYR:HB2	1.74	0.52
2:C:594:VAL:HG22	2:C:599:VAL:HG22	1.92	0.52
2:C:1040:ASP:N	2:C:1040:ASP:OD1	2.39	0.52
3:D:1150:PRO:HG3	3:D:1216:ALA:HA	1.91	0.52
9:I:206:ALA:HA	9:I:218:VAL:O	2.10	0.52
3:D:573:THR:O	3:D:576:ARG:HB2	2.10	0.52
3:D:919:ALA:O	3:D:922:SER:OG	2.24	0.52
9:G:91:PHE:HB2	9:I:164:LYS:HA	1.92	0.52
2:C:504:GLU:O	2:C:508:SER:OG	2.25	0.52
2:C:529:ARG:HD3	2:C:572:ILE:HG22	1.91	0.52
2:C:633:LEU:HB3	2:C:644:LEU:HB3	1.92	0.52
2:C:1155:VAL:HG23	2:C:1157:GLN:H	1.75	0.52
3:D:964:LYS:O	3:D:976:THR:N	2.37	0.52
3:D:1371:ARG:HE	3:D:1372:ARG:NH2	2.08	0.52
2:C:104:ILE:HD13	2:C:484:LEU:HG	1.92	0.52
2:C:393:ASP:OD1	2:C:394:ARG:N	2.43	0.52
2:C:615:VAL:HB	2:C:636:CYS:SG	2.50	0.52
2:C:692:THR:OG1	2:C:693:LEU:N	2.42	0.52
3:D:43:THR:O	3:D:52:GLU:N	2.43	0.52
3:D:518:VAL:C	3:D:547:ARG:HH12	2.12	0.52
3:D:653:ILE:HD13	3:D:692:ARG:HB3	1.90	0.52
3:D:733:SER:H	3:D:736:GLN:HG3	1.74	0.52
3:D:833:GLU:OE2	3:D:837:ASP:HB2	2.09	0.52
5:F:101:ALA:HA	6:N:26:DT:H3	1.74	0.52
7:K:41:GLY:HA2	7:K:44:ILE:HG22	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:126:LEU:HD23	9:I:127:LEU:HD23	1.91	0.52
2:C:816:ILE:O	2:C:1076:ILE:HA	2.10	0.52
2:C:840:SER:HB3	2:C:850:ILE:HD11	1.91	0.52
2:C:900:LYS:HG2	2:C:903:ARG:HH11	1.75	0.52
2:C:949:GLU:HA	2:C:952:GLN:NE2	2.21	0.52
3:D:218:THR:HA	3:D:221:ILE:HG22	1.91	0.52
3:D:891:ASP:OD1	3:D:892:PHE:N	2.42	0.52
9:G:180:PHE:HA	9:G:224:SER:OG	2.10	0.52
9:H:4:SER:O	9:H:8:THR:HG23	2.10	0.52
1:A:49:SER:OG	1:A:50:SER:N	2.42	0.51
2:C:1142:ARG:HD3	2:C:1169:VAL:HG21	1.92	0.51
3:D:183:GLU:HA	3:D:186:GLN:HE21	1.75	0.51
3:D:814:CYS:HB2	3:D:889:ASP:HB3	1.92	0.51
9:H:118:ILE:HA	9:H:169:LEU:HD22	1.92	0.51
9:I:16:THR:O	9:I:188:LYS:NZ	2.24	0.51
1:A:87:GLY:O	1:A:128:HIS:NE2	2.43	0.51
1:B:57:THR:C	1:B:58:GLU:HG3	2.29	0.51
2:C:225:PHE:CE1	2:C:345:PRO:HA	2.45	0.51
2:C:678:ARG:NH1	2:C:1071:GLY:O	2.44	0.51
2:C:849:GLU:O	2:C:886:LYS:HA	2.09	0.51
3:D:141:PHE:HE1	3:D:181:GLY:HA3	1.76	0.51
1:A:176:CYS:O	1:A:178:SER:N	2.43	0.51
3:D:768:ASN:CG	3:D:771:GLN:HE21	2.13	0.51
3:D:1135:THR:OG1	3:D:1136:GLY:N	2.37	0.51
5:F:10:TYR:OH	5:F:53:GLY:HA3	2.10	0.51
9:G:1:MET:SD	9:G:48:ILE:HA	2.51	0.51
1:A:66:HIS:HD2	1:A:68:TYR:H	1.58	0.51
1:B:100:LEU:HB2	1:B:144:ILE:HD11	1.93	0.51
2:C:339:ASN:HB3	2:C:343:HIS:N	2.25	0.51
3:D:355:ILE:HD11	3:D:466:MET:N	2.24	0.51
3:D:363:LEU:HD13	3:D:618:VAL:HG23	1.93	0.51
3:D:701:LEU:HD11	3:D:720:ASN:HD22	1.75	0.51
7:K:38:GLN:HB3	9:G:55:TYR:HD2	1.75	0.51
9:H:17:ILE:CD1	9:H:40:ALA:HB2	2.40	0.51
2:C:364:VAL:HG12	2:C:368:ARG:HD2	1.92	0.51
2:C:848:GLU:OE2	2:C:889:PRO:HD2	2.11	0.51
3:D:818:GLU:CA	3:D:881:LYS:NZ	2.72	0.51
9:H:53:ALA:O	9:H:95:ALA:N	2.41	0.51
9:H:59:GLY:O	9:H:63:ILE:HG12	2.11	0.51
1:A:52:PRO:HB3	1:B:5:VAL:HG22	1.92	0.51
1:B:208:ASN:OD1	1:B:209:GLY:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:720:ARG:NH2	2:C:749:ASP:OD1	2.44	0.51
3:D:362:ARG:N	3:D:365:GLN:HE21	2.04	0.51
3:D:736:GLN:O	3:D:740:LEU:HG	2.11	0.51
9:H:126:LEU:O	9:H:130:SER:OG	2.27	0.51
9:H:168:THR:OG1	9:I:87:ARG:O	2.26	0.51
9:I:29:ILE:HG12	9:I:42:ALA:O	2.11	0.51
1:B:182:ARG:HB3	1:B:206:GLU:HB3	1.92	0.51
2:C:77:GLU:N	2:C:95:PRO:HD2	2.25	0.51
2:C:97:ARG:NH2	2:C:121:GLU:HG2	2.25	0.51
3:D:705:THR:O	3:D:715:LYS:HA	2.10	0.51
3:D:720:ASN:HD21	3:D:722:ILE:HB	1.74	0.51
3:D:948:SER:OG	3:D:949:SER:N	2.43	0.51
3:D:1295:ASN:HD22	3:D:1297:LYS:NZ	2.09	0.51
7:K:81:ILE:HA	7:K:84:LYS:NZ	2.22	0.51
9:I:6:ASP:O	9:I:10:LEU:HG	2.09	0.51
2:C:672:GLU:HB3	2:C:1187:PHE:CE1	2.45	0.51
2:C:959:ASP:OD1	2:C:960:LEU:N	2.44	0.51
2:C:1235:LEU:HD12	2:C:1236:ASN:H	1.75	0.51
3:D:112:ALA:HA	3:D:238:ILE:HD13	1.91	0.51
3:D:1061:VAL:HG11	3:D:1101:LEU:O	2.11	0.51
4:T:44:DT:C4	4:T:45:DG:C6	2.98	0.51
9:G:105:LYS:HE2	9:G:106:PRO:O	2.11	0.51
9:G:130:SER:HB2	9:G:184:MET:HG3	1.92	0.51
2:C:6:THR:HA	2:C:9:LYS:HE3	1.92	0.51
2:C:300:ASP:OD1	2:C:300:ASP:N	2.42	0.51
2:C:301:TYR:HB3	2:C:310:ILE:HG13	1.93	0.51
2:C:575:LEU:HD23	2:C:576:SER:O	2.11	0.51
2:C:737:ASN:OD1	2:C:738:GLU:N	2.39	0.51
2:C:755:LYS:NZ	2:C:766:ASN:HD22	2.09	0.51
3:D:848:VAL:HG13	3:D:857:LEU:HB3	1.93	0.51
3:D:955:LYS:HG3	3:D:1012:ALA:HA	1.93	0.51
3:D:1096:PRO:HB2	3:D:1098:GLN:NE2	2.26	0.51
3:D:1292:LEU:HD13	3:D:1299:GLY:HA3	1.93	0.51
7:K:53:MET:HG2	7:K:54:SER:N	2.26	0.51
9:H:57:LEU:O	9:H:61:LEU:HG	2.11	0.51
9:H:152:PHE:CD2	9:H:160:LEU:HB3	2.45	0.51
1:A:67:GLU:OE1	1:A:67:GLU:N	2.24	0.51
1:B:111:THR:OG1	1:B:112:ALA:N	2.44	0.51
2:C:1309:VAL:HG23	2:C:1310:ASP:OD1	2.12	0.51
2:C:1321:GLU:N	2:C:1321:GLU:OE2	2.44	0.51
3:D:76:LYS:HD2	7:K:67:SER:HB3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:899:TYR:HD2	3:D:909:ILE:HG21	1.76	0.51
3:D:1184:ASP:OD1	3:D:1184:ASP:N	2.44	0.51
9:I:68:ASN:HB3	9:I:85:ASP:HB2	1.93	0.51
2:C:12:ARG:NH2	2:C:698:PRO:O	2.44	0.50
2:C:254:ASP:HB2	2:C:261:VAL:CG2	2.41	0.50
2:C:930:ASP:OD2	2:C:931:VAL:N	2.44	0.50
2:C:1313:HIS:HE2	3:D:380:PHE:HE1	1.59	0.50
5:F:125:VAL:HG23	5:F:126:HIS:CD2	2.46	0.50
9:G:28:PHE:HA	9:G:43:ASN:HA	1.93	0.50
9:H:14:PHE:CE1	9:H:40:ALA:HB1	2.46	0.50
2:C:211:ARG:NH2	2:C:354:ASP:OD2	2.41	0.50
2:C:597:GLY:O	2:C:628:HIS:ND1	2.45	0.50
2:C:728:ASP:OD1	2:C:730:SER:N	2.36	0.50
2:C:731:ARG:HH22	2:C:958:LYS:NZ	2.09	0.50
2:C:1167:GLU:O	2:C:1170:MET:N	2.45	0.50
3:D:408:VAL:O	3:D:411:ILE:HB	2.11	0.50
3:D:578:ILE:O	3:D:581:MET:HG3	2.10	0.50
9:H:12:LYS:O	9:H:16:THR:HG23	2.11	0.50
9:I:33:ALA:HB3	9:I:38:THR:H	1.76	0.50
2:C:41:GLN:HG2	2:C:73:TYR:CZ	2.45	0.50
2:C:102:LEU:HD23	2:C:489:PRO:HG3	1.94	0.50
2:C:241:LEU:HD12	2:C:245:ARG:HH11	1.75	0.50
2:C:881:ASP:OD2	2:C:882:ILE:N	2.34	0.50
2:C:1067:ALA:HB2	2:C:1073:LYS:HA	1.93	0.50
1:B:215:GLU:O	1:B:219:ARG:HG3	2.11	0.50
2:C:836:LEU:HB2	2:C:1052:VAL:HG13	1.93	0.50
2:C:1030:GLU:OE1	2:C:1033:ARG:HD2	2.11	0.50
2:C:1167:GLU:N	2:C:1168:GLU:OE1	2.45	0.50
3:D:37:GLU:O	3:D:39:LYS:NZ	2.38	0.50
3:D:119:SER:OG	3:D:123:ARG:NE	2.37	0.50
3:D:368:LEU:H	3:D:442:ILE:HG12	1.76	0.50
3:D:425:ARG:HH21	3:D:464:ASP:CG	2.15	0.50
3:D:1051:ASP:HB3	3:D:1055:GLY:H	1.77	0.50
5:F:67:TRP:O	5:F:71:MET:HG3	2.10	0.50
9:H:82:LYS:HE3	9:H:89:THR:HG23	1.93	0.50
2:C:186:PHE:CE1	2:C:196:VAL:HG23	2.47	0.50
2:C:720:ARG:HG3	2:C:736:VAL:HG13	1.93	0.50
2:C:980:VAL:HA	2:C:984:VAL:HB	1.92	0.50
2:C:1120:ALA:HB1	2:C:1198:LEU:HG	1.93	0.50
3:D:197:GLU:O	3:D:201:LEU:HG	2.11	0.50
3:D:255:LEU:HD21	5:F:124:PHE:CD1	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:648:GLU:O	3:D:651:HIS:NE2	2.45	0.50
3:D:1027:VAL:HG13	3:D:1199:PHE:HZ	1.76	0.50
9:I:189:MET:HA	9:I:216:TYR:CZ	2.47	0.50
2:C:18:ARG:CG	2:C:18:ARG:NH2	2.75	0.50
3:D:720:ASN:O	3:D:724:MET:HG3	2.12	0.50
3:D:733:SER:OG	3:D:736:GLN:HG2	2.12	0.50
3:D:821:MET:SD	3:D:881:LYS:HB2	2.51	0.50
3:D:858:VAL:HG13	3:D:859:PRO:O	2.10	0.50
3:D:1327:GLU:N	4:T:12:DT:OP1	2.39	0.50
4:T:11:DG:C6	6:N:41:DA:N6	2.79	0.50
5:F:13:ASN:OD1	5:F:94:PRO:HD2	2.12	0.50
6:N:49:DA:H2''	6:N:50:DG:C8	2.46	0.50
9:H:117:GLU:OE1	9:H:193:ASN:ND2	2.31	0.50
9:H:151:GLY:N	9:H:165:TYR:O	2.40	0.50
1:A:218:ARG:NE	1:B:231:PHE:O	2.45	0.50
2:C:272:ARG:HB2	2:C:275:ARG:HH21	1.77	0.50
3:D:77:ARG:HD3	7:K:64:GLU:HG3	1.93	0.50
3:D:1063:ASP:O	3:D:1067:ARG:N	2.44	0.50
1:A:111:THR:OG1	1:A:112:ALA:N	2.44	0.50
2:C:18:ARG:N	2:C:1188:ASP:OD2	2.30	0.50
3:D:77:ARG:HG3	3:D:78:LEU:H	1.76	0.50
3:D:495:ASN:C	3:D:497:GLU:H	2.15	0.50
3:D:701:LEU:HD21	3:D:723:TYR:HB2	1.94	0.50
3:D:1257:VAL:O	3:D:1260:MET:N	2.44	0.50
1:B:97:GLU:HB2	1:B:147:GLN:HA	1.94	0.50
2:C:888:THR:O	2:C:913:VAL:HA	2.12	0.50
3:D:420:PRO:HG3	3:D:481:ARG:NH2	2.27	0.50
9:G:158:SER:OG	9:G:159:ALA:N	2.44	0.50
2:C:107:ARG:NE	2:C:108:GLU:OE1	2.45	0.49
2:C:582:ASN:OD1	2:C:583:GLU:HG2	2.12	0.49
2:C:1106:ARG:O	2:C:1108:ASN:N	2.45	0.49
2:C:1116:HIS:HE1	3:D:641:ILE:H	1.59	0.49
6:N:5:DG:H2''	6:N:6:DC:C5	2.47	0.49
6:N:18:DA:C5	6:N:19:DC:C4	3.00	0.49
7:K:55:TYR:CD1	7:K:81:ILE:HD11	2.47	0.49
9:G:72:GLU:O	9:G:83:ILE:HA	2.11	0.49
9:G:87:ARG:NH1	9:I:121:GLU:OE2	2.45	0.49
9:G:157:ASP:CG	9:G:161:THR:H	2.15	0.49
9:H:202:GLY:N	9:H:226:HIS:HE1	2.10	0.49
2:C:12:ARG:HA	2:C:1181:PRO:HG2	1.94	0.49
2:C:196:VAL:HG11	2:C:209:ILE:HD11	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:242:VAL:HG12	2:C:245:ARG:HH12	1.77	0.49
2:C:638:SER:OG	2:C:639:LYS:HG2	2.12	0.49
2:C:657:THR:OG1	2:C:658:GLN:N	2.45	0.49
3:D:277:ASN:HA	3:D:280:LYS:HD2	1.94	0.49
3:D:814:CYS:SG	3:D:816:THR:HG21	2.50	0.49
5:F:104:ASN:ND2	6:N:26:DT:O2	2.44	0.49
1:A:13:LEU:H	1:B:231:PHE:HZ	1.60	0.49
1:A:81:ILE:HA	1:A:84:ASN:HD22	1.76	0.49
2:C:264:GLU:HG3	2:C:267:ARG:HB2	1.94	0.49
2:C:825:GLU:OE1	2:C:827:ARG:HD2	2.12	0.49
2:C:921:PRO:HA	5:F:133:ASP:HB3	1.95	0.49
3:D:460:ASP:OD1	3:D:460:ASP:N	2.45	0.49
3:D:735:ALA:HA	3:D:738:ARG:HB3	1.93	0.49
3:D:954:ASN:HB2	3:D:984:LEU:HD21	1.95	0.49
3:D:1165:PHE:CZ	3:D:1175:LEU:HD12	2.48	0.49
5:F:107:VAL:HA	5:F:110:ILE:HG22	1.94	0.49
6:N:29:DA:H3'	6:N:30:DA:H8	1.77	0.49
2:C:4:SER:O	2:C:7:GLU:N	2.45	0.49
2:C:101:ARG:HG3	2:C:118:LYS:C	2.33	0.49
2:C:548:ARG:NH2	2:C:567:PRO:O	2.44	0.49
3:D:266:ASN:O	3:D:270:ARG:N	2.27	0.49
3:D:983:LYS:HD2	3:D:985:ILE:HD11	1.94	0.49
3:D:1266:ILE:HD12	3:D:1278:GLU:OE2	2.11	0.49
6:N:23:DG:H2''	6:N:24:DA:H8	1.77	0.49
9:G:80:ASN:CG	9:G:93:PRO:HA	2.32	0.49
9:I:223:ASP:O	9:I:225:THR:HG23	2.13	0.49
1:A:149:GLY:HA3	1:A:177:TYR:CE2	2.48	0.49
2:C:59:ILE:HG22	2:C:68:LEU:HB3	1.94	0.49
2:C:582:ASN:HB3	2:C:586:PHE:HB2	1.94	0.49
3:D:1343:GLU:OE2	3:D:1345:ARG:NH2	2.41	0.49
9:G:128:ARG:HG2	9:G:131:ARG:CZ	2.43	0.49
1:A:91:ARG:HD2	1:A:93:GLN:HE21	1.76	0.49
1:B:139:SER:OG	1:B:140:ILE:N	2.46	0.49
2:C:232:ILE:HA	2:C:237:LEU:HD13	1.94	0.49
2:C:444:ASP:OD1	2:C:444:ASP:N	2.41	0.49
2:C:568:ASN:HB2	2:C:571:LEU:HD12	1.95	0.49
2:C:678:ARG:HE	2:C:1106:ARG:HG2	1.78	0.49
3:D:495:ASN:HD22	3:D:1247:LYS:HG3	1.78	0.49
3:D:573:THR:OG1	3:D:576:ARG:NH1	2.35	0.49
3:D:1144:LEU:HD21	3:D:1233:ILE:HG23	1.95	0.49
3:D:1358:PRO:HD3	3:D:1366:HIS:CE1	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:50:PHE:HE1	9:G:74:SER:HA	1.77	0.49
9:H:147:ILE:HG13	9:H:172:TYR:HB3	1.93	0.49
1:B:52:PRO:HA	1:B:150:ARG:HA	1.94	0.49
2:C:18:ARG:HH21	2:C:18:ARG:HG3	1.77	0.49
3:D:309:ASN:OD1	3:D:310:GLY:N	2.46	0.49
3:D:528:THR:HA	3:D:551:ARG:HB3	1.94	0.49
9:I:182:ILE:HG23	9:I:218:VAL:HG21	1.94	0.49
1:A:26:VAL:HG21	1:A:217:ILE:HD11	1.94	0.49
1:A:154:PRO:O	1:A:157:THR:OG1	2.31	0.49
1:B:109:PRO:HA	1:B:132:HIS:HD2	1.76	0.49
1:B:195:ARG:CZ	1:B:195:ARG:HA	2.42	0.49
2:C:303:ASP:OD1	2:C:328:SER:OG	2.20	0.49
2:C:521:LEU:HD22	2:C:687:ARG:HA	1.95	0.49
2:C:677:ASN:OD1	3:D:779:ALA:HB1	2.13	0.49
3:D:201:LEU:HA	3:D:204:GLU:OE1	2.13	0.49
3:D:423:LEU:HB3	3:D:466:MET:HE1	1.94	0.49
3:D:850:LYS:HE3	3:D:875:ASN:CB	2.42	0.49
3:D:885:VAL:HG22	3:D:1254:GLU:HB3	1.95	0.49
5:F:42:THR:OG1	5:F:43:ILE:N	2.45	0.49
9:H:28:PHE:HB2	9:H:43:ASN:OD1	2.13	0.49
9:I:194:TYR:HH	9:I:216:TYR:HE1	1.61	0.49
1:A:37:HIS:HB2	1:B:45:ARG:HH22	1.78	0.49
1:A:40:GLY:HA3	1:A:185:TYR:CE2	2.48	0.49
2:C:591:TYR:CE1	2:C:616:ILE:HG21	2.47	0.49
2:C:738:GLU:O	2:C:741:MET:HB3	2.13	0.49
3:D:817:HIS:ND1	3:D:817:HIS:N	2.60	0.49
3:D:1215:GLU:HB3	3:D:1220:ILE:HD11	1.95	0.49
4:T:48:DC:O2	4:T:49:DT:H5'	2.13	0.49
6:N:20:DT:H2''	6:N:21:DG:H8	1.77	0.49
9:G:172:TYR:OH	9:G:176:ASN:HB2	2.13	0.49
9:H:104:ASN:OD1	9:H:105:LYS:N	2.46	0.49
9:I:50:PHE:HE1	9:I:81:ILE:HG12	1.77	0.49
1:B:220:ALA:HA	1:B:223:ILE:HD12	1.95	0.49
2:C:297:VAL:HG12	2:C:315:MET:H	1.78	0.49
2:C:304:GLU:HG2	2:C:305:SER:H	1.77	0.49
2:C:1132:LEU:HD22	2:C:1177:ARG:CZ	2.43	0.49
3:D:352:ARG:HE	3:D:465:GLN:NE2	2.11	0.49
3:D:708:ASN:HA	3:D:713:GLU:HA	1.95	0.49
3:D:847:ASP:HB2	3:D:858:VAL:O	2.13	0.49
3:D:1003:LEU:HG	3:D:1018:ALA:HB2	1.95	0.49
3:D:1155:ILE:N	3:D:1211:SER:HG	2.10	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:64:THR:N	5:F:68:LYS:HE3	2.27	0.49
9:H:146:LYS:HG2	9:H:171:ASP:HB3	1.95	0.49
2:C:172:TYR:HB2	2:C:188:PHE:CE2	2.47	0.48
3:D:144:TYR:O	3:D:159:ILE:HB	2.13	0.48
3:D:380:PHE:O	3:D:384:LYS:HG2	2.12	0.48
3:D:999:TYR:HD2	3:D:1026:PRO:HB2	1.76	0.48
4:T:34:DG:C2'	4:T:35:DT:H71	2.42	0.48
5:F:37:VAL:O	5:F:38:ARG:HG3	2.13	0.48
9:G:55:TYR:HB2	9:G:95:ALA:HB2	1.95	0.48
9:G:66:LEU:HD21	9:I:128:ARG:HD2	1.95	0.48
9:I:2:LYS:HA	9:I:73:ILE:HD12	1.95	0.48
9:I:181:ILE:O	9:I:221:GLU:HG2	2.13	0.48
9:I:193:ASN:O	9:I:211:GLY:HA2	2.12	0.48
2:C:236:LYS:NZ	2:C:288:PRO:HA	2.28	0.48
2:C:643:SER:HB3	2:C:645:PHE:HE1	1.78	0.48
2:C:1081:PRO:HB2	2:C:1083:GLU:CD	2.34	0.48
2:C:1297:ASP:HA	2:C:1321:GLU:OE1	2.13	0.48
3:D:658:GLU:HA	3:D:661:VAL:HG12	1.95	0.48
7:K:96:ARG:O	7:K:99:VAL:HG22	2.12	0.48
9:H:194:TYR:HD2	9:H:209:PHE:HB3	1.78	0.48
1:B:92:VAL:HG12	1:B:121:VAL:HG22	1.94	0.48
2:C:185:ASP:OD1	2:C:186:PHE:N	2.47	0.48
2:C:210:LEU:HD13	2:C:220:ILE:HG12	1.94	0.48
4:T:34:DG:H2''	4:T:35:DT:OP2	2.13	0.48
6:N:13:DC:H2'	6:N:13:DC:OP2	2.13	0.48
9:G:85:ASP:HB3	9:G:88:SER:H	1.78	0.48
2:C:97:ARG:HH21	2:C:121:GLU:HG2	1.79	0.48
2:C:504:GLU:O	2:C:508:SER:N	2.46	0.48
2:C:937:ASP:OD1	2:C:1039:GLY:N	2.41	0.48
3:D:141:PHE:HB3	3:D:180:MET:SD	2.53	0.48
3:D:438:GLU:OE2	3:D:481:ARG:NH1	2.45	0.48
3:D:649:LYS:HA	3:D:652:GLU:HG3	1.95	0.48
3:D:1060:VAL:HG23	3:D:1106:ILE:HD13	1.94	0.48
3:D:1090:ILE:HB	3:D:1093:THR:HB	1.95	0.48
9:H:135:ILE:HD13	9:H:151:GLY:HA3	1.95	0.48
3:D:953:LYS:HB2	3:D:953:LYS:HE3	1.62	0.48
3:D:966:VAL:HG12	3:D:974:VAL:O	2.12	0.48
3:D:1289:ASN:O	3:D:1293:GLU:N	2.39	0.48
5:F:76:ILE:O	5:F:80:ILE:HG12	2.13	0.48
6:N:16:DT:H2''	6:N:17:DT:C6	2.49	0.48
9:H:20:GLY:HA2	9:H:57:LEU:HB2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:143:LYS:HD2	9:H:148:VAL:HG21	1.94	0.48
1:A:102:LEU:HD23	1:A:103:ASN:N	2.29	0.48
1:B:208:ASN:OD1	1:B:210:THR:HG22	2.12	0.48
2:C:367:TYR:CE2	2:C:371:ARG:HB2	2.49	0.48
2:C:447:HIS:O	2:C:450:ASN:ND2	2.46	0.48
2:C:525:THR:HG21	2:C:687:ARG:HD2	1.94	0.48
2:C:593:LYS:HB2	2:C:600:THR:HG22	1.94	0.48
3:D:320:ASN:ND2	4:T:23:DT:O2	2.41	0.48
3:D:954:ASN:C	3:D:955:LYS:HD2	2.33	0.48
3:D:993:GLU:HB3	3:D:995:TYR:CE2	2.48	0.48
3:D:1105:ALA:HB1	3:D:1122:ALA:HB1	1.95	0.48
9:G:27:GLN:NE2	9:G:43:ASN:OD1	2.46	0.48
9:G:28:PHE:HE2	9:G:30:MET:HB3	1.78	0.48
9:G:39:TYR:CZ	9:G:41:GLU:HB3	2.49	0.48
1:A:17:GLU:HB2	1:A:25:LYS:CE	2.44	0.48
2:C:582:ASN:N	2:C:588:GLU:OE1	2.47	0.48
2:C:906:PHE:O	2:C:909:LYS:HE3	2.14	0.48
3:D:85:CYS:SG	3:D:87:LYS:N	2.87	0.48
3:D:1199:PHE:HB2	3:D:1202:GLU:OE2	2.14	0.48
6:N:41:DA:C4	6:N:42:DC:C5	3.01	0.48
9:H:3:LEU:HD13	9:H:11:LEU:HD11	1.95	0.48
9:I:82:LYS:HE2	9:I:84:ALA:HB2	1.95	0.48
9:I:135:ILE:HG23	9:I:152:PHE:N	2.29	0.48
1:A:48:LEU:HG	1:A:183:ILE:HD12	1.96	0.48
2:C:65:ASN:O	2:C:105:TYR:N	2.37	0.48
2:C:398:SER:O	2:C:401:GLY:N	2.47	0.48
2:C:1299:ASN:O	2:C:1303:LYS:HG2	2.14	0.48
3:D:495:ASN:HD22	3:D:1247:LYS:CG	2.25	0.48
9:G:199:TRP:CE3	9:G:205:GLY:HA2	2.48	0.48
2:C:131:THR:HG23	2:C:133:ASN:N	2.24	0.48
2:C:559:CYS:SG	2:C:562:GLU:N	2.86	0.48
2:C:685:MET:HE1	2:C:1073:LYS:HB3	1.95	0.48
5:F:17:LEU:HG	5:F:94:PRO:HD3	1.96	0.48
5:F:133:ASP:OD1	5:F:133:ASP:N	2.46	0.48
8:E:56:GLU:HB2	8:E:58:LEU:HD22	1.94	0.48
9:G:180:PHE:CE1	9:G:226:HIS:HB3	2.48	0.48
9:G:202:GLY:O	9:G:226:HIS:NE2	2.47	0.48
1:A:12:ARG:N	1:A:29:GLU:O	2.47	0.47
2:C:301:TYR:O	2:C:310:ILE:N	2.47	0.47
2:C:528:ARG:NH2	2:C:577:VAL:O	2.47	0.47
2:C:801:ARG:HD3	2:C:1094:VAL:HA	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:826:ILE:C	3:D:828:GLY:H	2.17	0.47
3:D:1216:ALA:O	3:D:1220:ILE:HG12	2.13	0.47
3:D:1326:GLN:C	3:D:1327:GLU:HG2	2.34	0.47
9:G:1:MET:O	9:G:73:ILE:HG13	2.14	0.47
9:G:42:ALA:HB2	9:G:214:ALA:HB2	1.96	0.47
9:G:183:ASN:OD1	9:G:184:MET:N	2.47	0.47
9:H:11:LEU:HB3	9:H:61:LEU:HD11	1.96	0.47
9:H:164:LYS:HA	9:I:91:PHE:HB2	1.96	0.47
1:A:185:TYR:HB2	1:A:203:ILE:HG12	1.95	0.47
2:C:255:ILE:HG12	2:C:263:VAL:HB	1.95	0.47
3:D:576:ARG:NE	3:D:593:ASN:O	2.36	0.47
6:N:25:DG:H3'	6:N:26:DT:H71	1.96	0.47
6:N:41:DA:C6	6:N:42:DC:C4	3.02	0.47
9:H:32:ARG:HB3	9:H:103:PRO:HB3	1.95	0.47
9:I:21:ILE:HD13	9:I:57:LEU:HD22	1.95	0.47
9:I:29:ILE:HD11	9:I:42:ALA:HB3	1.96	0.47
1:A:167:PRO:HG2	1:A:170:ARG:HB2	1.96	0.47
2:C:548:ARG:NH2	2:C:568:ASN:HA	2.29	0.47
3:D:1252:HIS:O	3:D:1256:ILE:HG12	2.13	0.47
9:G:73:ILE:HG22	9:G:81:ILE:HD11	1.95	0.47
9:H:114:ALA:HB3	9:H:198:LEU:HB2	1.95	0.47
9:H:178:PHE:HB3	9:H:226:HIS:HA	1.95	0.47
1:A:96:ASP:OD1	1:A:97:GLU:N	2.48	0.47
2:C:4:SER:OG	2:C:7:GLU:N	2.47	0.47
3:D:138:VAL:HG13	3:D:181:GLY:H	1.79	0.47
3:D:704:GLU:N	3:D:718:SER:OG	2.48	0.47
3:D:844:THR:O	3:D:861:ASN:HA	2.14	0.47
3:D:873:GLU:OE2	3:D:990:ARG:NH1	2.41	0.47
5:F:93:ASN:OD1	5:F:95:HIS:N	2.43	0.47
6:N:30:DA:H5'	6:N:31:DA:C4	2.49	0.47
9:G:81:ILE:HG22	9:G:92:TRP:O	2.14	0.47
1:B:37:HIS:NE2	1:B:187:VAL:HG21	2.29	0.47
1:B:78:ILE:O	1:B:82:LEU:HG	2.14	0.47
2:C:303:ASP:HB3	2:C:306:THR:OG1	2.14	0.47
2:C:996:ARG:HH12	2:C:1000:LEU:N	2.13	0.47
2:C:1268:GLN:HG2	3:D:350:SER:OG	2.14	0.47
3:D:180:MET:HE3	3:D:293:ARG:HE	1.79	0.47
3:D:516:ASP:OD1	3:D:516:ASP:N	2.48	0.47
3:D:737:ILE:H	3:D:737:ILE:HD12	1.79	0.47
3:D:1174:ARG:HA	3:D:1189:MET:HA	1.95	0.47
5:F:17:LEU:HD11	5:F:92:LYS:O	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:132:ARG:HG3	5:F:133:ASP:H	1.79	0.47
9:H:27:GLN:HA	9:H:46:ASP:O	2.15	0.47
1:B:23:HIS:HA	1:B:205:MET:O	2.15	0.47
1:B:43:LEU:O	1:B:47:LEU:HG	2.14	0.47
1:B:66:HIS:CD2	1:B:68:TYR:HB2	2.50	0.47
2:C:65:ASN:HD22	2:C:105:TYR:HD2	1.62	0.47
2:C:73:TYR:CD2	2:C:96:LEU:HD11	2.48	0.47
2:C:272:ARG:HB2	2:C:275:ARG:NH2	2.30	0.47
2:C:290:GLU:CD	2:C:290:GLU:H	2.18	0.47
2:C:844:LYS:HE3	5:F:126:HIS:HE1	1.79	0.47
2:C:976:ARG:HB3	2:C:997:TRP:CZ3	2.49	0.47
2:C:1065:LYS:NZ	3:D:462:ASP:O	2.47	0.47
2:C:1160:ASP:OD1	2:C:1160:ASP:N	2.47	0.47
2:C:1257:GLN:NE2	3:D:341:ASN:O	2.43	0.47
6:N:20:DT:H2''	6:N:21:DG:C8	2.50	0.47
9:G:123:LEU:HD23	9:G:191:PRO:HA	1.96	0.47
9:H:152:PHE:CB	9:H:160:LEU:HD22	2.43	0.47
1:A:12:ARG:HA	1:B:231:PHE:HZ	1.80	0.47
1:A:226:GLU:HA	1:A:229:GLU:HG2	1.95	0.47
1:B:83:LEU:HD21	3:D:526:VAL:HG22	1.97	0.47
2:C:262:TYR:CG	2:C:277:LEU:HD21	2.50	0.47
2:C:653:MET:HG2	2:C:654:ASP:N	2.29	0.47
2:C:944:ARG:HA	2:C:947:GLU:OE1	2.14	0.47
2:C:1271:GLY:O	2:C:1275:VAL:HG23	2.14	0.47
2:C:1331:ARG:HD2	3:D:33:TRP:CH2	2.50	0.47
3:D:275:ARG:NH1	3:D:302:ALA:HB2	2.27	0.47
3:D:518:VAL:HG11	3:D:707:ILE:HB	1.97	0.47
3:D:726:ALA:O	3:D:729:GLY:N	2.47	0.47
3:D:1037:PHE:CZ	3:D:1059:LEU:HB2	2.49	0.47
3:D:1241:TYR:CE2	3:D:1248:ILE:HD12	2.50	0.47
7:K:97:PRO:HA	7:K:100:VAL:HG23	1.97	0.47
8:E:21:LEU:O	8:E:25:ARG:HG3	2.14	0.47
9:G:152:PHE:CB	9:G:160:LEU:HD22	2.45	0.47
9:I:117:GLU:HB2	9:I:195:LYS:HZ2	1.80	0.47
2:C:150:HIS:CE1	2:C:452:ARG:HG3	2.50	0.47
2:C:182:SER:HA	6:N:38:DG:H1	1.79	0.47
2:C:702:THR:HG22	2:C:705:GLU:OE2	2.15	0.47
3:D:146:VAL:HB	3:D:155:GLU:O	2.15	0.47
3:D:762:ASN:OD1	3:D:764:ARG:N	2.48	0.47
3:D:817:HIS:HA	3:D:845:ALA:HB1	1.95	0.47
6:N:2:DA:H2''	6:N:3:DG:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:49:DA:H2'	6:N:49:DA:OP2	2.15	0.47
9:G:4:SER:OG	9:G:7:THR:OG1	2.24	0.47
9:G:28:PHE:CE2	9:G:30:MET:HB3	2.49	0.47
1:A:98:VAL:HG22	1:A:99:ILE:H	1.80	0.47
1:B:225:ALA:HA	1:B:228:LEU:HD12	1.96	0.47
2:C:853:ASP:OD2	7:K:96:ARG:HB3	2.15	0.47
3:D:51:PRO:HB2	3:D:58:CYS:HA	1.96	0.47
3:D:91:GLU:HG3	3:D:92:VAL:N	2.30	0.47
3:D:165:TYR:CZ	3:D:169:LEU:HD22	2.49	0.47
3:D:850:LYS:HD3	3:D:857:LEU:HD22	1.96	0.47
4:T:27:DA:C6	4:T:28:DC:C4	3.02	0.47
7:K:81:ILE:HD12	7:K:84:LYS:NZ	2.29	0.47
9:G:137:THR:HG21	9:G:160:LEU:HD11	1.96	0.47
9:G:166:SER:N	9:H:89:THR:O	2.47	0.47
9:H:153:ASN:O	9:H:157:ASP:N	2.47	0.47
9:I:11:LEU:HD13	9:I:57:LEU:HD11	1.97	0.47
9:I:38:THR:HA	9:I:217:VAL:O	2.15	0.47
1:A:10:LYS:HG2	1:B:227:GLN:OE1	2.14	0.47
1:B:7:GLU:OE1	1:B:7:GLU:N	2.43	0.47
1:B:42:ALA:O	1:B:46:ILE:HG12	2.15	0.47
2:C:136:PHE:O	2:C:142:GLU:HA	2.15	0.47
2:C:230:PHE:HE1	2:C:292:ILE:HD13	1.80	0.47
2:C:542:ARG:HH12	6:N:40:DT:H71	1.80	0.47
2:C:592:ARG:HA	2:C:602:GLU:O	2.15	0.47
2:C:988:LYS:HD3	2:C:992:LEU:HD13	1.97	0.47
2:C:1247:SER:OG	2:C:1248:THR:N	2.48	0.47
3:D:111:THR:HG21	3:D:303:VAL:HG11	1.97	0.47
6:N:24:DA:H2''	6:N:25:DG:C8	2.50	0.47
9:I:148:VAL:HG22	9:I:168:THR:HA	1.97	0.47
1:A:15:ASP:OD1	1:A:16:ILE:N	2.48	0.46
2:C:231:GLU:HA	2:C:331:LYS:O	2.15	0.46
2:C:474:ALA:O	2:C:478:ARG:HG2	2.14	0.46
3:D:156:ARG:NH2	3:D:191:SER:O	2.48	0.46
3:D:847:ASP:HB3	3:D:860:ARG:HA	1.97	0.46
5:F:97:TYR:HD1	6:N:27:DA:N3	2.12	0.46
6:N:16:DT:OP2	6:N:16:DT:H2'	2.15	0.46
9:G:122:ASP:HB3	9:G:167:LEU:HD21	1.96	0.46
1:A:68:TYR:N	1:A:68:TYR:CD2	2.83	0.46
1:A:78:ILE:O	1:A:82:LEU:HG	2.15	0.46
1:A:140:ILE:HD12	1:A:141:SER:H	1.79	0.46
1:B:28:LEU:HD23	1:B:28:LEU:HA	1.73	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:61:SER:N	2:C:66:SER:O	2.42	0.46
2:C:817:LEU:HD11	2:C:1078:LYS:HB3	1.96	0.46
3:D:75:TYR:CD1	3:D:80:HIS:HB3	2.50	0.46
3:D:635:SER:OG	3:D:636:GLY:N	2.48	0.46
3:D:999:TYR:CD2	3:D:1026:PRO:HB2	2.50	0.46
3:D:1332:LEU:HD12	3:D:1332:LEU:HA	1.72	0.46
2:C:551:HIS:H	2:C:554:HIS:CE1	2.34	0.46
2:C:636:CYS:O	2:C:642:SER:HA	2.15	0.46
2:C:1246:ARG:NH2	2:C:1250:SER:O	2.47	0.46
3:D:78:LEU:HG	3:D:81:ARG:HH11	1.81	0.46
3:D:665:GLN:HE22	3:D:678:ARG:NE	2.13	0.46
3:D:1028:ILE:HD13	3:D:1119:ASP:O	2.14	0.46
3:D:1209:VAL:HG12	3:D:1211:SER:O	2.14	0.46
3:D:1326:GLN:O	3:D:1327:GLU:HG2	2.15	0.46
6:N:40:DT:C2	6:N:41:DA:C8	3.03	0.46
9:H:67:VAL:HG21	9:H:83:ILE:HG21	1.96	0.46
9:H:196:LEU:HD13	9:H:209:PHE:CE1	2.50	0.46
1:B:142:MET:HA	1:B:143:ARG:NH1	2.30	0.46
2:C:204:LEU:HD23	2:C:204:LEU:HA	1.71	0.46
2:C:522:SER:HA	2:C:525:THR:HG22	1.97	0.46
2:C:1214:ASP:OD1	2:C:1216:ARG:N	2.37	0.46
3:D:147:ILE:HD13	3:D:179:LYS:HE2	1.97	0.46
3:D:282:LEU:HD12	3:D:295:GLU:HG3	1.96	0.46
3:D:867:GLN:HA	3:D:870:ASP:OD2	2.15	0.46
3:D:1174:ARG:HG2	3:D:1175:LEU:N	2.28	0.46
9:H:199:TRP:HE1	9:H:201:LYS:HB2	1.80	0.46
1:A:45:ARG:HE	1:B:38:THR:HB	1.80	0.46
2:C:254:ASP:OD1	2:C:254:ASP:N	2.49	0.46
3:D:143:SER:OG	3:D:144:TYR:N	2.47	0.46
3:D:520:ALA:HB3	3:D:546:ALA:HB2	1.97	0.46
3:D:700:ASN:O	3:D:704:GLU:HG3	2.15	0.46
3:D:983:LYS:HA	3:D:994:SER:HA	1.96	0.46
5:F:24:LYS:HE2	5:F:24:LYS:HB3	1.83	0.46
9:G:13:ASN:O	9:G:16:THR:OG1	2.25	0.46
9:H:23:LEU:O	9:H:24:LYS:HD2	2.16	0.46
9:H:147:ILE:CG1	9:H:172:TYR:CB	2.85	0.46
9:I:153:ASN:ND2	9:I:156:GLU:OE2	2.39	0.46
1:B:140:ILE:HD12	1:B:140:ILE:HA	1.80	0.46
1:B:142:MET:C	1:B:143:ARG:HD3	2.36	0.46
2:C:217:THR:HG23	2:C:351:LEU:HD22	1.98	0.46
2:C:1006:GLU:O	2:C:1010:GLN:HG2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:1124:ILE:HD11	2:C:1198:LEU:HD11	1.97	0.46
2:C:1151:LEU:HD22	2:C:1201:LEU:HD23	1.98	0.46
3:D:45:ASN:HD22	3:D:48:THR:HG23	1.81	0.46
3:D:556:GLU:C	3:D:563:LEU:HA	2.36	0.46
3:D:705:THR:HG21	3:D:716:GLN:HE22	1.78	0.46
3:D:872:LEU:HB3	3:D:877:VAL:HG11	1.97	0.46
6:N:5:DG:H4'	6:N:6:DC:OP1	2.14	0.46
6:N:39:DA:H5''	6:N:39:DA:H8	1.80	0.46
1:B:102:LEU:HB3	1:B:142:MET:CG	2.45	0.46
2:C:18:ARG:HH11	2:C:622:ASN:CG	2.18	0.46
2:C:99:LYS:N	2:C:99:LYS:HD2	2.31	0.46
2:C:384:LEU:O	2:C:388:LEU:HB2	2.16	0.46
2:C:478:ARG:NE	2:C:478:ARG:HA	2.31	0.46
2:C:551:HIS:CG	2:C:553:THR:HG22	2.50	0.46
2:C:944:ARG:HA	2:C:947:GLU:CD	2.36	0.46
3:D:152:THR:HG22	3:D:153:ASN:H	1.80	0.46
3:D:281:ARG:NH1	5:F:77:GLU:OE1	2.49	0.46
3:D:423:LEU:HB3	3:D:466:MET:CE	2.46	0.46
3:D:556:GLU:HB3	3:D:558:ASP:OD1	2.16	0.46
3:D:902:ASP:C	3:D:904:ALA:H	2.18	0.46
3:D:1079:LYS:HA	3:D:1098:GLN:HG3	1.96	0.46
5:F:87:ASP:HB3	5:F:90:LYS:HZ2	1.81	0.46
9:G:92:TRP:CE3	9:G:93:PRO:HD2	2.50	0.46
2:C:890:LYS:HE3	2:C:914:LYS:HD3	1.97	0.46
2:C:949:GLU:O	2:C:952:GLN:HG2	2.16	0.46
4:T:27:DA:H62	5:F:104:ASN:HB3	1.80	0.46
4:T:52:DT:OP2	4:T:52:DT:H2'	2.15	0.46
5:F:56:LYS:HG3	5:F:56:LYS:O	2.16	0.46
6:N:43:DT:C2	6:N:44:DG:C8	3.04	0.46
8:E:51:LEU:HD23	8:E:54:ILE:HD12	1.98	0.46
9:I:133:LEU:HD23	9:I:164:LYS:HD2	1.98	0.46
9:I:165:TYR:CE2	9:I:167:LEU:HB2	2.50	0.46
1:B:133:LEU:HD22	1:B:138:ALA:HB1	1.98	0.46
2:C:6:THR:O	2:C:9:LYS:HG3	2.16	0.46
2:C:60:GLN:HB3	2:C:67:GLU:HG2	1.98	0.46
2:C:900:LYS:HA	2:C:903:ARG:HG2	1.98	0.46
3:D:26:SER:O	3:D:29:MET:N	2.49	0.46
3:D:129:ASP:OD1	3:D:220:ARG:NH1	2.49	0.46
3:D:209:ASN:HA	3:D:214:ARG:HH22	1.80	0.46
3:D:1101:LEU:HD21	3:D:1107:VAL:HG12	1.97	0.46
3:D:1283:SER:O	3:D:1287:ILE:HG22	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:24:LYS:HG2	9:G:51:ASP:OD2	2.15	0.46
9:G:165:TYR:CE2	9:G:167:LEU:HB2	2.51	0.46
1:A:29:GLU:HG2	1:A:30:PRO:HA	1.97	0.46
1:B:86:LYS:HZ3	1:B:174:ASP:HB2	1.80	0.46
2:C:163:LYS:HD2	2:C:163:LYS:N	2.31	0.46
2:C:318:SER:O	2:C:321:LEU:HB3	2.16	0.46
2:C:337:PHE:HE2	2:C:339:ASN:HB2	1.81	0.46
2:C:396:ASP:OD1	2:C:397:LEU:N	2.49	0.46
2:C:755:LYS:HD2	2:C:755:LYS:HA	1.61	0.46
2:C:788:SER:HB3	2:C:795:ALA:O	2.16	0.46
2:C:1313:HIS:O	8:E:28:ARG:NH2	2.32	0.46
3:D:43:THR:OG1	3:D:44:ILE:HG12	2.16	0.46
3:D:103:GLY:C	3:D:244:VAL:HG22	2.37	0.46
3:D:955:LYS:HA	3:D:1011:VAL:O	2.15	0.46
6:N:41:DA:H1'	6:N:42:DC:H5'	1.96	0.46
9:G:152:PHE:CZ	9:G:163:VAL:HG22	2.51	0.46
1:A:8:PHE:O	1:A:9:LEU:HD22	2.16	0.45
1:B:83:LEU:HD23	3:D:528:THR:HB	1.98	0.45
2:C:337:PHE:CE2	2:C:339:ASN:HB2	2.51	0.45
2:C:422:LYS:O	2:C:426:ILE:HG12	2.16	0.45
2:C:498:ILE:HG13	2:C:499:SER:N	2.30	0.45
2:C:1070:HIS:NE2	2:C:1114:GLU:OE2	2.49	0.45
2:C:1291:LEU:O	2:C:1295:SER:OG	2.32	0.45
2:C:1305:TYR:O	2:C:1309:VAL:HG22	2.16	0.45
2:C:1339:LEU:HB3	3:D:17:PHE:CE2	2.50	0.45
3:D:72:CYS:HB2	3:D:74:LYS:HB2	1.99	0.45
3:D:72:CYS:HB3	3:D:85:CYS:SG	2.55	0.45
3:D:1045:THR:OG1	3:D:1076:PRO:HD3	2.15	0.45
4:T:1:DG:H2'	4:T:2:DG:OP2	2.15	0.45
4:T:42:DG:H1'	4:T:43:DC:O5'	2.15	0.45
9:G:157:ASP:OD1	9:G:161:THR:HG22	2.16	0.45
9:G:166:SER:O	9:H:89:THR:N	2.33	0.45
2:C:216:THR:OG1	2:C:218:GLU:HG2	2.16	0.45
2:C:413:GLU:OE2	2:C:414:ILE:N	2.50	0.45
3:D:45:ASN:C	3:D:47:ARG:H	2.20	0.45
3:D:134:ASP:HA	3:D:137:ARG:NH1	2.31	0.45
3:D:1078:LEU:HD22	3:D:1099:TYR:OH	2.15	0.45
9:I:196:LEU:HD21	9:I:198:LEU:HD21	1.98	0.45
1:B:91:ARG:O	1:B:122:GLU:N	2.29	0.45
2:C:139:ASN:O	2:C:141:THR:N	2.45	0.45
2:C:538:LEU:HG	2:C:542:ARG:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:971:LEU:O	2:C:975:ILE:HG12	2.16	0.45
2:C:1322:SER:O	2:C:1325:VAL:HB	2.16	0.45
3:D:42:GLU:OE2	5:F:119:LYS:NZ	2.38	0.45
3:D:136:GLU:O	3:D:139:LEU:N	2.49	0.45
3:D:168:ALA:O	3:D:172:PHE:N	2.46	0.45
3:D:1067:ARG:HD2	3:D:1067:ARG:HA	1.65	0.45
7:K:79:SER:HA	7:K:82:ILE:HD12	1.97	0.45
8:E:6:VAL:O	8:E:10:VAL:HG23	2.15	0.45
8:E:13:ILE:HG22	8:E:15:ASN:HB2	1.98	0.45
1:B:101:THR:HG22	1:B:143:ARG:HG3	1.98	0.45
2:C:12:ARG:HG3	2:C:1181:PRO:C	2.36	0.45
2:C:94:ALA:O	2:C:126:GLU:HA	2.16	0.45
2:C:209:ILE:O	2:C:213:LEU:HG	2.15	0.45
3:D:129:ASP:OD1	3:D:220:ARG:HD2	2.17	0.45
3:D:208:THR:HG22	3:D:210:SER:N	2.31	0.45
3:D:1036:ARG:NE	3:D:1081:VAL:HG21	2.31	0.45
3:D:1155:ILE:O	3:D:1210:ILE:N	2.50	0.45
8:E:12:LYS:HZ1	8:E:13:ILE:HD11	1.82	0.45
9:G:152:PHE:HA	9:G:164:LYS:HG3	1.97	0.45
9:I:28:PHE:HZ	9:I:41:GLU:HB2	1.81	0.45
2:C:245:ARG:HB2	2:C:337:PHE:HE1	1.81	0.45
2:C:491:ASP:OD1	2:C:491:ASP:N	2.46	0.45
2:C:617:ALA:HB3	2:C:653:MET:HG3	1.99	0.45
2:C:1332:SER:OG	3:D:327:LEU:HD13	2.16	0.45
3:D:712:GLN:HG2	3:D:713:GLU:N	2.31	0.45
3:D:835:LEU:O	3:D:839:VAL:HG12	2.17	0.45
3:D:1080:ILE:O	3:D:1080:ILE:HG13	2.17	0.45
3:D:1357:ILE:O	3:D:1359:ALA:N	2.46	0.45
9:H:88:SER:HB2	9:H:90:ILE:HD11	1.98	0.45
1:A:102:LEU:O	1:A:141:SER:HA	2.16	0.45
1:B:22:THR:O	1:B:206:GLU:HA	2.16	0.45
2:C:1275:VAL:HG13	2:C:1287:LEU:HD21	1.99	0.45
3:D:52:GLU:HG2	3:D:53:ARG:H	1.81	0.45
3:D:247:PRO:HG2	3:D:248:ASP:OD1	2.17	0.45
3:D:539:SER:HB2	3:D:541:LEU:HG	1.99	0.45
3:D:556:GLU:O	3:D:563:LEU:HA	2.15	0.45
4:T:42:DG:C2	6:N:12:DA:C2	3.04	0.45
5:F:65:GLN:O	5:F:69:GLN:HG3	2.16	0.45
5:F:115:LYS:HA	5:F:115:LYS:HD2	1.74	0.45
6:N:48:DC:H2"	6:N:49:DA:H8	1.80	0.45
9:H:53:ALA:HB3	9:H:95:ALA:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:192:VAL:HG13	1:B:198:LEU:HD22	1.99	0.45
2:C:339:ASN:OD1	2:C:342:ASP:N	2.44	0.45
2:C:516:ASP:OD1	2:C:522:SER:HB2	2.17	0.45
2:C:678:ARG:NE	2:C:1106:ARG:HG2	2.32	0.45
2:C:688:GLN:HB2	2:C:1235:LEU:HD11	1.98	0.45
2:C:746:ALA:HB3	2:C:967:LEU:HD13	1.97	0.45
2:C:1110:GLY:O	2:C:1114:GLU:HG3	2.17	0.45
2:C:1151:LEU:HD12	2:C:1151:LEU:HA	1.66	0.45
2:C:1275:VAL:HG12	2:C:1279:GLU:OE2	2.17	0.45
3:D:712:GLN:HG2	3:D:713:GLU:H	1.82	0.45
3:D:745:GLY:O	3:D:759:ILE:N	2.45	0.45
3:D:905:ARG:HH21	8:E:16:ARG:NH2	2.12	0.45
3:D:959:LYS:HA	3:D:1007:ASP:OD1	2.17	0.45
3:D:1243:LEU:O	3:D:1244:GLN:NE2	2.49	0.45
5:F:21:ILE:O	5:F:24:LYS:HB2	2.16	0.45
5:F:144:PHE:O	5:F:148:ILE:HG12	2.17	0.45
1:B:13:LEU:HD21	1:B:16:ILE:HG13	1.99	0.45
1:B:33:ARG:HD3	1:B:197:ASP:OD2	2.17	0.45
2:C:933:VAL:HG12	2:C:1050:VAL:HG23	1.99	0.45
2:C:1283:ALA:O	2:C:1286:THR:OG1	2.35	0.45
3:D:233:LYS:HB3	3:D:233:LYS:HE2	1.58	0.45
3:D:970:SER:HB2	3:D:972:LYS:HE2	1.98	0.45
5:F:101:ALA:HA	6:N:26:DT:N3	2.31	0.45
7:K:36:ASP:HB2	7:K:39:GLU:HB3	1.99	0.45
9:G:128:ARG:HA	9:G:131:ARG:NE	2.31	0.45
9:H:116:THR:HB	9:H:147:ILE:CD1	2.47	0.45
9:H:146:LYS:HA	9:H:171:ASP:CA	2.38	0.45
2:C:192:ASP:HB3	2:C:346:TYR:HD1	1.82	0.45
2:C:839:VAL:HG12	2:C:1049:ILE:HG23	1.99	0.45
2:C:866:ASP:HA	2:C:872:TYR:OH	2.16	0.45
2:C:1268:GLN:O	3:D:346:ARG:HA	2.17	0.45
3:D:1025:MET:O	3:D:1027:VAL:HG23	2.17	0.45
6:N:22:DA:C2	6:N:23:DG:C4	3.05	0.45
9:H:81:ILE:HG13	9:H:94:ALA:HB2	1.99	0.45
9:H:118:ILE:HG22	9:H:194:TYR:O	2.16	0.45
9:I:17:ILE:CD1	9:I:40:ALA:HB2	2.46	0.45
1:B:207:THR:OG1	1:B:208:ASN:N	2.50	0.45
2:C:424:ASP:O	2:C:428:VAL:HG23	2.17	0.45
2:C:696:ASP:O	2:C:795:ALA:HB1	2.17	0.45
2:C:835:GLU:OE2	2:C:1053:TYR:OH	2.29	0.45
2:C:954:LYS:HB3	2:C:955:GLN:NE2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:1041:ASP:O	2:C:1042:LEU:HD23	2.17	0.45
3:D:803:VAL:HG21	3:D:1309:ILE:HG22	1.99	0.45
4:T:28:DC:N4	6:N:24:DA:H61	2.15	0.45
9:H:62:GLY:O	9:H:66:LEU:HG	2.17	0.45
9:H:172:TYR:CD2	9:H:172:TYR:O	2.70	0.45
9:H:197:LEU:HD12	9:H:208:LYS:HB3	1.99	0.45
9:I:78:ASP:OD2	9:I:80:ASN:ND2	2.46	0.45
9:I:184:MET:HG3	9:I:187:MET:SD	2.57	0.45
2:C:347:ILE:O	2:C:351:LEU:HG	2.17	0.44
2:C:560:PRO:HB2	3:D:776:THR:HG21	1.99	0.44
2:C:606:LEU:CD1	2:C:611:GLU:OE1	2.65	0.44
3:D:175:GLU:H	3:D:175:GLU:CD	2.19	0.44
3:D:747:MET:O	3:D:754:ILE:HG23	2.17	0.44
3:D:1287:ILE:HD13	3:D:1290:ARG:HH11	1.81	0.44
3:D:1307:LEU:HB3	3:D:1311:LYS:HB2	1.98	0.44
7:K:46:LYS:HB3	7:K:46:LYS:HE3	1.80	0.44
9:G:101:VAL:HG13	9:G:101:VAL:O	2.17	0.44
9:G:130:SER:HA	9:G:135:ILE:HB	1.99	0.44
9:H:130:SER:HB3	9:H:135:ILE:HB	1.99	0.44
1:B:111:THR:HA	1:B:129:VAL:HA	1.97	0.44
1:B:213:PRO:O	1:B:217:ILE:HG13	2.16	0.44
2:C:74:ARG:N	2:C:97:ARG:O	2.48	0.44
2:C:753:LEU:HA	2:C:767:GLN:OE1	2.16	0.44
2:C:942:ASP:O	2:C:946:LEU:HD23	2.18	0.44
2:C:1054:LEU:HD12	2:C:1055:ALA:H	1.81	0.44
2:C:1129:ASN:OD1	2:C:1177:ARG:NE	2.43	0.44
3:D:204:GLU:HB2	3:D:217:LEU:HD21	1.98	0.44
3:D:490:ILE:O	3:D:499:ILE:HG22	2.17	0.44
3:D:1075:ARG:NH2	3:D:1168:GLU:HG2	2.31	0.44
4:T:45:DG:C2	6:N:9:DA:N1	2.84	0.44
1:A:153:VAL:HG23	1:A:158:ARG:HH21	1.82	0.44
1:B:18:GLN:OE1	1:B:18:GLN:N	2.50	0.44
1:B:102:LEU:HD12	1:B:102:LEU:HA	1.69	0.44
1:B:195:ARG:NH1	1:B:195:ARG:HA	2.32	0.44
2:C:515:MET:HE3	2:C:527:LYS:HE2	2.00	0.44
2:C:636:CYS:HG	2:C:637:ARG:H	1.61	0.44
2:C:678:ARG:HD3	2:C:678:ARG:HA	1.47	0.44
2:C:993:PRO:O	2:C:996:ARG:N	2.45	0.44
2:C:1306:LYS:HD2	2:C:1310:ASP:OD1	2.17	0.44
3:D:62:PHE:CG	3:D:247:PRO:HG3	2.52	0.44
3:D:291:ILE:HG12	5:F:48:MET:SD	2.57	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1161:GLY:O	3:D:1203:ARG:HA	2.18	0.44
4:T:31:DT:H2''	4:T:32:DC:OP2	2.16	0.44
4:T:42:DG:C6	6:N:12:DA:N1	2.86	0.44
5:F:12:ASN:HD21	5:F:14:LYS:HB3	1.82	0.44
5:F:57:ARG:HG2	5:F:58:PHE:H	1.82	0.44
9:I:1:MET:O	9:I:73:ILE:HB	2.17	0.44
9:I:109:PHE:HE1	9:I:206:ALA:HB3	1.82	0.44
1:A:9:LEU:HD13	1:A:9:LEU:HA	1.90	0.44
2:C:93:SER:HG	2:C:127:ILE:C	2.18	0.44
2:C:542:ARG:HH12	6:N:40:DT:H6	1.64	0.44
2:C:548:ARG:HH21	2:C:568:ASN:HA	1.81	0.44
2:C:1172:LEU:HA	2:C:1175:ASN:HD22	1.81	0.44
3:D:357:VAL:HG23	3:D:358:GLY:N	2.33	0.44
3:D:677:GLU:OE2	3:D:681:LYS:HE2	2.18	0.44
4:T:36:DA:H2''	4:T:37:DA:C8	2.51	0.44
5:F:11:VAL:H	6:N:30:DA:H2	1.65	0.44
9:G:118:ILE:CG2	9:G:194:TYR:HB2	2.47	0.44
9:G:165:TYR:HE2	9:G:167:LEU:HB2	1.82	0.44
9:I:73:ILE:HG12	9:I:83:ILE:HG12	1.99	0.44
9:I:190:GLN:HG3	9:I:191:PRO:O	2.17	0.44
2:C:85:CYS:O	2:C:89:GLY:N	2.50	0.44
2:C:125:GLY:HA2	2:C:499:SER:HB3	1.99	0.44
2:C:200:ARG:HD2	2:C:200:ARG:HA	1.77	0.44
2:C:214:ASN:CG	2:C:359:ARG:HD2	2.38	0.44
2:C:270:THR:OG1	2:C:272:ARG:HG3	2.18	0.44
2:C:661:VAL:HG22	2:C:662:SER:N	2.33	0.44
2:C:844:LYS:HE3	5:F:126:HIS:CE1	2.53	0.44
3:D:125:GLY:O	3:D:129:ASP:N	2.51	0.44
3:D:724:MET:O	3:D:728:SER:HB3	2.17	0.44
3:D:739:GLN:HE21	3:D:744:ARG:HE	1.65	0.44
3:D:865:HIS:CE1	3:D:867:GLN:HB2	2.53	0.44
3:D:1140:ARG:NH1	3:D:1144:LEU:HB2	2.33	0.44
3:D:1261:LEU:HD11	3:D:1304:ARG:HH21	1.82	0.44
4:T:31:DT:H3'	4:T:31:DT:OP2	2.18	0.44
6:N:47:DG:H2''	6:N:48:DC:C6	2.52	0.44
9:G:80:ASN:HB3	9:G:92:TRP:O	2.18	0.44
9:H:146:LYS:HA	9:H:172:TYR:H	1.81	0.44
9:I:116:THR:HG21	9:I:169:LEU:HD13	2.00	0.44
1:B:212:ASP:OD2	1:B:215:GLU:N	2.34	0.44
2:C:181:GLY:HA2	2:C:394:ARG:O	2.17	0.44
2:C:618:GLN:HE22	3:D:770:LEU:H	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:801:ARG:HB2	2:C:1229:TYR:CE2	2.52	0.44
2:C:973:SER:OG	2:C:974:ARG:N	2.51	0.44
2:C:1117:LEU:HD12	2:C:1195:ILE:HD12	1.99	0.44
2:C:1338:GLU:HG2	3:D:21:LYS:HB3	2.00	0.44
3:D:325:LYS:HE2	3:D:325:LYS:HB3	1.67	0.44
3:D:599:LYS:HE3	3:D:599:LYS:HB3	1.71	0.44
8:E:62:GLN:O	8:E:66:VAL:HG22	2.17	0.44
9:H:137:THR:HG21	9:H:154:LYS:HD2	1.99	0.44
1:A:94:GLY:H	1:A:120:ASP:CB	2.31	0.44
1:B:229:GLU:HA	1:B:232:VAL:HG13	2.00	0.44
2:C:83:GLN:HA	2:C:86:GLN:HG3	2.00	0.44
2:C:700:VAL:HG13	2:C:1069:ARG:HH22	1.83	0.44
2:C:727:VAL:H	2:C:773:LEU:HD13	1.82	0.44
2:C:1087:TYR:HE1	2:C:1215:GLY:HA2	1.83	0.44
3:D:145:VAL:HA	3:D:159:ILE:HA	2.00	0.44
3:D:195:GLU:OE1	3:D:195:GLU:N	2.33	0.44
3:D:272:VAL:HG22	3:D:302:ALA:HB1	1.99	0.44
3:D:804:ALA:C	3:D:806:ASP:H	2.21	0.44
3:D:1046:ILE:HA	3:D:1061:VAL:HA	2.00	0.44
9:G:27:GLN:HB2	9:G:44:ILE:O	2.18	0.44
9:G:50:PHE:CE1	9:G:74:SER:HA	2.52	0.44
9:G:90:ILE:HG12	9:I:165:TYR:CD1	2.40	0.44
9:H:32:ARG:HD2	9:H:103:PRO:HA	2.00	0.44
9:I:196:LEU:HD13	9:I:209:PHE:CE1	2.53	0.44
1:B:95:LYS:NZ	1:B:97:GLU:H	2.16	0.44
1:B:215:GLU:OE2	1:B:219:ARG:NH2	2.51	0.44
2:C:10:ARG:NH2	2:C:791:LEU:HD12	2.33	0.44
2:C:74:ARG:CG	2:C:97:ARG:HB2	2.47	0.44
2:C:301:TYR:N	2:C:311:CYS:O	2.32	0.44
2:C:810:TYR:HB3	2:C:817:LEU:HD13	2.00	0.44
3:D:161:THR:HG22	3:D:163:GLU:HG3	1.99	0.44
3:D:678:ARG:NH1	3:D:756:GLU:OE2	2.51	0.44
3:D:1218:HIS:CD2	3:D:1306:LEU:HD23	2.53	0.44
3:D:1292:LEU:O	3:D:1295:ASN:N	2.41	0.44
6:N:9:DA:H2"	6:N:10:DG:C8	2.52	0.44
8:E:3:ARG:NE	8:E:3:ARG:HA	2.33	0.44
9:G:202:GLY:O	9:G:203:LYS:HE2	2.18	0.44
2:C:97:ARG:HH12	2:C:123:TYR:HB2	1.83	0.44
2:C:105:TYR:HD1	2:C:105:TYR:HA	1.69	0.44
2:C:661:VAL:HG22	2:C:662:SER:H	1.82	0.44
2:C:698:PRO:HB3	2:C:1231:TYR:CE2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:798:GLN:HB2	2:C:828:PHE:HE1	1.83	0.44
2:C:1147:ARG:HA	2:C:1150:ASP:OD2	2.17	0.44
2:C:1278:LEU:HA	2:C:1278:LEU:HD12	1.68	0.44
3:D:35:PHE:CD2	3:D:101:ARG:HB3	2.53	0.44
3:D:149:GLY:HA2	3:D:176:PHE:HD1	1.82	0.44
3:D:1293:GLU:N	3:D:1293:GLU:OE1	2.51	0.44
4:T:39:DA:C2	6:N:15:DA:C2	3.06	0.44
9:H:39:TYR:CZ	9:H:41:GLU:HB3	2.53	0.44
9:H:146:LYS:HA	9:H:172:TYR:N	2.33	0.44
9:I:189:MET:HB2	9:I:194:TYR:CE1	2.53	0.44
2:C:206:ALA:O	2:C:210:LEU:HG	2.18	0.43
2:C:267:ARG:HH12	2:C:270:THR:HG23	1.82	0.43
2:C:818:VAL:HB	2:C:1079:ILE:HG12	1.99	0.43
3:D:255:LEU:HD21	5:F:124:PHE:HD1	1.83	0.43
3:D:268:LEU:O	3:D:272:VAL:HG23	2.17	0.43
3:D:620:PHE:CE2	3:D:624:ILE:HD11	2.52	0.43
3:D:667:GLN:OE1	3:D:668:PHE:N	2.51	0.43
9:I:126:LEU:HD11	9:I:138:ILE:HG21	1.99	0.43
1:A:35:PHE:CE1	1:B:46:ILE:HD12	2.54	0.43
1:A:158:ARG:HH22	1:A:174:ASP:HA	1.82	0.43
1:B:25:LYS:HA	1:B:203:ILE:O	2.18	0.43
2:C:492:MET:N	2:C:492:MET:SD	2.89	0.43
2:C:593:LYS:HD2	2:C:652:TYR:CE1	2.53	0.43
2:C:883:LEU:HD23	2:C:1052:VAL:HG21	1.99	0.43
2:C:907:GLY:O	2:C:909:LYS:N	2.52	0.43
3:D:314:ARG:NE	3:D:314:ARG:HA	2.34	0.43
3:D:354:VAL:HG12	3:D:355:ILE:H	1.84	0.43
3:D:416:ILE:O	3:D:418:GLU:N	2.51	0.43
3:D:849:LEU:HD23	3:D:856:ILE:HG13	1.99	0.43
3:D:1079:LYS:HB3	3:D:1087:ASP:OD1	2.19	0.43
4:T:42:DG:C5	4:T:43:DC:C4	3.06	0.43
5:F:68:LYS:HA	5:F:71:MET:SD	2.58	0.43
1:B:35:PHE:HA	1:B:38:THR:HG22	2.00	0.43
2:C:103:VAL:HG12	2:C:117:ILE:HA	2.01	0.43
2:C:840:SER:HA	2:C:886:LYS:HZ2	1.81	0.43
2:C:953:LEU:HD12	2:C:954:LYS:N	2.32	0.43
2:C:1072:ASN:OD1	2:C:1072:ASN:N	2.31	0.43
2:C:1290:MET:SD	3:D:347:VAL:HG11	2.59	0.43
3:D:424:ASN:ND2	3:D:434:ILE:HB	2.33	0.43
3:D:651:HIS:CE1	3:D:652:GLU:HG2	2.53	0.43
3:D:960:LEU:HA	3:D:981:GLU:O	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1325:PHE:CG	3:D:1326:GLN:N	2.86	0.43
9:H:205:GLY:CA	9:H:220:LEU:HD12	2.46	0.43
2:C:9:LYS:O	2:C:1175:ASN:ND2	2.51	0.43
2:C:53:PHE:CE1	2:C:468:LEU:HD11	2.52	0.43
2:C:62:TYR:HE2	2:C:480:SER:HB2	1.83	0.43
2:C:210:LEU:HA	2:C:213:LEU:HG	2.00	0.43
2:C:235:ASN:OD1	2:C:236:LYS:N	2.51	0.43
2:C:377:THR:HG22	2:C:379:GLU:H	1.82	0.43
2:C:478:ARG:HG2	2:C:478:ARG:HH11	1.83	0.43
2:C:508:SER:O	2:C:509:SER:OG	2.37	0.43
2:C:650:VAL:HG22	2:C:651:ASP:H	1.83	0.43
2:C:1288:GLN:O	2:C:1292:THR:HG22	2.18	0.43
3:D:78:LEU:O	3:D:81:ARG:HG2	2.19	0.43
3:D:651:HIS:ND1	3:D:652:GLU:HG2	2.34	0.43
3:D:720:ASN:OD1	3:D:722:ILE:N	2.50	0.43
3:D:807:LEU:HA	3:D:807:LEU:HD23	1.65	0.43
3:D:953:LYS:HA	3:D:1013:GLY:HA2	2.01	0.43
3:D:1314:LEU:O	3:D:1316:THR:N	2.52	0.43
5:F:21:ILE:O	5:F:25:THR:HG23	2.18	0.43
9:G:49:ASP:OD1	9:G:49:ASP:N	2.44	0.43
9:G:112:ALA:HA	9:G:199:TRP:HA	2.00	0.43
9:G:121:GLU:HG3	9:G:122:ASP:N	2.34	0.43
9:G:147:ILE:HG12	9:G:178:PHE:HZ	1.83	0.43
9:I:105:LYS:HB2	9:I:105:LYS:HE3	1.77	0.43
1:B:132:HIS:O	1:B:134:THR:HG23	2.19	0.43
1:B:179:PRO:C	1:B:207:THR:HG1	2.20	0.43
2:C:197:ARG:HD2	2:C:200:ARG:NH1	2.34	0.43
2:C:590:PRO:HG3	2:C:605:TYR:CE1	2.53	0.43
2:C:1137:GLU:OE1	2:C:1137:GLU:N	2.52	0.43
3:D:495:ASN:HA	3:D:903:LEU:HD11	1.99	0.43
3:D:876:SER:HA	3:D:990:ARG:NH2	2.34	0.43
3:D:975:ILE:CG2	3:D:980:THR:HG21	2.48	0.43
3:D:1293:GLU:OE2	3:D:1299:GLY:N	2.41	0.43
4:T:49:DT:C4	4:T:50:DC:C4	3.06	0.43
9:G:180:PHE:CD2	9:G:198:LEU:HD13	2.54	0.43
9:G:197:LEU:HB2	9:G:208:LYS:HB3	2.01	0.43
9:H:67:VAL:HG21	9:H:83:ILE:HD13	1.99	0.43
9:I:129:VAL:O	9:I:132:GLY:N	2.50	0.43
1:B:55:ALA:HB3	1:B:177:TYR:CD1	2.53	0.43
1:B:77:ASP:HB3	1:B:80:GLU:OE1	2.18	0.43
1:B:155:ALA:O	1:B:158:ARG:NE	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:241:LEU:O	2:C:283:LYS:HA	2.19	0.43
2:C:522:SER:O	2:C:525:THR:HG22	2.18	0.43
2:C:605:TYR:C	2:C:606:LEU:HD23	2.39	0.43
2:C:896:THR:HG23	2:C:899:GLU:HG3	2.00	0.43
3:D:252:LEU:HD12	3:D:252:LEU:HA	1.54	0.43
3:D:532:GLU:H	3:D:532:GLU:HG3	1.48	0.43
3:D:567:THR:OG1	3:D:568:SER:N	2.52	0.43
3:D:1226:VAL:O	3:D:1230:THR:HG23	2.18	0.43
4:T:49:DT:C2	6:N:5:DG:N2	2.86	0.43
9:H:28:PHE:CE2	9:H:30:MET:HB3	2.53	0.43
9:H:107:ILE:HD12	9:H:217:VAL:HB	2.00	0.43
9:H:146:LYS:CB	9:H:171:ASP:HA	2.49	0.43
1:A:68:TYR:HB3	2:C:756:TYR:CD2	2.54	0.43
1:A:131:CYS:O	1:A:132:HIS:ND1	2.52	0.43
2:C:237:LEU:HD13	2:C:237:LEU:HA	1.87	0.43
2:C:320:ASP:O	2:C:324:LYS:NZ	2.41	0.43
2:C:724:VAL:HG12	2:C:773:LEU:HD12	2.01	0.43
2:C:1086:PRO:O	2:C:1094:VAL:HG12	2.18	0.43
2:C:1211:ARG:CZ	2:C:1211:ARG:HB3	2.48	0.43
2:C:1327:LEU:HD21	2:C:1339:LEU:HD11	2.00	0.43
2:C:1333:LEU:CD2	3:D:307:LEU:HD22	2.48	0.43
3:D:130:MET:SD	3:D:131:PRO:HD2	2.59	0.43
3:D:1226:VAL:HG23	3:D:1227:HIS:H	1.83	0.43
4:T:43:DC:C2	6:N:10:DG:N2	2.85	0.43
6:N:9:DA:C6	6:N:10:DG:C6	3.06	0.43
9:G:140:ILE:HG12	9:G:149:ILE:HD13	2.01	0.43
9:G:167:LEU:HD12	9:H:87:ARG:HB3	2.00	0.43
1:B:191:ARG:NH2	1:B:193:GLU:O	2.49	0.43
2:C:971:LEU:HD23	2:C:1018:TYR:HB2	2.00	0.43
3:D:233:LYS:HA	3:D:234:PRO:HD3	1.90	0.43
3:D:298:MET:HA	3:D:301:GLU:OE1	2.19	0.43
3:D:334:LYS:HB3	3:D:339:ARG:CZ	2.49	0.43
3:D:962:ASN:HB2	3:D:979:ASN:O	2.19	0.43
3:D:981:GLU:OE2	3:D:994:SER:OG	2.34	0.43
3:D:1161:GLY:CA	3:D:1203:ARG:HG2	2.48	0.43
3:D:1309:ILE:HG13	3:D:1310:THR:N	2.34	0.43
4:T:25:DA:N6	5:F:59:ASN:O	2.52	0.43
8:E:26:ARG:NE	8:E:53:GLU:OE1	2.52	0.43
9:H:1:MET:N	9:H:73:ILE:O	2.43	0.43
9:H:133:LEU:HB3	9:H:164:LYS:HE2	2.00	0.43
9:H:165:TYR:HD1	9:I:90:ILE:HG13	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:45:ARG:O	1:A:49:SER:HB3	2.19	0.43
1:A:126:PRO:HD2	1:A:127:GLN:HE22	1.83	0.43
2:C:900:LYS:HA	2:C:903:ARG:HD3	2.01	0.43
3:D:531:LYS:HD3	3:D:531:LYS:H	1.83	0.43
3:D:705:THR:HG23	3:D:707:ILE:HD13	2.00	0.43
3:D:883:ARG:NH1	3:D:897:HIS:HB2	2.33	0.43
3:D:930:LEU:HD23	3:D:930:LEU:HA	1.83	0.43
6:N:2:DA:H2''	6:N:3:DG:H8	1.84	0.43
8:E:65:ASP:O	8:E:69:ARG:HG2	2.19	0.43
9:G:2:LYS:HG2	9:G:71:ALA:O	2.19	0.43
9:G:200:ALA:HB3	9:G:228:PHE:CE2	2.54	0.43
9:H:17:ILE:HD12	9:H:40:ALA:CB	2.45	0.43
9:I:123:LEU:O	9:I:127:LEU:HG	2.19	0.43
9:I:179:ASN:O	9:I:224:SER:HA	2.19	0.43
1:A:17:GLU:OE2	1:A:25:LYS:HB2	2.18	0.43
1:A:79:LEU:HA	1:A:82:LEU:HD12	2.00	0.43
1:A:142:MET:HG3	1:A:144:ILE:HD11	2.01	0.43
2:C:193:ASN:HB3	2:C:195:PHE:CE2	2.46	0.43
2:C:225:PHE:CZ	2:C:345:PRO:HA	2.53	0.43
2:C:745:GLU:HA	2:C:967:LEU:HD22	2.00	0.43
2:C:1113:LEU:HA	2:C:1113:LEU:HD12	1.67	0.43
2:C:1327:LEU:HD12	2:C:1327:LEU:HA	1.88	0.43
3:D:172:PHE:C	3:D:174:ASP:H	2.22	0.43
3:D:677:GLU:HA	3:D:680:ASN:HD22	1.84	0.43
3:D:686:TRP:CE2	3:D:758:PRO:HD3	2.54	0.43
3:D:800:LEU:HD13	3:D:800:LEU:HA	1.85	0.43
4:T:38:DT:H2''	4:T:39:DA:C8	2.54	0.43
9:G:7:THR:OG1	9:G:46:ASP:OD2	2.29	0.43
9:G:116:THR:HG23	9:G:196:LEU:HD23	2.00	0.43
1:B:92:VAL:HG12	1:B:121:VAL:HG13	2.00	0.42
1:B:133:LEU:HD23	1:B:133:LEU:HA	1.69	0.42
2:C:639:LYS:H	2:C:641:GLU:CG	2.31	0.42
2:C:1165:SER:O	2:C:1165:SER:OG	2.30	0.42
2:C:1259:LEU:HD23	2:C:1259:LEU:HA	1.92	0.42
3:D:828:GLY:HA2	3:D:994:SER:O	2.18	0.42
3:D:1033:GLY:O	3:D:1114:GLN:HG3	2.19	0.42
3:D:1146:GLU:HB3	3:D:1148:ARG:NH1	2.34	0.42
3:D:1353:VAL:HG13	3:D:1355:ARG:HG3	2.00	0.42
5:F:79:SER:OG	5:F:98:ILE:HD12	2.19	0.42
6:N:45:DA:H2''	6:N:46:DA:C8	2.54	0.42
9:G:28:PHE:HB2	9:G:43:ASN:OD1	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:80:ASN:HB3	9:G:93:PRO:HA	2.01	0.42
9:G:153:ASN:HB3	9:G:156:GLU:HG3	2.01	0.42
1:A:228:LEU:C	1:A:230:ALA:H	2.22	0.42
1:B:57:THR:HG22	1:B:145:LYS:O	2.19	0.42
2:C:59:ILE:HD12	2:C:59:ILE:HA	1.94	0.42
2:C:188:PHE:HA	2:C:193:ASN:O	2.19	0.42
2:C:320:ASP:HB2	2:C:324:LYS:HZ1	1.84	0.42
2:C:409:LEU:HD23	2:C:409:LEU:HA	1.84	0.42
2:C:548:ARG:HE	2:C:571:LEU:HD11	1.85	0.42
2:C:724:VAL:HG12	2:C:774:GLY:H	1.84	0.42
2:C:1223:ARG:HH22	3:D:721:SER:HB2	1.84	0.42
3:D:381:ILE:O	3:D:385:LEU:HG	2.19	0.42
3:D:843:VAL:HG22	3:D:863:LEU:HA	2.00	0.42
3:D:951:GLN:HA	3:D:1016:THR:HA	2.02	0.42
5:F:150:ASP:OD1	5:F:150:ASP:N	2.50	0.42
6:N:28:DT:H2''	6:N:29:DA:C8	2.53	0.42
9:G:139:ALA:HB1	9:G:179:ASN:OD1	2.19	0.42
9:G:148:VAL:HB	9:G:167:LEU:O	2.19	0.42
9:G:179:ASN:O	9:G:224:SER:HA	2.19	0.42
9:H:21:ILE:N	9:H:100:VAL:HG11	2.34	0.42
9:H:30:MET:HB2	9:H:39:TYR:OH	2.19	0.42
9:H:39:TYR:OH	9:H:41:GLU:HB3	2.19	0.42
9:H:109:PHE:CD2	9:H:208:LYS:HD2	2.54	0.42
9:I:31:THR:OG1	9:I:40:ALA:HB3	2.20	0.42
9:I:76:SER:OG	9:I:77:GLU:N	2.52	0.42
1:A:213:PRO:O	1:A:217:ILE:HG13	2.18	0.42
1:B:20:SER:OG	1:B:23:HIS:HB3	2.20	0.42
2:C:216:THR:O	2:C:219:GLN:N	2.51	0.42
2:C:844:LYS:HG3	2:C:845:LEU:HG	2.00	0.42
2:C:851:THR:HG23	2:C:853:ASP:H	1.83	0.42
2:C:887:VAL:CG1	2:C:913:VAL:HB	2.49	0.42
3:D:147:ILE:O	3:D:177:ASP:HB2	2.19	0.42
3:D:224:LEU:HD23	3:D:224:LEU:HA	1.76	0.42
3:D:320:ASN:O	3:D:321:LYS:HB2	2.19	0.42
3:D:449:LEU:HD12	3:D:449:LEU:HA	1.64	0.42
3:D:599:LYS:O	3:D:602:SER:OG	2.21	0.42
3:D:846:GLU:HG2	3:D:881:LYS:HB3	2.01	0.42
6:N:48:DC:H2'	6:N:48:DC:OP2	2.20	0.42
7:K:38:GLN:OE1	7:K:38:GLN:N	2.52	0.42
7:K:48:VAL:HG21	7:K:55:TYR:CD1	2.55	0.42
9:G:143:LYS:HD3	9:G:148:VAL:HG21	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:187:MET:N	9:H:187:MET:SD	2.92	0.42
1:A:120:ASP:OD1	1:A:121:VAL:N	2.53	0.42
2:C:139:ASN:C	2:C:141:THR:H	2.22	0.42
2:C:157:PHE:CZ	2:C:431:LYS:HG2	2.55	0.42
2:C:242:VAL:HG12	2:C:245:ARG:NH1	2.35	0.42
2:C:291:TYR:O	2:C:295:LYS:NZ	2.41	0.42
2:C:550:VAL:HG23	2:C:554:HIS:ND1	2.34	0.42
2:C:633:LEU:HD22	2:C:644:LEU:HB3	2.00	0.42
2:C:817:LEU:HD12	2:C:1078:LYS:O	2.19	0.42
2:C:1059:ARG:CG	2:C:1060:ILE:H	2.32	0.42
2:C:1127:LYS:HA	2:C:1127:LYS:HD3	1.82	0.42
2:C:1211:ARG:HH11	2:C:1220:GLN:NE2	2.17	0.42
2:C:1296:ASP:O	2:C:1298:VAL:N	2.52	0.42
3:D:156:ARG:CZ	3:D:188:LEU:HD22	2.49	0.42
3:D:410:ASP:O	3:D:413:ASP:HB2	2.20	0.42
3:D:526:VAL:C	3:D:527:LEU:HD12	2.39	0.42
3:D:532:GLU:HA	3:D:535:ARG:HD3	2.01	0.42
3:D:1001:ALA:CB	3:D:1020:TRP:HB3	2.49	0.42
3:D:1043:GLY:HA2	3:D:1067:ARG:HH21	1.83	0.42
3:D:1159:ILE:HA	3:D:1206:ARG:HB2	2.01	0.42
9:H:139:ALA:HA	9:H:180:PHE:O	2.19	0.42
2:C:718:ALA:N	2:C:783:LEU:HD11	2.35	0.42
2:C:946:LEU:O	2:C:950:GLU:HG2	2.20	0.42
2:C:1252:SER:O	2:C:1256:GLN:HA	2.19	0.42
5:F:15:GLU:HA	5:F:18:GLN:HG2	2.01	0.42
9:H:154:LYS:HA	9:H:157:ASP:O	2.20	0.42
1:A:149:GLY:HA3	1:A:177:TYR:CZ	2.55	0.42
1:B:104:LYS:HD2	1:B:105:SER:H	1.84	0.42
2:C:43:PRO:O	2:C:44:GLU:HG2	2.20	0.42
2:C:805:MET:O	2:C:811:ASN:ND2	2.47	0.42
2:C:1284:ALA:N	3:D:479:GLU:OE1	2.52	0.42
2:C:1285:TYR:HB2	3:D:479:GLU:OE2	2.19	0.42
2:C:1333:LEU:HD22	3:D:307:LEU:HD22	2.01	0.42
3:D:290:ILE:O	3:D:293:ARG:HB3	2.20	0.42
3:D:796:LEU:HG	3:D:800:LEU:HD23	2.01	0.42
3:D:1262:ARG:NH2	3:D:1312:ALA:HB1	2.34	0.42
5:F:54:LEU:HD22	5:F:106:PHE:HE2	1.85	0.42
9:G:109:PHE:HZ	9:G:199:TRP:H	1.67	0.42
9:I:136:ASP:CG	9:I:154:LYS:H	2.22	0.42
9:I:152:PHE:HB2	9:I:160:LEU:HD22	2.00	0.42
1:A:25:LYS:HE2	1:A:25:LYS:HB2	1.91	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:153:VAL:HG22	1:A:175:ALA:HB3	2.01	0.42
1:B:10:LYS:HA	1:B:10:LYS:HD3	1.82	0.42
1:B:31:LEU:HD23	1:B:35:PHE:HB3	2.00	0.42
2:C:52:ALA:HA	2:C:465:ARG:NH2	2.35	0.42
2:C:559:CYS:HB2	2:C:662:SER:HB3	2.02	0.42
2:C:607:SER:OG	2:C:610:GLU:HG2	2.20	0.42
2:C:696:ASP:OD1	2:C:697:LYS:N	2.53	0.42
3:D:973:LEU:HB3	3:D:1003:LEU:HB2	2.02	0.42
3:D:974:VAL:HG13	3:D:1001:ALA:C	2.39	0.42
3:D:1262:ARG:HE	3:D:1262:ARG:HB3	1.70	0.42
3:D:1284:ARG:HH12	3:D:1288:ALA:HB2	1.83	0.42
9:G:15:ALA:HA	9:G:18:ASN:O	2.19	0.42
9:H:54:ILE:HG23	9:H:92:TRP:HE1	1.84	0.42
9:I:182:ILE:HG13	9:I:220:LEU:HD23	2.01	0.42
1:A:104:LYS:HG3	1:A:105:SER:N	2.35	0.42
1:B:16:ILE:O	1:B:18:GLN:NE2	2.52	0.42
1:B:52:PRO:HG3	1:B:150:ARG:NE	2.35	0.42
1:B:212:ASP:HB3	1:B:215:GLU:HB3	2.02	0.42
2:C:82:VAL:CG1	2:C:86:GLN:HE21	2.32	0.42
2:C:256:GLU:HA	2:C:261:VAL:HA	2.01	0.42
2:C:616:ILE:N	2:C:636:CYS:SG	2.93	0.42
2:C:624:ASP:C	2:C:626:GLU:N	2.72	0.42
3:D:215:LYS:HA	3:D:218:THR:HG22	2.01	0.42
3:D:599:LYS:C	3:D:603:LYS:HZ2	2.23	0.42
3:D:647:PRO:CG	3:D:697:MET:HB2	2.39	0.42
3:D:978:ARG:HG3	3:D:999:TYR:HB2	2.00	0.42
3:D:1329:THR:O	3:D:1333:THR:HG22	2.20	0.42
4:T:40:DG:H1'	4:T:41:DT:H5'	2.01	0.42
9:H:149:ILE:N	9:H:167:LEU:O	2.34	0.42
9:I:165:TYR:OH	9:I:167:LEU:HD22	2.19	0.42
1:A:10:LYS:HA	1:B:227:GLN:NE2	2.34	0.42
2:C:38:PHE:CD2	2:C:39:ILE:HG23	2.55	0.42
2:C:934:PHE:O	2:C:1049:ILE:N	2.45	0.42
3:D:135:ILE:O	3:D:138:VAL:HB	2.19	0.42
3:D:373:ALA:O	3:D:377:PHE:HD2	2.03	0.42
3:D:699:ASP:HA	3:D:702:GLN:OE1	2.20	0.42
3:D:770:LEU:O	3:D:774:ILE:HG13	2.20	0.42
3:D:1026:PRO:HA	3:D:1120:THR:HB	2.00	0.42
4:T:22:DT:H2''	4:T:23:DT:C5	2.55	0.42
5:F:129:TYR:O	5:F:129:TYR:CG	2.71	0.42
9:I:22:MET:SD	9:I:53:ALA:HB2	2.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:149:ILE:HG13	9:I:169:LEU:HG	2.02	0.42
1:A:64:VAL:O	1:A:65:LEU:HD23	2.20	0.42
1:A:135:ASP:HB3	1:A:138:ALA:HB2	2.02	0.42
2:C:167:SER:OG	2:C:169:LYS:HG2	2.20	0.42
2:C:231:GLU:OE2	2:C:238:GLN:HB2	2.20	0.42
2:C:855:PRO:O	2:C:857:VAL:HG22	2.20	0.42
3:D:30:ILE:HD13	3:D:243:PRO:HG3	2.01	0.42
3:D:285:LEU:HD23	5:F:80:ILE:HG22	2.02	0.42
4:T:10:DA:H2''	4:T:11:DG:C8	2.55	0.42
4:T:34:DG:H22	6:N:20:DT:H3	1.68	0.42
9:G:53:ALA:HB3	9:G:95:ALA:O	2.20	0.42
9:H:140:ILE:O	9:H:141:THR:HG22	2.20	0.42
1:B:217:ILE:HG13	1:B:217:ILE:H	1.70	0.41
2:C:55:SER:OG	2:C:56:VAL:N	2.53	0.41
2:C:70:TYR:HH	2:C:73:TYR:HD1	1.68	0.41
2:C:74:ARG:HH21	2:C:121:GLU:CD	2.21	0.41
2:C:436:ARG:HA	2:C:436:ARG:HD2	1.52	0.41
2:C:678:ARG:HH21	2:C:1106:ARG:HG2	1.85	0.41
2:C:882:ILE:HG13	2:C:919:ARG:CD	2.50	0.41
2:C:889:PRO:HA	2:C:912:ASP:O	2.20	0.41
2:C:1130:ALA:O	2:C:1134:GLN:HG3	2.20	0.41
2:C:1237:HIS:CD2	2:C:1237:HIS:N	2.88	0.41
3:D:266:ASN:O	3:D:269:TYR:HB2	2.20	0.41
3:D:369:PRO:HB3	3:D:444:GLY:O	2.19	0.41
3:D:384:LYS:HA	3:D:384:LYS:HD2	1.85	0.41
3:D:511:TYR:OH	3:D:727:ASP:OD2	2.24	0.41
3:D:559:ALA:O	3:D:561:GLY:N	2.52	0.41
3:D:608:CYS:SG	3:D:612:LEU:HD22	2.59	0.41
3:D:713:GLU:HG2	3:D:714:GLU:N	2.35	0.41
3:D:743:MET:HB2	3:D:759:ILE:O	2.20	0.41
5:F:92:LYS:HD3	5:F:92:LYS:HA	1.86	0.41
9:H:4:SER:O	9:H:7:THR:HB	2.20	0.41
9:H:28:PHE:CZ	9:H:30:MET:HB3	2.55	0.41
1:B:207:THR:HG1	1:B:208:ASN:H	1.68	0.41
2:C:27:LEU:HG	2:C:711:ASP:OD2	2.20	0.41
2:C:1026:GLU:O	2:C:1029:LEU:HG	2.20	0.41
3:D:499:ILE:HD12	3:D:499:ILE:HA	1.93	0.41
3:D:529:GLY:HA2	3:D:530:PRO:HD3	1.91	0.41
3:D:1226:VAL:HG23	3:D:1227:HIS:N	2.35	0.41
3:D:1316:THR:OG1	3:D:1318:SER:O	2.38	0.41
5:F:112:LYS:HG2	5:F:113:GLU:OE1	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:8:ASP:HB2	8:E:55:GLU:OE2	2.20	0.41
8:E:18:ASP:O	8:E:22:VAL:HG22	2.20	0.41
9:H:109:PHE:CD1	9:H:110:PRO:HD2	2.55	0.41
1:A:45:ARG:CZ	1:B:37:HIS:HB2	2.49	0.41
1:A:86:LYS:NZ	1:A:176:CYS:HB3	2.36	0.41
1:B:9:LEU:HD23	1:B:9:LEU:HA	1.89	0.41
2:C:857:VAL:CG2	2:C:862:LEU:HD21	2.49	0.41
2:C:1287:LEU:O	2:C:1290:MET:HB3	2.20	0.41
3:D:78:LEU:HG	3:D:81:ARG:HD2	2.01	0.41
3:D:94:GLN:NE2	3:D:96:LYS:HE3	2.35	0.41
3:D:250:ARG:O	3:D:250:ARG:HG2	2.20	0.41
3:D:474:LEU:HD11	8:E:31:GLN:OE1	2.20	0.41
3:D:573:THR:H	3:D:576:ARG:HD2	1.84	0.41
3:D:712:GLN:CG	3:D:713:GLU:H	2.34	0.41
3:D:825:VAL:HG23	3:D:832:LYS:HB2	2.02	0.41
3:D:982:LEU:HD22	3:D:995:TYR:CD2	2.52	0.41
3:D:1120:THR:OG1	3:D:1122:ALA:O	2.36	0.41
3:D:1327:GLU:HG3	3:D:1327:GLU:O	2.20	0.41
6:N:27:DA:H8	6:N:27:DA:O5'	2.03	0.41
9:G:1:MET:HG2	9:G:73:ILE:HD12	2.02	0.41
9:G:80:ASN:HA	9:G:94:ALA:HB2	2.02	0.41
9:I:180:PHE:CD2	9:I:198:LEU:HD13	2.55	0.41
2:C:79:VAL:HG23	2:C:80:PHE:CD1	2.55	0.41
2:C:82:VAL:HG12	2:C:86:GLN:HE21	1.84	0.41
2:C:101:ARG:HA	2:C:119:GLU:HA	2.01	0.41
2:C:453:ILE:N	2:C:585:GLY:O	2.54	0.41
2:C:838:CYS:HB2	2:C:918:LEU:HD22	2.02	0.41
3:D:588:PRO:HD2	3:D:591:ILE:HD11	2.01	0.41
4:T:47:DG:H1'	4:T:48:DC:C6	2.55	0.41
6:N:40:DT:H6	6:N:40:DT:H5''	1.85	0.41
9:H:50:PHE:CE1	9:H:74:SER:HA	2.56	0.41
9:H:182:ILE:CG1	9:H:220:LEU:HD23	2.48	0.41
1:B:43:LEU:HG	1:B:47:LEU:HD11	2.02	0.41
2:C:44:GLU:HG3	2:C:46:GLN:HB2	2.02	0.41
2:C:182:SER:O	2:C:395:TYR:HE1	2.03	0.41
2:C:356:THR:HG22	2:C:357:ASN:N	2.35	0.41
2:C:477:GLU:O	2:C:480:SER:HB3	2.20	0.41
2:C:899:GLU:O	2:C:902:LEU:HG	2.21	0.41
2:C:976:ARG:O	2:C:980:VAL:N	2.41	0.41
3:D:405:GLU:O	3:D:407:VAL:N	2.54	0.41
3:D:475:GLU:HG3	8:E:24:ALA:CB	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:749:LYS:HD3	3:D:750:PRO:HD2	2.02	0.41
3:D:1175:LEU:HD23	3:D:1176:VAL:N	2.35	0.41
3:D:1318:SER:HG	3:D:1321:SER:H	1.69	0.41
3:D:1321:SER:O	3:D:1324:SER:HB3	2.21	0.41
4:T:27:DA:C5	4:T:28:DC:C5	3.08	0.41
6:N:2:DA:C2	6:N:3:DG:C6	3.08	0.41
9:G:153:ASN:O	9:G:156:GLU:HG3	2.21	0.41
9:H:28:PHE:CZ	9:H:41:GLU:HB2	2.56	0.41
9:H:73:ILE:HG12	9:H:83:ILE:HG12	2.01	0.41
9:I:108:PRO:HG2	9:I:110:PRO:HD3	2.03	0.41
1:A:47:LEU:HD23	1:A:47:LEU:HA	1.59	0.41
1:A:192:VAL:HG21	1:A:198:LEU:HD12	2.02	0.41
1:A:218:ARG:O	1:A:222:THR:OG1	2.38	0.41
2:C:184:LEU:HD12	2:C:184:LEU:HA	1.91	0.41
2:C:238:GLN:HA	2:C:285:ILE:O	2.21	0.41
2:C:529:ARG:O	2:C:530:ILE:HD13	2.20	0.41
2:C:539:THR:H	2:C:542:ARG:HB3	1.86	0.41
2:C:839:VAL:HG12	2:C:1049:ILE:CG2	2.51	0.41
2:C:1264:GLN:HE21	3:D:257:GLY:HA3	1.86	0.41
3:D:281:ARG:O	3:D:284:ASP:HB2	2.21	0.41
3:D:381:ILE:H	3:D:381:ILE:HG13	1.71	0.41
3:D:599:LYS:O	3:D:603:LYS:HG2	2.20	0.41
3:D:805:GLN:HE21	3:D:1348:LYS:H	1.68	0.41
3:D:844:THR:OG1	3:D:846:GLU:O	2.30	0.41
3:D:1047:THR:O	3:D:1060:VAL:N	2.54	0.41
5:F:109:ARG:HA	5:F:109:ARG:HD2	1.88	0.41
1:A:25:LYS:HG2	1:A:204:GLU:CG	2.51	0.41
1:A:77:ASP:OD2	1:A:79:LEU:N	2.54	0.41
2:C:101:ARG:HB2	2:C:119:GLU:HB3	2.01	0.41
2:C:245:ARG:HB2	2:C:337:PHE:CE1	2.55	0.41
2:C:321:LEU:O	2:C:325:LEU:HD23	2.20	0.41
2:C:400:VAL:HG12	2:C:584:TYR:CD1	2.55	0.41
2:C:487:LEU:HA	2:C:491:ASP:OD2	2.20	0.41
2:C:726:TYR:HB3	2:C:733:VAL:HB	2.03	0.41
2:C:887:VAL:HG12	2:C:913:VAL:HB	2.03	0.41
2:C:1178:LYS:HE3	2:C:1178:LYS:HB3	1.93	0.41
2:C:1201:LEU:HD12	2:C:1201:LEU:HA	1.84	0.41
2:C:1211:ARG:HD3	2:C:1220:GLN:HE22	1.86	0.41
2:C:1299:ASN:O	2:C:1302:THR:OG1	2.35	0.41
3:D:145:VAL:O	3:D:178:ALA:HA	2.20	0.41
3:D:850:LYS:HE3	3:D:875:ASN:CG	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1151:LYS:HD2	3:D:1151:LYS:HA	1.85	0.41
7:K:47:MET:CB	7:K:58:ALA:HB1	2.49	0.41
7:K:55:TYR:CE1	7:K:81:ILE:HD11	2.56	0.41
7:K:82:ILE:HG22	7:K:86:GLN:HE21	1.86	0.41
9:G:83:ILE:CG2	9:G:90:ILE:HB	2.47	0.41
9:H:19:SER:O	9:H:56:ASP:HA	2.21	0.41
9:H:22:MET:SD	9:H:97:PRO:HG3	2.61	0.41
9:H:141:THR:HG22	9:H:180:PHE:N	2.36	0.41
2:C:704:MET:N	2:C:705:GLU:OE1	2.53	0.41
2:C:1022:LYS:O	2:C:1026:GLU:HG2	2.20	0.41
2:C:1095:ASP:HB2	2:C:1096:ILE:HG13	2.02	0.41
2:C:1101:LEU:O	2:C:1104:PRO:HD2	2.21	0.41
3:D:111:THR:HG23	3:D:300:GLN:NE2	2.32	0.41
3:D:495:ASN:OD1	3:D:495:ASN:N	2.54	0.41
3:D:521:LYS:NZ	3:D:540:GLY:O	2.32	0.41
9:G:115:VAL:HG12	9:G:197:LEU:HD23	2.03	0.41
9:G:136:ASP:OD1	9:G:137:THR:N	2.54	0.41
9:I:148:VAL:HG13	9:I:167:LEU:O	2.21	0.41
1:A:25:LYS:HG2	1:A:204:GLU:HG2	2.03	0.41
1:B:214:GLU:HA	1:B:217:ILE:CD1	2.48	0.41
1:B:224:LEU:HG	1:B:228:LEU:HD11	2.03	0.41
2:C:14:ASP:HA	2:C:1183:ALA:HB3	2.03	0.41
2:C:274:ILE:HA	2:C:277:LEU:HD12	2.02	0.41
2:C:364:VAL:HG13	2:C:376:PRO:HG3	2.03	0.41
2:C:473:ARG:HD3	5:F:58:PHE:HB2	2.03	0.41
2:C:521:LEU:HD21	2:C:687:ARG:HG2	2.03	0.41
2:C:618:GLN:NE2	3:D:769:VAL:HB	2.35	0.41
2:C:756:TYR:HA	2:C:765:ILE:O	2.21	0.41
2:C:790:ASP:O	2:C:793:GLU:N	2.42	0.41
2:C:890:LYS:HA	2:C:914:LYS:HE2	2.03	0.41
2:C:936:ARG:C	2:C:941:LYS:HZ3	2.24	0.41
2:C:960:LEU:HA	2:C:963:GLU:HB3	2.03	0.41
2:C:1027:LYS:HE2	2:C:1027:LYS:HB3	1.93	0.41
2:C:1059:ARG:O	2:C:1234:LYS:NZ	2.53	0.41
2:C:1176:LEU:O	2:C:1178:LYS:N	2.53	0.41
2:C:1246:ARG:HD2	2:C:1265:PHE:O	2.21	0.41
2:C:1314:GLN:HB2	8:E:28:ARG:NH1	2.35	0.41
2:C:1330:ILE:HA	2:C:1330:ILE:HD12	1.82	0.41
3:D:154:LEU:HA	3:D:158:GLN:OE1	2.21	0.41
3:D:450:HIS:HA	3:D:451:PRO:HD3	1.91	0.41
3:D:514:THR:OG1	3:D:596:LEU:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:521:LYS:HG2	3:D:542:ALA:HA	2.03	0.41
3:D:691:ASP:O	3:D:695:LYS:HG3	2.21	0.41
3:D:849:LEU:CD2	3:D:856:ILE:HG13	2.51	0.41
3:D:959:LYS:C	3:D:960:LEU:HD12	2.42	0.41
3:D:1027:VAL:HB	3:D:1122:ALA:H	1.85	0.41
3:D:1287:ILE:CD1	3:D:1290:ARG:HH11	2.34	0.41
3:D:1371:ARG:HH21	3:D:1372:ARG:HH21	1.68	0.41
4:T:10:DA:H2''	4:T:11:DG:H8	1.84	0.41
4:T:45:DG:H2''	4:T:46:DA:C8	2.56	0.41
5:F:26:GLU:O	5:F:29:ASN:N	2.51	0.41
6:N:47:DG:C4	6:N:48:DC:C5	3.09	0.41
9:G:3:LEU:HD22	9:G:7:THR:HG21	2.03	0.41
9:G:71:ALA:HB2	9:G:85:ASP:HA	2.02	0.41
9:G:109:PHE:CE2	9:G:112:ALA:HB2	2.43	0.41
9:H:32:ARG:HD3	9:H:101:VAL:HG12	2.03	0.41
9:H:214:ALA:HB3	9:H:216:TYR:CZ	2.56	0.41
1:A:60:GLU:OE1	1:A:60:GLU:N	2.54	0.41
1:B:26:VAL:O	1:B:202:VAL:HA	2.21	0.41
2:C:3:TYR:HB3	2:C:7:GLU:OE2	2.21	0.41
2:C:32:LEU:HA	2:C:32:LEU:HD23	1.79	0.41
2:C:975:ILE:HD11	2:C:1014:LEU:HB2	2.02	0.41
2:C:1109:ILE:HD13	2:C:1109:ILE:HA	1.92	0.41
2:C:1281:TYR:C	2:C:1283:ALA:H	2.25	0.41
3:D:149:GLY:HA2	3:D:176:PHE:CD1	2.55	0.41
3:D:179:LYS:HB3	3:D:183:GLU:OE2	2.21	0.41
3:D:424:ASN:O	3:D:466:MET:HE3	2.20	0.41
3:D:549:LYS:HB3	3:D:569:LEU:HD21	2.03	0.41
3:D:577:ALA:HA	3:D:580:TRP:HB3	2.03	0.41
3:D:646:ILE:HD13	3:D:646:ILE:HA	1.84	0.41
3:D:673:VAL:HG22	3:D:674:THR:H	1.85	0.41
3:D:709:ARG:C	3:D:711:GLY:N	2.74	0.41
3:D:812:ASP:O	3:D:896:ALA:N	2.53	0.41
3:D:897:HIS:HD1	3:D:897:HIS:H	1.69	0.41
3:D:1062:LEU:C	3:D:1103:GLY:HA2	2.41	0.41
3:D:1252:HIS:O	3:D:1255:VAL:HG12	2.21	0.41
3:D:1286:LYS:HE2	3:D:1286:LYS:HB3	1.71	0.41
9:H:136:ASP:C	9:H:184:MET:HB2	2.41	0.41
1:A:38:THR:HG21	1:B:46:ILE:HD11	2.02	0.40
1:A:45:ARG:NH2	1:B:37:HIS:HB2	2.36	0.40
1:B:97:GLU:CB	1:B:147:GLN:HA	2.51	0.40
2:C:124:MET:HA	2:C:495:ALA:HB1	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:339:ASN:OD1	2:C:340:ASP:N	2.53	0.40
2:C:450:ASN:OD1	2:C:451:ARG:HG2	2.21	0.40
2:C:452:ARG:NH2	2:C:584:TYR:O	2.51	0.40
2:C:619:ALA:O	2:C:621:SER:N	2.52	0.40
2:C:657:THR:O	2:C:659:GLN:N	2.55	0.40
2:C:678:ARG:NH2	2:C:1106:ARG:HG2	2.36	0.40
2:C:779:ARG:O	2:C:779:ARG:HD3	2.22	0.40
2:C:1081:PRO:CB	2:C:1083:GLU:CD	2.90	0.40
3:D:126:LEU:C	3:D:129:ASP:H	2.23	0.40
3:D:156:ARG:NH2	3:D:188:LEU:HA	2.37	0.40
3:D:354:VAL:HG12	3:D:355:ILE:N	2.36	0.40
3:D:388:ARG:HB3	3:D:390:LEU:HD13	2.02	0.40
3:D:620:PHE:CZ	3:D:624:ILE:HD11	2.57	0.40
3:D:1046:ILE:CD1	3:D:1059:LEU:HB3	2.51	0.40
3:D:1064:SER:HB2	3:D:1072:LYS:HA	2.03	0.40
3:D:1068:THR:O	3:D:1072:LYS:HB3	2.21	0.40
3:D:1120:THR:HG23	3:D:1123:ARG:HG2	2.02	0.40
4:T:49:DT:H1'	4:T:50:DC:O4'	2.21	0.40
9:H:143:LYS:HB3	9:H:148:VAL:CG1	2.52	0.40
1:A:86:LYS:HZ3	1:A:176:CYS:HB3	1.85	0.40
1:A:141:SER:O	1:A:142:MET:HB3	2.22	0.40
1:A:198:LEU:HD23	1:A:198:LEU:HA	1.63	0.40
2:C:588:GLU:HG3	2:C:605:TYR:HB3	2.02	0.40
2:C:702:THR:HG23	2:C:704:MET:H	1.86	0.40
2:C:1026:GLU:HA	2:C:1029:LEU:CD2	2.52	0.40
3:D:64:PRO:HB2	3:D:66:LYS:O	2.22	0.40
3:D:79:LYS:NZ	7:K:65:GLU:O	2.45	0.40
3:D:277:ASN:HA	3:D:280:LYS:CD	2.52	0.40
3:D:518:VAL:HA	3:D:547:ARG:NH2	2.16	0.40
3:D:594:GLN:H	3:D:594:GLN:HG2	1.50	0.40
3:D:796:LEU:HD12	3:D:799:ARG:NH2	2.36	0.40
3:D:822:MET:N	3:D:822:MET:SD	2.94	0.40
3:D:1079:LYS:HA	3:D:1098:GLN:NE2	2.26	0.40
4:T:7:DT:H2''	4:T:8:DT:C5	2.56	0.40
9:H:200:ALA:HB3	9:H:228:PHE:CE2	2.57	0.40
1:A:214:GLU:O	1:A:218:ARG:HG2	2.21	0.40
2:C:759:SER:OG	2:C:765:ILE:HG23	2.21	0.40
2:C:1211:ARG:HD3	2:C:1220:GLN:NE2	2.35	0.40
3:D:36:GLY:O	3:D:104:HIS:ND1	2.53	0.40
3:D:133:ARG:H	3:D:133:ARG:HG3	1.62	0.40
3:D:498:PRO:HD3	3:D:606:ASN:ND2	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:555:TYR:CD1	3:D:565:ALA:HB2	2.57	0.40
3:D:588:PRO:O	3:D:591:ILE:HG13	2.21	0.40
3:D:737:ILE:O	3:D:740:LEU:N	2.54	0.40
3:D:753:SER:OG	3:D:754:ILE:N	2.54	0.40
3:D:859:PRO:HB2	3:D:862:THR:CG2	2.51	0.40
3:D:948:SER:N	3:D:1022:PRO:HG3	2.36	0.40
3:D:1062:LEU:HD23	3:D:1062:LEU:HA	1.96	0.40
3:D:1109:LEU:HD12	3:D:1109:LEU:HA	1.81	0.40
5:F:37:VAL:O	5:F:38:ARG:CG	2.69	0.40
6:N:9:DA:H2 [?]	6:N:10:DG:H8	1.86	0.40
9:G:125:GLN:O	9:G:129:VAL:HG13	2.21	0.40
9:G:129:VAL:HG21	9:G:165:TYR:CD1	2.57	0.40
9:G:226:HIS:HB2	9:G:228:PHE:CZ	2.56	0.40
1:A:26:VAL:O	1:A:202:VAL:HA	2.22	0.40
1:A:218:ARG:HB3	1:B:233:ASP:HB2	2.03	0.40
1:B:97:GLU:HB2	1:B:146:VAL:O	2.22	0.40
1:B:186:ASN:O	1:B:202:VAL:HG12	2.21	0.40
2:C:400:VAL:HG12	2:C:584:TYR:HD1	1.86	0.40
2:C:599:VAL:N	2:C:627:GLY:HA3	2.31	0.40
2:C:839:VAL:HB	2:C:1049:ILE:HG12	2.04	0.40
2:C:848:GLU:CG	2:C:888:THR:HG22	2.51	0.40
2:C:1243:MET:HE1	3:D:445:LYS:HE2	2.04	0.40
3:D:583:VAL:HG13	3:D:587:LEU:HD22	2.04	0.40
3:D:850:LYS:HB3	3:D:850:LYS:HE2	1.76	0.40
7:K:37:ARG:NH2	7:K:75:LYS:HA	2.36	0.40
7:K:37:ARG:HB3	7:K:78:PRO:HA	2.03	0.40
9:G:180:PHE:HD1	9:G:224:SER:OG	2.04	0.40
9:H:11:LEU:HD13	9:H:61:LEU:HD21	2.03	0.40
9:H:137:THR:HA	9:H:184:MET:H	1.86	0.40
9:H:146:LYS:HE2	9:H:171:ASP:CB	2.28	0.40
9:I:194:TYR:CB	9:I:209:PHE:HD2	2.34	0.40
1:B:30:PRO:O	1:B:31:LEU:HD12	2.21	0.40
1:B:34:GLY:N	1:B:199:ASP:OD2	2.55	0.40
2:C:72:SER:H	2:C:99:LYS:HB2	1.87	0.40
2:C:644:LEU:HD23	2:C:644:LEU:HA	1.76	0.40
2:C:868:SER:OG	2:C:870:ILE:HG12	2.21	0.40
2:C:918:LEU:HD12	2:C:918:LEU:HA	1.82	0.40
2:C:1314:GLN:OE1	8:E:28:ARG:NH1	2.55	0.40
3:D:720:ASN:O	3:D:723:TYR:N	2.55	0.40
4:T:1:DG:C5	4:T:2:DG:C6	3.10	0.40
9:I:169:LEU:HD23	9:I:169:LEU:HA	1.91	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	215/329 (65%)	175 (81%)	40 (19%)	0	100	100
1	B	215/329 (65%)	188 (87%)	27 (13%)	0	100	100
2	C	1338/1342 (100%)	1096 (82%)	241 (18%)	1 (0%)	51	85
3	D	1329/1407 (94%)	1093 (82%)	235 (18%)	1 (0%)	51	85
5	F	133/185 (72%)	113 (85%)	19 (14%)	1 (1%)	19	60
7	K	69/132 (52%)	58 (84%)	11 (16%)	0	100	100
8	E	69/91 (76%)	59 (86%)	10 (14%)	0	100	100
9	G	226/236 (96%)	209 (92%)	17 (8%)	0	100	100
9	H	226/236 (96%)	211 (93%)	15 (7%)	0	100	100
9	I	226/236 (96%)	209 (92%)	17 (8%)	0	100	100
All	All	4046/4523 (90%)	3411 (84%)	632 (16%)	3 (0%)	54	85

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
5	F	129	TYR
3	D	764	ARG
2	C	45	GLY

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	186/286 (65%)	183 (98%)	3 (2%)	62	79
1	B	187/286 (65%)	186 (100%)	1 (0%)	88	93
2	C	1155/1157 (100%)	1144 (99%)	11 (1%)	76	86
3	D	1120/1168 (96%)	1116 (100%)	4 (0%)	91	94
5	F	121/166 (73%)	119 (98%)	2 (2%)	60	78
7	K	61/120 (51%)	59 (97%)	2 (3%)	38	61
8	E	61/75 (81%)	61 (100%)	0	100	100
9	G	189/197 (96%)	189 (100%)	0	100	100
9	H	189/197 (96%)	188 (100%)	1 (0%)	88	93
9	I	189/197 (96%)	188 (100%)	1 (0%)	88	93
All	All	3458/3849 (90%)	3433 (99%)	25 (1%)	84	90

All (25) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	114	ASP
1	A	143	ARG
1	A	186	ASN
1	B	143	ARG
2	C	18	ARG
2	C	105	TYR
2	C	264	GLU
2	C	491	ASP
2	C	637	ARG
2	C	779	ARG
2	C	807	TRP
2	C	909	LYS
2	C	996	ARG
2	C	1080	ASN
2	C	1291	LEU
3	D	60	ARG
3	D	250	ARG
3	D	816	THR
3	D	817	HIS
5	F	63	TYR
5	F	133	ASP
7	K	46	LYS
7	K	96	ARG
9	H	18	ASN
9	I	189	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (69) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	18	GLN
1	A	23	HIS
1	A	66	HIS
1	A	84	ASN
1	A	93	GLN
1	A	117	HIS
1	B	41	ASN
1	B	66	HIS
1	B	75	GLN
2	C	46	GLN
2	C	65	ASN
2	C	69	GLN
2	C	86	GLN
2	C	314	ASN
2	C	447	HIS
2	C	519	ASN
2	C	618	GLN
2	C	684	ASN
2	C	766	ASN
2	C	952	GLN
2	C	965	GLN
2	C	1023	HIS
2	C	1111	GLN
2	C	1116	HIS
2	C	1134	GLN
2	C	1136	GLN
2	C	1157	GLN
2	C	1175	ASN
2	C	1220	GLN
2	C	1237	HIS
2	C	1268	GLN
3	D	80	HIS
3	D	157	GLN
3	D	186	GLN
3	D	341	ASN
3	D	365	GLN
3	D	419	HIS
3	D	430	HIS
3	D	465	GLN
3	D	469	HIS
3	D	489	ASN

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Mol	Chain	Res	Type
3	D	495	ASN
3	D	665	GLN
3	D	680	ASN
3	D	739	GLN
3	D	1023	HIS
3	D	1098	GLN
3	D	1235	ASN
3	D	1238	GLN
3	D	1244	GLN
3	D	1268	ASN
3	D	1295	ASN
3	D	1326	GLN
3	D	1350	ASN
3	D	1366	HIS
5	F	84	HIS
5	F	126	HIS
5	F	127	ASN
7	K	40	ASN
7	K	66	ASN
7	K	93	ASN
8	E	31	GLN
8	E	43	ASN
9	G	153	ASN
9	H	27	GLN
9	H	213	HIS
9	H	226	HIS
9	I	124	GLN
9	I	186	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

Of 3 ligands modelled in this entry, 3 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

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

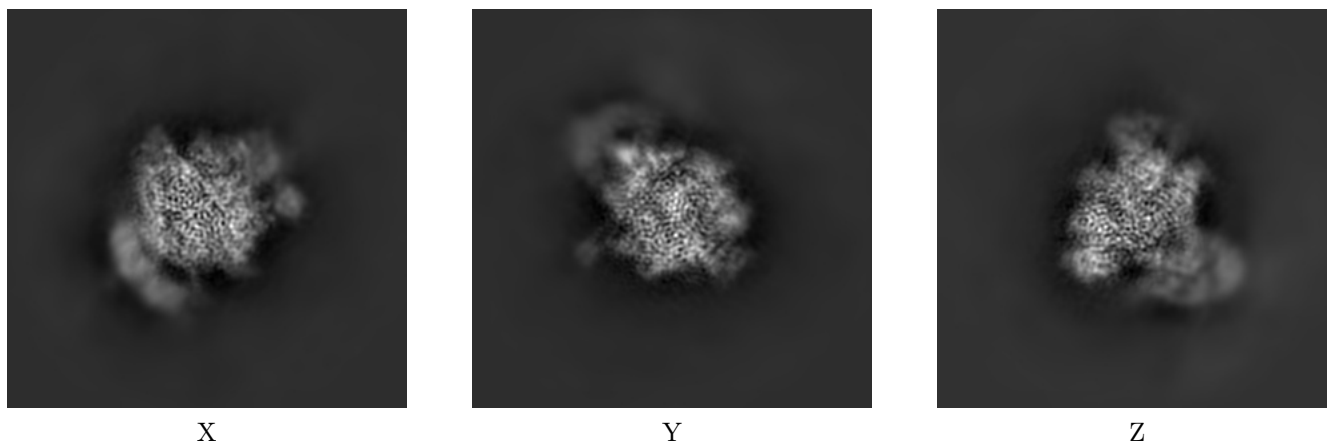
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-30605. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

6.1 Orthogonal projections [i](#)

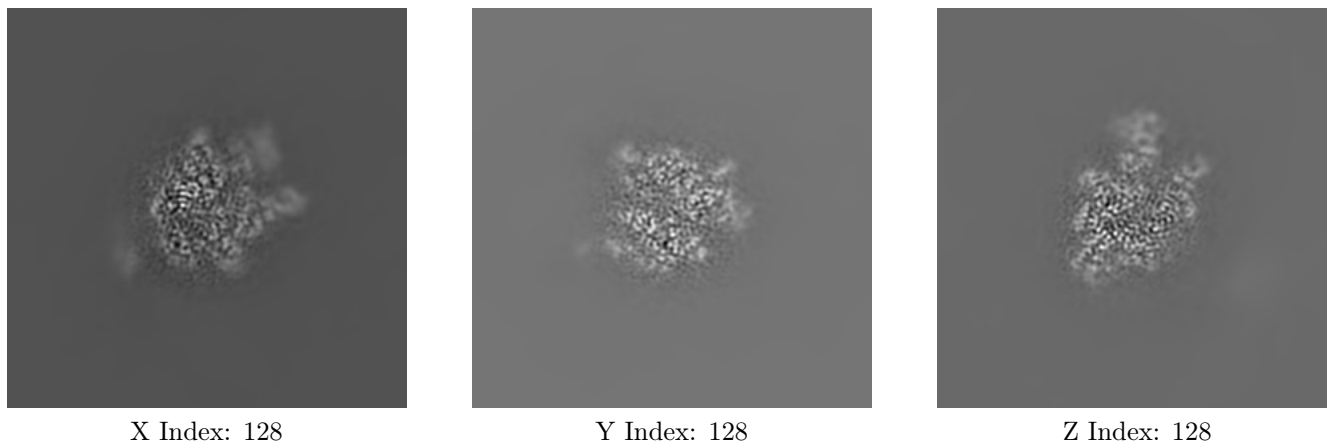
6.1.1 Primary map



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

6.2 Central slices [i](#)

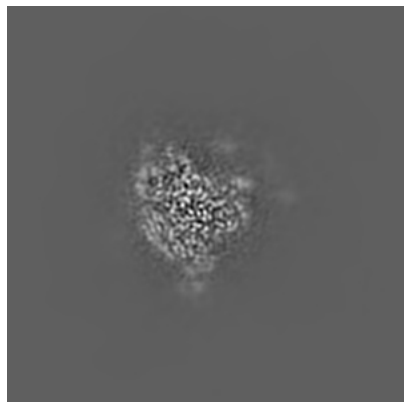
6.2.1 Primary map



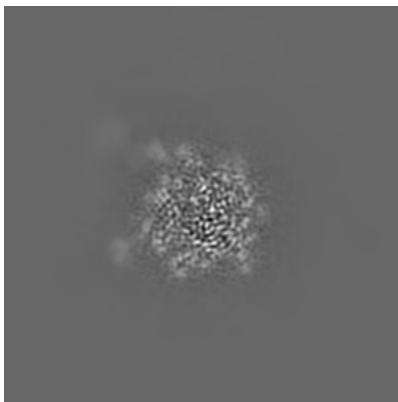
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

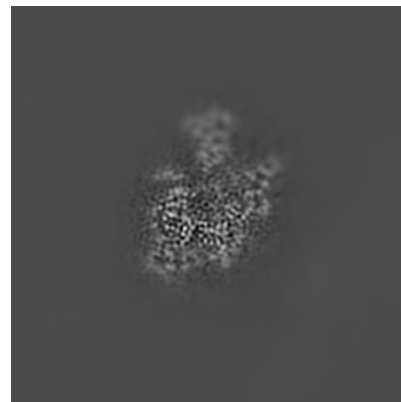
6.3.1 Primary map



X Index: 107



Y Index: 114

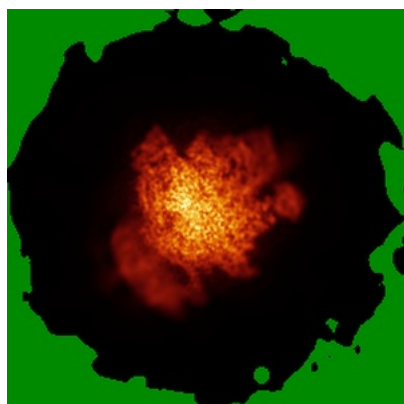


Z Index: 130

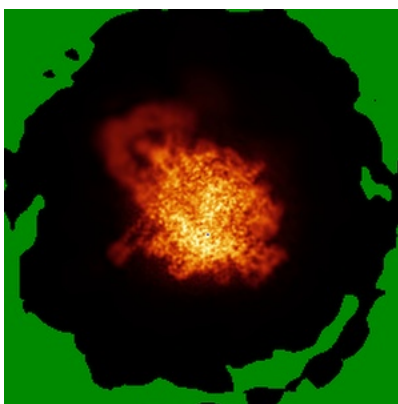
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

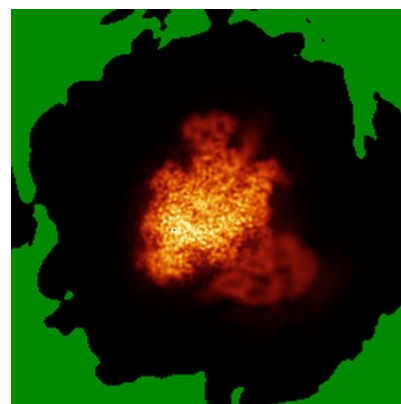
6.4.1 Primary map



X



Y

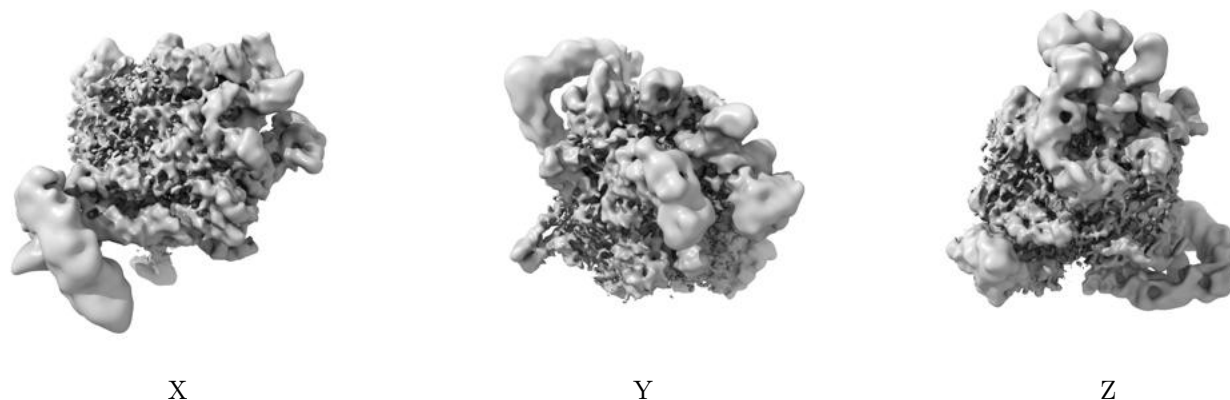


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.02. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

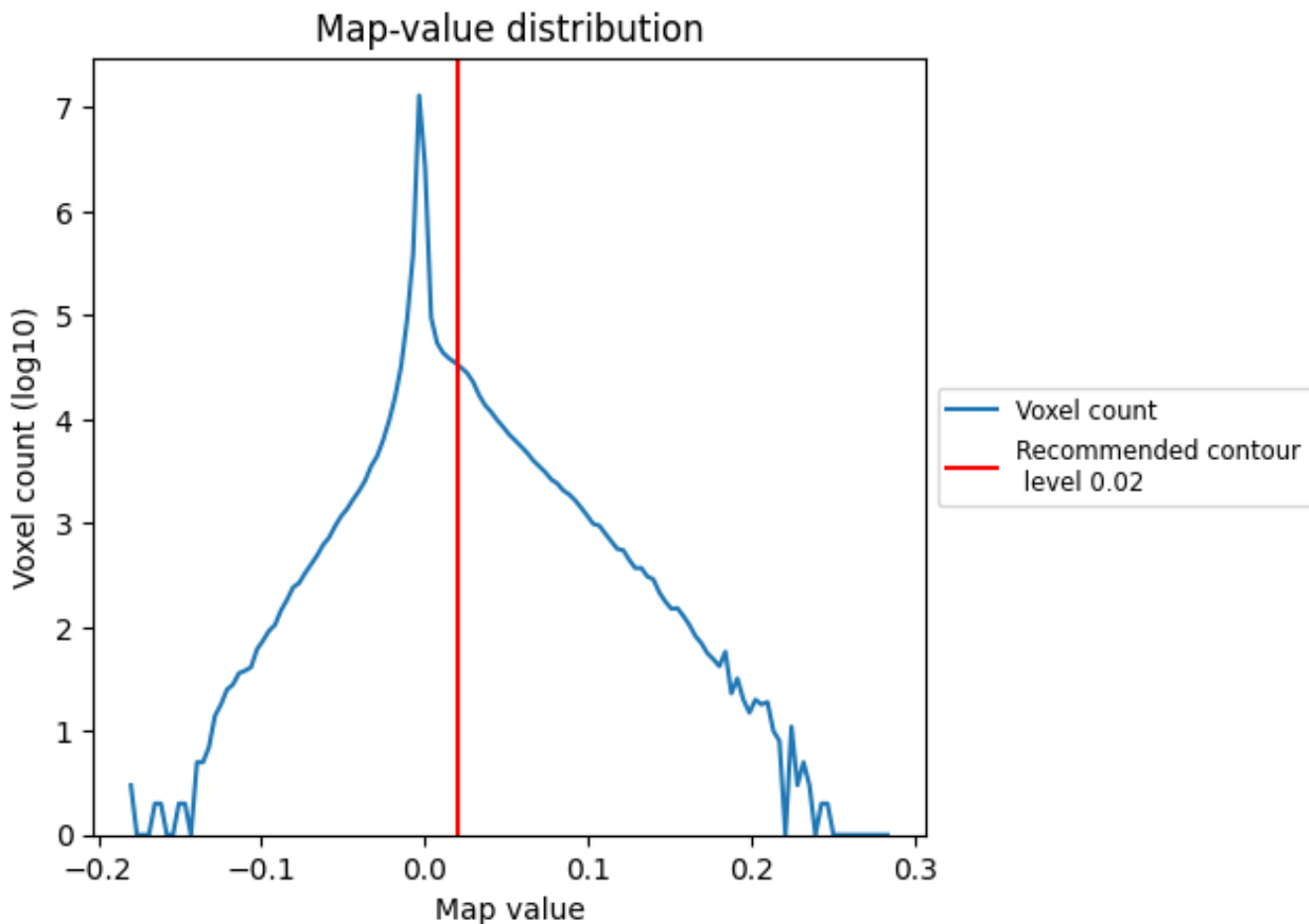
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

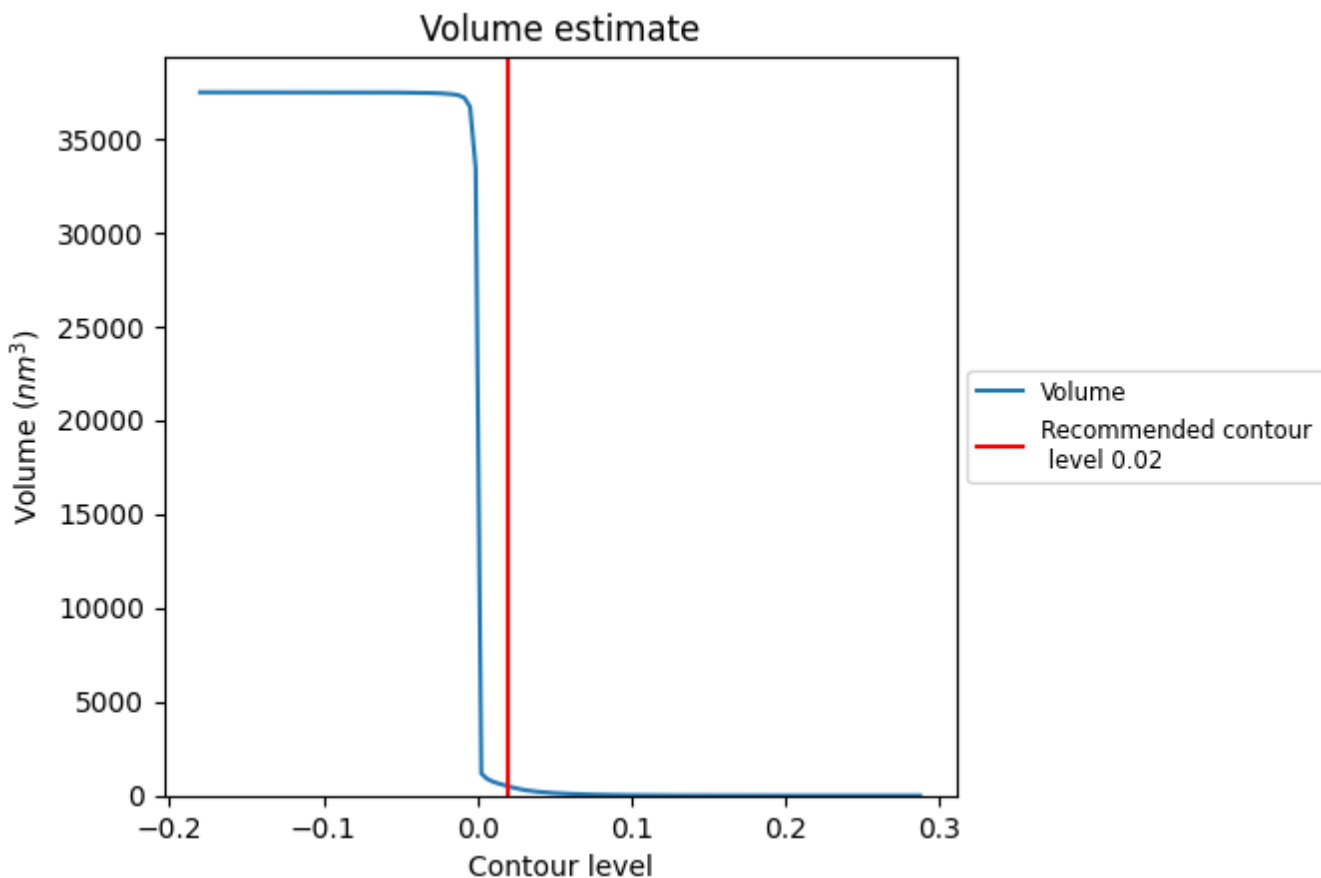
This section contains the results of statistical analysis of the map.

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.

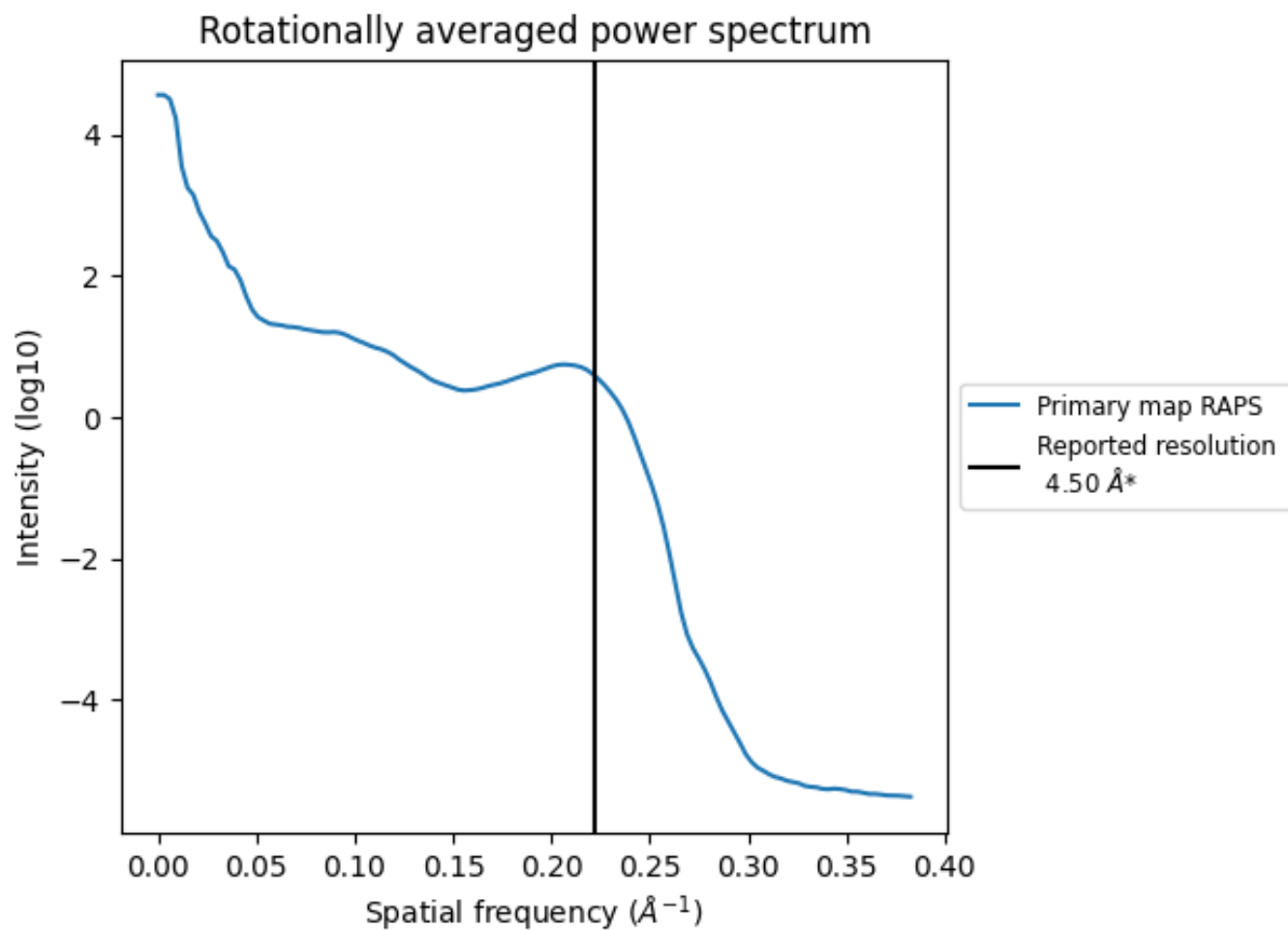
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 491 nm³; this corresponds to an approximate mass of 443 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}

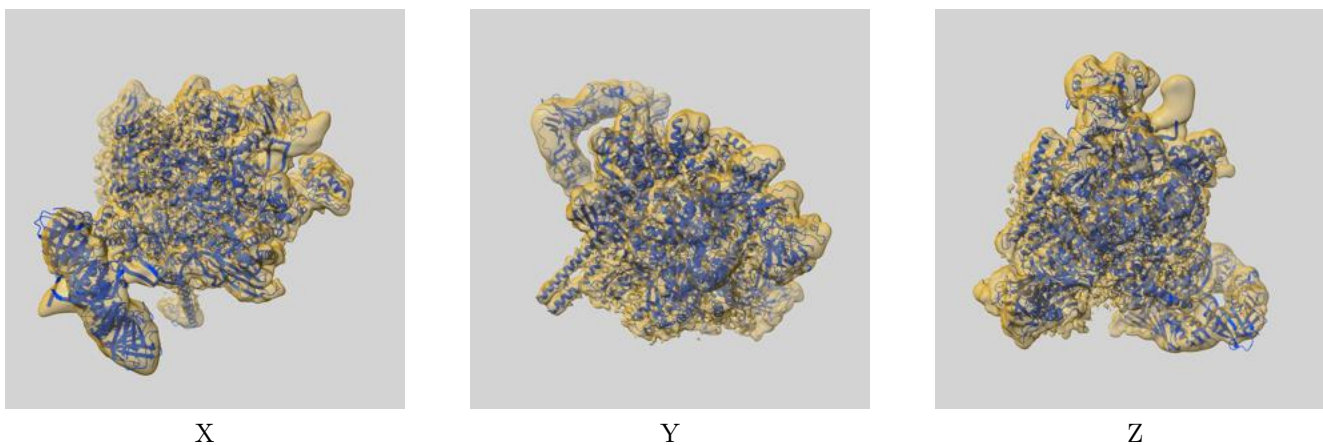
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

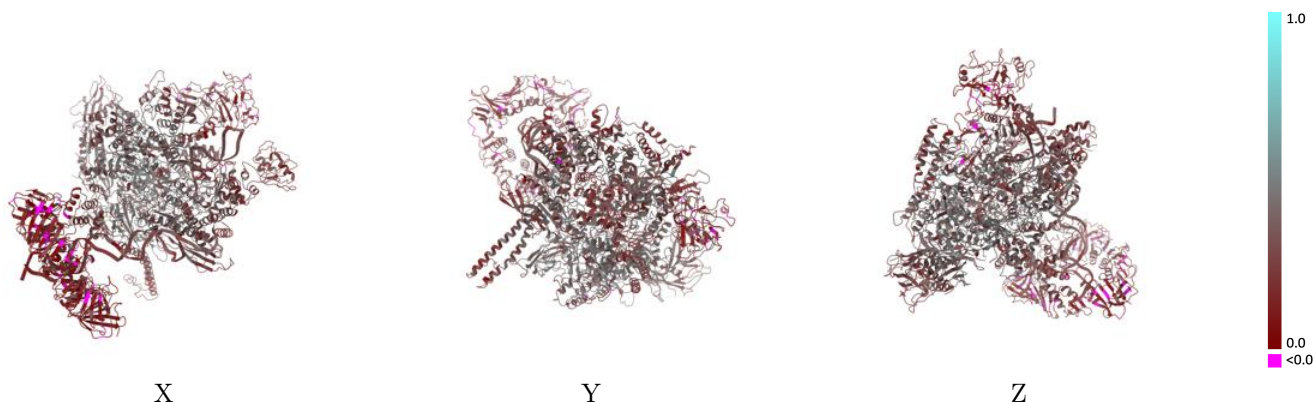
This section contains information regarding the fit between EMDB map EMD-30605 and PDB model 7D7D. Per-residue inclusion information can be found in section 3 on page 8.

9.1 Map-model overlay [i](#)



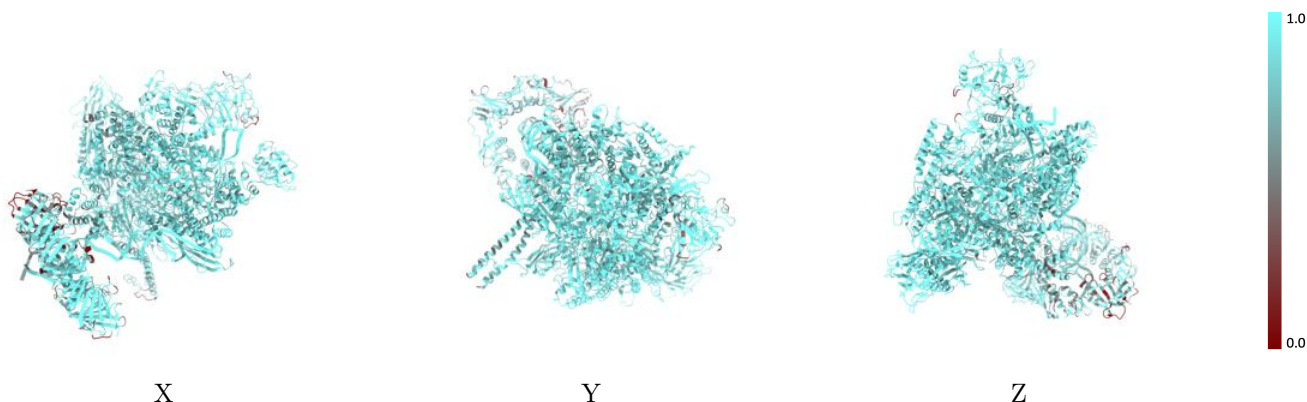
The images above show the 3D surface view of the map at the recommended contour level 0.02 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



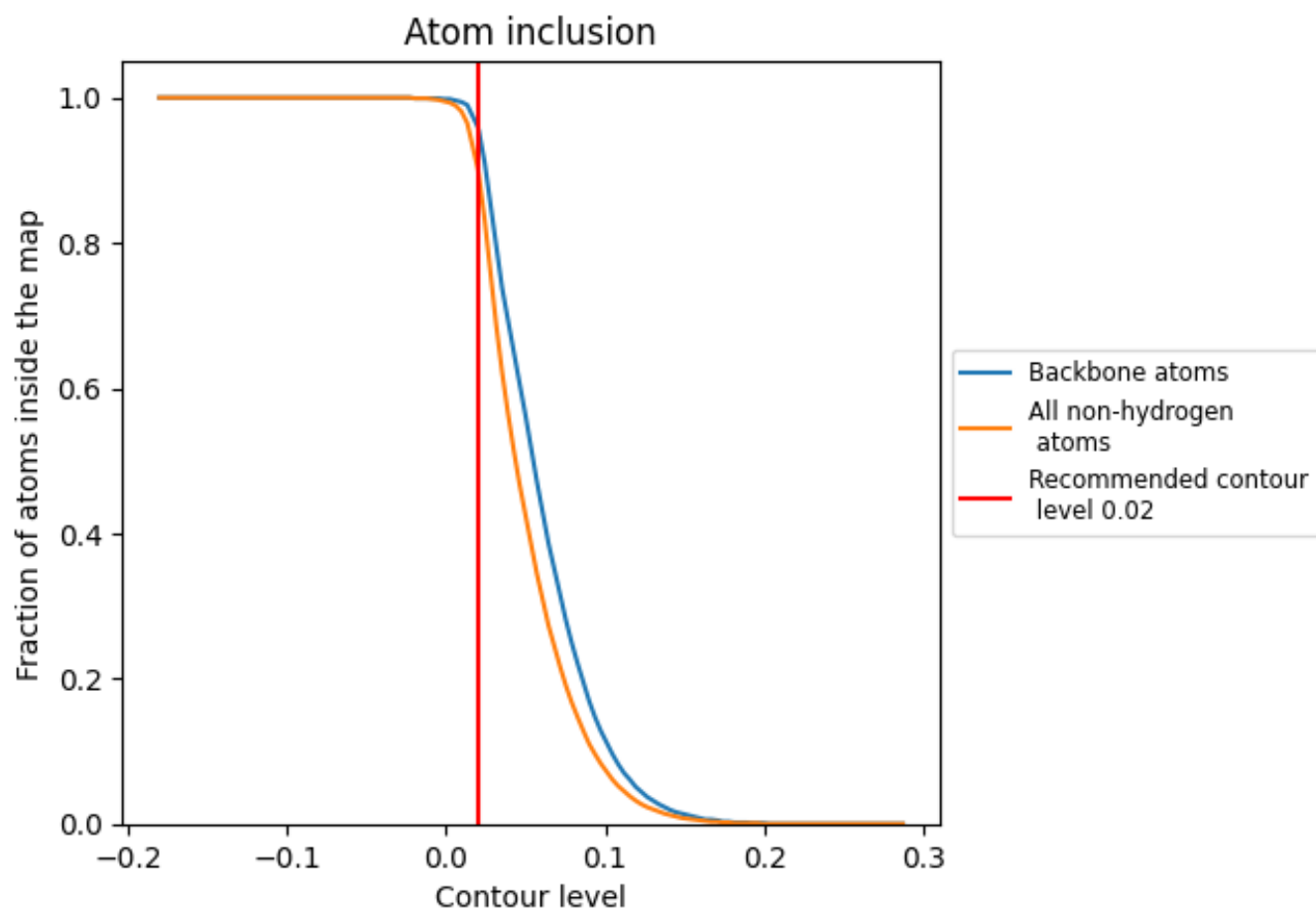
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.02).



























9.4 Atom inclusion [i](#)



At the recommended contour level, 96% of all backbone atoms, 90% of all non-hydrogen atoms, are inside the map.

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

The table lists the average atom inclusion at the recommended contour level (0.02) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9030	 0.3160
A	 0.9500	 0.3770
B	 0.9490	 0.3360
C	 0.9260	 0.3610
D	 0.9290	 0.3470
E	 0.7480	 0.3240
F	 0.9230	 0.3320
G	 0.8200	 0.1850
H	 0.8540	 0.1440
I	 0.6880	 0.1290
K	 0.8090	 0.2660
N	 0.9210	 0.2720
T	 0.9470	 0.2870

