



Full wwPDB EM Validation Report ⓘ

Aug 28, 2024 – 08:06 am BST

PDB ID : 8QXU
EMDB ID : EMD-18737
Title : In situ structure average of GroEL14-GroES7 complexes with wide GroEL7 trans ring conformation in Escherichia coli cytosol obtained by cryo electron tomography
Authors : Wagner, J.; Caravajal, A.I.; Beck, F.; Bracher, A.; Wan, W.; Bohn, S.; Koenner, R.; Baumeister, W.; Fernandez-Busnadiego, R.; Hartl, F.U.
Deposited on : 2023-10-25
Resolution : 12.00 Å(reported)
Based on initial models : 8P4M, 1KP8

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.dev112
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.38.2

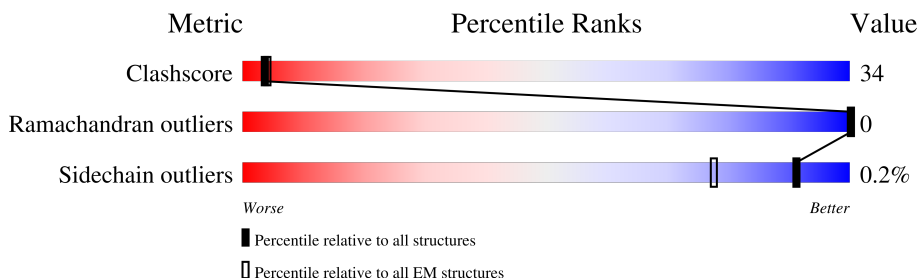
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 12.00 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	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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	547	
1	B	547	
1	C	547	
1	D	547	
1	E	547	
1	F	547	
1	G	547	

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Mol	Chain	Length	Quality of chain
1	H	547	 43% 53% .
1	I	547	 44% 52% .
1	J	547	 41% 54% .
1	K	547	 43% 53% .
1	L	547	 43% 53% .
1	M	547	 42% 54% .
1	N	547	 44% 52% .
2	O	97	 42% 56% .
2	P	97	 40% 58% .
2	Q	97	 43% 55% .
2	R	97	 43% 55% .
2	S	97	 44% 54% .
2	T	97	 43% 55% .
2	U	97	 42% 56% .

2 Entry composition [i](#)

There are 7 unique types of molecules in this entry. The entry contains 59458 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 Chaperonin GroEL.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	524	Total	C	N	O	S	0	0
			3851	2395	665	771	20		
1	B	524	Total	C	N	O	S	0	0
			3851	2395	665	771	20		
1	C	524	Total	C	N	O	S	0	0
			3851	2395	665	771	20		
1	D	524	Total	C	N	O	S	0	0
			3851	2395	665	771	20		
1	E	524	Total	C	N	O	S	0	0
			3851	2395	665	771	20		
1	F	524	Total	C	N	O	S	0	0
			3851	2395	665	771	20		
1	G	524	Total	C	N	O	S	0	0
			3851	2395	665	771	20		
1	H	525	Total	C	N	O	S	0	0
			3864	2403	667	774	20		
1	I	525	Total	C	N	O	S	0	0
			3864	2403	667	774	20		
1	J	525	Total	C	N	O	S	0	0
			3864	2403	667	774	20		
1	K	525	Total	C	N	O	S	0	0
			3864	2403	667	774	20		
1	L	525	Total	C	N	O	S	0	0
			3864	2403	667	774	20		
1	M	525	Total	C	N	O	S	0	0
			3864	2403	667	774	20		
1	N	525	Total	C	N	O	S	0	0
			3864	2403	667	774	20		

- Molecule 2 is a protein called Co-chaperonin GroES.

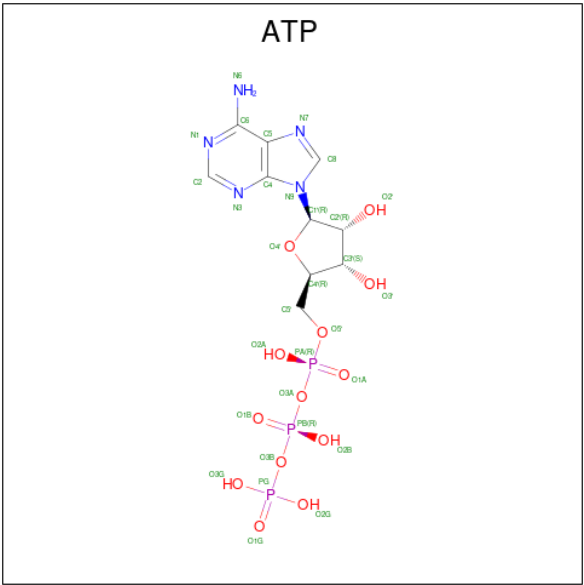
Mol	Chain	Residues	Atoms					AltConf	Trace
2	O	95	Total	C	N	O	S	0	0
			687	430	125	131	1		

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	P	95	Total	C	N	O	S	0	0
			687	430	125	131	1		
2	Q	95	Total	C	N	O	S	0	0
			687	430	125	131	1		
2	R	95	Total	C	N	O	S	0	0
			687	430	125	131	1		
2	S	95	Total	C	N	O	S	0	0
			687	430	125	131	1		
2	T	95	Total	C	N	O	S	0	0
			687	430	125	131	1		
2	U	95	Total	C	N	O	S	0	0
			687	430	125	131	1		

- Molecule 3 is ADENOSINE-5'-TRIPHOSPHATE (three-letter code: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$).



Mol	Chain	Residues	Atoms					AltConf
3	A	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	B	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	C	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	D	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	E	1	Total	C	N	O	P	0
			31	10	5	13	3	

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Mol	Chain	Residues	Atoms					AltConf
3	F	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	G	1	Total	C	N	O	P	0
			31	10	5	13	3	

- Molecule 4 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
4	A	1	Total	Mg	0
			1	1	
4	B	1	Total	Mg	0
			1	1	
4	C	1	Total	Mg	0
			1	1	
4	D	1	Total	Mg	0
			1	1	
4	E	1	Total	Mg	0
			1	1	
4	F	1	Total	Mg	0
			1	1	
4	G	1	Total	Mg	0
			1	1	
4	H	1	Total	Mg	0
			1	1	
4	I	1	Total	Mg	0
			1	1	
4	J	1	Total	Mg	0
			1	1	
4	K	1	Total	Mg	0
			1	1	
4	L	1	Total	Mg	0
			1	1	
4	M	1	Total	Mg	0
			1	1	
4	N	1	Total	Mg	0
			1	1	

- Molecule 5 is POTASSIUM ION (three-letter code: K) (formula: K).

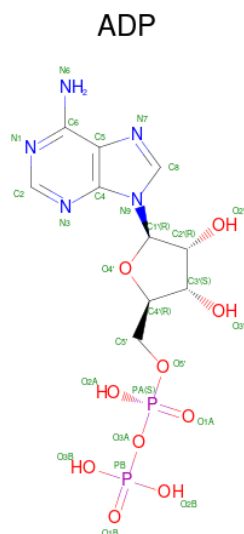
Mol	Chain	Residues	Atoms		AltConf
5	A	1	Total	K	0
			1	1	

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Mol	Chain	Residues	Atoms		AltConf
5	B	1	Total 1	K 1	0
5	C	1	Total 1	K 1	0
5	D	1	Total 1	K 1	0
5	E	1	Total 1	K 1	0
5	F	1	Total 1	K 1	0
5	G	1	Total 1	K 1	0
5	H	1	Total 1	K 1	0
5	I	1	Total 1	K 1	0
5	J	1	Total 1	K 1	0
5	K	1	Total 1	K 1	0
5	L	1	Total 1	K 1	0
5	M	1	Total 1	K 1	0
5	N	1	Total 1	K 1	0

- Molecule 6 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$).



Mol	Chain	Residues	Atoms					AltConf
6	H	1	Total 27	C 10	N 5	O 10	P 2	0
6	I	1	Total 27	C 10	N 5	O 10	P 2	0
6	J	1	Total 27	C 10	N 5	O 10	P 2	0
6	K	1	Total 27	C 10	N 5	O 10	P 2	0
6	L	1	Total 27	C 10	N 5	O 10	P 2	0
6	M	1	Total 27	C 10	N 5	O 10	P 2	0
6	N	1	Total 27	C 10	N 5	O 10	P 2	0

- Molecule 7 is water.

Mol	Chain	Residues	Atoms		AltConf
7	A	30	Total 30	O 30	0
7	B	29	Total 29	O 29	0
7	C	28	Total 28	O 28	0
7	D	30	Total 30	O 30	0
7	E	29	Total 29	O 29	0

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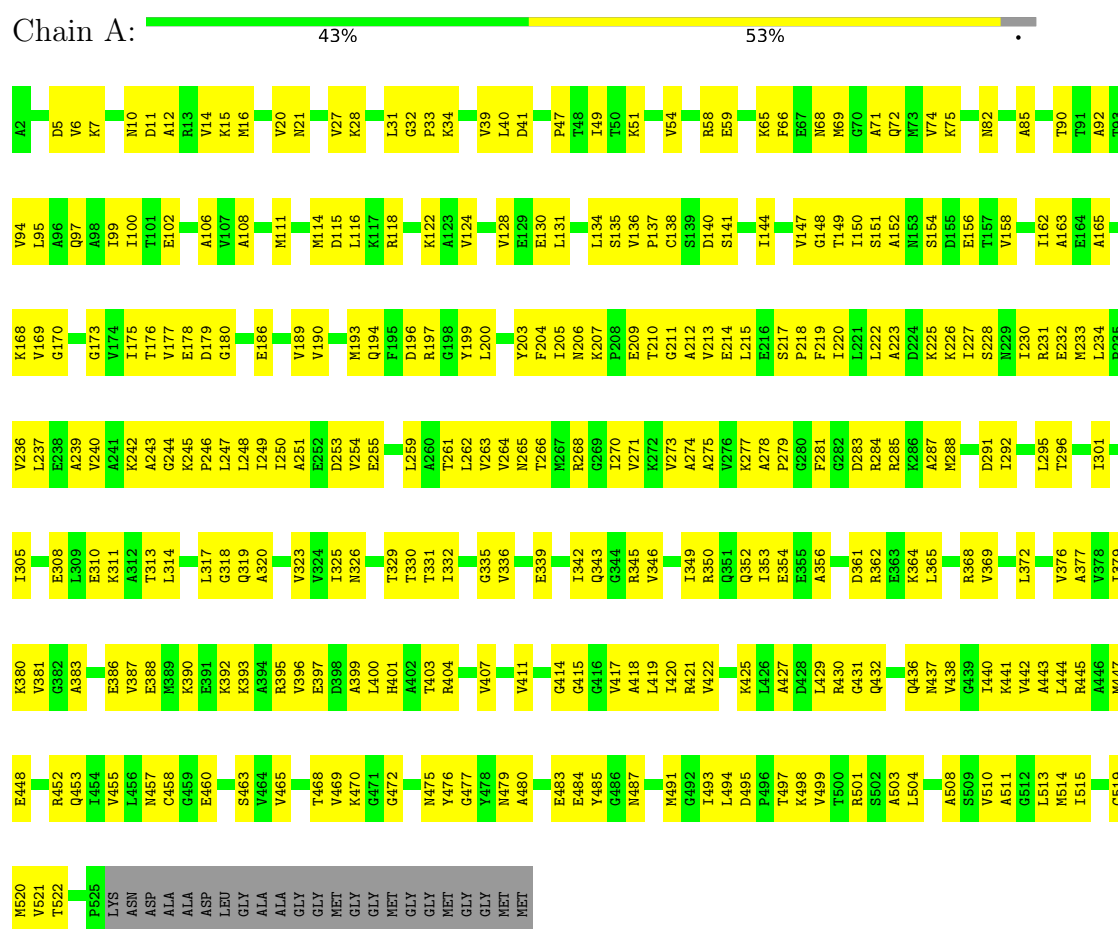
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Mol	Chain	Residues	Atoms		AltConf
7	F	30	Total 30	O 30	0
7	G	27	Total 27	O 27	0
7	H	1	Total 1	O 1	0
7	I	1	Total 1	O 1	0
7	J	1	Total 1	O 1	0
7	K	1	Total 1	O 1	0
7	L	1	Total 1	O 1	0
7	M	1	Total 1	O 1	0
7	N	1	Total 1	O 1	0

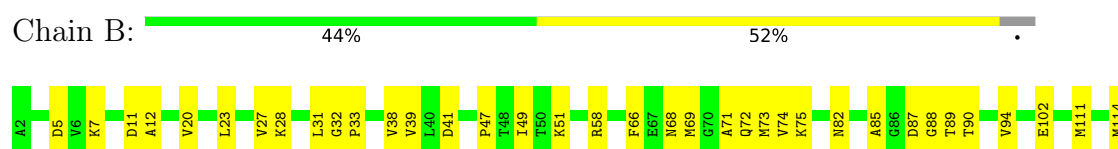
3 Residue-property plots

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

• Molecule 1: Chaperonin GroEL



• Molecule 1: Chaperonin GroEL



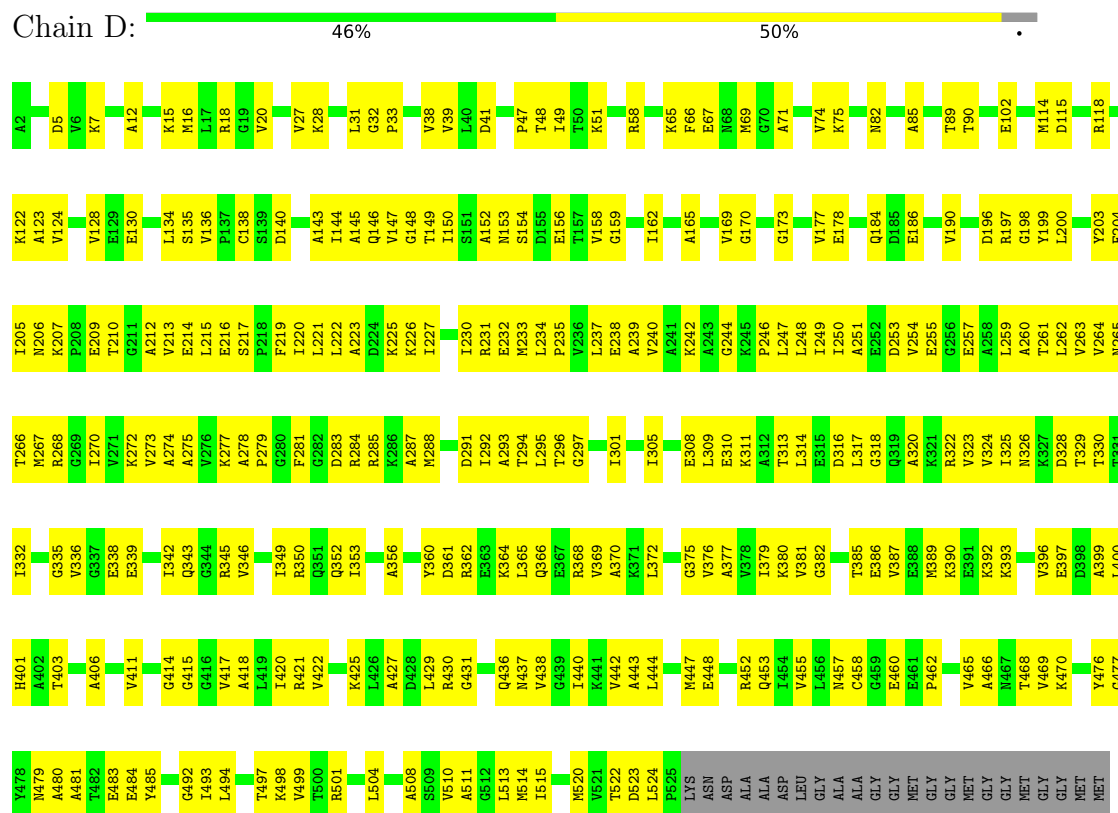
D115	V189	D253	V324	R395	V484	GLY
L116	V190	A258	I325	V396	V485	MET
K117	M193	L259	N326	E397	T468	GLY
R118	Q194	A260	K327	E398	T469	GLY
K122	P195	T261	D328	A399	K470	MET
A123	R196	L262	L400	H401	G471	GLY
V124	R197	V263	T330	A402	G472	MET
V128	R198	V264	T331	T403	N475	GLY
E129	Y199	N265	I332	R404	Y476	GLY
E130	L200	T266	I333	A405	A477	MET
L131	S201	K267	V336	A406	G478	MET
L134	F204	R268	E337	E409	N479	
S135	I205	G269	E338	G410	A480	
V136	N206	I270	E339	V411	E483	
P137	K207	V271	I342	Q415	E484	
C138	G211	K272	Q343	G416	Y485	
A143	A212	A274	K344	V417	G486	
I144	V213	A275	V346	A418	N487	
A145	E214	V276	I349	L419	M491	
Q146	L215	K277	Q352	T420	I492	
V147	E216	P279	I353	R421	G493	
G148	S217	G280	I353	V422	L494	
T149	P218	F281	K425	K425	T497	
I150	F219	G282	A356	L426	K498	
S151	I220	R284	D361	A427	Y499	
A152	L221	R285	R362	D428	L429	
M153	L222	K286	E583	R430	T500	
S154	A223	A287	K364	Q431	R501	
D155	D224	M288	L365	Q432	L504	
E156	K225	D291	Q366	N433	Q505	
T157	I227	I292	E367	Q436	A508	
V158	I227	S228	R368	N437	A511	
G159	S229	L295	V369	T440	T515	
I162	I230	T296	A370	K441	C519	
A163	R231	V300	K371	V442	M520	
E164	M233	I301	L372	A443	Y521	
A165	L234	I305	G375	R445	D523	
M166	L237	E308	V376	A446	L524	
V169	E238	L309	A377	E448	P525	
K171	V240	E310	V378	R452	LYS	
E172	G173	K311	I379	Q453	ASN	
G173	A241	A312	K380	T454	ASP	
V174	K242	T313	V381	V455	ALA	
I175	A243	L314	T385	L456	ALA	
I176	G244	L317	E386	T89	ASP	
V177	K245	K317	V387	A457	LEU	
E178	P246	L319	M389	C458	GLY	
D179	L247	G318	ASP	N459	ALA	
G180	L248	A320	K390	E460	ALA	
Q184	I249	K321	E391	S463	GLY	
D185	L250	R322	K392			
E186	A251	V323	A393			

• Molecule 1: Chaperonin GroEL

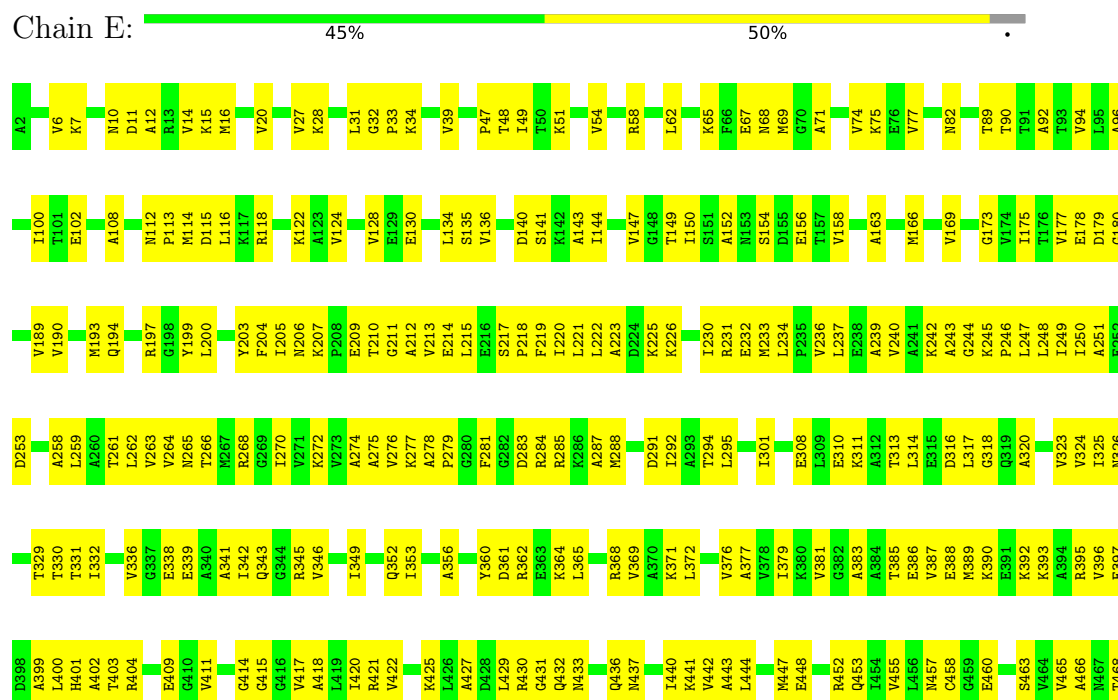
Chain C:  44% 52%

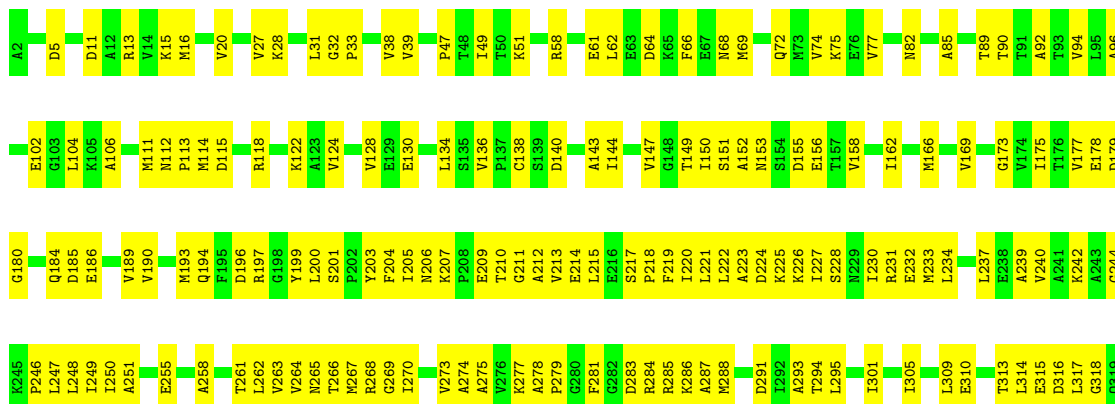
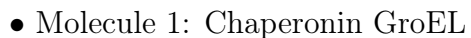
A2	E102	L183	L248	A320	E388	T454
D5	A106	E186	T249	R321	M389	V485
A12	M111	V190	E252	V323	K390	T486
K15	P113	M193	D253	V324	E391	N457
M16	M114	Q194	V254	K326	K392	C458
L17	D115	F195	E255	R327	A394	E480
R18	L116	E257	A258	D328	R395	S463
G19	K117	D196	E259	T329	V396	T484
V20	R118	R197	L259	T330	D398	V485
V27	K122	G198	T261	T331	A399	T488
R28	A123	Y199	L262	I332	L400	V489
V29	V124	L200	V263	G335	A402	K470
L31	T125	Y203	V264	V336	G471	G472
Q30	A126	F204	N265	E339	A405	N475
G32	A127	I205	T266	A340	A406	Y476
P33	V128	K206	K287	A341	E409	G477
K34	E129	K207	R288	I342	G410	Y478
G35	E130	E209	G289	Q343	V411	N479
R36	T210	G211	I270	R345	G414	A480
N37	S135	A212	V273	V346	C415	E483
V38	V136	V213	A274	I349	G416	E484
P47	C138	E214	V275	R350	V417	Y485
K51	L215	L216	K277	Q351	A418	G486
V54	A143	E216	A278	Q352	L419	N487
R58	I144	S217	P279	I353	T420	M488
L62	V147	F218	G280	E354	R421	T489
F66	G148	F219	E385	A356	V422	P490
E67	T220	L221	G282	D359	K425	M491
M68	I150	A223	R284	Y360	L426	I493
G70	S151	D224	R285	D361	A427	L494
A71	A152	K225	K286	R362	P428	D495
Q72	E156	K226	A287	E363	L429	P496
V74	T157	I227	M288	K364	R430	T497
K75	V158	S228	T294	L365	Q431	K498
E76	L162	L234	L295	Q366	Q432	R501
V77	A163	L237	I301	E367	D435	L504
N82	K171	E238	S302	R368	Q436	Q505
D87	E172	A239	E303	V369	N437	A508
G88	G173	V240	E304	L372	G439	S509
T89	V174	A241	E308	V376	T440	V510
T90	K380	K242	L309	A377	V442	A511
T91	L175	A243	E310	V378	A443	T515
A92	T176	G244	K311	I379	L444	T516
A96	V177	K245	A312	K390	R445	T517
	L314	G244	T313	V381	A446	E518
	L317	P246	L314	E382	M447	C519
	G318	Q319	L317	A383	E448	M520
			E386			T522
			V387			

● Molecule 1: Chaperonin GroEL

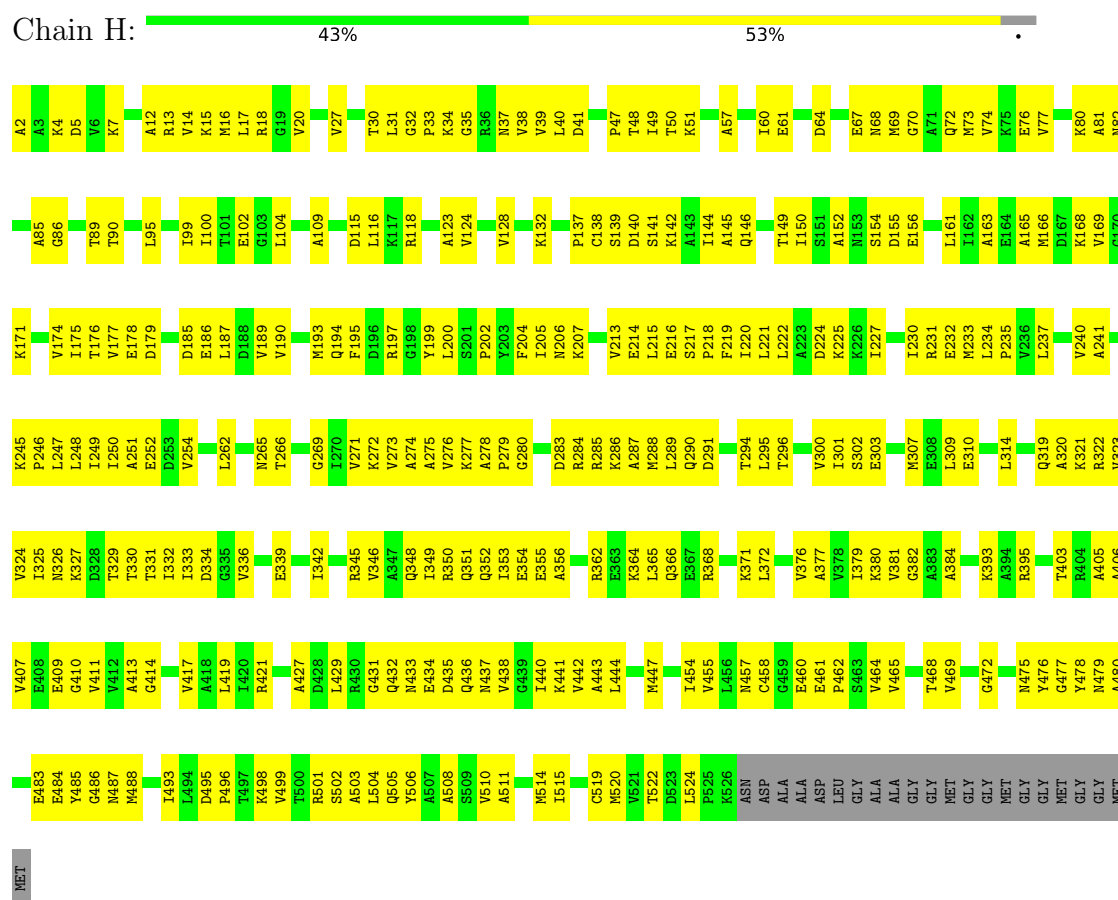


● Molecule 1: Chaperonin GroEL



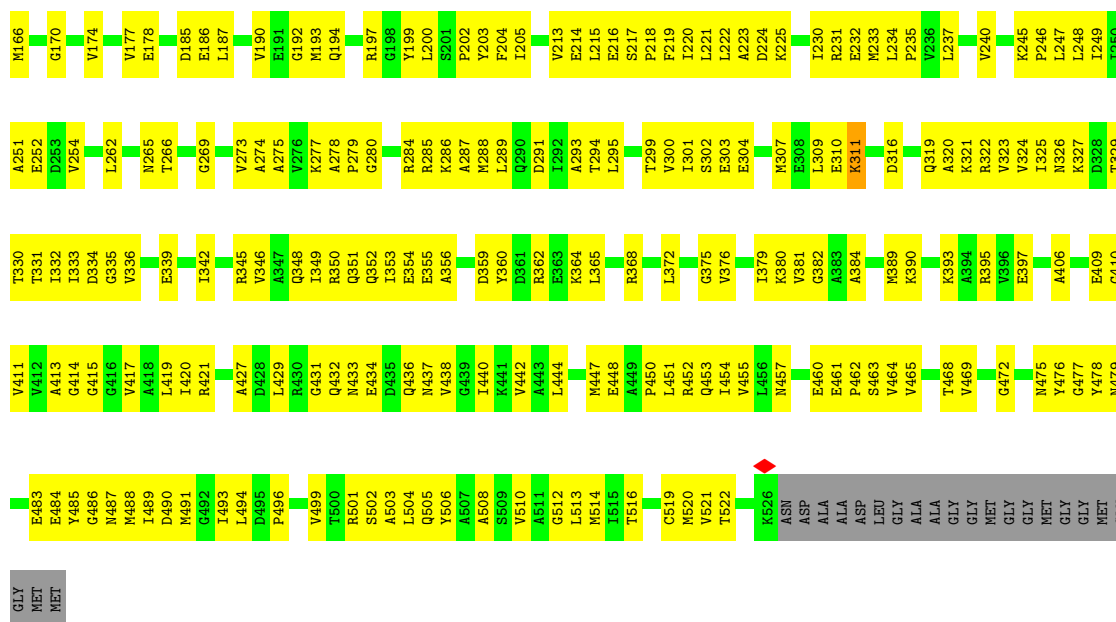


- Molecule 1: Chaperonin GroEL



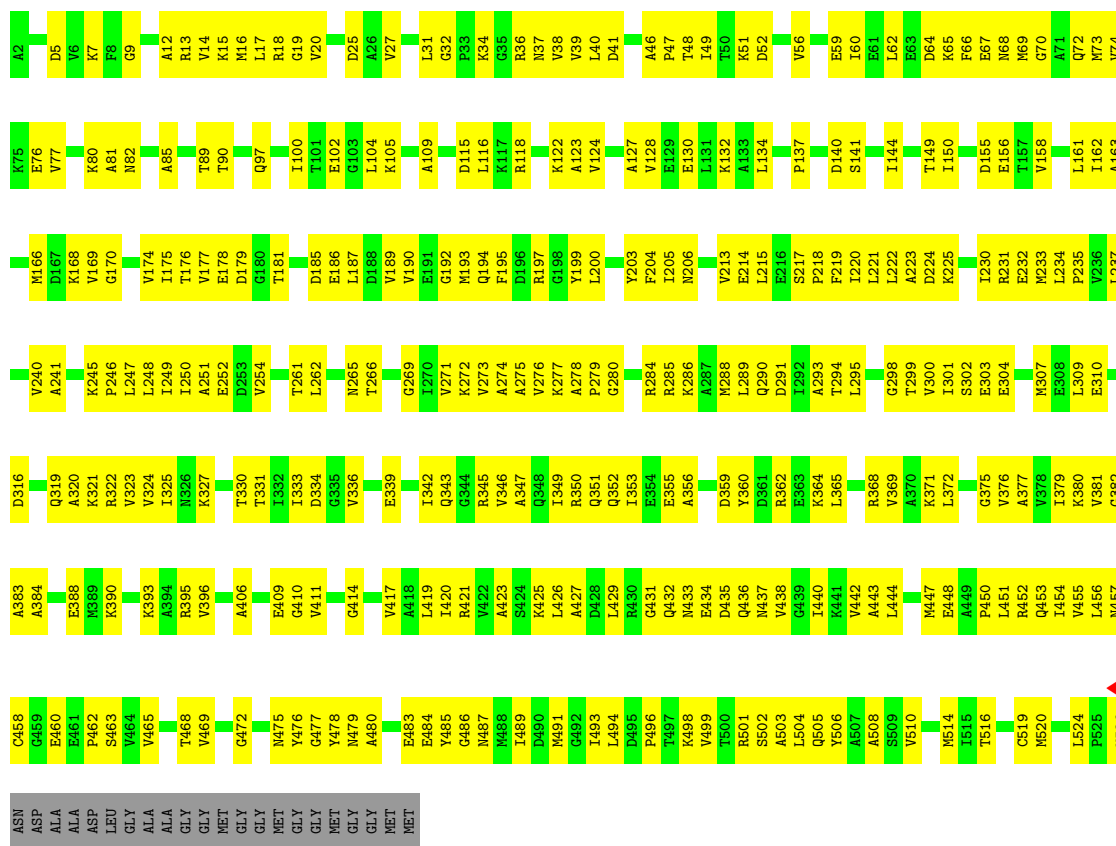
- Molecule 1: Chaperonin GroEL





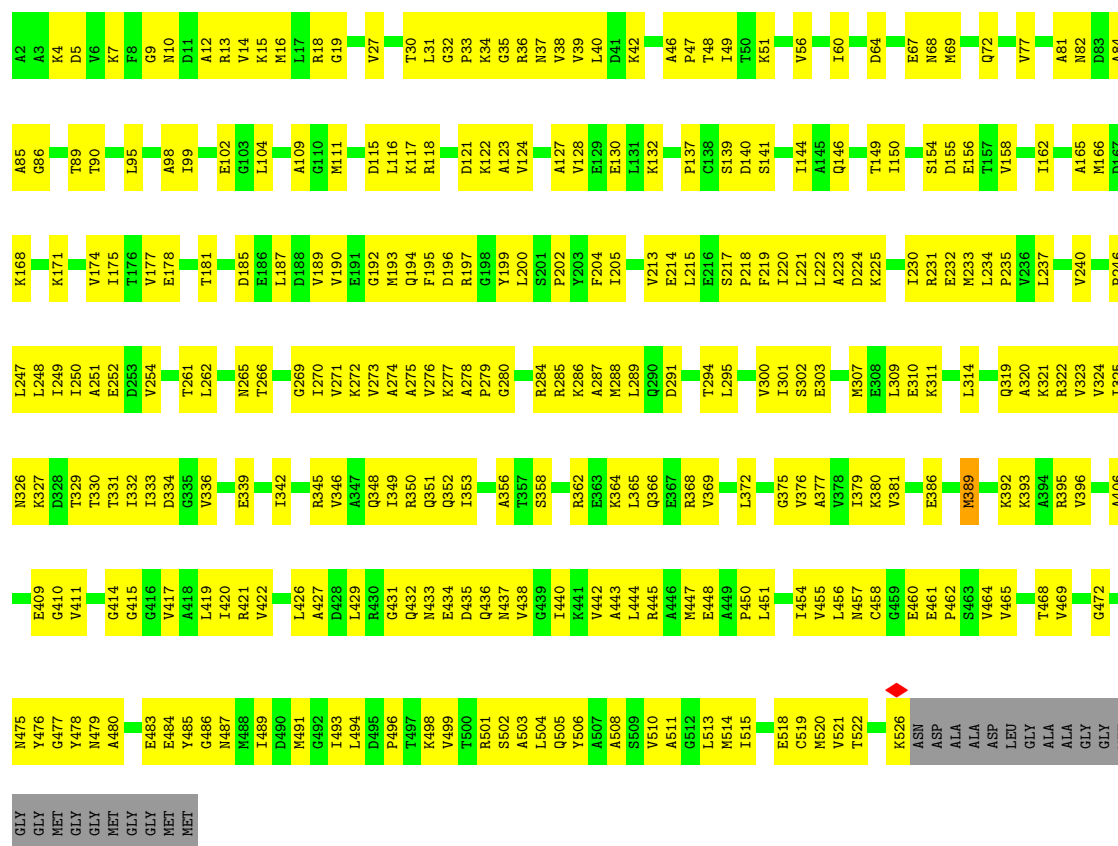
• Molecule 1: Chaperonin GroEL

Chain J:



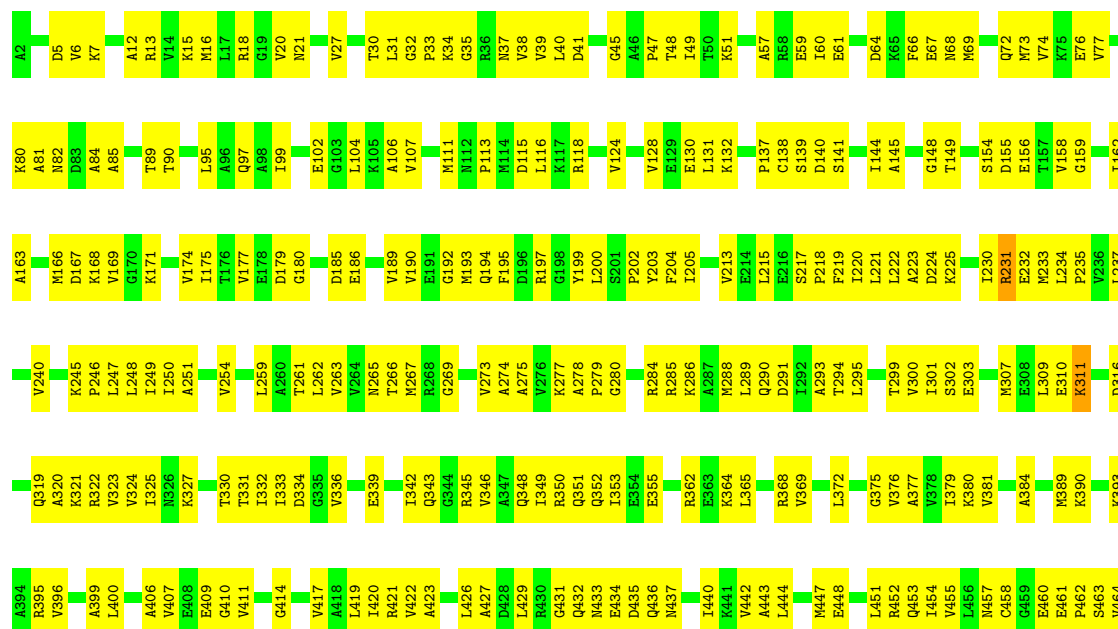
• Molecule 1: Chaperonin GroEL

Chain K:  43% 53%



• Molecule 1: Chaperonin GroEL

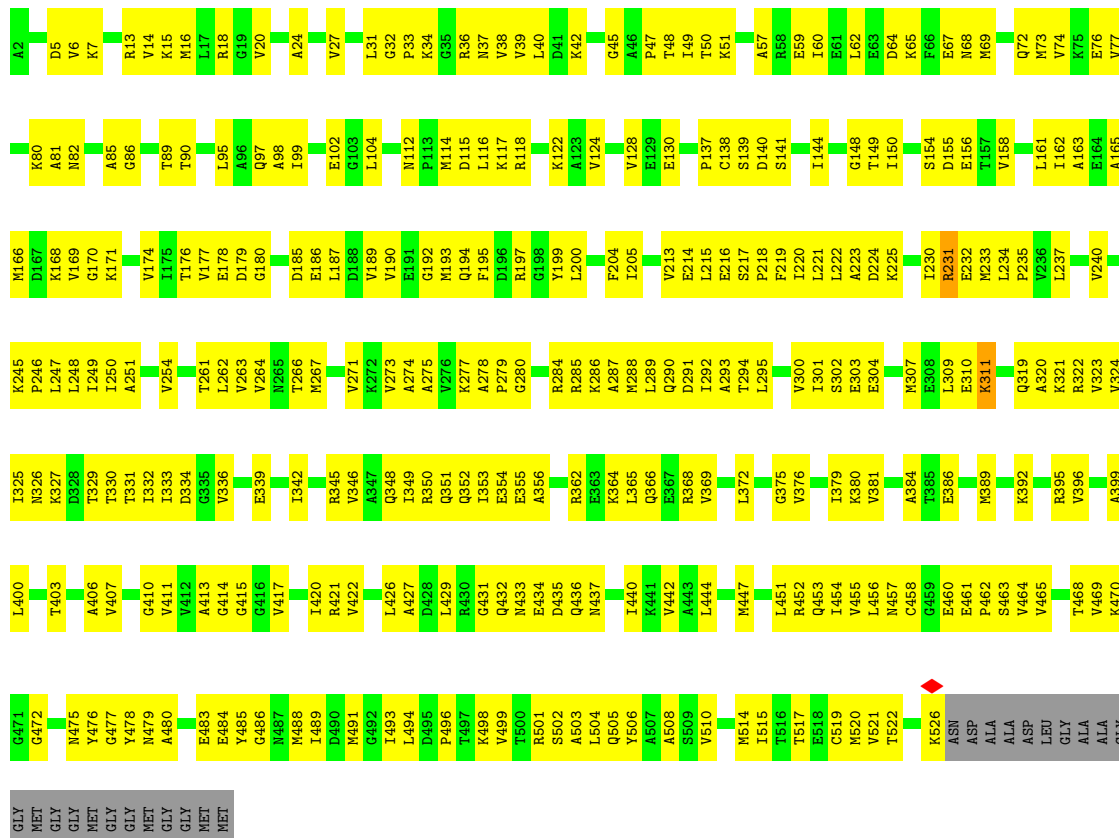
Chain L:  43% 53%





• Molecule 1: Chaperonin GroEL

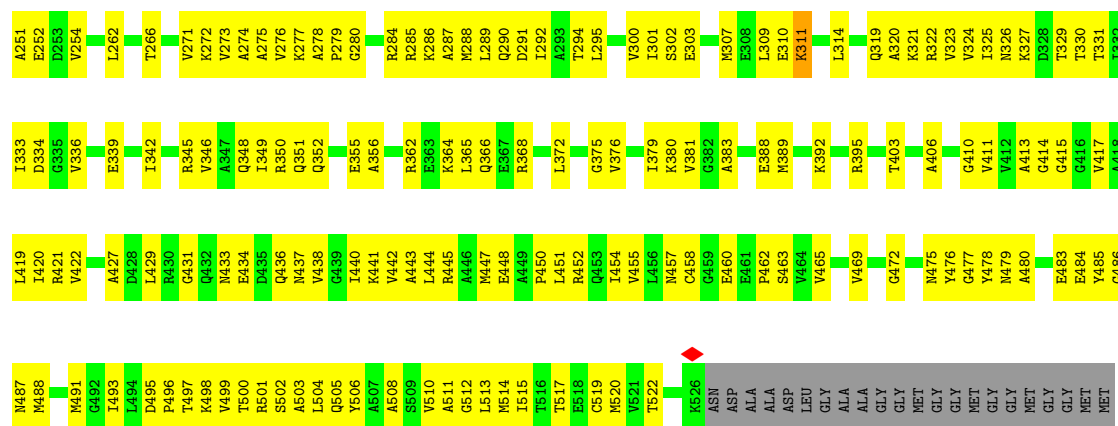
Chain M: 42% 54%



• Molecule 1: Chaperonin GroEL

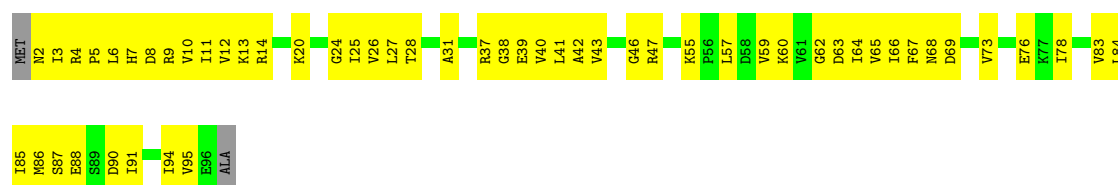
Chain N: 44% 52%





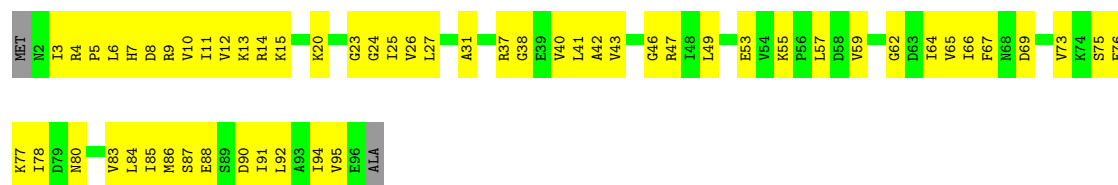
• Molecule 2: Co-chaperonin GroES

Chain O: 42% 56%



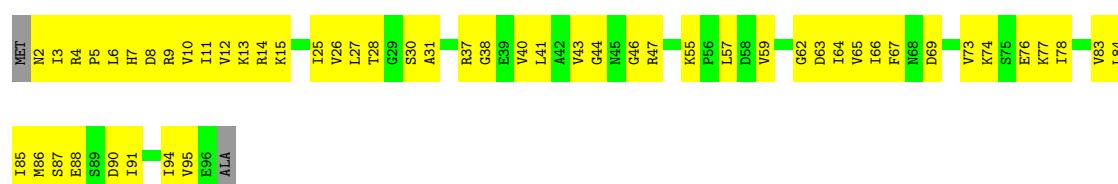
• Molecule 2: Co-chaperonin GroES

Chain P: 40% 58%



• Molecule 2: Co-chaperonin GroES

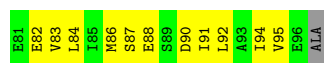
Chain Q: 43% 55%



• Molecule 2: Co-chaperonin GroES

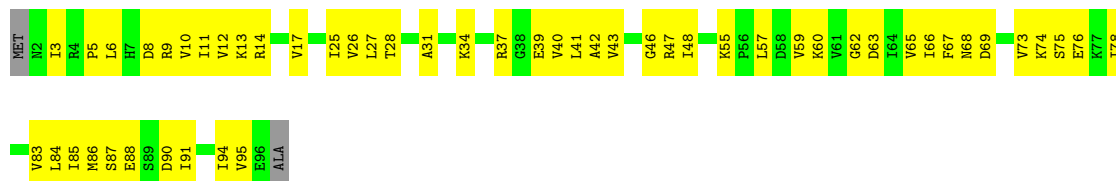
Chain R: 43% 55%





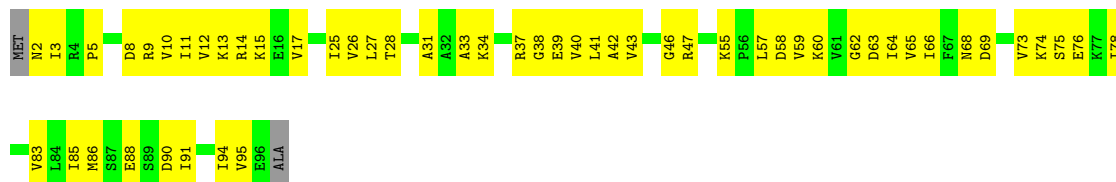
• Molecule 2: Co-chaperonin GroES

Chain S: 44% 54% .



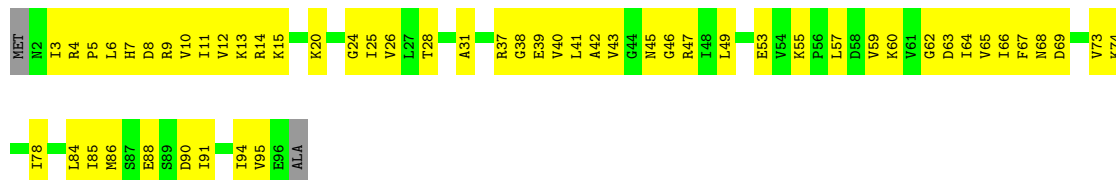
• Molecule 2: Co-chaperonin GroES

Chain T: 43% 55% .



• Molecule 2: Co-chaperonin GroES

Chain U: 42% 56% .



4 Experimental information

Property	Value	Source
EM reconstruction method	SUBTOMOGRAM AVERAGING	Depositor
Imposed symmetry	POINT, C7	Depositor
Number of subtomograms used	10130	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 ($e^-/\text{\AA}^2$)	120	Depositor
Minimum defocus (nm)	2500	Depositor
Maximum defocus (nm)	5000	Depositor
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.512	Depositor
Minimum map value	-0.283	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.052	Depositor
Recommended contour level	0.0981	Depositor
Map size (Å)	450.56, 450.56, 450.56	wwPDB
Map dimensions	128, 128, 128	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	3.52, 3.52, 3.52	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, ATP, K, ADP

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	0.28	0/3879	0.52	0/5238
1	B	0.28	0/3879	0.52	0/5238
1	C	0.28	0/3879	0.52	0/5238
1	D	0.28	0/3879	0.53	0/5238
1	E	0.28	0/3879	0.52	0/5238
1	F	0.28	0/3879	0.52	0/5238
1	G	0.28	0/3879	0.53	1/5238 (0.0%)
1	H	0.28	0/3892	0.53	0/5254
1	I	0.29	0/3892	0.54	0/5254
1	J	0.29	0/3892	0.53	0/5254
1	K	0.28	0/3892	0.53	1/5254 (0.0%)
1	L	0.28	0/3892	0.54	0/5254
1	M	0.29	0/3892	0.55	0/5254
1	N	0.28	0/3892	0.52	0/5254
2	O	0.30	0/690	0.56	0/930
2	P	0.30	0/690	0.56	0/930
2	Q	0.29	0/690	0.57	0/930
2	R	0.29	0/690	0.56	0/930
2	S	0.28	0/690	0.54	0/930
2	T	0.29	0/690	0.55	0/930
2	U	0.29	0/690	0.54	0/930
All	All	0.28	0/59227	0.53	2/79954 (0.0%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	K	389	MET	CA-CB-CG	5.27	122.25	113.30
1	G	514	MET	CA-CB-CG	5.22	122.17	113.30

There are no chirality outliers.

There are no planarity outliers.

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	A	3851	0	3970	274	0
1	B	3851	0	3971	274	0
1	C	3851	0	3971	268	0
1	D	3851	0	3970	256	0
1	E	3851	0	3970	263	0
1	F	3851	0	3970	278	0
1	G	3851	0	3970	256	0
1	H	3864	0	3989	274	0
1	I	3864	0	3989	266	0
1	J	3864	0	3989	279	0
1	K	3864	0	3989	283	0
1	L	3864	0	3989	269	0
1	M	3864	0	3989	291	0
1	N	3864	0	3989	281	0
2	O	687	0	718	65	0
2	P	687	0	718	69	0
2	Q	687	0	718	64	0
2	R	687	0	718	66	0
2	S	687	0	718	62	0
2	T	687	0	718	66	0
2	U	687	0	718	61	0
3	A	31	0	12	6	0
3	B	31	0	12	8	0
3	C	31	0	12	6	0
3	D	31	0	12	6	0
3	E	31	0	12	8	0
3	F	31	0	12	6	0
3	G	31	0	12	7	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0
4	D	1	0	0	0	0
4	E	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	F	1	0	0	0	0
4	G	1	0	0	0	0
4	H	1	0	0	0	0
4	I	1	0	0	0	0
4	J	1	0	0	0	0
4	K	1	0	0	0	0
4	L	1	0	0	0	0
4	M	1	0	0	0	0
4	N	1	0	0	0	0
5	A	1	0	0	0	0
5	B	1	0	0	0	0
5	C	1	0	0	0	0
5	D	1	0	0	0	0
5	E	1	0	0	0	0
5	F	1	0	0	0	0
5	G	1	0	0	0	0
5	H	1	0	0	0	0
5	I	1	0	0	0	0
5	J	1	0	0	0	0
5	K	1	0	0	0	0
5	L	1	0	0	0	0
5	M	1	0	0	0	0
5	N	1	0	0	0	0
6	H	27	0	12	5	0
6	I	27	0	12	4	0
6	J	27	0	12	5	0
6	K	27	0	12	5	0
6	L	27	0	12	4	0
6	M	27	0	12	4	0
6	N	27	0	12	7	0
7	A	30	0	0	2	0
7	B	29	0	0	2	0
7	C	28	0	0	1	0
7	D	30	0	0	4	0
7	E	29	0	0	2	0
7	F	30	0	0	4	0
7	G	27	0	0	2	0
7	H	1	0	0	0	0
7	I	1	0	0	0	0
7	J	1	0	0	0	0
7	K	1	0	0	0	0
7	L	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
7	M	1	0	0	0	0
7	N	1	0	0	0	0
All	All	59458	0	60909	4107	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 34.

All (4107) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:233:MET:HB3	1:D:237:LEU:HD23	1.49	0.95
1:L:166:MET:HB3	1:L:175:ILE:HD11	1.50	0.93
1:C:233:MET:HB3	1:C:237:LEU:HD23	1.50	0.92
1:J:249:ILE:HB	1:J:275:ALA:HA	1.53	0.90
1:D:240:VAL:HG21	1:D:247:LEU:HD12	1.52	0.89
1:K:192:GLY:H	1:K:375:GLY:HA2	1.38	0.88
1:L:417:VAL:HG11	1:L:477:GLY:HA3	1.54	0.88
2:O:57:LEU:HD23	2:O:88:GLU:HB2	1.56	0.88
1:K:249:ILE:HB	1:K:275:ALA:HA	1.53	0.87
1:F:233:MET:HB3	1:F:237:LEU:HD23	1.55	0.87
1:M:192:GLY:H	1:M:375:GLY:HA2	1.40	0.86
1:C:342:ILE:HG23	1:C:372:LEU:HG	1.54	0.86
1:K:279:PRO:HG2	1:K:288:MET:HB3	1.58	0.86
1:L:249:ILE:HB	1:L:275:ALA:HA	1.56	0.86
1:N:249:ILE:HB	1:N:275:ALA:HA	1.58	0.86
1:L:77:VAL:HG21	1:L:510:VAL:HB	1.58	0.86
1:M:249:ILE:HB	1:M:275:ALA:HA	1.54	0.86
1:B:342:ILE:HG23	1:B:372:LEU:HG	1.55	0.86
1:G:342:ILE:HG23	1:G:372:LEU:HG	1.55	0.86
2:U:12:VAL:HG12	2:U:40:VAL:HG12	1.58	0.86
1:E:342:ILE:HG23	1:E:372:LEU:HG	1.56	0.85
1:H:249:ILE:HB	1:H:275:ALA:HA	1.57	0.85
1:I:249:ILE:HB	1:I:275:ALA:HA	1.58	0.85
1:M:166:MET:O	1:M:170:GLY:N	2.09	0.84
1:M:279:PRO:HG2	1:M:288:MET:HB3	1.59	0.84
2:Q:67:PHE:HB3	2:Q:91:ILE:HD13	1.59	0.84
1:H:352:GLN:OE1	1:H:368:ARG:NH2	2.09	0.84
1:L:240:VAL:HG11	1:L:247:LEU:HB2	1.60	0.84
1:K:77:VAL:HG21	1:K:510:VAL:HB	1.59	0.84
1:A:281:PHE:H	1:A:284:ARG:HG3	1.41	0.84
1:M:352:GLN:OE1	1:M:368:ARG:NH2	2.10	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:279:PRO:HG2	1:H:288:MET:HB3	1.58	0.83
1:I:240:VAL:HG11	1:I:247:LEU:HB2	1.59	0.83
1:M:240:VAL:HG11	1:M:247:LEU:HB2	1.59	0.83
1:J:417:VAL:HG11	1:J:477:GLY:HA3	1.59	0.83
1:M:85:ALA:HB1	1:M:499:VAL:HA	1.57	0.83
1:H:417:VAL:HG11	1:H:477:GLY:HA3	1.60	0.82
1:N:15:LYS:HD3	1:N:18:ARG:HH21	1.42	0.82
1:H:85:ALA:HB1	1:H:499:VAL:HA	1.60	0.82
1:I:192:GLY:H	1:I:375:GLY:HA2	1.43	0.82
1:K:85:ALA:HB1	1:K:499:VAL:HA	1.61	0.82
1:E:281:PHE:H	1:E:284:ARG:HG3	1.44	0.82
1:H:240:VAL:HG11	1:H:247:LEU:HB2	1.60	0.82
1:M:77:VAL:HG21	1:M:510:VAL:HB	1.60	0.82
1:H:77:VAL:HG21	1:H:510:VAL:HB	1.61	0.82
1:L:321:LYS:HB2	1:L:334:ASP:HB3	1.62	0.82
1:I:321:LYS:HB2	1:I:334:ASP:HB3	1.60	0.82
2:O:65:VAL:HG12	2:O:94:ILE:HG22	1.62	0.82
1:J:333:ILE:HG23	1:J:376:VAL:HG21	1.62	0.81
2:O:12:VAL:HG12	2:O:40:VAL:HA	1.60	0.81
1:I:279:PRO:HG2	1:I:288:MET:HB3	1.61	0.81
1:J:85:ALA:HB1	1:J:499:VAL:HA	1.61	0.81
1:K:321:LYS:HB2	1:K:334:ASP:HB3	1.62	0.81
1:N:321:LYS:HB2	1:N:334:ASP:HB3	1.62	0.81
1:J:240:VAL:HG11	1:J:247:LEU:HB2	1.62	0.81
2:Q:73:VAL:HA	2:Q:86:MET:HB3	1.62	0.81
2:O:95:VAL:HA	2:P:3:ILE:HG22	1.62	0.81
2:P:57:LEU:HD23	2:P:88:GLU:HB2	1.63	0.81
1:K:333:ILE:HG23	1:K:376:VAL:HG21	1.63	0.81
1:N:232:GLU:HB3	1:N:309:LEU:HB2	1.62	0.81
1:J:321:LYS:HB2	1:J:334:ASP:HB3	1.63	0.81
1:F:342:ILE:HG23	1:F:372:LEU:HG	1.60	0.80
1:E:320:ALA:HA	1:E:336:VAL:H	1.45	0.80
1:N:192:GLY:HA3	1:N:376:VAL:HG13	1.64	0.80
1:K:240:VAL:HG11	1:K:247:LEU:HB2	1.62	0.80
1:L:333:ILE:HG23	1:L:376:VAL:HG21	1.64	0.80
1:N:279:PRO:HG2	1:N:288:MET:HB3	1.63	0.80
1:I:85:ALA:HB1	1:I:499:VAL:HA	1.63	0.80
1:M:321:LYS:HB2	1:M:334:ASP:HB3	1.63	0.80
1:H:69:MET:HB2	1:I:47:PRO:HG2	1.63	0.80
1:N:192:GLY:H	1:N:375:GLY:HA2	1.45	0.80
1:M:417:VAL:HG11	1:M:477:GLY:HA3	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:413:ALA:HB1	1:M:488:MET:HB2	1.63	0.79
1:N:39:VAL:HG22	1:N:49:ILE:HG12	1.62	0.79
1:B:39:VAL:HG22	1:B:49:ILE:HG12	1.65	0.79
1:L:279:PRO:HG2	1:L:288:MET:HB3	1.64	0.79
1:K:365:LEU:HD23	1:K:368:ARG:HE	1.45	0.79
1:C:31:LEU:HB2	1:C:90:THR:HG21	1.65	0.79
1:H:232:GLU:HB3	1:H:309:LEU:HB2	1.63	0.79
2:U:11:ILE:HG12	2:U:85:ILE:HG12	1.65	0.79
1:K:417:VAL:HG11	1:K:477:GLY:HA3	1.65	0.79
1:B:223:ALA:HA	1:B:301:ILE:HB	1.65	0.78
1:B:248:LEU:HD22	1:B:323:VAL:HG11	1.65	0.78
1:I:417:VAL:HG11	1:I:477:GLY:HA3	1.65	0.78
1:N:333:ILE:HG23	1:N:376:VAL:HG21	1.65	0.78
1:I:69:MET:HB2	1:J:47:PRO:HG2	1.65	0.78
1:I:352:GLN:OE1	1:I:368:ARG:NH2	2.15	0.78
1:N:224:ASP:HB3	1:N:302:SER:HB3	1.65	0.78
1:N:240:VAL:HG11	1:N:247:LEU:HB2	1.64	0.78
1:A:233:MET:HB3	1:A:237:LEU:HD23	1.63	0.78
1:H:207:LYS:HD2	1:H:214:GLU:HG3	1.64	0.78
1:L:85:ALA:HB1	1:L:499:VAL:HA	1.64	0.78
1:I:232:GLU:HB3	1:I:309:LEU:HB2	1.66	0.78
2:R:57:LEU:HD23	2:R:88:GLU:HB2	1.66	0.78
1:L:365:LEU:HD23	1:L:368:ARG:HE	1.48	0.78
1:F:39:VAL:HG22	1:F:49:ILE:HG12	1.65	0.78
1:L:39:VAL:HG22	1:L:49:ILE:HG12	1.66	0.78
1:B:122:LYS:HG2	1:B:429:LEU:HD21	1.64	0.78
1:D:420:ILE:HG12	1:D:448:GLU:HG2	1.66	0.78
1:B:233:MET:HB3	1:B:237:LEU:HD23	1.66	0.77
1:F:342:ILE:HG12	1:F:372:LEU:HD11	1.66	0.77
1:E:122:LYS:HG2	1:E:429:LEU:HD21	1.65	0.77
1:N:417:VAL:HG11	1:N:477:GLY:HA3	1.64	0.77
1:E:39:VAL:HG22	1:E:49:ILE:HG12	1.65	0.77
1:G:295:LEU:HA	1:G:342:ILE:HD11	1.65	0.77
1:H:224:ASP:HB3	1:H:302:SER:HB3	1.64	0.77
1:J:192:GLY:H	1:J:375:GLY:HA2	1.48	0.77
1:G:193:MET:HG2	1:G:295:LEU:HD22	1.66	0.77
1:L:192:GLY:H	1:L:375:GLY:HA2	1.49	0.77
2:P:65:VAL:HG12	2:P:94:ILE:HG22	1.64	0.77
1:E:169:VAL:HG22	1:E:173:GLY:HA3	1.67	0.77
1:A:115:ASP:OD1	1:A:432:GLN:NE2	2.16	0.77
1:B:393:LYS:NZ	1:B:397:GLU:OE2	2.17	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:295:LEU:HA	1:B:342:ILE:HD11	1.67	0.77
1:N:352:GLN:OE1	1:N:368:ARG:NH2	2.14	0.77
2:T:69:ASP:HA	2:T:73:VAL:HG21	1.67	0.77
1:F:215:LEU:HD22	1:F:246:PRO:HB3	1.66	0.76
1:C:421:ARG:NH2	1:C:476:TYR:O	2.16	0.76
1:E:31:LEU:HB2	1:E:90:THR:HG21	1.67	0.76
2:P:69:ASP:HA	2:P:73:VAL:HG21	1.66	0.76
2:U:57:LEU:HD23	2:U:88:GLU:HB2	1.67	0.76
1:G:122:LYS:HG2	1:G:429:LEU:HD21	1.66	0.76
1:J:279:PRO:HG2	1:J:288:MET:HB3	1.67	0.76
1:A:122:LYS:HG2	1:A:429:LEU:HD21	1.67	0.76
1:G:223:ALA:HA	1:G:301:ILE:HB	1.68	0.76
1:L:232:GLU:HB3	1:L:309:LEU:HB2	1.68	0.76
1:G:240:VAL:HG21	1:G:247:LEU:HD12	1.65	0.76
1:K:349:ILE:HG21	1:K:368:ARG:HB2	1.68	0.76
1:M:333:ILE:HG23	1:M:376:VAL:HG21	1.68	0.76
1:C:122:LYS:HG2	1:C:429:LEU:HD21	1.66	0.76
1:N:349:ILE:HG21	1:N:368:ARG:HB2	1.68	0.76
1:B:421:ARG:NH2	1:B:476:TYR:O	2.16	0.76
2:T:57:LEU:HD23	2:T:88:GLU:HB2	1.68	0.76
1:D:215:LEU:HD22	1:D:246:PRO:HB3	1.68	0.75
1:C:281:PHE:H	1:C:284:ARG:HG3	1.52	0.75
1:N:85:ALA:HB1	1:N:499:VAL:HA	1.66	0.75
1:K:232:GLU:HB3	1:K:309:LEU:HB2	1.69	0.75
2:T:12:VAL:HG12	2:T:40:VAL:HA	1.69	0.75
1:G:31:LEU:HB2	1:G:90:THR:HG21	1.68	0.75
1:H:220:ILE:HD11	1:H:250:ILE:HD12	1.69	0.75
1:I:224:ASP:HB3	1:I:302:SER:HB3	1.65	0.75
1:F:180:GLY:N	1:F:381:VAL:O	2.20	0.75
1:C:295:LEU:HA	1:C:342:ILE:HD11	1.68	0.75
1:D:122:LYS:HG2	1:D:429:LEU:HD21	1.67	0.75
1:D:291:ASP:HB3	1:D:372:LEU:HD21	1.69	0.75
1:F:122:LYS:HG2	1:F:429:LEU:HD21	1.68	0.75
1:H:321:LYS:HB2	1:H:334:ASP:HB3	1.67	0.75
1:M:69:MET:HB2	1:N:47:PRO:HG2	1.69	0.74
2:Q:78:ILE:HG12	2:Q:83:VAL:HG21	1.69	0.74
1:F:51:LYS:NZ	3:F:601:ATP:O1A	2.20	0.74
1:J:232:GLU:HB3	1:J:309:LEU:HB2	1.70	0.74
1:C:169:VAL:HG22	1:C:173:GLY:HA3	1.69	0.74
1:N:274:ALA:HB1	1:N:325:ILE:HD13	1.69	0.74
1:C:469:VAL:HG13	1:C:477:GLY:HA2	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:214:GLU:HG3	1:M:324:VAL:HG22	1.68	0.74
1:D:469:VAL:HG13	1:D:477:GLY:HA2	1.70	0.74
1:B:169:VAL:HG22	1:B:173:GLY:HA3	1.70	0.74
1:G:393:LYS:NZ	1:G:397:GLU:OE2	2.18	0.74
1:I:420:ILE:HD12	1:I:451:LEU:HD13	1.70	0.74
1:M:353:ILE:HG23	1:M:362:ARG:HH12	1.52	0.74
1:N:213:VAL:HB	1:N:325:ILE:HG12	1.69	0.74
2:T:57:LEU:O	2:T:60:LYS:NZ	2.19	0.74
1:E:421:ARG:NH2	1:E:476:TYR:O	2.19	0.74
1:M:289:LEU:HD23	1:M:300:VAL:HG13	1.68	0.74
1:E:248:LEU:HD22	1:E:323:VAL:HG11	1.68	0.74
1:J:295:LEU:HD23	1:J:342:ILE:HG12	1.70	0.73
1:J:224:ASP:HB3	1:J:302:SER:HB3	1.68	0.73
1:D:169:VAL:HB	1:D:377:ALA:HB2	1.70	0.73
1:E:197:ARG:O	1:E:330:THR:OG1	2.06	0.73
2:S:69:ASP:HA	2:S:73:VAL:HG21	1.69	0.73
1:G:233:MET:HB3	1:G:237:LEU:HG	1.71	0.73
1:I:77:VAL:HG21	1:I:510:VAL:HB	1.71	0.73
1:M:295:LEU:HD23	1:M:342:ILE:HG12	1.71	0.73
1:M:420:ILE:HD12	1:M:451:LEU:HD13	1.70	0.73
1:C:339:GLU:HA	1:C:342:ILE:HD12	1.71	0.73
1:H:225:LYS:HD3	1:H:303:GLU:HG3	1.71	0.73
1:J:77:VAL:HG21	1:J:510:VAL:HB	1.69	0.73
1:L:339:GLU:O	1:L:343:GLN:NE2	2.22	0.73
1:M:6:VAL:HG22	1:M:521:VAL:HG12	1.71	0.73
1:G:215:LEU:HD22	1:G:246:PRO:HB3	1.70	0.73
1:K:420:ILE:HD12	1:K:451:LEU:HD13	1.71	0.73
1:G:115:ASP:OD1	1:G:432:GLN:NE2	2.21	0.73
1:I:349:ILE:HG21	1:I:368:ARG:HB2	1.70	0.73
1:D:41:ASP:HA	1:D:47:PRO:HB3	1.71	0.73
1:N:295:LEU:HD23	1:N:342:ILE:HG12	1.71	0.73
1:G:186:GLU:HB3	1:G:380:LYS:HB2	1.71	0.72
1:M:479:ASN:O	1:M:483:GLU:N	2.22	0.72
1:C:197:ARG:O	1:C:330:THR:OG1	2.07	0.72
1:D:248:LEU:HD22	1:D:323:VAL:HG11	1.71	0.72
1:F:421:ARG:NH2	1:F:476:TYR:O	2.18	0.72
1:A:21:ASN:OD1	1:A:97:GLN:NE2	2.23	0.72
1:A:262:LEU:HD22	1:A:273:VAL:HG21	1.70	0.72
1:A:469:VAL:HG13	1:A:477:GLY:HA2	1.71	0.72
1:D:281:PHE:H	1:D:284:ARG:HG3	1.54	0.72
1:F:115:ASP:OD1	1:F:432:GLN:NE2	2.20	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:352:GLN:HA	1:J:355:GLU:HG3	1.71	0.72
1:C:203:TYR:HB2	1:C:263:VAL:HB	1.71	0.72
1:D:169:VAL:HG22	1:D:173:GLY:HA3	1.72	0.72
1:F:20:VAL:HG13	1:F:74:VAL:HG21	1.71	0.72
1:J:431:GLY:N	1:J:437:ASN:OD1	2.23	0.72
1:K:139:SER:HA	1:K:171:LYS:HE3	1.72	0.72
1:K:289:LEU:HD23	1:K:300:VAL:HG13	1.72	0.72
2:T:10:VAL:N	2:T:86:MET:O	2.21	0.72
1:A:219:PHE:HD2	1:A:240:VAL:HG22	1.54	0.72
1:K:192:GLY:HA3	1:K:376:VAL:HG13	1.69	0.72
1:K:432:GLN:NE2	1:K:436:GLN:OE1	2.22	0.72
2:T:9:ARG:HB3	2:T:85:ILE:HD11	1.71	0.72
1:F:184:GLN:NE2	1:F:185:ASP:OD1	2.23	0.72
1:F:169:VAL:HG22	1:F:173:GLY:HA3	1.71	0.72
1:G:240:VAL:O	1:G:244:GLY:N	2.23	0.72
1:D:231:ARG:HA	1:D:234:LEU:HD23	1.72	0.71
1:I:10:ASN:HA	1:I:13:ARG:HB2	1.71	0.71
1:K:111:MET:HB2	1:K:116:LEU:HD11	1.71	0.71
1:N:479:ASN:ND2	1:N:491:MET:SD	2.63	0.71
2:R:12:VAL:HG12	2:R:40:VAL:HA	1.72	0.71
1:G:281:PHE:H	1:G:284:ARG:HG3	1.53	0.71
2:P:12:VAL:HG22	2:P:86:MET:HE1	1.72	0.71
2:Q:11:ILE:HD11	2:Q:83:VAL:HB	1.70	0.71
1:A:421:ARG:NH2	1:A:476:TYR:O	2.17	0.71
1:A:58:ARG:HA	1:A:75:LYS:HD3	1.72	0.71
1:F:231:ARG:HA	1:F:234:LEU:HD23	1.72	0.71
1:C:115:ASP:OD1	1:C:432:GLN:NE2	2.23	0.71
1:D:326:ASN:OD1	1:D:329:THR:N	2.23	0.71
1:F:240:VAL:O	1:F:244:GLY:N	2.24	0.71
1:H:47:PRO:HG2	1:N:69:MET:HB2	1.73	0.71
2:P:10:VAL:N	2:P:86:MET:O	2.22	0.71
1:E:420:ILE:HG12	1:E:448:GLU:HG2	1.71	0.71
1:F:393:LYS:NZ	1:F:397:GLU:OE2	2.23	0.71
1:H:349:ILE:HG21	1:H:368:ARG:HB2	1.72	0.71
1:J:339:GLU:O	1:J:343:GLN:NE2	2.24	0.71
1:L:322:ARG:HB2	1:L:333:ILE:HB	1.70	0.71
1:F:102:GLU:HG3	1:F:442:VAL:HG22	1.73	0.71
1:F:193:MET:HG2	1:F:295:LEU:HD22	1.73	0.71
1:F:491:MET:HE3	1:F:493:ILE:HD12	1.72	0.71
1:G:180:GLY:N	1:G:381:VAL:O	2.19	0.71
1:G:193:MET:HB2	1:G:332:ILE:HB	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:349:ILE:HD13	1:J:368:ARG:HG2	1.71	0.71
1:K:352:GLN:O	1:K:362:ARG:NH2	2.23	0.71
1:L:224:ASP:HB3	1:L:302:SER:HB3	1.72	0.71
1:M:431:GLY:N	1:M:437:ASN:OD1	2.23	0.71
1:N:81:ALA:O	1:N:85:ALA:CB	2.38	0.71
1:E:223:ALA:HA	1:E:301:ILE:HB	1.71	0.71
2:S:11:ILE:O	2:S:41:LEU:N	2.24	0.71
1:A:240:VAL:O	1:A:244:GLY:N	2.24	0.71
1:I:40:LEU:HD22	1:I:59:GLU:HG2	1.71	0.71
1:A:295:LEU:HA	1:A:342:ILE:HD11	1.73	0.70
1:D:240:VAL:O	1:D:244:GLY:N	2.22	0.70
1:J:455:VAL:HG13	1:J:460:GLU:HB2	1.73	0.70
1:M:421:ARG:NH2	1:M:476:TYR:O	2.22	0.70
1:N:431:GLY:N	1:N:437:ASN:OD1	2.24	0.70
1:J:220:ILE:HD11	1:J:250:ILE:HD12	1.72	0.70
1:B:213:VAL:N	1:B:325:ILE:O	2.24	0.70
1:A:12:ALA:HA	1:A:520:MET:HE1	1.73	0.70
1:A:197:ARG:O	1:A:330:THR:OG1	2.10	0.70
1:B:326:ASN:OD1	1:B:329:THR:N	2.23	0.70
1:J:432:GLN:NE2	1:J:436:GLN:OE1	2.24	0.70
1:M:224:ASP:HB3	1:M:302:SER:HB3	1.74	0.70
1:N:31:LEU:O	1:N:457:ASN:ND2	2.23	0.70
2:S:59:VAL:HG11	2:S:91:ILE:HG21	1.71	0.70
1:D:186:GLU:HB3	1:D:380:LYS:HB2	1.72	0.70
1:E:215:LEU:HD22	1:E:246:PRO:HB3	1.71	0.70
1:E:469:VAL:HG13	1:E:477:GLY:HA2	1.72	0.70
1:G:184:GLN:NE2	1:G:185:ASP:OD1	2.25	0.70
1:H:362:ARG:HH21	1:H:366:GLN:HB2	1.54	0.70
2:R:69:ASP:HA	2:R:73:VAL:HG21	1.74	0.70
1:B:281:PHE:H	1:B:284:ARG:HG3	1.55	0.70
1:F:102:GLU:HB3	1:F:442:VAL:HG13	1.73	0.70
1:F:150:ILE:HG13	1:F:493:ILE:HA	1.73	0.70
1:K:224:ASP:HB3	1:K:302:SER:HB3	1.74	0.70
1:L:325:ILE:HG22	1:L:330:THR:HG23	1.73	0.70
1:B:469:VAL:HG13	1:B:477:GLY:HA2	1.73	0.70
1:G:219:PHE:HD2	1:G:240:VAL:HG22	1.57	0.70
1:G:365:LEU:HD13	1:G:368:ARG:HD3	1.73	0.70
1:M:194:GLN:HG3	1:M:331:THR:HB	1.74	0.70
1:N:348:GLN:O	1:N:351:GLN:NE2	2.24	0.70
2:O:10:VAL:N	2:O:86:MET:O	2.25	0.70
2:Q:12:VAL:HG12	2:Q:40:VAL:HA	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:220:ILE:HD11	1:N:250:ILE:HD12	1.74	0.70
2:P:94:ILE:HG23	2:Q:6:LEU:HD11	1.74	0.70
2:R:67:PHE:HB3	2:R:91:ILE:HD13	1.73	0.70
1:B:240:VAL:O	1:B:244:GLY:N	2.23	0.70
1:G:356:ALA:O	1:G:362:ARG:NH2	2.24	0.70
1:K:233:MET:HG3	1:K:237:LEU:HG	1.74	0.70
1:K:431:GLY:N	1:K:437:ASN:OD1	2.25	0.70
1:A:169:VAL:HG22	1:A:173:GLY:HA3	1.72	0.70
1:C:169:VAL:HB	1:C:377:ALA:HB2	1.74	0.70
1:E:240:VAL:O	1:E:244:GLY:N	2.25	0.70
1:N:233:MET:HG3	1:N:237:LEU:HG	1.73	0.70
1:E:393:LYS:NZ	1:E:397:GLU:OE2	2.21	0.69
1:M:77:VAL:HG13	1:M:506:TYR:HB3	1.72	0.69
1:D:31:LEU:HB2	1:D:90:THR:HG21	1.73	0.69
1:F:279:PRO:HG2	1:F:288:MET:HB3	1.74	0.69
1:H:479:ASN:N	1:H:484:GLU:O	2.25	0.69
1:A:248:LEU:HD22	1:A:323:VAL:HG11	1.73	0.69
1:A:356:ALA:O	1:A:362:ARG:NH2	2.25	0.69
1:B:51:LYS:NZ	3:B:601:ATP:O1A	2.25	0.69
1:D:232:GLU:HA	1:D:310:GLU:HG3	1.75	0.69
1:G:248:LEU:HD22	1:G:323:VAL:HG11	1.72	0.69
1:H:31:LEU:O	1:H:457:ASN:ND2	2.24	0.69
1:I:193:MET:HG2	1:I:295:LEU:HD13	1.74	0.69
1:J:225:LYS:HD3	1:J:303:GLU:HG3	1.75	0.69
1:L:77:VAL:HG13	1:L:506:TYR:HB3	1.74	0.69
2:S:40:VAL:O	2:S:62:GLY:N	2.21	0.69
1:C:215:LEU:HD22	1:C:246:PRO:HB3	1.74	0.69
1:G:169:VAL:HG22	1:G:173:GLY:HA3	1.73	0.69
1:M:362:ARG:HH21	1:M:366:GLN:HG3	1.57	0.69
1:A:20:VAL:HG13	1:A:74:VAL:HG21	1.74	0.69
1:A:51:LYS:NZ	3:A:601:ATP:O1A	2.26	0.69
1:J:144:ILE:HD12	1:J:166:MET:HE3	1.74	0.69
1:F:263:VAL:O	1:F:266:THR:OG1	2.11	0.69
1:G:263:VAL:O	1:G:266:THR:OG1	2.11	0.69
1:M:520:MET:HG2	1:N:39:VAL:HB	1.75	0.69
1:N:77:VAL:HG21	1:N:510:VAL:HB	1.74	0.69
1:N:225:LYS:HD3	1:N:303:GLU:HG3	1.75	0.69
1:N:362:ARG:HH21	1:N:366:GLN:HB2	1.57	0.69
1:G:495:ASP:OD2	3:G:601:ATP:O2'	2.09	0.69
1:I:413:ALA:HB1	1:I:488:MET:HB2	1.75	0.69
1:K:307:MET:HG2	1:K:311:LYS:HZ2	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:186:GLU:O	1:M:380:LYS:N	2.23	0.69
1:M:350:ARG:HD3	1:M:353:ILE:HD12	1.75	0.69
1:B:58:ARG:HA	1:B:75:LYS:HD3	1.73	0.69
1:C:114:MET:SD	7:D:2003:HOH:O	2.51	0.69
1:C:420:ILE:HG12	1:C:448:GLU:HG2	1.75	0.69
1:I:325:ILE:HG22	1:I:330:THR:HG23	1.74	0.69
1:J:192:GLY:HA3	1:J:376:VAL:HG13	1.75	0.69
1:M:128:VAL:HG13	1:M:501:ARG:HG3	1.75	0.69
1:M:232:GLU:HB3	1:M:309:LEU:HB2	1.73	0.69
1:B:20:VAL:HG13	1:B:74:VAL:HG21	1.73	0.69
1:C:252:GLU:OE2	1:C:285:ARG:NH1	2.25	0.69
1:G:197:ARG:O	1:G:330:THR:OG1	2.10	0.69
1:H:81:ALA:O	1:H:85:ALA:CB	2.41	0.69
1:L:284:ARG:CZ	1:L:364:LYS:HB3	2.23	0.69
1:L:295:LEU:HD23	1:L:342:ILE:HG12	1.74	0.69
1:A:39:VAL:HG22	1:A:49:ILE:HG12	1.75	0.69
1:D:308:GLU:H	1:D:311:LYS:HD3	1.57	0.69
1:E:279:PRO:HG2	1:E:288:MET:HB3	1.75	0.69
1:H:322:ARG:HB2	1:H:333:ILE:HB	1.75	0.69
1:K:520:MET:HG2	1:L:39:VAL:HB	1.73	0.69
1:H:15:LYS:HD3	1:H:18:ARG:HH21	1.56	0.68
1:G:130:GLU:HB2	1:G:422:VAL:HG13	1.73	0.68
1:I:289:LEU:HD23	1:I:300:VAL:HG13	1.75	0.68
1:M:174:VAL:HG23	1:M:376:VAL:HA	1.75	0.68
2:U:5:PRO:HG3	2:U:11:ILE:HG13	1.75	0.68
1:E:180:GLY:N	1:E:381:VAL:O	2.20	0.68
1:E:249:ILE:HB	1:E:275:ALA:HA	1.73	0.68
1:I:431:GLY:N	1:I:437:ASN:OD1	2.24	0.68
1:L:141:SER:HB3	1:L:163:ALA:HB1	1.76	0.68
1:B:220:ILE:N	1:B:318:GLY:O	2.23	0.68
1:M:40:LEU:HD13	1:M:59:GLU:HG3	1.75	0.68
1:M:325:ILE:HG22	1:M:330:THR:HG23	1.75	0.68
1:C:346:VAL:HB	1:C:369:VAL:HG13	1.76	0.68
1:F:185:ASP:HA	1:F:381:VAL:HA	1.75	0.68
1:F:226:LYS:HE2	1:F:253:ASP:HB3	1.76	0.68
1:A:193:MET:HG2	1:A:295:LEU:HD22	1.76	0.68
1:H:295:LEU:HA	1:H:342:ILE:HG12	1.75	0.68
1:L:420:ILE:HD12	1:L:451:LEU:HD13	1.74	0.68
1:L:421:ARG:NH2	1:L:476:TYR:O	2.24	0.68
1:F:281:PHE:H	1:F:284:ARG:HG3	1.58	0.68
2:S:13:LYS:HB2	2:S:41:LEU:HD11	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:207:LYS:HZ1	1:C:214:GLU:HB2	1.58	0.68
1:C:479:ASN:N	1:C:484:GLU:O	2.26	0.68
1:I:519:CYS:HB3	1:J:38:VAL:HG22	1.76	0.68
1:K:84:ALA:O	1:K:498:LYS:NZ	2.23	0.68
1:L:81:ALA:O	1:L:85:ALA:CB	2.42	0.68
1:L:431:GLY:N	1:L:437:ASN:OD1	2.26	0.68
1:M:353:ILE:HG23	1:M:362:ARG:HH22	1.59	0.68
1:C:263:VAL:O	1:C:266:THR:OG1	2.11	0.68
1:L:346:VAL:HG13	1:L:350:ARG:NH1	2.09	0.68
2:P:11:ILE:HG22	2:P:41:LEU:HB2	1.73	0.68
2:T:13:LYS:HB2	2:T:41:LEU:HD11	1.74	0.68
1:B:353:ILE:HG23	1:B:362:ARG:HB2	1.75	0.68
1:J:325:ILE:HG22	1:J:330:THR:HG23	1.76	0.68
1:A:231:ARG:HH11	1:A:234:LEU:HD11	1.60	0.67
1:H:178:GLU:N	1:H:379:ILE:O	2.21	0.67
1:I:128:VAL:HG13	1:I:501:ARG:HG3	1.76	0.67
1:K:353:ILE:O	1:K:362:ARG:NH1	2.28	0.67
1:M:81:ALA:O	1:M:85:ALA:CB	2.42	0.67
2:T:59:VAL:HG21	2:T:91:ILE:HG21	1.76	0.67
1:A:66:PHE:HB3	1:A:520:MET:HE3	1.76	0.67
1:G:339:GLU:HA	1:G:342:ILE:HD12	1.75	0.67
1:L:104:LEU:HD21	1:L:514:MET:HG3	1.76	0.67
1:B:169:VAL:HB	1:B:377:ALA:HB2	1.77	0.67
1:H:194:GLN:HG3	1:H:331:THR:HB	1.76	0.67
1:J:81:ALA:O	1:J:85:ALA:CB	2.43	0.67
1:K:69:MET:HG2	1:K:520:MET:HE3	1.76	0.67
1:B:31:LEU:HB2	1:B:90:THR:HG21	1.75	0.67
1:D:51:LYS:NZ	3:D:601:ATP:O1A	2.26	0.67
1:G:231:ARG:HH11	2:U:31:ALA:HB1	1.60	0.67
1:I:455:VAL:HG13	1:I:460:GLU:HB2	1.74	0.67
1:J:291:ASP:OD1	1:J:345:ARG:NE	2.21	0.67
1:L:225:LYS:HD3	1:L:303:GLU:HG3	1.75	0.67
1:N:251:ALA:O	1:N:278:ALA:N	2.27	0.67
2:U:11:ILE:HD12	2:U:42:ALA:HB3	1.75	0.67
1:F:345:ARG:O	1:F:349:ILE:HG13	1.95	0.67
1:G:66:PHE:HB3	1:G:520:MET:HE3	1.75	0.67
1:I:427:ALA:HA	1:I:444:LEU:HD13	1.76	0.67
1:M:31:LEU:O	1:M:457:ASN:ND2	2.26	0.67
1:N:413:ALA:HB1	1:N:488:MET:HB2	1.75	0.67
1:D:219:PHE:HD2	1:D:240:VAL:HG22	1.59	0.67
1:D:365:LEU:HD13	1:D:368:ARG:HD3	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:115:ASP:OD1	1:E:118:ARG:NH1	2.27	0.67
1:F:220:ILE:HG23	1:F:250:ILE:HD12	1.76	0.67
1:K:77:VAL:HG13	1:K:506:TYR:HB3	1.76	0.67
1:K:251:ALA:O	1:K:278:ALA:N	2.26	0.67
1:D:263:VAL:O	1:D:266:THR:OG1	2.13	0.67
1:E:213:VAL:N	1:E:325:ILE:O	2.27	0.67
1:L:7:LYS:HE3	1:L:15:LYS:HG3	1.76	0.67
1:M:200:LEU:HD13	1:M:254:VAL:H	1.59	0.67
2:Q:66:ILE:HD11	2:R:3:ILE:HD13	1.75	0.67
1:A:291:ASP:HB3	1:A:372:LEU:HD21	1.75	0.67
1:J:41:ASP:HA	1:J:47:PRO:HB3	1.75	0.67
1:J:177:VAL:O	1:J:393:LYS:NZ	2.28	0.67
1:K:31:LEU:O	1:K:457:ASN:ND2	2.25	0.67
1:K:419:LEU:HB3	1:K:447:MET:HB3	1.77	0.67
1:F:240:VAL:HG21	1:F:247:LEU:HD12	1.76	0.67
1:H:431:GLY:N	1:H:437:ASN:OD1	2.24	0.67
1:K:178:GLU:N	1:K:379:ILE:O	2.24	0.67
1:N:20:VAL:HG22	1:N:74:VAL:HG21	1.76	0.67
1:A:263:VAL:O	1:A:266:THR:OG1	2.11	0.67
1:C:15:LYS:HD3	1:C:18:ARG:HH21	1.60	0.67
1:D:115:ASP:OD1	1:D:118:ARG:NH1	2.26	0.67
1:D:295:LEU:HA	1:D:342:ILE:HD11	1.77	0.67
1:G:220:ILE:O	1:G:318:GLY:N	2.27	0.67
1:K:214:GLU:HG3	1:K:324:VAL:HG22	1.77	0.67
2:Q:65:VAL:HG12	2:Q:94:ILE:HG22	1.77	0.67
1:D:220:ILE:O	1:D:318:GLY:N	2.27	0.66
1:G:231:ARG:HA	1:G:234:LEU:HG	1.77	0.66
1:J:251:ALA:O	1:J:278:ALA:N	2.28	0.66
1:D:39:VAL:HG22	1:D:49:ILE:HG12	1.75	0.66
1:E:326:ASN:OD1	1:E:329:THR:N	2.22	0.66
1:G:115:ASP:OD1	1:G:118:ARG:NH1	2.26	0.66
1:J:349:ILE:HA	1:J:352:GLN:HG2	1.76	0.66
1:L:186:GLU:O	1:L:380:LYS:N	2.28	0.66
2:Q:65:VAL:HB	2:Q:91:ILE:HD12	1.78	0.66
2:R:95:VAL:HA	2:S:3:ILE:HG12	1.76	0.66
2:S:12:VAL:HG12	2:S:40:VAL:HA	1.76	0.66
1:D:415:GLY:HA2	3:D:601:ATP:H1'	1.77	0.66
1:E:51:LYS:NZ	3:E:601:ATP:O1A	2.29	0.66
1:E:339:GLU:HA	1:E:342:ILE:HD12	1.78	0.66
1:H:40:LEU:N	1:H:48:THR:O	2.28	0.66
1:H:41:ASP:HA	1:H:47:PRO:HB3	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:225:LYS:HD3	1:I:303:GLU:HG3	1.75	0.66
1:K:7:LYS:HE3	1:K:15:LYS:HG3	1.76	0.66
1:K:356:ALA:O	1:K:362:ARG:NH1	2.28	0.66
1:M:251:ALA:O	1:M:278:ALA:N	2.28	0.66
1:B:220:ILE:HG23	1:B:250:ILE:HD12	1.76	0.66
1:F:175:ILE:HB	1:F:404:ARG:HH12	1.61	0.66
1:H:325:ILE:HG22	1:H:330:THR:HG23	1.77	0.66
1:H:419:LEU:HB3	1:H:447:MET:HB3	1.77	0.66
1:K:274:ALA:HB1	1:K:325:ILE:HD13	1.78	0.66
1:L:15:LYS:HD3	1:L:18:ARG:HH21	1.59	0.66
1:M:36:ARG:NH2	1:M:456:LEU:O	2.25	0.66
1:C:223:ALA:HA	1:C:301:ILE:HB	1.77	0.66
1:D:15:LYS:HD3	1:D:18:ARG:HH21	1.61	0.66
1:D:58:ARG:HA	1:D:75:LYS:HD3	1.78	0.66
1:K:128:VAL:HG13	1:K:501:ARG:HG3	1.76	0.66
1:E:223:ALA:HB1	1:E:225:LYS:HG2	1.76	0.66
1:F:248:LEU:HD22	1:F:323:VAL:HG11	1.76	0.66
1:N:249:ILE:O	1:N:276:VAL:N	2.25	0.66
2:S:73:VAL:HA	2:S:86:MET:HB3	1.77	0.66
1:A:228:SER:HA	1:A:255:GLU:HG3	1.78	0.66
1:C:115:ASP:OD1	1:C:118:ARG:NH1	2.28	0.66
1:C:326:ASN:OD1	1:C:329:THR:N	2.27	0.66
1:D:430:ARG:HH11	1:D:437:ASN:HB3	1.60	0.66
1:J:40:LEU:HD22	1:J:59:GLU:HG2	1.76	0.66
1:A:326:ASN:OD1	1:A:329:THR:N	2.28	0.66
1:E:226:LYS:HE2	1:E:253:ASP:HB3	1.77	0.66
1:G:265:ASN:OD1	2:U:26:VAL:N	2.26	0.66
1:K:104:LEU:HD21	1:K:514:MET:HG3	1.76	0.66
2:R:5:PRO:HG3	2:R:11:ILE:HG12	1.78	0.66
2:T:47:ARG:HH22	2:T:88:GLU:HB3	1.60	0.66
1:C:268:ARG:HG3	2:Q:26:VAL:HG21	1.76	0.66
1:D:265:ASN:OD1	2:R:26:VAL:N	2.27	0.66
1:G:85:ALA:HB1	1:G:499:VAL:HG22	1.78	0.66
1:G:225:LYS:HD3	1:G:309:LEU:HB2	1.78	0.66
1:G:431:GLY:HA3	1:G:436:GLN:HB3	1.77	0.66
1:I:31:LEU:O	1:I:457:ASN:ND2	2.26	0.66
2:O:78:ILE:HD11	2:O:83:VAL:HG11	1.78	0.66
2:U:67:PHE:HB3	2:U:91:ILE:HD13	1.77	0.66
1:C:172:GLU:O	1:C:366:GLN:NE2	2.28	0.66
1:C:346:VAL:HA	1:C:349:ILE:HD12	1.77	0.66
1:H:5:ASP:HB2	1:H:524:LEU:HD23	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:128:VAL:HG13	1:H:501:ARG:HG3	1.78	0.66
1:J:166:MET:O	1:J:170:GLY:N	2.21	0.66
1:N:15:LYS:HD3	1:N:18:ARG:NH2	2.11	0.66
2:P:11:ILE:O	2:P:41:LEU:N	2.26	0.66
1:B:279:PRO:HG2	1:B:288:MET:HB3	1.77	0.65
1:B:479:ASN:ND2	1:B:491:MET:SD	2.69	0.65
1:F:193:MET:HB2	1:F:332:ILE:HB	1.78	0.65
1:I:81:ALA:O	1:I:85:ALA:CB	2.44	0.65
1:L:251:ALA:O	1:L:278:ALA:N	2.28	0.65
1:C:220:ILE:O	1:C:318:GLY:N	2.29	0.65
1:D:85:ALA:HB1	1:D:499:VAL:HG22	1.77	0.65
1:E:519:CYS:HB3	1:F:38:VAL:HG22	1.77	0.65
1:J:346:VAL:HG13	1:J:350:ARG:NH1	2.11	0.65
1:M:221:LEU:HB3	1:M:249:ILE:HA	1.78	0.65
1:I:20:VAL:HG22	1:I:74:VAL:HG21	1.78	0.65
2:P:47:ARG:N	2:P:55:LYS:O	2.29	0.65
2:U:73:VAL:HA	2:U:86:MET:HB3	1.78	0.65
1:B:216:GLU:OE2	1:B:322:ARG:NH1	2.28	0.65
1:G:113:PRO:HB2	1:G:516:THR:HA	1.78	0.65
1:M:455:VAL:HG13	1:M:460:GLU:HB2	1.78	0.65
1:M:517:THR:HA	1:N:37:ASN:HB2	1.78	0.65
2:Q:10:VAL:HG11	2:Q:40:VAL:HG12	1.79	0.65
2:T:17:VAL:HG22	2:T:34:LYS:HA	1.77	0.65
1:C:320:ALA:HA	1:C:336:VAL:H	1.62	0.65
1:H:427:ALA:HA	1:H:444:LEU:HD13	1.77	0.65
1:K:225:LYS:HD3	1:K:303:GLU:HG3	1.78	0.65
1:M:352:GLN:HA	1:M:355:GLU:HG3	1.78	0.65
1:B:215:LEU:HD22	1:B:246:PRO:HB3	1.78	0.65
1:G:58:ARG:HA	1:G:75:LYS:HD3	1.79	0.65
1:G:415:GLY:HA2	3:G:601:ATP:H1'	1.78	0.65
1:I:333:ILE:HG23	1:I:376:VAL:HG21	1.78	0.65
1:J:178:GLU:N	1:J:379:ILE:O	2.20	0.65
1:K:427:ALA:HA	1:K:444:LEU:HD13	1.77	0.65
1:L:139:SER:HA	1:L:171:LYS:HE3	1.78	0.65
1:A:215:LEU:HD22	1:A:246:PRO:HB3	1.79	0.65
1:C:431:GLY:HA3	1:C:436:GLN:HB3	1.79	0.65
1:E:231:ARG:HA	1:E:234:LEU:HG	1.79	0.65
1:E:349:ILE:HG23	1:E:365:LEU:HD12	1.78	0.65
1:F:213:VAL:N	1:F:325:ILE:O	2.27	0.65
1:L:197:ARG:NH2	1:L:280:GLY:O	2.30	0.65
1:L:420:ILE:HG12	1:L:448:GLU:HG2	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S:10:VAL:N	2:S:86:MET:O	2.15	0.65
2:T:95:VAL:HA	2:U:3:ILE:HG12	1.77	0.65
1:A:249:ILE:HB	1:A:275:ALA:HA	1.79	0.65
1:B:213:VAL:HB	1:B:325:ILE:HB	1.79	0.65
1:B:325:ILE:HG13	1:B:330:THR:HG23	1.78	0.65
1:C:356:ALA:O	1:C:362:ARG:NH2	2.30	0.65
1:K:215:LEU:HB3	1:K:246:PRO:HB2	1.78	0.65
1:K:325:ILE:HG22	1:K:330:THR:HG23	1.79	0.65
1:N:132:LYS:HE3	1:N:501:ARG:HD3	1.78	0.65
1:N:141:SER:HB3	1:N:163:ALA:HB1	1.78	0.65
1:H:250:ILE:HG12	1:H:276:VAL:HB	1.78	0.65
1:D:421:ARG:NH2	1:D:476:TYR:O	2.20	0.65
1:G:326:ASN:OD1	1:G:329:THR:N	2.23	0.65
1:H:251:ALA:O	1:H:278:ALA:N	2.29	0.65
1:L:31:LEU:O	1:L:457:ASN:ND2	2.23	0.65
1:N:81:ALA:O	1:N:85:ALA:HB2	1.96	0.65
1:N:479:ASN:N	1:N:484:GLU:O	2.29	0.65
2:O:8:ASP:HA	2:O:57:LEU:HD11	1.77	0.65
1:D:213:VAL:N	1:D:325:ILE:O	2.27	0.64
1:E:102:GLU:HB2	1:E:442:VAL:HG13	1.78	0.64
1:E:353:ILE:HG23	1:E:362:ARG:HB2	1.79	0.64
2:R:66:ILE:HD11	2:S:3:ILE:HD13	1.78	0.64
1:C:230:ILE:HA	1:C:233:MET:HE2	1.80	0.64
1:F:339:GLU:O	1:F:343:GLN:NE2	2.30	0.64
1:K:175:ILE:HA	1:K:377:ALA:HB3	1.78	0.64
1:K:220:ILE:HD11	1:K:250:ILE:HD12	1.77	0.64
2:Q:15:LYS:HE3	2:Q:64:ILE:HG23	1.79	0.64
2:U:11:ILE:O	2:U:41:LEU:N	2.21	0.64
1:B:268:ARG:HG3	2:P:26:VAL:HG21	1.78	0.64
1:D:71:ALA:HA	1:D:74:VAL:HG12	1.79	0.64
1:D:223:ALA:HA	1:D:301:ILE:HB	1.77	0.64
1:F:115:ASP:OD1	1:F:118:ARG:NH1	2.29	0.64
1:G:224:ASP:OD1	1:G:285:ARG:NH1	2.30	0.64
1:I:353:ILE:HA	1:I:362:ARG:HH22	1.61	0.64
1:I:421:ARG:NH2	1:I:476:TYR:O	2.29	0.64
1:J:420:ILE:HG12	1:J:448:GLU:HG2	1.79	0.64
1:L:349:ILE:HD13	1:L:368:ARG:HB3	1.79	0.64
1:N:419:LEU:HB3	1:N:447:MET:HB3	1.80	0.64
2:S:27:LEU:HB3	2:S:31:ALA:HB3	1.78	0.64
1:F:220:ILE:O	1:F:318:GLY:N	2.30	0.64
2:S:95:VAL:HA	2:T:3:ILE:HG12	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:51:LYS:NZ	3:C:601:ATP:O1A	2.30	0.64
1:E:220:ILE:O	1:E:318:GLY:N	2.30	0.64
1:J:421:ARG:NH2	1:J:476:TYR:O	2.26	0.64
1:L:222:LEU:HD13	1:L:293:ALA:HA	1.79	0.64
1:M:18:ARG:NE	1:M:67:GLU:OE2	2.30	0.64
2:R:38:GLY:HA3	2:R:67:PHE:HE1	1.62	0.64
1:A:148:GLY:HA2	1:A:399:ALA:HB1	1.80	0.64
1:B:172:GLU:O	1:B:366:GLN:NE2	2.31	0.64
1:J:233:MET:HG3	1:J:237:LEU:HG	1.80	0.64
2:O:94:ILE:HG23	2:P:6:LEU:HD21	1.78	0.64
2:P:14:ARG:NH2	2:P:69:ASP:OD2	2.31	0.64
2:Q:38:GLY:HA3	2:Q:67:PHE:HE1	1.61	0.64
2:R:12:VAL:HG22	2:R:84:LEU:HB2	1.80	0.64
1:B:220:ILE:O	1:B:318:GLY:N	2.29	0.64
1:G:20:VAL:HG22	1:G:74:VAL:HB	1.77	0.64
1:L:291:ASP:OD1	1:L:345:ARG:NE	2.27	0.64
1:N:326:ASN:N	1:N:329:THR:O	2.23	0.64
2:O:73:VAL:HA	2:O:86:MET:HB3	1.78	0.64
1:A:279:PRO:HG2	1:A:288:MET:HB3	1.79	0.64
1:D:279:PRO:HG2	1:D:288:MET:HB3	1.80	0.64
1:E:421:ARG:HH12	1:E:470:LYS:HA	1.63	0.64
1:F:349:ILE:HG22	1:F:365:LEU:HB3	1.80	0.64
1:J:62:LEU:HB2	1:J:68:ASN:HB2	1.80	0.64
1:N:291:ASP:OD1	1:N:345:ARG:NE	2.31	0.64
1:D:270:ILE:HG21	2:R:25:ILE:HA	1.80	0.64
1:F:356:ALA:O	1:F:362:ARG:NH2	2.31	0.64
1:H:77:VAL:HG13	1:H:506:TYR:HB3	1.78	0.64
1:M:7:LYS:HE3	1:M:15:LYS:HG3	1.79	0.64
2:P:37:ARG:HH22	2:Q:78:ILE:HG22	1.62	0.64
2:P:59:VAL:HG21	2:P:91:ILE:HG21	1.80	0.64
1:E:263:VAL:O	1:E:266:THR:OG1	2.10	0.64
1:F:320:ALA:HA	1:F:336:VAL:H	1.63	0.64
1:F:431:GLY:HA3	1:F:436:GLN:HB3	1.80	0.64
1:K:421:ARG:NH2	1:K:476:TYR:O	2.25	0.64
1:L:324:VAL:HB	1:L:331:THR:HB	1.80	0.64
1:A:349:ILE:HG23	1:A:365:LEU:HD12	1.80	0.63
1:A:365:LEU:HD13	1:A:368:ARG:HD3	1.80	0.63
1:E:365:LEU:HD13	1:E:368:ARG:HD3	1.81	0.63
1:I:326:ASN:N	1:I:329:THR:O	2.30	0.63
1:I:393:LYS:NZ	1:I:397:GLU:OE2	2.31	0.63
1:J:249:ILE:O	1:J:276:VAL:N	2.27	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:81:ALA:O	1:K:85:ALA:CB	2.45	0.63
1:L:322:ARG:O	1:L:333:ILE:N	2.30	0.63
1:B:263:VAL:O	1:B:266:THR:OG1	2.13	0.63
1:F:15:LYS:HB3	1:F:66:PHE:HB2	1.80	0.63
1:F:203:TYR:HB2	1:F:263:VAL:HB	1.80	0.63
1:G:261:THR:O	1:G:265:ASN:ND2	2.31	0.63
1:H:61:GLU:OE2	1:H:72:GLN:NE2	2.31	0.63
1:I:40:LEU:N	1:I:48:THR:O	2.30	0.63
1:I:251:ALA:O	1:I:278:ALA:N	2.29	0.63
1:K:213:VAL:HB	1:K:325:ILE:HG12	1.79	0.63
1:L:455:VAL:HG13	1:L:460:GLU:HB2	1.79	0.63
1:M:197:ARG:NH2	1:M:280:GLY:O	2.31	0.63
1:F:186:GLU:O	1:F:380:LYS:N	2.26	0.63
1:G:479:ASN:N	1:G:484:GLU:O	2.27	0.63
1:I:41:ASP:HA	1:I:47:PRO:HB3	1.80	0.63
1:J:455:VAL:HG21	1:J:465:VAL:HG11	1.79	0.63
1:N:200:LEU:HD13	1:N:254:VAL:H	1.64	0.63
2:S:8:ASP:HA	2:S:57:LEU:HD11	1.78	0.63
2:T:8:ASP:HB3	2:T:47:ARG:HG3	1.80	0.63
1:A:31:LEU:HB2	1:A:90:THR:HG21	1.81	0.63
1:A:115:ASP:OD1	1:A:118:ARG:NH1	2.29	0.63
1:I:205:ILE:HA	1:I:213:VAL:HG22	1.79	0.63
1:J:214:GLU:HG3	1:J:324:VAL:HG22	1.80	0.63
1:M:225:LYS:HD3	1:M:303:GLU:HG3	1.80	0.63
1:N:427:ALA:HA	1:N:444:LEU:HD13	1.81	0.63
1:D:261:THR:O	1:D:265:ASN:ND2	2.31	0.63
1:D:339:GLU:HA	1:D:342:ILE:HD12	1.81	0.63
1:F:31:LEU:HB2	1:F:90:THR:HG21	1.81	0.63
1:I:197:ARG:HE	1:I:279:PRO:HA	1.63	0.63
1:N:205:ILE:HA	1:N:213:VAL:HG22	1.80	0.63
2:O:6:LEU:HD11	2:U:94:ILE:HG13	1.81	0.63
1:J:240:VAL:HG21	1:J:247:LEU:HD13	1.79	0.63
1:L:479:ASN:N	1:L:484:GLU:O	2.31	0.63
1:M:291:ASP:OD1	1:M:345:ARG:NE	2.32	0.63
2:O:14:ARG:NH2	2:O:69:ASP:OD2	2.31	0.63
1:E:233:MET:HB3	1:E:237:LEU:HD23	1.81	0.63
1:F:326:ASN:OD1	1:F:329:THR:N	2.28	0.63
1:G:230:ILE:HA	1:G:233:MET:HE2	1.81	0.63
1:G:320:ALA:HA	1:G:336:VAL:H	1.63	0.63
1:I:214:GLU:HG3	1:I:324:VAL:HG22	1.81	0.63
1:K:64:ASP:HB3	1:K:67:GLU:HB2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Q:10:VAL:N	2:Q:86:MET:O	2.29	0.63
1:D:325:ILE:HG13	1:D:330:THR:HG23	1.79	0.63
1:G:350:ARG:HA	1:G:353:ILE:HD12	1.81	0.63
1:I:200:LEU:HD21	1:I:277:LYS:HB2	1.79	0.63
1:I:501:ARG:NH1	1:I:505:GLN:OE1	2.32	0.63
1:J:266:THR:HG22	1:J:273:VAL:H	1.63	0.63
1:M:325:ILE:HA	1:M:330:THR:HA	1.80	0.63
1:B:130:GLU:HB2	1:B:422:VAL:HG13	1.79	0.62
1:B:231:ARG:HA	1:B:234:LEU:HG	1.81	0.62
1:E:342:ILE:HG12	1:E:372:LEU:HD11	1.79	0.62
1:H:7:LYS:HE3	1:H:15:LYS:HG3	1.80	0.62
2:P:65:VAL:HB	2:P:91:ILE:HG23	1.81	0.62
2:R:13:LYS:HB2	2:R:41:LEU:HD11	1.81	0.62
1:A:203:TYR:HB2	1:A:263:VAL:HB	1.79	0.62
1:H:20:VAL:HG22	1:H:74:VAL:HG21	1.80	0.62
1:I:166:MET:O	1:I:170:GLY:N	2.32	0.62
1:M:411:VAL:HA	1:M:496:PRO:HA	1.80	0.62
1:M:479:ASN:N	1:M:484:GLU:O	2.27	0.62
2:P:11:ILE:HD12	2:P:42:ALA:HB3	1.81	0.62
2:S:68:ASN:N	2:S:90:ASP:O	2.31	0.62
1:F:339:GLU:HA	1:F:342:ILE:HD12	1.80	0.62
1:A:222:LEU:O	1:A:301:ILE:N	2.20	0.62
1:B:190:VAL:O	1:B:376:VAL:N	2.24	0.62
1:G:213:VAL:N	1:G:325:ILE:O	2.29	0.62
1:H:166:MET:HB3	1:H:175:ILE:HD11	1.81	0.62
1:H:235:PRO:HG3	1:H:310:GLU:HA	1.81	0.62
1:I:222:LEU:HD13	1:I:293:ALA:HA	1.81	0.62
1:L:21:ASN:HA	1:L:97:GLN:HE21	1.64	0.62
1:D:421:ARG:HH12	1:D:470:LYS:HA	1.64	0.62
1:E:31:LEU:O	1:E:457:ASN:ND2	2.27	0.62
1:E:58:ARG:HA	1:E:75:LYS:HD3	1.80	0.62
1:H:139:SER:HA	1:H:171:LYS:HE3	1.82	0.62
1:I:477:GLY:N	1:I:486:GLY:O	2.31	0.62
1:K:36:ARG:NH2	1:K:456:LEU:O	2.31	0.62
1:L:205:ILE:HA	1:L:213:VAL:HG22	1.81	0.62
1:M:221:LEU:HD23	1:M:249:ILE:HG23	1.80	0.62
1:M:455:VAL:HG21	1:M:465:VAL:HG11	1.80	0.62
2:Q:15:LYS:HG3	2:Q:38:GLY:HA2	1.81	0.62
1:A:175:ILE:HB	1:A:404:ARG:HH12	1.65	0.62
1:C:27:VAL:HG12	1:C:90:THR:HG23	1.82	0.62
1:J:427:ALA:HA	1:J:444:LEU:HD13	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:155:ASP:OD2	1:M:395:ARG:NH1	2.33	0.62
2:P:8:ASP:HA	2:P:57:LEU:HD11	1.80	0.62
2:U:47:ARG:N	2:U:55:LYS:O	2.32	0.62
1:A:220:ILE:O	1:A:318:GLY:N	2.32	0.62
1:A:397:GLU:O	1:A:401:HIS:ND1	2.32	0.62
1:B:240:VAL:HG21	1:B:247:LEU:HD12	1.82	0.62
1:E:265:ASN:OD1	2:S:26:VAL:N	2.30	0.62
1:G:240:VAL:HG11	1:G:247:LEU:HB2	1.80	0.62
1:G:325:ILE:HG13	1:G:330:THR:HG23	1.82	0.62
1:H:200:LEU:HD13	1:H:254:VAL:H	1.65	0.62
1:I:111:MET:HG3	1:I:116:LEU:HD11	1.82	0.62
1:M:65:LYS:O	1:M:69:MET:HG3	2.00	0.62
1:M:213:VAL:HB	1:M:325:ILE:HG12	1.81	0.62
1:N:365:LEU:HA	1:N:368:ARG:HG3	1.82	0.62
2:T:68:ASN:N	2:T:90:ASP:O	2.30	0.62
1:C:240:VAL:O	1:C:244:GLY:N	2.32	0.62
1:D:301:ILE:HD11	1:D:316:ASP:HB3	1.82	0.62
1:F:469:VAL:HG13	1:F:477:GLY:HA2	1.82	0.62
1:H:104:LEU:HD21	1:H:514:MET:HG3	1.81	0.62
1:I:197:ARG:NH2	1:I:280:GLY:O	2.32	0.62
1:K:117:LYS:NZ	1:K:121:ASP:OD2	2.32	0.62
1:M:501:ARG:NH1	1:M:505:GLN:OE1	2.33	0.62
1:F:213:VAL:HG11	1:F:274:ALA:HB2	1.82	0.62
1:J:322:ARG:O	1:J:333:ILE:N	2.29	0.62
1:N:82:ASN:HB2	1:N:89:THR:HG22	1.80	0.62
1:A:28:LYS:HE2	1:A:94:VAL:HG22	1.80	0.62
1:A:193:MET:HE1	1:A:372:LEU:HA	1.81	0.62
1:C:58:ARG:HA	1:C:75:LYS:HD3	1.80	0.62
1:C:213:VAL:N	1:C:325:ILE:O	2.27	0.62
1:F:249:ILE:HB	1:F:275:ALA:HA	1.81	0.62
1:G:186:GLU:O	1:G:380:LYS:N	2.30	0.62
1:I:240:VAL:HG21	1:I:247:LEU:HD13	1.80	0.62
1:K:291:ASP:OD1	1:K:345:ARG:NE	2.33	0.62
1:K:479:ASN:N	1:K:484:GLU:O	2.31	0.62
1:M:274:ALA:HB1	1:M:325:ILE:HD13	1.81	0.62
2:O:11:ILE:O	2:O:41:LEU:N	2.32	0.62
2:T:11:ILE:HG13	2:T:85:ILE:HD13	1.82	0.62
1:D:320:ALA:HA	1:D:336:VAL:H	1.65	0.61
1:G:205:ILE:HA	1:G:213:VAL:HG22	1.81	0.61
1:G:220:ILE:N	1:G:318:GLY:O	2.24	0.61
1:L:186:GLU:N	1:L:380:LYS:O	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:200:LEU:HD13	1:L:254:VAL:H	1.64	0.61
1:L:325:ILE:HA	1:L:330:THR:HA	1.81	0.61
1:C:279:PRO:HG2	1:C:288:MET:HB3	1.82	0.61
1:D:20:VAL:HG13	1:D:74:VAL:HG21	1.81	0.61
1:J:479:ASN:O	1:J:483:GLU:N	2.34	0.61
1:N:195:PHE:HZ	1:N:250:ILE:HD13	1.66	0.61
1:N:215:LEU:HB3	1:N:246:PRO:HB2	1.81	0.61
1:N:333:ILE:HG12	1:N:376:VAL:HG11	1.81	0.61
2:U:49:LEU:HD12	2:U:53:GLU:HB2	1.82	0.61
1:C:177:VAL:HG23	1:C:400:LEU:HD22	1.82	0.61
1:E:325:ILE:HG13	1:E:330:THR:HG23	1.82	0.61
1:I:82:ASN:HB2	1:I:89:THR:HG22	1.81	0.61
1:J:15:LYS:NZ	1:J:64:ASP:OD2	2.27	0.61
1:J:31:LEU:O	1:J:457:ASN:ND2	2.24	0.61
1:K:197:ARG:NH2	1:K:280:GLY:O	2.33	0.61
1:M:197:ARG:HE	1:M:279:PRO:HA	1.65	0.61
1:M:200:LEU:HD21	1:M:277:LYS:HB2	1.82	0.61
1:N:197:ARG:NH2	1:N:280:GLY:O	2.33	0.61
2:S:66:ILE:HG21	2:T:76:GLU:HG2	1.82	0.61
1:A:220:ILE:N	1:A:318:GLY:O	2.23	0.61
1:H:185:ASP:OD1	1:H:382:GLY:N	2.31	0.61
1:I:81:ALA:HB1	1:I:503:ALA:HA	1.81	0.61
1:I:479:ASN:ND2	1:I:491:MET:HG3	2.14	0.61
1:K:322:ARG:HB2	1:K:333:ILE:HB	1.81	0.61
1:N:325:ILE:HG22	1:N:330:THR:HG23	1.83	0.61
1:N:455:VAL:HG13	1:N:460:GLU:HB2	1.83	0.61
2:S:37:ARG:HH22	2:T:78:ILE:HG22	1.65	0.61
1:F:58:ARG:HA	1:F:75:LYS:HD3	1.81	0.61
1:H:266:THR:HG22	1:H:273:VAL:H	1.65	0.61
1:J:40:LEU:N	1:J:48:THR:O	2.31	0.61
1:J:213:VAL:HB	1:J:325:ILE:HG12	1.83	0.61
1:K:200:LEU:HD13	1:K:254:VAL:H	1.65	0.61
1:C:124:VAL:HG21	1:C:508:ALA:HB2	1.81	0.61
1:C:495:ASP:OD2	3:C:601:ATP:O2'	2.15	0.61
1:D:393:LYS:NZ	1:D:397:GLU:OE2	2.30	0.61
1:I:266:THR:HG22	1:I:273:VAL:H	1.64	0.61
1:J:215:LEU:HB3	1:J:246:PRO:HB2	1.81	0.61
1:K:39:VAL:HG13	1:K:49:ILE:HG12	1.81	0.61
1:K:322:ARG:O	1:K:333:ILE:N	2.28	0.61
1:M:322:ARG:O	1:M:333:ILE:N	2.30	0.61
2:Q:40:VAL:HG23	2:Q:62:GLY:H	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Q:47:ARG:NH2	2:Q:88:GLU:HB3	2.16	0.61
1:A:144:ILE:HG23	1:A:403:THR:HG21	1.82	0.61
1:E:220:ILE:HG23	1:E:250:ILE:HD12	1.83	0.61
1:G:469:VAL:HG13	1:G:477:GLY:HA2	1.82	0.61
1:H:81:ALA:O	1:H:85:ALA:HB3	2.00	0.61
1:J:322:ARG:HB2	1:J:333:ILE:HB	1.81	0.61
1:M:322:ARG:HB2	1:M:333:ILE:HB	1.82	0.61
1:A:519:CYS:HB3	1:B:38:VAL:HG22	1.80	0.61
1:F:295:LEU:HA	1:F:342:ILE:HD11	1.83	0.61
1:C:220:ILE:HG23	1:C:250:ILE:HD12	1.81	0.61
1:C:248:LEU:HD22	1:C:323:VAL:HG11	1.83	0.61
1:D:227:ILE:HD12	1:D:254:VAL:HG22	1.80	0.61
1:E:415:GLY:HA2	3:E:601:ATP:H1'	1.81	0.61
1:G:169:VAL:HB	1:G:377:ALA:HB2	1.82	0.61
1:I:325:ILE:HA	1:I:330:THR:HA	1.81	0.61
1:K:455:VAL:HG13	1:K:460:GLU:HB2	1.81	0.61
1:N:155:ASP:OD2	1:N:395:ARG:NH1	2.34	0.61
1:A:251:ALA:O	1:A:278:ALA:N	2.33	0.61
1:A:431:GLY:HA3	1:A:436:GLN:HB3	1.82	0.61
1:C:231:ARG:HA	1:C:234:LEU:HG	1.83	0.61
1:H:38:VAL:HG22	1:N:519:CYS:HB3	1.82	0.61
1:H:339:GLU:HA	1:H:342:ILE:HD12	1.83	0.61
1:H:413:ALA:HB1	1:H:488:MET:HB2	1.83	0.61
1:I:218:PRO:HB3	1:I:246:PRO:HG2	1.83	0.61
1:J:122:LYS:NZ	1:J:432:GLN:OE1	2.34	0.61
1:K:32:GLY:HA3	1:K:454:ILE:HG23	1.83	0.61
1:L:223:ALA:HA	1:L:301:ILE:HB	1.82	0.61
1:M:38:VAL:O	1:M:50:THR:N	2.33	0.61
1:M:350:ARG:HA	1:M:353:ILE:HD12	1.83	0.61
2:U:15:LYS:HG3	2:U:38:GLY:HA2	1.83	0.61
1:B:27:VAL:HG12	1:B:90:THR:HG23	1.82	0.60
1:G:421:ARG:NH2	1:G:476:TYR:O	2.22	0.60
1:H:205:ILE:HA	1:H:213:VAL:HG22	1.81	0.60
1:I:174:VAL:HB	1:I:376:VAL:HG12	1.82	0.60
1:I:200:LEU:HD13	1:I:254:VAL:H	1.65	0.60
1:L:81:ALA:O	1:L:85:ALA:HB2	2.01	0.60
1:M:349:ILE:HG21	1:M:368:ARG:HB2	1.83	0.60
1:B:213:VAL:HG11	1:B:274:ALA:HB2	1.81	0.60
1:B:420:ILE:HG12	1:B:448:GLU:HG2	1.82	0.60
1:D:216:GLU:OE2	1:D:322:ARG:NH1	2.34	0.60
1:G:220:ILE:HG23	1:G:250:ILE:HD12	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:174:VAL:HG11	1:H:376:VAL:HG12	1.82	0.60
1:H:291:ASP:OD1	1:H:345:ARG:NE	2.32	0.60
1:L:84:ALA:O	1:L:498:LYS:NZ	2.27	0.60
1:N:14:VAL:HB	1:N:18:ARG:HH12	1.65	0.60
2:O:11:ILE:HG22	2:O:41:LEU:HB2	1.83	0.60
1:A:230:ILE:HA	1:A:233:MET:HE2	1.83	0.60
1:C:519:CYS:HB3	1:D:38:VAL:HG22	1.82	0.60
1:K:205:ILE:HA	1:K:213:VAL:HG22	1.82	0.60
1:L:144:ILE:HG12	1:L:166:MET:HE3	1.83	0.60
2:P:12:VAL:HG12	2:P:40:VAL:HA	1.83	0.60
2:T:11:ILE:HD12	2:T:42:ALA:HB3	1.83	0.60
1:B:69:MET:HB2	1:C:47:PRO:HG2	1.83	0.60
1:C:20:VAL:HG22	1:C:74:VAL:HB	1.83	0.60
1:D:177:VAL:HG23	1:D:400:LEU:HD22	1.84	0.60
1:E:158:VAL:HG11	1:E:396:VAL:HA	1.84	0.60
1:F:213:VAL:HB	1:F:325:ILE:HB	1.84	0.60
1:L:406:ALA:HB2	1:L:496:PRO:HG3	1.83	0.60
1:N:76:GLU:HG2	1:N:80:LYS:HE3	1.83	0.60
1:B:320:ALA:HA	1:B:336:VAL:H	1.66	0.60
1:E:152:ALA:HB2	1:E:399:ALA:HB2	1.83	0.60
1:E:205:ILE:HA	1:E:213:VAL:HG22	1.84	0.60
1:H:81:ALA:HB1	1:H:503:ALA:HA	1.83	0.60
1:H:274:ALA:HB1	1:H:325:ILE:HD13	1.82	0.60
1:M:433:ASN:H	1:M:436:GLN:HB2	1.67	0.60
1:M:477:GLY:N	1:M:486:GLY:O	2.34	0.60
1:A:85:ALA:HB1	1:A:499:VAL:HG22	1.83	0.60
1:B:177:VAL:HG23	1:B:400:LEU:HD22	1.84	0.60
1:B:231:ARG:NH2	2:P:31:ALA:O	2.34	0.60
1:E:264:VAL:O	1:E:268:ARG:HG2	2.02	0.60
1:H:349:ILE:HD13	1:H:368:ARG:HB3	1.84	0.60
1:K:386:GLU:O	1:K:389:MET:HB2	2.01	0.60
1:L:501:ARG:NH1	1:L:505:GLN:OE1	2.34	0.60
2:O:12:VAL:O	2:O:84:LEU:N	2.34	0.60
2:T:73:VAL:HA	2:T:86:MET:HB3	1.83	0.60
1:A:186:GLU:HG3	1:A:380:LYS:HE2	1.84	0.60
1:B:232:GLU:HA	1:B:310:GLU:HG3	1.84	0.60
1:L:137:PRO:HA	1:L:410:GLY:HA2	1.84	0.60
1:M:427:ALA:HA	1:M:444:LEU:HD13	1.83	0.60
1:N:240:VAL:HG21	1:N:247:LEU:HD13	1.83	0.60
2:R:8:ASP:HA	2:R:57:LEU:HD11	1.83	0.60
1:A:27:VAL:HG12	1:A:90:THR:HG23	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:85:ALA:HB1	1:B:499:VAL:HG22	1.82	0.60
1:B:346:VAL:HB	1:B:369:VAL:HG22	1.83	0.60
1:C:452:ARG:HH12	1:C:463:SER:HA	1.65	0.60
1:D:262:LEU:HD22	1:D:273:VAL:HG21	1.84	0.60
1:H:202:PRO:HG2	1:I:384:ALA:HA	1.83	0.60
1:J:179:ASP:HA	1:J:381:VAL:HG22	1.84	0.60
1:M:124:VAL:HG13	1:M:504:LEU:HG	1.84	0.60
1:N:421:ARG:NH2	1:N:476:TYR:O	2.26	0.60
1:A:209:GLU:HG2	1:A:210:THR:HG23	1.83	0.60
1:A:261:THR:O	1:A:265:ASN:ND2	2.33	0.60
1:A:346:VAL:HB	1:A:369:VAL:HG22	1.82	0.60
1:B:251:ALA:O	1:B:278:ALA:N	2.35	0.60
1:D:213:VAL:HB	1:D:325:ILE:HB	1.83	0.60
1:E:114:MET:SD	7:F:701:HOH:O	2.56	0.60
1:F:197:ARG:O	1:F:330:THR:OG1	2.12	0.60
1:F:350:ARG:HA	1:F:353:ILE:HD12	1.83	0.60
1:G:519:CYS:SG	1:G:520:MET:N	2.75	0.60
1:M:215:LEU:HB3	1:M:246:PRO:HB2	1.81	0.60
1:M:302:SER:HB2	1:M:304:GLU:HG2	1.83	0.60
2:R:46:GLY:HA2	2:R:57:LEU:HD12	1.84	0.60
1:A:213:VAL:N	1:A:325:ILE:O	2.29	0.60
1:A:393:LYS:NZ	1:A:397:GLU:OE2	2.26	0.60
1:B:230:ILE:HA	1:B:233:MET:HE2	1.83	0.60
1:C:393:LYS:NZ	1:C:397:GLU:OE2	2.30	0.60
1:E:232:GLU:HA	1:E:310:GLU:HG3	1.84	0.60
1:H:195:PHE:HZ	1:H:250:ILE:HD13	1.67	0.60
1:J:77:VAL:HG13	1:J:506:TYR:HB3	1.84	0.60
1:K:270:ILE:HG22	1:K:271:VAL:HG23	1.83	0.60
1:B:221:LEU:HB2	1:B:317:LEU:HD22	1.83	0.59
1:C:414:GLY:H	1:C:488:MET:HB3	1.67	0.59
1:D:346:VAL:HB	1:D:369:VAL:HG22	1.84	0.59
1:H:323:VAL:HG12	1:H:332:ILE:HG22	1.84	0.59
1:I:349:ILE:HD13	1:I:368:ARG:HB3	1.84	0.59
1:I:455:VAL:HG21	1:I:465:VAL:HG11	1.83	0.59
1:K:266:THR:HG22	1:K:273:VAL:H	1.66	0.59
1:K:295:LEU:HD23	1:K:342:ILE:HG12	1.82	0.59
1:K:325:ILE:HA	1:K:330:THR:HA	1.84	0.59
1:A:522:THR:HG22	1:B:41:ASP:HB2	1.83	0.59
1:C:421:ARG:HH12	1:C:470:LYS:HA	1.65	0.59
1:F:252:GLU:OE2	1:F:285:ARG:NH1	2.34	0.59
1:I:39:VAL:HG13	1:I:49:ILE:HG12	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:200:LEU:HD13	1:J:254:VAL:H	1.66	0.59
1:J:420:ILE:HD12	1:J:451:LEU:HD13	1.83	0.59
1:A:264:VAL:O	1:A:268:ARG:HG2	2.03	0.59
1:A:287:ALA:HA	1:A:345:ARG:HH21	1.67	0.59
1:E:27:VAL:HG12	1:E:90:THR:HG23	1.83	0.59
1:G:177:VAL:HG23	1:G:400:LEU:HD22	1.82	0.59
1:H:215:LEU:HB3	1:H:246:PRO:HB2	1.84	0.59
1:H:365:LEU:HD23	1:H:368:ARG:HE	1.68	0.59
1:M:39:VAL:HA	1:M:49:ILE:HA	1.85	0.59
1:N:128:VAL:HG13	1:N:501:ARG:HG3	1.84	0.59
1:B:349:ILE:HG23	1:B:365:LEU:HB3	1.83	0.59
1:C:149:THR:OG1	1:C:156:GLU:HA	2.02	0.59
1:F:264:VAL:O	1:F:268:ARG:HG2	2.02	0.59
1:K:433:ASN:H	1:K:436:GLN:HB2	1.67	0.59
1:M:141:SER:HB3	1:M:163:ALA:HB1	1.83	0.59
1:N:325:ILE:HA	1:N:330:THR:HA	1.84	0.59
2:S:11:ILE:HG22	2:S:41:LEU:HB2	1.84	0.59
1:A:223:ALA:HB1	1:A:225:LYS:HG2	1.84	0.59
1:B:20:VAL:HG22	1:B:74:VAL:HB	1.83	0.59
1:C:144:ILE:HG23	1:C:403:THR:HB	1.84	0.59
1:D:197:ARG:O	1:D:330:THR:OG1	2.14	0.59
1:D:220:ILE:HG23	1:D:250:ILE:HD12	1.83	0.59
1:E:190:VAL:N	1:E:376:VAL:O	2.29	0.59
1:E:231:ARG:NH2	2:S:31:ALA:O	2.34	0.59
1:F:27:VAL:HG12	1:F:90:THR:HG23	1.85	0.59
1:F:193:MET:HE1	1:F:372:LEU:HA	1.83	0.59
1:G:262:LEU:HD22	1:G:273:VAL:HG21	1.84	0.59
1:H:197:ARG:NH2	1:H:280:GLY:O	2.35	0.59
1:I:419:LEU:HD22	1:I:447:MET:HG3	1.84	0.59
1:K:82:ASN:HB2	1:K:89:THR:HG22	1.83	0.59
1:M:240:VAL:HG21	1:M:247:LEU:HD13	1.83	0.59
1:N:194:GLN:HG3	1:N:331:THR:HB	1.83	0.59
2:P:46:GLY:HA2	2:P:57:LEU:HD12	1.83	0.59
2:T:46:GLY:HA2	2:T:57:LEU:HD12	1.83	0.59
2:T:65:VAL:HB	2:T:91:ILE:HG23	1.84	0.59
1:B:144:ILE:HG23	1:B:403:THR:HB	1.85	0.59
1:C:231:ARG:HH21	2:Q:31:ALA:HB1	1.67	0.59
1:D:27:VAL:HG12	1:D:90:THR:HG23	1.85	0.59
1:E:251:ALA:O	1:E:278:ALA:N	2.34	0.59
1:F:150:ILE:HD11	1:F:493:ILE:HG12	1.85	0.59
1:F:452:ARG:HH12	1:F:463:SER:HA	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:420:ILE:HG12	1:I:448:GLU:HG2	1.84	0.59
1:M:138:CYS:HB3	1:M:406:ALA:HB1	1.84	0.59
1:M:193:MET:HG2	1:M:295:LEU:HD13	1.82	0.59
2:Q:40:VAL:HG13	2:Q:65:VAL:HG21	1.85	0.59
1:B:519:CYS:HB3	1:C:38:VAL:HG22	1.85	0.59
1:G:221:LEU:HB2	1:G:317:LEU:HD22	1.84	0.59
1:L:128:VAL:HG13	1:L:501:ARG:HG3	1.84	0.59
1:L:185:ASP:HA	1:L:381:VAL:HA	1.85	0.59
1:B:230:ILE:HD11	1:B:258:ALA:HA	1.85	0.59
1:G:102:GLU:HB2	1:G:442:VAL:HG13	1.84	0.59
1:H:82:ASN:HB2	1:H:89:THR:HG22	1.85	0.59
1:H:455:VAL:HG13	1:H:460:GLU:HB2	1.84	0.59
1:I:77:VAL:HG13	1:I:506:TYR:HB3	1.84	0.59
1:J:128:VAL:HG13	1:J:501:ARG:HG3	1.85	0.59
1:M:192:GLY:HA3	1:M:376:VAL:HG13	1.84	0.59
1:M:266:THR:HG22	1:M:273:VAL:H	1.68	0.59
1:E:124:VAL:HG21	1:E:508:ALA:HB2	1.84	0.59
1:E:346:VAL:HG13	1:E:372:LEU:HD23	1.83	0.59
1:I:295:LEU:HD23	1:I:342:ILE:HG12	1.84	0.59
1:K:196:ASP:HA	1:K:329:THR:HG22	1.85	0.59
1:M:291:ASP:HA	1:M:345:ARG:HG2	1.85	0.59
1:C:261:THR:HG21	2:Q:27:LEU:HD13	1.84	0.59
1:L:148:GLY:HA2	1:L:399:ALA:HB1	1.85	0.59
1:M:13:ARG:HD3	1:M:514:MET:HE3	1.85	0.59
2:Q:91:ILE:O	2:R:9:ARG:NH1	2.35	0.59
2:S:11:ILE:HD12	2:S:42:ALA:HB3	1.85	0.59
1:B:287:ALA:HA	1:B:345:ARG:HH21	1.68	0.58
1:C:12:ALA:HA	1:C:520:MET:HE3	1.84	0.58
1:I:322:ARG:O	1:I:333:ILE:N	2.30	0.58
1:K:168:LYS:HG2	1:K:189:VAL:HG13	1.85	0.58
1:L:82:ASN:HB2	1:L:89:THR:HG22	1.85	0.58
1:L:155:ASP:OD2	1:L:395:ARG:NH1	2.35	0.58
1:L:266:THR:HG22	1:L:273:VAL:H	1.68	0.58
2:O:46:GLY:HA2	2:O:57:LEU:HD12	1.84	0.58
2:Q:46:GLY:HA2	2:Q:57:LEU:HD12	1.84	0.58
1:C:391:GLU:OE1	1:C:395:ARG:NH1	2.36	0.58
1:F:205:ILE:HA	1:F:213:VAL:HG22	1.85	0.58
1:H:32:GLY:HA3	1:H:454:ILE:HG23	1.84	0.58
1:I:73:MET:SD	1:J:47:PRO:HD2	2.43	0.58
1:N:81:ALA:HB1	1:N:503:ALA:HA	1.85	0.58
2:T:43:VAL:HG13	2:T:57:LEU:HD22	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:417:VAL:HG21	1:C:477:GLY:HA3	1.84	0.58
1:E:239:ALA:HA	1:E:242:LYS:HE2	1.86	0.58
1:G:28:LYS:HE2	1:G:94:VAL:HG22	1.85	0.58
1:G:149:THR:OG1	1:G:156:GLU:HA	2.03	0.58
1:G:452:ARG:HH12	1:G:463:SER:HA	1.68	0.58
1:J:205:ILE:HA	1:J:213:VAL:HG22	1.84	0.58
1:K:13:ARG:HD3	1:K:104:LEU:HD22	1.85	0.58
1:M:199:TYR:CE1	1:M:205:ILE:HD11	2.37	0.58
2:T:8:ASP:HA	2:T:57:LEU:HD11	1.84	0.58
1:B:190:VAL:N	1:B:376:VAL:O	2.27	0.58
1:G:203:TYR:HB2	1:G:263:VAL:CG2	2.33	0.58
1:G:222:LEU:O	1:G:301:ILE:N	2.28	0.58
1:J:185:ASP:OD1	1:J:382:GLY:N	2.34	0.58
1:K:326:ASN:N	1:K:329:THR:O	2.24	0.58
1:M:82:ASN:HB2	1:M:89:THR:HG22	1.84	0.58
1:M:346:VAL:HG22	1:M:372:LEU:HB3	1.84	0.58
1:M:353:ILE:HG23	1:M:362:ARG:NH1	2.17	0.58
2:P:94:ILE:HD11	2:Q:4:ARG:HE	1.68	0.58
1:A:169:VAL:HB	1:A:377:ALA:HB2	1.84	0.58
1:C:124:VAL:HG13	1:C:504:LEU:HG	1.84	0.58
1:C:148:GLY:O	1:C:152:ALA:N	2.35	0.58
1:D:214:GLU:HG3	1:D:324:VAL:HG22	1.83	0.58
1:E:381:VAL:HG12	1:E:389:MET:HE1	1.86	0.58
1:F:262:LEU:HD22	1:F:273:VAL:HG21	1.85	0.58
1:F:265:ASN:OD1	2:T:26:VAL:N	2.28	0.58
1:G:264:VAL:O	1:G:268:ARG:HG2	2.03	0.58
1:G:443:ALA:O	1:G:447:MET:HG2	2.03	0.58
1:H:345:ARG:O	1:H:349:ILE:HG13	2.04	0.58
1:I:359:ASP:OD1	1:I:360:TYR:N	2.35	0.58
1:J:81:ALA:O	1:J:85:ALA:HB3	2.02	0.58
1:L:111:MET:HG3	1:L:116:LEU:HD11	1.85	0.58
1:N:266:THR:HG22	1:N:273:VAL:H	1.69	0.58
1:N:498:LYS:HG3	1:N:501:ARG:NH2	2.18	0.58
2:R:73:VAL:HG22	2:R:86:MET:SD	2.42	0.58
1:A:320:ALA:HA	1:A:335:GLY:HA2	1.86	0.58
1:B:124:VAL:HG21	1:B:508:ALA:HB2	1.86	0.58
1:D:130:GLU:HB2	1:D:422:VAL:HG13	1.86	0.58
1:D:231:ARG:HH21	1:D:234:LEU:HD21	1.68	0.58
1:E:266:THR:O	1:E:272:LYS:NZ	2.26	0.58
1:E:381:VAL:HG13	1:E:392:LYS:HE3	1.86	0.58
1:F:232:GLU:HA	1:F:310:GLU:HG3	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:190:VAL:O	1:H:376:VAL:N	2.34	0.58
1:I:202:PRO:HG2	1:J:384:ALA:HA	1.85	0.58
1:N:458:CYS:SG	1:N:480:ALA:HB1	2.43	0.58
2:O:3:ILE:HG13	2:O:78:ILE:HG21	1.85	0.58
2:O:11:ILE:HG13	2:O:85:ILE:HD13	1.85	0.58
2:T:66:ILE:HD11	2:U:3:ILE:HD13	1.85	0.58
1:B:12:ALA:HA	1:B:520:MET:CE	2.33	0.58
1:B:448:GLU:OE1	1:B:470:LYS:NZ	2.37	0.58
1:C:111:MET:HE1	1:C:438:VAL:HB	1.85	0.58
1:D:411:VAL:HG21	1:D:494:LEU:HD22	1.86	0.58
1:F:31:LEU:O	1:F:457:ASN:ND2	2.26	0.58
1:H:141:SER:HB3	1:H:163:ALA:HB1	1.84	0.58
2:P:11:ILE:HG23	2:P:83:VAL:HB	1.86	0.58
1:D:231:ARG:HH12	2:R:31:ALA:HB1	1.68	0.58
1:E:231:ARG:HH21	2:S:31:ALA:HB1	1.69	0.58
1:E:261:THR:O	1:E:265:ASN:ND2	2.35	0.58
1:F:169:VAL:HB	1:F:377:ALA:HB2	1.84	0.58
1:F:479:ASN:ND2	1:F:491:MET:SD	2.77	0.58
1:G:144:ILE:HG23	1:G:403:THR:HB	1.84	0.58
1:K:301:ILE:HG12	1:K:307:MET:HE1	1.84	0.58
1:M:5:ASP:N	1:M:522:THR:O	2.33	0.58
2:P:11:ILE:HG13	2:P:85:ILE:HD13	1.86	0.58
2:R:10:VAL:N	2:R:86:MET:O	2.29	0.58
2:R:15:LYS:HG2	2:R:38:GLY:HA2	1.85	0.58
1:C:251:ALA:O	1:C:278:ALA:N	2.37	0.58
1:F:35:GLY:O	7:F:701:HOH:O	2.16	0.58
1:H:166:MET:HB2	1:H:171:LYS:HA	1.85	0.58
1:H:421:ARG:NH2	1:H:476:TYR:O	2.27	0.58
1:L:81:ALA:HB1	1:L:503:ALA:HA	1.85	0.58
1:L:381:VAL:O	1:L:389:MET:HE1	2.04	0.58
1:E:342:ILE:HA	1:E:372:LEU:HD21	1.86	0.58
1:G:409:GLU:OE2	1:G:501:ARG:NH2	2.36	0.58
1:I:419:LEU:HB3	1:I:447:MET:HB3	1.84	0.58
1:K:455:VAL:HG21	1:K:465:VAL:HG11	1.85	0.58
1:L:495:ASP:OD2	6:L:601:ADP:O2'	2.19	0.58
2:R:65:VAL:HB	2:R:91:ILE:HG23	1.85	0.58
2:T:40:VAL:HG23	2:T:62:GLY:H	1.68	0.58
2:U:65:VAL:HB	2:U:91:ILE:HG23	1.86	0.58
1:F:240:VAL:HG11	1:F:247:LEU:HB2	1.86	0.57
1:G:5:ASP:HB3	1:G:522:THR:OG1	2.04	0.57
1:I:185:ASP:OD1	1:I:382:GLY:N	2.29	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:82:ASN:HB2	1:J:89:THR:HG22	1.86	0.57
1:M:124:VAL:HG21	1:M:508:ALA:HB2	1.85	0.57
1:A:240:VAL:HG21	1:A:247:LEU:HD12	1.87	0.57
1:A:346:VAL:HA	1:A:349:ILE:HD12	1.85	0.57
1:B:415:GLY:HA2	3:B:601:ATP:H1'	1.85	0.57
1:D:66:PHE:HB3	1:D:520:MET:SD	2.44	0.57
1:D:158:VAL:HG11	1:D:396:VAL:HA	1.86	0.57
1:E:421:ARG:NH2	1:E:469:VAL:O	2.33	0.57
1:F:343:GLN:HA	1:F:346:VAL:HG22	1.84	0.57
1:H:326:ASN:N	1:H:329:THR:O	2.28	0.57
1:J:223:ALA:HA	1:J:301:ILE:HB	1.86	0.57
1:K:166:MET:HB3	1:K:171:LYS:HG2	1.86	0.57
2:P:14:ARG:HB3	2:P:67:PHE:HZ	1.69	0.57
1:A:443:ALA:O	1:A:447:MET:HG2	2.04	0.57
1:C:468:THR:HB	1:C:485:TYR:CE2	2.39	0.57
1:G:196:ASP:HA	1:G:329:THR:HA	1.85	0.57
1:J:177:VAL:HA	1:J:379:ILE:HB	1.86	0.57
1:J:479:ASN:N	1:J:484:GLU:O	2.37	0.57
2:P:10:VAL:HG22	2:P:43:VAL:HG22	1.84	0.57
2:U:10:VAL:HG22	2:U:43:VAL:HG22	1.86	0.57
1:A:325:ILE:HG13	1:A:330:THR:HG23	1.86	0.57
1:A:417:VAL:HG21	1:A:477:GLY:HA3	1.86	0.57
1:B:431:GLY:HA3	1:B:436:GLN:HB3	1.85	0.57
1:C:20:VAL:HG13	1:C:74:VAL:HG21	1.87	0.57
1:E:149:THR:OG1	1:E:156:GLU:HA	2.04	0.57
1:F:261:THR:O	1:F:265:ASN:ND2	2.37	0.57
1:J:89:THR:N	6:J:601:ADP:O3B	2.37	0.57
1:J:290:GLN:OE1	1:J:294:THR:OG1	2.22	0.57
1:J:381:VAL:HG21	1:J:393:LYS:HG2	1.86	0.57
2:R:64:ILE:O	2:R:95:VAL:N	2.37	0.57
2:S:65:VAL:HG12	2:S:94:ILE:HA	1.86	0.57
1:A:420:ILE:HG12	1:A:448:GLU:HG2	1.85	0.57
1:D:203:TYR:HB2	1:D:263:VAL:HB	1.85	0.57
1:F:148:GLY:HA2	1:F:399:ALA:HB1	1.87	0.57
1:G:346:VAL:HB	1:G:369:VAL:HG22	1.85	0.57
1:H:193:MET:HG2	1:H:371:LYS:HB3	1.87	0.57
1:K:68:ASN:O	1:K:72:GLN:HG2	2.05	0.57
1:K:406:ALA:HB2	1:K:496:PRO:HG3	1.87	0.57
1:A:108:ALA:HB1	1:H:109:ALA:HB1	1.87	0.57
1:D:31:LEU:O	1:D:457:ASN:ND2	2.23	0.57
1:E:189:VAL:HA	1:E:377:ALA:HA	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:219:PHE:HD2	1:E:240:VAL:HG22	1.69	0.57
1:I:221:LEU:HB3	1:I:249:ILE:HA	1.87	0.57
2:P:67:PHE:HB3	2:P:91:ILE:HD13	1.84	0.57
2:U:8:ASP:HA	2:U:57:LEU:HD11	1.85	0.57
1:B:458:CYS:SG	1:B:480:ALA:HB1	2.44	0.57
1:E:323:VAL:HG22	1:E:332:ILE:HA	1.86	0.57
1:I:7:LYS:HE3	1:I:15:LYS:HG3	1.85	0.57
1:K:199:TYR:CE2	1:K:205:ILE:HD11	2.40	0.57
1:A:47:PRO:HG2	1:G:69:MET:HB3	1.86	0.57
1:B:239:ALA:HA	1:B:242:LYS:HE2	1.86	0.57
1:C:179:ASP:HA	1:C:381:VAL:HB	1.87	0.57
1:C:448:GLU:OE1	1:C:470:LYS:NZ	2.34	0.57
1:E:71:ALA:HA	1:E:74:VAL:HG12	1.86	0.57
1:H:411:VAL:HA	1:H:496:PRO:HA	1.87	0.57
1:L:343:GLN:HA	1:L:346:VAL:HB	1.85	0.57
1:L:350:ARG:NH1	1:L:369:VAL:HB	2.19	0.57
1:M:421:ARG:NH1	1:M:469:VAL:O	2.37	0.57
2:R:11:ILE:HG22	2:R:41:LEU:HB2	1.87	0.57
1:A:130:GLU:HB2	1:A:422:VAL:HG13	1.86	0.57
1:B:180:GLY:N	1:B:381:VAL:O	2.28	0.57
1:B:321:LYS:NZ	1:B:336:VAL:HG11	2.20	0.57
1:D:264:VAL:O	1:D:268:ARG:HG2	2.05	0.57
1:E:278:ALA:HB3	1:E:285:ARG:HE	1.70	0.57
1:E:452:ARG:HH12	1:E:463:SER:HA	1.70	0.57
1:H:240:VAL:HG21	1:H:247:LEU:HD13	1.87	0.57
1:H:519:CYS:HB3	1:I:38:VAL:HG22	1.86	0.57
1:N:455:VAL:HG22	1:N:478:TYR:CE2	2.40	0.57
1:A:339:GLU:HA	1:A:342:ILE:HD12	1.86	0.57
1:B:199:TYR:CD2	1:B:213:VAL:HG23	2.40	0.57
1:B:339:GLU:HA	1:B:342:ILE:HD12	1.86	0.57
1:D:124:VAL:HG21	1:D:508:ALA:HB2	1.87	0.57
1:E:231:ARG:HD3	1:E:234:LEU:HD11	1.87	0.57
1:F:420:ILE:HG12	1:F:448:GLU:HG2	1.86	0.57
1:H:169:VAL:HG21	1:H:377:ALA:HB2	1.87	0.57
1:H:199:TYR:CE2	1:H:205:ILE:HD11	2.39	0.57
1:I:33:PRO:HD3	6:I:601:ADP:C4	2.39	0.57
1:I:39:VAL:HA	1:I:49:ILE:HA	1.87	0.57
1:J:18:ARG:NE	1:J:67:GLU:OE2	2.34	0.57
1:J:274:ALA:HB1	1:J:325:ILE:HD13	1.87	0.57
1:A:231:ARG:NH2	2:O:31:ALA:O	2.37	0.56
1:B:150:ILE:HG23	3:B:601:ATP:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:214:GLU:OE2	1:C:322:ARG:NH1	2.38	0.56
1:C:231:ARG:HD3	1:C:234:LEU:HD11	1.87	0.56
1:D:200:LEU:HD12	1:D:275:ALA:HB1	1.86	0.56
1:D:350:ARG:HA	1:D:353:ILE:HD12	1.87	0.56
1:G:150:ILE:HG13	1:G:493:ILE:HA	1.87	0.56
1:H:501:ARG:NH1	1:H:505:GLN:OE1	2.38	0.56
1:I:479:ASN:O	1:I:483:GLU:N	2.38	0.56
1:K:235:PRO:HG3	1:K:310:GLU:HA	1.87	0.56
1:K:352:GLN:OE1	1:K:368:ARG:NH2	2.38	0.56
1:M:27:VAL:HG12	1:M:90:THR:HG23	1.87	0.56
1:M:519:CYS:HB3	1:N:38:VAL:HG22	1.85	0.56
1:N:501:ARG:NH1	1:N:505:GLN:OE1	2.38	0.56
2:O:11:ILE:HG23	2:O:83:VAL:HB	1.85	0.56
2:R:57:LEU:O	2:R:60:LYS:NZ	2.27	0.56
2:S:66:ILE:HD11	2:T:3:ILE:HD13	1.87	0.56
2:U:12:VAL:HA	2:U:40:VAL:HA	1.87	0.56
1:B:487:ASN:O	1:B:491:MET:HG2	2.04	0.56
1:C:209:GLU:HG2	1:C:210:THR:HG23	1.87	0.56
1:C:230:ILE:H	1:C:230:ILE:HD12	1.69	0.56
1:C:349:ILE:HG22	1:C:365:LEU:HB3	1.86	0.56
1:F:220:ILE:HG13	1:F:248:LEU:HD23	1.87	0.56
1:J:39:VAL:HG22	1:J:49:ILE:HG12	1.87	0.56
1:J:353:ILE:HD11	1:J:369:VAL:HG11	1.87	0.56
1:K:324:VAL:HB	1:K:331:THR:HG23	1.87	0.56
1:L:131:LEU:HD21	1:L:500:THR:HB	1.85	0.56
1:L:215:LEU:HB3	1:L:246:PRO:HB2	1.86	0.56
2:O:76:GLU:HB3	2:O:78:ILE:HG23	1.87	0.56
2:Q:47:ARG:HH22	2:Q:88:GLU:HB3	1.70	0.56
1:A:265:ASN:OD1	2:O:26:VAL:N	2.28	0.56
1:B:179:ASP:OD1	1:B:393:LYS:HD2	2.06	0.56
1:B:206:ASN:HD21	1:B:214:GLU:HB3	1.70	0.56
1:B:261:THR:O	1:B:265:ASN:ND2	2.37	0.56
1:B:343:GLN:HA	1:B:346:VAL:HG22	1.87	0.56
1:D:244:GLY:O	1:D:272:LYS:NZ	2.36	0.56
1:D:346:VAL:HA	1:D:349:ILE:HB	1.87	0.56
1:D:353:ILE:HG23	1:D:362:ARG:HB2	1.87	0.56
1:E:166:MET:HA	1:E:169:VAL:HG12	1.87	0.56
1:F:223:ALA:HB1	1:F:225:LYS:HG2	1.87	0.56
1:F:287:ALA:HA	1:F:345:ARG:HH21	1.70	0.56
1:G:124:VAL:HG21	1:G:508:ALA:HB2	1.86	0.56
1:H:27:VAL:HG12	1:H:90:THR:HG23	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:73:MET:SD	1:I:47:PRO:HD2	2.46	0.56
1:H:137:PRO:HA	1:H:410:GLY:HA2	1.87	0.56
1:I:381:VAL:HG23	1:I:389:MET:SD	2.45	0.56
1:J:12:ALA:HA	1:J:520:MET:HE2	1.86	0.56
1:J:218:PRO:HB3	1:J:246:PRO:HG2	1.88	0.56
1:K:81:ALA:HB1	1:K:503:ALA:HA	1.86	0.56
1:K:194:GLN:HG3	1:K:331:THR:HB	1.86	0.56
1:K:501:ARG:NH1	1:K:505:GLN:OE1	2.38	0.56
1:N:65:LYS:O	1:N:69:MET:HG3	2.04	0.56
1:N:131:LEU:HG	1:N:497:THR:HG23	1.87	0.56
1:N:223:ALA:HA	1:N:301:ILE:HB	1.87	0.56
2:T:58:ASP:OD2	2:U:7:HIS:NE2	2.39	0.56
1:G:279:PRO:HG2	1:G:288:MET:HB3	1.86	0.56
1:G:429:LEU:O	1:G:430:ARG:NH1	2.38	0.56
1:H:233:MET:HG3	1:H:237:LEU:HG	1.86	0.56
1:J:325:ILE:HA	1:J:330:THR:HA	1.88	0.56
1:K:487:ASN:O	1:K:491:MET:HG2	2.04	0.56
1:L:166:MET:HB2	1:L:171:LYS:HA	1.86	0.56
1:M:33:PRO:HD3	6:M:601:ADP:C4	2.41	0.56
1:M:81:ALA:O	1:M:85:ALA:HB2	2.06	0.56
1:M:81:ALA:O	1:M:85:ALA:HB3	2.06	0.56
1:M:349:ILE:HD13	1:M:368:ARG:HB3	1.86	0.56
1:N:41:ASP:HA	1:N:47:PRO:HB3	1.87	0.56
2:S:10:VAL:HG13	2:S:40:VAL:HG13	1.87	0.56
1:A:177:VAL:HG23	1:A:400:LEU:HD22	1.88	0.56
1:B:197:ARG:O	1:B:330:THR:OG1	2.16	0.56
1:C:150:ILE:HG13	1:C:493:ILE:HA	1.87	0.56
1:C:166:MET:HA	1:C:169:VAL:HG12	1.86	0.56
1:D:287:ALA:HA	1:D:345:ARG:HH21	1.70	0.56
1:D:431:GLY:N	1:D:437:ASN:OD1	2.39	0.56
1:E:204:PHE:HD1	1:E:266:THR:HG21	1.70	0.56
1:G:27:VAL:HG12	1:G:90:THR:HG23	1.88	0.56
1:G:190:VAL:N	1:G:376:VAL:O	2.29	0.56
1:H:195:PHE:HB3	1:H:371:LYS:HE3	1.88	0.56
1:J:193:MET:HG2	1:J:295:LEU:HD13	1.87	0.56
2:U:46:GLY:HA2	2:U:57:LEU:HD12	1.86	0.56
1:A:65:LYS:O	1:A:69:MET:HG3	2.05	0.56
1:A:141:SER:HA	1:A:144:ILE:HD12	1.86	0.56
1:A:468:THR:HB	1:A:485:TYR:CE2	2.41	0.56
1:F:20:VAL:HG22	1:F:74:VAL:HB	1.85	0.56
1:G:199:TYR:CD2	1:G:213:VAL:HG23	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:498:LYS:HG3	1:H:501:ARG:NH2	2.20	0.56
1:I:124:VAL:HG21	1:I:508:ALA:HB2	1.88	0.56
1:K:295:LEU:HA	1:K:342:ILE:HG12	1.88	0.56
1:M:205:ILE:HA	1:M:213:VAL:HG22	1.88	0.56
1:N:161:LEU:HG	1:N:187:LEU:HD23	1.87	0.56
2:O:66:ILE:HG21	2:P:76:GLU:HG2	1.88	0.56
2:P:5:PRO:HB3	2:P:85:ILE:HD11	1.87	0.56
1:A:262:LEU:HD13	1:A:273:VAL:HG11	1.87	0.56
1:C:178:GLU:HA	1:C:393:LYS:HE2	1.87	0.56
1:F:239:ALA:HA	1:F:242:LYS:HE2	1.87	0.56
1:G:151:SER:OG	1:G:399:ALA:HA	2.06	0.56
1:I:5:ASP:N	1:I:522:THR:O	2.38	0.56
1:I:165:ALA:HB2	1:I:187:LEU:HD22	1.88	0.56
1:L:27:VAL:HG12	1:L:90:THR:HG23	1.88	0.56
1:L:274:ALA:HB1	1:L:325:ILE:HD13	1.86	0.56
2:O:26:VAL:HG12	2:O:28:THR:HG23	1.87	0.56
2:P:77:LYS:HG3	2:P:80:ASN:HA	1.87	0.56
2:Q:95:VAL:HA	2:R:3:ILE:HG12	1.87	0.56
2:T:14:ARG:HA	2:T:38:GLY:HA2	1.87	0.56
1:A:41:ASP:HB2	1:G:522:THR:HG22	1.87	0.56
1:B:247:LEU:HB3	1:B:273:VAL:HG22	1.87	0.56
1:G:158:VAL:HG11	1:G:396:VAL:HA	1.87	0.56
1:H:461:GLU:HG3	1:H:464:VAL:H	1.71	0.56
1:I:262:LEU:HD22	1:I:273:VAL:HG21	1.88	0.56
1:I:274:ALA:HB1	1:I:325:ILE:HD13	1.88	0.56
1:L:222:LEU:HD23	1:L:250:ILE:HB	1.87	0.56
1:M:233:MET:HG3	1:M:237:LEU:HG	1.87	0.56
1:M:235:PRO:HG3	1:M:310:GLU:HA	1.87	0.56
1:N:301:ILE:HG12	1:N:307:MET:HE1	1.87	0.56
1:N:365:LEU:HD23	1:N:368:ARG:HE	1.71	0.56
2:O:5:PRO:HB3	2:O:85:ILE:HD11	1.88	0.56
2:P:20:LYS:NZ	2:P:23:GLY:O	2.38	0.56
1:C:232:GLU:HA	1:C:310:GLU:HG3	1.87	0.56
1:D:12:ALA:HA	1:D:520:MET:CE	2.36	0.56
1:E:69:MET:HB2	1:F:47:PRO:HG2	1.88	0.56
1:G:152:ALA:HB2	1:G:399:ALA:HB2	1.88	0.56
1:H:249:ILE:O	1:H:276:VAL:N	2.23	0.56
1:I:18:ARG:NE	1:I:67:GLU:OE2	2.38	0.56
1:I:81:ALA:O	1:I:85:ALA:HB2	2.06	0.56
1:K:479:ASN:HB2	1:K:491:MET:CE	2.35	0.56
1:L:218:PRO:HB3	1:L:246:PRO:HG2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:345:ARG:NH2	1:L:368:ARG:HH12	2.03	0.56
2:O:43:VAL:HG13	2:O:57:LEU:HD22	1.87	0.56
1:A:205:ILE:HA	1:A:213:VAL:HG22	1.88	0.56
1:D:219:PHE:CD2	1:D:240:VAL:HG22	2.40	0.56
1:I:345:ARG:NH2	1:I:368:ARG:HH12	2.04	0.56
1:K:333:ILE:HG12	1:K:376:VAL:HG11	1.88	0.56
1:L:124:VAL:HG21	1:L:508:ALA:HB2	1.88	0.56
1:M:177:VAL:HA	1:M:379:ILE:HB	1.87	0.56
2:R:11:ILE:N	2:R:42:ALA:O	2.33	0.56
1:B:149:THR:OG1	1:B:156:GLU:HA	2.06	0.55
1:B:200:LEU:HD12	1:B:275:ALA:HB1	1.87	0.55
1:B:322:ARG:O	1:B:333:ILE:N	2.35	0.55
1:B:468:THR:HB	1:B:485:TYR:CE2	2.41	0.55
1:C:186:GLU:HB3	1:C:380:LYS:HB2	1.88	0.55
1:C:409:GLU:OE2	1:C:501:ARG:NH2	2.38	0.55
1:D:5:ASP:N	1:D:522:THR:O	2.27	0.55
1:E:143:ALA:O	1:E:147:VAL:HG23	2.06	0.55
1:E:443:ALA:O	1:E:447:MET:HG2	2.05	0.55
1:F:130:GLU:HB2	1:F:422:VAL:HG13	1.87	0.55
1:G:214:GLU:HG3	1:G:324:VAL:HG22	1.88	0.55
1:H:384:ALA:HA	1:N:202:PRO:HG2	1.87	0.55
1:H:433:ASN:H	1:H:436:GLN:HB2	1.71	0.55
1:I:132:LYS:NZ	1:I:409:GLU:OE2	2.37	0.55
1:J:15:LYS:HB3	1:J:66:PHE:HB2	1.88	0.55
1:J:221:LEU:HD23	1:J:249:ILE:HG23	1.87	0.55
1:K:421:ARG:NH1	1:K:469:VAL:O	2.39	0.55
1:K:458:CYS:SG	1:K:480:ALA:HB1	2.47	0.55
1:K:477:GLY:N	1:K:486:GLY:O	2.39	0.55
1:M:498:LYS:HG3	1:M:501:ARG:NH2	2.21	0.55
2:T:64:ILE:O	2:T:95:VAL:N	2.39	0.55
2:U:38:GLY:HA3	2:U:67:PHE:HE1	1.71	0.55
1:C:308:GLU:H	1:C:311:LYS:HD3	1.70	0.55
1:D:431:GLY:HA3	1:D:436:GLN:HB3	1.88	0.55
1:G:213:VAL:HG11	1:G:274:ALA:HB2	1.88	0.55
1:H:219:PHE:CE2	1:H:314:LEU:HD22	2.40	0.55
1:H:351:GLN:HA	1:H:354:GLU:CD	2.25	0.55
1:I:155:ASP:OD2	1:I:395:ARG:HD2	2.06	0.55
1:I:178:GLU:N	1:I:379:ILE:O	2.25	0.55
1:L:233:MET:HG3	1:L:237:LEU:HG	1.86	0.55
1:L:339:GLU:HB3	1:L:343:GLN:HE22	1.71	0.55
1:L:433:ASN:H	1:L:436:GLN:HB2	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:263:VAL:O	1:M:266:THR:OG1	2.22	0.55
1:B:365:LEU:HD13	1:B:368:ARG:HD3	1.87	0.55
1:B:452:ARG:HH12	1:B:463:SER:HA	1.71	0.55
1:C:302:SER:OG	1:C:304:GLU:OE1	2.23	0.55
1:D:150:ILE:HG23	3:D:601:ATP:C8	2.41	0.55
1:F:488:MET:HA	1:F:491:MET:HE2	1.88	0.55
1:G:349:ILE:HG23	1:G:365:LEU:HD12	1.87	0.55
1:G:468:THR:HB	1:G:485:TYR:CE2	2.40	0.55
1:H:47:PRO:HD2	1:N:73:MET:SD	2.47	0.55
1:L:202:PRO:HG2	1:M:384:ALA:HA	1.88	0.55
1:M:461:GLU:HG3	1:M:464:VAL:H	1.71	0.55
1:N:346:VAL:HG22	1:N:372:LEU:HB3	1.87	0.55
2:P:40:VAL:HG23	2:P:62:GLY:H	1.71	0.55
2:P:95:VAL:HA	2:Q:3:ILE:HG22	1.87	0.55
1:B:158:VAL:HG11	1:B:396:VAL:HA	1.87	0.55
1:B:193:MET:HB2	1:B:332:ILE:HB	1.89	0.55
1:D:204:PHE:HD1	1:D:266:THR:HG21	1.71	0.55
1:E:16:MET:HE3	1:E:69:MET:SD	2.46	0.55
1:H:177:VAL:HA	1:H:379:ILE:HB	1.89	0.55
1:I:233:MET:HG3	1:I:237:LEU:HG	1.88	0.55
1:K:349:ILE:HD13	1:K:368:ARG:HB3	1.89	0.55
1:N:29:VAL:O	1:N:36:ARG:N	2.34	0.55
1:A:204:PHE:HD1	1:A:266:THR:HG21	1.72	0.55
1:A:343:GLN:HA	1:A:346:VAL:HG22	1.88	0.55
1:C:240:VAL:HG11	1:C:247:LEU:HB2	1.87	0.55
1:H:39:VAL:HG13	1:H:49:ILE:HG12	1.89	0.55
1:H:168:LYS:HG2	1:H:189:VAL:HG13	1.87	0.55
1:I:295:LEU:HA	1:I:342:ILE:HG12	1.89	0.55
1:I:381:VAL:HG11	1:I:393:LYS:HA	1.88	0.55
1:L:432:GLN:OE1	1:L:436:GLN:NE2	2.31	0.55
1:M:218:PRO:HB3	1:M:246:PRO:HG2	1.89	0.55
1:M:368:ARG:O	1:M:372:LEU:HD23	2.07	0.55
1:N:14:VAL:HB	1:N:18:ARG:NH1	2.21	0.55
1:B:184:GLN:NE2	1:B:185:ASP:OD1	2.40	0.55
1:D:20:VAL:HG22	1:D:74:VAL:HB	1.88	0.55
1:E:431:GLY:HA3	1:E:436:GLN:HB3	1.89	0.55
1:E:468:THR:HB	1:E:485:TYR:CE2	2.42	0.55
1:F:166:MET:HA	1:F:169:VAL:HG12	1.89	0.55
1:G:39:VAL:HG22	1:G:49:ILE:HG12	1.88	0.55
1:H:155:ASP:OD2	1:H:395:ARG:HD2	2.06	0.55
1:I:302:SER:HB2	1:I:304:GLU:HG2	1.86	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:221:LEU:HB3	1:K:249:ILE:HA	1.87	0.55
1:L:427:ALA:HA	1:L:444:LEU:HD13	1.88	0.55
1:M:89:THR:N	6:M:601:ADP:O3B	2.39	0.55
1:N:89:THR:N	6:N:601:ADP:O3B	2.38	0.55
2:P:43:VAL:HG13	2:P:57:LEU:HD22	1.88	0.55
1:A:20:VAL:HG12	1:A:97:GLN:OE1	2.07	0.55
1:B:71:ALA:HA	1:B:74:VAL:HG12	1.89	0.55
1:B:230:ILE:O	1:B:234:LEU:N	2.40	0.55
1:E:150:ILE:HG23	3:E:601:ATP:C8	2.42	0.55
1:H:230:ILE:O	1:H:234:LEU:N	2.39	0.55
1:J:20:VAL:HG22	1:J:74:VAL:HG21	1.88	0.55
1:L:13:ARG:HD3	1:L:514:MET:HE3	1.86	0.55
1:L:472:GLY:HA3	1:L:476:TYR:CD2	2.42	0.55
1:N:137:PRO:HA	1:N:410:GLY:HA2	1.89	0.55
1:B:356:ALA:O	1:B:362:ARG:NH2	2.39	0.55
1:C:240:VAL:HG21	1:C:247:LEU:HD13	1.89	0.55
1:C:414:GLY:HA3	1:C:493:ILE:HG22	1.89	0.55
1:E:65:LYS:O	1:E:69:MET:HG3	2.06	0.55
1:F:149:THR:OG1	1:F:156:GLU:HA	2.07	0.55
1:G:150:ILE:HG23	3:G:601:ATP:C8	2.42	0.55
1:I:346:VAL:HG22	1:I:372:LEU:HB3	1.88	0.55
1:J:279:PRO:O	1:J:285:ARG:HA	2.06	0.55
1:L:203:TYR:HB2	1:L:263:VAL:HG13	1.89	0.55
1:L:263:VAL:HG12	1:L:267:MET:HE1	1.89	0.55
1:M:117:LYS:HB2	1:M:515:ILE:HG21	1.89	0.55
1:A:452:ARG:HH12	1:A:463:SER:HA	1.71	0.55
1:B:102:GLU:HB2	1:B:442:VAL:HG13	1.88	0.55
1:B:221:LEU:HD23	1:B:249:ILE:HG12	1.88	0.55
1:D:349:ILE:HG23	1:D:365:LEU:HD12	1.89	0.55
1:E:28:LYS:HE2	1:E:94:VAL:HG22	1.89	0.55
1:E:124:VAL:HG13	1:E:504:LEU:HG	1.88	0.55
1:E:432:GLN:HB2	1:E:436:GLN:NE2	2.22	0.55
1:H:89:THR:N	6:H:601:ADP:O3B	2.39	0.55
1:H:291:ASP:HB3	1:H:372:LEU:HD21	1.87	0.55
1:H:301:ILE:HG21	1:H:309:LEU:HD23	1.89	0.55
1:I:322:ARG:HB2	1:I:333:ILE:HB	1.87	0.55
1:J:68:ASN:O	1:J:72:GLN:HG2	2.07	0.55
1:L:290:GLN:OE1	1:L:294:THR:OG1	2.24	0.55
1:B:166:MET:HA	1:B:169:VAL:HG12	1.89	0.55
1:E:20:VAL:HG13	1:E:74:VAL:HG21	1.89	0.55
1:E:20:VAL:HG22	1:E:74:VAL:HB	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:199:TYR:CD2	1:F:213:VAL:HG23	2.42	0.55
1:I:68:ASN:O	1:I:72:GLN:HG2	2.07	0.55
1:J:85:ALA:HB2	1:J:502:SER:HB2	1.89	0.55
1:K:124:VAL:HG13	1:K:504:LEU:HG	1.88	0.55
1:K:197:ARG:HE	1:K:279:PRO:HA	1.72	0.55
1:K:414:GLY:HA3	1:K:493:ILE:HG22	1.89	0.55
1:L:461:GLU:HG3	1:L:464:VAL:H	1.71	0.55
2:Q:47:ARG:N	2:Q:55:LYS:O	2.40	0.55
2:S:65:VAL:HG21	2:S:91:ILE:HD12	1.88	0.55
1:A:220:ILE:HG23	1:A:250:ILE:HD12	1.88	0.54
1:B:219:PHE:CZ	1:B:245:LYS:HE2	2.42	0.54
1:C:193:MET:HB2	1:C:332:ILE:HB	1.89	0.54
1:E:221:LEU:HB2	1:E:317:LEU:HD22	1.89	0.54
1:H:197:ARG:HE	1:H:279:PRO:HA	1.72	0.54
1:J:199:TYR:CE1	1:J:205:ILE:HD11	2.42	0.54
1:J:411:VAL:HA	1:J:496:PRO:HA	1.89	0.54
1:L:180:GLY:H	1:L:389:MET:HE2	1.72	0.54
1:L:199:TYR:CE2	1:L:205:ILE:HD11	2.42	0.54
1:M:353:ILE:HG23	1:M:362:ARG:NH2	2.22	0.54
1:N:433:ASN:H	1:N:436:GLN:HB2	1.72	0.54
2:T:11:ILE:HG22	2:T:41:LEU:HB2	1.88	0.54
1:A:220:ILE:HG13	1:A:248:LEU:HD23	1.88	0.54
1:A:414:GLY:HA3	1:A:493:ILE:HG22	1.89	0.54
1:B:323:VAL:HG22	1:B:332:ILE:HA	1.88	0.54
1:B:356:ALA:HB1	1:B:361:ASP:HB2	1.90	0.54
1:D:292:ILE:O	1:D:296:THR:OG1	2.17	0.54
1:D:323:VAL:HG22	1:D:332:ILE:HA	1.89	0.54
1:F:200:LEU:HD12	1:F:275:ALA:HB1	1.89	0.54
1:I:13:ARG:HG3	1:I:104:LEU:HD22	1.89	0.54
1:K:185:ASP:OD2	1:K:392:LYS:HE3	2.07	0.54
2:T:15:LYS:HZ1	2:T:64:ILE:HG12	1.72	0.54
1:B:66:PHE:HB3	1:B:520:MET:SD	2.48	0.54
1:B:135:SER:HB3	1:B:497:THR:HG21	1.89	0.54
1:C:510:VAL:HG23	1:D:385:THR:HG21	1.90	0.54
1:E:200:LEU:HD12	1:E:275:ALA:HB1	1.89	0.54
1:E:250:ILE:HG23	1:E:278:ALA:HA	1.89	0.54
1:F:69:MET:HE1	1:F:520:MET:HB3	1.89	0.54
1:F:144:ILE:HG23	1:F:403:THR:HG21	1.89	0.54
1:G:220:ILE:HG13	1:G:248:LEU:HD23	1.89	0.54
1:H:352:GLN:HA	1:H:355:GLU:HG3	1.89	0.54
1:J:81:ALA:HB1	1:J:503:ALA:HA	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:27:VAL:HG12	1:K:90:THR:HG23	1.89	0.54
1:K:284:ARG:NE	1:K:364:LYS:HB3	2.23	0.54
1:N:345:ARG:NH2	1:N:368:ARG:HH12	2.05	0.54
1:A:510:VAL:HG23	1:B:385:THR:HG21	1.89	0.54
1:D:205:ILE:HA	1:D:213:VAL:HG22	1.90	0.54
1:D:278:ALA:HB3	1:D:285:ARG:HH11	1.72	0.54
1:D:417:VAL:HG21	1:D:477:GLY:HA3	1.89	0.54
1:E:177:VAL:HG23	1:E:400:LEU:HD22	1.89	0.54
1:H:419:LEU:HD22	1:H:447:MET:HG3	1.89	0.54
1:J:235:PRO:HG3	1:J:310:GLU:HA	1.89	0.54
1:K:31:LEU:HD13	1:K:90:THR:HB	1.88	0.54
1:K:249:ILE:O	1:K:276:VAL:N	2.34	0.54
1:K:346:VAL:HG22	1:K:372:LEU:HB3	1.89	0.54
2:P:12:VAL:HG22	2:P:84:LEU:HB2	1.90	0.54
1:A:421:ARG:HH12	1:A:470:LYS:HA	1.72	0.54
1:B:115:ASP:OD1	1:B:118:ARG:NH1	2.37	0.54
1:C:176:THR:O	1:C:379:ILE:N	2.28	0.54
1:C:343:GLN:HA	1:C:346:VAL:HG22	1.89	0.54
1:D:397:GLU:O	1:D:401:HIS:ND1	2.41	0.54
1:E:152:ALA:O	1:E:395:ARG:NH1	2.41	0.54
1:E:200:LEU:HD21	1:E:277:LYS:HG3	1.89	0.54
1:F:204:PHE:HD1	1:F:266:THR:HG21	1.71	0.54
1:F:230:ILE:H	1:F:230:ILE:HD12	1.70	0.54
1:H:455:VAL:HG21	1:H:465:VAL:HG11	1.89	0.54
1:J:155:ASP:OD2	1:J:395:ARG:HD2	2.07	0.54
1:J:162:ILE:HD11	1:J:396:VAL:HG13	1.89	0.54
1:J:356:ALA:HB2	1:J:365:LEU:HD12	1.88	0.54
1:K:81:ALA:O	1:K:85:ALA:HB2	2.08	0.54
2:R:11:ILE:HB	2:R:42:ALA:HB3	1.90	0.54
2:U:68:ASN:N	2:U:90:ASP:O	2.33	0.54
1:A:154:SER:N	7:A:2019:HOH:O	2.40	0.54
1:A:458:CYS:SG	1:A:480:ALA:HB1	2.47	0.54
1:C:452:ARG:HH21	1:C:470:LYS:HZ1	1.54	0.54
1:D:122:LYS:HD3	1:D:440:ILE:HD11	1.88	0.54
1:D:353:ILE:HD13	1:D:366:GLN:HG3	1.90	0.54
1:E:7:LYS:HE2	1:E:11:ASP:HB3	1.90	0.54
1:F:152:ALA:HB2	1:F:399:ALA:HB2	1.90	0.54
1:G:51:LYS:NZ	3:G:601:ATP:O1A	2.41	0.54
1:G:200:LEU:N	1:G:275:ALA:O	2.40	0.54
1:J:16:MET:O	1:J:20:VAL:HG23	2.07	0.54
1:K:365:LEU:HA	1:K:368:ARG:HG3	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:240:VAL:HG21	1:L:247:LEU:HD13	1.90	0.54
1:N:199:TYR:CE2	1:N:205:ILE:HD11	2.41	0.54
1:B:114:MET:HE1	1:C:34:LYS:HG2	1.88	0.54
1:C:12:ALA:HB1	1:C:16:MET:HE3	1.89	0.54
1:I:414:GLY:HA3	1:I:493:ILE:HG22	1.90	0.54
1:K:89:THR:N	6:K:601:ADP:O3B	2.38	0.54
1:M:233:MET:HG2	1:M:262:LEU:HD21	1.89	0.54
1:B:150:ILE:HG13	1:B:493:ILE:HA	1.90	0.54
1:J:222:LEU:HD23	1:J:250:ILE:HB	1.89	0.54
1:L:177:VAL:HA	1:L:379:ILE:HB	1.89	0.54
1:M:81:ALA:HB1	1:M:503:ALA:HA	1.90	0.54
1:N:40:LEU:N	1:N:48:THR:O	2.37	0.54
2:S:43:VAL:HG13	2:S:57:LEU:HD22	1.89	0.54
2:U:13:LYS:HB2	2:U:41:LEU:HD11	1.89	0.54
1:B:421:ARG:O	1:B:425:LYS:HG3	2.08	0.54
1:B:452:ARG:HH21	1:B:470:LYS:HZ1	1.56	0.54
1:B:479:ASN:N	1:B:484:GLU:O	2.40	0.54
1:C:204:PHE:HD1	1:C:266:THR:HG21	1.73	0.54
1:E:140:ASP:OD1	1:E:140:ASP:N	2.41	0.54
1:E:175:ILE:HB	1:E:404:ARG:HH12	1.72	0.54
1:H:295:LEU:HD13	1:H:332:ILE:HD11	1.88	0.54
1:I:479:ASN:N	1:I:484:GLU:O	2.37	0.54
1:J:498:LYS:HG3	1:J:501:ARG:NH2	2.23	0.54
1:L:250:ILE:HG23	1:L:278:ALA:HA	1.90	0.54
1:N:85:ALA:HB2	1:N:502:SER:HB2	1.89	0.54
1:N:166:MET:HB3	1:N:175:ILE:HD11	1.90	0.54
1:N:356:ALA:HB2	1:N:365:LEU:HD12	1.90	0.54
2:O:8:ASP:OD2	2:O:87:SER:OG	2.25	0.54
1:A:144:ILE:HG23	1:A:403:THR:CG2	2.36	0.54
1:A:200:LEU:HD12	1:A:275:ALA:HB1	1.90	0.54
1:C:190:VAL:N	1:C:376:VAL:O	2.27	0.54
1:C:364:LYS:O	1:C:368:ARG:HG3	2.07	0.54
1:E:214:GLU:HG3	1:E:324:VAL:HG22	1.89	0.54
1:G:64:ASP:O	1:G:68:ASN:N	2.35	0.54
1:G:420:ILE:HG12	1:G:448:GLU:HG2	1.89	0.54
1:H:39:VAL:HA	1:H:49:ILE:HA	1.90	0.54
1:H:324:VAL:HB	1:H:331:THR:HG22	1.90	0.54
1:H:349:ILE:O	1:H:353:ILE:HG13	2.07	0.54
1:I:177:VAL:HA	1:I:379:ILE:HB	1.90	0.54
1:I:324:VAL:N	1:I:331:THR:O	2.35	0.54
1:J:197:ARG:NH2	1:J:280:GLY:O	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:302:SER:HB2	1:J:304:GLU:HG2	1.90	0.54
1:K:10:ASN:HA	1:K:13:ARG:HB2	1.89	0.54
1:N:195:PHE:CZ	1:N:250:ILE:HD13	2.43	0.54
1:N:218:PRO:HG3	1:N:323:VAL:HG22	1.90	0.54
1:B:196:ASP:HA	1:B:329:THR:HA	1.88	0.53
1:D:346:VAL:HA	1:D:349:ILE:HD12	1.90	0.53
1:F:197:ARG:HD2	1:F:277:LYS:HB2	1.90	0.53
1:G:155:ASP:OD2	1:G:395:ARG:NH1	2.41	0.53
1:I:62:LEU:HB2	1:I:68:ASN:HB2	1.90	0.53
1:I:475:ASN:HB2	1:I:487:ASN:ND2	2.23	0.53
1:J:262:LEU:HD22	1:J:273:VAL:HG21	1.90	0.53
1:N:122:LYS:HD3	1:N:440:ILE:HD11	1.90	0.53
1:A:124:VAL:HG21	1:A:508:ALA:HB2	1.89	0.53
1:D:149:THR:OG1	1:D:156:GLU:HA	2.08	0.53
1:D:221:LEU:HD21	1:D:309:LEU:HD11	1.90	0.53
1:D:222:LEU:O	1:D:301:ILE:N	2.31	0.53
1:D:468:THR:HB	1:D:485:TYR:CE2	2.43	0.53
1:E:130:GLU:HB2	1:E:422:VAL:HG13	1.89	0.53
1:G:411:VAL:HG21	1:G:494:LEU:HD22	1.88	0.53
1:H:13:ARG:HD3	1:H:514:MET:HE3	1.88	0.53
1:J:163:ALA:HA	1:J:166:MET:HE2	1.90	0.53
1:K:461:GLU:HG3	1:K:464:VAL:H	1.71	0.53
1:M:284:ARG:CZ	1:M:364:LYS:HD2	2.38	0.53
1:N:230:ILE:O	1:N:234:LEU:N	2.41	0.53
2:Q:57:LEU:HD23	2:Q:88:GLU:HB2	1.90	0.53
1:A:230:ILE:O	1:A:234:LEU:N	2.42	0.53
1:A:452:ARG:HH21	1:A:470:LYS:HZ1	1.56	0.53
1:C:397:GLU:O	1:C:401:HIS:ND1	2.42	0.53
1:D:199:TYR:CD2	1:D:213:VAL:HG23	2.44	0.53
1:D:343:GLN:HA	1:D:346:VAL:HG22	1.90	0.53
1:F:429:LEU:HB3	1:F:440:ILE:HG21	1.91	0.53
1:G:193:MET:HE1	1:G:372:LEU:HA	1.89	0.53
1:G:287:ALA:HA	1:G:345:ARG:HH21	1.72	0.53
1:G:346:VAL:HA	1:G:349:ILE:HD12	1.90	0.53
1:I:199:TYR:CE1	1:I:205:ILE:HD11	2.43	0.53
1:I:348:GLN:O	1:I:351:GLN:NE2	2.41	0.53
1:K:155:ASP:OD2	1:K:395:ARG:HD2	2.08	0.53
1:K:177:VAL:HA	1:K:379:ILE:HB	1.89	0.53
1:M:20:VAL:HG22	1:M:74:VAL:HG21	1.90	0.53
1:M:82:ASN:O	1:M:86:GLY:N	2.30	0.53
2:O:13:LYS:HG2	2:O:41:LEU:HD21	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:193:MET:HB2	1:A:332:ILE:HB	1.90	0.53
1:C:29:VAL:O	1:C:36:ARG:N	2.39	0.53
1:C:431:GLY:N	1:C:437:ASN:OD1	2.41	0.53
1:C:458:CYS:SG	1:C:480:ALA:HB1	2.48	0.53
1:F:30:THR:HB	1:F:51:LYS:HG2	1.89	0.53
1:F:223:ALA:HA	1:F:301:ILE:HB	1.89	0.53
1:F:411:VAL:HG21	1:F:494:LEU:HD22	1.90	0.53
1:F:458:CYS:SG	1:F:480:ALA:HB1	2.49	0.53
1:F:468:THR:HB	1:F:485:TYR:CE1	2.43	0.53
1:G:287:ALA:HB1	1:G:368:ARG:CZ	2.39	0.53
1:I:230:ILE:O	1:I:234:LEU:N	2.41	0.53
1:I:417:VAL:HG21	1:I:488:MET:HG2	1.89	0.53
1:J:5:ASP:HB2	1:J:524:LEU:HD23	1.89	0.53
1:K:12:ALA:O	1:K:16:MET:HG2	2.08	0.53
1:L:131:LEU:HG	1:L:497:THR:HG23	1.89	0.53
1:A:479:ASN:ND2	1:A:491:MET:HG3	2.23	0.53
1:C:415:GLY:HA2	3:C:601:ATP:H1'	1.90	0.53
1:E:458:CYS:SG	1:E:480:ALA:HB1	2.48	0.53
1:H:31:LEU:HD13	1:H:90:THR:HB	1.90	0.53
1:I:291:ASP:OD1	1:I:345:ARG:NE	2.41	0.53
1:J:203:TYR:HE2	1:K:181:THR:HA	1.73	0.53
1:K:323:VAL:HA	1:K:332:ILE:HA	1.89	0.53
1:K:479:ASN:O	1:K:483:GLU:N	2.42	0.53
1:N:218:PRO:HB3	1:N:246:PRO:HG2	1.90	0.53
2:O:65:VAL:HG23	2:O:67:PHE:HD1	1.72	0.53
2:R:55:LYS:HE3	2:S:48:ILE:HG21	1.91	0.53
1:D:140:ASP:N	1:D:140:ASP:OD1	2.40	0.53
1:G:20:VAL:HG13	1:G:74:VAL:HG21	1.89	0.53
1:K:218:PRO:HB3	1:K:246:PRO:HG2	1.91	0.53
1:M:165:ALA:HB2	1:M:187:LEU:HD22	1.90	0.53
1:N:247:LEU:HG	1:N:249:ILE:HD11	1.90	0.53
1:A:206:ASN:HD21	1:A:214:GLU:HB3	1.73	0.53
1:B:205:ILE:HA	1:B:213:VAL:HG22	1.91	0.53
1:F:190:VAL:O	1:F:376:VAL:N	2.39	0.53
1:F:364:LYS:O	1:F:368:ARG:HG3	2.08	0.53
1:H:350:ARG:HD3	1:H:353:ILE:HD12	1.91	0.53
1:I:122:LYS:HZ3	1:I:431:GLY:HA2	1.73	0.53
1:J:161:LEU:HG	1:J:187:LEU:HD23	1.90	0.53
1:M:149:THR:OG1	1:M:156:GLU:HA	2.09	0.53
1:M:161:LEU:HG	1:M:187:LEU:HD23	1.90	0.53
1:M:365:LEU:HD23	1:M:368:ARG:HE	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:T:47:ARG:O	2:T:55:LYS:N	2.35	0.53
1:A:158:VAL:HG11	1:A:396:VAL:HA	1.90	0.53
1:D:479:ASN:O	1:D:483:GLU:N	2.42	0.53
1:G:228:SER:O	1:G:258:ALA:HB2	2.09	0.53
1:G:230:ILE:HD12	1:G:230:ILE:H	1.73	0.53
1:I:16:MET:O	1:I:20:VAL:HG23	2.09	0.53
1:J:124:VAL:HG21	1:J:508:ALA:HB2	1.90	0.53
1:K:284:ARG:HB3	1:K:284:ARG:CZ	2.39	0.53
1:N:33:PRO:HD3	6:N:601:ADP:C4	2.44	0.53
1:N:178:GLU:N	1:N:379:ILE:O	2.21	0.53
2:P:66:ILE:HD11	2:Q:3:ILE:HG21	1.91	0.53
1:B:322:ARG:HB3	1:B:333:ILE:HB	1.91	0.53
1:D:65:LYS:O	1:D:69:MET:HG3	2.08	0.53
1:E:219:PHE:O	1:E:248:LEU:N	2.39	0.53
1:E:219:PHE:CZ	1:E:245:LYS:HE2	2.44	0.53
1:F:5:ASP:N	1:F:522:THR:O	2.26	0.53
1:F:226:LYS:HZ2	1:F:255:GLU:HG3	1.74	0.53
1:L:89:THR:N	6:L:601:ADP:O3B	2.41	0.53
1:L:324:VAL:N	1:L:331:THR:O	2.38	0.53
1:N:81:ALA:O	1:N:85:ALA:HB3	2.09	0.53
1:N:193:MET:HG2	1:N:295:LEU:HD13	1.89	0.53
2:O:47:ARG:N	2:O:55:LYS:O	2.42	0.53
2:O:64:ILE:O	2:O:95:VAL:N	2.35	0.53
2:T:47:ARG:NH2	2:T:88:GLU:HB3	2.24	0.53
1:A:197:ARG:HD2	1:A:277:LYS:HB2	1.91	0.53
1:A:429:LEU:HB3	1:A:440:ILE:HG21	1.90	0.53
1:B:189:VAL:HA	1:B:377:ALA:HA	1.90	0.53
1:C:205:ILE:HA	1:C:213:VAL:HG22	1.91	0.53
1:D:239:ALA:HA	1:D:242:LYS:HE2	1.91	0.53
1:E:479:ASN:HB3	1:E:484:GLU:HG2	1.90	0.53
1:G:421:ARG:HH12	1:G:470:LYS:HA	1.74	0.53
1:G:431:GLY:N	1:G:437:ASN:OD1	2.40	0.53
1:H:124:VAL:HG21	1:H:508:ALA:HB2	1.91	0.53
1:I:262:LEU:HD13	1:I:273:VAL:HG11	1.90	0.53
1:J:39:VAL:HA	1:J:49:ILE:HA	1.90	0.53
1:J:195:PHE:HB3	1:J:371:LYS:HE3	1.91	0.53
1:K:215:LEU:HB2	1:K:323:VAL:HG22	1.90	0.53
1:L:455:VAL:HG22	1:L:478:TYR:CE2	2.44	0.53
1:M:85:ALA:HB2	1:M:502:SER:HB2	1.91	0.53
1:M:116:LEU:HG	1:M:435:ASP:OD1	2.09	0.53
1:N:349:ILE:HG12	1:N:368:ARG:NH2	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:351:GLN:NE2	1:N:352:GLN:HG3	2.24	0.53
2:Q:10:VAL:HG22	2:Q:43:VAL:HG12	1.90	0.53
1:A:230:ILE:H	1:A:230:ILE:HD12	1.73	0.52
1:B:409:GLU:OE2	1:B:501:ARG:NE	2.40	0.52
1:B:429:LEU:O	1:B:430:ARG:NH1	2.37	0.52
1:C:352:GLN:HB3	1:C:365:LEU:HD13	1.92	0.52
1:D:232:GLU:HB3	1:D:309:LEU:HD23	1.91	0.52
1:D:452:ARG:HG3	1:D:462:PRO:HB2	1.91	0.52
1:F:176:THR:O	1:F:379:ILE:N	2.31	0.52
1:G:153:ASN:HD22	1:G:395:ARG:HD3	1.74	0.52
1:G:221:LEU:HD23	1:G:249:ILE:HG12	1.92	0.52
1:I:489:ILE:HA	1:I:494:LEU:HD21	1.90	0.52
1:L:345:ARG:O	1:L:349:ILE:HG13	2.09	0.52
1:N:190:VAL:O	1:N:376:VAL:N	2.42	0.52
1:N:352:GLN:HA	1:N:355:GLU:HG3	1.91	0.52
1:A:180:GLY:N	1:A:381:VAL:O	2.35	0.52
1:A:232:GLU:HA	1:A:310:GLU:HG3	1.90	0.52
1:D:364:LYS:O	1:D:368:ARG:HG3	2.10	0.52
1:D:455:VAL:HG13	1:D:460:GLU:HB2	1.90	0.52
1:E:154:SER:N	7:E:720:HOH:O	2.42	0.52
1:F:427:ALA:O	1:F:441:LYS:NZ	2.42	0.52
1:F:479:ASN:HB3	1:F:484:GLU:HG2	1.92	0.52
1:G:343:GLN:HA	1:G:346:VAL:HG22	1.89	0.52
1:H:262:LEU:HD22	1:H:273:VAL:HG11	1.91	0.52
1:I:433:ASN:H	1:I:436:GLN:HB2	1.73	0.52
1:L:61:GLU:OE2	1:L:72:GLN:NE2	2.43	0.52
1:L:221:LEU:HB3	1:L:249:ILE:HA	1.90	0.52
1:N:149:THR:OG1	1:N:156:GLU:HA	2.08	0.52
2:O:76:GLU:HG3	2:U:66:ILE:HG21	1.91	0.52
2:R:68:ASN:N	2:R:90:ASP:O	2.35	0.52
2:T:59:VAL:HG22	2:T:94:ILE:HD11	1.90	0.52
1:C:102:GLU:OE1	1:C:445:ARG:NE	2.28	0.52
1:C:323:VAL:HG22	1:C:332:ILE:HA	1.90	0.52
1:D:349:ILE:HG23	1:D:365:LEU:HB3	1.91	0.52
1:E:128:VAL:HG13	1:E:501:ARG:HG3	1.90	0.52
1:E:193:MET:HG2	1:E:295:LEU:HD22	1.89	0.52
1:E:213:VAL:HG11	1:E:274:ALA:HB2	1.91	0.52
1:E:417:VAL:HG21	1:E:477:GLY:HA3	1.91	0.52
1:H:421:ARG:NH1	1:H:469:VAL:O	2.40	0.52
1:I:89:THR:N	6:I:601:ADP:O3B	2.41	0.52
1:I:102:GLU:HB2	1:I:442:VAL:HG13	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:215:LEU:HB2	1:J:323:VAL:HG22	1.90	0.52
1:J:501:ARG:NH1	1:J:505:GLN:OE1	2.41	0.52
1:K:345:ARG:NH2	1:K:368:ARG:HH12	2.07	0.52
1:K:368:ARG:O	1:K:372:LEU:HD23	2.09	0.52
1:L:324:VAL:O	1:L:331:THR:N	2.25	0.52
1:L:411:VAL:HA	1:L:496:PRO:HA	1.90	0.52
1:N:166:MET:HB2	1:N:171:LYS:HA	1.90	0.52
1:N:219:PHE:CE2	1:N:314:LEU:HD22	2.44	0.52
2:O:10:VAL:HG22	2:O:43:VAL:HG22	1.91	0.52
2:O:69:ASP:HA	2:O:73:VAL:HG21	1.90	0.52
1:A:278:ALA:HB3	1:A:285:ARG:HE	1.74	0.52
1:A:356:ALA:HB1	1:A:361:ASP:HB2	1.91	0.52
1:B:31:LEU:O	1:B:457:ASN:ND2	2.26	0.52
1:C:381:VAL:HG21	1:C:393:LYS:HA	1.90	0.52
1:F:124:VAL:HG21	1:F:508:ALA:HB2	1.91	0.52
1:G:397:GLU:O	1:G:401:HIS:ND1	2.43	0.52
1:H:345:ARG:NH2	1:H:368:ARG:HH12	2.07	0.52
1:J:433:ASN:H	1:J:436:GLN:HB2	1.73	0.52
1:K:419:LEU:HD22	1:K:447:MET:HG3	1.90	0.52
1:L:301:ILE:HG12	1:L:307:MET:HE1	1.91	0.52
1:N:31:LEU:HD13	1:N:90:THR:HB	1.91	0.52
1:N:224:ASP:OD2	1:N:286:LYS:HG2	2.09	0.52
1:N:411:VAL:HA	1:N:496:PRO:HA	1.92	0.52
1:B:397:GLU:O	1:B:401:HIS:ND1	2.43	0.52
1:D:421:ARG:O	1:D:425:LYS:HG3	2.09	0.52
1:E:163:ALA:HA	1:E:166:MET:HE3	1.92	0.52
1:E:295:LEU:HA	1:E:342:ILE:HD11	1.89	0.52
1:F:158:VAL:HG11	1:F:396:VAL:HA	1.91	0.52
1:G:124:VAL:HG13	1:G:504:LEU:HG	1.90	0.52
1:G:209:GLU:HG2	1:G:210:THR:HG23	1.91	0.52
1:H:68:ASN:O	1:H:72:GLN:HG2	2.10	0.52
1:J:221:LEU:HB3	1:J:249:ILE:HA	1.90	0.52
1:K:240:VAL:HG21	1:K:247:LEU:HD13	1.90	0.52
1:M:218:PRO:HG3	1:M:323:VAL:HG22	1.91	0.52
1:M:284:ARG:CZ	1:M:284:ARG:HB3	2.39	0.52
2:O:59:VAL:HG21	2:O:91:ILE:HG21	1.91	0.52
1:A:219:PHE:CZ	1:A:245:LYS:HE2	2.44	0.52
1:C:222:LEU:O	1:C:301:ILE:N	2.25	0.52
1:D:135:SER:HB3	1:D:497:THR:HG21	1.91	0.52
1:E:414:GLY:HA3	1:E:493:ILE:HG22	1.91	0.52
1:F:16:MET:HE1	1:G:39:VAL:HG11	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:144:ILE:HG23	1:H:403:THR:HB	1.92	0.52
1:H:186:GLU:O	1:H:380:LYS:N	2.30	0.52
1:I:215:LEU:HB3	1:I:246:PRO:HB2	1.91	0.52
1:I:235:PRO:HG3	1:I:310:GLU:HA	1.92	0.52
1:J:32:GLY:HA3	1:J:454:ILE:HG23	1.92	0.52
1:J:190:VAL:O	1:J:376:VAL:N	2.42	0.52
1:K:124:VAL:HG21	1:K:508:ALA:HB2	1.92	0.52
1:L:69:MET:HG2	1:L:520:MET:CE	2.40	0.52
1:L:192:GLY:HA3	1:L:376:VAL:HG13	1.91	0.52
1:L:349:ILE:HG21	1:L:368:ARG:HB2	1.90	0.52
2:O:20:LYS:NZ	2:O:24:GLY:HA2	2.25	0.52
2:U:43:VAL:HG13	2:U:57:LEU:HD22	1.92	0.52
2:U:59:VAL:HG22	2:U:94:ILE:HD11	1.92	0.52
1:B:219:PHE:HD2	1:B:240:VAL:HG22	1.73	0.52
1:C:128:VAL:HG13	1:C:501:ARG:HG3	1.92	0.52
1:C:175:ILE:HB	1:C:404:ARG:HH12	1.74	0.52
1:C:193:MET:HG2	1:C:295:LEU:HD22	1.91	0.52
1:C:230:ILE:HD11	1:C:258:ALA:HA	1.91	0.52
1:F:31:LEU:HB2	1:F:90:THR:CG2	2.39	0.52
1:G:5:ASP:N	1:G:522:THR:O	2.36	0.52
1:G:140:ASP:OD1	1:G:140:ASP:N	2.42	0.52
1:H:241:ALA:HB2	1:H:271:VAL:HG22	1.91	0.52
1:I:345:ARG:O	1:I:349:ILE:HG13	2.10	0.52
1:I:461:GLU:HG3	1:I:464:VAL:H	1.75	0.52
1:K:122:LYS:NZ	1:K:432:GLN:OE1	2.42	0.52
1:K:345:ARG:O	1:K:349:ILE:HG13	2.09	0.52
1:K:420:ILE:HG12	1:K:448:GLU:HG2	1.91	0.52
1:M:349:ILE:O	1:M:353:ILE:HG13	2.10	0.52
1:N:215:LEU:HB2	1:N:323:VAL:HG22	1.91	0.52
1:N:429:LEU:HD23	1:N:440:ILE:HG12	1.92	0.52
1:A:239:ALA:HA	1:A:242:LYS:HE2	1.91	0.52
1:B:151:SER:HB2	1:B:399:ALA:HA	1.92	0.52
1:B:186:GLU:HG2	1:B:380:LYS:HB2	1.92	0.52
1:D:213:VAL:HG11	1:D:274:ALA:HB2	1.91	0.52
1:E:250:ILE:HD13	1:E:292:ILE:HD13	1.92	0.52
1:E:343:GLN:HA	1:E:346:VAL:HG22	1.91	0.52
1:F:190:VAL:N	1:F:376:VAL:O	2.33	0.52
1:F:325:ILE:HG13	1:F:330:THR:HG23	1.90	0.52
1:G:261:THR:OG1	2:U:28:THR:O	2.24	0.52
1:G:452:ARG:HH21	1:G:470:LYS:HZ1	1.58	0.52
1:H:76:GLU:HG2	1:H:80:LYS:HE3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:440:ILE:O	1:H:444:LEU:HG	2.10	0.52
1:J:195:PHE:HZ	1:J:250:ILE:HD13	1.74	0.52
1:K:348:GLN:O	1:K:352:GLN:HG3	2.10	0.52
1:M:326:ASN:N	1:M:329:THR:O	2.24	0.52
1:N:77:VAL:HG13	1:N:506:TYR:HB3	1.91	0.52
1:N:322:ARG:HB2	1:N:333:ILE:HB	1.92	0.52
2:Q:37:ARG:HH12	2:R:3:ILE:HD11	1.75	0.52
1:A:39:VAL:O	1:G:520:MET:HA	2.10	0.52
1:A:135:SER:HB3	1:A:497:THR:HG21	1.92	0.52
1:D:31:LEU:HB2	1:D:90:THR:CG2	2.38	0.52
1:D:458:CYS:SG	1:D:480:ALA:HB1	2.50	0.52
1:F:214:GLU:HG3	1:F:324:VAL:HG22	1.91	0.52
1:G:239:ALA:HA	1:G:242:LYS:HE2	1.92	0.52
1:I:204:PHE:HE2	1:I:275:ALA:HB3	1.75	0.52
1:J:31:LEU:HD13	1:J:90:THR:HB	1.92	0.52
1:K:222:LEU:HD23	1:K:250:ILE:HB	1.91	0.52
1:K:433:ASN:OD1	1:K:434:GLU:N	2.43	0.52
1:L:132:LYS:NZ	1:L:409:GLU:OE2	2.39	0.52
1:N:115:ASP:O	1:N:436:GLN:HG2	2.10	0.52
2:S:11:ILE:HG12	2:S:85:ILE:HG12	1.91	0.52
2:U:26:VAL:HG12	2:U:28:THR:HG23	1.92	0.52
2:U:64:ILE:O	2:U:95:VAL:N	2.41	0.52
1:A:205:ILE:HD13	1:A:211:GLY:HA2	1.91	0.52
1:B:163:ALA:HA	1:B:166:MET:HE3	1.92	0.52
1:B:194:GLN:HG3	1:B:331:THR:HG22	1.92	0.52
1:G:31:LEU:HB2	1:G:90:THR:CG2	2.40	0.52
1:G:214:GLU:OE2	1:G:322:ARG:NH1	2.43	0.52
1:G:364:LYS:O	1:G:368:ARG:HG3	2.09	0.52
1:G:414:GLY:HA3	1:G:493:ILE:HG22	1.92	0.52
1:H:477:GLY:N	1:H:486:GLY:O	2.39	0.52
1:I:85:ALA:HB2	1:I:502:SER:HB2	1.92	0.52
1:I:115:ASP:O	1:I:436:GLN:HG2	2.10	0.52
1:L:81:ALA:O	1:L:85:ALA:HB3	2.10	0.52
1:L:475:ASN:HB2	1:L:487:ASN:ND2	2.25	0.52
1:M:31:LEU:HD13	1:M:90:THR:HB	1.92	0.52
1:N:66:PHE:HB3	1:N:520:MET:HE1	1.92	0.52
1:N:349:ILE:HD13	1:N:368:ARG:HB3	1.91	0.52
1:N:414:GLY:HA3	1:N:493:ILE:HG22	1.92	0.52
1:N:479:ASN:O	1:N:483:GLU:N	2.43	0.52
1:A:149:THR:OG1	1:A:156:GLU:HA	2.09	0.51
1:B:386:GLU:O	1:B:390:LYS:HG3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:68:ASN:O	1:C:72:GLN:HG2	2.11	0.51
1:E:479:ASN:ND2	1:E:491:MET:HG3	2.24	0.51
1:F:230:ILE:HA	1:F:233:MET:HE2	1.92	0.51
1:F:448:GLU:OE1	1:F:470:LYS:NZ	2.41	0.51
1:G:421:ARG:O	1:G:425:LYS:HG3	2.10	0.51
1:H:115:ASP:O	1:H:436:GLN:HG2	2.09	0.51
1:H:455:VAL:HG22	1:H:478:TYR:CE2	2.45	0.51
1:I:221:LEU:N	1:I:248:LEU:O	2.28	0.51
1:L:85:ALA:HB2	1:L:502:SER:HB2	1.91	0.51
1:N:101:THR:HG22	1:N:105:LYS:HE2	1.91	0.51
2:R:77:LYS:HD2	2:R:80:ASN:HA	1.91	0.51
1:B:261:THR:HG21	2:P:27:LEU:HD13	1.92	0.51
1:B:417:VAL:HG21	1:B:477:GLY:HA3	1.92	0.51
1:C:283:ASP:OD1	1:C:284:ARG:N	2.43	0.51
1:C:313:THR:O	1:C:317:LEU:HG	2.09	0.51
1:C:314:LEU:HA	1:C:317:LEU:HD12	1.92	0.51
1:E:169:VAL:HB	1:E:377:ALA:HB2	1.92	0.51
1:F:68:ASN:O	1:F:72:GLN:HG2	2.09	0.51
1:G:465:VAL:HA	1:G:485:TYR:OH	2.10	0.51
1:I:368:ARG:O	1:I:372:LEU:HD23	2.10	0.51
1:J:350:ARG:HA	1:J:353:ILE:HD12	1.92	0.51
1:M:34:LYS:HB2	1:M:458:CYS:SG	2.51	0.51
1:M:351:GLN:HA	1:M:354:GLU:CD	2.31	0.51
1:M:498:LYS:HG3	1:M:501:ARG:HH21	1.74	0.51
1:A:71:ALA:HA	1:A:74:VAL:HG12	1.92	0.51
1:A:421:ARG:O	1:A:425:LYS:HG3	2.10	0.51
1:C:31:LEU:HB2	1:C:90:THR:CG2	2.38	0.51
1:G:472:GLY:HA3	1:G:476:TYR:CD2	2.44	0.51
1:H:197:ARG:NH1	1:H:277:LYS:HD3	2.26	0.51
1:J:247:LEU:HG	1:J:249:ILE:HD11	1.92	0.51
1:L:30:THR:HA	1:L:35:GLY:HA3	1.93	0.51
1:M:345:ARG:O	1:M:349:ILE:HG13	2.10	0.51
1:N:279:PRO:O	1:N:285:ARG:HA	2.10	0.51
1:N:437:ASN:O	1:N:441:LYS:HG2	2.10	0.51
2:R:12:VAL:O	2:R:84:LEU:N	2.37	0.51
2:T:65:VAL:HG21	2:T:91:ILE:HD12	1.92	0.51
1:A:178:GLU:N	1:A:379:ILE:O	2.32	0.51
1:C:102:GLU:HB2	1:C:442:VAL:HG13	1.92	0.51
1:E:199:TYR:CD1	1:E:213:VAL:HG23	2.45	0.51
1:G:320:ALA:HA	1:G:335:GLY:HA2	1.93	0.51
1:H:342:ILE:HG23	1:H:372:LEU:HD12	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:475:ASN:HB2	1:J:487:ASN:ND2	2.25	0.51
1:K:174:VAL:HG11	1:K:376:VAL:HG12	1.91	0.51
1:K:219:PHE:CE2	1:K:314:LEU:HD22	2.45	0.51
1:K:247:LEU:HG	1:K:249:ILE:HD11	1.92	0.51
1:M:39:VAL:HG22	1:M:49:ILE:HG23	1.92	0.51
1:M:95:LEU:O	1:M:99:ILE:HG13	2.11	0.51
1:M:204:PHE:HD1	1:M:266:THR:HG21	1.76	0.51
2:O:9:ARG:HB3	2:O:85:ILE:HD11	1.93	0.51
2:R:47:ARG:N	2:R:55:LYS:O	2.43	0.51
2:S:46:GLY:HA2	2:S:57:LEU:HD12	1.92	0.51
2:S:47:ARG:N	2:S:55:LYS:O	2.43	0.51
1:A:452:ARG:NH1	7:A:2013:HOH:O	2.29	0.51
1:B:230:ILE:HD12	1:B:230:ILE:H	1.75	0.51
1:C:150:ILE:HG23	3:C:601:ATP:C8	2.45	0.51
1:C:215:LEU:HD12	1:C:248:LEU:HB2	1.93	0.51
1:D:215:LEU:HD12	1:D:248:LEU:HB2	1.92	0.51
1:F:186:GLU:N	1:F:380:LYS:O	2.42	0.51
1:F:291:ASP:OD1	1:F:372:LEU:HD13	2.10	0.51
1:H:279:PRO:O	1:H:285:ARG:HA	2.11	0.51
1:H:472:GLY:HA3	1:H:476:TYR:CD2	2.45	0.51
1:I:27:VAL:HG12	1:I:90:THR:HG23	1.92	0.51
1:I:356:ALA:HB3	1:I:362:ARG:HH21	1.76	0.51
1:I:438:VAL:O	1:I:442:VAL:HG23	2.11	0.51
1:I:514:MET:HG3	1:I:514:MET:O	2.11	0.51
1:K:137:PRO:HA	1:K:410:GLY:HA2	1.92	0.51
1:K:472:GLY:HA3	1:K:476:TYR:CD2	2.45	0.51
1:M:122:LYS:HZ2	1:M:431:GLY:HA2	1.75	0.51
1:N:32:GLY:HA3	1:N:454:ILE:HG23	1.91	0.51
1:N:39:VAL:HA	1:N:49:ILE:HA	1.92	0.51
1:N:131:LEU:HD21	1:N:500:THR:HB	1.93	0.51
1:D:240:VAL:HG11	1:D:247:LEU:HB2	1.92	0.51
1:D:352:GLN:O	1:D:356:ALA:N	2.44	0.51
3:D:601:ATP:O1G	7:D:2001:HOH:O	2.19	0.51
1:F:71:ALA:HA	1:F:74:VAL:HG12	1.92	0.51
1:F:417:VAL:HG21	1:F:477:GLY:HA3	1.92	0.51
1:G:11:ASP:O	1:G:15:LYS:HG2	2.11	0.51
1:H:81:ALA:O	1:H:85:ALA:HB2	2.10	0.51
1:H:262:LEU:HB3	1:H:273:VAL:HG11	1.93	0.51
1:J:64:ASP:HB3	1:J:67:GLU:HB2	1.93	0.51
1:J:325:ILE:O	1:J:325:ILE:HG13	2.09	0.51
1:K:440:ILE:O	1:K:444:LEU:HG	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:144:ILE:HD13	1:N:166:MET:SD	2.50	0.51
1:N:406:ALA:HB2	1:N:496:PRO:HG3	1.92	0.51
1:B:124:VAL:HG13	1:B:504:LEU:HG	1.91	0.51
1:B:200:LEU:HD21	1:B:277:LYS:HG3	1.92	0.51
1:B:250:ILE:HG23	1:B:278:ALA:HA	1.93	0.51
1:B:498:LYS:HG3	1:B:501:ARG:HH21	1.75	0.51
1:F:196:ASP:HA	1:F:329:THR:HA	1.91	0.51
1:F:519:CYS:HB3	1:G:38:VAL:HG22	1.92	0.51
1:G:175:ILE:HB	1:G:404:ARG:HH12	1.75	0.51
1:G:414:GLY:H	1:G:488:MET:HB3	1.76	0.51
1:H:85:ALA:HB2	1:H:502:SER:HB2	1.91	0.51
1:K:40:LEU:N	1:K:48:THR:O	2.44	0.51
1:M:32:GLY:HA3	1:M:454:ILE:HG23	1.92	0.51
1:N:345:ARG:O	1:N:349:ILE:HG13	2.10	0.51
1:A:31:LEU:HB2	1:A:90:THR:CG2	2.40	0.51
1:A:150:ILE:HG23	3:A:601:ATP:C8	2.46	0.51
1:A:231:ARG:HA	1:A:234:LEU:HG	1.93	0.51
1:B:5:ASP:N	1:B:522:THR:O	2.29	0.51
1:C:200:LEU:HD12	1:C:275:ALA:HB1	1.91	0.51
1:D:144:ILE:HG23	1:D:403:THR:HB	1.93	0.51
1:D:148:GLY:HA2	1:D:399:ALA:HB1	1.93	0.51
1:E:147:VAL:HG12	1:E:402:ALA:HB1	1.93	0.51
1:F:230:ILE:HG22	1:F:234:LEU:HD22	1.93	0.51
1:F:511:ALA:O	1:F:515:ILE:HG12	2.11	0.51
1:G:16:MET:HE1	1:G:517:THR:HG21	1.93	0.51
1:G:417:VAL:HG21	1:G:477:GLY:HA3	1.93	0.51
1:H:14:VAL:O	1:H:18:ARG:HG3	2.10	0.51
1:H:57:ALA:HA	1:H:60:ILE:HD12	1.93	0.51
1:H:213:VAL:HB	1:H:325:ILE:HG12	1.91	0.51
1:I:279:PRO:O	1:I:285:ARG:HA	2.11	0.51
1:J:301:ILE:HG21	1:J:309:LEU:HD23	1.93	0.51
1:L:40:LEU:N	1:L:48:THR:O	2.42	0.51
1:L:57:ALA:HA	1:L:60:ILE:HD12	1.91	0.51
2:P:10:VAL:HG11	2:P:40:VAL:HG12	1.93	0.51
1:A:150:ILE:HG13	1:A:493:ILE:HA	1.92	0.51
1:C:158:VAL:HG11	1:C:396:VAL:HA	1.92	0.51
1:C:517:THR:HG21	1:D:39:VAL:HG23	1.93	0.51
1:D:206:ASN:HD21	1:D:214:GLU:HB3	1.76	0.51
1:E:190:VAL:O	1:E:376:VAL:N	2.38	0.51
1:F:397:GLU:O	1:F:401:HIS:ND1	2.44	0.51
1:J:429:LEU:HG	1:J:440:ILE:HD13	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:224:ASP:OD2	1:L:286:LYS:HG2	2.10	0.51
1:M:69:MET:HE1	1:N:39:VAL:HG11	1.92	0.51
1:M:158:VAL:HG13	1:M:396:VAL:HA	1.93	0.51
1:N:84:ALA:O	1:N:502:SER:OG	2.28	0.51
2:U:59:VAL:HG21	2:U:91:ILE:HG21	1.93	0.51
1:A:207:LYS:HZ3	1:A:214:GLU:HB2	1.75	0.51
1:B:264:VAL:O	1:B:268:ARG:HG2	2.11	0.51
1:B:352:GLN:O	1:B:356:ALA:N	2.44	0.51
1:C:196:ASP:HA	1:C:329:THR:HA	1.93	0.51
1:H:351:GLN:NE2	1:H:352:GLN:HG3	2.26	0.51
1:I:81:ALA:O	1:I:85:ALA:HB3	2.10	0.51
1:K:56:VAL:HG12	1:K:60:ILE:HD11	1.92	0.51
1:L:429:LEU:HB3	1:L:440:ILE:HG21	1.93	0.51
1:M:178:GLU:N	1:M:379:ILE:O	2.29	0.51
1:N:346:VAL:O	1:N:350:ARG:HG2	2.11	0.51
1:N:368:ARG:O	1:N:372:LEU:HD23	2.11	0.51
1:A:283:ASP:OD1	1:A:284:ARG:N	2.44	0.50
1:B:364:LYS:O	1:B:368:ARG:HG3	2.10	0.50
1:B:498:LYS:HG3	1:B:501:ARG:NH2	2.26	0.50
1:C:220:ILE:HG13	1:C:248:LEU:HD23	1.92	0.50
1:H:70:GLY:HA2	1:H:73:MET:HE1	1.94	0.50
1:I:284:ARG:NE	1:I:364:LYS:HB3	2.26	0.50
1:K:81:ALA:O	1:K:85:ALA:HB3	2.10	0.50
1:M:465:VAL:HA	1:M:485:TYR:OH	2.11	0.50
1:N:124:VAL:HG11	1:N:508:ALA:HB2	1.93	0.50
1:N:290:GLN:OE1	1:N:294:THR:OG1	2.30	0.50
1:A:200:LEU:N	1:A:275:ALA:O	2.37	0.50
1:C:190:VAL:O	1:C:376:VAL:N	2.36	0.50
1:E:213:VAL:HB	1:E:325:ILE:HB	1.94	0.50
1:E:219:PHE:CD2	1:E:240:VAL:HG22	2.46	0.50
1:E:240:VAL:HG21	1:E:247:LEU:HD12	1.92	0.50
1:G:136:VAL:HG23	1:G:411:VAL:HG23	1.94	0.50
1:G:458:CYS:SG	1:G:480:ALA:HB1	2.51	0.50
1:H:16:MET:O	1:H:20:VAL:HG23	2.11	0.50
1:I:6:VAL:HG13	1:I:521:VAL:HG22	1.92	0.50
1:J:27:VAL:HG12	1:J:90:THR:HG23	1.94	0.50
1:J:293:ALA:O	1:J:298:GLY:N	2.45	0.50
1:J:320:ALA:HA	1:J:336:VAL:H	1.75	0.50
1:J:460:GLU:O	1:J:462:PRO:HD3	2.11	0.50
1:L:186:GLU:HB3	1:L:380:LYS:HB2	1.93	0.50
1:N:38:VAL:O	1:N:50:THR:N	2.34	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:345:ARG:HH21	1:N:368:ARG:HH12	1.57	0.50
2:P:86:MET:HG2	2:P:87:SER:O	2.11	0.50
2:U:40:VAL:HG23	2:U:62:GLY:H	1.76	0.50
1:C:71:ALA:HA	1:C:74:VAL:HG12	1.93	0.50
1:D:287:ALA:HB1	1:D:368:ARG:CZ	2.41	0.50
1:E:386:GLU:O	1:E:390:LYS:HG3	2.11	0.50
1:E:522:THR:HG22	1:F:41:ASP:HB2	1.93	0.50
1:G:322:ARG:HB3	1:G:333:ILE:HB	1.93	0.50
1:I:472:GLY:HA3	1:I:476:TYR:CD2	2.47	0.50
1:J:414:GLY:HA3	1:J:493:ILE:HG22	1.94	0.50
1:J:468:THR:HB	1:J:485:TYR:CE2	2.46	0.50
1:L:368:ARG:O	1:L:372:LEU:HD23	2.12	0.50
1:A:352:GLN:O	1:A:356:ALA:N	2.45	0.50
1:B:193:MET:HG2	1:B:295:LEU:HD22	1.93	0.50
1:B:308:GLU:H	1:B:311:LYS:HD3	1.77	0.50
1:D:206:ASN:ND2	1:D:214:GLU:O	2.44	0.50
1:E:308:GLU:H	1:E:311:LYS:HD3	1.75	0.50
1:I:190:VAL:O	1:I:376:VAL:N	2.44	0.50
1:L:204:PHE:HE2	1:L:275:ALA:HB3	1.76	0.50
1:N:98:ALA:O	1:N:102:GLU:HG2	2.10	0.50
1:N:301:ILE:HG21	1:N:309:LEU:HD23	1.94	0.50
1:B:31:LEU:HB2	1:B:90:THR:CG2	2.39	0.50
1:B:228:SER:O	1:B:258:ALA:HB2	2.12	0.50
1:E:150:ILE:HG13	1:E:494:LEU:H	1.77	0.50
1:J:472:GLY:HA3	1:J:476:TYR:CD2	2.47	0.50
1:K:279:PRO:C	1:K:288:MET:HG3	2.31	0.50
1:L:200:LEU:HD21	1:L:277:LYS:HB2	1.92	0.50
1:N:197:ARG:HE	1:N:279:PRO:HA	1.76	0.50
1:N:262:LEU:HD22	1:N:273:VAL:HG21	1.93	0.50
1:N:322:ARG:O	1:N:333:ILE:N	2.31	0.50
1:A:219:PHE:CD2	1:A:240:VAL:HG22	2.41	0.50
1:A:430:ARG:HH22	1:A:441:LYS:HE2	1.75	0.50
1:A:511:ALA:O	1:A:515:ILE:HG12	2.11	0.50
1:B:204:PHE:HD1	1:B:266:THR:HG21	1.77	0.50
1:B:287:ALA:HB1	1:B:368:ARG:CZ	2.42	0.50
1:C:399:ALA:O	1:C:403:THR:HG23	2.12	0.50
1:E:421:ARG:O	1:E:425:LYS:HG3	2.12	0.50
1:F:28:LYS:HE2	1:F:94:VAL:HG22	1.93	0.50
1:G:453:GLN:NE2	1:G:457:ASN:OD1	2.45	0.50
1:I:356:ALA:O	1:I:362:ARG:NH2	2.45	0.50
1:J:197:ARG:NH1	1:J:277:LYS:HD3	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:204:PHE:CD1	1:M:266:THR:HG21	2.47	0.50
2:Q:12:VAL:O	2:Q:84:LEU:N	2.45	0.50
1:A:179:ASP:OD1	1:A:393:LYS:HD2	2.11	0.50
1:A:223:ALA:HA	1:A:301:ILE:HB	1.93	0.50
1:B:102:GLU:OE1	1:B:445:ARG:NE	2.32	0.50
1:B:511:ALA:O	1:B:515:ILE:HG12	2.12	0.50
1:C:421:ARG:NH2	1:C:469:VAL:O	2.31	0.50
1:D:356:ALA:HB1	1:D:361:ASP:HB2	1.94	0.50
1:F:287:ALA:HA	1:F:345:ARG:NH2	2.27	0.50
1:G:429:LEU:HB3	1:G:440:ILE:HG21	1.93	0.50
1:I:15:LYS:O	1:I:67:GLU:HG2	2.11	0.50
1:L:163:ALA:O	1:L:167:ASP:HB2	2.12	0.50
1:M:204:PHE:HE2	1:M:275:ALA:HB3	1.77	0.50
1:N:188:ASP:OD1	1:N:188:ASP:N	2.45	0.50
1:N:197:ARG:NH1	1:N:277:LYS:HD3	2.26	0.50
2:R:43:VAL:HG13	2:R:57:LEU:HD22	1.94	0.50
1:C:213:VAL:HB	1:C:325:ILE:HB	1.92	0.50
1:D:291:ASP:O	1:D:294:THR:OG1	2.27	0.50
1:D:420:ILE:HG21	1:D:470:LYS:HG2	1.94	0.50
1:E:264:VAL:HG21	2:S:28:THR:HG21	1.93	0.50
1:G:185:ASP:HA	1:G:381:VAL:HA	1.94	0.50
1:G:232:GLU:HA	1:G:310:GLU:HG3	1.94	0.50
1:H:37:ASN:ND2	1:H:51:LYS:HE2	2.26	0.50
1:H:406:ALA:HB2	1:H:496:PRO:HG3	1.94	0.50
1:I:104:LEU:HD21	1:I:514:MET:HG2	1.93	0.50
1:I:192:GLY:HA3	1:I:376:VAL:HG22	1.93	0.50
1:I:417:VAL:CG1	1:I:477:GLY:HA3	2.41	0.50
1:J:17:LEU:HB2	1:J:104:LEU:HD12	1.94	0.50
1:J:451:LEU:HD21	1:J:465:VAL:HG12	1.94	0.50
1:K:98:ALA:O	1:K:102:GLU:HG2	2.12	0.50
1:K:144:ILE:HD12	1:K:166:MET:HE3	1.93	0.50
1:L:325:ILE:HG13	1:L:325:ILE:O	2.10	0.50
1:M:204:PHE:CE2	1:M:275:ALA:HB3	2.47	0.50
1:N:295:LEU:HA	1:N:342:ILE:HG12	1.94	0.50
1:B:32:GLY:HA2	3:B:601:ATP:O4'	2.11	0.50
1:B:87:ASP:OD1	1:B:88:GLY:N	2.41	0.50
1:D:386:GLU:O	1:D:390:LYS:HG3	2.11	0.50
1:F:138:CYS:HB2	1:F:411:VAL:HG13	1.94	0.50
1:H:248:LEU:HD22	1:H:323:VAL:HG21	1.94	0.50
1:I:150:ILE:HD12	6:I:601:ADP:N7	2.26	0.50
1:J:241:ALA:HB2	1:J:271:VAL:HG22	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:421:ARG:NH1	1:J:469:VAL:O	2.44	0.50
1:K:144:ILE:HB	1:K:166:MET:HE3	1.93	0.50
1:L:106:ALA:O	1:L:111:MET:HG2	2.12	0.50
1:L:223:ALA:O	1:L:251:ALA:HA	2.12	0.50
1:L:235:PRO:HG3	1:L:310:GLU:HA	1.93	0.50
1:L:323:VAL:HG12	1:L:332:ILE:HG22	1.93	0.50
1:M:57:ALA:HA	1:M:60:ILE:HD12	1.93	0.50
1:N:204:PHE:HE2	1:N:275:ALA:HB3	1.76	0.50
2:R:66:ILE:HG21	2:S:76:GLU:HG2	1.93	0.50
2:U:13:LYS:N	2:U:39:GLU:O	2.43	0.50
1:A:151:SER:HB2	1:A:399:ALA:HA	1.94	0.49
1:D:259:LEU:O	1:D:263:VAL:HG13	2.12	0.49
1:D:448:GLU:HB3	1:D:452:ARG:NH1	2.27	0.49
1:H:176:THR:O	1:H:379:ILE:N	2.43	0.49
1:H:200:LEU:HD21	1:H:277:LYS:HB2	1.94	0.49
1:J:81:ALA:O	1:J:85:ALA:HB2	2.11	0.49
1:J:122:LYS:NZ	1:J:431:GLY:HA2	2.27	0.49
1:L:279:PRO:C	1:L:288:MET:HG3	2.32	0.49
1:L:423:ALA:HB2	1:L:447:MET:HB2	1.94	0.49
1:M:350:ARG:O	1:M:353:ILE:HB	2.11	0.49
1:B:321:LYS:HZ2	1:B:336:VAL:HG11	1.78	0.49
1:C:226:LYS:HZ3	1:C:253:ASP:HB3	1.77	0.49
1:F:214:GLU:OE2	1:F:322:ARG:NH1	2.46	0.49
1:H:47:PRO:CG	1:N:69:MET:HB2	2.41	0.49
1:I:31:LEU:HD23	1:I:453:GLN:HB3	1.94	0.49
1:I:197:ARG:NH1	1:I:277:LYS:HD3	2.27	0.49
2:O:40:VAL:HG23	2:O:62:GLY:H	1.77	0.49
2:T:2:ASN:OD1	2:T:3:ILE:N	2.45	0.49
1:A:128:VAL:HG13	1:A:501:ARG:HG3	1.93	0.49
1:A:431:GLY:N	1:A:437:ASN:OD1	2.44	0.49
1:B:399:ALA:O	1:B:403:THR:HG23	2.13	0.49
1:C:186:GLU:O	1:C:380:LYS:N	2.33	0.49
1:C:458:CYS:HB3	1:C:483:GLU:OE2	2.13	0.49
1:D:12:ALA:HA	1:D:520:MET:HE1	1.93	0.49
1:D:196:ASP:HA	1:D:329:THR:HA	1.94	0.49
1:D:438:VAL:O	1:D:442:VAL:HG23	2.12	0.49
1:J:265:ASN:O	1:J:269:GLY:N	2.45	0.49
1:L:37:ASN:ND2	1:L:51:LYS:HE2	2.27	0.49
1:N:100:ILE:HD11	1:N:510:VAL:HG22	1.95	0.49
1:N:177:VAL:HA	1:N:379:ILE:HB	1.93	0.49
1:N:284:ARG:HB3	1:N:284:ARG:CZ	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:111:MET:HE1	1:B:116:LEU:HD21	1.93	0.49
1:B:175:ILE:HB	1:B:404:ARG:HH12	1.77	0.49
1:D:262:LEU:HD13	1:D:273:VAL:HG11	1.94	0.49
1:E:144:ILE:O	1:E:403:THR:HG22	2.12	0.49
1:E:409:GLU:OE2	1:E:501:ARG:NH2	2.44	0.49
1:H:356:ALA:HB2	1:H:365:LEU:HD12	1.94	0.49
1:I:325:ILE:HG13	1:I:325:ILE:O	2.12	0.49
1:I:349:ILE:HG12	1:I:368:ARG:NH2	2.28	0.49
1:K:432:GLN:HB2	1:K:436:GLN:NE2	2.27	0.49
1:K:460:GLU:HG3	1:K:478:TYR:OH	2.12	0.49
1:L:291:ASP:OD2	1:L:368:ARG:HD2	2.12	0.49
1:L:414:GLY:HA3	1:L:493:ILE:HG22	1.94	0.49
1:M:122:LYS:HZ2	1:M:440:ILE:HD11	1.76	0.49
1:N:124:VAL:HG13	1:N:504:LEU:HG	1.94	0.49
1:N:124:VAL:HG21	1:N:508:ALA:HB2	1.94	0.49
2:O:2:ASN:OD1	2:O:3:ILE:N	2.45	0.49
2:R:47:ARG:NH2	2:R:88:GLU:HB3	2.27	0.49
2:S:17:VAL:HG22	2:S:34:LYS:HA	1.95	0.49
2:U:20:LYS:HE3	2:U:24:GLY:HA2	1.93	0.49
1:A:33:PRO:HD3	3:A:601:ATP:C4	2.48	0.49
1:C:265:ASN:HA	1:C:268:ARG:HB2	1.95	0.49
1:D:220:ILE:HG13	1:D:248:LEU:HD23	1.95	0.49
1:E:194:GLN:HG3	1:E:331:THR:HG22	1.94	0.49
1:E:498:LYS:HG3	1:E:501:ARG:NH2	2.28	0.49
1:G:438:VAL:O	1:G:442:VAL:HG23	2.13	0.49
1:H:115:ASP:CG	1:H:118:ARG:HH21	2.16	0.49
1:H:218:PRO:HG3	1:H:323:VAL:HG22	1.94	0.49
1:I:204:PHE:CE2	1:I:275:ALA:HB3	2.47	0.49
1:J:186:GLU:O	1:J:380:LYS:N	2.26	0.49
1:J:224:ASP:OD2	1:J:286:LYS:HG2	2.12	0.49
1:K:219:PHE:HD2	1:K:240:VAL:HG22	1.76	0.49
1:K:349:ILE:HG12	1:K:368:ARG:CZ	2.42	0.49
1:K:356:ALA:HB3	1:K:362:ARG:NH2	2.26	0.49
1:L:174:VAL:HG11	1:L:376:VAL:HG12	1.93	0.49
1:L:323:VAL:HA	1:L:332:ILE:HA	1.94	0.49
1:M:230:ILE:O	1:M:234:LEU:N	2.45	0.49
1:B:225:LYS:N	1:B:252:GLU:OE1	2.46	0.49
1:B:411:VAL:HG21	1:B:494:LEU:HD22	1.94	0.49
1:C:143:ALA:O	1:C:147:VAL:HG23	2.12	0.49
1:C:498:LYS:HG3	1:C:501:ARG:NH2	2.27	0.49
1:D:498:LYS:HG3	1:D:501:ARG:NH2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:178:GLU:O	1:E:381:VAL:N	2.45	0.49
1:F:66:PHE:HB3	1:F:520:MET:SD	2.51	0.49
1:F:199:TYR:HE2	1:F:212:ALA:HA	1.75	0.49
1:G:111:MET:HE1	1:G:438:VAL:HB	1.95	0.49
1:H:433:ASN:OD1	1:H:434:GLU:N	2.46	0.49
1:I:31:LEU:HD13	1:I:90:THR:HB	1.94	0.49
1:L:352:GLN:HA	1:L:355:GLU:HG3	1.94	0.49
1:L:479:ASN:HB2	1:L:491:MET:HE3	1.93	0.49
1:M:262:LEU:O	1:M:266:THR:HG23	2.12	0.49
1:M:264:VAL:HA	1:M:267:MET:HE1	1.92	0.49
2:Q:11:ILE:HG13	2:Q:41:LEU:HD12	1.95	0.49
1:A:169:VAL:HG11	1:A:175:ILE:HG13	1.95	0.49
1:A:438:VAL:O	1:A:442:VAL:HG23	2.13	0.49
1:C:199:TYR:CD2	1:C:213:VAL:HG23	2.48	0.49
1:C:205:ILE:HD13	1:C:211:GLY:HA2	1.94	0.49
1:C:264:VAL:O	1:C:268:ARG:HG2	2.13	0.49
1:D:136:VAL:HG23	1:D:411:VAL:HG23	1.94	0.49
1:G:143:ALA:O	1:G:147:VAL:HG23	2.12	0.49
1:H:38:VAL:O	1:H:50:THR:N	2.42	0.49
1:H:224:ASP:OD2	1:H:286:LYS:HG2	2.13	0.49
1:M:76:GLU:HG2	1:M:80:LYS:HE3	1.93	0.49
1:M:148:GLY:HA2	1:M:399:ALA:HB1	1.95	0.49
1:M:345:ARG:NH2	1:M:368:ARG:HH12	2.11	0.49
1:M:353:ILE:CG2	1:M:362:ARG:HH22	2.23	0.49
2:P:86:MET:HG3	2:P:90:ASP:HB2	1.95	0.49
1:A:141:SER:HB2	1:A:163:ALA:HB1	1.95	0.49
1:B:136:VAL:HG23	1:B:411:VAL:HG23	1.95	0.49
1:B:199:TYR:HE2	1:B:212:ALA:HA	1.76	0.49
1:D:16:MET:SD	1:D:514:MET:HE1	2.52	0.49
1:E:287:ALA:HA	1:E:345:ARG:NH2	2.28	0.49
1:F:177:VAL:HG23	1:F:400:LEU:HD22	1.95	0.49
1:G:179:ASP:OD1	1:G:393:LYS:HD2	2.12	0.49
1:G:194:GLN:O	1:G:371:LYS:NZ	2.40	0.49
1:I:491:MET:HG2	1:I:493:ILE:HG13	1.93	0.49
1:J:37:ASN:ND2	1:J:51:LYS:HE2	2.27	0.49
1:J:206:ASN:ND2	1:J:214:GLU:O	2.45	0.49
1:K:130:GLU:OE1	1:K:426:LEU:HG	2.12	0.49
1:K:460:GLU:O	1:K:462:PRO:HD3	2.13	0.49
1:L:417:VAL:O	1:L:421:ARG:HG2	2.13	0.49
1:M:346:VAL:O	1:M:350:ARG:HG2	2.12	0.49
1:C:215:LEU:HB3	1:C:246:PRO:HB2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:386:GLU:O	1:C:389:MET:HB2	2.13	0.49
1:D:342:ILE:HG23	1:D:372:LEU:HB3	1.95	0.49
1:D:427:ALA:HA	1:D:444:LEU:HD13	1.94	0.49
1:E:283:ASP:OD1	1:E:284:ARG:N	2.46	0.49
1:E:291:ASP:OD1	1:E:372:LEU:HD22	2.11	0.49
1:F:154:SER:N	7:F:719:HOH:O	2.44	0.49
1:I:177:VAL:HG13	1:I:393:LYS:NZ	2.28	0.49
1:I:265:ASN:O	1:I:269:GLY:N	2.45	0.49
1:K:455:VAL:HG22	1:K:478:TYR:CE2	2.48	0.49
1:L:12:ALA:O	1:L:16:MET:HG2	2.11	0.49
1:L:32:GLY:HA3	1:L:454:ILE:HG23	1.95	0.49
1:M:171:LYS:HD2	1:M:407:VAL:HG22	1.93	0.49
1:M:468:THR:HB	1:M:485:TYR:CE2	2.48	0.49
1:N:16:MET:O	1:N:20:VAL:HG23	2.13	0.49
1:N:37:ASN:ND2	1:N:51:LYS:HE2	2.28	0.49
1:N:241:ALA:HB2	1:N:271:VAL:HG22	1.95	0.49
1:N:320:ALA:HA	1:N:336:VAL:H	1.78	0.49
1:B:421:ARG:HH12	1:B:470:LYS:HA	1.77	0.49
1:C:102:GLU:CB	1:C:442:VAL:HG13	2.43	0.49
1:D:41:ASP:OD1	1:D:47:PRO:HG3	2.13	0.49
1:E:179:ASP:OD1	1:E:393:LYS:HD2	2.13	0.49
1:F:116:LEU:HD21	1:F:438:VAL:HG12	1.95	0.49
1:F:209:GLU:HG2	1:F:210:THR:HG23	1.94	0.49
1:F:251:ALA:O	1:F:278:ALA:N	2.43	0.49
1:F:313:THR:O	1:F:317:LEU:HG	2.13	0.49
1:I:460:GLU:O	1:I:462:PRO:HD3	2.13	0.49
1:J:301:ILE:HG12	1:J:307:MET:HE1	1.94	0.49
1:J:477:GLY:N	1:J:486:GLY:O	2.43	0.49
1:K:262:LEU:HD22	1:K:273:VAL:HG11	1.95	0.49
1:N:440:ILE:O	1:N:444:LEU:HG	2.13	0.49
1:A:189:VAL:HA	1:A:377:ALA:HA	1.94	0.48
1:A:421:ARG:NH2	1:A:469:VAL:O	2.37	0.48
1:B:33:PRO:HD3	3:B:601:ATP:C4	2.48	0.48
1:B:349:ILE:HG23	1:B:365:LEU:HD12	1.95	0.48
1:E:364:LYS:O	1:E:368:ARG:HG3	2.12	0.48
1:G:283:ASP:OD1	1:G:284:ARG:N	2.46	0.48
1:G:458:CYS:HB3	1:G:483:GLU:OE2	2.13	0.48
1:I:284:ARG:HE	1:I:364:LYS:HB3	1.78	0.48
1:J:66:PHE:CD1	1:J:520:MET:HE3	2.47	0.48
1:J:122:LYS:HZ3	1:J:431:GLY:HA2	1.77	0.48
1:J:124:VAL:HG11	1:J:508:ALA:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:218:PRO:HG3	1:J:323:VAL:HG22	1.95	0.48
1:K:202:PRO:HG2	1:L:384:ALA:HA	1.94	0.48
1:K:415:GLY:HA2	6:K:601:ADP:N3	2.28	0.48
1:L:311:LYS:HD2	1:L:311:LYS:O	2.13	0.48
1:N:498:LYS:HG3	1:N:501:ARG:HH21	1.77	0.48
2:T:94:ILE:HG13	2:U:6:LEU:HD11	1.95	0.48
1:A:213:VAL:HB	1:A:325:ILE:HB	1.95	0.48
1:B:201:SER:HB2	1:B:259:LEU:HD21	1.95	0.48
1:B:472:GLY:HA3	1:B:476:TYR:CD2	2.48	0.48
1:E:32:GLY:HA2	3:E:601:ATP:O4'	2.13	0.48
1:E:301:ILE:HD11	1:E:316:ASP:HB3	1.95	0.48
1:F:140:ASP:N	1:F:140:ASP:OD1	2.46	0.48
1:F:472:GLY:HA3	1:F:476:TYR:CD2	2.48	0.48
1:H:175:ILE:HA	1:H:377:ALA:HB3	1.94	0.48
1:H:204:PHE:HE2	1:H:275:ALA:HB3	1.77	0.48
1:I:311:LYS:HD2	1:I:311:LYS:O	2.14	0.48
1:I:323:VAL:HG12	1:I:332:ILE:HG22	1.93	0.48
1:I:468:THR:HB	1:I:485:TYR:CE2	2.48	0.48
1:M:220:ILE:HG12	1:M:222:LEU:HD21	1.94	0.48
1:M:262:LEU:HB3	1:M:273:VAL:HG11	1.94	0.48
1:M:477:GLY:O	1:M:486:GLY:N	2.46	0.48
1:A:102:GLU:HB2	1:A:442:VAL:HG13	1.95	0.48
1:A:199:TYR:CD2	1:A:213:VAL:HG23	2.48	0.48
1:C:219:PHE:CZ	1:C:245:LYS:HD2	2.48	0.48
1:C:261:THR:O	1:C:265:ASN:ND2	2.44	0.48
1:C:387:VAL:HA	1:C:390:LYS:HE2	1.94	0.48
1:D:320:ALA:HA	1:D:335:GLY:HA2	1.93	0.48
1:G:150:ILE:O	7:G:701:HOH:O	2.20	0.48
1:I:37:ASN:ND2	1:I:51:LYS:HE2	2.27	0.48
1:I:301:ILE:HG21	1:I:309:LEU:HD23	1.94	0.48
1:J:204:PHE:HE2	1:J:275:ALA:HB3	1.77	0.48
1:K:262:LEU:HD22	1:K:273:VAL:HG21	1.95	0.48
1:L:6:VAL:HG22	1:L:521:VAL:HG22	1.95	0.48
1:L:460:GLU:O	1:L:462:PRO:HD3	2.14	0.48
1:L:520:MET:HE2	1:M:39:VAL:HB	1.94	0.48
1:M:39:VAL:HG13	1:M:49:ILE:HG12	1.95	0.48
1:N:214:GLU:HG3	1:N:324:VAL:HG22	1.94	0.48
1:N:222:LEU:HD23	1:N:250:ILE:HB	1.96	0.48
1:N:383:ALA:HB1	1:N:388:GLU:HB3	1.95	0.48
1:N:472:GLY:HA3	1:N:476:TYR:CD2	2.48	0.48
2:S:65:VAL:HB	2:S:91:ILE:HG23	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:134:LEU:HD23	1:A:418:ALA:HB1	1.95	0.48
1:A:287:ALA:HA	1:A:345:ARG:NH2	2.27	0.48
1:A:427:ALA:HA	1:A:444:LEU:HD13	1.95	0.48
1:A:448:GLU:OE1	1:A:470:LYS:NZ	2.42	0.48
1:B:166:MET:HB3	1:B:175:ILE:HD11	1.94	0.48
1:B:240:VAL:HG11	1:B:247:LEU:HB2	1.95	0.48
1:C:325:ILE:HG13	1:C:330:THR:HG23	1.94	0.48
1:E:206:ASN:HD21	1:E:214:GLU:HB3	1.78	0.48
1:G:323:VAL:HG22	1:G:332:ILE:HA	1.94	0.48
1:I:186:GLU:O	1:I:380:LYS:N	2.26	0.48
1:I:429:LEU:HG	1:I:440:ILE:HD13	1.93	0.48
1:J:36:ARG:NH2	1:J:456:LEU:O	2.34	0.48
1:J:299:THR:N	1:J:316:ASP:O	2.43	0.48
1:L:149:THR:OG1	1:L:156:GLU:HA	2.13	0.48
1:L:193:MET:HG2	1:L:295:LEU:HD13	1.94	0.48
1:M:36:ARG:HE	1:M:457:ASN:HA	1.79	0.48
2:O:11:ILE:HD12	2:O:42:ALA:HB3	1.94	0.48
2:P:64:ILE:O	2:P:95:VAL:N	2.38	0.48
2:T:26:VAL:HG12	2:T:28:THR:HG23	1.95	0.48
1:B:20:VAL:HA	1:B:74:VAL:HG11	1.95	0.48
1:B:346:VAL:HA	1:B:349:ILE:HD12	1.95	0.48
1:B:452:ARG:NH1	7:B:2009:HOH:O	2.30	0.48
1:C:247:LEU:HB3	1:C:273:VAL:HG22	1.95	0.48
1:D:246:PRO:HG3	1:D:272:LYS:HE2	1.93	0.48
1:E:231:ARG:HH22	2:S:27:LEU:HD13	1.79	0.48
1:F:151:SER:HB2	1:F:399:ALA:HA	1.96	0.48
1:F:352:GLN:HB3	1:F:365:LEU:HD13	1.96	0.48
1:G:61:GLU:HG2	1:G:72:GLN:OE1	2.13	0.48
1:H:325:ILE:HA	1:H:330:THR:HA	1.96	0.48
1:I:144:ILE:HD12	1:I:166:MET:HE3	1.94	0.48
1:J:25:ASP:OD1	1:J:97:GLN:NE2	2.45	0.48
1:K:165:ALA:HB2	1:K:187:LEU:HD22	1.96	0.48
1:K:166:MET:HB3	1:K:171:LYS:HA	1.96	0.48
1:K:381:VAL:HG21	1:K:393:LYS:HB2	1.96	0.48
1:L:40:LEU:HD13	1:L:59:GLU:HG3	1.95	0.48
1:L:107:VAL:HG13	1:L:113:PRO:HG3	1.96	0.48
1:L:231:ARG:O	1:L:231:ARG:NH1	2.39	0.48
1:N:13:ARG:HG2	1:N:514:MET:HE3	1.94	0.48
1:N:16:MET:HE3	1:N:69:MET:SD	2.53	0.48
1:N:479:ASN:HB2	1:N:491:MET:SD	2.54	0.48
2:U:65:VAL:HG23	2:U:67:PHE:HD1	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:278:ALA:HB3	1:B:285:ARG:HH11	1.77	0.48
1:B:479:ASN:HB3	1:B:484:GLU:HG2	1.95	0.48
1:C:32:GLY:HA2	3:C:601:ATP:O4'	2.14	0.48
1:D:152:ALA:HB2	1:D:399:ALA:HB2	1.96	0.48
1:D:199:TYR:HE2	1:D:212:ALA:HA	1.78	0.48
1:G:166:MET:HA	1:G:169:VAL:HG12	1.94	0.48
1:G:189:VAL:HA	1:G:377:ALA:HA	1.96	0.48
1:I:440:ILE:O	1:I:444:LEU:HG	2.13	0.48
1:J:194:GLN:HG3	1:J:331:THR:HB	1.95	0.48
1:J:284:ARG:HB3	1:J:284:ARG:CZ	2.44	0.48
1:M:279:PRO:O	1:M:285:ARG:HA	2.13	0.48
1:N:82:ASN:O	1:N:86:GLY:N	2.31	0.48
2:Q:14:ARG:NH1	2:Q:69:ASP:OD1	2.46	0.48
1:B:148:GLY:HA2	1:B:399:ALA:HB1	1.96	0.48
1:C:356:ALA:HB1	1:C:361:ASP:HB2	1.95	0.48
1:E:222:LEU:O	1:E:301:ILE:N	2.25	0.48
1:E:427:ALA:O	1:E:441:LYS:NZ	2.46	0.48
1:F:392:LYS:O	1:F:396:VAL:HG23	2.14	0.48
1:H:187:LEU:HB3	1:H:379:ILE:HG12	1.95	0.48
1:J:342:ILE:O	1:J:346:VAL:HG23	2.13	0.48
1:K:221:LEU:HD23	1:K:249:ILE:HG23	1.96	0.48
1:L:5:ASP:N	1:L:522:THR:O	2.44	0.48
1:M:472:GLY:HA3	1:M:476:TYR:CD2	2.48	0.48
1:N:199:TYR:CE2	1:N:327:LYS:HA	2.49	0.48
1:N:311:LYS:HD2	1:N:311:LYS:O	2.13	0.48
1:N:421:ARG:NH1	1:N:469:VAL:O	2.46	0.48
1:N:495:ASP:OD2	6:N:601:ADP:O2'	2.23	0.48
1:A:100:ILE:HA	1:A:515:ILE:HD11	1.95	0.48
1:A:176:THR:O	1:A:379:ILE:N	2.33	0.48
1:A:287:ALA:HB1	1:A:368:ARG:CZ	2.44	0.48
1:B:114:MET:CE	1:C:34:LYS:HG2	2.44	0.48
1:D:230:ILE:O	1:D:233:MET:N	2.41	0.48
1:E:6:VAL:HG22	1:E:521:VAL:HG13	1.96	0.48
1:F:207:LYS:HE2	1:F:212:ALA:HB3	1.95	0.48
1:I:161:LEU:HG	1:I:187:LEU:HD23	1.96	0.48
1:I:194:GLN:HA	1:I:330:THR:O	2.14	0.48
1:I:323:VAL:HA	1:I:332:ILE:HA	1.95	0.48
1:I:359:ASP:O	1:I:362:ARG:HB2	2.14	0.48
1:I:433:ASN:OD1	1:I:434:GLU:N	2.47	0.48
1:K:195:PHE:CE2	1:K:197:ARG:HB2	2.49	0.48
1:K:204:PHE:HE2	1:K:275:ALA:HB3	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:16:MET:O	1:L:20:VAL:HG23	2.14	0.48
1:M:301:ILE:HG12	1:M:307:MET:HE1	1.96	0.48
1:M:311:LYS:O	1:M:311:LYS:HD2	2.14	0.48
2:O:37:ARG:HH22	2:P:78:ILE:HG22	1.78	0.48
1:A:219:PHE:HB3	1:A:317:LEU:HD13	1.95	0.48
1:A:364:LYS:O	1:A:368:ARG:HG3	2.13	0.48
1:B:427:ALA:O	1:B:441:LYS:NZ	2.46	0.48
1:D:124:VAL:HG22	1:D:504:LEU:HD11	1.95	0.48
1:F:122:LYS:NZ	1:F:430:ARG:O	2.34	0.48
1:F:141:SER:HB2	1:F:163:ALA:HB1	1.96	0.48
1:F:144:ILE:HG23	1:F:403:THR:CG2	2.44	0.48
1:F:220:ILE:N	1:F:318:GLY:O	2.33	0.48
1:G:102:GLU:CB	1:G:442:VAL:HG13	2.44	0.48
1:H:124:VAL:HG13	1:H:504:LEU:HG	1.95	0.48
1:H:320:ALA:HA	1:H:336:VAL:H	1.79	0.48
1:J:284:ARG:HE	1:J:364:LYS:HB3	1.78	0.48
1:L:220:ILE:HG13	1:L:248:LEU:HD22	1.94	0.48
1:L:259:LEU:O	1:L:263:VAL:HG23	2.13	0.48
1:L:265:ASN:O	1:L:269:GLY:N	2.46	0.48
1:M:222:LEU:HD13	1:M:293:ALA:HA	1.96	0.48
2:P:40:VAL:HG23	2:P:62:GLY:N	2.29	0.48
1:A:415:GLY:HA2	3:A:601:ATP:H1'	1.96	0.48
1:A:475:ASN:HB2	1:A:487:ASN:ND2	2.29	0.48
1:B:226:LYS:HZ3	1:B:253:ASP:HB3	1.79	0.48
1:D:479:ASN:N	1:D:484:GLU:O	2.43	0.48
1:E:268:ARG:NH1	2:S:26:VAL:HG11	2.29	0.48
1:F:320:ALA:HA	1:F:335:GLY:HA2	1.95	0.48
1:F:430:ARG:HH12	1:F:441:LYS:HE2	1.79	0.48
1:I:477:GLY:O	1:I:486:GLY:N	2.47	0.48
1:L:69:MET:HE3	1:M:47:PRO:HD2	1.95	0.48
1:L:262:LEU:HD22	1:L:273:VAL:HG21	1.95	0.48
1:L:421:ARG:NH1	1:L:469:VAL:O	2.46	0.48
1:M:140:ASP:O	1:M:144:ILE:HG12	2.14	0.48
1:M:429:LEU:HG	1:M:440:ILE:HD13	1.95	0.48
2:P:12:VAL:CG2	2:P:84:LEU:HB2	2.44	0.48
2:S:5:PRO:HD3	2:S:42:ALA:HB1	1.96	0.48
2:S:67:PHE:CE2	2:S:69:ASP:HB3	2.49	0.48
1:A:472:GLY:HA3	1:A:476:TYR:CD2	2.48	0.47
1:B:214:GLU:HG3	1:B:324:VAL:HG22	1.95	0.47
1:D:128:VAL:HG13	1:D:501:ARG:HG3	1.96	0.47
1:E:31:LEU:HB2	1:E:90:THR:CG2	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:33:PRO:HD3	3:E:601:ATP:C4	2.49	0.47
1:F:221:LEU:HD11	1:F:309:LEU:HD11	1.96	0.47
1:F:262:LEU:O	1:F:266:THR:HG23	2.14	0.47
1:F:422:VAL:HA	1:F:425:LYS:HE2	1.96	0.47
1:G:178:GLU:HA	1:G:393:LYS:HE2	1.95	0.47
1:G:399:ALA:O	1:G:403:THR:HG23	2.13	0.47
1:I:70:GLY:HA2	1:I:73:MET:HE1	1.95	0.47
1:J:419:LEU:HD22	1:J:447:MET:SD	2.54	0.47
1:K:324:VAL:O	1:K:331:THR:N	2.43	0.47
1:M:479:ASN:HB2	1:M:491:MET:SD	2.54	0.47
2:R:27:LEU:HB3	2:R:31:ALA:HB3	1.95	0.47
1:A:12:ALA:CA	1:A:520:MET:HE1	2.43	0.47
1:A:138:CYS:HB2	1:A:411:VAL:HG13	1.96	0.47
1:B:68:ASN:O	1:B:72:GLN:HG2	2.14	0.47
1:C:31:LEU:O	1:C:457:ASN:ND2	2.32	0.47
1:D:32:GLY:HA2	3:D:601:ATP:O4'	2.14	0.47
1:E:178:GLU:HA	1:E:393:LYS:HE2	1.95	0.47
1:F:134:LEU:HD23	1:F:418:ALA:HB1	1.95	0.47
1:G:206:ASN:HD21	1:G:214:GLU:HB3	1.79	0.47
3:G:601:ATP:H5'2	3:G:601:ATP:H8	1.79	0.47
1:H:319:GLN:HB2	1:H:336:VAL:HB	1.97	0.47
1:H:414:GLY:HA3	1:H:493:ILE:HG22	1.95	0.47
1:I:365:LEU:HA	1:I:368:ARG:HG3	1.95	0.47
1:J:458:CYS:SG	1:J:480:ALA:HB1	2.54	0.47
1:J:465:VAL:HA	1:J:485:TYR:OH	2.14	0.47
1:K:218:PRO:HG3	1:K:323:VAL:HG22	1.96	0.47
1:K:519:CYS:HB3	1:L:38:VAL:HG22	1.96	0.47
1:L:12:ALA:HB1	1:L:520:MET:SD	2.55	0.47
1:M:37:ASN:ND2	1:M:51:LYS:HE2	2.28	0.47
1:N:64:ASP:HB3	1:N:67:GLU:HB2	1.96	0.47
1:N:250:ILE:HG12	1:N:276:VAL:HB	1.94	0.47
2:R:65:VAL:HG23	2:R:67:PHE:HD1	1.79	0.47
2:S:74:LYS:O	2:S:85:ILE:N	2.46	0.47
1:A:11:ASP:O	1:A:15:LYS:HG2	2.13	0.47
1:A:458:CYS:HB3	1:A:483:GLU:OE2	2.14	0.47
1:D:146:GLN:HB2	1:D:494:LEU:HD12	1.97	0.47
1:D:513:LEU:HD11	1:E:388:GLU:HA	1.95	0.47
1:F:427:ALA:HA	1:F:444:LEU:HD13	1.97	0.47
1:G:32:GLY:HA2	3:G:601:ATP:O4'	2.14	0.47
1:H:165:ALA:HB2	1:H:187:LEU:HD22	1.96	0.47
1:J:65:LYS:O	1:J:69:MET:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:440:ILE:O	1:J:444:LEU:HG	2.14	0.47
1:K:190:VAL:O	1:K:376:VAL:N	2.47	0.47
1:K:230:ILE:HD13	1:K:261:THR:HB	1.95	0.47
1:K:411:VAL:HG12	1:K:496:PRO:HA	1.97	0.47
1:L:194:GLN:HA	1:L:330:THR:O	2.14	0.47
1:M:14:VAL:O	1:M:18:ARG:HG3	2.12	0.47
1:M:323:VAL:HA	1:M:332:ILE:HA	1.97	0.47
1:M:324:VAL:HB	1:M:331:THR:HG23	1.96	0.47
1:N:292:ILE:HA	1:N:295:LEU:HD12	1.95	0.47
1:N:460:GLU:O	1:N:462:PRO:HD3	2.15	0.47
2:O:4:ARG:NH1	2:U:94:ILE:HD12	2.30	0.47
2:O:38:GLY:HA3	2:O:67:PHE:HE1	1.79	0.47
2:Q:59:VAL:HG11	2:Q:91:ILE:HG21	1.95	0.47
2:R:73:VAL:HA	2:R:86:MET:HB3	1.96	0.47
2:R:94:ILE:HG13	2:S:6:LEU:HD11	1.96	0.47
1:A:227:ILE:HG23	1:A:233:MET:SD	2.54	0.47
1:A:346:VAL:HA	1:A:349:ILE:HB	1.96	0.47
1:C:20:VAL:HA	1:C:74:VAL:HG11	1.96	0.47
1:C:430:ARG:HD2	1:C:437:ASN:HB3	1.96	0.47
1:D:231:ARG:NH2	2:R:21:SER:OG	2.47	0.47
1:F:20:VAL:HG12	1:F:97:GLN:OE1	2.15	0.47
1:F:22:VAL:HG11	1:F:62:LEU:HD21	1.95	0.47
1:F:69:MET:HB3	1:G:47:PRO:HG2	1.96	0.47
1:G:128:VAL:HG13	1:G:501:ARG:HG3	1.96	0.47
1:I:353:ILE:HG23	1:I:362:ARG:NH1	2.30	0.47
1:I:460:GLU:HG3	1:I:478:TYR:OH	2.14	0.47
1:K:417:VAL:O	1:K:421:ARG:HG2	2.14	0.47
1:L:148:GLY:CA	1:L:399:ALA:HB1	2.45	0.47
1:M:190:VAL:O	1:M:376:VAL:N	2.48	0.47
1:M:319:GLN:HB2	1:M:336:VAL:HB	1.96	0.47
1:M:339:GLU:HA	1:M:342:ILE:HD12	1.95	0.47
1:N:140:ASP:O	1:N:144:ILE:HG13	2.15	0.47
1:N:417:VAL:O	1:N:421:ARG:HG2	2.14	0.47
1:N:420:ILE:HG12	1:N:448:GLU:HG2	1.97	0.47
1:N:477:GLY:N	1:N:486:GLY:O	2.48	0.47
2:Q:12:VAL:CG2	2:Q:84:LEU:HB2	2.45	0.47
1:A:5:ASP:N	1:A:522:THR:O	2.29	0.47
1:A:264:VAL:HG11	2:O:28:THR:HG21	1.95	0.47
1:B:259:LEU:O	1:B:263:VAL:HG13	2.15	0.47
1:C:422:VAL:HA	1:C:425:LYS:HE2	1.97	0.47
1:C:430:ARG:HD3	1:C:430:ARG:HA	1.74	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:479:ASN:N	1:E:484:GLU:O	2.47	0.47
1:F:451:LEU:HD21	1:F:469:VAL:HG21	1.96	0.47
1:G:262:LEU:O	1:G:266:THR:HG23	2.15	0.47
1:G:402:ALA:O	1:G:496:PRO:HG3	2.15	0.47
1:H:301:ILE:HG12	1:H:307:MET:HE1	1.95	0.47
1:H:438:VAL:O	1:H:442:VAL:HG23	2.15	0.47
1:I:301:ILE:HG12	1:I:307:MET:HE1	1.95	0.47
1:I:352:GLN:HA	1:I:355:GLU:HG3	1.95	0.47
1:I:353:ILE:HG23	1:I:362:ARG:HH12	1.79	0.47
1:J:339:GLU:HA	1:J:342:ILE:HD12	1.97	0.47
1:K:85:ALA:HB2	1:K:502:SER:HB2	1.95	0.47
1:K:124:VAL:HG11	1:K:508:ALA:HB2	1.95	0.47
1:L:76:GLU:HG2	1:L:80:LYS:HE3	1.95	0.47
1:L:204:PHE:CE2	1:L:275:ALA:HB3	2.49	0.47
1:L:455:VAL:HG21	1:L:465:VAL:HG11	1.96	0.47
1:M:290:GLN:OE1	1:M:294:THR:OG1	2.32	0.47
1:M:421:ARG:HH12	1:M:469:VAL:C	2.18	0.47
1:N:17:LEU:HD11	1:N:101:THR:HG23	1.97	0.47
1:N:95:LEU:O	1:N:99:ILE:HG13	2.13	0.47
2:T:47:ARG:N	2:T:55:LYS:O	2.47	0.47
1:A:152:ALA:HB2	1:A:399:ALA:HB2	1.97	0.47
1:A:165:ALA:HB2	1:A:379:ILE:HD11	1.97	0.47
1:A:353:ILE:HG23	1:A:362:ARG:HB2	1.95	0.47
1:B:12:ALA:HA	1:B:520:MET:HE2	1.96	0.47
1:B:12:ALA:HA	1:B:520:MET:HE3	1.96	0.47
1:B:455:VAL:HG13	1:B:460:GLU:HB2	1.97	0.47
1:C:112:ASN:ND2	1:C:115:ASP:OD2	2.42	0.47
1:C:487:ASN:O	1:C:491:MET:HG2	2.14	0.47
1:H:460:GLU:HG3	1:H:478:TYR:OH	2.15	0.47
1:I:115:ASP:OD2	1:I:433:ASN:ND2	2.38	0.47
1:J:12:ALA:HA	1:J:520:MET:CE	2.43	0.47
1:L:169:VAL:HG21	1:L:377:ALA:HB2	1.96	0.47
1:M:348:GLN:O	1:M:351:GLN:HG3	2.15	0.47
1:N:174:VAL:HG11	1:N:376:VAL:HG12	1.95	0.47
1:N:284:ARG:CZ	1:N:364:LYS:HD2	2.45	0.47
2:Q:13:LYS:HB2	2:Q:41:LEU:HD11	1.95	0.47
2:T:11:ILE:O	2:T:41:LEU:N	2.34	0.47
1:A:138:CYS:O	1:A:407:VAL:HA	2.14	0.47
1:A:215:LEU:HD12	1:A:248:LEU:HB2	1.96	0.47
1:A:259:LEU:O	1:A:263:VAL:HG13	2.15	0.47
1:A:386:GLU:O	1:A:390:LYS:HG3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:69:MET:HB2	1:C:47:PRO:CG	2.45	0.47
1:C:66:PHE:HB3	1:C:520:MET:SD	2.54	0.47
1:C:218:PRO:HG2	1:C:323:VAL:HG23	1.97	0.47
1:C:230:ILE:HG22	1:C:234:LEU:HD23	1.96	0.47
1:C:519:CYS:SG	1:C:520:MET:N	2.88	0.47
1:D:190:VAL:N	1:D:376:VAL:O	2.41	0.47
1:D:207:LYS:NZ	1:D:214:GLU:HB2	2.30	0.47
1:D:231:ARG:NH2	1:D:234:LEU:HD21	2.29	0.47
1:D:511:ALA:O	1:D:515:ILE:HG12	2.13	0.47
1:E:113:PRO:HB3	1:E:515:ILE:HG22	1.95	0.47
1:E:265:ASN:HA	1:E:268:ARG:HB2	1.97	0.47
1:G:20:VAL:HA	1:G:74:VAL:HG11	1.97	0.47
1:G:301:ILE:HD11	1:G:316:ASP:HB3	1.97	0.47
1:H:5:ASP:N	1:H:522:THR:O	2.45	0.47
1:H:95:LEU:O	1:H:99:ILE:HG13	2.14	0.47
1:H:195:PHE:CD2	1:H:279:PRO:HB3	2.49	0.47
1:H:429:LEU:O	1:H:441:LYS:NZ	2.34	0.47
1:H:479:ASN:O	1:H:483:GLU:N	2.47	0.47
1:I:350:ARG:O	1:I:354:GLU:HG2	2.15	0.47
1:I:411:VAL:HA	1:I:496:PRO:HA	1.96	0.47
1:J:76:GLU:HG2	1:J:80:LYS:HE3	1.97	0.47
1:J:368:ARG:O	1:J:372:LEU:HD23	2.15	0.47
1:J:433:ASN:OD1	1:J:434:GLU:N	2.48	0.47
1:K:115:ASP:CG	1:K:118:ARG:HH21	2.16	0.47
1:K:348:GLN:O	1:K:351:GLN:HG2	2.15	0.47
1:L:32:GLY:HA2	6:L:601:ADP:O4'	2.15	0.47
1:L:34:LYS:HE2	1:L:481:ALA:HA	1.96	0.47
1:L:138:CYS:O	1:L:407:VAL:HG22	2.15	0.47
1:M:45:GLY:O	1:M:47:PRO:HD3	2.15	0.47
1:M:475:ASN:HB3	1:M:489:ILE:HG12	1.96	0.47
1:N:13:ARG:HA	1:N:514:MET:HE1	1.97	0.47
1:N:27:VAL:HG12	1:N:90:THR:HG23	1.97	0.47
1:N:141:SER:HA	1:N:144:ILE:HD12	1.95	0.47
1:N:168:LYS:HG2	1:N:189:VAL:HG13	1.96	0.47
1:N:219:PHE:HD2	1:N:240:VAL:HG22	1.80	0.47
2:P:92:LEU:HD21	2:Q:74:LYS:HG3	1.96	0.47
2:Q:64:ILE:O	2:Q:95:VAL:N	2.40	0.47
1:E:113:PRO:HA	1:E:116:LEU:HD12	1.96	0.47
1:E:392:LYS:O	1:E:396:VAL:HG23	2.14	0.47
1:H:12:ALA:O	1:H:16:MET:HG2	2.15	0.47
1:H:115:ASP:HB3	1:H:435:ASP:HB2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:460:GLU:O	1:H:462:PRO:HD3	2.13	0.47
1:I:137:PRO:HA	1:I:410:GLY:HA2	1.96	0.47
1:I:465:VAL:HA	1:I:485:TYR:OH	2.14	0.47
1:J:438:VAL:O	1:J:442:VAL:HG23	2.15	0.47
1:K:177:VAL:HG13	1:K:393:LYS:HE2	1.97	0.47
1:N:123:ALA:HB2	1:N:440:ILE:HG12	1.96	0.47
1:N:248:LEU:HD21	1:N:250:ILE:HD11	1.97	0.47
1:A:7:LYS:HG2	1:A:66:PHE:CE1	2.49	0.47
1:A:40:LEU:HD13	1:A:59:GLU:HG3	1.97	0.47
1:A:427:ALA:O	1:A:441:LYS:NZ	2.48	0.47
1:C:166:MET:HB3	1:C:175:ILE:HD11	1.96	0.47
1:C:270:ILE:HG21	2:Q:25:ILE:HA	1.97	0.47
1:C:427:ALA:HA	1:C:444:LEU:HD13	1.97	0.47
1:C:447:MET:HE2	1:C:447:MET:HA	1.97	0.47
1:D:15:LYS:HD2	1:D:67:GLU:HG3	1.97	0.47
1:D:153:ASN:ND2	7:D:2003:HOH:O	2.46	0.47
1:D:222:LEU:HD21	1:D:292:ILE:HG22	1.96	0.47
1:D:261:THR:HG21	2:R:27:LEU:HD13	1.95	0.47
1:D:361:ASP:O	1:D:365:LEU:HD23	2.15	0.47
1:F:346:VAL:HB	1:F:369:VAL:HG13	1.97	0.47
1:G:361:ASP:O	1:G:365:LEU:HD23	2.15	0.47
1:H:417:VAL:O	1:H:421:ARG:HG2	2.15	0.47
1:K:132:LYS:NZ	1:K:409:GLU:OE2	2.46	0.47
1:K:479:ASN:CG	1:K:493:ILE:HD11	2.35	0.47
1:L:345:ARG:HD2	1:L:348:GLN:OE1	2.14	0.47
1:M:351:GLN:NE2	1:M:352:GLN:HG3	2.30	0.47
2:P:38:GLY:HA3	2:P:67:PHE:HE1	1.80	0.47
2:T:12:VAL:HG12	2:T:40:VAL:HG12	1.97	0.47
1:A:140:ASP:N	1:A:140:ASP:OD1	2.48	0.47
1:B:128:VAL:HG13	1:B:501:ARG:HG3	1.96	0.47
1:B:431:GLY:N	1:B:437:ASN:OD1	2.48	0.47
1:C:69:MET:HG3	1:D:47:PRO:HG2	1.97	0.47
1:D:217:SER:HA	1:D:320:ALA:O	2.15	0.47
1:D:392:LYS:O	1:D:396:VAL:HG23	2.15	0.47
1:E:339:GLU:O	1:E:342:ILE:HB	2.15	0.47
1:G:114:MET:HG3	1:G:118:ARG:NH1	2.30	0.47
1:G:247:LEU:HD21	1:G:249:ILE:HG13	1.96	0.47
1:H:284:ARG:CZ	1:H:364:LYS:HB3	2.45	0.47
1:H:333:ILE:HG23	1:H:376:VAL:HG21	1.96	0.47
1:H:349:ILE:HG12	1:H:368:ARG:CZ	2.45	0.47
1:I:289:LEU:HG	1:I:300:VAL:HG22	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:351:GLN:NE2	1:I:352:GLN:HG3	2.29	0.47
1:J:195:PHE:CZ	1:J:250:ILE:HD13	2.50	0.47
1:L:295:LEU:HD21	1:L:372:LEU:HD13	1.96	0.47
1:M:460:GLU:O	1:M:462:PRO:HD3	2.15	0.47
2:Q:11:ILE:HB	2:Q:85:ILE:HD13	1.96	0.47
2:R:59:VAL:HG11	2:R:91:ILE:HG21	1.97	0.47
1:D:227:ILE:HB	1:D:254:VAL:HA	1.98	0.46
1:G:199:TYR:HE2	1:G:212:ALA:HA	1.79	0.46
1:G:392:LYS:O	1:G:396:VAL:HG23	2.14	0.46
1:G:427:ALA:O	1:G:441:LYS:NZ	2.47	0.46
1:H:195:PHE:HE2	1:H:197:ARG:HB2	1.80	0.46
1:H:346:VAL:O	1:H:350:ARG:HG2	2.15	0.46
1:I:339:GLU:HA	1:I:342:ILE:HB	1.96	0.46
1:K:95:LEU:O	1:K:99:ILE:HG13	2.15	0.46
1:K:158:VAL:HG13	1:K:396:VAL:HG22	1.97	0.46
1:M:444:LEU:O	1:M:447:MET:HG2	2.15	0.46
1:N:284:ARG:NE	1:N:364:LYS:HB3	2.29	0.46
1:A:420:ILE:CG2	1:A:470:LYS:HG2	2.45	0.46
1:B:222:LEU:O	1:B:301:ILE:N	2.29	0.46
1:C:136:VAL:HG23	1:C:411:VAL:HG23	1.97	0.46
1:C:243:ALA:HB2	1:C:314:LEU:HD21	1.97	0.46
1:C:294:THR:HG22	1:C:341:ALA:HB1	1.97	0.46
1:D:230:ILE:HG22	1:D:234:LEU:HD22	1.97	0.46
1:E:219:PHE:HB3	1:E:317:LEU:HD13	1.97	0.46
1:F:92:ALA:HB2	1:F:503:ALA:HB1	1.98	0.46
1:F:498:LYS:HG3	1:F:501:ARG:NH2	2.31	0.46
1:H:348:GLN:O	1:H:351:GLN:NE2	2.48	0.46
1:H:511:ALA:O	1:H:515:ILE:HG13	2.16	0.46
1:J:7:LYS:HE3	1:J:15:LYS:HE3	1.96	0.46
1:J:100:ILE:HG23	1:J:514:MET:HE1	1.97	0.46
1:J:137:PRO:HA	1:J:410:GLY:HA2	1.97	0.46
1:J:174:VAL:HG11	1:J:376:VAL:HG12	1.97	0.46
1:J:262:LEU:HD22	1:J:273:VAL:HG11	1.98	0.46
1:L:39:VAL:HA	1:L:49:ILE:HA	1.96	0.46
1:L:45:GLY:O	1:L:47:PRO:HD3	2.16	0.46
1:L:158:VAL:HG13	1:L:396:VAL:HA	1.97	0.46
1:M:250:ILE:HG23	1:M:278:ALA:HA	1.97	0.46
1:M:279:PRO:C	1:M:288:MET:HG3	2.36	0.46
1:N:221:LEU:HD23	1:N:249:ILE:HD12	1.96	0.46
2:P:25:ILE:H	2:P:25:ILE:HD12	1.80	0.46
2:T:37:ARG:HH22	2:U:78:ILE:HG22	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:292:ILE:O	1:A:296:THR:OG1	2.22	0.46
1:B:227:ILE:HG23	1:B:233:MET:SD	2.56	0.46
1:C:359:ASP:HA	1:C:362:ARG:HE	1.80	0.46
1:D:178:GLU:N	1:D:379:ILE:O	2.41	0.46
1:D:387:VAL:HA	1:D:390:LYS:HE2	1.96	0.46
1:F:149:THR:HA	1:F:155:ASP:O	2.16	0.46
1:F:215:LEU:HD12	1:F:248:LEU:HB2	1.97	0.46
1:G:205:ILE:HD13	1:G:211:GLY:HA2	1.96	0.46
1:H:195:PHE:CZ	1:H:250:ILE:HD13	2.48	0.46
1:H:197:ARG:HD2	1:H:277:LYS:HB3	1.96	0.46
1:J:489:ILE:HA	1:J:494:LEU:HD21	1.97	0.46
1:K:32:GLY:HA2	6:K:601:ADP:O4'	2.15	0.46
1:K:224:ASP:OD2	1:K:286:LYS:HG2	2.16	0.46
1:K:339:GLU:HA	1:K:342:ILE:HD12	1.97	0.46
1:L:414:GLY:O	1:L:417:VAL:HG22	2.15	0.46
1:M:230:ILE:O	1:M:234:LEU:HG	2.15	0.46
1:N:195:PHE:CE2	1:N:197:ARG:HB2	2.50	0.46
1:N:287:ALA:HB1	1:N:368:ARG:NH1	2.31	0.46
1:A:136:VAL:HG23	1:A:411:VAL:HG23	1.97	0.46
1:A:186:GLU:HG2	1:A:380:LYS:HB2	1.96	0.46
1:A:190:VAL:N	1:A:376:VAL:O	2.32	0.46
1:A:237:LEU:HD12	1:A:271:VAL:HG21	1.96	0.46
1:B:143:ALA:O	1:B:147:VAL:HG23	2.16	0.46
1:B:214:GLU:HG2	1:B:322:ARG:HH11	1.81	0.46
1:B:370:ALA:HB1	1:B:375:GLY:O	2.15	0.46
1:D:223:ALA:HB1	1:D:225:LYS:HG2	1.98	0.46
1:F:150:ILE:HG23	3:F:601:ATP:C8	2.50	0.46
1:F:356:ALA:HB1	1:F:361:ASP:HB2	1.97	0.46
1:G:200:LEU:HD12	1:G:275:ALA:HB1	1.97	0.46
1:H:220:ILE:HG21	1:H:296:THR:HG21	1.96	0.46
1:I:223:ALA:O	1:I:251:ALA:HA	2.16	0.46
1:J:419:LEU:HD12	1:J:450:PRO:HG2	1.96	0.46
1:L:15:LYS:HB3	1:L:66:PHE:HB2	1.97	0.46
1:L:230:ILE:O	1:L:234:LEU:N	2.49	0.46
1:L:333:ILE:HG12	1:L:376:VAL:HG11	1.96	0.46
1:M:455:VAL:CG1	1:M:460:GLU:HB2	2.45	0.46
1:N:185:ASP:OD2	1:N:392:LYS:HE3	2.15	0.46
1:N:342:ILE:O	1:N:346:VAL:HG23	2.16	0.46
1:N:433:ASN:OD1	1:N:434:GLU:N	2.48	0.46
2:O:57:LEU:O	2:O:60:LYS:NZ	2.32	0.46
2:P:37:ARG:NH2	2:Q:77:LYS:O	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S:17:VAL:HG21	2:S:34:LYS:HD2	1.98	0.46
1:A:6:VAL:HG22	1:A:521:VAL:HG13	1.98	0.46
1:A:32:GLY:HA2	3:A:601:ATP:O4'	2.15	0.46
1:A:102:GLU:OE1	1:A:445:ARG:NE	2.41	0.46
1:A:495:ASP:OD2	3:A:601:ATP:O2'	2.24	0.46
1:B:28:LYS:HE2	1:B:94:VAL:HG22	1.98	0.46
1:B:31:LEU:HD13	1:B:90:THR:HB	1.97	0.46
1:F:200:LEU:N	1:F:275:ALA:O	2.40	0.46
1:F:206:ASN:HD21	1:F:214:GLU:HB3	1.81	0.46
1:F:413:ALA:HB3	1:F:418:ALA:HB2	1.97	0.46
1:G:420:ILE:CG2	1:G:470:LYS:HG2	2.46	0.46
1:G:498:LYS:HG3	1:G:501:ARG:NH2	2.30	0.46
1:I:149:THR:OG1	1:I:156:GLU:HA	2.14	0.46
1:K:262:LEU:HB3	1:K:273:VAL:HG11	1.97	0.46
1:L:339:GLU:HG2	1:L:342:ILE:HD12	1.98	0.46
1:M:352:GLN:HA	1:M:355:GLU:CG	2.45	0.46
2:O:78:ILE:HA	2:U:37:ARG:HH22	1.81	0.46
2:S:9:ARG:HA	2:S:87:SER:HA	1.97	0.46
2:S:12:VAL:HG22	2:S:84:LEU:HB2	1.96	0.46
1:A:131:LEU:HD21	1:A:419:LEU:HD23	1.98	0.46
1:A:314:LEU:HA	1:A:317:LEU:HD12	1.97	0.46
1:B:7:LYS:HE2	1:B:11:ASP:HB3	1.98	0.46
1:B:287:ALA:HA	1:B:345:ARG:NH2	2.31	0.46
1:C:62:LEU:HB2	1:C:68:ASN:HB2	1.97	0.46
1:C:350:ARG:O	1:C:354:GLU:HG2	2.15	0.46
1:C:475:ASN:CG	1:C:489:ILE:HG12	2.36	0.46
1:E:77:VAL:HG12	1:E:92:ALA:HB1	1.97	0.46
1:F:206:ASN:ND2	1:F:214:GLU:O	2.48	0.46
1:F:493:ILE:HD13	3:F:601:ATP:N1	2.31	0.46
1:H:124:VAL:HG11	1:H:508:ALA:HB2	1.98	0.46
1:H:326:ASN:ND2	1:H:329:THR:OG1	2.43	0.46
1:I:95:LEU:O	1:I:99:ILE:HG13	2.15	0.46
1:I:287:ALA:HB1	1:I:368:ARG:CZ	2.46	0.46
1:I:339:GLU:HA	1:I:342:ILE:HD12	1.98	0.46
1:J:115:ASP:O	1:J:436:GLN:HG2	2.16	0.46
1:J:124:VAL:HG11	1:J:508:ALA:CB	2.46	0.46
1:J:274:ALA:HB1	1:J:325:ILE:CD1	2.45	0.46
1:K:115:ASP:O	1:K:436:GLN:HG2	2.16	0.46
1:M:16:MET:HE1	1:M:69:MET:SD	2.55	0.46
1:M:69:MET:HA	1:M:72:GLN:HG2	1.97	0.46
2:T:46:GLY:HA2	2:T:57:LEU:CD1	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:453:GLN:NE2	1:B:457:ASN:OD1	2.48	0.46
1:C:77:VAL:HG11	1:C:96:ALA:HB2	1.97	0.46
1:C:152:ALA:HA	1:C:395:ARG:HG2	1.98	0.46
1:H:174:VAL:HB	1:H:376:VAL:HA	1.97	0.46
1:H:274:ALA:HB1	1:H:325:ILE:CD1	2.46	0.46
1:H:325:ILE:O	1:H:325:ILE:HG13	2.15	0.46
1:I:417:VAL:O	1:I:421:ARG:HG2	2.15	0.46
1:K:7:LYS:HD3	1:K:12:ALA:HA	1.97	0.46
1:K:130:GLU:HB3	1:K:422:VAL:HG22	1.98	0.46
1:N:262:LEU:HD22	1:N:273:VAL:HG11	1.97	0.46
2:O:67:PHE:HB3	2:O:91:ILE:HD13	1.97	0.46
1:A:217:SER:HA	1:A:320:ALA:O	2.16	0.46
1:B:346:VAL:HA	1:B:349:ILE:HB	1.98	0.46
1:D:370:ALA:HB1	1:D:375:GLY:O	2.16	0.46
1:H:15:LYS:NZ	1:H:64:ASP:OD2	2.33	0.46
1:H:64:ASP:HB3	1:H:67:GLU:HB2	1.98	0.46
1:H:227:ILE:HG12	1:H:309:LEU:HD11	1.96	0.46
1:J:230:ILE:O	1:J:234:LEU:N	2.49	0.46
1:J:295:LEU:HA	1:J:342:ILE:HG12	1.97	0.46
1:K:5:ASP:N	1:K:522:THR:O	2.40	0.46
1:K:19:GLY:HA3	1:K:67:GLU:O	2.16	0.46
1:K:42:LYS:HD3	1:K:46:ALA:O	2.15	0.46
1:L:115:ASP:HB3	1:L:435:ASP:HB2	1.97	0.46
1:M:195:PHE:CD2	1:M:279:PRO:HB3	2.51	0.46
1:N:475:ASN:HB2	1:N:487:ASN:ND2	2.31	0.46
2:Q:14:ARG:HG3	2:Q:67:PHE:HZ	1.81	0.46
1:C:204:PHE:CD1	1:C:266:THR:HG21	2.50	0.46
1:C:262:LEU:HD22	1:C:273:VAL:HG21	1.97	0.46
1:D:261:THR:HG23	2:R:27:LEU:HA	1.96	0.46
1:D:523:ASP:OD1	1:D:524:LEU:N	2.48	0.46
1:E:231:ARG:HH11	1:E:234:LEU:HD11	1.81	0.46
1:E:294:THR:HG22	1:E:341:ALA:HB1	1.97	0.46
1:E:411:VAL:HG21	1:E:494:LEU:HD22	1.98	0.46
1:F:162:ILE:HG12	1:F:400:LEU:HD13	1.97	0.46
1:J:19:GLY:HA3	1:J:67:GLU:O	2.16	0.46
1:J:166:MET:HA	1:J:175:ILE:HD11	1.98	0.46
1:J:252:GLU:O	1:J:277:LYS:HG3	2.16	0.46
1:J:411:VAL:HG12	1:J:496:PRO:HA	1.98	0.46
1:J:432:GLN:HB2	1:J:436:GLN:NE2	2.30	0.46
1:K:279:PRO:O	1:K:285:ARG:HA	2.15	0.46
1:L:31:LEU:HD13	1:L:90:THR:HB	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:166:MET:O	1:M:169:VAL:N	2.49	0.46
2:O:25:ILE:H	2:O:25:ILE:HD12	1.81	0.46
2:T:11:ILE:HB	2:T:42:ALA:HB3	1.98	0.46
1:A:465:VAL:HA	1:A:485:TYR:OH	2.16	0.46
1:B:392:LYS:O	1:B:396:VAL:HG23	2.16	0.46
1:C:250:ILE:HG23	1:C:278:ALA:HA	1.98	0.46
1:C:345:ARG:O	1:C:349:ILE:HG13	2.15	0.46
1:D:169:VAL:HG13	1:D:170:GLY:O	2.16	0.46
1:E:11:ASP:O	1:E:15:LYS:HG2	2.16	0.46
1:E:259:LEU:O	1:E:263:VAL:HG13	2.16	0.46
1:F:15:LYS:HD3	1:F:18:ARG:HH21	1.80	0.46
1:G:204:PHE:CD1	1:G:266:THR:HG21	2.51	0.46
1:I:76:GLU:HG2	1:I:80:LYS:HE2	1.97	0.46
1:I:421:ARG:NH1	1:I:469:VAL:O	2.47	0.46
1:N:419:LEU:HD12	1:N:450:PRO:HG2	1.98	0.46
2:O:68:ASN:N	2:O:90:ASP:O	2.34	0.46
2:O:76:GLU:OE1	2:O:85:ILE:HG22	2.16	0.46
2:R:8:ASP:O	2:R:57:LEU:HD21	2.16	0.46
2:U:11:ILE:HB	2:U:42:ALA:H	1.80	0.46
1:A:313:THR:O	1:A:317:LEU:HG	2.16	0.45
1:A:498:LYS:HG3	1:A:501:ARG:NH2	2.31	0.45
1:B:219:PHE:CD2	1:B:240:VAL:HG22	2.50	0.45
1:C:15:LYS:HB2	1:C:520:MET:HE3	1.98	0.45
1:C:455:VAL:HG13	1:C:460:GLU:HB2	1.99	0.45
1:D:124:VAL:HG13	1:D:504:LEU:HG	1.98	0.45
1:D:165:ALA:O	1:D:169:VAL:HG12	2.15	0.45
1:D:465:VAL:HA	1:D:485:TYR:OH	2.16	0.45
1:E:193:MET:HE1	1:E:371:LYS:O	2.15	0.45
1:E:209:GLU:HG2	1:E:210:THR:HG23	1.98	0.45
1:F:126:ALA:O	1:F:130:GLU:HG2	2.16	0.45
1:F:259:LEU:O	1:F:263:VAL:HG13	2.15	0.45
1:G:339:GLU:O	1:G:342:ILE:HB	2.16	0.45
1:H:221:LEU:HB3	1:H:249:ILE:HA	1.98	0.45
1:H:458:CYS:SG	1:H:480:ALA:HB1	2.56	0.45
1:I:12:ALA:O	1:I:16:MET:HG2	2.16	0.45
1:I:115:ASP:CG	1:I:118:ARG:HH21	2.20	0.45
1:I:488:MET:HE3	1:I:493:ILE:HD12	1.98	0.45
1:K:475:ASN:HB2	1:K:487:ASN:ND2	2.31	0.45
1:K:479:ASN:HB2	1:K:491:MET:HE3	1.97	0.45
1:L:190:VAL:O	1:L:376:VAL:N	2.49	0.45
1:M:222:LEU:HD23	1:M:250:ILE:HB	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:107:VAL:HG13	1:N:113:PRO:HG3	1.98	0.45
1:N:420:ILE:HD12	1:N:451:LEU:HD13	1.96	0.45
1:A:381:VAL:HG21	1:A:393:LYS:HA	1.98	0.45
1:C:287:ALA:HB1	1:C:368:ARG:CZ	2.46	0.45
1:C:453:GLN:NE2	1:C:457:ASN:OD1	2.49	0.45
1:D:69:MET:HB2	1:E:47:PRO:HG3	1.97	0.45
1:E:352:GLN:O	1:E:356:ALA:N	2.49	0.45
1:E:356:ALA:HB1	1:E:361:ASP:HB2	1.98	0.45
1:F:124:VAL:HG13	1:F:504:LEU:HG	1.97	0.45
1:F:179:ASP:OD1	1:F:393:LYS:HD2	2.15	0.45
1:G:51:LYS:HD3	1:G:153:ASN:ND2	2.31	0.45
1:G:207:LYS:HE2	1:G:212:ALA:HB3	1.98	0.45
1:G:523:ASP:OD1	1:G:524:LEU:N	2.48	0.45
1:H:123:ALA:HB3	1:H:443:ALA:HB3	1.98	0.45
1:H:141:SER:HA	1:H:144:ILE:HD13	1.97	0.45
1:K:195:PHE:HE2	1:K:197:ARG:HB2	1.81	0.45
1:K:438:VAL:O	1:K:442:VAL:HG23	2.15	0.45
1:L:498:LYS:HG3	1:L:501:ARG:NH2	2.31	0.45
1:M:40:LEU:N	1:M:48:THR:O	2.49	0.45
1:M:193:MET:SD	1:M:295:LEU:HD22	2.57	0.45
1:N:195:PHE:HE2	1:N:197:ARG:HB2	1.81	0.45
2:S:57:LEU:HD23	2:S:88:GLU:HB2	1.97	0.45
2:U:10:VAL:N	2:U:86:MET:O	2.23	0.45
2:U:25:ILE:HD12	2:U:25:ILE:H	1.81	0.45
1:B:204:PHE:CD1	1:B:266:THR:HG21	2.51	0.45
1:B:270:ILE:HG21	2:P:25:ILE:HA	1.99	0.45
1:D:287:ALA:HA	1:D:345:ARG:NH2	2.31	0.45
1:E:465:VAL:HA	1:E:485:TYR:OH	2.15	0.45
1:F:230:ILE:O	1:F:233:MET:N	2.39	0.45
1:F:386:GLU:O	1:F:390:LYS:HD3	2.15	0.45
1:G:205:ILE:HG23	1:G:212:ALA:O	2.16	0.45
1:G:223:ALA:HB1	1:G:225:LYS:HG2	1.98	0.45
1:H:149:THR:OG1	1:H:156:GLU:HA	2.16	0.45
1:H:206:ASN:ND2	1:H:214:GLU:O	2.49	0.45
1:H:381:VAL:HG11	1:H:393:LYS:HA	1.98	0.45
1:I:76:GLU:O	1:I:80:LYS:HG3	2.17	0.45
1:J:102:GLU:HB2	1:J:442:VAL:HG13	1.98	0.45
1:K:116:LEU:HG	1:K:435:ASP:HB3	1.97	0.45
1:M:76:GLU:O	1:M:80:LYS:HG3	2.15	0.45
1:N:195:PHE:CD2	1:N:279:PRO:HB3	2.51	0.45
2:O:37:ARG:HG2	2:O:66:ILE:HG12	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:75:SER:HA	2:P:83:VAL:O	2.17	0.45
2:Q:2:ASN:OD1	2:Q:3:ILE:N	2.50	0.45
1:B:169:VAL:HG13	1:B:170:GLY:O	2.16	0.45
1:B:226:LYS:NZ	1:B:253:ASP:HB3	2.31	0.45
1:B:429:LEU:HB3	1:B:440:ILE:HG21	1.99	0.45
1:C:130:GLU:HB2	1:C:422:VAL:HG13	1.98	0.45
1:D:69:MET:HB2	1:E:47:PRO:CG	2.46	0.45
1:E:122:LYS:NZ	1:E:430:ARG:O	2.37	0.45
1:E:346:VAL:HB	1:E:369:VAL:HG22	1.99	0.45
1:F:414:GLY:H	1:F:488:MET:HB3	1.81	0.45
3:F:601:ATP:H5'2	3:F:601:ATP:H8	1.81	0.45
1:G:291:ASP:HB3	1:G:372:LEU:HD13	1.98	0.45
1:H:246:PRO:HA	1:H:272:LYS:HB2	1.98	0.45
1:I:224:ASP:OD2	1:I:286:LYS:HG2	2.16	0.45
1:J:13:ARG:HB3	1:J:104:LEU:HD22	1.98	0.45
1:J:149:THR:OG1	1:J:156:GLU:HA	2.15	0.45
1:K:386:GLU:HA	1:K:389:MET:HG2	1.98	0.45
1:L:381:VAL:HG11	1:L:396:VAL:HG21	1.99	0.45
1:M:356:ALA:HB2	1:M:365:LEU:HD12	1.97	0.45
1:M:460:GLU:HG3	1:M:478:TYR:OH	2.17	0.45
1:N:199:TYR:CZ	1:N:327:LYS:HA	2.52	0.45
2:P:73:VAL:HA	2:P:86:MET:HB3	1.98	0.45
1:A:226:LYS:HE3	1:A:255:GLU:HG2	1.97	0.45
1:A:361:ASP:O	1:A:365:LEU:HD23	2.16	0.45
1:B:217:SER:HA	1:B:320:ALA:O	2.17	0.45
1:B:475:ASN:HB2	1:B:487:ASN:ND2	2.32	0.45
1:C:5:ASP:N	1:C:522:THR:O	2.29	0.45
1:C:259:LEU:O	1:C:263:VAL:HG13	2.17	0.45
1:F:353:ILE:HD13	1:F:366:GLN:HG3	1.98	0.45
1:F:430:ARG:HH22	1:F:441:LYS:HE2	1.81	0.45
1:G:321:LYS:HB3	1:G:334:ASP:HB3	1.98	0.45
1:G:479:ASN:HB2	1:G:491:MET:HE3	1.97	0.45
1:I:520:MET:HG3	1:J:39:VAL:O	2.16	0.45
1:J:262:LEU:HB3	1:J:273:VAL:HG11	1.98	0.45
1:J:349:ILE:O	1:J:353:ILE:HG13	2.16	0.45
1:J:417:VAL:O	1:J:421:ARG:HG2	2.16	0.45
1:K:417:VAL:HG12	1:K:451:LEU:HD12	1.98	0.45
1:L:149:THR:HG22	1:L:154:SER:HA	1.97	0.45
1:N:111:MET:HB2	1:N:116:LEU:HD11	1.98	0.45
1:N:364:LYS:HD3	1:N:364:LYS:HA	1.74	0.45
1:N:419:LEU:HD22	1:N:447:MET:HG3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S:95:VAL:HG13	2:T:3:ILE:HD11	1.98	0.45
2:T:95:VAL:HG13	2:U:3:ILE:HD11	1.97	0.45
1:B:198:GLY:N	1:B:328:ASP:O	2.50	0.45
1:C:198:GLY:N	1:C:328:ASP:O	2.50	0.45
1:C:224:ASP:N	1:C:301:ILE:O	2.48	0.45
1:C:248:LEU:HD22	1:C:323:VAL:HG21	1.98	0.45
1:C:402:ALA:O	1:C:496:PRO:HG3	2.16	0.45
1:D:204:PHE:CD1	1:D:266:THR:HG21	2.52	0.45
1:E:199:TYR:OH	1:E:211:GLY:O	2.23	0.45
1:E:431:GLY:N	1:E:437:ASN:OD1	2.49	0.45
1:F:268:ARG:NH1	2:T:26:VAL:HG11	2.32	0.45
1:F:381:VAL:HG13	1:F:392:LYS:HE3	1.99	0.45
1:G:222:LEU:HD22	1:G:293:ALA:HB2	1.98	0.45
1:G:429:LEU:HD23	1:G:440:ILE:HG12	1.98	0.45
1:H:465:VAL:HA	1:H:485:TYR:OH	2.17	0.45
1:I:203:TYR:HE2	1:J:181:THR:HA	1.81	0.45
1:I:346:VAL:O	1:I:350:ARG:HG2	2.16	0.45
1:I:487:ASN:HB3	1:I:490:ASP:OD2	2.17	0.45
1:J:134:LEU:HD21	1:J:425:LYS:NZ	2.32	0.45
1:J:140:ASP:O	1:J:144:ILE:HG12	2.16	0.45
1:J:423:ALA:HB2	1:J:447:MET:HB2	1.98	0.45
1:L:15:LYS:HD3	1:L:18:ARG:NH2	2.30	0.45
1:L:197:ARG:HE	1:L:279:PRO:HA	1.81	0.45
1:M:351:GLN:HA	1:M:354:GLU:OE1	2.17	0.45
1:M:417:VAL:HG21	1:M:488:MET:HG3	1.97	0.45
1:N:216:GLU:HG2	1:N:322:ARG:HD2	1.98	0.45
1:N:415:GLY:HA2	6:N:601:ADP:N3	2.32	0.45
2:O:12:VAL:CG2	2:O:84:LEU:HB2	2.47	0.45
2:P:88:GLU:OE1	2:Q:7:HIS:NE2	2.47	0.45
1:A:218:PRO:O	1:A:319:GLN:HA	2.17	0.45
1:A:308:GLU:HB2	1:A:311:LYS:HG3	1.99	0.45
1:A:342:ILE:HG23	1:A:372:LEU:HB3	1.98	0.45
1:B:265:ASN:HA	1:B:268:ARG:HB2	1.99	0.45
1:C:152:ALA:HB2	1:C:399:ALA:HB2	1.99	0.45
1:D:102:GLU:CB	1:D:442:VAL:HG13	2.46	0.45
1:D:219:PHE:CE2	1:D:314:LEU:HD23	2.52	0.45
1:F:452:ARG:HH21	1:F:470:LYS:NZ	2.15	0.45
1:G:322:ARG:O	1:G:333:ILE:N	2.45	0.45
1:H:252:GLU:O	1:H:277:LYS:HG3	2.17	0.45
1:I:192:GLY:HA3	1:I:376:VAL:HG13	1.98	0.45
1:J:102:GLU:HB3	1:J:442:VAL:HG22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:193:MET:HG2	1:K:295:LEU:HD13	1.98	0.45
1:L:16:MET:HE2	1:L:66:PHE:O	2.17	0.45
1:N:122:LYS:NZ	1:N:431:GLY:HA2	2.32	0.45
1:A:31:LEU:HD13	1:A:90:THR:HB	1.99	0.45
1:A:102:GLU:CB	1:A:442:VAL:HG13	2.47	0.45
1:A:106:ALA:O	1:A:111:MET:HG2	2.17	0.45
1:B:205:ILE:HG23	1:B:212:ALA:O	2.17	0.45
1:B:361:ASP:O	1:B:365:LEU:HD23	2.15	0.45
1:B:381:VAL:HG13	1:B:392:LYS:HE3	1.99	0.45
1:C:262:LEU:O	1:C:266:THR:HG23	2.16	0.45
1:C:320:ALA:HA	1:C:335:GLY:HA2	1.97	0.45
1:D:220:ILE:HG22	1:D:222:LEU:HG	1.99	0.45
1:D:510:VAL:HG23	1:E:385:THR:HG21	1.98	0.45
1:E:141:SER:HB2	1:E:163:ALA:HB1	1.99	0.45
1:F:66:PHE:HA	1:F:69:MET:HE3	1.98	0.45
1:F:199:TYR:OH	1:F:211:GLY:O	2.17	0.45
1:H:76:GLU:O	1:H:80:LYS:HG3	2.17	0.45
1:H:219:PHE:HD2	1:H:240:VAL:HG22	1.80	0.45
1:H:349:ILE:HG12	1:H:368:ARG:NH2	2.31	0.45
1:K:342:ILE:O	1:K:346:VAL:HG23	2.17	0.45
1:L:66:PHE:O	1:L:69:MET:HB3	2.17	0.45
1:L:339:GLU:HA	1:L:342:ILE:HB	1.99	0.45
1:M:179:ASP:OD1	1:M:180:GLY:N	2.50	0.45
1:M:223:ALA:O	1:M:251:ALA:HA	2.17	0.45
2:T:40:VAL:HG22	2:T:63:ASP:O	2.17	0.45
1:A:68:ASN:O	1:A:72:GLN:HG2	2.16	0.45
1:A:114:MET:SD	1:A:118:ARG:NH2	2.88	0.45
1:C:87:ASP:OD1	1:C:88:GLY:N	2.50	0.45
1:F:136:VAL:HG23	1:F:411:VAL:HG23	1.99	0.45
1:F:138:CYS:O	1:F:407:VAL:HA	2.17	0.45
1:F:168:LYS:HD3	1:F:168:LYS:HA	1.70	0.45
1:F:226:LYS:NZ	1:F:255:GLU:HG3	2.31	0.45
1:H:32:GLY:HA2	6:H:601:ADP:O4'	2.17	0.45
1:H:199:TYR:CE2	1:H:327:LYS:HA	2.52	0.45
1:I:114:MET:SD	1:I:516:THR:HG22	2.56	0.45
1:L:230:ILE:HD13	1:L:261:THR:HB	1.98	0.45
1:L:419:LEU:HD22	1:L:447:MET:SD	2.56	0.45
1:M:98:ALA:O	1:M:102:GLU:HG2	2.17	0.45
1:M:185:ASP:HA	1:M:381:VAL:HA	1.98	0.45
1:N:429:LEU:HB3	1:N:440:ILE:HG21	1.98	0.45
2:O:78:ILE:HG22	2:U:37:ARG:HH22	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:O:94:ILE:HD11	2:P:4:ARG:HH11	1.81	0.45
2:Q:10:VAL:O	2:Q:86:MET:N	2.47	0.45
2:Q:69:ASP:HA	2:Q:73:VAL:HG21	1.99	0.45
2:T:11:ILE:HG23	2:T:83:VAL:HB	1.99	0.45
1:D:381:VAL:O	1:D:389:MET:HE1	2.17	0.45
1:E:149:THR:HG21	1:E:156:GLU:OE2	2.16	0.45
1:G:201:SER:HB3	1:G:204:PHE:CE2	2.51	0.45
1:I:122:LYS:NZ	1:I:431:GLY:HA2	2.30	0.45
1:K:82:ASN:O	1:K:86:GLY:N	2.31	0.45
1:K:265:ASN:O	1:K:269:GLY:N	2.50	0.45
1:K:366:GLN:HA	1:K:369:VAL:HG22	1.99	0.45
1:B:165:ALA:HB2	1:B:379:ILE:HD11	1.99	0.44
1:B:223:ALA:HB3	1:B:251:ALA:HB2	1.99	0.44
1:C:287:ALA:HA	1:C:345:ARG:HH21	1.81	0.44
1:D:230:ILE:H	1:D:230:ILE:HD12	1.81	0.44
1:E:128:VAL:HG21	1:E:505:GLN:HG3	1.98	0.44
1:E:475:ASN:HB2	1:E:487:ASN:ND2	2.31	0.44
1:F:77:VAL:HG12	1:F:92:ALA:HB1	1.98	0.44
1:F:361:ASP:O	1:F:365:LEU:HG	2.17	0.44
1:G:124:VAL:HG11	1:G:508:ALA:CB	2.47	0.44
1:G:197:ARG:HD2	1:G:277:LYS:HB2	1.98	0.44
1:J:36:ARG:HE	1:J:457:ASN:HA	1.82	0.44
1:J:76:GLU:O	1:J:80:LYS:HG3	2.16	0.44
1:J:141:SER:HA	1:J:144:ILE:HD11	1.99	0.44
1:J:195:PHE:CE2	1:J:197:ARG:HB2	2.52	0.44
1:L:64:ASP:HB3	1:L:67:GLU:HB2	2.00	0.44
1:L:130:GLU:HG2	1:L:422:VAL:HG22	1.99	0.44
1:L:130:GLU:OE1	1:L:426:LEU:HG	2.17	0.44
1:L:433:ASN:OD1	1:L:434:GLU:N	2.50	0.44
1:L:458:CYS:SG	1:L:480:ALA:HB1	2.57	0.44
1:M:174:VAL:HG11	1:M:194:GLN:HB2	1.99	0.44
1:M:429:LEU:HB3	1:M:440:ILE:HG21	1.98	0.44
2:S:10:VAL:HG11	2:S:91:ILE:HD11	1.99	0.44
1:C:180:GLY:N	1:C:381:VAL:O	2.31	0.44
1:C:219:PHE:CE1	1:C:245:LYS:HD2	2.53	0.44
1:C:361:ASP:O	1:C:365:LEU:HG	2.16	0.44
1:D:414:GLY:HA3	1:D:493:ILE:HG22	1.99	0.44
1:E:383:ALA:HB1	1:E:388:GLU:HG2	2.00	0.44
1:E:429:LEU:HB3	1:E:440:ILE:HG21	1.99	0.44
1:E:448:GLU:OE1	1:E:470:LYS:NZ	2.42	0.44
1:F:69:MET:O	1:F:73:MET:HG2	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:346:VAL:HA	1:F:349:ILE:HD12	2.00	0.44
1:F:352:GLN:O	1:F:356:ALA:N	2.50	0.44
1:G:102:GLU:OE1	1:G:445:ARG:NE	2.38	0.44
1:G:215:LEU:HD12	1:G:248:LEU:HB2	1.98	0.44
1:H:142:LYS:NZ	1:H:146:GLN:HG3	2.32	0.44
1:H:222:LEU:HD23	1:H:250:ILE:HB	1.99	0.44
1:H:287:ALA:HB1	1:H:368:ARG:CZ	2.48	0.44
1:H:294:THR:HG21	1:H:345:ARG:HB2	1.98	0.44
1:K:5:ASP:HB3	1:K:522:THR:HG22	1.98	0.44
1:K:15:LYS:HD3	1:K:18:ARG:NH2	2.32	0.44
1:L:95:LEU:O	1:L:99:ILE:HG13	2.17	0.44
1:L:141:SER:HA	1:L:144:ILE:HD13	1.99	0.44
1:N:230:ILE:O	1:N:234:LEU:HG	2.17	0.44
1:N:252:GLU:O	1:N:277:LYS:HG3	2.17	0.44
2:S:11:ILE:HG23	2:S:83:VAL:HB	2.00	0.44
1:C:126:ALA:O	1:C:130:GLU:HG2	2.18	0.44
1:D:134:LEU:HD23	1:D:418:ALA:HB1	1.99	0.44
1:D:479:ASN:HB3	1:D:484:GLU:HG2	1.99	0.44
1:E:16:MET:SD	1:E:514:MET:HE1	2.58	0.44
1:E:69:MET:HB2	1:F:47:PRO:CG	2.46	0.44
1:F:353:ILE:HG23	1:F:362:ARG:HB2	1.99	0.44
1:F:420:ILE:CG2	1:F:470:LYS:HG2	2.47	0.44
1:G:251:ALA:O	1:G:277:LYS:HA	2.18	0.44
1:H:230:ILE:O	1:H:234:LEU:HG	2.18	0.44
1:I:262:LEU:HD22	1:I:273:VAL:HG11	1.98	0.44
1:J:32:GLY:HA2	6:J:601:ADP:O4'	2.17	0.44
1:J:168:LYS:HG2	1:J:189:VAL:HG13	2.00	0.44
1:J:195:PHE:CD2	1:J:279:PRO:HB3	2.53	0.44
1:K:37:ASN:ND2	1:K:51:LYS:HE2	2.32	0.44
1:K:345:ARG:HD2	1:K:348:GLN:OE1	2.17	0.44
1:L:124:VAL:HG11	1:L:508:ALA:CB	2.47	0.44
1:L:193:MET:HE3	1:L:295:LEU:HD13	2.00	0.44
1:L:263:VAL:O	1:L:266:THR:OG1	2.27	0.44
1:L:465:VAL:HA	1:L:485:TYR:OH	2.17	0.44
1:M:112:ASN:OD1	1:M:114:MET:N	2.50	0.44
1:M:345:ARG:HD2	1:M:348:GLN:OE1	2.18	0.44
1:M:349:ILE:HG12	1:M:368:ARG:NH2	2.32	0.44
1:A:268:ARG:NH1	2:O:26:VAL:HG11	2.32	0.44
1:B:197:ARG:HD2	1:B:277:LYS:HB2	1.99	0.44
1:B:215:LEU:HD12	1:B:248:LEU:HB2	2.00	0.44
1:B:232:GLU:HG2	1:B:310:GLU:OE2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:200:LEU:HD21	1:C:277:LYS:HG3	1.98	0.44
1:D:283:ASP:OD1	1:D:284:ARG:N	2.50	0.44
3:D:601:ATP:H5'2	3:D:601:ATP:H8	1.81	0.44
1:E:6:VAL:HG13	1:E:521:VAL:HG22	2.00	0.44
1:E:313:THR:O	1:E:317:LEU:HG	2.17	0.44
1:F:224:ASP:OD1	1:F:285:ARG:NH1	2.51	0.44
1:F:231:ARG:NH2	2:T:31:ALA:O	2.40	0.44
1:G:219:PHE:CD2	1:G:240:VAL:HG22	2.44	0.44
1:G:265:ASN:O	1:G:269:GLY:N	2.51	0.44
1:K:85:ALA:CB	1:K:499:VAL:HA	2.41	0.44
1:K:358:SER:O	1:K:362:ARG:HG2	2.17	0.44
1:L:145:ALA:HA	1:L:159:GLY:C	2.38	0.44
1:L:221:LEU:HD23	1:L:249:ILE:HD12	1.99	0.44
1:M:130:GLU:OE1	1:M:426:LEU:HG	2.18	0.44
1:M:364:LYS:HD3	1:M:364:LYS:HA	1.76	0.44
2:Q:8:ASP:HA	2:Q:57:LEU:HD11	1.99	0.44
2:S:11:ILE:HB	2:S:42:ALA:HB3	1.99	0.44
1:A:440:ILE:O	1:A:444:LEU:HG	2.18	0.44
1:B:134:LEU:HD23	1:B:418:ALA:HB1	2.00	0.44
1:D:145:ALA:HA	1:D:159:GLY:C	2.37	0.44
1:E:236:VAL:HG21	1:E:317:LEU:HD21	1.99	0.44
1:E:479:ASN:O	1:E:483:GLU:N	2.51	0.44
1:F:40:LEU:HD13	1:F:59:GLU:HG3	2.00	0.44
1:F:294:THR:HG22	1:F:341:ALA:HB1	1.99	0.44
1:G:349:ILE:HG23	1:G:365:LEU:CD1	2.47	0.44
1:H:215:LEU:HB2	1:H:323:VAL:HG22	1.99	0.44
1:I:218:PRO:HG3	1:I:323:VAL:HG22	1.99	0.44
1:I:294:THR:HG21	1:I:345:ARG:HB2	2.00	0.44
1:M:115:ASP:OD2	1:M:433:ASN:ND2	2.35	0.44
1:M:130:GLU:HB2	1:M:422:VAL:HG13	1.99	0.44
1:M:287:ALA:HB1	1:M:368:ARG:CZ	2.47	0.44
1:M:295:LEU:HA	1:M:342:ILE:HG12	1.99	0.44
2:Q:43:VAL:HB	2:Q:57:LEU:HD22	1.99	0.44
1:A:270:ILE:HG21	2:O:25:ILE:HA	1.99	0.44
1:B:381:VAL:HG12	1:B:389:MET:HE1	2.00	0.44
1:B:420:ILE:CG2	1:B:470:LYS:HG2	2.47	0.44
1:B:479:ASN:O	1:B:483:GLU:N	2.50	0.44
1:D:234:LEU:HD12	1:D:238:GLU:OE2	2.18	0.44
1:D:381:VAL:HG13	1:D:392:LYS:HE3	2.00	0.44
1:D:417:VAL:O	1:D:421:ARG:HG2	2.18	0.44
1:F:222:LEU:O	1:F:301:ILE:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:510:VAL:O	1:F:514:MET:HG2	2.18	0.44
1:G:112:ASN:ND2	1:G:115:ASP:OD2	2.43	0.44
1:G:313:THR:O	1:G:317:LEU:HG	2.17	0.44
1:G:346:VAL:HA	1:G:349:ILE:HB	2.00	0.44
1:H:195:PHE:CE2	1:H:197:ARG:HB2	2.53	0.44
1:I:29:VAL:O	1:I:36:ARG:N	2.26	0.44
1:I:193:MET:SD	1:I:295:LEU:HD22	2.58	0.44
1:I:216:GLU:HG2	1:I:322:ARG:HD2	1.99	0.44
1:I:475:ASN:HB2	1:I:487:ASN:HD21	1.82	0.44
1:J:31:LEU:HD23	1:J:453:GLN:HB3	2.00	0.44
1:J:177:VAL:C	1:J:393:LYS:HZ2	2.21	0.44
1:K:149:THR:OG1	1:K:156:GLU:HA	2.18	0.44
1:M:148:GLY:CA	1:M:399:ALA:HB1	2.47	0.44
1:M:219:PHE:CD2	1:M:245:LYS:HD2	2.52	0.44
1:M:230:ILE:HD13	1:M:261:THR:HB	1.99	0.44
1:M:458:CYS:SG	1:M:480:ALA:HB1	2.57	0.44
1:N:5:ASP:N	1:N:522:THR:O	2.44	0.44
1:N:7:LYS:HE3	1:N:15:LYS:HG3	1.98	0.44
2:R:11:ILE:O	2:R:41:LEU:N	2.40	0.44
1:A:158:VAL:HG22	1:A:396:VAL:HG22	1.99	0.44
1:A:203:TYR:CE1	1:G:305:ILE:HG12	2.52	0.44
1:A:222:LEU:HD21	1:A:292:ILE:HG22	1.99	0.44
1:B:207:LYS:NZ	1:B:214:GLU:HB2	2.32	0.44
1:B:222:LEU:HB2	1:B:300:VAL:HA	2.00	0.44
1:C:77:VAL:HG12	1:C:92:ALA:HB1	1.99	0.44
1:C:134:LEU:HD23	1:C:418:ALA:HB1	2.00	0.44
1:C:230:ILE:O	1:C:234:LEU:N	2.51	0.44
1:C:239:ALA:HA	1:C:242:LYS:HE2	1.98	0.44
1:E:12:ALA:O	1:E:16:MET:HG2	2.18	0.44
1:E:511:ALA:O	1:E:515:ILE:HG12	2.17	0.44
1:F:152:ALA:O	1:F:395:ARG:HD2	2.18	0.44
1:F:169:VAL:HB	1:F:377:ALA:CB	2.47	0.44
1:G:178:GLU:N	1:G:379:ILE:O	2.47	0.44
1:J:115:ASP:CG	1:J:118:ARG:HH21	2.21	0.44
1:J:123:ALA:HB3	1:J:443:ALA:HB3	2.00	0.44
1:J:284:ARG:O	1:J:288:MET:HG2	2.18	0.44
1:J:319:GLN:HB2	1:J:336:VAL:HB	2.00	0.44
1:J:359:ASP:HA	1:J:362:ARG:HB3	1.99	0.44
1:K:323:VAL:HB	1:K:332:ILE:HG22	2.00	0.44
1:L:124:VAL:HG11	1:L:508:ALA:HB2	1.99	0.44
1:L:299:THR:N	1:L:316:ASP:O	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:24:ALA:HB3	1:M:97:GLN:HG3	2.00	0.44
1:M:349:ILE:HG12	1:M:368:ARG:CZ	2.48	0.44
2:P:6:LEU:HB3	2:P:7:HIS:CD2	2.52	0.44
1:A:350:ARG:NH2	1:A:369:VAL:HG11	2.32	0.44
1:B:128:VAL:HG21	1:B:505:GLN:HG3	2.00	0.44
1:D:462:PRO:O	1:D:466:ALA:CB	2.66	0.44
1:E:523:ASP:OD1	1:E:524:LEU:N	2.51	0.44
1:F:15:LYS:HB2	1:F:520:MET:HE3	1.99	0.44
1:F:431:GLY:N	1:F:437:ASN:OD1	2.43	0.44
1:G:77:VAL:HG12	1:G:92:ALA:HB1	1.99	0.44
1:G:455:VAL:CG1	1:G:460:GLU:HB2	2.47	0.44
1:H:34:LYS:HB2	1:H:458:CYS:SG	2.58	0.44
1:H:217:SER:O	1:H:245:LYS:HD3	2.17	0.44
1:H:350:ARG:HA	1:H:353:ILE:HD12	1.99	0.44
1:H:495:ASP:OD2	6:H:601:ADP:O2'	2.33	0.44
1:J:230:ILE:O	1:J:234:LEU:HG	2.18	0.44
1:K:498:LYS:HG3	1:K:501:ARG:NH2	2.33	0.44
1:L:69:MET:HG2	1:L:520:MET:HE3	2.00	0.44
1:L:220:ILE:HD11	1:L:250:ILE:HD12	2.00	0.44
1:M:178:GLU:HB2	1:M:380:LYS:HD3	1.99	0.44
1:N:130:GLU:HB2	1:N:422:VAL:HG13	2.00	0.44
2:R:75:SER:HB3	2:R:82:GLU:OE1	2.18	0.44
1:A:239:ALA:HB1	1:A:314:LEU:HD11	2.00	0.44
1:A:419:LEU:HD23	1:A:419:LEU:HA	1.87	0.44
1:C:16:MET:HE3	1:C:520:MET:HE2	2.00	0.44
1:C:232:GLU:HB3	1:C:309:LEU:HD23	2.00	0.44
1:C:279:PRO:O	1:C:285:ARG:HA	2.18	0.44
1:D:198:GLY:N	1:D:328:ASP:O	2.51	0.44
1:E:82:ASN:HB2	1:E:89:THR:HG21	2.00	0.44
1:E:452:ARG:HH21	1:E:470:LYS:NZ	2.16	0.44
1:F:250:ILE:HD13	1:F:292:ILE:HD13	2.00	0.44
1:H:283:ASP:OD1	1:H:284:ARG:N	2.51	0.44
1:I:452:ARG:HH12	1:I:463:SER:HA	1.83	0.44
1:J:176:THR:O	1:J:379:ILE:N	2.45	0.44
1:J:246:PRO:HA	1:J:272:LYS:HB2	2.00	0.44
1:K:34:LYS:HB2	1:K:458:CYS:SG	2.58	0.44
1:M:417:VAL:O	1:M:421:ARG:HG2	2.17	0.44
1:N:115:ASP:CG	1:N:118:ARG:HH21	2.21	0.44
2:P:9:ARG:HA	2:P:87:SER:HA	1.99	0.44
2:Q:5:PRO:O	2:Q:44:GLY:HA2	2.18	0.44
2:Q:94:ILE:HG23	2:R:6:LEU:HD11	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:34:LYS:HG2	1:G:114:MET:HE2	2.00	0.43
1:A:162:ILE:HG12	1:A:400:LEU:HD13	1.99	0.43
1:A:349:ILE:HG23	1:A:365:LEU:HB3	1.99	0.43
1:B:220:ILE:HG13	1:B:248:LEU:HD23	2.00	0.43
1:B:421:ARG:NH2	1:B:469:VAL:O	2.44	0.43
1:C:221:LEU:HD21	1:C:309:LEU:HD11	1.99	0.43
1:C:443:ALA:O	1:C:447:MET:HG2	2.18	0.43
1:D:184:GLN:N	1:D:382:GLY:HA3	2.32	0.43
1:D:251:ALA:O	1:D:278:ALA:N	2.51	0.43
1:D:264:VAL:HA	1:D:267:MET:SD	2.57	0.43
1:D:305:ILE:O	1:E:264:VAL:HG22	2.18	0.43
1:D:420:ILE:CG2	1:D:470:LYS:HG2	2.48	0.43
1:E:458:CYS:HB3	1:E:483:GLU:OE2	2.17	0.43
1:F:417:VAL:O	1:F:421:ARG:HG2	2.18	0.43
1:G:217:SER:HA	1:G:320:ALA:O	2.18	0.43
1:G:270:ILE:HG21	2:U:25:ILE:HA	2.00	0.43
1:H:193:MET:H	1:H:332:ILE:HG13	1.83	0.43
1:I:221:LEU:HD23	1:I:249:ILE:HD12	1.99	0.43
1:J:69:MET:HG2	1:K:47:PRO:CG	2.48	0.43
1:J:383:ALA:HB1	1:J:388:GLU:HB3	2.00	0.43
1:K:252:GLU:O	1:K:277:LYS:HG3	2.18	0.43
1:K:349:ILE:O	1:K:353:ILE:HG13	2.18	0.43
1:K:414:GLY:O	1:K:417:VAL:HG22	2.18	0.43
1:A:479:ASN:HB3	1:A:484:GLU:HG2	2.00	0.43
1:E:220:ILE:HG22	1:E:222:LEU:HG	2.00	0.43
1:F:219:PHE:CZ	1:F:314:LEU:HD23	2.54	0.43
1:F:359:ASP:HA	1:F:362:ARG:HE	1.81	0.43
1:G:239:ALA:HB1	1:G:314:LEU:HD11	1.99	0.43
1:H:82:ASN:O	1:H:86:GLY:N	2.32	0.43
1:H:364:LYS:HA	1:H:364:LYS:HD3	1.81	0.43
1:I:342:ILE:O	1:I:346:VAL:HG23	2.18	0.43
1:J:56:VAL:HG12	1:J:60:ILE:HD11	1.99	0.43
1:J:104:LEU:HD23	1:J:104:LEU:HA	1.60	0.43
1:L:262:LEU:HB3	1:L:273:VAL:HG11	2.00	0.43
1:M:386:GLU:O	1:M:389:MET:HB3	2.18	0.43
1:N:34:LYS:HB2	1:N:458:CYS:SG	2.58	0.43
1:N:262:LEU:HB3	1:N:273:VAL:HG11	2.00	0.43
1:N:349:ILE:HG21	1:N:368:ARG:CB	2.45	0.43
2:Q:9:ARG:HA	2:Q:87:SER:HA	2.00	0.43
1:C:339:GLU:O	1:C:342:ILE:HB	2.18	0.43
1:E:6:VAL:HG22	1:E:521:VAL:HG22	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:12:ALA:HA	1:E:520:MET:HE2	2.00	0.43
1:E:207:LYS:NZ	1:E:214:GLU:HB2	2.33	0.43
1:F:440:ILE:O	1:F:444:LEU:HG	2.17	0.43
1:G:138:CYS:HB3	1:G:406:ALA:HB1	2.01	0.43
1:G:226:LYS:HZ1	1:G:255:GLU:N	2.17	0.43
1:G:268:ARG:NH1	2:U:26:VAL:HG11	2.33	0.43
1:G:452:ARG:NH1	7:G:714:HOH:O	2.30	0.43
1:H:179:ASP:HA	1:H:381:VAL:HG22	2.00	0.43
1:H:265:ASN:O	1:H:269:GLY:N	2.51	0.43
1:H:475:ASN:HB2	1:H:487:ASN:ND2	2.33	0.43
1:I:390:LYS:NZ	1:I:393:LYS:HG2	2.33	0.43
1:J:20:VAL:HG22	1:J:74:VAL:CG2	2.47	0.43
1:K:4:LYS:HB3	1:K:521:VAL:HG13	2.00	0.43
1:K:195:PHE:CZ	1:K:250:ILE:HD13	2.53	0.43
1:K:468:THR:HB	1:K:485:TYR:CE2	2.53	0.43
1:L:140:ASP:O	1:L:144:ILE:HD12	2.18	0.43
1:L:218:PRO:HG3	1:L:323:VAL:HG22	2.00	0.43
1:L:349:ILE:HG21	1:L:368:ARG:CB	2.49	0.43
1:M:230:ILE:HG12	1:M:261:THR:HG21	2.00	0.43
1:N:219:PHE:CD2	1:N:314:LEU:HD22	2.52	0.43
2:R:12:VAL:HG21	2:R:86:MET:HE1	1.99	0.43
1:B:178:GLU:HG3	1:B:380:LYS:HG3	2.01	0.43
1:D:162:ILE:HG23	1:D:400:LEU:HD12	2.00	0.43
1:D:226:LYS:NZ	1:D:253:ASP:HB3	2.33	0.43
1:E:108:ALA:HB1	1:K:109:ALA:HB1	1.99	0.43
1:F:221:LEU:HD12	1:F:236:VAL:HG11	2.00	0.43
1:G:227:ILE:HG23	1:G:233:MET:SD	2.58	0.43
1:H:69:MET:SD	1:H:520:MET:HE3	2.58	0.43
1:H:142:LYS:HD2	1:H:145:ALA:HB3	2.01	0.43
1:H:405:ALA:HB1	1:H:498:LYS:HB3	2.00	0.43
1:H:433:ASN:HB3	1:H:436:GLN:HG3	2.00	0.43
1:I:124:VAL:HG13	1:I:504:LEU:HG	2.01	0.43
1:J:15:LYS:HD3	1:J:18:ARG:NH2	2.34	0.43
1:J:127:ALA:HB3	1:J:504:LEU:HD21	2.00	0.43
1:K:102:GLU:HG3	1:K:445:ARG:NH1	2.33	0.43
1:K:199:TYR:CE2	1:K:327:LYS:HA	2.53	0.43
1:K:219:PHE:CD2	1:K:314:LEU:HD22	2.54	0.43
1:L:31:LEU:HB3	1:L:453:GLN:HG3	1.99	0.43
1:L:262:LEU:HD13	1:L:273:VAL:HG11	2.00	0.43
1:M:224:ASP:OD2	1:M:286:LYS:HG2	2.18	0.43
1:M:381:VAL:HG23	1:M:389:MET:SD	2.58	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:T:75:SER:HA	2:T:83:VAL:O	2.17	0.43
1:A:124:VAL:HG22	1:A:504:LEU:HD11	2.00	0.43
1:A:243:ALA:HB2	1:A:314:LEU:HD21	2.01	0.43
1:A:392:LYS:O	1:A:396:VAL:HG23	2.19	0.43
1:C:106:ALA:O	1:C:111:MET:HG2	2.19	0.43
1:D:260:ALA:HA	1:D:263:VAL:HG22	2.00	0.43
1:E:239:ALA:HB1	1:E:314:LEU:HD11	2.00	0.43
1:E:240:VAL:HG21	1:E:247:LEU:CD1	2.48	0.43
1:F:20:VAL:HA	1:F:74:VAL:HG11	2.00	0.43
1:F:127:ALA:N	1:F:426:LEU:HD11	2.34	0.43
1:F:178:GLU:N	1:F:379:ILE:O	2.42	0.43
1:F:205:ILE:HG23	1:F:212:ALA:O	2.19	0.43
1:G:113:PRO:CB	1:G:516:THR:HA	2.45	0.43
1:G:219:PHE:CE2	1:G:314:LEU:HD23	2.53	0.43
1:G:268:ARG:HG3	2:U:26:VAL:HG21	2.00	0.43
1:H:30:THR:HB	1:H:51:LYS:C	2.38	0.43
1:H:152:ALA:HB3	1:H:155:ASP:HB2	2.01	0.43
1:H:221:LEU:N	1:H:248:LEU:O	2.28	0.43
1:I:411:VAL:HG12	1:I:496:PRO:HA	2.00	0.43
1:J:276:VAL:HG12	1:J:277:LYS:O	2.17	0.43
1:J:455:VAL:CG1	1:J:460:GLU:HB2	2.45	0.43
1:K:115:ASP:OD2	1:K:433:ASN:ND2	2.35	0.43
1:K:168:LYS:HE2	1:K:168:LYS:HB2	1.87	0.43
1:L:221:LEU:HD23	1:L:249:ILE:HG23	2.01	0.43
1:M:16:MET:O	1:M:20:VAL:HG23	2.18	0.43
1:M:42:LYS:N	1:M:47:PRO:HB3	2.33	0.43
1:M:197:ARG:NH1	1:M:277:LYS:HD3	2.33	0.43
2:P:13:LYS:HG2	2:P:41:LEU:HD21	2.00	0.43
2:T:14:ARG:NH1	2:T:34:LYS:HZ2	2.16	0.43
2:U:10:VAL:O	2:U:86:MET:HG3	2.18	0.43
1:B:200:LEU:N	1:B:275:ALA:O	2.35	0.43
1:B:440:ILE:O	1:B:444:LEU:HG	2.18	0.43
1:C:34:LYS:O	1:C:36:ARG:NH1	2.52	0.43
1:C:219:PHE:HB3	1:C:317:LEU:HB3	2.01	0.43
1:D:452:ARG:HH22	1:D:470:LYS:HE2	1.83	0.43
1:E:62:LEU:O	1:E:68:ASN:HB2	2.18	0.43
1:E:270:ILE:HG21	2:S:25:ILE:HA	2.00	0.43
1:E:349:ILE:HG23	1:E:365:LEU:CD1	2.48	0.43
1:E:479:ASN:CG	1:E:493:ILE:HD11	2.39	0.43
1:H:235:PRO:CG	1:H:310:GLU:HA	2.47	0.43
1:H:432:GLN:HB2	1:H:436:GLN:NE2	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:468:THR:HB	1:H:485:TYR:CE2	2.54	0.43
1:I:324:VAL:HB	1:I:331:THR:HB	2.00	0.43
1:I:365:LEU:HD23	1:I:368:ARG:HE	1.83	0.43
1:L:477:GLY:N	1:L:486:GLY:O	2.51	0.43
1:L:511:ALA:O	1:L:515:ILE:HG13	2.19	0.43
1:N:123:ALA:HB3	1:N:443:ALA:HB3	2.01	0.43
1:N:222:LEU:HD11	1:N:292:ILE:HG22	1.99	0.43
2:P:15:LYS:HE2	2:P:64:ILE:HG23	2.01	0.43
2:R:63:ASP:HB3	2:R:94:ILE:HG23	2.00	0.43
2:U:74:LYS:HE3	2:U:74:LYS:HB3	1.72	0.43
1:A:16:MET:SD	1:A:514:MET:HE1	2.58	0.43
1:A:152:ALA:O	1:A:395:ARG:HD2	2.18	0.43
1:A:218:PRO:HG2	1:A:323:VAL:HG23	2.00	0.43
1:B:339:GLU:HG3	1:B:343:GLN:OE1	2.18	0.43
1:B:465:VAL:HA	1:B:485:TYR:OH	2.17	0.43
1:C:429:LEU:HB3	1:C:440:ILE:HG21	2.01	0.43
1:D:207:LYS:HE2	1:D:212:ALA:HB3	2.00	0.43
1:F:149:THR:HG22	1:F:154:SER:HA	1.99	0.43
1:F:287:ALA:HB1	1:F:368:ARG:CZ	2.49	0.43
1:F:415:GLY:HA2	3:F:601:ATP:H1'	2.01	0.43
1:F:469:VAL:HG22	1:F:477:GLY:C	2.39	0.43
1:G:115:ASP:CG	1:G:433:ASN:HD21	2.22	0.43
1:H:102:GLU:HB3	1:H:442:VAL:HG22	2.01	0.43
1:H:345:ARG:HD2	1:H:348:GLN:OE1	2.19	0.43
1:I:345:ARG:HD2	1:I:348:GLN:OE1	2.18	0.43
1:J:9:GLY:O	1:J:13:ARG:HG2	2.19	0.43
1:J:162:ILE:HG22	1:J:166:MET:HE1	2.00	0.43
1:J:277:LYS:NZ	1:J:285:ARG:HH21	2.17	0.43
1:J:516:THR:O	1:K:37:ASN:HB2	2.19	0.43
1:K:197:ARG:NH1	1:K:277:LYS:HD3	2.33	0.43
1:K:230:ILE:O	1:K:234:LEU:HG	2.18	0.43
1:L:115:ASP:O	1:L:436:GLN:HG2	2.18	0.43
1:N:68:ASN:O	1:N:72:GLN:HG2	2.17	0.43
1:N:352:GLN:O	1:N:356:ALA:N	2.52	0.43
2:R:9:ARG:HA	2:R:87:SER:HA	2.00	0.43
1:A:455:VAL:HG13	1:A:460:GLU:HB2	2.00	0.43
1:B:102:GLU:CB	1:B:442:VAL:HG13	2.49	0.43
1:B:223:ALA:O	1:B:251:ALA:HA	2.19	0.43
1:B:252:GLU:HA	1:B:285:ARG:NH1	2.34	0.43
1:B:427:ALA:HA	1:B:444:LEU:HD13	2.00	0.43
1:C:239:ALA:HB1	1:C:314:LEU:HD12	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:277:LYS:HB3	1:C:277:LYS:HE3	1.88	0.43
1:E:77:VAL:HG11	1:E:96:ALA:HB2	2.01	0.43
1:E:135:SER:HB3	1:E:497:THR:HG21	2.00	0.43
1:E:230:ILE:H	1:E:230:ILE:HD12	1.84	0.43
1:E:262:LEU:O	1:E:266:THR:HG23	2.19	0.43
1:E:295:LEU:HD12	1:E:342:ILE:HD11	2.00	0.43
1:F:222:LEU:HD22	1:F:293:ALA:HB2	2.01	0.43
1:F:225:LYS:HE2	1:F:225:LYS:HB2	1.83	0.43
1:G:452:ARG:HH21	1:G:470:LYS:NZ	2.16	0.43
1:H:190:VAL:O	1:H:376:VAL:HG22	2.19	0.43
1:K:185:ASP:HA	1:K:380:LYS:O	2.19	0.43
1:K:187:LEU:HB3	1:K:379:ILE:HG12	2.01	0.43
1:K:274:ALA:HB1	1:K:325:ILE:CD1	2.48	0.43
1:K:291:ASP:HB3	1:K:372:LEU:HD21	2.00	0.43
1:L:349:ILE:O	1:L:353:ILE:HG13	2.19	0.43
1:M:33:PRO:HD2	1:M:454:ILE:HG23	2.00	0.43
1:M:168:LYS:HE2	1:M:168:LYS:HB2	1.83	0.43
1:M:199:TYR:CE1	1:M:327:LYS:HA	2.54	0.43
1:N:81:ALA:HA	1:N:506:TYR:CD2	2.54	0.43
1:N:465:VAL:HA	1:N:485:TYR:OH	2.19	0.43
1:A:387:VAL:HA	1:A:390:LYS:HE2	2.01	0.43
1:A:452:ARG:HH21	1:A:470:LYS:NZ	2.17	0.43
1:B:69:MET:O	1:B:73:MET:HG2	2.18	0.43
1:B:270:ILE:HG22	1:B:271:VAL:HG13	2.00	0.43
1:B:339:GLU:O	1:B:342:ILE:HB	2.18	0.43
1:C:111:MET:HE1	1:C:116:LEU:HD21	2.00	0.43
1:C:227:ILE:HG23	1:C:233:MET:SD	2.59	0.43
1:C:239:ALA:HB1	1:C:314:LEU:CD1	2.49	0.43
1:D:209:GLU:HG2	1:D:210:THR:HG23	2.01	0.43
1:E:136:VAL:HG23	1:E:411:VAL:HG23	2.01	0.43
1:F:207:LYS:NZ	1:F:214:GLU:HB2	2.34	0.43
1:F:265:ASN:HA	1:F:268:ARG:HB2	2.01	0.43
1:F:308:GLU:HB2	1:F:311:LYS:HG3	2.01	0.43
1:F:421:ARG:O	1:F:425:LYS:HG3	2.19	0.43
1:F:429:LEU:O	1:F:430:ARG:NH1	2.52	0.43
1:F:453:GLN:NE2	1:F:457:ASN:OD1	2.52	0.43
1:G:207:LYS:NZ	1:G:214:GLU:HB2	2.34	0.43
1:H:290:GLN:HG3	1:H:345:ARG:NE	2.33	0.43
1:I:147:VAL:HG11	1:I:406:ALA:HB2	2.00	0.43
1:I:217:SER:HA	1:I:320:ALA:O	2.19	0.43
1:I:513:LEU:HA	1:I:513:LEU:HD23	1.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:364:LYS:HD3	1:J:364:LYS:HA	1.67	0.43
1:J:390:LYS:HA	1:J:393:LYS:HB2	2.01	0.43
1:J:460:GLU:HG3	1:J:478:TYR:OH	2.18	0.43
1:L:69:MET:HE2	1:L:73:MET:HG3	2.00	0.43
1:L:104:LEU:HD23	1:L:104:LEU:HA	1.82	0.43
1:L:195:PHE:CE2	1:L:197:ARG:HB2	2.54	0.43
1:L:319:GLN:HB2	1:L:336:VAL:HB	2.01	0.43
1:M:15:LYS:HD3	1:M:18:ARG:NH2	2.34	0.43
1:M:150:ILE:HG13	1:M:494:LEU:H	1.84	0.43
1:M:301:ILE:HG21	1:M:309:LEU:HD23	2.00	0.43
1:M:333:ILE:HG12	1:M:376:VAL:HG11	2.00	0.43
1:N:287:ALA:HB1	1:N:368:ARG:CZ	2.48	0.43
1:N:513:LEU:HA	1:N:513:LEU:HD23	1.75	0.43
2:O:8:ASP:O	2:O:57:LEU:HD21	2.18	0.43
2:R:20:LYS:HE3	2:R:24:GLY:HA2	2.01	0.43
2:U:14:ARG:NH2	2:U:69:ASP:OD1	2.50	0.43
2:U:65:VAL:HG12	2:U:94:ILE:HG12	2.01	0.43
1:B:417:VAL:O	1:B:421:ARG:HG2	2.19	0.43
1:C:350:ARG:HA	1:C:353:ILE:HD12	2.01	0.43
1:C:452:ARG:NH1	7:C:707:HOH:O	2.30	0.43
1:E:10:ASN:O	1:E:14:VAL:HG23	2.19	0.43
1:E:361:ASP:O	1:E:365:LEU:HD23	2.19	0.43
1:G:417:VAL:O	1:G:421:ARG:HG2	2.19	0.43
1:H:289:LEU:HD22	1:H:300:VAL:HG13	2.00	0.43
1:I:39:VAL:HG22	1:I:49:ILE:HG23	2.01	0.43
1:I:124:VAL:HG11	1:I:508:ALA:HB2	2.01	0.43
1:I:252:GLU:O	1:I:277:LYS:HG3	2.19	0.43
1:J:130:GLU:OE1	1:J:426:LEU:HG	2.18	0.43
1:J:174:VAL:CG1	1:J:376:VAL:HG12	2.49	0.43
1:K:193:MET:SD	1:K:295:LEU:HD22	2.58	0.43
1:K:223:ALA:HA	1:K:301:ILE:HB	2.00	0.43
1:K:421:ARG:HH12	1:K:469:VAL:C	2.22	0.43
1:L:124:VAL:HG22	1:L:504:LEU:HD11	2.01	0.43
1:M:73:MET:SD	1:N:47:PRO:HD2	2.59	0.43
1:M:139:SER:O	1:M:171:LYS:HD3	2.18	0.43
1:N:149:THR:HG22	1:N:154:SER:HA	2.00	0.43
1:N:235:PRO:HG3	1:N:310:GLU:HA	2.01	0.43
2:P:20:LYS:HZ1	2:P:24:GLY:HA2	1.83	0.43
2:Q:86:MET:HE2	2:Q:90:ASP:HB2	2.01	0.43
2:R:88:GLU:HG2	2:R:91:ILE:HG13	2.01	0.43
2:S:67:PHE:HE2	2:S:69:ASP:HB3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S:69:ASP:OD1	2:S:69:ASP:N	2.51	0.43
2:S:73:VAL:HG22	2:S:86:MET:SD	2.59	0.43
1:A:194:GLN:HA	1:A:331:THR:HA	2.01	0.42
1:A:232:GLU:HG2	1:A:310:GLU:OE2	2.19	0.42
1:B:131:LEU:HD21	1:B:419:LEU:HD23	2.01	0.42
1:B:186:GLU:HG3	1:B:380:LYS:HE2	2.01	0.42
1:B:291:ASP:OD1	1:B:345:ARG:HG2	2.19	0.42
1:C:35:GLY:O	1:C:51:LYS:HE2	2.19	0.42
1:C:54:VAL:HG11	1:C:82:ASN:HB2	2.01	0.42
1:D:207:LYS:HZ1	1:D:214:GLU:HB2	1.83	0.42
1:D:214:GLU:OE2	1:D:322:ARG:NH1	2.52	0.42
1:D:399:ALA:O	1:D:403:THR:HG23	2.18	0.42
1:E:203:TYR:HB2	1:E:263:VAL:HB	2.01	0.42
1:E:277:LYS:HE3	1:E:285:ARG:HH22	1.84	0.42
1:F:158:VAL:HG22	1:F:396:VAL:HG22	1.99	0.42
1:F:198:GLY:N	1:F:328:ASP:O	2.53	0.42
1:H:161:LEU:HG	1:H:187:LEU:HD23	2.00	0.42
1:H:169:VAL:CG2	1:H:377:ALA:HB2	2.48	0.42
1:J:124:VAL:HG22	1:J:504:LEU:HD11	2.01	0.42
1:J:262:LEU:HD13	1:J:273:VAL:HG11	2.01	0.42
1:K:339:GLU:HA	1:K:342:ILE:HB	2.01	0.42
1:L:115:ASP:CG	1:L:118:ARG:HH21	2.22	0.42
1:N:20:VAL:HG22	1:N:74:VAL:CG2	2.45	0.42
1:N:69:MET:HA	1:N:72:GLN:HG2	2.01	0.42
1:N:339:GLU:HA	1:N:342:ILE:HD12	2.00	0.42
1:N:514:MET:HA	1:N:517:THR:OG1	2.19	0.42
2:R:37:ARG:HH12	2:S:3:ILE:HD11	1.84	0.42
2:R:78:ILE:HD11	2:R:83:VAL:HG11	2.01	0.42
1:A:207:LYS:HD2	1:A:212:ALA:HB3	2.01	0.42
1:B:194:GLN:HA	1:B:331:THR:HA	2.00	0.42
1:C:169:VAL:HG13	1:C:170:GLY:O	2.18	0.42
1:E:205:ILE:HD13	1:E:211:GLY:HA2	2.02	0.42
1:E:220:ILE:HG13	1:E:248:LEU:HD23	2.01	0.42
1:F:308:GLU:H	1:F:311:LYS:HD3	1.84	0.42
1:G:62:LEU:O	1:G:68:ASN:HB2	2.18	0.42
1:G:162:ILE:HG23	1:G:400:LEU:HD12	2.01	0.42
1:G:455:VAL:HG13	1:G:460:GLU:HB2	2.00	0.42
1:H:138:CYS:O	1:H:407:VAL:HG22	2.19	0.42
1:H:199:TYR:CZ	1:H:327:LYS:HA	2.54	0.42
1:I:279:PRO:C	1:I:288:MET:HG3	2.40	0.42
1:I:299:THR:N	1:I:316:ASP:O	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:327:LYS:HE2	1:I:327:LYS:HB3	1.82	0.42
1:K:246:PRO:HA	1:K:272:LYS:HB2	2.00	0.42
1:L:76:GLU:O	1:L:80:LYS:HG3	2.19	0.42
1:L:162:ILE:HG23	1:L:400:LEU:HD12	2.01	0.42
1:L:177:VAL:HG22	1:L:393:LYS:HE2	2.01	0.42
1:L:320:ALA:HA	1:L:336:VAL:H	1.85	0.42
1:M:415:GLY:HA3	1:M:488:MET:HE2	2.01	0.42
1:N:13:ARG:HA	1:N:514:MET:CE	2.49	0.42
1:N:32:GLY:HA2	6:N:601:ADP:O4'	2.19	0.42
1:N:40:LEU:HD22	1:N:59:GLU:HB3	2.02	0.42
1:N:451:LEU:O	1:N:455:VAL:HG23	2.19	0.42
2:P:3:ILE:HD13	2:P:78:ILE:HG21	2.00	0.42
2:T:5:PRO:HD3	2:T:42:ALA:HB1	2.01	0.42
1:B:82:ASN:HB2	1:B:89:THR:HG21	2.01	0.42
1:B:115:ASP:OD2	1:B:433:ASN:ND2	2.32	0.42
1:B:338:GLU:HG2	1:B:338:GLU:O	2.19	0.42
1:B:441:LYS:HB3	1:B:445:ARG:NH1	2.34	0.42
1:C:242:LYS:HE2	1:C:242:LYS:HB2	1.89	0.42
1:C:250:ILE:HD11	1:C:332:ILE:HD11	2.02	0.42
1:C:353:ILE:HG23	1:C:362:ARG:HB2	2.01	0.42
1:D:197:ARG:HD2	1:D:277:LYS:HB2	2.00	0.42
1:D:313:THR:O	1:D:317:LEU:HG	2.20	0.42
1:E:48:THR:HG22	1:E:390:LYS:NZ	2.35	0.42
1:E:199:TYR:HE1	1:E:212:ALA:HA	1.83	0.42
1:E:199:TYR:HA	1:E:276:VAL:HG12	2.01	0.42
1:E:207:LYS:HE2	1:E:212:ALA:HB3	2.00	0.42
1:F:283:ASP:OD1	1:F:284:ARG:N	2.52	0.42
1:G:122:LYS:NZ	1:G:430:ARG:O	2.41	0.42
1:J:158:VAL:HG13	1:J:396:VAL:HG22	1.99	0.42
1:K:30:THR:HA	1:K:35:GLY:HA3	2.02	0.42
1:K:429:LEU:HB3	1:K:440:ILE:HG21	2.01	0.42
1:L:339:GLU:HA	1:L:342:ILE:HD12	2.00	0.42
1:M:433:ASN:OD1	1:M:434:GLU:N	2.52	0.42
1:N:35:GLY:HA2	1:N:457:ASN:HB3	2.00	0.42
1:A:169:VAL:HG13	1:A:170:GLY:O	2.19	0.42
1:A:253:ASP:OD1	1:A:254:VAL:N	2.50	0.42
1:A:336:VAL:HG23	1:A:336:VAL:O	2.20	0.42
1:B:205:ILE:HD13	1:B:211:GLY:HA2	2.01	0.42
1:B:276:VAL:HG11	1:B:330:THR:OG1	2.19	0.42
1:B:313:THR:O	1:B:317:LEU:HG	2.19	0.42
3:B:601:ATP:O1G	7:B:2001:HOH:O	2.21	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:135:SER:HB3	1:C:497:THR:HG21	2.00	0.42
1:C:260:ALA:HA	1:C:263:VAL:HG22	2.02	0.42
1:D:448:GLU:HB3	1:D:452:ARG:CZ	2.50	0.42
1:G:77:VAL:HG11	1:G:96:ALA:HB2	2.02	0.42
1:G:277:LYS:HB3	1:G:277:LYS:HE3	1.90	0.42
1:H:35:GLY:HA2	1:H:457:ASN:HB3	2.00	0.42
1:H:295:LEU:HD23	1:H:342:ILE:HD13	2.02	0.42
1:H:421:ARG:HH12	1:H:469:VAL:C	2.23	0.42
1:I:15:LYS:NZ	1:I:64:ASP:OD2	2.42	0.42
1:I:215:LEU:O	1:I:323:VAL:HG22	2.20	0.42
1:I:219:PHE:CE2	1:I:245:LYS:HD2	2.55	0.42
1:I:349:ILE:HG12	1:I:368:ARG:CZ	2.50	0.42
1:I:447:MET:O	1:I:450:PRO:HD2	2.19	0.42
1:J:12:ALA:O	1:J:16:MET:HG2	2.19	0.42
1:J:14:VAL:O	1:J:18:ARG:HG3	2.20	0.42
1:J:31:LEU:HB3	1:J:453:GLN:HG3	2.01	0.42
1:J:406:ALA:HB2	1:J:496:PRO:HG3	2.01	0.42
1:K:46:ALA:HA	1:K:47:PRO:HD3	1.78	0.42
1:K:320:ALA:HA	1:K:336:VAL:H	1.84	0.42
1:L:279:PRO:O	1:L:285:ARG:HA	2.19	0.42
1:L:390:LYS:HA	1:L:390:LYS:HD2	1.74	0.42
1:L:452:ARG:HH12	1:L:463:SER:HA	1.83	0.42
1:L:520:MET:HE2	1:L:520:MET:HB3	1.80	0.42
1:M:62:LEU:HB2	1:M:68:ASN:HB2	2.02	0.42
1:M:168:LYS:HG2	1:M:189:VAL:HG13	2.02	0.42
1:M:185:ASP:OD2	1:M:392:LYS:HE3	2.19	0.42
1:N:319:GLN:HB2	1:N:336:VAL:HB	2.01	0.42
2:O:47:ARG:NH2	2:O:88:GLU:HB3	2.35	0.42
2:P:8:ASP:O	2:P:57:LEU:HD21	2.19	0.42
2:R:4:ARG:HH12	2:R:6:LEU:HD23	1.85	0.42
1:A:513:LEU:HB3	1:B:49:ILE:HD13	2.01	0.42
1:B:124:VAL:HG22	1:B:504:LEU:HD11	2.01	0.42
1:B:250:ILE:HD11	1:B:332:ILE:HD11	2.00	0.42
1:D:455:VAL:CG1	1:D:460:GLU:HB2	2.49	0.42
1:E:440:ILE:O	1:E:444:LEU:HG	2.20	0.42
1:G:448:GLU:OE1	1:G:470:LYS:NZ	2.53	0.42
1:I:220:ILE:HG12	1:I:222:LEU:HD21	2.02	0.42
1:I:356:ALA:HB3	1:I:362:ARG:NH2	2.35	0.42
1:J:46:ALA:HA	1:J:47:PRO:HD3	1.90	0.42
1:K:9:GLY:N	1:K:518:GLU:O	2.39	0.42
1:K:220:ILE:HG12	1:K:222:LEU:HD21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:230:ILE:O	1:K:234:LEU:N	2.52	0.42
1:K:451:LEU:HD11	1:K:469:VAL:HG21	2.02	0.42
1:L:175:ILE:HG21	1:L:400:LEU:HD11	2.01	0.42
1:L:230:ILE:O	1:L:234:LEU:HG	2.18	0.42
1:M:102:GLU:HB3	1:M:442:VAL:HG22	2.02	0.42
1:M:452:ARG:HH12	1:M:463:SER:HA	1.84	0.42
1:N:117:LYS:HD2	1:N:512:GLY:O	2.19	0.42
1:N:174:VAL:CG1	1:N:376:VAL:HG12	2.50	0.42
1:N:262:LEU:HD13	1:N:273:VAL:HG11	2.02	0.42
1:N:276:VAL:HG12	1:N:277:LYS:O	2.19	0.42
2:O:27:LEU:HB3	2:O:31:ALA:HB3	2.01	0.42
1:B:178:GLU:O	1:B:381:VAL:N	2.51	0.42
1:B:349:ILE:HG21	1:B:369:VAL:HG23	2.02	0.42
1:D:443:ALA:O	1:D:447:MET:HG2	2.20	0.42
1:F:323:VAL:HG22	1:F:332:ILE:HA	2.01	0.42
1:I:353:ILE:HA	1:I:362:ARG:HH12	1.84	0.42
1:J:34:LYS:HB2	1:J:458:CYS:SG	2.59	0.42
1:J:52:ASP:O	1:J:56:VAL:HG23	2.20	0.42
1:J:132:LYS:NZ	1:J:409:GLU:OE2	2.42	0.42
1:J:360:TYR:CE1	1:J:364:LYS:HE3	2.55	0.42
1:K:14:VAL:O	1:K:18:ARG:HG3	2.19	0.42
1:K:140:ASP:OD1	1:K:141:SER:N	2.52	0.42
1:K:146:GLN:HB2	1:K:494:LEU:HD12	2.01	0.42
1:L:195:PHE:CD2	1:L:279:PRO:HB3	2.54	0.42
1:L:204:PHE:CD1	1:L:266:THR:HG21	2.55	0.42
1:L:219:PHE:CD2	1:L:245:LYS:HD2	2.55	0.42
1:M:150:ILE:HD12	6:M:601:ADP:N7	2.35	0.42
1:N:438:VAL:O	1:N:442:VAL:HG23	2.20	0.42
1:N:460:GLU:HG3	1:N:478:TYR:OH	2.19	0.42
2:R:59:VAL:HG22	2:R:88:GLU:HG3	2.01	0.42
1:B:23:LEU:HD22	1:B:74:VAL:HG13	2.02	0.42
1:C:262:LEU:HD13	1:C:273:VAL:HG11	2.01	0.42
1:C:386:GLU:O	1:C:390:LYS:HG3	2.20	0.42
1:D:227:ILE:HG22	1:D:255:GLU:OE1	2.19	0.42
1:D:277:LYS:HB3	1:D:277:LYS:HE3	1.90	0.42
1:E:112:ASN:ND2	7:E:722:HOH:O	2.49	0.42
1:E:455:VAL:HG13	1:E:460:GLU:HB2	2.02	0.42
1:F:465:VAL:HA	1:F:485:TYR:OH	2.20	0.42
1:G:264:VAL:HA	1:G:267:MET:SD	2.60	0.42
1:H:248:LEU:HD21	1:H:250:ILE:HD11	2.02	0.42
1:J:104:LEU:HG	1:J:514:MET:HE1	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:417:VAL:HG12	1:J:451:LEU:HD12	2.02	0.42
1:K:319:GLN:HB2	1:K:336:VAL:HB	2.02	0.42
1:K:346:VAL:O	1:K:350:ARG:HG2	2.20	0.42
1:L:102:GLU:HB3	1:L:442:VAL:HG22	2.02	0.42
1:M:13:ARG:HA	1:M:514:MET:CE	2.50	0.42
1:M:420:ILE:HG23	1:M:470:LYS:HG2	2.00	0.42
1:M:434:GLU:HA	1:M:437:ASN:ND2	2.34	0.42
1:N:150:ILE:HD12	6:N:601:ADP:N7	2.35	0.42
1:N:217:SER:HA	1:N:320:ALA:O	2.19	0.42
1:N:220:ILE:HA	1:N:248:LEU:HB3	2.01	0.42
1:N:511:ALA:O	1:N:515:ILE:HG13	2.19	0.42
2:S:73:VAL:HG11	2:S:84:LEU:HD23	2.02	0.42
1:A:95:LEU:O	1:A:99:ILE:HG13	2.20	0.42
1:A:441:LYS:HB3	1:A:445:ARG:NH1	2.34	0.42
1:B:33:PRO:HG3	3:B:601:ATP:C6	2.55	0.42
1:B:207:LYS:HE2	1:B:212:ALA:HB3	2.02	0.42
1:B:283:ASP:OD1	1:B:284:ARG:N	2.53	0.42
1:D:115:ASP:O	1:D:436:GLN:HG2	2.20	0.42
1:E:134:LEU:HD23	1:E:418:ALA:HB1	2.01	0.42
1:E:230:ILE:HD11	1:E:258:ALA:HA	2.02	0.42
3:E:601:ATP:H8	3:E:601:ATP:H5'2	1.85	0.42
1:F:218:PRO:HG2	1:F:323:VAL:HG23	2.02	0.42
1:G:232:GLU:HG2	1:G:310:GLU:OE2	2.20	0.42
1:H:33:PRO:HD3	6:H:601:ADP:N9	2.35	0.42
1:H:368:ARG:O	1:H:372:LEU:HD23	2.19	0.42
1:I:319:GLN:HB2	1:I:336:VAL:HB	2.01	0.42
1:I:364:LYS:HD3	1:I:364:LYS:HA	1.69	0.42
1:J:214:GLU:OE1	1:J:214:GLU:N	2.52	0.42
1:J:345:ARG:O	1:J:349:ILE:HG13	2.20	0.42
1:J:476:TYR:HA	1:J:487:ASN:HA	2.01	0.42
1:L:68:ASN:O	1:L:72:GLN:HG2	2.20	0.42
1:L:168:LYS:HG2	1:L:189:VAL:HG13	2.02	0.42
1:L:443:ALA:O	1:L:447:MET:HG2	2.20	0.42
1:M:39:VAL:HG22	1:M:49:ILE:HG12	2.01	0.42
1:M:137:PRO:HA	1:M:410:GLY:HA2	2.00	0.42
1:M:144:ILE:HG23	1:M:403:THR:HB	2.02	0.42
1:M:489:ILE:HG23	1:M:494:LEU:HD21	2.00	0.42
1:N:124:VAL:HG11	1:N:508:ALA:CB	2.49	0.42
1:N:452:ARG:HH12	1:N:463:SER:HA	1.85	0.42
2:O:40:VAL:HG22	2:O:63:ASP:O	2.20	0.42
2:R:92:LEU:HB3	2:S:85:ILE:HG21	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:69:MET:HB2	1:B:47:PRO:CG	2.50	0.42
1:A:175:ILE:HB	1:A:404:ARG:NH1	2.33	0.42
1:A:196:ASP:HA	1:A:329:THR:HA	2.01	0.42
1:B:243:ALA:HB2	1:B:314:LEU:HD21	2.02	0.42
1:B:447:MET:HA	1:B:447:MET:HE2	2.02	0.42
1:B:523:ASP:OD1	1:B:524:LEU:N	2.53	0.42
1:C:128:VAL:HG21	1:C:505:GLN:HG3	2.02	0.42
1:C:452:ARG:HH21	1:C:470:LYS:NZ	2.18	0.42
1:D:205:ILE:HG23	1:D:212:ALA:O	2.20	0.42
1:E:387:VAL:HA	1:E:390:LYS:HE2	2.02	0.42
1:F:452:ARG:HH21	1:F:470:LYS:HZ1	1.66	0.42
1:G:194:GLN:HA	1:G:331:THR:HA	2.02	0.42
1:G:199:TYR:CZ	1:G:205:ILE:HD11	2.55	0.42
1:I:432:GLN:HB2	1:I:436:GLN:NE2	2.35	0.42
1:J:233:MET:HE1	1:J:247:LEU:HD21	2.02	0.42
1:K:33:PRO:HD3	6:K:601:ADP:C4	2.55	0.42
1:K:417:VAL:HG12	1:K:451:LEU:CD1	2.50	0.42
1:K:478:TYR:HA	1:K:485:TYR:HA	2.00	0.42
1:L:432:GLN:HB2	1:L:436:GLN:OE1	2.20	0.42
1:M:15:LYS:NZ	1:M:64:ASP:OD2	2.35	0.42
1:M:216:GLU:HG2	1:M:322:ARG:HD2	2.01	0.42
1:M:320:ALA:HA	1:M:336:VAL:H	1.85	0.42
1:N:248:LEU:HD22	1:N:323:VAL:HG21	2.01	0.42
2:O:12:VAL:HG22	2:O:84:LEU:HB2	2.02	0.42
2:O:40:VAL:HG11	2:O:59:VAL:HG11	2.02	0.42
2:Q:25:ILE:H	2:Q:25:ILE:HD12	1.83	0.42
2:U:12:VAL:O	2:U:84:LEU:HB2	2.20	0.42
1:A:31:LEU:O	1:A:457:ASN:ND2	2.24	0.42
1:A:215:LEU:HB3	1:A:246:PRO:HB2	2.02	0.42
1:C:33:PRO:HD3	3:C:601:ATP:C8	2.54	0.42
1:C:162:ILE:HG23	1:C:400:LEU:HD12	2.01	0.42
1:D:48:THR:HG22	1:D:390:LYS:NZ	2.35	0.42
1:F:168:LYS:HB3	1:F:189:VAL:HB	2.02	0.42
1:F:250:ILE:HG23	1:F:278:ALA:HA	2.02	0.42
1:G:261:THR:HA	2:U:28:THR:OG1	2.20	0.42
1:G:524:LEU:HD23	1:G:524:LEU:HA	1.92	0.42
1:H:217:SER:HA	1:H:320:ALA:O	2.20	0.42
1:I:32:GLY:HA3	1:I:454:ILE:HG23	2.01	0.42
1:I:127:ALA:HB3	1:I:504:LEU:HD21	2.02	0.42
1:J:217:SER:HA	1:J:320:ALA:O	2.19	0.42
1:J:452:ARG:HH12	1:J:463:SER:HA	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:221:LEU:N	1:K:248:LEU:O	2.31	0.42
1:K:223:ALA:O	1:K:251:ALA:HA	2.19	0.42
1:M:85:ALA:CB	1:M:499:VAL:HA	2.40	0.42
1:M:353:ILE:HD11	1:M:369:VAL:HG11	2.02	0.42
1:N:16:MET:HE1	1:N:66:PHE:O	2.20	0.42
2:R:59:VAL:HG12	2:R:94:ILE:HD11	2.01	0.42
1:A:240:VAL:HG21	1:A:247:LEU:CD1	2.49	0.41
1:A:261:THR:HG23	2:O:26:VAL:O	2.20	0.41
1:B:162:ILE:HG12	1:B:400:LEU:HD13	2.01	0.41
1:B:231:ARG:HH11	1:B:234:LEU:HD11	1.85	0.41
1:C:34:LYS:HA	1:C:36:ARG:HH22	1.84	0.41
1:D:143:ALA:O	1:D:147:VAL:HG23	2.20	0.41
1:D:186:GLU:O	1:D:380:LYS:N	2.30	0.41
1:D:448:GLU:O	1:D:452:ARG:HD3	2.20	0.41
1:D:479:ASN:CG	1:D:493:ILE:HD11	2.40	0.41
1:E:158:VAL:HG13	1:E:396:VAL:HG13	2.02	0.41
1:E:197:ARG:HD2	1:E:277:LYS:HB2	2.02	0.41
1:E:206:ASN:ND2	1:E:214:GLU:O	2.53	0.41
1:F:82:ASN:HB2	1:F:89:THR:HG21	2.02	0.41
1:F:222:LEU:HD21	1:F:292:ILE:HG22	2.00	0.41
1:F:455:VAL:HG13	1:F:460:GLU:HB2	2.01	0.41
1:F:455:VAL:CG1	1:F:460:GLU:HB2	2.50	0.41
1:G:441:LYS:HB3	1:G:445:ARG:NH1	2.35	0.41
1:G:455:VAL:HG21	1:G:465:VAL:HG11	2.02	0.41
1:H:2:ALA:O	1:H:4:LYS:HG2	2.20	0.41
1:H:100:ILE:HG12	1:H:511:ALA:HA	2.02	0.41
1:H:132:LYS:NZ	1:H:409:GLU:OE2	2.43	0.41
1:H:250:ILE:HA	1:H:276:VAL:O	2.20	0.41
1:I:15:LYS:HD3	1:I:18:ARG:NH2	2.35	0.41
1:I:406:ALA:HB2	1:I:496:PRO:HG3	2.02	0.41
1:J:34:LYS:HE3	1:J:483:GLU:OE1	2.20	0.41
1:J:199:TYR:CE1	1:J:327:LYS:HA	2.54	0.41
1:J:343:GLN:HA	1:J:346:VAL:HB	2.02	0.41
1:K:195:PHE:CD2	1:K:279:PRO:HB3	2.55	0.41
1:K:199:TYR:CZ	1:K:327:LYS:HA	2.55	0.41
1:K:287:ALA:HB1	1:K:368:ARG:CZ	2.50	0.41
1:K:447:MET:O	1:K:450:PRO:HD2	2.21	0.41
1:L:179:ASP:OD1	1:L:389:MET:HE2	2.20	0.41
1:L:301:ILE:HG21	1:L:309:LEU:HD23	2.02	0.41
1:M:16:MET:HG3	1:M:514:MET:SD	2.60	0.41
1:M:20:VAL:HG22	1:M:74:VAL:CG2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:162:ILE:HG23	1:M:400:LEU:HD12	2.01	0.41
1:M:217:SER:HA	1:M:320:ALA:O	2.20	0.41
1:M:231:ARG:O	1:M:231:ARG:NH1	2.43	0.41
1:M:432:GLN:HB2	1:M:436:GLN:NE2	2.34	0.41
2:S:39:GLU:N	2:S:39:GLU:OE1	2.53	0.41
2:T:25:ILE:H	2:T:25:ILE:HD12	1.85	0.41
1:A:20:VAL:HG22	1:A:74:VAL:HB	2.02	0.41
1:A:295:LEU:HD21	1:A:335:GLY:H	1.86	0.41
1:A:323:VAL:HG22	1:A:332:ILE:HA	2.02	0.41
1:B:149:THR:HG22	1:B:154:SER:HA	2.01	0.41
1:B:323:VAL:HG22	1:B:332:ILE:HG12	2.01	0.41
1:C:36:ARG:NE	1:C:36:ARG:HA	2.35	0.41
1:C:207:LYS:HD2	1:C:212:ALA:HB3	2.01	0.41
1:C:217:SER:HA	1:C:320:ALA:O	2.20	0.41
1:C:465:VAL:HA	1:C:485:TYR:OH	2.20	0.41
1:E:205:ILE:HG23	1:E:212:ALA:O	2.20	0.41
1:E:217:SER:HA	1:E:320:ALA:O	2.20	0.41
1:F:150:ILE:CG1	1:F:493:ILE:HA	2.47	0.41
1:F:276:VAL:HG11	1:F:330:THR:OG1	2.20	0.41
1:F:458:CYS:HB3	1:F:483:GLU:OE2	2.20	0.41
1:F:519:CYS:SG	1:F:520:MET:N	2.93	0.41
1:H:279:PRO:C	1:H:288:MET:HG3	2.39	0.41
1:I:106:ALA:O	1:I:111:MET:HG2	2.19	0.41
1:J:479:ASN:HB2	1:J:491:MET:CE	2.50	0.41
1:K:16:MET:HE1	1:K:69:MET:HB3	2.02	0.41
1:K:248:LEU:HB2	1:K:323:VAL:HG21	2.03	0.41
1:M:7:LYS:HE3	1:M:15:LYS:HE3	2.02	0.41
1:N:289:LEU:HD22	1:N:300:VAL:HG13	2.01	0.41
1:N:381:VAL:HG23	1:N:389:MET:SD	2.60	0.41
2:S:25:ILE:H	2:S:25:ILE:HD12	1.85	0.41
1:A:305:ILE:O	1:B:264:VAL:HG22	2.20	0.41
1:A:349:ILE:HG23	1:A:365:LEU:CD1	2.47	0.41
1:B:452:ARG:HH21	1:B:470:LYS:NZ	2.17	0.41
1:D:123:ALA:HB2	1:D:440:ILE:HG23	2.02	0.41
1:D:239:ALA:HB1	1:D:314:LEU:HD11	2.02	0.41
1:E:345:ARG:O	1:E:349:ILE:HG13	2.20	0.41
1:E:466:ALA:O	1:E:470:LYS:HG3	2.20	0.41
1:F:108:ALA:HB1	1:J:109:ALA:HB1	2.03	0.41
1:F:219:PHE:CD2	1:F:240:VAL:HG22	2.55	0.41
1:F:339:GLU:HB3	1:F:343:GLN:HE22	1.84	0.41
1:F:421:ARG:HH12	1:F:470:LYS:HA	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:31:LEU:HD23	1:G:453:GLN:HG3	2.02	0.41
1:H:20:VAL:HG22	1:H:74:VAL:CG2	2.48	0.41
1:I:117:LYS:HD2	1:I:512:GLY:O	2.20	0.41
1:J:414:GLY:O	1:J:417:VAL:HG22	2.20	0.41
1:K:217:SER:HA	1:K:320:ALA:O	2.21	0.41
1:L:31:LEU:HD23	1:L:453:GLN:HB3	2.03	0.41
1:L:230:ILE:HG12	1:L:261:THR:HG21	2.02	0.41
1:M:149:THR:HG22	1:M:154:SER:HA	2.02	0.41
1:M:284:ARG:NE	1:M:364:LYS:HB3	2.35	0.41
1:M:339:GLU:HA	1:M:342:ILE:HB	2.01	0.41
1:N:85:ALA:CB	1:N:499:VAL:HA	2.43	0.41
1:N:187:LEU:HB3	1:N:379:ILE:HG12	2.02	0.41
1:A:455:VAL:CG1	1:A:460:GLU:HB2	2.50	0.41
1:B:178:GLU:HA	1:B:393:LYS:HE2	2.01	0.41
1:B:443:ALA:O	1:B:447:MET:HG2	2.21	0.41
1:C:194:GLN:HA	1:C:331:THR:HA	2.03	0.41
1:C:511:ALA:O	1:C:515:ILE:HG12	2.20	0.41
1:D:222:LEU:HD22	1:D:293:ALA:HB2	2.02	0.41
1:F:28:LYS:HD3	1:F:453:GLN:OE1	2.21	0.41
1:F:194:GLN:HA	1:F:331:THR:HA	2.02	0.41
1:F:277:LYS:HB3	1:F:277:LYS:HE3	1.90	0.41
1:F:399:ALA:O	1:F:403:THR:OG1	2.28	0.41
1:F:510:VAL:HG23	1:G:385:THR:HG21	2.01	0.41
1:G:381:VAL:HG13	1:G:392:LYS:HE3	2.03	0.41
1:H:116:LEU:HD23	1:H:435:ASP:O	2.21	0.41
1:I:38:VAL:O	1:I:50:THR:N	2.47	0.41
1:J:150:ILE:HD12	6:J:601:ADP:N7	2.34	0.41
1:J:339:GLU:HA	1:J:342:ILE:HB	2.02	0.41
1:K:124:VAL:HG11	1:K:508:ALA:CB	2.50	0.41
1:L:451:LEU:O	1:L:455:VAL:HG23	2.20	0.41
1:M:186:GLU:N	1:M:380:LYS:O	2.53	0.41
2:P:66:ILE:HG21	2:Q:76:GLU:HG2	2.03	0.41
2:P:77:LYS:HE2	2:P:77:LYS:HB2	1.89	0.41
2:R:12:VAL:HG12	2:R:40:VAL:HG12	2.01	0.41
2:T:73:VAL:HG22	2:T:86:MET:SD	2.61	0.41
1:A:350:ARG:O	1:A:354:GLU:HG2	2.20	0.41
1:C:472:GLY:HA3	1:C:476:TYR:CD2	2.56	0.41
1:D:102:GLU:HB2	1:D:442:VAL:HG13	2.02	0.41
1:D:149:THR:HG22	1:D:154:SER:HA	2.01	0.41
1:E:15:LYS:HE2	1:E:67:GLU:HG3	2.01	0.41
1:E:54:VAL:HG11	1:E:82:ASN:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:178:GLU:N	1:E:379:ILE:O	2.45	0.41
1:E:219:PHE:HB2	1:E:247:LEU:HA	2.02	0.41
1:E:338:GLU:H	1:E:338:GLU:CD	2.23	0.41
1:F:475:ASN:O	1:F:488:MET:N	2.52	0.41
1:G:13:ARG:HD2	1:G:104:LEU:HD22	2.01	0.41
1:H:17:LEU:HD12	1:H:17:LEU:HA	1.83	0.41
1:H:215:LEU:HB3	1:H:218:PRO:HB3	2.02	0.41
1:H:216:GLU:HG2	1:H:322:ARG:HD2	2.01	0.41
1:H:220:ILE:HA	1:H:248:LEU:HB3	2.03	0.41
1:J:169:VAL:CG2	1:J:377:ALA:HB2	2.51	0.41
1:J:443:ALA:O	1:J:447:MET:HG2	2.20	0.41
1:J:493:ILE:HG12	6:J:601:ADP:N6	2.35	0.41
1:J:516:THR:OG1	1:K:37:ASN:OD1	2.18	0.41
1:K:150:ILE:HD12	6:K:601:ADP:N7	2.36	0.41
1:K:294:THR:HG21	1:K:345:ARG:HB2	2.01	0.41
1:K:465:VAL:HA	1:K:485:TYR:OH	2.20	0.41
1:K:522:THR:HA	1:L:41:ASP:HB3	2.02	0.41
1:L:289:LEU:HD22	1:L:300:VAL:HG13	2.03	0.41
1:M:104:LEU:HD21	1:M:514:MET:HG2	2.01	0.41
1:N:15:LYS:HB3	1:N:66:PHE:HB2	2.03	0.41
2:O:6:LEU:HB3	2:O:7:HIS:CD2	2.55	0.41
2:U:37:ARG:HA	2:U:65:VAL:O	2.20	0.41
1:A:92:ALA:HB2	1:A:503:ALA:HB1	2.03	0.41
1:B:206:ASN:ND2	1:B:214:GLU:O	2.53	0.41
1:C:34:LYS:HB2	1:C:458:CYS:SG	2.60	0.41
1:D:158:VAL:HG22	1:D:396:VAL:HG22	2.01	0.41
1:D:421:ARG:NH2	1:D:469:VAL:O	2.44	0.41
1:E:455:VAL:CG1	1:E:460:GLU:HB2	2.51	0.41
1:E:472:GLY:HA3	1:E:476:TYR:CD2	2.56	0.41
1:G:134:LEU:HD23	1:G:418:ALA:HB1	2.01	0.41
1:H:301:ILE:HA	1:H:307:MET:HE3	2.01	0.41
1:I:124:VAL:HG11	1:I:508:ALA:CB	2.51	0.41
1:I:152:ALA:HB3	1:I:155:ASP:HB2	2.03	0.41
1:I:421:ARG:HH12	1:I:469:VAL:C	2.24	0.41
1:J:105:LYS:HA	1:J:105:LYS:HD2	1.69	0.41
1:K:489:ILE:HA	1:K:494:LEU:HD21	2.03	0.41
1:N:144:ILE:HG23	1:N:403:THR:HB	2.02	0.41
1:N:185:ASP:HA	1:N:380:LYS:O	2.21	0.41
1:N:284:ARG:NH1	1:N:364:LYS:HD2	2.36	0.41
1:N:455:VAL:HG21	1:N:465:VAL:HG11	2.01	0.41
2:R:95:VAL:HG13	2:S:3:ILE:HD11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:420:ILE:HG21	1:A:470:LYS:HG2	2.01	0.41
1:C:257:GLU:HG3	2:Q:30:SER:H	1.85	0.41
1:C:440:ILE:O	1:C:444:LEU:HG	2.21	0.41
1:D:138:CYS:HB3	1:D:406:ALA:HB1	2.03	0.41
1:D:262:LEU:O	1:D:266:THR:HG23	2.20	0.41
1:E:33:PRO:HG3	3:E:601:ATP:C6	2.55	0.41
1:F:32:GLY:HA2	3:F:601:ATP:O4'	2.20	0.41
1:F:452:ARG:NH1	7:F:708:HOH:O	2.29	0.41
1:G:33:PRO:HD3	3:G:601:ATP:C8	2.56	0.41
1:G:106:ALA:O	1:G:111:MET:HG2	2.21	0.41
1:G:287:ALA:HA	1:G:345:ARG:NH2	2.34	0.41
1:G:348:GLN:HA	1:G:351:GLN:OE1	2.20	0.41
1:G:370:ALA:HB1	1:G:375:GLY:O	2.21	0.41
1:H:140:ASP:O	1:H:144:ILE:HD12	2.21	0.41
1:H:351:GLN:HA	1:H:354:GLU:OE2	2.20	0.41
1:I:415:GLY:HA2	6:I:601:ADP:N3	2.35	0.41
1:J:124:VAL:HG13	1:J:504:LEU:HG	2.03	0.41
1:J:250:ILE:HG12	1:J:276:VAL:HB	2.03	0.41
1:J:480:ALA:H	6:J:601:ADP:H2	1.69	0.41
1:J:526:LYS:HA	1:J:526:LYS:HD2	1.78	0.41
1:K:123:ALA:HB3	1:K:443:ALA:HB3	2.01	0.41
1:L:199:TYR:CZ	1:L:327:LYS:HA	2.56	0.41
1:L:213:VAL:HB	1:L:325:ILE:HG12	2.03	0.41
1:M:31:LEU:HD23	1:M:453:GLN:HB3	2.03	0.41
1:M:68:ASN:O	1:M:72:GLN:HG2	2.20	0.41
1:M:433:ASN:HB3	1:M:436:GLN:HG3	2.02	0.41
1:N:15:LYS:NZ	1:N:64:ASP:OD2	2.35	0.41
1:N:345:ARG:HD2	1:N:348:GLN:OE1	2.20	0.41
2:P:5:PRO:HD3	2:P:42:ALA:HB1	2.03	0.41
2:R:12:VAL:CG2	2:R:84:LEU:HB2	2.49	0.41
2:R:37:ARG:NH2	2:S:78:ILE:HG22	2.35	0.41
2:R:38:GLY:HA3	2:R:67:PHE:CE1	2.50	0.41
2:T:15:LYS:HE2	2:T:39:GLU:HB2	2.03	0.41
2:T:17:VAL:HG13	2:T:33:ALA:O	2.20	0.41
2:T:74:LYS:O	2:T:85:ILE:N	2.54	0.41
2:U:8:ASP:C	2:U:57:LEU:HD21	2.41	0.41
2:U:57:LEU:O	2:U:60:LYS:NZ	2.36	0.41
1:A:34:LYS:HB2	1:A:458:CYS:SG	2.61	0.41
1:A:136:VAL:HA	1:A:137:PRO:HD3	1.95	0.41
1:A:213:VAL:O	1:A:325:ILE:N	2.32	0.41
1:A:248:LEU:HD12	1:A:274:ALA:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:277:LYS:HB3	1:A:277:LYS:HE3	1.92	0.41
1:A:453:GLN:NE2	1:A:457:ASN:OD1	2.53	0.41
1:C:194:GLN:HG3	1:C:331:THR:HG22	2.02	0.41
1:C:219:PHE:HB3	1:C:317:LEU:HD13	2.02	0.41
1:C:323:VAL:HG22	1:C:332:ILE:HG12	2.03	0.41
1:C:517:THR:CG2	1:D:39:VAL:HG23	2.50	0.41
1:D:7:LYS:HB2	1:D:520:MET:HE2	2.02	0.41
1:D:230:ILE:HA	1:D:233:MET:HE2	2.03	0.41
1:D:239:ALA:HB1	1:D:314:LEU:CD1	2.50	0.41
1:E:308:GLU:HB2	1:E:311:LYS:HG3	2.03	0.41
1:E:397:GLU:O	1:E:401:HIS:ND1	2.54	0.41
1:F:270:ILE:HG21	2:T:25:ILE:HA	2.02	0.41
1:G:250:ILE:HG23	1:G:278:ALA:HA	2.02	0.41
1:H:124:VAL:HG11	1:H:508:ALA:CB	2.51	0.41
1:I:149:THR:HG21	1:I:156:GLU:OE2	2.20	0.41
1:J:219:PHE:CD2	1:J:245:LYS:HD2	2.56	0.41
1:J:347:ALA:O	1:J:351:GLN:HG3	2.20	0.41
1:J:519:CYS:HB3	1:K:38:VAL:HG22	2.02	0.41
1:K:149:THR:HG21	1:K:156:GLU:OE2	2.21	0.41
1:L:217:SER:HA	1:L:320:ALA:O	2.21	0.41
1:L:233:MET:HG2	1:L:262:LEU:HD21	2.02	0.41
1:L:263:VAL:HG12	1:L:267:MET:CE	2.51	0.41
1:L:274:ALA:HB1	1:L:325:ILE:CD1	2.51	0.41
1:L:431:GLY:HA3	1:L:436:GLN:HB3	2.02	0.41
1:L:447:MET:HE1	1:L:504:LEU:HD13	2.03	0.41
1:M:176:THR:O	1:M:379:ILE:N	2.45	0.41
1:M:289:LEU:HD12	1:M:289:LEU:HA	1.87	0.41
2:Q:10:VAL:HB	2:Q:86:MET:SD	2.61	0.41
2:S:75:SER:HA	2:S:83:VAL:O	2.21	0.41
2:U:40:VAL:HG22	2:U:63:ASP:O	2.20	0.41
1:A:54:VAL:HG11	1:A:82:ASN:HB2	2.02	0.41
1:A:144:ILE:HG21	1:A:163:ALA:HA	2.02	0.41
1:A:168:LYS:HB3	1:A:189:VAL:HG11	2.03	0.41
1:A:226:LYS:NZ	1:A:253:ASP:HB3	2.36	0.41
1:A:319:GLN:C	1:A:336:VAL:HG22	2.41	0.41
1:A:320:ALA:HA	1:A:336:VAL:H	1.86	0.41
1:C:111:MET:CE	1:C:435:ASP:HA	2.51	0.41
1:C:123:ALA:HB2	1:C:440:ILE:HG23	2.02	0.41
1:C:138:CYS:HB3	1:C:406:ALA:HB1	2.03	0.41
1:D:360:TYR:O	1:D:364:LYS:HG2	2.20	0.41
1:D:460:GLU:HB3	1:D:465:VAL:HG21	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:115:ASP:CG	1:E:433:ASN:HD21	2.23	0.41
1:E:230:ILE:HA	1:E:233:MET:HE2	2.03	0.41
1:E:287:ALA:HA	1:E:345:ARG:HH21	1.86	0.41
1:F:102:GLU:CD	1:F:445:ARG:HE	2.24	0.41
1:F:112:ASN:ND2	1:F:115:ASP:OD2	2.46	0.41
1:F:261:THR:HG23	2:T:27:LEU:HA	2.03	0.41
1:F:264:VAL:HG11	2:T:28:THR:HG21	2.02	0.41
1:F:430:ARG:HH22	1:F:441:LYS:CE	2.34	0.41
1:G:82:ASN:HB2	1:G:89:THR:HG21	2.03	0.41
1:G:217:SER:N	1:G:218:PRO:HD3	2.36	0.41
1:G:323:VAL:HG12	1:G:325:ILE:HD11	2.02	0.41
1:G:421:ARG:NH2	1:G:469:VAL:O	2.48	0.41
1:H:18:ARG:HB2	1:H:67:GLU:HG2	2.01	0.41
1:H:149:THR:HG22	1:H:154:SER:HA	2.03	0.41
1:H:150:ILE:HD12	6:H:601:ADP:N7	2.36	0.41
1:H:429:LEU:HB3	1:H:440:ILE:HG21	2.02	0.41
1:I:4:LYS:HE2	1:J:59:GLU:OE2	2.21	0.41
1:I:33:PRO:HD2	1:I:454:ILE:HG23	2.01	0.41
1:I:141:SER:HB3	1:I:163:ALA:HB1	2.03	0.41
1:I:455:VAL:CG1	1:I:460:GLU:HB2	2.48	0.41
1:J:70:GLY:HA2	1:J:73:MET:CE	2.50	0.41
1:J:479:ASN:CG	1:J:493:ILE:HD11	2.42	0.41
1:K:5:ASP:HB3	1:K:522:THR:CG2	2.51	0.41
1:K:149:THR:HG22	1:K:154:SER:HA	2.03	0.41
1:K:511:ALA:O	1:K:515:ILE:HG13	2.20	0.41
1:L:180:GLY:H	1:L:389:MET:CE	2.33	0.41
1:L:262:LEU:HD22	1:L:273:VAL:HG11	2.03	0.41
1:L:291:ASP:HA	1:L:345:ARG:HG2	2.03	0.41
1:M:13:ARG:HA	1:M:514:MET:HE1	2.03	0.41
1:M:220:ILE:HG13	1:M:248:LEU:HD22	2.03	0.41
1:M:262:LEU:HD13	1:M:273:VAL:HG11	2.03	0.41
1:M:271:VAL:O	1:M:273:VAL:HG23	2.21	0.41
1:M:324:VAL:HB	1:M:331:THR:CG2	2.51	0.41
1:M:325:ILE:O	1:M:325:ILE:HG13	2.21	0.41
1:M:342:ILE:O	1:M:346:VAL:HG23	2.20	0.41
1:M:411:VAL:HG12	1:M:496:PRO:HA	2.02	0.41
1:M:414:GLY:HA3	1:M:493:ILE:HG22	2.02	0.41
2:O:39:GLU:OE1	2:O:64:ILE:HG13	2.20	0.41
2:P:12:VAL:CG2	2:P:86:MET:HE1	2.48	0.41
2:P:49:LEU:HD12	2:P:53:GLU:HG2	2.03	0.41
2:P:94:ILE:HD11	2:Q:4:ARG:NE	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Q:14:ARG:HG3	2:Q:67:PHE:CZ	2.55	0.41
2:U:5:PRO:HB3	2:U:9:ARG:HB2	2.02	0.41
1:A:28:LYS:HD3	1:A:453:GLN:OE1	2.21	0.41
1:A:342:ILE:HG23	1:A:372:LEU:HD12	2.03	0.41
1:B:136:VAL:HA	1:B:137:PRO:HD3	1.94	0.41
1:B:152:ALA:O	1:B:395:ARG:HD2	2.20	0.41
1:B:305:ILE:HD12	1:B:305:ILE:HA	1.97	0.41
1:C:149:THR:HG21	1:C:156:GLU:OE2	2.20	0.41
1:C:264:VAL:HG21	2:Q:28:THR:HG21	2.03	0.41
1:D:28:LYS:O	1:D:453:GLN:NE2	2.54	0.41
1:D:178:GLU:OE2	1:D:380:LYS:HD2	2.21	0.41
1:D:234:LEU:N	1:D:235:PRO:HD2	2.36	0.41
1:E:100:ILE:HA	1:E:515:ILE:HD11	2.03	0.41
1:E:360:TYR:O	1:E:364:LYS:HG2	2.21	0.41
1:F:189:VAL:HA	1:F:377:ALA:HA	2.02	0.41
1:F:429:LEU:HD23	1:F:440:ILE:HG12	2.03	0.41
1:G:420:ILE:HG23	1:G:470:LYS:HG2	2.03	0.41
1:H:2:ALA:O	1:I:61:GLU:HB2	2.21	0.41
1:H:220:ILE:HG12	1:H:222:LEU:HG	2.02	0.41
1:I:519:CYS:O	1:J:38:VAL:HA	2.21	0.41
1:K:513:LEU:HD23	1:K:513:LEU:HA	1.93	0.41
1:K:526:LYS:HD2	1:K:526:LYS:HA	1.79	0.41
1:M:292:ILE:HA	1:M:295:LEU:HD12	2.03	0.41
1:N:221:LEU:N	1:N:248:LEU:O	2.29	0.41
2:R:25:ILE:HD12	2:R:25:ILE:H	1.86	0.41
1:A:10:ASN:O	1:A:14:VAL:HG23	2.21	0.40
1:A:236:VAL:O	1:A:240:VAL:HG23	2.21	0.40
1:A:250:ILE:HG23	1:A:278:ALA:HA	2.03	0.40
1:A:432:GLN:HG2	1:A:436:GLN:HG3	2.02	0.40
1:B:149:THR:HA	1:B:155:ASP:O	2.21	0.40
1:B:158:VAL:HG22	1:B:396:VAL:HG22	2.03	0.40
1:C:225:LYS:N	1:C:252:GLU:OE1	2.53	0.40
1:C:228:SER:O	1:C:255:GLU:HB2	2.21	0.40
1:C:308:GLU:N	1:C:311:LYS:HD3	2.36	0.40
1:D:146:GLN:CD	1:D:492:GLY:HA2	2.41	0.40
1:D:338:GLU:CD	1:D:338:GLU:H	2.24	0.40
1:E:193:MET:HB2	1:E:332:ILE:HB	2.02	0.40
1:E:213:VAL:O	1:E:325:ILE:N	2.35	0.40
1:E:223:ALA:HB3	1:E:251:ALA:HB2	2.03	0.40
1:E:243:ALA:HB2	1:E:314:LEU:HD21	2.03	0.40
1:F:41:ASP:HA	1:F:47:PRO:HB3	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:169:VAL:HG11	1:F:175:ILE:HG13	2.02	0.40
1:F:234:LEU:HD12	1:F:238:GLU:OE2	2.21	0.40
1:G:286:LYS:HA	1:G:286:LYS:HD3	1.81	0.40
1:G:479:ASN:HB3	1:G:482:THR:HB	2.02	0.40
1:H:352:GLN:HA	1:H:355:GLU:CG	2.51	0.40
1:J:81:ALA:HA	1:J:506:TYR:CD2	2.56	0.40
1:J:289:LEU:HD23	1:J:300:VAL:HG22	2.02	0.40
1:J:360:TYR:O	1:J:364:LYS:HG2	2.21	0.40
1:K:122:LYS:HZ3	1:K:431:GLY:HA2	1.86	0.40
1:K:194:GLN:HA	1:K:331:THR:HA	2.03	0.40
1:K:252:GLU:HG3	1:K:285:ARG:CZ	2.52	0.40
1:L:353:ILE:HG23	1:L:362:ARG:HD2	2.04	0.40
1:M:219:PHE:CE2	1:M:245:LYS:HD2	2.56	0.40
1:N:192:GLY:N	1:N:375:GLY:HA2	2.24	0.40
1:N:493:ILE:HD13	6:N:601:ADP:N1	2.36	0.40
2:P:40:VAL:HG11	2:P:59:VAL:HG11	2.04	0.40
2:T:5:PRO:HB3	2:T:85:ILE:HD11	2.03	0.40
2:U:4:ARG:NH2	2:U:45:ASN:HB3	2.36	0.40
2:U:49:LEU:N	2:U:53:GLU:O	2.35	0.40
1:A:116:LEU:HD21	1:A:438:VAL:HG12	2.03	0.40
1:A:383:ALA:HB1	1:A:388:GLU:HB3	2.03	0.40
1:A:479:ASN:O	1:A:483:GLU:N	2.54	0.40
1:B:138:CYS:HB3	1:B:406:ALA:HB1	2.04	0.40
1:B:419:LEU:HD23	1:B:419:LEU:HA	1.94	0.40
1:C:197:ARG:HD2	1:C:277:LYS:HB2	2.03	0.40
1:C:304:GLU:HG3	1:D:203:TYR:CE2	2.56	0.40
1:D:12:ALA:O	1:D:16:MET:HG2	2.21	0.40
1:D:33:PRO:HB2	1:D:481:ALA:HB2	2.03	0.40
1:D:255:GLU:HG2	1:D:257:GLU:H	1.86	0.40
1:D:452:ARG:NH1	1:D:466:ALA:HB1	2.36	0.40
1:E:430:ARG:HH12	1:E:441:LYS:HE2	1.86	0.40
1:G:115:ASP:O	1:G:436:GLN:HG2	2.20	0.40
1:H:289:LEU:HD23	1:H:300:VAL:HG22	2.04	0.40
1:I:42:LYS:H	1:I:47:PRO:HB3	1.85	0.40
1:I:140:ASP:O	1:I:144:ILE:HG13	2.20	0.40
1:I:247:LEU:O	1:I:273:VAL:HA	2.21	0.40
1:I:252:GLU:HG3	1:I:285:ARG:CZ	2.50	0.40
1:K:127:ALA:HB3	1:K:504:LEU:HD21	2.03	0.40
1:K:162:ILE:HD11	1:K:396:VAL:HG13	2.02	0.40
1:K:284:ARG:CZ	1:K:364:LYS:HD2	2.51	0.40
1:K:324:VAL:HB	1:K:331:THR:CG2	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:349:ILE:HG12	1:K:368:ARG:NH2	2.36	0.40
1:L:33:PRO:HD3	6:L:601:ADP:N9	2.37	0.40
1:L:295:LEU:HA	1:L:342:ILE:HG12	2.03	0.40
1:N:197:ARG:HD2	1:N:277:LYS:HB3	2.03	0.40
1:N:421:ARG:HH12	1:N:469:VAL:C	2.25	0.40
2:P:37:ARG:HA	2:P:65:VAL:O	2.22	0.40
2:R:67:PHE:HA	2:R:91:ILE:HA	2.02	0.40
1:B:114:MET:HB3	1:B:118:ARG:CZ	2.51	0.40
1:B:292:ILE:O	1:B:296:THR:OG1	2.28	0.40
1:B:323:VAL:HA	1:B:331:THR:O	2.21	0.40
3:B:601:ATP:H8	3:B:601:ATP:H5'2	1.85	0.40
1:C:82:ASN:HB2	1:C:89:THR:HG21	2.03	0.40
1:C:420:ILE:CG2	1:C:470:LYS:HG2	2.51	0.40
1:D:20:VAL:HA	1:D:74:VAL:HG11	2.03	0.40
1:E:20:VAL:HA	1:E:74:VAL:HG11	2.03	0.40
1:E:31:LEU:HD23	1:E:453:GLN:HG3	2.04	0.40
1:E:194:GLN:HE21	1:E:329:THR:HG21	1.85	0.40
1:E:197:ARG:CZ	1:E:279:PRO:HA	2.51	0.40
1:E:203:TYR:CB	1:E:263:VAL:HB	2.51	0.40
1:E:495:ASP:OD2	3:E:601:ATP:O2'	2.33	0.40
1:E:513:LEU:HD11	1:F:388:GLU:HA	2.02	0.40
1:F:200:LEU:HD21	1:F:277:LYS:HG3	2.03	0.40
1:F:260:ALA:HA	1:F:263:VAL:HG22	2.02	0.40
1:I:30:THR:HA	1:I:35:GLY:HA3	2.03	0.40
1:I:81:ALA:HA	1:I:506:TYR:CD2	2.56	0.40
1:I:98:ALA:O	1:I:102:GLU:HG2	2.21	0.40
1:I:320:ALA:HA	1:I:335:GLY:HA2	2.04	0.40
1:J:248:LEU:HD21	1:J:250:ILE:HD11	2.03	0.40
1:K:479:ASN:ND2	1:K:493:ILE:HD11	2.37	0.40
1:L:348:GLN:HA	1:L:351:GLN:OE1	2.20	0.40
1:M:526:LYS:HD2	1:M:526:LYS:HA	1.80	0.40
1:N:7:LYS:HE3	1:N:15:LYS:HE3	2.03	0.40
1:N:30:THR:HA	1:N:35:GLY:HA3	2.04	0.40
1:N:102:GLU:HG3	1:N:445:ARG:NH1	2.36	0.40
1:N:246:PRO:HA	1:N:272:LYS:HB2	2.04	0.40
2:Q:40:VAL:HG22	2:Q:63:ASP:O	2.22	0.40
2:T:27:LEU:HB3	2:T:31:ALA:HB3	2.02	0.40
1:A:16:MET:HE3	1:A:69:MET:SD	2.61	0.40
1:A:136:VAL:O	1:A:411:VAL:N	2.32	0.40
1:A:479:ASN:N	1:A:484:GLU:O	2.53	0.40
1:B:115:ASP:O	1:B:436:GLN:HG2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:455:VAL:HG21	1:B:465:VAL:HG11	2.03	0.40
1:C:163:ALA:HA	1:C:166:MET:HE3	2.03	0.40
1:C:183:LEU:HA	1:C:383:ALA:N	2.37	0.40
1:C:392:LYS:O	1:C:396:VAL:HG23	2.21	0.40
1:C:417:VAL:O	1:C:421:ARG:HG2	2.21	0.40
1:D:82:ASN:HB2	1:D:89:THR:HG21	2.03	0.40
1:D:114:MET:CE	1:E:34:LYS:HG2	2.51	0.40
1:D:462:PRO:O	1:D:466:ALA:HB3	2.21	0.40
1:E:218:PRO:HG2	1:E:323:VAL:HG23	2.02	0.40
1:E:233:MET:O	1:E:237:LEU:HB2	2.21	0.40
1:E:420:ILE:CG2	1:E:470:LYS:HG2	2.51	0.40
1:F:161:LEU:HD12	1:F:161:LEU:HA	1.88	0.40
1:F:223:ALA:HB1	1:F:225:LYS:CG	2.51	0.40
1:F:413:ALA:HB1	1:F:488:MET:HG3	2.04	0.40
1:H:214:GLU:OE1	1:H:324:VAL:HG22	2.22	0.40
1:I:414:GLY:O	1:I:488:MET:HG3	2.21	0.40
1:J:116:LEU:HD23	1:J:435:ASP:O	2.21	0.40
1:K:230:ILE:HG12	1:K:261:THR:HG21	2.03	0.40
1:K:325:ILE:O	1:K:325:ILE:HG13	2.21	0.40
1:L:81:ALA:HA	1:L:506:TYR:CD2	2.56	0.40
1:L:468:THR:HB	1:L:485:TYR:CE2	2.56	0.40
1:M:351:GLN:HA	1:M:354:GLU:OE2	2.21	0.40
1:N:227:ILE:HG12	1:N:309:LEU:HD11	2.03	0.40
1:N:447:MET:O	1:N:450:PRO:HD2	2.21	0.40
2:O:10:VAL:HG11	2:O:40:VAL:HG12	2.03	0.40
2:P:47:ARG:NH2	2:P:88:GLU:HB3	2.36	0.40
2:Q:6:LEU:O	2:Q:9:ARG:HG3	2.22	0.40
2:T:11:ILE:N	2:T:42:ALA:O	2.44	0.40
1:A:147:VAL:HG22	1:A:494:LEU:HB2	2.03	0.40
1:A:513:LEU:HD12	1:B:387:VAL:HG23	2.03	0.40
1:B:145:ALA:HA	1:B:159:GLY:C	2.41	0.40
1:B:455:VAL:CG1	1:B:460:GLU:HB2	2.51	0.40
1:C:31:LEU:HD13	1:C:90:THR:HB	2.04	0.40
1:C:220:ILE:HG22	1:C:222:LEU:HG	2.03	0.40
1:C:455:VAL:CG1	1:C:460:GLU:HB2	2.51	0.40
1:D:154:SER:N	7:D:2018:HOH:O	2.54	0.40
1:D:235:PRO:HG3	1:D:310:GLU:O	2.22	0.40
1:D:249:ILE:HB	1:D:275:ALA:HA	2.04	0.40
1:D:297:GLY:HA2	1:D:338:GLU:OE2	2.21	0.40
1:F:342:ILE:HG23	1:F:372:LEU:CG	2.41	0.40
1:G:294:THR:HG22	1:G:341:ALA:HB1	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:313:THR:OG1	1:G:315:GLU:OE1	2.35	0.40
1:H:39:VAL:HG22	1:H:49:ILE:HG12	2.04	0.40
1:H:102:GLU:HB2	1:H:442:VAL:HG13	2.04	0.40
1:H:262:LEU:HD22	1:H:273:VAL:HG21	2.03	0.40
1:I:287:ALA:HB1	1:I:368:ARG:NH1	2.37	0.40
1:J:230:ILE:HD13	1:J:261:THR:HB	2.03	0.40
1:K:204:PHE:CE2	1:K:275:ALA:HB3	2.56	0.40
1:L:20:VAL:HG13	1:L:74:VAL:HG21	2.04	0.40
1:L:519:CYS:O	1:M:38:VAL:HA	2.21	0.40
1:M:33:PRO:HG3	6:M:601:ADP:C6	2.56	0.40
1:M:115:ASP:CG	1:M:118:ARG:HH21	2.24	0.40
1:N:291:ASP:HA	1:N:345:ARG:HG2	2.02	0.40
1:N:295:LEU:HD21	1:N:372:LEU:HD13	2.04	0.40
2:Q:67:PHE:HA	2:Q:91:ILE:HA	2.03	0.40
2:S:14:ARG:HH21	2:S:67:PHE:HE2	1.69	0.40
2:S:60:LYS:N	2:S:63:ASP:OD2	2.35	0.40
2:T:25:ILE:HG22	2:T:27:LEU:HD22	2.04	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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	522/547 (95%)	504 (97%)	18 (3%)	0	100	100
1	B	522/547 (95%)	509 (98%)	13 (2%)	0	100	100
1	C	522/547 (95%)	506 (97%)	16 (3%)	0	100	100
1	D	522/547 (95%)	510 (98%)	12 (2%)	0	100	100
1	E	522/547 (95%)	507 (97%)	15 (3%)	0	100	100
1	F	522/547 (95%)	507 (97%)	15 (3%)	0	100	100
1	G	522/547 (95%)	510 (98%)	12 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	H	523/547 (96%)	500 (96%)	23 (4%)	0	100	100
1	I	523/547 (96%)	500 (96%)	23 (4%)	0	100	100
1	J	523/547 (96%)	500 (96%)	23 (4%)	0	100	100
1	K	523/547 (96%)	500 (96%)	23 (4%)	0	100	100
1	L	523/547 (96%)	499 (95%)	24 (5%)	0	100	100
1	M	523/547 (96%)	504 (96%)	19 (4%)	0	100	100
1	N	523/547 (96%)	502 (96%)	21 (4%)	0	100	100
2	O	93/97 (96%)	87 (94%)	6 (6%)	0	100	100
2	P	93/97 (96%)	88 (95%)	5 (5%)	0	100	100
2	Q	93/97 (96%)	89 (96%)	4 (4%)	0	100	100
2	R	93/97 (96%)	87 (94%)	6 (6%)	0	100	100
2	S	93/97 (96%)	85 (91%)	8 (9%)	0	100	100
2	T	93/97 (96%)	90 (97%)	3 (3%)	0	100	100
2	U	93/97 (96%)	89 (96%)	4 (4%)	0	100	100
All	All	7966/8337 (96%)	7673 (96%)	293 (4%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains ⓘ

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	403/414 (97%)	403 (100%)	0	100	100
1	B	403/414 (97%)	403 (100%)	0	100	100
1	C	403/414 (97%)	403 (100%)	0	100	100
1	D	403/414 (97%)	403 (100%)	0	100	100
1	E	403/414 (97%)	403 (100%)	0	100	100
1	F	403/414 (97%)	403 (100%)	0	100	100
1	G	403/414 (97%)	403 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	H	405/414 (98%)	404 (100%)	1 (0%)	92	94
1	I	405/414 (98%)	403 (100%)	2 (0%)	86	89
1	J	405/414 (98%)	404 (100%)	1 (0%)	92	94
1	K	405/414 (98%)	404 (100%)	1 (0%)	92	94
1	L	405/414 (98%)	403 (100%)	2 (0%)	86	89
1	M	405/414 (98%)	403 (100%)	2 (0%)	86	89
1	N	405/414 (98%)	403 (100%)	2 (0%)	86	89
2	O	73/80 (91%)	73 (100%)	0	100	100
2	P	73/80 (91%)	73 (100%)	0	100	100
2	Q	73/80 (91%)	73 (100%)	0	100	100
2	R	73/80 (91%)	73 (100%)	0	100	100
2	S	73/80 (91%)	73 (100%)	0	100	100
2	T	73/80 (91%)	73 (100%)	0	100	100
2	U	73/80 (91%)	73 (100%)	0	100	100
All	All	6167/6356 (97%)	6156 (100%)	11 (0%)	91	94

All (11) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	H	231	ARG
1	I	231	ARG
1	I	311	LYS
1	J	231	ARG
1	K	231	ARG
1	L	231	ARG
1	L	311	LYS
1	M	231	ARG
1	M	311	LYS
1	N	231	ARG
1	N	311	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (14) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	453	GLN
1	B	453	GLN

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Mol	Chain	Res	Type
1	C	453	GLN
1	D	194	GLN
1	D	453	GLN
1	E	112	ASN
1	E	453	GLN
1	F	343	GLN
1	F	453	GLN
1	G	453	GLN
1	J	343	GLN
1	L	21	ASN
1	L	97	GLN
1	L	343	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 oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 42 ligands modelled in this entry, 28 are monoatomic - leaving 14 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
6	ADP	J	601	5,4	24,29,29	0.92	1 (4%)	29,45,45	1.48	4 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	ATP	B	601	5,4	26,33,33	0.60	0	31,52,52	0.75	2 (6%)
3	ATP	F	601	5,4	26,33,33	0.61	0	31,52,52	0.75	2 (6%)
6	ADP	M	601	5,4	24,29,29	0.93	1 (4%)	29,45,45	1.50	4 (13%)
3	ATP	E	601	5,4	26,33,33	0.60	0	31,52,52	0.75	2 (6%)
6	ADP	N	601	5,4	24,29,29	0.91	1 (4%)	29,45,45	1.49	4 (13%)
3	ATP	G	601	5,4	26,33,33	0.60	0	31,52,52	0.74	2 (6%)
6	ADP	H	601	5,4	24,29,29	0.91	1 (4%)	29,45,45	1.50	4 (13%)
3	ATP	A	601	5,4	26,33,33	0.60	0	31,52,52	0.75	2 (6%)
6	ADP	K	601	5,4	24,29,29	0.91	1 (4%)	29,45,45	1.48	4 (13%)
6	ADP	I	601	5,4	24,29,29	0.91	1 (4%)	29,45,45	1.50	4 (13%)
6	ADP	L	601	5,4	24,29,29	0.90	1 (4%)	29,45,45	1.53	4 (13%)
3	ATP	D	601	5,4	26,33,33	0.60	0	31,52,52	0.76	2 (6%)
3	ATP	C	601	5	26,33,33	0.61	0	31,52,52	0.74	2 (6%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	ADP	J	601	5,4	-	6/12/32/32	0/3/3/3
3	ATP	B	601	5,4	-	5/18/38/38	0/3/3/3
3	ATP	F	601	5,4	-	4/18/38/38	0/3/3/3
6	ADP	M	601	5,4	-	5/12/32/32	0/3/3/3
3	ATP	E	601	5,4	-	3/18/38/38	0/3/3/3
6	ADP	N	601	5,4	-	5/12/32/32	0/3/3/3
3	ATP	G	601	5,4	-	6/18/38/38	0/3/3/3
6	ADP	H	601	5,4	-	5/12/32/32	0/3/3/3
3	ATP	A	601	5,4	-	2/18/38/38	0/3/3/3
6	ADP	K	601	5,4	-	6/12/32/32	0/3/3/3
6	ADP	I	601	5,4	-	6/12/32/32	0/3/3/3
6	ADP	L	601	5,4	-	5/12/32/32	0/3/3/3
3	ATP	D	601	5,4	-	6/18/38/38	0/3/3/3
3	ATP	C	601	5	-	4/18/38/38	0/3/3/3

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	J	601	ADP	C5-C4	2.41	1.47	1.40
6	L	601	ADP	C5-C4	2.39	1.47	1.40
6	M	601	ADP	C5-C4	2.38	1.47	1.40
6	N	601	ADP	C5-C4	2.38	1.47	1.40
6	I	601	ADP	C5-C4	2.37	1.47	1.40
6	H	601	ADP	C5-C4	2.37	1.47	1.40
6	K	601	ADP	C5-C4	2.37	1.47	1.40

All (42) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	K	601	ADP	PA-O3A-PB	-3.79	119.84	132.83
6	I	601	ADP	PA-O3A-PB	-3.77	119.91	132.83
6	L	601	ADP	PA-O3A-PB	-3.74	119.99	132.83
6	H	601	ADP	PA-O3A-PB	-3.74	120.01	132.83
6	J	601	ADP	PA-O3A-PB	-3.72	120.07	132.83
6	M	601	ADP	PA-O3A-PB	-3.70	120.12	132.83
6	N	601	ADP	PA-O3A-PB	-3.69	120.17	132.83
6	L	601	ADP	N3-C2-N1	-3.43	123.31	128.68
6	J	601	ADP	C3'-C2'-C1'	3.36	106.03	100.98
6	I	601	ADP	C3'-C2'-C1'	3.33	106.00	100.98
6	H	601	ADP	C3'-C2'-C1'	3.29	105.93	100.98
6	M	601	ADP	C3'-C2'-C1'	3.27	105.90	100.98
6	M	601	ADP	N3-C2-N1	-3.26	123.58	128.68
6	K	601	ADP	C3'-C2'-C1'	3.25	105.87	100.98
6	H	601	ADP	N3-C2-N1	-3.24	123.61	128.68
6	N	601	ADP	N3-C2-N1	-3.24	123.62	128.68
6	N	601	ADP	C3'-C2'-C1'	3.22	105.83	100.98
6	L	601	ADP	C3'-C2'-C1'	3.22	105.82	100.98
6	I	601	ADP	N3-C2-N1	-3.22	123.65	128.68
6	J	601	ADP	N3-C2-N1	-3.11	123.82	128.68
6	K	601	ADP	N3-C2-N1	-3.08	123.86	128.68
6	H	601	ADP	C4-C5-N7	-2.93	106.35	109.40
6	L	601	ADP	C4-C5-N7	-2.87	106.41	109.40
6	K	601	ADP	C4-C5-N7	-2.76	106.52	109.40
6	N	601	ADP	C4-C5-N7	-2.75	106.53	109.40
6	J	601	ADP	C4-C5-N7	-2.75	106.54	109.40
6	I	601	ADP	C4-C5-N7	-2.38	106.92	109.40
3	D	601	ATP	C5-C6-N6	2.32	123.88	120.35
3	A	601	ATP	C5-C6-N6	2.31	123.86	120.35
6	M	601	ADP	C4-C5-N7	-2.29	107.01	109.40
3	B	601	ATP	C5-C6-N6	2.29	123.83	120.35
3	F	601	ATP	C5-C6-N6	2.26	123.79	120.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	E	601	ATP	C5-C6-N6	2.26	123.79	120.35
3	G	601	ATP	C5-C6-N6	2.25	123.78	120.35
3	C	601	ATP	C5-C6-N6	2.25	123.77	120.35
3	F	601	ATP	PB-O3B-PG	2.07	139.94	132.83
3	C	601	ATP	PB-O3B-PG	2.06	139.90	132.83
3	D	601	ATP	PB-O3B-PG	2.06	139.90	132.83
3	A	601	ATP	PB-O3B-PG	2.06	139.88	132.83
3	B	601	ATP	PB-O3B-PG	2.05	139.87	132.83
3	E	601	ATP	PB-O3B-PG	2.05	139.85	132.83
3	G	601	ATP	PB-O3B-PG	2.04	139.83	132.83

There are no chirality outliers.

All (68) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	B	601	ATP	C3'-C4'-C5'-O5'
3	D	601	ATP	C5'-O5'-PA-O2A
3	D	601	ATP	C3'-C4'-C5'-O5'
3	E	601	ATP	C3'-C4'-C5'-O5'
3	G	601	ATP	C3'-C4'-C5'-O5'
6	H	601	ADP	C5'-O5'-PA-O3A
6	I	601	ADP	C5'-O5'-PA-O1A
6	I	601	ADP	C5'-O5'-PA-O3A
6	J	601	ADP	C5'-O5'-PA-O1A
6	J	601	ADP	C5'-O5'-PA-O3A
6	J	601	ADP	O4'-C4'-C5'-O5'
6	K	601	ADP	C5'-O5'-PA-O1A
6	K	601	ADP	C5'-O5'-PA-O3A
6	L	601	ADP	C5'-O5'-PA-O1A
6	L	601	ADP	O4'-C4'-C5'-O5'
6	M	601	ADP	C5'-O5'-PA-O1A
6	M	601	ADP	C5'-O5'-PA-O3A
6	N	601	ADP	C5'-O5'-PA-O1A
6	N	601	ADP	C5'-O5'-PA-O3A
6	H	601	ADP	O4'-C4'-C5'-O5'
6	H	601	ADP	C3'-C4'-C5'-O5'
6	I	601	ADP	O4'-C4'-C5'-O5'
6	J	601	ADP	C3'-C4'-C5'-O5'
6	K	601	ADP	O4'-C4'-C5'-O5'
6	M	601	ADP	O4'-C4'-C5'-O5'
6	N	601	ADP	O4'-C4'-C5'-O5'
3	D	601	ATP	O4'-C4'-C5'-O5'

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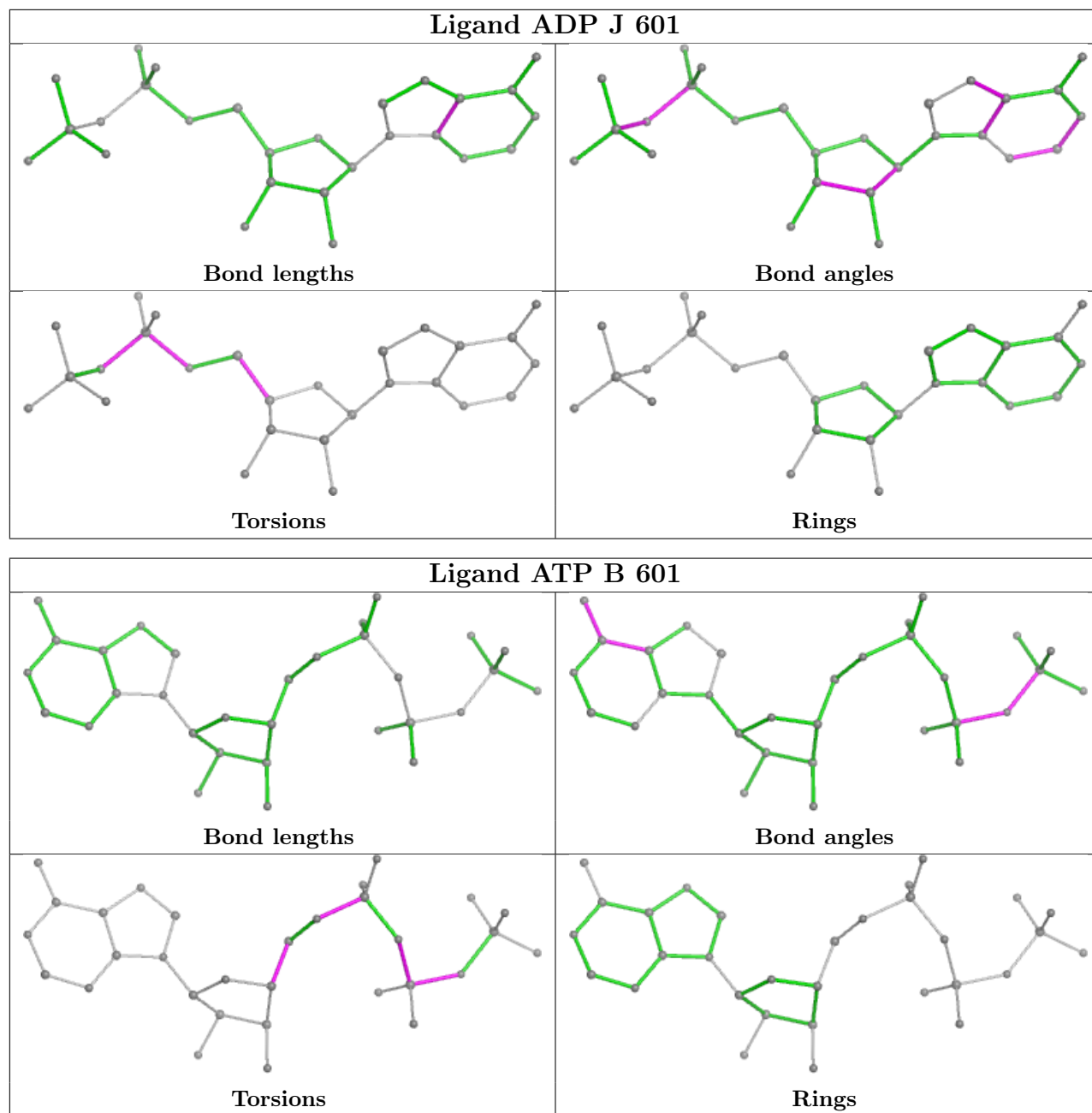
Mol	Chain	Res	Type	Atoms
6	K	601	ADP	C3'-C4'-C5'-O5'
6	L	601	ADP	C3'-C4'-C5'-O5'
6	M	601	ADP	C3'-C4'-C5'-O5'
6	I	601	ADP	C3'-C4'-C5'-O5'
6	N	601	ADP	C3'-C4'-C5'-O5'
3	A	601	ATP	C3'-C4'-C5'-O5'
3	B	601	ATP	O4'-C4'-C5'-O5'
3	E	601	ATP	O4'-C4'-C5'-O5'
3	G	601	ATP	O4'-C4'-C5'-O5'
3	C	601	ATP	PB-O3A-PA-O1A
3	F	601	ATP	PB-O3B-PG-O2G
3	C	601	ATP	PG-O3B-PB-O1B
6	K	601	ADP	PB-O3A-PA-O2A
3	D	601	ATP	C5'-O5'-PA-O1A
6	H	601	ADP	C5'-O5'-PA-O1A
3	F	601	ATP	C3'-C4'-C5'-O5'
3	A	601	ATP	O4'-C4'-C5'-O5'
3	F	601	ATP	PA-O3A-PB-O1B
6	H	601	ADP	PB-O3A-PA-O2A
6	I	601	ADP	PB-O3A-PA-O2A
6	J	601	ADP	PB-O3A-PA-O2A
6	L	601	ADP	PB-O3A-PA-O2A
6	M	601	ADP	PB-O3A-PA-O2A
6	N	601	ADP	PB-O3A-PA-O2A
3	C	601	ATP	PB-O3A-PA-O2A
3	G	601	ATP	PA-O3A-PB-O1B
3	E	601	ATP	PB-O3B-PG-O2G
3	G	601	ATP	PG-O3B-PB-O3A
3	D	601	ATP	C5'-O5'-PA-O3A
6	L	601	ADP	C5'-O5'-PA-O3A
3	B	601	ATP	PG-O3B-PB-O2B
3	B	601	ATP	PA-O3A-PB-O2B
3	C	601	ATP	PG-O3B-PB-O2B
3	D	601	ATP	PA-O3A-PB-O2B
3	F	601	ATP	PA-O3A-PB-O2B
3	G	601	ATP	PA-O3A-PB-O2B
6	I	601	ADP	PB-O3A-PA-O1A
6	J	601	ADP	PB-O3A-PA-O1A
6	K	601	ADP	PB-O3A-PA-O1A
3	B	601	ATP	C5'-O5'-PA-O1A
3	G	601	ATP	C5'-O5'-PA-O1A

There are no ring outliers.

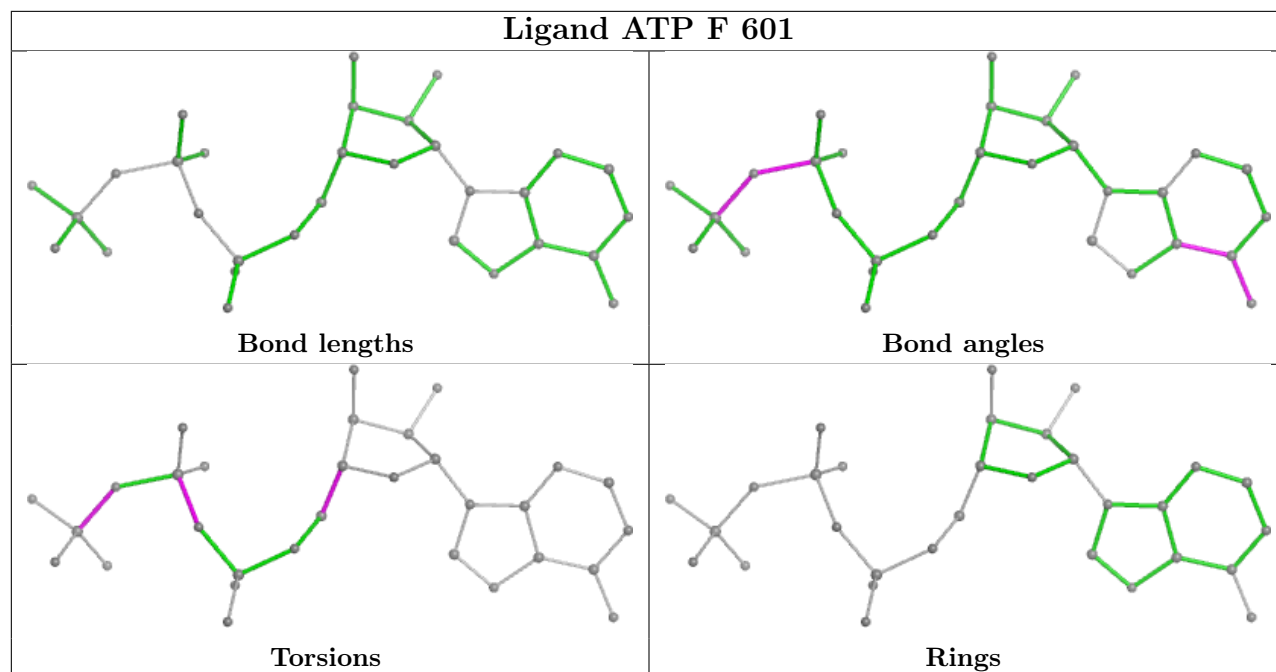
14 monomers are involved in 81 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
6	J	601	ADP	5	0
3	B	601	ATP	8	0
3	F	601	ATP	6	0
6	M	601	ADP	4	0
3	E	601	ATP	8	0
6	N	601	ADP	7	0
3	G	601	ATP	7	0
6	H	601	ADP	5	0
3	A	601	ATP	6	0
6	K	601	ADP	5	0
6	I	601	ADP	4	0
6	L	601	ADP	4	0
3	D	601	ATP	6	0
3	C	601	ATP	6	0

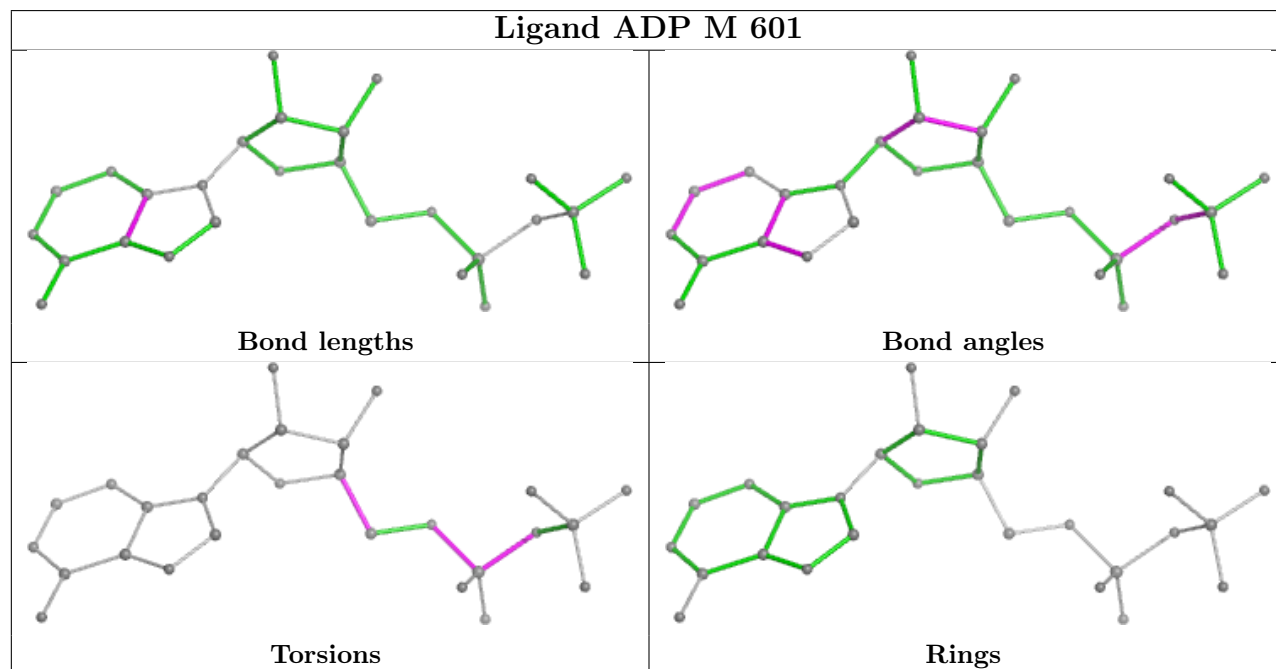
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



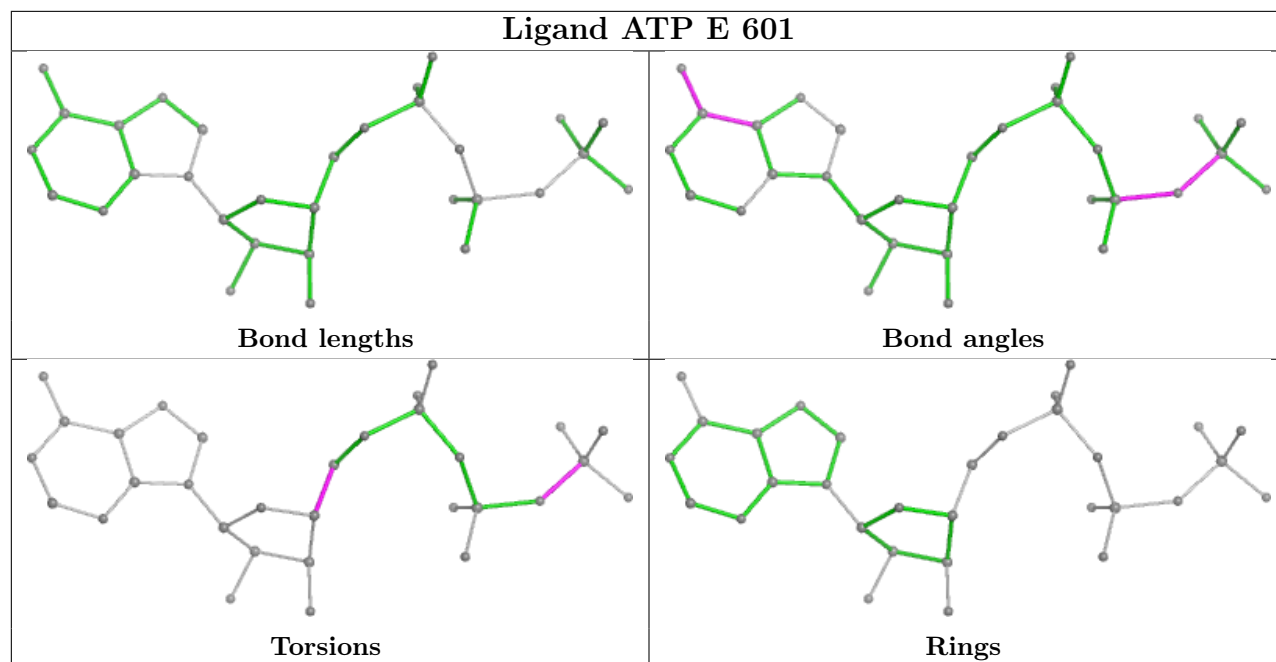
Ligand ATP F 601



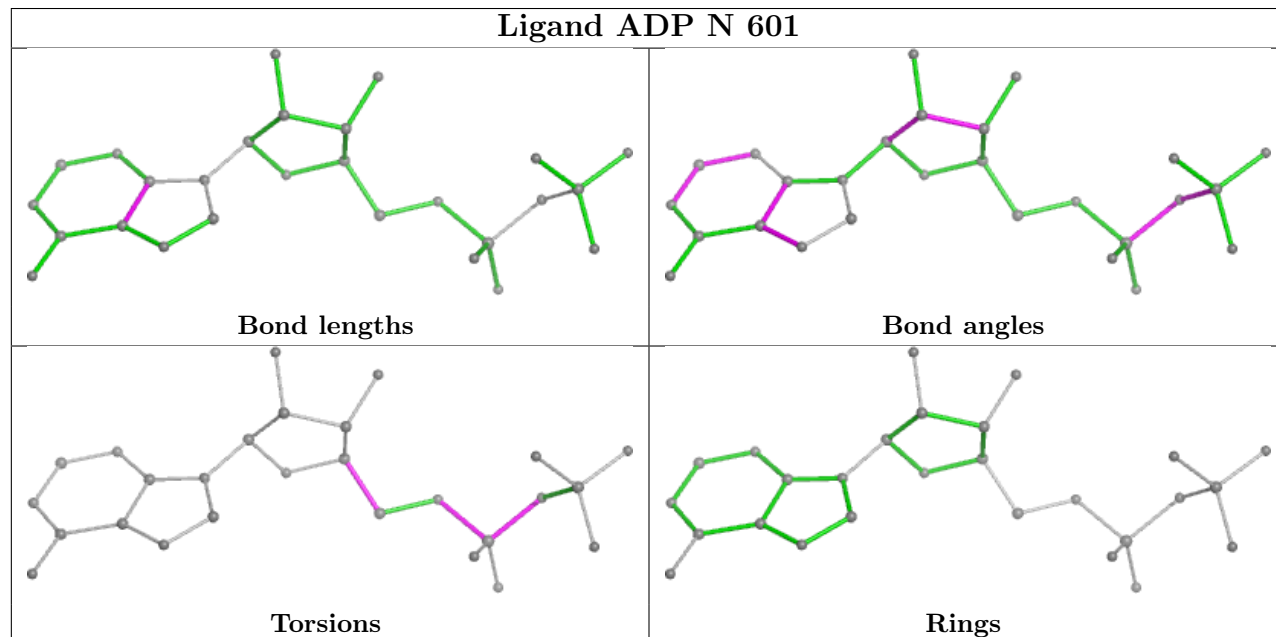
Ligand ADP M 601

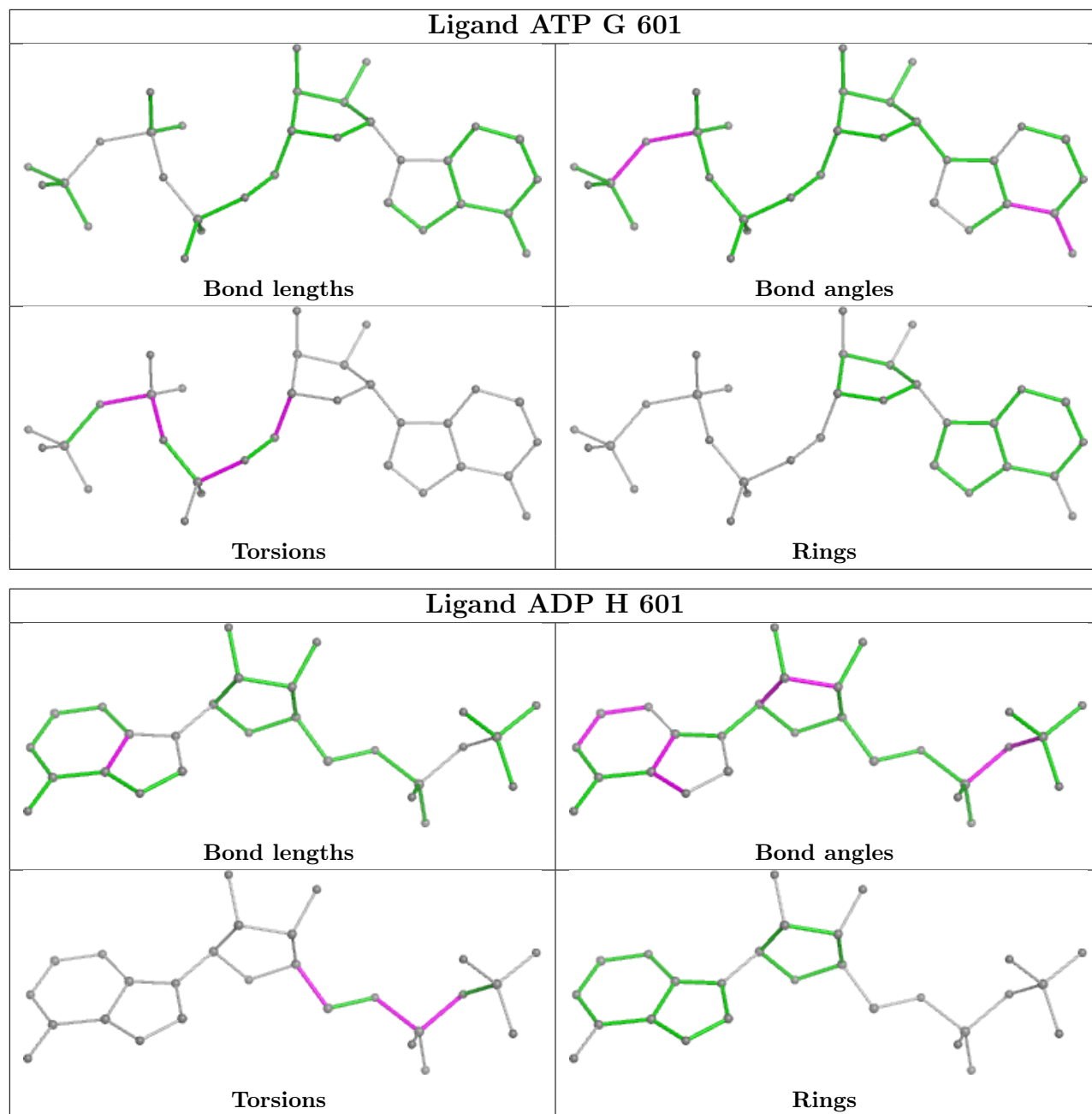


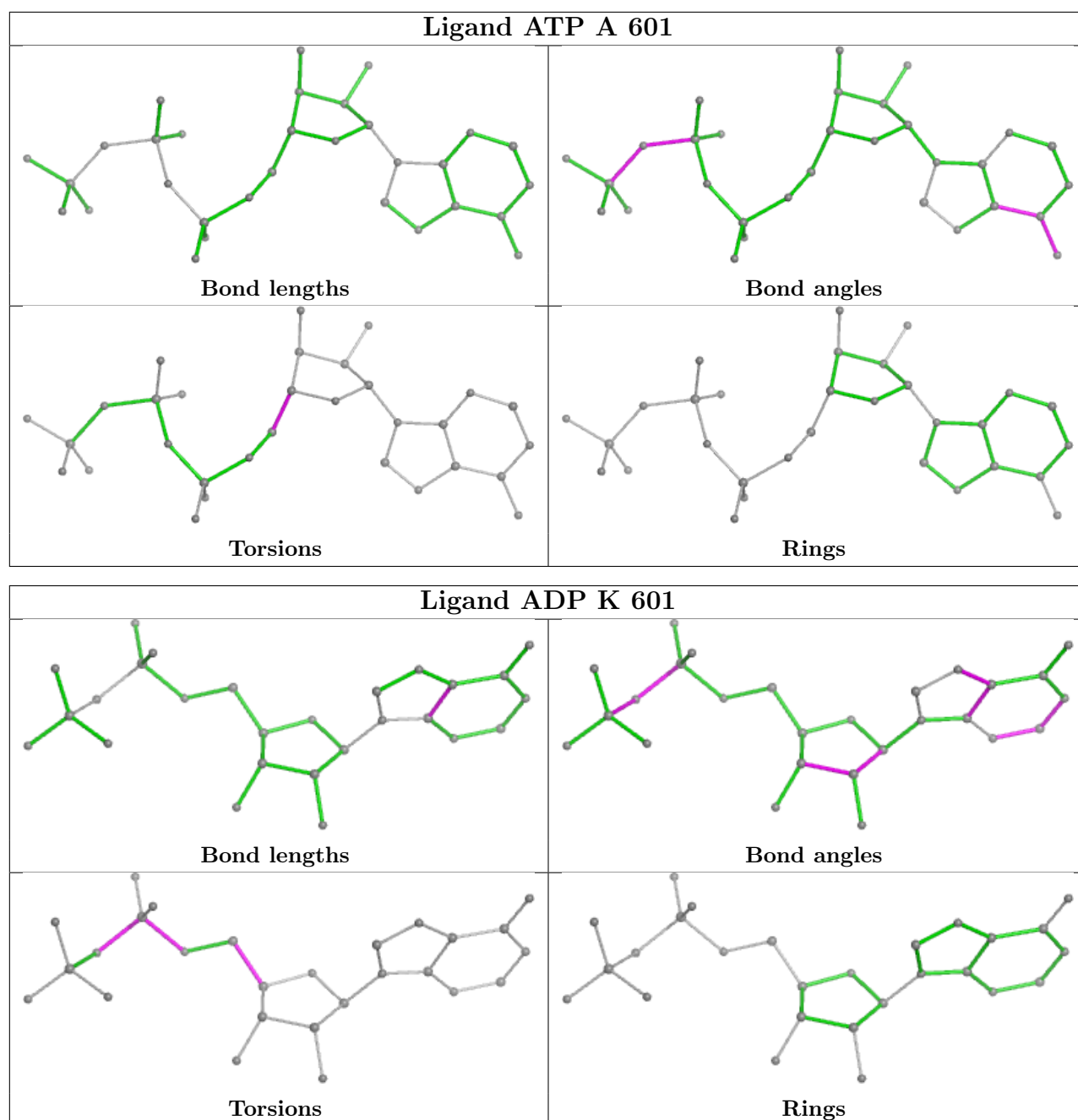
Ligand ATP E 601



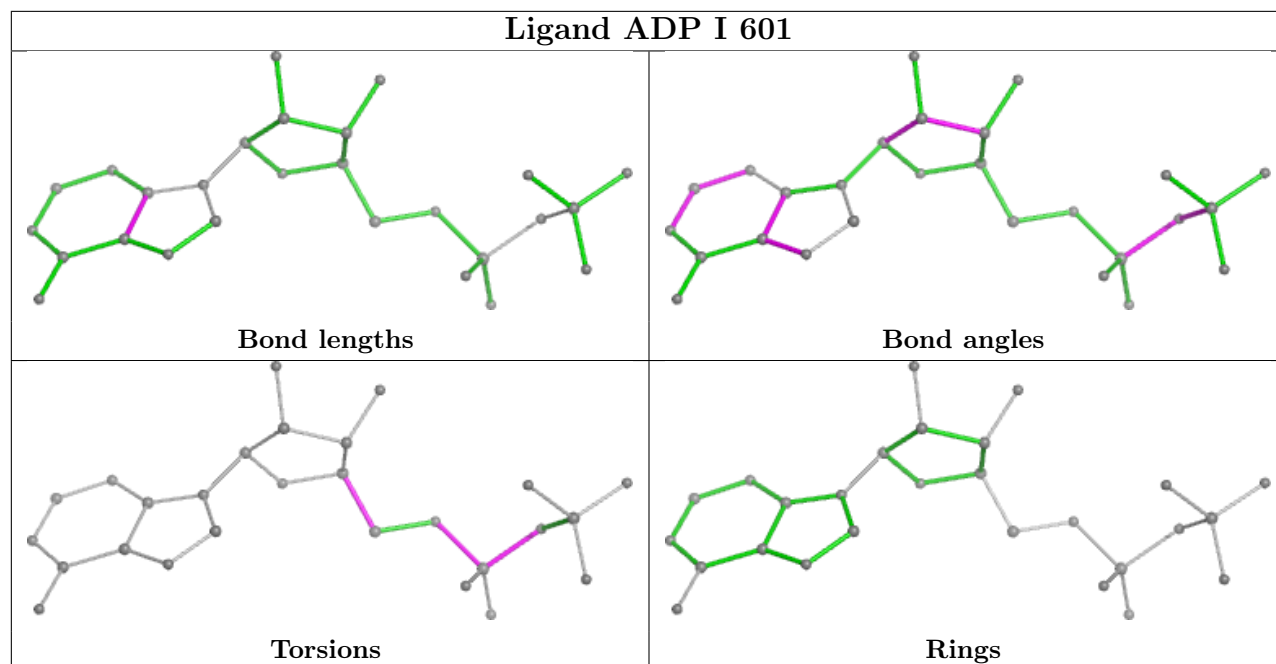
Ligand ADP N 601



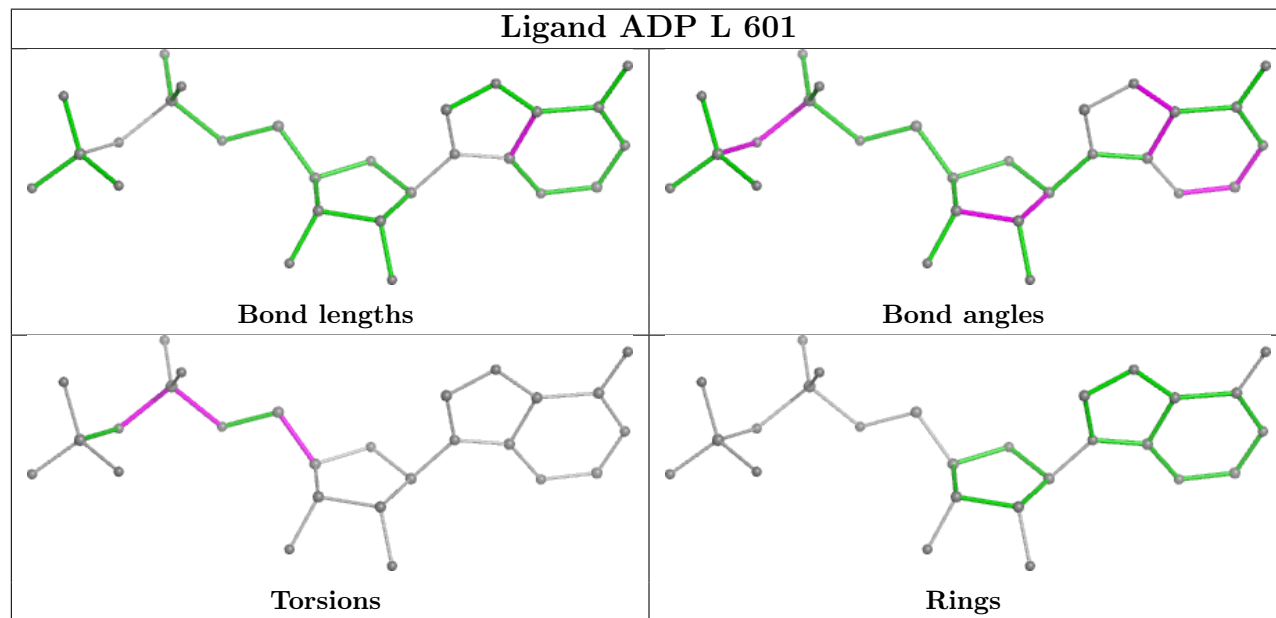


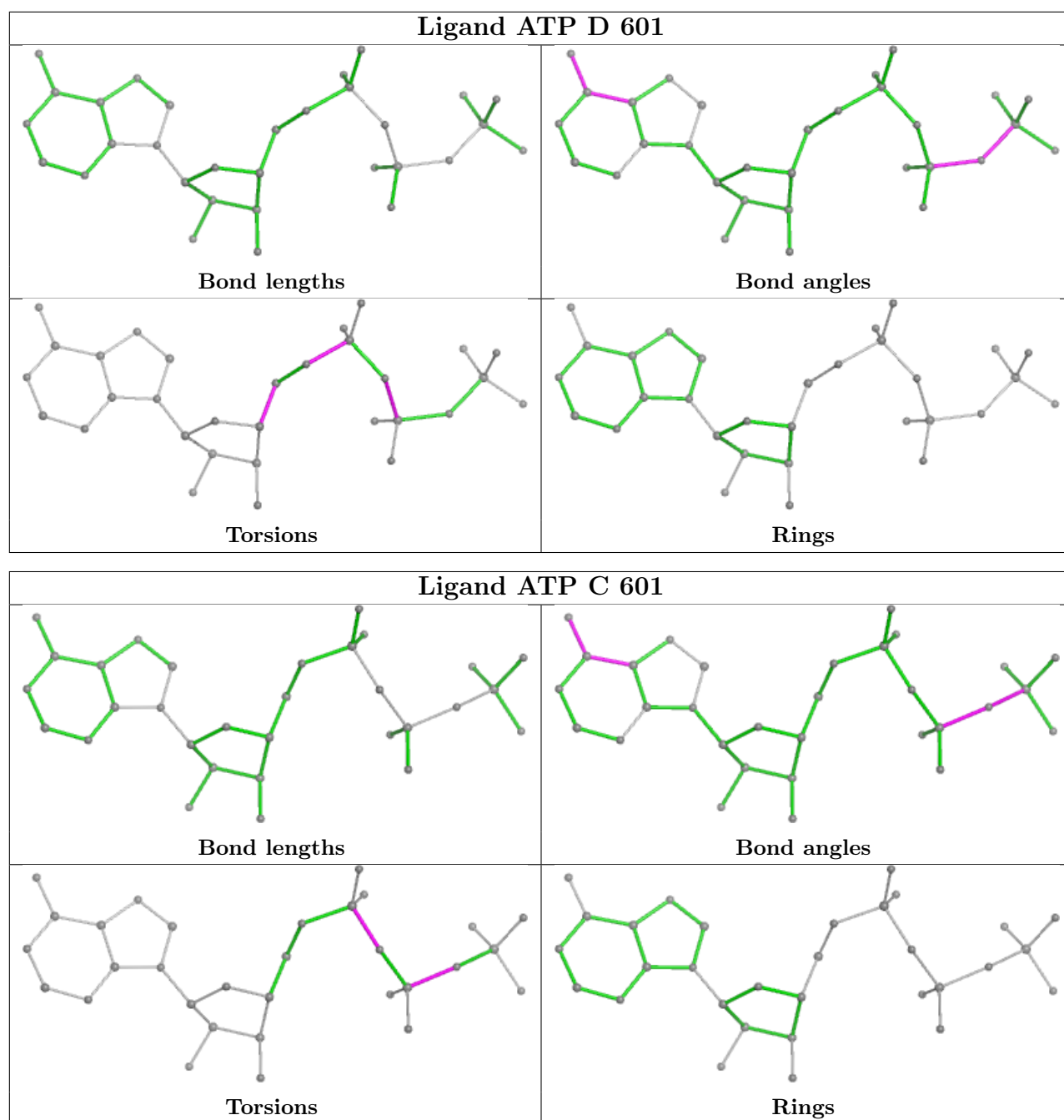


Ligand ADP I 601



Ligand ADP L 601





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.

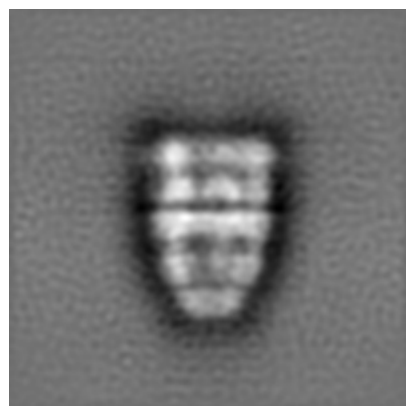
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-18737. These allow visual inspection of the internal detail of the map and identification of artifacts.

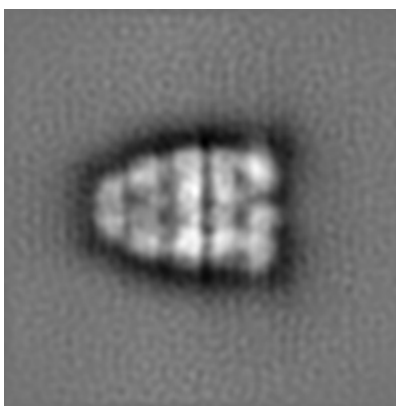
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

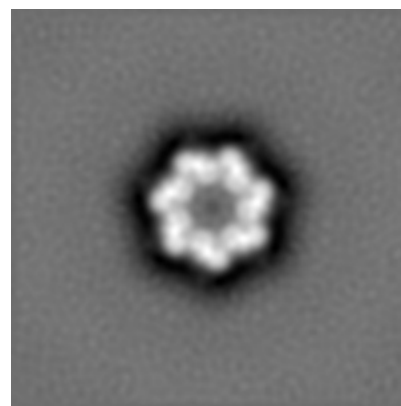
6.1.1 Primary map



X

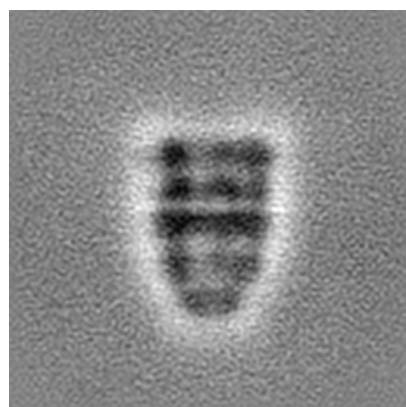


Y

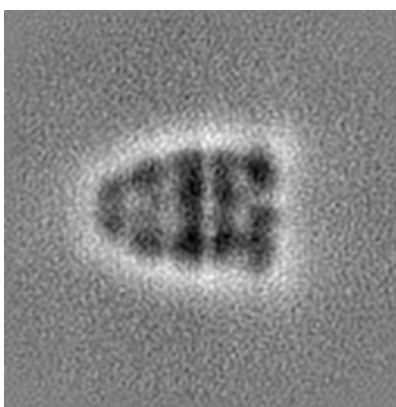


Z

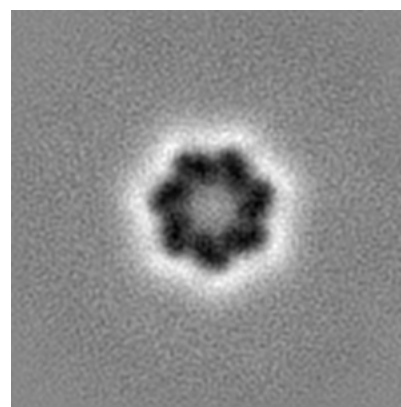
6.1.2 Raw map



X



Y

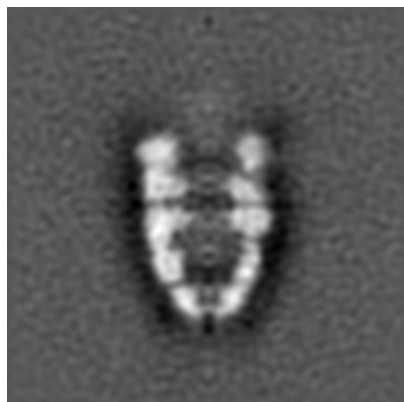


Z

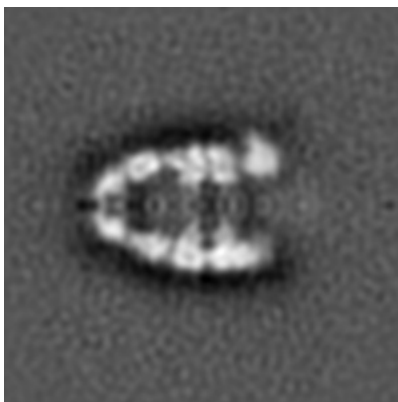
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

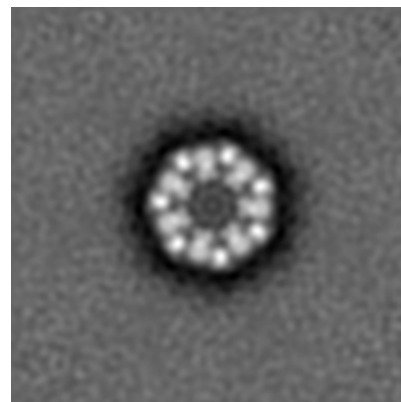
6.2.1 Primary map



X Index: 64



Y Index: 64



Z Index: 64

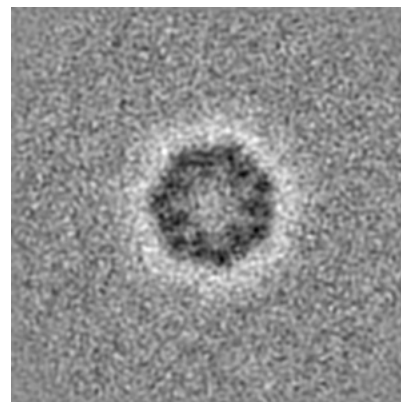
6.2.2 Raw map



X Index: 64



Y Index: 64

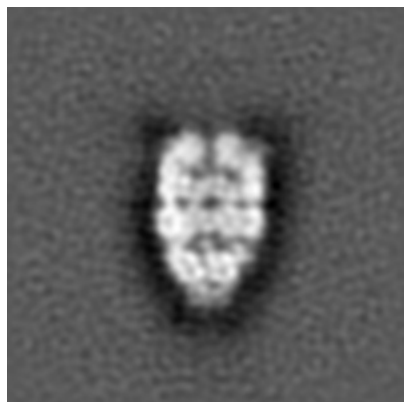


Z Index: 64

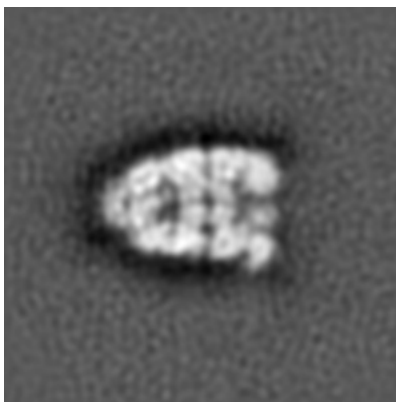
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

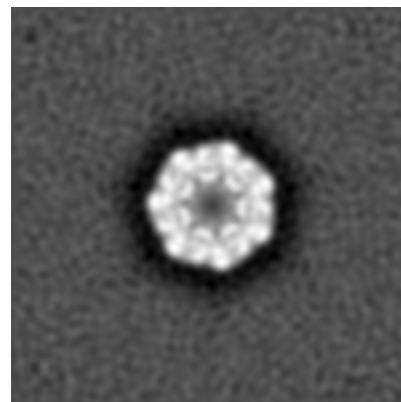
6.3.1 Primary map



X Index: 53

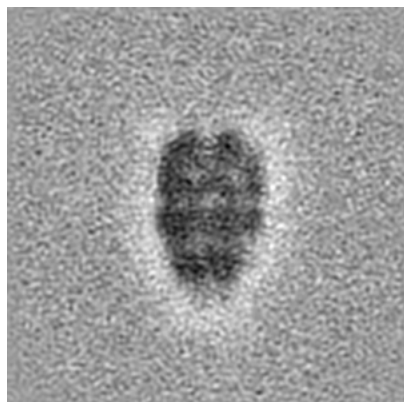


Y Index: 54

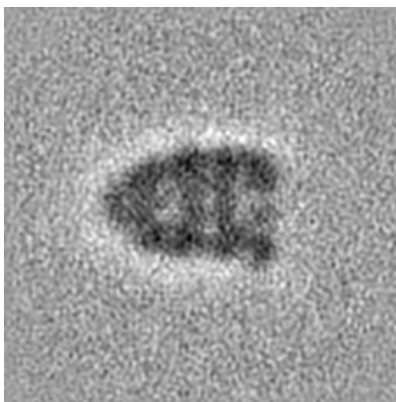


Z Index: 61

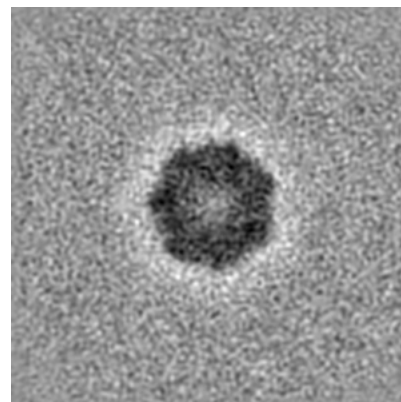
6.3.2 Raw map



X Index: 52



Y Index: 54

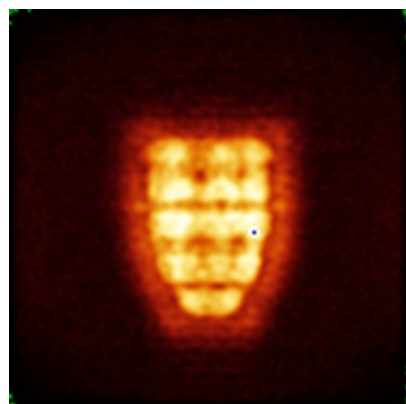


Z Index: 60

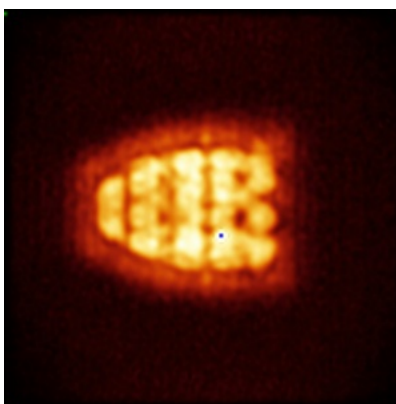
The images above show the largest variance slices of the map in three orthogonal directions.

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

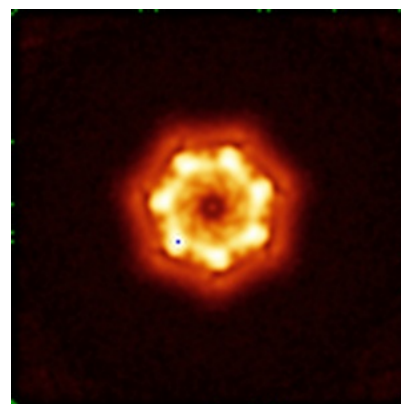
6.4.1 Primary map



X

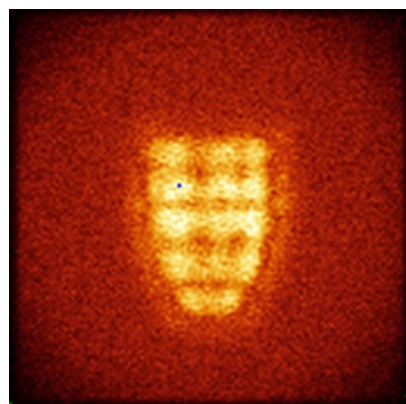


Y

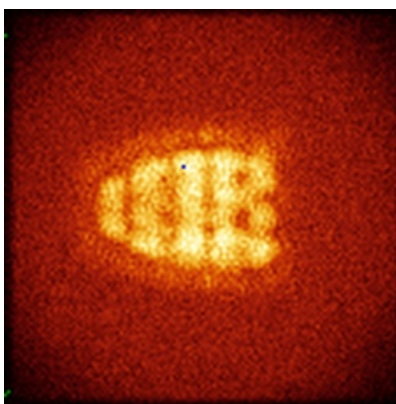


Z

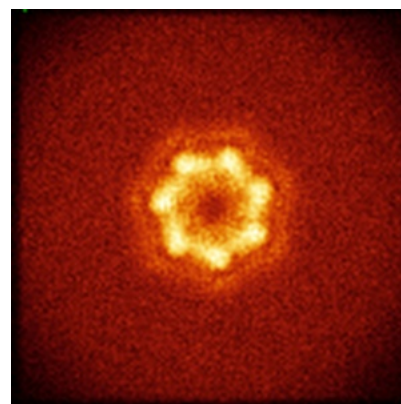
6.4.2 Raw map



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](#)

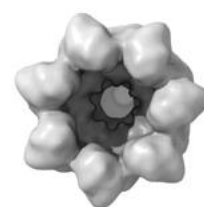
6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0981. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

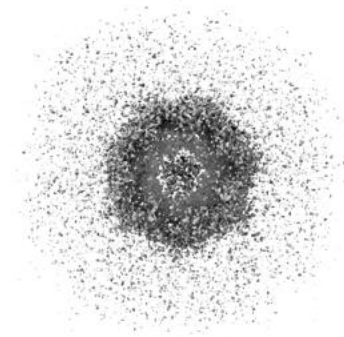
6.5.2 Raw map



X



Y



Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

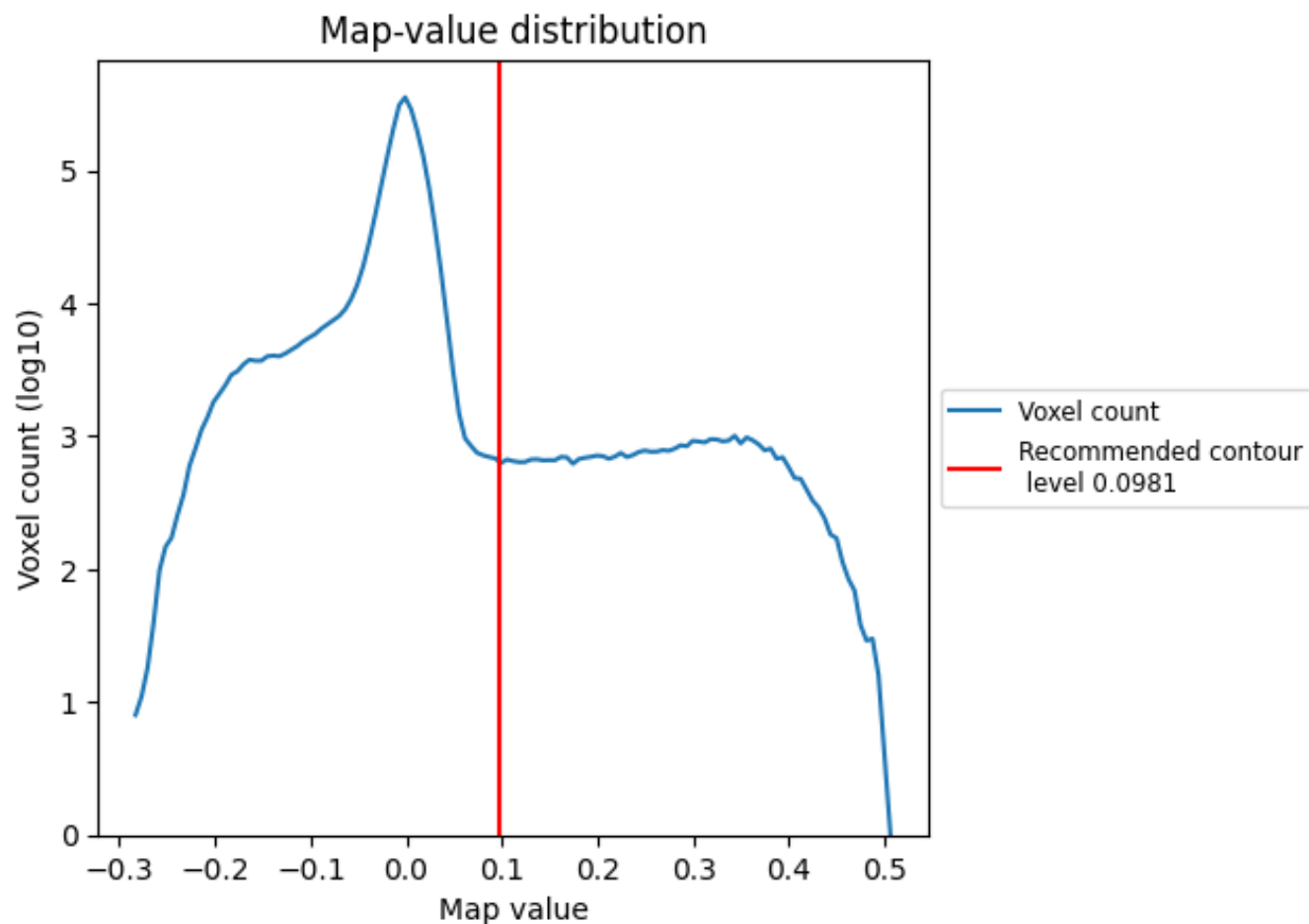
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

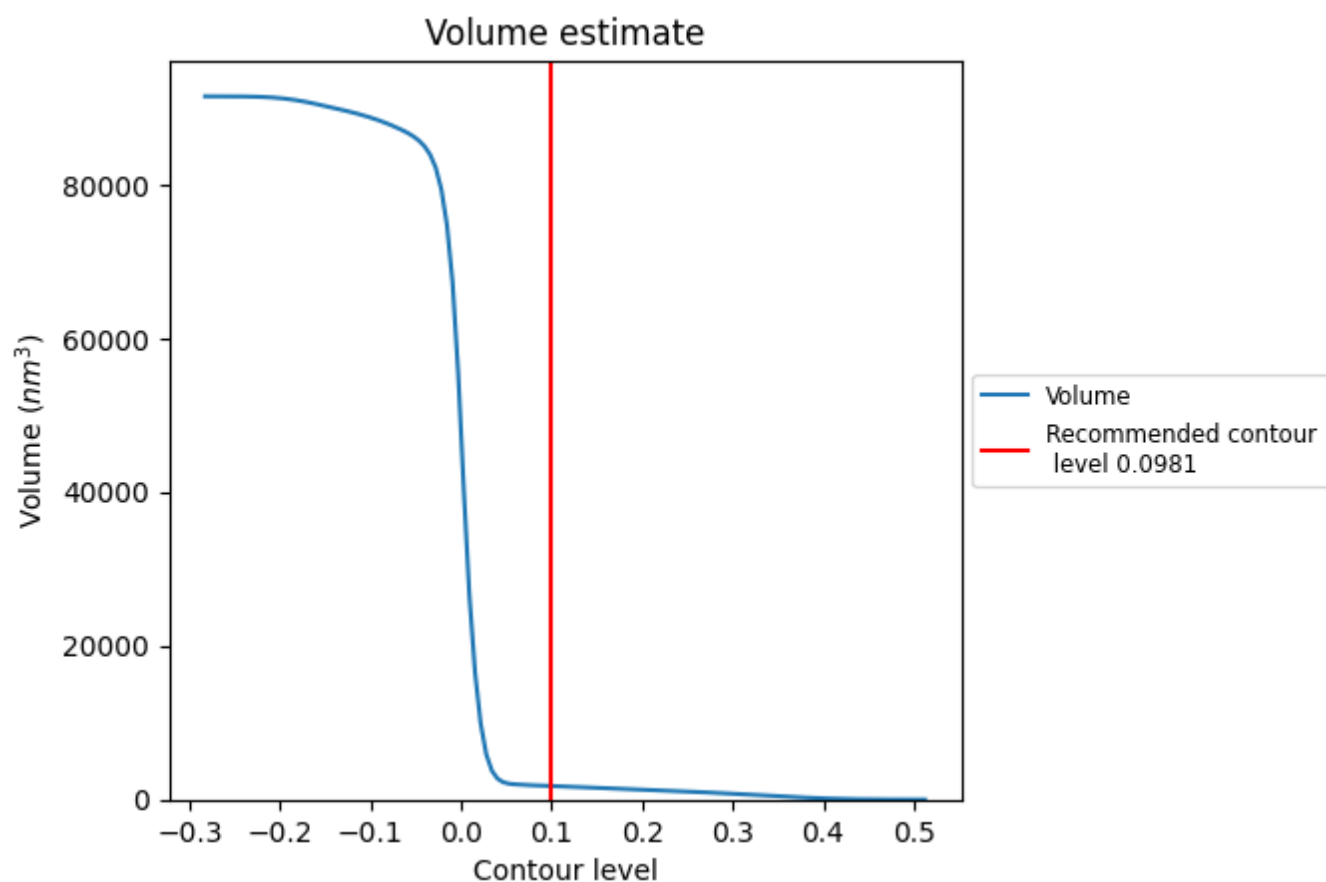
This section contains the results of statistical analysis of the map.

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.

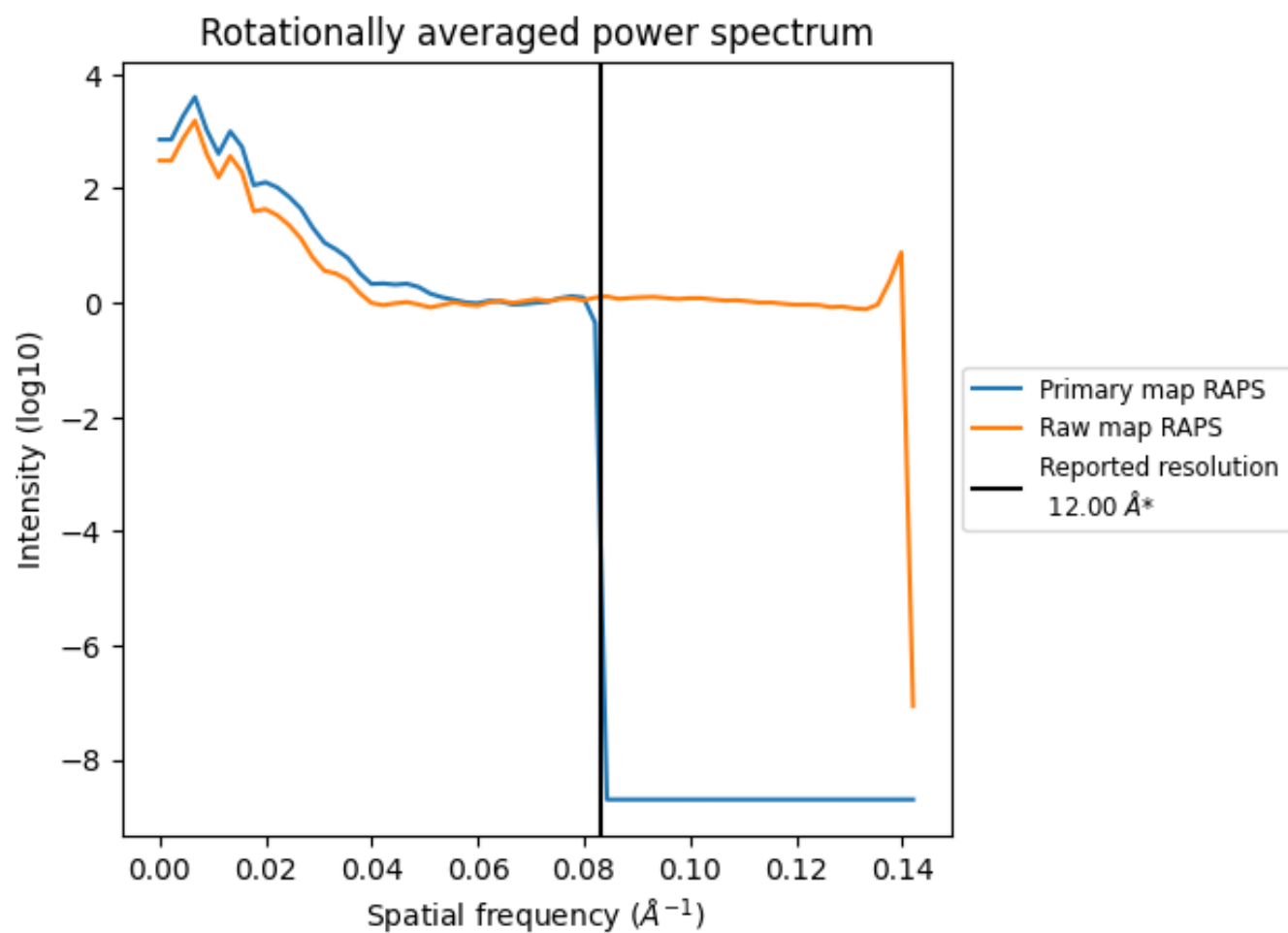
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1763 nm³; this corresponds to an approximate mass of 1593 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 ⓘ

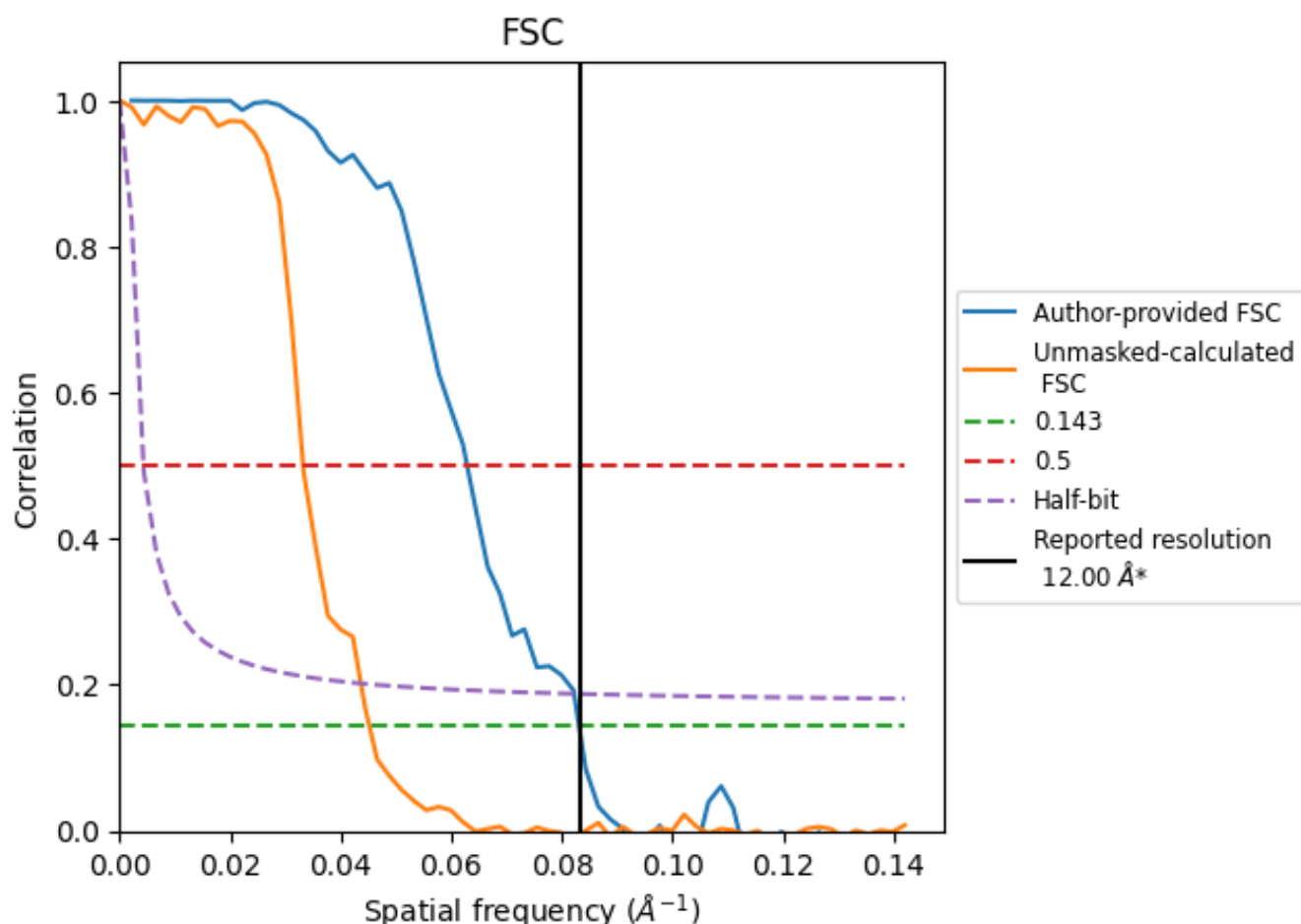


*Reported resolution corresponds to spatial frequency of 0.083 \AA^{-1}

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.083 Å⁻¹

8.2 Resolution estimates [i](#)

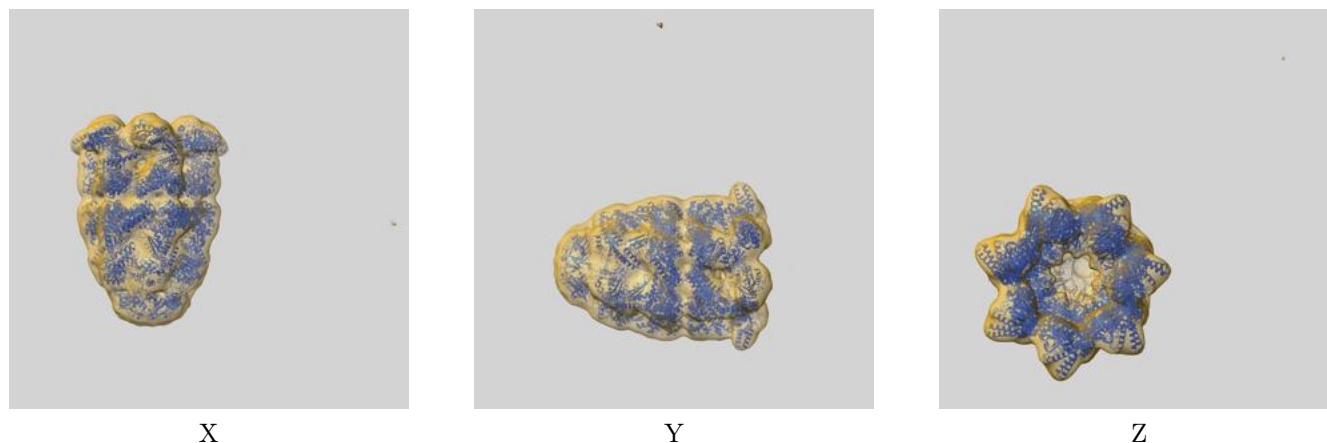
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	12.00	-	-
Author-provided FSC curve	12.03	15.90	12.17
Unmasked-calculated*	22.12	30.12	22.94

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 22.12 differs from the reported value 12.0 by more than 10 %

9 Map-model fit [i](#)

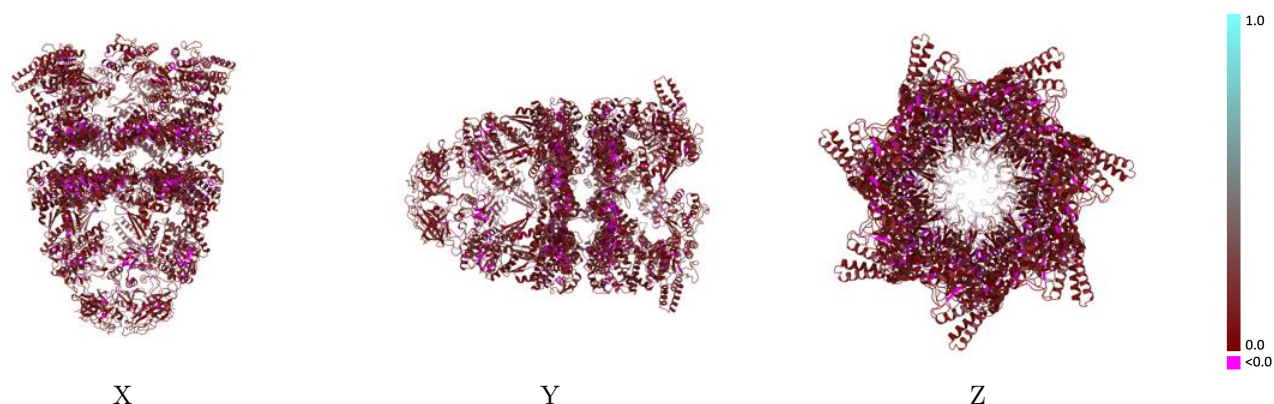
This section contains information regarding the fit between EMDB map EMD-18737 and PDB model 8QXU. Per-residue inclusion information can be found in section [3](#) on page [10](#).

9.1 Map-model overlay [i](#)



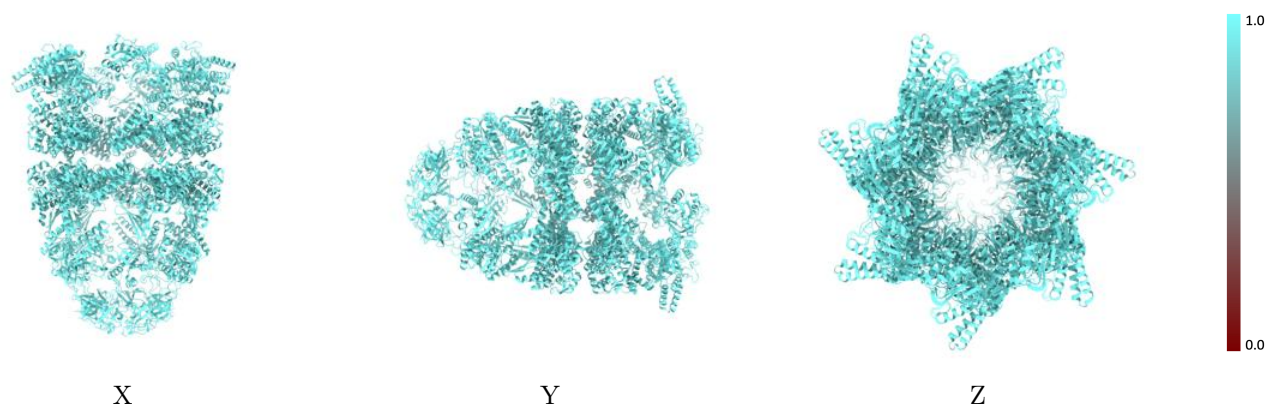
The images above show the 3D surface view of the map at the recommended contour level 0.0981 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



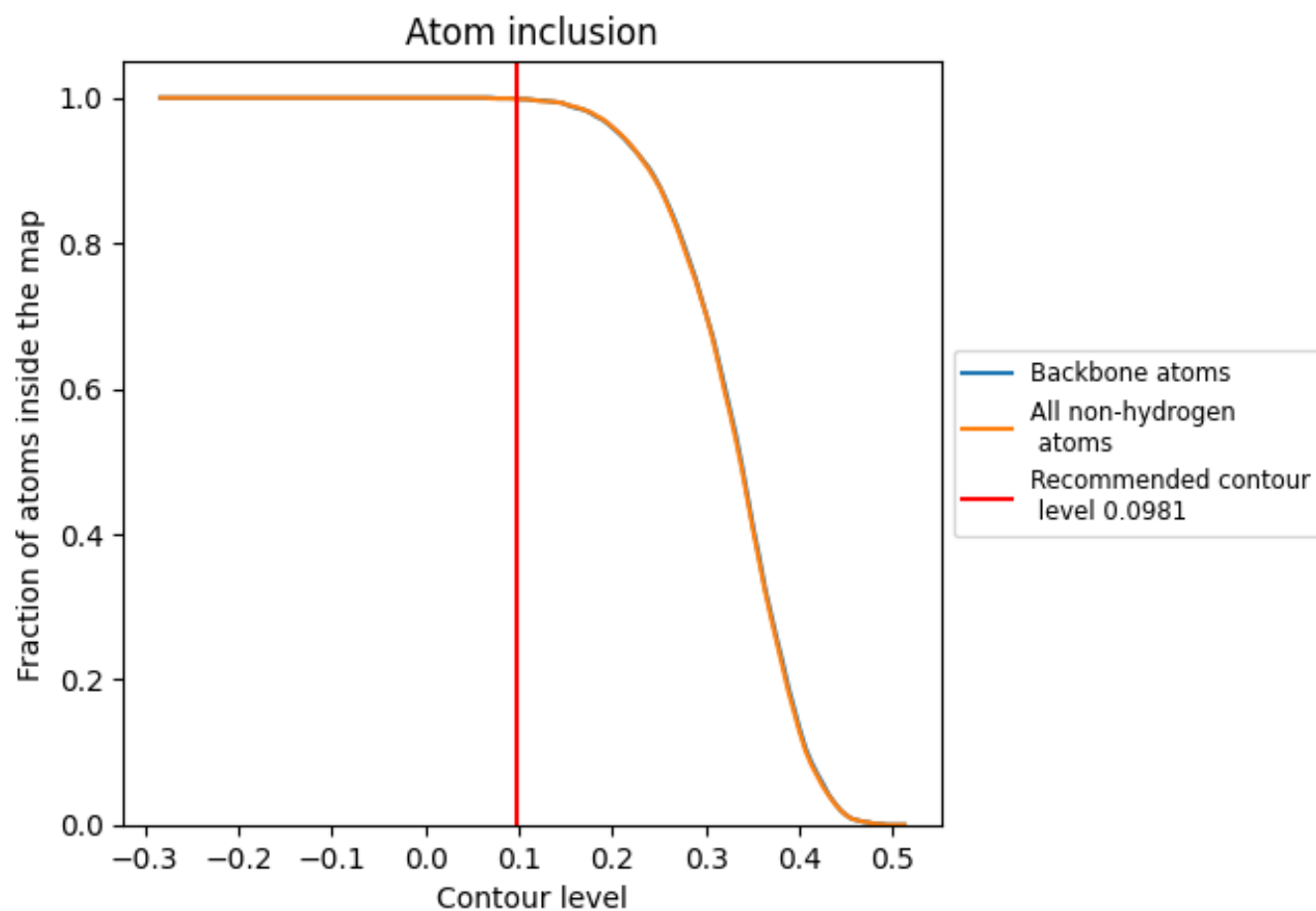
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.0981).













































9.4 Atom inclusion [i](#)



At the recommended contour level, 100% of all backbone atoms, 100% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.0981) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9980	 0.1040
A	 1.0000	 0.1080
B	 1.0000	 0.1060
C	 1.0000	 0.1070
D	 1.0000	 0.1040
E	 1.0000	 0.1040
F	 1.0000	 0.1040
G	 1.0000	 0.1070
H	 0.9970	 0.1010
I	 0.9960	 0.1000
J	 0.9960	 0.1030
K	 0.9960	 0.1010
L	 0.9960	 0.1000
M	 0.9960	 0.1020
N	 0.9960	 0.1040
O	 1.0000	 0.1090
P	 1.0000	 0.1080
Q	 1.0000	 0.1030
R	 1.0000	 0.1090
S	 1.0000	 0.1090
T	 1.0000	 0.1070
U	 1.0000	 0.1040

