



Full wwPDB EM Validation Report ⓘ

Dec 12, 2022 – 12:21 am GMT

PDB ID : 6TIW
EMDB ID : EMD-10421
Title : Human kinesin-5 motor domain in the GSK state bound to microtubules (Conformation 2)
Authors : Pena, A.; Sweeney, A.; Cook, A.D.; Moores, C.A.; Topf, M.
Deposited on : 2019-11-22
Resolution : 3.80 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev43
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.3

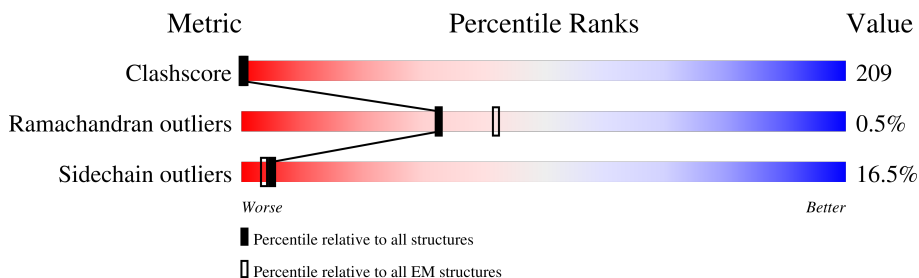
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.80 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	K	391	
2	B	429	
3	A	438	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
4	MZK	K	501	-	-	X	-
5	G2P	A	501	-	-	X	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
5	G2P	B	501	-	-	X	-

2 Entry composition

There are 6 unique types of molecules in this entry. The entry contains 9491 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 Kinesin-like protein KIF11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	K	334	2607	1630	466	501	10	0	0

There are 22 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
K	-21	MET	-	initiating methionine	UNP P52732
K	-20	HIS	-	expression tag	UNP P52732
K	-19	HIS	-	expression tag	UNP P52732
K	-18	HIS	-	expression tag	UNP P52732
K	-17	HIS	-	expression tag	UNP P52732
K	-16	HIS	-	expression tag	UNP P52732
K	-15	HIS	-	expression tag	UNP P52732
K	-14	SER	-	expression tag	UNP P52732
K	-13	SER	-	expression tag	UNP P52732
K	-12	GLY	-	expression tag	UNP P52732
K	-11	VAL	-	expression tag	UNP P52732
K	-10	ASP	-	expression tag	UNP P52732
K	-9	LEU	-	expression tag	UNP P52732
K	-8	GLY	-	expression tag	UNP P52732
K	-7	THR	-	expression tag	UNP P52732
K	-6	GLU	-	expression tag	UNP P52732
K	-5	ASN	-	expression tag	UNP P52732
K	-4	LEU	-	expression tag	UNP P52732
K	-3	TYR	-	expression tag	UNP P52732
K	-2	PHE	-	expression tag	UNP P52732
K	-1	GLN	-	expression tag	UNP P52732
K	0	SER	-	expression tag	UNP P52732

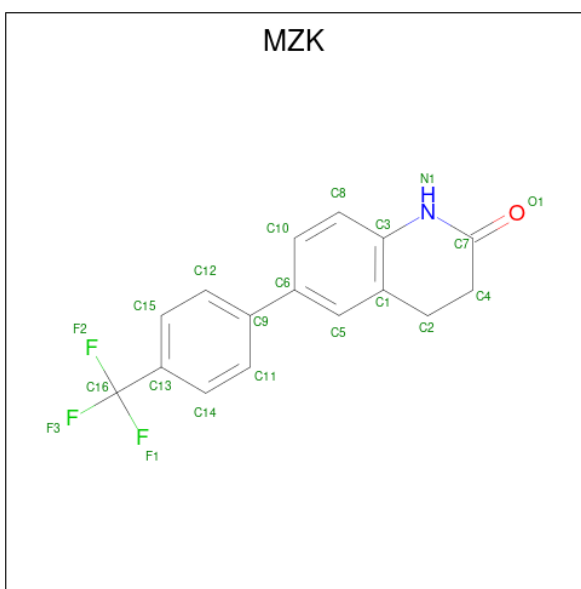
- Molecule 2 is a protein called Tubulin beta chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	429	3372	2117	578	651	26	0	0

- Molecule 3 is a protein called Tubulin alpha-1B chain.

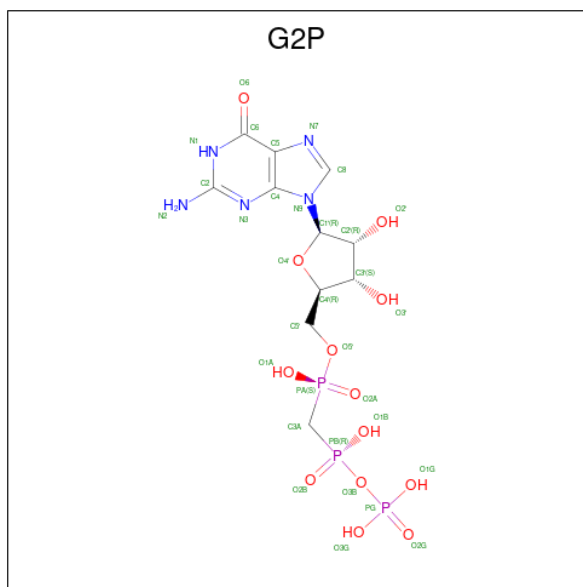
Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	A	438	3425	2167	582	654	22	0	0

- Molecule 4 is 6-[4-(trifluoromethyl)phenyl]-3,4-dihydro-1 {H}-quinolin-2-one (three-letter code: MZK) (formula: $C_{16}H_{12}F_3NO$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	F	N	O	
4	K	1	21	16	3	1	1	0

- Molecule 5 is PHOSPHOMETHYLPHOSPHONIC ACID GUANYLATE ESTER (three-letter code: G2P) (formula: $C_{11}H_{18}N_5O_{13}P_3$).



Mol	Chain	Residues	Atoms					AltConf
5	B	1	Total	C	N	O	P	0
				32	11	5	13	
5	A	1	Total	C	N	O	P	0
				32	11	5	13	

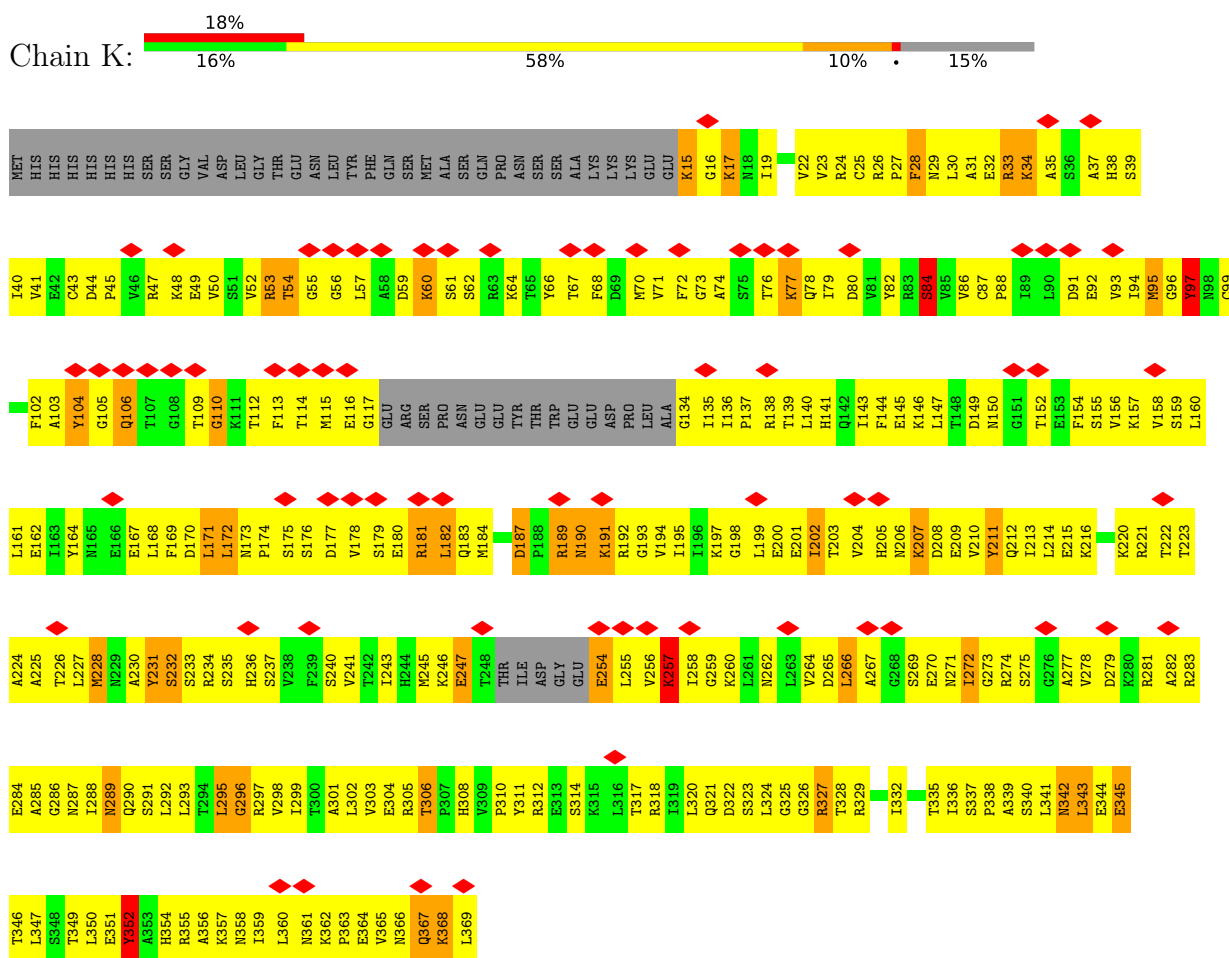
- Molecule 6 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
6	B	1	Total	Mg	0
				1	
6	A	1	Total	Mg	0
				1	

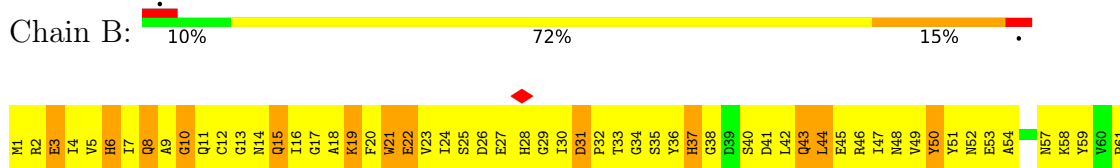
3 Residue-property plots [i](#)

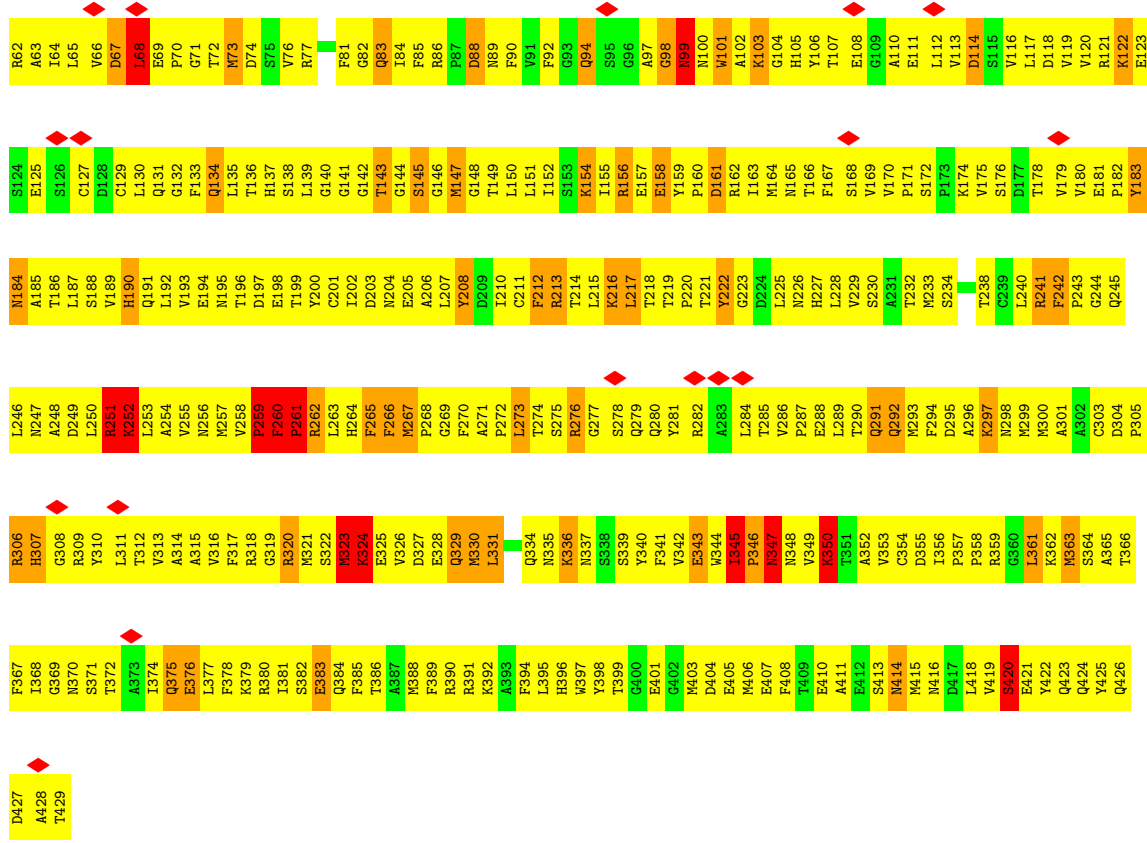
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: Kinesin-like protein KIF11

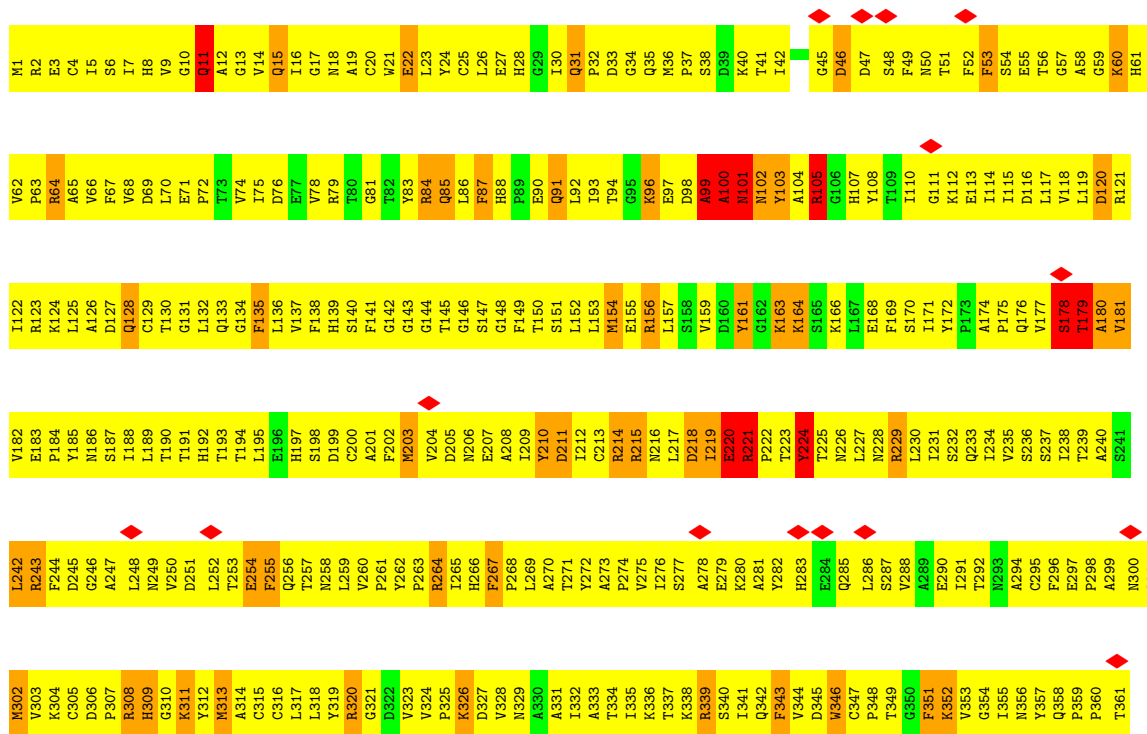
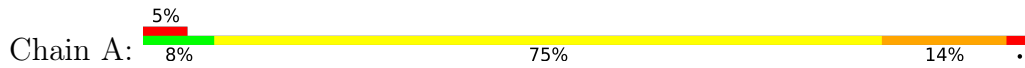


- Molecule 2: Tubulin beta chain





• Molecule 3: Tubulin alpha-1B chain



4 Experimental information

Property	Value	Source
EM reconstruction method	HELICAL	Depositor
Imposed symmetry	HELICAL, twist=-25.7°, rise=8.9 Å, axial sym=C1	Depositor
Number of segments used	507219	Depositor
Resolution determination method	FSC 0.5 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{Å}^2$)	45	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.022	Depositor
Minimum map value	0.000	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.000	Depositor
Recommended contour level	0.005	Depositor
Map size (Å)	555.9, 555.9, 555.9	wwPDB
Map dimensions	510, 510, 510	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.09, 1.09, 1.09	Depositor

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: MZK, MG, G2P

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	K	1.68	13/2640 (0.5%)	1.27	18/3557 (0.5%)
2	B	1.20	5/3447 (0.1%)	1.57	40/4669 (0.9%)
3	A	1.23	12/3503 (0.3%)	1.41	41/4754 (0.9%)
All	All	1.36	30/9590 (0.3%)	1.44	99/12980 (0.8%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	K	0	5
2	B	0	10
3	A	1	18
All	All	1	33

All (30) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	K	84	SER	CB-OG	-56.93	0.68	1.42
2	B	324	LYS	CE-NZ	25.12	2.11	1.49
1	K	254	GLU	CB-CG	-24.02	1.06	1.52
3	A	221	ARG	CB-CG	19.21	2.04	1.52
3	A	221	ARG	CG-CD	16.02	1.92	1.51
3	A	221	ARG	CA-CB	14.49	1.85	1.53
1	K	247	GLU	CB-CG	-13.94	1.25	1.52
2	B	324	LYS	CD-CE	13.73	1.85	1.51
1	K	247	GLU	CD-OE1	-11.45	1.13	1.25
1	K	257	LYS	CB-CG	-10.64	1.23	1.52
1	K	260	LYS	CG-CD	-9.29	1.20	1.52
3	A	221	ARG	C-N	8.93	1.51	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	409	VAL	CA-CB	-8.05	1.37	1.54
1	K	306	THR	C-O	-7.66	1.08	1.23
1	K	97	TYR	CE1-CZ	-7.65	1.28	1.38
3	A	221	ARG	CD-NE	-6.99	1.34	1.46
3	A	179	THR	CA-C	6.87	1.70	1.52
2	B	350	LYS	CD-CE	-6.74	1.34	1.51
3	A	404	PHE	N-CA	6.59	1.59	1.46
1	K	97	TYR	CE2-CZ	-6.52	1.30	1.38
2	B	260	PHE	CB-CG	-6.03	1.41	1.51
3	A	221	ARG	CZ-NH2	-6.00	1.25	1.33
1	K	352	TYR	CG-CD2	5.90	1.46	1.39
1	K	97	TYR	CG-CD2	5.89	1.46	1.39
3	A	406	HIS	CB-CG	-5.73	1.39	1.50
1	K	352	TYR	CB-CG	5.71	1.60	1.51
3	A	221	ARG	CA-C	5.58	1.67	1.52
1	K	254	GLU	CD-OE2	-5.46	1.19	1.25
2	B	252	LYS	CB-CG	-5.38	1.38	1.52
3	A	99	ALA	CA-C	-5.03	1.39	1.52

All (99) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	251	ARG	NE-CZ-NH2	35.87	138.24	120.30
2	B	251	ARG	NH1-CZ-NH2	-24.10	92.89	119.40
2	B	10	GLY	O-C-N	-19.90	90.86	122.70
3	A	403	ALA	O-C-N	-17.81	94.20	122.70
2	B	260	PHE	CB-CG-CD2	-15.53	109.93	120.80
2	B	10	GLY	CA-C-N	14.42	148.93	117.20
2	B	251	ARG	NE-CZ-NH1	14.10	127.35	120.30
2	B	68	LEU	CB-CG-CD2	13.45	133.86	111.00
2	B	98	GLY	O-C-N	-13.29	101.44	122.70
1	K	352	TYR	CB-CG-CD2	-12.31	113.62	121.00
1	K	254	GLU	CA-CB-CG	11.92	139.62	113.40
2	B	68	LEU	CB-CG-CD1	-11.21	91.94	111.00
3	A	409	VAL	CG1-CB-CG2	11.14	128.72	110.90
3	A	221	ARG	CG-CD-NE	10.88	134.66	111.80
1	K	352	TYR	CB-CG-CD1	-10.71	114.58	121.00
2	B	99	ASN	N-CA-CB	10.69	129.84	110.60
1	K	84	SER	CA-CB-OG	10.40	139.29	111.20
3	A	99	ALA	N-CA-CB	10.27	124.47	110.10
3	A	100	ALA	O-C-N	-10.24	106.32	122.70
2	B	323	MET	O-C-N	-10.14	106.47	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	K	257	LYS	CA-CB-CG	9.90	135.18	113.40
3	A	221	ARG	CD-NE-CZ	-9.90	109.74	123.60
3	A	403	ALA	CA-C-N	9.85	138.88	117.20
3	A	405	VAL	CA-CB-CG2	9.80	125.60	110.90
2	B	261	PRO	N-CD-CG	9.69	117.73	103.20
3	A	101	ASN	N-CA-CB	9.58	127.85	110.60
1	K	231	TYR	CZ-CE2-CD2	-9.46	111.28	119.80
2	B	98	GLY	CA-C-N	8.83	136.62	117.20
1	K	97	TYR	CG-CD2-CE2	-8.82	114.25	121.30
3	A	220	GLU	N-CA-CB	8.81	126.46	110.60
1	K	257	LYS	CB-CG-CD	8.78	134.43	111.60
3	A	221	ARG	CB-CA-C	8.61	127.61	110.40
3	A	181	VAL	CA-CB-CG2	8.45	123.57	110.90
1	K	231	TYR	CG-CD2-CE2	8.33	127.97	121.30
3	A	179	THR	CA-CB-CG2	8.24	123.94	112.40
2	B	259	PRO	N-CA-CB	8.02	112.93	103.30
3	A	404	PHE	CB-CG-CD1	7.99	126.39	120.80
3	A	221	ARG	CB-CG-CD	7.88	132.10	111.60
2	B	261	PRO	CA-N-CD	-7.79	100.60	111.50
2	B	99	ASN	C-N-CA	-7.67	102.53	121.70
3	A	221	ARG	N-CA-C	7.50	131.24	111.00
2	B	324	LYS	CD-CE-NZ	7.49	128.92	111.70
2	B	345	ILE	CA-CB-CG1	-7.47	96.81	111.00
3	A	161	TYR	CA-CB-CG	-7.43	99.28	113.40
2	B	324	LYS	N-CA-CB	7.42	123.96	110.60
2	B	324	LYS	CA-CB-CG	7.42	129.71	113.40
2	B	252	LYS	CA-CB-CG	-7.25	97.46	113.40
2	B	324	LYS	CB-CG-CD	7.20	130.32	111.60
3	A	220	GLU	CA-C-O	-7.18	105.03	120.10
3	A	427	ALA	CB-CA-C	-7.15	99.37	110.10
1	K	295	LEU	O-C-N	-7.12	111.10	123.20
3	A	221	ARG	CA-CB-CG	6.81	128.39	113.40
3	A	178	SER	CB-CA-C	6.78	122.98	110.10
3	A	409	VAL	CA-CB-CG2	-6.77	100.75	110.90
2	B	259	PRO	CA-N-CD	-6.74	102.06	111.50
2	B	260	PHE	CA-C-O	-6.71	106.01	120.10
3	A	99	ALA	CA-C-O	-6.71	106.02	120.10
3	A	405	VAL	CA-C-N	6.68	131.91	117.20
2	B	260	PHE	CB-CG-CD1	6.55	125.38	120.80
2	B	252	LYS	CB-CA-C	-6.49	97.43	110.40
3	A	11	GLN	O-C-N	-6.47	112.35	122.70
3	A	409	VAL	C-N-CA	-6.36	108.95	122.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	251	ARG	CG-CD-NE	6.33	125.10	111.80
1	K	260	LYS	CG-CD-CE	6.25	130.64	111.90
3	A	105	ARG	NE-CZ-NH2	-6.25	117.18	120.30
3	A	100	ALA	CA-C-N	6.20	130.84	117.20
2	B	252	LYS	CG-CD-CE	6.13	130.29	111.90
1	K	211	TYR	CA-CB-CG	-6.12	101.77	113.40
1	K	232	SER	N-CA-CB	6.10	119.65	110.50
1	K	260	LYS	CB-CG-CD	5.96	127.11	111.60
2	B	99	ASN	O-C-N	5.89	132.13	122.70
2	B	259	PRO	N-CD-CG	5.83	111.95	103.20
2	B	324	LYS	N-CA-C	-5.83	95.26	111.00
3	A	220	GLU	CB-CA-C	-5.83	98.74	110.40
3	A	181	VAL	CA-CB-CG1	-5.66	102.41	110.90
3	A	427	ALA	CA-C-N	-5.65	104.77	117.20
2	B	347	ASN	CA-CB-CG	-5.64	101.00	113.40
3	A	102	ASN	N-CA-CB	5.58	120.65	110.60
2	B	143	THR	N-CA-CB	5.56	120.87	110.30
3	A	405	VAL	N-CA-C	5.54	125.96	111.00
2	B	261	PRO	N-CA-CB	5.52	109.93	103.30
2	B	251	ARG	CD-NE-CZ	-5.51	115.89	123.60
1	K	247	GLU	CA-CB-CG	5.50	125.51	113.40
1	K	254	GLU	CB-CG-CD	5.49	129.03	114.20
1	K	211	TYR	CG-CD2-CE2	-5.49	116.91	121.30
1	K	295	LEU	CA-C-N	5.43	127.06	116.20
3	A	221	ARG	N-CA-CB	-5.43	100.83	110.60
3	A	178	SER	O-C-N	-5.42	114.04	122.70
3	A	179	THR	OG1-CB-CG2	-5.41	97.55	110.00
3	A	406	HIS	N-CA-CB	5.29	120.12	110.60
3	A	405	VAL	CA-CB-CG1	-5.24	103.05	110.90
2	B	67	ASP	C-N-CA	-5.22	108.64	121.70
2	B	350	LYS	C-N-CA	-5.21	108.67	121.70
2	B	323	MET	CA-C-N	5.16	128.54	117.20
2	B	324	LYS	CG-CD-CE	5.12	127.27	111.90
3	A	178	SER	CA-C-N	5.05	128.31	117.20
3	A	427	ALA	O-C-N	5.03	130.75	122.70
2	B	260	PHE	CA-C-N	5.01	131.13	117.10
3	A	180	ALA	N-CA-CB	-5.00	103.09	110.10

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
3	A	221	ARG	CA

All (33) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	A	100	ALA	Mainchain
3	A	101	ASN	Sidechain,Mainchain
3	A	11	GLN	Sidechain
3	A	178	SER	Peptide,Mainchain
3	A	179	THR	Mainchain
3	A	219	ILE	Mainchain
3	A	220	GLU	Sidechain,Mainchain
3	A	221	ARG	Mainchain
3	A	224	TYR	Mainchain
3	A	403	ALA	Mainchain
3	A	404	PHE	Sidechain,Mainchain,Peptide
3	A	99	ALA	Peptide,Mainchain
2	B	15	GLN	Peptide
2	B	252	LYS	Mainchain
2	B	259	PRO	Peptide
2	B	260	PHE	Sidechain,Mainchain
2	B	323	MET	Mainchain
2	B	345	ILE	Mainchain
2	B	346	PRO	Mainchain
2	B	420	SER	Mainchain
2	B	99	ASN	Mainchain
1	K	106	GLN	Sidechain
1	K	110	GLY	Peptide
1	K	296	GLY	Mainchain
1	K	352	TYR	Sidechain
1	K	53	ARG	Mainchain

5.2 Too-close contacts [\(i\)](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	K	2607	0	2670	967	0
2	B	3372	0	3253	1554	0
3	A	3425	0	3334	1601	0
4	K	21	0	0	14	0
5	A	32	0	14	18	0
5	B	32	0	14	20	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	A	1	0	0	0	0
6	B	1	0	0	0	0
All	All	9491	0	9285	3916	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 209.

All (3916) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:324:LYS:CD	2:B:324:LYS:CE	1.85	1.55
3:A:221:ARG:CA	3:A:221:ARG:CB	1.85	1.51
1:K:181:ARG:HH21	1:K:197:LYS:CG	1.19	1.51
3:A:221:ARG:CD	3:A:221:ARG:CG	1.92	1.47
1:K:95:MET:CE	1:K:97:TYR:HB2	1.45	1.43
1:K:181:ARG:NH2	1:K:197:LYS:HG3	1.27	1.42
1:K:95:MET:HE2	1:K:97:TYR:CB	1.53	1.38
3:A:221:ARG:CB	3:A:221:ARG:CG	2.04	1.35
1:K:82:TYR:CE2	1:K:86:VAL:HG21	1.69	1.26
1:K:162:GLU:CG	1:K:235:SER:HB2	1.68	1.24
1:K:82:TYR:CD2	1:K:86:VAL:HG21	1.73	1.23
1:K:297:ARG:HH12	2:B:262:ARG:CD	1.50	1.23
1:K:162:GLU:HG2	1:K:235:SER:CB	1.70	1.21
1:K:162:GLU:OE2	1:K:223:THR:CG2	1.89	1.20
2:B:64:ILE:HD11	2:B:119:VAL:HG11	1.23	1.20
1:K:187:ASP:OD1	1:K:195:ILE:HG13	1.33	1.20
1:K:157:LYS:CG	1:K:203:THR:OG1	1.89	1.19
1:K:162:GLU:CG	1:K:235:SER:CB	2.19	1.19
3:A:319:TYR:HD1	3:A:355:ILE:HG12	1.08	1.19
3:A:278:ALA:HA	3:A:368:LEU:HA	1.24	1.19
3:A:23:LEU:HD12	3:A:363:VAL:HA	1.24	1.18
3:A:268:PRO:HG2	3:A:378:LEU:HD13	1.26	1.17
1:K:162:GLU:HG2	1:K:235:SER:HB3	1.26	1.17
3:A:247:ALA:HB3	3:A:355:ILE:HB	1.20	1.16
1:K:82:TYR:CZ	1:K:86:VAL:HG11	1.80	1.16
1:K:157:LYS:HG3	1:K:203:THR:OG1	1.45	1.15
3:A:48:SER:HB2	3:A:243:ARG:HD3	1.20	1.15
3:A:176:GLN:HG2	3:A:207:GLU:HB2	1.29	1.15
2:B:326:VAL:HG12	2:B:330:MET:HE1	1.15	1.14
3:A:172:TYR:HB2	3:A:203:MET:HB2	1.25	1.14
3:A:286:LEU:HD13	3:A:291:ILE:HD11	1.30	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:162:GLU:OE2	1:K:223:THR:HG22	1.47	1.14
2:B:285:THR:HG22	2:B:288:GLU:HB2	1.28	1.13
2:B:41:ASP:HA	2:B:44:LEU:HD23	1.15	1.12
3:A:274:PRO:HG3	3:A:291:ILE:HG12	1.32	1.12
1:K:312:ARG:HA	1:K:318:ARG:CG	1.79	1.12
3:A:166:LYS:HD2	3:A:198:SER:HA	1.28	1.12
2:B:324:LYS:CE	2:B:324:LYS:NZ	2.11	1.12
1:K:181:ARG:NH2	1:K:197:LYS:HE2	1.63	1.11
2:B:324:LYS:NZ	3:A:221:ARG:CG	2.14	1.11
3:A:216:ASN:HB3	3:A:277:SER:HB2	1.29	1.11
2:B:324:LYS:HE2	3:A:221:ARG:CA	1.81	1.10
1:K:84:SER:OG	1:K:84:SER:HB2	1.29	1.10
1:K:55:GLY:HA3	1:K:60:LYS:HE3	1.11	1.10
1:K:157:LYS:HB3	1:K:201:GLU:HB3	1.33	1.10
3:A:251:ASP:HB3	3:A:254:GLU:HB3	1.33	1.10
1:K:162:GLU:CD	1:K:235:SER:HB2	1.73	1.09
1:K:181:ARG:NH2	1:K:197:LYS:CE	2.15	1.09
3:A:319:TYR:HB2	3:A:355:ILE:HA	1.12	1.09
3:A:3:GLU:HG2	3:A:50:ASN:HB3	1.16	1.09
3:A:30:ILE:HA	3:A:36:MET:HB3	1.15	1.09
3:A:70:LEU:HD13	3:A:145:THR:HG23	1.25	1.09
3:A:246:GLY:HA3	3:A:356:ASN:HA	1.25	1.09
2:B:250:LEU:HD12	2:B:253:LEU:HD11	1.10	1.09
3:A:70:LEU:HG	3:A:110:ILE:HG21	1.28	1.09
3:A:242:LEU:HD23	3:A:252:LEU:HG	1.24	1.09
2:B:274:THR:HB	2:B:279:GLN:HB2	1.15	1.09
3:A:181:VAL:HG11	3:A:404:PHE:CE1	1.87	1.09
1:K:53:ARG:HB3	1:K:60:LYS:HB3	1.14	1.09
2:B:309:ARG:HB2	2:B:426:GLN:HA	1.30	1.09
1:K:16:GLY:HA3	1:K:362:LYS:HA	1.33	1.08
3:A:34:GLY:HA3	3:A:86:LEU:HD13	1.35	1.08
1:K:181:ARG:NH2	1:K:197:LYS:CG	1.95	1.08
1:K:344:GLU:HB3	3:A:414:GLU:HG2	1.23	1.08
1:K:169:PHE:HA	1:K:179:SER:HA	1.32	1.08
1:K:160:LEU:HG	1:K:171:LEU:HD12	1.20	1.08
3:A:268:PRO:HB2	3:A:378:LEU:HB3	1.35	1.08
3:A:320:ARG:HG3	3:A:374:ALA:HB3	1.25	1.08
2:B:1:MET:HE2	2:B:49:VAL:HB	1.26	1.07
3:A:317:LEU:HB2	3:A:353:VAL:HB	1.36	1.07
2:B:172:SER:HB2	2:B:205:GLU:HB3	1.34	1.07
1:K:155:SER:HB3	1:K:203:THR:HG21	1.13	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:171:LEU:HD13	1:K:221:ARG:HA	1.36	1.07
2:B:273:LEU:HD11	2:B:297:LYS:HD2	1.11	1.07
2:B:392:LYS:HB3	2:B:395:LEU:HD11	1.24	1.07
2:B:54:ALA:HB3	2:B:58:LYS:HB3	1.37	1.07
2:B:252:LYS:HD2	3:A:101:ASN:HB3	1.36	1.07
1:K:159:SER:HA	1:K:172:LEU:HD13	1.18	1.06
2:B:212:PHE:HB2	2:B:220:PRO:HD3	1.37	1.06
1:K:187:ASP:OD1	1:K:195:ILE:CG1	2.02	1.06
1:K:84:SER:OG	1:K:84:SER:HB3	1.29	1.06
1:K:290:GLN:HE21	3:A:410:GLY:HA3	1.16	1.06
3:A:31:GLN:HG2	3:A:32:PRO:HD2	1.32	1.06
1:K:159:SER:HB2	1:K:199:LEU:HD21	1.35	1.05
1:K:246:LYS:CE	1:K:254:GLU:CD	2.24	1.05
2:B:269:GLY:HA3	2:B:367:PHE:HB3	1.38	1.05
3:A:68:VAL:HG12	3:A:93:ILE:HD11	1.38	1.05
3:A:313:MET:HE2	3:A:344:VAL:HG11	1.31	1.05
2:B:324:LYS:CE	3:A:221:ARG:HD3	1.85	1.04
1:K:47:ARG:NE	1:K:49:GLU:OE2	1.89	1.04
3:A:4:CYS:HA	3:A:132:LEU:HG	1.08	1.04
1:K:297:ARG:HH12	2:B:262:ARG:HD2	0.90	1.04
2:B:258:VAL:HG12	2:B:263:LEU:HD12	1.37	1.04
2:B:286:VAL:HG11	2:B:325:GLU:HB3	1.37	1.04
1:K:17:LYS:HG2	1:K:363:PRO:HG2	1.35	1.03
2:B:130:LEU:HD22	2:B:133:PHE:HE1	1.24	1.03
2:B:154:LYS:HE2	2:B:157:GLU:HB3	1.39	1.03
2:B:97:ALA:CB	2:B:143:THR:HA	1.88	1.03
2:B:274:THR:HG22	2:B:278:SER:HB2	1.39	1.03
1:K:246:LYS:HE3	1:K:254:GLU:CD	1.79	1.02
2:B:324:LYS:CE	3:A:221:ARG:CG	2.36	1.02
3:A:171:ILE:HA	3:A:204:VAL:HG12	1.36	1.02
2:B:246:LEU:HD12	2:B:352:ALA:HA	1.35	1.02
3:A:200:CYS:HA	3:A:266:HIS:HB3	1.02	1.02
1:K:84:SER:OG	1:K:84:SER:CA	2.08	1.02
2:B:215:LEU:HD22	2:B:217:LEU:HB2	1.38	1.02
1:K:95:MET:HG3	1:K:365:VAL:HG13	1.40	1.01
1:K:157:LYS:CE	1:K:203:THR:OG1	2.08	1.01
2:B:314:ALA:H	2:B:368:ILE:HB	1.22	1.01
1:K:297:ARG:NH1	2:B:262:ARG:HD2	1.74	1.01
3:A:217:LEU:HB3	3:A:219:ILE:HG12	1.38	1.01
2:B:149:THR:HA	2:B:191:GLN:HE22	1.25	1.01
1:K:31:ALA:HA	1:K:34:LYS:HD3	1.38	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:290:GLN:HE21	3:A:410:GLY:CA	1.74	1.00
3:A:115:ILE:HG12	3:A:119:LEU:HD23	1.41	1.00
2:B:100:ASN:HB2	2:B:103:LYS:HB2	1.43	1.00
1:K:48:LYS:HE3	1:K:70:MET:HA	1.42	1.00
1:K:312:ARG:HA	1:K:318:ARG:CD	1.90	1.00
2:B:4:ILE:HG23	2:B:133:PHE:HA	1.39	1.00
2:B:273:LEU:HG	2:B:298:ASN:HA	1.39	1.00
2:B:345:ILE:HD13	3:A:181:VAL:HG22	1.40	0.99
3:A:226:ASN:HA	3:A:229:ARG:HG3	1.41	0.99
1:K:17:LYS:HE3	1:K:329:ARG:HD3	1.43	0.99
2:B:120:VAL:HG23	2:B:121:ARG:HE	1.26	0.99
2:B:97:ALA:HB3	2:B:143:THR:HA	1.43	0.99
2:B:178:THR:HG23	2:B:181:GLU:H	1.25	0.99
2:B:324:LYS:HZ2	3:A:221:ARG:CG	1.71	0.99
3:A:70:LEU:HD23	3:A:110:ILE:HG13	1.45	0.99
1:K:187:ASP:HB3	1:K:195:ILE:HD11	1.44	0.99
1:K:26:ARG:HD2	1:K:29:ASN:HD21	1.28	0.99
1:K:293:LEU:HG	3:A:409:VAL:HG21	1.40	0.99
1:K:320:LEU:HD12	1:K:323:SER:HB2	1.44	0.99
2:B:103:LYS:HD2	2:B:401:GLU:HA	1.44	0.99
2:B:321:MET:HE3	2:B:326:VAL:HG22	1.44	0.99
3:A:319:TYR:CD1	3:A:355:ILE:HG12	1.98	0.99
1:K:77:LYS:HZ2	1:K:78:GLN:HG3	1.21	0.98
3:A:5:ILE:HG12	3:A:64:ARG:HB3	1.45	0.98
2:B:324:LYS:HG2	3:A:221:ARG:HB2	1.46	0.98
2:B:316:VAL:H	2:B:366:THR:HG22	1.28	0.98
2:B:422:TYR:HA	2:B:425:TYR:CE2	1.99	0.98
3:A:383:ALA:HA	3:A:386:GLU:HG2	1.44	0.98
2:B:376:GLU:HB3	2:B:380:ARG:HH12	1.27	0.97
2:B:324:LYS:CE	3:A:221:ARG:CD	2.42	0.97
1:K:84:SER:OG	1:K:84:SER:CB	0.68	0.97
3:A:195:LEU:HD13	3:A:201:ALA:HB2	1.45	0.97
1:K:82:TYR:OH	1:K:86:VAL:HG11	1.63	0.97
1:K:297:ARG:NH1	2:B:262:ARG:CD	2.27	0.97
1:K:223:THR:HG21	1:K:235:SER:H	1.29	0.97
3:A:5:ILE:H	3:A:132:LEU:HD21	1.27	0.97
2:B:324:LYS:CE	3:A:221:ARG:CB	2.43	0.97
2:B:4:ILE:HD11	2:B:131:GLN:HB3	1.44	0.96
3:A:181:VAL:HG11	3:A:404:PHE:HE1	1.24	0.96
1:K:343:LEU:HD23	1:K:343:LEU:H	1.29	0.96
2:B:182:PRO:HB2	2:B:385:PHE:HZ	1.26	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:262:TYR:HB3	3:A:264:ARG:HD3	1.47	0.96
1:K:283:ARG:NH2	2:B:160:PRO:HB2	1.81	0.96
1:K:312:ARG:HA	1:K:318:ARG:HD2	1.46	0.96
1:K:95:MET:CG	1:K:365:VAL:HG13	1.96	0.96
2:B:324:LYS:HE3	3:A:222:PRO:CD	1.94	0.96
1:K:329:ARG:HB2	1:K:363:PRO:HB3	1.48	0.95
1:K:172:LEU:HD11	1:K:199:LEU:HD11	1.46	0.95
3:A:185:TYR:HA	3:A:395:PHE:CZ	2.01	0.95
2:B:77:ARG:HH11	2:B:82:GLY:HA2	1.29	0.95
3:A:154:MET:HE1	3:A:166:LYS:HE2	1.46	0.95
2:B:419:VAL:HA	2:B:422:TYR:CD2	2.00	0.95
2:B:277:GLY:HA2	2:B:280:GLN:HE21	1.28	0.95
3:A:81:GLY:HA3	3:A:83:TYR:CE2	2.01	0.95
3:A:204:VAL:HG23	3:A:209:ILE:HD12	1.48	0.95
2:B:46:ARG:HB3	2:B:241:ARG:HD3	1.46	0.95
1:K:29:ASN:HB2	1:K:32:GLU:HG2	1.47	0.95
2:B:324:LYS:NZ	3:A:221:ARG:CB	2.29	0.95
3:A:296:PHE:CE1	3:A:335:ILE:HD12	2.01	0.95
2:B:152:ILE:HG13	2:B:192:LEU:HD23	1.47	0.94
2:B:376:GLU:HA	2:B:379:LYS:HE2	1.49	0.94
3:A:288:VAL:HG12	3:A:331:ALA:HB2	1.48	0.94
3:A:296:PHE:HE1	3:A:335:ILE:HD12	1.31	0.94
2:B:33:THR:HG23	2:B:35:SER:H	1.28	0.94
3:A:414:GLU:HG3	3:A:416:GLY:H	1.32	0.94
1:K:26:ARG:HG2	1:K:109:THR:HG23	1.49	0.94
1:K:190:ASN:HB3	1:K:193:GLY:HA3	1.50	0.94
3:A:63:PRO:HD3	3:A:86:LEU:HD11	1.49	0.94
3:A:200:CYS:HB2	3:A:267:PHE:HB3	1.49	0.94
1:K:178:VAL:HA	1:K:220:LYS:HE2	1.48	0.94
2:B:20:PHE:HD1	2:B:230:SER:HB2	1.32	0.94
2:B:250:LEU:CD1	2:B:253:LEU:HD11	1.99	0.93
2:B:267:MET:HG3	2:B:370:ASN:HA	1.51	0.93
3:A:313:MET:HG3	3:A:344:VAL:HG21	1.48	0.93
2:B:215:LEU:HA	2:B:276:ARG:HB3	1.49	0.93
3:A:116:ASP:HA	3:A:119:LEU:HD21	1.49	0.93
3:A:216:ASN:CB	3:A:277:SER:HB2	1.99	0.93
3:A:277:SER:H	3:A:280:LYS:HB2	1.33	0.93
2:B:73:MET:HG2	2:B:92:PHE:CE1	2.04	0.93
2:B:324:LYS:CE	3:A:221:ARG:CA	2.46	0.93
3:A:34:GLY:CA	3:A:86:LEU:HD13	1.98	0.93
2:B:284:LEU:HD13	2:B:289:LEU:HG	1.51	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:314:ALA:HB3	2:B:368:ILE:HG13	1.51	0.93
2:B:326:VAL:HG12	2:B:330:MET:CE	1.99	0.93
3:A:79:ARG:HD3	3:A:92:LEU:HD23	1.51	0.92
2:B:112:LEU:HD11	2:B:151:LEU:HB3	1.50	0.92
3:A:31:GLN:HB2	3:A:37:PRO:HD3	1.51	0.92
3:A:351:PHE:HD2	3:A:352:LYS:HB2	1.34	0.92
2:B:64:ILE:HD11	2:B:119:VAL:CG1	2.00	0.92
3:A:229:ARG:HB3	3:A:363:VAL:HG21	1.51	0.92
2:B:290:THR:HB	2:B:294:PHE:CZ	2.05	0.92
3:A:9:VAL:HB	3:A:139:HIS:CB	1.99	0.92
2:B:304:ASP:HB3	2:B:307:HIS:CG	2.05	0.92
1:K:187:ASP:HB2	1:K:189:ARG:CD	2.00	0.91
1:K:293:LEU:CG	3:A:409:VAL:HG21	2.00	0.91
3:A:286:LEU:HD11	3:A:373:ARG:HG3	1.49	0.91
1:K:320:LEU:HG	1:K:324:LEU:CD2	2.00	0.91
2:B:273:LEU:CD1	2:B:297:LYS:HD2	1.99	0.91
2:B:321:MET:CE	2:B:326:VAL:HG22	2.01	0.91
1:K:171:LEU:HA	1:K:220:LYS:CG	2.01	0.91
2:B:186:THR:HG23	2:B:187:LEU:HD22	1.51	0.91
1:K:47:ARG:HB3	1:K:49:GLU:HG3	1.51	0.91
1:K:320:LEU:HG	1:K:324:LEU:HD21	1.52	0.91
2:B:273:LEU:CG	2:B:298:ASN:HA	2.00	0.91
2:B:284:LEU:HD11	2:B:361:LEU:HD12	1.53	0.91
3:A:385:ALA:HA	3:A:388:TRP:CE2	2.06	0.91
1:K:144:PHE:CD2	1:K:207:LYS:HG3	2.06	0.90
3:A:171:ILE:CD1	5:A:501:G2P:H1'	1.99	0.90
2:B:102:ALA:CB	2:B:401:GLU:HB3	2.02	0.90
2:B:322:SER:OG	3:A:221:ARG:HB3	1.69	0.90
2:B:421:GLU:HG3	2:B:425:TYR:HE1	1.36	0.90
2:B:324:LYS:CE	3:A:222:PRO:CD	2.49	0.90
3:A:287:SER:HA	3:A:373:ARG:HH21	1.36	0.90
2:B:215:LEU:CD2	2:B:217:LEU:HB2	2.01	0.90
3:A:319:TYR:HB2	3:A:355:ILE:CA	1.99	0.90
1:K:82:TYR:CD2	1:K:86:VAL:CG2	2.54	0.90
1:K:157:LYS:HE3	1:K:203:THR:OG1	1.69	0.90
1:K:325:GLY:HA2	1:K:361:ASN:HA	1.54	0.90
3:A:153:LEU:HD12	3:A:156:ARG:HH12	1.37	0.90
1:K:159:SER:CA	1:K:172:LEU:HD13	2.02	0.90
3:A:3:GLU:HG2	3:A:50:ASN:CB	2.00	0.90
3:A:346:TRP:HE1	3:A:438:ASP:HA	1.34	0.90
2:B:250:LEU:HA	2:B:253:LEU:HD21	1.53	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:82:TYR:CE2	1:K:86:VAL:CG2	2.54	0.90
1:K:206:ASN:HD21	1:K:209:GLU:HG3	1.37	0.90
2:B:28:HIS:CD2	2:B:47:ILE:HD12	2.07	0.90
1:K:293:LEU:CD2	3:A:409:VAL:HG21	2.02	0.89
1:K:66:TYR:CE2	1:K:67:THR:O	2.25	0.89
1:K:144:PHE:CE2	1:K:207:LYS:HA	2.06	0.89
1:K:160:LEU:CG	1:K:171:LEU:HD12	2.01	0.89
2:B:148:GLY:HA2	2:B:151:LEU:HD21	1.54	0.89
2:B:345:ILE:CD1	3:A:181:VAL:HG22	2.03	0.89
3:A:286:LEU:CD1	3:A:291:ILE:HD11	2.02	0.89
1:K:215:GLU:CG	1:K:216:LYS:HE3	2.03	0.89
3:A:9:VAL:CG1	3:A:146:GLY:HA2	2.03	0.89
3:A:41:THR:HG21	3:A:49:PHE:HB2	1.54	0.89
3:A:262:TYR:HB3	3:A:264:ARG:CD	2.01	0.89
2:B:9:ALA:HB1	2:B:147:MET:CE	2.02	0.89
2:B:102:ALA:HB3	2:B:401:GLU:HB3	1.51	0.89
2:B:260:PHE:CE1	3:A:404:PHE:HA	2.08	0.89
1:K:55:GLY:CA	1:K:60:LYS:HE3	2.00	0.89
1:K:352:TYR:HB2	4:K:501:MZK:C15	2.03	0.89
3:A:200:CYS:CA	3:A:266:HIS:HB3	1.98	0.89
3:A:286:LEU:CD2	3:A:371:VAL:HB	2.02	0.89
3:A:344:VAL:HB	3:A:346:TRP:CD1	2.08	0.89
1:K:82:TYR:CZ	1:K:86:VAL:CG1	2.55	0.89
2:B:103:LYS:HD2	2:B:401:GLU:CA	2.02	0.89
3:A:278:ALA:CA	3:A:368:LEU:HA	2.01	0.89
3:A:318:LEU:HD22	3:A:319:TYR:H	1.37	0.89
3:A:351:PHE:CD2	3:A:352:LYS:HB2	2.08	0.89
1:K:53:ARG:CB	1:K:60:LYS:HB3	2.02	0.89
1:K:223:THR:HB	1:K:234:ARG:HB2	1.53	0.89
2:B:253:LEU:HB2	2:B:257:MET:CE	2.02	0.88
3:A:384:ILE:HD11	3:A:432:TYR:HE2	1.36	0.88
1:K:109:THR:CG2	1:K:335:THR:HB	2.03	0.88
1:K:170:ASP:HB2	1:K:180:GLU:HB2	1.54	0.88
1:K:181:ARG:CZ	1:K:197:LYS:HG3	2.02	0.88
3:A:189:LEU:HD13	3:A:418:PHE:CD2	2.07	0.88
1:K:187:ASP:HB3	1:K:195:ILE:CD1	2.04	0.88
2:B:392:LYS:CB	2:B:395:LEU:HD11	2.03	0.88
3:A:259:LEU:HD13	3:A:378:LEU:HD12	1.53	0.88
2:B:9:ALA:HB1	2:B:147:MET:HE2	1.54	0.88
2:B:51:TYR:HD2	2:B:59:TYR:HB3	1.38	0.88
3:A:276:ILE:HG13	3:A:371:VAL:HG11	1.53	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:16:ILE:HA	3:A:228:ASN:HD22	1.39	0.88
1:K:181:ARG:CZ	1:K:197:LYS:HE2	2.02	0.88
1:K:53:ARG:HB3	1:K:60:LYS:CB	2.01	0.88
2:B:20:PHE:HA	2:B:230:SER:HB2	1.53	0.88
3:A:4:CYS:HA	3:A:132:LEU:CG	2.01	0.88
3:A:107:HIS:HB2	3:A:148:GLY:HA2	1.56	0.88
2:B:162:ARG:CZ	2:B:162:ARG:HA	2.03	0.88
3:A:216:ASN:HB3	3:A:280:LYS:HD2	1.55	0.88
1:K:169:PHE:CD1	1:K:179:SER:HB2	2.09	0.88
2:B:371:SER:HB2	2:B:374:ILE:HG22	1.55	0.88
3:A:3:GLU:CG	3:A:50:ASN:HB3	2.04	0.88
3:A:286:LEU:HD23	3:A:371:VAL:HB	1.56	0.88
1:K:91:ASP:O	1:K:95:MET:SD	2.32	0.87
3:A:237:SER:HA	3:A:320:ARG:HH11	1.37	0.87
1:K:95:MET:HE2	1:K:97:TYR:CG	2.08	0.87
3:A:269:LEU:HD23	3:A:384:ILE:HD12	1.56	0.87
1:K:327:ARG:H	1:K:327:ARG:HH21	1.21	0.87
2:B:324:LYS:CD	3:A:221:ARG:CG	2.52	0.87
3:A:1:MET:HG2	3:A:47:ASP:N	1.89	0.87
3:A:232:SER:HB3	3:A:363:VAL:HG11	1.56	0.87
3:A:272:TYR:HE1	3:A:374:ALA:HB1	1.37	0.87
1:K:94:ILE:O	1:K:245:MET:HE3	1.73	0.87
2:B:339:SER:HA	2:B:429:THR:CG2	2.04	0.87
2:B:371:SER:HB2	2:B:374:ILE:CG2	2.04	0.87
3:A:103:TYR:HB2	3:A:147:SER:HB3	1.56	0.87
2:B:216:LYS:HE2	2:B:277:GLY:HA3	1.57	0.87
1:K:160:LEU:H	1:K:172:LEU:HD22	1.39	0.87
1:K:269:SER:HB3	1:K:288:ILE:HD11	1.56	0.87
1:K:298:VAL:HG23	1:K:310:PRO:HD2	1.54	0.87
3:A:68:VAL:HG21	3:A:149:PHE:CE1	2.08	0.87
3:A:70:LEU:CD2	3:A:110:ILE:HG13	2.04	0.87
3:A:275:VAL:HB	3:A:300:ASN:HD22	1.40	0.87
1:K:16:GLY:HA3	1:K:362:LYS:CA	2.05	0.86
2:B:244:GLY:HA2	2:B:355:ASP:N	1.90	0.86
3:A:282:TYR:CE1	3:A:369:ALA:HB2	2.10	0.86
2:B:1:MET:HE2	2:B:49:VAL:CB	2.04	0.86
2:B:45:GLU:HG3	2:B:46:ARG:HE	1.37	0.86
2:B:324:LYS:HE3	3:A:222:PRO:HD3	1.57	0.86
2:B:253:LEU:HB2	2:B:257:MET:HE1	1.57	0.86
2:B:142:GLY:HA2	2:B:184:ASN:CG	1.96	0.86
2:B:286:VAL:HB	2:B:287:PRO:HD3	1.58	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:209:ILE:HG12	3:A:302:MET:HB2	1.57	0.86
3:A:246:GLY:HA2	3:A:357:TYR:H	1.41	0.86
1:K:181:ARG:HB2	1:K:181:ARG:HH11	1.40	0.86
2:B:324:LYS:HZ1	3:A:222:PRO:N	1.73	0.86
2:B:376:GLU:CA	2:B:379:LYS:HE2	2.05	0.86
3:A:107:HIS:CD2	3:A:152:LEU:HB2	2.10	0.86
3:A:172:TYR:CB	3:A:203:MET:HB2	2.05	0.86
2:B:324:LYS:HZ3	3:A:221:ARG:CB	1.89	0.86
3:A:264:ARG:HD3	3:A:264:ARG:H	1.39	0.86
1:K:206:ASN:ND2	1:K:209:GLU:HG3	1.91	0.86
3:A:54:SER:HB3	3:A:64:ARG:HH11	1.40	0.86
3:A:233:GLN:HE21	3:A:234:ILE:HG22	1.41	0.86
3:A:320:ARG:HB2	3:A:374:ALA:H	1.37	0.85
2:B:24:ILE:HA	2:B:27:GLU:HG2	1.58	0.85
2:B:130:LEU:HD22	2:B:133:PHE:CE1	2.10	0.85
2:B:242:PHE:CD2	2:B:356:ILE:HD11	2.10	0.85
2:B:314:ALA:N	2:B:368:ILE:HB	1.92	0.85
3:A:166:LYS:CD	3:A:198:SER:HA	2.04	0.85
1:K:26:ARG:HH12	1:K:28:PHE:HA	1.41	0.85
1:K:109:THR:HG21	1:K:336:ILE:N	1.92	0.85
1:K:162:GLU:OE2	1:K:221:ARG:NH1	2.10	0.85
2:B:116:VAL:HG23	2:B:117:LEU:HD22	1.58	0.85
3:A:280:LYS:HA	3:A:283:HIS:CD2	2.11	0.85
1:K:26:ARG:CZ	1:K:338:PRO:HD2	2.06	0.85
1:K:37:ALA:HA	1:K:341:LEU:HD11	1.57	0.85
1:K:55:GLY:HA2	1:K:60:LYS:HA	1.58	0.85
2:B:1:MET:HG3	2:B:127:CYS:HB2	1.56	0.85
3:A:279:GLU:HA	3:A:282:TYR:CD2	2.12	0.85
3:A:385:ALA:HA	3:A:388:TRP:CD2	2.11	0.85
1:K:160:LEU:N	1:K:172:LEU:HB3	1.92	0.85
1:K:17:LYS:HD3	1:K:363:PRO:HB2	1.58	0.85
3:A:6:SER:HB3	3:A:138:PHE:CE1	2.11	0.85
2:B:152:ILE:HD13	2:B:155:ILE:HD11	1.58	0.85
2:B:170:VAL:CG2	2:B:203:ASP:HA	2.05	0.85
2:B:215:LEU:HA	2:B:276:ARG:CB	2.06	0.85
3:A:4:CYS:H	3:A:51:THR:HA	1.42	0.85
3:A:313:MET:CE	3:A:344:VAL:HG11	2.06	0.85
1:K:92:GLU:OE1	1:K:329:ARG:HG2	1.76	0.84
2:B:179:VAL:HG21	2:B:388:MET:HG3	1.56	0.84
2:B:377:LEU:HA	2:B:380:ARG:NE	1.92	0.84
2:B:398:TYR:HA	2:B:401:GLU:HG3	1.59	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:182:PRO:HB2	2:B:385:PHE:CZ	2.12	0.84
2:B:330:MET:HG3	2:B:331:LEU:HD13	1.59	0.84
1:K:170:ASP:HB2	1:K:180:GLU:CB	2.06	0.84
1:K:352:TYR:HA	4:K:501:MZK:F3	1.66	0.84
2:B:308:GLY:HA2	2:B:372:THR:CB	2.07	0.84
2:B:12:CYS:O	2:B:16:ILE:HG13	1.76	0.84
3:A:12:ALA:HA	3:A:15:GLN:NE2	1.92	0.84
2:B:21:TRP:CE3	2:B:21:TRP:HA	2.10	0.84
2:B:324:LYS:HE3	3:A:221:ARG:HD3	1.60	0.84
3:A:223:THR:HG22	3:A:225:THR:H	1.43	0.84
1:K:162:GLU:OE2	1:K:223:THR:HG23	1.77	0.84
3:A:48:SER:HB2	3:A:243:ARG:CD	2.06	0.84
3:A:310:GLY:HA3	3:A:381:THR:HB	1.56	0.84
1:K:269:SER:HB3	1:K:288:ILE:CD1	2.07	0.84
2:B:274:THR:HB	2:B:279:GLN:CB	2.04	0.84
2:B:286:VAL:HG11	2:B:325:GLU:CB	2.07	0.84
2:B:323:MET:HB2	3:A:221:ARG:CD	2.07	0.84
1:K:17:LYS:CG	1:K:363:PRO:HG2	2.07	0.84
2:B:292:GLN:O	2:B:298:ASN:HB2	1.78	0.84
2:B:12:CYS:SG	2:B:138:SER:HB3	2.17	0.84
3:A:320:ARG:CG	3:A:374:ALA:HB3	2.07	0.84
1:K:224:ALA:HB3	1:K:234:ARG:HG2	1.59	0.84
1:K:293:LEU:HD12	3:A:405:VAL:HG11	1.58	0.84
3:A:24:TYR:HB3	3:A:52:PHE:CD1	2.13	0.84
2:B:293:MET:HE1	2:B:367:PHE:HA	1.58	0.83
3:A:23:LEU:HD12	3:A:363:VAL:CA	2.06	0.83
1:K:234:ARG:NH2	1:K:284:GLU:HG3	1.92	0.83
3:A:36:MET:HE3	3:A:38:SER:HB3	1.59	0.83
3:A:81:GLY:HA3	3:A:83:TYR:CZ	2.12	0.83
3:A:163:LYS:HE3	3:A:164:LYS:H	1.43	0.83
1:K:292:LEU:HD23	4:K:501:MZK:C3	2.07	0.83
2:B:17:GLY:N	2:B:136:THR:HG21	1.93	0.83
2:B:323:MET:HB2	3:A:221:ARG:HG3	1.60	0.83
3:A:71:GLU:HB3	3:A:98:ASP:CG	1.99	0.83
3:A:215:ARG:NH1	3:A:216:ASN:HA	1.93	0.83
3:A:216:ASN:CB	3:A:280:LYS:HD2	2.08	0.83
1:K:162:GLU:CD	1:K:235:SER:CB	2.44	0.83
1:K:269:SER:HB3	1:K:288:ILE:CG1	2.09	0.83
2:B:21:TRP:CD1	2:B:63:ALA:HB2	2.13	0.83
1:K:160:LEU:HG	1:K:171:LEU:CD1	2.07	0.83
1:K:168:LEU:HD12	1:K:182:LEU:HB3	1.59	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:180:GLU:HG3	1:K:199:LEU:HD13	1.60	0.83
1:K:321:GLN:HA	1:K:324:LEU:HD23	1.59	0.83
2:B:64:ILE:HD12	2:B:119:VAL:HG21	1.61	0.83
3:A:70:LEU:HD13	3:A:145:THR:CG2	2.07	0.83
3:A:125:LEU:O	3:A:128:GLN:HG3	1.78	0.83
3:A:434:GLU:O	3:A:437:VAL:HG22	1.79	0.83
2:B:42:LEU:HA	2:B:45:GLU:OE1	1.79	0.83
2:B:252:LYS:HD2	3:A:101:ASN:CB	2.09	0.83
1:K:94:ILE:HG12	1:K:147:LEU:HD21	1.61	0.83
1:K:26:ARG:HD2	1:K:29:ASN:ND2	1.94	0.83
1:K:140:LEU:HD13	1:K:210:VAL:CG1	2.09	0.83
3:A:387:ALA:HA	3:A:390:ARG:CD	2.09	0.83
1:K:168:LEU:HD13	1:K:182:LEU:HG	1.60	0.82
2:B:10:GLY:H	2:B:147:MET:HE1	1.43	0.82
1:K:322:ASP:O	1:K:326:GLY:HA3	1.79	0.82
2:B:325:GLU:O	2:B:328:GLU:HG3	1.80	0.82
3:A:256:GLN:HA	3:A:259:LEU:CD1	2.08	0.82
3:A:385:ALA:HB1	3:A:429:GLU:OE1	1.79	0.82
1:K:72:PHE:CD1	1:K:76:THR:HG21	2.14	0.82
2:B:273:LEU:HD22	2:B:274:THR:N	1.93	0.82
2:B:327:ASP:HA	2:B:330:MET:SD	2.18	0.82
3:A:19:ALA:HB1	3:A:229:ARG:HH22	1.43	0.82
3:A:273:ALA:HB3	3:A:375:VAL:CG2	2.09	0.82
3:A:286:LEU:CD1	3:A:373:ARG:HG3	2.07	0.82
3:A:317:LEU:HB2	3:A:353:VAL:CB	2.09	0.82
1:K:266:LEU:HD22	1:K:267:ALA:H	1.44	0.82
2:B:139:LEU:HD11	2:B:171:PRO:HD3	1.59	0.82
3:A:23:LEU:HA	3:A:364:PRO:CG	2.08	0.82
3:A:117:LEU:O	3:A:121:ARG:HG3	1.78	0.82
1:K:55:GLY:CA	1:K:60:LYS:HA	2.10	0.82
2:B:139:LEU:CD1	2:B:185:ALA:HB1	2.10	0.82
2:B:379:LYS:HD3	2:B:419:VAL:HB	1.60	0.82
3:A:28:HIS:CE1	3:A:49:PHE:HA	2.15	0.82
3:A:70:LEU:CD1	3:A:145:THR:HG23	2.08	0.82
1:K:55:GLY:HA3	1:K:60:LYS:CE	2.05	0.82
2:B:23:VAL:HA	2:B:26:ASP:OD2	1.79	0.82
2:B:51:TYR:CE1	2:B:61:PRO:HA	2.14	0.82
2:B:222:TYR:O	2:B:225:LEU:HG	1.79	0.82
3:A:286:LEU:HB2	3:A:291:ILE:CG1	2.08	0.82
3:A:320:ARG:CD	3:A:360:PRO:HA	2.10	0.82
3:A:383:ALA:CA	3:A:386:GLU:HG2	2.10	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:153:LEU:HD12	3:A:156:ARG:NH1	1.95	0.82
3:A:277:SER:CB	3:A:280:LYS:HG3	2.10	0.82
1:K:41:VAL:CG2	1:K:338:PRO:HA	2.10	0.82
2:B:97:ALA:HB2	2:B:143:THR:HG23	1.61	0.82
2:B:100:ASN:HB3	2:B:401:GLU:OE2	1.79	0.82
2:B:204:ASN:O	2:B:207:LEU:HG	1.80	0.82
2:B:318:ARG:HB3	2:B:358:PRO:HD3	1.60	0.82
3:A:189:LEU:HD22	3:A:418:PHE:HE2	1.42	0.82
3:A:247:ALA:HB3	3:A:355:ILE:CB	2.05	0.82
3:A:251:ASP:CB	3:A:254:GLU:HB3	2.09	0.82
1:K:82:TYR:CE2	1:K:86:VAL:HG11	2.15	0.82
1:K:171:LEU:HB3	1:K:220:LYS:HB3	1.60	0.82
3:A:64:ARG:HH21	3:A:64:ARG:HA	1.45	0.82
2:B:152:ILE:HG13	2:B:192:LEU:CD2	2.09	0.82
2:B:389:PHE:O	2:B:392:LYS:HG3	1.79	0.82
2:B:392:LYS:HB3	2:B:395:LEU:CD1	2.08	0.82
3:A:275:VAL:HB	3:A:300:ASN:HA	1.62	0.82
2:B:67:ASP:OD2	2:B:73:MET:HB3	1.79	0.81
2:B:422:TYR:HA	2:B:425:TYR:CD2	2.15	0.81
3:A:232:SER:HB3	3:A:363:VAL:CG1	2.09	0.81
1:K:329:ARG:CB	1:K:363:PRO:HB3	2.09	0.81
2:B:314:ALA:HB3	2:B:368:ILE:CG1	2.09	0.81
3:A:75:ILE:HG23	3:A:92:LEU:HD11	1.60	0.81
3:A:195:LEU:HD13	3:A:201:ALA:CB	2.10	0.81
2:B:101:TRP:CZ2	2:B:403:MET:HG3	2.15	0.81
2:B:415:MET:O	2:B:419:VAL:HG13	1.79	0.81
3:A:117:LEU:HD22	3:A:117:LEU:H	1.44	0.81
3:A:255:PHE:CZ	3:A:352:LYS:HB3	2.15	0.81
3:A:307:PRO:HD2	3:A:308:ARG:CZ	2.10	0.81
2:B:323:MET:HE1	2:B:326:VAL:HG21	1.63	0.81
3:A:50:ASN:O	3:A:64:ARG:HD3	1.80	0.81
3:A:153:LEU:HD11	3:A:157:LEU:HD11	1.62	0.81
1:K:157:LYS:HB3	1:K:201:GLU:CB	2.09	0.81
1:K:227:LEU:HG	1:K:228:MET:HE3	1.60	0.81
3:A:3:GLU:HA	3:A:51:THR:HA	1.61	0.81
3:A:107:HIS:HB2	3:A:148:GLY:CA	2.09	0.81
3:A:135:PHE:CE1	3:A:166:LYS:HA	2.16	0.81
3:A:154:MET:HE1	3:A:166:LYS:CE	2.09	0.81
3:A:242:LEU:HD23	3:A:252:LEU:CG	2.10	0.81
3:A:319:TYR:HB3	3:A:355:ILE:HG23	1.61	0.81
2:B:65:LEU:HD13	2:B:90:PHE:HB3	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:324:LYS:NZ	3:A:222:PRO:N	2.29	0.81
3:A:41:THR:CG2	3:A:49:PHE:HB2	2.11	0.81
3:A:310:GLY:HA3	3:A:381:THR:CG2	2.11	0.81
1:K:246:LYS:CE	1:K:254:GLU:OE2	2.27	0.81
2:B:260:PHE:CZ	3:A:404:PHE:HA	2.15	0.81
3:A:279:GLU:HB3	3:A:283:HIS:CE1	2.15	0.81
1:K:181:ARG:NH2	1:K:197:LYS:CD	2.43	0.81
3:A:204:VAL:CG2	3:A:209:ILE:HD12	2.11	0.81
3:A:256:GLN:HA	3:A:259:LEU:HG	1.61	0.81
3:A:320:ARG:HG3	3:A:374:ALA:CB	2.09	0.81
1:K:47:ARG:NH1	1:K:47:ARG:HA	1.96	0.81
1:K:68:PHE:HB2	1:K:71:VAL:CG2	2.11	0.81
2:B:362:LYS:HA	2:B:362:LYS:HE3	1.61	0.81
3:A:45:GLY:HA2	3:A:49:PHE:CD2	2.15	0.81
3:A:84:ARG:HH11	3:A:85:GLN:HB3	1.45	0.81
3:A:205:ASP:CB	3:A:208:ALA:HB3	2.10	0.81
3:A:268:PRO:CB	3:A:378:LEU:HB3	2.09	0.81
3:A:318:LEU:HD11	3:A:320:ARG:HG2	1.62	0.81
1:K:77:LYS:NZ	1:K:78:GLN:HG3	1.95	0.81
1:K:304:GLU:CG	1:K:306:THR:HB	2.10	0.81
2:B:154:LYS:CE	2:B:157:GLU:HB3	2.11	0.81
2:B:262:ARG:HD3	2:B:262:ARG:H	1.45	0.81
3:A:48:SER:CB	3:A:243:ARG:HD3	2.08	0.81
3:A:81:GLY:O	3:A:84:ARG:HB3	1.81	0.81
3:A:212:ILE:O	3:A:215:ARG:HG3	1.81	0.81
3:A:344:VAL:HG23	3:A:347:CYS:H	1.46	0.81
1:K:144:PHE:CD2	1:K:207:LYS:HA	2.16	0.80
1:K:199:LEU:HD12	1:K:200:GLU:H	1.44	0.80
2:B:140:GLY:HA2	2:B:185:ALA:HB2	1.63	0.80
2:B:326:VAL:CG1	2:B:330:MET:HE1	2.07	0.80
2:B:421:GLU:HG3	2:B:425:TYR:CE1	2.14	0.80
3:A:5:ILE:HG23	3:A:65:ALA:HA	1.62	0.80
1:K:258:ILE:O	1:K:368:LYS:HE2	1.81	0.80
2:B:278:SER:HA	2:B:282:ARG:HH11	1.45	0.80
3:A:392:ASP:OD2	3:A:422:ARG:HD3	1.80	0.80
1:K:212:GLN:O	1:K:216:LYS:HG2	1.82	0.80
2:B:350:LYS:HE3	3:A:179:THR:CG2	2.10	0.80
2:B:280:GLN:HG3	2:B:281:TYR:CD1	2.16	0.80
2:B:285:THR:CG2	2:B:288:GLU:HB2	2.11	0.80
2:B:372:THR:HA	2:B:375:GLN:OE1	1.80	0.80
1:K:171:LEU:HD13	1:K:221:ARG:CA	2.11	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:101:TRP:HA	2:B:146:GLY:CA	2.11	0.80
2:B:144:GLY:HA2	2:B:147:MET:SD	2.22	0.80
2:B:152:ILE:HA	2:B:155:ILE:HD11	1.63	0.80
2:B:214:THR:HB	2:B:276:ARG:N	1.96	0.80
2:B:269:GLY:CA	2:B:367:PHE:HB3	2.10	0.80
2:B:342:VAL:HA	2:B:429:THR:C	2.02	0.80
3:A:313:MET:HA	3:A:344:VAL:CG2	2.11	0.80
1:K:177:ASP:HB2	1:K:179:SER:O	1.81	0.80
1:K:180:GLU:O	1:K:182:LEU:HD22	1.81	0.80
2:B:258:VAL:HG12	2:B:263:LEU:CD1	2.11	0.80
3:A:7:ILE:CG2	3:A:137:VAL:HA	2.12	0.80
3:A:277:SER:HB3	3:A:280:LYS:HG3	1.62	0.80
1:K:29:ASN:CB	1:K:32:GLU:HG2	2.12	0.80
3:A:156:ARG:NH1	3:A:156:ARG:HB3	1.96	0.80
3:A:237:SER:HA	3:A:320:ARG:NH1	1.96	0.80
2:B:242:PHE:CE2	2:B:356:ILE:HD11	2.16	0.80
2:B:322:SER:HB3	2:B:325:GLU:HG3	1.63	0.80
3:A:229:ARG:HA	3:A:229:ARG:CZ	2.12	0.80
2:B:51:TYR:CD2	2:B:59:TYR:HB3	2.16	0.80
2:B:272:PRO:HB2	2:B:279:GLN:HE22	1.44	0.80
2:B:276:ARG:HG3	2:B:277:GLY:N	1.95	0.80
3:A:35:GLN:HB2	3:A:60:LYS:HE2	1.63	0.80
3:A:269:LEU:HD23	3:A:384:ILE:CD1	2.12	0.80
1:K:140:LEU:HD13	1:K:210:VAL:HG12	1.61	0.79
1:K:320:LEU:CD1	1:K:323:SER:HB2	2.12	0.79
3:A:215:ARG:HH11	3:A:216:ASN:HD22	1.27	0.79
3:A:46:ASP:OD1	3:A:48:SER:HB3	1.83	0.79
3:A:63:PRO:HG3	3:A:86:LEU:HD21	1.64	0.79
3:A:431:ASP:HA	3:A:434:GLU:OE2	1.81	0.79
2:B:276:ARG:HD2	2:B:280:GLN:NE2	1.98	0.79
3:A:231:ILE:O	3:A:234:ILE:HG13	1.81	0.79
3:A:242:LEU:CD2	3:A:252:LEU:HG	2.09	0.79
1:K:266:LEU:HD22	1:K:267:ALA:N	1.98	0.79
1:K:274:ARG:NH1	1:K:274:ARG:HA	1.96	0.79
1:K:281:ARG:O	1:K:284:GLU:HG2	1.82	0.79
3:A:121:ARG:O	3:A:124:LYS:HG3	1.83	0.79
2:B:45:GLU:HB2	2:B:46:ARG:HH21	1.46	0.79
2:B:102:ALA:HB3	2:B:401:GLU:CD	2.03	0.79
3:A:192:HIS:CE1	3:A:421:ALA:HB2	2.17	0.79
3:A:217:LEU:HB3	3:A:219:ILE:CG1	2.12	0.79
3:A:278:ALA:HB1	3:A:282:TYR:OH	1.82	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:288:VAL:HG21	3:A:327:ASP:HB3	1.64	0.79
1:K:28:PHE:HB3	1:K:33:ARG:NE	1.98	0.79
1:K:31:ALA:HB1	1:K:34:LYS:HE2	1.65	0.79
2:B:178:THR:HG23	2:B:181:GLU:N	1.98	0.79
2:B:318:ARG:HG2	2:B:354:CYS:HB2	1.65	0.79
3:A:8:HIS:CD2	3:A:17:GLY:HA3	2.18	0.79
1:K:40:ILE:HG12	1:K:338:PRO:O	1.80	0.79
2:B:46:ARG:O	2:B:49:VAL:HG22	1.83	0.79
2:B:151:LEU:HD12	2:B:152:ILE:N	1.98	0.79
3:A:31:GLN:HB3	3:A:33:ASP:OD2	1.83	0.79
3:A:45:GLY:HA2	3:A:49:PHE:HD2	1.48	0.79
3:A:79:ARG:CZ	3:A:92:LEU:HG	2.13	0.79
3:A:311:LYS:HA	3:A:342:GLN:CG	2.11	0.79
1:K:95:MET:HE1	1:K:97:TYR:HB2	1.62	0.79
2:B:321:MET:HG2	2:B:322:SER:O	1.83	0.79
2:B:321:MET:CG	2:B:325:GLU:HB2	2.13	0.79
3:A:140:SER:HA	3:A:171:ILE:HG22	1.63	0.79
3:A:240:ALA:HA	3:A:243:ARG:HG2	1.62	0.79
2:B:117:LEU:O	2:B:121:ARG:HG2	1.82	0.79
2:B:309:ARG:CB	2:B:426:GLN:HA	2.10	0.79
2:B:316:VAL:N	2:B:366:THR:HG22	1.97	0.79
2:B:350:LYS:NZ	3:A:179:THR:HA	1.97	0.79
2:B:416:ASN:O	2:B:419:VAL:HG22	1.83	0.79
3:A:246:GLY:CA	3:A:356:ASN:HA	2.10	0.79
3:A:287:SER:CB	3:A:290:GLU:HG3	2.13	0.79
1:K:233:SER:OG	1:K:267:ALA:HA	1.82	0.79
2:B:215:LEU:O	2:B:276:ARG:HG2	1.83	0.79
3:A:8:HIS:NE2	3:A:17:GLY:HA3	1.98	0.79
1:K:95:MET:HE2	1:K:97:TYR:CD2	2.18	0.78
3:A:30:ILE:CA	3:A:36:MET:HB3	2.07	0.78
3:A:213:CYS:O	3:A:217:LEU:HG	1.83	0.78
3:A:216:ASN:CG	3:A:280:LYS:HD2	2.04	0.78
1:K:158:VAL:C	1:K:201:GLU:HG2	2.03	0.78
1:K:173:ASN:HB3	1:K:175:SER:OG	1.82	0.78
2:B:156:ARG:HH21	2:B:157:GLU:HA	1.47	0.78
2:B:341:PHE:CE2	2:B:346:PRO:HA	2.17	0.78
2:B:376:GLU:O	2:B:379:LYS:HG2	1.82	0.78
3:A:344:VAL:HB	3:A:346:TRP:HD1	1.43	0.78
1:K:339:ALA:HB1	1:K:341:LEU:HD13	1.62	0.78
2:B:103:LYS:NZ	2:B:103:LYS:HA	1.98	0.78
2:B:139:LEU:HD21	2:B:170:VAL:HG12	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:88:HIS:HB2	3:A:91:GLN:HE22	1.48	0.78
3:A:320:ARG:NE	3:A:360:PRO:HA	1.99	0.78
3:A:431:ASP:HA	3:A:434:GLU:CD	2.04	0.78
1:K:155:SER:CB	1:K:203:THR:HG21	2.05	0.78
2:B:293:MET:HA	2:B:298:ASN:CG	2.03	0.78
3:A:184:PRO:O	3:A:188:ILE:HD13	1.82	0.78
1:K:190:ASN:HB3	1:K:193:GLY:CA	2.13	0.78
2:B:33:THR:HG23	2:B:35:SER:N	1.97	0.78
2:B:103:LYS:HD2	2:B:401:GLU:HG2	1.65	0.78
2:B:246:LEU:HD12	2:B:352:ALA:CA	2.12	0.78
2:B:293:MET:HE3	2:B:367:PHE:HB2	1.64	0.78
3:A:30:ILE:HD11	3:A:34:GLY:O	1.83	0.78
3:A:56:THR:HG22	3:A:57:GLY:H	1.46	0.78
3:A:243:ARG:HD2	3:A:244:PHE:CD2	2.18	0.78
3:A:388:TRP:HB2	3:A:425:MET:CE	2.14	0.78
1:K:311:TYR:HE1	1:K:324:LEU:HG	1.47	0.78
2:B:120:VAL:HG23	2:B:121:ARG:NE	1.97	0.78
3:A:320:ARG:NH1	3:A:361:THR:HG23	1.99	0.78
3:A:383:ALA:HA	3:A:386:GLU:CG	2.13	0.78
1:K:144:PHE:HB2	1:K:207:LYS:HZ3	1.49	0.78
1:K:257:LYS:HA	1:K:368:LYS:HD3	1.65	0.78
2:B:103:LYS:HG2	2:B:401:GLU:OE2	1.84	0.78
2:B:172:SER:CB	2:B:205:GLU:HB3	2.13	0.78
3:A:320:ARG:HH12	3:A:361:THR:HG23	1.48	0.78
2:B:324:LYS:HE3	3:A:222:PRO:HD2	1.64	0.78
3:A:70:LEU:HG	3:A:110:ILE:CG2	2.13	0.78
3:A:320:ARG:HB2	3:A:360:PRO:HG3	1.64	0.78
3:A:320:ARG:HD3	3:A:360:PRO:HA	1.66	0.78
1:K:227:LEU:HD23	1:K:227:LEU:H	1.48	0.78
2:B:211:CYS:SG	2:B:220:PRO:HB3	2.24	0.78
2:B:376:GLU:HB3	2:B:380:ARG:NH1	1.98	0.78
3:A:8:HIS:HB3	3:A:13:GLY:C	2.03	0.78
3:A:328:VAL:O	3:A:332:ILE:HG12	1.82	0.78
3:A:339:ARG:HG3	3:A:340:SER:N	1.97	0.78
1:K:347:LEU:HD23	1:K:351:GLU:HG2	1.66	0.78
2:B:139:LEU:HD23	2:B:168:SER:HB2	1.65	0.78
2:B:316:VAL:O	2:B:365:ALA:HA	1.82	0.78
2:B:324:LYS:N	3:A:221:ARG:HG2	1.99	0.78
3:A:84:ARG:NH1	3:A:85:GLN:HB3	1.99	0.78
1:K:55:GLY:HA2	1:K:59:ASP:O	1.83	0.77
3:A:9:VAL:HG11	3:A:146:GLY:HA2	1.63	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:171:ILE:HA	3:A:204:VAL:CG1	2.14	0.77
3:A:185:TYR:CZ	3:A:398:MET:HB3	2.18	0.77
3:A:288:VAL:HG21	3:A:327:ASP:CB	2.14	0.77
3:A:208:ALA:O	3:A:212:ILE:HG12	1.84	0.77
3:A:286:LEU:HB2	3:A:291:ILE:HG12	1.65	0.77
3:A:287:SER:OG	3:A:290:GLU:HG3	1.82	0.77
3:A:306:ASP:HB2	3:A:309:HIS:CG	2.19	0.77
3:A:310:GLY:HA3	3:A:381:THR:CB	2.13	0.77
1:K:192:ARG:HB2	1:K:322:ASP:OD1	1.84	0.77
1:K:354:HIS:O	1:K:357:LYS:HG2	1.84	0.77
2:B:43:GLN:O	2:B:47:ILE:HG12	1.82	0.77
2:B:154:LYS:HE2	2:B:154:LYS:HA	1.67	0.77
2:B:208:TYR:CE2	2:B:220:PRO:HB2	2.19	0.77
3:A:56:THR:C	3:A:58:ALA:HA	2.03	0.77
1:K:246:LYS:HE3	1:K:254:GLU:OE1	1.83	0.77
2:B:12:CYS:SG	2:B:16:ILE:HD11	2.24	0.77
2:B:46:ARG:HA	2:B:46:ARG:CZ	2.15	0.77
2:B:148:GLY:HA2	2:B:151:LEU:CD2	2.14	0.77
3:A:176:GLN:HE21	3:A:207:GLU:HA	1.48	0.77
3:A:247:ALA:HA	3:A:357:TYR:CE1	2.20	0.77
3:A:402:ARG:HD2	3:A:415:GLU:OE1	1.84	0.77
1:K:274:ARG:HA	1:K:274:ARG:CZ	2.14	0.77
2:B:15:GLN:O	2:B:19:LYS:HG2	1.85	0.77
2:B:70:PRO:HB3	2:B:92:PHE:HE2	1.50	0.77
2:B:314:ALA:O	2:B:368:ILE:HG12	1.84	0.77
3:A:69:ASP:OD2	3:A:71:GLU:HG2	1.84	0.77
3:A:256:GLN:HA	3:A:259:LEU:CG	2.15	0.77
3:A:313:MET:HE2	3:A:344:VAL:CG1	2.13	0.77
2:B:41:ASP:CA	2:B:44:LEU:HD23	2.07	0.77
2:B:159:TYR:HB2	2:B:162:ARG:HG2	1.66	0.77
2:B:375:GLN:OE1	2:B:422:TYR:HB3	1.83	0.77
3:A:278:ALA:HA	3:A:368:LEU:CA	2.11	0.77
2:B:139:LEU:HD12	2:B:185:ALA:HB1	1.65	0.77
2:B:190:HIS:CE1	2:B:411:ALA:HA	2.20	0.77
2:B:213:ARG:NH1	2:B:213:ARG:HB2	2.00	0.77
2:B:277:GLY:HA2	2:B:280:GLN:NE2	1.99	0.77
2:B:303:CYS:SG	2:B:371:SER:HB3	2.25	0.77
3:A:6:SER:HB3	3:A:138:PHE:CZ	2.19	0.77
3:A:84:ARG:HD2	3:A:85:GLN:N	1.99	0.77
3:A:119:LEU:HD12	3:A:120:ASP:N	1.98	0.77
3:A:384:ILE:HD11	3:A:432:TYR:CE2	2.19	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:51:TYR:CZ	2:B:61:PRO:HA	2.20	0.77
2:B:65:LEU:H	2:B:90:PHE:HB2	1.47	0.77
2:B:381:ILE:HA	2:B:384:GLN:CD	2.04	0.77
3:A:31:GLN:HB2	3:A:37:PRO:CD	2.14	0.77
3:A:166:LYS:HG2	3:A:199:ASP:OD2	1.85	0.77
3:A:281:ALA:CB	3:A:369:ALA:HB3	2.15	0.77
3:A:286:LEU:HD12	3:A:286:LEU:O	1.84	0.77
2:B:159:TYR:CD2	2:B:162:ARG:HG2	2.20	0.77
2:B:214:THR:O	2:B:216:LYS:HD2	1.85	0.77
2:B:376:GLU:HG3	2:B:379:LYS:NZ	2.00	0.77
3:A:30:ILE:HA	3:A:36:MET:CB	2.09	0.77
3:A:154:MET:CG	3:A:197:HIS:HB2	2.15	0.77
2:B:263:LEU:HD11	2:B:265:PHE:O	1.86	0.77
2:B:342:VAL:HB	2:B:348:ASN:HD21	1.50	0.77
2:B:414:ASN:O	2:B:418:LEU:HD23	1.84	0.77
3:A:64:ARG:N	3:A:64:ARG:HD2	2.00	0.77
3:A:103:TYR:HE2	3:A:151:SER:HB3	1.50	0.77
1:K:257:LYS:HD3	1:K:367:GLN:HE22	1.50	0.76
1:K:290:GLN:NE2	3:A:410:GLY:HA3	1.98	0.76
3:A:152:LEU:HA	3:A:155:GLU:OE1	1.85	0.76
3:A:273:ALA:CB	3:A:295:CYS:HB2	2.15	0.76
1:K:135:ILE:HD12	1:K:136:ILE:N	2.00	0.76
1:K:155:SER:HB3	1:K:203:THR:CG2	2.05	0.76
1:K:256:VAL:O	1:K:368:LYS:HB2	1.85	0.76
2:B:5:VAL:HA	2:B:62:ARG:HG3	1.66	0.76
2:B:6:HIS:O	2:B:63:ALA:HA	1.84	0.76
2:B:105:HIS:CE1	2:B:150:LEU:HD23	2.20	0.76
2:B:413:SER:HA	2:B:416:ASN:ND2	2.00	0.76
3:A:78:VAL:HA	3:A:83:TYR:HE1	1.49	0.76
3:A:189:LEU:HD13	3:A:418:PHE:HD2	1.46	0.76
3:A:320:ARG:HB2	3:A:374:ALA:N	2.00	0.76
3:A:360:PRO:HB3	3:A:374:ALA:HB2	1.67	0.76
1:K:26:ARG:CG	1:K:109:THR:HA	2.15	0.76
1:K:345:GLU:O	1:K:349:THR:HG23	1.86	0.76
2:B:145:SER:OG	2:B:185:ALA:HA	1.85	0.76
2:B:183:TYR:HA	2:B:385:PHE:CE1	2.20	0.76
2:B:331:LEU:HA	2:B:334:GLN:NE2	2.00	0.76
3:A:214:ARG:CZ	3:A:215:ARG:HA	2.16	0.76
1:K:15:LYS:HE2	1:K:362:LYS:HE2	1.68	0.76
1:K:96:GLY:O	1:K:366:ASN:HB2	1.86	0.76
2:B:324:LYS:CG	3:A:221:ARG:HG2	2.15	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:324:LYS:CA	3:A:221:ARG:HG2	2.16	0.76
3:A:23:LEU:CD1	3:A:363:VAL:HA	2.11	0.76
3:A:26:LEU:CD2	3:A:364:PRO:HB3	2.15	0.76
3:A:306:ASP:HA	3:A:308:ARG:HH21	1.51	0.76
3:A:315:CYS:HA	3:A:378:LEU:O	1.84	0.76
3:A:317:LEU:HD23	3:A:377:MET:HG3	1.66	0.76
1:K:312:ARG:CA	1:K:318:ARG:HD2	2.16	0.76
1:K:365:VAL:CG1	1:K:367:GLN:HG2	2.14	0.76
2:B:212:PHE:HB2	2:B:220:PRO:CD	2.15	0.76
3:A:262:TYR:HE2	3:A:435:VAL:HG23	1.50	0.76
1:K:289:ASN:ND2	3:A:409:VAL:HG13	1.99	0.76
2:B:3:GLU:CD	2:B:50:TYR:HA	2.06	0.76
2:B:20:PHE:CE1	2:B:24:ILE:HD11	2.20	0.76
2:B:97:ALA:HB3	2:B:143:THR:CA	2.16	0.76
2:B:251:ARG:NE	3:A:100:ALA:HB3	1.99	0.76
2:B:327:ASP:O	2:B:330:MET:HG2	1.86	0.76
3:A:103:TYR:HB2	3:A:147:SER:CB	2.16	0.76
3:A:326:LYS:HA	3:A:329:ASN:ND2	2.00	0.76
1:K:31:ALA:HB1	1:K:34:LYS:CE	2.16	0.76
1:K:92:GLU:O	1:K:97:TYR:HB2	1.84	0.76
2:B:308:GLY:HA2	2:B:372:THR:H	1.51	0.76
2:B:377:LEU:HD12	2:B:377:LEU:O	1.86	0.76
3:A:386:GLU:O	3:A:390:ARG:HG3	1.86	0.76
1:K:32:GLU:HB3	1:K:33:ARG:HH21	1.50	0.76
1:K:156:VAL:N	1:K:203:THR:HG23	2.01	0.76
2:B:140:GLY:CA	2:B:171:PRO:HG3	2.15	0.76
3:A:273:ALA:HB2	3:A:295:CYS:HB2	1.68	0.76
1:K:114:THR:O	1:K:135:ILE:HG23	1.86	0.76
2:B:147:MET:HG2	2:B:148:GLY:N	2.00	0.76
3:A:17:GLY:HA2	3:A:20:CYS:SG	2.25	0.76
3:A:174:ALA:HB2	3:A:207:GLU:H	1.50	0.76
3:A:214:ARG:HG2	3:A:221:ARG:HH12	1.49	0.76
3:A:370:LYS:NZ	3:A:372:GLN:HA	2.01	0.76
2:B:217:LEU:HD12	2:B:219:THR:O	1.85	0.76
2:B:253:LEU:HD12	2:B:254:ALA:N	2.01	0.76
3:A:154:MET:HE2	3:A:154:MET:O	1.86	0.76
3:A:174:ALA:HB1	3:A:207:GLU:CB	2.16	0.76
3:A:396:ASP:HA	3:A:422:ARG:NH2	2.00	0.76
1:K:159:SER:HA	1:K:172:LEU:CD1	2.08	0.75
2:B:210:ILE:O	2:B:213:ARG:HG3	1.85	0.75
2:B:324:LYS:N	3:A:221:ARG:CG	2.49	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:31:GLN:HG2	3:A:32:PRO:CD	2.14	0.75
3:A:53:PHE:HB3	3:A:62:VAL:C	2.07	0.75
3:A:319:TYR:CB	3:A:355:ILE:HG23	2.15	0.75
3:A:321:GLY:HA3	3:A:372:GLN:HE21	1.50	0.75
1:K:289:ASN:HD22	3:A:409:VAL:CG1	2.00	0.75
2:B:137:HIS:O	2:B:168:SER:HA	1.85	0.75
2:B:323:MET:HB2	3:A:221:ARG:CG	2.15	0.75
3:A:163:LYS:HE3	3:A:164:LYS:N	2.01	0.75
3:A:391:LEU:HA	3:A:394:LYS:HE2	1.68	0.75
2:B:149:THR:CG2	2:B:188:SER:HA	2.17	0.75
2:B:183:TYR:O	2:B:186:THR:HG22	1.86	0.75
3:A:9:VAL:HB	3:A:139:HIS:HB2	1.68	0.75
2:B:122:LYS:HA	2:B:125:GLU:OE1	1.86	0.75
2:B:203:ASP:OD2	2:B:301:ALA:HA	1.87	0.75
3:A:176:GLN:CG	3:A:207:GLU:HB2	2.14	0.75
3:A:282:TYR:HE1	3:A:369:ALA:HB2	1.49	0.75
3:A:390:ARG:HA	3:A:393:HIS:CD2	2.21	0.75
2:B:101:TRP:CD1	2:B:149:THR:HG21	2.21	0.75
3:A:35:GLN:CB	3:A:60:LYS:HE2	2.17	0.75
3:A:119:LEU:O	3:A:122:ILE:HG13	1.85	0.75
3:A:189:LEU:HD22	3:A:418:PHE:CE2	2.21	0.75
2:B:46:ARG:CB	2:B:241:ARG:HD3	2.16	0.75
2:B:103:LYS:NZ	2:B:401:GLU:HA	2.01	0.75
2:B:156:ARG:HH12	2:B:160:PRO:HA	1.50	0.75
3:A:396:ASP:HA	3:A:422:ARG:CZ	2.17	0.75
2:B:178:THR:OG1	2:B:180:VAL:HG22	1.87	0.75
2:B:217:LEU:HD13	2:B:218:THR:N	2.01	0.75
3:A:55:GLU:HG2	3:A:61:HIS:CD2	2.21	0.75
1:K:168:LEU:HB3	1:K:182:LEU:HD23	1.69	0.75
3:A:96:LYS:O	3:A:96:LYS:HD3	1.86	0.75
3:A:381:THR:O	3:A:384:ILE:HG12	1.86	0.75
3:A:211:ASP:O	3:A:214:ARG:HG3	1.87	0.74
1:K:15:LYS:CE	1:K:362:LYS:HE2	2.17	0.74
2:B:2:ARG:HG3	2:B:131:GLN:N	2.02	0.74
2:B:81:PHE:O	2:B:84:ILE:HG22	1.86	0.74
2:B:345:ILE:HD12	3:A:181:VAL:HG13	1.69	0.74
2:B:367:PHE:O	2:B:368:ILE:HD13	1.86	0.74
3:A:331:ALA:O	3:A:335:ILE:HG12	1.87	0.74
1:K:34:LYS:HG2	1:K:35:ALA:N	2.01	0.74
1:K:171:LEU:HA	1:K:220:LYS:HD3	1.69	0.74
2:B:36:TYR:CZ	2:B:38:GLY:HA3	2.22	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:112:LEU:HD11	2:B:151:LEU:CB	2.17	0.74
2:B:112:LEU:CD1	2:B:151:LEU:HB3	2.18	0.74
2:B:272:PRO:HG3	2:B:284:LEU:HD11	1.69	0.74
2:B:308:GLY:CA	2:B:372:THR:H	1.99	0.74
1:K:187:ASP:HB2	1:K:189:ARG:HD3	1.69	0.74
3:A:30:ILE:CD1	3:A:61:HIS:HB2	2.17	0.74
3:A:214:ARG:NH1	3:A:215:ARG:HA	2.02	0.74
3:A:256:GLN:HA	3:A:259:LEU:HD12	1.67	0.74
3:A:288:VAL:O	3:A:292:THR:HG23	1.87	0.74
3:A:324:VAL:HG21	3:A:326:LYS:HZ1	1.51	0.74
3:A:326:LYS:HA	3:A:329:ASN:HD22	1.53	0.74
1:K:77:LYS:HG3	1:K:79:ILE:HG22	1.69	0.74
1:K:191:LYS:H	1:K:191:LYS:HZ2	1.36	0.74
2:B:20:PHE:HA	2:B:230:SER:CB	2.16	0.74
2:B:186:THR:CG2	2:B:187:LEU:HD22	2.18	0.74
2:B:381:ILE:HA	2:B:384:GLN:NE2	2.01	0.74
3:A:171:ILE:CA	3:A:204:VAL:HG12	2.15	0.74
1:K:95:MET:HE2	1:K:97:TYR:HB2	0.76	0.74
1:K:95:MET:HG2	1:K:97:TYR:H	1.52	0.74
1:K:97:TYR:CE1	1:K:329:ARG:HB2	2.22	0.74
2:B:2:ARG:HA	2:B:129:CYS:O	1.87	0.74
2:B:71:GLY:HA2	2:B:74:ASP:OD1	1.86	0.74
2:B:181:GLU:HB3	2:B:182:PRO:HD3	1.69	0.74
2:B:259:PRO:O	3:A:403:ALA:HB1	1.87	0.74
2:B:337:ASN:HB3	2:B:340:TYR:HB2	1.68	0.74
3:A:174:ALA:HB1	3:A:207:GLU:HB2	1.70	0.74
3:A:321:GLY:CA	3:A:359:PRO:HA	2.18	0.74
1:K:157:LYS:HG2	1:K:203:THR:CA	2.18	0.74
3:A:175:PRO:HG2	3:A:304:LYS:CE	2.18	0.74
3:A:245:ASP:HA	3:A:249:ASN:HB2	1.70	0.74
3:A:381:THR:OG1	3:A:384:ILE:HG23	1.87	0.74
1:K:68:PHE:HB2	1:K:71:VAL:HG22	1.68	0.74
3:A:90:GLU:HA	3:A:121:ARG:HH21	1.51	0.74
3:A:276:ILE:CG2	3:A:281:ALA:HB2	2.18	0.74
1:K:54:THR:C	1:K:60:LYS:HG3	2.08	0.74
2:B:3:GLU:HG3	2:B:50:TYR:HA	1.69	0.74
2:B:121:ARG:HB2	2:B:122:LYS:HZ3	1.52	0.74
3:A:116:ASP:HA	3:A:119:LEU:CD2	2.16	0.74
3:A:181:VAL:HG11	3:A:404:PHE:CD1	2.23	0.74
1:K:160:LEU:H	1:K:172:LEU:HB3	1.51	0.74
2:B:336:LYS:HA	2:B:336:LYS:HE3	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:78:VAL:HA	3:A:83:TYR:CE1	2.21	0.74
1:K:16:GLY:CA	1:K:362:LYS:HA	2.15	0.73
2:B:43:GLN:HA	2:B:242:PHE:HZ	1.52	0.73
2:B:284:LEU:HD13	2:B:289:LEU:CG	2.18	0.73
1:K:95:MET:O	1:K:367:GLN:HA	1.88	0.73
2:B:330:MET:CG	2:B:331:LEU:HD13	2.17	0.73
3:A:86:LEU:HD12	3:A:86:LEU:O	1.88	0.73
3:A:210:TYR:CE1	3:A:227:LEU:HB2	2.23	0.73
1:K:146:LYS:HA	1:K:149:ASP:OD2	1.88	0.73
1:K:173:ASN:HB2	1:K:176:SER:CB	2.18	0.73
1:K:312:ARG:HA	1:K:318:ARG:HG2	1.68	0.73
2:B:112:LEU:HD13	2:B:150:LEU:HD12	1.70	0.73
2:B:46:ARG:HH12	2:B:49:VAL:HG11	1.51	0.73
2:B:424:GLN:NE2	2:B:427:ASP:HB2	2.03	0.73
3:A:430:LYS:HZ2	3:A:433:GLU:HB3	1.51	0.73
1:K:17:LYS:N	1:K:363:PRO:HD2	2.03	0.73
1:K:95:MET:CE	1:K:97:TYR:CB	2.31	0.73
2:B:100:ASN:CB	2:B:103:LYS:HB2	2.17	0.73
3:A:185:TYR:HA	3:A:395:PHE:CE2	2.22	0.73
1:K:181:ARG:HH21	1:K:197:LYS:HG2	1.48	0.73
2:B:375:GLN:CD	2:B:422:TYR:HB3	2.08	0.73
3:A:67:PHE:HB2	3:A:92:LEU:CD1	2.19	0.73
3:A:210:TYR:CD1	3:A:227:LEU:HD13	2.24	0.73
3:A:276:ILE:CG1	3:A:371:VAL:HG11	2.17	0.73
2:B:21:TRP:HA	2:B:21:TRP:HE3	1.53	0.73
2:B:215:LEU:HD22	2:B:217:LEU:CB	2.18	0.73
2:B:215:LEU:HD13	2:B:217:LEU:CB	2.18	0.73
1:K:181:ARG:HH22	1:K:197:LYS:HE2	1.54	0.73
2:B:5:VAL:HA	2:B:62:ARG:CG	2.18	0.73
2:B:23:VAL:HG11	2:B:230:SER:OG	1.88	0.73
2:B:65:LEU:HB2	2:B:90:PHE:CD1	2.24	0.73
2:B:288:GLU:HG2	2:B:291:GLN:OE1	1.88	0.73
2:B:308:GLY:HA2	2:B:372:THR:HB	1.69	0.73
3:A:8:HIS:CB	3:A:14:VAL:HA	2.19	0.73
3:A:20:CYS:HB3	3:A:24:TYR:OH	1.88	0.73
3:A:60:LYS:HD3	3:A:61:HIS:H	1.52	0.73
3:A:226:ASN:HA	3:A:229:ARG:CG	2.17	0.73
3:A:313:MET:HA	3:A:344:VAL:CG1	2.19	0.73
3:A:316:CYS:O	3:A:377:MET:HA	1.89	0.73
1:K:258:ILE:H	1:K:368:LYS:CE	2.02	0.73
2:B:122:LYS:HA	2:B:125:GLU:CD	2.08	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:372:THR:O	2:B:375:GLN:HG2	1.89	0.73
2:B:392:LYS:HA	2:B:395:LEU:HD21	1.71	0.73
3:A:263:PRO:HD2	3:A:264:ARG:HD3	1.70	0.73
1:K:78:GLN:NE2	1:K:113:PHE:CD2	2.57	0.73
1:K:162:GLU:HG3	1:K:235:SER:HB2	1.66	0.73
2:B:324:LYS:NZ	3:A:221:ARG:CD	2.50	0.73
3:A:35:GLN:N	3:A:60:LYS:HE2	2.04	0.73
3:A:243:ARG:HG3	3:A:244:PHE:N	2.04	0.73
2:B:41:ASP:CG	2:B:42:LEU:HD22	2.10	0.72
2:B:190:HIS:NE2	2:B:411:ALA:HA	2.04	0.72
3:A:205:ASP:OD2	3:A:303:VAL:HG23	1.89	0.72
3:A:277:SER:H	3:A:280:LYS:CB	1.99	0.72
1:K:26:ARG:HB3	1:K:109:THR:HA	1.70	0.72
2:B:250:LEU:HD12	2:B:253:LEU:CD1	2.05	0.72
3:A:5:ILE:H	3:A:132:LEU:CD2	2.02	0.72
3:A:8:HIS:HB3	3:A:14:VAL:N	2.03	0.72
3:A:200:CYS:HA	3:A:266:HIS:CB	1.99	0.72
3:A:306:ASP:HA	3:A:308:ARG:NH2	2.04	0.72
3:A:387:ALA:HA	3:A:390:ARG:NE	2.05	0.72
1:K:147:LEU:O	1:K:150:ASN:HB2	1.89	0.72
1:K:162:GLU:CD	1:K:223:THR:HG22	2.10	0.72
2:B:141:GLY:HA3	5:B:501:G2P:O5'	1.89	0.72
3:A:21:TRP:CZ2	3:A:65:ALA:HB2	2.24	0.72
3:A:132:LEU:HB3	3:A:134:GLY:O	1.89	0.72
2:B:103:LYS:O	2:B:107:THR:HG22	1.88	0.72
2:B:363:MET:H	2:B:363:MET:HE3	1.54	0.72
3:A:188:ILE:HB	3:A:395:PHE:CD1	2.24	0.72
1:K:105:GLY:HA3	1:K:335:THR:OG1	1.89	0.72
1:K:311:TYR:CD2	1:K:321:GLN:HG3	2.24	0.72
2:B:12:CYS:CB	2:B:138:SER:HB3	2.19	0.72
1:K:344:GLU:CB	3:A:414:GLU:HG2	2.12	0.72
2:B:97:ALA:HA	2:B:104:GLY:HA3	1.70	0.72
3:A:164:LYS:HA	3:A:164:LYS:CE	2.19	0.72
1:K:15:LYS:CD	1:K:362:LYS:HB3	2.19	0.72
3:A:205:ASP:HB3	3:A:208:ALA:HB3	1.71	0.72
1:K:23:VAL:HG21	1:K:68:PHE:CE1	2.24	0.72
1:K:171:LEU:HA	1:K:220:LYS:CD	2.20	0.72
1:K:181:ARG:HH22	1:K:197:LYS:CE	2.00	0.72
2:B:190:HIS:O	2:B:193:VAL:HG12	1.90	0.72
2:B:285:THR:H	2:B:288:GLU:HB2	1.55	0.72
3:A:388:TRP:HB2	3:A:425:MET:HE1	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:392:LYS:O	2:B:395:LEU:HG	1.90	0.72
3:A:33:ASP:O	3:A:86:LEU:HA	1.90	0.72
3:A:215:ARG:HD3	3:A:216:ASN:ND2	2.04	0.72
1:K:172:LEU:HG	1:K:173:ASN:N	2.05	0.72
1:K:269:SER:HB3	1:K:288:ILE:HG13	1.71	0.72
2:B:3:GLU:CG	2:B:50:TYR:HA	2.20	0.72
2:B:43:GLN:HA	2:B:242:PHE:CZ	2.25	0.72
2:B:179:VAL:O	2:B:182:PRO:HD2	1.90	0.72
2:B:215:LEU:HA	2:B:276:ARG:CG	2.19	0.72
2:B:267:MET:HG3	2:B:369:GLY:O	1.90	0.72
2:B:285:THR:HG23	2:B:288:GLU:H	1.55	0.72
3:A:265:ILE:HD12	3:A:432:TYR:CE1	2.25	0.72
1:K:144:PHE:HB2	1:K:207:LYS:HG3	1.71	0.71
2:B:15:GLN:O	2:B:19:LYS:HE2	1.89	0.71
2:B:350:LYS:CE	3:A:179:THR:C	2.58	0.71
3:A:90:GLU:HA	3:A:121:ARG:NH2	2.05	0.71
2:B:159:TYR:CB	2:B:162:ARG:HG2	2.20	0.71
2:B:167:PHE:CD1	2:B:200:TYR:HB2	2.25	0.71
2:B:313:VAL:O	2:B:349:VAL:HA	1.91	0.71
2:B:405:GLU:HA	2:B:408:PHE:HD1	1.54	0.71
3:A:346:TRP:O	3:A:348:PRO:HD3	1.89	0.71
1:K:97:TYR:CE2	1:K:365:VAL:HG22	2.25	0.71
1:K:226:THR:HG23	1:K:232:SER:OG	1.89	0.71
1:K:255:LEU:HA	1:K:369:LEU:OXT	1.90	0.71
2:B:140:GLY:HA2	2:B:171:PRO:HG3	1.71	0.71
2:B:322:SER:O	2:B:326:VAL:HG23	1.90	0.71
3:A:233:GLN:HE21	3:A:234:ILE:CG2	2.02	0.71
3:A:288:VAL:CG1	3:A:331:ALA:HB2	2.19	0.71
1:K:181:ARG:HH21	1:K:197:LYS:HG3	0.55	0.71
3:A:274:PRO:HG3	3:A:291:ILE:CG1	2.17	0.71
1:K:156:VAL:O	1:K:203:THR:HA	1.91	0.71
1:K:311:TYR:HE1	1:K:324:LEU:CG	2.04	0.71
2:B:97:ALA:CB	2:B:143:THR:HG23	2.20	0.71
3:A:70:LEU:HB3	3:A:97:GLU:O	1.91	0.71
3:A:276:ILE:CD1	3:A:371:VAL:HG11	2.20	0.71
1:K:162:GLU:CG	1:K:235:SER:HB3	2.01	0.71
1:K:355:ARG:CG	4:K:501:MZK:F3	2.28	0.71
2:B:64:ILE:CD1	2:B:119:VAL:HG21	2.21	0.71
1:K:159:SER:OG	1:K:240:SER:OG	2.08	0.71
2:B:339:SER:HA	2:B:429:THR:HB	1.73	0.71
2:B:375:GLN:CG	2:B:422:TYR:HB3	2.21	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:419:VAL:HA	2:B:422:TYR:CE2	2.25	0.71
3:A:185:TYR:OH	3:A:398:MET:HB3	1.90	0.71
3:A:225:THR:O	3:A:229:ARG:HG2	1.90	0.71
3:A:262:TYR:HE2	3:A:435:VAL:CG2	2.03	0.71
3:A:275:VAL:CB	3:A:300:ASN:HD22	2.02	0.71
1:K:37:ALA:HB1	1:K:339:ALA:CB	2.21	0.71
1:K:52:VAL:HG11	1:K:346:THR:HG21	1.71	0.71
2:B:11:GLN:H	5:B:501:G2P:PB	2.14	0.71
2:B:67:ASP:HB3	2:B:69:GLU:O	1.90	0.71
2:B:86:ARG:HB3	2:B:88:ASP:OD1	1.89	0.71
2:B:102:ALA:HB1	2:B:403:MET:SD	2.31	0.71
2:B:350:LYS:HE3	3:A:179:THR:HG22	1.71	0.71
2:B:375:GLN:HG3	2:B:422:TYR:HB3	1.71	0.71
3:A:3:GLU:CA	3:A:51:THR:HA	2.20	0.71
3:A:317:LEU:HG	3:A:353:VAL:HG11	1.72	0.71
1:K:48:LYS:CE	1:K:71:VAL:H	2.04	0.71
1:K:304:GLU:HG2	1:K:306:THR:HB	1.72	0.71
1:K:320:LEU:CD2	1:K:324:LEU:HD11	2.21	0.71
2:B:20:PHE:CD1	2:B:230:SER:HB2	2.22	0.71
2:B:198:GLU:OE1	2:B:265:PHE:HB2	1.90	0.71
2:B:350:LYS:CE	3:A:179:THR:HA	2.21	0.71
3:A:115:ILE:HD12	3:A:152:LEU:HD21	1.72	0.71
3:A:206:ASN:O	3:A:210:TYR:HB2	1.91	0.71
3:A:242:LEU:HB2	3:A:252:LEU:HD11	1.73	0.71
3:A:275:VAL:HG13	3:A:280:LYS:HE3	1.73	0.71
1:K:136:ILE:HG21	1:K:214:LEU:HD11	1.72	0.71
1:K:212:GLN:HA	1:K:215:GLU:OE2	1.91	0.71
1:K:272:ILE:H	1:K:272:ILE:HD13	1.55	0.71
1:K:311:TYR:CG	1:K:321:GLN:HG3	2.25	0.71
2:B:6:HIS:HB3	2:B:62:ARG:O	1.90	0.71
2:B:161:ASP:OD1	2:B:162:ARG:HD2	1.91	0.71
2:B:190:HIS:CD2	2:B:411:ALA:HA	2.24	0.71
2:B:273:LEU:CB	2:B:298:ASN:HA	2.21	0.71
2:B:274:THR:CG2	2:B:278:SER:HB2	2.18	0.71
2:B:304:ASP:OD1	2:B:306:ARG:HB3	1.90	0.71
2:B:324:LYS:HG2	3:A:221:ARG:CB	2.21	0.71
2:B:215:LEU:HA	2:B:276:ARG:HG2	1.70	0.70
2:B:275:SER:HB3	2:B:278:SER:OG	1.91	0.70
3:A:176:GLN:HE21	3:A:207:GLU:CA	2.03	0.70
1:K:246:LYS:HE2	1:K:254:GLU:OE2	1.90	0.70
2:B:16:ILE:HG12	2:B:226:ASN:ND2	2.06	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:152:ILE:HA	2:B:155:ILE:CD1	2.20	0.70
2:B:250:LEU:HA	2:B:253:LEU:CD2	2.20	0.70
3:A:5:ILE:HG23	3:A:65:ALA:CA	2.21	0.70
3:A:132:LEU:CD2	3:A:135:PHE:HB3	2.20	0.70
3:A:277:SER:N	3:A:280:LYS:HB2	2.05	0.70
1:K:157:LYS:HG2	1:K:203:THR:N	2.06	0.70
1:K:227:LEU:HD21	1:K:270:GLU:OE2	1.90	0.70
2:B:42:LEU:HD22	2:B:42:LEU:H	1.55	0.70
2:B:105:HIS:HD1	2:B:106:TYR:HD2	1.36	0.70
3:A:4:CYS:N	3:A:51:THR:HA	2.06	0.70
3:A:8:HIS:CE1	3:A:21:TRP:HE1	2.09	0.70
3:A:23:LEU:HD12	3:A:363:VAL:HG12	1.71	0.70
3:A:217:LEU:CB	3:A:219:ILE:HG12	2.20	0.70
3:A:240:ALA:HA	3:A:243:ARG:CG	2.20	0.70
1:K:187:ASP:CG	1:K:195:ILE:HG13	2.09	0.70
2:B:101:TRP:CH2	2:B:187:LEU:HG	2.26	0.70
3:A:8:HIS:HE1	3:A:21:TRP:HE1	1.38	0.70
3:A:64:ARG:HH21	3:A:64:ARG:CA	2.03	0.70
3:A:66:VAL:HG21	3:A:122:ILE:HG22	1.74	0.70
3:A:212:ILE:HG22	3:A:216:ASN:OD1	1.91	0.70
1:K:170:ASP:H	1:K:180:GLU:H	1.39	0.70
2:B:8:GLN:NE2	2:B:14:ASN:HA	2.05	0.70
2:B:421:GLU:OE1	2:B:424:GLN:HB3	1.92	0.70
3:A:255:PHE:O	3:A:259:LEU:HG	1.91	0.70
3:A:268:PRO:HG2	3:A:378:LEU:CD1	2.14	0.70
3:A:318:LEU:HD13	3:A:319:TYR:N	2.06	0.70
1:K:170:ASP:HB2	1:K:180:GLU:CA	2.22	0.70
3:A:332:ILE:O	3:A:336:LYS:HG2	1.91	0.70
2:B:1:MET:SD	2:B:3:GLU:HG2	2.32	0.70
2:B:143:THR:HG22	2:B:147:MET:CE	2.22	0.70
2:B:350:LYS:HE2	3:A:179:THR:C	2.11	0.70
2:B:350:LYS:HZ1	3:A:179:THR:HA	1.55	0.70
3:A:7:ILE:HG23	3:A:137:VAL:HA	1.73	0.70
3:A:204:VAL:HG23	3:A:209:ILE:CD1	2.20	0.70
2:B:47:ILE:HG22	2:B:59:TYR:CD1	2.27	0.70
2:B:135:LEU:HB2	2:B:166:THR:HG23	1.73	0.70
2:B:266:PHE:CZ	2:B:369:GLY:HA2	2.26	0.70
2:B:279:GLN:NE2	2:B:284:LEU:HD21	2.06	0.70
3:A:24:TYR:O	3:A:27:GLU:HG3	1.91	0.70
3:A:269:LEU:CD2	3:A:384:ILE:HD12	2.21	0.70
1:K:221:ARG:HH22	1:K:233:SER:HB2	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:299:MET:HG3	2:B:301:ALA:O	1.92	0.70
3:A:351:PHE:HB2	3:A:352:LYS:NZ	2.07	0.70
1:K:40:ILE:HD13	1:K:340:SER:HA	1.73	0.70
1:K:57:LEU:HD21	3:A:427:ALA:CB	2.21	0.70
2:B:145:SER:HG	2:B:185:ALA:HA	1.57	0.70
2:B:215:LEU:CA	2:B:276:ARG:HG2	2.22	0.70
3:A:36:MET:CE	3:A:38:SER:HB3	2.22	0.70
3:A:269:LEU:O	3:A:378:LEU:HA	1.92	0.70
1:K:47:ARG:HB3	1:K:49:GLU:CG	2.22	0.69
1:K:257:LYS:HD3	1:K:367:GLN:NE2	2.06	0.69
1:K:283:ARG:HH22	2:B:160:PRO:HB2	1.56	0.69
2:B:46:ARG:HG3	2:B:242:PHE:CD1	2.27	0.69
2:B:51:TYR:HB2	2:B:59:TYR:CD1	2.26	0.69
2:B:65:LEU:HD13	2:B:90:PHE:CB	2.21	0.69
3:A:210:TYR:CE1	3:A:227:LEU:HD13	2.26	0.69
1:K:66:TYR:HE2	1:K:68:PHE:HA	1.57	0.69
1:K:157:LYS:HG2	1:K:203:THR:OG1	1.88	0.69
2:B:34:GLY:HA3	2:B:58:LYS:HG3	1.74	0.69
2:B:113:VAL:O	2:B:117:LEU:HD23	1.92	0.69
2:B:323:MET:HA	2:B:323:MET:CE	2.21	0.69
2:B:323:MET:HA	2:B:326:VAL:HG23	1.72	0.69
3:A:60:LYS:HD3	3:A:61:HIS:N	2.07	0.69
3:A:286:LEU:HD13	3:A:291:ILE:CD1	2.16	0.69
1:K:172:LEU:O	1:K:174:PRO:HD3	1.91	0.69
2:B:342:VAL:HA	2:B:429:THR:OXT	1.91	0.69
2:B:375:GLN:HG3	2:B:422:TYR:CB	2.22	0.69
3:A:41:THR:HG21	3:A:49:PHE:CB	2.22	0.69
3:A:103:TYR:CD1	3:A:189:LEU:HD23	2.27	0.69
3:A:221:ARG:CB	3:A:221:ARG:N	2.55	0.69
3:A:346:TRP:NE1	3:A:438:ASP:HA	2.07	0.69
1:K:32:GLU:O	1:K:35:ALA:HB3	1.93	0.69
1:K:221:ARG:HD3	1:K:237:SER:HB3	1.72	0.69
2:B:81:PHE:HA	2:B:83:GLN:OE1	1.92	0.69
2:B:324:LYS:CE	3:A:222:PRO:HD3	2.19	0.69
3:A:259:LEU:O	3:A:261:PRO:HD3	1.93	0.69
1:K:171:LEU:CA	1:K:220:LYS:HD3	2.23	0.69
1:K:221:ARG:CD	1:K:237:SER:HB3	2.20	0.69
2:B:19:LYS:HA	2:B:22:GLU:OE2	1.92	0.69
2:B:20:PHE:CZ	2:B:24:ILE:HD11	2.26	0.69
2:B:23:VAL:HG22	2:B:27:GLU:OE1	1.93	0.69
2:B:148:GLY:O	2:B:152:ILE:HG12	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:267:MET:CG	2:B:370:ASN:HA	2.22	0.69
2:B:289:LEU:H	2:B:289:LEU:HD12	1.56	0.69
2:B:293:MET:HE1	2:B:366:THR:O	1.93	0.69
2:B:375:GLN:HG3	2:B:422:TYR:CD2	2.28	0.69
1:K:169:PHE:CA	1:K:179:SER:HA	2.17	0.69
3:A:243:ARG:HG3	3:A:244:PHE:H	1.55	0.69
3:A:301:GLN:OE1	3:A:307:PRO:HG3	1.92	0.69
3:A:318:LEU:O	3:A:375:VAL:HA	1.93	0.69
1:K:17:LYS:HD3	1:K:363:PRO:CB	2.22	0.69
2:B:30:ILE:HD12	2:B:59:TYR:HB2	1.73	0.69
2:B:181:GLU:OE2	5:B:501:G2P:H3'	1.93	0.69
2:B:251:ARG:CZ	3:A:100:ALA:HB3	2.23	0.69
3:A:1:MET:HG2	3:A:47:ASP:CA	2.22	0.69
3:A:52:PHE:HB3	3:A:53:PHE:CE1	2.28	0.69
3:A:286:LEU:HD22	3:A:291:ILE:CD1	2.23	0.69
1:K:48:LYS:O	1:K:71:VAL:HG21	1.91	0.69
1:K:144:PHE:CB	1:K:207:LYS:HZ3	2.06	0.69
1:K:237:SER:OG	1:K:265:ASP:HB3	1.91	0.69
2:B:65:LEU:HD23	2:B:73:MET:SD	2.33	0.69
2:B:99:ASN:N	5:B:501:G2P:O3G	2.25	0.69
2:B:270:PHE:HB3	2:B:300:MET:SD	2.32	0.69
3:A:4:CYS:H	3:A:51:THR:CA	2.05	0.69
3:A:172:TYR:H	3:A:204:VAL:HG12	1.56	0.69
3:A:272:TYR:CE1	3:A:374:ALA:HB1	2.26	0.69
3:A:311:LYS:HG3	3:A:342:GLN:NE2	2.08	0.69
1:K:321:GLN:HA	1:K:324:LEU:CD2	2.23	0.69
2:B:148:GLY:HA2	2:B:151:LEU:CG	2.22	0.69
2:B:296:ALA:HA	2:B:305:PRO:HG3	1.73	0.69
2:B:334:GLN:HG2	2:B:335:ASN:N	2.08	0.69
3:A:318:LEU:HD22	3:A:319:TYR:N	2.06	0.69
1:K:355:ARG:HG2	4:K:501:MZK:F3	1.82	0.69
2:B:112:LEU:HD21	2:B:116:VAL:HG11	1.74	0.69
2:B:273:LEU:HD11	2:B:297:LYS:CD	2.07	0.69
2:B:288:GLU:HA	2:B:291:GLN:CD	2.13	0.69
3:A:170:SER:HB3	3:A:202:PHE:O	1.93	0.69
1:K:25:CYS:O	1:K:74:ALA:HA	1.93	0.68
1:K:157:LYS:CD	1:K:203:THR:OG1	2.40	0.68
1:K:174:PRO:HA	1:K:220:LYS:HZ2	1.57	0.68
2:B:205:GLU:HG3	2:B:206:ALA:N	2.08	0.68
2:B:206:ALA:O	2:B:210:ILE:HG13	1.93	0.68
2:B:330:MET:HG3	2:B:331:LEU:CD1	2.23	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:341:PHE:CE1	2:B:348:ASN:HB2	2.28	0.68
3:A:247:ALA:CB	3:A:355:ILE:HB	2.13	0.68
3:A:302:MET:H	3:A:302:MET:CE	2.07	0.68
1:K:246:LYS:HE2	1:K:254:GLU:CD	2.14	0.68
2:B:59:TYR:O	2:B:61:PRO:HD3	1.94	0.68
2:B:139:LEU:CD1	2:B:171:PRO:HD3	2.24	0.68
2:B:278:SER:HA	2:B:282:ARG:NH1	2.06	0.68
3:A:5:ILE:N	3:A:132:LEU:HD21	2.05	0.68
3:A:85:GLN:HG3	3:A:86:LEU:N	2.07	0.68
3:A:298:PRO:HA	3:A:301:GLN:HG3	1.75	0.68
3:A:302:MET:H	3:A:302:MET:HE3	1.58	0.68
1:K:26:ARG:HD3	1:K:109:THR:N	2.08	0.68
1:K:77:LYS:CE	1:K:78:GLN:H	2.05	0.68
2:B:214:THR:HB	2:B:276:ARG:H	1.58	0.68
2:B:245:GLN:HE21	2:B:353:VAL:HG23	1.57	0.68
2:B:371:SER:O	2:B:374:ILE:HG22	1.93	0.68
3:A:3:GLU:HA	3:A:51:THR:CA	2.22	0.68
1:K:66:TYR:HD2	1:K:68:PHE:CE2	2.12	0.68
1:K:160:LEU:HD21	1:K:221:ARG:HB2	1.75	0.68
2:B:7:ILE:H	2:B:134:GLN:HE22	1.42	0.68
2:B:187:LEU:HD11	2:B:408:PHE:CD2	2.28	0.68
2:B:250:LEU:O	2:B:253:LEU:HG	1.93	0.68
3:A:41:THR:HG22	3:A:42:ILE:H	1.57	0.68
3:A:155:GLU:O	3:A:159:VAL:HG23	1.93	0.68
3:A:273:ALA:O	3:A:375:VAL:HG22	1.93	0.68
1:K:17:LYS:CE	1:K:329:ARG:HD3	2.21	0.68
1:K:78:GLN:NE2	1:K:113:PHE:CE2	2.62	0.68
1:K:290:GLN:HA	3:A:409:VAL:HG11	1.75	0.68
2:B:313:VAL:HA	2:B:368:ILE:O	1.93	0.68
3:A:8:HIS:HA	3:A:138:PHE:HB2	1.75	0.68
3:A:265:ILE:HD11	3:A:435:VAL:HG11	1.73	0.68
3:A:384:ILE:CD1	3:A:432:TYR:HE2	2.04	0.68
3:A:402:ARG:CZ	3:A:402:ARG:HB2	2.23	0.68
1:K:48:LYS:HD2	1:K:71:VAL:H	1.59	0.68
1:K:327:ARG:O	1:K:363:PRO:HA	1.93	0.68
2:B:4:ILE:HG23	2:B:133:PHE:CA	2.21	0.68
2:B:339:SER:HA	2:B:429:THR:CB	2.23	0.68
3:A:9:VAL:HG22	3:A:149:PHE:CD1	2.29	0.68
3:A:217:LEU:HD12	3:A:222:PRO:HG3	1.75	0.68
1:K:226:THR:HG23	1:K:232:SER:CB	2.24	0.68
1:K:312:ARG:HD3	2:B:414:ASN:HD21	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:329:ARG:CA	1:K:363:PRO:HB3	2.24	0.68
3:A:270:ALA:HB2	3:A:378:LEU:CD2	2.24	0.68
3:A:294:ALA:HA	3:A:297:GLU:OE2	1.94	0.68
1:K:192:ARG:CD	1:K:327:ARG:HH12	2.07	0.68
1:K:192:ARG:NE	1:K:322:ASP:HA	2.09	0.68
2:B:315:ALA:HA	2:B:366:THR:O	1.94	0.68
3:A:1:MET:HB2	3:A:47:ASP:HA	1.74	0.68
3:A:46:ASP:N	3:A:49:PHE:HB3	2.09	0.68
3:A:126:ALA:HA	3:A:129:CYS:SG	2.33	0.68
3:A:430:LYS:NZ	3:A:433:GLU:HB3	2.09	0.68
1:K:169:PHE:HB3	1:K:178:VAL:O	1.93	0.68
2:B:186:THR:HG21	2:B:385:PHE:CD1	2.28	0.68
2:B:289:LEU:HA	2:B:292:GLN:NE2	2.09	0.68
3:A:301:GLN:CD	3:A:307:PRO:HG3	2.14	0.68
3:A:358:GLN:HG2	3:A:359:PRO:HD2	1.76	0.68
2:B:30:ILE:HG22	2:B:36:TYR:CD1	2.29	0.68
3:A:96:LYS:HA	3:A:96:LYS:HZ2	1.58	0.68
3:A:260:VAL:CG1	3:A:268:PRO:HD3	2.24	0.68
3:A:287:SER:H	3:A:290:GLU:HB2	1.59	0.68
2:B:322:SER:OG	3:A:221:ARG:CB	2.42	0.67
3:A:8:HIS:HB3	3:A:14:VAL:HA	1.75	0.67
3:A:156:ARG:HB3	3:A:156:ARG:CZ	2.25	0.67
3:A:409:VAL:O	3:A:409:VAL:HG12	1.94	0.67
2:B:245:GLN:HB2	2:B:353:VAL:CG2	2.24	0.67
2:B:259:PRO:HA	3:A:404:PHE:CZ	2.29	0.67
3:A:26:LEU:HD23	3:A:364:PRO:HB3	1.75	0.67
3:A:205:ASP:CG	3:A:303:VAL:HA	2.14	0.67
3:A:390:ARG:HA	3:A:393:HIS:NE2	2.09	0.67
1:K:41:VAL:HG23	1:K:338:PRO:HA	1.74	0.67
1:K:199:LEU:HD12	1:K:200:GLU:N	2.09	0.67
1:K:312:ARG:NH1	1:K:318:ARG:NH2	2.42	0.67
2:B:103:LYS:CD	2:B:401:GLU:HG2	2.23	0.67
2:B:143:THR:HB	5:B:501:G2P:PB	2.34	0.67
3:A:5:ILE:HD13	3:A:125:LEU:HD23	1.77	0.67
3:A:9:VAL:HG12	3:A:146:GLY:HA2	1.76	0.67
1:K:167:GLU:HA	1:K:167:GLU:OE1	1.94	0.67
1:K:312:ARG:NH1	1:K:318:ARG:HH21	1.92	0.67
2:B:293:MET:HA	2:B:298:ASN:OD1	1.95	0.67
3:A:6:SER:HB2	3:A:21:TRP:CZ2	2.29	0.67
3:A:36:MET:HG3	3:A:38:SER:O	1.94	0.67
3:A:133:GLN:OE1	3:A:242:LEU:HG	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:164:LYS:HA	3:A:164:LYS:NZ	2.09	0.67
3:A:176:GLN:HE21	3:A:207:GLU:CB	2.07	0.67
1:K:171:LEU:CB	1:K:220:LYS:HB3	2.25	0.67
2:B:3:GLU:HA	2:B:3:GLU:OE2	1.95	0.67
2:B:58:LYS:HG2	2:B:59:TYR:N	2.10	0.67
2:B:121:ARG:HB2	2:B:122:LYS:NZ	2.08	0.67
2:B:183:TYR:HB3	2:B:398:TYR:OH	1.95	0.67
2:B:200:TYR:CG	2:B:268:PRO:HG3	2.30	0.67
2:B:323:MET:CB	3:A:221:ARG:HG3	2.24	0.67
2:B:379:LYS:HD3	2:B:419:VAL:CB	2.24	0.67
3:A:21:TRP:CE2	3:A:65:ALA:HB2	2.30	0.67
3:A:147:SER:HB3	3:A:190:THR:OG1	1.95	0.67
3:A:256:GLN:CA	3:A:259:LEU:HG	2.23	0.67
1:K:104:TYR:CE2	1:K:266:LEU:HG	2.29	0.67
1:K:227:LEU:HG	1:K:228:MET:CE	2.23	0.67
2:B:97:ALA:HB3	2:B:143:THR:OG1	1.94	0.67
2:B:103:LYS:HA	2:B:103:LYS:HZ2	1.56	0.67
3:A:79:ARG:CD	3:A:92:LEU:HD23	2.24	0.67
3:A:210:TYR:CE1	3:A:227:LEU:HD22	2.29	0.67
3:A:271:THR:HG21	3:A:295:CYS:SG	2.35	0.67
2:B:132:GLY:HA3	2:B:163:ILE:O	1.95	0.67
1:K:95:MET:HB2	1:K:365:VAL:HG11	1.76	0.67
1:K:170:ASP:H	1:K:180:GLU:N	1.92	0.67
2:B:7:ILE:H	2:B:134:GLN:NE2	1.92	0.67
2:B:170:VAL:HG23	2:B:203:ASP:HA	1.75	0.67
3:A:200:CYS:HB3	3:A:266:HIS:O	1.95	0.67
2:B:187:LEU:HD11	2:B:408:PHE:HD2	1.60	0.67
2:B:204:ASN:HA	2:B:207:LEU:HD23	1.77	0.67
2:B:285:THR:HG23	2:B:288:GLU:N	2.08	0.67
2:B:324:LYS:CD	3:A:220:GLU:O	2.43	0.67
3:A:152:LEU:HD23	3:A:152:LEU:O	1.95	0.67
3:A:223:THR:HB	3:A:226:ASN:CG	2.15	0.67
1:K:77:LYS:NZ	1:K:78:GLN:CG	2.57	0.67
2:B:4:ILE:HG13	2:B:132:GLY:O	1.95	0.67
2:B:11:GLN:N	5:B:501:G2P:O1B	2.28	0.67
2:B:24:ILE:HG22	2:B:28:HIS:NE2	2.10	0.67
2:B:142:GLY:HA2	2:B:184:ASN:ND2	2.10	0.67
1:K:29:ASN:O	1:K:32:GLU:HB2	1.96	0.66
2:B:44:LEU:HG	2:B:45:GLU:N	2.10	0.66
2:B:101:TRP:HA	2:B:146:GLY:HA2	1.77	0.66
2:B:110:ALA:O	2:B:113:VAL:HG22	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:210:TYR:HE1	3:A:227:LEU:HB2	1.60	0.66
3:A:262:TYR:HB3	3:A:264:ARG:NE	2.10	0.66
3:A:294:ALA:HA	3:A:297:GLU:CD	2.14	0.66
1:K:171:LEU:HA	1:K:220:LYS:HG2	1.77	0.66
1:K:171:LEU:HA	1:K:220:LYS:CB	2.24	0.66
1:K:289:ASN:HD22	3:A:409:VAL:HG11	1.60	0.66
2:B:156:ARG:NH1	2:B:160:PRO:HA	2.10	0.66
2:B:341:PHE:HE2	2:B:346:PRO:HA	1.56	0.66
3:A:23:LEU:CD1	3:A:363:VAL:HG12	2.25	0.66
3:A:263:PRO:HD2	3:A:264:ARG:HH11	1.58	0.66
3:A:273:ALA:HB1	3:A:274:PRO:HA	1.77	0.66
3:A:281:ALA:HB1	3:A:369:ALA:HB3	1.76	0.66
3:A:313:MET:HA	3:A:344:VAL:HG22	1.77	0.66
3:A:321:GLY:N	3:A:359:PRO:HA	2.10	0.66
3:A:334:THR:O	3:A:338:LYS:HG2	1.95	0.66
1:K:172:LEU:HG	1:K:173:ASN:H	1.61	0.66
3:A:96:LYS:HA	3:A:96:LYS:NZ	2.10	0.66
1:K:15:LYS:HD3	1:K:362:LYS:HD2	1.77	0.66
1:K:135:ILE:CD1	1:K:136:ILE:HG13	2.26	0.66
1:K:271:ASN:HD22	1:K:274:ARG:H	1.44	0.66
1:K:365:VAL:HG12	1:K:367:GLN:HG2	1.78	0.66
2:B:336:LYS:HA	2:B:336:LYS:CE	2.25	0.66
2:B:404:ASP:O	2:B:407:GLU:HG3	1.95	0.66
3:A:2:ARG:O	3:A:51:THR:HG23	1.95	0.66
3:A:270:ALA:HA	3:A:378:LEU:HD23	1.76	0.66
3:A:320:ARG:O	3:A:373:ARG:HA	1.96	0.66
1:K:298:VAL:HG23	1:K:310:PRO:CD	2.26	0.66
1:K:302:LEU:O	1:K:305:ARG:HD2	1.95	0.66
2:B:322:SER:H	2:B:325:GLU:CD	1.99	0.66
3:A:79:ARG:HD3	3:A:92:LEU:CD2	2.24	0.66
3:A:133:GLN:HE21	3:A:253:THR:HG23	1.61	0.66
1:K:192:ARG:HE	1:K:327:ARG:HH22	1.42	0.66
1:K:342:ASN:ND2	1:K:345:GLU:H	1.92	0.66
1:K:352:TYR:CB	4:K:501:MZK:C15	2.73	0.66
2:B:70:PRO:HG3	2:B:94:GLN:HA	1.78	0.66
2:B:179:VAL:CG2	2:B:388:MET:HG3	2.26	0.66
2:B:245:GLN:HB2	2:B:353:VAL:HG21	1.77	0.66
3:A:9:VAL:HB	3:A:139:HIS:HB3	1.76	0.66
3:A:104:ALA:HB2	3:A:413:MET:HG3	1.78	0.66
3:A:276:ILE:HG13	3:A:371:VAL:CG1	2.24	0.66
1:K:168:LEU:CD1	1:K:182:LEU:HG	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:327:ARG:HA	1:K:364:GLU:OE1	1.95	0.66
2:B:276:ARG:HD2	2:B:280:GLN:HE22	1.61	0.66
2:B:313:VAL:HB	2:B:349:VAL:HG22	1.77	0.66
2:B:323:MET:HB2	3:A:221:ARG:HD2	1.77	0.66
2:B:342:VAL:HA	2:B:429:THR:O	1.94	0.66
3:A:69:ASP:OD2	3:A:74:VAL:HG22	1.95	0.66
3:A:318:LEU:O	3:A:375:VAL:HG12	1.95	0.66
1:K:31:ALA:HB1	1:K:34:LYS:NZ	2.10	0.66
1:K:168:LEU:HB3	1:K:182:LEU:CD2	2.26	0.66
1:K:169:PHE:HD1	1:K:179:SER:HB2	1.59	0.66
1:K:303:VAL:CG1	1:K:358:ASN:HD22	2.09	0.66
2:B:17:GLY:CA	2:B:136:THR:HG21	2.26	0.66
2:B:47:ILE:HG22	2:B:59:TYR:CE1	2.31	0.66
2:B:200:TYR:HB3	2:B:268:PRO:HG3	1.76	0.66
2:B:203:ASP:OD2	2:B:206:ALA:HB3	1.95	0.66
3:A:424:ASP:O	3:A:427:ALA:HB3	1.96	0.66
1:K:26:ARG:CD	1:K:109:THR:HA	2.25	0.66
2:B:200:TYR:CB	2:B:268:PRO:HG3	2.26	0.66
2:B:210:ILE:O	2:B:214:THR:HG23	1.95	0.66
2:B:323:MET:HA	2:B:326:VAL:CG2	2.25	0.66
2:B:390:ARG:HA	2:B:390:ARG:CZ	2.25	0.66
2:B:286:VAL:HG11	2:B:325:GLU:CG	2.26	0.66
3:A:33:ASP:HA	3:A:85:GLN:CD	2.17	0.66
3:A:54:SER:CB	3:A:64:ARG:HH11	2.08	0.66
3:A:171:ILE:HD13	5:A:501:G2P:H1'	1.77	0.66
3:A:270:ALA:HA	3:A:377:MET:O	1.96	0.66
3:A:320:ARG:CB	3:A:374:ALA:H	2.09	0.66
3:A:333:ALA:O	3:A:337:THR:HG22	1.95	0.66
3:A:428:LEU:HA	3:A:431:ASP:OD1	1.95	0.66
1:K:15:LYS:HD3	1:K:362:LYS:HB3	1.78	0.65
1:K:27:PRO:CA	1:K:74:ALA:HB1	2.26	0.65
1:K:160:LEU:H	1:K:172:LEU:CD2	2.08	0.65
3:A:8:HIS:CD2	3:A:14:VAL:HA	2.32	0.65
3:A:243:ARG:HD2	3:A:244:PHE:CE2	2.31	0.65
1:K:26:ARG:CB	1:K:109:THR:HA	2.25	0.65
1:K:256:VAL:H	1:K:369:LEU:C	1.99	0.65
2:B:34:GLY:C	2:B:58:LYS:HA	2.16	0.65
2:B:215:LEU:C	2:B:276:ARG:HG2	2.16	0.65
2:B:382:SER:O	2:B:385:PHE:HB2	1.96	0.65
3:A:5:ILE:CD1	3:A:125:LEU:HD23	2.27	0.65
3:A:56:THR:HG22	3:A:57:GLY:N	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:288:VAL:HG12	3:A:331:ALA:CB	2.24	0.65
3:A:430:LYS:O	3:A:430:LYS:HD3	1.95	0.65
1:K:297:ARG:NH1	2:B:262:ARG:NE	2.45	0.65
2:B:6:HIS:O	2:B:7:ILE:HD13	1.95	0.65
2:B:156:ARG:NH2	2:B:157:GLU:HA	2.11	0.65
2:B:289:LEU:HD21	2:B:363:MET:HB2	1.78	0.65
2:B:376:GLU:CB	2:B:379:LYS:HE2	2.25	0.65
3:A:308:ARG:H	3:A:308:ARG:NE	1.94	0.65
3:A:321:GLY:HA2	3:A:359:PRO:HA	1.79	0.65
3:A:401:LYS:HA	3:A:401:LYS:NZ	2.12	0.65
1:K:356:ALA:O	1:K:359:ILE:HG22	1.95	0.65
3:A:57:GLY:N	3:A:58:ALA:HA	2.09	0.65
1:K:95:MET:CE	1:K:97:TYR:CD2	2.80	0.65
1:K:301:ALA:HB1	1:K:306:THR:HG21	1.79	0.65
2:B:103:LYS:HG2	2:B:401:GLU:HG2	1.78	0.65
2:B:167:PHE:CE1	2:B:200:TYR:HD2	2.15	0.65
2:B:324:LYS:HZ2	3:A:221:ARG:CD	2.09	0.65
1:K:136:ILE:O	1:K:139:THR:HG22	1.96	0.65
2:B:67:ASP:OD2	2:B:70:PRO:HA	1.97	0.65
3:A:25:CYS:HA	3:A:30:ILE:CG2	2.27	0.65
3:A:75:ILE:HD12	3:A:92:LEU:HD11	1.78	0.65
3:A:75:ILE:HG22	3:A:79:ARG:HE	1.62	0.65
3:A:189:LEU:HD13	3:A:418:PHE:CE2	2.31	0.65
3:A:251:ASP:HB3	3:A:254:GLU:OE1	1.97	0.65
3:A:288:VAL:CG2	3:A:327:ASP:HB3	2.26	0.65
1:K:50:VAL:HB	1:K:68:PHE:CZ	2.32	0.65
1:K:225:ALA:HB1	1:K:230:ALA:O	1.97	0.65
2:B:5:VAL:HG22	2:B:133:PHE:CD1	2.31	0.65
2:B:46:ARG:HA	2:B:46:ARG:NH1	2.12	0.65
2:B:323:MET:CA	3:A:221:ARG:HG3	2.27	0.65
3:A:32:PRO:O	3:A:86:LEU:HB2	1.97	0.65
1:K:104:TYR:CE2	4:K:501:MZK:C2	2.80	0.65
1:K:144:PHE:HE2	1:K:210:VAL:HG21	1.61	0.65
1:K:172:LEU:H	1:K:172:LEU:HD23	1.61	0.65
2:B:52:ASN:H	2:B:62:ARG:HH22	1.44	0.65
2:B:97:ALA:HA	2:B:104:GLY:CA	2.26	0.65
2:B:143:THR:HG22	2:B:147:MET:HE3	1.79	0.65
2:B:215:LEU:HD13	2:B:217:LEU:HB2	1.76	0.65
2:B:274:THR:HG22	2:B:275:SER:H	1.61	0.65
2:B:288:GLU:HA	2:B:291:GLN:OE1	1.97	0.65
2:B:361:LEU:HD23	2:B:361:LEU:O	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:379:LYS:HA	2:B:415:MET:SD	2.36	0.65
3:A:46:ASP:H	3:A:49:PHE:HB3	1.62	0.65
3:A:188:ILE:HG12	3:A:395:PHE:HD1	1.62	0.65
3:A:242:LEU:HD23	3:A:252:LEU:H	1.61	0.65
1:K:31:ALA:CA	1:K:34:LYS:HD3	2.22	0.65
1:K:82:TYR:OH	1:K:86:VAL:CG1	2.44	0.65
1:K:301:ALA:HB1	1:K:306:THR:CG2	2.27	0.65
2:B:1:MET:HE2	2:B:1:MET:HA	1.76	0.65
2:B:238:THR:O	2:B:241:ARG:HG3	1.97	0.65
2:B:271:ALA:HB3	2:B:365:ALA:O	1.97	0.65
3:A:132:LEU:HD22	3:A:135:PHE:HB3	1.78	0.65
2:B:9:ALA:O	2:B:137:HIS:HA	1.97	0.65
2:B:25:SER:O	2:B:28:HIS:HB2	1.97	0.65
2:B:139:LEU:HD12	2:B:140:GLY:N	2.12	0.65
2:B:320:ARG:HB3	2:B:320:ARG:NH1	2.11	0.65
2:B:321:MET:HG3	2:B:325:GLU:OE1	1.97	0.65
2:B:324:LYS:CD	3:A:221:ARG:HG2	2.27	0.65
3:A:7:ILE:HG22	3:A:136:LEU:O	1.97	0.65
3:A:70:LEU:CD2	3:A:99:ALA:HA	2.27	0.65
3:A:147:SER:O	3:A:150:THR:HG22	1.97	0.65
3:A:231:ILE:O	3:A:235:VAL:HG23	1.97	0.65
3:A:324:VAL:HG21	3:A:326:LYS:NZ	2.12	0.65
1:K:189:ARG:CD	1:K:189:ARG:H	2.09	0.64
1:K:329:ARG:HD2	1:K:363:PRO:CG	2.27	0.64
1:K:341:LEU:H	1:K:341:LEU:HD12	1.62	0.64
2:B:327:ASP:O	2:B:331:LEU:HD22	1.97	0.64
3:A:3:GLU:O	3:A:132:LEU:HA	1.97	0.64
3:A:78:VAL:CG1	3:A:92:LEU:HD22	2.27	0.64
3:A:105:ARG:HB2	3:A:411:GLU:CD	2.17	0.64
3:A:311:LYS:HA	3:A:342:GLN:CD	2.17	0.64
3:A:375:VAL:HG21	3:A:377:MET:HE1	1.79	0.64
1:K:66:TYR:HD2	1:K:68:PHE:CD2	2.14	0.64
1:K:192:ARG:HB3	1:K:322:ASP:HA	1.79	0.64
2:B:377:LEU:HA	2:B:380:ARG:CZ	2.27	0.64
3:A:174:ALA:HB1	3:A:176:GLN:HG2	1.77	0.64
1:K:168:LEU:CB	1:K:182:LEU:HD23	2.26	0.64
1:K:221:ARG:NE	1:K:237:SER:HB3	2.12	0.64
2:B:116:VAL:O	2:B:120:VAL:HG13	1.97	0.64
2:B:159:TYR:HD2	2:B:162:ARG:HG2	1.60	0.64
3:A:103:TYR:CE2	3:A:151:SER:HB3	2.32	0.64
3:A:209:ILE:CG1	3:A:302:MET:HB2	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:318:LEU:CD1	3:A:320:ARG:HG2	2.27	0.64
3:A:388:TRP:HZ3	3:A:428:LEU:HG	1.61	0.64
1:K:173:ASN:CB	1:K:176:SER:H	2.11	0.64
2:B:11:GLN:HA	2:B:14:ASN:HB2	1.79	0.64
2:B:317:PHE:HA	2:B:364:SER:O	1.97	0.64
3:A:49:PHE:CE1	3:A:53:PHE:HD1	2.16	0.64
3:A:214:ARG:HG3	3:A:215:ARG:N	2.12	0.64
1:K:17:LYS:HD3	1:K:363:PRO:HG2	1.77	0.64
1:K:109:THR:CB	1:K:335:THR:HB	2.27	0.64
1:K:144:PHE:CG	1:K:207:LYS:HG3	2.32	0.64
1:K:156:VAL:H	1:K:203:THR:HG23	1.60	0.64
1:K:164:TYR:HB2	1:K:235:SER:OG	1.97	0.64
2:B:214:THR:CG2	2:B:275:SER:HA	2.27	0.64
3:A:28:HIS:HE1	3:A:49:PHE:HA	1.58	0.64
1:K:48:LYS:HD2	1:K:71:VAL:N	2.12	0.64
1:K:94:ILE:HD13	1:K:150:ASN:HD21	1.63	0.64
1:K:289:ASN:ND2	3:A:409:VAL:CG1	2.60	0.64
2:B:21:TRP:HD1	2:B:85:PHE:HE2	1.44	0.64
2:B:27:GLU:HA	2:B:359:ARG:NH1	2.12	0.64
2:B:45:GLU:HB2	2:B:46:ARG:NH2	2.12	0.64
2:B:183:TYR:CZ	2:B:385:PHE:HB3	2.31	0.64
2:B:244:GLY:HA2	2:B:355:ASP:H	1.63	0.64
2:B:258:VAL:HG11	2:B:263:LEU:O	1.98	0.64
3:A:1:MET:CB	3:A:47:ASP:HA	2.28	0.64
3:A:123:ARG:CZ	3:A:123:ARG:HB2	2.27	0.64
3:A:236:SER:HB2	3:A:361:THR:OG1	1.98	0.64
3:A:240:ALA:CA	3:A:243:ARG:HG2	2.27	0.64
3:A:287:SER:O	3:A:291:ILE:HG13	1.97	0.64
3:A:312:TYR:CE2	3:A:341:ILE:HD12	2.31	0.64
1:K:33:ARG:CZ	1:K:33:ARG:HA	2.28	0.64
1:K:171:LEU:HA	1:K:220:LYS:HB3	1.79	0.64
1:K:174:PRO:HA	1:K:220:LYS:NZ	2.12	0.64
1:K:227:LEU:HG	1:K:228:MET:SD	2.37	0.64
1:K:234:ARG:HE	1:K:281:ARG:HH21	1.44	0.64
1:K:312:ARG:HA	1:K:318:ARG:HG3	1.77	0.64
2:B:4:ILE:HG23	2:B:132:GLY:O	1.98	0.64
2:B:244:GLY:HA2	2:B:355:ASP:CA	2.27	0.64
2:B:245:GLN:OE1	2:B:355:ASP:HA	1.98	0.64
2:B:269:GLY:HA3	2:B:367:PHE:CB	2.23	0.64
2:B:329:GLN:OE1	2:B:330:MET:HE3	1.98	0.64
2:B:379:LYS:CB	2:B:419:VAL:HG11	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:45:GLY:CA	3:A:49:PHE:HD2	2.11	0.64
3:A:53:PHE:HA	3:A:64:ARG:HD2	1.80	0.64
2:B:291:GLN:HG2	2:B:292:GLN:N	2.13	0.64
2:B:324:LYS:NZ	3:A:221:ARG:HD2	2.12	0.64
3:A:274:PRO:O	3:A:276:ILE:HG12	1.98	0.64
3:A:311:LYS:HG3	3:A:342:GLN:CD	2.18	0.64
3:A:339:ARG:HH22	3:A:342:GLN:HB3	1.62	0.64
3:A:397:LEU:O	3:A:397:LEU:HD23	1.98	0.64
1:K:55:GLY:C	1:K:62:SER:HB2	2.18	0.64
1:K:366:ASN:O	1:K:368:LYS:HD2	1.97	0.64
2:B:28:HIS:HA	2:B:43:GLN:OE1	1.98	0.64
2:B:63:ALA:O	2:B:64:ILE:HD13	1.97	0.64
2:B:67:ASP:HB3	2:B:69:GLU:C	2.18	0.64
2:B:245:GLN:NE2	2:B:245:GLN:H	1.95	0.64
3:A:78:VAL:HG11	3:A:92:LEU:HD22	1.80	0.64
1:K:26:ARG:HD3	1:K:109:THR:CA	2.28	0.64
1:K:258:ILE:H	1:K:368:LYS:HE2	1.62	0.64
2:B:135:LEU:HD22	2:B:135:LEU:N	2.13	0.64
3:A:189:LEU:CD2	3:A:418:PHE:HE2	2.11	0.64
3:A:281:ALA:HB3	3:A:369:ALA:HB3	1.80	0.64
1:K:57:LEU:HD22	3:A:427:ALA:HA	1.80	0.63
1:K:157:LYS:HG3	1:K:203:THR:HG1	1.59	0.63
1:K:192:ARG:HB3	1:K:322:ASP:CA	2.28	0.63
1:K:192:ARG:O	1:K:194:VAL:HG13	1.98	0.63
1:K:271:ASN:OD1	3:A:412:GLY:HA3	1.98	0.63
2:B:261:PRO:HD2	3:A:406:HIS:CD2	2.32	0.63
2:B:271:ALA:HB2	2:B:293:MET:SD	2.38	0.63
2:B:274:THR:HG22	2:B:275:SER:N	2.13	0.63
3:A:35:GLN:HB2	3:A:60:LYS:CE	2.28	0.63
3:A:154:MET:SD	3:A:197:HIS:HB2	2.38	0.63
2:B:66:VAL:HG11	2:B:147:MET:HE2	1.79	0.63
2:B:178:THR:CG2	2:B:181:GLU:HB2	2.28	0.63
3:A:116:ASP:O	3:A:119:LEU:HG	1.98	0.63
3:A:253:THR:O	3:A:257:THR:HG23	1.99	0.63
3:A:317:LEU:CG	3:A:353:VAL:HG11	2.28	0.63
1:K:94:ILE:O	1:K:245:MET:CE	2.45	0.63
1:K:158:VAL:HG12	1:K:241:VAL:HG22	1.79	0.63
1:K:171:LEU:CA	1:K:220:LYS:HB3	2.28	0.63
1:K:285:ALA:O	1:K:288:ILE:HG12	1.99	0.63
1:K:293:LEU:CD2	3:A:409:VAL:CG2	2.76	0.63
1:K:298:VAL:O	1:K:302:LEU:HD13	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:97:ALA:HB3	2:B:143:THR:CB	2.28	0.63
2:B:149:THR:CA	2:B:191:GLN:HE22	2.05	0.63
2:B:320:ARG:NH1	2:B:320:ARG:H	1.95	0.63
2:B:324:LYS:CD	3:A:221:ARG:HD3	2.28	0.63
2:B:342:VAL:HB	2:B:348:ASN:ND2	2.13	0.63
3:A:164:LYS:HA	3:A:164:LYS:HE2	1.80	0.63
3:A:205:ASP:CG	3:A:303:VAL:HG23	2.19	0.63
1:K:25:CYS:SG	1:K:41:VAL:HG11	2.38	0.63
1:K:212:GLN:HA	1:K:215:GLU:CD	2.18	0.63
2:B:272:PRO:HG3	2:B:284:LEU:CD1	2.27	0.63
2:B:318:ARG:CB	2:B:358:PRO:HD3	2.29	0.63
3:A:8:HIS:CG	3:A:14:VAL:HA	2.33	0.63
1:K:227:LEU:HG	1:K:228:MET:N	2.13	0.63
1:K:258:ILE:H	1:K:368:LYS:HD3	1.64	0.63
2:B:101:TRP:H	2:B:184:ASN:HB2	1.64	0.63
2:B:127:CYS:SG	2:B:130:LEU:HG	2.38	0.63
2:B:253:LEU:HB2	2:B:257:MET:HE2	1.77	0.63
2:B:286:VAL:CG1	2:B:325:GLU:HB3	2.19	0.63
2:B:303:CYS:CB	2:B:371:SER:HB3	2.29	0.63
2:B:309:ARG:HD2	2:B:429:THR:HA	1.79	0.63
2:B:70:PRO:HB3	2:B:92:PHE:CE2	2.33	0.63
2:B:167:PHE:CE1	2:B:200:TYR:HB2	2.34	0.63
1:K:57:LEU:CD2	3:A:427:ALA:CB	2.77	0.63
1:K:92:GLU:HB3	1:K:97:TYR:CD2	2.34	0.63
1:K:144:PHE:CE2	1:K:210:VAL:HG21	2.34	0.63
1:K:365:VAL:HG11	1:K:367:GLN:HG2	1.78	0.63
2:B:48:ASN:HA	2:B:59:TYR:CE1	2.33	0.63
2:B:77:ARG:HH11	2:B:82:GLY:CA	2.09	0.63
2:B:245:GLN:HE21	2:B:353:VAL:CG2	2.11	0.63
2:B:251:ARG:HH21	3:A:99:ALA:C	2.02	0.63
2:B:357:PRO:HB3	2:B:362:LYS:O	1.98	0.63
1:K:47:ARG:HA	1:K:47:ARG:CZ	2.29	0.63
2:B:103:LYS:CD	2:B:401:GLU:HA	2.25	0.63
2:B:103:LYS:HZ2	2:B:401:GLU:HA	1.61	0.63
2:B:193:VAL:HG13	2:B:194:GLU:N	2.14	0.63
2:B:199:THR:HG23	2:B:265:PHE:CD2	2.34	0.63
2:B:215:LEU:CD1	2:B:217:LEU:HB2	2.28	0.63
2:B:323:MET:C	3:A:221:ARG:HG3	2.19	0.63
3:A:124:LYS:HD2	3:A:125:LEU:N	2.14	0.63
3:A:143:GLY:HA2	5:A:501:G2P:H3A1	1.80	0.63
3:A:188:ILE:HB	3:A:395:PHE:CE1	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:247:ALA:HA	3:A:357:TYR:HE1	1.62	0.63
3:A:286:LEU:HD21	3:A:373:ARG:H	1.64	0.63
3:A:305:CYS:O	3:A:307:PRO:HD3	1.98	0.63
1:K:299:ILE:HG22	1:K:355:ARG:HB3	1.81	0.63
2:B:46:ARG:HG3	2:B:241:ARG:HD2	1.80	0.63
2:B:98:GLY:C	5:B:501:G2P:O3G	2.37	0.63
2:B:324:LYS:CB	3:A:221:ARG:HG2	2.29	0.63
2:B:404:ASP:HB3	2:B:406:MET:HG2	1.81	0.63
3:A:9:VAL:O	3:A:139:HIS:HA	1.98	0.63
3:A:242:LEU:O	3:A:242:LEU:HD13	1.98	0.63
3:A:261:PRO:HB2	3:A:262:TYR:CE1	2.34	0.63
3:A:430:LYS:NZ	3:A:430:LYS:HA	2.13	0.63
1:K:25:CYS:SG	1:K:338:PRO:HG3	2.38	0.62
1:K:191:LYS:HD3	1:K:191:LYS:N	2.13	0.62
1:K:204:VAL:HG11	1:K:209:GLU:CB	2.29	0.62
2:B:324:LYS:CE	3:A:222:PRO:HD2	2.24	0.62
3:A:385:ALA:HA	3:A:388:TRP:CZ2	2.33	0.62
1:K:55:GLY:HA2	1:K:59:ASP:C	2.20	0.62
1:K:320:LEU:HG	1:K:324:LEU:HD22	1.80	0.62
2:B:4:ILE:HD11	2:B:131:GLN:CB	2.23	0.62
2:B:159:TYR:HB3	2:B:161:ASP:CG	2.19	0.62
2:B:210:ILE:HG23	2:B:297:LYS:HE3	1.81	0.62
2:B:275:SER:HG	2:B:276:ARG:N	1.97	0.62
2:B:102:ALA:HB1	2:B:401:GLU:HB3	1.82	0.62
2:B:309:ARG:NH2	2:B:309:ARG:HA	2.15	0.62
2:B:324:LYS:N	3:A:221:ARG:HG3	2.14	0.62
3:A:8:HIS:HB3	3:A:14:VAL:CA	2.28	0.62
3:A:214:ARG:O	3:A:217:LEU:HB2	1.98	0.62
3:A:430:LYS:HD3	3:A:430:LYS:C	2.19	0.62
2:B:65:LEU:HD22	2:B:90:PHE:CG	2.35	0.62
2:B:103:LYS:HA	2:B:103:LYS:CE	2.29	0.62
2:B:215:LEU:CA	2:B:276:ARG:HB3	2.25	0.62
2:B:324:LYS:HZ2	3:A:221:ARG:HG3	1.64	0.62
3:A:7:ILE:HD12	3:A:8:HIS:H	1.63	0.62
3:A:30:ILE:HD11	3:A:61:HIS:HB2	1.80	0.62
3:A:214:ARG:HA	3:A:222:PRO:HG3	1.80	0.62
1:K:144:PHE:CB	1:K:207:LYS:HG3	2.29	0.62
1:K:227:LEU:HD23	1:K:227:LEU:N	2.15	0.62
1:K:327:ARG:HD3	1:K:327:ARG:N	2.13	0.62
2:B:12:CYS:C	2:B:16:ILE:HG13	2.19	0.62
2:B:271:ALA:HB3	2:B:365:ALA:C	2.20	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:320:ARG:HB3	2:B:320:ARG:HH11	1.63	0.62
3:A:31:GLN:CB	3:A:37:PRO:HD3	2.26	0.62
3:A:104:ALA:HB1	3:A:413:MET:SD	2.39	0.62
3:A:139:HIS:HE1	3:A:141:PHE:CD2	2.17	0.62
3:A:191:THR:HG23	3:A:192:HIS:N	2.15	0.62
3:A:368:LEU:HD12	3:A:368:LEU:O	1.98	0.62
1:K:96:GLY:HA3	1:K:366:ASN:O	1.98	0.62
1:K:181:ARG:HG3	1:K:181:ARG:O	1.98	0.62
2:B:112:LEU:CD2	2:B:116:VAL:HG11	2.29	0.62
3:A:217:LEU:HD11	3:A:222:PRO:HB3	1.81	0.62
3:A:275:VAL:CG1	3:A:280:LYS:HE3	2.28	0.62
3:A:286:LEU:HD21	3:A:371:VAL:HB	1.78	0.62
1:K:94:ILE:HG12	1:K:147:LEU:CD2	2.28	0.62
1:K:109:THR:HB	1:K:335:THR:HB	1.81	0.62
2:B:10:GLY:N	2:B:147:MET:HE1	2.15	0.62
2:B:191:GLN:HG2	2:B:195:ASN:ND2	2.14	0.62
2:B:289:LEU:HD12	2:B:289:LEU:N	2.15	0.62
3:A:117:LEU:HD22	3:A:117:LEU:N	2.14	0.62
2:B:97:ALA:CA	2:B:104:GLY:HA3	2.30	0.62
2:B:138:SER:CB	2:B:169:VAL:HG22	2.29	0.62
2:B:155:ILE:O	2:B:158:GLU:HG3	1.99	0.62
2:B:258:VAL:O	3:A:404:PHE:CE2	2.52	0.62
2:B:304:ASP:HB3	2:B:307:HIS:CD2	2.33	0.62
3:A:72:PRO:HA	3:A:94:THR:OG1	2.00	0.62
1:K:17:LYS:CD	1:K:363:PRO:HG2	2.28	0.62
1:K:160:LEU:N	1:K:172:LEU:HD22	2.12	0.62
1:K:227:LEU:CG	1:K:228:MET:HE3	2.30	0.62
2:B:361:LEU:HG	2:B:363:MET:O	2.00	0.62
3:A:19:ALA:HA	3:A:22:GLU:OE1	2.00	0.62
3:A:31:GLN:NE2	3:A:33:ASP:HB3	2.15	0.62
3:A:240:ALA:O	3:A:243:ARG:HG3	2.00	0.62
2:B:240:LEU:HD12	2:B:247:ASN:OD1	2.00	0.62
2:B:323:MET:HB2	2:B:324:LYS:HZ2	1.65	0.62
3:A:101:ASN:O	3:A:182:VAL:HG11	2.00	0.62
3:A:234:ILE:HD12	3:A:235:VAL:N	2.15	0.62
3:A:274:PRO:N	3:A:291:ILE:HG23	2.15	0.62
3:A:402:ARG:O	3:A:405:VAL:HG23	2.00	0.62
1:K:115:MET:HE1	1:K:135:ILE:HD11	1.80	0.61
1:K:173:ASN:HB2	1:K:176:SER:HB2	1.81	0.61
2:B:70:PRO:CD	2:B:94:GLN:HG2	2.30	0.61
2:B:260:PHE:CZ	3:A:404:PHE:CA	2.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:363:MET:H	2:B:363:MET:CE	2.12	0.61
2:B:421:GLU:O	2:B:424:GLN:HB3	1.99	0.61
3:A:103:TYR:HE2	3:A:151:SER:CB	2.12	0.61
1:K:200:GLU:O	1:K:200:GLU:HG2	1.98	0.61
1:K:202:ILE:HD12	1:K:203:THR:N	2.15	0.61
2:B:323:MET:CE	2:B:326:VAL:HG21	2.29	0.61
2:B:404:ASP:OD1	2:B:406:MET:HE2	2.00	0.61
3:A:176:GLN:HE21	3:A:207:GLU:HB2	1.64	0.61
1:K:78:GLN:CD	1:K:113:PHE:CE2	2.74	0.61
2:B:116:VAL:O	2:B:120:VAL:HG22	2.00	0.61
2:B:200:TYR:CD1	2:B:268:PRO:HG3	2.36	0.61
2:B:214:THR:HG22	2:B:275:SER:HA	1.82	0.61
2:B:285:THR:HG22	2:B:288:GLU:CB	2.17	0.61
2:B:305:PRO:HB3	2:B:310:TYR:OH	1.99	0.61
3:A:9:VAL:HG13	3:A:149:PHE:HD1	1.65	0.61
3:A:310:GLY:CA	3:A:381:THR:HB	2.28	0.61
1:K:93:VAL:O	1:K:259:GLY:HA3	2.00	0.61
1:K:269:SER:CB	1:K:288:ILE:HD11	2.29	0.61
2:B:101:TRP:HB2	2:B:145:SER:HB3	1.81	0.61
2:B:170:VAL:HG13	2:B:201:CYS:HB2	1.80	0.61
2:B:258:VAL:HG21	2:B:261:PRO:HA	1.81	0.61
2:B:318:ARG:NH2	2:B:356:ILE:HG13	2.14	0.61
2:B:321:MET:HG3	2:B:325:GLU:HB2	1.82	0.61
3:A:143:GLY:CA	5:A:501:G2P:H3A1	2.30	0.61
3:A:324:VAL:HG23	3:A:327:ASP:H	1.65	0.61
3:A:406:HIS:HA	3:A:409:VAL:HB	1.82	0.61
1:K:48:LYS:CD	1:K:71:VAL:H	2.13	0.61
1:K:329:ARG:HA	1:K:363:PRO:HB3	1.83	0.61
2:B:1:MET:HA	2:B:49:VAL:HB	1.82	0.61
2:B:30:ILE:HA	2:B:36:TYR:HD1	1.65	0.61
2:B:234:SER:O	2:B:238:THR:HG23	1.99	0.61
2:B:273:LEU:O	2:B:292:GLN:HB3	1.99	0.61
2:B:288:GLU:HA	2:B:291:GLN:NE2	2.16	0.61
2:B:362:LYS:HA	2:B:362:LYS:CE	2.30	0.61
3:A:22:GLU:HA	3:A:25:CYS:SG	2.40	0.61
3:A:46:ASP:OD2	3:A:49:PHE:HB2	2.00	0.61
3:A:75:ILE:HG22	3:A:79:ARG:NE	2.15	0.61
3:A:312:TYR:CD2	3:A:341:ILE:HG23	2.35	0.61
3:A:430:LYS:O	3:A:434:GLU:HG3	1.99	0.61
1:K:361:ASN:CG	1:K:363:PRO:HD3	2.20	0.61
2:B:20:PHE:HD1	2:B:230:SER:CB	2.10	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:140:GLY:HA3	2:B:171:PRO:HG3	1.80	0.61
2:B:273:LEU:HG	2:B:298:ASN:CA	2.23	0.61
3:A:163:LYS:HB2	3:A:163:LYS:NZ	2.16	0.61
1:K:115:MET:CE	1:K:135:ILE:HD11	2.31	0.61
1:K:181:ARG:HB2	1:K:181:ARG:NH1	2.12	0.61
2:B:107:THR:HG23	2:B:108:GLU:N	2.15	0.61
2:B:186:THR:HG21	2:B:385:PHE:HD1	1.64	0.61
2:B:204:ASN:HA	2:B:207:LEU:CD2	2.31	0.61
3:A:122:ILE:HD12	3:A:123:ARG:N	2.15	0.61
1:K:159:SER:CB	1:K:199:LEU:HD21	2.22	0.61
1:K:270:GLU:CD	1:K:275:SER:HB2	2.20	0.61
1:K:311:TYR:O	1:K:318:ARG:HG3	2.00	0.61
2:B:42:LEU:HD22	2:B:42:LEU:N	2.16	0.61
2:B:143:THR:CG2	2:B:147:MET:HE3	2.31	0.61
2:B:314:ALA:H	2:B:368:ILE:CB	2.06	0.61
2:B:318:ARG:CD	2:B:358:PRO:HG3	2.31	0.61
3:A:63:PRO:CG	3:A:86:LEU:HD21	2.31	0.61
3:A:307:PRO:HD2	3:A:308:ARG:NH2	2.15	0.61
3:A:431:ASP:O	3:A:435:VAL:HG12	2.00	0.61
1:K:54:THR:HG23	1:K:55:GLY:N	2.16	0.61
1:K:68:PHE:CG	1:K:71:VAL:HG22	2.36	0.61
2:B:260:PHE:CZ	3:A:407:TRP:N	2.64	0.61
2:B:260:PHE:CD1	3:A:404:PHE:HD2	2.19	0.61
2:B:381:ILE:HA	2:B:384:GLN:CG	2.29	0.61
3:A:248:LEU:HD23	3:A:249:ASN:N	2.16	0.61
3:A:277:SER:H	3:A:280:LYS:CG	2.14	0.61
1:K:26:ARG:HD3	1:K:109:THR:HA	1.81	0.61
1:K:303:VAL:HG13	1:K:358:ASN:HD22	1.66	0.61
1:K:320:LEU:HD21	1:K:324:LEU:HD11	1.83	0.61
2:B:45:GLU:HG3	2:B:46:ARG:NE	2.13	0.61
2:B:108:GLU:HA	2:B:111:GLU:OE2	2.01	0.61
2:B:162:ARG:HA	2:B:162:ARG:NE	2.16	0.61
2:B:421:GLU:CD	2:B:424:GLN:HB3	2.21	0.61
3:A:130:THR:HG23	3:A:131:GLY:N	2.15	0.61
3:A:140:SER:HA	3:A:171:ILE:CG2	2.31	0.61
3:A:172:TYR:HE2	3:A:391:LEU:HD23	1.66	0.61
3:A:344:VAL:HA	3:A:438:ASP:CG	2.21	0.61
1:K:28:PHE:CD2	1:K:32:GLU:HB3	2.36	0.60
1:K:77:LYS:HB3	1:K:80:ASP:OD2	2.00	0.60
2:B:140:GLY:HA2	2:B:185:ALA:CB	2.31	0.60
2:B:208:TYR:CD2	2:B:220:PRO:HG2	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:23:LEU:HD12	3:A:363:VAL:CG1	2.30	0.60
3:A:78:VAL:HG13	3:A:83:TYR:CE1	2.36	0.60
3:A:183:GLU:HB2	3:A:184:PRO:HD3	1.83	0.60
1:K:17:LYS:HD3	1:K:363:PRO:CG	2.30	0.60
1:K:189:ARG:NH1	1:K:193:GLY:HA3	2.15	0.60
2:B:215:LEU:O	2:B:215:LEU:HD23	2.01	0.60
1:K:272:ILE:HB	1:K:282:ALA:HB1	1.83	0.60
2:B:108:GLU:OE1	2:B:147:MET:HA	2.01	0.60
2:B:151:LEU:O	2:B:155:ILE:HG12	2.01	0.60
2:B:244:GLY:HA2	2:B:355:ASP:HB2	1.81	0.60
2:B:246:LEU:H	2:B:353:VAL:CG2	2.14	0.60
3:A:78:VAL:HB	3:A:92:LEU:HD21	1.82	0.60
3:A:229:ARG:O	3:A:363:VAL:HG11	2.00	0.60
3:A:274:PRO:HB2	3:A:276:ILE:HD11	1.83	0.60
1:K:15:LYS:HE2	1:K:362:LYS:CE	2.31	0.60
1:K:55:GLY:N	1:K:60:LYS:HA	2.15	0.60
2:B:46:ARG:HH12	2:B:49:VAL:CG1	2.14	0.60
2:B:139:LEU:HD13	2:B:185:ALA:HB1	1.81	0.60
2:B:271:ALA:HB3	2:B:365:ALA:HB3	1.82	0.60
2:B:382:SER:HB3	2:B:415:MET:HE1	1.84	0.60
1:K:228:MET:HA	1:K:228:MET:HE2	1.83	0.60
2:B:347:ASN:ND2	2:B:350:LYS:HZ3	2.00	0.60
3:A:26:LEU:HD22	3:A:364:PRO:HB3	1.81	0.60
3:A:155:GLU:HG2	3:A:156:ARG:N	2.16	0.60
3:A:317:LEU:HD22	3:A:377:MET:CE	2.31	0.60
3:A:321:GLY:HA3	3:A:372:GLN:O	2.01	0.60
1:K:190:ASN:HD22	1:K:191:LYS:N	1.99	0.60
2:B:1:MET:HA	2:B:1:MET:CE	2.30	0.60
2:B:151:LEU:HD12	2:B:152:ILE:CA	2.32	0.60
2:B:337:ASN:OD1	2:B:339:SER:HB3	2.02	0.60
3:A:70:LEU:CG	3:A:110:ILE:HG21	2.19	0.60
3:A:216:ASN:HB3	3:A:280:LYS:CD	2.31	0.60
3:A:407:TRP:HA	3:A:407:TRP:HE3	1.66	0.60
1:K:215:GLU:OE2	1:K:216:LYS:HE3	2.01	0.60
1:K:246:LYS:NZ	1:K:254:GLU:OE2	2.35	0.60
2:B:101:TRP:CH2	2:B:403:MET:HG3	2.36	0.60
2:B:262:ARG:CD	2:B:262:ARG:H	2.14	0.60
2:B:324:LYS:NZ	3:A:221:ARG:CA	2.64	0.60
3:A:115:ILE:HG23	3:A:116:ASP:N	2.17	0.60
3:A:154:MET:HE2	3:A:154:MET:CA	2.31	0.60
3:A:179:THR:HB	3:A:183:GLU:OE2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:271:THR:O	3:A:376:CYS:HA	2.02	0.60
3:A:287:SER:HB3	3:A:290:GLU:HG3	1.83	0.60
1:K:77:LYS:HE3	1:K:78:GLN:HB2	1.83	0.60
1:K:145:GLU:HG2	1:K:207:LYS:NZ	2.17	0.60
1:K:170:ASP:OD2	1:K:180:GLU:HG2	2.02	0.60
1:K:297:ARG:HH12	2:B:262:ARG:NE	1.98	0.60
2:B:67:ASP:CG	2:B:73:MET:HB3	2.22	0.60
2:B:225:LEU:HD12	2:B:226:ASN:N	2.17	0.60
2:B:293:MET:CE	2:B:367:PHE:HA	2.31	0.60
2:B:318:ARG:NH2	2:B:358:PRO:HA	2.16	0.60
3:A:31:GLN:HE22	3:A:33:ASP:HB3	1.65	0.60
1:K:48:LYS:NZ	1:K:70:MET:HG3	2.16	0.60
1:K:152:THR:O	1:K:154:PHE:HD2	1.85	0.60
1:K:215:GLU:HG2	1:K:216:LYS:N	2.17	0.60
2:B:36:TYR:CD2	2:B:44:LEU:HB2	2.37	0.60
2:B:90:PHE:HE1	2:B:92:PHE:CE1	2.19	0.60
2:B:241:ARG:HD2	2:B:242:PHE:N	2.17	0.60
3:A:16:ILE:HG23	3:A:17:GLY:N	2.16	0.60
3:A:101:ASN:CA	3:A:144:GLY:HA3	2.30	0.60
3:A:135:PHE:HE1	3:A:166:LYS:HA	1.66	0.60
3:A:317:LEU:HD22	3:A:377:MET:HE3	1.84	0.60
2:B:260:PHE:CG	3:A:406:HIS:NE2	2.69	0.60
2:B:381:ILE:HA	2:B:384:GLN:HG3	1.82	0.60
3:A:171:ILE:HG13	3:A:204:VAL:CG1	2.32	0.60
3:A:204:VAL:HG13	3:A:206:ASN:OD1	2.01	0.60
3:A:255:PHE:HZ	3:A:352:LYS:H	1.50	0.60
3:A:259:LEU:CD1	3:A:378:LEU:HD12	2.30	0.60
3:A:326:LYS:NZ	3:A:326:LYS:HB3	2.17	0.60
1:K:16:GLY:CA	1:K:363:PRO:HD2	2.31	0.59
1:K:102:PHE:HD1	1:K:264:VAL:CG1	2.15	0.59
1:K:293:LEU:HD21	3:A:409:VAL:CG2	2.32	0.59
2:B:154:LYS:HE2	2:B:157:GLU:CB	2.26	0.59
2:B:272:PRO:HB3	2:B:292:GLN:HE22	1.67	0.59
2:B:318:ARG:CZ	2:B:358:PRO:HA	2.31	0.59
3:A:78:VAL:O	3:A:84:ARG:HB2	2.02	0.59
3:A:103:TYR:HD2	3:A:147:SER:C	2.05	0.59
3:A:174:ALA:HB2	3:A:207:GLU:N	2.15	0.59
3:A:349:THR:HG1	3:A:351:PHE:HD1	1.50	0.59
1:K:77:LYS:CD	1:K:78:GLN:H	2.15	0.59
1:K:226:THR:HG23	1:K:232:SER:HB3	1.84	0.59
1:K:297:ARG:HH22	2:B:260:PHE:HD2	1.48	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:329:ARG:HA	1:K:363:PRO:HG3	1.84	0.59
2:B:84:ILE:HG23	2:B:85:PHE:CD1	2.37	0.59
2:B:217:LEU:HD13	2:B:218:THR:H	1.65	0.59
2:B:323:MET:CA	2:B:326:VAL:HG23	2.33	0.59
1:K:59:ASP:HA	1:K:60:LYS:NZ	2.17	0.59
1:K:204:VAL:HG11	1:K:209:GLU:HB3	1.84	0.59
2:B:113:VAL:HG23	2:B:114:ASP:N	2.17	0.59
2:B:137:HIS:HE1	2:B:166:THR:CG2	2.15	0.59
2:B:404:ASP:OD1	2:B:406:MET:HG2	2.02	0.59
3:A:189:LEU:HD12	3:A:192:HIS:HE1	1.66	0.59
3:A:294:ALA:HA	3:A:297:GLU:OE1	2.02	0.59
1:K:60:LYS:H	1:K:60:LYS:HD2	1.67	0.59
1:K:192:ARG:CB	1:K:322:ASP:HA	2.32	0.59
1:K:344:GLU:HB3	3:A:414:GLU:CG	2.15	0.59
2:B:9:ALA:HB1	2:B:147:MET:SD	2.42	0.59
2:B:118:ASP:O	2:B:122:LYS:HD2	2.03	0.59
2:B:141:GLY:HA3	5:B:501:G2P:C5'	2.32	0.59
2:B:167:PHE:HE1	2:B:200:TYR:CD2	2.20	0.59
2:B:170:VAL:HG22	2:B:203:ASP:HA	1.83	0.59
2:B:178:THR:CG2	2:B:180:VAL:HG22	2.32	0.59
3:A:6:SER:HB2	3:A:21:TRP:HZ2	1.68	0.59
3:A:274:PRO:CD	3:A:291:ILE:HG23	2.32	0.59
3:A:276:ILE:HG22	3:A:277:SER:O	2.02	0.59
1:K:41:VAL:HB	1:K:338:PRO:HA	1.85	0.59
1:K:184:MET:SD	1:K:194:VAL:HG21	2.42	0.59
1:K:258:ILE:H	1:K:368:LYS:CD	2.16	0.59
1:K:266:LEU:HD13	1:K:267:ALA:C	2.23	0.59
1:K:283:ARG:HH22	2:B:160:PRO:CB	2.14	0.59
1:K:293:LEU:HD23	3:A:409:VAL:HG11	1.83	0.59
2:B:131:GLN:NE2	2:B:131:GLN:HA	2.17	0.59
2:B:276:ARG:O	2:B:280:GLN:HG2	2.03	0.59
2:B:350:LYS:HE3	3:A:179:THR:HA	1.83	0.59
1:K:82:TYR:CZ	1:K:86:VAL:CB	2.85	0.59
1:K:272:ILE:HD11	3:A:411:GLU:O	2.03	0.59
2:B:272:PRO:CG	2:B:284:LEU:HD11	2.33	0.59
2:B:375:GLN:HG3	2:B:376:GLU:OE2	2.03	0.59
3:A:4:CYS:SG	3:A:135:PHE:HA	2.42	0.59
3:A:188:ILE:CG2	3:A:421:ALA:HB1	2.31	0.59
3:A:242:LEU:HB2	3:A:252:LEU:CD1	2.31	0.59
3:A:280:LYS:HA	3:A:283:HIS:HD2	1.66	0.59
1:K:23:VAL:HG21	1:K:68:PHE:HE1	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:66:TYR:HB3	1:K:68:PHE:CZ	2.37	0.59
2:B:145:SER:HB3	2:B:188:SER:OG	2.02	0.59
2:B:167:PHE:HE1	2:B:200:TYR:HD2	1.49	0.59
2:B:221:THR:HG22	2:B:223:GLY:H	1.66	0.59
2:B:243:PRO:C	2:B:355:ASP:HB2	2.23	0.59
2:B:306:ARG:HH21	2:B:309:ARG:NH2	2.00	0.59
3:A:277:SER:HB3	3:A:280:LYS:H	1.67	0.59
1:K:15:LYS:O	1:K:362:LYS:HA	2.02	0.59
2:B:324:LYS:CD	3:A:221:ARG:CD	2.81	0.59
3:A:78:VAL:HB	3:A:92:LEU:CD2	2.32	0.59
3:A:214:ARG:HH21	3:A:219:ILE:N	2.00	0.59
1:K:48:LYS:HA	1:K:71:VAL:HB	1.85	0.59
1:K:157:LYS:CB	1:K:201:GLU:HB3	2.21	0.59
1:K:181:ARG:HH22	1:K:183:GLN:HB2	1.68	0.59
1:K:228:MET:CE	1:K:228:MET:HA	2.33	0.59
1:K:284:GLU:HA	1:K:287:ASN:HD22	1.67	0.59
2:B:53:GLU:HA	2:B:58:LYS:O	2.03	0.59
2:B:303:CYS:HB2	2:B:371:SER:HB3	1.83	0.59
2:B:324:LYS:HD3	3:A:221:ARG:CD	2.33	0.59
3:A:295:CYS:HA	3:A:300:ASN:CG	2.22	0.59
1:K:171:LEU:N	1:K:171:LEU:HD23	2.18	0.59
1:K:272:ILE:HD13	1:K:272:ILE:N	2.17	0.59
2:B:34:GLY:HA2	2:B:84:ILE:HD13	1.84	0.59
2:B:215:LEU:HD23	2:B:276:ARG:NE	2.17	0.59
3:A:146:GLY:O	3:A:150:THR:HG22	2.03	0.59
3:A:229:ARG:HH21	3:A:363:VAL:HB	1.68	0.59
3:A:351:PHE:HB2	3:A:352:LYS:HZ3	1.68	0.59
1:K:321:GLN:CA	1:K:324:LEU:HD23	2.31	0.58
2:B:20:PHE:CE1	2:B:233:MET:HB2	2.37	0.58
2:B:139:LEU:HD11	2:B:171:PRO:CD	2.32	0.58
2:B:251:ARG:NH2	3:A:99:ALA:O	2.36	0.58
2:B:260:PHE:CE2	3:A:406:HIS:N	2.71	0.58
2:B:272:PRO:HA	2:B:292:GLN:HE22	1.67	0.58
2:B:309:ARG:HB2	2:B:426:GLN:CA	2.19	0.58
3:A:171:ILE:HG13	3:A:204:VAL:HG11	1.84	0.58
1:K:57:LEU:CD2	3:A:427:ALA:HA	2.33	0.58
1:K:191:LYS:H	1:K:191:LYS:NZ	2.01	0.58
2:B:20:PHE:O	2:B:23:VAL:HG12	2.04	0.58
2:B:140:GLY:CA	2:B:185:ALA:HB2	2.32	0.58
2:B:277:GLY:CA	2:B:280:GLN:HE21	2.08	0.58
2:B:376:GLU:HB2	2:B:380:ARG:HH22	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:419:VAL:HG23	2:B:420:SER:N	2.18	0.58
3:A:141:PHE:HB2	3:A:171:ILE:O	2.03	0.58
3:A:239:THR:O	3:A:243:ARG:HG2	2.03	0.58
3:A:428:LEU:HD12	3:A:428:LEU:O	2.03	0.58
1:K:26:ARG:HH21	1:K:337:SER:HB2	1.67	0.58
1:K:95:MET:HB2	1:K:365:VAL:CG1	2.32	0.58
1:K:109:THR:HG21	1:K:336:ILE:H	1.65	0.58
2:B:156:ARG:HE	2:B:157:GLU:HA	1.67	0.58
2:B:174:LYS:HD2	2:B:175:VAL:HG23	1.86	0.58
2:B:339:SER:HA	2:B:429:THR:HG22	1.84	0.58
2:B:392:LYS:CA	2:B:395:LEU:HD21	2.33	0.58
3:A:93:ILE:CD1	3:A:118:VAL:HG12	2.33	0.58
3:A:185:TYR:CE1	3:A:404:PHE:HB2	2.38	0.58
3:A:287:SER:HB3	3:A:290:GLU:OE2	2.02	0.58
3:A:420:GLU:OE1	3:A:420:GLU:HA	2.02	0.58
1:K:48:LYS:C	1:K:71:VAL:HG21	2.23	0.58
1:K:92:GLU:HB3	1:K:97:TYR:CG	2.38	0.58
2:B:228:LEU:HD21	2:B:300:MET:HE1	1.85	0.58
2:B:260:PHE:CE2	3:A:405:VAL:N	2.71	0.58
2:B:318:ARG:HD3	2:B:358:PRO:HG3	1.85	0.58
3:A:78:VAL:CA	3:A:83:TYR:HE1	2.15	0.58
3:A:217:LEU:HD23	3:A:277:SER:OG	2.03	0.58
1:K:84:SER:CB	1:K:84:SER:HG	1.24	0.58
1:K:109:THR:HB	1:K:335:THR:CB	2.34	0.58
1:K:170:ASP:HB3	1:K:177:ASP:O	2.03	0.58
1:K:202:ILE:HD12	1:K:203:THR:H	1.68	0.58
1:K:275:SER:OG	1:K:277:ALA:HB2	2.03	0.58
1:K:311:TYR:CE1	1:K:324:LEU:HD23	2.39	0.58
2:B:190:HIS:CG	2:B:411:ALA:HB1	2.38	0.58
2:B:246:LEU:O	2:B:352:ALA:HB1	2.04	0.58
2:B:260:PHE:CZ	3:A:404:PHE:C	2.77	0.58
2:B:347:ASN:CG	2:B:350:LYS:HZ3	2.06	0.58
3:A:99:ALA:HB2	3:A:145:THR:CA	2.34	0.58
3:A:114:ILE:HG23	3:A:115:ILE:N	2.18	0.58
1:K:48:LYS:HE3	1:K:70:MET:CA	2.25	0.58
1:K:191:LYS:HZ2	1:K:191:LYS:N	2.01	0.58
1:K:293:LEU:HD21	3:A:409:VAL:HG21	1.84	0.58
2:B:119:VAL:HG12	2:B:123:GLU:HG2	1.85	0.58
2:B:296:ALA:HB2	2:B:305:PRO:CD	2.33	0.58
2:B:324:LYS:HD2	3:A:220:GLU:O	2.04	0.58
3:A:156:ARG:NH1	3:A:157:LEU:HG	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:215:ARG:HH11	3:A:216:ASN:HA	1.69	0.58
3:A:216:ASN:ND2	3:A:280:LYS:HD2	2.18	0.58
1:K:15:LYS:HD3	1:K:362:LYS:CD	2.33	0.58
1:K:180:GLU:CD	1:K:199:LEU:HA	2.24	0.58
1:K:190:ASN:HB3	1:K:193:GLY:H	1.69	0.58
1:K:355:ARG:HG3	4:K:501:MZK:F3	1.94	0.58
2:B:309:ARG:HD2	2:B:429:THR:CA	2.33	0.58
3:A:102:ASN:HB2	3:A:407:TRP:HE1	1.69	0.58
3:A:360:PRO:HG3	3:A:374:ALA:N	2.18	0.58
1:K:68:PHE:CB	1:K:71:VAL:HG22	2.33	0.58
2:B:21:TRP:HH2	2:B:50:TYR:CZ	2.22	0.58
2:B:54:ALA:CB	2:B:58:LYS:HB3	2.24	0.58
2:B:323:MET:HA	2:B:323:MET:HE3	1.86	0.58
2:B:324:LYS:CG	3:A:221:ARG:CG	2.81	0.58
2:B:362:LYS:HD2	2:B:362:LYS:N	2.17	0.58
3:A:78:VAL:HG13	3:A:83:TYR:HE1	1.69	0.58
3:A:174:ALA:CB	3:A:176:GLN:HG2	2.33	0.58
3:A:217:LEU:HA	3:A:277:SER:OG	2.03	0.58
3:A:339:ARG:HH22	3:A:342:GLN:CB	2.17	0.58
1:K:236:HIS:N	1:K:267:ALA:HB2	2.19	0.58
2:B:111:GLU:HA	2:B:114:ASP:OD2	2.04	0.58
3:A:8:HIS:O	3:A:68:VAL:HG22	2.04	0.58
3:A:67:PHE:HB2	3:A:92:LEU:HD12	1.85	0.58
3:A:67:PHE:HB2	3:A:92:LEU:HD13	1.85	0.58
1:K:44:ASP:OD2	1:K:47:ARG:HG2	2.04	0.58
1:K:190:ASN:HB3	1:K:193:GLY:N	2.19	0.58
1:K:235:SER:C	1:K:267:ALA:HB2	2.24	0.58
2:B:45:GLU:HG2	2:B:46:ARG:N	2.18	0.58
2:B:138:SER:O	2:B:144:GLY:HA3	2.04	0.58
2:B:258:VAL:O	3:A:404:PHE:HE2	1.87	0.58
3:A:430:LYS:HD3	3:A:434:GLU:HG3	1.84	0.58
1:K:222:THR:HG23	1:K:231:TYR:CE2	2.39	0.57
2:B:44:LEU:O	2:B:48:ASN:HB2	2.03	0.57
2:B:191:GLN:HG2	2:B:195:ASN:HD21	1.69	0.57
2:B:213:ARG:HE	2:B:214:THR:HG22	1.68	0.57
2:B:410:GLU:HA	2:B:410:GLU:OE2	2.03	0.57
3:A:2:ARG:HG3	3:A:131:GLY:O	2.04	0.57
3:A:272:TYR:HE1	3:A:374:ALA:CB	2.15	0.57
1:K:136:ILE:CG2	1:K:214:LEU:HD11	2.34	0.57
2:B:139:LEU:HD12	2:B:185:ALA:CB	2.34	0.57
2:B:145:SER:OG	2:B:188:SER:HB2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:151:LEU:CD1	2:B:152:ILE:HG12	2.34	0.57
3:A:9:VAL:HG23	3:A:138:PHE:O	2.04	0.57
3:A:156:ARG:HH12	3:A:157:LEU:HG	1.68	0.57
3:A:409:VAL:C	3:A:412:GLY:H	2.07	0.57
3:A:429:GLU:OE1	3:A:429:GLU:HA	2.04	0.57
1:K:272:ILE:HG12	1:K:273:GLY:N	2.19	0.57
2:B:67:ASP:H	2:B:92:PHE:HB2	1.68	0.57
2:B:288:GLU:O	2:B:292:GLN:HG3	2.04	0.57
3:A:5:ILE:CG2	3:A:65:ALA:HA	2.34	0.57
3:A:185:TYR:HB3	3:A:408:TYR:HE1	1.68	0.57
3:A:260:VAL:HG23	3:A:260:VAL:O	2.04	0.57
3:A:268:PRO:HB3	3:A:380:ASN:OD1	2.05	0.57
3:A:388:TRP:CZ3	3:A:428:LEU:HD21	2.39	0.57
1:K:92:GLU:HB3	1:K:97:TYR:CB	2.34	0.57
1:K:189:ARG:HH11	1:K:193:GLY:HA3	1.70	0.57
1:K:227:LEU:H	1:K:227:LEU:CD2	2.16	0.57
2:B:108:GLU:OE2	2:B:147:MET:HB3	2.04	0.57
2:B:260:PHE:CD2	3:A:406:HIS:NE2	2.73	0.57
2:B:324:LYS:HD3	3:A:221:ARG:HD3	1.87	0.57
2:B:337:ASN:HB3	2:B:340:TYR:CB	2.32	0.57
3:A:12:ALA:HA	3:A:15:GLN:HE22	1.70	0.57
3:A:67:PHE:O	3:A:93:ILE:HG12	2.03	0.57
3:A:273:ALA:HB3	3:A:375:VAL:HG21	1.86	0.57
3:A:319:TYR:CB	3:A:355:ILE:HA	2.08	0.57
1:K:110:GLY:HA3	1:K:113:PHE:HB3	1.87	0.57
1:K:215:GLU:HG3	1:K:216:LYS:HE3	1.85	0.57
1:K:293:LEU:HD12	3:A:405:VAL:CG1	2.33	0.57
1:K:327:ARG:H	1:K:327:ARG:NH2	1.99	0.57
2:B:32:PRO:HG3	2:B:81:PHE:CE1	2.40	0.57
2:B:112:LEU:O	2:B:116:VAL:HG13	2.03	0.57
2:B:252:LYS:HG2	3:A:100:ALA:HB1	1.87	0.57
2:B:284:LEU:HD22	2:B:288:GLU:OE1	2.04	0.57
2:B:309:ARG:HD2	2:B:429:THR:O	2.04	0.57
2:B:326:VAL:O	2:B:329:GLN:HG3	2.04	0.57
3:A:176:GLN:NE2	3:A:207:GLU:HA	2.18	0.57
3:A:246:GLY:HA3	3:A:355:ILE:O	2.03	0.57
1:K:223:THR:HG21	1:K:235:SER:N	2.11	0.57
1:K:327:ARG:HA	1:K:362:LYS:O	2.05	0.57
1:K:104:TYR:HD2	1:K:105:GLY:H	1.52	0.57
2:B:186:THR:HG23	2:B:187:LEU:N	2.19	0.57
2:B:271:ALA:CB	2:B:365:ALA:HB3	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:97:GLU:OE2	3:A:110:ILE:HD11	2.03	0.57
1:K:54:THR:HG23	1:K:56:GLY:N	2.19	0.57
1:K:109:THR:HG21	1:K:335:THR:HB	1.83	0.57
1:K:162:GLU:OE2	1:K:235:SER:HB2	2.05	0.57
2:B:1:MET:SD	2:B:127:CYS:HB3	2.44	0.57
2:B:20:PHE:O	2:B:24:ILE:HG12	2.04	0.57
2:B:62:ARG:NH1	2:B:62:ARG:HA	2.19	0.57
2:B:217:LEU:HD13	2:B:219:THR:H	1.69	0.57
2:B:240:LEU:HD13	2:B:248:ALA:O	2.05	0.57
2:B:244:GLY:CA	2:B:355:ASP:HB2	2.34	0.57
3:A:35:GLN:OE1	3:A:35:GLN:HA	2.03	0.57
3:A:248:LEU:HB3	3:A:354:GLY:HA2	1.87	0.57
3:A:282:TYR:CD1	3:A:369:ALA:HB2	2.39	0.57
3:A:319:TYR:CD2	3:A:375:VAL:HG12	2.40	0.57
2:B:99:ASN:CA	2:B:142:GLY:HA3	2.35	0.57
2:B:103:LYS:CG	2:B:401:GLU:HG2	2.34	0.57
3:A:30:ILE:HD12	3:A:61:HIS:CG	2.40	0.57
3:A:33:ASP:CG	3:A:35:GLN:H	2.08	0.57
3:A:41:THR:HG22	3:A:46:ASP:OD2	2.05	0.57
3:A:187:SER:O	3:A:191:THR:HG22	2.05	0.57
3:A:246:GLY:HA2	3:A:357:TYR:N	2.17	0.57
3:A:275:VAL:HG13	3:A:275:VAL:O	2.05	0.57
3:A:388:TRP:HB2	3:A:425:MET:HE2	1.87	0.57
1:K:26:ARG:HE	1:K:337:SER:CB	2.17	0.57
1:K:43:CYS:C	1:K:45:PRO:HD3	2.26	0.57
1:K:290:GLN:NE2	3:A:410:GLY:CA	2.58	0.57
2:B:245:GLN:NE2	2:B:355:ASP:HA	2.20	0.57
3:A:4:CYS:N	3:A:51:THR:HG22	2.19	0.57
3:A:153:LEU:HD11	3:A:157:LEU:CD1	2.33	0.57
3:A:176:GLN:HG3	3:A:177:VAL:H	1.69	0.57
3:A:278:ALA:HB1	3:A:282:TYR:CZ	2.40	0.57
1:K:181:ARG:HH22	1:K:197:LYS:NZ	2.03	0.56
1:K:303:VAL:HG22	1:K:358:ASN:HB2	1.87	0.56
1:K:343:LEU:H	1:K:343:LEU:CD2	2.10	0.56
1:K:347:LEU:HD23	1:K:347:LEU:O	2.04	0.56
1:K:361:ASN:OD1	1:K:363:PRO:HG3	2.05	0.56
2:B:19:LYS:HZ3	2:B:19:LYS:N	2.02	0.56
2:B:187:LEU:HG	2:B:408:PHE:CE2	2.40	0.56
2:B:266:PHE:CE2	2:B:311:LEU:HG	2.40	0.56
3:A:108:TYR:O	3:A:112:LYS:HG2	2.05	0.56
3:A:112:LYS:O	3:A:115:ILE:HG22	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:122:ILE:HD12	3:A:123:ARG:HA	1.86	0.56
3:A:311:LYS:HA	3:A:342:GLN:NE2	2.20	0.56
3:A:395:PHE:HA	3:A:398:MET:HG2	1.87	0.56
3:A:401:LYS:HA	3:A:401:LYS:HZ3	1.69	0.56
1:K:41:VAL:CB	1:K:338:PRO:HA	2.34	0.56
1:K:221:ARG:HD2	1:K:221:ARG:O	2.05	0.56
1:K:361:ASN:C	1:K:363:PRO:HD3	2.25	0.56
2:B:81:PHE:HA	2:B:83:GLN:HE22	1.70	0.56
2:B:116:VAL:HG23	2:B:117:LEU:N	2.20	0.56
2:B:183:TYR:CE1	2:B:385:PHE:HB3	2.40	0.56
2:B:216:LYS:HE2	2:B:277:GLY:CA	2.31	0.56
3:A:9:VAL:HG11	3:A:149:PHE:HB3	1.87	0.56
3:A:317:LEU:HG	3:A:353:VAL:CG1	2.34	0.56
3:A:358:GLN:HG2	3:A:359:PRO:CD	2.35	0.56
1:K:26:ARG:NH1	1:K:338:PRO:HD2	2.20	0.56
1:K:68:PHE:HB2	1:K:71:VAL:HG23	1.85	0.56
1:K:106:GLN:HB2	1:K:109:THR:OG1	2.05	0.56
1:K:290:GLN:HA	1:K:293:LEU:HD23	1.86	0.56
1:K:341:LEU:HD12	1:K:341:LEU:N	2.19	0.56
2:B:4:ILE:CG2	2:B:133:PHE:HA	2.24	0.56
2:B:102:ALA:HB3	2:B:401:GLU:OE1	2.03	0.56
2:B:149:THR:HG21	2:B:188:SER:HA	1.87	0.56
2:B:216:LYS:HD3	2:B:276:ARG:NH1	2.20	0.56
2:B:251:ARG:HD3	3:A:105:ARG:HH21	1.68	0.56
2:B:284:LEU:HD13	2:B:289:LEU:CD2	2.36	0.56
2:B:308:GLY:HA2	2:B:372:THR:N	2.20	0.56
2:B:327:ASP:O	2:B:331:LEU:HD13	2.05	0.56
2:B:350:LYS:HE3	3:A:179:THR:CA	2.36	0.56
2:B:350:LYS:CE	3:A:179:THR:CA	2.83	0.56
2:B:374:ILE:HG13	2:B:378:PHE:CZ	2.40	0.56
3:A:5:ILE:HD11	3:A:125:LEU:HG	1.87	0.56
3:A:70:LEU:HD22	3:A:99:ALA:HA	1.87	0.56
3:A:172:TYR:N	3:A:204:VAL:HG12	2.18	0.56
3:A:188:ILE:CG1	3:A:395:PHE:HD1	2.18	0.56
3:A:246:GLY:HA3	3:A:356:ASN:CA	2.18	0.56
3:A:263:PRO:HD2	3:A:264:ARG:CD	2.33	0.56
3:A:275:VAL:HB	3:A:300:ASN:ND2	2.18	0.56
3:A:387:ALA:HA	3:A:390:ARG:HD2	1.85	0.56
1:K:32:GLU:CB	1:K:33:ARG:HH21	2.18	0.56
2:B:322:SER:HB3	2:B:325:GLU:CG	2.34	0.56
3:A:262:TYR:HD2	3:A:265:ILE:HG12	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:275:VAL:HG13	3:A:280:LYS:CE	2.35	0.56
3:A:390:ARG:O	3:A:394:LYS:HD2	2.04	0.56
1:K:43:CYS:O	1:K:45:PRO:HD3	2.06	0.56
2:B:83:GLN:NE2	2:B:83:GLN:H	2.04	0.56
3:A:1:MET:HB2	3:A:47:ASP:CB	2.35	0.56
3:A:4:CYS:CA	3:A:132:LEU:HG	2.04	0.56
3:A:205:ASP:HB3	3:A:208:ALA:CB	2.36	0.56
1:K:135:ILE:HD11	1:K:136:ILE:HG13	1.88	0.56
1:K:272:ILE:H	1:K:272:ILE:CD1	2.18	0.56
2:B:42:LEU:O	2:B:45:GLU:HG2	2.05	0.56
2:B:84:ILE:HG23	2:B:85:PHE:N	2.19	0.56
2:B:266:PHE:CE1	2:B:369:GLY:HA2	2.40	0.56
2:B:320:ARG:H	2:B:320:ARG:CZ	2.19	0.56
2:B:377:LEU:HA	2:B:380:ARG:HG3	1.88	0.56
2:B:384:GLN:O	2:B:388:MET:HG2	2.05	0.56
3:A:63:PRO:CD	3:A:86:LEU:HD11	2.30	0.56
3:A:117:LEU:H	3:A:117:LEU:CD2	2.17	0.56
3:A:240:ALA:HA	3:A:243:ARG:NE	2.20	0.56
1:K:48:LYS:NZ	1:K:71:VAL:H	2.03	0.56
2:B:2:ARG:HG3	2:B:131:GLN:H	1.70	0.56
2:B:208:TYR:HE2	2:B:225:LEU:HD23	1.69	0.56
3:A:71:GLU:HB3	3:A:98:ASP:CB	2.36	0.56
3:A:150:THR:HG23	3:A:151:SER:N	2.21	0.56
3:A:191:THR:O	3:A:194:THR:HG22	2.06	0.56
3:A:235:VAL:HA	3:A:238:ILE:HD12	1.87	0.56
3:A:313:MET:HA	3:A:344:VAL:HG13	1.87	0.56
1:K:57:LEU:CD2	3:A:427:ALA:HB2	2.36	0.56
1:K:321:GLN:O	1:K:324:LEU:HD23	2.06	0.56
2:B:15:GLN:OE1	2:B:19:LYS:HE3	2.05	0.56
2:B:31:ASP:HB2	2:B:33:THR:HG22	1.88	0.56
2:B:130:LEU:HD12	2:B:130:LEU:N	2.20	0.56
2:B:213:ARG:HG3	2:B:214:THR:H	1.70	0.56
3:A:125:LEU:HD12	3:A:128:GLN:CG	2.36	0.56
3:A:172:TYR:H	3:A:204:VAL:CG1	2.19	0.56
3:A:288:VAL:HG21	3:A:327:ASP:HB2	1.88	0.56
3:A:305:CYS:SG	3:A:383:ALA:HB3	2.45	0.56
3:A:323:VAL:HB	3:A:355:ILE:HG21	1.86	0.56
1:K:26:ARG:NH2	1:K:32:GLU:HG3	2.20	0.56
1:K:97:TYR:HA	1:K:366:ASN:H	1.70	0.56
2:B:3:GLU:OE1	2:B:49:VAL:HG23	2.05	0.56
2:B:284:LEU:CD1	2:B:361:LEU:HD12	2.32	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:53:PHE:CD2	3:A:63:PRO:HA	2.41	0.56
3:A:163:LYS:HB2	3:A:163:LYS:HZ1	1.69	0.56
1:K:82:TYR:CE2	1:K:86:VAL:CB	2.88	0.56
1:K:95:MET:CG	1:K:365:VAL:CG1	2.79	0.56
1:K:172:LEU:HD21	1:K:199:LEU:CD1	2.35	0.56
2:B:192:LEU:HD13	2:B:192:LEU:C	2.26	0.56
2:B:214:THR:HB	2:B:275:SER:HA	1.87	0.56
2:B:260:PHE:H	2:B:262:ARG:NH2	2.04	0.56
2:B:379:LYS:HB3	2:B:419:VAL:HG11	1.88	0.56
2:B:382:SER:HB3	2:B:415:MET:CE	2.36	0.56
3:A:154:MET:HA	3:A:154:MET:CE	2.36	0.56
3:A:233:GLN:HB3	3:A:363:VAL:HG13	1.88	0.56
1:K:15:LYS:HG2	1:K:16:GLY:N	2.20	0.55
1:K:94:ILE:HA	1:K:245:MET:HE1	1.87	0.55
2:B:11:GLN:N	5:B:501:G2P:O2A	2.39	0.55
2:B:28:HIS:HB3	2:B:30:ILE:HG23	1.86	0.55
2:B:139:LEU:HG	2:B:169:VAL:O	2.06	0.55
2:B:215:LEU:CG	2:B:217:LEU:HB2	2.36	0.55
3:A:75:ILE:HG23	3:A:92:LEU:CD1	2.35	0.55
3:A:182:VAL:HG12	3:A:186:ASN:OD1	2.06	0.55
1:K:226:THR:CG2	1:K:232:SER:HB3	2.37	0.55
1:K:303:VAL:CG2	1:K:358:ASN:HD22	2.19	0.55
2:B:35:SER:HA	2:B:57:ASN:O	2.05	0.55
2:B:175:VAL:HG12	2:B:176:SER:N	2.21	0.55
2:B:345:ILE:HD11	3:A:181:VAL:HA	1.88	0.55
3:A:52:PHE:O	3:A:63:PRO:HA	2.06	0.55
3:A:137:VAL:HB	3:A:168:GLU:HA	1.88	0.55
3:A:233:GLN:NE2	3:A:234:ILE:HA	2.20	0.55
3:A:271:THR:CG2	3:A:377:MET:HB2	2.36	0.55
1:K:15:LYS:HD3	1:K:362:LYS:CG	2.36	0.55
1:K:15:LYS:HE3	1:K:364:GLU:CD	2.26	0.55
1:K:172:LEU:CD1	1:K:199:LEU:HD11	2.28	0.55
1:K:187:ASP:OD1	1:K:195:ILE:HG12	1.99	0.55
1:K:312:ARG:CA	1:K:318:ARG:CG	2.71	0.55
1:K:360:LEU:HD12	1:K:360:LEU:N	2.20	0.55
2:B:42:LEU:HA	2:B:45:GLU:CD	2.27	0.55
2:B:62:ARG:HA	2:B:62:ARG:HH11	1.71	0.55
2:B:112:LEU:HD23	2:B:112:LEU:C	2.27	0.55
2:B:113:VAL:HG23	2:B:114:ASP:OD1	2.07	0.55
2:B:245:GLN:CD	2:B:355:ASP:HA	2.26	0.55
2:B:260:PHE:CZ	3:A:405:VAL:N	2.73	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:31:GLN:H	3:A:36:MET:HA	1.71	0.55
3:A:118:VAL:HG23	3:A:119:LEU:N	2.21	0.55
3:A:171:ILE:HD12	5:A:501:G2P:N3	2.22	0.55
3:A:311:LYS:HG2	3:A:438:ASP:OD2	2.05	0.55
3:A:321:GLY:HA3	3:A:372:GLN:NE2	2.20	0.55
1:K:26:ARG:NH1	1:K:28:PHE:HA	2.18	0.55
2:B:3:GLU:HG3	2:B:50:TYR:CA	2.37	0.55
2:B:11:GLN:CA	2:B:14:ASN:HB2	2.37	0.55
2:B:43:GLN:CA	2:B:242:PHE:HZ	2.19	0.55
2:B:142:GLY:HA2	2:B:184:ASN:OD1	2.06	0.55
2:B:199:THR:O	2:B:265:PHE:HD2	1.90	0.55
3:A:121:ARG:NH1	3:A:121:ARG:HG2	2.22	0.55
3:A:189:LEU:CD1	3:A:417:GLU:HG3	2.37	0.55
1:K:29:ASN:H	1:K:32:GLU:HG3	1.71	0.55
1:K:134:GLY:CA	1:K:138:ARG:HG2	2.37	0.55
1:K:140:LEU:HD22	1:K:210:VAL:HG11	1.89	0.55
2:B:1:MET:HG3	2:B:2:ARG:H	1.72	0.55
2:B:81:PHE:HA	2:B:83:GLN:NE2	2.22	0.55
2:B:263:LEU:HD22	2:B:264:HIS:N	2.21	0.55
2:B:347:ASN:HD22	3:A:177:VAL:CG2	2.20	0.55
3:A:4:CYS:O	3:A:64:ARG:HB2	2.07	0.55
3:A:52:PHE:HB3	3:A:53:PHE:CZ	2.40	0.55
3:A:230:LEU:HD23	3:A:230:LEU:C	2.27	0.55
1:K:16:GLY:HA3	1:K:363:PRO:HD2	1.87	0.55
1:K:136:ILE:HG21	1:K:214:LEU:CD1	2.37	0.55
1:K:145:GLU:HG2	1:K:207:LYS:HZ1	1.70	0.55
2:B:225:LEU:O	2:B:229:VAL:HG23	2.06	0.55
2:B:306:ARG:HA	2:B:340:TYR:HE1	1.70	0.55
2:B:375:GLN:HG2	2:B:376:GLU:N	2.21	0.55
2:B:398:TYR:O	2:B:401:GLU:HB2	2.07	0.55
3:A:259:LEU:HD13	3:A:378:LEU:CD1	2.31	0.55
1:K:82:TYR:CE2	1:K:86:VAL:CG1	2.87	0.55
1:K:102:PHE:CD1	1:K:264:VAL:CG1	2.90	0.55
1:K:115:MET:SD	1:K:135:ILE:HG12	2.46	0.55
1:K:223:THR:OG1	1:K:233:SER:HA	2.06	0.55
2:B:3:GLU:C	2:B:4:ILE:HD12	2.27	0.55
2:B:23:VAL:HG11	2:B:230:SER:CB	2.37	0.55
2:B:46:ARG:HG3	2:B:241:ARG:CD	2.35	0.55
2:B:246:LEU:H	2:B:353:VAL:HG22	1.70	0.55
2:B:307:HIS:O	2:B:426:GLN:HG3	2.07	0.55
2:B:308:GLY:HA2	2:B:372:THR:OG1	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:396:HIS:O	2:B:399:THR:HB	2.06	0.55
3:A:1:MET:CG	3:A:47:ASP:HB2	2.36	0.55
3:A:210:TYR:HA	3:A:213:CYS:SG	2.46	0.55
3:A:229:ARG:HG2	3:A:229:ARG:HH11	1.72	0.55
3:A:317:LEU:HB2	3:A:353:VAL:CG1	2.36	0.55
1:K:224:ALA:HB3	1:K:234:ARG:CG	2.33	0.55
1:K:271:ASN:ND2	1:K:274:ARG:H	2.05	0.55
2:B:86:ARG:HB2	2:B:89:ASN:OD1	2.06	0.55
2:B:178:THR:HG22	2:B:181:GLU:HB2	1.89	0.55
2:B:214:THR:CB	2:B:275:SER:HA	2.37	0.55
2:B:321:MET:HG2	2:B:325:GLU:HB2	1.89	0.55
3:A:34:GLY:HA2	3:A:86:LEU:HD13	1.89	0.55
3:A:286:LEU:HD22	3:A:291:ILE:HD11	1.87	0.55
3:A:370:LYS:HE2	3:A:371:VAL:O	2.07	0.55
1:K:144:PHE:HD2	1:K:207:LYS:HG3	1.64	0.55
1:K:311:TYR:CE1	1:K:324:LEU:HG	2.36	0.55
2:B:101:TRP:HB2	2:B:188:SER:OG	2.07	0.55
3:A:205:ASP:OD1	3:A:303:VAL:HG23	2.07	0.55
3:A:262:TYR:HB2	3:A:265:ILE:H	1.72	0.55
3:A:318:LEU:HD13	3:A:318:LEU:C	2.27	0.55
1:K:144:PHE:HB2	1:K:207:LYS:CG	2.37	0.55
1:K:172:LEU:HD21	1:K:199:LEU:HD11	1.87	0.55
2:B:41:ASP:OD1	2:B:42:LEU:HD22	2.07	0.55
2:B:215:LEU:HD13	2:B:217:LEU:HB3	1.87	0.55
2:B:341:PHE:CZ	2:B:346:PRO:HA	2.41	0.55
2:B:421:GLU:HA	2:B:421:GLU:OE2	2.05	0.55
3:A:99:ALA:HB3	5:A:501:G2P:O2G	2.07	0.55
3:A:115:ILE:HD12	3:A:152:LEU:CD2	2.37	0.55
3:A:271:THR:HG22	3:A:377:MET:HB2	1.89	0.55
3:A:344:VAL:HA	3:A:438:ASP:OD1	2.06	0.55
3:A:358:GLN:CG	3:A:359:PRO:HD2	2.35	0.55
3:A:401:LYS:HG3	3:A:403:ALA:HB2	1.88	0.55
2:B:415:MET:HG2	2:B:419:VAL:HG13	1.89	0.54
3:A:274:PRO:HB2	3:A:276:ILE:CD1	2.37	0.54
2:B:8:GLN:HE22	2:B:14:ASN:HA	1.72	0.54
2:B:11:GLN:O	2:B:14:ASN:HB2	2.07	0.54
2:B:15:GLN:HG3	2:B:19:LYS:CG	2.37	0.54
2:B:36:TYR:HD2	2:B:44:LEU:HB2	1.72	0.54
2:B:228:LEU:HD21	2:B:300:MET:CE	2.37	0.54
2:B:324:LYS:HZ3	3:A:221:ARG:CA	2.19	0.54
3:A:101:ASN:HA	3:A:144:GLY:HA3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:224:TYR:CD2	5:A:501:G2P:C6	2.91	0.54
3:A:317:LEU:N	3:A:353:VAL:HG12	2.22	0.54
3:A:388:TRP:CH2	3:A:432:TYR:CE2	2.95	0.54
3:A:405:VAL:O	3:A:409:VAL:HG23	2.06	0.54
1:K:55:GLY:HA2	1:K:60:LYS:CA	2.35	0.54
1:K:190:ASN:HD22	1:K:192:ARG:H	1.55	0.54
2:B:149:THR:HA	2:B:191:GLN:NE2	2.09	0.54
2:B:154:LYS:NZ	2:B:157:GLU:HG3	2.23	0.54
2:B:214:THR:HA	2:B:275:SER:OG	2.07	0.54
3:A:16:ILE:HD11	3:A:231:ILE:HB	1.89	0.54
3:A:172:TYR:CG	3:A:203:MET:HB2	2.43	0.54
3:A:298:PRO:HA	3:A:301:GLN:CG	2.37	0.54
3:A:311:LYS:N	3:A:311:LYS:HE3	2.22	0.54
3:A:385:ALA:HA	3:A:388:TRP:CE3	2.42	0.54
3:A:409:VAL:CG1	3:A:409:VAL:O	2.55	0.54
1:K:162:GLU:HG3	1:K:221:ARG:NH1	2.22	0.54
1:K:191:LYS:H	1:K:191:LYS:HD3	1.71	0.54
2:B:113:VAL:O	2:B:116:VAL:HG22	2.08	0.54
2:B:253:LEU:O	2:B:257:MET:HG2	2.07	0.54
2:B:258:VAL:HB	2:B:260:PHE:O	2.08	0.54
2:B:262:ARG:HD3	2:B:262:ARG:N	2.20	0.54
2:B:266:PHE:CD1	2:B:368:ILE:HG22	2.43	0.54
2:B:280:GLN:HG3	2:B:281:TYR:N	2.23	0.54
2:B:376:GLU:OE2	2:B:422:TYR:HB2	2.07	0.54
3:A:154:MET:HE2	3:A:154:MET:HA	1.90	0.54
3:A:155:GLU:HG2	3:A:156:ARG:H	1.71	0.54
3:A:189:LEU:HD13	3:A:417:GLU:HG3	1.90	0.54
3:A:250:VAL:HG22	3:A:251:ASP:N	2.23	0.54
3:A:294:ALA:O	3:A:300:ASN:HB2	2.07	0.54
3:A:349:THR:HG21	3:A:351:PHE:CD1	2.43	0.54
3:A:394:LYS:HD2	3:A:394:LYS:H	1.73	0.54
3:A:433:GLU:O	3:A:437:VAL:HG13	2.08	0.54
1:K:171:LEU:HD13	1:K:221:ARG:CB	2.37	0.54
2:B:45:GLU:HG2	2:B:46:ARG:H	1.71	0.54
2:B:214:THR:C	2:B:276:ARG:H	2.11	0.54
2:B:255:VAL:HG13	2:B:256:ASN:N	2.23	0.54
3:A:46:ASP:OD1	3:A:244:PHE:HZ	1.90	0.54
3:A:99:ALA:HB2	3:A:145:THR:N	2.23	0.54
3:A:391:LEU:HA	3:A:394:LYS:CE	2.37	0.54
1:K:158:VAL:O	1:K:201:GLU:HG2	2.07	0.54
2:B:102:ALA:HB3	2:B:401:GLU:CB	2.32	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:259:PRO:O	2:B:260:PHE:HB2	2.07	0.54
2:B:306:ARG:HA	2:B:340:TYR:CE1	2.43	0.54
3:A:143:GLY:HA3	5:A:501:G2P:O1B	2.07	0.54
3:A:270:ALA:HB2	3:A:378:LEU:HD21	1.88	0.54
3:A:307:PRO:HB3	3:A:312:TYR:OH	2.08	0.54
3:A:319:TYR:HB3	3:A:323:VAL:HG21	1.90	0.54
3:A:323:VAL:HG12	3:A:324:VAL:N	2.23	0.54
1:K:102:PHE:HD1	1:K:264:VAL:HB	1.72	0.54
2:B:139:LEU:H	2:B:168:SER:HB3	1.71	0.54
2:B:155:ILE:HG13	2:B:156:ARG:N	2.23	0.54
2:B:213:ARG:HE	2:B:214:THR:CG2	2.21	0.54
2:B:232:THR:HG23	2:B:270:PHE:HD1	1.72	0.54
1:K:50:VAL:HG23	1:K:71:VAL:CG1	2.38	0.54
2:B:178:THR:HG21	2:B:180:VAL:CG2	2.38	0.54
2:B:186:THR:HB	2:B:385:PHE:HE1	1.72	0.54
2:B:372:THR:HA	2:B:375:GLN:CD	2.28	0.54
3:A:24:TYR:HB3	3:A:52:PHE:CG	2.42	0.54
3:A:270:ALA:CA	3:A:378:LEU:HD23	2.38	0.54
3:A:298:PRO:HB3	3:A:301:GLN:HE21	1.72	0.54
3:A:407:TRP:HA	3:A:407:TRP:CE3	2.42	0.54
1:K:140:LEU:HD13	1:K:210:VAL:HG11	1.90	0.54
1:K:144:PHE:HB3	1:K:207:LYS:HD2	1.90	0.54
2:B:70:PRO:HA	2:B:92:PHE:CE2	2.43	0.54
2:B:154:LYS:O	2:B:158:GLU:HG3	2.08	0.54
2:B:259:PRO:HA	3:A:404:PHE:CE2	2.43	0.54
2:B:309:ARG:HD2	2:B:429:THR:C	2.28	0.54
3:A:23:LEU:HA	3:A:364:PRO:HG2	1.89	0.54
3:A:23:LEU:HD23	3:A:23:LEU:C	2.27	0.54
3:A:174:ALA:HB1	3:A:207:GLU:HB3	1.90	0.54
3:A:346:TRP:HD1	3:A:346:TRP:H	1.55	0.54
3:A:402:ARG:HG3	3:A:405:VAL:HG21	1.89	0.54
1:K:102:PHE:HZ	1:K:266:LEU:HD23	1.72	0.54
1:K:181:ARG:CG	1:K:198:GLY:HA3	2.38	0.54
2:B:41:ASP:OD2	2:B:42:LEU:HD22	2.08	0.54
2:B:70:PRO:HG3	2:B:94:GLN:CB	2.38	0.54
2:B:154:LYS:O	2:B:154:LYS:HD3	2.08	0.54
2:B:263:LEU:C	2:B:263:LEU:HD13	2.28	0.54
2:B:374:ILE:HG23	2:B:375:GLN:N	2.23	0.54
3:A:1:MET:HB2	3:A:47:ASP:CA	2.38	0.54
3:A:74:VAL:HG23	3:A:75:ILE:N	2.23	0.54
3:A:136:LEU:N	3:A:136:LEU:HD22	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:17:LYS:HE3	1:K:329:ARG:CD	2.26	0.53
1:K:134:GLY:HA2	1:K:138:ARG:HG2	1.89	0.53
1:K:290:GLN:CA	3:A:409:VAL:HG11	2.38	0.53
2:B:24:ILE:CA	2:B:27:GLU:HG2	2.36	0.53
2:B:72:THR:O	2:B:76:VAL:HG23	2.08	0.53
2:B:90:PHE:HE1	2:B:92:PHE:HE1	1.55	0.53
2:B:148:GLY:O	2:B:151:LEU:HG	2.07	0.53
2:B:221:THR:HG22	2:B:222:TYR:N	2.23	0.53
2:B:228:LEU:HD23	2:B:228:LEU:C	2.29	0.53
2:B:267:MET:HE2	2:B:370:ASN:C	2.29	0.53
2:B:278:SER:HB3	2:B:282:ARG:HD2	1.91	0.53
2:B:324:LYS:NZ	3:A:222:PRO:CD	2.70	0.53
2:B:418:LEU:HB3	2:B:422:TYR:CZ	2.43	0.53
3:A:107:HIS:HD2	3:A:152:LEU:HB2	1.63	0.53
3:A:202:PHE:HE1	3:A:267:PHE:CB	2.22	0.53
3:A:217:LEU:CD1	3:A:222:PRO:HG3	2.37	0.53
3:A:286:LEU:HB2	3:A:291:ILE:HG13	1.87	0.53
3:A:317:LEU:HD13	3:A:319:TYR:OH	2.08	0.53
1:K:284:GLU:HA	1:K:287:ASN:ND2	2.23	0.53
2:B:15:GLN:HG3	2:B:19:LYS:CD	2.38	0.53
2:B:154:LYS:HZ3	2:B:158:GLU:N	2.06	0.53
2:B:155:ILE:HA	2:B:158:GLU:OE1	2.08	0.53
2:B:159:TYR:HB3	2:B:161:ASP:OD1	2.08	0.53
2:B:238:THR:O	2:B:242:PHE:HB2	2.08	0.53
2:B:260:PHE:O	2:B:262:ARG:N	2.42	0.53
2:B:388:MET:O	2:B:391:ARG:HB2	2.09	0.53
3:A:194:THR:HG23	3:A:195:LEU:N	2.23	0.53
3:A:234:ILE:O	3:A:238:ILE:HG13	2.08	0.53
3:A:273:ALA:HA	3:A:274:PRO:C	2.29	0.53
3:A:370:LYS:CE	3:A:372:GLN:HA	2.37	0.53
1:K:48:LYS:HZ1	1:K:70:MET:HG3	1.73	0.53
1:K:66:TYR:CD2	1:K:68:PHE:CE1	2.95	0.53
1:K:215:GLU:HG2	1:K:216:LYS:HE3	1.85	0.53
1:K:312:ARG:HH11	1:K:318:ARG:NH2	2.05	0.53
2:B:32:PRO:HG3	2:B:81:PHE:HE1	1.74	0.53
2:B:215:LEU:HB3	2:B:217:LEU:H	1.73	0.53
2:B:306:ARG:NH2	2:B:339:SER:HB3	2.23	0.53
3:A:53:PHE:HA	3:A:63:PRO:HA	1.89	0.53
3:A:53:PHE:HD2	3:A:63:PRO:CA	2.20	0.53
1:K:66:TYR:CE2	1:K:68:PHE:HA	2.41	0.53
1:K:66:TYR:CD2	1:K:68:PHE:CZ	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:162:GLU:CD	1:K:235:SER:HG	2.11	0.53
2:B:1:MET:HA	2:B:3:GLU:OE1	2.09	0.53
2:B:246:LEU:HD12	2:B:352:ALA:CB	2.38	0.53
2:B:285:THR:H	2:B:288:GLU:CB	2.20	0.53
3:A:224:TYR:CE2	5:A:501:G2P:C6	2.91	0.53
3:A:276:ILE:HG21	3:A:281:ALA:HB2	1.90	0.53
1:K:29:ASN:H	1:K:32:GLU:CG	2.21	0.53
1:K:37:ALA:HB1	1:K:339:ALA:HB1	1.88	0.53
1:K:57:LEU:HD22	3:A:427:ALA:CA	2.38	0.53
1:K:96:GLY:HA2	1:K:258:ILE:O	2.09	0.53
1:K:221:ARG:CZ	1:K:237:SER:HB3	2.39	0.53
2:B:145:SER:HB2	2:B:184:ASN:OD1	2.09	0.53
2:B:156:ARG:NE	2:B:157:GLU:HA	2.24	0.53
2:B:260:PHE:N	2:B:262:ARG:CZ	2.71	0.53
3:A:62:VAL:HG13	3:A:62:VAL:O	2.08	0.53
3:A:93:ILE:HG21	3:A:121:ARG:CD	2.38	0.53
3:A:101:ASN:N	5:A:501:G2P:O3G	2.41	0.53
3:A:115:ILE:O	3:A:118:VAL:HG22	2.07	0.53
3:A:195:LEU:CD1	3:A:201:ALA:HB2	2.29	0.53
3:A:209:ILE:CD1	3:A:302:MET:HB2	2.39	0.53
1:K:31:ALA:O	1:K:34:LYS:HG2	2.09	0.53
1:K:43:CYS:SG	1:K:73:GLY:HA2	2.48	0.53
2:B:11:GLN:C	2:B:14:ASN:HB2	2.29	0.53
2:B:150:LEU:C	2:B:150:LEU:HD13	2.28	0.53
2:B:207:LEU:HD12	2:B:208:TYR:N	2.23	0.53
2:B:271:ALA:HB2	2:B:293:MET:HG2	1.90	0.53
2:B:289:LEU:H	2:B:289:LEU:CD1	2.22	0.53
2:B:304:ASP:HB3	2:B:307:HIS:ND1	2.23	0.53
3:A:101:ASN:HA	3:A:144:GLY:CA	2.38	0.53
3:A:242:LEU:CD2	3:A:252:LEU:H	2.21	0.53
3:A:251:ASP:CG	3:A:254:GLU:H	2.12	0.53
2:B:2:ARG:HD2	2:B:131:GLN:HA	1.91	0.53
2:B:4:ILE:HG13	2:B:132:GLY:H	1.73	0.53
2:B:225:LEU:HD11	5:B:501:G2P:H2N1	1.72	0.53
2:B:246:LEU:HD13	2:B:246:LEU:C	2.29	0.53
2:B:286:VAL:HG21	2:B:325:GLU:CD	2.29	0.53
2:B:388:MET:CE	2:B:388:MET:HA	2.39	0.53
3:A:21:TRP:HD1	3:A:67:PHE:HZ	1.56	0.53
3:A:260:VAL:HG13	3:A:268:PRO:HD3	1.91	0.53
3:A:265:ILE:HG23	3:A:432:TYR:OH	2.08	0.53
3:A:317:LEU:CD2	3:A:377:MET:HG3	2.36	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:368:LEU:HD12	3:A:368:LEU:C	2.29	0.53
1:K:357:LYS:HG3	1:K:358:ASN:OD1	2.08	0.53
2:B:68:LEU:CD1	5:B:501:G2P:O2G	2.56	0.53
2:B:73:MET:HG2	2:B:92:PHE:HE1	1.65	0.53
2:B:118:ASP:OD2	2:B:119:VAL:HG23	2.09	0.53
2:B:121:ARG:O	2:B:125:GLU:HG3	2.08	0.53
2:B:152:ILE:O	2:B:155:ILE:HG12	2.08	0.53
2:B:379:LYS:HB2	2:B:419:VAL:HG11	1.90	0.53
3:A:298:PRO:HB3	3:A:301:GLN:NE2	2.24	0.53
2:B:73:MET:HG3	2:B:74:ASP:N	2.24	0.53
2:B:207:LEU:HD12	2:B:207:LEU:C	2.29	0.53
2:B:334:GLN:HG2	2:B:335:ASN:ND2	2.24	0.53
2:B:339:SER:CA	2:B:429:THR:HB	2.38	0.53
3:A:63:PRO:HB2	3:A:87:PHE:CZ	2.44	0.53
3:A:103:TYR:HD1	3:A:189:LEU:HD23	1.72	0.53
3:A:124:LYS:HZ3	3:A:125:LEU:HB2	1.73	0.53
3:A:143:GLY:HA3	5:A:501:G2P:C3A	2.38	0.53
3:A:153:LEU:CD1	3:A:157:LEU:HG	2.39	0.53
3:A:337:THR:HG23	3:A:338:LYS:N	2.24	0.53
3:A:360:PRO:HG2	3:A:371:VAL:HG23	1.90	0.53
1:K:50:VAL:HB	1:K:68:PHE:CE2	2.44	0.53
1:K:278:VAL:HG12	1:K:279:ASP:N	2.23	0.53
2:B:5:VAL:HG12	2:B:123:GLU:HG3	1.91	0.53
2:B:6:HIS:HA	2:B:134:GLN:OE1	2.08	0.53
2:B:345:ILE:HG12	2:B:346:PRO:O	2.09	0.53
2:B:350:LYS:HE2	3:A:179:THR:O	2.09	0.53
3:A:3:GLU:HB3	3:A:64:ARG:HG2	1.91	0.53
3:A:144:GLY:HA2	3:A:186:ASN:ND2	2.25	0.53
3:A:181:VAL:CG1	3:A:404:PHE:CD1	2.92	0.53
3:A:430:LYS:HD3	3:A:434:GLU:CG	2.39	0.53
1:K:16:GLY:C	1:K:363:PRO:HD2	2.29	0.52
1:K:102:PHE:CD1	1:K:264:VAL:HG12	2.43	0.52
1:K:135:ILE:HD12	1:K:136:ILE:HG13	1.90	0.52
1:K:173:ASN:HB2	1:K:176:SER:H	1.75	0.52
1:K:326:GLY:HA2	1:K:362:LYS:NZ	2.24	0.52
2:B:172:SER:HB2	2:B:205:GLU:CB	2.24	0.52
2:B:318:ARG:HA	2:B:354:CYS:CB	2.39	0.52
2:B:376:GLU:CB	2:B:380:ARG:HH22	2.22	0.52
3:A:19:ALA:HB1	3:A:229:ARG:NH2	2.21	0.52
3:A:21:TRP:HA	3:A:24:TYR:CD2	2.44	0.52
3:A:21:TRP:CE3	3:A:24:TYR:HD2	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:176:GLN:HG3	3:A:177:VAL:N	2.24	0.52
3:A:214:ARG:HB2	3:A:222:PRO:HD3	1.91	0.52
3:A:256:GLN:HE22	3:A:260:VAL:CG1	2.22	0.52
1:K:320:LEU:HD21	1:K:324:LEU:CD1	2.39	0.52
2:B:42:LEU:H	2:B:42:LEU:CD2	2.21	0.52
2:B:77:ARG:HD3	2:B:82:GLY:CA	2.39	0.52
2:B:116:VAL:HG23	2:B:117:LEU:CD2	2.36	0.52
2:B:213:ARG:HB2	2:B:213:ARG:HH11	1.70	0.52
2:B:244:GLY:HA2	2:B:355:ASP:CB	2.39	0.52
2:B:260:PHE:O	2:B:262:ARG:HD3	2.09	0.52
2:B:284:LEU:HB3	2:B:289:LEU:CD1	2.38	0.52
2:B:334:GLN:HG2	2:B:335:ASN:H	1.73	0.52
2:B:358:PRO:HG2	2:B:364:SER:OG	2.09	0.52
2:B:422:TYR:HD1	2:B:425:TYR:CZ	2.27	0.52
3:A:84:ARG:HD2	3:A:85:GLN:CA	2.38	0.52
3:A:256:GLN:HE22	3:A:260:VAL:HG13	1.73	0.52
3:A:387:ALA:HA	3:A:390:ARG:CZ	2.39	0.52
1:K:60:LYS:HD2	1:K:60:LYS:N	2.24	0.52
1:K:147:LEU:HD11	1:K:243:ILE:HD13	1.90	0.52
1:K:187:ASP:HB2	1:K:189:ARG:NE	2.25	0.52
1:K:246:LYS:CE	1:K:254:GLU:OE1	2.50	0.52
2:B:97:ALA:CB	2:B:143:THR:CA	2.75	0.52
2:B:97:ALA:H	2:B:143:THR:CG2	2.22	0.52
2:B:280:GLN:HG3	2:B:281:TYR:CE1	2.44	0.52
3:A:188:ILE:HG22	3:A:421:ALA:HB1	1.90	0.52
3:A:255:PHE:HZ	3:A:352:LYS:N	2.08	0.52
3:A:430:LYS:HZ2	3:A:430:LYS:HA	1.72	0.52
1:K:26:ARG:CZ	1:K:32:GLU:HG3	2.39	0.52
1:K:64:LYS:HD3	1:K:350:LEU:HG	1.91	0.52
1:K:172:LEU:HD11	1:K:173:ASN:HD21	1.75	0.52
1:K:206:ASN:ND2	1:K:209:GLU:H	2.08	0.52
1:K:327:ARG:NH2	1:K:327:ARG:HG2	2.24	0.52
2:B:120:VAL:CG2	2:B:121:ARG:HH21	2.22	0.52
2:B:252:LYS:CD	3:A:101:ASN:HB3	2.25	0.52
2:B:293:MET:HE1	2:B:367:PHE:CA	2.36	0.52
2:B:293:MET:HA	2:B:298:ASN:CB	2.38	0.52
2:B:308:GLY:HA3	2:B:372:THR:H	1.73	0.52
2:B:324:LYS:NZ	3:A:221:ARG:C	2.62	0.52
2:B:324:LYS:HZ1	3:A:222:PRO:CD	2.22	0.52
3:A:101:ASN:HA	3:A:144:GLY:N	2.24	0.52
3:A:122:ILE:HD12	3:A:123:ARG:CA	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:306:ASP:CA	3:A:308:ARG:HH21	2.21	0.52
3:A:411:GLU:HB2	3:A:413:MET:HG2	1.90	0.52
1:K:173:ASN:HB2	1:K:176:SER:OG	2.09	0.52
1:K:192:ARG:HD3	1:K:327:ARG:HH12	1.74	0.52
2:B:65:LEU:O	2:B:92:PHE:HB3	2.10	0.52
2:B:101:TRP:CA	2:B:146:GLY:HA2	2.39	0.52
2:B:101:TRP:O	2:B:146:GLY:HA2	2.09	0.52
2:B:159:TYR:HB3	2:B:161:ASP:OD2	2.09	0.52
2:B:284:LEU:HB2	2:B:289:LEU:HD11	1.92	0.52
2:B:337:ASN:HB3	2:B:340:TYR:CG	2.45	0.52
2:B:341:PHE:HE1	2:B:348:ASN:H	1.55	0.52
2:B:375:GLN:HG2	2:B:376:GLU:H	1.75	0.52
3:A:417:GLU:HG3	3:A:418:PHE:CD2	2.44	0.52
2:B:273:LEU:C	2:B:273:LEU:HD13	2.30	0.52
2:B:285:THR:N	2:B:288:GLU:HB2	2.25	0.52
3:A:111:GLY:O	3:A:114:ILE:HG22	2.09	0.52
3:A:263:PRO:CD	3:A:264:ARG:HH11	2.22	0.52
3:A:355:ILE:HG22	3:A:356:ASN:N	2.25	0.52
1:K:68:PHE:CD2	1:K:71:VAL:HG22	2.45	0.52
1:K:236:HIS:CE1	1:K:267:ALA:HB3	2.45	0.52
2:B:277:GLY:O	2:B:280:GLN:HG2	2.08	0.52
2:B:324:LYS:HZ2	3:A:221:ARG:HD2	1.69	0.52
3:A:205:ASP:HB2	3:A:208:ALA:HB3	1.88	0.52
1:K:27:PRO:HA	1:K:74:ALA:HB1	1.91	0.52
1:K:48:LYS:CE	1:K:70:MET:HG3	2.39	0.52
1:K:144:PHE:CE1	1:K:156:VAL:HG21	2.44	0.52
1:K:181:ARG:NH2	1:K:197:LYS:NZ	2.58	0.52
2:B:203:ASP:OD1	2:B:206:ALA:HB2	2.09	0.52
2:B:240:LEU:HA	2:B:247:ASN:HD21	1.75	0.52
3:A:16:ILE:HA	3:A:228:ASN:ND2	2.17	0.52
3:A:140:SER:OG	3:A:143:GLY:HA3	2.10	0.52
3:A:174:ALA:HB2	3:A:206:ASN:HB2	1.92	0.52
3:A:233:GLN:HG3	3:A:234:ILE:N	2.25	0.52
3:A:286:LEU:CG	3:A:291:ILE:HD11	2.39	0.52
3:A:339:ARG:HG3	3:A:340:SER:CA	2.40	0.52
1:K:15:LYS:HG2	1:K:364:GLU:OE2	2.10	0.52
1:K:25:CYS:HB3	1:K:43:CYS:SG	2.50	0.52
1:K:160:LEU:H	1:K:172:LEU:CB	2.23	0.52
1:K:311:TYR:CD1	1:K:321:GLN:HG3	2.44	0.52
2:B:363:MET:HE3	2:B:363:MET:N	2.23	0.52
2:B:422:TYR:CD1	2:B:425:TYR:CE2	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:23:LEU:HA	3:A:364:PRO:HG3	1.89	0.52
3:A:276:ILE:HG23	3:A:281:ALA:CA	2.40	0.52
3:A:286:LEU:HD11	3:A:372:GLN:HB3	1.92	0.52
3:A:313:MET:O	3:A:347:CYS:HB3	2.09	0.52
1:K:212:GLN:O	1:K:215:GLU:HG2	2.10	0.52
1:K:233:SER:HG	1:K:267:ALA:HA	1.75	0.52
1:K:297:ARG:NH2	2:B:260:PHE:HD2	2.08	0.52
2:B:12:CYS:SG	5:B:501:G2P:C4	2.98	0.52
2:B:34:GLY:HA3	2:B:58:LYS:CG	2.37	0.52
2:B:34:GLY:HA2	2:B:84:ILE:CD1	2.40	0.52
2:B:208:TYR:CE2	2:B:225:LEU:HD23	2.44	0.52
3:A:41:THR:HG22	3:A:42:ILE:N	2.24	0.52
3:A:214:ARG:HG3	3:A:215:ARG:H	1.74	0.52
3:A:214:ARG:CB	3:A:222:PRO:HD3	2.40	0.52
3:A:215:ARG:HH11	3:A:216:ASN:ND2	2.04	0.52
1:K:110:GLY:HA2	1:K:113:PHE:H	1.74	0.51
1:K:289:ASN:O	1:K:292:LEU:HB2	2.10	0.51
2:B:23:VAL:HG13	2:B:24:ILE:N	2.24	0.51
2:B:167:PHE:CE1	2:B:200:TYR:CD2	2.96	0.51
2:B:174:LYS:CD	2:B:175:VAL:HG23	2.40	0.51
2:B:251:ARG:NH2	3:A:100:ALA:O	2.43	0.51
2:B:260:PHE:CD2	3:A:406:HIS:CE1	2.97	0.51
2:B:299:MET:HE2	2:B:299:MET:HA	1.92	0.51
2:B:313:VAL:O	2:B:349:VAL:HG13	2.10	0.51
3:A:30:ILE:HD12	3:A:61:HIS:HB2	1.92	0.51
3:A:189:LEU:HD11	3:A:417:GLU:OE2	2.10	0.51
3:A:399:TYR:OH	3:A:415:GLU:HB3	2.10	0.51
1:K:192:ARG:HG2	1:K:192:ARG:NH1	2.26	0.51
1:K:240:SER:HB3	1:K:262:ASN:OD1	2.10	0.51
2:B:1:MET:HE2	2:B:49:VAL:CA	2.41	0.51
2:B:14:ASN:CB	2:B:72:THR:HG21	2.40	0.51
2:B:252:LYS:CG	3:A:100:ALA:HB1	2.40	0.51
2:B:272:PRO:CB	2:B:292:GLN:HE22	2.23	0.51
3:A:3:GLU:C	3:A:51:THR:HG22	2.30	0.51
3:A:7:ILE:HD12	3:A:8:HIS:N	2.24	0.51
3:A:102:ASN:CG	3:A:105:ARG:H	2.14	0.51
1:K:57:LEU:HD21	3:A:427:ALA:HB1	1.91	0.51
1:K:93:VAL:CG1	1:K:243:ILE:HD12	2.40	0.51
2:B:1:MET:HG3	2:B:127:CYS:CB	2.34	0.51
2:B:251:ARG:NH2	3:A:102:ASN:H	2.08	0.51
2:B:361:LEU:HD21	2:B:364:SER:OG	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:26:LEU:HD23	3:A:364:PRO:CB	2.40	0.51
3:A:90:GLU:CA	3:A:121:ARG:HH21	2.21	0.51
3:A:145:THR:HB	5:A:501:G2P:O1B	2.11	0.51
3:A:233:GLN:CA	3:A:363:VAL:HG13	2.40	0.51
1:K:15:LYS:HE3	1:K:364:GLU:OE2	2.09	0.51
1:K:68:PHE:CD2	1:K:71:VAL:CG2	2.94	0.51
1:K:189:ARG:CZ	1:K:189:ARG:HB2	2.39	0.51
2:B:1:MET:CG	2:B:127:CYS:HB2	2.33	0.51
2:B:179:VAL:HG13	2:B:180:VAL:N	2.24	0.51
2:B:260:PHE:C	2:B:262:ARG:HD3	2.31	0.51
3:A:317:LEU:CB	3:A:353:VAL:HB	2.25	0.51
3:A:332:ILE:HG22	3:A:336:LYS:HG2	1.93	0.51
1:K:26:ARG:NH1	1:K:26:ARG:HG3	2.25	0.51
1:K:180:GLU:HG3	1:K:199:LEU:CD1	2.36	0.51
2:B:47:ILE:HG22	2:B:59:TYR:HD1	1.76	0.51
2:B:99:ASN:HA	2:B:142:GLY:HA3	1.93	0.51
2:B:117:LEU:O	2:B:120:VAL:HG22	2.10	0.51
2:B:159:TYR:HD2	2:B:162:ARG:CG	2.23	0.51
2:B:225:LEU:HD12	2:B:225:LEU:C	2.31	0.51
2:B:252:LYS:CG	3:A:100:ALA:O	2.59	0.51
2:B:376:GLU:HG3	2:B:379:LYS:HZ3	1.75	0.51
3:A:54:SER:O	3:A:61:HIS:HA	2.11	0.51
3:A:344:VAL:HG12	3:A:438:ASP:OD2	2.10	0.51
1:K:352:TYR:HB2	4:K:501:MZK:C12	2.40	0.51
2:B:193:VAL:HG13	2:B:194:GLU:H	1.76	0.51
3:A:20:CYS:HB3	3:A:24:TYR:CZ	2.45	0.51
3:A:132:LEU:HD23	3:A:134:GLY:O	2.11	0.51
3:A:215:ARG:HD3	3:A:216:ASN:N	2.25	0.51
3:A:416:GLY:O	3:A:420:GLU:HG2	2.11	0.51
1:K:154:PHE:CE2	1:K:205:HIS:HE1	2.29	0.51
1:K:168:LEU:CD1	1:K:182:LEU:HB3	2.38	0.51
1:K:257:LYS:CA	1:K:368:LYS:HD3	2.38	0.51
2:B:189:VAL:HG13	2:B:190:HIS:N	2.26	0.51
2:B:272:PRO:CA	2:B:292:GLN:HE22	2.24	0.51
2:B:273:LEU:O	2:B:273:LEU:HD13	2.11	0.51
2:B:323:MET:HG3	3:A:210:TYR:CE2	2.46	0.51
3:A:99:ALA:CB	3:A:145:THR:N	2.74	0.51
3:A:188:ILE:O	3:A:191:THR:HG22	2.10	0.51
3:A:382:THR:HG22	3:A:433:GLU:HA	1.92	0.51
1:K:19:ILE:HB	1:K:361:ASN:HB2	1.93	0.51
1:K:312:ARG:HD3	2:B:414:ASN:ND2	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:341:LEU:H	1:K:341:LEU:CD1	2.23	0.51
2:B:33:THR:CG2	2:B:35:SER:H	2.13	0.51
2:B:210:ILE:HA	2:B:213:ARG:HG2	1.92	0.51
3:A:14:VAL:HG23	3:A:15:GLN:N	2.25	0.51
3:A:115:ILE:O	3:A:119:LEU:HG	2.11	0.51
3:A:188:ILE:HG22	3:A:421:ALA:CB	2.40	0.51
3:A:286:LEU:CD2	3:A:291:ILE:HD11	2.41	0.51
3:A:370:LYS:HZ3	3:A:372:GLN:HA	1.74	0.51
3:A:397:LEU:HD23	3:A:397:LEU:C	2.30	0.51
1:K:17:LYS:CD	1:K:17:LYS:H	2.24	0.51
1:K:97:TYR:HB3	1:K:99:CYS:SG	2.50	0.51
2:B:77:ARG:NH1	2:B:82:GLY:HA2	2.11	0.51
2:B:113:VAL:HA	2:B:116:VAL:HG22	1.93	0.51
2:B:213:ARG:HG3	2:B:214:THR:N	2.24	0.51
2:B:392:LYS:CG	2:B:395:LEU:HD11	2.41	0.51
3:A:35:GLN:CA	3:A:60:LYS:HE2	2.41	0.51
3:A:153:LEU:HD12	3:A:156:ARG:CZ	2.40	0.51
3:A:277:SER:HB2	3:A:280:LYS:HG3	1.92	0.51
1:K:31:ALA:CB	1:K:34:LYS:HE2	2.40	0.51
1:K:190:ASN:ND2	1:K:192:ARG:H	2.09	0.51
1:K:327:ARG:HD3	1:K:362:LYS:HZ1	1.76	0.51
2:B:101:TRP:HD1	2:B:149:THR:HG21	1.74	0.51
3:A:272:TYR:H	3:A:302:MET:HE1	1.76	0.51
3:A:273:ALA:HB2	3:A:295:CYS:CB	2.40	0.51
3:A:316:CYS:O	3:A:317:LEU:HD23	2.11	0.51
3:A:349:THR:HG21	3:A:351:PHE:CE1	2.46	0.51
1:K:271:ASN:HD22	1:K:274:ARG:N	2.09	0.50
2:B:117:LEU:HA	2:B:120:VAL:HG22	1.93	0.50
2:B:148:GLY:HA2	2:B:151:LEU:HG	1.92	0.50
2:B:306:ARG:HH21	2:B:309:ARG:CZ	2.24	0.50
2:B:324:LYS:HE3	3:A:221:ARG:HH11	1.74	0.50
3:A:21:TRP:CE3	3:A:24:TYR:CD2	2.99	0.50
3:A:30:ILE:N	3:A:36:MET:HE1	2.26	0.50
3:A:54:SER:HB2	3:A:64:ARG:HE	1.76	0.50
3:A:153:LEU:CD1	3:A:157:LEU:HD11	2.37	0.50
3:A:154:MET:HE2	3:A:154:MET:C	2.31	0.50
1:K:15:LYS:HD3	1:K:362:LYS:CB	2.39	0.50
1:K:192:ARG:HG2	1:K:192:ARG:HH11	1.76	0.50
1:K:215:GLU:CD	1:K:216:LYS:HE3	2.31	0.50
1:K:314:SER:HB3	1:K:317:THR:OG1	2.10	0.50
2:B:52:ASN:H	2:B:62:ARG:NH2	2.08	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:143:THR:HB	5:B:501:G2P:O2B	2.10	0.50
2:B:279:GLN:HE22	2:B:284:LEU:HD21	1.76	0.50
3:A:9:VAL:HG22	3:A:149:PHE:CE1	2.46	0.50
3:A:123:ARG:HG3	3:A:127:ASP:OD1	2.12	0.50
3:A:295:CYS:HA	3:A:300:ASN:OD1	2.12	0.50
3:A:395:PHE:HB3	3:A:422:ARG:HH12	1.75	0.50
3:A:401:LYS:CG	3:A:403:ALA:HB2	2.42	0.50
1:K:157:LYS:HE3	1:K:203:THR:HG1	1.73	0.50
1:K:311:TYR:CE2	1:K:321:GLN:HG3	2.46	0.50
1:K:350:LEU:HD13	1:K:350:LEU:C	2.31	0.50
2:B:28:HIS:HE1	2:B:51:TYR:CZ	2.29	0.50
2:B:143:THR:HG22	2:B:147:MET:SD	2.52	0.50
3:A:65:ALA:HB3	3:A:87:PHE:CE2	2.47	0.50
3:A:217:LEU:HD12	3:A:222:PRO:CG	2.40	0.50
3:A:417:GLU:O	3:A:420:GLU:HB2	2.11	0.50
1:K:33:ARG:HG3	1:K:33:ARG:HH11	1.76	0.50
1:K:33:ARG:HG3	1:K:33:ARG:NH1	2.26	0.50
1:K:293:LEU:CD1	3:A:405:VAL:HG11	2.35	0.50
2:B:47:ILE:HD13	2:B:241:ARG:HH12	1.75	0.50
2:B:309:ARG:HG2	2:B:428:ALA:O	2.11	0.50
3:A:24:TYR:HB3	3:A:52:PHE:CE1	2.46	0.50
3:A:316:CYS:SG	3:A:377:MET:HA	2.52	0.50
1:K:221:ARG:NH2	1:K:233:SER:HB2	2.25	0.50
2:B:48:ASN:HB2	2:B:59:TYR:OH	2.12	0.50
2:B:260:PHE:CD2	3:A:404:PHE:N	2.80	0.50
2:B:286:VAL:CB	2:B:287:PRO:HD3	2.38	0.50
2:B:321:MET:HG2	2:B:322:SER:N	2.26	0.50
2:B:350:LYS:HE2	3:A:180:ALA:N	2.26	0.50
3:A:47:ASP:OD2	3:A:243:ARG:HA	2.10	0.50
3:A:90:GLU:OE1	3:A:121:ARG:HB3	2.11	0.50
3:A:96:LYS:HD3	3:A:96:LYS:C	2.30	0.50
3:A:237:SER:HB3	3:A:320:ARG:HD2	1.93	0.50
3:A:385:ALA:HB2	3:A:432:TYR:CD2	2.45	0.50
1:K:32:GLU:HA	1:K:32:GLU:OE2	2.11	0.50
1:K:301:ALA:O	1:K:304:GLU:HB3	2.12	0.50
1:K:320:LEU:O	1:K:324:LEU:HD22	2.12	0.50
1:K:344:GLU:HG2	3:A:414:GLU:HB2	1.94	0.50
1:K:344:GLU:HG2	3:A:414:GLU:CB	2.42	0.50
2:B:151:LEU:O	2:B:155:ILE:HG23	2.12	0.50
2:B:205:GLU:HG3	2:B:206:ALA:H	1.76	0.50
3:A:118:VAL:O	3:A:122:ILE:HG23	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:312:TYR:CD2	3:A:341:ILE:CG2	2.95	0.50
1:K:54:THR:HG23	1:K:56:GLY:H	1.77	0.50
1:K:170:ASP:HB2	1:K:180:GLU:N	2.27	0.50
1:K:170:ASP:N	1:K:180:GLU:H	2.06	0.50
1:K:171:LEU:HD13	1:K:221:ARG:HB2	1.93	0.50
2:B:4:ILE:HD12	2:B:4:ILE:N	2.26	0.50
2:B:97:ALA:HB2	2:B:143:THR:HA	1.84	0.50
2:B:214:THR:HB	2:B:275:SER:CA	2.42	0.50
2:B:252:LYS:HG3	3:A:100:ALA:C	2.32	0.50
2:B:273:LEU:HD22	2:B:274:THR:H	1.73	0.50
2:B:311:LEU:O	2:B:342:VAL:HG21	2.12	0.50
3:A:9:VAL:HG13	3:A:149:PHE:CD1	2.47	0.50
3:A:76:ASP:HA	3:A:79:ARG:HG2	1.94	0.50
3:A:275:VAL:CA	3:A:300:ASN:HD22	2.23	0.50
1:K:16:GLY:HA3	1:K:363:PRO:CD	2.41	0.50
1:K:66:TYR:HD2	1:K:68:PHE:CZ	2.30	0.50
2:B:51:TYR:CD1	2:B:61:PRO:HA	2.46	0.50
2:B:98:GLY:O	2:B:99:ASN:HB2	2.11	0.50
2:B:271:ALA:HB2	2:B:293:MET:CG	2.41	0.50
2:B:323:MET:HG3	3:A:210:TYR:HE2	1.76	0.50
3:A:9:VAL:HG22	3:A:149:PHE:HD1	1.75	0.50
3:A:70:LEU:HD23	3:A:99:ALA:HA	1.94	0.50
3:A:99:ALA:HB2	3:A:145:THR:HA	1.94	0.50
3:A:101:ASN:HA	3:A:144:GLY:H	1.76	0.50
3:A:319:TYR:HB2	3:A:355:ILE:HG23	1.94	0.50
1:K:23:VAL:CG2	1:K:68:PHE:CD1	2.95	0.50
2:B:13:GLY:HA2	2:B:16:ILE:HB	1.93	0.50
2:B:59:TYR:O	2:B:84:ILE:HD11	2.10	0.50
2:B:101:TRP:CG	2:B:102:ALA:N	2.78	0.50
2:B:342:VAL:HG12	2:B:344:TRP:H	1.76	0.50
2:B:353:VAL:HG23	2:B:353:VAL:O	2.12	0.50
3:A:164:LYS:HA	3:A:164:LYS:HZ1	1.76	0.50
3:A:188:ILE:HD12	3:A:188:ILE:N	2.27	0.50
3:A:223:THR:HB	3:A:226:ASN:H	1.77	0.50
1:K:48:LYS:HZ1	1:K:70:MET:CG	2.25	0.49
2:B:2:ARG:CG	2:B:131:GLN:HB2	2.42	0.49
2:B:14:ASN:CG	2:B:72:THR:HG21	2.32	0.49
2:B:379:LYS:HB2	2:B:415:MET:SD	2.52	0.49
3:A:72:PRO:HG3	3:A:96:LYS:HZ2	1.77	0.49
1:K:44:ASP:HB3	1:K:47:ARG:HB2	1.94	0.49
2:B:148:GLY:CA	2:B:151:LEU:HD21	2.35	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:260:PHE:CZ	3:A:405:VAL:C	2.86	0.49
2:B:350:LYS:HZ1	3:A:179:THR:CA	2.22	0.49
3:A:4:CYS:H	3:A:51:THR:CB	2.25	0.49
3:A:240:ALA:HA	3:A:243:ARG:HE	1.77	0.49
3:A:310:GLY:HA3	3:A:381:THR:HG22	1.91	0.49
1:K:369:LEU:HD22	1:K:369:LEU:N	2.27	0.49
2:B:6:HIS:HB3	2:B:21:TRP:CE2	2.46	0.49
2:B:45:GLU:CG	2:B:46:ARG:HE	2.16	0.49
2:B:156:ARG:HA	2:B:164:MET:CE	2.43	0.49
2:B:186:THR:HB	2:B:385:PHE:CE1	2.47	0.49
2:B:272:PRO:CB	2:B:279:GLN:HE22	2.19	0.49
2:B:396:HIS:H	2:B:396:HIS:CD2	2.28	0.49
2:B:405:GLU:HA	2:B:408:PHE:CD1	2.43	0.49
2:B:418:LEU:HB3	2:B:422:TYR:OH	2.12	0.49
3:A:3:GLU:HA	3:A:51:THR:N	2.26	0.49
3:A:150:THR:CG2	3:A:190:THR:HG21	2.42	0.49
3:A:166:LYS:HD2	3:A:198:SER:CA	2.21	0.49
3:A:232:SER:HB3	3:A:363:VAL:HG12	1.90	0.49
3:A:404:PHE:N	3:A:404:PHE:CD2	2.79	0.49
3:A:430:LYS:HD3	3:A:434:GLU:OE1	2.13	0.49
1:K:29:ASN:HB2	1:K:32:GLU:H	1.78	0.49
1:K:181:ARG:HG3	1:K:198:GLY:HA3	1.95	0.49
2:B:137:HIS:HB2	2:B:144:GLY:CA	2.42	0.49
2:B:251:ARG:HH22	3:A:102:ASN:H	1.59	0.49
2:B:266:PHE:CE2	2:B:370:ASN:HB3	2.48	0.49
2:B:313:VAL:HG13	2:B:367:PHE:CE2	2.48	0.49
2:B:339:SER:O	2:B:429:THR:HB	2.12	0.49
2:B:422:TYR:HD1	2:B:425:TYR:CE2	2.31	0.49
3:A:8:HIS:HB2	3:A:14:VAL:HG12	1.94	0.49
3:A:153:LEU:HG	3:A:157:LEU:CD1	2.42	0.49
3:A:171:ILE:O	3:A:171:ILE:HG23	2.11	0.49
3:A:256:GLN:OE1	3:A:259:LEU:HD12	2.12	0.49
1:K:82:TYR:CE1	1:K:86:VAL:HB	2.47	0.49
1:K:168:LEU:HB2	1:K:182:LEU:CB	2.42	0.49
1:K:329:ARG:HA	1:K:363:PRO:CB	2.42	0.49
2:B:46:ARG:CG	2:B:242:PHE:CE1	2.95	0.49
2:B:148:GLY:CA	2:B:151:LEU:HG	2.42	0.49
2:B:157:GLU:HA	2:B:157:GLU:OE1	2.12	0.49
2:B:375:GLN:HG3	2:B:422:TYR:CG	2.47	0.49
3:A:6:SER:CB	3:A:21:TRP:CZ2	2.95	0.49
3:A:265:ILE:CD1	3:A:432:TYR:CE1	2.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:181:ARG:NE	1:K:197:LYS:HG3	2.27	0.49
1:K:292:LEU:HD23	4:K:501:MZK:N1	2.27	0.49
2:B:260:PHE:HB3	2:B:262:ARG:CD	2.41	0.49
2:B:318:ARG:CB	2:B:358:PRO:HG3	2.43	0.49
2:B:320:ARG:HG2	2:B:321:MET:N	2.21	0.49
3:A:181:VAL:CG1	3:A:404:PHE:CE1	2.79	0.49
3:A:388:TRP:CZ3	3:A:428:LEU:CD2	2.95	0.49
1:K:39:SER:HA	1:K:338:PRO:HB2	1.93	0.49
1:K:66:TYR:HD2	1:K:68:PHE:CG	2.31	0.49
1:K:157:LYS:HE2	1:K:203:THR:OG1	2.07	0.49
1:K:283:ARG:HG2	1:K:287:ASN:HD21	1.78	0.49
2:B:137:HIS:HB2	2:B:144:GLY:HA2	1.94	0.49
2:B:149:THR:HG23	2:B:188:SER:CB	2.43	0.49
2:B:154:LYS:HE2	2:B:154:LYS:CA	2.39	0.49
2:B:419:VAL:HA	2:B:422:TYR:CG	2.45	0.49
3:A:9:VAL:CG1	3:A:149:PHE:HD1	2.25	0.49
3:A:23:LEU:HA	3:A:364:PRO:CD	2.42	0.49
3:A:124:LYS:NZ	3:A:125:LEU:HB2	2.28	0.49
3:A:255:PHE:HZ	3:A:352:LYS:CA	2.26	0.49
1:K:50:VAL:H	1:K:68:PHE:HE2	1.59	0.49
1:K:104:TYR:HD2	1:K:105:GLY:N	2.11	0.49
2:B:151:LEU:HD12	2:B:152:ILE:HG12	1.95	0.49
2:B:180:VAL:HG23	2:B:181:GLU:N	2.28	0.49
2:B:208:TYR:CE2	2:B:225:LEU:CD2	2.95	0.49
2:B:306:ARG:HH22	2:B:339:SER:HB3	1.77	0.49
2:B:331:LEU:HA	2:B:334:GLN:HE22	1.74	0.49
2:B:342:VAL:HG12	2:B:344:TRP:N	2.28	0.49
3:A:23:LEU:HD22	3:A:24:TYR:CD1	2.47	0.49
3:A:286:LEU:HD12	3:A:286:LEU:C	2.32	0.49
3:A:430:LYS:CD	3:A:434:GLU:HG3	2.43	0.49
1:K:28:PHE:CD2	1:K:32:GLU:CB	2.96	0.49
1:K:59:ASP:HA	1:K:60:LYS:HZ2	1.76	0.49
1:K:192:ARG:HH21	1:K:326:GLY:HA3	1.77	0.49
2:B:27:GLU:HA	2:B:27:GLU:OE2	2.12	0.49
2:B:390:ARG:HA	2:B:390:ARG:NH1	2.27	0.49
3:A:35:GLN:HG2	3:A:59:GLY:O	2.13	0.49
3:A:72:PRO:HG3	3:A:96:LYS:HA	1.95	0.49
3:A:220:GLU:CD	3:A:221:ARG:H	2.16	0.49
1:K:66:TYR:CD2	1:K:68:PHE:CG	3.01	0.49
2:B:120:VAL:HG23	2:B:121:ARG:N	2.28	0.49
2:B:156:ARG:HH21	2:B:157:GLU:CA	2.21	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:186:THR:CG2	2:B:385:PHE:CE1	2.96	0.49
2:B:249:ASP:O	2:B:253:LEU:HD23	2.13	0.49
2:B:418:LEU:HB3	2:B:422:TYR:CE1	2.48	0.49
3:A:7:ILE:HG22	3:A:137:VAL:HA	1.95	0.49
3:A:12:ALA:O	3:A:16:ILE:HG22	2.13	0.49
3:A:177:VAL:HG22	3:A:178:SER:O	2.12	0.49
3:A:388:TRP:CH2	3:A:432:TYR:CD2	3.01	0.49
3:A:401:LYS:O	3:A:401:LYS:HE3	2.13	0.49
1:K:320:LEU:HD23	1:K:324:LEU:HD11	1.95	0.48
2:B:24:ILE:O	2:B:27:GLU:HB2	2.13	0.48
2:B:47:ILE:CG2	2:B:59:TYR:CE1	2.96	0.48
2:B:156:ARG:HA	2:B:164:MET:SD	2.53	0.48
3:A:111:GLY:HA3	3:A:152:LEU:CD1	2.42	0.48
3:A:130:THR:HG23	3:A:131:GLY:H	1.78	0.48
3:A:226:ASN:O	3:A:229:ARG:HB2	2.12	0.48
3:A:311:LYS:HG3	3:A:342:GLN:OE1	2.13	0.48
3:A:358:GLN:HG2	3:A:359:PRO:N	2.28	0.48
3:A:407:TRP:CE3	3:A:407:TRP:CA	2.96	0.48
1:K:277:ALA:HB1	1:K:281:ARG:HB2	1.93	0.48
2:B:36:TYR:CD2	2:B:44:LEU:CB	2.95	0.48
2:B:46:ARG:HG2	2:B:242:PHE:CE1	2.48	0.48
2:B:156:ARG:HB2	2:B:164:MET:HE3	1.95	0.48
2:B:322:SER:HG	3:A:221:ARG:CB	2.26	0.48
2:B:390:ARG:O	2:B:392:LYS:HE2	2.13	0.48
3:A:113:GLU:CD	3:A:113:GLU:H	2.16	0.48
3:A:154:MET:HG2	3:A:197:HIS:HB2	1.93	0.48
3:A:200:CYS:CB	3:A:267:PHE:HB3	2.33	0.48
3:A:267:PHE:N	3:A:267:PHE:CD2	2.81	0.48
3:A:349:THR:CG2	3:A:351:PHE:HD1	2.25	0.48
3:A:385:ALA:HB1	3:A:429:GLU:CD	2.32	0.48
3:A:387:ALA:HB2	3:A:390:ARG:NH1	2.28	0.48
1:K:170:ASP:OD2	1:K:176:SER:HB2	2.12	0.48
2:B:156:ARG:HA	2:B:164:MET:HE1	1.95	0.48
3:A:214:ARG:HH22	3:A:218:ASP:HA	1.78	0.48
3:A:243:ARG:HD3	3:A:244:PHE:CZ	2.49	0.48
3:A:338:LYS:HZ3	3:A:338:LYS:HA	1.78	0.48
1:K:78:GLN:CG	1:K:113:PHE:HE2	2.27	0.48
2:B:33:THR:HG23	2:B:34:GLY:N	2.29	0.48
2:B:208:TYR:CG	2:B:220:PRO:HG2	2.47	0.48
2:B:258:VAL:O	2:B:258:VAL:HG23	2.13	0.48
2:B:318:ARG:HG2	2:B:354:CYS:CB	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:42:ILE:O	3:A:46:ASP:HB3	2.13	0.48
3:A:179:THR:N	3:A:183:GLU:OE1	2.46	0.48
3:A:420:GLU:O	3:A:424:ASP:HB3	2.13	0.48
1:K:77:LYS:HE3	1:K:78:GLN:H	1.75	0.48
1:K:78:GLN:CG	1:K:113:PHE:CE2	2.96	0.48
1:K:293:LEU:CD1	3:A:405:VAL:CG1	2.91	0.48
1:K:347:LEU:HD23	1:K:347:LEU:C	2.34	0.48
2:B:31:ASP:OD1	2:B:37:HIS:HB2	2.13	0.48
2:B:81:PHE:HA	2:B:83:GLN:CD	2.33	0.48
2:B:242:PHE:HD1	2:B:242:PHE:HA	1.51	0.48
2:B:376:GLU:HG3	2:B:379:LYS:HZ1	1.75	0.48
3:A:141:PHE:HD2	3:A:141:PHE:HA	1.57	0.48
3:A:174:ALA:CB	3:A:207:GLU:H	2.22	0.48
3:A:181:VAL:O	3:A:184:PRO:HD2	2.14	0.48
3:A:243:ARG:CD	3:A:244:PHE:CE2	2.95	0.48
2:B:111:GLU:H	2:B:111:GLU:CD	2.16	0.48
2:B:117:LEU:CA	2:B:120:VAL:HG22	2.44	0.48
2:B:166:THR:O	2:B:167:PHE:HD1	1.96	0.48
2:B:225:LEU:HD11	2:B:226:ASN:ND2	2.28	0.48
2:B:228:LEU:HD23	2:B:229:VAL:N	2.29	0.48
2:B:371:SER:CB	2:B:374:ILE:HG22	2.34	0.48
2:B:394:PHE:HD1	2:B:396:HIS:NE2	2.10	0.48
3:A:2:ARG:HE	3:A:132:LEU:C	2.17	0.48
3:A:52:PHE:CB	3:A:53:PHE:CE1	2.96	0.48
3:A:339:ARG:HG3	3:A:340:SER:HA	1.95	0.48
3:A:368:LEU:HD13	3:A:369:ALA:O	2.13	0.48
3:A:408:TYR:CD1	3:A:418:PHE:CZ	3.01	0.48
1:K:117:GLY:HA2	1:K:134:GLY:O	2.14	0.48
1:K:181:ARG:HH22	1:K:183:GLN:N	2.12	0.48
1:K:243:ILE:HG22	1:K:245:MET:HG3	1.95	0.48
1:K:295:LEU:O	1:K:298:VAL:HG12	2.12	0.48
1:K:320:LEU:HD12	1:K:320:LEU:O	2.13	0.48
2:B:252:LYS:CG	3:A:100:ALA:C	2.82	0.48
2:B:343:GLU:HG2	2:B:344:TRP:N	2.29	0.48
2:B:377:LEU:CA	2:B:380:ARG:HG3	2.43	0.48
2:B:394:PHE:HA	2:B:396:HIS:NE2	2.29	0.48
3:A:91:GLN:NE2	3:A:91:GLN:H	2.10	0.48
3:A:174:ALA:HB3	3:A:176:GLN:CG	2.43	0.48
3:A:210:TYR:HD1	3:A:213:CYS:SG	2.36	0.48
3:A:360:PRO:HB3	3:A:374:ALA:CB	2.40	0.48
3:A:391:LEU:O	3:A:394:LYS:HD3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:399:TYR:HB2	3:A:422:ARG:NH2	2.29	0.48
1:K:27:PRO:HA	1:K:74:ALA:CB	2.44	0.48
1:K:94:ILE:HD13	1:K:150:ASN:ND2	2.27	0.48
1:K:168:LEU:HB3	1:K:182:LEU:HG	1.96	0.48
1:K:206:ASN:CG	1:K:209:GLU:HG3	2.33	0.48
1:K:323:SER:HA	1:K:328:THR:HB	1.95	0.48
2:B:167:PHE:CE2	2:B:233:MET:SD	3.07	0.48
2:B:169:VAL:O	2:B:169:VAL:HG23	2.14	0.48
2:B:183:TYR:CD1	2:B:385:PHE:CD1	3.02	0.48
2:B:252:LYS:HG2	3:A:100:ALA:O	2.13	0.48
1:K:66:TYR:CD2	1:K:68:PHE:CD1	3.01	0.48
1:K:190:ASN:HD22	1:K:192:ARG:N	2.12	0.48
1:K:234:ARG:CZ	1:K:284:GLU:HG3	2.44	0.48
1:K:288:ILE:O	1:K:291:SER:HB3	2.14	0.48
2:B:45:GLU:O	2:B:49:VAL:HG13	2.14	0.48
2:B:148:GLY:C	2:B:151:LEU:HG	2.34	0.48
2:B:150:LEU:HD13	2:B:150:LEU:O	2.13	0.48
2:B:260:PHE:C	2:B:262:ARG:N	2.68	0.48
2:B:380:ARG:O	2:B:383:GLU:HB3	2.14	0.48
3:A:21:TRP:HE3	3:A:24:TYR:HD2	1.62	0.48
3:A:274:PRO:HG2	3:A:286:LEU:HD23	1.95	0.48
1:K:28:PHE:CE2	1:K:37:ALA:HB3	2.49	0.48
1:K:57:LEU:CD1	3:A:427:ALA:HB2	2.43	0.48
1:K:159:SER:HB2	1:K:199:LEU:CD2	2.26	0.48
1:K:297:ARG:NH1	2:B:262:ARG:HE	2.12	0.48
1:K:312:ARG:HH12	1:K:318:ARG:HH21	1.60	0.48
2:B:276:ARG:HG3	2:B:276:ARG:HH11	1.79	0.48
2:B:337:ASN:HB3	2:B:340:TYR:CD2	2.49	0.48
2:B:413:SER:HA	2:B:416:ASN:HD22	1.77	0.48
3:A:188:ILE:CB	3:A:395:PHE:HD1	2.27	0.48
1:K:25:CYS:CB	1:K:43:CYS:SG	3.02	0.47
1:K:139:THR:HG23	1:K:140:LEU:N	2.28	0.47
1:K:170:ASP:OD1	1:K:172:LEU:HD23	2.14	0.47
1:K:178:VAL:HA	1:K:220:LYS:CE	2.33	0.47
2:B:152:ILE:HA	2:B:155:ILE:CG1	2.43	0.47
2:B:258:VAL:HG12	2:B:263:LEU:HB3	1.96	0.47
2:B:267:MET:SD	2:B:299:MET:HE1	2.53	0.47
2:B:313:VAL:HG22	2:B:368:ILE:O	2.14	0.47
2:B:415:MET:HG2	2:B:419:VAL:CG1	2.44	0.47
3:A:49:PHE:CE1	3:A:53:PHE:CD1	3.00	0.47
3:A:176:GLN:NE2	3:A:207:GLU:HB2	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:188:ILE:CB	3:A:395:PHE:CD1	2.95	0.47
3:A:286:LEU:CB	3:A:291:ILE:HG12	2.40	0.47
1:K:157:LYS:HG2	1:K:203:THR:HA	1.92	0.47
1:K:181:ARG:CD	1:K:198:GLY:HA3	2.45	0.47
1:K:311:TYR:CG	1:K:321:GLN:CG	2.95	0.47
2:B:149:THR:HB	2:B:191:GLN:OE1	2.14	0.47
2:B:217:LEU:CD1	2:B:219:THR:H	2.27	0.47
2:B:219:THR:HB	2:B:220:PRO:HD2	1.95	0.47
2:B:271:ALA:HA	2:B:272:PRO:C	2.34	0.47
2:B:307:HIS:O	2:B:372:THR:HB	2.14	0.47
3:A:262:TYR:CD1	3:A:264:ARG:CZ	2.97	0.47
3:A:317:LEU:H	3:A:353:VAL:HG12	1.79	0.47
3:A:343:PHE:HD2	3:A:343:PHE:HA	1.49	0.47
3:A:387:ALA:HA	3:A:390:ARG:CG	2.44	0.47
1:K:97:TYR:CD2	1:K:365:VAL:HA	2.50	0.47
1:K:222:THR:CG2	1:K:231:TYR:HE2	2.28	0.47
2:B:2:ARG:HG2	2:B:131:GLN:HB2	1.95	0.47
2:B:18:ALA:C	2:B:19:LYS:HZ3	2.18	0.47
2:B:30:ILE:CD1	2:B:59:TYR:HB2	2.43	0.47
2:B:51:TYR:CB	2:B:59:TYR:HB3	2.45	0.47
2:B:105:HIS:HD2	2:B:149:THR:CB	2.26	0.47
3:A:1:MET:CE	3:A:1:MET:HA	2.45	0.47
3:A:275:VAL:CB	3:A:300:ASN:HA	2.38	0.47
3:A:303:VAL:HG22	3:A:304:LYS:N	2.28	0.47
3:A:435:VAL:HG13	3:A:436:GLY:N	2.30	0.47
1:K:24:ARG:NH1	1:K:109:THR:O	2.48	0.47
1:K:47:ARG:CD	1:K:49:GLU:OE2	2.62	0.47
1:K:95:MET:CE	1:K:97:TYR:HD2	2.27	0.47
1:K:103:ALA:O	1:K:266:LEU:HB2	2.14	0.47
1:K:160:LEU:O	1:K:172:LEU:HD23	2.14	0.47
2:B:266:PHE:CZ	2:B:311:LEU:HG	2.49	0.47
3:A:4:CYS:SG	3:A:136:LEU:HD22	2.55	0.47
3:A:63:PRO:HD2	3:A:87:PHE:CD1	2.50	0.47
3:A:115:ILE:HA	3:A:118:VAL:HG22	1.96	0.47
3:A:122:ILE:HD12	3:A:122:ILE:C	2.35	0.47
3:A:234:ILE:HD12	3:A:234:ILE:C	2.35	0.47
1:K:26:ARG:HE	1:K:337:SER:HB3	1.79	0.47
1:K:297:ARG:NH1	2:B:262:ARG:CG	2.77	0.47
1:K:299:ILE:HG21	4:K:501:MZK:F2	2.04	0.47
1:K:329:ARG:HD2	1:K:363:PRO:HG2	1.97	0.47
1:K:343:LEU:HG	1:K:344:GLU:N	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:5:VAL:CG2	2:B:133:PHE:HB3	2.44	0.47
2:B:21:TRP:NE1	2:B:63:ALA:HB2	2.30	0.47
2:B:69:GLU:OE2	2:B:94:GLN:HG2	2.15	0.47
2:B:102:ALA:HB2	2:B:403:MET:CG	2.45	0.47
2:B:191:GLN:CG	2:B:195:ASN:HD21	2.27	0.47
3:A:233:GLN:N	3:A:363:VAL:HG13	2.29	0.47
3:A:338:LYS:HZ2	3:A:338:LYS:HB3	1.78	0.47
3:A:351:PHE:CB	3:A:352:LYS:HA	2.41	0.47
3:A:370:LYS:HE2	3:A:372:GLN:HA	1.95	0.47
1:K:290:GLN:N	3:A:409:VAL:HG11	2.29	0.47
1:K:290:GLN:HG2	3:A:410:GLY:N	2.30	0.47
2:B:192:LEU:HD21	2:B:196:THR:OG1	2.14	0.47
2:B:269:GLY:C	2:B:367:PHE:HB3	2.35	0.47
3:A:64:ARG:HA	3:A:64:ARG:NH2	2.20	0.47
3:A:90:GLU:CD	3:A:124:LYS:HE3	2.35	0.47
3:A:189:LEU:HD21	3:A:417:GLU:OE2	2.15	0.47
1:K:104:TYR:CD2	1:K:266:LEU:HG	2.49	0.47
1:K:180:GLU:C	1:K:182:LEU:HD22	2.34	0.47
1:K:204:VAL:HG11	1:K:209:GLU:HB2	1.97	0.47
1:K:293:LEU:CD2	3:A:409:VAL:HG11	2.44	0.47
2:B:65:LEU:HD22	2:B:90:PHE:CD1	2.50	0.47
2:B:70:PRO:HG3	2:B:94:GLN:HB2	1.96	0.47
2:B:70:PRO:HG3	2:B:94:GLN:CA	2.42	0.47
2:B:101:TRP:O	2:B:105:HIS:HB2	2.15	0.47
2:B:139:LEU:HD12	2:B:140:GLY:CA	2.45	0.47
2:B:139:LEU:O	2:B:185:ALA:HB2	2.14	0.47
2:B:212:PHE:CB	2:B:220:PRO:HG3	2.44	0.47
2:B:270:PHE:CG	2:B:271:ALA:N	2.83	0.47
2:B:380:ARG:HG2	2:B:380:ARG:HH11	1.80	0.47
3:A:9:VAL:CG2	3:A:149:PHE:CD1	2.97	0.47
3:A:11:GLN:O	3:A:15:GLN:CD	2.53	0.47
3:A:53:PHE:HB3	3:A:62:VAL:O	2.14	0.47
3:A:53:PHE:HD2	3:A:63:PRO:CG	2.28	0.47
3:A:75:ILE:HG21	3:A:79:ARG:NH2	2.30	0.47
3:A:103:TYR:CD2	3:A:148:GLY:HA2	2.49	0.47
3:A:111:GLY:HA3	3:A:152:LEU:HD12	1.96	0.47
3:A:205:ASP:O	3:A:209:ILE:HB	2.15	0.47
3:A:245:ASP:OD1	3:A:249:ASN:HB2	2.15	0.47
3:A:270:ALA:CB	3:A:378:LEU:HD23	2.45	0.47
1:K:17:LYS:O	1:K:361:ASN:HB3	2.15	0.47
2:B:143:THR:CG2	2:B:147:MET:CE	2.91	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:159:TYR:CG	2:B:162:ARG:HG2	2.49	0.47
2:B:217:LEU:HD13	2:B:218:THR:OG1	2.14	0.47
2:B:249:ASP:HB3	3:A:100:ALA:CB	2.45	0.47
2:B:284:LEU:CB	2:B:289:LEU:HD11	2.45	0.47
2:B:318:ARG:HB3	2:B:358:PRO:CD	2.39	0.47
3:A:1:MET:HG2	3:A:47:ASP:H	1.74	0.47
3:A:30:ILE:HG23	3:A:30:ILE:O	2.15	0.47
3:A:93:ILE:HD13	3:A:118:VAL:HG12	1.96	0.47
3:A:192:HIS:NE2	3:A:193:THR:HG23	2.29	0.47
1:K:37:ALA:HB1	1:K:339:ALA:HB2	1.95	0.47
1:K:168:LEU:HB3	1:K:182:LEU:CG	2.45	0.47
1:K:311:TYR:HE1	1:K:324:LEU:CD2	2.26	0.47
2:B:28:HIS:CE1	2:B:47:ILE:HG23	2.49	0.47
2:B:67:ASP:N	2:B:92:PHE:HB2	2.29	0.47
2:B:324:LYS:HD3	3:A:221:ARG:NH1	2.30	0.47
2:B:377:LEU:O	2:B:380:ARG:HG3	2.15	0.47
2:B:394:PHE:HD1	2:B:396:HIS:CE1	2.33	0.47
2:B:419:VAL:O	2:B:422:TYR:HB2	2.14	0.47
3:A:88:HIS:H	3:A:88:HIS:CD2	2.33	0.47
3:A:360:PRO:HG2	3:A:371:VAL:O	2.14	0.47
1:K:72:PHE:HB3	1:K:76:THR:OG1	2.14	0.47
1:K:311:TYR:CE1	1:K:324:LEU:CD2	2.98	0.47
2:B:46:ARG:CG	2:B:242:PHE:CD1	2.98	0.47
2:B:149:THR:HG23	2:B:188:SER:OG	2.14	0.47
2:B:151:LEU:HD12	2:B:152:ILE:CG1	2.45	0.47
2:B:162:ARG:HA	2:B:162:ARG:NH1	2.29	0.47
3:A:1:MET:HA	3:A:1:MET:HE3	1.97	0.47
3:A:104:ALA:HB3	3:A:411:GLU:HG3	1.97	0.47
3:A:141:PHE:H	3:A:171:ILE:CG2	2.28	0.47
1:K:26:ARG:NH2	1:K:337:SER:HB2	2.30	0.46
1:K:47:ARG:O	1:K:48:LYS:HB2	2.16	0.46
1:K:57:LEU:CD2	3:A:427:ALA:CA	2.92	0.46
1:K:102:PHE:CE1	1:K:264:VAL:HG12	2.50	0.46
2:B:49:VAL:HG23	2:B:50:TYR:N	2.30	0.46
2:B:214:THR:CB	2:B:276:ARG:H	2.26	0.46
2:B:371:SER:HB2	2:B:374:ILE:HG21	1.91	0.46
3:A:83:TYR:O	3:A:86:LEU:HB3	2.15	0.46
1:K:288:ILE:HG13	1:K:289:ASN:N	2.31	0.46
2:B:3:GLU:HG3	2:B:50:TYR:O	2.15	0.46
2:B:3:GLU:OE2	2:B:50:TYR:HA	2.15	0.46
2:B:103:LYS:HG2	2:B:401:GLU:CG	2.43	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:245:GLN:NE2	2:B:353:VAL:HG23	2.28	0.46
2:B:291:GLN:HE21	2:B:291:GLN:HB3	1.38	0.46
2:B:321:MET:HG3	2:B:325:GLU:CB	2.45	0.46
2:B:331:LEU:HD12	2:B:334:GLN:HE22	1.80	0.46
2:B:377:LEU:HD12	2:B:377:LEU:C	2.34	0.46
2:B:394:PHE:CZ	2:B:397:TRP:CH2	3.03	0.46
3:A:9:VAL:CG1	3:A:149:PHE:HB3	2.46	0.46
3:A:53:PHE:HD2	3:A:63:PRO:CB	2.27	0.46
3:A:233:GLN:NE2	3:A:234:ILE:HG22	2.20	0.46
1:K:68:PHE:CD2	1:K:68:PHE:N	2.83	0.46
1:K:171:LEU:C	1:K:220:LYS:HD3	2.36	0.46
1:K:204:VAL:HG12	1:K:209:GLU:OE1	2.16	0.46
1:K:286:GLY:O	1:K:290:GLN:HG3	2.14	0.46
1:K:365:VAL:HG11	1:K:367:GLN:CG	2.44	0.46
2:B:97:ALA:H	2:B:143:THR:HG23	1.80	0.46
2:B:102:ALA:O	2:B:105:HIS:HB3	2.16	0.46
2:B:152:ILE:C	2:B:155:ILE:HG12	2.36	0.46
2:B:343:GLU:HG2	2:B:344:TRP:CD1	2.50	0.46
3:A:78:VAL:CG1	3:A:83:TYR:HE1	2.28	0.46
3:A:121:ARG:HG2	3:A:121:ARG:HH11	1.80	0.46
3:A:321:GLY:HA2	3:A:359:PRO:CA	2.46	0.46
1:K:41:VAL:HB	1:K:338:PRO:HB3	1.97	0.46
1:K:204:VAL:CG2	1:K:210:VAL:HG22	2.45	0.46
2:B:103:LYS:HD2	2:B:401:GLU:CG	2.40	0.46
2:B:260:PHE:C	2:B:262:ARG:H	2.18	0.46
2:B:284:LEU:HB3	2:B:289:LEU:HD12	1.96	0.46
2:B:341:PHE:HZ	2:B:346:PRO:C	2.19	0.46
3:A:1:MET:HB2	3:A:47:ASP:HB2	1.97	0.46
3:A:48:SER:HB3	3:A:244:PHE:CZ	2.51	0.46
3:A:214:ARG:HG2	3:A:221:ARG:NH1	2.24	0.46
1:K:50:VAL:HG23	1:K:71:VAL:HG13	1.97	0.46
2:B:186:THR:O	2:B:189:VAL:HG12	2.16	0.46
2:B:273:LEU:HD22	2:B:273:LEU:C	2.34	0.46
3:A:30:ILE:HD12	3:A:61:HIS:CB	2.45	0.46
3:A:192:HIS:ND1	3:A:421:ALA:HB2	2.30	0.46
3:A:324:VAL:HG22	3:A:327:ASP:CG	2.36	0.46
3:A:389:ALA:O	3:A:392:ASP:HB3	2.16	0.46
1:K:112:THR:O	1:K:116:GLU:HG3	2.16	0.46
1:K:161:LEU:HA	1:K:171:LEU:HG	1.98	0.46
1:K:211:TYR:O	1:K:214:LEU:HB3	2.16	0.46
1:K:255:LEU:HD22	1:K:369:LEU:HA	1.95	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:215:LEU:HD23	2:B:276:ARG:HE	1.81	0.46
2:B:251:ARG:CZ	3:A:105:ARG:NE	2.78	0.46
2:B:321:MET:SD	2:B:326:VAL:HA	2.55	0.46
3:A:349:THR:CG2	3:A:351:PHE:CD1	2.99	0.46
1:K:55:GLY:N	1:K:60:LYS:HG3	2.30	0.46
1:K:97:TYR:CD2	1:K:365:VAL:HG22	2.51	0.46
1:K:317:THR:HA	1:K:320:LEU:HB3	1.98	0.46
1:K:327:ARG:HH21	1:K:327:ARG:N	2.01	0.46
1:K:357:LYS:HG3	1:K:358:ASN:N	2.31	0.46
2:B:7:ILE:N	2:B:134:GLN:HE22	2.12	0.46
2:B:45:GLU:CB	2:B:46:ARG:HH21	2.23	0.46
2:B:99:ASN:C	2:B:142:GLY:HA3	2.36	0.46
2:B:152:ILE:CA	2:B:155:ILE:HG12	2.46	0.46
2:B:324:LYS:CD	3:A:221:ARG:HH11	2.29	0.46
3:A:97:GLU:OE2	3:A:105:ARG:NH1	2.48	0.46
3:A:108:TYR:CE2	3:A:413:MET:SD	3.09	0.46
3:A:143:GLY:HA3	5:A:501:G2P:H3A1	1.98	0.46
3:A:223:THR:HB	3:A:226:ASN:OD1	2.14	0.46
3:A:224:TYR:HE2	3:A:227:LEU:HD23	1.80	0.46
3:A:298:PRO:HA	3:A:301:GLN:NE2	2.31	0.46
1:K:77:LYS:HA	1:K:77:LYS:HD2	1.76	0.46
1:K:308:HIS:CE1	2:B:420:SER:HB2	2.51	0.46
1:K:350:LEU:HD13	1:K:354:HIS:CD2	2.51	0.46
2:B:34:GLY:CA	2:B:84:ILE:HD13	2.46	0.46
2:B:242:PHE:HD1	2:B:243:PRO:HD3	1.81	0.46
2:B:331:LEU:HD13	2:B:331:LEU:N	2.31	0.46
2:B:381:ILE:HG23	2:B:384:GLN:OE1	2.15	0.46
3:A:2:ARG:NH1	3:A:131:GLY:HA3	2.31	0.46
3:A:7:ILE:HD11	3:A:68:VAL:HG22	1.95	0.46
3:A:63:PRO:HB2	3:A:87:PHE:CE1	2.50	0.46
3:A:104:ALA:CB	3:A:413:MET:HG3	2.43	0.46
3:A:308:ARG:H	3:A:308:ARG:HE	1.63	0.46
3:A:318:LEU:HD11	3:A:320:ARG:CG	2.41	0.46
1:K:144:PHE:CB	1:K:207:LYS:HD2	2.46	0.46
2:B:3:GLU:HG3	2:B:50:TYR:HD1	1.81	0.46
2:B:154:LYS:NZ	2:B:157:GLU:HB3	2.31	0.46
2:B:154:LYS:HZ3	2:B:157:GLU:C	2.18	0.46
3:A:75:ILE:HG21	3:A:79:ARG:HH21	1.80	0.46
3:A:209:ILE:HG22	3:A:227:LEU:HD11	1.98	0.46
3:A:288:VAL:HG11	3:A:328:VAL:HA	1.97	0.46
3:A:334:THR:O	3:A:337:THR:HG22	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:384:ILE:HG13	3:A:385:ALA:N	2.30	0.46
1:K:352:TYR:CD2	1:K:352:TYR:O	2.69	0.46
2:B:5:VAL:HA	2:B:62:ARG:HG2	1.97	0.46
2:B:200:TYR:HD1	2:B:268:PRO:HD3	1.81	0.46
2:B:253:LEU:HD12	2:B:254:ALA:CA	2.46	0.46
3:A:351:PHE:HB2	3:A:352:LYS:HZ2	1.80	0.46
3:A:388:TRP:HH2	3:A:432:TYR:CE2	2.31	0.46
1:K:102:PHE:HD1	1:K:264:VAL:CB	2.29	0.45
1:K:109:THR:HG23	1:K:336:ILE:O	2.16	0.45
1:K:221:ARG:HD3	1:K:237:SER:CB	2.42	0.45
1:K:293:LEU:HD22	1:K:293:LEU:N	2.32	0.45
2:B:28:HIS:CG	2:B:47:ILE:CG2	2.99	0.45
2:B:44:LEU:C	2:B:44:LEU:HD12	2.36	0.45
2:B:138:SER:HA	2:B:169:VAL:HG22	1.97	0.45
2:B:323:MET:O	2:B:326:VAL:HB	2.16	0.45
3:A:2:ARG:CZ	3:A:131:GLY:HA3	2.46	0.45
3:A:86:LEU:HD12	3:A:86:LEU:C	2.37	0.45
3:A:214:ARG:CG	3:A:221:ARG:HH12	2.22	0.45
3:A:248:LEU:HD23	3:A:248:LEU:C	2.36	0.45
3:A:264:ARG:HD3	3:A:264:ARG:N	2.18	0.45
3:A:291:ILE:CD1	3:A:373:ARG:HB2	2.46	0.45
3:A:351:PHE:HD2	3:A:352:LYS:HZ3	1.63	0.45
1:K:189:ARG:HD3	1:K:189:ARG:H	1.80	0.45
1:K:191:LYS:HZ2	1:K:191:LYS:HB2	1.81	0.45
1:K:236:HIS:ND1	1:K:267:ALA:HB3	2.31	0.45
2:B:12:CYS:O	2:B:15:GLN:HB3	2.17	0.45
2:B:77:ARG:HD3	2:B:82:GLY:HA3	1.98	0.45
2:B:102:ALA:CB	2:B:403:MET:CG	2.94	0.45
2:B:159:TYR:CD2	2:B:162:ARG:CG	2.98	0.45
2:B:214:THR:CG2	2:B:297:LYS:CE	2.95	0.45
2:B:222:TYR:CG	5:B:501:G2P:C6	2.98	0.45
2:B:262:ARG:HH21	2:B:263:LEU:H	1.64	0.45
2:B:266:PHE:HD2	2:B:266:PHE:HA	1.40	0.45
2:B:318:ARG:HA	2:B:354:CYS:HB3	1.97	0.45
2:B:350:LYS:HE3	3:A:179:THR:CB	2.46	0.45
2:B:358:PRO:HD2	2:B:362:LYS:O	2.15	0.45
2:B:422:TYR:HA	2:B:425:TYR:CZ	2.49	0.45
3:A:49:PHE:CD1	3:A:53:PHE:HD1	2.34	0.45
3:A:273:ALA:C	3:A:375:VAL:HG22	2.36	0.45
3:A:306:ASP:HB2	3:A:309:HIS:CD2	2.51	0.45
1:K:29:ASN:CG	1:K:32:GLU:HG2	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:181:ARG:HH22	1:K:183:GLN:CB	2.28	0.45
2:B:70:PRO:HD3	2:B:94:GLN:HA	1.98	0.45
2:B:106:TYR:N	2:B:106:TYR:CD2	2.82	0.45
2:B:211:CYS:O	2:B:215:LEU:HB2	2.16	0.45
2:B:299:MET:CE	2:B:367:PHE:HD1	2.30	0.45
2:B:325:GLU:O	2:B:329:GLN:HG3	2.16	0.45
3:A:49:PHE:CZ	3:A:61:HIS:HD2	2.33	0.45
3:A:53:PHE:CD2	3:A:63:PRO:CA	2.99	0.45
3:A:101:ASN:ND2	3:A:142:GLY:O	2.50	0.45
3:A:175:PRO:HG2	3:A:304:LYS:NZ	2.31	0.45
3:A:281:ALA:HB3	3:A:369:ALA:H	1.81	0.45
3:A:375:VAL:CG2	3:A:377:MET:CE	2.95	0.45
1:K:50:VAL:CG2	1:K:71:VAL:HG13	2.46	0.45
1:K:57:LEU:HA	3:A:423:GLU:OE1	2.16	0.45
1:K:204:VAL:HG23	1:K:204:VAL:O	2.17	0.45
2:B:5:VAL:HG23	2:B:5:VAL:O	2.15	0.45
2:B:12:CYS:CB	2:B:138:SER:CB	2.93	0.45
2:B:68:LEU:HD12	5:B:501:G2P:O2G	2.17	0.45
2:B:299:MET:CE	2:B:367:PHE:CD1	3.00	0.45
2:B:342:VAL:CB	2:B:348:ASN:HD21	2.23	0.45
3:A:21:TRP:CZ2	3:A:65:ALA:CB	2.97	0.45
3:A:152:LEU:HD23	3:A:152:LEU:C	2.36	0.45
3:A:279:GLU:HB3	3:A:283:HIS:NE2	2.31	0.45
3:A:298:PRO:HA	3:A:301:GLN:HE21	1.81	0.45
2:B:123:GLU:HA	2:B:123:GLU:OE2	2.16	0.45
2:B:186:THR:HA	2:B:189:VAL:HG12	1.99	0.45
2:B:266:PHE:HE1	2:B:312:THR:CG2	2.29	0.45
2:B:326:VAL:O	2:B:330:MET:HE3	2.16	0.45
2:B:341:PHE:CE1	2:B:348:ASN:CB	2.98	0.45
2:B:419:VAL:CG2	2:B:420:SER:N	2.78	0.45
3:A:97:GLU:CD	3:A:105:ARG:HH22	2.19	0.45
3:A:172:TYR:HB3	3:A:204:VAL:O	2.16	0.45
3:A:317:LEU:CB	3:A:353:VAL:CG1	2.95	0.45
3:A:391:LEU:N	3:A:391:LEU:HD22	2.32	0.45
1:K:15:LYS:CD	1:K:362:LYS:HD2	2.46	0.45
1:K:15:LYS:HG2	1:K:362:LYS:HB3	1.99	0.45
1:K:37:ALA:CB	1:K:341:LEU:HD13	2.47	0.45
1:K:191:LYS:H	1:K:191:LYS:CD	2.29	0.45
1:K:303:VAL:HG13	1:K:358:ASN:ND2	2.31	0.45
1:K:311:TYR:CD2	1:K:321:GLN:CG	2.98	0.45
2:B:70:PRO:CG	2:B:94:GLN:HA	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:97:ALA:CB	2:B:143:THR:CG2	2.94	0.45
2:B:213:ARG:HH21	2:B:214:THR:HA	1.81	0.45
3:A:25:CYS:O	3:A:30:ILE:HG22	2.17	0.45
3:A:28:HIS:CE1	3:A:52:PHE:HD1	2.35	0.45
3:A:71:GLU:HB3	3:A:98:ASP:OD2	2.17	0.45
3:A:147:SER:HA	3:A:190:THR:HG21	1.98	0.45
3:A:150:THR:CG2	3:A:190:THR:CG2	2.95	0.45
3:A:172:TYR:H	3:A:204:VAL:H	1.65	0.45
3:A:202:PHE:HE1	3:A:267:PHE:HB2	1.80	0.45
3:A:212:ILE:HG21	3:A:299:ALA:O	2.16	0.45
3:A:233:GLN:CB	3:A:363:VAL:HG13	2.47	0.45
1:K:209:GLU:O	1:K:213:ILE:HG12	2.17	0.45
2:B:105:HIS:HD2	2:B:149:THR:HB	1.82	0.45
2:B:154:LYS:HD3	2:B:154:LYS:C	2.37	0.45
2:B:271:ALA:HB1	2:B:272:PRO:HA	1.99	0.45
3:A:5:ILE:HG22	3:A:6:SER:N	2.31	0.45
3:A:62:VAL:CG2	3:A:88:HIS:HD2	2.30	0.45
3:A:104:ALA:CB	3:A:413:MET:CG	2.94	0.45
1:K:15:LYS:HE3	1:K:362:LYS:HE2	1.94	0.45
1:K:109:THR:HB	1:K:335:THR:OG1	2.17	0.45
1:K:145:GLU:CG	1:K:207:LYS:HZ1	2.30	0.45
1:K:203:THR:HG22	1:K:204:VAL:N	2.32	0.45
2:B:1:MET:CG	2:B:2:ARG:H	2.27	0.45
2:B:81:PHE:CA	2:B:83:GLN:HE22	2.29	0.45
2:B:108:GLU:OE2	2:B:143:THR:HG23	2.17	0.45
2:B:266:PHE:HE2	2:B:370:ASN:HB3	1.81	0.45
2:B:267:MET:CE	2:B:367:PHE:HE1	2.30	0.45
2:B:288:GLU:O	2:B:291:GLN:HG2	2.17	0.45
2:B:323:MET:C	3:A:221:ARG:CG	2.83	0.45
3:A:54:SER:HB3	3:A:64:ARG:NH1	2.20	0.45
3:A:132:LEU:HD23	3:A:135:PHE:HA	1.99	0.45
3:A:136:LEU:HD12	3:A:169:PHE:HE1	1.82	0.45
3:A:188:ILE:CG2	3:A:421:ALA:CB	2.95	0.45
3:A:223:THR:HG22	3:A:225:THR:N	2.22	0.45
3:A:255:PHE:O	3:A:258:ASN:HB3	2.16	0.45
1:K:144:PHE:CD1	1:K:154:PHE:HE1	2.34	0.45
2:B:112:LEU:CD2	2:B:116:VAL:CG1	2.95	0.45
2:B:180:VAL:O	2:B:183:TYR:HB2	2.17	0.45
2:B:242:PHE:CE2	2:B:356:ILE:CD1	2.96	0.45
2:B:260:PHE:HE2	3:A:406:HIS:N	2.15	0.45
2:B:324:LYS:HE2	3:A:221:ARG:CB	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:331:LEU:HA	2:B:334:GLN:CD	2.37	0.45
2:B:331:LEU:O	2:B:334:GLN:HG2	2.16	0.45
2:B:376:GLU:CD	2:B:422:TYR:HB2	2.37	0.45
3:A:4:CYS:HG	3:A:135:PHE:HA	1.82	0.45
3:A:24:TYR:HA	3:A:27:GLU:CG	2.47	0.45
3:A:50:ASN:HA	3:A:53:PHE:O	2.17	0.45
3:A:62:VAL:CG2	3:A:88:HIS:CD2	3.00	0.45
3:A:316:CYS:O	3:A:377:MET:HG3	2.17	0.45
1:K:23:VAL:CG2	1:K:68:PHE:CE1	2.98	0.45
1:K:72:PHE:HB3	1:K:76:THR:CB	2.47	0.45
2:B:138:SER:HB2	2:B:169:VAL:CG2	2.47	0.45
2:B:151:LEU:HD11	2:B:152:ILE:HG12	1.98	0.45
2:B:207:LEU:HG	2:B:208:TYR:N	2.32	0.45
2:B:310:TYR:N	2:B:310:TYR:CD2	2.82	0.45
3:A:26:LEU:O	3:A:26:LEU:HD12	2.17	0.45
3:A:70:LEU:N	3:A:70:LEU:HD12	2.31	0.45
3:A:153:LEU:HD12	3:A:156:ARG:NH2	2.32	0.45
3:A:224:TYR:CD2	5:A:501:G2P:O6	2.70	0.45
3:A:383:ALA:C	3:A:386:GLU:HG2	2.37	0.45
2:B:422:TYR:CD1	2:B:422:TYR:N	2.82	0.44
3:A:153:LEU:CG	3:A:157:LEU:CD1	2.95	0.44
3:A:352:LYS:HG3	3:A:353:VAL:H	1.82	0.44
3:A:414:GLU:CG	3:A:415:GLU:N	2.80	0.44
1:K:28:PHE:CG	1:K:33:ARG:NH2	2.85	0.44
1:K:246:LYS:NZ	1:K:254:GLU:CD	2.69	0.44
2:B:58:LYS:HZ2	2:B:86:ARG:HE	1.65	0.44
2:B:121:ARG:HE	2:B:121:ARG:N	2.15	0.44
3:A:154:MET:CA	3:A:154:MET:CE	2.95	0.44
3:A:174:ALA:CB	3:A:176:GLN:CG	2.95	0.44
3:A:174:ALA:CB	3:A:207:GLU:HB2	2.42	0.44
3:A:176:GLN:OE1	3:A:177:VAL:HG12	2.18	0.44
3:A:256:GLN:OE1	3:A:259:LEU:HB2	2.18	0.44
3:A:287:SER:HB3	3:A:290:GLU:CG	2.47	0.44
3:A:311:LYS:O	3:A:312:TYR:HD1	2.00	0.44
3:A:405:VAL:O	3:A:408:TYR:N	2.51	0.44
2:B:21:TRP:HH2	2:B:50:TYR:OH	1.98	0.44
2:B:166:THR:HG22	2:B:167:PHE:N	2.32	0.44
2:B:260:PHE:CE2	3:A:405:VAL:CA	3.00	0.44
3:A:204:VAL:HG22	3:A:205:ASP:N	2.32	0.44
3:A:211:ASP:HA	3:A:214:ARG:HG2	1.99	0.44
3:A:274:PRO:HD3	3:A:291:ILE:HD13	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:66:TYR:CD2	1:K:68:PHE:CE2	3.00	0.44
1:K:298:VAL:HG13	1:K:299:ILE:N	2.32	0.44
1:K:303:VAL:HG22	1:K:358:ASN:ND2	2.32	0.44
2:B:61:PRO:HB2	2:B:85:PHE:CE2	2.53	0.44
2:B:202:ILE:O	2:B:202:ILE:HG13	2.17	0.44
2:B:260:PHE:CE2	3:A:405:VAL:C	2.91	0.44
2:B:291:GLN:HG2	2:B:292:GLN:H	1.80	0.44
2:B:330:MET:HG2	2:B:331:LEU:HD13	1.98	0.44
2:B:345:ILE:CD1	3:A:181:VAL:CG2	2.88	0.44
3:A:46:ASP:H	3:A:49:PHE:CB	2.27	0.44
3:A:210:TYR:HB3	3:A:221:ARG:NH2	2.32	0.44
3:A:211:ASP:OD1	3:A:212:ILE:HD13	2.17	0.44
3:A:267:PHE:H	3:A:267:PHE:HD2	1.64	0.44
3:A:360:PRO:HG3	3:A:373:ARG:C	2.38	0.44
1:K:15:LYS:CE	1:K:362:LYS:HB3	2.46	0.44
1:K:82:TYR:CZ	1:K:86:VAL:HB	2.51	0.44
1:K:135:ILE:HD12	1:K:136:ILE:CA	2.48	0.44
1:K:191:LYS:HZ2	1:K:191:LYS:CB	2.31	0.44
1:K:228:MET:CE	1:K:228:MET:CA	2.96	0.44
1:K:258:ILE:N	1:K:368:LYS:HD3	2.32	0.44
2:B:20:PHE:CE1	2:B:24:ILE:CD1	2.97	0.44
2:B:24:ILE:HD11	2:B:234:SER:HA	1.98	0.44
2:B:154:LYS:HZ3	2:B:157:GLU:HB3	1.82	0.44
2:B:194:GLU:H	2:B:194:GLU:CD	2.21	0.44
2:B:199:THR:CG2	2:B:265:PHE:CD2	3.00	0.44
2:B:200:TYR:HB3	2:B:268:PRO:CG	2.45	0.44
2:B:225:LEU:CD1	5:B:501:G2P:H2N1	2.30	0.44
2:B:381:ILE:CA	2:B:384:GLN:HG3	2.46	0.44
3:A:28:HIS:CD2	3:A:41:THR:CG2	3.00	0.44
3:A:103:TYR:CD1	3:A:104:ALA:N	2.86	0.44
3:A:107:HIS:CE1	3:A:108:TYR:HE1	2.34	0.44
3:A:141:PHE:H	3:A:171:ILE:HG23	1.81	0.44
3:A:312:TYR:HB2	3:A:342:GLN:O	2.18	0.44
3:A:370:LYS:HD3	3:A:371:VAL:C	2.38	0.44
1:K:87:CYS:HB2	1:K:88:PRO:HD3	2.00	0.44
1:K:115:MET:SD	1:K:135:ILE:CG1	3.05	0.44
1:K:211:TYR:HD2	1:K:211:TYR:HA	1.41	0.44
1:K:255:LEU:HB3	1:K:369:LEU:HD13	1.94	0.44
1:K:304:GLU:HG3	1:K:306:THR:CA	2.48	0.44
2:B:65:LEU:HD22	2:B:90:PHE:CD2	2.52	0.44
2:B:112:LEU:O	2:B:116:VAL:HG22	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:350:LYS:CE	3:A:179:THR:O	2.65	0.44
2:B:383:GLU:O	2:B:386:THR:HB	2.17	0.44
2:B:396:HIS:CE1	2:B:397:TRP:CD1	3.05	0.44
2:B:398:TYR:HA	2:B:398:TYR:HD1	1.41	0.44
3:A:24:TYR:C	3:A:27:GLU:HG3	2.38	0.44
3:A:98:ASP:C	3:A:100:ALA:H	2.21	0.44
3:A:175:PRO:HG2	3:A:304:LYS:HE2	1.96	0.44
3:A:414:GLU:HG3	3:A:415:GLU:N	2.32	0.44
1:K:15:LYS:HE3	1:K:362:LYS:HB3	1.99	0.44
1:K:329:ARG:HA	1:K:363:PRO:CG	2.46	0.44
2:B:67:ASP:OD1	2:B:73:MET:HB3	2.18	0.44
2:B:139:LEU:HD23	2:B:168:SER:CB	2.43	0.44
2:B:187:LEU:HD22	2:B:187:LEU:H	1.83	0.44
2:B:246:LEU:CD1	2:B:352:ALA:CB	2.95	0.44
2:B:263:LEU:HD22	2:B:264:HIS:H	1.82	0.44
2:B:345:ILE:HD12	3:A:181:VAL:CG1	2.45	0.44
3:A:23:LEU:HG	3:A:364:PRO:HD3	2.00	0.44
3:A:123:ARG:HH11	3:A:123:ARG:HG2	1.82	0.44
3:A:176:GLN:HG2	3:A:207:GLU:CB	2.22	0.44
3:A:319:TYR:HD2	3:A:375:VAL:HG12	1.83	0.44
3:A:375:VAL:HB	3:A:377:MET:HE3	1.99	0.44
1:K:15:LYS:HD3	1:K:15:LYS:N	2.32	0.44
1:K:15:LYS:CG	1:K:362:LYS:HB3	2.48	0.44
1:K:19:ILE:N	1:K:361:ASN:HB3	2.33	0.44
1:K:26:ARG:NE	1:K:337:SER:HA	2.33	0.44
1:K:50:VAL:HG23	1:K:71:VAL:HG11	2.00	0.44
1:K:157:LYS:HG2	1:K:203:THR:CB	2.47	0.44
1:K:168:LEU:CB	1:K:182:LEU:HG	2.48	0.44
2:B:33:THR:HG21	2:B:35:SER:HB2	1.99	0.44
2:B:190:HIS:CD2	2:B:411:ALA:CA	2.99	0.44
2:B:252:LYS:HE2	3:A:101:ASN:O	2.16	0.44
2:B:323:MET:N	3:A:221:ARG:HG3	2.32	0.44
2:B:341:PHE:CZ	2:B:348:ASN:N	2.85	0.44
2:B:347:ASN:ND2	2:B:350:LYS:NZ	2.65	0.44
3:A:21:TRP:CD1	3:A:67:PHE:CZ	3.06	0.44
3:A:153:LEU:CD1	3:A:157:LEU:CD1	2.96	0.44
3:A:345:ASP:H	3:A:438:ASP:HB3	1.83	0.44
3:A:387:ALA:HA	3:A:390:ARG:HG3	2.00	0.44
1:K:26:ARG:CG	1:K:26:ARG:HH11	2.29	0.44
1:K:54:THR:CG2	1:K:56:GLY:H	2.31	0.44
1:K:222:THR:CG2	1:K:231:TYR:CE2	3.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:327:ARG:HH21	1:K:327:ARG:HG2	1.82	0.44
2:B:2:ARG:HE	2:B:2:ARG:HB2	1.68	0.44
2:B:30:ILE:HB	2:B:35:SER:O	2.18	0.44
2:B:117:LEU:C	2:B:120:VAL:HG22	2.39	0.44
2:B:244:GLY:N	2:B:355:ASP:HB2	2.32	0.44
3:A:24:TYR:HA	3:A:27:GLU:HG3	1.99	0.44
3:A:234:ILE:HD12	3:A:235:VAL:CA	2.48	0.44
3:A:301:GLN:HE22	3:A:307:PRO:HD3	1.83	0.44
3:A:311:LYS:HD3	3:A:436:GLY:O	2.18	0.44
3:A:407:TRP:CZ3	3:A:411:GLU:OE2	2.71	0.44
3:A:409:VAL:O	3:A:410:GLY:C	2.53	0.44
1:K:109:THR:HG21	1:K:335:THR:C	2.38	0.43
1:K:324:LEU:HD22	1:K:324:LEU:N	2.33	0.43
1:K:347:LEU:CD2	1:K:351:GLU:HG2	2.44	0.43
2:B:2:ARG:O	2:B:4:ILE:HD12	2.18	0.43
2:B:113:VAL:CA	2:B:116:VAL:HG22	2.47	0.43
2:B:324:LYS:NZ	3:A:222:PRO:HD2	2.33	0.43
2:B:324:LYS:HD3	3:A:221:ARG:HH11	1.82	0.43
2:B:339:SER:HA	2:B:429:THR:HG21	1.97	0.43
3:A:1:MET:HG2	3:A:47:ASP:CB	2.48	0.43
3:A:5:ILE:CD1	3:A:125:LEU:CD2	2.96	0.43
3:A:103:TYR:CE2	3:A:151:SER:CB	2.95	0.43
3:A:185:TYR:H	3:A:185:TYR:HD2	1.66	0.43
3:A:391:LEU:HA	3:A:394:LYS:CD	2.48	0.43
3:A:399:TYR:CE1	3:A:402:ARG:NE	2.86	0.43
1:K:168:LEU:CB	1:K:182:LEU:CG	2.95	0.43
1:K:358:ASN:O	1:K:360:LEU:HD12	2.18	0.43
2:B:15:GLN:HG3	2:B:19:LYS:HD2	1.99	0.43
2:B:40:SER:O	2:B:44:LEU:HB3	2.18	0.43
2:B:105:HIS:HD2	2:B:149:THR:OG1	2.01	0.43
2:B:106:TYR:CZ	2:B:403:MET:SD	3.11	0.43
2:B:151:LEU:CD1	2:B:152:ILE:CD1	2.96	0.43
2:B:178:THR:HG21	2:B:180:VAL:HG22	1.96	0.43
2:B:222:TYR:CD1	5:B:501:G2P:C6	3.01	0.43
2:B:249:ASP:HB3	3:A:100:ALA:HB2	2.00	0.43
2:B:263:LEU:HG	2:B:311:LEU:CD1	2.47	0.43
2:B:275:SER:HG	2:B:276:ARG:H	1.66	0.43
2:B:390:ARG:HA	2:B:392:LYS:NZ	2.33	0.43
3:A:276:ILE:HG23	3:A:281:ALA:HA	2.00	0.43
1:K:40:ILE:HG23	1:K:340:SER:HB2	2.01	0.43
1:K:136:ILE:CG2	1:K:214:LEU:CD1	2.96	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:303:VAL:HG22	1:K:358:ASN:HD22	1.81	0.43
2:B:12:CYS:HB2	2:B:138:SER:OG	2.17	0.43
2:B:58:LYS:HG2	2:B:59:TYR:H	1.80	0.43
2:B:70:PRO:HD3	2:B:94:GLN:HG2	1.98	0.43
2:B:216:LYS:HD3	2:B:276:ARG:CZ	2.48	0.43
2:B:269:GLY:HA3	2:B:367:PHE:CD1	2.52	0.43
2:B:319:GLY:H	2:B:354:CYS:HB3	1.83	0.43
3:A:8:HIS:CE1	3:A:67:PHE:CE1	3.06	0.43
3:A:98:ASP:OD1	5:A:501:G2P:O2G	2.36	0.43
1:K:48:LYS:HE3	1:K:70:MET:HG3	2.00	0.43
1:K:144:PHE:CB	1:K:207:LYS:CD	2.96	0.43
2:B:85:PHE:CD1	2:B:85:PHE:N	2.86	0.43
2:B:199:THR:HG22	2:B:265:PHE:CB	2.48	0.43
2:B:222:TYR:HB3	5:B:501:G2P:O6	2.18	0.43
2:B:299:MET:HE1	2:B:367:PHE:HD1	1.83	0.43
2:B:324:LYS:CE	3:A:221:ARG:HH11	2.31	0.43
3:A:11:GLN:CB	3:A:74:VAL:HG11	2.48	0.43
3:A:25:CYS:HB3	3:A:30:ILE:HG23	2.00	0.43
3:A:240:ALA:HA	3:A:243:ARG:CD	2.49	0.43
3:A:375:VAL:HG21	3:A:377:MET:CE	2.46	0.43
1:K:169:PHE:HA	1:K:179:SER:CA	2.24	0.43
2:B:48:ASN:HD21	2:B:53:GLU:CG	2.31	0.43
2:B:288:GLU:OE2	2:B:292:GLN:HG2	2.18	0.43
2:B:309:ARG:HG3	2:B:310:TYR:N	2.33	0.43
2:B:309:ARG:NH1	2:B:426:GLN:HG2	2.34	0.43
2:B:310:TYR:CD1	2:B:313:VAL:CG2	3.01	0.43
2:B:385:PHE:HA	2:B:388:MET:HG2	2.01	0.43
2:B:405:GLU:O	2:B:408:PHE:HB2	2.18	0.43
3:A:21:TRP:HA	3:A:21:TRP:CE3	2.54	0.43
3:A:70:LEU:CG	3:A:110:ILE:HG13	2.47	0.43
3:A:185:TYR:CD2	3:A:185:TYR:N	2.87	0.43
3:A:278:ALA:HB2	3:A:367:ASP:O	2.18	0.43
3:A:296:PHE:CE1	3:A:335:ILE:HG23	2.54	0.43
3:A:318:LEU:HD13	3:A:374:ALA:O	2.18	0.43
3:A:320:ARG:HB2	3:A:360:PRO:CG	2.41	0.43
1:K:40:ILE:HG13	1:K:41:VAL:N	2.34	0.43
1:K:47:ARG:CZ	1:K:47:ARG:CA	2.95	0.43
2:B:21:TRP:HD1	2:B:85:PHE:CE2	2.29	0.43
2:B:117:LEU:HA	2:B:120:VAL:CG2	2.48	0.43
2:B:156:ARG:CZ	2:B:157:GLU:HA	2.48	0.43
2:B:251:ARG:NH2	3:A:99:ALA:C	2.70	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:303:CYS:HB2	2:B:371:SER:CB	2.48	0.43
3:A:430:LYS:CD	3:A:434:GLU:CG	2.96	0.43
1:K:93:VAL:HG12	1:K:243:ILE:HD12	2.00	0.43
1:K:215:GLU:HG2	1:K:216:LYS:H	1.81	0.43
1:K:295:LEU:O	1:K:299:ILE:HG12	2.18	0.43
1:K:350:LEU:HD13	1:K:350:LEU:O	2.19	0.43
1:K:361:ASN:ND2	1:K:363:PRO:HD3	2.33	0.43
1:K:367:GLN:HE21	1:K:367:GLN:HB3	1.44	0.43
2:B:34:GLY:CA	2:B:84:ILE:CD1	2.96	0.43
2:B:143:THR:HG22	2:B:143:THR:O	2.18	0.43
2:B:147:MET:O	2:B:151:LEU:HG	2.18	0.43
2:B:258:VAL:HG21	2:B:261:PRO:CA	2.49	0.43
3:A:26:LEU:HB3	3:A:364:PRO:HG3	2.00	0.43
3:A:185:TYR:HB3	3:A:408:TYR:CE1	2.50	0.43
3:A:218:ASP:OD2	3:A:279:GLU:HG2	2.19	0.43
3:A:234:ILE:CG1	3:A:235:VAL:N	2.82	0.43
3:A:246:GLY:CA	3:A:356:ASN:HD22	2.32	0.43
3:A:312:TYR:C	3:A:344:VAL:HG13	2.39	0.43
3:A:375:VAL:CG2	3:A:377:MET:HE1	2.47	0.43
1:K:54:THR:CG2	1:K:55:GLY:N	2.82	0.43
1:K:78:GLN:NE2	1:K:113:PHE:O	2.45	0.43
2:B:266:PHE:CD1	2:B:368:ILE:CG2	3.02	0.43
2:B:284:LEU:CB	2:B:289:LEU:CD1	2.96	0.43
2:B:313:VAL:CG1	2:B:367:PHE:CE2	3.01	0.43
2:B:327:ASP:C	2:B:331:LEU:HD22	2.39	0.43
1:K:72:PHE:CD1	1:K:76:THR:CG2	2.97	0.43
1:K:95:MET:HG3	1:K:365:VAL:CG1	2.28	0.43
1:K:95:MET:CB	1:K:365:VAL:CG1	2.95	0.43
1:K:290:GLN:HA	3:A:409:VAL:CG1	2.44	0.43
1:K:304:GLU:HG3	1:K:306:THR:HB	1.98	0.43
2:B:49:VAL:CG2	2:B:50:TYR:N	2.82	0.43
2:B:198:GLU:OE1	2:B:198:GLU:HA	2.19	0.43
3:A:21:TRP:CD1	3:A:67:PHE:HZ	2.35	0.43
3:A:123:ARG:HD3	3:A:127:ASP:OD2	2.18	0.43
3:A:262:TYR:CD1	3:A:264:ARG:NH2	2.87	0.43
1:K:172:LEU:HG	1:K:173:ASN:ND2	2.34	0.43
2:B:9:ALA:CB	2:B:147:MET:SD	3.07	0.43
2:B:178:THR:CG2	2:B:180:VAL:CG2	2.95	0.43
2:B:315:ALA:HB1	2:B:365:ALA:HB1	2.01	0.43
3:A:31:GLN:NE2	3:A:33:ASP:H	2.16	0.43
3:A:49:PHE:HE1	3:A:53:PHE:CD1	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:153:LEU:HG	3:A:157:LEU:HD12	2.00	0.43
3:A:172:TYR:CE2	3:A:391:LEU:HD23	2.51	0.43
3:A:280:LYS:NZ	3:A:280:LYS:HB3	2.34	0.43
3:A:388:TRP:CZ3	3:A:428:LEU:HG	2.48	0.43
1:K:26:ARG:HG3	1:K:26:ARG:HH11	1.83	0.42
1:K:28:PHE:CE1	1:K:39:SER:N	2.86	0.42
1:K:292:LEU:CD2	4:K:501:MZK:N1	2.82	0.42
1:K:314:SER:O	1:K:318:ARG:HG3	2.19	0.42
2:B:21:TRP:HE1	2:B:62:ARG:N	2.16	0.42
2:B:48:ASN:HD21	2:B:53:GLU:HG3	1.84	0.42
2:B:70:PRO:CB	2:B:92:PHE:HE2	2.24	0.42
2:B:103:LYS:HD2	2:B:401:GLU:N	2.30	0.42
2:B:398:TYR:CA	2:B:401:GLU:HG3	2.40	0.42
3:A:174:ALA:HB3	3:A:176:GLN:HG3	2.01	0.42
3:A:233:GLN:N	3:A:363:VAL:CG1	2.82	0.42
1:K:139:THR:CG2	1:K:140:LEU:N	2.82	0.42
1:K:191:LYS:N	1:K:191:LYS:CD	2.82	0.42
1:K:202:ILE:HG23	1:K:202:ILE:O	2.18	0.42
1:K:204:VAL:HG21	1:K:209:GLU:HB2	2.00	0.42
1:K:255:LEU:CD2	1:K:369:LEU:CA	2.77	0.42
1:K:347:LEU:HD23	1:K:351:GLU:CG	2.42	0.42
2:B:1:MET:CG	2:B:127:CYS:CB	2.95	0.42
2:B:107:THR:CG2	2:B:108:GLU:N	2.82	0.42
2:B:212:PHE:HB2	2:B:220:PRO:CG	2.48	0.42
2:B:241:ARG:NE	2:B:242:PHE:CG	2.86	0.42
2:B:274:THR:CG2	2:B:279:GLN:N	2.83	0.42
2:B:280:GLN:CG	2:B:281:TYR:N	2.81	0.42
2:B:293:MET:CE	2:B:367:PHE:CA	2.96	0.42
2:B:394:PHE:CZ	2:B:397:TRP:CZ3	3.07	0.42
3:A:3:GLU:OE1	3:A:54:SER:HB2	2.19	0.42
3:A:139:HIS:HE1	3:A:141:PHE:CE2	2.37	0.42
3:A:163:LYS:HE3	3:A:163:LYS:N	2.33	0.42
3:A:233:GLN:CG	3:A:234:ILE:N	2.83	0.42
3:A:248:LEU:HD13	3:A:353:VAL:O	2.19	0.42
3:A:302:MET:HG2	3:A:303:VAL:H	1.84	0.42
3:A:313:MET:CA	3:A:344:VAL:HG13	2.48	0.42
3:A:387:ALA:O	3:A:391:LEU:HD23	2.19	0.42
1:K:135:ILE:HD12	1:K:136:ILE:CG1	2.49	0.42
1:K:226:THR:CG2	1:K:232:SER:CB	2.95	0.42
1:K:320:LEU:CD2	1:K:324:LEU:CD1	2.95	0.42
2:B:30:ILE:HA	2:B:36:TYR:CD1	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:149:THR:CG2	2:B:188:SER:CA	2.95	0.42
2:B:273:LEU:HD21	2:B:297:LYS:CD	2.49	0.42
3:A:71:GLU:HA	3:A:72:PRO:HD3	1.82	0.42
3:A:111:GLY:HA2	3:A:114:ILE:HG22	2.01	0.42
3:A:135:PHE:O	3:A:135:PHE:HD1	2.02	0.42
3:A:185:TYR:HB2	3:A:408:TYR:OH	2.19	0.42
3:A:229:ARG:HE	3:A:363:VAL:HB	1.85	0.42
3:A:286:LEU:HD22	3:A:291:ILE:HD13	2.00	0.42
3:A:310:GLY:C	3:A:311:LYS:HE3	2.40	0.42
3:A:342:GLN:O	3:A:342:GLN:HG3	2.19	0.42
3:A:347:CYS:SG	3:A:349:THR:CG2	3.07	0.42
3:A:413:MET:HB3	3:A:413:MET:HE2	1.95	0.42
1:K:16:GLY:HA3	1:K:362:LYS:C	2.37	0.42
1:K:33:ARG:CZ	1:K:33:ARG:CA	2.97	0.42
1:K:255:LEU:HD23	1:K:369:LEU:HB3	1.06	0.42
2:B:9:ALA:HA	2:B:66:VAL:HB	2.02	0.42
2:B:15:GLN:OE1	2:B:15:GLN:HA	2.19	0.42
2:B:29:GLY:O	2:B:37:HIS:HB3	2.19	0.42
2:B:97:ALA:CB	2:B:143:THR:CB	2.95	0.42
2:B:151:LEU:CD1	2:B:152:ILE:HD13	2.49	0.42
2:B:154:LYS:CE	2:B:154:LYS:HA	2.44	0.42
2:B:267:MET:SD	2:B:299:MET:CE	3.07	0.42
2:B:292:GLN:HA	2:B:295:ASP:OD1	2.19	0.42
3:A:11:GLN:O	3:A:14:VAL:HG22	2.20	0.42
3:A:226:ASN:HB3	3:A:367:ASP:OD2	2.20	0.42
3:A:312:TYR:CD2	3:A:315:CYS:SG	3.12	0.42
1:K:272:ILE:CB	1:K:282:ALA:HB1	2.48	0.42
1:K:327:ARG:HH21	1:K:327:ARG:CG	2.33	0.42
2:B:36:TYR:CE1	2:B:38:GLY:N	2.84	0.42
2:B:58:LYS:HZ2	2:B:86:ARG:HG2	1.84	0.42
2:B:101:TRP:HB3	2:B:184:ASN:O	2.19	0.42
2:B:113:VAL:CG2	2:B:114:ASP:N	2.82	0.42
2:B:155:ILE:CG1	2:B:156:ARG:N	2.83	0.42
2:B:187:LEU:CD1	2:B:408:PHE:CD2	3.00	0.42
2:B:241:ARG:CD	2:B:242:PHE:N	2.82	0.42
2:B:276:ARG:HH11	2:B:280:GLN:NE2	2.18	0.42
2:B:314:ALA:HB3	2:B:368:ILE:HG12	1.99	0.42
2:B:374:ILE:CG2	2:B:375:GLN:N	2.81	0.42
2:B:381:ILE:HG12	2:B:384:GLN:NE2	2.33	0.42
2:B:382:SER:CB	2:B:415:MET:CE	2.98	0.42
3:A:4:CYS:SG	3:A:132:LEU:HD23	2.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:5:ILE:CG1	3:A:64:ARG:HB3	2.32	0.42
3:A:161:TYR:O	3:A:163:LYS:HD3	2.19	0.42
3:A:229:ARG:HG2	3:A:229:ARG:NH1	2.34	0.42
3:A:274:PRO:CB	3:A:276:ILE:HD11	2.49	0.42
1:K:27:PRO:CA	1:K:74:ALA:CB	2.97	0.42
1:K:60:LYS:N	1:K:60:LYS:CD	2.83	0.42
1:K:102:PHE:CZ	1:K:266:LEU:HB2	2.54	0.42
1:K:312:ARG:CA	1:K:318:ARG:HG2	2.43	0.42
2:B:1:MET:CG	2:B:2:ARG:N	2.83	0.42
2:B:116:VAL:CG2	2:B:117:LEU:N	2.82	0.42
2:B:154:LYS:HZ3	2:B:157:GLU:CB	2.32	0.42
2:B:210:ILE:HG23	2:B:297:LYS:CE	2.45	0.42
2:B:258:VAL:O	3:A:404:PHE:CZ	2.72	0.42
2:B:267:MET:HA	2:B:268:PRO:HD3	1.76	0.42
2:B:347:ASN:OD1	2:B:350:LYS:NZ	2.50	0.42
2:B:362:LYS:CE	2:B:362:LYS:CA	2.96	0.42
3:A:14:VAL:CG2	3:A:15:GLN:N	2.82	0.42
3:A:135:PHE:HE1	3:A:166:LYS:CB	2.33	0.42
3:A:138:PHE:O	3:A:139:HIS:HB3	2.20	0.42
3:A:202:PHE:CD1	3:A:267:PHE:CD1	3.07	0.42
3:A:234:ILE:HD12	3:A:235:VAL:HA	2.02	0.42
3:A:255:PHE:HZ	3:A:352:LYS:HB3	1.78	0.42
3:A:351:PHE:HA	3:A:352:LYS:HA	1.67	0.42
1:K:40:ILE:CG1	1:K:41:VAL:N	2.83	0.42
1:K:293:LEU:HG	3:A:405:VAL:HG12	2.01	0.42
2:B:181:GLU:OE2	5:B:501:G2P:H5'1	2.20	0.42
2:B:187:LEU:HD22	2:B:187:LEU:N	2.34	0.42
2:B:207:LEU:CG	2:B:208:TYR:N	2.83	0.42
2:B:294:PHE:N	2:B:294:PHE:CD2	2.87	0.42
2:B:306:ARG:NH2	2:B:340:TYR:CD1	2.88	0.42
2:B:324:LYS:CD	3:A:221:ARG:CB	2.98	0.42
2:B:386:THR:O	2:B:389:PHE:HB3	2.19	0.42
3:A:11:GLN:HB3	3:A:74:VAL:HG11	2.02	0.42
3:A:53:PHE:CA	3:A:63:PRO:HA	2.49	0.42
3:A:62:VAL:HB	3:A:88:HIS:NE2	2.35	0.42
3:A:70:LEU:HD22	3:A:99:ALA:CA	2.49	0.42
3:A:153:LEU:CD1	3:A:157:LEU:CG	2.97	0.42
3:A:305:CYS:SG	3:A:383:ALA:CB	3.08	0.42
3:A:314:ALA:HA	3:A:343:PHE:CE2	2.55	0.42
3:A:387:ALA:CA	3:A:390:ARG:CZ	2.97	0.42
3:A:402:ARG:HH11	3:A:402:ARG:HG2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:40:ILE:HB	1:K:53:ARG:HB2	2.01	0.42
1:K:136:ILE:HB	1:K:137:PRO:CD	2.50	0.42
1:K:321:GLN:C	1:K:324:LEU:HD23	2.40	0.42
2:B:65:LEU:N	2:B:65:LEU:CD1	2.83	0.42
2:B:138:SER:HB2	2:B:169:VAL:HG22	1.99	0.42
2:B:164:MET:HB2	2:B:164:MET:HE2	1.84	0.42
2:B:207:LEU:HD11	2:B:225:LEU:HD22	2.00	0.42
2:B:217:LEU:HD22	2:B:218:THR:H	1.85	0.42
2:B:258:VAL:CG1	2:B:263:LEU:HB3	2.49	0.42
3:A:114:ILE:CG2	3:A:115:ILE:N	2.83	0.42
3:A:203:MET:SD	3:A:267:PHE:HZ	2.43	0.42
3:A:254:GLU:OE2	3:A:255:PHE:HA	2.19	0.42
3:A:274:PRO:HG2	3:A:286:LEU:CD2	2.50	0.42
3:A:384:ILE:CG1	3:A:385:ALA:N	2.83	0.42
3:A:390:ARG:CA	3:A:393:HIS:CD2	2.99	0.42
3:A:413:MET:HB3	3:A:417:GLU:OE2	2.20	0.42
1:K:28:PHE:HE1	1:K:39:SER:N	2.18	0.42
1:K:109:THR:HG22	1:K:335:THR:HB	1.93	0.42
1:K:295:LEU:HD23	1:K:295:LEU:C	2.39	0.42
1:K:352:TYR:O	1:K:352:TYR:HD2	2.03	0.42
2:B:2:ARG:HG3	2:B:2:ARG:O	2.20	0.42
2:B:14:ASN:HB3	2:B:72:THR:HG21	2.01	0.42
2:B:28:HIS:CG	2:B:47:ILE:HG23	2.55	0.42
2:B:105:HIS:NE2	2:B:150:LEU:HA	2.35	0.42
2:B:285:THR:N	2:B:288:GLU:CB	2.83	0.42
2:B:321:MET:CG	2:B:322:SER:N	2.83	0.42
2:B:343:GLU:H	2:B:343:GLU:CD	2.23	0.42
2:B:407:GLU:HG3	2:B:408:PHE:N	2.35	0.42
3:A:125:LEU:HD12	3:A:128:GLN:HG3	2.01	0.42
3:A:135:PHE:HE1	3:A:166:LYS:CA	2.33	0.42
3:A:244:PHE:N	3:A:244:PHE:CD1	2.85	0.42
1:K:30:LEU:HD12	1:K:33:ARG:HB2	2.01	0.42
2:B:4:ILE:N	2:B:4:ILE:CD1	2.83	0.42
2:B:36:TYR:CE1	2:B:38:GLY:HA3	2.53	0.42
2:B:152:ILE:HA	2:B:155:ILE:HG12	2.01	0.42
2:B:190:HIS:CG	2:B:411:ALA:CB	3.02	0.42
2:B:260:PHE:CG	3:A:404:PHE:N	2.84	0.42
2:B:315:ALA:HA	2:B:366:THR:HG23	2.02	0.42
2:B:368:ILE:HG22	2:B:369:GLY:N	2.35	0.42
3:A:107:HIS:ND1	3:A:108:TYR:CE1	2.88	0.42
1:K:234:ARG:HD3	1:K:234:ARG:HA	1.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:298:VAL:HB	1:K:310:PRO:HG2	2.01	0.41
2:B:23:VAL:HG11	2:B:230:SER:HB2	2.01	0.41
2:B:250:LEU:C	2:B:253:LEU:HG	2.40	0.41
2:B:260:PHE:CD1	2:B:261:PRO:HD2	2.55	0.41
2:B:293:MET:HE3	2:B:367:PHE:CB	2.42	0.41
2:B:296:ALA:CB	2:B:305:PRO:HD3	2.50	0.41
2:B:313:VAL:HG13	2:B:367:PHE:CD2	2.55	0.41
3:A:122:ILE:CG1	3:A:123:ARG:N	2.83	0.41
3:A:188:ILE:CG1	3:A:395:PHE:CD1	3.02	0.41
3:A:306:ASP:CB	3:A:309:HIS:CE1	3.03	0.41
3:A:311:LYS:H	3:A:311:LYS:HD2	1.84	0.41
3:A:318:LEU:HD13	3:A:319:TYR:C	2.40	0.41
3:A:425:MET:SD	3:A:429:GLU:HG2	2.59	0.41
3:A:432:TYR:O	3:A:435:VAL:HG13	2.20	0.41
1:K:22:VAL:HG11	1:K:70:MET:HE2	2.01	0.41
1:K:92:GLU:CB	1:K:97:TYR:CD2	3.01	0.41
1:K:347:LEU:O	1:K:351:GLU:HG2	2.20	0.41
1:K:365:VAL:CG1	1:K:367:GLN:CG	2.95	0.41
2:B:4:ILE:HG22	2:B:5:VAL:O	2.19	0.41
2:B:68:LEU:CD2	2:B:68:LEU:C	2.89	0.41
2:B:138:SER:OG	5:B:501:G2P:O2A	2.37	0.41
2:B:151:LEU:HD12	2:B:152:ILE:HA	2.02	0.41
2:B:172:SER:HB3	2:B:205:GLU:N	2.35	0.41
2:B:251:ARG:HH22	3:A:102:ASN:N	2.18	0.41
3:A:21:TRP:CE2	3:A:65:ALA:CB	3.00	0.41
3:A:188:ILE:N	3:A:188:ILE:CD1	2.83	0.41
3:A:318:LEU:CD1	3:A:320:ARG:CG	2.96	0.41
3:A:325:PRO:O	3:A:328:VAL:HB	2.20	0.41
1:K:94:ILE:HA	1:K:245:MET:CE	2.50	0.41
1:K:159:SER:CB	1:K:172:LEU:HD13	2.47	0.41
1:K:173:ASN:HB3	1:K:176:SER:H	1.83	0.41
1:K:295:LEU:O	1:K:296:GLY:C	2.55	0.41
2:B:23:VAL:CG1	2:B:24:ILE:N	2.83	0.41
2:B:165:ASN:ND2	2:B:167:PHE:CZ	2.89	0.41
2:B:260:PHE:N	2:B:262:ARG:NH2	2.68	0.41
2:B:260:PHE:HB3	3:A:406:HIS:NE2	2.36	0.41
2:B:263:LEU:O	2:B:263:LEU:HD13	2.20	0.41
3:A:102:ASN:ND2	3:A:407:TRP:CE2	2.86	0.41
3:A:171:ILE:HD12	5:A:501:G2P:H1'	1.94	0.41
3:A:224:TYR:CE2	3:A:227:LEU:HD23	2.55	0.41
3:A:250:VAL:HG22	3:A:254:GLU:OE1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:255:PHE:C	3:A:259:LEU:HG	2.40	0.41
3:A:296:PHE:N	3:A:296:PHE:CD2	2.85	0.41
3:A:370:LYS:HD3	3:A:370:LYS:C	2.40	0.41
3:A:389:ALA:N	3:A:425:MET:CE	2.83	0.41
1:K:97:TYR:OH	1:K:363:PRO:HB2	2.20	0.41
1:K:272:ILE:HD11	3:A:411:GLU:C	2.40	0.41
1:K:272:ILE:CG2	1:K:282:ALA:HB1	2.50	0.41
1:K:342:ASN:C	1:K:342:ASN:HD22	2.23	0.41
2:B:112:LEU:HD11	2:B:151:LEU:CA	2.49	0.41
2:B:251:ARG:HG3	3:A:100:ALA:CB	2.51	0.41
2:B:345:ILE:HG23	2:B:348:ASN:ND2	2.35	0.41
3:A:9:VAL:CG2	3:A:149:PHE:HD1	2.32	0.41
3:A:122:ILE:CD1	3:A:123:ARG:N	2.82	0.41
3:A:192:HIS:CD2	3:A:193:THR:HG23	2.55	0.41
3:A:210:TYR:CZ	3:A:227:LEU:HD22	2.55	0.41
3:A:275:VAL:HG13	3:A:280:LYS:NZ	2.34	0.41
3:A:311:LYS:N	3:A:311:LYS:CD	2.83	0.41
3:A:393:HIS:O	3:A:396:ASP:HB3	2.19	0.41
1:K:162:GLU:HG3	1:K:235:SER:CB	2.29	0.41
1:K:272:ILE:HB	1:K:282:ALA:CB	2.50	0.41
1:K:355:ARG:HG3	4:K:501:MZK:C16	2.51	0.41
2:B:99:ASN:O	2:B:142:GLY:HA3	2.20	0.41
2:B:186:THR:CG2	2:B:187:LEU:N	2.82	0.41
2:B:304:ASP:CB	2:B:307:HIS:CE1	3.04	0.41
3:A:36:MET:HB2	3:A:38:SER:HB3	2.03	0.41
3:A:79:ARG:NH1	3:A:92:LEU:HG	2.36	0.41
3:A:118:VAL:CG2	3:A:119:LEU:N	2.82	0.41
3:A:143:GLY:HA3	5:A:501:G2P:PB	2.60	0.41
3:A:262:TYR:CB	3:A:264:ARG:HD3	2.35	0.41
3:A:270:ALA:HB2	3:A:378:LEU:HD23	2.01	0.41
3:A:352:LYS:CG	3:A:353:VAL:N	2.83	0.41
1:K:28:PHE:CZ	1:K:37:ALA:C	2.93	0.41
1:K:227:LEU:CD1	1:K:228:MET:CE	2.98	0.41
1:K:258:ILE:N	1:K:368:LYS:HE2	2.33	0.41
2:B:192:LEU:HD13	2:B:192:LEU:O	2.21	0.41
2:B:350:LYS:NZ	3:A:179:THR:O	2.54	0.41
3:A:1:MET:N	3:A:47:ASP:HA	2.36	0.41
3:A:13:GLY:O	3:A:16:ILE:HG22	2.20	0.41
3:A:242:LEU:HB2	3:A:252:LEU:CG	2.50	0.41
3:A:253:THR:O	3:A:256:GLN:HB3	2.21	0.41
3:A:308:ARG:CD	3:A:308:ARG:N	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:321:GLY:CA	3:A:372:GLN:HE21	2.25	0.41
3:A:336:LYS:HD2	3:A:336:LYS:HA	1.76	0.41
1:K:272:ILE:HG22	1:K:282:ALA:HA	2.01	0.41
1:K:312:ARG:CD	2:B:414:ASN:HD21	2.31	0.41
1:K:343:LEU:HD23	1:K:343:LEU:N	2.12	0.41
2:B:47:ILE:CD1	2:B:241:ARG:HH12	2.33	0.41
2:B:106:TYR:HD2	2:B:106:TYR:N	2.18	0.41
2:B:137:HIS:HD2	2:B:144:GLY:O	2.04	0.41
2:B:183:TYR:CE1	2:B:385:PHE:CD1	3.09	0.41
2:B:190:HIS:CG	2:B:411:ALA:HA	2.56	0.41
2:B:271:ALA:CB	2:B:293:MET:SD	3.07	0.41
2:B:303:CYS:CB	2:B:371:SER:CB	2.99	0.41
2:B:410:GLU:CD	2:B:413:SER:HB2	2.41	0.41
3:A:36:MET:HA	3:A:37:PRO:HD3	1.88	0.41
3:A:74:VAL:CG2	3:A:75:ILE:N	2.83	0.41
3:A:87:PHE:CE1	3:A:91:GLN:HG2	2.55	0.41
3:A:214:ARG:CG	3:A:215:ARG:N	2.82	0.41
3:A:219:ILE:HG22	3:A:221:ARG:N	2.36	0.41
3:A:219:ILE:O	3:A:220:GLU:O	2.39	0.41
3:A:272:TYR:CG	3:A:273:ALA:N	2.86	0.41
1:K:17:LYS:HG3	1:K:329:ARG:NE	2.35	0.41
1:K:97:TYR:HA	1:K:366:ASN:OD1	2.21	0.41
1:K:145:GLU:OE2	1:K:207:LYS:NZ	2.49	0.41
1:K:168:LEU:HB2	1:K:182:LEU:HB2	2.02	0.41
1:K:352:TYR:CG	4:K:501:MZK:C15	3.04	0.41
2:B:154:LYS:O	2:B:157:GLU:HB3	2.21	0.41
2:B:221:THR:HG22	2:B:223:GLY:N	2.35	0.41
3:A:20:CYS:HA	3:A:232:SER:OG	2.21	0.41
3:A:108:TYR:C	3:A:112:LYS:HZ2	2.24	0.41
3:A:224:TYR:CZ	5:A:501:G2P:C5	3.04	0.41
1:K:26:ARG:HG2	1:K:109:THR:HA	2.01	0.41
1:K:77:LYS:CE	1:K:78:GLN:HB2	2.51	0.41
1:K:134:GLY:CA	1:K:138:ARG:CG	2.99	0.41
1:K:139:THR:O	1:K:143:ILE:HG13	2.21	0.41
1:K:190:ASN:CB	1:K:193:GLY:H	2.32	0.41
2:B:19:LYS:HA	2:B:19:LYS:NZ	2.36	0.41
2:B:31:ASP:OD1	2:B:37:HIS:HA	2.21	0.41
2:B:32:PRO:HB3	2:B:81:PHE:CE1	2.56	0.41
2:B:34:GLY:O	2:B:58:LYS:HA	2.20	0.41
2:B:94:GLN:HE21	2:B:94:GLN:HB3	1.52	0.41
2:B:127:CYS:SG	2:B:130:LEU:CD1	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:130:LEU:CD2	2:B:133:PHE:HE1	2.10	0.41
2:B:186:THR:HG21	2:B:385:PHE:CE1	2.56	0.41
2:B:196:THR:HG22	2:B:198:GLU:N	2.36	0.41
2:B:199:THR:HG23	2:B:199:THR:O	2.21	0.41
2:B:213:ARG:HB2	2:B:213:ARG:CZ	2.51	0.41
2:B:252:LYS:HG2	3:A:100:ALA:CB	2.51	0.41
2:B:255:VAL:CG1	2:B:256:ASN:N	2.83	0.41
2:B:266:PHE:HE1	2:B:312:THR:HG23	1.85	0.41
2:B:323:MET:HE1	2:B:326:VAL:CG2	2.44	0.41
2:B:324:LYS:CG	3:A:221:ARG:CB	2.95	0.41
2:B:337:ASN:CB	2:B:340:TYR:CD2	3.03	0.41
2:B:347:ASN:CG	2:B:350:LYS:NZ	2.74	0.41
2:B:347:ASN:HD21	2:B:350:LYS:HZ3	1.66	0.41
3:A:24:TYR:CA	3:A:27:GLU:HG3	2.51	0.41
3:A:35:GLN:NE2	3:A:40:LYS:HE3	2.36	0.41
3:A:99:ALA:CB	3:A:101:ASN:H	2.34	0.41
3:A:108:TYR:O	3:A:112:LYS:HD3	2.21	0.41
3:A:130:THR:CG2	3:A:131:GLY:N	2.82	0.41
3:A:150:THR:CG2	3:A:151:SER:N	2.82	0.41
3:A:234:ILE:CD1	3:A:235:VAL:N	2.82	0.41
3:A:245:ASP:CA	3:A:249:ASN:HB2	2.45	0.41
3:A:251:ASP:CG	3:A:254:GLU:HB3	2.40	0.41
3:A:262:TYR:CD2	3:A:265:ILE:HG12	2.54	0.41
3:A:298:PRO:CG	3:A:308:ARG:HH12	2.34	0.41
3:A:320:ARG:HD3	3:A:360:PRO:CA	2.43	0.41
3:A:347:CYS:SG	3:A:349:THR:HG23	2.61	0.41
3:A:351:PHE:HB2	3:A:352:LYS:HA	2.03	0.41
1:K:54:THR:HG23	1:K:62:SER:HB2	2.02	0.41
1:K:54:THR:CB	1:K:56:GLY:H	2.34	0.41
1:K:59:ASP:C	1:K:61:SER:H	2.24	0.41
1:K:272:ILE:CG1	1:K:273:GLY:N	2.82	0.41
2:B:24:ILE:CG2	2:B:28:HIS:NE2	2.82	0.41
2:B:259:PRO:CA	3:A:404:PHE:CE2	3.03	0.41
2:B:260:PHE:HD1	2:B:260:PHE:HA	1.72	0.41
2:B:269:GLY:HA3	2:B:367:PHE:HD1	1.86	0.41
3:A:7:ILE:O	3:A:138:PHE:CD1	2.74	0.41
3:A:28:HIS:CD2	3:A:41:THR:HG23	2.56	0.41
3:A:242:LEU:HD23	3:A:252:LEU:N	2.33	0.41
3:A:261:PRO:C	3:A:262:TYR:CD1	2.95	0.41
3:A:276:ILE:HB	3:A:368:LEU:HD22	2.03	0.41
3:A:278:ALA:O	3:A:282:TYR:CD1	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:306:ASP:CB	3:A:308:ARG:HH21	2.34	0.41
3:A:311:LYS:N	3:A:311:LYS:CE	2.83	0.41
3:A:318:LEU:O	3:A:319:TYR:CD2	2.74	0.41
1:K:16:GLY:HA3	1:K:363:PRO:N	2.35	0.40
1:K:141:HIS:HB2	1:K:211:TYR:OH	2.21	0.40
2:B:6:HIS:C	2:B:7:ILE:HD13	2.41	0.40
2:B:21:TRP:CZ2	2:B:62:ARG:O	2.74	0.40
2:B:152:ILE:HG21	2:B:192:LEU:CD2	2.51	0.40
2:B:175:VAL:CG1	2:B:176:SER:N	2.84	0.40
2:B:214:THR:HB	2:B:275:SER:C	2.40	0.40
2:B:245:GLN:HE22	2:B:355:ASP:HA	1.85	0.40
2:B:320:ARG:CZ	2:B:320:ARG:N	2.83	0.40
2:B:390:ARG:CZ	2:B:390:ARG:CA	2.96	0.40
3:A:11:GLN:HA	3:A:74:VAL:HG11	2.03	0.40
3:A:111:GLY:HA2	3:A:114:ILE:CG2	2.51	0.40
3:A:243:ARG:C	3:A:244:PHE:CD1	2.94	0.40
3:A:255:PHE:CD1	3:A:259:LEU:HD21	2.56	0.40
3:A:311:LYS:HA	3:A:342:GLN:HG2	1.99	0.40
1:K:19:ILE:HD11	1:K:332:ILE:HG13	2.03	0.40
2:B:10:GLY:N	2:B:147:MET:SD	2.94	0.40
2:B:20:PHE:CZ	2:B:24:ILE:CD1	3.01	0.40
2:B:193:VAL:HG13	2:B:194:GLU:CD	2.41	0.40
2:B:250:LEU:HA	2:B:253:LEU:CG	2.51	0.40
2:B:251:ARG:NE	3:A:105:ARG:NE	2.70	0.40
2:B:309:ARG:HG2	2:B:425:TYR:O	2.22	0.40
2:B:378:PHE:O	2:B:381:ILE:HB	2.20	0.40
2:B:396:HIS:ND1	2:B:397:TRP:CD1	2.89	0.40
3:A:16:ILE:CG2	3:A:17:GLY:N	2.82	0.40
3:A:68:VAL:O	3:A:68:VAL:HG23	2.21	0.40
3:A:308:ARG:H	3:A:308:ARG:CD	2.34	0.40
1:K:50:VAL:CG2	1:K:71:VAL:CG1	2.99	0.40
1:K:144:PHE:CB	1:K:207:LYS:CG	2.97	0.40
2:B:200:TYR:CD1	2:B:268:PRO:HD3	2.56	0.40
2:B:253:LEU:CB	2:B:257:MET:HE1	2.40	0.40
3:A:63:PRO:O	3:A:87:PHE:CE1	2.75	0.40
3:A:179:THR:C	3:A:183:GLU:OE1	2.59	0.40
3:A:304:LYS:HG3	3:A:304:LYS:O	2.22	0.40
3:A:318:LEU:H	3:A:376:CYS:H	1.69	0.40
1:K:15:LYS:HE3	1:K:362:LYS:CB	2.50	0.40
1:K:27:PRO:N	1:K:74:ALA:HB1	2.37	0.40
1:K:162:GLU:CD	1:K:235:SER:OG	2.59	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:255:LEU:CD2	1:K:369:LEU:HA	2.50	0.40
1:K:368:LYS:HD2	1:K:368:LYS:N	2.37	0.40
2:B:51:TYR:CE2	2:B:61:PRO:HA	2.56	0.40
2:B:108:GLU:CD	2:B:147:MET:HA	2.41	0.40
2:B:186:THR:CG2	2:B:385:PHE:HE1	2.33	0.40
2:B:274:THR:CG2	2:B:275:SER:N	2.83	0.40
2:B:404:ASP:O	2:B:408:PHE:CD1	2.75	0.40
3:A:1:MET:CB	3:A:47:ASP:CA	2.96	0.40
3:A:3:GLU:HG2	3:A:50:ASN:C	2.41	0.40
3:A:5:ILE:HG23	3:A:65:ALA:N	2.36	0.40
3:A:10:GLY:HA2	3:A:145:THR:HB	2.03	0.40
3:A:11:GLN:HG3	3:A:71:GLU:OE1	2.22	0.40
3:A:153:LEU:HD11	3:A:157:LEU:CG	2.52	0.40
3:A:156:ARG:HB3	3:A:156:ARG:HH11	1.84	0.40
3:A:346:TRP:HZ2	3:A:437:VAL:O	2.04	0.40
3:A:349:THR:OG1	3:A:351:PHE:HD1	2.01	0.40
3:A:407:TRP:CE3	3:A:407:TRP:O	2.75	0.40
1:K:204:VAL:HG23	1:K:206:ASN:O	2.22	0.40
1:K:288:ILE:O	1:K:292:LEU:HD13	2.21	0.40
1:K:311:TYR:CD2	1:K:321:GLN:CD	2.95	0.40
1:K:369:LEU:N	1:K:369:LEU:CD2	2.84	0.40
2:B:43:GLN:OE1	2:B:47:ILE:HD11	2.21	0.40
2:B:70:PRO:HD3	2:B:94:GLN:O	2.21	0.40
2:B:81:PHE:N	2:B:81:PHE:CD1	2.88	0.40
2:B:196:THR:HG22	2:B:198:GLU:H	1.86	0.40
3:A:36:MET:HB2	3:A:38:SER:H	1.85	0.40
3:A:56:THR:CG2	3:A:57:GLY:N	2.82	0.40
3:A:63:PRO:CB	3:A:87:PHE:CE1	3.04	0.40
3:A:70:LEU:HD22	3:A:99:ALA:HB2	2.04	0.40
3:A:215:ARG:CD	3:A:216:ASN:N	2.84	0.40
3:A:377:MET:N	3:A:377:MET:SD	2.95	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	K	328/391 (84%)	322 (98%)	6 (2%)	0	100	100
2	B	427/429 (100%)	421 (99%)	4 (1%)	2 (0%)	29	66
3	A	436/438 (100%)	422 (97%)	10 (2%)	4 (1%)	17	54
All	All	1191/1258 (95%)	1165 (98%)	20 (2%)	6 (0%)	32	66

All (6) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	261	PRO
3	A	179	THR
3	A	100	ALA
3	A	405	VAL
3	A	406	HIS
2	B	347	ASN

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	K	292/343 (85%)	255 (87%)	37 (13%)	4	23
2	B	369/369 (100%)	299 (81%)	70 (19%)	1	10
3	A	369/369 (100%)	306 (83%)	63 (17%)	2	14
All	All	1030/1081 (95%)	860 (84%)	170 (16%)	5	15

All (170) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	K	15	LYS
1	K	17	LYS
1	K	28	PHE
1	K	33	ARG

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Mol	Chain	Res	Type
1	K	34	LYS
1	K	38	HIS
1	K	54	THR
1	K	60	LYS
1	K	77	LYS
1	K	84	SER
1	K	95	MET
1	K	97	TYR
1	K	104	TYR
1	K	171	LEU
1	K	172	LEU
1	K	181	ARG
1	K	182	LEU
1	K	187	ASP
1	K	189	ARG
1	K	190	ASN
1	K	191	LYS
1	K	202	ILE
1	K	207	LYS
1	K	208	ASP
1	K	228	MET
1	K	247	GLU
1	K	257	LYS
1	K	266	LEU
1	K	272	ILE
1	K	289	ASN
1	K	327	ARG
1	K	342	ASN
1	K	343	LEU
1	K	345	GLU
1	K	352	TYR
1	K	367	GLN
1	K	368	LYS
2	B	3	GLU
2	B	6	HIS
2	B	8	GLN
2	B	19	LYS
2	B	21	TRP
2	B	22	GLU
2	B	31	ASP
2	B	37	HIS
2	B	43	GLN

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Mol	Chain	Res	Type
2	B	44	LEU
2	B	50	TYR
2	B	68	LEU
2	B	73	MET
2	B	83	GLN
2	B	88	ASP
2	B	94	GLN
2	B	101	TRP
2	B	103	LYS
2	B	114	ASP
2	B	122	LYS
2	B	134	GLN
2	B	145	SER
2	B	147	MET
2	B	154	LYS
2	B	156	ARG
2	B	158	GLU
2	B	161	ASP
2	B	183	TYR
2	B	184	ASN
2	B	190	HIS
2	B	197	ASP
2	B	208	TYR
2	B	212	PHE
2	B	213	ARG
2	B	216	LYS
2	B	217	LEU
2	B	222	TYR
2	B	227	HIS
2	B	241	ARG
2	B	242	PHE
2	B	251	ARG
2	B	252	LYS
2	B	260	PHE
2	B	262	ARG
2	B	265	PHE
2	B	266	PHE
2	B	267	MET
2	B	273	LEU
2	B	276	ARG
2	B	291	GLN
2	B	292	GLN

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Mol	Chain	Res	Type
2	B	297	LYS
2	B	306	ARG
2	B	307	HIS
2	B	320	ARG
2	B	324	LYS
2	B	329	GLN
2	B	330	MET
2	B	331	LEU
2	B	336	LYS
2	B	343	GLU
2	B	350	LYS
2	B	361	LEU
2	B	363	MET
2	B	375	GLN
2	B	376	GLU
2	B	383	GLU
2	B	414	ASN
2	B	420	SER
2	B	423	GLN
3	A	15	GLN
3	A	18	ASN
3	A	22	GLU
3	A	31	GLN
3	A	46	ASP
3	A	53	PHE
3	A	60	LYS
3	A	64	ARG
3	A	84	ARG
3	A	85	GLN
3	A	87	PHE
3	A	91	GLN
3	A	96	LYS
3	A	101	ASN
3	A	103	TYR
3	A	105	ARG
3	A	120	ASP
3	A	128	GLN
3	A	135	PHE
3	A	154	MET
3	A	156	ARG
3	A	163	LYS
3	A	164	LYS

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Mol	Chain	Res	Type
3	A	179	THR
3	A	203	MET
3	A	210	TYR
3	A	211	ASP
3	A	214	ARG
3	A	215	ARG
3	A	218	ASP
3	A	220	GLU
3	A	221	ARG
3	A	224	TYR
3	A	229	ARG
3	A	242	LEU
3	A	243	ARG
3	A	254	GLU
3	A	255	PHE
3	A	264	ARG
3	A	267	PHE
3	A	285	GLN
3	A	302	MET
3	A	308	ARG
3	A	309	HIS
3	A	311	LYS
3	A	313	MET
3	A	320	ARG
3	A	326	LYS
3	A	339	ARG
3	A	343	PHE
3	A	346	TRP
3	A	351	PHE
3	A	352	LYS
3	A	392	ASP
3	A	394	LYS
3	A	396	ASP
3	A	401	LYS
3	A	405	VAL
3	A	407	TRP
3	A	423	GLU
3	A	424	ASP
3	A	430	LYS
3	A	432	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (51) such sidechains are listed below:

Mol	Chain	Res	Type
1	K	98	ASN
1	K	150	ASN
1	K	173	ASN
1	K	190	ASN
1	K	205	HIS
1	K	271	ASN
1	K	287	ASN
1	K	289	ASN
1	K	290	GLN
1	K	308	HIS
1	K	342	ASN
1	K	367	GLN
2	B	11	GLN
2	B	28	HIS
2	B	94	GLN
2	B	105	HIS
2	B	131	GLN
2	B	226	ASN
2	B	245	GLN
2	B	279	GLN
2	B	280	GLN
2	B	291	GLN
2	B	292	GLN
2	B	334	GLN
2	B	335	ASN
2	B	347	ASN
2	B	348	ASN
2	B	375	GLN
2	B	414	ASN
2	B	424	GLN
2	B	426	GLN
3	A	8	HIS
3	A	15	GLN
3	A	31	GLN
3	A	61	HIS
3	A	88	HIS
3	A	91	GLN
3	A	101	ASN
3	A	139	HIS
3	A	176	GLN
3	A	186	ASN
3	A	216	ASN
3	A	228	ASN

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Mol	Chain	Res	Type
3	A	233	GLN
3	A	283	HIS
3	A	285	GLN
3	A	300	ASN
3	A	301	GLN
3	A	329	ASN
3	A	342	GLN
3	A	358	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 5 ligands modelled in this entry, 2 are monoatomic - leaving 3 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
4	MZK	K	501	-	23,23,23	0.94	1 (4%)	34,34,34	0.78	0
5	G2P	A	501	6	27,34,34	1.11	1 (3%)	33,54,54	1.99	5 (15%)
5	G2P	B	501	6	27,34,34	1.19	3 (11%)	33,54,54	2.13	7 (21%)

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. '2' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	MZK	K	501	-	-	0/10/19/19	0/3/3/3
5	G2P	A	501	6	-	7/15/38/38	0/3/3/3
5	G2P	B	501	6	-	4/15/38/38	0/3/3/3

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	K	501	MZK	C7-N1	3.20	1.38	1.35
5	B	501	G2P	C6-N1	3.01	1.38	1.33
5	A	501	G2P	C6-N1	2.99	1.38	1.33
5	B	501	G2P	PA-O1A	-2.46	1.50	1.56
5	B	501	G2P	PB-O1B	-2.40	1.50	1.56

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	A	501	G2P	C5-C6-N1	-8.13	112.31	123.43
5	B	501	G2P	C5-C6-N1	-8.02	112.46	123.43
5	B	501	G2P	C2-N1-C6	5.73	125.04	115.93
5	A	501	G2P	C2-N1-C6	5.70	124.99	115.93
5	B	501	G2P	O1B-PB-C3A	3.17	119.55	106.58
5	B	501	G2P	N3-C2-N1	-3.05	123.15	127.22
5	B	501	G2P	O1A-PA-C3A	2.94	118.59	106.58
5	A	501	G2P	N3-C2-N1	-2.92	123.33	127.22
5	B	501	G2P	C4-C5-C6	-2.47	118.44	120.80
5	A	501	G2P	C4-C5-C6	-2.45	118.46	120.80
5	B	501	G2P	C2-N3-C4	-2.26	112.77	115.36
5	A	501	G2P	C2-N3-C4	-2.17	112.88	115.36

There are no chirality outliers.

All (11) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	B	501	G2P	PB-C3A-PA-O1A
5	B	501	G2P	PB-C3A-PA-O2A
5	B	501	G2P	PB-C3A-PA-O5'
5	A	501	G2P	PB-O3B-PG-O1G
5	A	501	G2P	PB-C3A-PA-O1A

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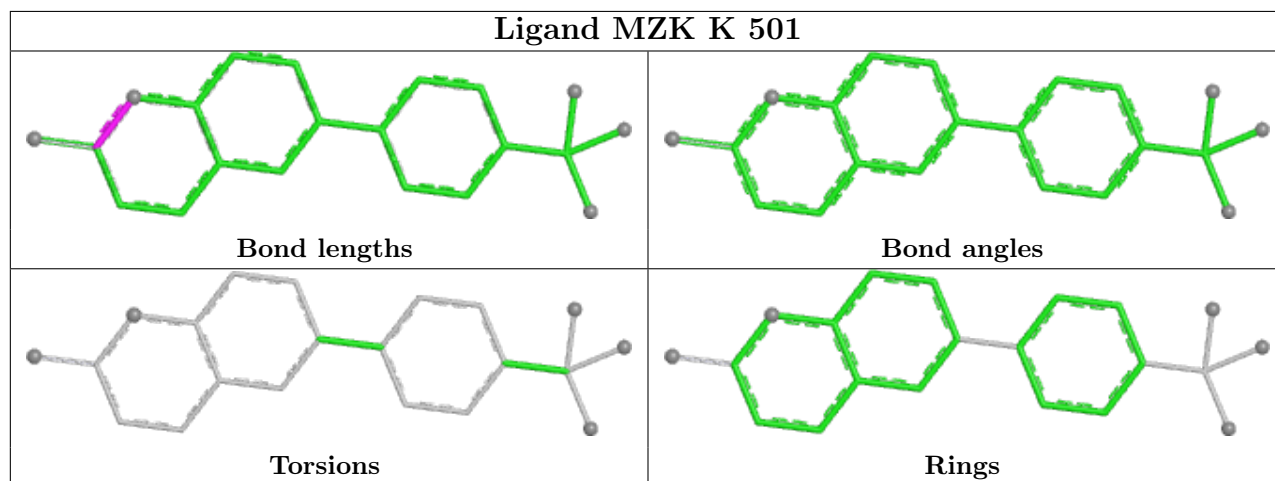
Mol	Chain	Res	Type	Atoms
5	A	501	G2P	PB-C3A-PA-O2A
5	A	501	G2P	PB-C3A-PA-O5'
5	A	501	G2P	C5'-O5'-PA-O1A
5	B	501	G2P	PB-O3B-PG-O3G
5	A	501	G2P	PB-O3B-PG-O3G
5	A	501	G2P	PB-O3B-PG-O2G

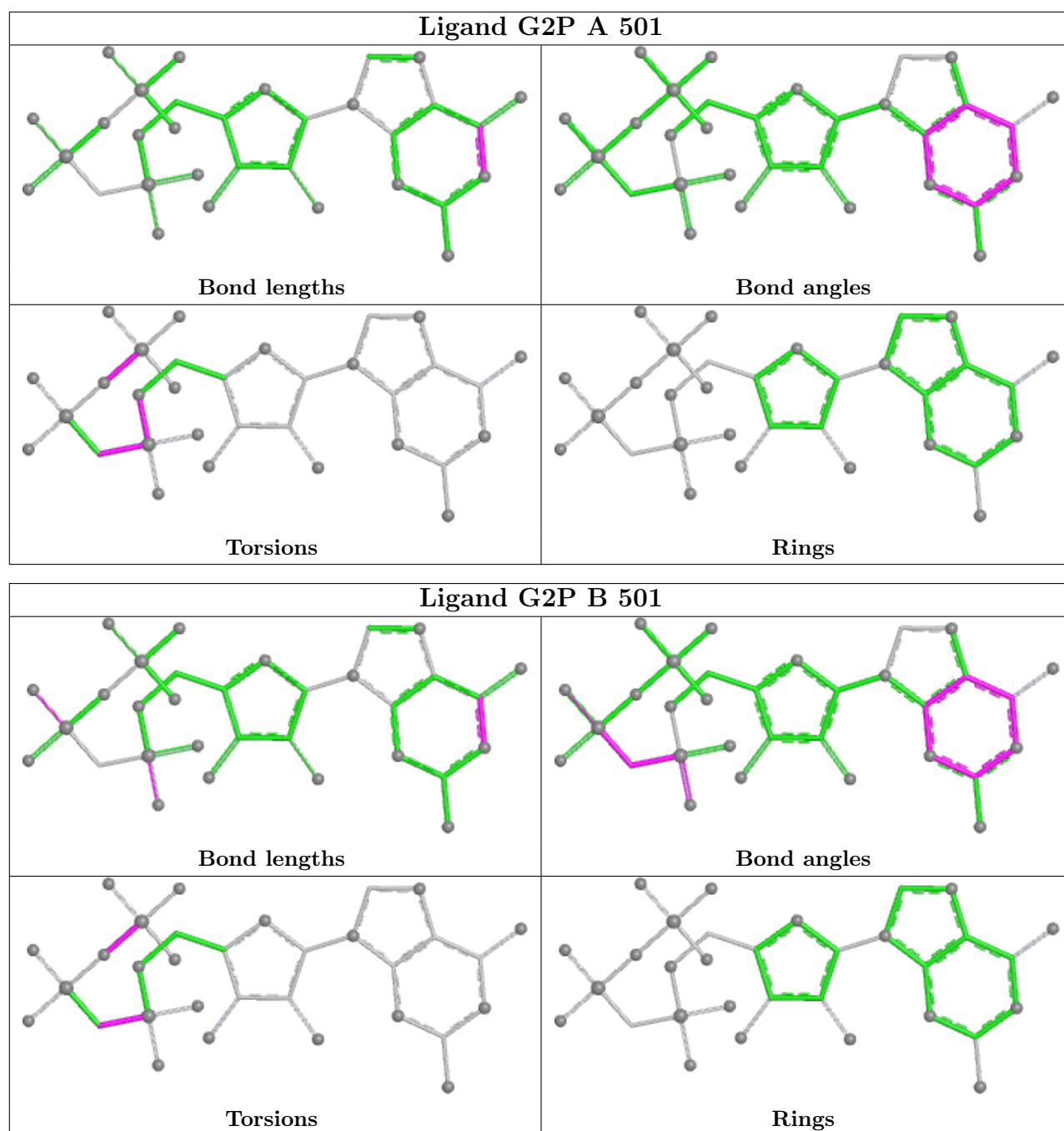
There are no ring outliers.

3 monomers are involved in 52 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	K	501	MZK	14	0
5	A	501	G2P	18	0
5	B	501	G2P	20	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.





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.

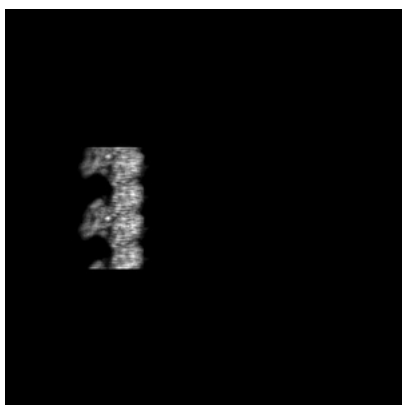
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-10421. These allow visual inspection of the internal detail of the map and identification of artifacts.

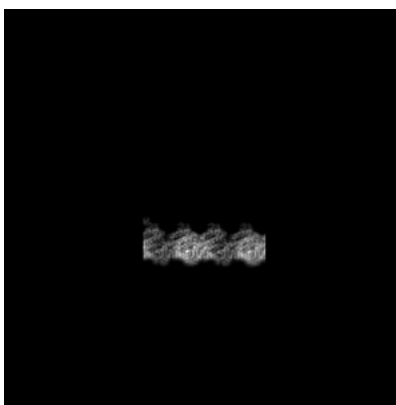
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

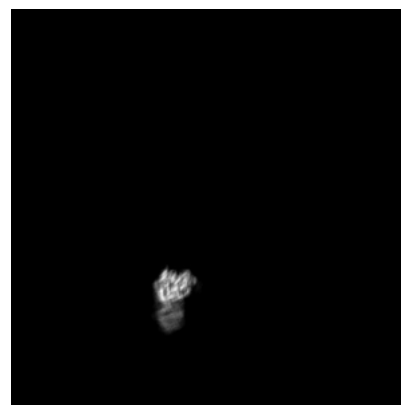
6.1.1 Primary map



X



Y

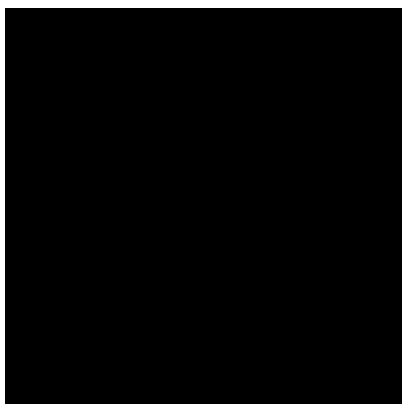


Z

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

6.2 Central slices [i](#)

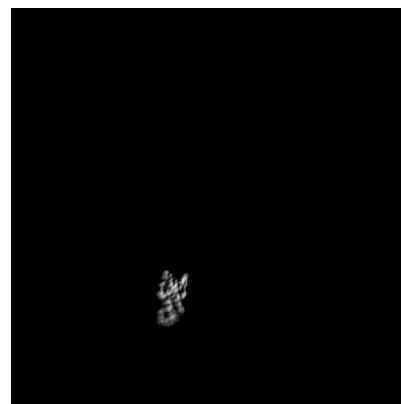
6.2.1 Primary map



X Index: 255



Y Index: 255



Z Index: 255

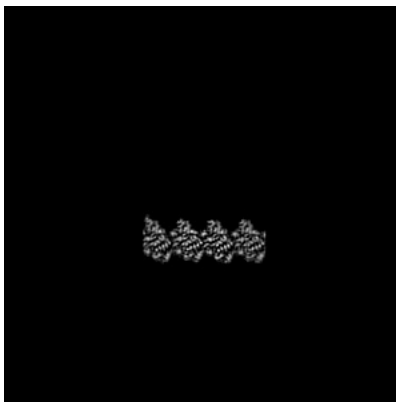
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

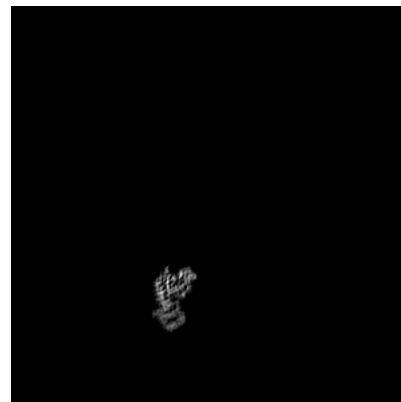
6.3.1 Primary map



X Index: 200



Y Index: 162



Z Index: 233

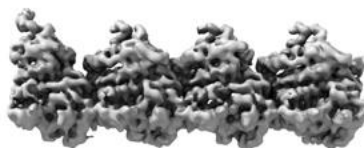
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views [i](#)

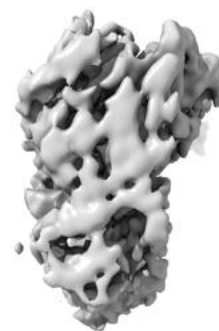
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.005. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

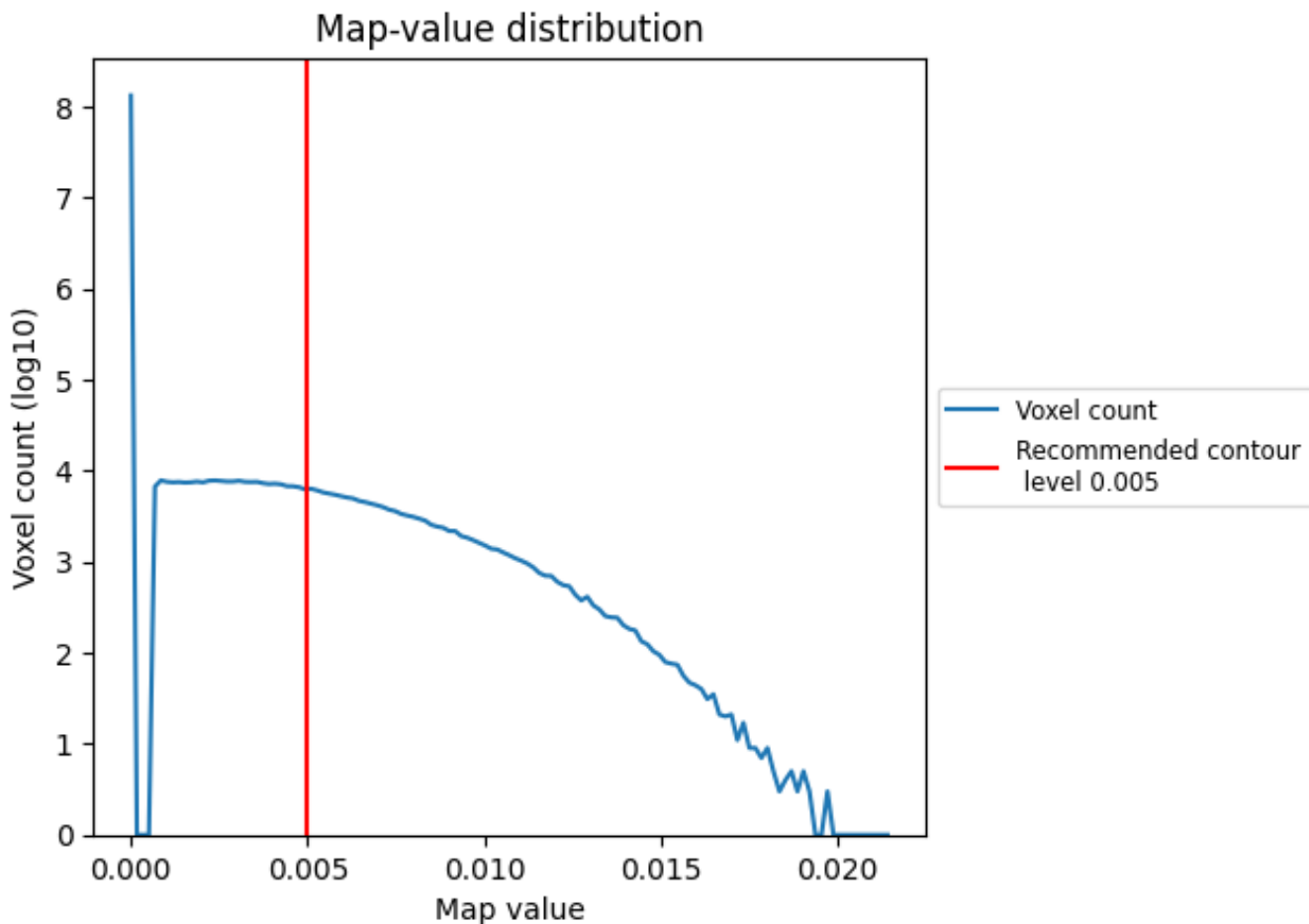
6.5 Mask visualisation

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

7 Map analysis [i](#)

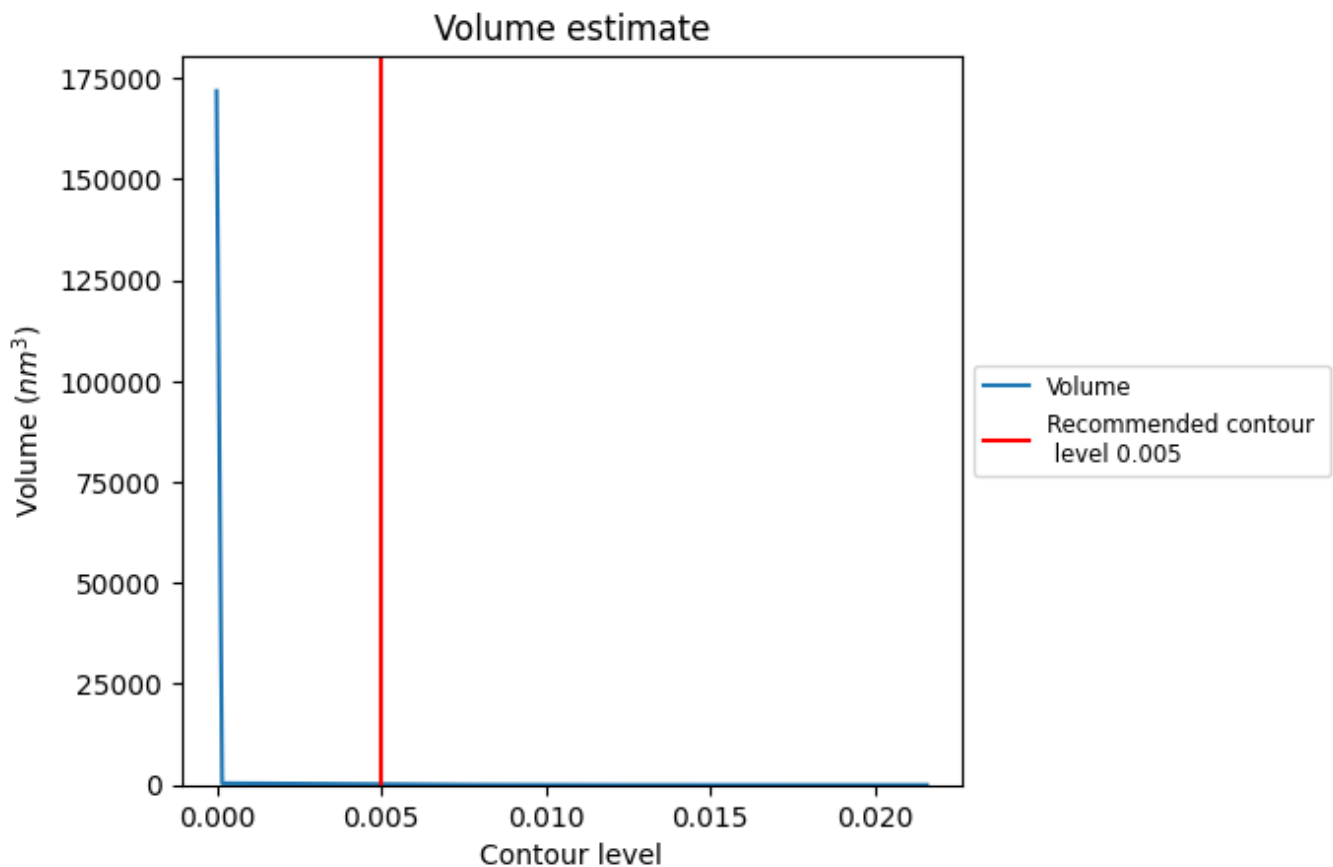
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

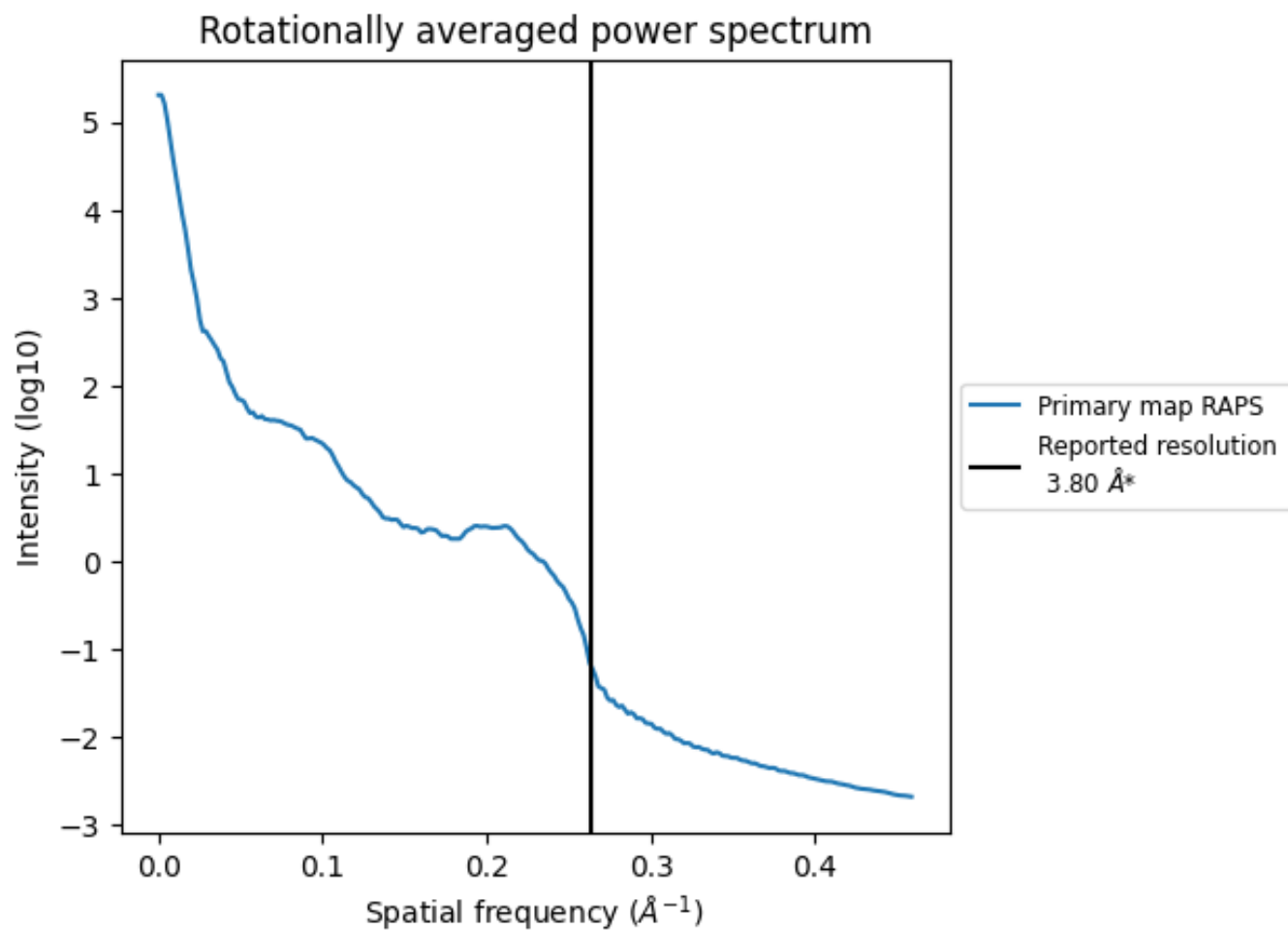
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 169 nm³; this corresponds to an approximate mass of 152 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)

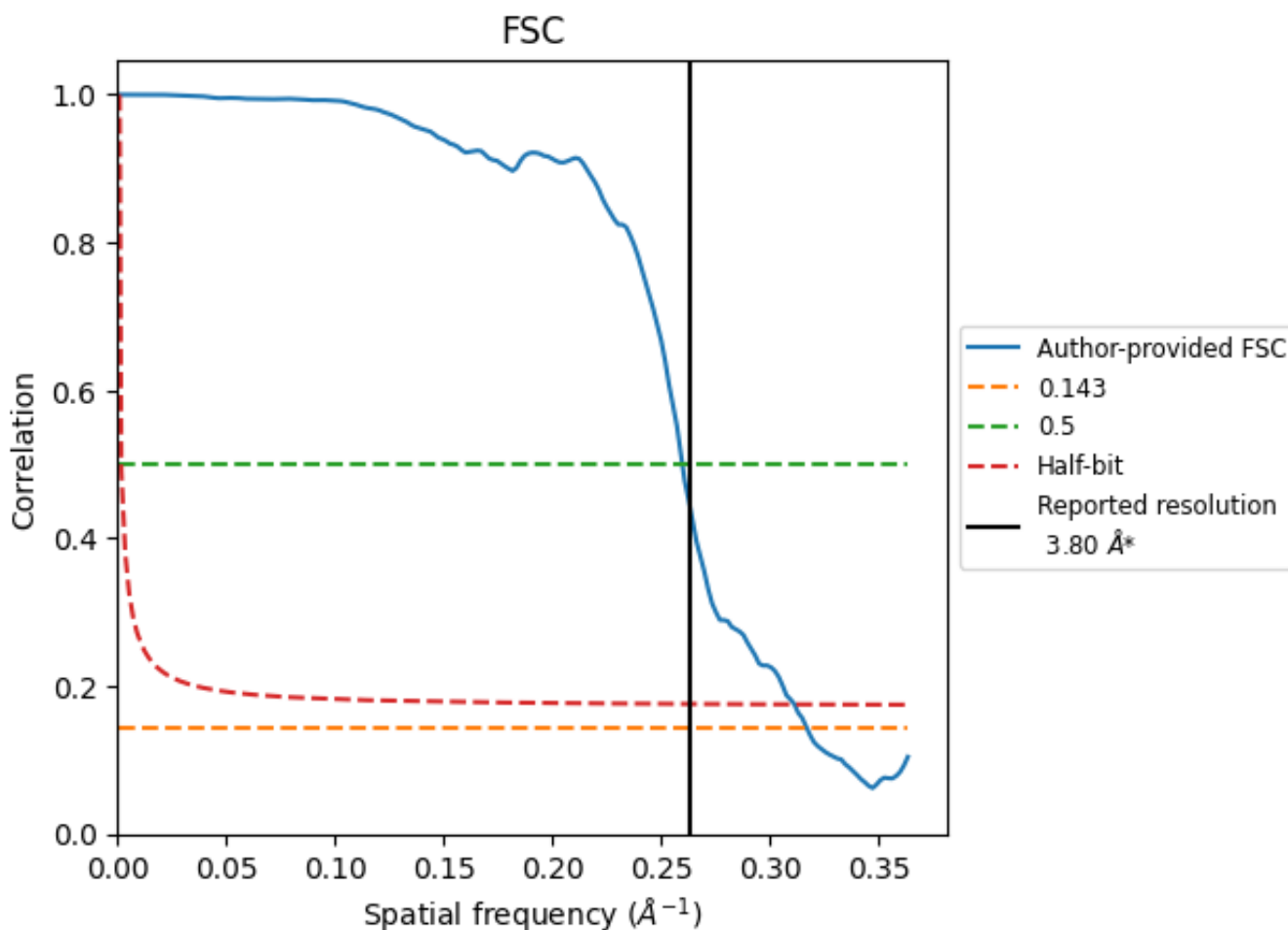


*Reported resolution corresponds to spatial frequency of 0.263 Å⁻¹

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 0.263 Å⁻¹

8.2 Resolution estimates [i](#)

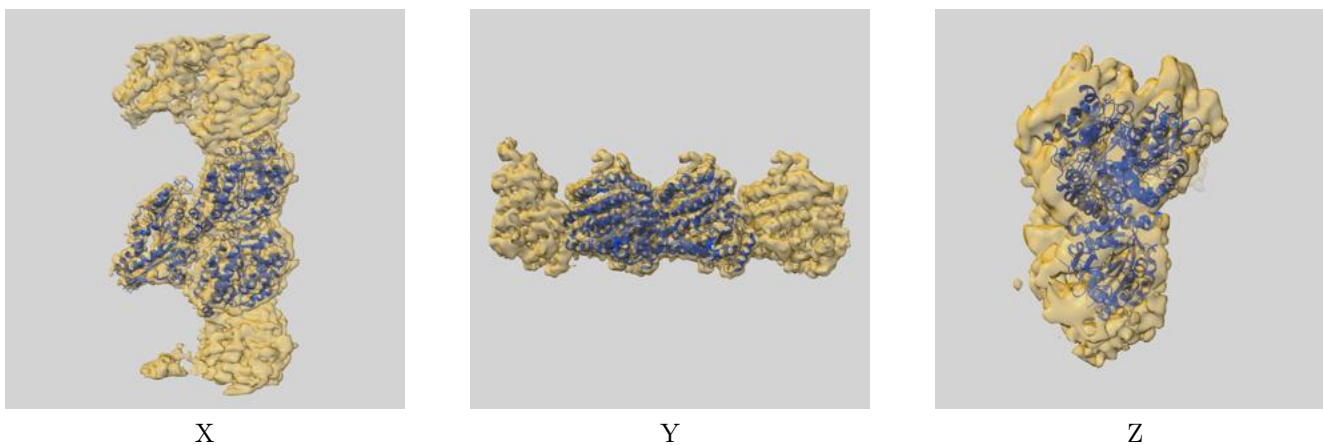
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	-	3.80	-
Author-provided FSC curve	3.16	3.85	3.21
Unmasked-calculated*	-	-	-

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

9 Map-model fit [i](#)

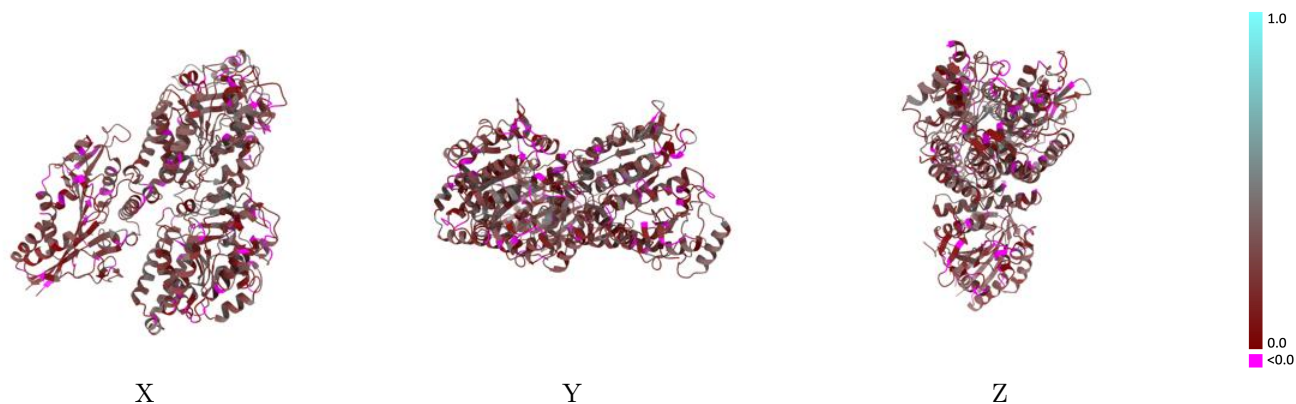
This section contains information regarding the fit between EMDB map EMD-10421 and PDB model 6TIW. Per-residue inclusion information can be found in section 3 on page 7.

9.1 Map-model overlay [i](#)



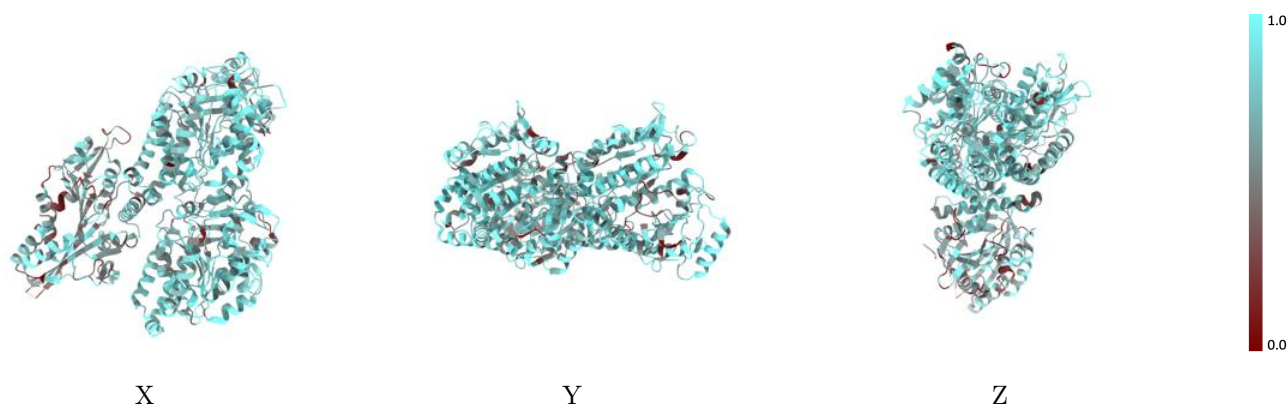
The images above show the 3D surface view of the map at the recommended contour level 0.005 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



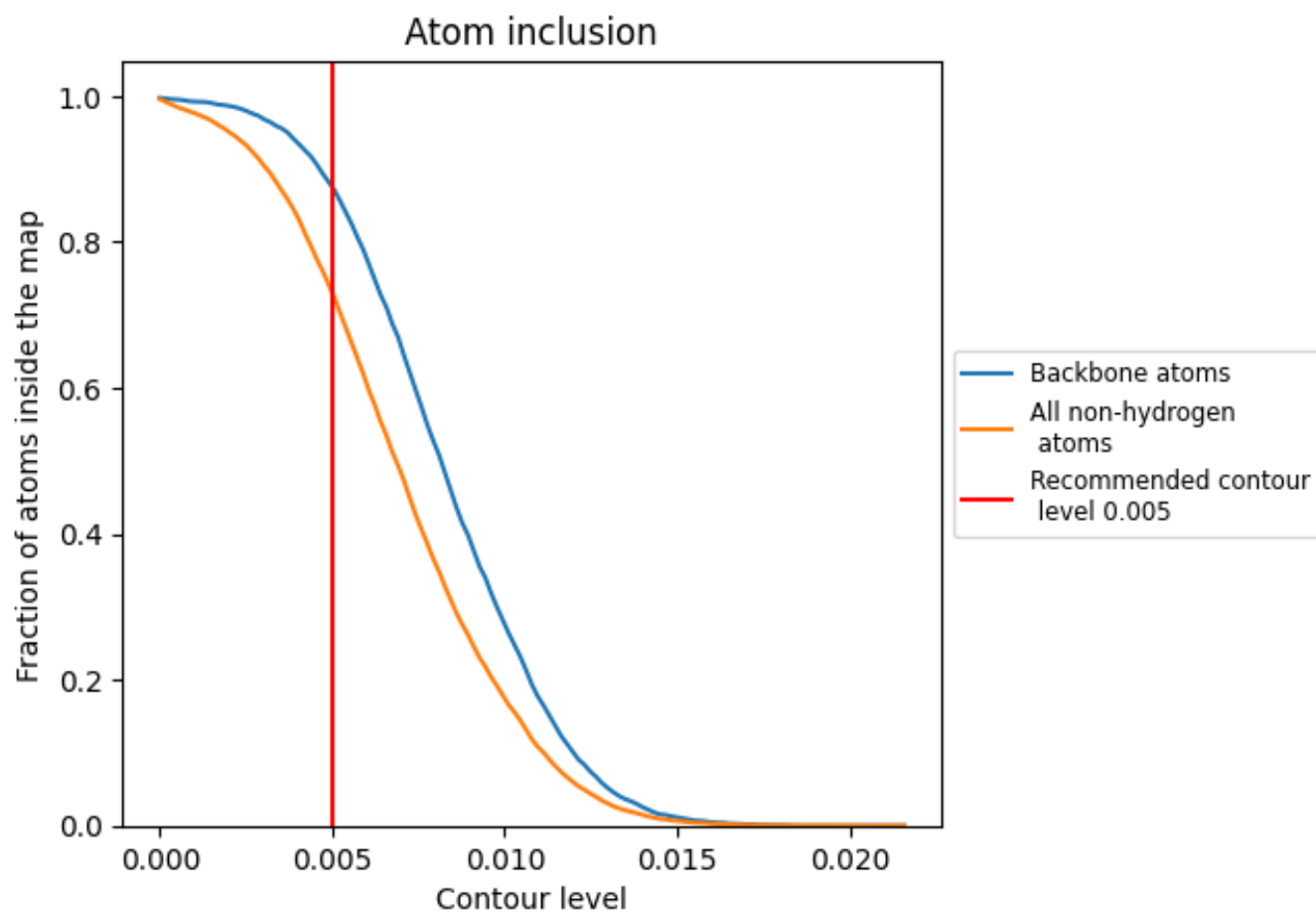
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.005).









9.4 Atom inclusion [i](#)



At the recommended contour level, 88% of all backbone atoms, 73% 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 (0.005) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7309	 0.2140
A	 0.7740	 0.2350
B	 0.7821	 0.2190
K	 0.6075	 0.1800

