



Full wwPDB X-ray Structure Validation Report ⓘ

Aug 4, 2026 – 07:31 PM EDT

PDB ID : 1JQK / pdb_00001jqk
Title : Crystal structure of carbon monoxide dehydrogenase from Rhodospirillum rubrum
Authors : Drennan, C.L.; Heo, J.; Sintchak, M.D.; Schreiter, E.; Ludden, P.W.
Deposited on : 2001-08-07
Resolution : 2.80 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	NOT EXECUTED
EDS	:	NOT EXECUTED
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.50

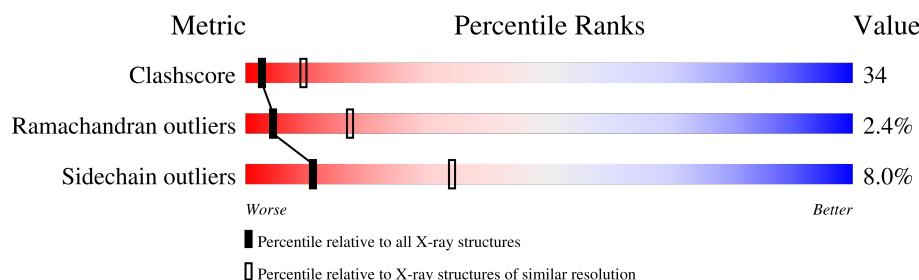
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.80 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))
Clashscore	190562	4276 (2.80-2.80)
Ramachandran outliers	187476	4196 (2.80-2.80)
Sidechain outliers	187428	4198 (2.80-2.80)

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

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	639	44% 43% 8% 5%
1	B	639	46% 40% 8% 5%
1	C	639	50% 38% 8% 5%
1	D	639	49% 40% 6% 5%
1	E	639	48% 39% 7% 5%
1	F	639	46% 41% 8% 5%

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

ria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
4	XCC	C	803	-	-	X	-

2 Entry composition [i](#)

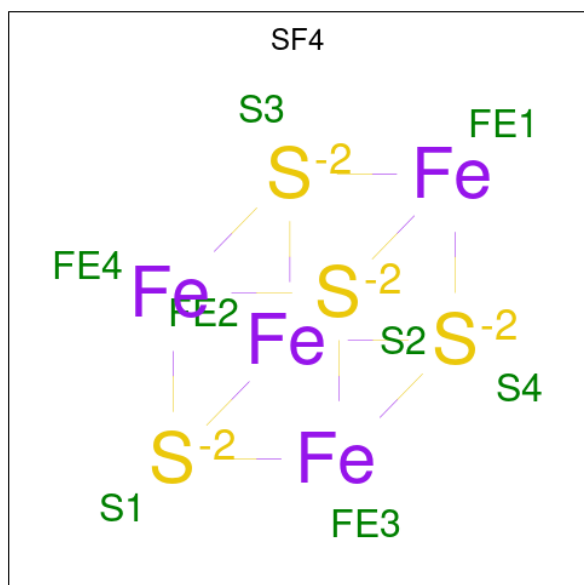
There are 4 unique types of molecules in this entry. The entry contains 26898 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called carbon monoxide dehydrogenase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	610	Total	C	N	O	S	0	0	0
			4461	2798	792	838	33			
1	B	610	Total	C	N	O	S	0	0	0
			4461	2798	792	838	33			
1	C	610	Total	C	N	O	S	0	0	0
			4461	2798	792	838	33			
1	D	610	Total	C	N	O	S	0	0	0
			4461	2798	792	838	33			
1	E	610	Total	C	N	O	S	0	0	0
			4461	2798	792	838	33			
1	F	610	Total	C	N	O	S	0	0	0
			4461	2798	792	838	33			

- Molecule 2 is IRON/SULFUR CLUSTER (CCD ID: SF4) (formula: Fe_4S_4).

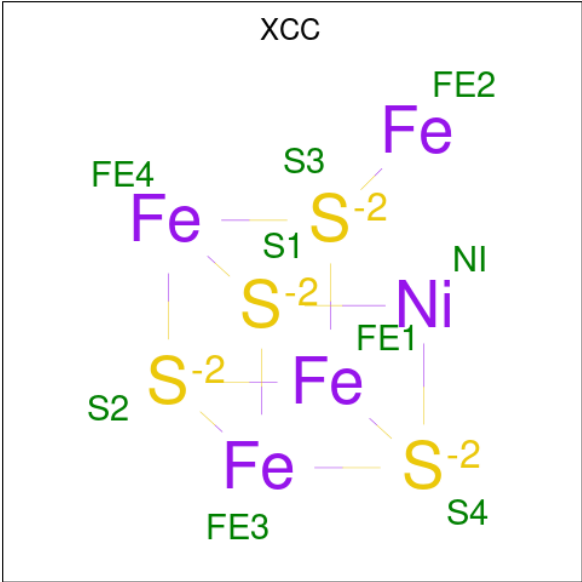


Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total Fe S 8 4 4	0	0
2	A	1	Total Fe S 8 4 4	0	0
2	B	1	Total Fe S 8 4 4	0	0
2	C	1	Total Fe S 8 4 4	0	0
2	C	1	Total Fe S 8 4 4	0	0
2	D	1	Total Fe S 8 4 4	0	0
2	E	1	Total Fe S 8 4 4	0	0
2	E	1	Total Fe S 8 4 4	0	0
2	F	1	Total Fe S 8 4 4	0	0

- Molecule 3 is UNKNOWN LIGAND (CCD ID: UNX) (formula: X).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total X 1 1	0	0
3	B	1	Total X 1 1	0	0
3	C	1	Total X 1 1	0	0
3	D	1	Total X 1 1	0	0
3	E	1	Total X 1 1	0	0
3	F	1	Total X 1 1	0	0

- Molecule 4 is FE(4)-NI(1)-S(4) CLUSTER (CCD ID: XCC) (formula: Fe₄NiS₄).



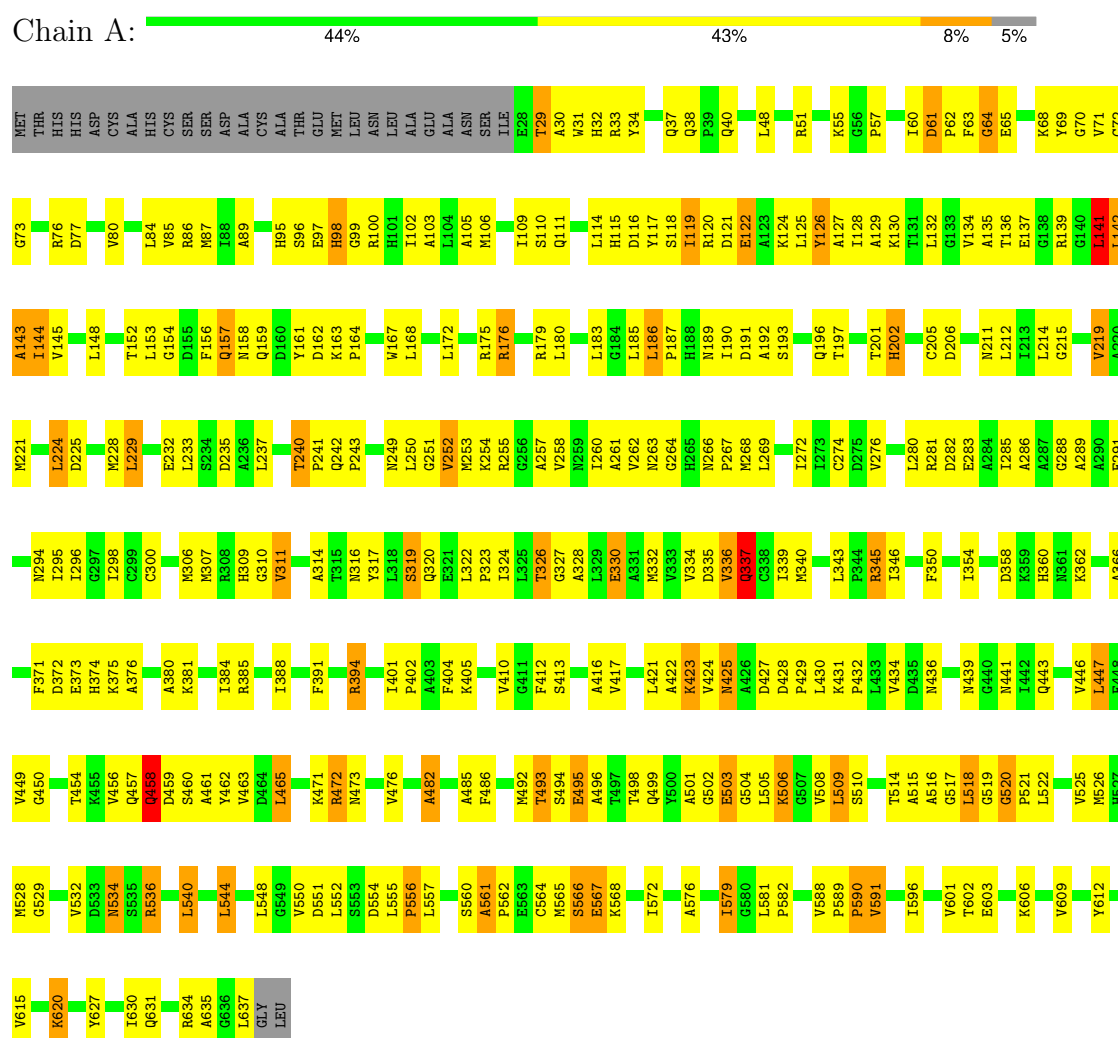
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	A	1	Total	Fe	Ni	S	0	0
			9	4	1	4		
4	B	1	Total	Fe	Ni	S	0	0
			9	4	1	4		
4	C	1	Total	Fe	Ni	S	0	0
			9	4	1	4		
4	D	1	Total	Fe	Ni	S	0	0
			9	4	1	4		
4	E	1	Total	Fe	Ni	S	0	0
			9	4	1	4		
4	F	1	Total	Fe	Ni	S	0	0
			9	4	1	4		

3 Residue-property plots

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

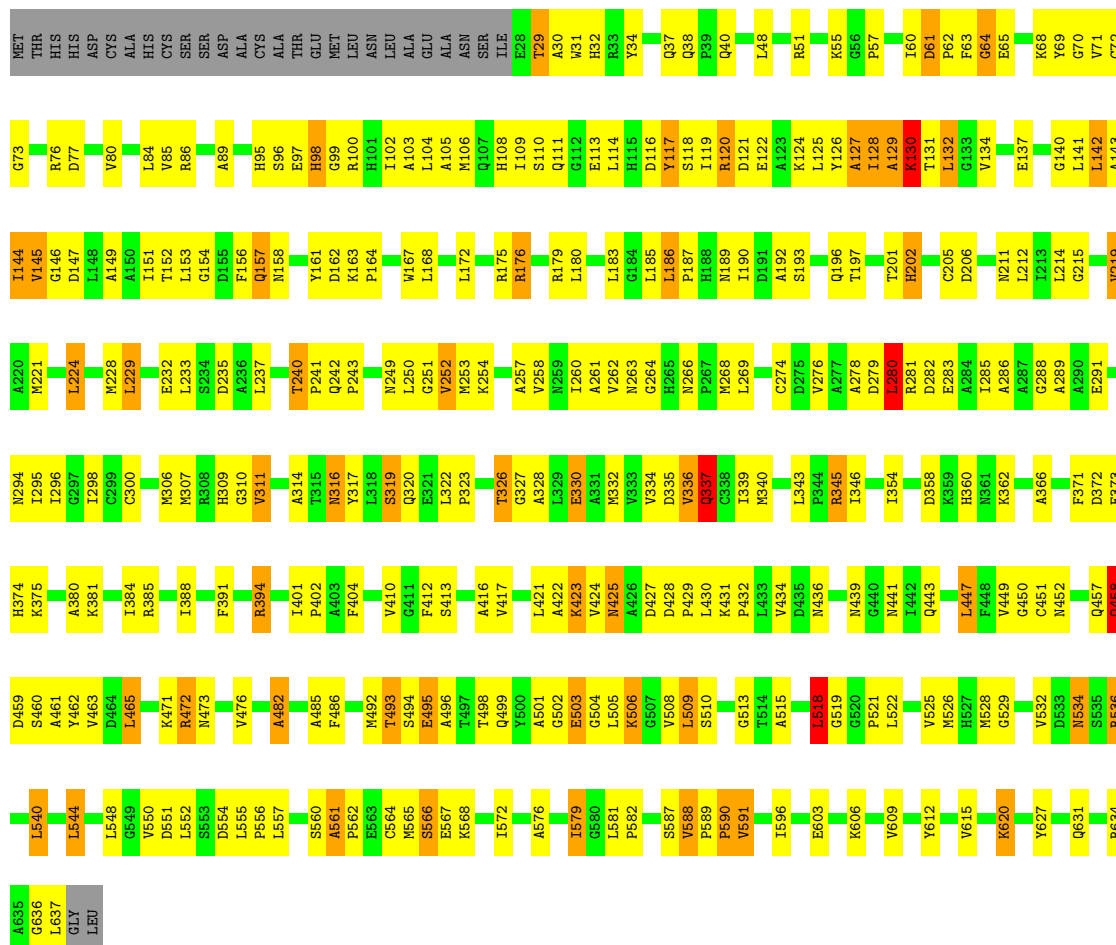
Note EDS was not executed.

- Molecule 1: carbon monoxide dehydrogenase



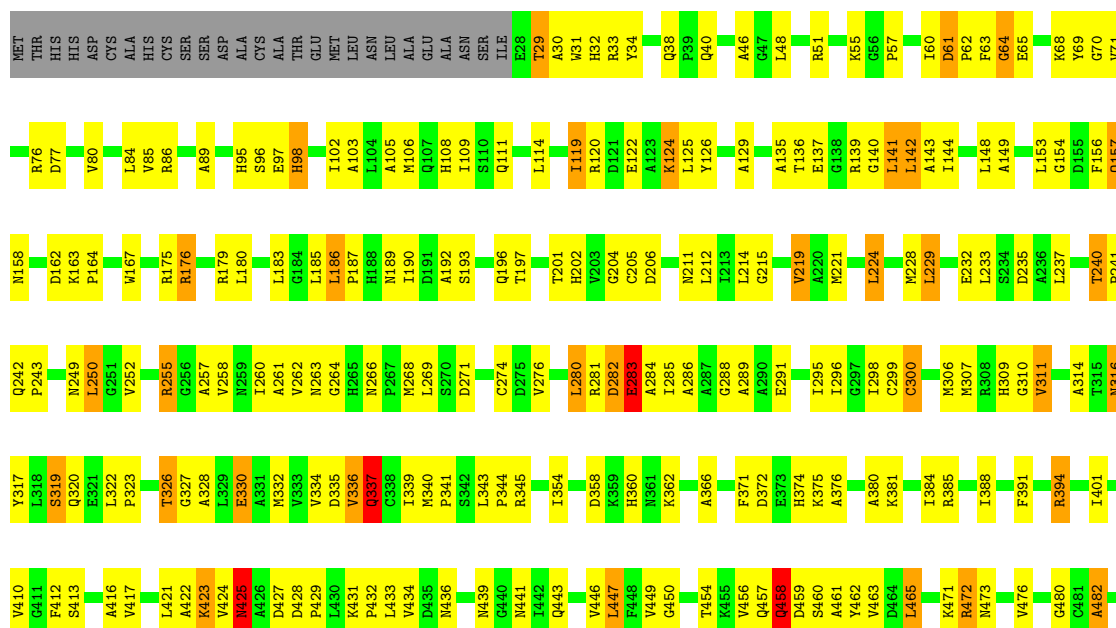
- Molecule 1: carbon monoxide dehydrogenase

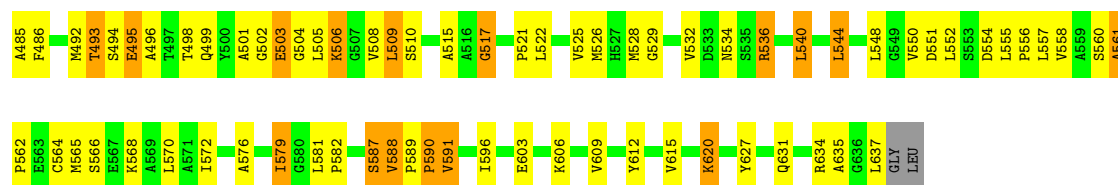




• Molecule 1: carbon monoxide dehydrogenase

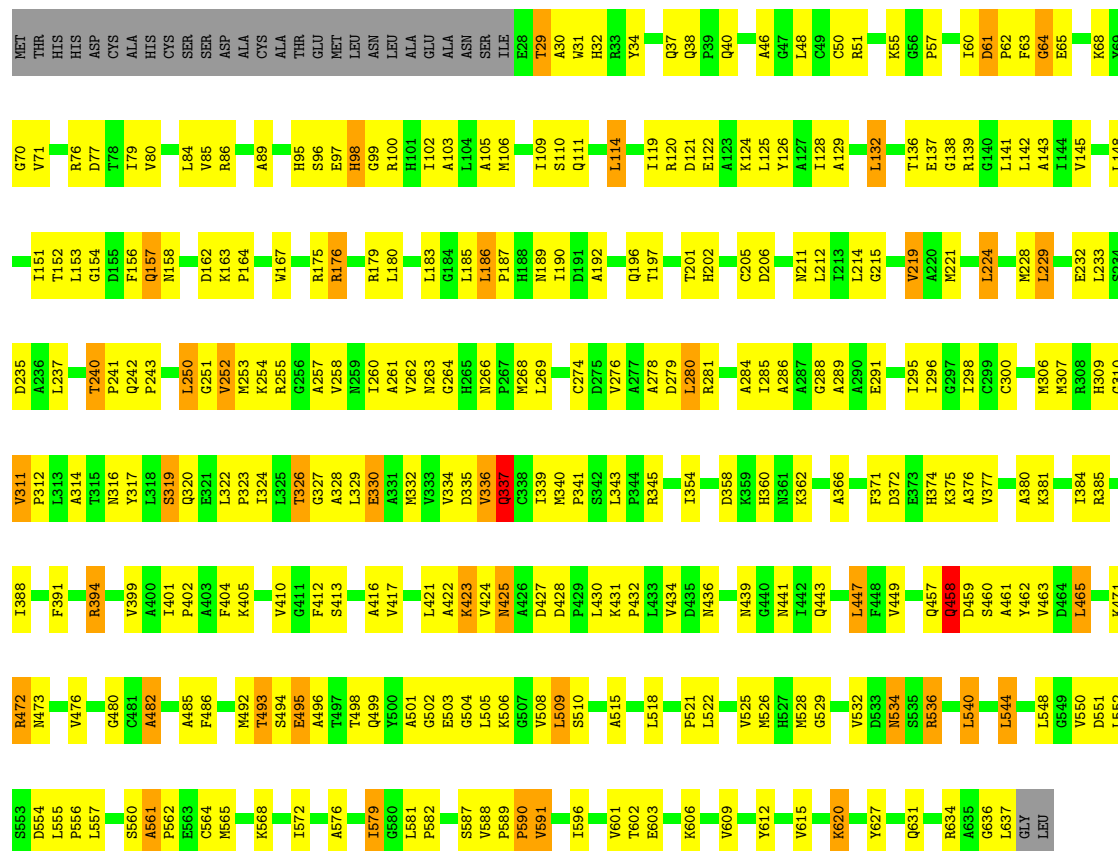
Chain C: 50% 38% 8% 5%





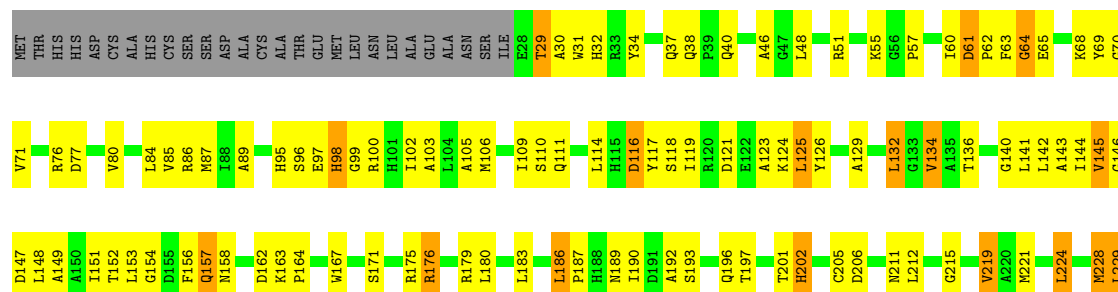
• Molecule 1: carbon monoxide dehydrogenase

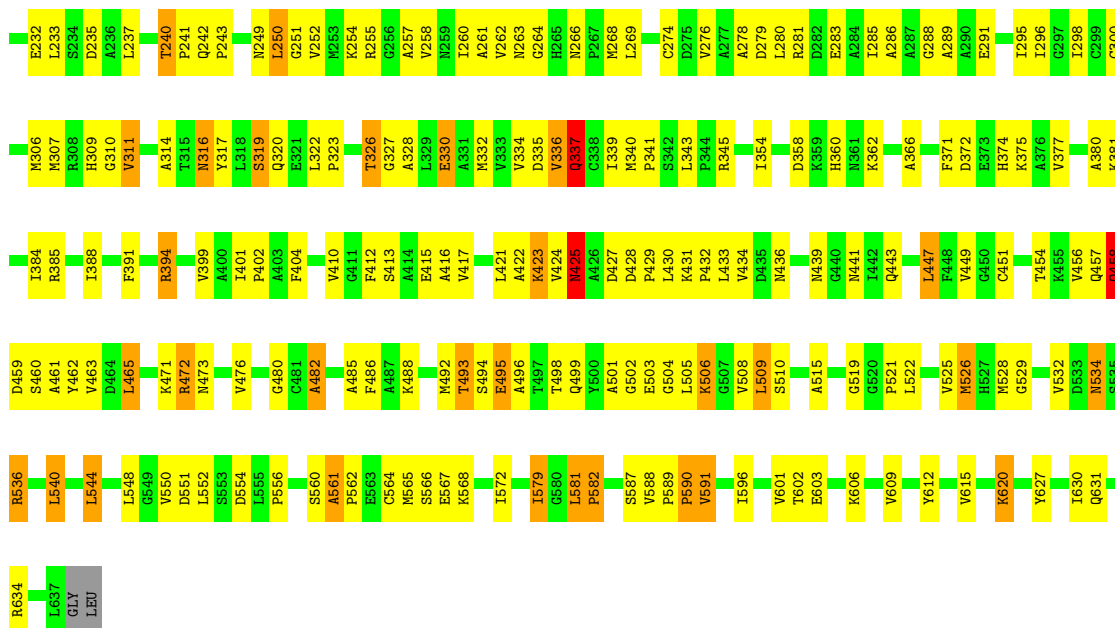
Chain D: 49% 40% 6% 5%



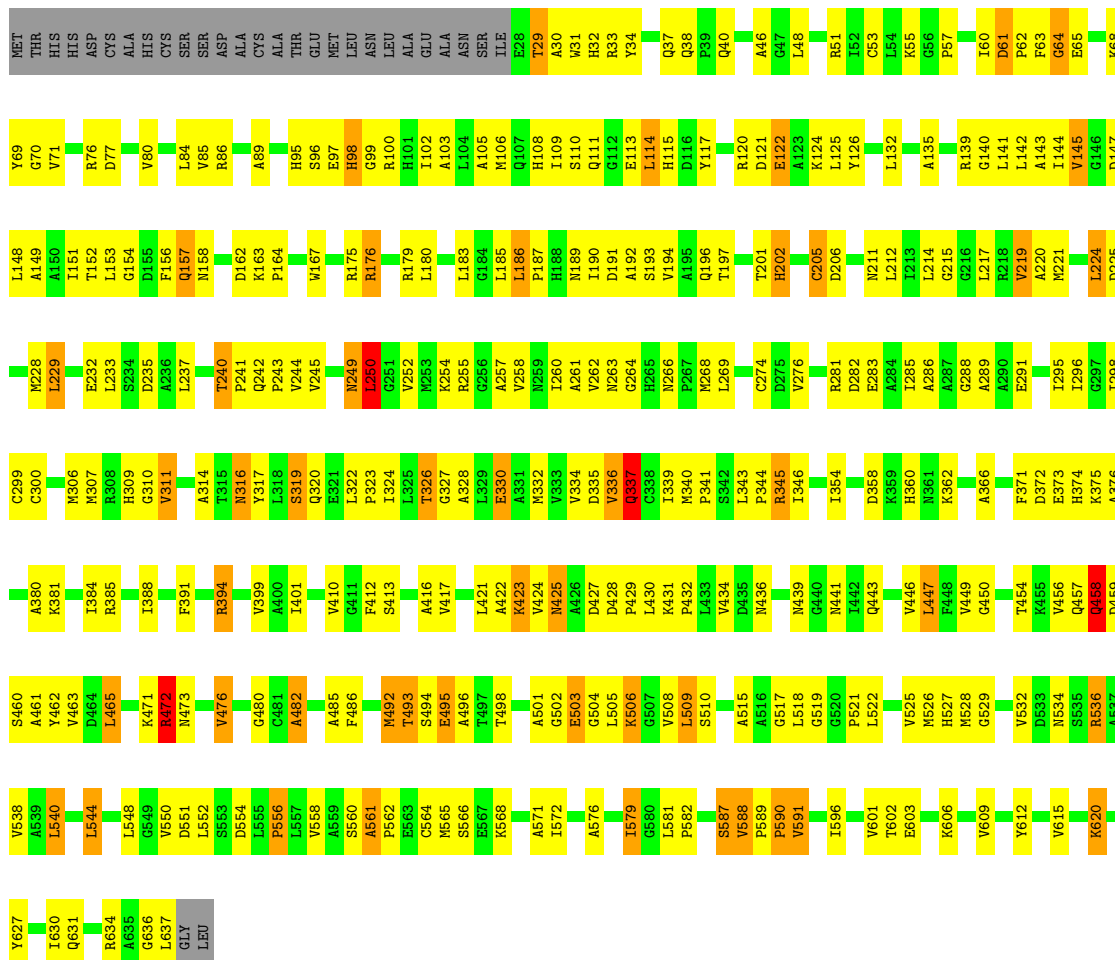
• Molecule 1: carbon monoxide dehydrogenase

Chain E: 48% 39% 7% 5%





- Molecule 1: carbon monoxide dehydrogenase



4 Data and refinement statistics

Xtriage (Phenix) and EDS were not executed - this section is therefore incomplete.

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	92.60Å 200.10Å 116.80Å 90.00° 111.50° 90.00°	Depositor
Resolution (Å)	100.00 – 2.80	Depositor
% Data completeness (in resolution range)	76.9 (100.00-2.80)	Depositor
R_{merge}	(Not available)	Depositor
R_{sym}	0.09	Depositor
Refinement program	CNS 1.0	Depositor
R, R_{free}	0.257 , 0.287	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	26898	wwPDB-VP
Average B, all atoms (Å ²)	47.0	wwPDB-VP

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: UNX, XCC, SF4

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	0.43	0/4534	0.99	30/6161 (0.5%)
1	B	0.44	0/4534	1.00	28/6161 (0.5%)
1	C	0.53	0/4534	1.02	24/6161 (0.4%)
1	D	0.55	0/4534	1.01	24/6161 (0.4%)
1	E	0.56	2/4534 (0.0%)	1.02	26/6161 (0.4%)
1	F	0.54	0/4534	1.03	27/6161 (0.4%)
All	All	0.51	2/27204 (0.0%)	1.01	159/36966 (0.4%)

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	E	0	1

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	526	MET	SD-CE	-5.64	1.65	1.79
1	E	228	MET	SD-CE	-5.09	1.66	1.79

All (159) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	250	LEU	N-CA-C	9.53	123.94	111.75
1	D	128	ILE	N-CA-C	-9.14	101.43	110.30
1	B	129	ALA	N-CA-C	-8.72	99.25	111.81
1	F	482	ALA	N-CA-C	-7.76	102.77	111.07
1	A	476	VAL	N-CA-C	7.48	118.64	107.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	476	VAL	N-CA-C	7.46	118.62	107.80
1	C	476	VAL	N-CA-C	7.46	118.61	107.80
1	D	482	ALA	N-CA-C	-7.40	103.15	111.07
1	C	482	ALA	N-CA-C	-7.38	103.17	111.07
1	D	476	VAL	N-CA-C	7.37	118.48	107.80
1	A	143	ALA	N-CA-C	-7.36	104.44	113.41
1	B	482	ALA	N-CA-C	-7.31	103.25	111.07
1	E	581	LEU	N-CA-C	7.27	118.95	109.93
1	C	141	LEU	N-CA-C	7.22	118.84	110.97
1	A	482	ALA	N-CA-C	-7.19	103.37	111.07
1	B	476	VAL	N-CA-C	7.18	118.21	107.80
1	F	476	VAL	N-CA-C	7.17	118.21	107.75
1	F	561	ALA	CA-C-N	7.10	126.62	119.24
1	F	561	ALA	C-N-CA	7.10	126.62	119.24
1	C	581	LEU	N-CA-C	7.05	118.67	109.93
1	D	591	VAL	N-CA-C	7.05	117.19	111.62
1	E	143	ALA	N-CA-C	-6.99	103.71	111.82
1	F	581	LEU	N-CA-C	6.85	118.43	109.93
1	A	561	ALA	CA-C-N	6.83	126.34	119.24
1	A	561	ALA	C-N-CA	6.83	126.34	119.24
1	D	581	LEU	N-CA-C	6.81	118.37	109.93
1	E	482	ALA	N-CA-C	-6.72	103.88	111.07
1	F	336	VAL	N-CA-C	6.67	118.32	108.45
1	C	561	ALA	CA-C-N	6.66	126.91	119.32
1	C	561	ALA	C-N-CA	6.66	126.91	119.32
1	B	581	LEU	N-CA-C	6.60	118.11	109.93
1	E	311	VAL	CA-C-N	6.49	126.25	119.76
1	E	311	VAL	C-N-CA	6.49	126.25	119.76
1	C	336	VAL	N-CA-C	6.41	117.93	108.45
1	F	61	ASP	CA-C-N	6.35	125.85	119.24
1	F	61	ASP	C-N-CA	6.35	125.85	119.24
1	E	591	VAL	N-CA-C	6.35	117.45	112.12
1	A	581	LEU	N-CA-C	6.32	117.76	109.93
1	B	561	ALA	CA-C-N	6.31	126.52	119.32
1	B	561	ALA	C-N-CA	6.31	126.52	119.32
1	E	336	VAL	N-CA-C	6.29	117.76	108.45
1	E	283	GLU	N-CA-C	-6.18	104.65	111.82
1	A	463	VAL	N-CA-C	6.17	116.35	110.42
1	B	336	VAL	N-CA-C	6.17	117.59	108.45
1	D	561	ALA	CA-C-N	6.17	126.36	119.32
1	D	561	ALA	C-N-CA	6.17	126.36	119.32
1	E	561	ALA	CA-C-N	6.16	126.34	119.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	561	ALA	C-N-CA	6.16	126.34	119.32
1	D	336	VAL	N-CA-C	6.11	117.49	108.45
1	A	61	ASP	CA-C-N	6.05	125.53	119.24
1	A	61	ASP	C-N-CA	6.05	125.53	119.24
1	D	311	VAL	CA-C-N	6.05	125.81	119.76
1	D	311	VAL	C-N-CA	6.05	125.81	119.76
1	F	98	HIS	N-CA-C	-5.97	104.69	111.14
1	D	463	VAL	N-CA-C	5.96	116.14	110.42
1	F	463	VAL	N-CA-C	5.93	116.11	110.42
1	A	336	VAL	N-CA-C	5.91	117.20	108.45
1	B	311	VAL	CA-C-N	5.91	125.67	119.76
1	B	311	VAL	C-N-CA	5.91	125.67	119.76
1	C	61	ASP	CA-C-N	5.87	125.35	119.24
1	C	61	ASP	C-N-CA	5.87	125.35	119.24
1	E	492	MET	N-CA-C	-5.87	103.26	110.65
1	F	120	ARG	N-CA-C	-5.86	106.14	113.28
1	F	311	VAL	CA-C-N	5.82	125.58	119.76
1	F	311	VAL	C-N-CA	5.82	125.58	119.76
1	B	463	VAL	N-CA-C	5.82	116.00	110.42
1	E	536	ARG	N-CA-C	-5.81	104.95	111.28
1	D	534	ASN	N-CA-C	-5.79	106.06	113.01
1	E	463	VAL	N-CA-C	5.79	115.98	110.42
1	C	311	VAL	CA-C-N	5.79	125.55	119.76
1	C	311	VAL	C-N-CA	5.79	125.55	119.76
1	D	300	CYS	N-CA-C	5.75	118.03	111.02
1	A	311	VAL	CA-C-N	5.73	125.49	119.76
1	A	311	VAL	C-N-CA	5.73	125.49	119.76
1	F	536	ARG	N-CA-C	-5.72	105.04	111.28
1	E	582	PRO	N-CA-C	-5.70	100.86	110.21
1	D	556	PRO	N-CA-C	-5.69	104.80	112.48
1	C	582	PRO	N-CA-C	-5.69	100.88	110.21
1	E	61	ASP	CA-C-N	5.67	125.14	119.24
1	E	61	ASP	C-N-CA	5.67	125.14	119.24
1	A	582	PRO	N-CA-C	-5.67	100.92	110.21
1	F	556	PRO	N-CA-C	-5.64	104.87	112.48
1	F	582	PRO	N-CA-C	-5.63	100.97	110.21
1	E	300	CYS	N-CA-C	5.58	117.83	111.02
1	B	61	ASP	CA-C-N	5.58	125.04	119.24
1	B	61	ASP	C-N-CA	5.58	125.04	119.24
1	F	492	MET	N-CA-C	-5.57	103.64	110.65
1	B	582	PRO	N-CA-C	-5.54	101.13	110.21
1	F	480	GLY	N-CA-C	5.54	121.31	111.73

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	451	CYS	N-CA-C	5.52	117.08	109.29
1	D	143	ALA	N-CA-C	-5.52	105.17	111.07
1	A	556	PRO	N-CA-C	-5.51	105.04	112.48
1	B	536	ARG	N-CA-C	-5.50	105.28	111.28
1	A	536	ARG	N-CA-C	-5.49	105.30	111.28
1	B	534	ASN	N-CA-C	-5.48	106.43	113.01
1	C	556	PRO	N-CA-C	-5.48	105.09	112.48
1	C	463	VAL	N-CA-C	5.47	115.67	110.42
1	A	566	SER	N-CA-C	5.46	117.58	110.53
1	E	534	ASN	N-CA-C	-5.46	106.46	113.01
1	D	536	ARG	N-CA-C	-5.45	105.34	111.28
1	A	534	ASN	N-CA-C	-5.45	106.47	113.01
1	D	61	ASP	CA-C-N	5.42	124.88	119.24
1	D	61	ASP	C-N-CA	5.42	124.88	119.24
1	B	300	CYS	N-CA-C	5.41	117.62	111.02
1	A	520	GLY	CA-C-N	5.40	126.55	120.66
1	A	520	GLY	C-N-CA	5.40	126.55	120.66
1	F	576	ALA	N-CA-C	-5.40	105.40	111.28
1	A	591	VAL	N-CA-C	5.39	116.65	112.12
1	B	576	ALA	N-CA-C	-5.37	105.42	111.28
1	F	300	CYS	N-CA-C	5.37	117.57	111.02
1	E	480	GLY	N-CA-C	5.37	121.01	111.73
1	D	582	PRO	N-CA-C	-5.36	101.42	110.21
1	E	171	SER	N-CA-C	5.34	119.90	113.17
1	C	480	GLY	N-CA-C	5.34	120.96	111.73
1	E	566	SER	N-CA-C	5.33	117.75	110.55
1	C	300	CYS	N-CA-C	5.33	117.52	111.02
1	B	567	GLU	N-CA-C	-5.33	105.64	111.82
1	D	480	GLY	N-CA-C	5.33	120.94	111.73
1	E	98	HIS	N-CA-C	-5.30	105.42	111.14
1	F	145	VAL	N-CA-C	-5.29	104.81	110.36
1	D	98	HIS	N-CA-C	-5.28	105.43	111.14
1	E	70	GLY	N-CA-C	-5.28	104.62	113.02
1	A	144	ILE	N-CA-C	-5.28	105.25	111.00
1	A	300	CYS	N-CA-C	5.26	117.44	111.02
1	C	98	HIS	N-CA-C	-5.25	104.99	111.40
1	B	451	CYS	N-CA-C	5.24	116.68	109.29
1	F	205	CYS	N-CA-C	5.24	113.78	108.75
1	B	127	ALA	N-CA-C	-5.24	104.33	111.56
1	F	250	LEU	N-CA-C	5.24	121.95	110.80
1	F	591	VAL	N-CA-C	5.23	116.51	112.12
1	C	299	CYS	CB-CA-C	-5.23	108.99	115.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	492	MET	N-CA-C	-5.23	103.42	110.68
1	B	202	HIS	N-CA-C	-5.21	103.65	110.53
1	A	70	GLY	N-CA-C	-5.21	104.74	113.02
1	D	70	GLY	N-CA-C	-5.19	104.76	113.02
1	A	202	HIS	N-CA-C	-5.18	103.69	110.53
1	A	576	ALA	N-CA-C	-5.18	105.64	111.28
1	B	147	ASP	N-CA-C	-5.17	105.56	111.14
1	F	70	GLY	N-CA-C	-5.16	104.81	113.02
1	F	202	HIS	N-CA-C	-5.16	103.72	110.53
1	C	536	ARG	N-CA-C	-5.14	105.68	111.28
1	E	202	HIS	N-CA-C	-5.13	103.76	110.53
1	B	591	VAL	N-CA-C	5.12	116.42	112.12
1	C	591	VAL	N-CA-C	5.11	116.41	112.12
1	B	492	MET	N-CA-C	-5.11	103.58	110.68
1	A	98	HIS	N-CA-C	-5.10	105.63	111.14
1	A	141	LEU	N-CA-C	5.09	121.64	110.80
1	C	70	GLY	N-CA-C	-5.07	104.96	113.02
1	C	576	ALA	N-CA-C	-5.06	105.76	111.28
1	A	567	GLU	N-CA-C	-5.05	105.96	111.82
1	B	98	HIS	N-CA-C	-5.05	105.69	111.14
1	B	70	GLY	N-CA-C	-5.04	105.00	113.02
1	F	299	CYS	CB-CA-C	-5.04	109.23	115.89
1	B	556	PRO	N-CA-C	-5.03	104.84	113.70
1	D	492	MET	N-CA-C	-5.03	103.69	110.68
1	D	576	ALA	N-CA-C	-5.01	105.81	111.28
1	A	492	MET	N-CA-C	-5.01	103.71	110.68
1	A	255	ARG	N-CA-C	-5.01	105.90	111.36
1	B	566	SER	N-CA-C	5.01	117.31	110.55

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	E	126	TYR	Sidechain

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	4461	0	4529	339	0
1	B	4461	0	4529	372	0
1	C	4461	0	4529	286	0
1	D	4461	0	4528	294	0
1	E	4461	0	4528	300	0
1	F	4461	0	4528	310	0
2	A	16	0	0	0	0
2	B	8	0	0	0	0
2	C	16	0	0	0	0
2	D	8	0	0	0	0
2	E	16	0	0	0	0
2	F	8	0	0	0	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
3	E	1	0	0	0	0
3	F	1	0	0	0	0
4	A	9	0	0	1	0
4	B	9	0	0	1	0
4	C	9	0	0	2	0
4	D	9	0	0	0	0
4	E	9	0	0	0	0
4	F	9	0	0	1	0
All	All	26898	0	27171	1816	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 34.

All (1816) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:65:GLU:HA	1:C:68:LYS:HE2	1.34	1.09
1:D:65:GLU:HA	1:D:68:LYS:HE2	1.35	1.08
1:E:65:GLU:HA	1:E:68:LYS:HE2	1.34	1.08
1:A:65:GLU:HA	1:A:68:LYS:HE2	1.33	1.07
1:F:65:GLU:HA	1:F:68:LYS:HE2	1.34	1.06
1:B:65:GLU:HA	1:B:68:LYS:HE2	1.34	1.05
1:D:141:LEU:HD12	1:D:142:LEU:HD12	1.39	1.01
1:B:132:LEU:HD22	1:B:151:ILE:HD13	1.40	1.01
1:F:334:VAL:HB	1:F:339:ILE:HD13	1.41	1.00
1:D:132:LEU:HD11	1:D:151:ILE:HG21	1.46	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:334:VAL:HB	1:E:339:ILE:HD13	1.45	0.98
1:B:127:ALA:HA	1:B:130:LYS:HZ3	1.27	0.98
1:E:255:ARG:HD3	1:E:399:VAL:HG11	1.45	0.97
1:A:110:SER:HA	1:A:142:LEU:HD22	1.46	0.97
1:C:334:VAL:HB	1:C:339:ILE:HD13	1.45	0.97
1:B:334:VAL:HB	1:B:339:ILE:HD13	1.44	0.96
1:D:334:VAL:HB	1:D:339:ILE:HD13	1.48	0.96
1:A:334:VAL:HB	1:A:339:ILE:HD13	1.43	0.95
1:A:119:ILE:HG12	1:A:141:LEU:HD21	1.45	0.93
1:B:126:TYR:HA	1:B:129:ALA:HB3	1.53	0.90
1:A:254:LYS:HB2	1:A:257:ALA:HB3	1.52	0.89
1:B:63:PHE:CE2	1:F:62:PRO:HG3	2.08	0.89
1:B:254:LYS:HG3	1:B:257:ALA:HB3	1.53	0.88
1:B:110:SER:HB3	1:B:145:VAL:HG23	1.54	0.88
1:C:300:CYS:HG	4:C:803:XCC:FE2	0.86	0.88
1:E:106:MET:HE2	1:E:233:LEU:HD22	1.56	0.88
1:C:106:MET:HE2	1:C:233:LEU:HD22	1.56	0.88
1:D:106:MET:HE2	1:D:233:LEU:HD22	1.54	0.88
1:F:250:LEU:HD21	1:F:323:PRO:HG3	1.56	0.88
1:E:241:PRO:HG2	1:E:413:SER:HB3	1.57	0.87
1:A:122:GLU:OE2	1:A:141:LEU:HD13	1.74	0.87
1:D:255:ARG:NH2	1:D:399:VAL:HB	1.90	0.87
1:E:472:ARG:HB3	1:E:627:TYR:CE2	2.10	0.86
1:B:106:MET:HE2	1:B:233:LEU:HD22	1.56	0.86
1:D:241:PRO:HG2	1:D:413:SER:HB3	1.56	0.86
1:A:241:PRO:HG2	1:A:413:SER:HB3	1.57	0.86
1:A:106:MET:HE2	1:A:233:LEU:HD22	1.55	0.86
1:F:241:PRO:HG2	1:F:413:SER:HB3	1.59	0.85
1:A:620:LYS:HA	1:A:620:LYS:HE3	1.58	0.85
1:B:472:ARG:HB3	1:B:627:TYR:CE2	2.12	0.84
1:A:34:TYR:HA	1:B:71:VAL:HG22	1.58	0.84
1:A:472:ARG:HB3	1:A:627:TYR:CE2	2.12	0.84
1:B:241:PRO:HG2	1:B:413:SER:HB3	1.57	0.84
1:C:340:MET:O	1:C:343:LEU:HD23	1.78	0.84
1:A:211:ASN:ND2	1:B:362:LYS:HD2	1.92	0.84
1:C:241:PRO:HG2	1:C:413:SER:HB3	1.59	0.84
1:F:106:MET:HE2	1:F:233:LEU:HD22	1.60	0.83
1:D:472:ARG:HB3	1:D:627:TYR:CE2	2.14	0.83
1:E:340:MET:O	1:E:343:LEU:HD23	1.78	0.83
1:F:472:ARG:HB3	1:F:627:TYR:CE2	2.14	0.83
1:C:472:ARG:HB3	1:C:627:TYR:CE2	2.13	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:620:LYS:HA	1:B:620:LYS:HE3	1.61	0.82
1:A:124:LYS:NZ	1:A:232:GLU:HA	1.94	0.82
1:F:29:THR:HG23	1:F:31:TRP:H	1.44	0.82
1:F:340:MET:O	1:F:343:LEU:HD23	1.79	0.82
1:A:362:LYS:HD2	1:B:211:ASN:ND2	1.95	0.82
1:F:620:LYS:HA	1:F:620:LYS:HE3	1.61	0.82
1:B:63:PHE:O	1:B:65:GLU:N	2.12	0.82
1:B:63:PHE:HE2	1:F:62:PRO:HG3	1.45	0.82
1:B:125:LEU:HD23	1:B:125:LEU:O	1.80	0.82
1:B:603:GLU:HA	1:B:606:LYS:HE2	1.62	0.82
1:B:372:ASP:HB3	1:B:375:LYS:HZ2	1.44	0.82
1:A:125:LEU:HA	1:A:128:ILE:HD12	1.62	0.81
1:C:29:THR:HG23	1:C:31:TRP:H	1.45	0.81
1:D:340:MET:O	1:D:343:LEU:HD23	1.80	0.81
1:D:620:LYS:HA	1:D:620:LYS:HE3	1.63	0.81
1:B:340:MET:O	1:B:343:LEU:HD23	1.78	0.81
1:C:55:LYS:HG3	1:D:565:MET:HG3	1.62	0.81
1:A:211:ASN:HD22	1:B:362:LYS:HD2	1.46	0.81
1:B:29:THR:HG23	1:B:31:TRP:H	1.44	0.81
1:C:603:GLU:HA	1:C:606:LYS:HE2	1.63	0.80
1:A:71:VAL:HG22	1:B:34:TYR:HA	1.62	0.80
1:B:457:GLN:HB2	1:B:460:SER:HB2	1.63	0.80
1:C:620:LYS:HA	1:C:620:LYS:HE3	1.62	0.80
1:A:29:THR:HG23	1:A:31:TRP:H	1.45	0.80
1:F:108:HIS:HB3	1:F:114:LEU:HD13	1.63	0.80
1:F:603:GLU:HA	1:F:606:LYS:HE2	1.64	0.80
1:B:126:TYR:OH	1:B:141:LEU:HD11	1.82	0.80
1:E:29:THR:HG23	1:E:31:TRP:H	1.47	0.80
1:C:436:ASN:HA	1:C:439:ASN:HD21	1.46	0.79
1:A:65:GLU:HA	1:A:68:LYS:CE	2.12	0.79
1:B:119:ILE:HG22	1:B:120:ARG:N	1.97	0.79
1:F:65:GLU:HA	1:F:68:LYS:CE	2.11	0.79
1:A:603:GLU:HA	1:A:606:LYS:HE2	1.64	0.79
1:E:565:MET:HG3	1:F:55:LYS:HG3	1.62	0.79
1:D:252:VAL:HG21	1:D:312:PRO:HB2	1.64	0.79
1:D:603:GLU:HA	1:D:606:LYS:HE2	1.65	0.79
1:A:55:LYS:HG3	1:B:565:MET:HG3	1.63	0.79
1:F:457:GLN:HB2	1:F:460:SER:HB2	1.65	0.79
1:B:250:LEU:HD21	1:B:323:PRO:HG3	1.64	0.79
1:B:436:ASN:HA	1:B:439:ASN:HD21	1.48	0.79
1:B:127:ALA:HA	1:B:130:LYS:NZ	1.99	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:417:VAL:HG11	1:C:540:LEU:HD11	1.66	0.78
1:A:139:ARG:NH2	1:A:143:ALA:HB1	1.98	0.78
1:A:196:GLN:HG2	1:B:97:GLU:OE1	1.84	0.78
1:E:372:ASP:HB3	1:E:375:LYS:HZ2	1.49	0.78
1:C:63:PHE:O	1:C:65:GLU:N	2.15	0.78
1:E:65:GLU:HA	1:E:68:LYS:CE	2.12	0.78
1:C:65:GLU:HA	1:C:68:LYS:CE	2.12	0.78
1:C:457:GLN:HB2	1:C:460:SER:HB2	1.64	0.77
1:E:603:GLU:HA	1:E:606:LYS:HE2	1.65	0.77
1:E:63:PHE:O	1:E:65:GLU:N	2.14	0.77
1:C:565:MET:HG3	1:D:55:LYS:HG3	1.65	0.77
1:A:340:MET:O	1:A:343:LEU:HD23	1.83	0.77
1:A:457:GLN:HB2	1:A:460:SER:HB2	1.64	0.77
1:D:65:GLU:HA	1:D:68:LYS:CE	2.14	0.77
1:F:63:PHE:O	1:F:65:GLU:N	2.16	0.77
1:A:97:GLU:OE1	1:B:196:GLN:HG2	1.85	0.77
1:A:417:VAL:HG11	1:A:540:LEU:HD11	1.66	0.77
1:E:620:LYS:HA	1:E:620:LYS:HE3	1.65	0.77
1:A:127:ALA:O	1:A:130:LYS:HB3	1.85	0.77
1:B:141:LEU:HA	1:B:144:ILE:HD11	1.65	0.77
1:C:250:LEU:HD21	1:C:323:PRO:HG3	1.66	0.76
1:A:110:SER:HB3	1:A:145:VAL:HG12	1.65	0.76
1:E:457:GLN:HB2	1:E:460:SER:HB2	1.66	0.76
1:A:126:TYR:CE2	1:A:136:THR:HB	2.21	0.76
1:A:254:LYS:HD3	1:A:291:GLU:HB3	1.66	0.76
1:E:55:LYS:HG3	1:F:565:MET:HG3	1.67	0.76
1:B:254:LYS:HE3	1:B:294:ASN:HB2	1.68	0.76
1:D:29:THR:HG23	1:D:31:TRP:H	1.49	0.76
1:F:550:VAL:HG22	1:F:551:ASP:H	1.51	0.76
1:A:517:GLY:O	1:A:518:LEU:HD13	1.85	0.76
1:C:135:ALA:O	1:C:139:ARG:HD3	1.86	0.76
1:A:63:PHE:O	1:A:65:GLU:N	2.16	0.76
1:B:65:GLU:HA	1:B:68:LYS:CE	2.14	0.76
1:E:417:VAL:HG11	1:E:540:LEU:HD11	1.68	0.76
1:F:175:ARG:HH12	1:F:550:VAL:HA	1.51	0.76
1:B:144:ILE:C	1:B:146:GLY:H	1.92	0.76
1:F:493:THR:CG2	1:F:495:GLU:HG2	2.16	0.76
1:A:565:MET:HG3	1:B:55:LYS:HG3	1.67	0.75
1:A:436:ASN:HA	1:A:439:ASN:HD21	1.49	0.75
1:D:372:ASP:HB3	1:D:375:LYS:HZ2	1.51	0.75
1:F:124:LYS:HG2	1:F:235:ASP:HB3	1.65	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:372:ASP:HB3	1:F:375:LYS:HZ2	1.51	0.75
1:F:417:VAL:HG11	1:F:540:LEU:HD11	1.69	0.75
1:B:62:PRO:HG3	1:F:63:PHE:CE2	2.20	0.75
1:D:63:PHE:O	1:D:65:GLU:N	2.16	0.75
1:D:457:GLN:HB2	1:D:460:SER:HB2	1.68	0.75
1:B:141:LEU:O	1:B:144:ILE:HG12	1.86	0.75
1:B:110:SER:HB3	1:B:145:VAL:O	1.86	0.75
1:C:180:LEU:HB2	1:C:186:LEU:HD13	1.69	0.74
1:B:264:GLY:HA3	1:B:335:ASP:OD1	1.87	0.74
1:A:124:LYS:O	1:A:128:ILE:HG13	1.87	0.74
1:C:436:ASN:HA	1:C:439:ASN:ND2	2.03	0.74
1:F:462:TYR:HE2	1:F:562:PRO:HD2	1.53	0.74
1:D:462:TYR:HE2	1:D:562:PRO:HD2	1.52	0.74
1:F:175:ARG:NH1	1:F:550:VAL:HA	2.02	0.74
1:B:518:LEU:CD1	1:B:519:GLY:H	2.01	0.74
1:E:196:GLN:HG2	1:F:97:GLU:OE1	1.87	0.74
1:B:417:VAL:HG11	1:B:540:LEU:HD11	1.69	0.74
1:C:550:VAL:HG22	1:C:551:ASP:H	1.52	0.74
1:B:175:ARG:HH12	1:B:550:VAL:HA	1.53	0.74
1:B:179:ARG:O	1:B:183:LEU:HD13	1.88	0.74
1:F:336:VAL:HG12	1:F:337:GLN:HG2	1.69	0.73
1:A:175:ARG:NH1	1:A:550:VAL:HA	2.03	0.73
1:B:518:LEU:HD12	1:B:519:GLY:H	1.53	0.73
1:D:436:ASN:HA	1:D:439:ASN:HD21	1.53	0.73
1:E:132:LEU:HD12	1:E:148:LEU:CD2	2.18	0.73
1:A:336:VAL:HG12	1:A:337:GLN:HG2	1.70	0.73
1:B:129:ALA:HA	1:B:134:VAL:HG11	1.71	0.73
1:A:175:ARG:HH12	1:A:550:VAL:HA	1.53	0.73
1:A:250:LEU:H	1:A:250:LEU:HD12	1.54	0.73
1:B:462:TYR:HE2	1:B:562:PRO:HD2	1.52	0.73
1:F:436:ASN:HA	1:F:439:ASN:HD21	1.53	0.73
1:B:436:ASN:HA	1:B:439:ASN:ND2	2.03	0.73
1:B:258:VAL:HG13	1:B:330:GLU:HG2	1.70	0.73
1:E:436:ASN:HA	1:E:439:ASN:HD21	1.53	0.73
1:A:362:LYS:HD2	1:B:211:ASN:HD22	1.54	0.73
1:A:372:ASP:HB3	1:A:375:LYS:HZ2	1.55	0.72
1:A:258:VAL:HG13	1:A:330:GLU:HG2	1.71	0.72
1:B:550:VAL:HG22	1:B:551:ASP:H	1.52	0.72
1:C:493:THR:CG2	1:C:495:GLU:HG2	2.19	0.72
1:E:462:TYR:HE2	1:E:562:PRO:HD2	1.55	0.72
1:F:258:VAL:HG13	1:F:330:GLU:HG2	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:436:ASN:HA	1:A:439:ASN:ND2	2.04	0.72
1:B:180:LEU:HB2	1:B:186:LEU:HD13	1.72	0.72
1:C:175:ARG:NH1	1:C:550:VAL:HA	2.04	0.72
1:D:550:VAL:HG22	1:D:551:ASP:H	1.55	0.72
1:E:97:GLU:OE1	1:F:196:GLN:HG2	1.89	0.72
1:A:264:GLY:HA3	1:A:335:ASP:OD1	1.90	0.72
1:A:493:THR:CG2	1:A:495:GLU:HG2	2.20	0.72
1:A:550:VAL:HG22	1:A:551:ASP:H	1.54	0.72
1:C:509:LEU:HD13	1:C:522:LEU:HB2	1.72	0.72
1:D:179:ARG:O	1:D:183:LEU:HD13	1.89	0.72
1:D:417:VAL:HG11	1:D:540:LEU:HD11	1.71	0.72
1:B:62:PRO:HG3	1:F:63:PHE:HE2	1.55	0.71
1:B:493:THR:CG2	1:B:495:GLU:HG2	2.20	0.71
1:C:264:GLY:HA3	1:C:335:ASP:OD1	1.89	0.71
1:E:175:ARG:HH12	1:E:550:VAL:HA	1.54	0.71
1:A:179:ARG:O	1:A:183:LEU:HD13	1.90	0.71
1:E:116:ASP:OD1	1:E:377:VAL:HG23	1.90	0.71
1:B:119:ILE:CG2	1:B:120:ARG:H	2.04	0.71
1:D:254:LYS:HB2	1:D:257:ALA:HB3	1.70	0.71
1:B:175:ARG:NH1	1:B:550:VAL:HA	2.04	0.71
1:D:175:ARG:HH12	1:D:550:VAL:HA	1.55	0.71
1:E:258:VAL:HG13	1:E:330:GLU:HG2	1.73	0.71
1:C:175:ARG:HH12	1:C:550:VAL:HA	1.53	0.71
1:C:421:LEU:O	1:C:424:VAL:HG12	1.91	0.71
1:C:71:VAL:HG22	1:D:34:TYR:HA	1.72	0.71
1:D:175:ARG:NH1	1:D:550:VAL:HA	2.04	0.71
1:E:175:ARG:NH1	1:E:550:VAL:HA	2.05	0.71
1:B:142:LEU:HA	1:B:145:VAL:HG22	1.73	0.71
1:E:550:VAL:HG22	1:E:551:ASP:H	1.54	0.71
1:D:493:THR:CG2	1:D:495:GLU:HG2	2.20	0.71
1:E:264:GLY:HA3	1:E:335:ASP:OD1	1.91	0.71
1:E:509:LEU:HD13	1:E:522:LEU:HB2	1.73	0.71
1:A:180:LEU:HB2	1:A:186:LEU:HD13	1.72	0.70
1:E:180:LEU:HB2	1:E:186:LEU:HD13	1.73	0.70
1:B:421:LEU:O	1:B:424:VAL:HG12	1.91	0.70
1:E:34:TYR:HA	1:F:71:VAL:HG22	1.74	0.70
1:A:254:LYS:HD3	1:A:291:GLU:CB	2.22	0.70
1:C:97:GLU:OE1	1:D:196:GLN:HG2	1.91	0.70
1:F:493:THR:HG22	1:F:496:ALA:H	1.56	0.70
1:D:180:LEU:HB2	1:D:186:LEU:HD13	1.73	0.70
1:E:568:LYS:H	1:F:202:HIS:HE1	1.38	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:180:LEU:HB2	1:F:186:LEU:HD13	1.72	0.70
1:C:34:TYR:HA	1:D:71:VAL:HG22	1.72	0.70
1:A:472:ARG:HG2	1:A:472:ARG:HH11	1.56	0.69
1:C:120:ARG:NH2	1:C:271:ASP:OD1	2.25	0.69
1:D:224:LEU:HD11	1:D:579:ILE:HD11	1.74	0.69
1:F:509:LEU:HD13	1:F:522:LEU:HB2	1.73	0.69
1:C:372:ASP:HB3	1:C:375:LYS:HZ2	1.57	0.69
1:E:493:THR:CG2	1:E:495:GLU:HG2	2.22	0.69
1:A:202:HIS:HE1	1:B:568:LYS:H	1.40	0.69
1:E:436:ASN:HA	1:E:439:ASN:ND2	2.06	0.69
1:F:264:GLY:HA3	1:F:335:ASP:OD1	1.90	0.69
1:F:421:LEU:O	1:F:424:VAL:HG12	1.92	0.69
1:F:436:ASN:HA	1:F:439:ASN:ND2	2.07	0.69
1:B:224:LEU:HD11	1:B:579:ILE:HD11	1.73	0.69
1:B:509:LEU:HD13	1:B:522:LEU:HB2	1.75	0.69
1:D:436:ASN:HA	1:D:439:ASN:ND2	2.07	0.69
1:C:472:ARG:HG2	1:C:472:ARG:HH11	1.57	0.69
1:A:509:LEU:HD13	1:A:522:LEU:HB2	1.74	0.69
1:C:462:TYR:HE2	1:C:562:PRO:HD2	1.57	0.69
1:D:421:LEU:O	1:D:424:VAL:HG12	1.92	0.69
1:E:421:LEU:O	1:E:424:VAL:HG12	1.91	0.69
1:A:462:TYR:HE2	1:A:562:PRO:HD2	1.56	0.69
1:C:258:VAL:HG13	1:C:330:GLU:HG2	1.74	0.69
1:E:71:VAL:HG22	1:F:34:TYR:HA	1.75	0.69
1:E:336:VAL:HG12	1:E:337:GLN:HG2	1.73	0.69
1:E:140:GLY:O	1:E:142:LEU:N	2.25	0.68
1:F:249:ASN:O	1:F:252:VAL:HG23	1.93	0.68
1:A:421:LEU:O	1:A:424:VAL:HG12	1.92	0.68
1:B:110:SER:CB	1:B:145:VAL:HG23	2.22	0.68
1:D:250:LEU:HD11	1:D:323:PRO:HG3	1.75	0.68
1:C:196:GLN:HG2	1:D:97:GLU:OE1	1.92	0.68
1:C:336:VAL:HG12	1:C:337:GLN:HG2	1.75	0.68
1:B:336:VAL:HG12	1:B:337:GLN:HG2	1.74	0.68
1:E:510:SER:HA	1:E:521:PRO:HB3	1.76	0.68
1:B:121:ASP:OD1	1:B:124:LYS:HB2	1.93	0.68
1:A:510:SER:HA	1:A:521:PRO:HB3	1.74	0.68
1:C:425:ASN:HD22	1:C:425:ASN:C	2.02	0.68
1:A:124:LYS:HZ1	1:A:232:GLU:HA	1.56	0.68
1:F:522:LEU:HD13	1:F:526:MET:CE	2.24	0.68
1:A:224:LEU:HD11	1:A:579:ILE:HD11	1.75	0.68
1:E:110:SER:HB3	1:E:145:VAL:CG2	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:258:VAL:HG13	1:D:330:GLU:HG2	1.74	0.67
1:D:264:GLY:HA3	1:D:335:ASP:OD1	1.93	0.67
1:D:522:LEU:HD13	1:D:526:MET:CE	2.24	0.67
1:C:249:ASN:O	1:C:252:VAL:HG22	1.94	0.67
1:D:141:LEU:HD12	1:D:142:LEU:CD1	2.18	0.67
1:E:278:ALA:O	1:E:281:ARG:HB3	1.94	0.67
1:B:281:ARG:C	1:B:283:GLU:H	2.02	0.67
1:D:125:LEU:HD12	1:D:148:LEU:HD12	1.75	0.67
1:D:509:LEU:HD13	1:D:522:LEU:HB2	1.76	0.67
1:A:493:THR:HG22	1:A:496:ALA:H	1.60	0.67
1:B:119:ILE:CG2	1:B:120:ARG:N	2.57	0.67
1:B:472:ARG:HG2	1:B:472:ARG:HH11	1.59	0.67
1:B:493:THR:HG22	1:B:496:ALA:H	1.60	0.67
1:F:179:ARG:O	1:F:183:LEU:HD13	1.95	0.67
1:F:443:GLN:HA	1:F:634:ARG:NH2	2.10	0.67
1:F:472:ARG:HG2	1:F:472:ARG:HH11	1.59	0.67
1:A:254:LYS:HB2	1:A:257:ALA:CB	2.24	0.67
1:B:128:ILE:HG21	1:B:232:GLU:HB3	1.76	0.67
1:C:493:THR:HG22	1:C:496:ALA:H	1.60	0.67
1:F:113:GLU:O	1:F:114:LEU:HB2	1.94	0.67
1:A:77:ASP:OD1	1:A:596:ILE:HD13	1.95	0.66
1:C:202:HIS:HE1	1:D:568:LYS:H	1.41	0.66
1:C:522:LEU:HD13	1:C:526:MET:CE	2.25	0.66
1:D:251:GLY:HA3	1:D:404:PHE:O	1.95	0.66
1:D:493:THR:HG22	1:D:496:ALA:H	1.60	0.66
1:B:126:TYR:O	1:B:130:LYS:HG2	1.94	0.66
1:C:215:GLY:O	1:C:219:VAL:HG23	1.94	0.66
1:A:425:ASN:C	1:A:425:ASN:HD22	2.03	0.66
1:B:129:ALA:CA	1:B:134:VAL:HG11	2.25	0.66
1:B:281:ARG:CZ	1:B:281:ARG:HA	2.25	0.66
1:E:425:ASN:HD22	1:E:425:ASN:C	2.02	0.66
1:B:110:SER:HB3	1:B:145:VAL:C	2.21	0.66
1:C:211:ASN:ND2	1:D:362:LYS:HD2	2.09	0.66
1:E:412:PHE:CE2	1:E:526:MET:HE2	2.31	0.66
1:C:510:SER:HA	1:C:521:PRO:HB3	1.78	0.66
1:E:65:GLU:CA	1:E:68:LYS:HE2	2.21	0.66
1:A:251:GLY:HA3	1:A:404:PHE:O	1.96	0.66
1:B:510:SER:HA	1:B:521:PRO:HB3	1.77	0.66
1:D:266:ASN:HD21	1:D:268:MET:HB2	1.61	0.66
1:E:136:THR:HB	1:E:144:ILE:HD11	1.78	0.66
1:F:224:LEU:HD11	1:F:579:ILE:HD11	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:319:SER:HA	1:A:322:LEU:HD23	1.78	0.66
1:B:319:SER:HA	1:B:322:LEU:HD23	1.78	0.65
1:D:336:VAL:HG12	1:D:337:GLN:HG2	1.76	0.65
1:C:77:ASP:OD1	1:C:596:ILE:HD13	1.96	0.65
1:D:522:LEU:HD13	1:D:526:MET:HE1	1.79	0.65
1:F:254:LYS:HD3	1:F:291:GLU:OE1	1.95	0.65
1:B:142:LEU:O	1:B:142:LEU:HD23	1.96	0.65
1:C:381:LYS:O	1:C:385:ARG:HD3	1.96	0.65
1:F:381:LYS:O	1:F:385:ARG:HD3	1.96	0.65
1:C:266:ASN:HD21	1:C:268:MET:HB2	1.61	0.65
1:D:255:ARG:NE	1:D:399:VAL:HG11	2.11	0.65
1:E:255:ARG:NH2	1:E:401:ILE:H	1.94	0.65
1:A:86:ARG:HD2	1:A:201:THR:OG1	1.97	0.65
1:A:457:GLN:HB2	1:A:460:SER:CB	2.26	0.65
1:F:425:ASN:C	1:F:425:ASN:HD22	2.03	0.65
1:B:266:ASN:HD21	1:B:268:MET:HB2	1.62	0.65
1:C:319:SER:HA	1:C:322:LEU:HD23	1.79	0.65
1:A:156:PHE:HE1	1:A:229:LEU:HD11	1.62	0.65
1:A:412:PHE:CD2	1:A:526:MET:HE2	2.32	0.65
1:A:434:VAL:HG13	1:A:548:LEU:HD21	1.78	0.65
1:B:280:LEU:HD12	1:B:384:ILE:HG21	1.78	0.65
1:C:224:LEU:HD11	1:C:579:ILE:HD11	1.78	0.65
1:D:125:LEU:CD1	1:D:148:LEU:HD12	2.26	0.65
1:E:211:ASN:ND2	1:F:362:LYS:HD2	2.12	0.65
1:B:457:GLN:HB2	1:B:460:SER:CB	2.26	0.65
1:F:510:SER:HA	1:F:521:PRO:HB3	1.79	0.65
1:B:122:GLU:OE1	1:B:122:GLU:N	2.30	0.64
1:F:317:TYR:CE2	1:F:565:MET:HE2	2.31	0.64
1:A:266:ASN:HD21	1:A:268:MET:HB2	1.62	0.64
1:A:522:LEU:HD13	1:A:526:MET:CE	2.28	0.64
1:E:132:LEU:HD12	1:E:148:LEU:HD23	1.79	0.64
1:E:179:ARG:O	1:E:183:LEU:HD13	1.96	0.64
1:E:319:SER:HA	1:E:322:LEU:HD23	1.79	0.64
1:F:319:SER:HA	1:F:322:LEU:HD23	1.79	0.64
1:C:443:GLN:HA	1:C:634:ARG:NH2	2.13	0.64
1:C:124:LYS:HG3	1:C:235:ASP:HB3	1.79	0.64
1:E:266:ASN:HD21	1:E:268:MET:HB2	1.62	0.64
1:E:215:GLY:O	1:E:219:VAL:HG23	1.98	0.64
1:A:135:ALA:O	1:A:139:ARG:HD3	1.98	0.64
1:B:412:PHE:CD2	1:B:526:MET:HE2	2.32	0.64
1:D:425:ASN:C	1:D:425:ASN:HD22	2.05	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:362:LYS:HD2	1:F:211:ASN:ND2	2.12	0.64
1:A:375:LYS:HZ2	1:A:375:LYS:HB2	1.63	0.64
1:C:522:LEU:HD13	1:C:526:MET:HE1	1.79	0.64
1:F:124:LYS:HZ3	1:F:232:GLU:HA	1.63	0.64
1:F:252:VAL:HG12	1:F:296:ILE:HG22	1.78	0.64
1:F:457:GLN:HB2	1:F:460:SER:CB	2.27	0.64
1:E:412:PHE:CD2	1:E:526:MET:HE2	2.32	0.64
1:F:65:GLU:CA	1:F:68:LYS:HE2	2.21	0.63
1:B:425:ASN:ND2	1:B:428:ASP:H	1.96	0.63
1:C:153:LEU:O	1:C:157:GLN:HG2	1.99	0.63
1:E:472:ARG:HG2	1:E:472:ARG:HH11	1.63	0.63
1:B:122:GLU:HG2	1:B:141:LEU:HD21	1.81	0.63
1:B:522:LEU:HD13	1:B:526:MET:CE	2.28	0.63
1:C:457:GLN:HB2	1:C:460:SER:CB	2.26	0.63
1:B:77:ASP:OD1	1:B:596:ILE:HD13	1.99	0.63
1:C:425:ASN:ND2	1:C:428:ASP:H	1.96	0.63
1:D:472:ARG:HG2	1:D:472:ARG:HH11	1.62	0.63
1:F:77:ASP:OD1	1:F:596:ILE:HD13	1.98	0.63
1:F:434:VAL:HG13	1:F:548:LEU:HD21	1.81	0.63
1:A:132:LEU:HD12	1:A:148:LEU:HD22	1.81	0.63
1:B:156:PHE:HE1	1:B:229:LEU:HD11	1.63	0.63
1:B:434:VAL:HG13	1:B:548:LEU:HD21	1.80	0.63
1:C:434:VAL:HG13	1:C:548:LEU:HD21	1.81	0.63
1:D:285:ILE:HA	1:D:289:ALA:O	1.99	0.63
1:D:457:GLN:HB2	1:D:460:SER:CB	2.28	0.63
1:E:522:LEU:HD13	1:E:526:MET:CE	2.29	0.63
1:C:179:ARG:O	1:C:183:LEU:HD13	1.98	0.63
1:D:510:SER:HA	1:D:521:PRO:HB3	1.79	0.63
1:E:110:SER:HB3	1:E:145:VAL:HG23	1.81	0.63
1:A:412:PHE:CE2	1:A:526:MET:HE2	2.33	0.63
1:C:375:LYS:HZ2	1:C:375:LYS:HB2	1.63	0.63
1:E:493:THR:HG22	1:E:496:ALA:H	1.63	0.63
1:F:215:GLY:O	1:F:219:VAL:HG23	1.98	0.63
1:B:518:LEU:HD12	1:B:519:GLY:N	2.14	0.63
1:D:319:SER:HA	1:D:322:LEU:HD23	1.79	0.62
1:A:425:ASN:ND2	1:A:428:ASP:H	1.97	0.62
1:D:156:PHE:HE1	1:D:229:LEU:HD11	1.64	0.62
1:E:544:LEU:O	1:E:544:LEU:HD23	1.99	0.62
1:F:336:VAL:C	1:F:337:GLN:HG2	2.23	0.62
1:A:381:LYS:O	1:A:385:ARG:HD3	1.98	0.62
1:A:443:GLN:HA	1:A:634:ARG:NH2	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:77:ASP:OD1	1:D:596:ILE:HD13	1.98	0.62
1:D:125:LEU:HD12	1:D:148:LEU:CD1	2.29	0.62
1:E:509:LEU:CD1	1:E:522:LEU:HB2	2.30	0.62
1:F:606:LYS:HG2	1:F:612:TYR:CD2	2.35	0.62
1:A:63:PHE:HD1	1:A:64:GLY:H	1.47	0.62
1:B:443:GLN:HA	1:B:634:ARG:NH2	2.14	0.62
1:E:285:ILE:HA	1:E:289:ALA:O	1.99	0.62
1:B:29:THR:HG23	1:B:31:TRP:N	2.15	0.62
1:E:457:GLN:HB2	1:E:460:SER:CB	2.28	0.62
1:B:63:PHE:HD1	1:B:64:GLY:H	1.48	0.62
1:C:108:HIS:HB2	1:C:114:LEU:HD12	1.80	0.62
1:C:472:ARG:HG2	1:C:472:ARG:NH1	2.15	0.62
1:C:634:ARG:HH11	1:C:634:ARG:HG3	1.64	0.62
1:D:336:VAL:C	1:D:337:GLN:HG2	2.24	0.62
1:E:156:PHE:HE1	1:E:229:LEU:HD11	1.64	0.62
1:E:255:ARG:HG2	1:E:401:ILE:HD12	1.82	0.62
1:D:51:ARG:HG2	1:D:57:PRO:HB3	1.80	0.62
1:A:65:GLU:CA	1:A:68:LYS:HE2	2.21	0.62
1:B:117:TYR:N	1:B:117:TYR:CD1	2.67	0.62
1:B:412:PHE:CE2	1:B:526:MET:HE2	2.34	0.62
1:B:381:LYS:O	1:B:385:ARG:HD3	1.99	0.62
1:E:425:ASN:ND2	1:E:428:ASP:H	1.98	0.62
1:A:167:TRP:HB3	1:A:228:MET:HE3	1.81	0.62
1:E:443:GLN:HA	1:E:634:ARG:NH2	2.15	0.62
1:F:336:VAL:HG12	1:F:337:GLN:CG	2.30	0.62
1:F:522:LEU:HD13	1:F:526:MET:HE1	1.81	0.62
1:B:249:ASN:O	1:B:252:VAL:HG13	1.99	0.61
1:B:317:TYR:CE2	1:B:565:MET:HE2	2.34	0.61
1:B:425:ASN:C	1:B:425:ASN:HD22	2.05	0.61
1:C:51:ARG:HG2	1:C:57:PRO:HB3	1.82	0.61
1:A:472:ARG:HG2	1:A:472:ARG:NH1	2.14	0.61
1:A:522:LEU:HD13	1:A:526:MET:HE1	1.82	0.61
1:B:63:PHE:CZ	1:F:62:PRO:HG3	2.35	0.61
1:B:544:LEU:O	1:B:544:LEU:HD23	2.01	0.61
1:F:63:PHE:HD1	1:F:64:GLY:H	1.47	0.61
1:A:317:TYR:CE2	1:A:565:MET:HE2	2.35	0.61
1:C:156:PHE:HE1	1:C:229:LEU:HD11	1.65	0.61
1:C:509:LEU:CD1	1:C:522:LEU:HB2	2.30	0.61
1:D:103:ALA:HB1	1:D:153:LEU:CD1	2.30	0.61
1:E:381:LYS:O	1:E:385:ARG:HD3	2.00	0.61
1:F:29:THR:HG23	1:F:30:ALA:N	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:254:LYS:CE	1:B:294:ASN:HB2	2.29	0.61
1:E:103:ALA:HB1	1:E:153:LEU:CD1	2.30	0.61
1:F:412:PHE:CE2	1:F:526:MET:HE2	2.34	0.61
1:A:122:GLU:CD	1:A:141:LEU:HD22	2.25	0.61
1:A:215:GLY:O	1:A:219:VAL:HG23	2.00	0.61
1:B:51:ARG:HG2	1:B:57:PRO:HB3	1.82	0.61
1:B:103:ALA:HB1	1:B:153:LEU:CD1	2.30	0.61
1:E:51:ARG:HG2	1:E:57:PRO:HB3	1.83	0.61
1:E:362:LYS:HD2	1:F:211:ASN:HD22	1.66	0.61
1:E:434:VAL:HG13	1:E:548:LEU:HD21	1.82	0.61
1:D:119:ILE:O	1:D:119:ILE:HG22	1.99	0.61
1:D:443:GLN:HA	1:D:634:ARG:NH2	2.15	0.61
1:A:29:THR:HG23	1:A:30:ALA:N	2.16	0.61
1:B:119:ILE:HG22	1:B:120:ARG:H	1.59	0.61
1:C:544:LEU:HD23	1:C:544:LEU:O	2.01	0.61
1:D:606:LYS:HG2	1:D:612:TYR:CD2	2.36	0.61
1:E:63:PHE:HD1	1:E:64:GLY:H	1.48	0.61
1:E:255:ARG:NH1	1:E:399:VAL:HG12	2.16	0.61
1:F:124:LYS:HG2	1:F:235:ASP:CB	2.30	0.61
1:F:140:GLY:O	1:F:144:ILE:HD12	2.00	0.61
1:C:65:GLU:CA	1:C:68:LYS:HE2	2.21	0.61
1:E:202:HIS:HE1	1:F:568:LYS:H	1.49	0.61
1:E:134:VAL:O	1:E:136:THR:HG23	2.00	0.61
1:E:336:VAL:C	1:E:337:GLN:HG2	2.25	0.61
1:E:77:ASP:OD1	1:E:596:ILE:HD13	2.00	0.60
1:F:412:PHE:CD2	1:F:526:MET:HE2	2.35	0.60
1:F:550:VAL:HG22	1:F:554:ASP:OD2	2.01	0.60
1:A:322:LEU:H	1:A:322:LEU:HD22	1.66	0.60
1:B:285:ILE:HA	1:B:289:ALA:O	2.01	0.60
1:D:65:GLU:CA	1:D:68:LYS:HE2	2.23	0.60
1:D:425:ASN:ND2	1:D:428:ASP:H	1.98	0.60
1:E:224:LEU:HD11	1:E:579:ILE:HD11	1.83	0.60
1:E:522:LEU:HD13	1:E:526:MET:HE1	1.84	0.60
1:C:63:PHE:HD1	1:C:64:GLY:H	1.47	0.60
1:C:167:TRP:HB3	1:C:228:MET:HE3	1.84	0.60
1:D:29:THR:HG23	1:D:30:ALA:N	2.16	0.60
1:D:381:LYS:O	1:D:385:ARG:HD3	2.01	0.60
1:F:51:ARG:HG2	1:F:57:PRO:HB3	1.83	0.60
1:F:266:ASN:HD21	1:F:268:MET:HB2	1.65	0.60
1:A:137:GLU:HA	1:A:137:GLU:OE2	2.01	0.60
1:A:544:LEU:HD23	1:A:544:LEU:O	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:522:LEU:HD13	1:B:526:MET:HE1	1.83	0.60
1:B:596:ILE:H	1:B:596:ILE:HD12	1.67	0.60
1:D:322:LEU:H	1:D:322:LEU:HD22	1.66	0.60
1:D:215:GLY:O	1:D:219:VAL:HG23	2.02	0.60
1:D:434:VAL:HG13	1:D:548:LEU:HD21	1.84	0.60
1:E:634:ARG:HH11	1:E:634:ARG:HG3	1.67	0.60
1:C:211:ASN:HD22	1:D:362:LYS:HD2	1.67	0.60
1:D:153:LEU:O	1:D:157:GLN:HG2	2.02	0.60
1:E:153:LEU:O	1:E:157:GLN:HG2	2.01	0.60
1:B:127:ALA:HA	1:B:130:LYS:CE	2.31	0.60
1:F:103:ALA:HB1	1:F:153:LEU:CD1	2.31	0.60
1:A:103:ALA:HB1	1:A:153:LEU:CD1	2.30	0.60
1:D:167:TRP:HB3	1:D:228:MET:HE3	1.84	0.60
1:D:280:LEU:N	1:D:280:LEU:HD23	2.15	0.60
1:E:167:TRP:HB3	1:E:228:MET:HE3	1.84	0.60
1:E:334:VAL:HB	1:E:339:ILE:CD1	2.27	0.60
1:D:63:PHE:HD1	1:D:64:GLY:H	1.50	0.60
1:D:544:LEU:HD23	1:D:544:LEU:O	2.01	0.60
1:A:276:VAL:O	1:A:280:LEU:HD13	2.02	0.59
1:F:29:THR:HG23	1:F:31:TRP:N	2.15	0.59
1:A:334:VAL:HB	1:A:339:ILE:CD1	2.26	0.59
1:B:63:PHE:HB2	1:F:46:ALA:HB2	1.84	0.59
1:F:156:PHE:HE1	1:F:229:LEU:HD11	1.66	0.59
1:A:96:SER:HB2	1:A:190:ILE:HG21	1.84	0.59
1:B:336:VAL:HG12	1:B:337:GLN:CG	2.32	0.59
1:B:372:ASP:HB3	1:B:375:LYS:NZ	2.17	0.59
1:B:509:LEU:CD1	1:B:522:LEU:HB2	2.32	0.59
1:C:285:ILE:HA	1:C:289:ALA:O	2.01	0.59
1:E:536:ARG:HH11	1:E:536:ARG:HG3	1.66	0.59
1:F:322:LEU:H	1:F:322:LEU:HD22	1.68	0.59
1:A:205:CYS:SG	1:B:337:GLN:HB3	2.43	0.59
1:A:596:ILE:HD12	1:A:596:ILE:H	1.67	0.59
1:B:96:SER:HB2	1:B:190:ILE:HG21	1.85	0.59
1:C:412:PHE:CD2	1:C:526:MET:HE2	2.38	0.59
1:D:124:LYS:HE2	1:D:235:ASP:HB2	1.82	0.59
1:F:122:GLU:O	1:F:126:TYR:HD1	1.86	0.59
1:A:336:VAL:C	1:A:337:GLN:HG2	2.26	0.59
1:C:103:ALA:HB1	1:C:153:LEU:CD1	2.31	0.59
1:D:375:LYS:HZ2	1:D:375:LYS:HB2	1.68	0.59
1:A:336:VAL:HG12	1:A:337:GLN:CG	2.31	0.59
1:B:29:THR:HG23	1:B:30:ALA:N	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:493:THR:HG21	1:C:495:GLU:HG2	1.85	0.59
1:A:372:ASP:HB3	1:A:375:LYS:NZ	2.18	0.59
1:B:322:LEU:HD22	1:B:322:LEU:H	1.67	0.59
1:B:336:VAL:C	1:B:337:GLN:HG2	2.28	0.59
1:D:372:ASP:HB3	1:D:375:LYS:NZ	2.18	0.59
1:E:125:LEU:CD2	1:E:145:VAL:HG12	2.33	0.59
1:E:255:ARG:HD3	1:E:399:VAL:CG1	2.28	0.59
1:E:322:LEU:HD22	1:E:322:LEU:H	1.68	0.59
1:E:606:LYS:HG2	1:E:612:TYR:CD2	2.37	0.59
1:F:425:ASN:ND2	1:F:428:ASP:H	2.01	0.59
1:B:86:ARG:HD2	1:B:201:THR:OG1	2.02	0.59
1:B:167:TRP:HB3	1:B:228:MET:HE3	1.85	0.59
1:B:215:GLY:O	1:B:219:VAL:HG23	2.02	0.59
1:B:472:ARG:HG2	1:B:472:ARG:NH1	2.17	0.59
1:A:139:ARG:HH21	1:A:143:ALA:HB1	1.68	0.59
1:A:606:LYS:HG2	1:A:612:TYR:CD2	2.37	0.59
1:C:501:ALA:HB1	1:C:505:LEU:HD12	1.84	0.59
1:E:29:THR:HG23	1:E:30:ALA:N	2.16	0.59
1:E:372:ASP:HB3	1:E:375:LYS:NZ	2.16	0.59
1:A:51:ARG:HG2	1:A:57:PRO:HB3	1.85	0.59
1:A:509:LEU:CD1	1:A:522:LEU:HB2	2.32	0.59
1:A:122:GLU:O	1:A:126:TYR:HB2	2.03	0.58
1:B:280:LEU:HD22	1:B:283:GLU:OE1	2.03	0.58
1:F:167:TRP:HB3	1:F:228:MET:HE3	1.84	0.58
1:F:285:ILE:HA	1:F:289:ALA:O	2.03	0.58
1:F:493:THR:HG21	1:F:495:GLU:HG2	1.84	0.58
1:A:89:ALA:HB2	1:A:197:THR:HG21	1.84	0.58
1:B:162:ASP:O	1:B:164:PRO:HD3	2.03	0.58
1:D:510:SER:HB3	1:D:521:PRO:HB3	1.86	0.58
1:C:29:THR:HG23	1:C:30:ALA:N	2.18	0.58
1:D:281:ARG:O	1:D:285:ILE:HG13	2.03	0.58
1:F:153:LEU:O	1:F:157:GLN:HG2	2.03	0.58
1:C:336:VAL:C	1:C:337:GLN:HG2	2.27	0.58
1:C:412:PHE:CE2	1:C:526:MET:HE2	2.37	0.58
1:E:501:ALA:HB1	1:E:505:LEU:HD12	1.85	0.58
1:A:29:THR:HG23	1:A:31:TRP:N	2.16	0.58
1:B:89:ALA:HB2	1:B:197:THR:HG21	1.85	0.58
1:A:510:SER:CA	1:A:521:PRO:HB3	2.34	0.58
1:C:334:VAL:HB	1:C:339:ILE:CD1	2.28	0.58
1:E:317:TYR:CE2	1:E:565:MET:HE2	2.38	0.58
1:F:509:LEU:CD1	1:F:522:LEU:HB2	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:501:ALA:HB1	1:A:505:LEU:HD12	1.86	0.58
1:D:326:THR:HG22	1:D:328:ALA:H	1.68	0.58
1:E:206:ASP:HB3	1:E:212:LEU:HD21	1.84	0.58
1:E:336:VAL:HG12	1:E:337:GLN:CG	2.34	0.58
1:F:335:ASP:CG	1:F:336:VAL:H	2.12	0.58
1:A:153:LEU:O	1:A:157:GLN:HG2	2.03	0.58
1:B:550:VAL:HG22	1:B:554:ASP:OD2	2.03	0.58
1:C:536:ARG:HH11	1:C:536:ARG:HG3	1.69	0.58
1:D:86:ARG:HD2	1:D:201:THR:OG1	2.04	0.58
1:D:317:TYR:CE2	1:D:565:MET:HE2	2.39	0.58
1:D:501:ALA:HB1	1:D:505:LEU:HD12	1.84	0.58
1:B:153:LEU:O	1:B:157:GLN:HG2	2.04	0.57
1:C:317:TYR:CE2	1:C:565:MET:HE2	2.38	0.57
1:C:550:VAL:HG22	1:C:554:ASP:OD2	2.02	0.57
1:D:509:LEU:CD1	1:D:522:LEU:HB2	2.33	0.57
1:F:536:ARG:HH11	1:F:536:ARG:HG3	1.67	0.57
1:B:280:LEU:HD12	1:B:384:ILE:CG2	2.34	0.57
1:C:141:LEU:C	1:C:143:ALA:H	2.12	0.57
1:C:606:LYS:HG2	1:C:612:TYR:CD2	2.39	0.57
1:D:29:THR:HG23	1:D:31:TRP:N	2.19	0.57
1:A:280:LEU:C	1:A:282:ASP:H	2.13	0.57
1:B:117:TYR:N	1:B:117:TYR:HD1	2.02	0.57
1:B:501:ALA:HB1	1:B:505:LEU:HD12	1.86	0.57
1:C:335:ASP:CG	1:C:336:VAL:H	2.11	0.57
1:D:634:ARG:HH11	1:D:634:ARG:HG3	1.69	0.57
1:E:439:ASN:OD1	1:E:441:ASN:ND2	2.36	0.57
1:A:117:TYR:HE1	1:A:373:GLU:HB3	1.69	0.57
1:F:255:ARG:HG3	1:F:401:ILE:HD12	1.85	0.57
1:B:335:ASP:CG	1:B:336:VAL:H	2.11	0.57
1:E:89:ALA:HB2	1:E:197:THR:HG21	1.85	0.57
1:A:114:LEU:HD22	1:A:117:TYR:CD1	2.39	0.57
1:A:285:ILE:HA	1:A:289:ALA:O	2.05	0.57
1:E:550:VAL:HG22	1:E:554:ASP:OD2	2.05	0.57
1:F:89:ALA:HB2	1:F:197:THR:HG21	1.85	0.57
1:F:472:ARG:HG2	1:F:472:ARG:NH1	2.16	0.57
1:B:606:LYS:HG2	1:B:612:TYR:CD2	2.39	0.57
1:C:336:VAL:HG12	1:C:337:GLN:CG	2.35	0.57
1:A:510:SER:HA	1:A:521:PRO:CB	2.34	0.57
1:B:65:GLU:CA	1:B:68:LYS:HE2	2.22	0.57
1:D:412:PHE:CD2	1:D:526:MET:HE2	2.40	0.57
1:B:141:LEU:C	1:B:143:ALA:H	2.12	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:29:THR:HG23	1:C:31:TRP:N	2.16	0.57
1:D:142:LEU:HD12	1:D:142:LEU:N	2.19	0.57
1:D:266:ASN:ND2	1:D:268:MET:HB2	2.20	0.57
1:E:121:ASP:OD1	1:E:123:ALA:HB3	2.05	0.57
1:A:249:ASN:ND2	1:A:404:PHE:HB2	2.20	0.56
1:B:206:ASP:HB3	1:B:212:LEU:HD21	1.86	0.56
1:A:550:VAL:HG22	1:A:554:ASP:OD2	2.04	0.56
1:B:108:HIS:HB2	1:B:114:LEU:HD12	1.87	0.56
1:B:279:ASP:O	1:B:281:ARG:N	2.38	0.56
1:C:124:LYS:HE2	1:C:235:ASP:HB2	1.86	0.56
1:C:510:SER:HB3	1:C:521:PRO:HB3	1.87	0.56
1:D:412:PHE:CE2	1:D:526:MET:HE2	2.39	0.56
1:E:211:ASN:HD22	1:F:362:LYS:HD2	1.69	0.56
1:E:249:ASN:HD22	1:E:488:LYS:HE3	1.70	0.56
1:A:510:SER:HB3	1:A:521:PRO:HB3	1.87	0.56
1:A:634:ARG:HG3	1:A:634:ARG:HH11	1.70	0.56
1:B:132:LEU:CD1	1:B:151:ILE:HG21	2.36	0.56
1:C:96:SER:HB2	1:C:190:ILE:HG21	1.87	0.56
1:C:634:ARG:HG3	1:C:634:ARG:NH1	2.20	0.56
1:D:589:PRO:O	1:D:591:VAL:N	2.36	0.56
1:A:493:THR:HG21	1:A:495:GLU:HG2	1.88	0.56
1:D:141:LEU:HD13	1:D:141:LEU:C	2.30	0.56
1:E:510:SER:HA	1:E:521:PRO:CB	2.35	0.56
1:C:336:VAL:O	1:C:337:GLN:HG2	2.05	0.56
1:D:206:ASP:HB3	1:D:212:LEU:HD21	1.87	0.56
1:E:96:SER:HB2	1:E:190:ILE:HG21	1.86	0.56
1:F:124:LYS:NZ	1:F:232:GLU:HA	2.20	0.56
1:F:135:ALA:O	1:F:139:ARG:HD3	2.06	0.56
1:E:335:ASP:CG	1:E:336:VAL:H	2.12	0.56
1:F:372:ASP:HB3	1:F:375:LYS:NZ	2.20	0.56
1:F:501:ALA:HB1	1:F:505:LEU:HD12	1.88	0.56
1:A:162:ASP:O	1:A:164:PRO:HD3	2.06	0.56
1:B:266:ASN:ND2	1:B:268:MET:HB2	2.21	0.56
1:D:550:VAL:HG22	1:D:554:ASP:OD2	2.06	0.56
1:E:296:ILE:HD12	1:E:314:ALA:HB2	1.88	0.56
1:E:510:SER:HB3	1:E:521:PRO:HB3	1.87	0.56
1:B:536:ARG:HH11	1:B:536:ARG:HG3	1.71	0.56
1:E:472:ARG:HG2	1:E:472:ARG:NH1	2.22	0.56
1:A:439:ASN:OD1	1:A:441:ASN:ND2	2.39	0.55
1:B:281:ARG:HA	1:B:281:ARG:NH1	2.21	0.55
1:B:634:ARG:HH11	1:B:634:ARG:HG3	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:120:ARG:HG3	1:D:237:LEU:O	2.06	0.55
1:E:189:ASN:HB3	1:E:192:ALA:HB3	1.89	0.55
1:A:118:SER:O	1:A:237:LEU:HD23	2.06	0.55
1:C:266:ASN:ND2	1:C:268:MET:HB2	2.21	0.55
1:F:86:ARG:HD2	1:F:201:THR:OG1	2.06	0.55
1:F:510:SER:HB3	1:F:521:PRO:HB3	1.86	0.55
1:A:568:LYS:H	1:B:202:HIS:HE1	1.52	0.55
1:C:322:LEU:HD22	1:C:322:LEU:H	1.70	0.55
1:C:510:SER:CA	1:C:521:PRO:HB3	2.37	0.55
1:F:544:LEU:HD23	1:F:544:LEU:O	2.06	0.55
1:A:63:PHE:CG	1:C:46:ALA:HB2	2.42	0.55
1:D:335:ASP:CG	1:D:336:VAL:H	2.14	0.55
1:D:472:ARG:HG2	1:D:472:ARG:NH1	2.20	0.55
1:F:336:VAL:O	1:F:337:GLN:HG2	2.05	0.55
1:F:551:ASP:OD2	1:F:552:LEU:N	2.37	0.55
1:C:180:LEU:CD1	1:C:221:MET:HE2	2.36	0.55
1:C:568:LYS:H	1:D:202:HIS:HE1	1.54	0.55
1:D:336:VAL:HG12	1:D:337:GLN:CG	2.36	0.55
1:D:536:ARG:HG3	1:D:536:ARG:HH11	1.71	0.55
1:C:372:ASP:HB3	1:C:375:LYS:NZ	2.21	0.55
1:D:63:PHE:CE2	1:E:62:PRO:HG3	2.42	0.55
1:A:536:ARG:HH11	1:A:536:ARG:HG3	1.71	0.55
1:B:334:VAL:HB	1:B:339:ILE:CD1	2.28	0.55
1:B:354:ILE:O	1:B:366:ALA:HB1	2.06	0.55
1:C:362:LYS:HD2	1:D:211:ASN:ND2	2.20	0.55
1:D:493:THR:HG21	1:D:495:GLU:HG2	1.89	0.55
1:E:510:SER:CA	1:E:521:PRO:HB3	2.35	0.55
1:B:493:THR:HG21	1:B:495:GLU:HG2	1.87	0.55
1:C:337:GLN:HB3	1:D:205:CYS:SG	2.47	0.55
1:C:550:VAL:HG22	1:C:551:ASP:N	2.21	0.55
1:D:336:VAL:O	1:D:337:GLN:HG2	2.07	0.55
1:E:86:ARG:HD2	1:E:201:THR:OG1	2.07	0.55
1:E:375:LYS:HZ2	1:E:375:LYS:HB2	1.71	0.55
1:C:206:ASP:HB3	1:C:212:LEU:HD21	1.89	0.55
1:C:551:ASP:OD2	1:C:552:LEU:N	2.40	0.55
1:F:125:LEU:HD11	1:F:148:LEU:HD12	1.88	0.55
1:F:252:VAL:HG12	1:F:296:ILE:CG2	2.37	0.55
1:A:206:ASP:HB3	1:A:212:LEU:HD21	1.89	0.54
1:B:462:TYR:CE1	1:B:482:ALA:HA	2.41	0.54
1:C:326:THR:HG22	1:C:328:ALA:H	1.71	0.54
1:D:96:SER:HB2	1:D:190:ILE:HG21	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:180:LEU:CD1	1:F:221:MET:HE2	2.37	0.54
1:A:134:VAL:HG21	1:A:148:LEU:HD23	1.88	0.54
1:A:326:THR:HG22	1:A:328:ALA:H	1.72	0.54
1:B:126:TYR:HH	1:B:141:LEU:HD11	1.71	0.54
1:C:180:LEU:CB	1:C:186:LEU:HD13	2.37	0.54
1:F:296:ILE:HD12	1:F:314:ALA:HB2	1.89	0.54
1:B:144:ILE:C	1:B:146:GLY:N	2.61	0.54
1:B:307:MET:HE2	1:B:528:MET:C	2.33	0.54
1:B:510:SER:CA	1:B:521:PRO:HB3	2.37	0.54
1:A:307:MET:HE2	1:A:528:MET:C	2.33	0.54
1:A:462:TYR:CE1	1:A:482:ALA:HA	2.43	0.54
1:B:631:GLN:O	1:B:634:ARG:HB2	2.06	0.54
1:E:266:ASN:ND2	1:E:268:MET:HB2	2.21	0.54
1:E:551:ASP:OD2	1:E:552:LEU:N	2.39	0.54
1:F:96:SER:HB2	1:F:190:ILE:HG21	1.89	0.54
1:B:510:SER:HB3	1:B:521:PRO:HB3	1.89	0.54
1:C:510:SER:HA	1:C:521:PRO:CB	2.37	0.54
1:E:634:ARG:HG3	1:E:634:ARG:NH1	2.22	0.54
1:F:375:LYS:HZ2	1:F:375:LYS:HB2	1.73	0.54
1:E:162:ASP:O	1:E:164:PRO:HD3	2.08	0.54
1:A:266:ASN:ND2	1:A:268:MET:HB2	2.22	0.54
1:A:296:ILE:HD12	1:A:314:ALA:HB2	1.89	0.54
1:A:550:VAL:HG22	1:A:551:ASP:N	2.23	0.54
1:B:122:GLU:C	1:B:124:LYS:N	2.65	0.54
1:B:296:ILE:HD12	1:B:314:ALA:HB2	1.90	0.54
1:C:544:LEU:HD23	1:C:544:LEU:C	2.33	0.54
1:D:510:SER:CA	1:D:521:PRO:HB3	2.38	0.54
1:E:307:MET:HE2	1:E:528:MET:C	2.33	0.54
1:F:326:THR:HG22	1:F:328:ALA:H	1.72	0.54
1:A:335:ASP:CG	1:A:336:VAL:H	2.15	0.54
1:E:125:LEU:HD21	1:E:144:ILE:HG22	1.89	0.54
1:C:323:PRO:O	1:C:326:THR:HB	2.08	0.54
1:D:137:GLU:O	1:D:138:GLY:C	2.51	0.54
1:D:510:SER:HA	1:D:521:PRO:CB	2.38	0.54
1:A:551:ASP:OD2	1:A:552:LEU:N	2.42	0.53
1:B:124:LYS:HE2	1:B:235:ASP:HB3	1.90	0.53
1:B:326:THR:HG22	1:B:328:ALA:H	1.73	0.53
1:B:473:ASN:HA	1:B:505:LEU:HB2	1.90	0.53
1:C:89:ALA:HB2	1:C:197:THR:HG21	1.89	0.53
1:F:462:TYR:CE1	1:F:482:ALA:HA	2.43	0.53
1:F:634:ARG:HG3	1:F:634:ARG:HH11	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:205:CYS:SG	1:F:337:GLN:HB3	2.47	0.53
1:B:243:PRO:HD3	1:B:416:ALA:HB1	1.90	0.53
1:E:326:THR:HG22	1:E:328:ALA:H	1.73	0.53
1:E:493:THR:HG21	1:E:495:GLU:HG2	1.90	0.53
1:E:589:PRO:O	1:E:591:VAL:N	2.39	0.53
1:D:551:ASP:OD2	1:D:552:LEU:N	2.41	0.53
1:E:550:VAL:HG22	1:E:551:ASP:N	2.22	0.53
1:F:180:LEU:CB	1:F:186:LEU:HD13	2.38	0.53
1:F:206:ASP:HB3	1:F:212:LEU:HD21	1.89	0.53
1:F:493:THR:HG22	1:F:495:GLU:HG2	1.89	0.53
1:B:510:SER:HA	1:B:521:PRO:CB	2.38	0.53
1:D:473:ASN:HA	1:D:505:LEU:HB2	1.91	0.53
1:F:550:VAL:HG22	1:F:551:ASP:N	2.20	0.53
1:A:253:MET:HA	1:A:294:ASN:ND2	2.24	0.53
1:B:118:SER:C	1:B:119:ILE:HD12	2.33	0.53
1:C:296:ILE:HD12	1:C:314:ALA:HB2	1.91	0.53
1:E:29:THR:HG23	1:E:31:TRP:N	2.19	0.53
1:E:336:VAL:O	1:E:337:GLN:HG2	2.09	0.53
1:F:423:LYS:O	1:F:515:ALA:HB1	2.08	0.53
1:A:517:GLY:C	1:A:518:LEU:HD13	2.33	0.53
1:B:132:LEU:C	1:B:134:VAL:H	2.17	0.53
1:E:323:PRO:O	1:E:326:THR:HB	2.08	0.53
1:E:462:TYR:CE1	1:E:482:ALA:HA	2.44	0.53
1:E:596:ILE:H	1:E:596:ILE:HD12	1.72	0.53
1:F:252:VAL:CG1	1:F:296:ILE:HG22	2.39	0.53
1:F:551:ASP:OD2	1:F:552:LEU:HD12	2.09	0.53
1:B:130:LYS:C	1:B:132:LEU:H	2.16	0.53
1:B:544:LEU:HD23	1:B:544:LEU:C	2.33	0.53
1:C:439:ASN:OD1	1:C:441:ASN:ND2	2.42	0.53
1:E:544:LEU:HD23	1:E:544:LEU:C	2.33	0.53
1:B:281:ARG:O	1:B:283:GLU:N	2.42	0.53
1:B:589:PRO:O	1:B:591:VAL:N	2.40	0.53
1:C:462:TYR:CE1	1:C:482:ALA:HA	2.44	0.53
1:E:254:LYS:HD3	1:E:291:GLU:OE1	2.08	0.53
1:F:510:SER:CA	1:F:521:PRO:HB3	2.38	0.53
1:F:596:ILE:H	1:F:596:ILE:HD12	1.74	0.53
1:A:110:SER:HB2	1:A:142:LEU:O	2.09	0.53
1:C:69:TYR:O	1:D:37:GLN:NE2	2.41	0.53
1:F:162:ASP:O	1:F:164:PRO:HD3	2.09	0.53
1:B:281:ARG:C	1:B:283:GLU:N	2.67	0.52
1:C:119:ILE:HG21	1:C:125:LEU:HD22	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:596:ILE:H	1:C:596:ILE:HD12	1.74	0.52
1:D:323:PRO:O	1:D:326:THR:HB	2.09	0.52
1:E:473:ASN:HA	1:E:505:LEU:HB2	1.91	0.52
1:F:189:ASN:HB3	1:F:192:ALA:HB3	1.91	0.52
1:A:493:THR:HG22	1:A:495:GLU:HG2	1.91	0.52
1:E:310:GLY:O	1:E:311:VAL:C	2.52	0.52
1:F:589:PRO:O	1:F:591:VAL:N	2.42	0.52
1:A:319:SER:CA	1:A:322:LEU:HD23	2.39	0.52
1:B:142:LEU:HA	1:B:145:VAL:CG2	2.39	0.52
1:B:634:ARG:HG3	1:B:634:ARG:NH1	2.25	0.52
1:F:266:ASN:ND2	1:F:268:MET:HB2	2.23	0.52
1:F:631:GLN:O	1:F:634:ARG:HB2	2.09	0.52
1:D:310:GLY:O	1:D:311:VAL:C	2.53	0.52
1:D:510:SER:CB	1:D:521:PRO:HB3	2.40	0.52
1:D:631:GLN:O	1:D:634:ARG:HB2	2.10	0.52
1:D:634:ARG:HG3	1:D:634:ARG:NH1	2.24	0.52
1:E:176:ARG:NH2	1:E:609:VAL:O	2.43	0.52
1:F:439:ASN:OD1	1:F:441:ASN:ND2	2.42	0.52
1:A:167:TRP:HZ3	1:A:232:GLU:HG3	1.75	0.52
1:A:544:LEU:HD23	1:A:544:LEU:C	2.34	0.52
1:B:550:VAL:HG22	1:B:551:ASP:N	2.22	0.52
1:C:205:CYS:SG	1:D:337:GLN:HB3	2.49	0.52
1:C:473:ASN:HA	1:C:505:LEU:HB2	1.92	0.52
1:F:473:ASN:HA	1:F:505:LEU:HB2	1.91	0.52
1:C:86:ARG:HD2	1:C:201:THR:OG1	2.09	0.52
1:E:102:ILE:HG12	1:E:268:MET:HE2	1.92	0.52
1:E:154:GLY:HA2	1:E:157:GLN:HG3	1.91	0.52
1:A:180:LEU:CD1	1:A:221:MET:HE2	2.40	0.52
1:A:323:PRO:O	1:A:326:THR:HB	2.10	0.52
1:A:423:LYS:O	1:A:515:ALA:HB1	2.09	0.52
1:A:551:ASP:OD2	1:A:552:LEU:HD12	2.10	0.52
1:A:631:GLN:O	1:A:634:ARG:HB2	2.09	0.52
1:C:140:GLY:O	1:C:144:ILE:HG13	2.10	0.52
1:F:517:GLY:C	1:F:519:GLY:H	2.18	0.52
1:A:461:ALA:O	1:A:465:LEU:HB2	2.10	0.52
1:B:63:PHE:HE2	1:F:62:PRO:CG	2.20	0.52
1:B:250:LEU:O	1:B:253:MET:HG3	2.10	0.52
1:B:375:LYS:NZ	1:B:375:LYS:HB2	2.25	0.52
1:C:103:ALA:HB1	1:C:153:LEU:HD12	1.91	0.52
1:D:124:LYS:HE2	1:D:235:ASP:CB	2.40	0.52
1:D:176:ARG:NH2	1:D:609:VAL:O	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:493:THR:HG22	1:E:495:GLU:HG2	1.92	0.52
1:A:589:PRO:O	1:A:591:VAL:N	2.42	0.52
1:A:596:ILE:HD12	1:A:596:ILE:N	2.25	0.52
1:B:189:ASN:HB3	1:B:192:ALA:HB3	1.92	0.52
1:B:336:VAL:O	1:B:337:GLN:HG2	2.10	0.52
1:C:493:THR:HG22	1:C:495:GLU:HG2	1.91	0.52
1:D:439:ASN:OD1	1:D:441:ASN:ND2	2.42	0.52
1:D:493:THR:HG22	1:D:495:GLU:HG2	1.90	0.52
1:F:108:HIS:CB	1:F:114:LEU:HD13	2.37	0.52
1:F:522:LEU:HD13	1:F:526:MET:HE3	1.91	0.52
1:A:197:THR:OG1	1:A:219:VAL:HG21	2.10	0.51
1:B:596:ILE:HD12	1:B:596:ILE:N	2.24	0.51
1:D:180:LEU:CD1	1:D:221:MET:HE2	2.41	0.51
1:D:544:LEU:HD23	1:D:544:LEU:C	2.35	0.51
1:F:510:SER:HA	1:F:521:PRO:CB	2.38	0.51
1:A:280:LEU:C	1:A:282:ASP:N	2.67	0.51
1:A:510:SER:CB	1:A:521:PRO:HB3	2.40	0.51
1:C:122:GLU:O	1:C:126:TYR:HD1	1.94	0.51
1:C:162:ASP:O	1:C:164:PRO:HD3	2.10	0.51
1:C:589:PRO:O	1:C:591:VAL:N	2.42	0.51
1:D:63:PHE:HE2	1:E:62:PRO:HG3	1.75	0.51
1:F:250:LEU:CD2	1:F:323:PRO:HG3	2.36	0.51
1:F:319:SER:CA	1:F:322:LEU:HD23	2.40	0.51
1:A:63:PHE:CE2	1:C:62:PRO:HG3	2.45	0.51
1:A:63:PHE:HE2	1:C:62:PRO:HG3	1.75	0.51
1:A:156:PHE:CE1	1:A:229:LEU:HD11	2.44	0.51
1:A:202:HIS:CE1	1:B:566:SER:HB2	2.46	0.51
1:B:76:ARG:O	1:B:80:VAL:HG23	2.11	0.51
1:D:103:ALA:HB1	1:D:153:LEU:HD12	1.91	0.51
1:D:132:LEU:O	1:D:132:LEU:HD13	2.10	0.51
1:D:279:ASP:C	1:D:280:LEU:HD23	2.35	0.51
1:A:243:PRO:HD3	1:A:416:ALA:HB1	1.92	0.51
1:A:634:ARG:HG3	1:A:634:ARG:NH1	2.25	0.51
1:B:124:LYS:NZ	1:B:235:ASP:HB2	2.26	0.51
1:C:154:GLY:HA2	1:C:157:GLN:HG3	1.92	0.51
1:C:326:THR:HG23	1:C:401:ILE:HG12	1.93	0.51
1:D:462:TYR:CE1	1:D:482:ALA:HA	2.45	0.51
1:D:462:TYR:CE2	1:D:562:PRO:HD2	2.40	0.51
1:E:180:LEU:CD1	1:E:221:MET:HE2	2.40	0.51
1:E:319:SER:CA	1:E:322:LEU:HD23	2.41	0.51
1:A:103:ALA:HB1	1:A:153:LEU:HD12	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:375:LYS:HZ2	1:B:375:LYS:HB2	1.75	0.51
1:C:280:LEU:O	1:C:281:ARG:C	2.53	0.51
1:C:534:ASN:ND2	1:C:572:ILE:HD13	2.25	0.51
1:F:29:THR:HG22	1:F:32:HIS:H	1.75	0.51
1:A:330:GLU:HG3	1:A:391:PHE:HA	1.93	0.51
1:C:108:HIS:HB2	1:C:114:LEU:CD1	2.41	0.51
1:D:296:ILE:HD12	1:D:314:ALA:HB2	1.92	0.51
1:E:281:ARG:O	1:E:285:ILE:HG13	2.11	0.51
1:F:48:LEU:HD22	1:F:60:ILE:HB	1.91	0.51
1:F:334:VAL:HB	1:F:339:ILE:CD1	2.26	0.51
1:A:354:ILE:O	1:A:366:ALA:HB1	2.10	0.51
1:A:375:LYS:HB2	1:A:375:LYS:NZ	2.25	0.51
1:A:473:ASN:HA	1:A:505:LEU:HB2	1.91	0.51
1:B:197:THR:OG1	1:B:219:VAL:HG21	2.10	0.51
1:B:534:ASN:ND2	1:B:572:ILE:HD13	2.26	0.51
1:E:103:ALA:HB1	1:E:153:LEU:HD12	1.91	0.51
1:A:72:CYS:HA	1:B:340:MET:HE2	1.92	0.51
1:A:281:ARG:HD2	1:A:281:ARG:O	2.10	0.51
1:B:486:PHE:CD1	1:B:525:VAL:HG11	2.46	0.51
1:C:372:ASP:OD1	1:C:374:HIS:HB2	2.10	0.51
1:D:307:MET:HE2	1:D:528:MET:C	2.36	0.51
1:D:141:LEU:CD1	1:D:142:LEU:HD12	2.27	0.51
1:F:510:SER:CB	1:F:521:PRO:HB3	2.41	0.51
1:B:122:GLU:C	1:B:124:LYS:H	2.19	0.51
1:B:176:ARG:NH2	1:B:609:VAL:O	2.44	0.51
1:B:462:TYR:CE2	1:B:562:PRO:HD2	2.40	0.51
1:C:423:LYS:O	1:C:515:ALA:HB1	2.10	0.51
1:F:260:ILE:HB	1:F:295:ILE:HG22	1.93	0.51
1:C:197:THR:OG1	1:C:219:VAL:HG21	2.11	0.50
1:D:121:ASP:OD2	1:D:240:THR:HG22	2.12	0.50
1:D:423:LYS:O	1:D:515:ALA:HB1	2.10	0.50
1:E:243:PRO:HD3	1:E:416:ALA:HB1	1.91	0.50
1:F:317:TYR:O	1:F:320:GLN:HG2	2.10	0.50
1:F:634:ARG:HG3	1:F:634:ARG:NH1	2.26	0.50
1:B:119:ILE:HD12	1:B:119:ILE:N	2.25	0.50
1:B:141:LEU:HA	1:B:144:ILE:CD1	2.38	0.50
1:D:253:MET:HE1	1:D:329:LEU:HB2	1.93	0.50
1:D:330:GLU:HG3	1:D:391:PHE:HA	1.93	0.50
1:E:447:LEU:HD13	1:E:449:VAL:CG1	2.41	0.50
1:E:510:SER:CB	1:E:521:PRO:HB3	2.40	0.50
1:F:310:GLY:O	1:F:311:VAL:C	2.54	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:269:LEU:HD13	1:D:371:PHE:CE1	2.46	0.50
1:D:551:ASP:OD2	1:D:552:LEU:HD12	2.11	0.50
1:B:180:LEU:CB	1:B:186:LEU:HD13	2.40	0.50
1:C:105:ALA:HA	1:C:114:LEU:HD11	1.93	0.50
1:C:631:GLN:O	1:C:634:ARG:HB2	2.11	0.50
1:D:319:SER:CA	1:D:322:LEU:HD23	2.41	0.50
1:A:372:ASP:OD1	1:A:374:HIS:HB2	2.11	0.50
1:C:510:SER:CB	1:C:521:PRO:HB3	2.41	0.50
1:D:89:ALA:HB2	1:D:197:THR:HG21	1.92	0.50
1:D:334:VAL:HB	1:D:339:ILE:CD1	2.31	0.50
1:E:156:PHE:CE1	1:E:229:LEU:HD11	2.44	0.50
1:E:257:ALA:HB2	1:E:291:GLU:HB2	1.94	0.50
1:E:631:GLN:O	1:E:634:ARG:HB2	2.11	0.50
1:A:298:ILE:CD1	1:A:332:MET:HE2	2.42	0.50
1:C:281:ARG:O	1:C:284:ALA:HB3	2.11	0.50
1:C:319:SER:CA	1:C:322:LEU:HD23	2.40	0.50
1:F:372:ASP:OD1	1:F:374:HIS:HB2	2.12	0.50
1:F:457:GLN:O	1:F:458:GLN:C	2.54	0.50
1:F:544:LEU:HD23	1:F:544:LEU:C	2.36	0.50
1:A:126:TYR:CZ	1:A:136:THR:HB	2.47	0.50
1:A:566:SER:HB2	1:B:202:HIS:CE1	2.46	0.50
1:B:384:ILE:O	1:B:388:ILE:HG13	2.10	0.50
1:D:298:ILE:CD1	1:D:332:MET:HE2	2.41	0.50
1:E:486:PHE:CD1	1:E:525:VAL:HG11	2.46	0.50
1:A:114:LEU:HD21	1:A:373:GLU:C	2.37	0.50
1:A:189:ASN:HB3	1:A:192:ALA:HB3	1.94	0.50
1:A:486:PHE:CD1	1:A:525:VAL:HG11	2.47	0.50
1:B:124:LYS:HG3	1:B:240:THR:HG21	1.92	0.50
1:C:298:ILE:CD1	1:C:332:MET:HE2	2.42	0.50
1:C:354:ILE:O	1:C:366:ALA:HB1	2.12	0.50
1:E:337:GLN:HB3	1:F:205:CYS:SG	2.51	0.50
1:F:326:THR:HG23	1:F:401:ILE:HG12	1.94	0.50
1:A:124:LYS:HD3	1:A:235:ASP:HB3	1.93	0.50
1:C:457:GLN:O	1:C:458:GLN:C	2.55	0.50
1:D:158:ASN:HD21	1:D:163:LYS:HB3	1.77	0.50
1:A:114:LEU:HD21	1:A:373:GLU:CB	2.42	0.49
1:B:103:ALA:HB1	1:B:153:LEU:HD12	1.92	0.49
1:B:319:SER:CA	1:B:322:LEU:HD23	2.40	0.49
1:D:136:THR:HA	1:D:139:ARG:HG3	1.93	0.49
1:D:534:ASN:ND2	1:D:572:ILE:HD13	2.26	0.49
1:A:48:LEU:HD22	1:A:60:ILE:HB	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:326:THR:HG23	1:A:401:ILE:HG12	1.94	0.49
1:A:462:TYR:CE2	1:A:562:PRO:HD2	2.44	0.49
1:B:326:THR:HG23	1:B:401:ILE:HG12	1.95	0.49
1:C:250:LEU:CD2	1:C:323:PRO:HG3	2.39	0.49
1:C:551:ASP:OD2	1:C:552:LEU:HD12	2.12	0.49
1:D:550:VAL:HG22	1:D:551:ASP:N	2.23	0.49
1:E:269:LEU:HD13	1:E:371:PHE:CE1	2.47	0.49
1:F:176:ARG:NH2	1:F:609:VAL:O	2.44	0.49
1:F:235:ASP:OD1	1:F:240:THR:HA	2.12	0.49
1:A:518:LEU:O	1:A:520:GLY:N	2.45	0.49
1:B:461:ALA:O	1:B:465:LEU:HB2	2.11	0.49
1:B:493:THR:HG22	1:B:495:GLU:HG2	1.91	0.49
1:E:250:LEU:C	1:E:252:VAL:H	2.20	0.49
1:E:536:ARG:HG3	1:E:536:ARG:NH1	2.27	0.49
1:A:37:GLN:NE2	1:B:69:TYR:O	2.43	0.49
1:A:269:LEU:HD13	1:A:371:PHE:CE1	2.48	0.49
1:A:310:GLY:O	1:A:311:VAL:C	2.55	0.49
1:A:317:TYR:O	1:A:320:GLN:HG2	2.12	0.49
1:A:336:VAL:O	1:A:337:GLN:HG2	2.12	0.49
1:A:337:GLN:HB3	1:B:205:CYS:SG	2.52	0.49
1:B:132:LEU:HD11	1:B:151:ILE:HG21	1.94	0.49
1:C:243:PRO:HD3	1:C:416:ALA:HB1	1.94	0.49
1:D:260:ILE:HB	1:D:295:ILE:HG22	1.94	0.49
1:D:262:VAL:HG23	1:D:262:VAL:O	2.11	0.49
1:E:235:ASP:OD1	1:E:240:THR:HA	2.13	0.49
1:E:279:ASP:C	1:E:281:ARG:H	2.20	0.49
1:E:461:ALA:O	1:E:465:LEU:HB2	2.12	0.49
1:F:62:PRO:HA	1:F:76:ARG:HH22	1.78	0.49
1:F:257:ALA:HB2	1:F:291:GLU:HB2	1.94	0.49
1:F:354:ILE:O	1:F:366:ALA:HB1	2.12	0.49
1:F:471:LYS:C	1:F:473:ASN:H	2.20	0.49
1:A:125:LEU:CD2	1:A:141:LEU:HD11	2.42	0.49
1:B:298:ILE:CD1	1:B:332:MET:HE2	2.43	0.49
1:D:354:ILE:O	1:D:366:ALA:HB1	2.12	0.49
1:D:447:LEU:HD13	1:D:449:VAL:CG1	2.42	0.49
1:F:154:GLY:HA2	1:F:157:GLN:HG3	1.93	0.49
1:F:326:THR:HG22	1:F:328:ALA:N	2.27	0.49
1:F:518:LEU:CD1	1:F:522:LEU:HD23	2.42	0.49
1:A:154:GLY:HA2	1:A:157:GLN:HG3	1.95	0.49
1:A:192:ALA:O	1:A:196:GLN:HG3	2.12	0.49
1:D:156:PHE:CE1	1:D:229:LEU:HD11	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:85:VAL:CG1	1:E:197:THR:HG23	2.43	0.49
1:E:119:ILE:O	1:E:119:ILE:HG22	2.13	0.49
1:E:144:ILE:C	1:E:146:GLY:H	2.20	0.49
1:F:330:GLU:HG3	1:F:391:PHE:HA	1.95	0.49
1:A:69:TYR:O	1:B:37:GLN:NE2	2.40	0.49
1:A:141:LEU:O	1:A:144:ILE:N	2.45	0.49
1:C:29:THR:HG22	1:C:32:HIS:H	1.77	0.49
1:C:532:VAL:C	1:C:534:ASN:H	2.21	0.49
1:E:167:TRP:HZ3	1:E:232:GLU:HG3	1.77	0.49
1:E:307:MET:HE2	1:E:529:GLY:N	2.27	0.49
1:F:103:ALA:HB1	1:F:153:LEU:HD12	1.92	0.49
1:A:76:ARG:O	1:A:80:VAL:HG23	2.13	0.49
1:B:62:PRO:HG3	1:F:63:PHE:CZ	2.48	0.49
1:B:122:GLU:O	1:B:125:LEU:N	2.45	0.49
1:B:310:GLY:O	1:B:311:VAL:C	2.55	0.49
1:B:439:ASN:OD1	1:B:441:ASN:ND2	2.45	0.49
1:C:176:ARG:NH2	1:C:609:VAL:O	2.45	0.49
1:C:282:ASP:O	1:C:283:GLU:C	2.55	0.49
1:D:326:THR:HG22	1:D:328:ALA:N	2.27	0.49
1:E:330:GLU:HG3	1:E:391:PHE:HA	1.94	0.49
1:E:372:ASP:OD1	1:E:374:HIS:HB2	2.12	0.49
1:F:274:CYS:SG	1:F:295:ILE:HD11	2.53	0.49
1:A:281:ARG:HD2	1:A:281:ARG:C	2.38	0.49
1:B:330:GLU:HG3	1:B:391:PHE:HA	1.94	0.49
1:B:423:LYS:O	1:B:515:ALA:HB1	2.12	0.49
1:C:235:ASP:OD1	1:C:240:THR:HA	2.12	0.49
1:C:306:MET:HG2	1:C:410:VAL:HG21	1.95	0.49
1:C:515:ALA:C	1:C:517:GLY:H	2.21	0.49
1:C:560:SER:C	1:C:562:PRO:HD3	2.38	0.49
1:D:162:ASP:O	1:D:164:PRO:HD3	2.12	0.49
1:D:306:MET:HG2	1:D:410:VAL:HG21	1.94	0.49
1:B:48:LEU:HD22	1:B:60:ILE:HB	1.93	0.49
1:B:167:TRP:HZ3	1:B:232:GLU:HG3	1.78	0.49
1:B:269:LEU:HD13	1:B:371:PHE:CE1	2.48	0.49
1:D:486:PHE:CD1	1:D:525:VAL:HG11	2.48	0.49
1:D:498:THR:HA	1:D:506:LYS:HE2	1.94	0.49
1:E:132:LEU:HD12	1:E:148:LEU:HD22	1.94	0.49
1:A:102:ILE:HG12	1:A:268:MET:HE2	1.94	0.48
1:B:229:LEU:HD23	1:B:229:LEU:C	2.38	0.48
1:B:323:PRO:O	1:B:326:THR:HB	2.12	0.48
1:D:154:GLY:HA2	1:D:157:GLN:HG3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:596:ILE:HD12	1:D:596:ILE:H	1.77	0.48
1:E:457:GLN:O	1:E:458:GLN:C	2.56	0.48
1:F:534:ASN:ND2	1:F:572:ILE:HD13	2.28	0.48
1:B:276:VAL:O	1:B:280:LEU:HG	2.13	0.48
1:C:229:LEU:HD23	1:C:229:LEU:C	2.38	0.48
1:C:282:ASP:O	1:C:284:ALA:N	2.46	0.48
1:C:428:ASP:O	1:C:431:LYS:HB3	2.13	0.48
1:C:486:PHE:CD1	1:C:525:VAL:HG11	2.48	0.48
1:D:251:GLY:CA	1:D:404:PHE:O	2.60	0.48
1:E:534:ASN:ND2	1:E:572:ILE:HD13	2.29	0.48
1:F:536:ARG:HG3	1:F:536:ARG:NH1	2.28	0.48
1:A:157:GLN:HB3	1:B:157:GLN:HB3	1.95	0.48
1:B:317:TYR:O	1:B:320:GLN:HG2	2.13	0.48
1:B:532:VAL:C	1:B:534:ASN:H	2.22	0.48
1:D:136:THR:O	1:D:139:ARG:HB2	2.13	0.48
1:D:372:ASP:OD1	1:D:374:HIS:HB2	2.12	0.48
1:D:375:LYS:HB2	1:D:375:LYS:NZ	2.27	0.48
1:E:423:LYS:O	1:E:515:ALA:HB1	2.13	0.48
1:E:596:ILE:HD12	1:E:596:ILE:N	2.28	0.48
1:F:243:PRO:HD3	1:F:416:ALA:HB1	1.93	0.48
1:A:457:GLN:O	1:A:458:GLN:C	2.56	0.48
1:C:122:GLU:OE1	1:C:141:LEU:HD22	2.13	0.48
1:C:375:LYS:HB2	1:C:375:LYS:NZ	2.27	0.48
1:C:502:GLY:O	1:C:503:GLU:C	2.56	0.48
1:D:167:TRP:HZ3	1:D:232:GLU:HG3	1.77	0.48
1:E:144:ILE:C	1:E:146:GLY:N	2.70	0.48
1:E:252:VAL:HG12	1:E:296:ILE:HG22	1.95	0.48
1:F:102:ILE:HG12	1:F:268:MET:HE2	1.95	0.48
1:F:462:TYR:CE2	1:F:562:PRO:HD2	2.41	0.48
1:B:260:ILE:HB	1:B:295:ILE:HG22	1.96	0.48
1:B:510:SER:CB	1:B:521:PRO:HB3	2.43	0.48
1:B:551:ASP:OD2	1:B:552:LEU:N	2.44	0.48
1:C:317:TYR:O	1:C:320:GLN:HG2	2.13	0.48
1:D:85:VAL:HG12	1:D:197:THR:CG2	2.44	0.48
1:E:134:VAL:O	1:E:134:VAL:HG22	2.13	0.48
1:E:274:CYS:SG	1:E:295:ILE:HD11	2.54	0.48
1:E:532:VAL:C	1:E:534:ASN:H	2.21	0.48
1:B:95:HIS:O	1:B:98:HIS:HB3	2.13	0.48
1:C:224:LEU:HD22	1:C:228:MET:HG3	1.96	0.48
1:D:257:ALA:HB2	1:D:291:GLU:HB2	1.95	0.48
1:F:250:LEU:C	1:F:252:VAL:N	2.71	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:486:PHE:CD1	1:F:525:VAL:HG11	2.48	0.48
1:B:372:ASP:OD1	1:B:374:HIS:HB2	2.13	0.48
1:D:61:ASP:O	1:D:68:LYS:NZ	2.46	0.48
1:D:132:LEU:CD1	1:D:151:ILE:HD13	2.43	0.48
1:D:471:LYS:C	1:D:473:ASN:H	2.22	0.48
1:E:560:SER:C	1:E:562:PRO:HD3	2.39	0.48
1:F:167:TRP:HZ3	1:F:232:GLU:HG3	1.78	0.48
1:F:493:THR:HG23	1:F:495:GLU:OE2	2.13	0.48
1:A:63:PHE:C	1:A:65:GLU:H	2.16	0.48
1:A:129:ALA:HA	1:A:148:LEU:HD21	1.96	0.48
1:A:471:LYS:C	1:A:473:ASN:H	2.22	0.48
1:A:522:LEU:HB3	1:A:526:MET:HE3	1.95	0.48
1:C:167:TRP:HZ3	1:C:232:GLU:HG3	1.78	0.48
1:C:310:GLY:O	1:C:311:VAL:C	2.56	0.48
1:D:102:ILE:HG12	1:D:268:MET:HE2	1.94	0.48
1:A:229:LEU:C	1:A:229:LEU:HD23	2.39	0.48
1:C:71:VAL:O	1:C:71:VAL:HG12	2.14	0.48
1:A:532:VAL:C	1:A:534:ASN:H	2.22	0.47
1:B:471:LYS:C	1:B:473:ASN:H	2.22	0.47
1:B:522:LEU:HD13	1:B:526:MET:HE3	1.96	0.47
1:C:330:GLU:HG3	1:C:391:PHE:HA	1.96	0.47
1:F:323:PRO:O	1:F:326:THR:HB	2.13	0.47
1:F:502:GLY:O	1:F:503:GLU:C	2.56	0.47
1:B:29:THR:HG22	1:B:32:HIS:H	1.78	0.47
1:B:260:ILE:O	1:B:295:ILE:HA	2.14	0.47
1:B:428:ASP:O	1:B:431:LYS:HB3	2.13	0.47
1:C:462:TYR:CE2	1:C:562:PRO:HD2	2.45	0.47
1:D:358:ASP:OD1	1:D:360:HIS:N	2.42	0.47
1:F:428:ASP:O	1:F:431:LYS:HB3	2.14	0.47
1:F:552:LEU:C	1:F:554:ASP:H	2.22	0.47
1:A:251:GLY:O	1:A:405:LYS:HG3	2.13	0.47
1:A:326:THR:HG22	1:A:328:ALA:N	2.29	0.47
1:A:534:ASN:ND2	1:A:572:ILE:HD13	2.29	0.47
1:B:154:GLY:HA2	1:B:157:GLN:HG3	1.96	0.47
1:C:471:LYS:C	1:C:473:ASN:H	2.23	0.47
1:D:243:PRO:HD3	1:D:416:ALA:HB1	1.95	0.47
1:D:384:ILE:O	1:D:388:ILE:HG13	2.14	0.47
1:E:69:TYR:O	1:F:37:GLN:NE2	2.45	0.47
1:E:180:LEU:CB	1:E:186:LEU:HD13	2.44	0.47
1:E:260:ILE:HB	1:E:295:ILE:HG22	1.96	0.47
1:E:326:THR:HG22	1:E:328:ALA:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:560:SER:C	1:A:562:PRO:HD3	2.40	0.47
1:B:80:VAL:HG13	1:B:590:PRO:O	2.15	0.47
1:B:187:PRO:HD3	1:B:221:MET:HB2	1.96	0.47
1:B:503:GLU:O	1:B:504:GLY:C	2.57	0.47
1:C:156:PHE:CE1	1:C:229:LEU:HD11	2.47	0.47
1:C:307:MET:HE2	1:C:528:MET:C	2.39	0.47
1:C:326:THR:HG22	1:C:328:ALA:N	2.29	0.47
1:D:461:ALA:O	1:D:465:LEU:HB2	2.14	0.47
1:E:498:THR:HA	1:E:506:LYS:HE2	1.97	0.47
1:A:257:ALA:HB2	1:A:291:GLU:HB2	1.96	0.47
1:B:61:ASP:O	1:B:68:LYS:NZ	2.48	0.47
1:B:102:ILE:HG12	1:B:268:MET:HE2	1.96	0.47
1:B:180:LEU:CD1	1:B:221:MET:HE2	2.44	0.47
1:B:326:THR:HG22	1:B:328:ALA:N	2.29	0.47
1:C:358:ASP:OD1	1:C:360:HIS:N	2.42	0.47
1:D:532:VAL:C	1:D:534:ASN:H	2.21	0.47
1:E:129:ALA:HB1	1:E:134:VAL:HG13	1.96	0.47
1:E:132:LEU:HD13	1:E:151:ILE:HG21	1.95	0.47
1:E:262:VAL:HG23	1:E:262:VAL:O	2.14	0.47
1:E:354:ILE:O	1:E:366:ALA:HB1	2.13	0.47
1:E:544:LEU:C	1:E:544:LEU:CD2	2.88	0.47
1:A:306:MET:HG2	1:A:410:VAL:HG21	1.97	0.47
1:B:358:ASP:OD1	1:B:360:HIS:N	2.40	0.47
1:B:457:GLN:O	1:B:458:GLN:C	2.57	0.47
1:B:551:ASP:OD2	1:B:552:LEU:HD12	2.14	0.47
1:C:257:ALA:HB2	1:C:291:GLU:HB2	1.96	0.47
1:C:282:ASP:C	1:C:284:ALA:N	2.72	0.47
1:D:29:THR:HG22	1:D:32:HIS:H	1.78	0.47
1:D:46:ALA:HB2	1:E:63:PHE:CG	2.49	0.47
1:D:62:PRO:HG3	1:E:63:PHE:CE2	2.49	0.47
1:E:125:LEU:HD22	1:E:145:VAL:HG12	1.96	0.47
1:E:250:LEU:HD23	1:E:250:LEU:N	2.29	0.47
1:F:498:THR:HA	1:F:506:LYS:HE2	1.97	0.47
1:A:61:ASP:O	1:A:68:LYS:NZ	2.47	0.47
1:A:63:PHE:HB2	1:C:46:ALA:HB2	1.96	0.47
1:A:126:TYR:CE2	1:A:136:THR:CB	2.96	0.47
1:A:161:TYR:OH	1:B:360:HIS:HE1	1.97	0.47
1:A:384:ILE:O	1:A:388:ILE:HG13	2.14	0.47
1:A:391:PHE:O	1:A:394:ARG:HB3	2.15	0.47
1:B:62:PRO:HA	1:B:76:ARG:HH22	1.80	0.47
1:B:128:ILE:HA	1:B:131:THR:HB	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:192:ALA:O	1:B:196:GLN:HG3	2.14	0.47
1:B:235:ASP:OD1	1:B:240:THR:HA	2.15	0.47
1:B:552:LEU:C	1:B:554:ASP:H	2.22	0.47
1:B:561:ALA:HB1	1:B:564:CYS:HB3	1.97	0.47
1:C:125:LEU:HD11	1:C:148:LEU:HD12	1.97	0.47
1:C:391:PHE:O	1:C:394:ARG:HB3	2.14	0.47
1:C:461:ALA:O	1:C:465:LEU:HB2	2.14	0.47
1:C:493:THR:HG23	1:C:495:GLU:OE2	2.14	0.47
1:C:498:THR:HA	1:C:506:LYS:HE2	1.96	0.47
1:C:522:LEU:HB3	1:C:526:MET:HE3	1.95	0.47
1:E:251:GLY:HA3	1:E:404:PHE:O	2.15	0.47
1:E:261:ALA:HA	1:E:296:ILE:O	2.14	0.47
1:E:326:THR:HG23	1:E:401:ILE:HG12	1.96	0.47
1:E:375:LYS:NZ	1:E:375:LYS:HB2	2.29	0.47
1:F:100:ARG:HH12	1:F:191:ASP:CG	2.23	0.47
1:F:187:PRO:HD3	1:F:221:MET:HB2	1.96	0.47
1:F:262:VAL:HG23	1:F:262:VAL:O	2.13	0.47
1:F:461:ALA:O	1:F:465:LEU:HB2	2.15	0.47
1:A:260:ILE:HB	1:A:295:ILE:HG22	1.96	0.47
1:B:257:ALA:HB2	1:B:291:GLU:HB2	1.96	0.47
1:D:251:GLY:O	1:D:405:LYS:HB2	2.15	0.47
1:D:298:ILE:HD12	1:D:332:MET:HE2	1.97	0.47
1:E:29:THR:HG22	1:E:32:HIS:H	1.79	0.47
1:F:261:ALA:HA	1:F:296:ILE:O	2.15	0.47
1:F:375:LYS:NZ	1:F:375:LYS:HB2	2.29	0.47
1:F:532:VAL:C	1:F:534:ASN:H	2.22	0.47
1:A:283:GLU:O	1:A:286:ALA:HB3	2.14	0.47
1:C:105:ALA:HA	1:C:114:LEU:CD1	2.45	0.47
1:C:522:LEU:HD13	1:C:526:MET:HE3	1.95	0.47
1:C:536:ARG:HG3	1:C:536:ARG:NH1	2.28	0.47
1:D:197:THR:OG1	1:D:219:VAL:HG21	2.15	0.47
1:E:61:ASP:O	1:E:68:LYS:NZ	2.48	0.47
1:E:552:LEU:C	1:E:554:ASP:H	2.22	0.47
1:F:105:ALA:O	1:F:109:ILE:HG13	2.14	0.47
1:A:29:THR:HG22	1:A:32:HIS:H	1.79	0.47
1:B:501:ALA:O	1:B:506:LYS:HE3	2.15	0.47
1:C:260:ILE:HB	1:C:295:ILE:HG22	1.97	0.47
1:D:522:LEU:HB3	1:D:526:MET:HE3	1.97	0.47
1:D:536:ARG:HG3	1:D:536:ARG:NH1	2.30	0.47
1:E:422:ALA:C	1:E:424:VAL:H	2.23	0.47
1:E:428:ASP:O	1:E:431:LYS:HB3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:255:ARG:HG2	1:F:399:VAL:HG11	1.97	0.47
1:A:276:VAL:HG21	1:A:380:ALA:HB3	1.97	0.46
1:A:425:ASN:HD22	1:A:427:ASP:H	1.63	0.46
1:A:428:ASP:O	1:A:431:LYS:HB3	2.14	0.46
1:A:498:THR:HA	1:A:506:LYS:HE2	1.97	0.46
1:B:306:MET:HG2	1:B:410:VAL:HG21	1.97	0.46
1:B:391:PHE:O	1:B:394:ARG:HB3	2.14	0.46
1:D:327:GLY:O	1:D:394:ARG:HD3	2.15	0.46
1:D:561:ALA:HB1	1:D:564:CYS:HB3	1.95	0.46
1:E:551:ASP:OD2	1:E:552:LEU:HD12	2.15	0.46
1:F:76:ARG:O	1:F:80:VAL:HG23	2.15	0.46
1:F:298:ILE:CD1	1:F:332:MET:HE2	2.45	0.46
1:A:261:ALA:HA	1:A:296:ILE:O	2.16	0.46
1:C:105:ALA:O	1:C:109:ILE:HG13	2.14	0.46
1:C:122:GLU:OE1	1:C:141:LEU:CD2	2.64	0.46
1:D:522:LEU:HD13	1:D:526:MET:HE3	1.94	0.46
1:E:116:ASP:OD2	1:E:116:ASP:N	2.48	0.46
1:E:471:LYS:C	1:E:473:ASN:H	2.23	0.46
1:E:503:GLU:O	1:E:504:GLY:C	2.58	0.46
1:A:298:ILE:HD12	1:A:332:MET:HE2	1.98	0.46
1:A:345:ARG:NH2	1:B:73:GLY:O	2.48	0.46
1:B:158:ASN:HD21	1:B:163:LYS:HB3	1.80	0.46
1:B:262:VAL:HG23	1:B:262:VAL:O	2.15	0.46
1:B:522:LEU:HB3	1:B:526:MET:HE3	1.96	0.46
1:C:189:ASN:HB3	1:C:192:ALA:HB3	1.97	0.46
1:D:95:HIS:O	1:D:98:HIS:HB3	2.16	0.46
1:D:189:ASN:HB3	1:D:192:ALA:HB3	1.97	0.46
1:D:552:LEU:C	1:D:554:ASP:H	2.24	0.46
1:E:31:TRP:HZ3	1:E:322:LEU:HD21	1.79	0.46
1:E:462:TYR:CE2	1:E:562:PRO:HD2	2.43	0.46
1:F:61:ASP:O	1:F:68:LYS:NZ	2.48	0.46
1:F:147:ASP:O	1:F:151:ILE:HG13	2.16	0.46
1:F:156:PHE:CE1	1:F:229:LEU:HD11	2.47	0.46
1:F:307:MET:HE2	1:F:528:MET:C	2.40	0.46
1:F:384:ILE:O	1:F:388:ILE:HG13	2.15	0.46
1:B:536:ARG:HG3	1:B:536:ARG:NH1	2.30	0.46
1:C:425:ASN:HD22	1:C:427:ASP:H	1.64	0.46
1:D:63:PHE:CG	1:E:46:ALA:HB2	2.50	0.46
1:D:317:TYR:O	1:D:320:GLN:HG2	2.15	0.46
1:D:428:ASP:O	1:D:431:LYS:HB3	2.15	0.46
1:F:110:SER:HB2	1:F:142:LEU:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:250:LEU:C	1:F:252:VAL:H	2.23	0.46
1:F:306:MET:HG2	1:F:410:VAL:HG21	1.96	0.46
1:F:391:PHE:O	1:F:394:ARG:HB3	2.16	0.46
1:F:422:ALA:C	1:F:424:VAL:H	2.24	0.46
1:F:596:ILE:HD12	1:F:596:ILE:N	2.30	0.46
1:C:48:LEU:HD22	1:C:60:ILE:HB	1.97	0.46
1:D:85:VAL:CG1	1:D:197:THR:HG23	2.45	0.46
1:D:180:LEU:CB	1:D:186:LEU:HD13	2.42	0.46
1:D:180:LEU:HD12	1:D:221:MET:HE2	1.98	0.46
1:D:493:THR:HG23	1:D:495:GLU:OE2	2.15	0.46
1:E:85:VAL:HG12	1:E:197:THR:CG2	2.45	0.46
1:F:560:SER:C	1:F:562:PRO:HD3	2.40	0.46
1:A:502:GLY:O	1:A:503:GLU:C	2.59	0.46
1:B:276:VAL:HG21	1:B:380:ALA:HB3	1.98	0.46
1:C:80:VAL:HG13	1:C:590:PRO:O	2.16	0.46
1:C:503:GLU:O	1:C:504:GLY:C	2.58	0.46
1:C:552:LEU:C	1:C:554:ASP:H	2.24	0.46
1:D:126:TYR:O	1:D:129:ALA:HB3	2.15	0.46
1:E:358:ASP:OD1	1:E:360:HIS:N	2.45	0.46
1:F:269:LEU:HD13	1:F:371:PHE:CE1	2.51	0.46
1:B:130:LYS:C	1:B:132:LEU:N	2.74	0.46
1:B:193:SER:HB3	1:B:219:VAL:HG13	1.98	0.46
1:B:261:ALA:HA	1:B:296:ILE:O	2.15	0.46
1:B:422:ALA:C	1:B:424:VAL:H	2.23	0.46
1:B:560:SER:C	1:B:562:PRO:HD3	2.41	0.46
1:C:62:PRO:HA	1:C:76:ARG:HH22	1.80	0.46
1:E:180:LEU:HD12	1:E:221:MET:HE2	1.97	0.46
1:E:522:LEU:HB3	1:E:526:MET:HE3	1.98	0.46
1:F:459:ASP:HB3	1:F:485:ALA:HB1	1.97	0.46
1:A:422:ALA:C	1:A:424:VAL:H	2.24	0.46
1:B:109:ILE:CD1	1:B:237:LEU:HD21	2.46	0.46
1:C:31:TRP:HZ3	1:C:322:LEU:HD21	1.80	0.46
1:C:158:ASN:HD21	1:C:163:LYS:HB3	1.80	0.46
1:C:362:LYS:HD2	1:D:211:ASN:HD22	1.81	0.46
1:F:522:LEU:HB3	1:F:526:MET:HE3	1.97	0.46
1:A:62:PRO:HA	1:A:76:ARG:HH22	1.80	0.46
1:A:514:THR:C	1:A:516:ALA:H	2.23	0.46
1:C:422:ALA:C	1:C:424:VAL:H	2.23	0.46
1:D:503:GLU:O	1:D:504:GLY:C	2.58	0.46
1:F:99:GLY:O	1:F:100:ARG:C	2.58	0.46
1:F:185:LEU:HD21	1:F:214:LEU:HD22	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:450:GLY:O	4:A:803:XCC:S1	2.74	0.46
1:A:536:ARG:HG3	1:A:536:ARG:NH1	2.29	0.46
1:A:544:LEU:C	1:A:544:LEU:CD2	2.89	0.46
1:B:450:GLY:O	4:B:803:XCC:S1	2.74	0.46
1:B:544:LEU:C	1:B:544:LEU:CD2	2.89	0.46
1:C:596:ILE:HD12	1:C:596:ILE:N	2.30	0.46
1:D:544:LEU:C	1:D:544:LEU:CD2	2.89	0.46
1:D:552:LEU:HD12	1:D:552:LEU:H	1.81	0.46
1:D:560:SER:C	1:D:562:PRO:HD3	2.41	0.46
1:F:29:THR:HG21	1:F:31:TRP:HE3	1.81	0.46
1:C:261:ALA:HA	1:C:296:ILE:O	2.15	0.45
1:D:132:LEU:HD12	1:D:151:ILE:HD12	1.99	0.45
1:D:229:LEU:C	1:D:229:LEU:HD23	2.41	0.45
1:D:250:LEU:CD1	1:D:323:PRO:HG3	2.46	0.45
1:D:31:TRP:HZ3	1:D:322:LEU:HD21	1.81	0.45
1:D:261:ALA:HA	1:D:296:ILE:O	2.15	0.45
1:E:124:LYS:NZ	1:E:415:GLU:OE2	2.49	0.45
1:E:307:MET:HG3	1:E:529:GLY:HA2	1.99	0.45
1:E:561:ALA:HB1	1:E:564:CYS:HB3	1.98	0.45
1:C:141:LEU:C	1:C:143:ALA:N	2.73	0.45
1:C:544:LEU:C	1:C:544:LEU:CD2	2.89	0.45
1:D:176:ARG:NH1	1:D:551:ASP:OD1	2.50	0.45
1:A:85:VAL:CG1	1:A:197:THR:HG23	2.46	0.45
1:A:552:LEU:C	1:A:554:ASP:H	2.23	0.45
1:B:31:TRP:HZ3	1:B:322:LEU:HD21	1.81	0.45
1:B:127:ALA:HA	1:B:130:LYS:HG2	1.98	0.45
1:C:142:LEU:HD23	1:C:142:LEU:N	2.32	0.45
1:C:204:GLY:O	1:D:337:GLN:HA	2.16	0.45
1:C:298:ILE:HD12	1:C:332:MET:HE2	1.97	0.45
1:E:48:LEU:HD22	1:E:60:ILE:HB	1.99	0.45
1:E:224:LEU:O	1:E:228:MET:HG3	2.17	0.45
1:E:306:MET:HG2	1:E:410:VAL:HG21	1.97	0.45
1:A:80:VAL:HG13	1:A:590:PRO:O	2.17	0.45
1:A:280:LEU:HD23	1:A:388:ILE:HD11	1.97	0.45
1:A:561:ALA:HB1	1:A:564:CYS:HB3	1.98	0.45
1:B:113:GLU:O	1:B:114:LEU:HB2	2.16	0.45
1:B:116:ASP:HB2	1:B:117:TYR:CD1	2.52	0.45
1:B:129:ALA:HA	1:B:134:VAL:HG21	1.99	0.45
1:C:424:VAL:HG13	1:C:432:PRO:HG3	1.98	0.45
1:C:425:ASN:C	1:C:425:ASN:ND2	2.73	0.45
1:D:48:LEU:HD22	1:D:60:ILE:HB	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:254:LYS:HB2	1:E:257:ALA:HB3	1.97	0.45
1:A:180:LEU:CB	1:A:186:LEU:HD13	2.41	0.45
1:B:124:LYS:O	1:B:127:ALA:HB3	2.16	0.45
1:C:124:LYS:HE2	1:C:235:ASP:CB	2.46	0.45
1:E:110:SER:HB3	1:E:145:VAL:HG22	1.97	0.45
1:E:317:TYR:O	1:E:320:GLN:HG2	2.16	0.45
1:F:254:LYS:HB2	1:F:257:ALA:HB3	1.97	0.45
1:F:425:ASN:C	1:F:425:ASN:ND2	2.74	0.45
1:A:31:TRP:HZ3	1:A:322:LEU:HD21	1.81	0.45
1:A:109:ILE:C	1:A:111:GLN:H	2.24	0.45
1:A:260:ILE:O	1:A:295:ILE:HA	2.17	0.45
1:A:493:THR:HG23	1:A:495:GLU:OE2	2.16	0.45
1:A:514:THR:C	1:A:516:ALA:N	2.71	0.45
1:B:38:GLN:HA	1:B:38:GLN:OE1	2.17	0.45
1:C:61:ASP:O	1:C:68:LYS:NZ	2.49	0.45
1:C:337:GLN:HB3	1:C:337:GLN:HE21	1.62	0.45
1:C:384:ILE:O	1:C:388:ILE:HG13	2.17	0.45
1:D:38:GLN:OE1	1:D:40:GLN:HG3	2.17	0.45
1:E:255:ARG:CZ	1:E:399:VAL:HG12	2.47	0.45
1:E:384:ILE:O	1:E:388:ILE:HG13	2.17	0.45
1:F:424:VAL:O	1:F:425:ASN:HB2	2.16	0.45
1:A:167:TRP:CZ3	1:A:232:GLU:HG3	2.52	0.45
1:B:109:ILE:C	1:B:111:GLN:H	2.24	0.45
1:B:125:LEU:HD23	1:B:125:LEU:C	2.41	0.45
1:C:262:VAL:HG23	1:C:262:VAL:O	2.17	0.45
1:C:447:LEU:HD13	1:C:449:VAL:CG1	2.47	0.45
1:D:263:ASN:HB2	1:D:298:ILE:HB	1.98	0.45
1:D:457:GLN:O	1:D:458:GLN:C	2.59	0.45
1:E:37:GLN:NE2	1:F:69:TYR:O	2.44	0.45
1:F:503:GLU:O	1:F:504:GLY:C	2.59	0.45
1:A:38:GLN:OE1	1:A:38:GLN:HA	2.17	0.45
1:A:95:HIS:O	1:A:98:HIS:HB3	2.16	0.45
1:A:503:GLU:O	1:A:504:GLY:C	2.59	0.45
1:B:156:PHE:CE1	1:B:229:LEU:HD11	2.46	0.45
1:B:298:ILE:HD12	1:B:332:MET:HE2	1.98	0.45
1:C:102:ILE:HG12	1:C:268:MET:HE2	1.99	0.45
1:C:450:GLY:O	4:C:803:XCC:S1	2.75	0.45
1:C:459:ASP:HB3	1:C:485:ALA:HB1	1.99	0.45
1:D:235:ASP:OD1	1:D:240:THR:HA	2.16	0.45
1:D:269:LEU:HD13	1:D:371:PHE:CD1	2.52	0.45
1:D:422:ALA:C	1:D:424:VAL:H	2.25	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:596:ILE:HD12	1:D:596:ILE:N	2.32	0.45
1:E:250:LEU:C	1:E:252:VAL:N	2.74	0.45
1:E:335:ASP:CG	1:E:336:VAL:N	2.75	0.45
1:E:499:GLN:HG2	1:E:499:GLN:O	2.17	0.45
1:A:251:GLY:O	1:A:405:LYS:HB2	2.17	0.45
1:B:307:MET:HE2	1:B:529:GLY:N	2.32	0.45
1:C:109:ILE:CD1	1:C:237:LEU:HD21	2.47	0.45
1:C:269:LEU:HD13	1:C:371:PHE:CE1	2.52	0.45
1:C:335:ASP:CG	1:C:336:VAL:N	2.74	0.45
1:D:425:ASN:HD22	1:D:427:ASP:H	1.65	0.45
1:E:125:LEU:CD2	1:E:144:ILE:HG22	2.45	0.45
1:E:319:SER:O	1:E:323:PRO:HD3	2.17	0.45
1:A:340:MET:HE2	1:B:72:CYS:HA	1.98	0.44
1:B:309:HIS:ND1	1:B:309:HIS:N	2.65	0.44
1:C:286:ALA:C	1:C:288:GLY:H	2.25	0.44
1:C:319:SER:HA	1:C:322:LEU:CD2	2.46	0.44
1:E:197:THR:OG1	1:E:219:VAL:HG21	2.18	0.44
1:E:269:LEU:HD13	1:E:371:PHE:CD1	2.52	0.44
1:E:326:THR:CG2	1:E:328:ALA:HB3	2.47	0.44
1:E:424:VAL:HG13	1:E:432:PRO:HG3	1.98	0.44
1:E:522:LEU:HD13	1:E:526:MET:HE3	1.97	0.44
1:C:149:ALA:O	1:C:153:LEU:HB2	2.16	0.44
1:E:193:SER:HB3	1:E:219:VAL:HG13	1.99	0.44
1:E:276:VAL:HG21	1:E:380:ALA:HB3	1.99	0.44
1:F:109:ILE:C	1:F:111:GLN:H	2.26	0.44
1:F:194:VAL:O	1:F:197:THR:HB	2.18	0.44
1:F:319:SER:HA	1:F:322:LEU:CD2	2.46	0.44
1:A:87:MET:O	1:A:567:GLU:HB3	2.18	0.44
1:A:211:ASN:ND2	1:B:362:LYS:CD	2.73	0.44
1:A:307:MET:HE2	1:A:529:GLY:N	2.32	0.44
1:B:250:LEU:HD21	1:B:323:PRO:CG	2.40	0.44
1:D:119:ILE:HG22	1:D:122:GLU:HG2	2.00	0.44
1:D:284:ALA:C	1:D:289:ALA:HB3	2.43	0.44
1:D:337:GLN:HB3	1:D:337:GLN:HE21	1.61	0.44
1:D:502:GLY:O	1:D:503:GLU:C	2.60	0.44
1:F:335:ASP:CG	1:F:336:VAL:N	2.75	0.44
1:F:424:VAL:HG13	1:F:432:PRO:HG3	1.99	0.44
1:A:202:HIS:HB3	1:A:205:CYS:SG	2.57	0.44
1:B:130:LYS:HD2	1:B:131:THR:N	2.33	0.44
1:B:278:ALA:O	1:B:281:ARG:HG2	2.17	0.44
1:B:493:THR:HG23	1:B:495:GLU:OE2	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:425:ASN:HD22	1:E:427:ASP:H	1.65	0.44
1:F:31:TRP:HZ3	1:F:322:LEU:HD21	1.82	0.44
1:F:63:PHE:C	1:F:65:GLU:H	2.18	0.44
1:F:85:VAL:HG12	1:F:197:THR:CG2	2.48	0.44
1:F:117:TYR:N	1:F:117:TYR:CD1	2.85	0.44
1:F:192:ALA:O	1:F:196:GLN:HG3	2.17	0.44
1:A:73:GLY:O	1:B:345:ARG:NH2	2.51	0.44
1:A:85:VAL:HG12	1:A:197:THR:CG2	2.47	0.44
1:A:319:SER:HA	1:A:322:LEU:CD2	2.45	0.44
1:B:29:THR:HG21	1:B:31:TRP:HE3	1.82	0.44
1:B:336:VAL:HG12	1:B:337:GLN:CD	2.42	0.44
1:C:185:LEU:HD21	1:C:214:LEU:HD22	1.99	0.44
1:C:193:SER:HB3	1:C:219:VAL:HG13	1.99	0.44
1:C:263:ASN:HB2	1:C:298:ILE:HB	1.99	0.44
1:D:326:THR:HG23	1:D:401:ILE:HG12	1.98	0.44
1:E:109:ILE:CD1	1:E:237:LEU:HD21	2.48	0.44
1:E:202:HIS:HB3	1:E:205:CYS:SG	2.58	0.44
1:F:189:ASN:OD1	1:F:189:ASN:C	2.61	0.44
1:F:229:LEU:HD23	1:F:229:LEU:C	2.41	0.44
1:F:260:ILE:O	1:F:295:ILE:HA	2.18	0.44
1:F:552:LEU:HD12	1:F:552:LEU:H	1.82	0.44
1:A:96:SER:CB	1:A:190:ILE:HG21	2.47	0.44
1:B:185:LEU:HD21	1:B:214:LEU:HD22	2.00	0.44
1:C:274:CYS:SG	1:C:295:ILE:HD11	2.58	0.44
1:D:158:ASN:ND2	1:D:163:LYS:HE3	2.31	0.44
1:F:38:GLN:OE1	1:F:40:GLN:HG3	2.18	0.44
1:F:193:SER:HB3	1:F:219:VAL:HG13	1.98	0.44
1:F:276:VAL:HG21	1:F:380:ALA:HB3	2.00	0.44
1:A:33:ARG:NH1	1:B:71:VAL:O	2.50	0.44
1:A:269:LEU:HD13	1:A:371:PHE:CD1	2.53	0.44
1:A:326:THR:CG2	1:A:328:ALA:HB3	2.48	0.44
1:B:85:VAL:CG1	1:B:197:THR:HG23	2.48	0.44
1:D:99:GLY:O	1:D:100:ARG:C	2.60	0.44
1:E:298:ILE:CD1	1:E:332:MET:HE2	2.48	0.44
1:E:327:GLY:O	1:E:394:ARG:HD3	2.17	0.44
1:A:109:ILE:CD1	1:A:237:LEU:HD21	2.48	0.44
1:A:125:LEU:HD21	1:A:141:LEU:HD11	1.99	0.44
1:A:235:ASP:OD1	1:A:240:THR:HA	2.17	0.44
1:A:249:ASN:O	1:A:252:VAL:HG22	2.18	0.44
1:A:421:LEU:HB3	1:A:429:PRO:O	2.17	0.44
1:B:327:GLY:O	1:B:394:ARG:HD3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:502:GLY:O	1:B:503:GLU:C	2.60	0.44
1:C:316:ASN:HB2	1:C:317:TYR:H	1.62	0.44
1:C:499:GLN:HG2	1:C:499:GLN:O	2.18	0.44
1:D:276:VAL:HG21	1:D:380:ALA:HB3	2.00	0.44
1:E:109:ILE:C	1:E:111:GLN:H	2.26	0.44
1:F:85:VAL:CG1	1:F:197:THR:HG23	2.48	0.44
1:F:425:ASN:HD22	1:F:427:ASP:H	1.65	0.44
1:A:187:PRO:HD3	1:A:221:MET:HB2	1.99	0.44
1:C:29:THR:HG21	1:C:31:TRP:HE3	1.82	0.44
1:C:250:LEU:C	1:C:252:VAL:H	2.25	0.44
1:C:561:ALA:HB1	1:C:564:CYS:HB3	2.00	0.44
1:D:132:LEU:CD1	1:D:151:ILE:CD1	2.95	0.44
1:D:391:PHE:O	1:D:394:ARG:HB3	2.17	0.44
1:E:62:PRO:HA	1:E:76:ARG:HH22	1.81	0.44
1:F:152:THR:HG23	1:F:229:LEU:HG	1.99	0.44
1:F:336:VAL:HG12	1:F:337:GLN:CD	2.43	0.44
1:A:62:PRO:HA	1:A:76:ARG:NH2	2.33	0.43
1:A:522:LEU:HD13	1:A:526:MET:HE3	1.97	0.43
1:B:102:ILE:HA	1:B:268:MET:HE2	2.00	0.43
1:B:144:ILE:HG12	1:B:144:ILE:H	1.42	0.43
1:B:269:LEU:HD13	1:B:371:PHE:CD1	2.53	0.43
1:B:274:CYS:SG	1:B:295:ILE:HD11	2.58	0.43
1:C:38:GLN:OE1	1:C:38:GLN:HA	2.18	0.43
1:C:85:VAL:HG12	1:C:197:THR:CG2	2.48	0.43
1:C:276:VAL:HG21	1:C:380:ALA:HB3	2.00	0.43
1:E:391:PHE:O	1:E:394:ARG:HB3	2.18	0.43
1:F:95:HIS:O	1:F:98:HIS:HB3	2.17	0.43
1:F:263:ASN:HB2	1:F:298:ILE:HB	1.99	0.43
1:F:446:VAL:HA	1:F:558:VAL:O	2.18	0.43
1:A:176:ARG:NH2	1:A:609:VAL:O	2.51	0.43
1:A:189:ASN:OD1	1:A:189:ASN:C	2.62	0.43
1:B:167:TRP:CZ3	1:B:232:GLU:HG3	2.53	0.43
1:C:433:LEU:HD11	1:C:544:LEU:HD12	2.00	0.43
1:E:105:ALA:O	1:E:109:ILE:HG13	2.18	0.43
1:E:263:ASN:HB2	1:E:298:ILE:HB	2.00	0.43
1:F:29:THR:CG2	1:F:31:TRP:HE3	2.32	0.43
1:A:158:ASN:HD21	1:A:163:LYS:HB3	1.83	0.43
1:A:193:SER:HB3	1:A:219:VAL:HG13	1.99	0.43
1:A:251:GLY:O	1:A:405:LYS:CG	2.67	0.43
1:A:336:VAL:HG12	1:A:337:GLN:CD	2.44	0.43
1:A:360:HIS:HE1	1:B:161:TYR:OH	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:202:HIS:HB3	1:B:205:CYS:SG	2.58	0.43
1:B:459:ASP:HB3	1:B:485:ALA:HB1	1.99	0.43
1:C:33:ARG:NH1	1:D:71:VAL:O	2.52	0.43
1:D:274:CYS:SG	1:D:295:ILE:HD11	2.58	0.43
1:F:62:PRO:HA	1:F:76:ARG:NH2	2.32	0.43
1:F:80:VAL:HG13	1:F:590:PRO:O	2.18	0.43
1:F:561:ALA:HB1	1:F:564:CYS:HB3	2.00	0.43
1:A:102:ILE:HA	1:A:268:MET:HE2	2.00	0.43
1:A:152:THR:HG23	1:A:229:LEU:HG	1.99	0.43
1:A:309:HIS:N	1:A:309:HIS:ND1	2.66	0.43
1:B:587:SER:O	1:B:588:VAL:HB	2.18	0.43
1:C:255:ARG:NH1	1:C:255:ARG:HG2	2.32	0.43
1:C:587:SER:O	1:C:588:VAL:HB	2.18	0.43
1:D:105:ALA:O	1:D:109:ILE:HG13	2.17	0.43
1:E:76:ARG:O	1:E:80:VAL:HG23	2.19	0.43
1:E:95:HIS:O	1:E:98:HIS:HB3	2.18	0.43
1:E:152:THR:HG23	1:E:229:LEU:HG	1.99	0.43
1:F:64:GLY:O	1:F:65:GLU:C	2.61	0.43
1:F:144:ILE:O	1:F:145:VAL:C	2.60	0.43
1:A:29:THR:HG21	1:A:31:TRP:HE3	1.83	0.43
1:A:262:VAL:HG23	1:A:262:VAL:O	2.18	0.43
1:A:430:LEU:O	1:A:434:VAL:HG23	2.18	0.43
1:A:459:ASP:HB3	1:A:485:ALA:HB1	2.00	0.43
1:B:110:SER:CA	1:B:145:VAL:HG23	2.48	0.43
1:B:447:LEU:HD13	1:B:449:VAL:CG1	2.49	0.43
1:C:63:PHE:C	1:C:65:GLU:H	2.16	0.43
1:E:87:MET:O	1:E:567:GLU:HB3	2.18	0.43
1:E:176:ARG:NH1	1:E:551:ASP:OD1	2.51	0.43
1:E:187:PRO:HD3	1:E:221:MET:HB2	1.99	0.43
1:F:548:LEU:HB2	1:F:550:VAL:HG12	2.01	0.43
1:A:29:THR:CG2	1:A:31:TRP:HE3	2.32	0.43
1:A:322:LEU:HD22	1:A:322:LEU:N	2.32	0.43
1:A:358:ASP:OD1	1:A:360:HIS:N	2.44	0.43
1:A:424:VAL:O	1:A:425:ASN:HB2	2.17	0.43
1:C:326:THR:CG2	1:C:328:ALA:HB3	2.49	0.43
1:D:76:ARG:O	1:D:80:VAL:HG23	2.19	0.43
1:D:109:ILE:CD1	1:D:237:LEU:HD21	2.48	0.43
1:D:121:ASP:OD2	1:D:240:THR:CG2	2.66	0.43
1:E:316:ASN:HB2	1:E:317:TYR:H	1.60	0.43
1:F:217:LEU:O	1:F:220:ALA:HB3	2.18	0.43
1:F:286:ALA:C	1:F:288:GLY:H	2.26	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:263:ASN:HB2	1:A:298:ILE:HB	2.01	0.43
1:A:327:GLY:O	1:A:394:ARG:HD3	2.18	0.43
1:B:425:ASN:HD22	1:B:427:ASP:H	1.66	0.43
1:C:570:LEU:HD12	1:C:570:LEU:HA	1.91	0.43
1:D:336:VAL:HG12	1:D:337:GLN:CD	2.44	0.43
1:E:493:THR:HG23	1:E:495:GLU:OE2	2.17	0.43
1:F:544:LEU:C	1:F:544:LEU:CD2	2.92	0.43
1:A:71:VAL:HG13	1:B:34:TYR:HB2	2.00	0.43
1:A:105:ALA:O	1:A:109:ILE:HG13	2.19	0.43
1:A:286:ALA:C	1:A:288:GLY:H	2.27	0.43
1:A:307:MET:HG3	1:A:529:GLY:HA2	2.00	0.43
1:A:345:ARG:O	1:A:346:ILE:C	2.62	0.43
1:A:454:THR:C	1:A:456:VAL:H	2.27	0.43
1:C:64:GLY:O	1:C:65:GLU:C	2.61	0.43
1:C:109:ILE:C	1:C:111:GLN:H	2.26	0.43
1:C:343:LEU:O	1:C:344:PRO:C	2.62	0.43
1:C:446:VAL:HA	1:C:558:VAL:O	2.19	0.43
1:D:29:THR:CG2	1:D:31:TRP:HE3	2.31	0.43
1:D:96:SER:CB	1:D:190:ILE:HG21	2.49	0.43
1:E:286:ALA:C	1:E:288:GLY:H	2.27	0.43
1:E:424:VAL:O	1:E:425:ASN:HB2	2.18	0.43
1:F:109:ILE:CD1	1:F:237:LEU:HD21	2.49	0.43
1:F:337:GLN:HB3	1:F:337:GLN:HE21	1.61	0.43
1:F:358:ASP:OD1	1:F:360:HIS:N	2.43	0.43
1:A:29:THR:HG22	1:A:32:HIS:CD2	2.54	0.43
1:A:38:GLN:OE1	1:A:40:GLN:HG3	2.19	0.43
1:A:424:VAL:HG13	1:A:432:PRO:HG3	2.00	0.43
1:B:152:THR:HG23	1:B:229:LEU:HG	2.00	0.43
1:C:29:THR:CG2	1:C:31:TRP:HE3	2.31	0.43
1:D:80:VAL:HG13	1:D:590:PRO:O	2.19	0.43
1:D:278:ALA:O	1:D:281:ARG:HD2	2.19	0.43
1:E:71:VAL:O	1:F:33:ARG:NH1	2.52	0.43
1:E:158:ASN:HD21	1:E:163:LYS:HB3	1.83	0.43
1:E:189:ASN:OD1	1:E:189:ASN:C	2.62	0.43
1:E:202:HIS:CE1	1:F:566:SER:HB2	2.54	0.43
1:A:499:GLN:O	1:A:499:GLN:HG2	2.19	0.43
1:B:85:VAL:HG12	1:B:197:THR:CG2	2.48	0.43
1:B:105:ALA:O	1:B:109:ILE:HG13	2.18	0.43
1:B:109:ILE:HD12	1:B:237:LEU:HD21	2.01	0.43
1:B:499:GLN:O	1:B:499:GLN:HG2	2.19	0.43
1:C:307:MET:HG3	1:C:529:GLY:HA2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:421:LEU:HB3	1:C:429:PRO:O	2.18	0.43
1:D:187:PRO:HD3	1:D:221:MET:HB2	1.99	0.43
1:D:548:LEU:HB2	1:D:550:VAL:HG12	2.01	0.43
1:E:38:GLN:OE1	1:E:40:GLN:HG3	2.19	0.43
1:E:147:ASP:O	1:E:151:ILE:HG13	2.19	0.43
1:E:402:PRO:HB3	1:E:404:PHE:CD2	2.54	0.43
1:F:117:TYR:CE2	1:F:268:MET:HG2	2.54	0.43
1:F:197:THR:OG1	1:F:219:VAL:HG21	2.19	0.43
1:F:340:MET:HA	1:F:341:PRO:HD3	1.86	0.43
1:A:119:ILE:HG22	1:A:125:LEU:HD22	1.99	0.42
1:A:125:LEU:HD21	1:A:141:LEU:CD1	2.49	0.42
1:A:185:LEU:HD21	1:A:214:LEU:HD22	2.01	0.42
1:B:62:PRO:HA	1:B:76:ARG:NH2	2.34	0.42
1:B:132:LEU:CD2	1:B:151:ILE:HD13	2.29	0.42
1:D:62:PRO:HA	1:D:76:ARG:HH22	1.83	0.42
1:D:322:LEU:HD22	1:D:322:LEU:N	2.33	0.42
1:D:555:LEU:C	1:D:557:LEU:H	2.27	0.42
1:E:224:LEU:HD22	1:E:228:MET:HG3	2.00	0.42
1:F:38:GLN:OE1	1:F:38:GLN:HA	2.18	0.42
1:F:421:LEU:HB3	1:F:429:PRO:O	2.19	0.42
1:A:117:TYR:HE2	1:A:272:ILE:CG1	2.32	0.42
1:A:346:ILE:H	1:A:346:ILE:HD12	1.84	0.42
1:B:158:ASN:ND2	1:B:163:LYS:HE3	2.34	0.42
1:B:276:VAL:O	1:B:279:ASP:HB2	2.20	0.42
1:C:62:PRO:HA	1:C:76:ARG:NH2	2.35	0.42
1:C:76:ARG:O	1:C:80:VAL:HG23	2.18	0.42
1:D:102:ILE:HG23	1:D:237:LEU:HD12	2.01	0.42
1:E:38:GLN:OE1	1:E:38:GLN:HA	2.18	0.42
1:E:62:PRO:HA	1:E:76:ARG:NH2	2.34	0.42
1:E:319:SER:HA	1:E:322:LEU:CD2	2.46	0.42
1:E:336:VAL:HG12	1:E:337:GLN:CD	2.44	0.42
1:E:340:MET:HA	1:E:341:PRO:HD3	1.87	0.42
1:F:62:PRO:HG2	1:F:63:PHE:H	1.82	0.42
1:A:109:ILE:HD12	1:A:237:LEU:HD21	2.02	0.42
1:A:119:ILE:CG2	1:A:125:LEU:HD22	2.49	0.42
1:A:225:ASP:HA	1:A:228:MET:HE2	2.01	0.42
1:A:425:ASN:C	1:A:425:ASN:ND2	2.74	0.42
1:A:567:GLU:OE2	1:B:86:ARG:NH2	2.53	0.42
1:B:29:THR:CG2	1:B:31:TRP:HE3	2.32	0.42
1:B:128:ILE:C	1:B:130:LYS:H	2.27	0.42
1:B:335:ASP:CG	1:B:336:VAL:N	2.75	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:95:HIS:O	1:C:98:HIS:HB3	2.18	0.42
1:C:176:ARG:NH1	1:C:551:ASP:OD1	2.53	0.42
1:C:327:GLY:O	1:C:394:ARG:HD3	2.20	0.42
1:D:286:ALA:C	1:D:288:GLY:H	2.27	0.42
1:E:149:ALA:O	1:E:153:LEU:HB2	2.20	0.42
1:F:319:SER:O	1:F:323:PRO:HD3	2.20	0.42
1:F:501:ALA:O	1:F:506:LYS:HE3	2.19	0.42
1:F:636:GLY:O	1:F:637:LEU:HD23	2.19	0.42
1:A:159:GLN:HB3	1:B:104:LEU:HD21	2.00	0.42
1:A:296:ILE:HD12	1:A:314:ALA:CB	2.50	0.42
1:B:29:THR:HG22	1:B:32:HIS:CD2	2.54	0.42
1:B:189:ASN:C	1:B:189:ASN:OD1	2.62	0.42
1:B:307:MET:HG3	1:B:529:GLY:HA2	1.99	0.42
1:B:424:VAL:HG13	1:B:432:PRO:HG3	2.01	0.42
1:B:548:LEU:HB2	1:B:550:VAL:HG12	2.00	0.42
1:C:126:TYR:O	1:C:129:ALA:HB3	2.18	0.42
1:C:555:LEU:C	1:C:557:LEU:H	2.28	0.42
1:D:109:ILE:C	1:D:111:GLN:H	2.26	0.42
1:E:424:VAL:CG1	1:E:432:PRO:HG3	2.50	0.42
1:F:117:TYR:HE2	1:F:268:MET:HG2	1.85	0.42
1:F:298:ILE:HD12	1:F:332:MET:HE2	2.02	0.42
1:F:307:MET:HG3	1:F:529:GLY:HA2	2.01	0.42
1:B:38:GLN:OE1	1:B:40:GLN:HG3	2.19	0.42
1:C:424:VAL:O	1:C:425:ASN:HB2	2.19	0.42
1:D:601:VAL:HG23	1:D:602:THR:HG23	2.01	0.42
1:E:102:ILE:HG23	1:E:237:LEU:HD12	2.00	0.42
1:E:309:HIS:ND1	1:E:309:HIS:N	2.68	0.42
1:E:459:ASP:HB3	1:E:485:ALA:HB1	2.00	0.42
1:A:64:GLY:O	1:A:65:GLU:C	2.62	0.42
1:A:501:ALA:O	1:A:506:LYS:HE3	2.19	0.42
1:B:263:ASN:HB2	1:B:298:ILE:HB	2.02	0.42
1:B:322:LEU:HD22	1:B:322:LEU:N	2.33	0.42
1:B:430:LEU:O	1:B:434:VAL:HG23	2.19	0.42
1:C:85:VAL:CG1	1:C:197:THR:HG23	2.49	0.42
1:C:187:PRO:HD3	1:C:221:MET:HB2	2.00	0.42
1:E:109:ILE:HD12	1:E:237:LEU:HD21	2.02	0.42
1:E:430:LEU:O	1:E:434:VAL:HG23	2.20	0.42
1:E:601:VAL:HG23	1:E:602:THR:HG23	2.01	0.42
1:F:149:ALA:O	1:F:153:LEU:HB2	2.19	0.42
1:F:326:THR:CG2	1:F:328:ALA:HB3	2.50	0.42
1:F:450:GLY:O	4:F:803:XCC:S1	2.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:556:PRO:HB2	1:A:630:ILE:HG23	2.01	0.42
1:B:498:THR:HA	1:B:506:LYS:HE2	2.02	0.42
1:C:260:ILE:O	1:C:295:ILE:HA	2.18	0.42
1:D:185:LEU:HD21	1:D:214:LEU:HD22	2.01	0.42
1:D:501:ALA:O	1:D:506:LYS:HB2	2.19	0.42
1:A:119:ILE:O	1:A:121:ASP:N	2.53	0.42
1:A:132:LEU:HD12	1:A:148:LEU:CD2	2.48	0.42
1:A:446:VAL:O	1:A:446:VAL:HG13	2.20	0.42
1:B:96:SER:CB	1:B:190:ILE:HG21	2.49	0.42
1:B:168:LEU:HA	1:B:228:MET:HE1	2.02	0.42
1:B:319:SER:O	1:B:323:PRO:HD3	2.19	0.42
1:C:635:ALA:C	1:C:637:LEU:H	2.28	0.42
1:D:152:THR:HG23	1:D:229:LEU:HG	2.02	0.42
1:D:459:ASP:HB3	1:D:485:ALA:HB1	2.01	0.42
1:E:260:ILE:O	1:E:295:ILE:HA	2.19	0.42
1:E:505:LEU:HD13	1:E:505:LEU:C	2.45	0.42
1:A:180:LEU:HD12	1:A:221:MET:HE2	2.01	0.42
1:B:130:LYS:N	1:B:134:VAL:HG21	2.35	0.42
1:C:38:GLN:OE1	1:C:40:GLN:HG3	2.19	0.42
1:D:189:ASN:C	1:D:189:ASN:OD1	2.62	0.42
1:D:402:PRO:HB3	1:D:404:PHE:CD2	2.54	0.42
1:E:502:GLY:O	1:E:503:GLU:C	2.62	0.42
1:F:309:HIS:ND1	1:F:309:HIS:N	2.67	0.42
1:F:430:LEU:O	1:F:434:VAL:HG23	2.20	0.42
1:F:501:ALA:O	1:F:506:LYS:HB2	2.19	0.42
1:B:326:THR:CG2	1:B:328:ALA:HB3	2.49	0.42
1:B:326:THR:CG2	1:B:401:ILE:HG12	2.50	0.42
1:B:372:ASP:CB	1:B:375:LYS:HZ2	2.25	0.42
1:C:319:SER:O	1:C:323:PRO:HD3	2.19	0.42
1:C:501:ALA:O	1:C:506:LYS:HE3	2.20	0.42
1:D:63:PHE:C	1:D:65:GLU:H	2.17	0.42
1:D:110:SER:HB3	1:D:145:VAL:HG12	2.01	0.42
1:E:144:ILE:O	1:E:146:GLY:N	2.53	0.42
1:E:296:ILE:HD12	1:E:314:ALA:CB	2.49	0.42
1:A:552:LEU:HD12	1:A:552:LEU:H	1.85	0.41
1:A:601:VAL:HG23	1:A:602:THR:HG23	2.02	0.41
1:B:63:PHE:C	1:B:65:GLU:H	2.16	0.41
1:B:64:GLY:O	1:B:65:GLU:C	2.63	0.41
1:B:71:VAL:O	1:B:71:VAL:HG12	2.20	0.41
1:B:102:ILE:HG23	1:B:237:LEU:HD12	2.01	0.41
1:B:140:GLY:O	1:B:143:ALA:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:555:LEU:C	1:B:557:LEU:H	2.27	0.41
1:D:253:MET:HE3	1:D:329:LEU:HD13	2.01	0.41
1:D:499:GLN:O	1:D:499:GLN:HG2	2.20	0.41
1:B:111:GLN:NE2	1:B:113:GLU:OE2	2.53	0.41
1:B:424:VAL:O	1:B:425:ASN:HB2	2.19	0.41
1:B:501:ALA:O	1:B:506:LYS:HB2	2.20	0.41
1:C:119:ILE:N	1:C:119:ILE:HD13	2.35	0.41
1:C:154:GLY:C	1:C:156:PHE:H	2.28	0.41
1:C:158:ASN:ND2	1:C:163:LYS:HE3	2.35	0.41
1:D:62:PRO:HA	1:D:76:ARG:NH2	2.35	0.41
1:D:62:PRO:HG2	1:D:63:PHE:H	1.85	0.41
1:D:132:LEU:HD22	1:D:132:LEU:HA	1.93	0.41
1:F:327:GLY:O	1:F:394:ARG:HD3	2.20	0.41
1:F:587:SER:C	1:F:588:VAL:HG23	2.45	0.41
1:B:319:SER:HA	1:B:322:LEU:CD2	2.46	0.41
1:C:309:HIS:ND1	1:C:309:HIS:N	2.68	0.41
1:D:431:LYS:N	1:D:432:PRO:HD2	2.35	0.41
1:E:552:LEU:C	1:E:554:ASP:N	2.79	0.41
1:F:235:ASP:CG	1:F:240:THR:HA	2.46	0.41
1:F:324:ILE:HD11	1:F:343:LEU:HD12	2.01	0.41
1:A:402:PRO:HB3	1:A:404:PHE:CD2	2.55	0.41
1:B:62:PRO:HG2	1:B:63:PHE:H	1.85	0.41
1:B:132:LEU:CD2	1:B:151:ILE:HG21	2.50	0.41
1:C:109:ILE:HD12	1:C:237:LEU:HD21	2.02	0.41
1:D:64:GLY:O	1:D:65:GLU:C	2.62	0.41
1:D:77:ASP:CG	1:D:596:ILE:HD13	2.46	0.41
1:D:260:ILE:O	1:D:295:ILE:HA	2.19	0.41
1:E:55:LYS:HZ3	1:F:317:TYR:HH	1.59	0.41
1:E:64:GLY:O	1:E:65:GLU:C	2.63	0.41
1:E:421:LEU:HB3	1:E:429:PRO:O	2.21	0.41
1:E:548:LEU:HB2	1:E:550:VAL:HG12	2.02	0.41
1:F:167:TRP:CZ3	1:F:232:GLU:HG3	2.55	0.41
1:F:225:ASP:HA	1:F:228:MET:HE2	2.02	0.41
1:F:316:ASN:HB2	1:F:317:TYR:H	1.61	0.41
1:F:345:ARG:O	1:F:346:ILE:C	2.64	0.41
1:A:335:ASP:CG	1:A:336:VAL:N	2.78	0.41
1:B:127:ALA:HA	1:B:130:LYS:CG	2.50	0.41
1:C:167:TRP:CZ3	1:C:232:GLU:HG3	2.56	0.41
1:C:336:VAL:HG12	1:C:337:GLN:CD	2.46	0.41
1:D:319:SER:HA	1:D:322:LEU:CD2	2.47	0.41
1:D:424:VAL:HG13	1:D:432:PRO:HG3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:636:GLY:O	1:D:637:LEU:HD23	2.21	0.41
1:E:229:LEU:HD23	1:E:229:LEU:C	2.46	0.41
1:A:266:ASN:HA	1:A:267:PRO:HD2	1.98	0.41
1:A:326:THR:CG2	1:A:401:ILE:HG12	2.51	0.41
1:B:402:PRO:HB3	1:B:404:PHE:CD2	2.55	0.41
1:B:636:GLY:O	1:B:637:LEU:HD23	2.21	0.41
1:C:102:ILE:HA	1:C:268:MET:HE2	2.01	0.41
1:C:326:THR:CG2	1:C:401:ILE:HG12	2.50	0.41
1:F:102:ILE:HA	1:F:268:MET:HE2	2.03	0.41
1:F:124:LYS:NZ	1:F:235:ASP:HB2	2.36	0.41
1:F:307:MET:HE2	1:F:529:GLY:N	2.35	0.41
1:F:447:LEU:HD13	1:F:449:VAL:CG1	2.50	0.41
1:A:100:ARG:HH12	1:A:191:ASP:CG	2.29	0.41
1:A:424:VAL:CG1	1:A:432:PRO:HG3	2.51	0.41
1:A:447:LEU:HD13	1:A:449:VAL:CG1	2.50	0.41
1:B:251:GLY:HA2	1:B:402:PRO:O	2.21	0.41
1:B:421:LEU:HB3	1:B:429:PRO:O	2.19	0.41
1:C:136:THR:O	1:C:137:GLU:C	2.64	0.41
1:C:472:ARG:HH11	1:C:472:ARG:CG	2.29	0.41
1:D:235:ASP:CG	1:D:240:THR:HA	2.45	0.41
1:D:424:VAL:O	1:D:425:ASN:HB2	2.20	0.41
1:E:29:THR:HG21	1:E:31:TRP:HE3	1.85	0.41
1:E:80:VAL:HG13	1:E:590:PRO:O	2.21	0.41
1:E:99:GLY:O	1:E:100:ARG:C	2.62	0.41
1:E:117:TYR:O	1:E:118:SER:HB3	2.21	0.41
1:F:71:VAL:O	1:F:71:VAL:HG12	2.19	0.41
1:F:158:ASN:HD21	1:F:163:LYS:HB3	1.85	0.41
1:F:296:ILE:HD12	1:F:314:ALA:CB	2.51	0.41
1:A:102:ILE:HG23	1:A:237:LEU:HD12	2.01	0.41
1:A:168:LEU:HD22	1:A:172:LEU:HD11	2.03	0.41
1:A:274:CYS:SG	1:A:295:ILE:HD11	2.61	0.41
1:B:108:HIS:HB2	1:B:114:LEU:CD1	2.49	0.41
1:B:127:ALA:CA	1:B:130:LYS:HZ3	2.15	0.41
1:C:431:LYS:N	1:C:432:PRO:HD2	2.36	0.41
1:D:224:LEU:HD22	1:D:228:MET:HG3	2.02	0.41
1:D:276:VAL:HG22	1:D:377:VAL:HG13	2.03	0.41
1:D:335:ASP:CG	1:D:336:VAL:N	2.77	0.41
1:D:430:LEU:O	1:D:434:VAL:HG23	2.20	0.41
1:D:534:ASN:HD22	1:D:572:ILE:HD13	1.85	0.41
1:E:102:ILE:HA	1:E:268:MET:HE2	2.03	0.41
1:A:129:ALA:HB1	1:A:134:VAL:HB	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:127:ALA:O	1:B:128:ILE:HG23	2.21	0.41
1:B:168:LEU:HD22	1:B:172:LEU:HD11	2.03	0.41
1:B:345:ARG:O	1:B:346:ILE:C	2.64	0.41
1:B:424:VAL:CG1	1:B:432:PRO:HG3	2.51	0.41
1:C:340:MET:HA	1:C:341:PRO:HD3	1.87	0.41
1:C:424:VAL:CG1	1:C:432:PRO:HG3	2.51	0.41
1:C:534:ASN:HD22	1:C:572:ILE:HD13	1.85	0.41
1:D:38:GLN:OE1	1:D:38:GLN:HA	2.20	0.41
1:D:102:ILE:HA	1:D:268:MET:HE2	2.03	0.41
1:D:109:ILE:HD12	1:D:237:LEU:HD21	2.03	0.41
1:D:167:TRP:C	1:D:228:MET:HE1	2.45	0.41
1:D:324:ILE:HD11	1:D:343:LEU:HD12	2.02	0.41
1:D:340:MET:HA	1:D:341:PRO:HD3	1.86	0.41
1:E:71:VAL:O	1:E:71:VAL:HG12	2.21	0.41
1:E:454:THR:C	1:E:456:VAL:H	2.29	0.41
1:E:501:ALA:O	1:E:506:LYS:HB2	2.20	0.41
1:E:532:VAL:C	1:E:534:ASN:N	2.79	0.41
1:F:224:LEU:HD22	1:F:228:MET:HG3	2.02	0.41
1:F:343:LEU:O	1:F:344:PRO:C	2.64	0.41
1:F:373:GLU:H	1:F:373:GLU:CD	2.29	0.41
1:F:424:VAL:CG1	1:F:432:PRO:HG3	2.50	0.41
1:A:319:SER:O	1:A:323:PRO:HD3	2.20	0.41
1:A:324:ILE:HD11	1:A:343:LEU:HD12	2.03	0.41
1:B:124:LYS:HE2	1:B:235:ASP:CB	2.50	0.41
1:B:149:ALA:O	1:B:153:LEU:HB2	2.21	0.41
1:D:50:CYS:HB2	1:D:79:ILE:HG23	2.01	0.41
1:D:167:TRP:CZ3	1:D:232:GLU:HG3	2.55	0.41
1:D:255:ARG:CZ	1:D:399:VAL:HB	2.47	0.41
1:E:31:TRP:CZ3	1:E:322:LEU:HD21	2.56	0.41
1:F:180:LEU:HD12	1:F:221:MET:HE2	2.02	0.41
1:F:244:VAL:HG22	1:F:245:VAL:N	2.35	0.41
1:F:281:ARG:O	1:F:285:ILE:HG13	2.20	0.41
1:F:534:ASN:O	1:F:538:VAL:HG23	2.21	0.41
1:F:587:SER:O	1:F:588:VAL:HB	2.20	0.41
1:A:555:LEU:C	1:A:557:LEU:H	2.29	0.40
1:B:99:GLY:O	1:B:100:ARG:C	2.64	0.40
1:B:141:LEU:O	1:B:143:ALA:N	2.50	0.40
1:B:286:ALA:C	1:B:288:GLY:H	2.29	0.40
1:B:373:GLU:H	1:B:373:GLU:CD	2.30	0.40
1:E:63:PHE:C	1:E:65:GLU:H	2.16	0.40
1:E:235:ASP:CG	1:E:240:THR:HA	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:102:ILE:HG23	1:F:237:LEU:HD12	2.02	0.40
1:F:601:VAL:HG23	1:F:602:THR:HG23	2.03	0.40
1:B:108:HIS:HB3	1:B:113:GLU:HG3	2.02	0.40
1:B:141:LEU:C	1:B:143:ALA:N	2.79	0.40
1:B:431:LYS:N	1:B:432:PRO:HD2	2.36	0.40
1:D:307:MET:HG3	1:D:529:GLY:HA2	2.02	0.40
1:D:309:HIS:ND1	1:D:309:HIS:N	2.68	0.40
1:E:433:LEU:HD11	1:E:544:LEU:HD12	2.02	0.40
1:F:144:ILE:HD12	1:F:144:ILE:H	1.86	0.40
1:A:34:TYR:HB2	1:B:71:VAL:HG13	2.02	0.40
1:A:99:GLY:O	1:A:100:ARG:C	2.64	0.40
1:A:124:LYS:HD3	1:A:235:ASP:CB	2.51	0.40
1:A:635:ALA:C	1:A:637:LEU:H	2.30	0.40
1:B:296:ILE:HD12	1:B:314:ALA:CB	2.51	0.40
1:B:513:GLY:O	1:B:518:LEU:HD11	2.21	0.40
1:C:29:THR:HG22	1:C:32:HIS:CD2	2.56	0.40
1:C:202:HIS:HB3	1:C:205:CYS:SG	2.60	0.40
1:C:235:ASP:CG	1:C:240:THR:HA	2.46	0.40
1:E:29:THR:HG22	1:E:32:HIS:CD2	2.56	0.40
1:E:276:VAL:HG22	1:E:377:VAL:HG13	2.03	0.40
1:E:556:PRO:HB2	1:E:630:ILE:HG23	2.03	0.40
1:F:140:GLY:O	1:F:143:ALA:HB3	2.21	0.40
1:F:269:LEU:HD13	1:F:371:PHE:CD1	2.57	0.40
1:F:283:GLU:O	1:F:286:ALA:HB3	2.22	0.40
1:F:495:GLU:O	1:F:496:ALA:C	2.65	0.40
1:A:110:SER:HB3	1:A:145:VAL:CG1	2.43	0.40
1:A:326:THR:HG22	1:A:328:ALA:HB3	2.04	0.40
1:A:350:PHE:CD1	1:A:350:PHE:N	2.90	0.40
1:B:132:LEU:C	1:B:134:VAL:N	2.79	0.40
1:B:316:ASN:CG	1:B:452:ASN:HD21	2.30	0.40
1:C:454:THR:C	1:C:456:VAL:H	2.28	0.40
1:E:85:VAL:HG12	1:E:197:THR:HG23	2.01	0.40
1:F:454:THR:C	1:F:456:VAL:H	2.30	0.40
1:F:476:VAL:HG12	1:F:525:VAL:HG13	2.03	0.40
1:A:548:LEU:HB2	1:A:550:VAL:HG12	2.02	0.40
1:C:224:LEU:HD22	1:C:228:MET:CG	2.51	0.40
1:C:566:SER:HB2	1:D:202:HIS:CE1	2.56	0.40
1:D:132:LEU:CD1	1:D:151:ILE:HG21	2.33	0.40
1:E:581:LEU:HA	1:E:582:PRO:HD3	1.99	0.40
1:F:53:CYS:SG	1:F:55:LYS:HB2	2.62	0.40
1:F:492:MET:CE	1:F:527:HIS:HB2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:556:PRO:HB2	1:F:630:ILE:HG23	2.03	0.40
1:F:571:ALA:O	1:F:572:ILE:C	2.64	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	608/639 (95%)	523 (86%)	69 (11%)	16 (3%)	4	15
1	B	608/639 (95%)	510 (84%)	79 (13%)	19 (3%)	3	12
1	C	608/639 (95%)	535 (88%)	58 (10%)	15 (2%)	4	16
1	D	608/639 (95%)	535 (88%)	64 (10%)	9 (2%)	8	28
1	E	608/639 (95%)	530 (87%)	66 (11%)	12 (2%)	6	21
1	F	608/639 (95%)	537 (88%)	56 (9%)	15 (2%)	4	16
All	All	3648/3834 (95%)	3170 (87%)	392 (11%)	86 (2%)	4	17

All (86) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	64	GLY
1	A	141	LEU
1	A	337	GLN
1	A	425	ASN
1	A	458	GLN
1	B	64	GLY
1	B	280	LEU
1	B	337	GLN
1	B	425	ASN
1	B	458	GLN

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Mol	Chain	Res	Type
1	C	64	GLY
1	C	337	GLN
1	C	425	ASN
1	C	458	GLN
1	D	64	GLY
1	D	337	GLN
1	D	425	ASN
1	D	458	GLN
1	E	64	GLY
1	E	141	LEU
1	E	337	GLN
1	E	425	ASN
1	E	458	GLN
1	F	64	GLY
1	F	337	GLN
1	F	425	ASN
1	F	458	GLN
1	A	120	ARG
1	A	142	LEU
1	A	519	GLY
1	B	130	LYS
1	B	282	ASP
1	C	517	GLY
1	D	114	LEU
1	E	114	LEU
1	F	250	LEU
1	B	128	ILE
1	B	137	GLU
1	B	142	LEU
1	B	145	VAL
1	C	280	LEU
1	E	280	LEU
1	E	423	LYS
1	F	114	LEU
1	A	252	VAL
1	A	423	LYS
1	B	423	LYS
1	C	142	LEU
1	C	283	GLU
1	C	423	LYS
1	C	506	LYS
1	D	423	LYS

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Mol	Chain	Res	Type
1	E	519	GLY
1	F	141	LEU
1	F	249	ASN
1	F	423	LYS
1	A	116	ASP
1	A	503	GLU
1	A	506	LYS
1	B	506	LYS
1	B	518	LEU
1	C	503	GLU
1	E	506	LYS
1	F	472	ARG
1	F	506	LYS
1	A	376	ALA
1	B	120	ARG
1	B	503	GLU
1	B	590	PRO
1	C	376	ALA
1	D	376	ALA
1	D	590	PRO
1	F	376	ALA
1	F	503	GLU
1	A	588	VAL
1	B	252	VAL
1	C	590	PRO
1	E	588	VAL
1	E	590	PRO
1	A	590	PRO
1	B	588	VAL
1	D	588	VAL
1	F	590	PRO
1	C	119	ILE
1	C	588	VAL
1	F	588	VAL

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	466/490 (95%)	430 (92%)	36 (8%)	12	36
1	B	466/490 (95%)	429 (92%)	37 (8%)	11	35
1	C	466/490 (95%)	429 (92%)	37 (8%)	11	35
1	D	466/490 (95%)	428 (92%)	38 (8%)	10	33
1	E	466/490 (95%)	427 (92%)	39 (8%)	10	32
1	F	466/490 (95%)	429 (92%)	37 (8%)	11	35
All	All	2796/2940 (95%)	2572 (92%)	224 (8%)	11	34

All (224) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	29	THR
1	A	84	LEU
1	A	115	HIS
1	A	119	ILE
1	A	122	GLU
1	A	126	TYR
1	A	157	GLN
1	A	176	ARG
1	A	186	LEU
1	A	219	VAL
1	A	224	LEU
1	A	229	LEU
1	A	240	THR
1	A	242	GLN
1	A	316	ASN
1	A	319	SER
1	A	326	THR
1	A	330	GLU
1	A	337	GLN
1	A	345	ARG
1	A	394	ARG
1	A	447	LEU
1	A	458	GLN
1	A	465	LEU
1	A	472	ARG
1	A	493	THR
1	A	494	SER
1	A	495	GLU
1	A	508	VAL
1	A	509	LEU

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Mol	Chain	Res	Type
1	A	518	LEU
1	A	540	LEU
1	A	544	LEU
1	A	579	ILE
1	A	615	VAL
1	A	620	LYS
1	B	29	THR
1	B	84	LEU
1	B	117	TYR
1	B	130	LYS
1	B	132	LEU
1	B	144	ILE
1	B	157	GLN
1	B	176	ARG
1	B	186	LEU
1	B	219	VAL
1	B	224	LEU
1	B	229	LEU
1	B	240	THR
1	B	242	GLN
1	B	280	LEU
1	B	316	ASN
1	B	319	SER
1	B	326	THR
1	B	330	GLU
1	B	337	GLN
1	B	345	ARG
1	B	394	ARG
1	B	447	LEU
1	B	458	GLN
1	B	465	LEU
1	B	472	ARG
1	B	493	THR
1	B	494	SER
1	B	495	GLU
1	B	508	VAL
1	B	509	LEU
1	B	518	LEU
1	B	540	LEU
1	B	544	LEU
1	B	579	ILE
1	B	615	VAL

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Mol	Chain	Res	Type
1	B	620	LYS
1	C	29	THR
1	C	84	LEU
1	C	124	LYS
1	C	157	GLN
1	C	176	ARG
1	C	186	LEU
1	C	219	VAL
1	C	224	LEU
1	C	229	LEU
1	C	240	THR
1	C	242	GLN
1	C	255	ARG
1	C	282	ASP
1	C	283	GLU
1	C	316	ASN
1	C	319	SER
1	C	326	THR
1	C	330	GLU
1	C	337	GLN
1	C	345	ARG
1	C	394	ARG
1	C	425	ASN
1	C	447	LEU
1	C	458	GLN
1	C	465	LEU
1	C	472	ARG
1	C	493	THR
1	C	494	SER
1	C	495	GLU
1	C	508	VAL
1	C	509	LEU
1	C	540	LEU
1	C	544	LEU
1	C	579	ILE
1	C	587	SER
1	C	615	VAL
1	C	620	LYS
1	D	29	THR
1	D	84	LEU
1	D	114	LEU
1	D	132	LEU

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Mol	Chain	Res	Type
1	D	157	GLN
1	D	176	ARG
1	D	186	LEU
1	D	219	VAL
1	D	224	LEU
1	D	229	LEU
1	D	240	THR
1	D	242	GLN
1	D	250	LEU
1	D	252	VAL
1	D	280	LEU
1	D	316	ASN
1	D	319	SER
1	D	326	THR
1	D	330	GLU
1	D	337	GLN
1	D	345	ARG
1	D	394	ARG
1	D	447	LEU
1	D	458	GLN
1	D	465	LEU
1	D	472	ARG
1	D	493	THR
1	D	494	SER
1	D	495	GLU
1	D	508	VAL
1	D	509	LEU
1	D	518	LEU
1	D	540	LEU
1	D	544	LEU
1	D	579	ILE
1	D	587	SER
1	D	615	VAL
1	D	620	LYS
1	E	29	THR
1	E	84	LEU
1	E	116	ASP
1	E	125	LEU
1	E	132	LEU
1	E	134	VAL
1	E	145	VAL
1	E	157	GLN

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Mol	Chain	Res	Type
1	E	176	ARG
1	E	186	LEU
1	E	219	VAL
1	E	224	LEU
1	E	229	LEU
1	E	240	THR
1	E	242	GLN
1	E	250	LEU
1	E	316	ASN
1	E	319	SER
1	E	326	THR
1	E	330	GLU
1	E	337	GLN
1	E	345	ARG
1	E	394	ARG
1	E	425	ASN
1	E	447	LEU
1	E	458	GLN
1	E	465	LEU
1	E	472	ARG
1	E	493	THR
1	E	494	SER
1	E	495	GLU
1	E	508	VAL
1	E	509	LEU
1	E	540	LEU
1	E	544	LEU
1	E	579	ILE
1	E	587	SER
1	E	615	VAL
1	E	620	LYS
1	F	29	THR
1	F	84	LEU
1	F	115	HIS
1	F	121	ASP
1	F	122	GLU
1	F	132	LEU
1	F	157	GLN
1	F	176	ARG
1	F	186	LEU
1	F	219	VAL
1	F	224	LEU

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Mol	Chain	Res	Type
1	F	229	LEU
1	F	240	THR
1	F	242	GLN
1	F	282	ASP
1	F	316	ASN
1	F	319	SER
1	F	326	THR
1	F	330	GLU
1	F	337	GLN
1	F	345	ARG
1	F	394	ARG
1	F	447	LEU
1	F	458	GLN
1	F	465	LEU
1	F	472	ARG
1	F	493	THR
1	F	494	SER
1	F	495	GLU
1	F	508	VAL
1	F	509	LEU
1	F	540	LEU
1	F	544	LEU
1	F	579	ILE
1	F	587	SER
1	F	615	VAL
1	F	620	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (95) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	40	GLN
1	A	98	HIS
1	A	101	HIS
1	A	111	GLN
1	A	202	HIS
1	A	211	ASN
1	A	249	ASN
1	A	266	ASN
1	A	294	ASN
1	A	337	GLN
1	A	360	HIS
1	A	361	ASN

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Mol	Chain	Res	Type
1	A	425	ASN
1	A	436	ASN
1	A	441	ASN
1	A	452	ASN
1	A	457	GLN
1	B	40	GLN
1	B	98	HIS
1	B	101	HIS
1	B	111	GLN
1	B	211	ASN
1	B	249	ASN
1	B	266	ASN
1	B	294	ASN
1	B	337	GLN
1	B	360	HIS
1	B	361	ASN
1	B	374	HIS
1	B	425	ASN
1	B	436	ASN
1	B	441	ASN
1	B	452	ASN
1	B	457	GLN
1	B	595	GLN
1	C	40	GLN
1	C	98	HIS
1	C	101	HIS
1	C	111	GLN
1	C	202	HIS
1	C	211	ASN
1	C	266	ASN
1	C	294	ASN
1	C	337	GLN
1	C	360	HIS
1	C	361	ASN
1	C	425	ASN
1	C	436	ASN
1	C	441	ASN
1	C	452	ASN
1	C	457	GLN
1	D	40	GLN
1	D	98	HIS
1	D	101	HIS

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Mol	Chain	Res	Type
1	D	111	GLN
1	D	211	ASN
1	D	266	ASN
1	D	337	GLN
1	D	360	HIS
1	D	361	ASN
1	D	425	ASN
1	D	436	ASN
1	D	441	ASN
1	D	452	ASN
1	D	457	GLN
1	E	40	GLN
1	E	98	HIS
1	E	101	HIS
1	E	111	GLN
1	E	115	HIS
1	E	211	ASN
1	E	249	ASN
1	E	266	ASN
1	E	337	GLN
1	E	360	HIS
1	E	361	ASN
1	E	374	HIS
1	E	425	ASN
1	E	441	ASN
1	E	452	ASN
1	E	457	GLN
1	F	40	GLN
1	F	98	HIS
1	F	101	HIS
1	F	111	GLN
1	F	211	ASN
1	F	266	ASN
1	F	294	ASN
1	F	337	GLN
1	F	360	HIS
1	F	361	ASN
1	F	425	ASN
1	F	441	ASN
1	F	452	ASN
1	F	457	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 21 ligands modelled in this entry, 6 are unknown - leaving 15 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	SF4	C	750	1	0,12,12	-	-	-		
2	SF4	B	750	1	0,12,12	-	-	-		
2	SF4	A	700	1	0,12,12	-	-	-		
2	SF4	C	701	1	0,12,12	-	-	-		
2	SF4	F	750	1	0,12,12	-	-	-		
4	XCC	B	803	1	0,12,12	-	-	-		
4	XCC	D	803	1	0,12,12	-	-	-		
4	XCC	E	803	1	0,12,12	-	-	-		
2	SF4	A	750	1	0,12,12	-	-	-		
4	XCC	F	803	1	0,12,12	-	-	-		
4	XCC	C	803	1	0,12,12	-	-	-		
2	SF4	D	750	1	0,12,12	-	-	-		
2	SF4	E	702	1	0,12,12	-	-	-		
2	SF4	E	750	1	0,12,12	-	-	-		
4	XCC	A	803	1	0,12,12	-	-	-		

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	SF4	C	750	1	-	-	0/6/5/5
2	SF4	B	750	1	-	-	0/6/5/5
2	SF4	A	700	1	-	-	0/6/5/5
2	SF4	C	701	1	-	-	0/6/5/5
2	SF4	F	750	1	-	-	0/6/5/5
4	XCC	B	803	1	-	-	0/4/4/4
4	XCC	D	803	1	-	-	0/4/4/4
4	XCC	E	803	1	-	-	0/4/4/4
2	SF4	A	750	1	-	-	0/6/5/5
4	XCC	F	803	1	-	-	0/4/4/4
4	XCC	C	803	1	-	-	0/4/4/4
2	SF4	D	750	1	-	-	0/6/5/5
2	SF4	E	702	1	-	-	0/6/5/5
2	SF4	E	750	1	-	-	0/6/5/5
4	XCC	A	803	1	-	-	0/4/4/4

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

4 monomers are involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	B	803	XCC	1	0
4	F	803	XCC	1	0
4	C	803	XCC	2	0
4	A	803	XCC	1	0

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

EDS was not executed - this section is therefore empty.

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

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates

EDS was not executed - this section is therefore empty.

6.4 Ligands

EDS was not executed - this section is therefore empty.

6.5 Other polymers

EDS was not executed - this section is therefore empty.