



Full wwPDB X-ray Structure Validation Report ⓘ

May 16, 2020 – 06:42 pm BST

PDB ID : 2GTT
Title : Crystal structure of the rabies virus nucleoprotein-RNA complex
Authors : Albertini, A.A.V.; Wernimont, A.K.; Muziol, T.; Ravelli, R.B.G.; Weis-
senhorn, W.; Ruigrok, R.W.H.
Deposited on : 2006-04-28
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 following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.11
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)	:	2.11

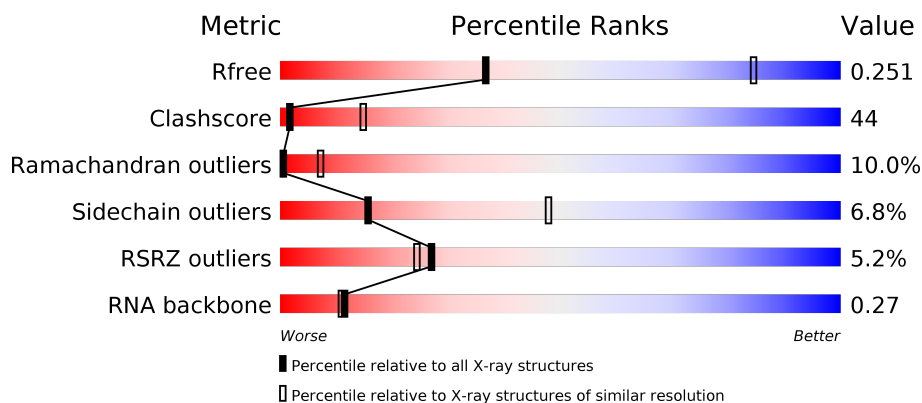
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 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 on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	W	99	 3% 17% 30% 30% 22%
2	X	99	 4% 14% 33% 34% 18%
3	A	450	 4% 41% 38% 9% 11%
3	B	450	 5% 36% 43% 9% 11%

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Mol	Chain	Length	Quality of chain
3	C	450	
3	D	450	
3	E	450	
3	F	450	
3	G	450	
3	H	450	
3	I	450	
3	J	450	
3	K	450	
3	L	450	
3	M	450	
3	N	450	
3	O	450	
3	P	450	
3	Q	450	
3	R	450	
3	S	450	
3	T	450	
3	U	450	
3	V	450	

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 74551 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 RNA chain called RNA (99-MER).

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	X	99	Total	C	N	O	P	0	0	0
			2045	925	365	657	98			

- Molecule 3 is a protein called Nucleoprotein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	A	401	Total	C	N	O	S	0	0	0
			3192	2042	549	584	17			
3	B	401	Total	C	N	O	S	0	0	0
			3196	2045	550	584	17			
3	C	404	Total	C	N	O	S	0	0	0
			3217	2058	553	589	17			
3	D	400	Total	C	N	O	S	0	0	0
			3187	2039	548	583	17			
3	E	400	Total	C	N	O	S	0	0	0
			3187	2039	548	583	17			
3	F	405	Total	C	N	O	S	0	0	0
			3223	2062	553	591	17			
3	G	400	Total	C	N	O	S	0	0	0
			3183	2037	548	581	17			
3	H	400	Total	C	N	O	S	0	0	0
			3191	2042	549	583	17			
3	I	403	Total	C	N	O	S	0	0	0
			3209	2053	551	588	17			
3	J	405	Total	C	N	O	S	0	0	0
			3225	2063	554	591	17			

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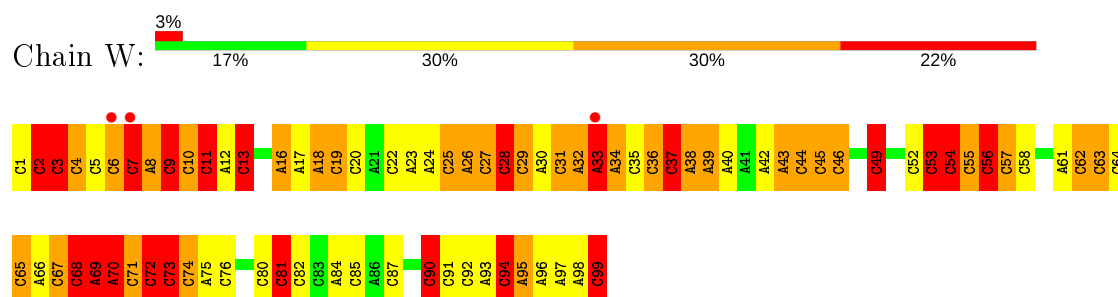
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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	K	401	Total	C	N	O	S	0	0	0
			3192	2043	550	582	17			
3	L	406	Total	C	N	O	S	0	0	0
			3234	2068	555	594	17			
3	M	404	Total	C	N	O	S	0	0	0
			3217	2058	553	589	17			
3	N	405	Total	C	N	O	S	0	0	0
			3223	2062	553	591	17			
3	O	400	Total	C	N	O	S	0	0	0
			3183	2037	548	581	17			
3	P	399	Total	C	N	O	S	0	0	0
			3182	2037	548	580	17			
3	Q	402	Total	C	N	O	S	0	0	0
			3200	2048	550	585	17			
3	R	401	Total	C	N	O	S	0	0	0
			3192	2043	550	582	17			
3	S	401	Total	C	N	O	S	0	0	0
			3192	2043	550	582	17			
3	T	400	Total	C	N	O	S	0	0	0
			3187	2040	549	581	17			
3	U	403	Total	C	N	O	S	0	0	0
			3209	2054	552	586	17			
3	V	405	Total	C	N	O	S	0	0	0
			3226	2063	554	592	17			

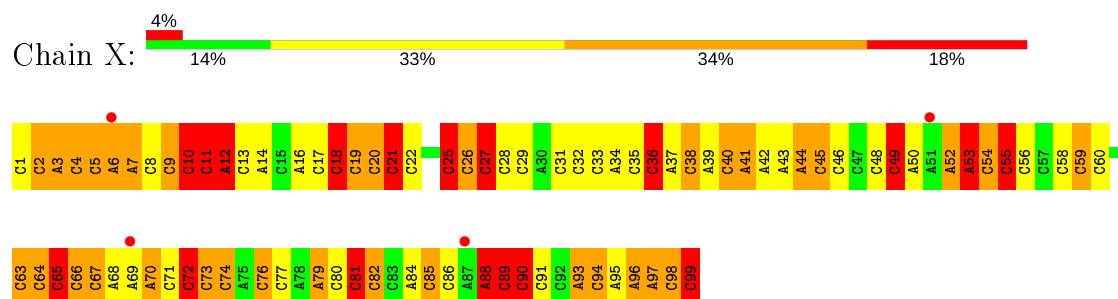
3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA and DNA 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.

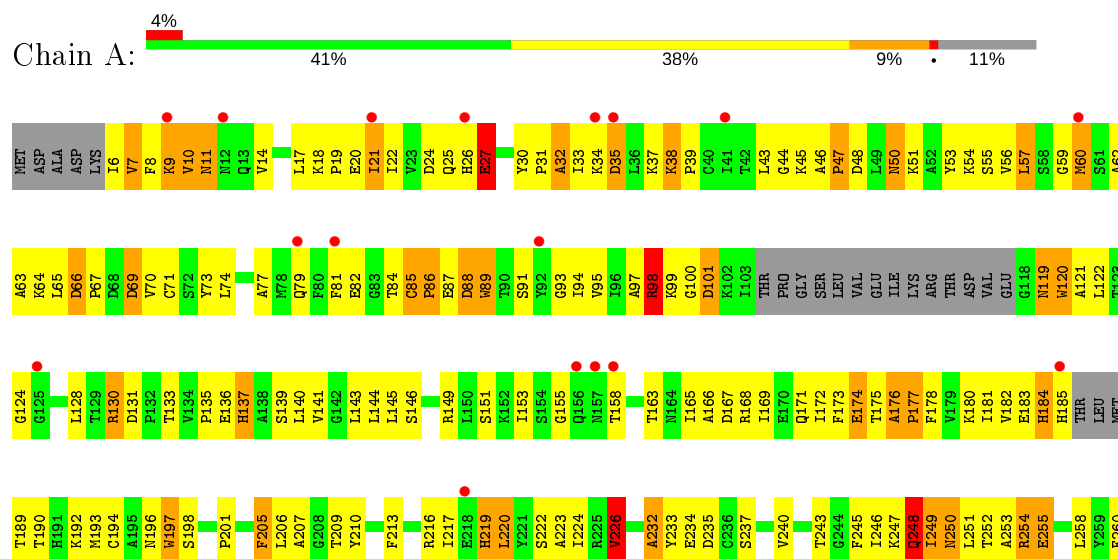
• Molecule 1: RNA (99-MER)

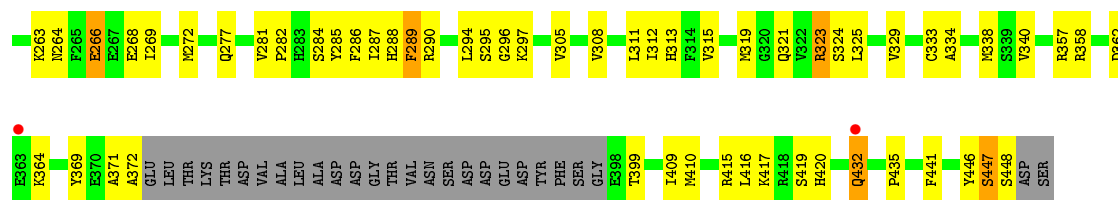


• Molecule 2: RNA (99-MER)

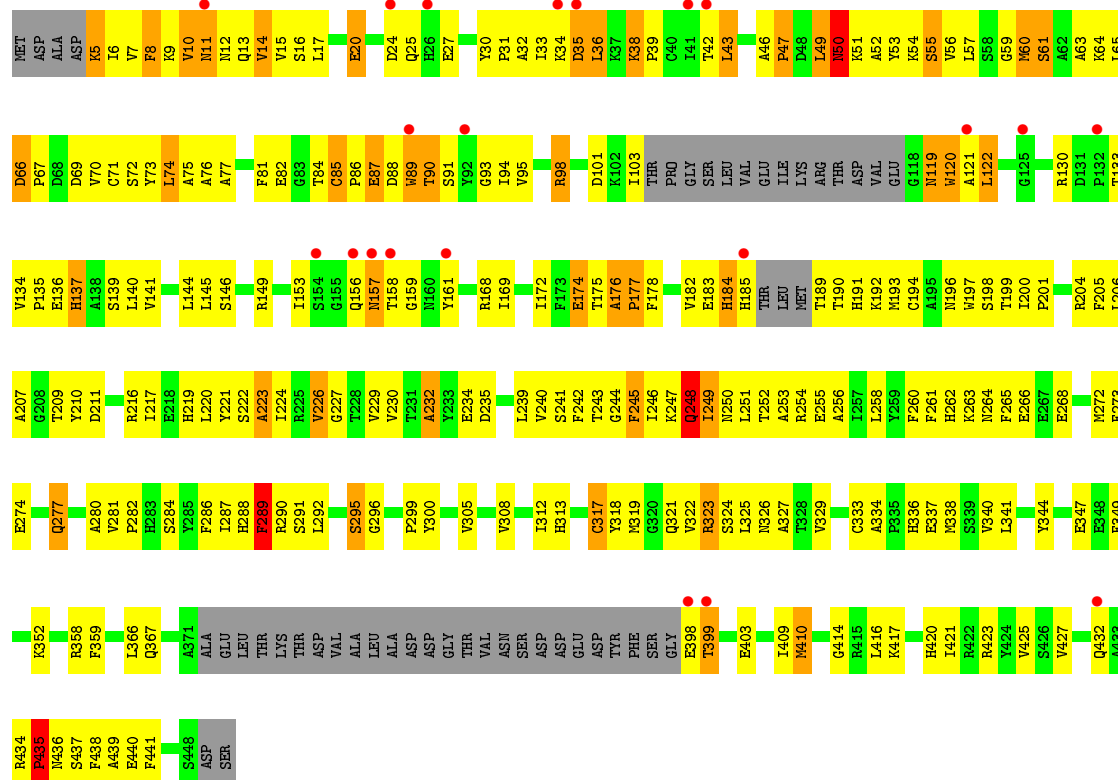


• Molecule 3: Nucleoprotein

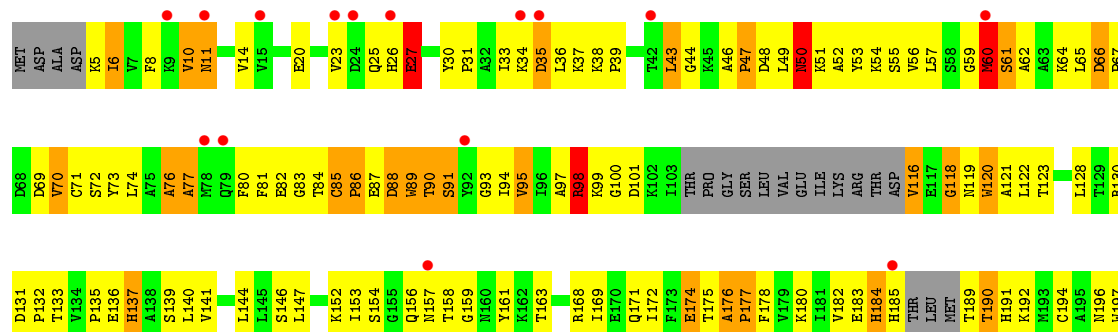


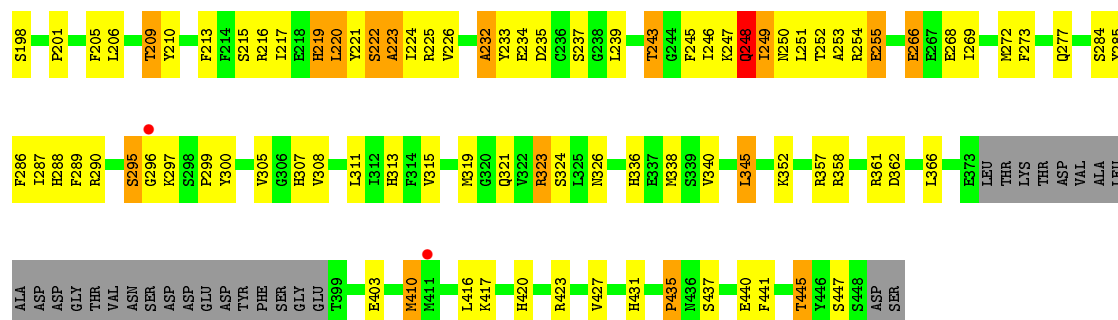


• Molecule 3: Nucleoprotein

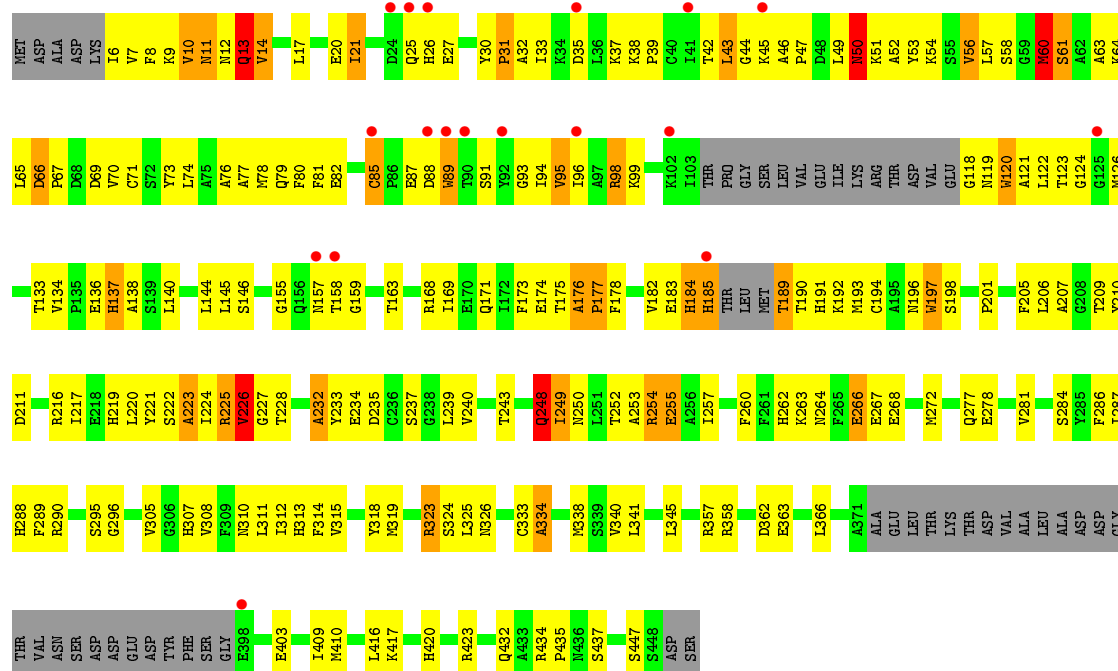
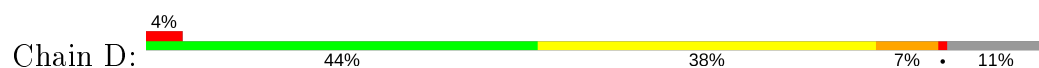


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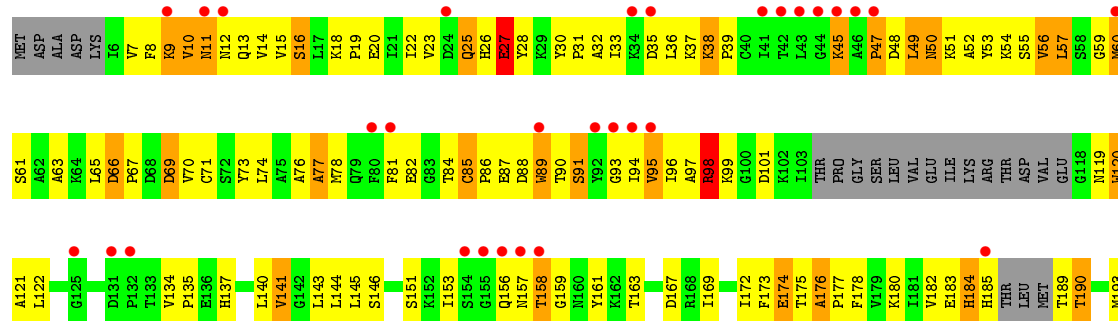


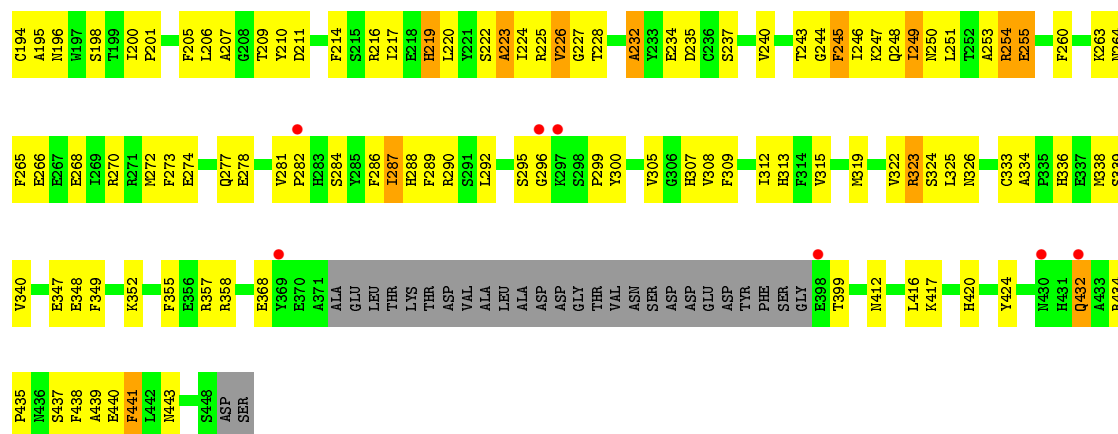


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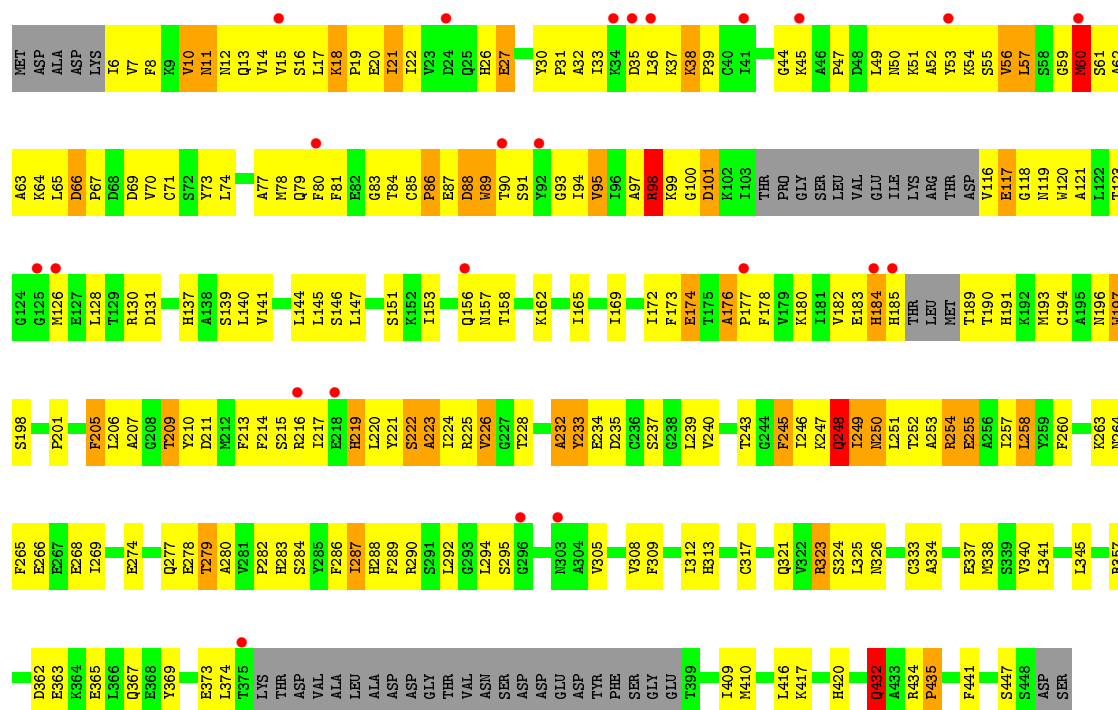


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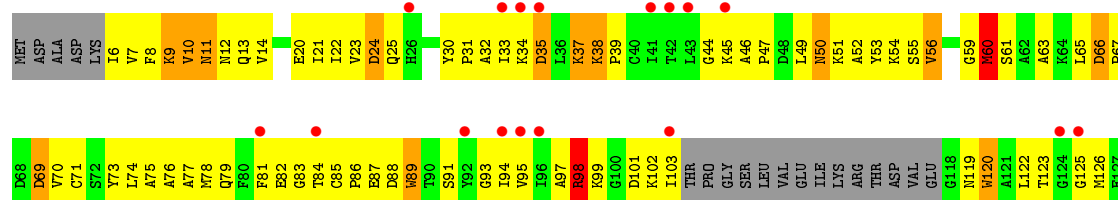


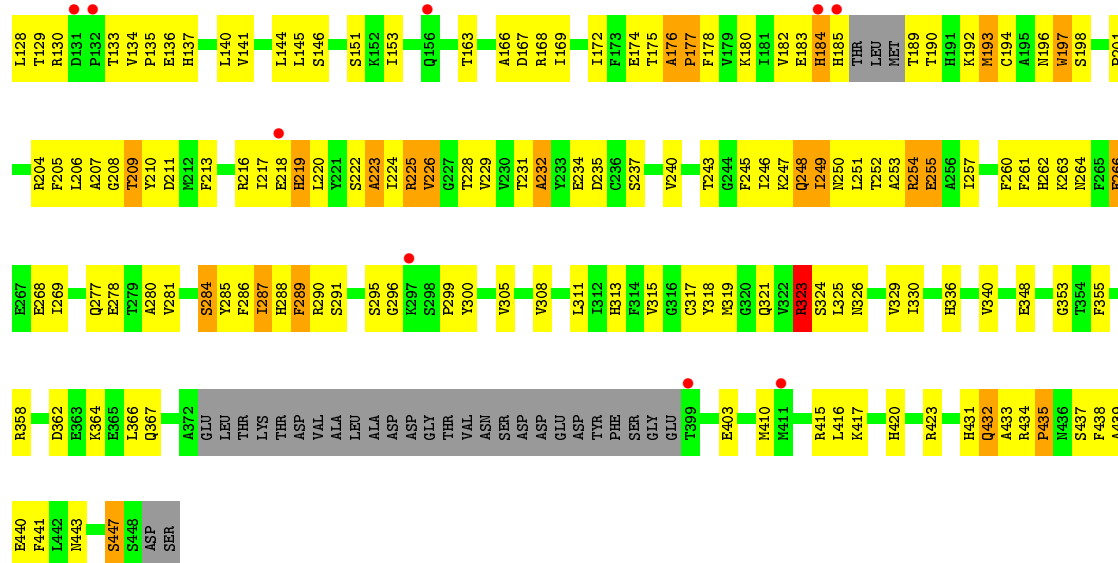


• Molecule 3: Nucleoprotein

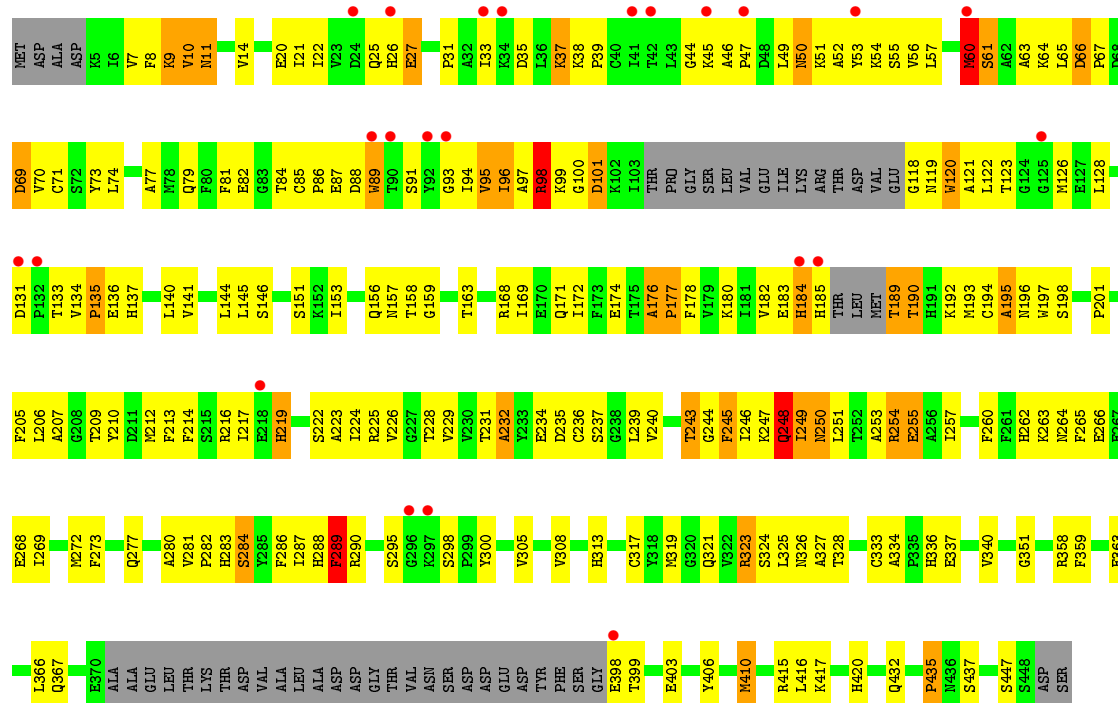


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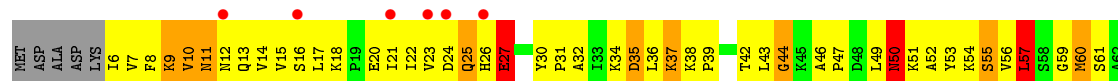


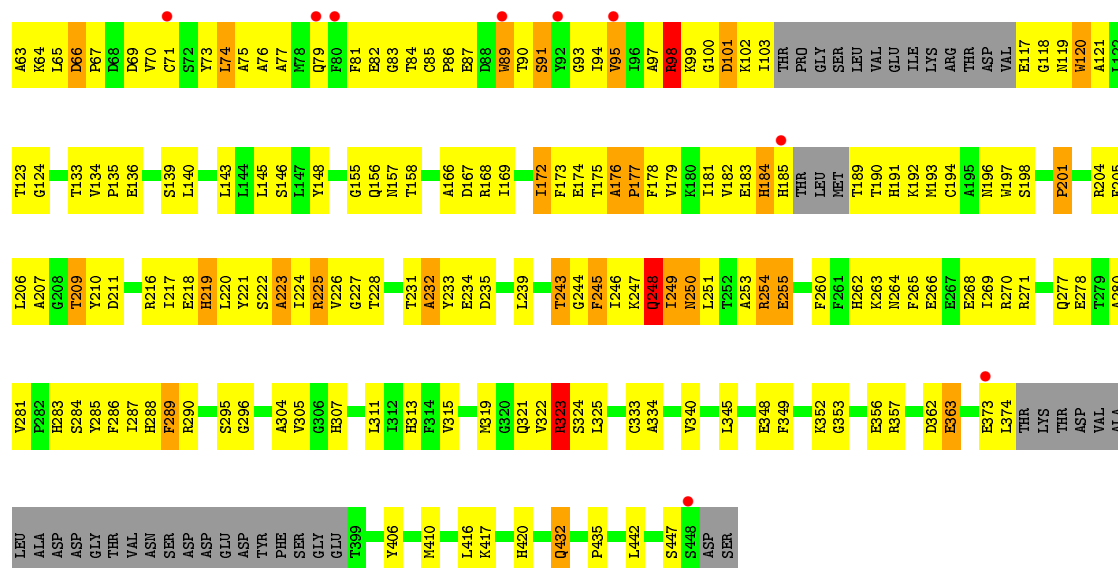


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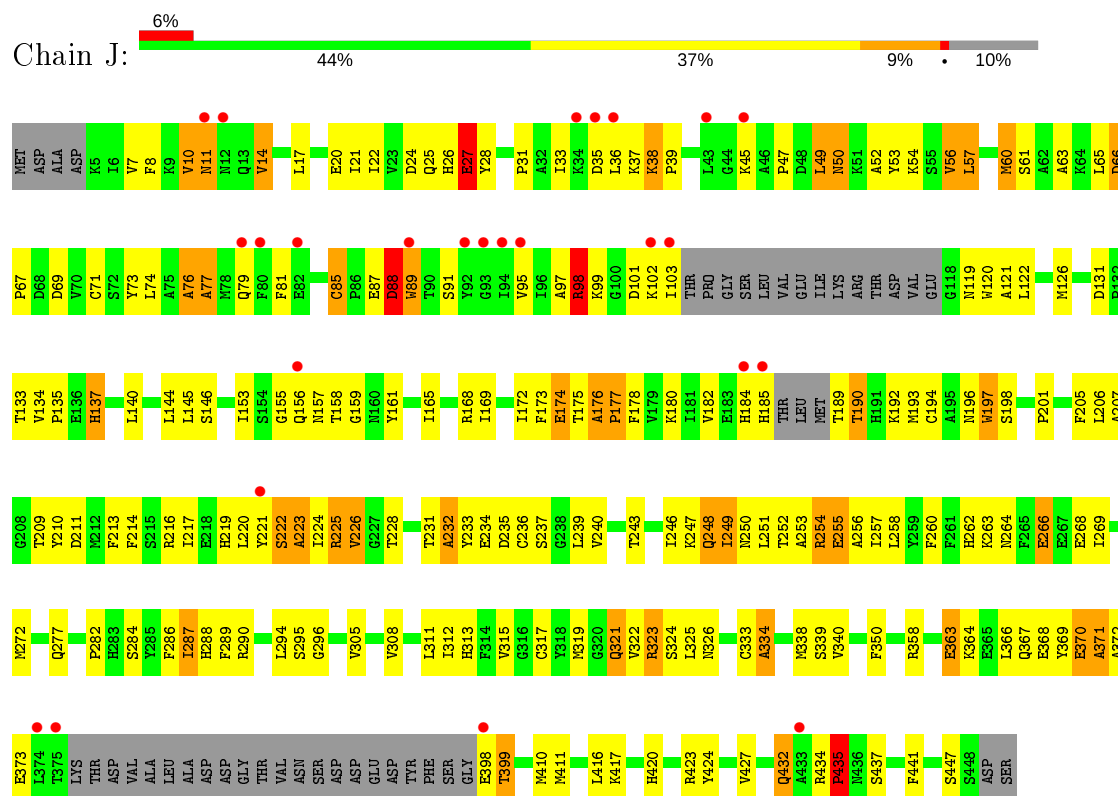


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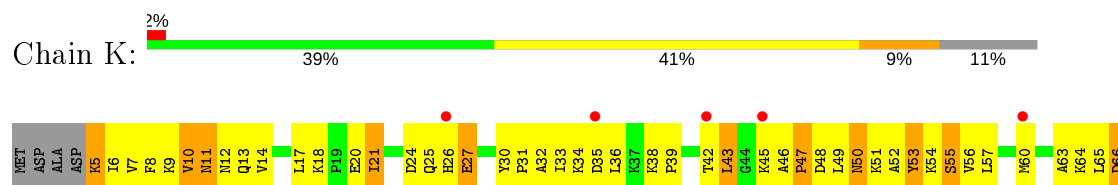


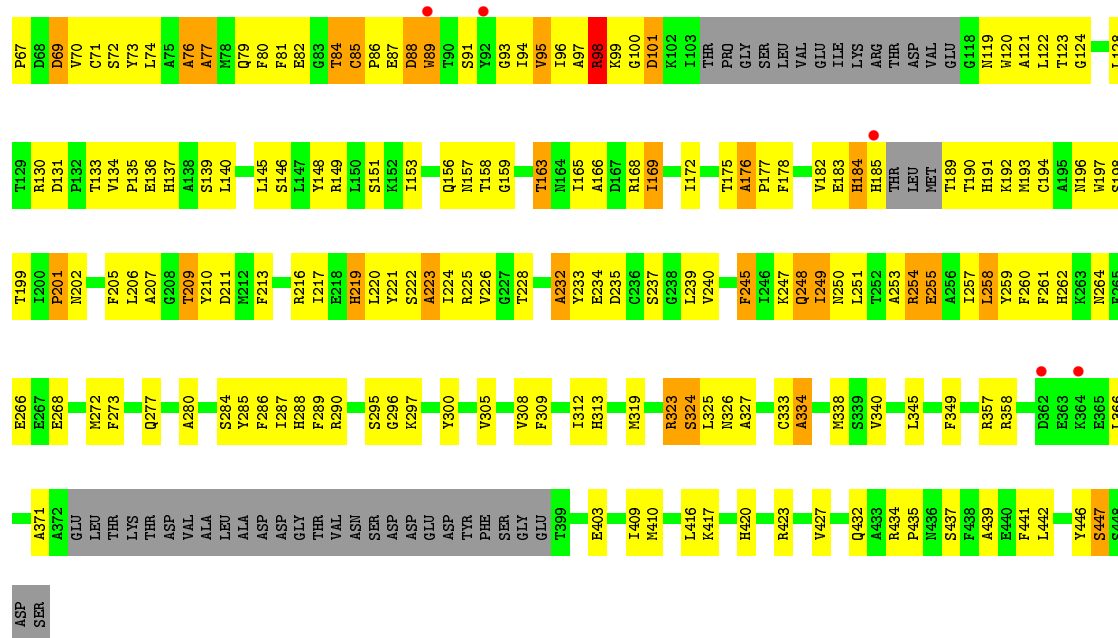


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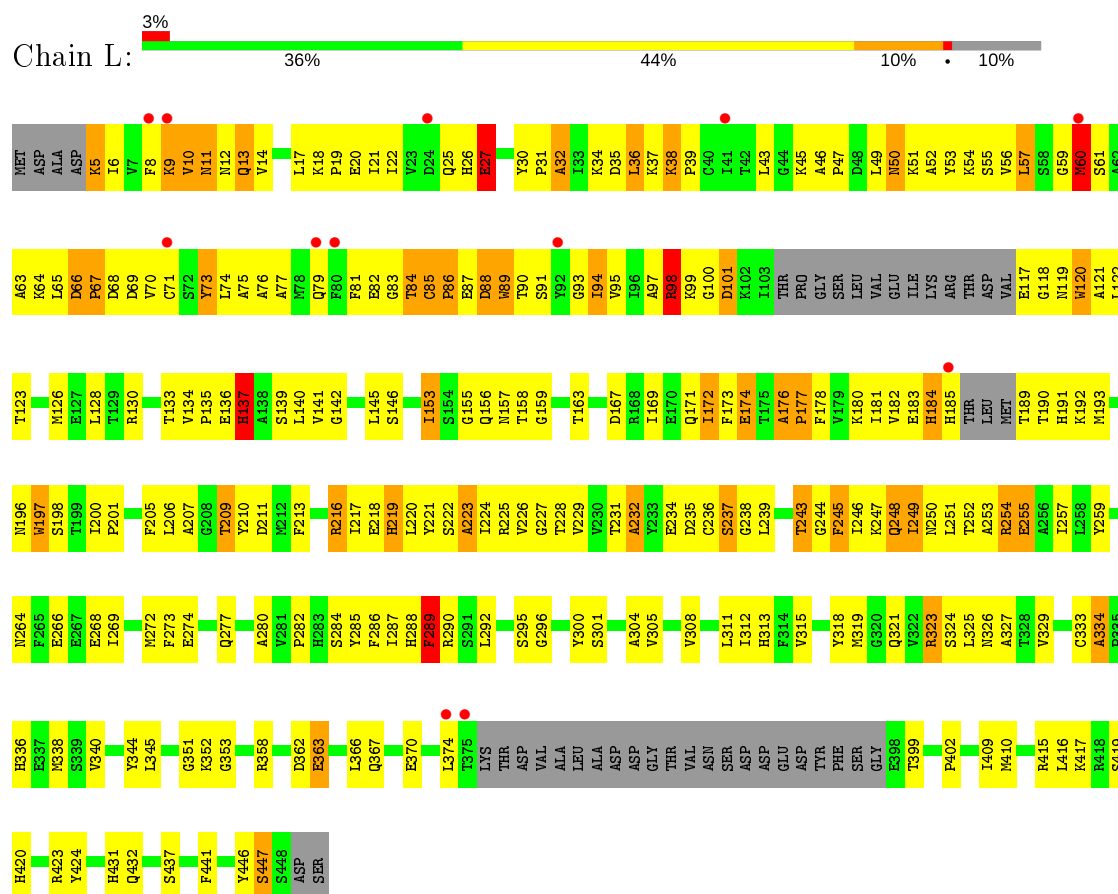


• Molecule 3: Nucleoprotein



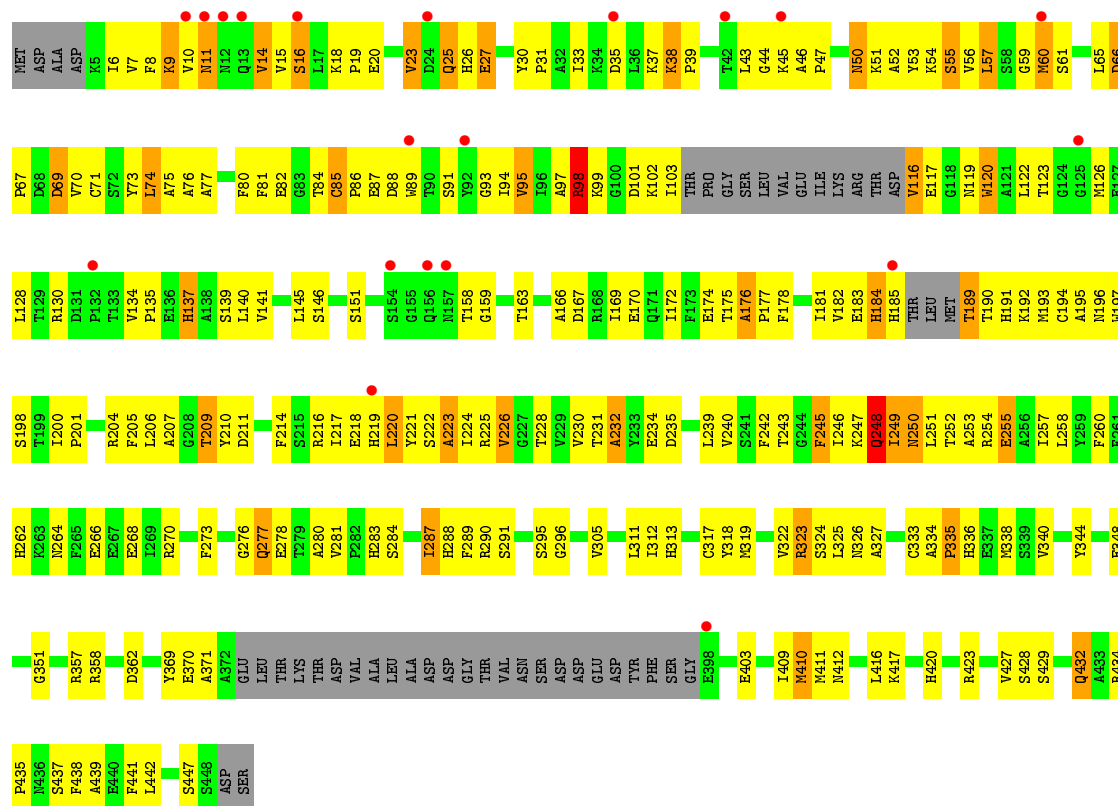


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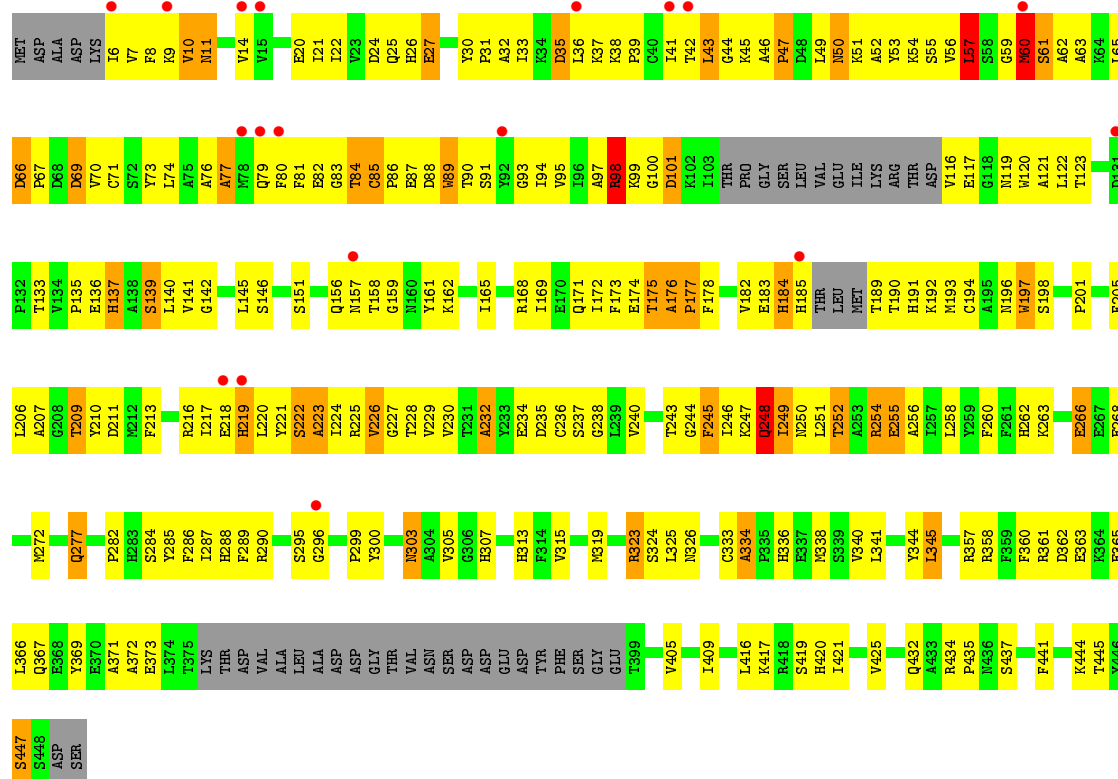


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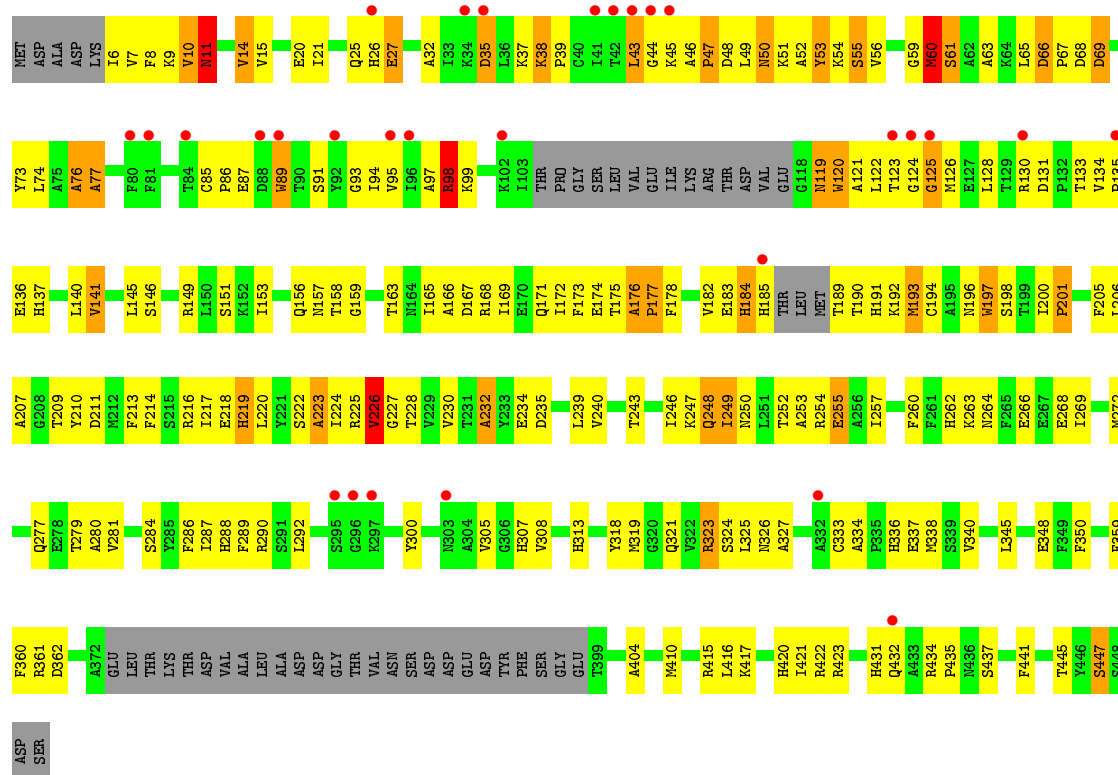
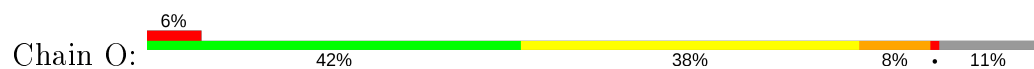




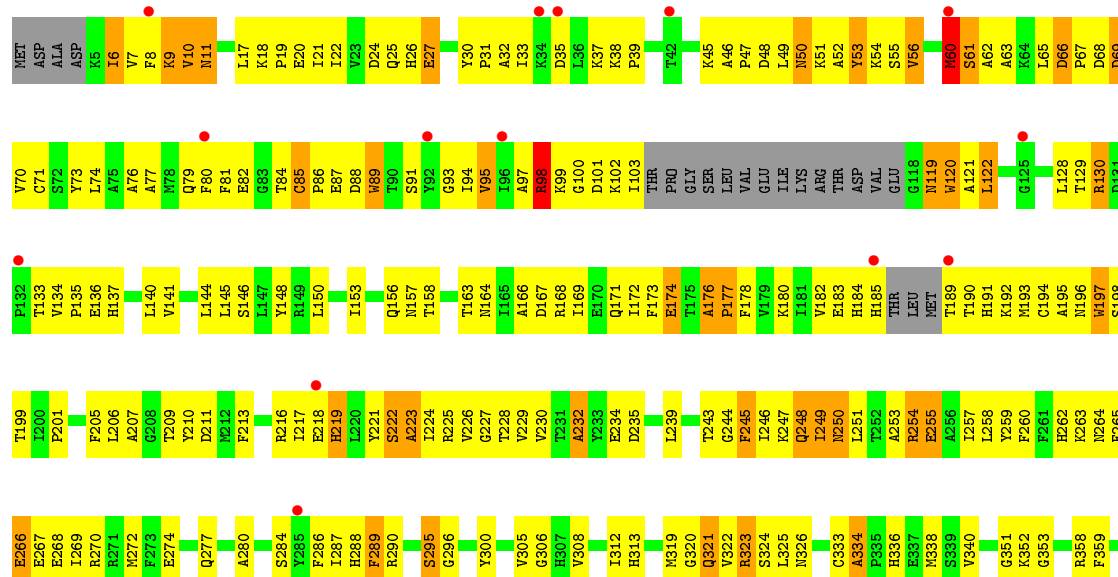
- Molecule 3: Nucleoprotein

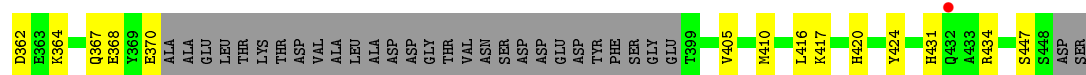


- Molecule 3: Nucleoprotein

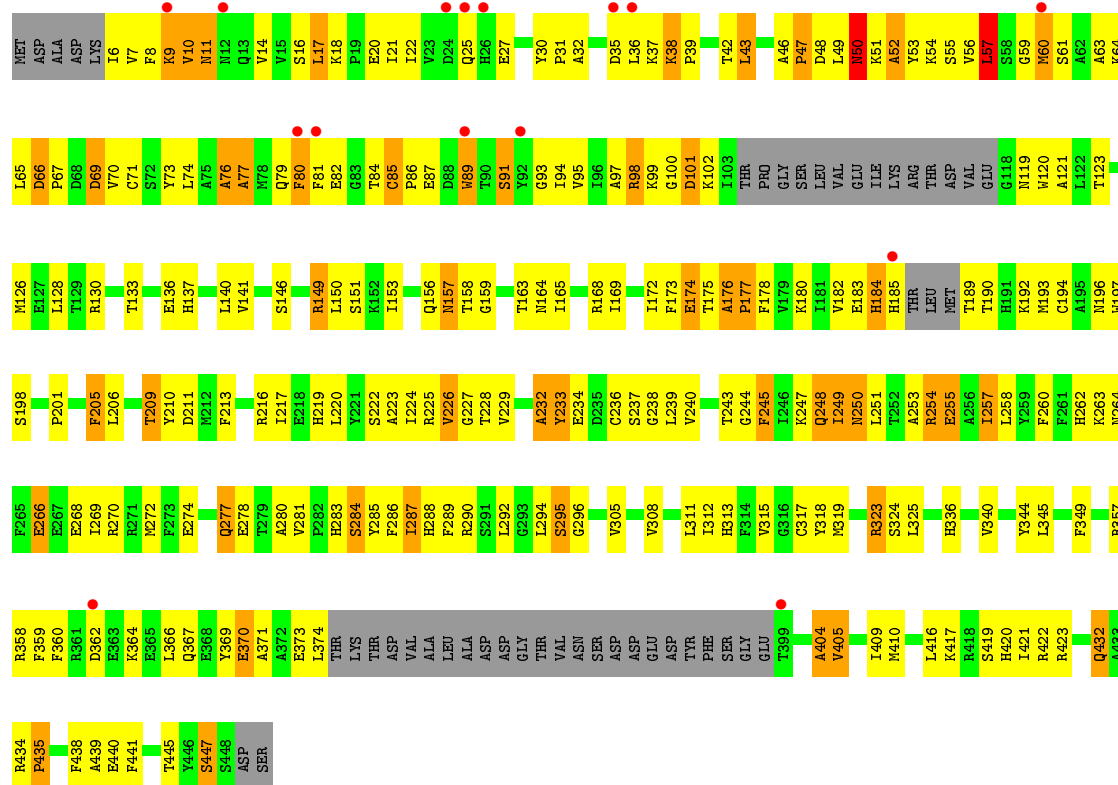


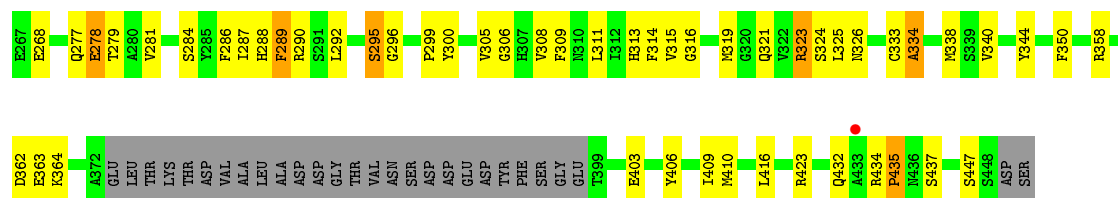
- Molecule 3: Nucleoprotein



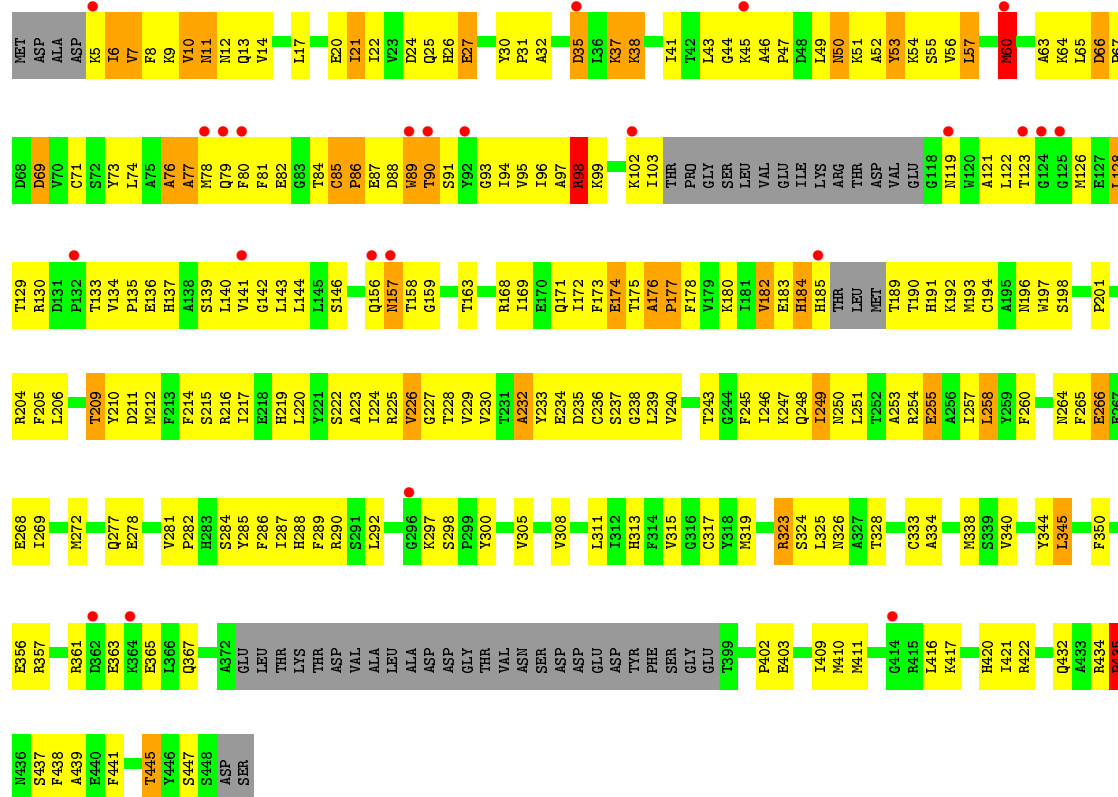


● Molecule 3: Nucleoprotein

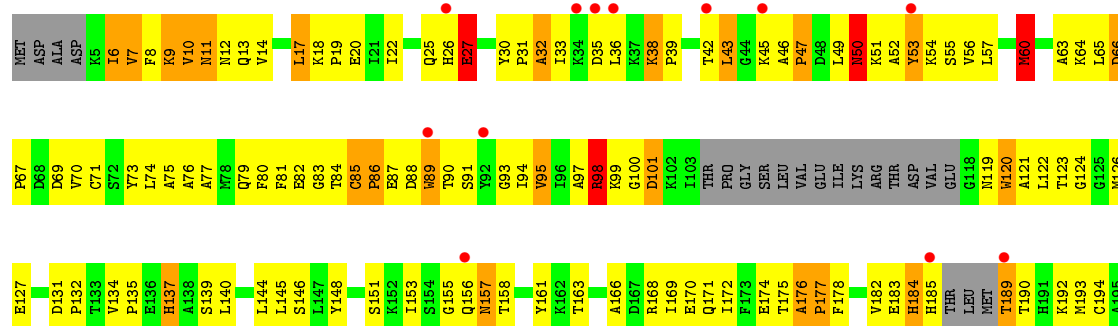
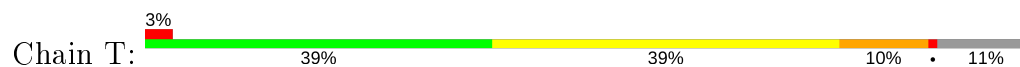


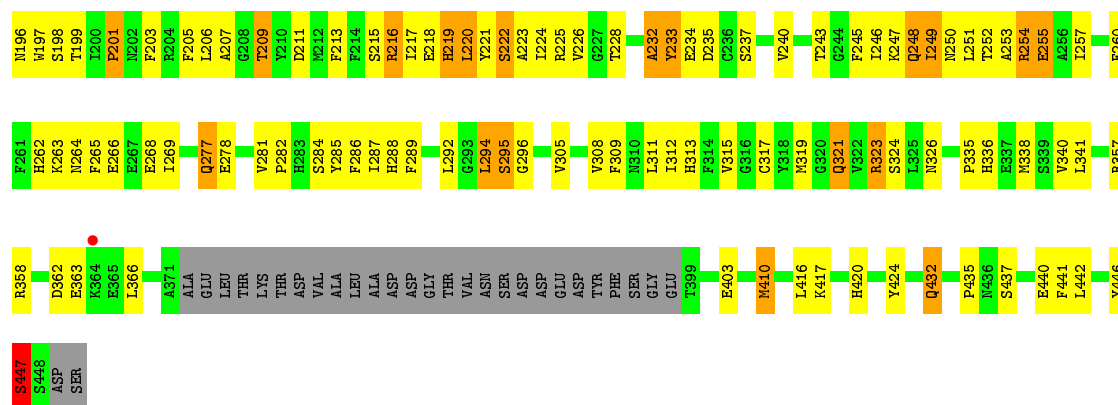


• Molecule 3: Nucleoprotein

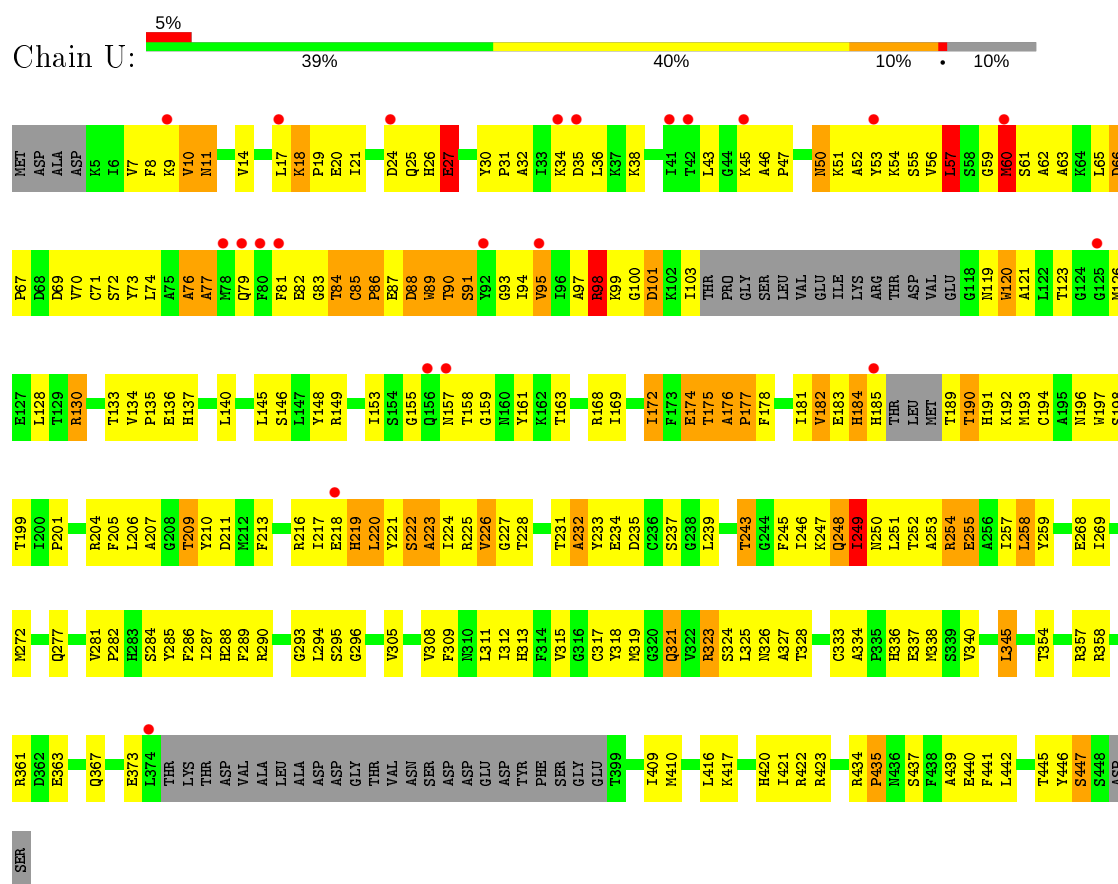


• Molecule 3: Nucleoprotein

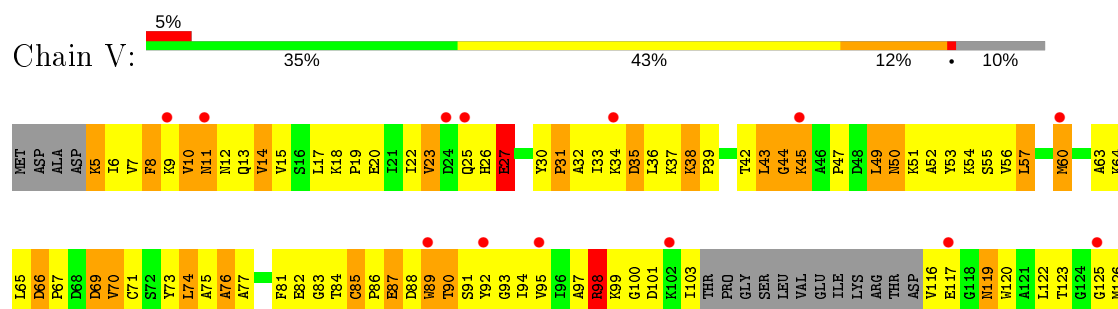


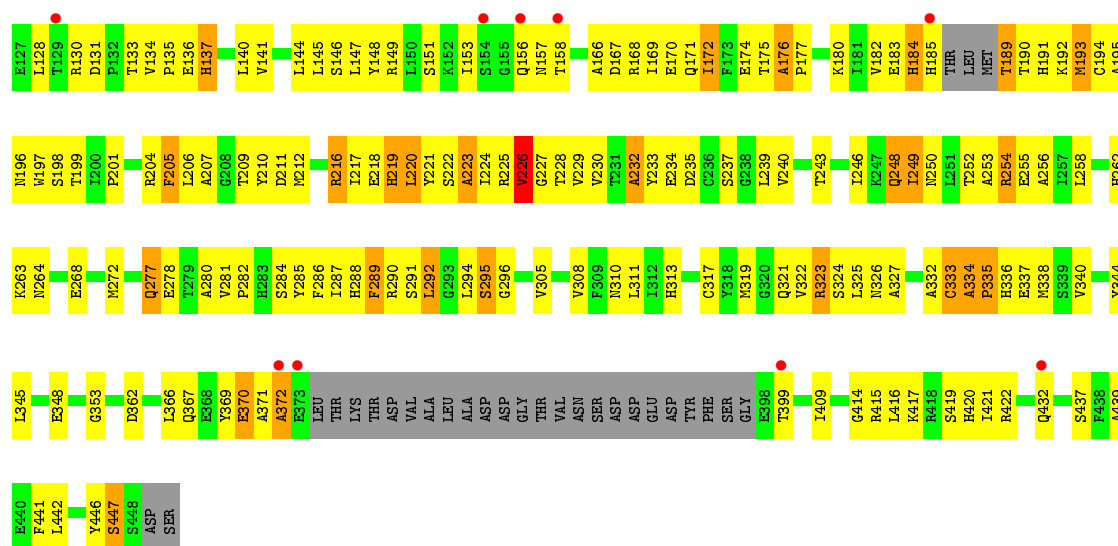


• Molecule 3: Nucleoprotein



• Molecule 3: Nucleoprotein





4 Data and refinement statistics

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)	25.00 – 3.49 24.95 – 3.49	Depositor EDS
% Data completeness (in resolution range)	99.4 (25.00-3.49) 99.3 (24.95-3.49)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.10	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.54 (at 3.46Å)	Xtriage
Refinement program	REFMAC 5.2.0005	Depositor
R, R_{free}	0.269 , 0.313 0.253 , 0.251	Depositor DCC
R_{free} test set	11041 reflections (4.88%)	wwPDB-VP
Wilson B-factor (Å ²)	105.9	Xtriage
Anisotropy	0.072	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , 102.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.42$, $\langle L^2 \rangle = 0.24$	Xtriage
Estimated twinning fraction	0.057 for k,h,-l	Xtriage
F_o, F_c correlation	0.90	EDS
Total number of atoms	74551	wwPDB-VP
Average B, all atoms (Å ²)	82.0	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.*

¹Intensities estimated from amplitudes.

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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	W	1.36	11/2297 (0.5%)	1.82	66/3563 (1.9%)
2	X	1.43	15/2276 (0.7%)	1.92	89/3528 (2.5%)
3	A	0.91	2/3269 (0.1%)	0.77	1/4413 (0.0%)
3	B	0.90	2/3273 (0.1%)	0.78	1/4417 (0.0%)
3	C	0.94	3/3294 (0.1%)	0.78	1/4446 (0.0%)
3	D	0.85	1/3264 (0.0%)	0.74	2/4406 (0.0%)
3	E	0.77	1/3264 (0.0%)	0.69	0/4406
3	F	0.85	1/3300 (0.0%)	0.75	1/4456 (0.0%)
3	G	0.78	0/3260	0.70	0/4401
3	H	0.83	0/3268	0.73	0/4410
3	I	0.94	3/3286 (0.1%)	0.78	1/4436 (0.0%)
3	J	0.84	2/3302 (0.1%)	0.72	0/4457
3	K	0.91	1/3269 (0.0%)	0.77	0/4412
3	L	1.06	5/3311 (0.2%)	0.83	0/4469
3	M	0.95	0/3294	0.77	0/4446
3	N	0.92	2/3300 (0.1%)	0.77	0/4456
3	O	0.80	0/3260	0.72	1/4401 (0.0%)
3	P	0.80	0/3259	0.72	0/4398
3	Q	0.89	1/3277 (0.0%)	0.78	1/4424 (0.0%)
3	R	0.79	0/3269	0.69	0/4412
3	S	0.83	1/3269 (0.0%)	0.75	0/4412
3	T	1.02	4/3264 (0.1%)	0.86	1/4405 (0.0%)
3	U	0.99	3/3286 (0.1%)	0.81	0/4435
3	V	0.96	3/3303 (0.1%)	0.79	0/4458
All	All	0.93	61/76714 (0.1%)	0.88	165/104467 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
3	L	0	1

All (61) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	X	11	C	C1'-N1	9.74	1.63	1.48
2	X	90	C	P-O5'	7.30	1.67	1.59
1	W	6	C	C1'-N1	7.24	1.59	1.48
3	L	57	LEU	C-N	6.88	1.49	1.34
3	T	57	LEU	C-N	6.55	1.49	1.34
2	X	60	C	C1'-N1	6.38	1.58	1.48
3	T	57	LEU	C-O	-6.26	1.11	1.23
2	X	6	A	C3'-O3'	6.18	1.50	1.42
3	I	27	GLU	CG-CD	6.14	1.61	1.51
3	L	27	GLU	CG-CD	6.14	1.61	1.51
1	W	53	C	C1'-N1	6.07	1.57	1.48
3	T	317	CYS	CB-SG	-6.00	1.72	1.82
3	T	27	GLU	CG-CD	5.98	1.60	1.51
3	C	57	LEU	C-N	5.97	1.47	1.34
2	X	5	C	C3'-O3'	5.97	1.50	1.42
3	Q	57	LEU	C-N	5.88	1.47	1.34
3	A	27	GLU	CG-CD	5.85	1.60	1.51
2	X	89	C	C3'-O3'	5.84	1.50	1.42
3	F	57	LEU	C-N	5.82	1.47	1.34
1	W	32	A	C3'-O3'	5.80	1.50	1.42
3	U	27	GLU	CG-CD	5.74	1.60	1.51
3	N	57	LEU	C-N	5.73	1.47	1.34
3	C	57	LEU	C-O	-5.72	1.12	1.23
2	X	25	C	C1'-N1	5.67	1.57	1.48
3	L	27	GLU	CB-CG	5.66	1.62	1.52
3	L	73	TYR	CB-CG	5.64	1.60	1.51
3	K	57	LEU	C-N	5.60	1.47	1.34
1	W	32	A	N9-C4	5.59	1.41	1.37
3	V	57	LEU	C-N	5.58	1.46	1.34
1	W	7	C	C1'-N1	5.55	1.57	1.48
3	N	57	LEU	C-O	-5.52	1.12	1.23
1	W	26	A	N9-C4	-5.49	1.34	1.37
3	S	57	LEU	C-N	5.46	1.46	1.34
3	B	87	GLU	CG-CD	5.45	1.60	1.51
3	U	57	LEU	C-N	5.44	1.46	1.34
1	W	2	C	C1'-N1	5.44	1.56	1.48
3	J	57	LEU	C-N	5.41	1.46	1.34
1	W	73	C	C1'-N1	5.38	1.56	1.48
3	I	57	LEU	C-N	5.36	1.46	1.34
2	X	20	C	C1'-N1	5.33	1.56	1.48
3	B	317	CYS	CB-SG	-5.31	1.73	1.81
3	A	57	LEU	C-N	5.28	1.46	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	X	11	C	N1-C2	5.26	1.45	1.40
3	L	424	TYR	CE2-CZ	-5.25	1.31	1.38
3	V	226	VAL	CB-CG2	-5.24	1.41	1.52
1	W	5	C	P-O5'	5.21	1.65	1.59
2	X	59	C	C1'-N1	5.20	1.56	1.48
2	X	72	C	C1'-N1	5.19	1.56	1.48
2	X	89	C	O3'-P	5.18	1.67	1.61
2	X	12	A	N9-C8	5.17	1.41	1.37
2	X	6	A	C5-C4	5.17	1.42	1.38
3	I	27	GLU	CB-CG	5.15	1.61	1.52
3	J	27	GLU	CG-CD	5.14	1.59	1.51
3	U	249	ILE	CA-CB	5.14	1.66	1.54
1	W	10	C	C1'-N1	5.13	1.56	1.48
3	V	87	GLU	CG-CD	5.12	1.59	1.51
2	X	26	C	N3-C4	-5.11	1.30	1.33
3	C	27	GLU	CB-CG	5.10	1.61	1.52
3	E	57	LEU	C-N	5.06	1.45	1.34
1	W	74	C	C1'-N1	5.04	1.56	1.48
3	D	226	VAL	CB-CG2	-5.00	1.42	1.52

All (165) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	W	2	C	O4'-C1'-N1	14.51	119.81	108.20
2	X	11	C	O4'-C1'-N1	13.06	118.65	108.20
1	W	2	C	C1'-O4'-C4'	-12.35	100.02	109.90
2	X	7	A	O4'-C1'-N9	12.30	118.04	108.20
1	W	53	C	C4'-C3'-C2'	-12.27	90.33	102.60
2	X	11	C	C1'-O4'-C4'	-11.73	100.52	109.90
2	X	89	C	C3'-C2'-C1'	-11.01	92.70	101.50
2	X	81	C	O4'-C1'-N1	10.89	116.91	108.20
1	W	35	C	O4'-C1'-N1	10.74	116.79	108.20
1	W	2	C	O4'-C4'-C3'	-10.24	93.76	104.00
1	W	62	C	O4'-C1'-N1	9.94	116.16	108.20
1	W	18	A	O4'-C1'-N9	-9.40	100.68	108.20
1	W	53	C	O4'-C1'-N1	8.90	115.32	108.20
2	X	99	C	C3'-C2'-C1'	8.89	108.62	101.50
1	W	2	C	C4'-C3'-C2'	-8.67	93.93	102.60
1	W	68	C	P-O3'-C3'	8.41	129.79	119.70
2	X	81	C	C1'-O4'-C4'	-8.37	103.21	109.90
1	W	70	A	O4'-C4'-C3'	-8.33	95.67	104.00
1	W	2	C	C5'-C4'-O4'	8.26	119.02	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	X	99	C	C6-N1-C2	-8.18	117.03	120.30
1	W	74	C	O4'-C1'-N1	8.16	114.73	108.20
2	X	90	C	N1-C2-O2	8.16	123.79	118.90
2	X	36	C	O4'-C1'-N1	8.14	114.72	108.20
2	X	18	C	C1'-O4'-C4'	-8.12	103.40	109.90
2	X	6	A	C8-N9-C4	-7.89	102.64	105.80
1	W	46	C	O4'-C1'-N1	7.75	114.40	108.20
2	X	65	C	O4'-C1'-N1	7.71	114.37	108.20
1	W	39	A	O4'-C1'-N9	7.56	114.25	108.20
2	X	44	A	C1'-O4'-C4'	-7.56	103.85	109.90
2	X	11	C	C6-N1-C2	-7.50	117.30	120.30
1	W	6	C	O4'-C1'-N1	7.26	114.01	108.20
2	X	53	A	C1'-O4'-C4'	-7.25	104.10	109.90
2	X	7	A	C1'-O4'-C4'	-7.18	104.16	109.90
1	W	69	A	N9-C1'-C2'	7.15	123.29	114.00
2	X	90	C	O4'-C1'-N1	7.14	113.92	108.20
1	W	81	C	O4'-C1'-N1	7.08	113.86	108.20
2	X	90	C	N3-C2-O2	-7.08	116.95	121.90
2	X	6	A	O4'-C1'-C2'	-7.03	98.77	105.80
1	W	90	C	O4'-C1'-N1	6.99	113.79	108.20
2	X	26	C	O4'-C1'-N1	6.97	113.77	108.20
2	X	65	C	O4'-C4'-C3'	-6.96	97.04	104.00
2	X	71	C	O4'-C1'-N1	6.93	113.75	108.20
2	X	90	C	C2-N1-C1'	6.91	126.40	118.80
2	X	11	C	O4'-C4'-C3'	-6.75	97.25	104.00
1	W	56	C	O4'-C1'-N1	6.73	113.59	108.20
2	X	18	C	C4'-C3'-C2'	-6.64	95.96	102.60
2	X	12	A	C5-N7-C8	-6.64	100.58	103.90
2	X	60	C	N3-C2-O2	-6.60	117.28	121.90
1	W	44	C	O4'-C1'-N1	6.60	113.48	108.20
1	W	53	C	C3'-C2'-C1'	-6.53	96.28	101.50
1	W	18	A	N1-C6-N6	6.53	122.52	118.60
2	X	53	A	O4'-C1'-N9	6.51	113.41	108.20
1	W	17	A	N9-C1'-C2'	-6.49	104.86	112.00
2	X	72	C	O4'-C1'-N1	6.45	113.36	108.20
1	W	54	C	N1-C2-O2	6.43	122.76	118.90
2	X	25	C	N1-C2-O2	6.43	122.76	118.90
1	W	35	C	C2-N1-C1'	6.38	125.82	118.80
1	W	28	C	O4'-C1'-N1	6.28	113.22	108.20
2	X	12	A	C4-C5-N7	6.28	113.84	110.70
2	X	6	A	N7-C8-N9	6.26	116.93	113.80
2	X	81	C	C2-N1-C1'	6.24	125.67	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	50	ASN	N-CA-C	-6.23	94.19	111.00
1	W	99	C	O4'-C1'-N1	6.22	113.17	108.20
2	X	25	C	O4'-C1'-N1	6.22	113.17	108.20
2	X	25	C	N3-C2-O2	-6.20	117.56	121.90
1	W	55	C	N1-C2-O2	6.20	122.62	118.90
2	X	25	C	C2-N1-C1'	6.17	125.59	118.80
2	X	40	C	O4'-C1'-N1	6.16	113.13	108.20
1	W	37	C	N1-C2-O2	6.15	122.59	118.90
2	X	11	C	C5-C6-N1	6.11	124.06	121.00
3	B	50	ASN	N-CA-C	-6.08	94.59	111.00
2	X	20	C	O4'-C1'-N1	6.07	113.06	108.20
3	T	50	ASN	N-CA-C	-6.07	94.61	111.00
1	W	29	C	O4'-C4'-C3'	-6.05	97.95	104.00
1	W	35	C	N1-C2-O2	6.02	122.51	118.90
1	W	69	A	N1-C6-N6	6.02	122.21	118.60
2	X	88	A	N7-C8-N9	5.98	116.79	113.80
1	W	53	C	C6-N1-C2	-5.97	117.91	120.30
2	X	72	C	P-O3'-C3'	5.95	126.84	119.70
2	X	2	C	O4'-C4'-C3'	-5.94	98.06	104.00
1	W	17	A	O4'-C1'-N9	5.93	112.94	108.20
2	X	81	C	O5'-P-OP1	-5.92	100.37	105.70
2	X	60	C	O4'-C1'-N1	5.90	112.92	108.20
2	X	49	C	O4'-C1'-N1	5.89	112.92	108.20
2	X	79	A	O4'-C4'-C3'	-5.89	98.11	104.00
2	X	79	A	O4'-C1'-N9	5.88	112.91	108.20
1	W	72	C	O4'-C1'-N1	5.87	112.90	108.20
2	X	3	A	N1-C6-N6	5.87	122.12	118.60
1	W	38	A	O4'-C4'-C3'	-5.82	98.18	104.00
1	W	13	C	C4'-C3'-C2'	5.80	108.40	102.60
2	X	98	C	O4'-C1'-N1	5.77	112.81	108.20
2	X	55	C	N1-C2-O2	5.76	122.36	118.90
2	X	74	C	O4'-C1'-N1	5.75	112.80	108.20
2	X	60	C	C2-N1-C1'	5.74	125.11	118.80
1	W	68	C	O4'-C1'-N1	5.71	112.76	108.20
3	I	50	ASN	N-CA-C	-5.69	95.64	111.00
1	W	49	C	N1-C2-O2	5.68	122.31	118.90
1	W	56	C	C5'-C4'-O4'	-5.68	102.29	109.10
2	X	93	A	C1'-O4'-C4'	-5.67	105.36	109.90
2	X	12	A	N1-C6-N6	5.67	122.00	118.60
2	X	53	A	N9-C1'-C2'	-5.64	105.79	112.00
2	X	85	C	O4'-C1'-N1	5.61	112.69	108.20
2	X	10	C	N1-C2-O2	5.56	122.23	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	Q	50	ASN	N-CA-C	-5.54	96.04	111.00
1	W	6	C	N3-C2-O2	-5.54	118.03	121.90
1	W	10	C	N1-C2-O2	5.52	122.21	118.90
2	X	90	C	C6-N1-C1'	-5.52	114.18	120.80
2	X	88	A	N1-C6-N6	5.51	121.91	118.60
2	X	88	A	C8-N9-C4	-5.50	103.60	105.80
2	X	77	C	O4'-C4'-C3'	-5.49	98.51	104.00
2	X	60	C	C6-N1-C2	-5.48	118.11	120.30
2	X	40	C	N1-C2-O2	5.46	122.18	118.90
1	W	71	C	O4'-C1'-N1	5.46	112.57	108.20
2	X	99	C	N1-C2-N3	5.45	123.02	119.20
2	X	89	C	C4'-C3'-C2'	-5.44	97.16	102.60
1	W	54	C	N3-C4-C5	5.44	124.07	121.90
2	X	11	C	N1-C1'-C2'	5.43	121.06	114.00
1	W	73	C	C6-N1-C2	-5.41	118.14	120.30
1	W	20	C	O4'-C4'-C3'	-5.40	98.60	104.00
2	X	29	C	N3-C2-O2	-5.40	118.12	121.90
2	X	82	C	N1-C2-O2	5.38	122.13	118.90
2	X	88	A	C3'-C2'-C1'	-5.38	97.19	101.50
1	W	9	C	O4'-C1'-N1	5.35	112.48	108.20
1	W	9	C	C1'-O4'-C4'	-5.35	105.62	109.90
1	W	57	C	C5'-C4'-O4'	5.34	115.51	109.10
3	A	226	VAL	CB-CA-C	-5.34	101.25	111.40
1	W	39	A	C1'-O4'-C4'	-5.33	105.63	109.90
2	X	88	A	O4'-C4'-C3'	-5.32	98.68	104.00
1	W	25	C	O4'-C1'-N1	5.32	112.45	108.20
1	W	91	C	C6-N1-C2	-5.29	118.18	120.30
1	W	87	C	N1-C2-O2	5.28	122.07	118.90
1	W	6	C	C6-N1-C2	-5.28	118.19	120.30
3	F	50	ASN	N-CA-C	-5.28	96.76	111.00
2	X	76	C	N1-C2-O2	5.26	122.06	118.90
3	D	50	ASN	N-CA-C	-5.26	96.81	111.00
2	X	79	A	C1'-O4'-C4'	-5.25	105.70	109.90
2	X	25	C	O4'-C4'-C3'	-5.23	98.77	104.00
1	W	3	C	O4'-C1'-N1	5.22	112.38	108.20
2	X	6	A	C4'-C3'-C2'	-5.21	97.39	102.60
1	W	6	C	C2-N1-C1'	5.21	124.53	118.80
1	W	35	C	C6-N1-C1'	-5.20	114.57	120.80
2	X	81	C	C6-N1-C1'	-5.19	114.57	120.80
1	W	33	A	C4'-C3'-C2'	-5.18	97.42	102.60
2	X	55	C	N3-C2-O2	-5.18	118.27	121.90
2	X	96	A	N1-C6-N6	5.18	121.71	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	X	7	A	C4'-C3'-C2'	-5.15	97.45	102.60
2	X	59	C	C6-N1-C2	-5.15	118.24	120.30
1	W	72	C	N3-C2-O2	-5.14	118.30	121.90
1	W	11	C	O4'-C1'-N1	5.12	112.30	108.20
1	W	9	C	N1-C2-O2	5.12	121.97	118.90
2	X	11	C	N1-C2-O2	5.11	121.97	118.90
2	X	27	C	N1-C2-O2	5.11	121.97	118.90
1	W	94	C	P-O3'-C3'	5.11	125.83	119.70
2	X	77	C	C6-N1-C2	-5.10	118.26	120.30
2	X	21	C	C6-N1-C2	-5.08	118.27	120.30
3	D	13	GLN	N-CA-C	-5.08	97.28	111.00
2	X	34	A	C1'-O4'-C4'	-5.06	105.85	109.90
1	W	25	C	O4'-C4'-C3'	-5.06	98.94	104.00
2	X	5	C	O4'-C1'-N1	5.06	112.25	108.20
2	X	29	C	N1-C2-O2	5.05	121.93	118.90
1	W	53	C	O4'-C1'-C2'	-5.05	100.75	105.80
2	X	76	C	N3-C2-O2	-5.05	118.37	121.90
3	O	226	VAL	CB-CA-C	-5.04	101.83	111.40
2	X	80	C	O4'-C1'-N1	5.03	112.23	108.20
1	W	19	C	P-O3'-C3'	5.00	125.70	119.70

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	L	57	LEU	Mainchain

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	W	2059	0	1091	114	0
2	X	2045	0	1091	121	0
3	A	3192	0	3137	284	0
3	B	3196	0	3145	325	0
3	C	3217	0	3165	311	0
3	D	3187	0	3132	286	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	E	3187	0	3132	285	0
3	F	3223	0	3170	296	0
3	G	3183	0	3131	280	0
3	H	3191	0	3140	278	0
3	I	3209	0	3154	331	0
3	J	3225	0	3174	286	0
3	K	3192	0	3144	312	0
3	L	3234	0	3180	379	0
3	M	3217	0	3165	342	0
3	N	3223	0	3170	310	0
3	O	3183	0	3131	283	0
3	P	3182	0	3134	316	0
3	Q	3200	0	3148	336	0
3	R	3192	0	3144	254	0
3	S	3192	0	3144	284	0
3	T	3187	0	3139	328	0
3	U	3209	0	3161	321	0
3	V	3226	0	3171	327	0
All	All	74551	0	71493	6394	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 44.

All (6394) 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)
3:P:189:THR:CG2	3:P:192:LYS:HB3	1.35	1.56
3:A:255:GLU:HA	3:K:8:PHE:CZ	1.39	1.54
3:L:255:GLU:HA	3:V:8:PHE:CZ	1.35	1.54
3:E:8:PHE:CZ	3:F:255:GLU:HA	1.37	1.53
3:G:189:THR:CG2	3:G:192:LYS:HB3	1.40	1.50
3:H:8:PHE:CZ	3:I:255:GLU:HA	1.45	1.50
3:M:189:THR:CG2	3:M:192:LYS:HB3	1.41	1.50
3:L:255:GLU:HA	3:V:8:PHE:CE2	1.45	1.48
3:B:8:PHE:CE2	3:C:255:GLU:HA	1.47	1.48
3:T:8:PHE:CZ	3:U:255:GLU:HA	1.52	1.45
3:H:8:PHE:CE2	3:I:255:GLU:HA	1.52	1.42
3:I:8:PHE:CZ	3:J:255:GLU:HA	1.55	1.41
3:T:8:PHE:CE2	3:U:255:GLU:HA	1.59	1.38
3:D:8:PHE:CE2	3:E:255:GLU:HA	1.64	1.33
3:Q:264:ASN:HD21	3:R:251:LEU:CD2	1.42	1.31

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Q:8:PHE:CZ	3:R:255:GLU:HA	1.64	1.31
3:R:8:PHE:CZ	3:S:255:GLU:HA	1.67	1.30
3:D:189:THR:CG2	3:D:192:LYS:HB3	1.62	1.29
3:D:264:ASN:HD21	3:E:251:LEU:CD2	1.46	1.28
3:O:264:ASN:HD21	3:P:251:LEU:CD2	1.47	1.25
3:A:255:GLU:HA	3:K:8:PHE:CE2	1.70	1.24
3:L:264:ASN:HD21	3:M:251:LEU:CD2	1.49	1.24
3:G:8:PHE:CE2	3:H:255:GLU:HA	1.73	1.23
3:P:189:THR:HG22	3:P:192:LYS:CB	1.69	1.23
3:U:8:PHE:CE2	3:V:255:GLU:HA	1.72	1.23
3:M:8:PHE:CZ	3:N:255:GLU:HA	1.74	1.23
3:B:189:THR:CG2	3:B:192:LYS:HB3	1.70	1.20
3:G:8:PHE:CZ	3:H:255:GLU:HA	1.75	1.20
3:D:146:SER:HB2	3:D:169:ILE:HD12	1.20	1.19
3:M:77:ALA:HB3	3:M:98:ARG:NH2	1.57	1.19
3:M:176:ALA:HB1	3:M:177:PRO:HD2	1.22	1.19
3:C:77:ALA:HB3	3:C:98:ARG:HH22	1.08	1.19
3:L:255:GLU:CA	3:V:8:PHE:CZ	2.25	1.18
3:H:8:PHE:CZ	3:I:255:GLU:CA	2.26	1.18
3:P:249:ILE:HG21	3:P:319:MET:HE1	1.27	1.17
3:O:8:PHE:CE2	3:P:255:GLU:HA	1.79	1.17
3:M:189:THR:HG23	3:M:192:LYS:CB	1.75	1.16
3:B:38:LYS:HE2	3:B:39:PRO:HD2	1.22	1.16
3:O:8:PHE:CZ	3:P:255:GLU:HA	1.81	1.15
3:P:8:PHE:CZ	3:Q:255:GLU:HA	1.78	1.15
3:B:189:THR:HG22	3:B:192:LYS:HB3	1.24	1.15
3:C:87:GLU:HG2	3:C:284:SER:HA	1.15	1.15
3:H:176:ALA:HB1	3:H:177:PRO:HD2	1.17	1.15
3:G:189:THR:HG23	3:G:192:LYS:HB3	1.28	1.15
3:I:176:ALA:HB1	3:I:177:PRO:HD2	1.20	1.15
3:C:172:ILE:CD1	3:C:226:VAL:HG21	1.76	1.15
3:P:189:THR:CG2	3:P:192:LYS:CB	2.19	1.15
3:J:8:PHE:CZ	3:K:255:GLU:HA	1.82	1.14
3:V:87:GLU:HG2	3:V:284:SER:HA	1.22	1.14
3:D:176:ALA:HB1	3:D:177:PRO:HD2	1.19	1.14
3:Q:264:ASN:ND2	3:R:251:LEU:CD2	2.08	1.14
3:A:255:GLU:CA	3:K:8:PHE:CZ	2.30	1.14
3:I:264:ASN:HD21	3:J:251:LEU:CD2	1.59	1.14
3:I:264:ASN:HD21	3:J:251:LEU:HD22	1.08	1.13
3:J:172:ILE:HD11	3:J:226:VAL:HG21	1.20	1.13
3:L:264:ASN:HD21	3:M:251:LEU:HD22	1.01	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:T:77:ALA:HB3	3:T:98:ARG:HH22	1.02	1.13
3:G:189:THR:CG2	3:G:192:LYS:CB	2.25	1.13
3:R:172:ILE:HD11	3:R:226:VAL:HG21	1.24	1.12
3:G:189:THR:HG22	3:G:192:LYS:CB	1.79	1.12
3:E:8:PHE:HZ	3:F:255:GLU:CA	1.62	1.12
3:L:251:LEU:CD2	3:V:264:ASN:HD21	1.60	1.12
3:P:146:SER:HB2	3:P:169:ILE:HD12	1.29	1.12
3:V:30:TYR:HB3	3:V:277:GLN:NE2	1.64	1.12
3:B:7:VAL:C	3:B:8:PHE:HD1	1.53	1.11
3:P:176:ALA:HB1	3:P:177:PRO:HD2	1.29	1.11
3:O:264:ASN:HD21	3:P:251:LEU:HD22	1.08	1.11
3:Q:264:ASN:HD21	3:R:251:LEU:HD22	1.10	1.11
3:U:176:ALA:HB1	3:U:177:PRO:HD2	1.29	1.11
3:O:176:ALA:HB1	3:O:177:PRO:HD2	1.15	1.11
3:C:248:GLN:HG2	3:C:249:ILE:H	1.14	1.11
3:M:248:GLN:HG2	3:M:249:ILE:H	1.03	1.11
3:D:264:ASN:HD21	3:E:251:LEU:HD22	1.07	1.10
3:D:189:THR:HG22	3:D:192:LYS:HB3	1.21	1.10
3:L:255:GLU:CA	3:V:8:PHE:CE2	2.31	1.10
3:M:189:THR:CG2	3:M:192:LYS:CB	2.28	1.10
3:R:172:ILE:CD1	3:R:226:VAL:HG21	1.80	1.10
3:T:8:PHE:CZ	3:U:255:GLU:CA	2.34	1.10
3:I:77:ALA:HB3	3:I:98:ARG:NH2	1.65	1.10
3:N:248:GLN:HG2	3:N:249:ILE:H	1.06	1.10
3:P:248:GLN:HG2	3:P:249:ILE:H	1.06	1.10
3:T:77:ALA:HB3	3:T:98:ARG:NH2	1.67	1.10
3:M:77:ALA:HB3	3:M:98:ARG:HH22	0.98	1.09
3:A:77:ALA:HB3	3:A:98:ARG:HH22	1.13	1.09
3:R:176:ALA:HB1	3:R:177:PRO:HD2	1.35	1.09
3:D:248:GLN:HG2	3:D:249:ILE:H	0.97	1.09
3:I:264:ASN:ND2	3:J:251:LEU:HD22	1.68	1.09
3:D:8:PHE:CZ	3:E:255:GLU:HA	1.86	1.09
3:L:205:PHE:O	3:L:209:THR:HG22	1.51	1.09
3:M:57:LEU:HD21	3:M:194:CYS:SG	1.92	1.09
3:E:8:PHE:CZ	3:F:255:GLU:CA	2.33	1.08
3:J:8:PHE:CE2	3:K:255:GLU:HA	1.88	1.08
3:R:249:ILE:HG22	3:R:250:ASN:H	1.06	1.08
3:K:189:THR:HG22	3:K:192:LYS:HB3	1.32	1.08
3:T:176:ALA:HB1	3:T:177:PRO:HD2	1.11	1.08
3:B:249:ILE:HG22	3:B:250:ASN:H	1.13	1.08
3:I:248:GLN:HG2	3:I:249:ILE:H	0.98	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:77:ALA:HB3	3:I:98:ARG:HH22	0.93	1.08
3:R:38:LYS:HE2	3:R:39:PRO:HD2	1.32	1.08
3:T:146:SER:HB2	3:T:169:ILE:HD12	1.32	1.08
3:L:248:GLN:HG2	3:L:249:ILE:H	1.13	1.08
3:I:185:HIS:C	3:I:189:THR:N	2.07	1.08
3:I:8:PHE:HZ	3:J:255:GLU:CA	1.66	1.08
3:L:8:PHE:HZ	3:M:255:GLU:HB2	1.16	1.08
3:M:65:LEU:HD21	3:M:119:ASN:HB3	1.33	1.07
3:V:189:THR:HG22	3:V:192:LYS:HB3	1.26	1.07
3:O:146:SER:HB2	3:O:169:ILE:HD12	1.31	1.07
3:Q:77:ALA:HB3	3:Q:98:ARG:HH22	0.95	1.07
3:K:54:LYS:HE3	3:K:140:LEU:HD23	1.33	1.06
3:B:176:ALA:HB1	3:B:177:PRO:HD2	1.32	1.06
3:A:249:ILE:HD11	3:A:321:GLN:HG3	1.37	1.06
3:P:340:VAL:HG22	3:P:416:LEU:HD11	1.38	1.06
3:J:340:VAL:HG22	3:J:416:LEU:HD11	1.35	1.06
3:I:189:THR:CG2	3:I:192:LYS:HB3	1.86	1.06
3:I:205:PHE:O	3:I:209:THR:HG22	1.53	1.06
3:L:65:LEU:HD21	3:L:119:ASN:HB3	1.36	1.06
3:P:264:ASN:HD21	3:Q:251:LEU:CD2	1.67	1.06
2:X:1:C:C4	3:L:157:ASN:HB2	1.90	1.06
3:J:81:PHE:HZ	3:J:85:CYS:HB2	1.16	1.06
3:G:172:ILE:HD11	3:G:226:VAL:HG21	1.32	1.06
3:U:54:LYS:HE3	3:U:140:LEU:HD23	1.37	1.06
3:A:176:ALA:HB1	3:A:177:PRO:HD2	1.33	1.05
3:B:172:ILE:HD11	3:B:226:VAL:HG21	1.37	1.05
3:F:77:ALA:HB3	3:F:98:ARG:HH22	1.17	1.05
3:Q:264:ASN:ND2	3:R:251:LEU:HD22	1.66	1.05
3:Q:77:ALA:HB3	3:Q:98:ARG:NH2	1.70	1.05
3:V:172:ILE:HD11	3:V:226:VAL:HG21	1.38	1.05
3:E:87:GLU:HG2	3:E:284:SER:HA	1.39	1.05
3:K:249:ILE:HG22	3:K:250:ASN:H	1.19	1.05
3:J:264:ASN:HD21	3:K:251:LEU:CD2	1.70	1.05
3:N:10:VAL:HG12	3:N:11:ASN:H	1.18	1.05
3:M:8:PHE:HZ	3:N:255:GLU:HA	0.93	1.05
3:U:8:PHE:CZ	3:V:255:GLU:HA	1.90	1.05
3:L:133:THR:HG22	3:L:136:GLU:OE2	1.56	1.05
3:L:5:LYS:HE3	3:L:8:PHE:CE2	1.91	1.05
3:I:249:ILE:HG21	3:I:319:MET:CE	1.87	1.04
3:S:189:THR:HG22	3:S:192:LYS:HB3	1.37	1.04
3:B:20:GLU:H	3:B:20:GLU:CD	1.61	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:T:54:LYS:HE3	3:T:140:LEU:HD23	1.36	1.04
3:G:176:ALA:HB1	3:G:177:PRO:HD2	1.06	1.04
3:U:63:ALA:HB3	3:U:65:LEU:HD13	1.38	1.04
3:B:8:PHE:CZ	3:C:255:GLU:HA	1.92	1.03
3:H:122:LEU:HD22	3:O:122:LEU:CD2	1.89	1.03
1:W:66:A:C2'	1:W:67:C:H5'	1.88	1.03
3:D:248:GLN:HG2	3:D:249:ILE:N	1.70	1.03
3:N:54:LYS:HE3	3:N:140:LEU:HD23	1.06	1.03
3:V:38:LYS:HE2	3:V:39:PRO:HD2	1.40	1.03
3:G:189:THR:HG22	3:G:192:LYS:HB3	1.03	1.03
3:C:77:ALA:CB	3:C:98:ARG:HH22	1.71	1.02
3:E:65:LEU:HD21	3:E:119:ASN:HB3	1.40	1.02
3:C:189:THR:CG2	3:C:192:LYS:HB3	1.88	1.02
3:P:54:LYS:HE3	3:P:140:LEU:HD23	1.39	1.02
3:J:264:ASN:HD21	3:K:251:LEU:HD22	1.20	1.02
3:P:189:THR:HG23	3:P:192:LYS:HB3	1.38	1.02
3:Q:249:ILE:HG22	3:Q:250:ASN:H	1.24	1.02
3:A:248:GLN:HG2	3:A:249:ILE:H	1.20	1.02
3:H:248:GLN:HG2	3:H:249:ILE:H	1.23	1.02
3:M:87:GLU:HG2	3:M:284:SER:HA	1.40	1.02
3:N:49:LEU:HD22	3:N:52:ALA:HB2	1.41	1.01
3:T:85:CYS:HB3	3:T:91:SER:HB2	1.42	1.01
3:E:38:LYS:HE2	3:E:39:PRO:HD2	1.39	1.01
3:B:54:LYS:HE3	3:B:140:LEU:HD23	1.43	1.01
3:N:63:ALA:HB3	3:N:65:LEU:HD13	1.38	1.01
3:V:249:ILE:HG22	3:V:250:ASN:H	1.22	1.01
3:C:189:THR:HG22	3:C:192:LYS:HB3	1.37	1.01
3:F:248:GLN:HG2	3:F:249:ILE:H	1.24	1.01
2:X:89:C:N4	3:M:323:ARG:HE	1.58	1.01
3:I:249:ILE:CG2	3:I:319:MET:CE	2.38	1.01
3:I:249:ILE:HG21	3:I:319:MET:HE1	1.36	1.01
3:N:77:ALA:HB3	3:N:98:ARG:HH22	1.22	1.01
3:M:264:ASN:HD21	3:N:251:LEU:CD2	1.74	1.00
3:Q:176:ALA:HB1	3:Q:177:PRO:HD2	1.40	1.00
3:B:8:PHE:CE2	3:C:255:GLU:CA	2.44	1.00
3:R:185:HIS:C	3:R:189:THR:N	2.14	1.00
3:Q:8:PHE:HZ	3:R:255:GLU:CA	1.75	1.00
3:N:77:ALA:CB	3:N:98:ARG:HH22	1.73	1.00
3:Q:205:PHE:O	3:Q:209:THR:HG22	1.59	1.00
3:Q:172:ILE:HD12	3:Q:226:VAL:HG21	1.42	1.00
3:S:8:PHE:CZ	3:T:255:GLU:HA	1.96	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:U:248:GLN:HG2	3:U:249:ILE:H	1.23	1.00
3:M:189:THR:HG22	3:M:192:LYS:HB3	1.40	1.00
3:C:176:ALA:HB1	3:C:177:PRO:HD2	1.43	1.00
3:N:249:ILE:HG22	3:N:250:ASN:H	1.24	1.00
3:T:176:ALA:CB	3:T:177:PRO:HD2	1.91	1.00
3:T:248:GLN:HG2	3:T:249:ILE:H	1.24	1.00
3:L:251:LEU:HD21	3:V:264:ASN:HD21	1.27	1.00
3:F:176:ALA:HB1	3:F:177:PRO:HD2	1.44	0.99
3:J:248:GLN:HG2	3:J:249:ILE:H	1.23	0.99
3:R:8:PHE:HZ	3:S:255:GLU:HA	1.24	0.99
3:V:65:LEU:HD21	3:V:119:ASN:HB3	1.44	0.99
3:A:77:ALA:CB	3:A:98:ARG:HH22	1.76	0.99
3:K:38:LYS:HE2	3:K:39:PRO:HD2	1.44	0.99
3:K:122:LEU:HD23	3:L:122:LEU:HD11	1.44	0.99
3:L:87:GLU:HG2	3:L:284:SER:HA	1.45	0.99
3:M:249:ILE:HG22	3:M:250:ASN:H	1.24	0.99
3:A:77:ALA:HB3	3:A:98:ARG:NH2	1.76	0.99
3:F:417:LYS:H	3:F:420:HIS:CD2	1.81	0.99
3:T:54:LYS:HE3	3:T:140:LEU:CD2	1.91	0.99
3:M:248:GLN:HG2	3:M:249:ILE:N	1.68	0.99
3:T:417:LYS:H	3:T:420:HIS:HD2	1.05	0.99
3:C:205:PHE:O	3:C:209:THR:HG22	1.61	0.99
3:I:189:THR:HG22	3:I:192:LYS:HB3	1.44	0.99
3:M:176:ALA:CB	3:M:177:PRO:HD2	1.93	0.99
3:M:205:PHE:O	3:M:209:THR:HG22	1.63	0.99
3:U:57:LEU:CD2	3:U:194:CYS:SG	2.51	0.99
3:M:77:ALA:CB	3:M:98:ARG:HH22	1.76	0.98
3:U:205:PHE:O	3:U:209:THR:HG22	1.62	0.98
3:V:77:ALA:HB3	3:V:98:ARG:HH22	1.28	0.98
3:D:189:THR:HG23	3:D:192:LYS:HB3	1.45	0.98
3:L:176:ALA:HB1	3:L:177:PRO:HD2	1.45	0.98
3:K:49:LEU:HD22	3:K:52:ALA:HB2	1.45	0.98
3:Q:77:ALA:CB	3:Q:98:ARG:HH22	1.76	0.98
3:F:87:GLU:HG2	3:F:284:SER:HA	1.45	0.98
3:Q:30:TYR:HB3	3:Q:277:GLN:HE21	1.28	0.98
3:K:176:ALA:HB1	3:K:177:PRO:HD2	1.41	0.98
3:F:77:ALA:HB3	3:F:98:ARG:NH2	1.78	0.98
3:G:340:VAL:HG13	3:G:416:LEU:HD12	1.43	0.98
3:T:51:LYS:HA	3:T:54:LYS:HE2	1.44	0.98
3:L:313:HIS:ND1	3:L:324:SER:HB3	1.78	0.98
3:G:176:ALA:HB1	3:G:177:PRO:CD	1.94	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:176:ALA:HB1	3:N:177:PRO:HD2	1.46	0.97
3:Q:30:TYR:HB3	3:Q:277:GLN:NE2	1.79	0.97
3:S:189:THR:CG2	3:S:192:LYS:HB3	1.95	0.97
3:J:33:ILE:HB	3:J:88:ASP:HB3	1.42	0.97
1:W:66:A:H2'	1:W:67:C:H5'	1.41	0.97
3:D:249:ILE:HG22	3:D:250:ASN:H	1.29	0.97
3:I:87:GLU:HG2	3:I:284:SER:HA	1.46	0.97
3:L:8:PHE:CZ	3:M:255:GLU:HB2	1.99	0.97
3:N:54:LYS:CE	3:N:140:LEU:HD23	1.93	0.97
3:H:197:TRP:HD1	3:H:198:SER:H	1.10	0.97
3:I:51:LYS:HA	3:I:54:LYS:HE2	1.45	0.97
3:G:176:ALA:CB	3:G:177:PRO:HD2	1.93	0.97
3:O:182:VAL:HB	3:O:190:THR:HG21	1.46	0.97
3:Q:54:LYS:HE3	3:Q:140:LEU:HD23	1.45	0.97
3:H:8:PHE:HZ	3:I:255:GLU:CA	1.72	0.97
3:K:205:PHE:O	3:K:209:THR:HG22	1.63	0.97
3:J:81:PHE:CZ	3:J:85:CYS:HB2	1.99	0.96
3:S:441:PHE:O	3:S:445:THR:HG23	1.63	0.96
3:E:248:GLN:HG2	3:E:249:ILE:H	1.28	0.96
3:J:10:VAL:HG12	3:J:11:ASN:H	1.31	0.96
3:N:248:GLN:HG2	3:N:249:ILE:N	1.80	0.96
3:Q:87:GLU:HG2	3:Q:284:SER:HA	1.44	0.96
3:C:77:ALA:HB3	3:C:98:ARG:NH2	1.80	0.96
3:K:172:ILE:CD1	3:K:226:VAL:HG21	1.94	0.96
3:O:87:GLU:HG2	3:O:284:SER:HA	1.47	0.96
3:I:262:HIS:HE1	3:J:251:LEU:HD23	1.31	0.96
3:K:51:LYS:HA	3:K:54:LYS:HE2	1.44	0.96
3:Q:264:ASN:ND2	3:R:251:LEU:HD21	1.77	0.96
3:U:146:SER:HB2	3:U:169:ILE:HD12	1.48	0.96
3:V:183:GLU:O	3:V:190:THR:HG22	1.66	0.96
3:A:122:LEU:HD21	3:V:122:LEU:HD22	1.48	0.96
3:H:8:PHE:CE2	3:I:255:GLU:CA	2.47	0.96
3:K:268:GLU:HB3	3:K:305:VAL:HG23	1.47	0.96
3:N:54:LYS:HE3	3:N:140:LEU:CD2	1.96	0.96
3:O:189:THR:HG22	3:O:192:LYS:HB3	1.48	0.96
3:H:340:VAL:HG13	3:H:416:LEU:HD12	1.48	0.95
3:I:264:ASN:ND2	3:J:251:LEU:CD2	2.27	0.95
3:P:8:PHE:HZ	3:Q:255:GLU:HA	1.25	0.95
3:R:8:PHE:CE2	3:S:255:GLU:HA	2.01	0.95
3:I:32:ALA:HB2	3:I:277:GLN:HE22	1.29	0.95
3:Q:8:PHE:HZ	3:R:255:GLU:HA	0.82	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:189:THR:O	3:D:193:MET:HG2	1.64	0.95
3:I:248:GLN:HG2	3:I:249:ILE:N	1.76	0.95
3:I:249:ILE:HG22	3:I:250:ASN:H	1.29	0.95
3:R:77:ALA:HB3	3:R:98:ARG:HH12	1.31	0.95
3:K:87:GLU:HG2	3:K:284:SER:HA	1.48	0.95
3:L:255:GLU:HA	3:V:8:PHE:HZ	1.16	0.95
3:Q:248:GLN:HG2	3:Q:249:ILE:H	1.31	0.95
3:G:63:ALA:HB3	3:G:65:LEU:HD13	1.47	0.95
3:L:146:SER:HB2	3:L:169:ILE:HD12	1.48	0.95
3:D:264:ASN:ND2	3:E:251:LEU:CD2	2.29	0.95
3:J:38:LYS:HA	3:J:38:LYS:HE2	1.47	0.95
3:N:182:VAL:HB	3:N:190:THR:HG21	1.49	0.95
3:V:417:LYS:H	3:V:420:HIS:CD2	1.85	0.95
3:L:282:PRO:HG3	3:V:25:GLN:HG2	1.48	0.95
3:M:172:ILE:HD11	3:M:226:VAL:HG21	1.48	0.95
3:I:54:LYS:HE3	3:I:140:LEU:HD23	1.49	0.95
3:M:264:ASN:ND2	3:N:251:LEU:CD2	2.30	0.94
3:M:264:ASN:ND2	3:N:251:LEU:HD21	1.80	0.94
3:Q:146:SER:HB2	3:Q:169:ILE:HD12	1.48	0.94
3:G:38:LYS:HE2	3:G:38:LYS:HA	1.46	0.94
3:O:189:THR:CG2	3:O:192:LYS:HB3	1.97	0.94
3:Q:172:ILE:CD1	3:Q:226:VAL:HG21	1.95	0.94
3:D:340:VAL:HG22	3:D:416:LEU:HD11	1.50	0.94
3:K:189:THR:CG2	3:K:192:LYS:HB3	1.97	0.94
3:L:50:ASN:HD22	3:L:50:ASN:N	1.64	0.94
3:M:10:VAL:CG2	3:M:18:LYS:NZ	2.30	0.94
3:C:323:ARG:HD3	3:C:323:ARG:C	1.88	0.94
3:L:31:PRO:HD2	3:L:277:GLN:HG3	1.50	0.94
3:J:172:ILE:CD1	3:J:226:VAL:HG21	1.96	0.94
3:B:35:ASP:CG	3:B:89:TRP:HE1	1.70	0.94
3:I:417:LYS:H	3:I:420:HIS:HD2	1.10	0.94
3:J:20:GLU:OE1	3:J:20:GLU:N	2.00	0.94
3:M:340:VAL:HA	3:M:416:LEU:HD11	1.46	0.94
3:T:10:VAL:HG12	3:T:11:ASN:H	1.32	0.94
3:T:176:ALA:HB1	3:T:177:PRO:CD	1.97	0.94
3:M:344:TYR:CD2	3:M:409:ILE:HG12	2.03	0.94
3:H:38:LYS:HE2	3:H:39:PRO:HD2	1.50	0.93
3:S:248:GLN:HG2	3:S:249:ILE:H	1.33	0.93
3:B:183:GLU:O	3:B:190:THR:HG22	1.68	0.93
3:L:54:LYS:HE3	3:L:140:LEU:HD23	1.49	0.93
3:L:51:LYS:HA	3:L:54:LYS:HE2	1.50	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:264:ASN:HD21	3:C:251:LEU:HD22	1.32	0.93
3:H:54:LYS:HE3	3:H:140:LEU:HD23	1.48	0.93
3:M:57:LEU:CD2	3:M:194:CYS:SG	2.55	0.93
3:S:20:GLU:N	3:S:20:GLU:CD	2.22	0.93
3:E:308:VAL:HG12	3:E:312:ILE:HD11	1.51	0.93
3:O:264:ASN:ND2	3:P:251:LEU:CD2	2.31	0.93
3:Q:185:HIS:C	3:Q:189:THR:N	2.22	0.93
3:S:172:ILE:HD12	3:S:226:VAL:HG21	1.51	0.93
3:U:323:ARG:HD3	3:U:324:SER:N	1.84	0.93
3:G:268:GLU:HB3	3:G:305:VAL:HG23	1.47	0.93
3:L:264:ASN:ND2	3:M:251:LEU:CD2	2.29	0.93
2:X:40:C:H2'	2:X:41:A:C8	2.04	0.93
3:J:77:ALA:HB3	3:J:98:ARG:HH22	1.32	0.93
3:B:8:PHE:HE2	3:C:255:GLU:CA	1.79	0.92
3:G:146:SER:HB2	3:G:169:ILE:HD12	1.50	0.92
3:G:172:ILE:CD1	3:G:226:VAL:HG21	1.98	0.92
3:G:73:TYR:HD2	3:G:210:TYR:HH	0.93	0.92
3:I:146:SER:HB2	3:I:169:ILE:HD12	1.50	0.92
3:K:77:ALA:HB3	3:K:98:ARG:HH22	1.33	0.92
3:P:417:LYS:H	3:P:420:HIS:HD2	1.15	0.92
3:A:197:TRP:HD1	3:A:198:SER:H	1.13	0.92
3:O:176:ALA:HB1	3:O:177:PRO:CD	2.00	0.92
3:V:189:THR:CG2	3:V:192:LYS:HB3	1.97	0.92
3:A:163:THR:HG22	3:A:192:LYS:NZ	1.84	0.92
3:B:7:VAL:O	3:B:8:PHE:CD1	2.21	0.92
3:C:248:GLN:HG2	3:C:249:ILE:N	1.83	0.92
3:M:73:TYR:HD2	3:M:210:TYR:HH	1.03	0.92
3:Q:31:PRO:HD2	3:Q:277:GLN:HG3	1.51	0.92
3:O:183:GLU:H	3:O:190:THR:HG21	1.31	0.92
3:R:340:VAL:HG22	3:R:416:LEU:HD11	1.50	0.92
3:A:255:GLU:CA	3:K:8:PHE:HZ	1.72	0.92
3:N:172:ILE:CD1	3:N:226:VAL:HG21	1.99	0.92
3:S:257:ILE:HD13	3:S:269:ILE:HD12	1.49	0.92
3:H:176:ALA:CB	3:H:177:PRO:HD2	1.99	0.92
3:J:176:ALA:HB1	3:J:177:PRO:HD2	1.52	0.92
3:N:87:GLU:HG2	3:N:284:SER:HA	1.50	0.92
3:R:305:VAL:HG22	3:R:308:VAL:HB	1.49	0.92
3:L:46:ALA:HB1	3:L:50:ASN:OD1	1.70	0.92
3:Q:128:LEU:HD11	3:Q:130:ARG:HE	1.33	0.92
3:H:122:LEU:HD22	3:O:122:LEU:HD22	1.48	0.92
3:M:54:LYS:HD3	3:M:69:ASP:OD2	1.70	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:189:THR:HG22	3:B:192:LYS:CB	1.99	0.92
3:E:340:VAL:HG22	3:E:416:LEU:HD11	1.52	0.91
3:M:185:HIS:C	3:M:189:THR:N	2.23	0.91
3:B:87:GLU:HG2	3:B:284:SER:HA	1.52	0.91
3:R:87:GLU:HG2	3:R:284:SER:HA	1.52	0.91
1:W:1:C:N4	3:F:157:ASN:HB2	1.86	0.91
1:W:67:C:O2	1:W:67:C:H2'	1.69	0.91
3:G:197:TRP:HD1	3:G:198:SER:H	1.19	0.91
3:P:249:ILE:HG21	3:P:319:MET:CE	1.99	0.91
3:H:51:LYS:O	3:H:55:SER:HB2	1.69	0.91
3:A:87:GLU:HG2	3:A:284:SER:HA	1.52	0.91
3:B:189:THR:CG2	3:B:192:LYS:CB	2.48	0.91
3:H:248:GLN:HG2	3:H:249:ILE:N	1.85	0.91
3:I:46:ALA:HB1	3:I:50:ASN:OD1	1.70	0.91
3:E:8:PHE:CE2	3:F:255:GLU:HA	2.06	0.91
3:O:38:LYS:HE2	3:O:38:LYS:HA	1.53	0.91
3:M:30:TYR:HB3	3:M:277:GLN:NE2	1.85	0.91
3:B:248:GLN:HG2	3:B:249:ILE:H	1.36	0.90
3:L:255:GLU:HA	3:V:8:PHE:HE2	1.34	0.90
3:M:176:ALA:HB1	3:M:177:PRO:CD	2.00	0.90
3:P:264:ASN:HD21	3:Q:251:LEU:HD22	1.36	0.90
3:E:246:ILE:HG13	3:E:247:LYS:N	1.84	0.90
3:I:8:PHE:HZ	3:J:255:GLU:HA	0.75	0.90
3:I:77:ALA:CB	3:I:98:ARG:HH22	1.82	0.90
3:L:264:ASN:ND2	3:M:251:LEU:HD22	1.84	0.90
3:U:189:THR:HG22	3:U:192:LYS:HB3	1.54	0.90
3:U:74:LEU:HD22	3:U:98:ARG:HB2	1.52	0.90
3:V:194:CYS:C	3:V:196:ASN:H	1.74	0.90
3:H:313:HIS:ND1	3:H:324:SER:HB3	1.85	0.90
3:I:9:LYS:HD2	3:I:9:LYS:N	1.86	0.90
3:L:21:ILE:HB	3:M:280:ALA:HB2	1.51	0.90
3:O:77:ALA:O	3:O:98:ARG:CZ	2.20	0.90
3:D:87:GLU:HG2	3:D:284:SER:HA	1.52	0.90
3:L:93:GLY:O	3:L:94:ILE:HG23	1.72	0.90
3:F:249:ILE:HG22	3:F:250:ASN:OD1	1.72	0.90
3:F:33:ILE:HD12	3:F:88:ASP:HB2	1.50	0.90
3:M:189:THR:HG23	3:M:192:LYS:HB3	0.92	0.90
3:O:253:ALA:O	3:O:254:ARG:HG2	1.70	0.90
3:A:8:PHE:CE1	3:B:254:ARG:O	2.25	0.90
3:M:248:GLN:CD	3:M:249:ILE:HG13	1.92	0.90
3:K:63:ALA:HB3	3:K:65:LEU:HD13	1.53	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:10:VAL:HG23	3:M:18:LYS:HZ1	1.36	0.90
3:P:248:GLN:HG2	3:P:249:ILE:N	1.83	0.90
3:B:77:ALA:HB3	3:B:98:ARG:HH22	1.37	0.90
3:D:264:ASN:HD21	3:E:251:LEU:HD21	1.33	0.90
3:I:262:HIS:HE1	3:J:251:LEU:CD2	1.86	0.89
3:J:189:THR:CG2	3:J:192:LYS:HB3	2.02	0.89
3:P:185:HIS:C	3:P:189:THR:N	2.25	0.89
3:L:77:ALA:HB3	3:L:98:ARG:HH22	1.35	0.89
3:O:176:ALA:CB	3:O:177:PRO:HD2	2.01	0.89
3:R:249:ILE:HG22	3:R:250:ASN:N	1.85	0.89
3:U:133:THR:HG22	3:U:136:GLU:OE2	1.72	0.89
3:U:268:GLU:HB3	3:U:305:VAL:HG23	1.53	0.89
3:V:417:LYS:H	3:V:420:HIS:HD2	0.94	0.89
3:T:38:LYS:HE2	3:T:39:PRO:HD2	1.53	0.89
3:T:63:ALA:HB3	3:T:65:LEU:HD13	1.55	0.89
3:B:189:THR:HG23	3:B:192:LYS:HB3	1.55	0.89
3:Q:410:MET:HA	3:Q:410:MET:HE2	1.54	0.89
3:B:7:VAL:O	3:B:8:PHE:HD1	1.55	0.89
3:C:441:PHE:O	3:C:445:THR:HG23	1.71	0.89
3:T:185:HIS:C	3:T:189:THR:N	2.26	0.89
3:V:176:ALA:CB	3:V:177:PRO:HD2	2.03	0.89
3:L:248:GLN:HG2	3:L:249:ILE:N	1.88	0.89
3:P:38:LYS:HA	3:P:38:LYS:HE2	1.55	0.89
3:L:189:THR:HG22	3:L:192:LYS:HB3	1.53	0.89
3:L:77:ALA:HB3	3:L:98:ARG:NH2	1.87	0.89
3:Q:417:LYS:H	3:Q:420:HIS:HD2	1.19	0.89
2:X:65:C:H2'	2:X:66:C:H5'	1.52	0.89
3:G:189:THR:HG23	3:G:192:LYS:CB	1.97	0.89
3:F:73:TYR:HD2	3:F:210:TYR:HH	0.96	0.89
3:I:262:HIS:CE1	3:J:251:LEU:CD2	2.56	0.89
3:T:249:ILE:HG22	3:T:250:ASN:H	1.37	0.89
3:J:340:VAL:HG13	3:J:416:LEU:HD12	1.56	0.88
3:K:313:HIS:ND1	3:K:324:SER:HB3	1.89	0.88
3:H:176:ALA:HB1	3:H:177:PRO:CD	2.01	0.88
3:M:8:PHE:HZ	3:N:255:GLU:CA	1.85	0.88
3:S:87:GLU:HG2	3:S:284:SER:HA	1.55	0.88
3:T:87:GLU:HG2	3:T:284:SER:HA	1.51	0.88
3:U:57:LEU:HD22	3:U:194:CYS:SG	2.11	0.88
3:B:7:VAL:C	3:B:8:PHE:CD1	2.44	0.88
3:C:268:GLU:HB3	3:C:305:VAL:HG23	1.55	0.88
3:M:10:VAL:HG23	3:M:18:LYS:NZ	1.88	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:122:LEU:HD11	3:T:122:LEU:HD23	1.55	0.88
3:A:54:LYS:HD3	3:A:69:ASP:OD2	1.73	0.88
3:D:268:GLU:HB3	3:D:305:VAL:HG23	1.55	0.88
3:I:323:ARG:C	3:I:323:ARG:HD3	1.93	0.88
3:N:57:LEU:CD2	3:N:194:CYS:SG	2.62	0.88
3:T:8:PHE:HZ	3:U:255:GLU:CA	1.86	0.88
3:V:54:LYS:HD3	3:V:69:ASP:OD2	1.74	0.88
3:M:10:VAL:CG2	3:M:18:LYS:HZ1	1.85	0.88
3:B:249:ILE:HG22	3:B:250:ASN:N	1.89	0.88
3:P:189:THR:HG22	3:P:192:LYS:HB3	0.88	0.88
3:B:38:LYS:CE	3:B:39:PRO:HD2	2.04	0.88
3:F:49:LEU:HD22	3:F:52:ALA:HB2	1.55	0.88
3:O:264:ASN:HD21	3:P:251:LEU:HD21	1.34	0.88
3:P:264:ASN:HD21	3:Q:251:LEU:HD21	1.36	0.88
3:J:264:ASN:ND2	3:K:251:LEU:HD22	1.88	0.88
3:A:20:GLU:N	3:A:20:GLU:OE1	2.07	0.88
3:C:223:ALA:O	3:C:226:VAL:HG23	1.72	0.88
3:D:189:THR:CG2	3:D:192:LYS:CB	2.51	0.88
3:E:85:CYS:HB3	3:E:91:SER:HB2	1.53	0.88
3:L:251:LEU:CD2	3:V:264:ASN:ND2	2.37	0.88
3:U:65:LEU:HD21	3:U:119:ASN:HB3	1.53	0.88
2:X:20:C:H2'	2:X:21:C:H5''	1.56	0.88
3:L:239:LEU:O	3:L:243:THR:HG22	1.74	0.87
3:M:46:ALA:HB1	3:M:50:ASN:OD1	1.74	0.87
3:M:264:ASN:CG	3:N:251:LEU:HD21	1.94	0.87
3:O:264:ASN:ND2	3:P:251:LEU:HD22	1.89	0.87
3:R:194:CYS:C	3:R:196:ASN:H	1.73	0.87
3:S:77:ALA:HB3	3:S:98:ARG:HH12	1.38	0.87
3:T:8:PHE:CE2	3:U:255:GLU:CA	2.54	0.87
3:B:77:ALA:O	3:B:98:ARG:CZ	2.21	0.87
3:E:176:ALA:HB1	3:E:177:PRO:HD2	1.56	0.87
3:P:197:TRP:HD1	3:P:198:SER:H	1.20	0.87
3:Q:223:ALA:O	3:Q:226:VAL:HG23	1.73	0.87
3:V:323:ARG:C	3:V:323:ARG:HD3	1.93	0.87
3:C:77:ALA:O	3:C:98:ARG:CZ	2.23	0.87
3:F:417:LYS:N	3:F:420:HIS:HD2	1.72	0.87
3:L:196:ASN:O	3:L:197:TRP:HB2	1.73	0.87
3:L:216:ARG:HG3	3:L:217:ILE:HD12	1.55	0.87
1:W:1:C:C4	3:F:157:ASN:HB2	2.10	0.87
3:Q:249:ILE:HG22	3:Q:250:ASN:OD1	1.75	0.87
3:R:268:GLU:HB3	3:R:305:VAL:HG23	1.56	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:87:GLU:HG2	3:C:284:SER:CA	2.04	0.87
3:L:73:TYR:HD2	3:L:210:TYR:HH	0.91	0.87
3:E:38:LYS:HE2	3:E:39:PRO:CD	2.03	0.87
3:I:50:ASN:N	3:I:50:ASN:HD22	1.69	0.87
3:O:340:VAL:HG13	3:O:416:LEU:CD1	2.05	0.87
3:Q:323:ARG:C	3:Q:323:ARG:HD3	1.95	0.87
3:O:417:LYS:H	3:O:420:HIS:HD2	1.17	0.87
3:S:133:THR:HG22	3:S:136:GLU:OE2	1.73	0.87
3:V:77:ALA:O	3:V:98:ARG:CZ	2.22	0.87
3:K:77:ALA:CB	3:K:98:ARG:HH22	1.88	0.87
3:M:182:VAL:HB	3:M:190:THR:HG21	1.56	0.87
3:T:8:PHE:HZ	3:U:255:GLU:HA	1.38	0.87
3:V:248:GLN:HG2	3:V:249:ILE:H	1.40	0.87
3:S:205:PHE:O	3:S:209:THR:HG22	1.75	0.86
3:V:268:GLU:HB3	3:V:305:VAL:HG23	1.55	0.86
3:A:77:ALA:O	3:A:98:ARG:CZ	2.23	0.86
3:G:8:PHE:CZ	3:H:255:GLU:CA	2.57	0.86
3:L:266:GLU:OE2	3:M:358:ARG:HD2	1.76	0.86
3:U:417:LYS:H	3:U:420:HIS:HD2	1.22	0.86
3:V:20:GLU:OE1	3:V:20:GLU:N	2.08	0.86
3:B:20:GLU:N	3:B:20:GLU:CD	2.25	0.86
3:D:264:ASN:ND2	3:E:251:LEU:HD22	1.89	0.86
3:Q:232:ALA:O	3:Q:234:GLU:N	2.08	0.86
3:B:31:PRO:HD2	3:B:277:GLN:HG3	1.56	0.86
3:P:87:GLU:HG2	3:P:284:SER:HA	1.55	0.86
3:P:63:ALA:HB3	3:P:65:LEU:HD13	1.58	0.86
3:C:323:ARG:HD3	3:C:324:SER:N	1.90	0.86
3:J:248:GLN:HG2	3:J:249:ILE:N	1.89	0.86
3:U:77:ALA:CB	3:U:98:ARG:HH22	1.88	0.86
3:P:169:ILE:HG22	3:P:226:VAL:CG1	2.06	0.86
3:T:74:LEU:HD22	3:T:98:ARG:HB2	1.54	0.86
3:J:249:ILE:HG22	3:J:250:ASN:H	1.40	0.86
3:J:367:GLN:HA	3:J:370:GLU:HG3	1.58	0.86
3:N:10:VAL:HG12	3:N:11:ASN:N	1.91	0.86
3:N:54:LYS:HD3	3:N:69:ASP:OD2	1.75	0.86
3:N:74:LEU:HD22	3:N:98:ARG:HB2	1.58	0.86
3:R:249:ILE:CG2	3:R:250:ASN:H	1.88	0.86
3:U:248:GLN:HG2	3:U:249:ILE:N	1.88	0.86
3:C:98:ARG:H	3:C:98:ARG:HD2	1.39	0.85
3:D:189:THR:HG22	3:D:192:LYS:CB	2.06	0.85
2:X:18:C:H5'	3:U:327:ALA:HA	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:183:GLU:O	3:D:190:THR:HG22	1.76	0.85
3:A:53:TYR:HD1	3:A:121:ALA:O	1.59	0.85
3:A:8:PHE:CZ	3:B:255:GLU:HA	2.12	0.85
3:D:185:HIS:C	3:D:189:THR:N	2.30	0.85
3:J:268:GLU:HB3	3:J:305:VAL:HG23	1.57	0.85
3:P:65:LEU:HD21	3:P:119:ASN:HB3	1.57	0.85
2:X:36:C:H2'	2:X:38:C:H5''	1.57	0.85
3:E:74:LEU:HD22	3:E:98:ARG:HB2	1.58	0.85
3:H:38:LYS:HE2	3:H:39:PRO:CD	2.06	0.85
3:N:53:TYR:O	3:N:56:VAL:HG23	1.77	0.85
3:T:65:LEU:HB3	3:T:120:TRP:CZ3	2.11	0.85
3:B:38:LYS:HE2	3:B:39:PRO:CD	2.06	0.85
3:Q:410:MET:CE	3:Q:410:MET:HA	2.06	0.85
3:U:77:ALA:HB3	3:U:98:ARG:HH22	1.41	0.85
3:V:38:LYS:CE	3:V:39:PRO:HD2	2.06	0.85
3:D:8:PHE:HE2	3:E:255:GLU:HA	1.36	0.85
3:I:313:HIS:ND1	3:I:324:SER:HB3	1.91	0.85
3:I:8:PHE:CZ	3:J:255:GLU:CA	2.51	0.85
3:U:222:SER:O	3:U:224:ILE:N	2.10	0.85
3:C:172:ILE:HD11	3:C:226:VAL:HG21	1.57	0.85
3:N:20:GLU:HB2	3:O:254:ARG:HD2	1.58	0.85
3:C:172:ILE:HD12	3:C:226:VAL:HG21	1.57	0.85
3:C:31:PRO:HD2	3:C:277:GLN:HG3	1.58	0.85
3:F:216:ARG:HG3	3:F:217:ILE:HD12	1.59	0.85
3:F:57:LEU:HD23	3:F:57:LEU:C	1.97	0.85
3:G:248:GLN:HG2	3:G:249:ILE:H	1.41	0.85
3:I:249:ILE:CG2	3:I:319:MET:HE3	2.07	0.85
3:I:14:VAL:HG23	3:I:15:VAL:H	1.42	0.85
3:J:50:ASN:HD22	3:J:50:ASN:H	1.22	0.85
3:M:313:HIS:ND1	3:M:324:SER:HB3	1.91	0.85
3:V:189:THR:HG22	3:V:192:LYS:CB	2.06	0.85
3:F:205:PHE:O	3:F:209:THR:HG22	1.76	0.85
3:G:340:VAL:HG13	3:G:416:LEU:CD1	2.06	0.85
3:V:7:VAL:C	3:V:8:PHE:HD1	1.79	0.85
3:A:146:SER:HB2	3:A:169:ILE:HD12	1.58	0.84
3:I:176:ALA:HB1	3:I:177:PRO:CD	2.06	0.84
3:L:185:HIS:C	3:L:189:THR:N	2.31	0.84
3:M:189:THR:HG22	3:M:193:MET:N	1.92	0.84
3:O:340:VAL:HG13	3:O:416:LEU:HD12	1.59	0.84
3:J:87:GLU:HG2	3:J:284:SER:HA	1.59	0.84
3:R:323:ARG:C	3:R:323:ARG:HD3	1.98	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:54:LYS:HE3	3:S:140:LEU:HD23	1.58	0.84
3:S:248:GLN:HG2	3:S:249:ILE:N	1.91	0.84
3:B:313:HIS:ND1	3:B:324:SER:HB3	1.91	0.84
3:G:122:LEU:CD2	3:P:122:LEU:HD22	2.07	0.84
3:C:43:LEU:HD23	3:C:116:VAL:HG11	1.59	0.84
3:I:262:HIS:CE1	3:J:251:LEU:HD23	2.11	0.84
3:A:255:GLU:HA	3:K:8:PHE:HZ	1.02	0.84
3:P:8:PHE:CE2	3:Q:255:GLU:HA	2.12	0.84
3:P:323:ARG:C	3:P:323:ARG:HD3	1.98	0.84
2:X:1:C:N4	3:L:157:ASN:HD22	1.75	0.84
3:D:197:TRP:HD1	3:D:198:SER:H	1.22	0.84
3:E:38:LYS:HG3	3:E:292:LEU:HB3	1.59	0.84
3:M:77:ALA:CB	3:M:98:ARG:NH2	2.35	0.84
3:Q:367:GLN:HA	3:Q:370:GLU:OE2	1.77	0.84
3:I:31:PRO:HD2	3:I:277:GLN:HG3	1.56	0.84
3:P:169:ILE:HG22	3:P:226:VAL:HG11	1.57	0.84
3:V:176:ALA:HB1	3:V:177:PRO:CD	2.08	0.84
3:V:87:GLU:CG	3:V:284:SER:HA	2.07	0.84
3:U:20:GLU:CD	3:U:20:GLU:N	2.28	0.84
3:H:77:ALA:HB3	3:H:98:ARG:HH12	1.41	0.84
3:N:441:PHE:O	3:N:445:THR:HG23	1.78	0.83
3:N:77:ALA:HB3	3:N:98:ARG:NH2	1.93	0.83
3:R:176:ALA:HB1	3:R:177:PRO:CD	2.08	0.83
3:B:42:THR:O	3:B:43:LEU:O	1.96	0.83
3:B:8:PHE:HZ	3:C:255:GLU:HB2	1.40	0.83
3:M:204:ARG:HE	3:M:291:SER:HA	1.40	0.83
3:Q:248:GLN:HG2	3:Q:249:ILE:N	1.94	0.83
3:C:182:VAL:HB	3:C:190:THR:HG21	1.59	0.83
3:C:51:LYS:HA	3:C:54:LYS:HE2	1.58	0.83
3:D:176:ALA:HB1	3:D:177:PRO:CD	2.05	0.83
3:E:194:CYS:C	3:E:196:ASN:H	1.76	0.83
3:G:21:ILE:HB	3:H:280:ALA:HB2	1.60	0.83
3:G:248:GLN:HG2	3:G:249:ILE:N	1.93	0.83
3:V:340:VAL:HG13	3:V:416:LEU:HD12	1.60	0.83
3:A:249:ILE:HG22	3:A:250:ASN:H	1.40	0.83
3:A:255:GLU:CA	3:K:8:PHE:CE2	2.58	0.83
3:B:249:ILE:HD11	3:B:321:GLN:HG3	1.60	0.83
3:H:194:CYS:C	3:H:196:ASN:H	1.77	0.83
3:K:185:HIS:C	3:K:189:THR:N	2.31	0.83
3:M:189:THR:O	3:M:193:MET:HB2	1.78	0.83
3:V:340:VAL:HG13	3:V:416:LEU:CD1	2.07	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:340:VAL:HG13	3:B:416:LEU:HD12	1.61	0.83
3:J:73:TYR:HD2	3:J:210:TYR:OH	1.61	0.83
3:O:340:VAL:HA	3:O:416:LEU:HD11	1.61	0.83
3:S:172:ILE:CD1	3:S:226:VAL:HG21	2.09	0.83
3:V:176:ALA:CB	3:V:177:PRO:CD	2.56	0.83
3:V:38:LYS:HE2	3:V:39:PRO:CD	2.07	0.83
3:A:54:LYS:HE3	3:A:140:LEU:HD23	1.59	0.83
3:A:323:ARG:C	3:A:323:ARG:HD3	1.99	0.83
3:D:176:ALA:CB	3:D:177:PRO:HD2	2.05	0.83
3:D:313:HIS:ND1	3:D:324:SER:HB3	1.92	0.83
3:G:189:THR:HB	3:G:193:MET:HG2	1.60	0.83
3:M:216:ARG:O	3:M:216:ARG:HD3	1.77	0.83
3:Q:264:ASN:HD21	3:R:251:LEU:HD21	1.29	0.83
3:H:8:PHE:HE2	3:I:255:GLU:HA	1.39	0.83
3:K:74:LEU:HD22	3:K:98:ARG:HB2	1.60	0.83
3:P:98:ARG:HD2	3:P:98:ARG:H	1.44	0.83
3:C:239:LEU:O	3:C:243:THR:HG22	1.79	0.83
3:E:172:ILE:CD1	3:E:226:VAL:HG21	2.09	0.83
3:G:87:GLU:HG2	3:G:284:SER:HA	1.59	0.83
3:J:189:THR:HG22	3:J:192:LYS:HB3	1.61	0.83
3:T:49:LEU:HD22	3:T:52:ALA:HB2	1.60	0.83
3:E:189:THR:HB	3:E:193:MET:HG2	1.59	0.83
3:G:249:ILE:HD11	3:G:321:GLN:HG3	1.61	0.83
3:K:249:ILE:HG22	3:K:250:ASN:N	1.94	0.83
3:Q:240:VAL:O	3:Q:243:THR:HG22	1.79	0.83
3:Q:50:ASN:N	3:Q:50:ASN:HD22	1.77	0.83
3:T:223:ALA:O	3:T:226:VAL:HG23	1.77	0.83
3:F:8:PHE:CZ	3:G:255:GLU:HA	2.13	0.82
3:J:172:ILE:HD11	3:J:226:VAL:CG2	2.07	0.82
3:O:10:VAL:O	3:O:11:ASN:HB3	1.79	0.82
3:F:8:PHE:CE2	3:G:255:GLU:HA	2.13	0.82
3:I:248:GLN:CG	3:I:249:ILE:H	1.87	0.82
3:L:251:LEU:HD21	3:V:264:ASN:ND2	1.91	0.82
3:V:146:SER:HB2	3:V:169:ILE:HD12	1.60	0.82
3:E:74:LEU:HD22	3:E:98:ARG:CB	2.10	0.82
3:S:176:ALA:O	3:S:178:PHE:N	2.12	0.82
3:G:77:ALA:O	3:G:98:ARG:CZ	2.27	0.82
3:J:185:HIS:CB	3:J:189:THR:N	2.42	0.82
3:P:74:LEU:HD22	3:P:98:ARG:HB2	1.61	0.82
3:Q:77:ALA:O	3:Q:98:ARG:CZ	2.27	0.82
3:G:54:LYS:HE3	3:G:140:LEU:HD23	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:176:ALA:HB1	3:K:177:PRO:CD	2.09	0.82
3:A:51:LYS:O	3:A:55:SER:HB2	1.79	0.82
3:D:249:ILE:HG22	3:D:250:ASN:N	1.94	0.82
3:J:432:GLN:HA	3:J:432:GLN:HE21	1.44	0.82
3:Q:264:ASN:CG	3:R:251:LEU:HD21	2.00	0.82
3:T:219:HIS:HA	3:T:222:SER:HB3	1.62	0.82
3:B:77:ALA:HB1	3:B:220:LEU:HD21	1.62	0.82
3:B:417:LYS:H	3:B:420:HIS:HD2	1.28	0.82
3:J:8:PHE:CZ	3:K:255:GLU:CA	2.63	0.82
3:L:323:ARG:HD3	3:L:323:ARG:C	2.00	0.82
2:X:89:C:H41	3:M:323:ARG:HE	1.26	0.82
3:N:205:PHE:O	3:N:209:THR:HG22	1.79	0.82
3:N:65:LEU:HD21	3:N:119:ASN:HB3	1.60	0.82
3:N:98:ARG:HD2	3:N:98:ARG:H	1.44	0.82
3:V:20:GLU:N	3:V:20:GLU:CD	2.32	0.82
3:C:54:LYS:HE3	3:C:140:LEU:HD23	1.61	0.82
3:E:122:LEU:HD22	3:R:122:LEU:HD22	1.60	0.82
3:F:38:LYS:HE2	3:F:39:PRO:HD2	1.62	0.82
3:V:206:LEU:HA	3:V:209:THR:HG22	1.62	0.82
3:V:249:ILE:HG22	3:V:250:ASN:N	1.94	0.82
3:C:8:PHE:CE2	3:D:255:GLU:HA	2.15	0.82
3:F:417:LYS:H	3:F:420:HIS:HD2	0.88	0.82
3:J:363:GLU:O	3:J:367:GLN:HG2	1.80	0.82
3:Q:63:ALA:HB3	3:Q:65:LEU:HD13	1.60	0.82
3:B:248:GLN:HG2	3:B:249:ILE:N	1.94	0.81
3:S:73:TYR:HD2	3:S:210:TYR:HH	0.84	0.81
3:U:77:ALA:HB3	3:U:98:ARG:HH12	1.44	0.81
1:W:7:C:H5'	3:E:235:ASP:OD2	1.80	0.81
3:A:122:LEU:CD2	3:V:122:LEU:HD22	2.10	0.81
3:F:323:ARG:HD3	3:F:323:ARG:C	2.01	0.81
3:I:32:ALA:HB2	3:I:277:GLN:NE2	1.94	0.81
3:S:176:ALA:C	3:S:178:PHE:H	1.84	0.81
3:F:65:LEU:HD21	3:F:119:ASN:HB3	1.61	0.81
3:P:38:LYS:HE2	3:P:39:PRO:CD	2.10	0.81
3:A:38:LYS:HE2	3:A:38:LYS:HA	1.63	0.81
3:H:323:ARG:HD3	3:H:323:ARG:C	2.00	0.81
3:L:128:LEU:HD11	3:L:130:ARG:HE	1.43	0.81
3:L:340:VAL:HG13	3:L:416:LEU:HD12	1.61	0.81
3:B:340:VAL:HG13	3:B:416:LEU:CD1	2.09	0.81
3:K:417:LYS:H	3:K:420:HIS:HD2	1.28	0.81
3:K:56:VAL:HG11	3:K:123:THR:OG1	1.80	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:255:GLU:CA	3:V:8:PHE:HZ	1.77	0.81
3:M:249:ILE:CG2	3:M:319:MET:HE1	2.10	0.81
3:R:46:ALA:HB1	3:R:50:ASN:OD1	1.81	0.81
3:J:308:VAL:HG12	3:J:312:ILE:HD11	1.62	0.81
3:P:189:THR:CG2	3:P:192:LYS:CG	2.58	0.81
3:P:287:ILE:HG13	3:P:288:HIS:CD2	2.15	0.81
3:Q:38:LYS:HE2	3:Q:39:PRO:HD2	1.62	0.81
3:B:176:ALA:CB	3:B:177:PRO:HD2	2.11	0.81
3:J:54:LYS:HE3	3:J:140:LEU:HD23	1.62	0.81
3:J:77:ALA:HB1	3:J:220:LEU:HD21	1.62	0.81
3:J:249:ILE:HD11	3:J:321:GLN:HG3	1.60	0.81
3:K:53:TYR:HD1	3:K:121:ALA:O	1.61	0.81
3:L:54:LYS:HE3	3:L:140:LEU:CD2	2.11	0.81
3:Q:57:LEU:HD22	3:Q:194:CYS:SG	2.21	0.81
3:S:323:ARG:C	3:S:323:ARG:HD3	2.00	0.81
3:D:20:GLU:OE1	3:D:20:GLU:N	2.13	0.81
3:G:417:LYS:H	3:G:420:HIS:HD2	1.24	0.81
3:H:122:LEU:HD22	3:O:122:LEU:HD21	1.61	0.81
3:H:49:LEU:HD22	3:H:52:ALA:HB2	1.63	0.81
3:N:169:ILE:HG22	3:N:226:VAL:CG1	2.10	0.81
3:Q:216:ARG:HG3	3:Q:217:ILE:HD12	1.61	0.81
3:E:51:LYS:O	3:E:55:SER:HB2	1.81	0.81
3:K:54:LYS:HE3	3:K:140:LEU:CD2	2.09	0.81
3:O:54:LYS:HE3	3:O:140:LEU:HD23	1.62	0.81
3:V:57:LEU:HD23	3:V:57:LEU:C	2.01	0.81
3:B:33:ILE:HD12	3:B:88:ASP:HB2	1.60	0.80
3:I:216:ARG:HG3	3:I:217:ILE:HD12	1.63	0.80
3:M:249:ILE:HG23	3:M:319:MET:CE	2.10	0.80
3:H:340:VAL:HG13	3:H:416:LEU:CD1	2.10	0.80
3:K:54:LYS:HG3	3:K:140:LEU:HD21	1.63	0.80
3:P:182:VAL:HB	3:P:190:THR:HG21	1.62	0.80
3:D:38:LYS:HE2	3:D:39:PRO:HD2	1.63	0.80
3:D:8:PHE:CZ	3:E:255:GLU:CA	2.63	0.80
3:M:264:ASN:OD1	3:N:251:LEU:HD21	1.81	0.80
3:O:266:GLU:OE2	3:P:358:ARG:HD2	1.81	0.80
3:A:77:ALA:CB	3:A:98:ARG:NH2	2.42	0.80
3:B:264:ASN:HD21	3:C:251:LEU:CD2	1.93	0.80
3:E:176:ALA:HB1	3:E:177:PRO:CD	2.12	0.80
3:K:248:GLN:HG2	3:K:249:ILE:H	1.47	0.80
3:K:5:LYS:HZ3	3:K:5:LYS:N	1.79	0.80
3:L:20:GLU:OE1	3:L:20:GLU:N	2.15	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:249:ILE:HG22	3:N:250:ASN:N	1.96	0.80
3:A:248:GLN:HG2	3:A:249:ILE:N	1.94	0.80
3:B:6:ILE:HD12	3:B:6:ILE:O	1.80	0.80
3:U:340:VAL:HG13	3:U:416:LEU:CD1	2.11	0.80
3:V:189:THR:HB	3:V:193:MET:HG2	1.63	0.80
3:B:172:ILE:CD1	3:B:226:VAL:HG21	2.10	0.80
3:M:189:THR:HG22	3:M:192:LYS:CB	2.06	0.80
3:O:417:LYS:H	3:O:420:HIS:CD2	1.99	0.80
3:Q:277:GLN:N	3:Q:277:GLN:OE1	2.15	0.80
3:G:122:LEU:HD21	3:P:122:LEU:HD22	1.63	0.80
3:T:205:PHE:O	3:T:209:THR:HG22	1.82	0.80
3:U:93:GLY:O	3:U:94:ILE:HG23	1.81	0.80
3:U:77:ALA:O	3:U:98:ARG:CZ	2.27	0.80
3:L:189:THR:CG2	3:L:192:LYS:HB3	2.12	0.80
3:O:32:ALA:HB2	3:O:277:GLN:HE22	1.47	0.80
3:S:163:THR:HG22	3:S:192:LYS:NZ	1.96	0.80
3:T:197:TRP:CD1	3:T:198:SER:N	2.50	0.80
3:T:410:MET:HA	3:T:410:MET:CE	2.11	0.80
3:D:194:CYS:C	3:D:196:ASN:H	1.83	0.80
3:I:189:THR:HG23	3:I:192:LYS:HB3	1.61	0.80
3:J:340:VAL:HG22	3:J:416:LEU:CD1	2.12	0.80
3:L:182:VAL:HB	3:L:190:THR:HG21	1.64	0.80
3:N:146:SER:HB2	3:N:169:ILE:HD12	1.62	0.80
3:Q:49:LEU:HD22	3:Q:52:ALA:HB2	1.62	0.79
3:T:183:GLU:O	3:T:184:HIS:O	2.01	0.79
3:A:20:GLU:N	3:A:20:GLU:CD	2.35	0.79
3:D:264:ASN:ND2	3:E:251:LEU:HD21	1.94	0.79
3:G:185:HIS:C	3:G:189:THR:N	2.34	0.79
3:H:87:GLU:HG2	3:H:284:SER:HA	1.63	0.79
3:I:417:LYS:H	3:I:420:HIS:CD2	1.98	0.79
3:L:31:PRO:HD2	3:L:277:GLN:CG	2.12	0.79
3:N:21:ILE:HB	3:O:280:ALA:HB2	1.62	0.79
3:S:73:TYR:HD2	3:S:210:TYR:OH	1.65	0.79
3:A:197:TRP:HD1	3:A:198:SER:N	1.80	0.79
3:E:264:ASN:HD21	3:F:251:LEU:HD22	1.47	0.79
3:N:185:HIS:C	3:N:189:THR:N	2.36	0.79
3:O:248:GLN:HG2	3:O:249:ILE:N	1.97	0.79
3:P:340:VAL:HG13	3:P:416:LEU:CD1	2.13	0.79
3:Q:164:ASN:O	3:Q:168:ARG:HG3	1.83	0.79
3:U:31:PRO:HD2	3:U:277:GLN:CG	2.12	0.79
3:U:31:PRO:HD2	3:U:277:GLN:HG3	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:65:LEU:HD21	3:D:119:ASN:HB3	1.63	0.79
3:I:249:ILE:HG22	3:I:250:ASN:N	1.96	0.79
3:L:5:LYS:HB2	3:L:5:LYS:NZ	1.96	0.79
3:M:262:HIS:CE1	3:N:251:LEU:HD23	2.17	0.79
3:A:340:VAL:HA	3:A:416:LEU:HD11	1.63	0.79
3:D:74:LEU:HD22	3:D:98:ARG:HB2	1.63	0.79
3:F:172:ILE:HD12	3:F:226:VAL:HG21	1.63	0.79
3:J:74:LEU:HD22	3:J:98:ARG:HB2	1.62	0.79
3:K:189:THR:HG22	3:K:192:LYS:CB	2.11	0.79
3:L:264:ASN:HD21	3:M:251:LEU:HD21	1.45	0.79
3:T:6:ILE:HD12	3:T:7:VAL:H	1.48	0.79
3:U:249:ILE:HG23	3:U:319:MET:CE	2.12	0.79
3:C:77:ALA:CB	3:C:98:ARG:NH2	2.42	0.79
3:S:182:VAL:HB	3:S:190:THR:HG21	1.64	0.79
3:V:248:GLN:HG2	3:V:249:ILE:N	1.97	0.79
3:B:63:ALA:O	3:B:197:TRP:HH2	1.64	0.79
3:F:74:LEU:HA	3:F:98:ARG:HD3	1.64	0.79
3:K:323:ARG:HD3	3:K:323:ARG:C	2.03	0.79
3:M:206:LEU:HA	3:M:209:THR:CG2	2.13	0.79
3:O:249:ILE:HG22	3:O:250:ASN:H	1.47	0.79
3:P:77:ALA:HB3	3:P:98:ARG:HH12	1.44	0.79
3:S:8:PHE:CZ	3:T:255:GLU:CA	2.65	0.79
3:D:57:LEU:HD21	3:D:144:LEU:HD21	1.65	0.79
3:G:56:VAL:HG11	3:G:123:THR:OG1	1.82	0.79
3:H:71:CYS:O	3:H:74:LEU:HG	1.82	0.79
3:I:197:TRP:CD1	3:I:198:SER:N	2.51	0.79
3:M:77:ALA:HB3	3:M:98:ARG:CZ	2.12	0.79
3:U:176:ALA:CB	3:U:177:PRO:HD2	2.09	0.79
3:U:46:ALA:HB1	3:U:50:ASN:OD1	1.82	0.79
3:E:77:ALA:HB3	3:E:98:ARG:HH22	1.48	0.79
3:V:183:GLU:O	3:V:190:THR:CG2	2.31	0.79
3:G:56:VAL:CG1	3:G:123:THR:OG1	2.31	0.79
3:T:248:GLN:HG2	3:T:249:ILE:N	1.97	0.79
3:E:26:HIS:O	3:E:27:GLU:HB3	1.82	0.78
3:E:323:ARG:C	3:E:323:ARG:HD3	2.04	0.78
3:H:197:TRP:CD1	3:H:198:SER:N	2.51	0.78
3:U:219:HIS:HA	3:U:222:SER:HB3	1.63	0.78
3:A:176:ALA:CB	3:A:177:PRO:HD2	2.12	0.78
3:A:268:GLU:HB3	3:A:305:VAL:HG23	1.62	0.78
3:D:252:THR:HG22	3:D:253:ALA:H	1.48	0.78
3:H:77:ALA:HB3	3:H:98:ARG:HH22	1.46	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:10:VAL:O	3:I:11:ASN:HB2	1.83	0.78
3:O:21:ILE:HB	3:P:280:ALA:HB2	1.63	0.78
3:U:128:LEU:HD11	3:U:130:ARG:HE	1.48	0.78
3:B:176:ALA:HB1	3:B:177:PRO:CD	2.12	0.78
3:F:277:GLN:OE1	3:F:277:GLN:N	2.15	0.78
3:F:77:ALA:CB	3:F:98:ARG:HH22	1.94	0.78
3:H:197:TRP:HD1	3:H:198:SER:N	1.80	0.78
3:P:146:SER:CB	3:P:169:ILE:HD12	2.10	0.78
3:R:32:ALA:HB2	3:R:277:GLN:NE2	1.97	0.78
3:R:38:LYS:CE	3:R:39:PRO:HD2	2.11	0.78
3:S:249:ILE:CG2	3:S:319:MET:SD	2.71	0.78
3:C:37:LYS:O	3:C:39:PRO:HD3	1.83	0.78
3:F:57:LEU:HD23	3:F:57:LEU:O	1.83	0.78
3:I:124:GLY:HA2	3:N:122:LEU:HD22	1.63	0.78
3:O:264:ASN:ND2	3:P:251:LEU:HD21	1.96	0.78
3:Q:42:THR:O	3:Q:43:LEU:O	2.01	0.78
3:Q:66:ASP:HB2	3:Q:67:PRO:HD3	1.65	0.78
3:T:38:LYS:HE2	3:T:39:PRO:CD	2.12	0.78
3:V:74:LEU:HD22	3:V:98:ARG:HB2	1.66	0.78
2:X:65:C:C2'	2:X:66:C:H5'	2.12	0.78
3:F:248:GLN:HG2	3:F:249:ILE:N	1.99	0.78
3:I:20:GLU:HB2	3:J:254:ARG:HD2	1.64	0.78
3:J:323:ARG:HD3	3:J:324:SER:N	1.98	0.78
3:M:56:VAL:HG12	3:M:59:GLY:HA3	1.65	0.78
3:V:205:PHE:O	3:V:209:THR:HG22	1.83	0.78
3:V:54:LYS:HE3	3:V:140:LEU:CD2	2.13	0.78
3:C:53:TYR:O	3:C:56:VAL:HG23	1.83	0.78
3:F:264:ASN:HD21	3:G:251:LEU:HD22	1.48	0.78
3:G:415:ARG:HG3	3:H:351:GLY:O	1.83	0.78
3:K:176:ALA:CB	3:K:177:PRO:HD2	2.13	0.78
3:N:169:ILE:HG22	3:N:226:VAL:HG11	1.65	0.78
3:O:8:PHE:CZ	3:P:255:GLU:CA	2.66	0.78
3:R:323:ARG:HD3	3:R:324:SER:N	1.99	0.78
3:T:417:LYS:H	3:T:420:HIS:CD2	1.97	0.78
3:U:249:ILE:HG21	3:U:319:MET:HE1	1.65	0.78
3:L:249:ILE:HD11	3:L:321:GLN:HG3	1.66	0.78
3:N:77:ALA:CB	3:N:98:ARG:NH2	2.47	0.78
3:U:176:ALA:HB1	3:U:177:PRO:CD	2.12	0.78
3:T:10:VAL:HG12	3:T:11:ASN:N	1.97	0.78
2:X:1:C:C4	3:L:157:ASN:CB	2.66	0.78
3:C:74:LEU:HD22	3:C:98:ARG:HB2	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:77:ALA:O	3:J:98:ARG:CZ	2.31	0.78
3:K:172:ILE:HD12	3:K:226:VAL:HG21	1.65	0.78
3:M:278:GLU:HB3	3:M:281:VAL:HB	1.66	0.78
3:P:268:GLU:HB3	3:P:305:VAL:HG23	1.65	0.78
3:P:51:LYS:O	3:P:55:SER:HB2	1.84	0.78
3:Q:153:ILE:H	3:Q:153:ILE:HD12	1.49	0.78
3:R:54:LYS:HE3	3:R:140:LEU:HD23	1.66	0.78
3:C:66:ASP:HB2	3:C:67:PRO:HD3	1.66	0.78
3:L:63:ALA:HB3	3:L:65:LEU:HD13	1.65	0.78
3:S:194:CYS:C	3:S:196:ASN:H	1.87	0.78
1:W:66:A:O2'	1:W:67:C:H5'	1.84	0.78
3:D:417:LYS:H	3:D:420:HIS:HD2	1.31	0.77
3:E:38:LYS:CE	3:E:39:PRO:HD2	2.14	0.77
3:Q:417:LYS:H	3:Q:420:HIS:CD2	2.01	0.77
3:Q:8:PHE:CZ	3:R:255:GLU:CA	2.58	0.77
3:R:74:LEU:HD22	3:R:98:ARG:HB2	1.65	0.77
3:U:182:VAL:HB	3:U:190:THR:HG21	1.65	0.77
3:I:249:ILE:HG23	3:I:319:MET:CE	2.14	0.77
3:N:31:PRO:HD2	3:N:277:GLN:HG3	1.65	0.77
3:V:87:GLU:HG2	3:V:284:SER:CA	2.12	0.77
3:A:185:HIS:C	3:A:189:THR:N	2.37	0.77
3:C:176:ALA:CB	3:C:177:PRO:HD2	2.15	0.77
3:C:176:ALA:HB1	3:C:177:PRO:CD	2.14	0.77
3:E:81:PHE:HZ	3:E:85:CYS:HB2	1.49	0.77
3:N:8:PHE:CZ	3:O:255:GLU:HA	2.19	0.77
3:V:54:LYS:HE3	3:V:140:LEU:HD23	1.65	0.77
3:B:32:ALA:HB2	3:B:277:GLN:HE22	1.48	0.77
3:N:246:ILE:HG13	3:N:247:LYS:N	1.98	0.77
3:O:163:THR:HG22	3:O:192:LYS:NZ	1.98	0.77
3:P:197:TRP:CD1	3:P:198:SER:N	2.52	0.77
3:R:434:ARG:HB3	3:R:435:PRO:HD2	1.65	0.77
3:U:97:ALA:O	3:U:99:LYS:N	2.16	0.77
3:B:240:VAL:O	3:B:243:THR:HG22	1.85	0.77
3:C:65:LEU:HD21	3:C:119:ASN:HB3	1.65	0.77
3:J:71:CYS:O	3:J:74:LEU:HG	1.83	0.77
3:L:268:GLU:HB3	3:L:305:VAL:HG23	1.66	0.77
3:Q:189:THR:CG2	3:Q:192:LYS:HB3	2.15	0.77
3:F:10:VAL:HG12	3:F:11:ASN:H	1.48	0.77
3:N:66:ASP:HB2	3:N:67:PRO:HD3	1.64	0.77
3:T:253:ALA:O	3:T:254:ARG:HG2	1.83	0.77
3:V:38:LYS:HG3	3:V:292:LEU:HB3	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:57:LEU:HD23	3:N:194:CYS:SG	2.25	0.77
3:V:176:ALA:HB3	3:V:177:PRO:HD2	1.67	0.77
3:E:151:SER:OG	3:E:198:SER:HA	1.84	0.77
3:F:74:LEU:HD22	3:F:98:ARG:HB2	1.65	0.77
3:P:194:CYS:C	3:P:196:ASN:H	1.88	0.77
3:P:287:ILE:HG13	3:P:288:HIS:HD2	1.50	0.77
3:P:8:PHE:HZ	3:Q:255:GLU:CA	1.98	0.77
3:L:410:MET:CE	3:L:410:MET:HA	2.15	0.77
3:T:216:ARG:HG2	3:T:216:ARG:HH11	1.50	0.77
3:U:8:PHE:CZ	3:V:255:GLU:CA	2.65	0.77
3:V:219:HIS:HA	3:V:222:SER:HB3	1.66	0.77
3:B:35:ASP:O	3:B:36:LEU:HG	1.84	0.77
3:E:253:ALA:C	3:E:255:GLU:H	1.88	0.77
3:F:128:LEU:HD11	3:F:130:ARG:HE	1.50	0.77
3:F:313:HIS:ND1	3:F:324:SER:HB3	2.00	0.77
3:J:63:ALA:HB3	3:J:65:LEU:HD13	1.65	0.77
3:U:54:LYS:HE3	3:U:140:LEU:CD2	2.14	0.77
3:V:206:LEU:HA	3:V:209:THR:CG2	2.14	0.77
3:G:74:LEU:HA	3:G:98:ARG:HD3	1.68	0.76
3:V:169:ILE:HG22	3:V:226:VAL:HG11	1.65	0.76
3:I:54:LYS:HE3	3:I:140:LEU:CD2	2.15	0.76
3:O:26:HIS:O	3:O:27:GLU:HB3	1.85	0.76
3:O:313:HIS:ND1	3:O:324:SER:HB3	2.00	0.76
3:T:249:ILE:HG22	3:T:250:ASN:N	2.00	0.76
3:A:163:THR:HG22	3:A:192:LYS:HZ2	1.50	0.76
3:J:169:ILE:HG22	3:J:226:VAL:CG1	2.15	0.76
3:M:25:GLN:HG2	3:N:282:PRO:HG3	1.66	0.76
3:P:163:THR:HG22	3:P:192:LYS:NZ	1.99	0.76
3:P:38:LYS:HE2	3:P:39:PRO:HD2	1.68	0.76
3:G:169:ILE:HG22	3:G:226:VAL:CG1	2.16	0.76
3:K:50:ASN:N	3:K:50:ASN:HD22	1.83	0.76
3:M:249:ILE:HG22	3:M:250:ASN:N	2.01	0.76
3:M:264:ASN:HD21	3:N:251:LEU:HD21	1.45	0.76
3:M:417:LYS:H	3:M:420:HIS:HD2	1.33	0.76
3:S:249:ILE:HG23	3:S:319:MET:SD	2.25	0.76
3:D:416:LEU:HD12	3:D:416:LEU:H	1.51	0.76
3:G:403:GLU:N	3:G:403:GLU:OE1	2.18	0.76
3:J:185:HIS:HB2	3:J:189:THR:N	2.00	0.76
3:L:205:PHE:O	3:L:209:THR:CG2	2.30	0.76
3:P:249:ILE:HD11	3:P:321:GLN:HG3	1.67	0.76
3:Q:189:THR:HG22	3:Q:192:LYS:HB3	1.65	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:268:GLU:HB3	3:S:305:VAL:HG23	1.67	0.76
3:T:20:GLU:N	3:T:20:GLU:CD	2.39	0.76
3:F:10:VAL:HG12	3:F:11:ASN:N	2.00	0.76
3:I:57:LEU:CD2	3:I:194:CYS:SG	2.74	0.76
3:L:50:ASN:HD22	3:L:50:ASN:H	1.34	0.76
3:M:264:ASN:HD21	3:N:251:LEU:CD1	1.98	0.76
3:R:176:ALA:CB	3:R:177:PRO:HD2	2.14	0.76
3:R:66:ASP:HB2	3:R:67:PRO:HD3	1.66	0.76
3:S:146:SER:HB2	3:S:169:ILE:HD12	1.67	0.76
3:S:264:ASN:HD21	3:T:251:LEU:HD22	1.50	0.76
3:F:77:ALA:HB1	3:F:220:LEU:HD21	1.68	0.76
3:I:323:ARG:HD3	3:I:324:SER:N	2.01	0.76
3:J:146:SER:HB2	3:J:169:ILE:HD12	1.67	0.76
3:K:77:ALA:HB3	3:K:98:ARG:NH2	2.00	0.76
3:U:249:ILE:CG2	3:U:319:MET:HE1	2.14	0.76
3:B:53:TYR:HD1	3:B:121:ALA:O	1.68	0.76
3:B:5:LYS:NZ	3:B:5:LYS:HB2	1.99	0.76
3:F:182:VAL:HB	3:F:190:THR:HG21	1.66	0.76
3:F:33:ILE:HB	3:F:88:ASP:HB3	1.68	0.76
3:H:77:ALA:CB	3:H:98:ARG:HH22	1.99	0.76
3:J:264:ASN:ND2	3:K:251:LEU:CD2	2.45	0.76
3:P:20:GLU:N	3:P:20:GLU:CD	2.35	0.76
3:T:77:ALA:HB1	3:T:220:LEU:HD21	1.68	0.76
3:P:77:ALA:HB3	3:P:98:ARG:HH22	1.49	0.76
3:Q:264:ASN:OD1	3:R:251:LEU:HD21	1.85	0.76
3:A:46:ALA:HB1	3:A:50:ASN:OD1	1.85	0.76
3:I:189:THR:HG22	3:I:192:LYS:CB	2.16	0.76
3:I:249:ILE:HG23	3:I:319:MET:SD	2.25	0.76
3:L:8:PHE:CZ	3:M:255:GLU:CB	2.69	0.75
3:N:176:ALA:HB1	3:N:177:PRO:CD	2.16	0.75
3:Q:8:PHE:CE2	3:R:258:LEU:HD13	2.20	0.75
3:S:246:ILE:HG13	3:S:247:LYS:N	2.01	0.75
3:S:253:ALA:C	3:S:255:GLU:H	1.89	0.75
3:C:51:LYS:O	3:C:55:SER:HB2	1.87	0.75
3:D:222:SER:C	3:D:224:ILE:H	1.89	0.75
3:D:50:ASN:HD22	3:D:50:ASN:N	1.84	0.75
3:E:287:ILE:HG13	3:E:288:HIS:CD2	2.20	0.75
3:R:77:ALA:HB3	3:R:98:ARG:NH1	2.00	0.75
3:U:340:VAL:HG13	3:U:416:LEU:HD12	1.68	0.75
3:B:74:LEU:HA	3:B:98:ARG:HD3	1.68	0.75
3:E:81:PHE:CZ	3:E:85:CYS:HB2	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:249:ILE:HG22	3:J:250:ASN:N	2.01	0.75
3:P:176:ALA:HB1	3:P:177:PRO:CD	2.15	0.75
1:W:1:C:O2	1:W:1:C:H2'	1.85	0.75
3:H:340:VAL:HA	3:H:416:LEU:HD11	1.69	0.75
3:L:20:GLU:CD	3:L:20:GLU:N	2.36	0.75
3:L:38:LYS:HE2	3:L:39:PRO:HD2	1.68	0.75
3:P:246:ILE:HG13	3:P:247:LYS:N	2.01	0.75
3:V:211:ASP:HB2	3:V:228:THR:HB	1.68	0.75
3:I:249:ILE:CG2	3:I:319:MET:HE1	2.10	0.75
3:O:146:SER:CB	3:O:169:ILE:HD12	2.13	0.75
3:P:249:ILE:CG2	3:P:319:MET:HE1	2.14	0.75
3:Q:85:CYS:HB3	3:Q:91:SER:HB2	1.68	0.75
3:V:30:TYR:HB3	3:V:277:GLN:HE21	1.49	0.75
2:X:40:C:H2'	2:X:41:A:H8	1.49	0.75
3:A:206:LEU:HA	3:A:209:THR:HG22	1.66	0.75
3:P:33:ILE:HD12	3:P:88:ASP:HB2	1.67	0.75
3:A:98:ARG:H	3:A:98:ARG:HD2	1.51	0.75
3:E:33:ILE:HD12	3:E:88:ASP:HB2	1.66	0.75
3:K:248:GLN:HG2	3:K:249:ILE:N	2.01	0.75
3:K:417:LYS:H	3:K:420:HIS:CD2	2.04	0.75
3:L:340:VAL:HA	3:L:416:LEU:HD11	1.68	0.75
3:O:205:PHE:O	3:O:209:THR:HG22	1.86	0.75
3:S:340:VAL:HG22	3:S:416:LEU:HD11	1.67	0.75
3:M:248:GLN:CG	3:M:249:ILE:H	1.95	0.75
2:X:9:C:N3	2:X:11:C:H6	1.84	0.75
3:G:434:ARG:HB3	3:G:435:PRO:HD2	1.69	0.74
3:H:77:ALA:HB3	3:H:98:ARG:NH1	2.02	0.74
3:O:248:GLN:HG2	3:O:249:ILE:H	1.51	0.74
3:P:50:ASN:HD22	3:P:50:ASN:H	1.34	0.74
3:T:77:ALA:CB	3:T:98:ARG:HH22	1.93	0.74
3:U:323:ARG:C	3:U:323:ARG:HD3	2.08	0.74
3:A:189:THR:CG2	3:A:192:LYS:HB3	2.16	0.74
3:I:249:ILE:CG1	3:I:319:MET:HE3	2.17	0.74
3:I:7:VAL:HG12	3:I:9:LYS:HE2	1.68	0.74
3:J:185:HIS:C	3:J:189:THR:N	2.40	0.74
3:K:172:ILE:HD11	3:K:226:VAL:HG21	1.69	0.74
3:M:9:LYS:NZ	3:O:362:ASP:HA	2.02	0.74
3:N:77:ALA:O	3:N:98:ARG:CZ	2.35	0.74
3:P:81:PHE:CZ	3:P:85:CYS:HB2	2.22	0.74
3:R:74:LEU:HD22	3:R:98:ARG:CB	2.16	0.74
3:S:313:HIS:ND1	3:S:324:SER:HB3	2.01	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:410:MET:CE	3:C:410:MET:HA	2.18	0.74
3:D:74:LEU:HD22	3:D:98:ARG:CB	2.17	0.74
3:E:206:LEU:HA	3:E:209:THR:HG22	1.68	0.74
3:L:38:LYS:HG3	3:L:292:LEU:HB3	1.69	0.74
3:N:50:ASN:O	3:N:54:LYS:HG2	1.87	0.74
3:P:172:ILE:HD12	3:P:226:VAL:HG21	1.69	0.74
3:G:54:LYS:HE3	3:G:140:LEU:CD2	2.17	0.74
3:N:290:ARG:HD2	3:N:295:SER:HB2	1.68	0.74
3:O:49:LEU:HD22	3:O:52:ALA:HB2	1.69	0.74
3:U:197:TRP:CD1	3:U:198:SER:N	2.56	0.74
3:H:305:VAL:HG22	3:H:308:VAL:HB	1.69	0.74
3:R:32:ALA:HB2	3:R:277:GLN:HE22	1.52	0.74
3:B:9:LYS:HD3	3:D:362:ASP:HA	1.68	0.74
3:E:176:ALA:CB	3:E:177:PRO:HD2	2.16	0.74
3:I:295:SER:OG	3:I:296:GLY:N	2.19	0.74
3:J:323:ARG:HD3	3:J:323:ARG:C	2.07	0.74
3:M:223:ALA:O	3:M:226:VAL:HG23	1.88	0.74
3:V:77:ALA:HB3	3:V:98:ARG:NH2	2.01	0.74
3:B:8:PHE:CZ	3:C:255:GLU:CA	2.67	0.74
3:D:163:THR:HG22	3:D:192:LYS:NZ	2.02	0.74
3:H:63:ALA:HB3	3:H:65:LEU:HD13	1.68	0.74
3:H:74:LEU:HD22	3:H:98:ARG:HB2	1.68	0.74
3:I:77:ALA:CB	3:I:98:ARG:NH2	2.47	0.74
3:M:145:LEU:HD22	3:M:207:ALA:HA	1.68	0.74
3:M:268:GLU:HB3	3:M:305:VAL:HG23	1.69	0.74
3:Q:53:TYR:HD1	3:Q:121:ALA:O	1.71	0.74
3:L:251:LEU:HD22	3:V:264:ASN:HD21	1.51	0.74
2:X:20:C:C2'	2:X:21:C:H5''	2.17	0.74
3:A:417:LYS:H	3:A:420:HIS:CD2	2.05	0.74
3:D:53:TYR:HD1	3:D:121:ALA:O	1.71	0.74
3:G:189:THR:CG2	3:G:192:LYS:CG	2.65	0.74
3:G:77:ALA:HB3	3:G:98:ARG:HH22	1.53	0.74
3:I:253:ALA:C	3:I:255:GLU:H	1.88	0.74
3:U:249:ILE:CG2	3:U:319:MET:CE	2.66	0.74
3:V:51:LYS:O	3:V:55:SER:HB2	1.86	0.74
3:A:197:TRP:CD1	3:A:198:SER:N	2.53	0.74
3:B:325:LEU:O	3:B:439:ALA:HB2	1.87	0.74
3:I:54:LYS:HG3	3:I:140:LEU:HD21	1.70	0.74
3:N:194:CYS:C	3:N:196:ASN:H	1.90	0.74
3:O:323:ARG:HD3	3:O:324:SER:N	2.03	0.74
3:P:417:LYS:H	3:P:420:HIS:CD2	2.04	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:T:249:ILE:HG21	3:T:319:MET:HE1	1.69	0.74
2:X:7:A:H5''	3:V:235:ASP:CG	2.08	0.74
3:B:206:LEU:HA	3:B:209:THR:HG22	1.68	0.74
3:E:25:GLN:HG2	3:F:282:PRO:HG3	1.68	0.74
3:H:33:ILE:HB	3:H:88:ASP:HB3	1.68	0.74
3:I:49:LEU:HD22	3:I:52:ALA:HB2	1.70	0.74
3:J:340:VAL:HG13	3:J:416:LEU:CD1	2.18	0.74
3:O:249:ILE:HG22	3:O:250:ASN:N	2.03	0.74
3:D:81:PHE:CZ	3:D:85:CYS:HB2	2.23	0.73
3:E:77:ALA:O	3:E:98:ARG:CZ	2.36	0.73
3:I:176:ALA:CB	3:I:177:PRO:HD2	2.07	0.73
3:K:340:VAL:HG22	3:K:416:LEU:HD11	1.69	0.73
3:L:249:ILE:HG22	3:L:250:ASN:N	2.03	0.73
3:D:216:ARG:HG3	3:D:217:ILE:HD12	1.69	0.73
3:F:63:ALA:HB3	3:F:65:LEU:HD13	1.70	0.73
3:G:253:ALA:O	3:G:254:ARG:HG2	1.88	0.73
3:B:189:THR:CG2	3:B:192:LYS:CG	2.66	0.73
3:S:77:ALA:O	3:S:98:ARG:CZ	2.36	0.73
3:A:189:THR:HG22	3:A:192:LYS:HB3	1.70	0.73
3:B:54:LYS:C	3:B:56:VAL:H	1.90	0.73
3:C:49:LEU:HD22	3:C:52:ALA:HB2	1.70	0.73
3:F:249:ILE:HG22	3:F:250:ASN:H	1.52	0.73
3:G:182:VAL:HB	3:G:190:THR:HG21	1.71	0.73
3:L:8:PHE:CZ	3:M:255:GLU:HA	2.22	0.73
3:Q:268:GLU:HB3	3:Q:305:VAL:HG23	1.71	0.73
3:S:197:TRP:CD1	3:S:198:SER:N	2.56	0.73
2:X:5:C:H2'	2:X:6:A:O4'	1.89	0.73
3:O:182:VAL:HB	3:O:190:THR:CG2	2.16	0.73
3:O:85:CYS:O	3:O:91:SER:HB2	1.88	0.73
3:Q:54:LYS:HD3	3:Q:69:ASP:OD2	1.88	0.73
3:U:38:LYS:HA	3:U:38:LYS:HE2	1.71	0.73
3:V:253:ALA:C	3:V:255:GLU:H	1.92	0.73
3:V:56:VAL:HG11	3:V:123:THR:OG1	1.89	0.73
3:L:50:ASN:ND2	3:L:50:ASN:N	2.36	0.73
3:S:176:ALA:HB1	3:S:177:PRO:HD2	1.70	0.73
3:T:30:TYR:HB3	3:T:277:GLN:NE2	2.02	0.73
3:T:8:PHE:HZ	3:U:255:GLU:CB	2.01	0.73
3:A:409:ILE:HG22	3:A:410:MET:HE2	1.70	0.73
3:B:54:LYS:HE3	3:B:140:LEU:CD2	2.19	0.73
3:M:194:CYS:C	3:M:196:ASN:H	1.91	0.73
3:S:249:ILE:HG21	3:S:319:MET:CE	2.19	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:77:ALA:CB	3:S:98:ARG:HH22	2.01	0.73
3:U:77:ALA:HB3	3:U:98:ARG:NH2	2.03	0.73
3:A:417:LYS:H	3:A:420:HIS:HD2	1.35	0.73
3:I:25:GLN:HG2	3:J:282:PRO:HB3	1.70	0.73
3:J:8:PHE:HZ	3:K:255:GLU:HA	1.52	0.73
3:O:66:ASP:HB2	3:O:67:PRO:HD3	1.71	0.73
3:Q:262:HIS:HE1	3:R:251:LEU:HD23	1.54	0.73
3:C:60:MET:N	3:C:60:MET:SD	2.58	0.73
3:E:77:ALA:HB3	3:E:98:ARG:HH12	1.53	0.73
3:G:222:SER:C	3:G:224:ILE:H	1.92	0.73
3:R:8:PHE:HZ	3:S:255:GLU:CA	2.01	0.73
3:S:32:ALA:HB2	3:S:277:GLN:HE22	1.52	0.73
3:S:287:ILE:HG13	3:S:288:HIS:CD2	2.23	0.73
3:T:249:ILE:HD11	3:T:321:GLN:HG3	1.71	0.73
3:F:205:PHE:CD2	3:F:205:PHE:C	2.62	0.72
3:K:7:VAL:HG12	3:K:8:PHE:N	2.03	0.72
3:P:8:PHE:CZ	3:Q:255:GLU:CA	2.67	0.72
3:T:172:ILE:HD11	3:T:226:VAL:HG21	1.70	0.72
3:U:77:ALA:HB3	3:U:98:ARG:NH1	2.04	0.72
3:D:54:LYS:HE3	3:D:140:LEU:HD23	1.71	0.72
3:D:323:ARG:HD3	3:D:324:SER:N	2.04	0.72
3:I:133:THR:HG22	3:I:136:GLU:HG3	1.72	0.72
3:K:98:ARG:HD2	3:K:98:ARG:H	1.53	0.72
3:J:10:VAL:HG12	3:J:11:ASN:N	2.04	0.72
3:L:73:TYR:HD2	3:L:210:TYR:OH	1.69	0.72
3:N:50:ASN:HD22	3:N:50:ASN:N	1.87	0.72
3:N:85:CYS:HB3	3:N:91:SER:HB2	1.70	0.72
3:P:249:ILE:CG2	3:P:319:MET:CE	2.67	0.72
3:A:176:ALA:HB1	3:A:177:PRO:CD	2.15	0.72
3:A:249:ILE:HG22	3:A:250:ASN:OD1	1.89	0.72
3:B:268:GLU:HB3	3:B:305:VAL:HG23	1.71	0.72
3:Q:174:GLU:HB2	3:Q:180:LYS:HB2	1.69	0.72
3:S:211:ASP:HB2	3:S:228:THR:HB	1.72	0.72
3:A:249:ILE:HG22	3:A:250:ASN:N	2.04	0.72
3:F:93:GLY:O	3:F:94:ILE:HG23	1.89	0.72
3:G:169:ILE:HG22	3:G:226:VAL:HG11	1.70	0.72
3:T:253:ALA:C	3:T:255:GLU:H	1.90	0.72
3:A:183:GLU:O	3:A:190:THR:HG22	1.89	0.72
3:G:66:ASP:HB2	3:G:67:PRO:HD3	1.72	0.72
3:H:246:ILE:HG13	3:H:247:LYS:N	2.04	0.72
3:K:66:ASP:O	3:K:70:VAL:N	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:R:37:LYS:HG3	3:R:89:TRP:CZ3	2.24	0.72
3:S:31:PRO:HD2	3:S:277:GLN:HG3	1.69	0.72
3:T:66:ASP:OD1	3:T:66:ASP:N	2.22	0.72
3:D:49:LEU:HD22	3:D:52:ALA:HB2	1.72	0.72
2:X:1:C:C5	3:L:157:ASN:HB2	2.24	0.72
3:E:122:LEU:HD22	3:R:122:LEU:CD2	2.18	0.72
3:T:197:TRP:HD1	3:T:198:SER:N	1.87	0.72
3:V:7:VAL:C	3:V:8:PHE:CD1	2.63	0.72
3:D:262:HIS:CE1	3:E:251:LEU:HD23	2.25	0.72
3:E:169:ILE:HG22	3:E:226:VAL:HG11	1.70	0.72
3:E:53:TYR:HD1	3:E:121:ALA:O	1.72	0.72
3:J:20:GLU:CD	3:J:20:GLU:N	2.41	0.72
3:L:169:ILE:HD11	3:L:191:HIS:HE1	1.54	0.72
3:L:87:GLU:C	3:L:89:TRP:H	1.91	0.72
3:O:32:ALA:HB2	3:O:277:GLN:NE2	2.05	0.72
3:U:185:HIS:HB2	3:U:189:THR:N	2.05	0.72
3:C:50:ASN:HD22	3:C:50:ASN:N	1.87	0.72
3:D:262:HIS:HE1	3:E:251:LEU:HD23	1.55	0.72
3:H:398:GLU:HG3	3:H:399:THR:H	1.53	0.72
3:K:20:GLU:N	3:K:20:GLU:CD	2.42	0.72
3:T:189:THR:CG2	3:T:192:LYS:HB3	2.19	0.72
3:C:87:GLU:CG	3:C:284:SER:HA	2.09	0.72
3:D:263:LYS:HE2	3:E:358:ARG:NH2	2.04	0.72
3:E:240:VAL:HA	3:E:243:THR:HG22	1.70	0.72
3:G:52:ALA:HA	3:G:126:MET:SD	2.29	0.72
3:L:326:ASN:HD22	3:L:431:HIS:CE1	2.08	0.72
3:Q:66:ASP:HB2	3:Q:67:PRO:CD	2.20	0.72
3:T:410:MET:HA	3:T:410:MET:HE2	1.71	0.72
3:T:98:ARG:HA	3:T:213:PHE:CD1	2.24	0.72
2:X:22:C:OP1	3:U:168:ARG:NH2	2.23	0.72
2:X:1:C:N4	3:L:157:ASN:HB2	2.04	0.72
3:G:78:MET:O	3:G:220:LEU:HD22	1.89	0.71
3:L:323:ARG:HD3	3:L:324:SER:N	2.05	0.71
3:M:163:THR:HG22	3:M:192:LYS:HZ2	1.55	0.71
3:P:284:SER:O	3:P:287:ILE:HG12	1.90	0.71
3:T:323:ARG:HD3	3:T:324:SER:N	2.05	0.71
3:T:74:LEU:CD2	3:T:98:ARG:HB2	2.20	0.71
3:D:38:LYS:HE2	3:D:39:PRO:CD	2.19	0.71
3:H:417:LYS:H	3:H:420:HIS:CD2	2.08	0.71
3:T:313:HIS:ND1	3:T:324:SER:HB3	2.05	0.71
3:I:133:THR:CG2	3:I:136:GLU:HG3	2.21	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:206:LEU:HA	3:J:209:THR:HG22	1.72	0.71
3:K:222:SER:O	3:K:224:ILE:N	2.23	0.71
3:S:77:ALA:HB3	3:S:98:ARG:NH1	2.05	0.71
3:V:253:ALA:O	3:V:254:ARG:HG2	1.91	0.71
2:X:6:A:C8	2:X:6:A:H3'	2.25	0.71
3:B:287:ILE:HG13	3:B:288:HIS:CD2	2.26	0.71
3:D:66:ASP:O	3:D:70:VAL:N	2.22	0.71
3:H:417:LYS:H	3:H:420:HIS:HD2	1.38	0.71
3:H:66:ASP:HB2	3:H:67:PRO:HD3	1.73	0.71
3:H:8:PHE:HZ	3:I:255:GLU:CB	2.02	0.71
3:I:74:LEU:HD22	3:I:98:ARG:HB2	1.71	0.71
3:L:417:LYS:H	3:L:420:HIS:CD2	2.08	0.71
3:M:9:LYS:HZ1	3:O:362:ASP:HA	1.56	0.71
3:O:63:ALA:HB3	3:O:65:LEU:HD13	1.72	0.71
3:T:277:GLN:OE1	3:T:277:GLN:N	2.23	0.71
3:V:20:GLU:CD	3:V:20:GLU:H	1.93	0.71
3:V:249:ILE:HD11	3:V:321:GLN:HG3	1.72	0.71
3:C:146:SER:HB2	3:C:169:ILE:HD12	1.73	0.71
3:H:81:PHE:HB3	3:H:94:ILE:HA	1.72	0.71
3:L:264:ASN:ND2	3:M:251:LEU:HD21	2.02	0.71
3:M:10:VAL:HG21	3:M:18:LYS:NZ	2.05	0.71
3:S:305:VAL:HG22	3:S:308:VAL:HB	1.73	0.71
3:D:77:ALA:HB3	3:D:98:ARG:HH22	1.55	0.71
3:E:248:GLN:HG2	3:E:249:ILE:N	2.05	0.71
3:E:249:ILE:HG23	3:E:319:MET:SD	2.30	0.71
3:I:417:LYS:N	3:I:420:HIS:HD2	1.87	0.71
3:J:33:ILE:HD12	3:J:88:ASP:HB2	1.72	0.71
3:A:205:PHE:CD2	3:A:205:PHE:O	2.43	0.71
3:E:172:ILE:HD12	3:E:226:VAL:HG21	1.72	0.71
3:F:184:HIS:O	3:F:189:THR:N	2.23	0.71
3:H:77:ALA:HB3	3:H:98:ARG:NH2	2.06	0.71
3:I:57:LEU:HD23	3:I:194:CYS:SG	2.31	0.71
3:U:257:ILE:HD13	3:U:269:ILE:HD12	1.73	0.71
1:W:66:A:O2'	1:W:67:C:C5'	2.39	0.71
3:B:146:SER:HB2	3:B:169:ILE:HD12	1.72	0.71
3:B:184:HIS:O	3:B:189:THR:N	2.23	0.71
3:C:185:HIS:C	3:C:189:THR:N	2.44	0.71
3:F:257:ILE:HD13	3:F:269:ILE:HD12	1.72	0.71
3:I:51:LYS:O	3:I:55:SER:HB2	1.90	0.71
3:J:74:LEU:HA	3:J:98:ARG:HD3	1.72	0.71
3:L:30:TYR:HB3	3:L:277:GLN:NE2	2.06	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:66:ASP:HB2	3:M:67:PRO:CD	2.21	0.71
3:O:77:ALA:HB3	3:O:98:ARG:HH12	1.56	0.71
3:R:249:ILE:HD11	3:R:321:GLN:HG3	1.73	0.71
3:U:189:THR:CG2	3:U:192:LYS:HB3	2.21	0.71
1:W:40:A:OP1	3:B:168:ARG:NH2	2.23	0.71
3:K:216:ARG:HG3	3:K:217:ILE:HD12	1.73	0.71
3:M:344:TYR:CD2	3:M:409:ILE:CG1	2.73	0.71
3:Q:57:LEU:CD2	3:Q:194:CYS:SG	2.78	0.71
3:T:31:PRO:HD2	3:T:277:GLN:HE21	1.56	0.71
3:U:50:ASN:HD22	3:U:50:ASN:N	1.87	0.71
3:C:46:ALA:HB1	3:C:50:ASN:OD1	1.91	0.71
3:M:74:LEU:HA	3:M:98:ARG:HD3	1.73	0.71
3:P:77:ALA:CB	3:P:98:ARG:HH22	2.02	0.71
3:Q:340:VAL:HG22	3:Q:416:LEU:HD11	1.72	0.71
3:U:87:GLU:OE2	3:U:285:TYR:N	2.23	0.71
3:A:151:SER:OG	3:A:198:SER:HA	1.91	0.70
3:A:216:ARG:HG3	3:A:217:ILE:HD12	1.72	0.70
3:C:249:ILE:HG22	3:C:250:ASN:H	1.55	0.70
3:C:305:VAL:HG22	3:C:308:VAL:HB	1.72	0.70
3:C:93:GLY:O	3:C:94:ILE:HG23	1.90	0.70
3:D:169:ILE:HG22	3:D:226:VAL:HG11	1.73	0.70
3:F:249:ILE:HG22	3:F:250:ASN:N	2.06	0.70
3:F:81:PHE:HB3	3:F:95:VAL:H	1.55	0.70
3:J:77:ALA:HB3	3:J:98:ARG:NH2	2.04	0.70
3:S:323:ARG:HD3	3:S:324:SER:N	2.05	0.70
3:V:417:LYS:N	3:V:420:HIS:HD2	1.80	0.70
3:A:77:ALA:HB3	3:A:98:ARG:CZ	2.22	0.70
3:H:185:HIS:C	3:H:189:THR:N	2.44	0.70
3:I:223:ALA:O	3:I:226:VAL:HG23	1.90	0.70
3:J:189:THR:HG23	3:J:192:LYS:HB3	1.72	0.70
3:J:366:LEU:O	3:J:366:LEU:HD23	1.91	0.70
3:Q:176:ALA:HB1	3:Q:177:PRO:CD	2.21	0.70
3:S:77:ALA:HB3	3:S:98:ARG:HH22	1.56	0.70
3:U:20:GLU:N	3:U:20:GLU:OE1	2.24	0.70
3:L:255:GLU:CB	3:V:8:PHE:HZ	2.04	0.70
3:D:52:ALA:HA	3:D:126:MET:SD	2.31	0.70
3:D:169:ILE:HG22	3:D:226:VAL:CG1	2.21	0.70
3:G:180:LYS:HE2	3:G:182:VAL:O	1.92	0.70
3:G:219:HIS:O	3:G:219:HIS:ND1	2.25	0.70
3:G:325:LEU:HD23	3:G:431:HIS:CD2	2.26	0.70
3:H:74:LEU:HA	3:H:98:ARG:HD3	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:410:MET:HE2	3:L:410:MET:HA	1.72	0.70
3:P:305:VAL:HG22	3:P:308:VAL:HB	1.71	0.70
1:W:67:C:N3	1:W:68:C:C4	2.60	0.70
3:B:73:TYR:OH	3:B:98:ARG:NH2	2.24	0.70
3:C:87:GLU:OE2	3:C:285:TYR:N	2.23	0.70
3:I:175:THR:HG23	3:I:176:ALA:H	1.55	0.70
3:I:373:GLU:O	3:I:374:LEU:HB2	1.89	0.70
3:L:87:GLU:O	3:L:89:TRP:N	2.24	0.70
3:M:189:THR:HG22	3:M:192:LYS:C	2.11	0.70
3:N:63:ALA:HB3	3:N:65:LEU:CD1	2.18	0.70
3:O:43:LEU:HG	3:O:44:GLY:H	1.56	0.70
3:U:249:ILE:HG22	3:U:250:ASN:H	1.56	0.70
3:B:35:ASP:OD2	3:B:89:TRP:CD1	2.43	0.70
3:F:223:ALA:O	3:F:226:VAL:HG23	1.91	0.70
3:F:79:GLN:HB3	3:F:217:ILE:HG21	1.74	0.70
3:G:249:ILE:HG22	3:G:250:ASN:H	1.56	0.70
3:G:8:PHE:HE2	3:H:255:GLU:HA	1.49	0.70
3:I:175:THR:HG23	3:I:176:ALA:N	2.07	0.70
3:I:250:ASN:N	3:I:250:ASN:OD1	2.24	0.70
3:J:313:HIS:ND1	3:J:324:SER:HB3	2.06	0.70
3:L:223:ALA:O	3:L:226:VAL:HG23	1.91	0.70
3:L:37:LYS:O	3:L:39:PRO:HD3	1.91	0.70
3:O:313:HIS:HB3	3:O:324:SER:HB2	1.74	0.70
3:R:50:ASN:HD22	3:R:50:ASN:N	1.88	0.70
3:U:66:ASP:HB2	3:U:67:PRO:HD3	1.74	0.70
3:N:172:ILE:HD12	3:N:226:VAL:HG21	1.72	0.70
3:P:338:MET:HA	3:P:338:MET:HE2	1.74	0.70
3:Q:74:LEU:HD22	3:Q:98:ARG:HB2	1.73	0.70
3:T:262:HIS:HE1	3:U:251:LEU:HD22	1.56	0.70
3:V:50:ASN:N	3:V:50:ASN:HD22	1.90	0.70
3:A:169:ILE:HG22	3:A:226:VAL:CG1	2.20	0.70
3:A:97:ALA:O	3:A:99:LYS:N	2.24	0.70
3:C:403:GLU:HG3	3:D:357:ARG:HH12	1.55	0.70
3:G:240:VAL:O	3:G:243:THR:HG22	1.92	0.70
3:P:145:LEU:HD22	3:P:207:ALA:HA	1.73	0.70
3:Q:10:VAL:HG12	3:Q:11:ASN:H	1.56	0.70
3:T:53:TYR:CD2	3:T:54:LYS:N	2.60	0.70
3:U:74:LEU:HD22	3:U:98:ARG:CB	2.22	0.70
3:B:249:ILE:CG2	3:B:319:MET:HE1	2.20	0.70
3:F:177:PRO:HB2	3:F:221:TYR:CE2	2.27	0.70
3:K:87:GLU:OE2	3:K:285:TYR:N	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:65:LEU:HD21	3:L:119:ASN:CB	2.20	0.70
3:O:268:GLU:HB3	3:O:305:VAL:HG23	1.73	0.70
3:P:97:ALA:O	3:P:99:LYS:N	2.19	0.70
3:R:63:ALA:HB3	3:R:65:LEU:HD13	1.72	0.70
3:G:51:LYS:O	3:G:55:SER:HB2	1.89	0.70
3:I:54:LYS:NZ	3:I:69:ASP:OD1	2.23	0.70
3:M:249:ILE:HG21	3:M:319:MET:HE1	1.73	0.70
3:V:219:HIS:CD2	3:V:222:SER:OG	2.43	0.70
2:X:89:C:H41	3:M:323:ARG:NE	1.90	0.70
3:B:73:TYR:CZ	3:B:98:ARG:NH2	2.60	0.70
3:B:77:ALA:HB3	3:B:98:ARG:NH2	2.06	0.70
3:F:410:MET:HA	3:F:410:MET:CE	2.22	0.70
3:P:206:LEU:HA	3:P:209:THR:HG22	1.73	0.70
3:U:63:ALA:HB3	3:U:65:LEU:CD1	2.21	0.70
3:B:49:LEU:HD22	3:B:52:ALA:HB2	1.74	0.69
3:H:38:LYS:HE2	3:H:38:LYS:HA	1.74	0.69
3:I:31:PRO:HD2	3:I:277:GLN:CG	2.21	0.69
3:M:163:THR:HG22	3:M:192:LYS:NZ	2.07	0.69
3:N:250:ASN:OD1	3:N:250:ASN:N	2.23	0.69
3:S:20:GLU:OE1	3:S:20:GLU:N	2.24	0.69
3:T:60:MET:SD	3:T:60:MET:N	2.63	0.69
3:A:57:LEU:HD12	3:A:57:LEU:N	2.07	0.69
3:B:340:VAL:HG22	3:B:416:LEU:HD11	1.74	0.69
3:C:221:TYR:O	3:C:223:ALA:N	2.26	0.69
3:I:66:ASP:OD1	3:I:66:ASP:N	2.21	0.69
3:J:87:GLU:C	3:J:89:TRP:H	1.96	0.69
3:J:33:ILE:HB	3:J:88:ASP:CB	2.18	0.69
3:N:49:LEU:CD2	3:N:52:ALA:HB2	2.20	0.69
3:O:211:ASP:HB2	3:O:228:THR:HB	1.74	0.69
3:P:74:LEU:HD22	3:P:98:ARG:CB	2.21	0.69
3:T:7:VAL:CG1	3:T:8:PHE:N	2.54	0.69
3:U:57:LEU:HD21	3:U:194:CYS:SG	2.30	0.69
3:U:87:GLU:HG2	3:U:284:SER:HA	1.72	0.69
3:D:184:HIS:O	3:D:189:THR:N	2.24	0.69
3:D:249:ILE:HG23	3:D:319:MET:CE	2.22	0.69
3:I:169:ILE:HG22	3:I:226:VAL:CG1	2.23	0.69
3:J:253:ALA:C	3:J:255:GLU:H	1.96	0.69
3:J:73:TYR:HD2	3:J:210:TYR:HH	0.79	0.69
3:L:255:GLU:CA	3:V:8:PHE:HE2	1.90	0.69
1:W:76:C:OP1	3:I:168:ARG:NH2	2.24	0.69
3:A:85:CYS:HB3	3:A:91:SER:HB2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:146:SER:CB	3:D:169:ILE:HD12	2.13	0.69
3:F:183:GLU:O	3:F:190:THR:HG22	1.91	0.69
3:G:222:SER:O	3:G:224:ILE:N	2.25	0.69
3:I:73:TYR:CZ	3:I:98:ARG:NH2	2.61	0.69
3:J:239:LEU:O	3:J:243:THR:HG22	1.92	0.69
3:L:54:LYS:C	3:L:56:VAL:H	1.94	0.69
3:M:295:SER:OG	3:M:296:GLY:N	2.21	0.69
3:N:287:ILE:HG13	3:N:288:HIS:CD2	2.28	0.69
3:R:184:HIS:O	3:R:189:THR:N	2.25	0.69
3:V:176:ALA:HB1	3:V:177:PRO:HD2	1.71	0.69
3:C:6:ILE:HD12	3:D:254:ARG:HH22	1.57	0.69
3:L:313:HIS:HB3	3:L:324:SER:HB2	1.74	0.69
3:T:97:ALA:O	3:T:99:LYS:N	2.24	0.69
3:B:211:ASP:OD2	3:B:288:HIS:HE1	1.75	0.69
3:C:176:ALA:C	3:C:178:PHE:H	1.94	0.69
3:E:249:ILE:HG21	3:E:319:MET:HE1	1.74	0.69
3:H:146:SER:HB2	3:H:169:ILE:HD12	1.74	0.69
3:I:85:CYS:HB3	3:I:91:SER:HB2	1.73	0.69
3:J:249:ILE:HG23	3:J:319:MET:SD	2.32	0.69
3:N:249:ILE:CG2	3:N:250:ASN:H	2.04	0.69
3:T:64:LYS:C	3:T:67:PRO:HD2	2.13	0.69
3:T:7:VAL:HG13	3:T:18:LYS:O	1.93	0.69
3:V:185:HIS:C	3:V:189:THR:N	2.46	0.69
3:E:78:MET:O	3:E:220:LEU:HD22	1.93	0.69
3:I:77:ALA:HB1	3:I:220:LEU:HD21	1.75	0.69
3:J:417:LYS:H	3:J:420:HIS:CD2	2.11	0.69
3:K:219:HIS:HA	3:K:222:SER:HB3	1.73	0.69
3:K:66:ASP:OD1	3:K:66:ASP:N	2.18	0.69
3:L:53:TYR:HD1	3:L:121:ALA:O	1.75	0.69
3:M:65:LEU:HD21	3:M:119:ASN:CB	2.19	0.69
3:N:176:ALA:C	3:N:178:PHE:H	1.94	0.69
3:P:340:VAL:HG13	3:P:416:LEU:HD12	1.74	0.69
3:S:54:LYS:HD3	3:S:69:ASP:OD2	1.91	0.69
3:T:189:THR:HG22	3:T:192:LYS:HB3	1.75	0.69
3:B:10:VAL:O	3:B:11:ASN:CB	2.41	0.69
3:B:194:CYS:C	3:B:196:ASN:H	1.94	0.69
3:E:172:ILE:HD11	3:E:226:VAL:HG21	1.74	0.69
3:H:268:GLU:HB3	3:H:305:VAL:HG23	1.75	0.69
3:I:268:GLU:HB3	3:I:305:VAL:HG23	1.73	0.69
3:P:20:GLU:N	3:P:20:GLU:OE1	2.25	0.69
3:P:46:ALA:HB1	3:P:50:ASN:OD1	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Q:266:GLU:OE2	3:R:358:ARG:HD2	1.92	0.69
3:A:57:LEU:HD11	3:A:140:LEU:HD11	1.75	0.69
3:B:323:ARG:HD3	3:B:323:ARG:C	2.13	0.69
3:M:74:LEU:HD22	3:M:98:ARG:HB2	1.75	0.69
3:N:177:PRO:HB2	3:N:221:TYR:CE2	2.27	0.69
3:O:51:LYS:O	3:O:55:SER:HB2	1.92	0.69
3:Q:54:LYS:HE3	3:Q:140:LEU:CD2	2.22	0.69
3:S:57:LEU:C	3:S:57:LEU:HD23	2.13	0.69
3:T:263:LYS:HE2	3:U:358:ARG:HH21	1.58	0.69
3:A:6:ILE:HG21	3:B:254:ARG:HH21	1.57	0.69
3:H:46:ALA:HB1	3:H:50:ASN:OD1	1.93	0.69
3:B:183:GLU:H	3:B:190:THR:HG21	1.57	0.69
1:W:34:A:H5'	3:B:235:ASP:OD2	1.93	0.69
3:C:296:GLY:C	3:C:297:LYS:HD3	2.13	0.69
3:I:239:LEU:O	3:I:243:THR:HG22	1.93	0.69
3:J:50:ASN:N	3:J:50:ASN:HD22	1.90	0.69
3:L:249:ILE:HG22	3:L:250:ASN:H	1.56	0.69
3:P:417:LYS:N	3:P:420:HIS:HD2	1.90	0.69
3:P:66:ASP:HB2	3:P:67:PRO:HD3	1.74	0.69
3:G:85:CYS:O	3:G:91:SER:HB2	1.92	0.68
3:Q:249:ILE:HG22	3:Q:250:ASN:N	2.04	0.68
3:S:184:HIS:O	3:S:189:THR:N	2.26	0.68
3:S:8:PHE:HE1	3:T:254:ARG:HG3	1.57	0.68
3:V:26:HIS:O	3:V:27:GLU:HB3	1.91	0.68
3:B:35:ASP:CG	3:B:89:TRP:NE1	2.46	0.68
3:G:249:ILE:HG23	3:G:319:MET:SD	2.34	0.68
3:K:33:ILE:HB	3:K:88:ASP:HB2	1.74	0.68
3:S:35:ASP:HA	3:S:89:TRP:HE1	1.58	0.68
3:C:248:GLN:CG	3:C:249:ILE:H	2.01	0.68
3:D:197:TRP:CD1	3:D:198:SER:N	2.60	0.68
3:E:50:ASN:N	3:E:50:ASN:HD22	1.91	0.68
3:H:26:HIS:O	3:H:27:GLU:HB3	1.92	0.68
3:I:197:TRP:HD1	3:I:198:SER:N	1.91	0.68
3:J:182:VAL:HB	3:J:190:THR:HG21	1.76	0.68
3:K:253:ALA:C	3:K:255:GLU:H	1.97	0.68
3:K:63:ALA:HB3	3:K:65:LEU:CD1	2.21	0.68
3:L:60:MET:SD	3:L:60:MET:N	2.65	0.68
3:T:175:THR:HG23	3:T:176:ALA:N	2.09	0.68
3:V:194:CYS:C	3:V:196:ASN:N	2.44	0.68
3:A:172:ILE:HD11	3:A:226:VAL:HG21	1.75	0.68
3:B:340:VAL:HA	3:B:416:LEU:HD11	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:417:LYS:H	3:E:420:HIS:HD2	1.40	0.68
3:N:182:VAL:HB	3:N:190:THR:CG2	2.23	0.68
3:Q:73:TYR:OH	3:Q:98:ARG:NH2	2.27	0.68
3:R:163:THR:HG22	3:R:192:LYS:NZ	2.08	0.68
3:S:6:ILE:O	3:S:7:VAL:HB	1.93	0.68
3:S:8:PHE:CE2	3:T:255:GLU:HA	2.27	0.68
2:X:89:C:H41	3:M:323:ARG:HH21	1.42	0.68
3:B:57:LEU:HD21	3:B:144:LEU:HD21	1.75	0.68
3:B:8:PHE:HE2	3:C:255:GLU:HA	0.92	0.68
3:I:81:PHE:HB3	3:I:95:VAL:H	1.58	0.68
3:R:206:LEU:HA	3:R:209:THR:HG22	1.73	0.68
3:S:249:ILE:HG21	3:S:319:MET:HE1	1.75	0.68
3:V:14:VAL:HG23	3:V:15:VAL:H	1.59	0.68
3:A:194:CYS:C	3:A:196:ASN:H	1.96	0.68
3:A:63:ALA:HB3	3:A:65:LEU:HD13	1.74	0.68
3:B:417:LYS:N	3:B:420:HIS:HD2	1.91	0.68
3:F:409:ILE:HG22	3:F:410:MET:HE3	1.75	0.68
3:M:216:ARG:C	3:M:216:ARG:HD3	2.14	0.68
3:Q:73:TYR:HD2	3:Q:210:TYR:HH	1.42	0.68
3:Q:323:ARG:HD3	3:Q:324:SER:N	2.07	0.68
3:S:81:PHE:CG	3:S:82:GLU:N	2.61	0.68
3:V:248:GLN:CD	3:V:249:ILE:HG13	2.14	0.68
3:H:189:THR:HG22	3:H:192:LYS:HB3	1.75	0.68
3:N:26:HIS:O	3:N:27:GLU:HB3	1.94	0.68
3:N:323:ARG:HD3	3:N:323:ARG:C	2.14	0.68
3:T:206:LEU:HA	3:T:209:THR:CG2	2.23	0.68
3:V:10:VAL:HG21	3:V:18:LYS:NZ	2.09	0.68
3:D:171:GLN:O	3:D:174:GLU:HG2	1.92	0.68
3:E:169:ILE:HG22	3:E:226:VAL:CG1	2.24	0.68
3:H:98:ARG:HD2	3:H:98:ARG:H	1.59	0.68
3:I:51:LYS:HA	3:I:54:LYS:CE	2.23	0.68
3:Q:133:THR:HG22	3:Q:136:GLU:OE2	1.93	0.68
3:Q:313:HIS:ND1	3:Q:324:SER:HB3	2.09	0.68
3:R:194:CYS:C	3:R:196:ASN:N	2.46	0.68
3:R:66:ASP:HB2	3:R:67:PRO:CD	2.24	0.68
3:S:183:GLU:O	3:S:190:THR:HG22	1.92	0.68
3:U:232:ALA:C	3:U:234:GLU:H	1.96	0.68
3:V:149:ARG:O	3:V:153:ILE:HD12	1.93	0.68
3:A:263:LYS:HE2	3:B:358:ARG:NH2	2.09	0.68
3:F:176:ALA:HB1	3:F:177:PRO:CD	2.22	0.68
3:G:194:CYS:C	3:G:196:ASN:H	1.95	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:249:ILE:HG22	3:G:250:ASN:N	2.09	0.68
3:F:20:GLU:HB2	3:G:254:ARG:HD2	1.74	0.68
3:G:50:ASN:HD22	3:G:50:ASN:N	1.92	0.68
3:L:184:HIS:O	3:L:189:THR:N	2.27	0.68
3:L:87:GLU:C	3:L:89:TRP:N	2.41	0.68
3:P:197:TRP:HD1	3:P:198:SER:N	1.89	0.68
3:Q:66:ASP:O	3:Q:70:VAL:N	2.26	0.68
3:C:10:VAL:O	3:C:11:ASN:HB2	1.94	0.68
3:H:171:GLN:O	3:H:174:GLU:HG2	1.93	0.68
3:I:189:THR:CG2	3:I:192:LYS:CB	2.67	0.68
3:J:308:VAL:HG12	3:J:312:ILE:CD1	2.23	0.68
3:K:26:HIS:O	3:K:27:GLU:HB3	1.93	0.68
3:N:366:LEU:O	3:N:366:LEU:HD23	1.94	0.68
3:R:340:VAL:HG22	3:R:416:LEU:CD1	2.24	0.68
3:S:12:ASN:HB3	3:S:13:GLN:OE1	1.94	0.68
3:V:66:ASP:O	3:V:70:VAL:N	2.25	0.68
3:G:340:VAL:HA	3:G:416:LEU:HD11	1.75	0.67
3:J:194:CYS:C	3:J:196:ASN:H	1.94	0.67
3:Q:169:ILE:HG22	3:Q:226:VAL:HG11	1.75	0.67
3:R:340:VAL:HG13	3:R:416:LEU:HD12	1.76	0.67
3:E:38:LYS:HD3	3:E:205:PHE:HE1	1.58	0.67
3:F:172:ILE:CD1	3:F:226:VAL:HG21	2.23	0.67
3:H:53:TYR:HD1	3:H:121:ALA:O	1.76	0.67
3:J:74:LEU:HD22	3:J:98:ARG:CB	2.22	0.67
3:K:268:GLU:HB3	3:K:305:VAL:CG2	2.24	0.67
3:L:176:ALA:HB1	3:L:177:PRO:CD	2.20	0.67
3:M:175:THR:HG23	3:M:176:ALA:N	2.09	0.67
3:N:216:ARG:HG3	3:N:217:ILE:HD12	1.74	0.67
3:U:54:LYS:HD3	3:U:69:ASP:OD2	1.95	0.67
1:W:85:C:OP1	3:H:168:ARG:NH2	2.27	0.67
3:C:249:ILE:HG21	3:C:319:MET:CE	2.25	0.67
3:B:9:LYS:NZ	3:D:363:GLU:H	1.92	0.67
3:I:74:LEU:HA	3:I:98:ARG:HD3	1.75	0.67
3:O:8:PHE:HE2	3:P:255:GLU:HA	1.54	0.67
3:P:77:ALA:HB3	3:P:98:ARG:NH1	2.08	0.67
3:P:20:GLU:O	3:Q:254:ARG:NH1	2.28	0.67
3:D:366:LEU:HD23	3:D:366:LEU:O	1.94	0.67
3:F:308:VAL:HG12	3:F:312:ILE:CD1	2.23	0.67
3:H:54:LYS:HD3	3:H:69:ASP:OD2	1.95	0.67
3:K:124:GLY:HA2	3:L:122:LEU:HD22	1.76	0.67
3:K:184:HIS:O	3:K:189:THR:N	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:P:222:SER:C	3:P:224:ILE:H	1.98	0.67
3:P:338:MET:HA	3:P:338:MET:CE	2.23	0.67
3:Q:31:PRO:HD2	3:Q:277:GLN:HE21	1.59	0.67
3:T:77:ALA:CB	3:T:98:ARG:NH2	2.54	0.67
3:U:32:ALA:H	3:U:277:GLN:HE21	1.42	0.67
3:B:169:ILE:HG22	3:B:226:VAL:HG11	1.76	0.67
3:B:51:LYS:O	3:B:55:SER:HB2	1.94	0.67
3:C:336:HIS:O	3:C:340:VAL:HG23	1.94	0.67
3:O:184:HIS:O	3:O:189:THR:N	2.28	0.67
3:V:66:ASP:HB2	3:V:67:PRO:HD3	1.76	0.67
3:C:249:ILE:HG22	3:C:250:ASN:N	2.10	0.67
3:C:64:LYS:O	3:C:64:LYS:HG3	1.95	0.67
3:E:264:ASN:HD21	3:F:251:LEU:CD2	2.08	0.67
3:G:189:THR:O	3:G:193:MET:N	2.16	0.67
3:I:313:HIS:HB3	3:I:324:SER:HB2	1.76	0.67
3:Q:77:ALA:CB	3:Q:98:ARG:NH2	2.46	0.67
3:T:189:THR:O	3:T:193:MET:HG2	1.94	0.67
3:A:205:PHE:CD2	3:A:205:PHE:C	2.67	0.67
3:K:163:THR:HG22	3:K:192:LYS:NZ	2.10	0.67
3:M:77:ALA:HB1	3:M:220:LEU:HD21	1.74	0.67
3:N:60:MET:N	3:N:60:MET:SD	2.68	0.67
3:P:9:LYS:HD3	3:R:362:ASP:HA	1.76	0.67
3:U:85:CYS:HB3	3:U:91:SER:HB2	1.77	0.67
3:E:249:ILE:HG22	3:E:250:ASN:N	2.10	0.67
3:I:278:GLU:HB3	3:I:281:VAL:CG2	2.25	0.67
3:I:87:GLU:OE2	3:I:285:TYR:N	2.28	0.67
3:I:73:TYR:OH	3:I:98:ARG:NH2	2.28	0.67
3:M:135:PRO:O	3:M:139:SER:HB2	1.95	0.67
3:M:10:VAL:CG2	3:M:18:LYS:HZ3	2.08	0.67
3:Q:232:ALA:C	3:Q:234:GLU:H	1.97	0.67
3:T:146:SER:CB	3:T:169:ILE:HD12	2.18	0.67
3:A:184:HIS:O	3:A:189:THR:N	2.28	0.67
3:C:249:ILE:HG21	3:C:319:MET:HE1	1.77	0.67
3:D:222:SER:O	3:D:224:ILE:N	2.27	0.67
3:F:8:PHE:CE1	3:G:254:ARG:O	2.48	0.67
3:F:77:ALA:CB	3:F:98:ARG:NH2	2.54	0.67
3:O:337:GLU:OE2	3:P:353:GLY:HA2	1.95	0.67
3:Q:182:VAL:HB	3:Q:190:THR:HG21	1.75	0.67
3:Q:253:ALA:O	3:Q:254:ARG:HG2	1.95	0.67
3:Q:73:TYR:CZ	3:Q:98:ARG:NH2	2.63	0.67
3:S:176:ALA:C	3:S:178:PHE:N	2.45	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:97:ALA:O	3:S:99:LYS:N	2.28	0.67
3:A:232:ALA:C	3:A:234:GLU:H	1.99	0.67
3:A:8:PHE:CD2	3:B:258:LEU:HD11	2.30	0.67
3:E:249:ILE:CG2	3:E:319:MET:SD	2.83	0.67
3:F:38:LYS:HG3	3:F:292:LEU:HB3	1.76	0.67
3:F:54:LYS:NZ	3:F:69:ASP:OD2	2.26	0.67
3:K:93:GLY:O	3:K:94:ILE:HG23	1.95	0.67
3:L:66:ASP:N	3:L:66:ASP:OD1	2.28	0.67
3:Q:163:THR:HG22	3:Q:192:LYS:HZ2	1.60	0.67
3:S:222:SER:O	3:S:224:ILE:N	2.28	0.67
3:A:334:ALA:O	3:A:338:MET:HG2	1.94	0.66
3:B:249:ILE:HG22	3:B:250:ASN:OD1	1.95	0.66
3:C:232:ALA:C	3:C:234:GLU:H	1.99	0.66
3:E:305:VAL:HG13	3:E:305:VAL:O	1.94	0.66
3:M:249:ILE:CG2	3:M:319:MET:CE	2.71	0.66
3:S:185:HIS:C	3:S:189:THR:N	2.48	0.66
3:C:255:GLU:C	3:C:255:GLU:OE1	2.33	0.66
3:D:313:HIS:ND1	3:D:324:SER:CB	2.58	0.66
3:G:434:ARG:HB3	3:G:435:PRO:CD	2.24	0.66
3:G:8:PHE:HZ	3:H:255:GLU:HA	1.55	0.66
3:K:77:ALA:O	3:K:98:ARG:CZ	2.43	0.66
3:L:287:ILE:HG13	3:L:288:HIS:CD2	2.30	0.66
3:N:54:LYS:CD	3:N:69:ASP:OD2	2.43	0.66
3:P:50:ASN:N	3:P:50:ASN:HD22	1.93	0.66
3:Q:10:VAL:O	3:Q:11:ASN:HB2	1.95	0.66
3:Q:169:ILE:HG22	3:Q:226:VAL:CG1	2.26	0.66
3:E:8:PHE:CE2	3:F:258:LEU:HD13	2.31	0.66
3:F:77:ALA:O	3:F:98:ARG:CZ	2.43	0.66
3:B:8:PHE:CZ	3:C:255:GLU:HB2	2.27	0.66
3:D:174:GLU:HG3	3:D:174:GLU:O	1.94	0.66
3:D:183:GLU:O	3:D:190:THR:CG2	2.42	0.66
3:D:263:LYS:HE2	3:E:358:ARG:HH21	1.59	0.66
3:D:33:ILE:HB	3:D:88:ASP:HB3	1.78	0.66
3:E:77:ALA:HB3	3:E:98:ARG:NH2	2.09	0.66
3:F:169:ILE:HG22	3:F:226:VAL:CG1	2.26	0.66
3:K:133:THR:HG22	3:K:136:GLU:HG3	1.78	0.66
3:L:8:PHE:CE1	3:M:254:ARG:O	2.49	0.66
3:P:53:TYR:HD1	3:P:121:ALA:O	1.78	0.66
3:T:305:VAL:HG22	3:T:308:VAL:HB	1.77	0.66
3:U:77:ALA:CB	3:U:98:ARG:NH2	2.56	0.66
3:A:30:TYR:HB3	3:A:277:GLN:NE2	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:8:PHE:CZ	3:D:255:GLU:HA	2.31	0.66
3:D:77:ALA:HB1	3:D:220:LEU:HD21	1.77	0.66
3:G:263:LYS:HE2	3:H:358:ARG:NH2	2.09	0.66
3:H:38:LYS:CE	3:H:39:PRO:HD2	2.25	0.66
3:K:56:VAL:CG1	3:K:123:THR:OG1	2.44	0.66
3:M:37:LYS:O	3:M:39:PRO:HD3	1.96	0.66
3:O:249:ILE:HG21	3:O:319:MET:HE1	1.76	0.66
3:R:253:ALA:C	3:R:255:GLU:H	1.98	0.66
3:S:32:ALA:HB2	3:S:277:GLN:NE2	2.11	0.66
3:A:263:LYS:HE2	3:B:358:ARG:HH21	1.61	0.66
3:D:169:ILE:HD11	3:D:191:HIS:HE1	1.60	0.66
3:N:315:VAL:O	3:N:319:MET:HE2	1.96	0.66
3:P:340:VAL:CG2	3:P:416:LEU:HD11	2.21	0.66
3:R:8:PHE:CZ	3:S:255:GLU:CA	2.61	0.66
3:S:57:LEU:HD21	3:S:194:CYS:SG	2.35	0.66
3:T:232:ALA:O	3:T:234:GLU:N	2.28	0.66
1:W:54:C:H2'	1:W:56:C:H5''	1.77	0.66
3:F:87:GLU:C	3:F:89:TRP:H	1.98	0.66
3:L:189:THR:O	3:L:193:MET:HG2	1.96	0.66
3:N:176:ALA:C	3:N:178:PHE:N	2.49	0.66
3:O:417:LYS:N	3:O:420:HIS:HD2	1.93	0.66
3:R:20:GLU:OE1	3:R:20:GLU:N	2.29	0.66
3:S:197:TRP:HD1	3:S:198:SER:H	1.40	0.66
3:B:38:LYS:HD3	3:B:205:PHE:HE1	1.59	0.66
3:D:248:GLN:CG	3:D:249:ILE:H	1.87	0.66
3:H:249:ILE:HG22	3:H:250:ASN:N	2.10	0.66
3:R:264:ASN:HD21	3:S:251:LEU:HD22	1.60	0.66
3:V:323:ARG:HD3	3:V:324:SER:N	2.10	0.66
3:A:50:ASN:N	3:A:50:ASN:HD22	1.92	0.66
3:E:146:SER:HB2	3:E:169:ILE:HD12	1.78	0.66
3:F:173:PHE:O	3:F:174:GLU:HB3	1.95	0.66
3:E:8:PHE:CD2	3:F:258:LEU:HD13	2.30	0.66
3:G:323:ARG:C	3:G:323:ARG:HD3	2.15	0.66
3:H:249:ILE:HG21	3:H:319:MET:HE1	1.76	0.66
3:K:65:LEU:HB3	3:K:120:TRP:CZ3	2.31	0.66
3:L:176:ALA:C	3:L:178:PHE:H	1.97	0.66
3:L:66:ASP:HB2	3:L:67:PRO:HD3	1.77	0.66
3:Q:284:SER:O	3:Q:287:ILE:HG12	1.95	0.66
3:Q:313:HIS:HB3	3:Q:324:SER:HB2	1.75	0.66
3:T:31:PRO:O	3:T:32:ALA:C	2.34	0.66
3:U:176:ALA:C	3:U:178:PHE:H	1.99	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:169:ILE:HG22	3:A:226:VAL:HG11	1.78	0.66
3:A:74:LEU:HD22	3:A:98:ARG:HB2	1.76	0.66
3:E:434:ARG:HB3	3:E:435:PRO:HD2	1.78	0.66
3:V:212:MET:HG3	3:V:288:HIS:CD2	2.30	0.66
3:A:56:VAL:HG12	3:A:59:GLY:HA3	1.76	0.65
3:C:66:ASP:O	3:C:70:VAL:N	2.29	0.65
3:E:340:VAL:HG22	3:E:416:LEU:CD1	2.26	0.65
3:F:73:TYR:O	3:F:98:ARG:NH1	2.30	0.65
3:F:8:PHE:CZ	3:G:255:GLU:CA	2.78	0.65
3:H:145:LEU:HD22	3:H:207:ALA:HA	1.78	0.65
3:J:31:PRO:HD2	3:J:277:GLN:HG3	1.78	0.65
3:L:77:ALA:CB	3:L:98:ARG:HH22	2.07	0.65
3:L:77:ALA:CB	3:L:98:ARG:NH2	2.58	0.65
3:S:239:LEU:O	3:S:243:THR:HG22	1.95	0.65
2:X:88:A:H8	2:X:89:C:H4'	1.60	0.65
3:A:77:ALA:HB3	3:A:98:ARG:NH1	2.11	0.65
3:B:8:PHE:HZ	3:C:255:GLU:CB	2.10	0.65
3:E:249:ILE:HG21	3:E:319:MET:CE	2.26	0.65
3:K:97:ALA:O	3:K:99:LYS:N	2.30	0.65
3:L:219:HIS:HA	3:L:222:SER:HB3	1.78	0.65
3:C:122:LEU:HD11	3:T:122:LEU:CD2	2.25	0.65
3:C:417:LYS:H	3:C:420:HIS:HD2	1.43	0.65
3:F:60:MET:SD	3:F:60:MET:N	2.69	0.65
3:J:156:GLN:C	3:J:158:THR:H	1.99	0.65
3:A:258:LEU:HD13	3:K:8:PHE:CD2	2.31	0.65
3:L:87:GLU:OE2	3:L:285:TYR:N	2.30	0.65
3:Q:236:CYS:O	3:Q:238:GLY:N	2.30	0.65
3:S:46:ALA:HB1	3:S:50:ASN:OD1	1.96	0.65
3:L:273:PHE:CD2	3:V:20:GLU:HB3	2.32	0.65
3:B:20:GLU:HB3	3:C:273:PHE:CD2	2.32	0.65
3:C:6:ILE:HD12	3:D:254:ARG:NH2	2.11	0.65
3:E:277:GLN:OE1	3:E:277:GLN:N	2.25	0.65
3:E:323:ARG:HD3	3:E:324:SER:N	2.12	0.65
3:I:10:VAL:HG12	3:I:11:ASN:H	1.61	0.65
3:J:206:LEU:HA	3:J:209:THR:CG2	2.26	0.65
3:Q:225:ARG:O	3:Q:228:THR:N	2.29	0.65
3:A:232:ALA:O	3:A:234:GLU:N	2.24	0.65
3:B:74:LEU:HD23	3:B:210:TYR:CZ	2.31	0.65
3:C:189:THR:HG23	3:C:192:LYS:HB3	1.75	0.65
3:D:197:TRP:HD1	3:D:198:SER:N	1.92	0.65
3:I:38:LYS:HA	3:I:38:LYS:HE2	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:248:GLN:O	3:L:250:ASN:O	2.14	0.65
3:M:7:VAL:HG22	3:M:19:PRO:HB3	1.77	0.65
3:Q:38:LYS:HG3	3:Q:292:LEU:HB3	1.77	0.65
3:A:77:ALA:HB3	3:A:98:ARG:HH12	1.61	0.65
3:C:246:ILE:HG13	3:C:247:LYS:N	2.12	0.65
3:H:249:ILE:HD11	3:H:321:GLN:HG3	1.77	0.65
3:I:65:LEU:HD21	3:I:119:ASN:HB3	1.77	0.65
3:N:211:ASP:HB2	3:N:228:THR:HB	1.79	0.65
3:O:222:SER:C	3:O:224:ILE:H	2.00	0.65
3:B:216:ARG:HG3	3:B:217:ILE:HD12	1.79	0.65
3:C:50:ASN:O	3:C:54:LYS:HG2	1.97	0.65
3:M:175:THR:HG23	3:M:176:ALA:H	1.62	0.65
3:M:305:VAL:HG13	3:M:305:VAL:O	1.96	0.65
3:O:323:ARG:HD3	3:O:323:ARG:C	2.16	0.65
3:P:77:ALA:HB3	3:P:98:ARG:NH2	2.12	0.65
2:X:72:C:OP1	3:O:323:ARG:NH2	2.29	0.65
3:E:77:ALA:CB	3:E:98:ARG:HH22	2.10	0.65
3:F:206:LEU:HA	3:F:209:THR:CG2	2.26	0.65
3:K:87:GLU:C	3:K:89:TRP:H	2.00	0.65
3:L:252:THR:HG22	3:L:253:ALA:H	1.61	0.65
3:O:286:PHE:HE1	3:O:300:TYR:CE1	2.13	0.65
3:P:189:THR:HG21	3:P:192:LYS:CG	2.26	0.65
3:P:26:HIS:O	3:P:27:GLU:HB3	1.97	0.65
3:P:323:ARG:HD3	3:P:324:SER:N	2.11	0.65
2:X:96:A:O5'	2:X:96:A:H8	1.80	0.65
3:A:287:ILE:HG13	3:A:288:HIS:CD2	2.31	0.65
3:D:10:VAL:O	3:D:11:ASN:CB	2.44	0.65
3:J:249:ILE:HG21	3:J:319:MET:HE1	1.78	0.65
3:M:183:GLU:O	3:M:190:THR:HG22	1.96	0.65
3:M:38:LYS:HA	3:M:38:LYS:HE2	1.79	0.65
3:N:10:VAL:CG1	3:N:11:ASN:H	1.94	0.65
3:P:172:ILE:CD1	3:P:226:VAL:HG21	2.26	0.65
3:Q:38:LYS:HE2	3:Q:39:PRO:CD	2.27	0.65
3:S:52:ALA:CB	3:S:126:MET:SD	2.85	0.65
2:X:89:C:C6	2:X:89:C:H3'	2.32	0.65
3:B:410:MET:HA	3:B:410:MET:CE	2.27	0.65
3:B:64:LYS:C	3:B:67:PRO:HD2	2.18	0.65
3:C:85:CYS:HB3	3:C:91:SER:HB2	1.78	0.65
3:I:93:GLY:O	3:I:94:ILE:HG23	1.97	0.65
3:I:8:PHE:CE2	3:J:255:GLU:HA	2.28	0.65
3:P:81:PHE:CD2	3:P:82:GLU:N	2.64	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:X:54:C:OP1	3:Q:323:ARG:NH2	2.28	0.65
3:Q:46:ALA:HB1	3:Q:50:ASN:OD1	1.97	0.65
3:U:249:ILE:HG22	3:U:250:ASN:N	2.11	0.65
3:B:189:THR:HG23	3:B:192:LYS:CB	2.21	0.64
3:D:46:ALA:HB1	3:D:50:ASN:OD1	1.97	0.64
3:E:30:TYR:HB3	3:E:277:GLN:NE2	2.11	0.64
3:F:253:ALA:C	3:F:255:GLU:H	1.99	0.64
3:I:63:ALA:HB3	3:I:65:LEU:HD13	1.78	0.64
3:L:176:ALA:CB	3:L:177:PRO:HD2	2.25	0.64
3:M:268:GLU:HB3	3:M:305:VAL:CG2	2.27	0.64
3:M:264:ASN:ND2	3:N:251:LEU:HD22	2.10	0.64
3:V:232:ALA:C	3:V:234:GLU:H	1.98	0.64
3:G:54:LYS:HD3	3:G:69:ASP:OD2	1.98	0.64
3:G:37:LYS:HG3	3:G:89:TRP:CE3	2.33	0.64
3:I:23:VAL:HG21	3:J:233:TYR:OH	1.96	0.64
3:K:53:TYR:CD1	3:K:121:ALA:O	2.47	0.64
3:K:197:TRP:CD1	3:K:198:SER:N	2.65	0.64
3:K:237:SER:HA	3:K:240:VAL:HB	1.77	0.64
3:L:50:ASN:ND2	3:L:50:ASN:H	1.95	0.64
3:N:77:ALA:HB1	3:N:98:ARG:HH22	1.62	0.64
3:O:284:SER:O	3:O:287:ILE:HG12	1.96	0.64
3:V:74:LEU:HD22	3:V:98:ARG:CB	2.25	0.64
3:E:74:LEU:HA	3:E:98:ARG:HD3	1.77	0.64
3:F:74:LEU:HD22	3:F:98:ARG:CB	2.27	0.64
3:K:73:TYR:HD2	3:K:210:TYR:OH	1.80	0.64
3:L:26:HIS:O	3:L:27:GLU:HB3	1.97	0.64
3:M:184:HIS:O	3:M:189:THR:N	2.30	0.64
3:M:50:ASN:N	3:M:50:ASN:HD22	1.95	0.64
3:Q:53:TYR:CD1	3:Q:121:ALA:O	2.51	0.64
1:W:1:C:H2'	1:W:2:C:OP2	1.98	0.64
3:D:155:GLY:H	3:D:158:THR:HG21	1.62	0.64
3:L:358:ARG:HH21	3:V:263:LYS:HG3	1.62	0.64
3:N:53:TYR:HD1	3:N:121:ALA:O	1.80	0.64
3:P:156:GLN:C	3:P:158:THR:H	1.99	0.64
3:P:264:ASN:ND2	3:Q:251:LEU:HD21	2.10	0.64
3:S:222:SER:C	3:S:224:ILE:H	2.00	0.64
3:U:268:GLU:HB3	3:U:305:VAL:CG2	2.27	0.64
2:X:12:A:N3	2:X:12:A:H2'	2.11	0.64
3:A:65:LEU:HB3	3:A:120:TRP:CZ3	2.33	0.64
3:A:66:ASP:HB2	3:A:67:PRO:HD3	1.79	0.64
3:B:398:GLU:O	3:B:399:THR:O	2.16	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:87:GLU:O	3:F:89:TRP:N	2.30	0.64
3:K:7:VAL:CG1	3:K:8:PHE:N	2.61	0.64
3:L:206:LEU:HA	3:L:209:THR:HG23	1.79	0.64
3:N:43:LEU:HD23	3:N:116:VAL:HG11	1.79	0.64
3:N:66:ASP:HB2	3:N:67:PRO:CD	2.27	0.64
3:O:240:VAL:HA	3:O:243:THR:HG22	1.78	0.64
3:O:43:LEU:HG	3:O:44:GLY:N	2.11	0.64
3:P:10:VAL:O	3:P:11:ASN:CB	2.45	0.64
3:Q:163:THR:HG22	3:Q:192:LYS:NZ	2.12	0.64
3:Q:249:ILE:CG2	3:Q:250:ASN:H	2.04	0.64
3:T:338:MET:HA	3:T:338:MET:CE	2.26	0.64
3:A:264:ASN:HD21	3:B:251:LEU:HD22	1.61	0.64
3:L:163:THR:HG22	3:L:192:LYS:NZ	2.13	0.64
3:R:176:ALA:C	3:R:178:PHE:H	2.00	0.64
3:R:326:ASN:HA	3:R:437:SER:HB2	1.79	0.64
3:V:81:PHE:HB3	3:V:94:ILE:HA	1.79	0.64
3:B:35:ASP:OD2	3:B:89:TRP:NE1	2.31	0.64
3:E:180:LYS:HE2	3:E:182:VAL:O	1.98	0.64
3:E:249:ILE:HG22	3:E:250:ASN:H	1.63	0.64
3:G:176:ALA:O	3:G:178:PHE:N	2.30	0.64
3:L:66:ASP:O	3:L:68:ASP:N	2.31	0.64
3:M:54:LYS:HE3	3:M:140:LEU:HD23	1.79	0.64
3:N:184:HIS:O	3:N:189:THR:N	2.30	0.64
3:O:253:ALA:C	3:O:254:ARG:HG2	2.17	0.64
3:O:8:PHE:HZ	3:P:255:GLU:HA	1.60	0.64
3:T:8:PHE:HE2	3:U:255:GLU:HA	1.47	0.64
3:U:295:SER:OG	3:U:296:GLY:N	2.31	0.64
3:V:169:ILE:HG22	3:V:226:VAL:CG1	2.27	0.64
3:B:93:GLY:O	3:B:94:ILE:HG23	1.98	0.64
3:G:278:GLU:HB3	3:G:281:VAL:HB	1.80	0.64
3:H:184:HIS:O	3:H:189:THR:N	2.31	0.64
3:N:189:THR:O	3:N:193:MET:HG2	1.98	0.64
3:O:318:TYR:CE1	3:O:423:ARG:HG2	2.33	0.64
3:P:148:TYR:HE1	3:P:199:THR:HG23	1.62	0.64
3:P:286:PHE:HE1	3:P:300:TYR:CE1	2.16	0.64
3:Q:250:ASN:N	3:Q:250:ASN:OD1	2.30	0.64
3:S:50:ASN:O	3:S:54:LYS:HG2	1.97	0.64
3:L:351:GLY:O	3:V:415:ARG:HG3	1.98	0.64
1:W:42:A:O5'	1:W:42:A:H8	1.81	0.64
3:A:87:GLU:C	3:A:89:TRP:N	2.51	0.64
3:L:251:LEU:HD22	3:V:264:ASN:ND2	2.10	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:308:VAL:HG12	3:L:312:ILE:HD12	1.79	0.64
3:D:42:THR:O	3:D:43:LEU:O	2.16	0.64
3:D:266:GLU:OE2	3:E:358:ARG:HD2	1.98	0.64
3:I:50:ASN:ND2	3:I:50:ASN:N	2.40	0.64
3:K:423:ARG:O	3:K:427:VAL:HG23	1.98	0.64
3:O:53:TYR:HD1	3:O:121:ALA:O	1.81	0.64
3:P:176:ALA:O	3:P:178:PHE:N	2.31	0.64
3:Q:87:GLU:C	3:Q:89:TRP:H	2.00	0.64
3:S:417:LYS:H	3:S:420:HIS:CD2	2.15	0.64
3:T:42:THR:O	3:T:43:LEU:O	2.16	0.64
3:B:284:SER:O	3:B:287:ILE:HG12	1.96	0.63
3:D:410:MET:CE	3:D:410:MET:HA	2.28	0.63
3:E:194:CYS:C	3:E:196:ASN:N	2.48	0.63
3:E:313:HIS:ND1	3:E:324:SER:HB3	2.12	0.63
3:F:313:HIS:HB3	3:F:324:SER:HB2	1.80	0.63
3:K:85:CYS:HB3	3:K:91:SER:HB2	1.80	0.63
3:L:326:ASN:HD22	3:L:431:HIS:HE1	1.44	0.63
3:P:176:ALA:CB	3:P:177:PRO:HD2	2.15	0.63
3:Q:10:VAL:O	3:Q:11:ASN:CB	2.46	0.63
3:Q:197:TRP:CD1	3:Q:198:SER:N	2.66	0.63
3:S:52:ALA:HA	3:S:126:MET:SD	2.37	0.63
3:S:53:TYR:CD2	3:S:54:LYS:N	2.66	0.63
3:U:77:ALA:HB1	3:U:220:LEU:HD21	1.79	0.63
3:V:73:TYR:O	3:V:76:ALA:N	2.31	0.63
3:V:85:CYS:HB3	3:V:91:SER:HB2	1.81	0.63
3:A:54:LYS:O	3:A:57:LEU:HD12	1.98	0.63
3:B:249:ILE:CG2	3:B:250:ASN:N	2.61	0.63
3:C:87:GLU:OE2	3:C:284:SER:C	2.36	0.63
3:D:189:THR:O	3:D:193:MET:CG	2.42	0.63
3:K:77:ALA:CB	3:K:98:ARG:NH2	2.58	0.63
3:L:53:TYR:O	3:L:56:VAL:HG23	1.98	0.63
3:M:250:ASN:N	3:M:250:ASN:OD1	2.31	0.63
3:O:219:HIS:HA	3:O:222:SER:HB3	1.79	0.63
3:T:100:GLY:C	3:T:101:ASP:OD2	2.36	0.63
1:W:7:C:H2'	1:W:8:A:O4'	1.97	0.63
3:A:87:GLU:C	3:A:89:TRP:H	2.00	0.63
3:C:54:LYS:HG3	3:C:140:LEU:HD21	1.79	0.63
3:D:37:LYS:HG3	3:D:89:TRP:CE3	2.33	0.63
3:F:146:SER:HB2	3:F:169:ILE:HD12	1.80	0.63
3:F:216:ARG:C	3:F:216:ARG:HD3	2.19	0.63
3:H:10:VAL:HG12	3:H:11:ASN:H	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:272:MET:SD	3:H:305:VAL:HG21	2.39	0.63
3:J:31:PRO:HD2	3:J:277:GLN:CG	2.27	0.63
3:J:340:VAL:CG2	3:J:416:LEU:HD11	2.20	0.63
3:B:290:ARG:HD2	3:B:295:SER:HB2	1.81	0.63
3:C:183:GLU:O	3:C:190:THR:HG22	1.97	0.63
3:H:231:THR:HA	3:H:234:GLU:OE1	1.97	0.63
3:H:323:ARG:HD3	3:H:324:SER:N	2.14	0.63
3:I:249:ILE:HG22	3:I:250:ASN:OD1	1.98	0.63
3:K:163:THR:HG22	3:K:192:LYS:HZ1	1.63	0.63
3:L:12:ASN:C	3:L:13:GLN:CD	2.57	0.63
3:L:74:LEU:HD22	3:L:98:ARG:HB2	1.81	0.63
3:M:248:GLN:O	3:M:249:ILE:C	2.34	0.63
3:N:176:ALA:CB	3:N:177:PRO:HD2	2.25	0.63
3:S:277:GLN:N	3:S:277:GLN:OE1	2.31	0.63
1:W:67:C:OP1	3:J:168:ARG:NH2	2.32	0.63
3:A:248:GLN:O	3:A:250:ASN:O	2.16	0.63
3:A:250:ASN:OD1	3:A:250:ASN:N	2.21	0.63
3:A:284:SER:O	3:A:287:ILE:HG12	1.99	0.63
3:C:250:ASN:N	3:C:250:ASN:OD1	2.28	0.63
3:E:176:ALA:CB	3:E:177:PRO:CD	2.75	0.63
3:G:417:LYS:H	3:G:420:HIS:CD2	2.13	0.63
3:H:81:PHE:CZ	3:H:85:CYS:HB2	2.34	0.63
3:P:65:LEU:HB3	3:P:120:TRP:CZ3	2.34	0.63
3:R:85:CYS:HB3	3:R:91:SER:HB2	1.80	0.63
3:T:172:ILE:CD1	3:T:226:VAL:HG21	2.29	0.63
3:T:26:HIS:O	3:T:27:GLU:HB3	1.99	0.63
3:T:7:VAL:HG12	3:T:8:PHE:N	2.13	0.63
3:K:253:ALA:O	3:K:255:GLU:N	2.32	0.63
3:L:5:LYS:HB2	3:L:5:LYS:HZ2	1.63	0.63
3:Q:31:PRO:HD2	3:Q:277:GLN:CG	2.26	0.63
3:U:308:VAL:HG12	3:U:312:ILE:HD12	1.80	0.63
3:A:323:ARG:HD3	3:A:324:SER:N	2.13	0.63
3:D:66:ASP:HB2	3:D:67:PRO:HD3	1.81	0.63
3:E:417:LYS:H	3:E:420:HIS:CD2	2.17	0.63
3:L:176:ALA:C	3:L:178:PHE:N	2.52	0.63
3:L:73:TYR:OH	3:L:98:ARG:NH2	2.32	0.63
3:N:8:PHE:HZ	3:O:255:GLU:HB2	1.64	0.63
3:O:10:VAL:O	3:O:11:ASN:CB	2.46	0.63
3:Q:175:THR:HG23	3:Q:176:ALA:N	2.14	0.63
3:Q:180:LYS:NZ	3:Q:184:HIS:HD2	1.97	0.63
3:R:284:SER:O	3:R:287:ILE:HG12	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:232:ALA:C	3:S:234:GLU:H	2.02	0.63
3:F:86:PRO:HA	3:F:90:THR:HA	1.81	0.63
3:I:169:ILE:HG22	3:I:226:VAL:HG11	1.80	0.63
3:K:84:THR:O	3:K:86:PRO:HD3	1.98	0.63
3:M:134:VAL:HB	3:M:135:PRO:HD3	1.80	0.63
3:Q:73:TYR:HD2	3:Q:210:TYR:OH	1.82	0.63
3:U:196:ASN:O	3:U:197:TRP:HB2	1.98	0.63
3:U:66:ASP:OD1	3:U:66:ASP:N	2.29	0.63
3:V:148:TYR:CE1	3:V:199:THR:HG23	2.33	0.63
1:W:67:C:H3'	1:W:68:C:C5'	2.29	0.63
3:A:222:SER:C	3:A:224:ILE:H	2.01	0.63
3:D:176:ALA:O	3:D:178:PHE:N	2.32	0.63
3:F:305:VAL:HG13	3:F:305:VAL:O	1.99	0.63
3:G:20:GLU:OE1	3:G:20:GLU:N	2.31	0.63
3:G:249:ILE:HG21	3:G:319:MET:HE1	1.80	0.63
3:J:252:THR:CG2	3:J:255:GLU:OE1	2.46	0.63
3:L:77:ALA:HB1	3:L:220:LEU:HD23	1.81	0.63
3:L:5:LYS:CE	3:L:8:PHE:CE2	2.78	0.63
3:O:305:VAL:HG22	3:O:308:VAL:HB	1.81	0.63
3:Q:35:ASP:OD2	3:Q:89:TRP:NE1	2.27	0.63
3:U:183:GLU:O	3:U:190:THR:HG22	1.99	0.63
3:U:284:SER:O	3:U:287:ILE:HG12	1.98	0.63
3:D:176:ALA:C	3:D:178:PHE:H	2.02	0.62
3:F:77:ALA:HB3	3:F:98:ARG:CZ	2.29	0.62
3:F:21:ILE:HB	3:G:280:ALA:HB2	1.79	0.62
3:M:52:ALA:HA	3:M:126:MET:SD	2.38	0.62
3:N:357:ARG:HB2	3:N:369:TYR:CE2	2.34	0.62
3:Q:50:ASN:N	3:Q:50:ASN:ND2	2.47	0.62
2:X:43:A:H5''	2:X:43:A:H8	1.64	0.62
3:C:197:TRP:CD1	3:C:198:SER:N	2.67	0.62
3:D:146:SER:HB2	3:D:169:ILE:CD1	2.14	0.62
3:H:182:VAL:HB	3:H:190:THR:HG21	1.81	0.62
3:L:54:LYS:HG3	3:L:140:LEU:HD21	1.80	0.62
3:M:172:ILE:CD1	3:M:226:VAL:HG21	2.27	0.62
3:M:66:ASP:HB2	3:M:67:PRO:HD3	1.81	0.62
3:N:8:PHE:CE1	3:O:254:ARG:O	2.53	0.62
3:O:194:CYS:C	3:O:196:ASN:H	2.01	0.62
3:O:169:ILE:HG22	3:O:226:VAL:CG1	2.30	0.62
3:B:53:TYR:CD1	3:B:121:ALA:O	2.51	0.62
3:D:175:THR:HG23	3:D:176:ALA:H	1.63	0.62
3:I:175:THR:O	3:I:176:ALA:O	2.17	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:189:THR:O	3:I:193:MET:N	2.32	0.62
3:I:264:ASN:OD1	3:J:251:LEU:HD21	1.99	0.62
3:L:8:PHE:CZ	3:M:255:GLU:CA	2.81	0.62
1:W:24:A:H5"	3:C:297:LYS:HD2	1.81	0.62
3:A:74:LEU:HA	3:A:98:ARG:HD3	1.80	0.62
3:B:175:THR:O	3:B:176:ALA:O	2.18	0.62
3:D:189:THR:HG23	3:D:192:LYS:CB	2.22	0.62
3:D:248:GLN:O	3:D:250:ASN:O	2.17	0.62
3:F:64:LYS:HG3	3:F:64:LYS:O	1.98	0.62
3:H:222:SER:C	3:H:224:ILE:H	2.02	0.62
3:H:52:ALA:HA	3:H:126:MET:SD	2.39	0.62
3:P:163:THR:HG22	3:P:192:LYS:HZ2	1.64	0.62
3:P:313:HIS:ND1	3:P:324:SER:HB3	2.13	0.62
3:Q:156:GLN:C	3:Q:158:THR:H	2.01	0.62
3:R:222:SER:O	3:R:224:ILE:N	2.32	0.62
3:S:253:ALA:O	3:S:255:GLU:N	2.33	0.62
3:V:174:GLU:O	3:V:174:GLU:HG3	1.99	0.62
3:V:326:ASN:HA	3:V:437:SER:HB2	1.82	0.62
3:V:97:ALA:C	3:V:99:LYS:H	2.03	0.62
3:C:51:LYS:O	3:C:55:SER:CB	2.47	0.62
3:F:410:MET:HA	3:F:410:MET:HE2	1.81	0.62
3:H:134:VAL:HB	3:H:135:PRO:HD3	1.81	0.62
3:H:336:HIS:O	3:H:340:VAL:HG23	1.99	0.62
3:I:264:ASN:ND2	3:J:251:LEU:HD21	2.15	0.62
3:K:434:ARG:HB3	3:K:435:PRO:CD	2.29	0.62
3:N:362:ASP:OD1	3:N:365:GLU:HB2	2.00	0.62
3:O:189:THR:HG23	3:O:192:LYS:HB3	1.79	0.62
3:O:249:ILE:HG23	3:O:319:MET:SD	2.39	0.62
3:F:253:ALA:O	3:F:255:GLU:N	2.31	0.62
3:H:206:LEU:HA	3:H:209:THR:HG22	1.81	0.62
3:K:53:TYR:CD2	3:K:54:LYS:N	2.68	0.62
3:M:67:PRO:HA	3:M:206:LEU:CD1	2.29	0.62
3:P:133:THR:HG22	3:P:136:GLU:HG3	1.82	0.62
3:S:49:LEU:HD22	3:S:52:ALA:HB2	1.81	0.62
3:T:32:ALA:H	3:T:277:GLN:NE2	1.97	0.62
3:U:76:ALA:O	3:U:77:ALA:HB2	1.99	0.62
3:V:371:ALA:O	3:V:372:ALA:CB	2.47	0.62
3:A:155:GLY:H	3:A:158:THR:HG21	1.63	0.62
3:E:286:PHE:HA	3:E:289:PHE:HB3	1.80	0.62
3:H:232:ALA:C	3:H:234:GLU:H	2.02	0.62
3:J:98:ARG:H	3:J:98:ARG:HD2	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:223:ALA:O	3:K:226:VAL:HG23	2.00	0.62
3:K:79:GLN:HG3	3:K:80:PHE:H	1.64	0.62
3:L:169:ILE:HG22	3:L:226:VAL:CG1	2.30	0.62
3:N:38:LYS:HA	3:N:38:LYS:HE2	1.81	0.62
3:O:74:LEU:HD22	3:O:98:ARG:HB2	1.82	0.62
3:U:340:VAL:HG13	3:U:416:LEU:HD11	1.81	0.62
3:V:69:ASP:C	3:V:71:CYS:H	2.03	0.62
3:A:176:ALA:C	3:A:178:PHE:H	2.03	0.62
3:A:6:ILE:CG2	3:B:254:ARG:HH21	2.11	0.62
3:B:340:VAL:HG22	3:B:416:LEU:CD1	2.30	0.62
3:D:54:LYS:HE3	3:D:140:LEU:CD2	2.30	0.62
3:E:50:ASN:H	3:E:50:ASN:HD22	1.47	0.62
3:F:87:GLU:C	3:F:89:TRP:N	2.52	0.62
3:G:323:ARG:HD3	3:G:324:SER:N	2.14	0.62
3:L:10:VAL:O	3:L:11:ASN:HB3	1.98	0.62
3:L:255:GLU:OE1	3:L:255:GLU:C	2.37	0.62
3:L:31:PRO:O	3:L:32:ALA:C	2.38	0.62
3:O:38:LYS:HD3	3:O:205:PHE:HE1	1.65	0.62
3:N:8:PHE:CZ	3:O:255:GLU:CA	2.83	0.62
3:P:232:ALA:C	3:P:234:GLU:H	2.03	0.62
3:R:47:PRO:HD2	3:R:50:ASN:HD21	1.63	0.62
3:S:60:MET:SD	3:S:60:MET:N	2.66	0.62
3:S:74:LEU:HD22	3:S:98:ARG:HB2	1.80	0.62
3:U:190:THR:HG23	3:U:191:HIS:N	2.14	0.62
3:U:409:ILE:HG22	3:U:410:MET:HE3	1.80	0.62
3:C:97:ALA:O	3:C:99:LYS:N	2.32	0.62
3:D:194:CYS:C	3:D:196:ASN:N	2.53	0.62
3:H:249:ILE:HG22	3:H:250:ASN:H	1.62	0.62
3:M:57:LEU:HD23	3:M:194:CYS:SG	2.38	0.62
3:R:222:SER:C	3:R:224:ILE:H	2.02	0.62
3:R:81:PHE:HZ	3:R:85:CYS:HB2	1.64	0.62
3:T:194:CYS:C	3:T:196:ASN:H	2.02	0.62
3:T:262:HIS:CE1	3:U:251:LEU:HD22	2.34	0.62
3:V:38:LYS:HD3	3:V:205:PHE:HE1	1.63	0.62
3:V:49:LEU:HD22	3:V:52:ALA:HB2	1.82	0.62
3:C:222:SER:O	3:C:224:ILE:N	2.32	0.62
3:F:38:LYS:HE2	3:F:39:PRO:CD	2.30	0.62
3:I:38:LYS:CE	3:I:38:LYS:HA	2.30	0.62
3:J:38:LYS:HE2	3:J:39:PRO:CD	2.29	0.62
3:L:9:LYS:HE2	3:L:17:LEU:CB	2.30	0.62
3:P:153:ILE:HD12	3:P:153:ILE:H	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:20:GLU:HB2	3:T:254:ARG:HD2	1.82	0.62
3:S:403:GLU:HG3	3:T:357:ARG:HH12	1.65	0.62
3:V:340:VAL:HA	3:V:416:LEU:HD11	1.81	0.62
1:W:24:A:H4'	3:C:290:ARG:HH21	1.64	0.61
3:E:54:LYS:HE3	3:E:140:LEU:HD23	1.82	0.61
3:E:211:ASP:HB2	3:E:228:THR:HB	1.81	0.61
3:G:336:HIS:O	3:G:340:VAL:HG23	1.98	0.61
3:I:249:ILE:HG12	3:I:319:MET:HE3	1.81	0.61
3:K:146:SER:HB2	3:K:169:ILE:HD12	1.82	0.61
3:L:290:ARG:HD2	3:L:295:SER:HB2	1.82	0.61
3:L:49:LEU:HD22	3:L:52:ALA:HB2	1.81	0.61
3:M:189:THR:HG23	3:M:192:LYS:CG	2.29	0.61
3:N:197:TRP:HD1	3:N:198:SER:O	1.82	0.61
3:T:295:SER:OG	3:T:296:GLY:N	2.32	0.61
3:V:30:TYR:CB	3:V:277:GLN:NE2	2.53	0.61
2:X:11:C:H2'	2:X:12:A:O4'	2.01	0.61
3:A:31:PRO:HD2	3:A:277:GLN:HG3	1.80	0.61
3:A:7:VAL:HG12	3:A:9:LYS:CE	2.30	0.61
3:B:326:ASN:HA	3:B:437:SER:HB2	1.82	0.61
3:B:403:GLU:HG3	3:C:357:ARG:HH12	1.65	0.61
3:C:340:VAL:HG22	3:C:416:LEU:HD11	1.81	0.61
3:E:32:ALA:HB2	3:E:277:GLN:HE22	1.64	0.61
3:E:74:LEU:CD2	3:E:98:ARG:HB2	2.30	0.61
3:F:169:ILE:HG22	3:F:226:VAL:HG12	1.82	0.61
3:H:74:LEU:HD22	3:H:98:ARG:CB	2.29	0.61
3:M:340:VAL:CA	3:M:416:LEU:HD11	2.28	0.61
3:O:93:GLY:O	3:O:94:ILE:HG23	2.00	0.61
3:R:133:THR:OG1	3:R:135:PRO:HD2	1.99	0.61
3:V:73:TYR:O	3:V:75:ALA:N	2.33	0.61
3:A:87:GLU:O	3:A:89:TRP:N	2.33	0.61
3:C:234:GLU:O	3:C:235:ASP:HB2	2.00	0.61
3:F:176:ALA:CB	3:F:177:PRO:HD2	2.26	0.61
3:F:57:LEU:CD2	3:F:57:LEU:C	2.68	0.61
3:G:33:ILE:HB	3:G:88:ASP:HB3	1.82	0.61
3:H:194:CYS:C	3:H:196:ASN:N	2.49	0.61
3:H:240:VAL:HA	3:H:243:THR:CG2	2.30	0.61
3:H:264:ASN:HD21	3:I:251:LEU:HD22	1.65	0.61
3:K:33:ILE:HB	3:K:88:ASP:CB	2.30	0.61
3:H:122:LEU:CD2	3:O:122:LEU:HD22	2.25	0.61
3:P:286:PHE:HA	3:P:289:PHE:HB3	1.82	0.61
3:L:362:ASP:HA	3:U:9:LYS:HD3	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:122:LEU:HD22	3:P:122:LEU:HD22	1.81	0.61
3:G:253:ALA:C	3:G:255:GLU:H	2.04	0.61
3:H:410:MET:HA	3:H:410:MET:CE	2.30	0.61
3:I:9:LYS:HD2	3:I:9:LYS:H	1.66	0.61
3:A:358:ARG:HD2	3:K:266:GLU:OE2	2.00	0.61
3:L:251:LEU:CD2	3:V:262:HIS:CE1	2.84	0.61
3:N:74:LEU:HA	3:N:98:ARG:HD3	1.82	0.61
3:O:66:ASP:HB2	3:O:67:PRO:CD	2.30	0.61
3:P:128:LEU:HD11	3:P:130:ARG:HE	1.64	0.61
3:R:146:SER:HB2	3:R:169:ILE:HD12	1.83	0.61
3:T:77:ALA:O	3:T:98:ARG:CZ	2.48	0.61
3:V:69:ASP:C	3:V:71:CYS:N	2.50	0.61
3:D:20:GLU:HB2	3:E:254:ARG:HD2	1.81	0.61
3:E:77:ALA:HB3	3:E:98:ARG:NH1	2.14	0.61
3:G:8:PHE:HZ	3:H:255:GLU:CA	2.08	0.61
3:J:284:SER:O	3:J:287:ILE:HG12	2.00	0.61
3:L:84:THR:O	3:L:86:PRO:HD3	2.01	0.61
3:M:20:GLU:O	3:N:254:ARG:NH1	2.32	0.61
3:N:416:LEU:HD12	3:N:416:LEU:N	2.16	0.61
3:N:57:LEU:HD21	3:N:194:CYS:SG	2.39	0.61
3:Q:38:LYS:CE	3:Q:39:PRO:HD2	2.29	0.61
3:S:340:VAL:HG13	3:S:416:LEU:HD12	1.82	0.61
2:X:89:C:H41	3:M:323:ARG:NH2	1.98	0.61
3:D:77:ALA:O	3:D:98:ARG:CZ	2.47	0.61
3:E:156:GLN:C	3:E:158:THR:H	2.04	0.61
3:E:253:ALA:O	3:E:255:GLU:N	2.33	0.61
1:W:72:C:C6	3:I:323:ARG:HG2	2.35	0.61
3:N:313:HIS:ND1	3:N:324:SER:HB3	2.15	0.61
3:N:98:ARG:HG3	3:N:213:PHE:CD1	2.35	0.61
3:P:53:TYR:O	3:P:56:VAL:HG23	2.00	0.61
3:Q:206:LEU:HA	3:Q:209:THR:CG2	2.30	0.61
3:Q:38:LYS:HA	3:Q:38:LYS:HE2	1.81	0.61
3:T:184:HIS:O	3:T:189:THR:N	2.33	0.61
3:C:268:GLU:OE2	3:C:307:HIS:HD2	1.84	0.61
3:F:214:PHE:CD2	3:F:222:SER:HA	2.35	0.61
3:F:8:PHE:HE1	3:G:254:ARG:HG3	1.64	0.61
3:I:53:TYR:CZ	3:I:65:LEU:HD22	2.35	0.61
3:J:126:MET:O	3:M:122:LEU:O	2.19	0.61
3:J:417:LYS:H	3:J:420:HIS:HD2	1.47	0.61
3:L:231:THR:HA	3:L:234:GLU:OE1	2.01	0.61
3:N:366:LEU:HD23	3:N:366:LEU:C	2.20	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:R:10:VAL:O	3:R:11:ASN:CB	2.49	0.61
3:T:81:PHE:HB3	3:T:94:ILE:HA	1.83	0.61
3:U:216:ARG:HG3	3:U:217:ILE:HD12	1.82	0.61
2:X:89:C:C2	2:X:90:C:H5"	2.35	0.61
3:A:189:THR:HB	3:A:193:MET:HG2	1.82	0.61
3:D:257:ILE:O	3:D:260:PHE:HB2	2.01	0.61
3:E:222:SER:O	3:E:224:ILE:N	2.34	0.61
3:G:38:LYS:HE2	3:G:38:LYS:CA	2.28	0.61
3:J:8:PHE:HZ	3:K:255:GLU:CA	2.11	0.61
3:K:46:ALA:HB1	3:K:50:ASN:OD1	2.00	0.61
3:T:223:ALA:O	3:T:226:VAL:CG2	2.47	0.61
3:V:175:THR:HG23	3:V:176:ALA:H	1.65	0.61
3:C:176:ALA:C	3:C:178:PHE:N	2.53	0.61
3:I:340:VAL:HG22	3:I:416:LEU:HD11	1.82	0.61
3:J:169:ILE:HG22	3:J:226:VAL:HG11	1.82	0.61
3:J:253:ALA:O	3:J:255:GLU:N	2.32	0.61
3:L:169:ILE:HG22	3:L:226:VAL:HG11	1.81	0.61
3:Q:172:ILE:HD11	3:Q:226:VAL:HG21	1.82	0.61
3:Q:98:ARG:H	3:Q:98:ARG:HD2	1.64	0.61
3:R:182:VAL:HB	3:R:190:THR:HG21	1.81	0.61
3:V:7:VAL:O	3:V:8:PHE:CD1	2.54	0.61
3:B:73:TYR:O	3:B:75:ALA:N	2.34	0.61
3:C:30:TYR:HB3	3:C:277:GLN:NE2	2.16	0.61
3:D:20:GLU:N	3:D:20:GLU:CD	2.53	0.61
3:D:77:ALA:HB3	3:D:98:ARG:HH12	1.66	0.61
3:F:287:ILE:HG13	3:F:288:HIS:CD2	2.35	0.61
3:I:54:LYS:C	3:I:56:VAL:H	2.04	0.61
3:M:57:LEU:HD11	3:M:191:HIS:HD2	1.66	0.61
3:Q:248:GLN:O	3:Q:249:ILE:C	2.39	0.61
3:S:53:TYR:HD1	3:S:121:ALA:H	1.49	0.61
3:A:74:LEU:HD22	3:A:98:ARG:CB	2.31	0.60
3:D:10:VAL:O	3:D:11:ASN:HB2	2.01	0.60
3:H:85:CYS:HB3	3:H:91:SER:HB2	1.83	0.60
3:I:197:TRP:CD1	3:I:198:SER:O	2.55	0.60
3:L:277:GLN:H	3:L:277:GLN:CD	2.03	0.60
3:Q:10:VAL:HG12	3:Q:11:ASN:N	2.16	0.60
3:Q:175:THR:HG23	3:Q:176:ALA:H	1.66	0.60
3:T:93:GLY:O	3:T:94:ILE:HG23	2.01	0.60
3:U:410:MET:HA	3:U:410:MET:CE	2.31	0.60
3:V:204:ARG:HE	3:V:291:SER:HA	1.65	0.60
3:V:63:ALA:O	3:V:197:TRP:HH2	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:53:TYR:HD1	3:F:121:ALA:O	1.85	0.60
3:G:313:HIS:ND1	3:G:324:SER:HB3	2.16	0.60
3:I:206:LEU:HA	3:I:209:THR:CG2	2.31	0.60
3:L:77:ALA:HB3	3:L:98:ARG:CZ	2.29	0.60
3:M:197:TRP:CD1	3:M:198:SER:N	2.69	0.60
3:M:252:THR:HG22	3:M:253:ALA:H	1.65	0.60
3:M:262:HIS:HE1	3:N:251:LEU:HD23	1.66	0.60
3:P:189:THR:HG23	3:P:192:LYS:CB	2.13	0.60
3:P:163:THR:HG22	3:P:192:LYS:HZ1	1.66	0.60
3:S:313:HIS:ND1	3:S:324:SER:CB	2.64	0.60
3:S:98:ARG:H	3:S:98:ARG:HD2	1.65	0.60
3:T:284:SER:O	3:T:287:ILE:HG12	2.01	0.60
3:U:169:ILE:HG22	3:U:226:VAL:CG1	2.30	0.60
1:W:67:C:H3'	1:W:68:C:H5''	1.83	0.60
3:D:248:GLN:CG	3:D:249:ILE:N	2.50	0.60
3:D:85:CYS:HB3	3:D:91:SER:HB2	1.83	0.60
3:F:52:ALA:HA	3:F:126:MET:SD	2.42	0.60
3:J:189:THR:HG22	3:J:192:LYS:CB	2.31	0.60
3:L:8:PHE:CE2	3:M:255:GLU:HA	2.37	0.60
3:O:415:ARG:HG3	3:P:351:GLY:O	2.00	0.60
3:Q:56:VAL:HG11	3:Q:123:THR:OG1	2.01	0.60
3:T:417:LYS:N	3:T:420:HIS:HD2	1.88	0.60
3:A:53:TYR:CD1	3:A:121:ALA:O	2.48	0.60
3:F:206:LEU:O	3:F:207:ALA:C	2.40	0.60
3:F:232:ALA:C	3:F:234:GLU:H	2.04	0.60
3:H:118:GLY:HA3	3:H:120:TRP:NE1	2.16	0.60
3:I:253:ALA:O	3:I:255:GLU:N	2.34	0.60
3:H:8:PHE:CZ	3:I:255:GLU:CB	2.81	0.60
3:L:366:LEU:C	3:L:366:LEU:HD23	2.21	0.60
3:M:323:ARG:HD3	3:M:323:ARG:C	2.22	0.60
3:M:410:MET:CE	3:M:410:MET:HA	2.30	0.60
3:P:66:ASP:HB2	3:P:67:PRO:CD	2.32	0.60
3:S:315:VAL:HG12	3:S:319:MET:CE	2.32	0.60
3:T:38:LYS:CE	3:T:39:PRO:HD2	2.28	0.60
3:U:10:VAL:O	3:U:11:ASN:CB	2.49	0.60
3:U:35:ASP:OD2	3:U:89:TRP:NE1	2.32	0.60
3:V:366:LEU:HD23	3:V:366:LEU:O	2.01	0.60
3:A:206:LEU:HA	3:A:209:THR:CG2	2.30	0.60
3:A:254:ARG:O	3:K:8:PHE:CZ	2.54	0.60
3:A:253:ALA:C	3:A:255:GLU:H	2.05	0.60
3:E:334:ALA:O	3:E:338:MET:HG2	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:32:ALA:HB2	3:F:277:GLN:HE22	1.66	0.60
3:G:38:LYS:CE	3:G:38:LYS:HA	2.27	0.60
3:I:183:GLU:O	3:I:190:THR:HG22	2.01	0.60
3:K:100:GLY:C	3:K:101:ASP:OD2	2.40	0.60
3:K:177:PRO:HB2	3:K:221:TYR:CE2	2.36	0.60
3:M:327:ALA:O	3:M:437:SER:HA	2.02	0.60
3:M:85:CYS:HB3	3:M:91:SER:HB2	1.83	0.60
3:P:146:SER:HB2	3:P:169:ILE:CD1	2.19	0.60
3:Q:54:LYS:HG3	3:Q:140:LEU:HD21	1.83	0.60
3:Q:9:LYS:N	3:Q:9:LYS:HD2	2.15	0.60
3:T:240:VAL:HA	3:T:243:THR:HG22	1.83	0.60
3:T:403:GLU:HG3	3:U:357:ARG:HH12	1.67	0.60
3:A:446:TYR:O	3:A:447:SER:OG	2.15	0.60
3:B:133:THR:HG22	3:B:136:GLU:HG3	1.83	0.60
3:C:277:GLN:OE1	3:C:277:GLN:N	2.34	0.60
3:D:249:ILE:CG2	3:D:319:MET:HE1	2.32	0.60
3:D:262:HIS:CE1	3:E:251:LEU:CD2	2.85	0.60
3:E:97:ALA:O	3:E:99:LYS:N	2.32	0.60
3:F:35:ASP:O	3:F:36:LEU:HG	2.01	0.60
3:G:77:ALA:HB1	3:G:220:LEU:HD21	1.83	0.60
3:I:10:VAL:O	3:I:11:ASN:CB	2.49	0.60
3:N:249:ILE:CG2	3:N:250:ASN:N	2.64	0.60
3:P:295:SER:OG	3:P:296:GLY:N	2.35	0.60
3:R:249:ILE:CG2	3:R:250:ASN:N	2.54	0.60
2:X:20:C:C3'	2:X:21:C:H5''	2.32	0.60
3:A:54:LYS:HD2	3:A:144:LEU:HD11	1.83	0.60
3:A:54:LYS:HE3	3:A:140:LEU:CD2	2.31	0.60
3:B:73:TYR:CD2	3:B:141:VAL:HG11	2.35	0.60
3:B:277:GLN:OE1	3:B:277:GLN:N	2.34	0.60
3:C:51:LYS:HA	3:C:54:LYS:CE	2.29	0.60
3:F:205:PHE:HD2	3:F:205:PHE:C	2.04	0.60
3:G:246:ILE:HG13	3:G:247:LYS:N	2.16	0.60
3:J:169:ILE:HG22	3:J:226:VAL:HG12	1.83	0.60
3:N:223:ALA:O	3:N:226:VAL:HG23	2.02	0.60
3:O:189:THR:HG22	3:O:192:LYS:CB	2.27	0.60
2:X:19:C:C4	3:U:157:ASN:HB2	2.36	0.60
3:U:176:ALA:O	3:U:178:PHE:N	2.35	0.60
3:V:10:VAL:HG21	3:V:18:LYS:HZ3	1.66	0.60
3:V:12:ASN:HB3	3:V:13:GLN:OE1	2.02	0.60
3:V:234:GLU:HG2	3:V:235:ASP:OD1	2.02	0.60
3:B:133:THR:CG2	3:B:136:GLU:HG3	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:54:LYS:NZ	3:C:69:ASP:OD1	2.35	0.60
3:D:64:LYS:O	3:D:64:LYS:HG3	2.00	0.60
3:F:197:TRP:CD1	3:F:198:SER:N	2.70	0.60
3:F:38:LYS:HD3	3:F:205:PHE:HE1	1.65	0.60
3:F:211:ASP:HB2	3:F:228:THR:HB	1.84	0.60
3:F:66:ASP:HB2	3:F:67:PRO:HD3	1.82	0.60
3:I:249:ILE:HG21	3:I:319:MET:HE3	1.74	0.60
3:M:262:HIS:CE1	3:N:251:LEU:CD2	2.84	0.60
3:P:53:TYR:CD1	3:P:121:ALA:O	2.54	0.60
1:W:58:C:OP1	3:K:168:ARG:NH2	2.34	0.60
2:X:97:A:H2'	2:X:98:C:O4'	2.01	0.60
3:B:8:PHE:CZ	3:C:255:GLU:CB	2.85	0.60
3:E:184:HIS:O	3:E:189:THR:N	2.34	0.60
3:H:33:ILE:HD12	3:H:88:ASP:HB2	1.84	0.60
3:J:277:GLN:CD	3:J:277:GLN:H	2.05	0.60
3:K:81:PHE:CG	3:K:82:GLU:N	2.70	0.60
3:L:216:ARG:HH11	3:L:216:ARG:HG2	1.67	0.60
3:A:251:LEU:CD2	3:K:264:ASN:HD21	2.14	0.60
3:A:31:PRO:O	3:A:32:ALA:C	2.40	0.60
3:A:7:VAL:CG1	3:A:9:LYS:HE2	2.32	0.60
3:E:12:ASN:HB3	3:E:13:GLN:OE1	2.02	0.60
3:F:263:LYS:HE2	3:G:358:ARG:HH21	1.67	0.60
3:I:10:VAL:HG12	3:I:11:ASN:N	2.17	0.60
3:I:124:GLY:HA2	3:N:122:LEU:CD2	2.29	0.60
3:U:81:PHE:HB3	3:U:94:ILE:HA	1.84	0.60
2:X:6:A:H3'	2:X:6:A:H8	1.67	0.60
3:B:54:LYS:O	3:B:56:VAL:N	2.35	0.59
3:C:53:TYR:HD1	3:C:121:ALA:O	1.85	0.59
3:G:77:ALA:HB3	3:G:98:ARG:NH2	2.16	0.59
3:I:77:ALA:HB1	3:I:220:LEU:CD2	2.32	0.59
3:L:239:LEU:O	3:L:243:THR:CG2	2.49	0.59
3:L:248:GLN:CG	3:L:249:ILE:N	2.62	0.59
3:M:128:LEU:HD11	3:M:130:ARG:HE	1.67	0.59
3:L:264:ASN:OD1	3:M:251:LEU:HD21	2.02	0.59
3:T:176:ALA:C	3:T:178:PHE:H	2.05	0.59
3:V:175:THR:HG23	3:V:176:ALA:N	2.16	0.59
3:A:253:ALA:C	3:A:255:GLU:N	2.55	0.59
3:E:183:GLU:H	3:E:190:THR:HG21	1.67	0.59
3:F:79:GLN:HB3	3:F:217:ILE:CG2	2.32	0.59
3:E:264:ASN:ND2	3:F:251:LEU:HD22	2.17	0.59
3:J:249:ILE:HG22	3:J:250:ASN:OD1	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:145:LEU:HD22	3:L:207:ALA:HA	1.84	0.59
3:M:249:ILE:HG23	3:M:319:MET:HE1	1.79	0.59
3:O:74:LEU:HD22	3:O:98:ARG:CB	2.32	0.59
3:Q:151:SER:OG	3:Q:198:SER:HA	2.02	0.59
3:R:38:LYS:HE2	3:R:39:PRO:CD	2.20	0.59
2:X:35:C:P	3:S:237:SER:HG	2.25	0.59
3:S:211:ASP:OD2	3:S:288:HIS:HE1	1.84	0.59
3:S:77:ALA:HB3	3:S:98:ARG:NH2	2.17	0.59
3:U:287:ILE:HG13	3:U:288:HIS:CD2	2.38	0.59
3:V:57:LEU:C	3:V:57:LEU:CD2	2.71	0.59
3:C:194:CYS:C	3:C:196:ASN:H	2.04	0.59
3:E:57:LEU:HD21	3:E:144:LEU:CD2	2.32	0.59
3:F:252:THR:HG22	3:F:253:ALA:H	1.66	0.59
3:G:175:THR:HG23	3:G:176:ALA:N	2.17	0.59
3:G:252:THR:HG22	3:G:253:ALA:H	1.67	0.59
3:H:57:LEU:HD11	3:H:140:LEU:CD1	2.32	0.59
3:I:183:GLU:O	3:I:184:HIS:O	2.20	0.59
3:I:190:THR:HG23	3:I:191:HIS:N	2.17	0.59
3:L:409:ILE:HG22	3:L:410:MET:HE3	1.84	0.59
3:S:189:THR:HG22	3:S:192:LYS:CB	2.25	0.59
3:V:57:LEU:HD11	3:V:191:HIS:HD2	1.67	0.59
3:A:34:LYS:O	3:A:35:ASP:HB2	2.02	0.59
3:B:15:VAL:HG12	3:B:16:SER:N	2.17	0.59
3:D:222:SER:C	3:D:224:ILE:N	2.55	0.59
3:F:162:LYS:O	3:F:165:ILE:HG12	2.02	0.59
3:H:133:THR:OG1	3:H:135:PRO:HD2	2.03	0.59
3:I:340:VAL:HG13	3:I:416:LEU:HD12	1.84	0.59
3:I:97:ALA:O	3:I:99:LYS:N	2.31	0.59
3:K:133:THR:CG2	3:K:136:GLU:HG3	2.33	0.59
3:K:183:GLU:O	3:K:190:THR:HG22	2.02	0.59
3:K:81:PHE:CZ	3:K:85:CYS:HB2	2.37	0.59
3:O:163:THR:HG22	3:O:192:LYS:HZ1	1.66	0.59
3:O:54:LYS:O	3:O:56:VAL:N	2.36	0.59
3:Q:87:GLU:C	3:Q:89:TRP:N	2.54	0.59
3:R:214:PHE:CD2	3:R:222:SER:HA	2.38	0.59
3:S:57:LEU:O	3:S:57:LEU:HD23	2.01	0.59
3:T:20:GLU:N	3:T:20:GLU:OE1	2.36	0.59
3:T:323:ARG:C	3:T:323:ARG:HD3	2.23	0.59
3:B:74:LEU:HD22	3:B:98:ARG:HB2	1.83	0.59
3:D:73:TYR:HD2	3:D:210:TYR:OH	1.86	0.59
3:E:284:SER:O	3:E:287:ILE:HG12	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:156:GLN:O	3:J:158:THR:N	2.35	0.59
3:N:197:TRP:CD1	3:N:198:SER:O	2.56	0.59
3:N:313:HIS:HB3	3:N:324:SER:HB2	1.85	0.59
3:P:74:LEU:CD2	3:P:98:ARG:HB2	2.33	0.59
3:Q:81:PHE:HE2	3:Q:84:THR:HA	1.66	0.59
3:S:38:LYS:HA	3:S:38:LYS:HE2	1.84	0.59
3:L:273:PHE:CE2	3:V:20:GLU:HB3	2.38	0.59
3:B:222:SER:O	3:B:224:ILE:N	2.35	0.59
3:D:416:LEU:N	3:D:416:LEU:HD12	2.17	0.59
3:E:65:LEU:HD21	3:E:119:ASN:CB	2.26	0.59
3:E:20:GLU:O	3:F:254:ARG:NH1	2.36	0.59
3:H:65:LEU:HD21	3:H:119:ASN:HB3	1.84	0.59
3:I:232:ALA:C	3:I:234:GLU:H	2.06	0.59
3:I:284:SER:O	3:I:287:ILE:HG12	2.02	0.59
3:M:211:ASP:HB2	3:M:228:THR:HB	1.85	0.59
3:M:77:ALA:HB3	3:M:98:ARG:NH1	2.17	0.59
3:O:54:LYS:HE3	3:O:140:LEU:CD2	2.32	0.59
3:Q:32:ALA:HB2	3:Q:277:GLN:HE22	1.67	0.59
3:S:250:ASN:OD1	3:S:250:ASN:N	2.29	0.59
3:T:74:LEU:HA	3:T:98:ARG:HD3	1.84	0.59
1:W:27:C:C2	3:C:323:ARG:HG2	2.38	0.59
3:F:151:SER:OG	3:F:198:SER:HA	2.02	0.59
3:R:174:GLU:HB2	3:R:180:LYS:HB2	1.84	0.59
3:S:189:THR:HG23	3:S:192:LYS:HB3	1.83	0.59
3:S:93:GLY:O	3:S:94:ILE:HG23	2.03	0.59
3:T:73:TYR:O	3:T:76:ALA:N	2.35	0.59
3:V:172:ILE:CD1	3:V:226:VAL:HG21	2.24	0.59
3:V:371:ALA:O	3:V:372:ALA:HB2	2.02	0.59
3:V:81:PHE:CG	3:V:82:GLU:N	2.70	0.59
1:W:9:C:OP1	3:E:323:ARG:NH2	2.34	0.59
3:E:65:LEU:CD2	3:E:119:ASN:HB3	2.25	0.59
3:I:77:ALA:O	3:I:98:ARG:CZ	2.51	0.59
3:K:87:GLU:C	3:K:89:TRP:N	2.54	0.59
3:P:222:SER:O	3:P:224:ILE:N	2.35	0.59
3:P:54:LYS:HE3	3:P:140:LEU:CD2	2.23	0.59
3:P:81:PHE:HZ	3:P:85:CYS:HB2	1.65	0.59
3:V:249:ILE:CG2	3:V:250:ASN:H	2.04	0.59
2:X:88:A:OP1	3:M:235:ASP:HB3	2.03	0.59
3:A:38:LYS:HE2	3:A:38:LYS:CA	2.32	0.59
3:F:51:LYS:O	3:F:55:SER:HB2	2.01	0.59
3:H:50:ASN:N	3:H:50:ASN:HD22	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:145:LEU:HD22	3:J:207:ALA:HA	1.84	0.59
3:K:175:THR:O	3:K:176:ALA:O	2.21	0.59
3:K:216:ARG:HH11	3:K:216:ARG:HG2	1.68	0.59
3:K:222:SER:C	3:K:224:ILE:H	2.06	0.59
3:K:340:VAL:HG22	3:K:416:LEU:CD1	2.33	0.59
3:N:417:LYS:H	3:N:420:HIS:HD2	1.51	0.59
3:O:232:ALA:C	3:O:234:GLU:H	2.06	0.59
3:P:257:ILE:HD13	3:P:269:ILE:HD12	1.85	0.59
3:T:56:VAL:HG11	3:T:123:THR:OG1	2.03	0.59
3:U:176:ALA:C	3:U:178:PHE:N	2.54	0.59
3:A:145:LEU:HD22	3:A:207:ALA:HA	1.85	0.59
3:B:240:VAL:HA	3:B:243:THR:HG22	1.84	0.59
3:C:248:GLN:CD	3:C:249:ILE:HG13	2.23	0.59
3:E:308:VAL:CG1	3:E:312:ILE:HD11	2.30	0.59
3:J:308:VAL:CG1	3:J:312:ILE:HD11	2.33	0.59
3:K:151:SER:OG	3:K:198:SER:HA	2.03	0.59
3:K:35:ASP:O	3:K:36:LEU:HG	2.03	0.59
3:M:10:VAL:HB	3:M:16:SER:HB2	1.84	0.59
3:M:20:GLU:CD	3:M:20:GLU:N	2.56	0.59
3:R:338:MET:HA	3:R:338:MET:HE2	1.84	0.59
3:L:255:GLU:C	3:V:8:PHE:HE2	2.06	0.59
3:A:53:TYR:O	3:A:56:VAL:HG23	2.02	0.58
3:C:133:THR:CG2	3:C:136:GLU:HG3	2.33	0.58
3:D:366:LEU:HD23	3:D:366:LEU:C	2.24	0.58
3:E:183:GLU:O	3:E:190:THR:HG22	2.03	0.58
3:D:9:LYS:HD3	3:F:362:ASP:HA	1.83	0.58
3:G:12:ASN:HB3	3:G:13:GLN:NE2	2.18	0.58
3:G:145:LEU:HD22	3:G:207:ALA:HA	1.85	0.58
3:J:222:SER:C	3:J:224:ILE:H	2.06	0.58
3:J:249:ILE:CG2	3:J:319:MET:CE	2.81	0.58
3:M:73:TYR:O	3:M:76:ALA:N	2.35	0.58
3:N:340:VAL:HG13	3:N:416:LEU:CD1	2.33	0.58
3:N:33:ILE:HB	3:N:88:ASP:HB3	1.83	0.58
3:O:172:ILE:HD11	3:O:226:VAL:HG11	1.84	0.58
3:O:6:ILE:HG13	3:O:7:VAL:H	1.67	0.58
3:P:248:GLN:CG	3:P:249:ILE:H	1.94	0.58
3:C:122:LEU:CD1	3:T:122:LEU:HD23	2.31	0.58
3:T:336:HIS:O	3:T:340:VAL:HG23	2.02	0.58
3:T:73:TYR:O	3:T:74:LEU:C	2.40	0.58
3:C:81:PHE:HE2	3:C:84:THR:HA	1.68	0.58
3:F:197:TRP:CD1	3:F:198:SER:O	2.56	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:215:SER:HB2	3:F:225:ARG:NH1	2.17	0.58
3:G:284:SER:O	3:G:287:ILE:HG12	2.03	0.58
1:W:81:C:C6	3:H:323:ARG:HG2	2.37	0.58
3:L:64:LYS:O	3:L:64:LYS:HG3	2.02	0.58
3:R:67:PRO:HA	3:R:206:LEU:CD1	2.33	0.58
3:T:10:VAL:O	3:T:11:ASN:HB2	2.02	0.58
3:U:184:HIS:O	3:U:189:THR:N	2.37	0.58
3:T:8:PHE:HZ	3:U:255:GLU:HB2	1.65	0.58
3:D:205:PHE:O	3:D:209:THR:HG22	2.03	0.58
3:D:79:GLN:HB3	3:D:217:ILE:HG23	1.85	0.58
3:D:77:ALA:HB3	3:D:98:ARG:NH2	2.19	0.58
3:J:38:LYS:HA	3:J:38:LYS:CE	2.29	0.58
3:L:12:ASN:CB	3:L:13:GLN:OE1	2.50	0.58
3:N:169:ILE:HD11	3:N:191:HIS:HE1	1.67	0.58
3:Q:126:MET:HG2	3:Q:128:LEU:H	1.69	0.58
3:A:10:VAL:O	3:A:11:ASN:CB	2.51	0.58
3:A:31:PRO:HG3	3:A:289:PHE:CD1	2.38	0.58
3:B:176:ALA:C	3:B:178:PHE:H	2.07	0.58
3:D:63:ALA:HB3	3:D:65:LEU:HD13	1.84	0.58
3:F:235:ASP:HB2	3:F:290:ARG:HG2	1.86	0.58
3:G:98:ARG:HD2	3:G:98:ARG:H	1.69	0.58
3:L:12:ASN:O	3:L:13:GLN:CG	2.50	0.58
3:L:56:VAL:HG11	3:L:123:THR:OG1	2.03	0.58
3:N:54:LYS:C	3:N:56:VAL:H	2.06	0.58
3:R:344:TYR:CG	3:R:409:ILE:HG12	2.38	0.58
3:S:32:ALA:H	3:S:277:GLN:HE21	1.49	0.58
3:V:54:LYS:C	3:V:56:VAL:H	2.06	0.58
1:W:55:C:C2	3:K:157:ASN:HB2	2.38	0.58
3:A:37:LYS:HG3	3:A:89:TRP:CE3	2.39	0.58
3:C:176:ALA:O	3:C:178:PHE:N	2.36	0.58
3:F:239:LEU:O	3:F:243:THR:HG22	2.04	0.58
3:I:15:VAL:CG1	3:I:16:SER:N	2.66	0.58
3:L:35:ASP:O	3:L:36:LEU:HG	2.04	0.58
3:M:239:LEU:O	3:M:243:THR:HG22	2.03	0.58
3:O:145:LEU:HD22	3:O:207:ALA:HA	1.85	0.58
3:S:65:LEU:HD21	3:S:119:ASN:HB3	1.84	0.58
3:T:86:PRO:HA	3:T:90:THR:HA	1.85	0.58
3:U:26:HIS:O	3:U:27:GLU:HB3	2.01	0.58
3:V:81:PHE:CD2	3:V:82:GLU:N	2.71	0.58
3:G:232:ALA:C	3:G:234:GLU:H	2.07	0.58
3:G:31:PRO:HD2	3:G:277:GLN:HG3	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:20:GLU:O	3:J:254:ARG:NH1	2.36	0.58
3:N:37:LYS:O	3:N:39:PRO:HD3	2.03	0.58
3:S:126:MET:HE2	3:S:128:LEU:O	2.03	0.58
3:T:20:GLU:O	3:T:22:ILE:HG12	2.04	0.58
3:T:84:THR:O	3:T:86:PRO:HD3	2.03	0.58
3:A:338:MET:CE	3:A:338:MET:HA	2.34	0.58
3:B:14:VAL:HG23	3:B:15:VAL:H	1.68	0.58
3:B:182:VAL:HB	3:B:190:THR:HG21	1.85	0.58
3:B:410:MET:HE2	3:B:410:MET:HA	1.85	0.58
3:C:417:LYS:H	3:C:420:HIS:CD2	2.21	0.58
3:F:216:ARG:NH2	3:F:283:HIS:CD2	2.71	0.58
3:I:103:ILE:HD12	3:I:103:ILE:N	2.17	0.58
3:L:197:TRP:CD1	3:L:198:SER:N	2.70	0.58
3:N:81:PHE:CG	3:N:82:GLU:N	2.71	0.58
3:P:180:LYS:HE3	3:P:182:VAL:O	2.02	0.58
3:Q:176:ALA:O	3:Q:178:PHE:N	2.37	0.58
3:U:53:TYR:HD1	3:U:121:ALA:H	1.50	0.58
2:X:88:A:H8	2:X:89:C:C4'	2.17	0.58
3:A:222:SER:O	3:A:224:ILE:N	2.36	0.58
3:B:417:LYS:H	3:B:420:HIS:CD2	2.17	0.58
3:E:31:PRO:HB3	3:E:289:PHE:HB2	1.86	0.58
3:I:222:SER:O	3:I:224:ILE:N	2.37	0.58
3:I:53:TYR:HD1	3:I:121:ALA:O	1.86	0.58
3:J:189:THR:CG2	3:J:192:LYS:CB	2.79	0.58
3:K:434:ARG:HB3	3:K:435:PRO:HD2	1.85	0.58
3:N:98:ARG:HG3	3:N:213:PHE:CG	2.39	0.58
3:O:20:GLU:OE1	3:O:20:GLU:N	2.37	0.58
3:O:97:ALA:O	3:O:99:LYS:N	2.27	0.58
3:Q:295:SER:OG	3:Q:296:GLY:N	2.34	0.58
3:R:163:THR:HG22	3:R:192:LYS:HZ2	1.69	0.58
3:S:253:ALA:C	3:S:255:GLU:N	2.56	0.58
3:S:85:CYS:HB3	3:S:91:SER:HB2	1.86	0.58
3:T:338:MET:HA	3:T:338:MET:HE2	1.86	0.58
3:T:54:LYS:NZ	3:T:69:ASP:OD2	2.32	0.58
3:U:197:TRP:HD1	3:U:198:SER:N	1.98	0.58
3:G:56:VAL:HG12	3:G:123:THR:OG1	2.04	0.58
3:H:183:GLU:O	3:H:190:THR:HG22	2.04	0.58
3:H:8:PHE:HZ	3:I:255:GLU:HB2	1.67	0.58
3:I:222:SER:C	3:I:224:ILE:N	2.57	0.58
3:L:190:THR:HG23	3:L:191:HIS:N	2.19	0.58
3:L:98:ARG:HD2	3:L:98:ARG:H	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:335:PRO:O	3:M:336:HIS:C	2.42	0.58
3:N:35:ASP:OD2	3:N:89:TRP:NE1	2.32	0.58
2:X:31:C:OP1	3:T:168:ARG:NH2	2.36	0.58
3:T:232:ALA:C	3:T:234:GLU:H	2.06	0.58
3:V:305:VAL:HG22	3:V:308:VAL:HB	1.84	0.58
3:V:69:ASP:O	3:V:71:CYS:N	2.36	0.58
1:W:61:A:H2'	1:W:62:C:O4'	2.04	0.58
1:W:7:C:H5'	3:E:235:ASP:CG	2.22	0.58
3:B:54:LYS:HD3	3:B:69:ASP:OD2	2.04	0.58
3:C:249:ILE:HG23	3:C:319:MET:SD	2.44	0.58
3:C:410:MET:HE3	3:C:410:MET:HA	1.85	0.58
3:F:73:TYR:CZ	3:F:98:ARG:NH2	2.72	0.58
3:H:415:ARG:HE	3:I:352:LYS:HB2	1.68	0.58
3:K:77:ALA:HB3	3:K:98:ARG:HH12	1.68	0.58
3:L:344:TYR:CD1	3:L:409:ILE:HG12	2.39	0.58
3:M:189:THR:HG22	3:M:192:LYS:CA	2.33	0.58
3:N:340:VAL:HG13	3:N:416:LEU:HD12	1.86	0.58
3:R:180:LYS:HE3	3:R:182:VAL:O	2.04	0.58
3:R:249:ILE:HG21	3:R:319:MET:HE1	1.85	0.58
3:T:340:VAL:HG13	3:T:416:LEU:HD12	1.86	0.58
3:U:53:TYR:HD1	3:U:121:ALA:N	2.02	0.58
3:U:8:PHE:HE2	3:V:255:GLU:HA	1.52	0.58
1:W:90:C:OP1	3:G:323:ARG:NH2	2.33	0.58
3:A:128:LEU:HD11	3:A:130:ARG:HE	1.69	0.57
3:B:249:ILE:HG21	3:B:319:MET:HE1	1.85	0.57
3:C:410:MET:HE2	3:C:410:MET:HA	1.86	0.57
3:H:77:ALA:CB	3:H:98:ARG:NH2	2.66	0.57
3:I:262:HIS:CE1	3:J:251:LEU:HD22	2.37	0.57
3:I:54:LYS:O	3:I:56:VAL:N	2.37	0.57
3:J:205:PHE:CD2	3:J:205:PHE:C	2.77	0.57
1:W:63:C:OP1	3:J:323:ARG:NH2	2.35	0.57
3:K:53:TYR:CZ	3:K:65:LEU:HD22	2.39	0.57
3:T:156:GLN:C	3:T:158:THR:H	2.04	0.57
3:T:206:LEU:HA	3:T:209:THR:HG22	1.86	0.57
3:T:262:HIS:HE1	3:U:251:LEU:CD2	2.16	0.57
3:U:248:GLN:O	3:U:250:ASN:O	2.22	0.57
1:W:67:C:C2'	1:W:67:C:O2	2.39	0.57
3:A:205:PHE:O	3:A:209:THR:HG22	2.05	0.57
3:B:175:THR:HG23	3:B:176:ALA:H	1.69	0.57
3:B:178:PHE:HE1	3:B:223:ALA:HB3	1.68	0.57
3:B:63:ALA:HB3	3:B:65:LEU:HD13	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:76:ALA:O	3:C:77:ALA:HB2	2.03	0.57
3:D:235:ASP:HB2	3:D:290:ARG:HG2	1.85	0.57
3:D:308:VAL:HG12	3:D:312:ILE:HD12	1.86	0.57
3:G:175:THR:HG23	3:G:176:ALA:H	1.69	0.57
3:I:59:GLY:O	3:I:61:SER:N	2.38	0.57
3:K:128:LEU:HD11	3:K:130:ARG:HE	1.67	0.57
3:L:12:ASN:HB2	3:L:13:GLN:OE1	2.04	0.57
3:M:8:PHE:CZ	3:N:255:GLU:CA	2.68	0.57
3:C:122:LEU:HD22	3:T:124:GLY:HA2	1.87	0.57
3:E:66:ASP:HB2	3:E:67:PRO:HD3	1.86	0.57
3:G:205:PHE:O	3:G:209:THR:HG22	2.03	0.57
3:J:77:ALA:CB	3:J:98:ARG:HH22	2.11	0.57
2:X:1:C:H42	3:L:157:ASN:HD22	1.51	0.57
3:L:146:SER:CB	3:L:169:ILE:HD12	2.30	0.57
3:M:14:VAL:HG23	3:M:15:VAL:H	1.68	0.57
3:M:206:LEU:HA	3:M:209:THR:HG23	1.86	0.57
3:Q:69:ASP:C	3:Q:71:CYS:N	2.58	0.57
3:U:60:MET:N	3:U:60:MET:SD	2.77	0.57
3:D:163:THR:HG22	3:D:192:LYS:HZ1	1.67	0.57
3:G:33:ILE:HB	3:G:88:ASP:CB	2.35	0.57
3:J:257:ILE:HD13	3:J:269:ILE:HD12	1.86	0.57
3:S:204:ARG:HH21	3:S:234:GLU:CD	2.08	0.57
3:U:77:ALA:HB3	3:U:98:ARG:CZ	2.34	0.57
3:V:54:LYS:C	3:V:56:VAL:N	2.58	0.57
1:W:54:C:C2	3:K:323:ARG:HG2	2.39	0.57
3:B:246:ILE:HG13	3:B:247:LYS:N	2.18	0.57
3:C:176:ALA:CB	3:C:177:PRO:CD	2.79	0.57
3:C:74:LEU:HA	3:C:98:ARG:HD3	1.86	0.57
3:D:253:ALA:C	3:D:255:GLU:H	2.07	0.57
3:D:38:LYS:HE2	3:D:38:LYS:HA	1.85	0.57
3:F:253:ALA:C	3:F:255:GLU:N	2.58	0.57
3:F:323:ARG:HD3	3:F:324:SER:N	2.20	0.57
3:G:10:VAL:HG12	3:G:11:ASN:N	2.19	0.57
3:G:222:SER:C	3:G:224:ILE:N	2.58	0.57
3:H:57:LEU:HD11	3:H:140:LEU:HD11	1.86	0.57
3:H:219:HIS:HA	3:H:222:SER:HB3	1.87	0.57
3:I:222:SER:C	3:I:224:ILE:H	2.08	0.57
3:K:38:LYS:HE2	3:K:39:PRO:CD	2.26	0.57
3:N:169:ILE:HG22	3:N:226:VAL:HG12	1.85	0.57
3:O:253:ALA:O	3:O:254:ARG:CG	2.50	0.57
3:O:287:ILE:HG13	3:O:288:HIS:CD2	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:R:313:HIS:HB3	3:R:324:SER:HB2	1.86	0.57
3:S:35:ASP:HA	3:S:89:TRP:NE1	2.19	0.57
3:T:8:PHE:CD2	3:U:258:LEU:HD13	2.40	0.57
3:V:232:ALA:O	3:V:234:GLU:N	2.35	0.57
3:E:308:VAL:O	3:E:312:ILE:HG13	2.03	0.57
3:F:37:LYS:O	3:F:39:PRO:HD3	2.03	0.57
3:F:81:PHE:HB3	3:F:95:VAL:N	2.19	0.57
3:H:20:GLU:CD	3:H:20:GLU:N	2.58	0.57
3:J:216:ARG:HD3	3:J:216:ARG:O	2.05	0.57
3:L:128:LEU:CD1	3:L:130:ARG:HE	2.17	0.57
3:L:38:LYS:HD3	3:L:205:PHE:HE1	1.69	0.57
3:M:74:LEU:HD22	3:M:98:ARG:CB	2.34	0.57
3:N:54:LYS:HD3	3:N:69:ASP:CG	2.24	0.57
3:R:189:THR:O	3:R:193:MET:N	2.32	0.57
3:R:54:LYS:HD3	3:R:69:ASP:OD2	2.05	0.57
3:S:236:CYS:O	3:S:240:VAL:HG23	2.04	0.57
3:T:263:LYS:HE2	3:U:358:ARG:NH2	2.19	0.57
3:U:51:LYS:O	3:U:55:SER:HB2	2.04	0.57
3:U:67:PRO:HA	3:U:206:LEU:HD11	1.87	0.57
1:W:73:C:N4	3:I:157:ASN:HD22	2.03	0.57
1:W:74:C:H2'	1:W:75:A:O4'	2.05	0.57
2:X:58:C:OP1	3:Q:168:ARG:NH2	2.37	0.57
3:B:5:LYS:HB2	3:B:5:LYS:HZ2	1.68	0.57
3:C:20:GLU:N	3:C:20:GLU:CD	2.58	0.57
3:C:441:PHE:CD2	3:C:441:PHE:C	2.78	0.57
3:C:73:TYR:OH	3:C:98:ARG:NH2	2.37	0.57
3:D:252:THR:HG22	3:D:253:ALA:N	2.18	0.57
3:E:37:LYS:O	3:E:39:PRO:HD3	2.04	0.57
3:F:190:THR:HG23	3:F:191:HIS:N	2.19	0.57
3:I:133:THR:HG22	3:I:136:GLU:OE2	2.04	0.57
3:J:39:PRO:HA	3:J:102:LYS:O	2.05	0.57
3:L:255:GLU:O	3:L:255:GLU:OE1	2.22	0.57
3:L:417:LYS:H	3:L:420:HIS:HD2	1.52	0.57
3:O:185:HIS:C	3:O:189:THR:N	2.58	0.57
3:Q:176:ALA:CB	3:Q:177:PRO:HD2	2.26	0.57
3:U:98:ARG:HH21	3:U:220:LEU:HD23	1.68	0.57
3:V:182:VAL:HB	3:V:190:THR:HG21	1.85	0.57
3:V:66:ASP:HB2	3:V:67:PRO:CD	2.35	0.57
1:W:1:C:C5'	1:W:99:C:O3'	2.53	0.57
3:B:249:ILE:HG23	3:B:319:MET:HE1	1.87	0.57
3:B:253:ALA:O	3:B:254:ARG:HG2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:W:28:C:C4	3:C:157:ASN:HB2	2.40	0.57
3:D:240:VAL:HA	3:D:243:THR:HG22	1.86	0.57
3:E:237:SER:HA	3:E:240:VAL:HB	1.87	0.57
3:E:348:GLU:OE1	3:E:352:LYS:HD3	2.04	0.57
3:F:308:VAL:HG12	3:F:312:ILE:HD12	1.87	0.57
3:G:31:PRO:HD2	3:G:277:GLN:CG	2.34	0.57
3:L:244:GLY:O	3:L:245:PHE:C	2.43	0.57
3:O:56:VAL:CG1	3:O:123:THR:OG1	2.53	0.57
3:O:77:ALA:O	3:O:98:ARG:NH1	2.36	0.57
3:P:185:HIS:CB	3:P:189:THR:N	2.68	0.57
3:P:194:CYS:C	3:P:196:ASN:N	2.58	0.57
3:S:171:GLN:O	3:S:175:THR:HG22	2.04	0.57
3:V:30:TYR:C	3:V:32:ALA:H	2.08	0.57
3:A:248:GLN:CG	3:A:249:ILE:N	2.66	0.57
1:W:36:C:C2	3:B:323:ARG:HG2	2.40	0.57
3:D:163:THR:HG22	3:D:192:LYS:HZ2	1.68	0.57
3:F:434:ARG:HB3	3:F:435:PRO:HD2	1.85	0.57
3:H:205:PHE:O	3:H:209:THR:HG22	2.05	0.57
3:H:73:TYR:HD2	3:H:210:TYR:OH	1.87	0.57
3:L:101:ASP:OD2	3:L:101:ASP:N	2.35	0.57
3:L:171:GLN:O	3:L:174:GLU:HG2	2.05	0.57
3:O:35:ASP:OD2	3:O:89:TRP:NE1	2.34	0.57
3:P:183:GLU:O	3:P:190:THR:HG22	2.03	0.57
3:P:336:HIS:O	3:P:340:VAL:HG23	2.04	0.57
3:R:37:LYS:HG3	3:R:89:TRP:HZ3	1.70	0.57
3:S:197:TRP:HD1	3:S:198:SER:N	2.00	0.57
3:S:249:ILE:HG21	3:S:319:MET:SD	2.44	0.57
3:U:338:MET:HA	3:U:338:MET:HE2	1.87	0.57
3:U:340:VAL:HA	3:U:416:LEU:HD11	1.86	0.57
1:W:33:A:OP1	1:W:33:A:H4'	2.04	0.57
3:B:204:ARG:HE	3:B:291:SER:HA	1.70	0.57
3:B:54:LYS:C	3:B:56:VAL:N	2.57	0.57
3:C:87:GLU:O	3:C:89:TRP:N	2.38	0.57
3:F:206:LEU:HA	3:F:209:THR:HG23	1.87	0.57
3:H:77:ALA:O	3:H:98:ARG:CZ	2.53	0.57
3:I:194:CYS:C	3:I:196:ASN:H	2.08	0.57
3:J:272:MET:SD	3:J:305:VAL:HG21	2.45	0.57
3:K:175:THR:HG23	3:K:176:ALA:N	2.20	0.57
3:L:98:ARG:HG3	3:L:213:PHE:CG	2.39	0.57
3:T:174:GLU:O	3:T:174:GLU:HG3	2.05	0.57
2:X:88:A:H2'	2:X:89:C:O5'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:74:LEU:HA	3:D:98:ARG:HD3	1.86	0.56
3:F:222:SER:O	3:F:224:ILE:N	2.37	0.56
3:K:66:ASP:O	3:K:67:PRO:C	2.43	0.56
3:N:20:GLU:O	3:N:22:ILE:HG12	2.04	0.56
3:N:66:ASP:O	3:N:67:PRO:C	2.42	0.56
3:O:163:THR:HG22	3:O:192:LYS:HZ2	1.68	0.56
3:O:222:SER:O	3:O:224:ILE:N	2.38	0.56
3:P:239:LEU:O	3:P:243:THR:HG22	2.04	0.56
3:Q:69:ASP:O	3:Q:71:CYS:N	2.39	0.56
3:R:176:ALA:CB	3:R:177:PRO:CD	2.79	0.56
3:R:183:GLU:O	3:R:190:THR:HG22	2.05	0.56
3:T:287:ILE:HG13	3:T:288:HIS:CD2	2.39	0.56
3:B:9:LYS:HZ2	3:D:363:GLU:H	1.52	0.56
1:W:31:C:OP1	3:C:168:ARG:NH2	2.38	0.56
3:E:10:VAL:O	3:E:11:ASN:CB	2.52	0.56
3:E:54:LYS:HD2	3:E:144:LEU:HD11	1.87	0.56
3:G:211:ASP:HB2	3:G:228:THR:HB	1.87	0.56
3:I:173:PHE:CZ	3:I:224:ILE:HA	2.39	0.56
3:I:373:GLU:O	3:I:374:LEU:CB	2.53	0.56
3:K:190:THR:HG23	3:K:191:HIS:N	2.19	0.56
3:K:249:ILE:HG23	3:K:319:MET:SD	2.45	0.56
3:M:324:SER:O	3:M:325:LEU:C	2.42	0.56
3:M:334:ALA:O	3:M:338:MET:HG2	2.05	0.56
3:N:10:VAL:CG1	3:N:11:ASN:N	2.62	0.56
3:O:183:GLU:N	3:O:190:THR:HG21	2.13	0.56
3:O:56:VAL:HG11	3:O:123:THR:OG1	2.06	0.56
3:P:246:ILE:HG13	3:P:247:LYS:H	1.68	0.56
3:P:340:VAL:HG13	3:P:416:LEU:HD11	1.87	0.56
3:P:8:PHE:CZ	3:Q:254:ARG:O	2.57	0.56
3:P:21:ILE:HB	3:Q:280:ALA:HB2	1.87	0.56
3:T:182:VAL:HB	3:T:190:THR:HG21	1.87	0.56
3:V:77:ALA:HB1	3:V:220:LEU:HD21	1.86	0.56
3:A:31:PRO:HD2	3:A:277:GLN:CG	2.34	0.56
3:A:38:LYS:HE2	3:A:39:PRO:HD2	1.87	0.56
3:C:49:LEU:CD2	3:C:52:ALA:HB2	2.34	0.56
3:G:305:VAL:HG22	3:G:308:VAL:HB	1.87	0.56
3:G:49:LEU:HD22	3:G:52:ALA:HB2	1.88	0.56
3:H:403:GLU:HG3	3:I:357:ARG:NH1	2.20	0.56
3:J:66:ASP:HB2	3:J:67:PRO:HD3	1.87	0.56
3:L:54:LYS:NZ	3:L:69:ASP:OD2	2.36	0.56
3:P:249:ILE:CG2	3:P:319:MET:SD	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:17:LEU:HD12	3:S:17:LEU:O	2.05	0.56
3:S:194:CYS:C	3:S:196:ASN:N	2.57	0.56
3:T:38:LYS:HA	3:T:38:LYS:HE2	1.87	0.56
3:U:134:VAL:HB	3:U:135:PRO:HD3	1.87	0.56
3:U:416:LEU:HD12	3:U:416:LEU:H	1.70	0.56
3:V:14:VAL:HG23	3:V:15:VAL:N	2.20	0.56
3:C:35:ASP:O	3:C:36:LEU:HG	2.05	0.56
3:D:323:ARG:HD3	3:D:323:ARG:C	2.25	0.56
3:J:176:ALA:O	3:J:178:PHE:N	2.39	0.56
3:M:317:CYS:SG	3:M:325:LEU:HD12	2.46	0.56
3:M:344:TYR:CE2	3:M:409:ILE:HA	2.40	0.56
3:M:93:GLY:O	3:M:94:ILE:HG23	2.05	0.56
3:N:248:GLN:O	3:N:250:ASN:O	2.22	0.56
3:O:248:GLN:HG2	3:O:249:ILE:HG13	1.87	0.56
3:P:38:LYS:CE	3:P:39:PRO:HD2	2.34	0.56
3:T:176:ALA:CB	3:T:177:PRO:CD	2.64	0.56
3:U:77:ALA:HB1	3:U:98:ARG:HH22	1.67	0.56
1:W:94:C:OP2	3:G:168:ARG:NH2	2.39	0.56
3:B:74:LEU:HD21	3:B:210:TYR:CE1	2.40	0.56
3:B:421:ILE:O	3:B:425:VAL:HG23	2.05	0.56
3:G:46:ALA:HB1	3:G:50:ASN:OD1	2.05	0.56
3:H:118:GLY:HA3	3:H:120:TRP:HE1	1.71	0.56
3:H:81:PHE:H	3:H:95:VAL:H	1.53	0.56
1:W:68:C:N3	3:J:223:ALA:HA	2.20	0.56
3:N:255:GLU:O	3:N:258:LEU:HB2	2.06	0.56
3:R:153:ILE:HG12	3:R:161:TYR:HE2	1.70	0.56
3:R:81:PHE:CZ	3:R:85:CYS:HB2	2.41	0.56
3:V:53:TYR:O	3:V:56:VAL:HG23	2.06	0.56
2:X:33:C:H5"	3:S:297:LYS:HD2	1.85	0.56
3:B:133:THR:OG1	3:B:135:PRO:HD2	2.05	0.56
3:D:81:PHE:HZ	3:D:85:CYS:HB2	1.71	0.56
3:F:31:PRO:HG3	3:F:289:PHE:CD1	2.41	0.56
3:L:54:LYS:C	3:L:56:VAL:N	2.58	0.56
3:M:270:ARG:HH11	3:M:270:ARG:HG3	1.70	0.56
3:M:317:CYS:SG	3:M:325:LEU:HA	2.46	0.56
3:N:80:PHE:CD2	3:N:80:PHE:N	2.71	0.56
3:C:77:ALA:HB3	3:C:98:ARG:CZ	2.36	0.56
3:F:248:GLN:CG	3:F:249:ILE:N	2.68	0.56
3:I:249:ILE:CG2	3:I:250:ASN:N	2.66	0.56
3:K:232:ALA:C	3:K:234:GLU:H	2.09	0.56
3:K:248:GLN:CD	3:K:249:ILE:HG13	2.26	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:66:ASP:O	3:L:67:PRO:C	2.41	0.56
3:M:248:GLN:CG	3:M:249:ILE:HG13	2.35	0.56
3:N:222:SER:C	3:N:224:ILE:H	2.09	0.56
3:N:81:PHE:CE2	3:N:84:THR:HA	2.41	0.56
3:P:10:VAL:O	3:P:11:ASN:HB3	2.05	0.56
3:P:17:LEU:HD12	3:P:17:LEU:O	2.06	0.56
3:O:264:ASN:OD1	3:P:251:LEU:HD21	2.06	0.56
3:T:12:ASN:HB3	3:T:13:GLN:OE1	2.06	0.56
3:V:367:GLN:HA	3:V:367:GLN:OE1	2.05	0.56
3:A:189:THR:HG23	3:A:192:LYS:HB3	1.88	0.56
3:C:51:LYS:CA	3:C:54:LYS:HE2	2.32	0.56
3:E:145:LEU:HD22	3:E:207:ALA:HA	1.87	0.56
3:E:74:LEU:HD22	3:E:98:ARG:HB3	1.86	0.56
3:I:65:LEU:HB3	3:I:120:TRP:CZ3	2.41	0.56
3:I:278:GLU:HB3	3:I:281:VAL:HG21	1.87	0.56
3:J:224:ILE:O	3:J:226:VAL:N	2.39	0.56
3:K:50:ASN:N	3:K:50:ASN:ND2	2.51	0.56
3:K:54:LYS:C	3:K:56:VAL:H	2.08	0.56
3:L:53:TYR:CD1	3:L:121:ALA:O	2.59	0.56
3:L:12:ASN:O	3:L:13:GLN:CD	2.43	0.56
3:L:222:SER:O	3:L:224:ILE:N	2.38	0.56
3:N:54:LYS:NZ	3:N:69:ASP:OD1	2.38	0.56
3:P:77:ALA:O	3:P:98:ARG:CZ	2.54	0.56
2:X:54:C:C2	3:Q:323:ARG:HG2	2.41	0.56
3:R:434:ARG:HB3	3:R:435:PRO:CD	2.36	0.56
3:S:212:MET:O	3:S:215:SER:HB3	2.05	0.56
3:S:5:LYS:O	3:S:7:VAL:N	2.39	0.56
3:U:253:ALA:O	3:U:254:ARG:HG2	2.05	0.56
3:V:57:LEU:O	3:V:57:LEU:HD23	2.05	0.56
3:D:250:ASN:N	3:D:250:ASN:OD1	2.37	0.56
3:F:362:ASP:OD1	3:F:365:GLU:HB2	2.06	0.56
3:F:81:PHE:CE1	3:F:85:CYS:HB2	2.39	0.56
3:H:77:ALA:HB3	3:H:98:ARG:CZ	2.35	0.56
3:I:248:GLN:CG	3:I:249:ILE:N	2.53	0.56
3:J:97:ALA:O	3:J:99:LYS:N	2.29	0.56
3:K:35:ASP:OD2	3:K:89:TRP:NE1	2.30	0.56
3:M:57:LEU:HD22	3:M:190:THR:O	2.06	0.56
3:N:50:ASN:ND2	3:N:50:ASN:N	2.54	0.56
3:S:169:ILE:HG22	3:S:226:VAL:CG1	2.35	0.56
3:V:167:ASP:O	3:V:171:GLN:HG3	2.06	0.56
3:B:87:GLU:CG	3:B:284:SER:HA	2.32	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:326:ASN:HD22	3:C:431:HIS:CE1	2.24	0.56
3:C:69:ASP:O	3:C:72:SER:N	2.39	0.56
3:D:305:VAL:HG22	3:D:308:VAL:HB	1.87	0.56
3:F:139:SER:HA	3:F:178:PHE:HD2	1.70	0.56
3:F:268:GLU:HB3	3:F:305:VAL:HG23	1.88	0.56
3:J:87:GLU:C	3:J:89:TRP:N	2.56	0.56
3:N:101:ASP:N	3:N:101:ASP:OD2	2.38	0.56
3:N:194:CYS:C	3:N:196:ASN:N	2.59	0.56
3:Q:7:VAL:CG1	3:Q:8:PHE:N	2.68	0.56
3:R:15:VAL:HG12	3:R:16:SER:N	2.21	0.56
3:R:248:GLN:HG2	3:R:249:ILE:N	2.20	0.56
3:R:235:ASP:HB2	3:R:290:ARG:HG2	1.88	0.56
3:R:65:LEU:HB3	3:R:120:TRP:CZ3	2.41	0.56
3:S:77:ALA:HB1	3:S:220:LEU:HD21	1.88	0.56
3:U:234:GLU:O	3:U:235:ASP:HB2	2.05	0.56
3:V:10:VAL:O	3:V:11:ASN:CB	2.53	0.56
1:W:23:A:O5'	1:W:23:A:H8	1.88	0.56
3:B:73:TYR:HD2	3:B:141:VAL:HG11	1.71	0.56
3:C:66:ASP:HB2	3:C:67:PRO:CD	2.36	0.56
3:F:183:GLU:H	3:F:190:THR:HG21	1.71	0.56
3:F:66:ASP:OD1	3:F:66:ASP:N	2.34	0.56
3:J:189:THR:O	3:J:193:MET:N	2.30	0.56
3:J:8:PHE:HE2	3:K:255:GLU:HA	1.61	0.56
3:K:287:ILE:HG13	3:K:288:HIS:CD2	2.40	0.56
3:L:366:LEU:O	3:L:366:LEU:HD23	2.06	0.56
3:L:85:CYS:HB3	3:L:91:SER:HB2	1.88	0.56
3:N:421:ILE:O	3:N:425:VAL:HG23	2.05	0.56
3:N:81:PHE:HE2	3:N:84:THR:HA	1.71	0.56
3:P:98:ARG:HA	3:P:213:PHE:CD1	2.41	0.56
3:S:169:ILE:O	3:S:173:PHE:HD1	1.89	0.56
3:S:176:ALA:HB1	3:S:177:PRO:CD	2.36	0.56
3:S:333:CYS:O	3:S:334:ALA:C	2.44	0.56
3:S:350:PHE:C	3:S:350:PHE:CD2	2.79	0.56
3:S:66:ASP:OD1	3:S:66:ASP:N	2.39	0.56
3:V:184:HIS:O	3:V:189:THR:N	2.39	0.56
3:V:93:GLY:O	3:V:94:ILE:HG23	2.06	0.56
1:W:92:C:H2'	1:W:93:A:C8	2.40	0.56
3:B:232:ALA:C	3:B:234:GLU:H	2.10	0.55
3:C:248:GLN:CG	3:C:249:ILE:N	2.61	0.55
3:C:326:ASN:HD22	3:C:431:HIS:HE1	1.54	0.55
3:D:333:CYS:O	3:D:334:ALA:C	2.44	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:219:HIS:HA	3:G:222:SER:HB3	1.88	0.55
3:H:10:VAL:HG12	3:H:11:ASN:N	2.20	0.55
3:J:65:LEU:HD21	3:J:119:ASN:HB3	1.87	0.55
3:N:268:GLU:HB3	3:N:305:VAL:HG23	1.88	0.55
3:O:197:TRP:HD1	3:O:198:SER:H	1.50	0.55
3:R:239:LEU:O	3:R:243:THR:HG22	2.05	0.55
3:U:53:TYR:CZ	3:U:65:LEU:HD22	2.41	0.55
3:U:98:ARG:HD2	3:U:98:ARG:H	1.71	0.55
3:B:74:LEU:HD22	3:B:98:ARG:CB	2.36	0.55
3:E:248:GLN:CG	3:E:249:ILE:H	2.11	0.55
3:D:264:ASN:OD1	3:E:251:LEU:HD21	2.07	0.55
3:F:85:CYS:O	3:F:91:SER:HB2	2.07	0.55
3:G:20:GLU:CD	3:G:20:GLU:N	2.59	0.55
3:N:21:ILE:HG13	3:O:279:THR:HB	1.87	0.55
3:N:340:VAL:HG22	3:N:416:LEU:HD11	1.87	0.55
3:Q:180:LYS:NZ	3:Q:184:HIS:CD2	2.73	0.55
3:P:264:ASN:ND2	3:Q:251:LEU:HD22	2.15	0.55
3:Q:74:LEU:HA	3:Q:98:ARG:HD3	1.89	0.55
3:R:340:VAL:HG13	3:R:416:LEU:CD1	2.35	0.55
3:T:250:ASN:OD1	3:T:250:ASN:N	2.32	0.55
1:W:76:C:O2	3:I:223:ALA:HA	2.06	0.55
3:A:222:SER:C	3:A:224:ILE:N	2.60	0.55
3:C:53:TYR:CD1	3:C:121:ALA:O	2.59	0.55
3:D:248:GLN:O	3:D:249:ILE:C	2.44	0.55
3:D:264:ASN:CG	3:E:251:LEU:HD21	2.27	0.55
3:F:31:PRO:HD2	3:F:277:GLN:HG3	1.87	0.55
3:K:189:THR:O	3:K:193:MET:N	2.39	0.55
3:K:222:SER:C	3:K:224:ILE:N	2.59	0.55
3:L:174:GLU:HB2	3:L:180:LYS:HB2	1.89	0.55
3:L:177:PRO:HB2	3:L:221:TYR:CE2	2.41	0.55
3:L:9:LYS:HE2	3:L:17:LEU:HB3	1.88	0.55
3:M:348:GLU:O	3:M:348:GLU:HG3	2.06	0.55
3:N:234:GLU:HG2	3:N:235:ASP:OD1	2.07	0.55
3:O:52:ALA:HA	3:O:126:MET:SD	2.46	0.55
3:P:248:GLN:O	3:P:250:ASN:O	2.23	0.55
3:P:31:PRO:HG3	3:P:289:PHE:CD1	2.42	0.55
3:A:340:VAL:HG13	3:A:416:LEU:HD12	1.89	0.55
3:D:60:MET:O	3:D:61:SER:HB3	2.07	0.55
3:I:248:GLN:O	3:I:249:ILE:C	2.43	0.55
3:L:10:VAL:O	3:L:11:ASN:CB	2.54	0.55
3:L:12:ASN:O	3:L:13:GLN:HG3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:79:GLN:HB3	3:L:217:ILE:CG2	2.37	0.55
3:M:223:ALA:O	3:M:226:VAL:CG2	2.54	0.55
3:N:66:ASP:O	3:N:70:VAL:N	2.38	0.55
3:O:74:LEU:CD2	3:O:98:ARG:HB2	2.37	0.55
3:T:77:ALA:HB3	3:T:98:ARG:CZ	2.33	0.55
3:U:257:ILE:O	3:U:257:ILE:HG22	2.07	0.55
3:A:176:ALA:O	3:A:178:PHE:N	2.39	0.55
3:A:6:ILE:O	3:A:7:VAL:HB	2.05	0.55
3:B:169:ILE:HG22	3:B:226:VAL:CG1	2.36	0.55
3:C:197:TRP:CD1	3:C:198:SER:O	2.60	0.55
3:C:31:PRO:HD2	3:C:277:GLN:HE21	1.71	0.55
3:D:278:GLU:HB3	3:D:281:VAL:HB	1.89	0.55
3:G:180:LYS:CE	3:G:182:VAL:O	2.53	0.55
3:G:38:LYS:HE2	3:G:39:PRO:HD2	1.88	0.55
3:H:225:ARG:O	3:H:229:VAL:N	2.37	0.55
3:M:189:THR:O	3:M:193:MET:N	2.28	0.55
3:M:38:LYS:CE	3:M:38:LYS:HA	2.36	0.55
3:N:255:GLU:OE1	3:N:255:GLU:C	2.45	0.55
3:O:77:ALA:HB3	3:O:98:ARG:HH22	1.71	0.55
3:R:406:TYR:CE2	3:R:410:MET:HG3	2.42	0.55
3:V:134:VAL:HB	3:V:135:PRO:HD3	1.89	0.55
3:L:254:ARG:HH21	3:V:6:ILE:HD13	1.72	0.55
3:L:163:THR:HG22	3:L:192:LYS:HZ2	1.71	0.55
3:L:66:ASP:C	3:L:68:ASP:N	2.60	0.55
3:N:197:TRP:CD1	3:N:198:SER:N	2.71	0.55
3:O:175:THR:HG23	3:O:176:ALA:N	2.22	0.55
3:O:286:PHE:HA	3:O:289:PHE:HB3	1.88	0.55
3:S:287:ILE:HG13	3:S:288:HIS:HD2	1.70	0.55
3:S:63:ALA:HB3	3:S:65:LEU:HD13	1.89	0.55
3:T:175:THR:HG23	3:T:176:ALA:H	1.70	0.55
3:T:51:LYS:HA	3:T:54:LYS:CE	2.28	0.55
3:V:73:TYR:HD1	3:V:76:ALA:HB3	1.70	0.55
1:W:56:C:O2'	1:W:57:C:H5'	2.05	0.55
3:A:140:LEU:HB2	3:A:181:ILE:HD11	1.88	0.55
3:C:133:THR:HG22	3:C:136:GLU:HG3	1.87	0.55
3:E:32:ALA:HB2	3:E:277:GLN:NE2	2.22	0.55
3:E:308:VAL:HG12	3:E:312:ILE:CD1	2.31	0.55
3:F:74:LEU:O	3:F:97:ALA:HB1	2.07	0.55
3:G:264:ASN:HD21	3:H:251:LEU:HD13	1.72	0.55
3:K:250:ASN:N	3:K:250:ASN:OD1	2.39	0.55
3:L:280:ALA:HA	3:V:23:VAL:HA	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:315:VAL:HG12	3:L:319:MET:HE1	1.88	0.55
3:O:169:ILE:HD11	3:O:191:HIS:HE1	1.70	0.55
3:O:20:GLU:CD	3:O:20:GLU:N	2.60	0.55
3:M:6:ILE:HD11	3:O:361:ARG:HG2	1.89	0.55
3:Q:205:PHE:CD2	3:Q:205:PHE:C	2.80	0.55
3:R:211:ASP:HB2	3:R:228:THR:HB	1.88	0.55
3:T:134:VAL:HB	3:T:135:PRO:HD3	1.89	0.55
2:X:89:C:N4	3:M:323:ARG:NE	2.39	0.55
3:A:194:CYS:C	3:A:196:ASN:N	2.60	0.55
3:A:38:LYS:CE	3:A:38:LYS:HA	2.35	0.55
3:G:204:ARG:HE	3:G:291:SER:HA	1.71	0.55
3:I:264:ASN:CG	3:J:251:LEU:HD21	2.27	0.55
3:K:101:ASP:N	3:K:101:ASP:OD2	2.40	0.55
3:K:133:THR:HG22	3:K:136:GLU:OE2	2.07	0.55
3:N:248:GLN:CG	3:N:249:ILE:N	2.55	0.55
3:L:5:LYS:HE2	3:N:361:ARG:HG2	1.89	0.55
3:N:66:ASP:OD1	3:N:66:ASP:N	2.40	0.55
3:Q:184:HIS:O	3:Q:189:THR:N	2.40	0.55
3:Q:10:VAL:HG21	3:Q:18:LYS:NZ	2.21	0.55
3:T:53:TYR:HB2	3:T:121:ALA:O	2.07	0.55
3:T:264:ASN:HD21	3:U:251:LEU:CD2	2.20	0.55
3:V:212:MET:HG3	3:V:288:HIS:HD2	1.70	0.55
3:B:66:ASP:OD1	3:B:66:ASP:N	2.36	0.55
3:F:33:ILE:HB	3:F:88:ASP:CB	2.37	0.55
3:I:253:ALA:C	3:I:255:GLU:N	2.58	0.55
3:J:249:ILE:HG21	3:J:319:MET:CE	2.36	0.55
3:K:326:ASN:HA	3:K:437:SER:HB2	1.89	0.55
3:L:176:ALA:O	3:L:178:PHE:N	2.40	0.55
3:M:189:THR:CG2	3:M:192:LYS:CG	2.82	0.55
3:N:8:PHE:CZ	3:O:255:GLU:HB2	2.42	0.55
3:P:249:ILE:HG23	3:P:319:MET:SD	2.47	0.55
3:Q:253:ALA:C	3:Q:255:GLU:H	2.09	0.55
3:S:248:GLN:HG2	3:S:249:ILE:HG13	1.89	0.55
3:T:278:GLU:HB3	3:T:281:VAL:CG2	2.37	0.55
3:V:249:ILE:CG2	3:V:250:ASN:N	2.67	0.55
3:U:21:ILE:HB	3:V:280:ALA:HB2	1.89	0.55
3:A:8:PHE:CZ	3:B:255:GLU:CA	2.87	0.55
3:B:73:TYR:CE1	3:B:77:ALA:HB3	2.42	0.55
3:C:403:GLU:HG3	3:D:357:ARG:NH1	2.22	0.55
3:D:49:LEU:HD23	3:D:51:LYS:HB3	1.87	0.55
3:E:15:VAL:CG1	3:E:16:SER:N	2.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:189:THR:HG23	3:G:192:LYS:CG	2.35	0.55
3:I:73:TYR:HD1	3:I:76:ALA:HB3	1.72	0.55
3:K:183:GLU:O	3:K:184:HIS:O	2.25	0.55
3:K:206:LEU:HA	3:K:209:THR:HG23	1.89	0.55
3:O:54:LYS:C	3:O:56:VAL:H	2.10	0.55
3:P:6:ILE:HD12	3:Q:254:ARG:NH2	2.22	0.55
3:Q:318:TYR:CZ	3:Q:423:ARG:HG2	2.42	0.55
3:T:175:THR:O	3:T:176:ALA:O	2.25	0.55
3:U:248:GLN:O	3:U:249:ILE:C	2.44	0.55
3:V:31:PRO:HG3	3:V:289:PHE:CD1	2.42	0.55
1:W:11:C:H2'	1:W:12:A:C8	2.42	0.55
3:A:155:GLY:N	3:A:158:THR:HG21	2.22	0.54
3:E:232:ALA:C	3:E:234:GLU:H	2.09	0.54
3:E:250:ASN:OD1	3:E:250:ASN:N	2.40	0.54
3:E:23:VAL:HB	3:F:279:THR:O	2.07	0.54
3:H:172:ILE:HD11	3:H:226:VAL:HG11	1.88	0.54
3:H:253:ALA:C	3:H:255:GLU:H	2.10	0.54
3:I:173:PHE:HZ	3:I:224:ILE:HA	1.71	0.54
3:J:79:GLN:HB3	3:J:217:ILE:CG2	2.37	0.54
3:M:278:GLU:OE2	3:M:284:SER:HB2	2.06	0.54
3:N:232:ALA:C	3:N:234:GLU:H	2.10	0.54
3:N:417:LYS:N	3:N:420:HIS:HD2	2.05	0.54
3:N:93:GLY:O	3:N:94:ILE:HG23	2.07	0.54
3:T:305:VAL:O	3:T:305:VAL:HG22	2.07	0.54
3:T:249:ILE:CG2	3:T:319:MET:HE1	2.36	0.54
3:T:50:ASN:HD22	3:T:50:ASN:N	2.04	0.54
3:U:252:THR:HG22	3:U:253:ALA:H	1.71	0.54
1:W:3:C:C2'	1:W:4:C:H5'	2.38	0.54
3:A:57:LEU:H	3:A:57:LEU:HD12	1.72	0.54
3:B:340:VAL:HG13	3:B:416:LEU:HD11	1.87	0.54
3:C:169:ILE:HG22	3:C:226:VAL:CG1	2.36	0.54
3:F:308:VAL:HG12	3:F:312:ILE:HD11	1.89	0.54
3:G:176:ALA:C	3:G:178:PHE:H	2.10	0.54
3:G:264:ASN:HD21	3:H:251:LEU:CD1	2.20	0.54
3:I:216:ARG:NH2	3:I:283:HIS:CD2	2.76	0.54
3:J:434:ARG:HB3	3:J:435:PRO:HD2	1.89	0.54
3:O:252:THR:HG22	3:O:253:ALA:H	1.73	0.54
3:O:313:HIS:ND1	3:O:324:SER:CB	2.70	0.54
3:P:8:PHE:CE1	3:Q:254:ARG:O	2.61	0.54
3:Q:66:ASP:O	3:Q:67:PRO:C	2.45	0.54
3:R:97:ALA:O	3:R:99:LYS:N	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:340:VAL:HG22	3:S:416:LEU:CD1	2.36	0.54
3:U:222:SER:C	3:U:224:ILE:H	2.10	0.54
3:B:134:VAL:HB	3:B:135:PRO:HD3	1.89	0.54
3:F:97:ALA:O	3:F:99:LYS:N	2.37	0.54
3:G:60:MET:N	3:G:60:MET:SD	2.74	0.54
3:H:156:GLN:C	3:H:158:THR:H	2.10	0.54
3:H:206:LEU:HA	3:H:209:THR:CG2	2.37	0.54
3:I:50:ASN:O	3:I:54:LYS:HG2	2.07	0.54
3:J:178:PHE:HE1	3:J:223:ALA:HB3	1.71	0.54
3:J:322:VAL:O	3:J:323:ARG:C	2.46	0.54
3:J:423:ARG:O	3:J:427:VAL:HG23	2.07	0.54
3:N:30:TYR:HB3	3:N:31:PRO:CD	2.36	0.54
3:Q:81:PHE:CZ	3:Q:85:CYS:HB2	2.42	0.54
3:R:278:GLU:HB3	3:R:281:VAL:HB	1.88	0.54
3:T:65:LEU:HD21	3:T:119:ASN:HB3	1.88	0.54
3:U:338:MET:CE	3:U:338:MET:HA	2.36	0.54
3:A:286:PHE:HA	3:A:289:PHE:HB3	1.89	0.54
3:C:215:SER:HB2	3:C:225:ARG:HH12	1.71	0.54
3:C:81:PHE:CE2	3:C:84:THR:HA	2.41	0.54
3:D:54:LYS:HD3	3:D:69:ASP:OD2	2.06	0.54
3:E:189:THR:CB	3:E:193:MET:HG2	2.33	0.54
3:F:78:MET:O	3:F:220:LEU:HD22	2.08	0.54
3:K:38:LYS:HA	3:K:38:LYS:HE2	1.89	0.54
3:L:248:GLN:CG	3:L:249:ILE:H	2.00	0.54
3:N:56:VAL:HG11	3:N:123:THR:OG1	2.07	0.54
3:O:185:HIS:CB	3:O:189:THR:N	2.71	0.54
3:R:15:VAL:HG12	3:R:16:SER:H	1.73	0.54
3:R:232:ALA:C	3:R:234:GLU:H	2.10	0.54
3:R:253:ALA:O	3:R:255:GLU:N	2.41	0.54
3:R:299:PRO:HG2	3:R:300:TYR:CE1	2.43	0.54
3:S:315:VAL:O	3:S:319:MET:HE2	2.08	0.54
3:S:74:LEU:HD22	3:S:98:ARG:CB	2.37	0.54
3:T:189:THR:HG23	3:T:192:LYS:HB3	1.89	0.54
3:U:169:ILE:HG22	3:U:226:VAL:HG11	1.89	0.54
3:V:278:GLU:HB3	3:V:281:VAL:HB	1.90	0.54
3:B:98:ARG:HD2	3:B:98:ARG:H	1.72	0.54
3:B:9:LYS:HD3	3:D:362:ASP:CA	2.38	0.54
3:I:87:GLU:HG2	3:I:284:SER:CA	2.27	0.54
3:J:174:GLU:HB2	3:J:180:LYS:HB2	1.88	0.54
3:J:176:ALA:C	3:J:178:PHE:H	2.11	0.54
3:K:73:TYR:HD2	3:K:210:TYR:HH	1.50	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:326:ASN:HB2	3:N:434:ARG:HD2	1.90	0.54
3:P:38:LYS:HA	3:P:38:LYS:CE	2.33	0.54
3:P:416:LEU:HD12	3:P:416:LEU:H	1.73	0.54
3:P:66:ASP:O	3:P:70:VAL:N	2.37	0.54
3:U:313:HIS:HB3	3:U:324:SER:HB2	1.90	0.54
3:V:97:ALA:O	3:V:99:LYS:N	2.33	0.54
3:B:206:LEU:O	3:B:207:ALA:C	2.45	0.54
3:B:54:LYS:HD2	3:B:144:LEU:HD11	1.89	0.54
3:C:133:THR:OG1	3:C:135:PRO:HD2	2.08	0.54
3:C:169:ILE:HG22	3:C:226:VAL:HG11	1.90	0.54
3:C:197:TRP:HD1	3:C:198:SER:O	1.91	0.54
3:B:264:ASN:ND2	3:C:251:LEU:HD22	2.13	0.54
3:C:56:VAL:HG11	3:C:123:THR:OG1	2.08	0.54
3:D:176:ALA:C	3:D:178:PHE:N	2.59	0.54
3:D:50:ASN:ND2	3:D:50:ASN:N	2.53	0.54
3:E:222:SER:C	3:E:224:ILE:H	2.11	0.54
3:F:249:ILE:HD11	3:F:321:GLN:HG3	1.90	0.54
3:F:333:CYS:O	3:F:334:ALA:C	2.46	0.54
3:F:85:CYS:HB3	3:F:91:SER:HB2	1.89	0.54
3:I:189:THR:HG23	3:I:192:LYS:CB	2.35	0.54
3:J:286:PHE:HA	3:J:289:PHE:HB3	1.90	0.54
3:L:17:LEU:O	3:L:18:LYS:HB3	2.07	0.54
3:L:246:ILE:HG13	3:L:247:LYS:N	2.21	0.54
3:M:10:VAL:O	3:M:11:ASN:HB3	2.08	0.54
3:N:8:PHE:HE1	3:O:254:ARG:HG3	1.72	0.54
3:R:156:GLN:C	3:R:158:THR:H	2.09	0.54
3:R:249:ILE:HG23	3:R:319:MET:SD	2.47	0.54
3:S:78:MET:HB3	3:S:97:ALA:HB2	1.89	0.54
3:T:216:ARG:HG2	3:T:216:ARG:NH1	2.20	0.54
3:T:33:ILE:HB	3:T:88:ASP:HB3	1.89	0.54
3:U:74:LEU:HA	3:U:98:ARG:HD3	1.89	0.54
3:A:163:THR:HG22	3:A:192:LYS:HZ1	1.70	0.54
3:A:272:MET:SD	3:A:305:VAL:HG21	2.48	0.54
3:B:87:GLU:HG2	3:B:284:SER:CA	2.33	0.54
3:D:77:ALA:CB	3:D:98:ARG:HH22	2.20	0.54
3:F:340:VAL:HG22	3:F:416:LEU:HD11	1.90	0.54
3:H:31:PRO:HD2	3:H:277:GLN:CG	2.38	0.54
3:I:175:THR:CG2	3:I:176:ALA:H	2.20	0.54
3:I:176:ALA:C	3:I:178:PHE:H	2.11	0.54
3:J:249:ILE:CG2	3:J:250:ASN:N	2.70	0.54
3:K:196:ASN:O	3:K:197:TRP:HB2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:206:LEU:HA	3:K:209:THR:CG2	2.38	0.54
3:K:410:MET:HA	3:K:410:MET:CE	2.38	0.54
3:O:172:ILE:HD11	3:O:226:VAL:HG21	1.88	0.54
3:Q:10:VAL:HB	3:Q:16:SER:HB2	1.90	0.54
3:T:66:ASP:O	3:T:70:VAL:N	2.41	0.54
3:U:185:HIS:C	3:U:189:THR:OG1	2.46	0.54
3:B:185:HIS:C	3:B:189:THR:N	2.61	0.54
1:W:33:A:H61	3:B:199:THR:HG21	1.73	0.54
3:F:139:SER:HA	3:F:178:PHE:CD2	2.42	0.54
3:F:247:LYS:C	3:F:248:GLN:O	2.45	0.54
3:H:20:GLU:OE1	3:H:20:GLU:N	2.41	0.54
3:J:10:VAL:CG1	3:J:11:ASN:H	2.05	0.54
3:L:81:PHE:HZ	3:L:85:CYS:N	2.06	0.54
3:N:183:GLU:H	3:N:190:THR:HG21	1.73	0.54
3:N:333:CYS:O	3:N:334:ALA:C	2.47	0.54
3:O:183:GLU:O	3:O:190:THR:HG22	2.07	0.54
3:O:248:GLN:O	3:O:250:ASN:O	2.26	0.54
3:Q:180:LYS:HZ1	3:Q:184:HIS:HD2	1.55	0.54
3:R:77:ALA:HB3	3:R:98:ARG:HH22	1.72	0.54
3:S:258:LEU:HB3	3:S:402:PRO:CG	2.37	0.54
3:T:101:ASP:OD2	3:T:101:ASP:N	2.41	0.54
3:U:59:GLY:O	3:U:61:SER:N	2.41	0.54
1:W:95:A:H5"	1:W:96:A:OP2	2.08	0.54
3:A:297:LYS:HD3	3:A:297:LYS:N	2.23	0.54
3:B:178:PHE:CE2	3:B:221:TYR:HD2	2.26	0.54
3:C:216:ARG:HG3	3:C:217:ILE:HD12	1.90	0.54
3:C:272:MET:SD	3:C:305:VAL:HG21	2.47	0.54
3:A:9:LYS:HD3	3:C:362:ASP:HA	1.90	0.54
3:D:133:THR:HG22	3:D:136:GLU:OE2	2.08	0.54
3:D:211:ASP:HB2	3:D:228:THR:HB	1.89	0.54
3:E:57:LEU:HD21	3:E:144:LEU:HD21	1.90	0.54
3:H:54:LYS:HE3	3:H:140:LEU:CD2	2.31	0.54
3:I:26:HIS:O	3:I:27:GLU:HB3	2.08	0.54
3:J:367:GLN:O	3:J:370:GLU:N	2.41	0.54
3:K:74:LEU:HA	3:K:98:ARG:HD3	1.89	0.54
3:L:85:CYS:O	3:L:91:SER:HB2	2.08	0.54
3:O:249:ILE:CG2	3:O:319:MET:CE	2.86	0.54
3:P:189:THR:O	3:P:193:MET:N	2.40	0.54
3:P:79:GLN:HG3	3:P:80:PHE:N	2.22	0.54
3:P:81:PHE:CG	3:P:82:GLU:N	2.76	0.54
3:T:163:THR:HG22	3:T:192:LYS:NZ	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:T:285:TYR:O	3:T:286:PHE:C	2.46	0.54
3:T:440:GLU:O	3:T:441:PHE:C	2.46	0.54
3:U:10:VAL:O	3:U:11:ASN:HB2	2.07	0.54
3:V:77:ALA:CB	3:V:98:ARG:HH22	2.12	0.54
1:W:1:C:O2	1:W:1:C:C2'	2.56	0.54
2:X:70:A:H8	2:X:70:A:H5''	1.73	0.54
3:A:35:ASP:OD2	3:A:89:TRP:NE1	2.29	0.54
3:B:6:ILE:O	3:B:6:ILE:CD1	2.54	0.54
3:C:223:ALA:O	3:C:226:VAL:CG2	2.50	0.54
3:C:8:PHE:HE1	3:D:254:ARG:HG3	1.71	0.54
3:D:287:ILE:HG13	3:D:288:HIS:CD2	2.42	0.54
3:E:182:VAL:HB	3:E:190:THR:HG21	1.89	0.54
3:E:253:ALA:C	3:E:255:GLU:N	2.60	0.54
3:H:57:LEU:HD21	3:H:144:LEU:HD21	1.89	0.54
3:I:232:ALA:O	3:I:234:GLU:N	2.39	0.54
3:M:276:GLY:O	3:M:277:GLN:C	2.46	0.54
3:N:219:HIS:HA	3:N:222:SER:HB3	1.90	0.54
3:R:145:LEU:HD22	3:R:207:ALA:HA	1.90	0.54
3:U:232:ALA:O	3:U:234:GLU:N	2.40	0.54
3:U:54:LYS:C	3:U:56:VAL:H	2.10	0.54
3:A:81:PHE:CG	3:A:82:GLU:N	2.76	0.53
3:B:12:ASN:HB3	3:B:13:GLN:OE1	2.08	0.53
3:J:185:HIS:CA	3:J:189:THR:N	2.71	0.53
3:M:175:THR:CG2	3:M:176:ALA:H	2.21	0.53
3:O:334:ALA:O	3:O:338:MET:HG2	2.09	0.53
3:O:73:TYR:CD2	3:O:141:VAL:HG11	2.43	0.53
3:T:248:GLN:O	3:T:249:ILE:C	2.46	0.53
3:T:50:ASN:O	3:T:54:LYS:HG2	2.08	0.53
3:T:6:ILE:CD1	3:T:7:VAL:H	2.18	0.53
2:X:63:C:C2	3:P:323:ARG:HG2	2.43	0.53
3:C:295:SER:OG	3:C:296:GLY:N	2.40	0.53
3:C:297:LYS:N	3:C:297:LYS:HD3	2.24	0.53
1:W:22:C:OP2	3:D:168:ARG:NH2	2.42	0.53
3:F:38:LYS:HD3	3:F:205:PHE:CE1	2.43	0.53
3:F:233:TYR:CE2	3:F:287:ILE:HG22	2.42	0.53
3:G:218:GLU:O	3:G:220:LEU:N	2.37	0.53
3:G:340:VAL:HG22	3:G:416:LEU:HD11	1.90	0.53
3:L:264:ASN:CG	3:M:251:LEU:HD21	2.27	0.53
3:M:54:LYS:O	3:M:56:VAL:N	2.41	0.53
3:N:6:ILE:HG13	3:N:7:VAL:N	2.23	0.53
3:P:189:THR:CG2	3:P:192:LYS:HG2	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Q:189:THR:HG23	3:Q:192:LYS:HB3	1.90	0.53
3:T:51:LYS:O	3:T:55:SER:HB2	2.09	0.53
3:T:66:ASP:O	3:T:67:PRO:C	2.45	0.53
3:A:37:LYS:O	3:A:39:PRO:HD3	2.07	0.53
3:D:206:LEU:HA	3:D:209:THR:HG22	1.91	0.53
3:D:253:ALA:O	3:D:254:ARG:HG2	2.09	0.53
3:E:134:VAL:HB	3:E:135:PRO:HD3	1.90	0.53
3:F:247:LYS:O	3:F:248:GLN:O	2.26	0.53
3:F:255:GLU:OE1	3:F:255:GLU:C	2.47	0.53
3:G:53:TYR:O	3:G:56:VAL:HG23	2.09	0.53
3:G:73:TYR:CG	3:G:141:VAL:HG21	2.43	0.53
3:J:248:GLN:O	3:J:250:ASN:O	2.25	0.53
3:K:233:TYR:CZ	3:K:287:ILE:HG22	2.43	0.53
3:K:98:ARG:HG3	3:K:213:PHE:CG	2.43	0.53
3:L:185:HIS:C	3:L:189:THR:OG1	2.46	0.53
3:L:315:VAL:HG12	3:L:319:MET:CE	2.39	0.53
3:L:324:SER:O	3:L:325:LEU:C	2.46	0.53
3:L:36:LEU:HA	3:L:89:TRP:CH2	2.43	0.53
3:M:218:GLU:O	3:M:220:LEU:N	2.39	0.53
3:P:164:ASN:O	3:P:168:ARG:HG3	2.08	0.53
3:O:264:ASN:CG	3:P:251:LEU:HD21	2.28	0.53
3:Q:6:ILE:HG22	3:Q:7:VAL:H	1.74	0.53
3:R:350:PHE:C	3:R:350:PHE:CD2	2.81	0.53
3:T:31:PRO:O	3:T:32:ALA:O	2.26	0.53
2:X:6:A:C8	2:X:6:A:C3'	2.92	0.53
3:A:153:ILE:HD12	3:A:153:ILE:H	1.73	0.53
3:A:249:ILE:CG2	3:A:250:ASN:N	2.72	0.53
3:A:85:CYS:O	3:A:91:SER:HB2	2.09	0.53
3:B:153:ILE:HG22	3:B:158:THR:OG1	2.08	0.53
3:B:206:LEU:HA	3:B:209:THR:CG2	2.35	0.53
3:B:232:ALA:O	3:B:234:GLU:N	2.34	0.53
3:B:366:LEU:HD23	3:B:366:LEU:C	2.27	0.53
3:E:53:TYR:CD1	3:E:121:ALA:O	2.57	0.53
3:F:176:ALA:C	3:F:178:PHE:N	2.61	0.53
3:G:38:LYS:HE2	3:G:39:PRO:CD	2.38	0.53
3:H:81:PHE:HZ	3:H:85:CYS:HB2	1.73	0.53
3:I:98:ARG:H	3:I:98:ARG:HD2	1.73	0.53
3:J:172:ILE:CD1	3:J:226:VAL:CG2	2.77	0.53
3:K:175:THR:HG23	3:K:176:ALA:H	1.72	0.53
3:K:305:VAL:O	3:K:305:VAL:HG13	2.08	0.53
3:M:77:ALA:O	3:M:98:ARG:CZ	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:O:77:ALA:HB3	3:O:98:ARG:NH1	2.22	0.53
3:P:169:ILE:HG22	3:P:226:VAL:HG12	1.90	0.53
3:Q:66:ASP:OD1	3:Q:66:ASP:N	2.30	0.53
3:R:180:LYS:CE	3:R:182:VAL:O	2.56	0.53
3:S:264:ASN:HD21	3:T:251:LEU:CD2	2.22	0.53
3:T:175:THR:CG2	3:T:176:ALA:N	2.71	0.53
2:X:18:C:OP1	3:U:323:ARG:NH2	2.37	0.53
3:G:163:THR:HG22	3:G:192:LYS:NZ	2.23	0.53
3:G:87:GLU:C	3:G:89:TRP:H	2.10	0.53
3:H:66:ASP:HB2	3:H:67:PRO:CD	2.38	0.53
3:I:51:LYS:O	3:I:55:SER:CB	2.56	0.53
3:J:176:ALA:C	3:J:178:PHE:N	2.61	0.53
3:J:222:SER:C	3:J:224:ILE:N	2.62	0.53
3:L:225:ARG:O	3:L:228:THR:N	2.42	0.53
3:L:295:SER:OG	3:L:296:GLY:N	2.41	0.53
3:M:287:ILE:HG13	3:M:288:HIS:HD2	1.73	0.53
3:R:216:ARG:HG3	3:R:217:ILE:HD12	1.91	0.53
3:R:333:CYS:O	3:R:334:ALA:C	2.47	0.53
3:S:32:ALA:H	3:S:277:GLN:NE2	2.06	0.53
3:B:266:GLU:OE2	3:C:358:ARG:HD2	2.08	0.53
3:B:323:ARG:HD3	3:B:324:SER:N	2.24	0.53
3:C:184:HIS:O	3:C:189:THR:N	2.41	0.53
3:I:249:ILE:CD1	3:I:319:MET:HE3	2.39	0.53
3:J:249:ILE:CG2	3:J:319:MET:HE1	2.37	0.53
3:L:54:LYS:O	3:L:56:VAL:N	2.41	0.53
3:L:8:PHE:HZ	3:M:255:GLU:CB	2.00	0.53
3:N:77:ALA:HB3	3:N:98:ARG:HH12	1.71	0.53
3:O:97:ALA:C	3:O:99:LYS:H	2.12	0.53
3:S:174:GLU:HB2	3:S:180:LYS:HB2	1.90	0.53
3:T:73:TYR:CD1	3:T:76:ALA:HB3	2.43	0.53
3:T:81:PHE:CG	3:T:82:GLU:N	2.76	0.53
3:V:313:HIS:ND1	3:V:324:SER:HB3	2.24	0.53
3:V:73:TYR:CD2	3:V:141:VAL:HG11	2.43	0.53
3:C:216:ARG:HD3	3:C:216:ARG:C	2.29	0.53
3:F:237:SER:HA	3:F:240:VAL:HB	1.91	0.53
3:J:156:GLN:C	3:J:158:THR:N	2.62	0.53
3:K:176:ALA:C	3:K:178:PHE:H	2.12	0.53
3:K:194:CYS:C	3:K:196:ASN:H	2.12	0.53
3:K:290:ARG:HD2	3:K:295:SER:HB2	1.91	0.53
3:L:31:PRO:O	3:L:32:ALA:O	2.27	0.53
3:L:97:ALA:O	3:L:99:LYS:N	2.36	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:103:ILE:HD12	3:M:103:ILE:N	2.23	0.53
3:N:176:ALA:O	3:N:178:PHE:N	2.42	0.53
3:N:277:GLN:OE1	3:N:277:GLN:N	2.40	0.53
3:N:313:HIS:ND1	3:N:324:SER:CB	2.72	0.53
3:N:338:MET:HA	3:N:338:MET:HE2	1.91	0.53
3:N:73:TYR:O	3:N:74:LEU:C	2.47	0.53
3:O:249:ILE:CG2	3:O:319:MET:HE1	2.39	0.53
3:O:336:HIS:O	3:O:340:VAL:HG23	2.08	0.53
3:P:248:GLN:O	3:P:249:ILE:C	2.46	0.53
3:P:81:PHE:HB3	3:P:94:ILE:HA	1.90	0.53
3:P:77:ALA:O	3:P:98:ARG:NH1	2.42	0.53
3:Q:81:PHE:HB3	3:Q:94:ILE:HA	1.90	0.53
3:T:249:ILE:CG2	3:T:319:MET:CE	2.86	0.53
3:T:63:ALA:HB3	3:T:65:LEU:CD1	2.35	0.53
3:U:416:LEU:N	3:U:416:LEU:HD12	2.24	0.53
3:B:74:LEU:CD2	3:B:210:TYR:CZ	2.91	0.53
3:F:54:LYS:HE3	3:F:140:LEU:HD23	1.91	0.53
3:F:66:ASP:O	3:F:70:VAL:N	2.42	0.53
1:W:73:C:C4	3:I:157:ASN:HB2	2.43	0.53
3:K:81:PHE:HB3	3:K:94:ILE:HA	1.91	0.53
3:N:59:GLY:O	3:N:61:SER:N	2.42	0.53
3:O:53:TYR:O	3:O:56:VAL:HG23	2.09	0.53
3:O:37:LYS:HG3	3:O:89:TRP:CE3	2.44	0.53
3:Q:239:LEU:HA	3:Q:272:MET:HE3	1.91	0.53
3:S:225:ARG:O	3:S:228:THR:N	2.42	0.53
3:U:183:GLU:H	3:U:190:THR:HG21	1.73	0.53
3:U:184:HIS:O	3:U:189:THR:CA	2.57	0.53
3:V:5:LYS:HB2	3:V:5:LYS:NZ	2.23	0.53
3:E:27:GLU:O	3:E:28:TYR:CD1	2.61	0.53
3:F:100:GLY:C	3:F:101:ASP:OD2	2.46	0.53
3:F:81:PHE:CE2	3:F:84:THR:HA	2.44	0.53
3:I:100:GLY:C	3:I:101:ASP:OD2	2.48	0.53
3:I:249:ILE:HD13	3:I:319:MET:HE3	1.91	0.53
3:K:20:GLU:OE1	3:K:20:GLU:N	2.41	0.53
3:M:438:PHE:O	3:M:439:ALA:C	2.47	0.53
3:N:225:ARG:O	3:N:227:GLY:N	2.42	0.53
3:N:248:GLN:O	3:N:249:ILE:C	2.47	0.53
3:O:133:THR:HG23	3:O:135:PRO:HD2	1.91	0.53
3:R:305:VAL:CG2	3:R:308:VAL:HB	2.31	0.53
3:S:216:ARG:HG3	3:S:217:ILE:HD12	1.91	0.53
3:S:249:ILE:HG22	3:S:250:ASN:N	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:T:424:TYR:CD1	3:T:442:LEU:HD13	2.43	0.53
3:T:54:LYS:HG3	3:T:140:LEU:HD21	1.91	0.53
3:U:268:GLU:CB	3:U:305:VAL:HG23	2.32	0.53
3:V:253:ALA:C	3:V:255:GLU:N	2.61	0.53
2:X:25:C:C4	2:X:26:C:C5	2.97	0.53
3:B:250:ASN:N	3:B:250:ASN:OD1	2.42	0.53
3:D:249:ILE:HG21	3:D:319:MET:HE1	1.91	0.53
3:D:60:MET:N	3:D:60:MET:SD	2.82	0.53
3:E:240:VAL:O	3:E:243:THR:HG22	2.09	0.53
3:G:262:HIS:CE1	3:H:251:LEU:HD22	2.44	0.53
3:G:235:ASP:HB2	3:G:290:ARG:HG2	1.91	0.53
3:I:156:GLN:C	3:I:158:THR:H	2.11	0.53
3:N:272:MET:SD	3:N:305:VAL:HG21	2.48	0.53
3:P:171:GLN:O	3:P:174:GLU:HG2	2.08	0.53
3:Q:278:GLU:OE2	3:Q:284:SER:HB2	2.09	0.53
3:Q:416:LEU:HD12	3:Q:416:LEU:H	1.74	0.53
3:T:54:LYS:C	3:T:56:VAL:H	2.12	0.53
3:T:33:ILE:HB	3:T:88:ASP:CB	2.38	0.53
3:T:8:PHE:HD2	3:U:258:LEU:HD13	1.72	0.53
3:U:81:PHE:CG	3:U:82:GLU:N	2.77	0.53
3:V:335:PRO:O	3:V:336:HIS:C	2.46	0.53
1:W:69:A:H2	1:W:70:A:C4	2.26	0.53
3:A:32:ALA:H	3:A:277:GLN:HE21	1.55	0.52
3:A:87:GLU:OE2	3:A:285:TYR:N	2.42	0.52
3:D:284:SER:O	3:D:287:ILE:HG12	2.08	0.52
3:G:176:ALA:C	3:G:178:PHE:N	2.63	0.52
3:G:37:LYS:O	3:G:39:PRO:HD3	2.08	0.52
3:H:174:GLU:O	3:H:174:GLU:HG3	2.08	0.52
3:H:189:THR:O	3:H:193:MET:N	2.42	0.52
3:I:268:GLU:OE2	3:I:307:HIS:HD2	1.91	0.52
3:I:8:PHE:CE2	3:J:258:LEU:HD13	2.44	0.52
3:L:183:GLU:O	3:L:190:THR:HG22	2.08	0.52
3:O:134:VAL:HB	3:O:135:PRO:HD3	1.91	0.52
3:S:183:GLU:O	3:S:190:THR:CG2	2.57	0.52
3:S:363:GLU:O	3:S:367:GLN:HG2	2.08	0.52
3:T:248:GLN:CD	3:T:249:ILE:HG13	2.29	0.52
3:T:81:PHE:CZ	3:T:85:CYS:HB2	2.44	0.52
3:U:239:LEU:O	3:U:243:THR:HG22	2.08	0.52
3:V:218:GLU:O	3:V:220:LEU:N	2.42	0.52
3:A:180:LYS:NZ	3:A:184:HIS:HD2	2.08	0.52
3:A:189:THR:O	3:A:193:MET:N	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:7:VAL:CG1	3:A:9:LYS:CE	2.86	0.52
3:B:183:GLU:O	3:B:190:THR:CG2	2.51	0.52
3:B:30:TYR:HB3	3:B:277:GLN:NE2	2.24	0.52
3:D:66:ASP:N	3:D:67:PRO:HD2	2.23	0.52
3:I:143:LEU:O	3:I:146:SER:OG	2.25	0.52
3:J:37:LYS:HG3	3:J:89:TRP:CE3	2.45	0.52
3:L:239:LEU:HA	3:L:272:MET:CE	2.39	0.52
3:P:183:GLU:O	3:P:190:THR:CG2	2.57	0.52
3:P:320:GLY:O	3:P:321:GLN:C	2.47	0.52
3:Q:249:ILE:CG2	3:Q:319:MET:HE1	2.40	0.52
3:S:315:VAL:HG12	3:S:319:MET:HE2	1.91	0.52
3:T:67:PRO:O	3:T:71:CYS:HB3	2.09	0.52
3:U:184:HIS:O	3:U:189:THR:HA	2.09	0.52
1:W:3:C:O2'	1:W:4:C:H5'	2.09	0.52
1:W:99:C:C6	3:F:323:ARG:HG2	2.43	0.52
3:A:313:HIS:ND1	3:A:324:SER:HB3	2.25	0.52
3:B:34:LYS:O	3:B:35:ASP:HB2	2.07	0.52
3:B:8:PHE:N	3:B:8:PHE:CD1	2.78	0.52
3:D:409:ILE:HG22	3:D:410:MET:HE3	1.92	0.52
3:G:197:TRP:HD1	3:G:198:SER:N	1.97	0.52
3:K:77:ALA:HB3	3:K:98:ARG:NH1	2.24	0.52
3:N:83:GLY:O	3:N:84:THR:HB	2.09	0.52
3:P:232:ALA:C	3:P:234:GLU:N	2.62	0.52
3:S:139:SER:HA	3:S:178:PHE:HD2	1.74	0.52
3:U:84:THR:O	3:U:86:PRO:HD3	2.09	0.52
3:A:308:VAL:HG12	3:A:312:ILE:CD1	2.39	0.52
3:B:262:HIS:ND1	3:B:263:LYS:N	2.57	0.52
3:B:329:VAL:HG12	3:B:436:ASN:O	2.09	0.52
3:D:175:THR:HG23	3:D:176:ALA:N	2.24	0.52
3:E:96:ILE:HD11	3:E:217:ILE:HD11	1.91	0.52
3:G:87:GLU:C	3:G:89:TRP:N	2.63	0.52
3:J:338:MET:HA	3:J:338:MET:HE2	1.90	0.52
3:K:32:ALA:HB2	3:K:277:GLN:NE2	2.24	0.52
3:L:59:GLY:O	3:L:61:SER:N	2.43	0.52
3:M:174:GLU:O	3:M:174:GLU:HG3	2.09	0.52
3:O:50:ASN:HD22	3:O:50:ASN:N	2.08	0.52
3:P:416:LEU:HD12	3:P:416:LEU:N	2.24	0.52
3:R:311:LEU:O	3:R:315:VAL:HG23	2.10	0.52
3:R:78:MET:HB3	3:R:97:ALA:HB2	1.90	0.52
3:S:10:VAL:O	3:S:11:ASN:CB	2.58	0.52
3:S:156:GLN:C	3:S:158:THR:H	2.11	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:240:VAL:HA	3:S:243:THR:CG2	2.40	0.52
2:X:88:A:C8	2:X:89:C:H4'	2.44	0.52
3:A:441:PHE:CD2	3:A:441:PHE:C	2.83	0.52
3:B:50:ASN:HD22	3:B:50:ASN:N	2.07	0.52
3:D:416:LEU:CD1	3:D:416:LEU:H	2.21	0.52
3:D:12:ASN:HD21	3:E:270:ARG:CD	2.23	0.52
3:F:30:TYR:HB3	3:F:277:GLN:NE2	2.25	0.52
3:H:277:GLN:CD	3:H:277:GLN:N	2.62	0.52
3:I:73:TYR:O	3:I:75:ALA:N	2.43	0.52
3:I:8:PHE:CE2	3:J:257:ILE:HB	2.44	0.52
3:K:189:THR:CG2	3:K:192:LYS:CB	2.78	0.52
3:K:7:VAL:HG13	3:K:18:LYS:O	2.09	0.52
3:K:85:CYS:O	3:K:91:SER:HB2	2.09	0.52
3:M:10:VAL:O	3:M:11:ASN:CB	2.57	0.52
3:M:30:TYR:HB3	3:M:277:GLN:HE21	1.70	0.52
3:M:417:LYS:H	3:M:420:HIS:CD2	2.20	0.52
3:M:9:LYS:N	3:M:9:LYS:HD2	2.25	0.52
3:P:31:PRO:HB3	3:P:289:PHE:HB2	1.91	0.52
3:R:31:PRO:HG2	3:R:286:PHE:HD1	1.75	0.52
3:D:123:THR:HG22	3:S:129:THR:HG22	1.92	0.52
3:S:74:LEU:HA	3:S:98:ARG:HD3	1.90	0.52
3:S:77:ALA:CB	3:S:98:ARG:NH2	2.71	0.52
3:U:194:CYS:C	3:U:196:ASN:H	2.12	0.52
3:U:53:TYR:CD2	3:U:54:LYS:N	2.77	0.52
3:V:42:THR:O	3:V:43:LEU:C	2.47	0.52
3:A:21:ILE:HB	3:B:280:ALA:HB2	1.92	0.52
3:B:249:ILE:HG23	3:B:319:MET:CE	2.39	0.52
3:C:313:HIS:ND1	3:C:324:SER:HB3	2.23	0.52
3:D:268:GLU:OE2	3:D:307:HIS:HD2	1.91	0.52
3:F:287:ILE:HG13	3:F:288:HIS:HD2	1.75	0.52
3:F:432:GLN:HE21	3:F:432:GLN:HA	1.75	0.52
3:G:130:ARG:NH2	3:G:136:GLU:OE2	2.42	0.52
3:G:84:THR:O	3:G:86:PRO:HD3	2.09	0.52
3:H:153:ILE:HG22	3:H:158:THR:OG1	2.10	0.52
3:H:189:THR:CG2	3:H:192:LYS:HB3	2.37	0.52
3:G:262:HIS:HE1	3:H:251:LEU:HD22	1.74	0.52
3:I:53:TYR:CE2	3:I:65:LEU:HB2	2.44	0.52
3:L:211:ASP:OD2	3:L:288:HIS:HE1	1.92	0.52
3:M:102:LYS:C	3:M:103:ILE:HD12	2.29	0.52
3:O:350:PHE:C	3:O:350:PHE:CD2	2.82	0.52
3:P:148:TYR:CE1	3:P:199:THR:HG23	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:P:31:PRO:HD2	3:P:277:GLN:HG2	1.91	0.52
3:R:221:TYR:O	3:R:223:ALA:N	2.42	0.52
3:R:56:VAL:HG11	3:R:123:THR:OG1	2.10	0.52
3:S:417:LYS:H	3:S:420:HIS:HD2	1.56	0.52
3:T:148:TYR:HB2	3:T:203:PHE:CE2	2.45	0.52
3:U:255:GLU:OE1	3:U:255:GLU:O	2.28	0.52
3:U:30:TYR:HB3	3:U:277:GLN:NE2	2.24	0.52
3:B:318:TYR:HE2	3:B:347:GLU:HA	1.74	0.52
3:D:79:GLN:HB3	3:D:217:ILE:CG2	2.39	0.52
3:E:20:GLU:N	3:E:20:GLU:CD	2.63	0.52
3:E:434:ARG:HB3	3:E:435:PRO:CD	2.39	0.52
3:E:66:ASP:HB2	3:E:67:PRO:CD	2.40	0.52
3:E:98:ARG:HD2	3:E:98:ARG:H	1.74	0.52
3:F:363:GLU:O	3:F:367:GLN:HG2	2.10	0.52
3:H:65:LEU:HB3	3:H:120:TRP:CZ3	2.44	0.52
3:J:235:ASP:HB2	3:J:290:ARG:HG2	1.92	0.52
3:M:249:ILE:HG23	3:M:319:MET:HE3	1.91	0.52
3:N:100:GLY:C	3:N:101:ASP:OD2	2.48	0.52
3:N:323:ARG:HD3	3:N:324:SER:N	2.25	0.52
3:R:217:ILE:CG2	3:R:218:GLU:N	2.72	0.52
3:S:232:ALA:O	3:S:234:GLU:N	2.38	0.52
3:U:232:ALA:C	3:U:234:GLU:N	2.63	0.52
3:V:249:ILE:HG23	3:V:319:MET:SD	2.49	0.52
3:D:232:ALA:C	3:D:234:GLU:H	2.12	0.52
3:E:20:GLU:OE1	3:E:20:GLU:N	2.43	0.52
3:F:268:GLU:HB3	3:F:305:VAL:CG2	2.40	0.52
3:I:66:ASP:O	3:I:70:VAL:N	2.43	0.52
3:J:222:SER:O	3:J:224:ILE:N	2.42	0.52
3:J:97:ALA:C	3:J:99:LYS:H	2.13	0.52
3:L:155:GLY:H	3:L:158:THR:HG21	1.74	0.52
3:M:204:ARG:NH2	3:M:290:ARG:HG3	2.24	0.52
3:M:287:ILE:HG13	3:M:288:HIS:CD2	2.44	0.52
3:O:48:ASP:C	3:O:48:ASP:OD1	2.47	0.52
3:T:311:LEU:O	3:T:315:VAL:HG23	2.10	0.52
3:U:7:VAL:CG1	3:U:8:PHE:N	2.73	0.52
3:U:81:PHE:HB3	3:U:95:VAL:H	1.75	0.52
1:W:9:C:H2'	1:W:11:C:H5''	1.92	0.52
2:X:9:C:H2'	2:X:11:C:H5''	1.91	0.52
2:X:7:A:H2'	2:X:8:C:O4'	2.10	0.52
3:A:26:HIS:O	3:A:27:GLU:HB3	2.09	0.52
3:B:367:GLN:HA	3:B:367:GLN:OE1	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:417:LYS:HB2	3:F:420:HIS:CD2	2.45	0.52
3:I:219:HIS:HA	3:I:222:SER:HB3	1.91	0.52
3:J:133:THR:OG1	3:J:135:PRO:HD2	2.10	0.52
3:K:76:ALA:O	3:K:77:ALA:HB2	2.10	0.52
3:L:172:ILE:HD12	3:L:226:VAL:HG21	1.91	0.52
3:L:232:ALA:C	3:L:234:GLU:H	2.11	0.52
3:N:73:TYR:HD2	3:N:210:TYR:OH	1.93	0.52
3:Q:336:HIS:HE1	3:Q:445:THR:HG21	1.75	0.52
3:T:175:THR:CG2	3:T:176:ALA:H	2.23	0.52
3:T:217:ILE:CG2	3:T:218:GLU:N	2.73	0.52
3:U:10:VAL:HG12	3:U:11:ASN:N	2.25	0.52
3:U:66:ASP:HB2	3:U:67:PRO:CD	2.40	0.52
3:V:289:PHE:C	3:V:289:PHE:CD1	2.84	0.52
3:A:269:ILE:HG13	3:B:359:PHE:CZ	2.45	0.52
3:B:235:ASP:HB2	3:B:290:ARG:HG2	1.92	0.52
3:C:53:TYR:HB2	3:C:121:ALA:O	2.10	0.52
3:D:286:PHE:HA	3:D:289:PHE:HB3	1.92	0.52
3:D:326:ASN:HA	3:D:437:SER:HB2	1.92	0.52
3:E:173:PHE:CZ	3:E:224:ILE:HA	2.45	0.52
3:E:146:SER:HA	3:E:227:GLY:HA3	1.92	0.52
3:F:12:ASN:HB3	3:F:13:GLN:OE1	2.09	0.52
3:H:37:LYS:HG3	3:H:89:TRP:CE3	2.45	0.52
3:H:7:VAL:CG1	3:H:9:LYS:HE3	2.40	0.52
3:J:398:GLU:OE2	3:J:399:THR:HG22	2.10	0.52
3:K:197:TRP:CD1	3:K:198:SER:O	2.63	0.52
3:K:81:PHE:H	3:K:95:VAL:H	1.57	0.52
3:L:81:PHE:HD1	3:L:217:ILE:HD11	1.74	0.52
3:L:73:TYR:CE2	3:L:98:ARG:NH1	2.78	0.52
3:M:175:THR:CG2	3:M:176:ALA:N	2.73	0.52
3:M:340:VAL:HG13	3:M:416:LEU:CD1	2.40	0.52
3:M:340:VAL:HG22	3:M:416:LEU:CD1	2.40	0.52
2:X:82:C:C4	3:N:157:ASN:HB2	2.44	0.52
3:N:183:GLU:N	3:N:190:THR:HG21	2.25	0.52
3:N:97:ALA:O	3:N:99:LYS:N	2.38	0.52
3:O:119:ASN:O	3:O:121:ALA:N	2.43	0.52
3:P:81:PHE:CE1	3:P:85:CYS:HB2	2.45	0.52
3:Q:194:CYS:C	3:Q:196:ASN:H	2.11	0.52
3:R:277:GLN:C	3:R:279:THR:H	2.13	0.52
3:R:403:GLU:HG3	3:S:357:ARG:HH12	1.74	0.52
3:R:54:LYS:HE3	3:R:140:LEU:CD2	2.36	0.52
3:T:98:ARG:HD2	3:T:98:ARG:H	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:T:73:TYR:CZ	3:T:98:ARG:NH2	2.78	0.52
3:B:122:LEU:O	3:U:126:MET:HE1	2.10	0.52
1:W:1:C:C2'	1:W:2:C:OP2	2.58	0.52
3:A:338:MET:HA	3:A:338:MET:HE2	1.92	0.51
3:B:222:SER:C	3:B:224:ILE:N	2.63	0.51
3:C:10:VAL:HG12	3:C:11:ASN:H	1.74	0.51
3:C:183:GLU:O	3:C:190:THR:CG2	2.57	0.51
3:B:258:LEU:HD21	3:C:361:ARG:HG3	1.92	0.51
3:C:74:LEU:HD22	3:C:98:ARG:CB	2.38	0.51
3:E:25:GLN:HG2	3:F:282:PRO:CG	2.38	0.51
3:E:37:LYS:HG3	3:E:89:TRP:CE3	2.45	0.51
3:G:206:LEU:O	3:G:207:ALA:C	2.49	0.51
3:G:278:GLU:HB2	3:G:284:SER:CB	2.40	0.51
3:G:9:LYS:HD3	3:I:362:ASP:HA	1.92	0.51
3:H:22:ILE:HD12	3:I:243:THR:HB	1.91	0.51
3:I:69:ASP:C	3:I:71:CYS:N	2.59	0.51
3:I:73:TYR:C	3:I:75:ALA:N	2.62	0.51
3:K:81:PHE:HD1	3:K:217:ILE:HD11	1.75	0.51
3:O:54:LYS:HD3	3:O:69:ASP:OD2	2.10	0.51
3:P:189:THR:HG22	3:P:192:LYS:CA	2.38	0.51
3:P:253:ALA:O	3:P:254:ARG:HG2	2.10	0.51
3:P:262:HIS:ND1	3:P:263:LYS:N	2.57	0.51
3:S:81:PHE:HB3	3:S:94:ILE:HA	1.91	0.51
3:S:9:LYS:HE2	3:S:17:LEU:HB3	1.93	0.51
3:T:234:GLU:HG2	3:T:235:ASP:OD1	2.09	0.51
3:U:249:ILE:HG23	3:U:319:MET:SD	2.50	0.51
3:V:222:SER:C	3:V:224:ILE:H	2.13	0.51
3:A:252:THR:CG2	3:A:255:GLU:OE1	2.58	0.51
3:B:133:THR:HG22	3:B:136:GLU:OE2	2.10	0.51
3:B:200:ILE:O	3:B:200:ILE:HG13	2.08	0.51
3:B:57:LEU:HD21	3:B:144:LEU:CD2	2.39	0.51
3:B:81:PHE:CG	3:B:82:GLU:N	2.78	0.51
3:C:248:GLN:O	3:C:249:ILE:C	2.49	0.51
3:C:70:VAL:O	3:C:210:TYR:OH	2.21	0.51
3:E:49:LEU:O	3:E:52:ALA:HB3	2.10	0.51
3:F:77:ALA:HB3	3:F:98:ARG:NH1	2.25	0.51
3:H:222:SER:O	3:H:224:ILE:N	2.43	0.51
3:I:175:THR:CG2	3:I:176:ALA:N	2.74	0.51
3:I:190:THR:CG2	3:I:191:HIS:N	2.73	0.51
3:L:77:ALA:HB3	3:L:98:ARG:NH1	2.25	0.51
3:O:11:ASN:OD1	3:O:11:ASN:C	2.48	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:O:249:ILE:CG2	3:O:250:ASN:N	2.73	0.51
3:Q:216:ARG:NH2	3:Q:283:HIS:CD2	2.78	0.51
3:S:258:LEU:HB3	3:S:402:PRO:HG2	1.92	0.51
3:T:171:GLN:O	3:T:174:GLU:HG2	2.10	0.51
3:T:249:ILE:HG22	3:T:250:ASN:OD1	2.10	0.51
3:T:35:ASP:O	3:T:36:LEU:HG	2.10	0.51
3:V:246:ILE:O	3:V:252:THR:O	2.29	0.51
3:V:334:ALA:O	3:V:338:MET:HG2	2.10	0.51
3:V:327:ALA:O	3:V:437:SER:HA	2.09	0.51
3:V:98:ARG:H	3:V:98:ARG:HD2	1.74	0.51
3:A:10:VAL:HG12	3:A:11:ASN:N	2.25	0.51
3:B:57:LEU:HD11	3:B:140:LEU:CD1	2.40	0.51
3:C:49:LEU:HB3	3:C:52:ALA:HB2	1.91	0.51
3:C:98:ARG:HG3	3:C:213:PHE:CG	2.45	0.51
3:D:249:ILE:CG2	3:D:319:MET:CE	2.85	0.51
3:F:26:HIS:O	3:F:27:GLU:HB3	2.09	0.51
1:W:96:A:H4'	3:F:290:ARG:HH21	1.74	0.51
3:G:78:MET:O	3:G:79:GLN:HB2	2.10	0.51
3:H:53:TYR:CD1	3:H:121:ALA:O	2.61	0.51
3:J:232:ALA:C	3:J:234:GLU:H	2.13	0.51
3:J:50:ASN:N	3:J:50:ASN:ND2	2.55	0.51
3:K:156:GLN:C	3:K:158:THR:H	2.12	0.51
3:L:77:ALA:HB1	3:L:220:LEU:CD2	2.40	0.51
3:L:81:PHE:CE2	3:L:84:THR:HA	2.46	0.51
3:L:9:LYS:HD3	3:N:362:ASP:HA	1.91	0.51
3:P:221:TYR:O	3:P:223:ALA:N	2.43	0.51
3:P:77:ALA:CB	3:P:98:ARG:NH2	2.70	0.51
3:Q:262:HIS:HE1	3:R:251:LEU:CD2	2.21	0.51
3:R:338:MET:HA	3:R:338:MET:CE	2.41	0.51
3:S:272:MET:SD	3:S:305:VAL:HG21	2.50	0.51
3:T:9:LYS:HD3	3:V:362:ASP:HA	1.91	0.51
3:B:289:PHE:CD1	3:B:290:ARG:N	2.78	0.51
3:B:313:HIS:HB3	3:B:324:SER:HB2	1.92	0.51
3:H:281:VAL:HB	3:H:284:SER:HB3	1.92	0.51
3:I:211:ASP:HB2	3:I:228:THR:HB	1.93	0.51
3:I:87:GLU:OE2	3:I:284:SER:C	2.48	0.51
3:J:156:GLN:O	3:J:158:THR:HG22	2.11	0.51
3:K:32:ALA:HB2	3:K:277:GLN:HE22	1.76	0.51
3:M:39:PRO:HA	3:M:102:LYS:O	2.10	0.51
3:N:21:ILE:HB	3:O:280:ALA:CB	2.38	0.51
3:N:76:ALA:O	3:N:77:ALA:HB2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:O:98:ARG:H	3:O:98:ARG:HD2	1.75	0.51
3:Q:180:LYS:HZ2	3:Q:184:HIS:CD2	2.28	0.51
3:R:286:PHE:O	3:R:289:PHE:HD2	1.93	0.51
3:T:221:TYR:O	3:T:223:ALA:N	2.43	0.51
3:U:50:ASN:N	3:U:50:ASN:ND2	2.56	0.51
3:A:205:PHE:C	3:A:205:PHE:HD2	2.13	0.51
3:A:253:ALA:O	3:A:254:ARG:HG2	2.10	0.51
3:A:357:ARG:HH12	3:K:403:GLU:HG3	1.75	0.51
3:D:338:MET:HA	3:D:338:MET:CE	2.40	0.51
3:D:338:MET:HA	3:D:338:MET:HE2	1.93	0.51
3:F:260:PHE:HB3	3:F:265:PHE:CD2	2.45	0.51
3:H:100:GLY:C	3:H:101:ASP:OD2	2.49	0.51
3:H:249:ILE:HG22	3:H:250:ASN:OD1	2.10	0.51
3:K:357:ARG:O	3:K:358:ARG:HG2	2.10	0.51
3:L:65:LEU:CD2	3:L:120:TRP:H	2.24	0.51
3:P:253:ALA:C	3:P:255:GLU:H	2.14	0.51
3:P:38:LYS:HE2	3:P:39:PRO:HD3	1.92	0.51
3:U:250:ASN:OD1	3:U:250:ASN:N	2.35	0.51
3:V:133:THR:HG22	3:V:136:GLU:OE2	2.10	0.51
3:V:63:ALA:HB3	3:V:65:LEU:HD13	1.92	0.51
3:A:253:ALA:O	3:A:255:GLU:N	2.44	0.51
3:B:183:GLU:N	3:B:190:THR:HG21	2.26	0.51
3:D:42:THR:O	3:D:43:LEU:C	2.48	0.51
3:E:248:GLN:CD	3:E:249:ILE:HG13	2.31	0.51
3:F:250:ASN:OD1	3:F:250:ASN:N	2.31	0.51
3:F:341:LEU:HB2	3:G:355:PHE:CE2	2.46	0.51
3:G:74:LEU:HD22	3:G:98:ARG:CB	2.40	0.51
3:L:136:GLU:O	3:L:137:HIS:C	2.49	0.51
3:L:249:ILE:CG2	3:L:250:ASN:N	2.73	0.51
3:L:257:ILE:HD13	3:L:269:ILE:HD12	1.93	0.51
3:U:32:ALA:N	3:U:277:GLN:HE21	2.09	0.51
3:S:6:ILE:HD11	3:U:361:ARG:HG2	1.93	0.51
3:V:35:ASP:O	3:V:36:LEU:HG	2.10	0.51
3:A:74:LEU:O	3:A:97:ALA:HB1	2.11	0.51
3:B:340:VAL:CA	3:B:416:LEU:HD11	2.41	0.51
3:D:289:PHE:CG	3:D:290:ARG:N	2.78	0.51
3:C:336:HIS:HE1	3:D:319:MET:O	1.94	0.51
3:E:248:GLN:O	3:E:249:ILE:C	2.49	0.51
3:E:50:ASN:ND2	3:E:50:ASN:N	2.58	0.51
3:I:172:ILE:HD12	3:I:226:VAL:HG21	1.93	0.51
3:J:189:THR:CG2	3:J:192:LYS:CG	2.88	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:5:LYS:HB2	3:L:5:LYS:HZ3	1.74	0.51
3:L:66:ASP:HB2	3:L:67:PRO:CD	2.39	0.51
3:M:77:ALA:HB1	3:M:220:LEU:CD2	2.40	0.51
3:O:206:LEU:O	3:O:207:ALA:C	2.48	0.51
3:O:287:ILE:HG13	3:O:288:HIS:HD2	1.74	0.51
3:Q:54:LYS:CD	3:Q:69:ASP:OD2	2.58	0.51
3:R:231:THR:O	3:R:232:ALA:O	2.29	0.51
3:T:253:ALA:O	3:T:255:GLU:N	2.43	0.51
3:U:308:VAL:HG12	3:U:312:ILE:CD1	2.40	0.51
3:V:30:TYR:O	3:V:32:ALA:N	2.43	0.51
3:A:249:ILE:CD1	3:A:321:GLN:HG3	2.24	0.51
3:A:371:ALA:O	3:A:372:ALA:HB2	2.10	0.51
3:A:66:ASP:OD1	3:A:66:ASP:N	2.42	0.51
3:C:284:SER:O	3:C:287:ILE:HG12	2.11	0.51
3:D:239:LEU:HA	3:D:272:MET:CE	2.40	0.51
3:E:347:GLU:HB2	3:E:420:HIS:HE1	1.76	0.51
3:E:81:PHE:HB3	3:E:95:VAL:H	1.76	0.51
3:F:176:ALA:O	3:F:178:PHE:N	2.43	0.51
3:H:234:GLU:O	3:H:235:ASP:HB2	2.10	0.51
3:I:74:LEU:HD22	3:I:98:ARG:CB	2.39	0.51
3:J:54:LYS:HE3	3:J:140:LEU:CD2	2.35	0.51
3:J:87:GLU:O	3:J:89:TRP:N	2.44	0.51
3:J:20:GLU:O	3:K:254:ARG:NH1	2.44	0.51
3:L:301:SER:OG	3:L:304:ALA:HB2	2.11	0.51
3:M:146:SER:HB2	3:M:169:ILE:HD12	1.92	0.51
3:M:176:ALA:C	3:M:178:PHE:H	2.14	0.51
3:M:333:CYS:O	3:M:334:ALA:C	2.49	0.51
3:N:32:ALA:HB2	3:N:277:GLN:HE22	1.75	0.51
3:O:14:VAL:HG23	3:O:15:VAL:H	1.76	0.51
3:Q:8:PHE:CE2	3:R:255:GLU:HA	2.37	0.51
3:S:286:PHE:HA	3:S:289:PHE:HB3	1.92	0.51
3:S:57:LEU:C	3:S:57:LEU:CD2	2.79	0.51
3:T:246:ILE:HG13	3:T:247:LYS:N	2.25	0.51
3:T:8:PHE:CZ	3:U:255:GLU:CB	2.85	0.51
3:V:10:VAL:HG12	3:V:11:ASN:N	2.26	0.51
3:V:286:PHE:HA	3:V:289:PHE:HB3	1.92	0.51
3:V:74:LEU:HA	3:V:98:ARG:HD3	1.93	0.51
1:W:31:C:P	3:C:168:ARG:HH22	2.33	0.51
3:I:183:GLU:O	3:I:190:THR:CG2	2.58	0.51
3:I:270:ARG:HG3	3:I:270:ARG:HH11	1.75	0.51
3:H:337:GLU:OE2	3:I:353:GLY:HA2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:54:LYS:C	3:J:56:VAL:N	2.64	0.51
3:L:5:LYS:HE3	3:L:8:PHE:CZ	2.42	0.51
3:M:15:VAL:CG1	3:M:16:SER:N	2.73	0.51
3:M:216:ARG:HG3	3:M:217:ILE:HD12	1.92	0.51
3:O:169:ILE:HG22	3:O:226:VAL:HG11	1.93	0.51
3:P:264:ASN:ND2	3:Q:251:LEU:CD2	2.52	0.51
3:Q:77:ALA:HB3	3:Q:98:ARG:CZ	2.37	0.51
3:R:218:GLU:HG2	3:R:219:HIS:H	1.76	0.51
3:S:222:SER:C	3:S:224:ILE:N	2.65	0.51
3:T:340:VAL:HG22	3:T:416:LEU:HD11	1.92	0.51
3:U:65:LEU:HD23	3:U:120:TRP:H	1.76	0.51
1:W:22:C:P	3:D:168:ARG:NH2	2.84	0.51
3:A:446:TYR:O	3:A:447:SER:CB	2.59	0.51
3:B:176:ALA:C	3:B:178:PHE:N	2.63	0.51
3:B:176:ALA:CB	3:B:177:PRO:CD	2.80	0.51
3:B:252:THR:HB	3:B:256:ALA:HB2	1.93	0.51
3:G:98:ARG:HA	3:G:213:PHE:CD1	2.46	0.51
3:K:145:LEU:HD22	3:K:207:ALA:HA	1.92	0.51
3:L:100:GLY:C	3:L:101:ASP:OD2	2.50	0.51
3:O:313:HIS:CB	3:O:324:SER:HB2	2.41	0.51
3:P:253:ALA:O	3:P:255:GLU:N	2.44	0.51
3:R:153:ILE:CG1	3:R:161:TYR:HE2	2.23	0.51
3:S:50:ASN:H	3:S:50:ASN:HD22	1.59	0.51
3:T:245:PHE:HB2	3:T:312:ILE:HG23	1.93	0.51
3:T:87:GLU:HG2	3:T:284:SER:CA	2.34	0.51
3:V:176:ALA:HB1	3:V:177:PRO:HD3	1.91	0.51
3:C:222:SER:C	3:C:224:ILE:H	2.13	0.50
3:E:240:VAL:CA	3:E:243:THR:HG22	2.40	0.50
3:E:309:PHE:HA	3:E:312:ILE:HD12	1.93	0.50
3:F:87:GLU:HG2	3:F:284:SER:CA	2.31	0.50
3:G:197:TRP:CD1	3:G:198:SER:N	2.68	0.50
3:I:6:ILE:O	3:I:7:VAL:HG23	2.11	0.50
3:K:38:LYS:CE	3:K:39:PRO:HD2	2.28	0.50
3:K:51:LYS:HA	3:K:54:LYS:CE	2.28	0.50
3:K:73:TYR:O	3:K:74:LEU:C	2.47	0.50
3:P:49:LEU:O	3:P:52:ALA:HB3	2.11	0.50
3:Q:272:MET:SD	3:Q:305:VAL:HG21	2.51	0.50
3:R:286:PHE:HA	3:R:289:PHE:HB3	1.93	0.50
3:S:30:TYR:HB3	3:S:277:GLN:NE2	2.25	0.50
3:U:272:MET:SD	3:U:305:VAL:HG21	2.51	0.50
3:U:54:LYS:C	3:U:56:VAL:N	2.64	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:U:53:TYR:CE1	3:U:65:LEU:HD22	2.46	0.50
2:X:89:C:H41	3:M:323:ARG:CZ	2.23	0.50
3:C:50:ASN:ND2	3:C:50:ASN:N	2.57	0.50
3:L:126:MET:CE	3:L:128:LEU:O	2.60	0.50
3:L:200:ILE:O	3:L:200:ILE:HG13	2.11	0.50
3:M:248:GLN:CG	3:M:249:ILE:N	2.48	0.50
3:M:335:PRO:O	3:M:338:MET:N	2.42	0.50
3:M:59:GLY:O	3:M:61:SER:N	2.44	0.50
3:N:189:THR:CG2	3:N:192:LYS:HB3	2.41	0.50
3:N:216:ARG:HD3	3:N:216:ARG:C	2.32	0.50
3:N:222:SER:O	3:N:224:ILE:N	2.45	0.50
3:O:76:ALA:O	3:O:77:ALA:HB2	2.10	0.50
3:O:8:PHE:HD2	3:P:258:LEU:CD1	2.23	0.50
3:Q:197:TRP:CD1	3:Q:198:SER:O	2.65	0.50
3:R:253:ALA:C	3:R:255:GLU:N	2.63	0.50
3:S:51:LYS:O	3:S:55:SER:HB2	2.11	0.50
3:S:77:ALA:HB1	3:S:98:ARG:HH22	1.75	0.50
3:U:66:ASP:O	3:U:70:VAL:N	2.44	0.50
3:A:11:ASN:OD1	3:A:11:ASN:O	2.30	0.50
3:C:311:LEU:O	3:C:315:VAL:HG23	2.11	0.50
3:C:73:TYR:CZ	3:C:98:ARG:NH2	2.79	0.50
3:H:9:LYS:N	3:H:9:LYS:HD2	2.27	0.50
3:I:64:LYS:C	3:I:67:PRO:HD2	2.31	0.50
3:J:54:LYS:C	3:J:56:VAL:H	2.13	0.50
3:K:185:HIS:CB	3:K:189:THR:N	2.75	0.50
3:L:38:LYS:HD2	3:L:292:LEU:O	2.11	0.50
3:N:133:THR:HG22	3:N:136:GLU:OE2	2.11	0.50
3:O:133:THR:HG22	3:O:136:GLU:OE2	2.11	0.50
3:O:173:PHE:CZ	3:O:224:ILE:HA	2.46	0.50
3:P:50:ASN:ND2	3:P:50:ASN:N	2.56	0.50
3:Q:248:GLN:O	3:Q:250:ASN:O	2.28	0.50
3:R:218:GLU:HG2	3:R:219:HIS:N	2.27	0.50
3:R:77:ALA:CB	3:R:98:ARG:HH12	2.16	0.50
3:R:77:ALA:CB	3:R:98:ARG:HH22	2.24	0.50
3:T:81:PHE:H	3:T:95:VAL:H	1.60	0.50
3:U:324:SER:O	3:U:326:ASN:N	2.45	0.50
3:U:87:GLU:C	3:U:89:TRP:N	2.62	0.50
3:V:38:LYS:NZ	3:V:39:PRO:HD2	2.26	0.50
3:B:5:LYS:NZ	3:B:5:LYS:CB	2.71	0.50
3:D:182:VAL:HB	3:D:190:THR:HG21	1.92	0.50
3:I:189:THR:CG2	3:I:192:LYS:CG	2.89	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:20:GLU:HB2	3:K:254:ARG:HD2	1.93	0.50
3:J:53:TYR:HD1	3:J:121:ALA:O	1.95	0.50
3:K:295:SER:OG	3:K:296:GLY:N	2.42	0.50
3:M:189:THR:HB	3:M:193:MET:HG2	1.94	0.50
3:N:67:PRO:HA	3:N:206:LEU:CD1	2.42	0.50
3:N:77:ALA:HB3	3:N:98:ARG:NH1	2.27	0.50
3:O:153:ILE:H	3:O:153:ILE:HD12	1.76	0.50
3:O:185:HIS:HB2	3:O:189:THR:N	2.26	0.50
3:P:189:THR:HG21	3:P:192:LYS:HG2	1.92	0.50
3:Q:56:VAL:CG1	3:Q:123:THR:OG1	2.58	0.50
3:Q:50:ASN:O	3:Q:54:LYS:HG2	2.11	0.50
3:R:176:ALA:C	3:R:178:PHE:N	2.64	0.50
3:T:268:GLU:HB3	3:T:305:VAL:HG23	1.92	0.50
3:U:79:GLN:HB3	3:U:217:ILE:CG2	2.41	0.50
3:V:219:HIS:HA	3:V:222:SER:CB	2.39	0.50
3:V:74:LEU:CD2	3:V:98:ARG:HB2	2.38	0.50
3:C:249:ILE:CG2	3:C:319:MET:CE	2.90	0.50
3:D:53:TYR:CD1	3:D:121:ALA:O	2.58	0.50
3:G:133:THR:HG22	3:G:136:GLU:OE2	2.11	0.50
3:G:146:SER:CB	3:G:169:ILE:HD12	2.32	0.50
3:G:410:MET:CE	3:G:410:MET:HA	2.42	0.50
3:G:443:ASN:O	3:G:447:SER:OG	2.29	0.50
3:G:54:LYS:C	3:G:56:VAL:N	2.65	0.50
3:I:184:HIS:O	3:I:189:THR:N	2.43	0.50
3:L:128:LEU:HD11	3:L:130:ARG:NE	2.19	0.50
3:L:9:LYS:HE2	3:L:17:LEU:HB2	1.94	0.50
2:X:98:C:P	3:L:237:SER:HG	2.34	0.50
3:L:30:TYR:CB	3:L:277:GLN:NE2	2.73	0.50
3:L:338:MET:HE2	3:L:338:MET:HA	1.93	0.50
3:M:313:HIS:HB3	3:M:324:SER:HB2	1.93	0.50
3:N:176:ALA:CB	3:N:177:PRO:CD	2.86	0.50
3:N:87:GLU:HG2	3:N:284:SER:CA	2.34	0.50
3:P:141:VAL:HG12	3:P:145:LEU:HD12	1.93	0.50
3:R:169:ILE:HG22	3:R:226:VAL:CG1	2.41	0.50
3:R:84:THR:C	3:R:86:PRO:HD3	2.32	0.50
3:S:434:ARG:HB3	3:S:435:PRO:HD2	1.92	0.50
3:T:183:GLU:O	3:T:184:HIS:C	2.50	0.50
3:U:417:LYS:N	3:U:420:HIS:HD2	2.01	0.50
3:V:185:HIS:HB2	3:V:189:THR:N	2.27	0.50
3:V:217:ILE:CG2	3:V:218:GLU:N	2.75	0.50
3:V:54:LYS:HE3	3:V:140:LEU:HD21	1.91	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:10:VAL:HG12	3:A:11:ASN:H	1.77	0.50
3:A:183:GLU:O	3:A:190:THR:CG2	2.59	0.50
3:A:232:ALA:C	3:A:234:GLU:N	2.64	0.50
3:B:260:PHE:HB3	3:B:265:PHE:CD2	2.47	0.50
3:B:262:HIS:NE2	3:B:337:GLU:OE1	2.40	0.50
3:C:246:ILE:CG1	3:C:247:LYS:N	2.74	0.50
3:C:338:MET:CE	3:C:338:MET:HA	2.41	0.50
3:D:177:PRO:HB2	3:D:221:TYR:CE2	2.46	0.50
3:E:31:PRO:HD2	3:E:277:GLN:HG3	1.93	0.50
3:G:277:GLN:N	3:G:277:GLN:OE1	2.45	0.50
3:I:286:PHE:HA	3:I:289:PHE:HB3	1.94	0.50
3:P:234:GLU:O	3:P:235:ASP:HB2	2.12	0.50
3:P:266:GLU:OE2	3:Q:358:ARG:HD2	2.11	0.50
3:Q:176:ALA:C	3:Q:178:PHE:N	2.64	0.50
3:S:128:LEU:HD11	3:S:130:ARG:HE	1.76	0.50
3:S:176:ALA:HB3	3:S:178:PHE:HD1	1.77	0.50
3:U:197:TRP:CD1	3:U:198:SER:O	2.64	0.50
3:V:219:HIS:CG	3:V:222:SER:OG	2.64	0.50
3:V:64:LYS:C	3:V:67:PRO:HD2	2.32	0.50
3:A:93:GLY:O	3:A:94:ILE:HG23	2.12	0.50
3:F:30:TYR:HB3	3:F:277:GLN:HE21	1.77	0.50
3:H:249:ILE:HG23	3:H:319:MET:SD	2.51	0.50
3:I:101:ASP:OD2	3:I:101:ASP:N	2.45	0.50
3:I:54:LYS:C	3:I:56:VAL:N	2.65	0.50
3:K:446:TYR:O	3:K:447:SER:CB	2.60	0.50
3:K:67:PRO:HA	3:K:206:LEU:CD1	2.41	0.50
3:L:73:TYR:CZ	3:L:98:ARG:NH2	2.80	0.50
3:N:338:MET:HA	3:N:338:MET:CE	2.42	0.50
3:Q:54:LYS:HD3	3:Q:69:ASP:CG	2.31	0.50
3:S:10:VAL:HG12	3:S:11:ASN:N	2.26	0.50
3:D:126:MET:O	3:S:122:LEU:O	2.30	0.50
3:S:35:ASP:OD2	3:S:89:TRP:NE1	2.45	0.50
3:T:326:ASN:HA	3:T:437:SER:HB2	1.93	0.50
3:U:73:TYR:CE1	3:U:77:ALA:HB3	2.47	0.50
3:V:441:PHE:CD2	3:V:441:PHE:C	2.85	0.50
3:A:20:GLU:HB3	3:B:273:PHE:CE2	2.46	0.50
3:B:32:ALA:HB2	3:B:277:GLN:NE2	2.21	0.50
3:E:66:ASP:N	3:E:67:PRO:HD2	2.27	0.50
3:F:249:ILE:CG2	3:F:250:ASN:N	2.74	0.50
3:F:81:PHE:CZ	3:F:84:THR:HA	2.47	0.50
3:H:153:ILE:H	3:H:153:ILE:HD12	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:64:LYS:O	3:H:64:LYS:HG3	2.12	0.50
3:K:249:ILE:HG21	3:K:319:MET:HE1	1.93	0.50
3:K:313:HIS:HB3	3:K:324:SER:HB2	1.93	0.50
3:O:333:CYS:O	3:O:334:ALA:C	2.50	0.50
3:P:38:LYS:HE2	3:P:38:LYS:CA	2.37	0.50
3:S:326:ASN:HA	3:S:437:SER:HB2	1.93	0.50
3:S:51:LYS:O	3:S:55:SER:CB	2.60	0.50
3:T:10:VAL:CG1	3:T:11:ASN:H	2.03	0.50
3:U:221:TYR:O	3:U:222:SER:C	2.50	0.50
3:U:31:PRO:HG3	3:U:289:PHE:CD1	2.46	0.50
3:V:175:THR:O	3:V:176:ALA:O	2.30	0.50
3:V:295:SER:OG	3:V:296:GLY:N	2.44	0.50
3:B:66:ASP:O	3:B:70:VAL:N	2.37	0.50
3:K:95:VAL:O	3:K:96:ILE:HG23	2.12	0.50
3:M:54:LYS:C	3:M:56:VAL:H	2.13	0.50
3:P:68:ASP:HB3	3:P:120:TRP:HH2	1.75	0.50
3:Q:245:PHE:HB2	3:Q:312:ILE:HG23	1.94	0.50
3:R:315:VAL:HG12	3:R:319:MET:CE	2.41	0.50
3:S:234:GLU:HG2	3:S:235:ASP:OD1	2.12	0.50
3:T:410:MET:HA	3:T:410:MET:HE3	1.92	0.50
3:T:73:TYR:HD1	3:T:76:ALA:HB3	1.77	0.50
3:U:253:ALA:C	3:U:255:GLU:N	2.64	0.50
3:V:54:LYS:CD	3:V:69:ASP:OD2	2.56	0.50
2:X:1:C:O5'	2:X:99:C:O3'	2.25	0.50
3:B:77:ALA:CB	3:B:98:ARG:HH22	2.19	0.49
3:C:232:ALA:O	3:C:234:GLU:N	2.45	0.49
3:C:31:PRO:HD2	3:C:277:GLN:CG	2.38	0.49
1:W:27:C:OP1	3:C:323:ARG:NH2	2.43	0.49
3:C:50:ASN:C	3:C:52:ALA:N	2.58	0.49
3:C:98:ARG:CD	3:C:98:ARG:H	2.17	0.49
3:D:417:LYS:H	3:D:420:HIS:CD2	2.20	0.49
3:F:326:ASN:HB2	3:F:434:ARG:HD2	1.93	0.49
3:J:277:GLN:CD	3:J:277:GLN:N	2.64	0.49
3:L:74:LEU:HA	3:L:98:ARG:HD3	1.94	0.49
3:M:10:VAL:HG21	3:M:18:LYS:HZ3	1.72	0.49
3:N:417:LYS:HB2	3:N:420:HIS:CD2	2.47	0.49
3:N:33:ILE:HB	3:N:88:ASP:CB	2.42	0.49
3:O:216:ARG:HD3	3:O:216:ARG:C	2.32	0.49
3:T:65:LEU:HD23	3:T:120:TRP:CE3	2.47	0.49
3:U:176:ALA:CB	3:U:177:PRO:CD	2.79	0.49
3:U:324:SER:O	3:U:325:LEU:C	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:62:ALA:HB3	3:A:197:TRP:HZ3	1.77	0.49
3:B:10:VAL:O	3:B:11:ASN:HB3	2.11	0.49
3:B:239:LEU:HA	3:B:272:MET:HE3	1.94	0.49
3:B:73:TYR:C	3:B:75:ALA:N	2.64	0.49
3:C:26:HIS:O	3:C:27:GLU:HB3	2.12	0.49
3:D:176:ALA:CB	3:D:177:PRO:CD	2.77	0.49
3:D:66:ASP:N	3:D:67:PRO:CD	2.74	0.49
3:E:54:LYS:C	3:E:56:VAL:N	2.64	0.49
3:E:8:PHE:HZ	3:F:255:GLU:CB	2.22	0.49
3:F:308:VAL:CG1	3:F:312:ILE:HD11	2.42	0.49
3:F:81:PHE:HE1	3:F:85:CYS:HB2	1.78	0.49
3:H:126:MET:HE2	3:H:128:LEU:O	2.12	0.49
3:I:249:ILE:HD11	3:I:321:GLN:HG3	1.94	0.49
3:J:194:CYS:C	3:J:196:ASN:N	2.65	0.49
3:K:87:GLU:O	3:K:89:TRP:N	2.45	0.49
2:X:89:C:H42	3:M:323:ARG:HE	1.49	0.49
3:N:277:GLN:CD	3:N:277:GLN:N	2.65	0.49
3:O:189:THR:HB	3:O:193:MET:HG2	1.94	0.49
3:Q:54:LYS:C	3:Q:56:VAL:H	2.15	0.49
3:T:79:GLN:HG3	3:T:80:PHE:H	1.77	0.49
3:U:87:GLU:OE2	3:U:284:SER:C	2.51	0.49
3:U:336:HIS:O	3:U:340:VAL:HG23	2.12	0.49
3:U:67:PRO:HA	3:U:206:LEU:CD1	2.41	0.49
3:V:146:SER:HA	3:V:227:GLY:HA3	1.93	0.49
2:X:26:C:P	3:T:237:SER:HG	2.33	0.49
3:A:340:VAL:HG13	3:A:416:LEU:CD1	2.42	0.49
3:D:189:THR:HB	3:D:193:MET:HG2	1.92	0.49
3:D:77:ALA:HB3	3:D:98:ARG:NH1	2.27	0.49
3:G:93:GLY:O	3:G:94:ILE:HG23	2.13	0.49
3:G:97:ALA:O	3:G:99:LYS:N	2.37	0.49
3:H:248:GLN:O	3:H:250:ASN:O	2.30	0.49
3:J:205:PHE:O	3:J:209:THR:HG22	2.12	0.49
3:L:235:ASP:HB2	3:L:290:ARG:HG2	1.95	0.49
3:L:81:PHE:HE2	3:L:84:THR:HA	1.77	0.49
3:N:35:ASP:HA	3:N:89:TRP:NE1	2.27	0.49
3:O:173:PHE:HZ	3:O:224:ILE:HA	1.78	0.49
3:P:62:ALA:HB3	3:P:197:TRP:HZ3	1.76	0.49
3:P:39:PRO:HA	3:P:102:LYS:O	2.11	0.49
3:Q:100:GLY:C	3:Q:101:ASP:OD2	2.51	0.49
3:Q:64:LYS:O	3:Q:64:LYS:HG3	2.10	0.49
3:R:250:ASN:N	3:R:250:ASN:OD1	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:R:74:LEU:HA	3:R:98:ARG:HD3	1.93	0.49
3:S:38:LYS:HG3	3:S:292:LEU:HB3	1.95	0.49
3:T:74:LEU:HD22	3:T:98:ARG:CB	2.35	0.49
3:V:81:PHE:HE2	3:V:84:THR:HA	1.77	0.49
2:X:43:A:H2'	2:X:44:A:O4'	2.11	0.49
2:X:9:C:N3	2:X:11:C:C6	2.73	0.49
3:B:10:VAL:O	3:B:11:ASN:HB2	2.11	0.49
3:B:145:LEU:HD22	3:B:207:ALA:HA	1.94	0.49
3:B:338:MET:CE	3:B:338:MET:HA	2.42	0.49
3:C:287:ILE:HG13	3:C:288:HIS:CD2	2.46	0.49
3:D:32:ALA:HB2	3:D:277:GLN:HE22	1.78	0.49
3:E:194:CYS:O	3:E:196:ASN:N	2.42	0.49
3:E:222:SER:C	3:E:224:ILE:N	2.66	0.49
3:F:245:PHE:HB2	3:F:312:ILE:HG23	1.93	0.49
3:F:53:TYR:O	3:F:56:VAL:HG23	2.12	0.49
3:G:441:PHE:C	3:G:441:PHE:CD2	2.86	0.49
3:G:66:ASP:HB2	3:G:67:PRO:CD	2.41	0.49
3:G:67:PRO:HA	3:G:206:LEU:CD1	2.42	0.49
3:H:253:ALA:C	3:H:255:GLU:N	2.64	0.49
3:J:249:ILE:HG23	3:J:319:MET:CE	2.42	0.49
3:L:246:ILE:CG1	3:L:247:LYS:N	2.75	0.49
3:M:194:CYS:C	3:M:196:ASN:N	2.61	0.49
3:M:264:ASN:HD21	3:N:251:LEU:HD11	1.73	0.49
3:M:344:TYR:CE2	3:M:409:ILE:HG12	2.46	0.49
3:M:409:ILE:HG22	3:M:410:MET:HE3	1.93	0.49
3:Q:283:HIS:O	3:Q:284:SER:O	2.31	0.49
3:Q:367:GLN:O	3:Q:370:GLU:HB2	2.12	0.49
3:R:10:VAL:O	3:R:11:ASN:HB3	2.12	0.49
3:S:169:ILE:HG22	3:S:226:VAL:HG12	1.94	0.49
3:T:189:THR:O	3:T:193:MET:N	2.45	0.49
3:T:7:VAL:HG13	3:T:8:PHE:H	1.76	0.49
3:U:249:ILE:HG22	3:U:250:ASN:OD1	2.11	0.49
3:V:216:ARG:HG2	3:V:216:ARG:HH11	1.77	0.49
3:A:54:LYS:C	3:A:56:VAL:N	2.66	0.49
3:A:74:LEU:CD2	3:A:98:ARG:HB2	2.41	0.49
3:C:215:SER:HB2	3:C:225:ARG:NH1	2.27	0.49
3:C:69:ASP:O	3:C:71:CYS:N	2.44	0.49
3:I:248:GLN:OE1	3:I:249:ILE:HG13	2.12	0.49
3:J:76:ALA:O	3:J:77:ALA:HB2	2.13	0.49
3:K:417:LYS:N	3:K:420:HIS:HD2	2.05	0.49
3:L:98:ARG:HG3	3:L:213:PHE:CD1	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:253:ALA:O	3:M:254:ARG:HG2	2.12	0.49
3:N:65:LEU:N	3:N:65:LEU:HD12	2.27	0.49
3:P:93:GLY:O	3:P:94:ILE:HG23	2.12	0.49
3:R:168:ARG:O	3:R:172:ILE:HG23	2.12	0.49
3:A:54:LYS:C	3:A:56:VAL:H	2.14	0.49
3:B:57:LEU:HD11	3:B:140:LEU:HD11	1.93	0.49
3:E:174:GLU:HG3	3:E:174:GLU:O	2.10	0.49
3:E:322:VAL:O	3:E:323:ARG:C	2.50	0.49
3:E:8:PHE:HZ	3:F:255:GLU:HA	0.77	0.49
3:F:338:MET:HA	3:F:338:MET:HE2	1.95	0.49
3:G:174:GLU:HB2	3:G:180:LYS:HB2	1.94	0.49
3:G:206:LEU:HA	3:G:209:THR:HG22	1.94	0.49
3:G:216:ARG:O	3:G:216:ARG:HD3	2.13	0.49
3:H:11:ASN:C	3:H:11:ASN:OD1	2.49	0.49
3:J:175:THR:HG23	3:J:176:ALA:N	2.27	0.49
3:J:231:THR:O	3:J:232:ALA:O	2.30	0.49
3:M:183:GLU:O	3:M:190:THR:CG2	2.61	0.49
3:N:77:ALA:HB3	3:N:98:ARG:CZ	2.42	0.49
3:O:166:ALA:O	3:O:167:ASP:C	2.50	0.49
3:P:67:PRO:HA	3:P:206:LEU:CD1	2.43	0.49
3:Q:87:GLU:OE1	3:Q:285:TYR:CZ	2.66	0.49
3:R:211:ASP:OD2	3:R:288:HIS:HE1	1.96	0.49
3:S:54:LYS:HD2	3:S:144:LEU:HD11	1.94	0.49
3:S:71:CYS:O	3:S:74:LEU:HG	2.13	0.49
3:T:87:GLU:CG	3:T:284:SER:HA	2.34	0.49
3:B:242:PHE:O	3:B:246:ILE:HG23	2.12	0.49
3:C:87:GLU:O	3:C:88:ASP:C	2.51	0.49
3:F:15:VAL:HG12	3:F:16:SER:N	2.27	0.49
3:F:197:TRP:HD1	3:F:198:SER:O	1.95	0.49
3:F:221:TYR:O	3:F:223:ALA:N	2.46	0.49
3:G:10:VAL:O	3:G:11:ASN:CB	2.61	0.49
3:J:176:ALA:HB1	3:J:177:PRO:CD	2.33	0.49
3:J:338:MET:HA	3:J:338:MET:CE	2.43	0.49
3:K:54:LYS:C	3:K:56:VAL:N	2.66	0.49
3:Q:20:GLU:HB2	3:R:254:ARG:HD2	1.95	0.49
3:S:410:MET:CE	3:S:410:MET:HA	2.43	0.49
3:S:57:LEU:CD2	3:S:194:CYS:SG	3.00	0.49
3:S:81:PHE:CD2	3:S:82:GLU:N	2.80	0.49
3:T:10:VAL:O	3:T:11:ASN:CB	2.60	0.49
3:U:189:THR:HB	3:U:193:MET:HG2	1.95	0.49
3:A:340:VAL:HG22	3:A:416:LEU:CD1	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:118:GLY:HA3	3:C:120:TRP:NE1	2.28	0.49
1:W:24:A:H4'	3:C:290:ARG:NH2	2.28	0.49
3:C:410:MET:CE	3:C:410:MET:CA	2.90	0.49
3:I:38:LYS:HE2	3:I:39:PRO:HD2	1.95	0.49
3:J:197:TRP:CD1	3:J:198:SER:N	2.78	0.49
3:L:49:LEU:O	3:L:52:ALA:HB3	2.12	0.49
3:L:87:GLU:OE2	3:L:284:SER:C	2.51	0.49
3:N:176:ALA:HB3	3:N:178:PHE:HD1	1.78	0.49
3:O:153:ILE:HG22	3:O:158:THR:OG1	2.12	0.49
3:O:54:LYS:C	3:O:56:VAL:N	2.65	0.49
3:Q:278:GLU:HB3	3:Q:281:VAL:CG2	2.43	0.49
3:R:98:ARG:H	3:R:98:ARG:HD2	1.78	0.49
3:S:315:VAL:HG12	3:S:319:MET:HE1	1.94	0.49
3:T:54:LYS:NZ	3:T:69:ASP:CG	2.66	0.49
3:V:370:GLU:HA	3:V:370:GLU:OE1	2.13	0.49
1:W:85:C:P	3:H:168:ARG:NH2	2.85	0.49
3:A:176:ALA:C	3:A:178:PHE:N	2.66	0.49
3:C:174:GLU:HB2	3:C:180:LYS:HB2	1.95	0.49
3:C:54:LYS:HE3	3:C:140:LEU:CD2	2.38	0.49
3:D:78:MET:O	3:D:220:LEU:HD22	2.12	0.49
3:G:225:ARG:O	3:G:229:VAL:N	2.41	0.49
3:G:317:CYS:SG	3:G:325:LEU:HA	2.53	0.49
3:H:81:PHE:HD1	3:H:96:ILE:HD11	1.77	0.49
3:M:53:TYR:O	3:M:56:VAL:HG23	2.12	0.49
3:N:53:TYR:CD1	3:N:121:ALA:O	2.63	0.49
3:O:217:ILE:HD12	3:O:217:ILE:N	2.27	0.49
3:P:60:MET:O	3:P:61:SER:HB3	2.12	0.49
3:Q:66:ASP:O	3:Q:69:ASP:N	2.45	0.49
3:R:38:LYS:HD3	3:R:205:PHE:HE1	1.78	0.49
3:R:77:ALA:HB1	3:R:220:LEU:HD21	1.95	0.49
3:T:31:PRO:HG3	3:T:289:PHE:CD1	2.47	0.49
2:X:66:C:O2'	2:X:67:C:H5'	2.12	0.49
3:B:175:THR:HG23	3:B:176:ALA:N	2.27	0.49
3:C:189:THR:O	3:C:191:HIS:N	2.46	0.49
3:D:206:LEU:HA	3:D:209:THR:CG2	2.42	0.49
3:E:185:HIS:HB2	3:E:189:THR:N	2.28	0.49
3:E:20:GLU:O	3:F:254:ARG:HD2	2.13	0.49
3:G:23:VAL:O	3:G:24:ASP:HB3	2.12	0.49
3:G:30:TYR:C	3:G:32:ALA:H	2.16	0.49
3:J:211:ASP:OD1	3:J:225:ARG:HG2	2.13	0.49
3:J:333:CYS:O	3:J:334:ALA:C	2.51	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:66:ASP:O	3:M:67:PRO:C	2.50	0.49
3:N:81:PHE:HZ	3:N:85:CYS:N	2.11	0.49
3:O:222:SER:C	3:O:224:ILE:N	2.64	0.49
3:O:337:GLU:OE2	3:P:353:GLY:CA	2.60	0.49
3:P:77:ALA:CB	3:P:98:ARG:HH12	2.19	0.49
3:Q:434:ARG:HB3	3:Q:435:PRO:HD2	1.95	0.49
3:S:214:PHE:CD2	3:S:222:SER:HA	2.48	0.49
3:S:266:GLU:OE2	3:T:358:ARG:HD2	2.13	0.49
3:T:313:HIS:HB3	3:T:324:SER:HB2	1.94	0.49
1:W:67:C:N3	1:W:68:C:N4	2.61	0.49
3:A:172:ILE:CD1	3:A:226:VAL:HG21	2.42	0.48
3:C:313:HIS:ND1	3:C:324:SER:CB	2.75	0.48
3:B:403:GLU:HG3	3:C:357:ARG:NH1	2.27	0.48
3:D:65:LEU:HB3	3:D:120:TRP:CZ3	2.48	0.48
3:F:205:PHE:O	3:F:205:PHE:CD2	2.65	0.48
3:F:169:ILE:HG22	3:F:226:VAL:HG11	1.95	0.48
3:H:79:GLN:HB3	3:H:217:ILE:CG2	2.43	0.48
3:I:225:ARG:HA	3:I:228:THR:OG1	2.13	0.48
3:I:264:ASN:HD21	3:J:251:LEU:CD1	2.26	0.48
3:I:406:TYR:CE2	3:I:410:MET:HG3	2.48	0.48
3:J:236:CYS:SG	3:J:289:PHE:HE2	2.36	0.48
3:J:441:PHE:CD2	3:J:441:PHE:C	2.85	0.48
3:M:176:ALA:C	3:M:178:PHE:N	2.67	0.48
3:M:222:SER:O	3:M:224:ILE:N	2.45	0.48
3:M:289:PHE:CD1	3:M:289:PHE:C	2.86	0.48
3:M:326:ASN:HA	3:M:437:SER:HB2	1.95	0.48
3:N:222:SER:C	3:N:224:ILE:N	2.66	0.48
3:O:169:ILE:HD11	3:O:191:HIS:CE1	2.47	0.48
3:O:441:PHE:O	3:O:445:THR:HG23	2.13	0.48
3:P:222:SER:C	3:P:224:ILE:N	2.65	0.48
3:Q:137:HIS:O	3:Q:140:LEU:N	2.45	0.48
3:S:340:VAL:HA	3:S:416:LEU:HD11	1.95	0.48
3:E:205:PHE:C	3:E:205:PHE:CD2	2.85	0.48
3:F:222:SER:C	3:F:224:ILE:H	2.15	0.48
3:F:222:SER:C	3:F:224:ILE:N	2.65	0.48
3:I:333:CYS:O	3:I:334:ALA:C	2.51	0.48
3:J:368:GLU:O	3:J:372:ALA:CB	2.61	0.48
3:K:31:PRO:HD2	3:K:277:GLN:CG	2.43	0.48
3:K:77:ALA:HB1	3:K:98:ARG:HH22	1.76	0.48
3:L:73:TYR:CZ	3:L:98:ARG:NH1	2.81	0.48
3:L:82:GLU:OE1	3:L:82:GLU:HA	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:145:LEU:CD2	3:M:207:ALA:HA	2.40	0.48
3:N:371:ALA:C	3:N:373:GLU:H	2.16	0.48
3:O:249:ILE:HG23	3:O:319:MET:CE	2.43	0.48
3:Q:189:THR:O	3:Q:193:MET:HG2	2.13	0.48
3:Q:223:ALA:O	3:Q:226:VAL:CG2	2.55	0.48
3:R:245:PHE:O	3:R:248:GLN:O	2.31	0.48
3:S:53:TYR:HD1	3:S:121:ALA:O	1.95	0.48
3:T:249:ILE:HG21	3:T:319:MET:CE	2.42	0.48
3:T:54:LYS:NZ	3:T:69:ASP:OD1	2.44	0.48
3:T:73:TYR:OH	3:T:98:ARG:NH2	2.46	0.48
3:U:74:LEU:HD23	3:U:210:TYR:CZ	2.48	0.48
3:V:322:VAL:O	3:V:323:ARG:C	2.51	0.48
3:A:54:LYS:O	3:A:56:VAL:N	2.46	0.48
3:B:205:PHE:C	3:B:205:PHE:CD2	2.86	0.48
3:E:153:ILE:CG1	3:E:161:TYR:HE2	2.27	0.48
3:E:438:PHE:O	3:E:439:ALA:C	2.51	0.48
3:F:286:PHE:O	3:F:288:HIS:N	2.45	0.48
3:G:189:THR:CG2	3:G:192:LYS:HG2	2.42	0.48
3:G:59:GLY:O	3:G:61:SER:N	2.46	0.48
3:H:66:ASP:O	3:H:70:VAL:N	2.44	0.48
3:I:225:ARG:O	3:I:226:VAL:C	2.52	0.48
3:I:53:TYR:CD1	3:I:121:ALA:N	2.81	0.48
3:J:49:LEU:O	3:J:52:ALA:HB3	2.12	0.48
3:J:33:ILE:CB	3:J:88:ASP:HB3	2.31	0.48
3:K:165:ILE:O	3:K:166:ALA:C	2.51	0.48
3:M:81:PHE:HB3	3:M:95:VAL:N	2.29	0.48
3:N:53:TYR:CD2	3:N:54:LYS:N	2.81	0.48
3:O:189:THR:CG2	3:O:192:LYS:CB	2.81	0.48
3:P:134:VAL:HB	3:P:135:PRO:HD3	1.94	0.48
3:Q:79:GLN:HG3	3:Q:80:PHE:H	1.78	0.48
3:Q:81:PHE:CE2	3:Q:84:THR:HA	2.46	0.48
3:S:248:GLN:CG	3:S:249:ILE:H	2.16	0.48
3:A:7:VAL:HG12	3:A:9:LYS:HE2	1.93	0.48
3:B:149:ARG:O	3:B:153:ILE:CD1	2.61	0.48
3:C:232:ALA:C	3:C:234:GLU:N	2.66	0.48
3:D:12:ASN:HB2	3:D:13:GLN:OE1	2.14	0.48
3:E:416:LEU:HD12	3:E:416:LEU:H	1.77	0.48
3:G:206:LEU:HA	3:G:209:THR:CG2	2.43	0.48
1:W:80:C:H2'	3:H:328:THR:OG1	2.14	0.48
3:J:369:TYR:O	3:J:371:ALA:N	2.45	0.48
3:M:214:PHE:CD2	3:M:222:SER:HA	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:255:GLU:OE1	3:M:255:GLU:C	2.51	0.48
3:N:139:SER:HA	3:N:178:PHE:CD2	2.48	0.48
3:N:248:GLN:CD	3:N:249:ILE:HG13	2.34	0.48
3:O:169:ILE:HG22	3:O:226:VAL:HG12	1.95	0.48
3:P:225:ARG:HA	3:P:228:THR:OG1	2.13	0.48
3:P:239:LEU:HA	3:P:272:MET:CE	2.43	0.48
3:Q:71:CYS:O	3:Q:74:LEU:HG	2.12	0.48
3:S:6:ILE:HD13	3:S:8:PHE:HE2	1.79	0.48
3:U:248:GLN:OE1	3:U:321:GLN:OE1	2.30	0.48
3:V:12:ASN:CB	3:V:13:GLN:OE1	2.60	0.48
3:V:222:SER:C	3:V:224:ILE:N	2.66	0.48
3:V:50:ASN:N	3:V:50:ASN:ND2	2.57	0.48
2:X:58:C:O2	3:Q:223:ALA:HA	2.12	0.48
3:A:248:GLN:O	3:A:249:ILE:C	2.50	0.48
3:A:66:ASP:O	3:A:70:VAL:N	2.45	0.48
3:B:286:PHE:HA	3:B:289:PHE:HB3	1.95	0.48
3:C:305:VAL:HG13	3:C:305:VAL:O	2.13	0.48
3:D:313:HIS:HB3	3:D:324:SER:HB2	1.95	0.48
3:E:441:PHE:CD2	3:E:441:PHE:C	2.86	0.48
3:F:338:MET:HA	3:F:338:MET:CE	2.43	0.48
3:J:264:ASN:HD21	3:K:251:LEU:HD21	1.68	0.48
3:J:37:LYS:O	3:J:39:PRO:HD3	2.13	0.48
3:K:176:ALA:C	3:K:178:PHE:N	2.66	0.48
3:K:182:VAL:HB	3:K:190:THR:HG21	1.96	0.48
3:K:64:LYS:C	3:K:67:PRO:HD2	2.34	0.48
3:L:32:ALA:H	3:L:277:GLN:HE21	1.59	0.48
3:M:234:GLU:HG2	3:M:235:ASP:OD1	2.14	0.48
3:M:245:PHE:CD1	3:M:312:ILE:HG23	2.48	0.48
3:N:171:GLN:O	3:N:175:THR:HG22	2.11	0.48
3:N:286:PHE:HA	3:N:289:PHE:HB3	1.96	0.48
3:T:38:LYS:HA	3:T:38:LYS:CE	2.43	0.48
3:T:77:ALA:HB1	3:T:220:LEU:CD2	2.40	0.48
3:U:326:ASN:HA	3:U:437:SER:HB2	1.95	0.48
3:U:8:PHE:HD2	3:V:258:LEU:CD1	2.27	0.48
1:W:56:C:H2'	1:W:57:C:O2	2.14	0.48
1:W:9:C:C2	3:E:323:ARG:HG2	2.48	0.48
2:X:36:C:C2	3:S:323:ARG:HG2	2.49	0.48
3:B:222:SER:C	3:B:224:ILE:H	2.17	0.48
3:B:250:ASN:HB3	3:B:349:PHE:CD2	2.49	0.48
3:D:234:GLU:HG2	3:D:235:ASP:OD1	2.14	0.48
3:D:81:PHE:CE1	3:D:85:CYS:HB2	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:20:GLU:HB3	3:E:273:PHE:CE2	2.48	0.48
3:H:398:GLU:HG3	3:H:399:THR:N	2.26	0.48
3:I:322:VAL:O	3:I:323:ARG:C	2.50	0.48
3:I:432:GLN:HE21	3:I:432:GLN:HA	1.79	0.48
3:K:333:CYS:O	3:K:334:ALA:C	2.52	0.48
3:L:20:GLU:HB3	3:M:273:PHE:CE2	2.48	0.48
3:M:276:GLY:O	3:M:277:GLN:O	2.31	0.48
3:P:211:ASP:HB3	3:P:288:HIS:CE1	2.49	0.48
3:Q:313:HIS:ND1	3:Q:324:SER:CB	2.77	0.48
3:Q:59:GLY:O	3:Q:61:SER:N	2.40	0.48
3:R:87:GLU:C	3:R:89:TRP:N	2.64	0.48
3:S:77:ALA:O	3:S:98:ARG:NH1	2.46	0.48
3:T:424:TYR:HD1	3:T:442:LEU:HD13	1.79	0.48
3:U:175:THR:HG23	3:U:176:ALA:N	2.28	0.48
3:U:77:ALA:O	3:U:98:ARG:NH1	2.47	0.48
3:U:83:GLY:O	3:U:84:THR:HB	2.12	0.48
3:V:38:LYS:CD	3:V:205:PHE:HE1	2.24	0.48
1:W:63:C:H2'	1:W:65:C:H5''	1.95	0.48
3:A:255:GLU:O	3:K:8:PHE:HE2	1.97	0.48
3:B:81:PHE:HE2	3:B:84:THR:HA	1.79	0.48
3:C:8:PHE:CE1	3:D:254:ARG:HG3	2.49	0.48
3:E:77:ALA:HB3	3:E:98:ARG:CZ	2.43	0.48
3:F:219:HIS:HA	3:F:222:SER:HB3	1.95	0.48
3:G:248:GLN:CG	3:G:249:ILE:N	2.71	0.48
3:H:317:CYS:SG	3:H:325:LEU:HA	2.54	0.48
3:I:185:HIS:CA	3:I:189:THR:N	2.76	0.48
3:J:313:HIS:HB3	3:J:324:SER:HB2	1.96	0.48
3:K:253:ALA:C	3:K:255:GLU:N	2.64	0.48
3:K:77:ALA:HB3	3:K:98:ARG:CZ	2.43	0.48
3:L:308:VAL:HG12	3:L:312:ILE:CD1	2.42	0.48
3:M:175:THR:O	3:M:176:ALA:O	2.31	0.48
3:N:232:ALA:O	3:N:234:GLU:N	2.42	0.48
3:O:211:ASP:OD1	3:O:225:ARG:HG2	2.13	0.48
3:P:73:TYR:HD2	3:P:210:TYR:OH	1.96	0.48
3:Q:87:GLU:O	3:Q:89:TRP:N	2.46	0.48
3:S:77:ALA:CB	3:S:98:ARG:HH12	2.19	0.48
3:T:38:LYS:HD3	3:T:292:LEU:O	2.14	0.48
3:U:235:ASP:HB2	3:U:290:ARG:HG2	1.96	0.48
3:U:313:HIS:ND1	3:U:324:SER:CB	2.77	0.48
3:U:440:GLU:O	3:U:441:PHE:C	2.52	0.48
3:L:251:LEU:CD2	3:V:262:HIS:HE1	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:251:LEU:CD1	3:V:264:ASN:HD21	2.27	0.48
1:W:45:C:C2	3:A:323:ARG:HG2	2.49	0.48
3:A:133:THR:HG22	3:A:136:GLU:OE2	2.13	0.48
3:B:194:CYS:C	3:B:196:ASN:N	2.63	0.48
3:C:87:GLU:C	3:C:89:TRP:N	2.66	0.48
3:C:77:ALA:HB3	3:C:98:ARG:HH12	1.78	0.48
3:C:77:ALA:HB3	3:C:98:ARG:NH1	2.29	0.48
3:D:10:VAL:HG12	3:D:11:ASN:N	2.28	0.48
3:B:9:LYS:CD	3:D:362:ASP:HA	2.41	0.48
3:E:30:TYR:HB3	3:E:277:GLN:HE21	1.78	0.48
3:G:30:TYR:HB3	3:G:277:GLN:NE2	2.29	0.48
3:H:10:VAL:O	3:H:11:ASN:HB2	2.13	0.48
3:H:193:MET:C	3:H:195:ALA:H	2.17	0.48
3:I:79:GLN:HB3	3:I:217:ILE:CG2	2.43	0.48
3:J:66:ASP:HB2	3:J:67:PRO:CD	2.43	0.48
3:L:118:GLY:HA3	3:L:120:TRP:NE1	2.28	0.48
3:L:441:PHE:CD2	3:L:441:PHE:C	2.87	0.48
3:M:247:LYS:C	3:M:248:GLN:O	2.47	0.48
3:O:216:ARG:O	3:O:216:ARG:HD3	2.14	0.48
3:P:77:ALA:HB3	3:P:98:ARG:CZ	2.43	0.48
3:Q:87:GLU:HG2	3:Q:284:SER:CA	2.29	0.48
3:Q:93:GLY:O	3:Q:94:ILE:HG23	2.14	0.48
3:S:410:MET:HE2	3:S:410:MET:HA	1.96	0.48
3:V:232:ALA:C	3:V:234:GLU:N	2.65	0.48
3:V:88:ASP:OD1	3:V:278:GLU:HG3	2.13	0.48
1:W:67:C:N3	1:W:68:C:C5	2.81	0.48
2:X:89:C:C3'	2:X:89:C:C6	2.96	0.48
3:A:251:LEU:HD22	3:K:262:HIS:CE1	2.49	0.48
3:G:211:ASP:OD1	3:G:225:ARG:HG2	2.14	0.48
3:K:42:THR:O	3:K:43:LEU:O	2.31	0.48
3:L:156:GLN:C	3:L:158:THR:H	2.15	0.48
3:O:197:TRP:CD1	3:O:198:SER:N	2.78	0.48
3:O:8:PHE:CD2	3:P:258:LEU:CD1	2.96	0.48
3:P:54:LYS:HD2	3:P:144:LEU:HD11	1.95	0.48
3:Q:416:LEU:HD12	3:Q:416:LEU:N	2.29	0.48
3:Q:81:PHE:HZ	3:Q:85:CYS:HB2	1.79	0.48
3:S:206:LEU:HA	3:S:209:THR:HG23	1.96	0.48
3:U:163:THR:HG22	3:U:192:LYS:HZ2	1.78	0.48
3:V:317:CYS:SG	3:V:325:LEU:HA	2.54	0.48
3:A:285:TYR:O	3:A:286:PHE:C	2.52	0.48
3:A:324:SER:O	3:A:325:LEU:C	2.50	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:245:PHE:HB2	3:B:312:ILE:HG23	1.95	0.48
3:C:313:HIS:HB3	3:C:324:SER:HB2	1.95	0.48
3:D:268:GLU:OE2	3:D:307:HIS:CD2	2.67	0.48
3:E:200:ILE:HG13	3:E:200:ILE:O	2.14	0.48
3:G:10:VAL:HG12	3:G:11:ASN:H	1.79	0.48
3:G:248:GLN:O	3:G:249:ILE:C	2.52	0.48
3:G:313:HIS:HB3	3:G:324:SER:HB2	1.96	0.48
3:G:364:LYS:O	3:G:367:GLN:HB2	2.14	0.48
3:H:10:VAL:O	3:H:11:ASN:CB	2.61	0.48
3:H:21:ILE:HB	3:I:280:ALA:HB2	1.96	0.48
3:I:64:LYS:O	3:I:64:LYS:HG3	2.14	0.48
3:J:35:ASP:O	3:J:36:LEU:HG	2.14	0.48
3:J:38:LYS:HE2	3:J:39:PRO:HD3	1.96	0.48
3:M:222:SER:C	3:M:224:ILE:N	2.66	0.48
3:M:97:ALA:O	3:M:99:LYS:N	2.36	0.48
3:N:441:PHE:C	3:N:441:PHE:CD2	2.88	0.48
3:N:74:LEU:HD22	3:N:98:ARG:CB	2.38	0.48
3:N:444:LYS:HZ2	3:O:431:HIS:HB2	1.79	0.48
3:P:253:ALA:C	3:P:255:GLU:N	2.67	0.48
3:P:32:ALA:HB2	3:P:277:GLN:HE21	1.79	0.48
3:Q:53:TYR:CZ	3:Q:65:LEU:HD22	2.49	0.48
3:R:324:SER:O	3:R:325:LEU:C	2.52	0.48
3:T:176:ALA:C	3:T:178:PHE:N	2.67	0.48
3:V:237:SER:HA	3:V:240:VAL:HB	1.96	0.48
3:A:67:PRO:HA	3:A:206:LEU:CD1	2.44	0.47
3:B:248:GLN:O	3:B:249:ILE:C	2.51	0.47
3:B:305:VAL:HG22	3:B:308:VAL:HB	1.96	0.47
3:B:73:TYR:O	3:B:76:ALA:N	2.47	0.47
3:C:163:THR:HG22	3:C:192:LYS:HZ2	1.78	0.47
3:D:56:VAL:CG1	3:D:123:THR:OG1	2.62	0.47
3:D:189:THR:O	3:D:193:MET:CB	2.62	0.47
3:D:237:SER:HA	3:D:240:VAL:HB	1.95	0.47
3:F:233:TYR:CZ	3:F:287:ILE:HG22	2.49	0.47
3:I:225:ARG:O	3:I:228:THR:N	2.47	0.47
3:L:288:HIS:O	3:L:290:ARG:N	2.47	0.47
3:L:340:VAL:HG13	3:L:416:LEU:CD1	2.38	0.47
3:M:31:PRO:HD2	3:M:277:GLN:HG3	1.95	0.47
3:M:67:PRO:HA	3:M:206:LEU:HD11	1.95	0.47
3:N:197:TRP:HD1	3:N:198:SER:N	2.11	0.47
3:N:79:GLN:HG3	3:N:80:PHE:H	1.78	0.47
3:N:8:PHE:CZ	3:O:255:GLU:CB	2.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:O:38:LYS:HE2	3:O:39:PRO:CD	2.43	0.47
3:O:8:PHE:HZ	3:P:255:GLU:CA	2.19	0.47
3:P:286:PHE:CE1	3:P:300:TYR:CE1	3.01	0.47
3:P:7:VAL:HG12	3:P:8:PHE:N	2.27	0.47
3:R:306:GLY:O	3:R:309:PHE:HB3	2.14	0.47
2:X:45:C:C2	3:R:323:ARG:HG2	2.49	0.47
3:R:73:TYR:CG	3:R:141:VAL:HG21	2.49	0.47
3:S:260:PHE:HB3	3:S:265:PHE:CD2	2.49	0.47
3:V:63:ALA:O	3:V:197:TRP:CH2	2.65	0.47
3:B:263:LYS:HG3	3:C:358:ARG:NH2	2.29	0.47
3:C:299:PRO:HG2	3:C:300:TYR:CE1	2.49	0.47
3:C:326:ASN:HA	3:C:437:SER:HB2	1.96	0.47
3:D:134:VAL:O	3:D:137:HIS:HB2	2.14	0.47
3:E:45:LYS:O	3:E:120:TRP:HZ2	1.97	0.47
3:E:77:ALA:CB	3:E:98:ARG:NH2	2.75	0.47
3:G:189:THR:HG22	3:G:192:LYS:CA	2.42	0.47
3:G:67:PRO:HA	3:G:206:LEU:HD11	1.95	0.47
3:I:10:VAL:HB	3:I:16:SER:HB2	1.96	0.47
3:I:277:GLN:N	3:I:277:GLN:CD	2.68	0.47
3:I:87:GLU:C	3:I:89:TRP:N	2.65	0.47
3:K:249:ILE:CG2	3:K:250:ASN:N	2.67	0.47
3:M:97:ALA:C	3:M:99:LYS:H	2.17	0.47
3:O:197:TRP:HD1	3:O:198:SER:O	1.97	0.47
3:O:262:HIS:CE1	3:P:251:LEU:HD23	2.49	0.47
3:Q:77:ALA:HB1	3:Q:220:LEU:HD21	1.94	0.47
3:T:313:HIS:ND1	3:T:324:SER:CB	2.77	0.47
3:U:155:GLY:H	3:U:158:THR:HG21	1.79	0.47
3:U:31:PRO:O	3:U:32:ALA:C	2.52	0.47
3:V:100:GLY:O	3:V:101:ASP:OD2	2.32	0.47
3:V:153:ILE:HG22	3:V:158:THR:OG1	2.14	0.47
3:V:206:LEU:O	3:V:207:ALA:C	2.52	0.47
2:X:1:C:N4	3:L:157:ASN:ND2	2.54	0.47
2:X:27:C:C2	3:T:323:ARG:HG2	2.49	0.47
3:A:362:ASP:OD2	3:A:364:LYS:HB2	2.14	0.47
3:C:128:LEU:HD11	3:C:130:ARG:HE	1.79	0.47
1:W:19:C:N3	3:D:157:ASN:HB2	2.29	0.47
3:E:140:LEU:O	3:E:141:VAL:C	2.52	0.47
3:G:102:LYS:C	3:G:103:ILE:HD12	2.35	0.47
3:H:174:GLU:HB2	3:H:180:LYS:HB2	1.97	0.47
3:H:214:PHE:CD2	3:H:222:SER:HA	2.49	0.47
3:H:93:GLY:O	3:H:94:ILE:HG23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:155:GLY:N	3:I:158:THR:HG21	2.28	0.47
3:I:77:ALA:HB3	3:I:98:ARG:CZ	2.39	0.47
3:J:369:TYR:O	3:J:370:GLU:C	2.53	0.47
3:J:432:GLN:HA	3:J:432:GLN:NE2	2.22	0.47
3:K:27:GLU:OE2	3:K:297:LYS:HG2	2.14	0.47
3:L:216:ARG:C	3:L:216:ARG:HD3	2.35	0.47
3:N:35:ASP:O	3:N:36:LEU:HG	2.15	0.47
3:P:333:CYS:O	3:P:334:ALA:C	2.53	0.47
3:P:269:ILE:HG13	3:Q:359:PHE:CZ	2.50	0.47
3:Q:421:ILE:O	3:Q:422:ARG:C	2.53	0.47
3:Q:438:PHE:O	3:Q:439:ALA:C	2.53	0.47
3:R:334:ALA:O	3:R:338:MET:HG2	2.13	0.47
3:U:441:PHE:C	3:U:441:PHE:CD2	2.87	0.47
3:U:76:ALA:O	3:U:77:ALA:CB	2.63	0.47
3:A:277:GLN:N	3:A:277:GLN:OE1	2.47	0.47
3:C:249:ILE:CG2	3:C:319:MET:SD	3.02	0.47
3:C:67:PRO:HA	3:C:206:LEU:CD1	2.43	0.47
3:D:310:ASN:O	3:D:314:PHE:CD1	2.67	0.47
3:D:57:LEU:HD21	3:D:144:LEU:CD2	2.41	0.47
3:H:249:ILE:CG2	3:H:319:MET:HE1	2.44	0.47
3:J:416:LEU:H	3:J:416:LEU:HD12	1.79	0.47
3:K:211:ASP:OD1	3:K:225:ARG:NH1	2.47	0.47
3:L:172:ILE:CD1	3:L:226:VAL:HG21	2.44	0.47
3:N:236:CYS:O	3:N:238:GLY:N	2.47	0.47
3:N:240:VAL:HA	3:N:243:THR:HG22	1.96	0.47
3:N:366:LEU:CD2	3:N:366:LEU:C	2.82	0.47
3:O:225:ARG:O	3:O:226:VAL:C	2.53	0.47
3:O:272:MET:SD	3:O:305:VAL:HG21	2.54	0.47
3:Q:35:ASP:O	3:Q:36:LEU:HG	2.14	0.47
3:R:54:LYS:HD2	3:R:144:LEU:HD11	1.95	0.47
3:D:122:LEU:HD22	3:S:122:LEU:HD11	1.96	0.47
3:S:96:ILE:HD11	3:S:217:ILE:HD11	1.95	0.47
3:U:323:ARG:HD3	3:U:324:SER:CA	2.44	0.47
3:U:325:LEU:O	3:U:439:ALA:HB2	2.13	0.47
3:A:246:ILE:HG13	3:A:247:LYS:N	2.28	0.47
3:C:235:ASP:HB2	3:C:290:ARG:HG2	1.96	0.47
3:D:410:MET:HE3	3:D:410:MET:HA	1.95	0.47
3:E:30:TYR:CE2	3:E:274:GLU:HB3	2.49	0.47
3:F:15:VAL:CG1	3:F:16:SER:N	2.77	0.47
3:F:185:HIS:C	3:F:189:THR:N	2.68	0.47
3:F:98:ARG:HG3	3:F:213:PHE:CD1	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:224:ILE:O	3:G:226:VAL:N	2.47	0.47
3:G:54:LYS:HD2	3:G:144:LEU:HD11	1.96	0.47
3:J:211:ASP:OD2	3:J:288:HIS:HE1	1.97	0.47
3:J:263:LYS:HE2	3:K:358:ARG:NH2	2.29	0.47
3:J:317:CYS:SG	3:J:325:LEU:HD12	2.55	0.47
3:M:240:VAL:HA	3:M:243:THR:HG22	1.95	0.47
3:O:171:GLN:HA	3:O:174:GLU:HG2	1.96	0.47
3:O:239:LEU:HA	3:O:272:MET:CE	2.44	0.47
3:O:65:LEU:HD21	3:O:119:ASN:HB3	1.95	0.47
3:Q:248:GLN:CD	3:Q:249:ILE:HG13	2.34	0.47
3:S:169:ILE:O	3:S:173:PHE:CD1	2.67	0.47
3:T:163:THR:HG22	3:T:192:LYS:HZ2	1.79	0.47
3:V:194:CYS:O	3:V:196:ASN:N	2.41	0.47
3:B:318:TYR:CE2	3:B:347:GLU:HA	2.49	0.47
3:B:20:GLU:HB3	3:C:273:PHE:CE2	2.50	0.47
3:E:153:ILE:HG12	3:E:161:TYR:CE2	2.49	0.47
3:E:77:ALA:HB1	3:E:220:LEU:HD21	1.97	0.47
3:E:440:GLU:O	3:E:443:ASN:HB3	2.14	0.47
3:H:248:GLN:CG	3:H:249:ILE:H	2.09	0.47
3:H:81:PHE:CD1	3:H:96:ILE:HD11	2.50	0.47
3:I:35:ASP:HA	3:I:89:TRP:HE1	1.78	0.47
3:J:324:SER:O	3:J:325:LEU:C	2.52	0.47
3:I:263:LYS:HE2	3:J:358:ARG:HH21	1.79	0.47
3:L:35:ASP:OD2	3:L:89:TRP:NE1	2.29	0.47
3:M:249:ILE:HG22	3:M:250:ASN:OD1	2.15	0.47
3:O:172:ILE:CD1	3:O:226:VAL:HG21	2.45	0.47
3:P:87:GLU:C	3:P:89:TRP:H	2.17	0.47
3:Q:178:PHE:HE1	3:Q:223:ALA:HB3	1.79	0.47
3:Q:225:ARG:O	3:Q:227:GLY:N	2.47	0.47
3:R:12:ASN:HB3	3:R:13:GLN:NE2	2.30	0.47
3:S:20:GLU:O	3:S:22:ILE:HG12	2.15	0.47
3:S:8:PHE:CE1	3:T:254:ARG:O	2.68	0.47
3:T:410:MET:CA	3:T:410:MET:CE	2.90	0.47
3:V:239:LEU:HD12	3:V:272:MET:HE3	1.97	0.47
2:X:6:A:H2'	2:X:7:A:H5'	1.96	0.47
2:X:76:C:OP1	3:O:168:ARG:NH2	2.47	0.47
3:A:311:LEU:O	3:A:312:ILE:C	2.53	0.47
3:A:38:LYS:HE2	3:A:39:PRO:CD	2.44	0.47
3:A:57:LEU:CD1	3:A:57:LEU:N	2.75	0.47
3:A:69:ASP:C	3:A:71:CYS:N	2.68	0.47
3:A:8:PHE:HE1	3:B:254:ARG:O	1.87	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:324:SER:O	3:B:326:ASN:N	2.48	0.47
3:D:249:ILE:CG2	3:D:250:ASN:N	2.66	0.47
3:G:183:GLU:O	3:G:190:THR:HG22	2.15	0.47
3:G:240:VAL:HA	3:G:243:THR:HG22	1.96	0.47
3:H:257:ILE:HD13	3:H:269:ILE:HD12	1.96	0.47
3:I:53:TYR:CD1	3:I:121:ALA:O	2.67	0.47
3:I:235:ASP:HB2	3:I:290:ARG:HG2	1.96	0.47
3:J:67:PRO:O	3:J:71:CYS:HB2	2.15	0.47
3:M:205:PHE:CD2	3:M:205:PHE:C	2.88	0.47
3:M:232:ALA:C	3:M:234:GLU:H	2.17	0.47
3:N:87:GLU:C	3:N:89:TRP:N	2.66	0.47
3:O:217:ILE:HD12	3:O:217:ILE:H	1.80	0.47
3:P:133:THR:CG2	3:P:136:GLU:HG3	2.43	0.47
3:P:146:SER:HA	3:P:227:GLY:HA3	1.96	0.47
3:P:173:PHE:CZ	3:P:224:ILE:HA	2.50	0.47
3:P:244:GLY:O	3:P:245:PHE:C	2.53	0.47
3:Q:146:SER:CB	3:Q:169:ILE:HD12	2.33	0.47
3:R:169:ILE:HG22	3:R:226:VAL:HG11	1.97	0.47
3:S:216:ARG:O	3:S:216:ARG:HD3	2.15	0.47
3:S:51:LYS:HA	3:S:54:LYS:HE2	1.96	0.47
3:T:197:TRP:CD1	3:T:198:SER:O	2.67	0.47
3:U:190:THR:CG2	3:U:191:HIS:N	2.78	0.47
3:U:410:MET:HA	3:U:410:MET:HE2	1.96	0.47
3:U:53:TYR:O	3:U:56:VAL:HG23	2.14	0.47
3:V:87:GLU:HB3	3:V:285:TYR:HD1	1.80	0.47
1:W:68:C:H6	1:W:68:C:H3'	1.79	0.47
3:C:49:LEU:C	3:C:50:ASN:HD22	2.18	0.47
3:C:81:PHE:CZ	3:C:85:CYS:HB2	2.50	0.47
3:E:240:VAL:HA	3:E:243:THR:CG2	2.40	0.47
3:G:216:ARG:HG3	3:G:217:ILE:HD12	1.96	0.47
1:W:94:C:O2	3:G:223:ALA:HA	2.14	0.47
3:J:236:CYS:O	3:J:240:VAL:HG23	2.14	0.47
3:K:185:HIS:CA	3:K:189:THR:N	2.77	0.47
3:K:308:VAL:HG12	3:K:312:ILE:CD1	2.45	0.47
3:L:205:PHE:C	3:L:205:PHE:CD2	2.87	0.47
3:L:234:GLU:O	3:L:235:ASP:HB2	2.14	0.47
3:L:370:GLU:O	3:L:374:LEU:HG	2.14	0.47
3:L:259:TYR:CE1	3:L:402:PRO:HG3	2.50	0.47
3:M:169:ILE:HG22	3:M:226:VAL:HG11	1.96	0.47
3:M:403:GLU:N	3:M:403:GLU:OE1	2.32	0.47
3:N:51:LYS:HA	3:N:54:LYS:HE2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:O:235:ASP:HB2	3:O:290:ARG:HG2	1.95	0.47
3:Q:153:ILE:H	3:Q:153:ILE:CD1	2.24	0.47
3:Q:69:ASP:C	3:Q:71:CYS:H	2.17	0.47
3:S:183:GLU:H	3:S:190:THR:HG21	1.80	0.47
2:X:31:C:P	3:T:168:ARG:HH22	2.38	0.47
3:T:248:GLN:HB3	3:T:248:GLN:HE21	1.41	0.47
3:T:319:MET:HB2	3:T:319:MET:HE2	1.63	0.47
3:U:313:HIS:ND1	3:U:324:SER:HB3	2.29	0.47
3:V:33:ILE:HD12	3:V:88:ASP:HB2	1.96	0.47
3:V:81:PHE:CZ	3:V:85:CYS:HB2	2.50	0.47
3:V:97:ALA:C	3:V:99:LYS:N	2.67	0.47
2:X:42:A:N6	2:X:43:A:C2	2.83	0.47
3:E:175:THR:HG23	3:E:176:ALA:N	2.30	0.47
3:D:12:ASN:HD21	3:E:270:ARG:HD2	1.80	0.47
3:F:156:GLN:C	3:F:158:THR:H	2.18	0.47
3:F:176:ALA:C	3:F:178:PHE:H	2.17	0.47
3:F:98:ARG:H	3:F:98:ARG:HD2	1.80	0.47
3:J:7:VAL:HG12	3:J:8:PHE:N	2.30	0.47
3:K:65:LEU:CD2	3:K:120:TRP:H	2.28	0.47
3:L:49:LEU:CD2	3:L:52:ALA:HB2	2.45	0.47
3:L:81:PHE:CG	3:L:82:GLU:N	2.83	0.47
3:M:81:PHE:CZ	3:M:84:THR:HA	2.50	0.47
3:O:246:ILE:HG13	3:O:247:LYS:N	2.30	0.47
3:O:348:GLU:HG3	3:O:348:GLU:O	2.14	0.47
3:O:74:LEU:HA	3:O:98:ARG:HD3	1.96	0.47
3:P:62:ALA:HB3	3:P:197:TRP:CZ3	2.49	0.47
3:P:87:GLU:C	3:P:89:TRP:N	2.66	0.47
3:Q:270:ARG:HG3	3:Q:270:ARG:HH11	1.79	0.47
3:Q:290:ARG:HG3	3:Q:290:ARG:NH1	2.29	0.47
3:R:142:GLY:HA2	3:R:224:ILE:HG23	1.96	0.47
3:S:163:THR:HG22	3:S:192:LYS:HZ2	1.76	0.47
3:S:77:ALA:HB3	3:S:98:ARG:CZ	2.44	0.47
3:U:69:ASP:O	3:U:72:SER:N	2.47	0.47
3:V:211:ASP:OD2	3:V:288:HIS:HE1	1.97	0.47
3:V:34:LYS:O	3:V:35:ASP:HB2	2.15	0.47
3:V:44:GLY:O	3:V:45:LYS:O	2.32	0.47
3:A:216:ARG:HD3	3:A:216:ARG:C	2.36	0.47
3:B:50:ASN:ND2	3:B:50:ASN:N	2.63	0.47
3:C:366:LEU:C	3:C:366:LEU:HD23	2.35	0.47
3:C:76:ALA:O	3:C:77:ALA:CB	2.63	0.47
3:E:7:VAL:HG12	3:E:8:PHE:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:10:VAL:CG1	3:F:11:ASN:H	2.11	0.47
3:G:189:THR:HG23	3:G:192:LYS:HG2	1.97	0.47
3:H:31:PRO:HD2	3:H:277:GLN:HG3	1.96	0.47
3:I:139:SER:HA	3:I:178:PHE:HD2	1.80	0.47
3:J:74:LEU:CD2	3:J:98:ARG:HB2	2.40	0.47
3:K:313:HIS:CG	3:K:324:SER:HB3	2.49	0.47
3:K:81:PHE:CE1	3:K:85:CYS:HB2	2.49	0.47
3:L:410:MET:CE	3:L:410:MET:CA	2.89	0.47
3:M:54:LYS:HD3	3:M:69:ASP:CG	2.33	0.47
3:M:53:TYR:CZ	3:M:65:LEU:HD22	2.50	0.47
3:M:81:PHE:HB3	3:M:95:VAL:H	1.79	0.47
3:P:100:GLY:C	3:P:101:ASP:OD2	2.53	0.47
3:P:9:LYS:HD2	3:P:9:LYS:N	2.29	0.47
3:Q:153:ILE:N	3:Q:153:ILE:HD12	2.24	0.47
3:Q:249:ILE:CG2	3:Q:250:ASN:N	2.72	0.47
3:R:206:LEU:HA	3:R:209:THR:CG2	2.42	0.47
3:R:20:GLU:N	3:R:20:GLU:CD	2.68	0.47
3:S:334:ALA:O	3:S:338:MET:HG2	2.15	0.47
3:T:151:SER:OG	3:T:198:SER:HA	2.15	0.47
3:U:246:ILE:HG13	3:U:247:LYS:N	2.29	0.47
3:T:266:GLU:OE2	3:U:358:ARG:HD2	2.15	0.47
3:A:174:GLU:HB2	3:A:180:LYS:HB2	1.96	0.47
3:C:222:SER:C	3:C:224:ILE:N	2.68	0.47
3:C:416:LEU:N	3:C:416:LEU:HD12	2.30	0.47
3:C:50:ASN:O	3:C:54:LYS:N	2.45	0.47
3:D:17:LEU:O	3:D:17:LEU:HD12	2.15	0.47
3:D:266:GLU:O	3:D:267:GLU:C	2.53	0.47
3:F:263:LYS:HE2	3:G:358:ARG:NH2	2.29	0.47
3:F:74:LEU:HD21	3:F:210:TYR:CE1	2.50	0.47
3:G:52:ALA:CB	3:G:126:MET:SD	3.03	0.47
3:L:6:ILE:HG22	3:M:254:ARG:HH21	1.80	0.47
3:M:81:PHE:HZ	3:M:84:THR:HA	1.80	0.47
3:N:258:LEU:HA	3:N:258:LEU:HD12	1.75	0.47
3:N:405:VAL:O	3:N:409:ILE:HG13	2.14	0.47
3:N:340:VAL:HA	3:N:416:LEU:HD11	1.97	0.47
3:Q:101:ASP:OD2	3:Q:101:ASP:N	2.48	0.47
3:Q:38:LYS:HD3	3:Q:205:PHE:HE1	1.80	0.47
3:Q:20:GLU:N	3:Q:20:GLU:CD	2.68	0.47
3:Q:324:SER:O	3:Q:325:LEU:C	2.51	0.47
3:R:101:ASP:OD2	3:R:101:ASP:N	2.48	0.47
3:S:67:PRO:HA	3:S:206:LEU:HD11	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:229:VAL:HG13	3:S:230:VAL:N	2.30	0.47
3:S:317:CYS:SG	3:S:325:LEU:HD12	2.55	0.47
3:S:76:ALA:O	3:S:77:ALA:HB2	2.15	0.47
3:T:79:GLN:HG3	3:T:80:PHE:N	2.30	0.47
3:U:101:ASP:N	3:U:101:ASP:OD2	2.47	0.47
3:U:285:TYR:O	3:U:289:PHE:N	2.48	0.47
3:V:56:VAL:CG1	3:V:123:THR:OG1	2.61	0.47
3:V:284:SER:O	3:V:287:ILE:HG12	2.15	0.47
3:A:196:ASN:O	3:A:197:TRP:HB2	2.14	0.46
3:A:315:VAL:O	3:A:319:MET:HE2	2.14	0.46
3:B:59:GLY:O	3:B:61:SER:N	2.49	0.46
3:C:189:THR:HG22	3:C:192:LYS:CB	2.26	0.46
3:D:53:TYR:CZ	3:D:65:LEU:HD22	2.50	0.46
3:F:79:GLN:OE1	3:F:220:LEU:HD13	2.15	0.46
3:G:54:LYS:O	3:G:56:VAL:N	2.48	0.46
3:K:54:LYS:O	3:K:56:VAL:N	2.48	0.46
3:K:81:PHE:HE2	3:K:84:THR:HA	1.79	0.46
3:L:135:PRO:O	3:L:139:SER:HB2	2.15	0.46
3:M:217:ILE:CG2	3:M:218:GLU:N	2.78	0.46
3:M:77:ALA:HB3	3:M:98:ARG:HH12	1.79	0.46
3:N:54:LYS:C	3:N:56:VAL:N	2.68	0.46
3:O:38:LYS:HD3	3:O:205:PHE:CE1	2.47	0.46
3:P:277:GLN:N	3:P:277:GLN:CD	2.68	0.46
3:Q:54:LYS:C	3:Q:56:VAL:N	2.68	0.46
3:Q:73:TYR:O	3:Q:74:LEU:C	2.52	0.46
3:R:315:VAL:HG12	3:R:319:MET:HE2	1.97	0.46
3:R:51:LYS:O	3:R:55:SER:HB2	2.14	0.46
3:S:50:ASN:N	3:S:50:ASN:HD22	2.12	0.46
3:T:7:VAL:CG1	3:T:8:PHE:H	2.25	0.46
3:T:85:CYS:O	3:T:91:SER:N	2.41	0.46
3:U:317:CYS:SG	3:U:325:LEU:HA	2.54	0.46
3:V:73:TYR:CD2	3:V:210:TYR:OH	2.68	0.46
3:V:87:GLU:HB3	3:V:285:TYR:CD1	2.50	0.46
3:A:340:VAL:HG22	3:A:416:LEU:HD11	1.96	0.46
3:A:57:LEU:H	3:A:57:LEU:CD1	2.28	0.46
3:B:340:VAL:CG2	3:B:416:LEU:HD11	2.43	0.46
3:E:145:LEU:HD11	3:E:210:TYR:CD1	2.50	0.46
3:E:59:GLY:O	3:E:61:SER:N	2.48	0.46
3:F:85:CYS:O	3:F:91:SER:CB	2.63	0.46
3:G:261:PHE:O	3:G:262:HIS:HB2	2.16	0.46
3:H:239:LEU:O	3:H:243:THR:HG22	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:410:MET:HE2	3:H:410:MET:HA	1.96	0.46
3:I:176:ALA:C	3:I:178:PHE:N	2.67	0.46
3:J:214:PHE:CG	3:J:222:SER:HA	2.50	0.46
3:L:333:CYS:O	3:L:334:ALA:C	2.53	0.46
3:N:10:VAL:O	3:N:11:ASN:HB2	2.16	0.46
3:O:250:ASN:OD1	3:O:250:ASN:N	2.39	0.46
3:P:185:HIS:HB2	3:P:189:THR:N	2.29	0.46
3:P:32:ALA:HB2	3:P:277:GLN:NE2	2.31	0.46
3:R:77:ALA:HB3	3:R:98:ARG:NH2	2.29	0.46
3:T:53:TYR:CZ	3:T:65:LEU:HD22	2.50	0.46
3:C:10:VAL:HG12	3:C:11:ASN:N	2.31	0.46
3:D:155:GLY:N	3:D:158:THR:HG21	2.30	0.46
3:E:52:ALA:O	3:E:56:VAL:HG23	2.16	0.46
3:E:77:ALA:O	3:E:98:ARG:NH1	2.47	0.46
3:F:54:LYS:HD2	3:F:144:LEU:HD11	1.96	0.46
3:J:21:ILE:HB	3:K:280:ALA:HB2	1.98	0.46
3:K:176:ALA:CB	3:K:177:PRO:CD	2.76	0.46
3:N:79:GLN:HG3	3:N:80:PHE:N	2.30	0.46
3:P:255:GLU:C	3:P:255:GLU:OE1	2.53	0.46
3:Q:287:ILE:HG13	3:Q:288:HIS:CD2	2.50	0.46
3:Q:336:HIS:CE1	3:Q:445:THR:HG21	2.50	0.46
3:S:189:THR:O	3:S:193:MET:HG2	2.15	0.46
3:T:218:GLU:O	3:T:220:LEU:N	2.49	0.46
3:T:240:VAL:HA	3:T:243:THR:CG2	2.43	0.46
3:T:31:PRO:HD2	3:T:277:GLN:HG3	1.95	0.46
3:U:253:ALA:C	3:U:255:GLU:H	2.17	0.46
3:B:149:ARG:O	3:B:153:ILE:HD12	2.16	0.46
3:B:249:ILE:HG23	3:B:319:MET:SD	2.56	0.46
3:C:266:GLU:OE2	3:D:358:ARG:HD2	2.15	0.46
3:C:285:TYR:O	3:C:286:PHE:C	2.52	0.46
3:D:184:HIS:HB3	3:D:185:HIS:H	1.40	0.46
3:D:315:VAL:O	3:D:319:MET:HE2	2.15	0.46
3:F:286:PHE:C	3:F:288:HIS:H	2.19	0.46
3:I:148:TYR:CE1	3:I:204:ARG:HG3	2.51	0.46
3:I:73:TYR:HD2	3:I:210:TYR:OH	1.97	0.46
3:I:69:ASP:O	3:I:71:CYS:N	2.49	0.46
3:I:81:PHE:CE2	3:I:84:THR:HA	2.50	0.46
3:J:368:GLU:O	3:J:372:ALA:HB3	2.16	0.46
3:L:35:ASP:HA	3:L:89:TRP:NE1	2.30	0.46
3:M:231:THR:O	3:M:288:HIS:ND1	2.48	0.46
3:M:289:PHE:CD1	3:M:290:ARG:N	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:357:ARG:HB2	3:M:369:TYR:CZ	2.50	0.46
3:M:57:LEU:HD23	3:M:57:LEU:O	2.15	0.46
3:N:172:ILE:HD11	3:N:226:VAL:HG21	1.89	0.46
3:N:416:LEU:CD1	3:N:416:LEU:N	2.79	0.46
3:N:326:ASN:HA	3:N:437:SER:HB2	1.96	0.46
3:O:6:ILE:CG1	3:O:7:VAL:H	2.28	0.46
3:Q:165:ILE:HA	3:Q:168:ARG:HD3	1.97	0.46
3:T:6:ILE:HG12	3:U:254:ARG:HH21	1.81	0.46
3:U:221:TYR:O	3:U:223:ALA:N	2.49	0.46
3:U:73:TYR:O	3:U:74:LEU:C	2.54	0.46
3:A:251:LEU:HD21	3:K:264:ASN:HD21	1.81	0.46
3:A:415:ARG:NH2	3:B:352:LYS:HD2	2.31	0.46
3:B:318:TYR:CE2	3:B:347:GLU:N	2.84	0.46
3:B:327:ALA:O	3:B:437:SER:HA	2.16	0.46
3:C:140:LEU:O	3:C:141:VAL:C	2.54	0.46
3:D:286:PHE:C	3:D:288:HIS:H	2.18	0.46
3:D:334:ALA:O	3:D:338:MET:HG2	2.14	0.46
3:D:56:VAL:HG11	3:D:123:THR:OG1	2.16	0.46
3:E:156:GLN:O	3:E:158:THR:N	2.49	0.46
3:E:250:ASN:HB3	3:E:349:PHE:CD2	2.50	0.46
3:E:66:ASP:OD1	3:E:66:ASP:N	2.47	0.46
3:F:77:ALA:HB3	3:F:98:ARG:HH12	1.80	0.46
3:G:184:HIS:O	3:G:189:THR:N	2.48	0.46
3:G:211:ASP:OD2	3:G:288:HIS:HE1	1.99	0.46
3:G:65:LEU:HB3	3:G:120:TRP:CZ3	2.50	0.46
3:H:222:SER:C	3:H:224:ILE:N	2.69	0.46
3:H:60:MET:O	3:H:61:SER:HB3	2.15	0.46
3:H:64:LYS:C	3:H:67:PRO:HD2	2.36	0.46
3:I:179:VAL:O	3:I:181:ILE:HG23	2.15	0.46
3:I:101:ASP:OD1	3:I:205:PHE:CE2	2.69	0.46
3:I:248:GLN:O	3:I:250:ASN:O	2.33	0.46
1:W:64:C:O2'	3:J:161:TYR:HB2	2.15	0.46
3:J:153:ILE:HG12	3:J:165:ILE:HD11	1.98	0.46
3:J:287:ILE:HG13	3:J:288:HIS:CD2	2.51	0.46
3:A:254:ARG:O	3:K:8:PHE:CE1	2.68	0.46
3:M:230:VAL:C	3:M:232:ALA:H	2.19	0.46
3:M:255:GLU:O	3:M:255:GLU:OE1	2.34	0.46
3:N:172:ILE:HG13	3:N:173:PHE:N	2.30	0.46
3:N:183:GLU:O	3:N:184:HIS:O	2.33	0.46
3:N:31:PRO:HD2	3:N:277:GLN:HE21	1.80	0.46
3:P:65:LEU:HD21	3:P:119:ASN:HD22	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Q:311:LEU:HD11	3:Q:345:LEU:HD22	1.96	0.46
3:S:232:ALA:C	3:S:234:GLU:N	2.69	0.46
3:T:176:ALA:O	3:T:178:PHE:N	2.47	0.46
3:T:205:PHE:C	3:T:205:PHE:CD2	2.88	0.46
3:U:145:LEU:HD22	3:U:207:ALA:HA	1.96	0.46
3:U:54:LYS:O	3:U:56:VAL:N	2.48	0.46
2:X:72:C:H2'	2:X:74:C:O5'	2.15	0.46
3:A:240:VAL:HA	3:A:243:THR:HG22	1.98	0.46
3:A:281:VAL:HA	3:A:282:PRO:HD3	1.80	0.46
3:B:81:PHE:HB3	3:B:94:ILE:HA	1.96	0.46
3:G:257:ILE:HD13	3:G:269:ILE:HD12	1.96	0.46
3:G:431:HIS:O	3:G:433:ALA:N	2.49	0.46
3:H:277:GLN:H	3:H:277:GLN:CD	2.18	0.46
3:G:263:LYS:HE2	3:H:358:ARG:HH21	1.78	0.46
3:I:260:PHE:HB3	3:I:265:PHE:CD2	2.51	0.46
3:J:252:THR:HB	3:J:256:ALA:HB2	1.97	0.46
3:J:264:ASN:ND2	3:K:251:LEU:HD21	2.25	0.46
3:J:313:HIS:ND1	3:J:324:SER:CB	2.76	0.46
3:L:126:MET:HE1	3:L:128:LEU:O	2.15	0.46
3:L:8:PHE:CD2	3:M:258:LEU:HD11	2.51	0.46
3:M:240:VAL:HA	3:M:243:THR:CG2	2.45	0.46
3:M:318:TYR:CE1	3:M:423:ARG:HG2	2.50	0.46
3:N:62:ALA:HB3	3:N:197:TRP:HZ3	1.80	0.46
3:O:60:MET:SD	3:O:60:MET:N	2.89	0.46
3:Q:257:ILE:O	3:Q:260:PHE:HB2	2.16	0.46
3:Q:51:LYS:O	3:Q:55:SER:HB2	2.16	0.46
3:Q:74:LEU:HD23	3:Q:210:TYR:CZ	2.50	0.46
3:S:142:GLY:HA2	3:S:224:ILE:HG23	1.97	0.46
3:T:215:SER:HB2	3:T:225:ARG:HH12	1.81	0.46
3:T:249:ILE:HG23	3:T:319:MET:CE	2.46	0.46
3:T:403:GLU:HG3	3:U:357:ARG:NH1	2.30	0.46
3:U:172:ILE:H	3:U:172:ILE:HG12	1.50	0.46
3:U:259:TYR:HB3	3:U:345:LEU:HD11	1.97	0.46
3:U:81:PHE:CE1	3:U:85:CYS:HB2	2.50	0.46
3:B:299:PRO:HG2	3:B:300:TYR:CD1	2.51	0.46
3:E:223:ALA:O	3:E:226:VAL:HG23	2.15	0.46
3:E:69:ASP:C	3:E:71:CYS:N	2.67	0.46
3:G:174:GLU:O	3:G:174:GLU:HG3	2.15	0.46
3:H:176:ALA:O	3:H:178:PHE:N	2.48	0.46
3:H:289:PHE:CG	3:H:290:ARG:N	2.83	0.46
3:I:66:ASP:HB2	3:I:67:PRO:HD3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:87:GLU:C	3:I:89:TRP:H	2.19	0.46
3:I:89:TRP:HB3	3:I:90:THR:H	1.65	0.46
3:K:326:ASN:HB2	3:K:434:ARG:HD2	1.98	0.46
3:K:74:LEU:HD22	3:K:98:ARG:CB	2.38	0.46
3:O:151:SER:OG	3:O:198:SER:HA	2.15	0.46
3:P:49:LEU:HD22	3:P:52:ALA:HB2	1.97	0.46
3:Q:404:ALA:O	3:Q:405:VAL:C	2.54	0.46
3:R:189:THR:HB	3:R:193:MET:HG2	1.98	0.46
3:Q:8:PHE:CZ	3:R:254:ARG:O	2.68	0.46
3:S:311:LEU:HD11	3:S:345:LEU:HD22	1.98	0.46
3:T:53:TYR:HD2	3:T:54:LYS:N	2.11	0.46
3:U:333:CYS:O	3:U:334:ALA:C	2.53	0.46
3:V:10:VAL:HG12	3:V:11:ASN:H	1.81	0.46
1:W:67:C:C3'	1:W:68:C:H5''	2.45	0.46
3:B:85:CYS:HB3	3:B:91:SER:HB2	1.98	0.46
3:C:100:GLY:C	3:C:101:ASP:OD2	2.54	0.46
3:G:217:ILE:N	3:G:217:ILE:HD12	2.31	0.46
3:I:51:LYS:CA	3:I:54:LYS:HE2	2.32	0.46
3:K:190:THR:CG2	3:K:191:HIS:N	2.78	0.46
3:M:206:LEU:O	3:M:209:THR:HG23	2.15	0.46
3:M:326:ASN:HB2	3:M:434:ARG:HD2	1.97	0.46
3:O:318:TYR:CZ	3:O:423:ARG:HG2	2.51	0.46
3:O:321:GLN:O	3:O:325:LEU:HB2	2.16	0.46
3:P:245:PHE:HB2	3:P:312:ILE:HG23	1.97	0.46
3:Q:211:ASP:OD2	3:Q:288:HIS:HE1	1.99	0.46
3:Q:315:VAL:O	3:Q:319:MET:HE2	2.15	0.46
3:Q:51:LYS:HA	3:Q:54:LYS:HE2	1.96	0.46
3:R:77:ALA:HB3	3:R:98:ARG:CZ	2.46	0.46
3:S:163:THR:HG22	3:S:192:LYS:HZ1	1.77	0.46
3:S:84:THR:O	3:S:86:PRO:HD3	2.16	0.46
3:T:217:ILE:HG23	3:T:218:GLU:N	2.31	0.46
3:T:53:TYR:CE1	3:T:65:LEU:HD22	2.51	0.46
3:U:177:PRO:HB2	3:U:221:TYR:CE2	2.51	0.46
3:U:87:GLU:O	3:U:89:TRP:N	2.49	0.46
3:U:89:TRP:HB3	3:U:90:THR:H	1.60	0.46
3:V:248:GLN:HE21	3:V:248:GLN:HB3	1.53	0.46
1:W:38:A:H2'	1:W:39:A:O4'	2.15	0.46
3:D:73:TYR:O	3:D:74:LEU:C	2.54	0.46
3:F:10:VAL:O	3:F:11:ASN:CB	2.63	0.46
3:G:166:ALA:O	3:G:167:ASP:C	2.53	0.46
3:H:290:ARG:HD2	3:H:295:SER:HB2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:31:PRO:HD2	3:H:277:GLN:HG2	1.97	0.46
3:I:69:ASP:O	3:I:70:VAL:C	2.54	0.46
3:J:246:ILE:CG1	3:J:247:LYS:N	2.78	0.46
3:J:325:LEU:HA	3:J:325:LEU:HD12	1.55	0.46
3:K:135:PRO:O	3:K:139:SER:HB2	2.16	0.46
3:K:77:ALA:HB1	3:K:220:LEU:HD21	1.97	0.46
3:L:248:GLN:O	3:L:249:ILE:C	2.53	0.46
3:M:441:PHE:C	3:M:441:PHE:CD2	2.90	0.46
3:N:135:PRO:O	3:N:139:SER:HB2	2.16	0.46
3:N:289:PHE:CG	3:N:290:ARG:N	2.84	0.46
3:N:295:SER:OG	3:N:296:GLY:N	2.49	0.46
3:O:253:ALA:C	3:O:255:GLU:H	2.17	0.46
3:P:232:ALA:O	3:P:234:GLU:N	2.41	0.46
3:Q:262:HIS:CE1	3:R:251:LEU:HD23	2.42	0.46
3:R:48:ASP:C	3:R:50:ASN:H	2.20	0.46
3:S:248:GLN:O	3:S:249:ILE:C	2.52	0.46
3:S:50:ASN:N	3:S:50:ASN:ND2	2.64	0.46
3:T:257:ILE:O	3:T:257:ILE:HG22	2.16	0.46
3:U:53:TYR:CD1	3:U:121:ALA:N	2.81	0.46
2:X:21:C:H5'	2:X:21:C:H6	1.81	0.46
2:X:32:C:O2	2:X:32:C:O4'	2.32	0.46
3:C:62:ALA:HB3	3:C:197:TRP:HZ3	1.81	0.46
3:C:81:PHE:CG	3:C:82:GLU:N	2.84	0.46
3:E:88:ASP:OD1	3:E:278:GLU:HG3	2.16	0.46
3:F:20:GLU:O	3:F:22:ILE:HG12	2.15	0.46
3:J:52:ALA:CB	3:J:126:MET:SD	3.04	0.46
3:K:149:ARG:O	3:K:153:ILE:HD12	2.16	0.46
3:L:222:SER:C	3:L:224:ILE:N	2.70	0.46
3:L:30:TYR:HB3	3:L:31:PRO:CD	2.45	0.46
3:L:326:ASN:HA	3:L:437:SER:HB2	1.97	0.46
3:N:168:ARG:O	3:N:172:ILE:HG23	2.16	0.46
3:N:217:ILE:CG2	3:N:218:GLU:N	2.78	0.46
3:N:79:GLN:HB2	3:N:220:LEU:HD13	1.96	0.46
3:Q:318:TYR:CE1	3:Q:423:ARG:HG2	2.51	0.46
3:S:325:LEU:O	3:S:439:ALA:HB2	2.16	0.46
3:T:98:ARG:HG3	3:T:213:PHE:CG	2.51	0.46
3:V:223:ALA:O	3:V:226:VAL:HG23	2.15	0.46
3:V:446:TYR:O	3:V:447:SER:OG	2.33	0.46
3:A:79:GLN:HB2	3:A:220:LEU:HD13	1.98	0.45
3:C:84:THR:O	3:C:86:PRO:HD3	2.16	0.45
3:D:71:CYS:O	3:D:74:LEU:HG	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:175:THR:O	3:E:176:ALA:O	2.34	0.45
3:G:194:CYS:C	3:G:196:ASN:N	2.66	0.45
3:G:217:ILE:CG2	3:G:218:GLU:N	2.78	0.45
3:G:253:ALA:C	3:G:255:GLU:N	2.69	0.45
3:K:148:TYR:CE1	3:K:199:THR:HG23	2.50	0.45
3:K:250:ASN:HB3	3:K:349:PHE:CD2	2.51	0.45
3:K:7:VAL:CG1	3:K:8:PHE:H	2.28	0.45
3:M:10:VAL:CG1	3:N:266:GLU:HG2	2.46	0.45
3:M:10:VAL:HG13	3:N:266:GLU:HG2	1.98	0.45
3:O:87:GLU:HG2	3:O:284:SER:CA	2.33	0.45
3:P:182:VAL:HB	3:P:190:THR:CG2	2.41	0.45
3:P:367:GLN:HA	3:P:367:GLN:OE1	2.16	0.45
3:Q:31:PRO:HD2	3:Q:277:GLN:NE2	2.30	0.45
3:R:73:TYR:HD2	3:R:210:TYR:OH	2.00	0.45
3:R:146:SER:HA	3:R:227:GLY:HA3	1.98	0.45
3:S:52:ALA:CA	3:S:126:MET:SD	3.03	0.45
3:T:233:TYR:CZ	3:T:287:ILE:HG22	2.51	0.45
3:U:73:TYR:HD2	3:U:210:TYR:OH	1.99	0.45
3:V:324:SER:O	3:V:325:LEU:C	2.53	0.45
3:V:38:LYS:HD3	3:V:205:PHE:CE1	2.49	0.45
1:W:81:C:OP1	3:H:323:ARG:NH2	2.44	0.45
3:A:33:ILE:HB	3:A:88:ASP:HB2	1.97	0.45
3:B:135:PRO:O	3:B:139:SER:HB2	2.16	0.45
3:B:65:LEU:HB3	3:B:120:TRP:CZ3	2.50	0.45
3:C:34:LYS:O	3:C:35:ASP:HB2	2.16	0.45
3:D:287:ILE:HG13	3:D:288:HIS:HD2	1.80	0.45
3:E:176:ALA:C	3:E:178:PHE:H	2.20	0.45
3:E:22:ILE:HA	3:E:22:ILE:HD13	1.80	0.45
3:E:245:PHE:CG	3:E:312:ILE:HG23	2.51	0.45
3:E:31:PRO:HB3	3:E:289:PHE:CB	2.46	0.45
3:E:81:PHE:HB3	3:E:95:VAL:N	2.31	0.45
3:G:153:ILE:N	3:G:153:ILE:HD12	2.31	0.45
3:G:299:PRO:HG2	3:G:300:TYR:CE1	2.52	0.45
3:H:225:ARG:O	3:H:228:THR:N	2.49	0.45
3:H:417:LYS:N	3:H:420:HIS:HD2	2.12	0.45
3:H:77:ALA:O	3:H:98:ARG:NH1	2.49	0.45
3:I:277:GLN:CD	3:I:277:GLN:H	2.19	0.45
3:I:73:TYR:O	3:I:98:ARG:NH1	2.49	0.45
3:J:410:MET:HA	3:J:410:MET:CE	2.47	0.45
3:K:239:LEU:HA	3:K:272:MET:CE	2.46	0.45
3:K:259:TYR:O	3:K:261:PHE:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:87:GLU:O	3:L:88:ASP:C	2.53	0.45
3:M:139:SER:HA	3:M:178:PHE:HD2	1.80	0.45
3:M:242:PHE:O	3:M:246:ILE:HG23	2.16	0.45
3:N:360:PHE:N	3:N:360:PHE:CD1	2.85	0.45
3:N:87:GLU:O	3:N:88:ASP:C	2.54	0.45
3:P:97:ALA:C	3:P:99:LYS:H	2.14	0.45
3:Q:206:LEU:HA	3:Q:209:THR:HG23	1.97	0.45
3:R:183:GLU:O	3:R:190:THR:CG2	2.64	0.45
3:R:249:ILE:HG22	3:R:250:ASN:OD1	2.16	0.45
3:R:340:VAL:CG2	3:R:416:LEU:HD11	2.34	0.45
3:R:67:PRO:O	3:R:71:CYS:HB2	2.16	0.45
3:R:87:GLU:C	3:R:89:TRP:H	2.19	0.45
3:S:99:LYS:HA	3:S:99:LYS:HD3	1.71	0.45
3:T:69:ASP:C	3:T:71:CYS:N	2.66	0.45
3:U:103:ILE:N	3:U:103:ILE:HD12	2.31	0.45
3:U:252:THR:HG22	3:U:253:ALA:N	2.32	0.45
3:V:185:HIS:CB	3:V:189:THR:N	2.79	0.45
3:V:10:VAL:CG2	3:V:18:LYS:NZ	2.78	0.45
3:V:54:LYS:O	3:V:56:VAL:N	2.49	0.45
3:V:89:TRP:HB3	3:V:90:THR:H	1.48	0.45
3:A:173:PHE:CZ	3:A:224:ILE:HA	2.51	0.45
3:B:63:ALA:O	3:B:197:TRP:CH2	2.56	0.45
3:C:197:TRP:HD1	3:C:198:SER:N	2.11	0.45
3:E:15:VAL:HG12	3:E:16:SER:N	2.31	0.45
3:E:84:THR:C	3:E:86:PRO:HD3	2.37	0.45
3:G:32:ALA:HB2	3:G:277:GLN:NE2	2.31	0.45
3:G:54:LYS:C	3:G:56:VAL:H	2.19	0.45
3:G:66:ASP:O	3:G:70:VAL:N	2.42	0.45
3:G:74:LEU:HD23	3:G:210:TYR:CZ	2.52	0.45
3:G:99:LYS:HD3	3:G:99:LYS:HA	1.75	0.45
3:I:20:GLU:N	3:I:20:GLU:OE1	2.49	0.45
3:L:197:TRP:HD1	3:L:198:SER:N	2.11	0.45
3:L:64:LYS:C	3:L:67:PRO:HD2	2.36	0.45
3:L:73:TYR:CE2	3:L:210:TYR:HE2	2.35	0.45
3:P:249:ILE:HG22	3:P:250:ASN:N	2.31	0.45
3:P:326:ASN:HB2	3:P:434:ARG:HD2	1.98	0.45
3:Q:176:ALA:C	3:Q:178:PHE:H	2.19	0.45
3:R:150:LEU:HD11	3:R:169:ILE:HD11	1.97	0.45
3:R:47:PRO:HD2	3:R:50:ASN:ND2	2.30	0.45
3:S:190:THR:HG23	3:S:191:HIS:N	2.31	0.45
3:S:255:GLU:C	3:S:255:GLU:OE1	2.55	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:U:325:LEU:HA	3:U:325:LEU:HD12	1.68	0.45
3:U:7:VAL:HG12	3:U:8:PHE:N	2.31	0.45
3:V:217:ILE:HG23	3:V:218:GLU:N	2.31	0.45
3:L:282:PRO:CG	3:V:25:GLN:HG2	2.32	0.45
2:X:6:A:H2'	2:X:7:A:O4'	2.15	0.45
3:B:54:LYS:NZ	3:B:69:ASP:OD2	2.44	0.45
3:B:73:TYR:HD1	3:B:76:ALA:HB3	1.81	0.45
3:C:156:GLN:C	3:C:158:THR:H	2.18	0.45
3:C:163:THR:HG22	3:C:192:LYS:NZ	2.31	0.45
3:D:26:HIS:O	3:D:27:GLU:HB3	2.15	0.45
3:E:255:GLU:OE1	3:E:255:GLU:C	2.55	0.45
3:E:66:ASP:O	3:E:70:VAL:N	2.38	0.45
3:F:116:VAL:O	3:F:117:GLU:HB2	2.16	0.45
3:F:340:VAL:HG22	3:F:416:LEU:CD1	2.47	0.45
3:G:63:ALA:HB3	3:G:65:LEU:CD1	2.33	0.45
3:I:248:GLN:CD	3:I:249:ILE:HG13	2.37	0.45
3:L:83:GLY:O	3:L:84:THR:HB	2.17	0.45
3:N:260:PHE:CD1	3:N:260:PHE:N	2.84	0.45
3:O:340:VAL:CA	3:O:416:LEU:HD11	2.40	0.45
3:O:263:LYS:HE2	3:P:358:ARG:HH21	1.81	0.45
3:P:54:LYS:HD3	3:P:69:ASP:OD2	2.17	0.45
3:Q:175:THR:CG2	3:Q:176:ALA:H	2.29	0.45
3:Q:53:TYR:CE2	3:Q:65:LEU:HB2	2.50	0.45
3:U:11:ASN:OD1	3:U:11:ASN:C	2.55	0.45
3:B:178:PHE:CE1	3:B:223:ALA:HB3	2.49	0.45
3:D:189:THR:CG2	3:D:192:LYS:CG	2.95	0.45
3:D:240:VAL:HA	3:D:243:THR:CG2	2.47	0.45
3:D:326:ASN:HB2	3:D:434:ARG:HD2	1.97	0.45
3:D:93:GLY:O	3:D:94:ILE:HG23	2.16	0.45
3:E:336:HIS:O	3:E:339:SER:OG	2.27	0.45
3:E:89:TRP:HB3	3:E:90:THR:H	1.66	0.45
3:F:180:LYS:HZ1	3:F:184:HIS:HD2	1.63	0.45
3:F:56:VAL:HG11	3:F:123:THR:OG1	2.17	0.45
3:G:52:ALA:CA	3:G:126:MET:SD	3.04	0.45
3:G:286:PHE:O	3:G:288:HIS:N	2.49	0.45
3:H:403:GLU:HG3	3:I:357:ARG:HH12	1.80	0.45
3:I:38:LYS:CA	3:I:38:LYS:HE2	2.45	0.45
3:J:54:LYS:CE	3:J:140:LEU:HD23	2.42	0.45
3:J:77:ALA:O	3:J:98:ARG:NH2	2.49	0.45
3:K:10:VAL:HG12	3:K:11:ASN:H	1.81	0.45
3:K:134:VAL:HB	3:K:135:PRO:HD3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:284:SER:O	3:K:287:ILE:HG12	2.17	0.45
3:L:73:TYR:O	3:L:74:LEU:C	2.55	0.45
3:L:73:TYR:C	3:L:75:ALA:N	2.69	0.45
3:M:116:VAL:O	3:M:117:GLU:HG3	2.17	0.45
3:M:66:ASP:O	3:M:70:VAL:N	2.37	0.45
3:N:162:LYS:O	3:N:165:ILE:HG12	2.17	0.45
3:N:81:PHE:CZ	3:N:85:CYS:HB2	2.51	0.45
3:P:206:LEU:O	3:P:207:ALA:C	2.54	0.45
3:R:38:LYS:HE2	3:R:38:LYS:HA	1.99	0.45
3:S:52:ALA:HB1	3:S:126:MET:SD	2.56	0.45
3:S:361:ARG:N	3:S:365:GLU:OE1	2.48	0.45
3:U:32:ALA:HB2	3:U:277:GLN:HE22	1.82	0.45
3:U:35:ASP:O	3:U:36:LEU:HG	2.17	0.45
2:X:68:A:H2'	2:X:69:A:C8	2.51	0.45
3:A:64:LYS:C	3:A:67:PRO:HD2	2.37	0.45
3:C:132:PRO:HG2	3:C:137:HIS:HE1	1.81	0.45
3:C:81:PHE:HB3	3:C:94:ILE:HA	1.97	0.45
3:D:54:LYS:HD2	3:D:144:LEU:HD11	1.99	0.45
3:D:145:LEU:HD22	3:D:207:ALA:HA	1.98	0.45
1:W:22:C:P	3:D:168:ARG:HH22	2.39	0.45
3:E:18:LYS:HA	3:E:19:PRO:HD3	1.81	0.45
3:F:248:GLN:O	3:F:250:ASN:O	2.35	0.45
3:G:133:THR:OG1	3:G:135:PRO:HD2	2.17	0.45
3:H:232:ALA:C	3:H:234:GLU:N	2.70	0.45
3:H:56:VAL:HG11	3:H:123:THR:OG1	2.17	0.45
3:H:7:VAL:HG12	3:H:9:LYS:HE3	1.99	0.45
3:H:98:ARG:HA	3:H:213:PHE:CD1	2.51	0.45
3:I:250:ASN:HB3	3:I:349:PHE:CD2	2.51	0.45
3:J:134:VAL:HA	3:J:137:HIS:HB2	1.99	0.45
3:J:350:PHE:CE1	3:J:423:ARG:NH2	2.84	0.45
3:K:98:ARG:HA	3:K:213:PHE:CD1	2.51	0.45
3:K:253:ALA:O	3:K:254:ARG:HG2	2.17	0.45
3:K:260:PHE:N	3:K:260:PHE:CD1	2.85	0.45
3:L:79:GLN:HG2	3:L:218:GLU:HB3	1.97	0.45
3:L:99:LYS:HD3	3:L:99:LYS:HA	1.63	0.45
3:M:51:LYS:O	3:M:55:SER:HB2	2.17	0.45
3:M:73:TYR:CG	3:M:141:VAL:HG21	2.52	0.45
3:N:220:LEU:HB3	3:N:221:TYR:H	1.63	0.45
3:N:54:LYS:O	3:N:56:VAL:N	2.49	0.45
3:O:225:ARG:HA	3:O:228:THR:OG1	2.17	0.45
3:O:434:ARG:HB3	3:O:435:PRO:HD2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:O:87:GLU:OE2	3:O:284:SER:C	2.55	0.45
3:O:98:ARG:HA	3:O:213:PHE:CD1	2.50	0.45
3:Q:31:PRO:HB3	3:Q:289:PHE:HB2	1.98	0.45
3:Q:360:PHE:CD1	3:Q:360:PHE:N	2.84	0.45
3:Q:366:LEU:HD23	3:Q:370:GLU:OE1	2.16	0.45
3:R:211:ASP:HB3	3:R:288:HIS:CE1	2.52	0.45
3:R:50:ASN:N	3:R:50:ASN:ND2	2.59	0.45
3:S:20:GLU:O	3:S:21:ILE:C	2.55	0.45
3:S:51:LYS:HA	3:S:54:LYS:CE	2.46	0.45
3:T:156:GLN:C	3:T:158:THR:N	2.70	0.45
3:T:189:THR:HG22	3:T:192:LYS:CB	2.46	0.45
3:U:169:ILE:HG22	3:U:226:VAL:HG12	1.97	0.45
3:V:250:ASN:N	3:V:250:ASN:OD1	2.49	0.45
2:X:84:A:OP2	3:N:161:TYR:OH	2.20	0.45
3:B:140:LEU:O	3:B:141:VAL:C	2.55	0.45
3:B:340:VAL:CB	3:B:416:LEU:HD11	2.47	0.45
3:C:340:VAL:HG13	3:C:416:LEU:HD12	1.98	0.45
3:D:173:PHE:CZ	3:D:224:ILE:HA	2.51	0.45
3:E:156:GLN:C	3:E:158:THR:N	2.69	0.45
3:E:33:ILE:HB	3:E:88:ASP:HB3	1.98	0.45
3:F:197:TRP:HD1	3:F:198:SER:N	2.13	0.45
3:F:216:ARG:CD	3:F:216:ARG:C	2.85	0.45
3:H:134:VAL:C	3:H:136:GLU:H	2.20	0.45
3:H:240:VAL:HA	3:H:243:THR:HG22	1.99	0.45
3:L:176:ALA:CB	3:L:177:PRO:CD	2.88	0.45
3:M:311:LEU:O	3:M:312:ILE:C	2.54	0.45
3:N:249:ILE:HG22	3:N:250:ASN:OD1	2.17	0.45
3:N:334:ALA:O	3:N:338:MET:HG2	2.17	0.45
3:P:69:ASP:C	3:P:71:CYS:N	2.68	0.45
3:Q:222:SER:C	3:Q:224:ILE:N	2.70	0.45
3:Q:77:ALA:HB1	3:Q:220:LEU:CD2	2.47	0.45
3:S:260:PHE:CD1	3:S:260:PHE:N	2.85	0.45
3:T:80:PHE:HA	3:T:95:VAL:HA	1.99	0.45
3:A:258:LEU:HD13	3:K:8:PHE:HD2	1.76	0.45
3:B:38:LYS:HG3	3:B:292:LEU:HB3	1.97	0.45
3:B:324:SER:O	3:B:325:LEU:C	2.55	0.45
3:A:266:GLU:OE2	3:B:358:ARG:HD2	2.17	0.45
3:C:171:GLN:O	3:C:175:THR:HG22	2.16	0.45
3:C:219:HIS:HA	3:C:222:SER:HB3	1.99	0.45
3:C:36:LEU:HA	3:C:89:TRP:CH2	2.51	0.45
3:F:190:THR:CG2	3:F:191:HIS:N	2.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:34:LYS:O	3:G:35:ASP:HB2	2.17	0.45
3:I:39:PRO:HA	3:I:102:LYS:O	2.17	0.45
3:I:253:ALA:O	3:I:254:ARG:HG2	2.16	0.45
3:K:189:THR:HG23	3:K:192:LYS:HB3	1.92	0.45
3:N:20:GLU:CD	3:N:20:GLU:N	2.70	0.45
3:O:56:VAL:HG12	3:O:59:GLY:HA3	1.97	0.45
3:P:267:GLU:O	3:P:270:ARG:HB3	2.17	0.45
3:Q:175:THR:CG2	3:Q:176:ALA:N	2.80	0.45
3:Q:74:LEU:HD22	3:Q:98:ARG:CB	2.44	0.45
3:Q:81:PHE:CG	3:Q:82:GLU:N	2.84	0.45
3:R:194:CYS:O	3:R:196:ASN:N	2.49	0.45
3:R:295:SER:OG	3:R:296:GLY:N	2.50	0.45
3:R:81:PHE:HD1	3:R:96:ILE:HD11	1.82	0.45
3:T:222:SER:C	3:T:224:ILE:N	2.70	0.45
3:V:57:LEU:HD21	3:V:190:THR:O	2.16	0.45
3:V:73:TYR:C	3:V:75:ALA:N	2.67	0.45
2:X:13:C:H2'	2:X:14:A:O4'	2.17	0.45
2:X:19:C:O4'	2:X:19:C:O2	2.34	0.45
2:X:52:A:H2'	2:X:53:A:O4'	2.17	0.45
3:A:30:TYR:CB	3:A:277:GLN:NE2	2.79	0.45
3:B:65:LEU:HD21	3:B:119:ASN:C	2.37	0.45
3:C:253:ALA:C	3:C:255:GLU:N	2.70	0.45
3:C:69:ASP:C	3:C:71:CYS:N	2.70	0.45
1:W:22:C:OP1	3:D:168:ARG:NH2	2.50	0.45
3:D:74:LEU:HD12	3:D:99:LYS:HE3	1.99	0.45
3:E:69:ASP:C	3:E:71:CYS:H	2.20	0.45
3:F:53:TYR:CD1	3:F:121:ALA:O	2.67	0.45
3:F:278:GLU:O	3:F:280:ALA:N	2.50	0.45
3:F:66:ASP:HB2	3:F:67:PRO:CD	2.47	0.45
3:A:357:ARG:NH1	3:K:403:GLU:HG3	2.32	0.45
3:M:151:SER:OG	3:M:198:SER:HA	2.17	0.45
3:N:417:LYS:H	3:N:420:HIS:CD2	2.32	0.45
3:Q:53:TYR:HB2	3:Q:121:ALA:O	2.17	0.45
3:Q:73:TYR:O	3:Q:76:ALA:N	2.50	0.45
3:S:102:LYS:C	3:S:103:ILE:HD12	2.36	0.45
3:S:248:GLN:O	3:S:250:ASN:O	2.35	0.45
3:T:126:MET:HG2	3:T:127:GLU:N	2.31	0.45
3:T:132:PRO:HG2	3:T:137:HIS:HE1	1.81	0.45
3:T:144:LEU:HA	3:T:144:LEU:HD23	1.77	0.45
3:T:252:THR:HG22	3:T:253:ALA:N	2.32	0.45
3:T:260:PHE:HB3	3:T:265:PHE:CD2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:T:308:VAL:O	3:T:309:PHE:C	2.55	0.45
3:T:31:PRO:C	3:T:32:ALA:O	2.54	0.45
3:T:54:LYS:C	3:T:56:VAL:N	2.70	0.45
3:U:98:ARG:NH2	3:U:220:LEU:HD23	2.32	0.45
3:U:290:ARG:HD2	3:U:295:SER:HB2	1.98	0.45
1:W:43:A:H2'	1:W:44:C:O4'	2.17	0.45
1:W:63:C:C2	3:J:323:ARG:HG2	2.52	0.45
2:X:37:A:N6	3:S:157:ASN:HD22	2.15	0.45
3:B:77:ALA:CB	3:B:98:ARG:NH2	2.80	0.45
3:C:80:PHE:N	3:C:80:PHE:CD2	2.85	0.45
3:D:197:TRP:HD1	3:D:198:SER:O	1.99	0.45
3:D:239:LEU:HD12	3:D:239:LEU:O	2.16	0.45
3:D:33:ILE:HD12	3:D:88:ASP:HB2	1.97	0.45
3:E:189:THR:HB	3:E:193:MET:CG	2.39	0.45
3:E:246:ILE:CG1	3:E:247:LYS:N	2.70	0.45
3:G:311:LEU:O	3:G:315:VAL:HG23	2.17	0.45
3:H:206:LEU:O	3:H:207:ALA:C	2.54	0.45
3:I:54:LYS:NZ	3:I:69:ASP:CG	2.70	0.45
3:J:262:HIS:CE1	3:K:251:LEU:CD2	3.00	0.45
3:L:268:GLU:CB	3:L:305:VAL:HG23	2.43	0.45
3:M:249:ILE:CG2	3:M:250:ASN:N	2.74	0.45
3:O:176:ALA:O	3:O:178:PHE:N	2.50	0.45
3:O:38:LYS:HE2	3:O:39:PRO:HD2	1.97	0.45
3:P:150:LEU:HA	3:P:153:ILE:HD13	1.98	0.45
3:P:8:PHE:HD1	3:P:20:GLU:OE2	2.00	0.45
3:P:172:ILE:HD11	3:P:226:VAL:HG11	1.99	0.45
3:Q:156:GLN:C	3:Q:158:THR:N	2.69	0.45
3:Q:410:MET:CA	3:Q:410:MET:CE	2.87	0.45
3:Q:79:GLN:HG3	3:Q:80:PHE:N	2.32	0.45
3:R:74:LEU:HD22	3:R:98:ARG:HB3	1.98	0.45
3:T:278:GLU:HB3	3:T:281:VAL:HG21	1.98	0.45
3:R:9:LYS:NZ	3:T:363:GLU:H	2.14	0.45
3:T:81:PHE:HE2	3:T:84:THR:HA	1.82	0.45
3:U:225:ARG:O	3:U:228:THR:N	2.50	0.45
3:U:363:GLU:O	3:U:367:GLN:HG2	2.17	0.45
3:V:73:TYR:O	3:V:74:LEU:C	2.55	0.45
2:X:16:A:H2'	2:X:17:C:O4'	2.17	0.45
2:X:6:A:C8	2:X:7:A:O4'	2.70	0.45
3:A:173:PHE:CE2	3:A:224:ILE:HA	2.52	0.44
3:A:98:ARG:HG3	3:A:213:PHE:CG	2.52	0.44
3:B:299:PRO:HG2	3:B:300:TYR:CE1	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:177:PRO:HB2	3:C:221:TYR:CE2	2.52	0.44
3:C:8:PHE:CZ	3:D:255:GLU:CA	2.97	0.44
3:F:169:ILE:HA	3:F:172:ILE:HD11	1.99	0.44
3:F:249:ILE:CG2	3:F:250:ASN:OD1	2.56	0.44
3:H:406:TYR:CE2	3:H:410:MET:HG3	2.52	0.44
3:H:67:PRO:HA	3:H:206:LEU:CD1	2.46	0.44
3:I:73:TYR:O	3:I:74:LEU:C	2.54	0.44
3:J:206:LEU:CA	3:J:209:THR:HG22	2.44	0.44
3:J:311:LEU:O	3:J:315:VAL:HG23	2.17	0.44
3:K:17:LEU:O	3:K:17:LEU:HD12	2.17	0.44
3:L:30:TYR:HB3	3:L:277:GLN:HE21	1.79	0.44
3:L:327:ALA:O	3:L:437:SER:HA	2.17	0.44
3:M:189:THR:O	3:M:193:MET:CB	2.56	0.44
3:N:211:ASP:OD2	3:N:288:HIS:HE1	2.00	0.44
3:N:341:LEU:HG	3:N:345:LEU:HD22	1.98	0.44
3:O:249:ILE:HG21	3:O:319:MET:CE	2.44	0.44
3:O:60:MET:O	3:O:61:SER:HB3	2.17	0.44
3:P:326:ASN:HD22	3:P:431:HIS:HE1	1.65	0.44
3:Q:39:PRO:HA	3:Q:102:LYS:O	2.17	0.44
3:Q:236:CYS:C	3:Q:238:GLY:N	2.69	0.44
3:S:134:VAL:HB	3:S:135:PRO:HD3	1.99	0.44
3:S:84:THR:C	3:S:86:PRO:HD3	2.37	0.44
3:S:35:ASP:CA	3:S:89:TRP:HE1	2.27	0.44
3:T:42:THR:O	3:T:43:LEU:C	2.54	0.44
3:U:153:ILE:HD12	3:U:153:ILE:H	1.81	0.44
3:U:98:ARG:HA	3:U:213:PHE:CD1	2.52	0.44
3:V:12:ASN:HB3	3:V:13:GLN:NE2	2.32	0.44
3:V:81:PHE:CE2	3:V:84:THR:HA	2.52	0.44
3:L:255:GLU:HB2	3:V:8:PHE:HZ	1.78	0.44
3:A:119:ASN:O	3:A:119:ASN:ND2	2.50	0.44
3:B:175:THR:C	3:B:176:ALA:O	2.55	0.44
3:D:255:GLU:C	3:D:255:GLU:OE1	2.56	0.44
3:B:9:LYS:HZ3	3:D:363:GLU:H	1.64	0.44
3:D:403:GLU:HG3	3:E:357:ARG:HH12	1.82	0.44
3:E:206:LEU:O	3:E:207:ALA:C	2.55	0.44
3:F:144:LEU:O	3:F:147:LEU:HB2	2.18	0.44
3:F:441:PHE:C	3:F:441:PHE:CD2	2.91	0.44
3:F:59:GLY:O	3:F:61:SER:N	2.50	0.44
3:G:54:LYS:CE	3:G:140:LEU:CD2	2.92	0.44
3:G:232:ALA:C	3:G:234:GLU:N	2.70	0.44
3:H:236:CYS:O	3:H:237:SER:C	2.56	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:225:ARG:O	3:I:227:GLY:N	2.50	0.44
3:I:231:THR:O	3:I:232:ALA:O	2.36	0.44
3:I:8:PHE:CD2	3:J:257:ILE:HB	2.52	0.44
3:J:364:LYS:O	3:J:367:GLN:HB2	2.17	0.44
3:N:206:LEU:HA	3:N:209:THR:CG2	2.47	0.44
2:X:73:C:N3	3:O:157:ASN:HB2	2.33	0.44
3:O:176:ALA:C	3:O:178:PHE:N	2.69	0.44
3:O:223:ALA:O	3:O:226:VAL:CG2	2.66	0.44
3:O:99:LYS:HD3	3:O:99:LYS:HA	1.82	0.44
3:Q:233:TYR:CZ	3:Q:287:ILE:HG22	2.52	0.44
3:Q:253:ALA:C	3:Q:254:ARG:HG2	2.37	0.44
3:P:269:ILE:HG13	3:Q:359:PHE:CE2	2.51	0.44
3:R:217:ILE:HG22	3:R:218:GLU:N	2.33	0.44
3:R:214:PHE:CG	3:R:222:SER:HA	2.51	0.44
3:S:184:HIS:H	3:S:184:HIS:CD2	2.33	0.44
3:S:281:VAL:HA	3:S:282:PRO:HD3	1.79	0.44
3:T:153:ILE:CG1	3:T:161:TYR:HE2	2.30	0.44
3:T:249:ILE:CG2	3:T:250:ASN:N	2.71	0.44
3:U:185:HIS:CB	3:U:189:THR:N	2.77	0.44
3:V:12:ASN:HB3	3:V:13:GLN:CD	2.37	0.44
3:A:50:ASN:N	3:A:50:ASN:ND2	2.61	0.44
3:B:252:THR:HG22	3:B:253:ALA:H	1.81	0.44
3:B:434:ARG:HB3	3:B:435:PRO:HD2	1.98	0.44
3:C:410:MET:CA	3:C:410:MET:HE3	2.45	0.44
3:C:416:LEU:H	3:C:416:LEU:HD12	1.83	0.44
3:D:137:HIS:O	3:D:140:LEU:N	2.50	0.44
3:D:53:TYR:CD2	3:D:54:LYS:N	2.86	0.44
3:E:76:ALA:O	3:E:77:ALA:HB2	2.17	0.44
3:G:326:ASN:HA	3:G:437:SER:HB2	1.98	0.44
3:H:264:ASN:HD21	3:I:251:LEU:CD2	2.30	0.44
3:H:363:GLU:O	3:H:367:GLN:HG2	2.17	0.44
3:I:176:ALA:CB	3:I:177:PRO:CD	2.78	0.44
3:J:253:ALA:C	3:J:255:GLU:N	2.67	0.44
3:K:65:LEU:HD21	3:K:119:ASN:HB3	1.99	0.44
3:L:216:ARG:NH1	3:L:216:ARG:HG2	2.31	0.44
3:M:248:GLN:HG2	3:M:249:ILE:HG13	1.98	0.44
3:M:50:ASN:N	3:M:50:ASN:ND2	2.60	0.44
3:M:81:PHE:CG	3:M:82:GLU:N	2.85	0.44
3:N:299:PRO:HG2	3:N:300:TYR:CE1	2.52	0.44
3:N:344:TYR:CD2	3:N:409:ILE:HG12	2.53	0.44
3:N:67:PRO:O	3:N:71:CYS:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Q:11:ASN:C	3:Q:11:ASN:OD1	2.55	0.44
3:R:248:GLN:HG2	3:R:249:ILE:H	1.82	0.44
3:U:69:ASP:C	3:U:71:CYS:N	2.69	0.44
3:V:17:LEU:HD12	3:V:17:LEU:C	2.37	0.44
3:V:281:VAL:HA	3:V:282:PRO:HD3	1.81	0.44
1:W:61:A:H8	1:W:61:A:H5"	1.82	0.44
1:W:73:C:C5	3:I:157:ASN:HB2	2.51	0.44
3:B:50:ASN:C	3:B:52:ALA:N	2.70	0.44
3:D:310:ASN:O	3:D:314:PHE:HD1	2.00	0.44
3:E:225:ARG:O	3:E:228:THR:N	2.51	0.44
3:E:245:PHE:HB2	3:E:312:ILE:CG2	2.48	0.44
3:E:27:GLU:O	3:E:28:TYR:CG	2.71	0.44
3:F:248:GLN:HE21	3:F:248:GLN:HB3	1.50	0.44
3:F:410:MET:CA	3:F:410:MET:CE	2.94	0.44
3:G:319:MET:HB2	3:G:319:MET:HE3	1.82	0.44
3:I:134:VAL:HB	3:I:135:PRO:HD3	1.99	0.44
3:I:44:GLY:HA2	3:I:117:GLU:N	2.32	0.44
3:I:73:TYR:CD1	3:I:76:ALA:HB3	2.52	0.44
3:J:216:ARG:HG3	3:J:217:ILE:HD12	2.00	0.44
3:K:65:LEU:HD23	3:K:120:TRP:H	1.83	0.44
3:K:168:ARG:O	3:K:172:ILE:HG23	2.18	0.44
3:J:20:GLU:HB3	3:K:273:PHE:CE2	2.52	0.44
3:L:253:ALA:C	3:L:255:GLU:N	2.69	0.44
3:M:176:ALA:CB	3:M:177:PRO:CD	2.66	0.44
3:M:222:SER:C	3:M:224:ILE:H	2.21	0.44
3:M:73:TYR:CD2	3:M:141:VAL:HG21	2.52	0.44
3:N:363:GLU:O	3:N:367:GLN:HG2	2.17	0.44
3:N:46:ALA:HA	3:N:47:PRO:HD3	1.71	0.44
3:P:18:LYS:HA	3:P:19:PRO:HD3	1.84	0.44
3:Q:239:LEU:HA	3:Q:272:MET:CE	2.47	0.44
3:Q:247:LYS:HB2	3:Q:247:LYS:HE3	1.71	0.44
3:Q:286:PHE:HA	3:Q:289:PHE:HB3	1.99	0.44
3:Q:54:LYS:O	3:Q:56:VAL:N	2.50	0.44
3:R:225:ARG:HA	3:R:228:THR:OG1	2.18	0.44
3:R:37:LYS:HG3	3:R:89:TRP:CE3	2.52	0.44
3:S:169:ILE:HG22	3:S:226:VAL:HG11	2.00	0.44
3:S:54:LYS:HD3	3:S:69:ASP:CG	2.38	0.44
3:T:366:LEU:HD23	3:T:366:LEU:O	2.18	0.44
3:V:189:THR:CG2	3:V:192:LYS:CB	2.78	0.44
3:A:255:GLU:HA	3:K:8:PHE:HE2	1.62	0.44
3:B:15:VAL:CG1	3:B:16:SER:N	2.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:101:ASP:N	3:C:101:ASP:OD2	2.50	0.44
3:C:235:ASP:CB	3:C:290:ARG:HG2	2.47	0.44
3:D:253:ALA:C	3:D:255:GLU:N	2.71	0.44
3:H:97:ALA:O	3:H:99:LYS:N	2.46	0.44
3:J:178:PHE:CE1	3:J:223:ALA:HB3	2.51	0.44
3:K:156:GLN:C	3:K:158:THR:N	2.70	0.44
3:L:56:VAL:CG1	3:L:123:THR:OG1	2.65	0.44
3:L:189:THR:O	3:L:190:THR:C	2.56	0.44
3:L:289:PHE:C	3:L:289:PHE:CD1	2.91	0.44
3:L:336:HIS:O	3:L:340:VAL:HG23	2.18	0.44
3:M:134:VAL:O	3:M:137:HIS:HB2	2.17	0.44
3:M:57:LEU:CD2	3:M:57:LEU:C	2.85	0.44
3:N:249:ILE:HG21	3:N:319:MET:HE1	1.99	0.44
3:N:33:ILE:HD12	3:N:88:ASP:HB2	1.99	0.44
3:N:37:LYS:HG3	3:N:89:TRP:CE3	2.52	0.44
3:O:421:ILE:O	3:O:422:ARG:C	2.56	0.44
3:P:74:LEU:HD21	3:P:210:TYR:CE1	2.52	0.44
3:P:74:LEU:HA	3:P:98:ARG:HD3	2.00	0.44
3:T:246:ILE:CG1	3:T:247:LYS:N	2.80	0.44
3:T:278:GLU:HB3	3:T:281:VAL:HB	1.99	0.44
3:U:100:GLY:C	3:U:101:ASP:OD2	2.56	0.44
3:U:148:TYR:CE1	3:U:199:THR:HG23	2.53	0.44
3:U:225:ARG:O	3:U:226:VAL:C	2.56	0.44
3:U:286:PHE:HA	3:U:289:PHE:HB3	1.98	0.44
3:U:416:LEU:CD1	3:U:416:LEU:H	2.29	0.44
3:U:52:ALA:O	3:U:53:TYR:C	2.56	0.44
3:U:98:ARG:HG3	3:U:213:PHE:CG	2.52	0.44
3:V:287:ILE:HG13	3:V:288:HIS:CD2	2.53	0.44
1:W:12:A:O2'	1:W:13:C:H5'	2.18	0.44
2:X:72:C:H4'	2:X:73:C:OP1	2.18	0.44
3:A:357:ARG:HB2	3:A:369:TYR:CE2	2.53	0.44
3:C:98:ARG:HG3	3:C:213:PHE:CD1	2.52	0.44
3:F:180:LYS:NZ	3:F:184:HIS:HD2	2.15	0.44
3:H:189:THR:HG22	3:H:192:LYS:CB	2.45	0.44
3:J:74:LEU:O	3:J:97:ALA:HB1	2.18	0.44
3:L:134:VAL:HB	3:L:135:PRO:HD3	2.00	0.44
3:L:315:VAL:O	3:L:319:MET:HE2	2.18	0.44
3:N:303:ASN:N	3:N:303:ASN:OD1	2.50	0.44
3:N:62:ALA:HB3	3:N:197:TRP:CZ3	2.52	0.44
3:O:50:ASN:H	3:O:50:ASN:HD22	1.66	0.44
3:O:6:ILE:HG13	3:O:7:VAL:N	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:R:344:TYR:CD2	3:R:409:ILE:HG12	2.52	0.44
3:S:168:ARG:O	3:S:172:ILE:HG23	2.17	0.44
3:S:173:PHE:HE2	3:S:224:ILE:HG12	1.82	0.44
3:U:35:ASP:HA	3:U:89:TRP:NE1	2.33	0.44
3:V:205:PHE:C	3:V:205:PHE:CD2	2.91	0.44
3:V:421:ILE:O	3:V:422:ARG:C	2.55	0.44
3:V:66:ASP:O	3:V:67:PRO:C	2.55	0.44
3:A:340:VAL:CA	3:A:416:LEU:HD11	2.41	0.44
3:B:205:PHE:O	3:B:209:THR:HG22	2.18	0.44
3:B:289:PHE:CG	3:B:290:ARG:N	2.86	0.44
3:C:206:LEU:HA	3:C:209:THR:CG2	2.48	0.44
3:C:248:GLN:HG2	3:C:249:ILE:HG13	1.99	0.44
3:C:47:PRO:HB2	3:C:48:ASP:H	1.46	0.44
3:E:284:SER:OG	3:E:286:PHE:HB3	2.18	0.44
3:G:163:THR:HG22	3:G:192:LYS:HZ2	1.82	0.44
1:W:85:C:P	3:H:168:ARG:HH22	2.40	0.44
3:H:66:ASP:N	3:H:66:ASP:OD1	2.50	0.44
3:I:311:LEU:O	3:I:315:VAL:HG23	2.17	0.44
3:M:322:VAL:O	3:M:323:ARG:C	2.56	0.44
3:M:80:PHE:HA	3:M:95:VAL:HG22	1.99	0.44
3:P:218:GLU:HG2	3:P:219:HIS:N	2.33	0.44
3:Q:232:ALA:C	3:Q:234:GLU:N	2.64	0.44
3:R:27:GLU:O	3:R:28:TYR:CD1	2.70	0.44
3:R:71:CYS:O	3:R:74:LEU:HG	2.17	0.44
3:U:183:GLU:N	3:U:190:THR:HG21	2.32	0.44
3:U:249:ILE:CG2	3:U:250:ASN:N	2.80	0.44
3:U:8:PHE:HE1	3:V:254:ARG:HG3	1.82	0.44
3:V:240:VAL:HA	3:V:243:THR:HG22	1.99	0.44
3:V:27:GLU:OE1	3:V:27:GLU:O	2.36	0.44
1:W:1:C:H5'	1:W:99:C:O3'	2.17	0.44
1:W:66:A:O2'	1:W:67:C:H5''	2.17	0.44
3:B:341:LEU:HD12	3:B:341:LEU:O	2.18	0.44
3:B:52:ALA:O	3:B:53:TYR:C	2.55	0.44
3:C:253:ALA:C	3:C:255:GLU:H	2.19	0.44
3:C:59:GLY:O	3:C:61:SER:N	2.51	0.44
3:D:32:ALA:HB2	3:D:277:GLN:NE2	2.33	0.44
3:F:235:ASP:CB	3:F:290:ARG:HG2	2.47	0.44
3:F:69:ASP:C	3:F:71:CYS:N	2.71	0.44
3:G:217:ILE:HG22	3:G:218:GLU:N	2.32	0.44
3:H:176:ALA:CB	3:H:177:PRO:CD	2.71	0.44
3:H:262:HIS:ND1	3:H:263:LYS:N	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:81:PHE:CG	3:H:82:GLU:N	2.86	0.44
3:I:20:GLU:O	3:I:22:ILE:N	2.51	0.44
3:J:22:ILE:HD13	3:J:22:ILE:HA	1.70	0.44
3:J:260:PHE:N	3:J:260:PHE:CD1	2.86	0.44
3:J:326:ASN:HA	3:J:437:SER:HB2	2.00	0.44
3:A:254:ARG:HD2	3:K:20:GLU:HB2	1.99	0.44
3:K:255:GLU:O	3:K:258:LEU:HB2	2.18	0.44
3:K:308:VAL:O	3:K:309:PHE:C	2.56	0.44
3:L:5:LYS:HD3	3:L:5:LYS:O	2.18	0.44
3:N:416:LEU:H	3:N:416:LEU:CD1	2.31	0.44
3:P:169:ILE:HA	3:P:172:ILE:HD11	1.99	0.44
3:R:313:HIS:O	3:R:314:PHE:C	2.56	0.44
3:T:32:ALA:HB2	3:T:277:GLN:HE22	1.81	0.44
3:T:77:ALA:N	3:T:98:ARG:HH12	2.16	0.44
3:U:32:ALA:H	3:U:277:GLN:NE2	2.11	0.44
3:V:54:LYS:HD2	3:V:144:LEU:HD11	2.00	0.44
3:V:8:PHE:N	3:V:8:PHE:CD1	2.85	0.44
3:A:171:GLN:O	3:A:174:GLU:HG3	2.18	0.44
3:A:206:LEU:CA	3:A:209:THR:HG22	2.42	0.44
3:C:132:PRO:HG2	3:C:137:HIS:CE1	2.53	0.44
3:C:73:TYR:CE1	3:C:77:ALA:HB3	2.53	0.44
3:D:417:LYS:N	3:D:420:HIS:HD2	2.06	0.44
3:E:347:GLU:HB2	3:E:420:HIS:CE1	2.52	0.44
3:E:66:ASP:O	3:E:69:ASP:N	2.51	0.44
3:F:128:LEU:CD1	3:F:130:ARG:HE	2.23	0.44
3:F:219:HIS:CD2	3:F:222:SER:OG	2.71	0.44
3:F:246:ILE:HG13	3:F:247:LYS:N	2.32	0.44
3:F:51:LYS:O	3:F:55:SER:CB	2.64	0.44
3:F:67:PRO:O	3:F:71:CYS:HB2	2.18	0.44
3:G:278:GLU:HB2	3:G:284:SER:HB2	2.00	0.44
3:J:173:PHE:CZ	3:J:224:ILE:HA	2.53	0.44
3:L:222:SER:C	3:L:224:ILE:H	2.20	0.44
3:L:31:PRO:HB3	3:L:289:PHE:HB2	2.00	0.44
3:L:73:TYR:CD2	3:L:141:VAL:HG11	2.53	0.44
3:M:134:VAL:HB	3:M:135:PRO:CD	2.46	0.44
3:P:54:LYS:C	3:P:56:VAL:H	2.21	0.44
3:Q:97:ALA:O	3:Q:99:LYS:N	2.44	0.44
3:Q:8:PHE:CD2	3:R:258:LEU:HD13	2.53	0.44
3:S:197:TRP:CD1	3:S:198:SER:O	2.71	0.44
3:S:260:PHE:HD1	3:S:260:PHE:N	2.16	0.44
3:S:340:VAL:HG13	3:S:416:LEU:CD1	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:64:LYS:C	3:S:67:PRO:HD2	2.38	0.44
3:T:335:PRO:O	3:T:336:HIS:C	2.54	0.44
3:U:222:SER:C	3:U:224:ILE:N	2.67	0.44
3:U:65:LEU:N	3:U:65:LEU:HD12	2.32	0.44
3:V:333:CYS:O	3:V:334:ALA:C	2.55	0.44
3:V:76:ALA:O	3:V:77:ALA:HB2	2.18	0.44
3:A:248:GLN:HB3	3:A:248:GLN:HE21	1.50	0.43
3:B:190:THR:HG23	3:B:191:HIS:N	2.33	0.43
3:C:152:LYS:O	3:C:154:SER:N	2.51	0.43
3:C:38:LYS:HA	3:C:38:LYS:HE2	2.00	0.43
3:D:325:LEU:HD12	3:D:325:LEU:HA	1.72	0.43
3:D:95:VAL:O	3:D:96:ILE:HG23	2.18	0.43
3:F:334:ALA:O	3:F:338:MET:HG2	2.18	0.43
3:G:290:ARG:NH2	3:G:296:GLY:O	2.51	0.43
3:G:75:ALA:O	3:G:77:ALA:N	2.51	0.43
3:H:225:ARG:O	3:H:226:VAL:C	2.55	0.43
3:I:35:ASP:O	3:I:36:LEU:HG	2.18	0.43
3:J:221:TYR:O	3:J:223:ALA:N	2.51	0.43
3:L:178:PHE:HE1	3:L:223:ALA:HB3	1.82	0.43
3:L:254:ARG:O	3:V:8:PHE:CZ	2.71	0.43
3:M:206:LEU:HA	3:M:209:THR:HG22	1.97	0.43
3:N:54:LYS:HG3	3:N:140:LEU:HD21	2.00	0.43
2:X:81:C:C6	3:N:323:ARG:HG2	2.52	0.43
3:N:73:TYR:CE2	3:N:210:TYR:HE2	2.36	0.43
3:O:214:PHE:HB3	3:O:222:SER:HB2	2.00	0.43
3:O:257:ILE:O	3:O:260:PHE:HB2	2.17	0.43
3:P:169:ILE:HA	3:P:172:ILE:CD1	2.49	0.43
3:P:176:ALA:C	3:P:178:PHE:N	2.71	0.43
3:P:189:THR:HB	3:P:193:MET:HG2	1.99	0.43
3:P:225:ARG:O	3:P:228:THR:N	2.51	0.43
3:P:48:ASP:C	3:P:48:ASP:OD1	2.56	0.43
3:Q:197:TRP:HD1	3:Q:198:SER:N	2.16	0.43
3:Q:325:LEU:HD12	3:Q:325:LEU:HA	1.69	0.43
3:S:156:GLN:O	3:S:158:THR:N	2.51	0.43
3:S:189:THR:O	3:S:193:MET:N	2.51	0.43
3:T:9:LYS:NZ	3:T:17:LEU:HD23	2.33	0.43
3:T:262:HIS:CE1	3:T:264:ASN:ND2	2.86	0.43
3:T:6:ILE:HD12	3:T:7:VAL:HG23	2.00	0.43
3:T:69:ASP:O	3:T:70:VAL:C	2.56	0.43
3:V:74:LEU:HD23	3:V:210:TYR:CZ	2.53	0.43
2:X:21:C:C5'	2:X:21:C:H6	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:73:TYR:HD2	3:A:210:TYR:OH	2.01	0.43
3:A:308:VAL:HG12	3:A:312:ILE:HD12	2.00	0.43
3:B:197:TRP:CD1	3:B:198:SER:N	2.86	0.43
3:B:223:ALA:O	3:B:226:VAL:HG23	2.18	0.43
3:C:35:ASP:OD2	3:C:89:TRP:NE1	2.36	0.43
3:E:264:ASN:HD21	3:F:251:LEU:HD13	1.83	0.43
3:H:151:SER:OG	3:H:198:SER:HA	2.17	0.43
3:H:326:ASN:HA	3:H:437:SER:HB2	2.00	0.43
3:H:54:LYS:C	3:H:56:VAL:N	2.71	0.43
3:I:183:GLU:O	3:I:184:HIS:C	2.57	0.43
3:I:196:ASN:O	3:I:197:TRP:HB2	2.18	0.43
3:L:67:PRO:HA	3:L:206:LEU:CD1	2.48	0.43
3:L:236:CYS:O	3:L:238:GLY:N	2.50	0.43
3:L:249:ILE:HG22	3:L:250:ASN:OD1	2.17	0.43
3:M:140:LEU:HB2	3:M:181:ILE:CD1	2.48	0.43
3:M:410:MET:HE3	3:M:410:MET:HA	2.00	0.43
3:N:197:TRP:HD1	3:N:198:SER:H	1.53	0.43
3:O:281:VAL:HB	3:O:284:SER:HB3	1.99	0.43
3:Q:432:GLN:HA	3:Q:432:GLN:HE21	1.83	0.43
3:Q:80:PHE:CD2	3:Q:80:PHE:N	2.83	0.43
3:R:11:ASN:C	3:R:11:ASN:OD1	2.57	0.43
3:S:87:GLU:OE2	3:S:285:TYR:N	2.51	0.43
3:T:281:VAL:HA	3:T:282:PRO:HD3	1.88	0.43
3:U:434:ARG:HB3	3:U:435:PRO:HD2	1.99	0.43
3:V:145:LEU:C	3:V:147:LEU:H	2.21	0.43
3:V:340:VAL:HG22	3:V:416:LEU:HD11	2.00	0.43
3:A:252:THR:HG22	3:A:253:ALA:H	1.83	0.43
3:C:73:TYR:CE2	3:C:210:TYR:HE2	2.35	0.43
3:D:31:PRO:HG3	3:D:289:PHE:CD1	2.53	0.43
3:F:54:LYS:HD3	3:F:69:ASP:OD2	2.18	0.43
3:G:151:SER:OG	3:G:198:SER:HA	2.18	0.43
3:G:340:VAL:HG22	3:G:416:LEU:CD1	2.48	0.43
3:H:286:PHE:HA	3:H:289:PHE:HB3	2.00	0.43
3:H:77:ALA:CB	3:H:98:ARG:HH12	2.20	0.43
3:I:217:ILE:CG2	3:I:218:GLU:N	2.82	0.43
3:I:271:ARG:NH1	3:I:304:ALA:O	2.52	0.43
3:J:247:LYS:HE3	3:J:247:LYS:HB2	1.79	0.43
3:J:38:LYS:HE2	3:J:39:PRO:HD2	1.97	0.43
3:J:98:ARG:HA	3:J:213:PHE:CD1	2.54	0.43
3:K:248:GLN:HE21	3:K:248:GLN:HB3	1.48	0.43
3:K:323:ARG:C	3:K:323:ARG:CD	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:446:TYR:O	3:L:447:SER:CB	2.65	0.43
3:M:134:VAL:O	3:M:137:HIS:N	2.51	0.43
3:M:410:MET:HE2	3:M:410:MET:HA	2.00	0.43
3:N:87:GLU:OE2	3:N:285:TYR:N	2.52	0.43
3:O:53:TYR:CD1	3:O:121:ALA:O	2.66	0.43
3:O:169:ILE:CD1	3:O:191:HIS:HE1	2.31	0.43
3:O:200:ILE:HA	3:O:201:PRO:HD2	1.77	0.43
3:O:98:ARG:HG3	3:O:213:PHE:CG	2.54	0.43
3:P:322:VAL:O	3:P:323:ARG:C	2.56	0.43
3:Q:7:VAL:HG12	3:Q:8:PHE:N	2.33	0.43
3:R:31:PRO:HG3	3:R:289:PHE:CD1	2.53	0.43
3:S:26:HIS:O	3:S:27:GLU:HB3	2.17	0.43
3:S:56:VAL:HG11	3:S:123:THR:OG1	2.19	0.43
3:S:6:ILE:HD13	3:S:8:PHE:CE2	2.53	0.43
3:U:181:ILE:O	3:U:182:VAL:HG13	2.18	0.43
3:U:79:GLN:HB3	3:U:217:ILE:HG23	2.00	0.43
3:U:269:ILE:HG23	3:U:269:ILE:HD12	1.64	0.43
3:U:318:TYR:CZ	3:U:423:ARG:HG2	2.53	0.43
3:V:248:GLN:O	3:V:249:ILE:C	2.54	0.43
3:V:332:ALA:O	3:V:334:ALA:N	2.50	0.43
3:A:7:VAL:HG11	3:A:9:LYS:HE2	2.00	0.43
3:B:183:GLU:O	3:B:184:HIS:O	2.36	0.43
3:B:232:ALA:C	3:B:234:GLU:N	2.72	0.43
3:D:9:LYS:HE2	3:D:17:LEU:HB3	2.01	0.43
3:D:253:ALA:O	3:D:254:ARG:CG	2.65	0.43
3:F:289:PHE:CG	3:F:290:ARG:N	2.86	0.43
3:G:315:VAL:O	3:G:319:MET:HE2	2.18	0.43
3:H:54:LYS:CE	3:H:140:LEU:HD23	2.34	0.43
3:I:169:ILE:HG22	3:I:226:VAL:HG12	1.98	0.43
3:J:266:GLU:OE2	3:K:358:ARG:HD2	2.17	0.43
3:K:133:THR:OG1	3:K:135:PRO:HD2	2.18	0.43
3:K:366:LEU:C	3:K:366:LEU:HD23	2.39	0.43
3:L:136:GLU:O	3:L:139:SER:N	2.51	0.43
3:L:181:ILE:O	3:L:182:VAL:HG13	2.18	0.43
3:L:268:GLU:HB3	3:L:305:VAL:CG2	2.41	0.43
3:L:74:LEU:HD22	3:L:98:ARG:CB	2.47	0.43
3:N:229:VAL:HG13	3:N:230:VAL:N	2.31	0.43
3:O:47:PRO:HD2	3:O:50:ASN:HD21	1.84	0.43
3:O:77:ALA:HB3	3:O:98:ARG:NH2	2.33	0.43
3:O:269:ILE:HG13	3:P:359:PHE:CZ	2.54	0.43
3:P:73:TYR:O	3:P:74:LEU:C	2.56	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Q:435:PRO:O	3:Q:440:GLU:CD	2.57	0.43
3:R:169:ILE:O	3:R:173:PHE:HD1	2.01	0.43
3:S:311:LEU:O	3:S:315:VAL:HG23	2.19	0.43
3:U:223:ALA:O	3:U:226:VAL:HG23	2.18	0.43
3:U:79:GLN:OE1	3:U:220:LEU:HD13	2.19	0.43
3:V:166:ALA:O	3:V:170:GLU:HB2	2.18	0.43
3:V:235:ASP:HB2	3:V:290:ARG:HG2	1.99	0.43
2:X:90:C:C6	3:M:323:ARG:HG2	2.53	0.43
2:X:93:A:N3	2:X:93:A:O4'	2.51	0.43
3:A:260:PHE:N	3:A:260:PHE:CD1	2.87	0.43
3:A:50:ASN:H	3:A:50:ASN:HD22	1.63	0.43
3:B:240:VAL:O	3:B:241:SER:C	2.57	0.43
3:C:225:ARG:O	3:C:226:VAL:C	2.56	0.43
3:C:20:GLU:HB2	3:D:254:ARG:HD2	1.99	0.43
3:E:235:ASP:HB2	3:E:290:ARG:HG2	2.00	0.43
3:E:322:VAL:O	3:E:325:LEU:N	2.52	0.43
3:E:412:ASN:ND2	3:E:417:LYS:HG2	2.33	0.43
3:F:20:GLU:N	3:F:20:GLU:CD	2.71	0.43
3:H:197:TRP:CD1	3:H:198:SER:O	2.72	0.43
3:I:53:TYR:HD1	3:I:121:ALA:N	2.15	0.43
3:L:12:ASN:HB3	3:L:13:GLN:NE2	2.34	0.43
3:L:38:LYS:HD2	3:L:292:LEU:C	2.38	0.43
3:O:56:VAL:HG13	3:O:125:GLY:HA3	2.01	0.43
3:O:74:LEU:CD2	3:O:98:ARG:CB	2.96	0.43
3:P:141:VAL:HG12	3:P:145:LEU:CD1	2.49	0.43
2:X:55:C:N3	3:Q:157:ASN:HB2	2.34	0.43
3:Q:274:GLU:OE1	3:Q:274:GLU:HA	2.18	0.43
3:S:139:SER:HA	3:S:178:PHE:CD2	2.53	0.43
3:U:31:PRO:HB3	3:U:289:PHE:HB2	2.00	0.43
3:V:189:THR:CG2	3:V:192:LYS:CG	2.97	0.43
3:V:73:TYR:HD2	3:V:210:TYR:OH	2.01	0.43
3:V:230:VAL:C	3:V:232:ALA:H	2.22	0.43
3:V:30:TYR:C	3:V:32:ALA:N	2.72	0.43
3:B:153:ILE:HG12	3:B:161:TYR:HE2	1.83	0.43
3:B:174:GLU:HG3	3:B:174:GLU:O	2.18	0.43
3:C:77:ALA:O	3:C:98:ARG:NH2	2.49	0.43
3:D:289:PHE:CD1	3:D:290:ARG:N	2.86	0.43
3:D:74:LEU:HD22	3:D:98:ARG:HB3	1.97	0.43
3:E:268:GLU:HB3	3:E:305:VAL:HG23	2.01	0.43
3:E:63:ALA:HB3	3:E:65:LEU:HD13	2.01	0.43
3:F:357:ARG:HB2	3:F:369:TYR:CE2	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:74:LEU:CD2	3:F:98:ARG:HB2	2.42	0.43
3:G:128:LEU:HD11	3:G:130:ARG:HE	1.82	0.43
3:G:348:GLU:O	3:G:348:GLU:HG3	2.19	0.43
3:I:206:LEU:HA	3:I:209:THR:HG23	2.00	0.43
3:I:287:ILE:HG13	3:I:288:HIS:CD2	2.54	0.43
3:J:206:LEU:O	3:J:207:ALA:C	2.57	0.43
1:W:62:C:P	3:J:237:SER:HG	2.42	0.43
3:J:54:LYS:O	3:J:56:VAL:N	2.51	0.43
3:K:305:VAL:HG22	3:K:308:VAL:HB	2.00	0.43
3:K:245:PHE:HB2	3:K:312:ILE:HG23	2.00	0.43
3:K:36:LEU:HA	3:K:89:TRP:CZ2	2.54	0.43
3:L:65:LEU:HD23	3:L:120:TRP:H	1.82	0.43
3:M:206:LEU:O	3:M:207:ALA:C	2.55	0.43
3:N:89:TRP:HB3	3:N:90:THR:H	1.65	0.43
3:P:67:PRO:O	3:P:71:CYS:CB	2.66	0.43
3:Q:37:LYS:O	3:Q:39:PRO:HD3	2.18	0.43
3:Q:441:PHE:CD2	3:Q:441:PHE:C	2.91	0.43
3:Q:7:VAL:HG13	3:Q:18:LYS:H	1.84	0.43
3:Q:99:LYS:HD3	3:Q:99:LYS:HA	1.85	0.43
3:R:81:PHE:HB3	3:R:94:ILE:HA	2.01	0.43
3:V:153:ILE:HD12	3:V:153:ILE:H	1.83	0.43
2:X:49:C:H2'	2:X:50:A:O4'	2.18	0.43
3:A:258:LEU:HD13	3:K:8:PHE:CE2	2.53	0.43
3:C:82:GLU:HA	3:C:82:GLU:OE1	2.19	0.43
3:E:23:VAL:HA	3:F:280:ALA:HA	2.00	0.43
3:F:174:GLU:O	3:F:174:GLU:HG3	2.19	0.43
3:G:206:LEU:O	3:G:208:GLY:N	2.52	0.43
3:H:262:HIS:CE1	3:I:251:LEU:HD22	2.53	0.43
3:H:7:VAL:HG12	3:H:8:PHE:N	2.33	0.43
3:I:169:ILE:HA	3:I:172:ILE:HD11	1.99	0.43
3:K:148:TYR:HE1	3:K:199:THR:HG23	1.83	0.43
3:K:98:ARG:HG3	3:K:213:PHE:CD1	2.54	0.43
3:K:260:PHE:HD1	3:K:260:PHE:N	2.16	0.43
3:L:155:GLY:N	3:L:158:THR:HG21	2.33	0.43
3:N:221:TYR:O	3:N:223:ALA:N	2.52	0.43
3:P:102:LYS:C	3:P:103:ILE:HD12	2.39	0.43
3:P:306:GLY:HA3	3:P:333:CYS:SG	2.58	0.43
3:P:362:ASP:OD2	3:P:364:LYS:HB2	2.18	0.43
3:Q:225:ARG:O	3:Q:226:VAL:C	2.56	0.43
3:Q:357:ARG:O	3:Q:358:ARG:HG2	2.18	0.43
3:R:362:ASP:OD2	3:R:364:LYS:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:T:153:ILE:HG13	3:T:161:TYR:HE2	1.83	0.43
3:V:442:LEU:HA	3:V:442:LEU:HD23	1.87	0.43
3:V:8:PHE:N	3:V:8:PHE:HD1	2.17	0.43
1:W:31:C:O2	3:C:223:ALA:HA	2.17	0.43
2:X:6:A:C5	2:X:7:A:C8	3.06	0.43
3:B:281:VAL:HA	3:B:282:PRO:HD3	1.89	0.43
3:B:319:MET:HE2	3:B:319:MET:HB2	1.53	0.43
3:C:196:ASN:O	3:C:197:TRP:HB2	2.18	0.43
3:C:67:PRO:HA	3:C:206:LEU:HD11	2.01	0.43
3:C:357:ARG:O	3:C:358:ARG:HG2	2.19	0.43
3:D:54:LYS:C	3:D:56:VAL:N	2.72	0.43
3:E:175:THR:CG2	3:E:176:ALA:N	2.81	0.43
3:E:264:ASN:OD1	3:F:251:LEU:HD21	2.17	0.43
3:G:103:ILE:N	3:G:103:ILE:HD12	2.34	0.43
3:G:253:ALA:O	3:G:255:GLU:N	2.51	0.43
3:G:286:PHE:C	3:G:288:HIS:H	2.22	0.43
3:H:176:ALA:C	3:H:178:PHE:N	2.72	0.43
3:I:37:LYS:HB3	3:I:38:LYS:H	1.70	0.43
3:J:211:ASP:HB2	3:J:228:THR:HB	2.01	0.43
3:J:370:GLU:O	3:J:371:ALA:HB2	2.19	0.43
3:J:53:TYR:CD2	3:J:54:LYS:N	2.87	0.43
3:J:66:ASP:O	3:J:69:ASP:N	2.52	0.43
3:K:10:VAL:HG12	3:K:11:ASN:N	2.34	0.43
3:L:190:THR:CG2	3:L:191:HIS:N	2.81	0.43
3:L:79:GLN:HB3	3:L:217:ILE:HG23	1.99	0.43
3:N:252:THR:HB	3:N:256:ALA:HB2	2.01	0.43
3:N:262:HIS:O	3:N:263:LYS:C	2.56	0.43
3:O:130:ARG:HB2	3:O:131:ASP:H	1.63	0.43
3:O:73:TYR:O	3:O:76:ALA:N	2.52	0.43
3:P:249:ILE:HD13	3:P:319:MET:CE	2.49	0.43
3:R:253:ALA:O	3:R:254:ARG:HG2	2.19	0.43
3:S:240:VAL:HA	3:S:243:THR:HG22	2.00	0.43
3:T:341:LEU:HD12	3:T:341:LEU:HA	1.73	0.43
3:T:73:TYR:C	3:T:75:ALA:N	2.70	0.43
3:U:421:ILE:O	3:U:422:ARG:C	2.56	0.43
3:V:37:LYS:O	3:V:39:PRO:HD3	2.19	0.43
3:A:20:GLU:O	3:A:22:ILE:HG12	2.19	0.43
3:B:230:VAL:C	3:B:232:ALA:H	2.22	0.43
3:C:249:ILE:CG2	3:C:250:ASN:N	2.81	0.43
3:C:81:PHE:HB3	3:C:95:VAL:H	1.84	0.43
3:C:77:ALA:HB1	3:C:98:ARG:HH22	1.73	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:81:PHE:CG	3:D:82:GLU:N	2.87	0.43
3:E:287:ILE:HG13	3:E:288:HIS:HD2	1.79	0.43
3:H:406:TYR:HE1	3:I:356:GLU:HA	1.84	0.43
3:J:97:ALA:C	3:J:99:LYS:N	2.71	0.43
3:K:327:ALA:O	3:K:437:SER:HA	2.18	0.43
3:M:33:ILE:HD12	3:M:88:ASP:HB2	2.00	0.43
3:M:348:GLU:O	3:M:348:GLU:CG	2.66	0.43
3:M:369:TYR:C	3:M:371:ALA:H	2.22	0.43
3:M:9:LYS:O	3:O:359:PHE:HA	2.19	0.43
3:N:249:ILE:HG23	3:N:319:MET:SD	2.59	0.43
3:Q:17:LEU:O	3:Q:17:LEU:HD12	2.19	0.43
3:Q:236:CYS:C	3:Q:238:GLY:H	2.21	0.43
3:R:56:VAL:CG1	3:R:123:THR:OG1	2.66	0.43
3:S:248:GLN:O	3:S:250:ASN:N	2.52	0.43
3:T:255:GLU:C	3:T:255:GLU:OE1	2.57	0.43
3:T:87:GLU:C	3:T:89:TRP:N	2.72	0.43
3:U:206:LEU:HA	3:U:209:THR:CG2	2.49	0.43
3:T:8:PHE:CZ	3:U:254:ARG:O	2.71	0.43
3:A:53:TYR:CZ	3:A:65:LEU:HD22	2.53	0.43
3:C:189:THR:O	3:C:190:THR:C	2.57	0.43
3:C:234:GLU:HG2	3:C:235:ASP:OD1	2.19	0.43
3:D:224:ILE:O	3:D:226:VAL:N	2.51	0.43
3:F:409:ILE:HG22	3:F:410:MET:CE	2.45	0.43
3:F:49:LEU:CD2	3:F:52:ALA:HB2	2.38	0.43
3:H:249:ILE:CG2	3:H:250:ASN:N	2.80	0.43
3:H:69:ASP:C	3:H:71:CYS:N	2.72	0.43
3:K:53:TYR:O	3:K:56:VAL:HG23	2.18	0.43
3:K:69:ASP:HA	3:K:72:SER:OG	2.19	0.43
3:L:311:LEU:O	3:L:312:ILE:C	2.56	0.43
3:L:318:TYR:CZ	3:L:423:ARG:HG2	2.54	0.43
3:L:353:GLY:HA3	3:V:337:GLU:HG3	2.01	0.43
3:M:20:GLU:OE1	3:M:20:GLU:N	2.49	0.43
3:M:340:VAL:HG22	3:M:416:LEU:HD13	2.00	0.43
3:M:428:SER:OG	3:M:429:SER:N	2.52	0.43
3:N:156:GLN:C	3:N:158:THR:H	2.22	0.43
3:O:219:HIS:HA	3:O:222:SER:CB	2.49	0.43
3:O:324:SER:O	3:O:325:LEU:C	2.57	0.43
3:P:218:GLU:HG2	3:P:219:HIS:H	1.83	0.43
3:P:7:VAL:CG1	3:P:8:PHE:N	2.82	0.43
3:R:5:LYS:C	3:R:7:VAL:H	2.22	0.43
3:S:206:LEU:O	3:S:209:THR:HG23	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:U:281:VAL:HA	3:U:282:PRO:HD3	1.85	0.43
3:V:134:VAL:O	3:V:137:HIS:HB2	2.19	0.43
3:V:156:GLN:C	3:V:158:THR:H	2.22	0.43
2:X:48:C:O2	2:X:48:C:O4'	2.36	0.43
3:B:103:ILE:HD12	3:B:103:ILE:N	2.33	0.42
3:C:239:LEU:HA	3:C:272:MET:CE	2.49	0.42
3:C:5:LYS:HB3	3:C:5:LYS:HE2	1.84	0.42
3:D:239:LEU:HA	3:D:272:MET:HE3	2.00	0.42
3:F:189:THR:O	3:F:193:MET:HG2	2.18	0.42
3:G:77:ALA:HB3	3:G:98:ARG:HH12	1.83	0.42
3:H:260:PHE:HB3	3:H:265:PHE:CD2	2.54	0.42
3:H:74:LEU:HB2	3:H:99:LYS:HE3	2.01	0.42
3:I:348:GLU:HG3	3:I:348:GLU:O	2.18	0.42
3:K:153:ILE:HD12	3:K:153:ILE:H	1.82	0.42
3:L:11:ASN:OD1	3:L:11:ASN:C	2.57	0.42
3:L:52:ALA:O	3:L:53:TYR:C	2.55	0.42
3:N:137:HIS:O	3:N:141:VAL:HG23	2.19	0.42
3:N:146:SER:CB	3:N:169:ILE:HD12	2.42	0.42
3:P:196:ASN:O	3:P:197:TRP:HB2	2.19	0.42
3:P:338:MET:CE	3:P:338:MET:CA	2.96	0.42
3:U:197:TRP:HD1	3:U:198:SER:O	2.02	0.42
3:L:358:ARG:NH2	3:V:263:LYS:HG3	2.32	0.42
1:W:44:C:P	3:A:237:SER:HG	2.42	0.42
3:A:235:ASP:HB2	3:A:290:ARG:HG2	2.01	0.42
3:A:77:ALA:HB1	3:A:220:LEU:HD21	2.01	0.42
3:A:87:GLU:OE2	3:A:284:SER:C	2.58	0.42
3:B:249:ILE:HG12	3:B:319:MET:HE3	2.01	0.42
3:B:317:CYS:O	3:B:427:VAL:HG11	2.19	0.42
3:B:89:TRP:HB3	3:B:90:THR:H	1.72	0.42
3:E:163:THR:O	3:E:167:ASP:OD1	2.36	0.42
3:E:182:VAL:HB	3:E:190:THR:CG2	2.49	0.42
3:E:295:SER:OG	3:E:296:GLY:N	2.52	0.42
3:F:101:ASP:OD2	3:F:101:ASP:N	2.51	0.42
3:F:73:TYR:CD2	3:F:141:VAL:HG11	2.54	0.42
3:G:74:LEU:HD22	3:G:98:ARG:HB3	2.01	0.42
3:I:17:LEU:O	3:I:18:LYS:HB3	2.19	0.42
3:I:246:ILE:HG13	3:I:247:LYS:N	2.34	0.42
3:I:324:SER:O	3:I:325:LEU:C	2.56	0.42
3:I:340:VAL:HG22	3:I:416:LEU:CD1	2.48	0.42
3:I:50:ASN:H	3:I:50:ASN:HD22	1.60	0.42
3:K:201:PRO:HB2	3:K:202:ASN:H	1.66	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:73:TYR:OH	3:K:98:ARG:NH2	2.53	0.42
3:L:54:LYS:NZ	3:L:69:ASP:CG	2.73	0.42
3:M:305:VAL:O	3:M:305:VAL:CG1	2.65	0.42
3:N:189:THR:HG22	3:N:192:LYS:HB3	2.02	0.42
3:N:42:THR:O	3:N:43:LEU:O	2.38	0.42
3:O:253:ALA:C	3:O:255:GLU:N	2.73	0.42
3:P:30:TYR:C	3:P:32:ALA:H	2.22	0.42
3:Q:173:PHE:O	3:Q:174:GLU:HB3	2.18	0.42
3:Q:183:GLU:O	3:Q:184:HIS:O	2.37	0.42
3:Q:30:TYR:CB	3:Q:277:GLN:NE2	2.68	0.42
3:R:103:ILE:HD12	3:R:103:ILE:N	2.34	0.42
3:R:139:SER:HA	3:R:178:PHE:HD2	1.84	0.42
3:S:56:VAL:CG1	3:S:123:THR:OG1	2.66	0.42
3:T:166:ALA:O	3:T:170:GLU:HB2	2.19	0.42
3:T:338:MET:CE	3:T:338:MET:CA	2.96	0.42
3:U:231:THR:O	3:U:232:ALA:O	2.38	0.42
3:M:362:ASP:HA	3:V:9:LYS:HD3	2.00	0.42
1:W:28:C:H4'	3:C:161:TYR:CD2	2.54	0.42
2:X:28:C:N3	3:T:157:ASN:HB2	2.34	0.42
2:X:64:C:N3	3:P:157:ASN:HB2	2.34	0.42
3:A:149:ARG:O	3:A:153:ILE:HD12	2.19	0.42
3:A:9:LYS:HE2	3:A:17:LEU:HB2	2.01	0.42
3:C:65:LEU:HB3	3:C:120:TRP:CZ3	2.55	0.42
3:C:69:ASP:O	3:C:70:VAL:C	2.57	0.42
3:C:77:ALA:HB1	3:C:220:LEU:HD21	2.01	0.42
3:D:248:GLN:HB3	3:D:248:GLN:HE21	1.43	0.42
3:E:93:GLY:O	3:E:94:ILE:HG23	2.19	0.42
3:F:180:LYS:NZ	3:F:184:HIS:CD2	2.87	0.42
3:F:6:ILE:HB	3:F:7:VAL:H	1.51	0.42
3:F:87:GLU:O	3:F:88:ASP:C	2.58	0.42
3:H:140:LEU:O	3:H:141:VAL:C	2.58	0.42
3:H:287:ILE:HG13	3:H:288:HIS:CD2	2.54	0.42
3:H:327:ALA:O	3:H:437:SER:HA	2.19	0.42
3:I:12:ASN:HB3	3:I:13:GLN:OE1	2.18	0.42
3:I:197:TRP:HD1	3:I:198:SER:O	2.00	0.42
3:I:172:ILE:HD11	3:I:226:VAL:HG11	2.00	0.42
3:I:211:ASP:OD2	3:I:288:HIS:HE1	2.02	0.42
3:K:234:GLU:O	3:K:235:ASP:HB2	2.19	0.42
3:K:442:LEU:HD23	3:K:442:LEU:HA	1.71	0.42
3:K:84:THR:C	3:K:86:PRO:HD3	2.40	0.42
3:L:253:ALA:O	3:L:255:GLU:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:27:GLU:CD	3:L:27:GLU:O	2.58	0.42
3:M:253:ALA:O	3:M:254:ARG:CG	2.67	0.42
3:M:235:ASP:HB2	3:M:290:ARG:HG2	2.01	0.42
3:N:235:ASP:HB2	3:N:290:ARG:HG2	2.00	0.42
3:P:248:GLN:CG	3:P:249:ILE:N	2.60	0.42
3:P:30:TYR:CE2	3:P:274:GLU:HB3	2.53	0.42
3:P:272:MET:SD	3:P:305:VAL:HG21	2.59	0.42
3:P:67:PRO:O	3:P:71:CYS:HB3	2.19	0.42
3:Q:189:THR:O	3:Q:193:MET:N	2.52	0.42
3:Q:74:LEU:O	3:Q:97:ALA:HB1	2.19	0.42
3:R:31:PRO:HD2	3:R:277:GLN:HG2	2.01	0.42
3:R:38:LYS:HG3	3:R:292:LEU:HB3	2.01	0.42
3:R:325:LEU:HD12	3:R:325:LEU:HA	1.80	0.42
3:S:140:LEU:O	3:S:143:LEU:N	2.53	0.42
3:T:169:ILE:HG22	3:T:226:VAL:CG1	2.49	0.42
3:U:19:PRO:C	3:U:20:GLU:CD	2.78	0.42
3:U:178:PHE:HE1	3:U:223:ALA:HB3	1.83	0.42
3:A:122:LEU:C	3:A:124:GLY:H	2.22	0.42
3:A:140:LEU:O	3:A:141:VAL:C	2.55	0.42
3:A:305:VAL:HG22	3:A:308:VAL:HB	2.02	0.42
3:B:336:HIS:CD2	3:C:249:ILE:HA	2.54	0.42
3:D:178:PHE:CE1	3:D:223:ALA:HB3	2.55	0.42
3:D:311:LEU:O	3:D:315:VAL:HG23	2.20	0.42
3:D:60:MET:O	3:D:61:SER:CB	2.67	0.42
3:F:232:ALA:O	3:F:234:GLU:N	2.52	0.42
3:H:7:VAL:CG1	3:H:8:PHE:N	2.82	0.42
3:H:97:ALA:C	3:H:99:LYS:H	2.21	0.42
3:I:223:ALA:O	3:I:226:VAL:CG2	2.65	0.42
3:J:323:ARG:C	3:J:323:ARG:CD	2.84	0.42
3:K:32:ALA:N	3:K:277:GLN:HE21	2.17	0.42
3:L:220:LEU:HD12	3:L:220:LEU:HA	1.91	0.42
3:M:410:MET:O	3:M:412:ASN:N	2.52	0.42
3:M:8:PHE:HA	3:O:360:PHE:O	2.19	0.42
3:O:53:TYR:CZ	3:O:65:LEU:HD22	2.54	0.42
3:Q:336:HIS:O	3:Q:340:VAL:HG23	2.20	0.42
3:R:9:LYS:CE	3:T:362:ASP:HA	2.49	0.42
3:S:140:LEU:O	3:S:141:VAL:C	2.56	0.42
3:S:278:GLU:HB3	3:S:281:VAL:HB	2.02	0.42
3:T:145:LEU:HD22	3:T:207:ALA:HA	2.01	0.42
3:T:32:ALA:H	3:T:277:GLN:HE21	1.63	0.42
3:T:67:PRO:O	3:T:71:CYS:CB	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:U:153:ILE:HG12	3:U:161:TYR:HE2	1.85	0.42
3:U:8:PHE:CE1	3:V:254:ARG:HG3	2.54	0.42
3:V:310:ASN:O	3:V:311:LEU:C	2.56	0.42
1:W:1:C:N4	3:F:157:ASN:CB	2.70	0.42
1:W:36:C:H2'	1:W:38:A:O5'	2.20	0.42
3:A:333:CYS:O	3:A:334:ALA:C	2.57	0.42
3:B:189:THR:O	3:B:193:MET:HG2	2.20	0.42
3:B:438:PHE:O	3:B:439:ALA:C	2.58	0.42
3:B:46:ALA:HA	3:B:47:PRO:HD3	1.80	0.42
3:C:178:PHE:HE1	3:C:223:ALA:HB3	1.84	0.42
3:C:248:GLN:CG	3:C:249:ILE:HG13	2.50	0.42
3:E:248:GLN:CG	3:E:249:ILE:N	2.74	0.42
3:G:169:ILE:HG22	3:G:226:VAL:HG12	1.97	0.42
3:H:333:CYS:O	3:H:334:ALA:C	2.58	0.42
3:H:340:VAL:HG22	3:H:416:LEU:HD11	2.01	0.42
3:J:289:PHE:CG	3:J:290:ARG:N	2.88	0.42
3:K:286:PHE:HE1	3:K:300:TYR:CE1	2.38	0.42
3:L:19:PRO:C	3:L:20:GLU:CD	2.77	0.42
3:L:232:ALA:O	3:L:234:GLU:N	2.42	0.42
3:L:66:ASP:O	3:L:70:VAL:N	2.52	0.42
3:N:307:HIS:CD2	3:N:333:CYS:HB3	2.54	0.42
3:P:38:LYS:HA	3:P:39:PRO:HD3	1.88	0.42
3:P:81:PHE:H	3:P:95:VAL:H	1.68	0.42
3:Q:31:PRO:CD	3:Q:277:GLN:HG3	2.36	0.42
3:Q:7:VAL:HG13	3:Q:8:PHE:H	1.83	0.42
3:S:180:LYS:HE3	3:S:182:VAL:O	2.19	0.42
3:U:148:TYR:O	3:U:149:ARG:C	2.57	0.42
3:U:211:ASP:OD2	3:U:288:HIS:HE1	2.03	0.42
3:V:54:LYS:CE	3:V:140:LEU:CD2	2.93	0.42
3:V:38:LYS:HA	3:V:38:LYS:HE2	2.02	0.42
1:W:65:C:H2'	1:W:66:A:C8	2.55	0.42
3:A:371:ALA:O	3:A:372:ALA:CB	2.67	0.42
3:B:66:ASP:O	3:B:67:PRO:C	2.56	0.42
3:B:66:ASP:HB2	3:B:67:PRO:HD3	2.00	0.42
3:B:73:TYR:C	3:B:75:ALA:H	2.23	0.42
3:D:57:LEU:O	3:D:58:SER:C	2.58	0.42
3:E:214:PHE:CG	3:E:222:SER:HA	2.55	0.42
3:E:289:PHE:CG	3:E:290:ARG:N	2.88	0.42
3:G:71:CYS:SG	3:G:103:ILE:HG12	2.60	0.42
3:G:189:THR:HG22	3:G:193:MET:N	2.34	0.42
3:G:219:HIS:O	3:G:220:LEU:C	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:337:GLU:HG3	3:G:353:GLY:HA3	2.00	0.42
3:H:319:MET:HB2	3:H:319:MET:HE2	1.66	0.42
3:H:50:ASN:N	3:H:50:ASN:ND2	2.66	0.42
3:I:249:ILE:HD13	3:I:319:MET:CE	2.49	0.42
3:K:416:LEU:HD12	3:K:416:LEU:H	1.85	0.42
3:M:65:LEU:HD23	3:M:120:TRP:H	1.83	0.42
3:M:169:ILE:HG22	3:M:226:VAL:CG1	2.50	0.42
3:M:73:TYR:O	3:M:75:ALA:N	2.53	0.42
3:N:60:MET:O	3:N:61:SER:HB3	2.20	0.42
3:O:97:ALA:C	3:O:99:LYS:N	2.71	0.42
3:R:236:CYS:O	3:R:240:VAL:HG23	2.20	0.42
3:R:31:PRO:HD2	3:R:277:GLN:CG	2.50	0.42
3:U:73:TYR:OH	3:U:98:ARG:NH2	2.52	0.42
3:V:340:VAL:HG22	3:V:416:LEU:CD1	2.49	0.42
2:X:94:C:O4'	2:X:94:C:O2	2.37	0.42
2:X:97:A:C6	2:X:98:C:C5	3.08	0.42
3:B:223:ALA:O	3:B:226:VAL:CG2	2.67	0.42
3:B:9:LYS:NZ	3:D:363:GLU:N	2.65	0.42
3:D:77:ALA:O	3:D:98:ARG:NH1	2.52	0.42
3:E:216:ARG:HG3	3:E:217:ILE:HD12	2.02	0.42
3:E:326:ASN:HA	3:E:437:SER:HB2	2.02	0.42
3:F:309:PHE:CE2	3:F:313:HIS:HD2	2.38	0.42
3:G:134:VAL:HB	3:G:135:PRO:HD3	2.02	0.42
3:G:197:TRP:HD1	3:G:198:SER:O	2.02	0.42
3:H:101:ASP:OD2	3:H:101:ASP:N	2.53	0.42
3:I:268:GLU:OE2	3:I:307:HIS:CD2	2.72	0.42
3:J:155:GLY:N	3:J:158:THR:HG21	2.35	0.42
3:J:26:HIS:O	3:J:27:GLU:HB3	2.19	0.42
3:K:189:THR:CG2	3:K:192:LYS:CG	2.98	0.42
3:K:30:TYR:HA	3:K:31:PRO:HD3	1.87	0.42
3:K:69:ASP:C	3:K:71:CYS:N	2.72	0.42
3:L:249:ILE:HG23	3:L:319:MET:SD	2.59	0.42
3:L:69:ASP:O	3:L:70:VAL:C	2.58	0.42
3:M:10:VAL:HG21	3:M:18:LYS:HZ1	1.68	0.42
2:X:89:C:N4	3:M:323:ARG:HH21	2.13	0.42
3:N:189:THR:HG23	3:N:192:LYS:HB3	2.02	0.42
3:N:6:ILE:HG13	3:N:7:VAL:H	1.82	0.42
3:Q:255:GLU:C	3:Q:255:GLU:OE1	2.58	0.42
3:Q:311:LEU:O	3:Q:315:VAL:HG23	2.20	0.42
3:Q:76:ALA:O	3:Q:77:ALA:HB2	2.20	0.42
3:S:189:THR:CG2	3:S:192:LYS:CB	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:211:ASP:OD1	3:S:225:ARG:HG2	2.20	0.42
3:T:222:SER:C	3:T:224:ILE:H	2.22	0.42
3:U:56:VAL:HG11	3:U:123:THR:OG1	2.20	0.42
3:U:8:PHE:HD2	3:V:258:LEU:HD11	1.84	0.42
3:A:290:ARG:NH1	3:A:290:ARG:HG3	2.34	0.42
3:A:46:ALA:HA	3:A:47:PRO:HD3	1.84	0.42
3:A:48:ASP:C	3:A:50:ASN:H	2.23	0.42
3:B:366:LEU:O	3:B:366:LEU:HD23	2.19	0.42
3:B:42:THR:C	3:B:43:LEU:O	2.56	0.42
3:C:253:ALA:O	3:C:255:GLU:N	2.53	0.42
3:C:423:ARG:O	3:C:427:VAL:HG23	2.20	0.42
3:C:33:ILE:HB	3:C:88:ASP:HB3	2.01	0.42
3:F:323:ARG:CD	3:F:323:ARG:C	2.80	0.42
3:G:21:ILE:O	3:G:22:ILE:HD13	2.19	0.42
3:G:74:LEU:HB3	3:G:98:ARG:HB2	2.02	0.42
3:H:410:MET:HA	3:H:410:MET:HE3	2.02	0.42
3:H:73:TYR:CG	3:H:141:VAL:HG21	2.55	0.42
3:I:340:VAL:HG13	3:I:416:LEU:CD1	2.49	0.42
3:J:57:LEU:HD11	3:J:144:LEU:HD23	2.02	0.42
3:J:223:ALA:O	3:J:226:VAL:CG2	2.68	0.42
3:K:21:ILE:H	3:K:21:ILE:HG12	1.54	0.42
3:K:255:GLU:C	3:K:255:GLU:OE1	2.58	0.42
3:K:66:ASP:O	3:K:69:ASP:N	2.53	0.42
3:M:204:ARG:O	3:M:205:PHE:C	2.58	0.42
3:M:248:GLN:O	3:M:249:ILE:O	2.37	0.42
3:M:344:TYR:CD1	3:M:344:TYR:N	2.87	0.42
3:N:98:ARG:HA	3:N:213:PHE:CD1	2.55	0.42
3:O:73:TYR:HD2	3:O:210:TYR:OH	2.02	0.42
3:O:240:VAL:O	3:O:243:THR:HG22	2.19	0.42
3:O:327:ALA:O	3:O:437:SER:HA	2.20	0.42
3:R:222:SER:C	3:R:224:ILE:N	2.65	0.42
3:R:306:GLY:HA3	3:R:333:CYS:SG	2.60	0.42
3:R:98:ARG:HG3	3:R:213:PHE:CG	2.55	0.42
3:T:89:TRP:HB3	3:T:90:THR:H	1.66	0.42
3:V:151:SER:HB2	3:V:198:SER:HA	2.01	0.42
1:W:70:A:C6	1:W:71:C:C4	3.08	0.42
3:A:7:VAL:HG12	3:A:9:LYS:HE3	2.02	0.42
3:B:69:ASP:C	3:B:71:CYS:N	2.70	0.42
3:C:20:GLU:HB2	3:D:254:ARG:CD	2.50	0.42
3:D:318:TYR:CZ	3:D:423:ARG:HG2	2.55	0.42
3:E:286:PHE:O	3:E:288:HIS:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:54:LYS:HD3	3:E:69:ASP:OD2	2.20	0.42
3:F:54:LYS:HE3	3:F:140:LEU:CD2	2.50	0.42
3:G:35:ASP:OD2	3:G:89:TRP:NE1	2.46	0.42
3:G:438:PHE:O	3:G:439:ALA:C	2.58	0.42
3:G:77:ALA:HB1	3:G:220:LEU:CD2	2.48	0.42
3:H:247:LYS:C	3:H:248:GLN:O	2.56	0.42
3:H:305:VAL:CG2	3:H:308:VAL:HB	2.42	0.42
3:I:166:ALA:O	3:I:167:ASP:C	2.57	0.42
3:J:240:VAL:HA	3:J:243:THR:CG2	2.49	0.42
3:K:73:TYR:CE1	3:K:77:ALA:HB3	2.55	0.42
3:A:255:GLU:CB	3:K:8:PHE:HZ	2.31	0.42
3:M:344:TYR:HE2	3:M:409:ILE:HA	1.84	0.42
3:O:156:GLN:C	3:O:158:THR:H	2.22	0.42
3:O:218:GLU:O	3:O:220:LEU:N	2.53	0.42
3:P:153:ILE:HD12	3:P:153:ILE:N	2.33	0.42
3:P:368:GLU:C	3:P:370:GLU:H	2.22	0.42
3:R:148:TYR:CE1	3:R:204:ARG:HG3	2.54	0.42
3:R:277:GLN:CD	3:R:277:GLN:H	2.19	0.42
3:R:54:LYS:C	3:R:56:VAL:N	2.72	0.42
3:S:214:PHE:CG	3:S:222:SER:HA	2.55	0.42
3:T:446:TYR:O	3:T:447:SER:CB	2.67	0.42
3:U:225:ARG:O	3:U:227:GLY:N	2.53	0.42
3:U:35:ASP:HA	3:U:89:TRP:HE1	1.84	0.42
2:X:13:C:OP1	3:V:168:ARG:NH2	2.53	0.42
1:W:53:C:H4'	1:W:54:C:OP1	2.20	0.42
2:X:25:C:N4	2:X:26:C:C5	2.88	0.42
2:X:69:A:C2	2:X:70:A:H1'	2.55	0.42
2:X:94:C:H2'	2:X:95:A:C8	2.55	0.42
3:A:183:GLU:N	3:A:190:THR:HG21	2.35	0.42
3:A:182:VAL:HB	3:A:190:THR:HG21	2.01	0.42
3:A:33:ILE:HB	3:A:88:ASP:CB	2.50	0.42
3:B:272:MET:SD	3:B:305:VAL:HG21	2.60	0.42
3:C:248:GLN:HB3	3:C:248:GLN:HE21	1.50	0.42
3:C:268:GLU:O	3:C:269:ILE:C	2.58	0.42
3:E:65:LEU:HB3	3:E:120:TRP:CZ3	2.55	0.42
3:E:244:GLY:O	3:E:245:PHE:C	2.58	0.42
3:H:272:MET:HG3	3:H:273:PHE:CE1	2.54	0.42
3:H:66:ASP:N	3:H:67:PRO:HD2	2.35	0.42
3:I:363:GLU:H	3:I:363:GLU:HG2	1.54	0.42
3:I:410:MET:HA	3:I:410:MET:CE	2.50	0.42
3:J:17:LEU:O	3:J:17:LEU:HD12	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:225:ARG:O	3:J:226:VAL:C	2.58	0.42
3:J:74:LEU:HB2	3:J:99:LYS:HE3	2.01	0.42
3:K:226:VAL:H	3:K:226:VAL:HG23	1.57	0.42
3:L:17:LEU:HD12	3:L:17:LEU:O	2.20	0.42
3:L:206:LEU:O	3:L:207:ALA:C	2.56	0.42
3:L:30:TYR:CE2	3:L:274:GLU:HB3	2.55	0.42
3:L:77:ALA:HB3	3:L:98:ARG:HH12	1.85	0.42
3:N:313:HIS:CB	3:N:324:SER:HB2	2.49	0.42
3:O:410:MET:HA	3:O:410:MET:CE	2.50	0.42
3:O:59:GLY:O	3:O:61:SER:N	2.53	0.42
3:P:217:ILE:HD12	3:P:217:ILE:N	2.35	0.42
3:R:205:PHE:O	3:R:209:THR:HG22	2.20	0.42
3:R:244:GLY:O	3:R:245:PHE:C	2.59	0.42
3:R:65:LEU:HD21	3:R:119:ASN:HB3	2.02	0.42
3:S:235:ASP:HB2	3:S:290:ARG:HG2	2.01	0.42
3:S:9:LYS:HE2	3:S:17:LEU:CB	2.50	0.42
3:T:424:TYR:CD1	3:T:442:LEU:CD1	3.03	0.42
3:U:155:GLY:N	3:U:158:THR:HG21	2.35	0.42
1:W:27:C:C4	1:W:29:C:C2	3.08	0.42
1:W:30:A:C2'	1:W:31:C:H5'	2.50	0.42
3:A:10:VAL:O	3:A:11:ASN:HB3	2.19	0.41
3:B:134:VAL:O	3:B:137:HIS:HB2	2.20	0.41
3:B:247:LYS:C	3:B:248:GLN:O	2.53	0.41
3:B:322:VAL:O	3:B:323:ARG:C	2.59	0.41
3:B:440:GLU:O	3:B:441:PHE:C	2.59	0.41
3:D:137:HIS:O	3:D:138:ALA:C	2.58	0.41
3:C:336:HIS:CE1	3:D:319:MET:O	2.72	0.41
3:D:38:LYS:HA	3:D:39:PRO:HD3	1.83	0.41
3:E:225:ARG:HA	3:E:228:THR:OG1	2.19	0.41
3:E:260:PHE:HB3	3:E:265:PHE:CD2	2.55	0.41
3:E:249:ILE:HG21	3:E:319:MET:SD	2.57	0.41
3:F:79:GLN:HG3	3:F:80:PHE:H	1.85	0.41
3:H:81:PHE:CE1	3:H:85:CYS:HB2	2.55	0.41
3:I:145:LEU:HD22	3:I:207:ALA:HA	2.01	0.41
3:I:22:ILE:HA	3:I:22:ILE:HD13	1.84	0.41
3:J:176:ALA:HB3	3:J:178:PHE:HD1	1.85	0.41
3:K:46:ALA:HA	3:K:47:PRO:HD3	1.91	0.41
3:L:20:GLU:O	3:L:22:ILE:HG12	2.20	0.41
3:L:66:ASP:O	3:L:69:ASP:N	2.53	0.41
3:N:38:LYS:HA	3:N:39:PRO:HD3	1.91	0.41
3:P:205:PHE:O	3:P:209:THR:HG22	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Q:257:ILE:HD13	3:Q:269:ILE:HD12	2.01	0.41
3:Q:31:PRO:CD	3:Q:277:GLN:HE21	2.31	0.41
3:Q:38:LYS:HD3	3:Q:205:PHE:CE1	2.55	0.41
3:Q:432:GLN:HE21	3:Q:432:GLN:CA	2.33	0.41
3:R:174:GLU:HG3	3:R:174:GLU:O	2.19	0.41
3:R:79:GLN:HG3	3:R:80:PHE:N	2.34	0.41
3:T:46:ALA:HA	3:T:47:PRO:HD3	1.74	0.41
3:T:87:GLU:HB3	3:T:88:ASP:H	1.64	0.41
3:U:99:LYS:HA	3:U:99:LYS:HD3	1.76	0.41
3:V:10:VAL:O	3:V:11:ASN:HB2	2.19	0.41
3:V:128:LEU:HD11	3:V:130:ARG:HE	1.85	0.41
3:L:251:LEU:HD22	3:V:262:HIS:CE1	2.55	0.41
3:V:348:GLU:O	3:V:348:GLU:HG3	2.20	0.41
1:W:25:C:H2'	1:W:26:A:O4'	2.20	0.41
3:A:140:LEU:HA	3:A:143:LEU:HD12	2.02	0.41
3:A:57:LEU:HD21	3:A:140:LEU:CD1	2.51	0.41
3:B:244:GLY:O	3:B:245:PHE:C	2.59	0.41
3:B:59:GLY:O	3:B:60:MET:C	2.59	0.41
3:C:56:VAL:CG1	3:C:123:THR:OG1	2.68	0.41
3:C:144:LEU:O	3:C:147:LEU:HB2	2.19	0.41
3:D:8:PHE:HZ	3:E:255:GLU:CA	2.28	0.41
3:F:30:TYR:CE2	3:F:274:GLU:HB3	2.55	0.41
3:G:232:ALA:O	3:G:234:GLU:N	2.47	0.41
3:H:212:MET:HG3	3:H:288:HIS:HD2	1.86	0.41
3:H:97:ALA:C	3:H:213:PHE:CE1	2.93	0.41
3:H:99:LYS:HA	3:H:99:LYS:HD3	1.84	0.41
3:I:133:THR:OG1	3:I:135:PRO:HD2	2.20	0.41
3:I:172:ILE:CD1	3:I:226:VAL:HG21	2.50	0.41
3:J:260:PHE:HD1	3:J:260:PHE:N	2.18	0.41
3:J:8:PHE:CZ	3:K:254:ARG:O	2.73	0.41
3:L:248:GLN:OE1	3:L:249:ILE:HG13	2.20	0.41
3:L:285:TYR:O	3:L:289:PHE:N	2.53	0.41
3:M:56:VAL:HG11	3:M:123:THR:OG1	2.19	0.41
3:N:223:ALA:O	3:N:226:VAL:CG2	2.69	0.41
3:N:244:GLY:O	3:N:245:PHE:C	2.58	0.41
3:N:35:ASP:HA	3:N:89:TRP:HE1	1.83	0.41
3:O:37:LYS:HG3	3:O:89:TRP:HE3	1.85	0.41
3:Q:205:PHE:HD2	3:Q:205:PHE:C	2.23	0.41
3:Q:244:GLY:O	3:Q:245:PHE:C	2.58	0.41
3:R:37:LYS:HB3	3:R:38:LYS:H	1.65	0.41
3:R:54:LYS:C	3:R:56:VAL:H	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:R:60:MET:SD	3:R:60:MET:N	2.93	0.41
3:T:19:PRO:C	3:T:20:GLU:CD	2.79	0.41
3:T:22:ILE:HA	3:T:22:ILE:HD13	1.84	0.41
3:T:232:ALA:C	3:T:234:GLU:N	2.72	0.41
1:W:55:C:N3	3:K:157:ASN:HB2	2.34	0.41
1:W:68:C:C5	1:W:69:A:N7	2.89	0.41
2:X:88:A:C2'	2:X:89:C:O5'	2.66	0.41
3:A:325:LEU:HA	3:A:325:LEU:HD12	1.80	0.41
3:B:73:TYR:O	3:B:74:LEU:C	2.59	0.41
3:C:345:LEU:HA	3:C:345:LEU:HD12	1.81	0.41
3:E:281:VAL:HA	3:E:282:PRO:HD3	1.76	0.41
3:E:33:ILE:HG21	3:E:36:LEU:O	2.20	0.41
3:F:248:GLN:CD	3:F:249:ILE:HG13	2.40	0.41
3:G:248:GLN:O	3:G:250:ASN:O	2.38	0.41
3:G:32:ALA:HB2	3:G:277:GLN:HE22	1.85	0.41
3:H:163:THR:HG22	3:H:192:LYS:NZ	2.36	0.41
3:I:59:GLY:O	3:I:60:MET:C	2.58	0.41
3:J:155:GLY:H	3:J:158:THR:HG21	1.84	0.41
3:J:98:ARG:HG3	3:J:213:PHE:CD1	2.54	0.41
3:K:12:ASN:HB3	3:K:13:GLN:OE1	2.20	0.41
3:K:257:ILE:HG22	3:K:257:ILE:O	2.20	0.41
3:K:286:PHE:HA	3:K:289:PHE:HB3	2.02	0.41
3:L:36:LEU:N	3:L:89:TRP:CE2	2.88	0.41
3:M:220:LEU:HB3	3:M:221:TYR:H	1.71	0.41
3:M:232:ALA:C	3:M:234:GLU:N	2.74	0.41
3:M:26:HIS:O	3:M:27:GLU:HB3	2.19	0.41
3:M:87:GLU:OE2	3:M:283:HIS:O	2.38	0.41
3:M:97:ALA:C	3:M:99:LYS:N	2.74	0.41
3:N:27:GLU:CD	3:N:27:GLU:O	2.59	0.41
3:O:37:LYS:HB3	3:O:38:LYS:H	1.64	0.41
3:P:216:ARG:HG3	3:P:217:ILE:HD12	2.01	0.41
3:P:249:ILE:CD1	3:P:321:GLN:HG3	2.44	0.41
3:Q:240:VAL:HA	3:Q:243:THR:HG22	2.03	0.41
3:Q:66:ASP:CB	3:Q:67:PRO:CD	2.93	0.41
3:R:206:LEU:O	3:R:207:ALA:C	2.59	0.41
3:T:183:GLU:O	3:T:190:THR:HG22	2.21	0.41
3:T:211:ASP:HB2	3:T:228:THR:HB	2.01	0.41
3:T:248:GLN:O	3:T:250:ASN:O	2.38	0.41
3:U:183:GLU:O	3:U:184:HIS:O	2.38	0.41
3:U:62:ALA:HB3	3:U:197:TRP:HZ3	1.84	0.41
3:U:248:GLN:HB3	3:U:248:GLN:HE21	1.43	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:V:225:ARG:O	3:V:229:VAL:N	2.50	0.41
3:U:337:GLU:HG3	3:V:353:GLY:HA3	2.02	0.41
3:V:91:SER:C	3:V:92:TYR:CD1	2.94	0.41
2:X:9:C:C2	3:V:323:ARG:HG2	2.55	0.41
3:A:100:GLY:C	3:A:101:ASP:OD2	2.59	0.41
3:A:165:ILE:HG13	3:A:166:ALA:N	2.34	0.41
3:D:248:GLN:CD	3:D:249:ILE:HG13	2.41	0.41
3:G:248:GLN:HE21	3:G:248:GLN:HB3	1.42	0.41
3:G:81:PHE:CG	3:G:82:GLU:N	2.88	0.41
3:H:84:THR:C	3:H:86:PRO:HD3	2.41	0.41
3:I:176:ALA:O	3:I:178:PHE:N	2.54	0.41
3:I:30:TYR:HA	3:I:31:PRO:HD3	1.85	0.41
3:K:247:LYS:C	3:K:248:GLN:O	2.53	0.41
3:K:409:ILE:HG22	3:K:410:MET:HE3	2.02	0.41
3:L:81:PHE:CE1	3:L:85:CYS:HB2	2.54	0.41
3:N:325:LEU:HA	3:N:325:LEU:HD12	1.74	0.41
3:N:416:LEU:H	3:N:416:LEU:HD12	1.83	0.41
3:P:197:TRP:CD1	3:P:198:SER:O	2.74	0.41
3:P:30:TYR:HA	3:P:31:PRO:HD3	1.68	0.41
3:P:259:TYR:HE2	3:P:405:VAL:HG21	1.86	0.41
3:Q:250:ASN:HB3	3:Q:349:PHE:CD2	2.54	0.41
3:Q:47:PRO:HB2	3:Q:48:ASP:H	1.59	0.41
3:R:156:GLN:C	3:R:158:THR:N	2.74	0.41
3:R:278:GLU:HB2	3:R:284:SER:OG	2.20	0.41
3:S:37:LYS:HB3	3:S:38:LYS:H	1.59	0.41
3:T:194:CYS:C	3:T:196:ASN:N	2.69	0.41
3:U:73:TYR:CD2	3:U:210:TYR:OH	2.73	0.41
3:V:43:LEU:HD23	3:V:116:VAL:HG21	2.02	0.41
3:V:369:TYR:C	3:V:371:ALA:H	2.23	0.41
3:A:84:THR:O	3:A:86:PRO:HD3	2.20	0.41
3:B:240:VAL:CA	3:B:243:THR:HG22	2.49	0.41
3:B:69:ASP:O	3:B:72:SER:N	2.53	0.41
3:C:249:ILE:HD11	3:C:321:GLN:HG3	2.02	0.41
3:D:239:LEU:O	3:D:243:THR:HG22	2.20	0.41
3:D:295:SER:OG	3:D:296:GLY:N	2.53	0.41
3:E:268:GLU:OE2	3:E:307:HIS:HD2	2.03	0.41
3:E:9:LYS:CE	3:G:362:ASP:HA	2.51	0.41
3:F:194:CYS:C	3:F:196:ASN:H	2.23	0.41
3:F:62:ALA:HB3	3:F:197:TRP:HZ3	1.85	0.41
3:H:248:GLN:HE21	3:H:248:GLN:HB3	1.57	0.41
3:H:305:VAL:O	3:H:305:VAL:HG22	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:266:GLU:OE2	3:H:358:ARG:HD2	2.21	0.41
3:I:225:ARG:C	3:I:227:GLY:N	2.74	0.41
3:I:244:GLY:O	3:I:245:PHE:C	2.59	0.41
3:I:35:ASP:OD2	3:I:89:TRP:NE1	2.51	0.41
3:I:66:ASP:O	3:I:67:PRO:C	2.57	0.41
3:J:31:PRO:HG3	3:J:289:PHE:CD1	2.55	0.41
3:J:85:CYS:HB3	3:J:91:SER:HB2	2.02	0.41
3:K:10:VAL:O	3:K:11:ASN:CB	2.68	0.41
3:K:5:LYS:N	3:K:5:LYS:NZ	2.61	0.41
3:M:166:ALA:O	3:M:170:GLU:HB2	2.20	0.41
3:M:344:TYR:HD1	3:M:344:TYR:H	1.67	0.41
3:M:57:LEU:C	3:M:59:GLY:N	2.74	0.41
3:M:8:PHE:CD1	3:M:8:PHE:N	2.88	0.41
3:O:46:ALA:HB1	3:O:50:ASN:OD1	2.21	0.41
3:P:169:ILE:HD11	3:P:191:HIS:HE1	1.85	0.41
3:P:290:ARG:NH1	3:P:290:ARG:HG3	2.34	0.41
3:Q:22:ILE:HD13	3:Q:22:ILE:HA	1.88	0.41
3:Q:344:TYR:CG	3:Q:409:ILE:HG12	2.55	0.41
3:R:249:ILE:CG2	3:R:319:MET:HE1	2.51	0.41
3:R:350:PHE:CE1	3:R:423:ARG:NH2	2.88	0.41
3:S:79:GLN:HG3	3:S:80:PHE:N	2.35	0.41
3:S:87:GLU:C	3:S:89:TRP:N	2.72	0.41
3:T:53:TYR:OH	3:T:63:ALA:N	2.53	0.41
3:U:198:SER:HB3	3:U:199:THR:H	1.73	0.41
3:U:204:ARG:HH21	3:U:234:GLU:CD	2.24	0.41
3:U:87:GLU:C	3:U:89:TRP:H	2.24	0.41
3:V:77:ALA:CB	3:V:98:ARG:NH2	2.78	0.41
1:W:24:A:H2'	1:W:25:C:O5'	2.19	0.41
2:X:10:C:C2	3:V:157:ASN:HB2	2.56	0.41
3:A:6:ILE:HG21	3:B:254:ARG:NH2	2.30	0.41
3:B:344:TYR:CD2	3:B:409:ILE:HG12	2.56	0.41
3:C:10:VAL:O	3:C:11:ASN:CB	2.67	0.41
3:C:205:PHE:CD2	3:C:205:PHE:C	2.93	0.41
3:C:73:TYR:HD2	3:C:210:TYR:OH	2.04	0.41
3:E:219:HIS:HA	3:E:222:SER:HB3	2.01	0.41
3:E:173:PHE:HZ	3:E:224:ILE:HA	1.82	0.41
3:D:341:LEU:HB2	3:E:355:PHE:CE2	2.55	0.41
3:F:176:ALA:O	3:F:177:PRO:C	2.56	0.41
3:F:54:LYS:C	3:F:56:VAL:H	2.23	0.41
3:F:69:ASP:O	3:F:71:CYS:N	2.53	0.41
3:G:231:THR:HA	3:G:234:GLU:OE1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:286:PHE:HA	3:G:289:PHE:HB3	2.02	0.41
3:H:298:SER:C	3:H:300:TYR:H	2.22	0.41
3:H:77:ALA:HB1	3:H:98:ARG:HH22	1.81	0.41
3:J:79:GLN:HB3	3:J:217:ILE:HG23	2.02	0.41
3:K:165:ILE:O	3:K:169:ILE:HG12	2.21	0.41
3:K:239:LEU:HA	3:K:272:MET:HE3	2.02	0.41
3:L:118:GLY:HA3	3:L:120:TRP:HE1	1.84	0.41
3:L:305:VAL:O	3:L:305:VAL:HG13	2.20	0.41
3:M:257:ILE:O	3:M:260:PHE:HB2	2.20	0.41
3:M:284:SER:O	3:M:287:ILE:HG12	2.18	0.41
3:N:69:ASP:C	3:N:71:CYS:N	2.73	0.41
3:O:73:TYR:CD2	3:O:141:VAL:HG21	2.55	0.41
3:P:260:PHE:CD1	3:P:260:PHE:N	2.88	0.41
3:Q:140:LEU:O	3:Q:141:VAL:C	2.58	0.41
3:U:98:ARG:HG3	3:U:213:PHE:CD1	2.56	0.41
3:V:99:LYS:HA	3:V:99:LYS:HD3	1.87	0.41
1:W:16:A:H5'	3:D:235:ASP:CG	2.41	0.41
2:X:58:C:H2'	2:X:59:C:O4'	2.21	0.41
3:A:183:GLU:O	3:A:184:HIS:O	2.38	0.41
3:A:296:GLY:C	3:A:297:LYS:HD3	2.41	0.41
3:E:73:TYR:HD2	3:E:210:TYR:OH	2.03	0.41
3:E:232:ALA:O	3:E:234:GLU:N	2.46	0.41
3:E:268:GLU:OE2	3:E:307:HIS:CD2	2.74	0.41
3:F:248:GLN:O	3:F:249:ILE:C	2.59	0.41
3:F:54:LYS:C	3:F:56:VAL:N	2.74	0.41
3:G:225:ARG:O	3:G:226:VAL:C	2.59	0.41
3:G:52:ALA:O	3:G:53:TYR:C	2.59	0.41
3:H:153:ILE:HD12	3:H:153:ILE:N	2.34	0.41
3:H:189:THR:HB	3:H:193:MET:HG2	2.02	0.41
3:H:205:PHE:CD2	3:H:205:PHE:C	2.93	0.41
3:H:37:LYS:HB3	3:H:38:LYS:H	1.70	0.41
3:I:133:THR:HG23	3:I:136:GLU:HG3	1.98	0.41
3:J:248:GLN:O	3:J:249:ILE:C	2.58	0.41
3:J:98:ARG:HG3	3:J:213:PHE:CG	2.55	0.41
3:L:197:TRP:CD1	3:L:198:SER:O	2.74	0.41
2:X:4:C:O2	3:L:223:ALA:HA	2.21	0.41
3:L:86:PRO:O	3:L:86:PRO:CD	2.69	0.41
3:M:270:ARG:NH1	3:M:270:ARG:HG3	2.36	0.41
3:N:151:SER:OG	3:N:198:SER:HA	2.21	0.41
3:N:260:PHE:HD1	3:N:260:PHE:N	2.18	0.41
3:N:50:ASN:HD22	3:N:50:ASN:H	1.66	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:O:192:LYS:C	3:O:194:CYS:H	2.22	0.41
3:O:206:LEU:HA	3:O:209:THR:CG2	2.51	0.41
3:O:441:PHE:C	3:O:441:PHE:CD2	2.94	0.41
3:O:68:ASP:HB3	3:O:120:TRP:HH2	1.85	0.41
3:P:319:MET:HB2	3:P:319:MET:HE2	1.61	0.41
3:O:415:ARG:HE	3:P:352:LYS:HB2	1.86	0.41
3:P:85:CYS:HB3	3:P:91:SER:HB2	2.02	0.41
3:Q:244:GLY:O	3:Q:247:LYS:HB3	2.21	0.41
3:R:54:LYS:O	3:R:56:VAL:N	2.53	0.41
3:R:67:PRO:HA	3:R:206:LEU:HD11	2.00	0.41
3:S:238:GLY:HA3	3:S:300:TYR:O	2.21	0.41
3:S:80:PHE:N	3:S:80:PHE:CD2	2.89	0.41
3:T:185:HIS:CA	3:T:189:THR:N	2.84	0.41
3:T:69:ASP:O	3:T:71:CYS:N	2.53	0.41
3:U:7:VAL:HG13	3:U:18:LYS:O	2.20	0.41
3:U:38:LYS:HZ3	3:U:293:GLY:HA3	1.85	0.41
3:V:31:PRO:HB3	3:V:289:PHE:HB2	2.03	0.41
1:W:32:A:H2	1:W:33:A:C8	2.39	0.41
3:B:60:MET:O	3:B:61:SER:HB3	2.20	0.41
1:W:26:A:P	3:C:237:SER:HG	2.43	0.41
3:C:66:ASP:OD1	3:C:66:ASP:N	2.54	0.41
3:F:7:VAL:HG13	3:F:18:LYS:O	2.21	0.41
3:H:281:VAL:HG12	3:H:283:HIS:H	1.86	0.41
3:I:442:LEU:HA	3:I:442:LEU:HD23	1.89	0.41
3:K:308:VAL:HG12	3:K:312:ILE:HD11	2.03	0.41
3:L:69:ASP:C	3:L:71:CYS:N	2.73	0.41
3:M:139:SER:HA	3:M:178:PHE:CD2	2.56	0.41
3:M:248:GLN:O	3:M:250:ASN:O	2.39	0.41
3:M:255:GLU:C	3:M:257:ILE:N	2.73	0.41
3:M:31:PRO:HD2	3:M:277:GLN:CG	2.51	0.41
3:N:38:LYS:HE2	3:N:39:PRO:CD	2.51	0.41
3:O:176:ALA:C	3:O:178:PHE:H	2.24	0.41
3:O:50:ASN:N	3:O:50:ASN:ND2	2.68	0.41
3:P:229:VAL:HG13	3:P:230:VAL:N	2.35	0.41
3:Q:263:LYS:HE2	3:R:358:ARG:NH2	2.36	0.41
3:Q:308:VAL:HG12	3:Q:312:ILE:CD1	2.51	0.41
3:S:176:ALA:O	3:S:177:PRO:C	2.56	0.41
3:T:56:VAL:CG1	3:T:123:THR:OG1	2.67	0.41
2:X:17:C:P	3:U:237:SER:HG	2.43	0.41
3:U:308:VAL:O	3:U:309:PHE:C	2.59	0.41
3:U:441:PHE:O	3:U:445:THR:HG23	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:W:1:C:N4	3:F:157:ASN:HD22	2.19	0.41
2:X:69:A:H8	2:X:69:A:O5'	2.03	0.41
2:X:95:A:H8	2:X:95:A:O5'	2.04	0.41
3:B:273:PHE:O	3:B:274:GLU:C	2.59	0.41
3:B:81:PHE:CE2	3:B:84:THR:HA	2.55	0.41
3:C:130:ARG:HB2	3:C:131:ASP:H	1.60	0.41
3:C:67:PRO:O	3:C:71:CYS:HB3	2.20	0.41
3:D:146:SER:HA	3:D:227:GLY:HA3	2.02	0.41
3:D:66:ASP:HB2	3:D:67:PRO:CD	2.47	0.41
3:E:47:PRO:HB2	3:E:48:ASP:H	1.64	0.41
3:F:215:SER:HB2	3:F:225:ARG:HH12	1.86	0.41
3:G:51:LYS:HD3	3:G:51:LYS:O	2.21	0.41
3:G:54:LYS:HE3	3:G:140:LEU:HD21	2.02	0.41
3:H:244:GLY:O	3:H:245:PHE:C	2.59	0.41
3:H:281:VAL:HA	3:H:282:PRO:HD3	1.75	0.41
3:H:74:LEU:CB	3:H:99:LYS:HE3	2.51	0.41
3:I:232:ALA:C	3:I:234:GLU:N	2.73	0.41
3:J:214:PHE:CD2	3:J:222:SER:HA	2.56	0.41
3:J:66:ASP:O	3:J:67:PRO:C	2.58	0.41
3:K:325:LEU:O	3:K:439:ALA:HB2	2.21	0.41
3:L:142:GLY:HA3	3:L:173:PHE:CE2	2.56	0.41
3:L:363:GLU:O	3:L:367:GLN:HG2	2.21	0.41
3:M:66:ASP:O	3:M:69:ASP:N	2.54	0.41
3:N:247:LYS:C	3:N:248:GLN:O	2.58	0.41
3:M:266:GLU:OE2	3:N:358:ARG:HD2	2.21	0.41
3:O:146:SER:HA	3:O:227:GLY:HA3	2.02	0.41
3:P:97:ALA:C	3:P:99:LYS:N	2.73	0.41
3:Q:128:LEU:HD11	3:Q:130:ARG:NE	2.16	0.41
3:Q:249:ILE:CG2	3:Q:250:ASN:OD1	2.58	0.41
3:S:146:SER:HA	3:S:227:GLY:HA3	2.03	0.41
3:T:248:GLN:CG	3:T:249:ILE:N	2.69	0.41
3:U:313:HIS:CB	3:U:324:SER:HB2	2.49	0.41
3:U:354:THR:O	3:U:354:THR:OG1	2.34	0.41
3:V:103:ILE:N	3:V:103:ILE:HD12	2.36	0.41
3:V:189:THR:O	3:V:193:MET:N	2.35	0.41
3:L:273:PHE:HE2	3:V:22:ILE:HD11	1.84	0.41
3:V:50:ASN:O	3:V:51:LYS:C	2.58	0.41
3:V:5:LYS:HB2	3:V:6:ILE:H	1.79	0.41
3:V:73:TYR:OH	3:V:98:ARG:NH2	2.54	0.41
3:A:189:THR:O	3:A:193:MET:HG2	2.21	0.41
3:A:87:GLU:O	3:A:88:ASP:C	2.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:87:GLU:OE2	3:C:285:TYR:CA	2.68	0.41
3:E:54:LYS:C	3:E:56:VAL:H	2.23	0.41
3:F:81:PHE:HZ	3:F:85:CYS:N	2.18	0.41
3:G:252:THR:HG22	3:G:253:ALA:N	2.35	0.41
3:G:269:ILE:HG13	3:H:359:PHE:CZ	2.56	0.41
3:H:57:LEU:HD21	3:H:144:LEU:CD2	2.51	0.41
3:J:103:ILE:HD12	3:J:103:ILE:N	2.36	0.41
3:J:27:GLU:O	3:J:28:TYR:CD1	2.74	0.41
3:K:136:GLU:O	3:K:137:HIS:C	2.59	0.41
3:K:441:PHE:C	3:K:441:PHE:CD2	2.93	0.41
3:L:206:LEU:HA	3:L:209:THR:CG2	2.49	0.41
3:L:232:ALA:C	3:L:234:GLU:N	2.74	0.41
3:L:338:MET:CE	3:L:338:MET:HA	2.50	0.41
3:M:81:PHE:CD2	3:M:82:GLU:N	2.89	0.41
3:N:11:ASN:C	3:N:11:ASN:OD1	2.59	0.41
3:N:145:LEU:HD22	3:N:207:ALA:HA	2.03	0.41
3:O:268:GLU:OE2	3:O:307:HIS:CD2	2.74	0.41
3:O:239:LEU:HD12	3:O:272:MET:CE	2.50	0.41
3:P:239:LEU:HA	3:P:272:MET:HE3	2.03	0.41
3:P:79:GLN:HG3	3:P:80:PHE:H	1.85	0.41
3:Q:308:VAL:HG12	3:Q:312:ILE:HD12	2.02	0.41
3:Q:249:ILE:HG23	3:Q:319:MET:HE1	2.02	0.41
3:Q:313:HIS:CB	3:Q:324:SER:HB2	2.46	0.41
3:Q:317:CYS:SG	3:Q:325:LEU:HD12	2.61	0.41
3:Q:371:ALA:C	3:Q:373:GLU:N	2.72	0.41
3:Q:77:ALA:O	3:Q:98:ARG:NH2	2.53	0.41
3:R:232:ALA:C	3:R:234:GLU:N	2.74	0.41
3:S:246:ILE:HG13	3:S:247:LYS:H	1.81	0.41
3:S:297:LYS:O	3:S:298:SER:C	2.60	0.41
3:S:89:TRP:HB3	3:S:90:THR:H	1.77	0.41
3:U:98:ARG:NH2	3:U:220:LEU:CD2	2.84	0.41
3:U:248:GLN:O	3:U:250:ASN:N	2.54	0.41
3:U:277:GLN:H	3:U:277:GLN:CD	2.24	0.41
3:V:180:LYS:HE2	3:V:182:VAL:O	2.21	0.41
3:V:222:SER:O	3:V:224:ILE:N	2.54	0.41
3:V:77:ALA:N	3:V:98:ARG:HH12	2.19	0.41
2:X:17:C:OP1	3:U:237:SER:OG	2.30	0.41
2:X:19:C:H4'	3:U:161:TYR:CD1	2.55	0.41
2:X:27:C:OP1	3:T:323:ARG:NH2	2.40	0.41
3:A:137:HIS:O	3:A:141:VAL:HG23	2.20	0.41
3:A:135:PRO:O	3:A:139:SER:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:18:LYS:HA	3:A:19:PRO:HD3	1.94	0.41
3:A:237:SER:HA	3:A:240:VAL:HB	2.02	0.41
3:B:156:GLN:C	3:B:158:THR:H	2.24	0.41
3:B:261:PHE:O	3:B:262:HIS:HB2	2.20	0.41
3:B:325:LEU:HD12	3:B:325:LEU:HA	1.79	0.41
3:C:135:PRO:O	3:C:139:SER:HB2	2.21	0.41
3:C:323:ARG:CD	3:C:323:ARG:C	2.70	0.41
3:D:197:TRP:CD1	3:D:198:SER:O	2.74	0.41
3:F:373:GLU:O	3:F:373:GLU:HG3	2.21	0.41
3:F:416:LEU:H	3:F:416:LEU:HD12	1.85	0.41
3:G:249:ILE:HG21	3:G:319:MET:CE	2.47	0.41
3:H:216:ARG:HD3	3:H:216:ARG:O	2.20	0.41
3:I:42:THR:HG22	3:I:103:ILE:CG2	2.51	0.41
3:I:264:ASN:HD21	3:J:251:LEU:CG	2.28	0.41
3:I:417:LYS:HB2	3:I:420:HIS:CD2	2.56	0.41
1:W:58:C:O2	3:K:223:ALA:HA	2.21	0.41
3:K:73:TYR:CZ	3:K:98:ARG:NH2	2.89	0.41
3:L:225:ARG:O	3:L:229:VAL:N	2.48	0.41
3:L:286:PHE:HE1	3:L:300:TYR:CE1	2.39	0.41
3:M:57:LEU:HD23	3:M:57:LEU:C	2.41	0.41
3:N:340:VAL:HG13	3:N:416:LEU:HD11	2.03	0.41
3:N:65:LEU:N	3:N:65:LEU:CD1	2.84	0.41
3:N:87:GLU:O	3:N:89:TRP:N	2.54	0.41
3:O:149:ARG:HG3	3:O:230:VAL:HG11	2.03	0.41
3:Q:253:ALA:C	3:Q:255:GLU:N	2.74	0.41
3:Q:37:LYS:HG3	3:Q:89:TRP:CE3	2.56	0.41
3:R:22:ILE:HA	3:R:22:ILE:HD13	1.83	0.41
3:R:289:PHE:CG	3:R:290:ARG:N	2.89	0.41
3:S:32:ALA:CB	3:S:277:GLN:HE22	2.28	0.41
3:S:403:GLU:HG3	3:T:357:ARG:NH1	2.33	0.41
3:S:67:PRO:HA	3:S:206:LEU:CD1	2.51	0.41
3:U:311:LEU:O	3:U:315:VAL:HG23	2.21	0.41
3:V:126:MET:HG2	3:V:128:LEU:H	1.86	0.41
3:V:73:TYR:CD1	3:V:76:ALA:HB3	2.55	0.41
1:W:90:C:C6	3:G:323:ARG:HG2	2.55	0.41
2:X:88:A:C8	2:X:89:C:C4'	3.00	0.41
3:A:251:LEU:HD22	3:K:262:HIS:HE1	1.86	0.40
3:B:146:SER:HA	3:B:227:GLY:HA3	2.03	0.40
3:B:318:TYR:CE1	3:B:423:ARG:HG2	2.56	0.40
3:C:252:THR:HG22	3:C:253:ALA:H	1.86	0.40
3:D:64:LYS:C	3:D:67:PRO:HD2	2.41	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:263:LYS:O	3:E:266:GLU:HG3	2.21	0.40
3:E:8:PHE:CZ	3:F:254:ARG:O	2.74	0.40
3:F:216:ARG:O	3:F:216:ARG:HD3	2.19	0.40
3:F:317:CYS:SG	3:F:325:LEU:HA	2.61	0.40
3:G:249:ILE:CG2	3:G:250:ASN:N	2.79	0.40
3:G:437:SER:OG	3:G:439:ALA:HB3	2.21	0.40
3:G:440:GLU:O	3:G:441:PHE:C	2.59	0.40
3:G:8:PHE:CZ	3:H:254:ARG:O	2.74	0.40
3:H:52:ALA:CB	3:H:126:MET:SD	3.09	0.40
3:H:324:SER:O	3:H:325:LEU:C	2.59	0.40
3:H:98:ARG:HG3	3:H:213:PHE:CG	2.55	0.40
3:K:334:ALA:O	3:K:338:MET:HG2	2.22	0.40
3:K:81:PHE:CD2	3:K:82:GLU:N	2.89	0.40
3:N:248:GLN:HB3	3:N:248:GLN:HE21	1.43	0.40
3:N:85:CYS:HB3	3:N:91:SER:CB	2.46	0.40
3:O:73:TYR:CG	3:O:141:VAL:HG21	2.56	0.40
3:O:252:THR:HG22	3:O:253:ALA:N	2.35	0.40
3:P:103:ILE:N	3:P:103:ILE:HD12	2.36	0.40
3:P:73:TYR:CG	3:P:141:VAL:HG21	2.56	0.40
3:P:166:ALA:O	3:P:167:ASP:C	2.60	0.40
3:P:22:ILE:HA	3:P:22:ILE:HD13	1.83	0.40
3:P:54:LYS:C	3:P:56:VAL:N	2.74	0.40
3:Q:222:SER:O	3:Q:224:ILE:N	2.55	0.40
3:Q:409:ILE:HG22	3:Q:410:MET:HE3	2.03	0.40
3:R:171:GLN:HG2	3:R:184:HIS:HE1	1.85	0.40
3:S:192:LYS:HA	3:S:192:LYS:HD2	1.90	0.40
3:R:264:ASN:ND2	3:S:251:LEU:HD22	2.31	0.40
3:T:132:PRO:HG2	3:T:137:HIS:CE1	2.56	0.40
3:T:148:TYR:CE1	3:T:199:THR:HG23	2.56	0.40
3:T:175:THR:C	3:T:176:ALA:O	2.56	0.40
3:T:257:ILE:HD13	3:T:269:ILE:HD12	2.03	0.40
3:T:30:TYR:HA	3:T:31:PRO:HD3	1.84	0.40
3:U:77:ALA:HB1	3:U:98:ARG:NH2	2.33	0.40
3:V:344:TYR:CG	3:V:409:ILE:HG12	2.56	0.40
1:W:49:C:OP1	3:A:168:ARG:NH2	2.54	0.40
2:X:36:C:C2'	2:X:38:C:H5''	2.39	0.40
2:X:2:C:H2'	2:X:3:A:O4'	2.20	0.40
3:A:130:ARG:HB2	3:A:131:ASP:H	1.73	0.40
3:B:130:ARG:NH2	3:B:136:GLU:OE2	2.53	0.40
3:B:324:SER:C	3:B:326:ASN:N	2.74	0.40
3:B:33:ILE:HB	3:B:88:ASP:HB2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:23:VAL:HG21	3:D:233:TYR:OH	2.21	0.40
3:D:366:LEU:CD2	3:D:366:LEU:C	2.88	0.40
3:E:315:VAL:HG12	3:E:319:MET:CE	2.51	0.40
3:E:38:LYS:HD3	3:E:205:PHE:CE1	2.48	0.40
3:E:412:ASN:HD22	3:E:417:LYS:HG2	1.86	0.40
3:E:54:LYS:NZ	3:E:69:ASP:OD2	2.53	0.40
3:F:145:LEU:HD22	3:F:207:ALA:HA	2.03	0.40
3:F:31:PRO:HG3	3:F:289:PHE:CE1	2.55	0.40
3:G:257:ILE:O	3:G:260:PHE:HB2	2.21	0.40
3:G:285:TYR:O	3:G:286:PHE:C	2.59	0.40
3:H:289:PHE:CD1	3:H:290:ARG:N	2.89	0.40
3:H:366:LEU:C	3:H:366:LEU:HD23	2.42	0.40
3:I:269:ILE:HD12	3:I:269:ILE:HG23	1.88	0.40
3:I:313:HIS:ND1	3:I:324:SER:CB	2.74	0.40
3:K:197:TRP:HD1	3:K:198:SER:N	2.17	0.40
3:L:153:ILE:H	3:L:153:ILE:HD12	1.87	0.40
3:O:153:ILE:N	3:O:153:ILE:HD12	2.36	0.40
3:O:47:PRO:HB2	3:O:48:ASP:H	1.57	0.40
3:Q:249:ILE:HG23	3:Q:319:MET:SD	2.60	0.40
3:Q:73:TYR:CZ	3:Q:98:ARG:CZ	3.03	0.40
3:R:12:ASN:HB3	3:R:13:GLN:HE22	1.86	0.40
3:R:313:HIS:O	3:R:316:GLY:N	2.55	0.40
3:S:421:ILE:O	3:S:422:ARG:C	2.59	0.40
3:U:53:TYR:HD1	3:U:121:ALA:O	2.04	0.40
3:U:87:GLU:O	3:U:88:ASP:C	2.59	0.40
3:V:172:ILE:HG21	3:V:172:ILE:HD13	1.81	0.40
3:V:325:LEU:O	3:V:439:ALA:HB2	2.21	0.40
2:X:6:A:C6	2:X:7:A:N7	2.90	0.40
3:A:219:HIS:HA	3:A:222:SER:HB3	2.04	0.40
1:W:37:C:N3	3:B:157:ASN:HB2	2.37	0.40
3:B:414:GLY:O	3:C:352:LYS:HA	2.20	0.40
3:D:118:GLY:HA3	3:D:120:TRP:HE1	1.86	0.40
3:D:6:ILE:HG22	3:D:7:VAL:N	2.37	0.40
3:E:272:MET:SD	3:E:305:VAL:HG21	2.61	0.40
3:E:299:PRO:HG2	3:E:300:TYR:CE1	2.57	0.40
3:D:403:GLU:HG3	3:E:357:ARG:NH1	2.37	0.40
3:F:10:VAL:O	3:F:11:ASN:HB2	2.21	0.40
3:F:53:TYR:CD2	3:F:54:LYS:N	2.89	0.40
3:G:329:VAL:CG2	3:G:330:ILE:N	2.84	0.40
3:H:197:TRP:HD1	3:H:198:SER:O	2.05	0.40
3:H:212:MET:HG3	3:H:288:HIS:CD2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:248:GLN:O	3:H:249:ILE:C	2.60	0.40
3:H:253:ALA:O	3:H:255:GLU:N	2.54	0.40
3:I:15:VAL:HG13	3:I:16:SER:N	2.35	0.40
3:I:286:PHE:C	3:I:288:HIS:H	2.25	0.40
3:I:34:LYS:O	3:I:35:ASP:HB2	2.21	0.40
3:J:153:ILE:HD12	3:J:153:ILE:N	2.36	0.40
3:K:216:ARG:O	3:K:216:ARG:HD3	2.22	0.40
3:K:219:HIS:HD1	3:K:219:HIS:C	2.24	0.40
3:K:272:MET:SD	3:K:305:VAL:HG21	2.61	0.40
3:L:79:GLN:HB3	3:L:217:ILE:HG21	2.01	0.40
3:M:192:LYS:HD2	3:M:192:LYS:HA	1.77	0.40
3:M:442:LEU:HA	3:M:442:LEU:HD23	1.95	0.40
3:N:336:HIS:HE1	3:O:319:MET:O	2.05	0.40
3:O:249:ILE:HD11	3:O:321:GLN:HG3	2.03	0.40
3:O:289:PHE:CG	3:O:290:ARG:N	2.89	0.40
3:P:121:ALA:O	3:P:122:LEU:HG	2.21	0.40
3:P:211:ASP:OD2	3:P:288:HIS:HE1	2.04	0.40
3:P:38:LYS:NZ	3:P:39:PRO:HD2	2.36	0.40
3:P:84:THR:C	3:P:86:PRO:HD3	2.42	0.40
3:Q:149:ARG:O	3:Q:151:SER:N	2.54	0.40
3:Q:362:ASP:OD2	3:Q:364:LYS:HB2	2.20	0.40
3:R:100:GLY:C	3:R:101:ASP:OD2	2.60	0.40
2:X:49:C:C6	3:R:223:ALA:HA	2.56	0.40
3:R:248:GLN:HB3	3:R:248:GLN:HE21	1.56	0.40
3:S:344:TYR:CD2	3:S:409:ILE:HG12	2.57	0.40
3:S:313:HIS:HB2	3:S:438:PHE:CZ	2.56	0.40
3:S:8:PHE:CE1	3:T:254:ARG:HG3	2.47	0.40
3:U:218:GLU:O	3:U:220:LEU:N	2.54	0.40
3:U:245:PHE:HB2	3:U:312:ILE:HG23	2.03	0.40
3:U:440:GLU:O	3:U:442:LEU:N	2.55	0.40
3:V:226:VAL:H	3:V:226:VAL:HG23	1.55	0.40
3:V:253:ALA:O	3:V:255:GLU:N	2.54	0.40
1:W:22:C:O2'	3:D:225:ARG:HB2	2.22	0.40
3:A:308:VAL:HG12	3:A:312:ILE:HD11	2.03	0.40
3:C:255:GLU:OE1	3:C:255:GLU:O	2.40	0.40
3:C:54:LYS:C	3:C:56:VAL:H	2.25	0.40
3:E:140:LEU:O	3:E:143:LEU:N	2.54	0.40
3:E:31:PRO:HD2	3:E:277:GLN:CG	2.52	0.40
3:G:70:VAL:O	3:G:210:TYR:OH	2.39	0.40
3:H:216:ARG:HG3	3:H:217:ILE:HD12	2.04	0.40
3:I:182:VAL:HB	3:I:190:THR:HG21	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:324:SER:O	3:J:326:ASN:N	2.55	0.40
3:J:369:TYR:C	3:J:371:ALA:N	2.74	0.40
3:J:38:LYS:HA	3:J:39:PRO:HD3	1.93	0.40
3:K:12:ASN:CB	3:K:13:GLN:OE1	2.69	0.40
3:K:289:PHE:C	3:K:289:PHE:CD1	2.95	0.40
3:K:357:ARG:C	3:K:358:ARG:HG2	2.42	0.40
3:L:53:TYR:O	3:L:56:VAL:CG2	2.66	0.40
3:L:54:LYS:NZ	3:L:69:ASP:OD1	2.52	0.40
3:M:211:ASP:OD1	3:M:225:ARG:HG2	2.21	0.40
3:M:338:MET:HA	3:M:338:MET:CE	2.52	0.40
3:M:340:VAL:HG22	3:M:416:LEU:HD11	2.01	0.40
3:L:415:ARG:HG3	3:M:351:GLY:O	2.22	0.40
3:O:324:SER:O	3:O:326:ASN:N	2.54	0.40
3:R:153:ILE:N	3:R:153:ILE:HD12	2.37	0.40
3:R:183:GLU:H	3:R:190:THR:HG21	1.86	0.40
3:R:350:PHE:CE1	3:R:423:ARG:CZ	3.04	0.40
3:T:155:GLY:N	3:T:158:THR:HG21	2.36	0.40
3:T:65:LEU:HD12	3:T:65:LEU:N	2.36	0.40
3:T:87:GLU:OE1	3:T:285:TYR:CE1	2.75	0.40
3:T:8:PHE:CE1	3:U:254:ARG:O	2.74	0.40
3:V:252:THR:HB	3:V:256:ALA:HB2	2.04	0.40
3:C:133:THR:HG23	3:C:136:GLU:HG3	2.01	0.40
3:C:435:PRO:O	3:C:440:GLU:OE1	2.40	0.40
3:C:73:TYR:O	3:C:74:LEU:C	2.60	0.40
3:D:30:TYR:C	3:D:32:ALA:H	2.25	0.40
3:E:81:PHE:HD1	3:E:96:ILE:HD11	1.85	0.40
3:F:232:ALA:C	3:F:234:GLU:N	2.72	0.40
3:F:305:VAL:CG1	3:F:305:VAL:O	2.68	0.40
3:F:83:GLY:O	3:F:84:THR:HB	2.21	0.40
3:G:318:TYR:CZ	3:G:423:ARG:HG2	2.57	0.40
3:G:6:ILE:HB	3:G:7:VAL:H	1.63	0.40
3:H:194:CYS:O	3:H:196:ASN:N	2.52	0.40
3:H:363:GLU:O	3:H:366:LEU:HB3	2.21	0.40
3:H:66:ASP:N	3:H:67:PRO:CD	2.85	0.40
3:I:220:LEU:HB3	3:I:221:TYR:H	1.61	0.40
3:I:313:HIS:CB	3:I:324:SER:HB2	2.48	0.40
3:K:163:THR:HG22	3:K:192:LYS:HZ2	1.87	0.40
3:K:175:THR:CG2	3:K:176:ALA:H	2.34	0.40
3:K:67:PRO:HA	3:K:206:LEU:HD12	2.03	0.40
3:K:225:ARG:O	3:K:228:THR:N	2.55	0.40
3:K:249:ILE:HG22	3:K:250:ASN:OD1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:323:ARG:HD3	3:K:324:SER:N	2.36	0.40
3:K:51:LYS:O	3:K:55:SER:HB2	2.22	0.40
3:L:10:VAL:HG23	3:L:18:LYS:NZ	2.36	0.40
3:L:74:LEU:HD23	3:L:210:TYR:CZ	2.56	0.40
3:L:225:ARG:O	3:L:227:GLY:N	2.54	0.40
3:L:250:ASN:OD1	3:L:250:ASN:N	2.43	0.40
3:L:352:LYS:HA	3:V:414:GLY:O	2.22	0.40
3:L:8:PHE:HE2	3:M:255:GLU:HG2	1.87	0.40
3:M:317:CYS:O	3:M:427:VAL:HG11	2.21	0.40
3:N:142:GLY:HA3	3:N:173:PHE:CE2	2.56	0.40
3:N:246:ILE:HG13	3:N:247:LYS:H	1.83	0.40
3:N:53:TYR:O	3:N:56:VAL:CG2	2.57	0.40
3:O:290:ARG:NH1	3:O:290:ARG:HG3	2.37	0.40
3:P:145:LEU:CD2	3:P:207:ALA:HA	2.45	0.40
3:P:260:PHE:HB3	3:P:265:PHE:CD2	2.56	0.40
3:P:324:SER:O	3:P:325:LEU:C	2.60	0.40
3:Q:248:GLN:CG	3:Q:249:ILE:N	2.70	0.40
3:Q:98:ARG:HG3	3:Q:213:PHE:CD2	2.57	0.40
3:R:17:LEU:O	3:R:17:LEU:HD12	2.22	0.40
3:S:133:THR:HG23	3:S:135:PRO:HD2	2.03	0.40
3:S:305:VAL:HG22	3:S:305:VAL:O	2.22	0.40
3:U:446:TYR:O	3:U:447:SER:CB	2.69	0.40
3:V:221:TYR:O	3:V:223:ALA:N	2.54	0.40
2:X:38:C:H2'	2:X:39:A:O4'	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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
3	A	393/450 (87%)	258 (66%)	93 (24%)	42 (11%)	0 6

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	B	393/450 (87%)	268 (68%)	87 (22%)	38 (10%)	0	7
3	C	396/450 (88%)	273 (69%)	79 (20%)	44 (11%)	0	6
3	D	392/450 (87%)	278 (71%)	80 (20%)	34 (9%)	1	9
3	E	392/450 (87%)	269 (69%)	86 (22%)	37 (9%)	0	8
3	F	397/450 (88%)	273 (69%)	84 (21%)	40 (10%)	0	7
3	G	392/450 (87%)	258 (66%)	93 (24%)	41 (10%)	0	7
3	H	392/450 (87%)	274 (70%)	86 (22%)	32 (8%)	1	9
3	I	395/450 (88%)	275 (70%)	81 (20%)	39 (10%)	0	7
3	J	397/450 (88%)	268 (68%)	84 (21%)	45 (11%)	0	6
3	K	393/450 (87%)	269 (68%)	95 (24%)	29 (7%)	1	11
3	L	398/450 (88%)	271 (68%)	85 (21%)	42 (11%)	0	7
3	M	396/450 (88%)	268 (68%)	92 (23%)	36 (9%)	1	8
3	N	397/450 (88%)	263 (66%)	94 (24%)	40 (10%)	0	7
3	O	392/450 (87%)	265 (68%)	89 (23%)	38 (10%)	0	7
3	P	391/450 (87%)	263 (67%)	90 (23%)	38 (10%)	0	7
3	Q	394/450 (88%)	268 (68%)	82 (21%)	44 (11%)	0	6
3	R	393/450 (87%)	273 (70%)	81 (21%)	39 (10%)	0	7
3	S	393/450 (87%)	273 (70%)	78 (20%)	42 (11%)	0	6
3	T	392/450 (87%)	276 (70%)	83 (21%)	33 (8%)	1	9
3	U	395/450 (88%)	263 (67%)	90 (23%)	42 (11%)	0	7
3	V	397/450 (88%)	251 (63%)	97 (24%)	49 (12%)	0	5
All	All	8670/9900 (88%)	5897 (68%)	1909 (22%)	864 (10%)	0	7

All (864) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	A	10	VAL
3	A	11	ASN
3	A	35	ASP
3	A	43	LEU
3	A	45	LYS
3	A	98	ARG
3	A	176	ALA
3	A	184	HIS
3	A	201	PRO

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Mol	Chain	Res	Type
3	A	219	HIS
3	A	232	ALA
3	A	447	SER
3	B	10	VAL
3	B	11	ASN
3	B	43	LEU
3	B	60	MET
3	B	95	VAL
3	B	120	TRP
3	B	176	ALA
3	B	184	HIS
3	B	201	PRO
3	B	219	HIS
3	B	333	CYS
3	B	399	THR
3	C	10	VAL
3	C	11	ASN
3	C	60	MET
3	C	86	PRO
3	C	98	ARG
3	C	176	ALA
3	C	184	HIS
3	C	201	PRO
3	C	219	HIS
3	C	222	SER
3	C	232	ALA
3	C	248	GLN
3	D	10	VAL
3	D	11	ASN
3	D	43	LEU
3	D	60	MET
3	D	61	SER
3	D	176	ALA
3	D	184	HIS
3	D	219	HIS
3	D	223	ALA
3	D	232	ALA
3	D	435	PRO
3	E	11	ASN
3	E	45	LYS
3	E	47	PRO
3	E	60	MET

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Mol	Chain	Res	Type
3	E	120	TRP
3	E	174	GLU
3	E	176	ALA
3	E	184	HIS
3	E	201	PRO
3	E	219	HIS
3	E	223	ALA
3	E	232	ALA
3	E	254	ARG
3	F	10	VAL
3	F	11	ASN
3	F	45	LYS
3	F	60	MET
3	F	174	GLU
3	F	176	ALA
3	F	184	HIS
3	F	219	HIS
3	F	232	ALA
3	F	248	GLN
3	F	254	ARG
3	F	432	GLN
3	G	10	VAL
3	G	11	ASN
3	G	37	LYS
3	G	45	LYS
3	G	47	PRO
3	G	60	MET
3	G	176	ALA
3	G	184	HIS
3	G	201	PRO
3	G	219	HIS
3	G	223	ALA
3	G	232	ALA
3	H	10	VAL
3	H	11	ASN
3	H	45	LYS
3	H	47	PRO
3	H	120	TRP
3	H	176	ALA
3	H	184	HIS
3	H	201	PRO
3	H	223	ALA

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Mol	Chain	Res	Type
3	H	232	ALA
3	I	10	VAL
3	I	11	ASN
3	I	21	ILE
3	I	43	LEU
3	I	60	MET
3	I	120	TRP
3	I	174	GLU
3	I	176	ALA
3	I	184	HIS
3	I	201	PRO
3	I	219	HIS
3	I	232	ALA
3	I	254	ARG
3	I	435	PRO
3	J	11	ASN
3	J	60	MET
3	J	120	TRP
3	J	184	HIS
3	J	201	PRO
3	J	219	HIS
3	J	232	ALA
3	J	254	ARG
3	J	371	ALA
3	J	399	THR
3	K	10	VAL
3	K	11	ASN
3	K	43	LEU
3	K	98	ARG
3	K	176	ALA
3	K	184	HIS
3	K	201	PRO
3	K	219	HIS
3	K	223	ALA
3	K	232	ALA
3	K	254	ARG
3	K	447	SER
3	L	10	VAL
3	L	11	ASN
3	L	36	LEU
3	L	43	LEU
3	L	60	MET

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Mol	Chain	Res	Type
3	L	174	GLU
3	L	176	ALA
3	L	184	HIS
3	L	201	PRO
3	L	219	HIS
3	L	232	ALA
3	L	245	PHE
3	L	399	THR
3	L	447	SER
3	M	45	LYS
3	M	47	PRO
3	M	60	MET
3	M	176	ALA
3	M	184	HIS
3	M	219	HIS
3	M	232	ALA
3	M	277	GLN
3	M	435	PRO
3	N	10	VAL
3	N	43	LEU
3	N	60	MET
3	N	174	GLU
3	N	176	ALA
3	N	184	HIS
3	N	219	HIS
3	N	232	ALA
3	N	248	GLN
3	O	10	VAL
3	O	11	ASN
3	O	43	LEU
3	O	47	PRO
3	O	60	MET
3	O	120	TRP
3	O	176	ALA
3	O	184	HIS
3	O	219	HIS
3	O	232	ALA
3	O	447	SER
3	P	10	VAL
3	P	11	ASN
3	P	60	MET
3	P	98	ARG

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Mol	Chain	Res	Type
3	P	177	PRO
3	P	184	HIS
3	P	201	PRO
3	P	219	HIS
3	P	223	ALA
3	P	232	ALA
3	P	245	PHE
3	P	249	ILE
3	P	447	SER
3	Q	11	ASN
3	Q	43	LEU
3	Q	60	MET
3	Q	120	TRP
3	Q	174	GLU
3	Q	184	HIS
3	Q	201	PRO
3	Q	219	HIS
3	Q	232	ALA
3	Q	233	TYR
3	Q	284	SER
3	Q	369	TYR
3	Q	435	PRO
3	R	10	VAL
3	R	11	ASN
3	R	37	LYS
3	R	47	PRO
3	R	60	MET
3	R	120	TRP
3	R	176	ALA
3	R	184	HIS
3	R	219	HIS
3	R	223	ALA
3	R	232	ALA
3	R	254	ARG
3	R	432	GLN
3	R	447	SER
3	S	6	ILE
3	S	10	VAL
3	S	11	ASN
3	S	47	PRO
3	S	98	ARG
3	S	177	PRO

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Mol	Chain	Res	Type
3	S	184	HIS
3	S	201	PRO
3	S	219	HIS
3	S	223	ALA
3	S	232	ALA
3	S	254	ARG
3	S	435	PRO
3	S	447	SER
3	T	7	VAL
3	T	10	VAL
3	T	11	ASN
3	T	43	LEU
3	T	60	MET
3	T	98	ARG
3	T	176	ALA
3	T	184	HIS
3	T	201	PRO
3	T	219	HIS
3	T	232	ALA
3	T	254	ARG
3	T	447	SER
3	U	10	VAL
3	U	11	ASN
3	U	43	LEU
3	U	60	MET
3	U	98	ARG
3	U	176	ALA
3	U	184	HIS
3	U	201	PRO
3	U	219	HIS
3	U	223	ALA
3	U	232	ALA
3	U	373	GLU
3	U	447	SER
3	V	10	VAL
3	V	11	ASN
3	V	45	LYS
3	V	60	MET
3	V	74	LEU
3	V	176	ALA
3	V	184	HIS
3	V	201	PRO

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Mol	Chain	Res	Type
3	V	219	HIS
3	V	232	ALA
3	V	333	CYS
3	V	372	ALA
3	V	399	THR
3	A	7	VAL
3	A	24	ASP
3	A	47	PRO
3	A	60	MET
3	A	86	PRO
3	A	88	ASP
3	A	119	ASN
3	A	174	GLU
3	A	223	ALA
3	A	249	ILE
3	A	254	ARG
3	A	289	PHE
3	A	399	THR
3	B	47	PRO
3	B	55	SER
3	B	61	SER
3	B	74	LEU
3	B	223	ALA
3	B	248	GLN
3	C	35	ASP
3	C	43	LEU
3	C	47	PRO
3	C	77	ALA
3	C	88	ASP
3	C	120	TRP
3	C	153	ILE
3	C	174	GLU
3	C	223	ALA
3	C	245	PHE
3	C	249	ILE
3	C	254	ARG
3	C	447	SER
3	D	35	ASP
3	D	120	TRP
3	D	159	GLY
3	D	225	ARG
3	D	266	GLU

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Mol	Chain	Res	Type
3	D	447	SER
3	E	35	ASP
3	E	82	GLU
3	E	141	VAL
3	E	157	ASN
3	E	159	GLY
3	E	190	THR
3	E	249	ILE
3	E	399	THR
3	E	432	GLN
3	F	21	ILE
3	F	47	PRO
3	F	88	ASP
3	F	118	GLY
3	F	120	TRP
3	F	222	SER
3	F	223	ALA
3	F	245	PHE
3	F	249	ILE
3	F	266	GLU
3	F	279	THR
3	F	374	LEU
3	G	35	ASP
3	G	76	ALA
3	G	83	GLY
3	G	120	TRP
3	G	225	ARG
3	G	245	PHE
3	G	254	ARG
3	G	284	SER
3	G	287	ILE
3	G	432	GLN
3	G	447	SER
3	H	219	HIS
3	H	248	GLN
3	H	249	ILE
3	I	47	PRO
3	I	74	LEU
3	I	82	GLU
3	I	91	SER
3	I	98	ARG
3	I	249	ILE

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Mol	Chain	Res	Type
3	J	10	VAL
3	J	14	VAL
3	J	47	PRO
3	J	76	ALA
3	J	77	ALA
3	J	95	VAL
3	J	98	ARG
3	J	157	ASN
3	J	174	GLU
3	J	176	ALA
3	J	222	SER
3	J	223	ALA
3	J	225	ARG
3	J	249	ILE
3	J	435	PRO
3	J	447	SER
3	K	45	LYS
3	K	77	ALA
3	K	159	GLY
3	K	371	ALA
3	K	432	GLN
3	L	32	ALA
3	L	47	PRO
3	L	88	ASP
3	L	98	ARG
3	L	153	ILE
3	L	159	GLY
3	L	223	ALA
3	L	248	GLN
3	L	249	ILE
3	L	289	PHE
3	M	11	ASN
3	M	35	ASP
3	M	55	SER
3	M	159	GLY
3	M	201	PRO
3	M	220	LEU
3	M	245	PHE
3	M	248	GLN
3	M	249	ILE
3	M	432	GLN
3	M	447	SER

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Mol	Chain	Res	Type
3	N	95	VAL
3	N	120	TRP
3	N	159	GLY
3	N	222	SER
3	N	223	ALA
3	N	226	VAL
3	N	245	PHE
3	N	372	ALA
3	N	447	SER
3	O	45	LYS
3	O	61	SER
3	O	77	ALA
3	O	98	ARG
3	O	128	LEU
3	O	159	GLY
3	O	201	PRO
3	O	223	ALA
3	P	6	ILE
3	P	37	LYS
3	P	45	LYS
3	P	47	PRO
3	P	61	SER
3	P	95	VAL
3	P	120	TRP
3	P	176	ALA
3	P	222	SER
3	P	254	ARG
3	P	321	GLN
3	Q	10	VAL
3	Q	14	VAL
3	Q	21	ILE
3	Q	47	PRO
3	Q	76	ALA
3	Q	95	VAL
3	Q	176	ALA
3	Q	237	SER
3	R	35	ASP
3	R	45	LYS
3	R	49	LEU
3	R	98	ARG
3	R	128	LEU
3	R	195	ALA

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Mol	Chain	Res	Type
3	R	222	SER
3	R	435	PRO
3	S	7	VAL
3	S	37	LYS
3	S	43	LEU
3	S	159	GLY
3	S	249	ILE
3	T	14	VAL
3	T	86	PRO
3	T	120	TRP
3	T	222	SER
3	T	233	TYR
3	U	45	LYS
3	U	47	PRO
3	U	77	ALA
3	U	86	PRO
3	U	120	TRP
3	U	159	GLY
3	U	174	GLU
3	U	220	LEU
3	U	249	ILE
3	V	47	PRO
3	V	49	LEU
3	V	76	ALA
3	V	98	ARG
3	V	120	TRP
3	V	370	GLU
3	V	447	SER
3	A	32	ALA
3	A	175	THR
3	A	177	PRO
3	A	220	LEU
3	A	233	TYR
3	A	245	PHE
3	A	432	GLN
3	B	35	ASP
3	B	36	LEU
3	B	90	THR
3	B	232	ALA
3	B	245	PHE
3	B	295	SER
3	B	296	GLY

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Mol	Chain	Res	Type
3	B	435	PRO
3	C	76	ALA
3	C	83	GLY
3	C	190	THR
3	D	21	ILE
3	D	47	PRO
3	D	76	ALA
3	D	177	PRO
3	D	201	PRO
3	D	248	GLN
3	D	249	ILE
3	E	195	ALA
3	E	333	CYS
3	E	368	GLU
3	F	14	VAL
3	F	201	PRO
3	F	226	VAL
3	F	294	LEU
3	F	435	PRO
3	F	447	SER
3	G	98	ARG
3	G	125	GLY
3	G	177	PRO
3	G	237	SER
3	G	249	ILE
3	G	323	ARG
3	G	435	PRO
3	H	35	ASP
3	H	37	LYS
3	H	61	SER
3	H	157	ASN
3	H	195	ALA
3	H	245	PHE
3	H	266	GLU
3	H	435	PRO
3	H	447	SER
3	I	35	ASP
3	I	37	LYS
3	I	55	SER
3	I	177	PRO
3	I	223	ALA
3	I	245	PHE

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Mol	Chain	Res	Type
3	I	266	GLU
3	I	447	SER
3	J	24	ASP
3	J	88	ASP
3	J	266	GLU
3	J	295	SER
3	J	370	GLU
3	K	24	ASP
3	K	76	ALA
3	K	84	THR
3	K	95	VAL
3	K	245	PHE
3	L	13	GLN
3	L	45	LYS
3	L	84	THR
3	L	254	ARG
3	M	43	LEU
3	M	86	PRO
3	M	120	TRP
3	M	195	ALA
3	M	223	ALA
3	M	370	GLU
3	M	411	MET
3	N	11	ASN
3	N	14	VAL
3	N	35	ASP
3	N	44	GLY
3	N	84	THR
3	N	98	ARG
3	N	237	SER
3	N	249	ILE
3	O	55	SER
3	O	193	MET
3	P	76	ALA
3	P	174	GLU
3	P	248	GLN
3	Q	150	LEU
3	Q	226	VAL
3	Q	254	ARG
3	Q	294	LEU
3	Q	295	SER
3	Q	404	ALA

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Mol	Chain	Res	Type
3	R	175	THR
3	R	201	PRO
3	R	245	PHE
3	R	289	PHE
3	S	35	ASP
3	S	45	LYS
3	S	53	TYR
3	S	60	MET
3	S	77	ALA
3	S	90	THR
3	S	233	TYR
3	S	245	PHE
3	T	32	ALA
3	T	157	ASN
3	T	177	PRO
3	T	249	ILE
3	T	294	LEU
3	T	321	GLN
3	T	432	GLN
3	U	14	VAL
3	U	84	THR
3	U	90	THR
3	U	91	SER
3	U	233	TYR
3	U	254	ARG
3	U	321	GLN
3	V	14	VAL
3	V	31	PRO
3	V	35	ASP
3	V	43	LEU
3	V	95	VAL
3	V	119	ASN
3	V	193	MET
3	V	254	ARG
3	V	277	GLN
3	A	266	GLU
3	B	27	GLU
3	B	49	LEU
3	B	157	ASN
3	B	174	GLU
3	B	249	ILE
3	B	289	PHE

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Mol	Chain	Res	Type
3	C	44	GLY
3	C	61	SER
3	C	90	THR
3	C	289	PHE
3	C	295	SER
3	D	44	GLY
3	E	10	VAL
3	E	27	GLU
3	E	49	LEU
3	E	77	ALA
3	E	245	PHE
3	F	86	PRO
3	F	117	GLU
3	F	233	TYR
3	F	287	ILE
3	G	295	SER
3	H	44	GLY
3	H	60	MET
3	H	135	PRO
3	H	254	ARG
3	I	27	GLU
3	I	86	PRO
3	I	118	GLY
3	I	233	TYR
3	I	248	GLN
3	J	61	SER
3	J	177	PRO
3	J	321	GLN
3	K	249	ILE
3	L	76	ALA
3	L	86	PRO
3	L	120	TRP
3	L	237	SER
3	M	14	VAL
3	M	27	GLU
3	M	74	LEU
3	M	95	VAL
3	M	98	ARG
3	M	335	PRO
3	N	47	PRO
3	N	55	SER
3	N	77	ALA

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Mol	Chain	Res	Type
3	N	175	THR
3	O	14	VAL
3	O	27	GLU
3	O	35	ASP
3	O	119	ASN
3	O	124	GLY
3	O	249	ILE
3	O	292	LEU
3	P	24	ASP
3	P	35	ASP
3	P	295	SER
3	Q	27	GLU
3	Q	52	ALA
3	Q	91	SER
3	Q	157	ASN
3	Q	159	GLY
3	Q	177	PRO
3	Q	245	PHE
3	Q	249	ILE
3	Q	266	GLU
3	Q	447	SER
3	R	95	VAL
3	R	249	ILE
3	R	266	GLU
3	R	295	SER
3	S	86	PRO
3	S	157	ASN
3	S	174	GLU
3	S	176	ALA
3	T	83	GLY
3	T	295	SER
3	U	76	ALA
3	U	175	THR
3	U	177	PRO
3	U	190	THR
3	U	222	SER
3	U	435	PRO
3	V	195	ALA
3	V	205	PHE
3	V	249	ILE
3	V	294	LEU
3	V	295	SER

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Mol	Chain	Res	Type
3	A	95	VAL
3	A	120	TRP
3	A	248	GLN
3	A	295	SER
3	B	86	PRO
3	C	14	VAL
3	D	13	GLN
3	D	45	LYS
3	D	95	VAL
3	D	254	ARG
3	D	334	ALA
3	E	91	SER
3	E	95	VAL
3	E	98	ARG
3	F	95	VAL
3	F	295	SER
3	G	24	ASP
3	G	44	GLY
3	G	95	VAL
3	G	119	ASN
3	G	266	GLU
3	H	95	VAL
3	H	98	ARG
3	H	159	GLY
3	H	284	SER
3	H	289	PHE
3	I	225	ARG
3	I	323	ARG
3	J	45	LYS
3	J	294	LEU
3	J	411	MET
3	K	88	ASP
3	L	34	LYS
3	L	55	SER
3	L	90	THR
3	L	95	VAL
3	L	137	HIS
3	N	24	ASP
3	N	45	LYS
3	N	61	SER
3	N	86	PRO
3	N	201	PRO

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Mol	Chain	Res	Type
3	N	254	ARG
3	N	435	PRO
3	O	53	TYR
3	O	95	VAL
3	O	177	PRO
3	O	248	GLN
3	P	53	TYR
3	P	119	ASN
3	P	130	ARG
3	P	195	ALA
3	Q	149	ARG
3	Q	405	VAL
3	R	153	ILE
3	R	177	PRO
3	R	278	GLU
3	S	14	VAL
3	S	24	ASP
3	S	76	ALA
3	S	266	GLU
3	S	411	MET
3	T	27	GLU
3	T	45	LYS
3	T	47	PRO
3	T	95	VAL
3	T	220	LEU
3	U	27	GLU
3	U	34	LYS
3	U	88	ASP
3	V	27	GLU
3	V	86	PRO
3	V	117	GLU
3	V	223	ALA
3	V	233	TYR
3	V	292	LEU
3	V	334	ALA
3	V	432	GLN
3	A	14	VAL
3	A	27	GLU
3	A	294	LEU
3	B	119	ASN
3	C	91	SER
3	C	95	VAL

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Mol	Chain	Res	Type
3	C	159	GLY
3	C	177	PRO
3	C	220	LEU
3	C	233	TYR
3	C	266	GLU
3	D	14	VAL
3	D	56	VAL
3	E	14	VAL
3	F	98	ARG
3	G	14	VAL
3	G	129	THR
3	G	193	MET
3	G	289	PHE
3	H	177	PRO
3	I	24	ASP
3	I	95	VAL
3	J	49	LEU
3	J	296	GLY
3	J	334	ALA
3	J	339	SER
3	K	14	VAL
3	K	34	LYS
3	K	47	PRO
3	K	55	SER
3	L	177	PRO
3	L	197	TRP
3	L	334	ALA
3	M	23	VAL
3	N	266	GLU
3	N	334	ALA
3	O	76	ALA
3	O	125	GLY
3	O	404	ALA
3	P	27	GLU
3	P	266	GLU
3	Q	77	ALA
3	Q	86	PRO
3	Q	119	ASN
3	R	61	SER
3	R	334	ALA
3	S	95	VAL
3	S	128	LEU

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Mol	Chain	Res	Type
3	T	435	PRO
3	U	24	ASP
3	U	95	VAL
3	U	226	VAL
3	V	44	GLY
3	V	70	VAL
3	V	83	GLY
3	V	220	LEU
3	B	334	ALA
3	C	6	ILE
3	C	70	VAL
3	E	287	ILE
3	G	56	VAL
3	I	44	GLY
3	I	83	GLY
3	M	44	GLY
3	O	86	PRO
3	O	226	VAL
3	Q	287	ILE
3	R	135	PRO
3	U	182	VAL
3	A	44	GLY
3	A	435	PRO
3	B	14	VAL
3	B	159	GLY
3	C	118	GLY
3	E	56	VAL
3	L	67	PRO
3	Q	257	ILE
3	R	14	VAL
3	S	21	ILE
3	S	44	GLY
3	B	177	PRO
3	D	31	PRO
3	D	124	GLY
3	F	153	ILE
3	K	334	ALA
3	P	334	ALA
3	R	6	ILE
3	V	19	PRO
3	F	44	GLY
3	J	56	VAL

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Mol	Chain	Res	Type
3	J	159	GLY
3	J	226	VAL
3	J	287	ILE
3	L	94	ILE
3	O	141	VAL
3	R	226	VAL
3	S	182	VAL
3	S	226	VAL
3	V	335	PRO
3	E	226	VAL
3	F	56	VAL
3	M	287	ILE
3	N	177	PRO
3	P	56	VAL
3	V	125	GLY

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	
3	A	343/386 (89%)	316 (92%)	27 (8%)	12	41
3	B	344/386 (89%)	320 (93%)	24 (7%)	15	46
3	C	346/386 (90%)	326 (94%)	20 (6%)	20	53
3	D	343/386 (89%)	323 (94%)	20 (6%)	20	53
3	E	343/386 (89%)	323 (94%)	20 (6%)	20	53
3	F	347/386 (90%)	325 (94%)	22 (6%)	18	51
3	G	342/386 (89%)	323 (94%)	19 (6%)	21	54
3	H	344/386 (89%)	319 (93%)	25 (7%)	14	45
3	I	345/386 (89%)	323 (94%)	22 (6%)	17	50
3	J	347/386 (90%)	322 (93%)	25 (7%)	14	45
3	K	343/386 (89%)	317 (92%)	26 (8%)	13	43
3	L	348/386 (90%)	320 (92%)	28 (8%)	12	41

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	M	346/386 (90%)	317 (92%)	29 (8%)	11	40
3	N	347/386 (90%)	319 (92%)	28 (8%)	11	41
3	O	342/386 (89%)	323 (94%)	19 (6%)	21	54
3	P	343/386 (89%)	324 (94%)	19 (6%)	21	54
3	Q	344/386 (89%)	316 (92%)	28 (8%)	11	41
3	R	343/386 (89%)	327 (95%)	16 (5%)	26	60
3	S	343/386 (89%)	320 (93%)	23 (7%)	16	48
3	T	343/386 (89%)	314 (92%)	29 (8%)	10	39
3	U	345/386 (89%)	320 (93%)	25 (7%)	14	45
3	V	347/386 (90%)	323 (93%)	24 (7%)	15	47
All	All	7578/8492 (89%)	7060 (93%)	518 (7%)	16	48

All (518) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	A	9	LYS
3	A	21	ILE
3	A	25	GLN
3	A	27	GLU
3	A	38	LYS
3	A	50	ASN
3	A	60	MET
3	A	66	ASP
3	A	69	ASP
3	A	85	CYS
3	A	89	TRP
3	A	98	ARG
3	A	101	ASP
3	A	130	ARG
3	A	137	HIS
3	A	167	ASP
3	A	197	TRP
3	A	205	PHE
3	A	226	VAL
3	A	248	GLN
3	A	250	ASN
3	A	255	GLU
3	A	323	ARG

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Mol	Chain	Res	Type
3	A	329	VAL
3	A	419	SER
3	A	432	GLN
3	A	448	SER
3	B	5	LYS
3	B	8	PHE
3	B	17	LEU
3	B	20	GLU
3	B	24	ASP
3	B	25	GLN
3	B	38	LYS
3	B	50	ASN
3	B	66	ASP
3	B	85	CYS
3	B	89	TRP
3	B	98	ARG
3	B	101	ASP
3	B	122	LEU
3	B	137	HIS
3	B	226	VAL
3	B	229	VAL
3	B	248	GLN
3	B	277	GLN
3	B	289	PHE
3	B	323	ARG
3	B	410	MET
3	B	432	GLN
3	B	435	PRO
3	C	25	GLN
3	C	27	GLU
3	C	50	ASN
3	C	60	MET
3	C	66	ASP
3	C	85	CYS
3	C	89	TRP
3	C	90	THR
3	C	98	ARG
3	C	116	VAL
3	C	137	HIS
3	C	209	THR
3	C	243	THR
3	C	248	GLN

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Mol	Chain	Res	Type
3	C	255	GLU
3	C	323	ARG
3	C	345	LEU
3	C	410	MET
3	C	435	PRO
3	C	445	THR
3	D	14	VAL
3	D	21	ILE
3	D	25	GLN
3	D	50	ASN
3	D	60	MET
3	D	66	ASP
3	D	80	PHE
3	D	85	CYS
3	D	89	TRP
3	D	98	ARG
3	D	137	HIS
3	D	185	HIS
3	D	189	THR
3	D	197	TRP
3	D	226	VAL
3	D	248	GLN
3	D	255	GLU
3	D	323	ARG
3	D	345	LEU
3	D	432	GLN
3	E	9	LYS
3	E	16	SER
3	E	25	GLN
3	E	27	GLU
3	E	38	LYS
3	E	50	ASN
3	E	60	MET
3	E	66	ASP
3	E	69	ASP
3	E	85	CYS
3	E	89	TRP
3	E	98	ARG
3	E	101	ASP
3	E	137	HIS
3	E	158	THR
3	E	255	GLU

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Mol	Chain	Res	Type
3	E	323	ARG
3	E	424	TYR
3	E	432	GLN
3	E	441	PHE
3	F	17	LEU
3	F	18	LYS
3	F	19	PRO
3	F	27	GLU
3	F	38	LYS
3	F	60	MET
3	F	66	ASP
3	F	89	TRP
3	F	98	ARG
3	F	101	ASP
3	F	131	ASP
3	F	137	HIS
3	F	197	TRP
3	F	205	PHE
3	F	209	THR
3	F	248	GLN
3	F	250	ASN
3	F	255	GLU
3	F	258	LEU
3	F	323	ARG
3	F	345	LEU
3	F	432	GLN
3	G	9	LYS
3	G	25	GLN
3	G	38	LYS
3	G	50	ASN
3	G	60	MET
3	G	66	ASP
3	G	69	ASP
3	G	89	TRP
3	G	98	ARG
3	G	101	ASP
3	G	137	HIS
3	G	197	TRP
3	G	209	THR
3	G	226	VAL
3	G	248	GLN
3	G	255	GLU

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Mol	Chain	Res	Type
3	G	323	ARG
3	G	366	LEU
3	G	432	GLN
3	H	9	LYS
3	H	14	VAL
3	H	25	GLN
3	H	27	GLU
3	H	50	ASN
3	H	60	MET
3	H	66	ASP
3	H	69	ASP
3	H	89	TRP
3	H	96	ILE
3	H	98	ARG
3	H	101	ASP
3	H	131	ASP
3	H	137	HIS
3	H	189	THR
3	H	190	THR
3	H	243	THR
3	H	248	GLN
3	H	250	ASN
3	H	255	GLU
3	H	289	PHE
3	H	323	ARG
3	H	410	MET
3	H	432	GLN
3	H	435	PRO
3	I	9	LYS
3	I	25	GLN
3	I	27	GLU
3	I	50	ASN
3	I	57	LEU
3	I	66	ASP
3	I	89	TRP
3	I	98	ARG
3	I	101	ASP
3	I	123	THR
3	I	172	ILE
3	I	201	PRO
3	I	209	THR
3	I	243	THR

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Mol	Chain	Res	Type
3	I	248	GLN
3	I	250	ASN
3	I	255	GLU
3	I	289	PHE
3	I	323	ARG
3	I	345	LEU
3	I	363	GLU
3	I	432	GLN
3	J	14	VAL
3	J	25	GLN
3	J	27	GLU
3	J	38	LYS
3	J	50	ASN
3	J	60	MET
3	J	66	ASP
3	J	85	CYS
3	J	88	ASP
3	J	89	TRP
3	J	98	ARG
3	J	101	ASP
3	J	122	LEU
3	J	131	ASP
3	J	137	HIS
3	J	190	THR
3	J	197	TRP
3	J	248	GLN
3	J	255	GLU
3	J	323	ARG
3	J	363	GLU
3	J	373	GLU
3	J	424	TYR
3	J	432	GLN
3	J	435	PRO
3	K	5	LYS
3	K	6	ILE
3	K	9	LYS
3	K	21	ILE
3	K	25	GLN
3	K	27	GLU
3	K	48	ASP
3	K	50	ASN
3	K	53	TYR

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Mol	Chain	Res	Type
3	K	60	MET
3	K	66	ASP
3	K	69	ASP
3	K	85	CYS
3	K	89	TRP
3	K	98	ARG
3	K	101	ASP
3	K	131	ASP
3	K	163	THR
3	K	169	ILE
3	K	209	THR
3	K	248	GLN
3	K	255	GLU
3	K	258	LEU
3	K	323	ARG
3	K	324	SER
3	K	345	LEU
3	L	5	LYS
3	L	9	LYS
3	L	14	VAL
3	L	25	GLN
3	L	27	GLU
3	L	38	LYS
3	L	50	ASN
3	L	60	MET
3	L	66	ASP
3	L	85	CYS
3	L	89	TRP
3	L	98	ARG
3	L	101	ASP
3	L	117	GLU
3	L	137	HIS
3	L	167	ASP
3	L	172	ILE
3	L	209	THR
3	L	216	ARG
3	L	243	THR
3	L	255	GLU
3	L	289	PHE
3	L	323	ARG
3	L	329	VAL
3	L	345	LEU

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Mol	Chain	Res	Type
3	L	363	GLU
3	L	419	SER
3	L	432	GLN
3	M	9	LYS
3	M	16	SER
3	M	23	VAL
3	M	25	GLN
3	M	38	LYS
3	M	50	ASN
3	M	57	LEU
3	M	60	MET
3	M	66	ASP
3	M	69	ASP
3	M	71	CYS
3	M	85	CYS
3	M	89	TRP
3	M	98	ARG
3	M	101	ASP
3	M	116	VAL
3	M	137	HIS
3	M	158	THR
3	M	167	ASP
3	M	189	THR
3	M	200	ILE
3	M	209	THR
3	M	226	VAL
3	M	248	GLN
3	M	250	ASN
3	M	255	GLU
3	M	323	ARG
3	M	410	MET
3	M	432	GLN
3	N	9	LYS
3	N	25	GLN
3	N	27	GLU
3	N	41	ILE
3	N	50	ASN
3	N	57	LEU
3	N	60	MET
3	N	66	ASP
3	N	69	ASP
3	N	85	CYS

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Mol	Chain	Res	Type
3	N	89	TRP
3	N	98	ARG
3	N	101	ASP
3	N	117	GLU
3	N	137	HIS
3	N	139	SER
3	N	197	TRP
3	N	209	THR
3	N	248	GLN
3	N	252	THR
3	N	255	GLU
3	N	277	GLN
3	N	303	ASN
3	N	323	ARG
3	N	345	LEU
3	N	419	SER
3	N	432	GLN
3	N	447	SER
3	O	9	LYS
3	O	11	ASN
3	O	25	GLN
3	O	38	LYS
3	O	50	ASN
3	O	60	MET
3	O	66	ASP
3	O	69	ASP
3	O	89	TRP
3	O	98	ARG
3	O	137	HIS
3	O	165	ILE
3	O	197	TRP
3	O	226	VAL
3	O	255	GLU
3	O	323	ARG
3	O	345	LEU
3	O	432	GLN
3	O	447	SER
3	P	9	LYS
3	P	25	GLN
3	P	50	ASN
3	P	60	MET
3	P	66	ASP

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Mol	Chain	Res	Type
3	P	69	ASP
3	P	85	CYS
3	P	89	TRP
3	P	98	ARG
3	P	122	LEU
3	P	129	THR
3	P	137	HIS
3	P	197	TRP
3	P	250	ASN
3	P	255	GLU
3	P	289	PHE
3	P	323	ARG
3	P	410	MET
3	P	424	TYR
3	Q	9	LYS
3	Q	17	LEU
3	Q	25	GLN
3	Q	38	LYS
3	Q	50	ASN
3	Q	57	LEU
3	Q	60	MET
3	Q	66	ASP
3	Q	69	ASP
3	Q	80	PHE
3	Q	85	CYS
3	Q	89	TRP
3	Q	98	ARG
3	Q	101	ASP
3	Q	205	PHE
3	Q	209	THR
3	Q	229	VAL
3	Q	248	GLN
3	Q	250	ASN
3	Q	255	GLU
3	Q	258	LEU
3	Q	277	GLN
3	Q	323	ARG
3	Q	370	GLU
3	Q	374	LEU
3	Q	419	SER
3	Q	432	GLN
3	Q	447	SER

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Mol	Chain	Res	Type
3	R	9	LYS
3	R	27	GLU
3	R	38	LYS
3	R	50	ASN
3	R	60	MET
3	R	66	ASP
3	R	69	ASP
3	R	88	ASP
3	R	89	TRP
3	R	98	ARG
3	R	101	ASP
3	R	137	HIS
3	R	248	GLN
3	R	255	GLU
3	R	323	ARG
3	R	363	GLU
3	S	25	GLN
3	S	27	GLU
3	S	38	LYS
3	S	41	ILE
3	S	50	ASN
3	S	60	MET
3	S	66	ASP
3	S	69	ASP
3	S	85	CYS
3	S	88	ASP
3	S	89	TRP
3	S	98	ARG
3	S	137	HIS
3	S	209	THR
3	S	255	GLU
3	S	258	LEU
3	S	323	ARG
3	S	328	THR
3	S	345	LEU
3	S	356	GLU
3	S	432	GLN
3	S	435	PRO
3	S	445	THR
3	T	6	ILE
3	T	9	LYS
3	T	17	LEU

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Mol	Chain	Res	Type
3	T	25	GLN
3	T	27	GLU
3	T	38	LYS
3	T	50	ASN
3	T	53	TYR
3	T	60	MET
3	T	66	ASP
3	T	85	CYS
3	T	89	TRP
3	T	98	ARG
3	T	101	ASP
3	T	131	ASP
3	T	137	HIS
3	T	139	SER
3	T	189	THR
3	T	201	PRO
3	T	209	THR
3	T	216	ARG
3	T	248	GLN
3	T	255	GLU
3	T	277	GLN
3	T	294	LEU
3	T	323	ARG
3	T	410	MET
3	T	432	GLN
3	T	447	SER
3	U	17	LEU
3	U	18	LYS
3	U	25	GLN
3	U	27	GLU
3	U	50	ASN
3	U	57	LEU
3	U	60	MET
3	U	66	ASP
3	U	85	CYS
3	U	89	TRP
3	U	98	ARG
3	U	101	ASP
3	U	130	ARG
3	U	137	HIS
3	U	172	ILE
3	U	174	GLU

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Mol	Chain	Res	Type
3	U	209	THR
3	U	243	THR
3	U	248	GLN
3	U	255	GLU
3	U	258	LEU
3	U	294	LEU
3	U	323	ARG
3	U	328	THR
3	U	345	LEU
3	V	5	LYS
3	V	8	PHE
3	V	23	VAL
3	V	27	GLU
3	V	38	LYS
3	V	50	ASN
3	V	60	MET
3	V	66	ASP
3	V	69	ASP
3	V	85	CYS
3	V	89	TRP
3	V	90	THR
3	V	98	ARG
3	V	131	ASP
3	V	137	HIS
3	V	172	ILE
3	V	189	THR
3	V	216	ARG
3	V	226	VAL
3	V	248	GLN
3	V	289	PHE
3	V	323	ARG
3	V	345	LEU
3	V	419	SER

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (229) such sidechains are listed below:

Mol	Chain	Res	Type
3	A	11	ASN
3	A	50	ASN
3	A	119	ASN
3	A	157	ASN
3	A	184	HIS

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Mol	Chain	Res	Type
3	A	248	GLN
3	A	264	ASN
3	A	420	HIS
3	A	431	HIS
3	A	432	GLN
3	B	191	HIS
3	B	264	ASN
3	B	283	HIS
3	B	288	HIS
3	B	307	HIS
3	B	336	HIS
3	B	420	HIS
3	B	431	HIS
3	B	432	GLN
3	C	50	ASN
3	C	137	HIS
3	C	184	HIS
3	C	219	HIS
3	C	248	GLN
3	C	264	ASN
3	C	283	HIS
3	C	288	HIS
3	C	307	HIS
3	C	336	HIS
3	C	420	HIS
3	C	431	HIS
3	C	432	GLN
3	D	191	HIS
3	D	248	GLN
3	D	264	ASN
3	D	277	GLN
3	D	283	HIS
3	D	288	HIS
3	D	307	HIS
3	D	420	HIS
3	D	432	GLN
3	E	50	ASN
3	E	119	ASN
3	E	164	ASN
3	E	264	ASN
3	E	307	HIS
3	E	420	HIS

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Mol	Chain	Res	Type
3	E	431	HIS
3	E	432	GLN
3	F	157	ASN
3	F	184	HIS
3	F	191	HIS
3	F	264	ASN
3	F	283	HIS
3	F	288	HIS
3	F	307	HIS
3	F	326	ASN
3	F	336	HIS
3	F	412	ASN
3	F	420	HIS
3	F	432	GLN
3	G	13	GLN
3	G	164	ASN
3	G	264	ASN
3	G	288	HIS
3	G	420	HIS
3	G	430	ASN
3	G	431	HIS
3	G	432	GLN
3	H	164	ASN
3	H	191	HIS
3	H	283	HIS
3	H	288	HIS
3	H	307	HIS
3	H	367	GLN
3	H	420	HIS
3	H	431	HIS
3	H	432	GLN
3	I	50	ASN
3	I	157	ASN
3	I	164	ASN
3	I	191	HIS
3	I	262	HIS
3	I	264	ASN
3	I	277	GLN
3	I	283	HIS
3	I	288	HIS
3	I	307	HIS
3	I	336	HIS

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Mol	Chain	Res	Type
3	I	420	HIS
3	I	432	GLN
3	J	13	GLN
3	J	50	ASN
3	J	191	HIS
3	J	248	GLN
3	J	264	ASN
3	J	277	GLN
3	J	288	HIS
3	J	321	GLN
3	J	336	HIS
3	J	420	HIS
3	J	431	HIS
3	J	432	GLN
3	K	50	ASN
3	K	137	HIS
3	K	164	ASN
3	K	248	GLN
3	K	264	ASN
3	K	277	GLN
3	K	288	HIS
3	K	420	HIS
3	K	431	HIS
3	K	432	GLN
3	L	50	ASN
3	L	157	ASN
3	L	191	HIS
3	L	248	GLN
3	L	264	ASN
3	L	336	HIS
3	L	420	HIS
3	L	431	HIS
3	L	432	GLN
3	M	191	HIS
3	M	264	ASN
3	M	288	HIS
3	M	307	HIS
3	M	420	HIS
3	M	432	GLN
3	N	50	ASN
3	N	184	HIS
3	N	191	HIS

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Mol	Chain	Res	Type
3	N	248	GLN
3	N	264	ASN
3	N	288	HIS
3	N	307	HIS
3	N	326	ASN
3	N	336	HIS
3	N	420	HIS
3	N	432	GLN
3	O	13	GLN
3	O	50	ASN
3	O	191	HIS
3	O	264	ASN
3	O	277	GLN
3	O	288	HIS
3	O	307	HIS
3	O	321	GLN
3	O	336	HIS
3	O	420	HIS
3	O	431	HIS
3	O	432	GLN
3	P	50	ASN
3	P	119	ASN
3	P	157	ASN
3	P	164	ASN
3	P	191	HIS
3	P	264	ASN
3	P	277	GLN
3	P	283	HIS
3	P	288	HIS
3	P	307	HIS
3	P	326	ASN
3	P	420	HIS
3	P	432	GLN
3	Q	50	ASN
3	Q	137	HIS
3	Q	184	HIS
3	Q	191	HIS
3	Q	264	ASN
3	Q	277	GLN
3	Q	283	HIS
3	Q	288	HIS
3	Q	307	HIS

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Mol	Chain	Res	Type
3	Q	336	HIS
3	Q	420	HIS
3	Q	431	HIS
3	Q	432	GLN
3	R	13	GLN
3	R	50	ASN
3	R	164	ASN
3	R	248	GLN
3	R	288	HIS
3	R	321	GLN
3	R	420	HIS
3	R	431	HIS
3	R	432	GLN
3	S	50	ASN
3	S	137	HIS
3	S	157	ASN
3	S	164	ASN
3	S	184	HIS
3	S	264	ASN
3	S	277	GLN
3	S	288	HIS
3	S	420	HIS
3	S	431	HIS
3	S	432	GLN
3	T	137	HIS
3	T	191	HIS
3	T	262	HIS
3	T	264	ASN
3	T	277	GLN
3	T	288	HIS
3	T	307	HIS
3	T	336	HIS
3	T	420	HIS
3	T	431	HIS
3	T	432	GLN
3	U	12	ASN
3	U	25	GLN
3	U	157	ASN
3	U	184	HIS
3	U	191	HIS
3	U	248	GLN
3	U	264	ASN

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Mol	Chain	Res	Type
3	U	277	GLN
3	U	288	HIS
3	U	307	HIS
3	U	420	HIS
3	U	431	HIS
3	U	432	GLN
3	V	50	ASN
3	V	164	ASN
3	V	191	HIS
3	V	264	ASN
3	V	288	HIS
3	V	336	HIS
3	V	420	HIS
3	V	432	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	W	98/99 (98%)	44 (44%)	4 (4%)
2	X	98/99 (98%)	40 (40%)	3 (3%)
All	All	196/198 (98%)	84 (42%)	7 (3%)

All (84) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	W	2	C
1	W	3	C
1	W	4	C
1	W	6	C
1	W	7	C
1	W	8	A
1	W	9	C
1	W	10	C
1	W	11	C
1	W	13	C
1	W	16	A
1	W	18	A
1	W	27	C
1	W	28	C
1	W	31	C
1	W	33	A

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Mol	Chain	Res	Type
1	W	34	A
1	W	36	C
1	W	37	C
1	W	43	A
1	W	45	C
1	W	46	C
1	W	49	C
1	W	52	C
1	W	53	C
1	W	54	C
1	W	56	C
1	W	63	C
1	W	65	C
1	W	67	C
1	W	68	C
1	W	69	A
1	W	70	A
1	W	72	C
1	W	73	C
1	W	81	C
1	W	82	C
1	W	84	A
1	W	90	C
1	W	94	C
1	W	95	A
1	W	97	A
1	W	98	A
1	W	99	C
2	X	4	C
2	X	9	C
2	X	10	C
2	X	11	C
2	X	12	A
2	X	18	C
2	X	19	C
2	X	21	C
2	X	25	C
2	X	27	C
2	X	36	C
2	X	38	C
2	X	41	A
2	X	45	C

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Mol	Chain	Res	Type
2	X	46	C
2	X	49	C
2	X	52	A
2	X	53	A
2	X	54	C
2	X	55	C
2	X	56	C
2	X	63	C
2	X	64	C
2	X	65	C
2	X	66	C
2	X	67	C
2	X	70	A
2	X	72	C
2	X	73	C
2	X	79	A
2	X	81	C
2	X	85	C
2	X	86	C
2	X	88	A
2	X	89	C
2	X	90	C
2	X	91	C
2	X	94	C
2	X	97	A
2	X	99	C

All (7) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	W	2	C
1	W	53	C
1	W	68	C
1	W	94	C
2	X	21	C
2	X	65	C
2	X	72	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 carbohydrates in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 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, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å ²)	Q<0.9
1	W	99/99 (100%)	0.14	3 (3%)	50	44	50, 73, 96, 128	0
2	X	99/99 (100%)	0.16	4 (4%)	38	33	39, 68, 93, 114	0
3	A	401/450 (89%)	0.12	19 (4%)	31	28	28, 83, 106, 112	0
3	B	401/450 (89%)	0.19	21 (5%)	27	24	28, 83, 105, 112	0
3	C	404/450 (89%)	0.11	17 (4%)	36	32	27, 81, 104, 115	0
3	D	400/450 (88%)	0.14	18 (4%)	33	29	28, 84, 107, 115	0
3	E	400/450 (88%)	0.33	37 (9%)	8	9	29, 87, 111, 117	0
3	F	405/450 (90%)	0.27	23 (5%)	23	21	28, 83, 107, 113	0
3	G	400/450 (88%)	0.22	26 (6%)	18	17	28, 86, 108, 115	0
3	H	400/450 (88%)	0.16	23 (5%)	23	20	28, 85, 106, 114	0
3	I	403/450 (89%)	0.11	15 (3%)	41	37	28, 82, 105, 117	0
3	J	405/450 (90%)	0.17	25 (6%)	20	18	28, 85, 110, 120	0
3	K	401/450 (89%)	0.06	10 (2%)	57	51	27, 82, 106, 114	0
3	L	406/450 (90%)	0.08	12 (2%)	50	44	27, 80, 102, 114	0
3	M	404/450 (89%)	0.21	20 (4%)	28	25	28, 84, 107, 113	0
3	N	405/450 (90%)	0.17	18 (4%)	34	30	27, 81, 105, 112	0
3	O	400/450 (88%)	0.24	29 (7%)	15	15	28, 86, 106, 115	0
3	P	399/450 (88%)	0.18	15 (3%)	40	36	28, 85, 106, 113	0
3	Q	402/450 (89%)	0.10	15 (3%)	41	37	28, 82, 104, 115	0
3	R	401/450 (89%)	0.28	36 (8%)	9	10	29, 87, 111, 117	0
3	S	401/450 (89%)	0.20	24 (5%)	21	19	28, 83, 105, 112	0
3	T	400/450 (88%)	0.07	13 (3%)	46	41	27, 81, 104, 116	0
3	U	403/450 (89%)	0.12	22 (5%)	25	22	28, 82, 106, 118	0
3	V	405/450 (90%)	0.21	22 (5%)	25	23	28, 82, 106, 116	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
All	All	9044/10098 (89%)	0.17	467 (5%) 27 24	27, 83, 106, 128	0

All (467) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
3	O	125	GLY	8.8
3	O	185	HIS	8.7
3	R	35	ASP	7.7
3	D	92	TYR	6.7
3	J	375	THR	6.2
3	G	185	HIS	6.1
3	E	46	ALA	5.6
3	E	185	HIS	5.6
3	V	24	ASP	5.6
3	M	11	ASN	5.5
3	F	185	HIS	5.5
3	Q	185	HIS	5.4
3	G	125	GLY	5.3
3	E	92	TYR	5.3
3	M	185	HIS	5.2
3	K	92	TYR	5.0
3	V	45	LYS	5.0
3	E	42	THR	5.0
3	R	42	THR	4.9
3	R	95	VAL	4.8
3	R	41	ILE	4.8
3	G	34	LYS	4.7
3	A	363	GLU	4.7
3	E	156	GLN	4.7
3	H	185	HIS	4.7
3	E	44	GLY	4.7
3	I	92	TYR	4.7
3	C	15	VAL	4.5
3	E	47	PRO	4.5
3	T	185	HIS	4.5
3	R	43	LEU	4.4
3	V	92	TYR	4.4
3	J	92	TYR	4.4
3	D	89	TRP	4.4
3	O	42	THR	4.3
3	E	45	LYS	4.3
3	D	398	GLU	4.3

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Mol	Chain	Res	Type	RSRZ
3	B	185	HIS	4.3
3	S	362	ASP	4.3
3	G	399	THR	4.3
3	F	218	GLU	4.2
3	R	92	TYR	4.2
3	M	12	ASN	4.2
3	P	60	MET	4.2
1	W	33	A	4.2
3	S	60	MET	4.2
3	V	117	GLU	4.2
3	U	60	MET	4.1
3	C	185	HIS	4.1
3	F	92	TYR	4.1
3	A	185	HIS	4.1
3	S	185	HIS	4.1
3	M	125	GLY	4.1
3	Q	92	TYR	4.1
3	O	45	LYS	4.1
3	J	94	ILE	4.1
3	T	35	ASP	4.0
3	C	9	LYS	4.0
3	G	42	THR	4.0
3	N	15	VAL	4.0
3	P	185	HIS	4.0
3	V	125	GLY	4.0
3	S	132	PRO	4.0
3	O	41	ILE	4.0
3	V	185	HIS	4.0
3	S	89	TRP	3.9
3	F	126	MET	3.9
3	H	42	THR	3.9
3	C	157	ASN	3.9
3	N	185	HIS	3.9
3	V	89	TRP	3.9
3	Q	12	ASN	3.9
3	B	89	TRP	3.9
3	I	24	ASP	3.9
3	B	24	ASP	3.9
3	J	80	PHE	3.8
3	V	373	GLU	3.8
3	U	41	ILE	3.8
3	U	156	GLN	3.8

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Mol	Chain	Res	Type	RSRZ
3	S	78	MET	3.8
3	M	398	GLU	3.8
3	R	34	LYS	3.8
3	I	89	TRP	3.8
3	L	60	MET	3.8
3	G	26	HIS	3.7
3	L	80	PHE	3.7
3	I	12	ASN	3.7
3	I	80	PHE	3.7
3	Q	26	HIS	3.7
3	R	94	ILE	3.7
3	B	399	THR	3.7
3	S	102	LYS	3.6
3	S	119	ASN	3.6
3	S	156	GLN	3.6
3	U	78	MET	3.6
3	M	154	SER	3.6
3	E	369	TYR	3.6
3	N	296	GLY	3.6
3	A	125	GLY	3.5
3	T	92	TYR	3.5
3	I	79	GLN	3.5
3	J	79	GLN	3.5
3	V	34	LYS	3.5
3	U	374	LEU	3.5
3	N	92	TYR	3.5
3	D	35	ASP	3.5
3	R	123	THR	3.5
3	B	34	LYS	3.5
3	R	124	GLY	3.4
3	L	185	HIS	3.4
3	F	80	PHE	3.4
3	E	125	GLY	3.4
3	L	375	THR	3.4
3	H	297	LYS	3.4
3	M	35	ASP	3.4
3	J	374	LEU	3.4
3	S	90	THR	3.4
3	J	89	TRP	3.4
3	J	36	LEU	3.4
3	B	11	ASN	3.4
3	K	45	LYS	3.4

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Mol	Chain	Res	Type	RSRZ
3	R	90	THR	3.4
3	R	36	LEU	3.3
3	L	92	TYR	3.3
3	F	60	MET	3.3
3	A	92	TYR	3.3
3	H	92	TYR	3.3
3	D	26	HIS	3.3
3	G	33	ILE	3.2
3	Q	24	ASP	3.2
3	C	11	ASN	3.2
3	P	92	TYR	3.2
3	U	125	GLY	3.2
3	G	132	PRO	3.2
3	S	45	LYS	3.2
3	F	125	GLY	3.2
3	R	24	ASP	3.2
3	T	26	HIS	3.2
3	R	120	TRP	3.2
3	U	34	LYS	3.2
3	S	92	TYR	3.2
3	H	33	ILE	3.2
3	U	157	ASN	3.2
3	E	35	ASP	3.2
3	E	41	ILE	3.2
3	R	11	ASN	3.2
3	U	35	ASP	3.2
3	H	132	PRO	3.1
3	O	43	LEU	3.1
3	U	92	TYR	3.1
3	A	35	ASP	3.1
3	R	89	TRP	3.1
3	A	12	ASN	3.1
3	U	185	HIS	3.1
3	C	24	ASP	3.1
3	M	92	TYR	3.1
1	W	6	C	3.1
3	B	432	GLN	3.1
3	R	60	MET	3.1
3	A	41	ILE	3.0
3	H	26	HIS	3.0
2	X	87	A	3.0
3	F	24	ASP	3.0

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Mol	Chain	Res	Type	RSRZ
3	C	60	MET	3.0
3	G	81	PHE	3.0
3	O	297	LYS	3.0
3	Q	25	GLN	3.0
3	U	42	THR	3.0
3	Q	9	LYS	3.0
3	F	375	THR	3.0
3	E	43	LEU	3.0
3	C	78	MET	3.0
3	N	80	PHE	3.0
3	C	411	MET	3.0
3	T	42	THR	3.0
3	U	80	PHE	2.9
3	G	45	LYS	2.9
3	N	78	MET	2.9
3	V	60	MET	2.9
3	G	94	ILE	2.9
3	R	84	THR	2.9
3	J	156	GLN	2.9
3	P	125	GLY	2.9
3	H	34	LYS	2.9
3	H	60	MET	2.9
3	J	35	ASP	2.9
3	N	60	MET	2.9
3	B	157	ASN	2.9
3	E	80	PHE	2.9
3	A	156	GLN	2.9
3	G	92	TYR	2.9
3	Q	399	THR	2.9
3	E	297	LYS	2.9
3	J	221	TYR	2.9
3	A	34	LYS	2.9
3	B	26	HIS	2.9
3	G	297	LYS	2.9
3	J	93	GLY	2.9
3	O	26	HIS	2.9
3	O	96	ILE	2.8
3	Q	89	TRP	2.8
3	O	34	LYS	2.8
3	G	184	HIS	2.8
2	X	6	A	2.8
3	V	11	ASN	2.8

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Mol	Chain	Res	Type	RSRZ
3	O	44	GLY	2.8
3	G	41	ILE	2.8
3	C	92	TYR	2.8
3	O	295	SER	2.8
3	K	364	LYS	2.8
3	S	125	GLY	2.8
3	N	41	ILE	2.8
3	D	24	ASP	2.8
3	I	71	CYS	2.8
3	F	41	ILE	2.8
3	F	15	VAL	2.8
3	E	11	ASN	2.8
3	V	399	THR	2.8
3	J	184	HIS	2.8
3	J	185	HIS	2.8
3	K	185	HIS	2.8
3	I	95	VAL	2.8
3	T	189	THR	2.8
3	N	14	VAL	2.8
3	R	80	PHE	2.8
3	L	71	CYS	2.8
3	M	132	PRO	2.8
3	N	9	LYS	2.8
3	U	95	VAL	2.8
3	J	82	GLU	2.7
3	S	35	ASP	2.7
3	C	296	GLY	2.7
3	B	41	ILE	2.7
3	E	94	ILE	2.7
3	F	177	PRO	2.7
3	U	9	LYS	2.7
3	L	79	GLN	2.7
3	O	432	GLN	2.7
3	M	45	LYS	2.7
3	F	296	GLY	2.7
3	P	80	PHE	2.7
3	A	218	GLU	2.7
3	E	154	SER	2.7
3	J	12	ASN	2.7
3	O	80	PHE	2.7
3	D	88	ASP	2.7
3	K	42	THR	2.7

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Mol	Chain	Res	Type	RSRZ
3	H	218	GLU	2.7
3	A	26	HIS	2.7
3	D	125	GLY	2.7
3	E	296	GLY	2.7
3	D	41	ILE	2.7
3	M	60	MET	2.7
3	S	364	LYS	2.7
3	S	124	GLY	2.7
3	S	414	GLY	2.7
3	R	40	CYS	2.7
3	T	364	LYS	2.7
1	W	7	C	2.7
3	F	34	LYS	2.6
3	F	216	ARG	2.6
3	D	102	LYS	2.6
3	F	156	GLN	2.6
3	Q	80	PHE	2.6
3	H	45	LYS	2.6
3	V	9	LYS	2.6
3	B	398	GLU	2.6
3	M	42	THR	2.6
3	N	42	THR	2.6
3	U	79	GLN	2.6
3	P	218	GLU	2.6
3	S	123	THR	2.6
3	A	60	MET	2.6
3	O	332	ALA	2.6
3	S	157	ASN	2.6
3	P	132	PRO	2.6
3	I	185	HIS	2.6
3	L	41	ILE	2.6
3	R	93	GLY	2.6
3	C	79	GLN	2.6
3	J	103	ILE	2.6
3	R	26	HIS	2.6
3	B	156	GLN	2.5
3	U	53	TYR	2.5
3	O	130	ARG	2.5
3	Q	362	ASP	2.5
3	B	42	THR	2.5
3	E	93	GLY	2.5
3	E	60	MET	2.5

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Mol	Chain	Res	Type	RSRZ
3	E	12	ASN	2.5
3	E	95	VAL	2.5
3	G	95	VAL	2.5
3	H	90	THR	2.5
3	C	35	ASP	2.5
3	U	218	GLU	2.5
3	E	34	LYS	2.5
3	R	45	LYS	2.5
3	F	184	HIS	2.5
3	B	158	THR	2.5
3	B	132	PRO	2.5
3	O	35	ASP	2.5
3	M	157	ASN	2.5
3	N	218	GLU	2.5
3	O	124	GLY	2.5
3	A	21	ILE	2.5
3	F	303	ASN	2.5
3	E	430	ASN	2.5
3	B	35	ASP	2.5
3	G	411	MET	2.5
3	H	398	GLU	2.5
3	R	12	ASN	2.5
3	D	96	ILE	2.5
3	I	26	HIS	2.5
3	V	154	SER	2.5
3	G	124	GLY	2.4
3	I	23	VAL	2.4
3	P	42	THR	2.4
3	F	45	LYS	2.4
3	J	102	LYS	2.4
3	S	296	GLY	2.4
3	O	81	PHE	2.4
3	P	96	ILE	2.4
3	R	119	ASN	2.4
3	H	184	HIS	2.4
3	O	88	ASP	2.4
3	Q	35	ASP	2.4
3	R	154	SER	2.4
3	M	156	GLN	2.4
3	D	158	THR	2.4
3	B	125	GLY	2.4
3	E	132	PRO	2.4

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Mol	Chain	Res	Type	RSRZ
3	R	29	LYS	2.4
3	V	156	GLN	2.4
3	V	158	THR	2.4
3	I	448	SER	2.4
3	L	374	LEU	2.4
3	R	44	GLY	2.4
3	D	90	THR	2.4
3	M	24	ASP	2.4
3	E	155	GLY	2.4
3	N	36	LEU	2.4
3	E	81	PHE	2.4
3	E	432	GLN	2.4
3	S	141	VAL	2.4
3	R	132	PRO	2.4
3	A	158	THR	2.4
3	M	89	TRP	2.4
3	Q	60	MET	2.4
3	A	157	ASN	2.4
3	F	35	ASP	2.3
3	V	432	GLN	2.3
3	C	26	HIS	2.3
3	T	36	LEU	2.3
3	C	34	LYS	2.3
3	G	218	GLU	2.3
3	J	398	GLU	2.3
3	F	90	THR	2.3
3	O	89	TRP	2.3
3	E	131	ASP	2.3
3	P	35	ASP	2.3
3	H	93	GLY	2.3
3	D	185	HIS	2.3
3	O	303	ASN	2.3
3	N	131	ASP	2.3
3	V	102	LYS	2.3
3	G	96	ILE	2.3
3	N	79	GLN	2.3
3	J	11	ASN	2.3
3	T	45	LYS	2.3
3	V	372	ALA	2.3
3	E	158	THR	2.2
3	H	131	ASP	2.2
3	E	282	PRO	2.2

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Mol	Chain	Res	Type	RSRZ
3	A	81	PHE	2.2
3	H	125	GLY	2.2
3	M	219	HIS	2.2
3	I	373	GLU	2.2
3	S	80	PHE	2.2
3	E	157	ASN	2.2
3	A	9	LYS	2.2
3	O	95	VAL	2.2
3	T	156	GLN	2.2
3	J	34	LYS	2.2
3	B	92	TYR	2.2
3	D	45	LYS	2.2
3	H	89	TRP	2.2
3	D	25	GLN	2.2
3	K	35	ASP	2.2
3	R	129	THR	2.2
3	O	92	TYR	2.2
3	S	5	LYS	2.2
3	A	432	GLN	2.2
3	P	432	GLN	2.2
3	K	362	ASP	2.2
3	R	161	TYR	2.2
3	G	131	ASP	2.2
2	X	69	A	2.2
3	O	135	PRO	2.1
3	E	24	ASP	2.1
3	U	45	LYS	2.1
2	X	51	A	2.1
3	E	89	TRP	2.1
3	H	53	TYR	2.1
3	N	219	HIS	2.1
3	O	84	THR	2.1
3	V	129	THR	2.1
3	M	16	SER	2.1
3	T	34	LYS	2.1
3	K	60	MET	2.1
3	O	296	GLY	2.1
3	D	157	ASN	2.1
3	M	13	GLN	2.1
3	F	36	LEU	2.1
3	G	43	LEU	2.1
3	U	17	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
3	R	185	HIS	2.1
3	E	398	GLU	2.1
3	A	79	GLN	2.1
3	N	6	ILE	2.1
3	H	41	ILE	2.1
3	R	156	GLN	2.1
3	E	9	LYS	2.1
3	B	154	SER	2.1
3	J	433	ALA	2.1
3	K	26	HIS	2.1
3	T	89	TRP	2.1
3	G	156	GLN	2.1
3	O	123	THR	2.1
3	P	8	PHE	2.1
3	F	53	TYR	2.1
3	L	9	LYS	2.1
3	P	34	LYS	2.1
3	G	103	ILE	2.1
3	H	24	ASP	2.1
3	R	131	ASP	2.1
3	M	10	VAL	2.1
3	R	433	ALA	2.1
3	H	296	GLY	2.1
3	D	85	CYS	2.1
3	K	89	TRP	2.1
3	Q	81	PHE	2.1
3	U	81	PHE	2.1
3	O	102	LYS	2.1
3	C	42	THR	2.1
3	L	24	ASP	2.1
3	B	121	ALA	2.0
3	B	161	TYR	2.0
3	H	47	PRO	2.0
3	I	16	SER	2.0
3	G	84	THR	2.0
3	I	21	ILE	2.0
3	Q	36	LEU	2.0
3	R	221	TYR	2.0
3	T	53	TYR	2.0
3	N	157	ASN	2.0
3	P	189	THR	2.0
3	G	35	ASP	2.0

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Mol	Chain	Res	Type	RSRZ
3	U	24	ASP	2.0
3	J	43	LEU	2.0
3	J	45	LYS	2.0
3	L	8	PHE	2.0
3	S	79	GLN	2.0
3	V	25	GLN	2.0
3	P	285	TYR	2.0
3	C	23	VAL	2.0
3	J	95	VAL	2.0
3	V	95	VAL	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 carbohydrates in this entry.

6.4 Ligands [i](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.