



Full wwPDB X-ray Structure Validation Report ⓘ

Apr 25, 2026 – 06:19 AM EDT

PDB ID : 2EU1 / pdb_00002eu1
Title : Crystal structure of the chaperonin GroEL-E461K
Authors : Cabo-Bilbao, A.; Spinelli, S.; Sot, B.; Agirre, J.; Mechaly, A.E.; Muga, A.;
Guerin, D.M.A.
Deposited on : 2005-10-28
Resolution : 3.29 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

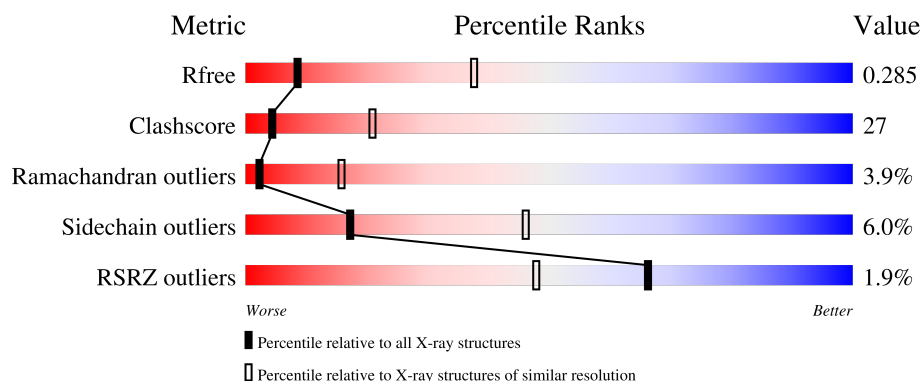
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.29 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1169 (3.32-3.28)
Clashscore	190562	1209 (3.32-3.28)
Ramachandran outliers	187476	1188 (3.32-3.28)
Sidechain outliers	187428	1187 (3.32-3.28)
RSRZ outliers	180081	1169 (3.32-3.28)

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

Mol	Chain	Length	Quality of chain
1	A	548	3% 50% 39% 7% .
1	B	548	3% 52% 37% 6% .
1	C	548	% 53% 36% 6% .
1	D	548	2% 50% 39% 7% .
1	E	548	% 49% 41% 6% .

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Mol	Chain	Length	Quality of chain
1	F	548	2% 50% 40% 5%
1	G	548	% 51% 40% 5%
1	H	548	% 51% 39% 5%
1	I	548	2% 51% 41%
1	J	548	% 52% 39%
1	K	548	2% 50% 41% 5%
1	L	548	2% 47% 44% 5%
1	M	548	3% 49% 42% 5%
1	N	548	% 49% 41% 5%

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 53970 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called GROEL.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	524	Total	C	N	O	S	0	0	0
			3855	2398	666	771	20			
1	B	524	Total	C	N	O	S	0	0	0
			3855	2398	666	771	20			
1	C	524	Total	C	N	O	S	0	0	0
			3855	2398	666	771	20			
1	D	524	Total	C	N	O	S	0	0	0
			3855	2398	666	771	20			
1	E	524	Total	C	N	O	S	0	0	0
			3855	2398	666	771	20			
1	F	524	Total	C	N	O	S	0	0	0
			3855	2398	666	771	20			
1	G	524	Total	C	N	O	S	0	0	0
			3855	2398	666	771	20			
1	H	524	Total	C	N	O	S	0	0	0
			3855	2398	666	771	20			
1	I	524	Total	C	N	O	S	0	0	0
			3855	2398	666	771	20			
1	J	524	Total	C	N	O	S	0	0	0
			3855	2398	666	771	20			
1	K	524	Total	C	N	O	S	0	0	0
			3855	2398	666	771	20			
1	L	524	Total	C	N	O	S	0	0	0
			3855	2398	666	771	20			
1	M	524	Total	C	N	O	S	0	0	0
			3855	2398	666	771	20			
1	N	524	Total	C	N	O	S	0	0	0
			3855	2398	666	771	20			

There are 14 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	461	LYS	GLU	engineered mutation	UNP P0A6F5

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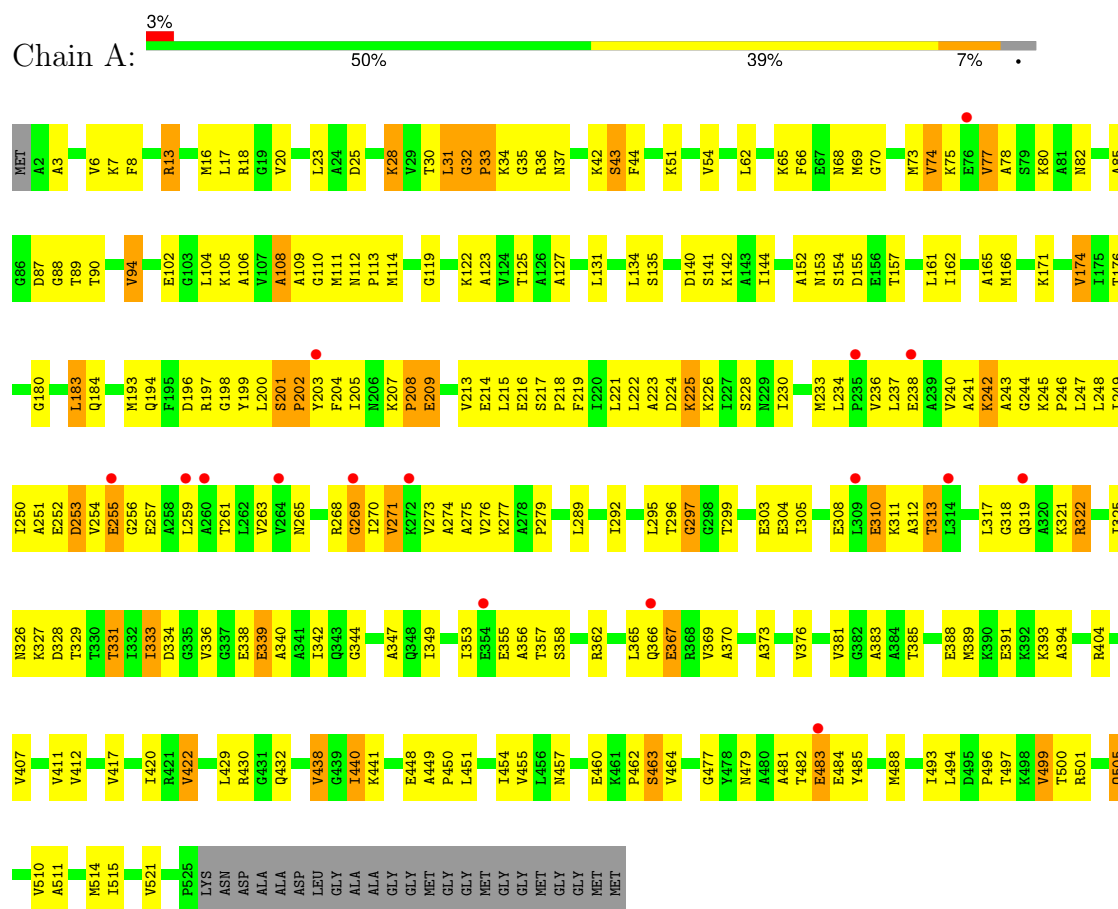
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Chain	Residue	Modelled	Actual	Comment	Reference
B	461	LYS	GLU	engineered mutation	UNP P0A6F5
C	461	LYS	GLU	engineered mutation	UNP P0A6F5
D	461	LYS	GLU	engineered mutation	UNP P0A6F5
E	461	LYS	GLU	engineered mutation	UNP P0A6F5
F	461	LYS	GLU	engineered mutation	UNP P0A6F5
G	461	LYS	GLU	engineered mutation	UNP P0A6F5
H	461	LYS	GLU	engineered mutation	UNP P0A6F5
I	461	LYS	GLU	engineered mutation	UNP P0A6F5
J	461	LYS	GLU	engineered mutation	UNP P0A6F5
K	461	LYS	GLU	engineered mutation	UNP P0A6F5
L	461	LYS	GLU	engineered mutation	UNP P0A6F5
M	461	LYS	GLU	engineered mutation	UNP P0A6F5
N	461	LYS	GLU	engineered mutation	UNP P0A6F5

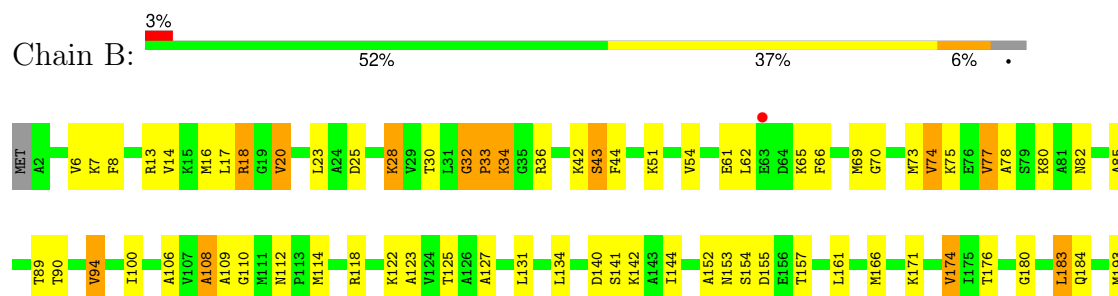
3 Residue-property plots

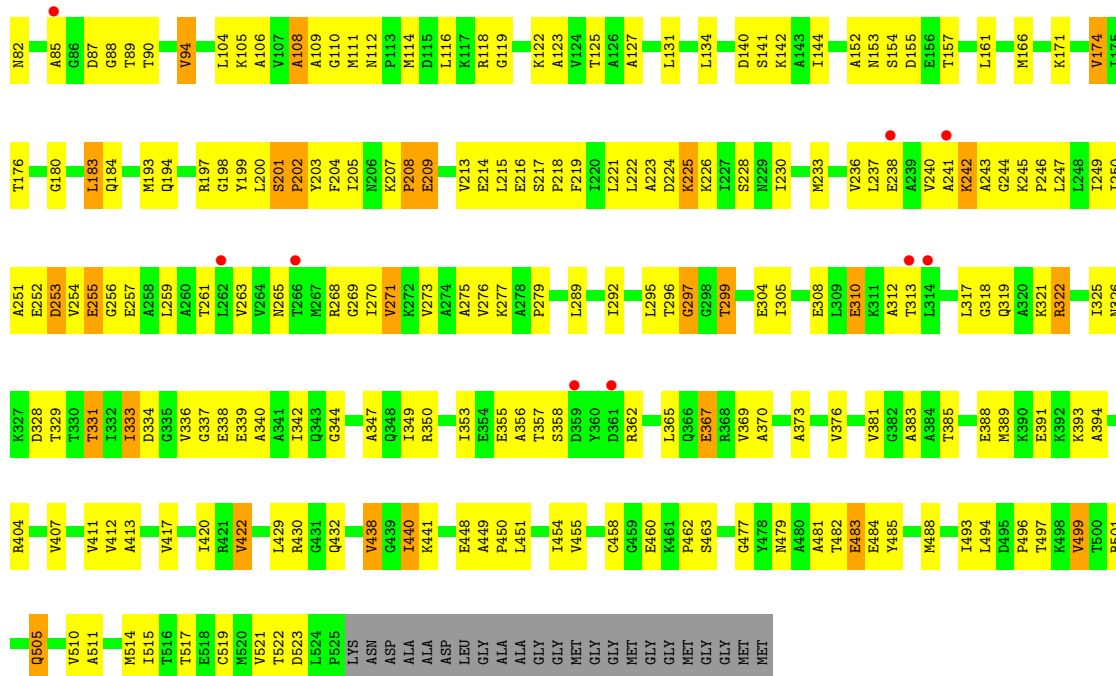
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

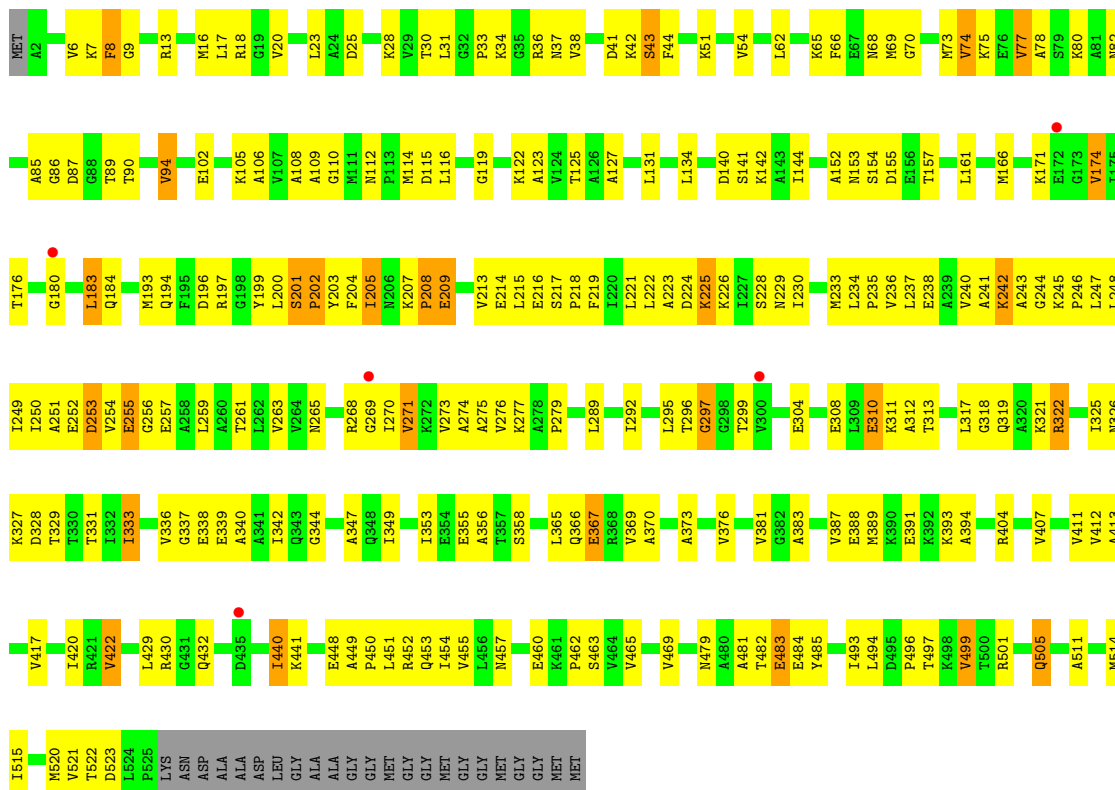
• Molecule 1: GROEL



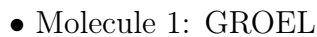
• Molecule 1: GROEL

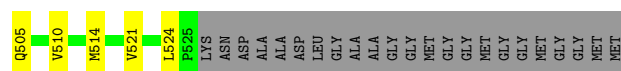




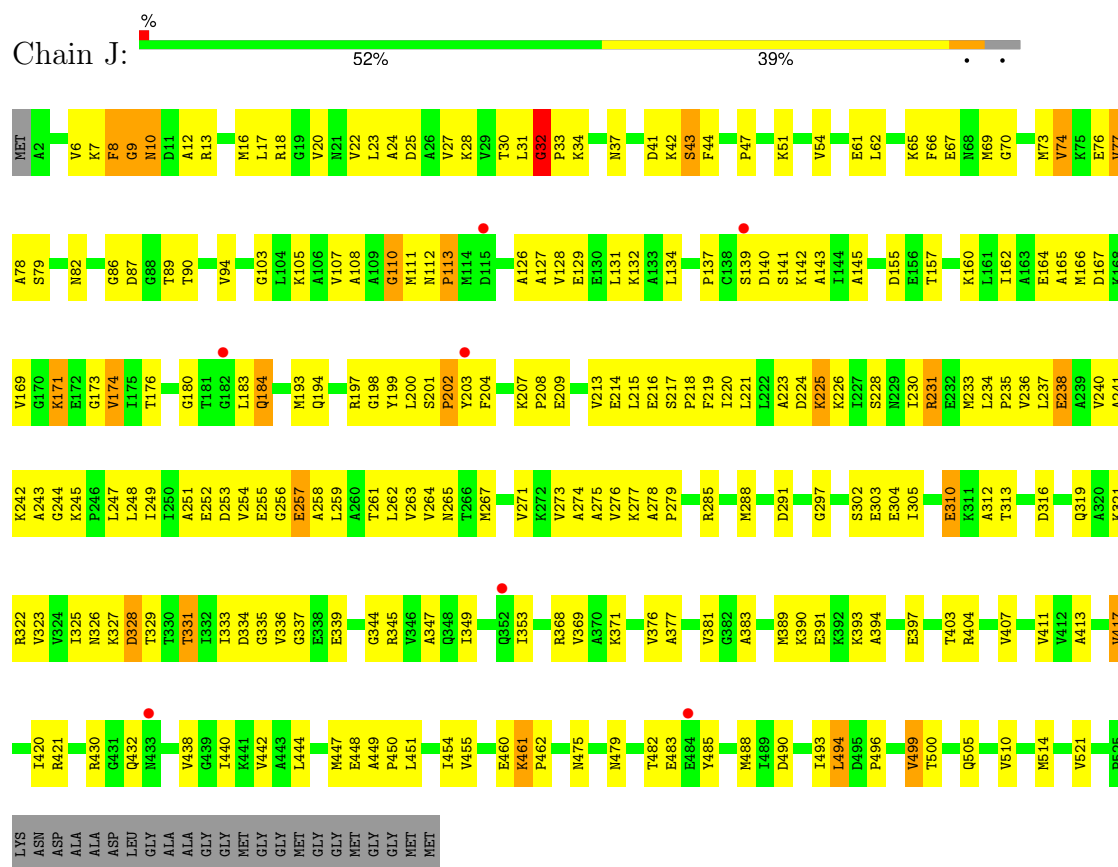


Chain H: 51% 39% 5%

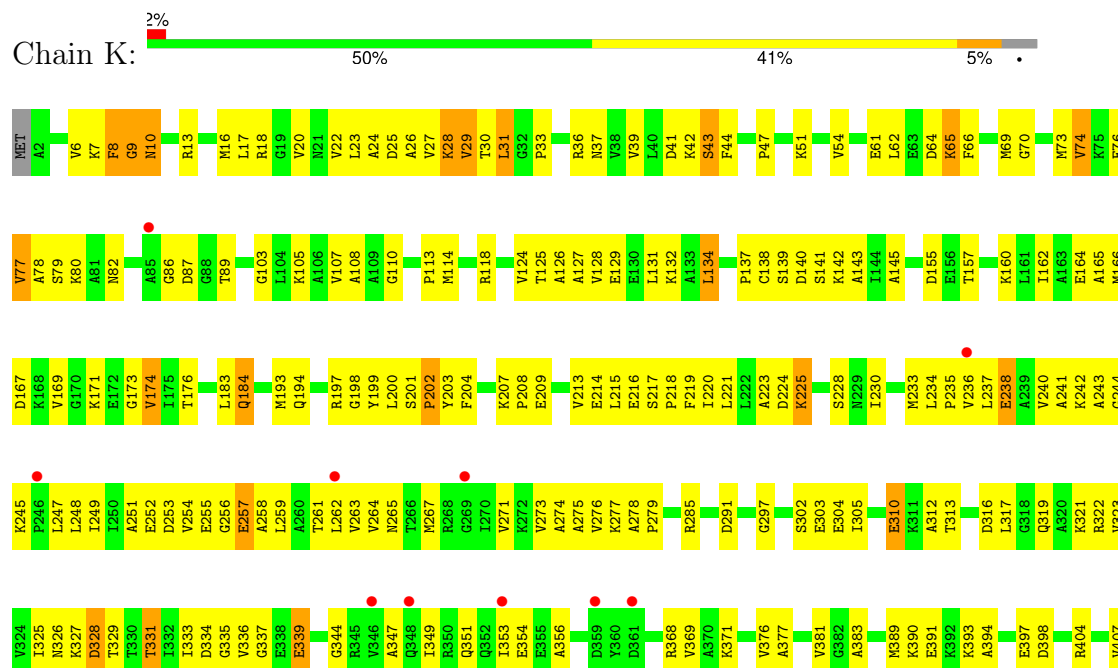


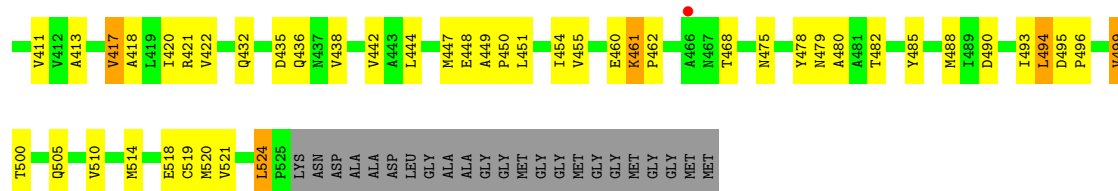


• Molecule 1: GROEL

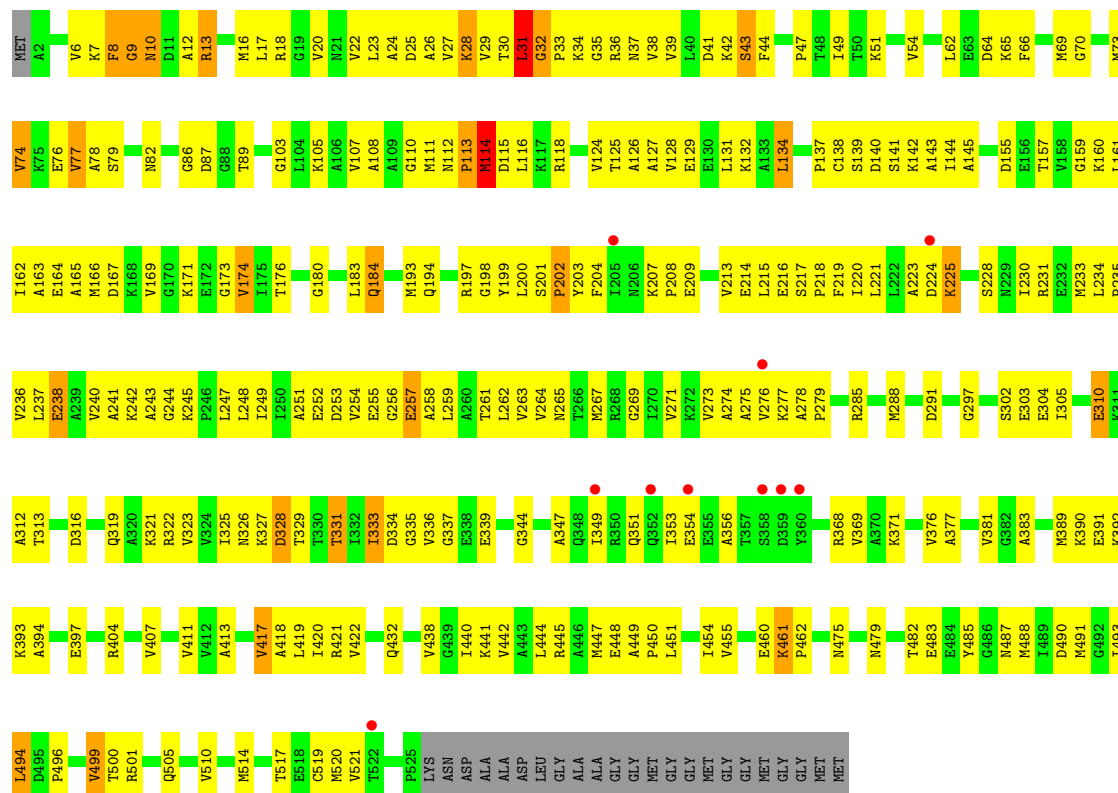


• Molecule 1: GROEL

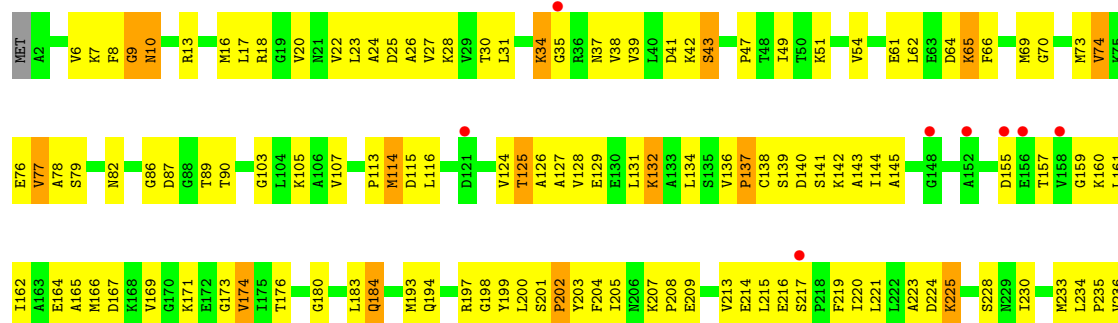


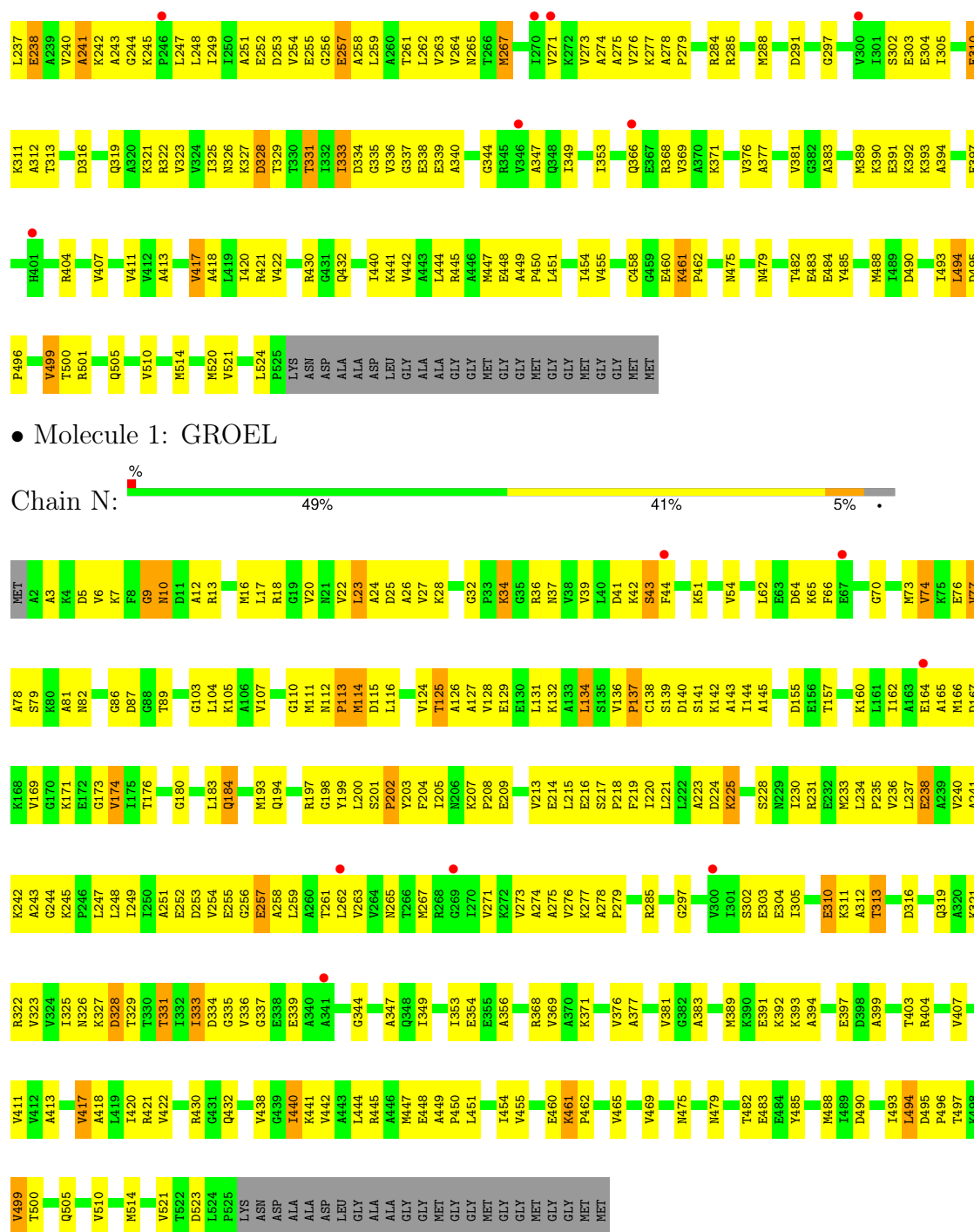


• Molecule 1: GROEL



• Molecule 1: GROEL





4 Data and refinement statistics

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α , β , γ	267.69Å 290.64Å 247.01Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	15.00 – 3.29 15.00 – 3.29	Depositor EDS
% Data completeness (in resolution range)	(Not available) (15.00-3.29) 84.5 (15.00-3.29)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.70 (at 3.32Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.276 , 0.296 0.266 , 0.285	Depositor DCC
R_{free} test set	6133 reflections (4.97%)	wwPDB-VP
Wilson B-factor (Å ²)	70.6	Xtriage
Anisotropy	0.555	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.29 , 49.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.43$, $\langle L^2 \rangle = 0.26$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.90	EDS
Total number of atoms	53970	wwPDB-VP
Average B, all atoms (Å ²)	57.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 44.51 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 1.5101e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

¹Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.72	0/3883	1.05	19/5242 (0.4%)
1	B	0.78	0/3883	1.02	13/5242 (0.2%)
1	C	0.69	0/3883	1.04	18/5242 (0.3%)
1	D	0.65	0/3883	1.02	17/5242 (0.3%)
1	E	0.64	1/3883 (0.0%)	1.04	17/5242 (0.3%)
1	F	0.67	0/3883	1.03	16/5242 (0.3%)
1	G	0.69	0/3883	1.01	11/5242 (0.2%)
1	H	0.68	0/3883	1.02	14/5242 (0.3%)
1	I	0.74	0/3883	0.97	10/5242 (0.2%)
1	J	0.65	0/3883	1.04	16/5242 (0.3%)
1	K	0.65	0/3883	0.99	11/5242 (0.2%)
1	L	0.65	1/3883 (0.0%)	1.01	16/5242 (0.3%)
1	M	0.68	0/3883	1.02	14/5242 (0.3%)
1	N	0.66	0/3883	1.00	16/5242 (0.3%)
All	All	0.68	2/54362 (0.0%)	1.02	208/73388 (0.3%)

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	114	MET	SD-CE	6.80	1.96	1.79
1	L	114	MET	SD-CE	6.70	1.96	1.79

All (208) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	M	284	ARG	NE-CZ-NH2	13.74	131.56	119.20
1	M	284	ARG	NE-CZ-NH1	-13.38	108.12	121.50
1	J	231	ARG	NE-CZ-NH2	13.18	131.06	119.20
1	J	231	ARG	NE-CZ-NH1	-12.12	109.38	121.50
1	N	368	ARG	NE-CZ-NH2	11.87	129.88	119.20
1	A	13	ARG	NE-CZ-NH2	-11.74	108.64	119.20
1	H	13	ARG	NE-CZ-NH2	-11.48	108.87	119.20
1	L	32	GLY	CA-C-N	11.36	134.04	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L	32	GLY	C-N-CA	11.36	134.04	119.84
1	L	13	ARG	NE-CZ-NH2	-11.16	109.15	119.20
1	M	284	ARG	CD-NE-CZ	10.99	139.79	124.40
1	N	368	ARG	NE-CZ-NH1	-10.94	110.56	121.50
1	E	13	ARG	NE-CZ-NH2	-10.84	109.45	119.20
1	J	231	ARG	CD-NE-CZ	9.95	138.34	124.40
1	C	32	GLY	CA-C-N	9.79	132.08	119.84
1	C	32	GLY	C-N-CA	9.79	132.08	119.84
1	H	32	GLY	CA-C-N	9.64	131.89	119.84
1	H	32	GLY	C-N-CA	9.64	131.89	119.84
1	A	32	GLY	CA-C-N	9.38	131.56	119.84
1	A	32	GLY	C-N-CA	9.38	131.56	119.84
1	H	13	ARG	CD-NE-CZ	9.28	137.39	124.40
1	E	13	ARG	CD-NE-CZ	8.97	136.96	124.40
1	L	13	ARG	CD-NE-CZ	8.83	136.76	124.40
1	A	13	ARG	CD-NE-CZ	8.77	136.68	124.40
1	L	13	ARG	NE-CZ-NH1	8.74	130.24	121.50
1	G	241	ALA	N-CA-C	-8.72	101.71	111.82
1	D	241	ALA	N-CA-C	-8.71	101.71	111.82
1	B	241	ALA	N-CA-C	-8.55	101.90	111.82
1	A	13	ARG	NE-CZ-NH1	8.52	130.02	121.50
1	A	241	ALA	N-CA-C	-8.40	102.07	111.82
1	E	32	GLY	CA-C-N	8.40	130.34	119.84
1	E	32	GLY	C-N-CA	8.40	130.34	119.84
1	H	13	ARG	NE-CZ-NH1	8.29	129.79	121.50
1	C	241	ALA	N-CA-C	-8.21	102.29	111.82
1	F	32	GLY	CA-C-N	8.17	130.05	119.84
1	F	32	GLY	C-N-CA	8.17	130.05	119.84
1	F	241	ALA	N-CA-C	-8.14	102.37	111.82
1	E	241	ALA	N-CA-C	-8.14	102.38	111.82
1	H	34	LYS	N-CA-C	-8.11	102.69	112.59
1	J	31	LEU	N-CA-C	7.95	122.65	109.46
1	N	368	ARG	CD-NE-CZ	7.83	135.37	124.40
1	E	13	ARG	NE-CZ-NH1	7.77	129.27	121.50
1	K	238	GLU	N-CA-C	-7.64	103.42	112.89
1	C	31	LEU	N-CA-C	7.55	121.63	110.30
1	H	31	LEU	N-CA-C	7.44	121.58	109.76
1	C	34	LYS	N-CA-C	-7.33	102.59	112.26
1	J	32	GLY	CA-C-N	7.31	128.98	119.84
1	J	32	GLY	C-N-CA	7.31	128.98	119.84
1	K	241	ALA	N-CA-C	-7.07	103.92	112.54
1	L	238	GLU	N-CA-C	-7.04	103.35	112.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	J	238	GLU	N-CA-C	-7.04	103.36	112.23
1	H	238	GLU	N-CA-C	-7.03	103.37	112.23
1	D	13	ARG	NE-CZ-NH1	-7.01	114.49	121.50
1	N	238	GLU	N-CA-C	-6.98	103.44	112.23
1	M	238	GLU	N-CA-C	-6.91	103.52	112.23
1	M	241	ALA	N-CA-C	-6.84	104.19	112.54
1	J	241	ALA	N-CA-C	-6.84	104.20	112.54
1	I	238	GLU	N-CA-C	-6.81	103.65	112.23
1	I	241	ALA	N-CA-C	-6.72	104.34	112.54
1	H	105	LYS	N-CA-C	-6.67	103.94	111.14
1	N	241	ALA	N-CA-C	-6.66	104.41	112.54
1	L	241	ALA	N-CA-C	-6.63	104.45	112.54
1	H	241	ALA	N-CA-C	-6.59	104.50	112.54
1	B	367	GLU	N-CA-C	-6.49	105.49	113.41
1	M	105	LYS	N-CA-C	-6.47	104.15	111.07
1	F	32	GLY	N-CA-C	6.44	125.48	112.34
1	E	367	GLU	N-CA-C	-6.35	105.66	113.41
1	A	432	GLN	N-CA-C	6.29	120.05	112.38
1	G	367	GLU	N-CA-C	-6.26	105.77	113.41
1	H	432	GLN	N-CA-C	6.25	118.64	111.02
1	F	367	GLU	N-CA-C	-6.22	105.82	113.41
1	N	105	LYS	N-CA-C	-6.19	104.44	111.07
1	E	432	GLN	N-CA-C	6.16	119.90	112.38
1	K	8	PHE	N-CA-C	6.16	119.57	109.72
1	J	13	ARG	NE-CZ-NH1	-6.13	115.37	121.50
1	D	13	ARG	NE-CZ-NH2	6.08	124.67	119.20
1	A	255	GLU	N-CA-C	6.07	119.09	109.50
1	L	28	LYS	N-CA-C	6.01	120.35	112.89
1	J	13	ARG	NE-CZ-NH2	6.01	124.61	119.20
1	K	13	ARG	NE-CZ-NH1	-6.00	115.50	121.50
1	C	367	GLU	N-CA-C	-6.00	106.09	113.41
1	N	13	ARG	NE-CZ-NH1	-5.98	115.52	121.50
1	G	255	GLU	N-CA-C	5.96	119.26	109.72
1	M	13	ARG	NE-CZ-NH1	-5.96	115.54	121.50
1	D	367	GLU	N-CA-C	-5.95	106.15	113.41
1	J	8	PHE	N-CA-C	5.95	119.24	109.72
1	D	32	GLY	CA-C-N	5.94	127.27	119.84
1	D	32	GLY	C-N-CA	5.94	127.27	119.84
1	F	13	ARG	NE-CZ-NH1	-5.93	115.57	121.50
1	K	432	GLN	N-CA-C	5.93	118.25	111.02
1	E	255	GLU	N-CA-C	5.91	119.18	109.72
1	D	432	GLN	N-CA-C	5.90	119.57	112.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	G	432	GLN	N-CA-C	5.89	119.57	112.38
1	J	105	LYS	N-CA-C	-5.88	104.78	111.07
1	A	367	GLU	N-CA-C	-5.86	106.26	113.41
1	F	255	GLU	N-CA-C	5.84	118.73	109.50
1	C	13	ARG	NE-CZ-NH1	-5.83	115.67	121.50
1	C	255	GLU	N-CA-C	5.80	119.00	109.72
1	H	255	GLU	N-CA-C	5.79	119.16	109.95
1	J	432	GLN	N-CA-C	5.79	118.08	111.02
1	H	28	LYS	N-CA-C	5.77	120.05	112.89
1	G	13	ARG	NE-CZ-NH1	-5.74	115.76	121.50
1	L	105	LYS	N-CA-C	-5.74	104.93	111.07
1	K	105	LYS	N-CA-C	-5.71	104.96	111.07
1	K	28	LYS	N-CA-C	5.70	119.41	112.23
1	I	13	ARG	NE-CZ-NH1	-5.69	115.81	121.50
1	F	432	GLN	N-CA-C	5.68	119.47	112.54
1	N	432	GLN	N-CA-C	5.67	117.93	111.02
1	I	5	ASP	N-CA-C	-5.65	99.69	108.90
1	B	255	GLU	N-CA-C	5.65	118.42	109.50
1	D	108	ALA	N-CA-C	-5.63	105.24	111.71
1	J	255	GLU	N-CA-C	5.61	118.87	109.95
1	A	8	PHE	N-CA-C	5.61	118.36	109.50
1	L	432	GLN	N-CA-C	5.60	117.85	111.02
1	D	238	GLU	N-CA-C	-5.59	105.96	112.89
1	C	13	ARG	NE-CZ-NH2	5.58	124.23	119.20
1	I	432	GLN	N-CA-C	5.58	117.83	111.02
1	K	13	ARG	NE-CZ-NH2	5.54	124.19	119.20
1	F	13	ARG	NE-CZ-NH2	5.51	124.16	119.20
1	C	62	LEU	N-CA-C	5.49	117.16	110.41
1	I	105	LYS	N-CA-C	-5.49	105.20	111.07
1	E	299	THR	N-CA-C	5.48	117.74	109.41
1	I	13	ARG	NE-CZ-NH2	5.48	124.13	119.20
1	D	8	PHE	N-CA-C	5.47	118.15	109.50
1	B	432	GLN	N-CA-C	5.47	119.21	112.54
1	B	8	PHE	N-CA-C	5.46	118.12	109.50
1	B	238	GLU	N-CA-C	-5.46	106.12	112.89
1	F	333	ILE	N-CA-C	5.45	115.70	107.80
1	L	255	GLU	N-CA-C	5.44	118.59	109.95
1	G	333	ILE	N-CA-C	5.44	115.68	107.80
1	K	255	GLU	N-CA-C	5.43	118.59	109.95
1	D	255	GLU	N-CA-C	5.42	118.40	109.72
1	I	8	PHE	N-CA-C	5.41	118.37	109.72
1	C	238	GLU	N-CA-C	-5.38	106.22	112.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	255	GLU	N-CA-C	5.36	118.46	109.95
1	B	62	LEU	N-CA-C	5.35	117.43	110.53
1	L	32	GLY	N-CA-C	5.35	123.25	112.34
1	F	62	LEU	N-CA-C	5.34	116.98	110.41
1	B	196	ASP	N-CA-C	5.33	117.62	109.62
1	M	13	ARG	NE-CZ-NH2	5.33	124.00	119.20
1	D	299	THR	N-CA-C	5.32	117.49	109.41
1	L	8	PHE	N-CA-C	5.30	118.20	109.72
1	M	432	GLN	N-CA-C	5.29	117.48	111.02
1	A	238	GLU	N-CA-C	-5.29	106.33	112.89
1	M	255	GLU	N-CA-C	5.28	118.35	109.95
1	I	255	GLU	N-CA-C	5.28	118.34	109.95
1	F	238	GLU	N-CA-C	-5.27	106.11	112.54
1	B	100	ILE	N-CA-C	5.27	115.48	110.42
1	C	135	SER	N-CA-C	5.26	117.80	109.96
1	G	62	LEU	N-CA-C	5.26	116.89	110.41
1	M	316	ASP	N-CA-C	-5.26	106.12	112.54
1	N	13	ARG	NE-CZ-NH2	5.26	123.93	119.20
1	E	62	LEU	N-CA-C	5.25	116.87	110.41
1	A	333	ILE	N-CA-C	5.23	115.38	107.80
1	B	108	ALA	N-CA-C	-5.23	105.69	111.71
1	A	242	LYS	N-CA-C	-5.22	103.50	110.55
1	F	30	THR	N-CA-C	-5.21	106.24	113.18
1	G	242	LYS	N-CA-C	-5.21	103.51	110.55
1	B	242	LYS	N-CA-C	-5.21	103.51	110.55
1	D	438	VAL	N-CA-C	-5.21	105.42	110.42
1	C	8	PHE	N-CA-C	5.21	117.73	109.50
1	L	316	ASP	N-CA-C	-5.20	106.19	112.54
1	L	351	GLN	N-CA-C	-5.20	105.06	111.40
1	M	333	ILE	N-CA-C	5.19	115.33	107.75
1	N	523	ASP	N-CA-C	5.18	117.37	110.53
1	E	100	ILE	N-CA-C	5.18	115.39	110.42
1	N	5	ASP	N-CA-C	-5.18	100.45	108.90
1	N	110	GLY	N-CA-C	5.18	120.86	114.69
1	C	432	GLN	N-CA-C	5.18	118.70	112.38
1	G	196	ASP	N-CA-C	5.17	117.38	109.62
1	F	100	ILE	N-CA-C	5.16	115.89	110.62
1	F	116	LEU	N-CA-C	-5.16	105.08	111.33
1	C	333	ILE	N-CA-C	5.16	115.28	107.80
1	A	135	SER	N-CA-C	5.16	117.65	109.96
1	C	299	THR	N-CA-C	5.16	117.25	109.41
1	G	8	PHE	N-CA-C	5.16	117.65	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	28	LYS	N-CA-C	5.14	119.18	113.01
1	E	333	ILE	N-CA-C	5.14	115.26	107.80
1	G	238	GLU	N-CA-C	-5.14	106.27	112.54
1	N	316	ASP	N-CA-C	-5.14	106.27	112.54
1	D	333	ILE	N-CA-C	5.13	115.24	107.80
1	J	110	GLY	N-CA-C	5.13	120.79	114.69
1	D	28	LYS	N-CA-C	5.12	119.16	113.01
1	D	242	LYS	N-CA-C	-5.12	103.64	110.55
1	H	51	LYS	N-CA-C	-5.11	105.76	112.41
1	L	333	ILE	N-CA-C	5.11	115.21	107.75
1	C	242	LYS	N-CA-C	-5.11	103.66	110.55
1	M	132	LYS	N-CA-C	-5.10	106.56	112.89
1	A	108	ALA	N-CA-C	-5.09	105.85	111.71
1	N	333	ILE	N-CA-C	5.08	115.17	107.75
1	A	438	VAL	N-CA-C	-5.08	105.55	110.42
1	A	62	LEU	N-CA-C	5.07	116.65	110.41
1	E	242	LYS	N-CA-C	-5.07	103.70	110.55
1	B	299	THR	N-CA-C	5.07	117.12	109.41
1	C	196	ASP	N-CA-C	5.07	117.22	109.62
1	E	116	LEU	N-CA-C	-5.07	105.20	111.33
1	B	28	LYS	N-CA-C	5.06	119.17	112.89
1	E	135	SER	N-CA-C	5.06	117.50	109.96
1	E	238	GLU	N-CA-C	-5.06	105.95	111.82
1	F	196	ASP	N-CA-C	5.06	117.21	109.62
1	K	351	GLN	N-CA-C	-5.06	105.23	111.40
1	N	399	ALA	N-CA-C	-5.04	107.26	113.41
1	A	196	ASP	N-CA-C	5.03	117.17	109.62
1	I	316	ASP	N-CA-C	-5.03	106.41	112.54
1	K	316	ASP	N-CA-C	-5.03	106.41	112.54
1	M	267	MET	N-CA-C	-5.01	107.24	113.55
1	D	116	LEU	N-CA-C	-5.00	105.28	111.33
1	J	316	ASP	N-CA-C	-5.00	106.44	112.54

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3855	0	3983	206	0
1	B	3855	0	3983	187	0
1	C	3855	0	3983	191	0
1	D	3855	0	3983	209	0
1	E	3855	0	3983	223	0
1	F	3855	0	3983	222	1
1	G	3855	0	3983	197	0
1	H	3855	0	3983	229	0
1	I	3855	0	3983	215	0
1	J	3855	0	3983	210	0
1	K	3855	0	3983	236	0
1	L	3855	0	3983	260	0
1	M	3855	0	3983	247	1
1	N	3855	0	3983	233	0
All	All	53970	0	55762	2929	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 27.

All (2929) 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:F:326:ASN:HD22	1:F:329:THR:HB	1.03	1.12
1:A:326:ASN:HD22	1:A:329:THR:HB	1.05	1.11
1:C:326:ASN:HD22	1:C:329:THR:HB	1.07	1.11
1:E:326:ASN:HD22	1:E:329:THR:HB	1.08	1.09
1:D:326:ASN:HD22	1:D:329:THR:HB	1.04	1.08
1:G:326:ASN:HD22	1:G:329:THR:HB	1.04	1.07
1:B:326:ASN:HD22	1:B:329:THR:HB	1.11	1.05
1:E:519:CYS:HB3	1:F:38:VAL:HG13	1.46	0.98
1:J:169:VAL:HG21	1:J:377:ALA:HB2	1.51	0.91
1:F:326:ASN:ND2	1:F:329:THR:HB	1.87	0.90
1:K:33:PRO:HD2	1:K:454:ILE:HG23	1.54	0.90
1:A:326:ASN:ND2	1:A:329:THR:HB	1.88	0.88
1:G:326:ASN:ND2	1:G:329:THR:HB	1.87	0.88
1:B:166:MET:HE2	1:B:171:LYS:HA	1.53	0.88
1:L:169:VAL:HG21	1:L:377:ALA:HB2	1.54	0.88
1:G:166:MET:HE2	1:G:171:LYS:HA	1.56	0.88
1:I:166:MET:HE2	1:I:171:LYS:HA	1.55	0.88
1:E:166:MET:HE2	1:E:171:LYS:HA	1.56	0.88
1:K:166:MET:HE2	1:K:171:LYS:HA	1.54	0.88
1:A:455:VAL:HG13	1:A:460:GLU:HB2	1.55	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:166:MET:HE2	1:D:171:LYS:HA	1.56	0.88
1:K:169:VAL:HG21	1:K:377:ALA:HB2	1.54	0.88
1:H:166:MET:HE2	1:H:171:LYS:HA	1.56	0.87
1:D:326:ASN:ND2	1:D:329:THR:HB	1.88	0.87
1:I:169:VAL:HG21	1:I:377:ALA:HB2	1.56	0.87
1:A:32:GLY:HA3	1:A:454:ILE:HG23	1.55	0.87
1:H:169:VAL:HG21	1:H:377:ALA:HB2	1.57	0.86
1:M:166:MET:HE2	1:M:171:LYS:HA	1.54	0.86
1:C:326:ASN:ND2	1:C:329:THR:HB	1.89	0.86
1:A:166:MET:HE2	1:A:171:LYS:HA	1.57	0.86
1:K:230:ILE:HD12	1:K:261:THR:HG21	1.58	0.86
1:I:230:ILE:HD12	1:I:261:THR:HG21	1.58	0.86
1:N:166:MET:HE2	1:N:171:LYS:HA	1.58	0.86
1:N:169:VAL:HG21	1:N:377:ALA:HB2	1.54	0.85
1:L:166:MET:HE2	1:L:171:LYS:HA	1.57	0.85
1:G:455:VAL:HG13	1:G:460:GLU:HB2	1.58	0.84
1:B:455:VAL:HG13	1:B:460:GLU:HB2	1.57	0.84
1:C:455:VAL:HG13	1:C:460:GLU:HB2	1.59	0.84
1:D:16:MET:SD	1:D:73:MET:HE1	2.19	0.83
1:M:169:VAL:HG21	1:M:377:ALA:HB2	1.58	0.83
1:E:326:ASN:ND2	1:E:329:THR:HB	1.92	0.83
1:N:230:ILE:HD12	1:N:261:THR:HG21	1.60	0.83
1:F:16:MET:SD	1:F:73:MET:HE1	2.19	0.82
1:K:33:PRO:HD2	1:K:454:ILE:CG2	2.10	0.82
1:H:230:ILE:HD12	1:H:261:THR:HG21	1.59	0.82
1:J:166:MET:HE2	1:J:171:LYS:HA	1.59	0.82
1:J:253:ASP:HB2	1:J:277:LYS:HE3	1.61	0.82
1:K:28:LYS:C	1:K:30:THR:H	1.85	0.81
1:H:32:GLY:HA3	1:H:454:ILE:HG23	1.59	0.81
1:H:221:LEU:HD23	1:H:249:ILE:HD12	1.62	0.81
1:K:449:ALA:HB3	1:K:450:PRO:HD3	1.61	0.81
1:M:230:ILE:HD12	1:M:261:THR:HG21	1.62	0.81
1:N:253:ASP:HB2	1:N:277:LYS:HE3	1.62	0.81
1:F:166:MET:HE2	1:F:171:LYS:HA	1.61	0.81
1:G:200:LEU:HG	1:G:276:VAL:HA	1.61	0.81
1:J:230:ILE:HD12	1:J:261:THR:HG21	1.63	0.81
1:G:311:LYS:NZ	1:N:313:THR:HG23	1.95	0.81
1:D:200:LEU:HG	1:D:276:VAL:HA	1.64	0.80
1:L:520:MET:HG2	1:M:39:VAL:HB	1.62	0.80
1:N:214:GLU:O	1:N:215:LEU:HD23	1.81	0.80
1:K:16:MET:SD	1:K:514:MET:HE2	2.22	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:16:MET:SD	1:H:514:MET:HE2	2.21	0.80
1:I:449:ALA:HB3	1:I:450:PRO:HD3	1.63	0.80
1:G:16:MET:SD	1:G:73:MET:HE1	2.22	0.80
1:E:517:THR:HG21	1:F:39:VAL:HG23	1.64	0.80
1:C:166:MET:HE2	1:C:171:LYS:HA	1.62	0.80
1:E:69:MET:SD	1:F:41:ASP:HB2	2.21	0.80
1:M:449:ALA:HB3	1:M:450:PRO:HD3	1.62	0.80
1:D:455:VAL:HG13	1:D:460:GLU:HB2	1.64	0.79
1:I:253:ASP:HB2	1:I:277:LYS:HE3	1.64	0.79
1:K:27:VAL:O	1:K:30:THR:HG22	1.81	0.79
1:L:230:ILE:HD12	1:L:261:THR:HG21	1.62	0.79
1:L:253:ASP:HB2	1:L:277:LYS:HE3	1.63	0.79
1:C:200:LEU:HG	1:C:276:VAL:HA	1.62	0.79
1:N:449:ALA:HB3	1:N:450:PRO:HD3	1.63	0.79
1:F:200:LEU:HG	1:F:276:VAL:HA	1.64	0.79
1:B:200:LEU:HG	1:B:276:VAL:HA	1.64	0.78
1:E:200:LEU:HG	1:E:276:VAL:HA	1.63	0.78
1:L:519:CYS:HB3	1:M:38:VAL:HG13	1.64	0.78
1:M:16:MET:SD	1:M:514:MET:HE2	2.23	0.78
1:E:8:PHE:HE1	1:F:26:ALA:HA	1.49	0.78
1:K:221:LEU:HD23	1:K:249:ILE:HD12	1.65	0.78
1:E:455:VAL:HG13	1:E:460:GLU:HB2	1.65	0.78
1:J:449:ALA:HB3	1:J:450:PRO:HD3	1.65	0.78
1:M:253:ASP:HB2	1:M:277:LYS:HE3	1.63	0.78
1:I:16:MET:SD	1:I:514:MET:HE2	2.24	0.78
1:N:32:GLY:HA3	1:N:454:ILE:HG23	1.66	0.77
1:J:221:LEU:HD23	1:J:249:ILE:HD12	1.65	0.77
1:L:8:PHE:HZ	1:M:26:ALA:HB2	1.47	0.77
1:L:254:VAL:HG12	1:L:259:LEU:HB2	1.66	0.77
1:L:8:PHE:HE1	1:M:26:ALA:HA	1.48	0.77
1:A:200:LEU:HG	1:A:276:VAL:HA	1.65	0.77
1:G:311:LYS:HZ3	1:N:313:THR:HG23	1.47	0.77
1:N:221:LEU:HD23	1:N:249:ILE:HD12	1.66	0.77
1:J:254:VAL:HG12	1:J:259:LEU:HB2	1.67	0.77
1:L:16:MET:SD	1:L:514:MET:HE2	2.25	0.77
1:H:253:ASP:HB2	1:H:277:LYS:HE3	1.67	0.76
1:I:221:LEU:HD23	1:I:249:ILE:HD12	1.67	0.76
1:A:34:LYS:HB3	1:G:114:MET:HG3	1.67	0.76
1:M:221:LEU:HD23	1:M:249:ILE:HD12	1.64	0.76
1:N:228:SER:O	1:N:257:GLU:HB3	1.85	0.76
1:L:449:ALA:HB3	1:L:450:PRO:HD3	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:381:VAL:HG21	1:K:393:LYS:HA	1.67	0.76
1:D:221:LEU:HD23	1:D:249:ILE:HD12	1.68	0.76
1:L:228:SER:O	1:L:257:GLU:HB3	1.85	0.76
1:B:326:ASN:ND2	1:B:329:THR:HB	1.96	0.76
1:H:494:LEU:H	1:H:494:LEU:HD12	1.51	0.76
1:D:16:MET:HB3	1:D:514:MET:HE3	1.67	0.76
1:H:449:ALA:HB3	1:H:450:PRO:HD3	1.65	0.76
1:I:381:VAL:HG21	1:I:393:LYS:HA	1.66	0.76
1:N:381:VAL:HG21	1:N:393:LYS:HA	1.68	0.75
1:F:85:ALA:HB1	1:F:499:VAL:HG12	1.69	0.75
1:L:221:LEU:HD23	1:L:249:ILE:HD12	1.67	0.75
1:M:254:VAL:HG12	1:M:259:LEU:HB2	1.69	0.75
1:M:494:LEU:H	1:M:494:LEU:HD12	1.51	0.75
1:I:404:ARG:HG2	1:I:404:ARG:HH11	1.51	0.75
1:M:381:VAL:HG21	1:M:393:LYS:HA	1.68	0.75
1:K:254:VAL:HG12	1:K:259:LEU:HB2	1.68	0.75
1:E:311:LYS:HD3	1:I:311:LYS:HB3	1.69	0.75
1:F:221:LEU:HD23	1:F:249:ILE:HD12	1.69	0.75
1:I:254:VAL:HG12	1:I:259:LEU:HB2	1.68	0.75
1:E:311:LYS:HB3	1:I:311:LYS:HD3	1.67	0.75
1:N:494:LEU:H	1:N:494:LEU:HD12	1.51	0.75
1:I:383:ALA:HB3	1:I:389:MET:HB2	1.68	0.74
1:J:16:MET:SD	1:J:514:MET:HE2	2.27	0.74
1:C:85:ALA:HB1	1:C:499:VAL:HG12	1.69	0.74
1:L:381:VAL:HG21	1:L:393:LYS:HA	1.69	0.74
1:L:383:ALA:HB3	1:L:389:MET:HB2	1.67	0.74
1:B:85:ALA:HB1	1:B:499:VAL:HG12	1.69	0.74
1:N:254:VAL:HG12	1:N:259:LEU:HB2	1.70	0.74
1:A:85:ALA:HB1	1:A:499:VAL:HG12	1.69	0.74
1:E:85:ALA:HB1	1:E:499:VAL:HG12	1.70	0.74
1:E:16:MET:SD	1:E:73:MET:HE1	2.26	0.74
1:A:16:MET:SD	1:A:73:MET:HE1	2.27	0.74
1:K:18:ARG:HG2	1:K:18:ARG:HH11	1.53	0.74
1:A:221:LEU:HD23	1:A:249:ILE:HD12	1.70	0.74
1:H:241:ALA:HB1	1:N:231:ARG:NH1	2.03	0.74
1:I:494:LEU:H	1:I:494:LEU:HD12	1.53	0.74
1:H:461:LYS:HA	1:H:461:LYS:HE3	1.70	0.74
1:J:214:GLU:O	1:J:215:LEU:HD23	1.87	0.73
1:K:228:SER:O	1:K:257:GLU:HB3	1.87	0.73
1:I:461:LYS:HE3	1:I:461:LYS:HA	1.71	0.73
1:F:455:VAL:HG13	1:F:460:GLU:HB2	1.68	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:6:VAL:HG22	1:M:521:VAL:HG22	1.68	0.73
1:F:183:LEU:HD13	1:F:184:GLN:HG3	1.69	0.73
1:H:254:VAL:HG12	1:H:259:LEU:HB2	1.70	0.73
1:N:461:LYS:HA	1:N:461:LYS:HE3	1.71	0.73
1:C:221:LEU:HD23	1:C:249:ILE:HD12	1.69	0.73
1:D:118:ARG:HH22	1:E:34:LYS:HE2	1.53	0.73
1:F:455:VAL:HG11	1:F:462:PRO:HA	1.71	0.73
1:H:228:SER:O	1:H:257:GLU:HB3	1.88	0.73
1:L:461:LYS:HA	1:L:461:LYS:HE3	1.69	0.73
1:J:6:VAL:HG22	1:J:521:VAL:HG22	1.69	0.73
1:J:228:SER:O	1:J:257:GLU:HB3	1.89	0.73
1:K:28:LYS:C	1:K:30:THR:N	2.38	0.73
1:K:383:ALA:HB3	1:K:389:MET:HB2	1.70	0.73
1:G:183:LEU:HD13	1:G:184:GLN:HG3	1.71	0.72
1:I:228:SER:O	1:I:257:GLU:HB3	1.89	0.72
1:K:253:ASP:HB2	1:K:277:LYS:HE3	1.70	0.72
1:L:404:ARG:HG2	1:L:404:ARG:HH11	1.54	0.72
1:M:31:LEU:HD23	1:M:31:LEU:C	2.13	0.72
1:M:461:LYS:HA	1:M:461:LYS:HE3	1.71	0.72
1:E:183:LEU:HD13	1:E:184:GLN:HG3	1.72	0.72
1:L:494:LEU:HD12	1:L:494:LEU:H	1.55	0.72
1:M:16:MET:SD	1:M:73:MET:HE1	2.29	0.72
1:C:16:MET:SD	1:C:73:MET:HE1	2.30	0.72
1:G:85:ALA:HB1	1:G:499:VAL:HG12	1.70	0.72
1:J:461:LYS:HA	1:J:461:LYS:HE3	1.70	0.72
1:L:214:GLU:O	1:L:215:LEU:HD23	1.89	0.72
1:K:69:MET:HE2	1:L:39:VAL:CG1	2.20	0.71
1:K:69:MET:HE2	1:L:39:VAL:HG12	1.72	0.71
1:A:252:GLU:O	1:A:253:ASP:HB2	1.90	0.71
1:M:228:SER:O	1:M:257:GLU:HB3	1.89	0.71
1:N:235:PRO:HG3	1:N:310:GLU:HG3	1.72	0.71
1:J:494:LEU:H	1:J:494:LEU:HD12	1.54	0.71
1:C:183:LEU:HD22	1:C:184:GLN:H	1.54	0.71
1:D:183:LEU:HD13	1:D:184:GLN:HG3	1.72	0.71
1:H:214:GLU:O	1:H:215:LEU:HD23	1.89	0.71
1:J:169:VAL:HG12	1:J:173:GLY:HA3	1.72	0.71
1:A:183:LEU:HD13	1:A:184:GLN:HG3	1.72	0.71
1:C:183:LEU:HD13	1:C:184:GLN:HG3	1.71	0.71
1:F:183:LEU:HD22	1:F:184:GLN:H	1.55	0.71
1:H:381:VAL:HG21	1:H:393:LYS:HA	1.73	0.71
1:H:404:ARG:HG2	1:H:404:ARG:HH11	1.56	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:214:GLU:O	1:I:215:LEU:HD23	1.91	0.71
1:M:214:GLU:O	1:M:215:LEU:HD23	1.90	0.71
1:N:383:ALA:HB3	1:N:389:MET:HB2	1.72	0.71
1:E:16:MET:HB3	1:E:514:MET:HE3	1.73	0.71
1:K:169:VAL:HG12	1:K:173:GLY:HA3	1.73	0.71
1:K:404:ARG:HG2	1:K:404:ARG:HH11	1.56	0.71
1:B:183:LEU:HD13	1:B:184:GLN:HG3	1.73	0.71
1:C:16:MET:HB3	1:C:514:MET:HE3	1.72	0.71
1:J:235:PRO:HG3	1:J:310:GLU:HG3	1.73	0.71
1:J:383:ALA:HB3	1:J:389:MET:HB2	1.72	0.71
1:B:221:LEU:HD23	1:B:249:ILE:HD12	1.73	0.70
1:D:34:LYS:HD2	1:D:458:CYS:CB	2.21	0.70
1:H:18:ARG:HG2	1:H:18:ARG:HH11	1.56	0.70
1:L:6:VAL:HG22	1:L:521:VAL:HG22	1.71	0.70
1:H:269:GLY:HA3	1:N:257:GLU:HG3	1.72	0.70
1:E:183:LEU:HD22	1:E:184:GLN:H	1.56	0.70
1:K:118:ARG:HH22	1:L:34:LYS:HE2	1.56	0.70
1:M:404:ARG:HG2	1:M:404:ARG:HH11	1.57	0.70
1:E:221:LEU:HD23	1:E:249:ILE:HD12	1.74	0.70
1:I:235:PRO:HG3	1:I:310:GLU:HG3	1.74	0.70
1:K:494:LEU:H	1:K:494:LEU:HD12	1.56	0.70
1:M:18:ARG:HG2	1:M:18:ARG:HH11	1.57	0.70
1:N:404:ARG:HG2	1:N:404:ARG:HH11	1.57	0.70
1:M:383:ALA:HB3	1:M:389:MET:HB2	1.72	0.70
1:K:235:PRO:HG3	1:K:310:GLU:HG3	1.73	0.70
1:L:235:PRO:HG3	1:L:310:GLU:HG3	1.72	0.70
1:E:252:GLU:O	1:E:253:ASP:HB2	1.91	0.70
1:K:16:MET:SD	1:K:73:MET:HE1	2.32	0.70
1:G:183:LEU:HD22	1:G:184:GLN:H	1.56	0.69
1:J:404:ARG:HG2	1:J:404:ARG:HH11	1.56	0.69
1:M:22:VAL:HG11	1:M:62:LEU:HD21	1.74	0.69
1:N:6:VAL:HG22	1:N:521:VAL:HG22	1.73	0.69
1:E:8:PHE:HZ	1:F:26:ALA:HB2	1.58	0.69
1:G:221:LEU:HD23	1:G:249:ILE:HD12	1.72	0.69
1:K:461:LYS:HA	1:K:461:LYS:HE3	1.74	0.69
1:A:183:LEU:HD22	1:A:184:GLN:H	1.56	0.69
1:H:383:ALA:HB3	1:H:389:MET:HB2	1.74	0.69
1:N:169:VAL:HG12	1:N:173:GLY:HA3	1.75	0.69
1:A:16:MET:HB3	1:A:514:MET:HE3	1.73	0.69
1:H:235:PRO:HG3	1:H:310:GLU:HG3	1.75	0.69
1:F:252:GLU:O	1:F:253:ASP:HB2	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:82:ASN:HB2	1:F:89:THR:OG1	1.93	0.69
1:D:85:ALA:HB1	1:D:499:VAL:HG12	1.74	0.68
1:G:252:GLU:O	1:G:253:ASP:HB2	1.93	0.68
1:M:169:VAL:HG12	1:M:173:GLY:HA3	1.75	0.68
1:M:174:VAL:HG23	1:M:376:VAL:HA	1.75	0.68
1:A:455:VAL:HG13	1:A:460:GLU:CB	2.23	0.68
1:J:381:VAL:HG21	1:J:393:LYS:HA	1.74	0.68
1:K:214:GLU:O	1:K:215:LEU:HD23	1.92	0.68
1:N:22:VAL:HG11	1:N:62:LEU:HD21	1.75	0.68
1:F:311:LYS:HB3	1:H:311:LYS:HG2	1.75	0.68
1:L:17:LEU:HA	1:L:20:VAL:HG12	1.73	0.68
1:B:16:MET:SD	1:B:73:MET:HE1	2.34	0.68
1:J:194:GLN:HB2	1:J:331:THR:HB	1.74	0.68
1:L:169:VAL:HG12	1:L:173:GLY:HA3	1.75	0.68
1:M:173:GLY:O	1:M:404:ARG:NH2	2.27	0.68
1:B:16:MET:HB3	1:B:514:MET:HE3	1.75	0.68
1:K:194:GLN:HB2	1:K:331:THR:HB	1.75	0.68
1:L:194:GLN:HB2	1:L:331:THR:HB	1.76	0.68
1:B:247:LEU:HB3	1:B:273:VAL:HG12	1.73	0.68
1:C:247:LEU:HB3	1:C:273:VAL:HG12	1.74	0.68
1:K:496:PRO:O	1:K:499:VAL:HG13	1.94	0.68
1:H:183:LEU:HD13	1:H:184:GLN:N	2.09	0.68
1:K:183:LEU:HD13	1:K:184:GLN:N	2.09	0.68
1:H:194:GLN:HB2	1:H:331:THR:HB	1.76	0.67
1:L:199:TYR:HA	1:L:276:VAL:HG12	1.76	0.67
1:L:496:PRO:O	1:L:499:VAL:HG13	1.94	0.67
1:M:199:TYR:HA	1:M:276:VAL:HG12	1.76	0.67
1:N:16:MET:SD	1:N:514:MET:HE2	2.33	0.67
1:D:183:LEU:HD22	1:D:184:GLN:H	1.58	0.67
1:H:420:ILE:HG13	1:H:448:GLU:HG2	1.77	0.67
1:I:17:LEU:HA	1:I:20:VAL:HG12	1.77	0.67
1:D:455:VAL:HG11	1:D:462:PRO:HA	1.77	0.67
1:M:235:PRO:HG3	1:M:310:GLU:HG3	1.74	0.67
1:D:252:GLU:O	1:D:253:ASP:HB2	1.93	0.67
1:E:383:ALA:HB3	1:E:389:MET:HB2	1.76	0.67
1:J:496:PRO:O	1:J:499:VAL:HG13	1.95	0.67
1:C:449:ALA:HB3	1:C:450:PRO:HD3	1.77	0.67
1:E:8:PHE:CE1	1:F:26:ALA:HA	2.29	0.67
1:J:199:TYR:HA	1:J:276:VAL:HG12	1.76	0.67
1:M:17:LEU:HA	1:M:20:VAL:HG12	1.76	0.67
1:M:420:ILE:HG13	1:M:448:GLU:HG2	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:194:GLN:HB2	1:N:331:THR:HB	1.77	0.67
1:F:247:LEU:HB3	1:F:273:VAL:HG12	1.76	0.67
1:H:22:VAL:HG11	1:H:62:LEU:HD21	1.75	0.67
1:H:169:VAL:HG12	1:H:173:GLY:HA3	1.76	0.67
1:B:183:LEU:HD22	1:B:184:GLN:H	1.59	0.67
1:C:252:GLU:O	1:C:253:ASP:HB2	1.93	0.67
1:G:31:LEU:O	1:G:457:ASN:ND2	2.27	0.67
1:E:247:LEU:HB3	1:E:273:VAL:HG12	1.77	0.67
1:H:17:LEU:HA	1:H:20:VAL:HG12	1.77	0.67
1:M:326:ASN:OD1	1:M:329:THR:HB	1.95	0.67
1:J:174:VAL:HG21	1:J:376:VAL:HG22	1.76	0.66
1:L:8:PHE:CZ	1:M:26:ALA:HB2	2.29	0.66
1:B:455:VAL:HG13	1:B:460:GLU:CB	2.25	0.66
1:D:230:ILE:HD12	1:D:261:THR:HG21	1.77	0.66
1:G:16:MET:HB3	1:G:514:MET:HE3	1.77	0.66
1:L:22:VAL:HG11	1:L:62:LEU:HD21	1.77	0.66
1:K:237:LEU:O	1:K:237:LEU:HD23	1.96	0.66
1:L:420:ILE:HG13	1:L:448:GLU:HG2	1.76	0.66
1:G:247:LEU:HB3	1:G:273:VAL:HG12	1.77	0.66
1:H:496:PRO:O	1:H:499:VAL:HG13	1.95	0.66
1:K:219:PHE:O	1:K:247:LEU:HD12	1.95	0.66
1:B:230:ILE:HD12	1:B:261:THR:HG21	1.78	0.66
1:B:252:GLU:O	1:B:253:ASP:HB2	1.94	0.66
1:F:16:MET:HB3	1:F:514:MET:HE3	1.78	0.66
1:G:455:VAL:HG13	1:G:460:GLU:CB	2.26	0.66
1:I:22:VAL:HG11	1:I:62:LEU:HD21	1.76	0.66
1:I:169:VAL:HG12	1:I:173:GLY:HA3	1.78	0.66
1:J:18:ARG:HG2	1:J:18:ARG:HH11	1.61	0.66
1:M:194:GLN:HB2	1:M:331:THR:HB	1.77	0.66
1:G:228:SER:O	1:G:257:GLU:HB3	1.95	0.66
1:H:174:VAL:HG23	1:H:376:VAL:HA	1.78	0.66
1:I:199:TYR:HA	1:I:276:VAL:HG12	1.77	0.66
1:M:237:LEU:HD23	1:M:237:LEU:O	1.95	0.66
1:A:230:ILE:HD12	1:A:261:THR:HG21	1.78	0.66
1:A:449:ALA:HB3	1:A:450:PRO:HD3	1.78	0.66
1:G:482:THR:O	1:G:484:GLU:HG3	1.95	0.66
1:H:173:GLY:O	1:H:404:ARG:NH2	2.29	0.66
1:J:174:VAL:HG23	1:J:376:VAL:HA	1.77	0.66
1:L:18:ARG:HG2	1:L:18:ARG:HH11	1.61	0.65
1:L:237:LEU:O	1:L:237:LEU:HD23	1.96	0.65
1:L:519:CYS:O	1:M:39:VAL:N	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:482:THR:O	1:A:484:GLU:HG3	1.96	0.65
1:B:482:THR:O	1:B:484:GLU:HG3	1.95	0.65
1:J:183:LEU:HD13	1:J:184:GLN:N	2.10	0.65
1:M:249:ILE:HB	1:M:275:ALA:HB2	1.77	0.65
1:D:247:LEU:HB3	1:D:273:VAL:HG12	1.76	0.65
1:I:76:GLU:O	1:I:79:SER:HB3	1.97	0.65
1:K:174:VAL:HG23	1:K:376:VAL:HA	1.77	0.65
1:F:230:ILE:HD12	1:F:261:THR:HG21	1.78	0.65
1:G:183:LEU:O	1:G:184:GLN:HB2	1.95	0.65
1:H:199:TYR:HA	1:H:276:VAL:HG12	1.77	0.65
1:N:249:ILE:HB	1:N:275:ALA:HB2	1.78	0.65
1:K:199:TYR:HA	1:K:276:VAL:HG12	1.77	0.65
1:E:482:THR:O	1:E:484:GLU:HG3	1.97	0.65
1:L:174:VAL:HG23	1:L:376:VAL:HA	1.78	0.65
1:B:82:ASN:HB2	1:B:89:THR:OG1	1.97	0.65
1:C:230:ILE:HG22	1:C:257:GLU:OE1	1.97	0.65
1:C:321:LYS:O	1:C:322:ARG:HB2	1.97	0.65
1:E:183:LEU:O	1:E:184:GLN:HB2	1.97	0.65
1:A:247:LEU:HB3	1:A:273:VAL:HG12	1.79	0.65
1:B:176:THR:HG21	1:B:333:ILE:HD13	1.78	0.65
1:G:230:ILE:HD12	1:G:261:THR:HG21	1.78	0.65
1:I:237:LEU:O	1:I:237:LEU:HD23	1.95	0.65
1:J:326:ASN:OD1	1:J:329:THR:HB	1.97	0.65
1:K:22:VAL:HG11	1:K:62:LEU:HD21	1.79	0.65
1:L:69:MET:SD	1:M:41:ASP:HB2	2.36	0.65
1:B:383:ALA:HB3	1:B:389:MET:HB2	1.79	0.65
1:E:214:GLU:O	1:E:215:LEU:HD23	1.96	0.65
1:F:311:LYS:HD3	1:H:311:LYS:HA	1.77	0.65
1:H:32:GLY:O	1:H:34:LYS:N	2.30	0.65
1:L:520:MET:HA	1:M:39:VAL:O	1.97	0.65
1:N:17:LEU:HA	1:N:20:VAL:HG12	1.79	0.65
1:B:511:ALA:O	1:B:515:ILE:HG13	1.98	0.64
1:C:82:ASN:HB2	1:C:89:THR:OG1	1.97	0.64
1:G:230:ILE:HG22	1:G:257:GLU:OE1	1.96	0.64
1:K:249:ILE:HB	1:K:275:ALA:HB2	1.79	0.64
1:A:214:GLU:O	1:A:215:LEU:HD23	1.98	0.64
1:I:194:GLN:HB2	1:I:331:THR:HB	1.79	0.64
1:J:237:LEU:HD23	1:J:237:LEU:O	1.97	0.64
1:J:249:ILE:HB	1:J:275:ALA:HB2	1.78	0.64
1:L:69:MET:HE3	1:M:41:ASP:CA	2.27	0.64
1:N:173:GLY:O	1:N:404:ARG:NH2	2.29	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:18:ARG:HH11	1:I:18:ARG:HG2	1.61	0.64
1:J:22:VAL:HG11	1:J:62:LEU:HD21	1.77	0.64
1:N:420:ILE:HG13	1:N:448:GLU:HG2	1.80	0.64
1:A:228:SER:O	1:A:257:GLU:HB3	1.96	0.64
1:C:183:LEU:O	1:C:184:GLN:HB2	1.97	0.64
1:C:230:ILE:HD12	1:C:261:THR:HG21	1.77	0.64
1:D:183:LEU:O	1:D:184:GLN:HB2	1.97	0.64
1:E:82:ASN:HB2	1:E:89:THR:OG1	1.98	0.64
1:H:6:VAL:HG22	1:H:521:VAL:HG22	1.78	0.64
1:L:69:MET:HE2	1:M:39:VAL:HG12	1.78	0.64
1:A:193:MET:HE1	1:A:292:ILE:HG12	1.80	0.64
1:H:241:ALA:HB1	1:N:231:ARG:HH11	1.63	0.64
1:H:249:ILE:HB	1:H:275:ALA:HB2	1.79	0.64
1:N:183:LEU:HD13	1:N:184:GLN:N	2.13	0.64
1:D:254:VAL:HG12	1:D:259:LEU:HB2	1.80	0.64
1:F:31:LEU:HD23	1:F:94:VAL:HG11	1.78	0.64
1:I:249:ILE:HB	1:I:275:ALA:HB2	1.79	0.64
1:N:237:LEU:O	1:N:237:LEU:HD23	1.97	0.64
1:E:519:CYS:CB	1:F:38:VAL:HG13	2.23	0.64
1:N:18:ARG:HG2	1:N:18:ARG:HH11	1.62	0.64
1:B:202:PRO:HB3	1:B:205:ILE:HD11	1.80	0.64
1:F:7:LYS:HG3	1:F:66:PHE:CZ	2.32	0.64
1:K:8:PHE:HE1	1:L:26:ALA:HA	1.63	0.64
1:A:183:LEU:O	1:A:184:GLN:HB2	1.98	0.64
1:E:193:MET:HE1	1:E:292:ILE:HG12	1.80	0.64
1:G:214:GLU:O	1:G:215:LEU:HD23	1.97	0.64
1:G:254:VAL:HG12	1:G:259:LEU:HB2	1.80	0.64
1:H:174:VAL:HG21	1:H:376:VAL:HG22	1.81	0.64
1:N:37:ASN:HD21	1:N:51:LYS:NZ	1.96	0.64
1:B:183:LEU:O	1:B:184:GLN:HB2	1.96	0.63
1:F:69:MET:SD	1:G:41:ASP:HB2	2.38	0.63
1:F:183:LEU:O	1:F:184:GLN:HB2	1.97	0.63
1:I:496:PRO:O	1:I:499:VAL:HG13	1.96	0.63
1:L:249:ILE:HB	1:L:275:ALA:HB2	1.79	0.63
1:M:166:MET:CE	1:M:171:LYS:HA	2.28	0.63
1:B:230:ILE:HG22	1:B:257:GLU:OE1	1.98	0.63
1:D:202:PRO:HB3	1:D:205:ILE:HD11	1.80	0.63
1:E:228:SER:O	1:E:257:GLU:HB3	1.99	0.63
1:E:230:ILE:HD12	1:E:261:THR:HG21	1.80	0.63
1:G:144:ILE:HD13	1:G:166:MET:SD	2.38	0.63
1:A:222:LEU:HD23	1:A:250:ILE:HB	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:455:VAL:HG11	1:E:462:PRO:HA	1.79	0.63
1:F:297:GLY:O	1:F:318:GLY:HA2	1.98	0.63
1:A:321:LYS:O	1:A:322:ARG:HB2	1.99	0.63
1:F:90:THR:O	1:F:94:VAL:HG13	1.98	0.63
1:H:237:LEU:O	1:H:237:LEU:HD23	1.98	0.63
1:J:420:ILE:HG13	1:J:448:GLU:HG2	1.80	0.63
1:M:183:LEU:HD13	1:M:184:GLN:N	2.13	0.63
1:C:176:THR:HG21	1:C:333:ILE:HD13	1.80	0.63
1:E:511:ALA:O	1:E:515:ILE:HG13	1.99	0.63
1:I:420:ILE:HG13	1:I:448:GLU:HG2	1.79	0.63
1:J:213:VAL:HG12	1:J:214:GLU:N	2.13	0.63
1:N:174:VAL:HG23	1:N:376:VAL:HA	1.79	0.63
1:N:247:LEU:HB3	1:N:273:VAL:HG12	1.80	0.63
1:C:482:THR:O	1:C:484:GLU:HG3	1.99	0.63
1:D:449:ALA:HB3	1:D:450:PRO:HD3	1.81	0.63
1:L:8:PHE:CE1	1:M:26:ALA:HA	2.31	0.63
1:M:496:PRO:O	1:M:499:VAL:HG13	1.99	0.63
1:N:199:TYR:HA	1:N:276:VAL:HG12	1.79	0.63
1:A:511:ALA:O	1:A:515:ILE:HG13	1.98	0.63
1:C:455:VAL:HG13	1:C:460:GLU:CB	2.29	0.63
1:I:451:LEU:C	1:I:451:LEU:HD23	2.24	0.63
1:A:297:GLY:O	1:A:318:GLY:HA2	1.99	0.63
1:F:230:ILE:HG22	1:F:257:GLU:OE1	1.99	0.63
1:J:16:MET:SD	1:J:73:MET:HE1	2.38	0.63
1:D:228:SER:O	1:D:257:GLU:HB3	1.98	0.63
1:E:202:PRO:HB3	1:E:205:ILE:HD11	1.80	0.63
1:E:230:ILE:HG22	1:E:257:GLU:OE1	1.99	0.63
1:K:28:LYS:O	1:K:30:THR:N	2.32	0.63
1:K:420:ILE:HG13	1:K:448:GLU:HG2	1.81	0.63
1:M:451:LEU:HD23	1:M:451:LEU:C	2.23	0.63
1:B:7:LYS:HG3	1:B:66:PHE:CZ	2.34	0.62
1:E:517:THR:CG2	1:F:39:VAL:HG23	2.27	0.62
1:I:183:LEU:HD13	1:I:184:GLN:N	2.14	0.62
1:J:247:LEU:HB3	1:J:273:VAL:HG12	1.81	0.62
1:K:166:MET:CE	1:K:171:LYS:HA	2.27	0.62
1:K:213:VAL:HG12	1:K:214:GLU:N	2.13	0.62
1:N:326:ASN:OD1	1:N:329:THR:HB	1.99	0.62
1:C:193:MET:HE1	1:C:292:ILE:HG12	1.81	0.62
1:F:449:ALA:HB3	1:F:450:PRO:HD3	1.81	0.62
1:L:493:ILE:O	1:L:493:ILE:HG22	1.97	0.62
1:M:391:GLU:O	1:M:394:ALA:HB3	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:214:GLU:O	1:C:215:LEU:HD23	1.99	0.62
1:D:295:LEU:HA	1:D:342:ILE:HD11	1.81	0.62
1:D:326:ASN:HD22	1:D:329:THR:CB	1.97	0.62
1:F:228:SER:O	1:F:257:GLU:HB3	1.99	0.62
1:I:213:VAL:HG12	1:I:214:GLU:N	2.13	0.62
1:M:247:LEU:HB3	1:M:273:VAL:HG12	1.81	0.62
1:B:131:LEU:CD1	1:B:422:VAL:HG21	2.29	0.62
1:C:131:LEU:CD1	1:C:422:VAL:HG21	2.29	0.62
1:C:202:PRO:HB3	1:C:205:ILE:HD11	1.81	0.62
1:A:82:ASN:HB2	1:A:89:THR:OG1	1.99	0.62
1:C:69:MET:SD	1:D:41:ASP:HB2	2.40	0.62
1:C:222:LEU:HD23	1:C:250:ILE:HB	1.81	0.62
1:D:383:ALA:HB3	1:D:389:MET:HB2	1.80	0.62
1:H:247:LEU:HB3	1:H:273:VAL:HG12	1.82	0.62
1:H:493:ILE:HG22	1:H:493:ILE:O	1.99	0.62
1:D:214:GLU:O	1:D:215:LEU:HD23	2.00	0.62
1:D:230:ILE:HG22	1:D:257:GLU:OE1	1.99	0.62
1:H:183:LEU:O	1:H:184:GLN:HB2	1.99	0.62
1:J:17:LEU:HA	1:J:20:VAL:HG12	1.81	0.62
1:A:176:THR:HG21	1:A:333:ILE:HD13	1.82	0.62
1:C:455:VAL:HG11	1:C:462:PRO:HA	1.81	0.62
1:D:222:LEU:HD23	1:D:250:ILE:HB	1.80	0.62
1:G:90:THR:O	1:G:94:VAL:HG13	2.00	0.62
1:K:76:GLU:O	1:K:79:SER:HB3	1.98	0.62
1:K:349:ILE:O	1:K:353:ILE:HG13	2.00	0.62
1:N:213:VAL:HG12	1:N:214:GLU:N	2.15	0.62
1:D:482:THR:O	1:D:484:GLU:HG3	1.98	0.62
1:J:37:ASN:ND2	1:J:51:LYS:HG3	2.14	0.62
1:J:219:PHE:O	1:J:247:LEU:HD12	2.00	0.62
1:F:519:CYS:HB3	1:G:38:VAL:HG13	1.81	0.62
1:G:222:LEU:HD23	1:G:250:ILE:HB	1.82	0.62
1:G:321:LYS:O	1:G:322:ARG:HB2	1.99	0.62
1:H:76:GLU:O	1:H:79:SER:HB3	2.00	0.62
1:I:6:VAL:HG22	1:I:521:VAL:HG22	1.81	0.62
1:K:173:GLY:O	1:K:404:ARG:NH2	2.33	0.62
1:N:219:PHE:O	1:N:247:LEU:HD12	1.99	0.62
1:A:131:LEU:CD1	1:A:422:VAL:HG21	2.30	0.61
1:L:519:CYS:CB	1:M:38:VAL:HG13	2.29	0.61
1:M:321:LYS:O	1:M:322:ARG:HB2	2.00	0.61
1:E:449:ALA:HB3	1:E:450:PRO:HD3	1.81	0.61
1:F:383:ALA:HB3	1:F:389:MET:HB2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:202:PRO:HB3	1:G:205:ILE:HD11	1.81	0.61
1:K:6:VAL:HG22	1:K:521:VAL:HG22	1.81	0.61
1:B:321:LYS:O	1:B:322:ARG:HB2	2.00	0.61
1:E:245:LYS:NZ	1:E:319:GLN:HE22	1.98	0.61
1:C:519:CYS:HB3	1:D:38:VAL:HG13	1.82	0.61
1:D:176:THR:HG21	1:D:333:ILE:HD13	1.82	0.61
1:C:383:ALA:HB3	1:C:389:MET:HB2	1.82	0.61
1:D:213:VAL:HG12	1:D:214:GLU:N	2.16	0.61
1:D:519:CYS:HB3	1:E:38:VAL:HG13	1.83	0.61
1:F:429:LEU:HD12	1:F:430:ARG:H	1.65	0.61
1:M:493:ILE:HG22	1:M:493:ILE:O	2.01	0.61
1:I:183:LEU:O	1:I:184:GLN:HB2	2.00	0.61
1:L:173:GLY:O	1:L:404:ARG:NH2	2.34	0.61
1:L:174:VAL:HG21	1:L:376:VAL:HG22	1.82	0.61
1:C:228:SER:O	1:C:257:GLU:HB3	2.00	0.61
1:F:321:LYS:O	1:F:322:ARG:HB2	2.00	0.61
1:H:37:ASN:ND2	1:H:51:LYS:HG3	2.16	0.61
1:K:17:LEU:HA	1:K:20:VAL:HG12	1.81	0.61
1:N:37:ASN:ND2	1:N:51:LYS:HG3	2.16	0.61
1:A:383:ALA:HB3	1:A:389:MET:HB2	1.82	0.61
1:C:213:VAL:HG12	1:C:214:GLU:N	2.16	0.61
1:D:8:PHE:HE1	1:E:26:ALA:HA	1.65	0.61
1:D:34:LYS:HD2	1:D:458:CYS:SG	2.40	0.61
1:F:202:PRO:HB3	1:F:205:ILE:HD11	1.82	0.61
1:H:213:VAL:HG12	1:H:214:GLU:N	2.16	0.61
1:J:183:LEU:O	1:J:184:GLN:HB2	2.00	0.61
1:L:69:MET:HE2	1:M:39:VAL:CG1	2.31	0.61
1:A:254:VAL:HG12	1:A:259:LEU:HB2	1.82	0.61
1:G:383:ALA:HB3	1:G:389:MET:HB2	1.83	0.61
1:H:499:VAL:HG22	1:H:500:THR:N	2.16	0.61
1:M:174:VAL:HG21	1:M:376:VAL:HG22	1.83	0.61
1:N:203:TYR:HB3	1:N:267:MET:HE1	1.83	0.61
1:B:449:ALA:HB3	1:B:450:PRO:HD3	1.82	0.60
1:G:449:ALA:HB3	1:G:450:PRO:HD3	1.82	0.60
1:H:219:PHE:O	1:H:247:LEU:HD12	2.00	0.60
1:L:183:LEU:HD13	1:L:184:GLN:N	2.16	0.60
1:J:82:ASN:HB2	1:J:89:THR:OG1	2.01	0.60
1:L:82:ASN:HB2	1:L:89:THR:OG1	2.00	0.60
1:H:451:LEU:HD23	1:H:451:LEU:C	2.26	0.60
1:K:37:ASN:ND2	1:K:51:LYS:HG3	2.16	0.60
1:M:249:ILE:HB	1:M:275:ALA:CB	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:82:ASN:HB2	1:N:89:THR:OG1	2.01	0.60
1:H:279:PRO:O	1:H:285:ARG:HG3	2.01	0.60
1:K:326:ASN:OD1	1:K:329:THR:HB	2.01	0.60
1:L:219:PHE:O	1:L:247:LEU:HD12	2.01	0.60
1:M:20:VAL:HG23	1:M:74:VAL:HG11	1.83	0.60
1:N:16:MET:SD	1:N:73:MET:HE1	2.41	0.60
1:E:7:LYS:HG3	1:E:66:PHE:CZ	2.36	0.60
1:E:389:MET:SD	1:E:389:MET:C	2.84	0.60
1:F:176:THR:HG21	1:F:333:ILE:HD13	1.83	0.60
1:I:200:LEU:CD1	1:I:254:VAL:HB	2.32	0.60
1:K:455:VAL:HG13	1:K:460:GLU:HB3	1.83	0.60
1:L:213:VAL:HG12	1:L:214:GLU:N	2.16	0.60
1:L:247:LEU:HB3	1:L:273:VAL:HG12	1.81	0.60
1:C:295:LEU:HA	1:C:342:ILE:HD11	1.84	0.60
1:D:193:MET:HE1	1:D:292:ILE:HG12	1.84	0.60
1:G:213:VAL:HG12	1:G:214:GLU:N	2.16	0.60
1:I:174:VAL:HG21	1:I:376:VAL:HG22	1.84	0.60
1:K:213:VAL:HG12	1:K:214:GLU:H	1.65	0.60
1:L:16:MET:SD	1:L:73:MET:HE1	2.42	0.60
1:B:32:GLY:HA3	1:B:454:ILE:HG23	1.84	0.60
1:E:176:THR:HG21	1:E:333:ILE:HD13	1.82	0.60
1:E:254:VAL:HG12	1:E:259:LEU:HB2	1.83	0.60
1:F:193:MET:HE1	1:F:292:ILE:HG12	1.83	0.60
1:F:214:GLU:O	1:F:215:LEU:HD23	2.01	0.60
1:H:236:VAL:O	1:H:236:VAL:HG12	2.01	0.60
1:L:37:ASN:ND2	1:L:51:LYS:HG3	2.17	0.60
1:B:222:LEU:HD23	1:B:250:ILE:HB	1.84	0.60
1:C:144:ILE:HD13	1:C:166:MET:SD	2.42	0.60
1:C:254:VAL:HG12	1:C:259:LEU:HB2	1.83	0.60
1:E:295:LEU:HA	1:E:342:ILE:HD11	1.83	0.60
1:F:131:LEU:CD1	1:F:422:VAL:HG21	2.31	0.60
1:H:34:LYS:HG3	1:H:458:CYS:HA	1.84	0.60
1:H:82:ASN:HB2	1:H:89:THR:OG1	2.02	0.60
1:J:349:ILE:O	1:J:353:ILE:HG13	2.02	0.60
1:K:247:LEU:HB3	1:K:273:VAL:HG12	1.82	0.60
1:L:166:MET:CE	1:L:171:LYS:HA	2.30	0.60
1:E:222:LEU:HD23	1:E:250:ILE:HB	1.83	0.60
1:F:254:VAL:HG12	1:F:259:LEU:HB2	1.84	0.60
1:G:82:ASN:HB2	1:G:89:THR:OG1	2.01	0.60
1:J:173:GLY:O	1:J:404:ARG:NH2	2.34	0.60
1:K:183:LEU:O	1:K:184:GLN:HB2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:114:MET:HG3	1:M:34:LYS:HD2	1.82	0.60
1:M:114:MET:HG3	1:N:34:LYS:HB3	1.83	0.60
1:A:7:LYS:HG3	1:A:66:PHE:CZ	2.36	0.59
1:B:254:VAL:HG12	1:B:259:LEU:HB2	1.83	0.59
1:D:245:LYS:HZ2	1:D:319:GLN:HE22	1.50	0.59
1:I:82:ASN:HB2	1:I:89:THR:OG1	2.02	0.59
1:M:74:VAL:HA	1:M:510:VAL:HG21	1.84	0.59
1:A:31:LEU:O	1:A:457:ASN:ND2	2.31	0.59
1:B:144:ILE:HD13	1:B:166:MET:SD	2.42	0.59
1:D:69:MET:SD	1:E:41:ASP:HB2	2.42	0.59
1:D:321:LYS:O	1:D:322:ARG:HB2	2.01	0.59
1:J:249:ILE:HB	1:J:275:ALA:CB	2.32	0.59
1:A:23:LEU:HD23	1:A:74:VAL:HG22	1.83	0.59
1:A:295:LEU:HA	1:A:342:ILE:HD11	1.83	0.59
1:E:455:VAL:HG13	1:E:460:GLU:CB	2.31	0.59
1:I:174:VAL:HG23	1:I:376:VAL:HA	1.83	0.59
1:I:249:ILE:HB	1:I:275:ALA:CB	2.31	0.59
1:J:203:TYR:HB3	1:J:267:MET:HE1	1.84	0.59
1:K:202:PRO:O	1:K:203:TYR:HB2	2.02	0.59
1:L:183:LEU:O	1:L:184:GLN:HB2	2.03	0.59
1:A:30:THR:O	1:A:35:GLY:HA3	2.02	0.59
1:A:230:ILE:HG22	1:A:257:GLU:OE1	2.02	0.59
1:D:131:LEU:CD1	1:D:422:VAL:HG21	2.32	0.59
1:D:455:VAL:HG13	1:D:460:GLU:CB	2.30	0.59
1:F:223:ALA:O	1:F:251:ALA:HA	2.02	0.59
1:N:183:LEU:O	1:N:184:GLN:HB2	2.01	0.59
1:N:499:VAL:HG22	1:N:500:THR:N	2.17	0.59
1:D:511:ALA:O	1:D:515:ILE:HG13	2.01	0.59
1:E:23:LEU:HD23	1:E:74:VAL:CG2	2.32	0.59
1:J:213:VAL:HG12	1:J:214:GLU:H	1.67	0.59
1:J:279:PRO:O	1:J:285:ARG:HG3	2.02	0.59
1:K:193:MET:HE3	1:K:371:LYS:HD3	1.85	0.59
1:L:37:ASN:HD21	1:L:51:LYS:NZ	2.00	0.59
1:M:197:ARG:HG3	1:M:277:LYS:O	2.03	0.59
1:I:32:GLY:HA3	1:I:454:ILE:HG23	1.84	0.59
1:N:77:VAL:CG2	1:N:78:ALA:N	2.65	0.59
1:D:82:ASN:HB2	1:D:89:THR:OG1	2.02	0.59
1:E:321:LYS:O	1:E:322:ARG:HB2	2.03	0.59
1:L:451:LEU:C	1:L:451:LEU:HD23	2.27	0.59
1:C:223:ALA:O	1:C:251:ALA:HA	2.03	0.59
1:D:223:ALA:O	1:D:251:ALA:HA	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:23:LEU:HD23	1:F:74:VAL:CG2	2.33	0.59
1:J:493:ILE:HG22	1:J:493:ILE:O	2.03	0.59
1:L:326:ASN:OD1	1:L:329:THR:HB	2.03	0.59
1:M:203:TYR:HB3	1:M:267:MET:HE1	1.85	0.59
1:M:279:PRO:O	1:M:285:ARG:HG3	2.03	0.59
1:N:166:MET:CE	1:N:171:LYS:HA	2.31	0.59
1:C:213:VAL:HG12	1:C:214:GLU:H	1.68	0.59
1:D:245:LYS:NZ	1:D:319:GLN:HE22	2.01	0.59
1:E:32:GLY:O	1:E:35:GLY:N	2.36	0.59
1:H:3:ALA:HA	1:I:61:GLU:O	2.03	0.59
1:K:417:VAL:O	1:K:420:ILE:HG22	2.03	0.59
1:L:213:VAL:HG12	1:L:214:GLU:H	1.68	0.59
1:L:247:LEU:HD12	1:L:248:LEU:H	1.68	0.59
1:N:249:ILE:HB	1:N:275:ALA:CB	2.33	0.59
1:A:202:PRO:HB3	1:A:205:ILE:HD11	1.85	0.59
1:B:455:VAL:HG11	1:B:462:PRO:HA	1.85	0.59
1:D:7:LYS:HG3	1:D:66:PHE:CZ	2.38	0.59
1:E:213:VAL:HG12	1:E:214:GLU:N	2.18	0.59
1:F:482:THR:O	1:F:484:GLU:HG3	2.03	0.59
1:H:16:MET:SD	1:H:73:MET:HE1	2.43	0.59
1:I:247:LEU:HB3	1:I:273:VAL:HG12	1.84	0.59
1:I:349:ILE:O	1:I:353:ILE:HG13	2.01	0.59
1:J:169:VAL:CG2	1:J:377:ALA:HB2	2.29	0.59
1:K:69:MET:CE	1:L:39:VAL:HG12	2.32	0.59
1:M:349:ILE:O	1:M:353:ILE:HG13	2.03	0.59
1:A:440:ILE:HG22	1:A:441:LYS:N	2.17	0.58
1:D:257:GLU:HB2	1:E:269:GLY:HA3	1.85	0.58
1:G:297:GLY:O	1:G:318:GLY:HA2	2.02	0.58
1:H:349:ILE:O	1:H:353:ILE:HG13	2.02	0.58
1:K:82:ASN:HB2	1:K:89:THR:OG1	2.03	0.58
1:N:279:PRO:O	1:N:285:ARG:HG3	2.03	0.58
1:A:213:VAL:HG12	1:A:214:GLU:N	2.17	0.58
1:B:237:LEU:HD23	1:B:237:LEU:O	2.03	0.58
1:C:237:LEU:O	1:C:237:LEU:HD23	2.02	0.58
1:M:82:ASN:HB2	1:M:89:THR:OG1	2.03	0.58
1:B:213:VAL:HG12	1:B:214:GLU:N	2.18	0.58
1:B:228:SER:O	1:B:257:GLU:HB3	2.02	0.58
1:L:236:VAL:O	1:L:236:VAL:HG12	2.02	0.58
1:L:279:PRO:O	1:L:285:ARG:HG3	2.03	0.58
1:N:247:LEU:HB3	1:N:273:VAL:CG1	2.33	0.58
1:A:213:VAL:HG12	1:A:214:GLU:H	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:326:ASN:HD22	1:A:329:THR:CB	1.97	0.58
1:G:344:GLY:O	1:G:347:ALA:HB3	2.03	0.58
1:I:28:LYS:C	1:I:30:THR:H	2.12	0.58
1:I:326:ASN:OD1	1:I:329:THR:HB	2.04	0.58
1:J:236:VAL:O	1:J:236:VAL:HG12	2.03	0.58
1:K:236:VAL:O	1:K:236:VAL:HG12	2.04	0.58
1:K:247:LEU:HB3	1:K:273:VAL:CG1	2.33	0.58
1:M:213:VAL:HG12	1:M:214:GLU:N	2.18	0.58
1:A:23:LEU:HD23	1:A:74:VAL:CG2	2.33	0.58
1:F:222:LEU:HD23	1:F:250:ILE:HB	1.86	0.58
1:I:202:PRO:O	1:I:203:TYR:HB2	2.04	0.58
1:J:252:GLU:O	1:J:253:ASP:HB2	2.03	0.58
1:M:31:LEU:HB2	1:M:90:THR:HG21	1.86	0.58
1:M:202:PRO:O	1:M:203:TYR:HB2	2.02	0.58
1:M:252:GLU:O	1:M:253:ASP:HB2	2.03	0.58
1:H:202:PRO:O	1:H:203:TYR:HB2	2.03	0.58
1:B:242:LYS:C	1:B:244:GLY:H	2.12	0.58
1:G:176:THR:HG21	1:G:333:ILE:HD13	1.84	0.58
1:G:228:SER:OG	1:G:255:GLU:HB2	2.03	0.58
1:H:193:MET:HE3	1:H:371:LYS:HD3	1.85	0.58
1:I:166:MET:CE	1:I:171:LYS:HA	2.30	0.58
1:I:203:TYR:HB3	1:I:267:MET:HE1	1.86	0.58
1:I:391:GLU:O	1:I:394:ALA:HB3	2.03	0.58
1:J:202:PRO:O	1:J:203:TYR:HB2	2.04	0.58
1:K:174:VAL:HG21	1:K:376:VAL:HG22	1.83	0.58
1:K:249:ILE:HB	1:K:275:ALA:CB	2.33	0.58
1:L:391:GLU:O	1:L:394:ALA:HB3	2.03	0.58
1:B:23:LEU:HD23	1:B:74:VAL:CG2	2.33	0.58
1:G:30:THR:HB	1:G:51:LYS:O	2.03	0.58
1:H:326:ASN:OD1	1:H:329:THR:HB	2.03	0.58
1:M:455:VAL:HG13	1:M:460:GLU:HB3	1.84	0.58
1:N:202:PRO:O	1:N:204:PHE:N	2.34	0.58
1:D:213:VAL:HG12	1:D:214:GLU:H	1.68	0.58
1:I:279:PRO:O	1:I:285:ARG:HG3	2.03	0.58
1:I:319:GLN:O	1:I:336:VAL:HG23	2.04	0.58
1:J:166:MET:CE	1:J:171:LYS:HA	2.33	0.58
1:J:444:LEU:HA	1:J:447:MET:HE3	1.86	0.58
1:K:319:GLN:O	1:K:336:VAL:HG23	2.03	0.58
1:K:451:LEU:HD23	1:K:451:LEU:C	2.28	0.58
1:B:36:ARG:HH11	1:B:36:ARG:HG3	1.69	0.58
1:C:36:ARG:HG3	1:C:36:ARG:HH11	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:223:ALA:O	1:G:251:ALA:HA	2.02	0.58
1:I:193:MET:HE3	1:I:371:LYS:HD3	1.86	0.58
1:M:247:LEU:HB3	1:M:273:VAL:CG1	2.34	0.58
1:E:90:THR:O	1:E:94:VAL:HG13	2.04	0.57
1:F:33:PRO:C	1:F:35:GLY:H	2.11	0.57
1:F:144:ILE:HD13	1:F:166:MET:SD	2.44	0.57
1:G:31:LEU:HD23	1:G:453:GLN:HG2	1.86	0.57
1:I:455:VAL:HG13	1:I:460:GLU:HB3	1.86	0.57
1:J:247:LEU:HB3	1:J:273:VAL:CG1	2.34	0.57
1:L:249:ILE:HB	1:L:275:ALA:CB	2.33	0.57
1:N:174:VAL:HG21	1:N:376:VAL:HG22	1.86	0.57
1:C:242:LYS:C	1:C:244:GLY:H	2.12	0.57
1:E:8:PHE:CZ	1:F:26:ALA:HB2	2.39	0.57
1:F:455:VAL:HG13	1:F:460:GLU:CB	2.34	0.57
1:H:213:VAL:HG12	1:H:214:GLU:H	1.69	0.57
1:I:37:ASN:ND2	1:I:51:LYS:HG3	2.19	0.57
1:L:77:VAL:CG2	1:L:78:ALA:N	2.67	0.57
1:L:252:GLU:O	1:L:253:ASP:HB2	2.04	0.57
1:M:202:PRO:O	1:M:204:PHE:N	2.34	0.57
1:M:236:VAL:O	1:M:236:VAL:HG12	2.03	0.57
1:N:460:GLU:O	1:N:462:PRO:HD3	2.03	0.57
1:B:6:VAL:HG22	1:B:521:VAL:HG22	1.86	0.57
1:F:429:LEU:HD12	1:F:430:ARG:N	2.19	0.57
1:H:200:LEU:CD1	1:H:254:VAL:HB	2.34	0.57
1:I:77:VAL:CG2	1:I:78:ALA:N	2.67	0.57
1:J:499:VAL:HG22	1:J:500:THR:N	2.19	0.57
1:M:76:GLU:O	1:M:79:SER:HB3	2.03	0.57
1:N:139:SER:HB3	1:N:171:LYS:NZ	2.20	0.57
1:B:208:PRO:HG2	1:B:209:GLU:OE1	2.04	0.57
1:B:223:ALA:O	1:B:251:ALA:HA	2.04	0.57
1:D:297:GLY:O	1:D:318:GLY:HA2	2.05	0.57
1:F:440:ILE:HG22	1:F:441:LYS:N	2.18	0.57
1:G:245:LYS:HZ2	1:G:319:GLN:HE22	1.52	0.57
1:I:252:GLU:O	1:I:253:ASP:HB2	2.04	0.57
1:F:511:ALA:O	1:F:515:ILE:HG13	2.04	0.57
1:G:193:MET:HE1	1:G:292:ILE:HG12	1.85	0.57
1:H:63:GLU:HA	1:N:3:ALA:HB2	1.85	0.57
1:H:417:VAL:O	1:H:420:ILE:HG22	2.04	0.57
1:K:391:GLU:O	1:K:394:ALA:HB3	2.04	0.57
1:N:213:VAL:HG12	1:N:214:GLU:H	1.69	0.57
1:N:278:ALA:HB3	1:N:285:ARG:HD3	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:223:ALA:O	1:A:251:ALA:HA	2.04	0.57
1:F:245:LYS:NZ	1:F:319:GLN:HE22	2.03	0.57
1:H:203:TYR:HB3	1:H:267:MET:HE1	1.85	0.57
1:J:76:GLU:O	1:J:79:SER:HB3	2.03	0.57
1:L:305:ILE:O	1:L:305:ILE:HG22	2.05	0.57
1:M:77:VAL:HG23	1:M:78:ALA:N	2.18	0.57
1:B:389:MET:SD	1:B:389:MET:C	2.88	0.57
1:E:223:ALA:O	1:E:251:ALA:HA	2.04	0.57
1:H:221:LEU:HB3	1:H:249:ILE:HD13	1.87	0.57
1:I:305:ILE:O	1:I:305:ILE:HG22	2.04	0.57
1:J:77:VAL:CG2	1:J:78:ALA:N	2.67	0.57
1:L:28:LYS:C	1:L:30:THR:H	2.11	0.57
1:L:76:GLU:O	1:L:79:SER:HB3	2.04	0.57
1:M:77:VAL:CG2	1:M:78:ALA:N	2.67	0.57
1:N:247:LEU:HD12	1:N:248:LEU:H	1.69	0.57
1:G:295:LEU:HA	1:G:342:ILE:HD11	1.86	0.57
1:K:77:VAL:CG2	1:K:78:ALA:N	2.66	0.57
1:K:499:VAL:HG22	1:K:500:THR:N	2.20	0.57
1:M:223:ALA:O	1:M:251:ALA:HA	2.04	0.57
1:N:252:GLU:O	1:N:253:ASP:HB2	2.05	0.57
1:E:201:SER:O	1:E:202:PRO:O	2.23	0.57
1:H:249:ILE:HB	1:H:275:ALA:CB	2.34	0.57
1:K:155:ASP:OD1	1:K:157:THR:HB	2.05	0.57
1:L:69:MET:CE	1:M:39:VAL:HG12	2.35	0.57
1:N:259:LEU:O	1:N:263:VAL:HG23	2.05	0.57
1:B:90:THR:O	1:B:94:VAL:HG13	2.05	0.57
1:C:208:PRO:HG2	1:C:209:GLU:OE1	2.05	0.57
1:C:259:LEU:O	1:C:263:VAL:HG23	2.04	0.57
1:C:297:GLY:O	1:C:318:GLY:HA2	2.05	0.57
1:F:140:ASP:C	1:F:142:LYS:H	2.13	0.57
1:G:237:LEU:HD23	1:G:237:LEU:O	2.05	0.57
1:I:219:PHE:O	1:I:247:LEU:HD12	2.05	0.57
1:J:451:LEU:HD23	1:J:451:LEU:C	2.29	0.57
1:N:76:GLU:O	1:N:79:SER:HB3	2.05	0.57
1:B:193:MET:HE1	1:B:292:ILE:HG12	1.87	0.56
1:C:511:ALA:O	1:C:515:ILE:HG13	2.05	0.56
1:D:90:THR:O	1:D:94:VAL:HG13	2.05	0.56
1:D:389:MET:SD	1:D:389:MET:C	2.88	0.56
1:E:519:CYS:O	1:F:39:VAL:N	2.38	0.56
1:J:155:ASP:OD1	1:J:157:THR:HB	2.05	0.56
1:J:193:MET:HE3	1:J:371:LYS:HD3	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:197:ARG:HG3	1:J:277:LYS:O	2.05	0.56
1:N:193:MET:HE3	1:N:371:LYS:HD3	1.87	0.56
1:A:389:MET:SD	1:A:389:MET:C	2.87	0.56
1:E:297:GLY:O	1:E:318:GLY:HA2	2.04	0.56
1:F:237:LEU:O	1:F:237:LEU:HD23	2.05	0.56
1:G:23:LEU:HD23	1:G:74:VAL:CG2	2.34	0.56
1:H:28:LYS:O	1:H:31:LEU:HB2	2.05	0.56
1:H:37:ASN:HD21	1:H:51:LYS:NZ	2.03	0.56
1:L:247:LEU:HB3	1:L:273:VAL:CG1	2.35	0.56
1:L:349:ILE:O	1:L:353:ILE:HG13	2.05	0.56
1:M:499:VAL:HG22	1:M:500:THR:N	2.19	0.56
1:A:237:LEU:O	1:A:237:LEU:HD23	2.04	0.56
1:A:245:LYS:NZ	1:A:319:GLN:HE22	2.04	0.56
1:C:228:SER:OG	1:C:255:GLU:HB2	2.05	0.56
1:E:237:LEU:HD23	1:E:237:LEU:O	2.06	0.56
1:F:389:MET:C	1:F:389:MET:SD	2.88	0.56
1:G:455:VAL:HG11	1:G:462:PRO:HA	1.87	0.56
1:H:77:VAL:CG2	1:H:78:ALA:N	2.69	0.56
1:H:391:GLU:O	1:H:394:ALA:HB3	2.05	0.56
1:I:213:VAL:HG12	1:I:214:GLU:H	1.67	0.56
1:I:236:VAL:O	1:I:236:VAL:HG12	2.05	0.56
1:M:183:LEU:O	1:M:184:GLN:HB2	2.05	0.56
1:M:305:ILE:O	1:M:305:ILE:HG22	2.05	0.56
1:N:155:ASP:OD1	1:N:157:THR:HB	2.05	0.56
1:N:391:GLU:O	1:N:394:ALA:HB3	2.04	0.56
1:B:214:GLU:O	1:B:215:LEU:HD23	2.05	0.56
1:D:201:SER:O	1:D:202:PRO:O	2.23	0.56
1:H:139:SER:HB3	1:H:171:LYS:NZ	2.20	0.56
1:J:28:LYS:C	1:J:30:THR:H	2.13	0.56
1:L:455:VAL:HG13	1:L:460:GLU:HB3	1.87	0.56
1:E:23:LEU:HD23	1:E:74:VAL:HG22	1.86	0.56
1:J:200:LEU:CD1	1:J:254:VAL:HB	2.35	0.56
1:K:200:LEU:CD1	1:K:254:VAL:HB	2.35	0.56
1:M:417:VAL:O	1:M:420:ILE:HG22	2.05	0.56
1:N:223:ALA:O	1:N:251:ALA:HA	2.04	0.56
1:N:236:VAL:HG12	1:N:236:VAL:O	2.05	0.56
1:A:90:THR:O	1:A:94:VAL:HG13	2.06	0.56
1:B:23:LEU:HD23	1:B:74:VAL:HG22	1.88	0.56
1:D:237:LEU:O	1:D:237:LEU:HD23	2.05	0.56
1:H:142:LYS:O	1:H:142:LYS:HD3	2.05	0.56
1:K:223:ALA:O	1:K:251:ALA:HA	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:202:PRO:O	1:L:203:TYR:HB2	2.04	0.56
1:L:460:GLU:O	1:L:462:PRO:HD3	2.05	0.56
1:M:20:VAL:CG2	1:M:74:VAL:HG11	2.34	0.56
1:N:455:VAL:HG13	1:N:460:GLU:HB3	1.87	0.56
1:D:338:GLU:C	1:D:340:ALA:H	2.14	0.56
1:H:278:ALA:HB3	1:H:285:ARG:HD3	1.86	0.56
1:M:193:MET:HE3	1:M:371:LYS:HD3	1.86	0.56
1:N:77:VAL:HG23	1:N:78:ALA:N	2.19	0.56
1:N:349:ILE:O	1:N:353:ILE:HG13	2.05	0.56
1:C:23:LEU:HD23	1:C:74:VAL:CG2	2.35	0.56
1:H:166:MET:CE	1:H:171:LYS:HA	2.31	0.56
1:I:169:VAL:CG2	1:I:377:ALA:HB2	2.34	0.56
1:J:391:GLU:O	1:J:394:ALA:HB3	2.06	0.56
1:K:77:VAL:HG23	1:K:78:ALA:N	2.19	0.56
1:L:25:ASP:HA	1:L:28:LYS:HE2	1.87	0.56
1:L:319:GLN:O	1:L:336:VAL:HG23	2.05	0.56
1:N:496:PRO:O	1:N:499:VAL:HG13	2.06	0.56
1:A:131:LEU:HD13	1:A:422:VAL:HG21	1.88	0.56
1:C:131:LEU:HD13	1:C:422:VAL:HG21	1.87	0.56
1:D:218:PRO:HB3	1:D:246:PRO:HG2	1.88	0.56
1:D:429:LEU:HD12	1:D:430:ARG:N	2.21	0.56
1:E:213:VAL:HG12	1:E:214:GLU:H	1.71	0.56
1:F:23:LEU:HD23	1:F:74:VAL:HG22	1.87	0.56
1:H:202:PRO:O	1:H:204:PHE:N	2.36	0.56
1:H:247:LEU:HB3	1:H:273:VAL:CG1	2.35	0.56
1:I:242:LYS:O	1:I:243:ALA:HB3	2.06	0.56
1:J:32:GLY:HA3	1:J:454:ILE:HG23	1.86	0.56
1:J:305:ILE:O	1:J:305:ILE:HG22	2.06	0.56
1:L:413:ALA:HB2	1:L:475:ASN:HD22	1.71	0.56
1:M:219:PHE:O	1:M:247:LEU:HD12	2.05	0.56
1:B:174:VAL:HB	1:B:376:VAL:HG13	1.87	0.56
1:D:429:LEU:HD12	1:D:430:ARG:H	1.70	0.56
1:G:131:LEU:CD1	1:G:422:VAL:HG21	2.36	0.56
1:G:245:LYS:NZ	1:G:319:GLN:HE22	2.03	0.56
1:K:142:LYS:O	1:K:142:LYS:HD3	2.06	0.56
1:K:493:ILE:O	1:K:493:ILE:HG22	2.06	0.56
1:M:139:SER:HB3	1:M:171:LYS:NZ	2.21	0.56
1:C:440:ILE:HG22	1:C:441:LYS:N	2.20	0.55
1:E:429:LEU:HD12	1:E:430:ARG:H	1.72	0.55
1:H:223:ALA:O	1:H:251:ALA:HA	2.05	0.55
1:J:77:VAL:HG23	1:J:78:ALA:N	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:176:THR:HG21	1:L:333:ILE:HD13	1.87	0.55
1:N:305:ILE:HG22	1:N:305:ILE:O	2.06	0.55
1:B:69:MET:SD	1:C:41:ASP:HB2	2.46	0.55
1:G:23:LEU:HD23	1:G:74:VAL:HG22	1.88	0.55
1:G:259:LEU:O	1:G:263:VAL:HG23	2.05	0.55
1:K:139:SER:HB3	1:K:171:LYS:NZ	2.21	0.55
1:K:209:GLU:OE1	1:K:209:GLU:N	2.39	0.55
1:L:417:VAL:O	1:L:420:ILE:HG22	2.06	0.55
1:N:321:LYS:O	1:N:322:ARG:HB2	2.06	0.55
1:E:242:LYS:C	1:E:244:GLY:H	2.14	0.55
1:F:213:VAL:HG12	1:F:214:GLU:N	2.21	0.55
1:G:208:PRO:HG2	1:G:209:GLU:OE1	2.06	0.55
1:G:389:MET:SD	1:G:389:MET:C	2.90	0.55
1:I:223:ALA:O	1:I:251:ALA:HA	2.07	0.55
1:K:197:ARG:HG3	1:K:277:LYS:O	2.06	0.55
1:K:305:ILE:HG22	1:K:305:ILE:O	2.06	0.55
1:L:517:THR:HG21	1:M:39:VAL:HG23	1.88	0.55
1:A:268:ARG:O	1:A:270:ILE:N	2.40	0.55
1:E:520:MET:HG2	1:F:39:VAL:HB	1.89	0.55
1:F:242:LYS:O	1:F:243:ALA:HB3	2.06	0.55
1:J:77:VAL:HG21	1:J:510:VAL:CG1	2.37	0.55
1:L:74:VAL:HA	1:L:510:VAL:HG21	1.88	0.55
1:L:77:VAL:HG21	1:L:510:VAL:CG1	2.36	0.55
1:M:37:ASN:ND2	1:M:51:LYS:HG3	2.21	0.55
1:N:169:VAL:CG2	1:N:377:ALA:HB2	2.31	0.55
1:G:201:SER:O	1:G:202:PRO:O	2.24	0.55
1:I:278:ALA:HB3	1:I:285:ARG:HD3	1.88	0.55
1:J:139:SER:HB3	1:J:171:LYS:NZ	2.22	0.55
1:J:247:LEU:HD12	1:J:248:LEU:H	1.71	0.55
1:K:25:ASP:HA	1:K:28:LYS:HE2	1.88	0.55
1:L:517:THR:CG2	1:M:39:VAL:HG23	2.36	0.55
1:N:202:PRO:O	1:N:203:TYR:HB2	2.06	0.55
1:B:297:GLY:O	1:B:318:GLY:HA2	2.07	0.55
1:C:201:SER:O	1:C:202:PRO:O	2.24	0.55
1:C:245:LYS:NZ	1:C:319:GLN:HE22	2.05	0.55
1:D:202:PRO:O	1:D:203:TYR:HB2	2.06	0.55
1:E:34:LYS:HB2	1:E:458:CYS:SG	2.47	0.55
1:F:242:LYS:C	1:F:244:GLY:H	2.14	0.55
1:I:139:SER:HB3	1:I:171:LYS:NZ	2.21	0.55
1:I:173:GLY:O	1:I:404:ARG:NH2	2.39	0.55
1:K:259:LEU:O	1:K:263:VAL:HG23	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:242:LYS:O	1:L:243:ALA:HB3	2.06	0.55
1:N:20:VAL:CG2	1:N:74:VAL:HG11	2.36	0.55
1:A:236:VAL:O	1:A:236:VAL:HG12	2.07	0.55
1:A:338:GLU:C	1:A:340:ALA:H	2.15	0.55
1:D:228:SER:OG	1:D:255:GLU:HB2	2.07	0.55
1:M:200:LEU:CD1	1:M:254:VAL:HB	2.36	0.55
1:E:131:LEU:CD1	1:E:422:VAL:HG21	2.37	0.55
1:E:245:LYS:HZ2	1:E:319:GLN:HE22	1.53	0.55
1:H:197:ARG:HG3	1:H:277:LYS:O	2.07	0.55
1:I:77:VAL:HG23	1:I:78:ALA:N	2.20	0.55
1:I:247:LEU:HB3	1:I:273:VAL:CG1	2.37	0.55
1:I:247:LEU:HD12	1:I:248:LEU:H	1.71	0.55
1:J:176:THR:HG21	1:J:333:ILE:HD13	1.88	0.55
1:E:338:GLU:C	1:E:340:ALA:H	2.15	0.55
1:F:381:VAL:HG21	1:F:393:LYS:HA	1.89	0.55
1:G:213:VAL:HG12	1:G:214:GLU:H	1.71	0.55
1:H:63:GLU:HB2	1:N:3:ALA:HB1	1.88	0.55
1:I:197:ARG:HG3	1:I:277:LYS:O	2.06	0.55
1:L:139:SER:HB3	1:L:171:LYS:NZ	2.21	0.55
1:L:203:TYR:HB3	1:L:267:MET:HE1	1.88	0.55
1:N:238:GLU:C	1:N:240:VAL:H	2.14	0.55
1:H:129:GLU:C	1:H:131:LEU:H	2.15	0.55
1:I:493:ILE:O	1:I:493:ILE:HG22	2.07	0.55
1:K:27:VAL:O	1:K:30:THR:CG2	2.52	0.55
1:K:279:PRO:O	1:K:285:ARG:HG3	2.06	0.55
1:K:444:LEU:HA	1:K:447:MET:HE3	1.89	0.55
1:K:518:GLU:HG2	1:L:36:ARG:HG3	1.89	0.55
1:M:209:GLU:N	1:M:209:GLU:OE1	2.40	0.55
1:A:455:VAL:HG11	1:A:462:PRO:HA	1.88	0.54
1:B:213:VAL:HG12	1:B:214:GLU:H	1.71	0.54
1:E:311:LYS:HB3	1:I:311:LYS:CD	2.35	0.54
1:F:30:THR:O	1:F:31:LEU:C	2.50	0.54
1:H:305:ILE:HG22	1:H:305:ILE:O	2.06	0.54
1:I:238:GLU:C	1:I:240:VAL:H	2.15	0.54
1:K:203:TYR:HB3	1:K:267:MET:HE1	1.88	0.54
1:L:155:ASP:OD1	1:L:157:THR:HB	2.06	0.54
1:M:413:ALA:HB2	1:M:475:ASN:HD22	1.72	0.54
1:N:20:VAL:HG23	1:N:74:VAL:HG11	1.90	0.54
1:C:7:LYS:HG3	1:C:66:PHE:CZ	2.42	0.54
1:C:23:LEU:HD23	1:C:74:VAL:HG22	1.88	0.54
1:D:268:ARG:O	1:D:270:ILE:N	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:176:THR:HG21	1:H:333:ILE:HD13	1.89	0.54
1:J:238:GLU:C	1:J:240:VAL:H	2.15	0.54
1:M:335:GLY:C	1:M:337:GLY:H	2.14	0.54
1:N:215:LEU:HB2	1:N:323:VAL:HG22	1.89	0.54
1:A:228:SER:OG	1:A:255:GLU:HB2	2.07	0.54
1:C:349:ILE:O	1:C:353:ILE:HG13	2.06	0.54
1:D:174:VAL:HB	1:D:376:VAL:HG13	1.89	0.54
1:F:344:GLY:O	1:F:347:ALA:HB3	2.08	0.54
1:H:77:VAL:HG21	1:H:510:VAL:CG1	2.37	0.54
1:H:242:LYS:O	1:H:243:ALA:HB3	2.07	0.54
1:J:344:GLY:O	1:J:347:ALA:HB3	2.07	0.54
1:K:73:MET:CE	1:K:514:MET:HE3	2.37	0.54
1:A:242:LYS:C	1:A:244:GLY:H	2.15	0.54
1:F:106:ALA:O	1:F:109:ALA:HB3	2.06	0.54
1:F:174:VAL:HB	1:F:376:VAL:HG13	1.88	0.54
1:F:259:LEU:O	1:F:263:VAL:HG23	2.07	0.54
1:H:74:VAL:HA	1:H:510:VAL:HG21	1.90	0.54
1:I:247:LEU:H	1:I:273:VAL:HG12	1.73	0.54
1:K:252:GLU:O	1:K:253:ASP:HB2	2.07	0.54
1:L:69:MET:HE3	1:M:41:ASP:N	2.21	0.54
1:L:77:VAL:HG23	1:L:78:ALA:N	2.21	0.54
1:L:238:GLU:C	1:L:240:VAL:H	2.15	0.54
1:M:242:LYS:O	1:M:243:ALA:HB3	2.06	0.54
1:A:201:SER:O	1:A:202:PRO:O	2.25	0.54
1:C:389:MET:C	1:C:389:MET:SD	2.91	0.54
1:G:242:LYS:C	1:G:244:GLY:H	2.14	0.54
1:G:511:ALA:O	1:G:515:ILE:HG13	2.07	0.54
1:H:252:GLU:O	1:H:253:ASP:HB2	2.08	0.54
1:H:479:ASN:ND2	1:H:482:THR:HG23	2.21	0.54
1:J:259:LEU:O	1:J:263:VAL:HG23	2.07	0.54
1:L:37:ASN:HD21	1:L:51:LYS:HZ3	1.55	0.54
1:M:319:GLN:O	1:M:336:VAL:HG23	2.07	0.54
1:C:338:GLU:C	1:C:340:ALA:H	2.13	0.54
1:G:199:TYR:HA	1:G:276:VAL:HG12	1.89	0.54
1:G:311:LYS:HB3	1:N:311:LYS:HG2	1.90	0.54
1:J:28:LYS:C	1:J:30:THR:N	2.63	0.54
1:N:25:ASP:HA	1:N:28:LYS:HE2	1.90	0.54
1:N:73:MET:HE3	1:N:514:MET:HE3	1.90	0.54
1:E:23:LEU:CD2	1:E:75:LYS:HG3	2.38	0.54
1:E:420:ILE:HG13	1:E:448:GLU:HG2	1.89	0.54
1:H:155:ASP:OD1	1:H:157:THR:HB	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:176:THR:HG21	1:I:333:ILE:HD13	1.89	0.54
1:J:393:LYS:O	1:J:397:GLU:HB2	2.07	0.54
1:N:200:LEU:CD1	1:N:254:VAL:HB	2.38	0.54
1:B:429:LEU:HD12	1:B:430:ARG:N	2.22	0.54
1:D:108:ALA:C	1:D:110:GLY:H	2.15	0.54
1:F:208:PRO:HG2	1:F:209:GLU:OE1	2.08	0.54
1:F:338:GLU:C	1:F:340:ALA:H	2.15	0.54
1:H:455:VAL:HG13	1:H:460:GLU:HB3	1.89	0.54
1:J:417:VAL:O	1:J:420:ILE:HG22	2.08	0.54
1:M:213:VAL:HG12	1:M:214:GLU:H	1.73	0.54
1:B:69:MET:HE3	1:C:41:ASP:HB2	1.90	0.54
1:B:131:LEU:HD13	1:B:422:VAL:HG21	1.90	0.54
1:B:440:ILE:HG22	1:B:441:LYS:N	2.22	0.54
1:C:174:VAL:HB	1:C:376:VAL:HG13	1.89	0.54
1:H:23:LEU:HD23	1:H:74:VAL:HG22	1.89	0.54
1:I:74:VAL:HA	1:I:510:VAL:HG21	1.89	0.54
1:I:259:LEU:O	1:I:263:VAL:HG23	2.07	0.54
1:J:139:SER:HB3	1:J:171:LYS:HZ1	1.73	0.54
1:J:221:LEU:HB3	1:J:249:ILE:HD13	1.90	0.54
1:J:278:ALA:HB3	1:J:285:ARG:HD3	1.90	0.54
1:J:319:GLN:O	1:J:336:VAL:HG23	2.08	0.54
1:L:202:PRO:O	1:L:204:PHE:N	2.35	0.54
1:L:209:GLU:OE1	1:L:209:GLU:N	2.41	0.54
1:A:245:LYS:HZ2	1:A:319:GLN:HE22	1.55	0.54
1:B:245:LYS:NZ	1:B:319:GLN:HE22	2.05	0.54
1:B:248:LEU:HD12	1:B:274:ALA:O	2.08	0.54
1:B:429:LEU:HD12	1:B:430:ARG:H	1.72	0.54
1:D:259:LEU:O	1:D:263:VAL:HG23	2.08	0.54
1:E:344:GLY:O	1:E:347:ALA:HB3	2.08	0.54
1:F:25:ASP:O	1:F:29:VAL:HG13	2.08	0.54
1:G:155:ASP:OD1	1:G:157:THR:HB	2.08	0.54
1:G:429:LEU:HD12	1:G:430:ARG:N	2.23	0.54
1:H:73:MET:HE3	1:H:514:MET:HE3	1.89	0.54
1:H:209:GLU:OE1	1:H:209:GLU:N	2.41	0.54
1:H:269:GLY:HA3	1:N:257:GLU:CG	2.36	0.54
1:J:8:PHE:HE1	1:K:26:ALA:HA	1.73	0.54
1:L:223:ALA:O	1:L:251:ALA:HA	2.07	0.54
1:A:199:TYR:HA	1:A:276:VAL:HG12	1.91	0.53
1:A:420:ILE:HG13	1:A:448:GLU:HG2	1.91	0.53
1:A:429:LEU:HD12	1:A:430:ARG:H	1.73	0.53
1:A:429:LEU:HD12	1:A:430:ARG:N	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:108:ALA:C	1:B:110:GLY:H	2.15	0.53
1:B:295:LEU:HA	1:B:342:ILE:HD11	1.90	0.53
1:F:268:ARG:O	1:F:270:ILE:N	2.40	0.53
1:G:77:VAL:HG23	1:G:78:ALA:N	2.23	0.53
1:H:34:LYS:HB3	1:N:114:MET:HG3	1.90	0.53
1:J:32:GLY:O	1:J:34:LYS:N	2.41	0.53
1:L:129:GLU:C	1:L:131:LEU:H	2.15	0.53
1:L:335:GLY:C	1:L:337:GLY:H	2.16	0.53
1:M:221:LEU:HB3	1:M:249:ILE:HD13	1.89	0.53
1:M:238:GLU:C	1:M:240:VAL:H	2.14	0.53
1:N:451:LEU:HD23	1:N:451:LEU:C	2.33	0.53
1:N:493:ILE:O	1:N:493:ILE:HG22	2.07	0.53
1:B:349:ILE:O	1:B:353:ILE:HG13	2.07	0.53
1:D:23:LEU:HD23	1:D:74:VAL:HG22	1.90	0.53
1:D:494:LEU:C	1:D:494:LEU:HD12	2.32	0.53
1:I:221:LEU:HB3	1:I:249:ILE:HD13	1.89	0.53
1:J:74:VAL:HA	1:J:510:VAL:HG21	1.91	0.53
1:J:234:LEU:N	1:J:235:PRO:HD2	2.23	0.53
1:J:242:LYS:O	1:J:243:ALA:HB3	2.08	0.53
1:J:247:LEU:H	1:J:273:VAL:HG12	1.73	0.53
1:K:221:LEU:HB3	1:K:249:ILE:HD13	1.90	0.53
1:C:6:VAL:HG22	1:C:521:VAL:HG22	1.91	0.53
1:C:268:ARG:O	1:C:270:ILE:N	2.40	0.53
1:D:440:ILE:HG22	1:D:441:LYS:N	2.23	0.53
1:H:234:LEU:N	1:H:235:PRO:HD2	2.23	0.53
1:K:18:ARG:HH11	1:K:18:ARG:CG	2.20	0.53
1:K:278:ALA:HB3	1:K:285:ARG:HD3	1.90	0.53
1:L:69:MET:CE	1:M:41:ASP:HB2	2.39	0.53
1:A:77:VAL:HG23	1:A:78:ALA:N	2.22	0.53
1:A:174:VAL:HB	1:A:376:VAL:HG13	1.90	0.53
1:A:259:LEU:O	1:A:263:VAL:HG23	2.09	0.53
1:D:236:VAL:O	1:D:236:VAL:HG12	2.07	0.53
1:E:429:LEU:HD12	1:E:430:ARG:N	2.23	0.53
1:F:228:SER:OG	1:F:255:GLU:HB2	2.08	0.53
1:H:77:VAL:HG23	1:H:78:ALA:N	2.23	0.53
1:H:259:LEU:O	1:H:263:VAL:HG23	2.08	0.53
1:I:321:LYS:O	1:I:322:ARG:HB2	2.08	0.53
1:K:413:ALA:HB2	1:K:475:ASN:HD22	1.74	0.53
1:M:259:LEU:O	1:M:263:VAL:HG23	2.08	0.53
1:A:77:VAL:CG2	1:A:78:ALA:N	2.70	0.53
1:E:199:TYR:HA	1:E:276:VAL:HG12	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:338:GLU:C	1:G:340:ALA:H	2.17	0.53
1:H:73:MET:CE	1:H:514:MET:HE3	2.38	0.53
1:K:485:TYR:HD1	1:K:485:TYR:H	1.55	0.53
1:B:122:LYS:HE2	1:B:429:LEU:HD11	1.91	0.53
1:B:202:PRO:O	1:B:204:PHE:N	2.41	0.53
1:D:496:PRO:HB2	1:D:499:VAL:HG13	1.91	0.53
1:E:32:GLY:O	1:E:34:LYS:N	2.42	0.53
1:G:77:VAL:CG2	1:G:78:ALA:N	2.72	0.53
1:I:7:LYS:HG3	1:I:66:PHE:CZ	2.44	0.53
1:J:25:ASP:HA	1:J:28:LYS:HE2	1.90	0.53
1:J:223:ALA:O	1:J:251:ALA:HA	2.08	0.53
1:K:247:LEU:HD12	1:K:248:LEU:H	1.73	0.53
1:M:247:LEU:HD12	1:M:248:LEU:H	1.72	0.53
1:D:199:TYR:HA	1:D:276:VAL:HG12	1.90	0.53
1:E:77:VAL:O	1:E:80:LYS:N	2.42	0.53
1:F:201:SER:O	1:F:202:PRO:O	2.26	0.53
1:G:429:LEU:HD12	1:G:430:ARG:H	1.73	0.53
1:H:25:ASP:HA	1:H:28:LYS:HE2	1.91	0.53
1:I:142:LYS:O	1:I:142:LYS:HD3	2.08	0.53
1:L:444:LEU:HA	1:L:447:MET:HE3	1.90	0.53
1:C:90:THR:O	1:C:94:VAL:HG13	2.09	0.53
1:C:245:LYS:HZ2	1:C:319:GLN:HE22	1.56	0.53
1:D:242:LYS:C	1:D:244:GLY:H	2.17	0.53
1:E:122:LYS:HE2	1:E:429:LEU:HD11	1.91	0.53
1:E:236:VAL:O	1:E:236:VAL:HG12	2.09	0.53
1:E:517:THR:HG21	1:F:39:VAL:CG2	2.37	0.53
1:F:17:LEU:HA	1:F:20:VAL:HG12	1.91	0.53
1:K:169:VAL:CG2	1:K:377:ALA:HB2	2.31	0.53
1:K:234:LEU:N	1:K:235:PRO:HD2	2.24	0.53
1:K:247:LEU:H	1:K:273:VAL:HG12	1.74	0.53
1:M:247:LEU:H	1:M:273:VAL:HG12	1.74	0.53
1:N:209:GLU:OE1	1:N:209:GLU:N	2.42	0.53
1:B:199:TYR:HA	1:B:276:VAL:HG12	1.89	0.53
1:D:33:PRO:C	1:D:35:GLY:H	2.17	0.53
1:D:450:PRO:O	1:D:454:ILE:HG13	2.09	0.53
1:E:218:PRO:HB3	1:E:246:PRO:HG2	1.91	0.53
1:E:259:LEU:O	1:E:263:VAL:HG23	2.09	0.53
1:E:496:PRO:HB2	1:E:499:VAL:HG13	1.91	0.53
1:F:17:LEU:HA	1:F:20:VAL:CG1	2.39	0.53
1:G:31:LEU:HD23	1:G:453:GLN:CG	2.39	0.53
1:I:155:ASP:OD1	1:I:157:THR:HB	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:77:VAL:HG11	1:J:510:VAL:HB	1.91	0.53
1:J:209:GLU:N	1:J:209:GLU:OE1	2.41	0.53
1:J:455:VAL:HG13	1:J:460:GLU:HB3	1.90	0.53
1:J:460:GLU:O	1:J:462:PRO:HD3	2.09	0.53
1:K:73:MET:SD	1:L:49:ILE:HD11	2.49	0.53
1:L:485:TYR:H	1:L:485:TYR:HD1	1.57	0.53
1:N:197:ARG:HG3	1:N:277:LYS:O	2.08	0.53
1:N:335:GLY:C	1:N:337:GLY:H	2.16	0.53
1:B:118:ARG:HH22	1:C:34:LYS:HE2	1.73	0.53
1:D:122:LYS:HE2	1:D:429:LEU:HD11	1.89	0.53
1:E:440:ILE:HG22	1:E:441:LYS:N	2.23	0.53
1:I:118:ARG:NH2	1:J:34:LYS:HE3	2.23	0.53
1:L:247:LEU:H	1:L:273:VAL:HG12	1.74	0.53
1:A:242:LYS:O	1:A:243:ALA:HB3	2.09	0.52
1:G:7:LYS:HG3	1:G:66:PHE:CZ	2.44	0.52
1:G:440:ILE:HG22	1:G:441:LYS:N	2.24	0.52
1:I:20:VAL:CG2	1:I:74:VAL:HG11	2.39	0.52
1:M:169:VAL:CG2	1:M:377:ALA:HB2	2.35	0.52
1:A:140:ASP:C	1:A:142:LYS:H	2.17	0.52
1:B:268:ARG:O	1:B:270:ILE:N	2.42	0.52
1:D:344:GLY:O	1:D:347:ALA:HB3	2.10	0.52
1:E:6:VAL:HG22	1:E:521:VAL:HG22	1.91	0.52
1:E:242:LYS:O	1:E:243:ALA:HB3	2.09	0.52
1:F:33:PRO:O	1:F:35:GLY:N	2.39	0.52
1:F:77:VAL:O	1:F:80:LYS:N	2.42	0.52
1:F:134:LEU:O	1:F:134:LEU:HD23	2.09	0.52
1:F:420:ILE:HG13	1:F:448:GLU:HG2	1.92	0.52
1:G:349:ILE:O	1:G:353:ILE:HG13	2.10	0.52
1:I:20:VAL:HG23	1:I:74:VAL:HG11	1.91	0.52
1:I:86:GLY:O	1:I:87:ASP:HB2	2.10	0.52
1:J:485:TYR:HD1	1:J:485:TYR:H	1.57	0.52
1:F:479:ASN:OD1	1:F:481:ALA:HB3	2.09	0.52
1:H:444:LEU:HA	1:H:447:MET:HE3	1.92	0.52
1:L:200:LEU:CD1	1:L:254:VAL:HB	2.40	0.52
1:L:450:PRO:O	1:L:454:ILE:HG13	2.10	0.52
1:A:144:ILE:HD13	1:A:166:MET:SD	2.50	0.52
1:B:247:LEU:HB3	1:B:273:VAL:CG1	2.39	0.52
1:F:199:TYR:HA	1:F:276:VAL:HG12	1.91	0.52
1:G:174:VAL:HB	1:G:376:VAL:HG13	1.91	0.52
1:H:20:VAL:CG2	1:H:74:VAL:HG11	2.40	0.52
1:H:238:GLU:C	1:H:240:VAL:H	2.16	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:242:LYS:O	1:K:243:ALA:HB3	2.09	0.52
1:B:338:GLU:C	1:B:340:ALA:H	2.16	0.52
1:E:268:ARG:O	1:E:270:ILE:N	2.43	0.52
1:H:20:VAL:HG23	1:H:74:VAL:HG11	1.90	0.52
1:K:36:ARG:O	1:K:51:LYS:HG2	2.10	0.52
1:K:519:CYS:O	1:L:38:VAL:HA	2.10	0.52
1:L:193:MET:HE3	1:L:371:LYS:HD3	1.90	0.52
1:L:221:LEU:HB3	1:L:249:ILE:HD13	1.92	0.52
1:N:247:LEU:H	1:N:273:VAL:HG12	1.75	0.52
1:B:344:GLY:O	1:B:347:ALA:HB3	2.09	0.52
1:B:494:LEU:C	1:B:494:LEU:HD12	2.35	0.52
1:E:25:ASP:HA	1:E:28:LYS:HE2	1.90	0.52
1:G:381:VAL:HG21	1:G:393:LYS:HA	1.92	0.52
1:H:321:LYS:O	1:H:322:ARG:HB2	2.08	0.52
1:I:77:VAL:HG21	1:I:510:VAL:CG1	2.40	0.52
1:K:129:GLU:C	1:K:131:LEU:H	2.16	0.52
1:K:134:LEU:HD11	1:K:421:ARG:HG2	1.91	0.52
1:K:201:SER:C	1:K:202:PRO:O	2.53	0.52
1:L:234:LEU:N	1:L:235:PRO:HD2	2.24	0.52
1:B:77:VAL:CG2	1:B:78:ALA:N	2.73	0.52
1:B:259:LEU:O	1:B:263:VAL:HG23	2.10	0.52
1:C:429:LEU:HD12	1:C:430:ARG:H	1.74	0.52
1:D:242:LYS:O	1:D:243:ALA:HB3	2.10	0.52
1:F:131:LEU:HD13	1:F:422:VAL:HG21	1.92	0.52
1:I:37:ASN:HD21	1:I:51:LYS:NZ	2.08	0.52
1:I:138:CYS:O	1:I:138:CYS:SG	2.68	0.52
1:I:234:LEU:N	1:I:235:PRO:HD2	2.25	0.52
1:M:393:LYS:O	1:M:397:GLU:HB2	2.08	0.52
1:M:460:GLU:O	1:M:462:PRO:HD3	2.09	0.52
1:N:77:VAL:HG21	1:N:510:VAL:CG1	2.40	0.52
1:N:444:LEU:HA	1:N:447:MET:HE3	1.92	0.52
1:A:349:ILE:O	1:A:353:ILE:HG13	2.10	0.52
1:B:131:LEU:HD12	1:B:422:VAL:HG21	1.91	0.52
1:D:144:ILE:HD13	1:D:166:MET:SD	2.50	0.52
1:E:228:SER:OG	1:E:255:GLU:HB2	2.10	0.52
1:H:319:GLN:O	1:H:336:VAL:HG23	2.10	0.52
1:M:160:LYS:O	1:M:164:GLU:HG3	2.10	0.52
1:M:485:TYR:HD1	1:M:485:TYR:H	1.56	0.52
1:D:140:ASP:C	1:D:142:LYS:H	2.18	0.52
1:D:247:LEU:HB3	1:D:273:VAL:CG1	2.39	0.52
1:F:70:GLY:HA2	1:F:73:MET:HE3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:202:PRO:O	1:F:204:PHE:N	2.38	0.52
1:G:242:LYS:O	1:G:243:ALA:HB3	2.09	0.52
1:G:268:ARG:O	1:G:270:ILE:N	2.42	0.52
1:H:63:GLU:HA	1:N:3:ALA:CB	2.40	0.52
1:H:335:GLY:C	1:H:337:GLY:H	2.16	0.52
1:I:209:GLU:OE1	1:I:209:GLU:N	2.43	0.52
1:J:86:GLY:O	1:J:87:ASP:HB2	2.10	0.52
1:M:23:LEU:HD23	1:M:74:VAL:HG22	1.91	0.52
1:M:37:ASN:HD21	1:M:51:LYS:NZ	2.08	0.52
1:M:234:LEU:N	1:M:235:PRO:HD2	2.24	0.52
1:A:208:PRO:HG2	1:A:209:GLU:OE1	2.09	0.52
1:D:33:PRO:O	1:D:35:GLY:N	2.38	0.52
1:D:77:VAL:O	1:D:80:LYS:N	2.43	0.52
1:E:174:VAL:HB	1:E:376:VAL:HG13	1.92	0.52
1:F:247:LEU:HB3	1:F:273:VAL:CG1	2.40	0.52
1:F:295:LEU:HA	1:F:342:ILE:HD11	1.92	0.52
1:H:215:LEU:HB2	1:H:323:VAL:HG22	1.91	0.52
1:J:202:PRO:O	1:J:204:PHE:N	2.38	0.52
1:N:214:GLU:C	1:N:215:LEU:HD23	2.35	0.52
1:A:70:GLY:HA2	1:A:73:MET:HE3	1.91	0.51
1:B:201:SER:O	1:B:202:PRO:O	2.28	0.51
1:B:218:PRO:HB3	1:B:246:PRO:HG2	1.93	0.51
1:D:17:LEU:HA	1:D:20:VAL:HG12	1.92	0.51
1:D:349:ILE:O	1:D:353:ILE:HG13	2.09	0.51
1:E:140:ASP:C	1:E:142:LYS:H	2.18	0.51
1:E:391:GLU:O	1:E:394:ALA:HB3	2.10	0.51
1:J:69:MET:HE2	1:K:39:VAL:CG1	2.39	0.51
1:K:8:PHE:CE1	1:L:26:ALA:HA	2.43	0.51
1:K:160:LYS:O	1:K:164:GLU:HG3	2.10	0.51
1:K:233:MET:HE1	1:K:249:ILE:HD12	1.91	0.51
1:K:335:GLY:C	1:K:337:GLY:H	2.16	0.51
1:A:412:VAL:HG13	1:A:497:THR:OG1	2.10	0.51
1:C:199:TYR:HA	1:C:276:VAL:HG12	1.91	0.51
1:D:8:PHE:CE1	1:E:26:ALA:HA	2.43	0.51
1:D:13:ARG:HD2	1:D:104:LEU:HD22	1.93	0.51
1:E:221:LEU:HD23	1:E:249:ILE:HG23	1.93	0.51
1:I:202:PRO:O	1:I:204:PHE:N	2.38	0.51
1:K:140:ASP:C	1:K:142:LYS:H	2.18	0.51
1:K:215:LEU:HB2	1:K:323:VAL:HG22	1.92	0.51
1:B:242:LYS:O	1:B:243:ALA:HB3	2.10	0.51
1:E:247:LEU:HB3	1:E:273:VAL:CG1	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:61:GLU:O	1:N:3:ALA:HA	2.09	0.51
1:K:74:VAL:HA	1:K:510:VAL:HG21	1.93	0.51
1:K:238:GLU:C	1:K:240:VAL:H	2.18	0.51
1:M:155:ASP:OD1	1:M:157:THR:HB	2.11	0.51
1:N:201:SER:C	1:N:202:PRO:O	2.54	0.51
1:A:344:GLY:O	1:A:347:ALA:HB3	2.10	0.51
1:C:140:ASP:C	1:C:142:LYS:H	2.18	0.51
1:D:221:LEU:HB3	1:D:249:ILE:HD13	1.93	0.51
1:F:6:VAL:HG22	1:F:521:VAL:HG22	1.91	0.51
1:H:247:LEU:HD12	1:H:248:LEU:H	1.75	0.51
1:H:247:LEU:H	1:H:273:VAL:HG12	1.76	0.51
1:L:259:LEU:O	1:L:263:VAL:HG23	2.10	0.51
1:N:142:LYS:O	1:N:142:LYS:HD3	2.10	0.51
1:N:176:THR:HG21	1:N:333:ILE:HD13	1.93	0.51
1:N:234:LEU:N	1:N:235:PRO:HD2	2.24	0.51
1:A:313:THR:HG23	1:M:311:LYS:NZ	2.25	0.51
1:C:236:VAL:HG12	1:C:236:VAL:O	2.10	0.51
1:C:494:LEU:C	1:C:494:LEU:HD12	2.35	0.51
1:E:69:MET:CE	1:F:41:ASP:HB2	2.39	0.51
1:G:236:VAL:O	1:G:236:VAL:HG12	2.11	0.51
1:H:499:VAL:CG2	1:H:500:THR:N	2.72	0.51
1:I:16:MET:SD	1:I:73:MET:HE1	2.51	0.51
1:K:37:ASN:HD21	1:K:51:LYS:NZ	2.09	0.51
1:N:37:ASN:HD21	1:N:51:LYS:HZ3	1.58	0.51
1:N:242:LYS:O	1:N:243:ALA:HB3	2.11	0.51
1:N:417:VAL:O	1:N:420:ILE:HG22	2.11	0.51
1:C:344:GLY:O	1:C:347:ALA:HB3	2.10	0.51
1:C:429:LEU:HD12	1:C:430:ARG:N	2.25	0.51
1:D:23:LEU:HD23	1:D:74:VAL:CG2	2.40	0.51
1:E:77:VAL:CG2	1:E:78:ALA:N	2.74	0.51
1:F:213:VAL:HG12	1:F:214:GLU:H	1.74	0.51
1:H:169:VAL:CG2	1:H:377:ALA:HB2	2.34	0.51
1:H:404:ARG:HG2	1:H:404:ARG:NH1	2.26	0.51
1:I:25:ASP:HA	1:I:28:LYS:HE2	1.92	0.51
1:K:20:VAL:HG23	1:K:74:VAL:HG11	1.93	0.51
1:N:413:ALA:HB2	1:N:475:ASN:HD22	1.76	0.51
1:B:140:ASP:C	1:B:142:LYS:H	2.19	0.51
1:H:207:LYS:O	1:H:209:GLU:N	2.44	0.51
1:H:460:GLU:O	1:H:462:PRO:HD3	2.11	0.51
1:L:23:LEU:HD23	1:L:74:VAL:HG22	1.92	0.51
1:L:140:ASP:C	1:L:142:LYS:H	2.19	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:69:MET:HE2	1:N:39:VAL:CG1	2.41	0.51
1:D:155:ASP:OD1	1:D:157:THR:HB	2.10	0.51
1:E:37:ASN:HD21	1:E:51:LYS:HE3	1.76	0.51
1:G:412:VAL:HG13	1:G:497:THR:OG1	2.10	0.51
1:J:73:MET:HE3	1:J:514:MET:HE3	1.92	0.51
1:J:455:VAL:HG11	1:J:462:PRO:HA	1.91	0.51
1:M:278:ALA:HB3	1:M:285:ARG:HD3	1.92	0.51
1:A:479:ASN:OD1	1:A:481:ALA:HB3	2.11	0.51
1:B:202:PRO:O	1:B:203:TYR:HB2	2.10	0.51
1:H:413:ALA:HB2	1:H:475:ASN:HD22	1.76	0.51
1:L:278:ALA:HB3	1:L:285:ARG:HD3	1.91	0.51
1:M:444:LEU:HA	1:M:447:MET:HE3	1.93	0.51
1:C:183:LEU:HD22	1:C:184:GLN:N	2.25	0.51
1:F:218:PRO:HB3	1:F:246:PRO:HG2	1.93	0.51
1:I:499:VAL:HG22	1:I:500:THR:N	2.26	0.51
1:J:129:GLU:C	1:J:131:LEU:H	2.19	0.51
1:K:20:VAL:CG2	1:K:74:VAL:HG11	2.41	0.51
1:K:73:MET:HE3	1:K:514:MET:HE3	1.92	0.51
1:K:77:VAL:HG21	1:K:510:VAL:CG1	2.39	0.51
1:K:321:LYS:O	1:K:322:ARG:HB2	2.09	0.51
1:L:36:ARG:O	1:L:51:LYS:HG2	2.11	0.51
1:L:207:LYS:O	1:L:209:GLU:N	2.44	0.51
1:M:86:GLY:O	1:M:87:ASP:HB2	2.10	0.51
1:N:393:LYS:O	1:N:397:GLU:HB2	2.11	0.51
1:E:479:ASN:OD1	1:E:481:ALA:HB3	2.10	0.50
1:F:77:VAL:CG2	1:F:78:ALA:N	2.74	0.50
1:G:140:ASP:C	1:G:142:LYS:H	2.16	0.50
1:J:335:GLY:C	1:J:337:GLY:H	2.18	0.50
1:D:519:CYS:O	1:E:38:VAL:HA	2.11	0.50
1:E:77:VAL:HG23	1:E:78:ALA:N	2.25	0.50
1:E:208:PRO:HG2	1:E:209:GLU:OE1	2.10	0.50
1:L:321:LYS:O	1:L:322:ARG:HB2	2.10	0.50
1:N:36:ARG:O	1:N:51:LYS:HG2	2.12	0.50
1:N:139:SER:HB3	1:N:171:LYS:HZ3	1.75	0.50
1:N:233:MET:HE1	1:N:249:ILE:HD12	1.92	0.50
1:D:131:LEU:HD12	1:D:422:VAL:HG21	1.93	0.50
1:D:219:PHE:O	1:D:247:LEU:HD12	2.11	0.50
1:E:202:PRO:O	1:E:203:TYR:HB2	2.11	0.50
1:F:108:ALA:C	1:F:110:GLY:H	2.20	0.50
1:F:245:LYS:HZ2	1:F:319:GLN:HE22	1.58	0.50
1:I:134:LEU:HD11	1:I:421:ARG:HG2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:233:MET:O	1:I:237:LEU:HB2	2.11	0.50
1:I:335:GLY:C	1:I:337:GLY:H	2.19	0.50
1:L:201:SER:C	1:L:202:PRO:O	2.54	0.50
1:L:499:VAL:HG22	1:L:500:THR:N	2.25	0.50
1:A:17:LEU:HA	1:A:20:VAL:HG12	1.93	0.50
1:A:183:LEU:HD22	1:A:184:GLN:N	2.26	0.50
1:B:69:MET:CE	1:C:41:ASP:HB2	2.42	0.50
1:E:349:ILE:O	1:E:353:ILE:HG13	2.11	0.50
1:H:160:LYS:O	1:H:164:GLU:HG3	2.12	0.50
1:I:230:ILE:HD12	1:I:261:THR:CG2	2.38	0.50
1:J:321:LYS:O	1:J:322:ARG:HB2	2.12	0.50
1:J:413:ALA:HB2	1:J:475:ASN:HD22	1.76	0.50
1:L:344:GLY:O	1:L:347:ALA:HB3	2.11	0.50
1:D:201:SER:C	1:D:202:PRO:O	2.55	0.50
1:D:208:PRO:HG2	1:D:209:GLU:OE1	2.12	0.50
1:F:28:LYS:C	1:F:30:THR:H	2.18	0.50
1:F:221:LEU:HB3	1:F:249:ILE:HD13	1.94	0.50
1:J:404:ARG:HG2	1:J:404:ARG:NH1	2.25	0.50
1:K:23:LEU:HD23	1:K:74:VAL:HG22	1.93	0.50
1:M:344:GLY:O	1:M:347:ALA:HB3	2.12	0.50
1:N:24:ALA:HA	1:N:27:VAL:HG12	1.94	0.50
1:A:17:LEU:HA	1:A:20:VAL:CG1	2.42	0.50
1:A:202:PRO:O	1:A:203:TYR:HB2	2.12	0.50
1:D:131:LEU:HD13	1:D:422:VAL:HG21	1.93	0.50
1:H:69:MET:HE2	1:I:39:VAL:CG1	2.42	0.50
1:I:413:ALA:HB2	1:I:475:ASN:HD22	1.76	0.50
1:J:37:ASN:HD21	1:J:51:LYS:HZ3	1.60	0.50
1:J:142:LYS:O	1:J:142:LYS:HD3	2.11	0.50
1:K:118:ARG:NH2	1:L:34:LYS:HE2	2.25	0.50
1:K:220:ILE:HG23	1:K:248:LEU:HD23	1.93	0.50
1:M:7:LYS:HG3	1:M:66:PHE:CZ	2.46	0.50
1:M:138:CYS:O	1:M:138:CYS:SG	2.69	0.50
1:N:134:LEU:HD11	1:N:421:ARG:HG2	1.92	0.50
1:D:420:ILE:HG13	1:D:448:GLU:HG2	1.93	0.50
1:F:140:ASP:C	1:F:142:LYS:N	2.69	0.50
1:I:129:GLU:C	1:I:131:LEU:H	2.19	0.50
1:B:412:VAL:HG13	1:B:497:THR:OG1	2.12	0.50
1:C:77:VAL:CG2	1:C:78:ALA:N	2.74	0.50
1:C:180:GLY:HA3	1:C:381:VAL:O	2.11	0.50
1:F:13:ARG:HD2	1:F:104:LEU:HD22	1.94	0.50
1:F:77:VAL:HG23	1:F:78:ALA:N	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:349:ILE:O	1:F:353:ILE:HG13	2.11	0.50
1:G:494:LEU:C	1:G:494:LEU:HD12	2.37	0.50
1:N:140:ASP:C	1:N:142:LYS:H	2.20	0.50
1:A:369:VAL:HG23	1:A:370:ALA:N	2.27	0.50
1:B:451:LEU:HD23	1:B:451:LEU:C	2.37	0.50
1:D:517:THR:HG21	1:E:39:VAL:HG23	1.93	0.50
1:E:202:PRO:O	1:E:204:PHE:N	2.41	0.50
1:G:522:THR:OG1	1:G:523:ASP:N	2.45	0.50
1:I:73:MET:HE3	1:I:514:MET:HE3	1.94	0.50
1:J:198:GLY:HA3	1:J:327:LYS:O	2.12	0.50
1:L:124:VAL:O	1:L:125:THR:C	2.54	0.50
1:M:142:LYS:O	1:M:142:LYS:HD3	2.11	0.50
1:N:129:GLU:C	1:N:131:LEU:H	2.19	0.50
1:N:201:SER:O	1:N:202:PRO:O	2.28	0.50
1:A:265:ASN:HD22	1:A:265:ASN:N	2.10	0.49
1:D:391:GLU:O	1:D:394:ALA:HB3	2.11	0.49
1:G:369:VAL:HG23	1:G:370:ALA:N	2.27	0.49
1:H:34:LYS:HG2	1:H:458:CYS:SG	2.52	0.49
1:H:198:GLY:HA3	1:H:327:LYS:O	2.12	0.49
1:M:198:GLY:HA3	1:M:327:LYS:O	2.11	0.49
1:N:73:MET:CE	1:N:514:MET:HE3	2.42	0.49
1:N:499:VAL:CG2	1:N:500:THR:N	2.73	0.49
1:C:412:VAL:HG13	1:C:497:THR:OG1	2.12	0.49
1:D:17:LEU:HA	1:D:20:VAL:CG1	2.42	0.49
1:G:6:VAL:HG22	1:G:521:VAL:HG22	1.94	0.49
1:G:77:VAL:O	1:G:80:LYS:N	2.45	0.49
1:K:176:THR:HG21	1:K:333:ILE:HD13	1.93	0.49
1:K:224:ASP:O	1:K:225:LYS:HB3	2.12	0.49
1:B:36:ARG:HG3	1:B:36:ARG:NH1	2.27	0.49
1:B:221:LEU:HD23	1:B:249:ILE:HG23	1.94	0.49
1:B:228:SER:OG	1:B:255:GLU:HB2	2.12	0.49
1:C:131:LEU:HD12	1:C:422:VAL:HG21	1.94	0.49
1:C:237:LEU:HD23	1:C:237:LEU:C	2.37	0.49
1:F:236:VAL:HG12	1:F:236:VAL:O	2.13	0.49
1:G:221:LEU:HB3	1:G:249:ILE:HD13	1.95	0.49
1:J:215:LEU:HB2	1:J:323:VAL:HG22	1.93	0.49
1:L:233:MET:HE1	1:L:249:ILE:HD12	1.94	0.49
1:M:18:ARG:HH11	1:M:18:ARG:CG	2.25	0.49
1:N:465:VAL:O	1:N:469:VAL:HG23	2.13	0.49
1:A:134:LEU:HD23	1:A:134:LEU:O	2.13	0.49
1:A:180:GLY:HA3	1:A:381:VAL:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:180:GLY:HA3	1:B:381:VAL:O	2.12	0.49
1:B:420:ILE:HG13	1:B:448:GLU:HG2	1.94	0.49
1:C:356:ALA:C	1:C:358:SER:H	2.21	0.49
1:D:217:SER:N	1:D:218:PRO:CD	2.75	0.49
1:H:86:GLY:O	1:H:87:ASP:HB2	2.13	0.49
1:I:207:LYS:O	1:I:209:GLU:N	2.46	0.49
1:L:86:GLY:O	1:L:87:ASP:HB2	2.12	0.49
1:L:197:ARG:HG3	1:L:277:LYS:O	2.13	0.49
1:A:217:SER:N	1:A:218:PRO:CD	2.76	0.49
1:B:77:VAL:HG23	1:B:78:ALA:N	2.25	0.49
1:B:265:ASN:HD22	1:B:265:ASN:N	2.11	0.49
1:C:108:ALA:C	1:C:110:GLY:H	2.20	0.49
1:C:247:LEU:HB3	1:C:273:VAL:CG1	2.39	0.49
1:D:240:VAL:HG11	1:D:247:LEU:HB2	1.95	0.49
1:E:28:LYS:C	1:E:30:THR:H	2.20	0.49
1:E:108:ALA:C	1:E:110:GLY:H	2.20	0.49
1:E:144:ILE:HD13	1:E:166:MET:SD	2.52	0.49
1:E:356:ALA:C	1:E:358:SER:H	2.20	0.49
1:G:33:PRO:HD2	1:G:454:ILE:HG23	1.94	0.49
1:G:202:PRO:O	1:G:203:TYR:HB2	2.11	0.49
1:G:218:PRO:HB3	1:G:246:PRO:HG2	1.93	0.49
1:I:460:GLU:O	1:I:462:PRO:HD3	2.12	0.49
1:M:215:LEU:HB2	1:M:323:VAL:HG22	1.94	0.49
1:N:86:GLY:O	1:N:87:ASP:HB2	2.12	0.49
1:N:319:GLN:O	1:N:336:VAL:HG23	2.12	0.49
1:A:108:ALA:C	1:A:110:GLY:H	2.18	0.49
1:C:25:ASP:HA	1:C:28:LYS:HE2	1.94	0.49
1:C:77:VAL:HG23	1:C:78:ALA:N	2.26	0.49
1:F:183:LEU:HD22	1:F:184:GLN:N	2.25	0.49
1:H:9:GLY:O	1:H:10:ASN:C	2.55	0.49
1:I:69:MET:HE3	1:J:41:ASP:HB2	1.94	0.49
1:I:444:LEU:HA	1:I:447:MET:HE3	1.94	0.49
1:J:37:ASN:HD21	1:J:51:LYS:NZ	2.11	0.49
1:K:77:VAL:HG11	1:K:510:VAL:HB	1.93	0.49
1:K:202:PRO:O	1:K:204:PHE:N	2.39	0.49
1:L:169:VAL:CG2	1:L:377:ALA:HB2	2.33	0.49
1:M:176:THR:HG21	1:M:333:ILE:HD13	1.94	0.49
1:N:233:MET:O	1:N:237:LEU:HB2	2.13	0.49
1:C:122:LYS:HE2	1:C:429:LEU:HD11	1.94	0.49
1:C:369:VAL:HG23	1:C:370:ALA:N	2.28	0.49
1:E:193:MET:HE1	1:E:292:ILE:CG1	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:202:PRO:O	1:G:204:PHE:N	2.40	0.49
1:J:69:MET:HE2	1:K:39:VAL:HG12	1.94	0.49
1:K:488:MET:HE3	1:K:493:ILE:HG21	1.94	0.49
1:N:74:VAL:HA	1:N:510:VAL:HG21	1.95	0.49
1:C:250:ILE:HG22	1:C:289:LEU:HD21	1.95	0.49
1:J:201:SER:O	1:J:202:PRO:O	2.30	0.49
1:L:393:LYS:O	1:L:397:GLU:HB2	2.13	0.49
1:M:77:VAL:HG21	1:M:510:VAL:CG1	2.42	0.49
1:N:207:LYS:O	1:N:209:GLU:N	2.46	0.49
1:A:325:ILE:N	1:A:325:ILE:HD12	2.27	0.49
1:B:451:LEU:HD23	1:B:451:LEU:O	2.13	0.49
1:C:77:VAL:O	1:C:80:LYS:N	2.46	0.49
1:D:369:VAL:HG23	1:D:370:ALA:N	2.28	0.49
1:G:356:ALA:C	1:G:358:SER:H	2.21	0.49
1:G:391:GLU:O	1:G:394:ALA:HB3	2.12	0.49
1:H:241:ALA:CB	1:N:231:ARG:NH1	2.75	0.49
1:J:201:SER:C	1:J:202:PRO:O	2.53	0.49
1:J:224:ASP:O	1:J:225:LYS:HB3	2.13	0.49
1:K:207:LYS:O	1:K:209:GLU:N	2.46	0.49
1:K:344:GLY:O	1:K:347:ALA:HB3	2.13	0.49
1:L:24:ALA:HA	1:L:27:VAL:HG12	1.94	0.49
1:L:207:LYS:C	1:L:209:GLU:H	2.21	0.49
1:M:224:ASP:O	1:M:225:LYS:HB3	2.12	0.49
1:A:271:VAL:HG12	1:A:273:VAL:HG13	1.95	0.49
1:B:237:LEU:HD23	1:B:237:LEU:C	2.38	0.49
1:C:202:PRO:O	1:C:204:PHE:N	2.43	0.49
1:E:25:ASP:O	1:E:29:VAL:HG22	2.12	0.49
1:E:501:ARG:O	1:E:505:GLN:HG3	2.12	0.49
1:F:127:ALA:HB1	1:F:422:VAL:HG11	1.95	0.49
1:F:217:SER:N	1:F:218:PRO:CD	2.76	0.49
1:G:122:LYS:HE2	1:G:429:LEU:HD11	1.95	0.49
1:H:37:ASN:HD21	1:H:51:LYS:HZ3	1.60	0.49
1:J:224:ASP:HB3	1:J:302:SER:HB3	1.95	0.49
1:K:37:ASN:HD21	1:K:51:LYS:HZ3	1.61	0.49
1:K:201:SER:O	1:K:202:PRO:O	2.31	0.49
1:K:460:GLU:O	1:K:462:PRO:HD3	2.12	0.49
1:L:404:ARG:HG2	1:L:404:ARG:NH1	2.24	0.49
1:N:221:LEU:HB3	1:N:249:ILE:HD13	1.93	0.49
1:A:28:LYS:C	1:A:30:THR:H	2.20	0.48
1:B:134:LEU:HD23	1:B:134:LEU:O	2.12	0.48
1:C:8:PHE:HE1	1:D:26:ALA:HA	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:494:LEU:HD12	1:E:494:LEU:C	2.37	0.48
1:H:201:SER:C	1:H:202:PRO:O	2.56	0.48
1:I:77:VAL:HG11	1:I:510:VAL:HB	1.95	0.48
1:L:479:ASN:CG	1:L:493:ILE:HD11	2.37	0.48
1:M:77:VAL:C	1:M:79:SER:N	2.71	0.48
1:M:201:SER:C	1:M:202:PRO:O	2.56	0.48
1:N:160:LYS:O	1:N:164:GLU:HG3	2.13	0.48
1:A:106:ALA:O	1:A:109:ALA:HB3	2.13	0.48
1:A:131:LEU:HD12	1:A:422:VAL:HG21	1.94	0.48
1:B:319:GLN:O	1:B:336:VAL:HG23	2.13	0.48
1:C:242:LYS:O	1:C:243:ALA:HB3	2.13	0.48
1:D:77:VAL:HG23	1:D:78:ALA:N	2.28	0.48
1:E:31:LEU:HA	1:E:31:LEU:HD12	1.60	0.48
1:G:106:ALA:O	1:G:109:ALA:HB3	2.13	0.48
1:G:247:LEU:HB3	1:G:273:VAL:CG1	2.42	0.48
1:I:140:ASP:C	1:I:142:LYS:H	2.21	0.48
1:K:8:PHE:HZ	1:L:26:ALA:HB2	1.78	0.48
1:K:393:LYS:O	1:K:397:GLU:HB2	2.12	0.48
1:L:20:VAL:HG23	1:L:74:VAL:HG11	1.94	0.48
1:E:201:SER:C	1:E:202:PRO:O	2.56	0.48
1:E:365:LEU:C	1:E:367:GLU:H	2.20	0.48
1:F:114:MET:HG3	1:G:34:LYS:HB3	1.95	0.48
1:H:393:LYS:O	1:H:397:GLU:HB2	2.12	0.48
1:I:200:LEU:HD13	1:I:254:VAL:HB	1.95	0.48
1:J:214:GLU:C	1:J:215:LEU:HD23	2.39	0.48
1:L:20:VAL:CG2	1:L:74:VAL:HG11	2.42	0.48
1:L:160:LYS:O	1:L:164:GLU:HG3	2.12	0.48
1:L:224:ASP:O	1:L:225:LYS:HB3	2.12	0.48
1:A:155:ASP:OD1	1:A:157:THR:HB	2.13	0.48
1:B:513:LEU:HD13	1:C:49:ILE:HD12	1.96	0.48
1:E:111:MET:SD	1:E:438:VAL:HG21	2.53	0.48
1:F:131:LEU:HD12	1:F:422:VAL:HG21	1.94	0.48
1:F:197:ARG:HE	1:F:279:PRO:HA	1.78	0.48
1:F:237:LEU:HD23	1:F:237:LEU:C	2.39	0.48
1:H:139:SER:HB3	1:H:171:LYS:HZ3	1.77	0.48
1:H:162:ILE:O	1:H:165:ALA:HB3	2.13	0.48
1:H:344:GLY:O	1:H:347:ALA:HB3	2.13	0.48
1:K:69:MET:HE2	1:L:39:VAL:HG11	1.95	0.48
1:M:70:GLY:HA2	1:M:73:MET:HE3	1.94	0.48
1:A:201:SER:C	1:A:202:PRO:O	2.57	0.48
1:B:496:PRO:HB2	1:B:499:VAL:HG13	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:202:PRO:O	1:C:203:TYR:HB2	2.13	0.48
1:C:338:GLU:C	1:C:340:ALA:N	2.70	0.48
1:D:77:VAL:CG2	1:D:78:ALA:N	2.76	0.48
1:D:369:VAL:O	1:D:373:ALA:N	2.46	0.48
1:G:219:PHE:O	1:G:247:LEU:HD12	2.13	0.48
1:H:134:LEU:HD11	1:H:421:ARG:HG2	1.96	0.48
1:J:7:LYS:HG3	1:J:66:PHE:CZ	2.49	0.48
1:N:200:LEU:HG	1:N:275:ALA:O	2.13	0.48
1:B:325:ILE:HD12	1:B:325:ILE:N	2.29	0.48
1:D:42:LYS:O	1:D:43:SER:C	2.56	0.48
1:E:326:ASN:HD22	1:E:329:THR:CB	2.01	0.48
1:J:160:LYS:O	1:J:164:GLU:HG3	2.13	0.48
1:L:127:ALA:O	1:L:131:LEU:HB2	2.13	0.48
1:L:455:VAL:HG11	1:L:462:PRO:HA	1.95	0.48
1:M:162:ILE:O	1:M:165:ALA:HB3	2.13	0.48
1:N:70:GLY:HA2	1:N:73:MET:HE3	1.96	0.48
1:B:25:ASP:HA	1:B:28:LYS:HE2	1.95	0.48
1:C:155:ASP:OD1	1:C:157:THR:HB	2.14	0.48
1:E:153:ASN:O	1:E:154:SER:HB2	2.14	0.48
1:H:230:ILE:HD12	1:H:261:THR:CG2	2.38	0.48
1:I:248:LEU:CD1	1:I:325:ILE:HD11	2.44	0.48
1:J:111:MET:SD	1:J:438:VAL:HG21	2.54	0.48
1:J:140:ASP:C	1:J:142:LYS:H	2.21	0.48
1:N:200:LEU:HG	1:N:276:VAL:HA	1.95	0.48
1:C:36:ARG:HG3	1:C:36:ARG:NH1	2.27	0.48
1:D:250:ILE:HG22	1:D:289:LEU:HD21	1.96	0.48
1:D:319:GLN:O	1:D:336:VAL:HG23	2.13	0.48
1:E:237:LEU:HD23	1:E:237:LEU:C	2.39	0.48
1:E:450:PRO:O	1:E:454:ILE:HG13	2.14	0.48
1:G:265:ASN:N	1:G:265:ASN:HD22	2.11	0.48
1:H:18:ARG:HH11	1:H:18:ARG:CG	2.24	0.48
1:H:488:MET:HE3	1:H:493:ILE:HG21	1.96	0.48
1:I:215:LEU:HB2	1:I:323:VAL:HG22	1.96	0.48
1:I:404:ARG:HG2	1:I:404:ARG:NH1	2.21	0.48
1:I:479:ASN:CG	1:I:493:ILE:HD11	2.38	0.48
1:J:254:VAL:O	1:J:259:LEU:HD22	2.13	0.48
1:J:499:VAL:CG2	1:J:500:THR:N	2.77	0.48
1:K:24:ALA:HA	1:K:27:VAL:HG12	1.95	0.48
1:K:69:MET:SD	1:K:520:MET:HE2	2.53	0.48
1:L:134:LEU:HD11	1:L:421:ARG:HG2	1.96	0.48
1:M:124:VAL:O	1:M:125:THR:C	2.56	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:214:GLU:C	1:M:215:LEU:HD23	2.38	0.48
1:B:155:ASP:OD1	1:B:157:THR:HB	2.14	0.48
1:C:218:PRO:HB3	1:C:246:PRO:HG2	1.96	0.48
1:D:265:ASN:HD22	1:D:265:ASN:N	2.10	0.48
1:D:381:VAL:HG21	1:D:393:LYS:HA	1.95	0.48
1:E:520:MET:HA	1:F:39:VAL:O	2.14	0.48
1:F:311:LYS:O	1:H:311:LYS:HE2	2.14	0.48
1:G:25:ASP:HA	1:G:28:LYS:HE2	1.96	0.48
1:H:77:VAL:HG11	1:H:510:VAL:HB	1.96	0.48
1:H:140:ASP:C	1:H:142:LYS:H	2.21	0.48
1:L:7:LYS:HG3	1:L:66:PHE:CZ	2.49	0.48
1:L:77:VAL:HG11	1:L:510:VAL:HB	1.95	0.48
1:L:418:ALA:O	1:L:422:VAL:HG22	2.14	0.48
1:M:25:ASP:HA	1:M:28:LYS:HE2	1.95	0.48
1:A:247:LEU:HB3	1:A:273:VAL:CG1	2.43	0.48
1:C:420:ILE:HG13	1:C:448:GLU:HG2	1.96	0.48
1:D:325:ILE:N	1:D:325:ILE:HD12	2.29	0.48
1:E:17:LEU:HA	1:E:20:VAL:CG1	2.44	0.48
1:I:126:ALA:O	1:I:127:ALA:C	2.57	0.48
1:I:252:GLU:O	1:I:277:LYS:HG3	2.14	0.48
1:J:69:MET:HE3	1:K:41:ASP:HB2	1.96	0.48
1:A:36:ARG:HH11	1:A:36:ARG:HG3	1.79	0.47
1:C:391:GLU:O	1:C:394:ALA:HB3	2.14	0.47
1:F:311:LYS:HD3	1:H:311:LYS:HG2	1.96	0.47
1:G:131:LEU:HD13	1:G:422:VAL:HG21	1.95	0.47
1:G:237:LEU:HD23	1:G:237:LEU:C	2.39	0.47
1:H:214:GLU:C	1:H:215:LEU:HD23	2.38	0.47
1:J:23:LEU:HD23	1:J:74:VAL:HG22	1.95	0.47
1:K:86:GLY:O	1:K:87:ASP:HB2	2.13	0.47
1:L:70:GLY:HA2	1:L:73:MET:HE3	1.96	0.47
1:L:118:ARG:NH2	1:M:34:LYS:HE3	2.29	0.47
1:M:9:GLY:O	1:M:10:ASN:C	2.57	0.47
1:M:22:VAL:HG11	1:M:62:LEU:CD2	2.41	0.47
1:M:129:GLU:C	1:M:131:LEU:H	2.21	0.47
1:M:194:GLN:O	1:M:194:GLN:HG2	2.14	0.47
1:N:207:LYS:C	1:N:209:GLU:H	2.22	0.47
1:B:236:VAL:O	1:B:236:VAL:HG12	2.14	0.47
1:C:221:LEU:HD23	1:C:249:ILE:HG23	1.95	0.47
1:G:17:LEU:HA	1:G:20:VAL:HG12	1.96	0.47
1:G:70:GLY:HA2	1:G:73:MET:HE3	1.95	0.47
1:G:140:ASP:C	1:G:142:LYS:N	2.72	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:70:GLY:HA2	1:H:73:MET:HE3	1.96	0.47
1:K:230:ILE:HD12	1:K:261:THR:CG2	2.38	0.47
1:M:140:ASP:C	1:M:142:LYS:H	2.21	0.47
1:N:404:ARG:HG2	1:N:404:ARG:NH1	2.27	0.47
1:N:485:TYR:HD1	1:N:485:TYR:H	1.62	0.47
1:A:25:ASP:HA	1:A:28:LYS:HE2	1.96	0.47
1:B:42:LYS:O	1:B:43:SER:C	2.57	0.47
1:C:17:LEU:HA	1:C:20:VAL:HG12	1.96	0.47
1:D:106:ALA:O	1:D:109:ALA:HB3	2.14	0.47
1:F:31:LEU:HD22	1:F:90:THR:CG2	2.44	0.47
1:F:485:TYR:N	1:F:485:TYR:CD1	2.82	0.47
1:G:134:LEU:HD23	1:G:134:LEU:O	2.13	0.47
1:G:153:ASN:O	1:G:154:SER:HB2	2.14	0.47
1:H:180:GLY:HA3	1:H:381:VAL:O	2.14	0.47
1:J:207:LYS:O	1:J:209:GLU:N	2.47	0.47
1:K:126:ALA:O	1:K:127:ALA:C	2.56	0.47
1:K:404:ARG:HG2	1:K:404:ARG:NH1	2.25	0.47
1:L:18:ARG:HH11	1:L:18:ARG:CG	2.27	0.47
1:M:404:ARG:HG2	1:M:404:ARG:NH1	2.27	0.47
1:A:3:ALA:HA	1:B:61:GLU:O	2.14	0.47
1:B:365:LEU:C	1:B:367:GLU:H	2.21	0.47
1:C:226:LYS:HD3	1:C:255:GLU:OE2	2.15	0.47
1:D:271:VAL:HG12	1:D:273:VAL:HG13	1.97	0.47
1:F:226:LYS:HD3	1:F:255:GLU:OE2	2.15	0.47
1:G:17:LEU:HA	1:G:20:VAL:CG1	2.45	0.47
1:I:118:ARG:HH22	1:J:34:LYS:HE3	1.79	0.47
1:I:160:LYS:O	1:I:164:GLU:HG3	2.13	0.47
1:I:224:ASP:HB3	1:I:302:SER:HB3	1.96	0.47
1:I:451:LEU:HD23	1:I:451:LEU:O	2.14	0.47
1:K:479:ASN:CG	1:K:493:ILE:HD11	2.39	0.47
1:K:499:VAL:CG2	1:K:500:THR:N	2.77	0.47
1:L:103:GLY:O	1:L:107:VAL:HG23	2.14	0.47
1:A:233:MET:HB3	1:A:237:LEU:HD12	1.96	0.47
1:B:17:LEU:HA	1:B:20:VAL:CG1	2.45	0.47
1:B:23:LEU:CD2	1:B:75:LYS:HG3	2.45	0.47
1:C:265:ASN:HD22	1:C:265:ASN:N	2.11	0.47
1:D:365:LEU:C	1:D:367:GLU:H	2.23	0.47
1:F:369:VAL:HG23	1:F:370:ALA:N	2.29	0.47
1:H:124:VAL:O	1:H:125:THR:C	2.57	0.47
1:I:23:LEU:HD23	1:I:74:VAL:HG22	1.96	0.47
1:K:103:GLY:O	1:K:107:VAL:HG23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:77:VAL:C	1:L:79:SER:N	2.71	0.47
1:L:128:VAL:O	1:L:132:LYS:HG3	2.14	0.47
1:L:142:LYS:O	1:L:142:LYS:HD3	2.14	0.47
1:M:139:SER:HB3	1:M:171:LYS:HZ3	1.79	0.47
1:N:479:ASN:CG	1:N:493:ILE:HD11	2.40	0.47
1:A:221:LEU:HB3	1:A:249:ILE:HD13	1.96	0.47
1:B:127:ALA:HB1	1:B:422:VAL:HG11	1.96	0.47
1:B:198:GLY:O	1:B:276:VAL:HG12	2.15	0.47
1:D:237:LEU:HD23	1:D:237:LEU:C	2.40	0.47
1:E:180:GLY:HA3	1:E:381:VAL:O	2.14	0.47
1:E:485:TYR:N	1:E:485:TYR:CD1	2.82	0.47
1:F:250:ILE:HG22	1:F:289:LEU:HD21	1.97	0.47
1:F:356:ALA:C	1:F:358:SER:H	2.23	0.47
1:G:226:LYS:HD3	1:G:255:GLU:OE2	2.14	0.47
1:G:240:VAL:HG11	1:G:247:LEU:HB2	1.96	0.47
1:H:77:VAL:C	1:H:79:SER:N	2.72	0.47
1:H:451:LEU:HD23	1:H:451:LEU:O	2.14	0.47
1:K:77:VAL:C	1:K:79:SER:N	2.70	0.47
1:L:162:ILE:O	1:L:165:ALA:HB3	2.15	0.47
1:L:201:SER:O	1:L:202:PRO:O	2.32	0.47
1:N:224:ASP:HB3	1:N:302:SER:HB3	1.95	0.47
1:A:42:LYS:O	1:A:43:SER:C	2.58	0.47
1:A:199:TYR:CE2	1:A:327:LYS:HA	2.49	0.47
1:A:237:LEU:HD23	1:A:237:LEU:C	2.40	0.47
1:B:356:ALA:C	1:B:358:SER:H	2.22	0.47
1:D:356:ALA:C	1:D:358:SER:H	2.23	0.47
1:E:17:LEU:HA	1:E:20:VAL:HG12	1.97	0.47
1:F:33:PRO:C	1:F:35:GLY:N	2.72	0.47
1:F:42:LYS:O	1:F:43:SER:C	2.58	0.47
1:F:122:LYS:HE2	1:F:429:LEU:HD11	1.95	0.47
1:G:42:LYS:O	1:G:43:SER:C	2.58	0.47
1:G:180:GLY:HA3	1:G:381:VAL:O	2.15	0.47
1:H:485:TYR:HD1	1:H:485:TYR:H	1.61	0.47
1:J:278:ALA:HB1	1:J:279:PRO:HD2	1.97	0.47
1:K:28:LYS:O	1:K:29:VAL:C	2.55	0.47
1:K:207:LYS:C	1:K:209:GLU:H	2.23	0.47
1:L:22:VAL:HG11	1:L:62:LEU:CD2	2.44	0.47
1:L:198:GLY:HA3	1:L:327:LYS:O	2.15	0.47
1:M:73:MET:CE	1:M:514:MET:HE3	2.44	0.47
1:N:23:LEU:HD23	1:N:74:VAL:HG22	1.96	0.47
1:A:23:LEU:CD2	1:A:75:LYS:HG3	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:308:GLU:C	1:D:310:GLU:H	2.23	0.47
1:E:69:MET:HE3	1:F:41:ASP:CA	2.45	0.47
1:E:140:ASP:C	1:E:142:LYS:N	2.73	0.47
1:H:252:GLU:O	1:H:277:LYS:HG3	2.13	0.47
1:L:114:MET:HB3	1:M:34:LYS:HE2	1.97	0.47
1:L:180:GLY:HA3	1:L:381:VAL:O	2.15	0.47
1:M:34:LYS:HB2	1:M:458:CYS:SG	2.55	0.47
1:A:221:LEU:HD23	1:A:249:ILE:HG23	1.96	0.47
1:A:338:GLU:C	1:A:340:ALA:N	2.73	0.47
1:A:391:GLU:O	1:A:394:ALA:HB3	2.15	0.47
1:B:381:VAL:HG21	1:B:393:LYS:HA	1.95	0.47
1:C:23:LEU:CD2	1:C:75:LYS:HG3	2.45	0.47
1:C:134:LEU:O	1:C:134:LEU:HD23	2.15	0.47
1:C:140:ASP:C	1:C:142:LYS:N	2.73	0.47
1:D:338:GLU:C	1:D:340:ALA:N	2.71	0.47
1:F:233:MET:HB3	1:F:237:LEU:HD12	1.97	0.47
1:G:233:MET:HB3	1:G:237:LEU:HD12	1.96	0.47
1:G:271:VAL:HG12	1:G:273:VAL:HG13	1.96	0.47
1:H:248:LEU:CD1	1:H:325:ILE:HD11	2.45	0.47
1:I:201:SER:C	1:I:202:PRO:O	2.55	0.47
1:J:233:MET:HE1	1:J:249:ILE:HD12	1.95	0.47
1:K:7:LYS:HG3	1:K:66:PHE:CZ	2.50	0.47
1:K:138:CYS:O	1:K:138:CYS:SG	2.73	0.47
1:K:139:SER:HB3	1:K:171:LYS:HZ1	1.79	0.47
1:K:291:ASP:OD2	1:K:368:ARG:HD2	2.15	0.47
1:M:201:SER:O	1:M:202:PRO:O	2.33	0.47
1:M:233:MET:O	1:M:237:LEU:HB2	2.15	0.47
1:N:349:ILE:HG21	1:N:369:VAL:HG13	1.97	0.47
1:A:451:LEU:O	1:A:451:LEU:HD23	2.15	0.47
1:C:197:ARG:HE	1:C:279:PRO:HA	1.80	0.47
1:C:271:VAL:HG12	1:C:273:VAL:HG13	1.96	0.47
1:C:479:ASN:OD1	1:C:481:ALA:HB3	2.15	0.47
1:F:23:LEU:CD2	1:F:75:LYS:HG3	2.45	0.47
1:G:296:THR:O	1:G:297:GLY:O	2.33	0.47
1:H:207:LYS:C	1:H:209:GLU:H	2.22	0.47
1:H:233:MET:O	1:H:237:LEU:HB2	2.15	0.47
1:J:200:LEU:HD13	1:J:254:VAL:HB	1.96	0.47
1:K:22:VAL:HG11	1:K:62:LEU:CD2	2.45	0.47
1:K:70:GLY:HA2	1:K:73:MET:HE3	1.97	0.47
1:K:200:LEU:HG	1:K:275:ALA:O	2.15	0.47
1:K:200:LEU:HD13	1:K:254:VAL:HB	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:451:LEU:HD23	1:M:451:LEU:O	2.15	0.47
1:N:77:VAL:C	1:N:79:SER:N	2.73	0.47
1:N:344:GLY:O	1:N:347:ALA:HB3	2.15	0.47
1:C:13:ARG:HD2	1:C:104:LEU:HD22	1.97	0.46
1:C:249:ILE:HB	1:C:275:ALA:CB	2.45	0.46
1:G:217:SER:N	1:G:218:PRO:CD	2.79	0.46
1:G:420:ILE:HG13	1:G:448:GLU:HG2	1.97	0.46
1:H:127:ALA:O	1:H:131:LEU:HB2	2.15	0.46
1:H:198:GLY:CA	1:H:328:ASP:HA	2.45	0.46
1:I:201:SER:O	1:I:202:PRO:O	2.33	0.46
1:L:349:ILE:HG21	1:L:369:VAL:HG13	1.97	0.46
1:M:31:LEU:HD12	1:M:90:THR:HG22	1.97	0.46
1:A:68:ASN:O	1:A:69:MET:C	2.57	0.46
1:A:249:ILE:HB	1:A:275:ALA:CB	2.45	0.46
1:B:217:SER:N	1:B:218:PRO:CD	2.77	0.46
1:B:233:MET:HB3	1:B:237:LEU:HD12	1.97	0.46
1:B:245:LYS:HZ2	1:B:319:GLN:HE22	1.62	0.46
1:B:369:VAL:HG23	1:B:370:ALA:N	2.30	0.46
1:D:34:LYS:HD2	1:D:458:CYS:HB3	1.94	0.46
1:D:140:ASP:C	1:D:142:LYS:N	2.73	0.46
1:E:131:LEU:HD12	1:E:422:VAL:HG21	1.96	0.46
1:E:369:VAL:HG23	1:E:370:ALA:N	2.30	0.46
1:F:338:GLU:C	1:F:340:ALA:N	2.72	0.46
1:M:103:GLY:O	1:M:107:VAL:HG23	2.15	0.46
1:M:203:TYR:C	1:M:205:ILE:N	2.72	0.46
1:A:193:MET:CE	1:A:292:ILE:HG12	2.45	0.46
1:B:338:GLU:C	1:B:340:ALA:N	2.73	0.46
1:C:233:MET:HB3	1:C:237:LEU:HD12	1.96	0.46
1:C:248:LEU:HD12	1:C:274:ALA:O	2.15	0.46
1:E:193:MET:HG2	1:E:194:GLN:N	2.30	0.46
1:E:265:ASN:HD22	1:E:265:ASN:N	2.11	0.46
1:E:487:ASN:O	1:E:491:MET:HG3	2.15	0.46
1:G:479:ASN:OD1	1:G:481:ALA:HB3	2.15	0.46
1:H:479:ASN:CG	1:H:493:ILE:HD11	2.40	0.46
1:J:233:MET:O	1:J:237:LEU:HB2	2.15	0.46
1:K:30:THR:CG2	1:K:31:LEU:N	2.77	0.46
1:K:349:ILE:HG21	1:K:369:VAL:HG13	1.98	0.46
1:K:520:MET:HG2	1:L:39:VAL:HB	1.97	0.46
1:L:73:MET:SD	1:M:49:ILE:HD11	2.56	0.46
1:L:139:SER:HB3	1:L:171:LYS:HZ1	1.80	0.46
1:N:77:VAL:HG11	1:N:510:VAL:HB	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:224:ASP:O	1:A:225:LYS:HB3	2.16	0.46
1:E:214:GLU:C	1:E:215:LEU:HD23	2.40	0.46
1:F:140:ASP:O	1:F:142:LYS:N	2.48	0.46
1:F:209:GLU:OE1	1:F:209:GLU:N	2.48	0.46
1:F:391:GLU:O	1:F:394:ALA:HB3	2.16	0.46
1:G:465:VAL:O	1:G:469:VAL:HG23	2.15	0.46
1:I:198:GLY:HA3	1:I:327:LYS:O	2.16	0.46
1:L:129:GLU:C	1:L:131:LEU:N	2.73	0.46
1:M:69:MET:HE2	1:N:39:VAL:HG12	1.97	0.46
1:A:250:ILE:HG22	1:A:289:LEU:HD21	1.98	0.46
1:B:201:SER:C	1:B:202:PRO:O	2.59	0.46
1:B:391:GLU:O	1:B:394:ALA:HB3	2.16	0.46
1:C:201:SER:C	1:C:202:PRO:O	2.56	0.46
1:C:365:LEU:C	1:C:367:GLU:H	2.23	0.46
1:E:250:ILE:HG22	1:E:289:LEU:HD21	1.97	0.46
1:F:202:PRO:O	1:F:203:TYR:HB2	2.13	0.46
1:G:201:SER:O	1:G:204:PHE:HD2	1.98	0.46
1:H:258:ALA:O	1:H:262:LEU:HG	2.16	0.46
1:I:393:LYS:O	1:I:397:GLU:HB2	2.14	0.46
1:I:417:VAL:O	1:I:420:ILE:HG22	2.16	0.46
1:J:77:VAL:C	1:J:79:SER:N	2.72	0.46
1:L:17:LEU:HA	1:L:20:VAL:CG1	2.43	0.46
1:L:501:ARG:HG2	1:L:501:ARG:HH11	1.80	0.46
1:M:455:VAL:HG11	1:M:462:PRO:HA	1.98	0.46
1:M:479:ASN:ND2	1:M:482:THR:HG23	2.31	0.46
1:N:216:GLU:O	1:N:217:SER:C	2.58	0.46
1:E:217:SER:N	1:E:218:PRO:CD	2.78	0.46
1:E:319:GLN:O	1:E:336:VAL:HG23	2.16	0.46
1:F:311:LYS:HD3	1:H:311:LYS:CB	2.46	0.46
1:G:214:GLU:C	1:G:215:LEU:HD23	2.40	0.46
1:H:224:ASP:HB3	1:H:302:SER:HB3	1.97	0.46
1:J:488:MET:HE3	1:J:493:ILE:HG21	1.98	0.46
1:L:17:LEU:O	1:L:20:VAL:HG12	2.16	0.46
1:L:214:GLU:C	1:L:215:LEU:HD23	2.40	0.46
1:L:252:GLU:O	1:L:277:LYS:HG3	2.15	0.46
1:L:521:VAL:O	1:M:41:ASP:N	2.46	0.46
1:A:193:MET:HE1	1:A:292:ILE:CG1	2.44	0.46
1:B:153:ASN:O	1:B:154:SER:HB2	2.15	0.46
1:B:250:ILE:HG22	1:B:289:LEU:HD21	1.97	0.46
1:C:369:VAL:O	1:C:373:ALA:N	2.49	0.46
1:D:127:ALA:O	1:D:131:LEU:HB2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:278:ALA:HB1	1:H:279:PRO:HD2	1.98	0.46
1:K:265:ASN:HD22	1:K:265:ASN:N	2.14	0.46
1:K:336:VAL:HG12	1:K:336:VAL:O	2.16	0.46
1:L:265:ASN:HD22	1:L:265:ASN:N	2.14	0.46
1:N:9:GLY:O	1:N:10:ASN:C	2.59	0.46
1:N:198:GLY:HA3	1:N:327:LYS:O	2.16	0.46
1:A:197:ARG:HG3	1:A:277:LYS:O	2.16	0.46
1:A:295:LEU:HD13	1:A:295:LEU:C	2.40	0.46
1:B:385:THR:OG1	1:B:388:GLU:HG3	2.16	0.46
1:C:310:GLU:C	1:C:312:ALA:H	2.24	0.46
1:D:108:ALA:C	1:D:110:GLY:N	2.73	0.46
1:D:180:GLY:HA3	1:D:381:VAL:O	2.16	0.46
1:E:155:ASP:OD1	1:E:157:THR:HB	2.15	0.46
1:E:308:GLU:C	1:E:310:GLU:H	2.24	0.46
1:F:34:LYS:HG2	1:F:458:CYS:SG	2.56	0.46
1:F:482:THR:C	1:F:483:GLU:OE1	2.59	0.46
1:G:201:SER:C	1:G:202:PRO:O	2.58	0.46
1:G:248:LEU:HD12	1:G:274:ALA:O	2.15	0.46
1:H:129:GLU:C	1:H:131:LEU:N	2.73	0.46
1:H:200:LEU:HD13	1:H:254:VAL:HB	1.98	0.46
1:H:224:ASP:O	1:H:225:LYS:HB3	2.15	0.46
1:J:37:ASN:HD22	1:J:51:LYS:HG3	1.80	0.46
1:J:73:MET:CE	1:J:514:MET:HE3	2.46	0.46
1:J:321:LYS:O	1:J:321:LYS:HG2	2.16	0.46
1:A:140:ASP:C	1:A:142:LYS:N	2.73	0.46
1:A:209:GLU:OE1	1:A:209:GLU:N	2.49	0.46
1:A:356:ALA:C	1:A:358:SER:H	2.23	0.46
1:D:233:MET:HB3	1:D:237:LEU:HD12	1.97	0.46
1:D:485:TYR:N	1:D:485:TYR:CD1	2.83	0.46
1:E:485:TYR:HD1	1:E:485:TYR:H	1.64	0.46
1:I:207:LYS:C	1:I:209:GLU:H	2.23	0.46
1:I:344:GLY:O	1:I:347:ALA:HB3	2.16	0.46
1:K:494:LEU:HD12	1:K:494:LEU:N	2.25	0.46
1:L:69:MET:HE3	1:M:41:ASP:HB2	1.98	0.46
1:M:69:MET:HE3	1:N:41:ASP:HB2	1.98	0.46
1:M:200:LEU:HG	1:M:276:VAL:HA	1.96	0.46
1:N:198:GLY:CA	1:N:328:ASP:HA	2.46	0.46
1:N:418:ALA:O	1:N:422:VAL:HG22	2.15	0.46
1:A:218:PRO:HB3	1:A:246:PRO:HG2	1.98	0.46
1:D:6:VAL:HG22	1:D:521:VAL:HG22	1.97	0.46
1:D:134:LEU:HD23	1:D:134:LEU:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:207:LYS:C	1:D:209:GLU:H	2.24	0.46
1:E:70:GLY:HA2	1:E:73:MET:HE3	1.98	0.46
1:F:216:GLU:C	1:F:218:PRO:HD3	2.41	0.46
1:H:336:VAL:O	1:H:336:VAL:HG12	2.16	0.46
1:I:214:GLU:C	1:I:215:LEU:HD23	2.41	0.46
1:I:479:ASN:ND2	1:I:482:THR:HG23	2.31	0.46
1:L:220:ILE:HG23	1:L:248:LEU:HD23	1.98	0.46
1:M:278:ALA:HB1	1:M:279:PRO:HD2	1.97	0.46
1:N:9:GLY:O	1:N:12:ALA:N	2.49	0.46
1:N:37:ASN:HD21	1:N:51:LYS:HZ2	1.64	0.46
1:C:217:SER:N	1:C:218:PRO:CD	2.79	0.45
1:D:224:ASP:O	1:D:225:LYS:HB3	2.16	0.45
1:E:271:VAL:HG12	1:E:273:VAL:HG13	1.98	0.45
1:G:365:LEU:C	1:G:367:GLU:H	2.23	0.45
1:H:233:MET:HE1	1:H:249:ILE:HD12	1.97	0.45
1:I:278:ALA:HB1	1:I:279:PRO:HD2	1.98	0.45
1:J:243:ALA:O	1:J:245:LYS:N	2.49	0.45
1:K:207:LYS:C	1:K:209:GLU:N	2.75	0.45
1:K:233:MET:O	1:K:237:LEU:HB2	2.17	0.45
1:K:252:GLU:O	1:K:277:LYS:HG3	2.17	0.45
1:K:455:VAL:HG13	1:K:460:GLU:CB	2.47	0.45
1:M:207:LYS:C	1:M:209:GLU:H	2.24	0.45
1:M:233:MET:HE1	1:M:249:ILE:HD12	1.97	0.45
1:N:126:ALA:O	1:N:129:GLU:N	2.49	0.45
1:N:138:CYS:O	1:N:138:CYS:SG	2.73	0.45
1:C:17:LEU:HA	1:C:20:VAL:CG1	2.46	0.45
1:C:296:THR:O	1:C:297:GLY:O	2.34	0.45
1:C:501:ARG:O	1:C:505:GLN:HG3	2.16	0.45
1:G:197:ARG:HE	1:G:279:PRO:HA	1.80	0.45
1:G:308:GLU:C	1:G:310:GLU:H	2.24	0.45
1:H:138:CYS:O	1:H:138:CYS:SG	2.74	0.45
1:J:430:ARG:HG2	1:J:430:ARG:HH11	1.81	0.45
1:M:180:GLY:HA3	1:M:381:VAL:O	2.15	0.45
1:M:200:LEU:HD13	1:M:254:VAL:HB	1.98	0.45
1:M:224:ASP:HB3	1:M:302:SER:HB3	1.98	0.45
1:A:77:VAL:O	1:A:80:LYS:N	2.48	0.45
1:B:140:ASP:C	1:B:142:LYS:N	2.74	0.45
1:E:233:MET:HB3	1:E:237:LEU:HD12	1.97	0.45
1:E:248:LEU:HD12	1:E:274:ALA:O	2.16	0.45
1:E:296:THR:O	1:E:297:GLY:O	2.34	0.45
1:G:249:ILE:HB	1:G:275:ALA:CB	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:392:LYS:C	1:H:394:ALA:N	2.74	0.45
1:I:108:ALA:C	1:I:110:GLY:H	2.25	0.45
1:K:127:ALA:O	1:K:131:LEU:HB2	2.15	0.45
1:K:129:GLU:C	1:K:131:LEU:N	2.74	0.45
1:M:265:ASN:HD22	1:M:265:ASN:N	2.13	0.45
1:N:7:LYS:HG3	1:N:66:PHE:CZ	2.50	0.45
1:N:207:LYS:C	1:N:209:GLU:N	2.74	0.45
1:A:308:GLU:C	1:A:310:GLU:H	2.24	0.45
1:B:249:ILE:HB	1:B:275:ALA:CB	2.46	0.45
1:C:209:GLU:OE1	1:C:209:GLU:N	2.49	0.45
1:D:25:ASP:HA	1:D:28:LYS:HE2	1.98	0.45
1:D:36:ARG:HH11	1:D:36:ARG:HG3	1.81	0.45
1:E:13:ARG:HD3	1:E:104:LEU:HD22	1.98	0.45
1:E:493:ILE:O	1:E:493:ILE:HG22	2.16	0.45
1:F:249:ILE:HB	1:F:275:ALA:CB	2.47	0.45
1:F:308:GLU:C	1:F:310:GLU:H	2.25	0.45
1:G:131:LEU:HD12	1:G:422:VAL:HG21	1.98	0.45
1:G:310:GLU:C	1:G:312:ALA:H	2.25	0.45
1:I:207:LYS:C	1:I:209:GLU:N	2.75	0.45
1:I:216:GLU:O	1:I:217:SER:C	2.60	0.45
1:J:248:LEU:CD1	1:J:325:ILE:HD11	2.47	0.45
1:J:291:ASP:OD2	1:J:368:ARG:HD2	2.16	0.45
1:L:200:LEU:HG	1:L:276:VAL:HA	1.98	0.45
1:L:207:LYS:C	1:L:209:GLU:N	2.73	0.45
1:M:73:MET:HE3	1:M:514:MET:HE3	1.98	0.45
1:N:64:ASP:OD1	1:N:66:PHE:HB2	2.16	0.45
1:N:220:ILE:HG23	1:N:248:LEU:HD23	1.97	0.45
1:B:519:CYS:HB3	1:C:38:VAL:HG13	1.98	0.45
1:F:265:ASN:HD22	1:F:265:ASN:N	2.13	0.45
1:G:108:ALA:C	1:G:110:GLY:H	2.23	0.45
1:I:77:VAL:C	1:I:79:SER:N	2.72	0.45
1:J:134:LEU:HD11	1:J:421:ARG:HG2	1.97	0.45
1:K:198:GLY:HA3	1:K:327:LYS:O	2.15	0.45
1:L:278:ALA:HB1	1:L:279:PRO:HD2	1.98	0.45
1:L:494:LEU:HD12	1:L:494:LEU:N	2.24	0.45
1:M:207:LYS:O	1:M:209:GLU:N	2.49	0.45
1:M:291:ASP:OD2	1:M:368:ARG:HD2	2.17	0.45
1:B:296:THR:O	1:B:297:GLY:O	2.33	0.45
1:C:221:LEU:HB3	1:C:249:ILE:HD13	1.97	0.45
1:D:52:ASP:OD1	1:D:54:VAL:HG23	2.17	0.45
1:F:295:LEU:HD13	1:F:295:LEU:C	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:183:LEU:HD22	1:G:184:GLN:N	2.26	0.45
1:J:127:ALA:O	1:J:131:LEU:HB2	2.17	0.45
1:J:207:LYS:C	1:J:209:GLU:H	2.24	0.45
1:J:235:PRO:HG3	1:J:310:GLU:CG	2.46	0.45
1:L:231:ARG:HH11	1:M:241:ALA:C	2.24	0.45
1:N:18:ARG:HH11	1:N:18:ARG:CG	2.29	0.45
1:A:207:LYS:C	1:A:209:GLU:H	2.25	0.45
1:A:485:TYR:N	1:A:485:TYR:CD1	2.85	0.45
1:B:207:LYS:O	1:B:209:GLU:N	2.50	0.45
1:C:417:VAL:O	1:C:420:ILE:HG22	2.16	0.45
1:D:202:PRO:O	1:D:204:PHE:N	2.46	0.45
1:D:413:ALA:CB	1:D:417:VAL:CG2	2.94	0.45
1:E:23:LEU:HD22	1:E:75:LYS:HG3	1.97	0.45
1:E:412:VAL:HG13	1:E:497:THR:OG1	2.17	0.45
1:E:465:VAL:O	1:E:469:VAL:HG23	2.17	0.45
1:G:171:LYS:HB3	1:G:407:VAL:HG11	1.97	0.45
1:G:199:TYR:CE2	1:G:327:LYS:HA	2.52	0.45
1:I:216:GLU:C	1:I:218:PRO:HD3	2.42	0.45
1:J:200:LEU:HG	1:J:276:VAL:HA	1.98	0.45
1:M:482:THR:O	1:M:483:GLU:HB2	2.17	0.45
1:A:207:LYS:O	1:A:209:GLU:N	2.50	0.45
1:A:381:VAL:HG21	1:A:393:LYS:HA	1.99	0.45
1:B:290:GLN:O	1:B:291:ASP:C	2.60	0.45
1:D:183:LEU:HD22	1:D:184:GLN:N	2.29	0.45
1:D:197:ARG:HE	1:D:279:PRO:HA	1.81	0.45
1:E:134:LEU:O	1:E:134:LEU:HD23	2.17	0.45
1:E:224:ASP:O	1:E:225:LYS:HB3	2.17	0.45
1:E:248:LEU:HA	1:E:274:ALA:O	2.17	0.45
1:F:193:MET:HE1	1:F:292:ILE:CG1	2.46	0.45
1:F:193:MET:HG2	1:F:194:GLN:N	2.31	0.45
1:G:68:ASN:O	1:G:69:MET:C	2.58	0.45
1:G:505:GLN:HE21	1:G:505:GLN:HB3	1.58	0.45
1:H:455:VAL:HG13	1:H:460:GLU:CB	2.47	0.45
1:I:28:LYS:C	1:I:30:THR:N	2.70	0.45
1:I:248:LEU:HD11	1:I:325:ILE:HD11	1.99	0.45
1:J:252:GLU:O	1:J:277:LYS:HG3	2.17	0.45
1:L:216:GLU:O	1:L:217:SER:C	2.60	0.45
1:M:30:THR:OG1	1:M:31:LEU:N	2.50	0.45
1:M:128:VAL:O	1:M:132:LYS:HG3	2.16	0.45
1:M:198:GLY:CA	1:M:328:ASP:HA	2.47	0.45
1:M:216:GLU:O	1:M:217:SER:C	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:258:ALA:O	1:M:262:LEU:HG	2.17	0.45
1:N:265:ASN:HD22	1:N:265:ASN:N	2.13	0.45
1:A:28:LYS:C	1:A:30:THR:N	2.75	0.45
1:A:214:GLU:C	1:A:215:LEU:HD23	2.41	0.45
1:A:219:PHE:O	1:A:247:LEU:HD12	2.16	0.45
1:B:123:ALA:HB2	1:B:440:ILE:HG13	1.98	0.45
1:B:221:LEU:HB3	1:B:249:ILE:HD13	1.99	0.45
1:B:310:GLU:C	1:B:312:ALA:H	2.24	0.45
1:B:336:VAL:O	1:B:337:GLY:C	2.59	0.45
1:C:112:ASN:OD1	1:C:114:MET:N	2.50	0.45
1:D:183:LEU:O	1:D:184:GLN:CB	2.65	0.45
1:D:209:GLU:OE1	1:D:209:GLU:N	2.50	0.45
1:D:479:ASN:OD1	1:D:481:ALA:HB3	2.17	0.45
1:E:183:LEU:HD22	1:E:184:GLN:N	2.27	0.45
1:E:221:LEU:HB3	1:E:249:ILE:HD13	1.99	0.45
1:F:214:GLU:C	1:F:215:LEU:HD23	2.42	0.45
1:F:221:LEU:HD23	1:F:249:ILE:HG23	1.99	0.45
1:G:197:ARG:HG3	1:G:277:LYS:O	2.17	0.45
1:H:254:VAL:O	1:H:259:LEU:HD22	2.17	0.45
1:I:224:ASP:O	1:I:225:LYS:HB3	2.16	0.45
1:I:482:THR:O	1:I:483:GLU:HB2	2.17	0.45
1:J:128:VAL:O	1:J:132:LYS:HG3	2.16	0.45
1:J:198:GLY:CA	1:J:328:ASP:HA	2.46	0.45
1:J:220:ILE:HG23	1:J:248:LEU:HD23	1.99	0.45
1:J:479:ASN:ND2	1:J:482:THR:HG23	2.32	0.45
1:L:200:LEU:HG	1:L:275:ALA:O	2.15	0.45
1:M:479:ASN:CG	1:M:493:ILE:HD11	2.41	0.45
1:N:162:ILE:O	1:N:165:ALA:HB3	2.17	0.45
1:N:200:LEU:HD13	1:N:254:VAL:HB	1.98	0.45
1:A:6:VAL:HG22	1:A:521:VAL:HG22	1.99	0.45
1:A:365:LEU:C	1:A:367:GLU:H	2.25	0.45
1:B:305:ILE:O	1:B:305:ILE:HG22	2.17	0.45
1:C:201:SER:O	1:C:204:PHE:HD2	2.00	0.45
1:D:249:ILE:HB	1:D:275:ALA:CB	2.47	0.45
1:F:485:TYR:HD1	1:F:485:TYR:H	1.64	0.45
1:G:183:LEU:O	1:G:184:GLN:CB	2.64	0.45
1:G:501:ARG:O	1:G:505:GLN:HG3	2.17	0.45
1:H:265:ASN:HD22	1:H:265:ASN:N	2.14	0.45
1:H:349:ILE:HG21	1:H:369:VAL:HG13	1.98	0.45
1:H:496:PRO:O	1:H:497:THR:C	2.60	0.45
1:I:321:LYS:O	1:I:321:LYS:HG2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:349:ILE:HG21	1:I:369:VAL:HG13	1.97	0.45
1:J:66:PHE:O	1:J:67:GLU:C	2.60	0.45
1:K:518:GLU:CG	1:L:36:ARG:HG3	2.47	0.45
1:L:73:MET:HE3	1:L:514:MET:HE3	1.99	0.45
1:L:200:LEU:HD13	1:L:254:VAL:HB	1.99	0.45
1:L:215:LEU:HB2	1:L:323:VAL:HG22	1.98	0.45
1:L:224:ASP:HB3	1:L:302:SER:HB3	1.98	0.45
1:L:488:MET:HE3	1:L:493:ILE:HG21	1.98	0.45
1:B:17:LEU:HA	1:B:20:VAL:HG12	1.98	0.44
1:C:381:VAL:HG21	1:C:393:LYS:HA	1.99	0.44
1:E:13:ARG:CD	1:E:104:LEU:HD22	2.47	0.44
1:F:77:VAL:O	1:F:80:LYS:HB2	2.17	0.44
1:F:310:GLU:C	1:F:312:ALA:H	2.25	0.44
1:F:365:LEU:C	1:F:367:GLU:H	2.23	0.44
1:H:9:GLY:O	1:H:12:ALA:N	2.50	0.44
1:H:207:LYS:C	1:H:209:GLU:N	2.74	0.44
1:I:17:LEU:HA	1:I:20:VAL:CG1	2.47	0.44
1:I:73:MET:CE	1:I:514:MET:HE3	2.47	0.44
1:J:207:LYS:C	1:J:209:GLU:N	2.75	0.44
1:K:124:VAL:O	1:K:125:THR:C	2.59	0.44
1:K:417:VAL:HG21	1:K:488:MET:HG3	1.99	0.44
1:M:451:LEU:C	1:M:451:LEU:CD2	2.89	0.44
1:B:28:LYS:C	1:B:30:THR:H	2.23	0.44
1:B:207:LYS:C	1:B:209:GLU:H	2.25	0.44
1:C:219:PHE:O	1:C:247:LEU:HD12	2.16	0.44
1:D:295:LEU:HA	1:D:342:ILE:CD1	2.47	0.44
1:E:290:GLN:O	1:E:291:ASP:C	2.61	0.44
1:F:487:ASN:O	1:F:491:MET:HG3	2.18	0.44
1:F:494:LEU:C	1:F:494:LEU:HD12	2.43	0.44
1:J:310:GLU:C	1:J:312:ALA:H	2.26	0.44
1:K:216:GLU:C	1:K:218:PRO:HD3	2.42	0.44
1:L:230:ILE:HD12	1:L:261:THR:CG2	2.41	0.44
1:L:291:ASP:OD2	1:L:368:ARG:HD2	2.17	0.44
1:M:220:ILE:HG23	1:M:248:LEU:HD23	1.98	0.44
1:N:310:GLU:C	1:N:312:ALA:H	2.26	0.44
1:A:122:LYS:HE2	1:A:429:LEU:HD11	1.98	0.44
1:A:496:PRO:HB2	1:A:499:VAL:HG13	1.98	0.44
1:C:52:ASP:OD1	1:C:54:VAL:HG23	2.17	0.44
1:C:240:VAL:HG11	1:C:247:LEU:HB2	2.00	0.44
1:C:295:LEU:HD13	1:C:295:LEU:C	2.43	0.44
1:D:111:MET:SD	1:D:438:VAL:HG21	2.58	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:219:PHE:O	1:E:247:LEU:HD12	2.17	0.44
1:F:451:LEU:O	1:F:451:LEU:HD23	2.17	0.44
1:G:77:VAL:O	1:G:80:LYS:HB2	2.17	0.44
1:H:108:ALA:C	1:H:110:GLY:H	2.25	0.44
1:H:389:MET:SD	1:H:389:MET:C	3.00	0.44
1:H:494:LEU:HD12	1:H:494:LEU:N	2.20	0.44
1:J:70:GLY:HA2	1:J:73:MET:HE3	1.99	0.44
1:K:200:LEU:HG	1:K:276:VAL:HA	1.99	0.44
1:L:64:ASP:OD1	1:L:66:PHE:HB2	2.17	0.44
1:M:310:GLU:C	1:M:312:ALA:H	2.25	0.44
1:M:335:GLY:C	1:M:337:GLY:N	2.76	0.44
1:N:42:LYS:O	1:N:43:SER:C	2.60	0.44
1:N:124:VAL:O	1:N:125:THR:C	2.59	0.44
1:A:36:ARG:O	1:A:51:LYS:HG2	2.17	0.44
1:A:296:THR:O	1:A:297:GLY:O	2.35	0.44
1:B:13:ARG:O	1:B:14:VAL:C	2.59	0.44
1:B:171:LYS:HB3	1:B:407:VAL:HG11	1.98	0.44
1:B:226:LYS:HD3	1:B:255:GLU:OE2	2.17	0.44
1:B:295:LEU:C	1:B:295:LEU:HD13	2.42	0.44
1:C:216:GLU:C	1:C:218:PRO:HD3	2.42	0.44
1:D:485:TYR:H	1:D:485:TYR:HD1	1.65	0.44
1:E:216:GLU:C	1:E:218:PRO:HD3	2.42	0.44
1:E:381:VAL:HG21	1:E:393:LYS:HA	1.99	0.44
1:F:201:SER:O	1:F:204:PHE:HD2	2.00	0.44
1:F:268:ARG:C	1:F:270:ILE:H	2.25	0.44
1:G:23:LEU:CD2	1:G:75:LYS:HG3	2.47	0.44
1:G:209:GLU:OE1	1:G:209:GLU:N	2.50	0.44
1:G:221:LEU:HD23	1:G:249:ILE:HG23	1.98	0.44
1:I:392:LYS:C	1:I:394:ALA:N	2.76	0.44
1:J:143:ALA:C	1:J:145:ALA:N	2.75	0.44
1:J:183:LEU:CD1	1:J:184:GLN:HG3	2.47	0.44
1:K:42:LYS:O	1:K:43:SER:C	2.60	0.44
1:K:224:ASP:HB3	1:K:302:SER:HB3	1.98	0.44
1:M:127:ALA:O	1:M:131:LEU:HB2	2.18	0.44
1:A:31:LEU:HD22	1:A:31:LEU:HA	1.61	0.44
1:A:201:SER:O	1:A:204:PHE:HD2	2.01	0.44
1:B:219:PHE:O	1:B:247:LEU:HD12	2.18	0.44
1:C:214:GLU:C	1:C:215:LEU:HD23	2.43	0.44
1:D:417:VAL:O	1:D:420:ILE:HG22	2.17	0.44
1:E:42:LYS:O	1:E:43:SER:C	2.60	0.44
1:E:112:ASN:OD1	1:E:114:MET:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:209:GLU:OE1	1:E:209:GLU:N	2.50	0.44
1:E:338:GLU:C	1:E:340:ALA:N	2.72	0.44
1:F:29:VAL:O	1:F:29:VAL:HG23	2.18	0.44
1:F:36:ARG:HG3	1:F:36:ARG:HH11	1.82	0.44
1:G:207:LYS:C	1:G:209:GLU:H	2.25	0.44
1:G:479:ASN:CG	1:G:493:ILE:HD11	2.41	0.44
1:I:198:GLY:CA	1:I:328:ASP:HA	2.47	0.44
1:J:262:LEU:C	1:J:264:VAL:N	2.73	0.44
1:J:265:ASN:HD22	1:J:265:ASN:N	2.15	0.44
1:J:496:PRO:HB2	1:J:499:VAL:CG1	2.48	0.44
1:N:17:LEU:HA	1:N:20:VAL:CG1	2.46	0.44
1:N:74:VAL:O	1:N:74:VAL:HG23	2.17	0.44
1:B:183:LEU:HD22	1:B:184:GLN:N	2.29	0.44
1:B:183:LEU:O	1:B:184:GLN:CB	2.66	0.44
1:B:193:MET:HG2	1:B:194:GLN:N	2.32	0.44
1:B:209:GLU:OE1	1:B:209:GLU:N	2.50	0.44
1:B:308:GLU:C	1:B:310:GLU:H	2.25	0.44
1:C:193:MET:HG2	1:C:194:GLN:N	2.33	0.44
1:C:207:LYS:O	1:C:209:GLU:N	2.51	0.44
1:C:290:GLN:O	1:C:291:ASP:C	2.60	0.44
1:C:482:THR:C	1:C:483:GLU:OE1	2.60	0.44
1:E:311:LYS:HG2	1:I:311:LYS:HG2	1.98	0.44
1:F:77:VAL:HG21	1:F:510:VAL:CG1	2.48	0.44
1:H:201:SER:O	1:H:202:PRO:O	2.36	0.44
1:I:162:ILE:O	1:I:165:ALA:HB3	2.17	0.44
1:I:233:MET:HE1	1:I:249:ILE:HD12	1.98	0.44
1:K:214:GLU:C	1:K:215:LEU:HD23	2.42	0.44
1:L:198:GLY:CA	1:L:328:ASP:HA	2.48	0.44
1:L:521:VAL:N	1:M:39:VAL:O	2.45	0.44
1:B:197:ARG:HE	1:B:279:PRO:HA	1.83	0.44
1:D:207:LYS:O	1:D:209:GLU:N	2.50	0.44
1:D:216:GLU:C	1:D:218:PRO:HD3	2.42	0.44
1:D:413:ALA:HB1	1:D:417:VAL:CG2	2.47	0.44
1:E:69:MET:HE3	1:F:41:ASP:N	2.32	0.44
1:E:123:ALA:HB2	1:E:440:ILE:HG13	2.00	0.44
1:E:207:LYS:C	1:E:209:GLU:H	2.25	0.44
1:G:119:GLY:O	1:G:440:ILE:HD12	2.17	0.44
1:G:224:ASP:O	1:G:225:LYS:HB3	2.18	0.44
1:G:268:ARG:C	1:G:270:ILE:H	2.25	0.44
1:H:63:GLU:CA	1:N:3:ALA:HB1	2.47	0.44
1:H:126:ALA:O	1:H:127:ALA:C	2.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:243:ALA:O	1:I:245:LYS:N	2.51	0.44
1:I:485:TYR:H	1:I:485:TYR:HD1	1.66	0.44
1:K:77:VAL:O	1:K:79:SER:N	2.51	0.44
1:L:111:MET:SD	1:L:438:VAL:HG21	2.58	0.44
1:N:479:ASN:ND2	1:N:482:THR:HG23	2.31	0.44
1:A:221:LEU:HA	1:A:317:LEU:HD11	1.99	0.44
1:B:268:ARG:C	1:B:270:ILE:H	2.26	0.44
1:E:106:ALA:O	1:E:109:ALA:HB3	2.18	0.44
1:E:127:ALA:O	1:E:131:LEU:HB2	2.18	0.44
1:E:131:LEU:HD13	1:E:422:VAL:HG21	2.00	0.44
1:E:240:VAL:HG11	1:E:247:LEU:HB2	2.00	0.44
1:E:310:GLU:C	1:E:312:ALA:H	2.25	0.44
1:F:201:SER:C	1:F:202:PRO:O	2.60	0.44
1:F:311:LYS:HD3	1:H:311:LYS:CA	2.44	0.44
1:G:338:GLU:C	1:G:340:ALA:N	2.74	0.44
1:G:417:VAL:O	1:G:420:ILE:HG22	2.18	0.44
1:G:496:PRO:HB2	1:G:499:VAL:HG13	1.98	0.44
1:H:220:ILE:HG23	1:H:248:LEU:HD23	1.99	0.44
1:I:143:ALA:C	1:I:145:ALA:N	2.75	0.44
1:J:17:LEU:O	1:J:20:VAL:HG12	2.18	0.44
1:J:336:VAL:O	1:J:336:VAL:HG12	2.18	0.44
1:L:233:MET:O	1:L:237:LEU:HB2	2.17	0.44
1:M:126:ALA:O	1:M:127:ALA:C	2.59	0.44
1:M:143:ALA:O	1:M:144:ILE:C	2.61	0.44
1:M:165:ALA:C	1:M:167:ASP:N	2.75	0.44
1:M:392:LYS:C	1:M:394:ALA:N	2.73	0.44
1:N:488:MET:HE3	1:N:493:ILE:HG21	1.99	0.44
1:A:153:ASN:O	1:A:154:SER:HB2	2.16	0.44
1:A:233:MET:O	1:A:234:LEU:C	2.61	0.44
1:A:268:ARG:C	1:A:270:ILE:H	2.25	0.44
1:A:319:GLN:O	1:A:336:VAL:HG23	2.17	0.44
1:B:201:SER:O	1:B:204:PHE:HD2	2.01	0.44
1:B:479:ASN:OD1	1:B:481:ALA:HB3	2.17	0.44
1:C:77:VAL:HG21	1:C:510:VAL:CG1	2.48	0.44
1:C:183:LEU:O	1:C:184:GLN:CB	2.66	0.44
1:D:27:VAL:O	1:D:30:THR:OG1	2.34	0.44
1:F:207:LYS:C	1:F:209:GLU:H	2.25	0.44
1:F:450:PRO:O	1:F:454:ILE:HG13	2.18	0.44
1:G:325:ILE:N	1:G:325:ILE:HD12	2.33	0.44
1:H:22:VAL:HG11	1:H:62:LEU:CD2	2.46	0.44
1:H:111:MET:SD	1:H:438:VAL:HG21	2.58	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:441:LYS:O	1:H:445:ARG:HB2	2.18	0.44
1:H:524:LEU:HD12	1:H:524:LEU:HA	1.87	0.44
1:I:136:VAL:O	1:I:136:VAL:HG12	2.18	0.44
1:I:220:ILE:HG23	1:I:248:LEU:HD23	1.99	0.44
1:I:495:ASP:O	1:I:496:PRO:C	2.61	0.44
1:K:9:GLY:O	1:K:10:ASN:C	2.61	0.44
1:K:183:LEU:CD1	1:K:184:GLN:HG3	2.47	0.44
1:K:496:PRO:HB2	1:K:499:VAL:CG1	2.48	0.44
1:M:24:ALA:HA	1:M:27:VAL:HG12	1.99	0.44
1:M:243:ALA:O	1:M:245:LYS:N	2.51	0.44
1:N:243:ALA:O	1:N:245:LYS:N	2.50	0.44
1:C:485:TYR:N	1:C:485:TYR:CD1	2.85	0.43
1:D:73:MET:SD	1:E:49:ILE:HD11	2.58	0.43
1:D:77:VAL:HG21	1:D:510:VAL:CG1	2.48	0.43
1:E:201:SER:O	1:E:204:PHE:HD2	2.00	0.43
1:E:505:GLN:HE21	1:E:505:GLN:HB3	1.63	0.43
1:F:180:GLY:HA3	1:F:381:VAL:O	2.17	0.43
1:G:295:LEU:C	1:G:295:LEU:HD13	2.43	0.43
1:H:17:LEU:HA	1:H:20:VAL:CG1	2.47	0.43
1:H:42:LYS:O	1:H:43:SER:C	2.61	0.43
1:J:485:TYR:CD1	1:J:485:TYR:N	2.86	0.43
1:K:198:GLY:CA	1:K:328:ASP:HA	2.48	0.43
1:L:10:ASN:HA	1:L:13:ARG:NH1	2.33	0.43
1:M:77:VAL:HG11	1:M:510:VAL:HB	2.00	0.43
1:M:418:ALA:O	1:M:422:VAL:HG22	2.18	0.43
1:M:450:PRO:O	1:M:454:ILE:HG13	2.18	0.43
1:N:224:ASP:O	1:N:225:LYS:HB3	2.17	0.43
1:A:32:GLY:O	1:A:34:LYS:N	2.51	0.43
1:A:112:ASN:OD1	1:A:114:MET:N	2.51	0.43
1:A:197:ARG:HE	1:A:279:PRO:HA	1.83	0.43
1:B:224:ASP:O	1:B:225:LYS:HB3	2.18	0.43
1:B:248:LEU:HA	1:B:274:ALA:O	2.19	0.43
1:B:271:VAL:HG12	1:B:273:VAL:HG13	2.00	0.43
1:C:31:LEU:HD12	1:C:31:LEU:HA	1.79	0.43
1:C:42:LYS:O	1:C:43:SER:C	2.61	0.43
1:C:197:ARG:HG3	1:C:277:LYS:O	2.18	0.43
1:C:308:GLU:C	1:C:310:GLU:H	2.25	0.43
1:D:221:LEU:HD23	1:D:249:ILE:HG23	2.00	0.43
1:F:248:LEU:HA	1:F:274:ALA:O	2.18	0.43
1:F:271:VAL:HG12	1:F:273:VAL:HG13	1.98	0.43
1:G:369:VAL:O	1:G:373:ALA:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:42:LYS:O	1:I:43:SER:C	2.61	0.43
1:I:90:THR:O	1:I:94:VAL:HG12	2.18	0.43
1:K:321:LYS:O	1:K:321:LYS:HG2	2.19	0.43
1:L:243:ALA:O	1:L:245:LYS:N	2.50	0.43
1:L:248:LEU:CD1	1:L:325:ILE:HD11	2.47	0.43
1:L:482:THR:O	1:L:483:GLU:HB2	2.18	0.43
1:M:134:LEU:HD11	1:M:421:ARG:HG2	2.00	0.43
1:M:495:ASP:O	1:M:496:PRO:C	2.59	0.43
1:N:180:GLY:HA3	1:N:381:VAL:O	2.18	0.43
1:A:37:ASN:HD21	1:A:51:LYS:HE3	1.83	0.43
1:A:310:GLU:C	1:A:312:ALA:H	2.26	0.43
1:A:385:THR:OG1	1:A:388:GLU:HG3	2.18	0.43
1:A:482:THR:C	1:A:483:GLU:OE1	2.61	0.43
1:B:106:ALA:O	1:B:109:ALA:HB3	2.17	0.43
1:B:112:ASN:OD1	1:B:114:MET:N	2.51	0.43
1:B:233:MET:O	1:B:234:LEU:C	2.61	0.43
1:D:23:LEU:CD2	1:D:75:LYS:HG3	2.48	0.43
1:D:28:LYS:C	1:D:30:THR:H	2.26	0.43
1:D:201:SER:O	1:D:204:PHE:HD2	1.99	0.43
1:D:214:GLU:C	1:D:215:LEU:HD23	2.43	0.43
1:E:325:ILE:HD12	1:E:325:ILE:N	2.34	0.43
1:G:102:GLU:O	1:G:105:LYS:HB3	2.18	0.43
1:G:216:GLU:C	1:G:218:PRO:HD3	2.43	0.43
1:H:335:GLY:C	1:H:337:GLY:N	2.77	0.43
1:I:139:SER:HB3	1:I:171:LYS:HZ3	1.83	0.43
1:I:265:ASN:N	1:I:265:ASN:HD22	2.15	0.43
1:I:451:LEU:C	1:I:451:LEU:CD2	2.90	0.43
1:I:455:VAL:HG13	1:I:460:GLU:CB	2.48	0.43
1:K:310:GLU:C	1:K:312:ALA:H	2.26	0.43
1:L:336:VAL:O	1:L:336:VAL:HG12	2.18	0.43
1:M:77:VAL:O	1:M:79:SER:N	2.50	0.43
1:M:455:VAL:HG13	1:M:460:GLU:CB	2.47	0.43
1:N:389:MET:C	1:N:389:MET:SD	3.01	0.43
1:N:403:THR:O	1:N:404:ARG:C	2.62	0.43
1:A:112:ASN:OD1	1:A:112:ASN:C	2.61	0.43
1:A:123:ALA:HB2	1:A:440:ILE:HG13	2.00	0.43
1:B:493:ILE:O	1:B:493:ILE:HG22	2.18	0.43
1:C:268:ARG:C	1:C:270:ILE:H	2.26	0.43
1:D:69:MET:HE2	1:E:39:VAL:CG1	2.49	0.43
1:D:501:ARG:O	1:D:505:GLN:HG3	2.19	0.43
1:E:207:LYS:O	1:E:209:GLU:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:23:LEU:HD22	1:F:75:LYS:HG3	1.99	0.43
1:F:325:ILE:N	1:F:325:ILE:HD12	2.34	0.43
1:G:69:MET:SD	1:G:520:MET:HE2	2.57	0.43
1:H:183:LEU:CD1	1:H:184:GLN:HG3	2.49	0.43
1:H:450:PRO:O	1:H:454:ILE:HG13	2.18	0.43
1:K:216:GLU:O	1:K:217:SER:C	2.62	0.43
1:M:501:ARG:HG2	1:M:501:ARG:HH11	1.83	0.43
1:N:392:LYS:C	1:N:394:ALA:N	2.75	0.43
1:A:183:LEU:O	1:A:184:GLN:CB	2.66	0.43
1:A:248:LEU:HD12	1:A:274:ALA:O	2.18	0.43
1:A:494:LEU:C	1:A:494:LEU:HD12	2.42	0.43
1:B:207:LYS:C	1:B:209:GLU:N	2.77	0.43
1:B:451:LEU:C	1:B:451:LEU:CD2	2.92	0.43
1:D:296:THR:O	1:D:297:GLY:O	2.36	0.43
1:D:310:GLU:C	1:D:312:ALA:H	2.27	0.43
1:E:521:VAL:HB	1:F:40:LEU:HD23	2.00	0.43
1:F:27:VAL:HG22	1:F:90:THR:HG23	2.01	0.43
1:H:451:LEU:C	1:H:451:LEU:CD2	2.92	0.43
1:H:487:ASN:N	1:H:491:MET:HE2	2.34	0.43
1:I:9:GLY:O	1:I:10:ASN:C	2.61	0.43
1:I:494:LEU:HD12	1:I:494:LEU:N	2.22	0.43
1:J:24:ALA:HA	1:J:27:VAL:HG12	2.00	0.43
1:J:77:VAL:O	1:J:79:SER:N	2.51	0.43
1:L:23:LEU:HD23	1:L:74:VAL:CG2	2.49	0.43
1:L:262:LEU:C	1:L:264:VAL:N	2.76	0.43
1:M:8:PHE:HE1	1:N:26:ALA:HA	1.82	0.43
1:N:143:ALA:C	1:N:145:ALA:N	2.76	0.43
1:N:199:TYR:CZ	1:N:327:LYS:HA	2.54	0.43
1:A:102:GLU:O	1:A:105:LYS:HB3	2.18	0.43
1:A:417:VAL:O	1:A:420:ILE:HG22	2.19	0.43
1:B:108:ALA:C	1:B:110:GLY:N	2.74	0.43
1:D:32:GLY:HA3	1:D:33:PRO:HD2	1.81	0.43
1:D:127:ALA:HB1	1:D:422:VAL:HG11	2.00	0.43
1:D:193:MET:HE1	1:D:292:ILE:CG1	2.48	0.43
1:D:268:ARG:C	1:D:270:ILE:H	2.25	0.43
1:H:143:ALA:C	1:H:145:ALA:N	2.73	0.43
1:J:258:ALA:O	1:J:262:LEU:HG	2.18	0.43
1:K:126:ALA:O	1:K:129:GLU:N	2.52	0.43
1:K:248:LEU:CD1	1:K:325:ILE:HD11	2.48	0.43
1:L:31:LEU:HD13	1:L:31:LEU:HA	1.75	0.43
1:L:42:LYS:O	1:L:43:SER:C	2.62	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:202:PRO:C	1:N:204:PHE:N	2.77	0.43
1:A:77:VAL:HG21	1:A:510:VAL:CG1	2.48	0.43
1:A:230:ILE:HD12	1:A:261:THR:CG2	2.48	0.43
1:E:69:MET:SD	1:E:520:MET:HE2	2.59	0.43
1:E:197:ARG:HE	1:E:279:PRO:HA	1.83	0.43
1:E:451:LEU:HD23	1:E:451:LEU:O	2.18	0.43
1:F:477:GLY:HA3	1:F:488:MET:CG	2.49	0.43
1:G:311:LYS:HZ1	1:N:313:THR:HG23	1.75	0.43
1:I:36:ARG:O	1:I:51:LYS:HG2	2.19	0.43
1:I:235:PRO:HG3	1:I:310:GLU:CG	2.46	0.43
1:I:393:LYS:O	1:I:393:LYS:HG2	2.18	0.43
1:J:69:MET:CE	1:K:39:VAL:HG12	2.48	0.43
1:J:126:ALA:O	1:J:127:ALA:C	2.60	0.43
1:K:243:ALA:O	1:K:245:LYS:N	2.51	0.43
1:L:254:VAL:O	1:L:259:LEU:HD22	2.19	0.43
1:L:335:GLY:C	1:L:337:GLY:N	2.77	0.43
1:M:69:MET:CE	1:N:39:VAL:HG12	2.49	0.43
1:M:204:PHE:CE1	1:M:274:ALA:HA	2.53	0.43
1:A:455:VAL:CG1	1:A:460:GLU:HB2	2.37	0.43
1:B:216:GLU:C	1:B:218:PRO:HD3	2.44	0.43
1:B:465:VAL:O	1:B:469:VAL:HG23	2.18	0.43
1:B:485:TYR:N	1:B:485:TYR:CD1	2.87	0.43
1:C:112:ASN:HA	1:C:113:PRO:HD3	1.79	0.43
1:C:119:GLY:O	1:C:440:ILE:HD12	2.19	0.43
1:C:249:ILE:HB	1:C:275:ALA:HB2	2.00	0.43
1:D:37:ASN:HD21	1:D:51:LYS:HE3	1.83	0.43
1:D:77:VAL:HG11	1:D:510:VAL:HB	2.01	0.43
1:D:230:ILE:HD12	1:D:261:THR:CG2	2.47	0.43
1:D:353:ILE:HG23	1:D:362:ARG:HG3	2.01	0.43
1:E:68:ASN:O	1:E:69:MET:C	2.61	0.43
1:E:77:VAL:O	1:E:80:LYS:HB2	2.19	0.43
1:E:115:ASP:O	1:E:116:LEU:C	2.62	0.43
1:E:193:MET:CE	1:E:292:ILE:HG12	2.46	0.43
1:E:521:VAL:O	1:F:41:ASP:N	2.46	0.43
1:F:240:VAL:HG11	1:F:247:LEU:HB2	2.01	0.43
1:G:123:ALA:HB2	1:G:440:ILE:HG13	1.99	0.43
1:H:36:ARG:O	1:H:51:LYS:HG2	2.19	0.43
1:K:455:VAL:HG11	1:K:462:PRO:HA	2.00	0.43
1:L:73:MET:CE	1:L:514:MET:HE3	2.48	0.43
1:L:145:ALA:O	1:L:159:GLY:HA3	2.19	0.43
1:L:310:GLU:C	1:L:312:ALA:H	2.26	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:200:LEU:HG	1:M:275:ALA:O	2.19	0.43
1:A:194:GLN:HB2	1:A:331:THR:HB	2.00	0.43
1:A:501:ARG:O	1:A:505:GLN:HG3	2.18	0.43
1:B:16:MET:O	1:B:20:VAL:HG12	2.19	0.43
1:C:479:ASN:CG	1:C:493:ILE:HD11	2.44	0.43
1:D:171:LYS:HB3	1:D:407:VAL:HG11	2.01	0.43
1:D:477:GLY:HA3	1:D:488:MET:CG	2.49	0.43
1:E:197:ARG:HG3	1:E:277:LYS:O	2.19	0.43
1:E:242:LYS:C	1:E:244:GLY:N	2.77	0.43
1:E:249:ILE:HB	1:E:275:ALA:CB	2.49	0.43
1:E:522:THR:OG1	1:E:523:ASP:N	2.52	0.43
1:F:112:ASN:OD1	1:F:114:MET:N	2.52	0.43
1:F:412:VAL:HG13	1:F:497:THR:OG1	2.19	0.43
1:H:216:GLU:C	1:H:218:PRO:HD3	2.43	0.43
1:I:258:ALA:O	1:I:262:LEU:HG	2.18	0.43
1:J:20:VAL:HG23	1:J:74:VAL:HG11	2.01	0.43
1:J:42:LYS:O	1:J:43:SER:C	2.61	0.43
1:K:165:ALA:C	1:K:167:ASP:N	2.77	0.43
1:K:449:ALA:HB3	1:K:450:PRO:CD	2.41	0.43
1:K:518:GLU:HB2	1:L:36:ARG:HB2	2.01	0.43
1:L:28:LYS:C	1:L:30:THR:N	2.74	0.43
1:L:247:LEU:HD12	1:L:248:LEU:N	2.32	0.43
1:M:18:ARG:CG	1:M:18:ARG:NH1	2.82	0.43
1:N:127:ALA:O	1:N:131:LEU:HB2	2.19	0.43
1:N:216:GLU:C	1:N:218:PRO:HD3	2.44	0.43
1:A:207:LYS:C	1:A:209:GLU:N	2.77	0.43
1:C:106:ALA:O	1:C:109:ALA:HB3	2.18	0.43
1:C:496:PRO:HB2	1:C:499:VAL:HG13	2.00	0.43
1:D:36:ARG:O	1:D:51:LYS:HG2	2.19	0.43
1:D:336:VAL:O	1:D:337:GLY:C	2.62	0.43
1:E:221:LEU:HB3	1:E:249:ILE:HA	2.01	0.43
1:E:268:ARG:C	1:E:270:ILE:H	2.26	0.43
1:F:193:MET:CE	1:F:292:ILE:HG12	2.49	0.43
1:H:9:GLY:O	1:H:11:ASP:N	2.51	0.43
1:H:310:GLU:C	1:H:312:ALA:H	2.27	0.43
1:I:143:ALA:O	1:I:144:ILE:C	2.61	0.43
1:I:180:GLY:HA3	1:I:381:VAL:O	2.18	0.43
1:J:349:ILE:HG21	1:J:369:VAL:HG13	2.01	0.43
1:L:108:ALA:C	1:L:110:GLY:H	2.27	0.43
1:N:115:ASP:O	1:N:116:LEU:C	2.61	0.43
1:N:336:VAL:HG12	1:N:336:VAL:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:108:ALA:C	1:A:110:GLY:N	2.76	0.42
1:A:269:GLY:O	1:G:229:ASN:OD1	2.37	0.42
1:C:207:LYS:C	1:C:209:GLU:H	2.26	0.42
1:C:224:ASP:O	1:C:225:LYS:HB3	2.19	0.42
1:C:305:ILE:HG22	1:C:305:ILE:O	2.19	0.42
1:D:112:ASN:OD1	1:D:114:MET:N	2.52	0.42
1:D:123:ALA:HB2	1:D:440:ILE:HG13	2.00	0.42
1:D:305:ILE:O	1:D:305:ILE:HG22	2.19	0.42
1:E:16:MET:SD	1:E:514:MET:HE3	2.59	0.42
1:J:22:VAL:HG11	1:J:62:LEU:CD2	2.48	0.42
1:J:165:ALA:C	1:J:167:ASP:N	2.77	0.42
1:L:9:GLY:O	1:L:12:ALA:N	2.51	0.42
1:L:126:ALA:O	1:L:127:ALA:C	2.61	0.42
1:L:258:ALA:O	1:L:262:LEU:HG	2.19	0.42
1:M:136:VAL:O	1:M:136:VAL:HG12	2.18	0.42
1:M:145:ALA:O	1:M:159:GLY:HA3	2.19	0.42
1:M:494:LEU:HD12	1:M:494:LEU:N	2.20	0.42
1:N:230:ILE:HD12	1:N:261:THR:CG2	2.40	0.42
1:N:252:GLU:O	1:N:277:LYS:HG3	2.19	0.42
1:A:493:ILE:O	1:A:493:ILE:HG22	2.18	0.42
1:B:77:VAL:HG11	1:B:510:VAL:HB	2.01	0.42
1:B:77:VAL:HG21	1:B:510:VAL:CG1	2.49	0.42
1:B:505:GLN:HE21	1:B:505:GLN:HB3	1.65	0.42
1:E:365:LEU:C	1:E:367:GLU:N	2.78	0.42
1:F:68:ASN:O	1:F:69:MET:C	2.62	0.42
1:G:89:THR:O	1:G:90:THR:C	2.62	0.42
1:G:336:VAL:O	1:G:337:GLY:C	2.62	0.42
1:J:204:PHE:CD1	1:J:274:ALA:HA	2.54	0.42
1:J:230:ILE:HD12	1:J:261:THR:CG2	2.43	0.42
1:J:479:ASN:CG	1:J:493:ILE:HD11	2.43	0.42
1:K:278:ALA:HB1	1:K:279:PRO:HD2	2.00	0.42
1:K:485:TYR:CD1	1:K:485:TYR:N	2.86	0.42
1:L:143:ALA:C	1:L:145:ALA:N	2.75	0.42
1:M:65:LYS:HB3	1:M:65:LYS:NZ	2.34	0.42
1:M:303:GLU:C	1:M:305:ILE:N	2.78	0.42
1:N:258:ALA:O	1:N:262:LEU:HG	2.17	0.42
1:N:450:PRO:O	1:N:454:ILE:HG13	2.19	0.42
1:N:455:VAL:HG11	1:N:462:PRO:HA	2.00	0.42
1:A:36:ARG:HG3	1:A:36:ARG:NH1	2.34	0.42
1:A:216:GLU:C	1:A:218:PRO:HD3	2.44	0.42
1:A:499:VAL:CG2	1:A:500:THR:N	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:194:GLN:HB2	1:B:331:THR:HB	2.01	0.42
1:B:353:ILE:HG23	1:B:362:ARG:HG3	2.01	0.42
1:C:221:LEU:HB3	1:C:249:ILE:HA	2.01	0.42
1:D:31:LEU:HD13	1:D:31:LEU:HA	1.83	0.42
1:D:295:LEU:C	1:D:295:LEU:HD13	2.44	0.42
1:E:32:GLY:HA3	1:E:454:ILE:HG23	2.00	0.42
1:F:219:PHE:O	1:F:247:LEU:HD12	2.18	0.42
1:F:296:THR:O	1:F:297:GLY:O	2.37	0.42
1:G:37:ASN:HD21	1:G:51:LYS:HE3	1.84	0.42
1:G:482:THR:C	1:G:483:GLU:OE1	2.62	0.42
1:H:143:ALA:O	1:H:144:ILE:C	2.60	0.42
1:H:176:THR:HG21	1:H:333:ILE:CD1	2.49	0.42
1:H:221:LEU:HD23	1:H:249:ILE:CD1	2.43	0.42
1:H:366:GLN:O	1:H:369:VAL:HG22	2.20	0.42
1:I:111:MET:SD	1:I:438:VAL:HG21	2.59	0.42
1:J:20:VAL:CG2	1:J:74:VAL:HG11	2.49	0.42
1:K:254:VAL:O	1:K:259:LEU:HD22	2.20	0.42
1:L:235:PRO:HG3	1:L:310:GLU:CG	2.45	0.42
1:M:321:LYS:O	1:M:321:LYS:HG2	2.19	0.42
1:M:499:VAL:CG2	1:M:500:THR:N	2.76	0.42
1:N:112:ASN:HA	1:N:113:PRO:HD3	1.89	0.42
1:N:202:PRO:C	1:N:204:PHE:H	2.25	0.42
1:N:278:ALA:HB1	1:N:279:PRO:HD2	2.01	0.42
1:A:127:ALA:HB1	1:A:422:VAL:HG11	2.01	0.42
1:A:202:PRO:O	1:A:204:PHE:N	2.44	0.42
1:A:305:ILE:O	1:A:305:ILE:HG22	2.19	0.42
1:B:240:VAL:HG11	1:B:247:LEU:HB2	2.01	0.42
1:B:249:ILE:HB	1:B:275:ALA:HB2	2.02	0.42
1:C:77:VAL:HG11	1:C:510:VAL:HB	2.01	0.42
1:D:34:LYS:HD2	1:D:458:CYS:CA	2.50	0.42
1:D:482:THR:C	1:D:483:GLU:OE1	2.62	0.42
1:E:336:VAL:O	1:E:337:GLY:C	2.62	0.42
1:F:108:ALA:C	1:F:110:GLY:N	2.78	0.42
1:F:228:SER:HA	1:F:255:GLU:O	2.19	0.42
1:G:193:MET:HG2	1:G:194:GLN:N	2.34	0.42
1:H:69:MET:HE2	1:I:39:VAL:HG11	2.01	0.42
1:I:108:ALA:C	1:I:110:GLY:N	2.77	0.42
1:I:496:PRO:HB2	1:I:499:VAL:CG1	2.49	0.42
1:J:9:GLY:O	1:J:12:ALA:N	2.52	0.42
1:L:112:ASN:HA	1:L:113:PRO:HD3	1.88	0.42
1:M:204:PHE:CD1	1:M:274:ALA:HA	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:248:LEU:CD1	1:M:325:ILE:HD11	2.49	0.42
1:M:389:MET:SD	1:M:389:MET:C	3.02	0.42
1:C:319:GLN:O	1:C:336:VAL:HG23	2.19	0.42
1:D:87:ASP:CG	1:D:88:GLY:N	2.78	0.42
1:D:226:LYS:HD3	1:D:255:GLU:OE2	2.19	0.42
1:F:463:SER:O	1:F:464:VAL:C	2.62	0.42
1:G:105:LYS:HE3	1:G:105:LYS:HB2	1.90	0.42
1:H:200:LEU:HG	1:H:276:VAL:HA	2.00	0.42
1:I:124:VAL:O	1:I:125:THR:C	2.62	0.42
1:I:200:LEU:HG	1:I:276:VAL:HA	2.01	0.42
1:I:389:MET:O	1:I:390:LYS:C	2.62	0.42
1:L:9:GLY:O	1:L:10:ASN:C	2.61	0.42
1:L:176:THR:HG21	1:L:333:ILE:CD1	2.49	0.42
1:L:204:PHE:CD1	1:L:274:ALA:HA	2.55	0.42
1:L:496:PRO:HB2	1:L:499:VAL:CG1	2.49	0.42
1:L:499:VAL:CG2	1:L:500:THR:N	2.82	0.42
1:M:64:ASP:OD1	1:M:66:PHE:HB2	2.18	0.42
1:N:321:LYS:O	1:N:321:LYS:HG2	2.19	0.42
1:A:77:VAL:HG11	1:A:510:VAL:HB	2.01	0.42
1:A:119:GLY:O	1:A:440:ILE:HD12	2.19	0.42
1:A:171:LYS:HB3	1:A:407:VAL:HG11	2.02	0.42
1:A:450:PRO:O	1:A:454:ILE:HG13	2.19	0.42
1:B:221:LEU:HB3	1:B:249:ILE:HA	2.02	0.42
1:D:221:LEU:HA	1:D:317:LEU:HD11	2.02	0.42
1:D:493:ILE:O	1:D:493:ILE:HG22	2.19	0.42
1:E:230:ILE:HD12	1:E:261:THR:CG2	2.49	0.42
1:F:505:GLN:HE21	1:F:505:GLN:HB3	1.57	0.42
1:H:202:PRO:C	1:H:204:PHE:N	2.78	0.42
1:I:24:ALA:HA	1:I:27:VAL:HG12	2.01	0.42
1:I:70:GLY:HA2	1:I:73:MET:HE3	2.02	0.42
1:J:199:TYR:CZ	1:J:327:LYS:HA	2.54	0.42
1:J:482:THR:O	1:J:483:GLU:HB2	2.19	0.42
1:K:162:ILE:O	1:K:165:ALA:HB3	2.19	0.42
1:M:17:LEU:HA	1:M:20:VAL:CG1	2.47	0.42
1:M:237:LEU:HD23	1:M:237:LEU:C	2.43	0.42
1:N:37:ASN:HD22	1:N:51:LYS:HG3	1.82	0.42
1:N:248:LEU:CD1	1:N:325:ILE:HD11	2.48	0.42
1:A:226:LYS:HD3	1:A:255:GLU:OE2	2.19	0.42
1:A:477:GLY:HA3	1:A:488:MET:CG	2.50	0.42
1:B:339:GLU:H	1:B:339:GLU:HG2	1.56	0.42
1:B:369:VAL:O	1:B:373:ALA:N	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:501:ARG:O	1:B:505:GLN:HG3	2.18	0.42
1:C:199:TYR:CE2	1:C:327:LYS:HA	2.55	0.42
1:C:353:ILE:C	1:C:355:GLU:H	2.27	0.42
1:E:477:GLY:HA3	1:E:488:MET:CG	2.49	0.42
1:F:207:LYS:O	1:F:209:GLU:N	2.52	0.42
1:F:353:ILE:HG23	1:F:362:ARG:HG3	2.02	0.42
1:G:485:TYR:CD1	1:G:485:TYR:N	2.87	0.42
1:H:18:ARG:CG	1:H:18:ARG:NH1	2.83	0.42
1:H:108:ALA:C	1:H:110:GLY:N	2.78	0.42
1:H:243:ALA:O	1:H:245:LYS:N	2.52	0.42
1:I:37:ASN:HD21	1:I:51:LYS:HZ3	1.67	0.42
1:I:103:GLY:O	1:I:107:VAL:HG23	2.19	0.42
1:I:213:VAL:CG1	1:I:214:GLU:H	2.33	0.42
1:J:77:VAL:HG21	1:J:510:VAL:HB	2.02	0.42
1:L:389:MET:C	1:L:391:GLU:N	2.77	0.42
1:L:441:LYS:O	1:L:445:ARG:HB2	2.20	0.42
1:L:451:LEU:C	1:L:451:LEU:CD2	2.93	0.42
1:N:126:ALA:O	1:N:127:ALA:C	2.62	0.42
1:N:335:GLY:C	1:N:337:GLY:N	2.77	0.42
1:N:482:THR:O	1:N:483:GLU:HB2	2.19	0.42
1:A:112:ASN:HA	1:A:113:PRO:HD3	1.80	0.42
1:C:68:ASN:O	1:C:69:MET:C	2.62	0.42
1:C:207:LYS:C	1:C:209:GLU:N	2.78	0.42
1:D:34:LYS:HB2	1:D:458:CYS:SG	2.60	0.42
1:D:243:ALA:C	1:D:245:LYS:H	2.28	0.42
1:E:77:VAL:HG21	1:E:510:VAL:CG1	2.49	0.42
1:E:171:LYS:HB3	1:E:407:VAL:HG11	2.01	0.42
1:E:289:LEU:HD23	1:E:289:LEU:HA	1.93	0.42
1:F:127:ALA:O	1:F:131:LEU:HB2	2.19	0.42
1:G:207:LYS:C	1:G:209:GLU:N	2.78	0.42
1:H:199:TYR:CZ	1:H:327:LYS:HA	2.55	0.42
1:H:291:ASP:OD2	1:H:368:ARG:HD2	2.19	0.42
1:I:310:GLU:C	1:I:312:ALA:H	2.27	0.42
1:K:235:PRO:HG3	1:K:310:GLU:CG	2.46	0.42
1:L:419:LEU:O	1:L:422:VAL:HG23	2.18	0.42
1:L:451:LEU:HD23	1:L:451:LEU:O	2.19	0.42
1:M:254:VAL:O	1:M:259:LEU:HD22	2.20	0.42
1:N:111:MET:SD	1:N:438:VAL:HG21	2.60	0.42
1:N:194:GLN:O	1:N:194:GLN:HG2	2.20	0.42
1:N:303:GLU:C	1:N:305:ILE:N	2.78	0.42
1:A:485:TYR:HD1	1:A:485:TYR:H	1.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:270:ILE:O	1:C:271:VAL:HB	2.19	0.42
1:D:193:MET:CE	1:D:292:ILE:HG12	2.49	0.42
1:D:522:THR:OG1	1:D:523:ASP:N	2.52	0.42
1:E:108:ALA:C	1:E:110:GLY:N	2.77	0.42
1:F:207:LYS:C	1:F:209:GLU:N	2.78	0.42
1:F:279:PRO:O	1:F:285:ARG:HG3	2.19	0.42
1:H:24:ALA:HA	1:H:27:VAL:HG12	2.00	0.42
1:H:393:LYS:O	1:H:393:LYS:HG2	2.19	0.42
1:I:145:ALA:O	1:I:159:GLY:HA3	2.19	0.42
1:I:203:TYR:C	1:I:205:ILE:N	2.76	0.42
1:I:237:LEU:HD23	1:I:237:LEU:C	2.45	0.42
1:I:389:MET:SD	1:I:389:MET:C	3.02	0.42
1:K:17:LEU:O	1:K:20:VAL:HG12	2.19	0.42
1:K:77:VAL:O	1:K:80:LYS:N	2.52	0.42
1:K:204:PHE:CD1	1:K:274:ALA:HA	2.55	0.42
1:K:335:GLY:C	1:K:337:GLY:N	2.76	0.42
1:L:288:MET:HG2	1:L:368:ARG:HD3	2.02	0.42
1:M:17:LEU:O	1:M:20:VAL:HG12	2.19	0.42
1:M:126:ALA:O	1:M:129:GLU:N	2.51	0.42
1:M:169:VAL:CG1	1:M:173:GLY:HA3	2.48	0.42
1:M:262:LEU:C	1:M:264:VAL:N	2.76	0.42
1:N:17:LEU:CA	1:N:20:VAL:HG12	2.50	0.42
1:N:136:VAL:O	1:N:136:VAL:HG12	2.20	0.42
1:N:201:SER:O	1:N:204:PHE:HD2	2.03	0.42
1:N:235:PRO:HG3	1:N:310:GLU:CG	2.45	0.42
1:N:495:ASP:O	1:N:496:PRO:C	2.61	0.42
1:A:89:THR:O	1:A:90:THR:C	2.63	0.42
1:A:221:LEU:HA	1:A:317:LEU:CD1	2.50	0.42
1:A:240:VAL:HG11	1:A:247:LEU:HB2	2.01	0.42
1:C:233:MET:O	1:C:234:LEU:C	2.63	0.42
1:C:450:PRO:O	1:C:454:ILE:HG13	2.19	0.42
1:D:197:ARG:HG3	1:D:277:LYS:O	2.20	0.42
1:D:385:THR:OG1	1:D:388:GLU:HG3	2.19	0.42
1:E:102:GLU:O	1:E:105:LYS:HB3	2.20	0.42
1:E:226:LYS:HD3	1:E:255:GLU:OE2	2.19	0.42
1:E:233:MET:O	1:E:234:LEU:C	2.63	0.42
1:F:86:GLY:O	1:F:87:ASP:HB2	2.20	0.42
1:F:197:ARG:HG3	1:F:277:LYS:O	2.20	0.42
1:F:230:ILE:HD12	1:F:261:THR:CG2	2.47	0.42
1:F:319:GLN:O	1:F:336:VAL:HG23	2.20	0.42
1:H:64:ASP:O	1:H:65:LYS:C	2.63	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:213:VAL:CG1	1:J:214:GLU:N	2.81	0.42
1:J:221:LEU:HD23	1:J:249:ILE:CD1	2.45	0.42
1:K:143:ALA:C	1:K:145:ALA:N	2.76	0.42
1:K:199:TYR:CZ	1:K:327:LYS:HA	2.54	0.42
1:K:262:LEU:C	1:K:264:VAL:N	2.75	0.42
1:K:354:GLU:C	1:K:356:ALA:H	2.28	0.42
1:L:115:ASP:O	1:L:116:LEU:C	2.62	0.42
1:L:165:ALA:C	1:L:167:ASP:N	2.76	0.42
1:L:487:ASN:N	1:L:491:MET:HE2	2.35	0.42
1:M:77:VAL:O	1:M:78:ALA:C	2.61	0.42
1:M:336:VAL:O	1:M:336:VAL:HG12	2.19	0.42
1:M:488:MET:HE3	1:M:493:ILE:HG21	2.01	0.42
1:N:112:ASN:OD1	1:N:112:ASN:C	2.63	0.42
1:B:199:TYR:CE2	1:B:327:LYS:HA	2.55	0.41
1:B:221:LEU:HA	1:B:317:LEU:HD11	2.02	0.41
1:C:465:VAL:O	1:C:469:VAL:HG23	2.21	0.41
1:D:68:ASN:O	1:D:69:MET:C	2.63	0.41
1:D:153:ASN:O	1:D:154:SER:HB2	2.18	0.41
1:E:451:LEU:HD23	1:E:451:LEU:C	2.45	0.41
1:F:205:ILE:H	1:F:205:ILE:HG13	1.53	0.41
1:F:369:VAL:O	1:F:373:ALA:N	2.53	0.41
1:F:385:THR:OG1	1:F:388:GLU:HG3	2.20	0.41
1:H:64:ASP:OD1	1:H:66:PHE:HB2	2.20	0.41
1:H:441:LYS:HA	1:H:441:LYS:HD3	1.91	0.41
1:I:127:ALA:O	1:I:131:LEU:HB2	2.20	0.41
1:I:165:ALA:C	1:I:167:ASP:H	2.28	0.41
1:I:389:MET:C	1:I:391:GLU:N	2.78	0.41
1:I:404:ARG:NH1	1:I:404:ARG:CG	2.81	0.41
1:J:129:GLU:C	1:J:131:LEU:N	2.77	0.41
1:J:194:GLN:O	1:J:194:GLN:HG2	2.20	0.41
1:J:389:MET:O	1:J:390:LYS:C	2.62	0.41
1:K:219:PHE:HB3	1:K:317:LEU:CD2	2.50	0.41
1:K:303:GLU:C	1:K:305:ILE:N	2.78	0.41
1:K:478:TYR:CE2	1:K:480:ALA:HA	2.55	0.41
1:K:524:LEU:HD12	1:K:524:LEU:HA	1.91	0.41
1:M:42:LYS:O	1:M:43:SER:C	2.63	0.41
1:A:16:MET:HB3	1:A:514:MET:CE	2.46	0.41
1:A:230:ILE:CD1	1:A:261:THR:HG21	2.49	0.41
1:A:240:VAL:O	1:A:240:VAL:HG12	2.19	0.41
1:A:248:LEU:HA	1:A:274:ALA:O	2.19	0.41
1:C:111:MET:SD	1:C:438:VAL:HG21	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:112:ASN:OD1	1:C:112:ASN:C	2.62	0.41
1:C:228:SER:HA	1:C:255:GLU:O	2.20	0.41
1:G:207:LYS:O	1:G:209:GLU:N	2.53	0.41
1:G:213:VAL:CG1	1:G:214:GLU:N	2.83	0.41
1:G:250:ILE:HG22	1:G:289:LEU:HD21	2.02	0.41
1:G:319:GLN:O	1:G:336:VAL:HG23	2.19	0.41
1:H:37:ASN:HD22	1:H:51:LYS:HG3	1.84	0.41
1:H:262:LEU:C	1:H:264:VAL:N	2.77	0.41
1:I:213:VAL:CG1	1:I:214:GLU:N	2.80	0.41
1:I:291:ASP:OD2	1:I:368:ARG:HD2	2.20	0.41
1:J:162:ILE:O	1:J:165:ALA:HB3	2.19	0.41
1:J:389:MET:C	1:J:391:GLU:N	2.78	0.41
1:L:202:PRO:C	1:L:204:PHE:N	2.78	0.41
1:L:216:GLU:C	1:L:218:PRO:HD3	2.44	0.41
1:N:254:VAL:O	1:N:259:LEU:HD22	2.20	0.41
1:A:111:MET:SD	1:A:438:VAL:HG21	2.60	0.41
1:A:249:ILE:HB	1:A:275:ALA:HB2	2.02	0.41
1:A:451:LEU:HD23	1:A:451:LEU:C	2.45	0.41
1:A:479:ASN:CG	1:A:493:ILE:HD11	2.46	0.41
1:A:496:PRO:O	1:A:497:THR:C	2.63	0.41
1:D:36:ARG:HG3	1:D:36:ARG:NH1	2.35	0.41
1:H:216:GLU:O	1:H:217:SER:C	2.63	0.41
1:I:42:LYS:HB3	1:I:42:LYS:HE2	1.86	0.41
1:I:129:GLU:C	1:I:131:LEU:N	2.77	0.41
1:I:165:ALA:C	1:I:167:ASP:N	2.76	0.41
1:J:450:PRO:O	1:J:454:ILE:HG13	2.20	0.41
1:K:413:ALA:HB1	1:K:417:VAL:CG2	2.50	0.41
1:K:468:THR:HG21	1:K:485:TYR:CE2	2.56	0.41
1:L:37:ASN:HD22	1:L:51:LYS:HG3	1.86	0.41
1:L:479:ASN:ND2	1:L:482:THR:HG23	2.35	0.41
1:N:22:VAL:HG11	1:N:62:LEU:CD2	2.46	0.41
1:N:77:VAL:O	1:N:79:SER:N	2.54	0.41
1:N:129:GLU:C	1:N:131:LEU:N	2.77	0.41
1:N:204:PHE:CD1	1:N:274:ALA:HA	2.54	0.41
1:C:248:LEU:HA	1:C:274:ALA:O	2.20	0.41
1:D:494:LEU:HD12	1:D:494:LEU:O	2.20	0.41
1:E:117:LYS:O	1:E:120:ILE:N	2.53	0.41
1:E:199:TYR:HB3	1:E:325:ILE:HG21	2.02	0.41
1:E:305:ILE:HG22	1:E:305:ILE:O	2.20	0.41
1:F:111:MET:SD	1:F:438:VAL:HG21	2.60	0.41
1:F:199:TYR:HB3	1:F:325:ILE:HG21	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:496:PRO:HB2	1:F:499:VAL:HG13	2.02	0.41
1:G:112:ASN:OD1	1:G:114:MET:N	2.53	0.41
1:G:233:MET:O	1:G:234:LEU:C	2.63	0.41
1:G:451:LEU:HD23	1:G:451:LEU:C	2.45	0.41
1:H:136:VAL:O	1:H:136:VAL:HG12	2.19	0.41
1:I:202:PRO:C	1:I:204:PHE:N	2.79	0.41
1:I:254:VAL:O	1:I:259:LEU:HD22	2.20	0.41
1:K:435:ASP:O	1:K:436:GLN:C	2.63	0.41
1:L:204:PHE:CE1	1:L:274:ALA:HA	2.56	0.41
1:M:183:LEU:CD1	1:M:184:GLN:HG3	2.50	0.41
1:M:202:PRO:C	1:M:204:PHE:N	2.77	0.41
1:N:430:ARG:HG2	1:N:430:ARG:HH11	1.85	0.41
1:N:449:ALA:HB3	1:N:450:PRO:CD	2.43	0.41
1:A:198:GLY:O	1:A:276:VAL:HG12	2.21	0.41
1:A:311:LYS:HB3	1:M:311:LYS:HB3	2.02	0.41
1:D:8:PHE:O	1:D:9:GLY:C	2.64	0.41
1:D:70:GLY:HA2	1:D:73:MET:HE3	2.02	0.41
1:D:194:GLN:HB2	1:D:331:THR:HB	2.01	0.41
1:D:198:GLY:O	1:D:276:VAL:HG12	2.20	0.41
1:E:69:MET:HE3	1:F:41:ASP:HB2	2.01	0.41
1:F:233:MET:O	1:F:234:LEU:C	2.63	0.41
1:H:77:VAL:HG21	1:H:510:VAL:HB	2.03	0.41
1:H:288:MET:HG2	1:H:368:ARG:HD3	2.02	0.41
1:H:321:LYS:O	1:H:321:LYS:HG2	2.21	0.41
1:I:502:SER:O	1:I:503:ALA:C	2.63	0.41
1:J:335:GLY:C	1:J:337:GLY:N	2.79	0.41
1:K:450:PRO:O	1:K:454:ILE:HG13	2.21	0.41
1:L:389:MET:O	1:L:390:LYS:C	2.62	0.41
1:M:252:GLU:O	1:M:277:LYS:HG3	2.20	0.41
1:N:213:VAL:CG1	1:N:214:GLU:N	2.83	0.41
1:N:440:ILE:HG22	1:N:441:LYS:N	2.35	0.41
1:A:339:GLU:H	1:A:339:GLU:HG2	1.56	0.41
1:A:353:ILE:HD13	1:A:366:GLN:HG2	2.01	0.41
1:A:463:SER:O	1:A:464:VAL:C	2.63	0.41
1:B:70:GLY:HA2	1:B:73:MET:HE3	2.03	0.41
1:B:321:LYS:O	1:B:321:LYS:HG2	2.20	0.41
1:C:485:TYR:H	1:C:485:TYR:HD1	1.69	0.41
1:E:207:LYS:C	1:E:209:GLU:N	2.78	0.41
1:F:501:ARG:O	1:F:505:GLN:HG3	2.20	0.41
1:G:387:VAL:O	1:G:388:GLU:C	2.63	0.41
1:K:18:ARG:HG2	1:K:18:ARG:NH1	2.29	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:77:VAL:O	1:L:79:SER:N	2.53	0.41
1:L:237:LEU:HD23	1:L:237:LEU:C	2.45	0.41
1:M:143:ALA:C	1:M:145:ALA:N	2.77	0.41
1:M:221:LEU:HD23	1:M:249:ILE:CD1	2.44	0.41
1:N:103:GLY:O	1:N:107:VAL:HG23	2.20	0.41
1:N:496:PRO:O	1:N:497:THR:C	2.62	0.41
1:C:176:THR:HG21	1:C:333:ILE:CD1	2.48	0.41
1:D:451:LEU:O	1:D:451:LEU:HD23	2.21	0.41
1:E:37:ASN:ND2	1:E:51:LYS:HE3	2.35	0.41
1:F:155:ASP:OD1	1:F:157:THR:HB	2.21	0.41
1:F:224:ASP:O	1:F:225:LYS:HB3	2.21	0.41
1:F:243:ALA:C	1:F:245:LYS:H	2.29	0.41
1:G:127:ALA:HB1	1:G:422:VAL:HG11	2.03	0.41
1:G:140:ASP:O	1:G:142:LYS:N	2.54	0.41
1:I:524:LEU:HD12	1:I:524:LEU:HA	1.87	0.41
1:J:9:GLY:O	1:J:10:ASN:C	2.63	0.41
1:J:180:GLY:HA3	1:J:381:VAL:O	2.20	0.41
1:K:108:ALA:C	1:K:110:GLY:H	2.28	0.41
1:L:17:LEU:CA	1:L:20:VAL:HG12	2.45	0.41
1:L:213:VAL:CG1	1:L:214:GLU:N	2.84	0.41
1:L:393:LYS:O	1:L:393:LYS:HG2	2.20	0.41
1:M:389:MET:C	1:M:391:GLU:N	2.77	0.41
1:M:440:ILE:HG22	1:M:441:LYS:N	2.36	0.41
1:N:455:VAL:HG13	1:N:460:GLU:CB	2.50	0.41
1:A:87:ASP:CG	1:A:88:GLY:N	2.79	0.41
1:B:176:THR:HG21	1:B:333:ILE:CD1	2.49	0.41
1:B:214:GLU:C	1:B:215:LEU:HD23	2.46	0.41
1:E:245:LYS:NZ	1:E:319:GLN:NE2	2.68	0.41
1:F:31:LEU:HD22	1:F:90:THR:HG22	2.03	0.41
1:G:36:ARG:HH11	1:G:36:ARG:HG3	1.84	0.41
1:G:86:GLY:O	1:G:87:ASP:HB2	2.21	0.41
1:G:353:ILE:C	1:G:355:GLU:H	2.29	0.41
1:G:493:ILE:O	1:G:493:ILE:HG22	2.21	0.41
1:H:203:TYR:CD1	1:H:267:MET:HE1	2.56	0.41
1:I:403:THR:O	1:I:404:ARG:C	2.63	0.41
1:J:18:ARG:HH11	1:J:18:ARG:CG	2.28	0.41
1:J:90:THR:O	1:J:94:VAL:HG12	2.21	0.41
1:J:216:GLU:O	1:J:217:SER:C	2.63	0.41
1:J:288:MET:HG2	1:J:368:ARG:HD3	2.02	0.41
1:J:303:GLU:C	1:J:305:ILE:N	2.78	0.41
1:K:18:ARG:CG	1:K:18:ARG:NH1	2.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:224:ASP:O	1:K:225:LYS:CB	2.69	0.41
1:K:389:MET:O	1:K:390:LYS:C	2.64	0.41
1:L:28:LYS:O	1:L:30:THR:N	2.54	0.41
1:M:115:ASP:O	1:M:116:LEU:C	2.62	0.41
1:M:203:TYR:O	1:M:204:PHE:C	2.63	0.41
1:N:143:ALA:O	1:N:144:ILE:C	2.63	0.41
1:A:114:MET:HG3	1:B:34:LYS:HB3	2.02	0.41
1:A:162:ILE:O	1:A:165:ALA:HB3	2.21	0.41
1:A:193:MET:HG2	1:A:194:GLN:N	2.36	0.41
1:A:369:VAL:O	1:A:373:ALA:N	2.49	0.41
1:B:77:VAL:O	1:B:80:LYS:N	2.52	0.41
1:C:30:THR:HB	1:C:51:LYS:O	2.20	0.41
1:C:203:TYR:O	1:C:204:PHE:C	2.64	0.41
1:C:240:VAL:O	1:C:240:VAL:HG12	2.21	0.41
1:C:269:GLY:O	1:C:271:VAL:N	2.54	0.41
1:C:295:LEU:HA	1:C:342:ILE:CD1	2.50	0.41
1:C:494:LEU:HD12	1:C:494:LEU:O	2.21	0.41
1:D:105:LYS:HE3	1:D:105:LYS:HB2	1.92	0.41
1:E:205:ILE:H	1:E:205:ILE:HG13	1.53	0.41
1:F:25:ASP:HA	1:F:28:LYS:HE2	2.02	0.41
1:F:222:LEU:HD12	1:F:293:ALA:HB2	2.03	0.41
1:F:270:ILE:O	1:F:271:VAL:HB	2.21	0.41
1:F:289:LEU:HD23	1:F:289:LEU:HA	1.93	0.41
1:F:305:ILE:O	1:F:305:ILE:HG22	2.21	0.41
1:G:36:ARG:HG3	1:G:36:ARG:NH1	2.36	0.41
1:G:115:ASP:O	1:G:116:LEU:C	2.62	0.41
1:G:221:LEU:HA	1:G:317:LEU:HD11	2.03	0.41
1:G:242:LYS:C	1:G:244:GLY:N	2.78	0.41
1:G:249:ILE:HB	1:G:275:ALA:HB2	2.02	0.41
1:G:326:ASN:HD22	1:G:329:THR:CB	1.97	0.41
1:G:353:ILE:HD13	1:G:366:GLN:HG2	2.03	0.41
1:H:114:MET:CA	1:H:114:MET:HE3	2.51	0.41
1:H:204:PHE:CD1	1:H:274:ALA:HA	2.56	0.41
1:H:482:THR:O	1:H:483:GLU:HB2	2.21	0.41
1:I:17:LEU:C	1:I:19:GLY:N	2.77	0.41
1:I:18:ARG:HH11	1:I:18:ARG:CG	2.29	0.41
1:I:74:VAL:O	1:I:74:VAL:HG23	2.20	0.41
1:I:247:LEU:HD12	1:I:248:LEU:N	2.36	0.41
1:I:430:ARG:HH11	1:I:430:ARG:HG2	1.86	0.41
1:J:108:ALA:C	1:J:110:GLY:H	2.29	0.41
1:J:247:LEU:HD12	1:J:248:LEU:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:345:ARG:C	1:J:347:ALA:N	2.78	0.41
1:J:403:THR:O	1:J:404:ARG:C	2.63	0.41
1:K:247:LEU:HD12	1:K:248:LEU:N	2.36	0.41
1:K:257:GLU:CG	1:L:269:GLY:HA3	2.51	0.41
1:K:435:ASP:O	1:K:438:VAL:N	2.54	0.41
1:L:69:MET:HE3	1:M:41:ASP:CB	2.51	0.41
1:L:163:ALA:C	1:L:165:ALA:N	2.78	0.41
1:L:165:ALA:C	1:L:167:ASP:H	2.27	0.41
1:L:194:GLN:O	1:L:194:GLN:HG2	2.21	0.41
1:L:224:ASP:O	1:L:225:LYS:CB	2.68	0.41
1:M:165:ALA:C	1:M:167:ASP:H	2.27	0.41
1:M:338:GLU:C	1:M:340:ALA:N	2.79	0.41
1:M:441:LYS:O	1:M:445:ARG:HB2	2.21	0.41
1:N:79:SER:C	1:N:81:ALA:N	2.79	0.41
1:A:353:ILE:C	1:A:355:GLU:H	2.29	0.41
1:B:17:LEU:O	1:B:18:ARG:C	2.63	0.41
1:B:112:ASN:OD1	1:B:112:ASN:C	2.64	0.41
1:B:417:VAL:O	1:B:418:ALA:C	2.64	0.41
1:C:194:GLN:HB2	1:C:331:THR:HB	2.02	0.41
1:D:34:LYS:HD2	1:D:458:CYS:HA	2.03	0.41
1:D:119:GLY:O	1:D:440:ILE:HD12	2.21	0.41
1:D:207:LYS:C	1:D:209:GLU:N	2.78	0.41
1:D:353:ILE:C	1:D:355:GLU:H	2.29	0.41
1:I:194:GLN:O	1:I:194:GLN:HG2	2.21	0.41
1:I:225:LYS:HE2	1:I:226:LYS:O	2.20	0.41
1:I:303:GLU:C	1:I:305:ILE:N	2.79	0.41
1:J:28:LYS:O	1:J:30:THR:N	2.55	0.41
1:J:201:SER:O	1:J:204:PHE:HD2	2.04	0.41
1:J:204:PHE:CE1	1:J:274:ALA:HA	2.55	0.41
1:J:451:LEU:C	1:J:451:LEU:CD2	2.94	0.41
1:L:321:LYS:O	1:L:321:LYS:HG2	2.21	0.41
1:M:207:LYS:C	1:M:209:GLU:N	2.76	0.41
1:M:247:LEU:HD12	1:M:248:LEU:N	2.36	0.41
1:M:288:MET:HG2	1:M:368:ARG:HD3	2.03	0.41
1:M:349:ILE:HG21	1:M:369:VAL:HG13	2.03	0.41
1:M:520:MET:HG2	1:N:39:VAL:HB	2.02	0.41
1:N:104:LEU:HD23	1:N:104:LEU:HA	1.89	0.41
1:N:114:MET:CA	1:N:114:MET:HE3	2.51	0.41
1:B:36:ARG:N	1:B:36:ARG:HD3	2.36	0.40
1:C:153:ASN:O	1:C:154:SER:HB2	2.21	0.40
1:C:325:ILE:HD12	1:C:325:ILE:N	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:517:THR:HG21	1:D:39:VAL:HG23	2.03	0.40
1:D:193:MET:HG2	1:D:194:GLN:N	2.36	0.40
1:E:34:LYS:HA	1:E:34:LYS:HD3	1.86	0.40
1:E:194:GLN:HB2	1:E:331:THR:HB	2.03	0.40
1:E:502:SER:O	1:E:503:ALA:C	2.63	0.40
1:F:102:GLU:O	1:F:105:LYS:HB3	2.22	0.40
1:G:193:MET:HE1	1:G:292:ILE:CG1	2.49	0.40
1:G:451:LEU:HD23	1:G:451:LEU:O	2.21	0.40
1:H:200:LEU:HG	1:H:275:ALA:O	2.22	0.40
1:H:237:LEU:HD23	1:H:237:LEU:C	2.47	0.40
1:I:77:VAL:HG21	1:I:510:VAL:HB	2.03	0.40
1:I:496:PRO:O	1:I:497:THR:C	2.64	0.40
1:J:225:LYS:HE2	1:J:226:LYS:O	2.22	0.40
1:K:65:LYS:NZ	1:K:65:LYS:HB3	2.36	0.40
1:K:339:GLU:H	1:K:339:GLU:HG2	1.68	0.40
1:K:413:ALA:CB	1:K:417:VAL:CG2	2.98	0.40
1:L:138:CYS:O	1:L:138:CYS:SG	2.78	0.40
1:L:354:GLU:C	1:L:356:ALA:H	2.28	0.40
1:L:392:LYS:C	1:L:394:ALA:N	2.78	0.40
1:M:430:ARG:HG2	1:M:430:ARG:HH11	1.86	0.40
1:N:247:LEU:HD12	1:N:248:LEU:N	2.33	0.40
1:A:13:ARG:HD3	1:A:104:LEU:HD22	2.04	0.40
1:A:16:MET:SD	1:A:514:MET:HE3	2.61	0.40
1:B:36:ARG:O	1:B:51:LYS:HG2	2.21	0.40
1:B:230:ILE:HD12	1:B:261:THR:CG2	2.49	0.40
1:C:127:ALA:O	1:C:131:LEU:HB2	2.21	0.40
1:C:199:TYR:HB3	1:C:325:ILE:HG21	2.04	0.40
1:C:230:ILE:HD12	1:C:261:THR:CG2	2.49	0.40
1:C:336:VAL:O	1:C:337:GLY:C	2.63	0.40
1:D:199:TYR:HB3	1:D:325:ILE:HG21	2.02	0.40
1:E:513:LEU:HD13	1:F:49:ILE:HD12	2.03	0.40
1:F:248:LEU:HD12	1:F:274:ALA:O	2.21	0.40
1:F:413:ALA:O	1:F:418:ALA:HB2	2.20	0.40
1:G:228:SER:HA	1:G:255:GLU:O	2.21	0.40
1:G:365:LEU:C	1:G:367:GLU:N	2.80	0.40
1:H:194:GLN:O	1:H:194:GLN:HG2	2.19	0.40
1:H:436:GLN:O	1:H:440:ILE:CD1	2.69	0.40
1:K:128:VAL:O	1:K:132:LYS:HG3	2.21	0.40
1:K:237:LEU:HD23	1:K:237:LEU:C	2.46	0.40
1:K:258:ALA:O	1:K:262:LEU:HG	2.20	0.40
1:K:479:ASN:ND2	1:K:482:THR:HG23	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:524:LEU:HD12	1:M:524:LEU:HA	1.89	0.40
1:N:17:LEU:O	1:N:20:VAL:HG12	2.21	0.40
1:N:128:VAL:O	1:N:132:LYS:HG3	2.21	0.40
1:N:237:LEU:HD23	1:N:237:LEU:C	2.45	0.40
1:A:140:ASP:O	1:A:142:LYS:N	2.55	0.40
1:A:353:ILE:HG23	1:A:362:ARG:HG3	2.04	0.40
1:B:387:VAL:O	1:B:388:GLU:C	2.63	0.40
1:B:494:LEU:HD12	1:B:494:LEU:O	2.21	0.40
1:D:112:ASN:OD1	1:D:112:ASN:C	2.64	0.40
1:D:350:ARG:HA	1:D:353:ILE:HD12	2.03	0.40
1:D:477:GLY:HA3	1:D:488:MET:HG2	2.04	0.40
1:F:290:GLN:O	1:F:291:ASP:C	2.64	0.40
1:G:193:MET:CE	1:G:292:ILE:HG12	2.49	0.40
1:G:230:ILE:CD1	1:G:261:THR:HG21	2.50	0.40
1:I:219:PHE:HB3	1:I:317:LEU:CD2	2.51	0.40
1:I:238:GLU:C	1:I:240:VAL:N	2.80	0.40
1:I:335:GLY:C	1:I:337:GLY:N	2.79	0.40
1:J:103:GLY:O	1:J:107:VAL:HG23	2.21	0.40
1:J:112:ASN:OD1	1:J:112:ASN:C	2.64	0.40
1:J:112:ASN:HA	1:J:113:PRO:HD3	1.89	0.40
1:K:418:ALA:O	1:K:422:VAL:HG22	2.21	0.40
1:L:30:THR:HG22	1:L:36:ARG:O	2.21	0.40
1:L:389:MET:C	1:L:389:MET:SD	3.05	0.40
1:L:485:TYR:CD1	1:L:485:TYR:N	2.86	0.40
1:A:303:GLU:O	1:A:305:ILE:N	2.54	0.40
1:B:236:VAL:HG22	1:B:312:ALA:O	2.21	0.40
1:C:89:THR:O	1:C:90:THR:C	2.63	0.40
1:C:321:LYS:O	1:C:321:LYS:HG2	2.20	0.40
1:C:463:SER:O	1:C:464:VAL:C	2.63	0.40
1:E:482:THR:C	1:E:483:GLU:OE1	2.65	0.40
1:F:249:ILE:HB	1:F:275:ALA:HB2	2.04	0.40
1:F:353:ILE:HD13	1:F:366:GLN:HG2	2.02	0.40
1:G:8:PHE:O	1:G:9:GLY:C	2.65	0.40
1:G:248:LEU:HA	1:G:274:ALA:O	2.21	0.40
1:G:448:GLU:HB3	1:G:452:ARG:HD2	2.03	0.40
1:H:145:ALA:O	1:H:159:GLY:HA3	2.22	0.40
1:H:157:THR:O	1:H:161:LEU:HB2	2.22	0.40
1:H:449:ALA:HB3	1:H:450:PRO:CD	2.45	0.40
1:I:219:PHE:HB3	1:I:317:LEU:HD21	2.04	0.40
1:J:70:GLY:O	1:J:74:VAL:HG13	2.22	0.40
1:J:216:GLU:C	1:J:218:PRO:HD3	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:444:LEU:HD23	1:J:447:MET:CE	2.52	0.40
1:K:64:ASP:OD1	1:K:66:PHE:HB2	2.22	0.40
1:K:69:MET:HE3	1:L:41:ASP:HB2	2.04	0.40
1:K:165:ALA:C	1:K:167:ASP:H	2.29	0.40
1:K:495:ASP:O	1:K:496:PRO:C	2.64	0.40
1:L:143:ALA:O	1:L:144:ILE:C	2.64	0.40
1:L:303:GLU:C	1:L:305:ILE:N	2.78	0.40
1:M:238:GLU:C	1:M:240:VAL:N	2.79	0.40
1:M:366:GLN:O	1:M:369:VAL:HG22	2.22	0.40
1:N:113:PRO:O	1:N:115:ASP:N	2.55	0.40
1:N:165:ALA:C	1:N:167:ASP:N	2.78	0.40
1:N:203:TYR:C	1:N:205:ILE:N	2.77	0.40
1:N:354:GLU:C	1:N:356:ALA:H	2.29	0.40
1:N:441:LYS:O	1:N:445:ARG:HB2	2.21	0.40
1:B:353:ILE:C	1:B:355:GLU:H	2.28	0.40
1:C:36:ARG:N	1:C:36:ARG:HD3	2.37	0.40
1:C:140:ASP:O	1:C:142:LYS:N	2.54	0.40
1:C:193:MET:CE	1:C:292:ILE:HG12	2.49	0.40
1:D:412:VAL:HG13	1:D:497:THR:OG1	2.20	0.40
1:E:221:LEU:HA	1:E:317:LEU:HD11	2.03	0.40
1:F:36:ARG:HG3	1:F:36:ARG:NH1	2.37	0.40
1:F:52:ASP:OD1	1:F:54:VAL:HG23	2.22	0.40
1:F:221:LEU:HB3	1:F:249:ILE:HA	2.04	0.40
1:F:240:VAL:O	1:F:240:VAL:HG12	2.21	0.40
1:F:353:ILE:C	1:F:355:GLU:H	2.28	0.40
1:F:413:ALA:CB	1:F:417:VAL:CG2	3.00	0.40
1:G:234:LEU:N	1:G:235:PRO:HD2	2.37	0.40
1:G:270:ILE:O	1:G:271:VAL:HB	2.21	0.40
1:G:413:ALA:CB	1:G:417:VAL:CG2	3.00	0.40
1:H:23:LEU:HD23	1:H:74:VAL:CG2	2.52	0.40
1:H:128:VAL:O	1:H:132:LYS:HG3	2.22	0.40
1:I:28:LYS:O	1:I:30:THR:N	2.54	0.40
1:J:198:GLY:HA3	1:J:328:ASP:HA	2.04	0.40
1:K:77:VAL:O	1:K:78:ALA:C	2.63	0.40
1:K:169:VAL:CG1	1:K:173:GLY:HA3	2.47	0.40
1:K:451:LEU:C	1:K:451:LEU:CD2	2.94	0.40
1:M:235:PRO:HG3	1:M:310:GLU:CG	2.47	0.40
1:M:389:MET:O	1:M:390:LYS:C	2.63	0.40
1:N:169:VAL:CG1	1:N:173:GLY:HA3	2.48	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:484:GLU:OE1	1:M:484:GLU:OE1[8_556]	2.13	0.07

5.3 Torsion angles

5.3.1 Protein backbone

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	522/548 (95%)	449 (86%)	54 (10%)	19 (4%)	2	17
1	B	522/548 (95%)	450 (86%)	51 (10%)	21 (4%)	2	15
1	C	522/548 (95%)	455 (87%)	49 (9%)	18 (3%)	3	18
1	D	522/548 (95%)	448 (86%)	54 (10%)	20 (4%)	2	16
1	E	522/548 (95%)	453 (87%)	50 (10%)	19 (4%)	2	17
1	F	522/548 (95%)	449 (86%)	52 (10%)	21 (4%)	2	15
1	G	522/548 (95%)	450 (86%)	56 (11%)	16 (3%)	3	20
1	H	522/548 (95%)	434 (83%)	69 (13%)	19 (4%)	2	17
1	I	522/548 (95%)	438 (84%)	67 (13%)	17 (3%)	3	19
1	J	522/548 (95%)	441 (84%)	58 (11%)	23 (4%)	2	13
1	K	522/548 (95%)	441 (84%)	60 (12%)	21 (4%)	2	15
1	L	522/548 (95%)	434 (83%)	63 (12%)	25 (5%)	2	12
1	M	522/548 (95%)	438 (84%)	62 (12%)	22 (4%)	2	14
1	N	522/548 (95%)	440 (84%)	61 (12%)	21 (4%)	2	15
All	All	7308/7672 (95%)	6220 (85%)	806 (11%)	282 (4%)	2	16

All (282) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	33	PRO
1	A	43	SER
1	A	152	ALA
1	B	32	GLY

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Mol	Chain	Res	Type
1	B	33	PRO
1	B	43	SER
1	B	152	ALA
1	C	43	SER
1	C	152	ALA
1	D	33	PRO
1	D	34	LYS
1	D	43	SER
1	D	152	ALA
1	E	33	PRO
1	E	43	SER
1	E	152	ALA
1	F	32	GLY
1	F	33	PRO
1	F	43	SER
1	G	43	SER
1	G	152	ALA
1	H	33	PRO
1	H	43	SER
1	H	244	GLY
1	H	256	GLY
1	H	313	THR
1	I	43	SER
1	I	244	GLY
1	I	256	GLY
1	I	313	THR
1	J	33	PRO
1	J	43	SER
1	J	244	GLY
1	J	256	GLY
1	J	313	THR
1	K	43	SER
1	K	244	GLY
1	K	256	GLY
1	K	313	THR
1	L	31	LEU
1	L	33	PRO
1	L	43	SER
1	L	244	GLY
1	L	256	GLY
1	L	313	THR
1	M	43	SER

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Mol	Chain	Res	Type
1	M	244	GLY
1	M	256	GLY
1	M	313	THR
1	N	43	SER
1	N	244	GLY
1	N	256	GLY
1	N	313	THR
1	A	202	PRO
1	A	269	GLY
1	A	297	GLY
1	B	202	PRO
1	B	269	GLY
1	B	297	GLY
1	C	202	PRO
1	C	269	GLY
1	C	297	GLY
1	D	202	PRO
1	D	269	GLY
1	D	297	GLY
1	E	202	PRO
1	E	269	GLY
1	E	297	GLY
1	F	152	ALA
1	F	202	PRO
1	F	269	GLY
1	F	297	GLY
1	F	304	GLU
1	G	202	PRO
1	G	269	GLY
1	G	297	GLY
1	H	9	GLY
1	H	10	ASN
1	H	32	GLY
1	H	297	GLY
1	I	257	GLU
1	I	297	GLY
1	J	9	GLY
1	J	32	GLY
1	J	141	SER
1	J	257	GLU
1	J	297	GLY
1	K	141	SER

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Mol	Chain	Res	Type
1	K	297	GLY
1	L	141	SER
1	L	257	GLU
1	L	297	GLY
1	M	35	GLY
1	M	297	GLY
1	N	114	MET
1	N	141	SER
1	N	202	PRO
1	N	257	GLU
1	N	297	GLY
1	A	271	VAL
1	A	304	GLU
1	B	271	VAL
1	B	304	GLU
1	C	253	ASP
1	C	271	VAL
1	C	304	GLU
1	D	271	VAL
1	D	304	GLU
1	D	483	GLU
1	E	271	VAL
1	E	304	GLU
1	F	141	SER
1	F	253	ASP
1	F	271	VAL
1	G	271	VAL
1	G	304	GLU
1	H	141	SER
1	H	202	PRO
1	H	225	LYS
1	H	257	GLU
1	H	334	ASP
1	I	141	SER
1	I	202	PRO
1	I	225	LYS
1	I	334	ASP
1	J	10	ASN
1	J	202	PRO
1	J	225	LYS
1	K	202	PRO
1	K	225	LYS

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Mol	Chain	Res	Type
1	K	257	GLU
1	K	334	ASP
1	L	9	GLY
1	L	32	GLY
1	L	114	MET
1	L	202	PRO
1	L	225	LYS
1	M	9	GLY
1	M	141	SER
1	M	202	PRO
1	M	225	LYS
1	M	257	GLU
1	N	9	GLY
1	N	10	ASN
1	N	225	LYS
1	A	141	SER
1	A	225	LYS
1	A	483	GLU
1	B	34	LYS
1	B	253	ASP
1	B	483	GLU
1	C	141	SER
1	C	322	ARG
1	C	483	GLU
1	D	141	SER
1	D	225	LYS
1	D	253	ASP
1	E	225	LYS
1	E	253	ASP
1	E	483	GLU
1	F	34	LYS
1	G	141	SER
1	G	253	ASP
1	I	9	GLY
1	J	171	LYS
1	J	334	ASP
1	K	9	GLY
1	K	10	ASN
1	L	10	ASN
1	L	304	GLU
1	L	334	ASP
1	M	10	ASN

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Mol	Chain	Res	Type
1	M	114	MET
1	M	304	GLU
1	M	334	ASP
1	N	334	ASP
1	A	253	ASP
1	A	313	THR
1	A	322	ARG
1	B	141	SER
1	B	225	LYS
1	B	313	THR
1	B	322	ARG
1	C	225	LYS
1	C	313	THR
1	C	334	ASP
1	D	322	ARG
1	D	334	ASP
1	E	141	SER
1	E	313	THR
1	E	322	ARG
1	E	334	ASP
1	E	357	THR
1	F	31	LEU
1	F	225	LYS
1	F	313	THR
1	F	322	ARG
1	G	225	LYS
1	G	256	GLY
1	G	313	THR
1	G	322	ARG
1	G	483	GLU
1	H	184	GLN
1	H	208	PRO
1	H	271	VAL
1	I	10	ASN
1	I	208	PRO
1	I	271	VAL
1	J	61	GLU
1	J	271	VAL
1	J	304	GLU
1	K	61	GLU
1	K	184	GLN
1	K	271	VAL

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Mol	Chain	Res	Type
1	K	304	GLU
1	L	208	PRO
1	L	271	VAL
1	M	61	GLU
1	M	271	VAL
1	N	23	LEU
1	N	34	LYS
1	N	208	PRO
1	N	271	VAL
1	N	304	GLU
1	A	201	SER
1	A	334	ASP
1	A	357	THR
1	B	201	SER
1	B	334	ASP
1	B	357	THR
1	C	201	SER
1	D	208	PRO
1	D	256	GLY
1	D	313	THR
1	D	357	THR
1	F	201	SER
1	F	256	GLY
1	F	334	ASP
1	G	201	SER
1	H	137	PRO
1	I	184	GLN
1	J	184	GLN
1	J	208	PRO
1	K	114	MET
1	K	208	PRO
1	L	47	PRO
1	L	184	GLN
1	M	137	PRO
1	M	184	GLN
1	M	208	PRO
1	N	113	PRO
1	N	184	GLN
1	A	208	PRO
1	A	256	GLY
1	C	256	GLY
1	D	201	SER

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Mol	Chain	Res	Type
1	E	208	PRO
1	E	256	GLY
1	F	29	VAL
1	H	113	PRO
1	I	137	PRO
1	L	113	PRO
1	L	137	PRO
1	N	137	PRO
1	B	208	PRO
1	B	256	GLY
1	C	208	PRO
1	E	201	SER
1	F	208	PRO
1	G	208	PRO
1	J	137	PRO
1	L	29	VAL
1	M	113	PRO
1	K	29	VAL
1	K	113	PRO
1	M	47	PRO
1	C	270	ILE
1	J	47	PRO
1	L	35	GLY
1	I	113	PRO
1	J	113	PRO
1	K	47	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	404/415 (97%)	378 (94%)	26 (6%)	16	44
1	B	404/415 (97%)	379 (94%)	25 (6%)	16	45
1	C	404/415 (97%)	378 (94%)	26 (6%)	16	44
1	D	404/415 (97%)	379 (94%)	25 (6%)	16	45

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	E	404/415 (97%)	379 (94%)	25 (6%)	16	45
1	F	404/415 (97%)	378 (94%)	26 (6%)	16	44
1	G	404/415 (97%)	379 (94%)	25 (6%)	16	45
1	H	404/415 (97%)	379 (94%)	25 (6%)	16	45
1	I	404/415 (97%)	381 (94%)	23 (6%)	18	47
1	J	404/415 (97%)	383 (95%)	21 (5%)	21	49
1	K	404/415 (97%)	380 (94%)	24 (6%)	18	46
1	L	404/415 (97%)	381 (94%)	23 (6%)	18	47
1	M	404/415 (97%)	382 (95%)	22 (5%)	20	49
1	N	404/415 (97%)	381 (94%)	23 (6%)	18	47
All	All	5656/5810 (97%)	5317 (94%)	339 (6%)	17	46

All (339) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	18	ARG
1	A	31	LEU
1	A	33	PRO
1	A	44	PHE
1	A	54	VAL
1	A	65	LYS
1	A	74	VAL
1	A	77	VAL
1	A	94	VAL
1	A	125	THR
1	A	161	LEU
1	A	174	VAL
1	A	183	LEU
1	A	209	GLU
1	A	299	THR
1	A	310	GLU
1	A	328	ASP
1	A	331	THR
1	A	339	GLU
1	A	404	ARG
1	A	411	VAL
1	A	422	VAL
1	A	440	ILE

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Mol	Chain	Res	Type
1	A	463	SER
1	A	499	VAL
1	A	505	GLN
1	B	18	ARG
1	B	20	VAL
1	B	33	PRO
1	B	44	PHE
1	B	54	VAL
1	B	65	LYS
1	B	74	VAL
1	B	77	VAL
1	B	94	VAL
1	B	125	THR
1	B	161	LEU
1	B	174	VAL
1	B	183	LEU
1	B	209	GLU
1	B	310	GLU
1	B	328	ASP
1	B	331	THR
1	B	339	GLU
1	B	404	ARG
1	B	411	VAL
1	B	440	ILE
1	B	455	VAL
1	B	463	SER
1	B	499	VAL
1	B	505	GLN
1	C	18	ARG
1	C	31	LEU
1	C	44	PHE
1	C	54	VAL
1	C	65	LYS
1	C	74	VAL
1	C	77	VAL
1	C	94	VAL
1	C	125	THR
1	C	161	LEU
1	C	174	VAL
1	C	183	LEU
1	C	209	GLU
1	C	299	THR

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Mol	Chain	Res	Type
1	C	310	GLU
1	C	328	ASP
1	C	331	THR
1	C	339	GLU
1	C	404	ARG
1	C	411	VAL
1	C	422	VAL
1	C	440	ILE
1	C	455	VAL
1	C	463	SER
1	C	499	VAL
1	C	505	GLN
1	D	18	ARG
1	D	31	LEU
1	D	44	PHE
1	D	54	VAL
1	D	65	LYS
1	D	74	VAL
1	D	77	VAL
1	D	94	VAL
1	D	125	THR
1	D	161	LEU
1	D	174	VAL
1	D	183	LEU
1	D	209	GLU
1	D	299	THR
1	D	310	GLU
1	D	328	ASP
1	D	331	THR
1	D	339	GLU
1	D	404	ARG
1	D	411	VAL
1	D	422	VAL
1	D	440	ILE
1	D	463	SER
1	D	499	VAL
1	D	505	GLN
1	E	18	ARG
1	E	29	VAL
1	E	31	LEU
1	E	44	PHE
1	E	54	VAL

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Mol	Chain	Res	Type
1	E	65	LYS
1	E	74	VAL
1	E	77	VAL
1	E	94	VAL
1	E	125	THR
1	E	161	LEU
1	E	174	VAL
1	E	183	LEU
1	E	209	GLU
1	E	310	GLU
1	E	328	ASP
1	E	331	THR
1	E	339	GLU
1	E	404	ARG
1	E	411	VAL
1	E	422	VAL
1	E	440	ILE
1	E	463	SER
1	E	499	VAL
1	E	505	GLN
1	F	18	ARG
1	F	31	LEU
1	F	33	PRO
1	F	44	PHE
1	F	54	VAL
1	F	65	LYS
1	F	74	VAL
1	F	77	VAL
1	F	94	VAL
1	F	125	THR
1	F	161	LEU
1	F	174	VAL
1	F	183	LEU
1	F	209	GLU
1	F	299	THR
1	F	310	GLU
1	F	328	ASP
1	F	331	THR
1	F	339	GLU
1	F	404	ARG
1	F	411	VAL
1	F	422	VAL

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Mol	Chain	Res	Type
1	F	440	ILE
1	F	463	SER
1	F	499	VAL
1	F	505	GLN
1	G	18	ARG
1	G	44	PHE
1	G	54	VAL
1	G	65	LYS
1	G	74	VAL
1	G	77	VAL
1	G	94	VAL
1	G	125	THR
1	G	161	LEU
1	G	174	VAL
1	G	183	LEU
1	G	205	ILE
1	G	209	GLU
1	G	299	THR
1	G	310	GLU
1	G	328	ASP
1	G	331	THR
1	G	339	GLU
1	G	404	ARG
1	G	411	VAL
1	G	422	VAL
1	G	440	ILE
1	G	463	SER
1	G	499	VAL
1	G	505	GLN
1	H	31	LEU
1	H	33	PRO
1	H	44	PHE
1	H	54	VAL
1	H	65	LYS
1	H	74	VAL
1	H	77	VAL
1	H	125	THR
1	H	134	LEU
1	H	137	PRO
1	H	174	VAL
1	H	310	GLU
1	H	328	ASP

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Mol	Chain	Res	Type
1	H	331	THR
1	H	339	GLU
1	H	403	THR
1	H	407	VAL
1	H	411	VAL
1	H	417	VAL
1	H	442	VAL
1	H	461	LYS
1	H	490	ASP
1	H	494	LEU
1	H	499	VAL
1	H	505	GLN
1	I	44	PHE
1	I	54	VAL
1	I	65	LYS
1	I	74	VAL
1	I	77	VAL
1	I	125	THR
1	I	137	PRO
1	I	174	VAL
1	I	310	GLU
1	I	328	ASP
1	I	331	THR
1	I	339	GLU
1	I	403	THR
1	I	407	VAL
1	I	411	VAL
1	I	417	VAL
1	I	440	ILE
1	I	442	VAL
1	I	461	LYS
1	I	490	ASP
1	I	494	LEU
1	I	499	VAL
1	I	505	GLN
1	J	44	PHE
1	J	54	VAL
1	J	65	LYS
1	J	74	VAL
1	J	77	VAL
1	J	174	VAL
1	J	231	ARG

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Mol	Chain	Res	Type
1	J	310	GLU
1	J	328	ASP
1	J	331	THR
1	J	339	GLU
1	J	407	VAL
1	J	411	VAL
1	J	417	VAL
1	J	440	ILE
1	J	442	VAL
1	J	461	LYS
1	J	490	ASP
1	J	494	LEU
1	J	499	VAL
1	J	505	GLN
1	K	31	LEU
1	K	44	PHE
1	K	54	VAL
1	K	65	LYS
1	K	74	VAL
1	K	77	VAL
1	K	134	LEU
1	K	137	PRO
1	K	174	VAL
1	K	310	GLU
1	K	328	ASP
1	K	331	THR
1	K	339	GLU
1	K	398	ASP
1	K	407	VAL
1	K	411	VAL
1	K	417	VAL
1	K	442	VAL
1	K	461	LYS
1	K	490	ASP
1	K	494	LEU
1	K	499	VAL
1	K	505	GLN
1	K	524	LEU
1	L	31	LEU
1	L	44	PHE
1	L	54	VAL
1	L	65	LYS

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Mol	Chain	Res	Type
1	L	74	VAL
1	L	77	VAL
1	L	134	LEU
1	L	161	LEU
1	L	174	VAL
1	L	310	GLU
1	L	328	ASP
1	L	331	THR
1	L	339	GLU
1	L	407	VAL
1	L	411	VAL
1	L	417	VAL
1	L	440	ILE
1	L	442	VAL
1	L	461	LYS
1	L	490	ASP
1	L	494	LEU
1	L	499	VAL
1	L	505	GLN
1	M	34	LYS
1	M	54	VAL
1	M	65	LYS
1	M	74	VAL
1	M	77	VAL
1	M	125	THR
1	M	137	PRO
1	M	161	LEU
1	M	174	VAL
1	M	310	GLU
1	M	328	ASP
1	M	331	THR
1	M	339	GLU
1	M	407	VAL
1	M	411	VAL
1	M	417	VAL
1	M	442	VAL
1	M	461	LYS
1	M	490	ASP
1	M	494	LEU
1	M	499	VAL
1	M	505	GLN
1	N	44	PHE

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Mol	Chain	Res	Type
1	N	54	VAL
1	N	65	LYS
1	N	74	VAL
1	N	77	VAL
1	N	125	THR
1	N	134	LEU
1	N	137	PRO
1	N	174	VAL
1	N	310	GLU
1	N	328	ASP
1	N	331	THR
1	N	339	GLU
1	N	407	VAL
1	N	411	VAL
1	N	417	VAL
1	N	440	ILE
1	N	442	VAL
1	N	461	LYS
1	N	490	ASP
1	N	494	LEU
1	N	499	VAL
1	N	505	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (117) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	37	ASN
1	A	68	ASN
1	A	153	ASN
1	A	265	ASN
1	A	319	GLN
1	A	326	ASN
1	A	351	GLN
1	A	467	ASN
1	A	475	ASN
1	B	37	ASN
1	B	68	ASN
1	B	72	GLN
1	B	153	ASN
1	B	229	ASN
1	B	265	ASN
1	B	319	GLN

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Mol	Chain	Res	Type
1	B	326	ASN
1	B	351	GLN
1	B	467	ASN
1	B	475	ASN
1	C	37	ASN
1	C	68	ASN
1	C	72	GLN
1	C	265	ASN
1	C	319	GLN
1	C	326	ASN
1	C	351	GLN
1	C	467	ASN
1	C	475	ASN
1	C	505	GLN
1	D	37	ASN
1	D	68	ASN
1	D	72	GLN
1	D	265	ASN
1	D	319	GLN
1	D	326	ASN
1	D	351	GLN
1	D	467	ASN
1	D	475	ASN
1	E	37	ASN
1	E	68	ASN
1	E	72	GLN
1	E	265	ASN
1	E	319	GLN
1	E	326	ASN
1	E	351	GLN
1	E	467	ASN
1	E	475	ASN
1	F	68	ASN
1	F	72	GLN
1	F	265	ASN
1	F	319	GLN
1	F	326	ASN
1	F	351	GLN
1	F	467	ASN
1	F	475	ASN
1	F	505	GLN
1	G	37	ASN

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Mol	Chain	Res	Type
1	G	68	ASN
1	G	229	ASN
1	G	265	ASN
1	G	319	GLN
1	G	326	ASN
1	G	351	GLN
1	G	467	ASN
1	G	475	ASN
1	G	505	GLN
1	H	37	ASN
1	H	68	ASN
1	H	194	GLN
1	H	265	ASN
1	H	319	GLN
1	H	467	ASN
1	H	475	ASN
1	I	37	ASN
1	I	68	ASN
1	I	194	GLN
1	I	265	ASN
1	I	319	GLN
1	I	467	ASN
1	I	475	ASN
1	I	505	GLN
1	J	37	ASN
1	J	68	ASN
1	J	194	GLN
1	J	265	ASN
1	J	319	GLN
1	J	467	ASN
1	J	475	ASN
1	K	37	ASN
1	K	68	ASN
1	K	72	GLN
1	K	194	GLN
1	K	265	ASN
1	K	319	GLN
1	K	467	ASN
1	K	475	ASN
1	L	37	ASN
1	L	68	ASN
1	L	194	GLN

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Mol	Chain	Res	Type
1	L	265	ASN
1	L	319	GLN
1	L	467	ASN
1	L	475	ASN
1	M	37	ASN
1	M	68	ASN
1	M	72	GLN
1	M	194	GLN
1	M	265	ASN
1	M	319	GLN
1	M	475	ASN
1	N	37	ASN
1	N	68	ASN
1	N	194	GLN
1	N	265	ASN
1	N	319	GLN
1	N	475	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	524/548 (95%)	0.11	16 (3%) 51 35	5, 52, 107, 117	0
1	B	524/548 (95%)	0.18	18 (3%) 48 32	3, 50, 106, 118	0
1	C	524/548 (95%)	-0.00	6 (1%) 78 60	3, 52, 106, 118	0
1	D	524/548 (95%)	0.11	9 (1%) 69 50	6, 52, 107, 118	0
1	E	524/548 (95%)	-0.02	5 (0%) 79 63	8, 53, 107, 117	0
1	F	524/548 (95%)	0.12	12 (2%) 61 42	7, 52, 107, 118	0
1	G	524/548 (95%)	0.04	5 (0%) 79 63	6, 53, 107, 118	0
1	H	524/548 (95%)	0.15	6 (1%) 78 60	4, 56, 114, 120	0
1	I	524/548 (95%)	0.15	12 (2%) 61 42	8, 55, 113, 120	0
1	J	524/548 (95%)	-0.01	7 (1%) 75 56	4, 56, 113, 120	0
1	K	524/548 (95%)	0.11	11 (2%) 63 44	9, 56, 112, 120	0
1	L	524/548 (95%)	0.04	10 (1%) 66 48	10, 56, 112, 120	0
1	M	524/548 (95%)	0.20	15 (2%) 53 35	10, 56, 113, 120	0
1	N	524/548 (95%)	0.10	7 (1%) 75 56	9, 56, 113, 120	0
All	All	7336/7672 (95%)	0.09	139 (1%) 66 48	3, 54, 110, 120	0

All (139) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	238	GLU	5.7
1	M	155	ASP	5.1
1	B	366	GLN	4.6
1	B	361	ASP	4.6
1	F	155	ASP	4.1
1	H	319	GLN	4.0
1	K	262	LEU	3.9
1	B	351	GLN	3.9

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Mol	Chain	Res	Type	RSRZ
1	K	348	GLN	3.9
1	A	203	TYR	3.7
1	A	264	VAL	3.6
1	J	203	TYR	3.5
1	C	211	GLY	3.5
1	L	359	ASP	3.5
1	H	203	TYR	3.4
1	B	352	GLN	3.4
1	A	259	LEU	3.2
1	I	352	GLN	3.2
1	F	283	ASP	3.2
1	A	309	LEU	3.1
1	K	361	ASP	3.1
1	B	307	MET	3.1
1	K	359	ASP	3.0
1	K	85	ALA	3.0
1	G	269	GLY	2.9
1	I	359	ASP	2.9
1	J	352	GLN	2.9
1	M	148	GLY	2.9
1	M	366	GLN	2.9
1	F	361	ASP	2.9
1	I	35	GLY	2.9
1	M	217	SER	2.9
1	B	428	ASP	2.9
1	B	261	THR	2.9
1	C	238	GLU	2.8
1	I	354	GLU	2.8
1	I	245	LYS	2.8
1	M	156	GLU	2.8
1	M	35	GLY	2.8
1	G	435	ASP	2.7
1	E	366	GLN	2.7
1	J	484	GLU	2.7
1	N	67	GLU	2.7
1	E	296	THR	2.7
1	B	349	ILE	2.7
1	M	271	VAL	2.7
1	F	363	GLU	2.7
1	M	401	HIS	2.7
1	J	433	ASN	2.7
1	A	255	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
1	I	346	VAL	2.6
1	N	341	ALA	2.6
1	I	363	GLU	2.6
1	K	466	ALA	2.6
1	B	203	TYR	2.6
1	A	319	GLN	2.6
1	F	156	GLU	2.6
1	L	522	THR	2.6
1	F	154	SER	2.6
1	B	63	GLU	2.6
1	D	241	ALA	2.6
1	K	246	PRO	2.5
1	B	359	ASP	2.5
1	A	354	GLU	2.5
1	F	357	THR	2.5
1	I	343	GLN	2.5
1	F	278	ALA	2.5
1	G	180	GLY	2.5
1	M	346	VAL	2.4
1	L	358	SER	2.4
1	A	272	LYS	2.4
1	D	361	ASP	2.4
1	K	346	VAL	2.4
1	D	85	ALA	2.4
1	M	270	ILE	2.4
1	B	201	SER	2.4
1	I	200	LEU	2.4
1	I	339	GLU	2.4
1	B	346	VAL	2.4
1	B	354	GLU	2.3
1	L	276	VAL	2.3
1	G	172	GLU	2.3
1	F	121	ASP	2.3
1	L	224	ASP	2.3
1	G	300	VAL	2.3
1	A	269	GLY	2.3
1	C	243	ALA	2.3
1	L	360	TYR	2.3
1	K	353	ILE	2.3
1	H	192	GLY	2.3
1	D	314	LEU	2.2
1	K	236	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
1	M	158	VAL	2.2
1	A	76	GLU	2.2
1	L	354	GLU	2.2
1	C	262	LEU	2.2
1	N	300	VAL	2.2
1	J	139	SER	2.2
1	A	260	ALA	2.2
1	E	154	SER	2.2
1	D	262	LEU	2.2
1	N	164	GLU	2.2
1	J	115	ASP	2.2
1	F	300	VAL	2.1
1	D	238	GLU	2.1
1	E	484	GLU	2.1
1	J	182	GLY	2.1
1	K	269	GLY	2.1
1	H	334	ASP	2.1
1	M	300	VAL	2.1
1	A	366	GLN	2.1
1	F	307	MET	2.1
1	A	235	PRO	2.1
1	B	238	GLU	2.1
1	M	246	PRO	2.1
1	F	158	VAL	2.1
1	C	352	GLN	2.1
1	I	351	GLN	2.1
1	E	271	VAL	2.1
1	D	359	ASP	2.1
1	N	262	LEU	2.1
1	D	266	THR	2.1
1	M	152	ALA	2.1
1	B	343	GLN	2.1
1	N	44	PHE	2.1
1	B	364	LYS	2.1
1	A	314	LEU	2.1
1	L	352	GLN	2.1
1	C	312	ALA	2.0
1	H	312	ALA	2.0
1	B	362	ARG	2.0
1	L	205	ILE	2.0
1	L	349	ILE	2.0
1	D	313	THR	2.0

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Mol	Chain	Res	Type	RSRZ
1	H	296	THR	2.0
1	I	121	ASP	2.0
1	M	121	ASP	2.0
1	N	269	GLY	2.0
1	A	483	GLU	2.0

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.