Full wwPDB X-ray Structure Validation Report (i)

Mar 10, 2026 – 02:33 PM UTC

PDB ID	:	6V4L / pdb_00006v4l
Title	:	Structure of TrkH-TrkA in complex with ATPgammaS
Authors	:	Zhou, M.; Zhang, H.
Deposited on	:	2019-11-27
Resolution	:	3.80 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the (i) 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 (i)) were used in the production of this report:

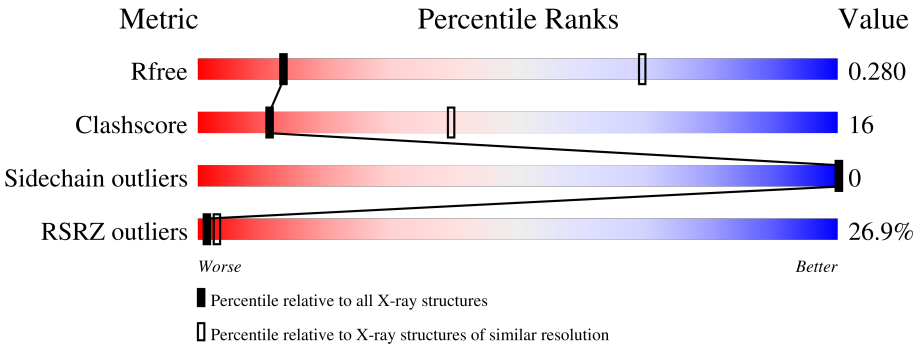
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.80 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1065 (3.96-3.64)
Clashscore	190562	1012 (3.94-3.66)
Sidechain outliers	187428	1043 (3.96-3.64)
RSRZ outliers	180081	1064 (3.96-3.64)

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 <=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	485	18%, 64%, 35%
1	B	485	21%, 67%, 32%
2	C	458	34%, 68%, 30%
2	D	458	33%, 62%, 36%

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 14337 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.

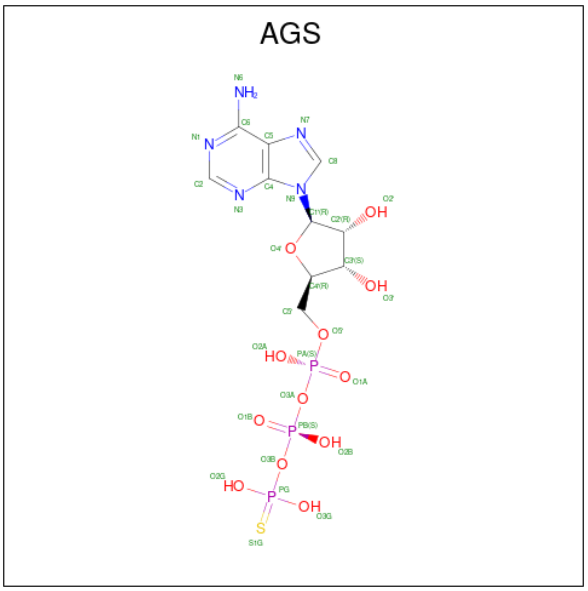
- Molecule 1 is a protein called Trk system potassium uptake protein TrkH.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	479	Total	C	N	O	S	0	0	0
			3692	2467	586	621	18			
1	B	479	Total	C	N	O	S	0	0	0
			3692	2467	586	621	18			

- Molecule 2 is a protein called Potassium uptake protein TrkA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	C	449	Total	C	N	O	S	0	0	0
			3417	2143	607	656	11			
2	D	448	Total	C	N	O	S	0	0	0
			3412	2140	606	655	11			

- Molecule 3 is PHOSPHOTHIOPHOSPHORIC ACID-ADENYLATE ESTER (CCD ID: AGS) (formula: $C_{10}H_{16}N_5O_{12}P_3S$).



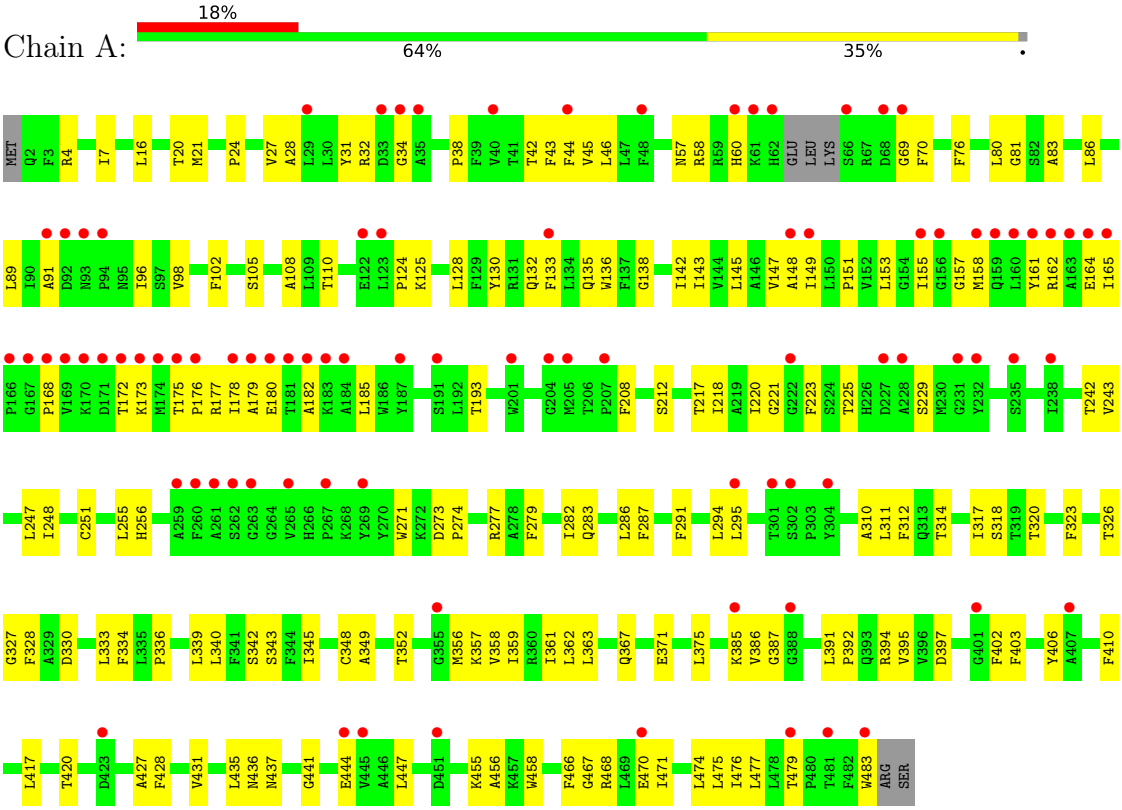
Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
3	C	1	Total	C	N	O	P	S	0	0
			31	10	5	12	3	1		
3	C	1	Total	C	N	O	P	S	0	0
			31	10	5	12	3	1		
3	D	1	Total	C	N	O	P	S	0	0
			31	10	5	12	3	1		
3	D	1	Total	C	N	O	P	S	0	0
			31	10	5	12	3	1		

3 Residue-property plots (i)

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.

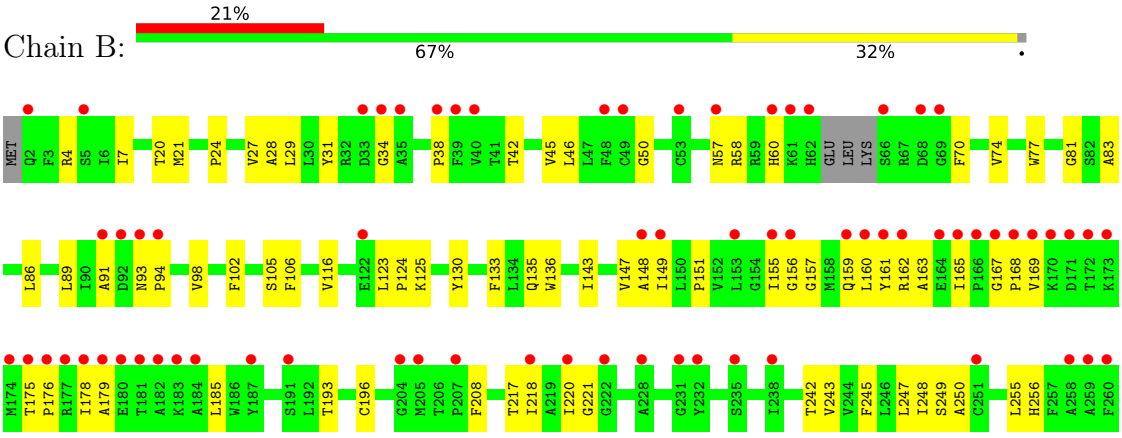
• Molecule 1: Trk system potassium uptake protein TrkH

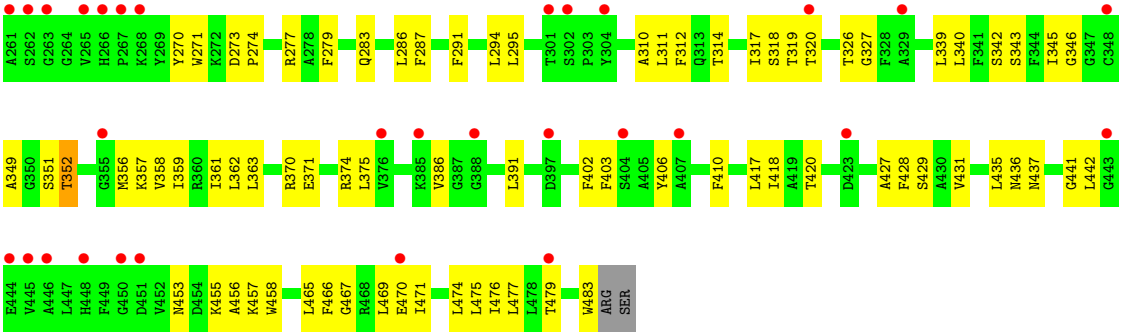
Chain A:



• Molecule 1: Trk system potassium uptake protein TrkH

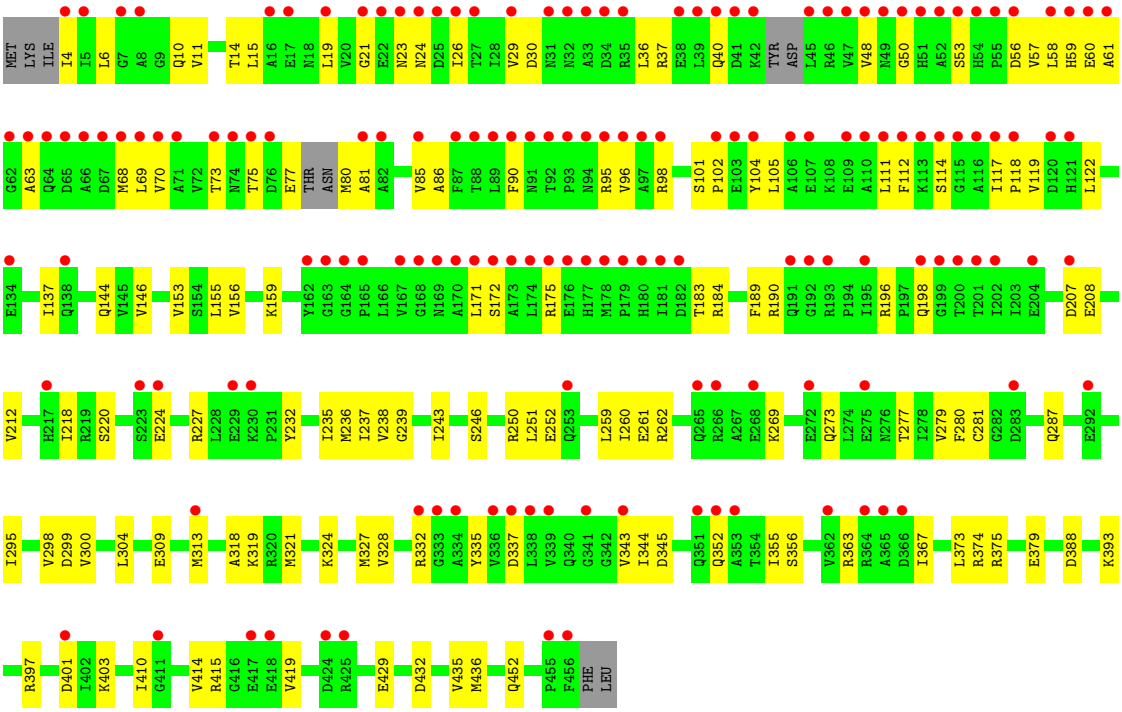
Chain B:





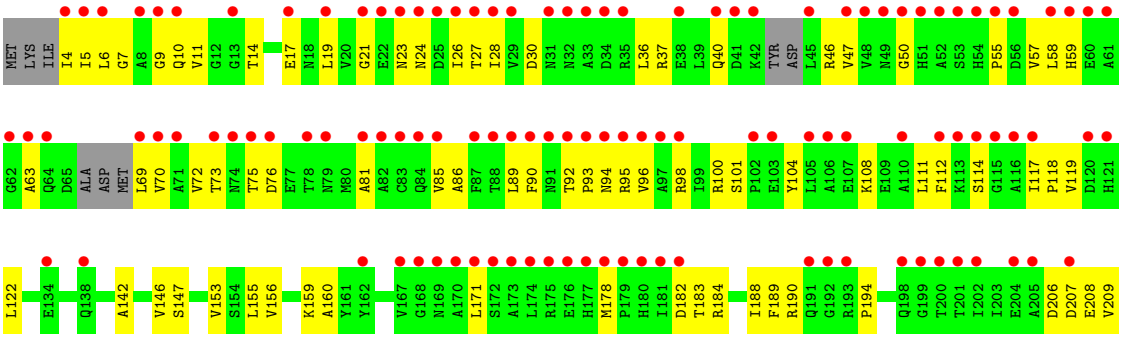
• Molecule 2: Potassium uptake protein TrkA

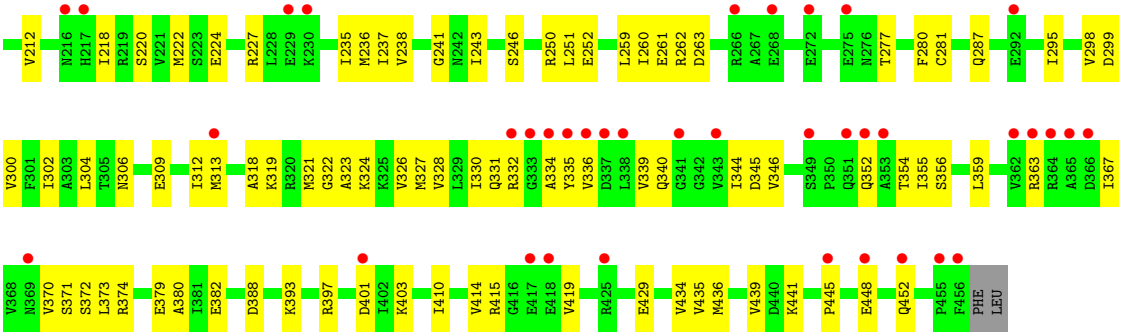
Chain C:



• Molecule 2: Potassium uptake protein TrkA

Chain D:




V212
N216
H217
I218
R219
S220
V221
M222
S223
E224
R227
L228
E229
K230
I235
M236
I237
V238
G241
N242
I243
S246
R250
L251
E252
L259
I260
E261
R262
D263
R266
A267
E268
E272
E275
N276
T277
F280
C281
Q287
E292
I295
V298
D299
V300
F301
I302
A303
L304
T305
N306
E309
I312
M313
A318
K319
R320
M321
G322
A323
K324
K325
V326
M327
V328
L329
I330
Q331
R332
G333
A334
Y335
V336
D337
L338
V339
Q340
G341
G342
V343
I344
D345
V346
S349
P350
Q351
Q352
A353
T354
I355
S356
L359
V362
R363
R364
A365
D366
I367
V368
N369
V370
S371
S372
L373
R374
E379
A380
I381
E382
D388
K393
R397
D401
I402
K403
I410
V414
R415
G416
E417
E418
V419
R425
E429
V434
V435
M436
V439
D440
K441
P445
E448
Q452
P455
F456
PHE
LEU

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 42	Depositor
Cell constants a, b, c, α, β, γ	164.27Å 164.27Å 123.39Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.33 – 3.80 49.33 – 3.80	Depositor EDS
% Data completeness (in resolution range)	96.7 (49.33-3.80) 96.7 (49.33-3.80)	Depositor EDS
R_{merge}	0.07	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.70 (at 3.77Å)	Xtriage
Refinement program	PHENIX 1.11.1_2575	Depositor
R, R_{free}	0.254 , 0.298 (Not available) , 0.280	Depositor DCC
R_{free} test set	1531 reflections (4.71%)	wwPDB-VP
Wilson B-factor (Å^2)	1.1	Xtriage
Anisotropy	2.869	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.23 , 31.8	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	0.449 for h,-k,-l	Xtriage
F_o,F_c correlation	0.81	EDS
Total number of atoms	14337	wwPDB-VP
Average B, all atoms (Å^2)	54.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.72% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

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

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	0.22	0/3797	0.54	1/5176 (0.0%)
1	B	0.22	0/3797	0.56	1/5176 (0.0%)
2	C	0.23	0/3464	0.54	0/4701
2	D	0.21	0/3459	0.54	0/4694
All	All	0.22	0/14517	0.55	2/19747 (0.0%)

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

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

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	168	PRO	N-CA-CB	7.59	111.22	103.25
1	A	168	PRO	N-CA-CB	5.39	108.91	103.25

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	352	THR	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3692	0	3752	126	0
1	B	3692	0	3750	121	0
2	C	3417	0	3428	106	0
2	D	3412	0	3423	116	0
3	C	62	0	24	9	0
3	D	62	0	24	13	0
All	All	14337	0	14401	469	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 16.

All (469) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:158:MET:H	1:A:161:TYR:HB3	1.17	1.03
1:B:156:GLY:HA3	1:B:161:TYR:HB2	1.55	0.88
2:D:95:ARG:NH1	2:D:118:PRO:O	2.09	0.86
1:A:406:TYR:OH	1:A:436:ASN:OD1	1.93	0.85
1:A:477:LEU:O	1:A:483:TRP:NE1	2.09	0.85
2:D:352:GLN:NE2	2:D:374:ARG:O	2.10	0.85
1:A:34:GLY:HA2	1:A:124:PRO:HB3	1.57	0.85
1:B:406:TYR:OH	1:B:436:ASN:OD1	1.95	0.84
1:B:136:TRP:HE1	1:B:193:THR:HG21	1.45	0.81
2:C:95:ARG:NH1	2:C:118:PRO:O	2.13	0.80
2:C:319:LYS:NZ	2:C:345:ASP:OD1	2.14	0.80
1:A:136:TRP:HE1	1:A:193:THR:HG21	1.46	0.80
2:D:50:GLY:HA2	2:D:57:VAL:HG21	1.65	0.79
2:C:4:ILE:N	2:C:68:MET:O	2.16	0.78
2:C:352:GLN:NE2	2:C:374:ARG:O	2.17	0.78
1:B:477:LEU:O	1:B:483:TRP:NE1	2.14	0.77
2:D:319:LYS:NZ	2:D:345:ASP:OD1	2.17	0.77
1:A:4:ARG:O	1:A:57:ASN:ND2	2.17	0.77
2:C:10:GLN:OE1	2:C:332:ARG:NE	2.19	0.76
1:B:283:GLN:NE2	1:B:318:SER:OG	2.17	0.75
1:A:345:ILE:HG12	1:A:361:ILE:HG13	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:420:THR:HG21	1:A:456:ALA:HB2	1.69	0.74
1:B:420:THR:HG21	1:B:456:ALA:HB2	1.69	0.74
2:C:415:ARG:NH1	2:C:429:GLU:OE2	2.21	0.73
2:D:261:GLU:OE2	3:D:501:AGS:O2'	2.05	0.73
1:A:28:ALA:O	1:A:32:ARG:NH1	2.20	0.73
2:D:367:ILE:HD13	2:D:452:GLN:HB2	1.71	0.73
2:D:393:LYS:O	2:D:397:ARG:NH2	2.21	0.73
1:A:357:LYS:NZ	1:A:470:GLU:OE2	2.21	0.73
1:B:4:ARG:O	1:B:57:ASN:ND2	2.18	0.72
2:C:309:GLU:O	2:C:313:MET:HG2	1.90	0.72
1:A:287:PHE:HA	1:A:314:THR:HG21	1.72	0.71
2:C:393:LYS:O	2:C:397:ARG:NH2	2.23	0.71
1:A:177:ARG:O	1:A:179:ALA:N	2.23	0.71
2:D:10:GLN:OE1	2:D:332:ARG:NE	2.16	0.71
1:B:157:GLY:O	1:B:349:ALA:HB1	1.91	0.71
1:A:217:THR:HG23	1:A:218:ILE:HD12	1.73	0.70
2:D:119:VAL:HG11	2:D:122:LEU:HD23	1.73	0.70
1:B:287:PHE:HA	1:B:314:THR:HG21	1.73	0.70
1:B:317:ILE:HD12	1:B:339:LEU:HD23	1.72	0.70
2:D:401:ASP:O	2:D:403:LYS:NZ	2.24	0.70
2:C:190:ARG:NH2	2:C:207:ASP:OD2	2.23	0.70
2:C:50:GLY:HA2	2:C:57:VAL:HG21	1.72	0.70
1:A:176:PRO:HB2	1:A:180:GLU:HB2	1.75	0.69
2:C:119:VAL:HG11	2:C:122:LEU:HD23	1.75	0.69
1:A:155:ILE:HG12	1:B:375:LEU:HD11	1.74	0.69
2:D:5:ILE:HD12	2:D:28:ILE:HG22	1.76	0.68
2:D:236:MET:HE2	2:D:260:ILE:HD11	1.76	0.68
1:A:157:GLY:O	1:A:349:ALA:HB1	1.94	0.67
1:A:162:ARG:O	1:A:164:GLU:N	2.27	0.67
1:B:345:ILE:HG12	1:B:361:ILE:HG13	1.75	0.67
1:B:247:LEU:HD21	1:B:283:GLN:HG2	1.76	0.67
3:D:502:AGS:O2A	3:D:502:AGS:S1G	2.53	0.66
1:A:375:LEU:HD11	1:B:155:ILE:HG13	1.75	0.66
1:B:165:ILE:HG22	1:B:167:GLY:H	1.60	0.66
2:C:367:ILE:HD13	2:C:452:GLN:HB2	1.78	0.66
1:B:286:LEU:HD11	1:B:342:SER:HB2	1.78	0.66
1:A:283:GLN:NE2	1:A:318:SER:OG	2.25	0.65
2:D:24:ASN:OD1	2:D:363:ARG:NH1	2.29	0.65
1:B:471:ILE:HG12	1:B:475:LEU:HD12	1.78	0.65
1:B:81:GLY:O	1:B:105:SER:OG	2.13	0.65
2:C:30:ASP:OD1	3:C:501:AGS:O2'	2.06	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:300:VAL:HG21	2:C:327:MET:HE3	1.79	0.63
1:A:247:LEU:HD21	1:A:283:GLN:HG2	1.79	0.63
3:D:501:AGS:O2G	3:D:501:AGS:O1B	2.16	0.63
2:C:10:GLN:N	3:C:501:AGS:S1G	2.71	0.63
2:D:17:GLU:OE2	2:D:441:LYS:NZ	2.29	0.63
2:C:261:GLU:OE2	3:C:502:AGS:O2'	2.15	0.62
3:C:501:AGS:O2A	3:C:501:AGS:O2B	2.16	0.62
1:B:340:LEU:HB2	1:B:442:LEU:HD23	1.81	0.62
2:D:332:ARG:HB2	2:D:335:TYR:HE2	1.64	0.62
2:C:236:MET:HE2	2:C:260:ILE:HD11	1.82	0.61
2:C:59:HIS:CE1	2:C:60:GLU:HG3	2.35	0.61
1:B:357:LYS:NZ	1:B:470:GLU:OE2	2.26	0.61
2:D:6:LEU:HD22	2:D:73:THR:HG22	1.82	0.61
1:B:93:ASN:HB2	1:B:94:PRO:HD3	1.81	0.61
1:A:21:MET:HE1	1:A:130:TYR:CE1	2.35	0.61
1:A:147:VAL:HG21	1:A:185:LEU:HD11	1.82	0.61
2:C:73:THR:O	2:C:75:THR:N	2.33	0.61
1:A:42:THR:HG23	1:A:86:LEU:HD23	1.83	0.61
2:C:4:ILE:HB	2:C:69:LEU:HD12	1.83	0.61
1:A:471:ILE:HG12	1:A:475:LEU:HD12	1.82	0.61
1:B:21:MET:HE1	1:B:130:TYR:CE1	2.36	0.61
2:D:58:LEU:HD11	2:D:86:ALA:HB2	1.83	0.60
1:B:42:THR:HG23	1:B:86:LEU:HD23	1.84	0.60
2:C:335:TYR:CD2	2:C:335:TYR:N	2.69	0.60
1:A:356:MET:HG2	1:A:402:PHE:HE2	1.68	0.59
1:A:286:LEU:HD11	1:A:342:SER:HB2	1.85	0.59
2:C:261:GLU:OE1	2:C:262:ARG:N	2.36	0.59
2:C:261:GLU:O	2:C:281:CYS:HA	2.02	0.59
1:B:143:ILE:HG22	1:B:185:LEU:HD13	1.84	0.58
2:D:300:VAL:HG21	2:D:327:MET:HE3	1.85	0.58
2:D:318:ALA:O	2:D:323:ALA:N	2.35	0.58
2:D:415:ARG:NH1	2:D:429:GLU:OE2	2.35	0.58
1:A:145:LEU:HA	1:A:149:ILE:CG2	2.32	0.58
2:D:19:LEU:HD11	2:D:26:ILE:HG12	1.84	0.58
2:C:156:VAL:HG21	2:C:218:ILE:HG23	1.85	0.58
3:C:502:AGS:O2G	3:C:502:AGS:O1B	2.21	0.58
2:D:306:ASN:OD1	3:D:501:AGS:O2B	2.20	0.58
2:D:352:GLN:O	2:D:356:SER:OG	2.20	0.58
1:A:89:LEU:HD21	1:A:98:VAL:HA	1.85	0.58
2:C:243:ILE:N	3:C:502:AGS:O3G	2.27	0.58
2:D:330:ILE:HG13	2:D:339:VAL:HG11	1.83	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:331:GLN:NE2	3:D:501:AGS:S1G	2.70	0.58
1:A:317:ILE:HD12	1:A:339:LEU:HD23	1.86	0.58
2:D:36:LEU:HD23	2:D:37:ARG:HG2	1.86	0.57
2:D:261:GLU:O	2:D:281:CYS:HA	2.04	0.57
2:C:401:ASP:O	2:C:403:LYS:NZ	2.37	0.57
1:B:250:ALA:O	1:B:351:SER:OG	2.20	0.57
1:B:356:MET:HG2	1:B:402:PHE:HE2	1.69	0.57
2:C:196:ARG:NH1	2:C:198:GLN:OE1	2.37	0.57
1:A:283:GLN:HE22	1:A:318:SER:HG	1.48	0.57
1:B:89:LEU:HD21	1:B:98:VAL:HA	1.86	0.57
1:A:242:THR:HB	1:A:312:PHE:HE2	1.69	0.56
1:B:162:ARG:HH21	1:B:163:ALA:HB2	1.70	0.56
1:B:159:GLN:HE21	1:B:159:GLN:HA	1.71	0.56
2:C:388:ASP:OD1	2:C:388:ASP:N	2.36	0.56
2:D:309:GLU:O	2:D:313:MET:HG2	2.05	0.56
2:C:414:VAL:HG22	2:C:419:VAL:HG22	1.87	0.56
2:C:14:THR:HB	2:C:355:ILE:HD13	1.87	0.56
2:C:332:ARG:HB3	2:C:335:TYR:CE2	2.40	0.56
2:D:156:VAL:HG21	2:D:218:ILE:HG23	1.87	0.56
2:C:59:HIS:O	2:C:63:ALA:N	2.39	0.56
2:C:153:VAL:HG11	2:C:435:VAL:HG21	1.88	0.55
1:A:162:ARG:HB2	1:A:395:VAL:HG22	1.88	0.55
1:B:242:THR:HB	1:B:312:PHE:HE2	1.71	0.55
1:B:466:PHE:CE1	1:B:474:LEU:HD22	2.41	0.55
2:C:352:GLN:O	2:C:356:SER:OG	2.24	0.55
3:C:502:AGS:O2A	3:C:502:AGS:O2B	2.25	0.55
1:A:466:PHE:CE1	1:A:474:LEU:HD22	2.42	0.55
1:A:394:ARG:HE	1:B:374:ARG:HH11	1.53	0.55
1:B:476:ILE:O	1:B:479:THR:OG1	2.19	0.55
2:D:73:THR:OG1	2:D:75:THR:N	2.40	0.55
1:A:220:ILE:HG23	1:A:220:ILE:O	2.06	0.54
2:C:69:LEU:HB3	2:C:95:ARG:HG2	1.89	0.54
2:D:261:GLU:OE1	2:D:262:ARG:N	2.40	0.54
2:D:159:LYS:O	2:D:227:ARG:NH1	2.34	0.54
1:A:148:ALA:O	1:A:151:PRO:HD2	2.08	0.54
1:B:294:LEU:HD12	1:B:310:ALA:HB2	1.88	0.54
2:C:36:LEU:HD23	2:C:37:ARG:HG2	1.90	0.54
1:A:358:VAL:O	1:A:362:LEU:N	2.31	0.54
2:C:24:ASN:OD1	2:C:363:ARG:NH1	2.40	0.54
1:B:370:ARG:HD3	1:B:374:ARG:HH21	1.71	0.54
2:D:295:ILE:HA	2:D:298:VAL:HG23	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:371:GLU:O	1:A:375:LEU:HD23	2.07	0.54
1:A:20:THR:HB	1:A:133:PHE:HE2	1.73	0.53
1:A:69:GLY:HA3	1:A:153:LEU:HD11	1.90	0.53
1:A:476:ILE:O	1:A:479:THR:OG1	2.21	0.53
2:C:30:ASP:HB3	2:C:36:LEU:HD12	1.90	0.53
2:D:241:GLY:HA3	3:D:501:AGS:O1B	2.08	0.53
2:C:95:ARG:NH1	2:C:95:ARG:HB2	2.24	0.53
2:D:190:ARG:NH2	2:D:207:ASP:OD2	2.27	0.53
2:C:10:GLN:CD	2:C:332:ARG:HE	2.15	0.53
1:A:394:ARG:HE	1:B:374:ARG:NH1	2.06	0.53
1:A:20:THR:HB	1:A:133:PHE:CE2	2.44	0.53
2:C:183:THR:OG1	2:C:184:ARG:N	2.41	0.53
2:D:101:SER:HB3	2:D:104:TYR:CD2	2.44	0.53
1:A:143:ILE:HG22	1:A:185:LEU:HD13	1.91	0.53
2:C:295:ILE:HA	2:C:298:VAL:HG23	1.91	0.53
2:C:332:ARG:HB3	2:C:335:TYR:HE2	1.73	0.53
2:D:94:ASN:O	2:D:95:ARG:HB2	2.07	0.52
1:A:148:ALA:C	1:A:151:PRO:HD2	2.34	0.52
1:A:251:CYS:HA	1:A:348:CYS:SG	2.48	0.52
2:D:153:VAL:HG11	2:D:435:VAL:HG21	1.90	0.52
1:B:155:ILE:HG21	1:B:470:GLU:HB3	1.89	0.52
1:B:417:LEU:O	1:B:420:THR:HG22	2.09	0.52
1:A:42:THR:HA	1:A:45:VAL:HG22	1.91	0.52
2:C:111:LEU:HD23	2:C:117:ILE:HD11	1.91	0.52
2:D:11:VAL:HG21	2:D:98:ARG:HH12	1.74	0.52
1:B:217:THR:HG23	1:B:218:ILE:HD12	1.92	0.52
1:A:175:THR:OG1	1:A:176:PRO:HD3	2.09	0.51
1:A:417:LEU:O	1:A:420:THR:HG22	2.10	0.51
1:B:248:ILE:O	1:B:256:HIS:NE2	2.34	0.51
2:D:10:GLN:O	2:D:14:THR:OG1	2.22	0.51
1:B:371:GLU:O	1:B:375:LEU:HD23	2.10	0.51
2:C:30:ASP:OD2	2:C:36:LEU:HB2	2.10	0.51
2:D:111:LEU:HD23	2:D:117:ILE:HD11	1.91	0.51
1:A:46:LEU:HD11	1:A:83:ALA:HB1	1.92	0.51
2:C:70:VAL:HA	2:C:96:VAL:O	2.11	0.51
2:D:321:MET:N	2:D:322:GLY:HA2	2.26	0.51
2:D:11:VAL:HG21	2:D:98:ARG:NH1	2.25	0.51
2:D:59:HIS:NE2	2:D:89:LEU:HB2	2.26	0.51
1:B:38:PRO:HG2	1:B:91:ALA:HB2	1.92	0.51
1:B:148:ALA:O	1:B:151:PRO:HD2	2.11	0.51
2:D:328:VAL:HG11	2:D:344:ILE:HD13	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:135:GLN:CD	1:A:221:GLY:HA3	2.35	0.51
1:B:102:PHE:CD2	1:B:458:TRP:HH2	2.29	0.51
2:D:243:ILE:HG22	2:D:304:LEU:HD13	1.92	0.51
1:A:294:LEU:HD12	1:A:310:ALA:HB2	1.93	0.51
1:B:175:THR:HB	1:B:176:PRO:HD3	1.93	0.51
2:D:36:LEU:O	2:D:40:GLN:N	2.44	0.51
2:D:388:ASP:OD1	2:D:388:ASP:N	2.37	0.51
1:B:46:LEU:O	1:B:50:GLY:N	2.37	0.51
1:B:46:LEU:HD11	1:B:83:ALA:HB1	1.92	0.51
2:D:98:ARG:HH11	2:D:354:THR:HG21	1.76	0.51
1:A:81:GLY:O	1:A:105:SER:OG	2.20	0.50
2:D:299:ASP:HA	2:D:324:LYS:HB2	1.91	0.50
2:D:336:VAL:O	2:D:340:GLN:HB2	2.11	0.50
2:D:414:VAL:HG22	2:D:419:VAL:HG22	1.93	0.50
1:A:161:TYR:O	1:A:162:ARG:C	2.54	0.50
1:B:220:ILE:HD13	1:B:352:THR:O	2.12	0.50
1:A:7:ILE:HB	1:A:57:ASN:ND2	2.27	0.50
1:A:136:TRP:NE1	1:A:193:THR:HG21	2.20	0.50
2:D:155:LEU:HD22	2:D:212:VAL:HG22	1.93	0.50
1:B:159:GLN:HA	1:B:159:GLN:NE2	2.26	0.50
1:A:102:PHE:CD2	1:A:458:TRP:HH2	2.30	0.50
2:D:183:THR:OG1	2:D:184:ARG:N	2.45	0.50
2:D:410:ILE:HA	2:D:436:MET:HB3	1.94	0.49
1:A:142:ILE:CG2	1:A:352:THR:HG22	2.42	0.49
1:B:147:VAL:HG21	1:B:185:LEU:HD11	1.94	0.49
1:B:291:PHE:CE2	1:B:295:LEU:HD11	2.47	0.49
2:C:144:GLN:OE1	2:C:375:ARG:NH2	2.44	0.49
2:C:295:ILE:HD11	2:C:318:ALA:HB1	1.93	0.49
1:B:429:SER:OG	1:B:441:GLY:O	2.30	0.49
1:A:220:ILE:HG22	1:A:352:THR:HB	1.94	0.49
1:A:363:LEU:HD11	1:A:391:LEU:HD12	1.93	0.49
1:B:160:LEU:HD22	1:B:391:LEU:CD2	2.43	0.49
1:B:286:LEU:HD11	1:B:342:SER:CB	2.43	0.49
1:A:70:PHE:CG	1:A:476:ILE:HD11	2.47	0.49
1:B:70:PHE:HE1	1:B:155:ILE:HD11	1.76	0.49
1:B:151:PRO:HB3	1:B:165:ILE:HD13	1.94	0.49
1:B:255:LEU:HB3	1:B:270:TYR:CE1	2.48	0.49
1:B:370:ARG:HD3	1:B:374:ARG:NH2	2.28	0.49
2:D:6:LEU:CD2	2:D:73:THR:HG22	2.43	0.49
1:A:38:PRO:HG2	1:A:91:ALA:HB2	1.95	0.48
1:A:165:ILE:HG23	1:A:165:ILE:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:77:TRP:CD1	1:B:469:LEU:HD21	2.49	0.48
2:C:220:SER:O	2:C:224:GLU:OE2	2.31	0.48
2:D:189:PHE:HB2	2:D:208:GLU:HB2	1.94	0.48
2:C:189:PHE:HB2	2:C:208:GLU:HB2	1.95	0.48
2:D:142:ALA:HB2	2:D:222:MET:HE1	1.94	0.48
1:A:145:LEU:HA	1:A:149:ILE:HG22	1.94	0.48
1:B:161:TYR:O	1:B:165:ILE:HD11	2.13	0.48
1:A:108:ALA:HA	1:A:223:PHE:HE2	1.79	0.48
1:A:291:PHE:CE2	1:A:295:LEU:HD11	2.49	0.48
2:C:101:SER:HB3	2:C:104:TYR:HD2	1.79	0.48
1:B:70:PHE:CG	1:B:476:ILE:HD11	2.49	0.48
1:B:161:TYR:O	1:B:162:ARG:C	2.56	0.47
2:D:326:VAL:HG23	2:D:345:ASP:H	1.79	0.47
2:C:29:VAL:HG13	2:C:48:VAL:O	2.15	0.47
2:C:239:GLY:HA3	2:C:304:LEU:O	2.14	0.47
1:A:135:GLN:OE1	1:A:221:GLY:HA3	2.14	0.47
1:B:136:TRP:NE1	1:B:193:THR:HG21	2.20	0.47
2:C:11:VAL:HG21	2:C:98:ARG:NH1	2.30	0.47
2:D:334:ALA:HB3	2:D:335:TYR:CE1	2.49	0.47
1:A:255:LEU:HD11	1:A:273:ASP:CB	2.44	0.47
1:A:427:ALA:O	1:A:431:VAL:HG22	2.15	0.47
1:A:435:LEU:O	1:A:467:GLY:HA3	2.14	0.47
2:D:235:ILE:HD13	2:D:251:LEU:HD13	1.96	0.47
1:A:271:TRP:O	1:A:277:ARG:HD3	2.14	0.47
1:A:334:PHE:HB2	1:B:418:ILE:HG22	1.97	0.47
2:C:313:MET:SD	2:C:313:MET:N	2.87	0.47
2:D:327:MET:HG2	2:D:346:VAL:HB	1.97	0.47
2:C:159:LYS:O	2:C:227:ARG:NH1	2.41	0.47
2:C:415:ARG:HG3	2:C:432:ASP:OD1	2.15	0.47
1:A:128:LEU:HD12	1:A:225:THR:HB	1.97	0.47
1:A:333:LEU:HG	1:A:444:GLU:HB2	1.97	0.47
2:C:172:SER:HA	2:C:175:ARG:HD2	1.96	0.47
2:C:53:SER:O	2:C:53:SER:OG	2.29	0.47
2:D:227:ARG:HA	2:D:227:ARG:HD2	1.75	0.47
1:A:286:LEU:HD11	1:A:342:SER:CB	2.45	0.46
2:C:36:LEU:O	2:C:40:GLN:N	2.48	0.46
2:C:328:VAL:HG11	2:C:344:ILE:HD13	1.97	0.46
2:D:5:ILE:HG23	2:D:70:VAL:HG12	1.97	0.46
2:D:147:SER:H	2:D:372:SER:HG	1.63	0.46
2:D:261:GLU:CD	3:D:501:AGS:HO2'	2.17	0.46
2:C:410:ILE:HA	2:C:436:MET:HB3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:220:SER:O	2:D:224:GLU:OE2	2.33	0.46
3:D:502:AGS:O1B	3:D:502:AGS:O2G	2.33	0.46
1:A:229:SER:HB3	1:A:323:PHE:HD1	1.80	0.46
2:C:259:LEU:HD22	2:C:279:VAL:HG23	1.97	0.46
1:A:437:ASN:OD1	1:A:468:ARG:NH2	2.45	0.46
2:D:9:GLY:HA3	3:D:502:AGS:S1G	2.55	0.46
1:B:283:GLN:HE22	1:B:318:SER:HG	1.52	0.46
2:D:7:GLY:HA3	2:D:72:VAL:HG23	1.96	0.46
1:A:320:THR:HG22	1:A:320:THR:O	2.16	0.46
1:B:28:ALA:O	1:B:29:LEU:HD23	2.15	0.46
1:B:125:LYS:HE3	1:B:208:PHE:CD2	2.50	0.46
1:B:135:GLN:CD	1:B:221:GLY:HA2	2.41	0.46
2:C:373:LEU:O	2:C:379:GLU:HA	2.16	0.46
1:A:125:LYS:HE3	1:A:208:PHE:HD2	1.79	0.46
2:C:235:ILE:HG12	2:C:300:VAL:CG1	2.46	0.46
2:C:259:LEU:HD23	2:C:260:ILE:N	2.31	0.46
2:C:299:ASP:HA	2:C:324:LYS:HB2	1.98	0.46
2:D:6:LEU:HD23	2:D:6:LEU:O	2.15	0.46
1:A:283:GLN:NE2	1:A:318:SER:HG	2.10	0.46
2:D:111:LEU:O	2:D:114:SER:OG	2.34	0.46
1:A:248:ILE:O	1:A:256:HIS:NE2	2.41	0.45
1:B:220:ILE:HD11	1:B:319:THR:O	2.16	0.45
1:A:125:LYS:HE3	1:A:208:PHE:CD2	2.50	0.45
1:B:20:THR:HB	1:B:133:PHE:HE2	1.82	0.45
1:B:125:LYS:HB3	1:B:208:PHE:CE2	2.51	0.45
2:C:246:SER:O	2:C:250:ARG:HG3	2.16	0.45
2:C:337:ASP:OD1	2:C:337:ASP:N	2.44	0.45
1:B:320:THR:HG23	1:B:437:ASN:O	2.17	0.45
1:B:442:LEU:HD12	1:B:442:LEU:HA	1.77	0.45
2:D:160:ALA:O	2:D:206:ASP:N	2.48	0.45
1:A:339:LEU:O	1:A:342:SER:OG	2.26	0.45
1:B:42:THR:HA	1:B:45:VAL:HG22	1.97	0.45
1:B:116:VAL:HG11	1:B:457:LYS:HE2	1.99	0.45
2:C:59:HIS:CG	2:C:90:PHE:CZ	3.05	0.45
2:C:101:SER:HB3	2:C:104:TYR:CD2	2.51	0.45
2:D:332:ARG:HB2	2:D:335:TYR:CE2	2.50	0.45
1:A:125:LYS:HB3	1:A:208:PHE:CE2	2.51	0.45
1:B:427:ALA:O	1:B:431:VAL:HG22	2.16	0.45
1:A:397:ASP:HB3	1:B:371:GLU:OE2	2.17	0.45
1:B:58:ARG:O	1:B:60:HIS:ND1	2.50	0.45
1:B:255:LEU:HD11	1:B:273:ASP:CB	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:227:ARG:HD2	2:C:227:ARG:HA	1.77	0.45
2:D:10:GLN:HG2	2:D:332:ARG:HH21	1.81	0.45
2:D:306:ASN:OD1	3:D:501:AGS:H5'2	2.17	0.45
2:D:359:LEU:HD13	2:D:370:VAL:HB	1.98	0.45
2:D:373:LEU:O	2:D:379:GLU:HA	2.17	0.45
1:B:245:PHE:O	1:B:249:SER:OG	2.22	0.45
1:B:125:LYS:HB3	1:B:208:PHE:HE2	1.83	0.45
1:B:243:VAL:HG11	1:B:311:LEU:HD11	1.98	0.45
1:B:453:ASN:OD1	1:B:455:LYS:N	2.50	0.45
1:A:110:THR:HG23	1:A:468:ARG:HB2	1.99	0.44
1:B:149:ILE:CG2	1:B:178:ILE:HD12	2.47	0.44
1:B:310:ALA:O	1:B:314:THR:HG23	2.17	0.44
2:D:4:ILE:HD13	2:D:27:THR:HB	1.98	0.44
1:A:359:ILE:O	1:A:363:LEU:N	2.37	0.44
2:C:81:ALA:O	2:C:85:VAL:HG23	2.17	0.44
2:C:252:GLU:HB3	2:C:277:THR:OG1	2.17	0.44
1:A:27:VAL:O	1:A:31:TYR:HB2	2.17	0.44
1:A:243:VAL:HG11	1:A:311:LEU:HD11	1.99	0.44
1:B:161:TYR:CE1	1:B:359:ILE:HD12	2.52	0.44
1:B:340:LEU:O	1:B:343:SER:HB3	2.18	0.44
2:D:69:LEU:HB3	2:D:95:ARG:HA	2.00	0.44
2:C:269:LYS:O	2:C:273:GLN:HG3	2.16	0.44
2:D:81:ALA:O	2:D:85:VAL:HG23	2.17	0.44
2:D:159:LYS:H	2:D:227:ARG:HH22	1.65	0.44
2:D:246:SER:O	2:D:250:ARG:HG3	2.17	0.44
2:D:259:LEU:HD23	2:D:260:ILE:N	2.32	0.44
2:D:445:PRO:HA	2:D:448:GLU:HB3	2.00	0.44
1:B:34:GLY:HA2	1:B:124:PRO:HB3	1.99	0.44
2:C:11:VAL:HG21	2:C:98:ARG:HH12	1.83	0.44
2:D:188:ILE:HD13	2:D:209:VAL:HA	2.00	0.44
1:B:7:ILE:HB	1:B:57:ASN:ND2	2.32	0.44
1:B:410:PHE:HZ	1:B:428:PHE:CD1	2.34	0.44
2:C:319:LYS:HE2	2:C:343:VAL:O	2.17	0.44
2:D:261:GLU:OE1	2:D:263:ASP:N	2.43	0.44
2:D:382:GLU:HA	2:D:434:VAL:O	2.18	0.44
1:A:138:GLY:O	1:A:142:ILE:HG22	2.17	0.44
2:C:21:GLY:C	2:C:23:ASN:H	2.26	0.44
2:C:77:GLU:HA	2:C:80:MET:HE2	2.00	0.44
1:B:274:PRO:HG3	1:B:386:VAL:O	2.17	0.43
2:C:6:LEU:O	2:C:73:THR:HG22	2.18	0.43
2:C:237:ILE:HG22	2:C:238:VAL:H	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:21:MET:HA	1:A:21:MET:HE2	1.99	0.43
1:A:279:PHE:O	1:A:283:GLN:HB2	2.17	0.43
1:B:27:VAL:O	1:B:31:TYR:HB2	2.18	0.43
1:B:125:LYS:HE3	1:B:208:PHE:HD2	1.82	0.43
2:C:259:LEU:O	2:C:280:PHE:HD1	2.01	0.43
2:D:36:LEU:HD21	2:D:47:VAL:HB	2.00	0.43
2:D:55:PRO:O	2:D:59:HIS:N	2.49	0.43
1:B:4:ARG:H	1:B:4:ARG:HG2	1.54	0.43
2:D:146:VAL:HB	2:D:155:LEU:HB2	2.00	0.43
1:A:178:ILE:O	1:A:182:ALA:N	2.50	0.43
1:B:318:SER:O	1:B:346:GLY:HA2	2.18	0.43
2:C:155:LEU:HD22	2:C:212:VAL:HG22	2.00	0.43
2:D:63:ALA:HB3	2:D:90:PHE:CE2	2.54	0.43
1:A:403:PHE:HE1	1:B:403:PHE:HE1	1.67	0.43
2:C:137:ILE:HG23	2:C:232:TYR:HD2	1.84	0.43
1:B:359:ILE:O	1:B:363:LEU:N	2.36	0.43
2:C:48:VAL:HG11	2:C:61:ALA:HB2	1.99	0.43
1:B:167:GLY:O	1:B:169:VAL:N	2.52	0.43
1:B:436:ASN:O	1:B:437:ASN:HB2	2.18	0.43
2:C:262:ARG:HE	3:C:502:AGS:C2	2.31	0.43
1:B:20:THR:HB	1:B:133:PHE:CE2	2.54	0.43
2:D:312:ILE:HG23	2:D:344:ILE:HD11	2.00	0.43
1:B:359:ILE:HA	1:B:362:LEU:HB3	2.01	0.42
2:C:56:ASP:O	2:C:60:GLU:HB2	2.19	0.42
2:C:111:LEU:O	2:C:114:SER:OG	2.37	0.42
2:D:21:GLY:C	2:D:23:ASN:H	2.27	0.42
2:D:30:ASP:OD1	3:D:502:AGS:O2'	2.29	0.42
1:A:282:ILE:HG21	1:A:345:ILE:HG21	2.01	0.42
1:B:271:TRP:O	1:B:277:ARG:HD3	2.19	0.42
2:C:58:LEU:HD11	2:C:86:ALA:HB2	2.01	0.42
2:C:171:LEU:HD23	2:C:171:LEU:HA	1.80	0.42
2:D:101:SER:HB3	2:D:104:TYR:HD2	1.84	0.42
2:D:287:GLN:HG2	2:D:321:MET:CE	2.49	0.42
1:A:274:PRO:HG3	1:A:386:VAL:O	2.20	0.42
1:A:363:LEU:HB3	1:A:367:GLN:OE1	2.19	0.42
1:B:21:MET:C	1:B:24:PRO:HD2	2.44	0.42
1:B:279:PHE:O	1:B:283:GLN:HB2	2.20	0.42
1:B:319:THR:O	1:B:320:THR:HB	2.18	0.42
2:D:10:GLN:N	3:D:502:AGS:O3G	2.52	0.42
1:A:125:LYS:HA	1:A:125:LYS:HD2	1.86	0.42
1:A:177:ARG:C	1:A:179:ALA:N	2.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:171:LEU:HD23	2:D:171:LEU:HA	1.79	0.42
1:A:96:ILE:HD12	1:A:96:ILE:HA	1.84	0.42
1:A:132:GLN:HG3	1:A:212:SER:HB2	2.01	0.42
1:A:330:ASP:N	1:A:330:ASP:OD1	2.52	0.42
1:A:441:GLY:HA3	1:A:447:LEU:HB2	2.00	0.42
2:C:102:PRO:O	2:C:105:LEU:N	2.52	0.42
2:D:371:SER:OG	2:D:380:ALA:HB3	2.19	0.42
1:B:106:PHE:CE1	1:B:465:LEU:HD21	2.54	0.42
2:D:27:THR:HG23	2:D:46:ARG:O	2.20	0.42
1:B:243:VAL:HG21	1:B:311:LEU:HD13	2.01	0.42
2:C:10:GLN:HG2	2:C:332:ARG:HH21	1.85	0.42
1:A:162:ARG:CD	1:A:394:ARG:HB3	2.49	0.42
1:A:340:LEU:O	1:A:343:SER:HB3	2.20	0.42
2:C:15:LEU:HD13	2:C:355:ILE:HG23	2.02	0.42
1:A:125:LYS:HB3	1:A:208:PHE:HE2	1.85	0.42
1:B:255:LEU:HD23	1:B:255:LEU:HA	1.82	0.42
2:C:146:VAL:HB	2:C:155:LEU:HB2	2.01	0.42
2:D:14:THR:HB	2:D:355:ILE:HD13	2.00	0.42
1:B:161:TYR:HA	1:B:165:ILE:CG1	2.49	0.41
2:D:70:VAL:HA	2:D:96:VAL:O	2.19	0.41
2:D:237:ILE:HG22	2:D:238:VAL:H	1.85	0.41
1:A:58:ARG:O	1:A:60:HIS:ND1	2.51	0.41
2:C:159:LYS:H	2:C:227:ARG:HH22	1.69	0.41
2:C:235:ILE:HD13	2:C:251:LEU:HD13	2.02	0.41
1:A:76:PHE:O	1:A:80:LEU:HB2	2.20	0.41
1:A:326:THR:OG1	1:A:327:GLY:N	2.53	0.41
1:B:435:LEU:O	1:B:467:GLY:HA3	2.21	0.41
2:D:235:ILE:HG12	2:D:300:VAL:CG1	2.51	0.41
1:A:21:MET:C	1:A:24:PRO:HD2	2.46	0.41
1:B:358:VAL:O	1:B:362:LEU:N	2.40	0.41
2:C:287:GLN:HG2	2:C:321:MET:HE3	2.01	0.41
2:D:10:GLN:CG	2:D:332:ARG:HH21	2.33	0.41
1:A:279:PHE:CG	1:A:348:CYS:SG	3.13	0.41
1:A:455:LYS:HB3	1:A:455:LYS:HE2	1.69	0.41
1:B:160:LEU:HD22	1:B:391:LEU:HD22	2.03	0.41
2:C:59:HIS:CD2	2:C:90:PHE:CZ	3.08	0.41
2:C:319:LYS:O	2:C:319:LYS:HG3	2.20	0.41
2:C:59:HIS:ND1	2:C:60:GLU:HG3	2.34	0.41
2:D:5:ILE:HG22	2:D:6:LEU:H	1.86	0.41
2:D:72:VAL:HG23	2:D:72:VAL:O	2.21	0.41
2:D:108:LYS:HG3	2:D:112:PHE:HD2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:385:LYS:HG2	1:A:385:LYS:O	2.20	0.41
1:A:474:LEU:HD23	1:A:474:LEU:O	2.21	0.41
1:B:326:THR:OG1	1:B:327:GLY:N	2.54	0.41
2:D:302:ILE:HG22	2:D:304:LEU:HD21	2.02	0.41
1:A:70:PHE:HE1	1:A:155:ILE:HD11	1.85	0.41
1:A:310:ALA:O	1:A:314:THR:HG23	2.20	0.41
1:B:94:PRO:HG3	1:B:123:LEU:HD22	2.03	0.41
1:B:176:PRO:HB2	1:B:179:ALA:HB3	2.02	0.41
1:B:402:PHE:CE1	1:B:471:ILE:HG22	2.56	0.41
2:D:178:MET:HG3	2:D:182:ASP:OD2	2.20	0.41
2:D:194:PRO:HG2	2:D:439:VAL:HG13	2.03	0.41
2:D:287:GLN:HG2	2:D:321:MET:HE1	2.03	0.41
1:A:162:ARG:HD3	1:A:394:ARG:HB3	2.02	0.41
2:C:19:LEU:HD11	2:C:26:ILE:HG12	2.03	0.41
1:A:386:VAL:HG23	1:A:387:GLY:N	2.37	0.40
1:B:391:LEU:N	1:B:391:LEU:HD23	2.36	0.40
2:C:10:GLN:O	2:C:14:THR:OG1	2.24	0.40
2:D:252:GLU:HB3	2:D:277:THR:OG1	2.21	0.40
2:D:259:LEU:O	2:D:280:PHE:HD1	2.04	0.40
1:A:328:PHE:CD1	1:A:336:PRO:HG3	2.56	0.40
1:A:410:PHE:HZ	1:A:428:PHE:CD1	2.39	0.40
1:B:70:PHE:O	1:B:74:VAL:HG13	2.21	0.40
1:B:160:LEU:HD22	1:B:391:LEU:HD21	2.03	0.40
2:C:14:THR:HG21	2:C:374:ARG:NH2	2.36	0.40
2:D:76:ASP:CG	2:D:100:ARG:H	2.29	0.40
1:A:7:ILE:HB	1:A:57:ASN:HD22	1.85	0.40
1:B:196:CYS:HB2	1:B:245:PHE:CD1	2.56	0.40
2:C:11:VAL:N	3:C:501:AGS:S1G	2.76	0.40
2:C:112:PHE:CE1	2:C:117:ILE:HB	2.56	0.40
2:D:92:THR:HG23	2:D:93:PRO:HD2	2.04	0.40
1:A:32:ARG:HD3	1:A:32:ARG:HA	1.88	0.40
1:A:172:THR:O	1:A:173:LYS:HB2	2.22	0.40
1:A:392:PRO:HG2	1:A:395:VAL:HG23	2.03	0.40
1:B:148:ALA:C	1:B:151:PRO:HD2	2.45	0.40
3:D:502:AGS:O2A	3:D:502:AGS:H4'	2.22	0.40
1:A:16:LEU:O	1:A:20:THR:HG23	2.22	0.40
1:A:43:PHE:HD2	1:A:44:PHE:CD1	2.39	0.40
2:C:58:LEU:HD21	2:C:69:LEU:HD21	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

There are no protein backbone outliers to report in this entry.

5.3.2 Protein sidechains (i)

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	385/395 (98%)	385 (100%)	0	100	100
1	B	385/395 (98%)	385 (100%)	0	100	100
2	C	361/378 (96%)	361 (100%)	0	100	100
2	D	361/378 (96%)	361 (100%)	0	100	100
All	All	1492/1546 (96%)	1492 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (7) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	135	GLN
1	B	252	ASN
2	C	32	ASN
2	C	59	HIS
2	C	361	HIS
2	C	452	GLN
2	D	32	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)

4 ligands are modelled in this entry.

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	AGS	D	502	-	32,33,33	0.62	1 (3%)	45,52,52	1.07	3 (6%)
3	AGS	C	502	-	32,33,33	0.67	0	45,52,52	0.96	4 (8%)
3	AGS	D	501	-	32,33,33	0.72	2 (6%)	45,52,52	0.98	2 (4%)
3	AGS	C	501	-	32,33,33	0.57	0	45,52,52	0.84	1 (2%)

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	AGS	D	502	-	-	4/21/38/38	0/3/3/3
3	AGS	C	502	-	-	2/21/38/38	0/3/3/3
3	AGS	D	501	-	-	5/21/38/38	0/3/3/3
3	AGS	C	501	-	-	5/21/38/38	0/3/3/3

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	D	501	AGS	PB-O3B	-2.76	1.56	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	D	502	AGS	PG-S1G	2.04	1.95	1.90
3	D	501	AGS	PG-S1G	2.01	1.95	1.90

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	D	501	AGS	PB-O3B-PG	-5.07	114.61	133.17
3	D	502	AGS	PB-O3B-PG	-4.99	114.92	133.17
3	C	501	AGS	PB-O3B-PG	-4.37	117.16	133.17
3	C	502	AGS	PB-O3B-PG	-4.35	117.27	133.17
3	D	502	AGS	C4'-O4'-C1'	-2.61	103.71	109.47
3	D	502	AGS	O4'-C1'-C2'	-2.24	101.82	106.62
3	C	502	AGS	O2'-C2'-C3'	-2.22	104.72	111.82
3	C	502	AGS	O4'-C4'-C3'	-2.20	100.78	105.15
3	C	502	AGS	C4'-O4'-C1'	-2.11	104.82	109.47
3	D	501	AGS	O2'-C2'-C3'	-2.00	105.40	111.82

There are no chirality outliers.

All (16) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	C	501	AGS	PB-O3B-PG-O3G
3	C	501	AGS	C5'-O5'-PA-O1A
3	C	501	AGS	C5'-O5'-PA-O3A
3	D	501	AGS	PB-O3A-PA-O5'
3	D	501	AGS	C5'-O5'-PA-O2A
3	D	501	AGS	C5'-O5'-PA-O3A
3	D	501	AGS	O4'-C4'-C5'-O5'
3	D	501	AGS	C3'-C4'-C5'-O5'
3	D	502	AGS	C5'-O5'-PA-O1A
3	D	502	AGS	C5'-O5'-PA-O2A
3	D	502	AGS	C5'-O5'-PA-O3A
3	D	502	AGS	C4'-C5'-O5'-PA
3	C	502	AGS	O4'-C4'-C5'-O5'
3	C	502	AGS	C3'-C4'-C5'-O5'
3	C	501	AGS	PA-O3A-PB-O2B
3	C	501	AGS	PB-O3B-PG-O2G

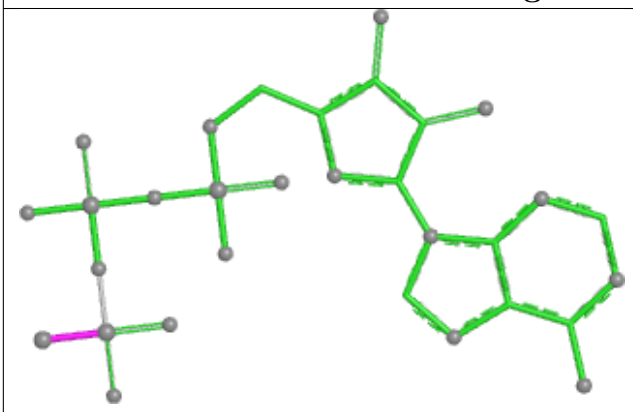
There are no ring outliers.

4 monomers are involved in 22 short contacts:

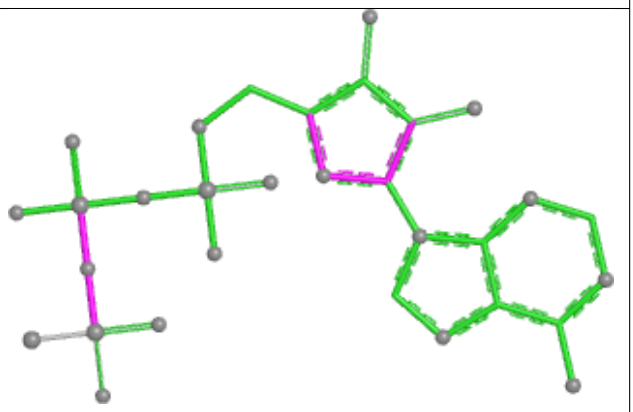
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	D	502	AGS	6	0
3	C	502	AGS	5	0
3	D	501	AGS	7	0
3	C	501	AGS	4	0

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 then 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.

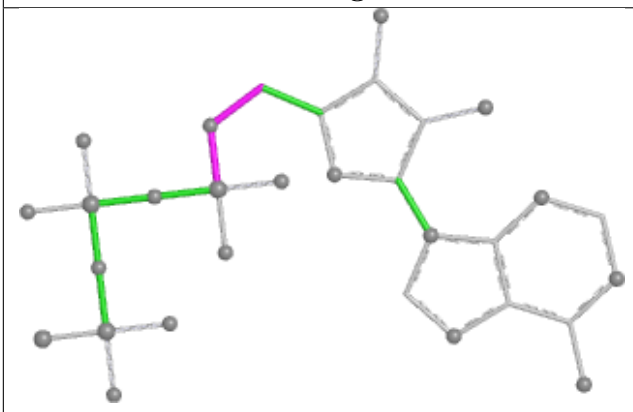
Ligand AGS D 502



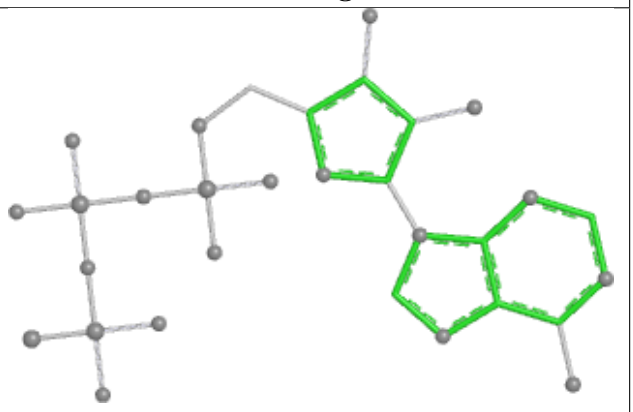
Bond lengths



Bond angles

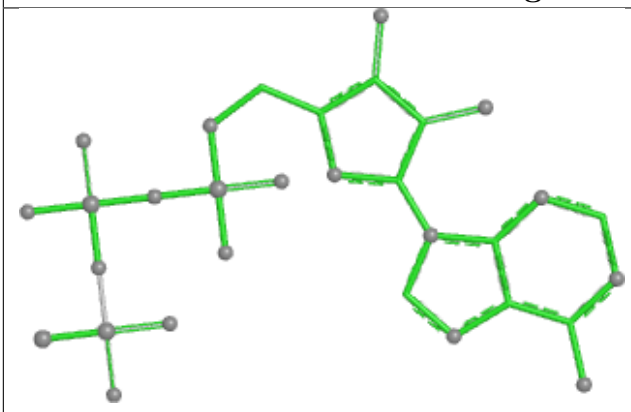


Torsions

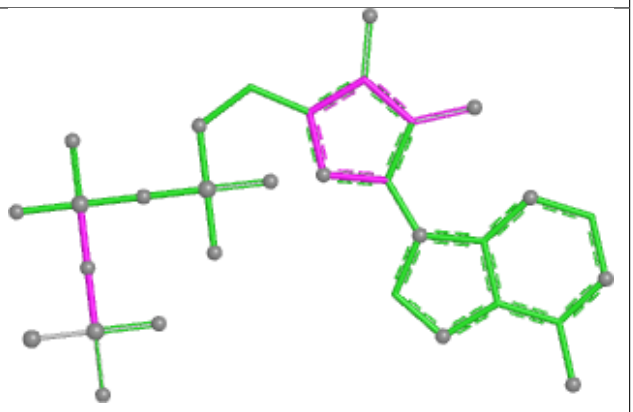


Rings

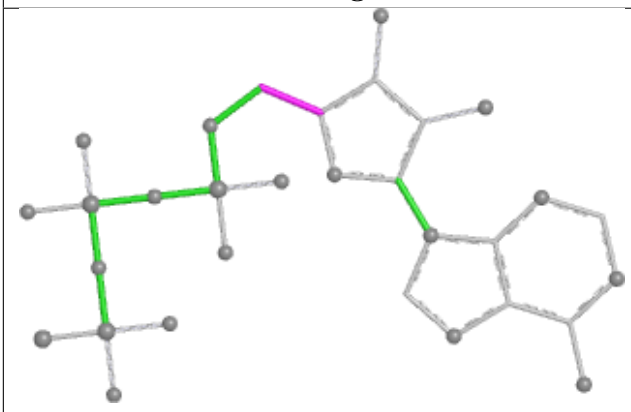
Ligand AGS C 502



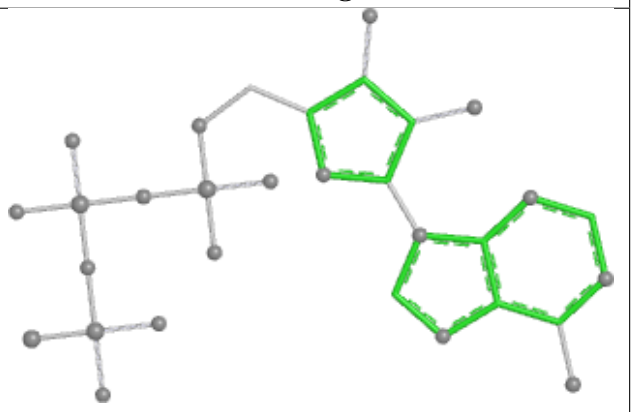
Bond lengths



Bond angles

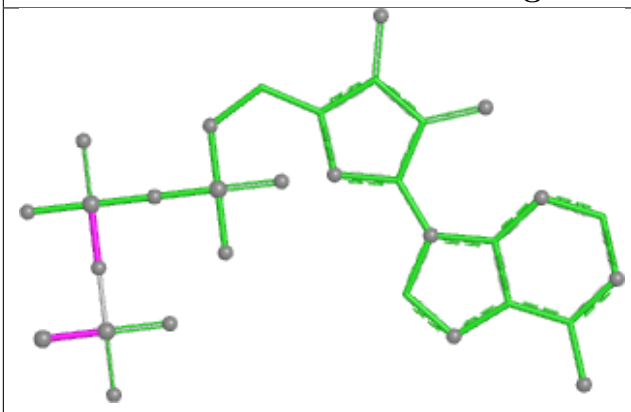


Torsions

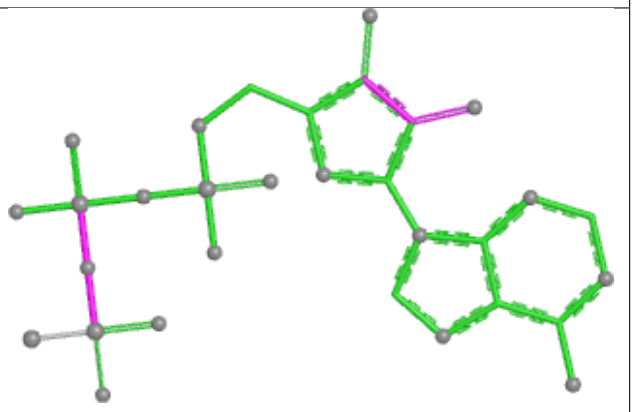


Rings

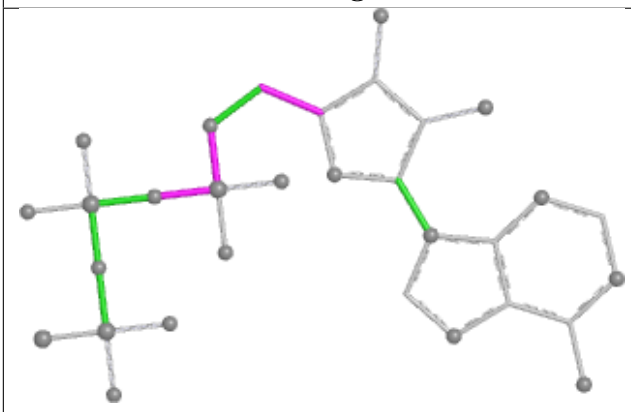
Ligand AGS D 501



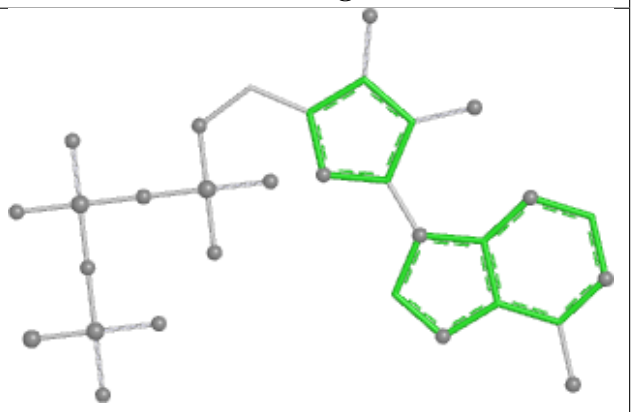
Bond lengths



Bond angles

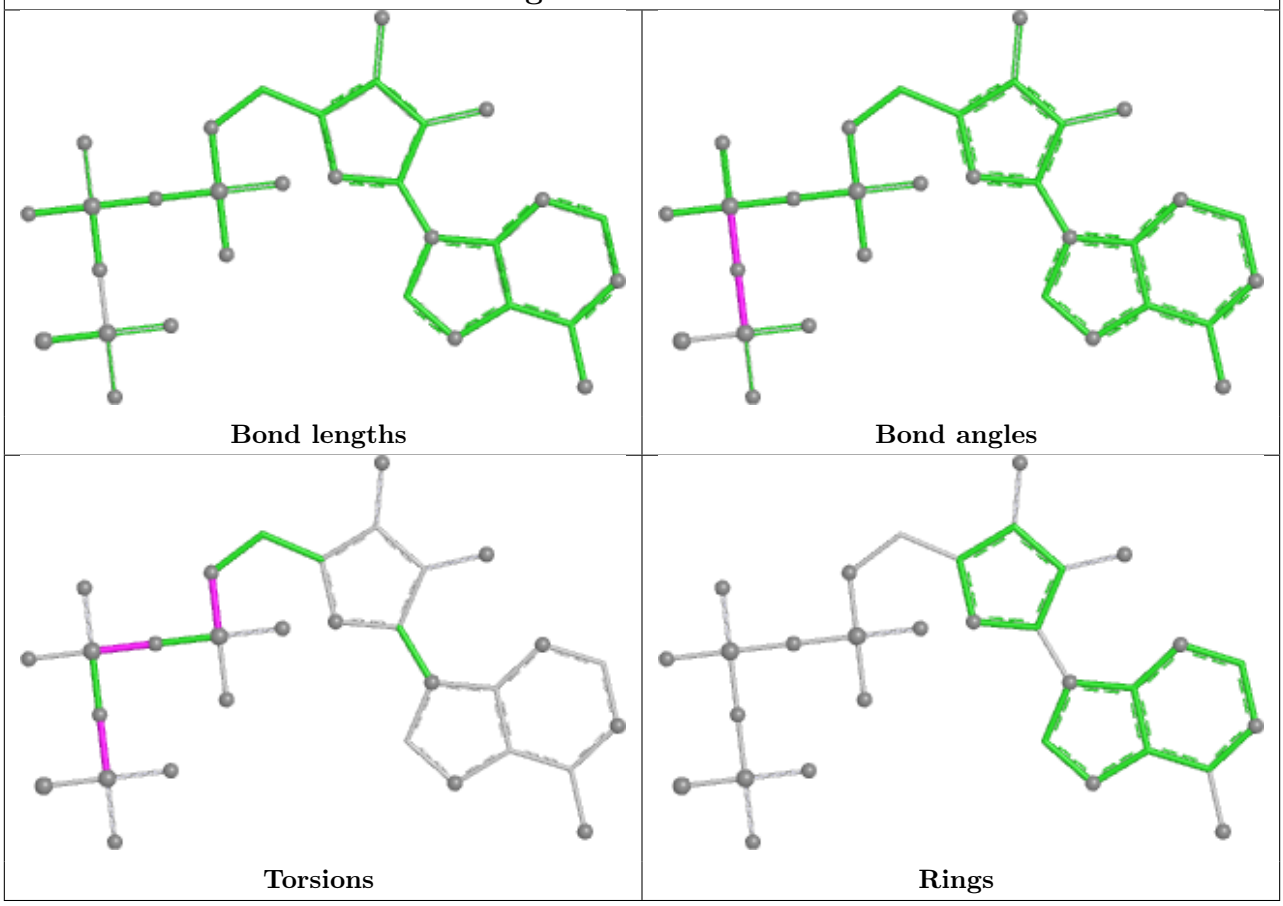


Torsions



Rings

Ligand AGS C 501



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, 95^{th} 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	479/485 (98%)	1.22	88 (18%)	3	6	10, 45, 95, 139	0
1	B	479/485 (98%)	1.24	100 (20%)	2	4	7, 45, 96, 129	0
2	C	449/458 (98%)	1.72	158 (35%)	1	1	8, 55, 109, 151	0
2	D	448/458 (97%)	1.70	153 (34%)	1	2	9, 55, 105, 161	0
All	All	1855/1886 (98%)	1.46	499 (26%)	1	3	7, 49, 103, 161	0

All (499) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	C	67	ASP	10.9
2	C	180	HIS	9.0
2	C	25	ASP	7.7
2	D	180	HIS	7.6
2	D	25	ASP	7.5
2	C	68	MET	7.3
2	C	94	ASN	7.1
2	C	170	ALA	7.0
1	A	168	PRO	7.0
2	C	93	PRO	6.8
2	C	191	GLN	6.5
2	D	94	ASN	6.4
2	D	93	PRO	6.2
2	D	78	THR	6.2
2	D	191	GLN	6.1
2	C	66	ALA	6.1
2	D	170	ALA	6.0
1	B	166	PRO	5.9
2	D	96	VAL	5.9
2	D	79	ASN	5.7
2	D	24	ASN	5.6

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Mol	Chain	Res	Type	RSRZ
2	D	106	ALA	5.6
1	A	176	PRO	5.5
1	A	166	PRO	5.5
2	D	21	GLY	5.5
2	C	96	VAL	5.4
2	C	65	ASP	5.3
2	D	70	VAL	5.3
2	C	82	ALA	5.3
2	D	178	MET	5.2
2	C	49	ASN	5.2
2	D	23	ASN	5.1
2	D	82	ALA	5.1
2	C	365	ALA	5.0
2	C	334	ALA	4.9
1	B	191	SER	4.9
2	C	172	SER	4.9
2	D	365	ALA	4.9
2	D	456	PHE	4.9
2	D	172	SER	4.9
2	C	24	ASN	4.8
1	B	171	ASP	4.8
2	D	74	ASN	4.8
2	D	56	ASP	4.7
1	A	167	GLY	4.7
2	D	337	ASP	4.7
2	C	268	GLU	4.7
2	D	8	ALA	4.7
1	A	169	VAL	4.6
2	C	199	GLY	4.6
2	D	199	GLY	4.6
2	C	202	ILE	4.6
2	C	116	ALA	4.6
2	D	362	VAL	4.5
1	B	231	GLY	4.5
2	C	59	HIS	4.5
2	D	63	ALA	4.5
2	D	202	ILE	4.4
1	B	60	HIS	4.4
2	C	70	VAL	4.4
1	B	187	TYR	4.3
2	D	95	ARG	4.3
1	B	35	ALA	4.3

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Mol	Chain	Res	Type	RSRZ
2	D	41	ASP	4.3
1	A	156	GLY	4.3
2	C	179	PRO	4.2
2	D	85	VAL	4.2
2	D	179	PRO	4.2
2	D	64	GLN	4.2
1	A	187	TYR	4.2
1	A	231	GLY	4.2
2	C	21	GLY	4.2
1	A	94	PRO	4.2
1	A	62	HIS	4.2
1	A	175	THR	4.1
2	C	120	ASP	4.1
2	C	337	ASP	4.1
1	A	444	GLU	4.1
2	D	42	LYS	4.1
1	A	191	SER	4.1
2	C	173	ALA	4.1
2	D	89	LEU	4.1
2	C	456	PHE	4.1
1	B	262	SER	4.1
2	C	174	LEU	4.1
2	D	425	ARG	4.1
2	C	106	ALA	4.1
1	A	159	GLN	4.0
2	D	53	SER	4.0
2	D	173	ALA	4.0
2	C	89	LEU	4.0
2	C	50	GLY	3.9
2	C	88	THR	3.9
2	C	41	ASP	3.9
2	D	116	ALA	3.9
1	A	260	PHE	3.9
2	D	120	ASP	3.9
1	A	44	PHE	3.9
2	C	201	THR	3.9
1	A	182	ALA	3.9
2	C	103	GLU	3.9
1	A	165	ILE	3.9
1	B	170	LYS	3.9
2	D	4	ILE	3.9
2	C	75	THR	3.9

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Mol	Chain	Res	Type	RSRZ
2	D	201	THR	3.9
1	B	251	CYS	3.8
1	A	160	LEU	3.8
1	A	267	PRO	3.8
1	A	451	ASP	3.8
1	A	163	ALA	3.8
1	B	164	GLU	3.8
2	D	334	ALA	3.8
2	C	54	HIS	3.8
2	C	85	VAL	3.8
2	C	168	GLY	3.8
2	C	138	GLN	3.8
1	A	164	GLU	3.8
2	C	23	ASN	3.7
2	C	200	THR	3.7
1	A	183	LYS	3.7
1	A	445	VAL	3.7
2	C	162	TYR	3.7
2	C	26	ILE	3.7
2	D	40	GLN	3.7
1	A	170	LYS	3.7
1	A	172	THR	3.7
2	D	50	GLY	3.7
2	C	64	GLN	3.7
2	C	110	ALA	3.7
2	D	61	ALA	3.7
2	D	88	THR	3.6
1	B	183	LYS	3.6
2	C	353	ALA	3.6
1	B	444	GLU	3.6
2	D	418	GLU	3.6
2	D	401	ASP	3.6
1	B	265	VAL	3.6
2	D	52	ALA	3.6
1	A	60	HIS	3.6
2	C	95	ARG	3.6
1	A	265	VAL	3.6
2	C	177	HIS	3.6
2	D	75	THR	3.5
2	C	207	ASP	3.5
1	B	168	PRO	3.5
2	C	178	MET	3.5

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Mol	Chain	Res	Type	RSRZ
1	B	175	THR	3.5
1	B	204	GLY	3.5
2	C	169	ASN	3.5
1	B	304	TYR	3.5
2	D	33	ALA	3.5
2	D	353	ALA	3.5
1	B	263	GLY	3.5
2	C	167	VAL	3.5
2	D	47	VAL	3.5
2	D	110	ALA	3.5
2	D	26	ILE	3.5
1	B	177	ARG	3.5
2	C	121	HIS	3.5
2	C	62	GLY	3.5
2	D	138	GLN	3.5
2	D	98	ARG	3.5
2	C	74	ASN	3.5
2	C	52	ALA	3.4
1	A	34	GLY	3.4
2	D	192	GLY	3.4
2	D	200	THR	3.4
2	C	56	ASP	3.4
2	C	362	VAL	3.4
1	B	62	HIS	3.4
1	A	35	ALA	3.4
2	D	121	HIS	3.4
2	D	22	GLU	3.4
2	C	34	ASP	3.4
2	C	47	VAL	3.4
2	C	40	GLN	3.4
2	C	171	LEU	3.4
1	B	94	PRO	3.4
2	D	217	HIS	3.4
2	D	332	ARG	3.4
2	D	38	GLU	3.3
2	D	34	ASP	3.3
1	B	179	ALA	3.3
1	B	160	LEU	3.3
2	C	60	GLU	3.3
1	A	93	ASN	3.3
2	C	22	GLU	3.3
2	C	275	GLU	3.3

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Mol	Chain	Res	Type	RSRZ
2	C	76	ASP	3.3
2	C	61	ALA	3.3
2	C	98	ARG	3.3
2	C	175	ARG	3.3
2	D	333	GLY	3.3
2	D	167	VAL	3.3
2	D	207	ASP	3.3
2	D	103	GLU	3.3
2	C	4	ILE	3.3
1	B	267	PRO	3.2
2	D	176	GLU	3.2
2	D	177	HIS	3.2
2	C	230	LYS	3.2
2	D	168	GLY	3.2
2	D	335	TYR	3.2
2	D	275	GLU	3.2
1	B	261	ALA	3.2
2	D	59	HIS	3.2
2	C	53	SER	3.2
1	B	167	GLY	3.2
2	D	45	LEU	3.2
1	A	178	ILE	3.2
1	B	232	TYR	3.2
2	D	55	PRO	3.2
1	A	263	GLY	3.2
2	C	69	LEU	3.1
2	D	5	ILE	3.1
1	A	355	GLY	3.1
2	C	176	GLU	3.1
2	C	401	ASP	3.1
2	C	455	PRO	3.1
2	D	58	LEU	3.1
2	C	181	ILE	3.1
1	B	260	PHE	3.1
2	D	48	VAL	3.1
2	D	91	ASN	3.1
2	D	87	PHE	3.1
1	A	171	ASP	3.1
2	D	174	LEU	3.1
2	C	332	ARG	3.1
2	C	92	THR	3.1
1	B	220	ILE	3.0

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Mol	Chain	Res	Type	RSRZ
2	C	8	ALA	3.0
2	C	91	ASN	3.0
2	C	33	ALA	3.0
2	D	169	ASN	3.0
2	C	425	ARG	3.0
2	C	117	ILE	3.0
2	C	198	GLN	3.0
1	B	66	SER	3.0
2	D	69	LEU	3.0
2	D	268	GLU	3.0
1	B	355	GLY	3.0
1	A	179	ALA	3.0
2	C	45	LEU	3.0
1	B	122	GLU	3.0
1	B	176	PRO	3.0
1	B	173	LYS	3.0
1	A	91	ALA	3.0
1	B	34	GLY	2.9
2	D	9	GLY	2.9
2	C	42	LYS	2.9
1	A	261	ALA	2.9
2	C	366	ASP	2.9
2	D	76	ASP	2.9
1	B	61	LYS	2.9
2	D	230	LYS	2.9
2	C	338	LEU	2.9
1	B	93	ASN	2.9
2	C	364	ARG	2.9
1	B	470	GLU	2.9
1	A	40	VAL	2.9
1	B	40	VAL	2.9
1	A	92	ASP	2.8
1	B	68	ASP	2.8
2	D	54	HIS	2.8
1	B	159	GLN	2.8
2	C	333	GLY	2.8
2	D	117	ILE	2.8
1	A	259	ALA	2.8
2	D	162	TYR	2.8
1	A	302	SER	2.8
2	D	60	GLU	2.8
1	B	443	GLY	2.8

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Mol	Chain	Res	Type	RSRZ
2	C	217	HIS	2.8
2	D	171	LEU	2.8
2	D	181	ILE	2.8
2	C	87	PHE	2.8
2	D	313	MET	2.8
2	D	364	ARG	2.8
1	A	232	TYR	2.8
1	A	180	GLU	2.8
1	B	169	VAL	2.8
2	C	5	ILE	2.8
2	D	182	ASP	2.8
1	A	162	ARG	2.8
2	C	192	GLY	2.8
2	C	97	ALA	2.8
1	A	174	MET	2.8
1	A	304	TYR	2.8
1	B	172	THR	2.8
2	D	90	PHE	2.8
2	D	266	ARG	2.8
1	A	205	MET	2.7
1	B	91	ALA	2.7
1	B	302	SER	2.7
1	A	161	TYR	2.7
2	C	352	GLN	2.7
2	D	105	LEU	2.7
2	D	81	ALA	2.7
1	B	149	ILE	2.7
2	D	73	THR	2.7
1	A	173	LYS	2.7
1	A	227	ASP	2.7
2	C	55	PRO	2.7
1	B	388	GLY	2.7
2	C	63	ALA	2.7
2	C	115	GLY	2.7
2	D	92	THR	2.7
1	B	49	CYS	2.7
2	D	19	LEU	2.7
1	B	376	VAL	2.6
2	D	175	ARG	2.6
1	B	33	ASP	2.6
1	B	92	ASP	2.6
1	B	259	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
2	D	49	ASN	2.6
1	A	133	PHE	2.6
2	C	19	LEU	2.6
1	B	155	ILE	2.6
2	C	35	ARG	2.6
2	C	193	ARG	2.6
1	A	122	GLU	2.6
1	B	301	THR	2.6
1	B	451	ASP	2.6
2	D	338	LEU	2.6
2	D	272	GLU	2.6
1	B	148	ALA	2.6
1	B	450	GLY	2.6
1	B	258	ALA	2.6
1	A	423	ASP	2.6
1	B	205	MET	2.6
1	A	228	ALA	2.6
1	A	69	GLY	2.6
1	B	156	GLY	2.6
2	C	38	GLU	2.5
2	C	113	LYS	2.5
2	D	134	GLU	2.5
2	D	366	ASP	2.5
2	C	111	LEU	2.5
1	A	204	GLY	2.5
1	B	448	HIS	2.5
2	C	39	LEU	2.5
1	A	68	ASP	2.5
2	C	90	PHE	2.5
2	C	351	GLN	2.5
1	A	61	LYS	2.5
2	D	27	THR	2.5
1	B	266	HIS	2.5
2	C	17	GLU	2.5
2	C	29	VAL	2.5
2	D	229	GLU	2.5
2	C	313	MET	2.5
1	B	57	ASN	2.5
1	B	423	ASP	2.5
1	B	207	PRO	2.5
2	D	84	GLN	2.5
1	A	66	SER	2.5

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Mol	Chain	Res	Type	RSRZ
2	C	114	SER	2.5
2	C	134	GLU	2.5
1	B	348	CYS	2.5
2	C	165	PRO	2.5
1	A	181	THR	2.5
1	B	404	SER	2.5
2	C	266	ARG	2.5
1	B	174	MET	2.5
2	C	48	VAL	2.5
1	B	48	PHE	2.4
2	C	272	GLU	2.4
2	D	204	GLU	2.4
2	D	445	PRO	2.4
1	A	262	SER	2.4
2	C	112	PHE	2.4
1	B	180	GLU	2.4
2	D	107	GLU	2.4
1	B	153	LEU	2.4
2	D	32	ASN	2.4
2	D	113	LYS	2.4
1	B	161	TYR	2.4
1	A	184	ALA	2.4
1	B	238	ILE	2.4
2	D	51	HIS	2.4
1	B	446	ALA	2.4
2	D	97	ALA	2.4
2	C	164	GLY	2.4
2	D	336	VAL	2.4
1	B	184	ALA	2.4
1	B	407	ALA	2.4
2	C	71	ALA	2.4
2	D	102	PRO	2.4
1	B	445	VAL	2.4
2	D	363	ARG	2.4
1	A	48	PHE	2.3
2	D	83	CYS	2.3
1	A	235	SER	2.3
1	B	268	LYS	2.3
2	C	224	GLU	2.3
2	D	351	GLN	2.3
2	C	46	ARG	2.3
2	C	58	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
1	B	69	GLY	2.3
2	D	13	GLY	2.3
2	C	32	ASN	2.3
1	B	329	ALA	2.3
1	A	470	GLU	2.3
1	B	165	ILE	2.3
2	D	17	GLU	2.3
2	C	31	ASN	2.3
2	D	352	GLN	2.3
2	C	109	GLU	2.3
1	B	5	SER	2.3
1	B	235	SER	2.3
2	D	114	SER	2.3
1	B	222	GLY	2.3
2	C	102	PRO	2.3
2	C	341	GLY	2.3
2	D	35	ARG	2.3
1	A	148	ALA	2.3
1	A	401	GLY	2.3
2	C	411	GLY	2.3
2	D	115	GLY	2.3
2	C	182	ASP	2.3
1	A	301	THR	2.2
2	D	205	ALA	2.2
2	D	198	GLN	2.2
2	D	292	GLU	2.2
2	D	448	GLU	2.2
1	A	222	GLY	2.2
1	B	162	ARG	2.2
2	D	369	ASN	2.2
1	B	178	ILE	2.2
2	D	112	PHE	2.2
1	A	407	ALA	2.2
2	D	452	GLN	2.2
2	D	343	VAL	2.2
1	B	39	PHE	2.2
2	D	216	ASN	2.2
2	D	10	GLN	2.2
2	C	223	SER	2.2
2	C	339	VAL	2.2
2	D	193	ARG	2.2
1	A	479	THR	2.2

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Mol	Chain	Res	Type	RSRZ
1	B	181	THR	2.2
2	C	51	HIS	2.2
1	A	29	LEU	2.2
2	C	336	VAL	2.2
2	D	29	VAL	2.2
2	C	107	GLU	2.2
2	C	204	GLU	2.2
2	C	417	GLU	2.2
2	C	73	THR	2.2
2	C	163	GLY	2.2
2	C	418	GLU	2.2
2	D	455	PRO	2.2
1	B	320	THR	2.2
1	B	53	CYS	2.1
2	C	283	ASP	2.1
1	B	218	ILE	2.1
2	D	417	GLU	2.1
1	B	182	ALA	2.1
1	B	2	GLN	2.1
2	C	265	GLN	2.1
1	B	397	ASP	2.1
1	A	483	TRP	2.1
1	A	207	PRO	2.1
1	A	388	GLY	2.1
2	C	7	GLY	2.1
1	A	123	LEU	2.1
2	D	31	ASN	2.1
2	C	253	GLN	2.1
1	A	201	TRP	2.1
1	A	269	TYR	2.1
1	A	481	THR	2.1
1	B	479	THR	2.1
2	D	71	ALA	2.1
2	C	292	GLU	2.1
1	A	238	ILE	2.1
1	B	228	ALA	2.1
2	C	343	VAL	2.1
2	C	104	TYR	2.1
1	A	33	ASP	2.1
2	C	118	PRO	2.1
2	C	229	GLU	2.1
1	B	385	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
2	C	195	ILE	2.1
2	D	28	ILE	2.1
2	D	6	LEU	2.1
1	A	149	ILE	2.0
1	A	385	LYS	2.0
2	C	16	ALA	2.0
2	D	62	GLY	2.0
2	C	424	ASP	2.0
1	A	295	LEU	2.0
2	C	81	ALA	2.0
2	D	349	SER	2.0
1	A	158	MET	2.0
2	D	341	GLY	2.0
1	A	155	ILE	2.0
1	B	38	PRO	2.0
2	C	27	THR	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, 95^{th} 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.

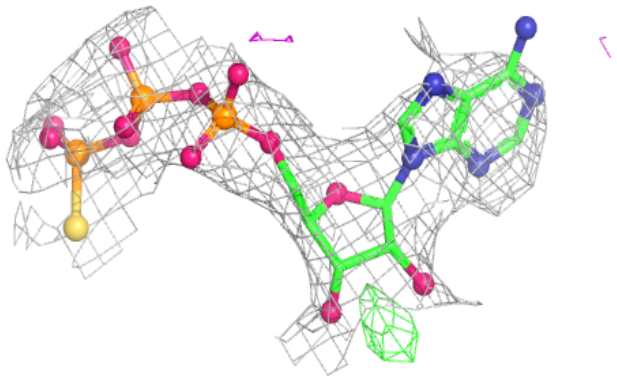
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	AGS	C	501	31/31	0.79	0.20	59,75,118,129	0
3	AGS	D	502	31/31	0.82	0.19	54,79,129,138	0
3	AGS	D	501	31/31	0.86	0.18	51,77,111,157	0
3	AGS	C	502	31/31	0.87	0.17	54,73,115,124	0

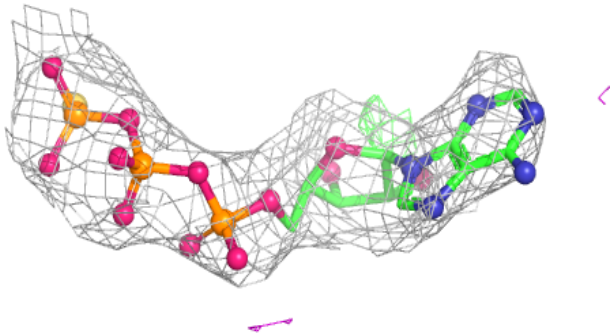
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers

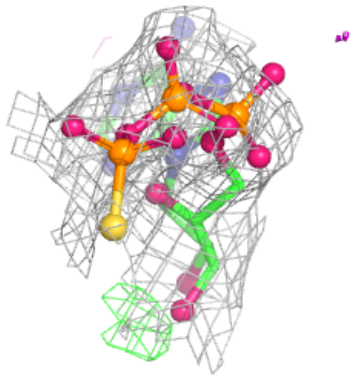
as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around AGS C 501:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

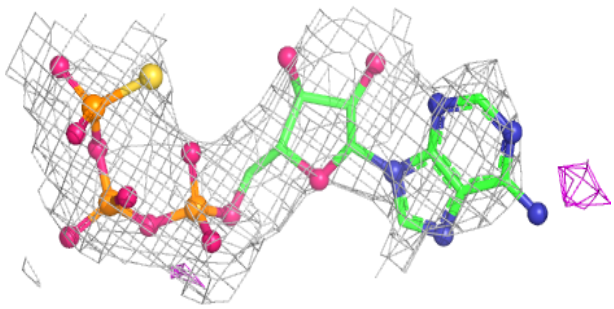


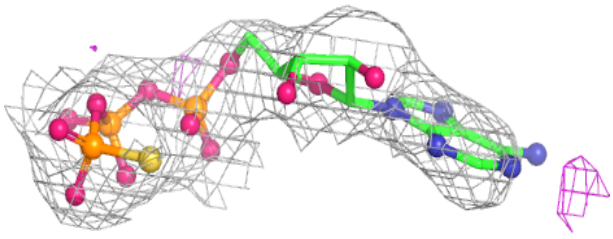


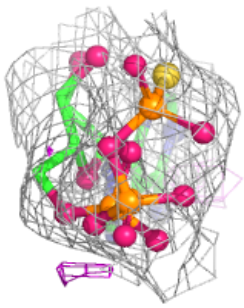


Electron density around AGS D 502:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

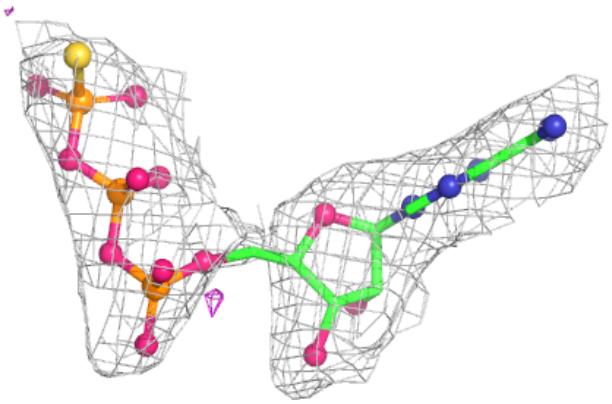


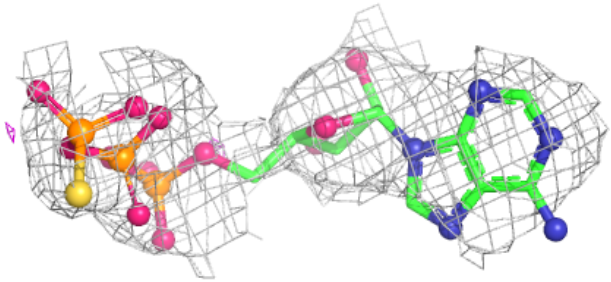


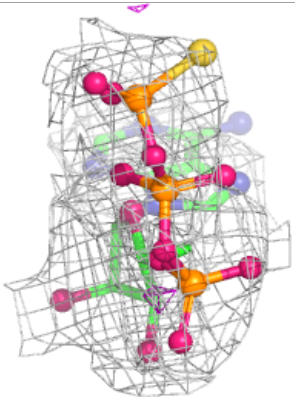


Electron density around AGS D 501:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

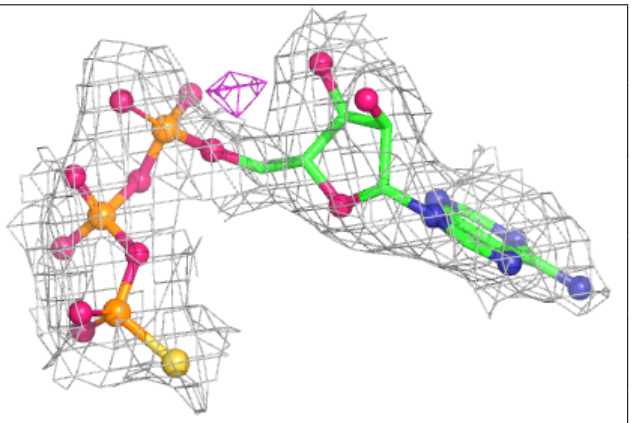


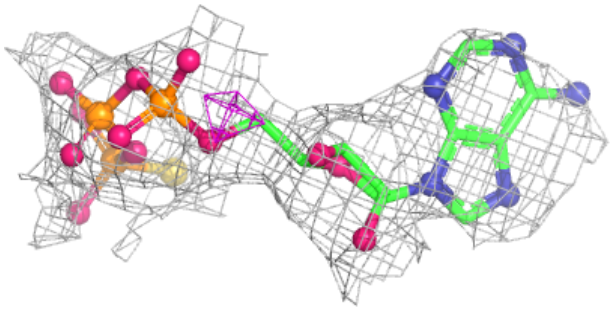


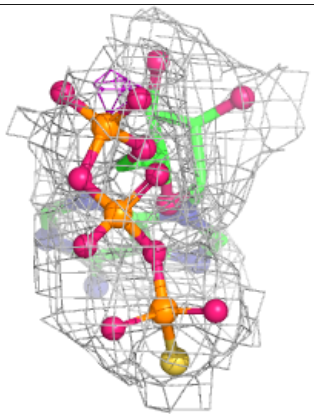


Electron density around AGS C 502:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)







6.5 Other polymers (i)

There are no such residues in this entry.