



## Full wwPDB EM Validation Report ⓘ

Nov 19, 2022 – 09:05 AM EST

PDB ID : 7RJ5  
EMDB ID : EMD-24481  
Title : The structure of BAM in complex with EspP at 7 Angstrom resolution  
Authors : Wu, R.R.; Noinaj, N.  
Deposited on : 2021-07-20  
Resolution : 7.00 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](mailto: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>.

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

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

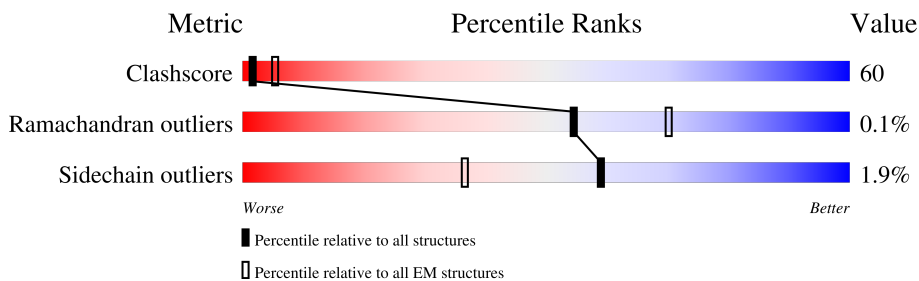
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 7.00 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  $\geq 3$ , 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	G	723	 6% 6% 88%
2	A	810	 22% 73%
3	B	373	 23% 75%
4	C	344	 8% 11% 81%
5	D	245	 24% 66% 9%
6	E	123	 20% 53% 26%

## 2 Entry composition [i](#)

There are 7 unique types of molecules in this entry. The entry contains 12639 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 Maltodextrin-binding protein, Autotransporter outer membrane beta-barrel domain-containing protein chimera.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	G	87	614	385	111	116	2	0	0

There are 5 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	578	MET	-	expression tag	UNP A0A4Z0THX4
G	579	GLY	-	expression tag	UNP A0A4Z0THX4
G	892	VAL	ALA	conflict	UNP A0A4Z0THX4
G	947	GLY	-	linker	UNP A0A4Z0THX4
G	948	SER	-	linker	UNP A0A4Z0THX4

- Molecule 2 is a protein called Outer membrane protein assembly factor BamA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	A	787	6228	3930	1049	1233	16	0	0

- Molecule 3 is a protein called Outer membrane protein assembly factor BamB.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	B	373	2807	1760	480	560	7	0	0

- Molecule 4 is a protein called Outer membrane protein assembly factor BamC.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	C	66	474	296	82	94	2	0	0

- Molecule 5 is a protein called Outer membrane protein assembly factor BamD.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	D	224	1801	1131	316	346	8	0	0

- Molecule 6 is a protein called Outer membrane protein assembly factor BamE.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	E	91	712	448	123	138	3	0	0

There are 10 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
E	114	GLY	-	expression tag	UNP A0A3L5AP29
E	115	GLY	-	expression tag	UNP A0A3L5AP29
E	116	HIS	-	expression tag	UNP A0A3L5AP29
E	117	HIS	-	expression tag	UNP A0A3L5AP29
E	118	HIS	-	expression tag	UNP A0A3L5AP29
E	119	HIS	-	expression tag	UNP A0A3L5AP29
E	120	HIS	-	expression tag	UNP A0A3L5AP29
E	121	HIS	-	expression tag	UNP A0A3L5AP29
E	122	HIS	-	expression tag	UNP A0A3L5AP29
E	123	HIS	-	expression tag	UNP A0A3L5AP29

- Molecule 7 is water.

Mol	Chain	Residues	Atoms		AltConf
7	A	3	Total	O	0
			3	3	

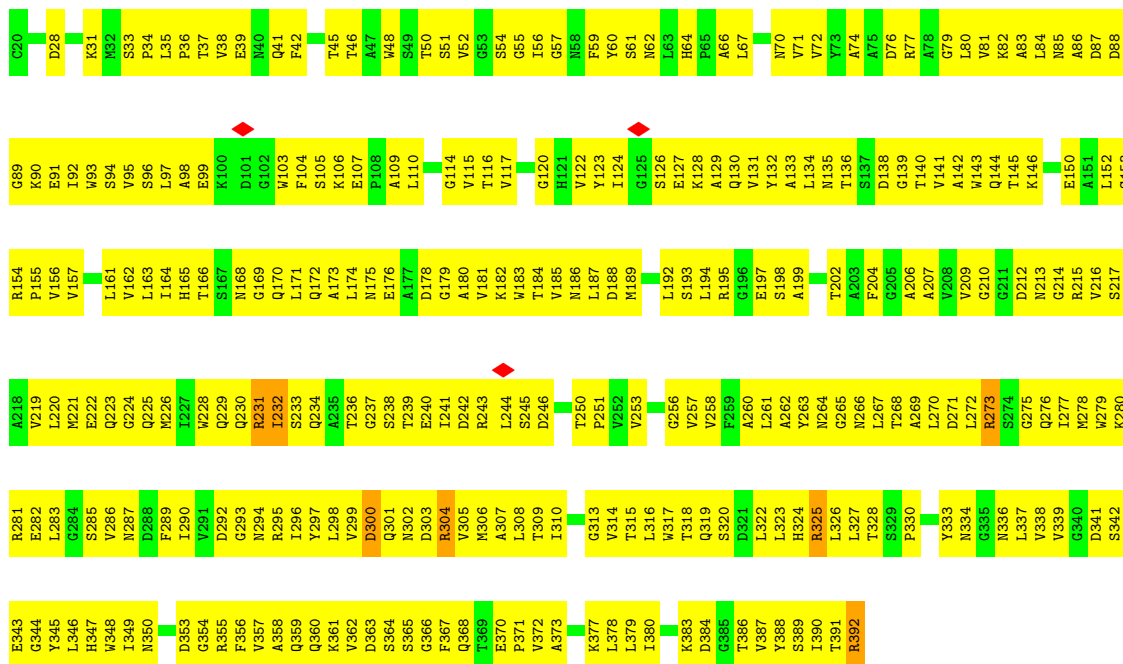




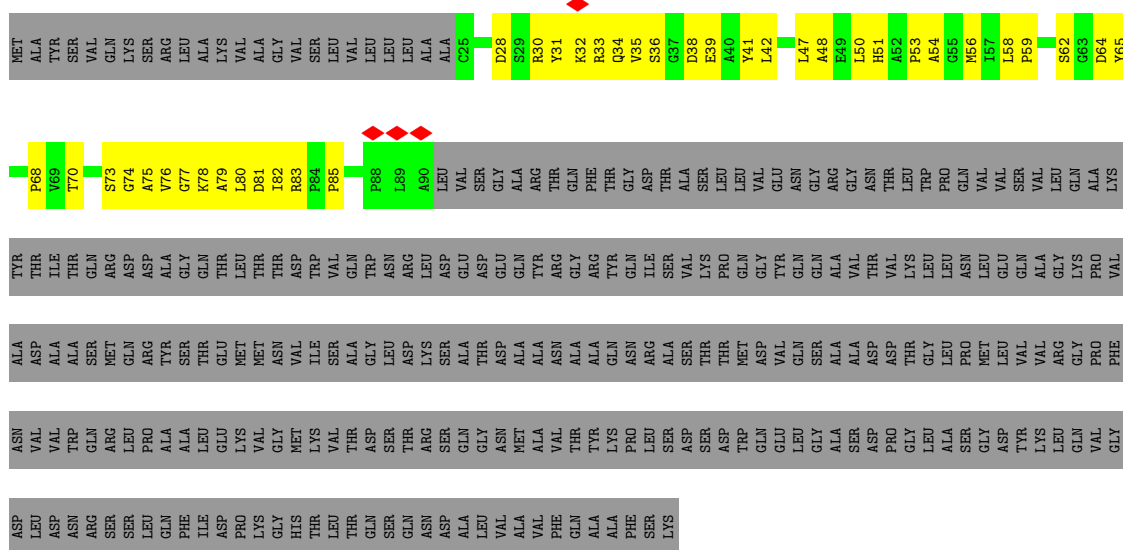
MET	ALA	MET	LYS	LYS	LEU	LEU	ILE	ALA	SER	LEU	LEU	PHE	SER	SER	THR	VAL	TYR	GLY	ALA	GLU	GLY	F24	F25	V26	R27	D28	F29	H30	F31	E32	Q35	R36	V37	A38	V39	G40	A41	L44	S45	M46	P47	V48	R49	T50	G51	I59	S60	N61	T62	L63	R64	A65	L66	F67	A68				
T69	G70	M71	F72	E73	D74	M75	R76	V77	L78	R79	L84	L85	H86	Q87	V88	K89	E90	R91	P92	T93	I94	A95	S96	I97	F98	F99	S100	G101	M102	K106	D107	G110	M109	L110	K111	Q112	M113	L114	G118	V119	R120	V121	G122	R123	S124	L125	D126	R127	N128	T129	E122	E192	D132	L133	E134	K135	F136	F197	
L137	E138	F140	Y141	Y144	G145	K146	L147	S148	A149	S150	V151	K152	Q153	V154	V155	T156	P157	L158	P159	R160	N161	R162	V163	D164	L165	L166	L167	L168	Q170	E171	G172	V173	S174	A175	E176	I177	Q178	T243	Q244	V245	S246	L247	T248	P249	D250	K251	R252	G253	T189	T190	D191	V255	E192	T257	V258	E259	L260	H196	F197
Q198	L199	R200	D201	E202	V203	P204	M205	V206	R207	V208	R212	K213	Y214	Q215	Q216	Q217	K218	L219	A220	E224	T225	L226	R227	S228	Y229	V230	L231	L232	Q170	Y235	A236	R237	F238	N239	L240	D241	S242	Q243	Q244	V245	L247	T248	P249	D250	K251	R252	G253	T189	T190	D191	V255	E192	T257	V258	E259	L260	H196	F197	
D264	Q266	Y267	L268	V271	E272	V273	G275	H280	S281	A282	E283	L284	E285	Q286	L287	T288	K289	E294	L295	Y296	G298	T299	K300	V301	T302	K303	K304	E305	D306	D307	L308	K309	K310	Q313	L311	L312	G313	R314	V315	L317	G316	Y317	A318	R319	P320	R321	V322	H325	F326	E327	L328								
R329	D330	A331	D332	K333	T334	V335	K336	L337	R338	V339	N340	D342	A343	G344	N345	R346	F347	Y348	V349	R350	K351	L352	R353	F354	E355	G356	N357	D358	T359	S360	K361	V364	L365	R366	R367	E368	V369	R370	Q371	Q372	E373	G374	A375	W376	L377	G378	S379	D380	L381	P382	D383	Q384	G385	K386	E387	R388	L389		
R390	R391	L392	G393	F394	F395	E396	T397	V398	D399	T400	Q403	R404	V405	A406	S407	F408	D410	D413	V414	K415	Y416	K417	V418	K419	E420	G421	R422	S425	F426	N427	F428	G429	L430	G431	Y432	E435	S436	Q437	V438	S439	F440	Q441	A442	Q443	V444	Q445	Q446	D447	N448	N449	L450	G451	T452	Q453	Y454				
A456	G457	L458	N459	M460	T461	K462	N463	D464	Y465	Q466	V467	V468	A469	E470	L471	S472	V473	V474	N475	F476	Y477	F478	F479	V480	D481	G482	V483	S484	L485	G486	R488	L489	F490	Y491	N492	D493	Q495	A499	L501	S502	D503	Y504	T505	N506	K507	S508	Y509	G510	T511	D512	V513	T514	L515	G516					
F517	F518	L519	N520	E521	Y522	N523	S524	R526	Y531	V532	H533	N534	S535	L536	G537	S538	V539	H539	Q540	P541	O542	V543	A544	M545	M546	R547	L548	Y549	Y550	S551	H552	S553	E554	H555	P556	S557	S559	D560	O561	D562	H563	R566	T567	D568	V569	L630	G681	R632	T633	R634	M635	Y574	G575	H576	T577	V578	N579	K580	
L581	D582	R583	G584	Y585	F586	P587	T588	D589	G590	S591	R592	V593	N594	L595	T596	G597	K598	V599	T600	S604	D605	N606	E607	V608	Y609	K610	L611	V612	L613	D614	T615	A616	T617	V618	V619	P620	L621	D622	D623	D624	H625	K626	M627	V628	D629	L630	G681	R632	T633	R634	M635	Y574	G575	H576	T577	V578	N579	K580	
G642	G643	R644	E645	M646	P647	E650	N651	F652	Y653	A654	G655	S657	S658	L659	V660	R661	Q664	S665	N666	T667	K671	A672	V673	K674	F675	P676	M677	Q678	A679	S680	N681	V682	D683	P684	D687	Y688	E689	G690	A691	T692	D693	D694	G695	A696	K697	D698	L699	C700	R701	S702	D703	D704	G707						
G708	N709	A710	V713	A714	S715	L716	E717	F718	L719	T720	P721	I725	S726	D727	K728	V729	A730	N731	S732	V733	R734	T735	S736	F737	K738	M739	D740	M741	G742	T743	V744	M745	D746	T747	N748	M749	D750	S751	D752	O753	Y754	S755	G756	Y757	F758	D759	Y760	S761	N765	L699	C700	R701	S702	D703	D704	G707			
K773	L774	Q775	M776	M777	R782	L783	V784	F785	S786	Y787	A788	R789	P790	F791	K792	K793	Y794	D795	G796	D797	A799	E800	Q801	F802	Q803	R804	N805	L806	G807	K808	A809	M810	D687	Y688	E689	G690	A691	T692	D693	D694	G695	A696	K697	D698	L699	C700	R701	S702	D703	D704	G707								

• Molecule 3: Outer membrane protein assembly factor BamB



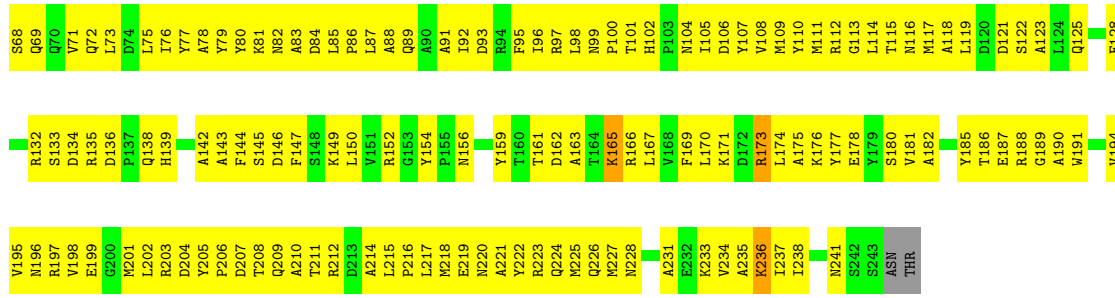


● Molecule 4: Outer membrane protein assembly factor BamC

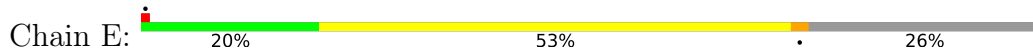


● Molecule 5: Outer membrane protein assembly factor BamD





• Molecule 6: Outer membrane protein assembly factor BamE





## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	70031	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	51.14	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.027	Depositor
Minimum map value	-0.014	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.001	Depositor
Recommended contour level	0.0025	Depositor
Map size ( $\text{\AA}$ )	251.99998, 251.99998, 251.99998	wwPDB
Map dimensions	240, 240, 240	wwPDB
Map angles ( $^\circ$ )	90.0, 90.0, 90.0	wwPDB
Pixel spacing ( $\text{\AA}$ )	1.05, 1.05, 1.05	Depositor

## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	G	0.28	0/623	0.54	0/840
2	A	0.35	0/6373	0.54	0/8647
3	B	0.33	0/2858	0.58	0/3897
4	C	0.32	0/484	0.50	0/661
5	D	0.34	0/1841	0.49	0/2499
6	E	0.33	0/727	0.56	0/992
All	All	0.34	0/12906	0.54	0/17536

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	A	0	4
3	B	0	1
All	All	0	5

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	A	123	GLU	Peptide
2	A	146	LYS	Peptide
2	A	698	ASP	Peptide
2	A	760	TYR	Peptide
3	B	300	ASP	Peptide

## 5.2 Too-close contacts

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	G	614	0	506	63	0
2	A	6228	0	5938	744	0
3	B	2807	0	2748	384	0
4	C	474	0	469	55	0
5	D	1801	0	1736	232	0
6	E	712	0	694	84	0
7	A	3	0	0	0	0
All	All	12639	0	12091	1474	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 60.

All (1474) 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)
5:D:237:ILE:O	5:D:241:ASN:HB2	1.53	1.07
2:A:355:GLU:HG2	2:A:417:LYS:HD3	1.40	1.03
3:B:371:PRO:HB3	3:B:380:ILE:HA	1.45	0.97
2:A:182:ILE:HA	2:A:258:VAL:HB	1.46	0.97
3:B:123:TYR:HH	3:B:143:TRP:HE1	1.12	0.96
2:A:519:ILE:HD12	6:E:29:ARG:H	1.27	0.96
2:A:403:GLN:HB2	2:A:413:ASP:HB2	1.48	0.96
3:B:122:VAL:HB	3:B:134:LEU:HB2	1.50	0.92
6:E:32:ILE:HG22	6:E:79:GLN:HE22	1.34	0.91
3:B:80:LEU:HA	3:B:96:SER:HA	1.53	0.91
3:B:346:LEU:HB2	3:B:360:GLN:HB2	1.52	0.91
2:A:630:LEU:HB2	2:A:717:GLU:HB2	1.51	0.89
2:A:484:SER:HB3	2:A:516:GLY:H	1.34	0.88
3:B:42:PHE:HB2	3:B:358:ALA:HB2	1.56	0.88
2:A:239:ASN:HB2	2:A:261:THR:HB	1.55	0.87
2:A:180:ILE:HA	2:A:256:VAL:HB	1.56	0.86
6:E:75:TYR:HB2	6:E:91:LEU:HB2	1.55	0.86
3:B:48:TRP:HD1	3:B:389:SER:H	1.21	0.86
4:C:41:TYR:O	5:D:166:ARG:NH2	2.08	0.86
6:E:34:GLN:HB3	6:E:79:GLN:HB2	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:175:ASN:N	3:B:179:GLY:O	2.10	0.85
2:A:327:GLU:HB2	2:A:336:LYS:HB2	1.59	0.84
2:A:653:TYR:HB3	2:A:665:SER:HB3	1.60	0.84
2:A:203:VAL:HG13	2:A:208:VAL:HA	1.60	0.83
4:C:48:ALA:O	5:D:212:ARG:NH2	2.12	0.83
6:E:32:ILE:HB	6:E:81:PRO:HA	1.60	0.83
2:A:437:GLY:H	2:A:464:ASP:HB3	1.40	0.83
2:A:768:MET:HB3	2:A:791:PHE:HB3	1.61	0.83
2:A:404:ARG:NH1	2:A:410:ASP:O	2.11	0.82
2:A:474:THR:HA	2:A:485:LEU:O	1.79	0.82
2:A:577:THR:HA	2:A:593:VAL:O	1.78	0.82
2:A:775:GLN:HA	2:A:783:LEU:O	1.80	0.82
2:A:268:LEU:HB2	2:A:296:TYR:HA	1.62	0.82
2:A:344:GLY:O	2:A:346:ARG:NH2	2.13	0.82
2:A:266:TYR:OH	2:A:330:ASP:OD1	1.98	0.81
3:B:165:HIS:HA	3:B:171:LEU:HA	1.61	0.81
2:A:386:LYS:HG2	2:A:400:THR:HG21	1.62	0.80
5:D:110:TYR:OH	5:D:162:ASP:OD1	1.99	0.80
2:A:176:GLU:O	2:A:178:GLN:NE2	2.15	0.79
3:B:378:LEU:HD12	3:B:390:ILE:HB	1.63	0.79
2:A:350:ARG:NH2	2:A:372:MET:O	2.16	0.79
6:E:76:VAL:HA	6:E:90:THR:HA	1.63	0.79
2:A:89:LYS:O	2:A:91:ARG:NH1	2.15	0.79
2:A:634:ARG:NH1	2:A:635:TRP:O	2.16	0.78
1:G:1223:ALA:HA	1:G:1264:LEU:HA	1.64	0.78
3:B:161:LEU:HG	3:B:182:LYS:HE3	1.66	0.77
5:D:196:ASN:ND2	6:E:64:MET:SD	2.57	0.77
2:A:353:ARG:NH1	2:A:373:GLU:OE2	2.16	0.77
3:B:290:ILE:HG12	3:B:330:PRO:HG2	1.65	0.77
2:A:675:PHE:HA	2:A:699:LEU:HG	1.67	0.77
3:B:56:ILE:HA	3:B:77:ARG:HD2	1.66	0.77
2:A:783:LEU:HA	2:A:806:ILE:HA	1.66	0.76
2:A:146:LYS:O	3:B:243:ARG:NH2	2.18	0.76
2:A:396:GLU:N	2:A:419:LYS:O	2.17	0.76
5:D:104:ASN:O	5:D:107:TYR:HB3	1.85	0.76
2:A:150:SER:O	2:A:169:PHE:HA	1.85	0.76
2:A:569:ASP:HA	2:A:604:SER:HA	1.68	0.76
3:B:79:GLY:HA3	3:B:98:ALA:HA	1.67	0.76
3:B:246:ASP:O	3:B:287:ASN:ND2	2.18	0.76
2:A:285:GLU:O	2:A:289:LYS:N	2.16	0.76
2:A:74:ASP:H	2:A:88:VAL:HG13	1.51	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:1273:ARG:HB2	1:G:1297:ARG:HB3	1.68	0.75
2:A:160:ARG:HH22	5:D:62:TYR:HA	1.51	0.75
2:A:493:ASP:HA	2:A:506:ASN:O	1.86	0.75
3:B:171:LEU:HB3	3:B:185:VAL:HB	1.68	0.75
3:B:319:GLN:HE21	3:B:353:ASP:HA	1.51	0.75
3:B:35:LEU:HD11	3:B:356:PHE:HZ	1.51	0.75
5:D:84:ASP:HB3	5:D:87:LEU:HD13	1.68	0.75
2:A:320:PRO:HB3	2:A:343:ALA:HA	1.69	0.75
3:B:334:ASN:HB2	3:B:392:ARG:HH22	1.51	0.75
6:E:71:ASN:HB2	6:E:95:PHE:HB2	1.67	0.75
2:A:178:GLN:HB2	2:A:254:ILE:H	1.51	0.75
2:A:684:PRO:HB2	2:A:687:ASP:HB2	1.68	0.75
1:G:1274:PHE:HA	1:G:1296:PHE:HA	1.68	0.75
3:B:48:TRP:HB3	3:B:389:SER:HB2	1.67	0.74
3:B:145:THR:OG1	3:B:178:ASP:O	2.05	0.74
2:A:580:LYS:HB3	2:A:591:SER:HB3	1.69	0.74
2:A:746:ASP:HB3	2:A:749:TRP:HE3	1.53	0.74
2:A:268:LEU:N	2:A:294:GLU:O	2.21	0.74
2:A:455:ALA:H	2:A:474:THR:H	1.34	0.74
3:B:67:LEU:HD21	3:B:70:ASN:H	1.53	0.74
2:A:395:PHE:HA	2:A:420:GLU:HA	1.69	0.74
3:B:271:ASP:O	3:B:275:GLY:N	2.20	0.74
3:B:330:PRO:HA	3:B:339:VAL:HB	1.69	0.74
2:A:93:THR:O	2:A:124:SER:OG	2.06	0.74
2:A:504:TYR:HE1	2:A:536:LEU:HB3	1.53	0.73
5:D:225:MET:SD	6:E:78:ARG:NH2	2.61	0.73
3:B:130:GLN:HA	3:B:146:LYS:HG2	1.71	0.73
3:B:265:GLY:O	3:B:283:LEU:N	2.21	0.73
2:A:150:SER:HB2	2:A:170:GLN:O	1.88	0.73
2:A:197:PHE:O	2:A:200:ARG:NH2	2.21	0.73
5:D:58:LEU:O	5:D:62:TYR:N	2.22	0.73
3:B:42:PHE:N	3:B:357:VAL:O	2.20	0.73
3:B:256:GLY:HA3	3:B:273:ARG:HH12	1.55	0.72
4:C:59:PRO:O	5:D:203:ARG:NE	2.17	0.72
6:E:88:GLN:NE2	6:E:109:ALA:O	2.22	0.72
2:A:272:GLU:O	2:A:339:VAL:N	2.21	0.72
3:B:220:LEU:HG	3:B:222:GLU:H	1.54	0.72
1:G:1263:GLY:HA3	1:G:1277:GLU:HA	1.72	0.72
2:A:328:ILE:HA	2:A:334:THR:O	1.90	0.72
2:A:348:TYR:H	2:A:377:LEU:HD22	1.54	0.72
2:A:160:ARG:NH1	5:D:61:ARG:O	2.22	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:295:ARG:HA	3:B:309:THR:HB	1.72	0.71
1:G:1273:ARG:O	1:G:1297:ARG:N	2.21	0.71
2:A:78:LEU:HB3	2:A:85:LEU:HB2	1.71	0.71
3:B:173:ALA:O	3:B:182:LYS:N	2.22	0.71
2:A:177:ILE:O	2:A:212:ARG:NH1	2.23	0.71
3:B:267:LEU:HD21	3:B:310:ILE:HG22	1.71	0.71
2:A:359:THR:OG1	2:A:452:THR:OG1	2.05	0.71
2:A:741:MET:HE1	2:A:769:SER:H	1.56	0.71
5:D:96:ILE:HA	5:D:99:ASN:HB2	1.73	0.71
2:A:651:ASN:ND2	2:A:652:PHE:O	2.23	0.71
3:B:126:SER:OG	3:B:128:LYS:NZ	2.22	0.71
2:A:232:ASP:HA	2:A:297:ASN:HA	1.73	0.71
2:A:74:ASP:O	2:A:76:ARG:NH2	2.24	0.71
2:A:767:ARG:O	2:A:793:LYS:NZ	2.20	0.71
4:C:38:ASP:H	4:C:41:TYR:HB3	1.54	0.71
3:B:31:LYS:HD3	3:B:323:LEU:HD23	1.72	0.70
2:A:430:ILE:HD11	2:A:438:VAL:HB	1.72	0.70
2:A:622:ASP:HB2	2:A:627:TRP:H	1.56	0.70
2:A:732:SER:O	2:A:734:ARG:NH1	2.24	0.70
2:A:177:ILE:H	2:A:212:ARG:HB3	1.55	0.70
3:B:135:ASN:N	3:B:140:THR:O	2.23	0.70
5:D:95:PHE:O	5:D:99:ASN:N	2.24	0.70
2:A:671:LYS:HD3	2:A:701:LYS:HG2	1.72	0.70
5:D:169:PHE:HD2	5:D:170:LEU:HD22	1.55	0.70
2:A:183:VAL:HB	2:A:259:ASN:HA	1.74	0.70
5:D:42:LYS:HA	5:D:45:ASP:HB3	1.71	0.70
5:D:109:MET:O	5:D:112:ARG:HG2	1.91	0.70
2:A:734:ARG:HH22	2:A:777:MET:HB2	1.56	0.70
2:A:417:LYS:HD2	2:A:418:VAL:H	1.54	0.70
2:A:491:TYR:HA	2:A:508:SER:O	1.91	0.70
2:A:632:ARG:HH22	2:A:661:ARG:HH22	1.39	0.70
5:D:136:ASP:OD1	5:D:139:HIS:ND1	2.24	0.70
2:A:364:VAL:O	2:A:367:ARG:NH1	2.25	0.69
3:B:72:VAL:HB	3:B:84:LEU:HB2	1.74	0.69
3:B:253:VAL:HG22	3:B:258:VAL:HA	1.72	0.69
1:G:1228:GLY:O	1:G:1230:GLN:NE2	2.25	0.69
2:A:376:TRP:HB3	6:E:35:GLY:HA3	1.73	0.69
2:A:613:LEU:HB2	2:A:635:TRP:HE3	1.57	0.69
5:D:80:TYR:OH	5:D:117:MET:SD	2.51	0.69
2:A:38:ALA:HB1	5:D:100:PRO:HD3	1.75	0.69
3:B:127:GLU:OE2	3:B:128:LYS:NZ	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:476:PRO:HA	2:A:484:SER:HA	1.73	0.69
2:A:594:ASN:HB2	2:A:614:ASP:HB2	1.73	0.69
2:A:237:ARG:NE	2:A:266:TYR:OH	2.26	0.69
2:A:267:LYS:N	2:A:333:LYS:O	2.21	0.69
2:A:569:ASP:OD1	2:A:605:ASP:N	2.26	0.69
1:G:1226:GLY:HA2	2:A:805:ASN:HA	1.73	0.68
2:A:388:ARG:O	2:A:391:ARG:NH1	2.26	0.68
3:B:48:TRP:HZ3	3:B:87:ASP:H	1.40	0.68
2:A:318:ALA:N	2:A:345:ASN:O	2.18	0.68
3:B:134:LEU:HD23	3:B:141:VAL:HA	1.75	0.68
3:B:170:GLN:HA	3:B:186:ASN:HA	1.74	0.68
5:D:108:VAL:O	5:D:112:ARG:N	2.22	0.68
3:B:327:LEU:HG	3:B:328:THR:H	1.58	0.68
1:G:1261:SER:HA	1:G:1279:GLU:HA	1.76	0.68
3:B:93:TRP:NE1	3:B:136:THR:O	2.26	0.68
3:B:293:GLY:O	3:B:295:ARG:NH1	2.27	0.68
2:A:360:SER:HB3	2:A:364:VAL:HG21	1.76	0.68
3:B:188:ASP:OD2	3:B:213:ASN:ND2	2.25	0.68
2:A:403:GLN:NE2	2:A:413:ASP:O	2.27	0.68
2:A:782:PRO:HG2	2:A:807:GLY:HA3	1.76	0.68
2:A:158:LEU:HB3	2:A:162:ARG:HB2	1.76	0.68
3:B:81:VAL:HB	3:B:95:VAL:HG23	1.74	0.68
1:G:1225:ALA:HA	1:G:1262:VAL:HA	1.75	0.68
2:A:245:VAL:HG22	2:A:256:VAL:HA	1.76	0.68
1:G:1279:GLU:HB2	1:G:1291:ALA:HB3	1.76	0.67
2:A:234:GLY:HA2	2:A:296:TYR:HB3	1.74	0.67
2:A:521:GLU:O	2:A:523:ASN:ND2	2.22	0.67
3:B:46:THR:HA	3:B:390:ILE:HA	1.77	0.67
3:B:143:TRP:CG	3:B:178:ASP:HA	2.28	0.67
5:D:43:LEU:HD12	5:D:48:TRP:HZ3	1.59	0.67
2:A:606:ASN:HA	2:A:644:LYS:HB3	1.76	0.67
3:B:87:ASP:HB2	3:B:89:GLY:H	1.59	0.67
2:A:144:VAL:HB	2:A:146:LYS:HG2	1.76	0.67
4:C:28:ASP:O	4:C:30:ARG:NH1	2.28	0.67
2:A:357:ASN:ND2	5:D:134:ASP:O	2.28	0.67
4:C:68:PRO:HG3	5:D:167:LEU:HD22	1.75	0.67
2:A:350:ARG:NH1	2:A:375:ALA:O	2.25	0.67
2:A:533:HIS:HE1	2:A:566:LYS:HB3	1.59	0.67
2:A:76:ARG:HH22	2:A:89:LYS:H	1.43	0.67
1:G:1274:PHE:HB3	1:G:1296:PHE:HD2	1.60	0.66
1:G:1296:PHE:HE1	1:G:1298:TYR:HB2	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:347:HIS:CD2	3:B:359:GLN:HE21	2.13	0.66
3:B:302:ASN:O	3:B:324:HIS:N	2.28	0.66
3:B:257:VAL:HA	3:B:271:ASP:HA	1.76	0.66
5:D:173:ARG:O	5:D:173:ARG:NH1	2.28	0.66
6:E:92:THR:HB	6:E:105:ASP:HB2	1.77	0.66
2:A:283:GLU:O	2:A:286:GLN:NE2	2.29	0.66
3:B:76:ASP:OD1	3:B:77:ARG:N	2.29	0.66
3:B:298:LEU:H	3:B:307:ALA:HA	1.59	0.66
5:D:212:ARG:HD2	5:D:212:ARG:H	1.60	0.66
6:E:38:LEU:HD13	6:E:91:LEU:HD11	1.77	0.66
1:G:1220:LYS:N	1:G:1267:GLU:O	2.28	0.66
2:A:215:GLN:NE2	2:A:217:GLN:OE1	2.29	0.66
3:B:33:SER:HB3	3:B:323:LEU:HD13	1.76	0.66
6:E:103:ASN:ND2	6:E:105:ASP:OD1	2.29	0.66
1:G:1220:LYS:O	1:G:1267:GLU:N	2.25	0.66
1:G:1257:ARG:HG3	1:G:1258:MET:H	1.61	0.66
2:A:525:LEU:HD13	2:A:576:TRP:HB2	1.78	0.66
1:G:1277:GLU:O	1:G:1293:ASN:N	2.26	0.66
3:B:64:HIS:NE2	3:B:115:VAL:O	2.28	0.66
3:B:245:SER:O	3:B:301:GLN:NE2	2.29	0.66
3:B:172:GLN:NE2	3:B:184:THR:OG1	2.28	0.66
3:B:173:ALA:HB3	3:B:183:TRP:H	1.61	0.66
2:A:768:MET:O	2:A:791:PHE:N	2.23	0.65
3:B:281:ARG:NH2	3:B:310:ILE:O	2.28	0.65
2:A:175:ALA:HB3	2:A:214:TYR:HB2	1.78	0.65
2:A:805:ASN:OD1	2:A:808:LYS:NZ	2.30	0.65
2:A:730:ALA:HA	2:A:733:VAL:HG12	1.78	0.65
2:A:93:THR:HG23	2:A:125:LEU:HB2	1.78	0.65
2:A:403:GLN:N	2:A:413:ASP:O	2.29	0.65
2:A:235:TYR:HA	2:A:265:GLN:HA	1.77	0.65
5:D:196:ASN:ND2	6:E:63:LEU:O	2.29	0.65
5:D:235:ALA:O	5:D:238:ILE:HG12	1.96	0.65
2:A:345:ASN:ND2	2:A:348:TYR:OH	2.30	0.65
2:A:547:ARG:NH1	2:A:748:ASN:O	2.30	0.65
2:A:182:ILE:HD13	2:A:190:THR:HB	1.78	0.65
6:E:73:TRP:H	6:E:95:PHE:HD2	1.44	0.65
5:D:147:PHE:HB3	5:D:163:ALA:HB1	1.79	0.65
2:A:93:THR:HA	2:A:125:LEU:HD12	1.79	0.65
2:A:234:GLY:O	2:A:266:TYR:N	2.29	0.65
2:A:46:MET:O	2:A:49:ARG:NH1	2.30	0.65
5:D:111:MET:O	5:D:114:LEU:HB3	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:667:THR:OG1	2:A:797:ASP:OD1	2.15	0.64
5:D:123:ALA:HB3	5:D:132:ARG:HH22	1.61	0.64
2:A:229:TYR:CZ	2:A:233:ARG:HD2	2.33	0.64
2:A:608:TYR:HA	2:A:639:ASP:O	1.97	0.64
2:A:439:SER:HA	2:A:463:ASN:HA	1.78	0.64
3:B:122:VAL:N	3:B:134:LEU:O	2.28	0.64
3:B:166:THR:OG1	3:B:170:GLN:NE2	2.31	0.64
2:A:244:GLN:H	2:A:257:THR:HG1	1.43	0.64
6:E:29:ARG:HH22	6:E:81:PRO:HB2	1.61	0.64
2:A:633:THR:HG22	2:A:714:ALA:HA	1.79	0.64
6:E:49:GLY:N	6:E:101:LEU:O	2.24	0.64
3:B:342:SER:HA	3:B:367:PHE:HD1	1.61	0.64
2:A:445:GLN:OE1	2:A:458:ILE:N	2.28	0.64
3:B:64:HIS:H	3:B:154:ARG:NH2	1.96	0.64
4:C:62:SER:OG	5:D:203:ARG:O	2.16	0.64
6:E:51:THR:OG1	6:E:54:GLN:HB3	1.98	0.64
2:A:546:TRP:HA	2:A:549:LEU:HD12	1.79	0.63
2:A:524:SER:HB3	2:A:526:ARG:HH11	1.63	0.63
3:B:322:LEU:HD22	3:B:325:ARG:HG2	1.80	0.63
3:B:346:LEU:N	3:B:360:GLN:O	2.29	0.63
2:A:371:GLN:HE21	2:A:372:MET:H	1.45	0.63
2:A:734:ARG:HH21	2:A:775:GLN:HG3	1.62	0.63
2:A:360:SER:OG	2:A:451:GLY:O	2.17	0.63
3:B:294:ASN:HB2	3:B:310:ILE:HD11	1.80	0.63
3:B:363:ASP:OD1	3:B:364:SER:N	2.32	0.63
6:E:64:MET:HB2	6:E:74:PHE:HB2	1.80	0.63
1:G:1225:ALA:O	2:A:808:LYS:NZ	2.28	0.63
2:A:94:ILE:HD11	2:A:162:ARG:HA	1.81	0.63
2:A:420:GLU:OE1	2:A:420:GLU:N	2.31	0.63
2:A:398:VAL:HG12	2:A:400:THR:HG23	1.80	0.63
2:A:463:ASN:HD21	2:A:466:GLN:HE21	1.46	0.63
2:A:159:PRO:O	2:A:162:ARG:NE	2.32	0.63
2:A:524:SER:O	2:A:526:ARG:NH1	2.32	0.62
2:A:608:TYR:HB2	2:A:646:MET:SD	2.39	0.62
3:B:85:ASN:HB2	3:B:92:ILE:HD11	1.79	0.62
6:E:36:ASN:ND2	6:E:76:VAL:O	2.31	0.62
3:B:258:VAL:N	3:B:270:LEU:O	2.22	0.62
5:D:115:THR:O	5:D:118:ALA:HB3	1.99	0.62
2:A:217:GLN:OE1	2:A:217:GLN:N	2.31	0.62
2:A:349:VAL:HG13	6:E:61:THR:HG21	1.80	0.62
2:A:571:THR:OG1	2:A:599:VAL:O	2.10	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:117:VAL:HG22	3:B:122:VAL:HA	1.81	0.62
2:A:229:TYR:O	2:A:233:ARG:NH1	2.32	0.62
2:A:765:ASN:HD22	2:A:794:TYR:HD2	1.47	0.62
3:B:82:LYS:HG2	3:B:83:ALA:H	1.65	0.62
2:A:676:PRO:HG3	2:A:698:ASP:HA	1.81	0.62
3:B:219:VAL:HA	3:B:226:MET:HA	1.81	0.62
3:B:267:LEU:HB3	3:B:281:ARG:HB2	1.82	0.62
3:B:350:ASN:OD1	3:B:355:ARG:N	2.32	0.62
5:D:85:LEU:O	5:D:89:GLN:NE2	2.31	0.62
2:A:110:LEU:O	2:A:114:LEU:HG	2.00	0.62
2:A:459:ASN:HB3	2:A:470:GLU:HB3	1.80	0.62
5:D:178:GLU:O	5:D:197:ARG:NH2	2.33	0.62
5:D:224:GLN:O	6:E:78:ARG:NH1	2.25	0.62
6:E:70:THR:OG1	6:E:95:PHE:O	2.12	0.62
2:A:267:LYS:HZ3	2:A:333:LYS:HB3	1.65	0.62
2:A:312:LEU:HG	2:A:317:TYR:HD2	1.63	0.62
3:B:135:ASN:O	3:B:139:GLY:N	2.31	0.62
2:A:148:SER:HB3	3:B:243:ARG:HH21	1.64	0.62
2:A:368:GLU:HG2	2:A:392:LEU:HD13	1.81	0.62
3:B:35:LEU:N	3:B:325:ARG:HH12	1.97	0.62
3:B:270:LEU:HD21	3:B:277:ILE:HD13	1.82	0.62
5:D:150:LEU:O	5:D:154:TYR:N	2.24	0.62
2:A:102:ASN:ND2	2:A:167:LEU:O	2.33	0.62
5:D:101:THR:O	5:D:102:HIS:ND1	2.33	0.62
2:A:709:ASN:H	2:A:746:ASP:HA	1.65	0.61
5:D:222:TYR:O	5:D:226:GLN:N	2.33	0.61
6:E:89:GLN:NE2	6:E:108:PRO:O	2.33	0.61
3:B:162:VAL:HG12	3:B:164:ILE:HD11	1.82	0.61
4:C:48:ALA:HB3	5:D:212:ARG:HH12	1.64	0.61
5:D:87:LEU:HD12	5:D:87:LEU:H	1.65	0.61
1:G:1220:LYS:HB3	1:G:1267:GLU:HB3	1.82	0.61
2:A:545:MET:HG3	2:A:546:TRP:HD1	1.65	0.61
2:A:733:VAL:HG23	2:A:776:TRP:HB2	1.81	0.61
3:B:50:THR:HB	3:B:387:VAL:HG23	1.83	0.61
5:D:110:TYR:HA	5:D:147:PHE:CE1	2.35	0.61
2:A:97:ILE:O	2:A:120:ARG:NH2	2.34	0.61
2:A:626:LYS:HG2	2:A:721:PRO:HD2	1.83	0.61
3:B:72:VAL:N	3:B:84:LEU:O	2.32	0.61
2:A:682:TYR:N	2:A:693:GLN:OE1	2.27	0.61
6:E:49:GLY:HA2	6:E:100:VAL:HG13	1.83	0.61
3:B:289:PHE:HB2	3:B:296:ILE:HD11	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:214:ALA:HA	5:D:217:LEU:HD13	1.83	0.61
2:A:733:VAL:HG22	2:A:774:LEU:HD11	1.83	0.61
3:B:220:LEU:HB3	3:B:225:GLN:H	1.64	0.61
3:B:220:LEU:HD23	3:B:223:GLN:HG2	1.82	0.61
3:B:317:TRP:HE3	3:B:337:LEU:HD22	1.66	0.61
2:A:302:THR:O	2:A:305:GLU:HG2	2.01	0.61
2:A:69:THR:OG1	2:A:73:GLU:OE2	2.13	0.60
3:B:114:GLY:N	3:B:154:ARG:HB3	2.16	0.60
2:A:151:VAL:HG12	2:A:169:PHE:HD1	1.66	0.60
2:A:404:ARG:HH12	2:A:410:ASP:H	1.48	0.60
3:B:349:ILE:HG23	3:B:354:GLY:O	2.01	0.60
5:D:177:TYR:O	5:D:180:SER:OG	2.17	0.60
2:A:273:VAL:HG22	2:A:339:VAL:HG23	1.83	0.60
2:A:243:THR:OG1	2:A:257:THR:O	2.14	0.60
2:A:248:THR:OG1	3:B:195:ARG:NH2	2.34	0.60
2:A:691:ALA:H	2:A:696:ALA:H	1.49	0.60
3:B:82:LYS:HA	3:B:94:SER:HA	1.82	0.60
5:D:89:GLN:HA	5:D:92:ILE:HD12	1.82	0.60
5:D:105:ILE:O	5:D:109:MET:N	2.28	0.60
4:C:50:LEU:HD22	5:D:241:ASN:HB3	1.82	0.60
2:A:768:MET:N	2:A:791:PHE:O	2.33	0.60
4:C:38:ASP:OD1	4:C:41:TYR:N	2.34	0.60
5:D:135:ARG:H	5:D:173:ARG:NH2	2.00	0.60
3:B:104:PHE:N	3:B:107:GLU:OE2	2.34	0.60
6:E:25:ARG:HG2	6:E:26:VAL:H	1.67	0.60
2:A:745:TRP:CD1	2:A:761:SER:HA	2.37	0.60
3:B:97:LEU:HD11	3:B:140:THR:HA	1.82	0.60
2:A:486:GLY:O	2:A:488:ARG:NH1	2.34	0.60
2:A:534:ASN:HB2	2:A:567:THR:HB	1.82	0.60
2:A:574:TYR:CZ	2:A:597:GLY:HA3	2.36	0.60
5:D:48:TRP:HB3	5:D:78:ALA:HB1	1.82	0.60
2:A:229:TYR:O	2:A:233:ARG:HG2	2.02	0.60
2:A:746:ASP:HB3	2:A:749:TRP:CE3	2.35	0.60
3:B:98:ALA:HB3	3:B:106:LYS:HE3	1.83	0.60
6:E:32:ILE:HG13	6:E:82:GLY:H	1.66	0.60
2:A:36:ARG:NH2	5:D:68:SER:OG	2.35	0.59
2:A:62:THR:O	2:A:66:LEU:HG	2.01	0.59
2:A:322:VAL:HA	2:A:341:VAL:HG22	1.83	0.59
2:A:337:LEU:HB3	2:A:339:VAL:HG13	1.83	0.59
2:A:800:GLU:O	2:A:803:GLN:NE2	2.35	0.59
2:A:271:VAL:HA	2:A:337:LEU:HB2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:318:ALA:HB3	2:A:345:ASN:N	2.16	0.59
3:B:327:LEU:HD12	3:B:341:ASP:HA	1.83	0.59
3:B:372:VAL:O	3:B:379:LEU:N	2.36	0.59
5:D:173:ARG:NH1	5:D:177:TYR:HB2	2.17	0.59
6:E:31:ASP:OD1	6:E:31:ASP:N	2.34	0.59
2:A:713:VAL:HG12	2:A:742:GLY:HA3	1.83	0.59
3:B:230:GLN:OE1	3:B:276:GLN:NE2	2.35	0.59
6:E:29:ARG:NH1	6:E:81:PRO:O	2.36	0.59
1:G:1298:TYR:HB3	2:A:426:PHE:HB2	1.84	0.59
2:A:352:ILE:O	2:A:353:ARG:NH1	2.34	0.59
6:E:78:ARG:HG2	6:E:88:GLN:HA	1.84	0.59
3:B:116:THR:O	3:B:123:TYR:HB2	2.02	0.59
3:B:307:ALA:HB3	3:B:317:TRP:HB2	1.84	0.59
5:D:175:ALA:HA	5:D:205:TYR:OH	2.03	0.59
3:B:33:SER:OG	3:B:325:ARG:NH1	2.35	0.59
3:B:269:ALA:HB3	3:B:278:MET:HB2	1.83	0.59
5:D:72:GLN:HA	5:D:75:LEU:HD12	1.83	0.59
2:A:157:PRO:HA	2:A:163:VAL:HA	1.84	0.59
2:A:627:TRP:HA	2:A:718:PHE:HE1	1.67	0.59
3:B:50:THR:OG1	3:B:88:ASP:O	2.20	0.59
5:D:178:GLU:HA	5:D:197:ARG:HH12	1.67	0.59
3:B:210:GLY:HA2	3:B:216:VAL:HG23	1.85	0.59
3:B:319:GLN:HE21	3:B:354:GLY:HA3	1.67	0.59
3:B:123:TYR:OH	3:B:176:GLU:HG3	2.03	0.59
2:A:178:GLN:OE1	2:A:212:ARG:NH2	2.35	0.58
2:A:191:ASP:HA	2:A:194:ILE:HD12	1.85	0.58
2:A:192:GLU:OE2	2:A:229:TYR:OH	2.14	0.58
2:A:272:GLU:HB2	2:A:338:ARG:HD3	1.84	0.58
2:A:471:LEU:O	2:A:488:ARG:HA	2.03	0.58
3:B:169:GLY:O	3:B:187:LEU:N	2.36	0.58
6:E:53:GLN:OE1	6:E:53:GLN:N	2.28	0.58
2:A:32:GLU:HB2	2:A:87:GLN:HA	1.85	0.58
3:B:305:VAL:H	3:B:320:SER:HA	1.67	0.58
2:A:745:TRP:HD1	2:A:761:SER:HA	1.68	0.58
6:E:72:THR:H	6:E:95:PHE:HB2	1.69	0.58
2:A:673:VAL:HG22	2:A:701:LYS:HA	1.86	0.58
3:B:202:THR:HG23	3:B:206:ALA:H	1.68	0.58
4:C:53:PRO:HG2	5:D:236:LYS:NZ	2.18	0.58
2:A:156:THR:HG23	2:A:164:ASP:HB2	1.85	0.58
2:A:321:ARG:HH22	2:A:340:ASN:HB3	1.67	0.58
5:D:68:SER:HA	5:D:71:VAL:HB	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:400:THR:HA	2:A:416:TYR:CD1	2.38	0.58
2:A:659:THR:O	2:A:661:ARG:NH1	2.37	0.58
3:B:271:ASP:OD1	3:B:273:ARG:NH2	2.35	0.58
5:D:198:VAL:HG11	5:D:218:MET:HB3	1.85	0.58
2:A:224:GLU:O	2:A:227:ARG:NH1	2.36	0.58
2:A:749:TRP:NE1	2:A:759:ASP:OD1	2.35	0.58
5:D:208:THR:OG1	5:D:211:THR:OG1	2.22	0.58
6:E:51:THR:OG1	6:E:54:GLN:OE1	2.22	0.58
2:A:134:GLU:OE2	2:A:135:LYS:NZ	2.37	0.58
5:D:85:LEU:HG	5:D:89:GLN:HE22	1.69	0.58
2:A:329:ASN:ND2	2:A:332:ASP:OD2	2.36	0.58
5:D:48:TRP:HB2	5:D:82:ASN:HB2	1.85	0.58
2:A:36:ARG:NH2	5:D:62:TYR:O	2.37	0.58
2:A:197:PHE:CZ	2:A:226:LEU:HB2	2.39	0.58
3:B:171:LEU:O	3:B:185:VAL:N	2.27	0.58
5:D:33:ASN:HA	5:D:67:TYR:CZ	2.39	0.58
5:D:113:GLY:HA3	5:D:147:PHE:CE1	2.39	0.58
6:E:71:ASN:HB2	6:E:95:PHE:CB	2.34	0.58
2:A:463:ASN:ND2	2:A:466:GLN:HE21	2.02	0.57
2:A:765:ASN:O	2:A:767:ARG:NH1	2.37	0.57
1:G:1264:LEU:HG	1:G:1276:LEU:HB3	1.86	0.57
2:A:468:TYR:CE2	2:A:470:GLU:HB2	2.38	0.57
2:A:651:ASN:ND2	2:A:666:ASN:OD1	2.37	0.57
4:C:83:ARG:NH1	5:D:77:TYR:OH	2.38	0.57
2:A:76:ARG:HH22	2:A:89:LYS:N	2.01	0.57
2:A:664:GLN:O	2:A:667:THR:OG1	2.14	0.57
2:A:671:LYS:HG2	2:A:702:SER:O	2.03	0.57
5:D:147:PHE:HE2	5:D:166:ARG:HG2	1.69	0.57
5:D:201:MET:O	5:D:205:TYR:N	2.19	0.57
2:A:40:GLY:O	2:A:44:LEU:HG	2.04	0.57
2:A:274:SER:N	2:A:340:ASN:OD1	2.36	0.57
3:B:171:LEU:N	3:B:185:VAL:O	2.28	0.57
3:B:264:ASN:OD1	3:B:266:ASN:ND2	2.37	0.57
5:D:228:ASN:HA	5:D:231:ALA:HB3	1.87	0.57
6:E:56:ALA:O	6:E:60:GLY:N	2.37	0.57
2:A:600:THR:HG21	2:A:608:TYR:CZ	2.40	0.57
2:A:626:LYS:O	2:A:720:THR:OG1	2.22	0.57
2:A:765:ASN:HA	2:A:794:TYR:CD2	2.39	0.57
3:B:126:SER:O	3:B:129:ALA:N	2.38	0.57
3:B:326:LEU:O	3:B:342:SER:N	2.24	0.57
5:D:217:LEU:HA	5:D:220:ASN:ND2	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:31:PHE:HD2	2:A:39:VAL:HG13	1.69	0.57
2:A:110:LEU:HA	2:A:113:ASN:HD21	1.69	0.57
2:A:653:TYR:CG	2:A:666:ASN:HB2	2.39	0.57
3:B:45:THR:OG1	3:B:391:THR:OG1	2.20	0.57
5:D:182:ALA:O	5:D:186:THR:HG23	2.05	0.57
1:G:1271:ASN:HB2	1:G:1298:TYR:CE1	2.39	0.57
2:A:101:GLY:O	2:A:168:VAL:HA	2.05	0.57
2:A:109:MET:O	2:A:113:ASN:ND2	2.38	0.57
3:B:123:TYR:HE1	3:B:143:TRP:CZ2	2.22	0.57
2:A:241:ASP:OD2	2:A:261:THR:OG1	2.20	0.57
2:A:476:PRO:HG2	2:A:477:TYR:CE2	2.39	0.57
2:A:620:PRO:HA	2:A:628:VAL:HA	1.87	0.57
2:A:268:LEU:HA	2:A:335:VAL:HB	1.86	0.57
2:A:352:ILE:N	2:A:373:GLU:OE2	2.36	0.56
3:B:122:VAL:HG23	3:B:136:THR:HA	1.87	0.56
2:A:541:PRO:HA	2:A:546:TRP:CE2	2.39	0.56
3:B:35:LEU:HD22	3:B:322:LEU:HD21	1.87	0.56
3:B:48:TRP:HE1	3:B:387:VAL:HB	1.70	0.56
3:B:232:ILE:HB	3:B:262:ALA:HB1	1.87	0.56
3:B:309:THR:HG23	3:B:314:VAL:O	2.05	0.56
5:D:125:GLN:HE22	5:D:132:ARG:NH2	2.02	0.56
2:A:26:VAL:O	2:A:51:GLY:N	2.31	0.56
2:A:175:ALA:HB1	2:A:254:ILE:HG12	1.86	0.56
2:A:767:ARG:HA	2:A:792:LYS:HA	1.86	0.56
3:B:52:VAL:HG12	3:B:386:THR:HG21	1.87	0.56
3:B:99:GLU:O	3:B:106:LYS:NZ	2.32	0.56
3:B:130:GLN:OE1	3:B:131:VAL:N	2.37	0.56
3:B:266:ASN:HA	3:B:282:GLU:HA	1.87	0.56
5:D:42:LYS:O	5:D:46:GLY:N	2.34	0.56
5:D:177:TYR:O	5:D:181:VAL:HG23	2.05	0.56
2:A:177:ILE:HB	2:A:201:ASP:HB3	1.87	0.56
2:A:179:GLN:HG3	2:A:181:ASN:H	1.70	0.56
2:A:404:ARG:HH12	2:A:410:ASP:N	2.03	0.56
2:A:533:HIS:CE1	2:A:566:LYS:HB3	2.40	0.56
2:A:677:HIS:H	2:A:691:ALA:HB1	1.71	0.56
3:B:35:LEU:HD11	3:B:356:PHE:CZ	2.38	0.56
3:B:300:ASP:HB2	3:B:304:ARG:CZ	2.35	0.56
5:D:189:GLY:HA2	5:D:191:TRP:CE2	2.40	0.56
2:A:232:ASP:HB2	2:A:233:ARG:NH1	2.20	0.56
2:A:478:PHE:N	2:A:483:VAL:O	2.37	0.56
3:B:132:TYR:CB	3:B:144:GLN:HA	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:304:ARG:O	3:B:304:ARG:NH1	2.35	0.56
2:A:583:ARG:HH22	2:A:586:PHE:HB3	1.71	0.56
2:A:624:ASP:O	2:A:626:LYS:NZ	2.38	0.56
4:C:56:MET:HG2	6:E:68:PHE:O	2.06	0.56
6:E:50:MET:H	6:E:101:LEU:HB3	1.70	0.56
2:A:129:THR:HA	2:A:132:ASP:OD2	2.05	0.56
2:A:348:TYR:CD1	2:A:410:ASP:HB3	2.41	0.56
2:A:400:THR:HA	2:A:416:TYR:CG	2.41	0.56
2:A:684:PRO:HG2	2:A:688:TYR:HB3	1.88	0.56
3:B:107:GLU:CD	3:B:107:GLU:H	2.09	0.56
3:B:306:MET:SD	3:B:320:SER:OG	2.61	0.56
3:B:346:LEU:O	3:B:359:GLN:NE2	2.39	0.56
5:D:206:PRO:HA	5:D:211:THR:HG21	1.87	0.56
2:A:91:ARG:C	2:A:93:THR:H	2.08	0.56
4:C:56:MET:HB3	6:E:68:PHE:CG	2.39	0.56
2:A:613:LEU:HB2	2:A:635:TRP:CE3	2.39	0.56
2:A:430:ILE:HA	2:A:439:SER:O	2.06	0.56
2:A:592:ARG:HB2	2:A:616:ALA:HB3	1.87	0.56
3:B:133:ALA:N	3:B:143:TRP:O	2.39	0.56
2:A:297:ASN:HB3	2:A:300:LYS:HB2	1.89	0.55
6:E:79:GLN:N	6:E:87:THR:OG1	2.31	0.55
1:G:1271:ASN:HB2	1:G:1298:TYR:HE1	1.70	0.55
2:A:683:ASP:HB2	2:A:694:ASP:H	1.71	0.55
1:G:1295:ASN:OD1	1:G:1296:PHE:N	2.36	0.55
2:A:264:ASP:OD1	2:A:265:GLN:N	2.39	0.55
2:A:777:MET:HA	2:A:782:PRO:HA	1.88	0.55
5:D:27:VAL:O	5:D:61:ARG:NH2	2.34	0.55
5:D:109:MET:HA	5:D:112:ARG:HE	1.70	0.55
5:D:182:ALA:HB2	5:D:197:ARG:HD3	1.89	0.55
5:D:222:TYR:O	5:D:227:MET:N	2.39	0.55
6:E:36:ASN:HB2	6:E:77:PHE:HD1	1.70	0.55
6:E:72:THR:HG23	6:E:94:THR:HA	1.87	0.55
2:A:227:ARG:O	2:A:231:LEU:HG	2.06	0.55
3:B:48:TRP:HD1	3:B:389:SER:N	1.98	0.55
3:B:169:GLY:HA3	3:B:189:MET:HG2	1.88	0.55
3:B:305:VAL:HG12	3:B:318:THR:HA	1.87	0.55
2:A:232:ASP:HB2	2:A:233:ARG:HH12	1.72	0.55
2:A:245:VAL:HG11	2:A:254:ILE:HG23	1.88	0.55
2:A:654:ALA:N	2:A:666:ASN:H	2.04	0.55
3:B:64:HIS:ND1	3:B:114:GLY:HA3	2.22	0.55
2:A:32:GLU:HG2	2:A:87:GLN:HG3	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:519:ILE:HD12	6:E:29:ARG:N	2.10	0.55
4:C:47:LEU:HG	5:D:207:ASP:HB3	1.89	0.55
4:C:85:PRO:HD3	5:D:107:TYR:CZ	2.42	0.55
5:D:106:ASP:HA	5:D:109:MET:HB2	1.87	0.55
2:A:141:TYR:HD1	2:A:146:LYS:HD2	1.72	0.55
2:A:311:LEU:HD12	2:A:314:ARG:HB2	1.87	0.55
2:A:525:LEU:HD12	2:A:526:ARG:H	1.72	0.55
3:B:135:ASN:HB3	3:B:138:ASP:OD1	2.07	0.55
6:E:32:ILE:HG22	6:E:79:GLN:NE2	2.14	0.55
2:A:277:LEU:HD13	2:A:281:SER:H	1.71	0.55
3:B:270:LEU:HB3	3:B:275:GLY:HA2	1.89	0.55
2:A:255:TYR:HE2	3:B:60:TYR:HB3	1.72	0.55
2:A:656:GLY:O	2:A:661:ARG:HA	2.07	0.55
2:A:150:SER:CB	2:A:170:GLN:O	2.54	0.55
2:A:394:PHE:HD1	2:A:448:ASN:HD22	1.52	0.55
3:B:318:THR:N	3:B:353:ASP:HB3	2.22	0.55
2:A:237:ARG:NH2	2:A:330:ASP:OD1	2.37	0.54
3:B:123:TYR:HB3	3:B:155:PRO:HG2	1.90	0.54
3:B:132:TYR:CE2	3:B:134:LEU:HD21	2.42	0.54
5:D:69:GLN:O	5:D:73:LEU:HG	2.07	0.54
5:D:86:PRO:HD2	5:D:87:LEU:HD12	1.88	0.54
5:D:119:LEU:HD11	5:D:139:HIS:CE1	2.42	0.54
5:D:78:ALA:O	5:D:82:ASN:HB2	2.07	0.54
2:A:197:PHE:HZ	2:A:226:LEU:HB2	1.73	0.54
2:A:204:PRO:HG2	2:A:206:TRP:HB3	1.87	0.54
2:A:516:GLY:HA2	2:A:526:ARG:HG3	1.88	0.54
2:A:692:THR:HG22	2:A:693:GLN:H	1.73	0.54
3:B:60:TYR:CZ	3:B:195:ARG:HG3	2.42	0.54
6:E:89:GLN:HA	6:E:108:PRO:HA	1.88	0.54
2:A:311:LEU:HA	2:A:314:ARG:HD2	1.88	0.54
3:B:173:ALA:HB1	3:B:182:LYS:HZ3	1.71	0.54
2:A:126:ASP:OD2	2:A:128:THR:OG1	2.25	0.54
2:A:393:GLY:O	2:A:421:ARG:NH2	2.40	0.54
3:B:236:THR:OG1	3:B:241:ILE:O	2.21	0.54
4:C:74:GLY:HA3	5:D:161:THR:HB	1.89	0.54
5:D:223:ARG:O	5:D:226:GLN:NE2	2.39	0.54
2:A:61:ASN:O	2:A:64:ARG:NH1	2.40	0.54
2:A:191:ASP:OD1	2:A:191:ASP:N	2.39	0.54
2:A:664:GLN:HE22	2:A:798:LYS:H	1.56	0.54
4:C:70:THR:HG21	5:D:161:THR:HG23	1.90	0.54
5:D:186:THR:HA	5:D:191:TRP:CD1	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:90:THR:CG2	6:E:107:LYS:H	2.20	0.54
2:A:96:SER:HA	2:A:121:VAL:HG12	1.89	0.54
2:A:710:ALA:O	2:A:744:VAL:HA	2.08	0.54
6:E:71:ASN:HB3	6:E:73:TRP:NE1	2.23	0.54
2:A:66:LEU:O	2:A:69:THR:OG1	2.25	0.54
2:A:576:TRP:HB3	2:A:595:LEU:HG	1.89	0.54
3:B:62:ASN:HB2	3:B:154:ARG:NH2	2.22	0.54
5:D:197:ARG:NH2	5:D:201:MET:SD	2.81	0.54
2:A:321:ARG:HE	2:A:342:ASP:CG	2.11	0.54
2:A:739:TRP:NE1	2:A:768:MET:SD	2.80	0.54
3:B:261:LEU:HD23	3:B:267:LEU:HB2	1.89	0.54
3:B:309:THR:OG1	3:B:314:VAL:HB	2.07	0.54
6:E:50:MET:HB3	6:E:55:VAL:HG11	1.90	0.54
1:G:1294:ALA:O	2:A:430:ILE:N	2.40	0.54
2:A:490:PHE:CE2	2:A:510:GLY:HA3	2.43	0.54
2:A:613:LEU:HD13	2:A:635:TRP:HB2	1.90	0.54
5:D:52:ILE:HD11	5:D:78:ALA:HB3	1.89	0.54
2:A:109:MET:O	2:A:112:GLN:NE2	2.40	0.53
2:A:181:ASN:OD1	2:A:181:ASN:N	2.41	0.53
2:A:551:SER:OG	2:A:552:MET:SD	2.66	0.53
2:A:699:LEU:HD12	2:A:699:LEU:H	1.72	0.53
3:B:45:THR:N	3:B:391:THR:O	2.26	0.53
3:B:380:ILE:HD11	3:B:388:TYR:HB2	1.90	0.53
2:A:350:ARG:O	2:A:351:LYS:HE2	2.08	0.53
2:A:542:GLN:HB2	2:A:674:TYR:CE1	2.42	0.53
3:B:217:SER:HA	3:B:229:GLN:HG3	1.90	0.53
5:D:116:ASN:HD21	5:D:142:ALA:HB3	1.74	0.53
1:G:1281:SER:H	1:G:1288:VAL:HB	1.74	0.53
2:A:354:PHE:CD1	2:A:416:TYR:HB2	2.43	0.53
2:A:557:SER:OG	2:A:560:ASP:O	2.26	0.53
2:A:635:TRP:HB3	2:A:637:TYR:CE2	2.43	0.53
3:B:33:SER:HB3	3:B:323:LEU:HB2	1.91	0.53
3:B:81:VAL:HG12	3:B:93:TRP:CZ3	2.43	0.53
4:C:35:VAL:HG21	4:C:77:GLY:HA2	1.90	0.53
1:G:1227:LEU:HD13	1:G:1260:MET:HB3	1.89	0.53
2:A:481:ASP:N	2:A:481:ASP:OD1	2.40	0.53
2:A:492:ASN:O	2:A:508:SER:OG	2.23	0.53
2:A:504:TYR:HA	2:A:537:SER:O	2.08	0.53
2:A:632:ARG:NH2	2:A:661:ARG:HH22	2.05	0.53
1:G:1224:ARG:O	1:G:1263:GLY:N	2.21	0.53
2:A:488:ARG:NH2	2:A:512:ASP:OD2	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:227:ARG:NH1	2:A:228:SER:HB3	2.23	0.53
2:A:749:TRP:CE2	2:A:759:ASP:HA	2.42	0.53
5:D:69:GLN:HE21	5:D:73:LEU:HD11	1.73	0.53
2:A:92:PRO:HA	2:A:161:ASN:O	2.08	0.53
2:A:233:ARG:HB2	2:A:235:TYR:HD1	1.74	0.53
4:C:76:VAL:HA	5:D:162:ASP:OD2	2.09	0.53
2:A:158:LEU:HB3	2:A:162:ARG:CB	2.39	0.53
2:A:370:ARG:HB2	2:A:388:ARG:HH11	1.73	0.53
2:A:729:TYR:O	2:A:733:VAL:N	2.41	0.53
3:B:48:TRP:CH2	3:B:89:GLY:HA2	2.44	0.53
3:B:308:LEU:HG	3:B:313:GLY:HA2	1.91	0.53
5:D:52:ILE:HD12	5:D:75:LEU:HD23	1.91	0.53
5:D:215:LEU:HD12	5:D:238:ILE:HG22	1.91	0.53
2:A:172:GLY:HA3	3:B:243:ARG:HH21	1.74	0.53
2:A:307:ASP:HA	2:A:310:LYS:HE2	1.91	0.53
2:A:480:VAL:HB	2:A:483:VAL:HG23	1.90	0.53
2:A:548:TYR:HD2	2:A:552:MET:HE1	1.74	0.53
3:B:81:VAL:HG12	3:B:93:TRP:HZ3	1.74	0.53
2:A:361:LYS:O	2:A:364:VAL:HG22	2.09	0.53
3:B:42:PHE:CD2	3:B:392:ARG:HG2	2.44	0.53
3:B:72:VAL:O	3:B:84:LEU:N	2.42	0.53
3:B:268:THR:OG1	3:B:269:ALA:N	2.40	0.53
5:D:108:VAL:HA	5:D:111:MET:HB3	1.91	0.53
1:G:1265:ASN:HA	1:G:1275:GLY:HA2	1.90	0.52
2:A:459:ASN:O	2:A:469:ALA:HA	2.09	0.52
2:A:579:ASN:HA	2:A:591:SER:O	2.09	0.52
3:B:256:GLY:O	3:B:272:LEU:N	2.24	0.52
5:D:56:GLU:OE1	5:D:60:ASN:ND2	2.37	0.52
5:D:125:GLN:HG3	5:D:128:PHE:CZ	2.44	0.52
5:D:178:GLU:OE1	5:D:205:TYR:OH	2.22	0.52
2:A:148:SER:HB3	3:B:243:ARG:NH2	2.23	0.52
2:A:376:TRP:CH2	6:E:33:ASN:HB3	2.44	0.52
2:A:384:GLN:HA	2:A:387:GLU:OE2	2.09	0.52
2:A:607:GLU:HB3	2:A:641:LEU:HD12	1.91	0.52
2:A:699:LEU:O	2:A:757:TYR:OH	2.15	0.52
2:A:719:ILE:HG13	2:A:735:THR:HG22	1.91	0.52
3:B:93:TRP:CZ3	3:B:139:GLY:HA3	2.44	0.52
5:D:79:TYR:HE2	5:D:91:ALA:HB2	1.74	0.52
5:D:122:SER:OG	5:D:132:ARG:NH1	2.42	0.52
1:G:1267:GLU:HA	1:G:1273:ARG:HD3	1.91	0.52
2:A:120:ARG:HG3	2:A:121:VAL:H	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:250:ASP:OD1	2:A:251:LYS:NZ	2.29	0.52
2:A:522:TYR:HB2	2:A:579:ASN:HB2	1.90	0.52
2:A:664:GLN:NE2	2:A:798:LYS:HB3	2.25	0.52
3:B:215:ARG:HH11	3:B:231:ARG:N	2.07	0.52
5:D:233:LYS:O	5:D:236:LYS:HG3	2.10	0.52
6:E:88:GLN:HG2	6:E:110:LEU:HD22	1.90	0.52
3:B:97:LEU:O	3:B:132:TYR:OH	2.27	0.52
3:B:346:LEU:O	3:B:360:GLN:N	2.31	0.52
6:E:72:THR:HA	6:E:93:LEU:O	2.10	0.52
1:G:1224:ARG:NH2	2:A:807:GLY:O	2.42	0.52
2:A:266:TYR:CD1	2:A:333:LYS:HA	2.45	0.52
2:A:549:LEU:O	2:A:554:GLU:N	2.43	0.52
2:A:274:SER:OG	2:A:340:ASN:ND2	2.42	0.52
2:A:352:ILE:HG13	2:A:366:ARG:NH1	2.24	0.52
2:A:545:MET:O	2:A:549:LEU:HG	2.09	0.52
2:A:583:ARG:NH2	2:A:586:PHE:HB3	2.24	0.52
3:B:199:ALA:HB3	3:B:251:PRO:HD2	1.90	0.52
3:B:267:LEU:HD23	3:B:281:ARG:HG3	1.92	0.52
3:B:333:TYR:OH	3:B:392:ARG:NE	2.43	0.52
3:B:334:ASN:HB2	3:B:392:ARG:NH2	2.24	0.52
4:C:34:GLN:HA	4:C:78:LYS:HZ1	1.75	0.52
5:D:199:GLU:O	5:D:203:ARG:HG2	2.10	0.52
1:G:1222:THR:O	1:G:1265:ASN:N	2.43	0.52
2:A:108:ASP:HA	2:A:111:LYS:HG2	1.92	0.52
2:A:179:GLN:OE1	2:A:180:ILE:N	2.41	0.52
2:A:666:ASN:OD1	2:A:707:GLY:N	2.39	0.52
2:A:213:LYS:HZ3	2:A:214:TYR:C	2.13	0.52
2:A:353:ARG:HA	2:A:366:ARG:HH22	1.74	0.52
2:A:499:ALA:HB2	2:A:684:PRO:HG3	1.92	0.52
3:B:104:PHE:CD1	3:B:107:GLU:HG3	2.44	0.52
2:A:160:ARG:NH2	5:D:62:TYR:HA	2.24	0.52
2:A:266:TYR:HD1	2:A:333:LYS:HA	1.75	0.52
2:A:540:GLN:O	2:A:546:TRP:NE1	2.41	0.52
3:B:104:PHE:HD1	3:B:107:GLU:HG3	1.75	0.52
1:G:1277:GLU:N	1:G:1293:ASN:O	2.41	0.51
2:A:233:ARG:O	2:A:265:GLN:NE2	2.27	0.51
2:A:629:VAL:O	2:A:630:LEU:HD23	2.10	0.51
3:B:246:ASP:HA	3:B:285:SER:HB3	1.91	0.51
2:A:610:LYS:HB2	2:A:646:MET:HE1	1.93	0.51
5:D:194:VAL:HA	5:D:197:ARG:HB3	1.92	0.51
2:A:330:ASP:C	2:A:332:ASP:H	2.13	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:450:LEU:C	2:A:452:THR:H	2.14	0.51
2:A:502:SER:HA	2:A:561:GLN:HB2	1.93	0.51
2:A:561:GLN:NE2	2:A:691:ALA:O	2.43	0.51
3:B:39:GLU:HB2	3:B:356:PHE:HB2	1.91	0.51
3:B:268:THR:HA	3:B:279:TRP:O	2.11	0.51
4:C:42:LEU:HA	5:D:166:ARG:HH12	1.75	0.51
5:D:93:ASP:O	5:D:97:ARG:HG2	2.10	0.51
6:E:77:PHE:CE2	6:E:79:GLN:HB3	2.45	0.51
1:G:1222:THR:OG1	1:G:1265:ASN:HB3	2.11	0.51
1:G:1285:LYS:NZ	2:A:689:GLU:H	2.08	0.51
2:A:173:VAL:HG22	2:A:252:LYS:HE3	1.91	0.51
3:B:114:GLY:H	3:B:154:ARG:HE	1.58	0.51
3:B:296:ILE:H	3:B:309:THR:HB	1.75	0.51
6:E:93:LEU:HD12	6:E:101:LEU:HD11	1.93	0.51
2:A:144:VAL:HG11	2:A:146:LYS:HE3	1.92	0.51
2:A:245:VAL:H	3:B:192:LEU:HD11	1.74	0.51
2:A:383:ASP:HA	2:A:386:LYS:HG3	1.93	0.51
2:A:404:ARG:NE	2:A:405:VAL:O	2.42	0.51
2:A:739:TRP:CZ2	2:A:768:MET:HG2	2.46	0.51
3:B:62:ASN:HD21	3:B:154:ARG:N	2.08	0.51
3:B:97:LEU:HD12	3:B:134:LEU:HD22	1.92	0.51
3:B:356:PHE:HB3	3:B:358:ALA:O	2.11	0.51
2:A:673:VAL:HA	2:A:700:CYS:O	2.11	0.51
4:C:53:PRO:HG2	5:D:236:LYS:HZ2	1.74	0.51
2:A:427:ASN:HD22	2:A:443:GLY:HA3	1.76	0.51
2:A:782:PRO:O	2:A:807:GLY:N	2.44	0.51
3:B:84:LEU:HA	3:B:91:GLU:HA	1.92	0.51
1:G:1224:ARG:HD3	2:A:808:LYS:HD2	1.93	0.51
2:A:194:ILE:O	2:A:200:ARG:NH2	2.44	0.51
2:A:237:ARG:HE	2:A:266:TYR:HH	1.58	0.51
2:A:432:TYR:CE2	2:A:435:GLU:HB2	2.46	0.51
2:A:464:ASP:OD1	2:A:465:TYR:N	2.44	0.51
3:B:327:LEU:HD11	3:B:339:VAL:HG13	1.93	0.51
6:E:80:GLN:HB3	6:E:85:GLY:O	2.11	0.51
2:A:146:LYS:HA	2:A:173:VAL:C	2.31	0.51
2:A:175:ALA:CB	2:A:214:TYR:HB2	2.40	0.51
2:A:379:SER:HA	2:A:382:VAL:HG22	1.93	0.51
2:A:581:LEU:HD12	2:A:582:ASP:H	1.75	0.51
3:B:71:VAL:HG13	3:B:92:ILE:HD13	1.91	0.51
2:A:38:ALA:HB2	5:D:98:LEU:HA	1.94	0.50
2:A:231:LEU:HB3	2:A:296:TYR:CE2	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:368:GLU:HG3	2:A:389:LEU:HD22	1.91	0.50
2:A:583:ARG:NH1	2:A:586:PHE:O	2.44	0.50
5:D:116:ASN:HD22	5:D:139:HIS:HB2	1.75	0.50
2:A:486:GLY:O	2:A:513:VAL:HA	2.09	0.50
2:A:512:ASP:OD1	2:A:513:VAL:N	2.45	0.50
3:B:33:SER:HG	3:B:325:ARG:HD3	1.76	0.50
3:B:123:TYR:CE1	3:B:133:ALA:HB2	2.47	0.50
4:C:33:ARG:NH2	4:C:80:LEU:O	2.30	0.50
2:A:136:GLY:HA2	2:A:139:ASP:OD2	2.12	0.50
2:A:541:PRO:HD3	2:A:561:GLN:HG2	1.93	0.50
2:A:674:TYR:HB2	2:A:690:CYS:SG	2.52	0.50
3:B:187:LEU:H	3:B:187:LEU:HD23	1.76	0.50
3:B:212:ASP:HA	3:B:263:TYR:CE1	2.46	0.50
3:B:327:LEU:HA	3:B:341:ASP:HA	1.93	0.50
2:A:160:ARG:NH1	5:D:63:PRO:HD2	2.26	0.50
2:A:352:ILE:HG12	2:A:373:GLU:OE2	2.11	0.50
2:A:583:ARG:NH1	2:A:588:THR:OG1	2.42	0.50
2:A:633:THR:HB	2:A:635:TRP:CZ2	2.47	0.50
2:A:714:ALA:O	2:A:740:ASP:HB3	2.11	0.50
3:B:34:PRO:HG2	3:B:36:PRO:HG3	1.94	0.50
5:D:35:ILE:HG13	5:D:58:LEU:HD12	1.94	0.50
2:A:286:GLN:OE1	2:A:286:GLN:N	2.43	0.50
2:A:467:THR:O	2:A:492:ASN:HA	2.11	0.50
3:B:172:GLN:OE1	3:B:173:ALA:N	2.43	0.50
2:A:395:PHE:CG	2:A:418:VAL:HB	2.47	0.50
3:B:48:TRP:NE1	3:B:387:VAL:O	2.44	0.50
3:B:104:PHE:CE1	3:B:107:GLU:HA	2.46	0.50
5:D:222:TYR:HA	5:D:227:MET:HE1	1.93	0.50
5:D:121:ASP:OD1	5:D:121:ASP:N	2.45	0.50
2:A:285:GLU:HA	2:A:288:THR:HB	1.93	0.50
5:D:234:VAL:HA	5:D:237:ILE:HD12	1.92	0.50
1:G:1225:ALA:N	2:A:808:LYS:HE3	2.27	0.50
2:A:44:LEU:HA	2:A:49:ARG:NH2	2.27	0.50
2:A:59:ILE:O	2:A:63:ILE:HG13	2.12	0.50
2:A:140:PHE:O	2:A:144:VAL:HG23	2.12	0.50
3:B:33:SER:O	3:B:325:ARG:NH2	2.45	0.50
4:C:34:GLN:HA	4:C:78:LYS:HE3	1.93	0.50
2:A:272:GLU:HB2	2:A:338:ARG:HA	1.93	0.49
2:A:376:TRP:HE3	2:A:376:TRP:H	1.59	0.49
2:A:394:PHE:CD1	2:A:448:ASN:ND2	2.73	0.49
2:A:428:PHE:HA	2:A:441:GLN:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:488:ARG:HH12	2:A:514:THR:N	2.09	0.49
2:A:504:TYR:OH	2:A:506:ASN:HB2	2.11	0.49
2:A:680:SER:HB2	2:A:693:GLN:N	2.26	0.49
3:B:41:GLN:NE2	3:B:356:PHE:O	2.45	0.49
3:B:285:SER:O	3:B:301:GLN:NE2	2.45	0.49
2:A:243:THR:HA	2:A:259:ASN:HB3	1.94	0.49
2:A:507:LYS:O	2:A:534:ASN:HA	2.11	0.49
2:A:643:GLY:N	2:A:645:GLU:OE2	2.44	0.49
2:A:798:LYS:HD3	2:A:800:GLU:HB3	1.95	0.49
3:B:70:ASN:O	3:B:86:ALA:N	2.44	0.49
4:C:33:ARG:CZ	4:C:78:LYS:HA	2.42	0.49
4:C:51:HIS:N	5:D:241:ASN:OD1	2.32	0.49
5:D:50:GLN:O	5:D:54:GLN:HG2	2.12	0.49
5:D:194:VAL:O	5:D:198:VAL:HG13	2.13	0.49
1:G:1273:ARG:HG3	1:G:1297:ARG:HH21	1.77	0.49
2:A:156:THR:O	2:A:164:ASP:HB2	2.13	0.49
2:A:176:GLU:HB3	2:A:212:ARG:HE	1.75	0.49
2:A:185:ASN:ND2	2:A:188:PHE:O	2.44	0.49
2:A:353:ARG:O	2:A:415:VAL:HA	2.13	0.49
2:A:408:SER:OG	2:A:410:ASP:OD1	2.15	0.49
2:A:733:VAL:CG2	2:A:774:LEU:HD11	2.42	0.49
3:B:60:TYR:HA	3:B:368:GLN:CD	2.33	0.49
3:B:239:THR:O	3:B:239:THR:OG1	2.29	0.49
3:B:322:LEU:HB3	3:B:325:ARG:HB2	1.94	0.49
3:B:327:LEU:HG	3:B:328:THR:N	2.25	0.49
5:D:36:TYR:CB	5:D:67:TYR:HE2	2.25	0.49
2:A:174:SER:OG	2:A:175:ALA:N	2.45	0.49
2:A:189:THR:O	2:A:192:GLU:HB3	2.12	0.49
2:A:454:TYR:HB3	2:A:473:VAL:HG23	1.94	0.49
3:B:76:ASP:HB3	3:B:80:LEU:HB3	1.95	0.49
3:B:333:TYR:CZ	3:B:378:LEU:HD21	2.47	0.49
5:D:106:ASP:HB3	5:D:154:TYR:CG	2.46	0.49
5:D:198:VAL:O	5:D:202:LEU:HG	2.12	0.49
2:A:67:PHE:HA	2:A:73:GLU:HG2	1.95	0.49
2:A:347:PHE:CE1	2:A:376:TRP:HA	2.48	0.49
3:B:207:ALA:HB2	3:B:221:MET:HB3	1.94	0.49
3:B:236:THR:HA	3:B:240:GLU:HA	1.93	0.49
5:D:102:HIS:HB2	5:D:105:ILE:HG23	1.94	0.49
5:D:199:GLU:HA	5:D:202:LEU:HD12	1.94	0.49
5:D:228:ASN:N	5:D:228:ASN:OD1	2.45	0.49
6:E:31:ASP:HB2	6:E:33:ASN:HD21	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:1230:GLN:HA	1:G:1231:PHE:HB2	1.95	0.49
2:A:129:THR:O	2:A:133:ILE:HG12	2.12	0.49
2:A:147:TYR:CZ	3:B:242:ASP:HA	2.47	0.49
2:A:589:ASP:HA	2:A:618:TYR:O	2.12	0.49
5:D:144:PHE:HE2	5:D:171:LYS:HB2	1.77	0.49
2:A:77:VAL:O	2:A:79:ARG:NH1	2.46	0.49
2:A:350:ARG:NH2	2:A:376:TRP:O	2.46	0.49
5:D:113:GLY:HA2	5:D:116:ASN:OD1	2.13	0.49
6:E:62:PRO:HB3	6:E:73:TRP:CD2	2.48	0.49
2:A:193:LEU:HA	2:A:196:HIS:ND1	2.27	0.49
2:A:286:GLN:NE2	2:A:287:LEU:HG	2.28	0.49
2:A:352:ILE:HA	2:A:414:VAL:HG23	1.94	0.49
3:B:56:ILE:HG13	3:B:383:LYS:HG2	1.94	0.49
3:B:236:THR:N	3:B:241:ILE:HG12	2.28	0.49
1:G:1281:SER:N	1:G:1288:VAL:O	2.45	0.49
2:A:355:GLU:OE1	2:A:355:GLU:N	2.46	0.49
2:A:417:LYS:HD2	2:A:418:VAL:N	2.26	0.49
2:A:596:THR:HB	2:A:612:THR:OG1	2.13	0.49
2:A:607:GLU:N	2:A:644:LYS:O	2.46	0.49
5:D:171:LYS:HD2	5:D:174:LEU:HD23	1.95	0.49
6:E:62:PRO:HA	6:E:75:TYR:OH	2.13	0.49
6:E:80:GLN:NE2	6:E:81:PRO:O	2.46	0.49
2:A:98:THR:OG1	2:A:165:LEU:N	2.46	0.48
2:A:134:GLU:OE1	2:A:153:ALA:N	2.45	0.48
2:A:247:LEU:HB2	3:B:194:LEU:HD22	1.95	0.48
2:A:312:LEU:O	2:A:316:GLY:N	2.28	0.48
2:A:671:LYS:HG2	2:A:703:ASP:HA	1.93	0.48
2:A:786:SER:HB3	2:A:803:GLN:HB2	1.95	0.48
5:D:33:ASN:HA	5:D:67:TYR:OH	2.13	0.48
5:D:186:THR:HA	5:D:191:TRP:HD1	1.77	0.48
2:A:318:ALA:HB3	2:A:345:ASN:H	1.79	0.48
2:A:376:TRP:CZ2	2:A:381:LEU:HD21	2.48	0.48
2:A:674:TYR:HB2	2:A:700:CYS:SG	2.52	0.48
3:B:157:VAL:HG13	3:B:162:VAL:HG22	1.95	0.48
3:B:220:LEU:HG	3:B:222:GLU:N	2.23	0.48
3:B:244:LEU:HD11	3:B:301:GLN:O	2.12	0.48
2:A:286:GLN:HA	2:A:289:LYS:HE2	1.93	0.48
2:A:548:TYR:OH	2:A:646:MET:O	2.23	0.48
4:C:65:TYR:OH	5:D:204:ASP:HA	2.12	0.48
6:E:41:ASN:O	6:E:45:LYS:HG2	2.12	0.48
6:E:47:ARG:O	6:E:50:MET:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:141:TYR:O	2:A:145:GLY:N	2.47	0.48
2:A:389:LEU:O	2:A:393:GLY:N	2.44	0.48
2:A:521:GLU:N	2:A:521:GLU:OE1	2.43	0.48
3:B:380:ILE:CG1	3:B:388:TYR:H	2.24	0.48
5:D:133:SER:OG	5:D:173:ARG:NH1	2.46	0.48
5:D:135:ARG:H	5:D:173:ARG:HH22	1.59	0.48
2:A:178:GLN:NE2	2:A:253:GLY:HA2	2.28	0.48
2:A:715:SER:HA	2:A:740:ASP:CG	2.33	0.48
3:B:123:TYR:OH	3:B:143:TRP:NE1	2.20	0.48
4:C:64:ASP:HB2	5:D:144:PHE:CD1	2.49	0.48
2:A:35:GLN:HG2	2:A:90:GLU:HG2	1.96	0.48
2:A:138:GLU:HG2	2:A:151:VAL:HG11	1.94	0.48
2:A:598:LYS:O	2:A:609:TYR:HA	2.14	0.48
2:A:647:PRO:HD2	2:A:650:GLU:HG3	1.94	0.48
2:A:736:SER:O	2:A:772:ILE:HD12	2.14	0.48
2:A:752:SER:O	2:A:755:SER:OG	2.25	0.48
5:D:60:ASN:O	5:D:63:PRO:HD3	2.14	0.48
5:D:207:ASP:HA	5:D:212:ARG:HH21	1.77	0.48
5:D:207:ASP:HA	5:D:212:ARG:NH2	2.29	0.48
6:E:54:GLN:HA	6:E:57:TYR:CD1	2.49	0.48
2:A:146:LYS:HG3	2:A:147:TYR:H	1.78	0.48
2:A:389:LEU:HB3	2:A:395:PHE:HZ	1.78	0.48
2:A:470:GLU:OE2	2:A:488:ARG:HB2	2.14	0.48
2:A:231:LEU:HB3	2:A:296:TYR:HE2	1.79	0.48
2:A:376:TRP:HH2	6:E:33:ASN:HB3	1.79	0.48
5:D:144:PHE:CE2	5:D:171:LYS:HD3	2.49	0.48
6:E:90:THR:HG23	6:E:106:ASN:HA	1.96	0.48
2:A:72:PHE:HB2	2:A:91:ARG:NH2	2.29	0.48
2:A:389:LEU:HB3	2:A:395:PHE:CZ	2.49	0.48
2:A:738:PHE:CE2	2:A:771:GLY:HA3	2.49	0.48
5:D:116:ASN:ND2	5:D:142:ALA:HB3	2.28	0.48
6:E:52:GLN:NE2	6:E:96:ASN:O	2.46	0.48
6:E:94:THR:HG21	6:E:102:THR:OG1	2.14	0.48
2:A:570:PHE:HB2	2:A:601:ILE:HD11	1.96	0.48
2:A:683:ASP:H	2:A:693:GLN:HB3	1.79	0.48
3:B:197:GLU:O	3:B:250:THR:OG1	2.20	0.48
2:A:61:ASN:O	2:A:64:ARG:HD3	2.14	0.47
2:A:106:LYS:O	2:A:110:LEU:HG	2.13	0.47
2:A:432:TYR:OH	2:A:435:GLU:OE2	2.31	0.47
2:A:495:GLN:HA	2:A:505:THR:HG23	1.95	0.47
2:A:792:LYS:HG3	2:A:795:ASP:HA	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:120:GLY:O	3:B:135:ASN:HA	2.14	0.47
3:B:156:VAL:O	3:B:162:VAL:HA	2.13	0.47
3:B:234:GLN:OE1	3:B:264:ASN:ND2	2.47	0.47
3:B:319:GLN:HG2	3:B:354:GLY:O	2.14	0.47
4:C:81:ASP:OD1	4:C:82:ILE:N	2.46	0.47
5:D:36:TYR:HB3	5:D:67:TYR:HE2	1.78	0.47
2:A:95:ALA:HB2	2:A:125:LEU:HG	1.97	0.47
3:B:74:ALA:H	3:B:83:ALA:HA	1.79	0.47
3:B:297:TYR:HD1	3:B:307:ALA:HB1	1.79	0.47
4:C:80:LEU:HD11	5:D:159:TYR:CD1	2.49	0.47
5:D:181:VAL:HB	5:D:197:ARG:NH1	2.29	0.47
5:D:136:ASP:CG	5:D:138:GLN:HE21	2.18	0.47
1:G:1285:LYS:HZ2	2:A:688:TYR:HD1	1.61	0.47
2:A:98:THR:O	2:A:165:LEU:HB3	2.14	0.47
2:A:500:ASP:O	2:A:681:ASN:HB2	2.13	0.47
2:A:561:GLN:NE2	2:A:688:TYR:OH	2.48	0.47
2:A:585:TYR:OH	2:A:777:MET:O	2.29	0.47
3:B:240:GLU:N	3:B:240:GLU:OE1	2.47	0.47
3:B:261:LEU:HD22	3:B:265:GLY:HA2	1.96	0.47
3:B:309:THR:N	3:B:314:VAL:O	2.46	0.47
2:A:91:ARG:C	2:A:93:THR:N	2.67	0.47
2:A:701:LYS:HD3	2:A:757:TYR:CG	2.50	0.47
2:A:741:MET:HB3	2:A:766:ILE:HG23	1.96	0.47
3:B:236:THR:HG23	3:B:240:GLU:HA	1.96	0.47
3:B:322:LEU:HD13	3:B:325:ARG:HB3	1.95	0.47
6:E:40:ALA:HA	6:E:43:VAL:HG23	1.97	0.47
1:G:1230:GLN:CA	1:G:1231:PHE:HB2	2.45	0.47
2:A:74:ASP:HB2	2:A:91:ARG:HH12	1.80	0.47
2:A:305:GLU:HB2	2:A:309:LYS:NZ	2.30	0.47
3:B:163:LEU:HD12	3:B:171:LEU:HD21	1.96	0.47
3:B:336:ASN:O	3:B:338:VAL:HG23	2.14	0.47
6:E:65:SER:OG	6:E:71:ASN:HA	2.14	0.47
2:A:92:PRO:O	2:A:94:ILE:N	2.46	0.47
2:A:478:PHE:CD2	2:A:485:LEU:HD13	2.50	0.47
2:A:739:TRP:HZ2	2:A:768:MET:HG2	1.80	0.47
3:B:298:LEU:HB2	3:B:306:MET:O	2.14	0.47
5:D:32:PRO:HA	5:D:35:ILE:HD11	1.97	0.47
5:D:119:LEU:HD21	5:D:139:HIS:CG	2.50	0.47
6:E:52:GLN:HG3	6:E:99:GLY:HA2	1.97	0.47
1:G:1260:MET:SD	1:G:1280:LYS:HB3	2.55	0.47
2:A:167:LEU:HB3	2:A:169:PHE:HE2	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:245:VAL:HG22	2:A:256:VAL:HG13	1.96	0.47
2:A:392:LEU:HD23	2:A:393:GLY:N	2.30	0.47
2:A:632:ARG:HH22	2:A:661:ARG:NH2	2.09	0.47
3:B:31:LYS:HB3	3:B:324:HIS:CE1	2.48	0.47
4:C:64:ASP:OD1	5:D:171:LYS:NZ	2.40	0.47
2:A:476:PRO:HG2	2:A:477:TYR:CZ	2.50	0.47
2:A:518:PRO:HB3	2:A:524:SER:HB2	1.97	0.47
4:C:48:ALA:C	5:D:212:ARG:HH22	2.18	0.47
2:A:242:SER:O	2:A:244:GLN:NE2	2.48	0.46
2:A:321:ARG:O	2:A:341:VAL:HA	2.15	0.46
2:A:350:ARG:HD3	2:A:350:ARG:N	2.29	0.46
2:A:508:SER:HA	2:A:534:ASN:HD22	1.80	0.46
2:A:749:TRP:NE1	2:A:759:ASP:HA	2.29	0.46
5:D:218:MET:SD	5:D:219:GLU:HG3	2.55	0.46
2:A:692:THR:H	2:A:695:GLY:HA3	1.79	0.46
3:B:87:ASP:OD2	3:B:90:LYS:HB2	2.15	0.46
4:C:33:ARG:NH2	4:C:77:GLY:O	2.47	0.46
4:C:58:LEU:HD21	6:E:67:PRO:HB2	1.96	0.46
5:D:30:ASN:HB3	5:D:31:PRO:HD2	1.96	0.46
1:G:1293:ASN:HA	2:A:431:GLY:HA2	1.98	0.46
2:A:264:ASP:OD1	2:A:333:LYS:NZ	2.48	0.46
2:A:599:VAL:HA	2:A:609:TYR:HD1	1.81	0.46
2:A:617:THR:C	2:A:618:TYR:HD1	2.18	0.46
2:A:621:ILE:HD12	2:A:621:ILE:H	1.81	0.46
5:D:77:TYR:OH	5:D:81:LYS:NZ	2.31	0.46
5:D:77:TYR:CE2	5:D:81:LYS:HG3	2.50	0.46
2:A:716:LEU:H	2:A:740:ASP:CG	2.19	0.46
3:B:162:VAL:O	3:B:174:LEU:N	2.44	0.46
3:B:175:ASN:HB2	3:B:180:ALA:HB3	1.98	0.46
1:G:1231:PHE:HD2	2:A:801:GLN:H	1.62	0.46
2:A:226:LEU:HD23	2:A:227:ARG:N	2.30	0.46
2:A:638:GLY:HA3	2:A:646:MET:HG3	1.98	0.46
2:A:732:SER:OG	2:A:777:MET:O	2.34	0.46
3:B:303:ASP:HB2	3:B:325:ARG:H	1.81	0.46
4:C:42:LEU:HA	5:D:166:ARG:NH1	2.31	0.46
4:C:73:SER:O	4:C:73:SER:OG	2.31	0.46
1:G:1227:LEU:O	2:A:804:PHE:HB2	2.16	0.46
2:A:72:PHE:HD2	2:A:91:ARG:HH22	1.64	0.46
2:A:109:MET:HA	2:A:112:GLN:HG3	1.98	0.46
2:A:541:PRO:HD3	2:A:561:GLN:CD	2.36	0.46
3:B:280:LYS:HB3	3:B:282:GLU:OE2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:120:ARG:HD2	2:A:120:ARG:HA	1.59	0.46
2:A:227:ARG:HH12	2:A:228:SER:HB3	1.81	0.46
3:B:281:ARG:HB3	3:B:283:LEU:HD21	1.97	0.46
2:A:70:GLY:N	2:A:73:GLU:OE2	2.49	0.46
2:A:257:THR:O	2:A:257:THR:OG1	2.33	0.46
2:A:399:ASP:O	2:A:416:TYR:HA	2.15	0.46
2:A:471:LEU:HG	2:A:489:LEU:HB3	1.97	0.46
2:A:541:PRO:HA	2:A:546:TRP:NE1	2.31	0.46
2:A:749:TRP:CZ3	2:A:760:TYR:HB2	2.50	0.46
3:B:214:GLY:O	3:B:232:ILE:N	2.34	0.46
5:D:88:ALA:O	5:D:92:ILE:HG13	2.16	0.46
5:D:112:ARG:CZ	5:D:146:ASP:HA	2.45	0.46
2:A:154:VAL:O	2:A:165:LEU:HA	2.16	0.46
2:A:272:GLU:N	2:A:337:LEU:O	2.21	0.46
2:A:382:VAL:O	2:A:386:LYS:HG3	2.16	0.46
2:A:538:ASN:HA	2:A:562:ASP:C	2.35	0.46
2:A:610:LYS:HD2	2:A:610:LYS:HA	1.74	0.46
2:A:634:ARG:HB3	2:A:713:VAL:CG2	2.46	0.46
5:D:96:ILE:HG13	5:D:97:ARG:CZ	2.46	0.46
5:D:173:ARG:HH12	5:D:177:TYR:HB2	1.78	0.46
6:E:36:ASN:HB3	6:E:38:LEU:HD21	1.97	0.46
2:A:184:GLY:HA3	2:A:260:ILE:O	2.16	0.46
2:A:351:LYS:HB3	2:A:353:ARG:NE	2.30	0.46
2:A:404:ARG:NH1	2:A:410:ASP:H	2.13	0.46
2:A:550:TYR:CE1	2:A:555:HIS:HA	2.50	0.46
3:B:90:LYS:HA	3:B:90:LYS:HD3	1.63	0.46
3:B:174:LEU:O	3:B:182:LYS:NZ	2.25	0.46
5:D:53:THR:O	5:D:56:GLU:HG3	2.16	0.46
6:E:88:GLN:CD	6:E:110:LEU:HA	2.36	0.46
1:G:1225:ALA:HB1	1:G:1262:VAL:HG12	1.99	0.45
1:G:1296:PHE:CE1	1:G:1298:TYR:HB2	2.47	0.45
2:A:410:ASP:N	2:A:410:ASP:OD1	2.48	0.45
2:A:633:THR:HB	2:A:635:TRP:CH2	2.50	0.45
2:A:664:GLN:NE2	2:A:798:LYS:H	2.13	0.45
3:B:97:LEU:HA	3:B:106:LYS:HZ1	1.80	0.45
3:B:164:ILE:HD13	3:B:174:LEU:HD12	1.98	0.45
3:B:270:LEU:HD22	3:B:275:GLY:O	2.15	0.45
3:B:342:SER:O	3:B:366:GLY:HA2	2.16	0.45
3:B:348:TRP:CG	3:B:358:ALA:HB3	2.51	0.45
4:C:58:LEU:HD22	5:D:203:ARG:HH22	1.80	0.45
2:A:98:THR:OG1	2:A:165:LEU:O	2.25	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:302:THR:OG1	2:A:303:LYS:N	2.49	0.45
2:A:445:GLN:HG3	2:A:457:GLY:HA2	1.97	0.45
2:A:578:TYR:OH	2:A:580:LYS:HB2	2.16	0.45
3:B:124:ILE:HD11	3:B:132:TYR:CZ	2.51	0.45
2:A:678:GLN:O	2:A:693:GLN:HA	2.17	0.45
3:B:237:GLY:C	3:B:239:THR:H	2.18	0.45
3:B:297:TYR:CE1	3:B:317:TRP:CD2	3.04	0.45
3:B:315:THR:HG22	3:B:318:THR:HB	1.99	0.45
3:B:348:TRP:CD1	3:B:392:ARG:HG3	2.51	0.45
2:A:96:SER:OG	2:A:163:VAL:N	2.50	0.45
2:A:97:ILE:N	2:A:120:ARG:HH12	2.14	0.45
2:A:517:PHE:CZ	2:A:519:ILE:HD13	2.52	0.45
2:A:542:GLN:OE1	2:A:544:ALA:N	2.38	0.45
3:B:220:LEU:N	3:B:225:GLN:O	2.49	0.45
5:D:106:ASP:HB3	5:D:154:TYR:CD1	2.51	0.45
2:A:193:LEU:HD13	2:A:196:HIS:ND1	2.32	0.45
2:A:453:GLY:O	2:A:475:ASN:HA	2.16	0.45
2:A:520:ASN:HB3	2:A:523:ASN:HB2	1.97	0.45
3:B:105:SER:OG	3:B:105:SER:O	2.33	0.45
3:B:134:LEU:HA	3:B:142:ALA:H	1.81	0.45
3:B:199:ALA:O	3:B:209:VAL:HA	2.16	0.45
2:A:280:HIS:HA	2:A:283:GLU:HB2	1.99	0.45
2:A:391:ARG:NH1	2:A:392:LEU:HB2	2.32	0.45
3:B:104:PHE:CG	3:B:104:PHE:O	2.70	0.45
5:D:204:ASP:HB3	5:D:205:TYR:CD1	2.52	0.45
2:A:74:ASP:HB3	2:A:89:LYS:H	1.82	0.45
2:A:179:GLN:HB2	3:B:59:PHE:HE2	1.82	0.45
2:A:771:GLY:HA2	2:A:788:ALA:HA	1.98	0.45
3:B:182:LYS:HE2	3:B:183:TRP:CZ3	2.51	0.45
4:C:39:GLU:HA	4:C:42:LEU:HB2	1.99	0.45
2:A:215:GLN:N	2:A:218:LYS:HE2	2.32	0.45
2:A:332:ASP:HB2	2:A:334:THR:HG23	1.99	0.45
2:A:415:VAL:C	2:A:416:TYR:HD1	2.19	0.45
2:A:620:PRO:HB3	2:A:628:VAL:HG13	1.99	0.45
3:B:46:THR:HA	3:B:390:ILE:HG12	1.99	0.45
3:B:150:GLU:O	3:B:166:THR:HB	2.17	0.45
3:B:228:TRP:HB2	3:B:230:GLN:NE2	2.31	0.45
5:D:104:ASN:O	5:D:108:VAL:HG23	2.16	0.45
1:G:1259:LEU:HG	1:G:1281:SER:HA	1.98	0.45
2:A:114:LEU:O	2:A:118:GLY:N	2.50	0.45
2:A:126:ASP:OD2	2:A:129:THR:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:172:GLY:HA2	3:B:28:ASP:OD2	2.17	0.45
2:A:787:TYR:HA	2:A:801:GLN:O	2.17	0.45
3:B:348:TRP:O	3:B:356:PHE:HA	2.17	0.45
5:D:62:TYR:C	5:D:64:PHE:H	2.19	0.45
1:G:1281:SER:N	1:G:1288:VAL:HB	2.32	0.45
2:A:47:PRO:HD2	2:A:62:THR:HG22	1.99	0.45
2:A:148:SER:OG	2:A:172:GLY:N	2.50	0.45
2:A:284:ILE:HA	2:A:286:GLN:HE22	1.81	0.45
2:A:476:PRO:CA	2:A:484:SER:HA	2.46	0.45
2:A:491:TYR:HB2	2:A:509:TYR:CD2	2.52	0.45
2:A:502:SER:HA	2:A:561:GLN:O	2.17	0.45
3:B:345:TYR:HB3	3:B:361:LYS:HA	1.99	0.45
1:G:1268:ILE:HB	1:G:1272:VAL:HB	2.00	0.44
2:A:151:VAL:HA	2:A:169:PHE:CD1	2.52	0.44
2:A:248:THR:HG22	2:A:251:LYS:HZ3	1.83	0.44
2:A:480:VAL:O	2:A:483:VAL:N	2.50	0.44
2:A:542:GLN:HB3	2:A:545:MET:HG2	1.97	0.44
2:A:671:LYS:CG	2:A:703:ASP:HA	2.47	0.44
3:B:233:SER:OG	3:B:263:TYR:N	2.50	0.44
3:B:303:ASP:OD2	3:B:326:LEU:HD22	2.17	0.44
5:D:106:ASP:HB2	5:D:150:LEU:HG	1.99	0.44
2:A:185:ASN:OD1	2:A:186:HIS:N	2.51	0.44
2:A:622:ASP:CB	2:A:627:TRP:H	2.27	0.44
2:A:642:GLY:C	2:A:644:LYS:H	2.20	0.44
3:B:31:LYS:HB3	3:B:324:HIS:HE1	1.82	0.44
3:B:175:ASN:ND2	3:B:182:LYS:HD3	2.33	0.44
3:B:197:GLU:CD	3:B:198:SER:H	2.20	0.44
5:D:205:TYR:HB2	5:D:208:THR:HG23	2.00	0.44
2:A:36:ARG:NH2	5:D:59:ASP:OD1	2.35	0.44
2:A:90:GLU:HG3	2:A:161:ASN:ND2	2.32	0.44
2:A:199:LEU:HD21	2:A:218:LYS:HE3	2.00	0.44
2:A:246:SER:OG	3:B:195:ARG:NH1	2.48	0.44
2:A:352:ILE:HB	2:A:354:PHE:CZ	2.52	0.44
2:A:380:ASP:OD1	2:A:381:LEU:HD12	2.17	0.44
2:A:451:GLY:HA2	2:A:454:TYR:O	2.17	0.44
2:A:501:LEU:HD22	2:A:562:ASP:HB3	1.99	0.44
2:A:503:ASP:O	2:A:538:ASN:HB2	2.17	0.44
2:A:677:HIS:N	2:A:691:ALA:HB1	2.31	0.44
2:A:767:ARG:NH2	2:A:794:TYR:O	2.50	0.44
3:B:133:ALA:HB3	3:B:143:TRP:N	2.33	0.44
3:B:316:LEU:O	3:B:353:ASP:N	2.41	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:79:TYR:HA	5:D:84:ASP:OD2	2.17	0.44
5:D:178:GLU:HB3	5:D:197:ARG:HH22	1.82	0.44
2:A:266:TYR:HE1	2:A:330:ASP:HA	1.82	0.44
2:A:380:ASP:OD1	2:A:380:ASP:N	2.49	0.44
2:A:557:SER:OG	2:A:562:ASP:OD1	2.32	0.44
2:A:624:ASP:HB2	2:A:626:LYS:NZ	2.33	0.44
2:A:637:TYR:CD1	2:A:710:ALA:HA	2.51	0.44
3:B:31:LYS:HE3	3:B:324:HIS:HE1	1.83	0.44
3:B:144:GLN:OE1	3:B:146:LYS:N	2.51	0.44
3:B:279:TRP:CH2	3:B:310:ILE:HB	2.53	0.44
5:D:111:MET:SD	5:D:114:LEU:HD23	2.57	0.44
2:A:215:GLN:HB3	2:A:218:LYS:HG3	1.99	0.44
2:A:388:ARG:O	2:A:391:ARG:HD3	2.18	0.44
2:A:541:PRO:HB3	2:A:677:HIS:CE1	2.53	0.44
2:A:615:THR:OG1	2:A:633:THR:OG1	2.05	0.44
2:A:628:VAL:HG12	2:A:630:LEU:HD21	1.98	0.44
3:B:57:GLY:H	3:B:77:ARG:NH1	2.15	0.44
3:B:66:ALA:HB2	3:B:115:VAL:O	2.17	0.44
3:B:282:GLU:OE2	3:B:282:GLU:N	2.51	0.44
3:B:296:ILE:HG22	3:B:309:THR:HA	1.99	0.44
3:B:373:ALA:HA	3:B:377:LYS:O	2.18	0.44
4:C:39:GLU:OE2	4:C:42:LEU:HG	2.18	0.44
5:D:109:MET:SD	5:D:112:ARG:NH2	2.91	0.44
2:A:30:HIS:HB3	2:A:84:LEU:O	2.17	0.44
2:A:199:LEU:O	2:A:200:ARG:NH1	2.39	0.44
2:A:680:SER:HB2	2:A:693:GLN:H	1.82	0.44
2:A:728:LYS:HB2	2:A:728:LYS:HE2	1.79	0.44
3:B:114:GLY:H	3:B:154:ARG:HB3	1.83	0.44
3:B:168:ASN:HB2	3:B:170:GLN:OE1	2.17	0.44
4:C:54:ALA:O	4:C:56:MET:HE2	2.17	0.44
6:E:64:MET:O	6:E:73:TRP:HA	2.17	0.44
2:A:348:TYR:HB2	2:A:377:LEU:HD13	2.00	0.44
2:A:372:MET:SD	2:A:372:MET:N	2.90	0.44
2:A:395:PHE:HA	2:A:420:GLU:CA	2.43	0.44
2:A:414:VAL:HB	2:A:416:TYR:CZ	2.52	0.44
3:B:80:LEU:HD21	3:B:82:LYS:HB2	2.00	0.44
3:B:92:ILE:HG22	3:B:93:TRP:HD1	1.82	0.44
3:B:251:PRO:HB3	3:B:260:ALA:HB2	1.99	0.44
1:G:1268:ILE:HG22	1:G:1269:ARG:N	2.33	0.44
2:A:90:GLU:CD	2:A:91:ARG:H	2.21	0.44
2:A:247:LEU:O	3:B:195:ARG:HD3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:352:ILE:C	2:A:353:ARG:HH11	2.21	0.44
2:A:397:THR:OG1	2:A:419:LYS:HD3	2.18	0.44
2:A:440:PHE:O	2:A:461:THR:HA	2.18	0.44
3:B:33:SER:CB	3:B:323:LEU:HB2	2.48	0.44
3:B:283:LEU:HD12	3:B:283:LEU:O	2.18	0.44
3:B:360:GLN:O	3:B:362:VAL:HG22	2.17	0.44
3:B:378:LEU:O	3:B:380:ILE:HG23	2.18	0.44
5:D:156:ASN:OD1	5:D:156:ASN:N	2.51	0.44
5:D:189:GLY:HA2	5:D:191:TRP:CZ2	2.53	0.44
5:D:220:ASN:OD1	5:D:224:GLN:NE2	2.49	0.44
2:A:77:VAL:HG22	2:A:79:ARG:HH11	1.82	0.44
2:A:325:MET:HG3	2:A:327:GLU:OE2	2.18	0.44
3:B:133:ALA:HB3	3:B:143:TRP:H	1.82	0.44
3:B:214:GLY:O	3:B:231:ARG:NH1	2.51	0.44
3:B:300:ASP:O	3:B:302:ASN:N	2.47	0.44
3:B:348:TRP:N	3:B:348:TRP:CE3	2.86	0.44
3:B:362:VAL:HG23	3:B:363:ASP:H	1.83	0.44
4:C:59:PRO:O	5:D:203:ARG:HA	2.18	0.44
6:E:92:THR:C	6:E:93:LEU:HD22	2.38	0.44
1:G:1274:PHE:HB3	1:G:1296:PHE:CD2	2.45	0.43
1:G:1289:ASP:HB2	2:A:435:GLU:OE2	2.18	0.43
2:A:149:ALA:HA	2:A:171:GLU:OE2	2.18	0.43
2:A:371:GLN:OE1	2:A:381:LEU:HB2	2.18	0.43
2:A:447:ASP:OD1	2:A:456:VAL:N	2.50	0.43
2:A:538:ASN:N	2:A:563:ASN:O	2.51	0.43
2:A:683:ASP:CB	2:A:694:ASP:H	2.30	0.43
3:B:134:LEU:HB3	3:B:139:GLY:C	2.39	0.43
3:B:214:GLY:HA3	3:B:231:ARG:HH12	1.81	0.43
5:D:182:ALA:HB2	5:D:197:ARG:HH21	1.83	0.43
1:G:1278:PHE:HE1	1:G:1290:ASN:HB2	1.83	0.43
1:G:1300:PHE:HE1	2:A:426:PHE:CE2	2.36	0.43
2:A:264:ASP:HB3	2:A:266:TYR:CZ	2.53	0.43
2:A:727:ASP:OD1	2:A:728:LYS:NZ	2.40	0.43
3:B:83:ALA:HB3	3:B:93:TRP:H	1.82	0.43
3:B:336:ASN:HD21	3:B:357:VAL:HB	1.83	0.43
3:B:384:ASP:N	3:B:384:ASP:OD1	2.52	0.43
5:D:46:GLY:HA2	5:D:48:TRP:CZ2	2.52	0.43
5:D:58:LEU:HD22	5:D:71:VAL:HG21	1.99	0.43
5:D:79:TYR:O	5:D:83:ALA:N	2.51	0.43
2:A:28:ASP:HB3	2:A:84:LEU:H	1.84	0.43
2:A:160:ARG:HH12	5:D:63:PRO:HD2	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:381:LEU:HA	2:A:384:GLN:OE1	2.18	0.43
2:A:404:ARG:NH1	2:A:405:VAL:O	2.51	0.43
2:A:546:TRP:HH2	2:A:558:THR:HA	1.83	0.43
2:A:576:TRP:HB3	2:A:595:LEU:CG	2.48	0.43
3:B:54:SER:OG	3:B:55:GLY:O	2.36	0.43
3:B:62:ASN:HD22	3:B:154:ARG:NE	2.16	0.43
3:B:67:LEU:HA	3:B:71:VAL:O	2.18	0.43
3:B:238:SER:N	3:B:240:GLU:OE2	2.39	0.43
1:G:1291:ALA:HA	2:A:432:TYR:CD2	2.53	0.43
2:A:155:VAL:HG22	2:A:165:LEU:HD12	2.00	0.43
2:A:364:VAL:HB	2:A:367:ARG:NH2	2.34	0.43
2:A:503:ASP:C	2:A:538:ASN:HB2	2.39	0.43
2:A:581:LEU:HB2	2:A:592:ARG:NH2	2.32	0.43
3:B:186:ASN:OD1	3:B:186:ASN:N	2.48	0.43
3:B:204:PHE:HD2	3:B:272:LEU:HD13	1.83	0.43
3:B:322:LEU:HD23	3:B:322:LEU:HA	1.72	0.43
5:D:66:PRO:O	5:D:69:GLN:HB3	2.18	0.43
5:D:149:LYS:HA	5:D:152:ARG:NH1	2.33	0.43
2:A:74:ASP:O	2:A:88:VAL:HA	2.17	0.43
2:A:206:TRP:HZ2	2:A:725:ILE:HA	1.83	0.43
2:A:235:TYR:CE2	2:A:265:GLN:HB2	2.54	0.43
2:A:236:ALA:HB3	2:A:266:TYR:CD2	2.53	0.43
2:A:531:TYR:CG	2:A:532:VAL:N	2.87	0.43
2:A:533:HIS:ND1	2:A:568:ASP:OD1	2.41	0.43
2:A:537:SER:OG	2:A:538:ASN:N	2.51	0.43
4:C:82:ILE:O	5:D:107:TYR:OH	2.23	0.43
5:D:56:GLU:O	5:D:60:ASN:ND2	2.51	0.43
2:A:193:LEU:HD12	2:A:226:LEU:HA	2.00	0.43
2:A:468:TYR:HA	2:A:491:TYR:O	2.18	0.43
3:B:143:TRP:HB2	3:B:178:ASP:OD1	2.18	0.43
5:D:93:ASP:HA	5:D:96:ILE:HG12	1.99	0.43
5:D:109:MET:HA	5:D:112:ARG:NE	2.32	0.43
1:G:1268:ILE:HG22	1:G:1269:ARG:H	1.83	0.43
2:A:654:ALA:O	2:A:666:ASN:N	2.52	0.43
2:A:701:LYS:HB2	2:A:757:TYR:CZ	2.54	0.43
2:A:746:ASP:O	2:A:749:TRP:HB2	2.19	0.43
2:A:750:ASP:O	2:A:754:TYR:HB2	2.18	0.43
2:A:774:LEU:O	2:A:784:VAL:HA	2.19	0.43
3:B:305:VAL:HB	3:B:319:GLN:H	1.83	0.43
3:B:327:LEU:HD21	3:B:339:VAL:HG11	2.01	0.43
3:B:344:GLY:HA2	3:B:367:PHE:CZ	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:38:ASP:O	4:C:42:LEU:HD23	2.19	0.43
5:D:209:GLN:HA	5:D:212:ARG:HD3	2.00	0.43
6:E:78:ARG:HA	6:E:87:THR:O	2.18	0.43
2:A:74:ASP:HB2	2:A:91:ARG:NH1	2.33	0.43
2:A:792:LYS:HD3	2:A:795:ASP:O	2.18	0.43
3:B:115:VAL:HG12	3:B:117:VAL:HG23	1.99	0.43
3:B:117:VAL:HG22	3:B:122:VAL:HG22	2.00	0.43
2:A:97:ILE:HG22	2:A:163:VAL:HG11	2.01	0.43
2:A:176:GLU:OE1	2:A:212:ARG:HB2	2.19	0.43
2:A:189:THR:HA	3:B:103:TRP:CZ3	2.53	0.43
2:A:244:GLN:HB3	3:B:192:LEU:HD12	2.01	0.43
2:A:581:LEU:HB2	2:A:592:ARG:HH22	1.84	0.43
3:B:48:TRP:HE1	3:B:387:VAL:CB	2.31	0.43
3:B:72:VAL:H	3:B:85:ASN:HA	1.84	0.43
3:B:154:ARG:H	3:B:154:ARG:HG2	1.68	0.43
3:B:165:HIS:NE2	3:B:166:THR:O	2.52	0.43
3:B:232:ILE:HG13	3:B:262:ALA:C	2.39	0.43
3:B:344:GLY:HA3	3:B:365:SER:H	1.84	0.43
4:C:35:VAL:HG11	4:C:42:LEU:HD21	2.00	0.43
5:D:50:GLN:O	5:D:53:THR:HB	2.18	0.43
2:A:213:LYS:HZ2	2:A:218:LYS:HD3	1.83	0.43
2:A:280:HIS:ND1	2:A:283:GLU:OE1	2.34	0.43
2:A:470:GLU:OE2	2:A:472:SER:OG	2.31	0.43
2:A:549:LEU:HB3	2:A:554:GLU:HG3	2.00	0.43
2:A:743:THR:HG23	2:A:745:TRP:HZ3	1.84	0.43
5:D:142:ALA:O	5:D:145:SER:OG	2.32	0.43
6:E:56:ALA:HB2	6:E:73:TRP:HH2	1.82	0.43
2:A:246:SER:HA	3:B:193:SER:O	2.19	0.42
2:A:338:ARG:HD2	2:A:340:ASN:OD1	2.19	0.42
3:B:269:ALA:HB3	3:B:278:MET:CB	2.48	0.42
3:B:286:VAL:HG21	3:B:298:LEU:HA	2.01	0.42
3:B:377:LYS:O	3:B:379:LEU:HG	2.18	0.42
5:D:113:GLY:O	5:D:116:ASN:HB2	2.18	0.42
1:G:1271:ASN:OD1	1:G:1272:VAL:HG23	2.19	0.42
2:A:167:LEU:HD23	2:A:167:LEU:HA	1.87	0.42
2:A:371:GLN:NE2	2:A:381:LEU:HD22	2.34	0.42
2:A:400:THR:HG22	2:A:416:TYR:CD2	2.54	0.42
2:A:549:LEU:HD13	2:A:556:PRO:HB3	2.00	0.42
2:A:572:PHE:CG	2:A:573:ASN:N	2.86	0.42
2:A:790:PRO:HG2	2:A:799:ALA:HB1	2.01	0.42
3:B:231:ARG:HH11	3:B:232:ILE:N	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:51:HIS:O	4:C:51:HIS:ND1	2.51	0.42
5:D:113:GLY:HA3	5:D:147:PHE:CZ	2.54	0.42
5:D:215:LEU:HA	5:D:218:MET:HG3	2.00	0.42
1:G:1276:LEU:HD12	1:G:1277:GLU:H	1.85	0.42
2:A:178:GLN:H	2:A:254:ILE:HB	1.85	0.42
2:A:357:ASN:ND2	5:D:135:ARG:HA	2.34	0.42
2:A:624:ASP:HB2	2:A:626:LYS:HZ3	1.84	0.42
2:A:672:ALA:O	2:A:702:SER:OG	2.29	0.42
3:B:51:SER:OG	3:B:386:THR:HG23	2.18	0.42
3:B:152:LEU:HD23	3:B:153:SER:N	2.34	0.42
3:B:198:SER:HA	3:B:250:THR:HA	2.00	0.42
3:B:341:ASP:H	3:B:347:HIS:CE1	2.36	0.42
3:B:353:ASP:HA	3:B:354:GLY:HA3	1.72	0.42
3:B:353:ASP:N	3:B:353:ASP:OD1	2.51	0.42
5:D:55:LEU:HD13	5:D:75:LEU:HG	2.01	0.42
5:D:176:LYS:HD2	5:D:210:ALA:HB2	2.01	0.42
6:E:88:GLN:N	6:E:89:GLN:OE1	2.47	0.42
2:A:47:PRO:HD2	2:A:62:THR:HA	2.00	0.42
2:A:298:GLY:O	2:A:302:THR:HG23	2.19	0.42
2:A:608:TYR:HD2	2:A:646:MET:SD	2.43	0.42
3:B:344:GLY:H	3:B:367:PHE:HE1	1.68	0.42
5:D:185:TYR:HB2	5:D:194:VAL:CG2	2.50	0.42
2:A:95:ALA:HB3	2:A:122:GLY:O	2.20	0.42
2:A:138:GLU:HA	2:A:141:TYR:CD2	2.54	0.42
2:A:178:GLN:HB3	2:A:255:TYR:CE1	2.55	0.42
2:A:509:TYR:O	2:A:532:VAL:HA	2.20	0.42
2:A:678:GLN:NE2	2:A:693:GLN:O	2.52	0.42
3:B:57:GLY:O	3:B:383:LYS:HD3	2.20	0.42
3:B:61:SER:OG	3:B:62:ASN:N	2.52	0.42
3:B:307:ALA:O	3:B:315:THR:HA	2.20	0.42
5:D:116:ASN:C	5:D:139:HIS:HD2	2.23	0.42
2:A:215:GLN:O	2:A:219:LEU:HG	2.19	0.42
2:A:338:ARG:HD3	2:A:338:ARG:HA	1.82	0.42
2:A:422:ASN:HA	2:A:448:ASN:HB2	2.01	0.42
2:A:425:SER:OG	2:A:445:GLN:HB2	2.20	0.42
2:A:475:ASN:C	2:A:477:TYR:H	2.22	0.42
2:A:541:PRO:HD2	2:A:674:TYR:CD2	2.55	0.42
2:A:620:PRO:HB3	2:A:628:VAL:HG22	2.02	0.42
2:A:657:SER:HA	2:A:661:ARG:HG2	2.00	0.42
2:A:708:GLY:HA3	2:A:745:TRP:C	2.39	0.42
2:A:792:LYS:CG	2:A:795:ASP:HA	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:110:LEU:HA	3:B:110:LEU:HD13	1.84	0.42
3:B:143:TRP:HE3	3:B:144:GLN:N	2.18	0.42
3:B:165:HIS:HB2	3:B:171:LEU:HB2	2.02	0.42
3:B:341:ASP:OD2	3:B:345:TYR:HD2	2.02	0.42
3:B:380:ILE:O	3:B:387:VAL:HG12	2.19	0.42
5:D:211:THR:O	5:D:215:LEU:HG	2.19	0.42
1:G:1265:ASN:OD1	1:G:1266:ALA:N	2.53	0.42
2:A:352:ILE:C	2:A:353:ARG:HD2	2.40	0.42
2:A:576:TRP:CG	2:A:577:THR:N	2.88	0.42
2:A:638:GLY:O	2:A:709:ASN:ND2	2.35	0.42
2:A:709:ASN:HB3	2:A:747:THR:HG23	2.02	0.42
3:B:109:ALA:HA	3:B:128:LYS:HE2	2.02	0.42
3:B:161:LEU:HB3	3:B:163:LEU:HD23	2.01	0.42
3:B:299:VAL:HG22	3:B:303:ASP:HA	2.00	0.42
5:D:222:TYR:HB2	5:D:231:ALA:HB2	2.01	0.42
6:E:60:GLY:O	6:E:62:PRO:HD3	2.19	0.42
2:A:345:ASN:OD1	2:A:346:ARG:N	2.49	0.42
2:A:541:PRO:O	2:A:675:PHE:HB3	2.20	0.42
2:A:551:SER:HB2	2:A:645:GLU:OE2	2.19	0.42
3:B:348:TRP:HB2	3:B:358:ALA:N	2.35	0.42
4:C:50:LEU:HD22	5:D:241:ASN:C	2.39	0.42
5:D:112:ARG:NH2	5:D:146:ASP:HA	2.35	0.42
5:D:147:PHE:N	5:D:147:PHE:CD1	2.86	0.42
5:D:202:LEU:HB2	5:D:203:ARG:NH1	2.34	0.42
5:D:208:THR:HG1	5:D:211:THR:HG1	1.59	0.42
6:E:29:ARG:NE	6:E:82:GLY:HA3	2.34	0.42
2:A:152:LYS:CG	2:A:168:VAL:HB	2.50	0.42
2:A:637:TYR:HD1	2:A:710:ALA:HA	1.84	0.42
2:A:767:ARG:NH2	2:A:794:TYR:HB2	2.34	0.42
3:B:98:ALA:N	3:B:106:LYS:HZ1	2.17	0.42
3:B:165:HIS:CD2	3:B:187:LEU:HD21	2.55	0.42
3:B:292:ASP:O	3:B:295:ARG:NH2	2.52	0.42
5:D:185:TYR:O	5:D:190:ALA:N	2.53	0.42
1:G:1273:ARG:HG3	1:G:1297:ARG:NH2	2.35	0.42
2:A:41:ALA:HA	2:A:44:LEU:HD12	2.00	0.42
2:A:618:TYR:OH	2:A:632:ARG:HG3	2.19	0.42
2:A:675:PHE:CD1	2:A:676:PRO:HD2	2.55	0.42
2:A:683:ASP:HA	2:A:684:PRO:HD3	1.89	0.42
3:B:230:GLN:HG3	3:B:275:GLY:O	2.20	0.42
3:B:297:TYR:HB3	3:B:307:ALA:HB1	2.01	0.42
4:C:64:ASP:OD1	4:C:64:ASP:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:32:ILE:CG1	6:E:82:GLY:H	2.30	0.42
2:A:284:ILE:HG12	2:A:311:LEU:HD23	2.02	0.41
2:A:299:THR:O	2:A:302:THR:OG1	2.25	0.41
2:A:371:GLN:HG2	2:A:382:VAL:HG12	2.01	0.41
2:A:447:ASP:OD1	2:A:456:VAL:HG23	2.20	0.41
2:A:541:PRO:HD3	2:A:561:GLN:CG	2.49	0.41
3:B:59:PHE:HB2	3:B:77:ARG:HH22	1.85	0.41
3:B:207:ALA:HB3	3:B:219:VAL:HG23	2.02	0.41
5:D:112:ARG:O	5:D:115:THR:HB	2.20	0.41
5:D:147:PHE:CE2	5:D:166:ARG:HG2	2.53	0.41
6:E:29:ARG:CZ	6:E:82:GLY:HA3	2.50	0.41
2:A:697:LYS:HA	2:A:697:LYS:HD2	1.78	0.41
2:A:798:LYS:HB3	2:A:798:LYS:HE3	1.86	0.41
3:B:233:SER:HG	3:B:263:TYR:H	1.65	0.41
3:B:269:ALA:O	3:B:278:MET:HB2	2.20	0.41
5:D:58:LEU:HD23	5:D:62:TYR:HB2	2.01	0.41
5:D:178:GLU:CA	5:D:197:ARG:HH12	2.33	0.41
5:D:215:LEU:HB2	5:D:238:ILE:HG21	2.02	0.41
6:E:71:ASN:HB3	6:E:73:TRP:CD1	2.55	0.41
1:G:1277:GLU:HB2	1:G:1293:ASN:HB2	2.02	0.41
2:A:137:LEU:HG	2:A:141:TYR:CZ	2.55	0.41
2:A:542:GLN:HG3	2:A:545:MET:H	1.84	0.41
2:A:766:ILE:O	2:A:767:ARG:NH2	2.53	0.41
3:B:92:ILE:HG22	3:B:93:TRP:CD1	2.55	0.41
5:D:191:TRP:O	5:D:195:VAL:HG23	2.20	0.41
5:D:194:VAL:HA	5:D:197:ARG:CB	2.51	0.41
2:A:148:SER:OG	2:A:148:SER:O	2.34	0.41
2:A:195:SER:HA	2:A:728:LYS:HZ2	1.86	0.41
2:A:200:ARG:HH21	2:A:728:LYS:HZ2	1.68	0.41
2:A:578:TYR:CE2	2:A:580:LYS:HB2	2.56	0.41
2:A:703:ASP:OD1	2:A:704:ASP:N	2.50	0.41
3:B:95:VAL:HG21	3:B:139:GLY:C	2.40	0.41
3:B:173:ALA:HB3	3:B:182:LYS:HB2	2.02	0.41
3:B:300:ASP:C	3:B:302:ASN:H	2.24	0.41
5:D:223:ARG:NH1	5:D:231:ALA:HB1	2.35	0.41
6:E:77:PHE:CZ	6:E:79:GLN:HB3	2.54	0.41
2:A:395:PHE:HA	2:A:421:ARG:N	2.36	0.41
2:A:546:TRP:CH2	2:A:558:THR:HA	2.55	0.41
2:A:728:LYS:HA	2:A:731:ASN:OD1	2.21	0.41
2:A:733:VAL:C	2:A:734:ARG:HD3	2.40	0.41
2:A:783:LEU:HD13	2:A:785:PHE:CE2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:143:TRP:HB2	3:B:178:ASP:CG	2.41	0.41
3:B:253:VAL:HG13	3:B:257:VAL:C	2.41	0.41
3:B:341:ASP:OD2	3:B:343:GLU:HB2	2.21	0.41
3:B:349:ILE:HG22	3:B:350:ASN:O	2.21	0.41
1:G:1260:MET:O	1:G:1280:LYS:N	2.51	0.41
2:A:35:GLN:OE1	5:D:64:PHE:HA	2.20	0.41
2:A:249:PRO:O	2:A:251:LYS:HG2	2.20	0.41
2:A:387:GLU:HA	2:A:390:ASN:HB2	2.03	0.41
2:A:478:PHE:C	2:A:480:VAL:H	2.24	0.41
2:A:552:MET:HA	2:A:644:LYS:HZ1	1.85	0.41
2:A:656:GLY:HA3	2:A:665:SER:OG	2.21	0.41
3:B:304:ARG:HB2	3:B:320:SER:HB3	2.03	0.41
4:C:31:TYR:CE1	4:C:36:SER:HA	2.55	0.41
2:A:214:TYR:CG	2:A:215:GLN:N	2.89	0.41
2:A:215:GLN:HG3	2:A:217:GLN:H	1.86	0.41
2:A:468:TYR:HD1	2:A:492:ASN:HB2	1.85	0.41
2:A:468:TYR:CG	2:A:469:ALA:N	2.88	0.41
3:B:38:VAL:HG23	3:B:359:GLN:HB3	2.02	0.41
3:B:267:LEU:O	3:B:280:LYS:HA	2.20	0.41
4:C:75:ALA:HB1	4:C:79:ALA:C	2.41	0.41
5:D:106:ASP:OD1	5:D:107:TYR:N	2.53	0.41
2:A:206:TRP:HH2	2:A:726:SER:HB3	1.85	0.41
2:A:242:SER:OG	2:A:244:GLN:OE1	2.31	0.41
2:A:246:SER:HA	3:B:194:LEU:HA	2.03	0.41
2:A:273:VAL:HA	2:A:339:VAL:O	2.21	0.41
2:A:307:ASP:OD1	2:A:308:ILE:N	2.54	0.41
2:A:368:GLU:OE2	2:A:388:ARG:HB3	2.20	0.41
2:A:395:PHE:CB	2:A:418:VAL:HB	2.51	0.41
3:B:308:LEU:HA	3:B:314:VAL:O	2.21	0.41
4:C:76:VAL:H	4:C:79:ALA:HB3	1.84	0.41
2:A:92:PRO:HB3	2:A:157:PRO:HB3	2.01	0.41
2:A:276:ASN:N	2:A:342:ASP:OD1	2.33	0.41
2:A:436:SER:OG	2:A:437:GLY:O	2.38	0.41
2:A:480:VAL:HB	2:A:483:VAL:CG2	2.51	0.41
2:A:579:ASN:CA	2:A:592:ARG:HH21	2.34	0.41
3:B:82:LYS:HG2	3:B:83:ALA:N	2.34	0.41
3:B:82:LYS:NZ	3:B:91:GLU:HB2	2.36	0.41
3:B:91:GLU:OE1	3:B:94:SER:HB2	2.21	0.41
3:B:154:ARG:HH12	3:B:370:GLU:HG2	1.86	0.41
3:B:296:ILE:HD12	3:B:296:ILE:HA	1.73	0.41
3:B:308:LEU:CG	3:B:313:GLY:HA2	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:319:GLN:NE2	3:B:353:ASP:HA	2.27	0.41
5:D:116:ASN:O	5:D:119:LEU:HG	2.20	0.41
5:D:215:LEU:HB3	5:D:234:VAL:HG12	2.03	0.41
5:D:220:ASN:OD1	5:D:221:ALA:N	2.54	0.41
5:D:233:LYS:HD2	5:D:233:LYS:HA	1.86	0.41
6:E:70:THR:OG1	6:E:71:ASN:N	2.53	0.41
2:A:36:ARG:HE	5:D:64:PHE:C	2.23	0.41
2:A:99:PHE:CD1	2:A:167:LEU:HB2	2.55	0.41
2:A:141:TYR:O	2:A:147:TYR:HB2	2.20	0.41
2:A:507:LYS:HE3	2:A:533:HIS:CD2	2.56	0.41
3:B:45:THR:C	3:B:390:ILE:HG23	2.42	0.41
5:D:134:ASP:OD1	5:D:134:ASP:N	2.54	0.41
6:E:63:LEU:H	6:E:75:TYR:HE1	1.62	0.41
2:A:272:GLU:OE2	2:A:336:LYS:HB3	2.20	0.40
2:A:394:PHE:C	2:A:421:ARG:HG2	2.42	0.40
2:A:541:PRO:HD2	2:A:674:TYR:CE2	2.56	0.40
3:B:36:PRO:HB2	3:B:37:THR:HG23	2.03	0.40
5:D:95:PHE:CE1	5:D:98:LEU:HD22	2.56	0.40
5:D:106:ASP:O	5:D:109:MET:HB2	2.20	0.40
5:D:143:ALA:HA	5:D:146:ASP:OD2	2.21	0.40
5:D:166:ARG:HG3	5:D:170:LEU:HD23	2.03	0.40
2:A:59:ILE:O	2:A:62:THR:OG1	2.31	0.40
2:A:243:THR:OG1	2:A:258:VAL:HA	2.20	0.40
2:A:488:ARG:HD3	2:A:512:ASP:O	2.20	0.40
2:A:540:GLN:HB3	2:A:674:TYR:CE2	2.56	0.40
2:A:598:LYS:HE2	2:A:610:LYS:HB2	2.03	0.40
5:D:76:ILE:O	5:D:79:TYR:HB2	2.21	0.40
5:D:170:LEU:HA	5:D:170:LEU:HD13	1.80	0.40
5:D:216:PRO:HG3	5:D:238:ILE:HD12	2.03	0.40
2:A:220:ALA:O	2:A:224:GLU:HG2	2.22	0.40
2:A:547:ARG:HH22	2:A:748:ASN:C	2.25	0.40
2:A:604:SER:OG	2:A:606:ASN:O	2.39	0.40
2:A:647:PRO:O	2:A:650:GLU:N	2.25	0.40
3:B:33:SER:N	3:B:323:LEU:HB2	2.37	0.40
3:B:228:TRP:NE1	3:B:272:LEU:O	2.53	0.40
3:B:386:THR:OG1	3:B:387:VAL:N	2.54	0.40
4:C:32:LYS:HE3	5:D:48:TRP:HZ2	1.85	0.40
2:A:72:PHE:HD2	2:A:91:ARG:NH2	2.19	0.40
2:A:97:ILE:H	2:A:120:ARG:HH12	1.69	0.40
2:A:97:ILE:HG12	2:A:120:ARG:NH1	2.36	0.40
2:A:110:LEU:HA	2:A:113:ASN:ND2	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:198:GLN:OE1	2:A:199:LEU:HD22	2.21	0.40
2:A:199:LEU:HD21	2:A:218:LYS:HB3	2.04	0.40
2:A:213:LYS:HG3	2:A:218:LYS:NZ	2.36	0.40
2:A:297:ASN:OD1	2:A:299:THR:N	2.54	0.40
2:A:727:ASP:OD1	2:A:727:ASP:N	2.54	0.40
3:B:219:VAL:HB	3:B:224:GLY:C	2.42	0.40
3:B:336:ASN:HD21	3:B:348:TRP:HB3	1.87	0.40
4:C:28:ASP:C	4:C:30:ARG:HD2	2.42	0.40
5:D:187:GLU:OE1	5:D:188:ARG:HG2	2.20	0.40
2:A:198:GLN:OE1	2:A:218:LYS:HD2	2.22	0.40
3:B:42:PHE:HD2	3:B:392:ARG:HG2	1.86	0.40
3:B:174:LEU:HD23	3:B:181:VAL:HA	2.02	0.40
3:B:305:VAL:HB	3:B:319:GLN:O	2.22	0.40
3:B:306:MET:HA	3:B:318:THR:CB	2.51	0.40
4:C:56:MET:SD	5:D:233:LYS:HE3	2.61	0.40
4:C:81:ASP:CG	4:C:83:ARG:HG2	2.41	0.40
5:D:48:TRP:CB	5:D:82:ASN:HB2	2.50	0.40
5:D:116:ASN:ND2	5:D:139:HIS:O	2.55	0.40
5:D:165:LYS:HD2	5:D:165:LYS:C	2.42	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	G	83/723 (12%)	71 (86%)	12 (14%)	0	100	100
2	A	785/810 (97%)	612 (78%)	171 (22%)	2 (0%)	41	77
3	B	371/373 (100%)	280 (76%)	91 (24%)	0	100	100
4	C	64/344 (19%)	53 (83%)	11 (17%)	0	100	100
5	D	222/245 (91%)	188 (85%)	34 (15%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	E	89/123 (72%)	72 (81%)	17 (19%)	0	100	100
All	All	1614/2618 (62%)	1276 (79%)	336 (21%)	2 (0%)	54	86

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	A	92	PRO
2	A	796	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	G	47/578 (8%)	46 (98%)	1 (2%)	53	72
2	A	671/688 (98%)	659 (98%)	12 (2%)	59	77
3	B	304/304 (100%)	298 (98%)	6 (2%)	55	74
4	C	49/276 (18%)	49 (100%)	0	100	100
5	D	188/204 (92%)	184 (98%)	4 (2%)	53	72
6	E	80/103 (78%)	78 (98%)	2 (2%)	47	68
All	All	1339/2153 (62%)	1314 (98%)	25 (2%)	59	75

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

Mol	Chain	Res	Type
1	G	1269	ARG
2	A	64	ARG
2	A	76	ARG
2	A	79	ARG
2	A	227	ARG
2	A	252	LYS
2	A	350	ARG
2	A	391	ARG
2	A	488	ARG

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Mol	Chain	Res	Type
2	A	526	ARG
2	A	614	ASP
2	A	734	ARG
2	A	798	LYS
3	B	231	ARG
3	B	232	ILE
3	B	273	ARG
3	B	304	ARG
3	B	325	ARG
3	B	392	ARG
5	D	49	ARG
5	D	165	LYS
5	D	173	ARG
5	D	236	LYS
6	E	47	ARG
6	E	57	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (18) such sidechains are listed below:

Mol	Chain	Res	Type
2	A	113	ASN
2	A	371	GLN
2	A	466	GLN
2	A	561	GLN
2	A	651	ASN
2	A	681	ASN
3	B	62	ASN
3	B	230	GLN
3	B	276	GLN
3	B	301	GLN
3	B	319	GLN
3	B	347	HIS
5	D	69	GLN
5	D	116	ASN
5	D	125	GLN
5	D	196	ASN
6	E	79	GLN
6	E	88	GLN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

### 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

### 5.6 Ligand geometry [i](#)

There are no ligands in this entry.

### 5.7 Other polymers [i](#)

There are no such residues in this entry.

### 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-24481. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

### 6.1 Orthogonal projections [i](#)

#### 6.1.1 Primary map



X



Y



Z

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

### 6.2 Central slices [i](#)

#### 6.2.1 Primary map



X Index: 120



Y Index: 120



Z Index: 120

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: 113



Y Index: 113

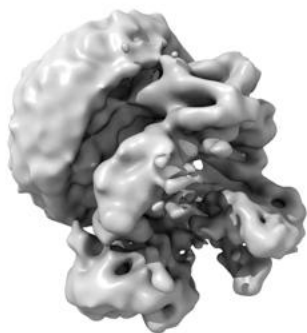


Z Index: 142

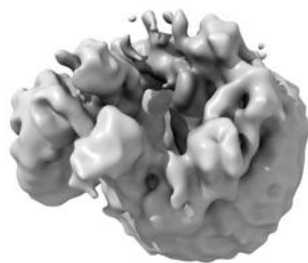
The images above show the largest variance slices of the map in three orthogonal directions.

## 6.4 Orthogonal surface views [i](#)

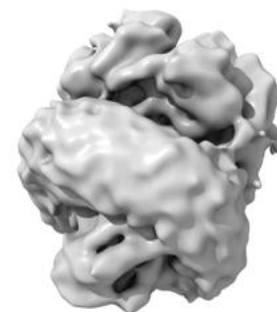
### 6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0025. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

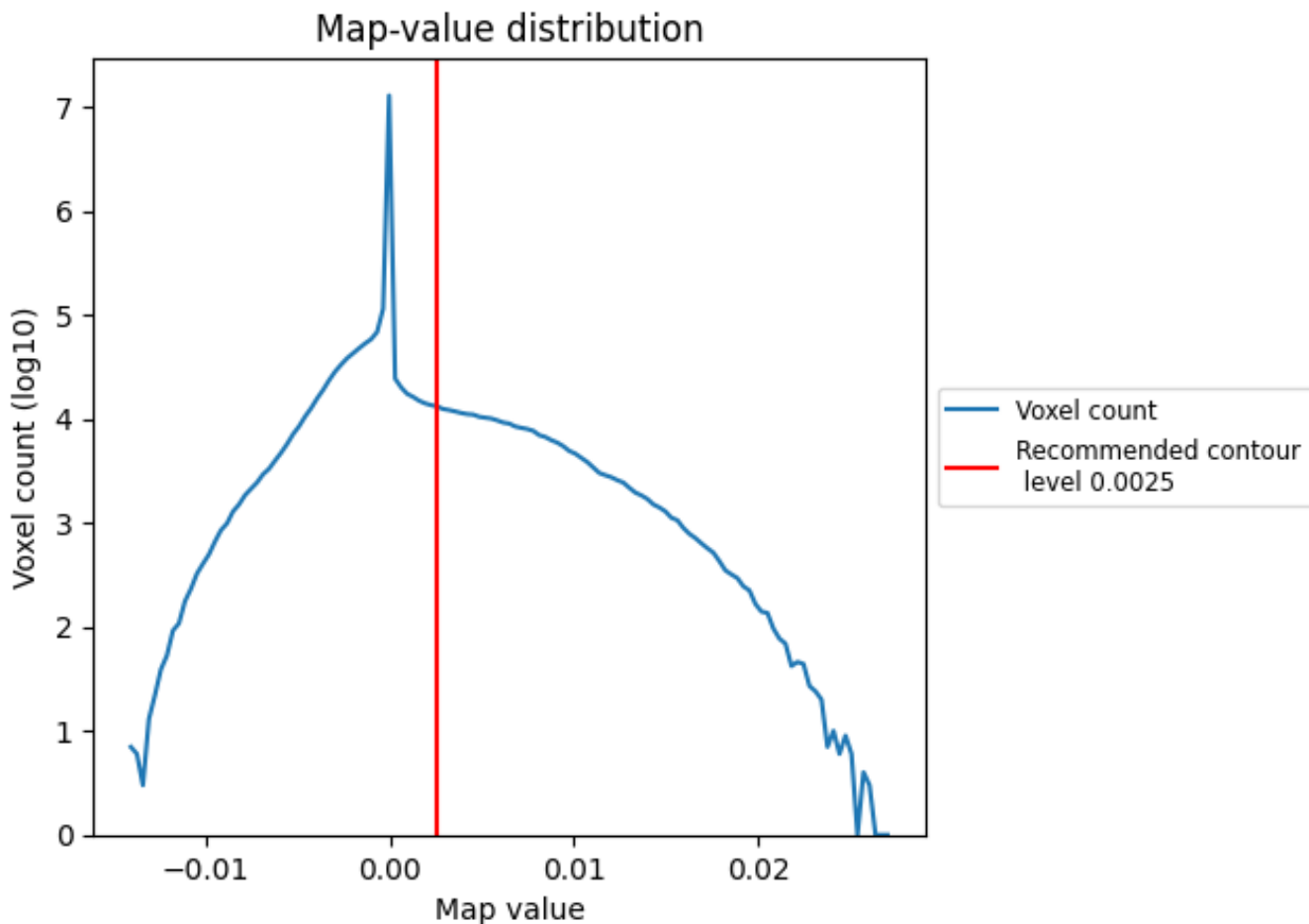
## 6.5 Mask visualisation

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

## 7 Map analysis [i](#)

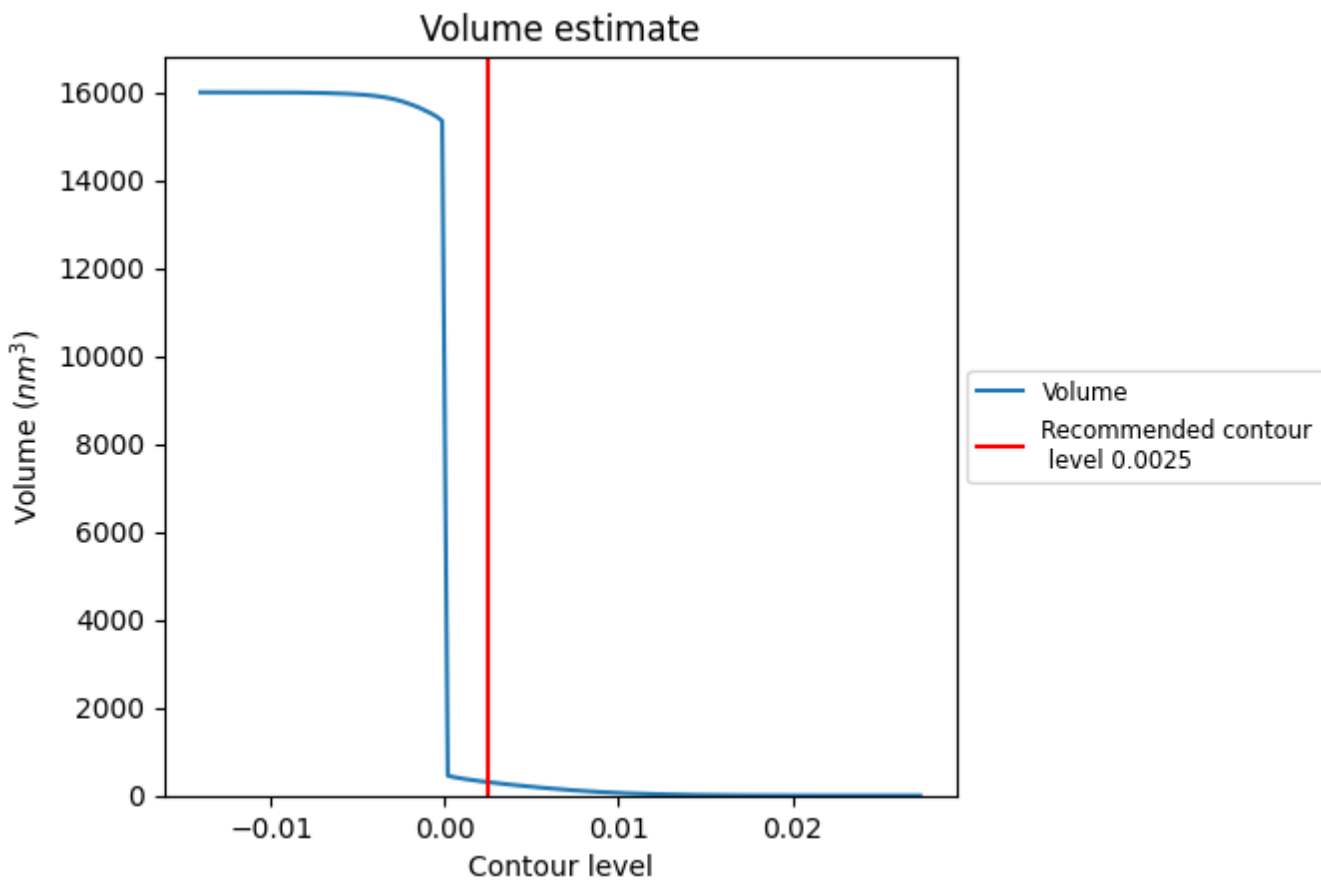
This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution [i](#)



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

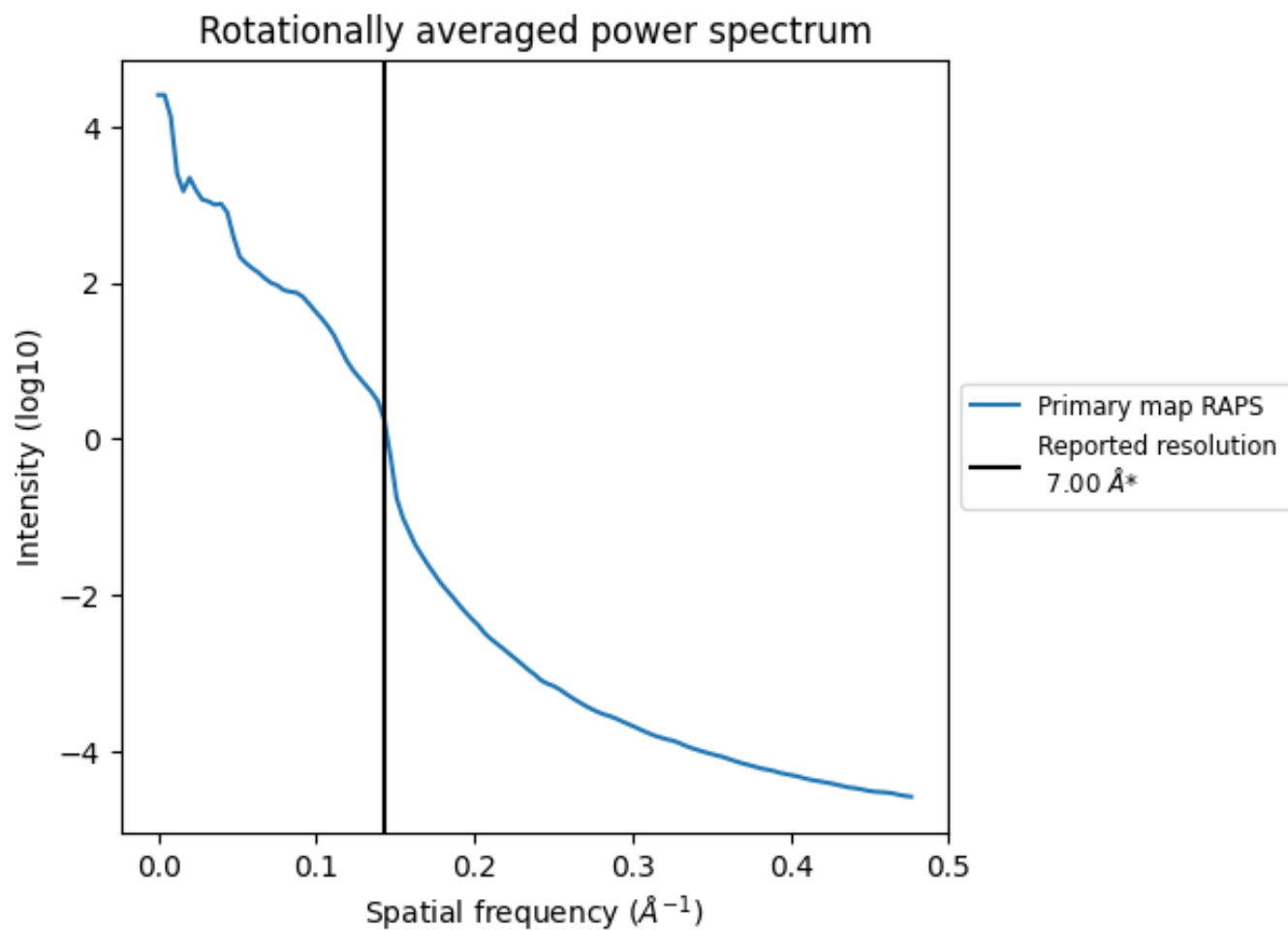
## 7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 305 nm<sup>3</sup>; this corresponds to an approximate mass of 276 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  $0.143 \text{\AA}^{-1}$



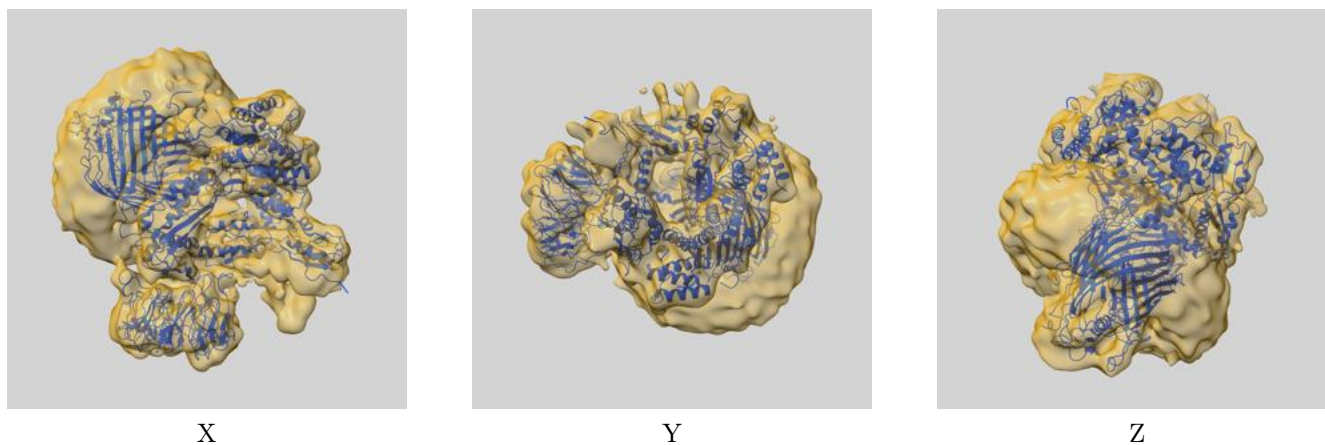
## 8 Fourier-Shell correlation

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-24481 and PDB model 7RJ5. Per-residue inclusion information can be found in section 3 on page 5.

### 9.1 Map-model overlay [i](#)



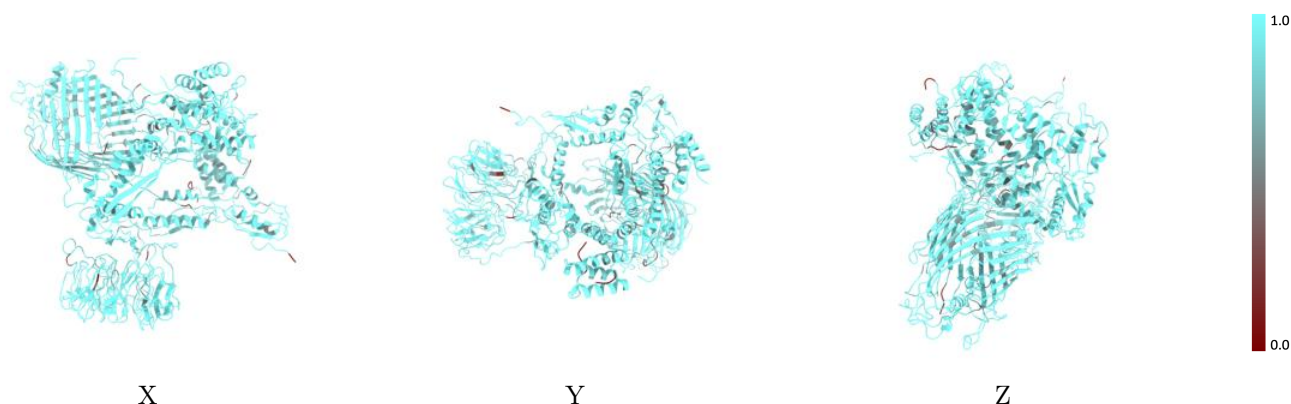
The images above show the 3D surface view of the map at the recommended contour level 0.0025 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



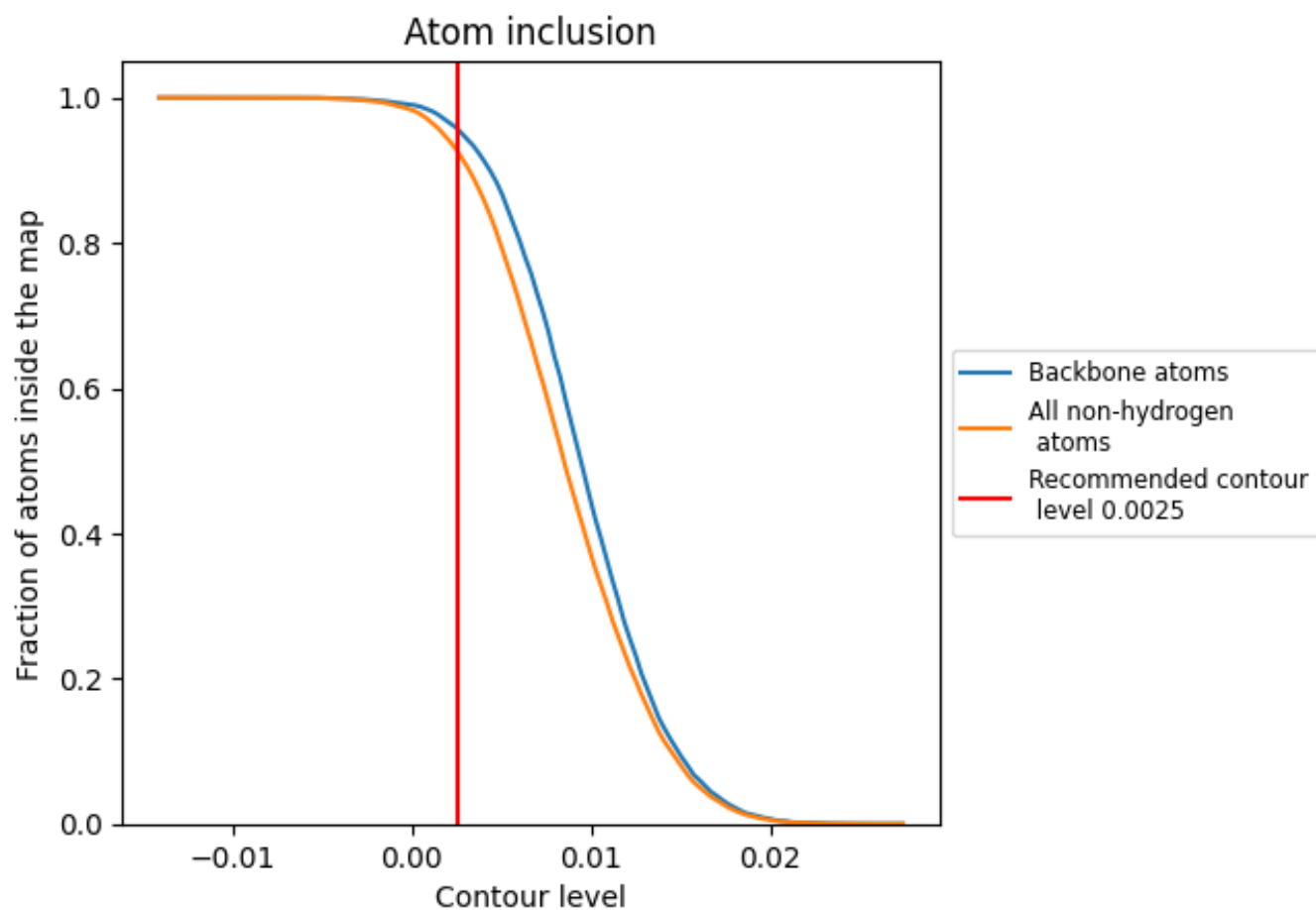
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.0025).















## 9.4 Atom inclusion [i](#)



At the recommended contour level, 96% of all backbone atoms, 93% 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 (0.0025) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9277	 0.2100
A	 0.9268	 0.2090
B	 0.9573	 0.2020
C	 0.8473	 0.2380
D	 0.9366	 0.2110
E	 0.9428	 0.2310
G	 0.8300	 0.2090

