Full wwPDB X-ray Structure Validation Report ⓘ

Aug 29, 2023 – 11:53 AM EDT

PDB ID	:	8FFR
Title	:	Revised structure of the rabies virus nucleoprotein-RNA complex
Authors	:	Leyrat, C.; Bourhis, J.M.; Albertini, A.A.V.; Wernimont, A.K.; Muziol, T.; Ravelli, R.B.G.; Weissenhorn, W.; Ruigrok, R.W.H.; Jamin, M.
Deposited on	:	2022-12-09
Resolution	:	3.49 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:

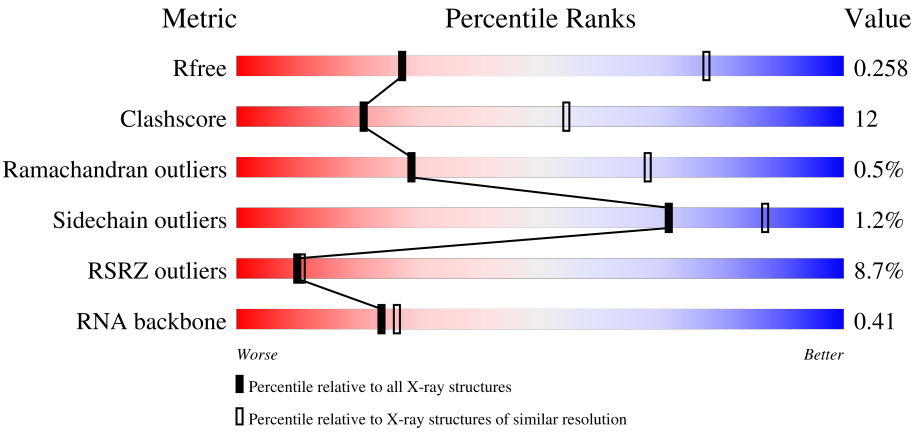
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.35
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.49 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	1659 (3.60-3.40)
Clashscore	141614	1036 (3.58-3.42)
Ramachandran outliers	138981	1005 (3.58-3.42)
Sidechain outliers	138945	1006 (3.58-3.42)
RSRZ outliers	127900	1559 (3.60-3.40)
RNA backbone	3102	1002 (4.00-3.00)

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 <=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	450	7% 69% 22% · 7%
1	B	450	7% 68% 25% 7%
1	C	450	11% 65% 27% · 7%
1	D	450	6% 71% 21% · 7%

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Mol	Chain	Length	Quality of chain
1	E	450	12% 64% 28% 7%
1	F	450	12% 70% 22% 7%
1	G	450	9% 65% 27% 7%
1	H	450	14% 66% 25% 7%
1	I	450	9% 68% 23% 7%
1	J	450	5% 71% 21% 7%
1	K	450	7% 66% 26% 7%
1	L	450	2% 69% 24% 7%
1	M	450	6% 64% 28% 7%
1	N	450	4% 68% 24% 7%
1	O	450	7% 73% 20% 7%
1	P	450	10% 71% 21% 7%
1	Q	450	15% 67% 25% 7%
1	R	450	6% 67% 25% 7%
1	S	450	10% 70% 22% 7%
1	T	450	4% 68% 24% 7%
1	U	450	6% 70% 22% 7%
1	V	450	12% 72% 21% 7%
2	W	99	20% 44% 28% 7%
3	X	99	15% 48% 28% 8%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
4	PO4	X	101	-	-	X	-

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 77284 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 Nucleoprotein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	418	Total	C	N	O	S	0	0	0
			3322	2123	570	611	18			
1	B	419	Total	C	N	O	S	0	0	0
			3331	2129	572	612	18			
1	C	418	Total	C	N	O	S	0	0	0
			3322	2123	570	611	18			
1	D	418	Total	C	N	O	S	0	0	0
			3322	2123	570	611	18			
1	E	418	Total	C	N	O	S	0	0	0
			3322	2123	570	611	18			
1	F	418	Total	C	N	O	S	0	0	0
			3322	2123	570	611	18			
1	G	418	Total	C	N	O	S	0	0	0
			3322	2123	570	611	18			
1	H	418	Total	C	N	O	S	0	0	0
			3322	2123	570	611	18			
1	I	418	Total	C	N	O	S	0	0	0
			3322	2123	570	611	18			
1	J	418	Total	C	N	O	S	0	0	0
			3322	2123	570	611	18			
1	K	420	Total	C	N	O	S	0	0	0
			3339	2133	573	615	18			
1	L	419	Total	C	N	O	S	0	0	0
			3331	2129	572	612	18			
1	M	420	Total	C	N	O	S	0	0	0
			3339	2133	573	615	18			
1	N	418	Total	C	N	O	S	0	0	0
			3322	2123	570	611	18			
1	O	419	Total	C	N	O	S	0	0	0
			3331	2129	572	612	18			
1	P	420	Total	C	N	O	S	0	0	0
			3339	2133	573	615	18			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	Q	418	Total	C	N	O	S	0	0	0
			3322	2123	570	611	18			
1	R	418	Total	C	N	O	S	0	0	0
			3322	2123	570	611	18			
1	S	418	Total	C	N	O	S	0	0	0
			3322	2123	570	611	18			
1	T	418	Total	C	N	O	S	0	0	0
			3322	2123	570	611	18			
1	U	418	Total	C	N	O	S	0	0	0
			3322	2123	570	611	18			
1	V	419	Total	C	N	O	S	0	0	0
			3331	2129	572	612	18			

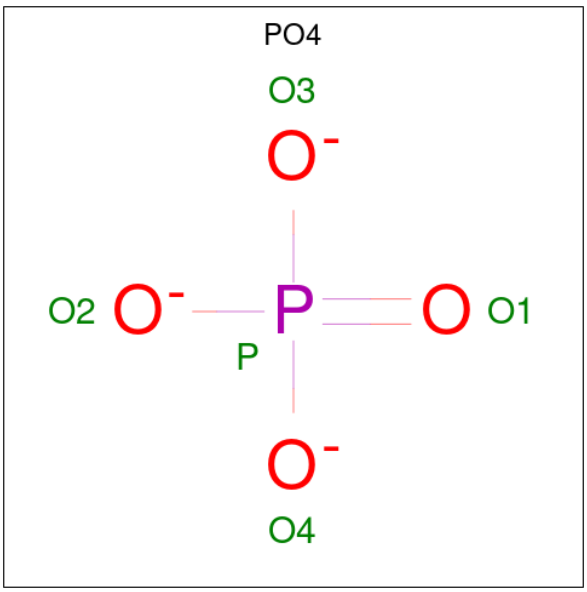
- Molecule 2 is a RNA chain called RNA (99-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	W	99	Total	C	N	O	P	0	0	0
			2059	932	379	650	98			

- Molecule 3 is a RNA chain called RNA (99-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	X	99	Total	C	N	O	P	0	0	0
			2044	925	365	656	98			

- Molecule 4 is PHOSPHATE ION (three-letter code: PO4) (formula: O_4P).



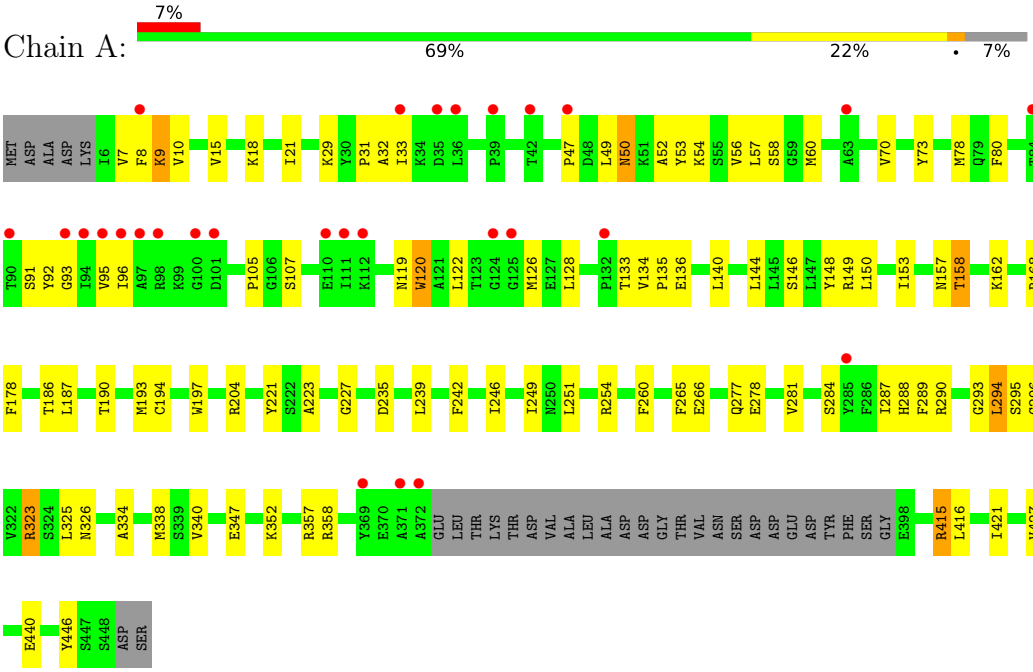
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	W	1	Total O P 5 4 1	0	0
4	X	1	Total O P 5 4 1	0	0

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.

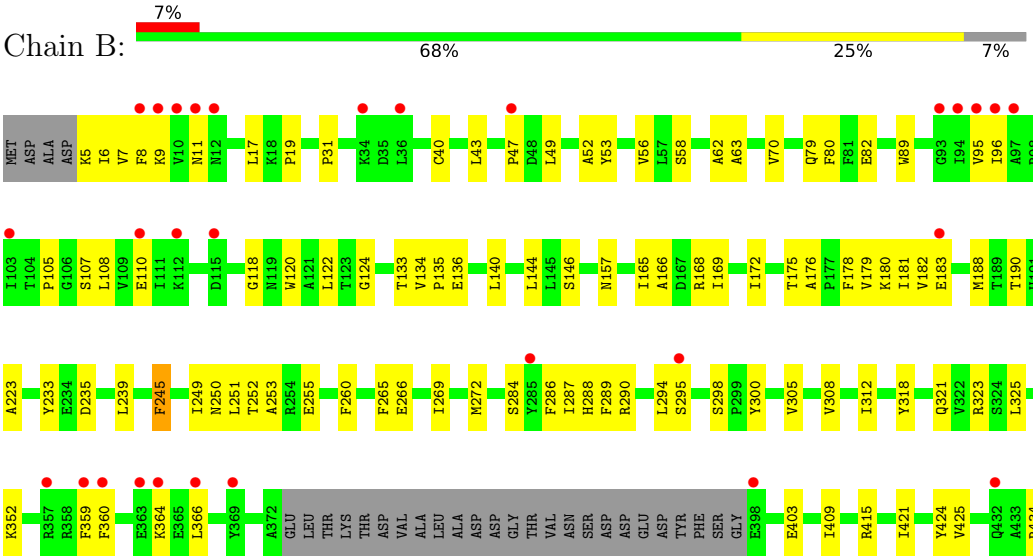
• Molecule 1: Nucleoprotein

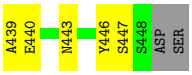
Chain A:



• Molecule 1: Nucleoprotein

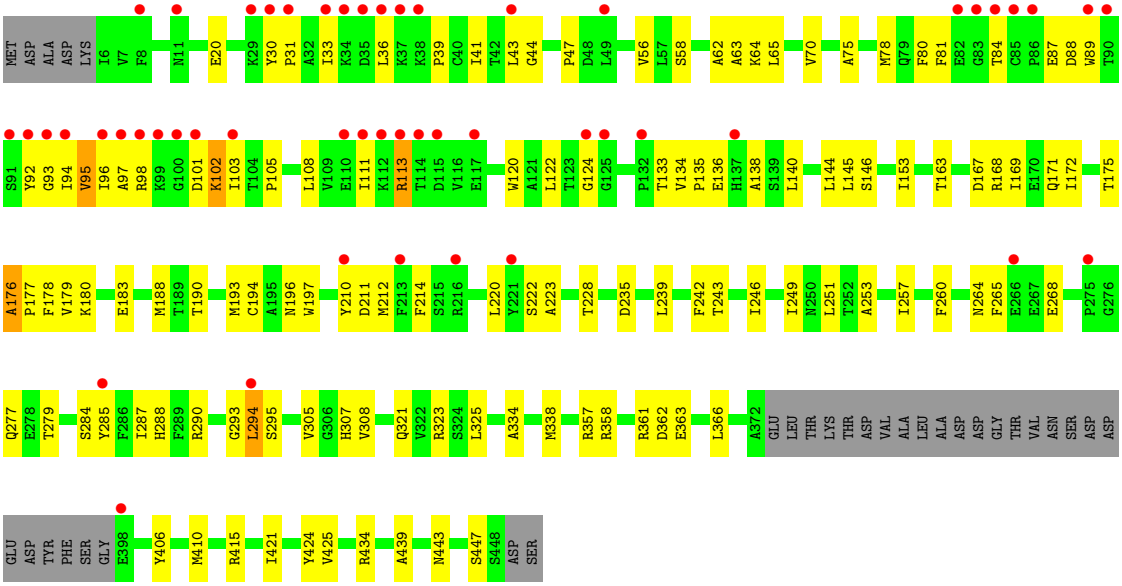
Chain B:





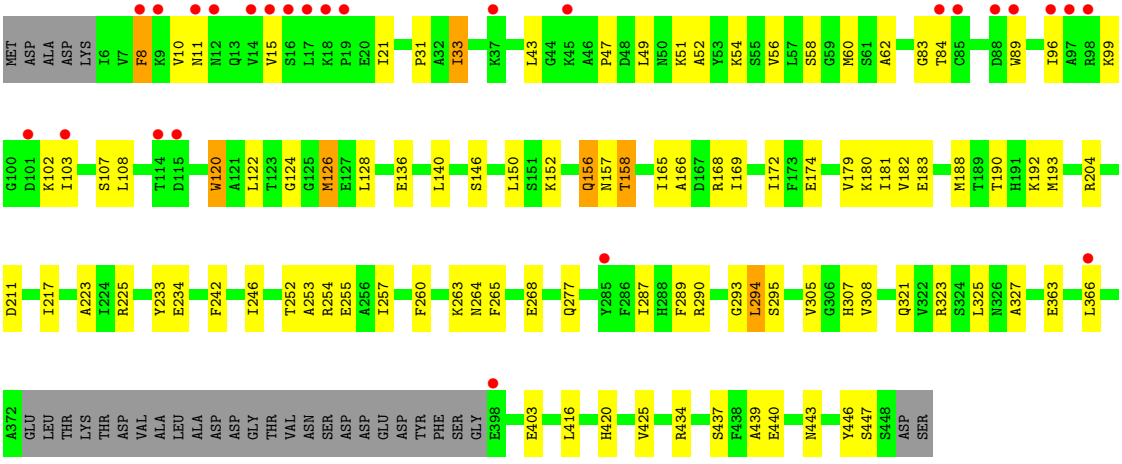
• Molecule 1: Nucleoprotein

Chain C:



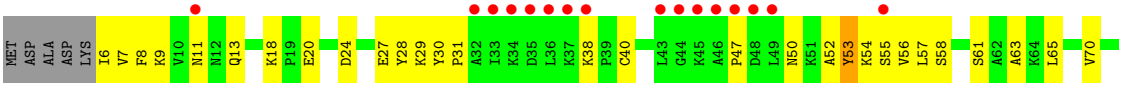
• Molecule 1: Nucleoprotein

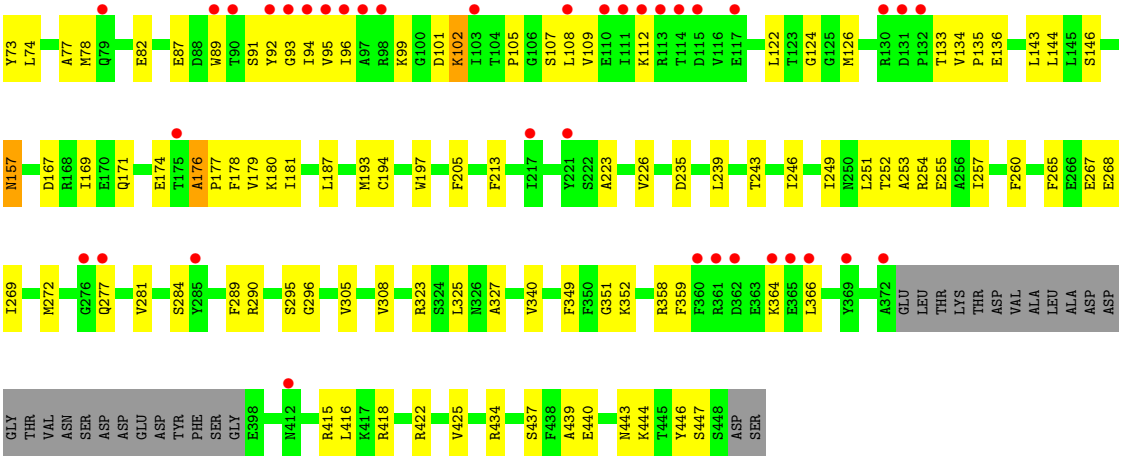
Chain D:



• Molecule 1: Nucleoprotein

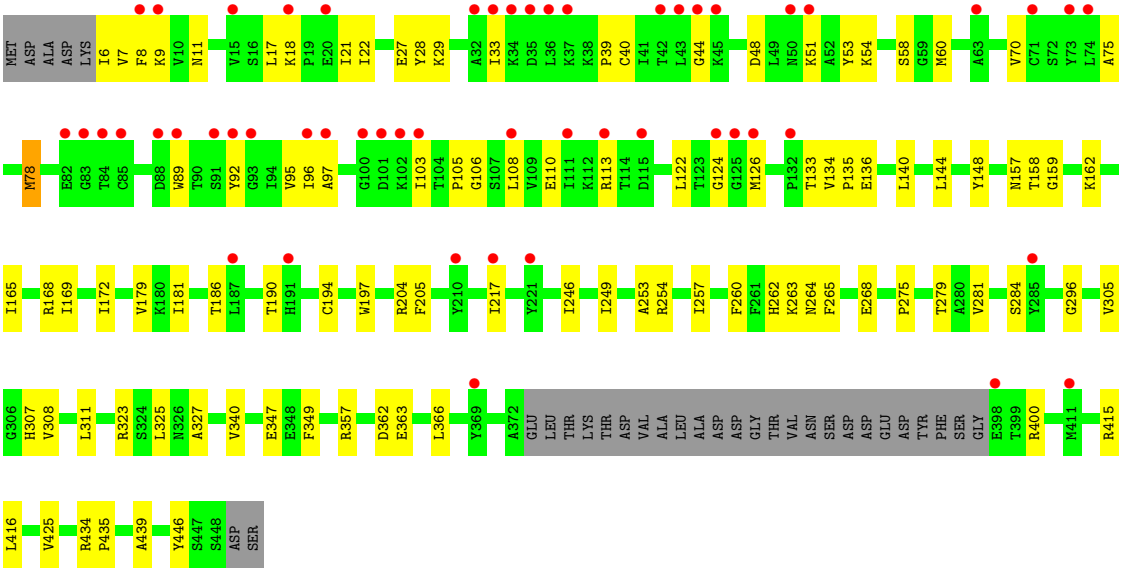
Chain E:





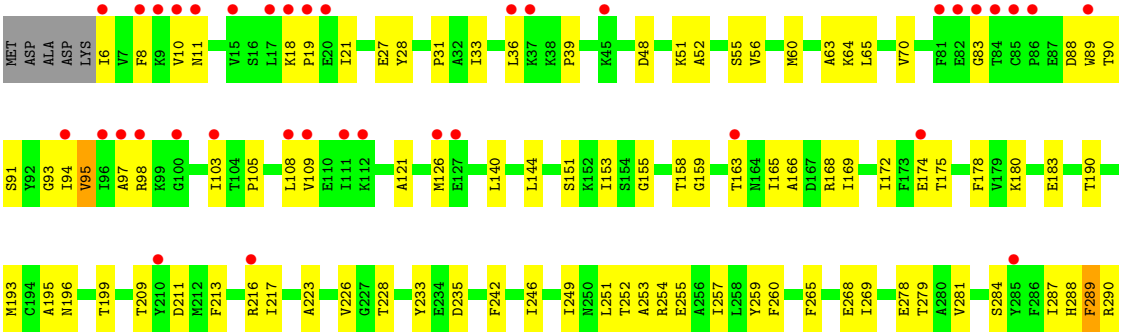
• Molecule 1: Nucleoprotein

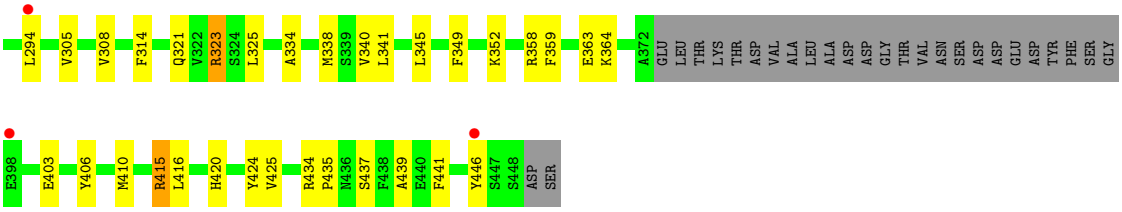
Chain F:



• Molecule 1: Nucleoprotein

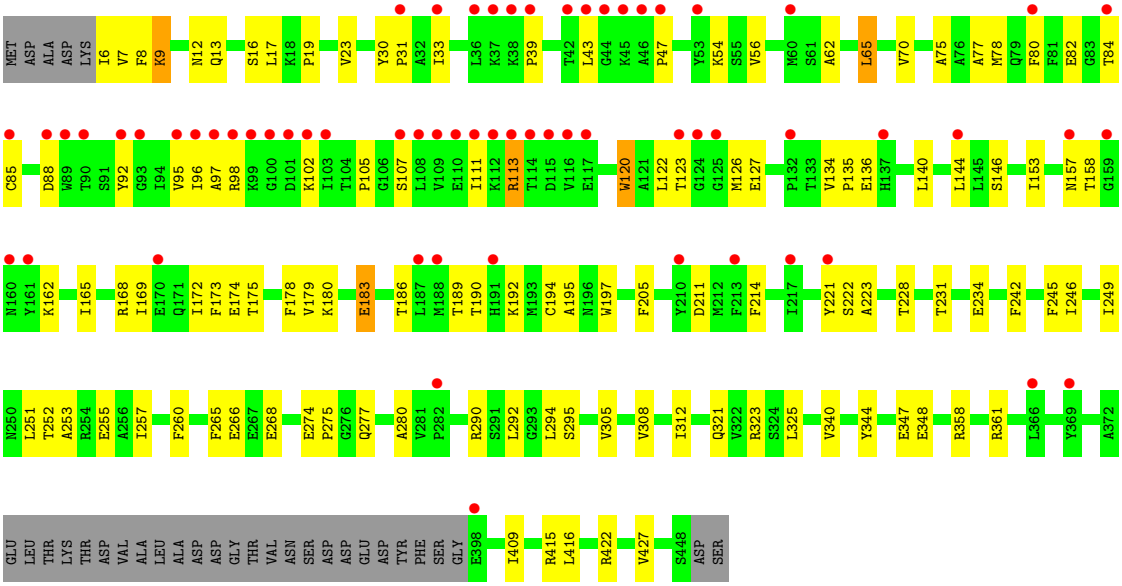
Chain G:





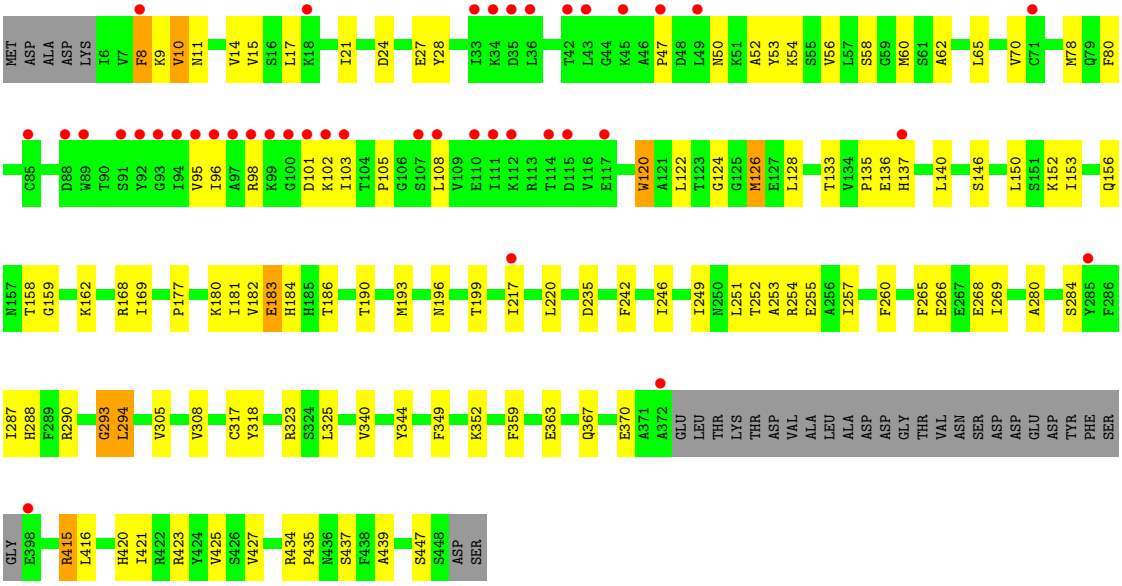
• Molecule 1: Nucleoprotein

Chain H:



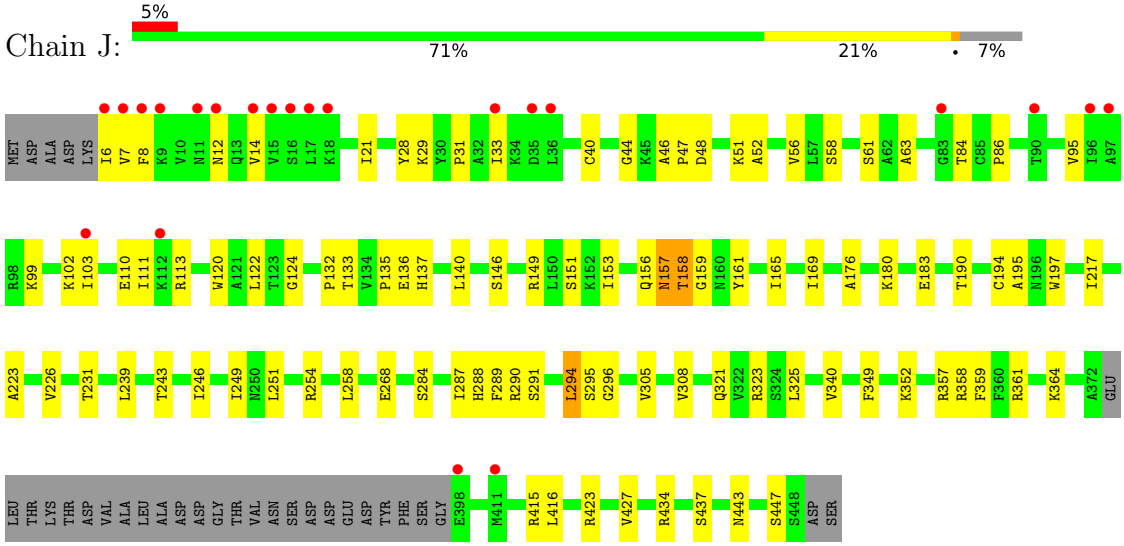
• Molecule 1: Nucleoprotein

Chain I:



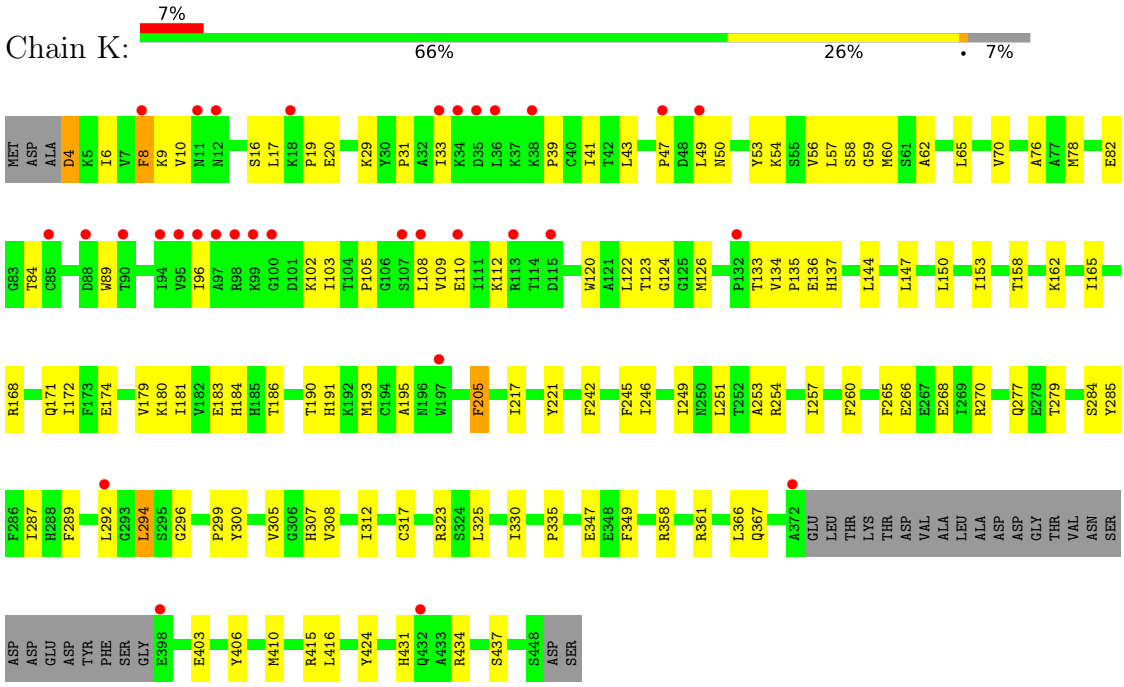
• Molecule 1: Nucleoprotein

Chain J:



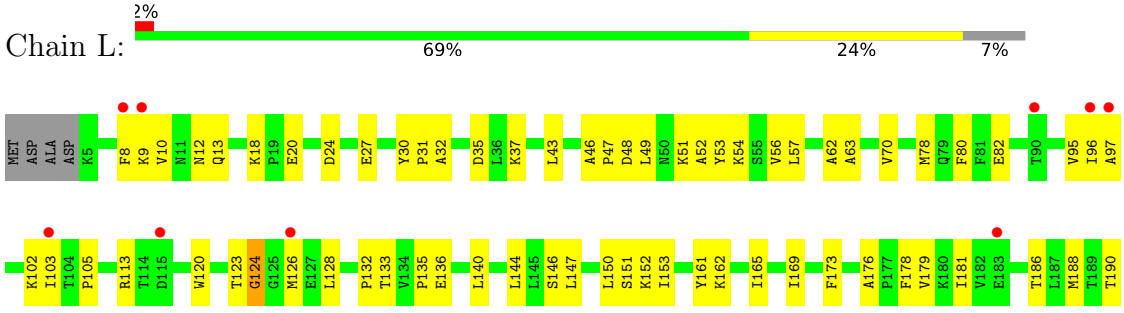
• Molecule 1: Nucleoprotein

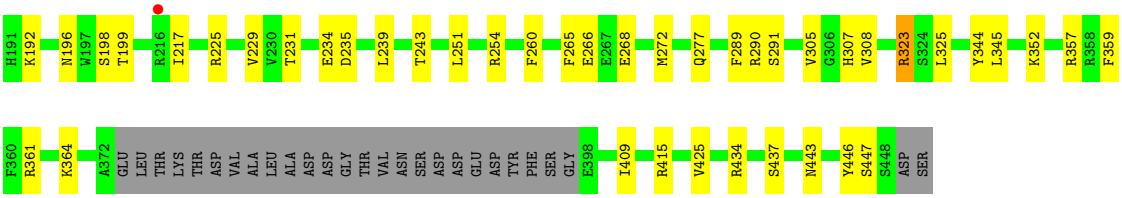
Chain K:



• Molecule 1: Nucleoprotein

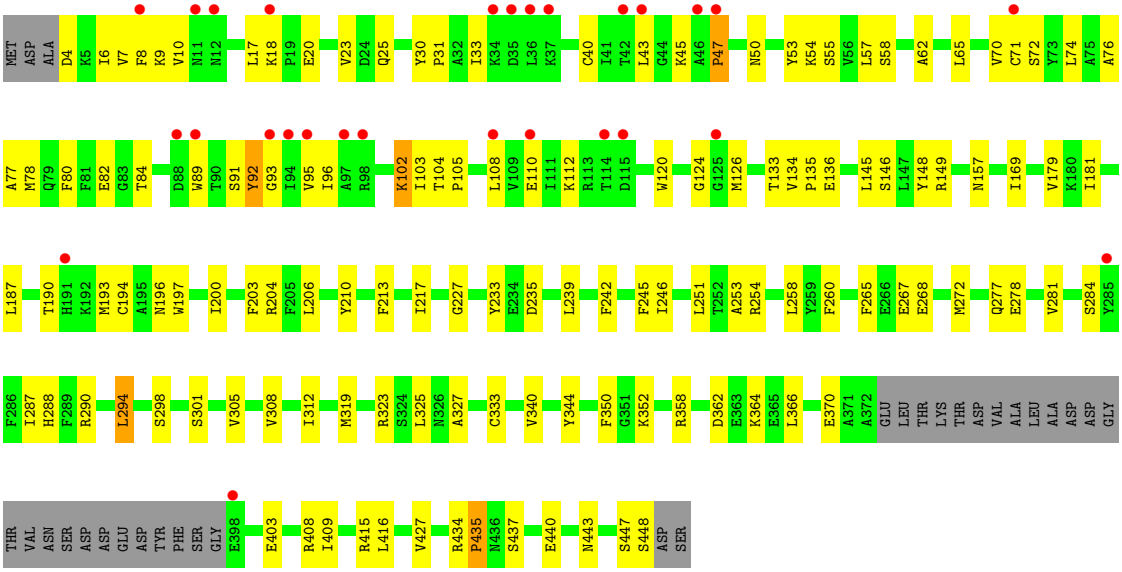
Chain L:





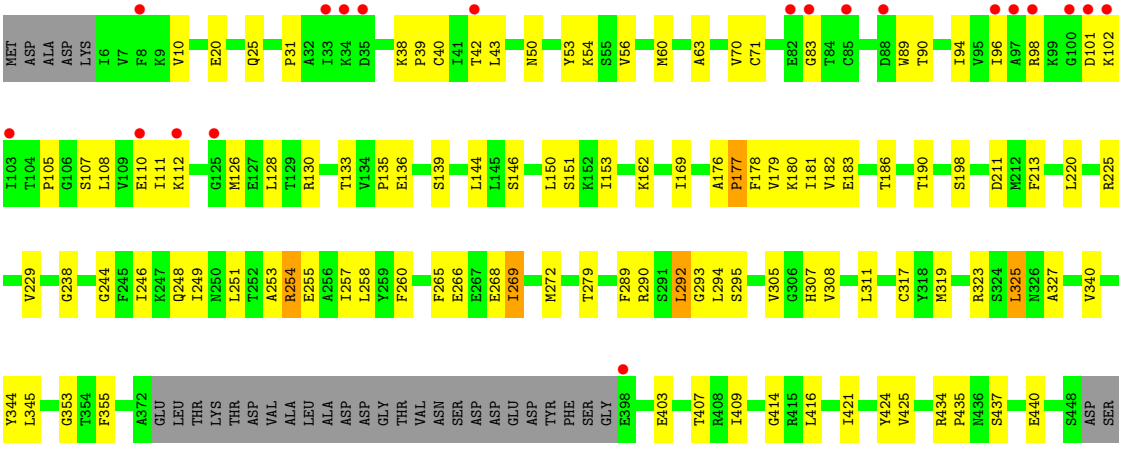
• Molecule 1: Nucleoprotein

Chain M:



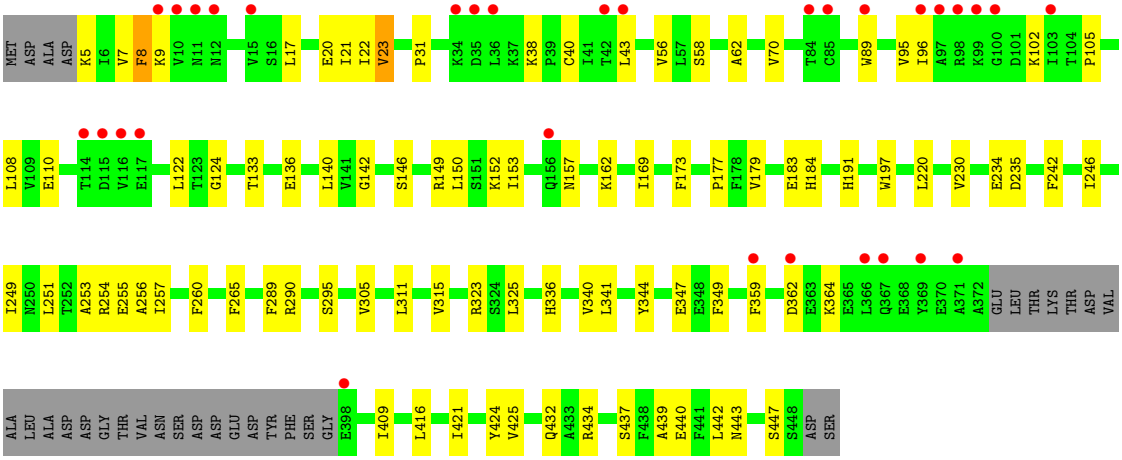
• Molecule 1: Nucleoprotein

Chain N:



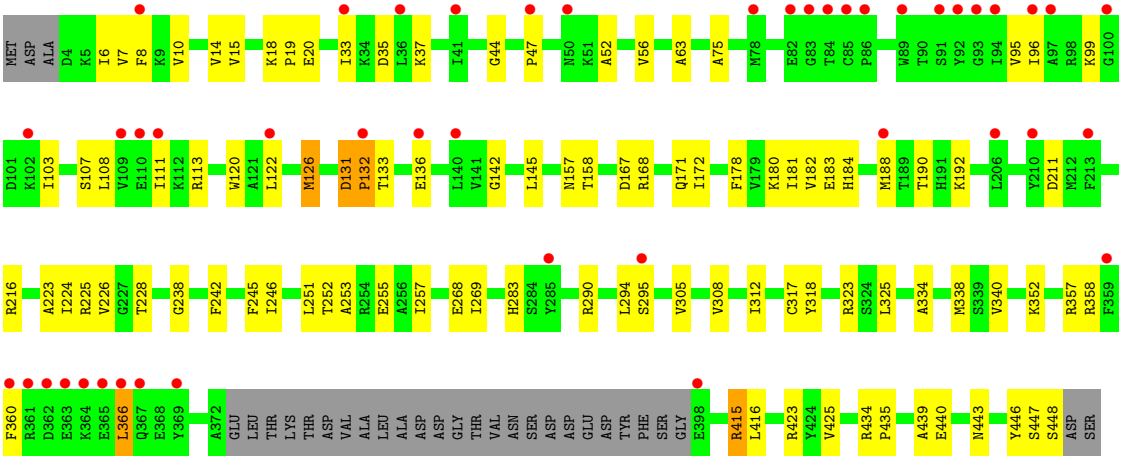
• Molecule 1: Nucleoprotein

Chain O:



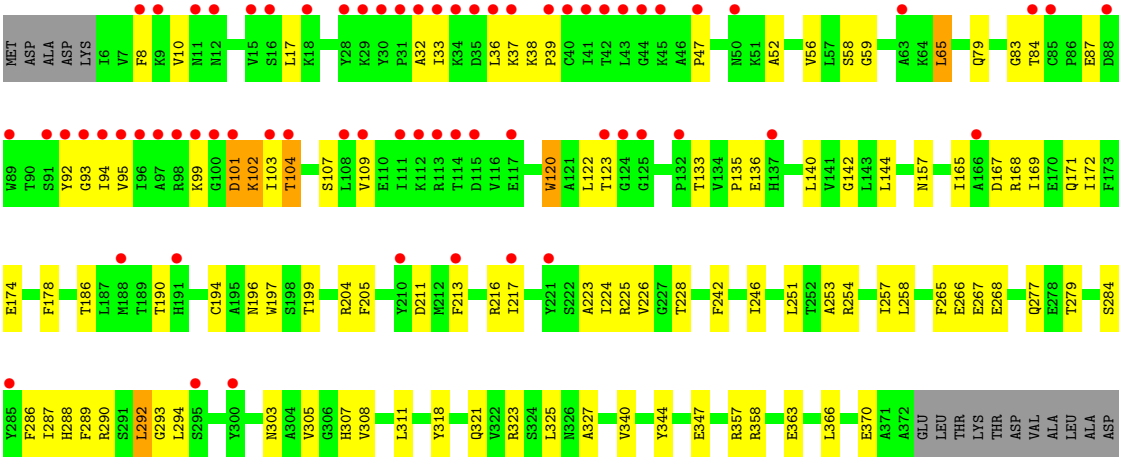
• Molecule 1: Nucleoprotein

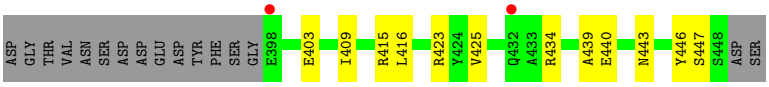
Chain P:



• Molecule 1: Nucleoprotein

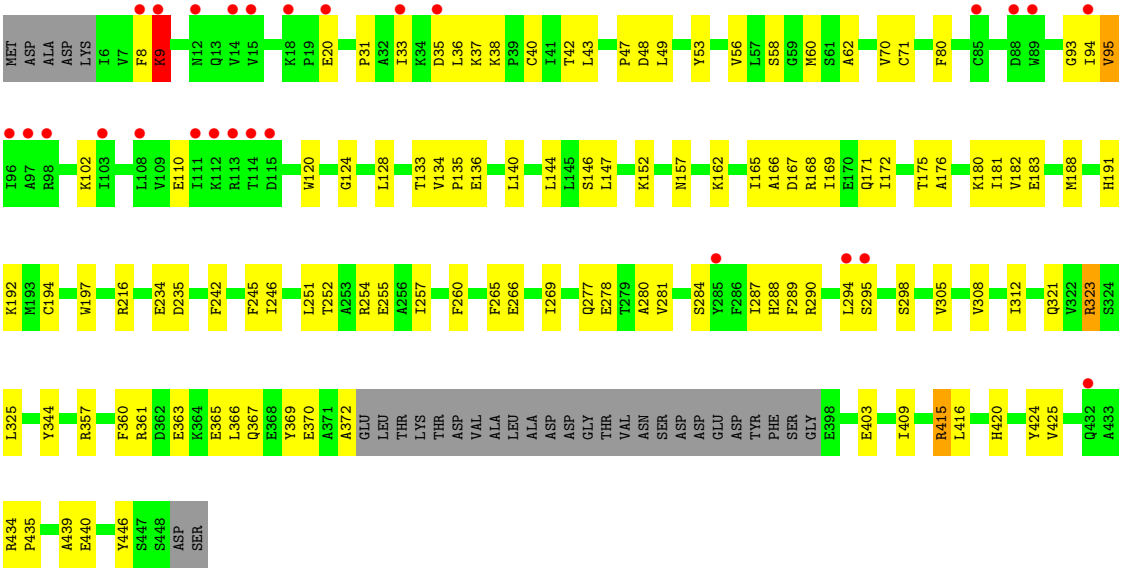
Chain Q:





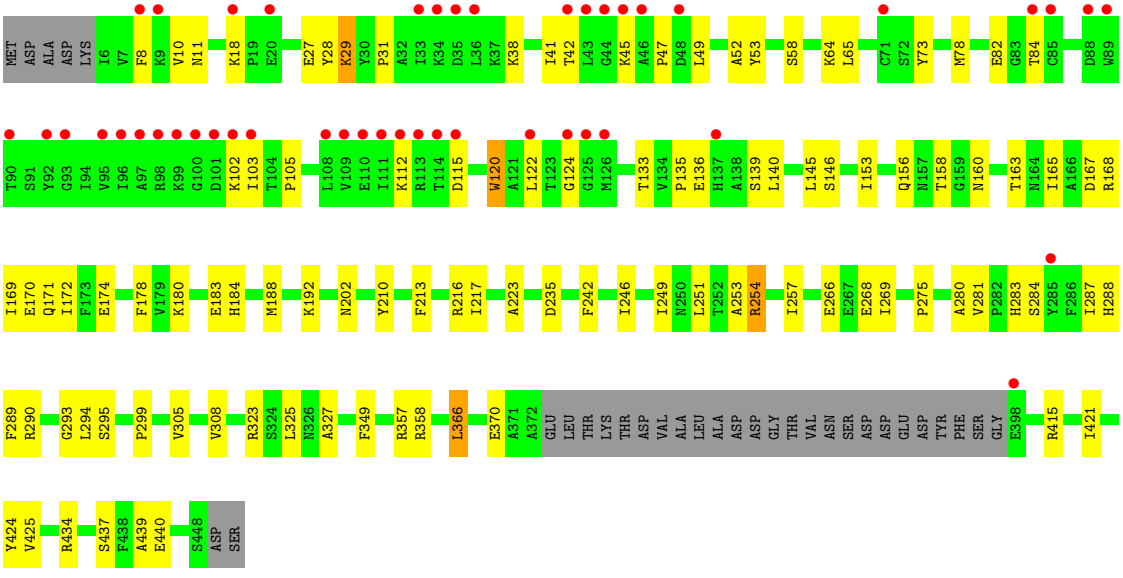
• Molecule 1: Nucleoprotein

Chain R:



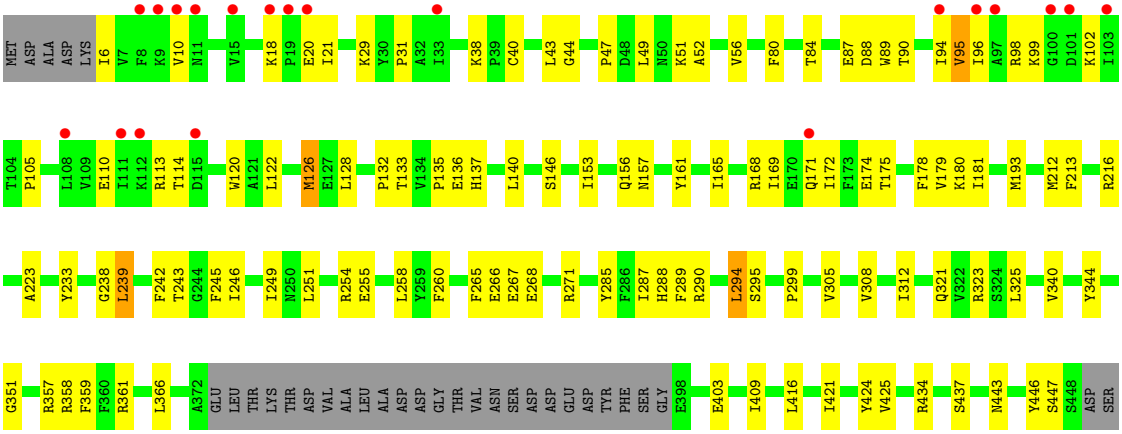
• Molecule 1: Nucleoprotein

Chain S:



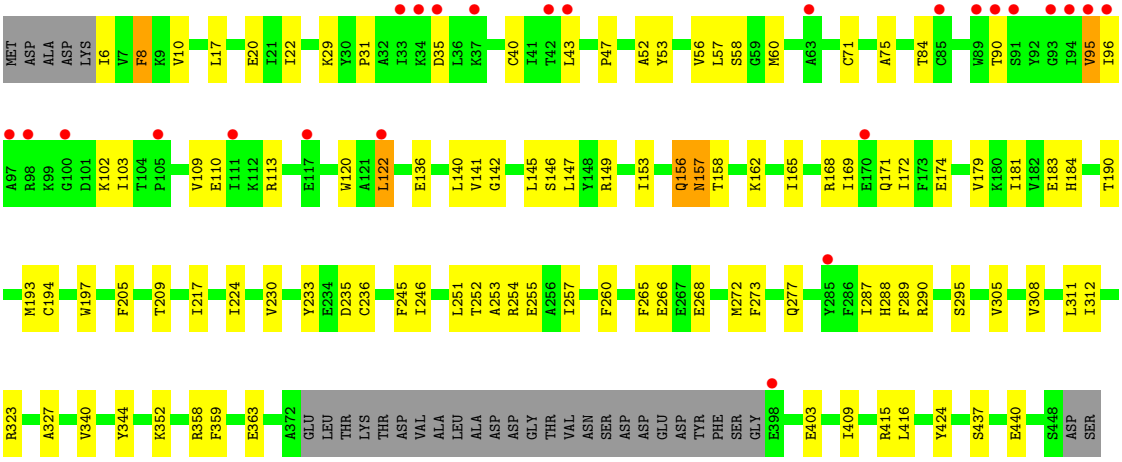
• Molecule 1: Nucleoprotein

Chain T:



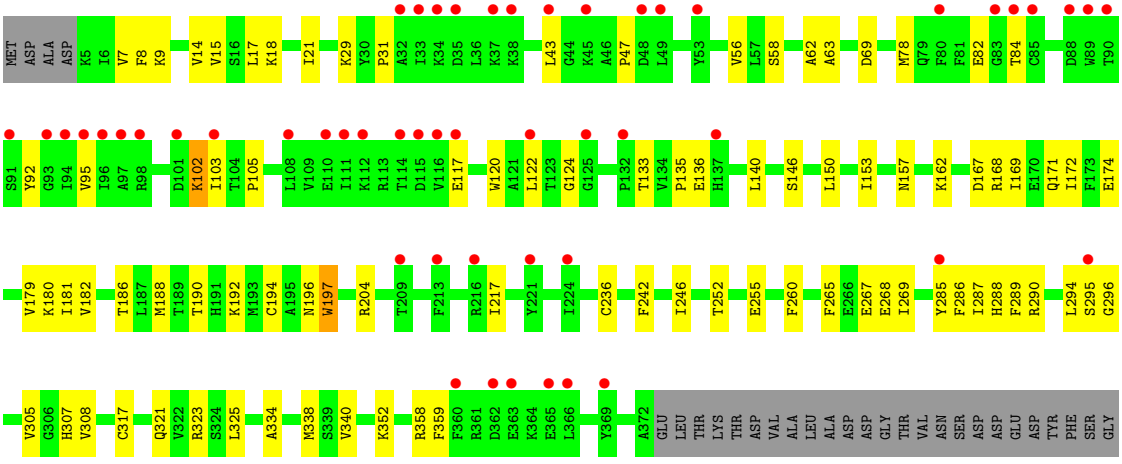
• Molecule 1: Nucleoprotein

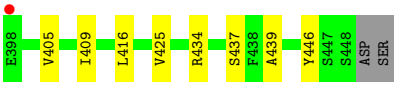
Chain U:



• Molecule 1: Nucleoprotein

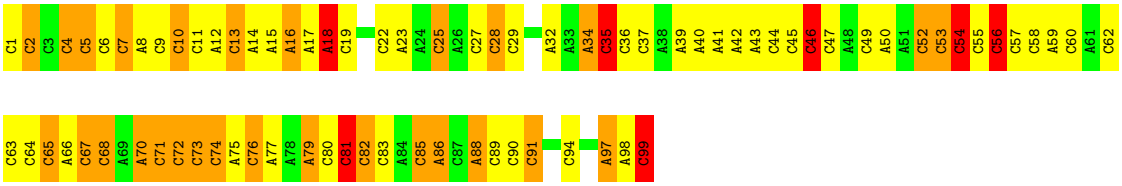
Chain V:





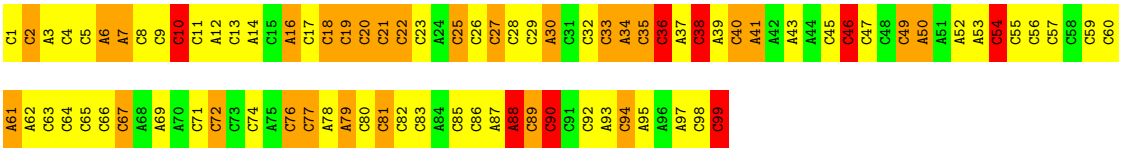
• Molecule 2: RNA (99-MER)

Chain W:



• Molecule 3: RNA (99-MER)

Chain X:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 2	Depositor
Cell constants a, b, c, α, β, γ	270.43Å 281.00Å 236.90Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.75 – 3.49 49.75 – 3.49	Depositor EDS
% Data completeness (in resolution range)	99.2 (49.75-3.49) 99.3 (49.75-3.49)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.48 (at 3.48Å)	Xtriage
Refinement program	PHENIX 1.20.1_4487, BUSTER	Depositor
R, R_{free}	0.224 , 0.255 0.226 , 0.258	Depositor DCC
R_{free} test set	11062 reflections (4.88%)	wwPDB-VP
Wilson B-factor (Å^2)	103.2	Xtriage
Anisotropy	0.401	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.33 , 65.5	EDS
L-test for twinning[2]	$< \|L\| > = 0.42$, $< L^2 > = 0.24$	Xtriage
Estimated twinning fraction	0.057 for k,h,-l	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	77284	wwPDB-VP
Average B, all atoms (Å^2)	103.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.27% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: PO4

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	0.62	3/3402 (0.1%)	0.73	1/4597 (0.0%)
1	B	0.63	6/3411 (0.2%)	0.76	1/4608 (0.0%)
1	C	0.57	3/3402 (0.1%)	0.69	0/4597
1	D	0.57	0/3402	0.73	3/4597 (0.1%)
1	E	0.60	6/3402 (0.2%)	0.72	0/4597
1	F	0.57	2/3402 (0.1%)	0.70	1/4597 (0.0%)
1	G	0.57	1/3402 (0.0%)	0.72	0/4597
1	H	0.59	4/3402 (0.1%)	0.70	1/4597 (0.0%)
1	I	0.61	5/3402 (0.1%)	0.70	1/4597 (0.0%)
1	J	0.62	3/3402 (0.1%)	0.78	3/4597 (0.1%)
1	K	0.63	1/3419 (0.0%)	0.78	2/4619 (0.0%)
1	L	0.66	2/3411 (0.1%)	0.84	4/4608 (0.1%)
1	M	0.65	3/3419 (0.1%)	0.82	2/4619 (0.0%)
1	N	0.61	0/3402	0.77	3/4597 (0.1%)
1	O	0.64	4/3411 (0.1%)	0.78	1/4608 (0.0%)
1	P	0.59	3/3419 (0.1%)	0.72	2/4619 (0.0%)
1	Q	0.64	9/3402 (0.3%)	0.70	2/4597 (0.0%)
1	R	0.60	5/3402 (0.1%)	0.75	2/4597 (0.0%)
1	S	0.56	0/3402	0.69	1/4597 (0.0%)
1	T	0.63	2/3402 (0.1%)	0.76	4/4597 (0.1%)
1	U	0.64	4/3402 (0.1%)	0.75	2/4597 (0.0%)
1	V	0.61	6/3411 (0.2%)	0.72	2/4608 (0.0%)
2	W	0.89	1/2297 (0.0%)	1.97	120/3563 (3.4%)
3	X	0.94	0/2275	2.11	147/3525 (4.2%)
All	All	0.63	73/79503 (0.1%)	0.89	305/108332 (0.3%)

All (73) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	G	95	VAL	CB-CG1	8.64	1.71	1.52
1	M	95	VAL	CB-CG1	8.00	1.69	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	I	95	VAL	CB-CG1	7.48	1.68	1.52
1	K	8	PHE	CB-CG	-7.41	1.38	1.51
1	Q	104	THR	C-N	7.37	1.48	1.34
1	I	95	VAL	CB-CG2	7.32	1.68	1.52
1	B	157	ASN	CB-CG	7.31	1.67	1.51
1	Q	157	ASN	CG-ND2	7.18	1.50	1.32
1	P	95	VAL	CB-CG2	7.04	1.67	1.52
1	E	157	ASN	CG-OD1	6.99	1.39	1.24
1	U	8	PHE	CB-CG	-6.99	1.39	1.51
1	J	95	VAL	CB-CG1	6.95	1.67	1.52
1	Q	157	ASN	CG-OD1	6.74	1.38	1.24
1	H	95	VAL	CB-CG2	6.64	1.66	1.52
1	Q	102	LYS	CD-CE	6.62	1.67	1.51
1	V	95	VAL	CB-CG2	6.53	1.66	1.52
1	E	95	VAL	CB-CG1	6.48	1.66	1.52
1	H	95	VAL	CB-CG1	6.43	1.66	1.52
1	Q	95	VAL	CB-CG2	6.38	1.66	1.52
1	F	157	ASN	CG-ND2	6.38	1.48	1.32
1	A	157	ASN	CG-OD1	6.36	1.38	1.24
1	R	157	ASN	CB-CG	6.36	1.65	1.51
1	E	157	ASN	CB-CG	6.30	1.65	1.51
1	C	95	VAL	CB-CG1	6.28	1.66	1.52
1	B	95	VAL	CB-CG1	6.25	1.66	1.52
1	O	8	PHE	CB-CG	-6.19	1.40	1.51
1	E	102	LYS	CD-CE	6.18	1.66	1.51
1	O	102	LYS	CB-CG	6.07	1.69	1.52
1	E	61	SER	CB-OG	5.94	1.50	1.42
1	I	8	PHE	CB-CG	-5.93	1.41	1.51
1	H	157	ASN	CG-OD1	5.92	1.36	1.24
1	Q	95	VAL	CB-CG1	5.88	1.65	1.52
1	E	157	ASN	CG-ND2	5.86	1.47	1.32
1	U	157	ASN	CG-ND2	5.85	1.47	1.32
1	C	102	LYS	CB-CG	5.84	1.68	1.52
1	A	95	VAL	CB-CG1	5.83	1.65	1.52
1	Q	157	ASN	CB-CG	5.81	1.64	1.51
1	I	102	LYS	CD-CE	5.80	1.65	1.51
1	P	95	VAL	CB-CG1	5.79	1.65	1.52
1	V	102	LYS	CD-CE	5.77	1.65	1.51
2	W	32	A	N9-C4	5.76	1.41	1.37
1	F	95	VAL	CB-CG2	5.74	1.65	1.52
1	T	95	VAL	CB-CG1	5.71	1.64	1.52
1	V	102	LYS	CB-CG	5.71	1.68	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	157	ASN	CG-OD1	5.71	1.36	1.24
1	V	102	LYS	CE-NZ	5.62	1.63	1.49
1	J	157	ASN	CB-CG	5.51	1.63	1.51
1	Q	104	THR	CB-CG2	5.48	1.70	1.52
1	R	95	VAL	CB-CG2	5.47	1.64	1.52
1	U	157	ASN	CB-CG	5.46	1.63	1.51
1	V	157	ASN	CB-CG	5.44	1.63	1.51
1	H	157	ASN	CB-CG	5.41	1.63	1.51
1	U	95	VAL	CB-CG2	5.38	1.64	1.52
1	O	157	ASN	CB-CG	5.34	1.63	1.51
1	Q	102	LYS	CE-NZ	5.34	1.62	1.49
1	C	102	LYS	CE-NZ	5.33	1.62	1.49
1	B	102	LYS	CE-NZ	5.30	1.62	1.49
1	L	20	GLU	CB-CG	-5.30	1.42	1.52
1	V	95	VAL	CB-CG1	5.29	1.64	1.52
1	B	157	ASN	CG-ND2	5.27	1.46	1.32
1	J	157	ASN	CG-OD1	5.26	1.35	1.24
1	M	157	ASN	CB-CG	5.26	1.63	1.51
1	R	71	CYS	CB-SG	-5.25	1.73	1.81
1	R	102	LYS	CD-CE	5.21	1.64	1.51
1	I	102	LYS	CE-NZ	5.16	1.61	1.49
1	L	8	PHE	CE2-CZ	5.11	1.47	1.37
1	A	157	ASN	CG-ND2	5.10	1.45	1.32
1	T	157	ASN	CG-OD1	5.09	1.35	1.24
1	P	157	ASN	CB-CG	5.07	1.62	1.51
1	R	157	ASN	CG-OD1	5.05	1.35	1.24
1	B	245	PHE	CB-CG	-5.05	1.42	1.51
1	M	102	LYS	CB-CG	5.04	1.66	1.52
1	O	157	ASN	CG-ND2	5.02	1.45	1.32

All (305) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	W	73	C	C6-N1-C2	-18.30	112.98	120.30
2	W	53	C	C6-N1-C2	-14.76	114.40	120.30
3	X	28	C	C6-N1-C2	-13.73	114.81	120.30
3	X	25	C	C6-N1-C2	-13.67	114.83	120.30
2	W	35	C	C6-N1-C2	-13.54	114.88	120.30
3	X	49	C	C6-N1-C2	-13.37	114.95	120.30
2	W	72	C	C6-N1-C2	-13.18	115.03	120.30
3	X	21	C	C6-N1-C2	-12.46	115.32	120.30
3	X	10	C	C6-N1-C2	-12.30	115.38	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	W	68	C	C6-N1-C2	-11.86	115.56	120.30
2	W	56	C	C6-N1-C2	-11.85	115.56	120.30
3	X	32	C	C6-N1-C2	-11.62	115.65	120.30
2	W	5	C	C6-N1-C2	-11.50	115.70	120.30
3	X	6	A	C8-N9-C4	-11.16	101.34	105.80
3	X	99	C	N1-C1'-C2'	11.12	128.45	114.00
3	X	60	C	C6-N1-C2	-10.74	116.00	120.30
2	W	80	C	C6-N1-C2	-10.65	116.04	120.30
2	W	74	C	C6-N1-C2	-10.43	116.13	120.30
2	W	62	C	C6-N1-C2	-10.42	116.13	120.30
3	X	77	C	C6-N1-C2	-10.21	116.21	120.30
2	W	85	C	C6-N1-C2	-9.87	116.35	120.30
3	X	71	C	C6-N1-C2	-9.76	116.39	120.30
2	W	73	C	N3-C4-C5	-9.57	118.07	121.90
3	X	59	C	C6-N1-C2	-9.55	116.48	120.30
2	W	73	C	C5-C6-N1	9.51	125.75	121.00
3	X	25	C	C5-C6-N1	9.44	125.72	121.00
2	W	82	C	C6-N1-C2	-9.36	116.56	120.30
3	X	55	C	C6-N1-C2	-9.25	116.60	120.30
3	X	40	C	C6-N1-C2	-9.25	116.60	120.30
3	X	21	C	N3-C4-C5	-9.23	118.21	121.90
3	X	25	C	C2-N1-C1'	9.08	128.79	118.80
2	W	32	A	N1-C6-N6	-9.01	113.20	118.60
3	X	83	C	C6-N1-C2	-8.86	116.75	120.30
2	W	57	C	C6-N1-C2	-8.85	116.76	120.30
3	X	65	C	C6-N1-C2	-8.73	116.81	120.30
3	X	57	C	C6-N1-C2	-8.66	116.83	120.30
3	X	99	C	P-O5'-C5'	-8.66	107.05	120.90
3	X	2	C	C6-N1-C2	-8.62	116.85	120.30
2	W	53	C	C2-N1-C1'	8.43	128.07	118.80
1	L	325	LEU	CB-CG-CD2	-8.40	96.72	111.00
3	X	49	C	N3-C2-O2	-8.37	116.04	121.90
3	X	2	C	N3-C2-O2	-8.33	116.07	121.90
3	X	69	A	C8-N9-C4	-8.28	102.49	105.80
2	W	35	C	N3-C4-C5	-8.21	118.61	121.90
3	X	22	C	C6-N1-C2	-8.19	117.02	120.30
3	X	55	C	N3-C2-O2	-8.18	116.17	121.90
2	W	5	C	N3-C4-C5	-8.16	118.63	121.90
3	X	6	A	N7-C8-N9	8.16	117.88	113.80
2	W	39	A	C8-N9-C4	-8.10	102.56	105.80
3	X	81	C	O5'-P-OP1	-8.09	98.42	105.70
2	W	73	C	C2-N1-C1'	8.07	127.67	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	W	4	C	C6-N1-C2	-8.05	117.08	120.30
1	U	156	GLN	CB-CA-C	7.99	126.37	110.40
3	X	83	C	N3-C4-C5	-7.90	118.74	121.90
3	X	54	C	N3-C4-C5	7.90	125.06	121.90
3	X	18	C	O5'-P-OP1	-7.80	98.68	105.70
3	X	30	A	N1-C6-N6	7.80	123.28	118.60
3	X	12	A	C8-N9-C4	-7.76	102.70	105.80
2	W	82	C	N3-C2-O2	-7.73	116.49	121.90
3	X	18	C	OP1-P-OP2	7.71	131.16	119.60
3	X	94	C	N3-C2-O2	-7.68	116.52	121.90
3	X	26	C	C6-N1-C2	-7.65	117.24	120.30
3	X	10	C	N3-C2-O2	-7.64	116.55	121.90
2	W	53	C	N3-C4-C5	-7.64	118.84	121.90
2	W	35	C	N3-C2-O2	-7.60	116.58	121.90
2	W	7	C	C6-N1-C2	-7.58	117.27	120.30
3	X	67	C	C5-C6-N1	7.54	124.77	121.00
1	B	102	LYS	CD-CE-NZ	7.47	128.89	111.70
2	W	81	C	C6-N1-C2	-7.47	117.31	120.30
1	M	95	VAL	CG1-CB-CG2	7.40	122.73	110.90
2	W	89	C	C6-N1-C2	-7.39	117.34	120.30
2	W	53	C	C5-C6-N1	7.39	124.69	121.00
3	X	74	C	C6-N1-C2	-7.33	117.37	120.30
3	X	40	C	C2-N1-C1'	7.30	126.84	118.80
3	X	23	C	C6-N1-C2	-7.29	117.39	120.30
2	W	47	C	C6-N1-C2	-7.24	117.40	120.30
3	X	30	A	C8-N9-C4	-7.22	102.91	105.80
3	X	56	C	N3-C2-O2	-7.19	116.86	121.90
3	X	66	C	C6-N1-C2	-7.17	117.43	120.30
3	X	92	C	N3-C2-O2	-7.17	116.88	121.90
3	X	4	C	N3-C4-N4	7.13	122.99	118.00
3	X	49	C	C2-N1-C1'	7.13	126.64	118.80
2	W	11	C	C6-N1-C2	-7.09	117.46	120.30
3	X	93	A	N1-C6-N6	7.07	122.84	118.60
3	X	92	C	C6-N1-C2	-7.02	117.49	120.30
3	X	28	C	N3-C2-O2	-7.02	116.98	121.90
3	X	20	C	C6-N1-C2	-7.02	117.49	120.30
2	W	4	C	C5-C6-N1	7.00	124.50	121.00
2	W	53	C	N3-C2-O2	-6.91	117.06	121.90
2	W	56	C	N3-C4-C5	-6.91	119.14	121.90
2	W	18	A	N1-C6-N6	6.89	122.73	118.60
3	X	21	C	N3-C2-O2	-6.87	117.09	121.90
2	W	42	A	N1-C6-N6	6.86	122.72	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	N	325	LEU	CB-CG-CD2	-6.85	99.36	111.00
2	W	74	C	C5-C6-N1	6.81	124.41	121.00
2	W	10	C	N3-C2-O2	-6.79	117.14	121.90
3	X	28	C	N3-C4-C5	-6.79	119.18	121.90
3	X	86	C	N3-C4-C5	-6.76	119.20	121.90
3	X	99	C	C5-C4-N4	-6.75	115.48	120.20
2	W	25	C	C6-N1-C2	-6.73	117.61	120.30
2	W	35	C	C5-C6-N1	6.72	124.36	121.00
3	X	26	C	C5-C6-N1	6.69	124.34	121.00
3	X	30	A	C4-C5-C6	6.63	120.32	117.00
2	W	58	C	N1-C2-O2	6.61	122.86	118.90
1	L	57	LEU	CB-CG-CD1	-6.58	99.81	111.00
2	W	59	A	N1-C6-N6	6.55	122.53	118.60
3	X	56	C	C6-N1-C2	-6.54	117.68	120.30
2	W	56	C	C5-C6-N1	6.54	124.27	121.00
2	W	72	C	N3-C4-C5	-6.54	119.29	121.90
2	W	71	C	C6-N1-C2	-6.52	117.69	120.30
3	X	7	A	N1-C6-N6	-6.51	114.69	118.60
2	W	83	C	C6-N1-C2	-6.46	117.72	120.30
2	W	89	C	N3-C2-O2	-6.46	117.38	121.90
3	X	27	C	C6-N1-C2	6.46	122.88	120.30
3	X	74	C	C5-C6-N1	6.43	124.21	121.00
3	X	57	C	N3-C4-C5	-6.42	119.33	121.90
1	D	294	LEU	CB-CG-CD1	6.41	121.90	111.00
2	W	91	C	C6-N1-C2	-6.40	117.74	120.30
3	X	54	C	N3-C4-N4	-6.35	113.55	118.00
3	X	27	C	N3-C4-C5	6.32	124.43	121.90
2	W	81	C	O5'-P-OP1	-6.32	100.01	105.70
2	W	67	C	OP1-P-OP2	-6.32	110.12	119.60
3	X	65	C	N3-C4-C5	-6.31	119.38	121.90
3	X	4	C	C5-C6-N1	6.31	124.15	121.00
3	X	67	C	C2-N3-C4	6.30	123.05	119.90
3	X	50	A	C8-N9-C4	-6.30	103.28	105.80
3	X	86	C	C6-N1-C2	-6.30	117.78	120.30
2	W	76	C	C5-C6-N1	6.26	124.13	121.00
3	X	32	C	O4'-C1'-N1	6.26	113.21	108.20
1	F	78	MET	CG-SD-CE	-6.25	90.21	100.20
3	X	32	C	C5-C6-N1	6.24	124.12	121.00
3	X	25	C	N3-C2-O2	-6.24	117.53	121.90
2	W	5	C	C5-C6-N1	6.24	124.12	121.00
3	X	99	C	C4'-C3'-O3'	-6.23	96.31	109.40
3	X	46	C	C6-N1-C2	-6.23	117.81	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	X	98	C	O4'-C1'-N1	6.23	113.18	108.20
2	W	68	C	N3-C4-C5	-6.22	119.41	121.90
3	X	8	C	C6-N1-C2	-6.21	117.82	120.30
3	X	47	C	N3-C2-O2	-6.20	117.56	121.90
2	W	35	C	C2-N1-C1'	6.20	125.61	118.80
1	J	294	LEU	CB-CG-CD1	6.18	121.52	111.00
2	W	39	A	N9-C4-C5	6.18	108.27	105.80
3	X	33	C	C6-N1-C2	-6.16	117.84	120.30
2	W	67	C	N3-C4-C5	6.14	124.36	121.90
2	W	58	C	N3-C2-O2	-6.14	117.60	121.90
2	W	1	C	C6-N1-C2	-6.10	117.86	120.30
3	X	72	C	C6-N1-C2	-6.09	117.86	120.30
2	W	10	C	C6-N1-C2	-6.09	117.87	120.30
2	W	29	C	N3-C2-O2	-6.09	117.64	121.90
1	R	102	LYS	CD-CE-NZ	6.05	125.62	111.70
3	X	36	C	C6-N1-C2	6.05	122.72	120.30
2	W	94	C	N3-C2-O2	-6.05	117.67	121.90
3	X	97	A	C5-C6-N1	-6.02	114.69	117.70
1	O	23	VAL	CG1-CB-CG2	6.02	120.53	110.90
3	X	90	C	C6-N1-C2	-5.99	117.90	120.30
3	X	85	C	C6-N1-C2	-5.99	117.91	120.30
3	X	25	C	N3-C4-C5	-5.98	119.51	121.90
2	W	82	C	N3-C4-C5	-5.98	119.51	121.90
1	K	4	ASP	CB-CG-OD1	5.94	123.65	118.30
2	W	7	C	C5-C6-N1	5.94	123.97	121.00
1	H	65	LEU	CB-CG-CD1	5.93	121.08	111.00
3	X	2	C	O5'-P-OP1	5.93	117.82	110.70
1	V	317	CYS	CA-CB-SG	5.92	124.66	114.00
3	X	30	A	C5-C6-N1	-5.91	114.74	117.70
3	X	4	C	C5-C4-N4	-5.91	116.06	120.20
3	X	10	C	N3-C4-C5	-5.91	119.54	121.90
3	X	30	A	C6-C5-N7	-5.91	128.17	132.30
1	L	345	LEU	CB-CG-CD2	-5.89	100.98	111.00
2	W	32	A	C4-C5-N7	-5.89	107.75	110.70
3	X	5	C	C2-N1-C1'	5.89	125.28	118.80
3	X	81	C	C2-N1-C1'	5.88	125.27	118.80
3	X	77	C	C2-N1-C1'	5.87	125.25	118.80
3	X	97	A	C2-N3-C4	-5.87	107.67	110.60
3	X	47	C	N1-C2-O2	5.85	122.41	118.90
3	X	5	C	N1-C2-O2	5.82	122.39	118.90
2	W	35	C	N1-C2-O2	5.82	122.39	118.90
3	X	71	C	N3-C4-C5	-5.82	119.57	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	W	46	C	C5-C4-N4	5.81	124.27	120.20
2	W	52	C	C2-N1-C1'	5.81	125.19	118.80
2	W	79	A	C8-N9-C4	-5.81	103.47	105.80
3	X	94	C	N1-C2-O2	5.81	122.39	118.90
2	W	17	A	C8-N9-C4	5.81	108.12	105.80
3	X	20	C	N3-C2-O2	-5.80	117.84	121.90
2	W	29	C	N1-C2-O2	5.77	122.36	118.90
2	W	60	C	C6-N1-C2	-5.76	118.00	120.30
2	W	62	C	OP1-P-OP2	-5.76	110.96	119.60
2	W	6	C	C6-N1-C2	-5.76	118.00	120.30
3	X	65	C	N3-C2-O2	-5.74	117.88	121.90
2	W	99	C	C5-C6-N1	5.74	123.87	121.00
3	X	89	C	N1-C2-O2	5.73	122.34	118.90
1	R	9	LYS	CD-CE-NZ	-5.72	98.55	111.70
2	W	89	C	C2-N1-C1'	5.71	125.08	118.80
3	X	60	C	N3-C2-O2	-5.71	117.90	121.90
2	W	52	C	N3-C2-O2	-5.70	117.91	121.90
2	W	1	C	O4'-C1'-N1	5.70	112.76	108.20
3	X	64	C	C6-N1-C2	-5.69	118.02	120.30
3	X	49	C	C5-C6-N1	5.67	123.83	121.00
1	M	333	CYS	CA-CB-SG	-5.65	103.83	114.00
1	J	61	SER	CB-CA-C	5.64	120.82	110.10
2	W	52	C	N1-C2-O2	5.64	122.28	118.90
2	W	71	C	C5-C6-N1	5.64	123.82	121.00
3	X	5	C	N3-C2-O2	-5.64	117.95	121.90
3	X	57	C	OP1-P-OP2	-5.64	111.14	119.60
2	W	76	C	C6-N1-C2	-5.63	118.05	120.30
2	W	68	C	N3-C2-O2	-5.63	117.96	121.90
2	W	83	C	N3-C4-C5	-5.63	119.65	121.90
2	W	58	C	C6-N1-C2	-5.63	118.05	120.30
3	X	54	C	C6-N1-C2	5.62	122.55	120.30
3	X	40	C	N3-C2-O2	-5.61	117.97	121.90
1	A	239	LEU	CB-CG-CD2	-5.61	101.47	111.00
2	W	89	C	N1-C2-O2	5.61	122.26	118.90
2	W	56	C	OP2-P-O3'	5.60	117.52	105.20
3	X	71	C	OP1-P-OP2	-5.60	111.19	119.60
3	X	93	A	C5-C6-N1	-5.59	114.90	117.70
3	X	20	C	O5'-P-OP2	-5.58	100.68	105.70
1	D	33	ILE	CG1-CB-CG2	-5.58	99.13	111.40
3	X	55	C	N1-C2-O2	5.57	122.24	118.90
2	W	81	C	N3-C2-O2	-5.57	118.00	121.90
3	X	99	C	N3-C4-C5	5.57	124.13	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	W	85	C	C5-C6-N1	5.56	123.78	121.00
2	W	46	C	C6-N1-C2	-5.56	118.08	120.30
2	W	6	C	N3-C2-O2	-5.55	118.01	121.90
3	X	2	C	N1-C2-O2	5.55	122.23	118.90
3	X	23	C	C5-C6-N1	5.55	123.78	121.00
2	W	74	C	N3-C2-O2	-5.54	118.02	121.90
2	W	62	C	O4'-C1'-N1	5.54	112.63	108.20
3	X	67	C	O5'-P-OP2	-5.53	100.72	105.70
3	X	29	C	N3-C2-O2	-5.53	118.03	121.90
1	T	294	LEU	CB-CG-CD1	5.52	120.38	111.00
2	W	25	C	C5-C6-N1	5.52	123.76	121.00
3	X	60	C	C2-N1-C1'	5.51	124.86	118.80
3	X	69	A	N9-C4-C5	5.47	107.99	105.80
2	W	2	C	O5'-P-OP2	-5.47	100.78	105.70
1	I	102	LYS	CD-CE-NZ	5.46	124.25	111.70
2	W	13	C	N1-C2-O2	5.45	122.17	118.90
2	W	18	A	C2-N3-C4	-5.44	107.88	110.60
1	Q	65	LEU	CB-CG-CD2	-5.43	101.77	111.00
3	X	38	C	C6-N1-C2	-5.42	118.13	120.30
2	W	88	A	C8-N9-C4	-5.41	103.63	105.80
3	X	12	A	C4-C5-C6	5.39	119.69	117.00
3	X	22	C	N3-C2-O2	-5.39	118.13	121.90
3	X	59	C	O4'-C1'-N1	5.39	112.51	108.20
3	X	35	C	C6-N1-C2	-5.38	118.15	120.30
2	W	54	C	C6-N1-C2	5.38	122.45	120.30
3	X	36	C	N3-C4-C5	5.37	124.05	121.90
3	X	25	C	N1-C2-O2	5.32	122.09	118.90
3	X	33	C	N3-C2-O2	-5.31	118.18	121.90
3	X	71	C	N3-C2-O2	-5.31	118.19	121.90
2	W	72	C	C2-N1-C1'	5.31	124.64	118.80
3	X	19	C	C2-N1-C1'	5.30	124.63	118.80
2	W	23	A	N1-C6-N6	5.30	121.78	118.60
2	W	32	A	N9-C4-C5	5.29	107.91	105.80
3	X	85	C	O4'-C1'-N1	5.28	112.43	108.20
1	K	8	PHE	CB-CG-CD1	-5.27	117.11	120.80
3	X	30	A	N7-C8-N9	5.27	116.44	113.80
3	X	59	C	C2-N1-C1'	5.25	124.58	118.80
2	W	6	C	N1-C2-O2	5.24	122.05	118.90
3	X	61	A	N1-C6-N6	5.24	121.74	118.60
2	W	32	A	C5-C6-N6	5.23	127.89	123.70
3	X	40	C	O4'-C1'-N1	5.23	112.39	108.20
2	W	28	C	C6-N1-C2	-5.23	118.21	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	X	28	C	C5-C4-N4	5.22	123.85	120.20
3	X	86	C	N3-C4-N4	5.20	121.64	118.00
3	X	89	C	C6-N1-C2	5.20	122.38	120.30
2	W	14	A	O4'-C1'-N9	5.19	112.35	108.20
2	W	60	C	C2-N1-C1'	5.19	124.51	118.80
3	X	59	C	N3-C4-C5	-5.18	119.83	121.90
1	V	14	VAL	CA-CB-CG2	-5.18	103.13	110.90
1	J	258	LEU	CB-CG-CD1	-5.18	102.20	111.00
2	W	10	C	N1-C2-O2	5.18	122.00	118.90
3	X	88	A	C8-N9-C4	-5.18	103.73	105.80
2	W	6	C	C2-N1-C1'	5.15	124.47	118.80
2	W	62	C	C5-C6-N1	5.15	123.57	121.00
3	X	62	A	C8-N9-C4	-5.15	103.74	105.80
2	W	4	C	C2-N3-C4	5.14	122.47	119.90
2	W	72	C	N3-C2-O2	-5.13	118.31	121.90
2	W	83	C	C4-C5-C6	5.12	119.96	117.40
1	N	269	ILE	CG1-CB-CG2	-5.12	100.14	111.40
3	X	53	A	O4'-C1'-N9	5.12	112.29	108.20
2	W	99	C	N1-C2-O2	5.12	121.97	118.90
1	S	366	LEU	CB-CG-CD2	5.11	119.69	111.00
2	W	94	C	C6-N1-C2	-5.11	118.26	120.30
1	D	43	LEU	CB-CG-CD1	-5.11	102.32	111.00
1	T	95	VAL	CG1-CB-CG2	5.11	119.07	110.90
3	X	76	C	OP1-P-OP2	-5.10	111.95	119.60
2	W	81	C	C2-N1-C1'	5.10	124.41	118.80
3	X	59	C	C5-C6-N1	5.10	123.55	121.00
1	L	20	GLU	CA-CB-CG	-5.09	102.19	113.40
2	W	32	A	C2-N3-C4	5.09	113.14	110.60
3	X	6	A	N1-C6-N6	5.09	121.65	118.60
2	W	56	C	O4'-C1'-N1	5.09	112.27	108.20
1	U	122	LEU	CA-CB-CG	5.09	127.00	115.30
1	P	366	LEU	CB-CG-CD1	5.08	119.64	111.00
1	Q	292	LEU	CB-CG-CD1	5.07	119.62	111.00
1	P	126	MET	CA-CB-CG	5.06	121.91	113.30
1	T	126	MET	CA-CB-CG	5.05	121.89	113.30
2	W	74	C	C2-N1-C1'	5.05	124.35	118.80
3	X	4	C	C6-N1-C2	-5.05	118.28	120.30
1	N	292	LEU	CB-CG-CD2	-5.04	102.44	111.00
2	W	68	C	C5-C6-N1	5.03	123.52	121.00
1	T	239	LEU	CB-CG-CD1	-5.01	102.48	111.00
3	X	3	A	N1-C6-N6	5.00	121.60	118.60
2	W	94	C	N1-C2-O2	5.00	121.90	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	X	41	A	C8-N9-C4	-5.00	103.80	105.80
2	W	32	A	N3-C4-C5	-5.00	123.30	126.80

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3322	0	3277	86	0
1	B	3331	0	3290	98	0
1	C	3322	0	3277	93	0
1	D	3322	0	3277	82	0
1	E	3322	0	3277	104	0
1	F	3322	0	3277	87	0
1	G	3322	0	3277	104	0
1	H	3322	0	3277	100	0
1	I	3322	0	3277	98	0
1	J	3322	0	3277	88	0
1	K	3339	0	3294	128	0
1	L	3331	0	3290	95	0
1	M	3339	0	3294	104	1
1	N	3322	0	3277	89	0
1	O	3331	0	3290	77	0
1	P	3339	0	3294	73	0
1	Q	3322	0	3277	82	0
1	R	3322	0	3277	92	0
1	S	3322	0	3277	77	0
1	T	3322	0	3277	109	0
1	U	3322	0	3277	81	0
1	V	3331	0	3290	77	1
2	W	2059	0	1091	33	0
3	X	2044	0	1091	37	0
4	W	5	0	0	0	0
4	X	5	0	0	3	0
All	All	77284	0	74379	1846	1

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 12.

All (1846) 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:K:96:ILE:HD11	1:K:108:LEU:HG	1.23	1.10
1:D:96:ILE:CD1	1:D:108:LEU:HA	1.84	1.07
1:C:134:VAL:HG23	1:C:135:PRO:HD3	1.38	1.05
1:D:96:ILE:HD11	1:D:108:LEU:HA	1.41	1.01
1:C:84:THR:HB	1:C:102:LYS:HG2	1.41	0.99
1:I:359:PHE:HB3	1:K:8:PHE:HZ	1.26	0.99
1:I:359:PHE:HB3	1:K:8:PHE:CZ	2.04	0.93
1:P:360:PHE:HB2	1:R:9:LYS:HE3	1.50	0.92
1:H:194:CYS:HB2	1:H:197:TRP:CD1	2.04	0.91
1:C:80:PHE:CZ	1:C:134:VAL:HB	2.06	0.90
1:H:12:ASN:OD1	1:H:13:GLN:N	2.06	0.88
1:T:88:ASP:HB3	1:T:98:ARG:HA	1.53	0.88
1:B:180:LYS:HE2	1:B:183:GLU:HA	1.54	0.87
1:E:122:LEU:HD13	1:S:122:LEU:HB2	1.57	0.87
1:C:36:LEU:HD22	1:C:93:GLY:HA3	1.57	0.87
1:K:41:ILE:HB	1:K:112:LYS:HD3	1.57	0.87
1:G:249:ILE:HD11	1:G:349:PHE:CG	2.09	0.87
1:V:146:SER:HB2	1:V:169:ILE:HD13	1.55	0.86
1:M:305:VAL:HG12	1:M:308:VAL:HB	1.56	0.85
1:N:327:ALA:HA	3:X:18:C:H5'	1.58	0.85
1:N:257:ILE:HB	1:O:8:PHE:CZ	2.11	0.84
1:U:136:GLU:HG3	1:U:179:VAL:HG21	1.57	0.84
1:R:180:LYS:HE2	1:R:183:GLU:HA	1.60	0.84
1:S:327:ALA:HA	3:X:72:C:H5'	1.59	0.84
1:A:290:ARG:HD2	1:A:295:SER:HB2	1.57	0.84
1:E:327:ALA:HA	2:W:81:C:H5'	1.60	0.84
1:C:358:ARG:HH21	1:D:263:LYS:HE2	1.43	0.83
1:H:65:LEU:HB2	1:H:197:TRP:CZ2	2.13	0.83
1:E:174:GLU:HG2	1:E:180:LYS:HG3	1.60	0.83
1:H:180:LYS:HE3	1:H:183:GLU:HA	1.61	0.83
1:L:150:LEU:O	1:L:153:ILE:HG22	1.77	0.83
1:D:33:ILE:HG12	1:D:294:LEU:HD22	1.60	0.83
1:L:9:LYS:HZ2	1:T:366:LEU:HB2	1.44	0.82
1:M:443:ASN:O	1:M:447:SER:OG	1.97	0.82
1:F:122:LEU:HD22	1:V:122:LEU:HB3	1.61	0.82
1:B:63:ALA:HA	1:B:190:THR:HG22	1.60	0.82
1:B:359:PHE:HB3	1:D:8:PHE:HZ	1.43	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:176:ALA:HB1	1:N:177:PRO:HD2	1.61	0.81
1:D:96:ILE:HD13	1:D:108:LEU:HA	1.60	0.81
1:G:254:ARG:HH11	1:H:6:ILE:HA	1.44	0.81
1:T:84:THR:HG22	1:T:102:LYS:HG2	1.62	0.81
1:P:131:ASP:HB2	1:P:132:PRO:HD3	1.60	0.81
1:L:176:ALA:HB2	1:M:65:LEU:HD13	1.63	0.80
1:E:53:TYR:CD2	1:E:56:VAL:HG11	2.17	0.80
1:M:10:VAL:HG23	1:U:359:PHE:HE1	1.45	0.80
1:E:254:ARG:HG3	1:E:255:GLU:N	1.97	0.80
1:S:45:LYS:HB2	1:S:115:ASP:HA	1.62	0.80
1:S:10:VAL:HG22	1:S:11:ASN:H	1.47	0.80
1:R:290:ARG:HD2	1:R:295:SER:HB2	1.64	0.79
1:E:290:ARG:HD2	1:E:295:SER:HB2	1.65	0.79
1:G:259:TYR:HB3	1:G:345:LEU:HD21	1.65	0.79
1:F:9:LYS:NZ	1:F:17:LEU:HD12	1.97	0.79
1:T:87:GLU:HA	1:T:99:LYS:HB3	1.65	0.79
1:B:146:SER:HB2	1:B:169:ILE:HD13	1.62	0.79
3:X:1:C:H5"	4:X:101:PO4:P	2.23	0.78
1:D:327:ALA:HA	2:W:72:C:H5'	1.65	0.78
1:M:47:PRO:HB3	1:M:120:TRP:CH2	2.18	0.78
1:M:294:LEU:HD23	1:M:294:LEU:H	1.46	0.78
1:L:9:LYS:NZ	1:T:366:LEU:HB2	1.99	0.78
1:P:142:GLY:HA2	1:P:224:ILE:HG23	1.66	0.78
1:C:146:SER:HB2	1:C:169:ILE:HD13	1.64	0.77
1:H:84:THR:HA	1:H:102:LYS:HA	1.66	0.77
1:S:42:THR:HG22	1:S:112:LYS:HD2	1.67	0.77
1:Q:59:GLY:HA3	1:Q:65:LEU:HD13	1.67	0.76
1:F:327:ALA:HA	2:W:90:C:H5'	1.68	0.76
1:D:268:GLU:HB3	1:D:305:VAL:HG23	1.67	0.76
1:D:180:LYS:HE2	1:D:183:GLU:HA	1.67	0.76
3:X:36:C:H2'	3:X:38:C:H5"	1.66	0.76
1:U:327:ALA:HA	3:X:90:C:H5'	1.68	0.76
1:B:290:ARG:HD2	1:B:295:SER:HB2	1.68	0.75
1:E:366:LEU:HD11	1:G:11:ASN:HB2	1.69	0.75
1:O:7:VAL:HB	1:O:17:LEU:HD11	1.68	0.75
1:F:48:ASP:HB2	1:F:51:LYS:HB2	1.66	0.75
1:Q:56:VAL:HG23	1:Q:65:LEU:HD21	1.68	0.75
1:L:305:VAL:HG12	1:L:308:VAL:HB	1.69	0.75
1:F:249:ILE:HD11	1:F:349:PHE:CG	2.22	0.74
1:V:82:GLU:HG2	1:V:102:LYS:HD2	1.67	0.74
1:F:268:GLU:HB3	1:F:305:VAL:HG23	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:305:VAL:HG12	1:B:308:VAL:HB	1.69	0.74
1:F:275:PRO:HD3	1:G:18:LYS:HD2	1.70	0.74
1:L:254:ARG:HD2	1:M:7:VAL:H	1.53	0.74
1:S:27:GLU:HG2	1:S:28:TYR:H	1.53	0.74
1:K:59:GLY:HA3	1:K:122:LEU:HD13	1.69	0.73
1:O:58:SER:HB2	1:O:124:GLY:O	1.88	0.73
1:Q:58:SER:HB3	1:Q:122:LEU:HD13	1.70	0.73
1:S:133:THR:HG22	1:S:136:GLU:HG3	1.70	0.73
1:L:56:VAL:HG13	1:L:140:LEU:HD21	1.68	0.73
1:A:415:ARG:NH2	1:K:347:GLU:O	2.21	0.73
1:H:30:TYR:HB3	1:H:277:GLN:NE2	2.02	0.73
1:I:56:VAL:HG23	1:I:140:LEU:HD21	1.69	0.73
1:C:290:ARG:HD2	1:C:295:SER:HB2	1.69	0.73
1:C:176:ALA:HB1	1:C:177:PRO:HD2	1.70	0.73
1:M:47:PRO:HB3	1:M:120:TRP:HH2	1.51	0.73
1:D:96:ILE:HD11	1:D:108:LEU:CA	2.18	0.73
1:E:53:TYR:CE2	1:E:56:VAL:HG11	2.23	0.73
1:L:9:LYS:HG3	1:L:9:LYS:O	1.89	0.73
1:M:146:SER:HB2	1:M:169:ILE:HD13	1.70	0.72
1:A:126:MET:HE3	1:A:128:LEU:O	1.89	0.72
1:I:27:GLU:HG2	1:I:28:TYR:H	1.54	0.72
1:O:146:SER:HB2	1:O:169:ILE:HD13	1.71	0.72
1:A:52:ALA:O	1:A:56:VAL:HG22	1.89	0.72
1:E:352:LYS:HD2	1:F:415:ARG:HH21	1.55	0.72
1:R:9:LYS:HD2	1:R:9:LYS:O	1.89	0.72
1:C:84:THR:HA	1:C:102:LYS:HA	1.72	0.72
1:C:98:ARG:HB3	1:C:101:ASP:HB2	1.72	0.72
1:O:21:ILE:C	1:O:22:ILE:HD12	2.10	0.71
1:T:90:THR:H	1:T:95:VAL:HG23	1.53	0.71
1:U:29:LYS:HB3	1:U:295:SER:O	1.91	0.71
1:J:434:ARG:HB2	1:J:437:SER:HB3	1.71	0.71
1:Q:213:PHE:HE1	1:Q:217:ILE:HD11	1.55	0.71
1:Q:363:GLU:HG3	1:V:9:LYS:HE3	1.71	0.71
1:N:290:ARG:HD2	1:N:295:SER:HB2	1.71	0.71
1:N:176:ALA:O	1:N:178:PHE:N	2.22	0.71
1:R:254:ARG:HD3	1:V:7:VAL:H	1.55	0.71
1:T:305:VAL:HG22	1:T:308:VAL:HB	1.73	0.71
1:B:9:LYS:HZ1	1:K:366:LEU:HB2	1.55	0.71
1:B:359:PHE:HB3	1:D:8:PHE:CZ	2.26	0.70
1:G:352:LYS:HD2	1:H:415:ARG:HH12	1.55	0.70
1:P:366:LEU:HB2	1:R:9:LYS:HZ3	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:96:ILE:HD11	1:F:108:LEU:HA	1.72	0.70
1:G:279:THR:O	1:H:23:VAL:HG23	1.91	0.70
1:Q:36:LEU:HD22	1:Q:93:GLY:HA3	1.73	0.70
1:G:90:THR:OG1	1:G:94:ILE:HA	1.92	0.70
1:I:305:VAL:HG22	1:I:308:VAL:HB	1.74	0.70
1:H:9:LYS:O	1:H:9:LYS:HD2	1.91	0.70
1:B:56:VAL:HG23	1:B:140:LEU:HD21	1.73	0.70
1:N:293:GLY:O	1:N:294:LEU:HG	1.92	0.70
1:C:62:ALA:HB2	1:C:124:GLY:HA3	1.73	0.70
1:E:143:LEU:HD12	1:E:187:LEU:HD13	1.73	0.70
1:R:146:SER:HB2	1:R:169:ILE:HD13	1.74	0.70
1:M:82:GLU:HG2	1:M:104:THR:HG22	1.73	0.69
1:N:180:LYS:HE2	1:N:183:GLU:HA	1.74	0.69
1:U:437:SER:O	1:U:440:GLU:HG3	1.92	0.69
1:K:4:ASP:OD2	1:K:6:ILE:HG22	1.90	0.69
1:L:153:ILE:HD11	1:L:161:TYR:CE1	2.27	0.69
1:R:252:THR:HG23	1:R:255:GLU:H	1.56	0.69
3:X:1:C:H5"	4:X:101:PO4:O3	1.92	0.69
1:I:96:ILE:HD11	1:I:108:LEU:HA	1.74	0.69
1:J:86:PRO:O	1:J:99:LYS:NZ	2.24	0.69
1:Q:167:ASP:O	1:Q:171:GLN:NE2	2.26	0.69
1:J:364:LYS:H	1:J:364:LYS:HD2	1.58	0.69
1:L:82:GLU:HG2	1:L:102:LYS:HE3	1.74	0.69
1:G:359:PHE:CE1	1:I:10:VAL:HG21	2.28	0.69
1:S:249:ILE:HD11	1:S:349:PHE:CG	2.27	0.69
1:B:249:ILE:HG22	1:B:251:LEU:HB2	1.74	0.68
1:O:424:TYR:HD1	1:O:442:LEU:HD13	1.58	0.68
1:P:7:VAL:HG12	1:P:19:PRO:HA	1.74	0.68
1:K:168:ARG:O	1:K:172:ILE:HG12	1.92	0.68
1:U:153:ILE:HD11	1:U:162:LYS:HG3	1.75	0.68
1:M:54:LYS:HG2	1:M:126:MET:HE1	1.76	0.68
1:B:62:ALA:HB2	1:B:124:GLY:HA3	1.76	0.68
1:J:133:THR:HG22	1:J:136:GLU:HG2	1.75	0.68
1:K:153:ILE:HD11	1:K:162:LYS:HG3	1.75	0.68
1:A:146:SER:HB2	1:A:169:ILE:HD13	1.76	0.68
1:H:340:VAL:HG22	1:H:416:LEU:HG	1.75	0.68
1:I:58:SER:HB2	1:I:124:GLY:O	1.94	0.68
1:U:90:THR:OG1	1:U:95:VAL:HG22	1.94	0.68
1:F:249:ILE:HD11	1:F:349:PHE:CD2	2.29	0.68
1:B:366:LEU:HD12	1:D:10:VAL:HG13	1.75	0.67
1:E:268:GLU:HB3	1:E:305:VAL:HG23	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:305:VAL:HG22	1:E:308:VAL:HB	1.75	0.67
1:L:153:ILE:HG23	1:L:162:LYS:HE2	1.77	0.67
1:R:251:LEU:HD22	1:R:255:GLU:HB3	1.76	0.67
1:A:10:VAL:HG11	1:A:18:LYS:NZ	2.09	0.67
1:I:254:ARG:HD3	1:J:8:PHE:HB2	1.76	0.67
1:Q:327:ALA:HA	3:X:45:C:H5'	1.77	0.67
1:I:325:LEU:HD12	1:I:439:ALA:HB2	1.76	0.67
1:T:242:PHE:CE2	1:T:246:ILE:HD11	2.30	0.67
1:U:205:PHE:O	1:U:209:THR:HG23	1.94	0.67
1:E:136:GLU:HG2	1:E:179:VAL:HG21	1.76	0.67
1:J:180:LYS:HE2	1:J:183:GLU:HA	1.76	0.67
1:Q:196:ASN:O	1:Q:199:THR:HG22	1.95	0.67
1:U:305:VAL:HG22	1:U:308:VAL:HB	1.76	0.67
1:D:136:GLU:HG3	1:D:179:VAL:HG21	1.76	0.67
1:L:323:ARG:HH12	3:X:99:C:H5"	1.60	0.67
1:P:180:LYS:HE2	1:P:183:GLU:HA	1.77	0.67
1:G:268:GLU:HB3	1:G:305:VAL:HG23	1.77	0.66
1:N:340:VAL:HG13	1:N:416:LEU:HG	1.76	0.66
1:F:122:LEU:HD11	1:F:126:MET:HE1	1.78	0.66
1:P:366:LEU:HB2	1:R:9:LYS:NZ	2.11	0.66
1:V:117:GLU:OE1	1:V:117:GLU:N	2.27	0.66
1:F:9:LYS:HZ3	1:F:17:LEU:HD12	1.60	0.66
1:B:289:PHE:HB2	1:B:294:LEU:HD11	1.78	0.66
1:J:103:ILE:HD11	1:J:217:ILE:HD11	1.78	0.66
1:C:33:ILE:HG13	1:C:92:TYR:OH	1.95	0.66
1:Q:254:ARG:HG3	1:R:8:PHE:HB3	1.78	0.66
1:I:96:ILE:CD1	1:I:108:LEU:HA	2.24	0.66
1:B:136:GLU:HG3	1:B:179:VAL:HG21	1.77	0.66
1:N:60:MET:SD	1:N:190:THR:HG21	2.36	0.66
1:R:56:VAL:HG23	1:R:140:LEU:HD21	1.78	0.66
1:K:65:LEU:HD12	1:K:70:VAL:HG21	1.78	0.66
1:M:77:ALA:HA	1:M:80:PHE:HD2	1.59	0.66
1:C:443:ASN:O	1:C:447:SER:OG	2.14	0.65
1:D:31:PRO:HB3	1:D:289:PHE:CD2	2.31	0.65
1:V:92:TYR:CD2	1:V:285:TYR:HB2	2.30	0.65
1:D:146:SER:HB2	1:D:169:ILE:HD13	1.78	0.65
1:E:47:PRO:HB2	1:E:52:ALA:HB2	1.78	0.65
1:G:216:ARG:HG3	1:G:217:ILE:HD13	1.78	0.65
1:P:33:ILE:HG12	1:P:294:LEU:HD22	1.78	0.65
1:J:156:GLN:O	1:J:158:THR:HG23	1.96	0.65
1:M:197:TRP:CE3	1:M:200:ILE:HD12	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:340:VAL:HG13	1:O:416:LEU:HG	1.78	0.65
1:I:254:ARG:HH12	1:J:6:ILE:C	2.00	0.65
1:N:305:VAL:HG22	1:N:308:VAL:HB	1.76	0.65
1:Q:246:ILE:HG23	1:Q:251:LEU:O	1.97	0.65
1:S:146:SER:HB2	1:S:169:ILE:HD13	1.78	0.65
1:G:257:ILE:HD13	1:G:269:ILE:HD12	1.77	0.65
1:J:254:ARG:HH11	1:K:20:GLU:CD	2.00	0.65
1:O:253:ALA:O	1:O:257:ILE:HG13	1.96	0.65
1:A:73:TYR:CZ	1:A:140:LEU:HD23	2.31	0.65
1:N:31:PRO:HB3	1:N:289:PHE:CD2	2.31	0.65
1:C:56:VAL:HG23	1:C:140:LEU:HD21	1.79	0.65
1:J:254:ARG:NH1	1:K:20:GLU:H	1.95	0.65
1:N:70:VAL:HG13	1:N:144:LEU:HD13	1.78	0.65
1:N:225:ARG:HG2	1:N:225:ARG:HH11	1.62	0.65
1:T:44:GLY:O	1:T:113:ARG:HD2	1.97	0.65
1:U:103:ILE:HD11	1:U:217:ILE:HD11	1.79	0.65
1:V:153:ILE:HD11	1:V:162:LYS:HG3	1.77	0.65
1:C:361:ARG:HB3	1:D:254:ARG:HH21	1.62	0.64
1:G:254:ARG:NH1	1:H:6:ILE:HA	2.12	0.64
1:L:136:GLU:HG3	1:L:179:VAL:HG21	1.79	0.64
1:C:358:ARG:NH2	1:D:263:LYS:HE2	2.12	0.64
1:E:133:THR:HG22	1:E:136:GLU:HG3	1.79	0.64
1:P:8:PHE:HE2	1:P:10:VAL:HB	1.62	0.64
1:U:141:VAL:O	1:U:145:LEU:HD23	1.97	0.64
1:A:358:ARG:HD2	1:B:266:GLU:OE2	1.97	0.64
1:J:44:GLY:O	1:J:113:ARG:HD2	1.98	0.64
1:R:260:PHE:HB3	1:R:265:PHE:CD2	2.33	0.64
1:R:284:SER:O	1:R:287:ILE:HG22	1.97	0.64
1:E:50:ASN:O	1:E:54:LYS:HG3	1.98	0.64
1:G:151:SER:OG	1:G:195:ALA:O	2.07	0.64
1:M:148:TYR:CE1	1:M:204:ARG:HG2	2.32	0.64
1:I:359:PHE:HD1	1:K:8:PHE:HE2	1.44	0.64
1:L:126:MET:HE1	1:L:128:LEU:HB2	1.79	0.64
1:N:98:ARG:HB2	1:N:101:ASP:OD2	1.97	0.64
1:C:134:VAL:HG23	1:C:135:PRO:CD	2.22	0.64
1:E:54:LYS:HB3	1:E:126:MET:SD	2.37	0.64
1:E:55:SER:O	1:E:58:SER:OG	2.06	0.64
1:M:43:LEU:HD13	1:M:72:SER:HA	1.79	0.64
1:F:363:GLU:HA	1:H:9:LYS:HE2	1.80	0.63
1:H:252:THR:HG23	1:H:255:GLU:H	1.63	0.63
1:I:268:GLU:HB3	1:I:305:VAL:HG23	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:359:PHE:CD1	1:N:10:VAL:HG12	2.33	0.63
1:Q:443:ASN:O	1:Q:447:SER:OG	2.13	0.63
1:L:352:LYS:HD2	1:M:415:ARG:HH21	1.62	0.63
1:S:133:THR:OG1	1:S:135:PRO:HD2	1.98	0.63
1:C:84:THR:CB	1:C:102:LYS:HG2	2.24	0.63
1:A:266:GLU:OE2	1:K:358:ARG:HD2	1.99	0.63
1:K:305:VAL:HG12	1:K:308:VAL:HB	1.81	0.63
1:C:180:LYS:HE2	1:C:183:GLU:HA	1.80	0.63
1:G:165:ILE:HD12	1:G:166:ALA:N	2.14	0.63
1:I:146:SER:HB2	1:I:169:ILE:HD13	1.80	0.63
1:V:56:VAL:HG23	1:V:140:LEU:HD21	1.81	0.63
1:K:31:PRO:HB3	1:K:289:PHE:CD2	2.34	0.63
1:F:158:THR:HG22	1:F:158:THR:O	1.97	0.63
1:K:123:THR:HG23	1:N:126:MET:O	1.99	0.63
1:A:33:ILE:HG12	1:A:294:LEU:HD13	1.81	0.63
1:A:168:ARG:O	1:A:172:ILE:HG12	1.98	0.63
1:H:9:LYS:HD2	1:H:9:LYS:C	2.20	0.63
1:H:136:GLU:HG3	1:H:179:VAL:HG21	1.79	0.63
1:B:325:LEU:HD12	1:B:439:ALA:HB2	1.81	0.62
1:K:136:GLU:HG3	1:K:179:VAL:HG21	1.81	0.62
1:N:146:SER:HB2	1:N:169:ILE:HD13	1.80	0.62
1:O:5:LYS:HG3	1:O:7:VAL:HG22	1.81	0.62
1:S:290:ARG:HD2	1:S:295:SER:HB2	1.81	0.62
1:D:56:VAL:HG23	1:D:140:LEU:HD21	1.81	0.62
1:I:180:LYS:NZ	1:I:184:HIS:CE1	2.67	0.62
1:J:122:LEU:HD11	1:O:122:LEU:HB3	1.82	0.62
1:L:27:GLU:OE1	1:L:27:GLU:N	2.32	0.62
1:N:257:ILE:HD12	1:O:8:PHE:CE2	2.33	0.62
1:O:362:ASP:HB2	1:O:364:LYS:HG2	1.80	0.62
1:B:58:SER:HB2	1:B:124:GLY:O	1.99	0.62
1:E:418:ARG:HH11	1:E:422:ARG:HH12	1.47	0.62
1:R:47:PRO:HB3	1:R:120:TRP:CZ2	2.34	0.62
1:C:257:ILE:HB	1:D:8:PHE:HE2	1.65	0.62
1:I:180:LYS:HZ1	1:I:184:HIS:CE1	2.16	0.62
1:Q:204:ARG:HH21	1:Q:290:ARG:HG3	1.65	0.62
1:F:33:ILE:HB	1:F:92:TYR:HD2	1.63	0.62
1:F:70:VAL:HG13	1:F:144:LEU:HD13	1.82	0.62
1:G:91:SER:H	1:G:95:VAL:HG23	1.63	0.62
1:A:135:PRO:HG3	1:A:221:TYR:OH	2.00	0.62
1:J:290:ARG:HE	1:J:295:SER:HB2	1.64	0.62
1:M:54:LYS:HA	1:M:126:MET:HE3	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:41:ILE:HD12	1:K:112:LYS:HD3	1.82	0.62
1:J:63:ALA:HA	1:J:190:THR:HG22	1.81	0.62
1:K:242:PHE:CE2	1:K:246:ILE:HD11	2.35	0.62
1:K:260:PHE:HB3	1:K:265:PHE:CD2	2.35	0.62
1:A:47:PRO:HB3	1:A:120:TRP:CE2	2.35	0.62
1:A:47:PRO:HB3	1:A:120:TRP:CZ2	2.34	0.62
1:K:109:VAL:HG21	1:K:205:PHE:CE1	2.35	0.62
1:C:325:LEU:HD12	1:C:439:ALA:HB2	1.82	0.61
1:K:62:ALA:HB2	1:K:124:GLY:CA	2.30	0.61
1:Q:39:PRO:HB2	1:Q:205:PHE:HE2	1.65	0.61
1:V:305:VAL:HG22	1:V:308:VAL:HB	1.82	0.61
1:C:363:GLU:HG3	1:E:9:LYS:HE2	1.82	0.61
1:F:279:THR:HB	1:G:21:ILE:CD1	2.30	0.61
1:D:165:ILE:HD12	1:D:166:ALA:N	2.14	0.61
1:F:40:CYS:HB2	1:F:110:GLU:HG3	1.83	0.61
1:J:231:THR:HB	1:J:291:SER:OG	2.01	0.61
1:M:30:TYR:HB3	1:M:277:GLN:NE2	2.14	0.61
1:Q:358:ARG:HD2	1:R:266:GLU:OE2	1.99	0.61
1:T:94:ILE:HD11	1:T:285:TYR:CE2	2.36	0.61
1:F:305:VAL:HG22	1:F:308:VAL:HB	1.82	0.61
1:I:122:LEU:HD23	1:P:122:LEU:HG	1.83	0.61
1:O:133:THR:HG22	1:O:136:GLU:CD	2.21	0.61
1:V:31:PRO:HB3	1:V:289:PHE:HD2	1.66	0.61
1:I:153:ILE:HG13	1:I:162:LYS:HD3	1.81	0.61
1:T:49:LEU:HD23	1:T:80:PHE:CZ	2.36	0.61
1:H:274:GLU:HG3	1:H:275:PRO:HD2	1.83	0.61
1:C:47:PRO:HB3	1:C:120:TRP:CZ2	2.35	0.61
1:B:9:LYS:HB3	1:B:17:LEU:HD12	1.83	0.60
1:H:146:SER:CB	1:H:169:ILE:HG21	2.31	0.60
1:L:103:ILE:HD11	1:L:217:ILE:HD11	1.83	0.60
1:V:84:THR:HG22	1:V:102:LYS:HG2	1.82	0.60
1:K:103:ILE:HD11	1:K:217:ILE:HD11	1.82	0.60
1:N:40:CYS:HA	1:N:110:GLU:O	2.01	0.60
1:R:305:VAL:HG12	1:R:308:VAL:HB	1.81	0.60
1:C:122:LEU:HD23	1:U:122:LEU:HD23	1.82	0.60
1:L:95:VAL:O	1:L:97:ALA:N	2.34	0.60
1:B:233:TYR:CZ	1:B:287:ILE:HG22	2.37	0.60
1:B:290:ARG:HA	1:B:295:SER:HB3	1.82	0.60
1:O:89:TRP:CE3	1:O:96:ILE:HD11	2.36	0.60
1:K:29:LYS:HD2	1:K:296:GLY:HA3	1.83	0.60
1:M:145:LEU:HD11	1:M:210:TYR:CD2	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:136:GLU:HG3	1:C:179:VAL:HG21	1.81	0.60
1:F:33:ILE:HG13	1:F:92:TYR:HB3	1.82	0.60
1:H:62:ALA:HB1	1:H:123:THR:HB	1.84	0.60
1:J:254:ARG:HH12	1:K:20:GLU:N	2.00	0.60
1:L:260:PHE:HB3	1:L:265:PHE:CD2	2.36	0.60
1:N:96:ILE:HD11	1:N:107:SER:O	2.01	0.60
1:R:60:MET:HE1	1:R:144:LEU:HD23	1.84	0.60
1:B:318:TYR:HD2	1:B:424:TYR:CE1	2.19	0.60
1:E:325:LEU:HD12	1:E:439:ALA:HB2	1.82	0.60
1:I:62:ALA:HB2	1:I:124:GLY:HA3	1.83	0.60
1:M:20:GLU:CD	1:M:20:GLU:H	2.04	0.60
1:U:31:PRO:HD2	1:U:277:GLN:HG2	1.83	0.60
1:C:80:PHE:CE2	1:C:134:VAL:HB	2.37	0.60
1:H:194:CYS:HB2	1:H:197:TRP:NE1	2.15	0.60
1:I:287:ILE:HG13	1:I:288:HIS:ND1	2.16	0.60
1:J:132:PRO:HG2	1:J:137:HIS:NE2	2.17	0.60
1:S:281:VAL:HB	1:S:284:SER:HB3	1.82	0.60
1:B:7:VAL:HG23	1:B:19:PRO:HA	1.82	0.60
1:M:294:LEU:H	1:M:294:LEU:CD2	2.15	0.60
1:F:44:GLY:O	1:F:113:ARG:HD2	2.02	0.60
1:F:60:MET:HG2	1:F:190:THR:HG21	1.84	0.60
1:H:168:ARG:O	1:H:172:ILE:HG12	2.02	0.60
1:I:50:ASN:O	1:I:54:LYS:HG2	2.01	0.60
1:I:359:PHE:CD1	1:K:10:VAL:HG12	2.37	0.60
1:U:194:CYS:HA	1:U:197:TRP:CD1	2.36	0.60
1:A:260:PHE:HB3	1:A:265:PHE:CD2	2.37	0.59
1:M:242:PHE:CE2	1:M:246:ILE:HD11	2.37	0.59
1:S:168:ARG:O	1:S:172:ILE:HG12	2.02	0.59
1:S:268:GLU:HB3	1:S:305:VAL:HG23	1.84	0.59
1:T:321:GLN:O	1:T:325:LEU:HD23	2.02	0.59
1:U:6:ILE:HG13	1:U:6:ILE:O	2.02	0.59
1:U:168:ARG:O	1:U:172:ILE:HG12	2.02	0.59
1:U:253:ALA:O	1:U:257:ILE:HG13	2.02	0.59
1:A:434:ARG:HH12	2:W:46:C:H2'	1.68	0.59
1:B:96:ILE:CD1	1:B:107:SER:O	2.50	0.59
1:J:305:VAL:HG12	1:J:308:VAL:HB	1.83	0.59
1:N:139:SER:OG	1:N:178:PHE:HB3	2.02	0.59
1:V:434:ARG:HB2	1:V:437:SER:HB3	1.83	0.59
1:A:122:LEU:HD23	1:M:124:GLY:O	2.02	0.59
1:D:254:ARG:HD3	1:E:6:ILE:N	2.18	0.59
1:F:194:CYS:HA	1:F:197:TRP:CD1	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Q:211:ASP:HB2	1:Q:228:THR:OG1	2.01	0.59
1:V:31:PRO:HB3	1:V:289:PHE:CD2	2.37	0.59
1:V:287:ILE:HG13	1:V:288:HIS:ND1	2.16	0.59
1:C:434:ARG:HG2	2:W:64:C:N4	2.17	0.59
1:M:25:GLN:OE1	1:M:25:GLN:N	2.36	0.59
1:M:246:ILE:HG23	1:M:251:LEU:O	2.02	0.59
1:B:360:PHE:H	1:D:10:VAL:HG21	1.67	0.59
1:D:31:PRO:HD2	1:D:277:GLN:HG2	1.83	0.59
1:D:168:ARG:O	1:D:172:ILE:HG12	2.03	0.59
1:F:89:TRP:HB3	1:F:97:ALA:HB3	1.85	0.59
1:L:254:ARG:HD3	1:M:6:ILE:HA	1.85	0.59
1:R:9:LYS:HD2	1:R:9:LYS:C	2.23	0.59
1:A:242:PHE:CE2	1:A:246:ILE:HD11	2.37	0.59
1:F:253:ALA:O	1:F:257:ILE:HG13	2.03	0.59
1:K:54:LYS:HG2	1:K:126:MET:HE1	1.84	0.59
1:L:78:MET:HB2	1:L:105:PRO:HB2	1.83	0.59
1:M:194:CYS:SG	1:M:197:TRP:CD1	2.96	0.59
1:Q:347:GLU:O	1:R:415:ARG:NH2	2.31	0.59
1:N:39:PRO:HG2	1:N:292:LEU:HD13	1.85	0.59
1:T:136:GLU:HG3	1:T:179:VAL:HG21	1.83	0.59
1:T:168:ARG:O	1:T:172:ILE:HG12	2.02	0.59
1:F:58:SER:HB2	1:F:124:GLY:H	1.67	0.59
1:I:186:THR:O	1:I:190:THR:HG23	2.02	0.59
1:P:290:ARG:HD2	1:P:295:SER:OG	2.03	0.59
1:L:434:ARG:NH2	3:X:2:C:OP1	2.35	0.59
1:N:150:LEU:HD13	1:N:153:ILE:HD11	1.84	0.59
1:V:47:PRO:HB3	1:V:120:TRP:CE2	2.37	0.59
1:V:69:ASP:HB2	1:V:120:TRP:HD1	1.68	0.59
1:H:30:TYR:HB3	1:H:277:GLN:HE21	1.66	0.58
1:T:90:THR:N	1:T:95:VAL:HG23	2.18	0.58
1:D:122:LEU:HD12	1:T:51:LYS:HG3	1.84	0.58
1:L:152:LYS:HE3	1:L:234:GLU:OE2	2.02	0.58
1:V:29:LYS:HD2	1:V:296:GLY:HA3	1.85	0.58
1:C:93:GLY:O	1:C:95:VAL:HG13	2.02	0.58
1:E:53:TYR:OH	1:E:70:VAL:HA	2.03	0.58
1:M:10:VAL:HG23	1:U:359:PHE:CE1	2.33	0.58
1:O:7:VAL:HB	1:O:17:LEU:CD1	2.32	0.58
1:E:235:ASP:HB2	1:E:290:ARG:HG3	1.84	0.58
1:K:171:GLN:HA	1:K:174:GLU:HG2	1.85	0.58
1:L:443:ASN:O	1:L:447:SER:OG	2.20	0.58
1:G:168:ARG:O	1:G:172:ILE:HG13	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:268:GLU:HB3	1:H:305:VAL:HG23	1.84	0.58
1:I:340:VAL:HA	1:I:416:LEU:HD21	1.85	0.58
1:A:32:ALA:HB2	1:A:277:GLN:NE2	2.18	0.58
1:E:38:LYS:HE2	1:E:96:ILE:HB	1.84	0.58
1:F:262:HIS:HD2	1:F:264:ASN:H	1.50	0.58
1:G:31:PRO:HB3	1:G:289:PHE:CD1	2.38	0.58
1:J:153:ILE:HG12	1:J:153:ILE:O	2.04	0.58
1:P:188:MET:O	1:P:192:LYS:HG2	2.03	0.58
1:T:10:VAL:HG23	1:V:359:PHE:CE1	2.39	0.58
1:E:425:VAL:HG12	1:E:446:TYR:O	2.03	0.58
1:H:7:VAL:HG12	1:H:19:PRO:HB3	1.85	0.58
1:Q:225:ARG:HA	1:Q:228:THR:HG22	1.86	0.58
1:U:246:ILE:HG23	1:U:251:LEU:O	2.02	0.58
1:B:47:PRO:HB3	1:B:120:TRP:CH2	2.39	0.58
1:C:168:ARG:O	1:C:172:ILE:HG12	2.04	0.58
1:F:249:ILE:HD11	1:F:349:PHE:CB	2.34	0.58
1:H:290:ARG:HD2	1:H:295:SER:HB2	1.86	0.58
1:M:340:VAL:HA	1:M:416:LEU:HD13	1.85	0.58
1:P:242:PHE:O	1:P:246:ILE:HG12	2.04	0.58
1:U:290:ARG:HH21	3:X:87:A:H4'	1.69	0.58
1:B:290:ARG:HD3	1:B:298:SER:HB2	1.84	0.58
1:F:9:LYS:HZ1	1:F:17:LEU:HD12	1.69	0.58
1:L:173:PHE:HA	1:L:178:PHE:CB	2.34	0.58
1:R:235:ASP:HB2	1:R:290:ARG:HG3	1.86	0.58
1:B:11:ASN:HB2	1:K:366:LEU:HD11	1.85	0.58
1:E:58:SER:HB2	1:E:124:GLY:O	2.04	0.58
1:S:280:ALA:HB2	1:T:21:ILE:HB	1.85	0.58
1:D:174:GLU:HG2	1:D:180:LYS:HG3	1.85	0.57
1:E:109:VAL:HG11	1:E:205:PHE:HE1	1.67	0.57
1:H:211:ASP:HB2	1:H:228:THR:HB	1.86	0.57
1:P:443:ASN:O	1:P:447:SER:OG	2.19	0.57
1:Q:325:LEU:HD12	1:Q:439:ALA:HB2	1.86	0.57
1:S:27:GLU:HB2	1:S:29:LYS:HE3	1.86	0.57
1:T:361:ARG:HB3	1:U:254:ARG:HH21	1.69	0.57
1:E:167:ASP:O	1:E:171:GLN:NE2	2.37	0.57
1:E:246:ILE:HG23	1:E:251:LEU:O	2.03	0.57
1:L:146:SER:HB2	1:L:169:ILE:HD13	1.86	0.57
1:B:133:THR:HG22	1:B:136:GLU:OE1	2.04	0.57
1:M:325:LEU:HD11	1:M:427:VAL:HG12	1.85	0.57
1:O:347:GLU:O	1:P:415:ARG:NH2	2.35	0.57
1:G:33:ILE:HD13	1:G:294:LEU:HD13	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:41:ILE:HG22	1:C:111:ILE:CD1	2.35	0.57
1:E:40:CYS:SG	1:E:112:LYS:HG2	2.44	0.57
1:E:56:VAL:HG23	1:E:65:LEU:HD11	1.87	0.57
1:F:78:MET:CE	1:F:105:PRO:HB2	2.34	0.57
1:J:176:ALA:HB2	1:K:193:MET:O	2.04	0.57
1:F:279:THR:HB	1:G:21:ILE:HD12	1.85	0.57
1:D:443:ASN:O	1:D:447:SER:OG	2.22	0.57
1:E:122:LEU:HD13	1:S:122:LEU:CB	2.33	0.57
1:F:133:THR:OG1	1:F:135:PRO:HD2	2.05	0.57
1:J:133:THR:CG2	1:J:136:GLU:HG2	2.35	0.57
1:L:126:MET:CE	1:L:128:LEU:HB2	2.34	0.57
1:U:260:PHE:HB3	1:U:265:PHE:CD2	2.38	0.57
1:A:91:SER:O	1:A:93:GLY:N	2.32	0.57
1:B:253:ALA:HB3	1:C:20:GLU:HG3	1.87	0.57
1:D:47:PRO:HB3	1:D:120:TRP:CZ2	2.40	0.57
1:G:249:ILE:HD11	1:G:349:PHE:CB	2.34	0.57
1:J:254:ARG:HH21	1:K:6:ILE:HG12	1.69	0.57
1:C:84:THR:HB	1:C:102:LYS:CG	2.27	0.57
1:G:281:VAL:CG1	1:G:284:SER:HB3	2.34	0.57
1:T:146:SER:HB3	1:T:169:ILE:HD13	1.87	0.57
1:U:272:MET:HG3	1:U:273:PHE:CD2	2.40	0.57
1:I:434:ARG:HB2	1:I:437:SER:HB3	1.87	0.56
1:N:126:MET:HE3	1:N:128:LEU:HB2	1.87	0.56
1:R:134:VAL:HB	1:R:135:PRO:HD3	1.86	0.56
1:S:305:VAL:HG22	1:S:308:VAL:HB	1.87	0.56
1:I:96:ILE:CD1	1:I:108:LEU:HG	2.35	0.56
1:L:52:ALA:O	1:L:56:VAL:HG12	2.04	0.56
1:M:319:MET:HG2	1:M:350:PHE:HB2	1.86	0.56
1:D:60:MET:SD	1:D:190:THR:HG21	2.45	0.56
1:D:242:PHE:CE2	1:D:246:ILE:HD11	2.40	0.56
1:D:325:LEU:HD12	1:D:439:ALA:HB2	1.86	0.56
1:F:53:TYR:CD2	1:F:140:LEU:HD12	2.40	0.56
1:J:358:ARG:HD2	1:K:266:GLU:OE2	2.05	0.56
1:K:96:ILE:CD1	1:K:108:LEU:HG	2.16	0.56
1:O:20:GLU:N	1:O:20:GLU:OE1	2.39	0.56
1:S:49:LEU:HA	1:S:52:ALA:HB3	1.87	0.56
1:A:326:ASN:HB3	1:A:434:ARG:HE	1.70	0.56
1:H:134:VAL:HB	1:H:135:PRO:HD3	1.88	0.56
1:H:165:ILE:O	1:H:169:ILE:HG12	2.05	0.56
1:K:153:ILE:CD1	1:K:162:LYS:HG3	2.35	0.56
1:L:359:PHE:HD1	1:N:10:VAL:HG12	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:R:58:SER:OG	1:R:124:GLY:O	2.20	0.56
1:A:9:LYS:HE3	1:A:15:VAL:HG13	1.88	0.56
1:B:96:ILE:HD11	1:B:107:SER:C	2.26	0.56
1:E:254:ARG:HH21	1:F:6:ILE:N	2.04	0.56
1:I:158:THR:OG1	1:I:159:GLY:N	2.36	0.56
1:K:186:THR:O	1:K:190:THR:HG23	2.06	0.56
1:M:45:LYS:HE2	1:M:120:TRP:CH2	2.40	0.56
1:G:56:VAL:HG23	1:G:140:LEU:HD21	1.86	0.56
1:H:65:LEU:HD13	1:H:197:TRP:HZ2	1.70	0.56
1:M:40:CYS:HB2	1:M:110:GLU:HG3	1.87	0.56
1:Q:305:VAL:HG22	1:Q:308:VAL:HB	1.88	0.56
3:X:94:C:H2'	3:X:95:A:O4'	2.06	0.56
1:B:290:ARG:HD2	1:B:295:SER:CB	2.35	0.56
1:D:152:LYS:HE3	1:D:234:GLU:OE2	2.06	0.56
1:E:108:LEU:HD12	1:E:109:VAL:HG23	1.87	0.56
1:S:82:GLU:OE1	1:S:102:LYS:HE3	2.05	0.56
1:C:334:ALA:O	1:C:338:MET:HG2	2.06	0.56
1:M:253:ALA:HB3	1:N:20:GLU:HG3	1.87	0.56
1:O:305:VAL:O	1:O:305:VAL:HG12	2.05	0.56
1:P:268:GLU:HB3	1:P:305:VAL:HG23	1.87	0.56
1:S:180:LYS:HE2	1:S:183:GLU:HA	1.87	0.56
1:A:321:GLN:O	1:A:325:LEU:HD23	2.06	0.56
1:L:49:LEU:HD21	1:L:80:PHE:CZ	2.41	0.56
1:N:56:VAL:HG11	1:N:144:LEU:HD11	1.87	0.56
1:O:56:VAL:HG23	1:O:140:LEU:HD21	1.87	0.56
1:Q:213:PHE:CE1	1:Q:217:ILE:HD11	2.40	0.56
1:R:416:LEU:HD22	1:R:420:HIS:HB3	1.88	0.56
1:U:43:LEU:HD22	1:U:71:CYS:SG	2.46	0.56
1:V:252:THR:HG23	1:V:255:GLU:H	1.71	0.56
1:V:321:GLN:O	1:V:325:LEU:HD23	2.05	0.56
1:B:5:LYS:HG2	1:B:6:ILE:H	1.69	0.56
1:F:27:GLU:HG2	1:F:28:TYR:N	2.21	0.56
1:G:48:ASP:HB2	1:G:51:LYS:HB2	1.88	0.56
1:G:249:ILE:HD11	1:G:349:PHE:CD2	2.40	0.56
1:H:257:ILE:HB	1:I:8:PHE:CZ	2.41	0.56
1:O:242:PHE:CE2	1:O:246:ILE:HD11	2.40	0.56
1:V:194:CYS:HB3	1:V:197:TRP:CG	2.41	0.56
1:A:434:ARG:HD3	2:W:46:C:C5	2.41	0.55
1:M:148:TYR:HE1	1:M:204:ARG:HG2	1.71	0.55
1:R:242:PHE:CE2	1:R:246:ILE:HD11	2.41	0.55
1:A:352:LYS:HD2	1:B:415:ARG:NH1	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:65:LEU:HB2	1:H:197:TRP:HZ2	1.66	0.55
1:Q:38:LYS:CG	1:Q:94:ILE:HD13	2.36	0.55
1:F:29:LYS:HE3	1:F:296:GLY:HA3	1.89	0.55
1:H:62:ALA:CB	1:H:123:THR:HB	2.36	0.55
1:J:52:ALA:O	1:J:56:VAL:HG22	2.07	0.55
1:N:133:THR:OG1	1:N:135:PRO:HD2	2.06	0.55
1:S:249:ILE:HD11	1:S:349:PHE:CD2	2.41	0.55
1:B:96:ILE:HD11	1:B:107:SER:O	2.05	0.55
1:C:287:ILE:HG13	1:C:288:HIS:ND1	2.21	0.55
1:E:31:PRO:HB3	1:E:289:PHE:CD1	2.41	0.55
1:Q:56:VAL:HG21	1:Q:144:LEU:HD11	1.87	0.55
1:S:246:ILE:HG23	1:S:251:LEU:O	2.07	0.55
1:U:252:THR:HG23	1:U:255:GLU:H	1.71	0.55
1:P:340:VAL:HA	1:P:416:LEU:HD21	1.89	0.55
1:T:47:PRO:HB3	1:T:120:TRP:CE2	2.41	0.55
1:V:92:TYR:HD2	1:V:285:TYR:HB2	1.69	0.55
1:D:290:ARG:HD2	1:D:295:SER:HB2	1.89	0.55
1:I:280:ALA:HB2	1:J:21:ILE:HB	1.88	0.55
1:J:133:THR:OG1	1:J:135:PRO:HD2	2.05	0.55
1:J:254:ARG:NH1	1:K:20:GLU:N	2.55	0.55
1:K:56:VAL:HG11	1:K:144:LEU:HD11	1.89	0.55
1:O:136:GLU:HG3	1:O:179:VAL:HG21	1.88	0.55
1:R:305:VAL:CG1	1:R:308:VAL:HB	2.37	0.55
1:C:268:GLU:HB3	1:C:305:VAL:HG23	1.87	0.55
1:G:305:VAL:HG22	1:G:308:VAL:HB	1.89	0.55
1:L:63:ALA:HA	1:L:190:THR:HG22	1.89	0.55
1:O:359:PHE:HB3	1:Q:8:PHE:CZ	2.42	0.55
1:T:233:TYR:CZ	1:T:287:ILE:HG22	2.42	0.55
1:G:363:GLU:HB3	1:I:9:LYS:HE3	1.87	0.55
1:N:38:LYS:HD3	1:N:96:ILE:HD13	1.89	0.55
1:A:303:ASN:HD21	2:W:44:C:H41	1.54	0.55
1:B:235:ASP:HB2	1:B:290:ARG:HG3	1.89	0.55
1:I:47:PRO:HB3	1:I:120:TRP:CZ2	2.42	0.55
1:P:8:PHE:CE2	1:P:10:VAL:HB	2.41	0.55
1:P:47:PRO:HB3	1:P:120:TRP:CE2	2.41	0.55
1:P:305:VAL:HG22	1:P:308:VAL:HB	1.89	0.55
1:L:12:ASN:OD1	1:L:12:ASN:O	2.24	0.55
1:M:134:VAL:HB	1:M:135:PRO:HD3	1.89	0.55
1:B:82:GLU:HG2	1:B:102:LYS:HG2	1.88	0.54
1:L:268:GLU:OE1	1:L:307:HIS:HB2	2.07	0.54
1:M:260:PHE:HB3	1:M:265:PHE:CD2	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:254:ARG:HH11	1:P:6:ILE:HB	1.72	0.54
1:R:245:PHE:HB2	1:R:312:ILE:HG23	1.88	0.54
1:S:358:ARG:HD2	1:T:266:GLU:OE2	2.07	0.54
1:T:56:VAL:HG23	1:T:140:LEU:HD21	1.88	0.54
1:T:254:ARG:HG3	1:U:8:PHE:CE1	2.42	0.54
1:C:246:ILE:HG23	1:C:251:LEU:O	2.06	0.54
1:M:33:ILE:HD11	1:M:294:LEU:HD13	1.89	0.54
1:T:268:GLU:HB3	1:T:305:VAL:HG23	1.90	0.54
1:B:165:ILE:HD12	1:B:166:ALA:N	2.22	0.54
1:H:127:GLU:HG3	1:Q:123:THR:HG23	1.88	0.54
1:S:183:GLU:HG3	1:S:184:HIS:H	1.72	0.54
1:U:156:GLN:O	1:U:158:THR:HG23	2.08	0.54
1:A:7:VAL:O	1:K:254:ARG:HD2	2.07	0.54
1:B:443:ASN:O	1:B:447:SER:OG	2.24	0.54
1:K:41:ILE:O	1:K:112:LYS:HB3	2.08	0.54
1:F:75:ALA:HA	1:F:78:MET:HG2	1.89	0.54
1:G:63:ALA:HA	1:G:190:THR:HG22	1.88	0.54
1:H:214:PHE:CD2	1:H:222:SER:HA	2.41	0.54
1:R:254:ARG:HA	1:V:8:PHE:CZ	2.43	0.54
1:V:268:GLU:HB3	1:V:305:VAL:HG23	1.90	0.54
1:E:134:VAL:HB	1:E:135:PRO:HD3	1.90	0.54
1:F:260:PHE:HB3	1:F:265:PHE:CD2	2.43	0.54
1:J:33:ILE:HG12	1:J:294:LEU:HD21	1.90	0.54
1:N:244:GLY:O	1:N:248:GLN:HG2	2.08	0.54
1:R:168:ARG:O	1:R:172:ILE:HG12	2.07	0.54
1:E:105:PRO:HG3	1:E:213:PHE:CD2	2.42	0.54
1:G:70:VAL:HG13	1:G:144:LEU:HD13	1.90	0.54
1:L:196:ASN:O	1:L:199:THR:HG22	2.07	0.54
1:B:168:ARG:O	1:B:172:ILE:HG12	2.07	0.54
1:C:177:PRO:HG3	1:C:220:LEU:HG	1.90	0.54
1:C:268:GLU:OE1	1:C:307:HIS:HB2	2.08	0.54
1:G:352:LYS:HD2	1:H:415:ARG:NH1	2.23	0.54
1:P:223:ALA:O	1:P:226:VAL:HG23	2.08	0.54
1:G:235:ASP:HB2	1:G:290:ARG:HG3	1.89	0.54
1:I:181:ILE:HG13	1:I:182:VAL:HG13	1.90	0.54
1:M:136:GLU:HG3	1:M:179:VAL:HG21	1.88	0.54
1:R:165:ILE:HG13	1:R:166:ALA:N	2.23	0.54
1:T:47:PRO:HB3	1:T:120:TRP:CZ2	2.42	0.54
1:A:8:PHE:HE2	1:A:10:VAL:HB	1.73	0.54
1:A:50:ASN:O	1:A:54:LYS:HG3	2.08	0.54
1:C:321:GLN:O	1:C:325:LEU:HD23	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:53:TYR:CE2	1:E:73:TYR:CD2	2.96	0.54
1:G:88:ASP:HB3	1:G:98:ARG:HE	1.73	0.54
1:I:53:TYR:OH	1:I:136:GLU:HB3	2.08	0.54
1:I:260:PHE:HB3	1:I:265:PHE:CD2	2.42	0.54
1:M:235:ASP:HB2	1:M:290:ARG:HG3	1.89	0.54
1:P:20:GLU:HG2	1:P:20:GLU:O	2.08	0.54
1:Q:178:PHE:HE2	1:Q:223:ALA:HB3	1.72	0.54
1:A:54:LYS:HG2	1:A:126:MET:HE1	1.89	0.53
1:C:36:LEU:HB3	1:C:94:ILE:HD13	1.90	0.53
1:G:109:VAL:HG22	1:G:209:THR:HG21	1.89	0.53
1:I:246:ILE:HG23	1:I:251:LEU:O	2.07	0.53
1:P:318:TYR:CE1	1:P:423:ARG:HG2	2.43	0.53
1:P:358:ARG:HD2	1:Q:266:GLU:OE2	2.08	0.53
1:V:340:VAL:HG13	1:V:416:LEU:HG	1.90	0.53
1:B:290:ARG:HA	1:B:295:SER:CB	2.38	0.53
1:G:254:ARG:HD2	1:H:6:ILE:O	2.08	0.53
1:K:109:VAL:HG21	1:K:205:PHE:HE1	1.73	0.53
1:M:74:LEU:O	1:M:78:MET:HG3	2.08	0.53
1:P:14:VAL:HG23	1:P:15:VAL:HG22	1.89	0.53
1:Q:58:SER:CB	1:Q:122:LEU:HD13	2.36	0.53
1:G:95:VAL:HG12	1:G:97:ALA:H	1.74	0.53
1:I:9:LYS:HE2	1:I:17:LEU:HD12	1.89	0.53
1:S:133:THR:HG23	1:S:136:GLU:H	1.72	0.53
1:S:153:ILE:HD11	1:S:165:ILE:HD11	1.91	0.53
1:T:105:PRO:HG3	1:T:213:PHE:CG	2.44	0.53
1:J:352:LYS:HD2	1:K:415:ARG:HH21	1.73	0.53
1:S:27:GLU:CG	1:S:28:TYR:H	2.21	0.53
1:H:158:THR:O	1:H:162:LYS:HG2	2.09	0.53
1:N:246:ILE:HG23	1:N:251:LEU:O	2.08	0.53
1:N:272:MET:SD	1:N:305:VAL:HG21	2.49	0.53
1:P:216:ARG:HH11	1:P:283:HIS:HB2	1.72	0.53
1:S:178:PHE:HE2	1:S:223:ALA:HB3	1.73	0.53
1:A:21:ILE:HD12	1:K:279:THR:HB	1.91	0.53
1:B:260:PHE:HB3	1:B:265:PHE:CD2	2.43	0.53
1:D:366:LEU:HD11	1:F:11:ASN:HB2	1.90	0.53
1:E:352:LYS:HB2	1:F:415:ARG:HE	1.73	0.53
1:G:60:MET:SD	1:G:190:THR:HG21	2.49	0.53
1:G:90:THR:HA	1:G:95:VAL:H	1.72	0.53
1:L:153:ILE:CG2	1:L:162:LYS:HE2	2.38	0.53
1:R:175:THR:HG21	1:V:196:ASN:HB2	1.90	0.53
1:V:69:ASP:HB2	1:V:120:TRP:CD1	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:254:ARG:NH1	1:J:6:ILE:N	2.57	0.53
1:K:78:MET:SD	1:K:105:PRO:HB2	2.49	0.53
1:L:10:VAL:HG21	1:L:18:LYS:NZ	2.24	0.53
1:R:60:MET:CE	1:R:144:LEU:HD23	2.38	0.53
1:S:275:PRO:HD3	1:T:18:LYS:HE3	1.89	0.53
1:B:62:ALA:HB2	1:B:124:GLY:CA	2.38	0.53
1:D:11:ASN:HB3	1:D:15:VAL:O	2.09	0.53
1:H:39:PRO:HB2	1:H:205:PHE:HE2	1.74	0.53
1:L:344:TYR:CG	1:L:409:ILE:HG12	2.44	0.53
1:M:84:THR:HG22	1:M:102:LYS:HG2	1.90	0.53
1:A:10:VAL:HG11	1:A:18:LYS:HZ1	1.73	0.53
1:E:8:PHE:HE2	1:E:20:GLU:HB3	1.74	0.53
1:O:70:VAL:HG21	1:O:197:TRP:HH2	1.73	0.53
1:O:235:ASP:HB2	1:O:290:ARG:HG3	1.91	0.53
1:P:44:GLY:O	1:P:113:ARG:HD2	2.09	0.53
1:A:150:LEU:O	1:A:153:ILE:HG12	2.09	0.53
1:A:158:THR:O	1:A:162:LYS:HG3	2.08	0.53
1:G:278:GLU:OE1	1:G:284:SER:HB2	2.09	0.53
1:T:89:TRP:CE2	1:T:216:ARG:HG2	2.43	0.53
1:D:253:ALA:HB3	1:E:20:GLU:HG3	1.91	0.52
1:E:53:TYR:CG	1:E:56:VAL:HG11	2.44	0.52
1:N:225:ARG:HG2	1:N:225:ARG:NH1	2.25	0.52
1:A:53:TYR:CE1	1:A:57:LEU:HD22	2.44	0.52
1:E:74:LEU:O	1:E:78:MET:HG3	2.09	0.52
1:F:78:MET:HE1	1:F:105:PRO:HB2	1.90	0.52
1:G:52:ALA:O	1:G:56:VAL:HG22	2.09	0.52
1:J:357:ARG:HH12	1:K:403:GLU:HG3	1.74	0.52
1:K:180:LYS:HE2	1:K:183:GLU:HA	1.92	0.52
1:K:268:GLU:OE1	1:K:307:HIS:HB2	2.09	0.52
1:O:311:LEU:O	1:O:315:VAL:HG23	2.10	0.52
1:Q:171:GLN:HA	1:Q:174:GLU:HG2	1.91	0.52
1:Q:242:PHE:CE2	1:Q:246:ILE:HD11	2.45	0.52
1:B:421:ILE:O	1:B:425:VAL:HG23	2.09	0.52
1:C:175:THR:HG22	1:C:176:ALA:H	1.73	0.52
1:T:52:ALA:O	1:T:56:VAL:HG22	2.08	0.52
1:B:89:TRP:HB3	1:B:96:ILE:HG23	1.91	0.52
1:B:239:LEU:HA	1:B:272:MET:CE	2.40	0.52
1:E:340:VAL:HG13	1:E:416:LEU:HG	1.91	0.52
1:I:254:ARG:HH12	1:J:6:ILE:N	2.08	0.52
1:K:299:PRO:HG2	1:K:300:TYR:CE2	2.44	0.52
1:Q:363:GLU:H	1:Q:363:GLU:CD	2.13	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:R:56:VAL:CG2	1:R:140:LEU:HD21	2.39	0.52
1:D:103:ILE:HD11	1:D:217:ILE:HD11	1.92	0.52
1:I:54:LYS:HE2	1:I:128:LEU:HD23	1.91	0.52
1:M:89:TRP:HB3	1:M:96:ILE:O	2.09	0.52
1:P:131:ASP:CB	1:P:132:PRO:HD3	2.35	0.52
1:U:47:PRO:HB2	1:U:52:ALA:HB2	1.92	0.52
1:A:284:SER:O	1:A:287:ILE:HG12	2.09	0.52
1:F:103:ILE:HD11	1:F:217:ILE:HD11	1.92	0.52
1:F:434:ARG:HD3	2:W:91:C:C4	2.44	0.52
1:I:359:PHE:HD1	1:K:8:PHE:CE2	2.27	0.52
1:J:287:ILE:HG13	1:J:288:HIS:ND1	2.24	0.52
1:N:290:ARG:HD2	1:N:295:SER:CB	2.39	0.52
1:C:39:PRO:HG2	1:C:285:TYR:HE2	1.75	0.52
1:C:81:PHE:HZ	1:C:138:ALA:HA	1.75	0.52
1:H:135:PRO:HG3	1:H:221:TYR:OH	2.09	0.52
1:K:268:GLU:OE2	1:K:307:HIS:HD2	1.92	0.52
1:L:30:TYR:HB3	1:L:277:GLN:NE2	2.25	0.52
1:L:123:THR:HG22	1:L:124:GLY:N	2.24	0.52
1:N:151:SER:HB2	1:N:198:SER:HB3	1.92	0.52
1:Q:292:LEU:HD12	1:Q:293:GLY:O	2.09	0.52
1:U:268:GLU:HB3	1:U:305:VAL:HG23	1.91	0.52
1:C:133:THR:OG1	1:C:135:PRO:HD2	2.09	0.52
1:G:406:TYR:O	1:G:410:MET:HG2	2.09	0.52
1:H:54:LYS:HB3	1:H:126:MET:CE	2.39	0.52
1:H:305:VAL:HG22	1:H:308:VAL:HB	1.91	0.52
1:I:359:PHE:CD1	1:K:8:PHE:HE2	2.26	0.52
1:L:323:ARG:NH1	3:X:99:C:H5"	2.24	0.52
1:O:62:ALA:HB2	1:O:124:GLY:HA3	1.92	0.52
1:Q:104:THR:HA	1:Q:107:SER:OG	2.10	0.52
1:S:235:ASP:HB2	1:S:290:ARG:HG2	1.92	0.52
1:B:7:VAL:HG13	1:B:17:LEU:HD11	1.92	0.52
1:B:287:ILE:HG13	1:B:288:HIS:ND1	2.25	0.52
1:E:260:PHE:HB3	1:E:265:PHE:CD2	2.45	0.52
1:L:10:VAL:HG21	1:L:18:LYS:HZ1	1.75	0.52
1:P:225:ARG:HD3	3:X:40:C:O2'	2.10	0.52
1:R:321:GLN:O	1:R:325:LEU:HD23	2.08	0.52
1:S:47:PRO:HB3	1:S:120:TRP:CZ2	2.46	0.52
1:T:358:ARG:HD2	1:U:266:GLU:OE2	2.10	0.52
1:D:293:GLY:O	1:D:294:LEU:HG	2.10	0.51
1:D:363:GLU:H	1:D:363:GLU:CD	2.12	0.51
1:Q:52:ALA:O	1:Q:56:VAL:HG12	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:305:VAL:HG22	1:C:308:VAL:HB	1.92	0.51
1:D:425:VAL:HG22	1:D:446:TYR:O	2.10	0.51
1:I:103:ILE:HD11	1:I:217:ILE:HD11	1.92	0.51
1:I:105:PRO:HA	1:I:108:LEU:HD13	1.92	0.51
1:L:188:MET:O	1:L:192:LYS:HG2	2.11	0.51
1:N:153:ILE:HG13	1:N:162:LYS:HG2	1.92	0.51
1:S:325:LEU:HD12	1:S:439:ALA:HB2	1.92	0.51
1:V:47:PRO:HB3	1:V:120:TRP:CZ2	2.45	0.51
1:C:366:LEU:HD11	1:E:11:ASN:HB3	1.93	0.51
1:E:253:ALA:O	1:E:257:ILE:HG13	2.10	0.51
1:M:254:ARG:O	1:M:258:LEU:HD13	2.09	0.51
1:N:225:ARG:HH12	1:N:229:VAL:HA	1.75	0.51
1:P:357:ARG:NH1	1:Q:403:GLU:HG3	2.25	0.51
1:R:31:PRO:HG2	1:R:277:GLN:HG3	1.92	0.51
1:A:278:GLU:OE1	1:A:284:SER:HB2	2.10	0.51
1:D:434:ARG:HB2	1:D:437:SER:HB3	1.91	0.51
1:F:136:GLU:HG2	1:F:179:VAL:HG11	1.92	0.51
1:K:245:PHE:HB2	1:K:312:ILE:HG23	1.92	0.51
1:U:109:VAL:HG21	1:U:209:THR:HG21	1.92	0.51
1:U:340:VAL:HG22	1:U:416:LEU:HG	1.92	0.51
1:B:245:PHE:HB2	1:B:312:ILE:HG23	1.92	0.51
1:I:196:ASN:O	1:I:199:THR:HG23	2.10	0.51
1:N:182:VAL:O	1:N:186:THR:HG21	2.10	0.51
1:R:133:THR:HG22	1:R:136:GLU:HG3	1.92	0.51
1:T:289:PHE:HB2	1:T:294:LEU:HD12	1.93	0.51
1:D:122:LEU:HB3	1:T:122:LEU:CD1	2.40	0.51
1:P:290:ARG:HH21	3:X:33:C:H4'	1.75	0.51
1:B:364:LYS:H	1:B:364:LYS:HD2	1.74	0.51
1:C:167:ASP:O	1:C:171:GLN:HG2	2.11	0.51
1:D:122:LEU:HB3	1:T:122:LEU:HD11	1.93	0.51
1:J:33:ILE:HG12	1:J:294:LEU:CD2	2.40	0.51
1:N:254:ARG:HA	1:O:8:PHE:CE2	2.45	0.51
1:P:96:ILE:HD11	1:P:107:SER:O	2.09	0.51
1:P:181:ILE:HG13	1:P:182:VAL:HG13	1.92	0.51
1:R:70:VAL:HG13	1:R:144:LEU:HD13	1.93	0.51
1:R:305:VAL:HG12	1:R:305:VAL:O	2.10	0.51
1:T:10:VAL:HG23	1:V:359:PHE:CD1	2.46	0.51
1:V:186:THR:O	1:V:190:THR:HG23	2.11	0.51
3:X:49:C:H2'	3:X:50:A:O4'	2.10	0.51
1:D:47:PRO:HB2	1:D:52:ALA:HB2	1.93	0.51
1:E:29:LYS:HD2	1:E:296:GLY:HA3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:96:ILE:HD11	1:H:107:SER:HB2	1.93	0.51
1:J:284:SER:O	1:J:287:ILE:HG12	2.11	0.51
1:K:39:PRO:HB2	1:K:205:PHE:CZ	2.46	0.51
1:M:53:TYR:CE2	1:M:57:LEU:HD22	2.46	0.51
1:U:146:SER:HB3	1:U:169:ILE:HD13	1.93	0.51
1:A:70:VAL:HG13	1:A:144:LEU:HD13	1.92	0.51
1:C:253:ALA:O	1:C:257:ILE:HG13	2.10	0.51
1:E:194:CYS:HA	1:E:197:TRP:CD1	2.46	0.51
1:J:357:ARG:NH1	1:K:403:GLU:HG3	2.25	0.51
1:L:243:THR:HG21	1:M:23:VAL:HG22	1.93	0.51
1:L:364:LYS:H	1:L:364:LYS:HD2	1.76	0.51
1:O:254:ARG:NH1	1:P:6:ILE:HB	2.25	0.51
1:P:317:CYS:SG	1:P:325:LEU:HD22	2.51	0.51
1:E:27:GLU:OE2	1:E:28:TYR:N	2.43	0.51
1:F:136:GLU:HA	1:F:181:ILE:HD11	1.91	0.51
1:F:434:ARG:HB3	1:F:435:PRO:HD2	1.92	0.51
1:H:358:ARG:HD2	1:I:266:GLU:OE2	2.11	0.51
1:I:27:GLU:HG2	1:I:28:TYR:N	2.23	0.51
1:I:249:ILE:HD11	1:I:349:PHE:CG	2.46	0.51
1:J:249:ILE:HD12	1:J:349:PHE:CG	2.46	0.51
1:K:84:THR:HA	1:K:102:LYS:HA	1.93	0.51
1:Q:321:GLN:O	1:Q:325:LEU:HD23	2.11	0.51
1:G:33:ILE:HG21	1:G:294:LEU:HD22	1.93	0.50
1:H:47:PRO:HB3	1:H:120:TRP:CE2	2.46	0.50
1:I:183:GLU:CD	1:I:184:HIS:H	2.14	0.50
1:K:366:LEU:HD23	1:K:366:LEU:C	2.30	0.50
1:R:363:GLU:O	1:R:367:GLN:HG2	2.11	0.50
1:S:27:GLU:N	1:S:27:GLU:OE1	2.44	0.50
1:S:163:THR:HG22	1:S:188:MET:CE	2.41	0.50
2:W:34:A:C2	2:W:35:C:H1'	2.45	0.50
1:D:51:LYS:O	1:D:54:LYS:HG2	2.11	0.50
1:E:30:TYR:HB3	1:E:277:GLN:NE2	2.26	0.50
1:H:242:PHE:CE2	1:H:246:ILE:HD11	2.45	0.50
1:L:54:LYS:HG2	1:L:126:MET:HE2	1.92	0.50
1:L:239:LEU:O	1:L:243:THR:HG23	2.12	0.50
1:M:89:TRP:CH2	1:M:108:LEU:HD21	2.47	0.50
1:S:10:VAL:HG22	1:S:11:ASN:N	2.21	0.50
1:T:434:ARG:HD3	3:X:82:C:C4	2.46	0.50
1:E:434:ARG:HB2	1:E:437:SER:HB3	1.94	0.50
1:G:39:PRO:HG3	1:G:294:LEU:HD11	1.94	0.50
1:G:242:PHE:CE2	1:G:246:ILE:HD11	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:92:TYR:OH	1:H:277:GLN:O	2.27	0.50
1:H:194:CYS:CB	1:H:197:TRP:NE1	2.74	0.50
1:L:24:ASP:N	1:L:24:ASP:OD1	2.44	0.50
1:L:70:VAL:HG13	1:L:144:LEU:HD13	1.93	0.50
1:O:260:PHE:HB3	1:O:265:PHE:CD2	2.47	0.50
1:P:75:ALA:HB1	1:P:111:ILE:HD13	1.94	0.50
1:R:257:ILE:HB	1:V:8:PHE:CZ	2.45	0.50
1:T:178:PHE:HE2	1:T:223:ALA:HB3	1.76	0.50
1:D:58:SER:HB2	1:D:124:GLY:O	2.12	0.50
1:G:325:LEU:HD12	1:G:439:ALA:HB2	1.94	0.50
1:M:434:ARG:HB3	1:M:435:PRO:HD2	1.93	0.50
1:P:133:THR:HG22	1:P:136:GLU:CD	2.32	0.50
1:Q:56:VAL:HG13	1:Q:140:LEU:HD21	1.93	0.50
1:S:133:THR:CG2	1:S:136:GLU:HG3	2.41	0.50
1:S:178:PHE:CE2	1:S:223:ALA:HB3	2.46	0.50
1:S:287:ILE:HG13	1:S:288:HIS:ND1	2.27	0.50
1:U:287:ILE:HG13	1:U:288:HIS:ND1	2.27	0.50
1:I:344:TYR:CE1	1:I:420:HIS:HE1	2.30	0.50
1:K:10:VAL:HG23	1:K:16:SER:HB3	1.93	0.50
1:L:51:LYS:HA	1:L:54:LYS:HD2	1.92	0.50
1:Q:39:PRO:HG2	1:Q:109:VAL:HG12	1.92	0.50
1:E:239:LEU:O	1:E:243:THR:HG23	2.11	0.50
1:F:246:ILE:HA	1:F:249:ILE:HG22	1.94	0.50
1:H:214:PHE:HD2	1:H:222:SER:HA	1.76	0.50
1:H:321:GLN:O	1:H:325:LEU:HD23	2.11	0.50
1:J:29:LYS:HD3	1:J:296:GLY:HA3	1.93	0.50
1:J:153:ILE:HD12	1:J:161:TYR:CE2	2.46	0.50
1:J:246:ILE:HG23	1:J:251:LEU:O	2.12	0.50
1:K:9:LYS:HE3	1:K:17:LEU:HD13	1.94	0.50
1:L:62:ALA:CB	1:L:123:THR:HG21	2.41	0.50
1:U:31:PRO:HD2	1:U:277:GLN:CG	2.42	0.50
1:U:171:GLN:HA	1:U:174:GLU:HG2	1.93	0.50
1:B:434:ARG:HB2	1:B:437:SER:HB3	1.94	0.50
1:D:305:VAL:HG22	1:D:308:VAL:HB	1.93	0.50
1:G:89:TRP:HB3	1:G:97:ALA:HB3	1.94	0.50
1:I:15:VAL:O	1:I:15:VAL:HG23	2.11	0.50
1:K:41:ILE:HD11	1:K:205:PHE:CD1	2.47	0.50
1:R:257:ILE:HD12	1:V:8:PHE:CE2	2.47	0.50
1:B:122:LEU:O	1:L:54:LYS:HD3	2.12	0.50
1:E:272:MET:SD	1:E:305:VAL:HG21	2.52	0.50
1:G:323:ARG:HG2	2:W:99:C:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:186:THR:O	1:H:190:THR:HG23	2.12	0.50
1:M:31:PRO:HD2	1:M:277:GLN:HG2	1.94	0.50
1:N:38:LYS:HB2	1:N:110:GLU:HG3	1.93	0.50
1:Q:277:GLN:HB3	1:Q:279:THR:HG23	1.94	0.50
1:A:29:LYS:HE2	1:A:296:GLY:HA3	1.94	0.50
1:A:357:ARG:NH1	1:B:403:GLU:HG3	2.27	0.50
1:C:41:ILE:HG22	1:C:111:ILE:HD11	1.93	0.50
1:N:260:PHE:HB3	1:N:265:PHE:CD2	2.46	0.50
1:P:52:ALA:O	1:P:56:VAL:HG22	2.12	0.50
1:R:357:ARG:HB2	1:R:369:TYR:CZ	2.47	0.50
1:S:254:ARG:HD3	1:T:20:GLU:HB2	1.94	0.50
1:T:254:ARG:HA	1:U:8:PHE:CE1	2.47	0.50
2:W:97:A:H2'	2:W:98:A:O4'	2.12	0.50
1:B:105:PRO:HG3	1:B:213:PHE:CD2	2.46	0.49
1:C:31:PRO:HD2	1:C:277:GLN:HG2	1.94	0.49
1:D:54:LYS:HG3	1:D:122:LEU:HD21	1.93	0.49
1:J:254:ARG:HE	1:K:6:ILE:HG12	1.77	0.49
1:N:105:PRO:HG3	1:N:213:PHE:CG	2.46	0.49
1:O:31:PRO:HB3	1:O:295:SER:HB3	1.94	0.49
1:P:360:PHE:HB2	1:R:9:LYS:CE	2.33	0.49
1:T:161:TYR:O	1:T:165:ILE:HG12	2.12	0.49
1:U:40:CYS:HA	1:U:110:GLU:O	2.12	0.49
1:V:133:THR:HG23	1:V:136:GLU:H	1.77	0.49
1:V:260:PHE:HB3	1:V:265:PHE:CD2	2.47	0.49
1:C:62:ALA:O	1:C:64:LYS:HD2	2.11	0.49
1:C:89:TRP:HE1	1:C:103:ILE:HD11	1.77	0.49
1:D:188:MET:O	1:D:192:LYS:HG2	2.11	0.49
1:F:8:PHE:CD2	1:F:18:LYS:HB2	2.48	0.49
1:G:126:MET:N	1:G:126:MET:SD	2.84	0.49
1:H:39:PRO:HB2	1:H:205:PHE:CE2	2.47	0.49
1:J:352:LYS:HD2	1:K:415:ARG:NH2	2.27	0.49
1:V:103:ILE:HD11	1:V:217:ILE:HD11	1.94	0.49
1:V:425:VAL:HG22	1:V:446:TYR:O	2.12	0.49
1:A:56:VAL:HG23	1:A:140:LEU:HD21	1.94	0.49
1:A:73:TYR:OH	1:A:140:LEU:HD23	2.12	0.49
1:D:233:TYR:CZ	1:D:287:ILE:HG22	2.48	0.49
1:E:24:ASP:OD1	1:E:24:ASP:N	2.45	0.49
1:K:53:TYR:CZ	1:K:57:LEU:HD22	2.47	0.49
1:O:96:ILE:HD13	1:O:108:LEU:HD13	1.94	0.49
1:B:96:ILE:CD1	1:B:108:LEU:HA	2.43	0.49
1:H:347:GLU:O	1:I:415:ARG:NH2	2.39	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:153:ILE:HG13	1:K:162:LYS:HZ2	1.78	0.49
1:M:298:SER:OG	1:M:301:SER:HB3	2.12	0.49
1:S:103:ILE:HD11	1:S:217:ILE:HD11	1.93	0.49
1:T:271:ARG:HG2	1:T:299:PRO:HB2	1.95	0.49
1:G:64:LYS:O	1:G:65:LEU:HD22	2.12	0.49
1:C:44:GLY:O	1:C:113:ARG:HG3	2.12	0.49
1:D:260:PHE:HB3	1:D:265:PHE:CD2	2.48	0.49
1:I:242:PHE:CE2	1:I:246:ILE:HD11	2.48	0.49
1:N:211:ASP:OD1	1:N:225:ARG:CZ	2.61	0.49
1:T:89:TRP:CZ2	1:T:216:ARG:HB3	2.48	0.49
1:F:78:MET:HB2	1:F:78:MET:HE3	1.50	0.49
1:F:357:ARG:NH1	1:G:403:GLU:HG3	2.27	0.49
1:H:158:THR:O	1:H:158:THR:HG22	2.13	0.49
1:J:165:ILE:O	1:J:169:ILE:HG13	2.13	0.49
1:J:249:ILE:HG22	1:J:251:LEU:HG	1.95	0.49
1:L:133:THR:OG1	1:L:135:PRO:HD2	2.12	0.49
1:M:91:SER:O	1:M:93:GLY:N	2.42	0.49
1:M:105:PRO:HG3	1:M:213:PHE:CD2	2.48	0.49
1:O:359:PHE:HB3	1:Q:8:PHE:CE2	2.48	0.49
1:U:47:PRO:HB3	1:U:120:TRP:NE1	2.27	0.49
1:V:58:SER:HB2	1:V:124:GLY:O	2.13	0.49
1:V:84:THR:CG2	1:V:102:LYS:HG2	2.43	0.49
1:B:360:PHE:N	1:D:10:VAL:HG21	2.27	0.49
1:E:265:PHE:O	1:E:269:ILE:HG12	2.13	0.49
1:G:27:GLU:HG2	1:G:28:TYR:N	2.28	0.49
1:G:334:ALA:O	1:G:338:MET:HG2	2.12	0.49
1:H:260:PHE:HB3	1:H:265:PHE:CD2	2.47	0.49
1:J:443:ASN:O	1:J:447:SER:OG	2.31	0.49
1:M:9:LYS:HE2	1:U:363:GLU:HG3	1.95	0.49
1:P:334:ALA:O	1:P:338:MET:HG2	2.13	0.49
1:S:49:LEU:HD23	1:S:49:LEU:H	1.77	0.49
1:G:358:ARG:HD2	1:H:266:GLU:OE2	2.12	0.49
1:I:421:ILE:O	1:I:425:VAL:HG23	2.13	0.49
1:T:126:MET:SD	1:T:128:LEU:HB2	2.53	0.49
1:T:133:THR:HG23	1:T:136:GLU:H	1.77	0.49
1:B:49:LEU:HD22	1:B:49:LEU:N	2.27	0.49
1:F:54:LYS:O	1:F:126:MET:HE1	2.13	0.49
1:H:178:PHE:HE2	1:H:223:ALA:HB3	1.77	0.49
1:O:434:ARG:HB2	1:O:437:SER:HB3	1.95	0.49
1:Q:225:ARG:HA	1:Q:228:THR:CG2	2.42	0.49
1:S:434:ARG:HB2	1:S:437:SER:HB3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:60:MET:SD	1:U:190:THR:HG21	2.53	0.49
1:E:364:LYS:H	1:E:364:LYS:HD2	1.77	0.48
1:G:6:ILE:HG13	1:G:19:PRO:HB3	1.95	0.48
1:H:194:CYS:CB	1:H:197:TRP:CD1	2.87	0.48
1:I:52:ALA:O	1:I:56:VAL:HG22	2.13	0.48
1:J:361:ARG:HD3	1:K:254:ARG:HH21	1.78	0.48
1:K:89:TRP:CG	1:K:96:ILE:HG23	2.48	0.48
1:N:279:THR:O	1:O:23:VAL:HG22	2.13	0.48
1:T:245:PHE:HB2	1:T:312:ILE:HG23	1.95	0.48
1:T:254:ARG:O	1:U:8:PHE:HZ	1.95	0.48
1:B:239:LEU:HA	1:B:272:MET:HE1	1.94	0.48
1:K:43:LEU:HD22	1:K:112:LYS:HD2	1.95	0.48
1:K:89:TRP:HB3	1:K:96:ILE:HG23	1.95	0.48
1:N:268:GLU:HB3	1:N:305:VAL:HG23	1.95	0.48
1:V:236:CYS:SG	1:V:289:PHE:HE1	2.36	0.48
1:G:287:ILE:HG13	1:G:288:HIS:ND1	2.28	0.48
1:I:133:THR:OG1	1:I:135:PRO:HD2	2.13	0.48
1:M:133:THR:HG22	1:M:136:GLU:OE1	2.13	0.48
1:M:294:LEU:HD23	1:M:294:LEU:N	2.22	0.48
1:P:352:LYS:HD2	1:Q:415:ARG:NH1	2.28	0.48
1:Q:38:LYS:HG2	1:Q:94:ILE:HD13	1.95	0.48
1:S:78:MET:O	1:S:105:PRO:HD2	2.13	0.48
1:T:246:ILE:HG23	1:T:251:LEU:O	2.12	0.48
1:K:65:LEU:HD12	1:K:70:VAL:CG2	2.42	0.48
1:L:31:PRO:HG2	1:L:277:GLN:HG2	1.95	0.48
1:R:366:LEU:O	1:R:370:GLU:HG2	2.14	0.48
1:S:27:GLU:HG2	1:S:28:TYR:N	2.23	0.48
1:T:254:ARG:HA	1:U:8:PHE:HE1	1.77	0.48
1:U:8:PHE:O	1:U:17:LEU:HA	2.13	0.48
1:E:179:VAL:HG23	1:E:181:ILE:HG23	1.95	0.48
1:R:35:ASP:OD2	1:R:37:LYS:HB2	2.13	0.48
1:S:188:MET:O	1:S:192:LYS:HG2	2.12	0.48
1:T:132:PRO:HG2	1:T:137:HIS:HE2	1.78	0.48
1:E:444:LYS:HA	1:E:444:LYS:HD2	1.73	0.48
1:J:56:VAL:HG23	1:J:140:LEU:HD21	1.95	0.48
1:M:366:LEU:O	1:M:370:GLU:HG2	2.13	0.48
1:V:136:GLU:HG3	1:V:179:VAL:HG21	1.95	0.48
1:B:9:LYS:NZ	1:K:366:LEU:HB2	2.26	0.48
1:Q:434:ARG:HD3	3:X:46:C:C4	2.49	0.48
1:R:53:TYR:HE1	1:R:128:LEU:HD12	1.79	0.48
1:K:39:PRO:HB2	1:K:205:PHE:HZ	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:434:ARG:HB2	1:K:437:SER:HB3	1.96	0.48
1:L:31:PRO:HB3	1:L:289:PHE:CD1	2.48	0.48
1:M:287:ILE:HG13	1:M:288:HIS:ND1	2.29	0.48
1:M:362:ASP:OD2	1:M:364:LYS:HB2	2.14	0.48
1:Q:287:ILE:HG13	1:Q:288:HIS:ND1	2.29	0.48
1:R:58:SER:OG	1:R:124:GLY:N	2.47	0.48
1:F:165:ILE:O	1:F:169:ILE:HG12	2.14	0.48
1:H:78:MET:HB3	1:H:105:PRO:HB2	1.96	0.48
1:I:11:ASN:HD22	1:I:14:VAL:HB	1.77	0.48
1:I:252:THR:HG23	1:I:255:GLU:H	1.78	0.48
1:J:12:ASN:HB3	1:J:14:VAL:O	2.14	0.48
1:N:317:CYS:SG	1:N:325:LEU:HD23	2.54	0.48
1:O:183:GLU:HG3	1:O:184:HIS:H	1.79	0.48
1:P:131:ASP:HB2	1:P:132:PRO:CD	2.39	0.48
1:S:29:LYS:H	1:S:29:LYS:HD2	1.78	0.48
1:A:334:ALA:O	1:A:338:MET:HG2	2.14	0.48
1:E:176:ALA:HB3	1:E:178:PHE:HD2	1.78	0.48
1:F:39:PRO:HB2	1:F:205:PHE:HE2	1.79	0.48
1:J:84:THR:HG22	1:J:102:LYS:HG2	1.95	0.48
1:N:42:THR:HA	1:N:112:LYS:HB2	1.95	0.48
1:Q:186:THR:O	1:Q:190:THR:HG23	2.14	0.48
1:R:53:TYR:CE1	1:R:128:LEU:HD12	2.49	0.48
3:X:38:C:H2'	3:X:39:A:C8	2.49	0.48
1:A:58:SER:CB	1:A:122:LEU:HD12	2.44	0.47
1:A:347:GLU:O	1:B:415:ARG:NH2	2.44	0.47
1:B:250:ASN:HD21	1:C:264:ASN:ND2	2.12	0.47
1:D:181:ILE:HG13	1:D:182:VAL:HG13	1.96	0.47
1:D:293:GLY:C	1:D:294:LEU:HG	2.34	0.47
1:F:122:LEU:HD11	1:F:126:MET:CE	2.44	0.47
1:H:65:LEU:CD1	1:H:197:TRP:HZ2	2.27	0.47
1:K:47:PRO:HB3	1:K:120:TRP:CE2	2.49	0.47
1:M:40:CYS:SG	1:M:112:LYS:HG2	2.54	0.47
1:T:90:THR:CA	1:T:95:VAL:HG23	2.44	0.47
1:V:92:TYR:OH	1:V:286:PHE:HB2	2.14	0.47
1:C:75:ALA:HB1	1:C:111:ILE:HG12	1.96	0.47
1:E:146:SER:HB2	1:E:169:ILE:HD13	1.95	0.47
1:F:168:ARG:O	1:F:172:ILE:HG12	2.14	0.47
1:M:10:VAL:O	1:M:10:VAL:HG22	2.14	0.47
1:P:168:ARG:O	1:P:172:ILE:HG12	2.14	0.47
1:U:245:PHE:HB2	1:U:312:ILE:HG23	1.96	0.47
2:W:74:C:H2'	2:W:75:A:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:344:TYR:CG	1:B:409:ILE:HG12	2.49	0.47
1:G:223:ALA:O	1:G:226:VAL:HG12	2.15	0.47
1:H:65:LEU:HD13	1:H:197:TRP:CZ2	2.49	0.47
1:J:364:LYS:H	1:J:364:LYS:CD	2.27	0.47
1:M:358:ARG:HD2	1:N:266:GLU:OE2	2.14	0.47
1:V:168:ARG:O	1:V:172:ILE:HG12	2.13	0.47
1:D:96:ILE:CD1	1:D:107:SER:O	2.63	0.47
1:D:126:MET:CE	1:D:128:LEU:HB2	2.44	0.47
1:L:176:ALA:HB3	1:M:194:CYS:SG	2.55	0.47
1:M:239:LEU:HA	1:M:272:MET:CE	2.45	0.47
1:N:182:VAL:O	1:N:183:GLU:HB2	2.14	0.47
1:A:10:VAL:HG11	1:A:18:LYS:HZ3	1.80	0.47
1:C:235:ASP:HB2	1:C:290:ARG:HG3	1.95	0.47
1:D:204:ARG:HH12	1:D:290:ARG:HG3	1.79	0.47
1:G:105:PRO:HG3	1:G:213:PHE:CG	2.49	0.47
1:K:109:VAL:HG22	1:K:110:GLU:N	2.29	0.47
1:N:253:ALA:O	1:N:257:ILE:HG13	2.15	0.47
1:Q:38:LYS:HG3	1:Q:94:ILE:HD13	1.95	0.47
1:R:181:ILE:HG13	1:R:182:VAL:HG13	1.96	0.47
1:E:359:PHE:HB3	1:G:8:PHE:CZ	2.49	0.47
1:F:27:GLU:HG2	1:F:28:TYR:H	1.78	0.47
1:G:260:PHE:HB3	1:G:265:PHE:CD2	2.49	0.47
1:H:82:GLU:HG3	1:H:102:LYS:HE2	1.97	0.47
1:M:47:PRO:HG2	1:M:76:ALA:HB2	1.97	0.47
1:R:252:THR:CG2	1:R:255:GLU:HB2	2.44	0.47
1:A:54:LYS:HG2	1:A:126:MET:CE	2.44	0.47
1:A:340:VAL:HG13	1:A:416:LEU:HG	1.96	0.47
1:B:178:PHE:HE2	1:B:223:ALA:HB3	1.79	0.47
1:C:56:VAL:HG23	1:C:140:LEU:CD2	2.43	0.47
1:E:8:PHE:CE1	1:E:18:LYS:HB2	2.50	0.47
1:J:194:CYS:HB3	1:J:197:TRP:CG	2.50	0.47
1:K:49:LEU:HD22	1:K:49:LEU:H	1.80	0.47
1:K:82:GLU:HG2	1:K:102:LYS:HE3	1.96	0.47
1:K:191:HIS:CE1	1:K:195:ALA:HA	2.49	0.47
1:L:415:ARG:HE	1:U:352:LYS:HB2	1.79	0.47
1:M:71:CYS:SG	1:M:206:LEU:HD11	2.55	0.47
1:M:267:GLU:H	1:M:267:GLU:HG3	1.44	0.47
1:N:186:THR:O	1:N:190:THR:HG23	2.15	0.47
1:N:255:GLU:HA	1:N:258:LEU:HD12	1.96	0.47
1:Q:253:ALA:O	1:Q:257:ILE:HG13	2.15	0.47
1:R:152:LYS:HE3	1:R:234:GLU:OE2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:R:188:MET:O	1:R:192:LYS:HG2	2.14	0.47
1:R:325:LEU:HD12	1:R:439:ALA:HB2	1.96	0.47
1:U:245:PHE:CD1	1:U:312:ILE:HG23	2.50	0.47
1:A:8:PHE:CE2	1:J:359:PHE:HD1	2.32	0.47
1:A:246:ILE:HG23	1:A:251:LEU:O	2.15	0.47
1:C:70:VAL:HG13	1:C:144:LEU:HD13	1.97	0.47
1:E:96:ILE:HG12	1:E:107:SER:O	2.15	0.47
1:F:122:LEU:HD23	1:V:124:GLY:O	2.14	0.47
1:I:62:ALA:HB2	1:I:124:GLY:CA	2.44	0.47
1:K:54:LYS:HA	1:K:126:MET:HE3	1.97	0.47
1:L:49:LEU:HD21	1:L:80:PHE:HZ	1.79	0.47
1:L:165:ILE:O	1:L:169:ILE:HG13	2.13	0.47
1:Q:425:VAL:HG22	1:Q:446:TYR:O	2.14	0.47
1:R:38:LYS:HG2	1:R:94:ILE:HG21	1.97	0.47
1:T:90:THR:HA	1:T:95:VAL:HG23	1.97	0.47
1:B:133:THR:HG23	1:B:136:GLU:H	1.80	0.47
1:F:58:SER:OG	1:F:122:LEU:HD12	2.15	0.47
1:K:268:GLU:OE2	1:K:307:HIS:CD2	2.68	0.47
1:O:40:CYS:HA	1:O:110:GLU:O	2.14	0.47
1:P:253:ALA:O	1:P:257:ILE:HG13	2.13	0.47
1:Q:194:CYS:HA	1:Q:197:TRP:CD1	2.50	0.47
1:V:43:LEU:HD23	1:V:43:LEU:HA	1.81	0.47
1:B:70:VAL:HG13	1:B:144:LEU:HD13	1.97	0.47
1:D:253:ALA:O	1:D:257:ILE:HG13	2.14	0.47
1:H:70:VAL:HG13	1:H:144:LEU:HD13	1.97	0.47
1:H:96:ILE:HG12	1:H:107:SER:O	2.14	0.47
1:J:153:ILE:HD12	1:J:161:TYR:HE2	1.80	0.47
1:L:225:ARG:O	1:L:229:VAL:N	2.48	0.47
1:M:8:PHE:O	1:M:17:LEU:HA	2.15	0.47
1:S:145:LEU:HD11	1:S:210:TYR:CD2	2.50	0.47
2:W:65:C:H2'	2:W:66:A:C8	2.50	0.47
1:A:325:LEU:HD11	1:A:427:VAL:HG12	1.97	0.46
1:E:254:ARG:HH12	1:F:7:VAL:CG1	2.29	0.46
1:H:274:GLU:CG	1:H:275:PRO:HD2	2.45	0.46
1:M:4:ASP:O	1:M:6:ILE:N	2.40	0.46
1:M:45:LYS:HE2	1:M:120:TRP:CZ3	2.50	0.46
1:Q:142:GLY:HA2	1:Q:224:ILE:HG23	1.96	0.46
1:T:178:PHE:CE2	1:T:223:ALA:HB3	2.50	0.46
1:U:236:CYS:SG	1:U:289:PHE:HE1	2.38	0.46
1:U:344:TYR:CG	1:U:409:ILE:HG12	2.50	0.46
1:C:211:ASP:HB2	1:C:228:THR:HB	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:447:SER:O	1:I:447:SER:OG	2.32	0.46
1:M:103:ILE:HD11	1:M:217:ILE:HD11	1.97	0.46
1:N:133:THR:HG23	1:N:136:GLU:H	1.79	0.46
1:P:167:ASP:O	1:P:171:GLN:HG2	2.14	0.46
1:T:255:GLU:HA	1:T:258:LEU:HD12	1.97	0.46
1:U:75:ALA:HB3	1:U:113:ARG:NH2	2.30	0.46
1:H:245:PHE:CG	1:H:312:ILE:HG12	2.50	0.46
1:J:31:PRO:HB3	1:J:289:PHE:CD1	2.50	0.46
1:L:136:GLU:HG3	1:L:179:VAL:CG2	2.43	0.46
1:M:245:PHE:HB2	1:M:312:ILE:HG23	1.97	0.46
1:N:43:LEU:HD12	1:N:111:ILE:CG2	2.46	0.46
1:U:31:PRO:HG3	1:U:289:PHE:CD2	2.50	0.46
1:B:31:PRO:HB3	1:B:289:PHE:CD2	2.50	0.46
1:C:260:PHE:HB3	1:C:265:PHE:CD2	2.51	0.46
1:F:186:THR:O	1:F:190:THR:HG23	2.14	0.46
1:G:36:LEU:HD12	1:G:36:LEU:O	2.15	0.46
1:K:41:ILE:HD11	1:K:205:PHE:CE1	2.51	0.46
1:L:31:PRO:HD2	1:L:277:GLN:HG2	1.97	0.46
1:O:149:ARG:O	1:O:153:ILE:HG23	2.16	0.46
1:T:421:ILE:O	1:T:425:VAL:HG23	2.15	0.46
1:U:265:PHE:CZ	1:U:311:LEU:HD22	2.49	0.46
1:D:89:TRP:HB3	1:D:96:ILE:HG23	1.96	0.46
1:D:264:ASN:HD22	1:D:307:HIS:CE1	2.32	0.46
1:E:56:VAL:HG13	1:E:57:LEU:N	2.28	0.46
1:I:254:ARG:NH1	1:J:6:ILE:C	2.68	0.46
1:J:48:ASP:HB3	1:J:51:LYS:HB3	1.97	0.46
1:J:149:ARG:O	1:J:153:ILE:HG22	2.15	0.46
1:N:20:GLU:O	1:N:20:GLU:HG2	2.15	0.46
1:P:145:LEU:HA	1:P:145:LEU:HD23	1.76	0.46
1:P:181:ILE:HG21	1:P:181:ILE:HD13	1.60	0.46
1:P:434:ARG:HD3	3:X:37:A:C5	2.50	0.46
1:Q:268:GLU:OE1	1:Q:307:HIS:HB2	2.16	0.46
1:S:366:LEU:O	1:S:370:GLU:HG3	2.16	0.46
1:C:96:ILE:HB	1:C:108:LEU:HD13	1.98	0.46
1:H:56:VAL:HG23	1:H:140:LEU:HD21	1.97	0.46
1:J:340:VAL:HG13	1:J:416:LEU:HG	1.96	0.46
1:M:352:LYS:HA	1:N:414:GLY:O	2.15	0.46
1:Q:133:THR:OG1	1:Q:135:PRO:HD2	2.16	0.46
1:R:48:ASP:O	1:R:49:LEU:HB2	2.16	0.46
1:V:268:GLU:OE1	1:V:307:HIS:HB2	2.16	0.46
1:A:96:ILE:HG12	1:A:107:SER:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:434:ARG:HB3	1:B:435:PRO:HD2	1.98	0.46
1:C:214:PHE:CD1	1:C:222:SER:HA	2.50	0.46
1:M:364:LYS:HD2	1:M:364:LYS:N	2.31	0.46
1:O:20:GLU:N	1:O:20:GLU:CD	2.68	0.46
1:S:253:ALA:O	1:S:257:ILE:HG13	2.16	0.46
3:X:40:C:H2'	3:X:41:A:C8	2.50	0.46
1:A:31:PRO:HB3	1:A:289:PHE:CD1	2.51	0.46
1:C:33:ILE:HG13	1:C:92:TYR:HH	1.81	0.46
1:G:216:ARG:HG3	1:G:217:ILE:CD1	2.46	0.46
1:H:249:ILE:CG2	1:H:251:LEU:HB2	2.46	0.46
1:I:168:ARG:HH12	2:W:22:C:P	2.39	0.46
1:J:133:THR:HG22	1:J:136:GLU:CG	2.45	0.46
1:O:62:ALA:HB2	1:O:124:GLY:CA	2.46	0.46
1:O:177:PRO:HG3	1:O:220:LEU:HG	1.98	0.46
1:T:6:ILE:HG22	1:T:6:ILE:O	2.15	0.46
1:T:89:TRP:HZ3	1:T:212:MET:HG2	1.80	0.46
1:T:126:MET:HE3	1:T:128:LEU:N	2.31	0.46
1:T:254:ARG:HH21	1:U:6:ILE:N	2.13	0.46
1:A:133:THR:OG1	1:A:135:PRO:HD2	2.16	0.46
1:R:278:GLU:HB3	1:R:281:VAL:HB	1.97	0.46
1:U:183:GLU:HG3	1:U:184:HIS:H	1.80	0.46
1:U:245:PHE:HB2	1:U:312:ILE:CG2	2.46	0.46
2:W:67:C:H2'	2:W:68:C:O4'	2.16	0.46
1:E:254:ARG:HG3	1:E:255:GLU:H	1.74	0.46
1:F:281:VAL:HB	1:F:284:SER:HB2	1.96	0.46
1:G:83:GLY:HA3	1:G:217:ILE:HG21	1.97	0.46
1:M:233:TYR:CZ	1:M:287:ILE:HG22	2.50	0.46
1:O:249:ILE:CG2	1:O:251:LEU:HB2	2.46	0.46
1:R:257:ILE:HD13	1:R:269:ILE:HD12	1.97	0.46
1:R:290:ARG:HD3	1:R:298:SER:HB2	1.98	0.46
1:T:249:ILE:HG22	1:T:251:LEU:H	1.79	0.46
1:V:204:ARG:HH12	1:V:290:ARG:HG3	1.81	0.46
1:A:249:ILE:CG2	1:A:251:LEU:HB2	2.47	0.45
1:C:63:ALA:HA	1:C:190:THR:HG22	1.97	0.45
1:E:78:MET:O	1:E:105:PRO:HD2	2.16	0.45
1:I:249:ILE:HD11	1:I:349:PHE:CB	2.46	0.45
1:K:50:ASN:O	1:K:54:LYS:HG3	2.17	0.45
1:K:89:TRP:CG	1:K:96:ILE:CG2	2.99	0.45
1:L:48:ASP:HB2	1:L:51:LYS:HB2	1.97	0.45
1:L:56:VAL:HG21	1:L:144:LEU:HD11	1.98	0.45
1:M:133:THR:HG23	1:M:136:GLU:H	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:319:MET:O	1:O:336:HIS:HE1	1.99	0.45
1:O:133:THR:HG22	1:O:136:GLU:OE1	2.16	0.45
1:Q:47:PRO:HB3	1:Q:120:TRP:CZ2	2.51	0.45
1:Q:253:ALA:HB3	1:R:20:GLU:HG3	1.98	0.45
1:S:167:ASP:O	1:S:170:GLU:HG2	2.16	0.45
1:T:361:ARG:HB3	1:U:254:ARG:NH2	2.30	0.45
1:U:136:GLU:CG	1:U:179:VAL:HG21	2.39	0.45
1:A:56:VAL:CG2	1:A:140:LEU:HD21	2.46	0.45
1:I:156:GLN:O	1:I:158:THR:HG23	2.16	0.45
1:K:133:THR:HG23	1:K:136:GLU:H	1.81	0.45
1:N:50:ASN:N	1:N:50:ASN:OD1	2.48	0.45
1:P:434:ARG:HB3	1:P:435:PRO:HD2	1.98	0.45
1:R:162:LYS:HD3	1:R:191:HIS:CE1	2.51	0.45
2:W:7:C:H2'	2:W:8:A:O4'	2.15	0.45
1:B:284:SER:O	1:B:287:ILE:HG12	2.17	0.45
1:C:78:MET:O	1:C:105:PRO:HD2	2.15	0.45
1:G:246:ILE:HG23	1:G:251:LEU:O	2.16	0.45
1:H:85:CYS:SG	1:H:97:ALA:HB1	2.57	0.45
1:K:126:MET:HE2	1:K:126:MET:HB2	1.89	0.45
1:L:153:ILE:HD11	1:L:161:TYR:HE1	1.81	0.45
1:L:272:MET:SD	1:L:305:VAL:HG11	2.56	0.45
1:L:361:ARG:HG2	1:M:254:ARG:HH21	1.80	0.45
1:M:50:ASN:O	1:M:54:LYS:HG3	2.15	0.45
1:R:133:THR:OG1	1:R:135:PRO:HD2	2.15	0.45
1:S:28:TYR:HB3	1:S:299:PRO:HB3	1.97	0.45
1:S:105:PRO:HG3	1:S:213:PHE:CD2	2.51	0.45
1:T:40:CYS:HA	1:T:110:GLU:O	2.16	0.45
1:I:152:LYS:HE2	1:I:152:LYS:HB3	1.79	0.45
1:I:323:ARG:HG2	2:W:18:A:C4	2.51	0.45
1:I:434:ARG:HD3	2:W:19:C:C4	2.52	0.45
1:L:151:SER:OG	1:L:198:SER:HB3	2.17	0.45
1:L:290:ARG:HD2	1:L:290:ARG:HA	1.80	0.45
1:P:35:ASP:OD1	1:P:37:LYS:HG2	2.17	0.45
1:U:149:ARG:O	1:U:153:ILE:HG23	2.16	0.45
1:C:58:SER:HB2	1:C:124:GLY:O	2.17	0.45
1:E:65:LEU:HD12	1:E:70:VAL:CG2	2.47	0.45
1:G:169:ILE:HD13	1:G:169:ILE:HA	1.80	0.45
1:G:281:VAL:HG11	1:G:284:SER:HB3	1.98	0.45
1:H:43:LEU:HA	1:H:43:LEU:HD23	1.72	0.45
1:I:344:TYR:CD1	1:I:420:HIS:HE1	2.35	0.45
1:J:157:ASN:O	1:J:159:GLY:N	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:254:ARG:HD2	1:M:7:VAL:O	2.17	0.45
1:L:266:GLU:OE2	1:U:358:ARG:HD2	2.17	0.45
1:O:443:ASN:O	1:O:447:SER:OG	2.34	0.45
1:P:325:LEU:HD12	1:P:439:ALA:HB2	1.99	0.45
1:U:235:ASP:HA	3:X:89:C:OP1	2.16	0.45
1:A:73:TYR:CE2	1:A:140:LEU:HD23	2.52	0.45
1:C:163:THR:HA	1:C:188:MET:HE3	1.98	0.45
1:H:174:GLU:HG2	1:H:180:LYS:HB2	1.99	0.45
1:I:359:PHE:CD1	1:K:8:PHE:CE2	3.04	0.45
1:L:176:ALA:O	1:M:196:ASN:HB2	2.17	0.45
1:N:83:GLY:O	1:N:102:LYS:HA	2.17	0.45
1:N:225:ARG:NH1	1:N:229:VAL:HA	2.31	0.45
1:N:268:GLU:OE1	1:N:307:HIS:HB2	2.17	0.45
1:P:251:LEU:HD23	1:P:251:LEU:HA	1.75	0.45
1:Q:363:GLU:CG	1:V:9:LYS:HE3	2.42	0.45
1:R:167:ASP:O	1:R:171:GLN:NE2	2.49	0.45
1:S:53:TYR:CD2	1:S:140:LEU:HD22	2.51	0.45
1:B:181:ILE:HG13	1:B:182:VAL:HG13	1.99	0.45
1:D:321:GLN:O	1:D:325:LEU:HD23	2.16	0.45
1:G:211:ASP:HB2	1:G:228:THR:HB	1.99	0.45
1:I:251:LEU:HD22	1:I:255:GLU:HB3	1.98	0.45
1:I:317:CYS:O	1:I:427:VAL:HG11	2.17	0.45
1:K:49:LEU:HD11	1:K:76:ALA:HB1	1.99	0.45
1:M:149:ARG:HB2	1:M:227:GLY:HA2	1.99	0.45
1:M:284:SER:O	1:M:287:ILE:HG12	2.17	0.45
1:O:150:LEU:O	1:O:153:ILE:HG12	2.17	0.45
1:P:245:PHE:HB2	1:P:312:ILE:HG23	1.99	0.45
1:Q:318:TYR:CE1	1:Q:423:ARG:HG2	2.52	0.45
1:R:36:LEU:HD22	1:R:93:GLY:HA3	1.99	0.45
1:S:266:GLU:OE2	1:V:358:ARG:HD2	2.17	0.45
1:T:181:ILE:HG21	1:T:181:ILE:HD13	1.66	0.45
1:A:78:MET:HG2	1:A:105:PRO:HB2	1.98	0.45
1:A:134:VAL:HB	1:A:135:PRO:HD3	1.99	0.45
1:B:339:SER:OG	1:B:446:TYR:OH	2.33	0.45
1:E:91:SER:O	1:E:93:GLY:N	2.45	0.45
1:G:233:TYR:CZ	1:G:287:ILE:HG22	2.51	0.45
1:O:7:VAL:CG1	1:O:17:LEU:HD11	2.47	0.45
1:R:323:ARG:HG2	3:X:54:C:C2	2.52	0.45
1:S:45:LYS:HB2	1:S:115:ASP:CA	2.41	0.45
2:W:54:C:H2'	2:W:56:C:H5"	1.98	0.45
1:A:323:ARG:C	1:A:323:ARG:HD3	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:49:LEU:HA	1:D:49:LEU:HD12	1.74	0.45
1:G:105:PRO:HA	1:G:108:LEU:HD13	1.99	0.45
1:G:425:VAL:HG22	1:G:446:TYR:O	2.17	0.45
1:I:8:PHE:O	1:I:17:LEU:HA	2.16	0.45
1:I:284:SER:O	1:I:287:ILE:HG12	2.16	0.45
1:P:18:LYS:HG3	1:P:19:PRO:HD2	1.99	0.45
1:P:47:PRO:HB2	1:P:52:ALA:HB2	1.98	0.45
1:A:119:ASN:O	1:A:120:TRP:C	2.55	0.45
1:B:96:ILE:HD13	1:B:108:LEU:HA	1.98	0.45
1:B:133:THR:CG2	1:B:135:PRO:HG2	2.47	0.45
1:C:279:THR:OG1	1:D:21:ILE:HD12	2.17	0.45
1:F:8:PHE:HD2	1:F:18:LYS:HB2	1.81	0.45
1:J:223:ALA:O	1:J:226:VAL:HG12	2.17	0.45
1:N:403:GLU:O	1:N:407:THR:HG23	2.17	0.45
1:Q:33:ILE:HG23	1:Q:294:LEU:HG	1.99	0.45
1:S:421:ILE:O	1:S:425:VAL:HG23	2.17	0.45
1:V:269:ILE:HD12	1:V:269:ILE:HG23	1.66	0.45
1:B:52:ALA:O	1:B:56:VAL:HG22	2.17	0.44
1:B:175:THR:HG21	1:C:196:ASN:H	1.82	0.44
1:C:65:LEU:HD22	1:C:70:VAL:CG2	2.47	0.44
1:C:293:GLY:C	1:C:294:LEU:HD23	2.37	0.44
1:I:98:ARG:HB2	1:I:101:ASP:OD2	2.18	0.44
1:J:29:LYS:HG3	1:J:29:LYS:O	2.16	0.44
1:N:238:GLY:HA3	1:N:305:VAL:CG1	2.47	0.44
1:O:421:ILE:O	1:O:425:VAL:HG23	2.17	0.44
1:A:49:LEU:H	1:A:49:LEU:HG	1.68	0.44
1:B:321:GLN:O	1:B:325:LEU:HD23	2.18	0.44
1:D:252:THR:HG23	1:D:255:GLU:H	1.82	0.44
1:G:55:SER:HB2	1:G:121:ALA:O	2.18	0.44
1:G:155:GLY:O	1:G:158:THR:HG22	2.17	0.44
1:I:60:MET:O	1:I:190:THR:HG21	2.17	0.44
1:J:58:SER:HB2	1:J:124:GLY:H	1.81	0.44
1:K:246:ILE:HG23	1:K:251:LEU:O	2.17	0.44
1:L:35:ASP:OD1	1:L:37:LYS:HB2	2.16	0.44
1:M:55:SER:O	1:M:58:SER:HB2	2.17	0.44
1:O:142:GLY:HA3	1:O:173:PHE:CZ	2.51	0.44
1:O:254:ARG:C	1:O:256:ALA:H	2.20	0.44
1:O:336:HIS:O	1:O:340:VAL:HG23	2.16	0.44
1:P:252:THR:HG23	1:P:255:GLU:H	1.82	0.44
1:R:42:THR:O	1:R:43:LEU:HD23	2.17	0.44
1:U:96:ILE:HD12	1:U:96:ILE:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:344:TYR:CG	1:H:409:ILE:HG12	2.52	0.44
1:K:284:SER:O	1:K:287:ILE:HG12	2.16	0.44
1:L:53:TYR:CE1	1:L:132:PRO:HB3	2.52	0.44
1:N:128:LEU:HD12	1:N:130:ARG:NE	2.33	0.44
1:O:8:PHE:O	1:O:17:LEU:HA	2.17	0.44
1:A:18:LYS:HD3	1:K:270:ARG:HG3	1.99	0.44
1:A:148:TYR:CE1	1:A:204:ARG:HG3	2.53	0.44
1:D:253:ALA:CB	1:E:20:GLU:HG3	2.48	0.44
1:E:47:PRO:HB2	1:E:52:ALA:CB	2.47	0.44
1:E:281:VAL:CG1	1:E:284:SER:HB3	2.48	0.44
1:H:54:LYS:HB3	1:H:126:MET:HE2	2.00	0.44
1:M:194:CYS:HB3	1:M:197:TRP:CD1	2.52	0.44
1:Q:267:GLU:H	1:Q:267:GLU:HG3	1.50	0.44
1:Q:366:LEU:O	1:Q:370:GLU:HG2	2.17	0.44
1:R:33:ILE:HG12	1:R:294:LEU:HD13	2.00	0.44
1:T:88:ASP:OD1	1:T:88:ASP:N	2.50	0.44
1:V:334:ALA:O	1:V:338:MET:HG2	2.17	0.44
1:A:287:ILE:HG13	1:A:288:HIS:ND1	2.32	0.44
1:E:254:ARG:HH22	1:F:7:VAL:HG12	1.83	0.44
1:F:136:GLU:CG	1:F:179:VAL:HG11	2.47	0.44
1:H:9:LYS:HB3	1:H:17:LEU:HA	2.00	0.44
1:H:246:ILE:HG23	1:H:251:LEU:O	2.17	0.44
1:N:39:PRO:CG	1:N:292:LEU:HD13	2.47	0.44
1:N:135:PRO:HB2	1:N:179:VAL:HG23	1.99	0.44
1:N:344:TYR:CG	1:N:409:ILE:HG12	2.53	0.44
1:U:290:ARG:HD2	1:U:295:SER:HB2	1.99	0.44
1:B:325:LEU:CD1	1:B:439:ALA:HB2	2.48	0.44
1:E:358:ARG:HG3	1:F:263:LYS:HA	1.99	0.44
1:E:434:ARG:HD3	2:W:82:C:C4	2.53	0.44
1:G:175:THR:HG21	1:H:195:ALA:HB3	1.98	0.44
1:G:196:ASN:O	1:G:199:THR:HG22	2.18	0.44
1:J:268:GLU:HB3	1:J:305:VAL:HA	1.99	0.44
1:K:135:PRO:HD3	1:K:221:TYR:OH	2.17	0.44
1:K:330:ILE:O	1:K:335:PRO:HG3	2.17	0.44
1:L:434:ARG:HB2	1:L:437:SER:HB3	1.98	0.44
1:P:133:THR:O	1:P:136:GLU:HG2	2.17	0.44
1:Q:168:ARG:O	1:Q:172:ILE:HG12	2.18	0.44
1:T:89:TRP:N	1:T:89:TRP:CD1	2.86	0.44
3:X:87:A:N6	3:X:88:A:N3	2.64	0.44
1:B:40:CYS:HA	1:B:110:GLU:O	2.18	0.44
1:E:249:ILE:HD11	1:E:349:PHE:CG	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:78:MET:CE	1:F:106:GLY:N	2.81	0.44
1:F:162:LYS:O	1:F:165:ILE:HG22	2.17	0.44
1:F:325:LEU:HD12	1:F:439:ALA:HB2	1.98	0.44
1:G:252:THR:O	1:G:253:ALA:HB3	2.17	0.44
1:O:230:VAL:HG12	3:X:30:A:N6	2.32	0.44
1:R:323:ARG:HD3	1:R:323:ARG:C	2.38	0.44
1:A:194:CYS:HB3	1:A:197:TRP:CD1	2.52	0.44
1:B:360:PHE:HB2	1:D:10:VAL:HG21	1.99	0.44
1:E:223:ALA:O	1:E:226:VAL:HG12	2.17	0.44
1:I:367:GLN:O	1:I:370:GLU:HG2	2.17	0.44
1:O:9:LYS:NZ	1:O:17:LEU:HD13	2.32	0.44
1:O:311:LEU:CD1	1:O:341:LEU:HD23	2.48	0.44
1:O:359:PHE:CD1	1:Q:10:VAL:HG12	2.53	0.44
1:P:99:LYS:HE3	1:P:99:LYS:HB2	1.74	0.44
1:R:344:TYR:CG	1:R:409:ILE:HG12	2.53	0.44
1:S:153:ILE:HD11	1:S:165:ILE:CD1	2.48	0.44
1:U:147:LEU:HD21	1:U:190:THR:HG23	2.00	0.44
1:V:290:ARG:HD2	1:V:295:SER:OG	2.18	0.44
2:W:40:A:H2'	2:W:41:A:O4'	2.18	0.44
1:B:43:LEU:HA	1:B:43:LEU:HD23	1.78	0.44
1:B:252:THR:CG2	1:B:255:GLU:H	2.31	0.44
1:D:211:ASP:OD1	1:D:225:ARG:NE	2.50	0.44
1:F:27:GLU:HG3	1:F:29:LYS:HE2	2.00	0.44
1:F:265:PHE:CZ	1:F:311:LEU:HD22	2.53	0.44
1:L:153:ILE:HD11	1:L:161:TYR:CD1	2.53	0.44
1:M:239:LEU:HA	1:M:272:MET:HE1	1.99	0.44
1:O:424:TYR:CD1	1:O:442:LEU:HD13	2.46	0.44
1:P:103:ILE:HD12	1:P:108:LEU:HD11	2.00	0.44
1:Q:83:GLY:O	1:Q:102:LYS:HA	2.18	0.44
1:T:238:GLY:HA3	1:T:305:VAL:CG1	2.48	0.44
1:T:268:GLU:OE1	1:T:308:VAL:HG23	2.18	0.44
1:V:9:LYS:HD2	1:V:15:VAL:CG2	2.47	0.44
1:V:133:THR:OG1	1:V:135:PRO:HD2	2.18	0.44
1:A:133:THR:HG23	1:A:136:GLU:H	1.83	0.43
1:A:254:ARG:HG3	1:B:8:PHE:HB3	1.99	0.43
1:B:7:VAL:HG23	1:B:19:PRO:CA	2.47	0.43
1:B:133:THR:HG23	1:B:135:PRO:HG2	2.00	0.43
1:D:52:ALA:O	1:D:56:VAL:HG22	2.18	0.43
1:E:176:ALA:HB1	1:E:177:PRO:CD	2.48	0.43
1:F:53:TYR:CE2	1:F:136:GLU:HB3	2.53	0.43
1:F:78:MET:HE3	1:F:105:PRO:HB2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:264:ASN:HD22	1:F:307:HIS:CE1	2.35	0.43
1:K:147:LEU:HA	1:K:150:LEU:HD12	2.00	0.43
1:O:38:LYS:HE3	1:O:38:LYS:HB2	1.66	0.43
1:Q:217:ILE:HG21	1:Q:217:ILE:HD13	1.76	0.43
1:R:245:PHE:HB2	1:R:312:ILE:CG2	2.48	0.43
1:V:150:LEU:O	1:V:153:ILE:HG12	2.17	0.43
1:B:360:PHE:CD2	1:D:10:VAL:HG11	2.53	0.43
1:D:83:GLY:HA3	1:D:217:ILE:HG21	2.00	0.43
1:G:352:LYS:HB2	1:H:415:ARG:NH1	2.32	0.43
1:M:327:ALA:O	1:M:437:SER:HA	2.17	0.43
1:O:70:VAL:HG21	1:O:197:TRP:CH2	2.52	0.43
1:Q:286:PHE:HA	1:Q:289:PHE:HB3	2.00	0.43
1:R:361:ARG:NH1	1:R:365:GLU:OE2	2.50	0.43
1:T:49:LEU:HG	1:T:137:HIS:CE1	2.53	0.43
1:T:239:LEU:O	1:T:243:THR:HG23	2.19	0.43
1:U:84:THR:OG1	1:U:102:LYS:HG2	2.18	0.43
1:V:8:PHE:O	1:V:17:LEU:HA	2.18	0.43
1:V:56:VAL:HG23	1:V:140:LEU:CD2	2.45	0.43
1:J:416:LEU:HD23	1:J:416:LEU:HA	1.76	0.43
1:K:41:ILE:HG12	1:K:205:PHE:CD2	2.53	0.43
1:L:425:VAL:HG22	1:L:446:TYR:O	2.18	0.43
1:M:18:LYS:HB2	1:M:18:LYS:HE3	1.78	0.43
1:P:238:GLY:HA3	1:P:305:VAL:CG1	2.48	0.43
1:R:246:ILE:HG23	1:R:251:LEU:O	2.18	0.43
1:R:434:ARG:HB3	1:R:435:PRO:HD2	2.00	0.43
1:T:290:ARG:HH21	3:X:78:A:H4'	1.83	0.43
1:V:167:ASP:O	1:V:171:GLN:OE1	2.37	0.43
2:W:70:A:H2'	2:W:71:C:O4'	2.18	0.43
1:C:194:CYS:HB3	1:C:197:TRP:CG	2.53	0.43
1:D:157:ASN:OD1	2:W:73:C:N4	2.52	0.43
1:E:290:ARG:HH11	1:E:295:SER:HB2	1.83	0.43
1:K:249:ILE:HG23	1:K:349:PHE:CE1	2.53	0.43
1:R:287:ILE:HG23	1:R:288:HIS:ND1	2.33	0.43
1:T:344:TYR:CG	1:T:409:ILE:HG12	2.54	0.43
1:U:20:GLU:CD	1:U:20:GLU:H	2.22	0.43
1:V:188:MET:O	1:V:192:LYS:HG2	2.18	0.43
2:W:4:C:H2'	2:W:5:C:C6	2.53	0.43
1:A:18:LYS:HE3	1:A:18:LYS:HB2	1.82	0.43
1:B:352:LYS:HB2	1:C:415:ARG:HD2	2.01	0.43
1:C:89:TRP:HZ3	1:C:212:MET:HG2	1.82	0.43
1:E:82:GLU:HG2	1:E:102:LYS:HE3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:254:ARG:HH12	1:F:7:VAL:HG12	1.83	0.43
1:E:351:GLY:O	1:F:415:ARG:HD3	2.18	0.43
1:G:364:LYS:H	1:G:364:LYS:HD2	1.83	0.43
1:H:175:THR:HG21	1:I:196:ASN:H	1.84	0.43
1:K:183:GLU:HG3	1:K:184:HIS:H	1.83	0.43
1:N:53:TYR:OH	1:N:181:ILE:HD12	2.18	0.43
1:N:238:GLY:HA3	1:N:305:VAL:HG11	2.00	0.43
1:V:269:ILE:HA	1:V:269:ILE:HD13	1.77	0.43
1:C:178:PHE:HE2	1:C:223:ALA:HB3	1.83	0.43
1:G:251:LEU:HD23	1:G:251:LEU:HA	1.79	0.43
1:H:173:PHE:HA	1:H:178:PHE:HB2	2.01	0.43
1:H:325:LEU:HD11	1:H:427:VAL:HG12	2.00	0.43
1:I:54:LYS:HD2	1:I:126:MET:SD	2.58	0.43
1:I:96:ILE:HD11	1:I:108:LEU:HG	2.00	0.43
1:J:46:ALA:HA	1:J:47:PRO:HD3	1.82	0.43
1:K:53:TYR:CE1	1:K:57:LEU:HD22	2.52	0.43
1:L:133:THR:HG23	1:L:136:GLU:H	1.84	0.43
1:O:43:LEU:HD23	1:O:43:LEU:HA	1.84	0.43
1:Q:133:THR:HG23	1:Q:136:GLU:H	1.82	0.43
1:S:112:LYS:HB2	1:S:112:LYS:HE3	1.74	0.43
1:S:242:PHE:CE2	1:S:246:ILE:HD11	2.54	0.43
1:U:181:ILE:HG21	1:U:181:ILE:HD13	1.74	0.43
1:C:41:ILE:HG22	1:C:111:ILE:HD12	2.01	0.43
1:G:33:ILE:H	1:G:33:ILE:HG12	1.60	0.43
1:I:293:GLY:C	1:I:294:LEU:HD23	2.39	0.43
1:I:352:LYS:HD2	1:J:415:ARG:NH1	2.33	0.43
1:J:84:THR:CG2	1:J:102:LYS:HG2	2.49	0.43
1:J:423:ARG:O	1:J:427:VAL:HG23	2.18	0.43
1:M:133:THR:OG1	1:M:135:PRO:HD2	2.18	0.43
1:O:254:ARG:O	1:O:255:GLU:HB2	2.19	0.43
1:Q:133:THR:HG22	1:Q:136:GLU:HG3	2.00	0.43
1:S:31:PRO:HB3	1:S:289:PHE:CD2	2.54	0.43
1:U:53:TYR:CD2	1:U:140:LEU:HD12	2.53	0.43
1:V:180:LYS:O	1:V:180:LYS:HG3	2.19	0.43
3:X:20:C:H2'	3:X:21:C:O4'	2.19	0.43
1:E:176:ALA:C	1:E:178:PHE:H	2.22	0.43
1:H:422:ARG:HA	1:H:422:ARG:HD3	1.79	0.43
1:J:352:LYS:HB2	1:K:415:ARG:HE	1.83	0.43
1:O:249:ILE:HD11	1:O:349:PHE:CG	2.54	0.43
1:P:211:ASP:HB2	1:P:228:THR:HB	1.99	0.43
1:R:194:CYS:HB3	1:R:197:TRP:CD1	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S:65:LEU:HD23	1:S:65:LEU:HA	1.90	0.43
1:T:49:LEU:HD23	1:T:80:PHE:CE2	2.53	0.43
1:T:175:THR:HG23	1:U:193:MET:O	2.18	0.43
1:A:187:LEU:HA	1:A:190:THR:HG22	2.01	0.43
1:C:78:MET:SD	1:C:105:PRO:HB2	2.58	0.43
1:F:347:GLU:O	1:G:415:ARG:NH2	2.52	0.43
1:K:60:MET:HG3	1:K:190:THR:HG21	2.00	0.43
1:K:96:ILE:HG21	1:K:96:ILE:HD13	1.77	0.43
1:O:7:VAL:CB	1:O:17:LEU:HD11	2.42	0.43
1:U:340:VAL:HA	1:U:416:LEU:HD21	2.00	0.43
1:D:122:LEU:HD23	1:D:122:LEU:HA	1.88	0.43
1:F:22:ILE:HD12	1:F:22:ILE:N	2.33	0.43
1:H:33:ILE:HG12	1:H:294:LEU:HD11	2.01	0.43
1:H:54:LYS:HB3	1:H:126:MET:HE1	2.00	0.43
1:H:205:PHE:CD2	1:H:292:LEU:HA	2.54	0.43
1:K:33:ILE:HG12	1:K:294:LEU:HD11	2.01	0.43
1:K:134:VAL:O	1:K:137:HIS:HB2	2.18	0.43
1:L:32:ALA:H	1:L:277:GLN:HE21	1.67	0.43
1:M:77:ALA:HA	1:M:80:PHE:CD2	2.48	0.43
1:M:187:LEU:HA	1:M:190:THR:HG22	2.00	0.43
1:N:325:LEU:O	1:N:437:SER:HB2	2.18	0.43
1:O:96:ILE:HD13	1:O:108:LEU:CD1	2.49	0.43
1:S:156:GLN:O	1:S:158:THR:HG23	2.19	0.43
1:T:260:PHE:HB3	1:T:265:PHE:CD2	2.54	0.43
1:A:9:LYS:NZ	1:A:15:VAL:HG22	2.34	0.42
1:B:134:VAL:N	1:B:135:PRO:HD2	2.33	0.42
1:D:223:ALA:HA	2:W:76:C:O2	2.19	0.42
1:H:253:ALA:O	1:H:257:ILE:HG13	2.19	0.42
1:I:24:ASP:N	1:I:24:ASP:OD1	2.51	0.42
1:J:111:ILE:O	1:J:111:ILE:HG13	2.19	0.42
1:J:146:SER:HB2	1:J:169:ILE:HD13	2.01	0.42
1:K:367:GLN:OE1	1:K:367:GLN:HA	2.18	0.42
1:L:10:VAL:HG22	1:T:359:PHE:HD1	1.84	0.42
1:L:186:THR:O	1:L:190:THR:HG23	2.19	0.42
1:L:251:LEU:HA	1:L:251:LEU:HD23	1.71	0.42
1:O:442:LEU:HD23	1:O:442:LEU:HA	1.75	0.42
1:R:133:THR:HG22	1:R:136:GLU:CG	2.49	0.42
1:S:84:THR:HA	1:S:102:LYS:HA	2.01	0.42
1:C:178:PHE:CE2	1:C:223:ALA:HB3	2.54	0.42
1:G:178:PHE:HE2	1:G:223:ALA:HB3	1.83	0.42
1:H:274:GLU:HB3	1:H:277:GLN:HG3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:358:ARG:HD2	1:K:266:GLU:CD	2.40	0.42
1:K:62:ALA:HB2	1:K:124:GLY:N	2.33	0.42
1:N:225:ARG:HD3	3:X:22:C:O2'	2.19	0.42
1:S:73:TYR:CZ	1:S:140:LEU:HD23	2.54	0.42
1:S:171:GLN:HA	1:S:174:GLU:HG2	2.01	0.42
1:T:425:VAL:HG22	1:T:446:TYR:O	2.19	0.42
1:C:41:ILE:HD12	1:C:41:ILE:HA	1.89	0.42
1:C:62:ALA:HB2	1:C:124:GLY:CA	2.47	0.42
1:C:239:LEU:O	1:C:243:THR:HG23	2.19	0.42
1:D:62:ALA:HB2	1:D:124:GLY:HA3	2.02	0.42
1:J:122:LEU:CD1	1:O:122:LEU:HB3	2.48	0.42
1:L:161:TYR:CZ	1:L:165:ILE:HD11	2.54	0.42
1:L:357:ARG:NH1	1:M:403:GLU:HG3	2.35	0.42
1:N:434:ARG:HD3	3:X:19:C:N3	2.34	0.42
1:O:344:TYR:CG	1:O:409:ILE:HG12	2.54	0.42
1:P:63:ALA:HA	1:P:190:THR:HG22	2.00	0.42
1:Q:223:ALA:O	1:Q:226:VAL:HG12	2.19	0.42
1:R:20:GLU:O	1:R:20:GLU:HG2	2.19	0.42
1:R:257:ILE:HD12	1:V:8:PHE:CZ	2.54	0.42
1:S:8:PHE:HB3	1:S:18:LYS:O	2.19	0.42
1:A:178:PHE:HE2	1:A:223:ALA:HB3	1.84	0.42
1:B:79:GLN:HG3	1:B:80:PHE:N	2.34	0.42
1:I:269:ILE:HD13	1:I:269:ILE:HA	1.91	0.42
1:S:216:ARG:HH11	1:S:283:HIS:CD2	2.37	0.42
1:T:267:GLU:H	1:T:267:GLU:HG3	1.59	0.42
1:U:153:ILE:HD13	1:U:165:ILE:HD11	2.01	0.42
1:V:63:ALA:HA	1:V:190:THR:HG22	2.00	0.42
1:V:181:ILE:HG13	1:V:182:VAL:HG13	2.02	0.42
1:V:405:VAL:O	1:V:409:ILE:HG13	2.19	0.42
1:A:8:PHE:HE2	1:J:359:PHE:HD1	1.67	0.42
1:B:9:LYS:O	1:B:9:LYS:HG3	2.19	0.42
1:B:252:THR:HG22	1:B:255:GLU:HG2	2.00	0.42
1:C:242:PHE:CE2	1:C:246:ILE:HD11	2.54	0.42
1:D:416:LEU:HD22	1:D:420:HIS:CB	2.49	0.42
1:E:73:TYR:O	1:E:77:ALA:N	2.42	0.42
1:H:280:ALA:HB2	1:I:21:ILE:HB	2.01	0.42
1:J:321:GLN:O	1:J:325:LEU:HD23	2.17	0.42
1:K:153:ILE:HD13	1:K:165:ILE:HD11	2.01	0.42
1:K:325:LEU:O	1:K:437:SER:HB2	2.19	0.42
1:N:63:ALA:HA	1:N:190:THR:HG22	2.01	0.42
1:Q:254:ARG:O	1:Q:258:LEU:HG	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:T:133:THR:OG1	1:T:135:PRO:HD2	2.19	0.42
1:U:52:ALA:O	1:U:56:VAL:HG22	2.20	0.42
1:V:9:LYS:HA	1:V:9:LYS:HD3	1.66	0.42
1:V:242:PHE:CE2	1:V:246:ILE:HD11	2.55	0.42
2:W:49:C:H2'	2:W:50:A:O4'	2.18	0.42
1:A:149:ARG:O	1:A:153:ILE:HG23	2.20	0.42
1:E:254:ARG:NH1	1:F:7:VAL:HG12	2.35	0.42
1:G:27:GLU:HG2	1:G:28:TYR:H	1.83	0.42
1:G:246:ILE:HG12	1:G:253:ALA:HA	2.00	0.42
1:G:434:ARG:HB2	1:G:437:SER:HB3	2.02	0.42
1:H:77:ALA:HA	1:H:80:PHE:HD1	1.84	0.42
1:K:65:LEU:N	1:K:65:LEU:HD23	2.34	0.42
1:M:181:ILE:HG21	1:M:181:ILE:HD13	1.78	0.42
1:N:311:LEU:HD11	1:N:345:LEU:HD22	2.00	0.42
1:T:243:THR:HG22	1:U:22:ILE:HG21	2.01	0.42
1:T:290:ARG:HD2	1:T:295:SER:HB2	2.01	0.42
1:A:293:GLY:C	1:A:294:LEU:HD23	2.40	0.42
1:A:421:ILE:HG23	1:A:446:TYR:HB3	2.02	0.42
1:B:118:GLY:HA3	1:B:120:TRP:CZ3	2.54	0.42
1:G:434:ARG:HB3	1:G:435:PRO:HD2	2.01	0.42
1:H:7:VAL:O	1:H:8:PHE:HD1	2.03	0.42
1:I:65:LEU:HD22	1:I:70:VAL:CG2	2.50	0.42
1:I:290:ARG:HH21	2:W:15:A:H4'	1.84	0.42
1:L:43:LEU:HD23	1:L:43:LEU:HA	1.84	0.42
1:P:8:PHE:CE1	1:P:18:LYS:HB2	2.55	0.42
1:R:370:GLU:O	1:R:372:ALA:N	2.49	0.42
1:S:269:ILE:HD13	1:S:269:ILE:HA	1.87	0.42
1:T:105:PRO:HG3	1:T:213:PHE:CD2	2.55	0.42
1:T:238:GLY:HA3	1:T:305:VAL:HG11	2.01	0.42
1:A:8:PHE:CE2	1:A:10:VAL:HB	2.55	0.42
1:B:169:ILE:HD13	1:B:169:ILE:HG21	1.77	0.42
1:B:360:PHE:O	1:D:8:PHE:HE1	2.02	0.42
1:M:434:ARG:HD3	3:X:10:C:C4	2.54	0.42
1:N:421:ILE:O	1:N:425:VAL:HG23	2.20	0.42
1:O:95:VAL:O	1:O:95:VAL:HG13	2.20	0.42
1:R:425:VAL:HG22	1:R:446:TYR:O	2.19	0.42
1:S:41:ILE:HD11	1:S:202:ASN:HA	2.01	0.42
1:T:357:ARG:NH1	1:U:403:GLU:HG3	2.35	0.42
2:W:85:C:H2'	2:W:86:A:O4'	2.19	0.42
1:C:357:ARG:NH1	1:D:403:GLU:HG3	2.35	0.42
1:D:99:LYS:HB2	1:D:99:LYS:HE3	1.79	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:146:SER:O	1:D:150:LEU:HD12	2.19	0.42
1:E:38:LYS:HE3	1:E:94:ILE:HG13	2.02	0.42
1:E:254:ARG:NH2	1:F:7:VAL:HG12	2.35	0.42
1:G:109:VAL:HG22	1:G:209:THR:CG2	2.50	0.42
1:G:305:VAL:HG13	1:G:305:VAL:O	2.20	0.42
1:I:434:ARG:HB3	1:I:435:PRO:HD2	2.01	0.42
1:L:235:ASP:HB2	1:L:290:ARG:HG3	2.00	0.42
1:M:278:GLU:HB3	1:M:281:VAL:HB	2.02	0.42
1:N:50:ASN:O	1:N:54:LYS:HG3	2.20	0.42
1:N:253:ALA:HB3	1:N:254:ARG:NH1	2.34	0.42
1:R:40:CYS:HA	1:R:110:GLU:O	2.20	0.42
1:T:340:VAL:HG13	1:T:416:LEU:HG	2.01	0.42
1:A:235:ASP:HB2	1:A:290:ARG:HG3	2.01	0.42
1:C:30:TYR:HA	1:C:31:PRO:HD3	1.85	0.42
1:F:21:ILE:C	1:F:22:ILE:HD12	2.41	0.42
1:H:16:SER:O	1:H:17:LEU:HG	2.19	0.42
1:H:122:LEU:N	1:H:122:LEU:HD23	2.35	0.42
1:I:80:PHE:HE2	1:I:137:HIS:ND1	2.18	0.42
1:I:363:GLU:HG3	1:K:9:LYS:HG2	2.01	0.42
1:K:366:LEU:HD23	1:K:366:LEU:O	2.19	0.42
1:L:10:VAL:HG22	1:T:359:PHE:CD1	2.55	0.42
1:L:181:ILE:HG21	1:L:181:ILE:HD13	1.74	0.42
1:T:43:LEU:O	1:T:114:THR:HG23	2.20	0.42
1:V:267:GLU:H	1:V:267:GLU:HG3	1.64	0.42
1:A:80:PHE:CD2	1:A:134:VAL:HG22	2.55	0.41
1:A:278:GLU:HB3	1:A:281:VAL:HB	2.01	0.41
1:H:347:GLU:HG3	1:H:348:GLU:N	2.34	0.41
1:J:249:ILE:HG23	1:J:349:PHE:CD1	2.54	0.41
1:J:254:ARG:HD3	1:J:254:ARG:N	2.35	0.41
1:K:325:LEU:HD23	1:K:431:HIS:CG	2.55	0.41
1:L:46:ALA:HA	1:L:47:PRO:HD3	1.81	0.41
1:N:90:THR:HA	1:N:94:ILE:O	2.20	0.41
1:N:249:ILE:HD12	1:N:251:LEU:HD12	2.02	0.41
1:P:19:PRO:C	1:P:20:GLU:OE1	2.59	0.41
1:R:133:THR:HG22	1:R:136:GLU:OE1	2.20	0.41
1:T:31:PRO:HB3	1:T:289:PHE:CD2	2.54	0.41
3:X:79:A:H2'	3:X:80:C:O4'	2.20	0.41
1:A:153:ILE:O	1:A:153:ILE:HG13	2.20	0.41
1:C:249:ILE:HG23	1:C:251:LEU:HB2	2.02	0.41
1:G:153:ILE:HG21	1:G:153:ILE:HD13	1.73	0.41
1:H:361:ARG:O	1:J:7:VAL:HG23	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:151:SER:HB2	1:J:195:ALA:O	2.20	0.41
1:J:239:LEU:O	1:J:243:THR:HG23	2.20	0.41
1:K:253:ALA:O	1:K:257:ILE:HG13	2.19	0.41
1:O:152:LYS:HE3	1:O:234:GLU:OE2	2.19	0.41
1:O:289:PHE:HE1	1:O:295:SER:HG	1.66	0.41
1:O:325:LEU:HD12	1:O:439:ALA:HB2	2.01	0.41
1:P:183:GLU:HG3	1:P:184:HIS:H	1.85	0.41
1:Q:265:PHE:CZ	1:Q:311:LEU:HD22	2.54	0.41
1:Q:340:VAL:HG13	1:Q:416:LEU:HG	2.01	0.41
1:T:49:LEU:HD12	1:T:49:LEU:HA	1.79	0.41
1:T:87:GLU:HA	1:T:99:LYS:HE3	2.02	0.41
1:A:149:ARG:HB2	1:A:227:GLY:O	2.20	0.41
1:C:406:TYR:O	1:C:410:MET:HG2	2.20	0.41
1:C:421:ILE:O	1:C:425:VAL:HG23	2.20	0.41
1:E:249:ILE:HG23	1:E:251:LEU:HB2	2.02	0.41
1:F:122:LEU:HD12	1:F:122:LEU:HA	1.73	0.41
1:F:148:TYR:OH	1:F:204:ARG:NE	2.53	0.41
1:F:425:VAL:HG22	1:F:446:TYR:O	2.19	0.41
1:G:169:ILE:HD12	1:G:169:ILE:HG23	1.67	0.41
1:G:180:LYS:HD2	1:G:183:GLU:HA	2.02	0.41
1:G:321:GLN:O	1:G:325:LEU:HD23	2.20	0.41
1:J:249:ILE:HD12	1:J:249:ILE:HG23	1.83	0.41
1:N:96:ILE:HG12	1:N:108:LEU:HA	2.03	0.41
1:N:269:ILE:HD12	1:N:269:ILE:HG23	1.73	0.41
1:P:7:VAL:CG1	1:P:19:PRO:HA	2.46	0.41
1:Q:284:SER:O	1:Q:287:ILE:HG12	2.21	0.41
1:T:29:LYS:HB2	1:T:29:LYS:HE2	1.79	0.41
1:T:132:PRO:HG2	1:T:137:HIS:NE2	2.35	0.41
1:V:62:ALA:HB2	1:V:124:GLY:HA3	2.01	0.41
1:B:188:MET:O	1:B:192:LYS:HG2	2.21	0.41
1:E:53:TYR:HE2	1:E:144:LEU:HD11	1.86	0.41
1:I:235:ASP:HB3	2:W:16:A:O5'	2.20	0.41
1:L:173:PHE:HA	1:L:178:PHE:HB2	2.03	0.41
1:L:231:THR:HB	1:L:291:SER:OG	2.20	0.41
1:M:33:ILE:HB	1:M:92:TYR:CB	2.50	0.41
1:Q:83:GLY:HA2	1:Q:102:LYS:NZ	2.35	0.41
1:T:94:ILE:CD1	1:T:285:TYR:CE2	3.03	0.41
1:T:171:GLN:HA	1:T:174:GLU:HG2	2.02	0.41
1:T:351:GLY:O	1:U:415:ARG:HG3	2.20	0.41
1:T:421:ILE:HG23	1:T:446:TYR:HB3	2.01	0.41
1:T:443:ASN:O	1:T:447:SER:OG	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:325:LEU:O	1:A:437:SER:HB2	2.20	0.41
1:G:252:THR:O	1:G:254:ARG:N	2.51	0.41
1:I:122:LEU:CD2	1:P:122:LEU:HG	2.49	0.41
1:J:361:ARG:HB3	1:K:254:ARG:HE	1.86	0.41
1:M:70:VAL:O	1:M:74:LEU:HG	2.19	0.41
1:N:43:LEU:HD21	1:N:71:CYS:HB3	2.02	0.41
1:Q:344:TYR:CG	1:Q:409:ILE:HG12	2.56	0.41
1:T:153:ILE:HG22	1:T:153:ILE:O	2.19	0.41
1:T:287:ILE:HG13	1:T:288:HIS:ND1	2.35	0.41
1:U:233:TYR:N	1:U:287:ILE:O	2.37	0.41
3:X:13:C:H2'	3:X:14:A:O4'	2.20	0.41
1:E:109:VAL:CG1	1:E:205:PHE:HE1	2.34	0.41
1:H:88:ASP:HA	1:H:98:ARG:HA	2.01	0.41
1:I:11:ASN:HB3	1:I:14:VAL:O	2.20	0.41
1:I:150:LEU:HD23	1:I:153:ILE:HD11	2.03	0.41
1:M:65:LEU:HD11	1:M:193:MET:HG3	2.03	0.41
1:N:434:ARG:HB3	1:N:435:PRO:HD2	2.02	0.41
1:O:254:ARG:C	1:O:256:ALA:N	2.73	0.41
1:P:14:VAL:O	1:P:15:VAL:HG13	2.20	0.41
1:T:38:LYS:HG2	1:T:94:ILE:HD12	2.02	0.41
1:T:266:GLU:HG2	1:U:10:VAL:HG23	2.03	0.41
1:B:49:LEU:N	1:B:49:LEU:CD2	2.84	0.41
1:B:53:TYR:CD1	1:B:53:TYR:C	2.94	0.41
1:B:269:ILE:HD12	1:B:269:ILE:HG23	1.76	0.41
1:E:359:PHE:CD1	1:G:10:VAL:HG12	2.56	0.41
1:K:49:LEU:HD22	1:K:49:LEU:N	2.35	0.41
1:M:194:CYS:HB3	1:M:197:TRP:NE1	2.35	0.41
1:M:408:ARG:HE	1:M:408:ARG:HB2	1.65	0.41
1:N:25:GLN:HG2	1:N:25:GLN:O	2.20	0.41
1:Q:84:THR:HA	1:Q:101:ASP:O	2.21	0.41
1:R:31:PRO:HB3	1:R:289:PHE:CD2	2.56	0.41
1:U:149:ARG:HG3	1:U:230:VAL:HG11	2.03	0.41
1:V:78:MET:O	1:V:105:PRO:HD2	2.21	0.41
1:A:254:ARG:HH21	1:K:361:ARG:HB3	1.86	0.41
1:E:109:VAL:HG11	1:E:205:PHE:CE1	2.52	0.41
1:H:168:ARG:HH12	2:W:12:A:H5"	1.85	0.41
1:J:40:CYS:HA	1:J:110:GLU:O	2.21	0.41
1:K:109:VAL:CG2	1:K:205:PHE:CE1	3.04	0.41
1:K:181:ILE:HG21	1:K:181:ILE:HD13	1.83	0.41
1:M:268:GLU:HB3	1:M:305:VAL:HG13	2.03	0.41
1:Q:165:ILE:O	1:Q:169:ILE:HG12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:T:212:MET:HE3	1:T:285:TYR:HA	2.03	0.41
1:U:142:GLY:HA2	1:U:224:ILE:HG23	2.03	0.41
1:V:286:PHE:HA	1:V:289:PHE:HB3	2.02	0.41
2:W:76:C:H2'	2:W:77:A:O4'	2.21	0.41
3:X:76:C:H2'	3:X:77:C:O4'	2.21	0.41
1:B:286:PHE:HE1	1:B:300:TYR:CE2	2.39	0.41
1:B:434:ARG:HD3	2:W:55:C:C4	2.56	0.41
1:C:20:GLU:H	1:C:20:GLU:CD	2.24	0.41
1:C:145:LEU:HD11	1:C:210:TYR:CD2	2.56	0.41
1:D:84:THR:HA	1:D:102:LYS:HA	2.03	0.41
1:E:73:TYR:CZ	1:E:77:ALA:HB2	2.56	0.41
1:F:340:VAL:HG13	1:F:416:LEU:HG	2.03	0.41
1:G:36:LEU:HB2	1:G:93:GLY:HA3	2.02	0.41
1:H:31:PRO:HD2	1:H:277:GLN:NE2	2.36	0.41
1:H:43:LEU:HD12	1:H:111:ILE:HG21	2.03	0.41
1:H:189:THR:HA	1:H:192:LYS:HE2	2.03	0.41
1:I:78:MET:HB3	1:I:105:PRO:HG2	2.03	0.41
1:I:177:PRO:HB3	1:I:220:LEU:HD11	2.03	0.41
1:K:158:THR:HG22	2:W:37:C:O4'	2.21	0.41
1:K:285:TYR:HD1	1:K:292:LEU:HD13	1.86	0.41
1:L:361:ARG:HE	1:M:258:LEU:HD21	1.85	0.41
1:O:162:LYS:HD2	1:O:191:HIS:CE1	2.55	0.41
1:P:269:ILE:HD13	1:P:269:ILE:HA	1.93	0.41
1:P:425:VAL:HG22	1:P:446:TYR:O	2.21	0.41
1:Q:17:LEU:HD12	1:Q:17:LEU:O	2.21	0.41
1:R:80:PHE:CD1	1:R:80:PHE:N	2.88	0.41
1:R:95:VAL:O	1:R:95:VAL:HG13	2.20	0.41
1:R:147:LEU:HD23	1:R:147:LEU:HA	1.91	0.41
1:R:175:THR:CG2	1:R:176:ALA:N	2.84	0.41
1:R:360:PHE:HB3	1:R:365:GLU:HB3	2.02	0.41
1:T:290:ARG:HD2	1:T:290:ARG:HA	1.93	0.41
3:X:16:A:H2'	3:X:17:C:O4'	2.20	0.41
3:X:34:A:H2'	3:X:35:C:O4'	2.20	0.41
3:X:99:C:O3'	4:X:101:PO4:O1	2.28	0.41
1:A:186:THR:O	1:A:190:THR:HG22	2.21	0.41
1:C:87:GLU:HG3	1:C:88:ASP:N	2.36	0.41
1:D:96:ILE:HD11	1:D:107:SER:C	2.42	0.41
1:E:53:TYR:CE2	1:E:144:LEU:HD11	2.56	0.41
1:F:366:LEU:HD23	1:F:366:LEU:HA	1.91	0.41
1:G:65:LEU:HD12	1:G:70:VAL:CG2	2.51	0.41
1:G:159:GLY:O	1:G:163:THR:HG23	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:314:PHE:HZ	1:G:441:PHE:CD2	2.39	0.41
1:G:341:LEU:HG	1:G:345:LEU:HD12	2.03	0.41
1:G:416:LEU:HD22	1:G:420:HIS:HB3	2.03	0.41
1:H:231:THR:HA	1:H:234:GLU:HG2	2.02	0.41
1:J:254:ARG:NH1	1:K:20:GLU:HB2	2.36	0.41
1:M:30:TYR:HA	1:M:31:PRO:HD3	1.82	0.41
1:N:43:LEU:HA	1:N:43:LEU:HD23	1.76	0.41
1:N:177:PRO:HG3	1:N:220:LEU:HD11	2.03	0.41
1:Q:357:ARG:NH1	1:R:403:GLU:HG3	2.36	0.41
1:R:269:ILE:HD13	1:R:269:ILE:HA	1.84	0.41
1:R:280:ALA:HB2	1:V:21:ILE:HB	2.03	0.41
1:S:415:ARG:NH2	1:V:352:LYS:HD2	2.36	0.41
1:U:53:TYR:CE1	1:U:57:LEU:HD22	2.56	0.41
1:V:294:LEU:H	1:V:294:LEU:HG	1.71	0.41
1:E:87:GLU:HA	1:E:99:LYS:HG3	2.03	0.40
1:E:418:ARG:NH1	1:E:422:ARG:HH12	2.15	0.40
1:F:362:ASP:C	1:H:9:LYS:HE2	2.41	0.40
1:G:252:THR:HG23	1:G:255:GLU:H	1.86	0.40
1:H:75:ALA:HB3	1:H:113:ARG:NH2	2.36	0.40
1:K:54:LYS:HG2	1:K:126:MET:CE	2.50	0.40
1:K:58:SER:O	1:K:124:GLY:HA3	2.22	0.40
1:K:109:VAL:HG22	1:K:110:GLU:H	1.86	0.40
1:K:416:LEU:HD23	1:K:416:LEU:HA	1.95	0.40
1:L:54:LYS:HG2	1:L:126:MET:CE	2.51	0.40
1:L:268:GLU:OE2	1:L:307:HIS:ND1	2.46	0.40
1:M:434:ARG:HD3	3:X:10:C:N4	2.36	0.40
1:Q:37:LYS:HA	1:Q:94:ILE:HD11	2.03	0.40
1:Q:434:ARG:HD3	3:X:46:C:N4	2.37	0.40
1:R:251:LEU:HD23	1:R:251:LEU:HA	1.90	0.40
1:S:254:ARG:CD	1:T:20:GLU:HB2	2.51	0.40
1:S:293:GLY:O	1:S:294:LEU:HG	2.21	0.40
1:U:290:ARG:HA	1:U:295:SER:HB3	2.03	0.40
1:C:284:SER:O	1:C:287:ILE:HG12	2.21	0.40
1:D:156:GLN:O	1:D:158:THR:HG23	2.21	0.40
1:E:251:LEU:HD23	1:E:251:LEU:HA	1.96	0.40
1:G:109:VAL:CG2	1:G:209:THR:HG21	2.52	0.40
1:G:254:ARG:HE	1:G:254:ARG:HB2	1.67	0.40
1:I:254:ARG:HH12	1:J:6:ILE:CA	2.33	0.40
1:J:157:ASN:C	1:J:159:GLY:N	2.75	0.40
1:K:317:CYS:SG	1:K:325:LEU:HD12	2.60	0.40
1:L:147:LEU:HA	1:L:147:LEU:HD23	1.76	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:364:LYS:HE2	1:O:364:LYS:HB3	1.95	0.40
1:P:33:ILE:HG12	1:P:294:LEU:CD2	2.47	0.40
1:P:178:PHE:HE2	1:P:223:ALA:HB3	1.86	0.40
1:S:58:SER:HB2	1:S:124:GLY:N	2.37	0.40
1:S:139:SER:HB3	1:S:178:PHE:HB3	2.02	0.40
1:B:175:THR:HG22	1:B:176:ALA:N	2.37	0.40
1:C:43:LEU:HD12	1:C:43:LEU:HA	1.70	0.40
1:E:53:TYR:HA	1:E:56:VAL:HG12	2.04	0.40
1:E:146:SER:HB2	1:E:169:ILE:HG21	2.02	0.40
1:E:252:THR:O	1:E:253:ALA:C	2.60	0.40
1:G:103:ILE:HD11	1:G:217:ILE:HD11	2.03	0.40
1:K:31:PRO:HD2	1:K:277:GLN:CG	2.51	0.40
1:N:43:LEU:HD12	1:N:111:ILE:HG23	2.03	0.40
1:O:105:PRO:HA	1:O:108:LEU:HD23	2.01	0.40
1:O:249:ILE:HG23	1:O:251:LEU:HB2	2.02	0.40
1:R:62:ALA:HB2	1:R:124:GLY:HA3	2.02	0.40
1:T:434:ARG:HB2	1:T:437:SER:HB3	2.04	0.40
1:U:58:SER:OG	1:U:122:LEU:HB2	2.21	0.40
1:V:171:GLN:HA	1:V:174:GLU:HG2	2.03	0.40
1:V:416:LEU:HD23	1:V:416:LEU:HA	1.89	0.40
1:E:6:ILE:HG13	1:E:7:VAL:H	1.86	0.40
1:F:134:VAL:HB	1:F:135:PRO:HD3	2.03	0.40
1:G:174:GLU:OE1	1:G:180:LYS:HD3	2.21	0.40
1:G:340:VAL:HG22	1:G:416:LEU:HG	2.03	0.40
1:I:253:ALA:O	1:I:257:ILE:HG13	2.22	0.40
1:K:43:LEU:HD12	1:K:43:LEU:HA	1.79	0.40
1:M:62:ALA:HB2	1:M:124:GLY:N	2.36	0.40
1:M:344:TYR:CG	1:M:409:ILE:HG12	2.56	0.40
1:N:96:ILE:HD12	1:N:96:ILE:HA	1.82	0.40
1:Q:32:ALA:HA	1:Q:92:TYR:CD2	2.57	0.40
1:Q:87:GLU:HA	1:Q:99:LYS:HG2	2.03	0.40
1:S:357:ARG:NH1	1:T:403:GLU:HG3	2.37	0.40
1:T:174:GLU:OE1	1:T:180:LYS:HE2	2.22	0.40
1:V:325:LEU:HD12	1:V:439:ALA:HB2	2.02	0.40
1:A:326:ASN:CG	1:A:434:ARG:HH21	2.24	0.40
1:C:95:VAL:HG23	1:C:97:ALA:N	2.36	0.40
1:E:443:ASN:O	1:E:447:SER:OG	2.28	0.40
1:I:318:TYR:CZ	1:I:423:ARG:HG2	2.56	0.40
1:K:47:PRO:HB3	1:K:120:TRP:CZ2	2.56	0.40
1:K:406:TYR:O	1:K:410:MET:HG2	2.22	0.40
1:N:353:GLY:HA3	1:N:355:PHE:CZ	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:251:LEU:HD23	1:O:256:ALA:HA	2.02	0.40
1:S:160:ASN:OD1	1:S:160:ASN:N	2.55	0.40
1:T:94:ILE:H	1:T:94:ILE:HG12	1.71	0.40
1:T:126:MET:HE1	1:T:128:LEU:O	2.22	0.40
1:T:289:PHE:HB2	1:T:294:LEU:CD1	2.51	0.40

All (1) 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:M:4:ASP:OD2	1:V:18:LYS:NZ[3_655]	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	414/450 (92%)	390 (94%)	20 (5%)	4 (1%)	15 54
1	B	415/450 (92%)	396 (95%)	19 (5%)	0	100 100
1	C	414/450 (92%)	393 (95%)	18 (4%)	3 (1%)	22 61
1	D	414/450 (92%)	396 (96%)	16 (4%)	2 (0%)	29 68
1	E	414/450 (92%)	391 (94%)	19 (5%)	4 (1%)	15 54
1	F	414/450 (92%)	404 (98%)	9 (2%)	1 (0%)	47 81
1	G	414/450 (92%)	393 (95%)	21 (5%)	0	100 100
1	H	414/450 (92%)	395 (95%)	16 (4%)	3 (1%)	22 61
1	I	414/450 (92%)	389 (94%)	20 (5%)	5 (1%)	13 50
1	J	414/450 (92%)	392 (95%)	19 (5%)	3 (1%)	22 61
1	K	416/450 (92%)	399 (96%)	16 (4%)	1 (0%)	47 81
1	L	415/450 (92%)	391 (94%)	20 (5%)	4 (1%)	15 54

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	M	416/450 (92%)	394 (95%)	18 (4%)	4 (1%)	15 54
1	N	414/450 (92%)	395 (95%)	18 (4%)	1 (0%)	47 81
1	O	415/450 (92%)	397 (96%)	18 (4%)	0	100 100
1	P	416/450 (92%)	389 (94%)	24 (6%)	3 (1%)	22 61
1	Q	414/450 (92%)	396 (96%)	16 (4%)	2 (0%)	29 68
1	R	414/450 (92%)	392 (95%)	22 (5%)	0	100 100
1	S	414/450 (92%)	391 (94%)	22 (5%)	1 (0%)	47 81
1	T	414/450 (92%)	393 (95%)	19 (5%)	2 (0%)	29 68
1	U	414/450 (92%)	398 (96%)	15 (4%)	1 (0%)	47 81
1	V	415/450 (92%)	399 (96%)	16 (4%)	0	100 100
All	All	9118/9900 (92%)	8673 (95%)	401 (4%)	44 (0%)	29 68

All (44) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	92	TYR
1	A	158	THR
1	A	294	LEU
1	C	294	LEU
1	D	158	THR
1	I	294	LEU
1	J	158	THR
1	L	96	ILE
1	N	177	PRO
1	P	131	ASP
1	U	157	ASN
1	A	120	TRP
1	E	63	ALA
1	E	92	TYR
1	E	176	ALA
1	H	183	GLU
1	L	13	GLN
1	T	96	ILE
1	T	156	GLN
1	C	176	ALA
1	H	153	ILE
1	I	183	GLU
1	J	28	TYR

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Mol	Chain	Res	Type
1	M	92	TYR
1	P	158	THR
1	F	159	GLY
1	H	120	TRP
1	M	294	LEU
1	Q	103	ILE
1	Q	120	TRP
1	S	120	TRP
1	D	120	TRP
1	E	13	GLN
1	I	10	VAL
1	I	120	TRP
1	P	132	PRO
1	J	120	TRP
1	L	120	TRP
1	M	47	PRO
1	K	19	PRO
1	L	124	GLY
1	C	153	ILE
1	M	435	PRO
1	I	293	GLY

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	359/386 (93%)	351 (98%)	8 (2%)	52 78
1	B	360/386 (93%)	358 (99%)	2 (1%)	86 94
1	C	359/386 (93%)	354 (99%)	5 (1%)	67 85
1	D	359/386 (93%)	353 (98%)	6 (2%)	60 82
1	E	359/386 (93%)	350 (98%)	9 (2%)	47 75
1	F	359/386 (93%)	356 (99%)	3 (1%)	81 91
1	G	359/386 (93%)	354 (99%)	5 (1%)	67 85
1	H	359/386 (93%)	356 (99%)	3 (1%)	81 91

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	I	359/386 (93%)	356 (99%)	3 (1%)	81 91
1	J	359/386 (93%)	358 (100%)	1 (0%)	92 97
1	K	361/386 (94%)	357 (99%)	4 (1%)	73 88
1	L	360/386 (93%)	358 (99%)	2 (1%)	86 94
1	M	361/386 (94%)	357 (99%)	4 (1%)	73 88
1	N	359/386 (93%)	354 (99%)	5 (1%)	67 85
1	O	360/386 (93%)	357 (99%)	3 (1%)	81 91
1	P	361/386 (94%)	356 (99%)	5 (1%)	67 85
1	Q	359/386 (93%)	353 (98%)	6 (2%)	60 82
1	R	359/386 (93%)	353 (98%)	6 (2%)	60 82
1	S	359/386 (93%)	352 (98%)	7 (2%)	57 80
1	T	359/386 (93%)	356 (99%)	3 (1%)	81 91
1	U	359/386 (93%)	356 (99%)	3 (1%)	81 91
1	V	360/386 (93%)	358 (99%)	2 (1%)	86 94
All	All	7908/8492 (93%)	7813 (99%)	95 (1%)	71 87

All (95) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	9	LYS
1	A	50	ASN
1	A	60	MET
1	A	89	TRP
1	A	193	MET
1	A	323	ARG
1	A	415	ARG
1	A	440	GLU
1	B	323	ARG
1	B	440	GLU
1	C	113	ARG
1	C	193	MET
1	C	323	ARG
1	C	362	ASP
1	C	424	TYR
1	D	8	PHE
1	D	126	MET
1	D	156	GLN

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Mol	Chain	Res	Type
1	D	193	MET
1	D	323	ARG
1	D	440	GLU
1	E	53	TYR
1	E	89	TRP
1	E	101	ASP
1	E	157	ASN
1	E	193	MET
1	E	267	GLU
1	E	323	ARG
1	E	415	ARG
1	E	440	GLU
1	F	254	ARG
1	F	323	ARG
1	F	400	ARG
1	G	193	MET
1	G	289	PHE
1	G	323	ARG
1	G	415	ARG
1	G	424	TYR
1	H	9	LYS
1	H	113	ARG
1	H	323	ARG
1	I	126	MET
1	I	193	MET
1	I	415	ARG
1	J	323	ARG
1	K	205	PHE
1	K	294	LEU
1	K	323	ARG
1	K	424	TYR
1	L	113	ARG
1	L	323	ARG
1	M	203	PHE
1	M	323	ARG
1	M	440	GLU
1	M	448	SER
1	N	89	TRP
1	N	254	ARG
1	N	323	ARG
1	N	424	TYR
1	N	440	GLU

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Mol	Chain	Res	Type
1	O	323	ARG
1	O	432	GLN
1	O	440	GLU
1	P	126	MET
1	P	323	ARG
1	P	415	ARG
1	P	440	GLU
1	P	448	SER
1	Q	79	GLN
1	Q	101	ASP
1	Q	216	ARG
1	Q	303	ASN
1	Q	323	ARG
1	Q	440	GLU
1	R	9	LYS
1	R	216	ARG
1	R	323	ARG
1	R	415	ARG
1	R	424	TYR
1	R	440	GLU
1	S	29	LYS
1	S	38	LYS
1	S	64	LYS
1	S	254	ARG
1	S	323	ARG
1	S	424	TYR
1	S	440	GLU
1	T	193	MET
1	T	323	ARG
1	T	424	TYR
1	U	35	ASP
1	U	323	ARG
1	U	424	TYR
1	V	197	TRP
1	V	323	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (41) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	283	HIS
1	B	307	HIS
1	C	250	ASN

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Mol	Chain	Res	Type
1	C	264	ASN
1	C	307	HIS
1	D	264	ASN
1	D	283	HIS
1	E	171	GLN
1	E	250	ASN
1	F	191	HIS
1	F	262	HIS
1	F	264	ASN
1	H	191	HIS
1	I	11	ASN
1	I	184	HIS
1	I	191	HIS
1	I	420	HIS
1	K	191	HIS
1	L	277	GLN
1	L	321	GLN
1	M	250	ASN
1	M	307	HIS
1	M	336	HIS
1	M	420	HIS
1	N	248	GLN
1	N	264	ASN
1	O	196	ASN
1	Q	171	GLN
1	Q	250	ASN
1	R	171	GLN
1	R	262	HIS
1	R	264	ASN
1	S	283	HIS
1	T	250	ASN
1	T	307	HIS
1	U	11	ASN
1	U	184	HIS
1	U	196	ASN
1	U	264	ASN
1	U	326	ASN
1	V	307	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	W	98/99 (98%)	27 (27%)	1 (1%)
3	X	98/99 (98%)	23 (23%)	0
All	All	196/198 (98%)	50 (25%)	1 (0%)

All (50) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
2	W	2	C
2	W	9	C
2	W	10	C
2	W	13	C
2	W	16	A
2	W	18	A
2	W	25	C
2	W	27	C
2	W	28	C
2	W	34	A
2	W	35	C
2	W	36	C
2	W	43	A
2	W	45	C
2	W	46	C
2	W	52	C
2	W	54	C
2	W	56	C
2	W	63	C
2	W	65	C
2	W	70	A
2	W	79	A
2	W	81	C
2	W	86	A
2	W	88	A
2	W	97	A
2	W	99	C
3	X	6	A
3	X	7	A
3	X	9	C
3	X	10	C
3	X	11	C
3	X	16	A
3	X	25	C
3	X	27	C
3	X	34	A

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Mol	Chain	Res	Type
3	X	36	C
3	X	38	C
3	X	43	A
3	X	46	C
3	X	52	A
3	X	54	C
3	X	61	A
3	X	63	C
3	X	67	C
3	X	79	A
3	X	81	C
3	X	88	A
3	X	90	C
3	X	99	C

All (1) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	W	53	C

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)

2 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	$\#\|Z\|>2$
4	PO4	X	101	-	4,4,4	0.98	0	6,6,6	1.12	1 (16%)
4	PO4	W	101	-	4,4,4	0.86	0	6,6,6	1.04	0

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	X	101	PO4	O4-P-O1	-2.03	103.47	110.89

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	X	101	PO4	3	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

6.1 Protein, DNA and RNA chains

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, 95^{th} 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	418/450 (92%)	0.45	31 (7%)	14	14	73, 98, 121, 132	0
1	B	419/450 (93%)	0.39	31 (7%)	14	14	75, 95, 118, 135	0
1	C	418/450 (92%)	0.62	51 (12%)	4	5	78, 108, 138, 148	0
1	D	418/450 (92%)	0.37	26 (6%)	20	18	81, 98, 123, 143	0
1	E	418/450 (92%)	0.64	53 (12%)	3	4	85, 114, 138, 154	0
1	F	418/450 (92%)	0.69	53 (12%)	3	4	85, 119, 141, 149	0
1	G	418/450 (92%)	0.54	40 (9%)	8	8	85, 109, 131, 143	0
1	H	418/450 (92%)	0.77	64 (15%)	2	2	83, 121, 142, 152	0
1	I	418/450 (92%)	0.53	41 (9%)	7	8	81, 106, 127, 139	0
1	J	418/450 (92%)	0.32	22 (5%)	26	24	76, 93, 120, 138	0
1	K	420/450 (93%)	0.42	32 (7%)	13	14	74, 97, 118, 134	0
1	L	419/450 (93%)	0.21	10 (2%)	59	53	65, 85, 108, 127	0
1	M	420/450 (93%)	0.42	28 (6%)	17	16	65, 92, 117, 127	0
1	N	418/450 (92%)	0.32	20 (4%)	30	27	69, 92, 113, 129	0
1	O	419/450 (93%)	0.37	31 (7%)	14	14	72, 89, 113, 136	0
1	P	420/450 (93%)	0.55	45 (10%)	6	6	75, 107, 127, 135	0
1	Q	418/450 (92%)	0.82	69 (16%)	1	2	81, 122, 144, 152	0
1	R	418/450 (92%)	0.42	27 (6%)	18	17	79, 102, 124, 143	0
1	S	418/450 (92%)	0.58	46 (11%)	5	6	82, 114, 136, 149	0
1	T	418/450 (92%)	0.38	20 (4%)	30	27	76, 96, 122, 135	0
1	U	418/450 (92%)	0.33	25 (5%)	21	19	69, 101, 122, 137	0
1	V	419/450 (93%)	0.63	53 (12%)	3	5	81, 114, 136, 149	0
2	W	99/99 (100%)	0.30	0	100	100	84, 103, 121, 129	0
3	X	99/99 (100%)	0.29	0	100	100	78, 100, 120, 124	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
All	All	9404/10098 (93%)	0.49	818 (8%)	10	11	65, 102, 133, 154	0

All (818) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	Q	96	ILE	8.1
1	D	9	LYS	8.0
1	C	94	ILE	6.8
1	G	11	ASN	6.7
1	T	11	ASN	6.3
1	G	96	ILE	6.3
1	C	285	TYR	6.2
1	H	37	LYS	6.2
1	S	109	VAL	6.1
1	C	89	TRP	6.1
1	Q	114	THR	6.1
1	C	85	CYS	5.9
1	C	111	ILE	5.9
1	S	92	TYR	5.9
1	J	11	ASN	5.8
1	S	114	THR	5.7
1	E	34	LYS	5.6
1	Q	42	THR	5.4
1	F	34	LYS	5.4
1	Q	285	TYR	5.4
1	I	103	ILE	5.3
1	S	90	THR	5.3
1	E	33	ILE	5.3
1	C	101	ASP	5.3
1	V	285	TYR	5.3
1	C	33	ILE	5.3
1	H	113	ARG	5.3
1	F	32	ALA	5.2
1	T	100	GLY	5.2
1	Q	12	ASN	5.2
1	A	371	ALA	5.2
1	I	372	ALA	5.2
1	Q	132	PRO	5.1
1	S	43	LEU	5.1
1	Q	95	VAL	5.1
1	Q	93	GLY	5.0
1	V	398	GLU	4.9

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Mol	Chain	Res	Type	RSRZ
1	E	32	ALA	4.9
1	F	33	ILE	4.9
1	Q	43	LEU	4.9
1	Q	35	ASP	4.9
1	Q	44	GLY	4.9
1	G	85	CYS	4.9
1	J	15	VAL	4.9
1	Q	34	LYS	4.9
1	V	91	SER	4.9
1	H	42	THR	4.8
1	V	115	ASP	4.8
1	R	15	VAL	4.8
1	H	108	LEU	4.8
1	S	110	GLU	4.8
1	Q	29	LYS	4.8
1	R	115	ASP	4.8
1	Q	33	ILE	4.8
1	S	33	ILE	4.7
1	H	93	GLY	4.7
1	S	35	ASP	4.7
1	F	285	TYR	4.7
1	E	93	GLY	4.7
1	C	84	THR	4.6
1	K	11	ASN	4.6
1	F	111	ILE	4.6
1	H	90	THR	4.6
1	F	92	TYR	4.6
1	E	114	THR	4.6
1	Q	92	TYR	4.6
1	F	124	GLY	4.5
1	M	398	GLU	4.5
1	Q	101	ASP	4.5
1	P	398	GLU	4.5
1	A	110	GLU	4.5
1	G	100	GLY	4.5
1	E	115	ASP	4.5
1	D	11	ASN	4.5
1	I	33	ILE	4.4
1	S	285	TYR	4.4
1	O	366	LEU	4.4
1	D	15	VAL	4.4
1	H	114	THR	4.4

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Mol	Chain	Res	Type	RSRZ
1	G	17	LEU	4.4
1	S	398	GLU	4.4
1	F	132	PRO	4.4
1	F	85	CYS	4.4
1	S	111	ILE	4.4
1	K	398	GLU	4.4
1	Q	97	ALA	4.3
1	H	101	ASP	4.3
1	H	84	THR	4.3
1	H	124	GLY	4.3
1	D	18	LYS	4.3
1	B	99	LYS	4.3
1	B	115	ASP	4.3
1	C	98	ARG	4.3
1	M	47	PRO	4.3
1	C	112	LYS	4.3
1	H	95	VAL	4.3
1	E	285	TYR	4.3
1	I	108	LEU	4.2
1	H	160	ASN	4.2
1	Q	124	GLY	4.2
1	C	221	TYR	4.2
1	Q	84	THR	4.2
1	U	63	ALA	4.2
1	F	35	ASP	4.2
1	H	217	ILE	4.2
1	M	12	ASN	4.2
1	N	35	ASP	4.1
1	S	103	ILE	4.1
1	G	20	GLU	4.1
1	G	15	VAL	4.1
1	H	112	LYS	4.1
1	J	16	SER	4.1
1	S	20	GLU	4.1
1	R	96	ILE	4.1
1	S	34	LYS	4.1
1	A	85	CYS	4.1
1	H	47	PRO	4.1
1	R	8	PHE	4.0
1	B	96	ILE	4.0
1	C	86	PRO	4.0
1	Q	112	LYS	4.0

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Mol	Chain	Res	Type	RSRZ
1	T	8	PHE	4.0
1	G	97	ALA	4.0
1	I	97	ALA	4.0
1	P	210	TYR	4.0
1	G	111	ILE	4.0
1	Q	213	PHE	4.0
1	A	372	ALA	4.0
1	K	36	LEU	4.0
1	K	108	LEU	4.0
1	E	98	ARG	4.0
1	Q	37	LYS	4.0
1	C	34	LYS	3.9
1	H	103	ILE	3.9
1	D	16	SER	3.9
1	H	97	ALA	3.9
1	Q	115	ASP	3.9
1	Q	295	SER	3.9
1	A	111	ILE	3.9
1	G	294	LEU	3.9
1	T	96	ILE	3.9
1	D	17	LEU	3.9
1	C	100	GLY	3.9
1	S	95	VAL	3.8
1	V	110	GLU	3.8
1	E	362	ASP	3.8
1	P	369	TYR	3.8
1	V	221	TYR	3.8
1	H	92	TYR	3.8
1	F	91	SER	3.8
1	I	35	ASP	3.8
1	I	95	VAL	3.8
1	P	362	ASP	3.8
1	B	369	TYR	3.8
1	H	111	ILE	3.8
1	O	369	TYR	3.8
1	C	90	THR	3.8
1	G	18	LYS	3.7
1	F	8	PHE	3.7
1	Q	85	CYS	3.7
1	Q	88	ASP	3.7
1	C	96	ILE	3.7
1	C	213	PHE	3.7

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Mol	Chain	Res	Type	RSRZ
1	F	125	GLY	3.7
1	E	97	ALA	3.7
1	H	96	ILE	3.7
1	Q	98	ARG	3.7
1	H	125	GLY	3.7
1	Q	15	VAL	3.7
1	H	33	ILE	3.7
1	A	84	THR	3.7
1	C	125	GLY	3.7
1	P	363	GLU	3.7
1	H	46	ALA	3.7
1	U	97	ALA	3.7
1	S	124	GLY	3.7
1	H	98	ARG	3.7
1	H	43	LEU	3.7
1	D	398	GLU	3.7
1	U	93	GLY	3.6
1	A	97	ALA	3.6
1	H	100	GLY	3.6
1	O	11	ASN	3.6
1	V	122	LEU	3.6
1	P	50	ASN	3.6
1	F	84	THR	3.6
1	Q	94	ILE	3.6
1	P	94	ILE	3.6
1	H	107	SER	3.6
1	B	11	ASN	3.6
1	P	91	SER	3.6
1	C	93	GLY	3.6
1	F	93	GLY	3.6
1	S	45	LYS	3.5
1	C	103	ILE	3.5
1	M	108	LEU	3.5
1	F	126	MET	3.5
1	M	36	LEU	3.5
1	V	34	LYS	3.5
1	O	115	ASP	3.5
1	E	113	ARG	3.5
1	G	84	THR	3.5
1	P	364	LYS	3.5
1	I	88	ASP	3.5
1	T	94	ILE	3.5

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Mol	Chain	Res	Type	RSRZ
1	J	398	GLU	3.5
1	H	88	ASP	3.5
1	C	37	LYS	3.5
1	I	96	ILE	3.5
1	P	360	PHE	3.5
1	S	125	GLY	3.5
1	I	101	ASP	3.5
1	V	132	PRO	3.5
1	E	37	LYS	3.4
1	S	126	MET	3.4
1	Q	113	ARG	3.4
1	K	95	VAL	3.4
1	P	109	VAL	3.4
1	V	33	ILE	3.4
1	S	93	GLY	3.4
1	B	12	ASN	3.4
1	N	97	ALA	3.4
1	F	115	ASP	3.4
1	E	46	ALA	3.4
1	S	102	LYS	3.4
1	Q	63	ALA	3.4
1	J	8	PHE	3.4
1	D	84	THR	3.4
1	S	8	PHE	3.4
1	K	33	ILE	3.4
1	E	360	PHE	3.4
1	S	113	ARG	3.4
1	J	96	ILE	3.4
1	K	115	ASP	3.3
1	S	89	TRP	3.3
1	U	35	ASP	3.3
1	F	50	ASN	3.3
1	U	89	TRP	3.3
1	H	137	HIS	3.3
1	E	89	TRP	3.3
1	E	35	ASP	3.3
1	T	20	GLU	3.3
1	K	88	ASP	3.3
1	E	112	LYS	3.3
1	A	95	VAL	3.3
1	S	101	ASP	3.3
1	R	33	ILE	3.3

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Mol	Chain	Res	Type	RSRZ
1	S	100	GLY	3.3
1	V	96	ILE	3.3
1	N	100	GLY	3.3
1	B	366	LEU	3.3
1	G	216	ARG	3.3
1	U	285	TYR	3.3
1	I	89	TRP	3.3
1	A	63	ALA	3.3
1	H	117	GLU	3.3
1	U	98	ARG	3.3
1	E	366	LEU	3.3
1	H	369	TYR	3.3
1	Q	11	ASN	3.3
1	V	49	LEU	3.3
1	J	14	VAL	3.3
1	O	114	THR	3.2
1	P	111	ILE	3.2
1	P	85	CYS	3.2
1	R	20	GLU	3.2
1	F	103	ILE	3.2
1	C	97	ALA	3.2
1	Q	104	THR	3.2
1	P	96	ILE	3.2
1	C	91	SER	3.2
1	E	49	LEU	3.2
1	I	398	GLU	3.2
1	J	12	ASN	3.2
1	O	84	THR	3.2
1	R	14	VAL	3.2
1	M	94	ILE	3.2
1	R	285	TYR	3.2
1	F	45	LYS	3.2
1	Q	125	GLY	3.2
1	P	97	ALA	3.2
1	T	171	GLN	3.2
1	C	99	LYS	3.2
1	T	18	LYS	3.2
1	C	11	ASN	3.2
1	U	43	LEU	3.2
1	V	114	THR	3.2
1	S	115	ASP	3.2
1	B	360	PHE	3.2

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Mol	Chain	Res	Type	RSRZ
1	P	285	TYR	3.2
1	H	85	CYS	3.2
1	M	95	VAL	3.2
1	L	8	PHE	3.2
1	N	103	ILE	3.2
1	P	213	PHE	3.2
1	C	110	GLU	3.2
1	V	111	ILE	3.1
1	C	132	PRO	3.1
1	I	71	CYS	3.1
1	C	113	ARG	3.1
1	P	89	TRP	3.1
1	N	110	GLU	3.1
1	O	367	GLN	3.1
1	S	42	THR	3.1
1	K	96	ILE	3.1
1	H	110	GLU	3.1
1	F	89	TRP	3.1
1	I	285	TYR	3.1
1	P	92	TYR	3.1
1	G	94	ILE	3.1
1	D	88	ASP	3.1
1	Q	217	ILE	3.1
1	G	9	LYS	3.1
1	C	114	THR	3.1
1	Q	123	THR	3.1
1	A	132	PRO	3.1
1	G	108	LEU	3.1
1	T	115	ASP	3.1
1	I	114	THR	3.1
1	O	42	THR	3.1
1	A	94	ILE	3.1
1	R	103	ILE	3.1
1	G	398	GLU	3.1
1	J	7	VAL	3.1
1	Q	188	MET	3.1
1	H	36	LEU	3.1
1	A	88	ASP	3.0
1	G	285	TYR	3.0
1	G	86	PRO	3.0
1	H	89	TRP	3.0
1	C	83	GLY	3.0

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Mol	Chain	Res	Type	RSRZ
1	Q	31	PRO	3.0
1	V	89	TRP	3.0
1	V	37	LYS	3.0
1	S	85	CYS	3.0
1	T	15	VAL	3.0
1	H	188	MET	3.0
1	R	295	SER	3.0
1	V	88	ASP	3.0
1	C	398	GLU	3.0
1	E	132	PRO	3.0
1	F	9	LYS	3.0
1	T	9	LYS	3.0
1	P	140	LEU	3.0
1	M	8	PHE	3.0
1	F	101	ASP	3.0
1	D	14	VAL	3.0
1	I	100	GLY	3.0
1	Q	9	LYS	3.0
1	J	18	LYS	3.0
1	C	35	ASP	3.0
1	D	97	ALA	3.0
1	E	111	ILE	3.0
1	F	96	ILE	3.0
1	L	103	ILE	3.0
1	R	294	LEU	3.0
1	D	114	THR	3.0
1	K	110	GLU	3.0
1	F	217	ILE	3.0
1	A	369	TYR	3.0
1	B	95	VAL	3.0
1	M	11	ASN	3.0
1	B	357	ARG	2.9
1	F	43	LEU	2.9
1	N	101	ASP	2.9
1	E	103	ILE	2.9
1	J	90	THR	2.9
1	Q	41	ILE	2.9
1	E	221	TYR	2.9
1	S	46	ALA	2.9
1	D	12	ASN	2.9
1	H	221	TYR	2.9
1	A	101	ASP	2.9

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Mol	Chain	Res	Type	RSRZ
1	V	35	ASP	2.9
1	G	10	VAL	2.9
1	S	98	ARG	2.9
1	E	45	LYS	2.9
1	T	97	ALA	2.9
1	H	38	LYS	2.9
1	H	123	THR	2.9
1	O	89	TRP	2.9
1	R	89	TRP	2.9
1	F	97	ALA	2.9
1	N	83	GLY	2.9
1	H	45	LYS	2.9
1	Q	16	SER	2.9
1	S	137	HIS	2.9
1	Q	36	LEU	2.9
1	R	18	LYS	2.9
1	Q	166	ALA	2.9
1	O	15	VAL	2.9
1	V	84	THR	2.9
1	E	92	TYR	2.9
1	S	97	ALA	2.9
1	M	42	THR	2.8
1	M	71	CYS	2.8
1	H	170	GLU	2.8
1	S	71	CYS	2.8
1	S	99	LYS	2.8
1	K	113	ARG	2.8
1	Q	40	CYS	2.8
1	R	97	ALA	2.8
1	V	32	ALA	2.8
1	C	36	LEU	2.8
1	C	294	LEU	2.8
1	V	366	LEU	2.8
1	O	97	ALA	2.8
1	E	276	GLY	2.8
1	I	217	ILE	2.8
1	G	127	GLU	2.8
1	D	85	CYS	2.8
1	A	100	GLY	2.8
1	B	34	LYS	2.8
1	Q	210	TYR	2.8
1	V	360	PHE	2.8

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Mol	Chain	Res	Type	RSRZ
1	V	365	GLU	2.8
1	K	432	GLN	2.8
1	Q	111	ILE	2.8
1	Q	28	TYR	2.8
1	S	96	ILE	2.8
1	V	103	ILE	2.8
1	H	31	PRO	2.8
1	M	191	HIS	2.8
1	H	109	VAL	2.8
1	E	217	ILE	2.8
1	F	398	GLU	2.8
1	F	100	GLY	2.8
1	G	210	TYR	2.8
1	K	97	ALA	2.8
1	H	80	PHE	2.8
1	J	9	LYS	2.8
1	R	9	LYS	2.8
1	S	112	LYS	2.8
1	B	398	GLU	2.8
1	E	11	ASN	2.8
1	I	36	LEU	2.8
1	K	372	ALA	2.8
1	R	112	LYS	2.8
1	M	115	ASP	2.8
1	U	398	GLU	2.7
1	C	49	LEU	2.7
1	O	43	LEU	2.7
1	B	364	LYS	2.7
1	M	46	ALA	2.7
1	O	117	GLU	2.7
1	K	100	GLY	2.7
1	M	110	GLU	2.7
1	P	33	ILE	2.7
1	V	363	GLU	2.7
1	G	89	TRP	2.7
1	D	98	ARG	2.7
1	I	98	ARG	2.7
1	H	161	TYR	2.7
1	P	295	SER	2.7
1	B	47	PRO	2.7
1	A	89	TRP	2.7
1	E	48	ASP	2.7

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Mol	Chain	Res	Type	RSRZ
1	P	84	THR	2.7
1	R	98	ARG	2.7
1	Q	89	TRP	2.7
1	F	15	VAL	2.7
1	V	53	TYR	2.7
1	E	96	ILE	2.7
1	H	398	GLU	2.7
1	F	88	ASP	2.7
1	E	365	GLU	2.7
1	M	88	ASP	2.7
1	C	92	TYR	2.7
1	M	37	LYS	2.7
1	M	97	ALA	2.7
1	M	98	ARG	2.7
1	P	93	GLY	2.7
1	S	84	THR	2.7
1	U	42	THR	2.7
1	U	85	CYS	2.7
1	C	115	ASP	2.7
1	V	209	THR	2.7
1	P	367	GLN	2.7
1	B	93	GLY	2.7
1	Q	50	ASN	2.7
1	K	34	LYS	2.7
1	P	361	ARG	2.7
1	Q	109	VAL	2.7
1	E	364	LYS	2.7
1	M	43	LEU	2.7
1	F	411	MET	2.7
1	D	103	ILE	2.7
1	A	285	TYR	2.6
1	E	110	GLU	2.6
1	F	102	LYS	2.6
1	P	110	GLU	2.6
1	Q	398	GLU	2.6
1	V	83	GLY	2.6
1	N	85	CYS	2.6
1	C	117	GLU	2.6
1	F	44	GLY	2.6
1	Q	99	LYS	2.6
1	P	82	GLU	2.6
1	N	33	ILE	2.6

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Mol	Chain	Res	Type	RSRZ
1	H	213	PHE	2.6
1	I	8	PHE	2.6
1	I	137	HIS	2.6
1	G	112	LYS	2.6
1	K	47	PRO	2.6
1	N	98	ARG	2.6
1	F	20	GLU	2.6
1	K	35	ASP	2.6
1	R	432	GLN	2.6
1	D	19	PRO	2.6
1	G	19	PRO	2.6
1	I	93	GLY	2.6
1	A	36	LEU	2.6
1	B	36	LEU	2.6
1	I	85	CYS	2.6
1	M	34	LYS	2.6
1	A	35	ASP	2.6
1	H	191	HIS	2.6
1	F	51	LYS	2.6
1	I	102	LYS	2.6
1	P	8	PHE	2.6
1	G	82	GLU	2.6
1	M	125	GLY	2.6
1	O	398	GLU	2.6
1	R	12	ASN	2.6
1	F	18	LYS	2.6
1	V	94	ILE	2.6
1	H	53	TYR	2.6
1	H	210	TYR	2.6
1	N	34	LYS	2.6
1	A	33	ILE	2.6
1	B	112	LYS	2.6
1	A	124	GLY	2.6
1	V	125	GLY	2.6
1	K	12	ASN	2.6
1	T	112	LYS	2.5
1	Q	108	LEU	2.5
1	P	86	PRO	2.5
1	E	90	THR	2.5
1	F	42	THR	2.5
1	F	83	GLY	2.5
1	H	159	GLY	2.5

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Mol	Chain	Res	Type	RSRZ
1	E	47	PRO	2.5
1	P	132	PRO	2.5
1	E	361	ARG	2.5
1	M	114	THR	2.5
1	R	114	THR	2.5
1	U	94	ILE	2.5
1	F	108	LEU	2.5
1	I	34	LYS	2.5
1	V	98	ARG	2.5
1	N	398	GLU	2.5
1	Q	39	PRO	2.5
1	T	101	ASP	2.5
1	F	369	TYR	2.5
1	C	43	LEU	2.5
1	E	79	GLN	2.5
1	R	113	ARG	2.5
1	B	9	LYS	2.5
1	A	125	GLY	2.5
1	E	131	ASP	2.5
1	V	116	VAL	2.5
1	E	36	LEU	2.5
1	F	113	ARG	2.5
1	K	98	ARG	2.5
1	V	137	HIS	2.5
1	D	366	LEU	2.5
1	G	446	TYR	2.5
1	P	100	GLY	2.5
1	R	88	ASP	2.5
1	Q	8	PHE	2.5
1	U	170	GLU	2.5
1	I	43	LEU	2.5
1	I	112	LYS	2.5
1	N	125	GLY	2.5
1	A	47	PRO	2.5
1	H	132	PRO	2.5
1	I	45	LYS	2.5
1	U	105	PRO	2.5
1	E	175	THR	2.5
1	D	45	LYS	2.5
1	P	366	LEU	2.5
1	P	47	PRO	2.5
1	S	18	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
1	F	210	TYR	2.4
1	L	90	THR	2.4
1	V	90	THR	2.4
1	L	126	MET	2.4
1	H	116	VAL	2.4
1	I	47	PRO	2.4
1	T	103	ILE	2.4
1	P	188	MET	2.4
1	T	10	VAL	2.4
1	G	103	ILE	2.4
1	Q	432	GLN	2.4
1	O	36	LEU	2.4
1	R	94	ILE	2.4
1	U	90	THR	2.4
1	V	95	VAL	2.4
1	I	115	ASP	2.4
1	V	80	PHE	2.4
1	C	38	LYS	2.4
1	I	111	ILE	2.4
1	D	37	LYS	2.4
1	F	71	CYS	2.4
1	V	38	LYS	2.4
1	G	6	ILE	2.4
1	O	98	ARG	2.4
1	S	122	LEU	2.4
1	U	37	LYS	2.4
1	D	115	ASP	2.4
1	J	97	ALA	2.4
1	S	108	LEU	2.4
1	J	112	LYS	2.4
1	K	38	LYS	2.4
1	N	102	LYS	2.4
1	A	8	PHE	2.4
1	C	31	PRO	2.4
1	O	96	ILE	2.4
1	H	102	LYS	2.4
1	U	100	GLY	2.4
1	K	132	PRO	2.4
1	L	183	GLU	2.4
1	D	96	ILE	2.4
1	R	111	ILE	2.4
1	G	109	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
1	B	8	PHE	2.4
1	H	157	ASN	2.4
1	C	29	LYS	2.4
1	B	432	GLN	2.4
1	C	137	HIS	2.4
1	K	90	THR	2.4
1	H	115	ASP	2.3
1	H	99	LYS	2.3
1	H	282	PRO	2.3
1	A	93	GLY	2.3
1	K	197	TRP	2.3
1	C	82	GLU	2.3
1	N	42	THR	2.3
1	O	35	ASP	2.3
1	I	49	LEU	2.3
1	L	97	ALA	2.3
1	G	83	GLY	2.3
1	N	8	PHE	2.3
1	S	9	LYS	2.3
1	I	42	THR	2.3
1	P	365	GLU	2.3
1	S	88	ASP	2.3
1	E	108	LEU	2.3
1	F	221	TYR	2.3
1	V	43	LEU	2.3
1	A	39	PRO	2.3
1	G	163	THR	2.3
1	P	41	ILE	2.3
1	G	8	PHE	2.3
1	E	130	ARG	2.3
1	N	112	LYS	2.3
1	O	99	LYS	2.3
1	E	94	ILE	2.3
1	P	122	LEU	2.3
1	E	44	GLY	2.3
1	K	49	LEU	2.3
1	B	97	ALA	2.3
1	M	285	TYR	2.3
1	B	100	GLY	2.3
1	Q	100	GLY	2.3
1	K	99	LYS	2.3
1	E	43	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
1	V	101	ASP	2.3
1	M	18	LYS	2.3
1	P	78	MET	2.3
1	T	108	LEU	2.3
1	T	111	ILE	2.3
1	B	359	PHE	2.3
1	A	112	LYS	2.3
1	E	38	LYS	2.3
1	Q	45	LYS	2.3
1	N	88	ASP	2.3
1	V	117	GLU	2.3
1	P	36	LEU	2.3
1	E	55	SER	2.3
1	I	107	SER	2.3
1	V	216	ARG	2.3
1	P	102	LYS	2.3
1	F	36	LEU	2.3
1	H	366	LEU	2.3
1	D	8	PHE	2.3
1	G	37	LYS	2.3
1	K	18	LYS	2.3
1	O	359	PHE	2.3
1	F	63	ALA	2.3
1	V	93	GLY	2.2
1	O	362	ASP	2.2
1	L	96	ILE	2.2
1	K	94	ILE	2.2
1	B	110	GLU	2.2
1	C	124	GLY	2.2
1	E	369	TYR	2.2
1	I	94	ILE	2.2
1	D	285	TYR	2.2
1	F	74	LEU	2.2
1	G	36	LEU	2.2
1	D	101	ASP	2.2
1	M	35	ASP	2.2
1	S	48	ASP	2.2
1	U	117	GLU	2.2
1	J	36	LEU	2.2
1	K	8	PHE	2.2
1	G	98	ARG	2.2
1	R	85	CYS	2.2

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Mol	Chain	Res	Type	RSRZ
1	A	96	ILE	2.2
1	J	103	ILE	2.2
1	U	95	VAL	2.2
1	B	285	TYR	2.2
1	C	275	PRO	2.2
1	J	35	ASP	2.2
1	T	19	PRO	2.2
1	A	42	THR	2.2
1	C	216	ARG	2.2
1	F	73	TYR	2.2
1	P	206	LEU	2.2
1	G	45	LYS	2.2
1	U	33	ILE	2.2
1	E	117	GLU	2.2
1	G	174	GLU	2.2
1	Q	32	ALA	2.2
1	V	213	PHE	2.2
1	I	110	GLU	2.2
1	C	30	TYR	2.2
1	E	277	GLN	2.2
1	V	85	CYS	2.2
1	L	216	ARG	2.2
1	K	85	CYS	2.2
1	U	96	ILE	2.1
1	O	34	LYS	2.1
1	O	12	ASN	2.1
1	I	117	GLU	2.1
1	P	136	GLU	2.1
1	V	362	ASP	2.1
1	C	210	TYR	2.1
1	F	37	LYS	2.1
1	Q	191	HIS	2.1
1	O	103	ILE	2.1
1	B	295	SER	2.1
1	Q	47	PRO	2.1
1	I	18	LYS	2.1
1	Q	221	TYR	2.1
1	B	183	GLU	2.1
1	B	94	ILE	2.1
1	Q	103	ILE	2.1
1	S	36	LEU	2.1
1	F	191	HIS	2.1

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Mol	Chain	Res	Type	RSRZ
1	H	39	PRO	2.1
1	I	91	SER	2.1
1	K	107	SER	2.1
1	Q	30	TYR	2.1
1	B	363	GLU	2.1
1	V	97	ALA	2.1
1	B	103	ILE	2.1
1	Q	137	HIS	2.1
1	E	412	ASN	2.1
1	H	60	MET	2.1
1	J	17	LEU	2.1
1	J	411	MET	2.1
1	R	108	LEU	2.1
1	C	8	PHE	2.1
1	G	81	PHE	2.1
1	E	95	VAL	2.1
1	A	90	THR	2.1
1	F	82	GLU	2.1
1	Q	117	GLU	2.1
1	I	99	LYS	2.1
1	V	45	LYS	2.1
1	F	187	LEU	2.1
1	L	115	ASP	2.1
1	M	89	TRP	2.1
1	M	93	GLY	2.1
1	R	35	ASP	2.1
1	P	359	PHE	2.1
1	O	10	VAL	2.1
1	H	44	GLY	2.1
1	O	100	GLY	2.1
1	P	83	GLY	2.1
1	O	85	CYS	2.1
1	V	48	ASP	2.1
1	O	156	GLN	2.1
1	Q	18	LYS	2.1
1	U	34	LYS	2.1
1	O	371	ALA	2.1
1	J	6	ILE	2.1
1	J	83	GLY	2.1
1	V	108	LEU	2.1
1	O	9	LYS	2.0
1	V	369	TYR	2.0

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Mol	Chain	Res	Type	RSRZ
1	J	33	ILE	2.0
1	C	266	GLU	2.0
1	N	82	GLU	2.0
1	B	10	VAL	2.0
1	H	144	LEU	2.0
1	U	122	LEU	2.0
1	L	9	LYS	2.0
1	G	126	MET	2.0
1	Q	91	SER	2.0
1	U	91	SER	2.0
1	I	92	TYR	2.0
1	Q	300	TYR	2.0
1	T	33	ILE	2.0
1	S	44	GLY	2.0
1	D	89	TRP	2.0
1	O	116	VAL	2.0
1	H	187	LEU	2.0
1	A	98	ARG	2.0
1	E	372	ALA	2.0
1	K	292	LEU	2.0
1	V	295	SER	2.0
1	N	96	ILE	2.0
1	U	111	ILE	2.0
1	V	224	ILE	2.0
1	V	112	LYS	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, 95^{th} 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
4	PO4	W	101	5/5	0.96	0.17	97,104,108,116	0
4	PO4	X	101	5/5	0.97	0.17	70,77,88,106	0

6.5 Other polymers (i)

There are no such residues in this entry.