



Full wwPDB X-ray Structure Validation Report ⓘ

Jul 15, 2026 – 08:27 PM JST

PDB ID : 26VK / pdb_000026vk
Title : Crystal structure of Dihydroxyacetone kinase from Komagataella pastoris
Authors : Wei, H.L.; Chen, Y.Y.; Li, Q.; Liu, W.D.; Cai, T.
Deposited on : 2026-05-16
Resolution : 2.88 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:

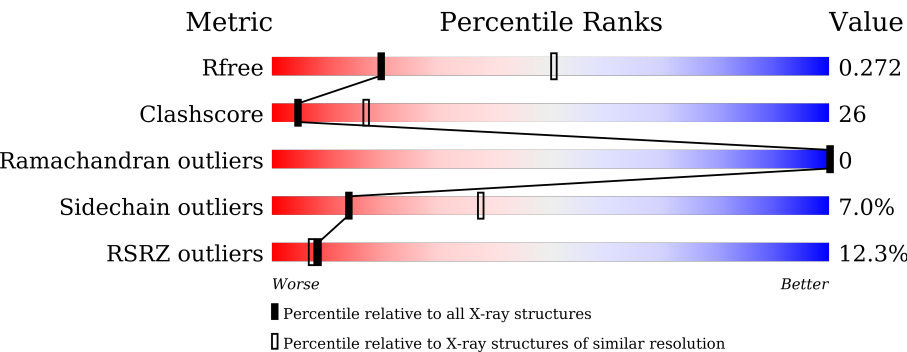
MolProbity : 4-5-2 with Phenix2.0
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 2.0
EDS : 3.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.015 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.50

1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.88 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	3557 (2.90-2.86)
Clashscore	190562	3801 (2.90-2.86)
Ramachandran outliers	187476	3699 (2.90-2.86)
Sidechain outliers	187428	3702 (2.90-2.86)
RSRZ outliers	180081	3558 (2.90-2.86)

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

Mol	Chain	Length	Quality of chain
1	A	608	9% 54% 33% • 10%
1	B	608	11% 55% 36% • 8%
1	C	608	15% 47% 38% • 12%
1	D	608	10% 37% 34% • 27%
1	E	608	7% 50% 41% • 8%
1	F	608	8% 34% 30% • 35%

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Mol	Chain	Length	Quality of chain
1	G	608	7% 39% 26% • 33%
1	H	608	12% 41% 31% • 26%

2 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 29194 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.

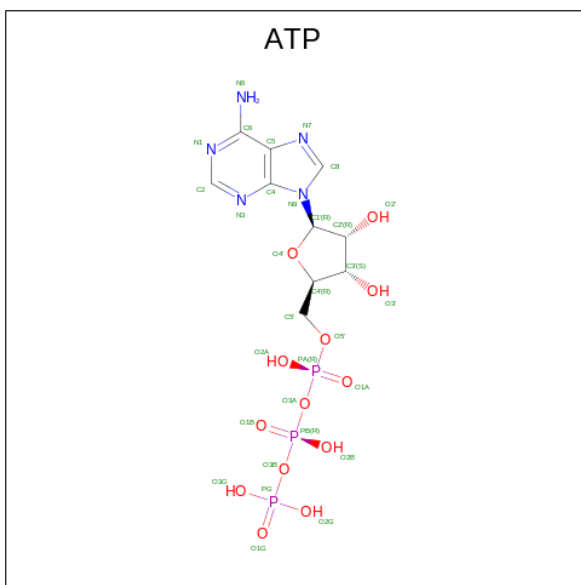
- Molecule 1 is a protein called Dihydroxyacetone kinase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	548	Total	C	N	O	S	0	0	0
			4084	2602	673	806	3			
1	B	562	Total	C	N	O	S	0	0	0
			4150	2642	679	825	4			
1	C	533	Total	C	N	O	S	0	0	0
			3950	2517	654	776	3			
1	D	442	Total	C	N	O	S	0	0	0
			3308	2117	552	636	3			
1	E	559	Total	C	N	O	S	0	0	0
			4156	2645	689	818	4			
1	F	395	Total	C	N	O	S	0	0	0
			2935	1882	483	567	3			
1	G	408	Total	C	N	O	S	0	0	0
			3066	1955	513	595	3			
1	H	449	Total	C	N	O	S	0	0	0
			3357	2138	554	661	4			

- Molecule 2 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	1	Total	Mg	0	0
			1	1		
2	B	1	Total	Mg	0	0
			1	1		
2	C	1	Total	Mg	0	0
			1	1		
2	D	1	Total	Mg	0	0
			1	1		

- Molecule 3 is ADENOSINE-5'-TRIPHOSPHATE (CCD ID: ATP) (formula: C₁₀H₁₆N₅O₁₃P₃).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	B	1	Total	C	N	O	P	0	0
			31	10	5	13	3		

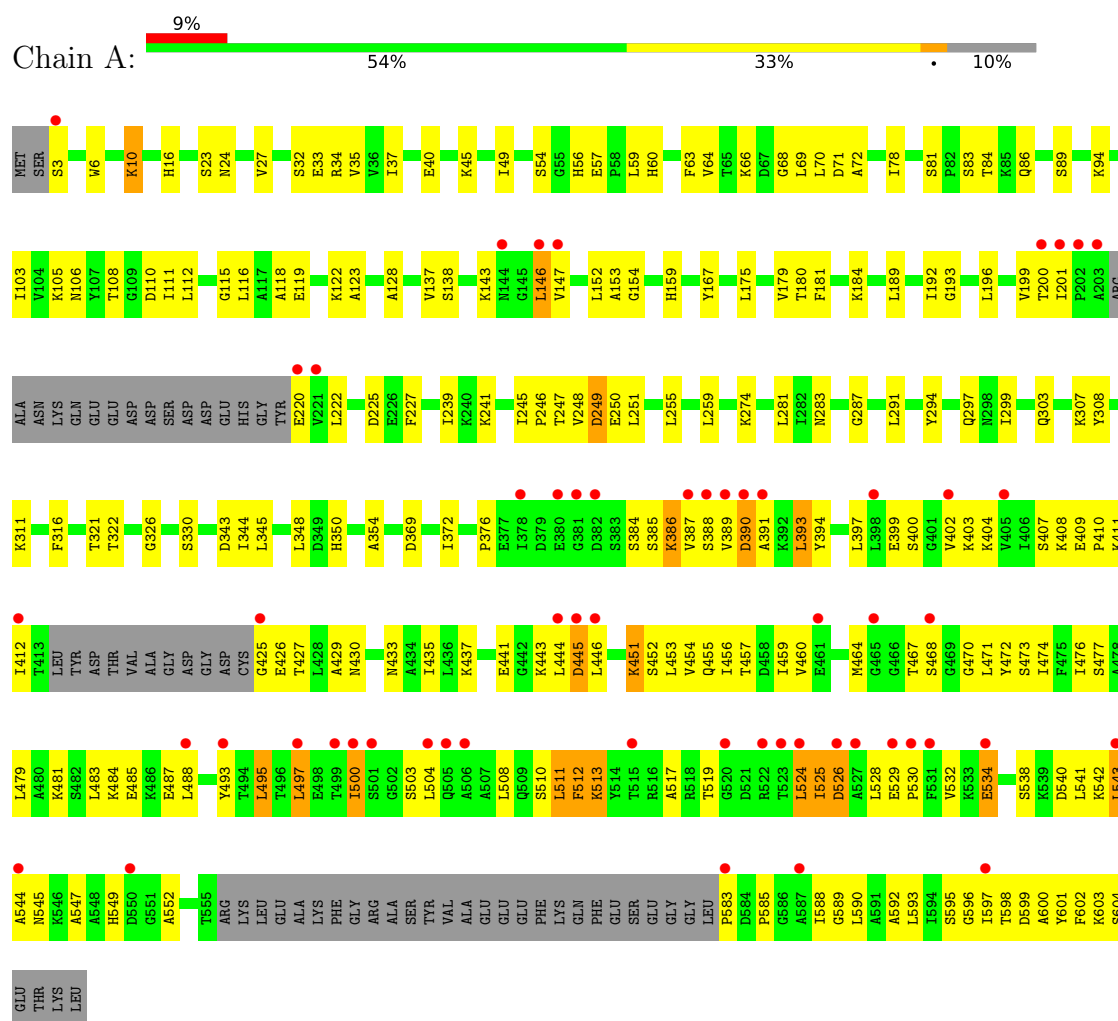
- Molecule 4 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	37	Total O 37 37	0	0
4	B	25	Total O 25 25	0	0
4	C	15	Total O 15 15	0	0
4	D	25	Total O 25 25	0	0
4	E	16	Total O 16 16	0	0
4	F	9	Total O 9 9	0	0
4	G	21	Total O 21 21	0	0
4	H	5	Total O 5 5	0	0

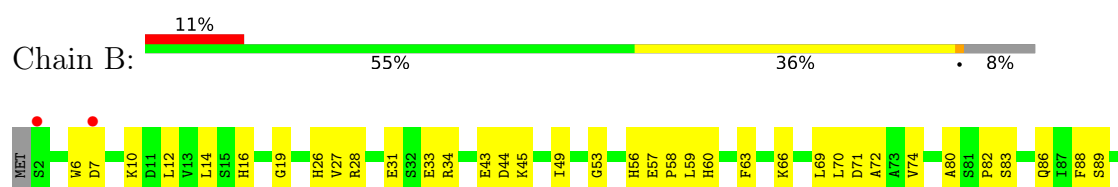
3 Residue-property plots

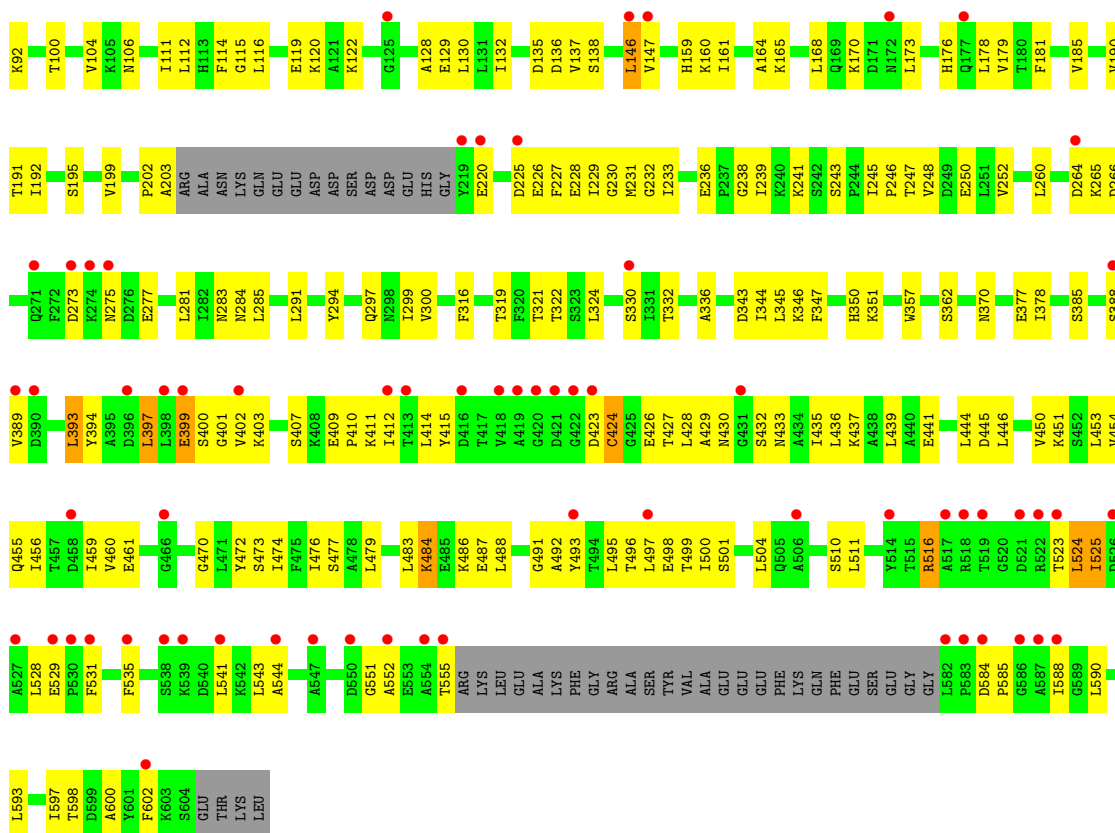
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

• Molecule 1: Dihydroxyacetone kinase

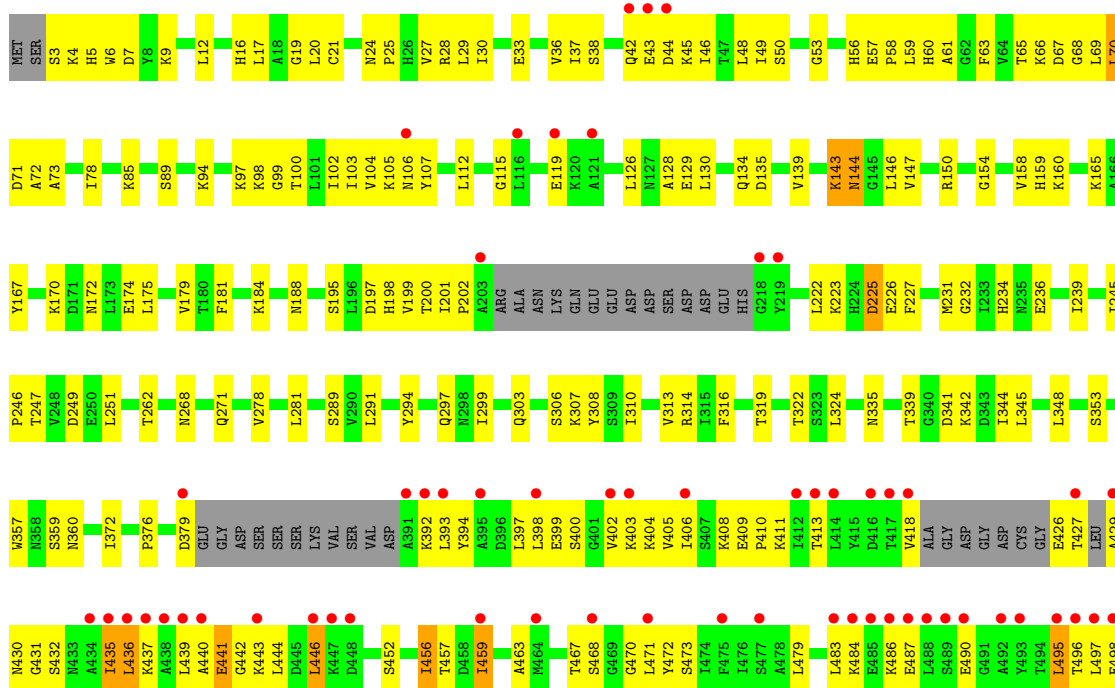


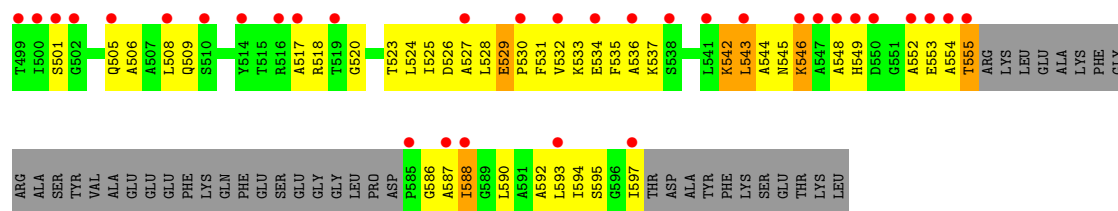
• Molecule 1: Dihydroxyacetone kinase



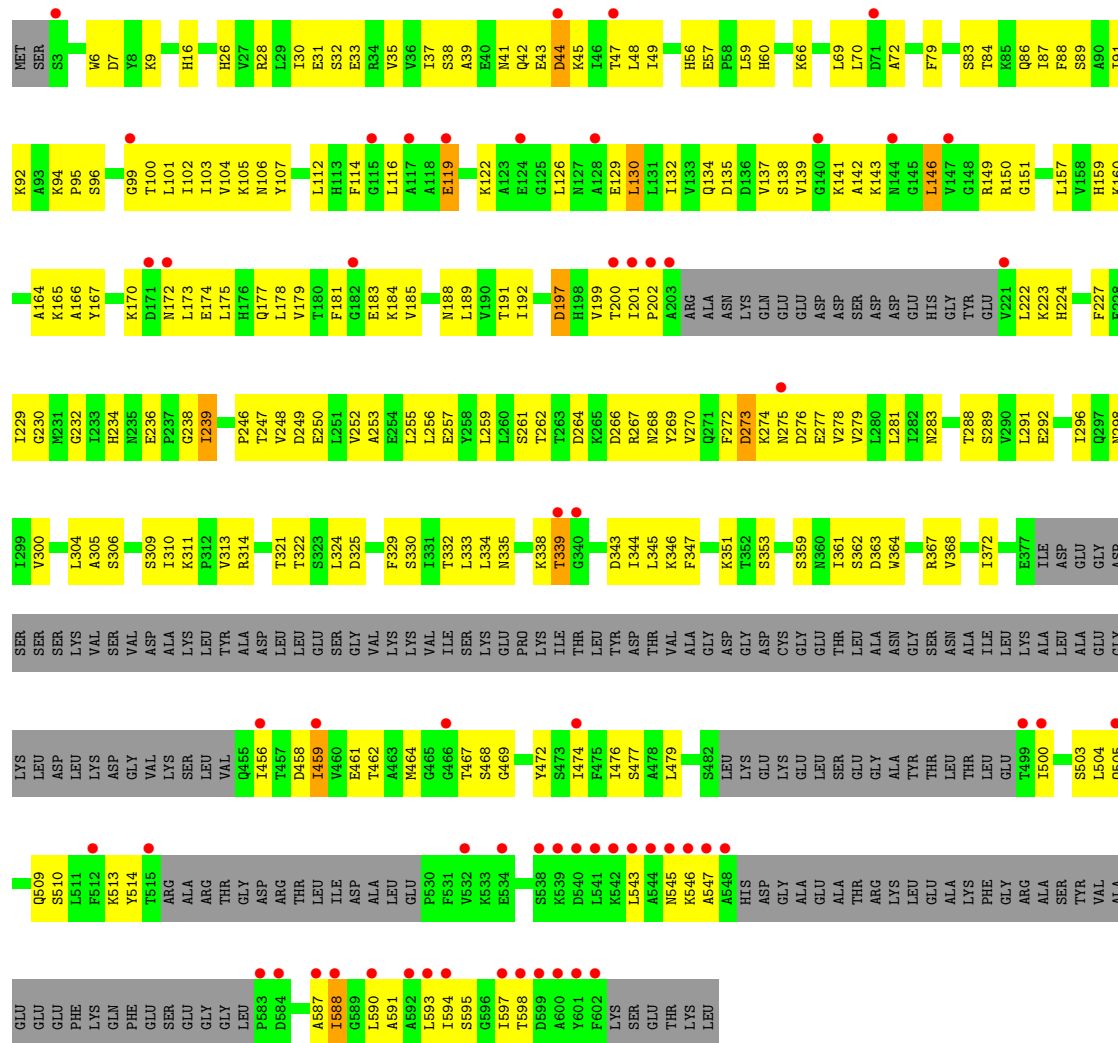


● Molecule 1: Dihydroxyacetone kinase



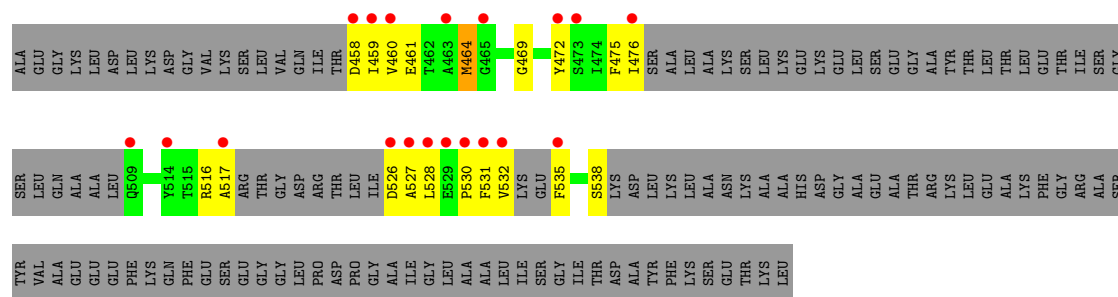


● Molecule 1: Dihydroxyacetone kinase

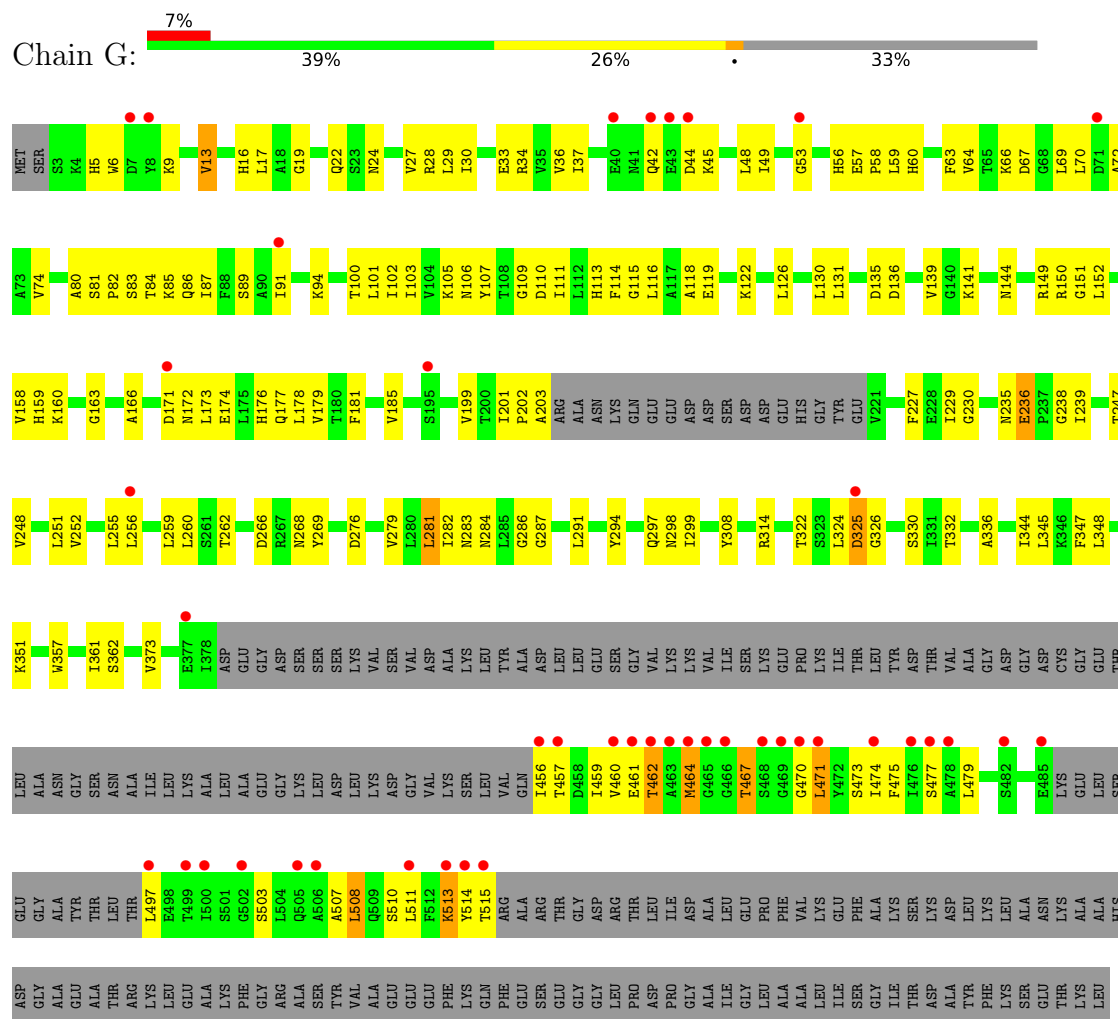


● Molecule 1: Dihydroxyacetone kinase

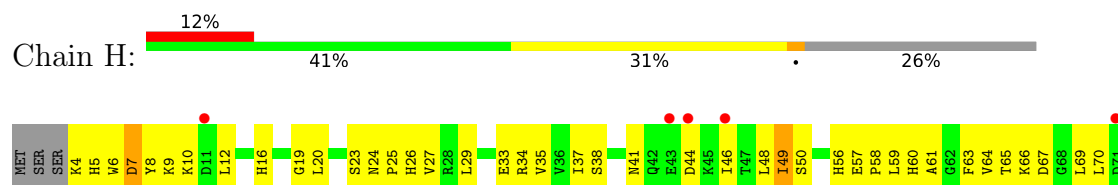


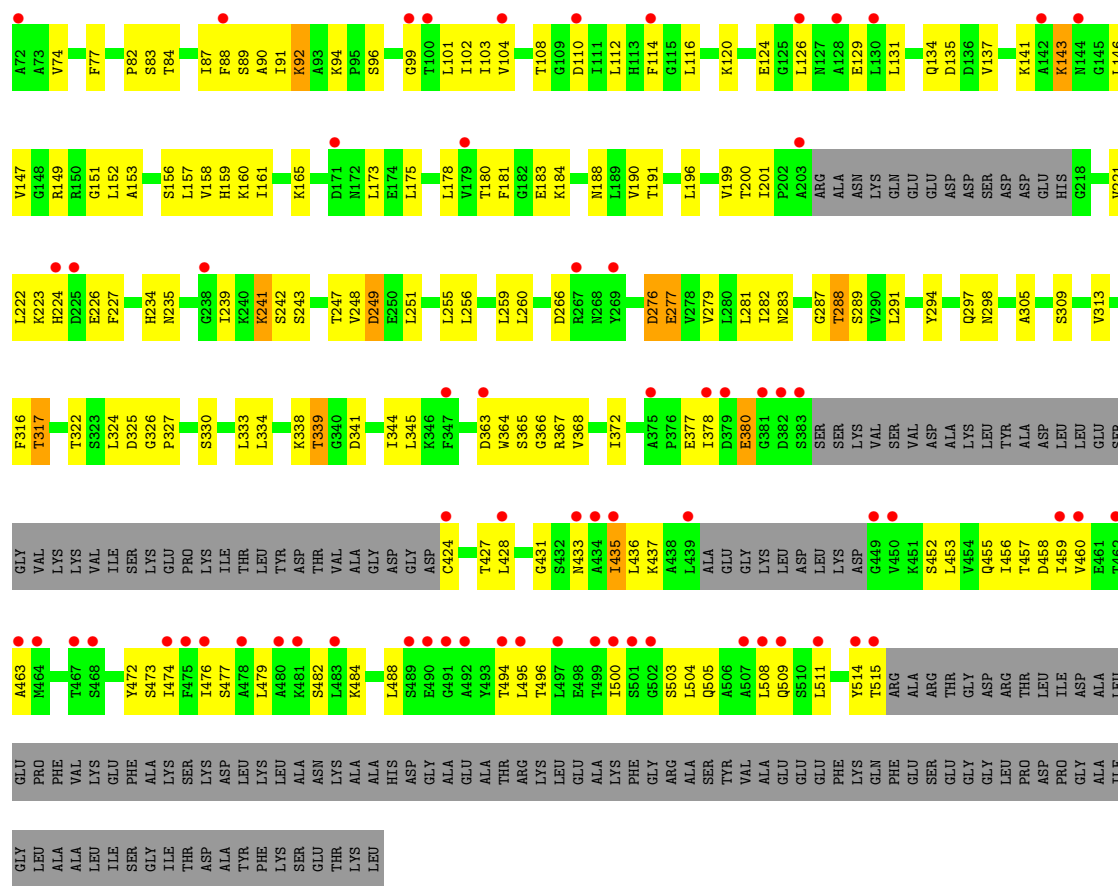


• Molecule 1: Dihydroxyacetone kinase



• Molecule 1: Dihydroxyacetone kinase





4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α , β , γ	106.35Å 114.28Å 122.81Å 64.50° 76.43° 75.10°	Depositor
Resolution (Å)	38.75 – 2.88 38.75 – 2.88	Depositor EDS
% Data completeness (in resolution range)	98.3 (38.75-2.88) 98.3 (38.75-2.88)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.75 (at 2.90Å)	Xtriage
Refinement program	PHENIX 2.0_5848	Depositor
R, R_{free}	0.223 , 0.268 0.230 , 0.272	Depositor DCC
R_{free} test set	1989 reflections (1.76%)	wwPDB-VP
Wilson B-factor (Å ²)	42.7	Xtriage
Anisotropy	0.195	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.27 , 51.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.88	EDS
Total number of atoms	29194	wwPDB-VP
Average B, all atoms (Å ²)	49.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.27% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

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	0.45	0/4145	0.77	0/5611
1	B	0.50	0/4214	0.85	0/5719
1	C	0.48	0/4006	0.80	0/5428
1	D	0.40	0/3363	0.66	0/4555
1	E	0.34	0/4219	0.64	0/5715
1	F	0.38	0/2986	0.69	0/4055
1	G	0.43	0/3114	0.70	0/4220
1	H	0.48	0/3409	0.75	0/4622
All	All	0.44	0/29456	0.74	0/39925

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	4084	0	4139	205	0
1	B	4150	0	4148	214	0
1	C	3950	0	3982	217	0
1	D	3308	0	3339	207	0
1	E	4156	0	4198	277	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	F	2935	0	2902	174	0
1	G	3066	0	3105	150	0
1	H	3357	0	3369	197	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
3	B	31	0	12	0	0
4	A	37	0	0	2	0
4	B	25	0	0	0	0
4	C	15	0	0	2	0
4	D	25	0	0	1	0
4	E	16	0	0	1	0
4	F	9	0	0	0	0
4	G	21	0	0	2	0
4	H	5	0	0	0	0
All	All	29194	0	29194	1509	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 26.

All (1509) 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:E:387:VAL:HG12	1:E:389:VAL:HG23	1.30	1.13
1:F:69:LEU:HD21	1:F:160:LYS:HA	1.20	1.12
1:C:402:VAL:HG13	1:C:432:SER:HB2	1.23	1.12
1:E:387:VAL:HG12	1:E:389:VAL:CG2	1.81	1.11
1:E:387:VAL:CG1	1:E:389:VAL:HG23	1.82	1.10
1:H:181:PHE:HE1	1:H:339:THR:HG23	1.12	1.09
1:A:412:ILE:HG23	1:A:585:PRO:HB3	1.24	1.09
1:B:14:LEU:HD21	1:B:34:ARG:HG2	1.34	1.06
1:B:402:VAL:HG13	1:B:432:SER:HB3	1.36	1.06
1:E:387:VAL:CG1	1:E:389:VAL:CG2	2.35	1.05
1:H:37:ILE:HD11	1:H:94:LYS:HG2	1.38	1.02
1:C:397:LEU:HB3	1:C:597:ILE:HG12	1.37	1.02
1:H:453:LEU:HA	1:H:456:ILE:HD12	1.43	1.01
1:C:393:LEU:O	1:C:397:LEU:HG	1.63	0.97
1:C:195:SER:HB2	1:C:231:MET:HE3	1.47	0.97
1:B:265:LYS:O	1:B:265:LYS:HD3	1.65	0.96
1:F:83:SER:HB3	1:F:86:GLN:HG3	1.44	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:277:GLU:HB3	1:D:313:VAL:HG11	1.43	0.96
1:H:181:PHE:CE1	1:H:339:THR:HG23	2.00	0.96
1:H:260:LEU:HD21	1:H:333:LEU:HD13	1.47	0.96
1:B:195:SER:HB3	1:B:231:MET:HE3	1.46	0.96
1:E:232:GLY:HA3	1:E:236:GLU:HB2	1.49	0.95
1:H:479:LEU:HD13	1:H:504:LEU:HD23	1.48	0.95
1:E:195:SER:HB3	1:E:231:MET:HE3	1.50	0.94
1:E:279:VAL:HG13	1:E:314:ARG:HB2	1.49	0.93
1:B:284:ASN:HB3	1:B:319:THR:HG22	1.49	0.93
1:A:542:LYS:HD3	1:A:602:PHE:CD2	2.05	0.92
1:E:523:THR:HG21	1:E:525:ILE:HG23	1.51	0.91
1:H:283:ASN:HB3	1:H:330:SER:HB3	1.52	0.91
1:A:220:GLU:N	1:A:220:GLU:OE1	2.03	0.91
1:F:69:LEU:CD2	1:F:160:LYS:HA	2.02	0.90
1:B:437:LYS:O	1:B:441:GLU:HG2	1.71	0.90
1:C:427:THR:HA	1:C:430:ASN:OD1	1.73	0.89
1:A:390:ASP:HB3	1:A:393:LEU:HB3	1.54	0.89
1:B:456:ILE:O	1:B:460:VAL:HG13	1.72	0.89
1:H:65:THR:HG23	1:H:67:ASP:H	1.36	0.88
1:E:523:THR:CG2	1:E:525:ILE:HG23	2.04	0.87
1:C:102:ILE:HB	1:C:130:LEU:HD12	1.55	0.86
1:H:181:PHE:HE1	1:H:339:THR:CG2	1.88	0.86
1:C:197:ASP:OD2	1:C:198:HIS:N	2.09	0.85
1:A:49:ILE:HG12	1:A:72:ALA:HB3	1.57	0.84
1:E:409:GLU:O	1:E:413:THR:HG23	1.78	0.84
1:E:455:GLN:O	1:E:459:ILE:HG13	1.77	0.84
1:D:262:THR:HG22	1:D:268:ASN:HD21	1.40	0.84
1:C:446:LEU:HD22	1:C:452:SER:HA	1.57	0.83
1:E:240:LYS:HD3	1:E:242:SER:OG	1.78	0.83
1:C:402:VAL:HG13	1:C:432:SER:CB	2.08	0.83
1:C:446:LEU:HD13	1:C:452:SER:HB2	1.61	0.83
1:D:44:ASP:HB2	1:D:170:LYS:HD2	1.61	0.82
1:D:69:LEU:HD21	1:D:160:LYS:HA	1.61	0.82
1:B:243:SER:OG	1:H:242:SER:HB3	1.79	0.81
1:E:146:LEU:HD22	1:E:146:LEU:H	1.43	0.81
1:A:138:SER:O	1:A:239:ILE:HG21	1.80	0.81
1:E:387:VAL:HG11	1:E:389:VAL:CG2	2.11	0.81
1:F:248:VAL:HG11	1:H:8:TYR:CE1	2.16	0.81
1:C:529:GLU:HB3	1:C:530:PRO:HD3	1.63	0.81
1:F:190:VAL:HG13	1:F:270:VAL:HG23	1.63	0.80
1:H:129:GLU:HB2	1:H:175:LEU:HD21	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:291:LEU:HA	1:D:16:HIS:CD2	2.16	0.80
1:C:531:PHE:HB2	1:C:548:ALA:HB2	1.63	0.80
1:D:179:VAL:O	1:D:183:GLU:HG3	1.82	0.80
1:E:70:LEU:HD21	1:E:159:HIS:CG	2.17	0.80
1:B:378:ILE:HD12	1:B:378:ILE:O	1.81	0.80
1:A:81:SER:HB3	1:A:110:ASP:OD1	1.82	0.80
1:C:37:ILE:HG23	1:C:94:LYS:HD3	1.65	0.79
1:E:398:LEU:O	1:E:402:VAL:HG22	1.82	0.79
1:F:4:LYS:HD2	1:H:224:HIS:HA	1.65	0.79
1:H:88:PHE:CD1	1:H:91:ILE:HB	2.19	0.78
1:B:227:PHE:CE1	1:B:246:PRO:HD3	2.17	0.78
1:E:460:VAL:HG13	1:E:464:MET:HE3	1.64	0.78
1:A:247:THR:OG1	1:A:250:GLU:HG3	1.84	0.78
1:B:402:VAL:HG13	1:B:432:SER:CB	2.11	0.78
1:H:494:THR:HG22	1:H:495:LEU:HD23	1.66	0.78
1:G:118:ALA:O	1:G:122:LYS:HG3	1.83	0.77
1:E:387:VAL:HG12	1:E:389:VAL:HG22	1.66	0.77
1:E:412:ILE:HG21	1:E:425:GLY:HA3	1.66	0.77
1:B:83:SER:H	1:B:86:GLN:HE21	1.31	0.77
1:A:409:GLU:HG3	1:A:429:ALA:HB2	1.66	0.77
1:E:399:GLU:HG3	1:E:436:LEU:HD21	1.65	0.77
1:A:116:LEU:CD1	1:B:473:SER:HB3	2.14	0.77
1:A:541:LEU:HB3	1:A:602:PHE:HE2	1.48	0.77
1:H:84:THR:HA	1:H:87:ILE:HD12	1.65	0.77
1:G:136:ASP:O	1:G:149:ARG:HD2	1.84	0.77
1:F:464:MET:HB3	1:F:469:GLY:HA3	1.65	0.77
1:F:9:LYS:HG2	1:H:249:ASP:OD2	1.84	0.76
1:A:16:HIS:CE1	1:A:57:GLU:HG2	2.21	0.76
1:F:223:LYS:HG2	1:F:226:GLU:OE2	1.85	0.76
1:A:123:ALA:O	1:B:484:LYS:HD2	1.84	0.76
1:B:486:LYS:HG2	1:B:493:TYR:CE1	2.20	0.76
1:C:393:LEU:HD21	1:C:495:LEU:HB3	1.67	0.76
1:C:49:ILE:HG12	1:C:72:ALA:HB3	1.68	0.76
1:D:30:ILE:HD12	1:D:35:VAL:HB	1.67	0.76
1:E:294:TYR:HB2	1:G:16:HIS:CD2	2.20	0.76
1:F:247:THR:HG22	1:F:249:ASP:H	1.47	0.76
1:F:248:VAL:CG2	1:F:299:ILE:HD13	2.14	0.76
1:C:63:PHE:HB3	1:C:69:LEU:HD22	1.68	0.76
1:E:227:PHE:CE1	1:E:246:PRO:HD3	2.20	0.76
1:H:199:VAL:HG21	1:H:324:LEU:HB2	1.68	0.75
1:F:83:SER:HB3	1:F:86:GLN:CG	2.17	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:399:GLU:HG3	1:E:436:LEU:CD2	2.17	0.75
1:G:33:GLU:HG3	1:G:89:SER:CB	2.17	0.74
1:A:451:LYS:O	1:A:455:GLN:HG3	1.88	0.74
1:E:486:LYS:HG2	1:E:493:TYR:CZ	2.22	0.74
1:A:175:LEU:O	1:A:179:VAL:HG23	1.87	0.74
1:G:81:SER:HB2	1:G:110:ASP:OD1	1.87	0.74
1:G:87:ILE:O	1:G:91:ILE:HG13	1.88	0.74
1:E:342:LYS:HG3	1:E:343:ASP:OD1	1.87	0.74
1:G:56:HIS:HA	1:G:322:THR:O	1.87	0.74
1:H:494:THR:HG22	1:H:495:LEU:H	1.53	0.74
1:E:49:ILE:HG12	1:E:72:ALA:HB3	1.69	0.74
1:G:107:TYR:CE1	1:G:150:ARG:HG2	2.22	0.74
1:E:387:VAL:CG1	1:E:389:VAL:HG22	2.17	0.74
1:B:445:ASP:CG	1:C:342:LYS:HG3	2.13	0.73
1:F:291:LEU:HA	1:H:16:HIS:ND1	2.02	0.73
1:A:517:ALA:HB2	1:B:146:LEU:HD13	1.68	0.73
1:D:44:ASP:HB2	1:D:170:LYS:CD	2.17	0.73
1:F:248:VAL:HG13	1:H:7:ASP:O	1.89	0.73
1:A:538:SER:HB2	1:A:543:LEU:HD13	1.70	0.73
1:E:410:PRO:O	1:E:414:LEU:HG	1.87	0.73
1:D:37:ILE:HD12	1:D:38:SER:O	1.89	0.73
1:H:281:LEU:HD12	1:H:316:PHE:HB2	1.69	0.73
1:B:247:THR:HG22	1:B:250:GLU:HG3	1.70	0.73
1:B:265:LYS:HE2	1:B:265:LYS:HA	1.70	0.73
1:B:450:VAL:O	1:B:454:VAL:HG23	1.89	0.73
1:F:129:GLU:HG2	1:F:179:VAL:HG11	1.71	0.73
1:E:425:GLY:HA2	1:E:428:LEU:HB2	1.71	0.72
1:A:411:LYS:HD2	1:A:411:LYS:O	1.90	0.72
1:A:16:HIS:HD2	1:B:294:TYR:HB2	1.54	0.72
1:C:249:ASP:HB3	4:C:805:HOH:O	1.90	0.72
1:E:59:LEU:HD12	1:E:63:PHE:CE1	2.23	0.72
1:E:390:ASP:HB3	1:E:393:LEU:HB3	1.71	0.72
1:D:149:ARG:HD3	1:D:269:TYR:CE1	2.25	0.72
1:A:222:LEU:CD2	1:A:241:LYS:HD2	2.19	0.71
1:C:470:GLY:HA3	1:D:112:LEU:HD23	1.72	0.71
1:B:129:GLU:HG2	1:B:179:VAL:HG21	1.72	0.71
1:C:223:LYS:HE3	1:C:226:GLU:OE2	1.89	0.71
1:D:273:ASP:N	1:D:276:ASP:OD2	2.22	0.71
1:G:101:LEU:HD21	1:G:103:ILE:HD11	1.73	0.71
1:C:531:PHE:CD2	1:C:594:ILE:HD13	2.24	0.71
1:E:273:ASP:OD1	1:E:274:LYS:N	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:531:PHE:HB2	1:E:548:ALA:HB2	1.72	0.71
1:F:116:LEU:HD22	1:F:120:LYS:HE3	1.73	0.71
1:B:402:VAL:CG1	1:B:432:SER:HB3	2.19	0.71
1:D:32:SER:OG	1:D:33:GLU:HG2	1.91	0.71
1:G:457:THR:HG21	1:G:477:SER:HB3	1.71	0.71
1:G:34:ARG:HG3	1:G:34:ARG:HH11	1.55	0.71
1:H:479:LEU:HD13	1:H:504:LEU:CD2	2.21	0.71
1:E:135:ASP:OD1	1:E:151:GLY:HA2	1.91	0.70
1:E:412:ILE:HD11	1:E:588:ILE:HB	1.72	0.70
1:B:14:LEU:CD2	1:B:34:ARG:HG2	2.19	0.70
1:E:130:LEU:HD22	1:G:514:TYR:HE2	1.56	0.70
1:F:44:ASP:O	1:F:98:LYS:HG3	1.90	0.70
1:A:116:LEU:HD11	1:B:473:SER:HB3	1.73	0.70
1:D:99:GLY:HA3	1:D:175:LEU:HD12	1.72	0.70
1:D:264:ASP:OD1	1:D:266:ASP:N	2.25	0.70
1:E:464:MET:HB2	1:E:469:GLY:HA3	1.73	0.70
1:D:253:ALA:O	1:D:257:GLU:HG3	1.91	0.70
1:E:70:LEU:HD21	1:E:159:HIS:CD2	2.26	0.70
1:E:277:GLU:HB2	1:E:337:THR:HG23	1.73	0.70
1:E:526:ASP:OD1	1:E:555:THR:HG22	1.91	0.70
1:A:540:ASP:HB3	1:A:543:LEU:HD12	1.74	0.69
1:E:227:PHE:CD1	1:E:246:PRO:HD3	2.27	0.69
1:F:256:LEU:CD2	1:F:259:LEU:HD12	2.22	0.69
1:G:13:VAL:O	1:G:17:LEU:HD12	1.93	0.69
1:B:115:GLY:O	1:B:119:GLU:HG2	1.92	0.69
1:F:229:ILE:O	1:F:239:ILE:HG22	1.91	0.69
1:H:453:LEU:HA	1:H:456:ILE:CD1	2.21	0.69
1:E:195:SER:HB3	1:E:231:MET:CE	2.20	0.69
1:C:518:ARG:CA	1:C:525:ILE:HD11	2.23	0.69
1:H:456:ILE:O	1:H:460:VAL:HG13	1.93	0.69
1:A:122:LYS:HE3	1:A:128:ALA:O	1.93	0.69
1:G:49:ILE:HD12	1:G:100:THR:CG2	2.23	0.69
1:G:70:LEU:HD11	1:G:159:HIS:CE1	2.27	0.69
1:A:294:TYR:HB2	1:B:16:HIS:CD2	2.27	0.69
1:C:25:PRO:O	1:C:28:ARG:NH1	2.26	0.69
1:B:83:SER:HB3	1:B:86:GLN:HG3	1.74	0.69
1:H:482:SER:OG	1:H:503:SER:HA	1.93	0.69
1:H:26:HIS:HB3	1:H:66:LYS:HG2	1.74	0.69
1:E:65:THR:HG23	1:E:67:ASP:H	1.57	0.68
1:G:173:LEU:HD21	1:G:178:LEU:HD13	1.75	0.68
1:C:44:ASP:HB2	1:C:170:LYS:HD3	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:153:ALA:HA	1:E:321:THR:OG1	1.93	0.68
1:A:222:LEU:HD23	1:A:241:LYS:HD2	1.74	0.68
1:D:262:THR:HA	1:D:268:ASN:ND2	2.08	0.68
1:D:175:LEU:C	1:D:175:LEU:HD23	2.19	0.68
1:E:400:SER:CB	1:E:600:ALA:HB2	2.24	0.68
1:H:181:PHE:CE1	1:H:341:ASP:HB2	2.28	0.68
1:A:542:LYS:HD3	1:A:602:PHE:CG	2.28	0.68
1:D:594:ILE:HA	1:D:597:ILE:HD12	1.76	0.68
1:C:394:TYR:O	1:C:398:LEU:HD23	1.94	0.68
1:F:248:VAL:HG23	1:F:299:ILE:HD13	1.76	0.68
1:H:260:LEU:HD21	1:H:333:LEU:CD1	2.22	0.68
1:H:484:LYS:O	1:H:484:LYS:HD3	1.94	0.68
1:A:593:LEU:O	1:A:597:ILE:HG13	1.94	0.68
1:H:88:PHE:HD1	1:H:91:ILE:HB	1.59	0.68
1:B:195:SER:HB3	1:B:231:MET:CE	2.23	0.68
1:D:16:HIS:CE1	1:D:57:GLU:HG2	2.28	0.68
1:A:485:GLU:HA	1:A:488:LEU:HD12	1.76	0.67
1:B:83:SER:H	1:B:86:GLN:NE2	1.91	0.67
1:D:83:SER:OG	1:D:86:GLN:HG3	1.94	0.67
1:F:312:PRO:O	1:F:367:ARG:NH2	2.27	0.67
1:H:69:LEU:CD2	1:H:70:LEU:H	2.06	0.67
1:F:116:LEU:HD11	1:H:473:SER:OG	1.94	0.67
1:F:191:THR:OG1	1:F:332:THR:HG23	1.94	0.67
1:H:173:LEU:HD21	1:H:178:LEU:HD13	1.76	0.67
1:C:139:VAL:HG22	1:C:239:ILE:HD13	1.76	0.67
1:E:45:LYS:HE2	1:E:71:ASP:OD1	1.94	0.67
1:E:412:ILE:CG2	1:E:425:GLY:HA3	2.25	0.67
1:E:515:THR:HG23	1:E:517:ALA:H	1.59	0.67
1:F:291:LEU:HD13	1:H:57:GLU:OE2	1.95	0.67
1:A:386:LYS:HG2	1:A:493:TYR:CE1	2.30	0.67
1:A:602:PHE:C	1:A:603:LYS:HD3	2.20	0.67
1:H:37:ILE:HD11	1:H:94:LYS:CG	2.22	0.67
1:H:453:LEU:CA	1:H:456:ILE:HD12	2.23	0.67
1:A:57:GLU:OE2	1:B:291:LEU:HD13	1.95	0.67
1:B:228:GLU:OE1	1:B:231:MET:HG3	1.94	0.67
1:B:247:THR:HG22	1:B:250:GLU:CG	2.24	0.67
1:G:49:ILE:HG12	1:G:72:ALA:HB3	1.77	0.67
1:F:227:PHE:HB3	1:F:245:ILE:HD13	1.77	0.67
1:C:27:VAL:O	1:C:28:ARG:HD2	1.95	0.66
1:B:168:LEU:HD13	1:B:346:LYS:CE	2.25	0.66
1:F:256:LEU:HD23	1:F:259:LEU:HD12	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:135:ASP:OD1	1:G:151:GLY:HA2	1.96	0.66
1:A:16:HIS:CD2	1:B:294:TYR:HB2	2.30	0.66
1:D:116:LEU:O	1:D:116:LEU:HD23	1.94	0.66
1:B:336:ALA:HB1	1:B:344:ILE:HG21	1.77	0.66
1:F:144:ASN:O	1:F:148:GLY:N	2.28	0.66
1:F:196:LEU:CD2	1:F:245:ILE:HD12	2.25	0.66
1:G:336:ALA:HB1	1:G:344:ILE:HG21	1.76	0.66
1:C:484:LYS:O	1:C:487:GLU:HB3	1.96	0.66
1:E:394:TYR:CD2	1:E:446:LEU:HB3	2.30	0.66
1:F:83:SER:CB	1:F:86:GLN:HG3	2.23	0.66
1:F:201:ILE:HD12	1:F:201:ILE:H	1.61	0.66
1:E:497:LEU:HD13	1:E:535:PHE:HZ	1.61	0.66
1:H:256:LEU:HD23	1:H:259:LEU:HD12	1.75	0.66
1:A:283:ASN:HB3	1:A:330:SER:OG	1.95	0.66
1:A:372:ILE:HD12	1:B:31:GLU:HB2	1.78	0.66
1:C:227:PHE:CE1	1:C:246:PRO:HD3	2.30	0.66
1:D:510:SER:O	1:D:513:LYS:HB2	1.95	0.66
1:H:181:PHE:HZ	1:H:344:ILE:HD13	1.59	0.66
1:E:248:VAL:CG1	1:E:299:ILE:HD13	2.25	0.66
1:F:336:ALA:HB1	1:F:344:ILE:HG21	1.78	0.66
1:H:367:ARG:HG2	1:H:367:ARG:HH11	1.61	0.66
1:B:284:ASN:CB	1:B:319:THR:HG22	2.25	0.65
1:H:452:SER:O	1:H:456:ILE:HD12	1.97	0.65
1:E:25:PRO:HD2	1:G:361:ILE:HD12	1.77	0.65
1:F:16:HIS:CE1	1:F:57:GLU:HG2	2.31	0.65
1:A:59:LEU:HD22	1:A:321:THR:OG1	1.97	0.65
1:E:335:ASN:O	1:E:339:THR:HG23	1.96	0.65
1:C:518:ARG:C	1:C:525:ILE:HD11	2.21	0.65
1:D:48:LEU:HD23	1:D:103:ILE:HD11	1.79	0.65
1:F:339:THR:OG1	1:F:344:ILE:HD12	1.97	0.65
1:H:137:VAL:HG11	1:H:190:VAL:HB	1.78	0.65
1:E:556:ARG:HB2	1:E:583:PRO:HG3	1.79	0.65
1:B:137:VAL:HG23	1:B:192:ILE:HD13	1.78	0.65
1:D:59:LEU:HD22	1:D:321:THR:OG1	1.97	0.65
1:F:60:HIS:NE2	1:F:105:LYS:HE2	2.11	0.65
1:F:278:VAL:HG21	1:F:310:ILE:HD12	1.78	0.65
1:H:165:LYS:HG2	1:H:173:LEU:HD22	1.77	0.65
1:C:232:GLY:HA3	1:C:236:GLU:OE1	1.97	0.65
1:D:44:ASP:CB	1:D:170:LYS:HD2	2.27	0.65
1:F:69:LEU:HD21	1:F:160:LYS:CA	2.13	0.65
1:B:129:GLU:HG3	1:B:130:LEU:H	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:189:LEU:HD21	1:D:334:LEU:HB2	1.78	0.65
1:H:34:ARG:HH12	1:H:77:PHE:HA	1.62	0.65
1:C:174:GLU:N	1:C:174:GLU:OE1	2.30	0.64
1:F:196:LEU:HD23	1:F:245:ILE:HD12	1.79	0.64
1:B:551:GLY:O	1:B:555:THR:HG23	1.97	0.64
1:A:474:ILE:HD12	1:B:112:LEU:HD22	1.79	0.64
1:E:319:THR:HG23	1:E:322:THR:CG2	2.27	0.64
1:E:510:SER:O	1:E:513:LYS:HB2	1.97	0.64
1:G:199:VAL:HG21	1:G:324:LEU:HB2	1.80	0.64
1:H:69:LEU:HD23	1:H:70:LEU:H	1.63	0.64
1:B:285:LEU:O	1:B:322:THR:HB	1.97	0.64
1:C:534:GLU:O	1:C:534:GLU:OE2	2.16	0.64
1:D:279:VAL:HG13	1:D:314:ARG:HB2	1.80	0.64
1:F:173:LEU:HD21	1:F:178:LEU:HB2	1.79	0.64
1:A:508:LEU:C	1:A:508:LEU:HD23	2.23	0.64
1:E:16:HIS:CD2	1:G:294:TYR:HB2	2.32	0.64
1:E:63:PHE:HB3	1:E:69:LEU:HD22	1.78	0.64
1:G:199:VAL:H	1:G:235:ASN:HD21	1.43	0.64
1:B:247:THR:CG2	1:B:250:GLU:HG3	2.27	0.64
1:C:160:LYS:HE3	1:C:357:TRP:CD1	2.33	0.64
1:A:511:LEU:HD21	1:A:525:ILE:HD11	1.78	0.64
1:E:106:ASN:ND2	1:E:149:ARG:O	2.31	0.64
1:C:56:HIS:HA	1:C:322:THR:O	1.98	0.64
1:H:453:LEU:HD13	1:H:479:LEU:HD23	1.80	0.64
1:E:247:THR:HG23	1:E:250:GLU:H	1.63	0.64
1:D:479:LEU:CD1	1:D:504:LEU:HD23	2.28	0.63
1:F:248:VAL:HG21	1:F:299:ILE:HD13	1.79	0.63
1:D:247:THR:OG1	1:D:250:GLU:HG3	1.98	0.63
1:A:196:LEU:HD22	1:A:245:ILE:HD13	1.79	0.63
1:C:69:LEU:CD2	1:C:70:LEU:H	2.12	0.63
1:A:6:TRP:HB3	1:B:248:VAL:HG23	1.80	0.63
1:B:16:HIS:CE1	1:B:57:GLU:HG2	2.33	0.63
1:B:33:GLU:HG3	1:B:89:SER:CB	2.29	0.63
1:D:42:GLN:HE22	1:D:167:TYR:HE1	1.44	0.63
1:F:6:TRP:HB3	1:H:248:VAL:HG23	1.79	0.63
1:G:457:THR:HA	1:G:460:VAL:HG22	1.79	0.63
1:A:385:SER:N	1:A:487:GLU:OE1	2.31	0.63
1:E:130:LEU:HD22	1:G:514:TYR:CE2	2.33	0.63
1:A:84:THR:HG21	1:A:116:LEU:CD2	2.29	0.63
1:E:229:ILE:HG22	1:E:239:ILE:CG2	2.29	0.63
1:D:277:GLU:HB3	1:D:313:VAL:CG1	2.23	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:106:ASN:HB3	1:E:150:ARG:O	1.99	0.62
1:F:190:VAL:HG13	1:F:270:VAL:CG2	2.28	0.62
1:H:181:PHE:CE1	1:H:339:THR:CG2	2.73	0.62
1:B:225:ASP:HB3	1:B:243:SER:OG	1.97	0.62
1:D:189:LEU:HG	1:D:334:LEU:HD13	1.81	0.62
1:F:279:VAL:HG13	1:F:314:ARG:HB2	1.80	0.62
1:C:4:LYS:NZ	1:D:223:LYS:O	2.31	0.62
1:C:139:VAL:HG22	1:C:239:ILE:CD1	2.29	0.62
1:B:283:ASN:HB3	1:B:330:SER:OG	1.99	0.62
1:D:344:ILE:HA	1:D:347:PHE:HD2	1.65	0.62
1:C:42:GLN:HB3	1:C:44:ASP:OD1	2.00	0.62
1:D:472:TYR:O	1:D:476:ILE:HG12	1.99	0.62
1:F:83:SER:H	1:F:86:GLN:HE21	1.47	0.62
1:H:38:SER:HB3	1:H:94:LYS:HZ3	1.64	0.62
1:C:404:LYS:NZ	1:C:595:SER:HB2	2.15	0.62
1:C:528:LEU:O	1:C:531:PHE:HB3	1.99	0.62
1:D:278:VAL:HG11	1:D:310:ILE:HG23	1.82	0.62
1:F:372:ILE:CD1	1:H:29:LEU:HD23	2.30	0.62
1:H:37:ILE:CD1	1:H:94:LYS:HG2	2.22	0.62
1:A:402:VAL:HG11	1:A:435:ILE:CG2	2.30	0.62
1:A:427:THR:HA	1:A:430:ASN:ND2	2.14	0.62
1:F:247:THR:HB	1:F:250:GLU:HG3	1.81	0.62
1:E:229:ILE:O	1:E:239:ILE:HG22	2.00	0.62
1:F:335:ASN:O	1:F:339:THR:HG23	1.99	0.62
1:A:602:PHE:O	1:A:603:LYS:HD3	2.00	0.61
1:D:227:PHE:CE1	1:D:246:PRO:HD3	2.35	0.61
1:D:273:ASP:OD2	1:D:338:LYS:NZ	2.30	0.61
1:H:104:VAL:CG2	1:H:110:ASP:HB3	2.29	0.61
1:B:168:LEU:HD13	1:B:346:LYS:HE2	1.82	0.61
1:C:446:LEU:HD13	1:C:452:SER:CB	2.29	0.61
1:E:556:ARG:HB2	1:E:583:PRO:HB3	1.82	0.61
1:F:228:GLU:HG3	1:F:240:LYS:O	2.00	0.61
1:H:58:PRO:HB2	1:H:63:PHE:CE1	2.36	0.61
1:B:248:VAL:O	1:B:252:VAL:HG23	2.01	0.61
1:C:46:ILE:HD12	1:C:46:ILE:H	1.64	0.61
1:F:161:ILE:HG22	1:F:162:LEU:HD23	1.82	0.61
1:G:122:LYS:HA	1:G:126:LEU:O	2.01	0.61
1:A:3:SER:N	1:A:200:THR:HG1	1.98	0.61
1:C:126:LEU:HD22	4:C:804:HOH:O	1.99	0.61
1:D:157:LEU:HG	1:D:281:LEU:HD13	1.82	0.61
1:D:165:LYS:HA	1:D:347:PHE:CE1	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:30:ILE:HB	1:E:35:VAL:CG1	2.30	0.61
1:E:556:ARG:HA	1:E:583:PRO:N	2.15	0.61
1:H:116:LEU:O	1:H:120:LYS:HG3	2.00	0.61
1:A:227:PHE:CE1	1:A:246:PRO:HD3	2.36	0.61
1:C:195:SER:HB2	1:C:231:MET:CE	2.27	0.61
1:E:152:LEU:HD12	1:E:191:THR:HG23	1.83	0.61
1:E:487:GLU:HB2	1:E:493:TYR:HE1	1.65	0.61
1:E:556:ARG:CB	1:E:583:PRO:HG3	2.31	0.61
1:B:129:GLU:HG3	1:B:130:LEU:N	2.16	0.61
1:B:453:LEU:HD13	1:B:479:LEU:HD23	1.83	0.61
1:C:307:LYS:HG2	1:C:308:TYR:CE1	2.36	0.61
1:H:431:GLY:HA2	1:H:463:ALA:HB1	1.83	0.61
1:C:316:PHE:HE2	1:C:348:LEU:HD13	1.66	0.60
1:D:172:ASN:ND2	1:E:341:ASP:HA	2.16	0.60
1:E:136:ASP:HB3	1:E:150:ARG:H	1.66	0.60
1:C:197:ASP:HA	1:C:222:LEU:HD13	1.83	0.60
1:C:426:GLU:O	1:C:429:ALA:HB3	2.00	0.60
1:G:459:ILE:HA	1:G:462:THR:HG22	1.83	0.60
1:A:6:TRP:HZ3	1:B:246:PRO:HD2	1.67	0.60
1:B:63:PHE:O	1:B:69:LEU:HB3	2.01	0.60
1:E:116:LEU:HD21	1:G:473:SER:HB3	1.83	0.60
1:E:510:SER:HA	1:E:513:LYS:HE2	1.81	0.60
1:D:278:VAL:HG11	1:D:310:ILE:CG2	2.31	0.60
1:D:461:GLU:OE2	1:D:462:THR:N	2.34	0.60
1:H:496:THR:O	1:H:500:ILE:HD13	2.01	0.60
1:B:487:GLU:O	1:B:491:GLY:N	2.33	0.60
1:F:283:ASN:HB3	1:F:330:SER:HB3	1.83	0.60
1:H:66:LYS:NZ	1:H:67:ASP:OD1	2.19	0.60
1:E:464:MET:HB2	1:E:469:GLY:CA	2.31	0.60
1:C:33:GLU:HG3	1:C:89:SER:OG	2.02	0.60
1:C:397:LEU:CB	1:C:597:ILE:HG12	2.24	0.60
1:E:285:LEU:HD12	1:E:328:GLY:C	2.27	0.60
1:E:593:LEU:O	1:E:597:ILE:HG12	2.01	0.60
1:F:180:THR:HA	1:F:183:GLU:OE1	2.01	0.60
1:A:6:TRP:CZ3	1:B:246:PRO:HD2	2.37	0.60
1:E:294:TYR:HB2	1:G:16:HIS:HD2	1.66	0.60
1:G:514:TYR:O	1:G:515:THR:C	2.45	0.60
1:F:304:LEU:HD22	1:F:310:ILE:HB	1.84	0.60
1:C:440:ALA:C	1:C:442:GLY:H	2.10	0.60
1:B:402:VAL:HG11	1:B:436:LEU:HG	1.84	0.59
1:C:139:VAL:CG2	1:C:239:ILE:HD13	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:59:LEU:HG	1:D:60:HIS:CE1	2.37	0.59
1:D:479:LEU:HD12	1:D:504:LEU:HD23	1.84	0.59
1:G:115:GLY:O	1:G:119:GLU:HG2	2.02	0.59
1:A:445:ASP:O	1:A:452:SER:HB3	2.02	0.59
1:A:541:LEU:CB	1:A:602:PHE:HE2	2.15	0.59
1:E:69:LEU:CD2	1:E:70:LEU:H	2.16	0.59
1:F:239:ILE:HG23	1:F:240:LYS:HB2	1.84	0.59
1:H:472:TYR:O	1:H:476:ILE:HG13	2.02	0.59
1:E:528:LEU:HB2	1:E:590:LEU:HD21	1.84	0.59
1:A:437:LYS:HG2	1:A:441:GLU:OE1	2.02	0.59
1:B:56:HIS:HA	1:B:322:THR:O	2.01	0.59
1:C:400:SER:HA	1:C:403:LYS:HG2	1.84	0.59
1:C:408:LYS:C	1:C:410:PRO:HD2	2.27	0.59
1:E:7:ASP:HB3	1:G:247:THR:HA	1.85	0.59
1:E:257:GLU:OE2	1:E:307:LYS:HE2	2.02	0.59
1:E:285:LEU:HD12	1:E:329:PHE:CA	2.32	0.59
1:E:19:GLY:O	1:G:297:GLN:NE2	2.35	0.59
1:E:127:ASN:OD1	1:E:175:LEU:HD23	2.03	0.59
1:E:523:THR:HG23	1:E:526:ASP:H	1.67	0.59
1:A:534:GLU:HG3	1:A:544:ALA:HA	1.85	0.59
1:D:351:LYS:HE3	1:D:359:SER:O	2.02	0.59
1:F:364:TRP:O	1:F:367:ARG:HB2	2.02	0.59
1:H:8:TYR:CG	1:H:12:LEU:HD13	2.37	0.59
1:C:398:LEU:HD12	1:C:435:ILE:HD11	1.85	0.59
1:F:83:SER:H	1:F:86:GLN:NE2	2.01	0.59
1:G:84:THR:HG21	1:G:116:LEU:HD23	1.84	0.59
1:H:151:GLY:O	1:H:152:LEU:HD23	2.02	0.59
1:A:56:HIS:HA	1:A:322:THR:O	2.02	0.59
1:A:412:ILE:CG2	1:A:585:PRO:HB3	2.17	0.59
1:D:165:LYS:HA	1:D:347:PHE:HE1	1.68	0.59
1:G:49:ILE:HD12	1:G:100:THR:HG23	1.85	0.59
1:H:277:GLU:HG2	1:H:313:VAL:HG13	1.84	0.59
1:B:226:GLU:OE2	1:B:241:LYS:HD2	2.03	0.59
1:C:554:ALA:O	1:C:555:THR:C	2.46	0.59
1:F:535:PHE:HA	1:F:538:SER:HB3	1.85	0.59
1:D:88:PHE:HA	1:D:91:ILE:HD12	1.85	0.58
1:E:35:VAL:HG23	1:E:73:ALA:O	2.03	0.58
1:C:357:TRP:CD1	1:C:359:SER:HG	2.21	0.58
1:H:88:PHE:HZ	1:H:126:LEU:HD12	1.68	0.58
1:D:264:ASP:OD1	1:D:267:ARG:N	2.34	0.58
1:H:188:ASN:ND2	1:H:338:LYS:HB3	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:70:LEU:HD21	1:A:159:HIS:CD2	2.38	0.58
1:B:83:SER:HB3	1:B:86:GLN:CG	2.33	0.58
1:C:7:ASP:HB3	1:D:247:THR:HG22	1.85	0.58
1:E:556:ARG:HB2	1:E:583:PRO:CB	2.33	0.58
1:E:427:THR:HA	1:E:430:ASN:OD1	2.03	0.58
1:F:190:VAL:CG1	1:F:270:VAL:HG23	2.34	0.58
1:H:56:HIS:HA	1:H:322:THR:O	2.04	0.58
1:H:151:GLY:C	1:H:152:LEU:HD23	2.28	0.58
1:H:366:GLY:O	1:H:368:VAL:HG23	2.04	0.58
1:A:404:LYS:HG3	1:A:596:GLY:CA	2.33	0.58
1:A:542:LYS:HD3	1:A:602:PHE:CE2	2.37	0.58
1:C:44:ASP:OD1	1:C:44:ASP:N	2.32	0.58
1:C:397:LEU:HD22	1:C:597:ILE:HG23	1.84	0.58
1:E:16:HIS:CD2	1:G:291:LEU:HA	2.37	0.58
1:E:60:HIS:HE2	1:E:105:LYS:HE3	1.67	0.58
1:F:69:LEU:HD11	1:F:160:LYS:HD2	1.86	0.58
1:G:33:GLU:HG3	1:G:89:SER:OG	2.02	0.58
1:G:64:VAL:HA	1:G:70:LEU:O	2.03	0.58
1:A:115:GLY:O	1:A:119:GLU:HG2	2.03	0.58
1:B:199:VAL:HG21	1:B:324:LEU:HB2	1.86	0.58
1:B:370:ASN:ND2	1:D:41:ASN:OD1	2.37	0.58
1:D:106:ASN:ND2	1:D:149:ARG:O	2.36	0.58
1:F:16:HIS:CD2	1:H:294:TYR:HB2	2.38	0.58
1:F:53:GLY:HA2	1:F:80:ALA:O	2.03	0.58
1:A:453:LEU:HD22	1:A:476:ILE:HG23	1.85	0.58
1:A:534:GLU:OE2	1:A:538:SER:HB3	2.04	0.58
1:E:402:VAL:O	1:E:406:ILE:HG13	2.03	0.58
1:A:181:PHE:HA	1:A:184:LYS:HD2	1.86	0.58
1:A:530:PRO:HB2	1:A:547:ALA:HB1	1.85	0.58
1:C:411:LYS:O	1:C:411:LYS:HG2	2.02	0.58
1:E:251:LEU:O	1:E:255:LEU:HG	2.03	0.58
1:E:542:LYS:HG3	1:E:602:PHE:CE2	2.38	0.58
1:H:26:HIS:ND1	1:H:66:LYS:HD3	2.18	0.58
1:A:84:THR:HG21	1:B:461:GLU:OE1	2.04	0.57
1:A:534:GLU:OE2	1:A:543:LEU:HB2	2.03	0.57
1:B:56:HIS:CE1	1:B:233:ILE:HD12	2.39	0.57
1:E:450:VAL:O	1:E:454:VAL:HG23	2.04	0.57
1:G:59:LEU:HG	1:G:60:HIS:ND1	2.19	0.57
1:B:453:LEU:CD1	1:B:479:LEU:HD23	2.34	0.57
1:B:525:ILE:HD11	1:B:529:GLU:HB2	1.84	0.57
1:C:199:VAL:HG21	1:C:324:LEU:HB2	1.84	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:16:HIS:NE2	1:F:57:GLU:HG2	2.18	0.57
1:G:5:HIS:CD2	1:G:202:PRO:HG3	2.38	0.57
1:G:282:ILE:HG13	1:G:297:GLN:HB2	1.86	0.57
1:B:120:LYS:NZ	1:B:120:LYS:HB3	2.19	0.57
1:D:248:VAL:O	1:D:252:VAL:HG23	2.04	0.57
1:D:545:ASN:HD21	1:D:547:ALA:HB3	1.69	0.57
1:F:102:ILE:O	1:F:130:LEU:HD12	2.04	0.57
1:A:538:SER:CB	1:A:543:LEU:HD13	2.35	0.57
1:B:16:HIS:NE2	1:B:57:GLU:HG2	2.19	0.57
1:C:37:ILE:HG22	1:C:38:SER:O	2.04	0.57
1:G:59:LEU:HD12	1:G:63:PHE:CE1	2.40	0.57
1:H:277:GLU:HG2	1:H:313:VAL:CG1	2.35	0.57
1:A:412:ILE:HG22	1:A:425:GLY:HA2	1.87	0.57
1:A:534:GLU:C	1:A:534:GLU:OE1	2.47	0.57
1:D:102:ILE:HB	1:D:130:LEU:HD12	1.85	0.57
1:F:49:ILE:HG23	1:F:72:ALA:HB3	1.87	0.57
1:A:500:ILE:HG23	1:A:504:LEU:HD12	1.86	0.57
1:G:141:LYS:HG3	1:G:266:ASP:O	2.03	0.57
1:H:305:ALA:O	1:H:309:SER:HA	2.05	0.57
1:G:66:LYS:HB3	1:G:66:LYS:NZ	2.18	0.57
1:H:27:VAL:HG11	1:H:64:VAL:HG13	1.87	0.57
1:A:412:ILE:HG23	1:A:585:PRO:CB	2.16	0.57
1:E:19:GLY:HA2	1:E:22:GLN:OE1	2.05	0.57
1:C:535:PHE:HB2	1:C:544:ALA:CB	2.34	0.57
1:F:45:LYS:O	1:F:96:SER:OG	2.20	0.57
1:F:74:VAL:HG12	1:F:82:PRO:HB3	1.85	0.57
1:H:180:THR:O	1:H:184:LYS:HG3	2.05	0.57
1:F:87:ILE:O	1:F:91:ILE:HG13	2.05	0.56
1:F:273:ASP:N	1:F:276:ASP:OD1	2.26	0.56
1:H:364:TRP:O	1:H:367:ARG:HB3	2.05	0.56
1:E:160:LYS:HD3	1:E:357:TRP:CD2	2.40	0.56
1:F:116:LEU:HD22	1:F:120:LYS:CE	2.34	0.56
1:B:164:ALA:HB3	1:B:347:PHE:HB3	1.87	0.56
1:B:393:LEU:O	1:B:397:LEU:HG	2.05	0.56
1:E:60:HIS:NE2	1:E:105:LYS:HE3	2.20	0.56
1:E:181:PHE:O	1:E:185:VAL:HG23	2.04	0.56
1:E:248:VAL:HG21	1:E:296:ILE:HG12	1.87	0.56
1:E:285:LEU:HD12	1:E:329:PHE:HA	1.87	0.56
1:F:304:LEU:HD22	1:F:310:ILE:CB	2.35	0.56
1:G:37:ILE:HB	1:G:94:LYS:HD3	1.86	0.56
1:H:88:PHE:CZ	1:H:126:LEU:HD12	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:479:LEU:O	1:A:483:LEU:HG	2.06	0.56
1:C:357:TRP:HD1	1:C:359:SER:HG	1.53	0.56
1:F:345:LEU:HD23	1:F:348:LEU:HD12	1.88	0.56
1:D:232:GLY:HA3	1:D:236:GLU:OE1	2.04	0.56
1:E:56:HIS:HA	1:E:322:THR:O	2.05	0.56
1:H:33:GLU:HG3	1:H:89:SER:OG	2.05	0.56
1:A:137:VAL:HG21	1:A:259:LEU:HD23	1.88	0.56
1:B:83:SER:CB	1:B:86:GLN:HG3	2.36	0.56
1:B:168:LEU:HD13	1:B:346:LYS:HE3	1.87	0.56
1:B:377:GLU:OE2	1:B:377:GLU:N	2.37	0.56
1:B:181:PHE:O	1:B:185:VAL:HG23	2.06	0.56
1:F:9:LYS:HE3	1:H:249:ASP:OD1	2.06	0.56
1:F:120:LYS:NZ	1:H:458:ASP:OD1	2.33	0.56
1:A:603:LYS:HD3	1:A:603:LYS:N	2.21	0.56
1:C:291:LEU:HA	1:D:16:HIS:HD2	1.70	0.56
1:D:172:ASN:HD22	1:E:341:ASP:HA	1.71	0.56
1:E:500:ILE:HG23	1:E:504:LEU:HD13	1.88	0.56
1:H:345:LEU:HD12	1:H:345:LEU:H	1.71	0.56
1:E:528:LEU:HB2	1:E:590:LEU:CD2	2.36	0.56
1:A:118:ALA:O	1:A:122:LYS:HG3	2.05	0.56
1:D:16:HIS:NE2	1:D:57:GLU:HG2	2.21	0.56
1:H:88:PHE:CE1	1:H:91:ILE:HB	2.41	0.56
1:C:30:ILE:HG22	1:C:33:GLU:H	1.71	0.55
1:E:104:VAL:HG21	1:E:130:LEU:HD11	1.88	0.55
1:E:247:THR:HG23	1:E:250:GLU:HB2	1.88	0.55
1:H:199:VAL:H	1:H:235:ASN:HD21	1.53	0.55
1:H:452:SER:C	1:H:456:ILE:HD12	2.31	0.55
1:E:298:ASN:HA	1:G:22:GLN:OE1	2.05	0.55
1:F:227:PHE:CE1	1:F:246:PRO:HD3	2.41	0.55
1:H:137:VAL:HG12	1:H:149:ARG:HH21	1.71	0.55
1:H:509:GLN:OE1	1:H:509:GLN:O	2.25	0.55
1:B:436:LEU:HA	1:B:439:LEU:HD12	1.89	0.55
1:H:33:GLU:HG3	1:H:89:SER:CB	2.36	0.55
1:D:304:LEU:HD22	1:D:310:ILE:HB	1.89	0.55
1:E:182:GLY:O	1:E:186:VAL:HG23	2.06	0.55
1:B:343:ASP:HB3	1:B:346:LYS:HB3	1.87	0.55
1:F:68:GLY:O	1:F:352:THR:HG21	2.06	0.55
1:C:66:LYS:HG3	1:C:67:ASP:OD1	2.05	0.55
1:F:304:LEU:HD22	1:F:310:ILE:CG2	2.36	0.55
1:G:83:SER:HB2	1:G:86:GLN:HG3	1.88	0.55
1:A:519:THR:HG23	1:A:526:ASP:HA	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:351:LYS:NZ	1:B:362:SER:OG	2.39	0.55
1:E:63:PHE:HB2	1:E:70:LEU:HD12	1.88	0.55
1:F:294:TYR:CE2	1:H:20:LEU:HD12	2.41	0.55
1:C:517:ALA:O	1:C:525:ILE:HD13	2.06	0.55
1:H:82:PRO:HD2	1:H:114:PHE:HE1	1.70	0.55
1:D:461:GLU:OE2	1:D:462:THR:CG2	2.55	0.54
1:E:514:TYR:HE2	1:G:119:GLU:OE2	1.90	0.54
1:G:16:HIS:CE1	1:G:57:GLU:HG2	2.41	0.54
1:A:473:SER:HB2	1:B:116:LEU:HD22	1.89	0.54
1:B:409:GLU:N	1:B:410:PRO:HD2	2.22	0.54
1:B:451:LYS:O	1:B:455:GLN:HG3	2.07	0.54
1:C:393:LEU:HD12	1:C:397:LEU:HD11	1.88	0.54
1:C:529:GLU:HB3	1:C:530:PRO:CD	2.36	0.54
1:E:291:LEU:HA	1:G:16:HIS:CD2	2.41	0.54
1:A:508:LEU:HD23	1:A:508:LEU:O	2.07	0.54
1:D:467:THR:HG23	1:D:468:SER:H	1.72	0.54
1:E:33:GLU:HG3	1:E:89:SER:CB	2.37	0.54
1:C:16:HIS:CE1	1:C:57:GLU:HG2	2.42	0.54
1:D:45:LYS:HD3	1:D:167:TYR:HA	1.88	0.54
1:D:197:ASP:HA	1:D:222:LEU:HD22	1.88	0.54
1:E:228:GLU:OE2	1:E:238:GLY:N	2.40	0.54
1:E:297:GLN:NE2	1:G:19:GLY:O	2.39	0.54
1:F:201:ILE:HD12	1:F:201:ILE:N	2.22	0.54
1:A:470:GLY:HA3	1:B:112:LEU:HD13	1.90	0.54
1:C:43:GLU:HB3	1:C:97:LYS:HD3	1.90	0.54
1:D:278:VAL:CG2	1:D:333:LEU:HD22	2.38	0.54
1:E:13:VAL:HG21	1:E:34:ARG:HH12	1.72	0.54
1:A:103:ILE:HD13	1:A:159:HIS:HD2	1.73	0.54
1:A:534:GLU:OE2	1:A:538:SER:CB	2.56	0.54
1:B:426:GLU:O	1:B:430:ASN:ND2	2.40	0.54
1:D:47:THR:HG22	1:D:49:ILE:HD12	1.89	0.54
1:D:459:ILE:H	1:D:459:ILE:HD12	1.72	0.54
1:C:28:ARG:NH2	1:D:368:VAL:HG22	2.23	0.54
1:C:473:SER:OG	1:D:116:LEU:HD11	2.08	0.54
1:D:45:LYS:HG3	1:D:166:ALA:O	2.07	0.54
1:A:481:LYS:HD2	1:B:122:LYS:HD2	1.89	0.54
1:E:30:ILE:HB	1:E:35:VAL:HG13	1.90	0.54
1:E:523:THR:HG23	1:E:526:ASP:N	2.23	0.54
1:E:556:ARG:CG	1:E:583:PRO:HG3	2.37	0.54
1:F:232:GLY:HA3	1:F:236:GLU:OE1	2.08	0.54
1:G:351:LYS:HE3	1:G:362:SER:OG	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:63:PHE:O	1:A:69:LEU:HB3	2.08	0.54
1:B:283:ASN:ND2	1:B:321:THR:O	2.32	0.54
1:C:65:THR:HG23	1:C:67:ASP:H	1.73	0.54
1:D:343:ASP:HB2	1:D:347:PHE:CE2	2.42	0.54
1:E:387:VAL:O	1:E:388:SER:C	2.51	0.54
1:H:455:GLN:O	1:H:459:ILE:HG22	2.08	0.54
1:A:534:GLU:C	1:A:534:GLU:CD	2.76	0.54
1:G:199:VAL:HG21	1:G:325:ASP:H	1.72	0.54
1:G:460:VAL:O	1:G:464:MET:HB2	2.08	0.54
1:H:227:PHE:CE1	1:H:242:SER:HB2	2.43	0.54
1:H:495:LEU:O	1:H:495:LEU:HG	2.08	0.54
1:A:248:VAL:HG23	1:B:6:TRP:HB3	1.90	0.53
1:A:297:GLN:NE2	1:B:19:GLY:O	2.37	0.53
1:C:25:PRO:HD2	1:D:361:ILE:HG13	1.89	0.53
1:A:426:GLU:HG3	1:A:426:GLU:O	2.07	0.53
1:D:479:LEU:HD12	1:D:504:LEU:HA	1.90	0.53
1:H:61:ALA:O	1:H:64:VAL:HG12	2.08	0.53
1:A:287:GLY:N	1:A:326:GLY:O	2.40	0.53
1:A:534:GLU:CD	1:A:543:LEU:HB2	2.32	0.53
1:B:227:PHE:HB3	1:B:245:ILE:CD1	2.38	0.53
1:C:431:GLY:HA2	1:C:463:ALA:HB1	1.90	0.53
1:E:401:GLY:HA2	1:E:596:GLY:HA3	1.89	0.53
1:F:22:GLN:NE2	1:H:298:ASN:OD1	2.41	0.53
1:G:33:GLU:HA	1:G:33:GLU:OE1	2.08	0.53
1:G:461:GLU:O	1:G:462:THR:C	2.49	0.53
1:E:297:GLN:O	1:E:301:VAL:HG23	2.08	0.53
1:F:64:VAL:HG23	1:F:73:ALA:HB2	1.89	0.53
1:A:45:LYS:NZ	1:A:71:ASP:OD1	2.40	0.53
1:E:14:LEU:HD21	1:E:34:ARG:CG	2.39	0.53
1:E:262:THR:HA	1:E:268:ASN:ND2	2.21	0.53
1:E:426:GLU:O	1:E:429:ALA:HB3	2.08	0.53
1:F:277:GLU:HG3	1:F:337:THR:HG23	1.91	0.53
1:A:412:ILE:HD11	1:A:589:GLY:CA	2.37	0.53
1:A:534:GLU:CD	1:A:534:GLU:O	2.51	0.53
1:C:78:ILE:HG21	1:C:201:ILE:HG23	1.90	0.53
1:D:461:GLU:OE2	1:D:462:THR:HG23	2.09	0.53
1:B:264:ASP:OD1	1:B:266:ASP:N	2.41	0.53
1:C:518:ARG:HA	1:C:525:ILE:HD11	1.89	0.53
1:D:174:GLU:OE1	1:D:177:GLN:HB3	2.09	0.53
1:H:297:GLN:OE1	1:H:317:THR:HG21	2.09	0.53
1:C:456:ILE:HA	1:C:459:ILE:HG22	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:60:HIS:HE2	1:D:105:LYS:HE3	1.73	0.53
1:E:298:ASN:HB2	1:G:19:GLY:CA	2.39	0.53
1:F:229:ILE:HG23	1:F:255:LEU:HD21	1.91	0.53
1:H:282:ILE:HB	1:H:317:THR:HG23	1.90	0.53
1:H:339:THR:HG22	1:H:341:ASP:H	1.74	0.53
1:D:104:VAL:HG12	1:D:105:LYS:O	2.08	0.53
1:E:412:ILE:HG21	1:E:425:GLY:CA	2.38	0.53
1:E:556:ARG:HB2	1:E:583:PRO:CG	2.39	0.53
1:A:27:VAL:HG12	1:A:64:VAL:HG12	1.91	0.53
1:A:83:SER:HB3	1:A:86:GLN:HG3	1.90	0.53
1:A:412:ILE:HD11	1:A:589:GLY:N	2.24	0.53
1:A:453:LEU:O	1:A:457:THR:HG23	2.08	0.53
1:E:232:GLY:CA	1:E:236:GLU:HB2	2.32	0.53
1:E:265:LYS:HD3	1:E:266:ASP:H	1.73	0.53
1:E:481:LYS:NZ	1:E:485:GLU:OE2	2.41	0.53
1:G:82:PRO:HG2	1:G:87:ILE:HD11	1.91	0.53
1:H:8:TYR:CD1	1:H:12:LEU:HD13	2.44	0.53
1:C:531:PHE:CD1	1:C:531:PHE:C	2.87	0.52
1:E:412:ILE:HD11	1:E:588:ILE:CB	2.38	0.52
1:A:397:LEU:HD21	1:A:601:TYR:HB2	1.91	0.52
1:B:281:LEU:HD12	1:B:316:PHE:HB2	1.91	0.52
1:E:260:LEU:HD21	1:E:333:LEU:CD1	2.39	0.52
1:H:200:THR:HG22	1:H:201:ILE:N	2.24	0.52
1:A:222:LEU:HD21	1:A:241:LYS:HD2	1.90	0.52
1:B:229:ILE:HG22	1:B:239:ILE:HG22	1.90	0.52
1:B:243:SER:HB2	1:H:243:SER:C	2.34	0.52
1:D:59:LEU:HG	1:D:60:HIS:ND1	2.24	0.52
1:F:47:THR:HG21	1:F:94:LYS:O	2.10	0.52
1:C:16:HIS:NE2	1:C:57:GLU:HG2	2.23	0.52
1:C:441:GLU:C	1:C:443:LYS:H	2.16	0.52
1:E:16:HIS:CE1	1:E:57:GLU:HG2	2.44	0.52
1:E:223:LYS:HE2	1:E:225:ASP:OD1	2.09	0.52
1:F:6:TRP:CZ3	1:H:251:LEU:HD22	2.44	0.52
1:F:301:VAL:HG21	1:F:315:ILE:CD1	2.39	0.52
1:E:191:THR:HB	1:E:332:THR:HG23	1.91	0.52
1:E:281:LEU:HB3	1:E:332:THR:HB	1.90	0.52
1:F:129:GLU:HB3	1:F:179:VAL:HG21	1.91	0.52
1:A:251:LEU:HD22	1:B:6:TRP:CZ3	2.44	0.52
1:B:14:LEU:HD21	1:B:34:ARG:CG	2.24	0.52
1:D:165:LYS:HG3	1:D:347:PHE:CZ	2.45	0.52
1:E:140:GLY:N	1:E:267:ARG:HH12	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:594:ILE:HA	1:E:597:ILE:CG1	2.40	0.52
1:F:293:LEU:HD23	1:F:317:THR:HG22	1.92	0.52
1:H:476:ILE:O	1:H:479:LEU:HB3	2.09	0.52
1:B:423:ASP:O	1:B:427:THR:HG23	2.09	0.52
1:C:313:VAL:HG22	1:C:314:ARG:NH1	2.25	0.52
1:D:47:THR:HG22	1:D:49:ILE:CD1	2.40	0.52
1:D:181:PHE:HZ	1:D:344:ILE:HD13	1.75	0.52
1:D:458:ASP:O	1:D:462:THR:HG23	2.10	0.52
1:E:22:GLN:OE1	1:G:298:ASN:HA	2.09	0.52
1:E:248:VAL:HG13	1:E:299:ILE:HD13	1.90	0.52
1:F:304:LEU:HD22	1:F:310:ILE:HG21	1.92	0.52
1:A:404:LYS:HG3	1:A:596:GLY:HA3	1.91	0.52
1:B:66:LYS:NZ	1:B:66:LYS:HB3	2.24	0.52
1:C:486:LYS:O	1:C:490:GLU:HB2	2.10	0.52
1:F:59:LEU:HG	1:F:60:HIS:ND1	2.25	0.52
1:B:59:LEU:HG	1:B:60:HIS:ND1	2.25	0.52
1:C:181:PHE:HZ	1:C:344:ILE:HD13	1.74	0.52
1:F:464:MET:HB3	1:F:469:GLY:CA	2.36	0.52
1:A:247:THR:HA	1:B:7:ASP:O	2.10	0.51
1:D:184:LYS:HD2	1:D:339:THR:O	2.10	0.51
1:E:112:LEU:HD13	1:G:470:GLY:HA3	1.92	0.51
1:E:296:ILE:HD13	1:E:329:PHE:CD2	2.45	0.51
1:H:131:LEU:CD1	1:H:183:GLU:HG2	2.40	0.51
1:B:168:LEU:CD1	1:B:346:LYS:HE2	2.40	0.51
1:C:50:SER:CB	1:C:70:LEU:HD11	2.40	0.51
1:C:467:THR:HG22	1:C:471:LEU:HD11	1.92	0.51
1:D:56:HIS:HA	1:D:322:THR:O	2.10	0.51
1:C:104:VAL:HG22	1:C:105:LYS:O	2.10	0.51
1:C:251:LEU:HD22	1:D:6:TRP:CZ3	2.45	0.51
1:D:172:ASN:CB	1:E:340:GLY:O	2.58	0.51
1:E:343:ASP:HB3	1:E:346:LYS:HB3	1.92	0.51
1:H:50:SER:HB3	1:H:70:LEU:HD11	1.92	0.51
1:E:60:HIS:ND1	1:E:159:HIS:HE1	2.08	0.51
1:E:257:GLU:HG2	1:E:308:TYR:OH	2.11	0.51
1:E:523:THR:OG1	1:E:525:ILE:HG22	2.11	0.51
1:E:549:HIS:O	1:E:553:GLU:HG2	2.11	0.51
1:H:181:PHE:CZ	1:H:344:ILE:HD13	2.44	0.51
1:A:84:THR:HG21	1:A:116:LEU:HD23	1.93	0.51
1:A:467:THR:O	1:A:471:LEU:HG	2.10	0.51
1:D:587:ALA:HA	1:D:590:LEU:HD12	1.93	0.51
1:E:314:ARG:NH2	1:E:349:ASP:OD2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:472:TYR:OH	1:E:590:LEU:HD13	2.10	0.51
1:B:552:ALA:HB1	1:B:588:ILE:HD13	1.92	0.51
1:C:402:VAL:HA	1:C:405:VAL:HG22	1.92	0.51
1:D:474:ILE:HA	1:D:477:SER:OG	2.10	0.51
1:E:60:HIS:CE1	1:E:105:LYS:HE3	2.46	0.51
1:F:296:ILE:HD13	1:F:329:PHE:CD1	2.45	0.51
1:G:149:ARG:HD3	1:G:269:TYR:CE1	2.45	0.51
1:H:165:LYS:HE2	1:H:173:LEU:HD13	1.92	0.51
1:H:505:GLN:O	1:H:508:LEU:HB3	2.10	0.51
1:A:138:SER:OG	1:A:239:ILE:HG23	2.11	0.51
1:C:545:ASN:HD21	1:C:595:SER:HA	1.76	0.51
1:F:46:ILE:HD12	1:F:46:ILE:H	1.75	0.51
1:G:109:GLY:O	1:G:113:HIS:ND1	2.43	0.51
1:H:141:LYS:N	1:H:266:ASP:OD1	2.43	0.51
1:H:457:THR:HG21	1:H:477:SER:HB3	1.93	0.51
1:B:402:VAL:HG21	1:B:435:ILE:HG21	1.92	0.51
1:C:53:GLY:HA3	1:C:234:HIS:HE1	1.76	0.51
1:D:44:ASP:OD1	1:D:44:ASP:N	2.42	0.51
1:E:228:GLU:HG2	1:E:231:MET:HB2	1.92	0.51
1:G:248:VAL:O	1:G:252:VAL:HG23	2.10	0.51
1:G:457:THR:HG21	1:G:477:SER:CB	2.41	0.51
1:A:344:ILE:HG23	1:A:345:LEU:N	2.26	0.51
1:A:400:SER:CB	1:A:600:ALA:HB2	2.41	0.51
1:E:412:ILE:HD11	1:E:588:ILE:CG2	2.41	0.51
1:E:523:THR:HG23	1:E:525:ILE:HG23	1.91	0.51
1:C:249:ASP:OD2	1:D:9:LYS:HB2	2.10	0.51
1:D:505:GLN:O	1:D:509:GLN:HG3	2.11	0.51
1:H:24:ASN:CG	1:H:27:VAL:HG22	2.36	0.51
1:B:227:PHE:CD1	1:B:246:PRO:HD3	2.46	0.50
1:F:254:GLU:HG2	1:F:258:TYR:CE1	2.45	0.50
1:G:33:GLU:OE2	1:G:85:LYS:HE2	2.10	0.50
1:A:534:GLU:OE1	1:A:534:GLU:O	2.29	0.50
1:F:107:TYR:O	1:F:111:ILE:HG12	2.12	0.50
1:F:527:ALA:O	1:F:530:PRO:HD2	2.11	0.50
1:H:69:LEU:HD23	1:H:70:LEU:N	2.27	0.50
1:H:339:THR:HG21	1:H:344:ILE:HD13	1.92	0.50
1:H:479:LEU:HD12	1:H:503:SER:HB3	1.94	0.50
1:C:12:LEU:HD23	1:C:202:PRO:HG2	1.94	0.50
1:C:63:PHE:HB3	1:C:69:LEU:CD2	2.40	0.50
1:D:26:HIS:CG	1:D:66:LYS:HD2	2.46	0.50
1:F:47:THR:HG23	1:F:96:SER:HB3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:435:ILE:HG12	1:H:436:LEU:N	2.27	0.50
1:A:192:ILE:HG12	1:A:255:LEU:HD22	1.92	0.50
1:D:49:ILE:CD1	1:D:100:THR:HG23	2.42	0.50
1:F:47:THR:HG23	1:F:96:SER:CB	2.41	0.50
1:A:196:LEU:CD2	1:A:245:ILE:HD13	2.40	0.50
1:A:399:GLU:OE2	1:A:403:LYS:HD3	2.11	0.50
1:C:411:LYS:HB2	1:C:411:LYS:NZ	2.27	0.50
1:E:199:VAL:HG12	1:E:326:GLY:HA2	1.92	0.50
1:F:4:LYS:NZ	1:H:196:LEU:O	2.32	0.50
1:F:7:ASP:O	1:H:247:THR:HA	2.12	0.50
1:F:41:ASN:OD1	1:F:94:LYS:HE2	2.11	0.50
1:G:110:ASP:O	1:G:114:PHE:HD1	1.94	0.50
1:E:291:LEU:HD12	1:G:16:HIS:HB2	1.93	0.50
1:H:88:PHE:HZ	1:H:126:LEU:CD1	2.23	0.50
1:C:3:SER:HB3	1:D:224:HIS:NE2	2.27	0.50
1:D:87:ILE:HD13	1:D:114:PHE:CG	2.47	0.50
1:D:134:GLN:O	1:D:149:ARG:NH2	2.45	0.50
1:D:461:GLU:HG3	1:D:477:SER:HB3	1.93	0.50
1:E:33:GLU:HG3	1:E:89:SER:OG	2.12	0.50
1:E:168:LEU:HD13	1:E:346:LYS:CE	2.42	0.50
1:F:261:SER:O	1:F:268:ASN:HB2	2.12	0.50
1:G:160:LYS:HD3	1:G:357:TRP:CD2	2.46	0.50
1:C:294:TYR:HB2	1:D:16:HIS:CD2	2.47	0.50
1:C:344:ILE:HG23	1:C:345:LEU:N	2.27	0.50
1:G:475:PHE:HD2	1:G:511:LEU:HD13	1.75	0.50
1:H:380:GLU:OE2	1:H:380:GLU:HA	2.11	0.50
1:B:88:PHE:O	1:B:92:LYS:HG2	2.11	0.50
1:B:225:ASP:CB	1:B:243:SER:HG	2.25	0.50
1:C:21:CYS:SG	1:C:29:LEU:HB2	2.52	0.50
1:C:404:LYS:HD3	1:C:592:ALA:O	2.10	0.50
1:C:427:THR:O	1:C:429:ALA:N	2.45	0.50
1:C:509:GLN:OE1	1:C:509:GLN:HA	2.12	0.50
1:D:107:TYR:HE1	1:D:150:ARG:HD2	1.77	0.50
1:D:173:LEU:HD21	1:D:178:LEU:HD13	1.94	0.50
1:D:296:ILE:HD13	1:D:329:PHE:CD1	2.47	0.50
1:E:450:VAL:HG21	1:E:484:LYS:HB2	1.93	0.50
1:A:16:HIS:NE2	1:A:57:GLU:HG2	2.26	0.49
1:C:134:GLN:HA	1:C:150:ARG:O	2.11	0.49
1:E:38:SER:O	1:E:94:LYS:NZ	2.45	0.49
1:A:552:ALA:HB1	1:A:588:ILE:HD13	1.93	0.49
1:B:225:ASP:HB3	1:B:243:SER:HG	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:444:LEU:CD2	1:B:455:GLN:HB2	2.42	0.49
1:F:277:GLU:HB3	1:F:313:VAL:HG21	1.93	0.49
1:G:106:ASN:ND2	1:G:149:ARG:O	2.30	0.49
1:F:56:HIS:CE1	1:F:233:ILE:HD12	2.47	0.49
1:G:17:LEU:HD23	1:G:36:VAL:HG23	1.94	0.49
1:G:106:ASN:HA	1:G:111:ILE:HD11	1.95	0.49
1:H:120:LYS:O	1:H:124:GLU:HG3	2.12	0.49
1:A:138:SER:C	1:A:239:ILE:HG21	2.38	0.49
1:A:294:TYR:HB2	1:B:16:HIS:HD2	1.71	0.49
1:C:468:SER:HA	1:C:471:LEU:HD12	1.93	0.49
1:G:260:LEU:HD13	1:G:308:TYR:CG	2.48	0.49
1:D:135:ASP:OD1	1:D:151:GLY:HA2	2.12	0.49
1:D:175:LEU:HD23	1:D:179:VAL:HG23	1.94	0.49
1:E:344:ILE:HG23	1:E:345:LEU:N	2.27	0.49
1:F:65:THR:HB	1:F:354:ALA:HB2	1.93	0.49
1:F:126:LEU:H	1:F:126:LEU:HD22	1.78	0.49
1:F:227:PHE:CZ	1:F:246:PRO:HG3	2.47	0.49
1:G:314:ARG:NH2	1:G:345:LEU:HD23	2.27	0.49
1:H:188:ASN:HD21	1:H:338:LYS:HB3	1.78	0.49
1:H:279:VAL:HB	1:H:334:LEU:HB3	1.94	0.49
1:A:311:LYS:HE3	1:A:369:ASP:OD1	2.12	0.49
1:A:457:THR:HG21	1:A:477:SER:HB3	1.94	0.49
1:D:164:ALA:HB3	1:D:347:PHE:HB3	1.95	0.49
1:D:335:ASN:OD1	1:D:338:LYS:HG2	2.12	0.49
1:D:464:MET:HE3	1:D:469:GLY:HA2	1.95	0.49
1:H:344:ILE:HG23	1:H:345:LEU:HD12	1.95	0.49
1:B:247:THR:CG2	1:B:250:GLU:H	2.26	0.49
1:C:431:GLY:HA2	1:C:463:ALA:CB	2.43	0.49
1:D:45:LYS:O	1:D:96:SER:OG	2.26	0.49
1:D:101:LEU:HD12	1:D:102:ILE:N	2.27	0.49
1:F:336:ALA:HA	1:F:344:ILE:HD13	1.94	0.49
1:B:407:SER:O	1:B:410:PRO:HD2	2.12	0.49
1:C:527:ALA:HB2	1:C:587:ALA:HB1	1.95	0.49
1:F:24:ASN:HB3	1:F:27:VAL:HG22	1.93	0.49
1:A:84:THR:OG1	1:A:116:LEU:HD23	2.12	0.49
1:A:399:GLU:HA	1:A:402:VAL:HG22	1.94	0.49
1:B:28:ARG:HG2	1:B:28:ARG:HH11	1.77	0.49
1:B:497:LEU:HG	1:B:535:PHE:CZ	2.48	0.49
1:E:285:LEU:HD12	1:E:329:PHE:N	2.28	0.49
1:G:199:VAL:HG21	1:G:324:LEU:CB	2.42	0.49
1:H:297:GLN:OE1	1:H:317:THR:CG2	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:49:ILE:HG12	1:B:72:ALA:HB3	1.94	0.49
1:C:360:ASN:O	1:D:353:SER:HA	2.13	0.49
1:D:257:GLU:O	1:D:261:SER:HB3	2.13	0.49
1:D:283:ASN:HB3	1:D:330:SER:OG	2.13	0.49
1:F:516:ARG:O	1:F:517:ALA:HB2	2.13	0.49
1:G:227:PHE:CE2	1:G:229:ILE:HG13	2.48	0.49
1:A:60:HIS:HE2	1:A:105:LYS:HE3	1.78	0.48
1:E:537:LYS:HB3	1:E:537:LYS:HE3	1.55	0.48
1:F:297:GLN:OE1	1:H:23:SER:OG	2.30	0.48
1:G:45:LYS:HB3	1:G:45:LYS:HE3	1.62	0.48
1:A:404:LYS:NZ	1:A:595:SER:HB2	2.29	0.48
1:D:188:ASN:HA	1:D:270:VAL:HG21	1.94	0.48
1:E:6:TRP:CZ3	1:G:251:LEU:HD22	2.47	0.48
1:E:284:ASN:OD1	1:E:286:GLY:N	2.34	0.48
1:E:411:LYS:O	1:E:415:TYR:HD2	1.96	0.48
1:E:426:GLU:O	1:E:430:ASN:OD1	2.31	0.48
1:F:281:LEU:HD12	1:F:316:PHE:HB2	1.95	0.48
1:C:518:ARG:HA	1:C:525:ILE:CD1	2.42	0.48
1:D:344:ILE:HG23	1:D:345:LEU:HD23	1.94	0.48
1:H:82:PRO:HD2	1:H:114:PHE:CE1	2.47	0.48
1:B:528:LEU:HB2	1:B:590:LEU:HD21	1.95	0.48
1:C:431:GLY:O	1:C:435:ILE:HG22	2.14	0.48
1:E:33:GLU:OE1	1:E:85:LYS:HD2	2.13	0.48
1:E:418:VAL:HG13	1:E:419:ALA:N	2.28	0.48
1:C:45:LYS:HE2	1:C:71:ASP:OD2	2.14	0.48
1:D:49:ILE:HD13	1:D:100:THR:CG2	2.44	0.48
1:E:24:ASN:HB3	1:E:27:VAL:HG22	1.94	0.48
1:E:30:ILE:HD12	1:E:35:VAL:CG1	2.44	0.48
1:H:367:ARG:HG2	1:H:367:ARG:NH1	2.28	0.48
1:A:468:SER:O	1:A:472:TYR:CD1	2.67	0.48
1:A:603:LYS:O	1:A:604:SER:HB3	2.13	0.48
1:B:598:THR:HG23	1:B:602:PHE:HD2	1.77	0.48
1:D:364:TRP:O	1:D:367:ARG:HB3	2.14	0.48
1:E:486:LYS:HE2	1:E:493:TYR:CD2	2.48	0.48
1:F:59:LEU:HG	1:F:60:HIS:CE1	2.48	0.48
1:H:4:LYS:O	1:H:5:HIS:ND1	2.47	0.48
1:B:400:SER:CB	1:B:600:ALA:HB2	2.44	0.48
1:C:411:LYS:O	1:C:411:LYS:CG	2.61	0.48
1:D:510:SER:O	1:D:514:TYR:HD1	1.95	0.48
1:H:99:GLY:HA3	1:H:175:LEU:HD12	1.95	0.48
1:B:106:ASN:HA	1:B:111:ILE:HD11	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:50:SER:HB3	1:C:70:LEU:HD11	1.96	0.48
1:C:533:LYS:O	1:C:536:ALA:HB3	2.14	0.48
1:A:408:LYS:HD3	1:A:592:ALA:CB	2.44	0.48
1:G:59:LEU:HA	1:G:60:HIS:HA	1.49	0.48
1:A:408:LYS:HD3	1:A:592:ALA:HB1	1.95	0.47
1:B:400:SER:HB2	1:B:600:ALA:HB2	1.96	0.47
1:G:53:GLY:HA2	1:G:80:ALA:O	2.14	0.47
1:H:428:LEU:HD22	1:H:472:TYR:HE2	1.78	0.47
1:A:316:PHE:HE2	1:A:348:LEU:HD13	1.77	0.47
1:C:139:VAL:HG13	1:C:143:LYS:HB3	1.96	0.47
1:D:175:LEU:C	1:D:175:LEU:CD2	2.85	0.47
1:E:411:LYS:O	1:E:415:TYR:CD2	2.67	0.47
1:F:252:VAL:HG11	1:F:299:ILE:HG22	1.96	0.47
1:G:471:LEU:HD13	1:G:471:LEU:HA	1.68	0.47
1:B:173:LEU:HD21	1:B:178:LEU:HD13	1.95	0.47
1:C:67:ASP:OD2	1:C:353:SER:HB2	2.14	0.47
1:C:542:LYS:HA	1:C:542:LYS:HD3	1.46	0.47
1:D:48:LEU:CD2	1:D:103:ILE:HD11	2.44	0.47
1:A:350:HIS:HA	4:A:813:HOH:O	2.13	0.47
1:D:45:LYS:HD2	1:D:166:ALA:C	2.40	0.47
1:F:50:SER:HB3	1:F:70:LEU:HD11	1.95	0.47
1:B:74:VAL:HG12	1:B:82:PRO:HB3	1.96	0.47
1:C:172:ASN:O	1:C:172:ASN:OD1	2.32	0.47
1:C:393:LEU:CD1	1:C:397:LEU:HD11	2.45	0.47
1:E:534:GLU:HB3	1:E:544:ALA:HA	1.96	0.47
1:F:336:ALA:HB1	1:F:344:ILE:CG2	2.45	0.47
1:G:59:LEU:HD23	1:G:105:LYS:HE3	1.97	0.47
1:G:479:LEU:HD13	1:G:507:ALA:HB2	1.96	0.47
1:A:451:LYS:HA	1:A:454:VAL:HG22	1.97	0.47
1:C:404:LYS:HZ3	1:C:595:SER:HB2	1.77	0.47
1:E:313:VAL:O	1:E:367:ARG:NH2	2.48	0.47
1:A:81:SER:CB	1:A:110:ASP:OD1	2.58	0.47
1:A:384:SER:C	1:A:386:LYS:H	2.23	0.47
1:B:45:LYS:NZ	1:B:71:ASP:OD1	2.44	0.47
1:B:415:TYR:HB2	1:B:585:PRO:HG3	1.97	0.47
1:B:445:ASP:OD1	1:C:342:LYS:HG3	2.15	0.47
1:E:514:TYR:CE2	1:G:119:GLU:OE2	2.67	0.47
1:F:56:HIS:HA	1:F:322:THR:O	2.14	0.47
1:G:45:LYS:HG3	1:G:166:ALA:O	2.15	0.47
1:H:103:ILE:HG21	1:H:158:VAL:HG11	1.96	0.47
1:B:69:LEU:HD21	1:B:160:LYS:HA	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:136:ASP:OD2	1:B:138:SER:HB3	2.15	0.47
1:B:248:VAL:HG12	1:B:299:ILE:HD13	1.96	0.47
1:D:325:ASP:OD1	1:D:325:ASP:N	2.45	0.47
1:D:500:ILE:C	1:D:500:ILE:HD12	2.40	0.47
1:E:542:LYS:HE3	1:E:542:LYS:HB3	1.49	0.47
1:F:17:LEU:HD22	1:F:36:VAL:HG23	1.96	0.47
1:G:34:ARG:HH11	1:G:34:ARG:CG	2.23	0.47
1:H:175:LEU:C	1:H:175:LEU:HD23	2.40	0.47
1:B:225:ASP:OD2	1:H:242:SER:HA	2.15	0.47
1:C:268:ASN:ND2	1:C:268:ASN:O	2.48	0.47
1:E:137:VAL:HG22	1:E:269:TYR:CD2	2.50	0.47
1:E:151:GLY:O	1:E:152:LEU:HD23	2.15	0.47
1:E:165:LYS:NZ	1:E:341:ASP:OD2	2.46	0.47
1:E:280:LEU:HD21	1:E:282:ILE:HD11	1.95	0.47
1:A:60:HIS:ND1	1:A:159:HIS:HE1	2.13	0.47
1:A:545:ASN:OD1	1:A:598:THR:HG21	2.15	0.47
1:B:424:CYS:O	1:B:428:LEU:HD12	2.15	0.47
1:D:229:ILE:HG22	1:D:239:ILE:HD11	1.96	0.47
1:E:277:GLU:HB3	1:E:336:ALA:HB3	1.97	0.47
1:E:481:LYS:HZ2	1:G:122:LYS:HE2	1.80	0.47
1:F:196:LEU:O	1:H:4:LYS:HE2	2.15	0.47
1:F:372:ILE:HD13	1:H:29:LEU:HD23	1.97	0.47
1:H:511:LEU:HD23	1:H:511:LEU:C	2.39	0.47
1:C:37:ILE:HD12	1:C:94:LYS:CD	2.46	0.46
1:C:69:LEU:HD22	1:C:70:LEU:H	1.80	0.46
1:E:260:LEU:HD21	1:E:333:LEU:HD13	1.96	0.46
1:F:339:THR:HG21	1:F:344:ILE:CD1	2.45	0.46
1:G:67:ASP:OD1	1:G:67:ASP:N	2.45	0.46
1:G:135:ASP:OD1	1:G:135:ASP:N	2.39	0.46
1:G:279:VAL:HG21	1:G:348:LEU:CD1	2.45	0.46
1:A:483:LEU:HD23	1:A:503:SER:OG	2.15	0.46
1:A:495:LEU:HD11	1:A:500:ILE:HG13	1.97	0.46
1:C:28:ARG:NH2	1:D:368:VAL:HG13	2.29	0.46
1:C:102:ILE:CB	1:C:130:LEU:HD12	2.37	0.46
1:C:278:VAL:HG21	1:C:310:ILE:HD13	1.97	0.46
1:C:409:GLU:N	1:C:410:PRO:HD2	2.29	0.46
1:D:59:LEU:HA	1:D:60:HIS:HA	1.57	0.46
1:E:116:LEU:HD13	1:E:116:LEU:HA	1.75	0.46
1:E:514:TYR:HE1	1:G:130:LEU:HD22	1.80	0.46
1:F:361:ILE:HD12	1:H:25:PRO:HD2	1.98	0.46
1:H:88:PHE:CE2	1:H:92:LYS:HE3	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:23:SER:OG	1:B:297:GLN:OE1	2.33	0.46
1:B:444:LEU:HD21	1:B:455:GLN:HB2	1.97	0.46
1:C:524:LEU:HD12	1:C:586:GLY:HA3	1.97	0.46
1:E:19:GLY:CA	1:G:298:ASN:HB2	2.45	0.46
1:G:287:GLY:N	1:G:326:GLY:O	2.47	0.46
1:A:103:ILE:HD13	1:A:159:HIS:CD2	2.49	0.46
1:A:384:SER:C	1:A:386:LYS:N	2.71	0.46
1:C:100:THR:O	1:C:128:ALA:HA	2.15	0.46
1:D:138:SER:HB3	1:D:239:ILE:HG12	1.97	0.46
1:F:196:LEU:HG	1:H:6:TRP:CZ2	2.51	0.46
1:G:103:ILE:HD13	1:G:131:LEU:HB3	1.97	0.46
1:H:57:GLU:HA	1:H:58:PRO:C	2.40	0.46
1:A:474:ILE:CD1	1:B:112:LEU:HD22	2.46	0.46
1:B:116:LEU:HD12	1:B:116:LEU:O	2.16	0.46
1:B:252:VAL:HG13	1:B:300:VAL:HG22	1.98	0.46
1:C:61:ALA:HA	1:C:73:ALA:CB	2.45	0.46
1:C:436:LEU:HA	1:C:439:LEU:HD12	1.98	0.46
1:D:363:ASP:HA	4:D:801:HOH:O	2.15	0.46
1:E:16:HIS:NE2	1:E:57:GLU:HG2	2.29	0.46
1:E:229:ILE:HG22	1:E:239:ILE:HG22	1.98	0.46
1:A:54:SER:HB2	1:A:78:ILE:HA	1.98	0.46
1:A:291:LEU:HD21	1:B:12:LEU:HD23	1.98	0.46
1:A:471:LEU:HD12	1:A:524:LEU:HD21	1.97	0.46
1:B:400:SER:O	1:B:401:GLY:C	2.57	0.46
1:C:5:HIS:NE2	1:C:200:THR:HB	2.31	0.46
1:C:523:THR:O	1:C:587:ALA:HB2	2.16	0.46
1:D:87:ILE:HD13	1:D:114:PHE:CD1	2.51	0.46
1:D:256:LEU:HD23	1:D:259:LEU:HD12	1.98	0.46
1:H:344:ILE:CG2	1:H:345:LEU:HD12	2.46	0.46
1:A:404:LYS:HE3	1:A:404:LYS:HB3	1.71	0.46
1:B:27:VAL:O	1:B:28:ARG:NH1	2.49	0.46
1:C:59:LEU:HA	1:C:60:HIS:HA	1.49	0.46
1:C:319:THR:HG22	1:C:322:THR:CG2	2.46	0.46
1:E:272:PHE:HD2	1:E:278:VAL:HG22	1.80	0.46
1:F:49:ILE:HG12	1:F:72:ALA:HB3	1.98	0.46
1:G:34:ARG:CG	1:G:34:ARG:NH1	2.79	0.46
1:G:227:PHE:HE2	1:G:229:ILE:HG13	1.79	0.46
1:D:28:ARG:NH1	1:D:39:ALA:HB2	2.31	0.46
1:D:188:ASN:HA	1:D:270:VAL:CG2	2.46	0.46
1:D:456:ILE:O	1:D:459:ILE:HD12	2.16	0.46
1:F:35:VAL:HG12	1:F:37:ILE:HG23	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:24:ASN:CG	1:G:27:VAL:HG22	2.41	0.46
1:G:281:LEU:HB3	1:G:332:THR:HB	1.97	0.46
1:H:59:LEU:HG	1:H:60:HIS:ND1	2.30	0.46
1:H:165:LYS:HE2	1:H:173:LEU:CD1	2.46	0.46
1:A:66:LYS:HE2	1:A:66:LYS:HB2	1.75	0.46
1:B:181:PHE:HZ	1:B:344:ILE:HD13	1.81	0.46
1:B:541:LEU:HD23	1:B:541:LEU:HA	1.72	0.46
1:D:252:VAL:HG13	1:D:300:VAL:HG22	1.98	0.46
1:D:513:LYS:HD2	1:D:513:LYS:HA	1.66	0.46
1:E:247:THR:CG2	1:E:250:GLU:HB2	2.45	0.46
1:G:57:GLU:HA	1:G:58:PRO:C	2.41	0.46
1:G:174:GLU:HB2	1:G:177:GLN:HB2	1.97	0.46
1:A:384:SER:HB2	1:A:484:LYS:HD3	1.98	0.46
1:B:344:ILE:HG23	1:B:345:LEU:N	2.30	0.46
1:B:496:THR:H	1:B:499:THR:HG1	1.61	0.46
1:D:107:TYR:CE1	1:D:150:ARG:HD2	2.51	0.46
1:E:556:ARG:HD2	1:E:583:PRO:HG3	1.97	0.46
1:E:603:LYS:HB2	1:E:603:LYS:HE3	1.79	0.46
1:A:146:LEU:H	1:A:146:LEU:HG	1.41	0.45
1:A:481:LYS:CD	1:B:122:LYS:HD2	2.45	0.45
1:D:119:GLU:HA	1:D:122:LYS:NZ	2.31	0.45
1:E:285:LEU:HA	1:E:322:THR:HA	1.99	0.45
1:E:344:ILE:CG2	1:E:345:LEU:N	2.79	0.45
1:C:44:ASP:O	1:C:98:LYS:HE3	2.16	0.45
1:D:47:THR:HG21	1:D:94:LYS:HB2	1.98	0.45
1:D:262:THR:HA	1:D:268:ASN:HD21	1.79	0.45
1:E:424:CYS:SG	1:E:585:PRO:HB2	2.56	0.45
1:F:40:GLU:CG	1:F:66:LYS:HG3	2.46	0.45
1:F:88:PHE:CE2	1:F:92:LYS:HE3	2.51	0.45
1:F:168:LEU:HD13	1:F:346:LYS:HE3	1.97	0.45
1:G:230:GLY:O	1:G:238:GLY:HA2	2.15	0.45
1:A:402:VAL:HG11	1:A:435:ILE:HG21	1.98	0.45
1:A:541:LEU:HD12	1:A:601:TYR:CD2	2.51	0.45
1:B:453:LEU:HD23	1:B:453:LEU:HA	1.66	0.45
1:D:30:ILE:HD11	1:D:37:ILE:HG21	1.97	0.45
1:D:188:ASN:O	1:D:334:LEU:HD12	2.16	0.45
1:D:278:VAL:HG21	1:D:333:LEU:HD22	1.97	0.45
1:E:245:ILE:CG2	1:G:6:TRP:HA	2.46	0.45
1:E:479:LEU:HA	1:E:507:ALA:HB2	1.97	0.45
1:F:135:ASP:OD2	1:F:154:GLY:HA3	2.16	0.45
1:H:59:LEU:HG	1:H:60:HIS:CE1	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:69:LEU:HD21	1:H:159:HIS:HB3	1.97	0.45
1:A:193:GLY:N	4:A:804:HOH:O	2.45	0.45
1:C:24:ASN:HB3	1:C:27:VAL:CG2	2.47	0.45
1:D:43:GLU:HG3	1:D:95:PRO:O	2.16	0.45
1:F:40:GLU:HG2	1:F:66:LYS:HG3	1.99	0.45
1:H:137:VAL:CG1	1:H:190:VAL:HB	2.44	0.45
1:H:226:GLU:HA	1:H:242:SER:O	2.16	0.45
1:H:344:ILE:HG23	1:H:345:LEU:N	2.31	0.45
1:H:494:THR:HG22	1:H:495:LEU:N	2.27	0.45
1:B:106:ASN:HB2	1:B:132:ILE:HG22	1.98	0.45
1:C:7:ASP:O	1:D:247:THR:HA	2.17	0.45
1:C:552:ALA:HB1	1:C:588:ILE:HA	1.98	0.45
1:D:189:LEU:CD2	1:D:334:LEU:HB2	2.47	0.45
1:D:202:PRO:HD3	1:D:324:LEU:HD13	1.97	0.45
1:E:594:ILE:O	1:E:597:ILE:HG13	2.16	0.45
1:F:239:ILE:CG2	1:F:240:LYS:N	2.79	0.45
1:G:107:TYR:HE1	1:G:150:ARG:HG2	1.76	0.45
1:H:74:VAL:HG22	1:H:90:ALA:HB2	1.99	0.45
1:B:59:LEU:HG	1:B:60:HIS:CE1	2.51	0.45
1:B:531:PHE:CD2	1:B:544:ALA:HB1	2.52	0.45
1:D:159:HIS:O	1:D:160:LYS:C	2.59	0.45
1:E:14:LEU:HD21	1:E:34:ARG:HG2	1.98	0.45
1:E:235:ASN:ND2	4:E:701:HOH:O	2.30	0.45
1:F:360:ASN:OD1	1:F:360:ASN:N	2.48	0.45
1:A:404:LYS:HE2	1:A:592:ALA:O	2.16	0.45
1:B:247:THR:HG23	1:B:250:GLU:H	1.81	0.45
1:B:456:ILE:HG22	1:B:476:ILE:HD13	1.99	0.45
1:B:516:ARG:HA	1:B:516:ARG:HD2	1.36	0.45
1:E:13:VAL:HG21	1:E:34:ARG:NH1	2.32	0.45
1:E:30:ILE:HB	1:E:35:VAL:HG12	1.98	0.45
1:F:136:ASP:CB	1:F:150:ARG:HB2	2.47	0.45
1:G:456:ILE:HG22	1:G:456:ILE:O	2.17	0.45
1:H:181:PHE:HZ	1:H:344:ILE:CD1	2.28	0.45
1:A:227:PHE:CD1	1:A:246:PRO:HD3	2.52	0.45
1:C:376:PRO:HD2	1:D:89:SER:OG	2.16	0.45
1:D:174:GLU:OE1	1:D:177:GLN:CB	2.65	0.45
1:E:229:ILE:HD11	1:E:251:LEU:CD1	2.47	0.45
1:G:34:ARG:HG3	1:G:34:ARG:NH1	2.28	0.45
1:H:184:LYS:HE2	1:H:184:LYS:HB3	1.60	0.45
1:H:460:VAL:HA	1:H:463:ALA:HB3	1.99	0.45
1:H:514:TYR:O	1:H:515:THR:OG1	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:106:ASN:OD1	1:A:111:ILE:HD11	2.17	0.45
1:B:344:ILE:HG23	1:B:345:LEU:HD13	1.98	0.45
1:C:181:PHE:CE1	1:C:341:ASP:HB2	2.52	0.45
1:C:543:LEU:HD22	1:C:543:LEU:HA	1.78	0.45
1:D:343:ASP:O	1:D:347:PHE:CD2	2.70	0.45
1:E:45:LYS:O	1:E:96:SER:OG	2.33	0.45
1:E:262:THR:HA	1:E:268:ASN:CG	2.41	0.45
1:H:88:PHE:CZ	1:H:126:LEU:CD1	2.99	0.45
1:C:99:GLY:HA3	1:C:175:LEU:CD1	2.47	0.45
1:D:270:VAL:HG12	1:D:272:PHE:CE1	2.52	0.45
1:E:277:GLU:H	1:E:337:THR:HG23	1.82	0.45
1:F:24:ASN:HB3	1:F:27:VAL:CG2	2.47	0.45
1:G:176:HIS:O	1:G:179:VAL:HG12	2.17	0.45
1:H:143:LYS:HA	1:H:143:LYS:HD2	1.86	0.45
1:A:249:ASP:OD1	1:A:249:ASP:N	2.50	0.44
1:A:512:PHE:HE1	1:A:525:ILE:HG13	1.81	0.44
1:A:513:LYS:HB3	1:A:513:LYS:HE2	1.47	0.44
1:B:129:GLU:CG	1:B:179:VAL:HG21	2.46	0.44
1:C:28:ARG:HH21	1:D:368:VAL:CG2	2.30	0.44
1:C:57:GLU:OE1	1:D:291:LEU:HB2	2.16	0.44
1:C:399:GLU:O	1:C:403:LYS:HG2	2.17	0.44
1:C:400:SER:O	1:C:403:LYS:HG3	2.16	0.44
1:F:140:GLY:HA2	1:F:266:ASP:HB3	2.00	0.44
1:H:10:LYS:HA	1:H:10:LYS:HD3	1.70	0.44
1:H:484:LYS:CD	1:H:488:LEU:HG	2.47	0.44
1:A:34:ARG:HH11	1:A:34:ARG:HG3	1.82	0.44
1:C:24:ASN:HB3	1:C:27:VAL:HG22	1.99	0.44
1:C:413:THR:OG1	1:C:426:GLU:HG2	2.18	0.44
1:D:311:LYS:HD2	1:D:311:LYS:HA	1.77	0.44
1:H:459:ILE:HG13	1:H:459:ILE:O	2.17	0.44
1:A:484:LYS:HD2	1:A:487:GLU:OE2	2.17	0.44
1:B:264:ASP:OD1	1:B:264:ASP:C	2.60	0.44
1:B:265:LYS:HD3	1:B:265:LYS:C	2.40	0.44
1:C:441:GLU:C	1:C:443:LYS:N	2.75	0.44
1:D:49:ILE:HG13	1:D:72:ALA:HB3	1.98	0.44
1:C:28:ARG:HH21	1:D:368:VAL:HG22	1.82	0.44
1:E:343:ASP:HB3	1:E:346:LYS:HD3	1.98	0.44
1:E:400:SER:HB2	1:E:600:ALA:HB2	1.98	0.44
1:A:299:ILE:O	1:A:303:GLN:HG3	2.18	0.44
1:A:528:LEU:HB2	1:A:590:LEU:HD21	2.00	0.44
1:B:252:VAL:CG1	1:B:300:VAL:HG22	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:106:ASN:OD1	1:C:106:ASN:C	2.60	0.44
1:C:313:VAL:HG22	1:C:314:ARG:HH11	1.81	0.44
1:C:520:GLY:N	1:C:526:ASP:OD2	2.50	0.44
1:D:26:HIS:ND1	1:D:66:LYS:HD2	2.32	0.44
1:D:264:ASP:OD1	1:D:264:ASP:C	2.61	0.44
1:D:588:ILE:H	1:D:588:ILE:HG13	1.57	0.44
1:F:48:LEU:CD1	1:F:163:GLY:HA2	2.47	0.44
1:G:284:ASN:OD1	1:G:286:GLY:N	2.36	0.44
1:H:35:VAL:HG22	1:H:74:VAL:HG13	1.99	0.44
1:B:232:GLY:HA3	1:B:236:GLU:OE1	2.16	0.44
1:C:107:TYR:HE1	1:C:150:ARG:HD3	1.82	0.44
1:D:189:LEU:HA	1:D:189:LEU:HD23	1.61	0.44
1:E:8:TYR:CE1	1:G:248:VAL:HG21	2.53	0.44
1:E:415:TYR:HE1	1:E:583:PRO:HG2	1.83	0.44
1:E:523:THR:HG21	1:E:525:ILE:CG2	2.35	0.44
1:A:45:LYS:HB3	1:A:45:LYS:HE3	1.73	0.44
1:A:291:LEU:HA	1:B:16:HIS:CD2	2.53	0.44
1:B:28:ARG:HG2	1:B:28:ARG:NH1	2.33	0.44
1:B:165:LYS:HD3	1:B:181:PHE:CD2	2.53	0.44
1:B:202:PRO:O	1:B:203:ALA:C	2.60	0.44
1:B:429:ALA:O	1:B:433:ASN:OD1	2.36	0.44
1:H:57:GLU:CD	1:H:57:GLU:H	2.25	0.44
1:B:239:ILE:HD12	1:B:239:ILE:HA	1.82	0.44
1:B:277:GLU:HB3	1:B:336:ALA:HB3	2.00	0.44
1:C:17:LEU:HD22	1:C:36:VAL:HG23	1.99	0.44
1:D:262:THR:CG2	1:D:268:ASN:HD21	2.21	0.44
1:E:165:LYS:HD2	1:E:181:PHE:CD2	2.53	0.44
1:E:285:LEU:O	1:E:322:THR:HB	2.18	0.44
1:G:262:THR:HA	1:G:268:ASN:CG	2.41	0.44
1:B:137:VAL:HG11	1:B:190:VAL:HB	1.99	0.44
1:B:402:VAL:HG21	1:B:435:ILE:CG2	2.48	0.44
1:B:455:GLN:O	1:B:459:ILE:HG13	2.18	0.44
1:C:268:ASN:HD21	1:C:271:GLN:CD	2.24	0.44
1:C:299:ILE:O	1:C:303:GLN:HG3	2.18	0.44
1:C:472:TYR:CE2	1:C:524:LEU:HD21	2.52	0.44
1:D:289:SER:HB3	1:D:292:GLU:HB2	1.99	0.44
1:E:137:VAL:O	1:E:137:VAL:CG1	2.64	0.44
1:F:344:ILE:HG23	1:F:345:LEU:N	2.33	0.44
1:H:288:THR:HG22	1:H:289:SER:O	2.17	0.44
1:A:376:PRO:HG3	1:B:92:LYS:HB2	2.00	0.43
1:B:135:ASP:OD1	1:B:135:ASP:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:335:ASN:O	1:C:339:THR:HG23	2.17	0.43
1:C:444:LEU:HA	1:C:446:LEU:HD21	2.00	0.43
1:C:472:TYR:CZ	1:C:524:LEU:HD23	2.52	0.43
1:D:172:ASN:HB2	1:E:340:GLY:O	2.18	0.43
1:E:14:LEU:HD21	1:E:34:ARG:HG3	1.99	0.43
1:E:43:GLU:N	1:E:43:GLU:OE1	2.51	0.43
1:E:101:LEU:HB2	1:E:175:LEU:HD11	1.99	0.43
1:E:523:THR:CG2	1:E:525:ILE:CG2	2.86	0.43
1:F:94:LYS:HD3	1:F:94:LYS:HA	1.79	0.43
1:H:87:ILE:O	1:H:91:ILE:HG13	2.18	0.43
1:H:276:ASP:OD2	1:H:338:LYS:HE3	2.18	0.43
1:H:431:GLY:O	1:H:435:ILE:HG23	2.18	0.43
1:B:393:LEU:HD13	1:B:397:LEU:HD21	2.00	0.43
1:B:472:TYR:O	1:B:476:ILE:HG13	2.18	0.43
1:C:59:LEU:HG	1:C:60:HIS:ND1	2.33	0.43
1:F:199:VAL:CG2	1:F:325:ASP:OD1	2.66	0.43
1:D:234:HIS:HB2	1:D:236:GLU:CD	2.43	0.43
1:E:450:VAL:HG22	1:E:480:ALA:O	2.18	0.43
1:F:262:THR:HG22	1:F:268:ASN:ND2	2.32	0.43
1:F:301:VAL:CG2	1:F:315:ILE:HD13	2.49	0.43
1:A:530:PRO:O	1:A:534:GLU:HB3	2.18	0.43
1:B:100:THR:O	1:B:128:ALA:HA	2.19	0.43
1:B:479:LEU:HD13	1:B:504:LEU:HD23	2.01	0.43
1:H:199:VAL:HG23	1:H:325:ASP:OD1	2.18	0.43
1:A:94:LYS:HD2	1:A:94:LYS:HA	1.84	0.43
1:C:505:GLN:O	1:C:506:ALA:C	2.62	0.43
1:D:106:ASN:HB2	1:D:132:ILE:HG22	1.99	0.43
1:D:175:LEU:HD23	1:D:175:LEU:O	2.18	0.43
1:E:314:ARG:HD3	1:E:364:TRP:NE1	2.33	0.43
1:G:479:LEU:HD13	1:G:507:ALA:CB	2.48	0.43
1:A:583:PRO:CB	1:A:588:ILE:HD11	2.48	0.43
1:B:412:ILE:HG23	1:B:585:PRO:HB3	2.00	0.43
1:D:149:ARG:HD3	1:D:269:TYR:CD1	2.53	0.43
1:F:116:LEU:HD11	1:H:473:SER:CB	2.48	0.43
1:F:116:LEU:HG	1:H:474:ILE:HD13	2.00	0.43
1:G:475:PHE:HE2	1:G:508:LEU:HD23	1.83	0.43
1:H:234:HIS:O	1:H:235:ASN:HB2	2.17	0.43
1:B:59:LEU:HA	1:B:60:HIS:HA	1.58	0.43
1:D:126:LEU:H	1:D:126:LEU:HG	1.58	0.43
1:D:192:ILE:HG12	1:D:255:LEU:HD22	2.00	0.43
1:D:510:SER:O	1:D:513:LYS:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:336:ALA:HB1	1:E:344:ILE:HG21	2.01	0.43
1:F:301:VAL:CG2	1:F:315:ILE:CD1	2.97	0.43
1:B:191:THR:HG23	1:B:332:THR:OG1	2.19	0.43
1:C:473:SER:HB3	1:D:116:LEU:HD12	2.01	0.43
1:C:523:THR:OG1	1:C:526:ASP:OD1	2.34	0.43
1:D:185:VAL:HG22	1:D:339:THR:OG1	2.19	0.43
1:D:591:ALA:HA	1:D:594:ILE:HD12	2.00	0.43
1:E:414:LEU:N	1:E:414:LEU:HD23	2.34	0.43
1:F:59:LEU:HA	1:F:60:HIS:HA	1.60	0.43
1:F:256:LEU:HD23	1:F:256:LEU:HA	1.67	0.43
1:A:225:ASP:OD2	1:A:225:ASP:N	2.49	0.43
1:A:376:PRO:CG	1:B:92:LYS:HB2	2.49	0.43
1:B:53:GLY:HA2	1:B:80:ALA:O	2.19	0.43
1:B:168:LEU:HD21	1:B:350:HIS:CE1	2.54	0.43
1:B:394:TYR:HB3	1:B:446:LEU:HD13	2.01	0.43
1:B:426:GLU:O	1:B:429:ALA:HB3	2.18	0.43
1:B:453:LEU:HD22	1:B:476:ILE:HG23	2.00	0.43
1:C:85:LYS:HB3	1:C:85:LYS:HZ2	1.84	0.43
1:C:158:VAL:O	1:C:159:HIS:C	2.61	0.43
1:D:137:VAL:O	1:D:267:ARG:HD3	2.18	0.43
1:D:191:THR:HG23	1:D:332:THR:OG1	2.19	0.43
1:E:168:LEU:HD13	1:E:346:LYS:HE3	2.00	0.43
1:F:538:SER:O	1:F:538:SER:OG	2.36	0.43
1:G:63:PHE:O	1:G:69:LEU:HB3	2.19	0.43
1:G:283:ASN:HB3	1:G:330:SER:HB2	2.01	0.43
1:A:116:LEU:HD13	1:B:473:SER:HB3	1.98	0.43
1:A:307:LYS:HD3	1:A:308:TYR:CE2	2.53	0.43
1:A:540:ASP:OD2	1:A:543:LEU:HD12	2.19	0.43
1:B:160:LYS:HD3	1:B:357:TRP:CD2	2.54	0.43
1:C:7:ASP:HB3	1:D:247:THR:HA	2.01	0.43
1:C:436:LEU:HA	1:C:436:LEU:HD23	1.80	0.43
1:D:344:ILE:HG23	1:D:345:LEU:N	2.34	0.43
1:D:514:TYR:CD1	1:D:514:TYR:N	2.87	0.43
1:F:116:LEU:HD21	1:H:477:SER:OG	2.19	0.43
1:G:181:PHE:O	1:G:185:VAL:HG23	2.19	0.43
1:H:153:ALA:O	1:H:156:SER:HB3	2.18	0.43
1:A:40:GLU:OE1	1:A:66:LYS:HE2	2.19	0.42
1:B:70:LEU:HD11	1:B:159:HIS:CD2	2.55	0.42
1:C:78:ILE:HG21	1:C:201:ILE:CG2	2.49	0.42
1:C:247:THR:HA	1:D:7:ASP:O	2.18	0.42
1:C:402:VAL:HA	1:C:405:VAL:CG2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:406:ILE:O	1:C:409:GLU:HB3	2.19	0.42
1:E:69:LEU:HD22	1:E:70:LEU:H	1.83	0.42
1:E:112:LEU:HD11	1:G:467:THR:HA	2.01	0.42
1:E:265:LYS:HD3	1:E:266:ASP:N	2.34	0.42
1:E:296:ILE:HD13	1:E:329:PHE:CE2	2.54	0.42
1:F:139:VAL:HA	1:F:239:ILE:HD13	2.00	0.42
1:H:9:LYS:HB2	1:H:9:LYS:HE2	1.72	0.42
1:H:457:THR:CG2	1:H:476:ILE:HB	2.49	0.42
1:A:59:LEU:HA	1:A:60:HIS:HA	1.55	0.42
1:A:384:SER:CB	1:A:484:LYS:HD3	2.48	0.42
1:A:473:SER:CB	1:B:116:LEU:HD22	2.48	0.42
1:C:69:LEU:HD21	1:C:159:HIS:HB3	2.01	0.42
1:C:135:ASP:OD2	1:C:154:GLY:HA3	2.19	0.42
1:E:33:GLU:OE1	1:E:85:LYS:CD	2.67	0.42
1:E:85:LYS:HE3	1:E:85:LYS:HB3	1.83	0.42
1:F:311:LYS:HB3	1:F:311:LYS:HE2	1.61	0.42
1:F:458:ASP:HB2	1:F:460:VAL:H	1.83	0.42
1:H:326:GLY:HA2	1:H:327:PRO:HD3	1.86	0.42
1:A:10:LYS:HA	1:A:10:LYS:HD3	1.71	0.42
1:B:44:ASP:HB2	1:B:170:LYS:HE2	2.01	0.42
1:B:495:LEU:HD12	1:B:495:LEU:HA	1.80	0.42
1:C:546:LYS:HE2	1:C:549:HIS:HB3	2.00	0.42
1:E:69:LEU:HD22	1:E:70:LEU:HG	2.01	0.42
1:A:57:GLU:OE1	1:B:291:LEU:HB2	2.19	0.42
1:A:189:LEU:HD23	1:A:189:LEU:HA	1.83	0.42
1:B:230:GLY:O	1:B:238:GLY:HA2	2.19	0.42
1:B:483:LEU:HD22	1:B:493:TYR:OH	2.19	0.42
1:B:598:THR:HG23	1:B:602:PHE:CD2	2.54	0.42
1:C:50:SER:HB2	1:C:70:LEU:HD11	2.01	0.42
1:D:138:SER:HB2	1:D:139:VAL:HG23	2.00	0.42
1:E:94:LYS:HA	1:E:94:LYS:HD2	1.76	0.42
1:E:273:ASP:O	1:E:276:ASP:HB2	2.19	0.42
1:G:94:LYS:HB3	1:G:94:LYS:HE3	1.77	0.42
1:G:151:GLY:C	1:G:152:LEU:HG	2.43	0.42
1:A:24:ASN:HB3	1:A:27:VAL:HG22	2.01	0.42
1:A:307:LYS:HD3	1:A:308:TYR:CZ	2.54	0.42
1:C:33:GLU:HG3	1:C:89:SER:CB	2.50	0.42
1:D:57:GLU:O	1:D:322:THR:OG1	2.34	0.42
1:D:69:LEU:HB3	1:D:70:LEU:H	1.71	0.42
1:E:199:VAL:CG1	1:E:326:GLY:HA2	2.49	0.42
1:F:319:THR:HG23	1:F:322:THR:CG2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:24:ASN:HB3	1:G:27:VAL:CG2	2.50	0.42
1:G:351:LYS:HG3	4:G:702:HOH:O	2.19	0.42
1:H:129:GLU:HG3	1:H:175:LEU:HD22	2.02	0.42
1:A:411:LYS:O	1:A:411:LYS:CD	2.66	0.42
1:B:26:HIS:CG	1:B:66:LYS:HE3	2.54	0.42
1:B:487:GLU:HA	1:B:491:GLY:O	2.19	0.42
1:B:524:LEU:HD12	1:B:590:LEU:HB2	2.01	0.42
1:C:6:TRP:HB3	1:D:248:VAL:HG23	2.02	0.42
1:C:404:LYS:HZ2	1:C:595:SER:HB2	1.85	0.42
1:D:92:LYS:HB3	1:D:92:LYS:HE3	1.85	0.42
1:E:30:ILE:HD12	1:E:35:VAL:HG13	2.01	0.42
1:E:69:LEU:CD2	1:E:70:LEU:HG	2.49	0.42
1:E:135:ASP:OD1	1:E:152:LEU:N	2.53	0.42
1:E:189:LEU:HD23	1:E:189:LEU:HA	1.84	0.42
1:E:486:LYS:HE2	1:E:493:TYR:CE2	2.55	0.42
1:F:64:VAL:CG2	1:F:73:ALA:HB2	2.50	0.42
1:F:154:GLY:O	1:F:158:VAL:HG23	2.20	0.42
1:G:236:GLU:H	1:G:236:GLU:HG3	1.34	0.42
1:B:45:LYS:HB3	1:B:45:LYS:HE3	1.74	0.42
1:B:59:LEU:HD22	1:B:321:THR:OG1	2.20	0.42
1:C:440:ALA:C	1:C:442:GLY:N	2.71	0.42
1:D:42:GLN:NE2	1:D:167:TYR:HE1	2.14	0.42
1:D:305:ALA:O	1:D:309:SER:HA	2.19	0.42
1:E:30:ILE:HG12	1:G:373:VAL:CG2	2.50	0.42
1:E:69:LEU:HD23	1:E:70:LEU:H	1.84	0.42
1:E:167:TYR:O	1:E:170:LYS:HG3	2.20	0.42
1:E:343:ASP:HB3	1:E:346:LYS:CB	2.49	0.42
1:E:510:SER:CA	1:E:513:LYS:HE2	2.49	0.42
1:G:276:ASP:O	4:G:701:HOH:O	2.22	0.42
1:G:324:LEU:HA	1:G:324:LEU:HD23	1.82	0.42
1:A:35:VAL:HG12	1:A:37:ILE:HG23	2.02	0.42
1:A:391:ALA:HB1	1:A:446:LEU:CB	2.49	0.42
1:A:404:LYS:HG3	1:A:596:GLY:HA2	2.01	0.42
1:A:427:THR:HA	1:A:430:ASN:HD22	1.84	0.42
1:B:524:LEU:O	1:B:524:LEU:HG	2.18	0.42
1:C:29:LEU:O	1:D:372:ILE:HA	2.19	0.42
1:F:48:LEU:HD13	1:F:163:GLY:HA2	2.00	0.42
1:G:33:GLU:O	1:G:86:GLN:NE2	2.44	0.42
1:A:457:THR:HG22	1:A:476:ILE:HB	2.01	0.42
1:B:484:LYS:O	1:B:488:LEU:HD23	2.20	0.42
1:C:188:ASN:HB3	1:C:335:ASN:HB3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:288:THR:HG22	1:D:289:SER:O	2.20	0.42
1:E:168:LEU:CD1	1:E:346:LYS:HE2	2.50	0.42
1:F:251:LEU:HD21	1:F:329:PHE:CZ	2.55	0.42
1:G:139:VAL:HG22	1:G:239:ILE:HD13	2.02	0.42
1:G:513:LYS:HB3	1:G:513:LYS:HE3	1.82	0.42
1:H:134:GLN:O	1:H:149:ARG:NH1	2.53	0.42
1:H:161:ILE:HD13	1:H:344:ILE:HD11	2.02	0.42
1:H:241:LYS:HB2	1:H:241:LYS:HE2	1.76	0.42
1:C:19:GLY:CA	1:D:298:ASN:HB2	2.50	0.42
1:C:27:VAL:C	1:C:28:ARG:HD2	2.44	0.42
1:E:175:LEU:O	1:E:179:VAL:HG23	2.19	0.42
1:E:335:ASN:ND2	1:E:338:LYS:HG3	2.35	0.42
1:E:453:LEU:HB2	1:E:480:ALA:HB2	2.02	0.42
1:E:500:ILE:HG23	1:E:504:LEU:CD1	2.50	0.42
1:F:287:GLY:N	1:F:326:GLY:O	2.52	0.42
1:G:248:VAL:HG12	1:G:299:ILE:HD13	2.02	0.42
1:A:69:LEU:HD12	1:A:354:ALA:CB	2.49	0.41
1:C:268:ASN:ND2	1:C:271:GLN:HE22	2.17	0.41
1:C:535:PHE:HB2	1:C:544:ALA:HB2	2.02	0.41
1:D:134:GLN:O	1:D:149:ARG:CZ	2.67	0.41
1:D:510:SER:O	1:D:514:TYR:CD1	2.72	0.41
1:E:196:LEU:HG	1:G:6:TRP:CZ2	2.55	0.41
1:E:448:ASP:O	1:E:452:SER:OG	2.22	0.41
1:H:287:GLY:N	1:H:326:GLY:O	2.53	0.41
1:A:33:GLU:HG3	1:A:89:SER:OG	2.21	0.41
1:C:129:GLU:HB3	1:C:179:VAL:HG21	2.02	0.41
1:C:392:LYS:HE3	1:C:392:LYS:HB3	1.82	0.41
1:F:184:LYS:HE2	1:F:184:LYS:HA	2.02	0.41
1:F:196:LEU:HD23	1:F:245:ILE:CD1	2.49	0.41
1:F:325:ASP:OD1	1:F:325:ASP:N	2.51	0.41
1:H:114:PHE:N	1:H:114:PHE:CD1	2.88	0.41
1:A:108:THR:O	1:A:112:LEU:HG	2.20	0.41
1:A:444:LEU:HD22	1:A:456:ILE:HG13	2.02	0.41
1:B:377:GLU:O	1:B:377:GLU:HG2	2.19	0.41
1:C:405:VAL:CG1	1:C:593:LEU:HB2	2.51	0.41
1:C:479:LEU:O	1:C:483:LEU:HG	2.20	0.41
1:D:174:GLU:OE1	1:D:177:GLN:NE2	2.53	0.41
1:D:274:LYS:HD2	1:D:274:LYS:HA	1.55	0.41
1:E:30:ILE:HG12	1:G:373:VAL:HG23	2.02	0.41
1:B:161:ILE:HD13	1:B:344:ILE:HD11	2.03	0.41
1:C:59:LEU:HG	1:C:60:HIS:CE1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:230:GLY:O	1:D:238:GLY:HA2	2.20	0.41
1:F:100:THR:O	1:F:128:ALA:HA	2.21	0.41
1:F:234:HIS:O	1:F:235:ASN:HB2	2.20	0.41
1:G:344:ILE:HA	1:G:347:PHE:CD2	2.55	0.41
1:H:135:ASP:O	1:H:191:THR:N	2.48	0.41
1:H:157:LEU:O	1:H:158:VAL:C	2.62	0.41
1:B:378:ILE:HD12	1:B:378:ILE:C	2.42	0.41
1:C:67:ASP:OD2	1:C:353:SER:CB	2.69	0.41
1:C:69:LEU:HD23	1:C:70:LEU:H	1.84	0.41
1:C:281:LEU:HD12	1:C:316:PHE:HB2	2.02	0.41
1:F:222:LEU:HD12	1:F:222:LEU:HA	1.93	0.41
1:G:29:LEU:HD12	1:G:30:ILE:N	2.36	0.41
1:G:248:VAL:CG1	1:G:299:ILE:HD13	2.50	0.41
1:H:49:ILE:O	1:H:102:ILE:HA	2.21	0.41
1:H:108:THR:O	1:H:112:LEU:HG	2.21	0.41
1:A:389:VAL:O	1:A:390:ASP:C	2.63	0.41
1:A:391:ALA:HB1	1:A:446:LEU:HB2	2.02	0.41
1:B:57:GLU:HA	1:B:58:PRO:C	2.45	0.41
1:C:508:LEU:HD22	1:C:532:VAL:HG11	2.03	0.41
1:D:79:PHE:HA	1:D:234:HIS:HD2	1.86	0.41
1:E:298:ASN:HB2	1:G:19:GLY:HA3	2.03	0.41
1:E:511:LEU:O	1:E:511:LEU:HG	2.20	0.41
1:F:48:LEU:HD23	1:F:101:LEU:HD23	2.02	0.41
1:G:74:VAL:HG11	1:G:87:ILE:HG13	2.03	0.41
1:G:256:LEU:HD23	1:G:259:LEU:HD12	2.02	0.41
1:H:158:VAL:O	1:H:159:HIS:C	2.63	0.41
1:A:152:LEU:HB3	1:A:153:ALA:H	1.67	0.41
1:A:497:LEU:HD13	1:A:497:LEU:HA	1.81	0.41
1:B:137:VAL:CG2	1:B:192:ILE:HD13	2.46	0.41
1:B:385:SER:HB3	1:B:492:ALA:CB	2.50	0.41
1:D:164:ALA:HB1	1:D:347:PHE:HA	2.03	0.41
1:G:279:VAL:HG22	1:G:314:ARG:HB2	2.03	0.41
1:A:407:SER:O	1:A:410:PRO:HD2	2.21	0.41
1:B:191:THR:OG1	1:B:332:THR:HG23	2.20	0.41
1:B:584:ASP:O	1:B:588:ILE:HG12	2.21	0.41
1:C:115:GLY:O	1:C:119:GLU:HG2	2.21	0.41
1:C:165:LYS:HD2	1:C:181:PHE:CD2	2.55	0.41
1:D:87:ILE:CD1	1:D:114:PHE:CD1	3.04	0.41
1:D:141:LYS:O	1:D:142:ALA:C	2.64	0.41
1:D:461:GLU:CD	1:D:461:GLU:C	2.88	0.41
1:E:59:LEU:HA	1:E:60:HIS:HA	1.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:361:ILE:HD13	1:E:361:ILE:HA	1.89	0.41
1:F:281:LEU:HB3	1:F:332:THR:HB	2.03	0.41
1:G:60:HIS:ND1	1:G:159:HIS:HE1	2.19	0.41
1:G:239:ILE:HD12	1:G:239:ILE:HA	1.79	0.41
1:H:8:TYR:CD1	1:H:12:LEU:CD1	3.04	0.41
1:H:484:LYS:O	1:H:488:LEU:HG	2.20	0.41
1:A:69:LEU:HD12	1:A:354:ALA:HB2	2.02	0.41
1:A:192:ILE:HG13	1:A:193:GLY:N	2.36	0.41
1:A:429:ALA:O	1:A:433:ASN:ND2	2.54	0.41
1:B:160:LYS:HD3	1:B:357:TRP:CE2	2.55	0.41
1:C:17:LEU:HD22	1:C:36:VAL:CG2	2.51	0.41
1:C:68:GLY:HA2	1:C:167:TYR:HB2	2.02	0.41
1:C:225:ASP:O	1:C:245:ILE:HG13	2.21	0.41
1:C:342:LYS:HA	1:C:342:LYS:HD2	1.76	0.41
1:C:528:LEU:HB2	1:C:590:LEU:CD2	2.51	0.41
1:D:173:LEU:HD12	1:D:173:LEU:HA	1.95	0.41
1:E:138:SER:O	1:E:267:ARG:NH1	2.54	0.41
1:E:293:LEU:HD12	1:E:293:LEU:HA	1.89	0.41
1:E:394:TYR:CD1	1:E:398:LEU:HD23	2.56	0.41
1:E:400:SER:OG	1:E:600:ALA:HB2	2.21	0.41
1:E:500:ILE:O	1:E:504:LEU:HD12	2.20	0.41
1:F:19:GLY:CA	1:H:298:ASN:HB2	2.51	0.41
1:F:259:LEU:HD13	1:F:333:LEU:HD12	2.02	0.41
1:F:268:ASN:OD1	1:F:268:ASN:O	2.39	0.41
1:F:297:GLN:NE2	1:H:19:GLY:O	2.38	0.41
1:G:158:VAL:O	1:G:159:HIS:C	2.64	0.41
1:G:201:ILE:HG22	1:G:203:ALA:H	1.84	0.41
1:H:12:LEU:HD12	1:H:12:LEU:HA	1.84	0.41
1:H:94:LYS:HD2	1:H:94:LYS:HA	1.86	0.41
1:H:251:LEU:O	1:H:255:LEU:HG	2.21	0.41
1:H:424:CYS:O	1:H:427:THR:HG23	2.21	0.41
1:H:484:LYS:HD3	1:H:488:LEU:HG	2.02	0.41
1:A:534:GLU:OE2	1:A:543:LEU:CB	2.67	0.41
1:C:251:LEU:HD22	1:D:6:TRP:CH2	2.56	0.41
1:D:594:ILE:O	1:D:598:THR:HG23	2.21	0.41
1:E:291:LEU:HD12	1:G:16:HIS:CB	2.51	0.41
1:E:418:VAL:CG1	1:E:419:ALA:N	2.84	0.41
1:E:420:GLY:C	1:E:422:GLY:H	2.28	0.41
1:G:28:ARG:HG2	1:G:28:ARG:HH11	1.86	0.41
1:G:297:GLN:O	1:G:297:GLN:HG2	2.20	0.41
1:A:180:THR:HG22	1:A:184:LYS:HE2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:250:GLU:HG3	1:A:250:GLU:H	1.62	0.40
1:A:500:ILE:HG23	1:A:504:LEU:CD1	2.51	0.40
1:A:599:ASP:O	1:A:603:LYS:HG2	2.21	0.40
1:B:104:VAL:HG23	1:B:114:PHE:CD2	2.55	0.40
1:C:319:THR:CG2	1:C:322:THR:CG2	2.99	0.40
1:C:372:ILE:HD12	1:D:31:GLU:HB2	2.03	0.40
1:E:170:LYS:HB2	1:E:170:LYS:HE2	1.43	0.40
1:E:409:GLU:CD	1:E:409:GLU:C	2.88	0.40
1:F:111:ILE:HG21	1:F:132:ILE:HD13	2.03	0.40
1:F:247:THR:HG21	1:H:9:LYS:HE2	2.03	0.40
1:G:27:VAL:HG12	1:G:64:VAL:HG12	2.04	0.40
1:G:256:LEU:HD23	1:G:256:LEU:HA	1.88	0.40
1:A:68:GLY:HA2	1:A:167:TYR:HB2	2.03	0.40
1:C:48:LEU:HD23	1:C:103:ILE:HD11	2.04	0.40
1:C:57:GLU:HA	1:C:58:PRO:C	2.46	0.40
1:E:25:PRO:HD2	1:G:361:ILE:CD1	2.48	0.40
1:E:100:THR:O	1:E:128:ALA:HA	2.20	0.40
1:E:307:LYS:O	1:E:307:LYS:HG3	2.21	0.40
1:F:57:GLU:OE1	1:H:291:LEU:HB2	2.21	0.40
1:G:144:ASN:ND2	1:G:149:ARG:HG2	2.36	0.40
1:A:154:GLY:HA3	1:A:189:LEU:HD13	2.04	0.40
1:A:452:SER:O	1:A:456:ILE:HD12	2.21	0.40
1:B:69:LEU:HD23	1:B:69:LEU:HA	1.92	0.40
1:B:192:ILE:HD12	1:B:192:ILE:HA	1.96	0.40
1:B:399:GLU:O	1:B:403:LYS:HG2	2.21	0.40
1:B:470:GLY:O	1:B:474:ILE:HG12	2.21	0.40
1:D:44:ASP:HB2	1:D:170:LYS:HD3	2.01	0.40
1:E:69:LEU:HD23	1:E:70:LEU:N	2.36	0.40
1:E:287:GLY:HA3	1:E:327:PRO:HA	2.03	0.40
1:E:431:GLY:HA3	1:E:464:MET:HE2	2.03	0.40
1:E:445:ASP:OD2	1:E:445:ASP:C	2.63	0.40
1:H:41:ASN:HA	1:H:94:LYS:NZ	2.37	0.40
1:H:59:LEU:HA	1:H:60:HIS:HA	1.50	0.40
1:C:9:LYS:HE2	1:D:249:ASP:CG	2.45	0.40
1:D:139:VAL:HG22	1:D:239:ILE:HG23	2.02	0.40
1:D:174:GLU:CD	1:D:174:GLU:N	2.79	0.40
1:E:280:LEU:HD12	1:E:281:LEU:N	2.37	0.40
1:F:248:VAL:HG21	1:F:299:ILE:CD1	2.48	0.40
1:F:254:GLU:HG2	1:F:258:TYR:HE1	1.85	0.40
1:H:159:HIS:O	1:H:160:LYS:C	2.63	0.40
1:A:249:ASP:OD2	1:B:10:LYS:NZ	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:393:LEU:O	1:A:394:TYR:C	2.63	0.40
1:B:83:SER:CA	1:B:86:GLN:HG3	2.51	0.40
1:B:397:LEU:HB3	1:B:597:ILE:HG23	2.04	0.40
1:B:435:ILE:HD11	1:B:456:ILE:HG12	2.04	0.40
1:B:487:GLU:HG2	1:B:491:GLY:O	2.21	0.40
1:C:144:ASN:O	1:C:147:VAL:HG12	2.20	0.40
1:C:535:PHE:HB2	1:C:544:ALA:HB1	2.03	0.40
1:D:146:LEU:H	1:D:146:LEU:HG	1.36	0.40
1:E:436:LEU:HD23	1:E:436:LEU:HA	1.70	0.40
1:F:17:LEU:HD22	1:F:36:VAL:CG2	2.51	0.40
1:F:239:ILE:HG23	1:F:240:LYS:N	2.35	0.40
1:G:48:LEU:HD22	1:G:163:GLY:HA2	2.03	0.40
1:G:49:ILE:O	1:G:102:ILE:HA	2.21	0.40
1:G:457:THR:O	1:G:460:VAL:HG22	2.22	0.40
1:H:282:ILE:HG13	1:H:297:GLN:HG3	2.03	0.40
1:H:495:LEU:HD23	1:H:495:LEU:H	1.85	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	540/608 (89%)	524 (97%)	16 (3%)	0	100	100
1	B	556/608 (91%)	541 (97%)	15 (3%)	0	100	100
1	C	521/608 (86%)	497 (95%)	24 (5%)	0	100	100
1	D	430/608 (71%)	414 (96%)	16 (4%)	0	100	100
1	E	553/608 (91%)	530 (96%)	23 (4%)	0	100	100
1	F	383/608 (63%)	372 (97%)	11 (3%)	0	100	100
1	G	400/608 (66%)	387 (97%)	13 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	H	441/608 (72%)	427 (97%)	14 (3%)	0	100	100
All	All	3824/4864 (79%)	3692 (96%)	132 (4%)	0	100	100

There are no Ramachandran outliers to report.

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	439/497 (88%)	402 (92%)	37 (8%)	10	29
1	B	441/497 (89%)	412 (93%)	29 (7%)	15	40
1	C	419/497 (84%)	384 (92%)	35 (8%)	10	29
1	D	354/497 (71%)	329 (93%)	25 (7%)	13	37
1	E	444/497 (89%)	426 (96%)	18 (4%)	27	59
1	F	311/497 (63%)	290 (93%)	21 (7%)	14	39
1	G	333/497 (67%)	313 (94%)	20 (6%)	17	44
1	H	362/497 (73%)	330 (91%)	32 (9%)	9	27
All	All	3103/3976 (78%)	2886 (93%)	217 (7%)	14	37

All (217) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	10	LYS
1	A	32	SER
1	A	143	LYS
1	A	146	LEU
1	A	147	VAL
1	A	199	VAL
1	A	201	ILE
1	A	249	ASP
1	A	274	LYS
1	A	281	LEU

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Mol	Chain	Res	Type
1	A	343	ASP
1	A	386	LYS
1	A	387	VAL
1	A	388	SER
1	A	390	ASP
1	A	393	LEU
1	A	443	LYS
1	A	445	ASP
1	A	451	LYS
1	A	459	ILE
1	A	460	VAL
1	A	464	MET
1	A	495	LEU
1	A	497	LEU
1	A	500	ILE
1	A	510	SER
1	A	511	LEU
1	A	512	PHE
1	A	513	LYS
1	A	524	LEU
1	A	525	ILE
1	A	526	ASP
1	A	529	GLU
1	A	532	VAL
1	A	534	GLU
1	A	543	LEU
1	A	549	HIS
1	B	43	GLU
1	B	146	LEU
1	B	147	VAL
1	B	176	HIS
1	B	220	GLU
1	B	260	LEU
1	B	273	ASP
1	B	275	ASN
1	B	388	SER
1	B	389	VAL
1	B	393	LEU
1	B	397	LEU
1	B	399	GLU
1	B	411	LYS
1	B	414	LEU

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Mol	Chain	Res	Type
1	B	424	CYS
1	B	477	SER
1	B	484	LYS
1	B	498	GLU
1	B	500	ILE
1	B	501	SER
1	B	510	SER
1	B	511	LEU
1	B	516	ARG
1	B	523	THR
1	B	524	LEU
1	B	525	ILE
1	B	543	LEU
1	B	593	LEU
1	C	20	LEU
1	C	70	LEU
1	C	112	LEU
1	C	143	LYS
1	C	144	ASN
1	C	146	LEU
1	C	184	LYS
1	C	225	ASP
1	C	262	THR
1	C	289	SER
1	C	297	GLN
1	C	306	SER
1	C	379	ASP
1	C	418	VAL
1	C	435	ILE
1	C	436	LEU
1	C	437	LYS
1	C	441	GLU
1	C	446	LEU
1	C	456	ILE
1	C	457	THR
1	C	459	ILE
1	C	495	LEU
1	C	496	THR
1	C	497	LEU
1	C	498	GLU
1	C	501	SER
1	C	529	GLU

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Mol	Chain	Res	Type
1	C	537	LYS
1	C	542	LYS
1	C	543	LEU
1	C	546	LYS
1	C	553	GLU
1	C	555	THR
1	C	588	ILE
1	D	44	ASP
1	D	84	THR
1	D	119	GLU
1	D	129	GLU
1	D	130	LEU
1	D	143	LYS
1	D	146	LEU
1	D	197	ASP
1	D	199	VAL
1	D	200	THR
1	D	201	ILE
1	D	239	ILE
1	D	273	ASP
1	D	275	ASN
1	D	306	SER
1	D	339	THR
1	D	346	LYS
1	D	362	SER
1	D	459	ILE
1	D	503	SER
1	D	543	LEU
1	D	546	LYS
1	D	588	ILE
1	D	593	LEU
1	D	595	SER
1	E	116	LEU
1	E	146	LEU
1	E	147	VAL
1	E	378	ILE
1	E	382	ASP
1	E	383	SER
1	E	384	SER
1	E	388	SER
1	E	390	ASP
1	E	392	LYS

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Mol	Chain	Res	Type
1	E	447	LYS
1	E	495	LEU
1	E	496	THR
1	E	498	GLU
1	E	500	ILE
1	E	533	LYS
1	E	537	LYS
1	E	541	LEU
1	F	31	GLU
1	F	116	LEU
1	F	129	GLU
1	F	139	VAL
1	F	146	LEU
1	F	147	VAL
1	F	171	ASP
1	F	176	HIS
1	F	224	HIS
1	F	270	VAL
1	F	360	ASN
1	F	459	ILE
1	F	461	GLU
1	F	464	MET
1	F	472	TYR
1	F	475	PHE
1	F	476	ILE
1	F	526	ASP
1	F	528	LEU
1	F	531	PHE
1	F	532	VAL
1	G	9	LYS
1	G	13	VAL
1	G	42	GLN
1	G	44	ASP
1	G	171	ASP
1	G	172	ASN
1	G	236	GLU
1	G	255	LEU
1	G	281	LEU
1	G	325	ASP
1	G	462	THR
1	G	464	MET
1	G	467	THR

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Mol	Chain	Res	Type
1	G	471	LEU
1	G	474	ILE
1	G	497	LEU
1	G	503	SER
1	G	508	LEU
1	G	510	SER
1	G	513	LYS
1	H	7	ASP
1	H	44	ASP
1	H	46	ILE
1	H	48	LEU
1	H	49	ILE
1	H	83	SER
1	H	92	LYS
1	H	96	SER
1	H	101	LEU
1	H	143	LYS
1	H	146	LEU
1	H	147	VAL
1	H	221	VAL
1	H	222	LEU
1	H	223	LYS
1	H	239	ILE
1	H	241	LYS
1	H	249	ASP
1	H	276	ASP
1	H	277	GLU
1	H	288	THR
1	H	317	THR
1	H	339	THR
1	H	363	ASP
1	H	365	SER
1	H	372	ILE
1	H	377	GLU
1	H	378	ILE
1	H	380	GLU
1	H	433	ASN
1	H	435	ILE
1	H	437	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (60) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	5	HIS
1	A	16	HIS
1	A	42	GLN
1	A	159	HIS
1	A	188	ASN
1	A	271	GLN
1	A	298	ASN
1	A	430	ASN
1	B	5	HIS
1	B	16	HIS
1	B	42	GLN
1	B	86	GLN
1	B	176	HIS
1	B	188	ASN
1	B	268	ASN
1	B	271	GLN
1	B	370	ASN
1	B	505	GLN
1	B	545	ASN
1	C	26	HIS
1	C	144	ASN
1	C	188	ASN
1	C	234	HIS
1	C	268	ASN
1	C	271	GLN
1	C	297	GLN
1	C	350	HIS
1	C	433	ASN
1	C	505	GLN
1	C	545	ASN
1	D	16	HIS
1	D	41	ASN
1	D	42	GLN
1	D	159	HIS
1	D	177	GLN
1	D	268	ASN
1	D	350	HIS
1	D	545	ASN
1	E	16	HIS
1	E	42	GLN
1	E	159	HIS
1	E	224	HIS
1	E	234	HIS

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Mol	Chain	Res	Type
1	E	268	ASN
1	E	275	ASN
1	E	455	GLN
1	F	16	HIS
1	F	26	HIS
1	F	86	GLN
1	F	172	ASN
1	F	268	ASN
1	G	16	HIS
1	G	159	HIS
1	G	172	ASN
1	G	235	ASN
1	G	370	ASN
1	G	509	GLN
1	H	188	ASN
1	H	224	HIS
1	H	268	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 5 ligands modelled in this entry, 4 are monoatomic - leaving 1 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
3	ATP	B	701	-	29,33,33	0.50	0	44,52,52	0.57	0

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
3	ATP	B	701	-	-	5/22/38/38	0/3/3/3

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

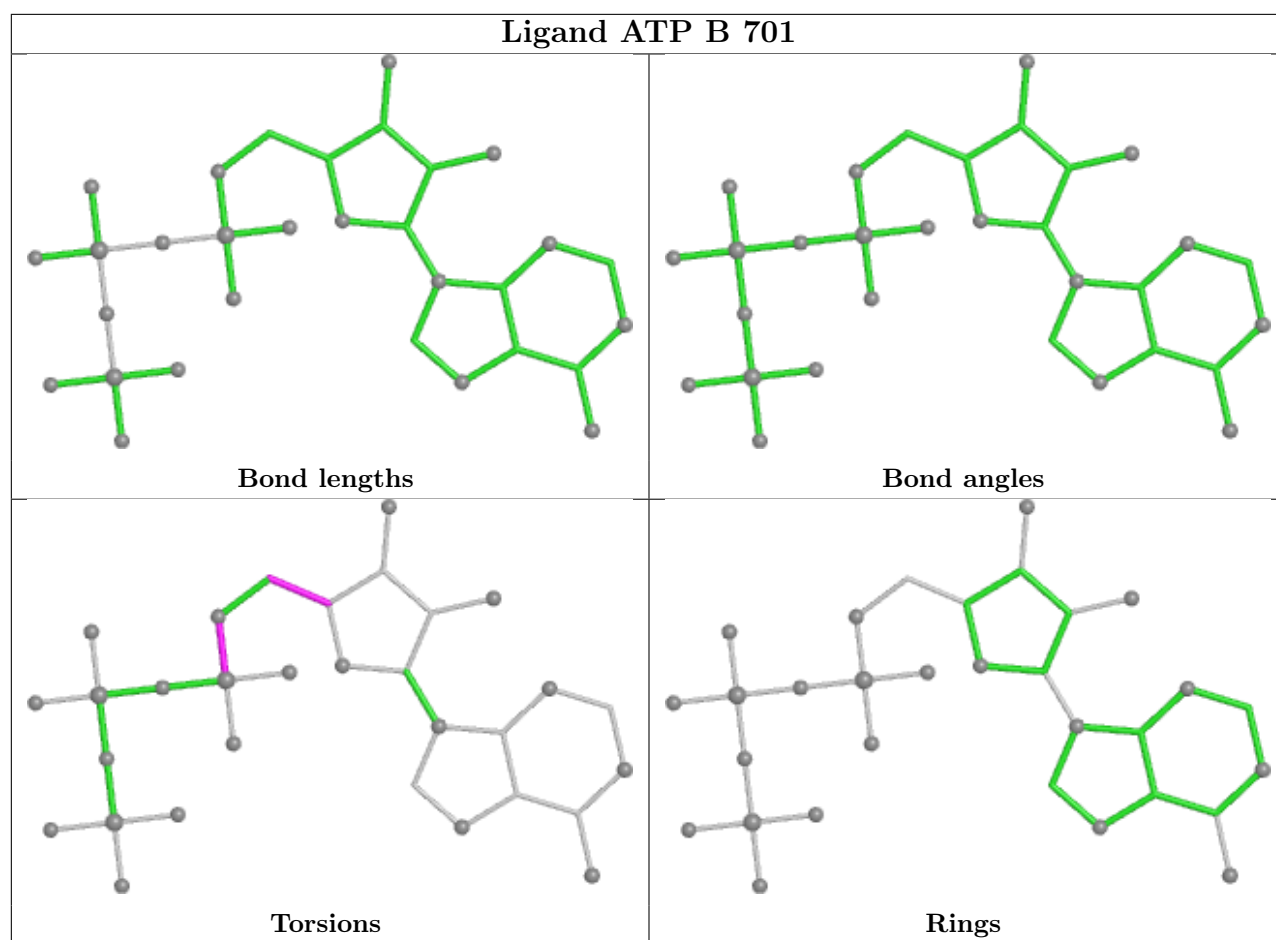
All (5) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	B	701	ATP	C5'-O5'-PA-O1A
3	B	701	ATP	C5'-O5'-PA-O2A
3	B	701	ATP	C5'-O5'-PA-O3A
3	B	701	ATP	C3'-C4'-C5'-O5'
3	B	701	ATP	O4'-C4'-C5'-O5'

There are no ring outliers.

No monomer is involved in short contacts.

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2		OWAB(Å ²)	Q<0.9
1	A	548/608 (90%)	0.54	56 (10%)	12 10	8, 30, 93, 160	0
1	B	562/608 (92%)	0.63	67 (11%)	9 7	10, 37, 84, 116	0
1	C	533/608 (87%)	0.82	91 (17%)	4 3	8, 42, 115, 138	0
1	D	442/608 (72%)	0.82	60 (13%)	7 5	11, 41, 87, 160	0
1	E	559/608 (91%)	0.70	41 (7%)	21 17	16, 50, 86, 144	0
1	F	395/608 (64%)	0.92	48 (12%)	8 7	28, 54, 123, 149	0
1	G	408/608 (67%)	0.53	43 (10%)	11 10	14, 34, 105, 116	0
1	H	449/608 (73%)	1.05	72 (16%)	5 4	22, 61, 113, 125	0
All	All	3896/4864 (80%)	0.74	478 (12%)	8 7	8, 45, 104, 160	0

All (478) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	E	389	VAL	12.5
1	A	527	ALA	8.1
1	D	221	VAL	7.8
1	B	273	ASP	7.6
1	B	389	VAL	7.3
1	D	548	ALA	7.2
1	D	203	ALA	6.9
1	A	389	VAL	6.4
1	A	221	VAL	6.3
1	B	419	ALA	6.0
1	A	203	ALA	5.9
1	D	593	LEU	5.8
1	F	528	LEU	5.6
1	A	534	GLU	5.4
1	C	493	TYR	5.3
1	B	418	VAL	5.2

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Mol	Chain	Res	Type	RSRZ
1	F	532	VAL	5.2
1	B	552	ALA	5.2
1	B	555	THR	5.1
1	A	202	PRO	5.0
1	D	538	SER	5.0
1	D	594	ILE	5.0
1	G	456	ILE	5.0
1	B	388	SER	4.9
1	B	2	SER	4.7
1	A	505	GLN	4.7
1	E	239	ILE	4.7
1	F	458	ASP	4.7
1	C	499	THR	4.6
1	C	500	ILE	4.6
1	B	219	TYR	4.5
1	C	588	ILE	4.5
1	D	144	ASN	4.5
1	B	518	ARG	4.4
1	C	555	THR	4.4
1	D	544	ALA	4.4
1	B	523	THR	4.3
1	E	198	HIS	4.3
1	C	548	ALA	4.3
1	D	597	ILE	4.2
1	C	585	PRO	4.2
1	A	387	VAL	4.2
1	F	517	ALA	4.2
1	C	485	GLU	4.2
1	H	44	ASP	4.2
1	E	382	ASP	4.1
1	C	495	LEU	4.1
1	F	460	VAL	4.1
1	B	550	ASP	4.0
1	C	119	GLU	4.0
1	G	515	THR	4.0
1	G	506	ALA	4.0
1	E	193	GLY	4.0
1	A	497	LEU	4.0
1	D	602	PHE	3.9
1	D	172	ASN	3.9
1	C	486	LYS	3.9
1	D	543	LEU	3.9

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Mol	Chain	Res	Type	RSRZ
1	A	531	PHE	3.9
1	C	593	LEU	3.9
1	F	140	GLY	3.8
1	B	535	PHE	3.8
1	G	463	ALA	3.8
1	A	445	ASP	3.8
1	D	340	GLY	3.8
1	H	110	ASP	3.8
1	D	590	LEU	3.8
1	A	388	SER	3.7
1	G	470	GLY	3.7
1	F	267	ARG	3.7
1	E	388	SER	3.7
1	A	446	LEU	3.7
1	C	514	TYR	3.7
1	B	539	LYS	3.7
1	D	542	LYS	3.7
1	A	378	ILE	3.7
1	G	8	TYR	3.7
1	C	501	SER	3.6
1	H	238	GLY	3.6
1	A	425	GLY	3.6
1	D	583	PRO	3.6
1	A	500	ILE	3.6
1	C	412	ILE	3.5
1	D	466	GLY	3.5
1	B	421	ASP	3.5
1	A	146	LEU	3.5
1	G	513	LYS	3.5
1	C	547	ALA	3.5
1	A	504	LEU	3.5
1	F	472	TYR	3.5
1	H	508	LEU	3.5
1	D	545	ASN	3.5
1	D	500	ILE	3.5
1	H	449	GLY	3.5
1	F	69	LEU	3.5
1	H	499	THR	3.5
1	B	390	ASP	3.4
1	A	200	THR	3.4
1	G	457	THR	3.4
1	H	494	THR	3.4

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Mol	Chain	Res	Type	RSRZ
1	E	418	VAL	3.4
1	A	220	GLU	3.4
1	B	521	ASP	3.4
1	C	418	VAL	3.4
1	F	530	PRO	3.4
1	B	538	SER	3.4
1	H	224	HIS	3.4
1	G	511	LEU	3.4
1	A	506	ALA	3.4
1	A	544	ALA	3.4
1	H	463	ALA	3.4
1	F	476	ILE	3.4
1	B	420	GLY	3.3
1	C	484	LYS	3.3
1	F	141	LYS	3.3
1	H	128	ALA	3.3
1	D	171	ASP	3.3
1	A	381	GLY	3.3
1	B	431	GLY	3.3
1	H	381	GLY	3.3
1	F	264	ASP	3.3
1	C	464	MET	3.3
1	C	543	LEU	3.3
1	C	417	THR	3.3
1	D	200	THR	3.3
1	D	124	GLU	3.3
1	G	42	GLN	3.3
1	H	515	THR	3.3
1	B	526	ASP	3.2
1	A	530	PRO	3.2
1	H	383	SER	3.2
1	H	144	ASN	3.2
1	A	412	ILE	3.2
1	F	459	ILE	3.2
1	C	413	THR	3.2
1	D	3	SER	3.2
1	B	146	LEU	3.2
1	C	554	ALA	3.2
1	F	465	GLY	3.2
1	G	469	GLY	3.2
1	D	474	ILE	3.2
1	A	3	SER	3.1

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Mol	Chain	Res	Type	RSRZ
1	A	144	ASN	3.1
1	D	117	ALA	3.1
1	E	421	ASP	3.1
1	B	125	GLY	3.1
1	B	519	THR	3.1
1	F	529	GLU	3.1
1	H	46	ILE	3.1
1	A	390	ASP	3.1
1	G	465	GLY	3.1
1	F	124	GLU	3.1
1	H	43	GLU	3.1
1	D	540	ASP	3.1
1	A	201	ILE	3.1
1	D	588	ILE	3.1
1	D	339	THR	3.1
1	E	583	PRO	3.1
1	H	100	THR	3.1
1	B	330	SER	3.1
1	D	44	ASP	3.1
1	G	477	SER	3.1
1	B	422	GLY	3.1
1	C	218	GLY	3.1
1	F	509	GLN	3.1
1	D	456	ILE	3.1
1	H	500	ILE	3.1
1	C	488	LEU	3.0
1	D	541	LEU	3.0
1	E	387	VAL	3.0
1	G	460	VAL	3.0
1	H	514	TYR	3.0
1	H	491	GLY	3.0
1	C	393	LEU	3.0
1	G	499	THR	3.0
1	C	391	ALA	3.0
1	D	547	ALA	3.0
1	A	526	ASP	3.0
1	B	586	GLY	3.0
1	G	468	SER	3.0
1	H	225	ASP	3.0
1	C	447	LYS	3.0
1	E	540	ASP	3.0
1	C	496	THR	3.0

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Mol	Chain	Res	Type	RSRZ
1	C	436	LEU	2.9
1	C	510	SER	2.9
1	F	526	ASP	2.9
1	B	517	ALA	2.9
1	C	517	ALA	2.9
1	F	527	ALA	2.9
1	B	588	ILE	2.9
1	E	423	ASP	2.9
1	F	144	ASN	2.9
1	G	195	SER	2.9
1	C	402	VAL	2.9
1	D	515	THR	2.9
1	H	495	LEU	2.9
1	D	202	PRO	2.9
1	C	43	GLU	2.9
1	E	529	GLU	2.9
1	D	539	LYS	2.9
1	H	71	ASP	2.9
1	H	507	ALA	2.9
1	B	531	PHE	2.9
1	B	412	ILE	2.9
1	C	414	LEU	2.9
1	D	140	GLY	2.8
1	D	587	ALA	2.8
1	C	505	GLN	2.8
1	C	492	ALA	2.8
1	B	398	LEU	2.8
1	C	508	LEU	2.8
1	G	497	LEU	2.8
1	H	460	VAL	2.8
1	B	527	ALA	2.8
1	D	459	ILE	2.8
1	H	126	LEU	2.8
1	H	467	THR	2.8
1	H	468	SER	2.8
1	B	529	GLU	2.8
1	G	485	GLU	2.8
1	C	446	LEU	2.8
1	E	146	LEU	2.8
1	D	584	ASP	2.8
1	H	481	LYS	2.8
1	E	383	SER	2.8

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Mol	Chain	Res	Type	RSRZ
1	C	530	PRO	2.8
1	E	134	GLN	2.7
1	B	399	GLU	2.7
1	B	506	ALA	2.7
1	H	459	ILE	2.7
1	C	439	LEU	2.7
1	E	552	ALA	2.7
1	D	182	GLY	2.7
1	B	225	ASP	2.7
1	H	171	ASP	2.7
1	H	509	GLN	2.7
1	B	147	VAL	2.7
1	E	114	PHE	2.7
1	F	535	PHE	2.7
1	C	416	ASP	2.7
1	C	459	ILE	2.6
1	F	265	LYS	2.6
1	B	514	TYR	2.6
1	A	520	GLY	2.6
1	F	53	GLY	2.6
1	H	99	GLY	2.6
1	E	380	GLU	2.6
1	H	363	ASP	2.6
1	E	522	ARG	2.6
1	D	115	GLY	2.6
1	E	532	VAL	2.6
1	G	40	GLU	2.6
1	F	44	ASP	2.6
1	C	434	ALA	2.6
1	H	142	ALA	2.6
1	E	442	GLY	2.6
1	C	532	VAL	2.6
1	G	471	LEU	2.6
1	E	378	ILE	2.6
1	E	597	ILE	2.6
1	G	505	GLN	2.6
1	E	419	ALA	2.6
1	F	463	ALA	2.6
1	H	88	PHE	2.6
1	C	403	LYS	2.6
1	G	500	ILE	2.6
1	F	143	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
1	A	499	THR	2.5
1	H	114	PHE	2.5
1	H	492	ALA	2.5
1	C	550	ASP	2.5
1	G	464	MET	2.5
1	F	531	PHE	2.5
1	H	72	ALA	2.5
1	H	434	ALA	2.5
1	B	416	ASP	2.5
1	C	44	ASP	2.5
1	H	502	GLY	2.5
1	E	221	VAL	2.5
1	G	514	TYR	2.5
1	H	478	ALA	2.5
1	C	516	ARG	2.5
1	E	390	ASP	2.5
1	A	529	GLU	2.5
1	E	415	TYR	2.5
1	A	488	LEU	2.4
1	A	550	ASP	2.4
1	H	379	ASP	2.4
1	G	482	SER	2.4
1	A	380	GLU	2.4
1	D	512	PHE	2.4
1	G	461	GLU	2.4
1	H	267	ARG	2.4
1	H	475	PHE	2.4
1	D	592	ALA	2.4
1	E	142	ALA	2.4
1	F	274	LYS	2.4
1	F	275	ASN	2.4
1	E	379	ASP	2.4
1	C	468	SER	2.4
1	D	119	GLU	2.4
1	A	391	ALA	2.4
1	A	587	ALA	2.4
1	H	269	TYR	2.4
1	B	541	LEU	2.4
1	B	582	LEU	2.4
1	F	175	LEU	2.4
1	G	476	ILE	2.4
1	E	368	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
1	F	325	ASP	2.4
1	C	498	GLU	2.4
1	C	538	SER	2.4
1	C	553	GLU	2.4
1	D	534	GLU	2.4
1	F	514	TYR	2.4
1	A	515	THR	2.4
1	A	444	LEU	2.4
1	C	541	LEU	2.4
1	G	256	LEU	2.4
1	C	597	ILE	2.4
1	G	91	ILE	2.4
1	H	433	ASN	2.4
1	B	458	ASP	2.4
1	G	325	ASP	2.4
1	C	487	GLU	2.4
1	C	440	ALA	2.4
1	C	527	ALA	2.4
1	C	536	ALA	2.4
1	H	480	ALA	2.4
1	C	546	LYS	2.3
1	F	149	ARG	2.3
1	G	53	GLY	2.3
1	D	599	ASP	2.3
1	G	71	ASP	2.3
1	H	382	ASP	2.3
1	E	501	SER	2.3
1	C	398	LEU	2.3
1	C	427	THR	2.3
1	C	497	LEU	2.3
1	D	47	THR	2.3
1	G	462	THR	2.3
1	H	439	LEU	2.3
1	E	310	ILE	2.3
1	H	378	ILE	2.3
1	H	474	ILE	2.3
1	F	52	GLY	2.3
1	B	264	ASP	2.3
1	D	71	ASP	2.3
1	B	554	ALA	2.3
1	E	402	VAL	2.3
1	C	395	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
1	A	398	LEU	2.3
1	H	511	LEU	2.3
1	C	406	ILE	2.3
1	A	523	THR	2.3
1	F	247	THR	2.3
1	F	263	THR	2.3
1	A	493	TYR	2.3
1	A	522	ARG	2.3
1	A	583	PRO	2.3
1	D	532	VAL	2.3
1	H	179	VAL	2.3
1	G	43	GLU	2.3
1	G	478	ALA	2.3
1	H	203	ALA	2.3
1	B	497	LEU	2.3
1	G	171	ASP	2.3
1	H	483	LEU	2.3
1	H	435	ILE	2.3
1	A	465	GLY	2.3
1	D	99	GLY	2.3
1	F	148	GLY	2.3
1	G	466	GLY	2.3
1	H	464	MET	2.2
1	C	490	GLU	2.2
1	D	275	ASN	2.2
1	A	524	LEU	2.2
1	C	116	LEU	2.2
1	C	471	LEU	2.2
1	H	497	LEU	2.2
1	B	271	GLN	2.2
1	F	134	GLN	2.2
1	B	584	ASP	2.2
1	G	474	ILE	2.2
1	B	583	PRO	2.2
1	C	489	SER	2.2
1	B	466	GLY	2.2
1	C	502	GLY	2.2
1	D	546	LYS	2.2
1	H	130	LEU	2.2
1	H	490	GLU	2.2
1	E	147	VAL	2.2
1	H	450	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
1	C	477	SER	2.2
1	F	473	SER	2.2
1	B	544	ALA	2.2
1	C	437	LYS	2.2
1	F	170	LYS	2.2
1	C	534	GLU	2.2
1	D	201	ILE	2.2
1	F	177	GLN	2.2
1	C	448	ASP	2.2
1	A	405	VAL	2.2
1	B	402	VAL	2.2
1	H	462	THR	2.2
1	H	424	CYS	2.2
1	H	501	SER	2.2
1	A	461	GLU	2.2
1	B	587	ALA	2.2
1	C	203	ALA	2.2
1	D	505	GLN	2.2
1	C	549	HIS	2.2
1	G	7	ASP	2.2
1	F	231	MET	2.2
1	E	143	LYS	2.2
1	G	502	GLY	2.2
1	B	493	TYR	2.2
1	A	501	SER	2.2
1	F	146	LEU	2.2
1	B	177	GLN	2.1
1	A	382	ASP	2.1
1	G	44	ASP	2.1
1	E	551	GLY	2.1
1	B	602	PHE	2.1
1	H	428	LEU	2.1
1	E	138	SER	2.1
1	C	106	ASN	2.1
1	F	147	VAL	2.1
1	C	443	LYS	2.1
1	E	151	GLY	2.1
1	C	121	ALA	2.1
1	D	601	TYR	2.1
1	A	468	SER	2.1
1	A	597	ILE	2.1
1	B	220	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
1	H	476	ILE	2.1
1	B	530	PRO	2.1
1	B	396	ASP	2.1
1	C	435	ILE	2.1
1	H	489	SER	2.1
1	B	172	ASN	2.1
1	C	483	LEU	2.1
1	E	116	LEU	2.1
1	B	413	THR	2.1
1	B	423	ASP	2.1
1	D	499	THR	2.1
1	D	598	THR	2.1
1	H	11	ASP	2.1
1	B	547	ALA	2.1
1	C	429	ALA	2.1
1	C	438	ALA	2.1
1	D	128	ALA	2.1
1	F	174	GLU	2.1
1	C	219	TYR	2.1
1	B	274	LYS	2.0
1	C	392	LYS	2.0
1	H	104	VAL	2.0
1	A	543	LEU	2.0
1	C	475	PHE	2.0
1	E	232	GLY	2.0
1	C	519	THR	2.0
1	C	552	ALA	2.0
1	D	600	ALA	2.0
1	F	369	ASP	2.0
1	H	375	ALA	2.0
1	C	42	GLN	2.0
1	F	198	HIS	2.0
1	B	275	ASN	2.0
1	B	522	ARG	2.0
1	H	347	PHE	2.0
1	C	587	ALA	2.0
1	B	7	ASP	2.0
1	C	379	ASP	2.0
1	G	377	GLU	2.0
1	A	147	VAL	2.0
1	A	402	VAL	2.0
1	D	147	VAL	2.0

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

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

6.3 Carbohydrates [i](#)

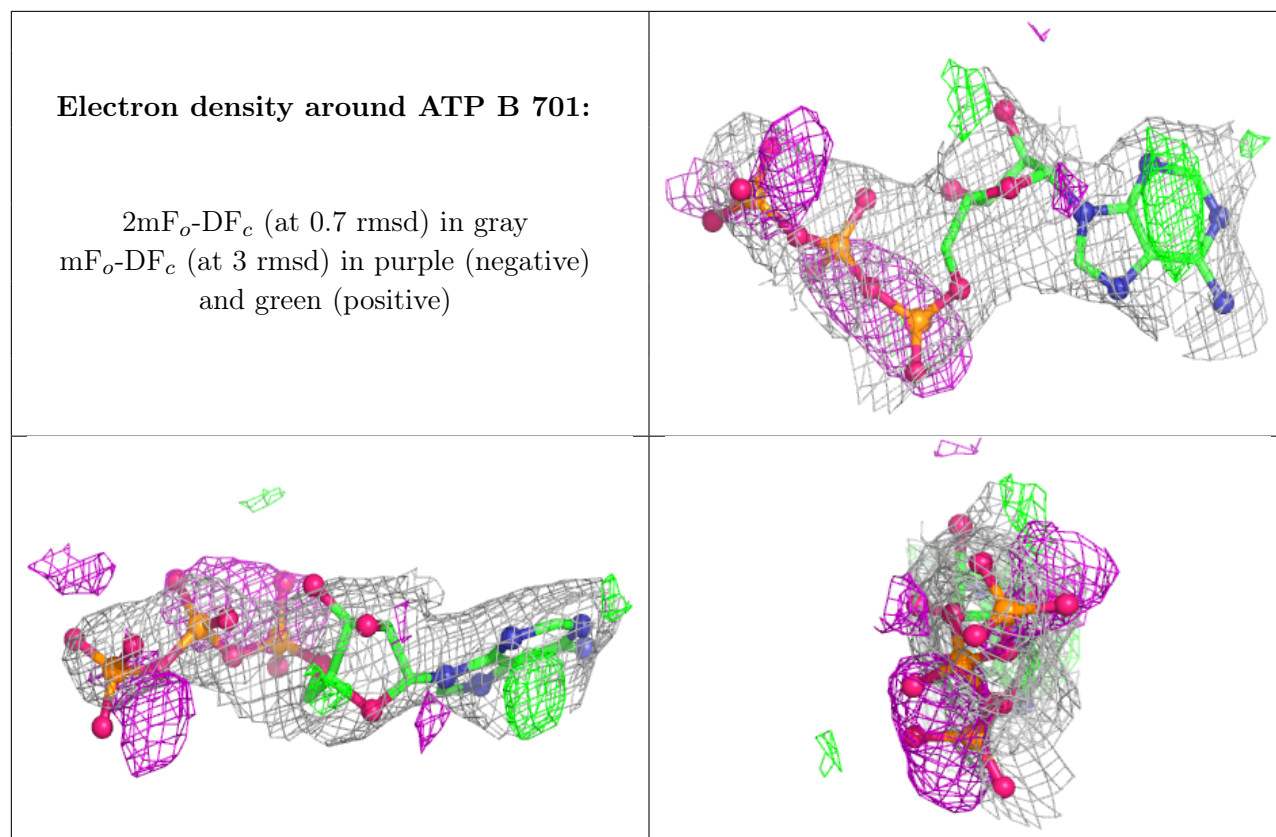
There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
2	MG	C	701	1/1	0.55	0.18	42,42,42,42	0
3	ATP	B	701	31/31	0.64	0.23	49,77,98,112	0
2	MG	B	700	1/1	0.70	0.29	52,52,52,52	0
2	MG	D	701	1/1	0.79	0.23	45,45,45,45	0
2	MG	A	701	1/1	0.83	0.13	30,30,30,30	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.



6.5 Other polymers [i](#)

There are no such residues in this entry.