



Full wwPDB X-ray Structure Validation Report

Mar 1, 2014 – 04:02 AM GMT

PDB ID : 3MVO
Title : Crystal structure of bovine glutamate dehydrogenase complexed with Eu3+
Authors : Smith, T.J.; Li, M.
Deposited on : 2010-05-04
Resolution : 3.23 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

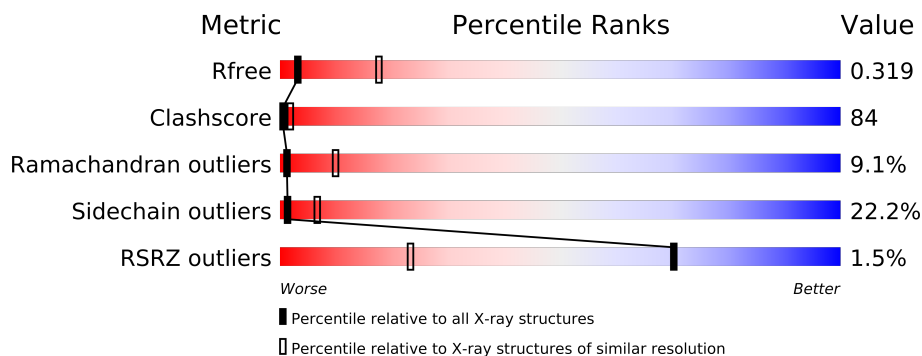
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.15 2013
Xtriage (Phenix) : dev-1323
EDS : stable22639
Percentile statistics : 21963
Refmac : 5.8.0049
CCP4 : 6.3.0 (Settle)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : stable22683

1 Overall quality at a glance

The reported resolution of this entry is 3.23 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}	66092	1080 (3.30-3.18)
Clashscore	79885	1369 (3.30-3.18)
Ramachandran outliers	78287	1342 (3.30-3.18)
Sidechain outliers	78261	1340 (3.30-3.18)
RSRZ outliers	66119	1081 (3.30-3.18)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	A	501	
1	B	501	
1	C	501	
1	D	501	
1	E	501	
1	F	501	

2 Entry composition i

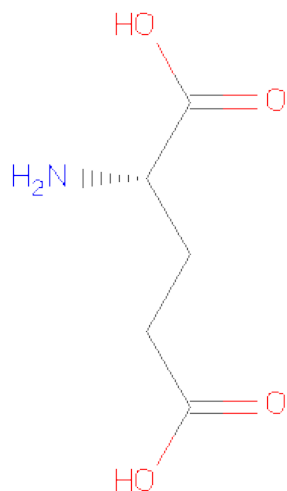
There are 4 unique types of molecules in this entry. The entry contains 23630 atoms, of which 0 are hydrogen and 0 are deuterium.

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 Glutamate dehydrogenase 1, mitochondrial.

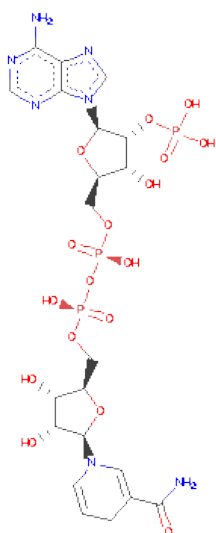
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	495	Total	C	N	O	S	0	0	0
			3880	2449	681	731	19			
1	B	495	Total	C	N	O	S	0	0	0
			3880	2449	681	731	19			
1	C	495	Total	C	N	O	S	0	0	0
			3880	2449	681	731	19			
1	D	495	Total	C	N	O	S	0	0	0
			3880	2449	681	731	19			
1	E	495	Total	C	N	O	S	0	0	0
			3880	2449	681	731	19			
1	F	495	Total	C	N	O	S	0	0	0
			3880	2449	681	731	19			

- Molecule 2 is GLUTAMIC ACID (three-letter code: GLU) (formula: C₅H₉NO₄).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	N	O	0	0
			10	5	1	4		
2	B	1	Total	C	N	O	0	0
			10	5	1	4		
2	C	1	Total	C	N	O	0	0
			10	5	1	4		
2	D	1	Total	C	N	O	0	0
			10	5	1	4		
2	E	1	Total	C	N	O	0	0
			10	5	1	4		
2	F	1	Total	C	N	O	0	0
			10	5	1	4		

- Molecule 3 is NADPH DIHYDRO-NICOTINAMIDE-ADENINE-DINUCLEOTIDEPHOSPHATE (three-letter code: NDP) (formula: $C_{21}H_{30}N_7O_{17}P_3$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	A	1	Total	C	N	O	P	0	0
			48	21	7	17	3		
3	B	1	Total	C	N	O	P	0	0
			48	21	7	17	3		
3	F	1	Total	C	N	O	P	0	0
			48	21	7	17	3		
3	D	1	Total	C	N	O	P	0	0
			48	21	7	17	3		
3	E	1	Total	C	N	O	P	0	0
			48	21	7	17	3		

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	C	1	Total	C	N	O	P	0	0
			48	21	7	17	3		

- Molecule 4 is EUROPIUM (III) ION (three-letter code: EU3) (formula: Eu).

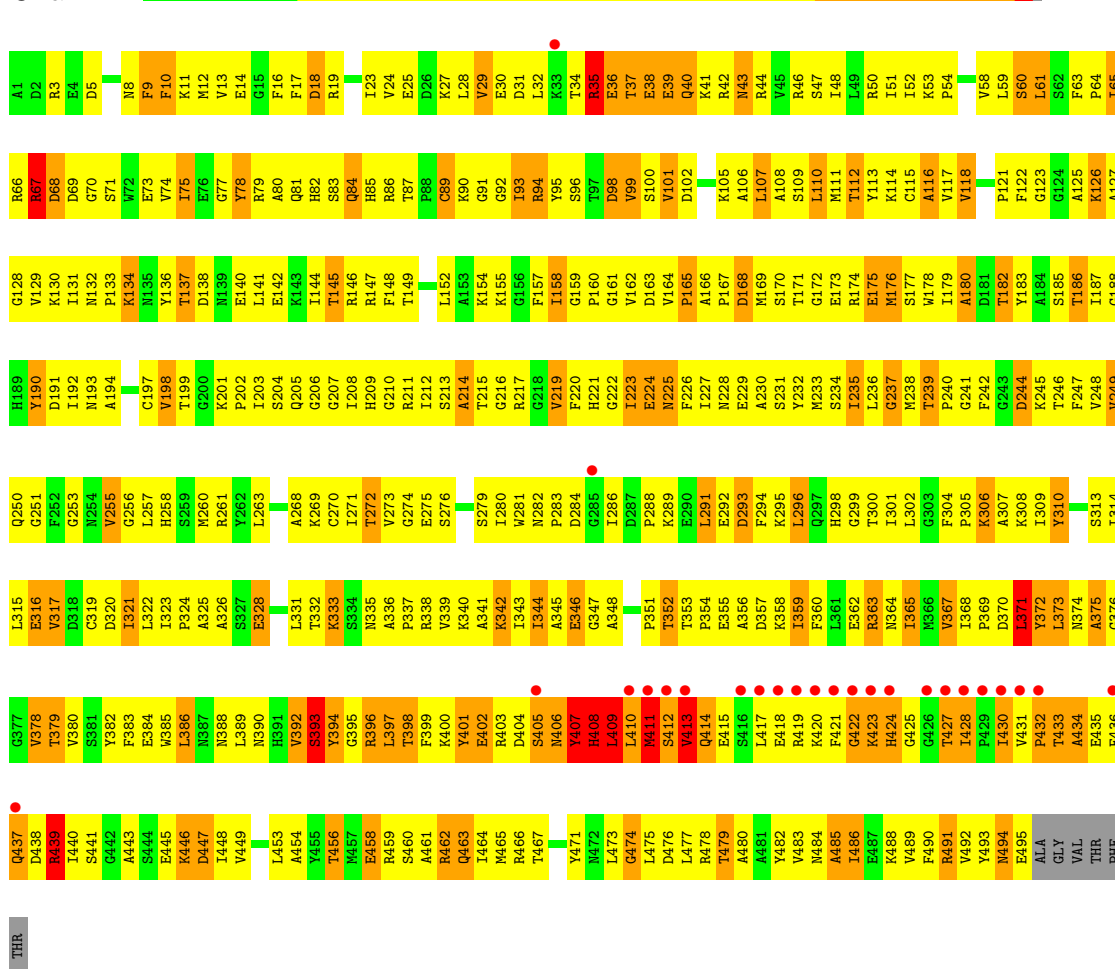
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	1	Total	Eu	0	0
			1	1		
4	D	1	Total	Eu	0	0
			1	1		

3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry 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.

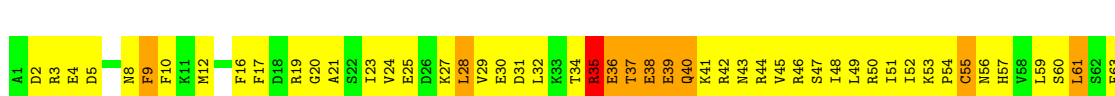
- Molecule 1: Glutamate dehydrogenase 1, mitochondrial

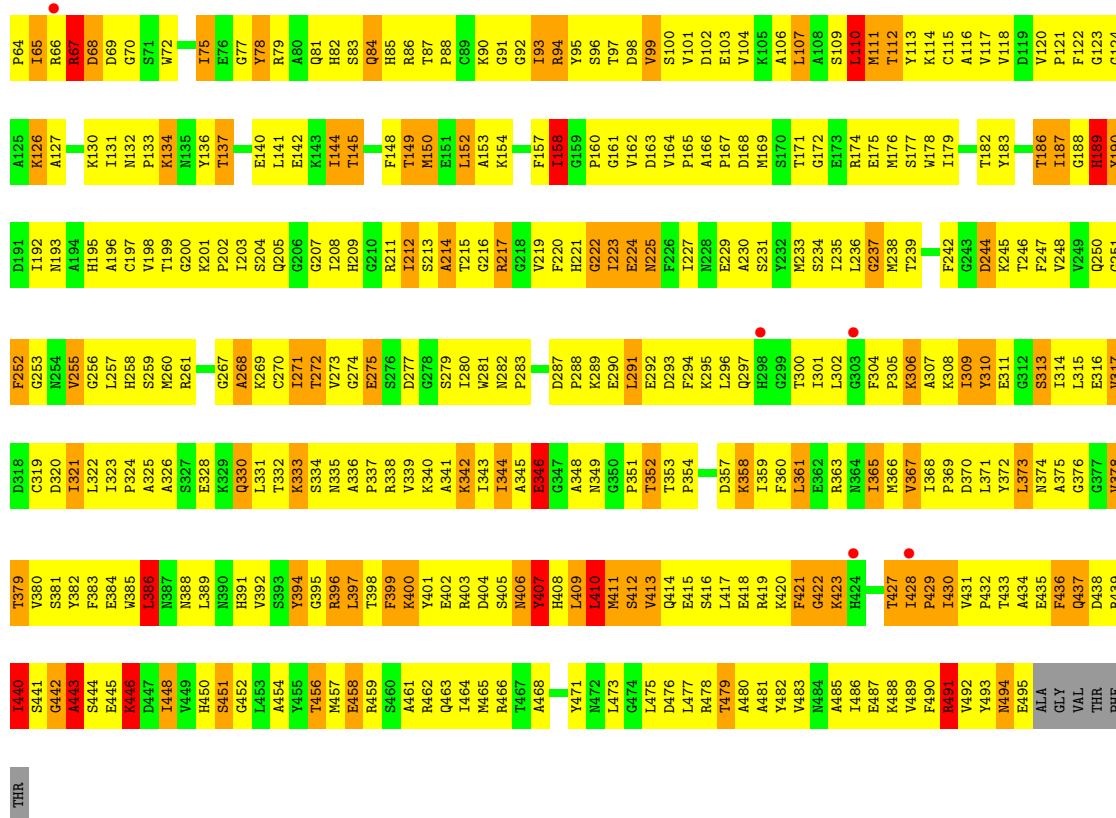
Chain A:



- Molecule 1: Glutamate dehydrogenase 1, mitochondrial

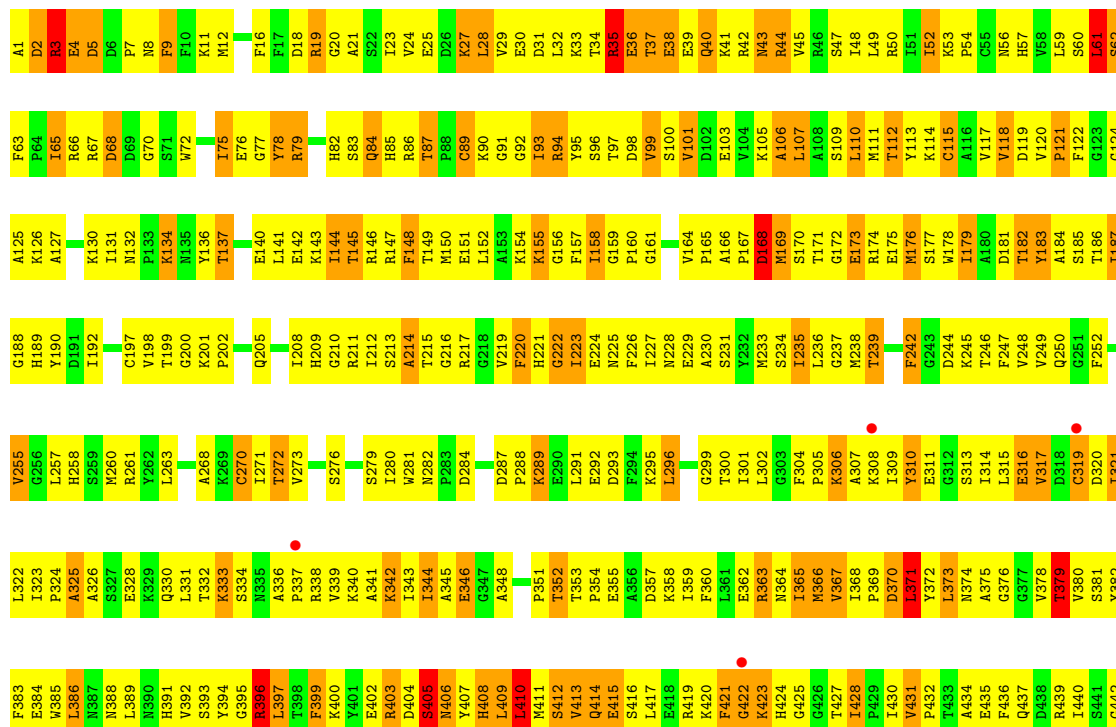
Chain B:

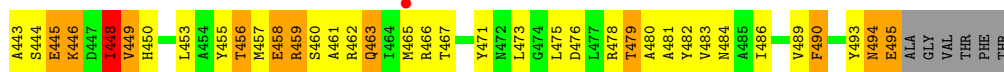




• Molecule 1: Glutamate dehydrogenase 1, mitochondrial

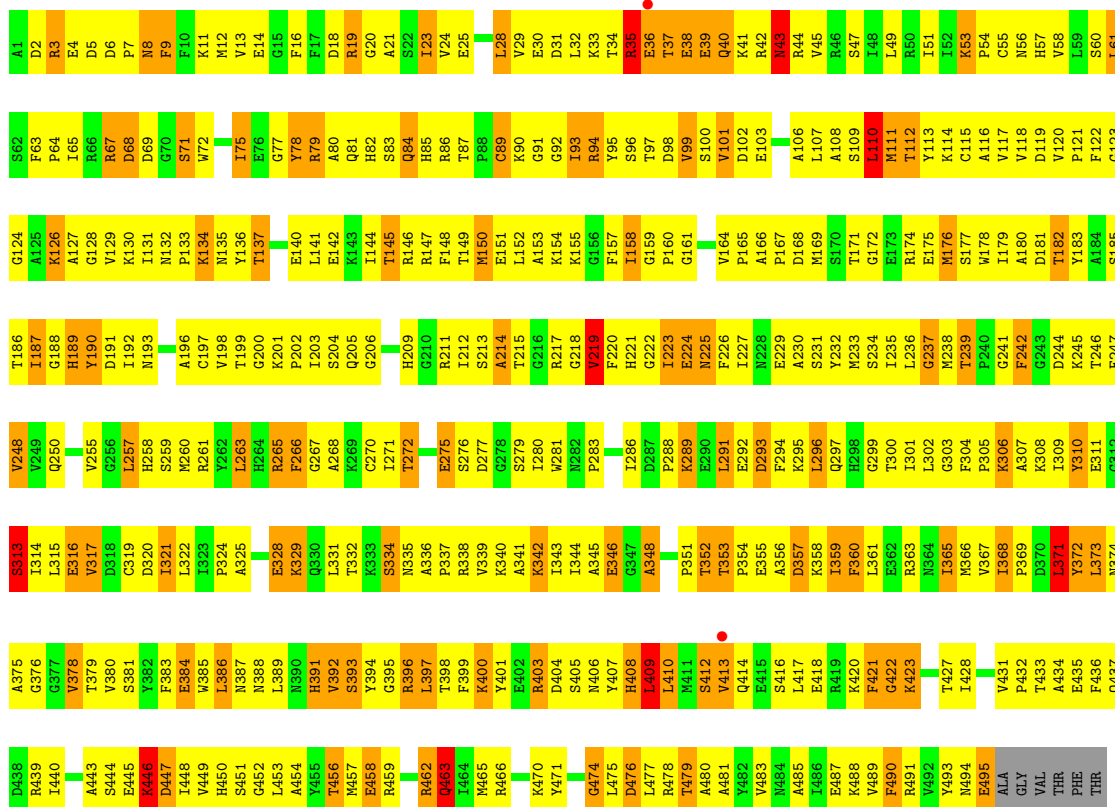
Chain C:





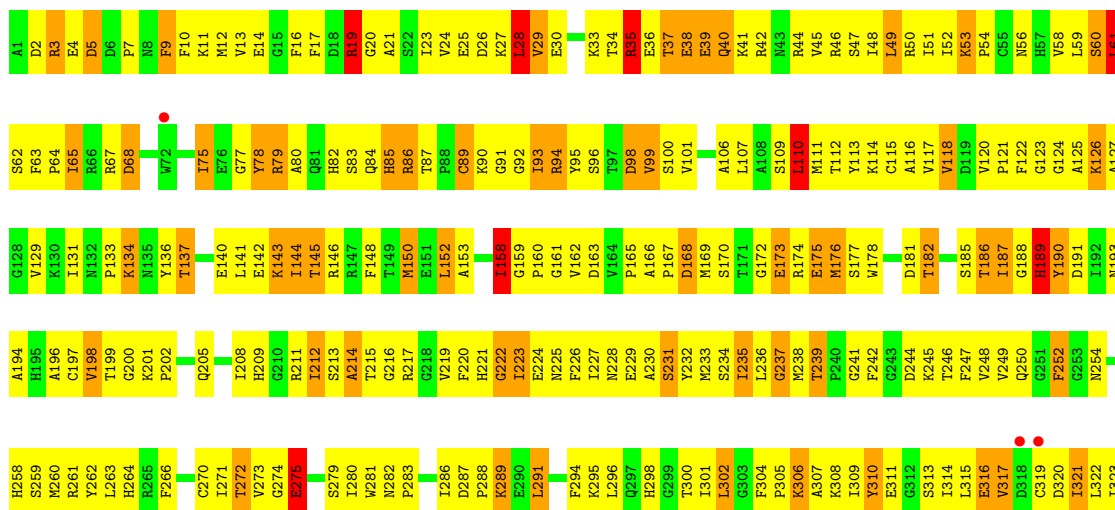
• Molecule 1: Glutamate dehydrogenase 1, mitochondrial

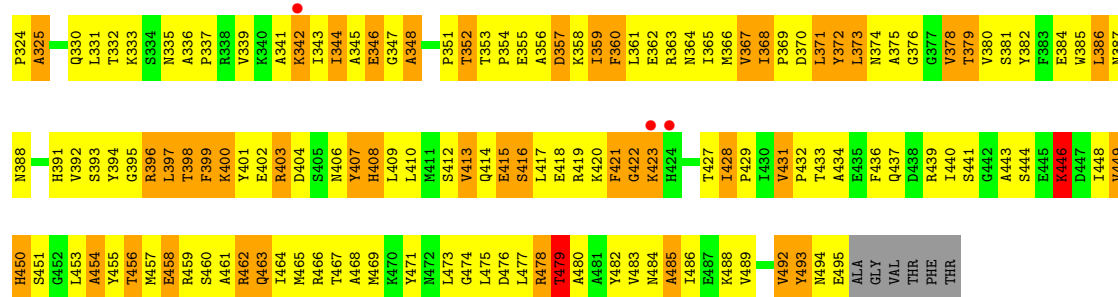
Chain D:



• Molecule 1: Glutamate dehydrogenase 1, mitochondrial

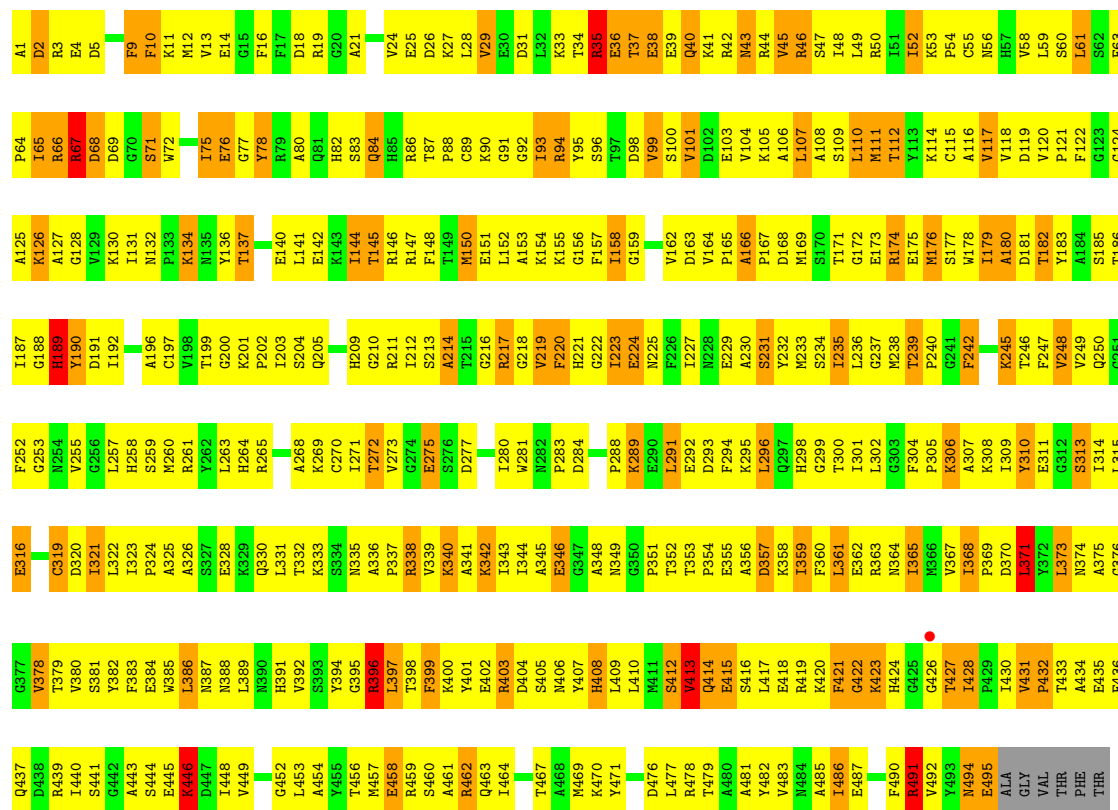
Chain E:





• Molecule 1: Glutamate dehydrogenase 1, mitochondrial

Chain F:



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	121.11Å 98.76Å 165.64Å 90.00° 101.55° 90.00°	Depositor
Resolution (Å)	43.89 – 3.23 47.44 – 3.23	Depositor EDS
% Data completeness (in resolution range)	90.1 (43.89-3.23) 90.2 (47.44-3.23)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.69 (at 3.25Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.6.1_353)	Depositor
R, R_{free}	0.261 , 0.310 0.242 , 0.319	Depositor DCC
R_{free} test set	2840 reflections (5.10%)	DCC
Wilson B-factor (Å ²)	36.0	Xtriage
Anisotropy	0.236	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.27 , -8.0	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle L \rangle = 0.43$, $\langle L^2 \rangle = 0.26$	Xtriage
Outliers	0 of 55739 reflections	Xtriage
F_o, F_c correlation	0.80	EDS
Total number of atoms	23630	wwPDB-VP
Average B, all atoms (Å ²)	36.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.24% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: NDP, EU3

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	0.92	11/3962 (0.3%)	0.81	3/5348 (0.1%)
1	B	0.81	7/3962 (0.2%)	0.82	6/5348 (0.1%)
1	C	0.53	1/3962 (0.0%)	0.74	4/5348 (0.1%)
1	D	0.52	1/3962 (0.0%)	0.72	1/5348 (0.0%)
1	E	0.51	1/3962 (0.0%)	0.70	0/5348
1	F	0.54	1/3962 (0.0%)	0.70	1/5348 (0.0%)
All	All	0.66	22/23772 (0.1%)	0.75	15/32088 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	B	0	1

All (22) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	401	TYR	CD1-CE1	25.60	1.77	1.39
1	A	401	TYR	CD2-CE2	21.54	1.71	1.39
1	B	436	PHE	CE1-CZ	20.24	1.75	1.37
1	A	401	TYR	CE2-CZ	17.79	1.61	1.38
1	B	436	PHE	CD1-CE1	16.55	1.72	1.39
1	A	401	TYR	CE1-CZ	14.64	1.57	1.38
1	B	436	PHE	CE2-CZ	14.61	1.65	1.37
1	B	436	PHE	CD2-CE2	13.34	1.66	1.39
1	A	408	HIS	N-CA	10.05	1.66	1.46
1	A	401	TYR	CG-CD2	9.58	1.51	1.39
1	B	443	ALA	N-CA	9.56	1.65	1.46
1	A	401	TYR	CG-CD1	9.52	1.51	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	436	PHE	CG-CD1	8.03	1.50	1.38
1	C	89	CYS	CB-SG	-6.52	1.71	1.82
1	F	89	CYS	CB-SG	-6.25	1.71	1.82
1	E	89	CYS	CB-SG	-6.16	1.71	1.82
1	B	436	PHE	CG-CD2	6.07	1.47	1.38
1	A	392	VAL	CB-CG1	-5.54	1.41	1.52
1	A	89	CYS	CB-SG	-5.40	1.73	1.81
1	A	392	VAL	CA-CB	-5.19	1.43	1.54
1	A	393	SER	CA-CB	5.17	1.60	1.52
1	D	89	CYS	CB-SG	-5.04	1.73	1.81

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	407	TYR	C-N-CA	11.29	149.91	121.70
1	B	442	GLY	C-N-CA	7.76	141.09	121.70
1	A	409	LEU	CA-CB-CG	6.42	130.06	115.30
1	C	61	LEU	CA-CB-CG	6.09	129.32	115.30
1	C	409	LEU	CA-CB-CG	6.05	129.22	115.30
1	B	410	LEU	CB-CG-CD1	5.97	121.15	111.00
1	D	409	LEU	CA-CB-CG	5.94	128.97	115.30
1	F	89	CYS	CA-CB-SG	-5.85	103.46	114.00
1	B	407	TYR	N-CA-C	-5.47	96.24	111.00
1	B	386	LEU	CA-CB-CG	5.35	127.61	115.30
1	C	410	LEU	CB-CG-CD2	5.34	120.09	111.00
1	B	430	ILE	CG1-CB-CG2	-5.33	99.68	111.40
1	C	115	CYS	CA-CB-SG	-5.25	104.55	114.00
1	B	440	ILE	CG1-CB-CG2	5.13	122.70	111.40
1	A	408	HIS	CB-CA-C	-5.04	100.31	110.40

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	443	ALA	Peptide

5.2 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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit,

and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3880	0	3842	1074	0
1	B	3880	0	3842	991	0
1	C	3880	0	3843	684	0
1	D	3880	0	3843	592	0
1	E	3880	0	3843	588	0
1	F	3880	0	3843	576	0
2	A	10	0	5	5	0
2	B	10	0	5	3	0
2	C	10	0	5	12	0
2	D	10	0	5	9	0
2	E	10	0	5	6	0
2	F	10	0	5	6	0
3	A	48	0	26	15	0
3	B	48	0	26	15	0
3	C	48	0	26	19	0
3	D	48	0	26	15	0
3	E	48	0	26	10	0
3	F	48	0	26	13	0
4	A	1	0	0	0	0
4	D	1	0	0	0	0
All	All	23630	0	23242	3956	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 84.

All (3956) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:414:GLN:HG2	1:B:430:ILE:CG2	1.17	1.61
1:A:401:TYR:CD1	1:A:401:TYR:CE1	1.77	1.55
1:A:409:LEU:CD2	1:B:407:TYR:H	1.24	1.51
1:A:401:TYR:CD1	1:B:443:ALA:CA	1.95	1.47
1:A:414:GLN:CG	1:B:430:ILE:HG22	1.54	1.35
1:A:428:ILE:HG12	1:B:428:ILE:CB	1.53	1.35
1:A:414:GLN:HB3	1:B:431:VAL:CA	1.55	1.35
1:A:409:LEU:HD22	1:B:407:TYR:N	1.35	1.35
1:A:428:ILE:CG1	1:B:428:ILE:HB	1.60	1.31
1:A:401:TYR:CD1	1:B:442:GLY:C	1.93	1.30
1:A:428:ILE:HB	1:B:430:ILE:CG1	1.61	1.29
1:A:412:SER:HB3	1:B:407:TYR:CG	1.67	1.29

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:415:GLU:H	1:B:432:PRO:CD	1.45	1.28
1:A:82:HIS:CD2	1:A:112:THR:HG21	1.68	1.28
1:A:410:LEU:C	1:B:410:LEU:HD13	1.51	1.28
1:A:411:MET:O	1:A:414:GLN:HB2	1.15	1.26
1:A:428:ILE:CB	1:B:430:ILE:HG13	1.66	1.26
1:A:401:TYR:CD1	1:B:442:GLY:O	1.84	1.26
1:A:434:ALA:N	1:C:412:SER:HB2	1.50	1.25
1:A:408:HIS:CE1	1:B:436:PHE:HA	1.74	1.23
1:A:436:PHE:N	1:C:408:HIS:HB3	1.55	1.20
1:A:409:LEU:CD1	1:B:406:ASN:H	1.56	1.19
1:A:410:LEU:N	1:B:406:ASN:HB2	1.57	1.19
1:B:82:HIS:CD2	1:B:112:THR:HG21	1.78	1.17
1:A:411:MET:HE2	1:B:433:THR:HG23	1.20	1.17
1:C:321:ILE:HG22	1:C:343:ILE:HB	1.24	1.16
1:A:414:GLN:CG	1:B:430:ILE:CG2	2.14	1.16
1:C:434:ALA:HA	1:C:437:GLN:HE22	1.08	1.16
1:A:434:ALA:H	1:C:412:SER:CB	1.58	1.15
1:A:410:LEU:CD1	1:B:410:LEU:HD12	1.75	1.15
1:E:52:ILE:HD13	1:E:489:VAL:HG12	1.21	1.15
1:A:414:GLN:HB3	1:B:431:VAL:C	1.67	1.15
1:A:430:ILE:HD12	1:B:430:ILE:HG21	1.17	1.14
1:A:409:LEU:HD13	1:B:406:ASN:N	1.59	1.14
1:A:410:LEU:HD12	1:B:410:LEU:HD12	1.28	1.14
1:A:433:THR:HA	1:C:412:SER:HB2	1.30	1.13
1:A:433:THR:HB	1:C:412:SER:N	1.63	1.13
2:E:502:GLU:HA	3:E:552:NDP:H41N	1.15	1.13
1:A:414:GLN:HG3	1:B:410:LEU:CD2	1.76	1.13
1:A:409:LEU:HG	1:B:403:ARG:HA	1.16	1.12
1:A:412:SER:HB3	1:B:407:TYR:CD2	1.84	1.12
1:A:415:GLU:HG3	1:B:431:VAL:HG23	1.28	1.12
1:A:409:LEU:HD23	1:B:407:TYR:HB2	1.14	1.12
1:A:408:HIS:HB3	1:B:440:ILE:HA	1.27	1.12
1:E:321:ILE:HG22	1:E:343:ILE:HB	1.26	1.12
1:A:406:ASN:O	1:A:410:LEU:HB2	1.46	1.11
1:A:418:GLU:HA	1:B:429:PRO:HB2	1.17	1.11
1:A:430:ILE:CG1	1:B:413:VAL:HB	1.81	1.10
1:A:435:GLU:HB3	1:C:408:HIS:CG	1.86	1.10
1:B:236:LEU:HD21	1:B:342:LYS:HG2	1.34	1.10
1:A:410:LEU:HB3	1:B:436:PHE:CE2	1.87	1.09
1:A:415:GLU:H	1:B:432:PRO:HD2	1.03	1.09
1:A:411:MET:HB2	1:B:436:PHE:CD2	1.88	1.09
1:A:409:LEU:HG	1:B:403:ARG:CA	1.83	1.09

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:433:THR:HA	1:C:412:SER:CB	1.83	1.09
1:A:411:MET:HG3	1:B:432:PRO:HA	1.26	1.08
1:A:401:TYR:CD1	1:B:443:ALA:HA	1.53	1.08
1:A:408:HIS:CE1	1:B:439:ARG:HG2	1.87	1.08
1:A:201:LYS:NZ	1:A:388:ASN:HD21	1.49	1.08
1:A:409:LEU:O	1:A:412:SER:HB2	1.53	1.08
1:A:321:ILE:HG22	1:A:343:ILE:HB	1.33	1.08
1:A:436:PHE:HB2	1:C:405:SER:C	1.73	1.08
1:B:63:PHE:CE1	1:B:75:ILE:HD11	1.89	1.07
1:F:236:LEU:HD21	1:F:342:LYS:HG2	1.34	1.07
1:A:408:HIS:NE2	1:B:438:ASP:N	2.02	1.07
1:A:434:ALA:HA	1:A:437:GLN:HE22	1.14	1.07
1:D:321:ILE:HG22	1:D:343:ILE:HB	1.35	1.07
1:C:173:GLU:OE2	1:C:202:PRO:HA	1.53	1.07
1:A:430:ILE:HG23	1:B:413:VAL:HG21	1.25	1.06
1:B:434:ALA:HA	1:B:437:GLN:HE22	1.17	1.06
1:A:436:PHE:HB3	1:C:409:LEU:H	0.90	1.05
1:A:415:GLU:N	1:B:432:PRO:HD2	1.71	1.05
2:C:502:GLU:HB3	3:C:552:NDP:H41N	1.32	1.05
1:A:436:PHE:HB3	1:C:409:LEU:N	1.71	1.05
1:A:413:VAL:HG23	1:B:410:LEU:CB	1.86	1.04
1:F:148:PHE:O	1:F:152:LEU:HD12	1.55	1.04
1:B:217:ARG:HG2	1:B:217:ARG:HH11	1.22	1.04
1:D:160:PRO:HG3	1:D:193:ASN:O	1.56	1.04
1:A:407:TYR:O	1:B:436:PHE:CD2	2.05	1.04
1:A:414:GLN:HG2	1:B:430:ILE:HG23	1.35	1.03
1:A:411:MET:O	1:A:414:GLN:CB	2.04	1.03
1:D:56:ASN:HD22	1:D:84:GLN:HE21	1.04	1.03
1:D:56:ASN:HD22	1:D:84:GLN:NE2	1.56	1.03
1:F:82:HIS:CD2	1:F:112:THR:HG21	1.94	1.03
1:D:236:LEU:HD21	1:D:342:LYS:HG2	1.40	1.03
1:A:413:VAL:HG23	1:B:410:LEU:HB3	1.35	1.02
1:E:91:GLY:HA3	1:E:125:ALA:O	1.59	1.02
1:A:96:SER:HB3	1:A:99:VAL:HG13	1.40	1.02
1:A:415:GLU:HB3	1:A:419:ARG:NH2	1.74	1.02
1:A:433:THR:CA	1:C:412:SER:HB2	1.89	1.01
1:C:95:TYR:OH	1:C:145:THR:HB	1.59	1.01
1:A:406:ASN:HA	1:B:406:ASN:OD1	1.60	1.01
1:A:433:THR:CG2	1:C:413:VAL:HG23	1.91	1.01
1:C:117:VAL:HG21	1:C:371:LEU:HD22	1.42	1.01
1:B:258:HIS:HD2	1:B:261:ARG:NH1	1.58	1.01
1:C:406:ASN:H	1:C:406:ASN:ND2	1.46	1.00

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:201:LYS:HZ1	1:A:388:ASN:ND2	1.57	1.00
1:A:413:VAL:CG1	1:B:411:MET:HG2	1.90	1.00
1:B:409:LEU:O	1:B:412:SER:HB2	1.61	1.00
1:A:410:LEU:CD1	1:B:409:LEU:HD22	1.91	1.00
1:D:94:ARG:NH1	1:D:107:LEU:HD21	1.74	1.00
1:B:72:TRP:HB2	1:E:47:SER:HB3	1.42	1.00
1:A:224:GLU:HB2	1:A:242:PHE:HE2	1.25	1.00
1:A:408:HIS:ND1	1:B:439:ARG:HG2	1.74	1.00
1:A:405:SER:HB3	1:B:402:GLU:OE2	1.59	1.00
1:C:458:GLU:HG3	1:C:459:ARG:N	1.77	0.99
1:B:56:ASN:HD22	1:B:84:GLN:NE2	1.61	0.99
1:A:95:TYR:OH	1:A:145:THR:HB	1.63	0.99
1:E:53:LYS:HB3	1:E:54:PRO:HD3	1.41	0.99
1:A:414:GLN:HB3	1:B:431:VAL:N	1.77	0.98
1:E:201:LYS:NZ	1:E:388:ASN:HD21	1.61	0.98
1:C:107:LEU:HB3	1:C:126:LYS:HG2	1.44	0.98
1:A:409:LEU:HB3	1:B:406:ASN:OD1	1.63	0.98
1:A:428:ILE:HD12	1:B:430:ILE:H	1.28	0.98
1:A:414:GLN:CG	1:B:410:LEU:HD21	1.93	0.98
1:A:410:LEU:O	1:B:410:LEU:HD22	1.63	0.97
1:B:272:THR:OG1	1:B:314:ILE:HD11	1.65	0.97
1:B:35:ARG:HD2	1:B:35:ARG:H	1.26	0.97
1:A:434:ALA:HA	1:A:437:GLN:NE2	1.79	0.97
1:A:430:ILE:HG13	1:B:430:ILE:HD13	1.43	0.96
1:A:421:PHE:HB3	1:B:427:THR:OG1	1.63	0.96
1:A:413:VAL:HG11	1:B:411:MET:HG2	1.44	0.96
1:A:433:THR:OG1	1:C:411:MET:N	1.99	0.96
1:C:300:THR:HG22	1:C:302:LEU:H	1.27	0.96
1:A:430:ILE:HG13	1:B:413:VAL:HB	1.45	0.96
1:A:414:GLN:HG3	1:B:410:LEU:HD21	1.00	0.96
1:D:313:SER:HB3	1:D:316:GLU:HB2	1.46	0.96
1:A:63:PHE:CE1	1:A:75:ILE:HD11	1.99	0.96
1:A:433:THR:HG22	1:C:413:VAL:CG2	1.96	0.96
1:A:421:PHE:HB3	1:B:427:THR:HG1	1.30	0.96
1:C:117:VAL:CG2	1:C:371:LEU:HD22	1.95	0.96
1:D:219:VAL:HA	1:D:373:LEU:CD2	1.96	0.96
1:A:411:MET:H	1:B:436:PHE:HE2	1.12	0.96
1:A:141:LEU:O	1:A:145:THR:HG22	1.65	0.96
1:F:63:PHE:CE1	1:F:75:ILE:HD11	2.01	0.96
1:A:408:HIS:CD2	1:B:439:ARG:H	1.83	0.95
1:D:219:VAL:HA	1:D:373:LEU:HD22	1.47	0.95
1:E:35:ARG:HD2	1:E:35:ARG:H	1.32	0.95

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:430:ILE:HD12	1:B:430:ILE:CG2	1.97	0.95
1:B:321:ILE:HG22	1:B:343:ILE:HB	1.45	0.95
1:F:458:GLU:HG3	1:F:459:ARG:N	1.82	0.95
1:A:436:PHE:CD2	1:C:409:LEU:HB3	2.01	0.95
1:A:434:ALA:N	1:C:412:SER:CB	2.24	0.95
1:E:118:VAL:HG11	1:E:375:ALA:CB	1.97	0.95
1:A:428:ILE:HD12	1:B:430:ILE:N	1.80	0.94
1:A:408:HIS:CA	1:B:436:PHE:CG	2.37	0.94
1:A:490:PHE:O	1:A:491:ARG:HD2	1.64	0.94
1:E:175:GLU:HA	1:E:178:TRP:HE3	1.29	0.94
1:A:430:ILE:CB	1:B:410:LEU:HG	1.97	0.94
1:A:418:GLU:HG3	1:B:431:VAL:HB	1.48	0.94
1:A:90:LYS:HB2	1:A:122:PHE:CD1	2.03	0.94
1:B:53:LYS:HB3	1:B:54:PRO:HD3	1.49	0.94
1:A:409:LEU:HB3	1:B:406:ASN:CG	1.89	0.93
1:A:411:MET:HE2	1:B:433:THR:CG2	1.98	0.93
1:A:414:GLN:HE21	1:B:431:VAL:N	1.66	0.93
1:D:244:ASP:HB2	1:D:245:LYS:HD2	1.48	0.93
1:E:131:ILE:O	1:E:133:PRO:HD3	1.68	0.93
1:E:177:SER:HB2	1:E:202:PRO:HG2	1.49	0.93
1:A:433:THR:C	1:C:412:SER:HB2	1.89	0.93
1:E:141:LEU:O	1:E:145:THR:HG22	1.67	0.93
1:A:148:PHE:CE2	1:A:152:LEU:HD11	2.03	0.93
1:A:161:GLY:HA2	1:C:192:ILE:HG13	1.50	0.93
1:F:382:TYR:O	1:F:386:LEU:HD22	1.69	0.93
1:A:411:MET:O	1:B:432:PRO:HD3	1.68	0.93
1:A:433:THR:HG22	1:C:413:VAL:H	1.34	0.93
1:B:437:GLN:HA	1:B:440:ILE:HD12	1.48	0.93
1:D:69:ASP:OD2	1:D:71:SER:HB3	1.69	0.93
1:E:52:ILE:HD13	1:E:489:VAL:CG1	1.99	0.93
1:A:415:GLU:N	1:B:432:PRO:CD	2.30	0.92
1:B:171:THR:HG22	1:B:175:GLU:HG3	1.50	0.92
1:C:24:VAL:CG1	1:C:483:VAL:HG13	1.99	0.92
1:A:410:LEU:HD12	1:B:410:LEU:CD1	1.98	0.92
1:A:146:ARG:HB3	1:A:182:THR:HG21	1.47	0.92
1:A:428:ILE:O	1:B:430:ILE:HA	1.69	0.92
1:B:405:SER:O	1:B:408:HIS:HB2	1.68	0.92
1:A:409:LEU:CD2	1:B:407:TYR:HB2	1.98	0.92
1:D:82:HIS:CD2	1:D:112:THR:HG21	2.03	0.92
1:A:407:TYR:N	1:B:436:PHE:CE1	2.38	0.92
1:A:409:LEU:CB	1:B:406:ASN:OD1	2.18	0.92
1:A:408:HIS:CD2	1:B:437:GLN:CA	2.53	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:434:ALA:HA	1:C:437:GLN:NE2	1.85	0.92
1:A:412:SER:CB	1:B:407:TYR:CG	2.52	0.92
1:A:436:PHE:CB	1:C:409:LEU:H	1.81	0.92
1:E:175:GLU:HA	1:E:178:TRP:CE3	2.05	0.91
1:A:411:MET:HB2	1:B:436:PHE:HD2	1.34	0.91
1:D:255:VAL:HG12	3:D:552:NDP:O2N	1.70	0.91
1:A:439:ARG:HD2	1:C:405:SER:HA	1.52	0.91
1:A:415:GLU:HB2	1:B:432:PRO:HD2	1.50	0.91
1:B:68:ASP:HB2	1:B:140:GLU:OE1	1.69	0.91
1:F:217:ARG:HH11	1:F:217:ARG:HG2	1.34	0.91
1:A:414:GLN:HE21	1:B:431:VAL:H	0.92	0.91
1:A:409:LEU:HD21	1:B:404:ASP:N	1.86	0.91
1:A:401:TYR:CG	1:B:443:ALA:HB2	2.06	0.91
1:A:224:GLU:HB2	1:A:242:PHE:CE2	2.06	0.91
1:E:244:ASP:HB2	1:E:245:LYS:HD2	1.54	0.90
1:A:236:LEU:HD21	1:A:342:LYS:HG2	1.51	0.90
1:A:401:TYR:CG	1:B:443:ALA:CB	2.52	0.90
1:A:411:MET:CE	1:B:433:THR:HG23	1.99	0.90
1:A:414:GLN:CB	1:B:431:VAL:C	2.39	0.90
1:A:118:VAL:HG11	1:A:375:ALA:CB	2.01	0.90
1:E:107:LEU:HD23	1:E:126:LYS:HE2	1.53	0.90
1:F:470:LYS:HG2	1:F:471:TYR:CE2	2.07	0.90
1:E:93:ILE:HB	1:E:127:ALA:HB3	1.54	0.90
1:A:430:ILE:CG2	1:B:413:VAL:HG21	2.02	0.90
1:A:409:LEU:HD13	1:B:406:ASN:H	0.77	0.90
1:A:430:ILE:CG1	1:B:430:ILE:HD13	2.01	0.90
1:D:272:THR:OG1	1:D:314:ILE:HD11	1.72	0.90
1:A:430:ILE:HG12	1:B:413:VAL:HB	1.50	0.89
1:D:300:THR:HG22	1:D:302:LEU:H	1.35	0.89
1:A:248:VAL:HG23	1:A:272:THR:O	1.71	0.89
1:A:280:ILE:HB	1:A:307:ALA:CB	2.00	0.89
1:C:167:PRO:HG3	1:C:176:MET:HG2	1.54	0.89
1:F:141:LEU:O	1:F:145:THR:HG22	1.71	0.89
1:B:408:HIS:HB3	1:C:436:PHE:HB2	1.54	0.89
1:A:409:LEU:CD2	1:B:407:TYR:N	2.08	0.89
1:C:199:THR:HA	1:C:384:GLU:OE1	1.72	0.89
1:D:417:LEU:HD23	1:F:428:ILE:HG21	1.52	0.89
1:A:435:GLU:HB3	1:C:408:HIS:CB	2.01	0.89
1:F:169:MET:HA	3:F:552:NDP:O2A	1.72	0.89
1:E:217:ARG:HD2	1:E:262:TYR:CZ	2.08	0.89
1:E:63:PHE:CE1	1:E:75:ILE:HD11	2.08	0.89
1:C:333:LYS:HB2	1:C:355:GLU:HG3	1.55	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:434:ALA:HA	1:E:437:GLN:HE22	1.38	0.88
1:D:201:LYS:HZ1	1:D:388:ASN:HD21	1.13	0.88
1:D:247:PHE:HB3	1:D:321:ILE:HG12	1.55	0.88
1:A:409:LEU:HB3	1:B:406:ASN:CB	2.03	0.88
1:A:409:LEU:HD23	1:B:407:TYR:CB	2.03	0.88
1:A:408:HIS:CD2	1:B:437:GLN:HA	2.08	0.88
1:F:95:TYR:OH	1:F:145:THR:HB	1.73	0.88
1:B:24:VAL:CG1	1:B:483:VAL:HG13	2.03	0.88
1:B:331:LEU:HD23	1:B:360:PHE:HZ	1.38	0.88
1:A:411:MET:CG	1:B:432:PRO:HA	2.02	0.88
1:B:160:PRO:HD3	1:B:197:CYS:HB3	1.56	0.88
1:A:411:MET:N	1:B:436:PHE:HE2	1.71	0.88
1:C:35:ARG:HG2	1:C:36:GLU:H	1.38	0.88
1:B:281:TRP:HB3	1:B:310:TYR:HB2	1.52	0.88
1:A:495:GLU:HG2	1:C:178:TRP:HE1	1.39	0.88
1:C:214:ALA:HB1	1:C:380:VAL:HG21	1.56	0.88
1:A:411:MET:HG3	1:B:432:PRO:CA	2.03	0.88
1:B:167:PRO:HG3	1:B:176:MET:CG	2.04	0.88
2:C:502:GLU:CB	3:C:552:NDP:H41N	2.04	0.87
1:C:19:ARG:HH11	1:C:19:ARG:HG2	1.39	0.87
1:F:35:ARG:H	1:F:35:ARG:HD2	1.38	0.87
1:B:403:ARG:CG	1:B:403:ARG:O	2.21	0.87
1:B:348:ALA:O	1:B:351:PRO:HD3	1.75	0.87
1:E:16:PHE:HE2	1:E:354:PRO:HB3	1.39	0.87
1:A:410:LEU:HD13	1:B:409:LEU:HD22	1.55	0.87
1:F:114:LYS:HA	1:F:371:LEU:HD23	1.56	0.87
1:A:415:GLU:CB	1:B:432:PRO:HD2	2.04	0.87
1:A:253:GLY:HA3	3:A:552:NDP:H52A	1.56	0.87
1:E:281:TRP:CB	1:E:310:TYR:HB2	2.03	0.87
1:F:247:PHE:HB3	1:F:321:ILE:HG12	1.57	0.87
1:F:114:LYS:HA	1:F:371:LEU:CD2	2.04	0.87
1:A:35:ARG:H	1:A:35:ARG:HD2	1.37	0.87
1:B:315:LEU:O	1:B:339:VAL:HG13	1.75	0.87
1:E:82:HIS:CD2	1:E:112:THR:HG21	2.09	0.87
1:A:433:THR:HG22	1:C:413:VAL:HG23	1.53	0.87
1:A:210:GLY:O	1:A:214:ALA:HB2	1.74	0.87
1:A:407:TYR:N	1:B:436:PHE:CZ	2.42	0.86
1:F:90:LYS:NZ	2:F:502:GLU:OE1	2.07	0.86
1:B:199:THR:HA	1:B:384:GLU:OE1	1.74	0.86
1:C:148:PHE:CE2	1:C:152:LEU:HD11	2.11	0.86
1:D:19:ARG:HH11	1:D:19:ARG:HG2	1.40	0.86
1:D:96:SER:O	1:D:130:LYS:HA	1.76	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:408:HIS:ND1	1:B:436:PHE:HA	1.91	0.86
1:E:90:LYS:HD3	1:E:122:PHE:CE1	2.11	0.86
1:A:430:ILE:CD1	1:B:430:ILE:HG21	2.06	0.86
1:C:406:ASN:N	1:C:406:ASN:ND2	2.19	0.86
2:B:502:GLU:HA	3:B:552:NDP:H41N	1.54	0.86
1:C:112:THR:HB	1:C:124:GLY:H	1.40	0.86
1:D:355:GLU:OE2	1:D:358:LYS:HE3	1.76	0.86
1:F:162:VAL:HG23	1:F:163:ASP:N	1.91	0.85
1:A:408:HIS:NE2	1:B:439:ARG:N	2.24	0.85
1:E:199:THR:HA	1:E:384:GLU:OE1	1.76	0.85
1:A:280:ILE:HB	1:A:307:ALA:HB1	1.55	0.85
1:C:63:PHE:CZ	1:C:75:ILE:HD11	2.12	0.85
1:B:116:ALA:O	1:B:488:LYS:HD2	1.76	0.85
1:E:258:HIS:HD2	1:E:261:ARG:NH1	1.74	0.85
1:A:414:GLN:CB	1:B:431:VAL:CA	2.50	0.85
1:A:201:LYS:NZ	1:A:388:ASN:ND2	2.19	0.85
1:C:107:LEU:CB	1:C:126:LYS:HG2	2.07	0.85
1:A:333:LYS:HB2	1:A:355:GLU:HG3	1.58	0.85
1:B:342:LYS:HB2	1:B:342:LYS:NZ	1.91	0.85
1:C:224:GLU:HB2	1:C:242:PHE:HE2	1.39	0.85
1:D:137:THR:HG23	1:D:140:GLU:HG3	1.59	0.85
1:D:95:TYR:OH	1:D:145:THR:HB	1.77	0.85
1:E:91:GLY:O	1:E:165:PRO:HA	1.77	0.84
1:B:217:ARG:NH1	1:B:221:HIS:HE1	1.76	0.84
1:D:434:ALA:HA	1:D:437:GLN:HE22	1.42	0.84
1:C:201:LYS:NZ	1:C:388:ASN:HD21	1.76	0.84
1:D:462:ARG:HG3	1:D:466:ARG:HH12	1.42	0.84
1:D:420:LYS:C	1:D:421:PHE:HD2	1.79	0.84
1:C:305:PRO:HB2	1:C:306:LYS:CD	2.07	0.84
1:A:408:HIS:CB	1:B:440:ILE:HA	2.07	0.84
1:E:150:MET:HE1	1:E:187:ILE:HD11	1.58	0.84
1:E:375:ALA:O	1:E:379:THR:OG1	1.96	0.84
1:A:446:LYS:H	1:A:446:LYS:HD2	1.42	0.84
1:C:63:PHE:CE1	1:C:75:ILE:HD11	2.12	0.84
1:E:224:GLU:HB2	1:E:242:PHE:HE2	1.41	0.84
1:D:348:ALA:HB1	3:D:552:NDP:O3D	1.78	0.84
1:B:313:SER:HB3	1:B:316:GLU:HB2	1.60	0.84
1:F:271:ILE:HD12	1:F:272:THR:CG2	2.07	0.84
1:F:281:TRP:HB3	1:F:310:TYR:HB2	1.59	0.84
1:A:417:LEU:HB3	1:B:414:GLN:HE22	1.41	0.83
1:A:404:ASP:HA	1:B:439:ARG:CD	2.08	0.83
1:A:226:PHE:HE2	1:A:465:MET:HG2	1.41	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:415:GLU:N	1:B:431:VAL:HA	1.92	0.83
1:A:197:CYS:SG	1:A:198:VAL:HG12	2.17	0.83
2:E:502:GLU:CA	3:E:552:NDP:H41N	2.05	0.83
1:F:153:ALA:HA	1:F:158:ILE:HG22	1.58	0.83
1:A:410:LEU:HB3	1:B:436:PHE:HE2	1.42	0.83
1:A:414:GLN:NE2	1:B:431:VAL:H	1.76	0.83
1:A:82:HIS:HD2	1:A:112:THR:HG21	1.43	0.83
1:D:111:MET:SD	2:D:502:GLU:HA	2.17	0.83
1:B:434:ALA:HA	1:B:437:GLN:NE2	1.92	0.83
1:C:410:LEU:HD23	1:C:432:PRO:HD3	1.59	0.83
1:C:201:LYS:HZ1	1:C:388:ASN:HD21	1.26	0.83
1:A:425:GLY:HA3	1:B:427:THR:O	1.76	0.83
1:A:315:LEU:HD12	1:A:335:ASN:HD21	1.41	0.83
1:A:281:TRP:HB3	1:A:310:TYR:HB2	1.60	0.83
1:B:255:VAL:HG12	3:B:552:NDP:O2N	1.79	0.83
1:E:332:THR:HG22	1:E:353:THR:HG21	1.59	0.83
1:C:420:LYS:C	1:C:421:PHE:HD2	1.81	0.83
1:E:174:ARG:HB3	1:E:175:GLU:OE2	1.79	0.83
1:E:224:GLU:CB	1:E:242:PHE:HE2	1.92	0.83
1:A:410:LEU:HD11	1:B:409:LEU:HD22	1.58	0.83
1:C:236:LEU:HD21	1:C:342:LYS:CG	2.08	0.83
1:A:433:THR:CB	1:C:412:SER:N	2.41	0.82
1:D:227:ILE:HD12	1:D:233:MET:SD	2.18	0.82
1:B:413:VAL:CG1	1:C:413:VAL:HG11	2.08	0.82
1:C:201:LYS:HZ1	1:C:388:ASN:ND2	1.77	0.82
1:A:458:GLU:HG3	1:A:459:ARG:N	1.93	0.82
1:D:35:ARG:HD2	1:D:35:ARG:H	1.43	0.82
1:B:53:LYS:O	1:B:82:HIS:HE1	1.62	0.82
1:C:434:ALA:CA	1:C:437:GLN:HE22	1.90	0.82
1:B:90:LYS:HZ3	1:B:164:VAL:HG12	1.44	0.82
1:A:436:PHE:HB2	1:C:405:SER:O	1.77	0.82
1:F:63:PHE:CZ	1:F:75:ILE:HD11	2.14	0.82
1:B:403:ARG:HG2	1:B:403:ARG:O	1.76	0.82
1:A:436:PHE:H	1:C:408:HIS:C	1.82	0.82
1:E:52:ILE:CD1	1:E:489:VAL:HG12	2.07	0.82
1:E:117:VAL:HG12	1:E:118:VAL:HG12	1.60	0.82
1:C:304:PHE:CD1	1:C:305:PRO:HD2	2.15	0.82
1:A:258:HIS:HD2	1:A:261:ARG:HH11	1.28	0.82
1:A:430:ILE:HB	1:B:410:LEU:HG	1.62	0.82
1:F:281:TRP:CB	1:F:310:TYR:HB2	2.10	0.82
1:B:160:PRO:HG3	1:B:193:ASN:O	1.80	0.82
1:C:405:SER:HB3	1:C:406:ASN:ND2	1.94	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:260:MET:HG2	1:A:288:PRO:HG3	1.60	0.82
1:D:29:VAL:HG21	1:D:42:ARG:HE	1.44	0.81
1:C:344:ILE:HB	1:C:367:VAL:HG12	1.61	0.81
1:B:63:PHE:CZ	1:B:75:ILE:HD11	2.14	0.81
1:A:435:GLU:O	1:A:438:ASP:HB2	1.77	0.81
1:A:131:ILE:O	1:A:133:PRO:HD3	1.79	0.81
1:F:201:LYS:HD2	1:F:205:GLN:O	1.80	0.81
1:B:68:ASP:OD1	1:B:137:THR:HG21	1.81	0.81
1:A:410:LEU:CG	1:B:410:LEU:HD12	2.10	0.81
1:A:408:HIS:NE2	1:B:437:GLN:N	2.29	0.81
1:E:219:VAL:HG11	1:E:259:SER:OG	1.81	0.81
1:F:167:PRO:HG3	1:F:176:MET:HE3	1.63	0.81
1:E:224:GLU:HB2	1:E:242:PHE:CE2	2.15	0.81
1:E:247:PHE:HB3	1:E:321:ILE:HG12	1.63	0.81
1:D:433:THR:HG23	1:E:412:SER:OG	1.79	0.81
1:A:410:LEU:CA	1:B:410:LEU:HD13	2.11	0.81
1:E:281:TRP:HB3	1:E:310:TYR:HB2	1.61	0.81
1:A:249:VAL:HB	1:A:323:ILE:HB	1.62	0.81
1:F:59:LEU:HD22	1:F:157:PHE:CD1	2.16	0.81
1:A:279:SER:CB	1:A:314:ILE:HD13	2.11	0.81
1:D:332:THR:HG22	1:D:353:THR:HG21	1.62	0.81
1:F:345:ALA:HB1	1:F:373:LEU:HD11	1.62	0.81
1:F:12:MET:HG3	1:F:354:PRO:HD3	1.63	0.81
1:D:225:ASN:HD21	1:D:458:GLU:HB2	1.44	0.81
1:F:348:ALA:HB1	3:F:552:NDP:O3D	1.81	0.81
1:A:164:VAL:HG13	1:A:197:CYS:O	1.81	0.80
1:A:90:LYS:HD3	1:A:122:PHE:CE1	2.16	0.80
1:D:63:PHE:CE1	1:D:75:ILE:HD11	2.16	0.80
1:E:368:ILE:HG22	1:E:373:LEU:HG	1.63	0.80
1:F:346:GLU:HG2	1:F:351:PRO:HG2	1.63	0.80
1:E:382:TYR:O	1:E:386:LEU:HD22	1.81	0.80
1:F:434:ALA:HA	1:F:437:GLN:HE22	1.46	0.80
1:A:411:MET:CG	1:B:433:THR:H	1.95	0.80
1:D:343:ILE:HG23	1:D:366:MET:HE3	1.62	0.80
1:F:199:THR:HA	1:F:384:GLU:OE1	1.80	0.80
1:B:222:GLY:HA3	1:B:373:LEU:HD21	1.62	0.80
1:C:405:SER:O	1:C:408:HIS:N	2.13	0.80
1:D:281:TRP:CZ2	1:D:283:PRO:HG3	2.17	0.80
1:E:332:THR:O	1:E:336:ALA:HB2	1.80	0.80
1:D:289:LYS:HE2	1:D:293:ASP:OD1	1.81	0.80
1:A:412:SER:HB3	1:B:407:TYR:CD1	2.17	0.80
1:A:435:GLU:C	1:C:408:HIS:HB3	2.00	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:363:ARG:NH1	1:F:365:ILE:HD11	1.97	0.80
1:C:244:ASP:HB2	1:C:245:LYS:HD2	1.63	0.80
1:A:323:ILE:HD13	1:A:345:ALA:HB3	1.64	0.79
1:D:82:HIS:CG	1:D:112:THR:HG21	2.16	0.79
1:A:476:ASP:OD2	1:A:479:THR:HG23	1.81	0.79
1:C:3:ARG:CZ	1:C:4:GLU:HG3	2.12	0.79
1:D:148:PHE:CE2	1:D:152:LEU:HD11	2.16	0.79
1:D:400:LYS:HD3	1:D:400:LYS:O	1.83	0.79
1:B:167:PRO:HG3	1:B:176:MET:HG3	1.65	0.79
1:D:315:LEU:HD13	1:D:331:LEU:CD1	2.12	0.79
1:D:35:ARG:HG2	1:D:36:GLU:H	1.46	0.79
1:E:382:TYR:CZ	1:E:386:LEU:HD21	2.17	0.79
1:A:411:MET:HG3	1:B:433:THR:N	1.96	0.79
1:E:372:TYR:CE1	1:E:461:ALA:HB2	2.17	0.79
1:C:90:LYS:HD2	1:C:164:VAL:HB	1.65	0.79
1:A:411:MET:HG3	1:B:433:THR:H	1.45	0.79
1:C:72:TRP:HB2	1:F:47:SER:HB3	1.63	0.79
1:A:414:GLN:HB3	1:B:431:VAL:HA	1.63	0.79
1:E:372:TYR:CZ	1:E:461:ALA:HB2	2.18	0.79
1:A:428:ILE:HB	1:B:430:ILE:HG13	0.83	0.79
1:B:258:HIS:HD2	1:B:261:ARG:HH11	1.25	0.79
1:E:44:ARG:NH2	1:E:494:ASN:HB2	1.98	0.79
1:F:1:ALA:O	1:F:2:ASP:HB2	1.81	0.79
1:F:420:LYS:C	1:F:421:PHE:HD2	1.86	0.79
1:A:410:LEU:C	1:B:410:LEU:CD1	2.45	0.79
1:B:399:PHE:HA	1:B:441:SER:HB3	1.65	0.79
1:B:444:SER:OG	1:B:446:LYS:HD3	1.82	0.79
1:B:274:GLY:O	1:B:275:GLU:HB2	1.81	0.79
1:E:115:CYS:SG	1:E:378:VAL:HG11	2.22	0.79
1:A:402:GLU:O	1:A:406:ASN:OD1	2.00	0.78
1:E:211:ARG:O	1:E:214:ALA:HB3	1.83	0.78
1:B:16:PHE:CD1	1:B:478:ARG:HD3	2.18	0.78
1:D:281:TRP:HB3	1:D:310:TYR:HB2	1.63	0.78
1:D:107:LEU:HD23	1:D:126:LYS:HE2	1.65	0.78
1:A:410:LEU:H	1:B:406:ASN:HB2	1.48	0.78
1:B:420:LYS:C	1:B:421:PHE:HD2	1.85	0.78
1:A:408:HIS:HA	1:B:436:PHE:CG	1.78	0.78
1:A:226:PHE:CE2	1:A:465:MET:HG2	2.18	0.78
1:A:118:VAL:HG11	1:A:375:ALA:HB3	1.63	0.78
1:D:109:SER:O	1:D:112:THR:HG23	1.83	0.78
1:D:90:LYS:HZ1	1:D:166:ALA:HB2	1.47	0.78
1:E:45:VAL:O	1:E:49:LEU:HB2	1.84	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:391:HIS:O	1:D:392:VAL:HG23	1.84	0.78
1:D:439:ARG:NH1	1:E:404:ASP:HB3	1.99	0.78
1:A:443:ALA:HB1	1:A:448:ILE:HG12	1.64	0.78
1:A:324:PRO:HD2	1:A:347:GLY:H	1.48	0.78
1:E:444:SER:OG	1:E:446:LYS:HD3	1.84	0.78
1:A:414:GLN:C	1:B:430:ILE:O	2.21	0.78
1:C:236:LEU:HD21	1:C:342:LYS:HG2	1.64	0.78
1:A:224:GLU:CB	1:A:242:PHE:HE2	1.96	0.78
1:B:35:ARG:HG2	1:B:36:GLU:H	1.49	0.78
1:E:35:ARG:HG2	1:E:36:GLU:H	1.45	0.78
1:F:333:LYS:HB2	1:F:355:GLU:HG3	1.65	0.78
1:A:417:LEU:HB3	1:B:414:GLN:NE2	1.99	0.78
1:B:406:ASN:C	1:B:408:HIS:H	1.84	0.77
1:B:323:ILE:HD13	1:B:345:ALA:HB3	1.65	0.77
1:E:458:GLU:HG3	1:E:459:ARG:N	1.98	0.77
2:C:502:GLU:HB3	3:C:552:NDP:C4N	2.13	0.77
1:A:414:GLN:CB	1:B:431:VAL:N	2.47	0.77
1:A:415:GLU:H	1:B:432:PRO:HD3	1.45	0.77
1:A:82:HIS:CG	1:A:112:THR:HG21	2.19	0.77
1:C:79:ARG:HD2	1:C:127:ALA:HB2	1.65	0.77
1:A:242:PHE:CE1	1:A:263:LEU:HD22	2.18	0.77
1:F:255:VAL:HG13	1:F:325:ALA:HB1	1.67	0.77
1:B:107:LEU:HB3	1:B:126:LYS:HG2	1.67	0.77
1:C:368:ILE:CG2	1:C:373:LEU:HG	2.15	0.77
1:E:476:ASP:OD2	1:E:479:THR:HG23	1.84	0.77
1:A:436:PHE:CE1	1:A:440:ILE:HA	2.19	0.77
1:C:406:ASN:N	1:C:406:ASN:HD22	1.81	0.77
1:B:72:TRP:HB2	1:E:47:SER:CB	2.14	0.77
1:A:129:VAL:HG12	1:A:131:ILE:HG12	1.66	0.77
1:B:35:ARG:HG2	1:B:36:GLU:HG3	1.66	0.77
1:E:86:ARG:NH2	1:F:204:SER:O	2.18	0.77
1:A:348:ALA:HB1	3:A:552:NDP:O3D	1.83	0.77
1:A:233:MET:HB3	1:A:238:MET:O	1.84	0.77
1:A:35:ARG:CD	1:A:35:ARG:H	1.97	0.77
1:F:437:GLN:HA	1:F:440:ILE:HB	1.65	0.77
1:D:160:PRO:HD3	1:D:197:CYS:HB3	1.66	0.77
1:D:65:ILE:HG13	1:D:144:ILE:HD13	1.67	0.77
1:D:260:MET:HG2	1:D:288:PRO:HG3	1.67	0.77
1:B:82:HIS:HD2	1:B:112:THR:HG21	1.49	0.76
1:F:211:ARG:HD2	1:F:211:ARG:O	1.85	0.76
1:D:488:LYS:HA	1:D:491:ARG:HD2	1.67	0.76
1:C:358:LYS:HG3	1:C:359:ILE:N	2.00	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:421:PHE:CB	1:B:427:THR:HG1	1.97	0.76
1:F:75:ILE:O	1:F:75:ILE:HD13	1.84	0.76
1:E:79:ARG:HD2	1:E:127:ALA:HB2	1.67	0.76
1:C:131:ILE:HB	1:C:136:TYR:HE2	1.49	0.76
1:E:64:PRO:O	1:E:65:ILE:HD13	1.86	0.76
1:A:401:TYR:O	1:A:404:ASP:HB2	1.85	0.76
1:A:414:GLN:CB	1:B:430:ILE:HG22	2.14	0.76
3:C:552:NDP:H2N	3:C:552:NDP:O5D	1.84	0.76
1:F:394:TYR:HE2	1:F:443:ALA:HB3	1.48	0.76
1:A:12:MET:HG3	1:A:354:PRO:HD3	1.68	0.76
1:C:53:LYS:HB3	1:C:54:PRO:HD3	1.67	0.76
1:B:413:VAL:HG11	1:C:413:VAL:HG11	1.68	0.76
1:B:258:HIS:CD2	1:B:261:ARG:NH1	2.50	0.76
1:A:408:HIS:ND1	1:B:436:PHE:CD1	2.54	0.76
1:A:434:ALA:H	1:C:412:SER:HB2	1.13	0.76
1:B:391:HIS:CD2	1:C:385:TRP:HH2	2.03	0.76
1:B:95:TYR:OH	1:B:145:THR:HB	1.86	0.76
1:F:162:VAL:CG2	1:F:163:ASP:N	2.49	0.76
1:F:399:PHE:HE2	1:F:443:ALA:O	1.69	0.76
1:C:131:ILE:HB	1:C:136:TYR:CE2	2.21	0.76
1:A:403:ARG:O	1:A:407:TYR:HB2	1.86	0.76
1:A:17:PHE:CE1	1:A:486:ILE:HG12	2.20	0.76
1:A:279:SER:HB3	1:A:314:ILE:HD13	1.67	0.76
1:A:414:GLN:O	1:B:430:ILE:O	2.04	0.76
1:C:406:ASN:H	1:C:406:ASN:HD22	1.34	0.76
1:A:436:PHE:H	1:C:408:HIS:HB3	1.49	0.76
1:D:348:ALA:HA	3:D:552:NDP:H1D	1.66	0.76
1:D:25:GLU:O	1:D:29:VAL:HG23	1.86	0.76
1:F:3:ARG:HG2	1:F:4:GLU:HG3	1.68	0.76
1:A:410:LEU:CB	1:B:436:PHE:CE2	2.69	0.76
1:A:372:TYR:CZ	1:A:461:ALA:HB2	2.21	0.76
1:E:201:LYS:HZ2	1:E:388:ASN:HD21	1.32	0.76
1:B:35:ARG:CD	1:B:35:ARG:H	1.99	0.76
1:B:174:ARG:HD2	1:B:178:TRP:CH2	2.19	0.76
1:A:436:PHE:N	1:C:408:HIS:CB	2.45	0.75
1:A:407:TYR:C	1:B:436:PHE:CG	2.44	0.75
1:A:406:ASN:C	1:B:436:PHE:CZ	2.59	0.75
1:A:5:ASP:HB3	1:A:332:THR:HB	1.69	0.75
1:D:224:GLU:HB2	1:D:242:PHE:HE2	1.50	0.75
1:C:255:VAL:HG22	1:C:325:ALA:HB1	1.69	0.75
1:F:443:ALA:HB1	1:F:448:ILE:HG12	1.67	0.75
1:C:321:ILE:CG2	1:C:343:ILE:HB	2.13	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:247:PHE:HB3	1:B:321:ILE:HG12	1.66	0.75
1:D:153:ALA:HA	1:D:158:ILE:HG22	1.68	0.75
1:B:331:LEU:HD23	1:B:360:PHE:CZ	2.20	0.75
1:C:16:PHE:HE2	1:C:354:PRO:HB3	1.52	0.75
1:D:92:GLY:HA2	1:D:166:ALA:O	1.85	0.75
1:C:37:THR:HA	1:C:40:GLN:HG3	1.67	0.75
1:A:414:GLN:NE2	1:B:431:VAL:O	2.19	0.75
1:C:248:VAL:HG12	1:C:319:CYS:SG	2.26	0.75
1:E:236:LEU:HD21	1:E:342:LYS:CG	2.16	0.75
1:A:428:ILE:HB	1:B:430:ILE:CD1	2.16	0.75
1:B:248:VAL:HG12	1:B:319:CYS:SG	2.26	0.75
1:A:146:ARG:CB	1:A:182:THR:HG21	2.16	0.75
1:A:175:GLU:HA	1:A:178:TRP:CE3	2.21	0.75
1:E:109:SER:O	1:E:112:THR:HG22	1.87	0.75
1:C:397:LEU:HD12	1:C:397:LEU:H	1.52	0.75
1:E:114:LYS:HA	1:E:371:LEU:HD23	1.69	0.75
1:E:63:PHE:CZ	1:E:75:ILE:HD11	2.22	0.75
1:D:37:THR:HA	1:D:40:GLN:HG3	1.68	0.75
1:F:322:LEU:O	1:F:324:PRO:HD3	1.86	0.75
1:B:90:LYS:HD2	1:B:164:VAL:O	1.87	0.75
1:D:247:PHE:CB	1:D:321:ILE:HG12	2.16	0.75
1:D:417:LEU:HD21	1:F:417:LEU:HD13	1.69	0.75
1:D:476:ASP:OD2	1:D:479:THR:HG23	1.87	0.75
1:A:430:ILE:CG2	1:B:410:LEU:HG	2.17	0.75
1:C:281:TRP:O	1:C:307:ALA:HA	1.87	0.75
1:A:98:ASP:O	1:A:100:SER:N	2.20	0.75
1:F:214:ALA:HB1	1:F:380:VAL:HG21	1.68	0.75
1:A:35:ARG:HG2	1:A:36:GLU:H	1.50	0.75
1:A:408:HIS:CE1	1:B:436:PHE:CA	2.64	0.74
1:C:48:ILE:O	1:C:52:ILE:HG13	1.88	0.74
1:A:409:LEU:HD22	1:B:406:ASN:N	2.02	0.74
2:A:502:GLU:HA	3:A:552:NDP:H41N	1.68	0.74
1:C:247:PHE:CZ	1:C:270:CYS:HB2	2.22	0.74
1:C:211:ARG:HH22	2:C:502:GLU:HG3	1.50	0.74
1:E:344:ILE:HB	1:E:367:VAL:HG12	1.70	0.74
1:E:188:GLY:O	1:E:190:TYR:N	2.21	0.74
1:A:410:LEU:CD1	1:B:410:LEU:CD1	2.62	0.74
1:A:409:LEU:HD22	1:B:407:TYR:H	0.60	0.74
1:C:103:GLU:O	1:C:106:ALA:HB3	1.88	0.74
1:A:29:VAL:HG13	1:A:41:LYS:HB3	1.68	0.74
1:F:304:PHE:CE2	1:F:306:LYS:HB2	2.23	0.74
1:A:410:LEU:O	1:B:410:LEU:CD2	2.35	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:413:VAL:HG22	1:B:407:TYR:CA	2.16	0.74
1:A:430:ILE:HG12	1:B:413:VAL:CB	2.16	0.74
1:B:363:ARG:NH1	1:B:365:ILE:HD11	2.02	0.74
1:F:171:THR:HB	1:F:175:GLU:HG3	1.69	0.74
1:C:35:ARG:H	1:C:35:ARG:HD2	1.51	0.74
1:D:85:HIS:CD2	1:D:489:VAL:HG13	2.22	0.74
2:F:502:GLU:N	3:F:552:NDP:H41N	2.03	0.74
1:A:430:ILE:HD13	1:B:410:LEU:CG	2.18	0.74
1:A:313:SER:HB3	1:A:316:GLU:HB2	1.70	0.74
1:D:79:ARG:HD3	1:D:152:LEU:HD22	1.67	0.74
1:D:305:PRO:HB2	1:D:306:LYS:HD3	1.68	0.74
1:B:188:GLY:O	1:B:190:TYR:N	2.20	0.74
1:E:158:ILE:HG12	1:E:159:GLY:H	1.52	0.74
1:F:335:ASN:C	1:F:337:PRO:HD2	2.07	0.74
1:C:247:PHE:CE1	1:C:270:CYS:HB2	2.23	0.74
1:E:247:PHE:O	1:E:271:ILE:HG13	1.87	0.74
1:C:313:SER:HB3	1:C:316:GLU:HB2	1.70	0.73
2:C:502:GLU:OE1	3:C:552:NDP:H42N	1.87	0.73
1:F:358:LYS:HG3	1:F:359:ILE:N	2.00	0.73
1:A:385:TRP:HH2	1:C:391:HIS:CD2	2.05	0.73
1:A:433:THR:CG2	1:C:413:VAL:H	2.00	0.73
1:A:433:THR:CG2	1:C:413:VAL:CG2	2.59	0.73
1:B:394:TYR:CE2	1:B:443:ALA:HB3	2.23	0.73
1:C:300:THR:HG22	1:C:302:LEU:N	2.02	0.73
1:B:322:LEU:O	1:B:324:PRO:HD3	1.89	0.73
1:A:36:GLU:O	1:A:37:THR:HG23	1.89	0.73
1:D:98:ASP:O	1:D:130:LYS:HE3	1.87	0.73
1:F:162:VAL:CG2	1:F:163:ASP:H	2.02	0.73
1:B:51:ILE:HD13	1:E:64:PRO:HB3	1.68	0.73
1:A:414:GLN:C	1:B:431:VAL:HA	2.08	0.73
1:A:258:HIS:HD2	1:A:261:ARG:NH1	1.84	0.73
1:E:221:HIS:O	1:E:225:ASN:HB2	1.87	0.73
1:E:453:LEU:CD1	1:E:457:MET:HG2	2.18	0.73
1:E:44:ARG:HH22	1:E:494:ASN:HB2	1.51	0.73
1:B:306:LYS:N	1:B:306:LYS:HD3	2.03	0.73
1:C:410:LEU:HD23	1:C:432:PRO:CD	2.19	0.73
1:E:199:THR:CA	1:E:384:GLU:OE1	2.36	0.73
1:E:281:TRP:HB2	1:E:310:TYR:HB2	1.69	0.73
1:A:201:LYS:HZ1	1:A:388:ASN:HD21	0.76	0.73
1:A:409:LEU:HD21	1:B:404:ASP:CA	2.18	0.73
1:A:412:SER:HA	1:B:432:PRO:HG3	1.71	0.73
1:D:53:LYS:HB3	1:D:54:PRO:HD3	1.70	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:418:GLU:HG3	1:B:431:VAL:CB	2.19	0.73
1:A:406:ASN:ND2	1:B:402:GLU:OE2	2.22	0.73
1:F:230:ALA:O	1:F:231:SER:C	2.27	0.73
1:C:5:ASP:HB3	1:C:332:THR:HB	1.69	0.73
1:A:94:ARG:O	1:A:128:GLY:HA2	1.88	0.73
1:F:380:VAL:HA	1:F:383:PHE:HD2	1.53	0.73
1:A:409:LEU:CG	1:B:403:ARG:HA	2.09	0.73
1:A:271:ILE:HD11	1:A:319:CYS:HB3	1.71	0.73
1:E:118:VAL:HG11	1:E:375:ALA:HB1	1.70	0.73
1:C:24:VAL:HG11	1:C:483:VAL:HG13	1.71	0.73
1:A:236:LEU:HD22	1:A:238:MET:HB2	1.71	0.73
1:A:48:ILE:O	1:A:52:ILE:HG13	1.89	0.73
1:E:114:LYS:HA	1:E:371:LEU:CD2	2.19	0.73
1:A:109:SER:O	1:A:113:TYR:CD1	2.42	0.72
1:E:85:HIS:HB2	1:E:492:VAL:HG21	1.71	0.72
1:E:250:GLN:HG3	1:E:314:ILE:HG21	1.71	0.72
1:B:271:ILE:HD12	1:B:272:THR:HG23	1.71	0.72
1:F:132:ASN:OD1	1:F:134:LYS:HB2	1.89	0.72
1:A:414:GLN:CG	1:B:410:LEU:CD2	2.58	0.72
1:C:326:ALA:O	3:C:552:NDP:H4D	1.88	0.72
1:D:47:SER:O	1:D:51:ILE:HG13	1.89	0.72
1:D:200:GLY:H	1:D:384:GLU:CD	1.93	0.72
1:E:161:GLY:HA2	1:F:192:ILE:HG13	1.70	0.72
1:A:413:VAL:H	1:B:407:TYR:HA	1.54	0.72
1:A:414:GLN:HG2	1:B:430:ILE:HG22	0.73	0.72
1:A:407:TYR:CD1	1:A:440:ILE:CD1	2.72	0.72
1:C:405:SER:O	1:C:408:HIS:HB2	1.89	0.72
1:E:90:LYS:HB2	1:E:122:PHE:CD1	2.24	0.72
1:B:321:ILE:CG2	1:B:343:ILE:HB	2.18	0.72
1:D:24:VAL:CG1	1:D:483:VAL:HG13	2.20	0.72
1:D:167:PRO:HG3	1:D:176:MET:HG2	1.70	0.72
1:A:436:PHE:H	1:C:409:LEU:N	1.87	0.72
1:D:331:LEU:HD23	1:D:360:PHE:HZ	1.54	0.72
1:F:250:GLN:HG3	1:F:314:ILE:HG21	1.71	0.72
1:A:413:VAL:HG22	1:B:407:TYR:HA	1.69	0.72
1:B:462:ARG:HG3	1:B:466:ARG:HH22	1.53	0.72
1:C:248:VAL:HG23	1:C:272:THR:O	1.90	0.72
1:C:175:GLU:CD	1:C:175:GLU:H	1.90	0.72
1:E:117:VAL:HG21	1:E:371:LEU:HD22	1.70	0.72
1:C:306:LYS:HD3	1:C:306:LYS:N	2.05	0.72
1:D:118:VAL:HG11	1:D:375:ALA:CB	2.19	0.72
1:A:433:THR:HG21	1:C:413:VAL:HG23	1.72	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:C:552:NDP:O2N	3:C:552:NDP:H52A	1.89	0.72
1:F:247:PHE:CB	1:F:321:ILE:HG12	2.19	0.72
1:C:476:ASP:OD2	1:C:479:THR:HG23	1.90	0.72
1:C:431:VAL:HG23	1:C:432:PRO:HD2	1.71	0.72
1:A:495:GLU:HG2	1:C:178:TRP:NE1	2.04	0.72
1:F:167:PRO:CG	1:F:176:MET:HE3	2.20	0.72
1:C:282:ASN:OD1	1:C:284:ASP:HB2	1.89	0.72
1:E:382:TYR:OH	1:F:392:VAL:HG22	1.89	0.72
1:D:306:LYS:N	1:D:306:LYS:HD3	2.03	0.72
1:A:410:LEU:HG	1:B:410:LEU:CD1	2.18	0.71
1:C:272:THR:OG1	1:C:314:ILE:HD11	1.90	0.71
1:F:5:ASP:HB3	1:F:332:THR:HB	1.71	0.71
1:F:491:ARG:HH11	1:F:491:ARG:HB2	1.55	0.71
1:A:407:TYR:O	1:B:436:PHE:CG	2.44	0.71
1:A:315:LEU:HD12	1:A:335:ASN:ND2	2.04	0.71
1:D:271:ILE:HD12	1:D:272:THR:HG23	1.71	0.71
1:C:177:SER:HB2	1:C:202:PRO:HG2	1.72	0.71
1:F:458:GLU:HG3	1:F:459:ARG:H	1.54	0.71
1:F:271:ILE:HD12	1:F:272:THR:HG22	1.70	0.71
1:C:36:GLU:O	1:C:37:THR:HG23	1.90	0.71
1:B:300:THR:HG22	1:B:302:LEU:H	1.55	0.71
1:C:437:GLN:HA	1:C:440:ILE:HB	1.71	0.71
1:C:175:GLU:HA	1:C:178:TRP:CE3	2.25	0.71
1:E:196:ALA:HA	1:E:388:ASN:HD22	1.55	0.71
1:D:409:LEU:HB2	1:F:436:PHE:CZ	2.25	0.71
1:D:183:TYR:O	1:D:183:TYR:CD2	2.43	0.71
1:C:167:PRO:HB3	1:C:172:GLY:HA2	1.73	0.71
1:E:201:LYS:HZ1	1:E:388:ASN:HD21	1.38	0.71
1:D:413:VAL:HG11	1:F:413:VAL:HG11	1.72	0.71
1:A:404:ASP:CB	1:B:442:GLY:O	2.38	0.71
1:E:211:ARG:HA	1:E:380:VAL:HG11	1.72	0.71
1:D:360:PHE:HA	1:D:365:ILE:HG13	1.72	0.71
1:B:38:GLU:HG2	1:B:39:GLU:N	2.03	0.71
1:F:414:GLN:O	1:F:416:SER:N	2.23	0.71
1:D:96:SER:HB3	1:D:99:VAL:HG13	1.72	0.71
1:E:457:MET:CE	1:E:457:MET:HA	2.21	0.71
1:B:217:ARG:HG2	1:B:217:ARG:NH1	2.02	0.71
1:E:53:LYS:O	1:E:82:HIS:HE1	1.72	0.71
1:F:137:THR:O	1:F:140:GLU:N	2.23	0.71
1:B:16:PHE:CE1	1:B:478:ARG:HD3	2.25	0.71
1:B:132:ASN:OD1	1:B:134:LYS:HB2	1.91	0.71
1:B:421:PHE:N	1:B:421:PHE:CD2	2.58	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:430:ILE:CD1	1:B:430:ILE:HD13	2.20	0.71
1:A:408:HIS:CD2	1:B:437:GLN:N	2.59	0.71
1:D:164:VAL:HG13	1:D:198:VAL:HA	1.72	0.71
1:F:35:ARG:H	1:F:35:ARG:CD	2.02	0.71
1:D:320:ASP:O	1:D:341:ALA:HB1	1.91	0.71
1:C:281:TRP:HB3	1:C:310:TYR:HB2	1.71	0.71
1:C:186:THR:O	1:C:189:HIS:HB3	1.91	0.71
1:F:34:THR:HG23	1:F:35:ARG:HD3	1.73	0.71
1:E:3:ARG:HG2	1:E:4:GLU:N	2.03	0.71
1:A:415:GLU:HB3	1:A:419:ARG:HH21	1.55	0.71
1:F:188:GLY:O	1:F:190:TYR:N	2.24	0.71
1:D:280:ILE:HD11	1:D:291:LEU:HD11	1.71	0.71
1:B:217:ARG:NH1	1:B:221:HIS:CE1	2.59	0.71
1:B:72:TRP:CB	1:E:47:SER:HB3	2.19	0.71
1:E:177:SER:HB2	1:E:202:PRO:CG	2.18	0.71
1:E:332:THR:O	1:E:336:ALA:CB	2.38	0.71
1:C:305:PRO:HB2	1:C:306:LYS:HD2	1.69	0.71
1:F:306:LYS:HD3	1:F:306:LYS:N	2.06	0.71
1:C:96:SER:O	1:C:130:LYS:HA	1.90	0.71
1:A:401:TYR:CD1	1:B:443:ALA:CB	2.74	0.70
1:C:211:ARG:HH22	2:C:502:GLU:CG	2.03	0.70
1:B:148:PHE:CE2	1:B:152:LEU:HD11	2.25	0.70
1:C:47:SER:HB3	1:F:72:TRP:HB2	1.73	0.70
1:C:493:TYR:O	1:C:495:GLU:N	2.24	0.70
1:C:412:SER:O	1:C:413:VAL:C	2.30	0.70
1:A:431:VAL:O	1:C:413:VAL:HG22	1.92	0.70
1:F:29:VAL:HG21	1:F:42:ARG:HE	1.56	0.70
1:B:346:GLU:HG2	1:B:351:PRO:CG	2.21	0.70
1:D:93:ILE:HB	1:D:127:ALA:HB3	1.73	0.70
1:A:16:PHE:HD1	1:A:482:TYR:HH	1.35	0.70
1:A:375:ALA:O	1:A:379:THR:OG1	2.08	0.70
1:C:331:LEU:HD23	1:C:360:PHE:HZ	1.57	0.70
1:A:281:TRP:CB	1:A:310:TYR:HB2	2.21	0.70
1:C:9:PHE:CD2	1:C:106:ALA:HB1	2.26	0.70
1:F:336:ALA:O	1:F:339:VAL:HG23	1.92	0.70
1:E:437:GLN:HA	1:E:440:ILE:HB	1.73	0.70
1:B:24:VAL:O	1:B:27:LYS:N	2.24	0.70
1:B:24:VAL:HG11	1:B:483:VAL:HG13	1.73	0.70
1:D:45:VAL:O	1:D:49:LEU:HB2	1.91	0.70
1:A:415:GLU:CA	1:B:432:PRO:HD2	2.21	0.70
1:C:279:SER:OG	1:C:314:ILE:HB	1.91	0.70
1:B:279:SER:HB3	1:B:314:ILE:HD13	1.73	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:147:ARG:O	1:C:150:MET:N	2.25	0.70
1:A:446:LYS:H	1:A:446:LYS:CD	2.03	0.70
1:B:277:ASP:OD1	1:B:302:LEU:HG	1.92	0.70
1:A:418:GLU:HA	1:B:429:PRO:CB	2.10	0.70
1:A:430:ILE:HG21	1:B:410:LEU:HG	1.73	0.70
1:A:434:ALA:CA	1:A:437:GLN:HE22	1.98	0.70
1:A:114:LYS:HA	1:A:371:LEU:HD23	1.72	0.70
1:D:480:ALA:O	1:D:483:VAL:HB	1.90	0.70
1:B:199:THR:CA	1:B:384:GLU:OE1	2.38	0.70
1:A:409:LEU:N	1:B:440:ILE:HG13	2.07	0.70
1:A:436:PHE:HB2	1:C:405:SER:CA	2.21	0.70
1:D:83:SER:O	1:D:84:GLN:HG3	1.92	0.70
1:A:436:PHE:O	1:A:436:PHE:CD1	2.45	0.70
1:E:321:ILE:CG2	1:E:343:ILE:HB	2.15	0.70
1:B:239:THR:HG23	1:B:245:LYS:NZ	2.06	0.70
1:A:434:ALA:H	1:C:412:SER:CA	2.04	0.70
1:A:428:ILE:HG13	1:B:429:PRO:N	2.05	0.70
1:A:52:ILE:HD13	1:A:489:VAL:HG12	1.73	0.70
1:E:220:PHE:HE1	1:E:266:PHE:HB2	1.55	0.70
1:E:248:VAL:HG21	1:E:314:ILE:HD11	1.72	0.70
1:D:238:MET:CE	1:D:245:LYS:HZ2	2.05	0.70
1:F:459:ARG:O	1:F:462:ARG:HB3	1.91	0.70
1:E:117:VAL:CG2	1:E:371:LEU:HD22	2.21	0.70
1:F:336:ALA:N	1:F:337:PRO:HD2	2.05	0.70
1:D:281:TRP:CB	1:D:310:TYR:HB2	2.21	0.70
1:D:315:LEU:O	1:D:339:VAL:HG13	1.92	0.70
1:C:382:TYR:O	1:C:386:LEU:HD22	1.92	0.70
1:B:281:TRP:CB	1:B:310:TYR:HB2	2.21	0.70
1:E:358:LYS:HG3	1:E:359:ILE:N	2.07	0.70
1:E:368:ILE:CG2	1:E:373:LEU:HG	2.21	0.70
1:C:169:MET:HG2	3:C:552:NDP:H52N	1.74	0.70
1:C:25:GLU:O	1:C:29:VAL:HG23	1.92	0.70
1:C:271:ILE:HD12	1:C:272:THR:HG23	1.73	0.69
1:F:150:MET:SD	1:F:186:THR:HG21	2.32	0.69
1:E:304:PHE:CD1	1:E:305:PRO:HD2	2.27	0.69
1:A:436:PHE:CB	1:C:405:SER:C	2.55	0.69
1:A:272:THR:HB	1:A:281:TRP:HA	1.73	0.69
1:F:363:ARG:HH11	1:F:365:ILE:HD11	1.57	0.69
1:F:323:ILE:HD13	1:F:345:ALA:HB3	1.72	0.69
1:D:410:LEU:O	1:D:413:VAL:HG23	1.92	0.69
1:C:308:LYS:HG2	1:C:308:LYS:O	1.92	0.69
1:E:214:ALA:HB1	1:E:380:VAL:HG21	1.74	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:302:LEU:HD22	1:F:309:ILE:HG23	1.73	0.69
1:D:246:THR:O	1:D:320:ASP:HB2	1.91	0.69
1:E:3:ARG:HG2	1:E:4:GLU:H	1.55	0.69
1:A:90:LYS:HB2	1:A:122:PHE:HD1	1.55	0.69
1:C:281:TRP:N	1:C:307:ALA:HB1	2.07	0.69
1:A:281:TRP:CZ2	1:A:283:PRO:HG3	2.28	0.69
1:A:417:LEU:HD11	1:B:411:MET:SD	2.32	0.69
1:A:490:PHE:CD2	1:A:491:ARG:N	2.61	0.69
1:D:462:ARG:HG3	1:D:466:ARG:NH1	2.07	0.69
1:D:399:PHE:O	1:D:401:TYR:N	2.26	0.69
1:E:107:LEU:HB3	1:E:126:LYS:HG2	1.73	0.69
1:F:29:VAL:CG2	1:F:42:ARG:HG2	2.22	0.69
1:F:35:ARG:HG2	1:F:36:GLU:H	1.57	0.69
1:F:394:TYR:CE2	1:F:443:ALA:HB3	2.28	0.69
1:A:385:TRP:O	1:A:389:LEU:HG	1.92	0.69
1:A:428:ILE:HG12	1:B:428:ILE:CA	2.21	0.69
1:C:416:SER:HA	1:C:419:ARG:NH1	2.08	0.69
1:C:242:PHE:CE1	1:C:263:LEU:HD22	2.28	0.69
1:C:202:PRO:HB2	1:C:205:GLN:HG2	1.74	0.69
1:F:109:SER:O	1:F:112:THR:HG23	1.92	0.69
1:A:161:GLY:CA	1:C:192:ILE:HG13	2.21	0.69
1:D:409:LEU:HB2	1:F:436:PHE:CE2	2.27	0.69
1:D:431:VAL:HG23	1:D:432:PRO:HD2	1.75	0.69
1:A:409:LEU:HD22	1:B:406:ASN:C	2.11	0.69
1:F:211:ARG:HH22	3:F:552:NDP:H71N	1.39	0.69
1:A:410:LEU:CG	1:B:410:LEU:CD1	2.70	0.69
1:A:433:THR:OG1	1:C:408:HIS:O	2.09	0.69
1:A:400:LYS:NZ	1:B:439:ARG:HH12	1.91	0.69
1:E:166:ALA:HB1	1:E:167:PRO:CD	2.23	0.69
1:F:179:ILE:O	1:F:180:ALA:C	2.29	0.69
1:E:24:VAL:HG23	1:E:28:LEU:HD22	1.75	0.69
1:F:431:VAL:HG23	1:F:432:PRO:HD2	1.73	0.69
1:E:95:TYR:OH	1:E:145:THR:HB	1.93	0.69
1:C:372:TYR:CZ	1:C:461:ALA:HB2	2.28	0.69
1:F:169:MET:HG2	3:F:552:NDP:H52N	1.75	0.69
1:E:453:LEU:HD12	1:E:457:MET:HG2	1.74	0.69
1:A:473:LEU:HB3	1:A:476:ASP:HB3	1.75	0.69
1:F:304:PHE:CD1	1:F:305:PRO:HD2	2.27	0.69
1:B:61:LEU:HB3	1:B:77:GLY:O	1.93	0.69
1:C:462:ARG:HG3	1:C:466:ARG:HH12	1.58	0.69
1:A:411:MET:N	1:B:410:LEU:HD13	2.08	0.69
1:E:248:VAL:HG23	1:E:272:THR:O	1.92	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:12:MET:HG3	1:B:354:PRO:HD3	1.75	0.69
1:B:222:GLY:HA3	1:B:373:LEU:CD2	2.22	0.69
1:D:68:ASP:OD1	1:D:137:THR:HG21	1.93	0.69
1:E:449:VAL:HG12	1:E:450:HIS:N	2.07	0.69
1:A:323:ILE:CD1	1:A:345:ALA:HB3	2.23	0.68
1:A:96:SER:HB3	1:A:99:VAL:CG1	2.22	0.68
1:B:485:ALA:O	1:B:489:VAL:HG23	1.94	0.68
1:E:99:VAL:HG23	1:E:99:VAL:O	1.92	0.68
1:A:408:HIS:CE1	1:B:435:GLU:O	2.46	0.68
1:A:410:LEU:O	1:B:410:LEU:HD13	1.91	0.68
1:A:408:HIS:HD2	1:B:437:GLN:HA	1.58	0.68
1:B:209:HIS:CD2	1:B:446:LYS:HA	2.29	0.68
1:F:167:PRO:HG3	1:F:176:MET:HG2	1.74	0.68
1:A:490:PHE:O	1:A:491:ARG:CD	2.40	0.68
1:E:345:ALA:HB1	1:E:373:LEU:HD11	1.75	0.68
1:B:279:SER:OG	1:B:314:ILE:HB	1.93	0.68
1:D:37:THR:O	1:D:38:GLU:HB2	1.94	0.68
1:D:132:ASN:CG	1:D:135:ASN:ND2	2.47	0.68
1:A:409:LEU:HD12	1:B:402:GLU:C	2.12	0.68
1:B:118:VAL:HG11	1:B:375:ALA:HB1	1.76	0.68
1:D:115:CYS:SG	1:D:378:VAL:HG11	2.33	0.68
1:F:174:ARG:O	1:F:177:SER:N	2.26	0.68
1:B:94:ARG:HH21	1:B:169:MET:HG3	1.58	0.68
1:A:27:LYS:HE2	1:A:31:ASP:OD1	1.93	0.68
1:A:428:ILE:C	1:B:430:ILE:HG12	2.12	0.68
1:C:224:GLU:CB	1:C:242:PHE:HE2	2.07	0.68
1:D:315:LEU:HD13	1:D:331:LEU:HD12	1.74	0.68
1:C:210:GLY:O	1:C:214:ALA:HB2	1.93	0.68
1:C:5:ASP:C	1:C:7:PRO:HD3	2.13	0.68
1:E:53:LYS:CB	1:E:54:PRO:HD3	2.19	0.68
1:B:281:TRP:CZ2	1:B:283:PRO:HG3	2.29	0.68
1:D:93:ILE:HD11	1:D:95:TYR:CE1	2.28	0.68
1:F:150:MET:HE1	1:F:187:ILE:HD11	1.76	0.68
1:D:34:THR:HG23	1:D:35:ARG:HD3	1.76	0.68
1:A:64:PRO:O	1:A:65:ILE:HD13	1.93	0.68
1:A:409:LEU:HB3	1:B:406:ASN:HB2	1.74	0.68
1:B:314:ILE:HD12	1:B:317:VAL:HG21	1.74	0.68
1:F:236:LEU:HD21	1:F:342:LYS:CG	2.19	0.68
1:B:56:ASN:HD22	1:B:84:GLN:HE21	1.40	0.68
1:E:226:PHE:O	1:E:229:GLU:HB3	1.94	0.68
1:D:420:LYS:C	1:D:421:PHE:CD2	2.66	0.68
1:B:126:LYS:HG3	1:B:127:ALA:H	1.57	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:406:ASN:O	1:A:410:LEU:CB	2.34	0.68
1:A:430:ILE:HD13	1:B:410:LEU:HD23	1.76	0.68
1:A:413:VAL:CG2	1:B:411:MET:H	2.07	0.68
1:D:126:LYS:HE3	1:D:168:ASP:OD2	1.94	0.68
1:E:118:VAL:O	1:E:118:VAL:HG23	1.94	0.68
1:B:167:PRO:HG3	1:B:176:MET:HG2	1.76	0.68
1:E:158:ILE:HG12	1:E:159:GLY:N	2.08	0.68
1:D:331:LEU:HD23	1:D:360:PHE:CZ	2.29	0.68
1:F:375:ALA:O	1:F:379:THR:OG1	2.12	0.68
1:A:34:THR:HG23	1:A:35:ARG:HD3	1.74	0.68
1:E:315:LEU:HD13	1:E:331:LEU:CD1	2.24	0.68
1:A:428:ILE:CD1	1:B:414:GLN:CD	2.62	0.68
1:C:402:GLU:HA	1:C:405:SER:HB2	1.75	0.68
1:F:346:GLU:HG2	1:F:351:PRO:CG	2.24	0.68
1:B:174:ARG:HD2	1:B:178:TRP:CZ2	2.28	0.68
1:E:12:MET:HG3	1:E:354:PRO:HD3	1.76	0.68
1:F:305:PRO:HB2	1:F:306:LYS:HD3	1.75	0.68
1:C:209:HIS:CD2	1:C:446:LYS:HA	2.29	0.68
1:B:118:VAL:O	1:B:118:VAL:HG23	1.94	0.67
1:D:247:PHE:CE2	1:D:263:LEU:HB3	2.30	0.67
1:C:4:GLU:O	1:C:5:ASP:HB2	1.94	0.67
1:F:335:ASN:OD1	1:F:336:ALA:N	2.27	0.67
1:B:204:SER:O	1:C:86:ARG:NH2	2.27	0.67
1:A:352:THR:OG1	1:A:478:ARG:NH2	2.27	0.67
1:A:300:THR:CG2	1:A:302:LEU:HB2	2.24	0.67
1:A:410:LEU:CD1	1:B:409:LEU:CD2	2.72	0.67
1:A:411:MET:CB	1:B:436:PHE:HD2	2.06	0.67
1:A:435:GLU:O	1:A:438:ASP:N	2.26	0.67
1:A:430:ILE:HB	1:B:410:LEU:CG	2.24	0.67
1:A:433:THR:HG22	1:C:413:VAL:HG22	1.77	0.67
1:C:224:GLU:HB2	1:C:242:PHE:CE2	2.26	0.67
1:B:236:LEU:HD21	1:B:342:LYS:CG	2.19	0.67
1:C:332:THR:HG22	1:C:353:THR:HG21	1.75	0.67
1:C:258:HIS:HD2	1:C:261:ARG:NH1	1.92	0.67
1:A:408:HIS:CB	1:B:436:PHE:CD1	2.67	0.67
1:A:436:PHE:CB	1:C:405:SER:O	2.42	0.67
1:D:392:VAL:HG22	1:F:382:TYR:OH	1.95	0.67
1:F:397:LEU:H	1:F:397:LEU:HD12	1.59	0.67
1:F:305:PRO:HB2	1:F:306:LYS:CD	2.24	0.67
1:C:165:PRO:O	1:C:198:VAL:HG23	1.94	0.67
1:C:95:TYR:HH	1:C:145:THR:HB	1.59	0.67
1:E:482:TYR:O	1:E:486:ILE:HG13	1.93	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:407:TYR:CE1	1:E:440:ILE:HD13	2.29	0.67
1:C:20:GLY:HA2	1:C:23:ILE:HD12	1.77	0.67
1:A:148:PHE:CZ	1:A:152:LEU:HD11	2.28	0.67
1:E:177:SER:CB	1:E:202:PRO:HG2	2.24	0.67
1:A:244:ASP:HB2	1:A:245:LYS:HD2	1.77	0.67
1:F:470:LYS:HG2	1:F:471:TYR:CD2	2.29	0.67
1:B:98:ASP:O	1:B:100:SER:N	2.28	0.67
1:E:431:VAL:HG23	1:E:432:PRO:HD2	1.75	0.67
1:C:37:THR:CG2	1:C:41:LYS:HG3	2.24	0.67
1:F:414:GLN:O	1:F:417:LEU:N	2.27	0.67
1:C:112:THR:HB	1:C:124:GLY:N	2.10	0.67
1:D:167:PRO:HB3	1:D:172:GLY:HA2	1.77	0.67
1:E:394:TYR:HE2	1:E:443:ALA:HB3	1.58	0.67
1:D:416:SER:HB3	1:F:430:ILE:HA	1.76	0.67
1:C:302:LEU:HD22	1:C:309:ILE:HG23	1.77	0.67
1:B:244:ASP:HB2	1:B:245:LYS:HD2	1.75	0.67
1:C:289:LYS:HE2	1:C:293:ASP:OD1	1.95	0.67
1:B:394:TYR:HE2	1:B:443:ALA:HB3	1.57	0.67
1:B:371:LEU:HD12	1:B:482:TYR:CD1	2.29	0.67
1:A:111:MET:HE1	1:A:378:VAL:HG13	1.75	0.67
1:C:247:PHE:HB3	1:C:321:ILE:HG12	1.75	0.67
1:E:167:PRO:HG3	1:E:176:MET:HG2	1.76	0.67
1:B:344:ILE:HB	1:B:367:VAL:HG12	1.75	0.67
1:D:148:PHE:CZ	1:D:152:LEU:HD11	2.30	0.67
1:D:90:LYS:HB2	1:D:122:PHE:CD1	2.29	0.67
1:D:457:MET:HA	1:D:457:MET:CE	2.24	0.67
1:F:37:THR:HA	1:F:40:GLN:HG3	1.77	0.67
1:E:98:ASP:O	1:E:100:SER:N	2.28	0.67
1:B:421:PHE:N	1:B:421:PHE:HD2	1.92	0.67
1:A:421:PHE:HB2	1:B:429:PRO:HB3	1.75	0.67
1:E:90:LYS:CB	1:E:122:PHE:CD1	2.78	0.67
1:B:363:ARG:HH11	1:B:365:ILE:HD11	1.57	0.67
1:B:56:ASN:HD22	1:B:84:GLN:HE22	1.42	0.67
1:A:209:HIS:CD2	1:A:446:LYS:HA	2.30	0.67
1:E:186:THR:OG1	1:E:187:ILE:N	2.28	0.67
1:B:258:HIS:CD2	1:B:261:ARG:HH11	2.09	0.67
1:F:280:ILE:HB	1:F:307:ALA:CB	2.25	0.67
1:E:19:ARG:HH11	1:E:19:ARG:HG2	1.59	0.67
1:A:433:THR:OG1	1:C:409:LEU:HA	1.95	0.66
1:A:428:ILE:HG23	1:B:428:ILE:HG21	1.75	0.66
1:C:482:TYR:O	1:C:486:ILE:HG13	1.95	0.66
1:A:142:GLU:HB2	1:A:178:TRP:CZ2	2.30	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:392:VAL:HG12	1:E:393:SER:O	1.95	0.66
1:A:304:PHE:CD1	1:A:305:PRO:HD2	2.30	0.66
1:A:404:ASP:CG	1:B:439:ARG:HD3	2.15	0.66
1:A:428:ILE:CG1	1:B:428:ILE:C	2.64	0.66
1:E:323:ILE:CD1	1:E:345:ALA:HB3	2.25	0.66
1:D:56:ASN:ND2	1:D:84:GLN:HE21	1.85	0.66
1:D:201:LYS:NZ	1:D:388:ASN:HD21	1.90	0.66
1:A:476:ASP:CG	1:A:479:THR:HG23	2.15	0.66
1:E:148:PHE:CE2	1:E:152:LEU:HD11	2.30	0.66
1:E:226:PHE:CE2	1:E:465:MET:SD	2.88	0.66
1:F:224:GLU:HB2	1:F:242:PHE:HE2	1.60	0.66
1:D:171:THR:CB	1:D:175:GLU:HG3	2.25	0.66
1:A:116:ALA:HB1	1:A:485:ALA:HA	1.76	0.66
1:F:112:THR:HB	1:F:124:GLY:H	1.60	0.66
1:C:41:LYS:O	1:C:45:VAL:HG23	1.94	0.66
1:C:292:GLU:O	1:C:296:LEU:HB2	1.96	0.66
1:A:400:LYS:HD2	1:B:451:SER:HB3	1.77	0.66
1:A:407:TYR:CD1	1:A:440:ILE:HD13	2.29	0.66
1:C:160:PRO:HG2	1:C:161:GLY:H	1.61	0.66
2:B:502:GLU:CA	3:B:552:NDP:H41N	2.25	0.66
1:B:260:MET:HG2	1:B:288:PRO:HG3	1.77	0.66
1:B:396:ARG:NH2	1:C:456:THR:HG21	2.11	0.66
1:E:214:ALA:CB	1:E:380:VAL:HG21	2.26	0.66
1:B:220:PHE:O	1:B:224:GLU:HB2	1.94	0.66
1:A:308:LYS:HG2	1:A:308:LYS:O	1.94	0.66
1:E:280:ILE:HB	1:E:307:ALA:CB	2.26	0.66
1:E:314:ILE:HD12	1:E:317:VAL:HG21	1.77	0.66
1:A:247:PHE:HB3	1:A:321:ILE:HG12	1.78	0.66
1:C:63:PHE:HD1	1:C:147:ARG:HG2	1.60	0.66
1:C:337:PRO:HA	1:C:359:ILE:HG21	1.76	0.66
1:C:330:GLN:HA	1:C:330:GLN:HE21	1.59	0.66
1:A:411:MET:N	1:B:436:PHE:CE2	2.51	0.66
1:C:227:ILE:HD12	1:C:233:MET:SD	2.35	0.66
1:A:433:THR:HA	1:C:412:SER:HB3	1.77	0.66
1:C:120:VAL:HG22	1:C:382:TYR:CD2	2.30	0.66
1:F:247:PHE:CE2	1:F:263:LEU:HB3	2.31	0.66
1:B:107:LEU:HG	1:B:126:LYS:HE2	1.78	0.66
1:E:315:LEU:HD13	1:E:331:LEU:HD12	1.77	0.66
1:A:404:ASP:HA	1:B:439:ARG:HD2	1.77	0.65
1:E:199:THR:HG21	1:E:381:SER:O	1.95	0.65
1:B:271:ILE:HD12	1:B:272:THR:CG2	2.25	0.65
1:E:196:ALA:HB2	1:E:388:ASN:HB3	1.77	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:330:GLN:HA	1:B:330:GLN:HE21	1.61	0.65
1:D:434:ALA:HA	1:D:437:GLN:NE2	2.09	0.65
1:F:434:ALA:HA	1:F:437:GLN:NE2	2.11	0.65
1:F:66:ARG:O	1:F:67:ARG:O	2.14	0.65
1:D:244:ASP:HB2	1:D:245:LYS:CD	2.25	0.65
1:B:5:ASP:HB3	1:B:332:THR:HB	1.78	0.65
1:B:177:SER:HB2	1:B:202:PRO:HG2	1.79	0.65
1:D:147:ARG:NE	1:D:151:GLU:OE2	2.23	0.65
1:C:239:THR:O	1:C:245:LYS:HE2	1.96	0.65
1:A:436:PHE:CD2	1:C:406:ASN:HA	2.31	0.65
1:B:414:GLN:O	1:B:418:GLU:HG3	1.95	0.65
1:E:26:ASP:O	1:E:29:VAL:HG13	1.97	0.65
1:F:217:ARG:NH1	1:F:217:ARG:HG2	2.06	0.65
1:A:406:ASN:HA	1:B:406:ASN:CG	2.17	0.65
1:A:82:HIS:CD2	1:A:112:THR:CG2	2.63	0.65
3:E:552:NDP:H2N	3:E:552:NDP:O1N	1.97	0.65
1:C:458:GLU:HG3	1:C:459:ARG:H	1.59	0.65
1:F:353:THR:HB	1:F:354:PRO:HD2	1.77	0.65
1:D:141:LEU:O	1:D:145:THR:CG2	2.44	0.65
1:A:409:LEU:HB2	1:B:406:ASN:OD1	1.95	0.65
1:B:90:LYS:NZ	1:B:164:VAL:HG12	2.11	0.65
1:A:410:LEU:HG	1:B:410:LEU:HD12	1.75	0.65
1:A:412:SER:OG	1:B:440:ILE:HD11	1.95	0.65
1:C:396:ARG:HG3	1:C:397:LEU:HG	1.78	0.65
1:A:373:LEU:O	1:A:373:LEU:HD22	1.96	0.65
1:F:148:PHE:CE2	1:F:152:LEU:HD11	2.31	0.65
1:F:248:VAL:HB	1:F:272:THR:HG23	1.78	0.65
1:D:99:VAL:O	1:D:99:VAL:HG23	1.97	0.65
1:B:444:SER:CB	1:B:446:LYS:HD3	2.27	0.65
2:C:502:GLU:CG	3:C:552:NDP:H41N	2.26	0.65
1:F:29:VAL:HG21	1:F:42:ARG:HG2	1.79	0.65
1:A:346:GLU:OE1	1:A:351:PRO:HD2	1.97	0.65
1:A:407:TYR:CD1	1:A:440:ILE:HD11	2.31	0.65
1:B:65:ILE:HG13	1:B:144:ILE:HG12	1.78	0.65
1:D:16:PHE:HE2	1:D:354:PRO:HB3	1.60	0.65
1:B:458:GLU:HG3	1:B:459:ARG:N	2.11	0.65
1:B:371:LEU:HD12	1:B:482:TYR:CE1	2.32	0.65
1:B:394:TYR:CD2	1:B:394:TYR:C	2.70	0.65
1:B:403:ARG:O	1:B:403:ARG:HG3	1.96	0.65
1:A:428:ILE:CD1	1:B:430:ILE:N	2.58	0.65
1:E:197:CYS:SG	1:E:198:VAL:HG12	2.37	0.65
1:C:249:VAL:HA	1:C:323:ILE:HB	1.78	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:456:THR:HA	1:E:459:ARG:HB3	1.79	0.65
1:A:16:PHE:HE2	1:A:354:PRO:HB3	1.60	0.65
1:A:412:SER:CB	1:B:407:TYR:CD1	2.78	0.65
1:B:410:LEU:O	1:B:411:MET:C	2.34	0.65
1:E:169:MET:HG2	3:E:552:NDP:C5D	2.27	0.65
1:C:345:ALA:HB1	1:C:373:LEU:HD11	1.78	0.65
1:D:399:PHE:HE2	1:D:443:ALA:O	1.78	0.65
1:C:473:LEU:HD22	1:C:476:ASP:HB3	1.77	0.65
1:D:131:ILE:HB	1:D:136:TYR:HE2	1.62	0.65
1:D:295:LYS:O	1:D:299:GLY:HA2	1.97	0.65
1:D:160:PRO:CG	1:D:193:ASN:O	2.41	0.65
1:B:152:LEU:HD23	1:B:157:PHE:HB2	1.79	0.65
1:E:161:GLY:CA	1:F:192:ILE:HG13	2.27	0.65
1:D:24:VAL:HG11	1:D:483:VAL:HG13	1.78	0.65
1:A:405:SER:OG	1:B:402:GLU:HB3	1.96	0.64
1:A:91:GLY:HA3	1:A:125:ALA:O	1.96	0.64
1:B:217:ARG:CG	1:B:217:ARG:HH11	2.01	0.64
1:E:25:GLU:O	1:E:29:VAL:HG12	1.97	0.64
1:A:81:GLN:NE2	1:A:157:PHE:CD2	2.66	0.64
1:B:117:VAL:HG12	1:B:118:VAL:HG12	1.80	0.64
1:B:224:GLU:HA	1:B:242:PHE:HE2	1.61	0.64
2:D:502:GLU:OXT	3:D:552:NDP:H41N	1.97	0.64
1:B:37:THR:HA	1:B:40:GLN:HG3	1.79	0.64
1:D:118:VAL:HG11	1:D:375:ALA:HB1	1.79	0.64
1:A:414:GLN:HA	1:B:430:ILE:C	2.18	0.64
1:A:279:SER:OG	1:A:314:ILE:HD13	1.97	0.64
1:C:443:ALA:HB1	1:C:448:ILE:HG12	1.79	0.64
1:F:202:PRO:HB2	1:F:205:GLN:CG	2.28	0.64
1:C:44:ARG:HH22	1:C:494:ASN:CB	2.10	0.64
1:B:99:VAL:HG23	1:B:99:VAL:O	1.98	0.64
1:C:132:ASN:OD1	1:C:134:LYS:HB2	1.97	0.64
1:E:90:LYS:HD3	1:E:122:PHE:HE1	1.57	0.64
1:C:150:MET:HE2	1:C:150:MET:HA	1.80	0.64
1:C:448:ILE:HG22	1:C:449:VAL:N	2.13	0.64
1:F:214:ALA:CB	1:F:380:VAL:HG21	2.27	0.64
1:F:248:VAL:HG21	1:F:314:ILE:HD11	1.79	0.64
1:E:403:ARG:HG3	1:E:407:TYR:HD1	1.63	0.64
1:A:29:VAL:HG21	1:A:42:ARG:HG2	1.79	0.64
1:A:410:LEU:HD11	1:B:409:LEU:CD2	2.27	0.64
1:B:451:SER:OG	1:B:452:GLY:N	2.31	0.64
1:D:236:LEU:HD22	1:D:238:MET:HB2	1.79	0.64
1:A:353:THR:O	1:A:357:ASP:N	2.29	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:148:PHE:CZ	1:E:152:LEU:HD11	2.32	0.64
1:D:188:GLY:O	1:D:191:ASP:N	2.30	0.64
1:A:413:VAL:HG23	1:B:410:LEU:HB2	1.75	0.64
1:C:247:PHE:CB	1:C:321:ILE:HG12	2.28	0.64
1:C:250:GLN:HG3	1:C:314:ILE:HG21	1.79	0.64
1:E:52:ILE:HG12	1:E:493:TYR:CE1	2.33	0.64
1:E:153:ALA:HA	1:E:158:ILE:HG22	1.80	0.64
1:B:336:ALA:N	1:B:337:PRO:HD2	2.13	0.64
1:C:348:ALA:HA	3:C:552:NDP:H1D	1.79	0.64
1:D:107:LEU:HB3	1:D:126:LYS:HG2	1.78	0.64
1:A:65:ILE:HG12	1:A:144:ILE:HD13	1.78	0.64
1:A:409:LEU:HD13	1:B:406:ASN:CG	2.18	0.64
1:C:248:VAL:HG21	1:C:314:ILE:HD11	1.79	0.64
1:E:272:THR:HB	1:E:281:TRP:HA	1.80	0.64
1:A:494:ASN:O	1:A:495:GLU:HB2	1.98	0.64
1:A:208:ILE:HG22	1:A:384:GLU:HB2	1.79	0.64
1:E:436:PHE:CZ	1:F:409:LEU:HD12	2.32	0.64
1:F:313:SER:HB3	1:F:316:GLU:HB2	1.79	0.64
1:E:404:ASP:O	1:E:408:HIS:HB2	1.98	0.64
1:D:35:ARG:CD	1:D:35:ARG:H	2.10	0.64
1:D:39:GLU:HG2	1:D:39:GLU:O	1.96	0.64
1:A:414:GLN:CD	1:B:431:VAL:O	2.36	0.64
1:A:90:LYS:NZ	1:A:164:VAL:O	2.30	0.64
1:C:280:ILE:HB	1:C:307:ALA:CB	2.27	0.64
1:D:224:GLU:HA	1:D:227:ILE:HG22	1.80	0.64
1:C:214:ALA:CB	1:C:380:VAL:HG21	2.26	0.64
1:D:420:LYS:O	1:D:421:PHE:HD2	1.80	0.64
1:B:349:ASN:N	3:B:552:NDP:O2D	2.28	0.64
1:D:141:LEU:O	1:D:145:THR:HG23	1.97	0.64
1:A:191:ASP:O	1:A:194:ALA:HB2	1.98	0.64
1:D:236:LEU:HD23	1:D:237:GLY:N	2.12	0.64
1:B:225:ASN:HD21	1:B:458:GLU:HB2	1.63	0.64
1:E:271:ILE:HD12	1:E:272:THR:HG23	1.80	0.64
1:B:323:ILE:CD1	1:B:345:ALA:HB3	2.28	0.64
1:E:36:GLU:O	1:E:37:THR:HG23	1.97	0.64
1:E:372:TYR:HE1	1:E:461:ALA:H	1.46	0.64
1:F:248:VAL:CG2	1:F:314:ILE:HD11	2.28	0.64
1:F:380:VAL:O	1:F:383:PHE:N	2.31	0.64
1:D:221:HIS:O	1:D:225:ASN:HB2	1.98	0.64
1:A:300:THR:HG22	1:A:302:LEU:N	2.13	0.64
1:C:414:GLN:CG	1:C:428:ILE:O	2.46	0.63
1:E:421:PHE:CD2	1:E:421:PHE:N	2.64	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:211:ARG:NE	1:D:381:SER:OG	2.30	0.63
1:E:331:LEU:HD23	1:E:360:PHE:CZ	2.32	0.63
1:A:409:LEU:CD1	1:B:402:GLU:C	2.66	0.63
1:A:382:TYR:O	1:A:386:LEU:HD22	1.98	0.63
1:A:211:ARG:HD2	1:A:211:ARG:O	1.97	0.63
1:C:112:THR:H	1:C:124:GLY:HA3	1.61	0.63
1:C:330:GLN:HA	1:C:330:GLN:NE2	2.13	0.63
1:C:183:TYR:C	1:C:183:TYR:CD2	2.71	0.63
1:C:91:GLY:O	1:C:165:PRO:HA	1.98	0.63
1:E:305:PRO:HB2	1:E:306:LYS:CD	2.28	0.63
1:B:427:THR:O	1:B:427:THR:OG1	2.16	0.63
1:A:414:GLN:CA	1:B:430:ILE:O	2.46	0.63
1:C:224:GLU:HA	1:C:227:ILE:HG22	1.79	0.63
1:B:246:THR:O	1:B:320:ASP:HB2	1.98	0.63
1:E:35:ARG:CD	1:E:35:ARG:H	2.08	0.63
1:F:146:ARG:HA	1:F:182:THR:HG21	1.81	0.63
1:D:369:PRO:HG3	1:D:478:ARG:HA	1.81	0.63
1:C:382:TYR:CE1	1:C:386:LEU:HD21	2.33	0.63
1:B:29:VAL:O	1:B:41:LYS:HD3	1.98	0.63
1:D:225:ASN:HD21	1:D:458:GLU:CB	2.09	0.63
1:C:68:ASP:HB2	1:C:140:GLU:OE1	1.97	0.63
1:A:433:THR:HB	1:C:412:SER:CA	2.27	0.63
1:C:344:ILE:HD11	1:C:360:PHE:CE1	2.33	0.63
1:C:403:ARG:O	1:C:407:TYR:HB2	1.99	0.63
1:E:34:THR:HG23	1:E:35:ARG:HD3	1.81	0.63
1:E:371:LEU:HD12	1:E:482:TYR:CD1	2.33	0.63
1:D:437:GLN:HA	1:D:440:ILE:HB	1.79	0.63
1:D:224:GLU:CB	1:D:242:PHE:HE2	2.11	0.63
1:C:371:LEU:HD13	1:C:481:ALA:HB1	1.81	0.63
1:B:172:GLY:O	1:B:176:MET:HG2	1.99	0.63
1:C:374:ASN:C	1:C:376:GLY:H	2.01	0.63
1:A:430:ILE:HG12	1:B:413:VAL:CG2	2.29	0.63
1:D:219:VAL:HA	1:D:373:LEU:HD21	1.79	0.63
1:C:19:ARG:CG	1:C:19:ARG:HH11	2.11	0.63
1:C:82:HIS:CD2	1:C:112:THR:HG21	2.33	0.63
1:E:342:LYS:NZ	1:E:342:LYS:HB2	2.14	0.63
1:C:230:ALA:HA	1:C:233:MET:HB2	1.81	0.62
1:B:315:LEU:HA	1:B:322:LEU:HD11	1.81	0.62
1:A:345:ALA:HB1	1:A:373:LEU:HD11	1.79	0.62
1:D:328:GLU:O	1:D:329:LYS:C	2.37	0.62
1:A:78:TYR:N	1:A:78:TYR:CD1	2.67	0.62
1:F:90:LYS:HE3	1:F:381:SER:HB3	1.80	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:221:HIS:NE2	1:F:454:ALA:HB2	2.14	0.62
1:C:59:LEU:HD22	1:C:157:PHE:CD1	2.33	0.62
1:A:397:LEU:HD23	1:B:383:PHE:CE1	2.33	0.62
1:B:405:SER:O	1:B:408:HIS:CB	2.45	0.62
1:A:414:GLN:HA	1:B:430:ILE:O	1.98	0.62
1:C:300:THR:CG2	1:C:302:LEU:HB2	2.29	0.62
1:A:154:LYS:HD3	1:E:189:HIS:CD2	2.34	0.62
1:B:272:THR:HG1	1:B:314:ILE:HD11	1.64	0.62
1:C:382:TYR:O	1:C:385:TRP:HB3	1.97	0.62
1:D:219:VAL:HG22	1:D:373:LEU:HD13	1.80	0.62
1:E:300:THR:CG2	1:E:302:LEU:HB2	2.28	0.62
1:A:428:ILE:HD11	1:B:428:ILE:C	2.20	0.62
1:E:169:MET:HG2	3:E:552:NDP:H51N	1.81	0.62
1:A:126:LYS:HG3	1:A:127:ALA:H	1.63	0.62
1:D:132:ASN:OD1	1:D:134:LYS:HB2	1.98	0.62
1:B:23:ILE:HG22	1:B:471:TYR:HD1	1.64	0.62
1:A:409:LEU:HD21	1:B:404:ASP:C	2.19	0.62
1:E:281:TRP:CZ2	1:E:283:PRO:HG3	2.33	0.62
1:B:315:LEU:HD13	1:B:331:LEU:HD12	1.81	0.62
1:C:252:PHE:CZ	1:C:257:LEU:HD13	2.35	0.62
1:A:235:ILE:O	1:A:235:ILE:HG22	1.99	0.62
1:F:231:SER:O	1:F:235:ILE:HD13	1.99	0.62
1:F:348:ALA:O	1:F:351:PRO:HD3	2.00	0.62
1:E:417:LEU:HB3	1:E:428:ILE:HD13	1.81	0.62
1:E:394:TYR:CE2	1:E:443:ALA:HB3	2.35	0.62
1:D:146:ARG:HA	1:D:182:THR:HG21	1.82	0.62
1:A:399:PHE:O	1:A:441:SER:HB3	1.99	0.62
1:A:201:LYS:HE3	1:A:206:GLY:HA3	1.82	0.62
1:D:281:TRP:N	1:D:307:ALA:HB1	2.14	0.62
1:C:94:ARG:HH21	1:C:169:MET:HG3	1.65	0.62
1:D:94:ARG:NH1	1:D:107:LEU:CD2	2.58	0.62
1:D:397:LEU:H	1:D:397:LEU:HD12	1.63	0.62
1:F:242:PHE:CE1	1:F:263:LEU:HD22	2.35	0.62
1:D:137:THR:HG23	1:D:140:GLU:CG	2.28	0.62
1:D:458:GLU:HG3	1:D:459:ARG:N	2.15	0.62
1:F:491:ARG:NH1	1:F:491:ARG:HB2	2.14	0.62
1:D:183:TYR:CD2	1:D:183:TYR:C	2.73	0.62
1:B:252:PHE:CZ	1:B:291:LEU:HD13	2.34	0.62
1:A:85:HIS:CE1	1:A:489:VAL:HG22	2.35	0.62
1:E:223:ILE:HA	1:E:368:ILE:HD12	1.82	0.62
1:A:315:LEU:HA	1:A:322:LEU:HD11	1.81	0.62
1:C:118:VAL:HG11	1:C:375:ALA:CB	2.29	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:140:GLU:O	1:E:143:LYS:HB2	1.99	0.62
1:F:260:MET:HG2	1:F:288:PRO:HG3	1.82	0.62
1:B:117:VAL:HG12	1:B:118:VAL:CG1	2.30	0.62
1:C:148:PHE:CD2	1:C:152:LEU:HD11	2.35	0.62
1:C:178:TRP:O	1:C:182:THR:HG23	1.99	0.62
1:C:150:MET:SD	1:C:186:THR:HG21	2.40	0.62
1:C:213:SER:O	1:C:215:THR:N	2.33	0.62
1:E:35:ARG:HD2	1:E:35:ARG:N	2.11	0.62
1:F:137:THR:HG23	1:F:140:GLU:CD	2.20	0.62
1:D:93:ILE:HD11	1:D:95:TYR:HE1	1.64	0.62
1:D:35:ARG:HG2	1:D:36:GLU:HG3	1.81	0.62
1:F:418:GLU:O	1:F:422:GLY:HA2	2.00	0.62
1:A:362:GLU:C	1:A:364:ASN:H	2.01	0.62
1:A:399:PHE:HA	1:A:441:SER:HB3	1.81	0.62
1:E:246:THR:O	1:E:320:ASP:HB2	1.99	0.62
1:A:273:VAL:HG21	1:A:291:LEU:CD1	2.29	0.62
1:A:358:LYS:HG3	1:A:359:ILE:N	2.15	0.62
1:D:332:THR:CA	1:D:356:ALA:HB2	2.30	0.62
1:F:167:PRO:HD3	1:F:200:GLY:HA3	1.82	0.62
1:D:131:ILE:HB	1:D:136:TYR:CE2	2.35	0.62
1:E:274:GLY:O	1:E:275:GLU:HB2	2.00	0.62
1:A:409:LEU:HD11	1:B:405:SER:N	2.15	0.61
1:A:428:ILE:HD11	1:B:428:ILE:O	1.99	0.61
1:A:117:VAL:HG21	1:A:371:LEU:HD22	1.82	0.61
1:E:230:ALA:HA	1:E:233:MET:HB2	1.81	0.61
1:F:174:ARG:HB3	1:F:175:GLU:OE2	1.99	0.61
1:C:479:THR:O	1:C:483:VAL:HG23	2.00	0.61
1:E:382:TYR:CE1	1:E:386:LEU:HD21	2.35	0.61
1:A:158:ILE:HA	1:A:163:ASP:O	2.00	0.61
1:E:333:LYS:HB2	1:E:355:GLU:HG3	1.81	0.61
1:C:101:VAL:O	1:C:105:LYS:HG3	2.00	0.61
1:A:118:VAL:HG11	1:A:375:ALA:HB1	1.82	0.61
1:D:314:ILE:HD12	1:D:317:VAL:HG21	1.81	0.61
1:C:107:LEU:HB3	1:C:126:LYS:CG	2.23	0.61
1:F:63:PHE:CD1	1:F:75:ILE:HD11	2.35	0.61
1:B:171:THR:CG2	1:B:175:GLU:HG3	2.29	0.61
1:A:37:THR:O	1:A:38:GLU:HB2	1.99	0.61
1:E:258:HIS:CD2	1:E:261:ARG:NH1	2.64	0.61
1:A:353:THR:HB	1:A:354:PRO:HD2	1.82	0.61
1:A:269:LYS:HD3	1:A:284:ASP:C	2.21	0.61
1:E:300:THR:HG22	1:E:302:LEU:H	1.65	0.61
1:F:258:HIS:HD2	1:F:261:ARG:HH11	1.46	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:408:HIS:HD1	1:B:436:PHE:HD1	1.44	0.61
1:B:247:PHE:HB3	1:B:321:ILE:CG1	2.30	0.61
1:F:342:LYS:HA	1:F:365:ILE:HG23	1.83	0.61
1:C:117:VAL:HG23	1:C:371:LEU:HD22	1.80	0.61
1:F:142:GLU:HA	1:F:178:TRP:CZ3	2.35	0.61
1:F:35:ARG:HG2	1:F:36:GLU:HG3	1.82	0.61
1:D:403:ARG:HA	1:D:440:ILE:O	2.01	0.61
1:C:306:LYS:CD	1:C:306:LYS:N	2.63	0.61
1:E:330:GLN:HA	1:E:330:GLN:NE2	2.14	0.61
1:A:410:LEU:O	1:B:410:LEU:CG	2.49	0.61
1:A:413:VAL:HG21	1:B:411:MET:H	1.65	0.61
1:B:110:LEU:O	1:B:112:THR:N	2.33	0.61
1:C:271:ILE:HD11	1:C:319:CYS:HB3	1.82	0.61
1:C:217:ARG:CZ	1:C:450:HIS:CD2	2.84	0.61
1:C:276:SER:HB2	3:C:552:NDP:O2X	2.00	0.61
1:F:93:ILE:HD11	1:F:95:TYR:HE1	1.65	0.61
1:F:421:PHE:N	1:F:421:PHE:CD2	2.68	0.61
1:D:171:THR:HB	1:D:175:GLU:HG3	1.82	0.61
1:A:295:LYS:O	1:A:299:GLY:HA2	2.00	0.61
1:E:402:GLU:HB2	1:E:441:SER:O	1.99	0.61
1:B:459:ARG:O	1:B:462:ARG:HB3	2.00	0.61
1:B:239:THR:O	1:B:245:LYS:HE2	2.00	0.61
1:A:404:ASP:HB2	1:B:442:GLY:O	2.00	0.61
1:B:399:PHE:HA	1:B:441:SER:O	2.01	0.61
1:E:129:VAL:HG12	1:E:131:ILE:HG23	1.82	0.61
1:C:222:GLY:HA3	1:C:373:LEU:HD21	1.83	0.61
1:D:92:GLY:CA	1:D:166:ALA:O	2.48	0.61
1:C:421:PHE:CD2	1:C:421:PHE:N	2.67	0.61
1:C:457:MET:CE	1:C:457:MET:HA	2.31	0.61
1:A:413:VAL:HB	1:B:411:MET:H	1.66	0.61
1:A:414:GLN:HA	1:B:430:ILE:HG22	1.83	0.61
1:A:428:ILE:H	1:B:429:PRO:C	2.03	0.61
1:A:430:ILE:HD13	1:B:410:LEU:CB	2.31	0.61
1:A:433:THR:HB	1:C:411:MET:C	2.20	0.61
1:A:247:PHE:HB3	1:A:321:ILE:CG1	2.31	0.61
1:F:233:MET:HE2	1:F:233:MET:HA	1.83	0.61
1:D:114:LYS:HA	1:D:371:LEU:CD2	2.30	0.61
1:C:372:TYR:CE1	1:C:461:ALA:HB2	2.36	0.61
1:A:146:ARG:NH2	1:A:182:THR:HG22	2.16	0.61
1:F:271:ILE:HD12	1:F:272:THR:HG23	1.81	0.61
1:C:421:PHE:HD2	1:C:421:PHE:N	1.97	0.61
1:B:461:ALA:O	1:B:465:MET:HG3	2.00	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:362:GLU:C	1:C:364:ASN:H	2.02	0.61
1:D:106:ALA:O	1:D:109:SER:OG	2.16	0.61
1:C:481:ALA:O	1:C:484:ASN:N	2.33	0.61
1:A:79:ARG:HG3	1:A:126:LYS:O	2.01	0.61
1:B:29:VAL:HG21	1:B:42:ARG:HG2	1.82	0.61
1:F:247:PHE:HB3	1:F:321:ILE:CG1	2.29	0.61
1:D:445:GLU:O	1:D:446:LYS:C	2.38	0.61
1:B:120:VAL:HG22	1:B:382:TYR:CD2	2.35	0.61
1:A:417:LEU:HD11	1:B:411:MET:CE	2.31	0.61
1:B:227:ILE:HD12	1:B:233:MET:SD	2.41	0.61
1:F:316:GLU:O	1:F:340:LYS:HE2	2.00	0.61
1:E:236:LEU:HD21	1:E:342:LYS:HG2	1.81	0.61
1:D:171:THR:HG22	1:D:175:GLU:HG3	1.82	0.61
1:B:287:ASP:OD1	1:B:290:GLU:HG3	2.00	0.61
1:A:116:ALA:O	1:A:488:LYS:HD2	2.01	0.61
1:A:85:HIS:HB2	1:A:492:VAL:HG11	1.82	0.61
1:D:224:GLU:HB2	1:D:242:PHE:CE2	2.35	0.61
1:E:353:THR:HB	1:E:354:PRO:HD2	1.83	0.61
1:A:16:PHE:O	1:A:19:ARG:HB3	2.01	0.61
1:A:409:LEU:HD21	1:B:403:ARG:C	2.22	0.60
1:A:404:ASP:O	1:B:439:ARG:HG3	2.00	0.60
1:B:316:GLU:O	1:B:340:LYS:HE2	2.01	0.60
1:D:114:LYS:HZ2	2:D:502:GLU:N	1.99	0.60
1:C:117:VAL:HG12	1:C:118:VAL:HG12	1.83	0.60
1:B:346:GLU:HG2	1:B:351:PRO:HD2	1.83	0.60
1:A:25:GLU:O	1:A:29:VAL:HG23	2.01	0.60
1:A:204:SER:OG	1:B:495:GLU:HG2	2.01	0.60
1:B:385:TRP:CE3	1:B:386:LEU:HD13	2.36	0.60
1:A:118:VAL:O	1:A:118:VAL:HG23	2.01	0.60
1:B:34:THR:HG23	1:B:35:ARG:HD3	1.82	0.60
1:F:379:THR:HG22	1:F:383:PHE:CE2	2.36	0.60
1:E:392:VAL:CG1	1:E:393:SER:N	2.64	0.60
1:F:258:HIS:HD2	1:F:261:ARG:NH1	2.00	0.60
1:A:217:ARG:O	1:A:220:PHE:HB3	2.00	0.60
1:A:408:HIS:HE1	1:B:435:GLU:O	1.83	0.60
1:D:53:LYS:O	1:D:82:HIS:HE1	1.84	0.60
1:E:37:THR:CG2	1:E:41:LYS:HG3	2.31	0.60
1:B:480:ALA:O	1:B:483:VAL:HB	2.01	0.60
1:C:82:HIS:C	1:C:82:HIS:CD2	2.74	0.60
1:B:239:THR:O	1:B:245:LYS:CE	2.49	0.60
1:C:462:ARG:HG3	1:C:466:ARG:NH1	2.16	0.60
1:A:101:VAL:O	1:A:105:LYS:HG3	2.02	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:436:PHE:O	1:C:436:PHE:CG	2.55	0.60
1:C:44:ARG:HH22	1:C:494:ASN:HB2	1.65	0.60
1:F:400:LYS:HD3	1:F:400:LYS:O	2.01	0.60
1:B:462:ARG:HG3	1:B:466:ARG:HH12	1.66	0.60
1:E:294:PHE:CE2	1:E:298:HIS:CE1	2.89	0.60
1:F:239:THR:HG23	1:F:245:LYS:HZ1	1.66	0.60
1:A:396:ARG:HG3	1:A:397:LEU:N	2.15	0.60
1:A:417:LEU:HD13	1:B:414:GLN:CD	2.22	0.60
1:A:409:LEU:O	1:B:406:ASN:C	2.39	0.60
1:C:168:ASP:HA	3:C:552:NDP:O7N	2.00	0.60
1:D:192:ILE:HG23	1:D:193:ASN:OD1	2.01	0.60
1:E:5:ASP:HB3	1:E:332:THR:HB	1.83	0.60
1:F:61:LEU:O	1:F:76:GLU:HA	2.01	0.60
1:A:406:ASN:ND2	1:B:402:GLU:OE1	2.35	0.60
1:A:404:ASP:O	1:A:408:HIS:HB2	2.02	0.60
1:A:436:PHE:HD2	1:C:409:LEU:HB3	1.60	0.60
1:B:406:ASN:C	1:B:408:HIS:N	2.55	0.60
1:A:425:GLY:CA	1:B:427:THR:O	2.48	0.60
1:A:411:MET:CG	1:B:433:THR:N	2.60	0.60
1:D:247:PHE:HB3	1:D:321:ILE:CG1	2.29	0.60
1:D:332:THR:HG22	1:D:353:THR:CG2	2.30	0.60
1:D:409:LEU:C	1:D:409:LEU:HD12	2.22	0.60
2:F:502:GLU:OE2	2:F:502:GLU:N	2.35	0.60
1:D:305:PRO:HB2	1:D:306:LYS:CD	2.31	0.60
1:E:58:VAL:HG22	1:E:80:ALA:CB	2.31	0.60
1:C:400:LYS:HD3	1:C:400:LYS:O	2.01	0.60
1:A:404:ASP:HA	1:B:439:ARG:HD3	1.81	0.60
1:C:336:ALA:O	1:C:339:VAL:HG23	2.01	0.60
1:E:29:VAL:O	1:E:41:LYS:HD3	2.02	0.60
1:F:223:ILE:HD13	1:F:345:ALA:CB	2.32	0.60
1:A:409:LEU:C	1:B:406:ASN:HB2	2.22	0.60
1:C:394:TYR:HE2	1:C:443:ALA:HB3	1.66	0.60
1:A:238:MET:HG2	1:A:245:LYS:HZ1	1.67	0.60
1:E:63:PHE:CD1	1:E:75:ILE:HD11	2.36	0.60
1:B:410:LEU:O	1:B:412:SER:N	2.34	0.60
1:A:418:GLU:CA	1:B:429:PRO:HB2	2.11	0.60
1:C:414:GLN:HG2	1:C:428:ILE:O	2.00	0.60
1:B:84:GLN:C	1:B:86:ARG:N	2.53	0.60
1:A:146:ARG:HE	1:A:182:THR:CG2	2.14	0.60
1:B:36:GLU:O	1:B:37:THR:HG23	2.02	0.60
1:B:177:SER:HB2	1:B:202:PRO:CG	2.31	0.60
1:A:235:ILE:CG2	1:A:235:ILE:O	2.49	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:258:HIS:CD2	1:A:261:ARG:NH1	2.68	0.60
1:C:315:LEU:HD22	1:C:331:LEU:HD11	1.84	0.60
1:A:300:THR:HG22	1:A:302:LEU:H	1.66	0.60
1:B:195:HIS:HE1	1:C:87:THR:HG21	1.67	0.60
1:F:476:ASP:OD2	1:F:479:THR:HG23	2.01	0.60
1:A:249:VAL:CB	1:A:323:ILE:HB	2.32	0.59
1:A:242:PHE:HE1	1:A:263:LEU:HD22	1.63	0.59
1:E:37:THR:HA	1:E:40:GLN:HG3	1.83	0.59
1:C:44:ARG:HH22	1:C:494:ASN:CA	2.15	0.59
1:A:430:ILE:HD13	1:B:410:LEU:CD2	2.32	0.59
1:D:280:ILE:HG22	1:D:309:ILE:HD13	1.84	0.59
1:D:319:CYS:SG	1:D:341:ALA:HB2	2.42	0.59
1:C:462:ARG:HG3	1:C:466:ARG:HH22	1.66	0.59
1:A:251:GLY:O	1:A:256:GLY:HA3	2.01	0.59
1:E:61:LEU:HB3	1:E:77:GLY:O	2.02	0.59
1:D:470:LYS:HG2	1:D:471:TYR:CE2	2.37	0.59
1:A:420:LYS:C	1:A:421:PHE:HD2	2.04	0.59
1:C:281:TRP:CB	1:C:310:TYR:HB2	2.31	0.59
1:D:495:GLU:OE2	1:E:205:GLN:HG2	2.02	0.59
1:F:162:VAL:HG23	1:F:163:ASP:H	1.63	0.59
1:C:272:THR:HG22	1:C:281:TRP:HD1	1.66	0.59
1:C:344:ILE:HD11	1:C:360:PHE:CZ	2.38	0.59
1:E:200:GLY:N	1:E:384:GLU:OE1	2.35	0.59
1:D:259:SER:O	1:D:263:LEU:HG	2.02	0.59
1:D:3:ARG:O	1:D:5:ASP:N	2.26	0.59
1:C:147:ARG:O	1:C:148:PHE:C	2.40	0.59
1:D:117:VAL:HG21	1:D:371:LEU:HD13	1.84	0.59
1:F:16:PHE:HE2	1:F:354:PRO:HB3	1.67	0.59
1:B:60:SER:HA	1:B:78:TYR:HD2	1.68	0.59
1:F:88:PRO:HD2	1:F:122:PHE:CE2	2.37	0.59
1:D:95:TYR:HB3	1:D:133:PRO:HG3	1.83	0.59
1:B:372:TYR:CZ	1:B:461:ALA:HB2	2.36	0.59
1:A:408:HIS:CG	1:B:436:PHE:CD1	2.91	0.59
1:A:428:ILE:HG12	1:B:428:ILE:HB	0.68	0.59
1:A:408:HIS:NE2	1:B:437:GLN:C	2.56	0.59
1:A:408:HIS:CD2	1:B:440:ILE:N	2.70	0.59
1:E:220:PHE:CE1	1:E:266:PHE:HB2	2.35	0.59
1:D:248:VAL:HG23	1:D:272:THR:O	2.02	0.59
1:D:334:SER:O	1:D:337:PRO:HD2	2.03	0.59
1:B:56:ASN:ND2	1:B:84:GLN:NE2	2.43	0.59
1:A:107:LEU:HB3	1:A:126:LYS:HG2	1.85	0.59
1:F:357:ASP:OD2	1:F:478:ARG:NE	2.35	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:52:ILE:HG12	1:C:493:TYR:CE2	2.37	0.59
1:B:19:ARG:HH11	1:B:19:ARG:HG2	1.68	0.59
1:A:158:ILE:HG13	1:A:165:PRO:HD2	1.84	0.59
1:A:412:SER:OG	1:B:407:TYR:CD1	2.55	0.59
1:B:247:PHE:CZ	1:B:270:CYS:HB2	2.37	0.59
1:D:308:LYS:O	1:D:308:LYS:HG2	2.02	0.59
1:C:222:GLY:HA3	1:C:373:LEU:CD2	2.33	0.59
1:C:93:ILE:HD11	1:C:95:TYR:HE1	1.67	0.59
1:A:209:HIS:CD2	1:A:446:LYS:HB3	2.37	0.59
1:B:51:ILE:CD1	1:E:64:PRO:HB3	2.33	0.59
1:B:51:ILE:HD13	1:E:64:PRO:CB	2.33	0.59
1:D:304:PHE:CE2	1:D:306:LYS:HB2	2.38	0.59
1:B:183:TYR:CD2	1:B:183:TYR:C	2.76	0.59
1:B:214:ALA:HB1	1:B:380:VAL:HG21	1.84	0.59
1:E:175:GLU:CD	1:E:175:GLU:H	2.05	0.59
1:E:239:THR:O	1:E:245:LYS:HE2	2.02	0.59
1:C:346:GLU:HB2	1:C:368:ILE:O	2.02	0.59
1:D:169:MET:HG2	3:D:552:NDP:H51N	1.84	0.59
1:F:167:PRO:CA	1:F:176:MET:HE3	2.31	0.59
1:F:416:SER:HA	1:F:419:ARG:NH1	2.18	0.59
1:E:209:HIS:CD2	1:E:446:LYS:HA	2.37	0.59
1:D:436:PHE:O	1:D:436:PHE:CG	2.54	0.59
1:A:310:TYR:CZ	1:A:317:VAL:HG22	2.37	0.59
1:A:336:ALA:O	1:A:339:VAL:HG23	2.03	0.59
1:B:224:GLU:HA	1:B:242:PHE:CE2	2.38	0.59
1:A:354:PRO:HA	1:A:357:ASP:HB2	1.83	0.59
1:B:23:ILE:HG22	1:B:471:TYR:CD1	2.37	0.59
1:E:116:ALA:O	1:E:488:LYS:HD2	2.03	0.59
1:A:58:VAL:HG22	1:A:80:ALA:CB	2.33	0.59
1:A:400:LYS:O	1:A:404:ASP:OD1	2.20	0.59
1:A:401:TYR:HA	1:A:404:ASP:CG	2.23	0.59
1:A:52:ILE:HD13	1:A:489:VAL:CG1	2.32	0.59
1:F:36:GLU:O	1:F:37:THR:HG23	2.03	0.59
1:B:94:ARG:NH1	1:B:107:LEU:HD21	2.18	0.59
1:E:42:ARG:O	1:E:46:ARG:HB2	2.03	0.59
1:A:409:LEU:HD22	1:B:406:ASN:CA	2.33	0.59
1:F:217:ARG:O	1:F:220:PHE:HB3	2.02	0.59
1:D:421:PHE:N	1:D:421:PHE:CD2	2.69	0.59
1:A:413:VAL:CB	1:B:411:MET:H	2.16	0.58
1:E:244:ASP:HB2	1:E:245:LYS:CD	2.30	0.58
1:D:271:ILE:HD12	1:D:272:THR:CG2	2.33	0.58
1:C:95:TYR:OH	1:C:145:THR:CB	2.43	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:239:THR:O	1:A:245:LYS:HE2	2.03	0.58
1:E:225:ASN:HD21	1:E:458:GLU:HB2	1.68	0.58
1:A:402:GLU:HB2	1:A:441:SER:O	2.03	0.58
1:A:430:ILE:CG1	1:B:410:LEU:HG	2.31	0.58
1:C:344:ILE:HB	1:C:367:VAL:CG1	2.33	0.58
1:C:165:PRO:HD2	1:C:197:CYS:O	2.03	0.58
1:B:37:THR:HB	1:B:41:LYS:HG3	1.84	0.58
1:C:27:LYS:HE2	1:C:31:ASP:OD1	2.03	0.58
1:F:396:ARG:HG3	1:F:397:LEU:HG	1.85	0.58
1:D:153:ALA:CA	1:D:158:ILE:HG22	2.32	0.58
1:A:430:ILE:HG13	1:B:430:ILE:CD1	2.25	0.58
1:A:434:ALA:N	1:C:412:SER:H	2.02	0.58
1:A:374:ASN:HD22	3:A:552:NDP:H6N	1.68	0.58
1:F:224:GLU:CB	1:F:242:PHE:HE2	2.17	0.58
1:A:43:ASN:O	1:A:44:ARG:C	2.41	0.58
1:E:476:ASP:CG	1:E:479:THR:HG23	2.22	0.58
1:A:351:PRO:HG2	1:A:352:THR:HG23	1.84	0.58
1:B:192:ILE:HG13	1:C:161:GLY:HA2	1.84	0.58
1:E:247:PHE:CZ	1:E:270:CYS:HB2	2.37	0.58
1:E:248:VAL:CG2	1:E:314:ILE:HD11	2.33	0.58
1:D:160:PRO:HD3	1:D:197:CYS:CB	2.34	0.58
1:D:215:THR:HG21	3:D:552:NDP:O7N	2.03	0.58
1:E:53:LYS:O	1:E:82:HIS:CE1	2.55	0.58
1:F:175:GLU:CD	1:F:175:GLU:H	2.05	0.58
1:A:412:SER:O	1:A:414:GLN:N	2.36	0.58
1:A:146:ARG:CZ	1:A:182:THR:HG22	2.34	0.58
1:B:148:PHE:CZ	1:B:152:LEU:HD11	2.39	0.58
1:E:9:PHE:CD2	1:E:12:MET:HE2	2.38	0.58
1:A:294:PHE:CE2	1:A:298:HIS:CE1	2.92	0.58
1:D:275:GLU:HB2	1:D:301:ILE:CD1	2.34	0.58
1:A:489:VAL:O	1:A:492:VAL:HG12	2.04	0.58
1:C:368:ILE:HG22	1:C:373:LEU:HG	1.85	0.58
1:B:219:VAL:HA	1:B:373:LEU:HD22	1.86	0.58
1:C:99:VAL:O	1:C:99:VAL:HG23	2.02	0.58
1:A:401:TYR:CB	1:B:443:ALA:HB2	2.32	0.58
1:B:398:THR:O	1:B:399:PHE:C	2.42	0.58
1:A:111:MET:HE1	1:A:378:VAL:CG1	2.32	0.58
1:A:321:ILE:HG22	1:A:343:ILE:CB	2.23	0.58
1:C:348:ALA:O	1:C:351:PRO:HD3	2.04	0.58
1:F:281:TRP:HB2	1:F:310:TYR:HB2	1.84	0.58
1:A:37:THR:C	1:A:40:GLN:HG3	2.24	0.58
1:C:209:HIS:CG	1:C:446:LYS:HG3	2.37	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:392:VAL:HG22	1:C:382:TYR:OH	2.04	0.58
1:D:90:LYS:HD2	1:D:164:VAL:HB	1.86	0.58
1:E:201:LYS:HZ2	1:E:388:ASN:ND2	2.00	0.58
1:B:408:HIS:O	1:B:409:LEU:C	2.41	0.58
1:A:408:HIS:CD2	1:B:437:GLN:C	2.77	0.58
1:B:342:LYS:HB2	1:B:342:LYS:HZ3	1.66	0.58
1:E:196:ALA:HB2	1:E:388:ASN:CB	2.33	0.58
1:F:175:GLU:O	1:F:179:ILE:HG13	2.03	0.58
1:D:385:TRP:CE3	1:D:386:LEU:HD13	2.38	0.58
1:C:90:LYS:HD3	1:C:122:PHE:CE1	2.39	0.58
1:E:188:GLY:O	1:E:191:ASP:N	2.37	0.58
1:A:68:ASP:OD2	1:A:140:GLU:HG3	2.04	0.58
1:A:406:ASN:HB3	1:B:406:ASN:ND2	2.19	0.58
1:A:406:ASN:C	1:B:436:PHE:HZ	2.04	0.58
1:A:117:VAL:CG2	1:A:371:LEU:HD22	2.34	0.58
1:D:321:ILE:CG2	1:D:343:ILE:HB	2.22	0.58
1:F:56:ASN:ND2	1:F:82:HIS:O	2.37	0.58
1:D:417:LEU:HB3	1:D:428:ILE:CD1	2.34	0.58
1:B:272:THR:OG1	1:B:314:ILE:CD1	2.48	0.57
1:D:316:GLU:OE2	1:D:338:ARG:HG3	2.03	0.57
1:E:109:SER:O	1:E:113:TYR:CD1	2.56	0.57
1:E:118:VAL:HG11	1:E:375:ALA:HB3	1.85	0.57
1:C:35:ARG:HG2	1:C:36:GLU:N	2.14	0.57
1:D:418:GLU:O	1:D:422:GLY:HA2	2.04	0.57
1:B:92:GLY:HA2	1:B:166:ALA:O	2.04	0.57
1:F:88:PRO:HD2	1:F:122:PHE:CD2	2.39	0.57
1:D:171:THR:CG2	1:D:175:GLU:HG3	2.34	0.57
1:C:423:LYS:N	1:C:423:LYS:HD2	2.18	0.57
1:A:411:MET:CB	1:B:432:PRO:HA	2.34	0.57
1:A:409:LEU:CG	1:B:403:ARG:CA	2.71	0.57
1:B:408:HIS:O	1:B:410:LEU:N	2.37	0.57
1:A:93:ILE:HD12	1:A:148:PHE:CE2	2.39	0.57
1:D:399:PHE:C	1:D:401:TYR:H	2.06	0.57
1:F:118:VAL:HG11	1:F:375:ALA:HB3	1.85	0.57
1:F:321:ILE:CG2	1:F:343:ILE:HB	2.34	0.57
1:D:32:LEU:HD12	1:D:33:LYS:N	2.18	0.57
1:A:24:VAL:HG11	1:A:483:VAL:HG13	1.86	0.57
1:A:402:GLU:OE1	1:A:402:GLU:HA	2.04	0.57
1:A:397:LEU:HD23	1:B:383:PHE:CD1	2.39	0.57
1:B:90:LYS:HB2	1:B:122:PHE:CD1	2.38	0.57
1:C:409:LEU:HD23	1:C:409:LEU:O	2.03	0.57
1:C:280:ILE:HG21	1:C:301:ILE:O	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:270:CYS:O	1:D:286:ILE:N	2.36	0.57
1:D:245:LYS:N	1:D:245:LYS:HD2	2.19	0.57
1:A:37:THR:HA	1:A:40:GLN:HG3	1.85	0.57
1:A:209:HIS:CD2	1:A:446:LYS:CB	2.87	0.57
1:C:260:MET:HG2	1:C:288:PRO:HG3	1.86	0.57
1:A:188:GLY:O	1:A:191:ASP:N	2.36	0.57
1:A:413:VAL:HG11	1:B:411:MET:CG	2.25	0.57
1:A:410:LEU:HD13	1:B:409:LEU:HB3	1.87	0.57
1:E:230:ALA:O	1:E:232:TYR:N	2.37	0.57
1:C:118:VAL:O	1:C:118:VAL:HG23	2.04	0.57
1:A:342:LYS:NZ	1:A:342:LYS:HB2	2.19	0.57
1:A:42:ARG:O	1:A:46:ARG:HB2	2.05	0.57
1:A:257:LEU:HD11	1:A:292:GLU:OE2	2.04	0.57
1:E:439:ARG:HG3	1:E:439:ARG:O	2.03	0.57
1:C:435:GLU:N	1:C:435:GLU:OE1	2.37	0.57
1:A:433:THR:O	1:A:435:GLU:N	2.32	0.57
1:A:400:LYS:HZ2	1:B:439:ARG:HH12	1.52	0.57
1:E:227:ILE:CG2	1:E:228:ASN:N	2.67	0.57
1:B:315:LEU:HD22	1:B:331:LEU:HD11	1.86	0.57
1:F:167:PRO:HA	1:F:176:MET:CE	2.34	0.57
1:F:142:GLU:HB2	1:F:178:TRP:CZ2	2.40	0.57
1:F:339:VAL:C	1:F:341:ALA:H	2.08	0.57
1:A:64:PRO:HD2	1:A:147:ARG:NH2	2.18	0.57
1:F:53:LYS:HB3	1:F:54:PRO:HD3	1.86	0.57
1:A:436:PHE:CE2	1:C:409:LEU:HD22	2.40	0.57
1:B:118:VAL:HG11	1:B:375:ALA:CB	2.34	0.57
1:B:208:ILE:CD1	1:B:383:PHE:HB3	2.34	0.57
1:A:428:ILE:C	1:B:430:ILE:CG1	2.73	0.57
2:A:502:GLU:HA	3:A:552:NDP:C4N	2.34	0.57
1:C:403:ARG:HA	1:C:440:ILE:O	2.04	0.57
1:E:160:PRO:HD3	1:E:197:CYS:HB3	1.86	0.57
1:A:227:ILE:HD13	1:A:343:ILE:CD1	2.34	0.57
1:C:9:PHE:CG	1:C:106:ALA:CB	2.88	0.57
1:E:372:TYR:OH	1:E:461:ALA:HB2	2.04	0.57
1:F:280:ILE:HB	1:F:307:ALA:HB1	1.87	0.57
1:B:107:LEU:CB	1:B:126:LYS:HG2	2.33	0.57
1:B:464:ILE:O	1:B:468:ALA:N	2.35	0.57
1:A:68:ASP:HB2	1:A:140:GLU:OE1	2.05	0.57
1:A:24:VAL:CG1	1:A:483:VAL:HG13	2.34	0.57
1:A:430:ILE:CG1	1:B:413:VAL:CB	2.68	0.57
1:A:410:LEU:CA	1:B:406:ASN:HB2	2.32	0.57
1:E:136:TYR:HB2	1:E:141:LEU:HD21	1.86	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:331:LEU:O	1:B:353:THR:HG23	2.05	0.57
1:C:169:MET:HE1	3:C:552:NDP:H8A	1.86	0.57
1:A:59:LEU:HD21	1:A:61:LEU:HD22	1.86	0.57
1:A:59:LEU:O	1:A:78:TYR:HA	2.05	0.57
1:D:36:GLU:O	1:D:37:THR:HG23	2.04	0.57
1:D:489:VAL:HG12	1:D:493:TYR:HE1	1.69	0.57
1:F:137:THR:HG23	1:F:140:GLU:HG3	1.86	0.57
1:F:201:LYS:HB2	1:F:384:GLU:OE1	2.05	0.57
1:C:480:ALA:O	1:C:483:VAL:HB	2.04	0.57
1:B:346:GLU:HG2	1:B:351:PRO:CD	2.33	0.57
1:E:258:HIS:HD2	1:E:261:ARG:HH12	1.51	0.57
1:F:3:ARG:HG2	1:F:4:GLU:N	2.19	0.57
1:B:416:SER:HB3	1:C:430:ILE:HA	1.87	0.57
1:C:229:GLU:HG3	1:C:231:SER:HB3	1.87	0.57
1:E:348:ALA:HA	3:E:552:NDP:H1D	1.85	0.57
1:D:346:GLU:HG2	1:D:351:PRO:HG2	1.85	0.57
1:A:234:SER:O	1:A:236:LEU:N	2.38	0.57
1:D:439:ARG:NH1	1:E:404:ASP:CB	2.67	0.57
1:B:107:LEU:HB3	1:B:126:LYS:CG	2.34	0.57
1:E:16:PHE:CE2	1:E:354:PRO:HB3	2.30	0.57
1:C:82:HIS:CG	1:C:112:THR:HG21	2.39	0.57
1:E:477:LEU:O	1:E:480:ALA:HB3	2.05	0.57
1:A:400:LYS:HZ2	1:B:439:ARG:NH1	2.02	0.57
1:A:408:HIS:NE2	1:B:437:GLN:CA	2.67	0.57
1:B:401:TYR:O	1:B:404:ASP:N	2.36	0.57
1:E:159:GLY:O	1:E:162:VAL:HG22	2.04	0.57
1:E:346:GLU:OE1	1:E:352:THR:HG23	2.04	0.57
1:E:89:CYS:HB3	1:E:125:ALA:HB2	1.86	0.57
1:A:314:ILE:HG23	1:A:315:LEU:HD23	1.86	0.57
1:C:178:TRP:O	1:C:179:ILE:C	2.41	0.57
1:B:24:VAL:O	1:B:27:LYS:HB3	2.05	0.57
1:A:69:ASP:OD2	1:A:71:SER:HB3	2.04	0.57
1:A:432:PRO:HA	1:C:409:LEU:HG	1.87	0.56
1:A:409:LEU:HD12	1:B:402:GLU:O	2.05	0.56
1:A:414:GLN:CA	1:B:430:ILE:C	2.74	0.56
1:A:226:PHE:CE2	1:A:465:MET:CG	2.87	0.56
1:A:91:GLY:HA2	1:A:111:MET:HE2	1.87	0.56
1:A:248:VAL:HG23	1:A:272:THR:C	2.24	0.56
1:F:247:PHE:CZ	1:F:263:LEU:HB2	2.40	0.56
1:E:409:LEU:O	1:E:412:SER:HB2	2.05	0.56
1:C:155:LYS:O	1:C:157:PHE:CD1	2.58	0.56
1:A:409:LEU:O	1:B:407:TYR:N	2.38	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:250:GLN:HG3	1:D:314:ILE:HG21	1.87	0.56
1:D:450:HIS:O	1:D:453:LEU:HB3	2.05	0.56
1:E:107:LEU:CB	1:E:126:LYS:HG2	2.35	0.56
1:E:98:ASP:O	1:E:99:VAL:C	2.44	0.56
1:D:58:VAL:HA	1:D:80:ALA:HA	1.87	0.56
1:B:90:LYS:HD3	1:B:122:PHE:CE1	2.41	0.56
1:B:379:THR:O	1:B:382:TYR:HB3	2.05	0.56
1:C:402:GLU:O	1:C:405:SER:CB	2.53	0.56
1:A:412:SER:O	1:A:415:GLU:N	2.38	0.56
1:A:169:MET:HG2	3:A:552:NDP:H52N	1.86	0.56
1:B:53:LYS:O	1:B:82:HIS:CE1	2.52	0.56
1:C:321:ILE:HG22	1:C:343:ILE:CB	2.16	0.56
1:B:315:LEU:HD13	1:B:331:LEU:CD1	2.35	0.56
1:B:344:ILE:HD11	1:B:360:PHE:CE1	2.41	0.56
1:F:342:LYS:HB2	1:F:342:LYS:NZ	2.19	0.56
1:C:186:THR:OG1	1:C:187:ILE:HG12	2.04	0.56
1:A:93:ILE:HD11	1:A:95:TYR:HE1	1.71	0.56
1:F:10:PHE:CE2	1:F:14:GLU:HG3	2.40	0.56
1:C:19:ARG:NH1	1:C:19:ARG:HG2	2.14	0.56
1:B:174:ARG:CD	1:B:178:TRP:CH2	2.88	0.56
1:B:479:THR:O	1:B:483:VAL:HG23	2.05	0.56
1:B:280:ILE:HB	1:B:307:ALA:CB	2.35	0.56
1:E:258:HIS:HD2	1:E:261:ARG:HH11	1.50	0.56
1:E:385:TRP:CZ2	1:F:192:ILE:HD11	2.40	0.56
1:E:209:HIS:CG	1:E:446:LYS:HG3	2.41	0.56
1:B:462:ARG:HG3	1:B:466:ARG:NH2	2.21	0.56
1:A:282:ASN:OD1	1:A:284:ASP:HB2	2.06	0.56
1:A:488:LYS:O	1:A:490:PHE:O	2.24	0.56
1:E:271:ILE:HD11	1:E:319:CYS:HB3	1.86	0.56
1:C:323:ILE:CD1	1:C:345:ALA:HB3	2.35	0.56
1:A:148:PHE:CD2	1:A:152:LEU:HD11	2.40	0.56
1:B:149:THR:O	1:B:152:LEU:HB2	2.06	0.56
1:D:435:GLU:HB3	1:E:408:HIS:NE2	2.21	0.56
1:D:37:THR:CA	1:D:40:GLN:HG3	2.35	0.56
1:D:479:THR:O	1:D:483:VAL:HG23	2.05	0.56
1:B:459:ARG:HG2	1:B:459:ARG:HH11	1.70	0.56
1:C:61:LEU:HD21	1:C:151:GLU:HB2	1.88	0.56
1:F:308:LYS:HG2	1:F:308:LYS:O	2.05	0.56
1:A:408:HIS:ND1	1:B:439:ARG:CG	2.58	0.56
1:B:399:PHE:CA	1:B:441:SER:HB3	2.34	0.56
1:E:142:GLU:O	1:E:146:ARG:HG3	2.05	0.56
1:B:221:HIS:HA	1:B:224:GLU:HB3	1.87	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:93:ILE:HD11	1:C:95:TYR:CE1	2.39	0.56
1:B:64:PRO:HB3	1:E:51:ILE:HD13	1.88	0.56
1:E:35:ARG:HG2	1:E:36:GLU:HG3	1.88	0.56
1:E:418:GLU:CG	1:E:428:ILE:HD12	2.36	0.56
2:B:502:GLU:HA	3:B:552:NDP:C4N	2.31	0.56
1:A:209:HIS:HD2	1:A:446:LYS:HA	1.71	0.56
1:E:315:LEU:HD12	1:E:335:ASN:ND2	2.20	0.56
1:B:369:PRO:HG3	1:B:477:LEU:O	2.06	0.56
1:D:57:HIS:HB2	1:D:81:GLN:HB2	1.88	0.56
1:B:403:ARG:HG3	1:B:407:TYR:HD1	1.70	0.56
1:C:379:THR:O	1:C:382:TYR:HB3	2.06	0.56
1:E:421:PHE:N	1:E:421:PHE:HD2	2.03	0.56
1:E:386:LEU:HG	1:F:392:VAL:CG2	2.36	0.56
1:A:16:PHE:CE2	1:A:354:PRO:HB3	2.40	0.56
1:F:239:THR:O	1:F:245:LYS:HE2	2.06	0.56
1:E:289:LYS:HA	1:E:289:LYS:HE3	1.87	0.56
1:A:404:ASP:HB3	1:B:442:GLY:O	2.05	0.56
1:C:413:VAL:O	1:C:417:LEU:HB2	2.05	0.56
1:C:412:SER:O	1:C:414:GLN:C	2.45	0.56
1:D:315:LEU:HD12	1:D:335:ASN:ND2	2.21	0.56
1:B:391:HIS:CD2	1:C:385:TRP:CH2	2.91	0.56
1:C:165:PRO:CD	1:C:197:CYS:O	2.54	0.56
1:F:354:PRO:HA	1:F:357:ASP:HB2	1.87	0.56
1:F:209:HIS:CD2	1:F:446:LYS:HA	2.40	0.56
1:A:306:LYS:HD3	1:A:306:LYS:N	2.21	0.56
1:C:61:LEU:HD21	1:C:151:GLU:CB	2.36	0.56
1:C:246:THR:O	1:C:320:ASP:N	2.36	0.56
1:A:436:PHE:CD1	1:C:405:SER:OG	2.52	0.56
1:A:372:TYR:OH	1:A:461:ALA:HB2	2.06	0.56
1:E:271:ILE:HD12	1:E:272:THR:CG2	2.35	0.56
1:D:271:ILE:O	1:D:272:THR:HG22	2.05	0.56
1:D:279:SER:OG	1:D:314:ILE:HB	2.06	0.56
1:A:146:ARG:NE	1:A:182:THR:HG22	2.19	0.56
1:B:38:GLU:CG	1:B:39:GLU:H	2.19	0.56
1:F:167:PRO:HA	1:F:176:MET:HE1	1.87	0.56
1:B:126:LYS:HG3	1:B:127:ALA:N	2.20	0.56
1:E:306:LYS:HD3	1:E:306:LYS:N	2.21	0.56
1:A:404:ASP:CB	1:B:439:ARG:HD3	2.35	0.56
1:D:394:TYR:HE2	1:D:443:ALA:HB3	1.71	0.56
1:C:37:THR:O	1:C:38:GLU:HB2	2.06	0.56
1:E:11:LYS:O	1:E:12:MET:C	2.44	0.56
1:C:457:MET:HA	1:C:457:MET:HE2	1.88	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:460:SER:O	1:F:464:ILE:HG13	2.06	0.56
1:A:229:GLU:OE2	1:A:229:GLU:HA	2.06	0.56
1:D:423:LYS:N	1:D:423:LYS:HD2	2.21	0.56
1:E:222:GLY:HA3	1:E:373:LEU:CD2	2.36	0.56
1:D:248:VAL:HG21	1:D:314:ILE:HD11	1.87	0.56
1:C:167:PRO:HA	1:C:176:MET:HE3	1.87	0.56
1:D:393:SER:O	1:D:394:TYR:C	2.42	0.56
1:D:485:ALA:O	1:D:489:VAL:HG23	2.06	0.56
1:B:466:ARG:NH1	1:B:466:ARG:HB2	2.21	0.56
1:B:464:ILE:HD13	1:B:481:ALA:HB2	1.87	0.56
1:E:60:SER:O	1:E:61:LEU:HB2	2.06	0.56
1:A:418:GLU:HG2	1:B:429:PRO:O	2.06	0.55
1:A:47:SER:HB3	1:D:72:TRP:HB2	1.86	0.55
1:E:199:THR:HG22	1:E:384:GLU:HG2	1.88	0.55
1:B:217:ARG:HH12	1:B:221:HIS:CE1	2.23	0.55
1:D:100:SER:O	1:D:101:VAL:C	2.43	0.55
1:D:166:ALA:CB	2:D:502:GLU:OE2	2.54	0.55
1:B:85:HIS:CD2	1:B:489:VAL:HG13	2.41	0.55
1:D:211:ARG:HA	1:D:380:VAL:HG11	1.88	0.55
1:D:19:ARG:CG	1:D:19:ARG:HH11	2.14	0.55
1:E:392:VAL:HG12	1:E:393:SER:N	2.20	0.55
1:F:78:TYR:N	1:F:78:TYR:CD1	2.74	0.55
1:A:374:ASN:C	1:A:376:GLY:H	2.09	0.55
1:F:224:GLU:HA	1:F:227:ILE:HG22	1.89	0.55
1:A:234:SER:C	1:A:236:LEU:H	2.10	0.55
1:F:47:SER:O	1:F:50:ARG:N	2.39	0.55
1:A:446:LYS:O	1:A:447:ASP:C	2.42	0.55
1:D:24:VAL:HG23	1:D:28:LEU:HD22	1.88	0.55
1:A:433:THR:HG22	1:C:413:VAL:N	2.14	0.55
1:A:409:LEU:HD11	1:B:404:ASP:H	1.70	0.55
1:C:230:ALA:O	1:C:231:SER:C	2.44	0.55
1:C:166:ALA:HB2	1:C:199:THR:OG1	2.06	0.55
1:B:37:THR:CA	1:B:40:GLN:HG3	2.36	0.55
1:F:63:PHE:CD1	1:F:147:ARG:HG3	2.41	0.55
1:F:339:VAL:O	1:F:341:ALA:N	2.40	0.55
1:B:196:ALA:HB2	1:B:388:ASN:CB	2.37	0.55
1:D:176:MET:N	1:D:176:MET:HE1	2.21	0.55
1:B:372:TYR:CE1	1:B:461:ALA:HB2	2.42	0.55
1:D:58:VAL:HG22	1:D:80:ALA:CB	2.37	0.55
1:E:120:VAL:HG13	1:E:121:PRO:HD2	1.89	0.55
1:A:404:ASP:OD1	1:B:439:ARG:HD3	2.06	0.55
1:A:415:GLU:HB2	1:B:432:PRO:CD	2.32	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:164:VAL:HG22	1:B:197:CYS:HA	1.88	0.55
1:A:413:VAL:HB	1:B:411:MET:N	2.22	0.55
1:B:90:LYS:HG3	1:B:91:GLY:N	2.22	0.55
1:C:280:ILE:HB	1:C:307:ALA:HB3	1.86	0.55
1:D:331:LEU:O	1:D:353:THR:HG23	2.06	0.55
1:D:332:THR:HA	1:D:356:ALA:HB2	1.89	0.55
1:D:90:LYS:HE2	1:D:164:VAL:HG12	1.88	0.55
1:B:346:GLU:OE1	1:B:352:THR:HG23	2.06	0.55
1:F:96:SER:O	1:F:130:LYS:HA	2.06	0.55
1:D:354:PRO:HA	1:D:357:ASP:HB2	1.89	0.55
1:E:453:LEU:HD11	1:E:457:MET:HG2	1.88	0.55
1:A:435:GLU:HB3	1:C:408:HIS:CA	2.36	0.55
1:A:414:GLN:CA	1:B:430:ILE:HG22	2.37	0.55
1:A:118:VAL:CG1	1:A:375:ALA:CB	2.81	0.55
1:E:90:LYS:HG3	1:E:91:GLY:H	1.71	0.55
1:C:458:GLU:O	1:C:460:SER:N	2.39	0.55
1:A:208:ILE:CG2	1:A:384:GLU:HB2	2.36	0.55
1:B:332:THR:O	1:B:334:SER:N	2.39	0.55
1:F:91:GLY:HA3	1:F:125:ALA:O	2.07	0.55
1:D:175:GLU:HA	1:D:178:TRP:CE3	2.42	0.55
1:A:113:TYR:O	1:A:116:ALA:HB3	2.05	0.55
1:A:382:TYR:OH	1:C:392:VAL:HG22	2.07	0.55
1:D:229:GLU:HG3	1:D:231:SER:HB3	1.88	0.55
1:E:41:LYS:O	1:E:45:VAL:HG23	2.07	0.55
1:D:395:GLY:O	1:D:399:PHE:CD2	2.60	0.55
1:F:95:TYR:HH	1:F:145:THR:HB	1.68	0.55
1:F:309:ILE:O	1:F:310:TYR:C	2.44	0.55
1:A:183:TYR:C	1:A:183:TYR:CD2	2.79	0.55
1:D:94:ARG:CZ	1:D:107:LEU:HD21	2.36	0.55
1:E:464:ILE:O	1:E:468:ALA:N	2.38	0.55
1:E:173:GLU:OE2	1:E:202:PRO:HA	2.05	0.55
1:F:167:PRO:CB	1:F:176:MET:HE3	2.36	0.55
1:F:271:ILE:C	1:F:272:THR:HG22	2.27	0.55
1:B:346:GLU:HG2	1:B:351:PRO:HG2	1.88	0.55
1:E:336:ALA:N	1:E:337:PRO:HD2	2.22	0.55
1:D:176:MET:CE	1:D:176:MET:N	2.69	0.55
1:B:245:LYS:HD2	1:B:245:LYS:N	2.21	0.55
1:D:220:PHE:CE1	1:D:266:PHE:HB2	2.42	0.55
1:A:430:ILE:HG23	1:B:413:VAL:CG2	2.17	0.55
1:A:433:THR:OG1	1:C:410:LEU:N	2.40	0.55
1:C:402:GLU:O	1:C:405:SER:HB3	2.07	0.55
1:D:281:TRP:O	1:D:307:ALA:HA	2.06	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:368:ILE:HG21	1:C:373:LEU:HG	1.88	0.55
1:D:37:THR:O	1:D:38:GLU:CB	2.54	0.55
1:E:305:PRO:HB2	1:E:306:LYS:HD3	1.88	0.55
1:F:485:ALA:O	1:F:486:ILE:C	2.43	0.55
1:B:405:SER:O	1:B:409:LEU:N	2.34	0.55
1:E:233:MET:HB3	1:E:238:MET:O	2.06	0.55
1:E:247:PHE:CB	1:E:321:ILE:HG12	2.35	0.55
1:D:336:ALA:N	1:D:337:PRO:HD2	2.20	0.55
1:E:455:TYR:HB2	1:F:400:LYS:HB2	1.88	0.55
1:C:238:MET:HG2	1:C:245:LYS:HZ1	1.72	0.55
1:B:99:VAL:CG2	1:B:130:LYS:HA	2.37	0.55
1:B:374:ASN:C	1:B:376:GLY:H	2.10	0.55
1:A:409:LEU:CD2	1:B:403:ARG:C	2.76	0.55
1:A:409:LEU:HD13	1:B:406:ASN:ND2	2.22	0.55
1:A:411:MET:O	1:B:432:PRO:CD	2.51	0.55
1:A:412:SER:CA	1:B:432:PRO:HG3	2.36	0.55
1:C:173:GLU:O	1:C:202:PRO:HD3	2.07	0.55
1:F:118:VAL:HG11	1:F:375:ALA:CB	2.36	0.55
1:E:84:GLN:C	1:E:86:ARG:N	2.60	0.55
1:D:404:ASP:O	1:D:408:HIS:HB2	2.07	0.55
1:A:430:ILE:HD12	1:B:430:ILE:CB	2.37	0.54
1:C:331:LEU:HD23	1:C:360:PHE:CZ	2.41	0.54
1:E:202:PRO:O	1:E:205:GLN:HB2	2.06	0.54
1:F:114:LYS:CA	1:F:371:LEU:HD23	2.35	0.54
1:E:385:TRP:HH2	1:F:391:HIS:CD2	2.25	0.54
1:E:382:TYR:OH	1:F:391:HIS:O	2.23	0.54
1:A:269:LYS:HD3	1:A:284:ASP:O	2.07	0.54
1:E:300:THR:HG22	1:E:302:LEU:HB2	1.88	0.54
1:A:177:SER:HB2	1:A:202:PRO:CD	2.36	0.54
1:B:247:PHE:O	1:B:271:ILE:HG13	2.07	0.54
1:A:406:ASN:ND2	1:B:402:GLU:CD	2.61	0.54
1:B:164:VAL:HG13	1:B:198:VAL:HA	1.89	0.54
1:C:392:VAL:HG11	1:C:397:LEU:HD11	1.90	0.54
1:B:112:THR:HB	1:B:124:GLY:H	1.72	0.54
1:D:83:SER:C	1:D:84:GLN:HG3	2.25	0.54
1:A:208:ILE:CD1	1:A:383:PHE:HB3	2.38	0.54
1:D:300:THR:HG22	1:D:302:LEU:N	2.14	0.54
1:E:217:ARG:HD2	1:E:262:TYR:CE2	2.42	0.54
1:D:98:ASP:O	1:D:99:VAL:C	2.45	0.54
1:E:457:MET:HE1	1:E:457:MET:HA	1.89	0.54
1:F:423:LYS:N	1:F:423:LYS:HD2	2.22	0.54
1:F:330:GLN:NE2	1:F:330:GLN:HA	2.22	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:235:ILE:O	1:C:235:ILE:CG2	2.55	0.54
1:F:246:THR:O	1:F:320:ASP:HB2	2.06	0.54
1:A:406:ASN:O	1:A:410:LEU:HD22	2.07	0.54
1:B:401:TYR:OH	1:C:442:GLY:O	2.21	0.54
1:A:336:ALA:N	1:A:337:PRO:HD2	2.22	0.54
1:D:343:ILE:CG2	1:D:366:MET:HE3	2.36	0.54
1:F:148:PHE:CD2	1:F:152:LEU:HD11	2.42	0.54
1:E:202:PRO:HB2	1:E:205:GLN:CG	2.38	0.54
1:D:396:ARG:HG3	1:D:397:LEU:HG	1.89	0.54
1:C:52:ILE:HD13	1:C:489:VAL:HG12	1.89	0.54
1:F:29:VAL:HG21	1:F:42:ARG:NE	2.19	0.54
1:F:25:GLU:O	1:F:29:VAL:HG23	2.07	0.54
1:B:79:ARG:HG3	1:B:126:LYS:O	2.08	0.54
1:F:444:SER:OG	1:F:446:LYS:HB2	2.06	0.54
1:B:456:THR:HA	1:B:459:ARG:HB3	1.87	0.54
1:C:12:MET:HG3	1:C:354:PRO:HD3	1.90	0.54
1:C:394:TYR:CE2	1:C:443:ALA:HB3	2.42	0.54
1:D:197:CYS:SG	1:D:198:VAL:HG12	2.47	0.54
1:F:321:ILE:HG22	1:F:343:ILE:HB	1.88	0.54
1:E:434:ALA:HA	1:E:437:GLN:NE2	2.16	0.54
1:A:430:ILE:HD12	1:B:430:ILE:HD13	1.89	0.54
1:A:146:ARG:NE	1:A:182:THR:CG2	2.71	0.54
1:E:461:ALA:O	1:E:465:MET:HG3	2.07	0.54
1:F:137:THR:HG23	1:F:140:GLU:CG	2.38	0.54
1:F:250:GLN:O	1:F:326:ALA:HB2	2.08	0.54
1:C:98:ASP:O	1:C:100:SER:N	2.41	0.54
1:C:261:ARG:CZ	1:C:261:ARG:HB3	2.37	0.54
1:E:443:ALA:HB1	1:E:448:ILE:HG12	1.90	0.54
1:E:362:GLU:C	1:E:364:ASN:H	2.11	0.54
1:B:432:PRO:HB3	1:B:437:GLN:HB3	1.89	0.54
1:A:492:VAL:CG1	1:A:493:TYR:N	2.70	0.54
1:C:248:VAL:HG13	1:C:322:LEU:HD12	1.89	0.54
1:E:211:ARG:HH22	3:E:552:NDP:H72N	1.52	0.54
1:D:247:PHE:CZ	1:D:270:CYS:HB2	2.43	0.54
1:C:1:ALA:O	1:C:2:ASP:HB3	2.07	0.54
1:C:382:TYR:CZ	1:C:386:LEU:HD21	2.43	0.54
1:D:409:LEU:C	1:D:409:LEU:CD1	2.76	0.54
1:F:332:THR:O	1:F:336:ALA:CB	2.56	0.54
1:A:238:MET:CE	1:A:245:LYS:HZ1	2.21	0.54
1:F:37:THR:O	1:F:38:GLU:HB2	2.08	0.54
1:A:456:THR:HA	1:A:459:ARG:HB3	1.88	0.54
1:F:421:PHE:N	1:F:421:PHE:HD2	2.04	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:137:THR:HG23	1:C:140:GLU:CD	2.28	0.54
1:C:462:ARG:HG3	1:C:466:ARG:NH2	2.22	0.54
1:C:289:LYS:HE3	1:C:289:LYS:HA	1.90	0.54
1:B:380:VAL:O	1:B:383:PHE:HB2	2.07	0.54
1:F:232:TYR:OH	1:F:477:LEU:HD21	2.08	0.54
1:C:201:LYS:CE	1:C:388:ASN:HD21	2.20	0.54
1:D:169:MET:HG2	3:D:552:NDP:C5D	2.38	0.54
1:A:412:SER:C	1:A:414:GLN:N	2.61	0.54
1:B:399:PHE:O	1:B:401:TYR:N	2.41	0.54
1:A:428:ILE:CG1	1:B:428:ILE:CB	2.45	0.54
1:B:336:ALA:O	1:B:339:VAL:HG23	2.08	0.54
1:B:337:PRO:HD3	1:B:359:ILE:CD1	2.38	0.54
1:C:217:ARG:NE	1:C:450:HIS:CD2	2.76	0.54
1:A:138:ASP:O	1:A:141:LEU:N	2.41	0.54
1:C:30:GLU:HG2	1:C:31:ASP:N	2.23	0.54
1:D:213:SER:O	1:D:214:ALA:C	2.46	0.54
1:F:42:ARG:O	1:F:46:ARG:HB2	2.07	0.54
1:E:337:PRO:HA	1:E:359:ILE:HG21	1.89	0.54
1:A:35:ARG:CD	1:A:35:ARG:N	2.69	0.54
1:C:463:GLN:HA	1:C:466:ARG:HB3	1.90	0.54
1:B:44:ARG:O	1:B:48:ILE:HG13	2.07	0.54
1:A:411:MET:HG3	1:B:432:PRO:C	2.27	0.54
1:A:435:GLU:O	1:A:438:ASP:CB	2.52	0.54
1:C:176:MET:HG3	1:C:199:THR:O	2.08	0.54
1:C:443:ALA:CB	1:C:448:ILE:HG12	2.39	0.54
1:C:63:PHE:CE2	1:C:75:ILE:HD11	2.43	0.54
1:B:37:THR:CG2	1:B:41:LYS:HG3	2.37	0.54
1:D:222:GLY:HA2	1:D:372:TYR:OH	2.08	0.54
1:C:40:GLN:HA	1:C:43:ASN:HB2	1.90	0.54
1:D:417:LEU:HD21	1:F:417:LEU:CD1	2.36	0.54
1:D:383:PHE:O	1:D:385:TRP:N	2.41	0.54
1:B:97:THR:CG2	1:B:132:ASN:HB2	2.37	0.54
1:A:346:GLU:OE1	1:A:352:THR:HG23	2.07	0.54
2:D:502:GLU:N	3:D:552:NDP:H5N	2.22	0.53
1:F:112:THR:HB	1:F:124:GLY:N	2.23	0.53
1:A:98:ASP:O	1:A:99:VAL:C	2.46	0.53
1:F:10:PHE:O	1:F:10:PHE:HD2	1.90	0.53
1:F:137:THR:O	1:F:140:GLU:HB2	2.08	0.53
1:F:68:ASP:HB2	1:F:140:GLU:CG	2.38	0.53
1:D:445:GLU:O	1:D:446:LYS:O	2.25	0.53
1:C:66:ARG:NH2	1:C:70:GLY:O	2.41	0.53
1:A:428:ILE:CB	1:B:428:ILE:HB	2.34	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:272:THR:OG1	1:E:314:ILE:HD11	2.09	0.53
1:B:271:ILE:HD11	1:B:319:CYS:HB3	1.90	0.53
1:B:339:VAL:O	1:B:341:ALA:N	2.41	0.53
1:D:336:ALA:O	1:D:339:VAL:HG23	2.08	0.53
1:F:84:GLN:C	1:F:86:ARG:N	2.62	0.53
1:A:95:TYR:HH	1:A:145:THR:HB	1.67	0.53
1:D:373:LEU:HD22	1:D:373:LEU:O	2.08	0.53
1:F:211:ARG:O	1:F:214:ALA:HB3	2.08	0.53
1:B:19:ARG:NH1	1:B:479:THR:HG21	2.24	0.53
1:A:29:VAL:HG13	1:A:41:LYS:CB	2.36	0.53
1:F:165:PRO:HD2	1:F:197:CYS:O	2.08	0.53
1:A:221:HIS:O	1:A:225:ASN:HB2	2.08	0.53
1:C:272:THR:CG2	1:C:281:TRP:HD1	2.21	0.53
1:C:175:GLU:HA	1:C:178:TRP:HE3	1.71	0.53
1:E:38:GLU:HG2	1:E:39:GLU:N	2.22	0.53
1:B:8:ASN:O	1:B:9:PHE:C	2.47	0.53
1:A:433:THR:CA	1:C:412:SER:CB	2.63	0.53
1:B:405:SER:HA	1:C:439:ARG:HD2	1.89	0.53
1:A:114:LYS:HA	1:A:371:LEU:CD2	2.38	0.53
1:D:315:LEU:HD13	1:D:331:LEU:HD11	1.89	0.53
1:F:29:VAL:HG22	1:F:42:ARG:HG2	1.90	0.53
1:A:101:VAL:HG22	1:A:105:LYS:HD2	1.91	0.53
1:A:186:THR:OG1	1:A:187:ILE:N	2.41	0.53
1:E:308:LYS:HG2	1:E:308:LYS:O	2.07	0.53
1:A:410:LEU:HB3	1:B:436:PHE:CZ	2.43	0.53
1:A:415:GLU:O	1:A:419:ARG:HB2	2.08	0.53
1:A:436:PHE:O	1:A:436:PHE:CG	2.62	0.53
1:A:213:SER:O	1:A:215:THR:N	2.42	0.53
1:C:167:PRO:CB	1:C:172:GLY:HA2	2.39	0.53
1:B:38:GLU:HG2	1:B:39:GLU:H	1.73	0.53
1:F:177:SER:HB2	1:F:202:PRO:CG	2.38	0.53
1:C:82:HIS:CD2	1:C:83:SER:N	2.76	0.53
1:A:428:ILE:HD11	1:B:414:GLN:NE2	2.23	0.53
1:E:238:MET:HE3	1:E:320:ASP:OD2	2.09	0.53
1:E:320:ASP:HB3	1:E:321:ILE:HD13	1.90	0.53
1:D:255:VAL:HG11	3:D:552:NDP:O4D	2.08	0.53
1:E:173:GLU:O	1:E:202:PRO:HD3	2.09	0.53
1:F:171:THR:CB	1:F:175:GLU:HG3	2.36	0.53
1:A:236:LEU:HD23	1:A:237:GLY:N	2.23	0.53
1:C:82:HIS:ND1	1:C:109:SER:HA	2.24	0.53
1:C:155:LYS:O	1:C:157:PHE:HD1	1.90	0.53
1:E:282:ASN:HB2	1:E:306:LYS:O	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:331:LEU:HD23	1:E:360:PHE:HZ	1.73	0.53
1:E:260:MET:HG2	1:E:288:PRO:HG3	1.91	0.53
1:F:457:MET:CE	1:F:457:MET:HA	2.38	0.53
1:C:412:SER:O	1:C:414:GLN:N	2.41	0.53
1:A:379:THR:O	1:A:382:TYR:HB3	2.09	0.53
1:E:92:GLY:HA2	1:E:166:ALA:H	1.72	0.53
1:B:339:VAL:C	1:B:341:ALA:H	2.11	0.53
1:D:303:GLY:H	1:D:309:ILE:CD1	2.22	0.53
1:C:147:ARG:O	1:C:149:THR:N	2.41	0.53
1:B:219:VAL:HG12	1:B:220:PHE:N	2.22	0.53
1:A:93:ILE:HD12	1:A:148:PHE:HE2	1.73	0.53
1:F:247:PHE:CE2	1:F:263:LEU:CB	2.91	0.53
1:E:395:GLY:O	1:E:399:PHE:CD2	2.61	0.53
1:F:45:VAL:O	1:F:47:SER:N	2.41	0.53
1:F:99:VAL:O	1:F:99:VAL:HG23	2.09	0.53
1:B:99:VAL:HG22	1:B:130:LYS:HA	1.91	0.53
1:D:209:HIS:CD2	1:D:446:LYS:HA	2.44	0.53
1:D:275:GLU:HB2	1:D:301:ILE:HD11	1.91	0.53
1:C:216:GLY:HA2	1:C:219:VAL:HB	1.89	0.53
1:A:404:ASP:O	1:B:436:PHE:CE1	2.61	0.53
1:A:53:LYS:O	1:A:82:HIS:HE1	1.92	0.53
1:F:248:VAL:HG12	1:F:319:CYS:SG	2.48	0.53
1:F:368:ILE:CG2	1:F:373:LEU:HG	2.38	0.53
1:D:397:LEU:HD23	1:F:383:PHE:CD1	2.44	0.53
1:F:380:VAL:HA	1:F:383:PHE:CD2	2.37	0.53
1:F:114:LYS:NZ	2:F:502:GLU:O	2.35	0.53
1:B:95:TYR:HB3	1:B:133:PRO:HG3	1.90	0.53
1:B:196:ALA:HB2	1:B:388:ASN:HB3	1.89	0.53
1:A:385:TRP:CZ2	1:A:389:LEU:HD11	2.44	0.53
1:F:48:ILE:HG21	1:F:490:PHE:CD1	2.44	0.53
1:F:131:ILE:HG13	1:F:131:ILE:O	2.07	0.53
1:A:400:LYS:NZ	1:B:439:ARG:NH1	2.56	0.53
1:A:430:ILE:HD13	1:B:410:LEU:HG	1.90	0.53
1:A:434:ALA:H	1:C:412:SER:N	2.06	0.53
1:A:374:ASN:HB2	3:A:552:NDP:H5N	1.91	0.53
1:E:313:SER:HB3	1:E:316:GLU:HB2	1.91	0.53
1:E:248:VAL:HG11	1:E:317:VAL:HG11	1.91	0.53
1:C:167:PRO:HD3	1:C:200:GLY:HA3	1.91	0.53
1:D:164:VAL:HG13	1:D:198:VAL:CA	2.38	0.53
1:B:258:HIS:HD2	1:B:261:ARG:HH12	1.49	0.53
1:F:166:ALA:HA	1:F:199:THR:O	2.09	0.53
1:F:281:TRP:CZ2	1:F:283:PRO:HG3	2.44	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:478:ARG:O	1:E:480:ALA:N	2.42	0.53
1:F:306:LYS:N	1:F:306:LYS:CD	2.72	0.53
1:B:491:ARG:O	1:B:494:ASN:N	2.25	0.53
1:F:104:VAL:HG12	1:F:104:VAL:O	2.09	0.53
1:A:408:HIS:CE1	1:B:439:ARG:N	2.78	0.53
1:A:436:PHE:HD2	1:C:406:ASN:HA	1.73	0.53
1:A:433:THR:CB	1:C:412:SER:H	2.18	0.53
1:E:162:VAL:HG23	1:E:163:ASP:N	2.23	0.53
1:F:234:SER:C	1:F:236:LEU:H	2.12	0.53
1:C:5:ASP:O	1:C:7:PRO:HD3	2.09	0.53
1:B:37:THR:C	1:B:40:GLN:HG3	2.30	0.53
1:A:10:PHE:HA	1:A:106:ALA:HB2	1.90	0.53
1:A:410:LEU:O	1:B:410:LEU:CB	2.57	0.52
1:A:51:ILE:O	1:A:54:PRO:HD2	2.08	0.52
1:C:392:VAL:HG12	1:C:393:SER:O	2.09	0.52
1:E:211:ARG:HD2	1:E:211:ARG:O	2.08	0.52
1:E:280:ILE:HB	1:E:307:ALA:HB1	1.91	0.52
1:C:16:PHE:CE2	1:C:354:PRO:HB3	2.38	0.52
1:D:90:LYS:CB	1:D:122:PHE:CD1	2.92	0.52
1:F:275:GLU:HG3	3:F:552:NDP:O2X	2.09	0.52
1:E:483:VAL:HG12	1:E:484:ASN:N	2.23	0.52
1:A:301:ILE:HG13	1:A:302:LEU:N	2.25	0.52
1:A:392:VAL:HG11	1:A:397:LEU:HD11	1.90	0.52
1:A:412:SER:N	1:B:432:PRO:HG3	2.24	0.52
1:B:220:PHE:CZ	1:B:224:GLU:HG3	2.45	0.52
1:E:236:LEU:HD21	1:E:342:LYS:HG3	1.89	0.52
1:B:292:GLU:O	1:B:294:PHE:N	2.42	0.52
1:C:444:SER:O	1:C:445:GLU:C	2.48	0.52
1:C:374:ASN:C	1:C:376:GLY:N	2.63	0.52
1:B:444:SER:HB2	1:B:446:LYS:HD3	1.91	0.52
1:A:222:GLY:HA3	1:A:373:LEU:HD23	1.90	0.52
1:D:314:ILE:HD12	1:D:317:VAL:CG2	2.39	0.52
1:D:53:LYS:O	1:D:82:HIS:CE1	2.62	0.52
1:B:400:LYS:HB2	1:C:455:TYR:HB2	1.90	0.52
1:F:183:TYR:CD2	1:F:183:TYR:O	2.61	0.52
1:D:257:LEU:HD12	1:D:257:LEU:O	2.08	0.52
1:A:411:MET:CE	1:A:414:GLN:OE1	2.57	0.52
1:B:413:VAL:O	1:B:417:LEU:HG	2.10	0.52
1:A:412:SER:HA	1:B:432:PRO:CG	2.39	0.52
1:C:404:ASP:O	1:C:408:HIS:HB2	2.08	0.52
1:A:339:VAL:C	1:A:341:ALA:H	2.12	0.52
1:A:77:GLY:C	1:A:78:TYR:CD1	2.83	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:201:LYS:NZ	1:E:388:ASN:ND2	2.44	0.52
1:A:238:MET:HE1	1:A:320:ASP:HB3	1.92	0.52
1:E:421:PHE:O	1:E:422:GLY:O	2.27	0.52
1:C:109:SER:O	1:C:112:THR:HG23	2.09	0.52
1:A:423:LYS:HD2	1:A:423:LYS:N	2.25	0.52
1:B:114:LYS:HA	1:B:371:LEU:HD23	1.91	0.52
1:B:431:VAL:HG22	1:B:432:PRO:O	2.08	0.52
1:C:366:MET:HG3	1:C:475:LEU:HD22	1.89	0.52
1:E:90:LYS:HG3	1:E:91:GLY:N	2.24	0.52
1:A:247:PHE:O	1:A:271:ILE:HG13	2.08	0.52
1:C:173:GLU:CD	1:C:202:PRO:HA	2.28	0.52
1:F:316:GLU:OE2	1:F:338:ARG:HG3	2.09	0.52
1:F:371:LEU:HD13	1:F:481:ALA:HB1	1.91	0.52
1:B:280:ILE:HB	1:B:307:ALA:HB1	1.91	0.52
1:B:94:ARG:HG2	1:B:94:ARG:O	2.10	0.52
1:E:23:ILE:HG22	1:E:471:TYR:HD1	1.74	0.52
1:D:18:ASP:O	1:D:21:ALA:HB3	2.10	0.52
1:B:410:LEU:C	1:B:412:SER:N	2.59	0.52
1:A:490:PHE:CG	1:A:491:ARG:N	2.78	0.52
1:C:247:PHE:CE2	1:C:263:LEU:HB3	2.44	0.52
1:C:346:GLU:OE1	1:C:352:THR:HG23	2.10	0.52
1:C:353:THR:HB	1:C:354:PRO:HD2	1.90	0.52
1:C:211:ARG:HH22	2:C:502:GLU:CD	2.13	0.52
1:D:94:ARG:HE	1:D:169:MET:HG3	1.75	0.52
1:E:53:LYS:HB3	1:E:54:PRO:CD	2.28	0.52
1:F:126:LYS:HG3	1:F:127:ALA:H	1.74	0.52
1:F:214:ALA:HB1	1:F:380:VAL:CG2	2.39	0.52
1:B:172:GLY:H	1:B:175:GLU:HG2	1.75	0.52
1:E:420:LYS:C	1:E:421:PHE:HD2	2.13	0.52
1:D:64:PRO:O	1:D:65:ILE:HD13	2.09	0.52
1:D:29:VAL:HG21	1:D:42:ARG:NE	2.20	0.52
1:D:444:SER:H	1:D:447:ASP:HB2	1.74	0.52
1:A:24:VAL:HG13	1:A:483:VAL:HG22	1.91	0.52
1:A:409:LEU:HA	1:A:412:SER:OG	2.09	0.52
1:A:485:ALA:O	1:A:488:LYS:N	2.43	0.52
1:C:363:ARG:NH1	1:C:365:ILE:HD11	2.25	0.52
1:A:219:VAL:HA	1:A:373:LEU:HD22	1.90	0.52
1:F:236:LEU:HD22	1:F:238:MET:HB2	1.92	0.52
1:C:63:PHE:CD1	1:C:147:ARG:CG	2.92	0.52
1:D:186:THR:OG1	1:D:187:ILE:N	2.42	0.52
1:B:64:PRO:O	1:B:65:ILE:HD13	2.08	0.52
1:B:29:VAL:CG2	1:B:42:ARG:HG2	2.40	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:453:LEU:HG	1:D:454:ALA:N	2.25	0.52
1:F:93:ILE:HB	1:F:127:ALA:HB3	1.90	0.52
1:F:172:GLY:H	1:F:175:GLU:HG2	1.74	0.52
1:A:37:THR:CG2	1:A:41:LYS:HG3	2.40	0.52
1:A:459:ARG:O	1:A:462:ARG:HB3	2.09	0.52
1:E:446:LYS:CD	1:E:446:LYS:H	2.22	0.52
1:F:304:PHE:HE2	1:F:306:LYS:HB2	1.72	0.52
1:A:404:ASP:CA	1:B:439:ARG:CD	2.86	0.52
1:E:492:VAL:CG2	1:E:493:TYR:N	2.73	0.52
1:B:230:ALA:O	1:B:231:SER:C	2.48	0.52
1:D:272:THR:OG1	1:D:314:ILE:CD1	2.54	0.52
1:C:91:GLY:HA3	1:C:125:ALA:O	2.10	0.52
1:C:385:TRP:CE2	1:C:389:LEU:HD11	2.45	0.52
1:C:63:PHE:CD1	1:C:75:ILE:HD11	2.44	0.52
1:E:112:THR:HG23	1:E:113:TYR:N	2.24	0.52
1:D:409:LEU:HD21	1:F:409:LEU:HD22	1.90	0.52
1:F:41:LYS:O	1:F:45:VAL:HG23	2.09	0.52
1:A:305:PRO:HB2	1:A:306:LYS:CD	2.40	0.52
1:A:463:GLN:HB3	1:A:466:ARG:HH21	1.74	0.52
1:A:409:LEU:CD2	1:B:407:TYR:CB	2.76	0.52
1:B:411:MET:O	1:B:414:GLN:HB3	2.10	0.52
1:D:150:MET:CE	1:D:187:ILE:HD11	2.39	0.52
1:D:392:VAL:HG11	1:D:397:LEU:HD11	1.90	0.52
1:C:34:THR:HG23	1:C:35:ARG:HD3	1.92	0.52
1:B:239:THR:HG23	1:B:245:LYS:HZ3	1.74	0.52
1:C:216:GLY:O	1:C:219:VAL:HB	2.10	0.52
1:E:339:VAL:HG12	1:E:341:ALA:HB3	1.92	0.52
1:A:410:LEU:CB	1:B:436:PHE:CZ	2.92	0.52
1:A:413:VAL:HG22	1:B:406:ASN:O	2.10	0.52
1:B:339:VAL:O	1:B:339:VAL:HG12	2.09	0.52
1:C:168:ASP:O	1:C:171:THR:O	2.28	0.52
1:C:198:VAL:O	1:C:201:LYS:NZ	2.32	0.52
1:B:25:GLU:O	1:B:29:VAL:HG23	2.10	0.52
1:F:164:VAL:HG13	1:F:197:CYS:C	2.30	0.52
1:F:362:GLU:C	1:F:364:ASN:H	2.12	0.52
1:B:93:ILE:O	1:B:93:ILE:HG12	2.07	0.52
1:A:435:GLU:N	1:A:437:GLN:OE1	2.43	0.51
1:B:412:SER:O	1:B:414:GLN:N	2.42	0.51
1:C:414:GLN:O	1:C:416:SER:N	2.43	0.51
1:B:212:ILE:HG13	1:B:213:SER:N	2.25	0.51
1:A:171:THR:HB	1:A:175:GLU:HG3	1.92	0.51
1:D:211:ARG:O	1:D:214:ALA:HB3	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:37:THR:O	1:F:38:GLU:CB	2.57	0.51
1:D:355:GLU:CD	1:D:358:LYS:HE3	2.31	0.51
1:C:59:LEU:HD21	1:C:155:LYS:HB2	1.92	0.51
1:D:24:VAL:HG23	1:D:28:LEU:CD2	2.40	0.51
1:D:446:LYS:O	1:D:447:ASP:C	2.48	0.51
1:A:66:ARG:NH2	1:A:70:GLY:O	2.43	0.51
1:B:9:PHE:CD2	1:B:106:ALA:HB1	2.45	0.51
1:C:344:ILE:CD1	1:C:360:PHE:CZ	2.93	0.51
1:C:383:PHE:O	1:C:386:LEU:N	2.43	0.51
1:F:201:LYS:HZ1	1:F:388:ASN:ND2	2.08	0.51
1:B:175:GLU:HA	1:B:178:TRP:CE3	2.45	0.51
1:C:30:GLU:HG2	1:C:31:ASP:H	1.74	0.51
1:E:433:THR:CG2	1:F:412:SER:HA	2.40	0.51
1:F:37:THR:CG2	1:F:41:LYS:HG3	2.40	0.51
1:D:289:LYS:CE	1:D:293:ASP:OD1	2.56	0.51
1:A:394:TYR:HE2	1:A:443:ALA:HB3	1.74	0.51
1:B:96:SER:O	1:B:99:VAL:HG22	2.09	0.51
1:A:420:LYS:HG3	1:A:421:PHE:CE2	2.46	0.51
1:C:412:SER:C	1:C:414:GLN:N	2.60	0.51
1:E:95:TYR:HB3	1:E:133:PRO:HG3	1.92	0.51
1:B:358:LYS:HG3	1:B:359:ILE:N	2.24	0.51
1:C:174:ARG:O	1:C:177:SER:HB3	2.10	0.51
1:D:90:LYS:NZ	1:D:166:ALA:HB2	2.23	0.51
1:D:391:HIS:O	1:D:392:VAL:CG2	2.58	0.51
1:E:5:ASP:C	1:E:7:PRO:HD3	2.30	0.51
1:A:428:ILE:CG1	1:B:430:ILE:HG13	2.36	0.51
1:C:280:ILE:HB	1:C:307:ALA:HB1	1.91	0.51
1:C:309:ILE:O	1:C:310:TYR:C	2.48	0.51
1:B:316:GLU:OE2	1:B:338:ARG:HG3	2.10	0.51
1:D:336:ALA:HB3	1:D:359:ILE:HD12	1.92	0.51
1:C:199:THR:HG21	1:C:381:SER:O	2.10	0.51
1:D:117:VAL:HG21	1:D:371:LEU:HD22	1.92	0.51
1:A:224:GLU:O	1:A:224:GLU:OE1	2.28	0.51
1:E:226:PHE:HE2	1:E:465:MET:HG2	1.75	0.51
1:F:10:PHE:O	1:F:10:PHE:CD2	2.63	0.51
1:F:219:VAL:HG11	1:F:259:SER:OG	2.10	0.51
1:F:478:ARG:O	1:F:481:ALA:N	2.43	0.51
1:C:43:ASN:O	1:C:44:ARG:C	2.48	0.51
1:A:238:MET:CG	1:A:245:LYS:HZ1	2.23	0.51
1:D:417:LEU:CD2	1:F:428:ILE:HG21	2.33	0.51
1:D:380:VAL:HG22	1:D:449:VAL:HG13	1.92	0.51
1:F:399:PHE:CE2	1:F:443:ALA:O	2.58	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:473:LEU:O	1:A:475:LEU:N	2.44	0.51
1:B:304:PHE:CD1	1:B:305:PRO:HD2	2.45	0.51
1:A:173:GLU:O	1:A:174:ARG:C	2.48	0.51
1:D:30:GLU:HG2	1:D:31:ASP:N	2.24	0.51
1:A:409:LEU:CD1	1:B:406:ASN:CG	2.78	0.51
1:A:409:LEU:HD11	1:B:404:ASP:N	2.25	0.51
1:A:228:ASN:OD1	1:A:241:GLY:HA2	2.10	0.51
1:F:232:TYR:O	1:F:235:ILE:N	2.43	0.51
1:C:175:GLU:O	1:C:178:TRP:N	2.44	0.51
1:C:154:LYS:HE2	1:D:185:SER:O	2.10	0.51
1:D:109:SER:O	1:D:113:TYR:CD1	2.64	0.51
1:D:78:TYR:CD1	1:D:78:TYR:N	2.79	0.51
1:D:392:VAL:O	1:D:394:TYR:N	2.43	0.51
1:F:202:PRO:HB2	1:F:205:GLN:HG2	1.91	0.51
1:B:30:GLU:HG2	1:B:31:ASP:N	2.26	0.51
1:F:43:ASN:O	1:F:44:ARG:C	2.48	0.51
1:F:153:ALA:CA	1:F:158:ILE:HG22	2.34	0.51
1:D:220:PHE:HE1	1:D:266:PHE:HB2	1.73	0.51
1:A:23:ILE:HG22	1:A:471:TYR:CD1	2.46	0.51
1:A:410:LEU:CB	1:B:436:PHE:HE2	2.14	0.51
1:E:313:SER:HB3	1:E:316:GLU:OE1	2.11	0.51
1:D:303:GLY:H	1:D:309:ILE:HD11	1.74	0.51
1:D:186:THR:OG1	1:D:187:ILE:HG12	2.11	0.51
1:F:56:ASN:HD21	1:F:83:SER:HA	1.76	0.51
1:B:149:THR:OG1	1:B:179:ILE:HG23	2.11	0.51
1:B:107:LEU:CG	1:B:126:LYS:HE2	2.40	0.51
1:F:433:THR:O	1:F:437:GLN:OE1	2.29	0.51
1:F:1:ALA:O	1:F:2:ASP:CB	2.57	0.51
1:A:90:LYS:CB	1:A:122:PHE:HD1	2.23	0.51
1:D:316:GLU:OE2	1:D:338:ARG:NH1	2.43	0.51
1:C:217:ARG:O	1:C:220:PHE:HB3	2.11	0.51
1:F:150:MET:O	1:F:154:LYS:HG3	2.11	0.51
1:D:289:LYS:HA	1:D:289:LYS:HE3	1.92	0.51
1:B:20:GLY:HA2	1:B:23:ILE:HD12	1.92	0.51
1:A:158:ILE:HG12	1:A:159:GLY:N	2.25	0.51
1:D:205:GLN:NE2	1:F:495:GLU:HB2	2.26	0.51
1:B:406:ASN:HA	1:B:409:LEU:CB	2.41	0.51
1:C:439:ARG:O	1:C:439:ARG:HG3	2.10	0.51
1:A:324:PRO:HD2	1:A:345:ALA:O	2.11	0.51
1:F:335:ASN:O	1:F:338:ARG:HG2	2.10	0.51
1:C:494:ASN:O	1:C:495:GLU:HG2	2.10	0.51
1:F:24:VAL:CG1	1:F:483:VAL:HG13	2.41	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:112:THR:N	1:C:124:GLY:HA3	2.26	0.51
1:D:406:ASN:O	1:D:410:LEU:HB2	2.11	0.51
1:A:300:THR:HG22	1:A:302:LEU:HB2	1.92	0.51
1:D:203:ILE:CG2	1:D:204:SER:N	2.73	0.51
1:A:9:PHE:O	1:A:10:PHE:C	2.46	0.51
1:E:23:ILE:HG22	1:E:471:TYR:CD1	2.46	0.51
1:C:158:ILE:HG12	1:C:159:GLY:N	2.25	0.51
1:B:423:LYS:CD	1:B:423:LYS:N	2.74	0.51
1:A:430:ILE:CD1	1:B:410:LEU:HD23	2.40	0.51
1:E:212:ILE:HG13	1:E:213:SER:N	2.24	0.51
1:B:337:PRO:HA	1:B:359:ILE:HG21	1.92	0.51
1:A:280:ILE:HB	1:A:307:ALA:HB3	1.87	0.51
1:D:325:ALA:HA	1:D:348:ALA:H	1.75	0.51
1:A:458:GLU:CG	1:A:459:ARG:N	2.71	0.51
1:D:37:THR:CG2	1:D:41:LYS:HG3	2.40	0.51
1:A:346:GLU:HG2	1:A:351:PRO:CG	2.40	0.51
1:A:8:ASN:CG	1:A:11:LYS:HG3	2.31	0.51
1:A:52:ILE:CD1	1:A:489:VAL:HG12	2.39	0.51
1:B:316:GLU:O	1:B:317:VAL:C	2.49	0.51
1:B:216:GLY:HA2	1:B:219:VAL:HB	1.93	0.51
1:D:255:VAL:HG22	1:D:325:ALA:HB1	1.92	0.51
1:E:300:THR:HG21	1:E:302:LEU:HB2	1.92	0.51
1:E:68:ASP:HB2	1:E:140:GLU:OE1	2.10	0.51
1:A:408:HIS:CD2	1:B:436:PHE:C	2.84	0.50
1:A:410:LEU:O	1:B:410:LEU:CD1	2.56	0.50
1:C:300:THR:HG21	1:C:302:LEU:HB2	1.93	0.50
2:F:502:GLU:CA	2:F:502:GLU:OE2	2.59	0.50
1:B:142:GLU:HB2	1:B:178:TRP:CZ2	2.46	0.50
1:B:59:LEU:HD22	1:B:157:PHE:CD1	2.46	0.50
1:C:19:ARG:CG	1:C:19:ARG:NH1	2.69	0.50
1:C:84:GLN:C	1:C:86:ARG:N	2.63	0.50
1:C:306:LYS:HD3	1:C:306:LYS:H	1.76	0.50
1:F:186:THR:O	1:F:189:HIS:HB3	2.12	0.50
1:A:344:ILE:HB	1:A:367:VAL:HG12	1.94	0.50
1:B:88:PRO:HB3	1:B:161:GLY:C	2.31	0.50
1:B:113:TYR:C	1:B:371:LEU:HD21	2.31	0.50
1:A:430:ILE:CG2	1:B:410:LEU:CD1	2.90	0.50
1:C:342:LYS:O	1:C:365:ILE:HG23	2.11	0.50
1:E:175:GLU:O	1:E:178:TRP:HB2	2.10	0.50
1:C:63:PHE:O	1:C:75:ILE:HD13	2.10	0.50
2:D:502:GLU:N	3:D:552:NDP:C5N	2.75	0.50
1:A:224:GLU:HG2	1:A:224:GLU:O	2.12	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:406:ASN:O	1:F:410:LEU:HB2	2.11	0.50
1:E:397:LEU:H	1:E:397:LEU:HD12	1.75	0.50
1:A:413:VAL:CG2	1:B:406:ASN:O	2.59	0.50
1:A:404:ASP:CA	1:B:439:ARG:HD3	2.41	0.50
1:B:445:GLU:O	1:B:446:LYS:C	2.49	0.50
1:C:160:PRO:CG	1:C:161:GLY:H	2.22	0.50
1:A:169:MET:O	1:A:170:SER:HB2	2.12	0.50
1:C:300:THR:HG22	1:C:302:LEU:HB2	1.93	0.50
1:E:172:GLY:O	1:E:176:MET:HB2	2.11	0.50
1:B:342:LYS:HB2	1:B:342:LYS:HZ2	1.75	0.50
1:D:280:ILE:HB	1:D:307:ALA:HB3	1.93	0.50
1:C:324:PRO:HB2	1:C:351:PRO:CB	2.40	0.50
1:B:37:THR:O	1:B:38:GLU:HB2	2.11	0.50
1:D:345:ALA:HB1	1:D:373:LEU:HD11	1.92	0.50
1:F:75:ILE:CD1	1:F:75:ILE:O	2.57	0.50
1:D:200:GLY:N	1:D:384:GLU:OE1	2.45	0.50
1:D:63:PHE:CZ	1:D:75:ILE:HD11	2.46	0.50
1:E:473:LEU:O	1:E:475:LEU:N	2.44	0.50
1:E:315:LEU:HD12	1:E:335:ASN:HD21	1.75	0.50
1:B:96:SER:O	1:B:130:LYS:HA	2.11	0.50
1:A:158:ILE:HG13	1:A:165:PRO:CD	2.42	0.50
1:A:10:PHE:O	1:A:13:VAL:HB	2.11	0.50
1:A:258:HIS:CD2	1:A:261:ARG:HH11	2.19	0.50
1:C:271:ILE:HD12	1:C:272:THR:CG2	2.41	0.50
1:D:230:ALA:HA	1:D:233:MET:HB2	1.93	0.50
1:D:107:LEU:CD2	1:D:126:LYS:HE2	2.38	0.50
1:D:276:SER:OG	3:D:552:NDP:O3X	2.29	0.50
1:D:78:TYR:O	1:D:79:ARG:HB2	2.12	0.50
1:F:459:ARG:O	1:F:462:ARG:CB	2.59	0.50
1:E:9:PHE:CD2	1:E:106:ALA:HB1	2.46	0.50
1:D:19:ARG:NH1	1:D:19:ARG:HG2	2.19	0.50
1:D:99:VAL:HA	1:D:103:GLU:OE1	2.11	0.50
1:C:445:GLU:O	1:C:446:LYS:C	2.49	0.50
1:E:59:LEU:O	1:E:78:TYR:HA	2.12	0.50
1:E:60:SER:HA	1:E:78:TYR:HD2	1.75	0.50
1:A:401:TYR:CE1	1:B:444:SER:N	2.79	0.50
1:A:411:MET:O	1:A:414:GLN:N	2.44	0.50
1:B:417:LEU:HB3	1:B:428:ILE:CD1	2.42	0.50
1:C:236:LEU:HD21	1:C:342:LYS:HG3	1.92	0.50
1:E:136:TYR:HB2	1:E:141:LEU:CD2	2.42	0.50
1:B:230:ALA:HA	1:B:233:MET:HB2	1.93	0.50
1:B:337:PRO:HD3	1:B:359:ILE:HD12	1.93	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:291:LEU:O	1:D:292:GLU:C	2.50	0.50
1:D:90:LYS:HD3	1:D:122:PHE:CE1	2.46	0.50
1:A:129:VAL:O	1:A:131:ILE:N	2.44	0.50
1:C:48:ILE:HG21	1:C:490:PHE:HD1	1.77	0.50
1:B:137:THR:HG23	1:B:140:GLU:HG3	1.94	0.50
1:F:26:ASP:OD1	1:F:42:ARG:NH2	2.45	0.50
1:A:29:VAL:CG2	1:A:42:ARG:HG2	2.41	0.50
1:D:175:GLU:HA	1:D:178:TRP:HE3	1.76	0.50
1:F:19:ARG:NH1	1:F:479:THR:HG21	2.26	0.50
1:F:77:GLY:HA2	1:F:128:GLY:O	2.10	0.50
1:B:53:LYS:CB	1:B:54:PRO:HD3	2.22	0.50
1:E:47:SER:O	1:E:51:ILE:HG13	2.11	0.50
1:D:396:ARG:O	1:D:396:ARG:HD2	2.12	0.50
1:F:177:SER:HB2	1:F:202:PRO:HG2	1.93	0.50
1:F:211:ARG:NH2	3:F:552:NDP:N7N	2.48	0.50
1:F:92:GLY:HA2	1:F:166:ALA:H	1.76	0.50
1:F:217:ARG:NH1	1:F:221:HIS:HE1	2.10	0.50
1:B:253:GLY:N	3:B:552:NDP:H4B	2.26	0.50
1:B:239:THR:HG23	1:B:245:LYS:HZ1	1.74	0.50
1:A:409:LEU:CD1	1:B:406:ASN:N	2.41	0.50
1:A:414:GLN:NE2	1:B:431:VAL:N	2.48	0.50
1:A:411:MET:C	1:B:432:PRO:HD3	2.31	0.50
1:C:402:GLU:CA	1:C:405:SER:HB2	2.41	0.50
1:A:491:ARG:HG2	1:A:492:VAL:N	2.27	0.50
1:A:271:ILE:C	1:A:272:THR:HG22	2.32	0.50
1:A:316:GLU:O	1:A:317:VAL:C	2.49	0.50
1:D:321:ILE:N	1:D:321:ILE:HD13	2.27	0.50
1:B:38:GLU:HB3	1:B:40:GLN:HG2	1.94	0.50
1:E:35:ARG:CD	1:E:35:ARG:N	2.73	0.50
1:F:35:ARG:N	1:F:35:ARG:CD	2.74	0.50
1:F:457:MET:HA	1:F:457:MET:HE2	1.93	0.50
1:E:215:THR:HG23	1:E:216:GLY:N	2.26	0.50
1:A:412:SER:HB3	1:B:407:TYR:CE2	2.44	0.50
1:A:421:PHE:CB	1:B:429:PRO:HB3	2.41	0.50
1:A:436:PHE:CD2	1:C:409:LEU:HD22	2.47	0.50
1:E:220:PHE:O	1:E:224:GLU:HB3	2.12	0.50
1:A:272:THR:HA	1:A:286:ILE:HD12	1.93	0.50
1:C:323:ILE:HD13	1:C:345:ALA:HB3	1.94	0.50
1:F:115:CYS:SG	1:F:378:VAL:HG11	2.52	0.50
1:F:172:GLY:H	1:F:175:GLU:CG	2.24	0.50
1:A:27:LYS:HE2	1:A:31:ASP:CG	2.31	0.50
1:C:90:LYS:HE2	1:C:164:VAL:CG1	2.42	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:167:PRO:CG	1:D:176:MET:HG2	2.39	0.50
1:B:239:THR:CG2	1:B:245:LYS:NZ	2.74	0.50
1:B:372:TYR:C	1:B:372:TYR:CD2	2.85	0.50
1:D:174:ARG:O	1:D:177:SER:HB3	2.12	0.50
1:D:177:SER:HB2	1:D:202:PRO:CG	2.42	0.50
1:D:181:ASP:O	1:D:181:ASP:OD1	2.29	0.50
1:A:339:VAL:O	1:A:341:ALA:N	2.45	0.50
1:E:399:PHE:C	1:E:401:TYR:H	2.14	0.50
1:F:91:GLY:O	1:F:165:PRO:HA	2.12	0.50
1:D:204:SER:O	1:F:492:VAL:HG13	2.11	0.50
1:F:49:LEU:HA	1:F:52:ILE:HD12	1.94	0.50
1:A:409:LEU:CD2	1:B:406:ASN:N	2.71	0.49
1:A:436:PHE:HB2	1:C:405:SER:HA	1.93	0.49
1:E:182:THR:O	1:E:186:THR:HG23	2.12	0.49
1:C:255:VAL:HG22	1:C:325:ALA:CB	2.40	0.49
1:B:219:VAL:HG22	1:B:373:LEU:HD13	1.93	0.49
1:D:90:LYS:HE2	1:D:164:VAL:CG1	2.42	0.49
1:D:451:SER:C	1:D:453:LEU:N	2.63	0.49
1:F:414:GLN:O	1:F:415:GLU:C	2.50	0.49
1:D:196:ALA:HB2	1:D:388:ASN:HB3	1.94	0.49
1:C:97:THR:CG2	1:C:132:ASN:HB2	2.42	0.49
1:A:137:THR:O	1:A:140:GLU:HB2	2.12	0.49
1:C:414:GLN:O	1:C:417:LEU:N	2.44	0.49
1:A:50:ARG:O	1:A:54:PRO:HD3	2.11	0.49
1:C:271:ILE:C	1:C:272:THR:HG22	2.32	0.49
1:E:247:PHE:HB3	1:E:321:ILE:CG1	2.40	0.49
1:B:234:SER:C	1:B:236:LEU:H	2.16	0.49
1:D:336:ALA:HB2	1:D:356:ALA:HB1	1.94	0.49
1:A:146:ARG:O	1:A:149:THR:HB	2.12	0.49
1:E:173:GLU:CD	1:E:202:PRO:HA	2.32	0.49
1:D:385:TRP:O	1:D:389:LEU:HG	2.11	0.49
1:B:348:ALA:HA	3:B:552:NDP:H1D	1.94	0.49
1:B:202:PRO:HD2	1:B:205:GLN:HB2	1.94	0.49
1:F:444:SER:O	1:F:445:GLU:C	2.48	0.49
1:D:85:HIS:NE2	1:D:489:VAL:HG13	2.27	0.49
1:B:300:THR:HG22	1:B:302:LEU:N	2.25	0.49
1:D:57:HIS:O	1:D:81:GLN:N	2.37	0.49
1:A:402:GLU:HA	1:A:405:SER:HB2	1.92	0.49
1:A:415:GLU:HG3	1:B:431:VAL:CG2	2.20	0.49
1:A:428:ILE:HG23	1:B:428:ILE:CG2	2.41	0.49
1:D:230:ALA:O	1:D:231:SER:C	2.51	0.49
1:D:150:MET:HE1	1:D:187:ILE:HD11	1.93	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:272:THR:OG1	1:F:314:ILE:HD11	2.12	0.49
1:C:476:ASP:CG	1:C:479:THR:HG23	2.32	0.49
1:D:99:VAL:HG22	1:D:130:LYS:HA	1.95	0.49
1:F:403:ARG:O	1:F:404:ASP:C	2.50	0.49
1:D:487:GLU:O	1:D:490:PHE:HB3	2.12	0.49
1:B:208:ILE:HD13	1:B:383:PHE:CB	2.43	0.49
1:C:316:GLU:O	1:C:340:LYS:HE2	2.12	0.49
1:B:247:PHE:CB	1:B:321:ILE:HG12	2.38	0.49
1:B:360:PHE:HD1	1:B:365:ILE:HG13	1.78	0.49
1:B:83:SER:O	1:B:84:GLN:HG3	2.12	0.49
1:F:374:ASN:C	1:F:376:GLY:H	2.15	0.49
1:F:24:VAL:O	1:F:25:GLU:C	2.50	0.49
1:F:44:ARG:O	1:F:45:VAL:C	2.49	0.49
1:B:78:TYR:O	1:B:127:ALA:HB1	2.11	0.49
1:F:422:GLY:O	1:F:426:GLY:O	2.30	0.49
1:A:405:SER:OG	1:B:402:GLU:CB	2.61	0.49
1:B:412:SER:C	1:B:414:GLN:N	2.66	0.49
1:A:374:ASN:ND2	3:A:552:NDP:H6N	2.27	0.49
1:A:281:TRP:O	1:A:307:ALA:HA	2.13	0.49
1:F:148:PHE:CZ	1:F:152:LEU:HD11	2.47	0.49
1:F:10:PHE:CD2	1:F:14:GLU:HG3	2.47	0.49
1:F:281:TRP:H	1:F:307:ALA:HB1	1.77	0.49
1:A:29:VAL:O	1:A:32:LEU:HB3	2.13	0.49
1:E:453:LEU:O	1:E:456:THR:N	2.46	0.49
1:F:2:ASP:CG	1:F:3:ARG:H	2.16	0.49
1:A:467:THR:HG21	1:A:483:VAL:CG1	2.42	0.49
1:A:192:ILE:HG13	1:B:161:GLY:HA2	1.92	0.49
1:A:430:ILE:CD1	1:B:430:ILE:CD1	2.89	0.49
1:A:417:LEU:HD11	1:B:411:MET:HE3	1.95	0.49
1:C:234:SER:C	1:C:236:LEU:H	2.15	0.49
1:C:339:VAL:O	1:C:340:LYS:HB2	2.12	0.49
1:E:89:CYS:HB2	1:E:163:ASP:CG	2.32	0.49
1:E:219:VAL:O	1:E:223:ILE:HG12	2.12	0.49
1:E:227:ILE:HG23	1:E:228:ASN:N	2.26	0.49
1:A:321:ILE:CG2	1:A:343:ILE:HB	2.24	0.49
1:C:346:GLU:HG2	1:C:351:PRO:HD2	1.94	0.49
1:D:236:LEU:HD21	1:D:342:LYS:CG	2.27	0.49
1:E:47:SER:HA	1:E:50:ARG:HB2	1.94	0.49
1:F:281:TRP:O	1:F:307:ALA:HA	2.12	0.49
1:F:349:ASN:ND2	3:F:552:NDP:O2D	2.45	0.49
1:B:137:THR:HG23	1:B:140:GLU:CG	2.42	0.49
1:B:202:PRO:O	1:B:203:ILE:C	2.50	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:111:MET:HB3	1:C:124:GLY:HA2	1.95	0.49
1:F:19:ARG:HG2	1:F:479:THR:HG21	1.94	0.49
1:B:308:LYS:HG2	1:B:308:LYS:O	2.10	0.49
1:E:169:MET:HG2	3:E:552:NDP:H52N	1.95	0.49
1:E:348:ALA:HB1	3:E:552:NDP:O3D	2.12	0.49
1:E:220:PHE:CE1	1:E:266:PHE:CD1	3.01	0.49
1:F:229:GLU:HG3	1:F:231:SER:HB3	1.94	0.49
1:B:84:GLN:O	1:B:86:ARG:N	2.45	0.49
1:A:77:GLY:C	1:A:78:TYR:CG	2.85	0.49
1:D:399:PHE:C	1:D:401:TYR:N	2.65	0.49
1:A:230:ALA:HA	1:A:233:MET:HB2	1.95	0.49
1:E:2:ASP:HB3	1:E:5:ASP:O	2.11	0.49
1:D:9:PHE:O	1:D:9:PHE:HD2	1.95	0.49
1:E:455:TYR:HH	1:F:399:PHE:HD1	1.61	0.49
1:C:136:TYR:HA	1:C:140:GLU:OE2	2.12	0.49
1:C:246:THR:O	1:C:320:ASP:HB2	2.13	0.49
1:A:409:LEU:O	1:B:406:ASN:O	2.31	0.49
1:B:412:SER:C	1:B:414:GLN:H	2.16	0.49
1:A:401:TYR:CG	1:B:442:GLY:O	2.47	0.49
1:D:271:ILE:C	1:D:272:THR:HG22	2.32	0.49
1:D:164:VAL:HA	1:D:197:CYS:O	2.13	0.49
1:B:65:ILE:HG12	1:B:144:ILE:HD13	1.95	0.49
1:E:109:SER:O	1:E:112:THR:CG2	2.60	0.49
1:E:82:HIS:CG	1:E:109:SER:HA	2.47	0.49
1:F:224:GLU:HB2	1:F:242:PHE:CE2	2.45	0.49
1:C:30:GLU:CG	1:C:31:ASP:N	2.75	0.49
1:F:98:ASP:O	1:F:100:SER:N	2.45	0.49
1:F:407:TYR:CE1	1:F:440:ILE:HD13	2.48	0.49
1:D:188:GLY:O	1:D:190:TYR:N	2.45	0.49
1:C:183:TYR:CE2	1:C:188:GLY:HA3	2.48	0.49
1:C:295:LYS:O	1:C:299:GLY:HA2	2.13	0.49
1:A:415:GLU:CG	1:B:431:VAL:HG23	2.20	0.49
1:A:332:THR:CA	1:A:356:ALA:HB2	2.43	0.49
1:D:315:LEU:HD12	1:D:335:ASN:HD21	1.76	0.49
1:C:150:MET:HA	1:C:150:MET:CE	2.42	0.49
1:C:35:ARG:CD	1:C:35:ARG:H	2.23	0.49
1:E:418:GLU:HG3	1:E:428:ILE:HD12	1.94	0.49
1:E:479:THR:O	1:E:483:VAL:HG23	2.13	0.49
1:C:68:ASP:OD1	1:C:137:THR:HG21	2.12	0.49
1:E:148:PHE:O	1:E:152:LEU:HD12	2.13	0.49
1:B:48:ILE:O	1:B:52:ILE:HG13	2.13	0.49
1:A:396:ARG:HG3	1:A:397:LEU:HG	1.94	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:208:ILE:HG21	1:B:380:VAL:HG12	1.94	0.49
1:A:430:ILE:HG21	1:B:410:LEU:CD1	2.43	0.49
1:A:413:VAL:HG12	1:B:411:MET:HG2	1.85	0.49
1:A:433:THR:CB	1:C:413:VAL:H	2.26	0.49
1:E:176:MET:SD	1:E:198:VAL:HG21	2.53	0.49
1:E:223:ILE:HD13	1:E:345:ALA:CB	2.43	0.49
1:B:234:SER:C	1:B:236:LEU:N	2.66	0.49
1:D:255:VAL:HG22	1:D:325:ALA:CB	2.43	0.49
1:E:114:LYS:O	1:E:117:VAL:HB	2.13	0.49
1:C:37:THR:HG21	1:C:41:LYS:HG3	1.94	0.49
1:F:420:LYS:C	1:F:421:PHE:CD2	2.76	0.49
1:E:400:LYS:O	1:E:400:LYS:HD3	2.13	0.49
1:B:131:ILE:HB	1:B:136:TYR:CE2	2.48	0.49
1:A:410:LEU:HD13	1:B:409:LEU:CD2	2.35	0.48
1:A:413:VAL:HG13	1:B:407:TYR:O	2.13	0.48
1:B:435:GLU:OE1	1:B:435:GLU:N	2.46	0.48
1:A:404:ASP:O	1:B:436:PHE:HE1	1.96	0.48
1:E:213:SER:OG	1:E:214:ALA:N	2.45	0.48
1:E:345:ALA:HB1	1:E:373:LEU:CD1	2.43	0.48
1:B:236:LEU:HD22	1:B:238:MET:HB2	1.95	0.48
1:F:300:THR:HG22	1:F:302:LEU:H	1.79	0.48
1:F:331:LEU:HA	1:F:335:ASN:HD21	1.78	0.48
1:F:417:LEU:HB3	1:F:428:ILE:HD13	1.94	0.48
1:A:37:THR:CA	1:A:40:GLN:HG3	2.43	0.48
1:B:292:GLU:C	1:B:294:PHE:H	2.16	0.48
1:B:394:TYR:C	1:B:394:TYR:HD2	2.13	0.48
1:A:108:ALA:O	1:A:112:THR:HG22	2.12	0.48
1:E:272:THR:HG22	1:E:281:TRP:HD1	1.78	0.48
1:E:246:THR:HG23	1:E:319:CYS:HB2	1.94	0.48
1:A:250:GLN:HG3	1:A:314:ILE:HG21	1.95	0.48
1:F:219:VAL:HG11	1:F:259:SER:CB	2.43	0.48
1:F:114:LYS:CA	1:F:371:LEU:CD2	2.86	0.48
1:A:246:THR:O	1:A:320:ASP:HB2	2.13	0.48
1:D:201:LYS:HZ1	1:D:388:ASN:ND2	1.95	0.48
1:E:12:MET:CG	1:E:354:PRO:HD3	2.42	0.48
1:D:134:LYS:HE2	1:D:134:LYS:HB3	1.55	0.48
1:A:300:THR:HG21	1:A:302:LEU:HB2	1.93	0.48
1:E:208:ILE:HD12	1:E:387:ASN:HB2	1.94	0.48
1:B:473:LEU:HD22	1:B:476:ASP:HB3	1.95	0.48
1:D:20:GLY:HA2	1:D:23:ILE:HD12	1.95	0.48
1:B:200:GLY:N	1:B:384:GLU:OE1	2.46	0.48
1:B:272:THR:HG1	1:B:314:ILE:CD1	2.26	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:248:VAL:HG12	1:A:319:CYS:SG	2.54	0.48
1:E:202:PRO:HB2	1:E:205:GLN:HG2	1.95	0.48
1:F:118:VAL:HG23	1:F:118:VAL:O	2.13	0.48
1:F:332:THR:HG22	1:F:353:THR:HG21	1.96	0.48
1:F:255:VAL:HG12	3:F:552:NDP:O2N	2.14	0.48
1:E:385:TRP:HZ2	1:F:192:ILE:HD11	1.75	0.48
1:E:96:SER:HB3	1:E:99:VAL:HG13	1.95	0.48
1:B:158:ILE:O	1:B:158:ILE:CG2	2.58	0.48
1:A:436:PHE:H	1:C:408:HIS:CB	2.18	0.48
1:A:413:VAL:HG13	1:B:407:TYR:C	2.33	0.48
1:A:418:GLU:CG	1:B:431:VAL:HB	2.32	0.48
1:E:228:ASN:OD1	1:E:241:GLY:HA2	2.13	0.48
1:D:342:LYS:NZ	1:D:342:LYS:HB2	2.28	0.48
1:C:118:VAL:HG11	1:C:375:ALA:HB1	1.94	0.48
1:D:345:ALA:HA	1:D:368:ILE:HB	1.94	0.48
1:F:136:TYR:HB2	1:F:141:LEU:CD2	2.42	0.48
1:F:98:ASP:O	1:F:99:VAL:C	2.52	0.48
1:A:409:LEU:CD2	1:B:404:ASP:N	2.68	0.48
1:B:217:ARG:CG	1:B:217:ARG:NH1	2.65	0.48
1:F:11:LYS:O	1:F:14:GLU:HB2	2.13	0.48
1:F:168:ASP:O	1:F:169:MET:C	2.50	0.48
1:C:29:VAL:O	1:C:41:LYS:HD3	2.13	0.48
1:B:330:GLN:O	1:B:332:THR:HG23	2.13	0.48
1:C:86:ARG:HB3	1:C:121:PRO:O	2.13	0.48
1:F:444:SER:OG	1:F:446:LYS:HD3	2.13	0.48
1:C:245:LYS:N	1:C:245:LYS:HD2	2.29	0.48
1:E:83:SER:O	1:E:84:GLN:HG3	2.14	0.48
1:F:482:TYR:O	1:F:486:ILE:HG13	2.14	0.48
1:D:232:TYR:HE1	1:D:474:GLY:O	1.97	0.48
1:A:232:TYR:HE1	1:A:474:GLY:O	1.95	0.48
1:E:363:ARG:NH1	1:E:365:ILE:HD11	2.28	0.48
1:A:405:SER:N	1:B:442:GLY:HA2	2.28	0.48
1:B:233:MET:O	1:B:237:GLY:N	2.41	0.48
1:D:242:PHE:CE1	1:D:263:LEU:HD22	2.49	0.48
1:C:213:SER:OG	1:C:214:ALA:N	2.45	0.48
1:A:99:VAL:HG23	1:A:99:VAL:O	2.12	0.48
1:A:63:PHE:CE1	1:A:75:ILE:CD1	2.86	0.48
1:D:409:LEU:O	1:D:409:LEU:CD1	2.62	0.48
1:A:346:GLU:OE2	1:A:369:PRO:HA	2.14	0.48
1:A:81:GLN:HG3	1:A:157:PHE:CE2	2.48	0.48
1:E:463:GLN:O	1:E:467:THR:HB	2.12	0.48
1:B:382:TYR:CZ	1:B:386:LEU:HD21	2.49	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:428:ILE:CD1	1:B:428:ILE:C	2.82	0.48
1:A:436:PHE:N	1:C:409:LEU:N	2.59	0.48
1:E:309:ILE:O	1:E:310:TYR:C	2.52	0.48
1:A:216:GLY:HA2	1:A:219:VAL:HB	1.96	0.48
1:A:272:THR:OG1	1:A:314:ILE:HD11	2.14	0.48
1:C:167:PRO:HG3	1:C:176:MET:HE2	1.96	0.48
1:C:2:ASP:OD2	1:C:3:ARG:NH2	2.46	0.48
1:D:82:HIS:N	1:D:124:GLY:O	2.45	0.48
1:A:99:VAL:HG22	1:A:130:LYS:HA	1.96	0.48
1:F:270:CYS:SG	1:F:272:THR:O	2.72	0.48
1:C:45:VAL:O	1:C:47:SER:N	2.46	0.48
1:D:29:VAL:CG2	1:D:42:ARG:HG2	2.44	0.48
1:F:399:PHE:O	1:F:401:TYR:N	2.47	0.48
1:B:305:PRO:HB2	1:B:306:LYS:HD3	1.95	0.48
1:B:396:ARG:HH21	1:C:456:THR:HG21	1.78	0.48
1:A:67:ARG:HD2	1:A:140:GLU:OE1	2.13	0.48
1:A:67:ARG:N	1:A:71:SER:O	2.47	0.48
1:F:49:LEU:HD12	1:F:52:ILE:HD12	1.95	0.48
1:A:437:GLN:OE1	1:A:438:ASP:N	2.47	0.48
1:A:410:LEU:O	1:B:410:LEU:HB2	2.14	0.48
1:A:421:PHE:CB	1:B:427:THR:OG1	2.47	0.48
1:B:443:ALA:CB	1:B:448:ILE:HG12	2.42	0.48
1:C:405:SER:O	1:C:408:HIS:CB	2.58	0.48
1:C:417:LEU:HB3	1:C:428:ILE:HD13	1.94	0.48
1:C:236:LEU:CD2	1:C:342:LYS:HG2	2.37	0.48
1:E:90:LYS:HE3	2:E:502:GLU:OE1	2.14	0.48
1:B:229:GLU:OE2	1:B:229:GLU:HA	2.14	0.48
1:C:3:ARG:C	1:C:5:ASP:H	2.16	0.48
1:D:223:ILE:HA	1:D:368:ILE:HD12	1.95	0.48
1:F:346:GLU:HB2	1:F:368:ILE:O	2.14	0.48
1:B:295:LYS:NZ	3:B:552:NDP:O1X	2.47	0.48
1:C:305:PRO:HB2	1:C:306:LYS:HD3	1.91	0.48
1:A:19:ARG:HG2	1:A:19:ARG:HH11	1.78	0.48
1:B:292:GLU:C	1:B:294:PHE:N	2.66	0.48
1:E:315:LEU:HD22	1:E:331:LEU:HD11	1.95	0.48
1:C:321:ILE:H	1:C:321:ILE:HD13	1.77	0.48
1:C:63:PHE:HD1	1:C:147:ARG:CG	2.23	0.48
1:A:166:ALA:HB1	1:A:167:PRO:CD	2.43	0.48
1:F:339:VAL:HG12	1:F:341:ALA:HB3	1.95	0.48
1:B:19:ARG:HH11	1:B:479:THR:HG21	1.79	0.48
1:F:154:LYS:C	1:F:156:GLY:H	2.17	0.48
1:F:315:LEU:HD22	1:F:322:LEU:HD21	1.96	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:305:PRO:HB2	1:A:306:LYS:HD3	1.96	0.48
1:A:203:ILE:HA	1:A:207:GLY:HA3	1.95	0.48
1:A:409:LEU:HG	1:B:402:GLU:C	2.34	0.48
1:A:430:ILE:CD1	1:B:410:LEU:HG	2.44	0.48
1:B:443:ALA:HB1	1:B:448:ILE:HG12	1.96	0.48
1:A:433:THR:CB	1:C:411:MET:N	2.77	0.48
1:A:110:LEU:O	1:A:111:MET:C	2.51	0.48
1:E:248:VAL:HG23	1:E:272:THR:C	2.33	0.48
1:A:248:VAL:HG22	1:A:249:VAL:N	2.29	0.48
1:C:202:PRO:HB2	1:C:205:GLN:CG	2.41	0.48
1:B:56:ASN:ND2	1:B:84:GLN:HE22	2.11	0.48
1:A:59:LEU:CD2	1:A:61:LEU:HD22	2.44	0.48
1:D:372:TYR:C	1:D:372:TYR:CD2	2.86	0.48
1:F:248:VAL:HG21	1:F:314:ILE:CD1	2.43	0.48
1:E:19:ARG:HA	1:E:19:ARG:HD2	1.57	0.48
1:F:78:TYR:CD2	1:F:101:VAL:HB	2.49	0.48
1:B:214:ALA:CB	1:B:380:VAL:HG21	2.43	0.47
1:A:430:ILE:HG21	1:B:410:LEU:HD12	1.96	0.47
1:A:436:PHE:CG	1:C:409:LEU:HB3	2.48	0.47
1:A:115:CYS:O	1:A:116:ALA:C	2.52	0.47
1:A:82:HIS:CD2	1:A:83:SER:HB2	2.48	0.47
1:B:109:SER:O	1:B:110:LEU:O	2.31	0.47
1:C:315:LEU:O	1:C:339:VAL:HG13	2.13	0.47
1:B:314:ILE:HD12	1:B:317:VAL:CG2	2.42	0.47
1:A:331:LEU:N	1:A:331:LEU:HD12	2.29	0.47
1:D:238:MET:HE3	1:D:245:LYS:NZ	2.29	0.47
1:C:372:TYR:CD2	1:C:372:TYR:C	2.88	0.47
1:E:461:ALA:O	1:E:462:ARG:C	2.52	0.47
1:F:382:TYR:CE1	1:F:386:LEU:HD21	2.49	0.47
1:D:9:PHE:CD2	1:D:12:MET:HE2	2.49	0.47
1:E:193:ASN:O	1:E:194:ALA:C	2.53	0.47
1:C:462:ARG:CG	1:C:466:ARG:HH22	2.25	0.47
1:A:66:ARG:O	1:A:67:ARG:O	2.32	0.47
1:E:264:HIS:O	1:E:264:HIS:ND1	2.47	0.47
1:A:409:LEU:O	1:B:407:TYR:CA	2.61	0.47
1:A:428:ILE:CA	1:B:430:ILE:HG13	2.41	0.47
1:C:3:ARG:NH1	1:C:4:GLU:HG3	2.28	0.47
1:D:94:ARG:O	1:D:94:ARG:HG2	2.14	0.47
1:D:239:THR:O	1:D:245:LYS:HE2	2.15	0.47
1:E:226:PHE:CE2	1:E:465:MET:HG2	2.49	0.47
1:D:396:ARG:O	1:D:396:ARG:CD	2.62	0.47
1:F:210:GLY:O	1:F:214:ALA:HB2	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:196:ALA:HB2	1:F:388:ASN:HB2	1.95	0.47
1:B:145:THR:O	1:B:148:PHE:N	2.46	0.47
1:D:277:ASP:O	1:D:302:LEU:HD11	2.14	0.47
1:D:201:LYS:HE2	1:D:206:GLY:O	2.14	0.47
1:B:202:PRO:HB2	1:B:205:GLN:HG2	1.95	0.47
1:B:202:PRO:O	1:B:205:GLN:N	2.38	0.47
1:E:456:THR:HG21	1:F:396:ARG:NH2	2.29	0.47
1:C:374:ASN:O	1:C:376:GLY:N	2.47	0.47
1:F:490:PHE:O	1:F:492:VAL:N	2.46	0.47
1:A:409:LEU:HG	1:B:403:ARG:N	2.28	0.47
1:B:164:VAL:HG13	1:B:198:VAL:CA	2.44	0.47
1:E:230:ALA:C	1:E:232:TYR:N	2.66	0.47
1:E:323:ILE:HD12	1:E:345:ALA:HB3	1.94	0.47
1:A:219:VAL:O	1:A:223:ILE:HG12	2.14	0.47
1:A:332:THR:HA	1:A:356:ALA:HB2	1.97	0.47
1:D:316:GLU:O	1:D:317:VAL:C	2.52	0.47
1:D:241:GLY:O	1:D:245:LYS:HD3	2.14	0.47
1:C:114:LYS:HA	1:C:371:LEU:HD23	1.95	0.47
1:E:371:LEU:HD12	1:E:482:TYR:CE1	2.49	0.47
1:F:178:TRP:O	1:F:179:ILE:C	2.51	0.47
1:F:380:VAL:O	1:F:381:SER:C	2.53	0.47
1:D:28:LEU:HD13	1:D:28:LEU:H	1.79	0.47
1:A:16:PHE:HD1	1:A:482:TYR:OH	1.95	0.47
1:A:89:CYS:HB2	1:A:163:ASP:OD2	2.14	0.47
1:C:411:MET:O	1:C:414:GLN:CB	2.63	0.47
1:A:90:LYS:HG3	1:A:91:GLY:H	1.79	0.47
1:E:90:LYS:NZ	2:E:502:GLU:OE1	2.47	0.47
1:A:271:ILE:O	1:A:272:THR:HG22	2.15	0.47
1:C:167:PRO:HD3	1:C:199:THR:O	2.14	0.47
1:D:238:MET:CE	1:D:245:LYS:NZ	2.77	0.47
1:F:63:PHE:O	1:F:75:ILE:CD1	2.62	0.47
1:D:454:ALA:HA	1:D:457:MET:HB2	1.95	0.47
1:F:336:ALA:N	1:F:337:PRO:CD	2.77	0.47
1:F:217:ARG:NH1	1:F:217:ARG:CG	2.70	0.47
1:B:24:VAL:HG12	1:B:483:VAL:HG13	1.91	0.47
1:B:332:THR:C	1:B:334:SER:N	2.68	0.47
1:D:132:ASN:CG	1:D:135:ASN:HD22	2.16	0.47
1:E:60:SER:HA	1:E:78:TYR:CD2	2.50	0.47
1:B:309:ILE:O	1:B:309:ILE:HG22	2.15	0.47
1:F:269:LYS:HD3	1:F:284:ASP:C	2.35	0.47
1:B:199:THR:HG22	1:B:384:GLU:HB3	1.96	0.47
1:E:211:ARG:NE	1:E:381:SER:OG	2.46	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:249:VAL:HA	1:E:323:ILE:HB	1.96	0.47
1:B:331:LEU:HD12	1:B:331:LEU:N	2.30	0.47
1:D:236:LEU:CD2	1:D:237:GLY:N	2.78	0.47
1:D:451:SER:O	1:D:453:LEU:N	2.48	0.47
1:D:63:PHE:CD1	1:D:147:ARG:HG3	2.50	0.47
1:D:406:ASN:C	1:D:408:HIS:N	2.68	0.47
1:A:66:ARG:O	1:A:67:ARG:C	2.52	0.47
1:B:32:LEU:HD13	1:B:494:ASN:OD1	2.13	0.47
1:A:398:THR:HG22	1:B:394:TYR:OH	2.14	0.47
1:A:405:SER:CA	1:B:442:GLY:HA2	2.44	0.47
1:C:281:TRP:H	1:C:307:ALA:HB1	1.78	0.47
1:E:131:ILE:HG13	1:E:133:PRO:HG3	1.96	0.47
1:E:153:ALA:CA	1:E:158:ILE:HG22	2.44	0.47
1:E:162:VAL:CG2	1:E:163:ASP:N	2.77	0.47
1:A:224:GLU:O	1:A:224:GLU:CG	2.62	0.47
1:F:10:PHE:CD1	1:F:105:LYS:HE2	2.49	0.47
1:C:37:THR:HB	1:C:41:LYS:HG3	1.97	0.47
1:E:412:SER:O	1:E:416:SER:OG	2.23	0.47
1:E:406:ASN:OD1	1:E:440:ILE:O	2.31	0.47
1:B:346:GLU:CG	1:B:351:PRO:HG2	2.45	0.47
1:D:141:LEU:O	1:D:145:THR:HG22	2.14	0.47
1:A:446:LYS:N	1:A:446:LYS:CD	2.74	0.47
1:A:454:ALA:O	1:A:458:GLU:HB3	2.14	0.47
1:E:344:ILE:N	1:E:366:MET:O	2.42	0.47
1:B:372:TYR:OH	1:B:461:ALA:HB2	2.14	0.47
1:A:202:PRO:HG2	1:A:205:GLN:HG3	1.97	0.47
1:B:473:LEU:HB3	1:B:476:ASP:HB3	1.96	0.47
1:B:17:PHE:CD1	1:B:113:TYR:CZ	3.02	0.47
1:A:169:MET:CG	3:A:552:NDP:H52N	2.44	0.47
1:A:324:PRO:CD	1:A:345:ALA:O	2.62	0.47
1:A:250:GLN:HA	1:A:274:GLY:HA3	1.96	0.47
1:D:247:PHE:O	1:D:271:ILE:HG13	2.13	0.47
1:D:77:GLY:HA2	1:D:128:GLY:O	2.14	0.47
1:C:154:LYS:HD3	1:D:189:HIS:CD2	2.50	0.47
1:D:238:MET:HE3	1:D:245:LYS:HZ2	1.77	0.47
1:E:53:LYS:CB	1:E:54:PRO:CD	2.91	0.47
1:F:294:PHE:CE2	1:F:298:HIS:CE1	3.03	0.47
1:D:443:ALA:HB1	1:D:448:ILE:HG12	1.96	0.47
1:F:202:PRO:HG2	1:F:205:GLN:HG3	1.96	0.47
1:D:420:LYS:NZ	1:F:427:THR:O	2.41	0.47
1:A:214:ALA:HB1	1:A:380:VAL:HG21	1.96	0.47
1:D:140:GLU:O	1:D:144:ILE:HG12	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:90:LYS:HA	1:C:164:VAL:O	2.14	0.47
1:D:490:PHE:C	1:D:490:PHE:HD1	2.18	0.47
1:D:488:LYS:O	1:D:489:VAL:C	2.52	0.47
1:E:236:LEU:CD2	1:E:342:LYS:HG2	2.45	0.47
1:E:137:THR:HG23	1:E:140:GLU:CD	2.35	0.47
1:F:9:PHE:CD2	1:F:106:ALA:HB1	2.48	0.47
1:C:8:ASN:HB3	1:C:11:LYS:HG3	1.96	0.47
1:B:395:GLY:O	1:B:399:PHE:CD2	2.67	0.47
1:A:436:PHE:HE2	1:B:409:LEU:CD1	2.28	0.47
1:C:160:PRO:HG2	1:C:161:GLY:N	2.28	0.47
1:D:360:PHE:HD1	1:D:365:ILE:HG13	1.79	0.47
1:C:9:PHE:CD2	1:C:106:ALA:CB	2.97	0.47
1:C:324:PRO:C	1:C:326:ALA:H	2.17	0.47
1:D:234:SER:O	1:D:236:LEU:N	2.48	0.47
1:A:126:LYS:HE3	1:A:168:ASP:OD2	2.14	0.47
1:A:75:ILE:HG12	1:A:75:ILE:O	2.14	0.47
1:F:331:LEU:HD23	1:F:360:PHE:CZ	2.50	0.47
1:F:331:LEU:HD23	1:F:360:PHE:HZ	1.80	0.47
1:C:44:ARG:HH22	1:C:494:ASN:HA	1.80	0.47
1:B:281:TRP:CD1	1:B:282:ASN:N	2.83	0.47
1:F:29:VAL:HG13	1:F:41:LYS:HB3	1.96	0.47
1:E:86:ARG:O	1:E:123:GLY:N	2.47	0.47
1:C:463:GLN:HB3	1:C:466:ARG:HH21	1.80	0.47
1:C:320:ASP:O	1:C:341:ALA:HB1	2.15	0.47
1:B:55:CYS:O	1:E:62:SER:HB2	2.14	0.47
1:A:160:PRO:HD3	1:A:197:CYS:HB3	1.97	0.47
1:A:111:MET:CE	2:A:502:GLU:HG3	2.45	0.47
1:A:90:LYS:HG3	1:A:91:GLY:N	2.30	0.47
1:E:150:MET:CE	1:E:150:MET:HA	2.45	0.47
1:E:158:ILE:HA	1:E:163:ASP:O	2.14	0.47
1:D:352:THR:OG1	1:D:478:ARG:NH2	2.48	0.47
1:D:107:LEU:HB3	1:D:126:LYS:CG	2.45	0.47
1:C:141:LEU:HA	1:C:141:LEU:HD23	1.52	0.47
1:D:9:PHE:CD2	1:D:12:MET:CE	2.98	0.47
1:E:382:TYR:CE2	1:E:386:LEU:HD21	2.49	0.47
1:F:448:ILE:HG22	1:F:449:VAL:N	2.29	0.47
1:F:315:LEU:HD23	1:F:322:LEU:HD11	1.97	0.47
1:B:277:ASP:O	1:B:302:LEU:HD11	2.14	0.47
1:C:209:HIS:CD2	1:C:446:LYS:HG3	2.50	0.47
1:A:102:ASP:HA	1:A:105:LYS:HD3	1.95	0.47
1:A:409:LEU:CG	1:B:402:GLU:O	2.63	0.47
1:A:435:GLU:CB	1:C:408:HIS:CG	2.79	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:309:ILE:O	1:A:310:TYR:C	2.54	0.47
1:C:372:TYR:OH	1:C:461:ALA:HB2	2.15	0.47
1:A:129:VAL:CG1	1:A:131:ILE:HG12	2.42	0.47
1:F:326:ALA:O	3:F:552:NDP:H51N	2.15	0.47
1:F:159:GLY:O	1:F:163:ASP:O	2.33	0.47
1:D:40:GLN:HA	1:D:43:ASN:HB2	1.97	0.47
1:F:395:GLY:O	1:F:398:THR:N	2.45	0.47
1:E:24:VAL:CG1	1:E:483:VAL:HG13	2.45	0.47
1:E:120:VAL:CG1	1:E:121:PRO:HD2	2.45	0.47
1:A:435:GLU:HB2	1:C:408:HIS:O	2.15	0.46
1:A:413:VAL:HG22	1:B:407:TYR:C	2.34	0.46
1:A:433:THR:OG1	1:C:409:LEU:CA	2.62	0.46
1:A:90:LYS:HD3	1:A:122:PHE:CD1	2.49	0.46
1:B:238:MET:CE	1:B:320:ASP:HB3	2.45	0.46
1:D:110:LEU:HA	1:D:110:LEU:HD12	1.78	0.46
1:F:213:SER:O	1:F:214:ALA:C	2.53	0.46
1:D:420:LYS:HG3	1:D:421:PHE:CE2	2.50	0.46
1:C:109:SER:O	1:C:113:TYR:CD1	2.68	0.46
1:E:300:THR:HG22	1:E:302:LEU:N	2.29	0.46
1:C:32:LEU:HD12	1:C:33:LYS:N	2.30	0.46
1:D:6:ASP:N	1:D:7:PRO:HD3	2.30	0.46
1:A:403:ARG:HB2	1:A:441:SER:OG	2.15	0.46
1:A:408:HIS:C	1:B:440:ILE:HG13	2.35	0.46
1:C:404:ASP:O	1:C:405:SER:O	2.34	0.46
1:A:247:PHE:CZ	1:A:270:CYS:HB2	2.51	0.46
1:A:279:SER:OG	1:A:314:ILE:HB	2.15	0.46
1:D:90:LYS:HG3	1:D:91:GLY:N	2.31	0.46
1:B:42:ARG:O	1:B:46:ARG:HB2	2.15	0.46
1:D:167:PRO:CB	1:D:172:GLY:HA2	2.44	0.46
1:D:176:MET:HG3	1:D:199:THR:O	2.13	0.46
1:E:413:VAL:HG11	1:F:413:VAL:HG11	1.98	0.46
1:C:453:LEU:CD1	1:C:457:MET:HG2	2.44	0.46
1:D:61:LEU:C	1:D:61:LEU:HD12	2.35	0.46
1:A:427:THR:HA	1:B:429:PRO:HG2	1.98	0.46
1:B:90:LYS:N	1:B:123:GLY:O	2.40	0.46
1:A:428:ILE:HD13	1:B:414:GLN:CD	2.35	0.46
1:A:428:ILE:CD1	1:B:414:GLN:NE2	2.78	0.46
1:C:395:GLY:O	1:C:397:LEU:N	2.48	0.46
1:C:396:ARG:O	1:C:396:ARG:HD2	2.15	0.46
1:E:146:ARG:HH22	1:E:181:ASP:CG	2.18	0.46
1:E:245:LYS:N	1:E:245:LYS:HD2	2.30	0.46
1:B:336:ALA:HB3	1:B:337:PRO:HD3	1.97	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:271:ILE:HG13	1:D:271:ILE:H	1.56	0.46
1:C:171:THR:HB	1:C:175:GLU:HG3	1.96	0.46
1:C:369:PRO:O	1:C:370:ASP:C	2.53	0.46
1:A:132:ASN:O	1:A:136:TYR:HD2	1.99	0.46
1:A:178:TRP:O	1:A:182:THR:HG23	2.15	0.46
1:F:65:ILE:HG13	1:F:144:ILE:HG12	1.98	0.46
1:E:25:GLU:O	1:E:29:VAL:CG1	2.62	0.46
1:E:117:VAL:HG12	1:E:118:VAL:CG1	2.40	0.46
1:F:174:ARG:O	1:F:177:SER:HB3	2.15	0.46
1:B:275:GLU:HB2	1:B:301:ILE:HD11	1.96	0.46
1:E:209:HIS:ND1	1:E:446:LYS:HG3	2.30	0.46
1:A:17:PHE:HE1	1:A:486:ILE:HG12	1.77	0.46
1:A:407:TYR:CE1	1:A:440:ILE:HD13	2.50	0.46
1:B:406:ASN:HA	1:B:409:LEU:HB2	1.97	0.46
1:A:372:TYR:CE1	1:A:461:ALA:HB2	2.49	0.46
1:E:166:ALA:HB1	1:E:167:PRO:HD3	1.97	0.46
1:C:4:GLU:HB2	1:C:334:SER:OG	2.16	0.46
1:C:201:LYS:NZ	1:C:384:GLU:OE1	2.46	0.46
1:D:110:LEU:O	1:D:113:TYR:N	2.49	0.46
1:D:152:LEU:HD23	1:D:157:PHE:HB2	1.97	0.46
1:D:77:GLY:C	1:D:78:TYR:CD1	2.89	0.46
1:F:94:ARG:HG2	1:F:94:ARG:O	2.16	0.46
1:C:19:ARG:NH1	1:C:479:THR:HG21	2.31	0.46
1:F:96:SER:HB3	1:F:99:VAL:HG13	1.98	0.46
1:C:421:PHE:O	1:C:422:GLY:O	2.33	0.46
1:A:64:PRO:HD2	1:A:147:ARG:HH22	1.80	0.46
1:E:58:VAL:HG22	1:E:80:ALA:HA	1.96	0.46
1:B:32:LEU:HD21	1:B:44:ARG:NH1	2.30	0.46
1:A:404:ASP:O	1:B:439:ARG:O	2.34	0.46
1:A:371:LEU:HA	1:A:371:LEU:HD23	1.72	0.46
1:E:214:ALA:HB1	1:E:380:VAL:CG2	2.43	0.46
1:B:233:MET:HA	1:B:233:MET:HE2	1.98	0.46
1:D:255:VAL:HG13	1:D:325:ALA:HB1	1.97	0.46
1:D:276:SER:OG	3:D:552:NDP:P2B	2.74	0.46
1:A:98:ASP:N	1:A:98:ASP:OD2	2.48	0.46
1:D:451:SER:O	1:D:452:GLY:C	2.52	0.46
1:F:281:TRP:N	1:F:307:ALA:HB1	2.31	0.46
1:F:436:PHE:HA	1:F:439:ARG:HG2	1.96	0.46
1:D:386:LEU:O	1:D:387:ASN:C	2.54	0.46
1:B:295:LYS:HG3	1:B:295:LYS:O	2.14	0.46
1:A:453:LEU:O	1:A:456:THR:N	2.48	0.46
1:D:29:VAL:HG21	1:D:42:ARG:HG2	1.97	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:61:LEU:O	1:C:76:GLU:HA	2.15	0.46
1:C:235:ILE:O	1:C:235:ILE:HG22	2.15	0.46
1:F:69:ASP:OD2	1:F:71:SER:HB3	2.16	0.46
1:B:397:LEU:H	1:B:397:LEU:HD12	1.80	0.46
1:D:475:LEU:HA	1:D:475:LEU:HD23	1.62	0.46
1:A:399:PHE:O	1:A:441:SER:CB	2.64	0.46
1:A:428:ILE:CG1	1:B:429:PRO:N	2.74	0.46
1:B:421:PHE:O	1:B:422:GLY:C	2.53	0.46
1:E:150:MET:O	1:E:153:ALA:HB3	2.14	0.46
1:E:166:ALA:HB1	1:E:167:PRO:HD2	1.97	0.46
1:B:12:MET:CG	1:B:354:PRO:HD3	2.45	0.46
1:A:248:VAL:CG2	1:A:249:VAL:N	2.79	0.46
1:F:230:ALA:HA	1:F:233:MET:HB2	1.98	0.46
1:C:166:ALA:HA	1:C:199:THR:O	2.16	0.46
1:D:91:GLY:HA2	2:D:502:GLU:HG3	1.97	0.46
1:F:217:ARG:O	1:F:218:GLY:C	2.52	0.46
1:F:217:ARG:O	1:F:220:PHE:N	2.49	0.46
1:E:399:PHE:O	1:E:401:TYR:N	2.48	0.46
1:E:453:LEU:O	1:E:454:ALA:C	2.53	0.46
1:F:420:LYS:O	1:F:421:PHE:HD2	1.99	0.46
1:E:209:HIS:O	1:E:449:VAL:HG21	2.16	0.46
1:F:188:GLY:O	1:F:191:ASP:N	2.34	0.46
1:A:294:PHE:O	1:A:298:HIS:N	2.46	0.46
1:A:39:GLU:HG2	1:A:39:GLU:O	2.14	0.46
1:A:84:GLN:C	1:A:86:ARG:N	2.67	0.46
1:A:477:LEU:HD23	1:A:477:LEU:HA	1.53	0.46
1:A:403:ARG:O	1:A:407:TYR:CB	2.61	0.46
1:A:47:SER:HA	1:A:50:ARG:HB2	1.97	0.46
1:C:271:ILE:H	1:C:271:ILE:HG13	1.48	0.46
1:C:172:GLY:O	1:C:175:GLU:HG2	2.16	0.46
1:F:414:GLN:C	1:F:416:SER:N	2.68	0.46
1:D:118:VAL:O	1:D:118:VAL:HG23	2.14	0.46
1:E:96:SER:O	1:E:99:VAL:HG22	2.15	0.46
1:D:205:GLN:HE21	1:F:495:GLU:HB2	1.80	0.46
1:B:420:LYS:C	1:B:421:PHE:CD2	2.77	0.46
1:E:280:ILE:HB	1:E:307:ALA:HB3	1.95	0.46
1:B:272:THR:HG21	1:B:317:VAL:HG11	1.97	0.46
1:C:211:ARG:HD2	1:C:211:ARG:O	2.16	0.46
1:F:10:PHE:C	1:F:10:PHE:CD2	2.86	0.46
1:F:118:VAL:HG23	1:F:120:VAL:HG23	1.98	0.46
1:F:178:TRP:O	1:F:179:ILE:O	2.33	0.46
1:F:5:ASP:OD2	1:F:355:GLU:HB3	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:37:THR:HB	1:A:41:LYS:HG3	1.96	0.46
1:E:258:HIS:CD2	1:E:261:ARG:HH11	2.29	0.46
1:F:395:GLY:O	1:F:396:ARG:C	2.53	0.46
1:F:403:ARG:HG3	1:F:407:TYR:HD1	1.81	0.46
1:E:111:MET:HE1	1:E:378:VAL:HG13	1.97	0.46
1:C:406:ASN:O	1:C:410:LEU:HB2	2.15	0.46
1:E:233:MET:O	1:E:237:GLY:N	2.49	0.46
1:B:233:MET:O	1:B:236:LEU:HB3	2.16	0.46
1:D:363:ARG:NH1	1:D:365:ILE:HD11	2.31	0.46
1:C:94:ARG:NH1	1:C:103:GLU:OE2	2.49	0.46
2:C:502:GLU:OE2	3:C:552:NDP:N7N	2.49	0.46
1:B:217:ARG:HH11	1:B:221:HIS:HE1	1.58	0.46
1:D:86:ARG:HB2	1:D:122:PHE:C	2.36	0.46
1:C:107:LEU:HA	1:C:107:LEU:HD12	1.69	0.46
1:B:37:THR:CB	1:B:41:LYS:HG3	2.46	0.46
1:C:24:VAL:O	1:C:27:LYS:HB3	2.15	0.46
1:C:44:ARG:NH2	1:C:494:ASN:HA	2.31	0.46
1:A:306:LYS:HD3	1:A:306:LYS:H	1.80	0.46
1:D:203:ILE:HG23	1:D:204:SER:N	2.31	0.46
1:B:418:GLU:O	1:B:422:GLY:HA2	2.16	0.46
1:B:437:GLN:N	1:B:437:GLN:OE1	2.49	0.46
1:A:117:VAL:HG12	1:A:118:VAL:HG12	1.98	0.46
1:A:121:PRO:O	1:A:122:PHE:HD2	1.98	0.46
1:A:372:TYR:C	1:A:372:TYR:CD2	2.89	0.46
1:A:90:LYS:HD3	1:A:122:PHE:HE1	1.76	0.46
1:B:248:VAL:HG13	1:B:322:LEU:HD12	1.97	0.46
1:D:5:ASP:HB3	1:D:332:THR:HB	1.98	0.46
1:B:391:HIS:HB3	1:C:385:TRP:HZ3	1.81	0.46
1:D:198:VAL:O	1:D:198:VAL:HG13	2.16	0.46
1:C:370:ASP:OD1	1:C:370:ASP:N	2.48	0.46
1:B:37:THR:O	1:B:38:GLU:CB	2.63	0.46
1:D:222:GLY:O	1:D:226:PHE:HD1	1.98	0.46
1:F:339:VAL:C	1:F:341:ALA:N	2.69	0.46
1:C:43:ASN:O	1:C:45:VAL:N	2.49	0.46
1:B:30:GLU:CG	1:B:31:ASP:N	2.79	0.46
1:A:30:GLU:HG2	1:A:31:ASP:N	2.30	0.46
1:D:19:ARG:CG	1:D:19:ARG:NH1	2.76	0.46
1:B:201:LYS:HZ1	1:B:388:ASN:ND2	2.14	0.46
1:C:82:HIS:HD2	1:C:83:SER:N	2.14	0.46
1:D:36:GLU:H	1:D:36:GLU:HG3	1.56	0.46
1:F:403:ARG:HA	1:F:440:ILE:O	2.15	0.46
1:E:478:ARG:O	1:E:479:THR:C	2.54	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:480:ALA:O	1:E:483:VAL:HB	2.16	0.46
1:D:116:ALA:O	1:D:488:LYS:HD2	2.15	0.46
1:D:490:PHE:C	1:D:490:PHE:CD1	2.88	0.46
1:C:463:GLN:HG2	1:C:463:GLN:H	1.49	0.46
1:E:331:LEU:O	1:E:356:ALA:CB	2.64	0.46
1:A:282:ASN:HB2	1:A:306:LYS:O	2.16	0.46
1:A:362:GLU:C	1:A:364:ASN:N	2.70	0.46
1:A:292:GLU:C	1:A:294:PHE:H	2.18	0.46
1:C:143:LYS:O	1:C:144:ILE:C	2.53	0.46
1:A:400:LYS:HZ1	1:B:439:ARG:HH12	1.63	0.45
1:C:9:PHE:HD1	1:C:103:GLU:HG3	1.80	0.45
1:B:217:ARG:NE	1:B:450:HIS:CD2	2.85	0.45
1:E:37:THR:O	1:E:38:GLU:CB	2.64	0.45
1:E:107:LEU:O	1:E:110:LEU:HB2	2.16	0.45
1:B:255:VAL:HG11	3:B:552:NDP:O4D	2.16	0.45
1:B:332:THR:O	1:B:333:LYS:C	2.54	0.45
1:F:494:ASN:O	1:F:495:GLU:HG3	2.16	0.45
1:B:153:ALA:HA	1:B:158:ILE:HG22	1.98	0.45
1:B:199:THR:CG2	1:B:384:GLU:HB3	2.46	0.45
1:B:429:PRO:O	1:B:429:PRO:CG	2.64	0.45
1:A:117:VAL:HG11	1:A:372:TYR:HB2	1.98	0.45
1:B:110:LEU:O	1:B:111:MET:C	2.53	0.45
1:E:270:CYS:O	1:E:286:ILE:N	2.48	0.45
1:E:316:GLU:O	1:E:317:VAL:C	2.54	0.45
1:B:353:THR:HB	1:B:354:PRO:HD2	1.96	0.45
1:A:175:GLU:HA	1:A:178:TRP:HE3	1.75	0.45
1:F:371:LEU:HA	1:F:371:LEU:HD23	1.74	0.45
1:F:379:THR:O	1:F:382:TYR:HB3	2.17	0.45
1:F:37:THR:HB	1:F:41:LYS:HG3	1.97	0.45
1:B:348:ALA:HB1	3:B:552:NDP:O3D	2.16	0.45
1:D:65:ILE:HG12	1:D:75:ILE:HD12	1.98	0.45
1:A:475:LEU:HA	1:A:475:LEU:HD23	1.75	0.45
1:E:56:ASN:HD22	1:E:84:GLN:HE21	1.62	0.45
1:E:78:TYR:CD1	1:E:78:TYR:N	2.85	0.45
1:A:409:LEU:HG	1:B:402:GLU:O	2.16	0.45
1:A:438:ASP:C	1:A:439:ARG:CG	2.84	0.45
1:A:164:VAL:HA	1:A:197:CYS:O	2.17	0.45
1:A:154:LYS:HE3	1:E:185:SER:O	2.16	0.45
1:B:315:LEU:HB3	1:B:322:LEU:HD21	1.97	0.45
1:D:346:GLU:CD	1:D:478:ARG:HH22	2.20	0.45
1:C:148:PHE:CD2	1:C:152:LEU:CD1	3.00	0.45
1:D:448:ILE:O	1:D:452:GLY:N	2.45	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:142:GLU:HA	1:F:178:TRP:CH2	2.51	0.45
1:F:331:LEU:O	1:F:353:THR:HG23	2.17	0.45
1:E:402:GLU:O	1:E:403:ARG:C	2.54	0.45
1:D:136:TYR:HB2	1:D:141:LEU:HD21	1.98	0.45
1:E:475:LEU:HD23	1:E:475:LEU:HA	1.77	0.45
1:B:239:THR:CG2	1:B:245:LYS:HZ1	2.29	0.45
1:B:98:ASP:O	1:B:99:VAL:C	2.54	0.45
1:B:491:ARG:HA	1:B:491:ARG:HD2	1.65	0.45
1:B:309:ILE:HD13	1:B:309:ILE:N	2.31	0.45
1:E:174:ARG:HG2	1:E:178:TRP:CH2	2.51	0.45
1:D:456:THR:O	1:D:457:MET:C	2.55	0.45
1:F:136:TYR:HA	1:F:140:GLU:OE2	2.16	0.45
1:F:223:ILE:HD13	1:F:345:ALA:HB2	1.98	0.45
1:F:379:THR:O	1:F:383:PHE:CD2	2.70	0.45
1:E:406:ASN:C	1:E:408:HIS:N	2.70	0.45
1:F:387:ASN:ND2	1:F:445:GLU:OE1	2.46	0.45
1:A:482:TYR:O	1:A:486:ILE:HG13	2.17	0.45
1:D:97:THR:HG22	1:D:132:ASN:N	2.31	0.45
1:C:423:LYS:C	1:C:425:GLY:N	2.70	0.45
1:F:293:ASP:HA	1:F:296:LEU:HB2	1.99	0.45
1:E:235:ILE:O	1:E:235:ILE:CG2	2.64	0.45
1:E:273:VAL:HG21	1:E:291:LEU:HD12	1.96	0.45
1:A:400:LYS:HD2	1:B:451:SER:CB	2.47	0.45
1:B:90:LYS:NZ	1:B:199:THR:OG1	2.47	0.45
1:A:433:THR:N	1:C:409:LEU:HG	2.31	0.45
1:E:259:SER:O	1:E:263:LEU:HG	2.17	0.45
1:A:222:GLY:HA3	1:A:373:LEU:CD2	2.46	0.45
1:F:234:SER:O	1:F:236:LEU:N	2.49	0.45
1:D:309:ILE:O	1:D:310:TYR:C	2.54	0.45
1:C:214:ALA:HB1	1:C:380:VAL:CG2	2.37	0.45
1:D:159:GLY:C	1:D:161:GLY:N	2.70	0.45
1:B:41:LYS:O	1:B:45:VAL:HG23	2.17	0.45
1:F:458:GLU:O	1:F:459:ARG:C	2.55	0.45
1:F:211:ARG:HD2	1:F:211:ARG:C	2.33	0.45
1:F:272:THR:OG1	1:F:273:VAL:N	2.48	0.45
1:C:24:VAL:HG23	1:C:28:LEU:HD22	1.97	0.45
1:A:234:SER:C	1:A:236:LEU:N	2.70	0.45
1:E:399:PHE:C	1:E:401:TYR:N	2.70	0.45
1:F:98:ASP:O	1:F:130:LYS:HE3	2.17	0.45
1:B:117:VAL:CG2	1:B:371:LEU:HD22	2.46	0.45
1:A:414:GLN:CG	1:B:430:ILE:HG23	2.13	0.45
1:A:411:MET:CB	1:B:436:PHE:CD2	2.77	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:238:MET:HG2	1:E:245:LYS:HZ1	1.81	0.45
1:B:314:ILE:O	1:B:317:VAL:HG23	2.16	0.45
1:B:336:ALA:HB3	1:B:359:ILE:HD12	1.99	0.45
1:C:167:PRO:CD	1:C:200:GLY:HA3	2.46	0.45
1:C:62:SER:HB2	1:F:55:CYS:O	2.16	0.45
1:F:108:ALA:O	1:F:112:THR:HG22	2.17	0.45
1:C:226:PHE:HE2	1:C:465:MET:HG2	1.81	0.45
1:C:370:ASP:O	1:C:371:LEU:C	2.55	0.45
1:F:202:PRO:HB2	1:F:205:GLN:CB	2.46	0.45
1:F:35:ARG:HG2	1:F:36:GLU:N	2.30	0.45
1:C:57:HIS:CE1	1:C:84:GLN:HE22	2.35	0.45
1:D:24:VAL:O	1:D:28:LEU:N	2.45	0.45
1:B:477:LEU:HD23	1:B:477:LEU:HA	1.62	0.45
1:E:339:VAL:C	1:E:341:ALA:H	2.19	0.45
1:E:415:GLU:O	1:E:419:ARG:HB2	2.16	0.45
1:E:361:LEU:HD23	1:E:361:LEU:O	2.16	0.45
1:C:410:LEU:HD12	1:C:410:LEU:HA	1.72	0.45
1:C:395:GLY:O	1:C:396:ARG:C	2.55	0.45
1:E:176:MET:HG3	1:E:199:THR:O	2.16	0.45
1:B:315:LEU:HD12	1:B:335:ASN:HD21	1.80	0.45
1:F:234:SER:C	1:F:236:LEU:N	2.69	0.45
1:D:280:ILE:HB	1:D:307:ALA:CB	2.47	0.45
1:D:107:LEU:CB	1:D:126:LYS:HG2	2.45	0.45
1:D:159:GLY:O	1:D:161:GLY:N	2.50	0.45
1:E:37:THR:O	1:E:38:GLU:HB2	2.17	0.45
1:F:167:PRO:CD	1:F:200:GLY:HA3	2.45	0.45
1:F:373:LEU:HD23	1:F:373:LEU:HA	1.83	0.45
1:A:35:ARG:HG2	1:A:36:GLU:HG3	1.98	0.45
1:B:150:MET:SD	1:B:186:THR:HG21	2.57	0.45
1:B:459:ARG:HG2	1:B:459:ARG:NH1	2.31	0.45
1:A:293:ASP:HA	1:A:296:LEU:HB2	1.99	0.45
1:E:59:LEU:O	1:E:78:TYR:HB3	2.17	0.45
1:F:183:TYR:CD2	1:F:183:TYR:C	2.90	0.45
1:C:411:MET:O	1:C:415:GLU:N	2.48	0.45
1:C:247:PHE:O	1:C:270:CYS:HA	2.16	0.45
1:E:323:ILE:HG22	1:E:325:ALA:HB2	1.99	0.45
1:D:279:SER:HB3	1:D:314:ILE:HD13	1.98	0.45
1:A:176:MET:HG3	1:A:199:THR:O	2.16	0.45
1:A:175:GLU:O	1:A:179:ILE:HG13	2.17	0.45
1:A:199:THR:HG22	1:A:384:GLU:HG2	1.98	0.45
1:B:35:ARG:N	1:B:35:ARG:CD	2.71	0.45
1:F:173:GLU:OE2	1:F:202:PRO:HA	2.17	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:173:GLU:O	1:F:202:PRO:HD3	2.17	0.45
1:F:219:VAL:O	1:F:223:ILE:HG12	2.17	0.45
1:E:436:PHE:HZ	1:F:409:LEU:HD12	1.80	0.45
1:B:141:LEU:HA	1:B:141:LEU:HD23	1.61	0.45
1:D:444:SER:O	1:D:445:GLU:C	2.54	0.45
1:A:406:ASN:O	1:A:410:LEU:CD2	2.64	0.45
1:B:165:PRO:HD2	1:B:197:CYS:O	2.17	0.45
1:B:429:PRO:HG2	1:B:429:PRO:O	2.17	0.45
1:D:280:ILE:HG13	1:D:280:ILE:O	2.16	0.45
1:D:321:ILE:HD13	1:D:321:ILE:H	1.82	0.45
1:D:3:ARG:HG3	1:D:3:ARG:H	1.58	0.45
1:D:109:SER:HA	1:D:112:THR:CG2	2.47	0.45
1:B:86:ARG:HB3	1:B:121:PRO:O	2.16	0.45
1:F:301:ILE:HG13	1:F:302:LEU:N	2.32	0.45
1:C:494:ASN:C	1:C:495:GLU:CG	2.85	0.45
1:E:353:THR:O	1:E:357:ASP:N	2.48	0.45
1:B:202:PRO:HG2	1:B:205:GLN:HG3	1.99	0.45
1:A:209:HIS:CD2	1:A:446:LYS:CA	2.99	0.45
1:A:306:LYS:N	1:A:306:LYS:CD	2.80	0.45
1:A:435:GLU:HB3	1:C:408:HIS:CD2	2.44	0.45
1:B:208:ILE:HB	1:B:384:GLU:HA	1.98	0.45
1:B:208:ILE:CG2	1:B:380:VAL:HG12	2.47	0.45
1:B:427:THR:O	1:B:429:PRO:HD3	2.17	0.45
1:E:90:LYS:NZ	1:E:166:ALA:HB2	2.32	0.45
1:E:169:MET:O	1:E:170:SER:HB2	2.17	0.45
2:C:502:GLU:CD	3:C:552:NDP:H42N	2.37	0.45
1:E:382:TYR:CZ	1:F:392:VAL:HG22	2.52	0.45
1:B:396:ARG:HG2	1:B:396:ARG:NH1	2.31	0.45
1:F:385:TRP:O	1:F:389:LEU:HG	2.17	0.45
1:A:409:LEU:HD12	1:B:402:GLU:HA	1.99	0.44
1:A:428:ILE:CD1	1:B:430:ILE:H	2.14	0.44
1:B:404:ASP:HB3	1:C:439:ARG:NH1	2.33	0.44
1:B:246:THR:OG1	1:B:271:ILE:HG12	2.17	0.44
1:C:146:ARG:HA	1:C:182:THR:HG21	1.98	0.44
1:C:146:ARG:CB	1:C:182:THR:HG21	2.47	0.44
1:C:379:THR:O	1:C:380:VAL:C	2.55	0.44
1:C:448:ILE:HA	1:C:448:ILE:HD13	1.51	0.44
1:F:82:HIS:CD2	1:F:83:SER:N	2.85	0.44
1:A:172:GLY:H	1:A:175:GLU:CG	2.30	0.44
1:E:82:HIS:CD2	1:E:112:THR:CG2	2.93	0.44
1:E:372:TYR:CD1	1:E:464:ILE:HD12	2.53	0.44
1:F:202:PRO:HB2	1:F:205:GLN:HB2	1.99	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:211:ARG:HH22	3:F:552:NDP:H72N	1.57	0.44
1:D:381:SER:O	1:D:384:GLU:HB3	2.17	0.44
1:B:328:GLU:HA	1:B:351:PRO:HA	1.99	0.44
1:A:32:LEU:HD21	1:A:44:ARG:NH1	2.32	0.44
1:C:421:PHE:O	1:C:422:GLY:C	2.56	0.44
1:C:50:ARG:O	1:C:54:PRO:HD3	2.16	0.44
1:F:181:ASP:O	1:F:185:SER:N	2.44	0.44
1:C:471:TYR:N	1:C:471:TYR:CD2	2.85	0.44
1:F:265:ARG:HB2	1:F:265:ARG:HE	1.57	0.44
1:A:414:GLN:HB2	1:B:432:PRO:HD3	1.99	0.44
1:B:370:ASP:O	1:B:371:LEU:C	2.56	0.44
1:A:430:ILE:HD12	1:B:430:ILE:CD1	2.46	0.44
1:A:428:ILE:CB	1:B:430:ILE:CG1	2.53	0.44
2:A:502:GLU:HA	3:A:552:NDP:C3N	2.47	0.44
1:C:407:TYR:CE1	1:C:440:ILE:HD13	2.52	0.44
1:B:229:GLU:HG3	1:B:231:SER:HB3	1.98	0.44
1:B:336:ALA:O	1:B:338:ARG:N	2.49	0.44
1:A:201:LYS:HZ2	1:A:388:ASN:ND2	2.12	0.44
1:A:335:ASN:C	1:A:337:PRO:HD2	2.38	0.44
1:D:332:THR:C	1:D:356:ALA:HB2	2.37	0.44
1:C:148:PHE:O	1:C:152:LEU:HD12	2.17	0.44
1:C:175:GLU:O	1:C:176:MET:C	2.56	0.44
1:E:93:ILE:O	1:E:93:ILE:HG12	2.18	0.44
1:E:418:GLU:HG2	1:E:428:ILE:HD12	2.00	0.44
1:D:420:LYS:HG2	1:F:428:ILE:HG23	2.00	0.44
1:D:63:PHE:O	1:D:75:ILE:HD13	2.17	0.44
1:E:385:TRP:HZ3	1:F:391:HIS:HB3	1.82	0.44
1:D:260:MET:CG	1:D:288:PRO:HG3	2.41	0.44
1:D:45:VAL:HG13	1:D:490:PHE:HE2	1.83	0.44
1:C:362:GLU:C	1:C:364:ASN:N	2.71	0.44
1:B:491:ARG:O	1:B:492:VAL:C	2.55	0.44
1:F:405:SER:O	1:F:408:HIS:HB2	2.16	0.44
1:F:69:ASP:OD2	1:F:69:ASP:O	2.35	0.44
1:A:363:ARG:NH1	1:A:365:ILE:HD11	2.32	0.44
1:E:95:TYR:HH	1:E:145:THR:HB	1.81	0.44
1:E:219:VAL:HG12	1:E:220:PHE:N	2.32	0.44
1:D:272:THR:HG22	1:D:281:TRP:HD1	1.82	0.44
1:D:165:PRO:HD2	1:D:197:CYS:O	2.17	0.44
1:B:57:HIS:CE1	1:B:84:GLN:OE1	2.69	0.44
1:F:94:ARG:NE	1:F:168:ASP:OD1	2.46	0.44
1:D:420:LYS:CG	1:D:421:PHE:HE2	2.30	0.44
1:C:110:LEU:HA	1:C:110:LEU:HD12	1.64	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:76:GLU:OE1	1:F:130:LYS:HD3	2.18	0.44
1:B:186:THR:OG1	1:B:187:ILE:N	2.50	0.44
1:E:344:ILE:HG13	1:E:367:VAL:HG13	1.98	0.44
1:E:301:ILE:HG13	1:E:302:LEU:N	2.32	0.44
1:F:104:VAL:CG1	1:F:104:VAL:O	2.64	0.44
1:A:430:ILE:HG21	1:B:410:LEU:CG	2.44	0.44
1:B:115:CYS:SG	1:B:378:VAL:HG11	2.58	0.44
1:A:400:LYS:HB3	1:B:451:SER:HB2	1.99	0.44
1:A:215:THR:OG1	3:A:552:NDP:H42N	2.18	0.44
1:E:186:THR:O	1:E:189:HIS:HB3	2.16	0.44
1:E:220:PHE:O	1:E:224:GLU:CB	2.66	0.44
1:E:238:MET:CE	1:E:320:ASP:OD2	2.66	0.44
1:B:238:MET:HE3	1:B:320:ASP:HB3	1.99	0.44
1:B:75:ILE:O	1:B:75:ILE:HG12	2.16	0.44
1:C:226:PHE:HE2	1:C:465:MET:CG	2.30	0.44
1:A:132:ASN:O	1:A:136:TYR:CD2	2.70	0.44
1:E:418:GLU:O	1:E:422:GLY:HA2	2.17	0.44
1:D:35:ARG:CD	1:D:35:ARG:N	2.80	0.44
1:C:462:ARG:CG	1:C:466:ARG:HH12	2.28	0.44
1:A:480:ALA:O	1:A:483:VAL:HB	2.16	0.44
1:A:430:ILE:HA	1:B:413:VAL:HG11	2.00	0.44
1:C:431:VAL:HA	1:C:432:PRO:HD3	1.92	0.44
1:C:342:LYS:O	1:C:365:ILE:CG2	2.64	0.44
1:C:150:MET:HE1	1:C:186:THR:OG1	2.17	0.44
1:B:219:VAL:O	1:B:222:GLY:N	2.51	0.44
1:D:238:MET:HG2	1:D:245:LYS:NZ	2.32	0.44
1:A:92:GLY:O	1:A:126:LYS:HD2	2.18	0.44
1:D:219:VAL:O	1:D:373:LEU:HD21	2.18	0.44
1:F:167:PRO:CA	1:F:176:MET:CE	2.91	0.44
1:C:29:VAL:HG21	1:C:42:ARG:HE	1.83	0.44
1:B:251:GLY:HA2	3:B:552:NDP:H1B	2.00	0.44
1:F:150:MET:CE	1:F:150:MET:HA	2.47	0.44
1:E:456:THR:O	1:E:457:MET:C	2.55	0.44
1:D:412:SER:OG	1:F:433:THR:HG23	2.17	0.44
1:E:191:ASP:HB3	1:E:194:ALA:HB2	1.98	0.44
1:A:193:ASN:O	1:A:194:ALA:C	2.56	0.44
1:D:423:LYS:N	1:D:423:LYS:CD	2.79	0.44
1:D:258:HIS:HD2	1:D:261:ARG:HH11	1.65	0.44
1:A:417:LEU:HA	1:A:417:LEU:HD23	1.84	0.44
1:A:427:THR:CA	1:B:429:PRO:HD2	2.48	0.44
1:B:90:LYS:HD3	1:B:122:PHE:CD1	2.53	0.44
1:B:421:PHE:O	1:B:422:GLY:O	2.35	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:428:ILE:O	1:B:430:ILE:HG12	2.16	0.44
1:A:401:TYR:CD1	1:B:443:ALA:HB2	2.48	0.44
1:A:401:TYR:HB2	1:B:443:ALA:HB2	2.00	0.44
1:A:432:PRO:HA	1:C:409:LEU:CG	2.47	0.44
1:A:48:ILE:HA	1:A:51:ILE:HD12	1.99	0.44
1:C:316:GLU:OE2	1:C:338:ARG:NH1	2.51	0.44
1:E:142:GLU:HB2	1:E:178:TRP:CZ2	2.53	0.44
1:E:145:THR:HG21	1:E:178:TRP:CE3	2.52	0.44
1:E:249:VAL:HG23	1:E:325:ALA:HB3	1.99	0.44
1:A:249:VAL:HA	1:A:323:ILE:O	2.18	0.44
1:F:233:MET:HB3	1:F:238:MET:O	2.17	0.44
1:C:169:MET:O	1:C:170:SER:HB2	2.18	0.44
1:B:38:GLU:OE1	1:B:39:GLU:OE1	2.35	0.44
1:D:462:ARG:CG	1:D:466:ARG:HH12	2.22	0.44
1:F:166:ALA:HB1	1:F:167:PRO:CD	2.47	0.44
1:F:332:THR:O	1:F:336:ALA:N	2.44	0.44
1:D:433:THR:CG2	1:E:412:SER:HA	2.47	0.44
1:A:38:GLU:HB3	1:A:40:GLN:HG2	2.00	0.44
1:F:395:GLY:O	1:F:397:LEU:N	2.51	0.44
1:C:462:ARG:HG3	1:C:466:ARG:CZ	2.48	0.44
1:A:188:GLY:O	1:A:190:TYR:N	2.51	0.44
1:D:475:LEU:O	1:D:477:LEU:N	2.48	0.44
1:B:47:SER:HA	1:B:50:ARG:HB2	1.98	0.44
1:A:420:LYS:O	1:A:421:PHE:HD2	2.00	0.44
1:B:420:LYS:CG	1:B:421:PHE:HE2	2.30	0.44
1:A:169:MET:HG3	3:A:552:NDP:H3D	1.99	0.44
1:E:224:GLU:HA	1:E:227:ILE:HG22	2.00	0.44
1:A:223:ILE:H	1:A:223:ILE:HG12	1.69	0.44
1:B:345:ALA:HB1	1:B:373:LEU:HD11	2.00	0.44
1:D:462:ARG:HG3	1:D:466:ARG:HH22	1.82	0.44
1:F:63:PHE:CD1	1:F:147:ARG:CG	3.01	0.44
1:F:177:SER:CB	1:F:202:PRO:HG2	2.48	0.44
1:D:439:ARG:HB2	1:E:401:TYR:OH	2.18	0.44
1:C:85:HIS:CD2	1:C:86:ARG:HG2	2.52	0.44
1:B:154:LYS:HD3	1:F:189:HIS:HB2	2.00	0.44
1:C:420:LYS:O	1:C:420:LYS:HG3	2.17	0.44
1:F:3:ARG:CG	1:F:4:GLU:HG3	2.45	0.44
1:A:17:PHE:O	1:A:18:ASP:C	2.56	0.44
1:A:12:MET:CG	1:A:354:PRO:HD3	2.45	0.44
1:E:342:LYS:HZ3	1:E:342:LYS:HB2	1.83	0.44
1:E:392:VAL:HG12	1:E:393:SER:C	2.37	0.44
1:B:208:ILE:HD13	1:B:383:PHE:HB3	2.00	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:446:LYS:H	1:B:446:LYS:CD	2.31	0.44
1:A:370:ASP:O	1:A:374:ASN:OD1	2.35	0.44
1:E:227:ILE:CG2	1:E:228:ASN:H	2.31	0.44
1:B:248:VAL:HG21	1:B:314:ILE:HD11	2.00	0.44
1:C:115:CYS:HB3	1:C:120:VAL:O	2.17	0.44
1:C:211:ARG:HH12	2:C:502:GLU:CD	2.21	0.44
1:C:399:PHE:HE2	1:C:443:ALA:O	2.01	0.44
2:C:502:GLU:CD	3:C:552:NDP:C4N	2.86	0.44
1:C:478:ARG:O	1:C:481:ALA:N	2.50	0.44
1:A:172:GLY:O	1:A:175:GLU:HG2	2.18	0.44
1:D:398:THR:O	1:D:399:PHE:C	2.56	0.44
1:D:453:LEU:CD1	1:D:457:MET:HG2	2.47	0.44
1:F:120:VAL:HA	1:F:121:PRO:HD2	1.52	0.44
1:F:321:ILE:HD13	1:F:321:ILE:N	2.33	0.44
1:C:40:GLN:H	1:C:40:GLN:HG2	1.40	0.44
1:C:45:VAL:C	1:C:47:SER:N	2.71	0.44
1:C:493:TYR:C	1:C:495:GLU:H	2.15	0.44
1:B:16:PHE:CD2	1:B:16:PHE:N	2.83	0.44
1:C:420:LYS:C	1:C:421:PHE:CD2	2.73	0.44
1:A:443:ALA:CB	1:A:448:ILE:HG12	2.41	0.44
1:C:183:TYR:O	1:C:183:TYR:CD2	2.71	0.44
1:A:412:SER:O	1:B:432:PRO:HD3	2.18	0.44
1:C:248:VAL:HG21	1:C:314:ILE:CD1	2.45	0.44
1:E:220:PHE:C	1:E:220:PHE:CD2	2.91	0.44
1:D:79:ARG:HA	1:D:126:LYS:O	2.18	0.44
1:D:78:TYR:CE2	1:D:101:VAL:HG12	2.53	0.44
1:E:372:TYR:C	1:E:372:TYR:CD2	2.91	0.44
1:F:271:ILE:HG22	1:F:283:PRO:O	2.18	0.44
1:F:159:GLY:N	1:F:163:ASP:O	2.47	0.44
1:D:132:ASN:HB3	1:D:135:ASN:ND2	2.33	0.44
1:D:44:ARG:HH12	1:D:494:ASN:HD21	1.66	0.44
1:B:9:PHE:O	1:B:10:PHE:C	2.56	0.44
1:B:267:GLY:O	1:B:268:ALA:O	2.36	0.44
1:E:410:LEU:HA	1:E:410:LEU:HD12	1.83	0.44
1:A:395:GLY:O	1:A:396:ARG:C	2.57	0.43
1:A:382:TYR:CZ	1:A:386:LEU:HD21	2.53	0.43
1:B:279:SER:CB	1:B:314:ILE:HD13	2.46	0.43
1:C:146:ARG:HB3	1:C:182:THR:HG21	2.00	0.43
1:D:13:VAL:O	1:D:14:GLU:C	2.56	0.43
1:D:55:CYS:HA	1:D:82:HIS:HA	2.00	0.43
1:E:462:ARG:HG3	1:E:466:ARG:HH12	1.83	0.43
1:E:226:PHE:CD2	1:E:465:MET:SD	3.11	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:300:THR:HG22	1:F:302:LEU:N	2.33	0.43
1:B:27:LYS:HG3	1:B:31:ASP:HB2	2.00	0.43
1:B:104:VAL:HG11	1:B:127:ALA:HA	2.00	0.43
1:A:35:ARG:HG2	1:A:36:GLU:N	2.27	0.43
1:B:150:MET:CE	1:B:187:ILE:HD11	2.48	0.43
1:F:396:ARG:HB2	1:F:396:ARG:HH11	1.83	0.43
1:F:209:HIS:CE1	1:F:446:LYS:HG3	2.52	0.43
1:E:305:PRO:HB2	1:E:306:LYS:HD2	1.98	0.43
1:A:255:VAL:HG22	1:A:325:ALA:HB1	2.00	0.43
1:F:295:LYS:O	1:F:299:GLY:HA2	2.17	0.43
1:A:428:ILE:HG13	1:A:428:ILE:H	1.68	0.43
1:B:114:LYS:HD2	1:B:378:VAL:HG21	2.00	0.43
1:E:165:PRO:HD2	1:E:197:CYS:O	2.18	0.43
1:E:223:ILE:H	1:E:223:ILE:HG12	1.58	0.43
1:E:250:GLN:N	1:E:323:ILE:O	2.41	0.43
1:C:63:PHE:CD1	1:C:147:ARG:HG3	2.53	0.43
1:D:148:PHE:O	1:D:149:THR:C	2.56	0.43
1:B:85:HIS:HB3	1:B:493:TYR:CE2	2.53	0.43
1:D:397:LEU:HD23	1:F:383:PHE:CE1	2.52	0.43
1:F:136:TYR:HB2	1:F:141:LEU:HD21	1.98	0.43
1:D:12:MET:HG3	1:D:354:PRO:HD3	1.99	0.43
1:F:421:PHE:O	1:F:422:GLY:C	2.56	0.43
1:D:85:HIS:CG	1:D:489:VAL:HG13	2.53	0.43
1:B:462:ARG:HG3	1:B:466:ARG:NH1	2.30	0.43
1:C:258:HIS:HD2	1:C:261:ARG:HH11	1.66	0.43
1:A:68:ASP:CG	1:A:140:GLU:HG3	2.39	0.43
1:C:61:LEU:N	1:C:77:GLY:O	2.51	0.43
1:E:423:LYS:HD2	1:E:423:LYS:N	2.33	0.43
1:E:168:ASP:O	1:E:169:MET:C	2.56	0.43
1:D:247:PHE:CE1	1:D:270:CYS:HB2	2.53	0.43
1:D:324:PRO:HB2	1:D:351:PRO:HG3	2.00	0.43
1:B:84:GLN:O	1:B:85:HIS:C	2.55	0.43
1:F:199:THR:HG1	1:F:381:SER:HG	1.63	0.43
1:C:112:THR:N	1:C:124:GLY:CA	2.82	0.43
1:C:56:ASN:HD22	1:C:84:GLN:HE21	1.66	0.43
1:D:11:LYS:O	1:D:12:MET:C	2.56	0.43
1:E:366:MET:HG3	1:E:475:LEU:HD22	2.00	0.43
1:F:203:ILE:CG2	1:F:204:SER:N	2.81	0.43
1:B:294:PHE:CD2	1:B:304:PHE:HD1	2.36	0.43
1:B:244:ASP:HB2	1:B:245:LYS:HZ3	1.84	0.43
1:A:13:VAL:O	1:A:14:GLU:C	2.57	0.43
1:F:289:LYS:HE2	1:F:293:ASP:OD1	2.17	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:14:GLU:O	1:E:17:PHE:HB3	2.19	0.43
1:A:411:MET:HE1	1:A:414:GLN:OE1	2.17	0.43
1:B:404:ASP:O	1:B:405:SER:C	2.55	0.43
1:B:414:GLN:O	1:B:415:GLU:C	2.56	0.43
1:C:409:LEU:O	1:C:410:LEU:CD1	2.66	0.43
1:A:121:PRO:CG	1:A:382:TYR:CE1	3.02	0.43
1:A:201:LYS:HE2	1:A:201:LYS:HB2	1.81	0.43
1:C:167:PRO:CG	1:C:176:MET:HG2	2.38	0.43
1:A:179:ILE:O	1:A:180:ALA:C	2.55	0.43
1:D:219:VAL:HG22	1:D:373:LEU:CD1	2.47	0.43
1:D:226:PHE:HE2	1:D:465:MET:HG2	1.82	0.43
1:E:436:PHE:CG	1:E:436:PHE:O	2.72	0.43
1:F:271:ILE:HG13	1:F:271:ILE:H	1.66	0.43
1:C:29:VAL:HG21	1:C:42:ARG:HG2	2.00	0.43
1:D:386:LEU:C	1:D:388:ASN:N	2.70	0.43
1:B:16:PHE:O	1:B:19:ARG:HB3	2.19	0.43
1:C:110:LEU:O	1:C:111:MET:C	2.56	0.43
1:C:59:LEU:HA	1:F:58:VAL:O	2.18	0.43
1:C:98:ASP:O	1:C:99:VAL:C	2.57	0.43
1:A:353:THR:CB	1:A:354:PRO:HD2	2.46	0.43
1:B:43:ASN:O	1:B:44:ARG:C	2.57	0.43
1:A:409:LEU:N	1:B:436:PHE:CZ	2.87	0.43
1:A:434:ALA:CA	1:A:437:GLN:NE2	2.64	0.43
1:A:121:PRO:HD2	1:A:382:TYR:CE1	2.54	0.43
1:B:336:ALA:HB3	1:B:337:PRO:CD	2.47	0.43
1:C:220:PHE:O	1:C:222:GLY:N	2.52	0.43
1:D:192:ILE:CG2	1:D:193:ASN:N	2.82	0.43
1:F:82:HIS:CG	1:F:112:THR:HG21	2.45	0.43
1:F:11:LYS:HA	1:F:14:GLU:HB2	2.01	0.43
1:D:428:ILE:HG21	1:E:417:LEU:HD23	1.99	0.43
1:E:344:ILE:HG13	1:E:367:VAL:CG1	2.49	0.43
1:D:476:ASP:CG	1:D:479:THR:HG23	2.39	0.43
1:F:406:ASN:C	1:F:408:HIS:N	2.71	0.43
1:B:81:GLN:NE2	1:B:163:ASP:OD1	2.28	0.43
1:B:490:PHE:C	1:B:490:PHE:CD2	2.92	0.43
1:A:411:MET:O	1:A:414:GLN:CA	2.63	0.43
1:A:430:ILE:HD11	1:B:410:LEU:O	2.19	0.43
1:B:211:ARG:O	1:B:214:ALA:HB3	2.18	0.43
1:C:160:PRO:CG	1:C:161:GLY:N	2.80	0.43
1:B:82:HIS:N	1:B:124:GLY:O	2.37	0.43
1:E:52:ILE:HG12	1:E:493:TYR:CD1	2.53	0.43
1:B:63:PHE:CD1	1:B:75:ILE:HD11	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:146:ARG:O	1:C:149:THR:HB	2.19	0.43
1:C:171:THR:CB	1:C:175:GLU:HG3	2.49	0.43
1:C:323:ILE:HG22	1:C:325:ALA:HB2	1.99	0.43
3:C:552:NDP:PN	3:C:552:NDP:H2N	2.59	0.43
1:F:56:ASN:ND2	1:F:83:SER:HA	2.32	0.43
1:D:238:MET:HG2	1:D:245:LYS:HZ2	1.83	0.43
1:B:213:SER:O	1:B:215:THR:N	2.52	0.43
1:D:217:ARG:NH2	1:D:450:HIS:HB3	2.33	0.43
1:F:116:ALA:O	1:F:117:VAL:C	2.56	0.43
1:B:95:TYR:CD2	1:B:171:THR:CG2	3.01	0.43
1:C:56:ASN:O	1:F:61:LEU:HD13	2.18	0.43
1:A:209:HIS:NE2	1:A:446:LYS:HB3	2.33	0.43
1:D:132:ASN:CG	1:D:135:ASN:HD21	2.21	0.43
1:E:68:ASP:HB2	1:E:140:GLU:CG	2.48	0.43
1:B:372:TYR:CG	1:B:372:TYR:O	2.71	0.43
1:F:423:LYS:CD	1:F:423:LYS:N	2.81	0.43
1:E:339:VAL:HG12	1:E:341:ALA:CB	2.49	0.43
1:D:202:PRO:HB2	1:D:205:GLN:CG	2.48	0.43
1:D:23:ILE:HG13	1:D:23:ILE:H	1.70	0.43
1:B:223:ILE:HG12	1:B:223:ILE:H	1.58	0.43
1:F:18:ASP:O	1:F:21:ALA:HB3	2.18	0.43
1:A:424:HIS:CD2	1:B:427:THR:HG21	2.53	0.43
1:B:439:ARG:HG3	1:B:439:ARG:O	2.19	0.43
1:C:322:LEU:N	1:C:343:ILE:O	2.36	0.43
1:B:272:THR:CG2	1:B:317:VAL:HG11	2.49	0.43
1:D:308:LYS:O	1:D:309:ILE:C	2.57	0.43
1:C:142:GLU:O	1:C:146:ARG:HG3	2.18	0.43
1:D:111:MET:SD	1:D:114:LYS:NZ	2.92	0.43
1:C:481:ALA:O	1:C:484:ASN:HB2	2.18	0.43
1:A:60:SER:HA	1:A:78:TYR:CD2	2.53	0.43
1:F:107:LEU:HB3	1:F:126:LYS:HG2	2.00	0.43
1:F:94:ARG:HB2	1:F:168:ASP:HB3	2.00	0.43
1:D:420:LYS:HG3	1:D:421:PHE:HE2	1.82	0.43
1:C:72:TRP:HB2	1:F:47:SER:CB	2.41	0.43
1:F:153:ALA:HB1	1:F:187:ILE:HG13	2.01	0.43
1:D:459:ARG:HH11	1:D:459:ARG:HG2	1.84	0.43
1:E:236:LEU:C	1:E:236:LEU:HD23	2.39	0.43
1:B:396:ARG:HH11	1:B:396:ARG:CG	2.31	0.43
1:A:372:TYR:CE1	1:A:461:ALA:N	2.86	0.43
1:E:245:LYS:HA	1:E:320:ASP:OD1	2.19	0.43
1:E:223:ILE:HG22	1:E:368:ILE:CD1	2.49	0.43
1:F:233:MET:HA	1:F:233:MET:CE	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:79:ARG:NH2	1:C:125:ALA:CB	2.82	0.43
1:C:4:GLU:O	1:C:5:ASP:CB	2.66	0.43
1:D:90:LYS:CB	1:D:122:PHE:HD1	2.31	0.43
1:F:222:GLY:HA3	1:F:373:LEU:CD2	2.48	0.43
1:F:378:VAL:HG13	2:F:502:GLU:HG3	1.99	0.43
1:B:330:GLN:N	1:B:351:PRO:O	2.50	0.43
1:A:17:PHE:C	1:A:19:ARG:N	2.69	0.43
1:A:65:ILE:HA	1:A:65:ILE:HD12	1.76	0.43
1:F:181:ASP:O	1:F:182:THR:C	2.57	0.43
1:F:239:THR:O	1:F:245:LYS:CE	2.66	0.43
1:A:408:HIS:CD2	1:B:439:ARG:N	2.68	0.43
1:B:258:HIS:CD2	1:B:261:ARG:HH12	2.30	0.43
1:F:332:THR:HA	1:F:356:ALA:HB2	2.01	0.43
1:E:110:LEU:HA	1:E:110:LEU:HD12	1.68	0.43
1:F:100:SER:O	1:F:103:GLU:HB3	2.18	0.43
1:D:95:TYR:HH	1:D:145:THR:HB	1.82	0.43
1:B:186:THR:O	1:B:189:HIS:HB3	2.19	0.43
1:A:369:PRO:HG3	1:A:478:ARG:HA	1.99	0.43
1:A:58:VAL:HG22	1:A:80:ALA:HB2	2.01	0.43
1:C:423:LYS:N	1:C:423:LYS:CD	2.81	0.43
1:A:401:TYR:HA	1:A:404:ASP:HB2	2.01	0.43
1:A:432:PRO:HA	1:C:409:LEU:CD1	2.49	0.43
1:A:461:ALA:O	1:A:465:MET:HG3	2.19	0.43
1:E:346:GLU:OE2	1:E:369:PRO:HA	2.18	0.43
1:E:346:GLU:HG2	1:E:351:PRO:HG2	2.01	0.43
1:E:246:THR:O	1:E:320:ASP:N	2.43	0.43
1:A:216:GLY:O	1:A:219:VAL:HB	2.19	0.43
1:F:230:ALA:O	1:F:234:SER:N	2.39	0.43
1:C:220:PHE:O	1:C:221:HIS:C	2.56	0.43
1:D:401:TYR:CE1	1:F:439:ARG:NH1	2.87	0.43
1:E:403:ARG:HG3	1:E:407:TYR:CD1	2.48	0.43
1:B:273:VAL:HG12	1:B:301:ILE:HD13	2.00	0.43
1:B:201:LYS:NZ	1:B:388:ASN:HD21	2.17	0.43
1:D:137:THR:HG23	1:D:140:GLU:CD	2.38	0.43
1:D:440:ILE:HG23	1:D:440:ILE:O	2.18	0.43
1:D:410:LEU:HA	1:D:410:LEU:HD12	1.74	0.43
1:D:265:ARG:O	1:D:267:GLY:N	2.52	0.43
1:A:109:SER:O	1:A:112:THR:HG23	2.19	0.42
1:A:374:ASN:C	1:A:376:GLY:N	2.72	0.42
1:C:230:ALA:O	1:C:234:SER:N	2.41	0.42
1:C:271:ILE:O	1:C:272:THR:HG22	2.18	0.42
1:C:247:PHE:HB2	1:C:321:ILE:HG12	2.01	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:227:ILE:CG2	1:A:228:ASN:N	2.82	0.42
1:A:5:ASP:OD2	1:A:332:THR:HB	2.19	0.42
1:D:186:THR:O	1:D:189:HIS:HB3	2.19	0.42
1:E:37:THR:HB	1:E:41:LYS:HG3	2.01	0.42
1:F:355:GLU:OE2	1:F:355:GLU:HA	2.18	0.42
1:A:230:ALA:O	1:A:231:SER:C	2.55	0.42
1:A:30:GLU:C	1:A:32:LEU:N	2.73	0.42
1:E:386:LEU:HG	1:F:392:VAL:HG23	2.01	0.42
1:F:3:ARG:HG2	1:F:4:GLU:CG	2.43	0.42
1:E:294:PHE:CZ	1:E:298:HIS:ND1	2.87	0.42
1:E:287:ASP:HA	1:E:288:PRO:HD3	1.85	0.42
1:A:10:PHE:CA	1:A:106:ALA:HB2	2.49	0.42
1:A:417:LEU:O	1:A:421:PHE:HB2	2.19	0.42
1:B:370:ASP:OD1	1:B:371:LEU:N	2.52	0.42
1:B:381:SER:O	1:B:384:GLU:N	2.52	0.42
1:A:409:LEU:C	1:B:406:ASN:C	2.78	0.42
1:A:418:GLU:HG2	1:B:429:PRO:C	2.40	0.42
1:A:428:ILE:HG13	1:B:429:PRO:C	2.38	0.42
1:C:273:VAL:HG12	1:C:301:ILE:HD13	2.02	0.42
1:E:281:TRP:O	1:E:307:ALA:HA	2.19	0.42
1:B:246:THR:HA	1:B:269:LYS:O	2.20	0.42
1:B:322:LEU:HD22	1:B:339:VAL:HG11	2.01	0.42
1:A:272:THR:CG2	1:A:317:VAL:HG11	2.49	0.42
1:B:63:PHE:O	1:B:75:ILE:HD13	2.19	0.42
1:C:148:PHE:CZ	1:C:152:LEU:HD11	2.53	0.42
1:D:110:LEU:O	1:D:111:MET:C	2.57	0.42
1:D:120:VAL:HA	1:D:121:PRO:HD2	1.80	0.42
1:D:159:GLY:O	1:D:160:PRO:C	2.56	0.42
1:A:94:ARG:HG2	1:A:99:VAL:HG11	2.01	0.42
1:F:417:LEU:HB3	1:F:428:ILE:CD1	2.49	0.42
1:B:196:ALA:HB2	1:B:388:ASN:HB2	2.01	0.42
1:B:158:ILE:HG22	1:B:158:ILE:O	2.19	0.42
1:A:409:LEU:HD12	1:B:402:GLU:CA	2.49	0.42
1:C:475:LEU:HD23	1:C:475:LEU:HA	1.77	0.42
1:E:90:LYS:CE	1:E:199:THR:OG1	2.67	0.42
1:E:220:PHE:CE1	1:E:266:PHE:CB	3.01	0.42
1:A:356:ALA:O	1:A:360:PHE:CD2	2.72	0.42
1:D:337:PRO:HA	1:D:359:ILE:HG21	2.00	0.42
1:C:346:GLU:HG2	1:C:351:PRO:HG2	2.00	0.42
1:D:180:ALA:HB2	1:D:198:VAL:CG1	2.49	0.42
1:B:212:ILE:HD11	1:B:258:HIS:CE1	2.53	0.42
1:B:86:ARG:HD2	1:B:121:PRO:HA	2.01	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:126:LYS:HG3	1:A:127:ALA:N	2.31	0.42
1:E:372:TYR:CE1	1:E:461:ALA:N	2.87	0.42
1:B:250:GLN:NE2	3:B:552:NDP:H2A	2.33	0.42
1:E:16:PHE:N	1:E:16:PHE:CD2	2.86	0.42
1:D:406:ASN:C	1:D:408:HIS:H	2.22	0.42
1:A:351:PRO:HG2	1:A:352:THR:CG2	2.47	0.42
1:C:260:MET:SD	1:C:288:PRO:HA	2.59	0.42
1:C:423:LYS:C	1:C:425:GLY:H	2.23	0.42
1:A:410:LEU:CA	1:B:436:PHE:HE2	2.31	0.42
1:E:373:LEU:HA	1:E:373:LEU:HD23	1.70	0.42
1:C:181:ASP:O	1:C:184:ALA:N	2.52	0.42
1:C:353:THR:O	1:C:357:ASP:HB2	2.20	0.42
1:D:378:VAL:HA	2:D:502:GLU:OE1	2.19	0.42
1:F:272:THR:HB	1:F:281:TRP:HA	2.01	0.42
1:B:280:ILE:HG12	1:B:301:ILE:HD12	2.02	0.42
1:B:92:GLY:O	1:B:126:LYS:HD2	2.19	0.42
1:E:9:PHE:O	1:E:10:PHE:C	2.57	0.42
1:F:88:PRO:HA	1:F:162:VAL:O	2.20	0.42
1:D:37:THR:HB	1:D:38:GLU:H	1.71	0.42
1:E:477:LEU:HD23	1:E:477:LEU:HA	1.63	0.42
1:F:239:THR:HA	1:F:240:PRO:HD3	1.93	0.42
1:B:162:VAL:HG23	1:B:163:ASP:N	2.35	0.42
1:A:134:LYS:HB3	1:A:134:LYS:HE2	1.80	0.42
1:A:420:LYS:C	1:A:421:PHE:CD2	2.90	0.42
1:B:379:THR:O	1:B:380:VAL:C	2.56	0.42
1:B:413:VAL:HG13	1:C:413:VAL:HG11	1.93	0.42
1:A:213:SER:HA	1:A:258:HIS:ND1	2.34	0.42
1:E:90:LYS:HD3	1:E:122:PHE:CD1	2.53	0.42
1:A:337:PRO:HA	1:A:359:ILE:HG21	2.00	0.42
1:D:112:THR:HB	1:D:124:GLY:H	1.84	0.42
1:D:374:ASN:HD22	3:D:552:NDP:H6N	1.85	0.42
1:A:95:TYR:HB3	1:A:133:PRO:HG3	2.01	0.42
1:D:462:ARG:O	1:D:465:MET:N	2.53	0.42
1:B:326:ALA:HB1	3:B:552:NDP:C4A	2.49	0.42
1:E:234:SER:C	1:E:236:LEU:N	2.73	0.42
1:C:446:LYS:H	1:C:446:LYS:CD	2.32	0.42
1:A:157:PHE:CE1	1:D:155:LYS:HD2	2.55	0.42
1:F:490:PHE:C	1:F:492:VAL:H	2.23	0.42
1:B:256:GLY:O	1:B:259:SER:N	2.53	0.42
1:A:437:GLN:HA	1:A:440:ILE:HB	2.01	0.42
1:A:404:ASP:C	1:B:439:ARG:HG3	2.39	0.42
1:B:482:TYR:O	1:B:486:ILE:HG13	2.18	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:248:VAL:CG2	1:C:314:ILE:HD11	2.48	0.42
1:E:230:ALA:O	1:E:231:SER:C	2.57	0.42
1:A:227:ILE:CD1	1:A:343:ILE:CD1	2.98	0.42
1:A:339:VAL:HG21	1:A:360:PHE:CZ	2.54	0.42
1:D:108:ALA:O	1:D:112:THR:HG22	2.19	0.42
1:F:56:ASN:HD22	1:F:84:GLN:NE2	2.18	0.42
1:C:458:GLU:C	1:C:460:SER:N	2.72	0.42
1:A:131:ILE:HB	1:A:136:TYR:CE2	2.55	0.42
1:E:372:TYR:HE1	1:E:461:ALA:N	2.15	0.42
1:D:396:ARG:CD	1:D:396:ARG:C	2.88	0.42
1:B:152:LEU:HD23	1:B:157:PHE:CB	2.47	0.42
1:E:417:LEU:HD13	1:F:417:LEU:HD21	2.00	0.42
3:B:552:NDP:H8A	3:B:552:NDP:H2B	1.87	0.42
1:A:37:THR:O	1:A:38:GLU:CB	2.64	0.42
1:A:211:ARG:HA	1:A:380:VAL:HG11	2.01	0.42
1:C:282:ASN:HB2	1:C:306:LYS:O	2.19	0.42
1:D:142:GLU:O	1:D:146:ARG:HG3	2.19	0.42
1:E:330:GLN:HA	1:E:330:GLN:HE21	1.80	0.42
1:D:470:LYS:HB3	1:D:471:TYR:CD2	2.54	0.42
1:F:27:LYS:HG3	1:F:31:ASP:HB2	2.02	0.42
1:B:378:VAL:HA	1:B:381:SER:HB2	2.00	0.42
1:B:394:TYR:CE2	1:B:443:ALA:CB	3.00	0.42
1:B:416:SER:HA	1:B:419:ARG:NH1	2.35	0.42
1:A:408:HIS:CG	1:B:440:ILE:HA	2.54	0.42
1:A:439:ARG:NH1	1:C:404:ASP:HB2	2.34	0.42
1:C:316:GLU:O	1:C:317:VAL:C	2.57	0.42
1:C:227:ILE:HD13	1:C:343:ILE:CD1	2.50	0.42
1:E:165:PRO:CD	1:E:197:CYS:O	2.68	0.42
1:E:281:TRP:HB2	1:E:310:TYR:CB	2.45	0.42
1:D:331:LEU:N	1:D:331:LEU:HD12	2.34	0.42
1:E:29:VAL:HG22	1:E:30:GLU:N	2.35	0.42
1:E:370:ASP:OD1	1:E:371:LEU:N	2.42	0.42
1:E:460:SER:O	1:E:461:ALA:C	2.57	0.42
1:F:174:ARG:O	1:F:175:GLU:C	2.58	0.42
1:F:16:PHE:CE2	1:F:354:PRO:HB3	2.50	0.42
1:F:356:ALA:O	1:F:360:PHE:CD2	2.73	0.42
1:D:147:ARG:HH11	1:D:147:ARG:HG2	1.85	0.42
1:B:150:MET:O	1:B:154:LYS:HG3	2.20	0.42
1:B:187:ILE:H	1:B:187:ILE:HG12	1.47	0.42
1:C:78:TYR:HE1	1:C:99:VAL:O	2.00	0.42
1:F:59:LEU:HB2	1:F:157:PHE:CZ	2.54	0.42
1:F:403:ARG:HB2	1:F:441:SER:OG	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:208:ILE:HG13	1:C:445:GLU:CD	2.40	0.42
1:C:246:THR:N	1:C:320:ASP:OD1	2.50	0.42
1:F:362:GLU:C	1:F:364:ASN:N	2.73	0.42
1:B:423:LYS:N	1:B:423:LYS:HD2	2.33	0.42
1:A:428:ILE:HG12	1:B:428:ILE:C	2.34	0.42
1:A:372:TYR:HE1	1:A:461:ALA:N	2.18	0.42
1:B:336:ALA:N	1:B:337:PRO:CD	2.81	0.42
1:A:250:GLN:N	1:A:323:ILE:O	2.45	0.42
1:C:94:ARG:NH2	1:C:169:MET:HG3	2.31	0.42
1:E:118:VAL:HA	1:E:460:SER:OG	2.20	0.42
1:F:247:PHE:O	1:F:270:CYS:HA	2.20	0.42
1:A:236:LEU:C	1:A:236:LEU:HD23	2.40	0.42
1:F:402:GLU:O	1:F:403:ARG:C	2.58	0.42
1:C:261:ARG:HG3	1:C:288:PRO:HB3	2.01	0.42
1:A:9:PHE:CE1	1:A:328:GLU:CG	3.02	0.42
1:D:174:ARG:HB3	1:D:174:ARG:HE	1.68	0.42
1:E:322:LEU:O	1:E:324:PRO:HD3	2.18	0.42
1:D:8:ASN:C	1:D:8:ASN:OD1	2.58	0.42
1:A:397:LEU:O	1:B:448:ILE:HG13	2.20	0.42
1:A:430:ILE:CD1	1:B:410:LEU:CG	2.95	0.42
1:A:372:TYR:HB2	1:A:464:ILE:HD11	2.01	0.42
1:A:490:PHE:O	1:A:492:VAL:N	2.44	0.42
1:B:110:LEU:HA	1:B:110:LEU:HD12	1.82	0.42
1:A:272:THR:OG1	1:A:273:VAL:N	2.53	0.42
1:C:181:ASP:O	1:C:182:THR:C	2.58	0.42
1:C:324:PRO:HB2	1:C:351:PRO:HB2	2.01	0.42
1:C:223:ILE:HD13	1:C:345:ALA:HB2	2.02	0.42
1:C:380:VAL:HA	1:C:383:PHE:CD2	2.55	0.42
1:D:218:GLY:O	1:D:219:VAL:C	2.58	0.42
1:F:68:ASP:HB2	1:F:140:GLU:OE1	2.19	0.42
1:C:479:THR:O	1:C:483:VAL:CG2	2.65	0.42
1:D:421:PHE:O	1:D:422:GLY:C	2.59	0.42
1:D:147:ARG:O	1:D:151:GLU:HG2	2.20	0.42
1:C:238:MET:HG2	1:C:245:LYS:NZ	2.34	0.42
1:B:183:TYR:O	1:B:183:TYR:CD2	2.72	0.42
1:A:413:VAL:CG2	1:B:408:HIS:N	2.83	0.42
1:E:172:GLY:H	1:E:175:GLU:CG	2.33	0.42
1:E:381:SER:OG	2:E:502:GLU:OE2	2.33	0.42
1:E:90:LYS:CE	2:E:502:GLU:OE1	2.68	0.42
1:A:358:LYS:HG3	1:A:359:ILE:H	1.83	0.42
1:D:114:LYS:HA	1:D:371:LEU:HD23	2.00	0.42
1:A:146:ARG:HH21	1:A:182:THR:HG22	1.82	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:45:VAL:HG12	1:E:49:LEU:HD22	2.01	0.42
1:F:458:GLU:O	1:F:461:ALA:N	2.53	0.42
1:E:372:TYR:CE1	1:E:461:ALA:CB	2.95	0.42
1:D:383:PHE:O	1:D:384:GLU:C	2.56	0.42
1:D:93:ILE:HA	1:D:127:ALA:O	2.19	0.42
1:F:58:VAL:HA	1:F:80:ALA:HA	2.02	0.42
1:A:394:TYR:CE2	1:A:443:ALA:HB3	2.53	0.42
1:E:473:LEU:HB3	1:E:476:ASP:HB3	2.02	0.42
1:E:234:SER:O	1:E:236:LEU:N	2.53	0.42
1:F:66:ARG:C	1:F:67:ARG:O	2.58	0.42
1:A:89:CYS:HA	1:A:123:GLY:O	2.19	0.42
1:E:333:LYS:HB2	1:E:355:GLU:CG	2.47	0.42
1:D:202:PRO:HB2	1:D:205:GLN:HG2	2.02	0.42
1:E:295:LYS:O	1:E:295:LYS:HG3	2.20	0.42
1:A:417:LEU:CD1	1:B:411:MET:HA	2.50	0.41
1:A:436:PHE:HE2	1:B:409:LEU:HD13	1.85	0.41
1:C:414:GLN:O	1:C:415:GLU:C	2.59	0.41
1:A:111:MET:HE1	2:A:502:GLU:HG3	2.01	0.41
1:E:94:ARG:HE	1:E:169:MET:HG3	1.84	0.41
1:E:220:PHE:HE1	1:E:266:PHE:CB	2.28	0.41
1:D:359:ILE:O	1:D:361:LEU:N	2.53	0.41
1:B:21:ALA:O	1:B:25:GLU:HB2	2.20	0.41
1:D:226:PHE:CE2	1:D:465:MET:HG2	2.55	0.41
1:E:39:GLU:HG2	1:E:39:GLU:O	2.19	0.41
1:E:114:LYS:O	1:E:118:VAL:HG13	2.20	0.41
1:F:117:VAL:HG12	1:F:118:VAL:CG1	2.50	0.41
1:F:94:ARG:NH2	1:F:168:ASP:OD1	2.51	0.41
1:F:219:VAL:HG11	1:F:259:SER:HB3	2.02	0.41
1:F:280:ILE:HB	1:F:307:ALA:HB3	1.99	0.41
1:F:277:ASP:O	1:F:302:LEU:HD11	2.20	0.41
1:B:169:MET:HA	3:B:552:NDP:O2A	2.20	0.41
1:A:40:GLN:HG2	1:A:40:GLN:H	1.22	0.41
1:D:58:VAL:HG22	1:D:80:ALA:HB2	2.01	0.41
1:A:428:ILE:CG1	1:B:428:ILE:CA	2.92	0.41
1:E:150:MET:HE1	1:E:187:ILE:CD1	2.41	0.41
1:E:92:GLY:HA2	1:E:166:ALA:O	2.20	0.41
1:B:337:PRO:HB3	1:B:359:ILE:HD13	2.02	0.41
1:D:91:GLY:HA2	1:D:111:MET:HE2	2.02	0.41
1:C:458:GLU:O	1:C:459:ARG:C	2.58	0.41
1:F:64:PRO:O	1:F:65:ILE:HD13	2.19	0.41
1:E:173:GLU:HG2	1:E:202:PRO:CA	2.50	0.41
1:F:277:ASP:OD2	1:F:300:THR:HG23	2.19	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:374:ASN:HD22	3:F:552:NDP:H6N	1.85	0.41
1:F:163:ASP:OD2	1:F:164:VAL:N	2.53	0.41
1:F:260:MET:CG	1:F:288:PRO:HG3	2.49	0.41
1:C:18:ASP:O	1:C:21:ALA:HB3	2.19	0.41
1:B:122:PHE:HZ	1:B:385:TRP:CE3	2.38	0.41
1:A:411:MET:CG	1:B:436:PHE:HD2	2.32	0.41
1:C:331:LEU:HD12	1:C:331:LEU:N	2.35	0.41
1:E:174:ARG:CD	1:E:178:TRP:CH2	3.02	0.41
1:D:336:ALA:N	1:D:337:PRO:CD	2.84	0.41
1:B:40:GLN:HG2	1:B:40:GLN:H	1.51	0.41
1:D:396:ARG:HH11	1:D:396:ARG:CG	2.33	0.41
1:D:457:MET:HA	1:D:457:MET:HE1	2.01	0.41
1:F:142:GLU:O	1:F:145:THR:HG23	2.21	0.41
1:E:414:GLN:O	1:E:417:LEU:N	2.47	0.41
1:D:357:ASP:O	1:D:358:LYS:C	2.58	0.41
1:F:392:VAL:HG11	1:F:397:LEU:HD11	2.03	0.41
1:F:399:PHE:HA	1:F:441:SER:O	2.19	0.41
1:E:111:MET:CE	1:E:378:VAL:HG13	2.50	0.41
1:F:490:PHE:C	1:F:492:VAL:N	2.74	0.41
1:E:235:ILE:O	1:E:235:ILE:HG22	2.21	0.41
1:A:423:LYS:C	1:A:425:GLY:N	2.74	0.41
1:A:430:ILE:CG2	1:B:413:VAL:CG2	2.88	0.41
1:A:402:GLU:CB	1:A:441:SER:O	2.66	0.41
1:B:199:THR:HG21	1:B:381:SER:O	2.21	0.41
1:A:414:GLN:CB	1:B:431:VAL:HA	2.39	0.41
1:B:90:LYS:HG3	1:B:91:GLY:H	1.85	0.41
1:A:169:MET:HA	3:A:552:NDP:O2A	2.20	0.41
1:C:310:TYR:CZ	1:C:317:VAL:HG22	2.55	0.41
1:E:142:GLU:O	1:E:145:THR:HG23	2.19	0.41
1:E:345:ALA:O	1:E:347:GLY:N	2.54	0.41
1:D:247:PHE:CD1	1:D:247:PHE:C	2.92	0.41
1:D:315:LEU:HA	1:D:322:LEU:HD11	2.03	0.41
1:D:316:GLU:O	1:D:340:LYS:HE2	2.20	0.41
1:A:494:ASN:O	1:A:495:GLU:CB	2.67	0.41
1:C:92:GLY:HA2	1:C:166:ALA:O	2.21	0.41
1:C:9:PHE:CE2	1:C:12:MET:CE	3.03	0.41
1:D:51:ILE:O	1:D:54:PRO:HD2	2.21	0.41
1:C:117:VAL:HG11	1:C:372:TYR:HA	2.02	0.41
1:A:167:PRO:HB3	1:A:172:GLY:HA2	2.03	0.41
1:D:223:ILE:H	1:D:223:ILE:HG12	1.47	0.41
1:F:75:ILE:HG21	1:F:144:ILE:CD1	2.51	0.41
1:E:173:GLU:HG2	1:E:202:PRO:HA	2.03	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:115:CYS:HB3	1:F:120:VAL:O	2.20	0.41
1:C:27:LYS:O	1:C:29:VAL:N	2.53	0.41
1:C:85:HIS:CD2	1:C:86:ARG:CG	3.03	0.41
1:F:449:VAL:O	1:F:453:LEU:HB3	2.20	0.41
1:B:462:ARG:CG	1:B:466:ARG:HH22	2.29	0.41
1:A:155:LYS:O	1:D:155:LYS:HA	2.20	0.41
1:A:294:PHE:C	1:A:296:LEU:N	2.73	0.41
1:A:467:THR:CG2	1:A:483:VAL:HG11	2.50	0.41
1:A:363:ARG:HG2	1:A:363:ARG:O	2.20	0.41
1:A:405:SER:OG	1:B:442:GLY:CA	2.68	0.41
1:A:414:GLN:O	1:A:417:LEU:N	2.45	0.41
1:B:117:VAL:HG12	1:B:118:VAL:HG13	2.03	0.41
1:A:47:SER:CB	1:D:72:TRP:HB2	2.51	0.41
1:A:249:VAL:HA	1:A:323:ILE:HB	2.01	0.41
1:C:324:PRO:O	1:C:326:ALA:N	2.40	0.41
1:D:86:ARG:HB3	1:D:121:PRO:O	2.21	0.41
1:F:55:CYS:HA	1:F:82:HIS:HA	2.03	0.41
1:C:93:ILE:HG12	1:C:93:ILE:O	2.20	0.41
1:C:478:ARG:HG2	1:C:482:TYR:CE1	2.55	0.41
1:A:60:SER:HA	1:A:78:TYR:HD2	1.85	0.41
1:B:45:VAL:O	1:B:46:ARG:C	2.59	0.41
1:F:11:LYS:O	1:F:12:MET:C	2.59	0.41
1:D:214:ALA:CB	1:D:380:VAL:HG21	2.51	0.41
1:D:16:PHE:CE2	1:D:354:PRO:HB3	2.48	0.41
1:F:59:LEU:HD22	1:F:157:PHE:CE1	2.55	0.41
1:E:456:THR:HG21	1:F:396:ARG:HH21	1.85	0.41
1:F:446:LYS:H	1:F:446:LYS:CD	2.34	0.41
1:A:162:VAL:HG23	1:A:163:ASP:N	2.35	0.41
1:C:65:ILE:HD13	1:C:65:ILE:HA	1.63	0.41
1:A:427:THR:N	1:B:429:PRO:HD2	2.36	0.41
1:B:192:ILE:HG23	1:B:193:ASN:N	2.36	0.41
1:B:117:VAL:HG21	1:B:371:LEU:HD22	2.03	0.41
1:B:208:ILE:HD13	1:B:383:PHE:HB2	2.03	0.41
1:B:413:VAL:HG23	1:B:413:VAL:H	1.49	0.41
1:B:451:SER:O	1:B:454:ALA:N	2.54	0.41
1:C:405:SER:O	1:C:408:HIS:CA	2.67	0.41
1:A:90:LYS:HG2	1:A:378:VAL:HG12	2.03	0.41
1:D:276:SER:HG	3:D:552:NDP:P2B	2.43	0.41
1:D:371:LEU:HD13	1:D:481:ALA:HB1	2.02	0.41
1:F:169:MET:HG2	3:F:552:NDP:C5D	2.47	0.41
1:F:219:VAL:HA	1:F:373:LEU:HD22	2.01	0.41
1:F:374:ASN:C	1:F:376:GLY:N	2.74	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:45:VAL:C	1:C:47:SER:H	2.24	0.41
1:C:494:ASN:C	1:C:495:GLU:HG2	2.40	0.41
1:E:13:VAL:HG11	1:E:110:LEU:HD13	2.03	0.41
1:B:30:GLU:HG2	1:B:31:ASP:H	1.84	0.41
1:B:94:ARG:NH2	1:B:169:MET:HG3	2.29	0.41
1:D:96:SER:O	1:D:99:VAL:HG22	2.20	0.41
1:F:399:PHE:C	1:F:401:TYR:H	2.24	0.41
1:E:24:VAL:HG23	1:E:28:LEU:CD2	2.48	0.41
1:D:172:GLY:O	1:D:176:MET:HE2	2.21	0.41
1:E:374:ASN:C	1:E:376:GLY:H	2.23	0.41
1:F:257:LEU:HG	1:F:257:LEU:O	2.20	0.41
1:B:66:ARG:O	1:B:67:ARG:O	2.38	0.41
1:E:134:LYS:HB3	1:E:134:LYS:HE2	1.78	0.41
1:A:399:PHE:CA	1:A:441:SER:HB3	2.50	0.41
1:A:276:SER:OG	3:A:552:NDP:O3X	2.32	0.41
1:C:363:ARG:O	1:C:365:ILE:HG12	2.20	0.41
1:A:331:LEU:HD23	1:A:360:PHE:CZ	2.56	0.41
1:D:281:TRP:HB2	1:D:310:TYR:HB2	2.01	0.41
1:C:211:ARG:O	1:C:214:ALA:HB3	2.21	0.41
1:C:332:THR:HG22	1:C:353:THR:CG2	2.46	0.41
1:D:234:SER:C	1:D:236:LEU:H	2.24	0.41
1:C:461:ALA:O	1:C:465:MET:HG3	2.20	0.41
1:B:212:ILE:HD11	1:B:258:HIS:HE1	1.85	0.41
1:A:78:TYR:O	1:A:127:ALA:HB1	2.21	0.41
1:A:93:ILE:HD11	1:A:95:TYR:CE1	2.53	0.41
1:D:451:SER:C	1:D:453:LEU:H	2.24	0.41
1:F:175:GLU:HA	1:F:178:TRP:CE3	2.55	0.41
1:F:294:PHE:HD1	1:F:300:THR:O	2.03	0.41
1:C:35:ARG:HG2	1:C:36:GLU:HG3	2.01	0.41
1:E:107:LEU:HD23	1:E:126:LYS:HG2	2.02	0.41
1:D:414:GLN:O	1:D:418:GLU:HG3	2.20	0.41
1:D:196:ALA:HB2	1:D:388:ASN:CB	2.50	0.41
1:F:467:THR:HG21	1:F:483:VAL:HG12	2.02	0.41
1:B:60:SER:HA	1:B:78:TYR:CD2	2.52	0.41
1:D:65:ILE:HA	1:D:65:ILE:HD13	1.67	0.41
1:E:429:PRO:HD2	1:F:420:LYS:HD3	2.02	0.41
1:A:275:GLU:HB2	1:A:301:ILE:CD1	2.50	0.41
1:E:19:ARG:HG2	1:E:19:ARG:NH1	2.31	0.41
1:E:294:PHE:CE2	1:E:298:HIS:HE1	2.37	0.41
1:B:103:GLU:O	1:B:106:ALA:HB3	2.20	0.41
1:E:235:ILE:HD12	1:E:235:ILE:N	2.36	0.41
1:A:390:ASN:O	1:A:392:VAL:HG23	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:408:HIS:C	1:B:410:LEU:N	2.74	0.41
1:A:121:PRO:O	1:A:122:PHE:CD2	2.72	0.41
1:C:247:PHE:CE2	1:C:263:LEU:CB	3.04	0.41
1:E:174:ARG:HG2	1:E:178:TRP:CZ3	2.55	0.41
1:D:291:LEU:O	1:D:294:PHE:N	2.40	0.41
1:D:322:LEU:O	1:D:324:PRO:HD3	2.20	0.41
1:D:328:GLU:HA	1:D:351:PRO:HA	2.03	0.41
1:D:169:MET:HA	3:D:552:NDP:O2A	2.21	0.41
1:D:111:MET:HE1	2:D:502:GLU:HG3	2.02	0.41
1:A:166:ALA:HA	1:A:199:THR:O	2.21	0.41
1:B:29:VAL:HG21	1:B:42:ARG:HE	1.86	0.41
1:A:73:GLU:OE2	1:A:75:ILE:HG22	2.21	0.41
1:E:21:ALA:O	1:E:25:GLU:HB2	2.21	0.41
1:E:372:TYR:CG	1:E:372:TYR:O	2.73	0.41
1:F:353:THR:O	1:F:357:ASP:N	2.53	0.41
1:C:47:SER:CB	1:F:72:TRP:HB2	2.47	0.41
1:A:238:MET:HG2	1:A:245:LYS:NZ	2.34	0.41
1:F:412:SER:C	1:F:414:GLN:N	2.74	0.41
1:B:201:LYS:HA	1:B:202:PRO:HD3	1.90	0.41
1:D:65:ILE:HG13	1:D:144:ILE:CD1	2.44	0.41
1:D:35:ARG:N	1:D:35:ARG:HD2	2.24	0.41
1:F:330:GLN:HE21	1:F:330:GLN:HA	1.84	0.41
1:D:177:SER:HB2	1:D:202:PRO:HG2	2.02	0.41
1:B:207:GLY:HA2	1:B:384:GLU:HG3	2.03	0.41
1:B:399:PHE:HD2	1:B:399:PHE:H	1.68	0.41
1:A:408:HIS:HD2	1:B:440:ILE:HB	1.86	0.41
1:A:412:SER:O	1:A:414:GLN:C	2.59	0.41
1:A:413:VAL:N	1:B:407:TYR:CD2	2.89	0.41
1:C:366:MET:HG3	1:C:475:LEU:CD2	2.50	0.41
1:E:89:CYS:HB3	1:E:125:ALA:CB	2.51	0.41
1:E:90:LYS:CD	1:E:122:PHE:CE1	2.95	0.41
1:E:175:GLU:CA	1:E:178:TRP:CE3	2.91	0.41
1:E:92:GLY:CA	1:E:166:ALA:O	2.69	0.41
1:E:242:PHE:CE1	1:E:263:LEU:HD22	2.55	0.41
1:B:315:LEU:HD12	1:B:335:ASN:ND2	2.36	0.41
1:A:281:TRP:H	1:A:307:ALA:HB1	1.86	0.41
1:F:342:LYS:CA	1:F:365:ILE:HG23	2.49	0.41
1:F:232:TYR:CZ	1:F:477:LEU:HD21	2.56	0.41
1:D:339:VAL:O	1:D:340:LYS:HB2	2.20	0.41
1:C:325:ALA:HA	1:C:348:ALA:N	2.36	0.41
1:D:149:THR:O	1:D:150:MET:C	2.59	0.41
1:D:325:ALA:HA	1:D:348:ALA:N	2.36	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:374:ASN:C	1:D:376:GLY:N	2.73	0.41
1:D:234:SER:C	1:D:236:LEU:N	2.73	0.41
1:A:94:ARG:O	1:A:128:GLY:CA	2.65	0.41
1:A:142:GLU:O	1:A:146:ARG:HG3	2.21	0.41
1:A:148:PHE:CD2	1:A:152:LEU:CD1	3.04	0.41
1:E:112:THR:N	1:E:124:GLY:HA3	2.36	0.41
1:D:466:ARG:NH1	1:D:466:ARG:HB2	2.36	0.41
1:D:448:ILE:HD13	1:D:448:ILE:HA	1.79	0.41
1:F:321:ILE:HG23	1:F:343:ILE:HB	2.03	0.41
1:F:383:PHE:O	1:F:384:GLU:C	2.58	0.41
1:C:35:ARG:CG	1:C:36:GLU:H	2.12	0.41
1:B:141:LEU:O	1:B:145:THR:HG22	2.20	0.41
1:C:36:GLU:H	1:C:36:GLU:HG3	1.51	0.41
1:E:107:LEU:O	1:E:110:LEU:CB	2.69	0.41
1:E:398:THR:O	1:E:399:PHE:C	2.59	0.41
1:E:406:ASN:O	1:E:408:HIS:N	2.54	0.41
1:D:201:LYS:NZ	1:D:388:ASN:ND2	2.63	0.41
1:B:281:TRP:O	1:B:307:ALA:HA	2.21	0.41
1:F:61:LEU:HD21	1:F:151:GLU:HB3	2.03	0.41
1:D:136:TYR:HA	1:D:140:GLU:OE2	2.21	0.41
1:D:68:ASP:OD1	1:D:137:THR:CG2	2.68	0.41
1:F:150:MET:HE1	1:F:187:ILE:CD1	2.46	0.41
1:A:458:GLU:O	1:A:460:SER:N	2.53	0.41
1:C:59:LEU:CD1	1:F:157:PHE:HZ	2.34	0.41
1:E:385:TRP:CE3	1:E:386:LEU:HD13	2.55	0.41
1:F:448:ILE:O	1:F:452:GLY:N	2.51	0.41
1:E:48:ILE:HD13	1:E:494:ASN:HB3	2.02	0.41
1:E:304:PHE:CE2	1:E:306:LYS:HB2	2.56	0.41
1:B:396:ARG:CG	1:B:396:ARG:NH1	2.83	0.41
1:E:252:PHE:HB2	1:E:275:GLU:OE1	2.20	0.41
1:B:9:PHE:CD2	1:B:106:ALA:CB	3.04	0.41
1:A:23:ILE:HG22	1:A:471:TYR:HD1	1.83	0.41
1:F:291:LEU:O	1:F:292:GLU:C	2.59	0.41
1:B:2:ASP:HB3	1:B:4:GLU:H	1.85	0.41
1:A:401:TYR:HA	1:A:404:ASP:CB	2.51	0.41
1:C:413:VAL:HB	1:C:430:ILE:HD13	2.03	0.41
1:A:118:VAL:CG1	1:A:375:ALA:HB1	2.47	0.41
1:C:343:ILE:HG23	1:C:366:MET:O	2.20	0.41
1:C:344:ILE:CB	1:C:367:VAL:HG12	2.40	0.41
1:E:248:VAL:HG11	1:E:317:VAL:CG1	2.51	0.41
1:D:292:GLU:O	1:D:296:LEU:HB2	2.21	0.41
1:D:101:VAL:HG22	1:D:102:ASP:N	2.34	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:35:ARG:HG2	1:E:36:GLU:N	2.25	0.41
1:E:372:TYR:HB2	1:E:464:ILE:HD11	2.03	0.41
1:F:223:ILE:H	1:F:223:ILE:HG12	1.36	0.41
1:B:19:ARG:HH11	1:B:19:ARG:CG	2.32	0.41
1:A:445:GLU:O	1:A:446:LYS:C	2.58	0.41
1:F:58:VAL:HG22	1:F:80:ALA:CB	2.51	0.41
1:F:445:GLU:O	1:F:449:VAL:HG23	2.22	0.41
1:B:366:MET:HG3	1:B:475:LEU:HD22	2.02	0.41
1:F:110:LEU:HD12	1:F:110:LEU:HA	1.90	0.41
1:A:404:ASP:HB3	1:B:439:ARG:HB2	2.03	0.40
1:A:412:SER:OG	1:B:440:ILE:CD1	2.66	0.40
1:A:418:GLU:O	1:A:422:GLY:HA2	2.21	0.40
1:B:417:LEU:HD23	1:B:417:LEU:HA	1.86	0.40
1:E:222:GLY:HA3	1:E:373:LEU:HD21	2.02	0.40
1:C:79:ARG:NH2	1:C:125:ALA:HB3	2.35	0.40
1:C:167:PRO:O	1:C:168:ASP:HB2	2.20	0.40
1:C:211:ARG:HD3	1:C:380:VAL:CG1	2.51	0.40
1:D:77:GLY:HA3	1:D:129:VAL:HA	2.01	0.40
1:D:13:VAL:HG11	1:D:110:LEU:HD13	2.04	0.40
1:D:245:LYS:HG3	1:D:245:LYS:HZ3	1.66	0.40
1:A:93:ILE:HA	1:A:127:ALA:O	2.20	0.40
1:A:166:ALA:HB1	1:A:167:PRO:HD2	2.03	0.40
1:C:126:LYS:HD3	1:C:126:LYS:HA	1.74	0.40
1:D:226:PHE:CD1	1:D:368:ILE:HD13	2.56	0.40
1:F:346:GLU:OE2	1:F:369:PRO:HA	2.21	0.40
1:C:37:THR:CB	1:C:41:LYS:HG3	2.50	0.40
1:A:239:THR:HA	1:A:240:PRO:HD3	1.94	0.40
1:E:398:THR:O	1:E:401:TYR:N	2.50	0.40
1:B:203:ILE:CG2	1:B:204:SER:N	2.84	0.40
1:B:458:GLU:O	1:B:459:ARG:C	2.58	0.40
1:C:23:ILE:HG13	1:C:23:ILE:H	1.67	0.40
1:A:89:CYS:O	1:A:163:ASP:HA	2.20	0.40
1:A:203:ILE:CG2	1:A:204:SER:N	2.83	0.40
1:F:27:LYS:O	1:F:28:LEU:C	2.60	0.40
1:A:399:PHE:C	1:A:441:SER:HB3	2.41	0.40
1:A:108:ALA:C	1:A:110:LEU:N	2.74	0.40
1:C:396:ARG:CD	1:C:396:ARG:C	2.89	0.40
1:A:219:VAL:HA	1:A:373:LEU:CD2	2.50	0.40
1:A:315:LEU:HD13	1:A:331:LEU:CD1	2.50	0.40
1:D:296:LEU:HD22	1:D:296:LEU:HA	1.53	0.40
1:B:391:HIS:HB3	1:C:385:TRP:CZ3	2.56	0.40
1:C:348:ALA:HA	3:C:552:NDP:C1D	2.49	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:91:GLY:CA	1:D:111:MET:HE2	2.52	0.40
1:F:263:LEU:O	1:F:264:HIS:C	2.60	0.40
1:D:420:LYS:CG	1:D:421:PHE:CE2	3.04	0.40
1:C:56:ASN:ND2	1:C:83:SER:HA	2.35	0.40
1:E:258:HIS:CD2	1:E:261:ARG:HH12	2.37	0.40
1:F:397:LEU:H	1:F:397:LEU:CD1	2.26	0.40
1:D:118:VAL:HG11	1:D:375:ALA:HB3	1.98	0.40
1:B:372:TYR:HB2	1:B:464:ILE:HD11	2.03	0.40
1:B:374:ASN:C	1:B:376:GLY:N	2.72	0.40
1:B:399:PHE:C	1:B:401:TYR:N	2.74	0.40
1:A:408:HIS:CG	1:B:439:ARG:C	2.94	0.40
1:A:326:ALA:HB1	3:A:552:NDP:C4A	2.51	0.40
1:A:52:ILE:O	1:A:82:HIS:CE1	2.74	0.40
1:C:272:THR:OG1	1:C:314:ILE:CD1	2.65	0.40
1:E:146:ARG:HA	1:E:182:THR:HG21	2.02	0.40
1:C:9:PHE:CE2	1:C:106:ALA:HB1	2.54	0.40
1:C:449:VAL:HG12	1:C:450:HIS:N	2.36	0.40
1:C:3:ARG:NE	1:C:4:GLU:HG3	2.36	0.40
1:C:141:LEU:O	1:C:145:THR:CG2	2.70	0.40
1:B:36:GLU:H	1:B:36:GLU:HG3	1.37	0.40
1:A:73:GLU:HG2	1:A:74:VAL:N	2.36	0.40
1:E:36:GLU:HG3	1:E:36:GLU:H	1.60	0.40
1:E:49:LEU:HD12	1:E:49:LEU:HA	1.99	0.40
1:E:370:ASP:O	1:E:371:LEU:C	2.59	0.40
1:E:482:TYR:HA	1:E:485:ALA:HB3	2.03	0.40
1:F:111:MET:HE1	1:F:378:VAL:HG13	2.02	0.40
1:F:12:MET:O	1:F:13:VAL:C	2.60	0.40
1:C:24:VAL:HG13	1:C:483:VAL:HG22	2.03	0.40
1:A:245:LYS:N	1:A:245:LYS:HD2	2.36	0.40
1:E:421:PHE:O	1:E:422:GLY:C	2.60	0.40
1:F:433:THR:C	1:F:435:GLU:H	2.25	0.40
1:D:85:HIS:HB3	1:D:493:TYR:CE1	2.57	0.40
1:A:292:GLU:O	1:A:296:LEU:HB2	2.21	0.40
1:F:269:LYS:HD3	1:F:284:ASP:O	2.21	0.40
1:B:214:ALA:HB1	1:B:380:VAL:CG2	2.49	0.40
1:B:394:TYR:CD2	1:B:395:GLY:N	2.90	0.40
1:C:405:SER:HB3	1:C:406:ASN:H	1.54	0.40
1:A:484:ASN:O	1:A:485:ALA:C	2.58	0.40
1:C:224:GLU:O	1:C:228:ASN:HB2	2.21	0.40
1:E:254:ASN:N	3:E:552:NDP:O2N	2.53	0.40
1:E:227:ILE:HG22	1:E:228:ASN:H	1.86	0.40
1:C:169:MET:CG	3:C:552:NDP:H52N	2.47	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:373:LEU:O	1:B:373:LEU:HD22	2.22	0.40
1:C:154:LYS:C	1:C:156:GLY:H	2.24	0.40
1:A:138:ASP:O	1:A:142:GLU:N	2.45	0.40
1:A:79:ARG:CB	1:A:127:ALA:HB2	2.52	0.40
1:D:463:GLN:HA	1:D:466:ARG:HB3	2.03	0.40
1:F:117:VAL:HG12	1:F:118:VAL:HG12	2.02	0.40
1:F:337:PRO:HA	1:F:359:ILE:HG21	2.04	0.40
1:F:216:GLY:O	1:F:217:ARG:C	2.60	0.40
1:C:59:LEU:O	1:C:78:TYR:HA	2.22	0.40
1:B:23:ILE:H	1:B:23:ILE:HG13	1.53	0.40
1:A:294:PHE:CZ	1:A:298:HIS:ND1	2.90	0.40
1:A:294:PHE:O	1:A:295:LYS:C	2.60	0.40
1:D:32:LEU:HD21	1:D:44:ARG:NH1	2.36	0.40
1:A:397:LEU:O	1:B:448:ILE:CD1	2.70	0.40
1:A:414:GLN:HE21	1:B:431:VAL:CA	2.35	0.40
1:B:385:TRP:CZ2	1:B:389:LEU:HD11	2.56	0.40
1:A:411:MET:CB	1:B:436:PHE:O	2.68	0.40
1:A:382:TYR:O	1:A:386:LEU:CD2	2.69	0.40
1:A:53:LYS:HB3	1:A:54:PRO:HD3	2.03	0.40
1:C:321:ILE:N	1:C:321:ILE:HD13	2.37	0.40
1:E:348:ALA:O	1:E:351:PRO:HD3	2.22	0.40
1:F:232:TYR:O	1:F:233:MET:C	2.59	0.40
1:A:146:ARG:HB3	1:A:182:THR:CG2	2.35	0.40
1:E:40:GLN:H	1:E:40:GLN:HG2	1.44	0.40
1:D:392:VAL:O	1:D:393:SER:C	2.59	0.40
1:F:255:VAL:O	1:F:255:VAL:HG22	2.22	0.40
1:F:302:LEU:HD23	1:F:302:LEU:HA	1.89	0.40
1:F:382:TYR:CZ	1:F:386:LEU:HD21	2.57	0.40
1:E:408:HIS:O	1:E:409:LEU:C	2.59	0.40
1:A:40:GLN:HA	1:A:43:ASN:HB2	2.03	0.40
1:D:9:PHE:CE2	1:D:12:MET:CE	3.05	0.40
1:A:458:GLU:HG3	1:A:459:ARG:H	1.77	0.40
1:F:394:TYR:CD2	1:F:448:ILE:HG13	2.57	0.40
1:D:489:VAL:O	1:D:490:PHE:C	2.59	0.40
1:D:28:LEU:HG	1:D:490:PHE:CD2	2.57	0.40
1:C:287:ASP:HA	1:C:288:PRO:HD3	1.87	0.40
1:D:89:CYS:HA	1:D:123:GLY:O	2.21	0.40
1:E:396:ARG:HH11	1:E:396:ARG:CG	2.35	0.40

There are no symmetry-related clashes.

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	493/501 (98%)	349 (71%)	100 (20%)	44 (9%)	1	10
1	B	493/501 (98%)	347 (70%)	105 (21%)	41 (8%)	1	12
1	C	493/501 (98%)	344 (70%)	103 (21%)	46 (9%)	1	9
1	D	493/501 (98%)	347 (70%)	102 (21%)	44 (9%)	1	10
1	E	493/501 (98%)	345 (70%)	102 (21%)	46 (9%)	1	9
1	F	493/501 (98%)	348 (71%)	98 (20%)	47 (10%)	1	9
All	All	2958/3006 (98%)	2080 (70%)	610 (21%)	268 (9%)	1	10

All (268) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	35	ARG
1	A	38	GLU
1	A	99	VAL
1	A	214	ALA
1	A	235	ILE
1	A	410	LEU
1	A	412	SER
1	A	434	ALA
1	A	439	ARG
1	A	447	ASP
1	B	35	ARG
1	B	38	GLU
1	B	99	VAL
1	B	110	LEU
1	B	111	MET
1	B	189	HIS
1	B	214	ALA
1	B	268	ALA
1	B	413	VAL
1	B	422	GLY
1	B	429	PRO

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Mol	Chain	Res	Type
1	C	5	ASP
1	C	35	ARG
1	C	38	GLU
1	C	89	CYS
1	C	99	VAL
1	C	214	ALA
1	C	317	VAL
1	C	371	LEU
1	C	405	SER
1	C	414	GLN
1	C	422	GLY
1	C	494	ASN
1	D	35	ARG
1	D	38	GLU
1	D	99	VAL
1	D	187	ILE
1	D	214	ALA
1	D	268	ALA
1	D	348	ALA
1	D	371	LEU
1	D	391	HIS
1	D	400	LYS
1	D	422	GLY
1	D	446	LYS
1	D	462	ARG
1	E	35	ARG
1	E	38	GLU
1	E	99	VAL
1	E	189	HIS
1	E	214	ALA
1	E	317	VAL
1	E	391	HIS
1	E	422	GLY
1	E	474	GLY
1	F	2	ASP
1	F	35	ARG
1	F	38	GLU
1	F	67	ARG
1	F	99	VAL
1	F	179	ILE
1	F	189	HIS
1	F	371	LEU

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Mol	Chain	Res	Type
1	F	415	GLU
1	F	422	GLY
1	A	67	ARG
1	A	186	THR
1	A	317	VAL
1	A	333	LYS
1	A	346	GLU
1	A	393	SER
1	A	413	VAL
1	A	414	GLN
1	A	422	GLY
1	A	424	HIS
1	A	474	GLY
1	B	67	ARG
1	B	186	THR
1	B	235	ILE
1	B	275	GLU
1	B	317	VAL
1	B	333	LYS
1	B	361	LEU
1	B	399	PHE
1	B	400	LYS
1	B	411	MET
1	B	412	SER
1	B	451	SER
1	C	2	ASP
1	C	43	ASN
1	C	179	ILE
1	C	268	ALA
1	C	325	ALA
1	C	396	ARG
1	C	399	PHE
1	C	415	GLU
1	C	424	HIS
1	D	79	ARG
1	D	111	MET
1	D	237	GLY
1	D	384	GLU
1	D	393	SER
1	D	463	GLN
1	E	19	ARG
1	E	158	ILE

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Mol	Chain	Res	Type
1	E	222	GLY
1	E	231	SER
1	E	235	ILE
1	E	346	GLU
1	E	399	PHE
1	E	400	LYS
1	E	415	GLU
1	E	446	LYS
1	E	462	ARG
1	E	478	ARG
1	F	45	VAL
1	F	52	ILE
1	F	144	ILE
1	F	310	TYR
1	F	359	ILE
1	F	370	ASP
1	F	413	VAL
1	F	424	HIS
1	A	18	ASP
1	A	310	TYR
1	A	363	ARG
1	A	371	LEU
1	A	394	TYR
1	A	494	ASN
1	B	69	ASP
1	B	70	GLY
1	B	168	ASP
1	B	293	ASP
1	B	310	TYR
1	B	346	GLU
1	B	409	LEU
1	C	3	ARG
1	C	4	GLU
1	C	44	ARG
1	C	121	PRO
1	C	148	PHE
1	C	155	LYS
1	C	220	PHE
1	C	237	GLY
1	C	310	TYR
1	C	333	LYS
1	C	346	GLU

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Mol	Chain	Res	Type
1	C	363	ARG
1	C	370	ASP
1	C	459	ARG
1	D	4	GLU
1	D	43	ASN
1	D	235	ILE
1	D	257	LEU
1	D	310	TYR
1	D	346	GLU
1	D	360	PHE
1	D	447	ASP
1	E	61	LEU
1	E	85	HIS
1	E	110	LEU
1	E	143	LYS
1	E	275	GLU
1	E	310	TYR
1	E	325	ALA
1	E	371	LEU
1	F	174	ARG
1	F	180	ALA
1	F	214	ALA
1	F	220	PHE
1	F	231	SER
1	F	268	ALA
1	F	319	CYS
1	F	340	LYS
1	F	346	GLU
1	F	399	PHE
1	F	403	ARG
1	F	414	GLN
1	F	491	ARG
1	A	165	PRO
1	A	268	ALA
1	A	293	ASP
1	A	340	LYS
1	A	375	ALA
1	A	398	THR
1	A	411	MET
1	A	462	ARG
1	B	55	CYS
1	B	149	THR

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Mol	Chain	Res	Type
1	B	222	GLY
1	B	257	LEU
1	B	325	ALA
1	B	491	ARG
1	C	319	CYS
1	C	379	THR
1	C	449	VAL
1	D	67	ARG
1	D	266	PHE
1	D	293	ASP
1	D	313	SER
1	D	329	LYS
1	D	334	SER
1	D	359	ILE
1	D	474	GLY
1	E	28	LEU
1	E	67	ARG
1	E	144	ILE
1	E	348	ALA
1	E	359	ILE
1	E	360	PHE
1	E	450	HIS
1	E	479	THR
1	F	111	MET
1	F	396	ARG
1	A	237	GLY
1	A	485	ALA
1	B	446	LYS
1	C	106	ALA
1	C	448	ILE
1	D	110	LEU
1	D	265	ARG
1	D	476	ASP
1	E	5	ASP
1	E	27	LYS
1	E	237	GLY
1	F	46	ARG
1	F	155	LYS
1	F	361	LEU
1	F	446	LYS
1	A	29	VAL
1	A	116	ALA

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Mol	Chain	Res	Type
1	A	180	ALA
1	A	359	ILE
1	A	432	PRO
1	B	28	LEU
1	C	27	LYS
1	C	144	ILE
1	C	168	ASP
1	C	235	ILE
1	D	150	MET
1	E	53	LYS
1	E	398	THR
1	E	454	ALA
1	E	485	ALA
1	F	43	ASN
1	F	117	VAL
1	F	235	ILE
1	F	237	GLY
1	F	462	ARG
1	B	237	GLY
1	D	179	ILE
1	F	253	GLY
1	D	219	VAL
1	D	317	VAL
1	E	20	GLY
1	E	449	VAL
1	F	166	ALA
1	A	449	VAL
1	A	486	ILE
1	B	158	ILE
1	C	52	ILE
1	D	53	LYS
1	D	392	VAL
1	F	29	VAL
1	B	309	ILE
1	C	222	GLY
1	F	432	PRO
1	F	486	ILE

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	416/420 (99%)	323 (78%)	93 (22%)	1	6
1	B	416/420 (99%)	325 (78%)	91 (22%)	1	7
1	C	416/420 (99%)	323 (78%)	93 (22%)	1	6
1	D	416/420 (99%)	323 (78%)	93 (22%)	1	6
1	E	416/420 (99%)	324 (78%)	92 (22%)	1	7
1	F	416/420 (99%)	324 (78%)	92 (22%)	1	7
All	All	2496/2520 (99%)	1942 (78%)	554 (22%)	1	6

All (554) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	3	ARG
1	A	9	PHE
1	A	10	PHE
1	A	28	LEU
1	A	35	ARG
1	A	36	GLU
1	A	37	THR
1	A	39	GLU
1	A	40	GLN
1	A	43	ASN
1	A	60	SER
1	A	61	LEU
1	A	65	ILE
1	A	67	ARG
1	A	68	ASP
1	A	75	ILE
1	A	78	TYR
1	A	84	GLN
1	A	87	THR
1	A	93	ILE
1	A	94	ARG
1	A	98	ASP
1	A	101	VAL
1	A	107	LEU
1	A	110	LEU
1	A	112	THR
1	A	118	VAL

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Mol	Chain	Res	Type
1	A	126	LYS
1	A	134	LYS
1	A	137	THR
1	A	145	THR
1	A	158	ILE
1	A	168	ASP
1	A	175	GLU
1	A	176	MET
1	A	182	THR
1	A	185	SER
1	A	190	TYR
1	A	198	VAL
1	A	212	ILE
1	A	219	VAL
1	A	223	ILE
1	A	224	GLU
1	A	225	ASN
1	A	239	THR
1	A	244	ASP
1	A	249	VAL
1	A	255	VAL
1	A	272	THR
1	A	289	LYS
1	A	291	LEU
1	A	296	LEU
1	A	306	LYS
1	A	316	GLU
1	A	321	ILE
1	A	328	GLU
1	A	338	ARG
1	A	342	LYS
1	A	344	ILE
1	A	352	THR
1	A	365	ILE
1	A	367	VAL
1	A	368	ILE
1	A	371	LEU
1	A	372	TYR
1	A	373	LEU
1	A	378	VAL
1	A	379	THR
1	A	386	LEU

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Mol	Chain	Res	Type
1	A	393	SER
1	A	396	ARG
1	A	397	LEU
1	A	402	GLU
1	A	405	SER
1	A	406	ASN
1	A	407	TYR
1	A	408	HIS
1	A	409	LEU
1	A	411	MET
1	A	413	VAL
1	A	423	LYS
1	A	427	THR
1	A	428	ILE
1	A	430	ILE
1	A	433	THR
1	A	437	GLN
1	A	439	ARG
1	A	446	LYS
1	A	456	THR
1	A	458	GLU
1	A	463	GLN
1	A	479	THR
1	A	491	ARG
1	B	3	ARG
1	B	9	PHE
1	B	28	LEU
1	B	35	ARG
1	B	36	GLU
1	B	37	THR
1	B	39	GLU
1	B	40	GLN
1	B	49	LEU
1	B	61	LEU
1	B	65	ILE
1	B	67	ARG
1	B	68	ASP
1	B	75	ILE
1	B	78	TYR
1	B	84	GLN
1	B	87	THR
1	B	93	ILE

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Mol	Chain	Res	Type
1	B	94	ARG
1	B	101	VAL
1	B	102	ASP
1	B	107	LEU
1	B	110	LEU
1	B	112	THR
1	B	126	LYS
1	B	134	LYS
1	B	137	THR
1	B	144	ILE
1	B	145	THR
1	B	150	MET
1	B	152	LEU
1	B	158	ILE
1	B	182	THR
1	B	187	ILE
1	B	189	HIS
1	B	190	TYR
1	B	212	ILE
1	B	217	ARG
1	B	223	ILE
1	B	224	GLU
1	B	225	ASN
1	B	244	ASP
1	B	252	PHE
1	B	255	VAL
1	B	271	ILE
1	B	272	THR
1	B	289	LYS
1	B	291	LEU
1	B	296	LEU
1	B	297	GLN
1	B	306	LYS
1	B	311	GLU
1	B	313	SER
1	B	321	ILE
1	B	330	GLN
1	B	342	LYS
1	B	344	ILE
1	B	346	GLU
1	B	352	THR
1	B	357	ASP

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Mol	Chain	Res	Type
1	B	358	LYS
1	B	361	LEU
1	B	365	ILE
1	B	367	VAL
1	B	368	ILE
1	B	373	LEU
1	B	378	VAL
1	B	379	THR
1	B	386	LEU
1	B	394	TYR
1	B	396	ARG
1	B	397	LEU
1	B	406	ASN
1	B	407	TYR
1	B	410	LEU
1	B	421	PHE
1	B	423	LYS
1	B	427	THR
1	B	428	ILE
1	B	437	GLN
1	B	440	ILE
1	B	446	LYS
1	B	448	ILE
1	B	456	THR
1	B	457	MET
1	B	458	GLU
1	B	463	GLN
1	B	479	THR
1	B	487	GLU
1	B	491	ARG
1	B	494	ASN
1	C	3	ARG
1	C	9	PHE
1	C	19	ARG
1	C	28	LEU
1	C	35	ARG
1	C	36	GLU
1	C	37	THR
1	C	39	GLU
1	C	40	GLN
1	C	49	LEU
1	C	60	SER

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Mol	Chain	Res	Type
1	C	61	LEU
1	C	62	SER
1	C	65	ILE
1	C	67	ARG
1	C	68	ASP
1	C	75	ILE
1	C	78	TYR
1	C	79	ARG
1	C	84	GLN
1	C	87	THR
1	C	93	ILE
1	C	94	ARG
1	C	101	VAL
1	C	107	LEU
1	C	110	LEU
1	C	112	THR
1	C	118	VAL
1	C	119	ASP
1	C	134	LYS
1	C	137	THR
1	C	145	THR
1	C	158	ILE
1	C	168	ASP
1	C	169	MET
1	C	173	GLU
1	C	176	MET
1	C	182	THR
1	C	183	TYR
1	C	185	SER
1	C	187	ILE
1	C	190	TYR
1	C	212	ILE
1	C	223	ILE
1	C	225	ASN
1	C	239	THR
1	C	242	PHE
1	C	255	VAL
1	C	270	CYS
1	C	272	THR
1	C	289	LYS
1	C	291	LEU
1	C	296	LEU

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Mol	Chain	Res	Type
1	C	306	LYS
1	C	311	GLU
1	C	316	GLU
1	C	321	ILE
1	C	328	GLU
1	C	342	LYS
1	C	344	ILE
1	C	352	THR
1	C	365	ILE
1	C	366	MET
1	C	367	VAL
1	C	371	LEU
1	C	373	LEU
1	C	378	VAL
1	C	379	THR
1	C	386	LEU
1	C	396	ARG
1	C	397	LEU
1	C	403	ARG
1	C	405	SER
1	C	406	ASN
1	C	408	HIS
1	C	410	LEU
1	C	412	SER
1	C	413	VAL
1	C	421	PHE
1	C	423	LYS
1	C	427	THR
1	C	428	ILE
1	C	431	VAL
1	C	445	GLU
1	C	446	LYS
1	C	448	ILE
1	C	456	THR
1	C	458	GLU
1	C	463	GLN
1	C	467	THR
1	C	479	THR
1	C	490	PHE
1	C	495	GLU
1	D	2	ASP
1	D	3	ARG

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Mol	Chain	Res	Type
1	D	8	ASN
1	D	9	PHE
1	D	19	ARG
1	D	23	ILE
1	D	28	LEU
1	D	35	ARG
1	D	36	GLU
1	D	37	THR
1	D	39	GLU
1	D	40	GLN
1	D	43	ASN
1	D	60	SER
1	D	61	LEU
1	D	67	ARG
1	D	68	ASP
1	D	71	SER
1	D	75	ILE
1	D	78	TYR
1	D	84	GLN
1	D	87	THR
1	D	93	ILE
1	D	94	ARG
1	D	101	VAL
1	D	110	LEU
1	D	112	THR
1	D	119	ASP
1	D	126	LYS
1	D	134	LYS
1	D	137	THR
1	D	145	THR
1	D	154	LYS
1	D	158	ILE
1	D	176	MET
1	D	182	THR
1	D	189	HIS
1	D	190	TYR
1	D	212	ILE
1	D	219	VAL
1	D	223	ILE
1	D	224	GLU
1	D	225	ASN
1	D	239	THR

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Mol	Chain	Res	Type
1	D	242	PHE
1	D	248	VAL
1	D	263	LEU
1	D	272	THR
1	D	275	GLU
1	D	289	LYS
1	D	291	LEU
1	D	296	LEU
1	D	297	GLN
1	D	306	LYS
1	D	311	GLU
1	D	313	SER
1	D	316	GLU
1	D	321	ILE
1	D	328	GLU
1	D	342	LYS
1	D	344	ILE
1	D	352	THR
1	D	353	THR
1	D	357	ASP
1	D	365	ILE
1	D	367	VAL
1	D	368	ILE
1	D	371	LEU
1	D	372	TYR
1	D	373	LEU
1	D	378	VAL
1	D	379	THR
1	D	386	LEU
1	D	396	ARG
1	D	397	LEU
1	D	403	ARG
1	D	405	SER
1	D	407	TYR
1	D	408	HIS
1	D	409	LEU
1	D	410	LEU
1	D	412	SER
1	D	413	VAL
1	D	421	PHE
1	D	423	LYS
1	D	427	THR

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Mol	Chain	Res	Type
1	D	446	LYS
1	D	456	THR
1	D	458	GLU
1	D	463	GLN
1	D	479	THR
1	D	490	PHE
1	D	495	GLU
1	E	3	ARG
1	E	9	PHE
1	E	19	ARG
1	E	28	LEU
1	E	29	VAL
1	E	33	LYS
1	E	35	ARG
1	E	37	THR
1	E	39	GLU
1	E	40	GLN
1	E	49	LEU
1	E	60	SER
1	E	61	LEU
1	E	65	ILE
1	E	68	ASP
1	E	75	ILE
1	E	78	TYR
1	E	79	ARG
1	E	86	ARG
1	E	87	THR
1	E	93	ILE
1	E	94	ARG
1	E	98	ASP
1	E	101	VAL
1	E	110	LEU
1	E	118	VAL
1	E	126	LYS
1	E	134	LYS
1	E	137	THR
1	E	144	ILE
1	E	145	THR
1	E	150	MET
1	E	152	LEU
1	E	158	ILE
1	E	168	ASP

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Mol	Chain	Res	Type
1	E	173	GLU
1	E	175	GLU
1	E	176	MET
1	E	182	THR
1	E	186	THR
1	E	187	ILE
1	E	189	HIS
1	E	190	TYR
1	E	198	VAL
1	E	212	ILE
1	E	223	ILE
1	E	239	THR
1	E	252	PHE
1	E	272	THR
1	E	275	GLU
1	E	279	SER
1	E	289	LYS
1	E	291	LEU
1	E	296	LEU
1	E	302	LEU
1	E	306	LYS
1	E	311	GLU
1	E	316	GLU
1	E	321	ILE
1	E	342	LYS
1	E	344	ILE
1	E	352	THR
1	E	357	ASP
1	E	367	VAL
1	E	368	ILE
1	E	372	TYR
1	E	373	LEU
1	E	378	VAL
1	E	379	THR
1	E	386	LEU
1	E	396	ARG
1	E	397	LEU
1	E	403	ARG
1	E	407	TYR
1	E	408	HIS
1	E	413	VAL
1	E	416	SER

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Mol	Chain	Res	Type
1	E	421	PHE
1	E	423	LYS
1	E	427	THR
1	E	428	ILE
1	E	431	VAL
1	E	446	LYS
1	E	451	SER
1	E	456	THR
1	E	458	GLU
1	E	463	GLN
1	E	469	MET
1	E	479	THR
1	E	492	VAL
1	E	493	TYR
1	E	495	GLU
1	F	9	PHE
1	F	10	PHE
1	F	33	LYS
1	F	35	ARG
1	F	36	GLU
1	F	37	THR
1	F	39	GLU
1	F	40	GLN
1	F	60	SER
1	F	61	LEU
1	F	65	ILE
1	F	66	ARG
1	F	67	ARG
1	F	68	ASP
1	F	71	SER
1	F	75	ILE
1	F	76	GLU
1	F	78	TYR
1	F	84	GLN
1	F	87	THR
1	F	93	ILE
1	F	94	ARG
1	F	101	VAL
1	F	107	LEU
1	F	110	LEU
1	F	112	THR
1	F	119	ASP

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Mol	Chain	Res	Type
1	F	126	LYS
1	F	134	LYS
1	F	137	THR
1	F	145	THR
1	F	150	MET
1	F	158	ILE
1	F	176	MET
1	F	182	THR
1	F	189	HIS
1	F	190	TYR
1	F	212	ILE
1	F	217	ARG
1	F	219	VAL
1	F	223	ILE
1	F	224	GLU
1	F	225	ASN
1	F	239	THR
1	F	242	PHE
1	F	245	LYS
1	F	248	VAL
1	F	249	VAL
1	F	252	PHE
1	F	272	THR
1	F	275	GLU
1	F	289	LYS
1	F	291	LEU
1	F	296	LEU
1	F	306	LYS
1	F	311	GLU
1	F	313	SER
1	F	316	GLU
1	F	321	ILE
1	F	328	GLU
1	F	338	ARG
1	F	342	LYS
1	F	344	ILE
1	F	352	THR
1	F	357	ASP
1	F	361	LEU
1	F	365	ILE
1	F	367	VAL
1	F	368	ILE

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Mol	Chain	Res	Type
1	F	371	LEU
1	F	373	LEU
1	F	378	VAL
1	F	386	LEU
1	F	396	ARG
1	F	397	LEU
1	F	408	HIS
1	F	412	SER
1	F	413	VAL
1	F	421	PHE
1	F	423	LYS
1	F	427	THR
1	F	428	ILE
1	F	431	VAL
1	F	446	LYS
1	F	456	THR
1	F	458	GLU
1	F	463	GLN
1	F	469	MET
1	F	487	GLU
1	F	491	ARG
1	F	494	ASN
1	F	495	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (71) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	82	HIS
1	A	85	HIS
1	A	135	ASN
1	A	189	HIS
1	A	209	HIS
1	A	225	ASN
1	A	258	HIS
1	A	388	ASN
1	A	390	ASN
1	A	414	GLN
1	A	424	HIS
1	A	484	ASN
1	B	40	GLN
1	B	57	HIS
1	B	82	HIS

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Mol	Chain	Res	Type
1	B	84	GLN
1	B	135	ASN
1	B	195	HIS
1	B	209	HIS
1	B	221	HIS
1	B	225	ASN
1	B	258	HIS
1	B	330	GLN
1	B	388	ASN
1	B	450	HIS
1	C	57	HIS
1	C	82	HIS
1	C	84	GLN
1	C	135	ASN
1	C	209	HIS
1	C	225	ASN
1	C	258	HIS
1	C	388	ASN
1	C	391	HIS
1	C	406	ASN
1	C	450	HIS
1	C	484	ASN
1	D	57	HIS
1	D	82	HIS
1	D	84	GLN
1	D	135	ASN
1	D	189	HIS
1	D	205	GLN
1	D	209	HIS
1	D	221	HIS
1	D	225	ASN
1	D	258	HIS
1	D	349	ASN
1	D	388	ASN
1	D	414	GLN
1	D	424	HIS
1	D	494	ASN
1	E	82	HIS
1	E	84	GLN
1	E	135	ASN
1	E	189	HIS
1	E	209	HIS

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Mol	Chain	Res	Type
1	E	225	ASN
1	E	388	ASN
1	E	406	ASN
1	F	56	ASN
1	F	57	HIS
1	F	82	HIS
1	F	135	ASN
1	F	209	HIS
1	F	221	HIS
1	F	388	ASN
1	F	391	HIS
1	F	406	ASN
1	F	424	HIS
1	F	494	ASN

5.3.3 RNA ⓘ

There are no RNA chains in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry ⓘ

Of 14 ligands modelled in this entry, 2 are monoatomic - leaving 12 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	GLU	A	502	-	9,9,9	1.07	1 (11%)	11,11,11	0.89	0
3	NDP	A	552	-	52,52,52	1.41	4 (7%)	80,80,80	1.78	13 (16%)
2	GLU	B	502	-	9,9,9	0.90	0	11,11,11	1.36	2 (18%)
3	NDP	B	552	-	52,52,52	1.35	6 (11%)	80,80,80	1.89	14 (17%)
2	GLU	C	502	-	9,9,9	1.20	1 (11%)	11,11,11	1.86	3 (27%)
3	NDP	C	552	-	52,52,52	1.39	5 (9%)	80,80,80	1.80	13 (16%)
2	GLU	D	502	-	9,9,9	0.93	0	11,11,11	0.98	0
3	NDP	D	552	-	52,52,52	1.44	5 (9%)	80,80,80	1.83	13 (16%)
2	GLU	E	502	-	9,9,9	0.87	0	11,11,11	1.68	3 (27%)
3	NDP	E	552	-	52,52,52	1.41	5 (9%)	80,80,80	1.76	11 (13%)
2	GLU	F	502	-	9,9,9	0.95	0	11,11,11	1.71	3 (27%)
3	NDP	F	552	-	52,52,52	1.54	7 (13%)	80,80,80	1.70	11 (13%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the chemical component dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	GLU	A	502	-	-	0/9/9/9	0/0/0/0
3	NDP	A	552	-	-	0/35/77/77	0/3/5/5
2	GLU	B	502	-	-	0/9/9/9	0/0/0/0
3	NDP	B	552	-	-	0/35/77/77	0/3/5/5
2	GLU	C	502	-	-	0/9/9/9	0/0/0/0
3	NDP	C	552	-	-	0/35/77/77	0/3/5/5
2	GLU	D	502	-	-	0/9/9/9	0/0/0/0
3	NDP	D	552	-	-	0/35/77/77	0/3/5/5
2	GLU	E	502	-	-	0/9/9/9	0/0/0/0
3	NDP	E	552	-	-	0/35/77/77	0/3/5/5
2	GLU	F	502	-	-	0/9/9/9	0/0/0/0
3	NDP	F	552	-	-	0/35/77/77	0/3/5/5

All (34) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	E	552	NDP	O7N-C7N	6.71	1.42	1.24
3	A	552	NDP	O7N-C7N	6.53	1.41	1.24
3	C	552	NDP	O7N-C7N	6.53	1.41	1.24
3	F	552	NDP	O7N-C7N	6.52	1.41	1.24
3	D	552	NDP	O7N-C7N	6.34	1.41	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	B	552	NDP	O7N-C7N	5.88	1.39	1.24
3	F	552	NDP	C2A-N3A	3.47	1.39	1.32
3	D	552	NDP	C2N-C3N	3.31	1.41	1.34
3	F	552	NDP	C2N-C3N	3.24	1.41	1.34
3	C	552	NDP	C2A-N3A	3.16	1.38	1.32
3	B	552	NDP	C2A-N3A	3.10	1.38	1.32
3	E	552	NDP	C2A-N3A	3.07	1.38	1.32
3	A	552	NDP	C2N-C3N	3.07	1.40	1.34
3	E	552	NDP	C2N-C3N	2.96	1.40	1.34
3	A	552	NDP	C2A-N3A	2.95	1.38	1.32
3	D	552	NDP	C2A-N3A	2.85	1.37	1.32
3	D	552	NDP	C6N-C5N	2.82	1.39	1.33
3	B	552	NDP	C2N-C3N	2.77	1.40	1.34
3	C	552	NDP	C2N-C3N	2.63	1.39	1.34
3	E	552	NDP	C2A-N1A	2.53	1.38	1.33
3	C	552	NDP	C6N-C5N	2.51	1.38	1.33
3	B	552	NDP	C2A-N1A	2.49	1.38	1.33
3	F	552	NDP	PN-O3	2.47	1.64	1.59
3	F	552	NDP	PA-O3	2.45	1.64	1.59
3	B	552	NDP	C6N-C5N	2.42	1.38	1.33
3	E	552	NDP	C6N-C5N	2.36	1.38	1.33
3	F	552	NDP	C2A-N1A	2.32	1.38	1.33
3	F	552	NDP	C6N-C5N	2.32	1.38	1.33
2	C	502	GLU	CG-CD	2.26	1.56	1.50
3	A	552	NDP	C6N-C5N	2.21	1.37	1.33
2	A	502	GLU	OXT-C	-2.20	1.22	1.30
3	D	552	NDP	O4D-C4D	-2.19	1.39	1.45
3	B	552	NDP	O4D-C4D	-2.11	1.40	1.45
3	C	552	NDP	C2A-N1A	2.03	1.37	1.33

All (86) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	D	552	NDP	N3A-C2A-N1A	-10.92	119.58	128.71
3	A	552	NDP	N3A-C2A-N1A	-10.75	119.72	128.71
3	C	552	NDP	N3A-C2A-N1A	-10.29	120.11	128.71
3	B	552	NDP	N3A-C2A-N1A	-10.09	120.28	128.71
3	F	552	NDP	N3A-C2A-N1A	-9.79	120.52	128.71
3	E	552	NDP	N3A-C2A-N1A	-9.11	121.09	128.71
3	C	552	NDP	O4B-C1B-N9A	5.56	113.61	108.44
3	E	552	NDP	O4B-C1B-N9A	5.02	113.11	108.44
3	B	552	NDP	P2B-O2B-C2B	-4.74	111.98	121.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	E	552	NDP	PN-O3-PA	-4.26	119.19	131.68
3	B	552	NDP	O4D-C1D-N1N	4.20	116.95	108.05
3	D	552	NDP	O4D-C1D-N1N	4.11	116.74	108.05
3	A	552	NDP	N3A-C4A-N9A	3.97	132.60	125.43
2	F	502	GLU	OXT-C-O	-3.90	115.26	124.07
3	D	552	NDP	C1D-N1N-C6N	-3.85	112.25	120.79
3	F	552	NDP	N3A-C4A-N9A	3.81	132.31	125.43
2	C	502	GLU	OXT-C-O	-3.78	115.53	124.07
3	C	552	NDP	N3A-C4A-N9A	3.75	132.20	125.43
3	B	552	NDP	N3A-C4A-N9A	3.71	132.12	125.43
3	D	552	NDP	N3A-C4A-N9A	3.69	132.10	125.43
3	E	552	NDP	N3A-C4A-N9A	3.62	131.96	125.43
3	F	552	NDP	O4D-C1D-N1N	3.52	115.50	108.05
3	B	552	NDP	C4B-O4B-C1B	3.47	113.52	109.75
2	E	502	GLU	C-CA-N	3.44	115.06	109.36
3	E	552	NDP	C1D-N1N-C6N	-3.31	113.45	120.79
3	A	552	NDP	C1D-N1N-C6N	-3.28	113.53	120.79
3	F	552	NDP	C1D-N1N-C6N	-3.25	113.59	120.79
3	E	552	NDP	O4D-C1D-N1N	3.22	114.87	108.05
3	B	552	NDP	O4B-C1B-N9A	3.18	111.39	108.44
3	D	552	NDP	P2B-O2B-C2B	-3.16	115.31	121.96
2	C	502	GLU	C-CA-N	3.13	114.55	109.36
3	D	552	NDP	PN-O3-PA	-3.12	122.53	131.68
2	E	502	GLU	OXT-C-O	-3.04	117.19	124.07
3	F	552	NDP	C1D-N1N-C2N	2.88	125.93	121.02
3	B	552	NDP	PN-O3-PA	-2.83	123.37	131.68
3	B	552	NDP	C1D-N1N-C6N	-2.82	114.53	120.79
3	F	552	NDP	C2N-C3N-C7N	2.82	125.70	118.49
3	D	552	NDP	C4A-C5A-N7A	-2.75	107.17	109.52
2	C	502	GLU	OXT-C-CA	2.73	123.02	116.88
3	A	552	NDP	PN-O3-PA	-2.70	123.77	131.68
3	C	552	NDP	C1D-N1N-C2N	-2.69	116.44	121.02
2	B	502	GLU	OXT-C-O	-2.67	118.03	124.07
3	D	552	NDP	C2A-N3A-C4A	2.56	121.30	114.01
3	A	552	NDP	O4D-C1D-N1N	2.54	113.43	108.05
3	E	552	NDP	C2N-C3N-C7N	2.52	124.94	118.49
3	F	552	NDP	O2A-PA-O3	2.52	117.12	105.14
3	F	552	NDP	C5A-C4A-N3A	-2.52	120.22	125.70
3	B	552	NDP	C2D-C1D-N1N	-2.49	106.86	113.21
3	D	552	NDP	N7A-C8A-N9A	-2.49	107.32	114.36
3	A	552	NDP	C5A-C4A-N3A	-2.48	120.30	125.70
3	D	552	NDP	C5A-C4A-N3A	-2.44	120.39	125.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	552	NDP	O2B-P2B-O1X	2.41	113.53	106.79
3	A	552	NDP	C2A-N3A-C4A	2.40	120.85	114.01
3	C	552	NDP	PN-O3-PA	-2.40	124.65	131.68
2	F	502	GLU	OXT-C-CA	2.40	122.26	116.88
3	A	552	NDP	O3D-C3D-C4D	-2.39	104.05	111.08
3	A	552	NDP	N7A-C8A-N9A	-2.38	107.61	114.36
3	C	552	NDP	C6N-N1N-C2N	2.34	122.50	119.44
3	C	552	NDP	C2D-C1D-N1N	-2.34	107.26	113.21
2	F	502	GLU	C-CA-N	2.33	113.22	109.36
3	C	552	NDP	C5A-C4A-N3A	-2.33	120.64	125.70
3	C	552	NDP	N7A-C8A-N9A	-2.31	107.82	114.36
3	F	552	NDP	C2A-N3A-C4A	2.28	120.49	114.01
2	B	502	GLU	OXT-C-CA	2.28	121.99	116.88
3	F	552	NDP	N7A-C8A-N9A	-2.27	107.95	114.36
3	E	552	NDP	C5A-C6A-N6A	-2.24	115.64	120.72
3	B	552	NDP	C3B-C2B-C1B	2.24	107.08	102.73
2	E	502	GLU	OXT-C-CA	2.23	121.88	116.88
3	B	552	NDP	C5A-C6A-N6A	-2.22	115.69	120.72
3	B	552	NDP	C5A-C4A-N3A	-2.22	120.88	125.70
3	C	552	NDP	C4A-C5A-N7A	-2.20	107.63	109.52
3	B	552	NDP	C2B-C1B-N9A	-2.17	105.50	113.74
3	A	552	NDP	C1D-N1N-C2N	2.16	124.70	121.02
3	D	552	NDP	C8A-N9A-C4A	2.12	108.52	106.90
3	C	552	NDP	O3X-P2B-O2B	2.09	113.10	107.09
3	E	552	NDP	C5A-C4A-N3A	-2.07	121.19	125.70
3	E	552	NDP	N7A-C8A-N9A	-2.07	108.52	114.36
3	C	552	NDP	C2A-N3A-C4A	2.06	119.88	114.01
3	D	552	NDP	C2N-C3N-C7N	2.06	123.75	118.49
3	F	552	NDP	C4A-C5A-N7A	-2.04	107.78	109.52
3	A	552	NDP	C4A-C5A-N7A	-2.04	107.78	109.52
3	B	552	NDP	C3N-C2N-N1N	-2.03	120.17	123.05
3	A	552	NDP	C2N-C3N-C7N	2.02	123.65	118.49
3	D	552	NDP	O2A-PA-O3	2.01	114.70	105.14
3	C	552	NDP	C4N-C3N-C2N	-2.00	119.24	121.68
3	E	552	NDP	C3D-C2D-C1D	2.00	105.33	101.35

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

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	495/501 (98%)	0.11	25 (5%)	27 6	6, 32, 70, 126	0
1	B	495/501 (98%)	0.00	5 (1%)	79 32	6, 32, 73, 124	0
1	C	495/501 (98%)	0.14	5 (1%)	79 32	6, 38, 76, 128	0
1	D	495/501 (98%)	-0.03	2 (0%)	90 54	6, 32, 68, 131	0
1	E	495/501 (98%)	-0.01	6 (1%)	75 28	8, 35, 71, 120	0
1	F	495/501 (98%)	-0.10	1 (0%)	93 67	4, 31, 71, 132	0
All	All	2970/3006 (98%)	0.02	44 (1%)	70 23	4, 33, 72, 132	0

All (44) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	431	VAL	7.3
1	A	430	ILE	6.2
1	A	429	PRO	5.4
1	A	432	PRO	5.2
1	A	422	GLY	4.4
1	E	319	CYS	4.3
1	A	424	HIS	4.3
1	A	423	LYS	3.9
1	A	410	LEU	3.9
1	E	424	HIS	3.4
1	A	413	VAL	3.0
1	A	412	SER	3.0
1	A	420	LYS	3.0
1	B	428	ILE	2.9
1	C	319	CYS	2.9
1	A	417	LEU	2.9
1	A	418	GLU	2.9
1	B	298	HIS	2.9
1	E	342	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
1	E	72	TRP	2.7
1	A	421	PHE	2.7
1	E	318	ASP	2.7
1	A	411	MET	2.6
1	A	427	THR	2.5
1	B	303	GLY	2.4
1	C	422	GLY	2.4
1	D	36	GLU	2.4
1	A	405	SER	2.3
1	C	308	LYS	2.3
1	A	285	GLY	2.3
1	A	426	GLY	2.2
1	F	426	GLY	2.2
1	C	465	MET	2.2
1	A	416	SER	2.1
1	B	424	HIS	2.1
1	E	423	LYS	2.1
1	D	413	VAL	2.1
1	A	436	PHE	2.1
1	A	33	LYS	2.1
1	C	337	PRO	2.1
1	A	437	GLN	2.0
1	A	419	ARG	2.0
1	B	66	ARG	2.0
1	A	428	ILE	2.0

6.2 Non-standard residues in protein, DNA, RNA chains ⓘ

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

6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors

of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
2	GLU	A	502	10/10	0.19	0.60	9,11,14,15	0
2	GLU	C	502	10/10	0.20	0.24	16,22,28,30	0
3	NDP	F	552	48/48	0.17	-0.14	7,18,40,52	0
3	NDP	A	552	48/48	0.18	-0.26	12,22,53,68	0
3	NDP	D	552	48/48	0.17	-0.55	13,26,35,41	0
3	NDP	C	552	48/48	0.18	-0.60	23,37,50,62	0
3	NDP	B	552	48/48	0.15	-0.70	12,26,39,49	0
2	GLU	E	502	10/10	0.14	-0.74	14,17,21,23	0
3	NDP	E	552	48/48	0.15	-0.92	18,34,58,77	0
2	GLU	D	502	10/10	0.16	-0.93	11,13,16,17	0
2	GLU	B	502	10/10	0.14	-1.11	8,11,13,15	0
2	GLU	F	502	10/10	0.12	-1.55	6,8,11,13	0
4	EU3	A	503	1/1	0.08	-1.96	67,67,67,67	0
4	EU3	D	503	1/1	0.09	-8.28	65,65,65,65	0

6.5 Other polymers ⓘ

There are no such residues in this entry.