wwPDB EM Map/Model Validation Report (i)

Apr 10, 2016 – 01:50 PM BST

PDB ID	:	3J2M
EMDB ID:	:	EMD-1126
Title	:	The X-ray structure of the gp15 hexamer and the model of the gp18 protein fitted into the cryo-EM reconstruction of the extended T4 tail
Authors	:	Fokine, A.; Zhang, Z.; Kanamaru, S.; Bowman, V.D.; Aksyuk, A.; Arisaka, F.; Rao, V.B.; Rossmann, M.G.
Deposited on	:	2012-11-09
Resolution	:	15.00 Å(reported)

This is a wwPDB EM Map/Model Validation Report for a publicly released PDB/EMDB entry.
For rigid body fitted models, validation errors reported here could
stem from errors in the original structure(s) used in the fitting.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
http://wwpdb.org/validation/2016/EMValidationReportHelp

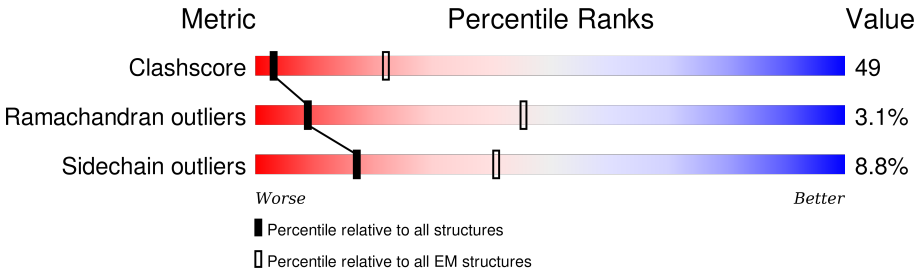
MolProbity	:	4.02b-467
Mogul	:	unknown
Percentile statistics	:	20151230.v01 (using entries in the PDB archive December 30th 2015)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP)	:	trunk27241

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 15.00 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	114402	924
Ramachandran outliers	111179	726
Sidechain outliers	111093	686

The table below summarises the geometric issues observed across the polymeric chains. The red, orange, yellow and green segments on the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5%

Mol	Chain	Length	Quality of chain
1	A	272	58% 17% • 22%
1	B	272	60% 15% • 22%
1	C	272	57% 17% • 22%
1	D	272	60% 14% • 22%
1	E	272	60% 14% • 22%
1	F	272	60% 15% • 22%
2	U	659	33% 50% 9% 8%
2	V	659	34% 49% 9% 8%
2	W	659	34% 49% 9% 8%

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Mol	Chain	Length	Quality of chain
2	X	659	34% 49% 9% 8%
2	Y	659	34% 49% 9% 8%
2	Z	659	33% 50% 9% 8%

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 38334 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Tail connector protein Gp15.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	211	Total	C	N	O	S	0	0
			1742	1123	283	328	8		
1	B	211	Total	C	N	O	S	0	0
			1742	1123	283	328	8		
1	C	211	Total	C	N	O	S	0	0
			1742	1123	283	328	8		
1	D	211	Total	C	N	O	S	0	0
			1742	1123	283	328	8		
1	E	211	Total	C	N	O	S	0	0
			1742	1123	283	328	8		
1	F	211	Total	C	N	O	S	0	0
			1742	1123	283	328	8		

- Molecule 2 is a protein called Tail sheath protein Gp18.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	U	609	Total	C	N	O	S	0	0
			4647	2929	785	923	10		
2	V	609	Total	C	N	O	S	0	0
			4647	2929	785	923	10		
2	W	609	Total	C	N	O	S	0	0
			4647	2929	785	923	10		
2	X	609	Total	C	N	O	S	0	0
			4647	2929	785	923	10		
2	Y	609	Total	C	N	O	S	0	0
			4647	2929	785	923	10		
2	Z	609	Total	C	N	O	S	0	0
			4647	2929	785	923	10		

There are 48 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
U	100	GLU	ASP	SEE REMARK 999	UNP P13332
U	148	ALA	GLY	SEE REMARK 999	UNP P13332

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Chain	Residue	Modelled	Actual	Comment	Reference
U	150	ILE	ASN	SEE REMARK 999	UNP P13332
U	151	ILE	TYR	SEE REMARK 999	UNP P13332
U	301	GLY	GLU	SEE REMARK 999	UNP P13332
U	399	VAL	ALA	SEE REMARK 999	UNP P13332
U	454	TYR	HIS	SEE REMARK 999	UNP P13332
U	510	PRO	ARG	ENGINEERED MUTATION	UNP P13332
V	100	GLU	ASP	SEE REMARK 999	UNP P13332
V	148	ALA	GLY	SEE REMARK 999	UNP P13332
V	150	ILE	ASN	SEE REMARK 999	UNP P13332
V	151	ILE	TYR	SEE REMARK 999	UNP P13332
V	301	GLY	GLU	SEE REMARK 999	UNP P13332
V	399	VAL	ALA	SEE REMARK 999	UNP P13332
V	454	TYR	HIS	SEE REMARK 999	UNP P13332
V	510	PRO	ARG	ENGINEERED MUTATION	UNP P13332
W	100	GLU	ASP	SEE REMARK 999	UNP P13332
W	148	ALA	GLY	SEE REMARK 999	UNP P13332
W	150	ILE	ASN	SEE REMARK 999	UNP P13332
W	151	ILE	TYR	SEE REMARK 999	UNP P13332
W	301	GLY	GLU	SEE REMARK 999	UNP P13332
W	399	VAL	ALA	SEE REMARK 999	UNP P13332
W	454	TYR	HIS	SEE REMARK 999	UNP P13332
W	510	PRO	ARG	ENGINEERED MUTATION	UNP P13332
X	100	GLU	ASP	SEE REMARK 999	UNP P13332
X	148	ALA	GLY	SEE REMARK 999	UNP P13332
X	150	ILE	ASN	SEE REMARK 999	UNP P13332
X	151	ILE	TYR	SEE REMARK 999	UNP P13332
X	301	GLY	GLU	SEE REMARK 999	UNP P13332
X	399	VAL	ALA	SEE REMARK 999	UNP P13332
X	454	TYR	HIS	SEE REMARK 999	UNP P13332
X	510	PRO	ARG	ENGINEERED MUTATION	UNP P13332
Y	100	GLU	ASP	SEE REMARK 999	UNP P13332
Y	148	ALA	GLY	SEE REMARK 999	UNP P13332
Y	150	ILE	ASN	SEE REMARK 999	UNP P13332
Y	151	ILE	TYR	SEE REMARK 999	UNP P13332
Y	301	GLY	GLU	SEE REMARK 999	UNP P13332
Y	399	VAL	ALA	SEE REMARK 999	UNP P13332
Y	454	TYR	HIS	SEE REMARK 999	UNP P13332
Y	510	PRO	ARG	ENGINEERED MUTATION	UNP P13332
Z	100	GLU	ASP	SEE REMARK 999	UNP P13332
Z	148	ALA	GLY	SEE REMARK 999	UNP P13332
Z	150	ILE	ASN	SEE REMARK 999	UNP P13332
Z	151	ILE	TYR	SEE REMARK 999	UNP P13332

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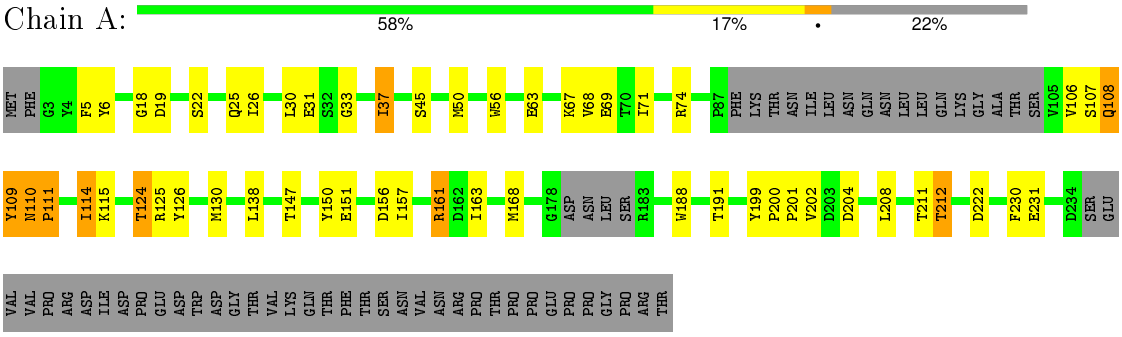
Chain	Residue	Modelled	Actual	Comment	Reference
Z	301	GLY	GLU	SEE REMARK 999	UNP P13332
Z	399	VAL	ALA	SEE REMARK 999	UNP P13332
Z	454	TYR	HIS	SEE REMARK 999	UNP P13332
Z	510	PRO	ARG	ENGINEERED MUTATION	UNP P13332

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 errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. 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. 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.

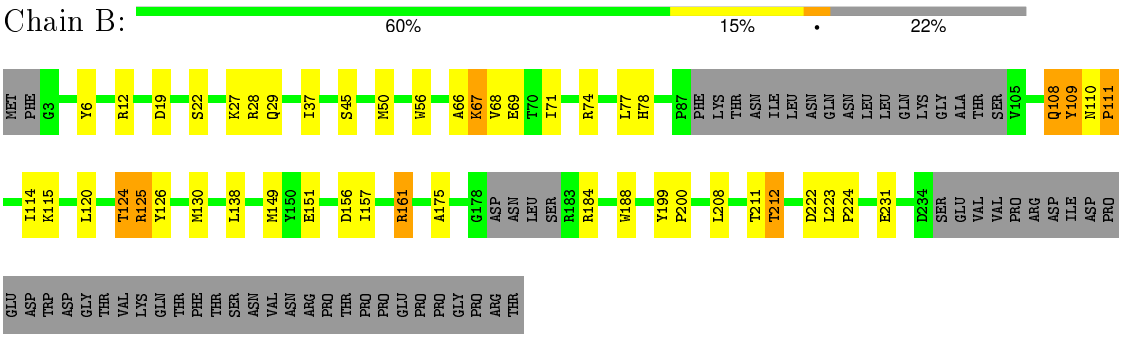
- Molecule 1: Tail connector protein Gp15

Chain A:



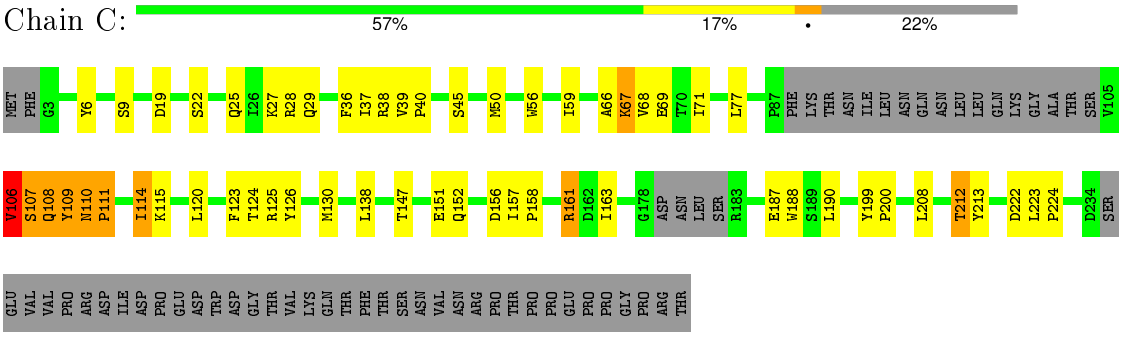
- Molecule 1: Tail connector protein Gp15

Chain B:



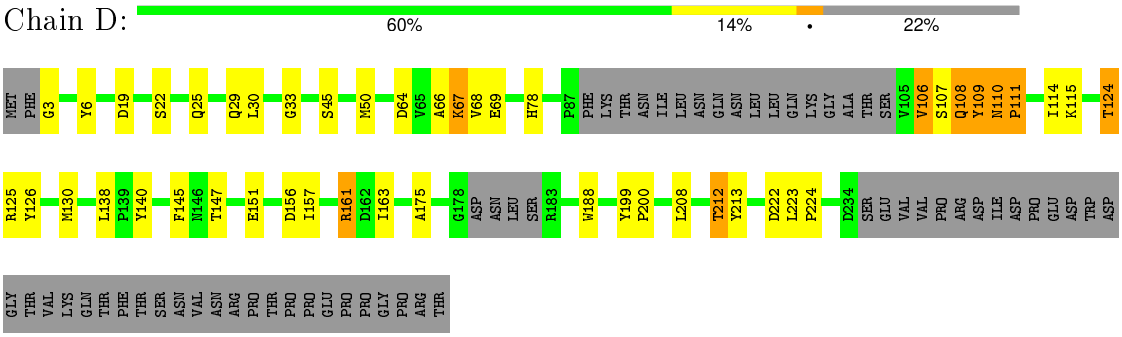
- Molecule 1: Tail connector protein Gp15

Chain C:



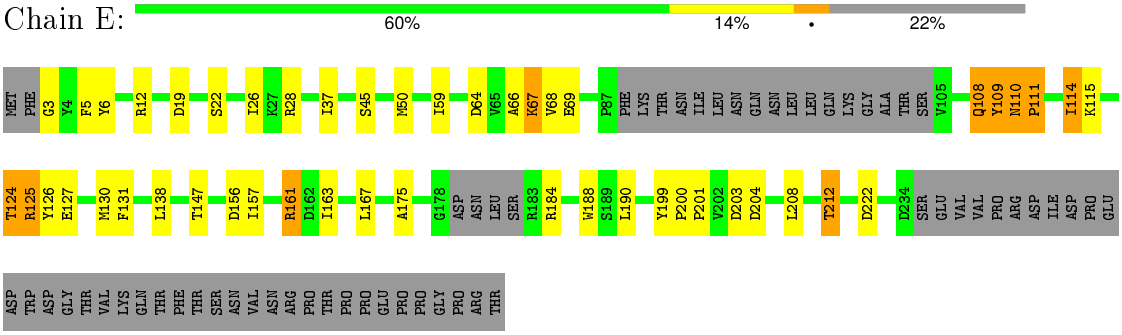
- Molecule 1: Tail connector protein Gp15

Chain D:



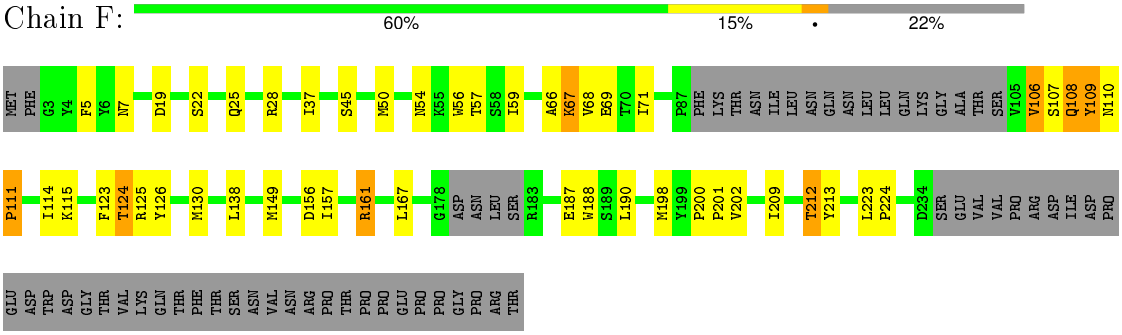
- Molecule 1: Tail connector protein Gp15

Chain E:



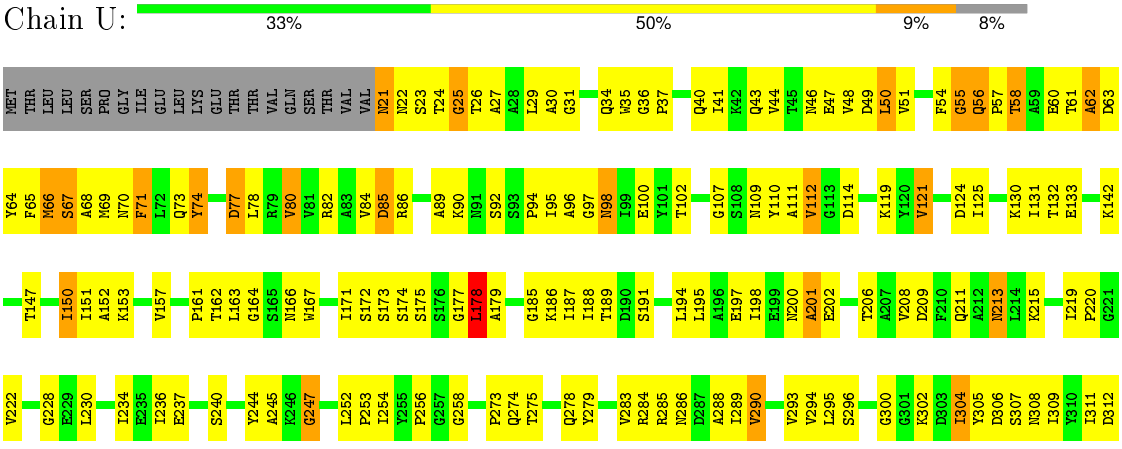
- Molecule 1: Tail connector protein Gp15

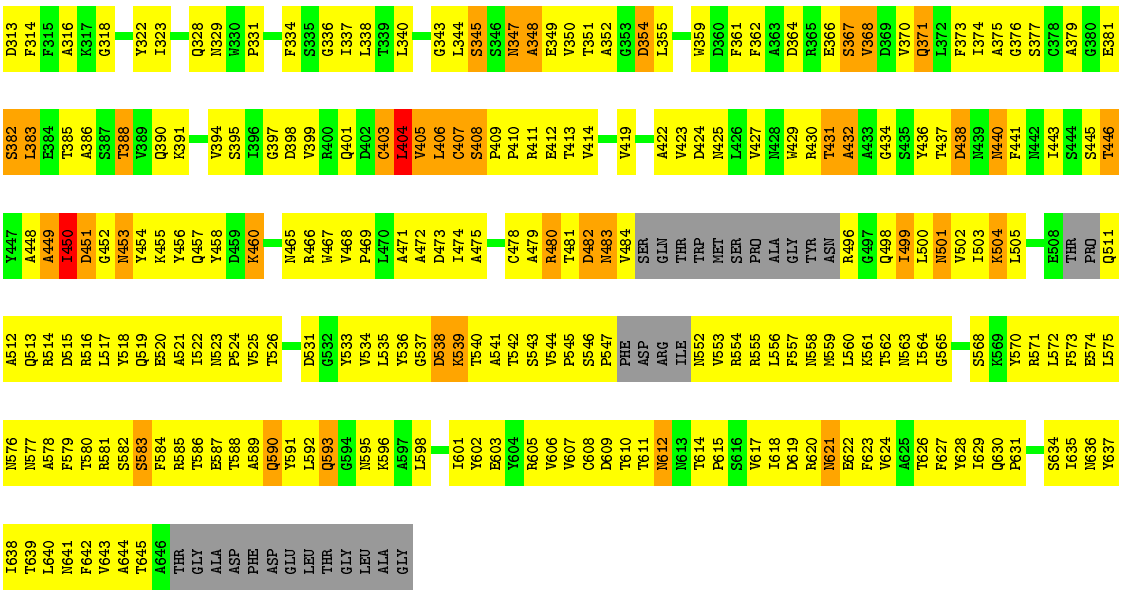
Chain F:



- Molecule 2: Tail sheath protein Gp18

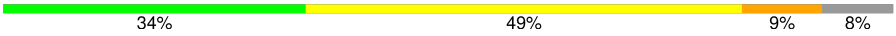
Chain U:

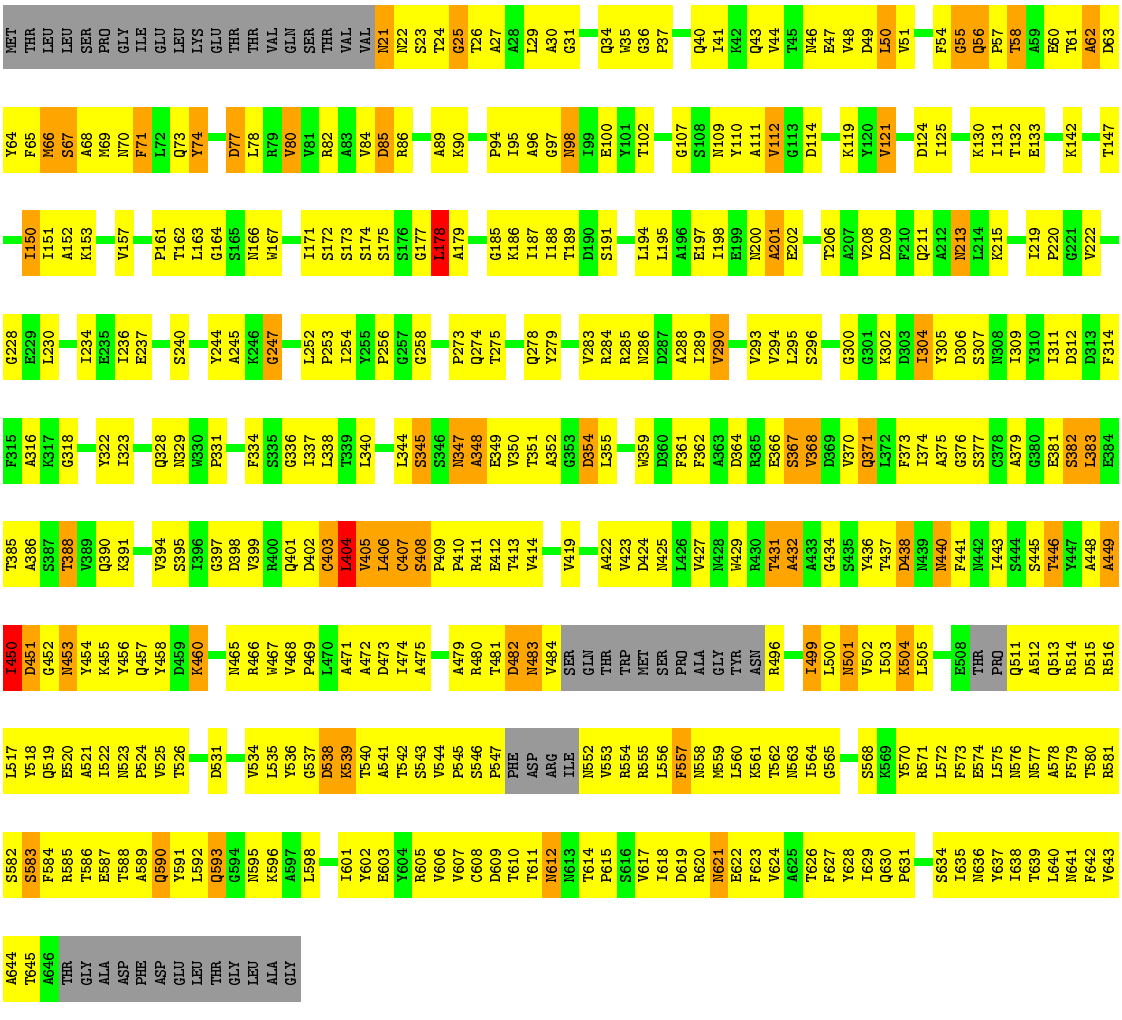




• Molecule 2: Tail sheath protein Gp18

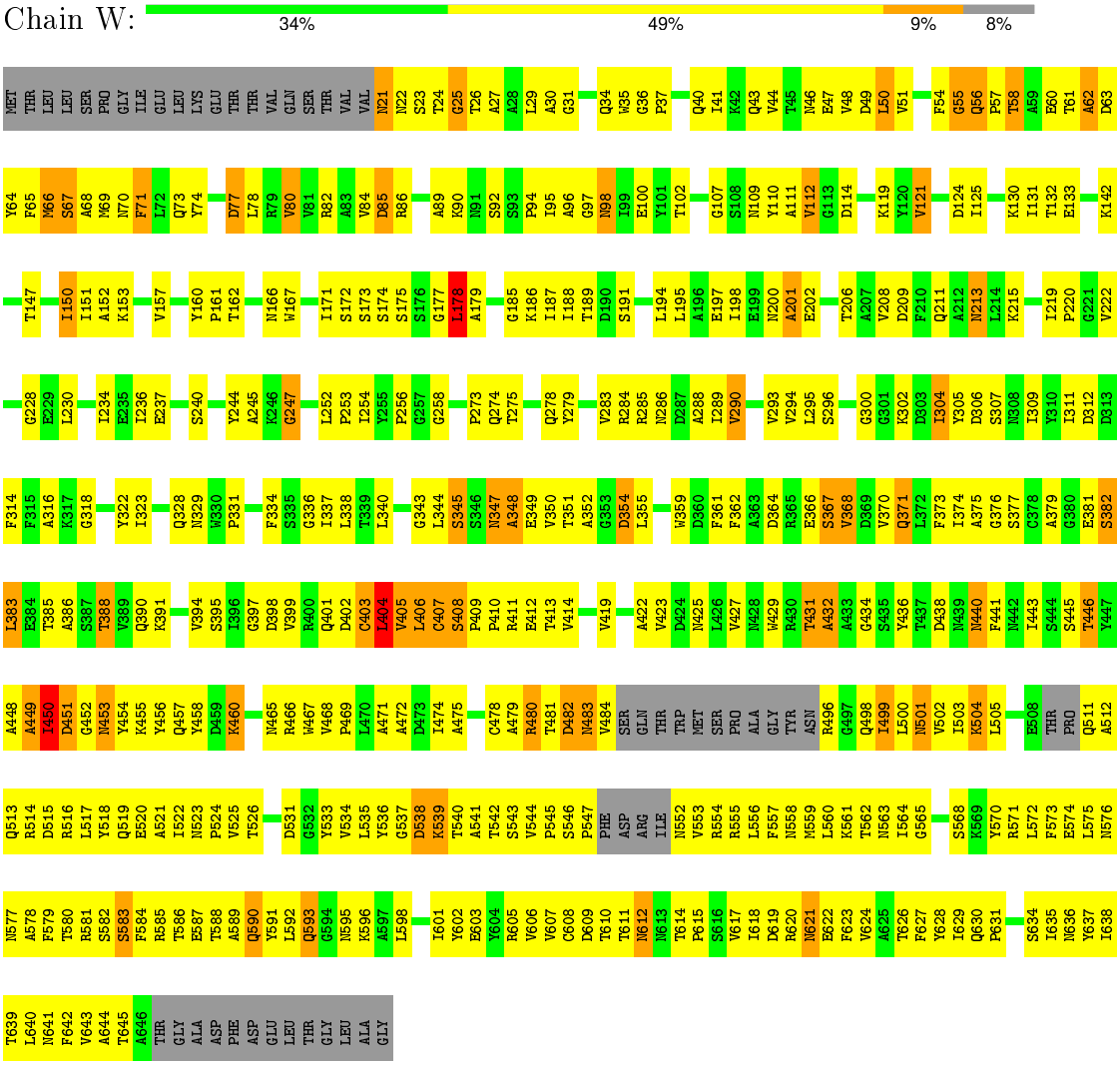
Chain V:





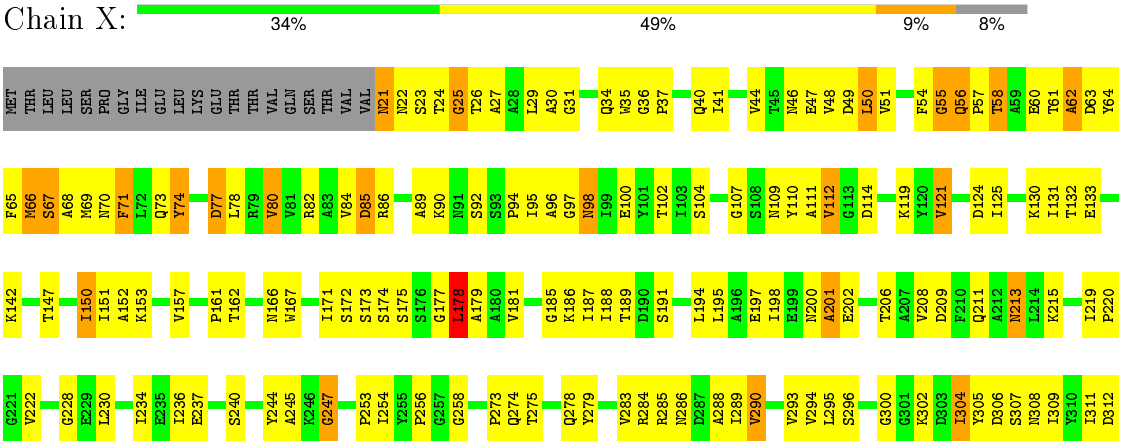
- Molecule 2: Tail sheath protein Gp18

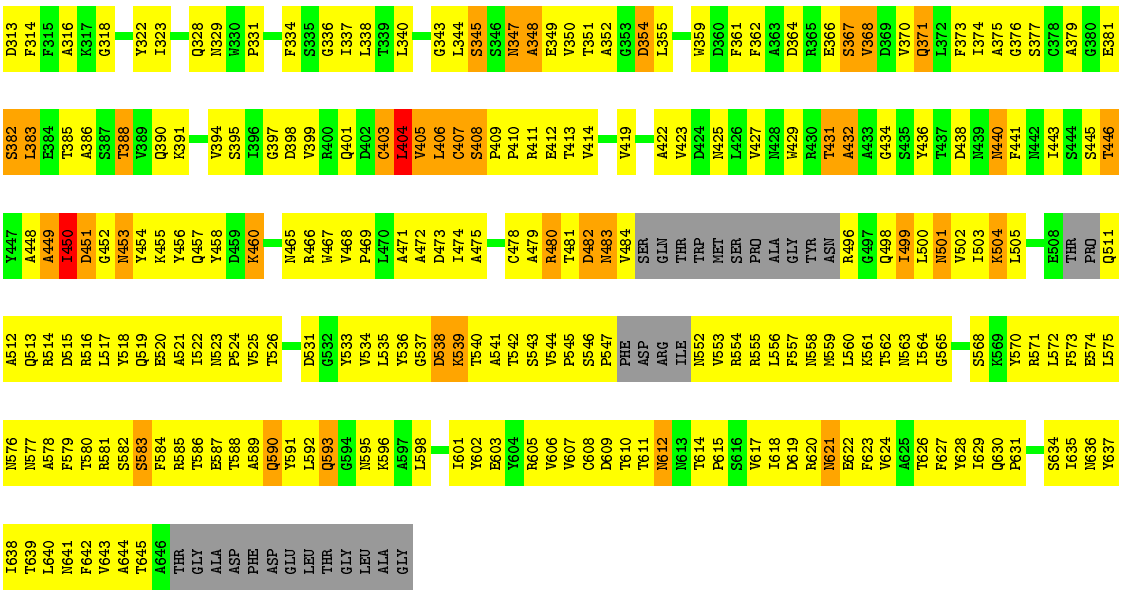
Chain W:



- Molecule 2: Tail sheath protein Gp18

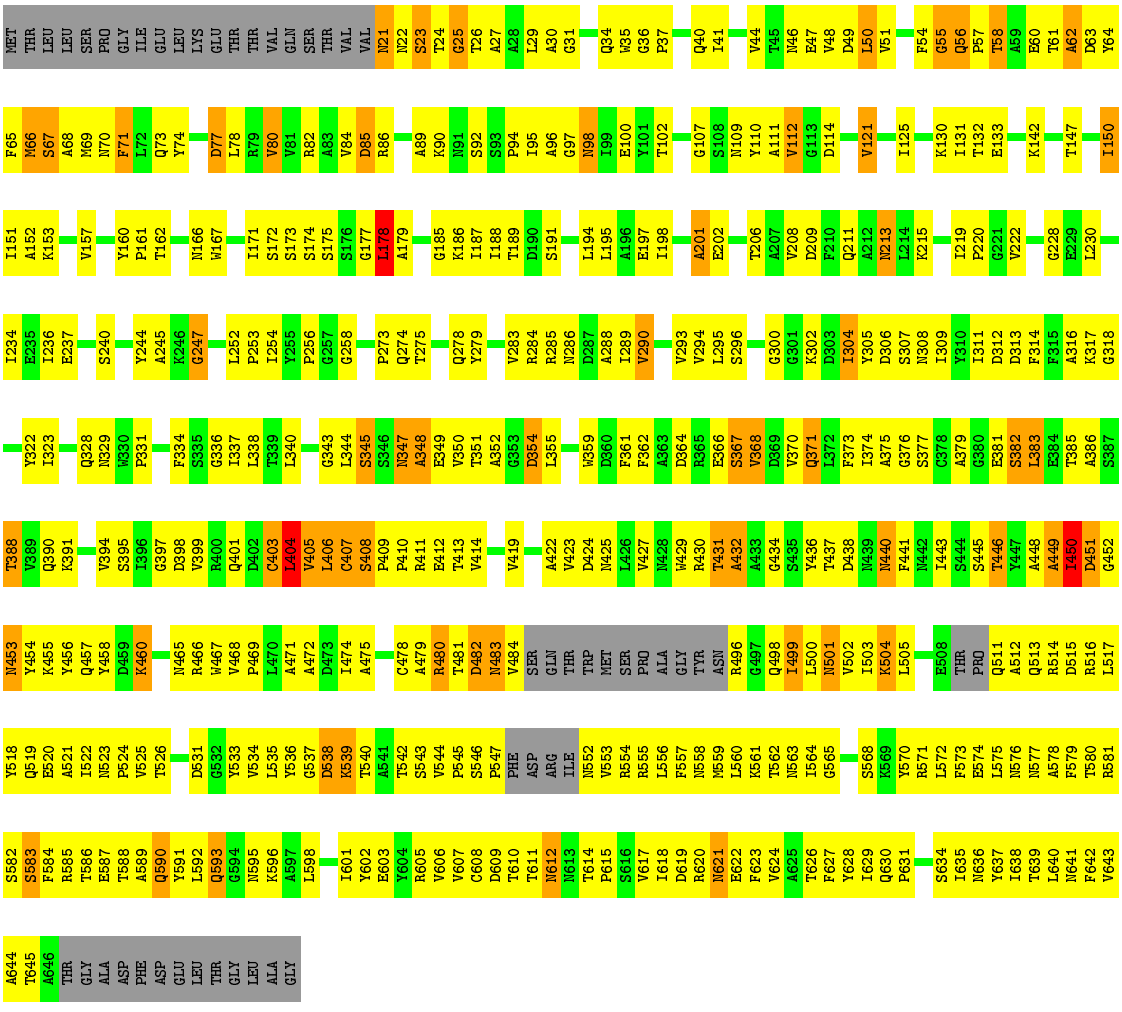
Chain X:





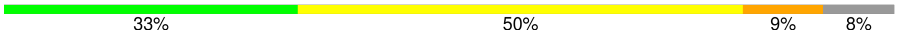
• Molecule 2: Tail sheath protein Gp18

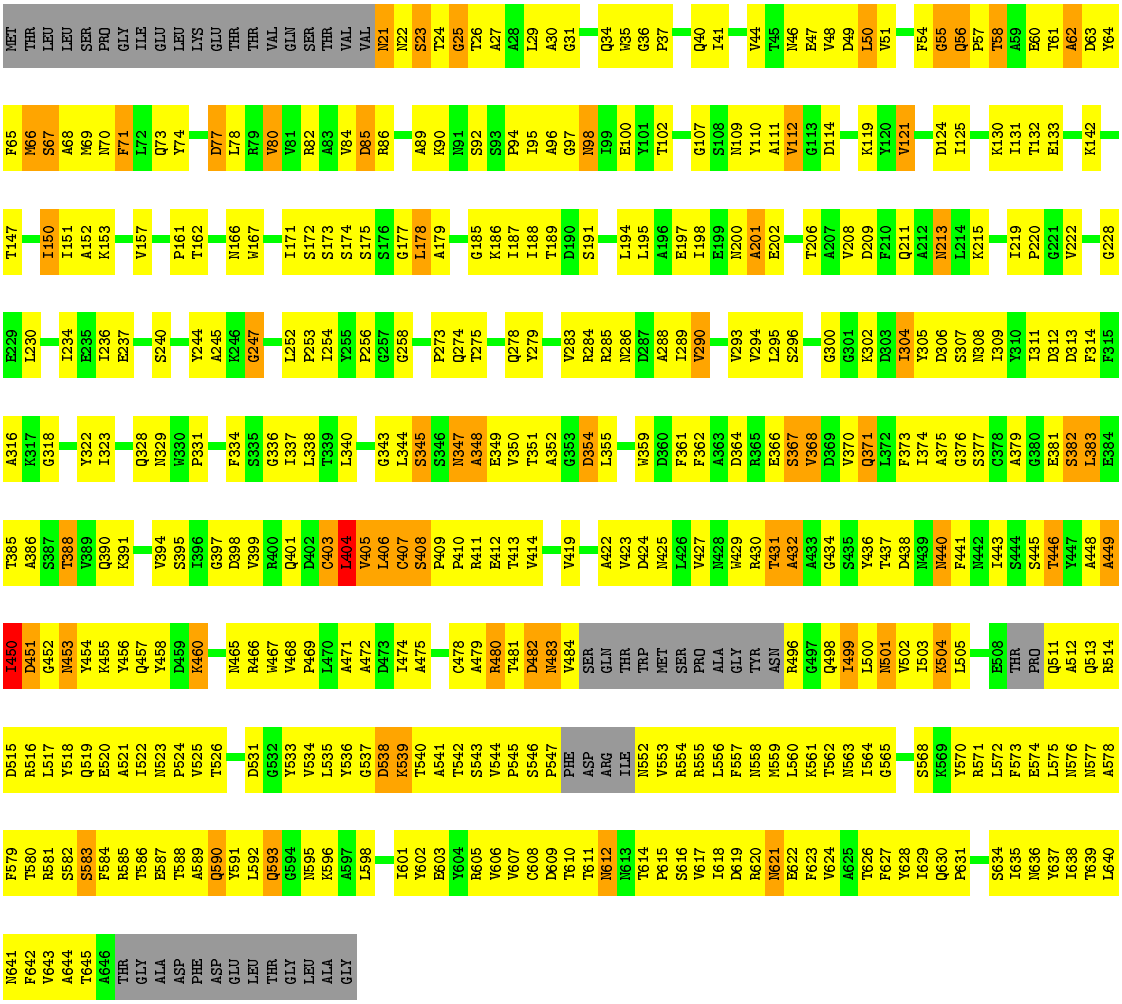
Chain Y:



- Molecule 2: Tail sheath protein Gp18

Chain Z:





4 Experimental information (i)

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of images	Not provided	Depositor
Resolution determination method	FSC at 0.5 cut-off	Depositor
CTF correction method	each particle image	Depositor
Microscope	FEI/PHILIPS CM300FEG/ST	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	Not provided	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	4000	Depositor
Magnification	45000	Depositor
Image detector	Not provided	Depositor

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	#$\|Z\|>2$	RMSZ	#$\|Z\|>2$
1	A	0.49	0/1787	0.64	0/2421
1	B	0.47	0/1787	0.63	0/2421
1	C	0.48	0/1787	0.64	1/2421 (0.0%)
1	D	0.49	0/1787	0.63	0/2421
1	E	0.49	0/1787	0.63	0/2421
1	F	0.50	0/1787	0.65	0/2421
2	U	0.60	0/4729	0.89	21/6427 (0.3%)
2	V	0.60	0/4729	0.90	21/6427 (0.3%)
2	W	0.60	0/4729	0.89	21/6427 (0.3%)
2	X	0.60	0/4729	0.90	21/6427 (0.3%)
2	Y	0.60	1/4729 (0.0%)	0.89	20/6427 (0.3%)
2	Z	0.60	1/4729 (0.0%)	0.89	19/6427 (0.3%)
All	All	0.57	2/39096 (0.0%)	0.83	124/53088 (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
2	U	0	4
2	V	0	4
2	W	0	4
2	X	0	4
2	Y	0	4
2	Z	0	4
All	All	0	24

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	Z	23	SER	C-O	5.16	1.33	1.23
2	Y	23	SER	C-O	5.03	1.32	1.23

All (124) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	V	55	GLY	N-CA-C	18.09	158.33	113.10
2	U	55	GLY	N-CA-C	18.03	158.18	113.10
2	Y	55	GLY	N-CA-C	18.01	158.12	113.10
2	W	55	GLY	N-CA-C	17.99	158.08	113.10
2	X	55	GLY	N-CA-C	17.93	157.92	113.10
2	Z	55	GLY	N-CA-C	17.84	157.71	113.10
2	V	56	GLN	N-CA-CB	-11.41	90.05	110.60
2	Y	56	GLN	N-CA-CB	-11.38	90.11	110.60
2	X	56	GLN	N-CA-CB	-11.37	90.13	110.60
2	Z	56	GLN	N-CA-CB	-11.37	90.13	110.60
2	U	56	GLN	N-CA-CB	-11.36	90.15	110.60
2	W	56	GLN	N-CA-CB	-11.35	90.17	110.60
2	X	367	SER	N-CA-CB	-10.77	94.34	110.50
2	V	367	SER	N-CA-CB	-10.64	94.54	110.50
2	W	367	SER	N-CA-CB	-10.56	94.65	110.50
2	U	367	SER	N-CA-CB	-10.54	94.68	110.50
2	Z	367	SER	N-CA-CB	-10.43	94.85	110.50
2	Y	367	SER	N-CA-CB	-10.41	94.88	110.50
2	V	111	ALA	CB-CA-C	9.73	124.70	110.10
2	W	111	ALA	CB-CA-C	9.72	124.68	110.10
2	X	111	ALA	CB-CA-C	9.69	124.64	110.10
2	X	405	VAL	N-CA-C	-9.68	84.88	111.00
2	U	112	VAL	N-CA-C	9.62	136.98	111.00
2	Y	112	VAL	N-CA-C	9.61	136.95	111.00
2	Y	405	VAL	N-CA-C	-9.59	85.11	111.00
2	Z	405	VAL	N-CA-C	-9.59	85.12	111.00
2	V	112	VAL	N-CA-C	9.57	136.83	111.00
2	U	407	CYS	CB-CA-C	-9.56	91.28	110.40
2	W	405	VAL	N-CA-C	-9.56	85.19	111.00
2	Z	407	CYS	CB-CA-C	-9.55	91.30	110.40
2	U	405	VAL	N-CA-C	-9.54	85.24	111.00
2	W	112	VAL	N-CA-C	9.53	136.74	111.00
2	X	112	VAL	N-CA-C	9.52	136.71	111.00
2	Z	112	VAL	N-CA-C	9.52	136.70	111.00
2	U	111	ALA	CB-CA-C	9.49	124.33	110.10
2	V	405	VAL	N-CA-C	-9.49	85.39	111.00
2	Z	111	ALA	CB-CA-C	9.48	124.32	110.10
2	Y	111	ALA	CB-CA-C	9.47	124.31	110.10
2	Y	407	CYS	CB-CA-C	-9.47	91.46	110.40
2	V	407	CYS	CB-CA-C	-9.46	91.47	110.40
2	X	407	CYS	CB-CA-C	-9.46	91.48	110.40
2	W	407	CYS	CB-CA-C	-9.43	91.54	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	V	408	SER	N-CA-CB	-8.89	97.16	110.50
2	X	408	SER	N-CA-CB	-8.85	97.23	110.50
2	Y	408	SER	N-CA-CB	-8.83	97.26	110.50
2	U	408	SER	N-CA-CB	-8.82	97.27	110.50
2	W	408	SER	N-CA-CB	-8.75	97.38	110.50
2	Z	408	SER	N-CA-CB	-8.67	97.50	110.50
2	Y	112	VAL	CB-CA-C	-7.75	96.67	111.40
2	V	112	VAL	CB-CA-C	-7.69	96.80	111.40
2	Z	112	VAL	CB-CA-C	-7.65	96.86	111.40
2	U	112	VAL	CB-CA-C	-7.65	96.87	111.40
2	W	112	VAL	CB-CA-C	-7.61	96.94	111.40
2	Y	404	LEU	N-CA-C	-7.60	90.49	111.00
2	X	112	VAL	CB-CA-C	-7.58	96.99	111.40
2	Z	404	LEU	N-CA-C	-7.55	90.61	111.00
2	U	404	LEU	N-CA-C	-7.55	90.62	111.00
2	W	404	LEU	N-CA-C	-7.54	90.64	111.00
2	X	404	LEU	N-CA-C	-7.53	90.68	111.00
2	V	404	LEU	N-CA-C	-7.52	90.70	111.00
2	U	366	GLU	CB-CA-C	7.44	125.29	110.40
2	Z	366	GLU	CB-CA-C	7.40	125.20	110.40
2	V	366	GLU	CB-CA-C	7.38	125.16	110.40
2	W	366	GLU	CB-CA-C	7.38	125.16	110.40
2	X	366	GLU	CB-CA-C	7.32	125.04	110.40
2	Y	366	GLU	CB-CA-C	7.23	124.86	110.40
2	U	404	LEU	CB-CA-C	6.87	123.25	110.20
2	X	404	LEU	CB-CA-C	6.87	123.25	110.20
2	Y	404	LEU	CB-CA-C	6.84	123.20	110.20
2	W	404	LEU	CB-CA-C	6.84	123.20	110.20
2	V	404	LEU	CB-CA-C	6.83	123.18	110.20
2	Z	404	LEU	CB-CA-C	6.83	123.17	110.20
2	V	449	ALA	CB-CA-C	6.67	120.10	110.10
2	X	449	ALA	CB-CA-C	6.67	120.10	110.10
2	Z	85	ASP	N-CA-C	-6.62	93.13	111.00
2	U	449	ALA	CB-CA-C	6.60	120.00	110.10
2	V	85	ASP	N-CA-C	-6.59	93.19	111.00
2	Y	449	ALA	CB-CA-C	6.59	119.99	110.10
2	W	449	ALA	CB-CA-C	6.59	119.98	110.10
2	Y	85	ASP	N-CA-C	-6.57	93.25	111.00
2	W	85	ASP	N-CA-C	-6.50	93.46	111.00
2	Z	449	ALA	CB-CA-C	6.48	119.82	110.10
2	X	85	ASP	N-CA-C	-6.47	93.52	111.00
2	U	85	ASP	N-CA-C	-6.42	93.67	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	V	406	LEU	CB-CA-C	6.24	122.05	110.20
2	Z	406	LEU	CB-CA-C	6.19	121.97	110.20
2	W	406	LEU	CB-CA-C	6.18	121.94	110.20
2	Y	406	LEU	CB-CA-C	6.16	121.91	110.20
2	U	406	LEU	CB-CA-C	6.12	121.82	110.20
2	X	406	LEU	CB-CA-C	6.12	121.82	110.20
2	V	85	ASP	CB-CA-C	5.81	122.01	110.40
2	Y	85	ASP	CB-CA-C	5.79	121.98	110.40
2	Z	85	ASP	CB-CA-C	5.72	121.84	110.40
2	X	85	ASP	CB-CA-C	5.71	121.82	110.40
2	U	85	ASP	CB-CA-C	5.70	121.79	110.40
2	W	85	ASP	CB-CA-C	5.68	121.76	110.40
2	W	406	LEU	N-CA-C	-5.36	96.53	111.00
2	Z	406	LEU	N-CA-C	-5.36	96.53	111.00
2	U	406	LEU	N-CA-C	-5.35	96.56	111.00
2	Y	406	LEU	N-CA-C	-5.31	96.65	111.00
2	V	406	LEU	N-CA-C	-5.30	96.68	111.00
2	X	406	LEU	N-CA-C	-5.29	96.72	111.00
2	X	178	LEU	N-CA-CB	-5.28	99.84	110.40
2	U	178	LEU	N-CA-CB	-5.27	99.86	110.40
2	V	179	ALA	N-CA-C	5.25	125.16	111.00
2	U	179	ALA	N-CA-C	5.24	125.15	111.00
2	X	179	ALA	N-CA-C	5.24	125.14	111.00
2	Y	179	ALA	N-CA-C	5.24	125.14	111.00
2	W	179	ALA	N-CA-C	5.20	125.04	111.00
2	Z	179	ALA	N-CA-C	5.19	125.01	111.00
2	Y	178	LEU	N-CA-CB	-5.17	100.05	110.40
2	X	21	ASN	C-N-CA	5.12	134.51	121.70
2	U	449	ALA	N-CA-C	-5.12	97.17	111.00
1	C	190	LEU	CA-CB-CG	5.10	127.03	115.30
2	V	21	ASN	C-N-CA	5.09	134.43	121.70
2	X	449	ALA	N-CA-C	-5.09	97.26	111.00
2	Y	21	ASN	C-N-CA	5.08	134.41	121.70
2	V	557	PHE	CA-CB-CG	-5.06	101.75	113.90
2	W	21	ASN	C-N-CA	5.06	134.35	121.70
2	Z	21	ASN	C-N-CA	5.05	134.33	121.70
2	V	178	LEU	N-CA-CB	-5.05	100.31	110.40
2	W	178	LEU	N-CA-CB	-5.03	100.33	110.40
2	W	449	ALA	N-CA-C	-5.02	97.43	111.00
2	U	21	ASN	C-N-CA	5.02	134.25	121.70

There are no chirality outliers.

All (24) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	U	21	ASN	Peptide
2	U	450	ILE	Peptide
2	U	451	ASP	Peptide
2	U	452	GLY	Peptide
2	V	21	ASN	Peptide
2	V	450	ILE	Peptide
2	V	451	ASP	Peptide
2	V	452	GLY	Peptide
2	W	21	ASN	Peptide
2	W	450	ILE	Peptide
2	W	451	ASP	Peptide
2	W	452	GLY	Peptide
2	X	21	ASN	Peptide
2	X	450	ILE	Peptide
2	X	451	ASP	Peptide
2	X	452	GLY	Peptide
2	Y	21	ASN	Peptide
2	Y	450	ILE	Peptide
2	Y	451	ASP	Peptide
2	Y	452	GLY	Peptide
2	Z	21	ASN	Peptide
2	Z	450	ILE	Peptide
2	Z	451	ASP	Peptide
2	Z	452	GLY	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	1742	0	1673	54	0
1	B	1742	0	1673	59	0
1	C	1742	0	1673	49	0
1	D	1742	0	1673	44	0
1	E	1742	0	1673	46	0
1	F	1742	0	1673	36	0
2	U	4647	0	4564	595	0
2	V	4647	0	4564	592	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	W	4647	0	4564	588	0
2	X	4647	0	4564	587	0
2	Y	4647	0	4562	576	0
2	Z	4647	0	4564	577	0
All	All	38334	0	37420	3690	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 49.

All (3690) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:156:ASP:HB3	2:U:579:PHE:CE1	1.23	1.68
1:B:157:ILE:CD1	2:V:579:PHE:HB3	1.20	1.63
1:B:157:ILE:HG13	2:V:579:PHE:CB	1.21	1.57
1:B:156:ASP:HB3	2:V:579:PHE:CE1	1.39	1.54
1:A:157:ILE:HG13	2:U:579:PHE:CB	1.22	1.54
2:Z:404:LEU:CG	2:Z:554:ARG:HH12	1.22	1.52
2:Y:404:LEU:CG	2:Y:554:ARG:HH12	1.22	1.51
2:U:404:LEU:CG	2:U:554:ARG:HH12	1.22	1.51
2:X:404:LEU:CG	2:X:554:ARG:HH12	1.22	1.51
2:Z:496:ARG:N	2:Z:534:VAL:CB	1.74	1.51
2:W:404:LEU:CG	2:W:554:ARG:HH12	1.22	1.50
2:W:409:PRO:O	2:W:454:TYR:CE1	1.65	1.49
2:V:409:PRO:O	2:V:454:TYR:CE1	1.65	1.49
2:W:446:THR:HG22	2:W:542:THR:CG2	1.42	1.49
2:U:496:ARG:N	2:U:534:VAL:CB	1.74	1.49
2:X:409:PRO:O	2:X:454:TYR:CE1	1.65	1.48
2:Y:496:ARG:N	2:Y:534:VAL:CB	1.74	1.48
2:X:496:ARG:N	2:X:534:VAL:CB	1.74	1.48
2:V:446:THR:HG22	2:V:542:THR:CG2	1.42	1.48
2:Y:446:THR:HG22	2:Y:542:THR:CG2	1.42	1.48
2:V:496:ARG:N	2:V:534:VAL:CB	1.74	1.48
2:V:404:LEU:CG	2:V:554:ARG:HH12	1.22	1.48
1:B:157:ILE:CG1	2:V:579:PHE:CB	1.90	1.47
2:Z:446:THR:HG22	2:Z:542:THR:CG2	1.42	1.47
2:U:409:PRO:O	2:U:454:TYR:CE1	1.66	1.47
2:Y:409:PRO:O	2:Y:454:TYR:CE1	1.65	1.47
2:U:446:THR:HG22	2:U:542:THR:CG2	1.42	1.47
2:Z:409:PRO:O	2:Z:454:TYR:CE1	1.65	1.47
2:X:446:THR:HG22	2:X:542:THR:CG2	1.42	1.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:157:ILE:CD1	2:U:579:PHE:HB3	1.44	1.45
2:W:496:ARG:N	2:W:534:VAL:HB	1.14	1.45
2:W:496:ARG:N	2:W:534:VAL:CB	1.74	1.44
2:X:496:ARG:N	2:X:534:VAL:HB	1.14	1.44
2:Y:496:ARG:N	2:Y:534:VAL:HB	1.14	1.44
1:B:157:ILE:HB	2:V:579:PHE:CD2	1.51	1.43
2:Z:496:ARG:N	2:Z:534:VAL:HB	1.14	1.43
2:U:496:ARG:N	2:U:534:VAL:HB	1.14	1.42
2:V:496:ARG:N	2:V:534:VAL:HB	1.14	1.41
1:A:157:ILE:CG1	2:U:579:PHE:CB	1.99	1.38
2:Z:404:LEU:HG	2:Z:554:ARG:NH1	1.09	1.37
2:U:404:LEU:HG	2:U:554:ARG:NH1	1.09	1.37
2:W:404:LEU:HG	2:W:554:ARG:NH1	1.09	1.37
2:X:404:LEU:HG	2:X:554:ARG:NH1	1.08	1.36
2:Y:404:LEU:HG	2:Y:554:ARG:NH1	1.08	1.36
2:V:404:LEU:HG	2:V:554:ARG:NH1	1.09	1.35
1:A:157:ILE:CG1	2:U:579:PHE:HB3	1.56	1.34
2:X:409:PRO:CD	2:X:451:ASP:O	1.75	1.33
2:W:409:PRO:CD	2:W:451:ASP:O	1.75	1.33
2:Z:409:PRO:CD	2:Z:451:ASP:O	1.75	1.33
2:W:446:THR:O	2:W:539:LYS:HE3	1.27	1.33
2:Y:409:PRO:CD	2:Y:451:ASP:O	1.76	1.33
2:V:446:THR:O	2:V:539:LYS:HE3	1.27	1.32
2:U:409:PRO:CD	2:U:451:ASP:O	1.76	1.32
2:V:409:PRO:CD	2:V:451:ASP:O	1.76	1.32
2:Z:446:THR:O	2:Z:539:LYS:HE3	1.29	1.29
1:A:156:ASP:CB	2:U:579:PHE:CE1	2.16	1.28
2:U:446:THR:O	2:U:539:LYS:HE3	1.28	1.25
2:Z:379:ALA:CB	2:Z:454:TYR:OH	1.84	1.25
2:X:379:ALA:CB	2:X:454:TYR:OH	1.84	1.25
2:V:379:ALA:CB	2:V:454:TYR:OH	1.85	1.25
2:U:379:ALA:CB	2:U:454:TYR:OH	1.85	1.25
1:E:156:ASP:HB3	2:Y:579:PHE:CE1	1.69	1.25
1:B:157:ILE:CG1	2:V:579:PHE:HB3	1.56	1.24
2:U:379:ALA:HB2	2:U:454:TYR:OH	1.36	1.24
2:Y:379:ALA:CB	2:Y:454:TYR:OH	1.84	1.24
2:X:446:THR:O	2:X:539:LYS:HE3	1.27	1.24
2:V:379:ALA:HB2	2:V:454:TYR:OH	1.37	1.24
2:W:379:ALA:CB	2:W:454:TYR:OH	1.84	1.24
1:A:157:ILE:HB	2:U:579:PHE:CD2	1.73	1.23
2:Z:379:ALA:HB2	2:Z:454:TYR:OH	1.36	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:427:VAL:HG11	2:V:516:ARG:NH2	1.54	1.22
2:U:427:VAL:HG11	2:U:516:ARG:NH2	1.55	1.22
1:A:156:ASP:HB3	2:U:579:PHE:CD1	1.76	1.21
1:C:157:ILE:CD1	2:W:579:PHE:HB3	1.71	1.21
1:A:156:ASP:CB	2:U:579:PHE:HE1	1.51	1.20
1:C:156:ASP:HB3	2:W:579:PHE:CE1	1.77	1.19
1:B:157:ILE:HG13	2:V:579:PHE:CG	1.77	1.19
2:Y:427:VAL:HG11	2:Y:516:ARG:NH2	1.54	1.19
2:X:427:VAL:HG11	2:X:516:ARG:NH2	1.55	1.19
2:W:427:VAL:HG11	2:W:516:ARG:NH2	1.55	1.19
2:Z:427:VAL:HG11	2:Z:516:ARG:NH2	1.54	1.19
2:W:379:ALA:HB2	2:W:454:TYR:OH	1.36	1.18
2:X:379:ALA:HB2	2:X:454:TYR:OH	1.37	1.18
2:X:427:VAL:HG11	2:X:516:ARG:HH21	1.01	1.18
1:E:157:ILE:HG13	2:Y:579:PHE:HB2	1.22	1.17
2:W:427:VAL:HG11	2:W:516:ARG:HH21	1.02	1.17
2:Y:379:ALA:HB2	2:Y:454:TYR:OH	1.37	1.17
1:B:157:ILE:CD1	2:V:579:PHE:CB	2.14	1.16
2:Y:409:PRO:HD3	2:Y:451:ASP:O	0.99	1.16
2:Y:427:VAL:HG11	2:Y:516:ARG:HH21	1.02	1.16
2:U:483:ASN:O	2:U:555:ARG:HB3	1.46	1.16
2:Y:496:ARG:N	2:Y:534:VAL:CG2	2.09	1.16
1:D:156:ASP:HB3	2:X:579:PHE:CE1	1.80	1.16
2:Z:409:PRO:HD3	2:Z:451:ASP:O	0.99	1.16
2:Z:496:ARG:N	2:Z:534:VAL:CG2	2.09	1.16
2:W:496:ARG:N	2:W:534:VAL:CG2	2.09	1.15
2:Z:483:ASN:O	2:Z:555:ARG:HB3	1.46	1.15
2:W:446:THR:HG22	2:W:542:THR:HG21	1.26	1.15
2:V:409:PRO:HD3	2:V:451:ASP:O	0.99	1.15
2:V:483:ASN:O	2:V:555:ARG:HB3	1.46	1.15
2:Y:483:ASN:O	2:Y:555:ARG:HB3	1.46	1.14
2:X:409:PRO:HD3	2:X:451:ASP:O	0.99	1.14
2:W:483:ASN:O	2:W:555:ARG:HB3	1.46	1.14
2:X:496:ARG:N	2:X:534:VAL:CG2	2.09	1.14
2:V:524:PRO:HG2	2:V:535:LEU:HB2	1.23	1.14
2:V:496:ARG:N	2:V:534:VAL:CG2	2.09	1.14
2:Z:524:PRO:HG2	2:Z:535:LEU:HB2	1.24	1.13
2:Y:379:ALA:HB1	2:Y:454:TYR:CZ	1.82	1.13
2:U:496:ARG:N	2:U:534:VAL:CG2	2.10	1.13
1:D:157:ILE:HD12	2:X:579:PHE:HB3	1.23	1.13
2:U:409:PRO:HD3	2:U:451:ASP:O	0.98	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:454:TYR:CE2	2:V:469:PRO:HA	1.84	1.13
2:Z:427:VAL:HG11	2:Z:516:ARG:HH21	1.02	1.13
2:X:483:ASN:O	2:X:555:ARG:HB3	1.46	1.13
2:U:454:TYR:CE2	2:U:469:PRO:HA	1.84	1.13
2:Z:379:ALA:HB1	2:Z:454:TYR:CZ	1.83	1.12
2:X:379:ALA:HB1	2:X:454:TYR:CZ	1.83	1.12
2:W:409:PRO:HD3	2:W:451:ASP:O	0.98	1.12
2:V:446:THR:HG22	2:V:542:THR:HG21	1.26	1.12
2:Y:454:TYR:CE2	2:Y:469:PRO:HA	1.83	1.12
2:W:505:LEU:CD1	2:W:525:VAL:HG11	1.79	1.12
2:Y:524:PRO:HG2	2:Y:535:LEU:HB2	1.23	1.12
2:U:505:LEU:CD1	2:U:525:VAL:HG11	1.79	1.12
2:U:379:ALA:HB1	2:U:454:TYR:CZ	1.83	1.12
2:Y:505:LEU:CD1	2:Y:525:VAL:HG11	1.79	1.12
1:C:157:ILE:HG13	2:W:579:PHE:CB	1.79	1.12
2:W:379:ALA:HB1	2:W:454:TYR:CZ	1.83	1.12
2:W:454:TYR:CE2	2:W:469:PRO:HA	1.85	1.12
1:D:157:ILE:CD1	2:X:579:PHE:HB3	1.80	1.12
2:Z:454:TYR:CE2	2:Z:469:PRO:HA	1.85	1.11
2:W:524:PRO:HG2	2:W:535:LEU:HB2	1.23	1.11
2:V:379:ALA:HB1	2:V:454:TYR:CZ	1.83	1.11
2:V:427:VAL:HG11	2:V:516:ARG:HH21	1.01	1.11
2:X:505:LEU:CD1	2:X:525:VAL:HG11	1.79	1.11
2:X:454:TYR:CE2	2:X:469:PRO:HA	1.84	1.11
2:Z:505:LEU:CD1	2:Z:525:VAL:HG11	1.79	1.11
1:B:156:ASP:CB	2:V:579:PHE:HE1	1.61	1.11
1:E:157:ILE:HG13	2:Y:579:PHE:CB	1.81	1.11
1:F:157:ILE:HB	2:Z:579:PHE:CD2	1.78	1.11
2:V:505:LEU:CD1	2:V:525:VAL:HG11	1.79	1.11
2:Z:450:ILE:HG12	2:Z:451:ASP:H	0.94	1.10
2:Z:446:THR:HG22	2:Z:542:THR:HG21	1.26	1.10
2:Y:379:ALA:CB	2:Y:454:TYR:CZ	2.35	1.10
2:X:379:ALA:CB	2:X:454:TYR:CZ	2.35	1.10
1:B:157:ILE:HD12	2:V:579:PHE:HB3	1.18	1.10
2:Y:450:ILE:HG12	2:Y:451:ASP:H	0.94	1.10
2:U:450:ILE:HG12	2:U:451:ASP:H	0.94	1.09
2:V:409:PRO:O	2:V:454:TYR:CZ	2.05	1.09
2:Z:379:ALA:CB	2:Z:454:TYR:CZ	2.35	1.09
2:X:409:PRO:O	2:X:454:TYR:CZ	2.06	1.09
2:Y:446:THR:HG22	2:Y:542:THR:HG21	1.26	1.09
1:B:156:ASP:CB	2:V:579:PHE:CE1	2.34	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:409:PRO:O	2:Z:454:TYR:CZ	2.05	1.09
2:W:379:ALA:CB	2:W:454:TYR:CZ	2.35	1.09
2:X:524:PRO:HG2	2:X:535:LEU:HB2	1.23	1.08
2:U:446:THR:HG22	2:U:542:THR:HG21	1.26	1.08
2:U:379:ALA:CB	2:U:454:TYR:CZ	2.35	1.08
2:U:524:PRO:HG2	2:U:535:LEU:HB2	1.23	1.08
2:Y:409:PRO:O	2:Y:454:TYR:CZ	2.06	1.08
2:X:446:THR:HG22	2:X:542:THR:HG21	1.26	1.08
2:V:379:ALA:CB	2:V:454:TYR:CZ	2.35	1.08
2:Y:51:VAL:HA	2:Y:55:GLY:HA2	1.36	1.08
2:X:450:ILE:HG12	2:X:451:ASP:H	0.94	1.07
2:W:409:PRO:O	2:W:454:TYR:CZ	2.06	1.07
2:V:450:ILE:HG12	2:V:451:ASP:H	0.94	1.07
2:V:454:TYR:CD2	2:V:469:PRO:HA	1.89	1.07
2:U:427:VAL:HG11	2:U:516:ARG:HH21	1.02	1.07
2:U:446:THR:CG2	2:U:542:THR:CG2	2.32	1.07
2:X:446:THR:CG2	2:X:542:THR:CG2	2.32	1.07
2:X:454:TYR:CD2	2:X:469:PRO:HA	1.90	1.07
2:Z:51:VAL:HA	2:Z:55:GLY:HA2	1.36	1.07
2:Z:446:THR:HG22	2:Z:542:THR:HG22	1.08	1.07
2:W:454:TYR:CD2	2:W:469:PRO:HA	1.90	1.07
2:Y:446:THR:HG22	2:Y:542:THR:HG22	1.08	1.07
2:X:51:VAL:HA	2:X:55:GLY:HA2	1.36	1.07
2:U:409:PRO:O	2:U:454:TYR:CZ	2.06	1.07
2:U:51:VAL:HA	2:U:55:GLY:HA2	1.36	1.07
2:U:454:TYR:CD2	2:U:469:PRO:HA	1.89	1.06
2:X:446:THR:HG22	2:X:542:THR:HG22	1.08	1.06
2:Y:454:TYR:CD2	2:Y:469:PRO:HA	1.89	1.06
2:W:446:THR:CG2	2:W:542:THR:CG2	2.32	1.06
2:X:446:THR:CG2	2:X:542:THR:HG22	1.85	1.06
2:Z:446:THR:CG2	2:Z:542:THR:CG2	2.32	1.06
1:B:157:ILE:CB	2:V:579:PHE:CD2	2.38	1.06
2:W:446:THR:CG2	2:W:542:THR:HG22	1.85	1.06
2:W:450:ILE:HG12	2:W:451:ASP:H	0.94	1.06
2:V:446:THR:CG2	2:V:542:THR:CG2	2.32	1.05
1:E:157:ILE:HD12	2:Y:579:PHE:HB3	1.34	1.05
2:V:446:THR:CG2	2:V:542:THR:HG22	1.85	1.05
2:Y:446:THR:CG2	2:Y:542:THR:HG22	1.85	1.05
2:V:51:VAL:HA	2:V:55:GLY:HA2	1.36	1.05
2:Z:454:TYR:CD2	2:Z:469:PRO:HA	1.90	1.05
2:Y:446:THR:CG2	2:Y:542:THR:CG2	2.32	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:W:450:ILE:HG12	2:W:451:ASP:N	1.67	1.05
2:W:51:VAL:HA	2:W:55:GLY:HA2	1.36	1.05
1:B:157:ILE:HD11	2:V:579:PHE:HB3	1.38	1.04
2:W:446:THR:HG22	2:W:542:THR:HG22	1.08	1.04
1:E:157:ILE:CD1	2:Y:579:PHE:HB3	1.87	1.04
1:A:157:ILE:HD12	2:U:579:PHE:HB3	1.31	1.04
1:B:157:ILE:CG1	2:V:579:PHE:CG	2.34	1.04
2:Z:446:THR:CG2	2:Z:542:THR:HG22	1.86	1.04
2:U:446:THR:CG2	2:U:542:THR:HG22	1.85	1.04
2:U:446:THR:HG22	2:U:542:THR:HG22	1.07	1.03
2:V:450:ILE:HG12	2:V:451:ASP:N	1.67	1.03
1:B:157:ILE:N	2:V:579:PHE:CD1	2.27	1.01
2:V:446:THR:HG22	2:V:542:THR:HG22	1.08	1.01
2:X:450:ILE:HG12	2:X:451:ASP:N	1.67	1.00
1:B:156:ASP:HB3	2:V:579:PHE:CD1	1.95	1.00
1:E:156:ASP:HB3	2:Y:579:PHE:CD1	1.96	1.00
1:D:157:ILE:HG13	2:X:579:PHE:HB2	1.43	1.00
2:U:450:ILE:HG12	2:U:451:ASP:N	1.67	0.98
2:Y:450:ILE:HG12	2:Y:451:ASP:N	1.68	0.98
1:B:157:ILE:HB	2:V:579:PHE:CG	1.99	0.98
2:Z:450:ILE:HG12	2:Z:451:ASP:N	1.67	0.98
2:U:409:PRO:O	2:U:454:TYR:HE1	1.16	0.97
2:U:514:ARG:HG3	2:U:535:LEU:HD13	1.47	0.97
2:X:556:LEU:HD23	2:X:560:LEU:HD23	1.46	0.97
1:C:156:ASP:HB3	2:W:579:PHE:HE1	1.26	0.97
2:Z:514:ARG:HG3	2:Z:535:LEU:HD13	1.46	0.97
2:W:556:LEU:HD23	2:W:560:LEU:HD23	1.46	0.97
2:Z:556:LEU:HD23	2:Z:560:LEU:HD23	1.46	0.97
2:Y:556:LEU:HD23	2:Y:560:LEU:HD23	1.47	0.97
2:U:228:GLY:HA2	2:U:345:SER:HB3	1.46	0.97
2:V:556:LEU:HD23	2:V:560:LEU:HD23	1.45	0.96
2:V:514:ARG:HG3	2:V:535:LEU:HD13	1.46	0.96
2:V:628:TYR:CD2	2:V:639:THR:HG22	2.00	0.96
1:A:157:ILE:HG13	2:U:579:PHE:CG	1.99	0.96
2:Y:514:ARG:HG3	2:Y:535:LEU:HD13	1.47	0.96
2:Z:228:GLY:HA2	2:Z:345:SER:HB3	1.47	0.96
2:U:628:TYR:CD2	2:U:639:THR:HG22	2.01	0.96
1:B:157:ILE:CB	2:V:579:PHE:CG	2.48	0.96
1:E:156:ASP:HB3	2:Y:579:PHE:HE1	1.30	0.96
2:Y:628:TYR:CD2	2:Y:639:THR:HG22	2.00	0.96
2:X:628:TYR:CD2	2:X:639:THR:HG22	2.01	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:228:GLY:HA2	2:V:345:SER:HB3	1.48	0.96
2:Z:628:TYR:CD2	2:Z:639:THR:HG22	2.01	0.96
2:W:112:VAL:O	2:W:112:VAL:CG1	2.14	0.96
2:Z:112:VAL:CG1	2:Z:112:VAL:O	2.14	0.95
2:X:112:VAL:O	2:X:112:VAL:CG1	2.14	0.95
2:W:628:TYR:CD2	2:W:639:THR:HG22	2.01	0.95
2:W:514:ARG:HG3	2:W:535:LEU:HD13	1.46	0.95
2:Y:409:PRO:O	2:Y:454:TYR:HE1	1.16	0.95
2:X:514:ARG:HG3	2:X:535:LEU:HD13	1.47	0.95
2:U:556:LEU:HD23	2:U:560:LEU:HD23	1.46	0.94
1:E:157:ILE:CG1	2:Y:579:PHE:CB	2.45	0.94
2:W:228:GLY:HA2	2:W:345:SER:HB3	1.47	0.94
1:A:157:ILE:CD1	2:U:579:PHE:CB	2.37	0.94
2:U:481:THR:HG21	2:U:496:ARG:NH2	1.82	0.94
2:Y:228:GLY:HA2	2:Y:345:SER:HB3	1.48	0.94
2:Y:112:VAL:CG1	2:Y:112:VAL:O	2.14	0.94
2:V:112:VAL:O	2:V:112:VAL:CG1	2.14	0.94
1:D:157:ILE:HG13	2:X:579:PHE:CB	1.97	0.94
2:X:228:GLY:HA2	2:X:345:SER:HB3	1.46	0.94
2:U:112:VAL:CG1	2:U:112:VAL:O	2.14	0.94
1:A:157:ILE:N	2:U:579:PHE:CD1	2.36	0.94
2:V:518:TYR:CE2	2:V:536:TYR:HB2	2.04	0.93
2:W:518:TYR:CE2	2:W:536:TYR:HB2	2.04	0.93
1:C:157:ILE:HG13	2:W:579:PHE:HB2	1.50	0.93
1:B:157:ILE:HG13	2:V:579:PHE:HB2	0.96	0.93
2:U:483:ASN:O	2:U:555:ARG:CB	2.17	0.93
2:Z:518:TYR:CE2	2:Z:536:TYR:HB2	2.03	0.93
2:U:518:TYR:CE2	2:U:536:TYR:HB2	2.04	0.93
2:W:514:ARG:CZ	2:W:535:LEU:HD22	1.99	0.93
2:Y:483:ASN:O	2:Y:555:ARG:CB	2.17	0.92
2:Z:481:THR:HG21	2:Z:496:ARG:NH2	1.84	0.92
2:V:409:PRO:O	2:V:454:TYR:HE1	1.16	0.92
2:Y:481:THR:HG21	2:Y:496:ARG:NH2	1.83	0.92
2:V:483:ASN:O	2:V:555:ARG:CB	2.17	0.92
2:X:408:SER:CA	2:X:451:ASP:HB3	2.00	0.92
2:V:514:ARG:CZ	2:V:535:LEU:HD22	2.00	0.92
2:X:514:ARG:CZ	2:X:535:LEU:HD22	1.99	0.92
2:X:518:TYR:CE2	2:X:536:TYR:HB2	2.04	0.92
2:W:408:SER:CA	2:W:451:ASP:HB3	2.00	0.92
2:Z:483:ASN:O	2:Z:555:ARG:CB	2.17	0.91
2:U:514:ARG:CZ	2:U:535:LEU:HD22	2.00	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:408:SER:CA	2:V:451:ASP:HB3	2.00	0.91
1:A:157:ILE:HG13	2:U:579:PHE:HB2	0.93	0.91
2:X:483:ASN:O	2:X:555:ARG:CB	2.17	0.91
2:W:483:ASN:O	2:W:555:ARG:CB	2.18	0.91
2:Y:408:SER:CA	2:Y:451:ASP:HB3	2.00	0.91
2:Z:514:ARG:CZ	2:Z:535:LEU:HD22	1.99	0.91
2:V:496:ARG:N	2:V:534:VAL:HG21	1.86	0.91
2:X:409:PRO:O	2:X:454:TYR:HE1	1.15	0.91
2:V:23:SER:OG	2:V:483:ASN:CB	2.19	0.91
2:Y:514:ARG:CZ	2:Y:535:LEU:HD22	1.99	0.91
2:U:408:SER:CA	2:U:451:ASP:HB3	2.00	0.91
2:Z:408:SER:CA	2:Z:451:ASP:HB3	2.00	0.91
2:V:481:THR:HG21	2:V:496:ARG:NH2	1.84	0.91
1:E:157:ILE:HB	2:Y:579:PHE:CD2	2.05	0.91
2:Z:23:SER:OG	2:Z:483:ASN:CB	2.19	0.90
2:Y:23:SER:OG	2:Y:483:ASN:CB	2.19	0.90
2:W:23:SER:OG	2:W:483:ASN:CB	2.19	0.90
2:Y:518:TYR:CE2	2:Y:536:TYR:HB2	2.04	0.90
2:W:409:PRO:O	2:W:454:TYR:HE1	1.15	0.90
2:W:496:ARG:N	2:W:534:VAL:HG21	1.86	0.90
2:U:23:SER:OG	2:U:483:ASN:CB	2.19	0.90
2:V:482:ASP:OD2	2:V:552:ASN:ND2	2.05	0.90
1:C:157:ILE:CG1	2:W:579:PHE:CB	2.50	0.90
2:U:496:ARG:N	2:U:534:VAL:HG21	1.87	0.90
2:Z:408:SER:HA	2:Z:451:ASP:HB3	1.54	0.89
2:X:23:SER:OG	2:X:483:ASN:CB	2.19	0.89
2:X:482:ASP:OD2	2:X:552:ASN:ND2	2.05	0.89
2:Z:409:PRO:O	2:Z:454:TYR:HE1	1.16	0.89
2:Z:496:ARG:N	2:Z:534:VAL:HG21	1.87	0.89
2:W:481:THR:HG21	2:W:496:ARG:NH2	1.85	0.89
2:Z:482:ASP:OD2	2:Z:552:ASN:ND2	2.05	0.89
1:F:156:ASP:HB3	2:Z:579:PHE:CE1	2.07	0.89
2:Y:482:ASP:OD2	2:Y:552:ASN:ND2	2.05	0.89
2:U:483:ASN:O	2:U:555:ARG:HD3	1.73	0.89
2:V:408:SER:HA	2:V:451:ASP:HB3	1.54	0.89
2:X:496:ARG:N	2:X:534:VAL:HG21	1.86	0.89
2:V:483:ASN:O	2:V:555:ARG:HD3	1.73	0.89
2:W:482:ASP:OD2	2:W:552:ASN:ND2	2.05	0.88
2:W:408:SER:HA	2:W:451:ASP:HB3	1.54	0.88
2:W:483:ASN:O	2:W:555:ARG:HD3	1.73	0.88
2:Y:496:ARG:N	2:Y:534:VAL:HG21	1.87	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:408:SER:HA	2:Y:451:ASP:HB3	1.54	0.88
2:U:482:ASP:OD2	2:U:552:ASN:ND2	2.05	0.88
2:X:481:THR:HG21	2:X:496:ARG:NH2	1.87	0.88
2:Y:23:SER:CB	2:Y:483:ASN:HB3	2.04	0.88
2:Z:483:ASN:O	2:Z:555:ARG:HD3	1.74	0.87
2:X:23:SER:CB	2:X:483:ASN:HB3	2.04	0.87
2:U:404:LEU:CG	2:U:554:ARG:NH1	2.00	0.87
2:Y:41:ILE:HD11	2:Y:361:PHE:HB3	1.56	0.87
1:A:157:ILE:CG1	2:U:579:PHE:HB2	1.87	0.87
1:B:157:ILE:HB	2:V:579:PHE:CE2	2.10	0.87
2:Z:23:SER:CB	2:Z:483:ASN:HB3	2.04	0.87
2:Y:483:ASN:O	2:Y:555:ARG:HD3	1.73	0.87
2:X:483:ASN:O	2:X:555:ARG:HD3	1.73	0.87
2:X:408:SER:HA	2:X:451:ASP:HB3	1.54	0.87
2:U:23:SER:CB	2:U:483:ASN:HB3	2.04	0.87
2:W:505:LEU:HD13	2:W:525:VAL:HG11	1.57	0.87
2:Z:41:ILE:HD11	2:Z:361:PHE:HB3	1.57	0.87
2:Z:517:LEU:HD12	2:Z:518:TYR:N	1.90	0.87
2:U:408:SER:HA	2:U:451:ASP:HB3	1.54	0.87
2:W:23:SER:CB	2:W:483:ASN:HB3	2.04	0.86
2:U:517:LEU:HD12	2:U:518:TYR:N	1.90	0.86
1:C:157:ILE:HG13	2:W:579:PHE:CG	2.08	0.86
2:U:505:LEU:HD13	2:U:525:VAL:HG11	1.57	0.86
2:X:41:ILE:HD11	2:X:361:PHE:HB3	1.57	0.86
2:U:41:ILE:HD11	2:U:361:PHE:HB3	1.57	0.86
2:V:23:SER:CB	2:V:483:ASN:HB3	2.04	0.86
2:V:391:LYS:NZ	2:V:440:ASN:ND2	2.23	0.86
2:Z:391:LYS:NZ	2:Z:440:ASN:ND2	2.23	0.86
2:U:517:LEU:HB2	2:U:522:ILE:CG2	2.06	0.86
2:X:524:PRO:HB2	2:X:535:LEU:HD12	1.56	0.86
1:B:157:ILE:CG1	2:V:579:PHE:HB2	1.82	0.86
2:U:23:SER:OG	2:U:483:ASN:HB3	1.76	0.86
2:W:391:LYS:HE3	2:W:440:ASN:O	1.76	0.86
2:X:391:LYS:HE3	2:X:440:ASN:O	1.76	0.86
2:U:391:LYS:NZ	2:U:440:ASN:ND2	2.23	0.86
1:D:109:TYR:HB3	1:D:161:ARG:HH22	1.39	0.86
2:Z:517:LEU:HB2	2:Z:522:ILE:CG2	2.06	0.86
2:V:517:LEU:HB2	2:V:522:ILE:CG2	2.06	0.86
2:U:524:PRO:HB2	2:U:535:LEU:HD12	1.57	0.86
2:W:517:LEU:HB2	2:W:522:ILE:CG2	2.06	0.86
2:Y:517:LEU:HD12	2:Y:518:TYR:N	1.90	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:157:ILE:HD12	2:W:579:PHE:HB3	1.55	0.86
2:Y:391:LYS:HE3	2:Y:440:ASN:O	1.76	0.86
2:W:391:LYS:NZ	2:W:440:ASN:ND2	2.23	0.86
2:Z:23:SER:OG	2:Z:483:ASN:HB3	1.76	0.86
2:Y:481:THR:HG21	2:Y:496:ARG:CZ	2.06	0.86
2:Y:23:SER:OG	2:Y:483:ASN:HB3	1.76	0.85
2:Y:391:LYS:NZ	2:Y:440:ASN:ND2	2.23	0.85
2:V:391:LYS:HE3	2:V:440:ASN:O	1.75	0.85
2:X:391:LYS:NZ	2:X:440:ASN:ND2	2.23	0.85
2:V:41:ILE:HD11	2:V:361:PHE:HB3	1.57	0.85
2:W:41:ILE:HD11	2:W:361:PHE:HB3	1.56	0.85
2:X:517:LEU:HD12	2:X:518:TYR:N	1.90	0.85
2:X:517:LEU:HB2	2:X:522:ILE:CG2	2.06	0.85
2:X:505:LEU:HD13	2:X:525:VAL:HG11	1.57	0.85
2:X:23:SER:CB	2:X:483:ASN:CB	2.55	0.85
2:W:23:SER:OG	2:W:483:ASN:HB3	1.76	0.85
2:U:481:THR:HG21	2:U:496:ARG:CZ	2.06	0.85
2:Y:517:LEU:HB2	2:Y:522:ILE:CG2	2.06	0.85
2:X:23:SER:OG	2:X:483:ASN:HB3	1.76	0.85
2:V:627:PHE:CZ	2:V:640:LEU:HB3	2.12	0.85
2:Z:505:LEU:HD13	2:Z:525:VAL:HG11	1.57	0.85
2:Y:23:SER:CB	2:Y:483:ASN:CB	2.55	0.84
2:U:391:LYS:HE3	2:U:440:ASN:O	1.75	0.84
2:W:517:LEU:HD12	2:W:518:TYR:N	1.91	0.84
2:Y:454:TYR:HE2	2:Y:469:PRO:HA	1.42	0.84
2:Y:627:PHE:CZ	2:Y:640:LEU:HB3	2.13	0.84
2:Z:481:THR:HG21	2:Z:496:ARG:CZ	2.07	0.84
2:W:23:SER:CB	2:W:483:ASN:CB	2.55	0.84
2:V:404:LEU:CG	2:V:554:ARG:NH1	2.00	0.84
1:C:157:ILE:CD1	2:W:579:PHE:CB	2.55	0.84
1:C:157:ILE:HD11	2:W:579:PHE:HB3	1.57	0.84
2:Z:391:LYS:HE3	2:Z:440:ASN:O	1.75	0.84
2:U:23:SER:CB	2:U:483:ASN:CB	2.56	0.84
2:V:505:LEU:HD13	2:V:525:VAL:HG11	1.57	0.84
2:Z:524:PRO:HB2	2:Z:535:LEU:HD12	1.57	0.84
2:U:627:PHE:CZ	2:U:640:LEU:HB3	2.12	0.84
2:W:524:PRO:HB2	2:W:535:LEU:HD12	1.57	0.84
2:V:23:SER:CB	2:V:483:ASN:CB	2.55	0.84
2:V:23:SER:OG	2:V:483:ASN:HB3	1.76	0.84
2:V:481:THR:HG21	2:V:496:ARG:CZ	2.08	0.84
2:V:517:LEU:HD12	2:V:518:TYR:N	1.91	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:524:PRO:HB2	2:Y:535:LEU:HD12	1.58	0.84
2:Z:23:SER:CB	2:Z:483:ASN:CB	2.55	0.84
2:X:627:PHE:CZ	2:X:640:LEU:HB3	2.12	0.84
2:V:524:PRO:HB2	2:V:535:LEU:HD12	1.58	0.84
1:D:156:ASP:HB3	2:X:579:PHE:HE1	1.39	0.84
2:X:454:TYR:HE2	2:X:469:PRO:HA	1.43	0.84
2:X:404:LEU:CG	2:X:554:ARG:NH1	2.00	0.84
2:W:481:THR:HG21	2:W:496:ARG:CZ	2.08	0.84
2:Y:505:LEU:HD13	2:Y:525:VAL:HG11	1.56	0.84
2:W:568:SER:O	2:W:571:ARG:HG2	1.78	0.84
2:W:627:PHE:CZ	2:W:640:LEU:HB3	2.12	0.84
2:U:568:SER:O	2:U:571:ARG:HG2	1.78	0.83
2:U:331:PRO:HB2	2:U:334:PHE:HB2	1.60	0.83
2:X:331:PRO:HB2	2:X:334:PHE:HB2	1.60	0.83
2:Z:627:PHE:CZ	2:Z:640:LEU:HB3	2.12	0.83
2:V:331:PRO:HB2	2:V:334:PHE:HB2	1.60	0.83
2:U:622:GLU:CD	2:U:645:THR:HA	1.99	0.83
1:C:109:TYR:HB3	1:C:161:ARG:HH22	1.41	0.83
2:Z:94:PRO:HB2	2:Z:219:ILE:HD12	1.61	0.83
2:W:331:PRO:HB2	2:W:334:PHE:HB2	1.60	0.83
1:D:157:ILE:CD1	2:X:579:PHE:CB	2.57	0.83
2:X:539:LYS:HE2	2:X:541:ALA:HA	1.61	0.83
2:W:404:LEU:CG	2:W:554:ARG:NH1	2.00	0.83
2:X:568:SER:O	2:X:571:ARG:HG2	1.78	0.83
1:A:157:ILE:HB	2:U:579:PHE:CG	2.13	0.83
2:Y:331:PRO:HB2	2:Y:334:PHE:HB2	1.60	0.83
2:Y:622:GLU:CD	2:Y:645:THR:HA	2.00	0.83
2:X:94:PRO:HB2	2:X:219:ILE:HD12	1.61	0.83
2:Z:568:SER:O	2:Z:571:ARG:HG2	1.78	0.83
2:V:568:SER:O	2:V:571:ARG:HG2	1.78	0.83
2:Z:331:PRO:HB2	2:Z:334:PHE:HB2	1.61	0.82
2:W:614:THR:HB	2:W:620:ARG:HA	1.61	0.82
2:Y:404:LEU:CG	2:Y:554:ARG:NH1	2.00	0.82
2:U:94:PRO:HB2	2:U:219:ILE:HD12	1.61	0.82
2:W:94:PRO:HB2	2:W:219:ILE:HD12	1.61	0.82
2:Y:568:SER:O	2:Y:571:ARG:HG2	1.78	0.82
2:W:622:GLU:CD	2:W:645:THR:HA	1.99	0.82
2:U:379:ALA:HB2	2:U:454:TYR:CZ	2.10	0.82
2:W:539:LYS:HE2	2:W:541:ALA:HA	1.62	0.82
1:B:109:TYR:HB3	1:B:161:ARG:HH22	1.45	0.82
2:Z:454:TYR:HE2	2:Z:469:PRO:HA	1.43	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:W:454:TYR:HE2	2:W:469:PRO:HA	1.43	0.82
2:X:481:THR:HG21	2:X:496:ARG:CZ	2.09	0.82
2:U:454:TYR:HE2	2:U:469:PRO:HA	1.43	0.82
2:V:614:THR:HB	2:V:620:ARG:HA	1.61	0.82
2:U:110:TYR:CE1	2:U:178:LEU:O	2.33	0.82
2:X:622:GLU:CD	2:X:645:THR:HA	1.99	0.81
2:V:622:GLU:CD	2:V:645:THR:HA	1.99	0.81
2:W:110:TYR:CE1	2:W:178:LEU:O	2.33	0.81
2:Z:622:GLU:CD	2:Z:645:THR:HA	2.00	0.81
1:E:157:ILE:HB	2:Y:579:PHE:CG	2.15	0.81
2:V:110:TYR:CE1	2:V:178:LEU:O	2.33	0.81
2:V:379:ALA:HB1	2:V:454:TYR:OH	1.74	0.81
1:E:157:ILE:CG1	2:Y:579:PHE:HB3	2.07	0.81
2:W:404:LEU:HG	2:W:554:ARG:HH11	1.46	0.81
2:V:539:LYS:HE2	2:V:541:ALA:HA	1.62	0.81
2:V:404:LEU:HG	2:V:554:ARG:HH11	1.46	0.81
1:A:109:TYR:HB3	1:A:161:ARG:HH22	1.44	0.81
2:U:404:LEU:CD2	2:U:554:ARG:HH12	1.94	0.81
2:W:547:PRO:O	2:W:553:VAL:HG22	1.81	0.81
2:W:496:ARG:N	2:W:534:VAL:CG1	2.43	0.81
2:Y:496:ARG:N	2:Y:534:VAL:CG1	2.44	0.81
2:Y:110:TYR:CE1	2:Y:178:LEU:O	2.33	0.81
2:V:404:LEU:CD2	2:V:554:ARG:HH12	1.94	0.81
2:V:379:ALA:HB2	2:V:454:TYR:CZ	2.11	0.80
2:U:496:ARG:N	2:U:534:VAL:CG1	2.44	0.80
2:X:112:VAL:HG12	2:X:112:VAL:O	1.81	0.80
2:X:524:PRO:HG2	2:X:535:LEU:CB	2.10	0.80
2:X:110:TYR:CE1	2:X:178:LEU:O	2.33	0.80
2:Z:404:LEU:CD2	2:Z:554:ARG:HH12	1.94	0.80
2:X:614:THR:HB	2:X:620:ARG:HA	1.61	0.80
2:Y:614:THR:HB	2:Y:620:ARG:HA	1.62	0.80
2:Y:94:PRO:HB2	2:Y:219:ILE:HD12	1.61	0.80
2:Z:547:PRO:O	2:Z:553:VAL:HG22	1.82	0.80
2:Y:23:SER:HB3	2:Y:483:ASN:HB3	1.64	0.80
1:E:156:ASP:CB	2:Y:579:PHE:CE1	2.61	0.80
1:D:157:ILE:CG1	2:X:579:PHE:CB	2.59	0.80
2:Y:404:LEU:CD2	2:Y:554:ARG:HH12	1.94	0.80
2:U:524:PRO:CB	2:U:535:LEU:HD12	2.11	0.80
2:X:524:PRO:CB	2:X:535:LEU:HD12	2.11	0.80
2:X:547:PRO:O	2:X:553:VAL:HG22	1.82	0.80
2:V:23:SER:HB3	2:V:483:ASN:HB3	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:U:614:THR:HB	2:U:620:ARG:HA	1.61	0.80
1:A:157:ILE:CB	2:U:579:PHE:CD2	2.63	0.80
2:Y:547:PRO:O	2:Y:553:VAL:HG22	1.82	0.80
2:Y:112:VAL:HG12	2:Y:112:VAL:O	1.82	0.80
2:Z:110:TYR:CE1	2:Z:178:LEU:O	2.34	0.80
2:X:404:LEU:CD2	2:X:554:ARG:HH12	1.94	0.80
2:V:94:PRO:HB2	2:V:219:ILE:HD12	1.61	0.80
2:W:450:ILE:H	2:W:540:THR:CG2	1.95	0.80
2:W:379:ALA:HB2	2:W:454:TYR:CZ	2.11	0.80
2:V:23:SER:HB3	2:V:559:MET:SD	2.22	0.80
2:X:496:ARG:N	2:X:534:VAL:CG1	2.44	0.80
2:V:496:ARG:N	2:V:534:VAL:CG1	2.44	0.80
2:U:539:LYS:HE2	2:U:541:ALA:HA	1.62	0.80
2:X:404:LEU:HG	2:X:554:ARG:HH11	1.45	0.80
2:X:379:ALA:HB2	2:X:454:TYR:CZ	2.11	0.80
2:W:23:SER:CB	2:W:559:MET:SD	2.70	0.80
2:W:112:VAL:O	2:W:112:VAL:HG12	1.81	0.80
2:Z:23:SER:CB	2:Z:559:MET:SD	2.70	0.80
2:Z:23:SER:HB3	2:Z:559:MET:SD	2.22	0.80
2:X:450:ILE:H	2:X:540:THR:CG2	1.95	0.80
2:W:23:SER:HB3	2:W:483:ASN:HB3	1.64	0.80
2:V:450:ILE:H	2:V:540:THR:CG2	1.95	0.80
2:V:454:TYR:HE2	2:V:469:PRO:HA	1.42	0.80
2:V:112:VAL:O	2:V:112:VAL:HG12	1.82	0.80
2:U:446:THR:CG2	2:U:542:THR:HG21	2.07	0.79
2:Z:23:SER:HB3	2:Z:483:ASN:HB3	1.64	0.79
2:Z:446:THR:CG2	2:Z:542:THR:HG21	2.06	0.79
2:Y:23:SER:CB	2:Y:559:MET:SD	2.70	0.79
2:U:23:SER:HB3	2:U:559:MET:SD	2.22	0.79
2:U:23:SER:CB	2:U:559:MET:SD	2.70	0.79
2:X:23:SER:CB	2:X:559:MET:SD	2.70	0.79
2:Z:496:ARG:N	2:Z:534:VAL:CG1	2.44	0.79
2:V:23:SER:CB	2:V:559:MET:SD	2.70	0.79
2:Z:524:PRO:CB	2:Z:535:LEU:HD12	2.12	0.79
2:U:404:LEU:HG	2:U:554:ARG:HH11	1.45	0.79
2:Y:614:THR:CB	2:Y:620:ARG:HA	2.13	0.79
2:Z:614:THR:HB	2:Z:620:ARG:HA	1.62	0.79
2:V:547:PRO:O	2:V:553:VAL:HG22	1.81	0.79
2:Y:505:LEU:CD1	2:Y:525:VAL:CG1	2.60	0.79
2:U:547:PRO:O	2:U:553:VAL:HG22	1.81	0.79
2:Z:112:VAL:HG12	2:Z:112:VAL:O	1.81	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:U:178:LEU:HD23	2:U:178:LEU:H	1.48	0.79
2:W:524:PRO:CB	2:W:535:LEU:HD12	2.12	0.79
2:Y:450:ILE:H	2:Y:540:THR:CG2	1.95	0.79
2:X:23:SER:HB3	2:X:559:MET:SD	2.22	0.79
2:Y:524:PRO:CB	2:Y:535:LEU:HD12	2.12	0.79
2:V:505:LEU:CD1	2:V:525:VAL:CG1	2.61	0.79
2:U:112:VAL:HG12	2:U:112:VAL:O	1.82	0.79
2:X:479:ALA:HA	2:X:484:VAL:HG11	1.65	0.79
2:U:524:PRO:HG2	2:U:535:LEU:CB	2.10	0.79
2:W:23:SER:HB3	2:W:559:MET:SD	2.23	0.79
2:X:178:LEU:HD23	2:X:178:LEU:H	1.48	0.79
1:A:157:ILE:CB	2:U:579:PHE:CG	2.66	0.79
2:W:524:PRO:HG2	2:W:535:LEU:CB	2.10	0.79
2:V:614:THR:CB	2:V:620:ARG:HA	2.13	0.79
2:U:23:SER:HB3	2:U:483:ASN:HB3	1.64	0.79
2:Y:23:SER:HB3	2:Y:559:MET:SD	2.22	0.78
2:Y:379:ALA:HB2	2:Y:454:TYR:CZ	2.11	0.78
2:Z:614:THR:CB	2:Z:620:ARG:HA	2.13	0.78
2:Z:404:LEU:CG	2:Z:554:ARG:NH1	2.00	0.78
2:X:614:THR:CB	2:X:620:ARG:HA	2.13	0.78
2:X:23:SER:HB3	2:X:483:ASN:HB3	1.64	0.78
2:V:524:PRO:CB	2:V:535:LEU:HD12	2.12	0.78
2:W:614:THR:CB	2:W:620:ARG:HA	2.13	0.78
2:Y:450:ILE:HG22	2:Y:540:THR:HG22	1.65	0.78
1:F:156:ASP:HB3	2:Z:579:PHE:HE1	1.44	0.78
2:U:614:THR:CB	2:U:620:ARG:HA	2.13	0.78
1:A:157:ILE:CG1	2:U:579:PHE:CG	2.60	0.78
2:U:450:ILE:H	2:U:540:THR:CG2	1.95	0.78
2:W:505:LEU:HD11	2:W:525:VAL:HG11	1.64	0.78
2:U:505:LEU:CD1	2:U:525:VAL:CG1	2.61	0.78
2:Y:178:LEU:HD23	2:Y:178:LEU:H	1.48	0.78
2:V:479:ALA:HA	2:V:484:VAL:HG11	1.65	0.78
2:Y:454:TYR:CE2	2:Y:469:PRO:CA	2.67	0.78
2:Z:178:LEU:HD23	2:Z:178:LEU:H	1.48	0.78
2:W:479:ALA:HA	2:W:484:VAL:HG11	1.66	0.78
2:Z:450:ILE:HG22	2:Z:540:THR:HG22	1.66	0.78
2:Y:479:ALA:HA	2:Y:484:VAL:HG11	1.65	0.78
2:Z:539:LYS:HE2	2:Z:541:ALA:HA	1.64	0.78
2:U:454:TYR:CE2	2:U:469:PRO:CA	2.67	0.78
2:X:450:ILE:HG22	2:X:540:THR:HG22	1.66	0.78
2:Z:505:LEU:CD1	2:Z:525:VAL:CG1	2.61	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:595:ASN:HB2	2:Z:601:ILE:HD12	1.66	0.78
2:V:524:PRO:HG2	2:V:535:LEU:CB	2.10	0.77
2:X:505:LEU:CD1	2:X:525:VAL:CG1	2.61	0.77
2:V:454:TYR:CE2	2:V:469:PRO:CA	2.67	0.77
2:V:518:TYR:OH	2:V:535:LEU:HB3	1.84	0.77
2:Y:407:CYS:O	2:Y:451:ASP:CB	2.32	0.77
2:X:84:VAL:HG13	2:X:85:ASP:O	1.85	0.77
2:Z:454:TYR:CE2	2:Z:469:PRO:CA	2.68	0.77
2:W:518:TYR:OH	2:W:535:LEU:HB3	1.85	0.77
2:W:450:ILE:HG22	2:W:540:THR:HG22	1.66	0.77
2:U:505:LEU:HD11	2:U:525:VAL:HG11	1.65	0.77
2:Z:407:CYS:O	2:Z:451:ASP:CB	2.33	0.77
2:Z:450:ILE:H	2:Z:540:THR:CG2	1.95	0.77
2:W:404:LEU:CD2	2:W:554:ARG:HH12	1.95	0.77
2:U:481:THR:CG2	2:U:496:ARG:NH2	2.47	0.77
2:Y:481:THR:CG2	2:Y:496:ARG:NH2	2.48	0.77
2:U:84:VAL:HG13	2:U:85:ASP:O	1.85	0.77
2:U:450:ILE:HG22	2:U:540:THR:HG22	1.66	0.77
2:V:505:LEU:HD11	2:V:525:VAL:HG11	1.64	0.77
2:U:407:CYS:O	2:U:451:ASP:HB2	1.85	0.77
2:X:518:TYR:OH	2:X:535:LEU:HB3	1.85	0.77
2:W:449:ALA:HA	2:W:540:THR:HG23	1.67	0.77
2:W:407:CYS:O	2:W:451:ASP:CB	2.33	0.77
2:V:450:ILE:HG22	2:V:540:THR:CG2	2.15	0.77
2:V:178:LEU:H	2:V:178:LEU:HD23	1.49	0.77
2:Y:84:VAL:HG13	2:Y:85:ASP:O	1.85	0.77
2:Z:524:PRO:HG2	2:Z:535:LEU:CB	2.10	0.77
2:X:407:CYS:O	2:X:451:ASP:HB2	1.85	0.77
2:U:628:TYR:HD2	2:U:639:THR:HG22	1.50	0.77
2:U:595:ASN:HB2	2:U:601:ILE:HD12	1.67	0.77
2:V:407:CYS:O	2:V:451:ASP:CB	2.33	0.77
2:Y:407:CYS:O	2:Y:451:ASP:HB2	1.84	0.77
2:Z:505:LEU:HD11	2:Z:525:VAL:HG11	1.64	0.77
2:Z:479:ALA:HA	2:Z:484:VAL:HG11	1.65	0.77
2:X:557:PHE:CZ	2:X:638:ILE:HG22	2.20	0.77
2:X:505:LEU:HD11	2:X:525:VAL:HG11	1.64	0.77
2:X:454:TYR:CE2	2:X:469:PRO:CA	2.67	0.77
2:W:451:ASP:OD1	2:W:474:ILE:HD13	1.85	0.77
2:V:450:ILE:HG22	2:V:540:THR:HG22	1.65	0.77
2:V:557:PHE:CZ	2:V:638:ILE:HG22	2.20	0.77
2:Y:524:PRO:HG2	2:Y:535:LEU:CB	2.10	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:628:TYR:HD2	2:Y:639:THR:HG22	1.49	0.77
2:X:178:LEU:CD2	2:X:178:LEU:H	1.98	0.77
2:U:570:TYR:HD2	2:U:584:PHE:CE2	2.03	0.77
2:Z:84:VAL:HG13	2:Z:85:ASP:O	1.85	0.77
2:Y:595:ASN:HB2	2:Y:601:ILE:HD12	1.67	0.77
2:Z:451:ASP:OD1	2:Z:474:ILE:HD13	1.85	0.76
2:Z:557:PHE:CZ	2:Z:638:ILE:HG22	2.20	0.76
2:Y:557:PHE:CZ	2:Y:638:ILE:HG22	2.20	0.76
2:U:479:ALA:HA	2:U:484:VAL:HG11	1.65	0.76
2:U:518:TYR:OH	2:U:535:LEU:HB3	1.85	0.76
2:W:450:ILE:HG22	2:W:540:THR:CG2	2.15	0.76
2:W:178:LEU:HD23	2:W:178:LEU:H	1.49	0.76
2:V:407:CYS:O	2:V:451:ASP:HB2	1.85	0.76
2:V:570:TYR:HD2	2:V:584:PHE:CE2	2.04	0.76
2:Z:518:TYR:OH	2:Z:535:LEU:HB3	1.85	0.76
2:Z:449:ALA:HA	2:Z:540:THR:HG23	1.66	0.76
2:X:449:ALA:HA	2:X:540:THR:HG23	1.67	0.76
2:X:450:ILE:HG22	2:X:540:THR:CG2	2.15	0.76
2:Z:178:LEU:H	2:Z:178:LEU:CD2	1.98	0.76
2:U:407:CYS:O	2:U:451:ASP:CB	2.33	0.76
2:W:407:CYS:O	2:W:451:ASP:HB2	1.85	0.76
2:V:449:ALA:HA	2:V:540:THR:HG23	1.66	0.76
2:Y:451:ASP:OD1	2:Y:474:ILE:HD13	1.86	0.76
2:W:24:THR:O	2:W:371:GLN:OE1	2.03	0.76
2:U:450:ILE:HG22	2:U:540:THR:CG2	2.15	0.76
2:U:557:PHE:CZ	2:U:638:ILE:HG22	2.20	0.76
2:X:407:CYS:O	2:X:451:ASP:CB	2.32	0.76
2:V:451:ASP:OD1	2:V:474:ILE:HD13	1.86	0.76
2:Y:450:ILE:CG1	2:Y:451:ASP:H	1.89	0.76
2:Z:112:VAL:O	2:Z:131:ILE:O	2.04	0.76
2:V:84:VAL:HG13	2:V:85:ASP:O	1.85	0.76
2:Z:450:ILE:HG22	2:Z:540:THR:CG2	2.15	0.76
2:Y:450:ILE:HG22	2:Y:540:THR:CG2	2.15	0.76
2:U:110:TYR:HE1	2:U:178:LEU:O	1.68	0.76
2:W:84:VAL:HG13	2:W:85:ASP:O	1.85	0.76
2:V:595:ASN:HB2	2:V:601:ILE:HD12	1.67	0.76
2:Z:379:ALA:HB2	2:Z:454:TYR:CZ	2.11	0.76
2:W:570:TYR:HD2	2:W:584:PHE:CE2	2.03	0.76
2:Y:178:LEU:CD2	2:Y:178:LEU:H	1.98	0.76
2:U:171:ILE:HG22	2:U:172:SER:H	1.50	0.76
2:Z:407:CYS:O	2:Z:451:ASP:HB2	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:X:451:ASP:OD1	2:X:474:ILE:HD13	1.86	0.76
2:Z:481:THR:CG2	2:Z:496:ARG:NH2	2.49	0.76
2:W:450:ILE:H	2:W:540:THR:HG23	1.51	0.76
2:Z:628:TYR:HD2	2:Z:639:THR:HG22	1.51	0.76
2:U:178:LEU:CD2	2:U:178:LEU:H	1.98	0.76
2:W:178:LEU:CD2	2:W:178:LEU:H	1.99	0.76
2:X:595:ASN:HB2	2:X:601:ILE:HD12	1.67	0.76
2:Z:171:ILE:HG22	2:Z:172:SER:H	1.50	0.76
2:Z:379:ALA:HB1	2:Z:454:TYR:OH	1.73	0.76
2:Y:518:TYR:OH	2:Y:535:LEU:HB3	1.85	0.76
2:V:112:VAL:O	2:V:131:ILE:O	2.04	0.76
2:U:451:ASP:OD1	2:U:474:ILE:HD13	1.86	0.76
2:W:454:TYR:CE2	2:W:469:PRO:CA	2.68	0.76
2:W:557:PHE:CZ	2:W:638:ILE:HG22	2.21	0.76
2:U:112:VAL:O	2:U:131:ILE:O	2.04	0.76
2:Y:570:TYR:HD2	2:Y:584:PHE:CE2	2.04	0.76
2:Z:570:TYR:HD2	2:Z:584:PHE:CE2	2.04	0.76
2:Z:404:LEU:HG	2:Z:554:ARG:HH11	1.46	0.75
2:Y:446:THR:CG2	2:Y:542:THR:HG21	2.07	0.75
2:V:628:TYR:HD2	2:V:639:THR:HG22	1.50	0.75
2:Y:112:VAL:O	2:Y:131:ILE:O	2.04	0.75
2:Y:449:ALA:HA	2:Y:540:THR:HG23	1.66	0.75
2:W:112:VAL:O	2:W:131:ILE:O	2.04	0.75
2:W:595:ASN:HB2	2:W:601:ILE:HD12	1.67	0.75
2:W:110:TYR:HE1	2:W:178:LEU:O	1.68	0.75
2:Z:22:ASN:O	2:Z:23:SER:OG	2.04	0.75
2:X:450:ILE:H	2:X:540:THR:HG23	1.51	0.75
2:W:517:LEU:CD1	2:W:524:PRO:HG3	2.16	0.75
2:X:24:THR:O	2:X:371:GLN:OE1	2.04	0.75
2:U:517:LEU:CD1	2:U:524:PRO:HG3	2.17	0.75
2:V:450:ILE:H	2:V:540:THR:HG23	1.51	0.75
2:V:24:THR:O	2:V:371:GLN:OE1	2.04	0.75
2:Z:517:LEU:CD1	2:Z:524:PRO:HG3	2.16	0.75
2:X:171:ILE:HG22	2:X:172:SER:H	1.51	0.75
2:V:171:ILE:HG22	2:V:172:SER:H	1.50	0.75
2:V:481:THR:CG2	2:V:496:ARG:NH2	2.49	0.75
2:X:112:VAL:O	2:X:131:ILE:O	2.05	0.75
2:V:110:TYR:HE1	2:V:178:LEU:O	1.69	0.75
2:X:570:TYR:HD2	2:X:584:PHE:CE2	2.04	0.75
2:X:517:LEU:CD1	2:X:524:PRO:HG3	2.16	0.75
2:V:517:LEU:CD1	2:V:524:PRO:HG3	2.17	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:450:ILE:H	2:Y:540:THR:HG23	1.51	0.75
2:X:391:LYS:HZ3	2:X:440:ASN:HD21	1.35	0.75
2:U:24:THR:O	2:U:371:GLN:OE1	2.04	0.74
2:W:505:LEU:CD1	2:W:525:VAL:CG1	2.61	0.74
2:X:26:THR:HA	2:X:77:ASP:OD1	1.87	0.74
2:Y:26:THR:HA	2:Y:77:ASP:OD1	1.87	0.74
2:U:22:ASN:O	2:U:23:SER:OG	2.04	0.74
2:V:26:THR:HA	2:V:77:ASP:OD1	1.87	0.74
2:Y:517:LEU:CD1	2:Y:524:PRO:HG3	2.16	0.74
2:U:391:LYS:HZ1	2:U:440:ASN:ND2	1.84	0.74
2:V:178:LEU:H	2:V:178:LEU:CD2	1.99	0.74
2:Y:24:THR:O	2:Y:371:GLN:OE1	2.04	0.74
2:Z:24:THR:O	2:Z:371:GLN:OE1	2.03	0.74
2:U:449:ALA:HA	2:U:540:THR:HG23	1.67	0.74
2:X:628:TYR:HD2	2:X:639:THR:HG22	1.51	0.74
2:Z:110:TYR:HE1	2:Z:178:LEU:O	1.69	0.74
2:U:450:ILE:H	2:U:540:THR:HG23	1.51	0.74
2:X:409:PRO:O	2:X:454:TYR:OH	2.06	0.74
2:V:523:ASN:HD21	2:V:538:ASP:HB3	1.53	0.74
2:W:171:ILE:HG22	2:W:172:SER:H	1.51	0.74
2:W:523:ASN:HD21	2:W:538:ASP:HB3	1.53	0.74
2:W:446:THR:CG2	2:W:542:THR:HG21	2.07	0.74
2:Z:450:ILE:H	2:Z:540:THR:HG23	1.51	0.74
2:Z:450:ILE:CG1	2:Z:451:ASP:H	1.89	0.74
2:X:556:LEU:HD23	2:X:560:LEU:CD2	2.18	0.74
2:V:496:ARG:O	2:V:496:ARG:HG3	1.88	0.74
2:Z:26:THR:HA	2:Z:77:ASP:OD1	1.87	0.74
2:W:22:ASN:O	2:W:23:SER:OG	2.05	0.74
2:W:26:THR:HA	2:W:77:ASP:OD1	1.88	0.74
2:Y:171:ILE:HG22	2:Y:172:SER:H	1.51	0.74
2:Y:22:ASN:O	2:Y:23:SER:OG	2.05	0.74
2:W:450:ILE:CG1	2:W:451:ASP:H	1.88	0.74
2:W:379:ALA:HB1	2:W:454:TYR:OH	1.74	0.74
2:Y:110:TYR:HE1	2:Y:178:LEU:O	1.69	0.74
2:X:627:PHE:CZ	2:X:640:LEU:HD23	2.23	0.73
2:V:450:ILE:CG1	2:V:451:ASP:H	1.89	0.73
2:V:517:LEU:HD22	2:V:524:PRO:HB3	1.70	0.73
2:Z:627:PHE:CZ	2:Z:640:LEU:HD23	2.23	0.73
2:U:450:ILE:CG1	2:U:451:ASP:H	1.89	0.73
2:U:523:ASN:HD21	2:U:538:ASP:HB3	1.53	0.73
2:U:521:ALA:HB1	2:U:540:THR:HA	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:U:26:THR:HA	2:U:77:ASP:OD1	1.87	0.73
2:W:409:PRO:O	2:W:454:TYR:OH	2.06	0.73
2:W:556:LEU:HD23	2:W:560:LEU:CD2	2.18	0.73
2:Y:505:LEU:HD11	2:Y:525:VAL:HG11	1.64	0.73
2:V:446:THR:CG2	2:V:542:THR:HG21	2.07	0.73
2:Y:523:ASN:HD21	2:Y:538:ASP:HB3	1.53	0.73
2:W:496:ARG:O	2:W:496:ARG:HG3	1.88	0.73
1:C:157:ILE:HB	2:W:579:PHE:CD2	2.22	0.73
2:X:517:LEU:HD22	2:X:524:PRO:HB3	1.70	0.73
2:V:409:PRO:O	2:V:454:TYR:OH	2.06	0.73
2:W:481:THR:CG2	2:W:496:ARG:NH2	2.51	0.73
2:V:112:VAL:O	2:V:112:VAL:HG13	1.88	0.73
2:Z:523:ASN:HD21	2:Z:538:ASP:HB3	1.53	0.73
2:Y:409:PRO:O	2:Y:454:TYR:OH	2.06	0.73
2:Y:517:LEU:HD22	2:Y:524:PRO:HB3	1.70	0.73
2:W:628:TYR:HD2	2:W:639:THR:HG22	1.51	0.73
2:Z:391:LYS:HZ1	2:Z:440:ASN:ND2	1.84	0.73
2:Y:627:PHE:CZ	2:Y:640:LEU:HD23	2.24	0.73
2:X:454:TYR:HD2	2:X:469:PRO:HA	1.53	0.73
2:U:526:THR:CG2	2:U:535:LEU:HD21	2.19	0.73
2:X:523:ASN:HD21	2:X:538:ASP:HB3	1.53	0.73
2:W:112:VAL:O	2:W:112:VAL:HG13	1.88	0.73
2:Y:172:SER:C	2:Y:174:SER:HA	2.09	0.73
2:Z:526:THR:CG2	2:Z:535:LEU:HD11	2.19	0.73
2:Y:404:LEU:HG	2:Y:554:ARG:HH11	1.45	0.73
2:Y:556:LEU:HD23	2:Y:560:LEU:CD2	2.19	0.73
2:V:521:ALA:HB1	2:V:540:THR:HA	1.70	0.73
2:W:391:LYS:HZ3	2:W:440:ASN:HD21	1.37	0.73
2:Z:409:PRO:O	2:Z:454:TYR:OH	2.05	0.73
2:W:517:LEU:HD22	2:W:524:PRO:HB3	1.71	0.73
2:W:627:PHE:CZ	2:W:640:LEU:HD23	2.23	0.73
1:F:108:GLN:HB3	1:F:200:PRO:HD2	1.70	0.73
2:U:483:ASN:O	2:U:555:ARG:CD	2.37	0.73
2:V:526:THR:CG2	2:V:535:LEU:HD21	2.19	0.73
2:X:481:THR:CG2	2:X:496:ARG:NH2	2.52	0.73
1:F:157:ILE:CB	2:Z:579:PHE:CD2	2.64	0.73
2:W:51:VAL:HG13	2:W:55:GLY:O	1.89	0.73
2:Y:391:LYS:HZ3	2:Y:440:ASN:HD21	1.37	0.73
2:U:526:THR:CG2	2:U:535:LEU:HD11	2.19	0.72
2:W:526:THR:CG2	2:W:535:LEU:HD21	2.19	0.72
2:X:51:VAL:HG13	2:X:55:GLY:O	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:W:172:SER:C	2:W:174:SER:HA	2.09	0.72
2:Y:410:PRO:O	2:Y:413:THR:HG22	1.89	0.72
2:Y:483:ASN:O	2:Y:555:ARG:CD	2.38	0.72
2:U:409:PRO:O	2:U:454:TYR:OH	2.06	0.72
2:V:556:LEU:HD23	2:V:560:LEU:CD2	2.18	0.72
2:V:627:PHE:CZ	2:V:640:LEU:HD23	2.23	0.72
2:U:496:ARG:O	2:U:496:ARG:HG3	1.89	0.72
2:Y:517:LEU:O	2:Y:520:GLU:HB3	1.89	0.72
2:Z:410:PRO:O	2:Z:413:THR:HG22	1.89	0.72
2:U:556:LEU:HD23	2:U:560:LEU:CD2	2.18	0.72
2:V:51:VAL:HG13	2:V:55:GLY:O	1.89	0.72
2:Z:112:VAL:HG13	2:Z:112:VAL:O	1.88	0.72
2:Z:526:THR:CG2	2:Z:535:LEU:HD21	2.19	0.72
2:U:517:LEU:HD22	2:U:524:PRO:HB3	1.71	0.72
2:X:526:THR:CG2	2:X:535:LEU:HD21	2.19	0.72
2:Y:526:THR:CG2	2:Y:535:LEU:HD21	2.19	0.72
2:Z:564:ILE:HD11	2:Z:642:PHE:HB2	1.71	0.72
2:Y:564:ILE:HD11	2:Y:642:PHE:HB2	1.72	0.72
2:X:446:THR:CG2	2:X:542:THR:HG21	2.07	0.72
2:V:483:ASN:O	2:V:555:ARG:CD	2.37	0.72
2:Y:409:PRO:HD2	2:Y:451:ASP:O	1.88	0.72
2:Y:526:THR:CG2	2:Y:535:LEU:HD11	2.19	0.72
2:W:410:PRO:O	2:W:413:THR:HG22	1.89	0.72
2:Z:483:ASN:O	2:Z:555:ARG:CD	2.38	0.72
2:Z:517:LEU:HD22	2:Z:524:PRO:HB3	1.71	0.72
2:U:627:PHE:CZ	2:U:640:LEU:HD23	2.23	0.72
2:Z:514:ARG:HG3	2:Z:535:LEU:CD1	2.20	0.72
2:V:410:PRO:O	2:V:413:THR:HG22	1.90	0.72
2:U:564:ILE:HD11	2:U:642:PHE:HB2	1.71	0.72
2:X:427:VAL:CG1	2:X:516:ARG:HH21	1.93	0.72
2:Y:112:VAL:HG13	2:Y:112:VAL:O	1.88	0.72
2:Z:521:ALA:HB1	2:Z:540:THR:HA	1.70	0.72
2:V:557:PHE:CE1	2:V:629:ILE:HB	2.25	0.72
2:X:496:ARG:HG3	2:X:496:ARG:O	1.89	0.72
2:X:110:TYR:HE1	2:X:178:LEU:O	1.68	0.72
2:Y:413:THR:HG23	2:Y:414:VAL:HG23	1.72	0.72
2:U:410:PRO:O	2:U:413:THR:HG22	1.89	0.72
2:Z:517:LEU:O	2:Z:520:GLU:HB3	1.90	0.72
2:U:630:GLN:HG3	2:U:636:ASN:O	1.90	0.72
2:X:22:ASN:O	2:X:23:SER:OG	2.04	0.72
2:X:564:ILE:HD11	2:X:642:PHE:HB2	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:496:ARG:O	2:Z:496:ARG:HG3	1.89	0.72
2:Z:590:GLN:O	2:Z:593:GLN:HG3	1.90	0.72
2:U:590:GLN:O	2:U:593:GLN:HG3	1.90	0.72
2:X:410:PRO:O	2:X:413:THR:HG22	1.90	0.72
2:X:23:SER:CB	2:X:483:ASN:HB2	2.20	0.71
2:X:483:ASN:O	2:X:555:ARG:CD	2.38	0.71
2:X:630:GLN:HG3	2:X:636:ASN:O	1.90	0.71
2:W:499:ILE:HD13	2:W:499:ILE:H	1.55	0.71
2:W:630:GLN:HG3	2:W:636:ASN:O	1.90	0.71
2:V:517:LEU:O	2:V:520:GLU:HB3	1.90	0.71
2:Y:521:ALA:HB1	2:Y:540:THR:HA	1.70	0.71
1:C:157:ILE:CG1	2:W:579:PHE:HB3	2.17	0.71
2:U:112:VAL:HG13	2:U:112:VAL:O	1.88	0.71
2:V:590:GLN:O	2:V:593:GLN:HG3	1.90	0.71
2:X:36:GLY:HA2	2:X:82:ARG:HD2	1.72	0.71
2:X:499:ILE:H	2:X:499:ILE:HD13	1.56	0.71
2:W:521:ALA:HB1	2:W:540:THR:HA	1.71	0.71
2:V:526:THR:CG2	2:V:535:LEU:HD11	2.19	0.71
2:X:112:VAL:HG13	2:X:112:VAL:O	1.88	0.71
2:W:614:THR:HG21	2:W:619:ASP:O	1.90	0.71
2:X:614:THR:HG21	2:X:619:ASP:O	1.90	0.71
2:W:31:GLY:HA3	2:W:64:TYR:CD2	2.25	0.71
2:U:382:SER:HB2	2:U:385:THR:HG22	1.72	0.71
2:U:379:ALA:HB1	2:U:454:TYR:OH	1.73	0.71
2:U:557:PHE:CE1	2:U:629:ILE:HB	2.26	0.71
2:X:521:ALA:HB1	2:X:540:THR:HA	1.70	0.71
2:X:557:PHE:CE1	2:X:629:ILE:HB	2.25	0.71
2:V:630:GLN:HG3	2:V:636:ASN:O	1.90	0.71
2:Y:499:ILE:HD13	2:Y:499:ILE:H	1.55	0.71
2:X:172:SER:C	2:X:174:SER:HA	2.10	0.71
2:V:172:SER:C	2:V:174:SER:HA	2.09	0.71
2:Z:413:THR:HG23	2:Z:414:VAL:HG23	1.72	0.71
2:X:394:VAL:HG11	2:X:443:ILE:HD12	1.73	0.71
2:W:590:GLN:O	2:W:593:GLN:HG3	1.90	0.71
2:Y:630:GLN:HG3	2:Y:636:ASN:O	1.90	0.71
2:Y:51:VAL:HG13	2:Y:55:GLY:O	1.89	0.71
2:Z:51:VAL:HG13	2:Z:55:GLY:O	1.89	0.71
2:U:51:VAL:HG13	2:U:55:GLY:O	1.90	0.71
2:V:614:THR:HG21	2:V:619:ASP:O	1.91	0.71
2:X:31:GLY:HA3	2:X:64:TYR:CD2	2.26	0.71
2:X:382:SER:HB2	2:X:385:THR:HG22	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:W:394:VAL:HG11	2:W:443:ILE:HD12	1.72	0.71
2:X:483:ASN:O	2:X:555:ARG:CG	2.39	0.71
2:X:556:LEU:O	2:X:560:LEU:HD23	1.91	0.71
2:W:517:LEU:O	2:W:520:GLU:HB3	1.89	0.71
2:V:23:SER:CB	2:V:483:ASN:HB2	2.21	0.71
2:V:499:ILE:H	2:V:499:ILE:HD13	1.55	0.71
2:W:51:VAL:CA	2:W:55:GLY:HA2	2.19	0.71
2:U:583:SER:O	2:U:586:THR:HG22	1.91	0.71
2:V:583:SER:O	2:V:586:THR:HG22	1.91	0.71
2:V:36:GLY:HA2	2:V:82:ARG:HD2	1.72	0.71
2:Y:114:ASP:OD2	2:Y:175:SER:HB2	1.91	0.71
2:Z:382:SER:HB2	2:Z:385:THR:HG22	1.72	0.71
2:Z:630:GLN:HG3	2:Z:636:ASN:O	1.90	0.71
2:U:517:LEU:O	2:U:520:GLU:HB3	1.89	0.71
2:W:564:ILE:HD11	2:W:642:PHE:HB2	1.71	0.71
2:Y:496:ARG:HG3	2:Y:496:ARG:O	1.88	0.71
2:Y:454:TYR:HE2	2:Y:469:PRO:CA	2.03	0.71
2:V:391:LYS:HZ1	2:V:440:ASN:ND2	1.87	0.71
2:Y:614:THR:HG21	2:Y:619:ASP:O	1.91	0.71
2:Z:172:SER:C	2:Z:174:SER:HA	2.09	0.71
2:U:394:VAL:HG11	2:U:443:ILE:HD12	1.73	0.71
2:Y:394:VAL:HG11	2:Y:443:ILE:HD12	1.73	0.71
2:U:36:GLY:HA2	2:U:82:ARG:HD2	1.73	0.71
2:W:514:ARG:HG3	2:W:535:LEU:CD1	2.20	0.71
2:V:22:ASN:O	2:V:23:SER:OG	2.04	0.71
2:V:413:THR:HG23	2:V:414:VAL:HG23	1.72	0.71
2:V:394:VAL:HG11	2:V:443:ILE:HD12	1.73	0.71
2:X:526:THR:CG2	2:X:535:LEU:HD11	2.19	0.71
2:W:521:ALA:HB1	2:W:539:LYS:O	1.91	0.71
2:W:557:PHE:CE1	2:W:629:ILE:HB	2.26	0.71
2:V:564:ILE:HD11	2:V:642:PHE:HB2	1.72	0.71
2:U:172:SER:C	2:U:174:SER:HA	2.10	0.71
2:Y:557:PHE:CE1	2:Y:629:ILE:HB	2.26	0.71
2:Y:556:LEU:O	2:Y:560:LEU:HD23	1.91	0.71
2:U:556:LEU:O	2:U:560:LEU:HD23	1.91	0.71
2:W:483:ASN:O	2:W:555:ARG:CD	2.37	0.71
2:W:526:THR:CG2	2:W:535:LEU:HD11	2.19	0.71
2:V:409:PRO:HD2	2:V:451:ASP:O	1.88	0.71
2:U:114:ASP:OD2	2:U:175:SER:HB2	1.91	0.71
2:Z:583:SER:O	2:Z:586:THR:HG22	1.91	0.71
2:W:583:SER:O	2:W:586:THR:HG22	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:36:GLY:HA2	2:Z:82:ARG:HD2	1.72	0.71
2:Y:382:SER:HB2	2:Y:385:THR:HG22	1.71	0.71
2:Z:394:VAL:HG11	2:Z:443:ILE:HD12	1.73	0.71
2:X:406:LEU:HD11	2:X:475:ALA:HB2	1.73	0.70
2:W:406:LEU:HD11	2:W:475:ALA:HB2	1.73	0.70
2:W:556:LEU:O	2:W:560:LEU:HD23	1.91	0.70
2:W:576:ASN:HB3	2:W:620:ARG:HH22	1.56	0.70
2:Y:36:GLY:HA2	2:Y:82:ARG:HD2	1.72	0.70
2:Y:31:GLY:HA3	2:Y:64:TYR:CD2	2.25	0.70
2:Y:23:SER:CB	2:Y:483:ASN:HB2	2.21	0.70
2:Y:559:MET:O	2:Y:562:THR:HG22	1.91	0.70
2:U:406:LEU:HD11	2:U:475:ALA:HB2	1.73	0.70
2:V:514:ARG:HG3	2:V:535:LEU:CD1	2.20	0.70
2:Y:521:ALA:HB1	2:Y:539:LYS:O	1.91	0.70
2:Z:614:THR:HG21	2:Z:619:ASP:O	1.91	0.70
2:W:413:THR:HG23	2:W:414:VAL:HG23	1.71	0.70
2:W:114:ASP:OD2	2:W:175:SER:HB2	1.91	0.70
2:Z:547:PRO:O	2:Z:553:VAL:CG2	2.39	0.70
2:Z:557:PHE:CE1	2:Z:629:ILE:HB	2.26	0.70
2:Z:556:LEU:HD23	2:Z:560:LEU:CD2	2.18	0.70
2:U:409:PRO:HD2	2:U:451:ASP:O	1.89	0.70
2:X:521:ALA:HB1	2:X:539:LYS:O	1.92	0.70
2:V:521:ALA:HB1	2:V:539:LYS:O	1.91	0.70
2:X:576:ASN:HB3	2:X:620:ARG:HH22	1.57	0.70
2:U:614:THR:HG21	2:U:619:ASP:O	1.91	0.70
2:Y:590:GLN:O	2:Y:593:GLN:HG3	1.90	0.70
2:Z:499:ILE:HD13	2:Z:499:ILE:H	1.56	0.70
2:Z:556:LEU:O	2:Z:560:LEU:HD23	1.90	0.70
2:U:499:ILE:HD13	2:U:499:ILE:H	1.56	0.70
2:X:450:ILE:CG1	2:X:451:ASP:H	1.89	0.70
2:W:409:PRO:HD2	2:W:451:ASP:O	1.88	0.70
2:W:454:TYR:HD2	2:W:469:PRO:HA	1.53	0.70
2:W:483:ASN:O	2:W:555:ARG:CG	2.39	0.70
2:Y:406:LEU:HD11	2:Y:475:ALA:HB2	1.73	0.70
2:X:413:THR:HG23	2:X:414:VAL:HG23	1.72	0.70
2:V:382:SER:HB2	2:V:385:THR:HG22	1.71	0.70
2:Z:31:GLY:HA3	2:Z:64:TYR:CD2	2.25	0.70
2:U:521:ALA:HB1	2:U:539:LYS:O	1.91	0.70
2:X:547:PRO:O	2:X:553:VAL:CG2	2.39	0.70
1:E:156:ASP:CB	2:Y:579:PHE:HE1	2.01	0.70
2:W:391:LYS:HZ1	2:W:440:ASN:ND2	1.88	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:31:GLY:HA3	2:V:64:TYR:CD2	2.25	0.70
2:Z:47:GLU:HG3	2:Z:69:MET:HG3	1.73	0.70
2:U:547:PRO:O	2:U:553:VAL:CG2	2.39	0.70
2:X:517:LEU:O	2:X:520:GLU:HB3	1.89	0.70
2:V:556:LEU:O	2:V:560:LEU:HD23	1.91	0.70
2:V:51:VAL:CA	2:V:55:GLY:HA2	2.19	0.70
2:U:576:ASN:HB3	2:U:620:ARG:HH22	1.56	0.70
2:Z:114:ASP:OD2	2:Z:175:SER:HB2	1.91	0.70
2:X:590:GLN:O	2:X:593:GLN:HG3	1.90	0.70
2:Z:521:ALA:HB1	2:Z:539:LYS:O	1.91	0.70
2:X:454:TYR:HE2	2:X:469:PRO:CA	2.03	0.70
2:V:406:LEU:HD11	2:V:475:ALA:HB2	1.74	0.70
2:V:483:ASN:O	2:V:555:ARG:CG	2.39	0.70
2:Y:576:ASN:HB3	2:Y:620:ARG:HH22	1.56	0.70
2:W:36:GLY:HA2	2:W:82:ARG:HD2	1.72	0.70
2:Y:583:SER:O	2:Y:586:THR:HG22	1.91	0.70
2:Z:406:LEU:HD11	2:Z:475:ALA:HB2	1.73	0.70
2:Z:454:TYR:HE2	2:Z:469:PRO:CA	2.04	0.70
2:Z:514:ARG:CG	2:Z:535:LEU:HD13	2.22	0.70
2:Y:547:PRO:O	2:Y:553:VAL:CG2	2.39	0.70
2:U:483:ASN:O	2:U:555:ARG:CG	2.39	0.70
2:X:559:MET:O	2:X:562:THR:HG22	1.92	0.70
2:Z:559:MET:O	2:Z:562:THR:HG22	1.91	0.70
2:V:391:LYS:HZ3	2:V:440:ASN:HD21	1.39	0.70
2:U:413:THR:HG23	2:U:414:VAL:HG23	1.72	0.70
2:U:47:GLU:HG3	2:U:69:MET:HG3	1.74	0.70
2:W:382:SER:HB2	2:W:385:THR:HG22	1.72	0.70
1:F:124:THR:HG21	1:F:130:MET:HG2	1.73	0.70
2:Z:483:ASN:O	2:Z:555:ARG:CG	2.39	0.70
2:U:23:SER:CB	2:U:483:ASN:HB2	2.21	0.70
2:W:23:SER:CB	2:W:483:ASN:HB2	2.20	0.70
2:X:114:ASP:OD2	2:X:175:SER:HB2	1.91	0.70
2:Z:409:PRO:HD2	2:Z:451:ASP:O	1.88	0.69
2:Z:524:PRO:CG	2:Z:535:LEU:HD12	2.22	0.69
2:U:454:TYR:HE2	2:U:469:PRO:CA	2.03	0.69
2:W:547:PRO:O	2:W:553:VAL:CG2	2.38	0.69
2:W:559:MET:O	2:W:562:THR:HG22	1.92	0.69
2:V:454:TYR:HE2	2:V:469:PRO:CA	2.03	0.69
2:U:524:PRO:CG	2:U:535:LEU:HD12	2.22	0.69
2:U:31:GLY:HA3	2:U:64:TYR:CD2	2.26	0.69
2:X:23:SER:HB3	2:X:483:ASN:CB	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:547:PRO:O	2:V:553:VAL:CG2	2.39	0.69
2:Y:514:ARG:CG	2:Y:535:LEU:HD13	2.22	0.69
2:W:427:VAL:CG1	2:W:516:ARG:HH21	1.94	0.69
2:Y:483:ASN:O	2:Y:555:ARG:CG	2.39	0.69
2:V:559:MET:O	2:V:562:THR:HG22	1.92	0.69
2:V:576:ASN:HB3	2:V:620:ARG:HH22	1.56	0.69
2:Z:576:ASN:HB3	2:Z:620:ARG:HH22	1.56	0.69
2:X:583:SER:O	2:X:586:THR:HG22	1.91	0.69
2:Z:23:SER:CB	2:Z:483:ASN:HB2	2.21	0.69
2:U:559:MET:O	2:U:562:THR:HG22	1.91	0.69
2:W:524:PRO:CG	2:W:535:LEU:HD12	2.22	0.69
2:W:564:ILE:HG13	2:W:565:GLY:N	2.07	0.69
2:V:427:VAL:CG1	2:V:516:ARG:HH21	1.93	0.69
2:U:55:GLY:O	2:U:65:PHE:CE1	2.46	0.69
2:U:228:GLY:CA	2:U:345:SER:HB3	2.23	0.69
2:X:55:GLY:O	2:X:65:PHE:CE1	2.46	0.69
2:X:391:LYS:HZ1	2:X:440:ASN:ND2	1.90	0.69
2:V:215:LYS:HE3	2:V:329:ASN:HD21	1.58	0.69
2:X:47:GLU:HG3	2:X:69:MET:HG3	1.73	0.69
2:Y:289:ILE:HD12	2:Y:289:ILE:H	1.58	0.69
2:Z:521:ALA:CB	2:Z:540:THR:HA	2.23	0.69
2:X:521:ALA:CB	2:X:540:THR:HA	2.23	0.69
2:W:23:SER:HB3	2:W:483:ASN:CB	2.22	0.69
2:W:454:TYR:HE2	2:W:469:PRO:CA	2.04	0.69
2:W:521:ALA:CB	2:W:540:THR:HA	2.22	0.69
2:V:524:PRO:CG	2:V:535:LEU:HD12	2.22	0.69
2:Y:524:PRO:CG	2:Y:535:LEU:HD12	2.22	0.69
2:V:55:GLY:O	2:V:65:PHE:CE1	2.46	0.69
2:Y:391:LYS:HZ1	2:Y:440:ASN:ND2	1.89	0.69
2:X:622:GLU:OE1	2:X:645:THR:HA	1.93	0.69
2:X:289:ILE:H	2:X:289:ILE:HD12	1.58	0.69
2:U:521:ALA:CB	2:U:540:THR:HA	2.23	0.69
2:U:561:LYS:HB3	2:U:640:LEU:CD2	2.23	0.69
2:X:455:LYS:HG3	2:X:502:VAL:HG22	1.75	0.69
2:W:517:LEU:O	2:W:522:ILE:HG22	1.93	0.69
2:V:521:ALA:CB	2:V:540:THR:HA	2.23	0.69
2:Y:51:VAL:CA	2:Y:55:GLY:HA2	2.19	0.69
2:Y:622:GLU:OE1	2:Y:645:THR:HA	1.93	0.69
2:Z:561:LYS:HB3	2:Z:640:LEU:CD2	2.23	0.69
2:U:455:LYS:HG3	2:U:502:VAL:HG22	1.75	0.69
2:W:455:LYS:HG3	2:W:502:VAL:HG22	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:U:614:THR:CG2	2:U:620:ARG:HA	2.23	0.69
2:Y:47:GLU:HG3	2:Y:69:MET:HG3	1.74	0.69
2:Z:455:LYS:HG3	2:Z:502:VAL:HG22	1.75	0.68
2:Z:517:LEU:O	2:Z:522:ILE:HG22	1.93	0.68
2:X:517:LEU:O	2:X:522:ILE:HG22	1.93	0.68
2:X:524:PRO:CG	2:X:535:LEU:HD12	2.22	0.68
2:W:561:LYS:HB3	2:W:640:LEU:CD2	2.23	0.68
2:V:561:LYS:HB3	2:V:640:LEU:CD2	2.23	0.68
2:Y:455:LYS:HG3	2:Y:502:VAL:HG22	1.75	0.68
2:W:215:LYS:HE3	2:W:329:ASN:HD21	1.58	0.68
2:Z:517:LEU:HD12	2:Z:518:TYR:H	1.57	0.68
2:X:564:ILE:HG13	2:X:565:GLY:N	2.08	0.68
2:V:517:LEU:O	2:V:522:ILE:HG22	1.93	0.68
2:Z:55:GLY:O	2:Z:65:PHE:CE1	2.46	0.68
2:Y:23:SER:HB3	2:Y:483:ASN:CB	2.22	0.68
2:U:514:ARG:HG3	2:U:535:LEU:CD1	2.21	0.68
2:V:454:TYR:HD2	2:V:469:PRO:HA	1.53	0.68
2:Z:622:GLU:OE1	2:Z:645:THR:HA	1.93	0.68
2:W:622:GLU:OE1	2:W:645:THR:HA	1.93	0.68
2:W:596:LYS:HD3	2:W:596:LYS:O	1.94	0.68
2:V:47:GLU:HG3	2:V:69:MET:HG3	1.74	0.68
1:D:124:THR:HG21	1:D:130:MET:HG2	1.75	0.68
2:X:578:ALA:O	2:X:581:ARG:HB3	1.94	0.68
2:U:427:VAL:CG1	2:U:516:ARG:HH21	1.94	0.68
2:Z:598:LEU:HD23	2:Z:598:LEU:O	1.93	0.68
2:U:598:LEU:HD23	2:U:598:LEU:O	1.94	0.68
2:X:514:ARG:HG3	2:X:535:LEU:CD1	2.21	0.68
2:V:596:LYS:O	2:V:596:LYS:HD3	1.94	0.68
1:B:108:GLN:HB3	1:B:200:PRO:HD2	1.75	0.68
2:Y:521:ALA:CB	2:Y:540:THR:HA	2.23	0.68
2:U:51:VAL:CA	2:U:55:GLY:HA2	2.20	0.68
2:W:55:GLY:O	2:W:65:PHE:CE1	2.46	0.68
2:Y:575:LEU:O	2:Y:580:THR:HG21	1.93	0.68
2:U:575:LEU:O	2:U:580:THR:HG21	1.94	0.68
2:Z:596:LYS:HD3	2:Z:596:LYS:O	1.94	0.68
2:V:114:ASP:OD2	2:V:175:SER:HB2	1.92	0.68
2:Z:578:ALA:O	2:Z:581:ARG:HB3	1.94	0.68
2:W:578:ALA:O	2:W:581:ARG:HB3	1.94	0.68
2:Z:289:ILE:HD12	2:Z:289:ILE:H	1.57	0.68
2:Z:450:ILE:CG1	2:Z:451:ASP:N	2.53	0.68
2:X:523:ASN:HD21	2:X:538:ASP:CB	2.07	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:523:ASN:HD21	2:V:538:ASP:CB	2.06	0.68
2:Y:55:GLY:O	2:Y:65:PHE:CE1	2.46	0.68
2:U:391:LYS:NZ	2:U:440:ASN:HD21	1.92	0.68
2:W:614:THR:CG2	2:W:620:ARG:HA	2.23	0.68
2:Z:575:LEU:O	2:Z:580:THR:HG21	1.94	0.68
2:U:596:LYS:HD3	2:U:596:LYS:O	1.94	0.68
2:X:522:ILE:O	2:X:524:PRO:HD3	1.94	0.68
2:X:427:VAL:O	2:X:431:THR:HG22	1.94	0.68
2:Z:427:VAL:O	2:Z:431:THR:HG22	1.94	0.68
2:V:622:GLU:OE1	2:V:645:THR:HA	1.93	0.68
2:Y:561:LYS:HB3	2:Y:640:LEU:CD2	2.23	0.68
2:U:454:TYR:HD2	2:U:469:PRO:HA	1.53	0.68
2:X:514:ARG:CG	2:X:535:LEU:HD13	2.23	0.68
2:W:408:SER:HB2	2:W:471:ALA:HB2	1.76	0.68
2:W:522:ILE:O	2:W:524:PRO:HD3	1.94	0.68
2:V:455:LYS:HG3	2:V:502:VAL:HG22	1.76	0.68
2:V:526:THR:HG21	2:V:535:LEU:HD21	1.76	0.68
2:Y:523:ASN:HD21	2:Y:538:ASP:CB	2.07	0.68
2:Y:427:VAL:O	2:Y:431:THR:HG22	1.94	0.68
2:V:228:GLY:CA	2:V:345:SER:HB3	2.24	0.68
2:X:596:LYS:HD3	2:X:596:LYS:O	1.94	0.68
2:Z:215:LYS:HE3	2:Z:329:ASN:HD21	1.58	0.68
2:W:47:GLU:HG3	2:W:69:MET:HG3	1.73	0.68
2:V:289:ILE:HD12	2:V:289:ILE:H	1.57	0.68
2:W:289:ILE:H	2:W:289:ILE:HD12	1.58	0.68
2:U:289:ILE:HD12	2:U:289:ILE:H	1.58	0.68
2:X:408:SER:HB2	2:X:471:ALA:HB2	1.76	0.67
2:X:409:PRO:C	2:X:454:TYR:HE1	1.97	0.67
2:W:55:GLY:O	2:W:65:PHE:HE1	1.78	0.67
2:V:614:THR:CG2	2:V:620:ARG:HA	2.24	0.67
2:X:215:LYS:HE3	2:X:329:ASN:HD21	1.58	0.67
2:Z:23:SER:HB3	2:Z:483:ASN:CB	2.22	0.67
2:U:517:LEU:O	2:U:522:ILE:HG22	1.93	0.67
2:U:523:ASN:HD21	2:U:538:ASP:CB	2.07	0.67
2:Y:379:ALA:HB1	2:Y:454:TYR:OH	1.73	0.67
2:U:427:VAL:CG1	2:U:516:ARG:NH2	2.47	0.67
2:Z:391:LYS:HZ3	2:Z:440:ASN:HD21	1.41	0.67
2:V:171:ILE:HG22	2:V:172:SER:N	2.09	0.67
2:U:500:LEU:HB2	2:U:501:ASN:OD1	1.94	0.67
2:Z:564:ILE:HG13	2:Z:565:GLY:N	2.07	0.67
2:Y:564:ILE:HG13	2:Y:565:GLY:N	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:U:408:SER:HB2	2:U:471:ALA:HB2	1.76	0.67
2:U:517:LEU:HD12	2:U:518:TYR:H	1.58	0.67
2:X:561:LYS:HB3	2:X:640:LEU:CD2	2.23	0.67
2:W:514:ARG:CG	2:W:535:LEU:HD13	2.22	0.67
2:Y:522:ILE:O	2:Y:524:PRO:HD3	1.94	0.67
2:Z:427:VAL:CG1	2:Z:516:ARG:HH21	1.94	0.67
2:Y:228:GLY:CA	2:Y:345:SER:HB3	2.24	0.67
2:U:622:GLU:OE1	2:U:645:THR:HA	1.93	0.67
2:Z:614:THR:CG2	2:Z:620:ARG:HA	2.24	0.67
2:W:96:ALA:HB2	2:W:191:SER:HA	1.77	0.67
2:V:578:ALA:O	2:V:581:ARG:HB3	1.94	0.67
2:W:598:LEU:HD23	2:W:598:LEU:O	1.94	0.67
2:Z:454:TYR:HD2	2:Z:469:PRO:HA	1.53	0.67
2:U:564:ILE:HG13	2:U:565:GLY:N	2.08	0.67
2:V:408:SER:HB2	2:V:471:ALA:HB2	1.77	0.67
2:Y:614:THR:CG2	2:Y:620:ARG:HA	2.23	0.67
2:Y:596:LYS:HD3	2:Y:596:LYS:O	1.94	0.67
2:W:500:LEU:HB2	2:W:501:ASN:OD1	1.95	0.67
2:Y:578:ALA:O	2:Y:581:ARG:HB3	1.94	0.67
2:V:598:LEU:HD23	2:V:598:LEU:O	1.94	0.67
1:B:157:ILE:HD12	2:V:579:PHE:CB	2.04	0.67
2:W:517:LEU:HD12	2:W:518:TYR:H	1.58	0.67
2:W:523:ASN:HD21	2:W:538:ASP:CB	2.07	0.67
2:X:614:THR:CG2	2:X:620:ARG:HA	2.24	0.67
2:Y:215:LYS:HE3	2:Y:329:ASN:HD21	1.60	0.67
2:X:304:ILE:HG13	2:X:305:TYR:CE2	2.30	0.67
2:Z:500:LEU:HB2	2:Z:501:ASN:OD1	1.95	0.67
2:Y:517:LEU:O	2:Y:522:ILE:HG22	1.93	0.67
1:C:157:ILE:CG1	2:W:579:PHE:CG	2.77	0.67
1:D:156:ASP:HB3	2:X:579:PHE:CD1	2.30	0.67
2:Y:55:GLY:O	2:Y:65:PHE:HE1	1.78	0.67
2:W:575:LEU:O	2:W:580:THR:HG21	1.94	0.67
2:V:575:LEU:O	2:V:580:THR:HG21	1.94	0.67
2:Z:171:ILE:HG22	2:Z:172:SER:N	2.09	0.67
2:V:500:LEU:HB2	2:V:501:ASN:OD1	1.94	0.67
2:W:304:ILE:HG13	2:W:305:TYR:CE2	2.30	0.67
2:V:96:ALA:HB2	2:V:191:SER:HA	1.77	0.67
2:V:564:ILE:HG13	2:V:565:GLY:N	2.08	0.67
2:U:427:VAL:O	2:U:431:THR:HG22	1.94	0.67
2:U:578:ALA:O	2:U:581:ARG:HB3	1.94	0.67
2:Y:351:THR:HG23	2:Y:354:ASP:H	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:351:THR:HG23	2:Z:354:ASP:H	1.60	0.67
2:U:514:ARG:NE	2:U:535:LEU:HD22	2.10	0.67
2:X:575:LEU:O	2:X:580:THR:HG21	1.94	0.67
2:X:351:THR:HG23	2:X:354:ASP:H	1.60	0.67
1:F:19:ASP:HA	1:F:22:SER:HB2	1.77	0.67
2:U:351:THR:HG23	2:U:354:ASP:H	1.60	0.67
2:Z:304:ILE:HG13	2:Z:305:TYR:CE2	2.30	0.67
2:Y:514:ARG:NE	2:Y:535:LEU:HD22	2.10	0.67
2:W:427:VAL:O	2:W:431:THR:HG22	1.94	0.67
2:W:171:ILE:HG22	2:W:172:SER:N	2.09	0.67
2:W:512:ALA:HA	2:W:515:ASP:OD2	1.95	0.67
2:Z:523:ASN:HD21	2:Z:538:ASP:CB	2.07	0.67
2:U:526:THR:HG21	2:U:535:LEU:HD21	1.77	0.67
2:X:409:PRO:HD2	2:X:451:ASP:O	1.87	0.67
2:W:379:ALA:CB	2:W:454:TYR:CE2	2.78	0.67
2:V:514:ARG:NE	2:V:535:LEU:HD22	2.10	0.67
2:V:522:ILE:O	2:V:524:PRO:HD3	1.94	0.67
2:U:391:LYS:HZ3	2:U:440:ASN:HD21	1.41	0.67
2:U:304:ILE:HG13	2:U:305:TYR:CE2	2.30	0.67
2:X:449:ALA:CA	2:X:540:THR:HG23	2.25	0.66
2:Y:514:ARG:HG3	2:Y:535:LEU:CD1	2.21	0.66
2:W:228:GLY:CA	2:W:345:SER:HB3	2.23	0.66
2:U:171:ILE:HG22	2:U:172:SER:N	2.09	0.66
2:X:171:ILE:HG22	2:X:172:SER:N	2.09	0.66
2:Y:512:ALA:HA	2:Y:515:ASP:OD2	1.95	0.66
2:Z:522:ILE:O	2:Z:524:PRO:HD3	1.94	0.66
2:Z:391:LYS:NZ	2:Z:440:ASN:HD21	1.91	0.66
2:U:96:ALA:HB2	2:U:191:SER:HA	1.77	0.66
2:V:427:VAL:CG1	2:V:516:ARG:NH2	2.47	0.66
2:Y:171:ILE:HG22	2:Y:172:SER:N	2.09	0.66
2:U:215:LYS:HE3	2:U:329:ASN:HD21	1.59	0.66
2:X:96:ALA:HB2	2:X:191:SER:HA	1.77	0.66
2:Y:598:LEU:O	2:Y:598:LEU:HD23	1.94	0.66
2:V:304:ILE:HG13	2:V:305:TYR:CE2	2.30	0.66
2:V:512:ALA:HA	2:V:515:ASP:OD2	1.95	0.66
2:X:500:LEU:HB2	2:X:501:ASN:OD1	1.95	0.66
2:W:351:THR:HG23	2:W:354:ASP:H	1.60	0.66
2:Z:379:ALA:CB	2:Z:454:TYR:CE2	2.78	0.66
2:Z:517:LEU:HD13	2:Z:524:PRO:HG3	1.78	0.66
2:Z:449:ALA:CA	2:Z:540:THR:HG23	2.25	0.66
2:U:379:ALA:CB	2:U:454:TYR:CE2	2.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:W:526:THR:HG21	2:W:535:LEU:HD21	1.77	0.66
2:W:449:ALA:CA	2:W:540:THR:HG23	2.25	0.66
2:V:514:ARG:CG	2:V:535:LEU:HD13	2.22	0.66
2:Y:500:LEU:HB2	2:Y:501:ASN:OD1	1.94	0.66
2:V:351:THR:HG23	2:V:354:ASP:H	1.61	0.66
2:Z:514:ARG:NE	2:Z:535:LEU:HD22	2.10	0.66
2:X:517:LEU:HD12	2:X:518:TYR:H	1.57	0.66
2:X:526:THR:HG21	2:X:535:LEU:HD21	1.77	0.66
2:X:514:ARG:NE	2:X:535:LEU:HD22	2.10	0.66
2:V:379:ALA:CB	2:V:454:TYR:CE2	2.79	0.66
2:V:427:VAL:O	2:V:431:THR:HG22	1.94	0.66
2:X:55:GLY:O	2:X:65:PHE:HE1	1.77	0.66
2:Z:512:ALA:HA	2:Z:515:ASP:OD2	1.95	0.66
2:Z:408:SER:HB2	2:Z:471:ALA:HB2	1.77	0.66
2:U:522:ILE:O	2:U:524:PRO:HD3	1.94	0.66
2:Y:427:VAL:CG1	2:Y:516:ARG:NH2	2.47	0.66
2:V:391:LYS:NZ	2:V:440:ASN:HD21	1.92	0.66
2:W:544:VAL:HG12	2:W:545:PRO:N	2.10	0.66
2:Y:408:SER:HB2	2:Y:471:ALA:HB2	1.77	0.66
2:Y:427:VAL:CG1	2:Y:516:ARG:HH21	1.94	0.66
1:F:109:TYR:HB3	1:F:161:ARG:HH22	1.60	0.66
2:X:544:VAL:HG12	2:X:545:PRO:N	2.11	0.66
2:Z:51:VAL:CA	2:Z:55:GLY:HA2	2.19	0.66
2:X:228:GLY:CA	2:X:345:SER:HB3	2.23	0.66
2:X:379:ALA:CB	2:X:454:TYR:CE2	2.79	0.66
2:Y:526:THR:HG21	2:Y:535:LEU:HD21	1.77	0.66
2:W:121:VAL:HG22	2:W:166:ASN:HB3	1.78	0.66
2:Z:96:ALA:HB2	2:Z:191:SER:HA	1.77	0.66
2:W:514:ARG:NE	2:W:535:LEU:HD22	2.09	0.65
2:Y:544:VAL:HG12	2:Y:545:PRO:N	2.11	0.65
2:Y:379:ALA:CB	2:Y:454:TYR:CE2	2.78	0.65
2:X:512:ALA:HA	2:X:515:ASP:OD2	1.95	0.65
2:X:121:VAL:HG22	2:X:166:ASN:HB3	1.79	0.65
2:X:598:LEU:O	2:X:598:LEU:HD23	1.95	0.65
2:V:55:GLY:O	2:V:65:PHE:HE1	1.78	0.65
2:Y:121:VAL:HG22	2:Y:166:ASN:HB3	1.78	0.65
2:U:449:ALA:CA	2:U:540:THR:HG23	2.25	0.65
1:D:157:ILE:HB	2:X:579:PHE:CD2	2.31	0.65
2:Y:96:ALA:HB2	2:Y:191:SER:HA	1.77	0.65
1:A:124:THR:HG21	1:A:130:MET:HG2	1.77	0.65
2:Y:304:ILE:HG13	2:Y:305:TYR:CE2	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:449:ALA:CA	2:Y:540:THR:HG23	2.25	0.65
2:Z:544:VAL:HG12	2:Z:545:PRO:N	2.10	0.65
2:V:517:LEU:HD12	2:V:518:TYR:H	1.58	0.65
2:Y:505:LEU:HD13	2:Y:525:VAL:CG1	2.26	0.65
2:U:55:GLY:O	2:U:65:PHE:HE1	1.78	0.65
2:V:449:ALA:CA	2:V:540:THR:HG23	2.25	0.65
2:X:427:VAL:CG1	2:X:516:ARG:NH2	2.47	0.65
2:X:517:LEU:HD11	2:X:524:PRO:HG3	1.79	0.65
2:W:23:SER:HG	2:W:483:ASN:HB3	1.61	0.65
2:Y:517:LEU:HD13	2:Y:524:PRO:HG3	1.78	0.65
2:Y:427:VAL:HG21	2:Y:516:ARG:CZ	2.27	0.65
2:V:603:GLU:HG2	2:V:637:TYR:OH	1.97	0.65
2:U:512:ALA:HA	2:U:515:ASP:OD2	1.95	0.65
2:Z:526:THR:HG21	2:Z:535:LEU:HD21	1.77	0.65
2:U:427:VAL:HG21	2:U:516:ARG:CZ	2.27	0.65
2:X:51:VAL:CA	2:X:55:GLY:HA2	2.19	0.65
2:Y:454:TYR:HD2	2:Y:469:PRO:HA	1.54	0.65
2:Y:526:THR:HG23	2:Y:535:LEU:CG	2.28	0.65
2:Z:427:VAL:HG21	2:Z:516:ARG:CZ	2.27	0.65
2:W:630:GLN:HE21	2:W:636:ASN:N	1.95	0.64
2:V:630:GLN:HE21	2:V:636:ASN:N	1.95	0.64
1:A:156:ASP:CB	2:U:579:PHE:CD1	2.63	0.64
2:Z:526:THR:HG23	2:Z:535:LEU:CG	2.27	0.64
2:Z:630:GLN:HE21	2:Z:636:ASN:N	1.95	0.64
2:W:517:LEU:HD11	2:W:524:PRO:HG3	1.79	0.64
2:Z:55:GLY:O	2:Z:65:PHE:HE1	1.78	0.64
2:W:391:LYS:NZ	2:W:440:ASN:HD21	1.91	0.64
2:Y:100:GLU:HG3	2:Y:186:LYS:H	1.62	0.64
2:V:121:VAL:HG22	2:V:166:ASN:HB3	1.78	0.64
2:Z:121:VAL:HG22	2:Z:166:ASN:HB3	1.78	0.64
2:X:526:THR:HG23	2:X:535:LEU:CG	2.28	0.64
2:W:514:ARG:HG2	2:W:518:TYR:HE1	1.63	0.64
2:W:561:LYS:HB3	2:W:640:LEU:HD21	1.80	0.64
2:Y:517:LEU:HD12	2:Y:518:TYR:H	1.58	0.64
2:W:514:ARG:HG2	2:W:518:TYR:CE1	2.33	0.64
2:V:526:THR:HG23	2:V:535:LEU:CG	2.27	0.64
1:C:69:GLU:OE2	1:C:126:TYR:OH	2.14	0.64
1:A:108:GLN:HB3	1:A:200:PRO:HD2	1.80	0.64
2:W:526:THR:HG23	2:W:535:LEU:CG	2.27	0.64
2:V:514:ARG:HG2	2:V:518:TYR:CE1	2.33	0.64
2:W:427:VAL:CG1	2:W:516:ARG:NH2	2.47	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:W:603:GLU:HG2	2:W:637:TYR:OH	1.97	0.64
2:Z:66:MET:HG2	2:Z:468:VAL:HG11	1.80	0.64
2:Y:517:LEU:HD11	2:Y:524:PRO:HG3	1.80	0.64
2:Y:603:GLU:HG2	2:Y:637:TYR:OH	1.97	0.64
1:B:157:ILE:N	2:V:579:PHE:CE1	2.65	0.64
2:Y:557:PHE:CE2	2:Y:631:PRO:HD3	2.33	0.64
2:X:561:LYS:HB3	2:X:640:LEU:HD21	1.80	0.64
2:W:409:PRO:C	2:W:454:TYR:HE1	1.98	0.64
2:V:544:VAL:HG12	2:V:545:PRO:N	2.11	0.64
2:V:561:LYS:HB3	2:V:640:LEU:HD21	1.80	0.64
2:Z:603:GLU:HG2	2:Z:637:TYR:OH	1.98	0.64
2:X:603:GLU:HG2	2:X:637:TYR:OH	1.98	0.64
2:Z:561:LYS:HB3	2:Z:640:LEU:HD21	1.80	0.64
2:U:514:ARG:CG	2:U:535:LEU:HD13	2.23	0.64
2:U:544:VAL:HG12	2:U:545:PRO:N	2.11	0.64
2:W:450:ILE:N	2:W:540:THR:HG23	2.13	0.64
2:Y:499:ILE:HG13	2:Y:502:VAL:HG21	1.80	0.64
2:Y:514:ARG:HG2	2:Y:518:TYR:CE1	2.33	0.64
1:C:156:ASP:CB	2:W:579:PHE:HE1	2.07	0.64
2:U:121:VAL:HG22	2:U:166:ASN:HB3	1.78	0.64
2:W:427:VAL:HG21	2:W:516:ARG:CZ	2.28	0.64
2:Z:505:LEU:HD13	2:Z:525:VAL:CG1	2.27	0.64
2:Z:228:GLY:CA	2:Z:345:SER:HB3	2.23	0.64
2:W:215:LYS:HE3	2:W:329:ASN:ND2	2.13	0.64
2:W:100:GLU:HG3	2:W:186:LYS:H	1.63	0.64
2:U:517:LEU:HD13	2:U:524:PRO:HG3	1.78	0.63
2:X:517:LEU:HD13	2:X:524:PRO:HG3	1.78	0.63
2:X:630:GLN:HE21	2:X:636:ASN:N	1.95	0.63
2:Y:450:ILE:N	2:Y:540:THR:HG23	2.13	0.63
2:X:215:LYS:HE3	2:X:329:ASN:ND2	2.13	0.63
2:Y:66:MET:HG2	2:Y:468:VAL:HG11	1.80	0.63
2:U:100:GLU:HG3	2:U:186:LYS:H	1.63	0.63
2:U:450:ILE:N	2:U:540:THR:HG23	2.14	0.63
2:U:526:THR:HG23	2:U:535:LEU:CG	2.28	0.63
2:X:379:ALA:HB1	2:X:454:TYR:OH	1.73	0.63
2:W:517:LEU:HD13	2:W:524:PRO:HG3	1.78	0.63
2:V:517:LEU:HD11	2:V:524:PRO:HG3	1.80	0.63
2:X:505:LEU:HD13	2:X:525:VAL:CG1	2.27	0.63
2:Z:215:LYS:HE3	2:Z:329:ASN:ND2	2.13	0.63
2:V:100:GLU:HG3	2:V:186:LYS:H	1.63	0.63
2:Z:100:GLU:HG3	2:Z:186:LYS:H	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:427:VAL:HG21	2:V:516:ARG:CZ	2.28	0.63
2:V:66:MET:HG2	2:V:468:VAL:HG11	1.80	0.63
2:Z:499:ILE:HG13	2:Z:502:VAL:HG21	1.81	0.63
2:Z:557:PHE:CE2	2:Z:631:PRO:HD3	2.34	0.63
2:X:450:ILE:N	2:X:540:THR:HG23	2.13	0.63
2:X:547:PRO:C	2:X:553:VAL:HG21	2.19	0.63
2:X:100:GLU:HG3	2:X:186:LYS:H	1.63	0.63
2:Z:514:ARG:HG2	2:Z:518:TYR:CE1	2.33	0.63
2:Y:547:PRO:C	2:Y:553:VAL:HG21	2.19	0.63
2:U:23:SER:HB3	2:U:483:ASN:CB	2.23	0.63
2:X:514:ARG:HG2	2:X:518:TYR:CE1	2.34	0.63
2:X:427:VAL:HG21	2:X:516:ARG:CZ	2.28	0.63
2:V:215:LYS:HE3	2:V:329:ASN:ND2	2.13	0.63
2:Z:517:LEU:HD11	2:Z:524:PRO:HG3	1.80	0.63
2:Z:450:ILE:N	2:Z:540:THR:HG23	2.13	0.63
2:U:557:PHE:CE2	2:U:631:PRO:HD3	2.33	0.63
2:U:630:GLN:HE21	2:U:636:ASN:N	1.95	0.63
2:U:66:MET:HG2	2:U:468:VAL:HG11	1.80	0.63
2:Z:561:LYS:O	2:Z:564:ILE:HG12	1.99	0.63
2:U:561:LYS:HB3	2:U:640:LEU:HD21	1.80	0.63
2:V:547:PRO:C	2:V:553:VAL:HG21	2.19	0.63
2:X:628:TYR:CE2	2:X:639:THR:HG22	2.34	0.63
2:Z:547:PRO:C	2:Z:553:VAL:HG21	2.19	0.63
2:X:499:ILE:HG13	2:X:502:VAL:HG21	1.81	0.63
2:W:404:LEU:CD2	2:W:554:ARG:NH1	2.60	0.63
2:W:547:PRO:C	2:W:553:VAL:HG21	2.19	0.63
2:W:561:LYS:O	2:W:564:ILE:HG12	1.99	0.63
2:U:603:GLU:HG2	2:U:637:TYR:OH	1.98	0.63
2:W:66:MET:HG2	2:W:468:VAL:HG11	1.79	0.63
2:Y:628:TYR:CE2	2:Y:639:THR:HG22	2.34	0.63
1:E:108:GLN:HB3	1:E:200:PRO:HD2	1.81	0.63
1:E:124:THR:HG21	1:E:130:MET:HG2	1.81	0.63
1:A:156:ASP:HB3	2:U:579:PHE:HE1	0.83	0.62
2:Y:630:GLN:HE21	2:Y:636:ASN:N	1.95	0.62
2:X:391:LYS:NZ	2:X:440:ASN:HD21	1.91	0.62
2:V:450:ILE:N	2:V:540:THR:HG23	2.13	0.62
2:V:499:ILE:HG13	2:V:502:VAL:HG21	1.80	0.62
2:V:514:ARG:HG2	2:V:518:TYR:HE1	1.63	0.62
2:V:517:LEU:HD13	2:V:524:PRO:HG3	1.79	0.62
2:U:514:ARG:HG2	2:U:518:TYR:CE1	2.34	0.62
2:X:561:LYS:O	2:X:564:ILE:HG12	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:W:557:PHE:CE2	2:W:631:PRO:HD3	2.33	0.62
2:V:557:PHE:CE2	2:V:631:PRO:HD3	2.34	0.62
2:U:499:ILE:HG13	2:U:502:VAL:HG21	1.81	0.62
2:X:514:ARG:HG2	2:X:518:TYR:HE1	1.64	0.62
2:V:23:SER:HB3	2:V:483:ASN:CB	2.22	0.62
2:X:557:PHE:CE2	2:X:631:PRO:HD3	2.34	0.62
2:Y:514:ARG:O	2:Y:518:TYR:HD1	1.82	0.62
2:Z:628:TYR:CE2	2:Z:639:THR:HG22	2.34	0.62
2:U:215:LYS:HE3	2:U:329:ASN:ND2	2.14	0.62
2:Z:213:ASN:HD22	2:Z:213:ASN:N	1.97	0.62
2:Y:561:LYS:HB3	2:Y:640:LEU:HD21	1.80	0.62
2:U:407:CYS:O	2:U:450:ILE:HA	2.00	0.62
2:U:547:PRO:C	2:U:553:VAL:HG21	2.19	0.62
2:U:561:LYS:O	2:U:564:ILE:HG12	1.99	0.62
2:Z:107:GLY:HA3	2:Z:110:TYR:CE1	2.35	0.62
2:Z:514:ARG:O	2:Z:517:LEU:HG	2.00	0.62
2:W:555:ARG:O	2:W:559:MET:HE2	2.00	0.62
2:Y:514:ARG:HG2	2:Y:518:TYR:HE1	1.63	0.62
2:W:628:TYR:CE2	2:W:639:THR:HG22	2.34	0.62
2:Y:107:GLY:HA3	2:Y:110:TYR:HE1	1.65	0.62
2:X:66:MET:HG2	2:X:468:VAL:HG11	1.80	0.62
2:Y:561:LYS:O	2:Y:564:ILE:HG12	1.99	0.62
2:U:514:ARG:HG2	2:U:518:TYR:HE1	1.65	0.62
2:U:514:ARG:O	2:U:518:TYR:HD1	1.82	0.62
2:W:514:ARG:O	2:W:517:LEU:HG	2.00	0.62
2:X:407:CYS:O	2:X:450:ILE:HA	2.00	0.62
2:U:107:GLY:HA3	2:U:110:TYR:CE1	2.34	0.62
2:Y:107:GLY:HA3	2:Y:110:TYR:CE1	2.34	0.62
2:Z:407:CYS:O	2:Z:450:ILE:HA	2.00	0.62
2:Z:514:ARG:O	2:Z:518:TYR:HD1	1.82	0.62
2:U:514:ARG:O	2:U:517:LEU:HG	2.00	0.62
2:X:555:ARG:O	2:X:559:MET:HE2	2.00	0.62
2:V:407:CYS:O	2:V:450:ILE:HA	2.00	0.62
2:Y:514:ARG:O	2:Y:517:LEU:HG	2.00	0.62
2:V:628:TYR:CE2	2:V:639:THR:HG22	2.34	0.62
2:Y:215:LYS:HE3	2:Y:329:ASN:ND2	2.14	0.62
2:U:213:ASN:HD22	2:U:213:ASN:N	1.98	0.62
2:Z:514:ARG:HG2	2:Z:518:TYR:HE1	1.63	0.61
2:Z:556:LEU:CD1	2:Z:631:PRO:HA	2.30	0.61
2:W:407:CYS:O	2:W:450:ILE:HA	2.00	0.61
2:V:561:LYS:O	2:V:564:ILE:HG12	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:U:628:TYR:CE2	2:U:639:THR:HG22	2.34	0.61
2:W:107:GLY:HA3	2:W:110:TYR:HE1	1.65	0.61
2:V:107:GLY:HA3	2:V:110:TYR:HE1	1.65	0.61
2:U:455:LYS:HE2	2:U:502:VAL:HG22	1.82	0.61
2:V:514:ARG:O	2:V:517:LEU:HG	2.00	0.61
2:Z:555:ARG:O	2:Z:559:MET:HE2	2.00	0.61
2:W:514:ARG:O	2:W:518:TYR:HD1	1.82	0.61
2:V:555:ARG:O	2:V:559:MET:HE2	2.00	0.61
2:Z:427:VAL:CG1	2:Z:516:ARG:NH2	2.47	0.61
1:E:69:GLU:OE2	1:E:126:TYR:OH	2.09	0.61
2:U:409:PRO:C	2:U:454:TYR:HE1	1.98	0.61
2:W:499:ILE:HG13	2:W:502:VAL:HG21	1.81	0.61
2:W:505:LEU:HD13	2:W:525:VAL:CG1	2.27	0.61
2:V:505:LEU:HD13	2:V:525:VAL:CG1	2.27	0.61
2:W:107:GLY:HA3	2:W:110:TYR:CE1	2.34	0.61
2:X:107:GLY:HA3	2:X:110:TYR:CE1	2.34	0.61
1:D:69:GLU:OE2	1:D:126:TYR:OH	2.13	0.61
2:W:573:PHE:HD2	2:W:574:GLU:CD	2.04	0.61
2:V:107:GLY:HA3	2:V:110:TYR:CE1	2.35	0.61
2:U:573:PHE:HD2	2:U:574:GLU:CD	2.04	0.61
2:U:278:GLN:HG2	2:U:296:SER:HB2	1.83	0.61
2:V:213:ASN:HD22	2:V:213:ASN:N	1.98	0.61
2:Y:213:ASN:N	2:Y:213:ASN:HD22	1.98	0.61
2:U:556:LEU:CD1	2:U:631:PRO:HA	2.30	0.61
2:V:514:ARG:O	2:V:518:TYR:HD1	1.83	0.61
2:Z:278:GLN:HG2	2:Z:296:SER:HB2	1.83	0.61
2:X:213:ASN:N	2:X:213:ASN:HD22	1.98	0.61
2:U:517:LEU:HD11	2:U:524:PRO:HG3	1.81	0.61
2:Y:391:LYS:NZ	2:Y:440:ASN:HD21	1.92	0.61
2:W:213:ASN:N	2:W:213:ASN:HD22	1.98	0.61
2:U:107:GLY:HA3	2:U:110:TYR:HE1	1.66	0.61
2:X:107:GLY:HA3	2:X:110:TYR:HE1	1.65	0.61
2:Z:107:GLY:HA3	2:Z:110:TYR:HE1	1.66	0.61
2:Y:278:GLN:HG2	2:Y:296:SER:HB2	1.83	0.61
2:Y:573:PHE:HD2	2:Y:574:GLU:CD	2.03	0.61
2:U:514:ARG:HA	2:U:517:LEU:HG	1.82	0.61
2:V:455:LYS:HE2	2:V:502:VAL:HG22	1.83	0.61
2:Y:556:LEU:CD1	2:Y:631:PRO:HA	2.31	0.61
2:U:404:LEU:CD2	2:U:554:ARG:NH1	2.60	0.61
1:F:66:ALA:O	1:F:68:VAL:N	2.32	0.61
2:Z:409:PRO:C	2:Z:454:TYR:HE1	1.98	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:X:514:ARG:O	2:X:518:TYR:HD1	1.82	0.60
2:Y:407:CYS:O	2:Y:450:ILE:HA	2.00	0.60
2:X:391:LYS:CE	2:X:440:ASN:O	2.49	0.60
2:V:573:PHE:HD2	2:V:574:GLU:CD	2.04	0.60
1:D:108:GLN:HB3	1:D:200:PRO:HD2	1.83	0.60
2:Z:455:LYS:HE2	2:Z:502:VAL:HG22	1.83	0.60
2:Z:514:ARG:HA	2:Z:517:LEU:HG	1.82	0.60
2:X:514:ARG:O	2:X:517:LEU:HG	2.00	0.60
2:X:556:LEU:CD1	2:X:631:PRO:HA	2.31	0.60
2:W:517:LEU:HB2	2:W:522:ILE:HG21	1.83	0.60
2:V:278:GLN:HG2	2:V:296:SER:HB2	1.83	0.60
2:Z:573:PHE:HD2	2:Z:574:GLU:CD	2.04	0.60
2:W:97:GLY:HA3	2:W:256:PRO:HG2	1.83	0.60
2:X:573:PHE:HD2	2:X:574:GLU:CD	2.04	0.60
2:W:627:PHE:HD1	2:W:629:ILE:HG13	1.67	0.60
2:W:556:LEU:CD1	2:W:631:PRO:HA	2.31	0.60
2:V:556:LEU:CD1	2:V:631:PRO:HA	2.31	0.60
2:V:617:VAL:HG23	2:V:619:ASP:N	2.17	0.60
2:X:161:PRO:HB3	2:X:187:ILE:HB	1.83	0.60
1:E:66:ALA:O	1:E:68:VAL:N	2.32	0.60
2:W:514:ARG:HA	2:W:517:LEU:HG	1.82	0.60
2:V:514:ARG:HA	2:V:517:LEU:HG	1.82	0.60
2:Y:517:LEU:HB2	2:Y:522:ILE:HG21	1.83	0.60
2:V:614:THR:HG21	2:V:620:ARG:HA	1.84	0.60
2:Z:617:VAL:HG23	2:Z:619:ASP:N	2.17	0.60
1:B:124:THR:HG21	1:B:130:MET:HG2	1.82	0.60
2:Y:23:SER:HG	2:Y:483:ASN:HB3	1.65	0.60
2:U:575:LEU:HD12	2:U:575:LEU:N	2.17	0.60
2:W:161:PRO:HB3	2:W:187:ILE:HB	1.83	0.60
2:U:161:PRO:HB3	2:U:187:ILE:HB	1.83	0.60
2:W:278:GLN:HG2	2:W:296:SER:HB2	1.82	0.60
2:Y:555:ARG:O	2:Y:559:MET:HE2	2.01	0.60
2:V:575:LEU:N	2:V:575:LEU:HD12	2.17	0.60
2:U:617:VAL:HG23	2:U:619:ASP:N	2.17	0.60
2:X:517:LEU:HB2	2:X:522:ILE:HG21	1.83	0.60
1:D:157:ILE:CG1	2:X:579:PHE:HB2	2.24	0.60
1:D:157:ILE:CG1	2:X:579:PHE:HB3	2.30	0.60
2:U:614:THR:HG21	2:U:620:ARG:HA	1.83	0.60
2:V:627:PHE:HD1	2:V:629:ILE:HG13	1.66	0.60
2:Y:514:ARG:HA	2:Y:517:LEU:HG	1.82	0.60
2:W:391:LYS:CE	2:W:440:ASN:O	2.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:W:614:THR:HG21	2:W:620:ARG:HA	1.83	0.60
2:Y:617:VAL:HG23	2:Y:619:ASP:N	2.17	0.60
2:Y:97:GLY:HA3	2:Y:256:PRO:HG2	1.84	0.60
2:Y:557:PHE:HE2	2:Y:631:PRO:HD3	1.67	0.60
2:U:526:THR:HG23	2:U:535:LEU:HD11	1.84	0.60
2:X:455:LYS:HE2	2:X:502:VAL:HG22	1.83	0.60
2:Z:97:GLY:HA3	2:Z:256:PRO:HG2	1.83	0.60
2:V:517:LEU:HB2	2:V:522:ILE:HG21	1.83	0.59
2:Y:526:THR:HG23	2:Y:535:LEU:HG	1.85	0.59
2:W:575:LEU:HD12	2:W:575:LEU:N	2.16	0.59
2:Y:614:THR:HG21	2:Y:620:ARG:HA	1.83	0.59
2:V:97:GLY:HA3	2:V:256:PRO:HG2	1.84	0.59
2:X:514:ARG:HA	2:X:517:LEU:HG	1.82	0.59
2:X:526:THR:HG23	2:X:535:LEU:HG	1.84	0.59
2:Z:391:LYS:CE	2:Z:440:ASN:O	2.49	0.59
2:W:617:VAL:HG23	2:W:619:ASP:N	2.17	0.59
2:X:617:VAL:HG23	2:X:619:ASP:N	2.16	0.59
2:Z:161:PRO:HB3	2:Z:187:ILE:HB	1.83	0.59
2:Z:526:THR:HG23	2:Z:535:LEU:HD11	1.84	0.59
2:U:517:LEU:HB2	2:U:522:ILE:HG21	1.83	0.59
2:U:542:THR:HG23	2:U:543:SER:N	2.18	0.59
2:V:409:PRO:C	2:V:454:TYR:HE1	1.98	0.59
2:Y:409:PRO:C	2:Y:454:TYR:HE1	1.98	0.59
2:Z:614:THR:HG21	2:Z:620:ARG:HA	1.83	0.59
2:Z:560:LEU:O	2:Z:564:ILE:HG23	2.03	0.59
2:U:560:LEU:O	2:U:564:ILE:HG23	2.03	0.59
1:C:114:ILE:HG12	1:C:115:LYS:N	2.17	0.59
2:X:278:GLN:HG2	2:X:296:SER:HB2	1.83	0.59
2:Z:542:THR:HG23	2:Z:543:SER:N	2.18	0.59
2:Z:557:PHE:HE2	2:Z:631:PRO:HD3	1.68	0.59
2:U:557:PHE:HE2	2:U:631:PRO:HD3	1.68	0.59
2:V:560:LEU:O	2:V:564:ILE:HG23	2.03	0.59
2:Y:455:LYS:HE2	2:Y:502:VAL:HG22	1.83	0.59
2:Y:575:LEU:HD12	2:Y:575:LEU:N	2.17	0.59
2:U:419:VAL:HA	2:U:422:ALA:HB3	1.83	0.59
2:Y:560:LEU:O	2:Y:564:ILE:HG23	2.03	0.59
2:X:404:LEU:CD2	2:X:554:ARG:NH1	2.59	0.59
2:W:542:THR:HG23	2:W:543:SER:N	2.17	0.59
2:V:542:THR:HG23	2:V:543:SER:N	2.18	0.59
2:V:557:PHE:HE2	2:V:631:PRO:HD3	1.68	0.59
2:V:391:LYS:CE	2:V:440:ASN:O	2.49	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:X:575:LEU:HD12	2:X:575:LEU:N	2.16	0.59
2:X:614:THR:HG21	2:X:620:ARG:HA	1.83	0.59
2:V:161:PRO:HB3	2:V:187:ILE:HB	1.83	0.59
2:X:542:THR:HG23	2:X:543:SER:N	2.17	0.59
2:W:557:PHE:HE2	2:W:631:PRO:HD3	1.68	0.59
2:V:526:THR:HG23	2:V:535:LEU:HD11	1.84	0.59
2:Z:575:LEU:N	2:Z:575:LEU:HD12	2.17	0.59
2:X:97:GLY:HA3	2:X:256:PRO:HG2	1.83	0.59
2:Z:398:ASP:O	2:Z:401:GLN:HG3	2.03	0.59
2:Z:526:THR:HG23	2:Z:535:LEU:HG	1.85	0.59
2:Y:404:LEU:CD2	2:Y:554:ARG:NH1	2.60	0.59
2:X:560:LEU:O	2:X:564:ILE:HG23	2.03	0.59
2:W:455:LYS:HE2	2:W:502:VAL:HG22	1.83	0.59
2:W:560:LEU:O	2:W:564:ILE:HG23	2.03	0.59
2:U:23:SER:HG	2:U:483:ASN:HB3	1.66	0.59
2:U:391:LYS:CE	2:U:440:ASN:O	2.49	0.59
2:Y:576:ASN:HA	2:Y:580:THR:HG21	1.85	0.59
2:V:581:ARG:HB2	2:V:623:PHE:CZ	2.38	0.59
2:Y:501:ASN:N	2:Y:501:ASN:OD1	2.36	0.59
2:Z:517:LEU:HB2	2:Z:522:ILE:HG21	1.83	0.58
2:U:627:PHE:HD1	2:U:629:ILE:HG13	1.67	0.58
2:X:456:TYR:HB3	2:X:504:LYS:HB3	1.85	0.58
2:X:557:PHE:HE2	2:X:631:PRO:HD3	1.68	0.58
2:X:627:PHE:HD1	2:X:629:ILE:HG13	1.67	0.58
2:V:526:THR:HG23	2:V:535:LEU:HG	1.84	0.58
1:D:156:ASP:CB	2:X:579:PHE:HE1	2.14	0.58
2:X:581:ARG:HB2	2:X:623:PHE:CZ	2.38	0.58
2:Y:581:ARG:HB2	2:Y:623:PHE:CZ	2.38	0.58
2:Z:60:GLU:HG2	2:Z:347:ASN:HB2	1.85	0.58
1:F:114:ILE:HG12	1:F:115:LYS:H	1.68	0.58
2:Y:398:ASP:O	2:Y:401:GLN:HG3	2.03	0.58
2:W:419:VAL:HA	2:W:422:ALA:HB3	1.84	0.58
2:Y:557:PHE:HZ	2:Y:629:ILE:O	1.86	0.58
2:X:373:PHE:HB2	2:X:405:VAL:HA	1.85	0.58
2:Y:161:PRO:HB3	2:Y:187:ILE:HB	1.83	0.58
1:A:157:ILE:HD11	2:U:579:PHE:HB3	1.69	0.58
2:Z:627:PHE:HD1	2:Z:629:ILE:HG13	1.67	0.58
2:U:526:THR:HG23	2:U:535:LEU:HG	1.85	0.58
2:U:555:ARG:O	2:U:559:MET:HE2	2.03	0.58
2:V:557:PHE:HE1	2:V:629:ILE:HB	1.68	0.58
2:U:505:LEU:HD13	2:U:525:VAL:CG1	2.27	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:151:GLU:OE2	1:B:161:ARG:NH1	2.34	0.58
2:V:178:LEU:CD2	2:V:178:LEU:N	2.67	0.58
2:U:576:ASN:HA	2:U:580:THR:HG21	1.86	0.58
2:U:501:ASN:N	2:U:501:ASN:OD1	2.36	0.58
2:Y:419:VAL:HA	2:Y:422:ALA:HB3	1.84	0.58
2:Y:133:GLU:HB3	2:Y:142:LYS:HB3	1.86	0.58
2:X:398:ASP:O	2:X:401:GLN:HG3	2.03	0.58
2:Z:523:ASN:OD1	2:Z:538:ASP:HA	2.04	0.58
2:Y:627:PHE:HD1	2:Y:629:ILE:HG13	1.67	0.58
2:W:23:SER:OG	2:W:483:ASN:HB2	2.03	0.58
2:W:373:PHE:HB2	2:W:405:VAL:HA	1.86	0.58
2:V:429:TRP:CZ2	2:V:441:PHE:HB2	2.39	0.58
2:X:576:ASN:HA	2:X:580:THR:HG21	1.86	0.58
1:E:125:ARG:HH21	1:E:184:ARG:HG2	1.68	0.58
2:W:429:TRP:CZ2	2:W:441:PHE:HB2	2.39	0.58
2:X:429:TRP:CZ2	2:X:441:PHE:HB2	2.39	0.58
2:Y:429:TRP:CZ2	2:Y:441:PHE:HB2	2.39	0.58
2:Z:576:ASN:HA	2:Z:580:THR:HG21	1.86	0.58
2:W:581:ARG:HB2	2:W:623:PHE:CZ	2.39	0.58
2:W:501:ASN:N	2:W:501:ASN:OD1	2.36	0.58
2:U:398:ASP:O	2:U:401:GLN:HG3	2.04	0.58
2:U:523:ASN:OD1	2:U:538:ASP:HA	2.04	0.58
2:W:523:ASN:ND2	2:W:538:ASP:HA	2.19	0.58
2:Y:391:LYS:CE	2:Y:440:ASN:O	2.49	0.58
2:U:557:PHE:HE1	2:U:629:ILE:HB	1.69	0.58
2:X:455:LYS:HG2	2:X:456:TYR:N	2.19	0.58
2:W:450:ILE:HG23	2:W:522:ILE:HG13	1.86	0.58
2:V:450:ILE:HG23	2:V:522:ILE:HG13	1.86	0.58
2:Z:429:TRP:CZ2	2:Z:441:PHE:HB2	2.39	0.58
2:W:576:ASN:HA	2:W:580:THR:HG21	1.85	0.58
2:U:581:ARG:HB2	2:U:623:PHE:CZ	2.39	0.58
2:X:133:GLU:HB3	2:X:142:LYS:HB3	1.86	0.58
2:Z:373:PHE:HB2	2:Z:404:LEU:O	2.04	0.58
2:U:450:ILE:N	2:U:540:THR:CG2	2.67	0.58
2:V:450:ILE:N	2:V:540:THR:CG2	2.66	0.58
2:Y:542:THR:HG23	2:Y:543:SER:N	2.18	0.58
2:U:614:THR:HG23	2:U:615:PRO:O	2.04	0.58
2:W:398:ASP:O	2:W:401:GLN:HG3	2.04	0.58
2:W:133:GLU:HB3	2:W:142:LYS:HB3	1.86	0.58
2:V:419:VAL:HA	2:V:422:ALA:HB3	1.85	0.58
2:V:455:LYS:HG2	2:V:456:TYR:N	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:404:LEU:CD2	2:Z:554:ARG:NH1	2.60	0.57
2:U:557:PHE:HZ	2:U:629:ILE:O	1.87	0.57
2:X:523:ASN:ND2	2:X:538:ASP:HA	2.19	0.57
2:W:373:PHE:HB2	2:W:404:LEU:O	2.04	0.57
2:V:557:PHE:HZ	2:V:629:ILE:O	1.86	0.57
2:X:450:ILE:HG23	2:X:522:ILE:HG13	1.86	0.57
2:X:557:PHE:HZ	2:X:629:ILE:O	1.86	0.57
2:W:456:TYR:O	2:W:503:ILE:HG12	2.04	0.57
2:W:526:THR:HG23	2:W:535:LEU:HD11	1.85	0.57
2:Y:450:ILE:HG23	2:Y:522:ILE:HG13	1.86	0.57
2:Y:526:THR:HG23	2:Y:535:LEU:HD11	1.85	0.57
2:U:429:TRP:CZ2	2:U:441:PHE:HB2	2.39	0.57
1:A:151:GLU:OE2	1:A:161:ARG:NH1	2.30	0.57
1:E:109:TYR:HB3	1:E:161:ARG:HH22	1.69	0.57
2:U:60:GLU:HG2	2:U:347:ASN:HB2	1.85	0.57
2:X:456:TYR:O	2:X:503:ILE:HG12	2.05	0.57
2:W:526:THR:HG23	2:W:535:LEU:HG	1.85	0.57
2:W:557:PHE:HZ	2:W:629:ILE:O	1.87	0.57
2:V:373:PHE:HB2	2:V:404:LEU:O	2.04	0.57
2:W:571:ARG:HG3	2:W:572:LEU:N	2.19	0.57
2:V:576:ASN:HA	2:V:580:THR:HG21	1.86	0.57
2:U:178:LEU:CD2	2:U:178:LEU:N	2.66	0.57
2:X:501:ASN:OD1	2:X:501:ASN:N	2.37	0.57
2:U:97:GLY:HA3	2:U:256:PRO:HG2	1.84	0.57
2:X:423:VAL:HG21	2:X:513:GLN:CD	2.25	0.57
2:V:60:GLU:HG2	2:V:347:ASN:HB2	1.85	0.57
2:Z:499:ILE:HG13	2:Z:502:VAL:CG2	2.34	0.57
2:U:450:ILE:HD13	2:U:522:ILE:HD12	1.86	0.57
2:U:523:ASN:ND2	2:U:538:ASP:HA	2.19	0.57
2:V:373:PHE:HB2	2:V:405:VAL:HA	1.86	0.57
2:V:404:LEU:CD2	2:V:554:ARG:NH1	2.59	0.57
2:Z:419:VAL:HA	2:Z:422:ALA:HB3	1.85	0.57
2:V:398:ASP:O	2:V:401:GLN:HG3	2.04	0.57
2:Z:450:ILE:HG23	2:Z:522:ILE:HG13	1.86	0.57
2:Y:373:PHE:HB2	2:Y:405:VAL:HA	1.86	0.57
2:U:499:ILE:HG13	2:U:502:VAL:CG2	2.35	0.57
2:U:456:TYR:HB3	2:U:504:LYS:HB3	1.85	0.57
2:W:499:ILE:HG13	2:W:502:VAL:CG2	2.35	0.57
2:W:514:ARG:CG	2:W:518:TYR:HE1	2.18	0.57
2:Y:456:TYR:O	2:Y:503:ILE:HG12	2.04	0.57
2:Y:456:TYR:HB3	2:Y:504:LYS:HB3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:423:VAL:HG21	2:Z:513:GLN:CD	2.25	0.57
2:X:419:VAL:HA	2:X:422:ALA:HB3	1.84	0.57
2:Z:557:PHE:HZ	2:Z:629:ILE:O	1.86	0.57
2:U:450:ILE:HG23	2:U:522:ILE:HG13	1.86	0.57
2:X:627:PHE:HZ	2:X:640:LEU:HD23	1.69	0.57
1:C:109:TYR:HB3	1:C:161:ARG:NH2	2.18	0.57
2:V:571:ARG:HG3	2:V:572:LEU:N	2.20	0.57
2:W:178:LEU:CD2	2:W:178:LEU:N	2.66	0.57
2:Z:178:LEU:CD2	2:Z:178:LEU:N	2.66	0.57
2:Z:614:THR:HG23	2:Z:615:PRO:O	2.05	0.57
2:Z:581:ARG:HB2	2:Z:623:PHE:CZ	2.39	0.57
2:Y:373:PHE:HB2	2:Y:404:LEU:O	2.04	0.57
2:X:523:ASN:OD1	2:X:538:ASP:HA	2.04	0.57
2:V:523:ASN:ND2	2:V:538:ASP:HA	2.19	0.57
2:Y:514:ARG:CG	2:Y:518:TYR:HE1	2.18	0.57
2:Y:523:ASN:ND2	2:Y:538:ASP:HA	2.19	0.57
2:V:501:ASN:N	2:V:501:ASN:OD1	2.37	0.57
2:X:60:GLU:HG2	2:X:347:ASN:HB2	1.85	0.57
2:Y:60:GLU:HG2	2:Y:347:ASN:HB2	1.85	0.57
2:Z:450:ILE:N	2:Z:540:THR:CG2	2.66	0.57
2:Z:514:ARG:CG	2:Z:518:TYR:HE1	2.18	0.57
2:Z:627:PHE:CD1	2:Z:629:ILE:HG13	2.40	0.57
2:X:557:PHE:HE1	2:X:629:ILE:HB	1.68	0.57
2:W:523:ASN:OD1	2:W:538:ASP:HA	2.05	0.57
2:V:456:TYR:O	2:V:503:ILE:HG12	2.04	0.57
2:V:514:ARG:CG	2:V:518:TYR:HE1	2.18	0.57
2:V:627:PHE:CD1	2:V:629:ILE:HG13	2.40	0.57
2:Z:455:LYS:HG2	2:Z:456:TYR:N	2.19	0.57
2:Y:558:ASN:HA	2:Y:561:LYS:HE2	1.86	0.57
1:E:157:ILE:CD1	2:Y:579:PHE:CB	2.71	0.57
2:Y:571:ARG:HG3	2:Y:572:LEU:N	2.20	0.57
2:V:596:LYS:HG2	2:V:601:ILE:O	2.05	0.57
2:Y:423:VAL:HG21	2:Y:513:GLN:CD	2.26	0.57
2:U:423:VAL:HG21	2:U:513:GLN:CD	2.25	0.57
2:Z:456:TYR:HB3	2:Z:504:LYS:HB3	1.86	0.57
2:U:373:PHE:HB2	2:U:404:LEU:O	2.05	0.57
2:Y:499:ILE:HG13	2:Y:502:VAL:CG2	2.35	0.57
1:C:151:GLU:OE2	1:C:161:ARG:NH1	2.37	0.57
2:Y:614:THR:HG23	2:Y:615:PRO:O	2.04	0.57
2:U:596:LYS:HG2	2:U:601:ILE:O	2.05	0.57
2:Z:557:PHE:HE1	2:Z:629:ILE:HB	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:557:PHE:HE1	2:Y:629:ILE:HB	1.69	0.56
2:U:455:LYS:HG2	2:U:456:TYR:N	2.19	0.56
2:U:514:ARG:CG	2:U:518:TYR:HE1	2.18	0.56
2:X:450:ILE:HD13	2:X:522:ILE:HD12	1.86	0.56
2:X:514:ARG:CG	2:X:518:TYR:HE1	2.18	0.56
2:W:456:TYR:HB3	2:W:504:LYS:HB3	1.85	0.56
2:V:499:ILE:HG13	2:V:502:VAL:CG2	2.34	0.56
2:V:450:ILE:HD13	2:V:522:ILE:HD12	1.86	0.56
2:Y:455:LYS:HG2	2:Y:456:TYR:N	2.19	0.56
2:Z:571:ARG:HG3	2:Z:572:LEU:N	2.20	0.56
2:Z:84:VAL:CG1	2:Z:85:ASP:O	2.53	0.56
2:Z:373:PHE:HB2	2:Z:405:VAL:HA	1.86	0.56
2:U:627:PHE:CD1	2:U:629:ILE:HG13	2.40	0.56
2:X:526:THR:HG23	2:X:535:LEU:HD11	1.85	0.56
2:V:627:PHE:CE2	2:V:640:LEU:HD23	2.40	0.56
2:Y:431:THR:O	2:Y:432:ALA:HB2	2.05	0.56
2:Y:585:ARG:HH21	2:Y:606:VAL:HG12	1.71	0.56
2:W:60:GLU:HG2	2:W:347:ASN:HB2	1.85	0.56
2:U:133:GLU:HB3	2:U:142:LYS:HB3	1.86	0.56
2:W:423:VAL:HG21	2:W:513:GLN:CD	2.25	0.56
2:Y:627:PHE:CD1	2:Y:629:ILE:HG13	2.40	0.56
2:U:627:PHE:CE2	2:U:640:LEU:HD23	2.40	0.56
2:X:499:ILE:HG13	2:X:502:VAL:CG2	2.35	0.56
2:V:456:TYR:HB3	2:V:504:LYS:HB3	1.86	0.56
2:V:454:TYR:HE2	2:V:469:PRO:CB	2.19	0.56
2:Y:523:ASN:OD1	2:Y:538:ASP:HA	2.05	0.56
2:Y:454:TYR:HE2	2:Y:469:PRO:CB	2.19	0.56
2:X:431:THR:O	2:X:432:ALA:HB2	2.06	0.56
2:X:50:LEU:HD12	2:X:50:LEU:C	2.26	0.56
2:U:571:ARG:HG3	2:U:572:LEU:N	2.20	0.56
2:X:571:ARG:HG3	2:X:572:LEU:N	2.20	0.56
2:Z:501:ASN:N	2:Z:501:ASN:OD1	2.37	0.56
2:Z:133:GLU:HB3	2:Z:142:LYS:HB3	1.86	0.56
2:Y:605:ARG:HE	2:Y:607:VAL:HB	1.70	0.56
2:V:133:GLU:HB3	2:V:142:LYS:HB3	1.86	0.56
2:W:605:ARG:HE	2:W:607:VAL:HB	1.70	0.56
2:Z:523:ASN:ND2	2:Z:538:ASP:HA	2.20	0.56
2:Z:539:LYS:HD2	2:Z:554:ARG:HD2	1.88	0.56
2:U:373:PHE:HB2	2:U:405:VAL:HA	1.86	0.56
2:V:523:ASN:OD1	2:V:538:ASP:HA	2.05	0.56
2:Y:450:ILE:HD13	2:Y:522:ILE:HD12	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:84:VAL:CG1	2:Y:85:ASP:O	2.53	0.56
1:F:114:ILE:HG12	1:F:115:LYS:N	2.20	0.56
2:U:624:VAL:HG12	2:U:643:VAL:HB	1.87	0.56
2:W:283:VAL:HG21	2:W:323:ILE:HD13	1.87	0.56
2:Z:456:TYR:O	2:Z:503:ILE:HG12	2.04	0.56
2:U:456:TYR:O	2:U:503:ILE:HG12	2.04	0.56
2:U:454:TYR:HE2	2:U:469:PRO:CB	2.19	0.56
2:X:627:PHE:CD1	2:X:629:ILE:HG13	2.40	0.56
2:W:450:ILE:HD13	2:W:522:ILE:HD12	1.86	0.56
2:W:455:LYS:HG2	2:W:456:TYR:N	2.19	0.56
2:V:431:THR:O	2:V:432:ALA:HB2	2.06	0.56
2:U:50:LEU:C	2:U:50:LEU:HD12	2.26	0.56
2:X:614:THR:HG23	2:X:615:PRO:O	2.04	0.56
2:V:423:VAL:HG21	2:V:513:GLN:CD	2.25	0.56
2:Z:558:ASN:HA	2:Z:561:LYS:HE2	1.87	0.56
2:Z:627:PHE:CE2	2:Z:640:LEU:HD23	2.41	0.56
2:Y:627:PHE:HZ	2:Y:640:LEU:HD23	1.70	0.56
2:X:373:PHE:HB2	2:X:404:LEU:O	2.05	0.56
2:X:454:TYR:HE2	2:X:469:PRO:CB	2.19	0.56
2:Z:596:LYS:HG2	2:Z:601:ILE:O	2.05	0.56
2:W:46:ASN:HB2	2:W:49:ASP:HB2	1.88	0.56
2:Y:236:ILE:H	2:Y:236:ILE:HD12	1.71	0.56
2:Z:454:TYR:HE2	2:Z:469:PRO:CB	2.19	0.56
2:W:450:ILE:N	2:W:540:THR:CG2	2.66	0.56
2:V:450:ILE:CG1	2:V:451:ASP:N	2.53	0.56
2:Y:50:LEU:HD12	2:Y:50:LEU:C	2.26	0.56
2:Z:50:LEU:HD12	2:Z:50:LEU:C	2.26	0.56
2:U:503:ILE:O	2:U:504:LYS:HB2	2.06	0.56
2:W:454:TYR:HE2	2:W:469:PRO:CB	2.19	0.56
2:W:627:PHE:CD1	2:W:629:ILE:HG13	2.40	0.56
2:V:558:ASN:HA	2:V:561:LYS:HE2	1.87	0.56
2:Y:450:ILE:N	2:Y:540:THR:CG2	2.66	0.56
2:W:431:THR:O	2:W:432:ALA:HB2	2.06	0.56
1:D:156:ASP:CB	2:X:579:PHE:CE1	2.73	0.56
2:W:50:LEU:HD12	2:W:50:LEU:C	2.27	0.56
2:V:614:THR:HG23	2:V:615:PRO:O	2.05	0.56
2:X:84:VAL:CG1	2:X:85:ASP:O	2.53	0.56
1:E:124:THR:HG23	1:E:126:TYR:H	1.71	0.56
1:B:69:GLU:OE2	1:B:126:TYR:OH	2.18	0.56
2:X:585:ARG:HH21	2:X:606:VAL:HG12	1.71	0.56
2:X:605:ARG:HE	2:X:607:VAL:HB	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:X:635:ILE:HG23	2:X:635:ILE:O	2.06	0.56
2:Y:627:PHE:CE2	2:Y:640:LEU:HD23	2.40	0.56
2:X:627:PHE:CE2	2:X:640:LEU:HD23	2.40	0.56
2:W:627:PHE:CE2	2:W:640:LEU:HD23	2.40	0.56
2:X:624:VAL:HG12	2:X:643:VAL:HB	1.88	0.56
2:X:46:ASN:HB2	2:X:49:ASP:HB2	1.88	0.56
2:Z:635:ILE:HG23	2:Z:635:ILE:O	2.06	0.56
2:U:558:ASN:HA	2:U:561:LYS:HE2	1.87	0.56
2:W:558:ASN:HA	2:W:561:LYS:HE2	1.87	0.56
2:V:23:SER:OG	2:V:483:ASN:HB2	2.04	0.56
2:Z:431:THR:O	2:Z:432:ALA:HB2	2.06	0.56
2:V:89:ALA:HB3	2:V:194:LEU:HD11	1.88	0.56
2:X:596:LYS:HG2	2:X:601:ILE:O	2.05	0.56
1:D:114:ILE:HG12	1:D:115:LYS:H	1.71	0.56
2:W:236:ILE:H	2:W:236:ILE:HD12	1.71	0.56
2:Z:450:ILE:HD13	2:Z:522:ILE:HD12	1.86	0.55
2:X:503:ILE:O	2:X:504:LYS:HB2	2.06	0.55
2:V:50:LEU:HD12	2:V:50:LEU:C	2.26	0.55
2:W:614:THR:HG23	2:W:615:PRO:O	2.05	0.55
2:W:596:LYS:HG2	2:W:601:ILE:O	2.05	0.55
2:W:557:PHE:HE1	2:W:629:ILE:HB	1.69	0.55
2:Y:503:ILE:O	2:Y:504:LYS:HB2	2.06	0.55
1:D:124:THR:HG23	1:D:126:TYR:H	1.72	0.55
2:Y:150:ILE:HG22	2:Y:167:TRP:CZ3	2.41	0.55
2:Z:585:ARG:HH21	2:Z:606:VAL:HG12	1.71	0.55
2:Y:624:VAL:HG12	2:Y:643:VAL:HB	1.89	0.55
2:Z:624:VAL:HG12	2:Z:643:VAL:HB	1.88	0.55
2:U:431:THR:O	2:U:432:ALA:HB2	2.06	0.55
2:Z:381:GLU:HB3	2:Z:385:THR:HG23	1.87	0.55
2:U:274:GLN:H	2:U:278:GLN:NE2	2.05	0.55
2:W:234:ILE:HB	2:W:340:LEU:HD12	1.89	0.55
2:U:283:VAL:HG21	2:U:323:ILE:HD13	1.88	0.55
2:V:283:VAL:HG21	2:V:323:ILE:HD13	1.88	0.55
2:Z:46:ASN:HB2	2:Z:49:ASP:HB2	1.89	0.55
2:Y:635:ILE:HG23	2:Y:635:ILE:O	2.06	0.55
2:U:539:LYS:HD2	2:U:554:ARG:HD2	1.89	0.55
2:V:503:ILE:O	2:V:504:LYS:HB2	2.06	0.55
2:V:539:LYS:HD2	2:V:554:ARG:HD2	1.89	0.55
2:U:89:ALA:HB3	2:U:194:LEU:HD11	1.89	0.55
2:U:84:VAL:CG1	2:U:85:ASP:O	2.54	0.55
2:W:302:LYS:HD3	2:W:306:ASP:HA	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:150:ILE:HG22	2:V:167:TRP:CZ3	2.42	0.55
2:X:539:LYS:HG2	2:X:541:ALA:N	2.22	0.55
1:A:109:TYR:HB3	1:A:161:ARG:NH2	2.18	0.55
2:U:382:SER:O	2:U:383:LEU:C	2.45	0.55
2:X:381:GLU:HB3	2:X:385:THR:HG23	1.89	0.55
2:Y:234:ILE:HB	2:Y:340:LEU:HD12	1.89	0.55
2:Z:150:ILE:HG22	2:Z:167:TRP:CZ3	2.42	0.55
2:X:283:VAL:HG21	2:X:323:ILE:HD13	1.88	0.55
2:U:234:ILE:HB	2:U:340:LEU:HD12	1.89	0.55
2:Y:46:ASN:HB2	2:Y:49:ASP:HB2	1.88	0.55
2:V:605:ARG:HE	2:V:607:VAL:HB	1.70	0.55
2:X:150:ILE:HG22	2:X:167:TRP:CZ3	2.42	0.55
2:V:624:VAL:HG12	2:V:643:VAL:HB	1.87	0.55
2:V:526:THR:HG23	2:V:535:LEU:CD1	2.37	0.55
2:U:51:VAL:HG22	2:U:65:PHE:HZ	1.72	0.55
2:U:570:TYR:CD2	2:U:584:PHE:CZ	2.95	0.55
2:Z:570:TYR:CD2	2:Z:584:PHE:CZ	2.95	0.55
2:V:381:GLU:HB3	2:V:385:THR:HG23	1.89	0.55
2:W:624:VAL:HG12	2:W:643:VAL:HB	1.88	0.55
2:Z:605:ARG:HE	2:Z:607:VAL:HB	1.70	0.55
2:V:302:LYS:HD3	2:V:306:ASP:HA	1.88	0.55
2:U:526:THR:HG23	2:U:535:LEU:CD1	2.37	0.55
2:X:558:ASN:HA	2:X:561:LYS:HE2	1.88	0.55
2:W:455:LYS:HE2	2:W:502:VAL:CG2	2.37	0.55
2:V:23:SER:HG	2:V:483:ASN:HB3	1.69	0.55
2:U:381:GLU:HB3	2:U:385:THR:HG23	1.88	0.55
2:Z:347:ASN:O	2:Z:348:ALA:C	2.45	0.55
1:F:19:ASP:OD2	1:F:213:TYR:OH	2.22	0.55
1:C:114:ILE:HG12	1:C:115:LYS:H	1.72	0.55
2:U:347:ASN:O	2:U:348:ALA:C	2.45	0.55
2:X:236:ILE:HD12	2:X:236:ILE:H	1.71	0.55
1:A:6:TYR:CD2	1:A:208:LEU:HG	2.42	0.55
2:V:570:TYR:CD2	2:V:584:PHE:CZ	2.95	0.55
2:W:274:GLN:H	2:W:278:GLN:NE2	2.05	0.55
2:X:624:VAL:HB	2:X:643:VAL:HG12	1.89	0.55
2:V:236:ILE:HD12	2:V:236:ILE:H	1.72	0.55
2:U:46:ASN:HB2	2:U:49:ASP:HB2	1.89	0.55
2:X:450:ILE:N	2:X:540:THR:CG2	2.66	0.55
2:Y:570:TYR:CD2	2:Y:584:PHE:CZ	2.95	0.55
2:V:84:VAL:CG1	2:V:85:ASP:O	2.54	0.55
2:Y:274:GLN:H	2:Y:278:GLN:NE2	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:X:274:GLN:H	2:X:278:GLN:NE2	2.05	0.55
2:Z:150:ILE:HG22	2:Z:167:TRP:HZ3	1.72	0.55
2:V:234:ILE:HB	2:V:340:LEU:HD12	1.89	0.55
2:V:46:ASN:HB2	2:V:49:ASP:HB2	1.89	0.55
1:E:19:ASP:HA	1:E:22:SER:HB2	1.89	0.55
2:U:150:ILE:HG22	2:U:167:TRP:CZ3	2.42	0.55
2:W:635:ILE:HG23	2:W:635:ILE:O	2.06	0.55
2:U:635:ILE:HG23	2:U:635:ILE:O	2.06	0.55
2:W:630:GLN:HE21	2:W:636:ASN:H	1.55	0.55
2:Z:89:ALA:HB3	2:Z:194:LEU:HD11	1.88	0.55
2:W:382:SER:O	2:W:383:LEU:C	2.45	0.55
2:V:274:GLN:H	2:V:278:GLN:NE2	2.05	0.55
2:U:585:ARG:HH21	2:U:606:VAL:HG12	1.71	0.55
2:Y:302:LYS:HD3	2:Y:306:ASP:HA	1.88	0.55
2:Y:206:THR:HG22	2:Y:206:THR:O	2.07	0.55
2:W:526:THR:HG23	2:W:535:LEU:CD1	2.37	0.54
2:W:539:LYS:HG2	2:W:541:ALA:N	2.22	0.54
2:Y:526:THR:HG23	2:Y:535:LEU:CD1	2.37	0.54
2:W:570:TYR:CD2	2:W:584:PHE:CZ	2.95	0.54
2:W:89:ALA:HB3	2:W:194:LEU:HD11	1.88	0.54
2:Z:274:GLN:H	2:Z:278:GLN:NE2	2.06	0.54
2:V:347:ASN:O	2:V:348:ALA:C	2.45	0.54
2:U:150:ILE:HG22	2:U:167:TRP:HZ3	1.72	0.54
2:W:585:ARG:HH21	2:W:606:VAL:HG12	1.71	0.54
2:V:206:THR:O	2:V:206:THR:HG22	2.07	0.54
2:W:503:ILE:O	2:W:504:LYS:HB2	2.06	0.54
2:Y:624:VAL:HB	2:Y:643:VAL:HG12	1.89	0.54
2:V:624:VAL:HB	2:V:643:VAL:HG12	1.90	0.54
2:W:624:VAL:HB	2:W:643:VAL:HG12	1.89	0.54
1:A:6:TYR:N	1:A:204:ASP:OD2	2.38	0.54
2:X:206:THR:HG22	2:X:206:THR:O	2.08	0.54
2:Y:283:VAL:HG21	2:Y:323:ILE:HD13	1.88	0.54
2:Z:455:LYS:HE2	2:Z:502:VAL:CG2	2.37	0.54
2:Z:503:ILE:O	2:Z:504:LYS:HB2	2.06	0.54
2:U:539:LYS:HG2	2:U:541:ALA:N	2.22	0.54
2:X:526:THR:HG23	2:X:535:LEU:CD1	2.37	0.54
2:W:570:TYR:HD2	2:W:584:PHE:CZ	2.25	0.54
2:Y:596:LYS:HG2	2:Y:601:ILE:O	2.06	0.54
2:X:347:ASN:O	2:X:348:ALA:C	2.45	0.54
2:U:624:VAL:HB	2:U:643:VAL:HG12	1.89	0.54
2:Z:206:THR:O	2:Z:206:THR:HG22	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:526:THR:HG23	2:Z:535:LEU:CD1	2.37	0.54
2:V:455:LYS:HE2	2:V:502:VAL:CG2	2.37	0.54
2:V:51:VAL:HG22	2:V:65:PHE:HZ	1.72	0.54
2:X:89:ALA:HB3	2:X:194:LEU:HD11	1.88	0.54
2:W:381:GLU:HB3	2:W:385:THR:HG23	1.90	0.54
2:U:236:ILE:H	2:U:236:ILE:HD12	1.72	0.54
2:V:585:ARG:HH21	2:V:606:VAL:HG12	1.71	0.54
2:Z:23:SER:HG	2:Z:483:ASN:HB3	1.69	0.54
2:U:630:GLN:HE21	2:U:636:ASN:H	1.55	0.54
2:W:627:PHE:HZ	2:W:640:LEU:HD23	1.68	0.54
2:X:570:TYR:CD2	2:X:584:PHE:CZ	2.95	0.54
2:V:150:ILE:HG22	2:V:167:TRP:HZ3	1.72	0.54
2:X:90:LYS:HB2	2:X:344:LEU:HB3	1.90	0.54
2:U:302:LYS:HD3	2:U:306:ASP:HA	1.88	0.54
2:Z:236:ILE:H	2:Z:236:ILE:HD12	1.71	0.54
2:U:605:ARG:HE	2:U:607:VAL:HB	1.71	0.54
2:W:206:THR:O	2:W:206:THR:HG22	2.08	0.54
2:X:455:LYS:HE2	2:X:502:VAL:CG2	2.37	0.54
2:X:539:LYS:HD2	2:X:554:ARG:HD2	1.90	0.54
2:W:539:LYS:HD2	2:W:554:ARG:HD2	1.89	0.54
2:Z:51:VAL:HG22	2:Z:65:PHE:HZ	1.73	0.54
2:V:570:TYR:HD2	2:V:584:PHE:CZ	2.26	0.54
2:X:580:THR:O	2:X:584:PHE:HD1	1.90	0.54
2:Y:89:ALA:HB3	2:Y:194:LEU:HD11	1.88	0.54
2:W:347:ASN:O	2:W:348:ALA:C	2.46	0.54
2:Z:624:VAL:HB	2:Z:643:VAL:HG12	1.89	0.54
2:Z:234:ILE:HB	2:Z:340:LEU:HD12	1.89	0.54
2:V:539:LYS:HG2	2:V:541:ALA:N	2.22	0.54
2:W:580:THR:O	2:W:584:PHE:HD1	1.91	0.54
2:X:178:LEU:CD2	2:X:178:LEU:N	2.66	0.54
2:Y:618:ILE:HG23	2:Y:619:ASP:N	2.23	0.54
2:Y:244:TYR:CD2	2:Y:273:PRO:HD2	2.43	0.54
2:V:635:ILE:HG23	2:V:635:ILE:O	2.06	0.54
2:U:455:LYS:HE2	2:U:502:VAL:CG2	2.37	0.54
2:X:618:ILE:HG23	2:X:619:ASP:N	2.23	0.54
2:W:84:VAL:CG1	2:W:85:ASP:O	2.54	0.54
2:Y:381:GLU:HB3	2:Y:385:THR:HG23	1.89	0.54
2:Z:244:TYR:CD2	2:Z:273:PRO:HD2	2.43	0.54
1:B:66:ALA:O	1:B:68:VAL:N	2.38	0.54
2:Z:539:LYS:HG2	2:Z:541:ALA:N	2.23	0.54
2:X:173:SER:N	2:X:174:SER:HA	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:347:ASN:O	2:Y:348:ALA:C	2.46	0.54
2:X:244:TYR:CD2	2:X:273:PRO:HD2	2.43	0.54
2:W:150:ILE:HG22	2:W:167:TRP:CZ3	2.42	0.54
1:B:156:ASP:CB	2:V:579:PHE:CD1	2.82	0.54
2:Y:23:SER:OG	2:Y:483:ASN:HB2	2.04	0.54
2:Y:557:PHE:HE2	2:Y:631:PRO:CD	2.20	0.54
2:U:523:ASN:CG	2:U:538:ASP:HA	2.29	0.54
2:Y:455:LYS:HE2	2:Y:502:VAL:CG2	2.37	0.54
2:U:570:TYR:HD2	2:U:584:PHE:CZ	2.26	0.54
2:X:382:SER:O	2:X:383:LEU:C	2.46	0.54
2:Y:150:ILE:HG22	2:Y:167:TRP:HZ3	1.72	0.54
2:X:234:ILE:HB	2:X:340:LEU:HD12	1.89	0.54
2:Z:283:VAL:HG21	2:Z:323:ILE:HD13	1.88	0.54
1:F:157:ILE:HB	2:Z:579:PHE:CE2	2.39	0.53
2:X:570:TYR:HD2	2:X:584:PHE:CZ	2.26	0.53
2:Z:618:ILE:HG23	2:Z:619:ASP:N	2.23	0.53
2:V:90:LYS:HB2	2:V:344:LEU:HB3	1.90	0.53
2:Z:446:THR:CB	2:Z:542:THR:HG22	2.39	0.53
2:Y:228:GLY:HA2	2:Y:345:SER:H	1.74	0.53
2:Y:371:GLN:HB3	2:Y:484:VAL:HG23	1.90	0.53
1:F:124:THR:CG2	1:F:130:MET:HG2	2.37	0.53
2:X:150:ILE:HG22	2:X:167:TRP:HZ3	1.72	0.53
1:B:125:ARG:HH21	1:B:184:ARG:HG2	1.74	0.53
2:U:408:SER:CB	2:U:451:ASP:HB3	2.39	0.53
2:W:523:ASN:CG	2:W:538:ASP:HA	2.29	0.53
2:U:618:ILE:HG23	2:U:619:ASP:N	2.23	0.53
2:Z:397:GLY:HA2	2:Z:403:CYS:SG	2.49	0.53
2:U:206:THR:HG22	2:U:206:THR:O	2.07	0.53
2:W:408:SER:CB	2:W:451:ASP:HB3	2.39	0.53
2:Z:228:GLY:HA2	2:Z:345:SER:H	1.74	0.53
2:W:172:SER:O	2:W:174:SER:HA	2.07	0.53
2:Y:90:LYS:HB2	2:Y:344:LEU:HB3	1.91	0.53
1:A:106:VAL:HG12	1:A:107:SER:H	1.74	0.53
2:Z:302:LYS:HD3	2:Z:306:ASP:HA	1.89	0.53
2:Z:451:ASP:OD2	2:Z:471:ALA:N	2.42	0.53
2:Z:562:THR:HG23	2:Z:563:ASN:N	2.24	0.53
2:U:627:PHE:HZ	2:U:640:LEU:HD23	1.69	0.53
2:W:448:ALA:HB3	2:W:540:THR:OG1	2.09	0.53
2:W:618:ILE:HG23	2:W:619:ASP:N	2.23	0.53
2:Y:580:THR:O	2:Y:584:PHE:HD1	1.91	0.53
2:W:371:GLN:HB3	2:W:484:VAL:HG23	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:U:114:ASP:CG	2:U:175:SER:HB2	2.29	0.53
2:W:90:LYS:HB2	2:W:344:LEU:HB3	1.91	0.53
2:V:244:TYR:CD2	2:V:273:PRO:HD2	2.43	0.53
2:X:302:LYS:HD3	2:X:306:ASP:HA	1.89	0.53
2:Y:630:GLN:HE21	2:Y:636:ASN:H	1.55	0.53
2:U:557:PHE:HE2	2:U:631:PRO:CD	2.21	0.53
2:X:448:ALA:HB3	2:X:540:THR:OG1	2.08	0.53
2:X:523:ASN:CG	2:X:538:ASP:HA	2.29	0.53
2:X:557:PHE:HE2	2:X:631:PRO:CD	2.21	0.53
2:Y:51:VAL:HG22	2:Y:65:PHE:HZ	1.73	0.53
2:V:580:THR:O	2:V:584:PHE:HD1	1.91	0.53
2:V:618:ILE:HG23	2:V:619:ASP:N	2.23	0.53
2:Z:172:SER:O	2:Z:174:SER:HA	2.08	0.53
2:Y:173:SER:N	2:Y:174:SER:HA	2.22	0.53
2:Z:114:ASP:CG	2:Z:175:SER:HB2	2.29	0.53
2:U:244:TYR:CD2	2:U:273:PRO:HD2	2.44	0.53
2:Z:408:SER:CB	2:Z:451:ASP:HB3	2.39	0.53
2:U:448:ALA:HB3	2:U:540:THR:OG1	2.09	0.53
2:W:449:ALA:HB2	2:W:539:LYS:HA	1.91	0.53
2:V:557:PHE:HE2	2:V:631:PRO:CD	2.21	0.53
2:V:630:GLN:HE21	2:V:636:ASN:H	1.56	0.53
2:Y:114:ASP:CG	2:Y:175:SER:HB2	2.29	0.53
2:W:150:ILE:HG22	2:W:167:TRP:HZ3	1.72	0.53
2:V:374:ILE:HG23	2:V:472:ALA:HA	1.90	0.53
1:B:19:ASP:HA	1:B:22:SER:HB2	1.90	0.53
2:Z:523:ASN:CG	2:Z:538:ASP:HA	2.29	0.53
2:X:449:ALA:HB2	2:X:539:LYS:HA	1.91	0.53
2:X:228:GLY:HA2	2:X:345:SER:CB	2.31	0.53
2:Y:570:TYR:HD2	2:Y:584:PHE:CZ	2.26	0.53
2:U:580:THR:O	2:U:584:PHE:HD1	1.90	0.53
2:Z:570:TYR:HD2	2:Z:584:PHE:CZ	2.26	0.53
2:Z:371:GLN:HB3	2:Z:484:VAL:HG23	1.90	0.53
2:Y:557:PHE:HE2	2:Y:631:PRO:CG	2.22	0.53
2:Y:562:THR:HG23	2:Y:563:ASN:N	2.24	0.53
2:V:627:PHE:HZ	2:V:640:LEU:HD23	1.69	0.53
2:Y:523:ASN:CG	2:Y:538:ASP:HA	2.29	0.53
2:X:51:VAL:HG22	2:X:65:PHE:HZ	1.73	0.53
2:V:289:ILE:N	2:V:289:ILE:HD12	2.24	0.53
2:U:275:THR:OG1	2:U:278:GLN:HG3	2.09	0.53
2:Z:90:LYS:HB2	2:Z:344:LEU:HB3	1.91	0.53
1:A:56:TRP:HB3	1:A:71:ILE:HD13	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:502:VAL:HG12	2:Z:504:LYS:H	1.74	0.53
2:U:446:THR:CB	2:U:542:THR:HG22	2.39	0.53
2:V:451:ASP:OD2	2:V:471:ALA:N	2.42	0.53
2:Y:451:ASP:OD2	2:Y:471:ALA:N	2.42	0.53
2:Y:382:SER:O	2:Y:383:LEU:C	2.46	0.53
1:F:124:THR:HG23	1:F:126:TYR:H	1.73	0.53
2:W:275:THR:OG1	2:W:278:GLN:HG3	2.09	0.53
2:Z:517:LEU:CD2	2:Z:524:PRO:HB3	2.39	0.52
2:X:562:THR:HG23	2:X:563:ASN:N	2.24	0.52
2:V:523:ASN:CG	2:V:538:ASP:HA	2.29	0.52
2:V:449:ALA:HB2	2:V:539:LYS:HA	1.91	0.52
2:U:172:SER:O	2:U:174:SER:HA	2.09	0.52
2:Y:172:SER:O	2:Y:174:SER:HA	2.08	0.52
2:Z:289:ILE:N	2:Z:289:ILE:HD12	2.24	0.52
1:E:26:ILE:HD11	1:E:37:ILE:HD11	1.91	0.52
2:W:518:TYR:O	2:W:519:GLN:HB3	2.09	0.52
2:V:408:SER:CB	2:V:451:ASP:HB3	2.39	0.52
2:V:446:THR:CB	2:V:542:THR:HG22	2.39	0.52
2:Y:449:ALA:HB2	2:Y:539:LYS:HA	1.92	0.52
1:E:157:ILE:CB	2:Y:579:PHE:CG	2.89	0.52
2:W:51:VAL:HG22	2:W:65:PHE:HZ	1.73	0.52
2:V:228:GLY:HA2	2:V:345:SER:N	2.25	0.52
2:X:371:GLN:HB3	2:X:484:VAL:HG23	1.90	0.52
2:W:595:ASN:CB	2:W:601:ILE:HD12	2.39	0.52
2:W:114:ASP:CG	2:W:175:SER:HB2	2.29	0.52
1:F:69:GLU:OE2	1:F:126:TYR:OH	2.11	0.52
2:U:289:ILE:HD12	2:U:289:ILE:N	2.24	0.52
2:U:90:LYS:HB2	2:U:344:LEU:HB3	1.91	0.52
2:Z:557:PHE:HE2	2:Z:631:PRO:CD	2.21	0.52
2:U:371:GLN:HB3	2:U:484:VAL:HG23	1.90	0.52
2:X:408:SER:CB	2:X:451:ASP:HB3	2.39	0.52
2:W:557:PHE:HE2	2:W:631:PRO:CD	2.21	0.52
1:E:157:ILE:N	2:Y:579:PHE:CD1	2.72	0.52
2:U:576:ASN:HB3	2:U:620:ARG:NH2	2.24	0.52
2:Z:580:THR:O	2:Z:584:PHE:HD1	1.91	0.52
2:X:172:SER:O	2:X:174:SER:HA	2.09	0.52
2:Y:275:THR:OG1	2:Y:278:GLN:HG3	2.09	0.52
2:W:198:ILE:HG23	2:W:201:ALA:HB2	1.92	0.52
2:Z:449:ALA:HB2	2:Z:539:LYS:HA	1.92	0.52
2:U:502:VAL:HG12	2:U:504:LYS:H	1.74	0.52
2:V:595:ASN:CB	2:V:601:ILE:HD12	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:114:ASP:CG	2:V:175:SER:HB2	2.29	0.52
2:W:244:TYR:CD2	2:W:273:PRO:HD2	2.44	0.52
2:U:198:ILE:HG23	2:U:201:ALA:HB2	1.92	0.52
2:Y:352:ALA:O	2:Y:355:LEU:HB2	2.10	0.52
2:Z:29:LEU:O	2:Z:80:VAL:HA	2.10	0.52
2:Z:198:ILE:HG23	2:Z:201:ALA:HB2	1.92	0.52
2:Z:630:GLN:HE21	2:Z:636:ASN:H	1.55	0.52
2:X:23:SER:HG	2:X:483:ASN:HB3	1.74	0.52
2:W:446:THR:C	2:W:539:LYS:HE3	2.20	0.52
2:V:371:GLN:HB3	2:V:484:VAL:HG23	1.91	0.52
2:W:397:GLY:HA2	2:W:403:CYS:SG	2.49	0.52
2:W:173:SER:N	2:W:174:SER:HA	2.22	0.52
2:Z:275:THR:OG1	2:Z:278:GLN:HG3	2.10	0.52
2:U:374:ILE:HG23	2:U:472:ALA:HA	1.91	0.52
1:B:27:LYS:HE2	1:B:29:GLN:HG2	1.91	0.52
2:Z:448:ALA:HB3	2:Z:540:THR:OG1	2.09	0.52
2:Z:557:PHE:HE2	2:Z:631:PRO:CG	2.22	0.52
2:U:562:THR:HG23	2:U:563:ASN:N	2.24	0.52
2:W:451:ASP:OD2	2:W:471:ALA:N	2.42	0.52
2:V:562:THR:HG23	2:V:563:ASN:N	2.24	0.52
2:Y:518:TYR:O	2:Y:519:GLN:HB3	2.10	0.52
2:V:228:GLY:HA2	2:V:345:SER:H	1.74	0.52
2:U:582:SER:O	2:U:583:SER:HB3	2.10	0.52
2:V:382:SER:O	2:V:383:LEU:C	2.45	0.52
2:W:289:ILE:N	2:W:289:ILE:HD12	2.24	0.52
2:Y:399:VAL:O	2:Y:399:VAL:HG12	2.09	0.52
2:Z:518:TYR:HE2	2:Z:536:TYR:HB2	1.69	0.52
2:U:397:GLY:HA2	2:U:403:CYS:SG	2.49	0.52
2:X:557:PHE:HE2	2:X:631:PRO:CG	2.22	0.52
2:V:172:SER:O	2:V:174:SER:HA	2.08	0.52
2:Y:374:ILE:HG23	2:Y:472:ALA:HA	1.91	0.52
2:U:446:THR:C	2:U:539:LYS:HE3	2.21	0.52
2:U:557:PHE:HE2	2:U:631:PRO:CG	2.22	0.52
2:W:502:VAL:HG12	2:W:504:LYS:H	1.75	0.52
2:Y:518:TYR:HE2	2:Y:536:TYR:HB2	1.70	0.52
1:C:157:ILE:HD12	2:W:579:PHE:CD2	2.45	0.52
2:X:228:GLY:HA2	2:X:345:SER:N	2.25	0.52
1:D:151:GLU:OE2	1:D:161:ARG:NH1	2.39	0.52
2:X:397:GLY:HA2	2:X:403:CYS:SG	2.49	0.52
2:Z:382:SER:O	2:Z:383:LEU:C	2.46	0.52
1:F:66:ALA:C	1:F:68:VAL:H	2.13	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:198:ILE:HG23	2:V:201:ALA:HB2	1.92	0.52
2:Y:198:ILE:HG23	2:Y:201:ALA:HB2	1.92	0.52
2:X:198:ILE:HG23	2:X:201:ALA:HB2	1.92	0.52
2:U:399:VAL:O	2:U:399:VAL:HG12	2.09	0.52
2:Z:453:ASN:HD22	2:Z:453:ASN:H	1.58	0.52
2:U:518:TYR:O	2:U:519:GLN:HB3	2.10	0.52
2:W:446:THR:CB	2:W:542:THR:HG22	2.39	0.52
2:V:518:TYR:O	2:V:519:GLN:HB3	2.10	0.52
2:V:496:ARG:N	2:V:534:VAL:HG11	2.25	0.52
2:Y:51:VAL:HG22	2:Y:65:PHE:CZ	2.45	0.52
2:U:51:VAL:HG22	2:U:65:PHE:CZ	2.45	0.52
2:U:228:GLY:HA2	2:U:345:SER:H	1.74	0.52
2:W:228:GLY:HA2	2:W:345:SER:H	1.74	0.52
2:U:391:LYS:HE3	2:U:441:PHE:HA	1.92	0.52
2:Z:25:GLY:HA2	2:Z:484:VAL:HG21	1.92	0.52
2:X:114:ASP:CG	2:X:175:SER:HB2	2.29	0.52
1:D:124:THR:CG2	1:D:130:MET:HG2	2.39	0.52
2:X:374:ILE:HG23	2:X:472:ALA:HA	1.91	0.52
2:X:23:SER:OG	2:X:483:ASN:HB2	2.04	0.52
2:V:502:VAL:HG12	2:V:504:LYS:H	1.75	0.52
2:Y:448:ALA:HB3	2:Y:540:THR:OG1	2.10	0.52
2:X:51:VAL:HG22	2:X:65:PHE:CZ	2.45	0.52
2:U:228:GLY:HA2	2:U:345:SER:N	2.25	0.52
2:Y:228:GLY:HA2	2:Y:345:SER:N	2.25	0.52
2:W:391:LYS:HE3	2:W:441:PHE:HA	1.92	0.52
2:X:391:LYS:HE3	2:X:441:PHE:HA	1.92	0.52
2:V:397:GLY:HA2	2:V:403:CYS:SG	2.50	0.52
2:W:605:ARG:O	2:W:609:ASP:HB2	2.10	0.52
2:V:29:LEU:O	2:V:80:VAL:HA	2.10	0.52
2:Z:511:GLN:HE21	2:Z:511:GLN:HA	1.75	0.52
2:U:449:ALA:HB2	2:U:539:LYS:HA	1.92	0.51
2:X:451:ASP:OD2	2:X:471:ALA:N	2.42	0.51
2:X:539:LYS:HD3	2:X:541:ALA:HB2	1.91	0.51
2:W:454:TYR:HE2	2:W:469:PRO:HB3	1.76	0.51
2:V:557:PHE:HE2	2:V:631:PRO:CG	2.22	0.51
2:Y:454:TYR:HE2	2:Y:469:PRO:HB3	1.76	0.51
2:V:51:VAL:HG22	2:V:65:PHE:CZ	2.45	0.51
2:W:51:VAL:HG22	2:W:65:PHE:CZ	2.45	0.51
2:Y:397:GLY:HA2	2:Y:403:CYS:SG	2.49	0.51
2:Y:289:ILE:HD12	2:Y:289:ILE:N	2.24	0.51
1:A:212:THR:HA	1:A:222:ASP:HA	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:W:352:ALA:O	2:W:355:LEU:HB2	2.10	0.51
2:U:451:ASP:OD2	2:U:471:ALA:N	2.42	0.51
2:U:454:TYR:HE2	2:U:469:PRO:HB3	1.76	0.51
2:X:502:VAL:HG12	2:X:504:LYS:H	1.75	0.51
2:X:517:LEU:CD2	2:X:524:PRO:HB3	2.38	0.51
2:Y:517:LEU:CD2	2:Y:524:PRO:HB3	2.39	0.51
2:U:84:VAL:HG13	2:U:89:ALA:HB2	1.92	0.51
2:V:275:THR:OG1	2:V:278:GLN:HG3	2.10	0.51
2:X:605:ARG:HD3	2:X:608:CYS:SG	2.51	0.51
2:X:511:GLN:HA	2:X:511:GLN:HE21	1.75	0.51
2:Z:518:TYR:O	2:Z:519:GLN:HB3	2.10	0.51
2:Z:627:PHE:HZ	2:Z:640:LEU:HD23	1.69	0.51
2:X:454:TYR:HE2	2:X:469:PRO:HB3	1.76	0.51
2:W:557:PHE:HE2	2:W:631:PRO:CG	2.22	0.51
2:V:560:LEU:HD13	2:V:591:TYR:HE2	1.76	0.51
2:W:496:ARG:N	2:W:534:VAL:HG11	2.24	0.51
2:Z:576:ASN:HB3	2:Z:620:ARG:NH2	2.25	0.51
2:Z:194:LEU:HD23	2:Z:195:LEU:N	2.25	0.51
2:Z:374:ILE:HG23	2:Z:472:ALA:HA	1.91	0.51
2:U:605:ARG:HD3	2:U:608:CYS:SG	2.51	0.51
2:X:30:ALA:HB3	2:X:359:TRP:CD2	2.46	0.51
2:X:399:VAL:HG12	2:X:399:VAL:O	2.10	0.51
2:V:448:ALA:HB3	2:V:540:THR:OG1	2.10	0.51
1:D:109:TYR:HB3	1:D:161:ARG:NH2	2.18	0.51
2:Z:595:ASN:CB	2:Z:601:ILE:HD12	2.39	0.51
2:X:84:VAL:HG13	2:X:89:ALA:HB2	1.93	0.51
2:Y:84:VAL:HG13	2:Y:89:ALA:HB2	1.92	0.51
2:Z:173:SER:N	2:Z:174:SER:HA	2.22	0.51
2:X:275:THR:OG1	2:X:278:GLN:HG3	2.09	0.51
2:U:605:ARG:O	2:U:609:ASP:HB2	2.10	0.51
1:A:147:THR:HG23	1:A:163:ILE:HB	1.92	0.51
2:W:399:VAL:HG12	2:W:399:VAL:O	2.10	0.51
2:U:453:ASN:H	2:U:453:ASN:HD22	1.58	0.51
2:Z:399:VAL:O	2:Z:399:VAL:HG12	2.09	0.51
2:Y:502:VAL:HG12	2:Y:504:LYS:H	1.75	0.51
2:W:228:GLY:HA2	2:W:345:SER:N	2.25	0.51
2:X:228:GLY:HA2	2:X:345:SER:H	1.74	0.51
2:Y:605:ARG:O	2:Y:609:ASP:HB2	2.11	0.51
2:Y:237:GLU:HG3	2:Y:337:ILE:CD1	2.41	0.51
2:Y:29:LEU:O	2:Y:80:VAL:HA	2.10	0.51
2:U:29:LEU:O	2:U:80:VAL:HA	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:560:LEU:HD13	2:Z:591:TYR:HE2	1.75	0.51
2:U:517:LEU:CD2	2:U:524:PRO:HB3	2.39	0.51
2:X:446:THR:C	2:X:539:LYS:HE3	2.21	0.51
2:W:562:THR:HG23	2:W:563:ASN:N	2.24	0.51
2:U:496:ARG:N	2:U:534:VAL:HG11	2.25	0.51
2:Z:51:VAL:HG22	2:Z:65:PHE:CZ	2.45	0.51
2:V:25:GLY:HA2	2:V:484:VAL:HG21	1.93	0.51
2:Y:194:LEU:HD23	2:Y:195:LEU:N	2.26	0.51
2:V:194:LEU:HD23	2:V:195:LEU:N	2.26	0.51
2:W:84:VAL:HG13	2:W:89:ALA:HB2	1.93	0.51
2:V:173:SER:N	2:V:174:SER:HA	2.22	0.51
2:W:161:PRO:O	2:W:186:LYS:HB3	2.11	0.51
2:V:605:ARG:O	2:V:609:ASP:HB2	2.10	0.51
1:C:108:GLN:HB3	1:C:200:PRO:HD2	1.91	0.51
2:V:352:ALA:O	2:V:355:LEU:HB2	2.11	0.51
2:X:630:GLN:HE21	2:X:636:ASN:H	1.56	0.51
2:Y:408:SER:CB	2:Y:451:ASP:HB3	2.39	0.51
2:Z:228:GLY:HA2	2:Z:345:SER:N	2.25	0.51
2:Y:617:VAL:HG23	2:Y:619:ASP:O	2.11	0.51
2:Z:617:VAL:HG23	2:Z:619:ASP:O	2.11	0.51
2:U:194:LEU:HD23	2:U:195:LEU:N	2.26	0.51
2:U:173:SER:N	2:U:174:SER:HA	2.22	0.51
2:X:595:ASN:CB	2:X:601:ILE:HD12	2.40	0.51
2:Z:582:SER:O	2:Z:583:SER:HB3	2.11	0.51
2:X:161:PRO:O	2:X:186:LYS:HB3	2.11	0.51
2:W:374:ILE:HG23	2:W:472:ALA:HA	1.91	0.51
2:Z:605:ARG:O	2:Z:609:ASP:HB2	2.10	0.51
2:Z:605:ARG:HD3	2:Z:608:CYS:SG	2.50	0.51
2:U:237:GLU:HG3	2:U:337:ILE:CD1	2.41	0.51
2:Z:352:ALA:O	2:Z:355:LEU:HB2	2.11	0.51
1:F:5:PHE:CE2	1:F:201:PRO:HB3	2.45	0.51
2:U:352:ALA:O	2:U:355:LEU:HB2	2.10	0.51
2:Y:627:PHE:CD1	2:Y:629:ILE:CD1	2.94	0.51
2:X:617:VAL:HG23	2:X:619:ASP:O	2.10	0.51
1:A:124:THR:CG2	1:A:130:MET:HG2	2.40	0.51
2:X:605:ARG:O	2:X:609:ASP:HB2	2.10	0.51
2:W:30:ALA:HB3	2:W:359:TRP:CD2	2.46	0.51
2:V:511:GLN:HE21	2:V:511:GLN:HA	1.75	0.51
2:U:450:ILE:CG1	2:U:451:ASP:N	2.53	0.51
2:W:539:LYS:HD3	2:W:541:ALA:HB2	1.92	0.51
2:X:496:ARG:N	2:X:534:VAL:HG11	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:582:SER:O	2:V:583:SER:HB3	2.11	0.51
2:V:605:ARG:HD3	2:V:608:CYS:SG	2.51	0.51
2:X:352:ALA:O	2:X:355:LEU:HB2	2.11	0.51
2:X:70:ASN:HB3	2:X:457:GLN:HE22	1.76	0.51
2:V:237:GLU:HG3	2:V:337:ILE:CD1	2.40	0.51
2:U:511:GLN:HA	2:U:511:GLN:HE21	1.76	0.51
1:B:157:ILE:CG1	2:V:579:PHE:CD2	2.79	0.51
2:V:450:ILE:HD13	2:V:522:ILE:CD1	2.41	0.51
2:V:391:LYS:HE3	2:V:441:PHE:HA	1.93	0.51
2:V:300:GLY:O	2:V:302:LYS:HG3	2.11	0.51
2:Y:254:ILE:HG12	2:Y:337:ILE:HB	1.93	0.51
2:Y:30:ALA:HB3	2:Y:359:TRP:CD2	2.46	0.51
2:Z:30:ALA:HB3	2:Z:359:TRP:CD2	2.46	0.51
2:V:399:VAL:HG12	2:V:399:VAL:O	2.09	0.51
2:U:627:PHE:CD1	2:U:629:ILE:CD1	2.95	0.50
2:V:407:CYS:N	2:V:449:ALA:O	2.44	0.50
2:Z:391:LYS:HE3	2:Z:441:PHE:HA	1.93	0.50
2:U:617:VAL:HG23	2:U:619:ASP:O	2.10	0.50
2:W:582:SER:O	2:W:583:SER:HB3	2.10	0.50
2:Y:583:SER:CA	2:Y:586:THR:HG22	2.42	0.50
2:X:254:ILE:HG12	2:X:337:ILE:HB	1.93	0.50
1:E:114:ILE:HG12	1:E:115:LYS:H	1.76	0.50
2:X:29:LEU:O	2:X:80:VAL:HA	2.10	0.50
2:U:23:SER:OG	2:U:483:ASN:HB2	2.04	0.50
2:X:518:TYR:O	2:X:519:GLN:HB3	2.10	0.50
2:X:543:SER:O	2:X:544:VAL:HG23	2.12	0.50
2:W:450:ILE:HD13	2:W:522:ILE:CD1	2.41	0.50
2:Y:450:ILE:HD13	2:Y:522:ILE:CD1	2.42	0.50
2:V:617:VAL:HG23	2:V:619:ASP:O	2.11	0.50
2:Y:178:LEU:CD2	2:Y:178:LEU:N	2.66	0.50
2:Y:25:GLY:HA2	2:Y:484:VAL:HG21	1.93	0.50
2:U:595:ASN:CB	2:U:601:ILE:HD12	2.40	0.50
2:V:215:LYS:CE	2:V:329:ASN:HD21	2.24	0.50
2:Y:161:PRO:O	2:Y:186:LYS:HB3	2.11	0.50
2:W:605:ARG:HD3	2:W:608:CYS:SG	2.51	0.50
2:V:588:THR:HG23	2:V:589:ALA:N	2.27	0.50
2:Z:237:GLU:HG3	2:Z:337:ILE:CD1	2.41	0.50
2:Y:453:ASN:H	2:Y:453:ASN:HD22	1.58	0.50
2:Z:454:TYR:HE2	2:Z:469:PRO:HB3	1.76	0.50
2:Z:543:SER:O	2:Z:544:VAL:HG23	2.11	0.50
2:U:560:LEU:HD13	2:U:591:TYR:HE2	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:W:517:LEU:CD2	2:W:524:PRO:HB3	2.39	0.50
2:V:543:SER:O	2:V:544:VAL:HG23	2.11	0.50
2:V:627:PHE:CD1	2:V:629:ILE:CD1	2.94	0.50
2:Y:496:ARG:CG	2:Y:496:ARG:O	2.59	0.50
2:Y:496:ARG:N	2:Y:534:VAL:HG11	2.25	0.50
2:W:25:GLY:HA2	2:W:484:VAL:HG21	1.93	0.50
2:W:194:LEU:HD23	2:W:195:LEU:N	2.26	0.50
1:E:124:THR:CG2	1:E:130:MET:HG2	2.41	0.50
1:E:66:ALA:C	1:E:68:VAL:H	2.13	0.50
2:X:588:THR:HG23	2:X:589:ALA:N	2.27	0.50
2:W:511:GLN:HA	2:W:511:GLN:HE21	1.76	0.50
2:Z:627:PHE:CD1	2:Z:629:ILE:CD1	2.95	0.50
2:Y:557:PHE:CE1	2:Y:638:ILE:HG22	2.47	0.50
2:X:627:PHE:CD1	2:X:629:ILE:CD1	2.94	0.50
2:X:627:PHE:CE1	2:X:629:ILE:HD12	2.47	0.50
2:W:560:LEU:HD13	2:W:591:TYR:HE2	1.76	0.50
2:V:517:LEU:CD2	2:V:524:PRO:HB3	2.39	0.50
2:Y:228:GLY:HA2	2:Y:345:SER:CB	2.32	0.50
2:V:622:GLU:HG2	2:V:644:ALA:O	2.12	0.50
2:X:582:SER:O	2:X:583:SER:HB3	2.11	0.50
1:C:19:ASP:HA	1:C:22:SER:HB2	1.93	0.50
2:X:220:PRO:HD2	2:X:338:LEU:HD11	1.94	0.50
2:X:453:ASN:H	2:X:453:ASN:HD22	1.58	0.50
2:Z:450:ILE:HD13	2:Z:522:ILE:CD1	2.41	0.50
2:Z:557:PHE:CE1	2:Z:638:ILE:CG2	2.95	0.50
2:Z:557:PHE:CE1	2:Z:638:ILE:HG22	2.46	0.50
2:Y:560:LEU:HD13	2:Y:591:TYR:HE2	1.76	0.50
2:U:627:PHE:CE1	2:U:629:ILE:HD12	2.47	0.50
2:X:446:THR:CB	2:X:542:THR:HG22	2.39	0.50
2:V:454:TYR:HE2	2:V:469:PRO:HB3	1.76	0.50
2:W:622:GLU:HG2	2:W:644:ALA:O	2.12	0.50
2:X:194:LEU:HD23	2:X:195:LEU:N	2.27	0.50
2:X:583:SER:CA	2:X:586:THR:HG22	2.42	0.50
2:Y:71:PHE:CD2	2:Y:71:PHE:C	2.85	0.50
2:V:161:PRO:O	2:V:186:LYS:HB3	2.11	0.50
2:W:300:GLY:O	2:W:302:LYS:HG3	2.12	0.50
2:W:624:VAL:CG1	2:W:643:VAL:HG12	2.42	0.50
2:V:30:ALA:HB3	2:V:359:TRP:CD2	2.46	0.50
2:Z:220:PRO:HD2	2:Z:338:LEU:HD11	1.94	0.50
1:D:223:LEU:HD12	1:D:224:PRO:HD2	1.92	0.50
2:W:29:LEU:O	2:W:80:VAL:HA	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:157:ILE:HD12	2:V:579:PHE:CD2	2.47	0.50
2:Z:627:PHE:CZ	2:Z:640:LEU:CD2	2.95	0.50
2:Y:557:PHE:CE2	2:Y:631:PRO:HG3	2.47	0.50
2:Y:627:PHE:CE1	2:Y:629:ILE:HD12	2.47	0.50
2:X:557:PHE:CE1	2:X:638:ILE:HG22	2.47	0.50
2:W:627:PHE:CE1	2:W:629:ILE:HD12	2.47	0.50
2:Y:391:LYS:HE3	2:Y:441:PHE:HA	1.93	0.50
2:Z:71:PHE:CD2	2:Z:71:PHE:C	2.85	0.50
2:Z:300:GLY:O	2:Z:302:LYS:HG3	2.11	0.50
2:X:237:GLU:HG3	2:X:337:ILE:CD1	2.41	0.50
2:U:70:ASN:HB3	2:U:457:GLN:HE22	1.76	0.50
2:X:362:PHE:HA	2:X:368:VAL:HG21	1.94	0.50
2:W:588:THR:HG23	2:W:589:ALA:N	2.27	0.50
2:U:220:PRO:HD2	2:U:338:LEU:HD11	1.93	0.50
2:U:30:ALA:HB3	2:U:359:TRP:CD2	2.46	0.50
2:Y:557:PHE:CE1	2:Y:638:ILE:CG2	2.95	0.50
2:U:518:TYR:HE2	2:U:536:TYR:HB2	1.71	0.50
2:W:617:VAL:HG23	2:W:619:ASP:O	2.11	0.50
2:X:622:GLU:HG2	2:X:644:ALA:O	2.12	0.50
2:V:236:ILE:N	2:V:236:ILE:HD12	2.27	0.50
2:Z:254:ILE:HG12	2:Z:337:ILE:HB	1.93	0.50
2:W:362:PHE:HA	2:W:368:VAL:HG21	1.94	0.50
2:Z:588:THR:HG23	2:Z:589:ALA:N	2.26	0.50
2:U:407:CYS:N	2:U:449:ALA:O	2.44	0.50
2:U:539:LYS:HD3	2:U:541:ALA:HB2	1.93	0.50
2:U:543:SER:O	2:U:544:VAL:HG23	2.12	0.50
2:X:445:SER:HB3	2:X:448:ALA:HB2	1.94	0.50
2:X:523:ASN:HD21	2:X:538:ASP:CA	2.25	0.50
2:W:627:PHE:CD1	2:W:629:ILE:CD1	2.94	0.50
2:W:557:PHE:CE1	2:W:638:ILE:HG22	2.46	0.50
2:Y:446:THR:CB	2:Y:542:THR:HG22	2.39	0.50
2:Y:576:ASN:HB3	2:Y:620:ARG:NH2	2.25	0.50
2:Y:582:SER:O	2:Y:583:SER:HB3	2.10	0.50
2:X:236:ILE:HD12	2:X:236:ILE:N	2.27	0.50
2:U:588:THR:HG23	2:U:589:ALA:N	2.27	0.50
1:C:66:ALA:O	1:C:68:VAL:N	2.45	0.50
2:Y:70:ASN:HB3	2:Y:457:GLN:HE22	1.77	0.50
2:W:245:ALA:C	2:W:247:GLY:H	2.15	0.50
2:W:453:ASN:H	2:W:453:ASN:HD22	1.58	0.50
2:Z:547:PRO:HB2	2:Z:553:VAL:HG11	1.94	0.50
2:Z:557:PHE:CE2	2:Z:631:PRO:HG3	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:U:25:GLY:HA2	2:U:484:VAL:HG21	1.93	0.50
2:W:547:PRO:HB2	2:W:553:VAL:HG11	1.94	0.50
2:V:627:PHE:CZ	2:V:640:LEU:CD2	2.94	0.50
2:Y:543:SER:O	2:Y:544:VAL:HG23	2.12	0.50
2:Z:84:VAL:HG13	2:Z:89:ALA:HB2	1.93	0.50
2:Z:583:SER:CA	2:Z:586:THR:HG22	2.42	0.50
2:V:383:LEU:O	2:V:386:ALA:HB3	2.12	0.50
2:X:304:ILE:HG13	2:X:305:TYR:CD2	2.47	0.50
2:X:71:PHE:C	2:X:71:PHE:CD2	2.85	0.50
2:Y:605:ARG:HD3	2:Y:608:CYS:SG	2.52	0.50
2:W:236:ILE:N	2:W:236:ILE:HD12	2.27	0.50
2:V:220:PRO:HD2	2:V:338:LEU:HD11	1.94	0.50
1:C:147:THR:HG23	1:C:163:ILE:HB	1.93	0.50
2:Y:588:THR:HG23	2:Y:589:ALA:N	2.27	0.50
2:V:453:ASN:H	2:V:453:ASN:HD22	1.58	0.50
2:X:450:ILE:HD13	2:X:522:ILE:CD1	2.42	0.49
2:X:560:LEU:HD13	2:X:591:TYR:HE2	1.76	0.49
2:U:622:GLU:HG2	2:U:644:ALA:O	2.12	0.49
2:Z:622:GLU:HG2	2:Z:644:ALA:O	2.12	0.49
2:V:84:VAL:HG13	2:V:89:ALA:HB2	1.93	0.49
2:U:583:SER:CA	2:U:586:THR:HG22	2.42	0.49
2:Z:236:ILE:HD12	2:Z:236:ILE:N	2.27	0.49
2:Y:220:PRO:HD2	2:Y:338:LEU:HD11	1.94	0.49
2:U:362:PHE:HA	2:U:368:VAL:HG21	1.94	0.49
2:Z:407:CYS:N	2:Z:449:ALA:O	2.45	0.49
2:Z:539:LYS:HD3	2:Z:541:ALA:HB2	1.94	0.49
2:Z:557:PHE:CZ	2:Z:638:ILE:CG2	2.94	0.49
2:Y:627:PHE:CZ	2:Y:640:LEU:CD2	2.95	0.49
2:W:409:PRO:C	2:W:454:TYR:CE1	2.71	0.49
2:W:456:TYR:HB2	2:W:467:TRP:CZ3	2.47	0.49
2:W:627:PHE:CZ	2:W:640:LEU:CD2	2.94	0.49
2:X:289:ILE:HD12	2:X:289:ILE:N	2.24	0.49
2:W:304:ILE:HG13	2:W:305:TYR:CD2	2.47	0.49
1:A:124:THR:HG23	1:A:126:TYR:H	1.77	0.49
2:W:254:ILE:HG12	2:W:337:ILE:HB	1.93	0.49
2:Z:627:PHE:CE1	2:Z:629:ILE:HD12	2.47	0.49
2:X:627:PHE:CZ	2:X:640:LEU:CD2	2.95	0.49
2:X:627:PHE:CD1	2:X:629:ILE:HD12	2.48	0.49
2:V:557:PHE:CZ	2:V:638:ILE:CG2	2.94	0.49
2:Z:228:GLY:HA2	2:Z:345:SER:CB	2.32	0.49
2:Y:595:ASN:CB	2:Y:601:ILE:HD12	2.39	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:U:71:PHE:CD2	2:U:71:PHE:C	2.85	0.49
2:Y:304:ILE:HG13	2:Y:305:TYR:CD2	2.48	0.49
2:U:161:PRO:O	2:U:186:LYS:HB3	2.11	0.49
2:Z:161:PRO:O	2:Z:186:LYS:HB3	2.11	0.49
2:Y:236:ILE:N	2:Y:236:ILE:HD12	2.27	0.49
2:U:300:GLY:O	2:U:302:LYS:HG3	2.12	0.49
2:U:254:ILE:HG12	2:U:337:ILE:HB	1.93	0.49
1:B:77:LEU:HD13	1:B:120:LEU:HD23	1.94	0.49
2:X:245:ALA:C	2:X:247:GLY:H	2.16	0.49
2:W:220:PRO:HD2	2:W:338:LEU:HD11	1.94	0.49
1:A:157:ILE:N	2:U:579:PHE:CG	2.72	0.49
2:Y:627:PHE:CD1	2:Y:629:ILE:HD12	2.47	0.49
2:U:557:PHE:CE1	2:U:638:ILE:CG2	2.95	0.49
2:X:518:TYR:HE2	2:X:536:TYR:HB2	1.70	0.49
2:X:547:PRO:HB2	2:X:553:VAL:HG11	1.94	0.49
2:X:557:PHE:CE1	2:X:638:ILE:CG2	2.95	0.49
2:W:627:PHE:CD1	2:W:629:ILE:HD12	2.48	0.49
2:Y:511:GLN:HA	2:Y:511:GLN:HE21	1.76	0.49
2:Y:547:PRO:HB2	2:Y:553:VAL:HG11	1.93	0.49
2:U:450:ILE:HD13	2:U:522:ILE:CD1	2.41	0.49
2:U:557:PHE:CE1	2:U:638:ILE:HG22	2.47	0.49
2:W:543:SER:O	2:W:544:VAL:HG23	2.11	0.49
2:V:557:PHE:CE2	2:V:631:PRO:HG3	2.47	0.49
2:Y:379:ALA:HB2	2:Y:454:TYR:CE2	2.46	0.49
2:W:382:SER:CB	2:W:385:THR:HG22	2.42	0.49
2:Y:300:GLY:O	2:Y:302:LYS:HG3	2.12	0.49
2:X:300:GLY:O	2:X:302:LYS:HG3	2.11	0.49
2:Z:511:GLN:NE2	2:Z:511:GLN:HA	2.28	0.49
2:V:254:ILE:HG12	2:V:337:ILE:HB	1.93	0.49
2:W:70:ASN:HB3	2:W:457:GLN:HE22	1.76	0.49
1:B:74:ARG:NH2	1:B:231:GLU:OE2	2.43	0.49
2:U:109:ASN:O	2:U:177:GLY:HA3	2.13	0.49
1:B:6:TYR:CD2	1:B:208:LEU:HG	2.48	0.49
2:X:448:ALA:CB	2:X:540:THR:OG1	2.61	0.49
2:V:627:PHE:CD1	2:V:629:ILE:HD12	2.48	0.49
2:V:627:PHE:CE1	2:V:629:ILE:HD12	2.48	0.49
2:X:383:LEU:O	2:X:386:ALA:HB3	2.13	0.49
2:W:237:GLU:HG3	2:W:337:ILE:CD1	2.41	0.49
2:U:557:PHE:CE2	2:U:631:PRO:HG3	2.47	0.49
2:U:627:PHE:CD1	2:U:629:ILE:HD12	2.48	0.49
2:V:539:LYS:HD3	2:V:541:ALA:HB2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:557:PHE:CE1	2:V:638:ILE:CG2	2.95	0.49
2:V:557:PHE:CE1	2:V:638:ILE:HG22	2.47	0.49
2:V:576:ASN:HB3	2:V:620:ARG:NH2	2.25	0.49
2:W:71:PHE:CD2	2:W:71:PHE:C	2.85	0.49
2:V:71:PHE:C	2:V:71:PHE:CD2	2.85	0.49
2:U:304:ILE:HG13	2:U:305:TYR:CD2	2.46	0.49
1:E:12:ARG:NH2	1:E:199:TYR:OH	2.45	0.49
2:X:624:VAL:CG1	2:X:643:VAL:HG12	2.42	0.49
2:U:236:ILE:N	2:U:236:ILE:HD12	2.28	0.49
2:V:624:VAL:CG1	2:V:643:VAL:HG12	2.42	0.49
2:Z:453:ASN:ND2	2:Z:453:ASN:H	2.11	0.49
2:X:511:GLN:HA	2:X:511:GLN:NE2	2.28	0.49
2:V:109:ASN:O	2:V:177:GLY:HA3	2.13	0.49
2:U:245:ALA:C	2:U:247:GLY:H	2.16	0.49
2:X:456:TYR:HB2	2:X:467:TRP:CZ3	2.48	0.49
2:W:557:PHE:CE1	2:W:638:ILE:CG2	2.95	0.49
2:V:547:PRO:HB2	2:V:553:VAL:HG11	1.93	0.49
2:Y:622:GLU:HG2	2:Y:644:ALA:O	2.12	0.49
2:V:583:SER:CA	2:V:586:THR:HG22	2.41	0.49
2:W:583:SER:CA	2:W:586:THR:HG22	2.42	0.49
2:W:215:LYS:CE	2:W:329:ASN:HD21	2.25	0.49
2:U:215:LYS:CE	2:U:329:ASN:HD21	2.26	0.49
2:V:304:ILE:HG13	2:V:305:TYR:CD2	2.47	0.49
2:U:627:PHE:CZ	2:U:640:LEU:CD2	2.95	0.49
2:W:523:ASN:HD21	2:W:538:ASP:CA	2.25	0.49
2:W:615:PRO:O	2:W:617:VAL:HG22	2.13	0.49
2:X:215:LYS:CE	2:X:329:ASN:HD21	2.25	0.49
2:V:70:ASN:HB3	2:V:457:GLN:HE22	1.77	0.49
2:V:245:ALA:C	2:V:247:GLY:H	2.15	0.49
1:B:156:ASP:HB3	2:V:579:PHE:HE1	0.80	0.49
2:X:557:PHE:CE2	2:X:631:PRO:HG3	2.47	0.49
2:W:557:PHE:CE2	2:W:631:PRO:HG3	2.47	0.49
2:U:496:ARG:O	2:U:496:ARG:CG	2.60	0.49
2:Y:456:TYR:HB2	2:Y:467:TRP:CZ3	2.48	0.49
2:Z:383:LEU:O	2:Z:386:ALA:HB3	2.13	0.49
2:Z:362:PHE:HA	2:Z:368:VAL:HG21	1.95	0.49
2:Z:70:ASN:HB3	2:Z:457:GLN:HE22	1.77	0.49
2:U:629:ILE:HG22	2:U:630:GLN:N	2.28	0.48
2:W:376:GLY:HA2	2:W:390:GLN:NE2	2.27	0.48
2:U:383:LEU:O	2:U:386:ALA:HB3	2.13	0.48
2:Y:383:LEU:O	2:Y:386:ALA:HB3	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:523:ASN:HD21	2:Z:538:ASP:CA	2.26	0.48
2:Z:629:ILE:HG22	2:Z:630:GLN:N	2.28	0.48
2:U:376:GLY:HA2	2:U:390:GLN:NE2	2.28	0.48
2:W:408:SER:HA	2:W:451:ASP:O	2.13	0.48
2:Y:376:GLY:HA2	2:Y:390:GLN:NE2	2.28	0.48
2:Y:445:SER:HB3	2:Y:448:ALA:HB2	1.95	0.48
1:B:109:TYR:HB3	1:B:161:ARG:NH2	2.20	0.48
2:U:615:PRO:O	2:U:617:VAL:HG22	2.13	0.48
2:Z:304:ILE:HG13	2:Z:305:TYR:CD2	2.47	0.48
1:C:110:ASN:HA	1:C:111:PRO:HD3	1.71	0.48
2:W:109:ASN:O	2:W:177:GLY:HA3	2.13	0.48
2:Z:627:PHE:CD1	2:Z:629:ILE:HD12	2.48	0.48
2:X:379:ALA:HB2	2:X:454:TYR:CE2	2.46	0.48
2:W:448:ALA:O	2:W:540:THR:N	2.42	0.48
2:V:448:ALA:CB	2:V:540:THR:OG1	2.62	0.48
2:Y:407:CYS:N	2:Y:449:ALA:O	2.44	0.48
2:Y:408:SER:HA	2:Y:451:ASP:O	2.13	0.48
2:U:577:ASN:H	2:U:580:THR:CG2	2.26	0.48
2:W:383:LEU:O	2:W:386:ALA:HB3	2.14	0.48
2:Z:624:VAL:CG1	2:Z:643:VAL:HG12	2.42	0.48
2:X:109:ASN:O	2:X:177:GLY:HA3	2.13	0.48
1:B:212:THR:HA	1:B:222:ASP:HA	1.94	0.48
1:F:54:ASN:HA	1:F:57:THR:HG22	1.96	0.48
2:Z:448:ALA:CB	2:Z:540:THR:OG1	2.61	0.48
2:X:376:GLY:HA2	2:X:390:GLN:NE2	2.28	0.48
2:W:407:CYS:N	2:W:449:ALA:O	2.44	0.48
2:W:445:SER:HB3	2:W:448:ALA:HB2	1.95	0.48
2:W:456:TYR:CZ	2:W:465:ASN:HB3	2.48	0.48
2:X:25:GLY:HA2	2:X:484:VAL:HG21	1.93	0.48
2:Z:413:THR:OG1	2:Z:425:ASN:HB3	2.14	0.48
2:Z:63:ASP:O	2:Z:67:SER:HB2	2.14	0.48
2:U:624:VAL:CG1	2:U:643:VAL:HG12	2.42	0.48
2:Y:511:GLN:NE2	2:Y:511:GLN:HA	2.28	0.48
2:Z:109:ASN:O	2:Z:177:GLY:HA3	2.13	0.48
2:Z:379:ALA:HB2	2:Z:454:TYR:CE2	2.46	0.48
2:Z:445:SER:HB3	2:Z:448:ALA:HB2	1.94	0.48
2:V:376:GLY:HA2	2:V:390:GLN:NE2	2.28	0.48
1:D:157:ILE:HG13	2:X:579:PHE:CG	2.48	0.48
2:U:440:ASN:C	2:U:440:ASN:HD22	2.17	0.48
2:X:615:PRO:O	2:X:617:VAL:HG22	2.13	0.48
2:U:453:ASN:H	2:U:453:ASN:ND2	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:362:PHE:HA	2:V:368:VAL:HG21	1.95	0.48
2:Y:362:PHE:HA	2:Y:368:VAL:HG21	1.94	0.48
1:D:147:THR:HG23	1:D:163:ILE:HB	1.94	0.48
2:Z:376:GLY:HA2	2:Z:390:GLN:NE2	2.28	0.48
2:Z:408:SER:HA	2:Z:451:ASP:O	2.14	0.48
2:U:408:SER:HA	2:U:451:ASP:O	2.13	0.48
2:X:407:CYS:N	2:X:449:ALA:O	2.44	0.48
2:Y:523:ASN:HD21	2:Y:538:ASP:CA	2.26	0.48
2:V:440:ASN:HD22	2:V:440:ASN:C	2.17	0.48
2:Z:615:PRO:O	2:Z:617:VAL:HG22	2.13	0.48
2:X:413:THR:OG1	2:X:425:ASN:HB3	2.13	0.48
2:Y:63:ASP:O	2:Y:67:SER:HB2	2.14	0.48
2:U:63:ASP:O	2:U:67:SER:HB2	2.14	0.48
2:Y:453:ASN:ND2	2:Y:453:ASN:H	2.11	0.48
2:Z:536:TYR:CG	2:Z:537:GLY:N	2.82	0.48
2:Z:496:ARG:O	2:Z:496:ARG:CG	2.60	0.48
2:Z:440:ASN:HD22	2:Z:440:ASN:C	2.17	0.48
2:W:576:ASN:HB3	2:W:620:ARG:NH2	2.25	0.48
2:X:382:SER:CB	2:X:385:THR:HG22	2.42	0.48
2:Y:109:ASN:O	2:Y:177:GLY:HA3	2.12	0.48
2:W:125:ILE:HD12	2:W:153:LYS:HG2	1.96	0.48
2:U:456:TYR:HB2	2:U:467:TRP:CZ3	2.48	0.48
2:U:448:ALA:CB	2:U:540:THR:OG1	2.61	0.48
2:W:448:ALA:CB	2:W:540:THR:OG1	2.61	0.48
2:W:561:LYS:HG3	2:W:562:THR:N	2.29	0.48
2:V:228:GLY:HA2	2:V:345:SER:CB	2.32	0.48
2:V:615:PRO:O	2:V:617:VAL:HG22	2.13	0.48
2:W:63:ASP:O	2:W:67:SER:HB2	2.14	0.48
2:X:63:ASP:O	2:X:67:SER:HB2	2.14	0.48
2:Y:624:VAL:CG1	2:Y:643:VAL:HG12	2.43	0.48
2:Y:30:ALA:HB3	2:Y:359:TRP:CE2	2.49	0.48
2:Y:629:ILE:HG22	2:Y:630:GLN:N	2.28	0.48
2:U:523:ASN:HD21	2:U:538:ASP:CA	2.26	0.48
2:X:408:SER:HA	2:X:451:ASP:O	2.14	0.48
2:V:449:ALA:CB	2:V:539:LYS:HA	2.44	0.48
2:V:523:ASN:HD21	2:V:538:ASP:CA	2.26	0.48
2:V:553:VAL:HG23	2:V:554:ARG:N	2.29	0.48
2:W:440:ASN:C	2:W:440:ASN:HD22	2.17	0.48
2:V:511:GLN:NE2	2:V:511:GLN:HA	2.28	0.48
2:U:511:GLN:HA	2:U:511:GLN:NE2	2.28	0.48
2:Z:30:ALA:HB3	2:Z:359:TRP:CE2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:245:ALA:C	2:Y:247:GLY:H	2.16	0.48
2:W:284:ARG:HA	2:W:288:ALA:O	2.14	0.48
1:D:6:TYR:CD2	1:D:208:LEU:HG	2.49	0.48
2:X:284:ARG:HA	2:X:288:ALA:O	2.14	0.48
2:X:449:ALA:CB	2:X:539:LYS:HA	2.44	0.48
2:W:557:PHE:CZ	2:W:638:ILE:CG2	2.95	0.48
2:V:502:VAL:HG12	2:V:503:ILE:N	2.29	0.48
2:X:576:ASN:HB3	2:X:620:ARG:NH2	2.25	0.48
2:V:453:ASN:N	2:V:453:ASN:ND2	2.62	0.48
2:X:58:THR:H	2:X:61:THR:HB	1.79	0.48
2:Z:284:ARG:HA	2:Z:288:ALA:O	2.14	0.48
2:X:456:TYR:CZ	2:X:465:ASN:HB3	2.49	0.47
2:Z:496:ARG:N	2:Z:534:VAL:HG11	2.25	0.47
2:V:456:TYR:CZ	2:V:465:ASN:HB3	2.49	0.47
2:V:456:TYR:HB2	2:V:467:TRP:CZ3	2.48	0.47
1:C:156:ASP:HB3	2:W:579:PHE:CD1	2.40	0.47
2:W:612:ASN:HD21	2:W:614:THR:HG22	1.79	0.47
2:Z:382:SER:CB	2:Z:385:THR:HG22	2.42	0.47
2:Z:453:ASN:ND2	2:Z:453:ASN:N	2.62	0.47
2:Y:125:ILE:HD12	2:Y:153:LYS:HG2	1.96	0.47
1:C:130:MET:HE2	1:C:188:TRP:CD2	2.49	0.47
2:U:448:ALA:O	2:U:540:THR:N	2.42	0.47
2:U:502:VAL:HG12	2:U:503:ILE:N	2.29	0.47
2:U:536:TYR:CG	2:U:537:GLY:N	2.82	0.47
2:U:547:PRO:HB2	2:U:553:VAL:HG11	1.94	0.47
2:X:407:CYS:O	2:X:451:ASP:N	2.48	0.47
2:W:518:TYR:HE2	2:W:536:TYR:HB2	1.70	0.47
2:V:408:SER:HA	2:V:451:ASP:O	2.14	0.47
2:X:440:ASN:C	2:X:440:ASN:HD22	2.17	0.47
2:Y:440:ASN:C	2:Y:440:ASN:HD22	2.17	0.47
2:Y:577:ASN:H	2:Y:580:THR:CG2	2.27	0.47
2:V:30:ALA:HB3	2:V:359:TRP:CE2	2.49	0.47
1:C:124:THR:HG21	1:C:130:MET:HG2	1.95	0.47
2:Z:125:ILE:HD12	2:Z:153:LYS:HG2	1.96	0.47
2:Y:58:THR:H	2:Y:61:THR:HB	1.80	0.47
2:X:502:VAL:HG12	2:X:503:ILE:N	2.30	0.47
2:X:536:TYR:CD2	2:X:537:GLY:N	2.83	0.47
2:X:536:TYR:CG	2:X:537:GLY:N	2.82	0.47
2:X:629:ILE:HG22	2:X:630:GLN:N	2.28	0.47
2:V:629:ILE:HG22	2:V:630:GLN:N	2.28	0.47
2:Y:448:ALA:CB	2:Y:540:THR:OG1	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:X:30:ALA:HB3	2:X:359:TRP:CE2	2.49	0.47
2:W:30:ALA:HB3	2:W:359:TRP:CE2	2.49	0.47
2:V:58:THR:H	2:V:61:THR:HB	1.79	0.47
2:W:58:THR:H	2:W:61:THR:HB	1.80	0.47
2:V:285:ARG:O	2:V:286:ASN:HB2	2.14	0.47
2:Z:553:VAL:HG23	2:Z:554:ARG:N	2.29	0.47
2:Y:553:VAL:HG23	2:Y:554:ARG:N	2.29	0.47
2:U:526:THR:OG1	2:U:535:LEU:HD21	2.15	0.47
2:X:450:ILE:CG1	2:X:451:ASP:N	2.53	0.47
2:W:536:TYR:CD2	2:W:537:GLY:N	2.83	0.47
2:Z:577:ASN:H	2:Z:580:THR:CG2	2.27	0.47
2:Y:382:SER:CB	2:Y:385:THR:HG22	2.42	0.47
2:Z:350:VAL:HG13	2:Z:354:ASP:HB2	1.97	0.47
2:X:453:ASN:H	2:X:453:ASN:ND2	2.11	0.47
2:W:453:ASN:H	2:W:453:ASN:ND2	2.11	0.47
2:W:453:ASN:ND2	2:W:453:ASN:N	2.62	0.47
2:Y:284:ARG:HA	2:Y:288:ALA:O	2.13	0.47
2:U:456:TYR:CZ	2:U:465:ASN:HB3	2.49	0.47
2:U:449:ALA:CB	2:U:539:LYS:HA	2.44	0.47
2:X:553:VAL:HG23	2:X:554:ARG:N	2.29	0.47
2:W:627:PHE:HZ	2:W:640:LEU:CD2	2.28	0.47
2:V:536:TYR:CG	2:V:537:GLY:N	2.82	0.47
2:Y:407:CYS:O	2:Y:451:ASP:N	2.48	0.47
2:Y:526:THR:OG1	2:Y:535:LEU:HD21	2.15	0.47
2:Y:536:TYR:CG	2:Y:537:GLY:N	2.82	0.47
2:V:577:ASN:H	2:V:580:THR:CG2	2.27	0.47
2:Y:612:ASN:HD21	2:Y:614:THR:HG22	1.79	0.47
2:Y:215:LYS:CE	2:Y:329:ASN:HD21	2.26	0.47
2:Z:27:ALA:HB2	2:Z:71:PHE:CZ	2.50	0.47
2:V:63:ASP:O	2:V:67:SER:HB2	2.14	0.47
2:X:453:ASN:N	2:X:453:ASN:ND2	2.62	0.47
2:Z:245:ALA:C	2:Z:247:GLY:H	2.16	0.47
1:E:5:PHE:CE2	1:E:201:PRO:HB3	2.50	0.47
2:V:125:ILE:HD12	2:V:153:LYS:HG2	1.97	0.47
1:E:147:THR:HG23	1:E:163:ILE:HB	1.97	0.47
2:U:284:ARG:HA	2:U:288:ALA:O	2.14	0.47
2:Z:456:TYR:HB2	2:Z:467:TRP:CZ3	2.49	0.47
2:Y:561:LYS:HG3	2:Y:562:THR:N	2.30	0.47
2:X:557:PHE:CZ	2:X:638:ILE:CG2	2.95	0.47
2:Y:456:TYR:CZ	2:Y:465:ASN:HB3	2.49	0.47
2:Y:502:VAL:HG12	2:Y:503:ILE:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:W:577:ASN:H	2:W:580:THR:CG2	2.26	0.47
2:U:30:ALA:HB3	2:U:359:TRP:CE2	2.49	0.47
2:U:125:ILE:HD12	2:U:153:LYS:HG2	1.97	0.47
1:E:167:LEU:HD11	1:E:190:LEU:HD12	1.96	0.47
2:V:284:ARG:HA	2:V:288:ALA:O	2.14	0.47
2:Z:449:ALA:CB	2:Z:539:LYS:HA	2.44	0.47
2:Z:502:VAL:HG12	2:Z:503:ILE:N	2.30	0.47
2:Z:561:LYS:HG3	2:Z:562:THR:N	2.30	0.47
2:Z:560:LEU:HD12	2:Z:592:LEU:CD2	2.45	0.47
2:Y:546:SER:N	2:Y:547:PRO:HD2	2.30	0.47
2:U:445:SER:HB3	2:U:448:ALA:HB2	1.95	0.47
2:U:561:LYS:HG3	2:U:562:THR:N	2.30	0.47
2:X:409:PRO:C	2:X:454:TYR:CE1	2.71	0.47
2:W:379:ALA:HB2	2:W:454:TYR:CE2	2.45	0.47
2:W:407:CYS:O	2:W:451:ASP:N	2.48	0.47
2:W:553:VAL:HG23	2:W:554:ARG:N	2.30	0.47
2:W:526:THR:OG1	2:W:535:LEU:HD21	2.15	0.47
2:W:547:PRO:C	2:W:553:VAL:CG2	2.82	0.47
2:V:445:SER:HB3	2:V:448:ALA:HB2	1.95	0.47
2:Y:615:PRO:O	2:Y:617:VAL:HG22	2.13	0.47
2:Z:171:ILE:CG2	2:Z:172:SER:H	2.25	0.47
2:Y:413:THR:OG1	2:Y:425:ASN:HB3	2.14	0.47
2:W:413:THR:OG1	2:W:425:ASN:HB3	2.14	0.47
2:U:413:THR:OG1	2:U:425:ASN:HB3	2.14	0.47
2:W:511:GLN:NE2	2:W:511:GLN:HA	2.29	0.47
2:V:453:ASN:H	2:V:453:ASN:ND2	2.12	0.47
1:A:114:ILE:HG12	1:A:115:LYS:N	2.29	0.47
2:Z:411:ARG:O	2:Z:412:GLU:C	2.53	0.47
2:X:285:ARG:O	2:X:286:ASN:HB2	2.14	0.47
2:U:58:THR:H	2:U:61:THR:HB	1.79	0.47
2:Y:411:ARG:O	2:Y:412:GLU:C	2.53	0.47
2:Z:526:THR:OG1	2:Z:535:LEU:HD21	2.15	0.47
2:X:526:THR:OG1	2:X:535:LEU:HD21	2.15	0.47
2:W:629:ILE:HG22	2:W:630:GLN:N	2.28	0.47
2:V:526:THR:OG1	2:V:535:LEU:HD21	2.15	0.47
2:W:621:ASN:CG	2:W:622:GLU:H	2.18	0.47
2:X:612:ASN:HD21	2:X:614:THR:HG22	1.80	0.47
2:U:614:THR:HB	2:U:620:ARG:CA	2.40	0.47
2:U:612:ASN:HD21	2:U:614:THR:HG22	1.79	0.47
2:Z:602:TYR:CG	2:Z:603:GLU:N	2.83	0.47
2:U:285:ARG:O	2:U:286:ASN:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:514:ARG:CA	2:Z:517:LEU:HG	2.45	0.47
2:Z:546:SER:N	2:Z:547:PRO:HD2	2.30	0.47
2:V:536:TYR:CD2	2:V:537:GLY:N	2.83	0.47
2:V:561:LYS:HG3	2:V:562:THR:N	2.29	0.47
2:V:560:LEU:HD12	2:V:592:LEU:CD2	2.45	0.47
2:Y:514:ARG:CA	2:Y:517:LEU:HG	2.45	0.47
2:Y:536:TYR:CD2	2:Y:537:GLY:N	2.83	0.47
2:V:614:THR:HB	2:V:620:ARG:CA	2.40	0.47
2:X:577:ASN:H	2:X:580:THR:CG2	2.27	0.47
2:U:350:VAL:HG13	2:U:354:ASP:HB2	1.97	0.47
2:X:27:ALA:HB2	2:X:71:PHE:CZ	2.49	0.47
2:Z:66:MET:HA	2:Z:66:MET:HE3	1.97	0.47
1:E:130:MET:HE2	1:E:188:TRP:CD2	2.50	0.47
2:U:62:ALA:HB1	2:U:466:ARG:NE	2.30	0.47
2:X:610:THR:HG23	2:X:611:THR:N	2.29	0.47
2:Z:610:THR:HG23	2:Z:611:THR:N	2.29	0.47
2:Y:293:VAL:HG22	2:Y:294:VAL:N	2.30	0.47
2:V:610:THR:HG23	2:V:611:THR:N	2.30	0.47
2:U:37:PRO:HB2	2:U:40:GLN:HB2	1.97	0.47
2:U:407:CYS:O	2:U:451:ASP:N	2.48	0.47
2:X:561:LYS:HG3	2:X:562:THR:N	2.30	0.47
2:Y:449:ALA:CB	2:Y:539:LYS:HA	2.45	0.47
2:Y:450:ILE:CG1	2:Y:451:ASP:N	2.53	0.47
2:Y:499:ILE:HD13	2:Y:499:ILE:N	2.28	0.47
2:U:228:GLY:HA2	2:U:345:SER:CB	2.31	0.47
2:U:382:SER:CB	2:U:385:THR:HG22	2.42	0.47
2:Z:215:LYS:CE	2:Z:329:ASN:HD21	2.25	0.47
2:Y:350:VAL:HG13	2:Y:354:ASP:HB2	1.97	0.47
2:X:27:ALA:HB3	2:X:78:LEU:HD12	1.97	0.47
2:V:62:ALA:HB1	2:V:466:ARG:NE	2.30	0.47
2:U:610:THR:HG23	2:U:611:THR:N	2.29	0.47
2:Z:58:THR:H	2:Z:61:THR:HB	1.80	0.47
2:Z:456:TYR:CZ	2:Z:465:ASN:HB3	2.49	0.46
2:U:536:TYR:CD2	2:U:537:GLY:N	2.83	0.46
2:W:514:ARG:CA	2:W:517:LEU:HG	2.45	0.46
2:W:536:TYR:CG	2:W:537:GLY:N	2.82	0.46
2:W:536:TYR:HD2	2:W:538:ASP:H	1.63	0.46
2:Y:448:ALA:O	2:Y:540:THR:N	2.41	0.46
2:X:602:TYR:CG	2:X:603:GLU:N	2.83	0.46
2:Z:62:ALA:HB1	2:Z:466:ARG:NE	2.30	0.46
2:Y:610:THR:HG23	2:Y:611:THR:N	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:62:ALA:HB1	2:Y:466:ARG:NE	2.30	0.46
2:Z:56:GLN:HA	2:Z:57:PRO:HD3	1.81	0.46
2:W:610:THR:HG23	2:W:611:THR:N	2.30	0.46
2:Z:499:ILE:HD13	2:Z:499:ILE:N	2.28	0.46
2:W:450:ILE:CG1	2:W:451:ASP:N	2.53	0.46
2:Y:602:TYR:CG	2:Y:603:GLU:N	2.83	0.46
2:V:413:THR:OG1	2:V:425:ASN:HB3	2.14	0.46
2:U:27:ALA:HB2	2:U:71:PHE:CZ	2.50	0.46
2:Y:27:ALA:HB2	2:Y:71:PHE:CZ	2.50	0.46
2:V:350:VAL:HG13	2:V:354:ASP:HB2	1.97	0.46
1:C:27:LYS:HB2	1:C:36:PHE:CE2	2.50	0.46
2:Z:536:TYR:CD2	2:Z:537:GLY:N	2.83	0.46
2:Y:560:LEU:HD12	2:Y:592:LEU:CD2	2.45	0.46
2:X:514:ARG:CA	2:X:517:LEU:HG	2.45	0.46
2:X:536:TYR:HD2	2:X:538:ASP:H	1.63	0.46
2:V:627:PHE:HZ	2:V:640:LEU:CD2	2.29	0.46
2:Y:517:LEU:HB2	2:Y:522:ILE:HG23	1.95	0.46
2:X:570:TYR:CD2	2:X:584:PHE:CE2	2.95	0.46
2:Z:612:ASN:HD21	2:Z:614:THR:HG22	1.80	0.46
2:W:71:PHE:C	2:W:73:GLN:N	2.69	0.46
2:W:100:GLU:HG2	2:W:186:LYS:O	2.16	0.46
2:U:100:GLU:HG2	2:U:186:LYS:O	2.16	0.46
2:V:100:GLU:HG2	2:V:186:LYS:O	2.16	0.46
2:W:285:ARG:O	2:W:286:ASN:HB2	2.14	0.46
1:E:6:TYR:CD2	1:E:208:LEU:HG	2.51	0.46
1:F:56:TRP:HB3	1:F:71:ILE:HD13	1.98	0.46
2:Y:290:VAL:HG11	2:Y:322:TYR:CD1	2.51	0.46
2:Z:407:CYS:O	2:Z:451:ASP:N	2.48	0.46
2:Z:544:VAL:CG1	2:Z:545:PRO:N	2.78	0.46
2:U:499:ILE:HD13	2:U:499:ILE:N	2.28	0.46
2:W:517:LEU:HB2	2:W:522:ILE:HG23	1.95	0.46
2:W:449:ALA:CB	2:W:539:LYS:HA	2.44	0.46
2:V:612:ASN:HD21	2:V:614:THR:HG22	1.81	0.46
2:W:602:TYR:CG	2:W:603:GLU:N	2.83	0.46
2:U:583:SER:HA	2:U:586:THR:HG22	1.98	0.46
2:X:62:ALA:HB1	2:X:466:ARG:NE	2.30	0.46
2:V:293:VAL:HG22	2:V:294:VAL:N	2.30	0.46
1:D:212:THR:HA	1:D:222:ASP:HA	1.98	0.46
2:Y:285:ARG:O	2:Y:286:ASN:HB2	2.14	0.46
2:V:411:ARG:O	2:V:412:GLU:C	2.54	0.46
2:Z:290:VAL:HG11	2:Z:322:TYR:CD1	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:U:546:SER:N	2:U:547:PRO:HD2	2.29	0.46
2:X:627:PHE:HZ	2:X:640:LEU:CD2	2.29	0.46
2:W:546:SER:N	2:W:547:PRO:HD2	2.30	0.46
2:W:560:LEU:HD12	2:W:592:LEU:CD2	2.45	0.46
1:F:157:ILE:N	2:Z:579:PHE:CD1	2.73	0.46
2:X:614:THR:HB	2:X:620:ARG:CA	2.41	0.46
2:X:601:ILE:HG22	2:X:602:TYR:N	2.31	0.46
1:D:29:GLN:OE1	1:E:3:GLY:N	2.49	0.46
2:X:37:PRO:HB2	2:X:40:GLN:HB2	1.97	0.46
2:Y:37:PRO:HB2	2:Y:40:GLN:HB2	1.97	0.46
2:Z:285:ARG:O	2:Z:286:ASN:HB2	2.14	0.46
2:Z:293:VAL:HG22	2:Z:294:VAL:N	2.30	0.46
2:X:125:ILE:HD12	2:X:153:LYS:HG2	1.97	0.46
2:X:290:VAL:HG11	2:X:322:TYR:CD1	2.50	0.46
2:U:379:ALA:HB2	2:U:454:TYR:CE2	2.46	0.46
2:U:544:VAL:CG1	2:U:545:PRO:N	2.78	0.46
2:V:407:CYS:O	2:V:451:ASP:N	2.48	0.46
2:V:546:SER:N	2:V:547:PRO:HD2	2.30	0.46
2:U:602:TYR:CG	2:U:603:GLU:N	2.83	0.46
2:W:71:PHE:C	2:W:73:GLN:H	2.19	0.46
2:X:350:VAL:HG13	2:X:354:ASP:HB2	1.98	0.46
2:W:350:VAL:HG13	2:W:354:ASP:HB2	1.97	0.46
2:Y:151:ILE:HG13	2:Y:152:ALA:N	2.31	0.46
2:X:458:TYR:CE2	2:X:460:LYS:HA	2.51	0.46
2:Y:458:TYR:CE2	2:Y:460:LYS:HA	2.51	0.46
2:X:517:LEU:HB2	2:X:522:ILE:HG23	1.95	0.46
2:X:517:LEU:HD13	2:X:524:PRO:CG	2.46	0.46
2:W:502:VAL:HG12	2:W:503:ILE:N	2.29	0.46
2:V:518:TYR:HE2	2:V:536:TYR:HB2	1.70	0.46
2:X:621:ASN:CG	2:X:622:GLU:H	2.19	0.46
2:Z:621:ASN:CG	2:Z:622:GLU:H	2.18	0.46
2:W:27:ALA:HB2	2:W:71:PHE:CZ	2.50	0.46
2:Z:71:PHE:C	2:Z:73:GLN:H	2.19	0.46
2:V:27:ALA:HB2	2:V:71:PHE:CZ	2.50	0.46
2:X:71:PHE:C	2:X:73:GLN:H	2.19	0.46
2:W:37:PRO:HB2	2:W:40:GLN:HB2	1.97	0.46
2:V:151:ILE:HG13	2:V:152:ALA:N	2.30	0.46
2:X:307:SER:O	2:X:309:ILE:HG23	2.16	0.46
2:W:411:ARG:O	2:W:412:GLU:C	2.54	0.46
2:U:35:TRP:HB3	2:U:54:PHE:HA	1.98	0.46
2:U:557:PHE:CZ	2:U:638:ILE:CG2	2.95	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:U:560:LEU:HD12	2:U:592:LEU:CD2	2.45	0.46
2:U:627:PHE:HZ	2:U:640:LEU:CD2	2.29	0.46
2:X:546:SER:N	2:X:547:PRO:HD2	2.30	0.46
2:X:560:LEU:HD12	2:X:592:LEU:CD2	2.46	0.46
2:V:407:CYS:O	2:V:451:ASP:HB3	2.15	0.46
2:V:621:ASN:CG	2:V:622:GLU:H	2.19	0.46
2:Y:173:SER:HA	2:Y:174:SER:HB3	1.98	0.46
2:Z:583:SER:HA	2:Z:586:THR:HG22	1.98	0.46
2:Y:27:ALA:HB3	2:Y:78:LEU:HD12	1.98	0.46
2:Y:100:GLU:HG2	2:Y:186:LYS:O	2.15	0.46
2:X:100:GLU:HG2	2:X:186:LYS:O	2.15	0.46
2:Z:511:GLN:HE21	2:Z:511:GLN:CA	2.29	0.46
2:V:35:TRP:HB3	2:V:54:PHE:HA	1.98	0.46
2:U:290:VAL:HG11	2:U:322:TYR:CD1	2.51	0.46
2:V:130:LYS:O	2:V:132:THR:HG23	2.16	0.46
1:A:5:PHE:CE2	1:A:201:PRO:HB3	2.51	0.46
1:D:19:ASP:HA	1:D:22:SER:HB2	1.98	0.46
2:X:151:ILE:HG13	2:X:152:ALA:N	2.30	0.46
2:Z:517:LEU:HB2	2:Z:522:ILE:HG23	1.95	0.46
2:U:517:LEU:HB2	2:U:522:ILE:HG23	1.95	0.46
2:V:73:GLN:HB3	2:V:500:LEU:HD12	1.98	0.46
2:Y:71:PHE:C	2:Y:73:GLN:H	2.19	0.46
2:W:283:VAL:CG2	2:W:323:ILE:HD13	2.46	0.46
2:Z:208:VAL:HG23	2:Z:209:ASP:N	2.31	0.46
2:Y:130:LYS:O	2:Y:132:THR:HG23	2.16	0.46
2:Z:35:TRP:HB3	2:Z:54:PHE:HA	1.98	0.46
2:Y:307:SER:O	2:Y:309:ILE:HG23	2.16	0.46
2:Y:526:THR:HG21	2:Y:535:LEU:HD11	1.97	0.46
1:F:157:ILE:CB	2:Z:579:PHE:CD1	2.85	0.46
2:Y:621:ASN:CG	2:Y:622:GLU:H	2.19	0.46
2:V:602:TYR:CG	2:V:603:GLU:N	2.83	0.46
2:Y:73:GLN:HB3	2:Y:500:LEU:HD12	1.98	0.46
1:E:125:ARG:NH2	1:E:184:ARG:HG2	2.30	0.46
2:W:624:VAL:HG12	2:W:643:VAL:CB	2.46	0.46
2:Y:283:VAL:CG2	2:Y:323:ILE:HD13	2.46	0.46
2:W:62:ALA:HB1	2:W:466:ARG:NE	2.31	0.46
2:W:35:TRP:HB3	2:W:54:PHE:HA	1.98	0.46
2:X:293:VAL:HG22	2:X:294:VAL:N	2.31	0.46
2:U:293:VAL:HG22	2:U:294:VAL:N	2.31	0.46
2:W:290:VAL:HG11	2:W:322:TYR:CD1	2.51	0.46
1:B:114:ILE:HG12	1:B:115:LYS:H	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:517:LEU:HD13	2:Z:524:PRO:CG	2.46	0.45
2:U:553:VAL:HG23	2:U:554:ARG:N	2.30	0.45
2:X:526:THR:HG21	2:X:535:LEU:HD11	1.96	0.45
2:X:547:PRO:C	2:X:553:VAL:CG2	2.83	0.45
2:V:544:VAL:CG1	2:V:545:PRO:N	2.78	0.45
2:U:50:LEU:HD12	2:U:51:VAL:N	2.31	0.45
2:U:621:ASN:CG	2:U:622:GLU:H	2.19	0.45
2:V:583:SER:HA	2:V:586:THR:HG22	1.97	0.45
2:Z:73:GLN:HB3	2:Z:500:LEU:HD12	1.99	0.45
1:C:19:ASP:OD2	1:C:213:TYR:OH	2.25	0.45
1:A:114:ILE:HG12	1:A:115:LYS:H	1.81	0.45
2:Z:130:LYS:O	2:Z:132:THR:HG23	2.16	0.45
1:A:18:GLY:HA3	1:A:230:PHE:CZ	2.52	0.45
2:U:151:ILE:HG13	2:U:152:ALA:N	2.30	0.45
2:V:37:PRO:HB2	2:V:40:GLN:HB2	1.97	0.45
2:U:544:VAL:CG1	2:U:545:PRO:HD2	2.46	0.45
2:V:544:VAL:CG1	2:V:545:PRO:HD2	2.47	0.45
2:Z:614:THR:HB	2:Z:620:ARG:CA	2.41	0.45
2:V:71:PHE:C	2:V:73:GLN:H	2.19	0.45
2:X:71:PHE:C	2:X:73:GLN:N	2.69	0.45
2:Z:100:GLU:HG2	2:Z:186:LYS:O	2.16	0.45
1:B:130:MET:HE2	1:B:188:TRP:CD2	2.51	0.45
1:C:6:TYR:CD2	1:C:208:LEU:HG	2.52	0.45
2:W:293:VAL:HG22	2:W:294:VAL:N	2.30	0.45
2:U:411:ARG:O	2:U:412:GLU:C	2.54	0.45
2:U:456:TYR:CE2	2:U:503:ILE:HD11	2.52	0.45
2:W:456:TYR:CE2	2:W:503:ILE:HD11	2.52	0.45
2:Y:536:TYR:HD2	2:Y:538:ASP:H	1.63	0.45
2:W:228:GLY:HA2	2:W:345:SER:CB	2.31	0.45
2:Y:601:ILE:HG22	2:Y:602:TYR:N	2.31	0.45
2:V:171:ILE:CG2	2:V:172:SER:N	2.79	0.45
2:V:624:VAL:HG12	2:V:643:VAL:CB	2.46	0.45
2:U:511:GLN:CA	2:U:511:GLN:HE21	2.29	0.45
2:V:290:VAL:HG11	2:V:322:TYR:CD1	2.51	0.45
1:B:223:LEU:HD12	1:B:224:PRO:HD2	1.98	0.45
1:D:106:VAL:HG12	1:D:107:SER:H	1.80	0.45
2:W:307:SER:O	2:W:309:ILE:HG23	2.16	0.45
2:W:130:LYS:O	2:W:132:THR:HG23	2.17	0.45
2:Y:208:VAL:HG23	2:Y:209:ASP:N	2.31	0.45
2:X:411:ARG:O	2:X:412:GLU:C	2.54	0.45
1:B:110:ASN:HA	1:B:111:PRO:HD3	1.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:536:TYR:HD2	2:V:538:ASP:H	1.63	0.45
2:V:596:LYS:HD3	2:V:596:LYS:C	2.37	0.45
2:U:71:PHE:C	2:U:73:GLN:H	2.19	0.45
2:Y:419:VAL:HA	2:Y:422:ALA:CB	2.47	0.45
2:X:283:VAL:CG2	2:X:323:ILE:HD13	2.47	0.45
2:X:626:THR:HB	2:X:641:ASN:ND2	2.31	0.45
2:V:211:GLN:OE1	2:V:328:GLN:HG2	2.16	0.45
2:Z:390:GLN:HE22	2:Z:408:SER:H	1.65	0.45
2:Y:557:PHE:CZ	2:Y:638:ILE:CG2	2.95	0.45
2:U:526:THR:HG21	2:U:535:LEU:HD11	1.97	0.45
2:W:407:CYS:O	2:W:451:ASP:HB3	2.14	0.45
2:U:596:LYS:HD3	2:U:596:LYS:C	2.37	0.45
2:Z:173:SER:HA	2:Z:174:SER:HB3	1.98	0.45
2:U:71:PHE:C	2:U:73:GLN:N	2.69	0.45
2:Y:71:PHE:C	2:Y:73:GLN:N	2.69	0.45
2:U:208:VAL:HG23	2:U:209:ASP:N	2.31	0.45
2:Z:252:LEU:HA	2:Z:253:PRO:HD3	1.79	0.45
2:U:130:LYS:O	2:U:132:THR:HG23	2.16	0.45
1:D:66:ALA:O	1:D:68:VAL:N	2.45	0.45
1:A:19:ASP:HA	1:A:22:SER:HB2	1.97	0.45
2:Z:37:PRO:HB2	2:Z:40:GLN:HB2	1.97	0.45
2:X:130:LYS:O	2:X:132:THR:HG23	2.16	0.45
2:Z:446:THR:C	2:Z:539:LYS:HE3	2.23	0.45
2:X:456:TYR:CE2	2:X:503:ILE:HD11	2.52	0.45
2:W:561:LYS:CB	2:W:640:LEU:HD21	2.47	0.45
2:V:499:ILE:N	2:V:499:ILE:HD13	2.28	0.45
2:V:456:TYR:CE2	2:V:503:ILE:HD11	2.52	0.45
2:V:514:ARG:CA	2:V:517:LEU:HG	2.45	0.45
2:Y:544:VAL:CG1	2:Y:545:PRO:N	2.78	0.45
2:Y:385:THR:HA	2:Y:388:THR:HG23	1.98	0.45
2:Y:583:SER:HA	2:Y:586:THR:HG22	1.97	0.45
2:U:73:GLN:HB3	2:U:500:LEU:HD12	1.99	0.45
2:U:27:ALA:HB3	2:U:78:LEU:HD12	1.97	0.45
2:V:283:VAL:CG2	2:V:323:ILE:HD13	2.47	0.45
1:E:114:ILE:HG12	1:E:115:LYS:N	2.31	0.45
2:W:458:TYR:CE2	2:W:460:LYS:HA	2.51	0.45
2:U:211:GLN:OE1	2:U:328:GLN:HG2	2.17	0.45
2:Z:544:VAL:CG1	2:Z:545:PRO:HD2	2.47	0.45
2:W:544:VAL:CG1	2:W:545:PRO:HD2	2.47	0.45
2:W:596:LYS:HD3	2:W:596:LYS:C	2.37	0.45
2:X:173:SER:HA	2:X:174:SER:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:385:THR:HA	2:Z:388:THR:HG23	1.99	0.45
2:Z:27:ALA:HB3	2:Z:78:LEU:HD12	1.98	0.45
2:U:624:VAL:HG11	2:U:643:VAL:HG12	1.98	0.45
2:U:390:GLN:HE22	2:U:408:SER:H	1.65	0.45
2:U:514:ARG:CA	2:U:517:LEU:HG	2.45	0.45
2:W:517:LEU:HD13	2:W:524:PRO:CG	2.46	0.45
2:W:544:VAL:CG1	2:W:545:PRO:N	2.78	0.45
2:Y:390:GLN:HE22	2:Y:408:SER:H	1.65	0.45
2:X:171:ILE:CG2	2:X:172:SER:N	2.79	0.45
1:D:130:MET:HE2	1:D:188:TRP:CD2	2.52	0.45
2:W:73:GLN:HB3	2:W:500:LEU:HD12	1.99	0.45
2:Z:624:VAL:HG12	2:Z:643:VAL:CB	2.46	0.45
2:Y:153:LYS:O	2:Y:157:VAL:HG22	2.16	0.45
1:D:64:ASP:O	1:D:68:VAL:HG23	2.16	0.45
1:D:110:ASN:HA	1:D:111:PRO:HD3	1.69	0.45
1:A:30:LEU:HB2	1:A:33:GLY:O	2.17	0.45
2:V:626:THR:HB	2:V:641:ASN:ND2	2.32	0.45
2:Z:307:SER:O	2:Z:309:ILE:HG23	2.16	0.45
2:U:407:CYS:O	2:U:451:ASP:HB3	2.15	0.45
2:U:544:VAL:HG13	2:U:545:PRO:HD2	1.99	0.45
2:W:390:GLN:HE22	2:W:408:SER:H	1.64	0.45
2:X:50:LEU:HD12	2:X:51:VAL:N	2.31	0.45
2:Y:614:THR:HB	2:Y:620:ARG:CA	2.41	0.45
2:W:601:ILE:HG22	2:W:602:TYR:N	2.31	0.45
2:V:385:THR:HA	2:V:388:THR:HG23	1.99	0.45
2:X:419:VAL:HA	2:X:422:ALA:CB	2.46	0.45
2:X:624:VAL:HG11	2:X:643:VAL:HG12	1.99	0.45
1:D:114:ILE:HG12	1:D:115:LYS:N	2.31	0.45
2:X:147:THR:O	2:X:151:ILE:HG23	2.17	0.45
2:U:307:SER:O	2:U:309:ILE:HG23	2.16	0.45
2:V:307:SER:O	2:V:309:ILE:HG23	2.16	0.45
1:F:123:PHE:CE1	1:F:187:GLU:HG3	2.52	0.45
2:X:390:GLN:HE22	2:X:408:SER:H	1.65	0.45
2:V:521:ALA:HB3	2:V:540:THR:HA	1.99	0.45
2:Z:50:LEU:HD12	2:Z:51:VAL:N	2.32	0.45
2:U:44:VAL:HG11	2:U:50:LEU:HB3	1.99	0.45
2:X:596:LYS:C	2:X:596:LYS:HD3	2.37	0.45
2:U:385:THR:HA	2:U:388:THR:HG23	1.99	0.45
2:W:27:ALA:HB3	2:W:78:LEU:HD12	1.98	0.45
2:V:27:ALA:HB3	2:V:78:LEU:HD12	1.98	0.45
2:U:419:VAL:HA	2:U:422:ALA:CB	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:X:624:VAL:HG12	2:X:643:VAL:CB	2.46	0.45
2:Y:624:VAL:HG11	2:Y:643:VAL:HG12	1.99	0.45
2:Z:283:VAL:CG2	2:Z:323:ILE:HD13	2.47	0.45
2:Y:453:ASN:N	2:Y:453:ASN:ND2	2.62	0.45
2:X:626:THR:O	2:X:626:THR:HG23	2.17	0.45
2:V:208:VAL:HG23	2:V:209:ASP:N	2.30	0.45
2:U:626:THR:HB	2:U:641:ASN:ND2	2.32	0.45
2:X:211:GLN:OE1	2:X:328:GLN:HG2	2.17	0.45
2:Z:23:SER:OG	2:Z:483:ASN:HB2	2.04	0.44
2:Y:50:LEU:HD12	2:Y:51:VAL:N	2.32	0.44
2:Y:586:THR:HG23	2:Y:587:GLU:N	2.32	0.44
2:U:283:VAL:CG2	2:U:323:ILE:HD13	2.47	0.44
2:X:35:TRP:HB3	2:X:54:PHE:HA	1.98	0.44
2:U:252:LEU:HA	2:U:253:PRO:HD3	1.80	0.44
1:C:152:GLN:HA	1:C:158:PRO:HA	1.98	0.44
2:U:458:TYR:CE2	2:U:460:LYS:HA	2.51	0.44
2:U:364:ASP:N	2:U:364:ASP:OD1	2.50	0.44
2:U:523:ASN:HD21	2:U:538:ASP:HA	1.82	0.44
2:W:517:LEU:C	2:W:522:ILE:HG22	2.38	0.44
2:V:375:ALA:HB3	2:V:406:LEU:O	2.17	0.44
2:V:544:VAL:HG13	2:V:545:PRO:HD2	1.99	0.44
2:Y:514:ARG:HE	2:Y:518:TYR:HE1	1.66	0.44
2:V:171:ILE:CG2	2:V:172:SER:H	2.25	0.44
2:Z:586:THR:HG23	2:Z:587:GLU:N	2.32	0.44
2:W:583:SER:HA	2:W:586:THR:HG22	1.98	0.44
2:W:385:THR:HA	2:W:388:THR:HG23	1.98	0.44
2:V:71:PHE:C	2:V:73:GLN:N	2.70	0.44
2:V:304:ILE:HG13	2:V:305:TYR:HE2	1.82	0.44
2:W:419:VAL:HA	2:W:422:ALA:CB	2.46	0.44
2:X:62:ALA:HB1	2:X:466:ARG:HE	1.82	0.44
1:C:27:LYS:HB2	1:C:36:PHE:HE2	1.82	0.44
2:V:626:THR:O	2:V:626:THR:HG23	2.17	0.44
2:V:458:TYR:CE2	2:V:460:LYS:HA	2.52	0.44
2:Y:626:THR:HB	2:Y:641:ASN:ND2	2.32	0.44
2:W:211:GLN:OE1	2:W:328:GLN:HG2	2.17	0.44
2:Z:211:GLN:OE1	2:Z:328:GLN:HG2	2.16	0.44
2:X:499:ILE:HD13	2:X:499:ILE:N	2.28	0.44
2:V:517:LEU:C	2:V:522:ILE:HG22	2.38	0.44
2:W:586:THR:HG23	2:W:587:GLU:N	2.32	0.44
2:Y:624:VAL:HG12	2:Y:643:VAL:CB	2.47	0.44
2:V:624:VAL:HG11	2:V:643:VAL:HG12	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:147:THR:O	2:V:151:ILE:HG23	2.17	0.44
2:W:626:THR:HB	2:W:641:ASN:ND2	2.33	0.44
2:Z:458:TYR:CE2	2:Z:460:LYS:HA	2.51	0.44
2:W:151:ILE:HG13	2:W:152:ALA:N	2.30	0.44
2:Y:211:GLN:OE1	2:Y:328:GLN:HG2	2.16	0.44
2:Z:536:TYR:HD2	2:Z:538:ASP:H	1.63	0.44
2:Z:627:PHE:CZ	2:Z:640:LEU:CB	2.95	0.44
2:U:375:ALA:HB3	2:U:406:LEU:O	2.18	0.44
2:X:454:TYR:O	2:X:467:TRP:CZ3	2.71	0.44
2:X:544:VAL:CG1	2:X:545:PRO:N	2.78	0.44
2:Y:544:VAL:CG1	2:Y:545:PRO:HD2	2.46	0.44
2:X:583:SER:HA	2:X:586:THR:HG22	1.98	0.44
2:W:304:ILE:HG13	2:W:305:TYR:HE2	1.81	0.44
2:X:73:GLN:HB3	2:X:500:LEU:HD12	1.99	0.44
2:W:100:GLU:HG3	2:W:186:LYS:N	2.32	0.44
2:U:624:VAL:HG12	2:U:643:VAL:CB	2.46	0.44
2:W:624:VAL:HG11	2:W:643:VAL:HG12	1.98	0.44
2:V:222:VAL:HG11	2:V:236:ILE:HG12	2.00	0.44
2:W:153:LYS:O	2:W:157:VAL:HG22	2.17	0.44
2:Y:147:THR:O	2:Y:151:ILE:HG23	2.18	0.44
1:C:29:GLN:OE1	1:D:3:GLY:N	2.51	0.44
2:W:208:VAL:HG23	2:W:209:ASP:N	2.31	0.44
2:U:163:LEU:HB3	2:U:164:GLY:H	1.63	0.44
2:X:208:VAL:HG23	2:X:209:ASP:N	2.31	0.44
2:Y:35:TRP:HB3	2:Y:54:PHE:HA	1.98	0.44
1:F:110:ASN:HA	1:F:111:PRO:HD3	1.69	0.44
2:U:454:TYR:O	2:U:467:TRP:CZ3	2.71	0.44
2:W:454:TYR:O	2:W:467:TRP:CZ3	2.71	0.44
2:V:454:TYR:O	2:V:467:TRP:CZ3	2.71	0.44
2:Y:375:ALA:HB3	2:Y:406:LEU:O	2.17	0.44
2:Y:456:TYR:CE2	2:Y:503:ILE:HD11	2.52	0.44
2:V:50:LEU:HD12	2:V:51:VAL:N	2.32	0.44
2:Z:601:ILE:HG22	2:Z:602:TYR:N	2.31	0.44
2:V:601:ILE:HG22	2:V:602:TYR:N	2.31	0.44
2:W:171:ILE:CG2	2:W:172:SER:N	2.80	0.44
2:W:173:SER:HA	2:W:174:SER:HB3	1.98	0.44
2:Y:171:ILE:CG2	2:Y:172:SER:H	2.26	0.44
2:X:385:THR:HA	2:X:388:THR:HG23	1.98	0.44
2:V:254:ILE:HB	2:V:258:GLY:O	2.18	0.44
2:Z:544:VAL:HG13	2:Z:545:PRO:HD2	1.99	0.44
2:U:536:TYR:HD2	2:U:538:ASP:H	1.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:596:LYS:HD3	2:Z:596:LYS:C	2.37	0.44
2:U:601:ILE:HG22	2:U:602:TYR:N	2.31	0.44
2:X:586:THR:HG23	2:X:587:GLU:N	2.32	0.44
2:V:100:GLU:HG3	2:V:186:LYS:N	2.31	0.44
2:Z:419:VAL:HA	2:Z:422:ALA:CB	2.46	0.44
2:U:453:ASN:ND2	2:U:453:ASN:N	2.62	0.44
2:X:153:LYS:O	2:X:157:VAL:HG22	2.17	0.44
2:W:626:THR:O	2:W:626:THR:HG23	2.17	0.44
2:W:147:THR:O	2:W:151:ILE:HG23	2.18	0.44
2:Z:456:TYR:CE2	2:Z:503:ILE:HD11	2.53	0.44
2:Z:454:TYR:O	2:Z:467:TRP:CZ3	2.71	0.44
2:X:517:LEU:C	2:X:522:ILE:HG22	2.38	0.44
2:Y:454:TYR:O	2:Y:467:TRP:CZ3	2.71	0.44
2:Z:71:PHE:C	2:Z:73:GLN:N	2.69	0.44
1:A:108:GLN:HB3	1:A:199:TYR:HB2	2.00	0.44
2:U:66:MET:HE3	2:U:66:MET:HA	1.98	0.44
2:V:153:LYS:O	2:V:157:VAL:HG22	2.17	0.44
2:U:153:LYS:O	2:U:157:VAL:HG22	2.17	0.44
2:Z:151:ILE:HG13	2:Z:152:ALA:N	2.30	0.44
2:Y:295:LEU:HD11	2:Y:314:PHE:CD2	2.53	0.44
2:W:375:ALA:HB3	2:W:406:LEU:O	2.17	0.44
2:V:379:ALA:HB2	2:V:454:TYR:CE2	2.46	0.44
2:V:586:THR:HG23	2:V:587:GLU:N	2.32	0.44
2:Z:153:LYS:O	2:Z:157:VAL:HG22	2.17	0.44
1:A:26:ILE:HG13	1:A:37:ILE:HG12	2.00	0.44
2:Z:626:THR:HB	2:Z:641:ASN:ND2	2.32	0.44
2:Y:56:GLN:HA	2:Y:57:PRO:HD3	1.80	0.44
2:V:523:ASN:HD21	2:V:538:ASP:HA	1.83	0.44
2:Y:596:LYS:HD3	2:Y:596:LYS:C	2.37	0.44
2:V:173:SER:HA	2:V:174:SER:HB3	1.98	0.44
2:V:419:VAL:HA	2:V:422:ALA:CB	2.46	0.44
2:U:222:VAL:HG11	2:U:236:ILE:HG12	2.00	0.44
1:B:66:ALA:C	1:B:68:VAL:H	2.20	0.44
2:Y:453:ASN:N	2:Y:453:ASN:HD22	2.16	0.44
2:U:626:THR:HG23	2:U:626:THR:O	2.17	0.44
2:Z:626:THR:O	2:Z:626:THR:HG23	2.17	0.44
2:Y:240:SER:HB3	2:Y:279:TYR:CE1	2.53	0.44
1:E:212:THR:HA	1:E:222:ASP:HA	2.00	0.44
2:V:253:PRO:HD2	2:V:336:GLY:HA2	2.00	0.44
1:D:67:LYS:O	1:D:67:LYS:HG2	2.18	0.44
2:Z:517:LEU:C	2:Z:522:ILE:HG22	2.38	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:U:514:ARG:HE	2:U:518:TYR:HE1	1.66	0.43
2:X:521:ALA:HB1	2:X:540:THR:CA	2.46	0.43
2:X:544:VAL:CG1	2:X:545:PRO:HD2	2.47	0.43
2:V:390:GLN:HE22	2:V:408:SER:H	1.66	0.43
1:F:130:MET:HE2	1:F:188:TRP:CD2	2.53	0.43
2:U:304:ILE:HG13	2:U:305:TYR:HE2	1.81	0.43
2:X:100:GLU:HB2	2:X:185:GLY:CA	2.48	0.43
2:Y:62:ALA:HB1	2:Y:466:ARG:HE	1.83	0.43
2:X:253:PRO:HD2	2:X:336:GLY:HA2	2.00	0.43
2:Y:253:PRO:HD2	2:Y:336:GLY:HA2	2.00	0.43
2:X:74:TYR:OH	2:X:473:ASP:OD2	2.35	0.43
2:W:240:SER:HB3	2:W:279:TYR:CE1	2.53	0.43
2:V:517:LEU:HB2	2:V:522:ILE:HG23	1.95	0.43
2:Y:544:VAL:HG13	2:Y:545:PRO:HD2	1.99	0.43
2:U:173:SER:HA	2:U:174:SER:HB3	1.98	0.43
2:V:382:SER:CB	2:V:385:THR:HG22	2.42	0.43
1:F:124:THR:HG23	1:F:126:TYR:N	2.33	0.43
2:X:643:VAL:O	2:X:643:VAL:HG23	2.19	0.43
2:U:453:ASN:HD22	2:U:453:ASN:N	2.16	0.43
2:Z:253:PRO:HD2	2:Z:336:GLY:HA2	2.00	0.43
2:Y:626:THR:O	2:Y:626:THR:HG23	2.17	0.43
1:C:212:THR:HA	1:C:222:ASP:HA	2.00	0.43
2:X:502:VAL:CG1	2:X:504:LYS:H	2.31	0.43
2:X:526:THR:CG2	2:X:535:LEU:CD2	2.95	0.43
2:V:44:VAL:HG11	2:V:50:LEU:HB3	1.99	0.43
2:U:586:THR:HG23	2:U:587:GLU:N	2.32	0.43
2:U:100:GLU:HB2	2:U:185:GLY:CA	2.48	0.43
2:Z:624:VAL:HG11	2:Z:643:VAL:HG12	1.99	0.43
2:U:90:LYS:N	2:U:344:LEU:O	2.48	0.43
2:Z:254:ILE:HB	2:Z:258:GLY:O	2.19	0.43
2:U:253:PRO:HD2	2:U:336:GLY:HA2	2.00	0.43
1:C:106:VAL:HG12	1:C:107:SER:H	1.82	0.43
2:U:295:LEU:HD11	2:U:314:PHE:CD2	2.53	0.43
2:V:240:SER:HB3	2:V:279:TYR:CE1	2.53	0.43
2:V:48:VAL:O	2:V:48:VAL:HG12	2.18	0.43
2:W:364:ASP:OD1	2:W:364:ASP:N	2.51	0.43
2:X:364:ASP:N	2:X:364:ASP:OD1	2.50	0.43
2:X:48:VAL:HG12	2:X:48:VAL:O	2.18	0.43
2:U:48:VAL:O	2:U:48:VAL:HG12	2.19	0.43
2:U:517:LEU:C	2:U:522:ILE:HG22	2.38	0.43
2:W:502:VAL:CG1	2:W:504:LYS:H	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:W:521:ALA:HB3	2:W:540:THR:HA	1.99	0.43
2:V:517:LEU:HD13	2:V:524:PRO:CG	2.46	0.43
2:Y:517:LEU:HD13	2:Y:524:PRO:CG	2.45	0.43
2:Y:517:LEU:C	2:Y:522:ILE:HG22	2.38	0.43
2:Y:521:ALA:HB3	2:Y:540:THR:HA	2.00	0.43
1:D:157:ILE:HB	2:X:579:PHE:CG	2.54	0.43
2:Z:44:VAL:HG11	2:Z:50:LEU:HB3	2.00	0.43
2:Z:304:ILE:HG13	2:Z:305:TYR:HE2	1.81	0.43
2:V:100:GLU:HB2	2:V:185:GLY:CA	2.48	0.43
2:W:222:VAL:HG11	2:W:236:ILE:HG12	2.00	0.43
2:Z:222:VAL:HG11	2:Z:236:ILE:HG12	2.00	0.43
2:V:511:GLN:HE21	2:V:511:GLN:CA	2.30	0.43
2:X:240:SER:HB3	2:X:279:TYR:CE1	2.53	0.43
1:B:56:TRP:HB3	1:B:71:ILE:HD13	2.00	0.43
2:Z:375:ALA:HB3	2:Z:406:LEU:O	2.17	0.43
2:Z:526:THR:HG21	2:Z:535:LEU:HD11	1.97	0.43
2:U:377:SER:HA	2:U:469:PRO:HG3	2.00	0.43
2:U:502:VAL:CG1	2:U:504:LYS:H	2.31	0.43
2:U:514:ARG:NH2	2:U:535:LEU:HD22	2.33	0.43
2:X:375:ALA:HB3	2:X:406:LEU:O	2.17	0.43
2:X:561:LYS:CB	2:X:640:LEU:HD21	2.47	0.43
2:W:526:THR:HG21	2:W:535:LEU:HD11	1.97	0.43
2:V:526:THR:CG2	2:V:535:LEU:CD2	2.94	0.43
2:W:50:LEU:HD12	2:W:51:VAL:N	2.32	0.43
2:X:254:ILE:HB	2:X:258:GLY:O	2.18	0.43
1:E:127:GLU:HG2	1:E:131:PHE:CZ	2.54	0.43
2:V:438:ASP:N	2:V:438:ASP:OD2	2.47	0.43
2:Z:502:VAL:CG1	2:Z:504:LYS:H	2.31	0.43
2:Z:547:PRO:C	2:Z:553:VAL:CG2	2.83	0.43
2:W:521:ALA:HB1	2:W:540:THR:CA	2.46	0.43
2:Y:171:ILE:CG2	2:Y:172:SER:N	2.79	0.43
2:Z:581:ARG:HA	2:Z:623:PHE:CE2	2.53	0.43
2:V:581:ARG:HB2	2:V:623:PHE:HZ	1.82	0.43
2:X:67:SER:OG	2:X:472:ALA:HB2	2.19	0.43
2:Z:62:ALA:HB1	2:Z:466:ARG:HE	1.83	0.43
1:B:114:ILE:HG12	1:B:115:LYS:N	2.33	0.43
2:U:240:SER:HB3	2:U:279:TYR:CE1	2.53	0.43
2:W:523:ASN:HD21	2:W:538:ASP:HA	1.82	0.43
2:V:502:VAL:CG1	2:V:504:LYS:H	2.31	0.43
2:V:514:ARG:NH2	2:V:535:LEU:HD22	2.33	0.43
1:B:108:GLN:CB	1:B:199:TYR:HB2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:U:581:ARG:HB2	2:U:623:PHE:HZ	1.83	0.43
2:Z:100:GLU:HB2	2:Z:185:GLY:CA	2.48	0.43
2:W:423:VAL:HG21	2:W:513:GLN:NE2	2.34	0.43
2:X:222:VAL:HG11	2:X:236:ILE:HG12	2.00	0.43
1:C:56:TRP:HB3	1:C:71:ILE:HD13	2.01	0.43
1:A:168:MET:HB2	1:A:191:THR:HG22	2.01	0.43
2:W:48:VAL:O	2:W:48:VAL:HG12	2.19	0.43
1:D:30:LEU:HB2	1:D:33:GLY:O	2.18	0.43
2:Z:377:SER:HA	2:Z:469:PRO:HG3	2.00	0.43
2:X:407:CYS:O	2:X:451:ASP:HB3	2.15	0.43
2:W:499:ILE:HD13	2:W:499:ILE:N	2.28	0.43
2:W:44:VAL:HG11	2:W:50:LEU:HB3	1.99	0.43
2:Z:89:ALA:HB3	2:Z:194:LEU:CD1	2.49	0.43
2:Y:581:ARG:HA	2:Y:623:PHE:CE2	2.54	0.43
2:Y:100:GLU:HB2	2:Y:185:GLY:CA	2.49	0.43
1:B:124:THR:HG23	1:B:126:TYR:H	1.84	0.43
1:B:124:THR:CG2	1:B:130:MET:HG2	2.46	0.43
2:W:254:ILE:HB	2:W:258:GLY:O	2.19	0.43
2:Z:147:THR:O	2:Z:151:ILE:HG23	2.18	0.43
2:V:364:ASP:OD1	2:V:364:ASP:N	2.50	0.43
2:W:502:VAL:CG1	2:W:503:ILE:N	2.82	0.43
2:W:544:VAL:HG13	2:W:545:PRO:HD2	2.00	0.43
2:V:526:THR:HG21	2:V:535:LEU:HD11	1.97	0.43
2:V:576:ASN:CA	2:V:580:THR:HG21	2.49	0.43
2:X:581:ARG:HB2	2:X:623:PHE:HZ	1.83	0.43
2:V:643:VAL:HG23	2:V:643:VAL:O	2.19	0.43
2:Y:254:ILE:HB	2:Y:258:GLY:O	2.18	0.43
2:V:295:LEU:HD11	2:V:314:PHE:CD2	2.54	0.43
2:Y:312:ASP:O	2:Y:316:ALA:HB2	2.19	0.43
2:Y:377:SER:HA	2:Y:469:PRO:HG3	2.00	0.43
2:V:577:ASN:N	2:V:580:THR:CG2	2.82	0.43
2:X:577:ASN:N	2:X:580:THR:CG2	2.82	0.43
2:U:577:ASN:N	2:U:580:THR:CG2	2.82	0.43
2:Z:602:TYR:CD2	2:Z:603:GLU:N	2.87	0.43
2:U:89:ALA:HB3	2:U:194:LEU:CD1	2.49	0.43
2:Y:89:ALA:HB3	2:Y:194:LEU:CD1	2.49	0.43
2:V:89:ALA:HB3	2:V:194:LEU:CD1	2.49	0.43
2:W:581:ARG:HB2	2:W:623:PHE:HZ	1.83	0.43
2:Y:215:LYS:HE3	2:Y:329:ASN:OD1	2.19	0.43
2:U:581:ARG:HA	2:U:623:PHE:CE2	2.53	0.43
2:W:97:GLY:O	2:W:98:ASN:O	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:97:GLY:O	2:V:98:ASN:O	2.37	0.43
1:B:223:LEU:HA	1:B:224:PRO:HD3	1.84	0.43
2:Z:312:ASP:O	2:Z:316:ALA:HB2	2.19	0.43
2:V:34:GLN:OE1	2:V:230:LEU:HD11	2.19	0.43
2:X:295:LEU:HD11	2:X:314:PHE:CD2	2.54	0.43
2:Z:478:CYS:C	2:Z:480:ARG:N	2.73	0.43
2:U:34:GLN:OE1	2:U:230:LEU:HD11	2.19	0.43
2:Z:48:VAL:O	2:Z:48:VAL:HG12	2.19	0.43
2:Z:407:CYS:O	2:Z:451:ASP:HB3	2.14	0.42
2:X:514:ARG:HE	2:X:518:TYR:HE1	1.67	0.42
2:X:539:LYS:HE2	2:X:541:ALA:CA	2.41	0.42
2:Y:576:ASN:CA	2:Y:580:THR:HG21	2.48	0.42
2:X:24:THR:O	2:X:26:THR:N	2.52	0.42
2:V:24:THR:O	2:V:26:THR:N	2.52	0.42
2:W:24:THR:O	2:W:26:THR:N	2.52	0.42
2:X:89:ALA:HB3	2:X:194:LEU:CD1	2.49	0.42
2:U:602:TYR:CD2	2:U:603:GLU:N	2.87	0.42
2:W:171:ILE:CG2	2:W:172:SER:H	2.26	0.42
2:U:215:LYS:HE3	2:U:329:ASN:OD1	2.19	0.42
1:F:109:TYR:OH	1:F:202:VAL:HG21	2.19	0.42
2:W:100:GLU:HB2	2:W:185:GLY:CA	2.49	0.42
2:Z:423:VAL:HG21	2:Z:513:GLN:NE2	2.34	0.42
2:Z:453:ASN:HD22	2:Z:453:ASN:N	2.15	0.42
2:V:62:ALA:HB1	2:V:466:ARG:HE	1.83	0.42
2:W:62:ALA:HB1	2:W:466:ARG:HE	1.83	0.42
2:U:147:THR:O	2:U:151:ILE:HG23	2.18	0.42
1:C:223:LEU:HA	1:C:224:PRO:HD3	1.80	0.42
2:Z:34:GLN:OE1	2:Z:230:LEU:HD11	2.19	0.42
1:F:149:MET:HG3	1:F:212:THR:O	2.18	0.42
2:Z:295:LEU:HD11	2:Z:314:PHE:CD2	2.54	0.42
2:W:539:LYS:HE2	2:W:541:ALA:CA	2.42	0.42
2:Y:44:VAL:HG11	2:Y:50:LEU:HB3	1.99	0.42
2:X:44:VAL:HG11	2:X:50:LEU:HB3	1.99	0.42
2:W:621:ASN:HA	2:W:621:ASN:HD22	1.63	0.42
2:U:178:LEU:HD23	2:U:178:LEU:N	2.22	0.42
2:X:576:ASN:CA	2:X:580:THR:HG21	2.49	0.42
2:Y:77:ASP:O	2:Y:77:ASP:OD1	2.38	0.42
2:W:602:TYR:CD2	2:W:603:GLU:N	2.87	0.42
2:U:68:ALA:O	2:U:69:MET:C	2.58	0.42
2:V:68:ALA:O	2:V:69:MET:C	2.58	0.42
2:X:581:ARG:HA	2:X:623:PHE:CE2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:U:97:GLY:O	2:U:98:ASN:O	2.37	0.42
2:X:90:LYS:N	2:X:344:LEU:O	2.48	0.42
2:U:254:ILE:HB	2:U:258:GLY:O	2.18	0.42
1:D:66:ALA:C	1:D:68:VAL:H	2.22	0.42
2:Z:240:SER:HB3	2:Z:279:TYR:CE1	2.53	0.42
2:W:253:PRO:HD2	2:W:336:GLY:HA2	2.00	0.42
2:W:252:LEU:HA	2:W:253:PRO:HD3	1.80	0.42
2:X:312:ASP:O	2:X:316:ALA:HB2	2.19	0.42
2:Z:364:ASP:N	2:Z:364:ASP:OD1	2.51	0.42
2:Z:502:VAL:CG1	2:Z:503:ILE:N	2.83	0.42
2:Z:514:ARG:HE	2:Z:518:TYR:HE1	1.66	0.42
2:Z:523:ASN:HD21	2:Z:538:ASP:HA	1.83	0.42
2:U:502:VAL:CG1	2:U:503:ILE:N	2.82	0.42
2:U:514:ARG:HA	2:U:517:LEU:CG	2.49	0.42
2:U:556:LEU:HD13	2:U:631:PRO:HA	2.01	0.42
2:X:409:PRO:HG2	2:X:454:TYR:CE1	2.54	0.42
2:Y:502:VAL:CG1	2:Y:504:LYS:H	2.31	0.42
2:Y:514:ARG:HA	2:Y:517:LEU:CD2	2.50	0.42
2:W:570:TYR:CD2	2:W:584:PHE:CE2	2.95	0.42
2:U:576:ASN:CA	2:U:580:THR:HG21	2.49	0.42
2:Z:24:THR:O	2:Z:26:THR:N	2.52	0.42
2:Z:77:ASP:O	2:Z:77:ASP:OD1	2.37	0.42
2:V:602:TYR:CD2	2:V:603:GLU:N	2.87	0.42
2:W:215:LYS:HE3	2:W:329:ASN:OD1	2.18	0.42
2:W:67:SER:OG	2:W:472:ALA:HB2	2.19	0.42
2:Y:222:VAL:HG11	2:Y:236:ILE:HG12	2.00	0.42
1:C:66:ALA:C	1:C:68:VAL:H	2.23	0.42
1:C:123:PHE:CE1	1:C:187:GLU:HG3	2.54	0.42
2:W:295:LEU:HD11	2:W:314:PHE:CD2	2.54	0.42
1:C:38:ARG:O	1:C:40:PRO:HD3	2.20	0.42
2:U:627:PHE:CZ	2:U:640:LEU:CB	2.95	0.42
2:W:514:ARG:HE	2:W:518:TYR:HE1	1.67	0.42
2:W:514:ARG:NH2	2:W:535:LEU:HD22	2.33	0.42
2:V:496:ARG:O	2:V:496:ARG:CG	2.59	0.42
2:W:576:ASN:CA	2:W:580:THR:HG21	2.49	0.42
2:Z:577:ASN:N	2:Z:580:THR:CG2	2.83	0.42
2:Z:371:GLN:O	2:Z:403:CYS:HA	2.19	0.42
2:W:581:ARG:HA	2:W:623:PHE:CE2	2.54	0.42
2:Y:643:VAL:O	2:Y:643:VAL:HG23	2.18	0.42
2:W:643:VAL:O	2:W:643:VAL:HG23	2.19	0.42
2:W:588:THR:CG2	2:W:589:ALA:N	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:588:THR:CG2	2:Z:589:ALA:N	2.82	0.42
2:X:34:GLN:OE1	2:X:230:LEU:HD11	2.19	0.42
2:Y:48:VAL:O	2:Y:48:VAL:HG12	2.19	0.42
2:Z:539:LYS:HE2	2:Z:541:ALA:CA	2.43	0.42
2:Z:555:ARG:O	2:Z:559:MET:HG3	2.19	0.42
2:V:526:THR:CG2	2:V:535:LEU:CD1	2.95	0.42
2:V:562:THR:CG2	2:V:563:ASN:N	2.82	0.42
2:Y:407:CYS:O	2:Y:451:ASP:HB3	2.14	0.42
2:X:391:LYS:CE	2:X:440:ASN:ND2	2.83	0.42
2:W:577:ASN:N	2:W:580:THR:CG2	2.82	0.42
2:X:575:LEU:CD1	2:X:575:LEU:N	2.83	0.42
2:Y:618:ILE:CG2	2:Y:619:ASP:N	2.83	0.42
2:X:77:ASP:O	2:X:77:ASP:OD1	2.38	0.42
2:Y:24:THR:O	2:Y:26:THR:N	2.53	0.42
2:Y:602:TYR:CD2	2:Y:603:GLU:N	2.87	0.42
2:W:89:ALA:HB3	2:W:194:LEU:CD1	2.49	0.42
2:X:215:LYS:HE3	2:X:329:ASN:OD1	2.19	0.42
2:Z:67:SER:OG	2:Z:472:ALA:HB2	2.19	0.42
2:X:97:GLY:O	2:X:98:ASN:O	2.37	0.42
2:X:624:VAL:CB	2:X:643:VAL:HG12	2.50	0.42
2:Z:643:VAL:O	2:Z:643:VAL:HG23	2.19	0.42
2:U:62:ALA:HB1	2:U:466:ARG:HE	1.83	0.42
2:U:312:ASP:O	2:U:316:ALA:HB2	2.20	0.42
1:E:110:ASN:HA	1:E:111:PRO:HD3	1.73	0.42
1:F:7:ASN:HB3	1:F:209:ILE:HD12	2.01	0.42
1:F:28:ARG:HD3	1:F:28:ARG:HA	1.90	0.42
1:C:28:ARG:HA	1:C:28:ARG:HD3	1.85	0.42
2:U:370:VAL:O	2:U:370:VAL:HG23	2.20	0.42
2:Z:562:THR:CG2	2:Z:563:ASN:N	2.82	0.42
2:Y:627:PHE:CZ	2:Y:640:LEU:CB	2.95	0.42
2:V:556:LEU:HD23	2:V:556:LEU:O	2.20	0.42
2:X:618:ILE:CG2	2:X:619:ASP:N	2.83	0.42
2:U:171:ILE:CG2	2:U:172:SER:H	2.25	0.42
2:V:215:LYS:HE3	2:V:329:ASN:OD1	2.18	0.42
1:B:12:ARG:NH2	1:B:199:TYR:OH	2.52	0.42
2:U:624:VAL:CB	2:U:643:VAL:HG12	2.50	0.42
2:U:643:VAL:HG23	2:U:643:VAL:O	2.19	0.42
2:V:423:VAL:HG21	2:V:513:GLN:NE2	2.34	0.42
2:X:46:ASN:HB2	2:X:49:ASP:CB	2.50	0.42
2:Z:236:ILE:HD11	2:Z:340:LEU:HD11	2.01	0.42
2:V:588:THR:CG2	2:V:589:ALA:N	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:W:511:GLN:HE21	2:W:511:GLN:CA	2.30	0.42
2:W:453:ASN:N	2:W:453:ASN:HD22	2.16	0.42
2:V:252:LEU:HA	2:V:253:PRO:HD3	1.80	0.42
2:Z:627:PHE:HZ	2:Z:640:LEU:CD2	2.29	0.42
2:Z:561:LYS:CB	2:Z:640:LEU:HD21	2.47	0.42
2:Y:562:THR:CG2	2:Y:563:ASN:N	2.82	0.42
2:Y:561:LYS:CB	2:Y:640:LEU:HD21	2.47	0.42
2:U:538:ASP:HB2	2:U:539:LYS:H	1.43	0.42
2:U:562:THR:CG2	2:U:563:ASN:N	2.82	0.42
2:W:514:ARG:HA	2:W:517:LEU:CD2	2.50	0.42
2:V:377:SER:HA	2:V:469:PRO:HG3	2.01	0.42
2:V:502:VAL:CG1	2:V:503:ILE:N	2.82	0.42
2:Y:514:ARG:HA	2:Y:517:LEU:CG	2.49	0.42
2:Y:577:ASN:N	2:Y:580:THR:CG2	2.82	0.42
2:X:371:GLN:O	2:X:403:CYS:HA	2.19	0.42
2:W:371:GLN:O	2:W:403:CYS:HA	2.19	0.42
2:X:423:VAL:HG21	2:X:513:GLN:NE2	2.35	0.42
2:Y:624:VAL:CB	2:Y:643:VAL:HG12	2.50	0.42
2:X:588:THR:CG2	2:X:589:ALA:N	2.82	0.42
2:W:312:ASP:O	2:W:316:ALA:HB2	2.19	0.42
2:U:56:GLN:HA	2:U:57:PRO:HD3	1.80	0.42
2:Z:521:ALA:HB3	2:Z:540:THR:HA	1.99	0.42
2:U:24:THR:O	2:U:26:THR:N	2.52	0.42
2:X:502:VAL:CG1	2:X:503:ILE:N	2.83	0.42
2:X:514:ARG:HA	2:X:517:LEU:CG	2.49	0.42
2:X:537:GLY:O	2:X:538:ASP:CB	2.68	0.42
2:W:408:SER:OG	2:W:409:PRO:HD2	2.20	0.42
2:W:409:PRO:HG2	2:W:454:TYR:CE1	2.55	0.42
2:W:496:ARG:CG	2:W:496:ARG:O	2.59	0.42
2:X:171:ILE:CG2	2:X:172:SER:H	2.25	0.42
2:Z:68:ALA:O	2:Z:69:MET:C	2.58	0.42
2:W:68:ALA:O	2:W:69:MET:C	2.58	0.42
2:X:236:ILE:HD11	2:X:340:LEU:HD11	2.01	0.42
2:V:312:ASP:O	2:V:316:ALA:HB2	2.20	0.42
2:Y:478:CYS:C	2:Y:480:ARG:N	2.73	0.42
2:U:438:ASP:OD2	2:U:438:ASP:N	2.48	0.42
2:Z:197:GLU:CD	2:Z:197:GLU:H	2.23	0.42
2:Z:514:ARG:HA	2:Z:517:LEU:CD2	2.50	0.42
2:Y:555:ARG:O	2:Y:559:MET:HG3	2.19	0.42
2:Y:627:PHE:HZ	2:Y:640:LEU:CD2	2.30	0.42
2:U:629:ILE:CG2	2:U:630:GLN:N	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:556:LEU:HD13	2:V:631:PRO:HA	2.02	0.42
2:W:618:ILE:CG2	2:W:619:ASP:N	2.83	0.42
1:A:109:TYR:OH	1:A:202:VAL:HG21	2.20	0.42
2:Z:618:ILE:CG2	2:Z:619:ASP:N	2.83	0.42
1:B:108:GLN:HB3	1:B:199:TYR:HB2	2.02	0.42
2:V:581:ARG:HA	2:V:623:PHE:CE2	2.54	0.42
2:X:213:ASN:N	2:X:213:ASN:ND2	2.67	0.42
2:W:236:ILE:HD11	2:W:340:LEU:HD11	2.01	0.42
2:U:236:ILE:HD11	2:U:340:LEU:HD11	2.02	0.42
2:W:624:VAL:CB	2:W:643:VAL:HG12	2.50	0.42
2:X:460:LYS:HE3	2:X:460:LYS:HB3	1.82	0.42
2:W:34:GLN:OE1	2:W:230:LEU:HD11	2.19	0.42
2:W:56:GLN:HA	2:W:57:PRO:HD3	1.81	0.42
2:Y:364:ASP:OD1	2:Y:364:ASP:N	2.51	0.42
2:U:197:GLU:H	2:U:197:GLU:CD	2.22	0.42
2:U:371:GLN:O	2:U:403:CYS:HA	2.20	0.42
2:X:377:SER:HA	2:X:469:PRO:HG3	2.00	0.42
2:X:562:THR:CG2	2:X:563:ASN:N	2.82	0.42
2:V:404:LEU:HA	2:V:554:ARG:HH22	1.85	0.42
2:V:537:GLY:O	2:V:538:ASP:CB	2.68	0.42
2:X:496:ARG:O	2:X:496:ARG:CG	2.60	0.42
2:Y:371:GLN:O	2:Y:403:CYS:HA	2.19	0.42
2:X:602:TYR:CD2	2:X:603:GLU:N	2.88	0.42
2:Y:304:ILE:HG13	2:Y:305:TYR:HE2	1.82	0.42
2:Y:97:GLY:O	2:Y:98:ASN:O	2.37	0.42
2:Z:423:VAL:O	2:Z:424:ASP:C	2.58	0.42
2:W:46:ASN:HB2	2:W:49:ASP:CB	2.50	0.42
2:Z:624:VAL:CB	2:Z:643:VAL:HG12	2.49	0.42
2:Y:588:THR:CG2	2:Y:589:ALA:N	2.82	0.42
1:E:222:ASP:OD1	1:E:222:ASP:N	2.53	0.42
2:Z:370:VAL:HG23	2:Z:370:VAL:O	2.20	0.42
2:Z:404:LEU:HA	2:Z:554:ARG:HH22	1.85	0.41
2:X:23:SER:HB2	2:X:559:MET:SD	2.59	0.41
2:W:526:THR:CG2	2:W:535:LEU:CD1	2.95	0.41
2:Y:502:VAL:CG1	2:Y:503:ILE:N	2.82	0.41
2:Z:581:ARG:HB2	2:Z:623:PHE:HZ	1.84	0.41
2:Y:67:SER:OG	2:Y:472:ALA:HB2	2.20	0.41
2:V:624:VAL:CB	2:V:643:VAL:HG12	2.50	0.41
2:U:200:ASN:O	2:U:201:ALA:C	2.58	0.41
1:A:222:ASP:N	1:A:222:ASP:OD1	2.53	0.41
2:V:61:THR:O	2:V:62:ALA:C	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:119:LYS:HE3	2:Z:124:ASP:OD1	2.20	0.41
2:Y:370:VAL:HG23	2:Y:370:VAL:O	2.20	0.41
1:B:28:ARG:HA	1:B:28:ARG:HD3	1.96	0.41
2:Z:499:ILE:CD1	2:Z:499:ILE:H	2.25	0.41
2:Z:554:ARG:HG2	2:Z:558:ASN:OD1	2.20	0.41
2:Y:627:PHE:CE1	2:Y:640:LEU:HB3	2.55	0.41
2:U:555:ARG:O	2:U:559:MET:HG3	2.20	0.41
2:U:558:ASN:O	2:U:561:LYS:HG2	2.20	0.41
2:U:561:LYS:CB	2:U:640:LEU:HD21	2.47	0.41
2:U:77:ASP:OD1	2:U:77:ASP:O	2.38	0.41
2:X:514:ARG:NH2	2:X:535:LEU:HD22	2.33	0.41
2:W:377:SER:HA	2:W:469:PRO:HG3	2.00	0.41
2:W:562:THR:CG2	2:W:563:ASN:N	2.82	0.41
2:V:514:ARG:HA	2:V:517:LEU:CD2	2.50	0.41
2:Y:50:LEU:HD11	2:Y:65:PHE:CE1	2.56	0.41
2:V:77:ASP:O	2:V:77:ASP:OD1	2.37	0.41
2:W:77:ASP:OD1	2:W:77:ASP:O	2.38	0.41
2:Z:100:GLU:HG3	2:Z:186:LYS:N	2.32	0.41
2:V:213:ASN:N	2:V:213:ASN:ND2	2.67	0.41
2:Z:97:GLY:O	2:Z:98:ASN:O	2.37	0.41
2:Y:46:ASN:HB2	2:Y:49:ASP:CB	2.50	0.41
2:X:90:LYS:HA	2:X:90:LYS:HD3	1.93	0.41
2:V:90:LYS:N	2:V:344:LEU:O	2.48	0.41
2:Z:200:ASN:O	2:Z:201:ALA:C	2.58	0.41
1:C:108:GLN:HB3	1:C:199:TYR:HB2	2.03	0.41
2:U:588:THR:CG2	2:U:589:ALA:N	2.82	0.41
2:U:74:TYR:OH	2:U:473:ASP:OD2	2.35	0.41
2:V:370:VAL:HG23	2:V:370:VAL:O	2.20	0.41
2:Z:537:GLY:O	2:Z:538:ASP:CB	2.69	0.41
2:U:514:ARG:HA	2:U:517:LEU:CD2	2.51	0.41
2:U:521:ALA:HB1	2:U:540:THR:CA	2.46	0.41
2:X:544:VAL:HG13	2:X:545:PRO:HD2	2.01	0.41
2:X:558:ASN:O	2:X:561:LYS:HG2	2.21	0.41
2:W:557:PHE:CE2	2:W:631:PRO:CG	3.03	0.41
2:X:50:LEU:HD11	2:X:65:PHE:CE1	2.55	0.41
2:U:50:LEU:HD11	2:U:65:PHE:CE1	2.55	0.41
2:W:391:LYS:CE	2:W:440:ASN:ND2	2.83	0.41
2:V:618:ILE:CG2	2:V:619:ASP:N	2.83	0.41
2:Y:590:GLN:HE21	2:Y:590:GLN:HB3	1.66	0.41
2:Z:215:LYS:HE3	2:Z:329:ASN:OD1	2.19	0.41
1:A:108:GLN:CB	1:A:199:TYR:HB2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:64:ASP:O	1:E:68:VAL:HG23	2.20	0.41
2:Z:46:ASN:HB2	2:Z:49:ASP:CB	2.50	0.41
2:Z:90:LYS:HA	2:Z:90:LYS:HD3	1.92	0.41
2:U:67:SER:OG	2:U:472:ALA:HB2	2.19	0.41
1:F:167:LEU:HD11	1:F:190:LEU:HD12	2.02	0.41
1:E:28:ARG:HD3	1:E:28:ARG:HA	1.89	0.41
2:X:197:GLU:H	2:X:197:GLU:CD	2.23	0.41
2:X:627:PHE:CD1	2:X:627:PHE:C	2.94	0.41
2:V:627:PHE:CE1	2:V:640:LEU:HB3	2.54	0.41
2:V:561:LYS:CB	2:V:640:LEU:HD21	2.46	0.41
2:Y:406:LEU:HA	2:Y:449:ALA:O	2.20	0.41
2:Y:391:LYS:CE	2:Y:440:ASN:ND2	2.84	0.41
2:W:213:ASN:N	2:W:213:ASN:ND2	2.67	0.41
2:U:423:VAL:HG21	2:U:513:GLN:NE2	2.34	0.41
2:Y:150:ILE:HG12	2:Y:150:ILE:H	1.63	0.41
2:X:290:VAL:HG11	2:X:322:TYR:CE1	2.56	0.41
2:V:56:GLN:HA	2:V:57:PRO:HD3	1.80	0.41
2:Z:498:GLN:HG3	2:Z:533:TYR:HA	2.02	0.41
1:A:157:ILE:N	2:U:579:PHE:CE1	2.86	0.41
2:Z:409:PRO:HG2	2:Z:454:TYR:CE1	2.55	0.41
2:Y:627:PHE:C	2:Y:627:PHE:CD1	2.94	0.41
2:U:403:CYS:HB2	2:U:404:LEU:H	1.77	0.41
2:X:406:LEU:HA	2:X:449:ALA:O	2.21	0.41
2:X:408:SER:OG	2:X:409:PRO:HD2	2.21	0.41
2:X:627:PHE:CZ	2:X:640:LEU:CB	2.95	0.41
2:V:23:SER:OG	2:V:483:ASN:CA	2.69	0.41
2:V:555:ARG:O	2:V:559:MET:HG3	2.19	0.41
2:U:427:VAL:O	2:U:431:THR:CG2	2.68	0.41
2:U:618:ILE:CG2	2:U:619:ASP:N	2.83	0.41
2:X:68:ALA:O	2:X:69:MET:C	2.58	0.41
2:Y:160:TYR:HA	2:Y:161:PRO:HA	1.82	0.41
2:Z:150:ILE:H	2:Z:150:ILE:HG12	1.63	0.41
1:B:222:ASP:OD1	1:B:222:ASP:N	2.53	0.41
2:Z:61:THR:O	2:Z:62:ALA:C	2.59	0.41
2:X:56:GLN:HA	2:X:57:PRO:HD3	1.81	0.41
2:Z:556:LEU:O	2:Z:556:LEU:HD23	2.20	0.41
2:W:538:ASP:HB2	2:W:539:LYS:H	1.42	0.41
2:W:555:ARG:O	2:W:559:MET:HG3	2.20	0.41
2:V:406:LEU:HA	2:V:449:ALA:O	2.20	0.41
2:V:408:SER:OG	2:V:409:PRO:HD2	2.21	0.41
2:V:409:PRO:HG2	2:V:454:TYR:CE1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:427:VAL:HG21	2:V:516:ARG:NH2	2.36	0.41
2:Y:427:VAL:O	2:Y:431:THR:CG2	2.68	0.41
1:F:156:ASP:HB3	2:Z:579:PHE:CD1	2.54	0.41
2:V:391:LYS:CE	2:V:440:ASN:ND2	2.84	0.41
2:V:371:GLN:O	2:V:403:CYS:HA	2.19	0.41
2:X:381:GLU:O	2:X:382:SER:C	2.59	0.41
2:Z:583:SER:C	2:Z:586:THR:HG22	2.41	0.41
1:E:108:GLN:HB3	1:E:199:TYR:HB2	2.03	0.41
2:Y:236:ILE:HD11	2:Y:340:LEU:HD11	2.01	0.41
2:Y:252:LEU:HA	2:Y:253:PRO:HD3	1.81	0.41
2:W:478:CYS:C	2:W:480:ARG:N	2.72	0.41
2:W:498:GLN:HG3	2:W:533:TYR:HA	2.02	0.41
2:W:370:VAL:HG23	2:W:370:VAL:O	2.20	0.41
2:X:370:VAL:O	2:X:370:VAL:HG23	2.20	0.41
2:Z:629:ILE:CG2	2:Z:630:GLN:N	2.83	0.41
2:Y:404:LEU:HA	2:Y:554:ARG:HH22	1.85	0.41
2:Y:556:LEU:HD23	2:Y:556:LEU:O	2.21	0.41
2:U:517:LEU:HD13	2:U:524:PRO:CG	2.46	0.41
2:U:537:GLY:O	2:U:538:ASP:CB	2.68	0.41
2:X:556:LEU:HD23	2:X:556:LEU:O	2.20	0.41
2:X:629:ILE:CG2	2:X:630:GLN:N	2.83	0.41
2:W:514:ARG:HA	2:W:517:LEU:CG	2.49	0.41
2:W:556:LEU:O	2:W:556:LEU:HD23	2.20	0.41
2:W:554:ARG:HG2	2:W:558:ASN:OD1	2.21	0.41
2:V:554:ARG:HG2	2:V:558:ASN:OD1	2.20	0.41
2:Y:499:ILE:CD1	2:Y:499:ILE:H	2.25	0.41
2:V:50:LEU:HD11	2:V:65:PHE:CE1	2.55	0.41
2:Y:581:ARG:HB2	2:Y:623:PHE:HZ	1.82	0.41
2:W:160:TYR:HA	2:W:161:PRO:HA	1.82	0.41
2:V:100:GLU:HB2	2:V:185:GLY:HA3	2.03	0.41
2:Y:423:VAL:HG21	2:Y:513:GLN:NE2	2.35	0.41
2:V:236:ILE:HD11	2:V:340:LEU:HD11	2.02	0.41
2:V:67:SER:OG	2:V:472:ALA:HB2	2.20	0.41
2:X:200:ASN:O	2:X:201:ALA:C	2.59	0.41
2:W:61:THR:O	2:W:62:ALA:C	2.59	0.41
2:Y:34:GLN:OE1	2:Y:230:LEU:HD11	2.19	0.41
2:U:308:ASN:HD21	2:U:313:ASP:CB	2.34	0.41
2:W:197:GLU:H	2:W:197:GLU:CD	2.23	0.41
2:Y:197:GLU:H	2:Y:197:GLU:CD	2.23	0.41
2:Z:23:SER:OG	2:Z:483:ASN:CA	2.69	0.41
2:Z:409:PRO:C	2:Z:454:TYR:CE1	2.71	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:557:PHE:CE2	2:Z:631:PRO:CG	3.03	0.41
2:U:408:SER:OG	2:U:409:PRO:HD2	2.21	0.41
2:U:556:LEU:O	2:U:556:LEU:HD23	2.20	0.41
2:U:564:ILE:CD1	2:U:642:PHE:HB2	2.48	0.41
2:X:555:ARG:O	2:X:559:MET:HG3	2.20	0.41
2:W:627:PHE:CD1	2:W:627:PHE:C	2.94	0.41
2:V:445:SER:O	2:V:540:THR:O	2.39	0.41
2:V:521:ALA:HB1	2:V:540:THR:CA	2.46	0.41
2:V:446:THR:C	2:V:539:LYS:HE3	2.20	0.41
2:V:629:ILE:CG2	2:V:630:GLN:N	2.83	0.41
2:Y:408:SER:OG	2:Y:409:PRO:HD2	2.21	0.41
2:W:427:VAL:HG21	2:W:516:ARG:NH2	2.36	0.41
2:Z:427:VAL:HG21	2:Z:516:ARG:NH2	2.35	0.41
2:Z:391:LYS:CE	2:Z:440:ASN:ND2	2.83	0.41
2:V:43:GLN:NE2	2:V:77:ASP:HB2	2.36	0.41
2:X:583:SER:C	2:X:586:THR:HG22	2.41	0.41
1:E:124:THR:HG23	1:E:126:TYR:N	2.35	0.41
2:W:200:ASN:O	2:W:201:ALA:C	2.59	0.41
2:U:61:THR:O	2:U:62:ALA:C	2.59	0.41
1:D:19:ASP:OD2	1:D:213:TYR:OH	2.31	0.41
2:W:92:SER:OG	2:W:343:GLY:HA3	2.21	0.41
2:U:119:LYS:HE3	2:U:124:ASP:OD1	2.20	0.41
2:V:119:LYS:HE3	2:V:124:ASP:OD1	2.20	0.41
2:X:498:GLN:HG3	2:X:533:TYR:HA	2.03	0.41
2:X:119:LYS:HE3	2:X:124:ASP:OD1	2.20	0.41
2:V:197:GLU:CD	2:V:197:GLU:H	2.23	0.41
2:W:402:ASP:O	2:W:402:ASP:CG	2.59	0.41
2:Z:406:LEU:HA	2:Z:449:ALA:O	2.20	0.41
2:Z:408:SER:OG	2:Z:409:PRO:HD2	2.21	0.41
2:Z:514:ARG:HA	2:Z:517:LEU:CG	2.49	0.41
2:Z:556:LEU:HD13	2:Z:631:PRO:HA	2.01	0.41
2:Y:554:ARG:HG2	2:Y:558:ASN:OD1	2.20	0.41
2:U:406:LEU:HA	2:U:449:ALA:O	2.20	0.41
2:U:445:SER:O	2:U:540:THR:O	2.39	0.41
2:X:448:ALA:O	2:X:540:THR:N	2.42	0.41
2:X:445:SER:O	2:X:540:THR:O	2.39	0.41
2:W:23:SER:OG	2:W:483:ASN:CA	2.68	0.41
2:V:558:ASN:O	2:V:561:LYS:HG2	2.21	0.41
2:V:514:ARG:HE	2:V:518:TYR:HE1	1.67	0.41
2:Y:409:PRO:HG2	2:Y:454:TYR:CE1	2.56	0.41
2:Z:50:LEU:HD11	2:Z:65:PHE:CE1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:W:381:GLU:O	2:W:382:SER:C	2.59	0.41
2:X:215:LYS:HE3	2:X:329:ASN:CG	2.42	0.41
2:X:304:ILE:HG13	2:X:305:TYR:HE2	1.81	0.41
2:Z:347:ASN:HA	2:Z:350:VAL:HG23	2.03	0.41
1:D:108:GLN:HB3	1:D:199:TYR:HB2	2.02	0.41
2:Y:423:VAL:O	2:Y:424:ASP:C	2.58	0.41
2:Y:605:ARG:HG2	2:Y:608:CYS:H	1.86	0.41
2:W:90:LYS:HA	2:W:90:LYS:HD3	1.93	0.41
2:V:200:ASN:O	2:V:201:ALA:C	2.59	0.41
2:X:511:GLN:CA	2:X:511:GLN:HE21	2.30	0.41
2:X:61:THR:O	2:X:62:ALA:C	2.59	0.41
2:U:498:GLN:HG3	2:U:533:TYR:HA	2.03	0.41
2:Z:92:SER:OG	2:Z:343:GLY:HA3	2.21	0.41
1:E:203:ASP:OD1	1:E:204:ASP:N	2.54	0.41
1:F:106:VAL:HG12	1:F:107:SER:H	1.86	0.41
1:D:140:TYR:O	1:D:145:PHE:HB2	2.21	0.41
1:A:74:ARG:NH2	1:A:231:GLU:OE2	2.48	0.41
1:C:77:LEU:HD13	1:C:120:LEU:HD23	2.03	0.41
2:V:163:LEU:HB3	2:V:164:GLY:H	1.63	0.41
2:Z:544:VAL:HG12	2:Z:545:PRO:CD	2.51	0.41
2:Y:557:PHE:CE2	2:Y:631:PRO:CG	3.02	0.41
2:U:544:VAL:HG12	2:U:545:PRO:CD	2.51	0.41
2:U:554:ARG:HG2	2:U:558:ASN:OD1	2.21	0.41
2:X:404:LEU:HA	2:X:404:LEU:HD23	1.91	0.41
2:W:537:GLY:O	2:W:538:ASP:CB	2.68	0.41
2:W:627:PHE:CZ	2:W:640:LEU:CB	2.95	0.41
2:V:544:VAL:HG12	2:V:545:PRO:CD	2.51	0.41
2:Y:537:GLY:O	2:Y:538:ASP:CB	2.68	0.41
1:C:157:ILE:HD12	2:W:579:PHE:HD2	1.85	0.41
2:Z:427:VAL:O	2:Z:431:THR:CG2	2.68	0.41
2:X:100:GLU:HB2	2:X:185:GLY:HA3	2.03	0.41
2:Y:573:PHE:HD2	2:Y:574:GLU:OE2	2.04	0.41
2:V:423:VAL:O	2:V:424:ASP:C	2.59	0.41
1:C:124:THR:CB	1:C:130:MET:HG2	2.50	0.41
2:W:290:VAL:HG11	2:W:322:TYR:CE1	2.56	0.41
2:U:404:LEU:HD23	2:U:404:LEU:HA	1.91	0.40
2:U:409:PRO:HG2	2:U:454:TYR:CE1	2.56	0.40
2:U:526:THR:CG2	2:U:535:LEU:CD2	2.95	0.40
2:W:450:ILE:HG22	2:W:540:THR:HG21	2.01	0.40
2:W:629:ILE:CG2	2:W:630:GLN:N	2.83	0.40
2:Y:445:SER:O	2:Y:540:THR:O	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:U:427:VAL:HG21	2:U:516:ARG:NH2	2.35	0.40
2:Y:427:VAL:HG21	2:Y:516:ARG:NH2	2.35	0.40
2:U:621:ASN:HA	2:U:621:ASN:HD22	1.64	0.40
2:V:621:ASN:HA	2:V:621:ASN:HD22	1.63	0.40
2:X:580:THR:O	2:X:584:PHE:CD1	2.73	0.40
2:Y:575:LEU:CD1	2:Y:575:LEU:N	2.83	0.40
2:Z:576:ASN:CA	2:Z:580:THR:HG21	2.49	0.40
2:Z:586:THR:CG2	2:Z:587:GLU:N	2.85	0.40
2:Y:100:GLU:HG3	2:Y:186:LYS:N	2.31	0.40
2:X:624:VAL:CG1	2:X:643:VAL:HB	2.51	0.40
2:Y:90:LYS:N	2:Y:344:LEU:O	2.48	0.40
1:B:149:MET:HG3	1:B:212:THR:O	2.21	0.40
1:C:39:VAL:HA	1:C:40:PRO:HD2	1.88	0.40
2:X:478:CYS:C	2:X:480:ARG:N	2.73	0.40
2:W:119:LYS:HE3	2:W:124:ASP:OD1	2.21	0.40
2:X:308:ASN:HD21	2:X:313:ASP:CB	2.34	0.40
2:V:402:ASP:O	2:V:402:ASP:CG	2.59	0.40
2:Y:92:SER:OG	2:Y:343:GLY:HA3	2.21	0.40
1:B:157:ILE:HD12	2:V:579:PHE:HD2	1.86	0.40
2:Y:627:PHE:CD1	2:Y:629:ILE:CG1	3.04	0.40
2:W:558:ASN:O	2:W:561:LYS:HG2	2.21	0.40
2:W:627:PHE:CD1	2:W:629:ILE:CG1	3.04	0.40
2:V:556:LEU:C	2:V:556:LEU:HD23	2.42	0.40
2:V:627:PHE:CD1	2:V:629:ILE:CG1	3.04	0.40
2:Y:544:VAL:HG12	2:Y:545:PRO:CD	2.51	0.40
2:U:391:LYS:CE	2:U:440:ASN:ND2	2.84	0.40
2:W:614:THR:HB	2:W:620:ARG:CA	2.40	0.40
2:U:73:GLN:HB3	2:U:500:LEU:CD1	2.51	0.40
2:Z:73:GLN:HB3	2:Z:500:LEU:CD1	2.51	0.40
2:U:100:GLU:HB2	2:U:185:GLY:HA3	2.03	0.40
2:U:423:VAL:O	2:U:424:ASP:C	2.59	0.40
2:Y:290:VAL:HG11	2:Y:322:TYR:CE1	2.56	0.40
1:B:211:THR:HB	1:B:223:LEU:HB3	2.04	0.40
1:A:150:TYR:O	1:A:211:THR:HA	2.21	0.40
2:Y:308:ASN:HD21	2:Y:313:ASP:CB	2.34	0.40
1:F:223:LEU:HA	1:F:224:PRO:HD3	1.86	0.40
2:Y:558:ASN:O	2:Y:561:LYS:HG2	2.21	0.40
2:W:404:LEU:HA	2:W:554:ARG:HH22	1.86	0.40
2:W:406:LEU:HA	2:W:449:ALA:O	2.20	0.40
2:V:23:SER:HB2	2:V:559:MET:SD	2.59	0.40
2:U:575:LEU:N	2:U:575:LEU:CD1	2.83	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Y:381:GLU:O	2:Y:382:SER:C	2.60	0.40
2:U:215:LYS:HE3	2:U:329:ASN:CG	2.42	0.40
2:Z:66:MET:O	2:Z:67:SER:C	2.60	0.40
2:W:100:GLU:HB2	2:W:185:GLY:HA3	2.04	0.40
2:X:66:MET:O	2:X:67:SER:C	2.60	0.40
2:Z:573:PHE:HD2	2:Z:574:GLU:OE2	2.04	0.40
1:F:114:ILE:HD12	1:F:198:MET:HE3	2.02	0.40
2:U:605:ARG:HG2	2:U:608:CYS:H	1.87	0.40
2:W:90:LYS:N	2:W:344:LEU:O	2.48	0.40
2:X:92:SER:OG	2:X:343:GLY:HA3	2.21	0.40
2:V:74:TYR:OH	2:V:473:ASP:OD2	2.35	0.40
2:U:92:SER:OG	2:U:343:GLY:HA3	2.22	0.40
2:Z:308:ASN:HD21	2:Z:313:ASP:CB	2.34	0.40
2:U:43:GLN:NE2	2:U:77:ASP:HB2	2.37	0.40
2:X:554:ARG:HG2	2:X:558:ASN:OD1	2.21	0.40
2:V:627:PHE:CD1	2:V:627:PHE:C	2.95	0.40
1:C:157:ILE:HD12	2:W:579:PHE:CB	2.37	0.40
2:W:50:LEU:HD11	2:W:65:PHE:CE1	2.56	0.40
2:W:43:GLN:NE2	2:W:77:ASP:HB2	2.36	0.40
2:U:381:GLU:O	2:U:382:SER:C	2.59	0.40
2:Y:68:ALA:O	2:Y:69:MET:C	2.58	0.40
2:Y:66:MET:O	2:Y:67:SER:C	2.60	0.40
2:U:100:GLU:HG3	2:U:186:LYS:N	2.32	0.40
1:F:115:LYS:HE3	1:F:115:LYS:HB2	1.77	0.40
2:U:46:ASN:HB2	2:U:49:ASP:CB	2.51	0.40
2:V:290:VAL:HG11	2:V:322:TYR:CE1	2.56	0.40
2:Y:498:GLN:HG3	2:Y:533:TYR:HA	2.03	0.40
2:X:104:SER:HB2	2:X:181:VAL:HG12	2.03	0.40
2:U:478:CYS:C	2:U:480:ARG:N	2.72	0.40
2:Y:317:LYS:HB2	2:Y:317:LYS:HE3	1.97	0.40
1:A:156:ASP:CG	2:U:579:PHE:HE1	2.17	0.40
2:Z:22:ASN:O	2:Z:23:SER:CB	2.70	0.40
2:Z:521:ALA:HB1	2:Z:540:THR:CA	2.46	0.40
2:Z:558:ASN:O	2:Z:561:LYS:HG2	2.22	0.40
2:Z:627:PHE:C	2:Z:627:PHE:CD1	2.94	0.40
2:Y:629:ILE:CG2	2:Y:630:GLN:N	2.83	0.40
2:Y:556:LEU:HD13	2:Y:631:PRO:HA	2.03	0.40
2:X:514:ARG:HA	2:X:517:LEU:CD2	2.51	0.40
2:X:404:LEU:HA	2:X:554:ARG:HH22	1.86	0.40
2:X:564:ILE:HD11	2:X:642:PHE:CB	2.47	0.40
2:V:514:ARG:HA	2:V:517:LEU:CG	2.49	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:627:PHE:CZ	2:V:640:LEU:CB	2.95	0.40
2:Y:526:THR:CG2	2:Y:535:LEU:CD2	2.95	0.40
2:X:427:VAL:HG21	2:X:516:ARG:NH2	2.36	0.40
2:Z:616:SER:O	2:Z:617:VAL:HG13	2.22	0.40
2:X:590:GLN:HE21	2:X:590:GLN:HB3	1.65	0.40
2:Y:586:THR:CG2	2:Y:587:GLU:N	2.85	0.40
2:Y:215:LYS:HE3	2:Y:329:ASN:CG	2.42	0.40
2:X:73:GLN:HB3	2:X:500:LEU:CD1	2.52	0.40
1:A:130:MET:HE2	1:A:188:TRP:CD2	2.57	0.40
2:W:66:MET:O	2:W:67:SER:C	2.60	0.40
2:Z:90:LYS:N	2:Z:344:LEU:O	2.48	0.40
1:A:110:ASN:HA	1:A:111:PRO:HD3	1.71	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	205/272 (75%)	184 (90%)	18 (9%)	3 (2%)	13 57
1	B	205/272 (75%)	184 (90%)	17 (8%)	4 (2%)	9 51
1	C	205/272 (75%)	184 (90%)	17 (8%)	4 (2%)	9 51
1	D	205/272 (75%)	184 (90%)	17 (8%)	4 (2%)	9 51
1	E	205/272 (75%)	183 (89%)	18 (9%)	4 (2%)	9 51
1	F	205/272 (75%)	184 (90%)	18 (9%)	3 (2%)	13 57
2	U	601/659 (91%)	479 (80%)	101 (17%)	21 (4%)	4 39
2	V	601/659 (91%)	480 (80%)	100 (17%)	21 (4%)	4 39
2	W	601/659 (91%)	479 (80%)	101 (17%)	21 (4%)	4 39
2	X	601/659 (91%)	479 (80%)	101 (17%)	21 (4%)	4 39

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	Y	601/659 (91%)	479 (80%)	101 (17%)	21 (4%)	4 39
2	Z	601/659 (91%)	480 (80%)	100 (17%)	21 (4%)	4 39
All	All	4836/5586 (87%)	3979 (82%)	709 (15%)	148 (3%)	9 42

All (148) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	108	GLN
1	B	67	LYS
1	B	108	GLN
1	C	67	LYS
1	C	108	GLN
1	D	67	LYS
1	E	67	LYS
1	E	108	GLN
1	F	67	LYS
2	U	98	ASN
2	U	201	ALA
2	U	432	ALA
2	U	538	ASP
2	U	539	LYS
2	V	98	ASN
2	V	201	ALA
2	V	432	ALA
2	V	538	ASP
2	V	539	LYS
2	W	98	ASN
2	W	201	ALA
2	W	432	ALA
2	W	538	ASP
2	W	539	LYS
2	X	98	ASN
2	X	201	ALA
2	X	432	ALA
2	X	538	ASP
2	X	539	LYS
2	Y	98	ASN
2	Y	201	ALA
2	Y	432	ALA
2	Y	538	ASP
2	Y	539	LYS

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Mol	Chain	Res	Type
2	Z	98	ASN
2	Z	201	ALA
2	Z	432	ALA
2	Z	538	ASP
2	Z	539	LYS
1	D	108	GLN
1	F	108	GLN
2	U	403	CYS
2	U	480	ARG
2	U	504	LYS
2	V	403	CYS
2	V	480	ARG
2	V	504	LYS
2	W	403	CYS
2	W	480	ARG
2	W	504	LYS
2	X	403	CYS
2	X	480	ARG
2	X	504	LYS
2	Y	403	CYS
2	Y	480	ARG
2	Y	504	LYS
2	Z	403	CYS
2	Z	480	ARG
2	Z	504	LYS
1	A	67	LYS
1	F	111	PRO
2	U	62	ALA
2	U	311	ILE
2	U	348	ALA
2	U	482	ASP
2	U	531	ASP
2	V	62	ALA
2	V	348	ALA
2	V	482	ASP
2	V	531	ASP
2	W	62	ALA
2	W	311	ILE
2	W	348	ALA
2	W	482	ASP
2	W	531	ASP
2	X	62	ALA

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Mol	Chain	Res	Type
2	X	311	ILE
2	X	348	ALA
2	X	482	ASP
2	X	531	ASP
2	Y	62	ALA
2	Y	311	ILE
2	Y	348	ALA
2	Y	482	ASP
2	Y	531	ASP
2	Z	62	ALA
2	Z	348	ALA
2	Z	482	ASP
2	Z	531	ASP
1	A	111	PRO
1	E	111	PRO
2	U	634	SER
2	V	311	ILE
2	V	634	SER
2	W	634	SER
2	X	634	SER
2	Y	634	SER
2	Z	311	ILE
2	Z	634	SER
1	B	111	PRO
1	B	175	ALA
1	C	111	PRO
1	D	175	ALA
1	E	175	ALA
2	U	583	SER
2	V	25	GLY
2	V	583	SER
2	W	583	SER
2	X	25	GLY
2	X	583	SER
2	Y	583	SER
2	Z	583	SER
2	U	25	GLY
2	U	304	ILE
2	V	304	ILE
2	W	25	GLY
2	Y	25	GLY
2	Y	304	ILE

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Mol	Chain	Res	Type
2	Z	25	GLY
2	Z	304	ILE
2	W	304	ILE
2	X	304	ILE
2	Z	247	GLY
2	Z	434	GLY
1	D	111	PRO
2	U	247	GLY
2	U	434	GLY
2	V	247	GLY
2	V	318	GLY
2	V	434	GLY
2	W	247	GLY
2	W	434	GLY
2	X	434	GLY
2	Y	247	GLY
2	Y	434	GLY
1	C	106	VAL
2	U	318	GLY
2	X	247	GLY
2	X	318	GLY
2	U	121	VAL
2	W	121	VAL
2	W	318	GLY
2	X	121	VAL
2	Y	121	VAL
2	Y	318	GLY
2	Z	121	VAL
2	Z	318	GLY
2	V	121	VAL

5.3.2 Protein sidechains

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	192/250 (77%)	176 (92%)	16 (8%)	14 49

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	B	192/250 (77%)	181 (94%)	11 (6%)	25	62
1	C	192/250 (77%)	176 (92%)	16 (8%)	14	49
1	D	192/250 (77%)	180 (94%)	12 (6%)	22	59
1	E	192/250 (77%)	180 (94%)	12 (6%)	22	59
1	F	192/250 (77%)	179 (93%)	13 (7%)	20	57
2	U	494/536 (92%)	446 (90%)	48 (10%)	10	40
2	V	494/536 (92%)	447 (90%)	47 (10%)	11	41
2	W	494/536 (92%)	448 (91%)	46 (9%)	11	42
2	X	494/536 (92%)	448 (91%)	46 (9%)	11	42
2	Y	494/536 (92%)	446 (90%)	48 (10%)	10	40
2	Z	494/536 (92%)	446 (90%)	48 (10%)	10	40
All	All	4116/4716 (87%)	3753 (91%)	363 (9%)	17	45

All (363) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	25	GLN
1	A	31	GLU
1	A	37	ILE
1	A	45	SER
1	A	50	MET
1	A	63	GLU
1	A	68	VAL
1	A	69	GLU
1	A	109	TYR
1	A	110	ASN
1	A	114	ILE
1	A	124	THR
1	A	125	ARG
1	A	138	LEU
1	A	161	ARG
1	A	212	THR
1	B	37	ILE
1	B	45	SER
1	B	50	MET
1	B	67	LYS
1	B	78	HIS
1	B	109	TYR

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Mol	Chain	Res	Type
1	B	124	THR
1	B	125	ARG
1	B	138	LEU
1	B	161	ARG
1	B	212	THR
1	C	9	SER
1	C	25	GLN
1	C	37	ILE
1	C	45	SER
1	C	50	MET
1	C	59	ILE
1	C	67	LYS
1	C	106	VAL
1	C	107	SER
1	C	109	TYR
1	C	110	ASN
1	C	114	ILE
1	C	125	ARG
1	C	138	LEU
1	C	161	ARG
1	C	212	THR
1	D	25	GLN
1	D	45	SER
1	D	50	MET
1	D	78	HIS
1	D	106	VAL
1	D	109	TYR
1	D	110	ASN
1	D	124	THR
1	D	125	ARG
1	D	138	LEU
1	D	161	ARG
1	D	212	THR
1	E	45	SER
1	E	50	MET
1	E	59	ILE
1	E	67	LYS
1	E	109	TYR
1	E	110	ASN
1	E	114	ILE
1	E	124	THR
1	E	125	ARG

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Mol	Chain	Res	Type
1	E	138	LEU
1	E	161	ARG
1	E	212	THR
1	F	25	GLN
1	F	37	ILE
1	F	45	SER
1	F	50	MET
1	F	59	ILE
1	F	67	LYS
1	F	106	VAL
1	F	109	TYR
1	F	124	THR
1	F	125	ARG
1	F	138	LEU
1	F	161	ARG
1	F	212	THR
2	U	50	LEU
2	U	58	THR
2	U	66	MET
2	U	67	SER
2	U	71	PHE
2	U	74	TYR
2	U	77	ASP
2	U	80	VAL
2	U	86	ARG
2	U	95	ILE
2	U	102	THR
2	U	150	ILE
2	U	162	THR
2	U	178	LEU
2	U	188	ILE
2	U	189	THR
2	U	202	GLU
2	U	213	ASN
2	U	290	VAL
2	U	345	SER
2	U	347	ASN
2	U	349	GLU
2	U	354	ASP
2	U	367	SER
2	U	368	VAL
2	U	371	GLN

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Mol	Chain	Res	Type
2	U	382	SER
2	U	383	LEU
2	U	388	THR
2	U	395	SER
2	U	404	LEU
2	U	430	ARG
2	U	431	THR
2	U	436	TYR
2	U	437	THR
2	U	438	ASP
2	U	440	ASN
2	U	446	THR
2	U	450	ILE
2	U	453	ASN
2	U	460	LYS
2	U	483	ASN
2	U	499	ILE
2	U	501	ASN
2	U	590	GLN
2	U	593	GLN
2	U	612	ASN
2	U	621	ASN
2	V	50	LEU
2	V	58	THR
2	V	66	MET
2	V	67	SER
2	V	71	PHE
2	V	74	TYR
2	V	77	ASP
2	V	80	VAL
2	V	86	ARG
2	V	95	ILE
2	V	102	THR
2	V	150	ILE
2	V	162	THR
2	V	178	LEU
2	V	188	ILE
2	V	189	THR
2	V	202	GLU
2	V	213	ASN
2	V	290	VAL
2	V	345	SER

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Mol	Chain	Res	Type
2	V	347	ASN
2	V	349	GLU
2	V	354	ASP
2	V	367	SER
2	V	368	VAL
2	V	371	GLN
2	V	382	SER
2	V	383	LEU
2	V	388	THR
2	V	395	SER
2	V	404	LEU
2	V	431	THR
2	V	436	TYR
2	V	437	THR
2	V	438	ASP
2	V	440	ASN
2	V	446	THR
2	V	450	ILE
2	V	453	ASN
2	V	460	LYS
2	V	483	ASN
2	V	499	ILE
2	V	501	ASN
2	V	590	GLN
2	V	593	GLN
2	V	612	ASN
2	V	621	ASN
2	W	50	LEU
2	W	58	THR
2	W	66	MET
2	W	67	SER
2	W	71	PHE
2	W	74	TYR
2	W	77	ASP
2	W	80	VAL
2	W	86	ARG
2	W	95	ILE
2	W	102	THR
2	W	150	ILE
2	W	162	THR
2	W	178	LEU
2	W	188	ILE

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Mol	Chain	Res	Type
2	W	189	THR
2	W	202	GLU
2	W	213	ASN
2	W	290	VAL
2	W	345	SER
2	W	347	ASN
2	W	349	GLU
2	W	354	ASP
2	W	367	SER
2	W	368	VAL
2	W	371	GLN
2	W	382	SER
2	W	383	LEU
2	W	388	THR
2	W	395	SER
2	W	404	LEU
2	W	431	THR
2	W	436	TYR
2	W	438	ASP
2	W	440	ASN
2	W	446	THR
2	W	450	ILE
2	W	453	ASN
2	W	460	LYS
2	W	483	ASN
2	W	499	ILE
2	W	501	ASN
2	W	590	GLN
2	W	593	GLN
2	W	612	ASN
2	W	621	ASN
2	X	50	LEU
2	X	58	THR
2	X	66	MET
2	X	67	SER
2	X	71	PHE
2	X	74	TYR
2	X	77	ASP
2	X	80	VAL
2	X	86	ARG
2	X	95	ILE
2	X	102	THR

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Mol	Chain	Res	Type
2	X	150	ILE
2	X	162	THR
2	X	178	LEU
2	X	188	ILE
2	X	189	THR
2	X	202	GLU
2	X	213	ASN
2	X	290	VAL
2	X	345	SER
2	X	347	ASN
2	X	349	GLU
2	X	354	ASP
2	X	367	SER
2	X	368	VAL
2	X	371	GLN
2	X	382	SER
2	X	383	LEU
2	X	388	THR
2	X	395	SER
2	X	404	LEU
2	X	431	THR
2	X	436	TYR
2	X	438	ASP
2	X	440	ASN
2	X	446	THR
2	X	450	ILE
2	X	453	ASN
2	X	460	LYS
2	X	483	ASN
2	X	499	ILE
2	X	501	ASN
2	X	590	GLN
2	X	593	GLN
2	X	612	ASN
2	X	621	ASN
2	Y	50	LEU
2	Y	58	THR
2	Y	66	MET
2	Y	67	SER
2	Y	71	PHE
2	Y	74	TYR
2	Y	77	ASP

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Mol	Chain	Res	Type
2	Y	80	VAL
2	Y	86	ARG
2	Y	95	ILE
2	Y	102	THR
2	Y	150	ILE
2	Y	162	THR
2	Y	178	LEU
2	Y	188	ILE
2	Y	189	THR
2	Y	202	GLU
2	Y	213	ASN
2	Y	290	VAL
2	Y	345	SER
2	Y	347	ASN
2	Y	349	GLU
2	Y	354	ASP
2	Y	367	SER
2	Y	368	VAL
2	Y	371	GLN
2	Y	382	SER
2	Y	383	LEU
2	Y	388	THR
2	Y	395	SER
2	Y	404	LEU
2	Y	430	ARG
2	Y	431	THR
2	Y	436	TYR
2	Y	437	THR
2	Y	438	ASP
2	Y	440	ASN
2	Y	446	THR
2	Y	450	ILE
2	Y	453	ASN
2	Y	460	LYS
2	Y	483	ASN
2	Y	499	ILE
2	Y	501	ASN
2	Y	590	GLN
2	Y	593	GLN
2	Y	612	ASN
2	Y	621	ASN
2	Z	50	LEU

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Mol	Chain	Res	Type
2	Z	58	THR
2	Z	66	MET
2	Z	67	SER
2	Z	71	PHE
2	Z	74	TYR
2	Z	77	ASP
2	Z	80	VAL
2	Z	86	ARG
2	Z	95	ILE
2	Z	102	THR
2	Z	150	ILE
2	Z	162	THR
2	Z	178	LEU
2	Z	188	ILE
2	Z	189	THR
2	Z	202	GLU
2	Z	213	ASN
2	Z	290	VAL
2	Z	345	SER
2	Z	347	ASN
2	Z	349	GLU
2	Z	354	ASP
2	Z	367	SER
2	Z	368	VAL
2	Z	371	GLN
2	Z	382	SER
2	Z	383	LEU
2	Z	388	THR
2	Z	395	SER
2	Z	404	LEU
2	Z	430	ARG
2	Z	431	THR
2	Z	436	TYR
2	Z	437	THR
2	Z	438	ASP
2	Z	440	ASN
2	Z	446	THR
2	Z	450	ILE
2	Z	453	ASN
2	Z	460	LYS
2	Z	483	ASN
2	Z	499	ILE

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Mol	Chain	Res	Type
2	Z	501	ASN
2	Z	590	GLN
2	Z	593	GLN
2	Z	612	ASN
2	Z	621	ASN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (100) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	152	GLN
2	U	43	GLN
2	U	70	ASN
2	U	213	ASN
2	U	278	GLN
2	U	390	GLN
2	U	440	ASN
2	U	453	ASN
2	U	457	GLN
2	U	511	GLN
2	U	513	GLN
2	U	523	ASN
2	U	590	GLN
2	U	612	ASN
2	U	621	ASN
2	U	630	GLN
2	U	641	ASN
2	V	43	GLN
2	V	70	ASN
2	V	213	ASN
2	V	278	GLN
2	V	329	ASN
2	V	390	GLN
2	V	440	ASN
2	V	453	ASN
2	V	457	GLN
2	V	511	GLN
2	V	513	GLN
2	V	523	ASN
2	V	590	GLN
2	V	612	ASN
2	V	621	ASN
2	V	630	GLN

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Mol	Chain	Res	Type
2	V	641	ASN
2	W	43	GLN
2	W	70	ASN
2	W	213	ASN
2	W	278	GLN
2	W	329	ASN
2	W	390	GLN
2	W	440	ASN
2	W	453	ASN
2	W	457	GLN
2	W	511	GLN
2	W	513	GLN
2	W	523	ASN
2	W	590	GLN
2	W	612	ASN
2	W	621	ASN
2	W	630	GLN
2	W	641	ASN
2	X	43	GLN
2	X	70	ASN
2	X	213	ASN
2	X	278	GLN
2	X	390	GLN
2	X	440	ASN
2	X	453	ASN
2	X	457	GLN
2	X	511	GLN
2	X	513	GLN
2	X	523	ASN
2	X	590	GLN
2	X	612	ASN
2	X	621	ASN
2	X	630	GLN
2	X	641	ASN
2	Y	43	GLN
2	Y	70	ASN
2	Y	213	ASN
2	Y	278	GLN
2	Y	390	GLN
2	Y	440	ASN
2	Y	453	ASN
2	Y	457	GLN

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Mol	Chain	Res	Type
2	Y	511	GLN
2	Y	513	GLN
2	Y	523	ASN
2	Y	590	GLN
2	Y	612	ASN
2	Y	621	ASN
2	Y	630	GLN
2	Y	641	ASN
2	Z	43	GLN
2	Z	70	ASN
2	Z	213	ASN
2	Z	278	GLN
2	Z	329	ASN
2	Z	390	GLN
2	Z	440	ASN
2	Z	453	ASN
2	Z	457	GLN
2	Z	511	GLN
2	Z	513	GLN
2	Z	523	ASN
2	Z	590	GLN
2	Z	612	ASN
2	Z	621	ASN
2	Z	630	GLN
2	Z	641	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates

There are no carbohydrates in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.