



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 19, 2024 – 12:04 AM EST

PDB ID : 4HOK
Title : crystal structure of apo ck1e
Authors : Huang, X.; Long, A.M.; Zhao, H.
Deposited on : 2012-10-22
Resolution : 2.77 Å(reported)

This is a Full wwPDB X-ray Structure 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/XrayValidationReportHelp>

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:

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

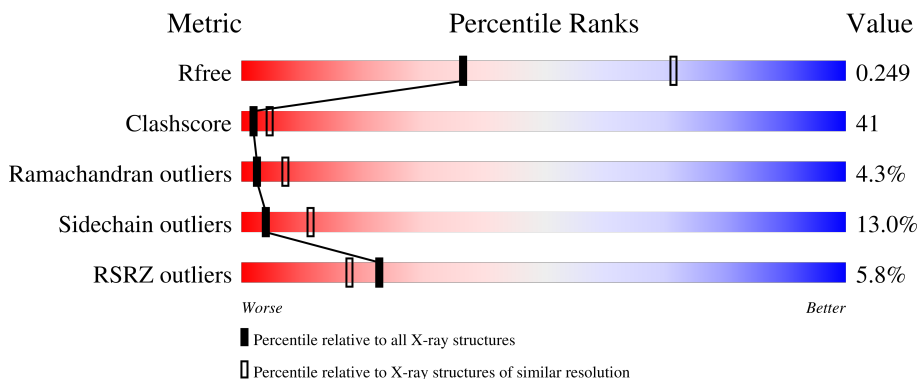
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.77 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)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	4107 (2.80-2.76)
Clashscore	141614	4575 (2.80-2.76)
Ramachandran outliers	138981	4487 (2.80-2.76)
Sidechain outliers	138945	4489 (2.80-2.76)
RSRZ outliers	127900	4027 (2.80-2.76)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower 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 electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	296	
1	C	296	
1	E	296	
1	G	296	
1	I	296	

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Mol	Chain	Length	Quality of chain
1	K	296	
1	M	296	
1	O	296	
1	Q	296	
1	S	296	
1	U	296	
1	W	296	

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
2	SO4	U	301	-	-	X	-

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 28954 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 Casein kinase I isoform epsilon.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	290	Total 2368	C 1520	N 410	O 423	S 15	0	0	0
1	C	289	Total 2370	C 1521	N 413	O 422	S 14	0	0	0
1	E	291	Total 2371	C 1521	N 414	O 422	S 14	0	0	0
1	G	290	Total 2358	C 1515	N 408	O 420	S 15	0	0	0
1	I	291	Total 2373	C 1522	N 413	O 423	S 15	0	0	0
1	K	290	Total 2354	C 1511	N 406	O 422	S 15	0	0	0
1	M	291	Total 2349	C 1507	N 409	O 419	S 14	0	0	0
1	O	290	Total 2364	C 1518	N 410	O 421	S 15	0	0	0
1	Q	290	Total 2365	C 1518	N 412	O 420	S 15	0	0	0
1	S	286	Total 2327	C 1495	N 403	O 415	S 14	0	0	0
1	U	289	Total 2349	C 1508	N 405	O 421	S 15	0	0	0
1	W	289	Total 2355	C 1512	N 407	O 422	S 14	0	0	0

There are 24 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-1	GLY	-	expression tag	UNP P49674
A	0	SER	-	expression tag	UNP P49674
C	-1	GLY	-	expression tag	UNP P49674
C	0	SER	-	expression tag	UNP P49674
E	-1	GLY	-	expression tag	UNP P49674

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Chain	Residue	Modelled	Actual	Comment	Reference
E	0	SER	-	expression tag	UNP P49674
G	-1	GLY	-	expression tag	UNP P49674
G	0	SER	-	expression tag	UNP P49674
I	-1	GLY	-	expression tag	UNP P49674
I	0	SER	-	expression tag	UNP P49674
K	-1	GLY	-	expression tag	UNP P49674
K	0	SER	-	expression tag	UNP P49674
M	-1	GLY	-	expression tag	UNP P49674
M	0	SER	-	expression tag	UNP P49674
O	-1	GLY	-	expression tag	UNP P49674
O	0	SER	-	expression tag	UNP P49674
Q	-1	GLY	-	expression tag	UNP P49674
Q	0	SER	-	expression tag	UNP P49674
S	-1	GLY	-	expression tag	UNP P49674
S	0	SER	-	expression tag	UNP P49674
U	-1	GLY	-	expression tag	UNP P49674
U	0	SER	-	expression tag	UNP P49674
W	-1	GLY	-	expression tag	UNP P49674
W	0	SER	-	expression tag	UNP P49674

- Molecule 2 is SULFATE ION (three-letter code: SO4) (formula: O₄S).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf		
2	A	1	Total	O	S	0	0
			5	4	1		
2	C	1	Total	O	S	0	0
			5	4	1		

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Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	E	1	Total	O	S	0	0
			5	4	1		
2	G	1	Total	O	S	0	0
			5	4	1		
2	I	1	Total	O	S	0	0
			5	4	1		
2	K	1	Total	O	S	0	0
			5	4	1		
2	M	1	Total	O	S	0	0
			5	4	1		
2	O	1	Total	O	S	0	0
			5	4	1		
2	Q	1	Total	O	S	0	0
			5	4	1		
2	S	1	Total	O	S	0	0
			5	4	1		
2	U	1	Total	O	S	0	0
			5	4	1		
2	W	1	Total	O	S	0	0
			5	4	1		

- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	79	Total	O	0	0
			79	79		
3	C	70	Total	O	0	0
			70	70		
3	E	61	Total	O	0	0
			61	61		
3	G	62	Total	O	0	0
			62	62		
3	I	57	Total	O	0	0
			57	57		
3	K	40	Total	O	0	0
			40	40		
3	M	40	Total	O	0	0
			40	40		
3	O	42	Total	O	0	0
			42	42		
3	Q	45	Total	O	0	0
			45	45		

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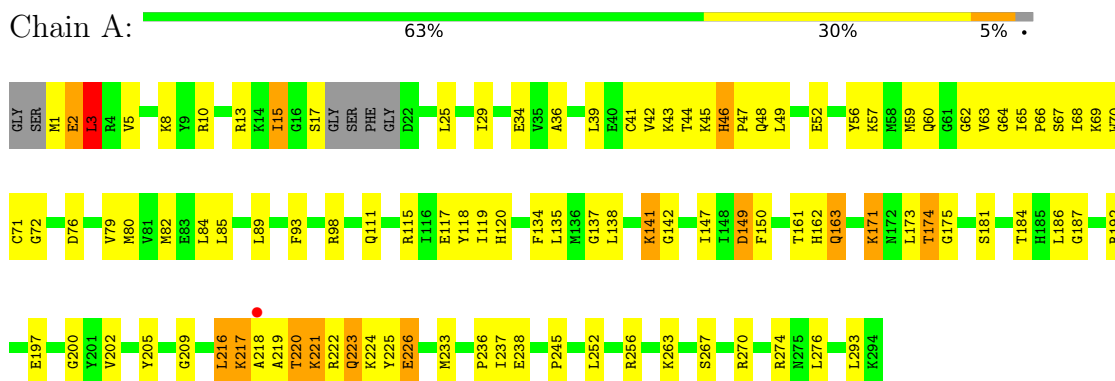
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	S	33	Total 33	O 33	0	0
3	U	29	Total 29	O 29	0	0
3	W	33	Total 33	O 33	0	0

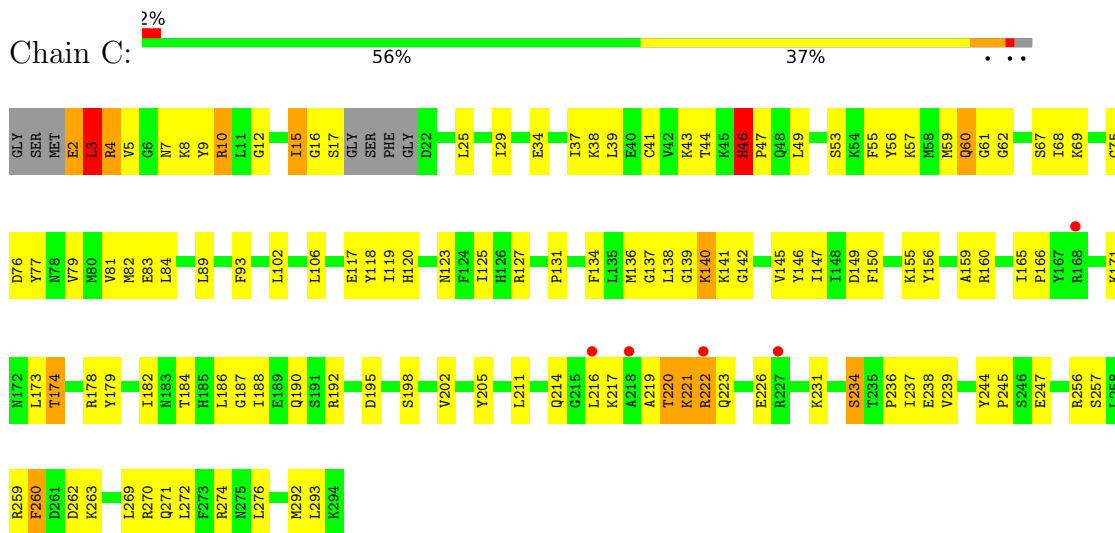
3 Residue-property plots [i](#)

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 electron 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 dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). 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.

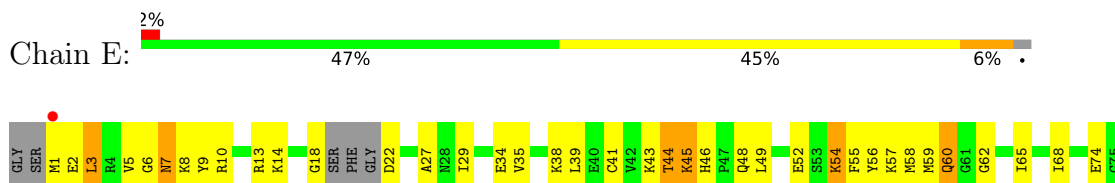
- Molecule 1: Casein kinase I isoform epsilon

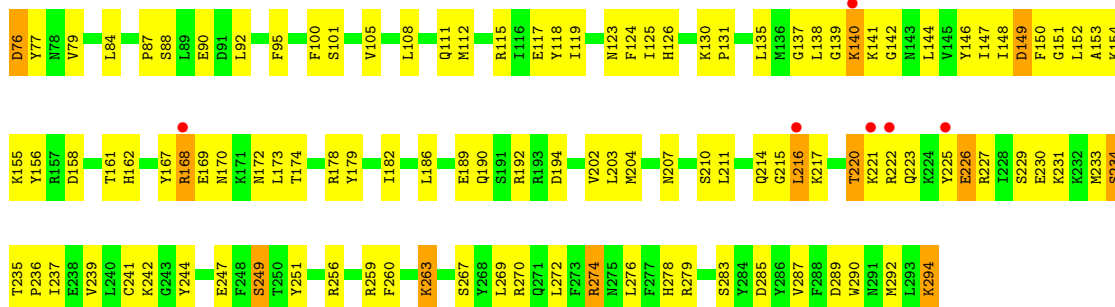


- Molecule 1: Casein kinase I isoform epsilon

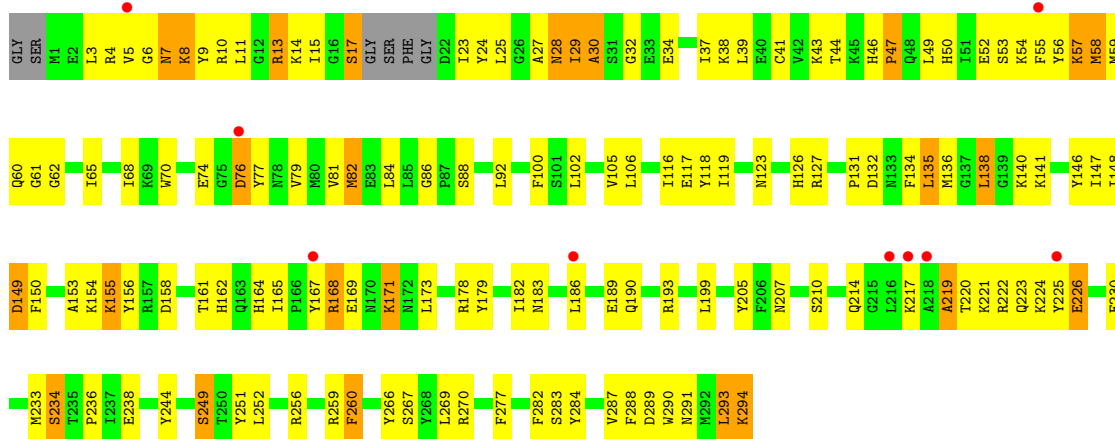


- Molecule 1: Casein kinase I isoform epsilon

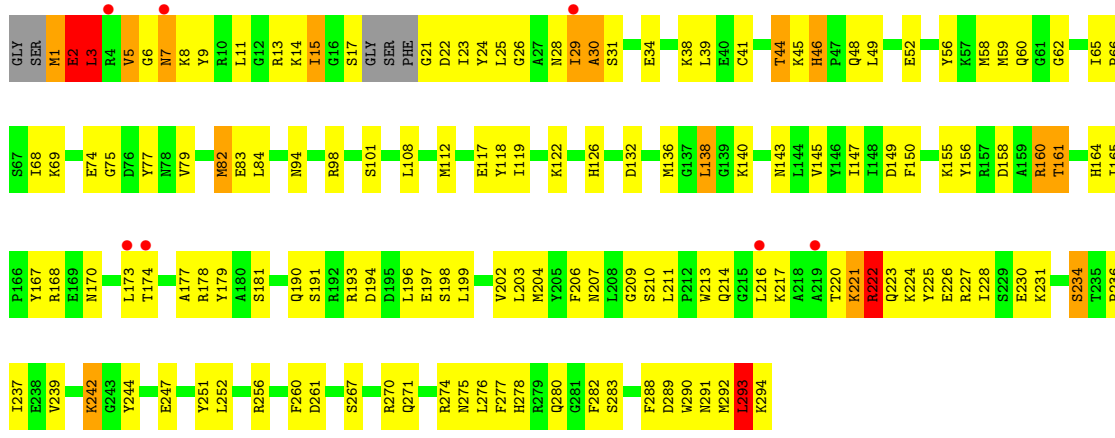




• Molecule 1: Casein kinase I isoform epsilon

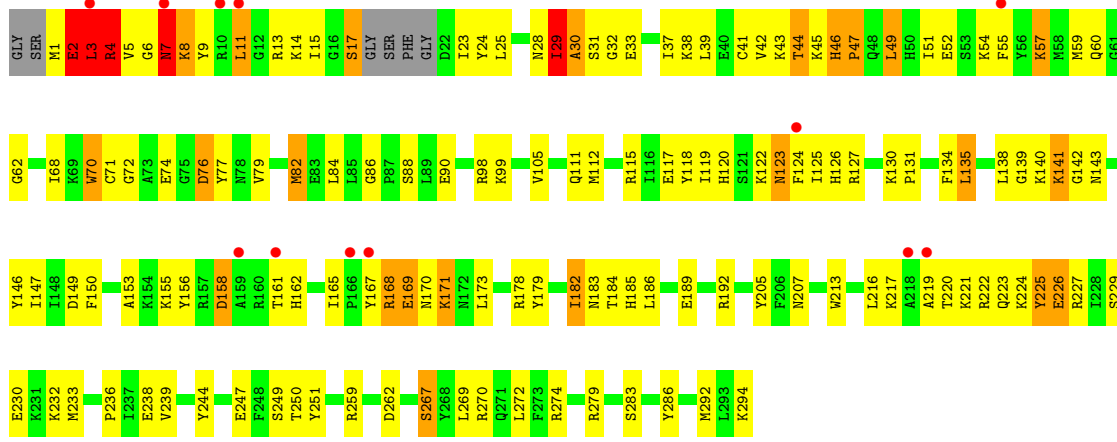


• Molecule 1: Casein kinase I isoform epsilon

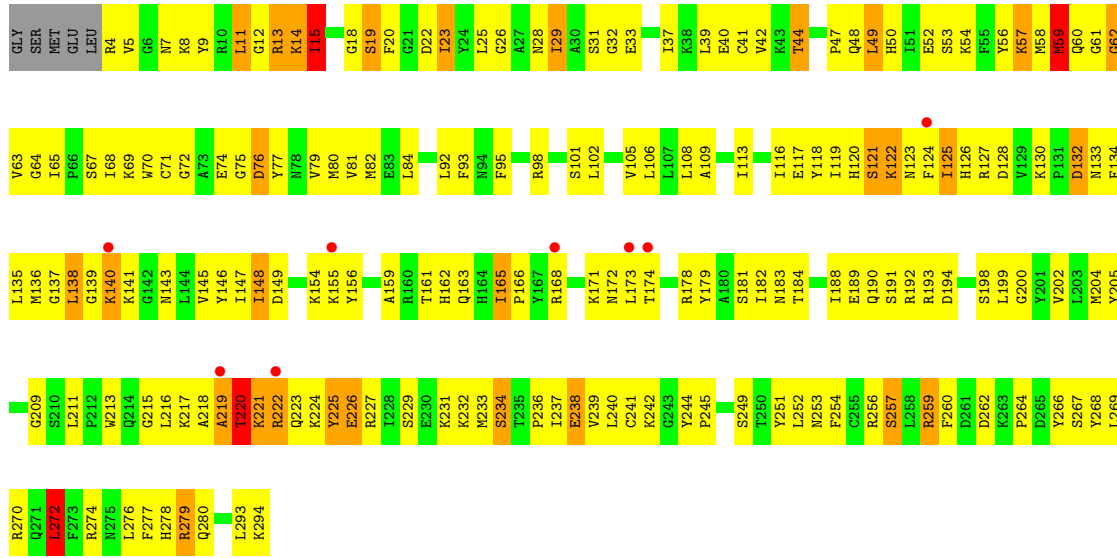


• Molecule 1: Casein kinase I isoform epsilon

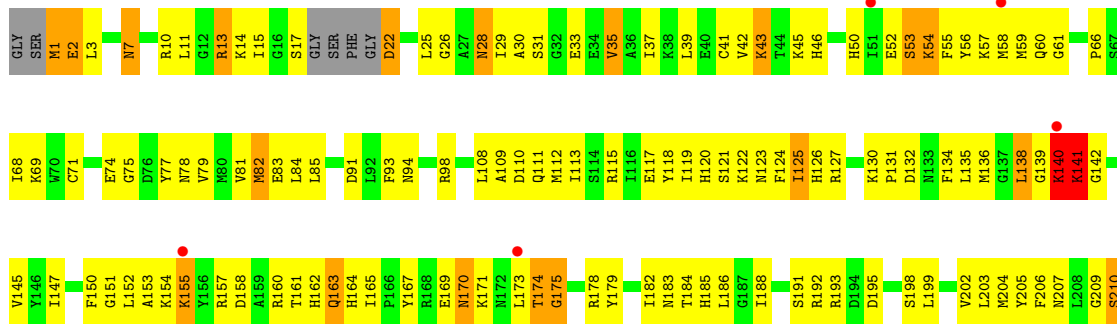


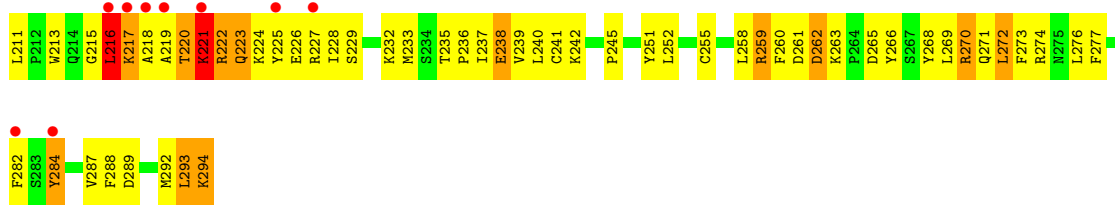


• Molecule 1: Casein kinase I isoform epsilon

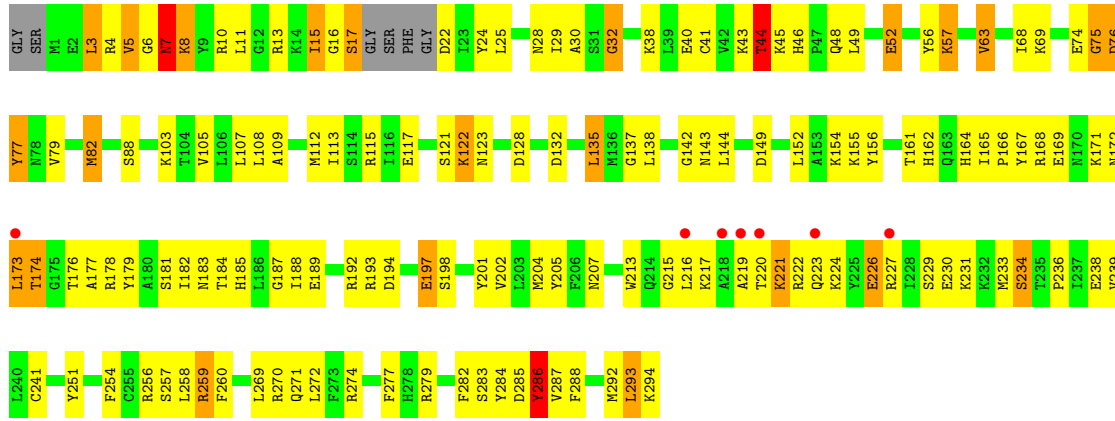


• Molecule 1: Casein kinase I isoform epsilon

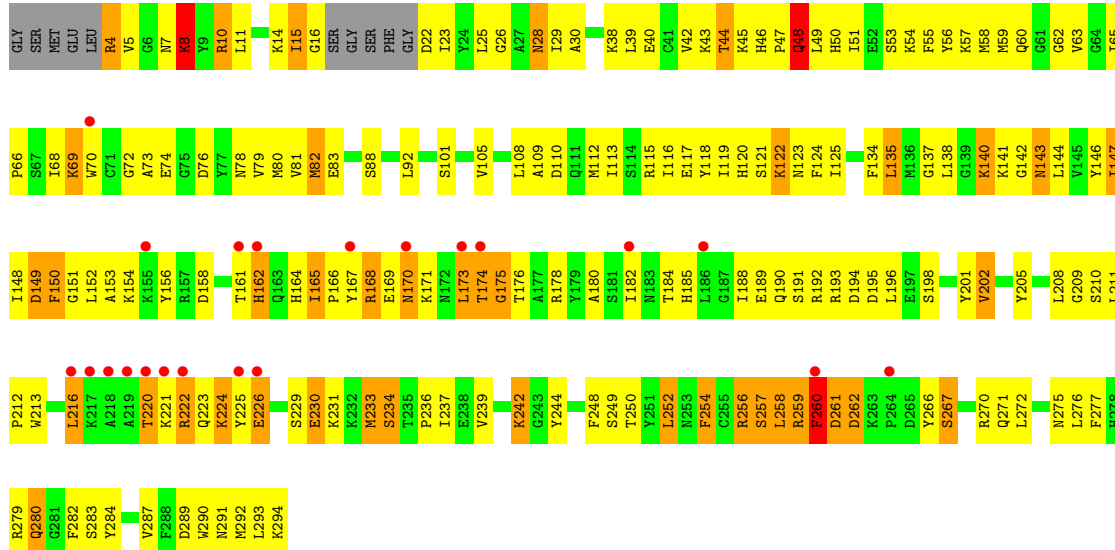




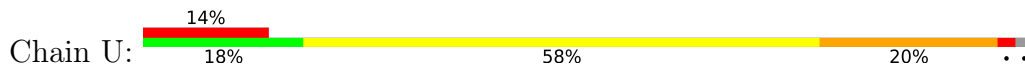
• Molecule 1: Casein kinase I isoform epsilon

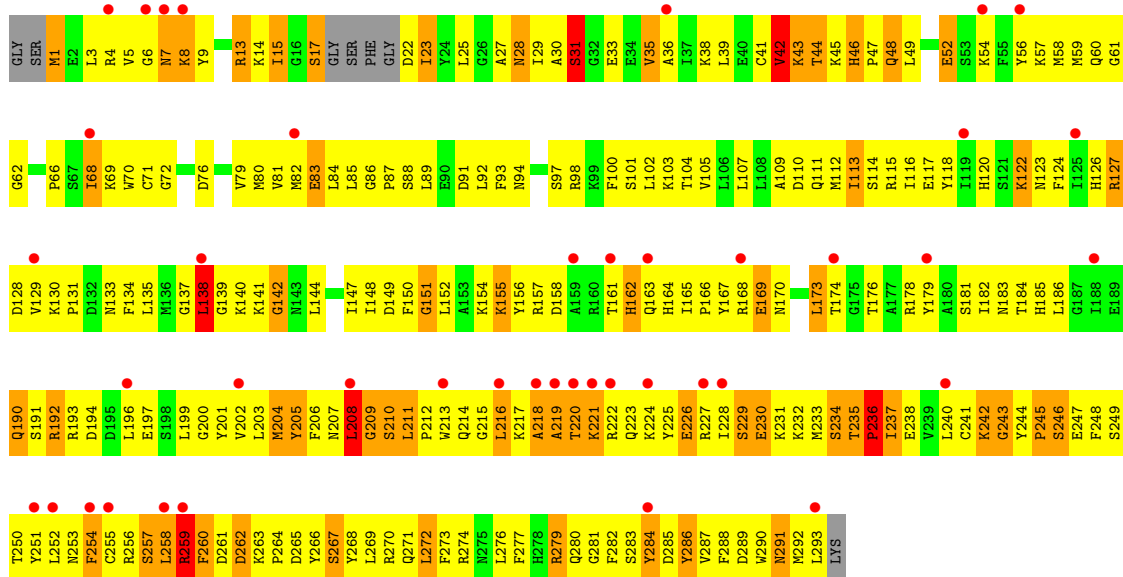


• Molecule 1: Casein kinase I isoform epsilon

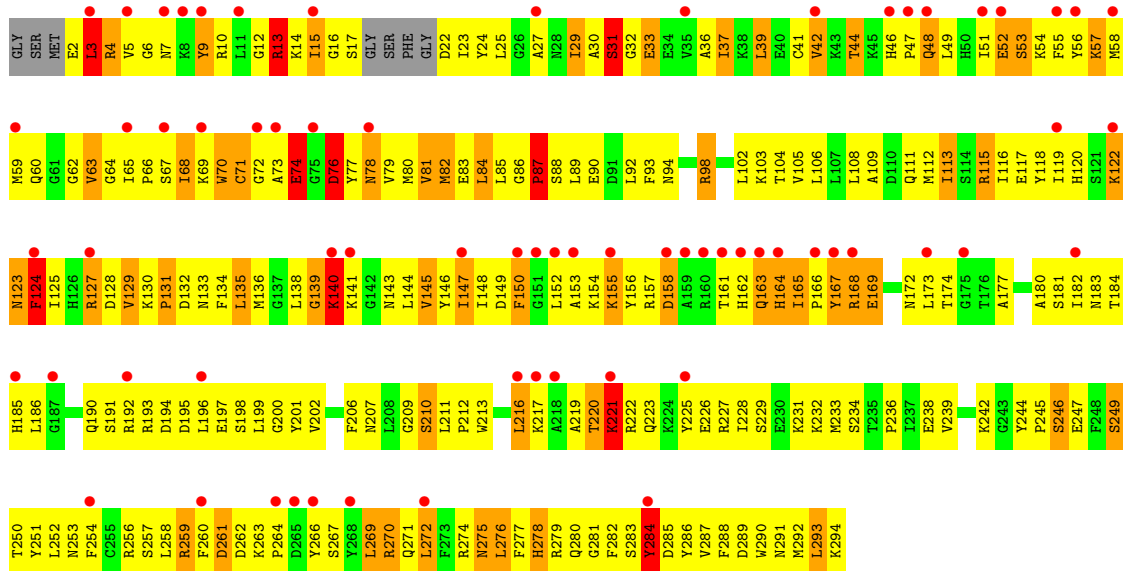
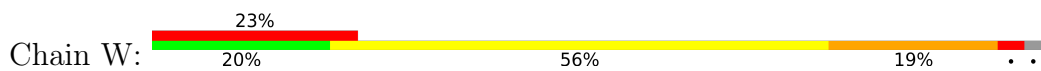


• Molecule 1: Casein kinase I isoform epsilon





● Molecule 1: Casein kinase I isoform epsilon



4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	180.36Å 142.50Å 232.46Å 90.00° 108.57° 90.00°	Depositor
Resolution (Å)	50.00 – 2.77 48.93 – 2.77	Depositor EDS
% Data completeness (in resolution range)	(Not available) (50.00-2.77) 99.8 (48.93-2.77)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.25 (at 2.77Å)	Xtrriage
Refinement program	CNS	Depositor
R, R_{free}	0.241 , 0.262 0.233 , 0.249	Depositor DCC
R_{free} test set	7082 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å ²)	56.2	Xtrriage
Anisotropy	0.177	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.35 , 66.5	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.33$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	28954	wwPDB-VP
Average B, all atoms (Å ²)	49.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.55% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

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: SO4

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.54	0/2422	0.80	3/3251 (0.1%)
1	C	0.52	0/2424	0.80	1/3252 (0.0%)
1	E	0.51	0/2425	0.80	0/3255
1	G	0.53	0/2411	0.81	0/3237
1	I	0.53	0/2427	0.84	3/3258 (0.1%)
1	K	0.52	0/2407	0.84	4/3234 (0.1%)
1	M	0.54	0/2404	0.91	6/3232 (0.2%)
1	O	0.53	0/2418	0.82	1/3246 (0.0%)
1	Q	0.53	0/2419	0.83	4/3248 (0.1%)
1	S	0.54	0/2380	0.84	1/3197 (0.0%)
1	U	0.59	0/2402	0.97	7/3228 (0.2%)
1	W	0.71	2/2408 (0.1%)	0.99	6/3233 (0.2%)
All	All	0.55	2/28947 (0.0%)	0.86	36/38871 (0.1%)

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	W	0	1

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	W	124	PHE	CG-CD1	9.41	1.52	1.38
1	W	284	TYR	CB-CG	5.17	1.59	1.51

All (36) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	M	20	PHE	N-CA-C	-8.77	87.33	111.00
1	A	138	LEU	CA-CB-CG	7.33	132.17	115.30
1	U	272	LEU	CA-CB-CG	7.19	131.84	115.30
1	K	3	LEU	N-CA-C	7.07	130.09	111.00
1	I	3	LEU	N-CA-C	6.98	129.84	111.00
1	W	127	ARG	NE-CZ-NH1	6.80	123.70	120.30
1	I	2	GLU	N-CA-C	6.60	128.83	111.00
1	M	23	ILE	N-CA-C	-6.52	93.39	111.00
1	W	123	ASN	N-CA-C	6.50	128.54	111.00
1	K	4	ARG	N-CA-C	6.39	128.25	111.00
1	W	124	PHE	CG-CD1-CE1	-6.36	113.81	120.80
1	C	3	LEU	N-CA-C	6.21	127.76	111.00
1	U	138	LEU	CA-CB-CG	6.06	129.23	115.30
1	M	14	LYS	N-CA-C	-5.98	94.84	111.00
1	A	3	LEU	N-CA-C	5.74	126.50	111.00
1	M	272	LEU	CA-CB-CG	5.70	128.42	115.30
1	A	175	GLY	N-CA-C	-5.68	98.90	113.10
1	Q	77	TYR	N-CA-C	5.56	126.01	111.00
1	I	293	LEU	CA-CB-CG	5.51	127.98	115.30
1	W	31	SER	N-CA-C	5.51	125.88	111.00
1	M	125	ILE	N-CA-C	-5.49	96.19	111.00
1	M	168	ARG	CG-CD-NE	-5.47	100.31	111.80
1	W	3	LEU	N-CA-C	5.45	125.71	111.00
1	U	155	LYS	N-CA-C	-5.40	96.42	111.00
1	Q	75	GLY	N-CA-C	-5.40	99.60	113.10
1	K	2	GLU	N-CA-C	5.35	125.44	111.00
1	Q	63	VAL	N-CA-C	-5.24	96.84	111.00
1	U	287	VAL	N-CA-C	-5.23	96.88	111.00
1	U	281	GLY	N-CA-C	5.22	126.15	113.10
1	W	76	ASP	N-CA-C	-5.21	96.94	111.00
1	U	68	ILE	N-CA-C	-5.17	97.05	111.00
1	U	259	ARG	NE-CZ-NH1	5.16	122.88	120.30
1	O	125	ILE	N-CA-C	-5.13	97.16	111.00
1	S	78	ASN	N-CA-C	-5.11	97.19	111.00
1	Q	32	GLY	N-CA-C	-5.09	100.37	113.10
1	K	31	SER	N-CA-C	5.01	124.53	111.00

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	W	284	TYR	Sidechain

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2368	0	2366	122	0
1	C	2370	0	2376	110	1
1	E	2371	0	2369	156	0
1	G	2358	0	2354	147	0
1	I	2373	0	2366	137	0
1	K	2354	0	2336	151	0
1	M	2349	0	2321	188	0
1	O	2364	0	2362	242	0
1	Q	2365	0	2359	173	1
1	S	2327	0	2313	258	1
1	U	2349	0	2337	370	0
1	W	2355	0	2346	380	0
2	A	5	0	0	0	0
2	C	5	0	0	0	0
2	E	5	0	0	0	0
2	G	5	0	0	1	0
2	I	5	0	0	0	0
2	K	5	0	0	0	0
2	M	5	0	0	1	0
2	O	5	0	0	0	0
2	Q	5	0	0	1	0
2	S	5	0	0	1	0
2	U	5	0	0	3	0
2	W	5	0	0	0	0
3	A	79	0	0	12	0
3	C	70	0	0	7	0
3	E	61	0	0	7	0
3	G	62	0	0	11	0
3	I	57	0	0	8	0
3	K	40	0	0	7	0
3	M	40	0	0	5	0
3	O	42	0	0	10	0
3	Q	45	0	0	6	0
3	S	33	0	0	7	0
3	U	29	0	0	6	0
3	W	33	0	0	13	0
All	All	28954	0	28205	2322	2

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 41.

All (2322) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:W:120:HIS:ND1	1:W:192:ARG:HG2	1.41	1.35
1:E:52:GLU:OE2	1:E:149:ASP:HA	1.31	1.24
1:K:3:LEU:CD2	1:K:11:LEU:HB3	1.71	1.20
1:W:53:SER:HB3	1:W:71:CYS:SG	1.79	1.20
1:M:13:ARG:H	1:M:13:ARG:CD	1.54	1.19
1:O:56:TYR:HB2	1:O:68:ILE:HD11	1.23	1.18
1:W:69:LYS:HB2	1:W:81:VAL:O	1.40	1.17
1:W:192:ARG:NH1	1:W:264:PRO:HD2	1.62	1.15
1:M:13:ARG:HD3	1:M:13:ARG:N	1.35	1.14
1:A:220:THR:HG22	1:A:223:GLN:H	1.10	1.13
1:S:191:SER:HB3	1:S:260:PHE:HE1	0.98	1.12
1:W:192:ARG:NH1	1:W:263:LYS:HA	1.65	1.11
1:W:158:ASP:HB3	1:W:163:GLN:HB2	1.26	1.11
1:W:29:ILE:HA	3:W:420:HOH:O	1.48	1.10
1:C:3:LEU:HD21	1:K:238:GLU:HG3	1.21	1.10
1:S:280:GLN:HA	1:S:280:GLN:HE21	1.01	1.10
1:M:222:ARG:HB2	1:M:222:ARG:HH11	1.16	1.09
1:W:192:ARG:HH12	1:W:263:LYS:HA	1.18	1.09
1:O:13:ARG:HH11	1:O:13:ARG:HG3	1.13	1.09
1:W:285:ASP:OD1	1:W:287:VAL:HG23	1.49	1.09
1:S:174:THR:CG2	1:S:175:GLY:H	1.65	1.08
1:O:28:ASN:ND2	1:O:31:SER:H	1.51	1.08
1:W:219:ALA:O	1:W:220:THR:HG22	1.51	1.08
1:S:191:SER:HB3	1:S:260:PHE:CE1	1.88	1.07
1:W:68:ILE:HD13	1:W:80:MET:HE3	1.34	1.07
1:K:3:LEU:HD22	1:K:11:LEU:HB3	1.34	1.07
1:U:47:PRO:O	1:U:48:GLN:HG3	1.56	1.06
1:I:160:ARG:HG2	1:I:160:ARG:HH11	1.20	1.05
1:S:174:THR:HG23	1:S:175:GLY:H	0.97	1.05
1:U:237:ILE:HG13	1:U:256:ARG:NH1	1.68	1.05
1:Q:17:SER:H	1:S:294:LYS:HD3	1.13	1.05
1:S:173:LEU:HD23	1:S:225:TYR:HD2	1.19	1.04
1:Q:4:ARG:HH21	1:Q:7:ASN:HA	1.20	1.04
1:S:280:GLN:HA	1:S:280:GLN:NE2	1.72	1.04
1:O:56:TYR:CB	1:O:68:ILE:HD11	1.87	1.04
1:I:220:THR:HG23	1:I:223:GLN:H	1.21	1.03
1:U:56:TYR:CE1	1:U:66:PRO:HG2	1.92	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:W:192:ARG:HH11	1:W:264:PRO:HD2	0.89	1.03
1:S:140:LYS:H	1:S:140:LYS:HD3	1.21	1.03
1:U:205:TYR:HB2	1:U:211:LEU:CD1	1.86	1.03
1:U:4:ARG:HH21	1:U:7:ASN:HA	1.22	1.02
1:E:220:THR:HG22	1:E:223:GLN:HG3	1.34	1.02
1:S:170:ASN:HD22	1:S:170:ASN:N	1.58	1.01
1:S:173:LEU:HD23	1:S:225:TYR:CD2	1.94	1.01
1:S:174:THR:HG23	1:S:175:GLY:N	1.70	1.01
1:U:4:ARG:NH2	1:U:7:ASN:HA	1.75	1.01
1:A:34:GLU:HG3	3:C:414:HOH:O	1.59	1.00
1:Q:259:ARG:HD2	1:Q:260:PHE:H	1.26	1.00
1:W:2:GLU:HG3	1:W:3:LEU:H	1.27	0.99
1:W:53:SER:HB3	1:W:71:CYS:HG	1.17	0.99
1:U:169:GLU:H	1:U:169:GLU:CD	1.67	0.98
1:G:82:MET:HE1	3:G:427:HOH:O	1.62	0.98
1:O:204:MET:HA	1:O:204:MET:HE3	1.46	0.98
1:E:249:SER:HB2	1:O:1:MET:HE3	1.46	0.98
1:I:278:HIS:HB3	3:I:411:HOH:O	1.64	0.98
1:U:156:TYR:HA	1:U:165:ILE:HD13	1.45	0.97
1:G:178:ARG:CZ	1:G:214:GLN:HE21	1.77	0.97
1:S:280:GLN:HE21	1:S:280:GLN:CA	1.77	0.97
1:U:264:PRO:HG2	1:U:266:TYR:CZ	1.99	0.97
1:M:274:ARG:HH11	1:M:274:ARG:HG2	1.29	0.97
1:O:140:LYS:HG3	1:O:141:LYS:HD3	1.43	0.97
1:W:41:CYS:HA	1:W:77:TYR:HD1	1.31	0.96
1:S:156:TYR:O	1:S:165:ILE:HG23	1.65	0.96
1:W:10:ARG:HG2	1:W:10:ARG:HH11	1.30	0.96
1:S:10:ARG:HG3	1:S:10:ARG:HH11	1.30	0.96
1:S:271:GLN:HA	1:S:271:GLN:NE2	1.80	0.96
1:U:66:PRO:HA	1:U:83:GLU:OE2	1.66	0.96
1:Q:220:THR:HG23	1:Q:223:GLN:H	1.31	0.96
1:O:255:CYS:HA	1:O:258:LEU:HD12	1.47	0.95
1:M:40:GLU:OE2	1:M:47:PRO:HA	1.67	0.95
1:C:3:LEU:CD2	1:K:238:GLU:HG3	1.97	0.95
1:G:15:ILE:HG21	1:G:25:LEU:HB2	1.49	0.95
1:U:7:ASN:HD22	1:U:7:ASN:C	1.67	0.95
1:W:4:ARG:HD3	1:W:29:ILE:HD12	1.49	0.95
1:M:15:ILE:HD12	1:M:25:LEU:HB2	1.45	0.94
1:O:13:ARG:HH11	1:O:13:ARG:CG	1.80	0.94
1:W:120:HIS:CE1	1:W:192:ARG:HG2	2.03	0.94
1:U:208:LEU:O	1:U:210:SER:N	2.00	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:211:LEU:HD22	1:U:213:TRP:CZ2	2.03	0.94
1:W:278:HIS:O	1:W:281:GLY:N	2.01	0.94
1:K:68:ILE:HD11	1:K:71:CYS:HB2	1.50	0.93
1:W:293:LEU:O	1:W:294:LYS:HD3	1.68	0.93
1:U:14:LYS:HG3	1:U:15:ILE:N	1.84	0.93
1:Q:4:ARG:NH2	1:Q:7:ASN:HA	1.82	0.93
1:Q:171:LYS:HB2	1:Q:187:GLY:O	1.69	0.93
1:K:259:ARG:HB2	1:K:262:ASP:OD1	1.69	0.92
1:W:173:LEU:HD12	1:W:184:THR:HG22	1.49	0.92
1:Q:17:SER:N	1:S:294:LYS:HD3	1.84	0.92
1:S:140:LYS:HD3	1:S:140:LYS:N	1.83	0.92
1:I:15:ILE:HD12	1:I:25:LEU:HB2	1.51	0.92
1:S:182:ILE:HD11	1:S:256:ARG:NH2	1.84	0.92
1:S:188:ILE:HG22	1:S:189:GLU:O	1.70	0.92
1:Q:15:ILE:HD13	1:Q:25:LEU:HB2	1.52	0.92
1:U:116:ILE:HG22	1:U:120:HIS:CE1	2.06	0.91
1:W:56:TYR:HB2	1:W:68:ILE:CD1	1.99	0.91
1:E:44:THR:HG22	1:E:45:LYS:H	1.33	0.91
1:W:148:ILE:HA	1:W:150:PHE:HE1	1.35	0.91
1:W:56:TYR:HB2	1:W:68:ILE:HG12	1.53	0.90
1:O:28:ASN:C	1:O:28:ASN:HD22	1.73	0.90
1:W:173:LEU:HD12	1:W:184:THR:CG2	2.02	0.90
1:M:5:VAL:HA	1:M:74:GLU:OE2	1.71	0.90
1:O:39:LEU:HD23	1:O:79:VAL:HG22	1.51	0.90
1:O:140:LYS:CG	1:O:141:LYS:H	1.83	0.90
1:I:293:LEU:HD21	1:K:15:ILE:HG13	1.52	0.89
1:U:5:VAL:HG23	1:U:9:TYR:HB2	1.54	0.89
1:U:237:ILE:CD1	1:U:252:LEU:HB3	2.02	0.89
1:M:237:ILE:HD12	1:M:253:ASN:OD1	1.72	0.89
1:G:171:LYS:HD2	1:G:189:GLU:OE1	1.71	0.89
1:U:205:TYR:HB2	1:U:211:LEU:HD12	1.53	0.89
1:G:39:LEU:HD23	1:G:79:VAL:HG22	1.54	0.89
1:E:52:GLU:OE2	1:E:149:ASP:CA	2.20	0.89
1:I:217:LYS:O	1:I:227:ARG:NH1	2.06	0.89
1:K:39:LEU:CD2	1:K:79:VAL:HG22	2.02	0.89
1:O:284:TYR:CD1	1:O:284:TYR:N	2.40	0.88
1:U:235:THR:O	1:U:235:THR:HG22	1.74	0.88
1:W:41:CYS:HA	1:W:77:TYR:CD1	2.08	0.88
1:U:235:THR:HG22	1:U:240:LEU:HB2	1.55	0.88
1:W:158:ASP:HB3	1:W:163:GLN:CB	2.02	0.88
1:A:1:MET:CE	1:G:249:SER:HB3	2.03	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:55:PHE:CD2	1:G:150:PHE:HB2	2.07	0.88
1:U:56:TYR:HB3	1:U:68:ILE:HD11	1.54	0.87
1:A:293:LEU:HD11	1:C:15:ILE:CG2	2.05	0.87
1:K:46:HIS:H	1:K:47:PRO:CD	1.87	0.87
1:S:4:ARG:HG3	1:S:4:ARG:HH11	1.39	0.87
1:S:101:SER:O	1:S:105:VAL:HG23	1.74	0.87
1:W:56:TYR:HB2	1:W:68:ILE:CG1	2.03	0.87
1:K:52:GLU:OE1	1:K:149:ASP:HA	1.75	0.87
1:O:293:LEU:O	1:O:294:LYS:HE3	1.73	0.87
1:U:56:TYR:CB	1:U:68:ILE:HD11	2.05	0.87
1:W:17:SER:HB3	3:W:426:HOH:O	1.73	0.86
1:A:117:GLU:OE1	1:A:270:ARG:NH2	2.07	0.86
1:G:178:ARG:CZ	1:G:214:GLN:NE2	2.37	0.86
1:G:43:LYS:HB2	1:M:233:MET:HE1	1.57	0.86
1:G:117:GLU:OE1	1:G:270:ARG:NH2	2.07	0.86
1:M:76:ASP:OD2	1:M:76:ASP:N	2.07	0.86
1:W:9:TYR:HB3	1:W:27:ALA:O	1.75	0.86
1:U:91:ASP:OD2	1:W:294:LYS:HB2	1.75	0.85
1:W:70:TRP:O	1:W:70:TRP:CE3	2.29	0.85
1:E:126:HIS:CD2	1:E:147:ILE:HD11	2.11	0.85
1:O:284:TYR:H	1:O:284:TYR:HD1	1.20	0.85
1:U:242:LYS:HG3	1:U:243:GLY:N	1.89	0.85
1:M:13:ARG:CD	1:M:13:ARG:N	2.23	0.85
1:S:108:LEU:O	1:S:112:MET:HG3	1.77	0.85
1:A:270:ARG:NH1	3:A:401:HOH:O	2.08	0.85
1:K:17:SER:HB2	3:K:405:HOH:O	1.75	0.85
1:M:59:MET:HB2	1:M:65:ILE:HG21	1.58	0.85
1:U:237:ILE:CD1	1:U:256:ARG:HD2	2.05	0.85
1:U:52:GLU:OE2	1:U:149:ASP:HA	1.75	0.85
1:I:160:ARG:HH11	1:I:160:ARG:CG	1.89	0.84
1:Q:236:PRO:HG2	1:Q:239:VAL:HB	1.56	0.84
1:A:217:LYS:H	1:A:217:LYS:HD2	1.42	0.84
1:S:140:LYS:H	1:S:140:LYS:CD	1.83	0.84
1:W:192:ARG:HH12	1:W:263:LYS:CA	1.89	0.84
1:U:28:ASN:CG	1:U:31:SER:HB2	1.97	0.84
1:C:117:GLU:OE1	1:C:270:ARG:NH2	2.10	0.84
1:S:191:SER:CB	1:S:260:PHE:HE1	1.86	0.84
1:O:140:LYS:HG3	1:O:141:LYS:H	1.38	0.84
1:U:117:GLU:HG3	1:U:266:TYR:CG	2.12	0.84
1:W:117:GLU:HB2	1:W:266:TYR:CE1	2.13	0.84
1:W:120:HIS:ND1	1:W:192:ARG:CG	2.35	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:154:LYS:HD2	3:S:410:HOH:O	1.77	0.84
1:O:174:THR:HG22	1:O:175:GLY:N	1.92	0.83
1:W:49:LEU:HD11	1:W:80:MET:HB2	1.60	0.83
1:W:259:ARG:HB2	1:W:262:ASP:OD2	1.78	0.83
1:W:148:ILE:HA	1:W:150:PHE:CE1	2.13	0.83
1:I:271:GLN:NE2	1:I:271:GLN:HA	1.93	0.83
1:S:248:PHE:O	1:S:252:LEU:HD12	1.78	0.83
1:A:115:ARG:HB3	3:A:419:HOH:O	1.78	0.83
1:S:10:ARG:HG3	1:S:10:ARG:NH1	1.88	0.83
1:W:10:ARG:HG2	1:W:10:ARG:NH1	1.91	0.83
1:U:28:ASN:HD22	1:U:28:ASN:C	1.82	0.83
1:I:237:ILE:HD13	1:I:252:LEU:HB3	1.58	0.82
1:W:117:GLU:HB2	1:W:266:TYR:CD1	2.13	0.82
1:U:237:ILE:HD12	1:U:256:ARG:HD2	1.60	0.82
1:S:10:ARG:HH11	1:S:10:ARG:CG	1.92	0.82
1:U:118:TYR:CZ	1:U:122:LYS:HE3	2.14	0.82
1:W:14:LYS:HD2	1:W:22:ASP:OD2	1.79	0.82
1:W:57:LYS:HE3	1:W:68:ILE:HB	1.60	0.82
1:C:5:VAL:HG23	1:C:9:TYR:HB2	1.59	0.82
1:G:173:LEU:HD23	1:G:225:TYR:CE2	2.14	0.82
1:K:259:ARG:HH11	1:K:259:ARG:HG3	1.42	0.82
1:O:45:LYS:O	1:O:46:HIS:HD2	1.63	0.82
1:I:221:LYS:HE2	1:I:221:LYS:H	1.45	0.82
1:U:237:ILE:HD13	1:U:252:LEU:HB3	1.61	0.82
1:W:13:ARG:H	1:W:13:ARG:HD3	1.45	0.82
1:W:64:GLY:HA3	1:W:115:ARG:NE	1.94	0.82
1:C:15:ILE:HD11	1:C:25:LEU:HD13	1.61	0.82
1:I:58:MET:O	1:I:58:MET:HG2	1.80	0.81
1:W:39:LEU:N	1:W:39:LEU:HD23	1.94	0.81
1:W:84:LEU:HD12	1:W:85:LEU:N	1.96	0.81
1:A:220:THR:HG22	1:A:223:GLN:N	1.93	0.81
1:A:222:ARG:HG3	1:A:222:ARG:HH11	1.45	0.81
1:O:117:GLU:OE1	1:O:270:ARG:NH2	2.12	0.81
1:U:124:PHE:HA	1:U:154:LYS:O	1.81	0.81
1:W:191:SER:HB3	1:W:260:PHE:CE1	2.16	0.81
1:E:126:HIS:HD2	1:E:147:ILE:HD11	1.45	0.81
1:M:217:LYS:O	1:M:227:ARG:NH1	2.12	0.81
1:W:269:LEU:O	1:W:271:GLN:N	2.13	0.81
1:A:221:LYS:HE2	1:A:221:LYS:H	1.45	0.81
1:A:82:MET:HE1	3:A:408:HOH:O	1.80	0.80
1:M:138:LEU:HD13	1:M:139:GLY:N	1.96	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Q:88:SER:HA	1:Q:135:LEU:HD12	1.63	0.80
1:Q:117:GLU:OE1	1:Q:270:ARG:NH2	2.14	0.80
1:S:237:ILE:HG13	1:S:256:ARG:NH1	1.96	0.80
1:S:271:GLN:HA	1:S:271:GLN:HE21	1.47	0.80
1:I:181:SER:HB2	1:I:197:GLU:OE2	1.81	0.80
1:U:178:ARG:HH21	1:U:214:GLN:HG3	1.46	0.80
1:W:60:GLN:HA	3:W:401:HOH:O	1.81	0.80
1:I:293:LEU:CD2	1:K:15:ILE:HG13	2.12	0.80
1:W:269:LEU:O	1:W:272:LEU:N	2.11	0.80
1:W:56:TYR:CB	1:W:68:ILE:HG12	2.12	0.80
1:U:178:ARG:NH2	1:U:214:GLN:HG3	1.96	0.80
1:S:4:ARG:NH1	1:S:29:ILE:HD11	1.95	0.80
1:E:39:LEU:HD22	1:E:79:VAL:HG22	1.64	0.80
1:M:161:THR:O	1:M:162:HIS:HB2	1.82	0.80
1:M:220:THR:OG1	1:M:221:LYS:N	2.09	0.80
1:U:137:GLY:O	1:U:142:GLY:HA2	1.83	0.79
1:O:222:ARG:HB3	3:O:417:HOH:O	1.82	0.79
1:Q:220:THR:HG22	1:Q:223:GLN:HE21	1.47	0.79
1:I:25:LEU:HD23	1:I:26:GLY:N	1.97	0.79
1:M:120:HIS:ND1	1:M:192:ARG:HG2	1.98	0.79
1:U:151:GLY:O	1:U:152:LEU:HD23	1.83	0.79
1:W:283:SER:HB2	1:W:285:ASP:OD2	1.83	0.79
1:C:5:VAL:CG2	1:C:9:TYR:HB2	2.12	0.79
1:I:17:SER:HA	1:I:21:GLY:O	1.83	0.79
1:K:6:GLY:O	1:K:8:LYS:N	2.15	0.79
1:Q:219:ALA:HB3	1:Q:223:GLN:HE22	1.45	0.79
1:Q:230:GLU:HG2	3:Q:406:HOH:O	1.83	0.79
1:U:100:PHE:HE2	1:U:206:PHE:CE1	2.01	0.79
1:O:219:ALA:HB3	1:O:223:GLN:OE1	1.83	0.78
1:O:222:ARG:HG3	1:O:223:GLN:N	1.98	0.78
1:S:174:THR:HG21	1:S:190:GLN:OE1	1.83	0.78
1:W:37:ILE:HG23	1:W:81:VAL:HG13	1.64	0.78
1:E:220:THR:CG2	1:E:223:GLN:HG3	2.12	0.78
1:K:84:LEU:O	1:K:138:LEU:HD22	1.83	0.78
1:U:204:MET:O	1:U:207:ASN:N	2.15	0.78
1:W:56:TYR:HB2	1:W:68:ILE:HD11	1.63	0.78
1:W:264:PRO:HG2	1:W:266:TYR:CE2	2.17	0.78
1:I:204:MET:HA	1:I:207:ASN:HD22	1.48	0.78
1:S:213:TRP:O	1:S:216:LEU:HD22	1.84	0.78
1:K:158:ASP:OD1	1:K:161:THR:N	2.17	0.78
1:U:7:ASN:C	1:U:7:ASN:ND2	2.35	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:49:LEU:HD12	1:K:49:LEU:O	1.84	0.78
1:W:4:ARG:CD	1:W:29:ILE:HD12	2.12	0.78
1:U:276:LEU:HD13	1:U:280:GLN:HG3	1.65	0.78
1:O:66:PRO:HA	1:O:83:GLU:OE2	1.84	0.78
1:M:31:SER:O	1:M:33:GLU:N	2.17	0.77
1:S:170:ASN:N	1:S:170:ASN:ND2	2.32	0.77
1:U:140:LYS:C	1:U:142:GLY:H	1.87	0.77
1:K:3:LEU:HD11	1:O:242:LYS:HE3	1.66	0.77
1:K:46:HIS:H	1:K:47:PRO:HD2	1.48	0.77
1:U:205:TYR:HB2	1:U:211:LEU:HD11	1.64	0.77
1:C:259:ARG:HB2	1:C:262:ASP:OD2	1.84	0.77
1:W:173:LEU:CD1	1:W:184:THR:HG22	2.14	0.77
1:Q:221:LYS:H	1:Q:221:LYS:HD2	1.49	0.77
1:E:274:ARG:NH1	1:Q:274:ARG:NH1	2.33	0.77
1:O:56:TYR:CE1	1:O:66:PRO:HG2	2.20	0.77
1:U:14:LYS:O	1:U:15:ILE:HG12	1.85	0.77
1:U:22:ASP:N	3:U:419:HOH:O	2.17	0.77
1:S:150:PHE:O	1:S:152:LEU:N	2.17	0.77
1:U:87:PRO:HD3	1:W:291:ASN:O	1.83	0.77
1:Q:259:ARG:HD2	1:Q:260:PHE:N	1.99	0.77
1:S:220:THR:HG22	1:S:223:GLN:NE2	2.00	0.77
1:S:69:LYS:HB2	1:S:81:VAL:O	1.85	0.77
1:G:207:ASN:HB3	1:G:244:TYR:CE1	2.20	0.76
1:M:8:LYS:HD3	1:M:9:TYR:CE2	2.20	0.76
1:M:222:ARG:HB2	1:M:222:ARG:NH1	1.96	0.76
1:U:202:VAL:O	1:U:206:PHE:CD2	2.38	0.76
1:S:109:ALA:O	1:S:113:ILE:HG13	1.84	0.76
1:S:161:THR:O	1:S:162:HIS:HB2	1.84	0.76
1:U:249:SER:O	1:U:253:ASN:ND2	2.17	0.76
1:A:171:LYS:HB2	1:A:187:GLY:O	1.85	0.76
1:W:219:ALA:O	1:W:220:THR:CG2	2.32	0.76
1:W:167:TYR:HE1	1:W:169:GLU:OE2	1.68	0.76
1:A:15:ILE:HD12	1:C:292:MET:HE3	1.68	0.76
1:G:219:ALA:O	1:G:220:THR:HB	1.85	0.76
1:C:46:HIS:H	1:C:47:PRO:HD3	1.50	0.76
1:U:56:TYR:HE1	1:U:66:PRO:HG2	1.48	0.76
3:A:476:HOH:O	1:I:1:MET:HE2	1.85	0.76
1:M:236:PRO:HG2	1:M:239:VAL:HG23	1.67	0.76
1:K:217:LYS:O	1:K:227:ARG:NH1	2.19	0.76
1:M:293:LEU:O	1:M:294:LYS:HD2	1.86	0.76
1:W:15:ILE:HG22	1:W:16:GLY:N	2.01	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Q:221:LYS:H	1:Q:221:LYS:CD	1.99	0.76
1:S:221:LYS:O	1:S:225:TYR:HD1	1.69	0.75
1:U:293:LEU:HB3	1:W:15:ILE:CG2	2.17	0.75
1:E:217:LYS:O	1:E:227:ARG:NH1	2.18	0.75
1:K:247:GLU:OE2	1:K:279:ARG:NH1	2.19	0.75
1:U:250:THR:HG21	1:U:272:LEU:HD11	1.67	0.75
1:W:64:GLY:HA3	1:W:115:ARG:CD	2.17	0.75
1:A:15:ILE:HG21	1:A:25:LEU:HB2	1.68	0.75
1:G:9:TYR:HA	1:G:27:ALA:O	1.86	0.75
1:U:292:MET:HG3	1:U:293:LEU:H	1.51	0.75
1:W:69:LYS:CB	1:W:81:VAL:O	2.30	0.75
1:G:220:THR:HG22	1:G:223:GLN:OE1	1.86	0.75
1:U:4:ARG:HH21	1:U:7:ASN:CA	1.98	0.74
1:M:42:VAL:HG23	1:M:76:ASP:O	1.86	0.74
1:M:118:TYR:O	1:M:121:SER:HB3	1.86	0.74
1:U:155:LYS:HE2	3:U:414:HOH:O	1.87	0.74
1:U:254:PHE:CD2	1:U:269:LEU:HD21	2.21	0.74
1:W:280:GLN:HB3	1:W:282:PHE:CE2	2.23	0.74
1:K:270:ARG:NH1	3:K:408:HOH:O	2.19	0.74
1:S:234:SER:O	1:S:236:PRO:HD3	1.88	0.74
1:U:237:ILE:HD13	1:U:252:LEU:CB	2.16	0.74
1:W:56:TYR:CE2	1:W:82:MET:CE	2.71	0.74
1:A:186:LEU:HD21	1:A:233:MET:HE1	1.68	0.74
1:Q:221:LYS:HD2	1:Q:221:LYS:N	2.02	0.74
1:U:4:ARG:CZ	1:U:7:ASN:HA	2.17	0.74
1:U:283:SER:C	1:U:285:ASP:H	1.91	0.74
1:K:3:LEU:HD23	1:K:11:LEU:HB3	1.67	0.74
1:W:181:SER:HB2	1:W:197:GLU:OE1	1.87	0.74
1:G:41:CYS:O	1:G:44:THR:HG22	1.87	0.74
1:S:158:ASP:O	1:S:162:HIS:HD2	1.71	0.74
1:S:169:GLU:CB	1:S:170:ASN:HD22	2.01	0.74
1:W:52:GLU:HG2	1:W:56:TYR:CE2	2.23	0.74
1:M:259:ARG:HB2	1:M:262:ASP:OD2	1.88	0.74
1:U:123:ASN:O	1:U:155:LYS:HA	1.87	0.74
1:U:183:ASN:HA	1:U:186:LEU:HG	1.68	0.74
1:W:164:HIS:NE2	1:W:261:ASP:HA	2.03	0.74
1:W:53:SER:HA	1:W:68:ILE:CD1	2.18	0.73
1:A:174:THR:O	1:A:174:THR:CG2	2.35	0.73
1:W:103:LYS:HG3	1:W:282:PHE:CD1	2.23	0.73
1:O:28:ASN:HD21	1:O:31:SER:H	1.36	0.73
1:U:241:CYS:O	1:U:244:TYR:HB2	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:13:ARG:CG	1:O:13:ARG:NH1	2.48	0.73
1:S:39:LEU:HD23	1:S:79:VAL:HG22	1.70	0.73
1:W:53:SER:CB	1:W:71:CYS:SG	2.70	0.73
1:U:112:MET:O	1:U:116:ILE:HD12	1.88	0.73
1:U:224:LYS:NZ	2:U:301:SO4:O3	2.19	0.73
1:K:1:MET:O	1:K:2:GLU:HB2	1.87	0.73
1:Q:10:ARG:HB2	1:Q:29:ILE:HD11	1.70	0.73
1:W:56:TYR:HE1	1:W:150:PHE:CE1	2.06	0.73
1:Q:226:GLU:O	1:Q:230:GLU:HG3	1.89	0.72
1:E:220:THR:HG22	1:E:223:GLN:CG	2.18	0.72
1:A:56:TYR:HD2	1:A:80:MET:HE3	1.55	0.72
1:G:5:VAL:C	1:G:7:ASN:N	2.42	0.72
1:S:10:ARG:HG2	1:S:10:ARG:O	1.89	0.72
1:Q:221:LYS:HG2	1:Q:222:ARG:H	1.54	0.72
1:U:109:ALA:O	1:U:113:ILE:HG13	1.89	0.72
1:U:60:GLN:HG3	1:U:61:GLY:N	2.03	0.72
1:W:269:LEU:O	1:W:270:ARG:C	2.25	0.72
1:W:271:GLN:OE1	1:W:275:ASN:OD1	2.07	0.72
1:M:124:PHE:CE2	1:M:155:LYS:HG3	2.24	0.72
1:O:52:GLU:O	1:O:54:LYS:N	2.23	0.72
1:O:140:LYS:HG3	1:O:141:LYS:CD	2.19	0.72
1:W:59:MET:HE1	1:W:122:LYS:HB2	1.70	0.72
1:W:63:VAL:HA	3:W:425:HOH:O	1.89	0.72
1:W:191:SER:HB3	1:W:260:PHE:CD1	2.25	0.72
1:E:117:GLU:OE1	1:E:270:ARG:NH2	2.21	0.72
1:S:137:GLY:HA3	1:S:141:LYS:HB2	1.71	0.72
1:U:100:PHE:HE2	1:U:206:PHE:HE1	1.35	0.72
1:U:234:SER:O	1:U:236:PRO:HD3	1.89	0.72
1:U:28:ASN:OD1	1:U:31:SER:HB2	1.88	0.72
1:G:5:VAL:C	1:G:7:ASN:H	1.91	0.71
1:K:3:LEU:CD1	1:O:242:LYS:HE3	2.20	0.71
1:U:46:HIS:H	1:U:47:PRO:HD3	1.55	0.71
1:U:117:GLU:HG3	1:U:266:TYR:CD1	2.25	0.71
1:W:111:GLN:OE1	1:W:145:VAL:HG23	1.90	0.71
1:O:13:ARG:HG3	1:O:13:ARG:NH1	1.94	0.71
1:U:135:LEU:HD13	1:U:148:ILE:HD13	1.70	0.71
1:O:222:ARG:CG	1:O:223:GLN:N	2.54	0.71
1:K:140:LYS:HG3	1:K:141:LYS:HG2	1.73	0.71
1:G:28:ASN:O	1:G:32:GLY:N	2.24	0.71
1:S:25:LEU:HD23	1:S:26:GLY:N	2.06	0.71
1:U:140:LYS:O	1:U:142:GLY:N	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:43:LYS:HB2	1:K:233:MET:HE2	1.72	0.71
1:K:39:LEU:HD21	1:K:79:VAL:HG22	1.71	0.71
1:M:200:GLY:HA3	1:M:252:LEU:HD21	1.73	0.71
1:W:66:PRO:HB3	1:W:85:LEU:HD11	1.71	0.71
1:S:4:ARG:N	3:S:402:HOH:O	2.23	0.71
1:A:47:PRO:O	1:A:48:GLN:HG2	1.90	0.71
1:A:111:GLN:O	1:A:115:ARG:HG2	1.90	0.71
1:C:140:LYS:HA	1:C:140:LYS:HE3	1.71	0.71
1:W:168:ARG:HG3	1:W:169:GLU:H	1.55	0.71
1:O:140:LYS:HG3	1:O:141:LYS:N	2.06	0.71
1:O:220:THR:HG23	1:O:222:ARG:HG2	1.71	0.71
1:U:237:ILE:HG13	1:U:256:ARG:CZ	2.21	0.71
1:W:247:GLU:HB2	1:W:276:LEU:CD2	2.21	0.71
1:W:278:HIS:O	1:W:280:GLN:N	2.24	0.71
1:O:174:THR:HG22	1:O:175:GLY:H	1.53	0.70
1:Q:293:LEU:C	1:Q:293:LEU:HD12	2.11	0.70
1:U:185:HIS:NE2	1:U:232:LYS:HE3	2.06	0.70
1:S:56:TYR:CE1	1:S:66:PRO:HG2	2.26	0.70
1:W:128:ASP:O	1:W:133:ASN:ND2	2.23	0.70
1:E:38:LYS:O	1:E:39:LEU:HD23	1.91	0.70
1:I:56:TYR:CE2	1:I:82:MET:HE2	2.25	0.70
1:S:169:GLU:HB2	1:S:170:ASN:ND2	2.06	0.70
1:U:41:CYS:O	1:U:44:THR:HG22	1.91	0.70
1:W:59:MET:CE	1:W:122:LYS:HB2	2.21	0.70
1:C:10:ARG:HB2	1:C:29:ILE:CD1	2.20	0.70
1:Q:213:TRP:HB3	1:Q:231:LYS:HG3	1.73	0.70
1:E:101:SER:O	1:E:105:VAL:HG23	1.90	0.70
1:A:56:TYR:HD2	1:A:68:ILE:HD11	1.55	0.70
1:K:161:THR:O	1:K:162:HIS:HB2	1.90	0.70
1:U:137:GLY:C	1:U:142:GLY:HA2	2.11	0.70
1:A:186:LEU:HD21	1:A:233:MET:CE	2.22	0.70
1:S:45:LYS:O	1:S:47:PRO:HD3	1.92	0.70
1:W:192:ARG:HH11	1:W:264:PRO:CD	1.85	0.70
1:C:39:LEU:CD2	1:C:79:VAL:HG22	2.21	0.70
1:E:10:ARG:HB2	1:E:29:ILE:HD11	1.73	0.70
1:K:39:LEU:HD22	1:K:79:VAL:HG22	1.72	0.70
1:O:123:ASN:O	1:O:155:LYS:HA	1.92	0.70
1:I:41:CYS:O	1:I:44:THR:HG22	1.92	0.69
1:S:167:TYR:O	1:S:167:TYR:HD1	1.73	0.69
1:W:182:ILE:HD12	1:W:256:ARG:NE	2.06	0.69
1:Q:220:THR:HG22	1:Q:223:GLN:NE2	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:259:ARG:HD3	1:S:260:PHE:H	1.56	0.69
1:O:259:ARG:HB2	1:O:262:ASP:HB2	1.74	0.69
1:S:120:HIS:HA	1:S:124:PHE:O	1.93	0.69
1:A:222:ARG:HG3	1:A:222:ARG:NH1	2.08	0.69
1:C:219:ALA:O	1:C:220:THR:HG22	1.92	0.69
1:S:169:GLU:CB	1:S:170:ASN:ND2	2.56	0.69
1:G:88:SER:HA	1:G:135:LEU:HD12	1.74	0.69
1:K:11:LEU:HD12	1:K:37:ILE:CD1	2.23	0.69
1:O:140:LYS:CG	1:O:141:LYS:N	2.51	0.69
1:O:204:MET:HE3	1:O:207:ASN:HB2	1.75	0.69
1:S:208:LEU:HD23	1:S:244:TYR:CE2	2.28	0.69
1:W:220:THR:OG1	1:W:221:LYS:HE2	1.92	0.69
1:A:120:HIS:CG	1:A:192:ARG:HG2	2.27	0.69
1:E:44:THR:HG22	1:E:45:LYS:N	2.07	0.69
1:M:191:SER:HB3	1:M:260:PHE:CE1	2.27	0.69
1:M:293:LEU:HD21	1:O:135:LEU:HD23	1.74	0.69
1:U:5:VAL:CG2	1:U:9:TYR:HB2	2.23	0.69
1:U:208:LEU:C	1:U:210:SER:H	1.96	0.69
1:G:222:ARG:O	1:G:226:GLU:OE1	2.11	0.69
1:Q:17:SER:H	1:S:294:LYS:CD	1.97	0.69
1:S:120:HIS:CG	1:S:192:ARG:HG2	2.28	0.69
1:C:3:LEU:HD21	1:K:238:GLU:CG	2.12	0.68
1:O:54:LYS:HG3	1:O:55:PHE:N	2.08	0.68
1:A:1:MET:O	1:A:2:GLU:HB2	1.93	0.68
1:G:28:ASN:HD21	1:G:30:ALA:HB3	1.58	0.68
1:K:5:VAL:HG12	1:K:74:GLU:HG2	1.76	0.68
1:S:143:ASN:C	1:S:143:ASN:HD22	1.97	0.68
1:U:127:ARG:HB3	1:U:190:GLN:NE2	2.07	0.68
1:W:138:LEU:O	1:W:139:GLY:C	2.32	0.68
1:C:10:ARG:HB2	1:C:29:ILE:HD11	1.74	0.68
1:M:41:CYS:O	1:M:44:THR:HG22	1.92	0.68
1:U:191:SER:HB3	1:U:260:PHE:CE1	2.28	0.68
1:W:127:ARG:HG2	1:W:190:GLN:NE2	2.08	0.68
1:I:13:ARG:HG2	3:I:416:HOH:O	1.93	0.68
1:O:56:TYR:CB	1:O:68:ILE:CD1	2.70	0.68
1:G:105:VAL:HG21	1:G:207:ASN:OD1	1.93	0.68
1:S:82:MET:HE2	3:S:409:HOH:O	1.92	0.68
1:U:254:PHE:CG	1:U:269:LEU:HD21	2.29	0.68
1:I:222:ARG:HG3	1:I:222:ARG:HH11	1.59	0.68
1:U:23:ILE:HD13	1:U:23:ILE:N	2.08	0.68
1:M:123:ASN:HD21	1:M:159:ALA:HA	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:28:ASN:ND2	1:U:30:ALA:H	1.92	0.68
1:U:217:LYS:O	1:U:218:ALA:HB2	1.94	0.68
1:W:12:GLY:HA2	3:W:432:HOH:O	1.93	0.68
1:W:73:ALA:O	1:W:74:GLU:HB3	1.93	0.68
1:E:111:GLN:O	1:E:115:ARG:HG2	1.93	0.68
1:W:13:ARG:HD3	1:W:13:ARG:N	2.06	0.68
1:E:39:LEU:CD2	1:E:79:VAL:HG13	2.24	0.68
1:E:92:LEU:HD22	1:E:290:TRP:CG	2.28	0.68
1:G:55:PHE:HA	1:G:58:MET:HE3	1.74	0.68
1:U:120:HIS:CG	1:U:192:ARG:HG2	2.28	0.68
1:W:111:GLN:CD	1:W:145:VAL:HG23	2.14	0.67
1:W:190:GLN:HA	1:W:194:ASP:OD2	1.94	0.67
1:E:182:ILE:HD11	1:E:256:ARG:NH2	2.08	0.67
1:W:143:ASN:ND2	1:W:286:TYR:CD2	2.62	0.67
1:A:1:MET:CE	1:G:249:SER:CB	2.73	0.67
1:O:118:TYR:CZ	1:O:122:LYS:HE3	2.29	0.67
1:W:41:CYS:HB2	1:W:77:TYR:CE1	2.29	0.67
1:E:210:SER:HB2	1:E:214:GLN:OE1	1.94	0.67
1:U:259:ARG:CB	1:U:262:ASP:OD2	2.42	0.67
1:W:14:LYS:NZ	1:W:16:GLY:O	2.24	0.67
1:Q:229:SER:O	1:Q:233:MET:HG3	1.93	0.67
1:U:218:ALA:O	1:U:219:ALA:O	2.12	0.67
1:U:261:ASP:O	1:U:262:ASP:O	2.12	0.67
1:O:130:LYS:HE3	1:O:132:ASP:HB2	1.76	0.67
1:U:202:VAL:O	1:U:206:PHE:HD2	1.77	0.67
1:U:276:LEU:CD1	1:U:280:GLN:HG3	2.24	0.67
1:W:92:LEU:HD13	1:W:290:TRP:CD2	2.30	0.67
1:C:4:ARG:HD3	3:C:428:HOH:O	1.93	0.67
1:G:220:THR:HG22	1:G:223:GLN:CD	2.15	0.67
1:M:293:LEU:HD21	1:O:135:LEU:CD2	2.24	0.67
1:O:41:CYS:SG	1:O:43:LYS:CE	2.82	0.67
1:O:155:LYS:HD2	1:O:157:ARG:O	1.95	0.67
1:O:220:THR:HG23	1:O:223:GLN:HG3	1.77	0.67
1:I:56:TYR:HE1	1:I:150:PHE:HE1	1.42	0.67
1:W:31:SER:HB2	1:W:33:GLU:HB3	1.76	0.67
1:A:119:ILE:HD13	1:A:150:PHE:HE2	1.58	0.67
1:M:274:ARG:HG2	1:M:274:ARG:NH1	2.00	0.67
1:Q:271:GLN:HE22	1:Q:274:ARG:NH1	1.93	0.67
1:S:115:ARG:O	1:S:119:ILE:HG13	1.96	0.67
1:E:43:LYS:O	1:E:44:THR:O	2.12	0.66
1:S:80:MET:HE2	1:S:82:MET:SD	2.35	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:167:TYR:HE2	1:S:259:ARG:NH1	1.93	0.66
1:S:173:LEU:HD12	1:S:174:THR:N	2.09	0.66
1:S:167:TYR:CE2	1:S:259:ARG:NH1	2.64	0.66
1:O:22:ASP:HA	3:O:405:HOH:O	1.94	0.66
1:O:17:SER:C	3:O:402:HOH:O	2.33	0.66
1:O:30:ALA:HB2	1:S:284:TYR:CZ	2.30	0.66
1:U:4:ARG:NH2	1:U:7:ASN:CA	2.56	0.66
1:E:44:THR:HG22	1:E:46:HIS:H	1.60	0.66
1:I:132:ASP:HB2	3:I:424:HOH:O	1.94	0.66
1:Q:215:GLY:N	2:Q:301:SO4:O3	2.29	0.66
1:W:200:GLY:HA3	1:W:252:LEU:HD21	1.76	0.66
1:S:236:PRO:HD2	1:S:239:VAL:HG21	1.78	0.66
1:A:10:ARG:HB2	1:A:29:ILE:CD1	2.25	0.66
1:C:140:LYS:HA	1:C:140:LYS:CE	2.26	0.66
1:U:237:ILE:HD11	1:U:252:LEU:HB3	1.77	0.66
1:K:62:GLY:HA3	1:K:118:TYR:CZ	2.30	0.66
1:S:4:ARG:HH12	1:S:29:ILE:HD11	1.61	0.66
1:S:254:PHE:C	1:S:254:PHE:CD2	2.69	0.66
1:U:164:HIS:HE1	1:U:260:PHE:CZ	2.13	0.66
1:W:192:ARG:NH1	1:W:264:PRO:CD	2.52	0.66
1:C:39:LEU:HD23	1:C:79:VAL:HG22	1.78	0.66
1:M:102:LEU:HG	1:M:106:LEU:CD1	2.25	0.66
1:Q:220:THR:HG23	1:Q:223:GLN:N	2.09	0.66
1:S:193:ARG:HG3	1:S:194:ASP:N	2.10	0.66
1:W:266:TYR:CB	1:W:270:ARG:HH12	2.09	0.66
1:K:5:VAL:HG12	1:K:74:GLU:CG	2.26	0.66
1:K:247:GLU:OE1	1:K:247:GLU:N	2.29	0.66
1:K:267:SER:OG	3:K:433:HOH:O	2.13	0.66
1:U:56:TYR:HB3	1:U:68:ILE:CD1	2.26	0.66
1:O:120:HIS:CE1	1:O:192:ARG:HG2	2.32	0.65
1:G:168:ARG:NH1	1:G:171:LYS:HG2	2.11	0.65
1:I:28:ASN:ND2	1:I:31:SER:H	1.94	0.65
1:I:56:TYR:CE2	1:I:82:MET:CE	2.79	0.65
1:O:229:SER:O	1:O:233:MET:HG3	1.96	0.65
1:S:221:LYS:O	1:S:225:TYR:CD1	2.48	0.65
1:E:56:TYR:HB2	1:E:68:ILE:HD11	1.77	0.65
1:G:161:THR:O	1:G:162:HIS:HB2	1.96	0.65
1:K:183:ASN:O	1:K:186:LEU:N	2.28	0.65
1:U:15:ILE:O	1:U:15:ILE:HG22	1.96	0.65
1:U:150:PHE:O	1:U:152:LEU:N	2.29	0.65
1:U:293:LEU:HB3	1:W:15:ILE:HG22	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:W:111:GLN:OE1	1:W:144:LEU:HA	1.96	0.65
1:A:147:ILE:CG2	3:A:419:HOH:O	2.44	0.65
1:M:220:THR:OG1	1:M:221:LYS:HE2	1.96	0.65
1:U:1:MET:SD	3:U:407:HOH:O	2.54	0.65
1:U:56:TYR:CG	1:U:68:ILE:HD11	2.31	0.65
1:U:267:SER:HA	1:U:270:ARG:NH1	2.10	0.65
1:I:222:ARG:HG3	1:I:222:ARG:NH1	2.11	0.65
1:M:15:ILE:HD11	1:O:292:MET:SD	2.37	0.65
1:S:117:GLU:OE1	1:S:270:ARG:NH2	2.30	0.65
1:S:167:TYR:O	1:S:167:TYR:CD1	2.50	0.65
1:U:140:LYS:C	1:U:142:GLY:N	2.47	0.65
1:W:111:GLN:OE1	1:W:145:VAL:N	2.28	0.65
1:I:23:ILE:HD11	1:I:38:LYS:HE2	1.79	0.65
1:K:143:ASN:OD1	1:K:286:TYR:HB3	1.96	0.65
1:S:22:ASP:N	3:S:418:HOH:O	2.28	0.65
1:S:23:ILE:HD11	1:S:38:LYS:HE3	1.78	0.65
1:U:235:THR:O	1:U:235:THR:CG2	2.43	0.65
1:U:237:ILE:HG22	1:U:249:SER:OG	1.96	0.65
1:W:117:GLU:OE1	1:W:270:ARG:NH2	2.30	0.65
1:W:251:TYR:CD1	1:W:251:TYR:C	2.69	0.65
1:I:221:LYS:H	1:I:221:LYS:CE	2.10	0.65
1:U:4:ARG:NE	1:U:7:ASN:HA	2.12	0.65
1:U:14:LYS:HG3	1:U:15:ILE:H	1.61	0.65
1:U:94:ASN:OD1	1:U:98:ARG:NH1	2.28	0.65
1:U:259:ARG:HB2	1:U:262:ASP:OD2	1.96	0.65
1:W:48:GLN:HA	1:W:51:ILE:HG13	1.76	0.65
1:A:68:ILE:CD1	1:A:80:MET:HE3	2.27	0.65
1:O:276:LEU:HD12	1:O:276:LEU:O	1.96	0.65
1:S:140:LYS:C	1:S:142:GLY:H	1.99	0.65
1:U:62:GLY:HA3	1:U:118:TYR:CE2	2.32	0.65
1:W:41:CYS:CA	1:W:77:TYR:HD1	2.07	0.65
1:C:15:ILE:CD1	1:C:25:LEU:HD13	2.27	0.65
1:U:289:ASP:O	1:U:292:MET:HG2	1.97	0.65
1:W:161:THR:O	1:W:162:HIS:HB2	1.97	0.65
1:M:236:PRO:HG2	1:M:239:VAL:CG2	2.27	0.64
1:U:28:ASN:HB3	1:U:31:SER:HB3	1.78	0.64
1:U:216:LEU:HB3	1:U:227:ARG:NH1	2.13	0.64
1:U:292:MET:O	1:W:87:PRO:HD3	1.97	0.64
1:A:226:GLU:HA	1:A:226:GLU:OE1	1.96	0.64
1:O:199:LEU:O	1:O:203:LEU:HG	1.98	0.64
1:W:2:GLU:CG	1:W:3:LEU:H	2.05	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:W:41:CYS:HB2	1:W:77:TYR:HE1	1.62	0.64
1:I:220:THR:HG23	1:I:223:GLN:N	2.05	0.64
1:M:173:LEU:HD12	1:M:184:THR:HG22	1.79	0.64
1:Q:41:CYS:O	1:Q:44:THR:HG23	1.97	0.64
1:K:186:LEU:HD21	1:K:233:MET:CE	2.27	0.64
1:O:140:LYS:C	1:O:142:GLY:H	2.01	0.64
1:O:174:THR:CG2	1:O:175:GLY:N	2.57	0.64
1:G:5:VAL:HG23	1:G:9:TYR:HB2	1.79	0.64
1:S:229:SER:O	1:S:233:MET:HG2	1.97	0.64
1:W:57:LYS:NZ	1:W:68:ILE:HG21	2.13	0.64
1:A:293:LEU:CD1	1:C:15:ILE:CG2	2.76	0.64
1:M:69:LYS:HB2	1:M:81:VAL:O	1.98	0.64
1:U:23:ILE:N	1:U:23:ILE:CD1	2.60	0.64
1:K:259:ARG:HG3	1:K:259:ARG:NH1	2.12	0.64
1:O:204:MET:HE3	1:O:204:MET:CA	2.26	0.64
1:E:74:GLU:OE1	3:E:445:HOH:O	2.15	0.64
1:I:197:GLU:OE1	1:I:256:ARG:HG2	1.98	0.64
1:O:220:THR:O	1:O:223:GLN:N	2.30	0.64
1:O:222:ARG:CG	1:O:223:GLN:H	2.10	0.64
1:W:164:HIS:CD2	1:W:261:ASP:HB2	2.32	0.64
1:O:7:ASN:HD21	1:S:283:SER:CA	2.11	0.63
1:S:68:ILE:HG22	1:S:69:LYS:N	2.13	0.63
1:U:6:GLY:HA3	1:U:70:TRP:CZ2	2.34	0.63
1:S:150:PHE:N	1:S:150:PHE:CD1	2.65	0.63
1:W:123:ASN:HA	1:W:156:TYR:CE2	2.33	0.63
1:I:56:TYR:HE2	1:I:82:MET:CE	2.11	0.63
1:K:46:HIS:N	1:K:47:PRO:HD2	2.13	0.63
1:U:100:PHE:CE2	1:U:206:PHE:CE1	2.84	0.63
1:W:33:GLU:HG3	1:W:33:GLU:O	1.97	0.63
1:W:56:TYR:CE2	1:W:82:MET:HE1	2.33	0.63
1:G:74:GLU:OE1	1:G:74:GLU:HA	1.98	0.63
1:O:58:MET:HE3	1:O:122:LYS:O	1.99	0.63
1:I:84:LEU:HD21	1:K:292:MET:HG3	1.79	0.63
1:I:173:LEU:HD23	1:I:225:TYR:CE2	2.33	0.63
1:O:120:HIS:ND1	1:O:192:ARG:HG2	2.13	0.63
1:M:134:PHE:C	1:M:135:LEU:HD12	2.18	0.63
1:S:15:ILE:HG21	1:S:25:LEU:HB2	1.79	0.63
1:U:283:SER:O	1:U:285:ASP:N	2.31	0.63
1:W:7:ASN:HA	3:W:405:HOH:O	1.99	0.63
1:U:213:TRP:CE3	1:U:232:LYS:HG3	2.33	0.63
1:A:42:VAL:HG23	1:A:76:ASP:O	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:5:VAL:HG21	1:G:37:ILE:HD13	1.81	0.63
1:O:28:ASN:ND2	1:O:31:SER:N	2.36	0.63
1:W:73:ALA:O	1:W:74:GLU:CB	2.46	0.63
1:Q:8:LYS:CB	1:Q:8:LYS:NZ	2.62	0.63
1:W:88:SER:HA	1:W:134:PHE:O	1.99	0.63
1:U:15:ILE:HD13	1:W:292:MET:CE	2.29	0.62
1:W:84:LEU:HD12	1:W:85:LEU:H	1.64	0.62
1:W:131:PRO:O	1:W:133:ASN:N	2.32	0.62
1:M:14:LYS:HE3	3:M:429:HOH:O	1.99	0.62
1:G:135:LEU:HD22	1:G:148:ILE:HD13	1.81	0.62
1:S:56:TYR:CE1	1:S:66:PRO:CG	2.83	0.62
1:S:56:TYR:CD1	1:S:66:PRO:HG2	2.34	0.62
1:S:239:VAL:O	1:S:242:LYS:HB2	1.99	0.62
1:U:178:ARG:NH2	2:U:301:SO4:O1	2.32	0.62
1:W:167:TYR:CE1	1:W:169:GLU:OE2	2.51	0.62
1:S:222:ARG:HG2	1:S:222:ARG:NH1	2.14	0.62
1:C:247:GLU:HG3	1:C:272:LEU:HD11	1.82	0.62
1:M:156:TYR:C	1:M:165:ILE:HG23	2.20	0.62
1:M:198:SER:O	1:M:202:VAL:HG23	1.99	0.62
1:S:120:HIS:CE1	1:S:192:ARG:HG2	2.34	0.62
1:S:236:PRO:HB2	1:S:239:VAL:HG23	1.80	0.62
1:U:235:THR:CG2	1:U:240:LEU:HB2	2.28	0.62
1:W:150:PHE:CD1	1:W:150:PHE:N	2.68	0.62
1:C:219:ALA:C	1:C:220:THR:HG22	2.20	0.62
1:Q:173:LEU:HD12	1:Q:184:THR:HG22	1.81	0.62
1:S:70:TRP:HZ3	1:S:72:GLY:O	1.81	0.62
1:U:193:ARG:HG3	1:U:194:ASP:H	1.65	0.62
1:W:280:GLN:HB3	1:W:282:PHE:CD2	2.35	0.62
1:A:220:THR:HG23	1:A:222:ARG:H	1.65	0.62
1:A:238:GLU:HG2	1:I:3:LEU:HB2	1.81	0.62
1:G:210:SER:HB2	1:G:214:GLN:OE1	2.00	0.62
1:S:39:LEU:CD2	1:S:79:VAL:HG22	2.30	0.62
1:C:222:ARG:HH11	1:C:222:ARG:CG	2.12	0.62
1:Q:76:ASP:OD1	1:Q:76:ASP:N	2.20	0.62
1:U:191:SER:O	1:U:193:ARG:N	2.32	0.62
1:C:37:ILE:HG12	1:C:81:VAL:HG22	1.82	0.62
1:G:127:ARG:HD2	1:G:190:GLN:NE2	2.15	0.62
1:I:222:ARG:O	1:I:226:GLU:OE1	2.17	0.62
1:K:221:LYS:O	1:K:224:LYS:N	2.33	0.62
1:M:140:LYS:O	1:M:141:LYS:HD3	1.99	0.62
1:M:174:THR:HG23	1:M:190:GLN:OE1	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Q:220:THR:OG1	1:Q:221:LYS:HD2	1.99	0.62
1:G:23:ILE:CD1	1:G:38:LYS:HG3	2.30	0.61
1:K:98:ARG:NH2	1:K:205:TYR:OH	2.33	0.61
1:S:112:MET:O	1:S:116:ILE:HD12	2.00	0.61
1:S:222:ARG:HG2	1:S:222:ARG:HH11	1.65	0.61
1:U:84:LEU:HD21	1:W:292:MET:HG2	1.82	0.61
1:U:184:THR:HG23	1:U:190:GLN:OE1	2.00	0.61
1:A:66:PRO:HB3	1:A:85:LEU:HD11	1.82	0.61
1:O:58:MET:HE1	1:O:124:PHE:CD1	2.34	0.61
1:W:192:ARG:HH12	1:W:263:LYS:CB	2.12	0.61
1:E:249:SER:HB2	1:O:1:MET:CE	2.26	0.61
1:M:254:PHE:CD2	1:M:269:LEU:HD21	2.35	0.61
1:S:4:ARG:HG3	1:S:4:ARG:NH1	2.03	0.61
1:S:221:LYS:NZ	1:S:221:LYS:H	1.98	0.61
1:W:247:GLU:OE1	1:W:247:GLU:N	2.33	0.61
1:E:174:THR:HG23	1:E:174:THR:O	2.01	0.61
1:S:182:ILE:CD1	1:S:256:ARG:NH2	2.62	0.61
1:U:250:THR:CG2	1:U:272:LEU:HD21	2.30	0.61
1:A:293:LEU:HD11	1:C:15:ILE:HG21	1.82	0.61
1:Q:285:ASP:O	1:Q:285:ASP:OD1	2.19	0.61
1:W:130:LYS:O	1:W:131:PRO:C	2.39	0.61
1:K:120:HIS:ND1	1:K:192:ARG:HG2	2.15	0.61
1:K:173:LEU:HD23	1:K:225:TYR:CE2	2.35	0.61
1:K:183:ASN:O	1:K:184:THR:C	2.38	0.61
1:M:31:SER:C	1:M:33:GLU:H	2.01	0.61
1:W:222:ARG:HG3	1:W:222:ARG:HH11	1.65	0.61
1:K:158:ASP:O	1:K:162:HIS:HA	2.00	0.61
1:O:41:CYS:SG	1:O:43:LYS:HE3	2.39	0.61
1:Q:40:GLU:HG2	1:Q:44:THR:HG21	1.82	0.61
1:U:164:HIS:HE1	1:U:260:PHE:CE2	2.18	0.61
1:W:57:LYS:HD3	1:W:68:ILE:CG1	2.30	0.61
1:A:137:GLY:HA3	1:A:141:LYS:O	2.01	0.61
1:C:56:TYR:HB2	1:C:68:ILE:HD11	1.83	0.61
1:M:18:GLY:O	1:M:19:SER:CB	2.48	0.61
1:M:174:THR:CG2	1:M:190:GLN:OE1	2.48	0.61
1:S:117:GLU:HG3	1:S:266:TYR:CD2	2.35	0.61
1:W:191:SER:OG	1:W:193:ARG:HG2	1.99	0.61
1:A:56:TYR:CD2	1:A:68:ILE:HD11	2.36	0.61
1:A:42:VAL:HG12	1:A:42:VAL:O	2.01	0.60
1:C:270:ARG:NH1	3:C:467:HOH:O	2.33	0.60
1:E:249:SER:CB	1:O:1:MET:HE3	2.27	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:29:ILE:HG22	1:I:30:ALA:N	2.16	0.60
1:K:182:ILE:HD13	1:K:233:MET:HG3	1.82	0.60
1:M:109:ALA:O	1:M:113:ILE:HG13	2.00	0.60
1:O:141:LYS:HD3	1:O:141:LYS:N	2.15	0.60
1:O:204:MET:HA	1:O:204:MET:CE	2.25	0.60
1:U:253:ASN:O	1:U:257:SER:OG	2.20	0.60
1:W:68:ILE:HD13	1:W:80:MET:CE	2.21	0.60
1:O:169:GLU:O	1:O:170:ASN:HB2	2.00	0.60
1:C:15:ILE:HG22	1:C:16:GLY:N	2.16	0.60
1:I:15:ILE:CD1	1:I:25:LEU:HB2	2.29	0.60
1:O:118:TYR:CE1	1:O:122:LYS:HE3	2.36	0.60
1:Q:6:GLY:O	1:Q:7:ASN:CB	2.49	0.60
1:S:108:LEU:O	1:S:112:MET:CG	2.48	0.60
1:U:28:ASN:ND2	1:U:30:ALA:N	2.49	0.60
1:W:177:ALA:HB1	1:W:228:ILE:HD12	1.82	0.60
1:I:1:MET:O	1:I:2:GLU:HB2	2.01	0.60
1:O:11:LEU:HD12	1:O:37:ILE:HD12	1.81	0.60
1:W:266:TYR:HB3	1:W:270:ARG:HH12	1.66	0.60
1:O:1:MET:O	1:O:2:GLU:CB	2.49	0.60
1:O:33:GLU:OE2	1:O:69:LYS:HE2	2.01	0.60
1:U:118:TYR:CZ	1:U:122:LYS:CE	2.84	0.60
1:U:191:SER:HB3	1:U:260:PHE:HE1	1.66	0.60
1:S:173:LEU:HD12	1:S:174:THR:H	1.67	0.60
1:U:213:TRP:CD2	1:U:232:LYS:HG3	2.36	0.60
1:G:84:LEU:HG	1:G:138:LEU:HD11	1.83	0.60
1:I:158:ASP:OD1	1:I:161:THR:HG23	2.02	0.60
1:O:117:GLU:HG3	1:O:266:TYR:CD2	2.37	0.60
1:A:147:ILE:HG22	3:A:419:HOH:O	2.01	0.60
1:G:168:ARG:NH1	1:G:169:GLU:O	2.35	0.60
1:G:171:LYS:HE2	3:G:402:HOH:O	2.02	0.60
1:M:253:ASN:O	1:M:257:SER:OG	2.19	0.60
1:E:34:GLU:O	1:E:35:VAL:HG13	2.02	0.59
1:G:46:HIS:N	1:G:47:PRO:HD3	2.17	0.59
1:K:11:LEU:HD12	1:K:37:ILE:HD12	1.82	0.59
1:Q:11:LEU:HD11	1:Q:24:TYR:CB	2.32	0.59
1:S:169:GLU:C	1:S:170:ASN:HD22	2.06	0.59
1:Q:63:VAL:HG22	1:Q:144:LEU:HD21	1.84	0.59
1:W:84:LEU:HG	1:W:138:LEU:HD12	1.85	0.59
1:M:57:LYS:HD2	1:M:68:ILE:HD12	1.83	0.59
1:O:7:ASN:HD21	1:S:283:SER:HA	1.67	0.59
1:O:213:TRP:HB2	1:O:228:ILE:HG23	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:174:THR:CG2	1:S:175:GLY:N	2.37	0.59
1:U:13:ARG:HG2	3:U:401:HOH:O	2.02	0.59
1:Q:221:LYS:HG2	1:Q:222:ARG:N	2.17	0.59
1:S:150:PHE:C	1:S:152:LEU:H	2.06	0.59
1:S:191:SER:CB	1:S:260:PHE:CE1	2.72	0.59
1:U:215:GLY:N	2:U:301:SO4:O4	2.23	0.59
1:W:39:LEU:HD23	1:W:39:LEU:H	1.66	0.59
1:W:47:PRO:O	1:W:48:GLN:HG3	2.02	0.59
1:A:219:ALA:HB3	1:A:223:GLN:OE1	2.02	0.59
1:O:7:ASN:ND2	1:S:283:SER:HA	2.17	0.59
1:O:220:THR:HG23	1:O:223:GLN:CG	2.32	0.59
1:S:169:GLU:HB3	1:S:170:ASN:HD22	1.67	0.59
1:U:4:ARG:HE	1:U:7:ASN:HA	1.67	0.59
1:W:56:TYR:HD2	1:W:80:MET:HE2	1.67	0.59
1:O:84:LEU:HG	1:O:138:LEU:CD1	2.33	0.59
1:U:242:LYS:HG3	1:U:243:GLY:H	1.66	0.59
1:E:9:TYR:HA	1:E:27:ALA:O	2.02	0.59
1:G:3:LEU:HD23	1:G:4:ARG:N	2.18	0.59
1:K:167:TYR:CD1	1:K:168:ARG:N	2.70	0.59
1:U:185:HIS:HB3	1:U:229:SER:OG	2.02	0.59
1:S:257:SER:O	1:S:258:LEU:O	2.20	0.59
1:S:271:GLN:HE21	1:S:271:GLN:CA	2.08	0.59
1:U:167:TYR:CD1	1:U:168:ARG:N	2.71	0.59
1:O:28:ASN:ND2	1:O:28:ASN:C	2.46	0.59
1:W:57:LYS:HD3	1:W:68:ILE:HD12	1.85	0.59
1:A:1:MET:HE3	1:G:249:SER:HB3	1.83	0.59
1:A:70:TRP:CH2	1:A:72:GLY:HA3	2.37	0.59
1:M:102:LEU:HG	1:M:106:LEU:HD11	1.84	0.59
1:U:109:ALA:O	1:U:113:ILE:CG1	2.51	0.59
1:E:151:GLY:O	1:E:152:LEU:HD23	2.03	0.58
1:U:28:ASN:HD22	1:U:30:ALA:N	2.01	0.58
1:U:114:SER:HB2	1:U:115:ARG:NH1	2.17	0.58
1:U:169:GLU:CD	1:U:169:GLU:N	2.43	0.58
1:W:9:TYR:CE1	1:W:69:LYS:HD3	2.38	0.58
1:W:57:LYS:HE3	1:W:68:ILE:CB	2.32	0.58
1:W:106:LEU:O	1:W:109:ALA:HB3	2.03	0.58
1:W:222:ARG:HG3	1:W:222:ARG:NH1	2.18	0.58
1:A:56:TYR:CD2	1:A:80:MET:HE3	2.36	0.58
1:C:102:LEU:O	1:C:106:LEU:HG	2.02	0.58
1:I:178:ARG:HD2	1:I:179:TYR:CZ	2.38	0.58
1:K:4:ARG:NH2	1:K:7:ASN:ND2	2.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:15:ILE:HG21	1:K:25:LEU:HB2	1.85	0.58
1:O:52:GLU:O	1:O:55:PHE:N	2.36	0.58
1:S:55:PHE:CZ	1:S:153:ALA:HB3	2.37	0.58
1:S:164:HIS:CD2	1:S:261:ASP:HA	2.39	0.58
1:U:86:GLY:HA2	1:W:291:ASN:O	2.02	0.58
1:A:174:THR:O	1:A:174:THR:HG22	2.01	0.58
1:A:293:LEU:CD1	1:C:15:ILE:HG23	2.33	0.58
1:M:204:MET:HA	1:M:204:MET:HE3	1.85	0.58
1:O:39:LEU:HD23	1:O:79:VAL:CG2	2.30	0.58
1:U:228:ILE:O	1:U:232:LYS:HB2	2.03	0.58
1:W:10:ARG:HB2	1:W:29:ILE:HD13	1.85	0.58
1:W:134:PHE:C	1:W:135:LEU:HD12	2.23	0.58
1:A:68:ILE:HD11	1:A:80:MET:HE3	1.84	0.58
1:C:165:ILE:HB	1:C:166:PRO:HD2	1.84	0.58
1:E:140:LYS:CG	1:E:141:LYS:HG2	2.34	0.58
1:O:182:ILE:O	1:O:185:HIS:HB2	2.02	0.58
1:Q:43:LYS:O	1:Q:44:THR:O	2.22	0.58
1:S:223:GLN:O	1:S:224:LYS:C	2.42	0.58
1:U:277:PHE:CZ	1:U:282:PHE:HB2	2.39	0.58
1:W:242:LYS:NZ	3:W:423:HOH:O	2.34	0.58
1:A:3:LEU:CD1	1:G:238:GLU:OE1	2.51	0.58
1:A:52:GLU:OE1	1:A:56:TYR:CZ	2.56	0.58
1:A:115:ARG:HD2	3:A:419:HOH:O	2.02	0.58
1:C:237:ILE:HD11	1:C:256:ARG:HD2	1.85	0.58
1:S:117:GLU:O	1:S:120:HIS:HB2	2.03	0.58
1:K:41:CYS:O	1:K:44:THR:HG23	2.03	0.58
1:Q:221:LYS:CG	1:Q:222:ARG:H	2.16	0.58
1:S:293:LEU:C	1:S:293:LEU:HD12	2.23	0.58
1:U:14:LYS:CG	1:U:15:ILE:N	2.64	0.58
1:U:100:PHE:HA	1:U:289:ASP:OD2	2.03	0.58
1:W:4:ARG:CD	1:W:29:ILE:CD1	2.82	0.58
1:W:79:VAL:HG12	1:W:80:MET:N	2.17	0.58
1:W:156:TYR:HA	1:W:165:ILE:HD13	1.86	0.58
1:E:74:GLU:OE1	1:E:74:GLU:HA	2.03	0.58
1:O:45:LYS:O	1:O:46:HIS:CD2	2.51	0.58
1:Q:17:SER:OG	1:S:294:LYS:HE2	2.04	0.58
1:U:237:ILE:HG13	1:U:256:ARG:HH11	1.65	0.58
1:W:56:TYR:HD2	1:W:80:MET:CE	2.16	0.58
1:G:23:ILE:HD12	1:G:38:LYS:HG3	1.84	0.58
1:S:165:ILE:HB	1:S:166:PRO:HD2	1.86	0.58
1:K:156:TYR:HA	1:K:165:ILE:HD13	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:171:LYS:HD3	1:K:189:GLU:OE1	2.03	0.58
1:S:143:ASN:HB3	3:S:411:HOH:O	2.02	0.58
1:W:37:ILE:CG2	1:W:81:VAL:HG13	2.34	0.58
1:C:165:ILE:HB	1:C:166:PRO:CD	2.33	0.57
1:M:267:SER:HA	1:M:270:ARG:NH1	2.19	0.57
1:W:15:ILE:HG22	1:W:16:GLY:H	1.69	0.57
1:W:124:PHE:CG	1:W:155:LYS:HA	2.39	0.57
1:W:285:ASP:O	1:W:286:TYR:HB2	2.04	0.57
1:Q:4:ARG:NH2	1:Q:7:ASN:CA	2.62	0.57
1:S:23:ILE:HD12	1:S:38:LYS:HG3	1.86	0.57
1:U:122:LYS:O	1:U:123:ASN:HB2	2.02	0.57
1:W:57:LYS:HD3	1:W:68:ILE:HG13	1.86	0.57
1:U:234:SER:O	1:U:236:PRO:CD	2.52	0.57
1:W:123:ASN:C	1:W:156:TYR:CD2	2.78	0.57
1:I:28:ASN:ND2	1:I:31:SER:N	2.51	0.57
1:I:158:ASP:OD1	1:I:161:THR:N	2.35	0.57
1:O:7:ASN:HD21	1:S:283:SER:HB2	1.69	0.57
1:Q:32:GLY:O	1:S:283:SER:HB3	2.04	0.57
1:Q:154:LYS:NZ	1:Q:189:GLU:OE2	2.31	0.57
1:Q:293:LEU:HD12	1:Q:294:LYS:N	2.19	0.57
1:U:129:VAL:HG13	1:U:134:PHE:CZ	2.39	0.57
1:W:56:TYR:HE2	1:W:82:MET:CE	2.16	0.57
1:W:57:LYS:CD	1:W:68:ILE:HG13	2.34	0.57
1:E:182:ILE:CD1	1:E:256:ARG:CZ	2.83	0.57
1:G:178:ARG:HD2	1:G:179:TYR:CZ	2.39	0.57
1:E:220:THR:CG2	1:E:223:GLN:H	2.17	0.57
1:Q:88:SER:CA	1:Q:135:LEU:HD12	2.34	0.57
1:S:202:VAL:O	1:S:205:TYR:HB3	2.04	0.57
1:A:202:VAL:O	1:A:205:TYR:HB3	2.05	0.57
1:C:60:GLN:HG3	1:C:61:GLY:N	2.20	0.57
1:G:168:ARG:HG2	1:G:169:GLU:H	1.68	0.57
1:Q:52:GLU:OE2	1:Q:149:ASP:HA	2.04	0.57
1:S:176:THR:HG23	3:S:407:HOH:O	2.05	0.57
1:U:251:TYR:CD1	1:U:251:TYR:C	2.78	0.57
1:E:44:THR:CG2	1:E:45:LYS:H	2.06	0.57
1:M:200:GLY:HA3	1:M:252:LEU:CD2	2.34	0.57
1:O:222:ARG:O	1:O:226:GLU:OE1	2.23	0.57
1:W:44:THR:HG23	1:W:46:HIS:H	1.69	0.57
1:M:11:LEU:HG	1:M:12:GLY:H	1.69	0.57
1:U:47:PRO:O	1:U:48:GLN:CG	2.44	0.57
1:U:193:ARG:HG3	1:U:194:ASP:N	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:283:SER:C	1:U:285:ASP:N	2.57	0.57
1:W:31:SER:C	1:W:33:GLU:H	2.07	0.57
1:E:289:ASP:O	1:E:294:LYS:NZ	2.38	0.57
1:Q:122:LYS:O	1:Q:123:ASN:HB2	2.05	0.57
1:W:47:PRO:C	1:W:48:GLN:HG3	2.25	0.57
1:I:8:LYS:HE3	1:I:9:TYR:CZ	2.40	0.56
1:K:3:LEU:CD2	1:K:11:LEU:CB	2.66	0.56
1:O:178:ARG:HD2	1:O:179:TYR:CZ	2.40	0.56
1:W:12:GLY:O	1:W:25:LEU:HB3	2.05	0.56
1:W:39:LEU:N	1:W:39:LEU:CD2	2.67	0.56
1:A:59:MET:HB2	1:A:65:ILE:HG21	1.86	0.56
1:M:93:PHE:CE1	1:M:98:ARG:C	2.79	0.56
1:W:193:ARG:HB3	1:W:258:LEU:HD12	1.87	0.56
1:A:236:PRO:HB3	1:I:77:TYR:CE2	2.40	0.56
1:G:37:ILE:HG12	1:G:81:VAL:HG22	1.86	0.56
1:G:76:ASP:OD1	1:G:76:ASP:N	2.32	0.56
1:I:23:ILE:HD13	1:I:23:ILE:N	2.20	0.56
1:I:117:GLU:OE1	1:I:270:ARG:NH2	2.39	0.56
1:M:220:THR:CG2	1:M:223:GLN:CD	2.73	0.56
1:O:28:ASN:HD21	1:O:30:ALA:HB3	1.69	0.56
1:Q:41:CYS:SG	3:Q:416:HOH:O	2.57	0.56
1:Q:173:LEU:CD1	1:Q:184:THR:HG22	2.36	0.56
1:S:80:MET:CE	1:S:82:MET:SD	2.93	0.56
1:U:42:VAL:HG12	1:U:43:LYS:N	2.20	0.56
1:U:186:LEU:HD21	1:U:233:MET:CE	2.36	0.56
1:W:12:GLY:O	1:W:13:ARG:O	2.24	0.56
1:W:14:LYS:HZ3	1:W:16:GLY:C	2.07	0.56
1:W:56:TYR:CD2	1:W:80:MET:HE2	2.40	0.56
1:W:254:PHE:O	1:W:257:SER:HB2	2.06	0.56
1:K:207:ASN:HB3	1:K:244:TYR:CE1	2.41	0.56
1:O:220:THR:O	1:O:221:LYS:C	2.42	0.56
1:Q:76:ASP:HA	3:Q:429:HOH:O	2.04	0.56
1:S:164:HIS:NE2	1:S:261:ASP:HA	2.20	0.56
1:W:83:GLU:HG3	1:W:83:GLU:O	2.04	0.56
1:A:84:LEU:HD21	1:C:292:MET:HG2	1.88	0.56
1:G:38:LYS:HE2	1:G:49:LEU:HD13	1.86	0.56
1:I:45:LYS:O	1:I:46:HIS:ND1	2.38	0.56
1:S:201:TYR:O	1:S:202:VAL:C	2.43	0.56
1:S:254:PHE:C	1:S:254:PHE:HD2	2.08	0.56
1:W:69:LYS:HB2	1:W:81:VAL:C	2.20	0.56
1:W:92:LEU:HD13	1:W:290:TRP:CE2	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:136:MET:SD	1:I:145:VAL:HG22	2.45	0.56
1:K:70:TRP:CZ3	1:K:72:GLY:HA3	2.40	0.56
1:M:229:SER:O	1:M:233:MET:HG3	2.06	0.56
1:M:245:PRO:HG2	1:M:276:LEU:HD21	1.88	0.56
1:O:7:ASN:ND2	1:S:283:SER:HB2	2.20	0.56
1:U:129:VAL:HG13	1:U:134:PHE:CE2	2.41	0.56
1:W:116:ILE:O	1:W:119:ILE:HB	2.05	0.56
1:E:56:TYR:CB	1:E:68:ILE:HD11	2.36	0.56
1:E:84:LEU:HG	1:E:138:LEU:HD11	1.88	0.56
1:M:124:PHE:HD2	1:M:154:LYS:C	2.09	0.56
1:O:193:ARG:NH1	1:O:260:PHE:HA	2.20	0.56
1:S:49:LEU:HD11	1:S:80:MET:HB2	1.87	0.56
1:U:60:GLN:HA	3:U:412:HOH:O	2.05	0.56
1:U:62:GLY:CA	1:U:118:TYR:CZ	2.89	0.56
1:M:156:TYR:O	1:M:165:ILE:HG23	2.06	0.56
1:O:268:TYR:CE1	1:O:272:LEU:HD22	2.41	0.56
1:Q:7:ASN:C	1:Q:7:ASN:HD22	2.09	0.56
1:Q:143:ASN:OD1	1:Q:288:PHE:HE2	1.88	0.56
1:Q:269:LEU:O	1:Q:272:LEU:HB3	2.06	0.56
1:W:264:PRO:O	1:W:266:TYR:CD2	2.59	0.56
1:A:56:TYR:HE1	1:A:150:PHE:HE1	1.54	0.56
1:G:150:PHE:HB3	1:G:153:ALA:CB	2.36	0.56
1:I:56:TYR:HE1	1:I:150:PHE:CE1	2.21	0.56
1:K:3:LEU:HD22	1:K:11:LEU:CB	2.22	0.56
1:M:251:TYR:CD2	1:M:269:LEU:HD22	2.40	0.56
1:E:6:GLY:O	1:E:8:LYS:N	2.39	0.55
1:E:247:GLU:CD	1:E:276:LEU:HD22	2.27	0.55
1:Q:279:ARG:HG3	1:Q:279:ARG:HH11	1.71	0.55
1:S:120:HIS:ND1	1:S:192:ARG:HG2	2.21	0.55
1:W:196:LEU:O	1:W:199:LEU:N	2.39	0.55
1:A:161:THR:OG1	1:A:163:GLN:HB2	2.07	0.55
1:I:271:GLN:HA	1:I:271:GLN:HE21	1.66	0.55
1:M:116:ILE:HD12	1:M:199:LEU:HD22	1.87	0.55
1:U:211:LEU:O	1:U:214:GLN:HB3	2.06	0.55
1:W:56:TYR:CE1	1:W:150:PHE:CE1	2.92	0.55
1:W:109:ALA:O	1:W:113:ILE:HG13	2.05	0.55
1:W:280:GLN:CB	1:W:282:PHE:CD2	2.89	0.55
1:C:174:THR:HG22	1:C:190:GLN:OE1	2.05	0.55
1:E:140:LYS:HG3	1:E:141:LYS:HG2	1.89	0.55
1:M:13:ARG:H	1:M:13:ARG:HD3	0.59	0.55
1:M:171:LYS:NZ	3:M:408:HOH:O	2.38	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:182:ILE:HD12	1:M:256:ARG:CZ	2.36	0.55
1:O:117:GLU:O	1:O:120:HIS:HB2	2.07	0.55
1:Q:41:CYS:HB3	1:Q:44:THR:HG22	1.87	0.55
1:Q:220:THR:HG22	1:Q:223:GLN:CG	2.35	0.55
1:W:56:TYR:CD2	1:W:80:MET:CE	2.89	0.55
1:W:79:VAL:CG1	1:W:80:MET:N	2.68	0.55
1:G:15:ILE:HG21	1:G:25:LEU:CB	2.31	0.55
1:M:84:LEU:HD21	1:O:292:MET:CE	2.37	0.55
1:S:174:THR:CG2	1:S:190:GLN:OE1	2.53	0.55
1:E:178:ARG:HD2	1:E:179:TYR:CZ	2.41	0.55
1:U:292:MET:O	1:W:87:PRO:CD	2.54	0.55
1:C:46:HIS:N	1:C:47:PRO:HD3	2.20	0.55
1:M:141:LYS:C	1:M:143:ASN:H	2.10	0.55
1:O:124:PHE:CD2	1:O:155:LYS:N	2.75	0.55
1:O:287:VAL:O	1:O:287:VAL:HG12	2.05	0.55
1:U:127:ARG:HD2	1:U:190:GLN:NE2	2.21	0.55
1:U:204:MET:O	1:U:207:ASN:HB2	2.07	0.55
1:K:123:ASN:OD1	1:K:123:ASN:N	2.40	0.55
1:M:59:MET:HB3	1:M:118:TYR:HE2	1.70	0.55
1:M:222:ARG:HH11	1:M:222:ARG:CB	2.05	0.55
1:Q:8:LYS:NZ	1:Q:8:LYS:HB2	2.22	0.55
1:S:271:GLN:NE2	1:S:271:GLN:CA	2.54	0.55
1:A:52:GLU:OE1	1:A:56:TYR:CE2	2.59	0.55
1:A:69:LYS:HE3	3:A:447:HOH:O	2.06	0.55
1:E:274:ARG:HH11	1:Q:274:ARG:NH1	2.04	0.55
1:G:178:ARG:NH1	1:G:214:GLN:NE2	2.55	0.55
1:W:213:TRP:HB3	1:W:231:LYS:HG3	1.89	0.55
1:A:181:SER:HB2	1:A:197:GLU:CD	2.26	0.55
1:C:25:LEU:HD21	1:C:34:GLU:OE2	2.06	0.55
1:K:251:TYR:CD2	1:K:269:LEU:HD22	2.42	0.55
1:W:59:MET:HE1	1:W:119:ILE:O	2.07	0.55
1:M:173:LEU:HD23	1:M:225:TYR:CD2	2.42	0.55
1:O:56:TYR:HB2	1:O:68:ILE:CD1	2.15	0.55
1:Q:8:LYS:HB3	1:Q:8:LYS:HZ3	1.72	0.55
1:U:182:ILE:O	1:U:185:HIS:HB2	2.07	0.55
1:W:13:ARG:H	1:W:13:ARG:CD	2.17	0.55
1:W:59:MET:CE	1:W:122:LYS:CB	2.85	0.55
1:E:140:LYS:HG2	1:E:141:LYS:CG	2.37	0.54
1:I:156:TYR:O	1:I:165:ILE:HG23	2.07	0.54
1:I:221:LYS:O	1:I:222:ARG:C	2.44	0.54
1:M:80:MET:CE	1:M:82:MET:HB3	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:124:PHE:HD1	1:U:154:LYS:C	2.09	0.54
1:W:86:GLY:O	1:W:135:LEU:HB3	2.06	0.54
1:W:272:LEU:HD12	1:W:272:LEU:O	2.07	0.54
1:G:62:GLY:HA3	1:G:118:TYR:CZ	2.42	0.54
1:I:221:LYS:HE2	1:I:221:LYS:N	2.20	0.54
1:I:247:GLU:OE1	1:I:247:GLU:N	2.36	0.54
1:U:192:ARG:HD2	1:U:266:TYR:OH	2.06	0.54
1:W:209:GLY:O	1:W:210:SER:HB3	2.07	0.54
1:W:267:SER:O	1:W:271:GLN:HB3	2.07	0.54
1:E:220:THR:HG22	1:E:223:GLN:H	1.72	0.54
1:G:41:CYS:SG	1:M:233:MET:HB3	2.47	0.54
1:K:32:GLY:O	1:K:33:GLU:C	2.43	0.54
1:O:167:TYR:HB2	1:O:260:PHE:CD2	2.43	0.54
1:S:208:LEU:CD2	1:S:244:TYR:CE2	2.90	0.54
1:U:15:ILE:CD1	1:W:292:MET:CE	2.84	0.54
1:U:237:ILE:CD1	1:U:256:ARG:CD	2.83	0.54
1:Q:178:ARG:HD2	1:Q:179:TYR:CZ	2.42	0.54
1:Q:213:TRP:HB3	1:Q:231:LYS:CG	2.38	0.54
1:S:120:HIS:CD2	1:S:192:ARG:HG2	2.42	0.54
1:U:89:LEU:HD13	1:U:206:PHE:HZ	1.72	0.54
1:I:11:LEU:HD11	1:I:24:TYR:CG	2.43	0.54
1:I:160:ARG:HG2	1:I:160:ARG:NH1	2.01	0.54
1:M:193:ARG:CZ	1:M:260:PHE:HA	2.37	0.54
1:S:59:MET:HB2	1:S:65:ILE:HG21	1.89	0.54
1:U:169:GLU:N	1:U:169:GLU:OE1	2.39	0.54
1:W:57:LYS:HD3	1:W:68:ILE:CD1	2.38	0.54
1:A:89:LEU:O	1:A:93:PHE:HB2	2.08	0.54
1:A:217:LYS:H	1:A:217:LYS:CD	2.09	0.54
1:I:230:GLU:O	1:I:234:SER:OG	2.24	0.54
1:M:52:GLU:OE2	1:M:149:ASP:HA	2.07	0.54
1:Q:74:GLU:N	1:Q:77:TYR:O	2.35	0.54
1:S:56:TYR:HB3	1:S:68:ILE:HG12	1.89	0.54
1:W:15:ILE:CG2	1:W:16:GLY:N	2.70	0.54
1:W:27:ALA:CB	3:W:418:HOH:O	2.54	0.54
1:W:247:GLU:HG3	1:W:272:LEU:HD11	1.88	0.54
1:W:277:PHE:CZ	1:W:282:PHE:HB3	2.43	0.54
1:C:123:ASN:ND2	1:C:159:ALA:HA	2.23	0.54
1:K:11:LEU:HD12	1:K:37:ILE:HD13	1.89	0.54
1:M:101:SER:O	1:M:105:VAL:HG23	2.08	0.54
1:S:8:LYS:HG3	1:S:8:LYS:O	2.08	0.54
1:U:118:TYR:OH	1:U:122:LYS:HE3	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1:MET:HE2	1:G:249:SER:CB	2.37	0.54
1:G:49:LEU:HG	1:G:49:LEU:O	2.06	0.54
1:G:150:PHE:N	1:G:150:PHE:CD1	2.75	0.54
1:I:94:ASN:OD1	1:I:98:ARG:NH1	2.39	0.54
1:M:28:ASN:C	1:M:28:ASN:OD1	2.45	0.54
1:M:128:ASP:OD2	1:M:130:LYS:HE2	2.07	0.54
1:O:134:PHE:C	1:O:135:LEU:HD12	2.27	0.54
1:S:140:LYS:C	1:S:142:GLY:N	2.61	0.54
1:U:56:TYR:HE1	1:U:66:PRO:CG	2.18	0.54
1:W:13:ARG:N	1:W:13:ARG:CD	2.71	0.54
1:W:44:THR:HG21	1:W:47:PRO:N	2.22	0.54
1:W:65:ILE:HD13	1:W:118:TYR:CD2	2.42	0.54
1:W:289:ASP:O	1:W:294:LYS:NZ	2.32	0.54
1:E:95:PHE:CE2	1:E:294:LYS:HE2	2.43	0.54
1:G:134:PHE:O	1:G:135:LEU:HD12	2.08	0.54
1:O:225:TYR:N	1:O:225:TYR:CD1	2.76	0.54
1:Q:292:MET:O	1:Q:294:LYS:NZ	2.30	0.54
1:U:204:MET:HE3	1:U:207:ASN:HB2	1.88	0.54
1:W:229:SER:O	1:W:233:MET:HG3	2.08	0.54
1:Q:56:TYR:HE2	1:Q:82:MET:CE	2.21	0.54
1:W:173:LEU:HD11	1:W:180:ALA:CB	2.38	0.54
1:W:200:GLY:HA3	1:W:252:LEU:CD2	2.38	0.54
1:E:52:GLU:OE1	1:E:56:TYR:CZ	2.60	0.53
1:G:186:LEU:HD21	1:G:233:MET:CE	2.37	0.53
1:O:7:ASN:HD21	1:S:283:SER:CB	2.21	0.53
1:Q:143:ASN:OD1	1:Q:288:PHE:CE2	2.60	0.53
1:S:55:PHE:O	1:S:59:MET:HG2	2.07	0.53
1:S:62:GLY:O	1:S:65:ILE:HG12	2.08	0.53
1:S:168:ARG:HG3	1:S:169:GLU:H	1.72	0.53
1:W:2:GLU:HG3	1:W:3:LEU:N	2.08	0.53
1:W:32:GLY:HA2	3:W:419:HOH:O	2.08	0.53
1:W:192:ARG:NH1	1:W:263:LYS:HG3	2.23	0.53
1:K:5:VAL:HG12	1:K:74:GLU:CD	2.29	0.53
1:K:274:ARG:NH2	3:K:418:HOH:O	2.35	0.53
1:O:108:LEU:O	1:O:112:MET:HG3	2.07	0.53
1:O:198:SER:O	1:O:202:VAL:HG23	2.08	0.53
1:U:60:GLN:CG	1:U:61:GLY:N	2.72	0.53
1:U:191:SER:OG	1:U:193:ARG:HG2	2.07	0.53
1:A:223:GLN:O	1:A:226:GLU:HB2	2.08	0.53
1:I:160:ARG:CG	1:I:160:ARG:NH1	2.56	0.53
1:Q:10:ARG:HG2	1:Q:10:ARG:NH1	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Q:156:TYR:CZ	1:Q:192:ARG:HD3	2.44	0.53
1:S:173:LEU:HD23	1:S:225:TYR:CE2	2.42	0.53
1:U:116:ILE:CG2	1:U:120:HIS:CE1	2.88	0.53
1:U:127:ARG:HB3	1:U:190:GLN:HE22	1.72	0.53
1:U:201:TYR:O	1:U:202:VAL:C	2.47	0.53
1:A:1:MET:O	1:A:2:GLU:CB	2.57	0.53
1:I:23:ILE:CD1	1:I:38:LYS:HE2	2.37	0.53
1:I:28:ASN:HD21	1:I:31:SER:H	1.56	0.53
1:S:14:LYS:HE3	1:S:22:ASP:OD2	2.07	0.53
1:S:260:PHE:CD1	1:S:260:PHE:C	2.80	0.53
1:I:173:LEU:HD21	1:I:177:ALA:HB2	1.91	0.53
1:M:74:GLU:O	1:M:75:GLY:C	2.46	0.53
1:M:135:LEU:HD12	1:M:135:LEU:N	2.23	0.53
1:Q:5:VAL:HG21	1:Q:79:VAL:HG11	1.90	0.53
1:U:103:LYS:HG3	1:U:282:PHE:HB3	1.89	0.53
1:E:62:GLY:HA3	1:E:118:TYR:CZ	2.44	0.53
1:Q:68:ILE:HG22	1:Q:69:LYS:N	2.23	0.53
1:W:93:PHE:CZ	1:W:206:PHE:HA	2.43	0.53
1:M:40:GLU:OE1	1:M:49:LEU:HB2	2.08	0.53
1:M:156:TYR:HA	1:M:165:ILE:CG2	2.38	0.53
1:O:25:LEU:HG	1:O:26:GLY:N	2.24	0.53
1:O:126:HIS:N	1:O:195:ASP:OD2	2.41	0.53
1:S:70:TRP:CZ3	1:S:72:GLY:O	2.62	0.53
1:S:120:HIS:HD2	1:S:124:PHE:O	1.90	0.53
1:S:250:THR:CG2	1:S:272:LEU:HD21	2.39	0.53
1:W:247:GLU:HG3	1:W:272:LEU:CD1	2.39	0.53
1:W:293:LEU:C	1:W:294:LYS:HD3	2.27	0.53
1:A:39:LEU:CD2	1:A:79:VAL:HG22	2.39	0.53
1:C:259:ARG:CB	1:C:262:ASP:OD2	2.57	0.53
1:E:39:LEU:HD21	1:E:79:VAL:HG13	1.91	0.53
1:I:167:TYR:HA	1:I:260:PHE:CE2	2.43	0.53
1:K:5:VAL:HG12	1:K:74:GLU:OE1	2.08	0.53
1:M:84:LEU:HD21	1:O:292:MET:HE2	1.91	0.53
1:W:70:TRP:O	1:W:70:TRP:HE3	1.86	0.53
1:Q:220:THR:CG2	1:Q:223:GLN:H	2.14	0.53
1:S:189:GLU:HB3	1:S:260:PHE:HE2	1.74	0.53
1:U:248:PHE:O	1:U:252:LEU:HD12	2.08	0.53
1:W:119:ILE:HD11	1:W:150:PHE:CE2	2.44	0.53
1:W:124:PHE:N	1:W:124:PHE:CD1	2.77	0.53
1:A:200:GLY:HA3	1:A:252:LEU:HD21	1.91	0.53
1:K:125:ILE:O	1:K:153:ALA:HA	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:274:ARG:NH1	3:K:418:HOH:O	2.41	0.53
1:Q:217:LYS:O	1:Q:227:ARG:NH1	2.37	0.53
1:S:92:LEU:HD13	1:S:290:TRP:CD2	2.44	0.53
1:U:28:ASN:CG	1:U:31:SER:CB	2.75	0.53
1:W:41:CYS:CA	1:W:77:TYR:CD1	2.85	0.53
1:E:138:LEU:CD2	1:G:287:VAL:HG13	2.39	0.52
1:G:178:ARG:NH2	2:G:301:SO4:O1	2.39	0.52
1:K:54:LYS:O	1:K:57:LYS:CB	2.57	0.52
1:O:140:LYS:O	1:O:142:GLY:N	2.40	0.52
1:Q:222:ARG:HG3	1:Q:222:ARG:HH11	1.74	0.52
1:S:182:ILE:HG23	1:S:233:MET:CE	2.40	0.52
1:U:38:LYS:O	1:U:39:LEU:HD23	2.09	0.52
1:U:156:TYR:HA	1:U:165:ILE:CD1	2.31	0.52
1:U:246:SER:O	1:U:250:THR:N	2.37	0.52
1:W:55:PHE:CE1	1:W:58:MET:HE1	2.45	0.52
1:W:247:GLU:CD	1:W:276:LEU:HD22	2.30	0.52
1:A:221:LYS:HE2	1:A:221:LYS:N	2.18	0.52
1:C:41:CYS:SG	3:C:411:HOH:O	2.59	0.52
1:E:57:LYS:N	1:E:68:ILE:HD11	2.24	0.52
1:O:161:THR:OG1	1:O:163:GLN:HB2	2.09	0.52
1:S:254:PHE:CD2	1:S:254:PHE:O	2.62	0.52
1:U:249:SER:O	1:U:253:ASN:HB2	2.10	0.52
1:U:292:MET:CG	1:U:293:LEU:H	2.18	0.52
1:G:183:ASN:ND2	3:G:434:HOH:O	2.41	0.52
1:M:102:LEU:HG	1:M:106:LEU:HD12	1.89	0.52
1:M:274:ARG:O	1:M:277:PHE:HB3	2.10	0.52
1:A:13:ARG:O	1:A:15:ILE:HG22	2.10	0.52
1:E:190:GLN:HA	1:E:194:ASP:OD2	2.10	0.52
1:E:279:ARG:HH11	1:E:279:ARG:HG3	1.74	0.52
1:U:178:ARG:CG	1:U:178:ARG:O	2.57	0.52
1:W:157:ARG:HA	1:W:163:GLN:O	2.09	0.52
1:M:173:LEU:CD1	1:M:184:THR:HG22	2.38	0.52
1:O:220:THR:O	1:O:222:ARG:N	2.43	0.52
1:Q:44:THR:OG1	1:Q:45:LYS:N	2.42	0.52
1:Q:293:LEU:HD11	1:S:16:GLY:HA3	1.92	0.52
1:S:66:PRO:HA	1:S:83:GLU:OE2	2.09	0.52
1:S:260:PHE:C	1:S:260:PHE:HD1	2.12	0.52
1:U:15:ILE:HD13	1:W:292:MET:HE1	1.92	0.52
1:U:259:ARG:O	1:U:262:ASP:HB2	2.09	0.52
1:U:264:PRO:HG2	1:U:266:TYR:CE1	2.45	0.52
1:C:60:GLN:CG	1:C:61:GLY:N	2.71	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:222:ARG:NH1	1:C:222:ARG:HG2	2.24	0.52
1:E:237:ILE:HD11	1:E:256:ARG:CZ	2.40	0.52
1:G:17:SER:C	3:G:425:HOH:O	2.47	0.52
1:G:54:LYS:HE2	3:G:444:HOH:O	2.08	0.52
1:K:41:CYS:O	1:K:44:THR:CG2	2.58	0.52
1:O:119:ILE:CD1	1:O:147:ILE:HD13	2.40	0.52
1:S:221:LYS:H	1:S:221:LYS:HZ3	1.56	0.52
1:U:127:ARG:NE	1:U:152:LEU:O	2.34	0.52
1:U:216:LEU:HB3	1:U:227:ARG:CZ	2.38	0.52
1:G:259:ARG:HD2	3:G:403:HOH:O	2.09	0.52
1:K:167:TYR:CD1	1:K:167:TYR:C	2.83	0.52
1:M:215:GLY:N	2:M:301:SO4:O3	2.41	0.52
1:O:52:GLU:OE2	1:O:56:TYR:HE2	1.91	0.52
1:O:183:ASN:O	1:O:186:LEU:N	2.42	0.52
1:O:251:TYR:CD1	1:O:251:TYR:C	2.82	0.52
1:U:285:ASP:O	1:U:286:TYR:HB2	2.10	0.52
1:G:131:PRO:HG2	1:G:205:TYR:CE2	2.44	0.52
1:O:54:LYS:HG3	1:O:55:PHE:H	1.74	0.52
1:S:121:SER:C	1:S:123:ASN:H	2.13	0.52
1:S:229:SER:O	1:S:233:MET:CG	2.58	0.52
1:W:105:VAL:HG21	1:W:207:ASN:OD1	2.10	0.52
1:W:250:THR:HA	1:W:253:ASN:HB2	1.91	0.52
1:W:280:GLN:CB	1:W:282:PHE:CE2	2.92	0.52
1:C:220:THR:HG23	1:C:223:GLN:CD	2.30	0.52
1:M:122:LYS:O	1:M:123:ASN:HB2	2.09	0.52
1:Q:138:LEU:HD11	1:S:287:VAL:HG13	1.91	0.52
1:A:263:LYS:HD2	3:A:448:HOH:O	2.10	0.52
1:E:58:MET:SD	1:E:124:PHE:CE1	3.03	0.52
1:I:108:LEU:O	1:I:112:MET:HG3	2.10	0.52
1:Q:11:LEU:HD11	1:Q:24:TYR:HB3	1.90	0.52
1:Q:251:TYR:C	1:Q:251:TYR:CD1	2.83	0.52
1:U:15:ILE:CD1	1:W:292:MET:HE1	2.40	0.52
1:W:124:PHE:CB	1:W:155:LYS:HA	2.40	0.52
1:W:271:GLN:O	1:W:275:ASN:ND2	2.32	0.52
1:Q:41:CYS:O	1:Q:44:THR:CG2	2.57	0.51
1:Q:105:VAL:HG21	1:Q:207:ASN:OD1	2.10	0.51
1:W:163:GLN:HA	1:W:163:GLN:OE1	2.11	0.51
1:A:237:ILE:HD11	1:A:256:ARG:CZ	2.40	0.51
1:E:90:GLU:HA	1:E:90:GLU:OE1	2.09	0.51
1:U:152:LEU:HD13	1:U:174:THR:HG22	1.92	0.51
1:U:167:TYR:HD2	1:U:260:PHE:CD2	2.28	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:264:PRO:CG	1:U:266:TYR:CZ	2.83	0.51
1:W:185:HIS:NE2	1:W:232:LYS:NZ	2.56	0.51
1:W:244:TYR:O	1:W:245:PRO:C	2.48	0.51
1:C:219:ALA:C	1:C:220:THR:CG2	2.78	0.51
1:I:292:MET:O	1:I:294:LYS:NZ	2.42	0.51
1:O:219:ALA:HB3	1:O:223:GLN:CD	2.31	0.51
1:W:116:ILE:HD11	1:W:129:VAL:CG2	2.40	0.51
1:W:247:GLU:HB2	1:W:276:LEU:HD23	1.91	0.51
1:E:1:MET:O	3:E:432:HOH:O	2.19	0.51
1:G:28:ASN:C	1:G:28:ASN:HD22	2.13	0.51
1:G:28:ASN:C	1:G:28:ASN:ND2	2.63	0.51
1:M:57:LYS:HD3	3:M:434:HOH:O	2.09	0.51
1:A:80:MET:HE1	1:A:82:MET:SD	2.51	0.51
1:C:137:GLY:O	1:C:142:GLY:HA2	2.10	0.51
1:E:222:ARG:HG3	1:E:222:ARG:NH1	2.24	0.51
1:G:150:PHE:HB3	1:G:153:ALA:HB3	1.91	0.51
1:M:237:ILE:O	1:M:240:LEU:HB3	2.10	0.51
1:Q:182:ILE:CD1	1:Q:256:ARG:CZ	2.88	0.51
1:Q:285:ASP:O	1:Q:287:VAL:N	2.42	0.51
1:W:22:ASP:N	3:W:413:HOH:O	2.43	0.51
1:W:250:THR:O	1:W:251:TYR:C	2.47	0.51
1:K:82:MET:HE1	3:K:406:HOH:O	2.11	0.51
1:M:8:LYS:HD3	1:M:9:TYR:CZ	2.46	0.51
1:U:103:LYS:HB2	1:U:282:PHE:CD1	2.45	0.51
1:W:270:ARG:HG3	1:W:270:ARG:NH1	2.26	0.51
1:E:34:GLU:O	1:E:35:VAL:CG1	2.58	0.51
1:I:23:ILE:HD12	1:I:38:LYS:HG3	1.93	0.51
1:O:56:TYR:HE1	1:O:66:PRO:HG2	1.72	0.51
1:O:66:PRO:HB3	1:O:85:LEU:HD11	1.91	0.51
1:O:84:LEU:HG	1:O:138:LEU:HD11	1.93	0.51
1:O:289:ASP:O	1:O:292:MET:HB3	2.10	0.51
1:S:237:ILE:CG1	1:S:256:ARG:NH1	2.72	0.51
1:U:28:ASN:C	1:U:28:ASN:ND2	2.55	0.51
1:E:88:SER:HA	1:E:135:LEU:HD23	1.91	0.51
1:E:222:ARG:HG3	1:E:222:ARG:HH11	1.74	0.51
1:I:45:LYS:C	1:I:46:HIS:ND1	2.64	0.51
1:M:274:ARG:NH1	1:M:274:ARG:CG	2.72	0.51
1:O:52:GLU:O	1:O:53:SER:C	2.49	0.51
1:U:165:ILE:HB	1:U:166:PRO:HD2	1.93	0.51
1:U:213:TRP:O	1:U:216:LEU:HD22	2.11	0.51
1:U:284:TYR:O	1:U:286:TYR:CE2	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:W:36:ALA:O	1:W:81:VAL:HA	2.10	0.51
1:W:54:LYS:O	1:W:58:MET:HB2	2.11	0.51
1:W:134:PHE:HA	1:W:146:TYR:O	2.11	0.51
1:C:259:ARG:N	1:C:262:ASP:OD2	2.38	0.51
1:E:137:GLY:O	1:E:142:GLY:HA2	2.11	0.51
1:E:138:LEU:HD22	1:G:287:VAL:HG13	1.93	0.51
1:Q:16:GLY:CA	1:S:294:LYS:HD3	2.41	0.51
1:Q:221:LYS:H	1:Q:221:LYS:HE3	1.76	0.51
1:U:45:LYS:O	1:U:46:HIS:CB	2.59	0.51
1:U:127:ARG:CB	1:U:190:GLN:NE2	2.74	0.51
1:U:277:PHE:CE2	1:U:282:PHE:O	2.63	0.51
1:C:76:ASP:OD1	1:C:77:TYR:CD2	2.64	0.51
1:I:69:LYS:HE2	3:I:417:HOH:O	2.11	0.51
1:U:167:TYR:O	1:U:168:ARG:HB2	2.11	0.51
1:W:57:LYS:CE	1:W:68:ILE:HB	2.36	0.51
1:W:150:PHE:O	1:W:153:ALA:HB3	2.11	0.51
1:C:3:LEU:CG	1:K:238:GLU:HG3	2.39	0.50
1:E:84:LEU:HG	1:E:138:LEU:CD1	2.41	0.50
1:G:84:LEU:O	1:G:138:LEU:HD12	2.11	0.50
1:G:222:ARG:O	1:G:226:GLU:HG2	2.10	0.50
1:K:186:LEU:HD21	1:K:233:MET:HE1	1.91	0.50
1:M:68:ILE:HG22	1:M:69:LYS:N	2.26	0.50
1:Q:165:ILE:HB	1:Q:166:PRO:HD2	1.92	0.50
1:Q:185:HIS:CG	1:Q:229:SER:HB2	2.46	0.50
1:U:103:LYS:HB2	1:U:282:PHE:CG	2.45	0.50
1:W:94:ASN:OD1	1:W:98:ARG:HD2	2.11	0.50
1:W:124:PHE:HB3	1:W:154:LYS:C	2.32	0.50
1:W:211:LEU:HB3	1:W:212:PRO:HD2	1.93	0.50
1:W:223:GLN:O	1:W:227:ARG:HG3	2.11	0.50
1:C:186:LEU:O	1:C:188:ILE:N	2.44	0.50
1:G:186:LEU:HD21	1:G:233:MET:HE1	1.94	0.50
1:I:220:THR:CG2	1:I:223:GLN:H	2.08	0.50
1:K:38:LYS:O	1:K:39:LEU:HD23	2.11	0.50
1:O:28:ASN:ND2	1:O:30:ALA:N	2.59	0.50
1:S:4:ARG:HH11	1:S:4:ARG:CG	2.13	0.50
1:U:28:ASN:HD22	1:U:30:ALA:H	1.56	0.50
1:U:186:LEU:HD21	1:U:233:MET:HE3	1.93	0.50
1:M:23:ILE:HG21	1:O:293:LEU:HD23	1.94	0.50
1:O:202:VAL:O	1:O:205:TYR:HB3	2.11	0.50
1:S:194:ASP:O	1:S:195:ASP:C	2.50	0.50
1:S:237:ILE:HG13	1:S:256:ARG:HH12	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:157:ARG:HA	1:U:164:HIS:HA	1.94	0.50
1:W:84:LEU:HG	1:W:138:LEU:CD1	2.42	0.50
1:W:124:PHE:HB3	1:W:154:LYS:O	2.12	0.50
1:E:220:THR:HG23	1:E:222:ARG:HB3	1.93	0.50
1:G:178:ARG:NH2	1:G:214:GLN:HE21	2.06	0.50
1:K:250:THR:HG21	1:K:272:LEU:HD11	1.92	0.50
1:Q:4:ARG:NH2	1:Q:7:ASN:HD22	2.08	0.50
1:Q:221:LYS:H	1:Q:221:LYS:CE	2.23	0.50
1:S:169:GLU:HB3	1:S:170:ASN:ND2	2.24	0.50
1:U:112:MET:HE1	1:U:199:LEU:HD11	1.93	0.50
1:W:102:LEU:HD13	1:W:245:PRO:HG2	1.92	0.50
1:C:62:GLY:HA3	1:C:118:TYR:CE2	2.47	0.50
1:C:67:SER:HB3	1:C:83:GLU:OE2	2.12	0.50
1:E:131:PRO:HD3	1:E:202:VAL:HG22	1.93	0.50
1:E:236:PRO:HB3	1:O:77:TYR:CE2	2.47	0.50
1:G:141:LYS:HD3	1:G:146:TYR:OH	2.12	0.50
1:G:168:ARG:HG2	1:G:169:GLU:N	2.27	0.50
1:M:71:CYS:SG	3:M:404:HOH:O	2.60	0.50
1:Q:108:LEU:O	1:Q:112:MET:HG3	2.12	0.50
1:U:138:LEU:CD1	1:U:138:LEU:C	2.80	0.50
1:W:44:THR:HG23	1:W:46:HIS:N	2.27	0.50
1:W:117:GLU:O	1:W:118:TYR:C	2.48	0.50
1:G:5:VAL:O	1:G:7:ASN:N	2.45	0.50
1:I:276:LEU:HD12	1:I:280:GLN:HG2	1.94	0.50
1:K:120:HIS:CG	1:K:192:ARG:HG2	2.46	0.50
1:K:220:THR:CG2	1:K:223:GLN:HG3	2.42	0.50
1:M:120:HIS:CG	1:M:192:ARG:HG2	2.47	0.50
1:M:219:ALA:HB3	1:M:223:GLN:OE1	2.11	0.50
1:O:52:GLU:OE2	1:O:56:TYR:CE2	2.64	0.50
1:O:215:GLY:O	1:O:216:LEU:C	2.49	0.50
1:Q:76:ASP:HB3	3:Q:429:HOH:O	2.10	0.50
1:Q:254:PHE:C	1:Q:254:PHE:CD2	2.84	0.50
1:U:242:LYS:O	1:U:244:TYR:N	2.45	0.50
1:E:203:LEU:O	1:E:207:ASN:ND2	2.44	0.50
1:G:259:ARG:HG2	1:G:259:ARG:HH11	1.76	0.50
1:K:43:LYS:CB	1:O:233:MET:HE1	2.41	0.50
1:U:52:GLU:OE2	1:U:150:PHE:N	2.44	0.50
1:U:126:HIS:CD2	1:U:147:ILE:HD11	2.46	0.50
1:U:204:MET:O	1:U:205:TYR:C	2.50	0.50
1:A:59:MET:O	1:A:60:GLN:C	2.49	0.50
1:K:62:GLY:CA	1:K:118:TYR:CZ	2.95	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:213:TRP:CE2	1:K:232:LYS:HE2	2.47	0.50
1:M:293:LEU:CD2	1:O:135:LEU:HD23	2.40	0.50
1:O:169:GLU:HA	1:O:188:ILE:HA	1.94	0.50
1:Q:167:TYR:CD1	1:Q:168:ARG:N	2.80	0.50
1:Q:220:THR:N	1:Q:223:GLN:HE21	2.10	0.50
1:S:7:ASN:O	1:S:7:ASN:CG	2.50	0.50
1:U:130:LYS:HB2	1:U:131:PRO:HD2	1.94	0.50
1:U:167:TYR:HA	1:U:260:PHE:CE2	2.46	0.50
1:W:70:TRP:O	1:W:70:TRP:CD2	2.65	0.50
1:W:254:PHE:CD2	1:W:258:LEU:HD21	2.46	0.50
1:A:120:HIS:ND1	1:A:192:ARG:HG2	2.26	0.50
1:A:293:LEU:HD12	1:C:15:ILE:HG23	1.94	0.50
1:C:17:SER:C	3:C:431:HOH:O	2.50	0.50
1:G:289:ASP:O	1:G:294:LYS:NZ	2.41	0.50
1:I:271:GLN:HG3	1:I:275:ASN:ND2	2.26	0.50
1:K:55:PHE:O	1:K:59:MET:HG2	2.12	0.50
1:O:219:ALA:CB	1:O:223:GLN:OE1	2.57	0.50
1:Q:7:ASN:C	1:Q:7:ASN:ND2	2.64	0.50
1:U:207:ASN:O	1:U:209:GLY:N	2.38	0.50
1:W:258:LEU:HD23	1:W:258:LEU:N	2.26	0.50
1:E:269:LEU:O	1:E:272:LEU:HB3	2.12	0.49
1:I:5:VAL:C	1:I:7:ASN:N	2.64	0.49
1:K:90:GLU:OE2	1:K:98:ARG:NH2	2.45	0.49
1:K:140:LYS:HG3	1:K:141:LYS:H	1.77	0.49
1:M:156:TYR:HA	1:M:165:ILE:HG23	1.94	0.49
1:Q:8:LYS:O	1:Q:29:ILE:HG12	2.12	0.49
1:S:137:GLY:HA3	1:S:141:LYS:CB	2.41	0.49
1:S:167:TYR:CD2	1:S:260:PHE:HD2	2.29	0.49
1:S:180:ALA:HB3	1:S:185:HIS:NE2	2.26	0.49
1:U:28:ASN:ND2	1:U:31:SER:N	2.59	0.49
1:C:12:GLY:N	1:C:25:LEU:O	2.45	0.49
1:E:172:ASN:O	1:E:173:LEU:C	2.49	0.49
1:K:29:ILE:HG22	1:K:30:ALA:N	2.26	0.49
1:M:125:ILE:HG13	1:M:127:ARG:HG3	1.95	0.49
1:Q:8:LYS:HB2	1:Q:8:LYS:HZ2	1.76	0.49
1:S:68:ILE:CG2	1:S:69:LYS:N	2.75	0.49
1:U:5:VAL:N	1:U:9:TYR:O	2.39	0.49
1:W:164:HIS:CE1	1:W:261:ASP:HA	2.46	0.49
1:E:182:ILE:HD11	1:E:256:ARG:CZ	2.41	0.49
1:G:131:PRO:HG2	1:G:205:TYR:HE2	1.76	0.49
1:M:218:ALA:HB2	1:M:227:ARG:HD3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:14:LYS:HD2	1:O:22:ASP:OD2	2.12	0.49
1:O:124:PHE:CD2	1:O:154:LYS:C	2.85	0.49
1:U:235:THR:O	1:U:236:PRO:C	2.51	0.49
1:W:17:SER:C	3:W:413:HOH:O	2.51	0.49
1:W:90:GLU:HB2	1:W:131:PRO:HB2	1.94	0.49
1:W:128:ASP:OD2	1:W:130:LYS:HD3	2.13	0.49
1:W:270:ARG:HG3	1:W:270:ARG:HH11	1.77	0.49
1:E:211:LEU:O	1:E:214:GLN:HB2	2.12	0.49
1:E:231:LYS:HA	1:E:234:SER:OG	2.12	0.49
1:G:92:LEU:HD13	1:G:290:TRP:CE2	2.47	0.49
1:M:135:LEU:HD13	1:M:148:ILE:HD13	1.93	0.49
1:M:251:TYR:O	1:M:254:PHE:HB3	2.13	0.49
1:Q:220:THR:H	1:Q:223:GLN:HE21	1.58	0.49
1:S:40:GLU:OE1	1:S:49:LEU:HB3	2.12	0.49
1:S:208:LEU:CD2	1:S:244:TYR:HE2	2.24	0.49
1:U:28:ASN:HD21	1:U:30:ALA:HB3	1.77	0.49
1:U:30:ALA:O	1:U:31:SER:C	2.49	0.49
1:U:52:GLU:OE1	1:U:56:TYR:HE2	1.94	0.49
1:I:234:SER:O	1:I:236:PRO:CD	2.61	0.49
1:K:4:ARG:NH2	1:K:7:ASN:HD22	2.11	0.49
1:K:6:GLY:C	1:K:8:LYS:H	2.07	0.49
1:K:117:GLU:OE1	1:K:270:ARG:NH2	2.46	0.49
1:M:41:CYS:HB2	1:M:77:TYR:CE1	2.48	0.49
1:M:58:MET:O	1:M:60:GLN:N	2.45	0.49
1:S:193:ARG:CG	1:S:194:ASP:N	2.76	0.49
1:U:271:GLN:O	1:U:272:LEU:C	2.50	0.49
1:W:213:TRP:HB3	1:W:231:LYS:CG	2.43	0.49
1:C:173:LEU:HD12	1:C:184:THR:HG22	1.94	0.49
1:E:237:ILE:HD11	1:E:256:ARG:NE	2.28	0.49
1:G:7:ASN:CG	1:G:7:ASN:O	2.50	0.49
1:M:141:LYS:C	1:M:143:ASN:N	2.65	0.49
1:O:60:GLN:CG	1:O:61:GLY:N	2.75	0.49
1:O:124:PHE:HD2	1:O:154:LYS:CA	2.26	0.49
1:O:124:PHE:HD2	1:O:154:LYS:C	2.16	0.49
1:U:277:PHE:CE1	1:U:282:PHE:HB2	2.48	0.49
1:W:10:ARG:HB2	1:W:29:ILE:CD1	2.42	0.49
1:W:135:LEU:N	1:W:135:LEU:CD1	2.76	0.49
1:A:174:THR:O	1:A:174:THR:HG23	2.13	0.49
1:A:238:GLU:CG	1:I:3:LEU:HB2	2.43	0.49
1:I:174:THR:O	1:I:174:THR:HG23	2.13	0.49
1:K:226:GLU:O	1:K:230:GLU:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:158:ASP:OD1	1:O:160:ARG:N	2.44	0.49
1:S:134:PHE:CZ	1:S:147:ILE:HD12	2.48	0.49
1:S:222:ARG:HH11	1:S:222:ARG:CG	2.23	0.49
1:E:57:LYS:HG3	1:E:68:ILE:HD12	1.95	0.49
1:K:111:GLN:OE1	1:K:115:ARG:NH2	2.45	0.49
1:K:119:ILE:CD1	1:K:147:ILE:HD13	2.43	0.49
1:O:120:HIS:CG	1:O:192:ARG:HG2	2.48	0.49
1:U:17:SER:C	3:U:403:HOH:O	2.50	0.49
1:W:86:GLY:N	1:W:136:MET:O	2.44	0.49
1:W:122:LYS:C	1:W:123:ASN:ND2	2.65	0.49
1:A:222:ARG:HH11	1:A:222:ARG:CG	2.20	0.49
1:E:207:ASN:HB3	1:E:244:TYR:CE1	2.48	0.49
1:K:41:CYS:HB3	1:K:44:THR:HG22	1.94	0.49
1:M:279:ARG:HG2	1:S:63:VAL:HG22	1.95	0.49
1:O:50:HIS:C	1:O:52:GLU:N	2.65	0.49
1:Q:28:ASN:OD1	1:Q:30:ALA:N	2.45	0.49
1:S:22:ASP:C	1:S:23:ILE:HD13	2.33	0.49
1:S:147:ILE:HG13	1:S:148:ILE:N	2.27	0.49
1:A:221:LYS:H	1:A:221:LYS:CE	2.21	0.49
1:C:231:LYS:HA	1:C:234:SER:OG	2.13	0.49
1:C:236:PRO:HB3	1:E:77:TYR:CE2	2.48	0.49
1:M:278:HIS:O	1:M:280:GLN:N	2.46	0.49
1:O:217:LYS:O	1:O:227:ARG:NH1	2.40	0.49
1:Q:181:SER:O	1:Q:184:THR:HB	2.13	0.49
1:Q:222:ARG:HG3	1:Q:222:ARG:NH1	2.26	0.49
1:U:138:LEU:HD13	1:U:139:GLY:N	2.28	0.49
1:U:254:PHE:O	1:U:257:SER:N	2.44	0.49
1:W:4:ARG:HD2	1:W:29:ILE:CD1	2.43	0.49
1:W:140:LYS:CE	1:W:140:LYS:HA	2.43	0.49
1:W:147:ILE:O	1:W:147:ILE:HG23	2.12	0.49
1:W:150:PHE:N	1:W:150:PHE:HD1	2.08	0.49
1:W:164:HIS:NE2	1:W:261:ASP:CA	2.76	0.49
1:W:259:ARG:O	1:W:262:ASP:HB2	2.12	0.49
1:A:245:PRO:CB	1:A:276:LEU:HD21	2.43	0.48
1:C:46:HIS:H	1:C:47:PRO:CD	2.22	0.48
1:C:186:LEU:O	1:C:188:ILE:HG13	2.12	0.48
1:E:54:LYS:HD3	1:E:54:LYS:HA	1.59	0.48
1:G:28:ASN:HD21	1:G:30:ALA:CB	2.24	0.48
1:G:116:ILE:HD12	1:G:199:LEU:HD22	1.95	0.48
1:G:178:ARG:HD2	1:G:179:TYR:CE1	2.48	0.48
1:I:15:ILE:HD11	1:I:25:LEU:HD12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:W:56:TYR:CE2	1:W:82:MET:HE2	2.48	0.48
1:K:15:ILE:CG2	1:K:25:LEU:HB2	2.43	0.48
1:C:222:ARG:CG	1:C:222:ARG:NH1	2.72	0.48
1:M:138:LEU:HD21	1:O:287:VAL:HG13	1.94	0.48
1:M:241:CYS:O	1:M:242:LYS:C	2.51	0.48
1:O:50:HIS:O	1:O:52:GLU:N	2.46	0.48
1:O:74:GLU:O	1:O:75:GLY:C	2.51	0.48
1:O:221:LYS:CG	1:O:222:ARG:N	2.74	0.48
1:S:141:LYS:O	1:S:142:GLY:C	2.50	0.48
1:S:209:GLY:O	1:S:210:SER:HB3	2.13	0.48
1:W:71:CYS:HA	1:W:79:VAL:O	2.14	0.48
1:C:219:ALA:HB3	1:C:223:GLN:OE1	2.14	0.48
1:E:5:VAL:N	1:E:9:TYR:O	2.43	0.48
1:G:6:GLY:HA2	1:G:70:TRP:CZ2	2.48	0.48
1:I:17:SER:HB3	3:I:409:HOH:O	2.13	0.48
1:O:94:ASN:OD1	1:O:98:ARG:NH1	2.44	0.48
1:O:237:ILE:O	1:O:240:LEU:HB3	2.13	0.48
1:Q:13:ARG:N	3:Q:418:HOH:O	2.32	0.48
1:Q:161:THR:O	1:Q:162:HIS:HB2	2.11	0.48
1:S:4:ARG:NH1	1:S:29:ILE:CD1	2.71	0.48
1:S:43:LYS:C	1:S:44:THR:O	2.49	0.48
1:U:9:TYR:CE2	1:U:81:VAL:HG11	2.48	0.48
1:U:44:THR:O	1:U:46:HIS:N	2.47	0.48
1:U:127:ARG:CB	1:U:190:GLN:HE21	2.26	0.48
1:U:184:THR:CG2	1:U:190:GLN:OE1	2.61	0.48
1:U:237:ILE:HG21	1:U:253:ASN:ND2	2.28	0.48
1:E:287:VAL:HG13	1:G:138:LEU:HD21	1.95	0.48
1:I:211:LEU:O	1:I:214:GLN:HB2	2.13	0.48
1:M:63:VAL:O	1:M:65:ILE:HG12	2.14	0.48
1:Q:16:GLY:HA2	1:S:294:LYS:HG2	1.95	0.48
1:U:193:ARG:HG3	1:U:194:ASP:OD2	2.12	0.48
1:A:45:LYS:O	1:A:46:HIS:CD2	2.67	0.48
1:E:119:ILE:HD11	1:E:147:ILE:HG21	1.94	0.48
1:K:156:TYR:O	1:K:165:ILE:HG23	2.13	0.48
1:M:56:TYR:HB2	1:M:68:ILE:HD11	1.96	0.48
1:Q:17:SER:N	1:S:294:LYS:CD	2.67	0.48
1:C:269:LEU:O	1:C:272:LEU:HB3	2.14	0.48
1:E:56:TYR:HB2	1:E:68:ILE:CD1	2.44	0.48
1:M:147:ILE:HG12	1:M:148:ILE:N	2.29	0.48
1:M:237:ILE:HD13	1:M:252:LEU:HB3	1.94	0.48
1:Q:277:PHE:CE1	1:Q:282:PHE:HD2	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:W:89:LEU:HG	1:W:134:PHE:HB2	1.96	0.48
1:A:63:VAL:HG12	1:A:64:GLY:N	2.28	0.48
1:E:236:PRO:HG2	1:E:239:VAL:CG2	2.44	0.48
1:G:43:LYS:HB2	1:M:233:MET:CE	2.35	0.48
1:G:182:ILE:HD12	1:G:256:ARG:CZ	2.43	0.48
1:K:171:LYS:HE2	1:K:171:LYS:HB3	1.77	0.48
1:C:38:LYS:HG2	1:C:49:LEU:HD13	1.95	0.48
1:C:46:HIS:N	1:C:47:PRO:CD	2.77	0.48
1:E:55:PHE:O	1:E:59:MET:HG2	2.14	0.48
1:G:76:ASP:HB2	3:G:438:HOH:O	2.14	0.48
1:K:14:LYS:HB2	1:K:24:TYR:CE2	2.49	0.48
1:O:222:ARG:HG2	1:O:223:GLN:H	1.79	0.48
1:Q:181:SER:HB2	1:Q:197:GLU:CD	2.34	0.48
1:S:191:SER:O	1:S:192:ARG:C	2.52	0.48
1:W:70:TRP:CH2	1:W:72:GLY:HA3	2.49	0.48
1:W:192:ARG:HD2	1:W:264:PRO:CD	2.44	0.48
1:U:4:ARG:CZ	1:U:7:ASN:O	2.61	0.48
1:U:39:LEU:CD2	1:U:79:VAL:HG13	2.44	0.48
1:U:111:GLN:O	1:U:115:ARG:HG2	2.14	0.48
1:U:247:GLU:CD	1:U:276:LEU:HD23	2.33	0.48
1:C:270:ARG:O	1:C:274:ARG:HG3	2.14	0.47
1:K:150:PHE:N	1:K:150:PHE:CD1	2.81	0.47
1:Q:128:ASP:HB2	1:Q:152:LEU:HD12	1.96	0.47
1:Q:182:ILE:HD12	1:Q:256:ARG:CZ	2.44	0.47
1:U:211:LEU:O	1:U:214:GLN:CB	2.62	0.47
1:W:37:ILE:HG23	1:W:80:MET:O	2.12	0.47
1:C:119:ILE:CD1	1:C:147:ILE:HD13	2.44	0.47
1:E:22:ASP:N	3:E:433:HOH:O	2.47	0.47
1:M:64:GLY:HA2	1:M:146:TYR:CD2	2.48	0.47
1:Q:4:ARG:NH2	1:Q:7:ASN:ND2	2.62	0.47
1:Q:181:SER:HA	1:Q:197:GLU:OE2	2.14	0.47
1:Q:193:ARG:HG3	1:Q:194:ASP:N	2.29	0.47
1:S:189:GLU:HB3	1:S:260:PHE:CE2	2.48	0.47
1:W:165:ILE:HB	1:W:166:PRO:CD	2.44	0.47
1:K:118:TYR:OH	1:K:122:LYS:HE3	2.13	0.47
1:K:221:LYS:NZ	1:K:225:TYR:OH	2.47	0.47
1:M:172:ASN:O	1:M:173:LEU:C	2.52	0.47
1:U:112:MET:CE	1:U:199:LEU:HD11	2.43	0.47
1:U:130:LYS:HB2	1:U:131:PRO:CD	2.44	0.47
1:U:224:LYS:O	1:U:228:ILE:HG13	2.14	0.47
1:C:120:HIS:CG	1:C:192:ARG:HG2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:138:LEU:HA	1:C:138:LEU:HD23	1.75	0.47
1:E:8:LYS:HD3	1:E:9:TYR:CE2	2.49	0.47
1:E:230:GLU:HA	1:E:233:MET:HE3	1.95	0.47
1:E:274:ARG:HH12	1:Q:274:ARG:NH1	2.11	0.47
1:G:28:ASN:ND2	1:G:30:ALA:H	2.12	0.47
1:G:55:PHE:CE2	1:G:150:PHE:O	2.68	0.47
1:K:44:THR:O	1:K:47:PRO:HD3	2.14	0.47
1:M:178:ARG:HD2	1:M:179:TYR:CZ	2.49	0.47
1:O:150:PHE:N	1:O:150:PHE:CD1	2.82	0.47
1:W:53:SER:HA	1:W:68:ILE:HD12	1.96	0.47
1:W:87:PRO:O	1:W:135:LEU:HA	2.13	0.47
1:A:98:ARG:NH2	1:A:205:TYR:OH	2.48	0.47
1:C:127:ARG:NH1	1:C:174:THR:HG21	2.29	0.47
1:I:291:ASN:O	1:K:86:GLY:HA2	2.14	0.47
1:K:185:HIS:HB3	1:K:229:SER:OG	2.13	0.47
1:O:150:PHE:O	1:O:152:LEU:N	2.47	0.47
1:O:167:TYR:HB2	1:O:260:PHE:CE2	2.49	0.47
1:S:120:HIS:CD2	1:S:125:ILE:HG22	2.49	0.47
1:W:6:GLY:HA2	1:W:70:TRP:CH2	2.50	0.47
1:E:140:LYS:HG2	1:E:141:LYS:HG3	1.97	0.47
1:E:168:ARG:HG2	1:E:169:GLU:N	2.29	0.47
1:G:41:CYS:SG	3:G:438:HOH:O	2.60	0.47
1:G:251:TYR:CD1	1:G:251:TYR:C	2.88	0.47
1:I:222:ARG:HH11	1:I:222:ARG:CG	2.26	0.47
1:I:271:GLN:HE21	1:I:271:GLN:CA	2.21	0.47
1:M:80:MET:HE2	1:M:82:MET:HB3	1.97	0.47
1:M:294:LYS:HB2	1:O:91:ASP:OD2	2.14	0.47
1:U:138:LEU:C	1:U:138:LEU:HD13	2.34	0.47
1:W:6:GLY:HA2	1:W:70:TRP:CZ2	2.50	0.47
1:G:10:ARG:NH2	3:G:450:HOH:O	2.47	0.47
1:G:57:LYS:HA	1:G:57:LYS:HD2	1.59	0.47
1:G:164:HIS:O	1:G:165:ILE:C	2.52	0.47
1:I:22:ASP:C	1:I:23:ILE:HD13	2.35	0.47
1:I:270:ARG:NH1	3:I:452:HOH:O	2.47	0.47
1:O:11:LEU:CD1	1:O:37:ILE:HD12	2.45	0.47
1:O:33:GLU:OE2	1:O:69:LYS:CE	2.62	0.47
1:O:35:VAL:HG21	1:O:81:VAL:CG1	2.43	0.47
1:O:119:ILE:HD11	1:O:147:ILE:HG21	1.96	0.47
1:O:259:ARG:HB2	1:O:262:ASP:CB	2.43	0.47
1:S:134:PHE:CE1	1:S:147:ILE:HD12	2.49	0.47
1:U:62:GLY:HA3	1:U:118:TYR:CZ	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:242:LYS:C	1:U:244:TYR:N	2.68	0.47
1:W:117:GLU:CB	1:W:266:TYR:CE1	2.94	0.47
1:W:269:LEU:C	1:W:271:GLN:N	2.68	0.47
1:A:17:SER:HA	3:A:413:HOH:O	2.13	0.47
1:E:57:LYS:HG3	1:E:68:ILE:CD1	2.45	0.47
1:G:29:ILE:O	1:G:30:ALA:O	2.33	0.47
1:K:139:GLY:O	1:K:140:LYS:C	2.51	0.47
1:S:143:ASN:C	1:S:143:ASN:ND2	2.66	0.47
1:U:29:ILE:HD13	1:U:29:ILE:HA	1.77	0.47
1:U:276:LEU:O	1:U:277:PHE:C	2.52	0.47
1:W:250:THR:HB	1:W:272:LEU:HD21	1.97	0.47
1:E:41:CYS:O	1:E:44:THR:OG1	2.21	0.47
1:E:57:LYS:O	1:E:60:GLN:HB3	2.15	0.47
1:E:76:ASP:OD1	1:E:76:ASP:N	2.28	0.47
1:K:45:LYS:O	1:K:46:HIS:CB	2.63	0.47
1:O:268:TYR:CZ	1:O:272:LEU:CD2	2.98	0.47
1:U:208:LEU:HD23	1:U:244:TYR:CE2	2.50	0.47
1:G:126:HIS:O	1:G:127:ARG:HB2	2.15	0.47
1:K:8:LYS:HB2	1:K:8:LYS:HE2	1.62	0.47
1:M:93:PHE:HZ	1:M:209:GLY:HA2	1.80	0.47
1:U:66:PRO:CA	1:U:83:GLU:OE2	2.52	0.47
1:U:197:GLU:O	1:U:200:GLY:N	2.45	0.47
1:U:207:ASN:C	1:U:209:GLY:H	2.18	0.47
1:W:123:ASN:HA	1:W:156:TYR:HE2	1.76	0.47
1:C:2:GLU:HB3	1:C:3:LEU:H	1.58	0.46
1:G:56:TYR:HB3	1:G:68:ILE:HG12	1.96	0.46
1:I:84:LEU:HD23	1:I:138:LEU:HD11	1.97	0.46
1:I:174:THR:CG2	1:I:190:GLN:OE1	2.63	0.46
1:K:54:LYS:O	1:K:57:LYS:HB2	2.15	0.46
1:K:134:PHE:HA	1:K:146:TYR:O	2.15	0.46
1:M:102:LEU:CG	1:M:106:LEU:HD11	2.45	0.46
1:O:125:ILE:HG21	1:O:191:SER:C	2.35	0.46
1:S:149:ASP:C	1:S:149:ASP:OD1	2.53	0.46
1:S:293:LEU:HD12	1:S:294:LYS:HB2	1.96	0.46
1:U:156:TYR:O	1:U:165:ILE:HG12	2.15	0.46
1:U:293:LEU:HB3	1:W:15:ILE:HG23	1.94	0.46
1:A:98:ARG:NH1	1:A:209:GLY:O	2.48	0.46
1:A:119:ILE:CD1	1:A:150:PHE:HE2	2.26	0.46
1:A:217:LYS:HD2	1:A:217:LYS:N	2.21	0.46
1:E:6:GLY:N	3:E:445:HOH:O	2.21	0.46
1:E:167:TYR:HA	1:E:260:PHE:CE2	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:119:ILE:HD11	1:G:147:ILE:HD13	1.98	0.46
1:O:28:ASN:CG	1:O:31:SER:HB3	2.36	0.46
1:U:35:VAL:HG23	1:U:36:ALA:O	2.16	0.46
1:W:164:HIS:CD2	1:W:261:ASP:O	2.67	0.46
1:A:120:HIS:CE1	1:A:192:ARG:HG2	2.51	0.46
1:I:56:TYR:CE1	1:I:150:PHE:CE1	3.03	0.46
1:S:43:LYS:O	1:S:44:THR:O	2.34	0.46
1:S:150:PHE:N	1:S:150:PHE:HD1	2.10	0.46
1:W:194:ASP:O	1:W:195:ASP:C	2.54	0.46
1:A:10:ARG:HB2	1:A:29:ILE:HD11	1.96	0.46
1:G:25:LEU:HD11	1:G:34:GLU:HB3	1.97	0.46
1:O:161:THR:C	1:O:163:GLN:H	2.19	0.46
1:Q:57:LYS:HD2	1:Q:57:LYS:HA	1.42	0.46
1:Q:220:THR:HG22	1:Q:223:GLN:HG3	1.96	0.46
1:Q:223:GLN:O	1:Q:227:ARG:HG3	2.15	0.46
1:S:150:PHE:C	1:S:152:LEU:N	2.67	0.46
1:A:36:ALA:HB3	1:A:82:MET:HG3	1.97	0.46
1:C:119:ILE:HD11	1:C:147:ILE:HD13	1.97	0.46
1:E:3:LEU:HD23	1:E:3:LEU:HA	1.64	0.46
1:E:123:ASN:HA	1:E:156:TYR:CE2	2.51	0.46
1:G:156:TYR:C	1:G:165:ILE:HG23	2.36	0.46
1:M:135:LEU:HD23	1:O:293:LEU:HD13	1.98	0.46
1:M:191:SER:HB3	1:M:260:PHE:HE1	1.80	0.46
1:O:111:GLN:O	1:O:115:ARG:HG2	2.15	0.46
1:O:183:ASN:O	1:O:184:THR:C	2.54	0.46
1:S:23:ILE:HD11	1:S:38:LYS:CE	2.45	0.46
1:E:130:LYS:HA	1:E:202:VAL:HG21	1.98	0.46
1:G:234:SER:O	1:G:236:PRO:HD3	2.16	0.46
1:M:231:LYS:HA	1:M:234:SER:OG	2.15	0.46
1:Q:10:ARG:HG2	1:Q:10:ARG:HH11	1.80	0.46
1:U:6:GLY:HA3	1:U:70:TRP:CE2	2.50	0.46
1:U:6:GLY:CA	1:U:70:TRP:CZ2	2.99	0.46
1:U:237:ILE:HD11	1:U:256:ARG:CD	2.45	0.46
1:W:266:TYR:HB3	1:W:270:ARG:NH1	2.30	0.46
1:C:136:MET:SD	1:C:145:VAL:HG22	2.56	0.46
1:G:14:LYS:HA	1:G:24:TYR:CD1	2.51	0.46
1:I:28:ASN:HD22	1:I:31:SER:N	2.12	0.46
1:I:196:LEU:O	1:I:199:LEU:HB3	2.15	0.46
1:O:41:CYS:SG	1:O:43:LYS:HE2	2.56	0.46
1:O:164:HIS:HE1	1:O:260:PHE:CZ	2.34	0.46
1:O:289:ASP:O	1:O:294:LYS:NZ	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:293:LEU:HD12	1:O:294:LYS:H	1.80	0.46
1:S:198:SER:O	1:S:202:VAL:HG23	2.15	0.46
1:U:49:LEU:HD11	1:U:80:MET:HB3	1.97	0.46
1:U:161:THR:O	1:U:163:GLN:N	2.49	0.46
1:U:267:SER:HA	1:U:270:ARG:HH11	1.80	0.46
1:W:44:THR:CG2	1:W:46:HIS:H	2.28	0.46
1:W:85:LEU:HD22	1:W:146:TYR:CD1	2.51	0.46
1:E:92:LEU:HD22	1:E:290:TRP:CD2	2.51	0.46
1:G:84:LEU:HG	1:G:138:LEU:CD1	2.45	0.46
1:G:123:ASN:O	1:G:155:LYS:HA	2.15	0.46
1:K:8:LYS:NZ	1:K:28:ASN:HD21	2.13	0.46
1:M:70:TRP:CZ3	1:M:72:GLY:N	2.83	0.46
1:S:57:LYS:HD3	1:S:57:LYS:HA	1.79	0.46
1:S:117:GLU:O	1:S:120:HIS:N	2.46	0.46
1:U:185:HIS:NE2	1:U:232:LYS:CE	2.78	0.46
1:W:57:LYS:HA	1:W:57:LYS:HD2	1.66	0.46
1:W:93:PHE:CE1	1:W:206:PHE:HD1	2.34	0.46
1:W:124:PHE:CE2	1:W:155:LYS:HG3	2.50	0.46
1:A:1:MET:O	1:A:2:GLU:OE1	2.34	0.46
1:K:112:MET:HE2	1:K:134:PHE:CE2	2.51	0.46
1:K:118:TYR:CZ	1:K:122:LYS:HE3	2.51	0.46
1:O:56:TYR:HE1	1:O:66:PRO:CG	2.29	0.46
1:O:169:GLU:O	1:O:170:ASN:CB	2.62	0.46
1:O:238:GLU:H	1:O:238:GLU:HG2	1.29	0.46
1:S:51:ILE:O	1:S:54:LYS:HB2	2.15	0.46
1:S:237:ILE:HD13	1:S:252:LEU:HB3	1.97	0.46
1:S:277:PHE:CE2	1:S:282:PHE:HB2	2.51	0.46
1:U:112:MET:CE	1:U:199:LEU:CD1	2.94	0.46
1:U:120:HIS:HB3	1:U:192:ARG:HD3	1.98	0.46
1:U:173:LEU:CD1	1:U:174:THR:N	2.79	0.46
1:U:222:ARG:O	1:U:225:TYR:HB2	2.15	0.46
1:W:59:MET:HE3	1:W:119:ILE:HG23	1.97	0.46
1:A:216:LEU:HD12	1:A:216:LEU:HA	1.77	0.46
1:I:126:HIS:CD2	1:I:147:ILE:HD11	2.51	0.46
1:K:182:ILE:CD1	1:K:233:MET:HG3	2.46	0.46
1:O:22:ASP:N	3:O:405:HOH:O	2.48	0.46
1:O:209:GLY:O	1:O:210:SER:HB3	2.16	0.46
1:O:224:LYS:O	1:O:228:ILE:HG13	2.16	0.46
1:O:225:TYR:N	1:O:225:TYR:HD1	2.12	0.46
1:Q:107:LEU:HD22	1:Q:286:TYR:CE1	2.50	0.46
1:S:182:ILE:HG23	1:S:233:MET:HE3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:250:THR:HG22	1:S:272:LEU:HD21	1.98	0.46
1:U:49:LEU:CD1	1:U:80:MET:HE3	2.46	0.46
1:U:89:LEU:HD13	1:U:206:PHE:CZ	2.51	0.46
1:W:88:SER:HA	1:W:135:LEU:HA	1.98	0.46
1:W:211:LEU:HD13	1:W:213:TRP:CZ2	2.51	0.46
1:O:22:ASP:CA	3:O:405:HOH:O	2.61	0.45
1:O:43:LYS:HE3	1:O:43:LYS:HB2	1.58	0.45
1:O:58:MET:SD	1:O:124:PHE:HE1	2.39	0.45
1:Q:8:LYS:CB	1:Q:8:LYS:HZ3	2.27	0.45
1:Q:43:LYS:C	1:Q:44:THR:O	2.55	0.45
1:A:47:PRO:C	1:A:48:GLN:CG	2.85	0.45
1:C:56:TYR:HE1	1:C:150:PHE:HE1	1.64	0.45
1:E:186:LEU:HD23	1:E:186:LEU:HA	1.72	0.45
1:I:17:SER:CB	3:I:409:HOH:O	2.63	0.45
1:K:88:SER:HA	1:K:135:LEU:HD12	1.99	0.45
1:M:62:GLY:HA3	1:M:118:TYR:CZ	2.50	0.45
1:M:156:TYR:CA	1:M:165:ILE:HG23	2.47	0.45
1:M:171:LYS:HD2	1:M:189:GLU:OE1	2.16	0.45
1:Q:56:TYR:CE2	1:Q:82:MET:CE	2.99	0.45
1:S:25:LEU:HD23	1:S:25:LEU:C	2.37	0.45
1:S:50:HIS:HA	1:S:53:SER:OG	2.16	0.45
1:S:260:PHE:HD1	1:S:260:PHE:O	1.99	0.45
1:U:116:ILE:HG22	1:U:120:HIS:NE2	2.27	0.45
1:A:220:THR:CG2	1:A:222:ARG:HB3	2.46	0.45
1:E:173:LEU:HD23	1:E:225:TYR:CE2	2.51	0.45
1:E:241:CYS:O	1:E:242:LYS:C	2.53	0.45
1:K:3:LEU:HD23	1:K:11:LEU:CB	2.43	0.45
1:O:60:GLN:HG3	1:O:61:GLY:H	1.81	0.45
1:S:150:PHE:HD1	1:S:150:PHE:H	1.65	0.45
1:U:6:GLY:C	1:U:8:LYS:H	2.20	0.45
1:U:70:TRP:CH2	1:U:72:GLY:HA3	2.51	0.45
1:W:42:VAL:HG22	1:W:76:ASP:C	2.36	0.45
1:W:56:TYR:HE2	1:W:82:MET:HE1	1.75	0.45
1:W:116:ILE:HG22	1:W:117:GLU:N	2.31	0.45
1:W:164:HIS:O	1:W:165:ILE:O	2.35	0.45
1:W:172:ASN:O	1:W:173:LEU:C	2.54	0.45
1:W:219:ALA:O	1:W:220:THR:CB	2.65	0.45
1:A:134:PHE:O	1:A:135:LEU:HD23	2.16	0.45
1:E:192:ARG:CZ	1:E:263:LYS:HA	2.47	0.45
1:G:167:TYR:CD1	1:G:168:ARG:N	2.84	0.45
1:M:26:GLY:HA3	1:M:37:ILE:HD11	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:220:THR:HG22	1:M:223:GLN:CD	2.35	0.45
1:M:223:GLN:O	1:M:227:ARG:HG3	2.16	0.45
1:O:58:MET:CE	1:O:122:LYS:O	2.63	0.45
1:O:140:LYS:C	1:O:142:GLY:N	2.69	0.45
1:Q:174:THR:O	1:Q:174:THR:CG2	2.63	0.45
1:U:94:ASN:O	1:U:97:SER:N	2.49	0.45
1:S:158:ASP:O	1:S:162:HIS:HA	2.17	0.45
1:U:85:LEU:HB2	1:U:135:LEU:HD23	1.97	0.45
1:U:234:SER:C	1:U:236:PRO:HD3	2.36	0.45
1:W:259:ARG:N	1:W:262:ASP:OD2	2.43	0.45
1:C:76:ASP:OD1	1:C:76:ASP:N	2.49	0.45
1:C:182:ILE:HD12	1:C:256:ARG:CZ	2.46	0.45
1:E:7:ASN:CG	1:E:7:ASN:O	2.53	0.45
1:E:292:MET:HA	1:G:86:GLY:HA2	1.97	0.45
1:I:62:GLY:HA3	1:I:118:TYR:CZ	2.52	0.45
1:I:164:HIS:CD2	1:I:261:ASP:HB2	2.52	0.45
1:M:173:LEU:HD12	1:M:173:LEU:HA	1.69	0.45
1:Q:15:ILE:HD13	1:Q:25:LEU:CB	2.34	0.45
1:Q:115:ARG:HA	1:Q:115:ARG:HD3	1.76	0.45
1:U:3:LEU:C	1:U:3:LEU:HD12	2.37	0.45
1:W:56:TYR:OH	1:W:148:ILE:HB	2.16	0.45
1:G:88:SER:HB2	1:G:135:LEU:CD1	2.46	0.45
1:I:25:LEU:HD23	1:I:25:LEU:C	2.37	0.45
1:I:59:MET:O	1:I:60:GLN:C	2.54	0.45
1:I:251:TYR:C	1:I:251:TYR:CD1	2.90	0.45
1:K:158:ASP:OD1	1:K:161:THR:OG1	2.28	0.45
1:Q:172:ASN:O	1:Q:173:LEU:C	2.55	0.45
1:S:116:ILE:HG21	1:S:196:LEU:CD2	2.47	0.45
1:S:118:TYR:C	1:S:118:TYR:CD2	2.90	0.45
1:S:220:THR:CG2	1:S:223:GLN:NE2	2.75	0.45
1:S:237:ILE:HD13	1:S:252:LEU:CB	2.47	0.45
1:U:182:ILE:HD11	1:U:256:ARG:NH2	2.30	0.45
1:W:236:PRO:HG2	1:W:239:VAL:HB	1.98	0.45
1:A:39:LEU:HD22	1:A:79:VAL:HG22	1.98	0.45
1:C:217:LYS:HE2	1:C:217:LYS:HB3	1.51	0.45
1:E:18:GLY:O	3:E:448:HOH:O	2.21	0.45
1:I:56:TYR:HB3	1:I:68:ILE:HG12	1.99	0.45
1:M:213:TRP:CE2	1:M:232:LYS:HE2	2.52	0.45
1:O:60:GLN:HG3	1:O:61:GLY:N	2.30	0.45
1:O:259:ARG:NH1	3:O:408:HOH:O	2.27	0.45
1:U:5:VAL:HG11	1:U:79:VAL:HG11	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:6:GLY:O	1:I:7:ASN:C	2.55	0.45
1:O:10:ARG:CZ	1:O:29:ILE:CD1	2.95	0.45
1:W:69:LYS:N	1:W:81:VAL:O	2.50	0.45
1:W:123:ASN:O	1:W:156:TYR:CD2	2.70	0.45
1:Q:6:GLY:O	1:Q:7:ASN:HB2	2.17	0.45
1:S:267:SER:O	1:S:271:GLN:HB2	2.17	0.45
1:U:120:HIS:CD2	1:U:192:ARG:HG2	2.51	0.45
1:E:38:LYS:HE3	3:E:457:HOH:O	2.17	0.44
1:G:136:MET:HA	1:G:136:MET:HE3	1.98	0.44
1:I:223:GLN:O	1:I:227:ARG:HG3	2.17	0.44
1:K:178:ARG:HD2	1:K:179:TYR:CZ	2.51	0.44
1:K:269:LEU:HD23	1:K:269:LEU:HA	1.69	0.44
1:M:122:LYS:O	1:M:123:ASN:CB	2.64	0.44
1:O:221:LYS:O	1:O:222:ARG:C	2.55	0.44
1:Q:181:SER:HB2	1:Q:197:GLU:OE2	2.17	0.44
1:U:6:GLY:O	1:U:8:LYS:N	2.50	0.44
1:U:23:ILE:HD13	1:U:23:ILE:H	1.82	0.44
1:U:252:LEU:O	1:U:256:ARG:HG3	2.17	0.44
1:W:112:MET:HB3	1:W:199:LEU:HD11	1.99	0.44
1:E:58:MET:HE2	1:E:58:MET:HB2	1.81	0.44
1:I:277:PHE:CZ	1:I:282:PHE:HB2	2.52	0.44
1:M:92:LEU:O	1:M:95:PHE:HB3	2.18	0.44
1:Q:109:ALA:O	1:Q:113:ILE:HG13	2.17	0.44
1:Q:236:PRO:HG2	1:Q:239:VAL:CB	2.39	0.44
1:S:57:LYS:O	1:S:58:MET:C	2.55	0.44
1:S:161:THR:O	1:S:162:HIS:CB	2.57	0.44
1:C:220:THR:HG21	1:C:223:GLN:NE2	2.32	0.44
1:G:220:THR:OG1	1:G:221:LYS:NZ	2.48	0.44
1:G:224:LYS:O	1:G:225:TYR:C	2.56	0.44
1:I:271:GLN:HE22	1:I:274:ARG:HD2	1.81	0.44
1:I:293:LEU:HD21	1:K:15:ILE:CG1	2.36	0.44
1:K:222:ARG:HG3	1:K:223:GLN:N	2.32	0.44
1:O:56:TYR:HB3	1:O:68:ILE:CD1	2.48	0.44
1:O:150:PHE:C	1:O:152:LEU:H	2.20	0.44
1:Q:28:ASN:OD1	1:Q:29:ILE:N	2.49	0.44
1:Q:122:LYS:O	1:Q:123:ASN:CB	2.64	0.44
1:S:28:ASN:HD22	1:S:28:ASN:C	2.20	0.44
1:U:56:TYR:HB3	1:U:68:ILE:CG1	2.47	0.44
1:U:223:GLN:O	1:U:227:ARG:HG3	2.17	0.44
1:W:9:TYR:CE2	1:W:81:VAL:HG21	2.52	0.44
1:W:87:PRO:HB2	1:W:92:LEU:HD21	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:W:216:LEU:HD12	1:W:216:LEU:HA	1.75	0.44
1:C:84:LEU:HD12	1:C:84:LEU:HA	1.79	0.44
1:I:17:SER:C	3:I:409:HOH:O	2.55	0.44
1:M:127:ARG:HG2	1:M:190:GLN:NE2	2.32	0.44
1:M:266:TYR:O	1:M:270:ARG:HB2	2.18	0.44
1:U:273:PHE:O	1:U:276:LEU:N	2.51	0.44
1:W:123:ASN:C	1:W:156:TYR:HD2	2.19	0.44
1:W:186:LEU:HA	1:W:186:LEU:HD23	1.63	0.44
1:A:120:HIS:CD2	1:A:192:ARG:HG2	2.52	0.44
1:E:130:LYS:HB2	1:E:131:PRO:HD2	2.00	0.44
1:G:154:LYS:NZ	1:G:189:GLU:OE2	2.42	0.44
1:G:226:GLU:CD	1:G:226:GLU:N	2.70	0.44
1:I:236:PRO:HB3	1:M:77:TYR:CE2	2.53	0.44
1:K:42:VAL:HG23	1:K:76:ASP:C	2.38	0.44
1:M:93:PHE:CD1	1:M:98:ARG:HA	2.52	0.44
1:Q:171:LYS:HE2	3:Q:405:HOH:O	2.16	0.44
1:Q:221:LYS:CG	1:Q:222:ARG:N	2.78	0.44
1:S:154:LYS:NZ	3:S:401:HOH:O	2.29	0.44
1:S:182:ILE:HD11	1:S:256:ARG:HH21	1.76	0.44
1:U:92:LEU:HA	1:U:92:LEU:HD23	1.79	0.44
1:W:56:TYR:CB	1:W:68:ILE:CG1	2.79	0.44
1:W:129:VAL:HG11	1:W:198:SER:HB2	2.00	0.44
1:A:47:PRO:C	1:A:48:GLN:HG2	2.38	0.44
1:E:59:MET:HB2	1:E:65:ILE:HG21	1.99	0.44
1:E:125:ILE:O	1:E:153:ALA:HA	2.18	0.44
1:E:140:LYS:HG2	1:E:141:LYS:HG2	1.97	0.44
1:E:144:LEU:HD23	1:E:146:TYR:CE1	2.53	0.44
1:M:181:SER:OG	1:M:194:ASP:OD1	2.28	0.44
1:S:134:PHE:HA	1:S:146:TYR:O	2.18	0.44
1:S:280:GLN:NE2	1:S:280:GLN:CA	2.49	0.44
1:U:204:MET:CE	1:U:207:ASN:HB2	2.48	0.44
1:U:276:LEU:HD13	1:U:276:LEU:C	2.37	0.44
1:U:276:LEU:HD13	1:U:276:LEU:O	2.17	0.44
1:W:14:LYS:NZ	1:W:16:GLY:C	2.70	0.44
1:W:117:GLU:OE1	1:W:266:TYR:CG	2.71	0.44
1:W:129:VAL:O	1:W:130:LYS:HB3	2.17	0.44
1:W:211:LEU:HD13	1:W:213:TRP:CE2	2.53	0.44
1:E:45:LYS:HB3	1:E:45:LYS:HE2	1.62	0.44
1:G:60:GLN:HG2	1:G:61:GLY:N	2.31	0.44
1:G:158:ASP:C	1:G:158:ASP:OD1	2.56	0.44
1:G:158:ASP:CG	1:G:161:THR:OG1	2.56	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:221:LYS:O	1:K:222:ARG:C	2.55	0.44
1:K:236:PRO:HD2	1:K:239:VAL:HB	2.00	0.44
1:O:58:MET:SD	1:O:124:PHE:CE1	3.10	0.44
1:Q:4:ARG:CZ	1:Q:7:ASN:O	2.66	0.44
1:S:14:LYS:CE	1:S:22:ASP:OD2	2.66	0.44
1:U:230:GLU:O	1:U:231:LYS:C	2.56	0.44
1:C:49:LEU:HD12	1:C:49:LEU:HA	1.76	0.44
1:I:66:PRO:HA	1:I:83:GLU:OE2	2.18	0.44
1:M:136:MET:SD	1:M:145:VAL:HG22	2.58	0.44
1:O:263:LYS:HD2	3:O:416:HOH:O	2.17	0.44
1:Q:52:GLU:OE1	1:Q:56:TYR:CZ	2.70	0.44
1:Q:103:LYS:NZ	1:Q:285:ASP:OD1	2.51	0.44
1:Q:221:LYS:O	1:Q:224:LYS:N	2.51	0.44
1:Q:259:ARG:HA	1:Q:259:ARG:HD3	1.35	0.44
1:U:15:ILE:CD1	1:W:292:MET:HE3	2.47	0.44
1:U:291:ASN:O	1:W:87:PRO:HD3	2.18	0.44
1:W:86:GLY:O	1:W:87:PRO:O	2.34	0.44
1:W:125:ILE:HD13	1:W:190:GLN:O	2.17	0.44
1:A:49:LEU:HA	1:A:49:LEU:HD12	1.53	0.44
1:C:178:ARG:HD2	1:C:179:TYR:CZ	2.53	0.44
1:G:88:SER:CB	1:G:135:LEU:CD1	2.96	0.44
1:I:207:ASN:HB3	1:I:244:TYR:CE1	2.53	0.44
1:M:128:ASP:O	1:M:133:ASN:ND2	2.45	0.44
1:M:188:ILE:HG22	1:M:189:GLU:N	2.32	0.44
1:M:220:THR:CG2	1:M:223:GLN:NE2	2.81	0.44
1:O:277:PHE:CE1	1:O:282:PHE:CB	3.00	0.44
1:U:4:ARG:HH21	1:U:7:ASN:CB	2.31	0.44
1:U:82:MET:HG3	1:U:83:GLU:O	2.18	0.44
1:W:78:ASN:O	1:W:79:VAL:HG23	2.18	0.44
1:W:86:GLY:CA	1:W:136:MET:O	2.65	0.44
1:W:90:GLU:HB2	1:W:131:PRO:CB	2.48	0.44
1:W:196:LEU:O	1:W:197:GLU:C	2.56	0.44
1:C:156:TYR:CZ	1:C:192:ARG:HD3	2.52	0.43
1:E:285:ASP:C	1:E:285:ASP:OD1	2.56	0.43
1:M:220:THR:HG23	1:M:223:GLN:CG	2.47	0.43
1:O:52:GLU:C	1:O:54:LYS:N	2.71	0.43
1:S:14:LYS:NZ	1:S:22:ASP:OD2	2.47	0.43
1:S:56:TYR:CE1	1:S:66:PRO:HG3	2.53	0.43
1:U:199:LEU:HD12	1:U:199:LEU:O	2.17	0.43
1:U:279:ARG:HG2	1:U:280:GLN:HG2	1.99	0.43
1:U:293:LEU:HD13	1:U:293:LEU:C	2.38	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:W:4:ARG:HD3	1:W:29:ILE:CD1	2.33	0.43
1:W:56:TYR:HB3	1:W:68:ILE:HG12	1.94	0.43
1:A:173:LEU:HD23	1:A:225:TYR:CE2	2.53	0.43
1:E:29:ILE:HD13	1:E:29:ILE:HA	1.78	0.43
1:G:252:LEU:HA	1:G:252:LEU:HD23	1.84	0.43
1:I:49:LEU:HA	1:I:49:LEU:HD12	1.79	0.43
1:I:191:SER:HB3	1:I:260:PHE:CE1	2.54	0.43
1:I:213:TRP:HB2	1:I:228:ILE:HG23	2.00	0.43
1:M:40:GLU:OE1	1:M:49:LEU:CB	2.66	0.43
1:M:48:GLN:O	1:M:50:HIS:N	2.51	0.43
1:O:58:MET:HE1	1:O:124:PHE:HD1	1.79	0.43
1:U:58:MET:O	1:U:60:GLN:N	2.51	0.43
1:U:107:LEU:HD21	1:U:277:PHE:CE1	2.53	0.43
1:U:176:THR:HG22	1:U:178:ARG:H	1.83	0.43
1:U:226:GLU:OE1	1:U:226:GLU:N	2.51	0.43
1:W:27:ALA:HB2	3:W:418:HOH:O	2.18	0.43
1:W:83:GLU:O	1:W:83:GLU:CG	2.66	0.43
1:C:43:LYS:HB2	1:K:233:MET:CE	2.44	0.43
1:E:150:PHE:N	1:E:150:PHE:CD1	2.86	0.43
1:E:236:PRO:HG2	1:E:239:VAL:HG23	2.00	0.43
1:G:102:LEU:O	1:G:106:LEU:HG	2.18	0.43
1:K:134:PHE:O	1:K:135:LEU:HD12	2.18	0.43
1:M:41:CYS:HA	1:M:77:TYR:CD1	2.53	0.43
1:M:74:GLU:OE1	1:M:74:GLU:HA	2.18	0.43
1:Q:257:SER:O	1:Q:258:LEU:C	2.57	0.43
1:S:223:GLN:O	1:S:226:GLU:N	2.52	0.43
1:U:9:TYR:HD2	1:U:81:VAL:HG21	1.83	0.43
1:W:57:LYS:HE3	1:W:68:ILE:CG2	2.47	0.43
1:W:207:ASN:HB3	1:W:244:TYR:CE1	2.53	0.43
1:W:251:TYR:CD1	1:W:252:LEU:N	2.87	0.43
1:C:131:PRO:HG3	1:C:202:VAL:HG13	2.01	0.43
1:E:241:CYS:HB2	1:O:1:MET:CE	2.49	0.43
1:G:186:LEU:HD11	1:G:233:MET:HE2	2.00	0.43
1:O:251:TYR:HD2	1:O:273:PHE:CE2	2.36	0.43
1:Q:202:VAL:O	1:Q:205:TYR:HB3	2.18	0.43
1:Q:234:SER:O	1:Q:236:PRO:HD3	2.18	0.43
1:S:88:SER:HA	1:S:135:LEU:HD12	1.99	0.43
1:S:259:ARG:O	1:S:262:ASP:HB2	2.19	0.43
1:U:46:HIS:N	1:U:47:PRO:HD3	2.28	0.43
1:U:263:LYS:HA	1:U:264:PRO:HD2	1.86	0.43
1:W:22:ASP:CA	3:W:413:HOH:O	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:W:57:LYS:O	1:W:58:MET:C	2.54	0.43
1:A:44:THR:OG1	1:G:230:GLU:OE2	2.16	0.43
1:A:56:TYR:HE1	1:A:150:PHE:CE1	2.36	0.43
1:I:239:VAL:O	1:I:242:LYS:N	2.45	0.43
1:K:46:HIS:N	1:K:47:PRO:CD	2.62	0.43
1:M:93:PHE:CE1	1:M:98:ARG:HA	2.53	0.43
1:O:54:LYS:CG	1:O:55:PHE:N	2.79	0.43
1:O:82:MET:HE1	3:O:423:HOH:O	2.17	0.43
1:O:127:ARG:NH1	3:O:419:HOH:O	2.48	0.43
1:O:136:MET:SD	1:O:145:VAL:HG22	2.57	0.43
1:Q:204:MET:HE1	1:Q:241:CYS:HA	2.01	0.43
1:S:69:LYS:HZ2	1:S:69:LYS:HG2	1.48	0.43
1:U:126:HIS:ND1	1:U:126:HIS:O	2.52	0.43
1:U:173:LEU:HD13	1:U:174:THR:H	1.84	0.43
1:W:57:LYS:O	1:W:60:GLN:HB3	2.19	0.43
1:C:236:PRO:HG2	1:C:239:VAL:CG2	2.48	0.43
1:E:241:CYS:CB	1:O:1:MET:HE1	2.49	0.43
1:E:249:SER:CB	1:O:1:MET:CE	2.94	0.43
1:K:59:MET:O	1:K:60:GLN:C	2.57	0.43
1:M:268:TYR:CE1	1:M:272:LEU:HD13	2.53	0.43
1:S:43:LYS:O	1:S:44:THR:C	2.57	0.43
1:S:237:ILE:HD11	1:S:256:ARG:CD	2.48	0.43
1:U:14:LYS:C	1:U:15:ILE:CG1	2.86	0.43
1:U:102:LEU:HD12	1:U:102:LEU:HA	1.73	0.43
1:W:128:ASP:HB2	1:W:152:LEU:HD12	1.99	0.43
1:C:89:LEU:O	1:C:93:PHE:HB2	2.19	0.43
1:C:220:THR:CG2	1:C:223:GLN:NE2	2.82	0.43
1:I:119:ILE:CD1	1:I:147:ILE:HD13	2.49	0.43
1:K:5:VAL:CG1	1:K:74:GLU:HG2	2.45	0.43
1:M:224:LYS:O	1:M:226:GLU:N	2.52	0.43
1:O:251:TYR:CE1	1:O:255:CYS:SG	3.06	0.43
1:Q:15:ILE:O	1:S:294:LYS:HB3	2.18	0.43
1:Q:49:LEU:HD12	1:Q:49:LEU:HA	1.85	0.43
1:U:117:GLU:CG	1:U:266:TYR:CG	2.93	0.43
1:W:280:GLN:HB2	1:W:282:PHE:CD2	2.54	0.43
1:A:62:GLY:HA3	1:A:118:TYR:CZ	2.54	0.43
1:G:277:PHE:CE2	1:G:282:PHE:HB2	2.54	0.43
1:K:23:ILE:HD13	1:K:38:LYS:HG3	2.00	0.43
1:K:70:TRP:CZ3	1:K:72:GLY:CA	3.01	0.43
1:K:105:VAL:HG21	1:K:207:ASN:OD1	2.19	0.43
1:M:119:ILE:CD1	1:M:147:ILE:HD13	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:137:GLY:HA3	1:M:141:LYS:HB2	2.01	0.43
1:U:124:PHE:CA	1:U:154:LYS:O	2.60	0.43
1:U:183:ASN:O	1:U:186:LEU:HB2	2.18	0.43
1:W:201:TYR:O	1:W:202:VAL:C	2.57	0.43
1:K:9:TYR:HE1	1:K:28:ASN:HD22	1.66	0.43
1:M:61:GLY:O	1:M:62:GLY:C	2.57	0.43
1:M:126:HIS:CD2	1:M:147:ILE:HD11	2.53	0.43
1:O:58:MET:HE2	1:O:122:LYS:HB3	2.01	0.43
1:O:259:ARG:CB	1:O:262:ASP:HB2	2.46	0.43
1:Q:32:GLY:O	1:S:283:SER:CB	2.67	0.43
1:Q:56:TYR:HE2	1:Q:82:MET:HE3	1.84	0.43
1:Q:204:MET:CE	1:Q:241:CYS:HA	2.49	0.43
1:U:128:ASP:OD1	1:U:176:THR:N	2.42	0.43
1:U:152:LEU:HD13	1:U:174:THR:CG2	2.49	0.43
1:C:59:MET:O	1:C:60:GLN:C	2.56	0.43
1:M:53:SER:O	1:M:57:LYS:HB2	2.19	0.43
1:M:267:SER:HA	1:M:270:ARG:HH12	1.84	0.43
1:Q:3:LEU:HD23	1:Q:4:ARG:H	1.84	0.43
1:Q:16:GLY:HA2	1:S:294:LYS:CG	2.49	0.43
1:Q:103:LYS:HG3	1:Q:277:PHE:HE1	1.84	0.43
1:U:49:LEU:HD12	1:U:80:MET:CE	2.49	0.43
1:U:101:SER:O	1:U:105:VAL:HG23	2.19	0.43
1:U:210:SER:OG	1:U:211:LEU:N	2.51	0.43
1:W:22:ASP:O	1:W:23:ILE:HD13	2.19	0.43
1:W:185:HIS:ND1	1:W:229:SER:HB2	2.34	0.43
1:W:264:PRO:HG2	1:W:266:TYR:CZ	2.53	0.43
1:C:182:ILE:CD1	1:C:256:ARG:CZ	2.97	0.42
1:I:101:SER:OG	1:I:289:ASP:OD1	2.36	0.42
1:O:140:LYS:HG2	1:O:141:LYS:H	1.75	0.42
1:O:152:LEU:HD22	1:O:174:THR:HG23	2.01	0.42
1:U:120:HIS:C	1:U:122:LYS:N	2.72	0.42
1:U:201:TYR:C	1:U:203:LEU:N	2.70	0.42
1:W:251:TYR:HD1	1:W:252:LEU:N	2.16	0.42
1:W:288:PHE:O	1:W:291:ASN:HB2	2.19	0.42
1:A:137:GLY:C	1:A:142:GLY:HA2	2.39	0.42
1:A:186:LEU:HD21	1:A:233:MET:HE3	2.00	0.42
1:I:193:ARG:HG3	1:I:194:ASP:N	2.34	0.42
1:I:276:LEU:HD12	1:I:276:LEU:O	2.19	0.42
1:O:42:VAL:HG22	1:O:78:ASN:ND2	2.33	0.42
1:O:93:PHE:CZ	1:O:206:PHE:HA	2.53	0.42
1:S:276:LEU:O	1:S:277:PHE:C	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:35:VAL:HG21	1:U:81:VAL:HG13	2.01	0.42
1:A:15:ILE:HG21	1:A:15:ILE:HD13	1.73	0.42
1:A:98:ARG:NH1	3:A:435:HOH:O	2.46	0.42
1:E:49:LEU:HD12	1:E:49:LEU:HA	1.83	0.42
1:I:277:PHE:CE2	1:I:282:PHE:HB2	2.54	0.42
1:M:39:LEU:HD22	1:M:79:VAL:HG22	2.01	0.42
1:M:41:CYS:HB2	1:M:77:TYR:HE1	1.84	0.42
1:S:173:LEU:HD13	1:S:184:THR:HG22	2.01	0.42
1:W:111:GLN:CB	1:W:145:VAL:HG23	2.49	0.42
1:C:41:CYS:O	1:C:44:THR:HG22	2.19	0.42
1:C:244:TYR:O	1:C:245:PRO:C	2.56	0.42
1:C:263:LYS:NZ	3:C:464:HOH:O	2.49	0.42
1:E:154:LYS:HE2	1:E:189:GLU:OE2	2.19	0.42
1:E:247:GLU:OE1	1:E:247:GLU:N	2.42	0.42
1:G:59:MET:HB2	1:G:65:ILE:HG21	2.00	0.42
1:G:259:ARG:O	1:G:260:PHE:C	2.58	0.42
1:K:54:LYS:HD3	1:K:54:LYS:HA	1.74	0.42
1:M:108:LEU:O	1:M:109:ALA:C	2.57	0.42
1:U:112:MET:HE2	1:U:199:LEU:CD1	2.49	0.42
1:U:196:LEU:O	1:U:199:LEU:HB3	2.19	0.42
1:U:261:ASP:OD1	1:U:261:ASP:N	2.36	0.42
1:W:70:TRP:HB3	1:W:81:VAL:CG2	2.49	0.42
1:W:192:ARG:NH1	1:W:263:LYS:CA	2.53	0.42
1:A:41:CYS:C	1:A:43:LYS:N	2.71	0.42
1:A:220:THR:CG2	1:A:222:ARG:H	2.32	0.42
1:E:251:TYR:CD1	1:E:251:TYR:C	2.93	0.42
1:I:15:ILE:HD11	1:K:292:MET:SD	2.58	0.42
1:K:140:LYS:C	1:K:142:GLY:H	2.22	0.42
1:O:118:TYR:OH	1:O:122:LYS:HE3	2.18	0.42
1:O:217:LYS:HA	1:O:217:LYS:HD3	1.48	0.42
1:Q:164:HIS:ND1	1:Q:165:ILE:N	2.67	0.42
1:U:202:VAL:HG12	1:U:206:PHE:CE2	2.55	0.42
1:U:276:LEU:HD22	1:U:276:LEU:HA	1.85	0.42
1:E:58:MET:HG2	1:E:59:MET:CE	2.50	0.42
1:E:221:LYS:H	1:E:221:LYS:HG3	1.63	0.42
1:E:274:ARG:NH1	1:Q:274:ARG:CZ	2.81	0.42
1:E:274:ARG:NH1	1:Q:274:ARG:HH12	2.16	0.42
1:M:205:TYR:HB2	1:M:211:LEU:HD11	2.01	0.42
1:O:182:ILE:HG22	1:O:183:ASN:N	2.35	0.42
1:U:117:GLU:HG3	1:U:266:TYR:CD2	2.52	0.42
1:U:118:TYR:O	1:U:122:LYS:HD2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:178:ARG:HG2	1:U:179:TYR:CD2	2.54	0.42
1:U:203:LEU:HD23	1:U:203:LEU:HA	1.70	0.42
1:U:264:PRO:CG	1:U:266:TYR:CE1	3.02	0.42
1:W:293:LEU:H	1:W:293:LEU:HD23	1.85	0.42
1:C:8:LYS:O	1:C:29:ILE:HG12	2.19	0.42
1:C:234:SER:O	1:C:236:PRO:HD3	2.20	0.42
1:C:245:PRO:HG2	1:C:276:LEU:HD21	2.01	0.42
1:I:239:VAL:O	1:I:242:LYS:HB2	2.19	0.42
1:K:119:ILE:HG22	1:K:124:PHE:O	2.19	0.42
1:O:265:ASP:OD1	1:O:268:TYR:CB	2.68	0.42
1:O:268:TYR:CZ	1:O:272:LEU:HD21	2.55	0.42
1:S:65:ILE:CG2	1:S:66:PRO:HD2	2.50	0.42
1:U:9:TYR:CD2	1:U:81:VAL:HG21	2.54	0.42
1:U:257:SER:O	1:U:258:LEU:C	2.58	0.42
1:M:125:ILE:HG23	1:M:156:TYR:CD2	2.55	0.42
1:M:220:THR:HG22	1:M:223:GLN:NE2	2.34	0.42
1:Q:182:ILE:O	1:Q:183:ASN:C	2.57	0.42
1:W:57:LYS:CE	1:W:68:ILE:HG21	2.50	0.42
1:W:134:PHE:C	1:W:135:LEU:CD1	2.88	0.42
1:A:68:ILE:HD12	1:A:80:MET:CE	2.49	0.42
1:A:115:ARG:CD	3:A:419:HOH:O	2.65	0.42
1:C:125:ILE:HG23	1:C:156:TYR:CD2	2.55	0.42
1:E:100:PHE:HA	1:E:289:ASP:OD2	2.20	0.42
1:E:278:HIS:HB3	1:Q:284:TYR:CG	2.55	0.42
1:G:46:HIS:N	1:G:47:PRO:CD	2.82	0.42
1:O:13:ARG:NH1	3:O:407:HOH:O	2.53	0.42
1:O:130:LYS:HB2	1:O:131:PRO:HD2	2.01	0.42
1:O:220:THR:H	1:O:223:GLN:HG3	1.85	0.42
1:Q:57:LYS:HD3	1:Q:68:ILE:HG12	2.00	0.42
1:S:125:ILE:O	1:S:125:ILE:HG13	2.19	0.42
1:S:289:ASP:O	1:S:292:MET:HB2	2.20	0.42
1:U:42:VAL:HB	1:U:76:ASP:OD1	2.20	0.42
1:U:54:LYS:O	1:U:57:LYS:HB2	2.20	0.42
1:U:120:HIS:C	1:U:122:LYS:H	2.22	0.42
1:U:178:ARG:HG2	1:U:179:TYR:CE2	2.55	0.42
1:W:193:ARG:CB	1:W:258:LEU:HD12	2.49	0.42
1:A:39:LEU:HD23	1:A:79:VAL:HG22	2.01	0.42
1:A:42:VAL:O	1:A:42:VAL:CG1	2.68	0.42
1:A:171:LYS:HA	1:A:171:LYS:HD2	1.73	0.42
1:E:14:LYS:HD2	1:E:22:ASP:OD2	2.20	0.42
1:E:156:TYR:CZ	1:E:192:ARG:HD3	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:274:ARG:HH12	1:Q:274:ARG:HH12	1.68	0.42
1:I:29:ILE:CG2	1:I:30:ALA:N	2.78	0.42
1:I:237:ILE:HD11	1:I:256:ARG:CZ	2.50	0.42
1:I:288:PHE:CG	1:I:290:TRP:CZ2	3.08	0.42
1:M:31:SER:C	1:M:33:GLU:N	2.71	0.42
1:M:244:TYR:O	1:M:245:PRO:C	2.57	0.42
1:S:23:ILE:HD13	1:S:23:ILE:N	2.35	0.42
1:S:182:ILE:CD1	1:S:256:ARG:CZ	2.98	0.42
1:S:189:GLU:HG3	1:S:260:PHE:HZ	1.85	0.42
1:S:193:ARG:NH1	1:S:260:PHE:N	2.67	0.42
1:U:100:PHE:CD2	1:U:206:PHE:CD1	3.08	0.42
1:W:122:LYS:HA	1:W:122:LYS:HD2	1.80	0.42
1:C:195:ASP:O	1:C:198:SER:HB2	2.19	0.41
1:E:216:LEU:HD12	1:E:216:LEU:HA	1.81	0.41
1:K:130:LYS:HB2	1:K:131:PRO:HD2	2.01	0.41
1:M:8:LYS:O	1:M:29:ILE:HG12	2.20	0.41
1:M:183:ASN:HB3	1:M:188:ILE:HB	2.02	0.41
1:M:254:PHE:CD2	1:M:269:LEU:HD11	2.55	0.41
1:U:226:GLU:O	1:U:227:ARG:C	2.58	0.41
1:W:6:GLY:CA	1:W:70:TRP:CH2	3.03	0.41
1:G:38:LYS:NZ	1:G:52:GLU:OE1	2.38	0.41
1:G:59:MET:CB	1:G:65:ILE:HG21	2.50	0.41
1:I:25:LEU:HD12	1:K:292:MET:SD	2.59	0.41
1:I:203:LEU:HD23	1:I:203:LEU:HA	1.71	0.41
1:M:124:PHE:CZ	1:M:155:LYS:HG3	2.54	0.41
1:O:218:ALA:HB1	1:O:223:GLN:HB2	2.02	0.41
1:Q:188:ILE:HG22	1:Q:189:GLU:N	2.35	0.41
1:Q:220:THR:CG2	1:Q:223:GLN:HG3	2.50	0.41
1:S:231:LYS:HA	1:S:234:SER:OG	2.21	0.41
1:U:89:LEU:HB2	1:U:131:PRO:O	2.20	0.41
1:U:221:LYS:H	1:U:221:LYS:HG3	1.46	0.41
1:W:158:ASP:OD1	1:W:161:THR:N	2.54	0.41
1:W:271:GLN:NE2	1:W:274:ARG:HD2	2.35	0.41
1:A:68:ILE:CD1	1:A:80:MET:CE	2.97	0.41
1:C:222:ARG:HH11	1:C:222:ARG:HG2	1.81	0.41
1:E:6:GLY:O	1:E:7:ASN:C	2.59	0.41
1:G:183:ASN:O	1:G:186:LEU:N	2.54	0.41
1:K:169:GLU:HB2	1:K:170:ASN:H	1.66	0.41
1:M:13:ARG:C	1:M:14:LYS:O	2.53	0.41
1:M:117:GLU:O	1:M:118:TYR:C	2.57	0.41
1:M:293:LEU:CD2	1:O:135:LEU:CD2	2.94	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Q:52:GLU:OE2	1:Q:149:ASP:CA	2.67	0.41
1:Q:165:ILE:HB	1:Q:166:PRO:CD	2.50	0.41
1:S:178:ARG:NE	2:S:301:SO4:O2	2.44	0.41
1:W:4:ARG:HD2	1:W:29:ILE:HD12	1.98	0.41
1:A:1:MET:HE2	1:G:249:SER:HB2	2.02	0.41
1:C:211:LEU:O	1:C:214:GLN:HB2	2.20	0.41
1:C:271:GLN:NE2	1:C:274:ARG:HD2	2.35	0.41
1:I:15:ILE:CD1	1:K:292:MET:SD	3.09	0.41
1:M:101:SER:CB	1:O:13:ARG:NH2	2.83	0.41
1:M:219:ALA:O	1:M:220:THR:O	2.39	0.41
1:M:238:GLU:H	1:M:238:GLU:HG2	1.09	0.41
1:O:223:GLN:HA	1:O:226:GLU:OE1	2.20	0.41
1:Q:4:ARG:CZ	1:Q:7:ASN:HA	2.48	0.41
1:S:92:LEU:HD13	1:S:290:TRP:CE2	2.55	0.41
1:U:199:LEU:HD12	1:U:199:LEU:HA	1.73	0.41
1:U:242:LYS:O	1:U:244:TYR:CD2	2.73	0.41
1:U:285:ASP:OD1	1:U:286:TYR:N	2.53	0.41
1:A:70:TRP:CZ3	1:A:72:GLY:HA3	2.55	0.41
1:E:168:ARG:HG2	1:E:169:GLU:H	1.86	0.41
1:E:215:GLY:O	1:E:216:LEU:C	2.59	0.41
1:I:6:GLY:C	1:I:8:LYS:N	2.72	0.41
1:I:101:SER:HB3	1:K:13:ARG:CZ	2.50	0.41
1:I:203:LEU:O	1:I:206:PHE:HB2	2.20	0.41
1:O:109:ALA:O	1:O:113:ILE:HG13	2.21	0.41
1:O:164:HIS:ND1	1:O:165:ILE:O	2.45	0.41
1:O:274:ARG:O	1:O:277:PHE:HB3	2.21	0.41
1:Q:40:GLU:HB2	1:Q:49:LEU:HD22	2.03	0.41
1:Q:182:ILE:O	1:Q:185:HIS:N	2.51	0.41
1:S:205:TYR:HB2	1:S:211:LEU:HD11	2.02	0.41
1:U:93:PHE:HA	1:U:100:PHE:CZ	2.55	0.41
1:U:128:ASP:O	1:U:133:ASN:ND2	2.46	0.41
1:U:135:LEU:CD1	1:U:148:ILE:HD13	2.46	0.41
1:U:150:PHE:C	1:U:152:LEU:N	2.74	0.41
1:W:246:SER:O	1:W:249:SER:HB2	2.21	0.41
1:C:221:LYS:H	1:C:221:LYS:HE2	1.86	0.41
1:C:238:GLU:CD	1:C:238:GLU:H	2.24	0.41
1:C:259:ARG:O	1:C:260:PHE:C	2.58	0.41
1:G:14:LYS:HB2	1:G:24:TYR:CE1	2.55	0.41
1:G:251:TYR:CD2	1:G:269:LEU:HD22	2.55	0.41
1:I:198:SER:O	1:I:202:VAL:HG23	2.20	0.41
1:I:276:LEU:O	1:I:280:GLN:HG2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:222:ARG:HG3	1:K:223:GLN:H	1.85	0.41
1:M:8:LYS:CD	1:M:9:TYR:CE2	2.98	0.41
1:M:130:LYS:HD2	1:M:132:ASP:OD2	2.21	0.41
1:M:138:LEU:HD21	1:O:287:VAL:CG1	2.50	0.41
1:M:220:THR:HG23	1:M:223:GLN:HB2	2.02	0.41
1:M:262:ASP:O	1:M:264:PRO:HD3	2.21	0.41
1:O:161:THR:O	1:O:163:GLN:N	2.54	0.41
1:S:275:ASN:O	1:S:279:ARG:HG3	2.21	0.41
1:U:150:PHE:N	1:U:150:PHE:CD1	2.88	0.41
1:W:104:THR:O	1:W:108:LEU:HG	2.20	0.41
1:W:116:ILE:HD11	1:W:129:VAL:HG22	2.02	0.41
1:C:75:GLY:C	1:C:77:TYR:H	2.24	0.41
1:C:138:LEU:O	1:C:141:LYS:N	2.51	0.41
1:K:17:SER:CB	3:K:405:HOH:O	2.52	0.41
1:O:59:MET:O	1:O:60:GLN:C	2.59	0.41
1:Q:137:GLY:O	1:Q:142:GLY:HA2	2.21	0.41
1:U:70:TRP:HZ3	1:U:79:VAL:HB	1.86	0.41
1:U:110:ASP:OD1	1:U:270:ARG:HG3	2.20	0.41
1:U:241:CYS:O	1:U:242:LYS:O	2.38	0.41
1:U:247:GLU:OE1	1:U:276:LEU:HD23	2.21	0.41
1:U:251:TYR:CE1	1:U:255:CYS:SG	3.13	0.41
1:W:112:MET:O	1:W:113:ILE:C	2.55	0.41
1:C:134:PHE:HA	1:C:146:TYR:O	2.20	0.41
1:E:88:SER:CA	1:E:135:LEU:HD23	2.50	0.41
1:G:15:ILE:HG23	1:G:25:LEU:H	1.84	0.41
1:I:221:LYS:O	1:I:224:LYS:N	2.54	0.41
1:K:1:MET:O	1:K:2:GLU:CB	2.66	0.41
1:O:122:LYS:O	1:O:123:ASN:HB2	2.20	0.41
1:O:252:LEU:HD23	1:O:252:LEU:HA	1.94	0.41
1:O:271:GLN:O	1:O:272:LEU:C	2.58	0.41
1:Q:138:LEU:HD12	1:S:291:ASN:HB3	2.03	0.41
1:U:250:THR:HG22	1:U:272:LEU:HD21	2.03	0.41
1:W:119:ILE:HD11	1:W:150:PHE:HE2	1.86	0.41
1:W:213:TRP:CZ3	1:W:232:LYS:HG2	2.56	0.41
1:E:55:PHE:HE2	1:E:124:PHE:CD2	2.39	0.41
1:E:108:LEU:O	1:E:112:MET:HG3	2.21	0.41
1:E:140:LYS:CG	1:E:141:LYS:N	2.84	0.41
1:E:158:ASP:O	1:E:162:HIS:HA	2.21	0.41
1:E:204:MET:HA	1:E:207:ASN:HD22	1.86	0.41
1:E:226:GLU:O	1:E:230:GLU:HB2	2.21	0.41
1:G:13:ARG:HD3	3:M:423:HOH:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:77:TYR:OH	1:M:236:PRO:HA	2.21	0.41
1:G:88:SER:HB2	1:G:135:LEU:HD12	2.03	0.41
1:I:231:LYS:HD2	1:I:231:LYS:O	2.21	0.41
1:I:234:SER:O	1:I:236:PRO:HD3	2.21	0.41
1:K:3:LEU:HD22	1:K:11:LEU:C	2.42	0.41
1:K:77:TYR:CZ	1:O:236:PRO:HB3	2.56	0.41
1:K:156:TYR:C	1:K:165:ILE:HG23	2.41	0.41
1:O:58:MET:HE1	1:O:124:PHE:CE1	2.56	0.41
1:O:204:MET:CA	1:O:204:MET:CE	2.93	0.41
1:O:211:LEU:HD22	1:O:213:TRP:CZ2	2.55	0.41
1:O:261:ASP:OD1	1:O:261:ASP:C	2.58	0.41
1:Q:46:HIS:O	1:Q:48:GLN:HG3	2.21	0.41
1:Q:74:GLU:O	1:Q:75:GLY:C	2.58	0.41
1:Q:176:THR:O	1:Q:177:ALA:C	2.59	0.41
1:Q:198:SER:O	1:Q:201:TYR:N	2.53	0.41
1:S:11:LEU:CD1	1:S:39:LEU:HD11	2.51	0.41
1:S:46:HIS:O	1:S:48:GLN:NE2	2.54	0.41
1:S:185:HIS:HB3	1:S:229:SER:OG	2.21	0.41
1:U:4:ARG:CG	1:U:5:VAL:N	2.82	0.41
1:U:27:ALA:HA	1:U:33:GLU:O	2.21	0.41
1:U:161:THR:C	1:U:163:GLN:N	2.75	0.41
1:U:181:SER:HB2	1:U:197:GLU:CD	2.41	0.41
1:U:185:HIS:CE1	1:U:228:ILE:HG22	2.56	0.41
1:U:254:PHE:HB3	1:U:255:CYS:H	1.71	0.41
1:W:125:ILE:CD1	1:W:127:ARG:HD3	2.51	0.41
1:W:156:TYR:HE1	1:W:192:ARG:HE	1.62	0.41
1:A:218:ALA:HB2	1:A:224:LYS:HA	2.03	0.41
1:E:169:GLU:HB2	1:E:170:ASN:H	1.64	0.41
1:G:50:HIS:O	1:G:53:SER:OG	2.31	0.41
1:G:193:ARG:CZ	1:G:260:PHE:HA	2.51	0.41
1:M:254:PHE:CE2	1:M:269:LEU:HD11	2.56	0.41
1:O:50:HIS:C	1:O:52:GLU:H	2.25	0.41
1:O:204:MET:SD	1:O:241:CYS:SG	3.11	0.41
1:O:236:PRO:HG2	1:O:239:VAL:HG23	2.02	0.41
1:U:103:LYS:CG	1:U:282:PHE:HB3	2.50	0.41
1:U:173:LEU:HD12	1:U:174:THR:N	2.36	0.41
1:U:182:ILE:O	1:U:186:LEU:HG	2.20	0.41
1:U:244:TYR:HA	1:U:245:PRO:HD3	1.88	0.41
1:W:57:LYS:CD	1:W:68:ILE:CG1	2.94	0.41
1:W:77:TYR:C	1:W:78:ASN:O	2.59	0.41
1:W:225:TYR:N	1:W:225:TYR:CD1	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:W:274:ARG:O	1:W:277:PHE:HB3	2.21	0.41
1:W:285:ASP:OD1	1:W:287:VAL:CG2	2.42	0.41
1:A:52:GLU:OE2	1:A:149:ASP:HA	2.21	0.40
1:A:80:MET:CE	1:A:82:MET:SD	3.09	0.40
1:E:229:SER:O	1:E:233:MET:HE2	2.22	0.40
1:G:8:LYS:HB2	1:G:8:LYS:HE2	1.63	0.40
1:G:117:GLU:HG3	1:G:266:TYR:CE2	2.57	0.40
1:I:118:TYR:OH	1:I:122:LYS:HE2	2.21	0.40
1:I:196:LEU:HD23	1:I:196:LEU:HA	1.86	0.40
1:O:269:LEU:O	1:O:270:ARG:C	2.59	0.40
1:O:292:MET:O	1:O:293:LEU:O	2.40	0.40
1:S:28:ASN:HD21	1:S:30:ALA:HB3	1.85	0.40
1:S:220:THR:OG1	1:S:221:LYS:N	2.54	0.40
1:S:230:GLU:O	1:S:233:MET:N	2.55	0.40
1:S:290:TRP:CD1	1:S:291:ASN:ND2	2.89	0.40
1:W:192:ARG:HD2	1:W:264:PRO:HD2	2.03	0.40
1:E:87:PRO:HA	1:G:293:LEU:HA	2.03	0.40
1:E:140:LYS:HG2	1:E:141:LYS:N	2.37	0.40
1:G:186:LEU:HD21	1:G:233:MET:HE2	2.03	0.40
1:K:126:HIS:O	1:K:127:ARG:HB2	2.21	0.40
1:K:156:TYR:CZ	1:K:192:ARG:HD3	2.55	0.40
1:M:204:MET:HE3	1:M:204:MET:CA	2.51	0.40
1:O:150:PHE:O	1:O:153:ALA:N	2.47	0.40
1:S:49:LEU:HD11	1:S:80:MET:CB	2.49	0.40
1:S:49:LEU:HD12	1:S:49:LEU:O	2.21	0.40
1:S:120:HIS:ND1	1:S:266:TYR:OH	2.43	0.40
1:S:237:ILE:CD1	1:S:256:ARG:NH1	2.84	0.40
1:U:211:LEU:CD2	1:U:213:TRP:CZ2	2.92	0.40
1:U:220:THR:O	1:U:221:LYS:C	2.58	0.40
1:W:90:GLU:O	1:W:93:PHE:N	2.54	0.40
1:A:171:LYS:CB	1:A:187:GLY:O	2.64	0.40
1:C:202:VAL:O	1:C:205:TYR:HB3	2.22	0.40
1:E:43:LYS:C	1:E:44:THR:O	2.60	0.40
1:E:52:GLU:OE2	1:E:149:ASP:N	2.54	0.40
1:E:270:ARG:NH1	3:E:401:HOH:O	2.55	0.40
1:G:3:LEU:HD13	1:G:11:LEU:HD22	2.03	0.40
1:G:284:TYR:HB2	3:G:445:HOH:O	2.22	0.40
1:K:39:LEU:HD23	1:K:39:LEU:HA	1.70	0.40
1:M:70:TRP:CZ3	1:M:72:GLY:CA	3.04	0.40
1:O:45:LYS:C	1:O:46:HIS:CD2	2.95	0.40
1:O:277:PHE:CE1	1:O:282:PHE:HB2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:65:ILE:HA	1:S:66:PRO:HD2	1.82	0.40
1:U:13:ARG:NH2	1:W:292:MET:HE1	2.35	0.40
1:U:161:THR:O	1:U:162:HIS:C	2.60	0.40
1:U:250:THR:HG21	1:U:272:LEU:HD21	2.02	0.40
1:W:24:TYR:CD2	1:W:39:LEU:HD21	2.56	0.40
1:W:150:PHE:O	1:W:153:ALA:CB	2.69	0.40
1:W:183:ASN:HA	1:W:186:LEU:HB2	2.04	0.40
1:A:173:LEU:HD12	1:A:184:THR:HG22	2.03	0.40
1:C:171:LYS:HD3	3:C:429:HOH:O	2.21	0.40
1:G:50:HIS:HE1	3:G:444:HOH:O	2.04	0.40
1:I:39:LEU:CD2	1:I:79:VAL:HG22	2.51	0.40
1:I:181:SER:CB	1:I:197:GLU:OE2	2.59	0.40
1:Q:68:ILE:CG2	1:Q:69:LYS:N	2.83	0.40
1:S:193:ARG:HG3	1:S:194:ASP:H	1.83	0.40
1:U:52:GLU:OE1	1:U:56:TYR:CE2	2.74	0.40
1:U:265:ASP:O	1:U:268:TYR:HB3	2.22	0.40
1:W:62:GLY:HA3	1:W:118:TYR:CZ	2.57	0.40
1:W:65:ILE:HG22	1:W:66:PRO:O	2.22	0.40
1:W:156:TYR:C	1:W:165:ILE:HG23	2.42	0.40
1:W:173:LEU:CD1	1:W:184:THR:CG2	2.83	0.40
1:E:156:TYR:CE1	1:E:192:ARG:HD3	2.56	0.40
1:G:149:ASP:C	1:G:149:ASP:OD1	2.60	0.40
1:G:288:PHE:O	1:G:291:ASN:HB2	2.21	0.40
1:I:74:GLU:O	1:I:75:GLY:C	2.59	0.40
1:I:165:ILE:O	1:I:165:ILE:HG13	2.21	0.40
1:I:209:GLY:O	1:I:210:SER:HB3	2.21	0.40
1:K:182:ILE:HD11	1:K:233:MET:HA	2.04	0.40
1:S:182:ILE:CG2	1:S:233:MET:CE	2.99	0.40
1:W:115:ARG:HH11	1:W:115:ARG:HA	1.87	0.40
1:W:124:PHE:CD2	1:W:155:LYS:CA	3.05	0.40

All (2) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:160:ARG:NH2	1:C:160:ARG:NH2[2_454]	1.82	0.38
1:Q:77:TYR:OH	1:S:233:MET:O[2_453]	2.14	0.06

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 X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	286/296 (97%)	257 (90%)	26 (9%)	3 (1%)	15	41
1	C	285/296 (96%)	255 (90%)	23 (8%)	7 (2%)	5	17
1	E	287/296 (97%)	257 (90%)	25 (9%)	5 (2%)	9	27
1	G	286/296 (97%)	244 (85%)	37 (13%)	5 (2%)	9	27
1	I	287/296 (97%)	245 (85%)	37 (13%)	5 (2%)	9	27
1	K	286/296 (97%)	240 (84%)	33 (12%)	13 (4%)	2	7
1	M	289/296 (98%)	227 (78%)	46 (16%)	16 (6%)	2	4
1	O	286/296 (97%)	233 (82%)	38 (13%)	15 (5%)	2	5
1	Q	286/296 (97%)	251 (88%)	31 (11%)	4 (1%)	11	31
1	S	282/296 (95%)	217 (77%)	48 (17%)	17 (6%)	1	3
1	U	285/296 (96%)	211 (74%)	43 (15%)	31 (11%)	0	1
1	W	285/296 (96%)	195 (68%)	65 (23%)	25 (9%)	1	1
All	All	3430/3552 (97%)	2832 (83%)	452 (13%)	146 (4%)	2	7

All (146) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	2	GLU
1	C	46	HIS
1	C	187	GLY
1	E	7	ASN
1	E	44	THR
1	G	260	PHE
1	I	2	GLU
1	I	3	LEU
1	K	2	GLU
1	K	4	ARG
1	K	46	HIS
1	K	219	ALA

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Mol	Chain	Res	Type
1	M	219	ALA
1	M	220	THR
1	O	2	GLU
1	O	53	SER
1	O	141	LYS
1	O	288	PHE
1	O	293	LEU
1	Q	44	THR
1	S	162	HIS
1	S	257	SER
1	S	258	LEU
1	U	31	SER
1	U	46	HIS
1	U	151	GLY
1	U	192	ARG
1	U	209	GLY
1	U	219	ALA
1	U	235	THR
1	U	236	PRO
1	U	242	LYS
1	U	262	ASP
1	W	3	LEU
1	W	13	ARG
1	W	31	SER
1	W	74	GLU
1	W	87	PRO
1	W	132	ASP
1	W	165	ILE
1	W	220	THR
1	W	270	ARG
1	W	279	ARG
1	C	139	GLY
1	E	139	GLY
1	E	149	ASP
1	I	30	ALA
1	K	141	LYS
1	M	11	LEU
1	M	19	SER
1	M	32	GLY
1	M	49	LEU
1	M	59	MET
1	M	279	ARG

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Mol	Chain	Res	Type
1	O	139	GLY
1	O	151	GLY
1	O	221	LYS
1	Q	7	ASN
1	Q	286	TYR
1	S	74	GLU
1	S	110	ASP
1	S	151	GLY
1	S	175	GLY
1	U	48	GLN
1	U	59	MET
1	U	141	LYS
1	U	162	HIS
1	U	208	LEU
1	U	218	ALA
1	U	254	PHE
1	U	284	TYR
1	U	290	TRP
1	W	15	ILE
1	W	70	TRP
1	W	139	GLY
1	W	140	LYS
1	W	164	HIS
1	W	210	SER
1	W	269	LEU
1	W	278	HIS
1	C	3	LEU
1	C	149	ASP
1	C	260	PHE
1	G	30	ALA
1	I	149	ASP
1	K	7	ASN
1	K	29	ILE
1	K	30	ALA
1	K	70	TRP
1	M	140	LYS
1	M	225	TYR
1	O	216	LEU
1	Q	173	LEU
1	S	8	LYS
1	S	44	THR
1	S	48	GLN

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Mol	Chain	Res	Type
1	S	149	ASP
1	S	202	VAL
1	U	127	ARG
1	U	212	PRO
1	U	237	ILE
1	U	260	PHE
1	U	286	TYR
1	W	4	ARG
1	W	30	ALA
1	W	44	THR
1	G	219	ALA
1	K	3	LEU
1	K	225	TYR
1	M	22	ASP
1	O	110	ASP
1	O	140	LYS
1	O	162	HIS
1	O	210	SER
1	S	60	GLN
1	S	260	PHE
1	U	170	ASN
1	U	258	LEU
1	W	131	PRO
1	W	217	LYS
1	A	149	ASP
1	E	2	GLU
1	G	47	PRO
1	G	149	ASP
1	I	222	ARG
1	K	51	ILE
1	O	7	ASN
1	O	175	GLY
1	S	224	LYS
1	U	15	ILE
1	U	245	PRO
1	W	221	LYS
1	C	60	GLN
1	M	15	ILE
1	M	148	ILE
1	S	73	ALA
1	S	122	LYS
1	U	142	GLY

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Mol	Chain	Res	Type
1	W	149	ASP
1	A	46	HIS
1	K	47	PRO
1	M	62	GLY
1	U	243	GLY
1	M	166	PRO
1	M	29	ILE
1	U	42	VAL

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 X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	255/260 (98%)	235 (92%)	20 (8%)	12	32
1	C	256/260 (98%)	234 (91%)	22 (9%)	10	28
1	E	254/260 (98%)	230 (91%)	24 (9%)	8	23
1	G	252/260 (97%)	226 (90%)	26 (10%)	7	19
1	I	254/260 (98%)	225 (89%)	29 (11%)	5	16
1	K	251/260 (96%)	224 (89%)	27 (11%)	6	17
1	M	248/260 (95%)	221 (89%)	27 (11%)	6	17
1	O	254/260 (98%)	216 (85%)	38 (15%)	3	8
1	Q	253/260 (97%)	223 (88%)	30 (12%)	5	14
1	S	248/260 (95%)	204 (82%)	44 (18%)	2	5
1	U	252/260 (97%)	203 (81%)	49 (19%)	1	4
1	W	253/260 (97%)	196 (78%)	57 (22%)	1	2
All	All	3030/3120 (97%)	2637 (87%)	393 (13%)	4	11

All (393) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	3	LEU
1	A	5	VAL

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Mol	Chain	Res	Type
1	A	8	LYS
1	A	15	ILE
1	A	57	LYS
1	A	67	SER
1	A	71	CYS
1	A	141	LYS
1	A	162	HIS
1	A	163	GLN
1	A	171	LYS
1	A	174	THR
1	A	216	LEU
1	A	217	LYS
1	A	220	THR
1	A	221	LYS
1	A	223	GLN
1	A	226	GLU
1	A	267	SER
1	A	274	ARG
1	C	2	GLU
1	C	4	ARG
1	C	7	ASN
1	C	10	ARG
1	C	15	ILE
1	C	46	HIS
1	C	53	SER
1	C	55	PHE
1	C	57	LYS
1	C	69	LYS
1	C	82	MET
1	C	140	LYS
1	C	155	LYS
1	C	174	THR
1	C	216	LEU
1	C	220	THR
1	C	221	LYS
1	C	222	ARG
1	C	226	GLU
1	C	234	SER
1	C	257	SER
1	C	293	LEU
1	E	3	LEU
1	E	13	ARG

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Mol	Chain	Res	Type
1	E	45	LYS
1	E	48	GLN
1	E	54	LYS
1	E	60	GLN
1	E	76	ASP
1	E	140	LYS
1	E	148	ILE
1	E	155	LYS
1	E	161	THR
1	E	168	ARG
1	E	216	LEU
1	E	220	THR
1	E	226	GLU
1	E	234	SER
1	E	235	THR
1	E	249	SER
1	E	259	ARG
1	E	263	LYS
1	E	267	SER
1	E	274	ARG
1	E	283	SER
1	E	294	LYS
1	G	7	ASN
1	G	8	LYS
1	G	13	ARG
1	G	17	SER
1	G	28	ASN
1	G	29	ILE
1	G	57	LYS
1	G	58	MET
1	G	76	ASP
1	G	82	MET
1	G	100	PHE
1	G	132	ASP
1	G	135	LEU
1	G	138	LEU
1	G	140	LYS
1	G	155	LYS
1	G	168	ARG
1	G	171	LYS
1	G	217	LYS
1	G	226	GLU

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Mol	Chain	Res	Type
1	G	234	SER
1	G	249	SER
1	G	267	SER
1	G	283	SER
1	G	293	LEU
1	G	294	LYS
1	I	1	MET
1	I	5	VAL
1	I	7	ASN
1	I	14	LYS
1	I	15	ILE
1	I	29	ILE
1	I	34	GLU
1	I	44	THR
1	I	46	HIS
1	I	48	GLN
1	I	52	GLU
1	I	65	ILE
1	I	82	MET
1	I	138	LEU
1	I	140	LYS
1	I	143	ASN
1	I	155	LYS
1	I	160	ARG
1	I	161	THR
1	I	168	ARG
1	I	170	ASN
1	I	216	LEU
1	I	221	LYS
1	I	222	ARG
1	I	234	SER
1	I	242	LYS
1	I	267	SER
1	I	283	SER
1	I	293	LEU
1	K	2	GLU
1	K	3	LEU
1	K	7	ASN
1	K	8	LYS
1	K	11	LEU
1	K	17	SER
1	K	29	ILE

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Mol	Chain	Res	Type
1	K	44	THR
1	K	49	LEU
1	K	57	LYS
1	K	76	ASP
1	K	82	MET
1	K	99	LYS
1	K	123	ASN
1	K	135	LEU
1	K	155	LYS
1	K	158	ASP
1	K	168	ARG
1	K	169	GLU
1	K	171	LYS
1	K	182	ILE
1	K	216	LEU
1	K	226	GLU
1	K	249	SER
1	K	267	SER
1	K	283	SER
1	K	294	LYS
1	M	4	ARG
1	M	7	ASN
1	M	13	ARG
1	M	15	ILE
1	M	44	THR
1	M	54	LYS
1	M	57	LYS
1	M	59	MET
1	M	67	SER
1	M	76	ASP
1	M	121	SER
1	M	122	LYS
1	M	132	ASP
1	M	138	LEU
1	M	163	GLN
1	M	165	ILE
1	M	216	LEU
1	M	220	THR
1	M	221	LYS
1	M	222	ARG
1	M	226	GLU
1	M	234	SER

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Mol	Chain	Res	Type
1	M	238	GLU
1	M	249	SER
1	M	257	SER
1	M	259	ARG
1	M	272	LEU
1	O	1	MET
1	O	3	LEU
1	O	13	ARG
1	O	15	ILE
1	O	22	ASP
1	O	28	ASN
1	O	35	VAL
1	O	43	LYS
1	O	54	LYS
1	O	57	LYS
1	O	71	CYS
1	O	82	MET
1	O	121	SER
1	O	138	LEU
1	O	140	LYS
1	O	141	LYS
1	O	155	LYS
1	O	163	GLN
1	O	170	ASN
1	O	171	LYS
1	O	173	LEU
1	O	174	THR
1	O	216	LEU
1	O	217	LYS
1	O	220	THR
1	O	221	LYS
1	O	222	ARG
1	O	223	GLN
1	O	232	LYS
1	O	235	THR
1	O	238	GLU
1	O	245	PRO
1	O	259	ARG
1	O	262	ASP
1	O	270	ARG
1	O	272	LEU
1	O	284	TYR

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Mol	Chain	Res	Type
1	O	294	LYS
1	Q	3	LEU
1	Q	5	VAL
1	Q	7	ASN
1	Q	8	LYS
1	Q	15	ILE
1	Q	17	SER
1	Q	22	ASP
1	Q	38	LYS
1	Q	44	THR
1	Q	52	GLU
1	Q	57	LYS
1	Q	76	ASP
1	Q	82	MET
1	Q	121	SER
1	Q	122	LYS
1	Q	132	ASP
1	Q	135	LEU
1	Q	155	LYS
1	Q	169	GLU
1	Q	174	THR
1	Q	197	GLU
1	Q	216	LEU
1	Q	221	LYS
1	Q	226	GLU
1	Q	234	SER
1	Q	238	GLU
1	Q	259	ARG
1	Q	283	SER
1	Q	286	TYR
1	Q	293	LEU
1	S	4	ARG
1	S	5	VAL
1	S	8	LYS
1	S	10	ARG
1	S	15	ILE
1	S	28	ASN
1	S	42	VAL
1	S	48	GLN
1	S	69	LYS
1	S	76	ASP
1	S	82	MET

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Mol	Chain	Res	Type
1	S	122	LYS
1	S	135	LEU
1	S	138	LEU
1	S	140	LYS
1	S	143	ASN
1	S	144	LEU
1	S	147	ILE
1	S	150	PHE
1	S	165	ILE
1	S	168	ARG
1	S	170	ASN
1	S	171	LYS
1	S	173	LEU
1	S	174	THR
1	S	212	PRO
1	S	216	LEU
1	S	220	THR
1	S	222	ARG
1	S	226	GLU
1	S	230	GLU
1	S	233	MET
1	S	234	SER
1	S	242	LYS
1	S	249	SER
1	S	252	LEU
1	S	254	PHE
1	S	256	ARG
1	S	259	ARG
1	S	260	PHE
1	S	261	ASP
1	S	262	ASP
1	S	267	SER
1	S	280	GLN
1	U	1	MET
1	U	7	ASN
1	U	8	LYS
1	U	13	ARG
1	U	17	SER
1	U	23	ILE
1	U	25	LEU
1	U	28	ASN
1	U	31	SER

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Mol	Chain	Res	Type
1	U	35	VAL
1	U	42	VAL
1	U	43	LYS
1	U	44	THR
1	U	52	GLU
1	U	69	LYS
1	U	71	CYS
1	U	83	GLU
1	U	88	SER
1	U	104	THR
1	U	113	ILE
1	U	122	LYS
1	U	138	LEU
1	U	144	LEU
1	U	158	ASP
1	U	169	GLU
1	U	173	LEU
1	U	190	GLN
1	U	204	MET
1	U	205	TYR
1	U	208	LEU
1	U	210	SER
1	U	211	LEU
1	U	216	LEU
1	U	220	THR
1	U	221	LYS
1	U	226	GLU
1	U	229	SER
1	U	230	GLU
1	U	234	SER
1	U	236	PRO
1	U	238	GLU
1	U	246	SER
1	U	257	SER
1	U	259	ARG
1	U	267	SER
1	U	274	ARG
1	U	279	ARG
1	U	288	PHE
1	U	291	ASN
1	W	3	LEU
1	W	5	VAL

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Mol	Chain	Res	Type
1	W	9	TYR
1	W	13	ARG
1	W	29	ILE
1	W	33	GLU
1	W	37	ILE
1	W	39	LEU
1	W	42	VAL
1	W	48	GLN
1	W	52	GLU
1	W	53	SER
1	W	57	LYS
1	W	63	VAL
1	W	67	SER
1	W	68	ILE
1	W	71	CYS
1	W	74	GLU
1	W	76	ASP
1	W	78	ASN
1	W	81	VAL
1	W	82	MET
1	W	84	LEU
1	W	87	PRO
1	W	98	ARG
1	W	113	ILE
1	W	115	ARG
1	W	122	LYS
1	W	124	PHE
1	W	129	VAL
1	W	135	LEU
1	W	140	LYS
1	W	141	LYS
1	W	145	VAL
1	W	147	ILE
1	W	150	PHE
1	W	155	LYS
1	W	158	ASP
1	W	163	GLN
1	W	167	TYR
1	W	168	ARG
1	W	169	GLU
1	W	174	THR
1	W	216	LEU

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Mol	Chain	Res	Type
1	W	221	LYS
1	W	226	GLU
1	W	234	SER
1	W	238	GLU
1	W	246	SER
1	W	249	SER
1	W	259	ARG
1	W	261	ASP
1	W	272	LEU
1	W	275	ASN
1	W	276	LEU
1	W	284	TYR
1	W	293	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (62) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	46	HIS
1	A	60	GLN
1	A	190	GLN
1	A	271	GLN
1	C	280	GLN
1	C	291	ASN
1	E	60	GLN
1	E	126	HIS
1	E	190	GLN
1	E	207	ASN
1	E	271	GLN
1	G	28	ASN
1	G	280	GLN
1	G	291	ASN
1	I	28	ASN
1	I	170	ASN
1	I	207	ASN
1	I	271	GLN
1	I	275	ASN
1	I	278	HIS
1	K	7	ASN
1	K	28	ASN
1	K	60	GLN
1	K	162	HIS
1	M	60	GLN

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Mol	Chain	Res	Type
1	M	271	GLN
1	O	7	ASN
1	O	28	ASN
1	O	46	HIS
1	O	60	GLN
1	O	78	ASN
1	O	163	GLN
1	O	207	ASN
1	O	278	HIS
1	O	280	GLN
1	Q	7	ASN
1	Q	60	GLN
1	Q	162	HIS
1	Q	170	ASN
1	Q	223	GLN
1	Q	271	GLN
1	Q	280	GLN
1	Q	291	ASN
1	S	28	ASN
1	S	48	GLN
1	S	60	GLN
1	S	143	ASN
1	S	162	HIS
1	S	170	ASN
1	S	271	GLN
1	S	280	GLN
1	U	7	ASN
1	U	28	ASN
1	U	164	HIS
1	U	271	GLN
1	U	278	HIS
1	U	280	GLN
1	U	291	ASN
1	W	50	HIS
1	W	78	ASN
1	W	190	GLN
1	W	271	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](#)

12 ligands are modelled in this entry.

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	$\# Z > 2$
2	SO4	C	301	-	4,4,4	0.59	0	6,6,6	0.41	0
2	SO4	E	301	-	4,4,4	0.44	0	6,6,6	0.43	0
2	SO4	U	301	-	4,4,4	0.53	0	6,6,6	0.43	0
2	SO4	A	301	-	4,4,4	0.38	0	6,6,6	0.32	0
2	SO4	I	301	-	4,4,4	0.32	0	6,6,6	0.34	0
2	SO4	O	301	-	4,4,4	0.23	0	6,6,6	0.47	0
2	SO4	W	301	-	4,4,4	0.63	0	6,6,6	0.36	0
2	SO4	K	301	-	4,4,4	0.46	0	6,6,6	0.19	0
2	SO4	G	301	-	4,4,4	0.44	0	6,6,6	0.66	0
2	SO4	Q	301	-	4,4,4	0.40	0	6,6,6	0.34	0
2	SO4	S	301	-	4,4,4	0.38	0	6,6,6	0.23	0
2	SO4	M	301	-	4,4,4	0.36	0	6,6,6	0.29	0

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5 monomers are involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	U	301	SO4	3	0
2	G	301	SO4	1	0
2	Q	301	SO4	1	0
2	S	301	SO4	1	0
2	M	301	SO4	1	0

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 Fit of model and data i

6.1 Protein, DNA and RNA chains i

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	290/296 (97%)	-0.03	1 (0%) 94 94	11, 31, 56, 84	1 (0%)
1	C	289/296 (97%)	0.06	5 (1%) 70 67	11, 34, 60, 82	1 (0%)
1	E	291/296 (98%)	0.06	7 (2%) 59 54	18, 38, 60, 84	1 (0%)
1	G	290/296 (97%)	0.18	9 (3%) 49 44	17, 41, 70, 90	1 (0%)
1	I	291/296 (98%)	0.18	7 (2%) 59 54	25, 41, 63, 83	1 (0%)
1	K	290/296 (97%)	0.24	12 (4%) 37 32	24, 47, 76, 92	1 (0%)
1	M	291/296 (98%)	0.29	8 (2%) 54 49	24, 49, 74, 81	1 (0%)
1	O	290/296 (97%)	0.35	14 (4%) 30 24	33, 53, 75, 94	1 (0%)
1	Q	290/296 (97%)	0.10	7 (2%) 59 54	24, 47, 72, 91	1 (0%)
1	S	286/296 (96%)	0.40	21 (7%) 15 10	25, 55, 77, 89	1 (0%)
1	U	289/296 (97%)	0.88	42 (14%) 2 1	26, 68, 86, 93	1 (0%)
1	W	289/296 (97%)	1.08	68 (23%) 0 0	28, 82, 93, 97	1 (0%)
All	All	3476/3552 (97%)	0.31	201 (5%) 23 18	11, 47, 83, 97	12 (0%)

All (201) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	W	217	LYS	6.6
1	O	218	ALA	6.0
1	W	3	LEU	5.2
1	W	150	PHE	5.1
1	G	218	ALA	4.9
1	W	51	ILE	4.9
1	W	5	VAL	4.8
1	O	216	LEU	4.8
1	W	59	MET	4.7
1	W	27	ALA	4.6
1	U	254	PHE	4.5

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Mol	Chain	Res	Type	RSRZ
1	W	159	ALA	4.4
1	W	161	THR	4.4
1	I	29	ILE	4.2
1	W	166	PRO	4.2
1	U	221	LYS	4.1
1	W	155	LYS	4.1
1	S	225	TYR	4.1
1	W	7	ASN	4.1
1	U	227	ARG	4.1
1	W	55	PHE	3.9
1	W	158	ASP	3.9
1	S	161	THR	3.9
1	U	258	LEU	3.8
1	U	219	ALA	3.8
1	W	147	ILE	3.8
1	W	73	ALA	3.7
1	W	58	MET	3.7
1	M	173	LEU	3.7
1	W	11	LEU	3.7
1	W	162	HIS	3.6
1	W	153	ALA	3.6
1	W	225	TYR	3.6
1	U	220	THR	3.6
1	O	217	LYS	3.6
1	S	219	ALA	3.5
1	U	240	LEU	3.5
1	W	268	TYR	3.5
1	W	265	ASP	3.5
1	S	170	ASN	3.5
1	K	159	ALA	3.5
1	W	168	ARG	3.5
1	W	35	VAL	3.4
1	U	159	ALA	3.4
1	U	54	LYS	3.3
1	U	218	ALA	3.3
1	W	160	ARG	3.3
1	U	252	LEU	3.3
1	W	264	PRO	3.3
1	S	220	THR	3.2
1	M	174	THR	3.2
1	W	164	HIS	3.2
1	U	6	GLY	3.2

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Mol	Chain	Res	Type	RSRZ
1	K	219	ALA	3.2
1	O	219	ALA	3.2
1	K	55	PHE	3.1
1	C	218	ALA	3.1
1	W	69	LYS	3.1
1	U	7	ASN	3.1
1	U	255	CYS	3.1
1	I	219	ALA	3.1
1	U	228	ILE	3.1
1	U	188	ILE	3.1
1	S	186	LEU	3.0
1	W	75	GLY	3.0
1	O	140	LYS	2.9
1	W	163	GLN	2.9
1	E	221	LYS	2.9
1	S	217	LYS	2.9
1	O	173	LEU	2.9
1	Q	218	ALA	2.9
1	W	122	LYS	2.9
1	M	168	ARG	2.9
1	G	55	PHE	2.8
1	W	47	PRO	2.8
1	W	260	PHE	2.8
1	U	216	LEU	2.8
1	W	173	LEU	2.8
1	I	216	LEU	2.8
1	C	216	LEU	2.8
1	S	260	PHE	2.8
1	U	125	ILE	2.8
1	W	9	TYR	2.7
1	K	7	ASN	2.7
1	W	15	ILE	2.7
1	M	140	LYS	2.7
1	Q	219	ALA	2.7
1	W	266	TYR	2.7
1	E	140	LYS	2.7
1	U	36	ALA	2.7
1	W	124	PHE	2.7
1	S	218	ALA	2.7
1	U	196	LEU	2.7
1	G	225	TYR	2.7
1	W	218	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
1	U	168	ARG	2.6
1	W	187	GLY	2.6
1	K	161	THR	2.6
1	E	222	ARG	2.6
1	W	167	TYR	2.6
1	M	219	ALA	2.5
1	W	152	LEU	2.5
1	S	222	ARG	2.5
1	U	163	GLN	2.5
1	U	251	TYR	2.5
1	U	119	ILE	2.5
1	U	213	TRP	2.5
1	U	82	MET	2.5
1	W	254	PHE	2.5
1	S	162	HIS	2.5
1	S	174	THR	2.5
1	S	216	LEU	2.5
1	O	284	TYR	2.5
1	U	129	VAL	2.4
1	C	168	ARG	2.4
1	M	222	ARG	2.4
1	M	155	LYS	2.4
1	W	78	ASN	2.4
1	G	186	LEU	2.4
1	Q	227	ARG	2.4
1	Q	173	LEU	2.4
1	W	42	VAL	2.4
1	U	56	TYR	2.4
1	W	127	ARG	2.4
1	I	173	LEU	2.4
1	W	48	GLN	2.4
1	I	7	ASN	2.4
1	K	3	LEU	2.3
1	W	140	LYS	2.3
1	O	51	ILE	2.3
1	W	284	TYR	2.3
1	O	225	TYR	2.3
1	U	224	LYS	2.3
1	W	56	TYR	2.3
1	Q	223	GLN	2.3
1	S	173	LEU	2.3
1	K	218	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
1	Q	220	THR	2.3
1	S	155	LYS	2.3
1	U	293	LEU	2.3
1	W	196	LEU	2.3
1	S	226	GLU	2.3
1	U	202	VAL	2.3
1	C	227	ARG	2.2
1	S	221	LYS	2.2
1	U	179	TYR	2.2
1	W	141	LYS	2.2
1	G	76	ASP	2.2
1	O	227	ARG	2.2
1	G	216	LEU	2.2
1	U	284	TYR	2.2
1	M	124	PHE	2.2
1	U	68	ILE	2.2
1	E	168	ARG	2.2
1	U	138	LEU	2.2
1	U	259	ARG	2.2
1	W	65	ILE	2.2
1	U	222	ARG	2.2
1	U	174	THR	2.2
1	U	4	ARG	2.2
1	O	58	MET	2.2
1	I	174	THR	2.2
1	S	182	ILE	2.2
1	U	8	LYS	2.2
1	A	218	ALA	2.2
1	W	119	ILE	2.1
1	K	11	LEU	2.1
1	S	70	TRP	2.1
1	G	167	TYR	2.1
1	I	4	ARG	2.1
1	K	166	PRO	2.1
1	S	264	PRO	2.1
1	W	151	GLY	2.1
1	W	175	GLY	2.1
1	E	225	TYR	2.1
1	U	161	THR	2.1
1	G	217	LYS	2.1
1	W	52	GLU	2.1
1	O	221	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
1	W	221	LYS	2.1
1	C	222	ARG	2.1
1	O	282	PHE	2.1
1	U	208	LEU	2.1
1	S	167	TYR	2.1
1	K	10	ARG	2.1
1	W	192	ARG	2.1
1	W	72	GLY	2.1
1	G	5	VAL	2.0
1	W	185	HIS	2.0
1	K	124	PHE	2.0
1	O	155	LYS	2.0
1	E	216	LEU	2.0
1	W	182	ILE	2.0
1	W	8	LYS	2.0
1	W	67	SER	2.0
1	Q	216	LEU	2.0
1	W	216	LEU	2.0
1	W	272	LEU	2.0
1	K	167	TYR	2.0
1	E	1	MET	2.0
1	W	46	HIS	2.0

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

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

6.3 Carbohydrates [\(i\)](#)

There are no monosaccharides in this entry.

6.4 Ligands [\(i\)](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
2	SO4	U	301	5/5	0.93	0.18	78,79,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
2	SO4	W	301	5/5	0.94	0.14	65,67,68,69	0
2	SO4	G	301	5/5	0.96	0.17	50,51,54,55	0
2	SO4	Q	301	5/5	0.96	0.16	55,55,55,56	0
2	SO4	C	301	5/5	0.97	0.14	43,46,47,48	0
2	SO4	S	301	5/5	0.97	0.11	68,69,70,71	0
2	SO4	I	301	5/5	0.97	0.17	51,53,54,55	0
2	SO4	M	301	5/5	0.97	0.12	52,53,54,57	0
2	SO4	E	301	5/5	0.98	0.11	50,51,53,55	0
2	SO4	K	301	5/5	0.98	0.17	55,55,57,59	0
2	SO4	A	301	5/5	0.98	0.17	30,33,34,40	0
2	SO4	O	301	5/5	0.98	0.15	62,62,63,66	0

6.5 Other polymers [\(i\)](#)

There are no such residues in this entry.