



Full wwPDB X-ray Structure Validation Report ⓘ

Jun 4, 2020 – 03:10 pm BST

PDB ID : 1H1K
Title : THE BLUETONGUE VIRUS (BTV) CORE BINDS DSRNA
Authors : Diprose, J.M.; Grimes, J.M.; Sutton, G.C.; Burroughs, J.N.; Meyer, A.; Maan, S.; Mertens, P.P.C.; Stuart, D.I.
Deposited on : 2002-07-17
Resolution : 10.00 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 following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

| | | |
|--------------------------------|---|--|
| MolProbity | : | 4.02b-467 |
| Xtriage (Phenix) | : | 1.13 |
| EDS | : | FAILED |
| Percentile statistics | : | 20191225.v01 (using entries in the PDB archive December 25th 2019) |
| Ideal geometry (proteins) | : | Engh & Huber (2001) |
| Ideal geometry (DNA, RNA) | : | Parkinson et al. (1996) |
| Validation Pipeline (wwPDB-VP) | : | 2.11 |

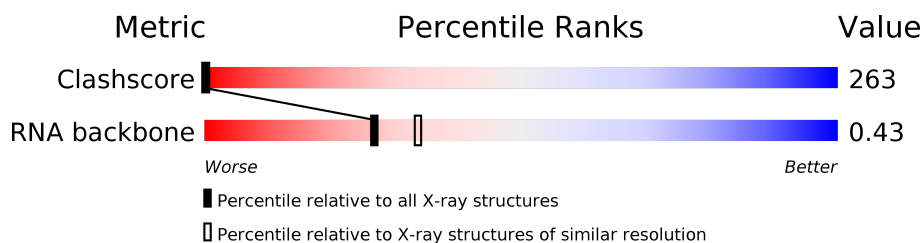
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 10.00 Å.

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



| Metric | Whole archive (#Entries) | Similar resolution (#Entries, resolution range(Å)) |
|--------------|-----------------------------|---|
| Clashscore | 141614 | 1071 (15.00-3.90) |
| RNA backbone | 3102 | 1079 (11.50-3.00) |

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

Note EDS failed to run properly.

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|--|
| 1 | I | 412 |  78% 21% |
| 2 | J | 276 |  72% 25% |
| 3 | K | 265 |  77% 19% |
| 4 | L | 412 |  79% 21% |
| 5 | M | 276 |  73% 24% |
| 6 | N | 265 |  82% 15% |

2 Entry composition

There are 6 unique types of molecules in this entry. The entry contains 40008 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 RNA chain called RNA.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|------|------|-----|---------|---------|-------|
| 1 | I | 412 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 9061 | 4120 | 2060 | 2470 | 411 | | | |

- Molecule 2 is a RNA chain called RNA.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|------|------|-----|---------|---------|-------|
| 2 | J | 276 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 6069 | 2760 | 1380 | 1654 | 275 | | | |

- Molecule 3 is a RNA chain called RNA.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|------|------|-----|---------|---------|-------|
| 3 | K | 265 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 5827 | 2650 | 1325 | 1588 | 264 | | | |

- Molecule 4 is a RNA chain called RNA.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|------|-----|---------|---------|-------|
| 4 | L | 412 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 8237 | 3708 | 824 | 3294 | 411 | | | |

- Molecule 5 is a RNA chain called RNA.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|------|-----|---------|---------|-------|
| 5 | M | 276 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 5517 | 2484 | 552 | 2206 | 275 | | | |

- Molecule 6 is a RNA chain called RNA.

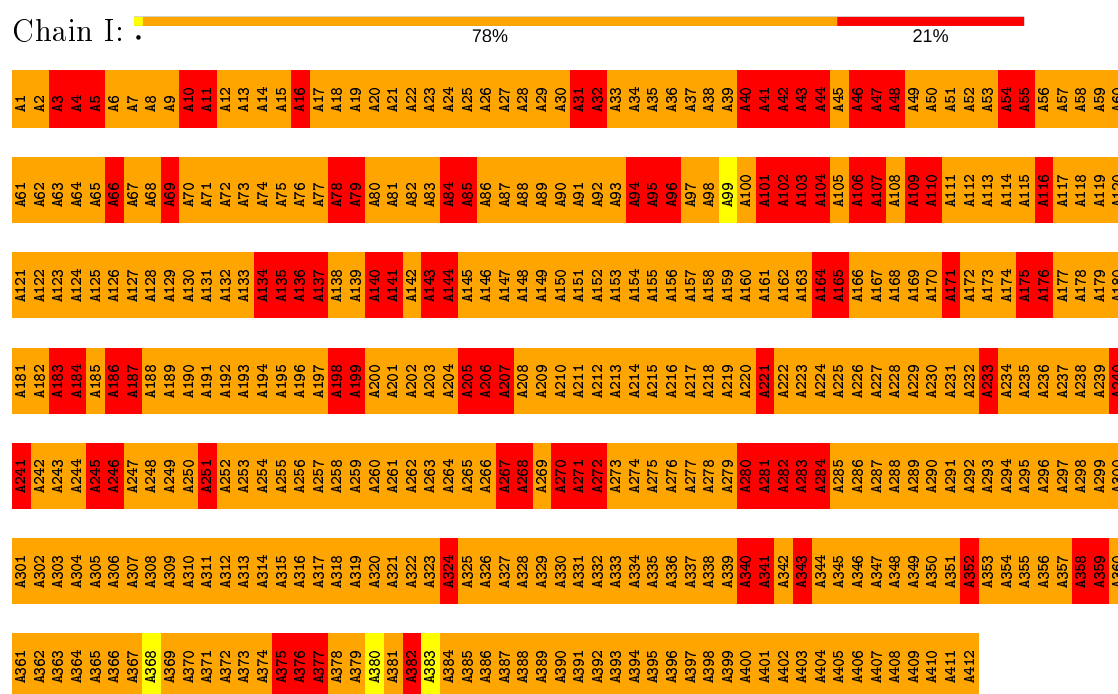
| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|------|-----|---------|---------|-------|
| 6 | N | 265 | Total | C | N | O | P | 0 | 0 | 0 |
| | | | 5297 | 2385 | 530 | 2118 | 264 | | | |

3 Residue-property plots

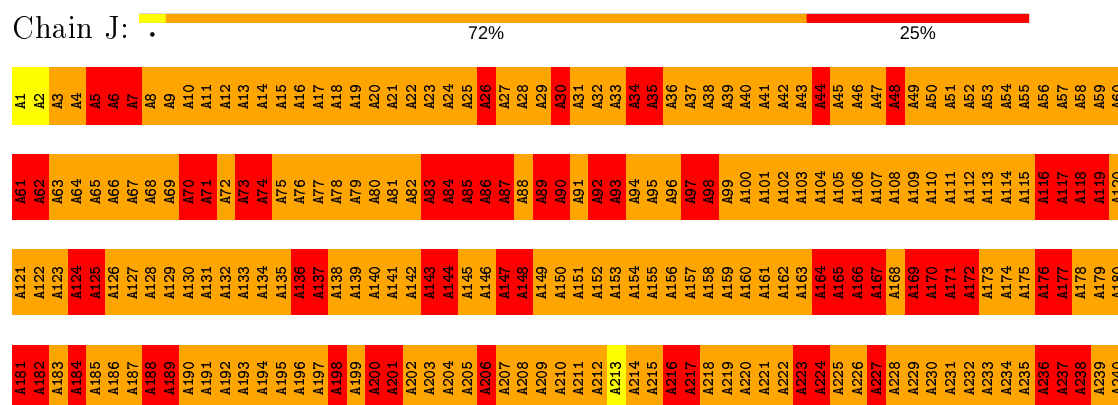
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. Residues are color-coded according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

Note EDS failed to run properly.

• Molecule 1: RNA




• Molecule 2: RNA




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| A241 |
| A242 |
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| A272 |
| A273 |
| A274 |
| A275 |
| A276 |

• Molecule 3: RNA

Chain K:  77% 19%


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| A1 |
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| A6 |
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• Molecule 4: RNA

Chain L:  79% 21%

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• Molecule 5: RNA

Chain M:  73% 24%

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| U397 | U457 | U517 |
| U398 | U458 | U518 |
| U399 | U459 | U519 |
| U400 | U460 | U520 |
| U401 | U461 | U521 |
| U402 | U462 | U522 |
| U403 | U463 | U523 |
| U404 | U464 | U524 |
| U405 | U465 | U525 |
| U406 | U466 | U526 |
| U407 | U467 | U527 |
| U408 | U468 | U528 |
| U409 | U469 | U529 |
| U410 | U470 | U530 |
| U411 | U471 | U531 |
| U412 | U472 | U532 |
| U413 | U473 | U533 |
| U414 | U474 | U534 |
| U415 | U475 | U535 |
| U416 | U476 | U536 |
| U417 | U477 | U537 |
| U418 | U478 | U538 |
| U419 | U479 | U539 |
| U420 | U480 | U540 |
| U421 | U481 | U541 |
| U422 | U482 | U542 |
| U423 | U483 | U543 |
| U424 | U484 | U544 |
| U425 | U485 | U545 |
| U426 | U486 | U546 |
| U427 | U487 | U547 |
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| U453 | U513 | |
| U454 | U514 | |
| U455 | U515 | |
| U456 | U516 | |

• Molecule 6: RNA



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|------|------|------|------|------|
| U266 | U326 | U386 | U446 | U506 |
| U267 | U327 | U387 | U447 | U507 |
| U268 | U328 | U388 | U448 | U508 |
| U269 | U329 | U389 | U449 | U509 |
| U270 | U330 | U390 | U450 | U510 |
| U271 | U331 | U391 | U451 | U511 |
| U272 | U332 | U392 | U452 | U512 |
| U273 | U333 | U393 | U453 | U513 |
| U274 | U334 | U394 | U454 | U514 |
| U275 | U335 | U395 | U455 | U515 |
| U276 | U336 | U396 | U456 | U516 |
| U277 | U337 | U397 | U457 | U517 |
| U278 | U338 | U398 | U458 | U518 |
| U279 | U339 | U399 | U459 | U519 |
| U280 | U340 | U400 | U460 | U520 |
| U281 | U341 | U401 | U461 | U521 |
| U282 | U342 | U402 | U462 | U522 |
| U283 | U343 | U403 | U463 | U523 |
| U284 | U344 | U404 | U464 | U524 |
| U285 | U345 | U405 | U465 | U525 |
| U286 | U346 | U406 | U466 | U526 |
| U287 | U347 | U407 | U467 | U527 |
| U288 | U348 | U408 | U468 | U528 |
| U289 | U349 | U409 | U469 | U529 |
| U290 | U350 | U410 | U470 | U530 |
| U291 | U351 | U411 | U471 | |
| U292 | U352 | U412 | U472 | |
| U293 | U353 | U413 | U473 | |
| U294 | U354 | U414 | U474 | |
| U295 | U355 | U415 | U475 | |
| U296 | U356 | U416 | U476 | |
| U297 | U357 | U417 | U477 | |
| U298 | U358 | U418 | U478 | |
| U299 | U359 | U419 | U479 | |
| U300 | U360 | U420 | U480 | |
| U301 | U361 | U421 | U481 | |
| U302 | U362 | U422 | U482 | |
| U303 | U363 | U423 | U483 | |
| U304 | U364 | U424 | U484 | |
| U305 | U365 | U425 | U485 | |
| U306 | U366 | U426 | U486 | |
| U307 | U367 | U427 | U487 | |
| U308 | U368 | U428 | U488 | |
| U309 | U369 | U429 | U489 | |
| U310 | U370 | U430 | U490 | |
| U311 | U371 | U431 | U491 | |
| U312 | U372 | U432 | U492 | |
| U313 | U373 | U433 | U493 | |
| U314 | U374 | U434 | U494 | |
| U315 | U375 | U435 | U495 | |
| U316 | U376 | U436 | U496 | |
| U317 | U377 | U437 | U497 | |
| U318 | U378 | U438 | U498 | |
| U319 | U379 | U439 | U499 | |
| U320 | U380 | U440 | U500 | |
| U321 | U381 | U441 | U501 | |
| U322 | U382 | U442 | U502 | |
| U323 | U383 | U443 | U503 | |
| U324 | U384 | U444 | U504 | |
| U325 | U385 | U445 | U505 | |

4 Data and refinement statistics

EDS failed to run properly - this section is therefore incomplete.

| Property | Value | Source |
|--|---|-----------|
| Space group | P 21 21 2 | Depositor |
| Cell constants a, b, c, α , β , γ | 795.60 Å 821.80 Å 753.30 Å 90.00° 90.00° 90.00° | Depositor |
| Resolution (Å) | (Not available) – 10.00 | Depositor |
| % Data completeness (in resolution range) | (Not available) ((Not available)-10.00) | Depositor |
| R_{merge} | 0.23 | Depositor |
| R_{sym} | (Not available) | Depositor |
| $\langle I/\sigma(I) \rangle$ ¹ | 4.83 (at 3.49 Å) | Xtriage |
| Refinement program | CNS | Depositor |
| R, R_{free} | (Not available) , (Not available) | Depositor |
| Wilson B-factor (Å ²) | 48.5 | Xtriage |
| Anisotropy | 0.015 | Xtriage |
| L-test for twinning ² | $\langle L \rangle = 0.38$, $\langle L^2 \rangle = 0.21$ | Xtriage |
| Estimated twinning fraction | 0.078 for k,h,-l | Xtriage |
| Total number of atoms | 40008 | wwPDB-VP |
| Average B, all atoms (Å ²) | 50.0 | wwPDB-VP |

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.12% 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 ⓘ

5.1 Standard geometry ⓘ

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

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|-------------------|-------------|-------------------|
| | | RMSZ | $\# Z > 5$ | RMSZ | $\# Z > 5$ |
| 1 | I | 3.74 | 703/10296 (6.8%) | 3.73 | 1049/16060 (6.5%) |
| 2 | J | 3.72 | 457/6896 (6.6%) | 3.57 | 672/10756 (6.2%) |
| 3 | K | 4.26 | 459/6621 (6.9%) | 3.39 | 627/10327 (6.1%) |
| 4 | L | 4.08 | 734/9060 (8.1%) | 3.87 | 1040/14000 (7.4%) |
| 5 | M | 3.97 | 464/6068 (7.6%) | 3.99 | 683/9376 (7.3%) |
| 6 | N | 4.42 | 459/5824 (7.9%) | 3.40 | 573/8994 (6.4%) |
| All | All | 4.01 | 3276/44765 (7.3%) | 3.68 | 4644/69513 (6.7%) |

All (3276) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 5 | M | 313 | U | O3'-P | 48.59 | 2.19 | 1.61 |
| 3 | K | 12 | A | O3'-P | 48.05 | 2.18 | 1.61 |
| 1 | I | 149 | A | O3'-P | 47.30 | 2.17 | 1.61 |
| 3 | K | 11 | A | O3'-P | 47.12 | 2.17 | 1.61 |
| 3 | K | 75 | A | O3'-P | 46.95 | 2.17 | 1.61 |
| 4 | L | 679 | U | O3'-P | 46.68 | 2.17 | 1.61 |
| 6 | N | 524 | U | O3'-P | 45.16 | 2.15 | 1.61 |
| 5 | M | 312 | U | O3'-P | 44.78 | 2.14 | 1.61 |
| 6 | N | 510 | U | O3'-P | 44.39 | 2.14 | 1.61 |
| 2 | J | 242 | A | O3'-P | 44.21 | 2.14 | 1.61 |
| 5 | M | 548 | U | O3'-P | 42.48 | 2.12 | 1.61 |
| 5 | M | 311 | U | O3'-P | 42.34 | 2.12 | 1.61 |
| 6 | N | 519 | U | O3'-P | 41.67 | 2.11 | 1.61 |
| 3 | K | 252 | A | O3'-P | 41.29 | 2.10 | 1.61 |
| 3 | K | 242 | A | O3'-P | 41.18 | 2.10 | 1.61 |
| 4 | L | 678 | U | O3'-P | 41.15 | 2.10 | 1.61 |
| 6 | N | 279 | U | O3'-P | 40.69 | 2.10 | 1.61 |
| 3 | K | 74 | A | O3'-P | 40.30 | 2.09 | 1.61 |
| 1 | I | 79 | A | O3'-P | -40.09 | 1.13 | 1.61 |
| 6 | N | 516 | U | O3'-P | 39.94 | 2.09 | 1.61 |
| 1 | I | 384 | A | O3'-P | 39.78 | 2.08 | 1.61 |
| 3 | K | 259 | A | O3'-P | 39.58 | 2.08 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 6 | N | 322 | U | O3'-P | 38.15 | 2.06 | 1.61 |
| 6 | N | 520 | U | O3'-P | 37.22 | 2.05 | 1.61 |
| 3 | K | 241 | A | O3'-P | 37.07 | 2.05 | 1.61 |
| 6 | N | 299 | U | O3'-P | 36.98 | 2.05 | 1.61 |
| 2 | J | 3 | A | O3'-P | 36.87 | 2.05 | 1.61 |
| 3 | K | 179 | A | O3'-P | 36.74 | 2.05 | 1.61 |
| 6 | N | 484 | U | O3'-P | 36.65 | 2.05 | 1.61 |
| 6 | N | 455 | U | O3'-P | 36.19 | 2.04 | 1.61 |
| 4 | L | 446 | U | O3'-P | 36.10 | 2.04 | 1.61 |
| 1 | I | 146 | A | O3'-P | 35.97 | 2.04 | 1.61 |
| 4 | L | 440 | U | O3'-P | 35.80 | 2.04 | 1.61 |
| 3 | K | 184 | A | O3'-P | 35.51 | 2.03 | 1.61 |
| 3 | K | 45 | A | O3'-P | 35.40 | 2.03 | 1.61 |
| 6 | N | 341 | U | O3'-P | 35.34 | 2.03 | 1.61 |
| 6 | N | 289 | U | O3'-P | 35.30 | 2.03 | 1.61 |
| 1 | I | 40 | A | O3'-P | 35.27 | 2.03 | 1.61 |
| 4 | L | 439 | U | O3'-P | 35.21 | 2.03 | 1.61 |
| 6 | N | 518 | U | O3'-P | 35.21 | 2.03 | 1.61 |
| 5 | M | 314 | U | O3'-P | 35.03 | 2.03 | 1.61 |
| 3 | K | 33 | A | O3'-P | 35.00 | 2.03 | 1.61 |
| 4 | L | 451 | U | O3'-P | 34.94 | 2.03 | 1.61 |
| 3 | K | 251 | A | O3'-P | 34.34 | 2.02 | 1.61 |
| 6 | N | 271 | U | O3'-P | 34.05 | 2.02 | 1.61 |
| 2 | J | 241 | A | O3'-P | 34.02 | 2.02 | 1.61 |
| 3 | K | 63 | A | O3'-P | 33.95 | 2.01 | 1.61 |
| 3 | K | 243 | A | O3'-P | 33.93 | 2.01 | 1.61 |
| 3 | K | 260 | A | O3'-P | 33.65 | 2.01 | 1.61 |
| 1 | I | 145 | A | O3'-P | 33.63 | 2.01 | 1.61 |
| 2 | J | 239 | A | O3'-P | 33.53 | 2.01 | 1.61 |
| 5 | M | 308 | U | O3'-P | 33.51 | 2.01 | 1.61 |
| 6 | N | 325 | U | O3'-P | 33.25 | 2.01 | 1.61 |
| 6 | N | 485 | U | O3'-P | 33.02 | 2.00 | 1.61 |
| 3 | K | 23 | A | O3'-P | 33.00 | 2.00 | 1.61 |
| 6 | N | 457 | U | O3'-P | 32.95 | 2.00 | 1.61 |
| 3 | K | 16 | A | O3'-P | 32.89 | 2.00 | 1.61 |
| 3 | K | 178 | A | O3'-P | 32.79 | 2.00 | 1.61 |
| 3 | K | 54 | A | O3'-P | 32.71 | 2.00 | 1.61 |
| 3 | K | 46 | A | O3'-P | 32.49 | 2.00 | 1.61 |
| 4 | L | 676 | U | O3'-P | 32.49 | 2.00 | 1.61 |
| 4 | L | 536 | U | O3'-P | 32.48 | 2.00 | 1.61 |
| 2 | J | 28 | A | O3'-P | -32.17 | 1.22 | 1.61 |
| 6 | N | 426 | U | O3'-P | -31.77 | 1.23 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 5 | M | 456 | U | O3'-P | -31.49 | 1.23 | 1.61 |
| 5 | M | 524 | U | O3'-P | -31.36 | 1.23 | 1.61 |
| 3 | K | 244 | A | O3'-P | 31.32 | 1.98 | 1.61 |
| 3 | K | 208 | A | O3'-P | 31.23 | 1.98 | 1.61 |
| 2 | J | 271 | A | O3'-P | 31.23 | 1.98 | 1.61 |
| 2 | J | 270 | A | O3'-P | 31.22 | 1.98 | 1.61 |
| 3 | K | 13 | A | O3'-P | 31.14 | 1.98 | 1.61 |
| 4 | L | 598 | U | O3'-P | -31.03 | 1.24 | 1.61 |
| 4 | L | 677 | U | O3'-P | 30.98 | 1.98 | 1.61 |
| 4 | L | 447 | U | O3'-P | 30.90 | 1.98 | 1.61 |
| 4 | L | 445 | U | O3'-P | 30.80 | 1.98 | 1.61 |
| 1 | I | 226 | A | O3'-P | -30.76 | 1.24 | 1.61 |
| 3 | K | 14 | A | O3'-P | 30.75 | 1.98 | 1.61 |
| 6 | N | 288 | U | O3'-P | 30.67 | 1.98 | 1.61 |
| 1 | I | 385 | A | O3'-P | 30.54 | 1.97 | 1.61 |
| 1 | I | 355 | A | O3'-P | 30.50 | 1.97 | 1.61 |
| 3 | K | 15 | A | O3'-P | 30.49 | 1.97 | 1.61 |
| 3 | K | 10 | A | O3'-P | 30.43 | 1.97 | 1.61 |
| 6 | N | 387 | U | O3'-P | 30.41 | 1.97 | 1.61 |
| 5 | M | 549 | U | O3'-P | 30.36 | 1.97 | 1.61 |
| 6 | N | 427 | U | O3'-P | -30.26 | 1.24 | 1.61 |
| 3 | K | 19 | A | O3'-P | 30.20 | 1.97 | 1.61 |
| 2 | J | 168 | A | O3'-P | 30.06 | 1.97 | 1.61 |
| 5 | M | 474 | U | O3'-P | 29.80 | 1.97 | 1.61 |
| 6 | N | 303 | U | O3'-P | 29.65 | 1.96 | 1.61 |
| 1 | I | 143 | A | O3'-P | 29.62 | 1.96 | 1.61 |
| 2 | J | 203 | A | O3'-P | -29.57 | 1.25 | 1.61 |
| 6 | N | 346 | U | O3'-P | 29.44 | 1.96 | 1.61 |
| 5 | M | 307 | U | O3'-P | 29.39 | 1.96 | 1.61 |
| 3 | K | 103 | A | O3'-P | -29.36 | 1.25 | 1.61 |
| 5 | M | 494 | U | O3'-P | -29.28 | 1.26 | 1.61 |
| 3 | K | 104 | A | O3'-P | -29.19 | 1.26 | 1.61 |
| 3 | K | 225 | A | O3'-P | 29.15 | 1.96 | 1.61 |
| 3 | K | 20 | A | O3'-P | 29.08 | 1.96 | 1.61 |
| 6 | N | 509 | U | O3'-P | 29.00 | 1.96 | 1.61 |
| 4 | L | 442 | U | O3'-P | 28.81 | 1.95 | 1.61 |
| 3 | K | 22 | A | O3'-P | 28.79 | 1.95 | 1.61 |
| 4 | L | 680 | U | O3'-P | 28.70 | 1.95 | 1.61 |
| 6 | N | 497 | U | O3'-P | 28.69 | 1.95 | 1.61 |
| 1 | I | 150 | A | O3'-P | 28.62 | 1.95 | 1.61 |
| 6 | N | 459 | U | O3'-P | 28.48 | 1.95 | 1.61 |
| 4 | L | 675 | U | O3'-P | 28.40 | 1.95 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 5 | M | 282 | U | O3'-P | 28.37 | 1.95 | 1.61 |
| 2 | J | 115 | A | O3'-P | 28.35 | 1.95 | 1.61 |
| 4 | L | 469 | U | O3'-P | 28.32 | 1.95 | 1.61 |
| 1 | I | 351 | A | O3'-P | 28.29 | 1.95 | 1.61 |
| 4 | L | 589 | U | O3'-P | -28.06 | 1.27 | 1.61 |
| 6 | N | 523 | U | O3'-P | 27.93 | 1.94 | 1.61 |
| 2 | J | 274 | A | O3'-P | 27.83 | 1.94 | 1.61 |
| 4 | L | 441 | U | O3'-P | 27.78 | 1.94 | 1.61 |
| 6 | N | 352 | U | O3'-P | 27.59 | 1.94 | 1.61 |
| 1 | I | 344 | A | O3'-P | 27.57 | 1.94 | 1.61 |
| 6 | N | 515 | U | O3'-P | 27.37 | 1.94 | 1.61 |
| 1 | I | 147 | A | O3'-P | 27.29 | 1.93 | 1.61 |
| 3 | K | 227 | A | O3'-P | 27.25 | 1.93 | 1.61 |
| 3 | K | 209 | A | O3'-P | 27.14 | 1.93 | 1.61 |
| 1 | I | 239 | A | O3'-P | -27.06 | 1.28 | 1.61 |
| 1 | I | 235 | A | O3'-P | -26.82 | 1.28 | 1.61 |
| 6 | N | 318 | U | O3'-P | 26.69 | 1.93 | 1.61 |
| 1 | I | 95 | A | O3'-P | 26.65 | 1.93 | 1.61 |
| 5 | M | 527 | U | O3'-P | -26.61 | 1.29 | 1.61 |
| 1 | I | 96 | A | O3'-P | -26.61 | 1.29 | 1.61 |
| 2 | J | 273 | A | O3'-P | 26.57 | 1.93 | 1.61 |
| 6 | N | 373 | U | O3'-P | 26.52 | 1.93 | 1.61 |
| 3 | K | 226 | A | O3'-P | 26.50 | 1.93 | 1.61 |
| 4 | L | 778 | U | O3'-P | -26.48 | 1.29 | 1.61 |
| 1 | I | 3 | A | O3'-P | 26.46 | 1.93 | 1.61 |
| 3 | K | 261 | A | O3'-P | 26.46 | 1.92 | 1.61 |
| 5 | M | 287 | U | O3'-P | -26.46 | 1.29 | 1.61 |
| 2 | J | 240 | A | O3'-P | 26.41 | 1.92 | 1.61 |
| 4 | L | 430 | U | O3'-P | 26.38 | 1.92 | 1.61 |
| 2 | J | 4 | A | O3'-P | 26.37 | 1.92 | 1.61 |
| 4 | L | 448 | U | O3'-P | 26.34 | 1.92 | 1.61 |
| 1 | I | 99 | A | O3'-P | 26.34 | 1.92 | 1.61 |
| 1 | I | 2 | A | O3'-P | 26.25 | 1.92 | 1.61 |
| 4 | L | 819 | U | O3'-P | 26.08 | 1.92 | 1.61 |
| 1 | I | 223 | A | O3'-P | -26.00 | 1.29 | 1.61 |
| 1 | I | 205 | A | O3'-P | 25.86 | 1.92 | 1.61 |
| 6 | N | 508 | U | O3'-P | 25.77 | 1.92 | 1.61 |
| 5 | M | 340 | U | O3'-P | 25.76 | 1.92 | 1.61 |
| 4 | L | 452 | U | O3'-P | 25.75 | 1.92 | 1.61 |
| 3 | K | 218 | A | O3'-P | 25.63 | 1.92 | 1.61 |
| 1 | I | 289 | A | O3'-P | 25.59 | 1.91 | 1.61 |
| 2 | J | 170 | A | O3'-P | 25.57 | 1.91 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 3 | K | 246 | A | O3'-P | 25.55 | 1.91 | 1.61 |
| 4 | L | 767 | U | O3'-P | -25.55 | 1.30 | 1.61 |
| 4 | L | 756 | U | O3'-P | -25.54 | 1.30 | 1.61 |
| 5 | M | 503 | U | O3'-P | -25.52 | 1.30 | 1.61 |
| 2 | J | 196 | A | O3'-P | 25.44 | 1.91 | 1.61 |
| 3 | K | 190 | A | O3'-P | 25.41 | 1.91 | 1.61 |
| 4 | L | 601 | U | O3'-P | -25.41 | 1.30 | 1.61 |
| 2 | J | 174 | A | O3'-P | -25.13 | 1.30 | 1.61 |
| 4 | L | 564 | U | O3'-P | -24.95 | 1.31 | 1.61 |
| 6 | N | 314 | U | O3'-P | 24.80 | 1.91 | 1.61 |
| 6 | N | 351 | U | O3'-P | 24.67 | 1.90 | 1.61 |
| 1 | I | 42 | A | O3'-P | -24.61 | 1.31 | 1.61 |
| 5 | M | 346 | U | O3'-P | -24.60 | 1.31 | 1.61 |
| 6 | N | 278 | U | O3'-P | 24.55 | 1.90 | 1.61 |
| 2 | J | 198 | A | O3'-P | -24.51 | 1.31 | 1.61 |
| 2 | J | 26 | A | O3'-P | -24.48 | 1.31 | 1.61 |
| 5 | M | 493 | U | O3'-P | 24.48 | 1.90 | 1.61 |
| 6 | N | 460 | U | O3'-P | 24.47 | 1.90 | 1.61 |
| 1 | I | 148 | A | O3'-P | 24.46 | 1.90 | 1.61 |
| 1 | I | 381 | A | O3'-P | 24.37 | 1.90 | 1.61 |
| 2 | J | 65 | A | O3'-P | -24.33 | 1.31 | 1.61 |
| 1 | I | 220 | A | O3'-P | 24.30 | 1.90 | 1.61 |
| 2 | J | 27 | A | O3'-P | -24.30 | 1.31 | 1.61 |
| 6 | N | 272 | U | O3'-P | 24.16 | 1.90 | 1.61 |
| 1 | I | 288 | A | O3'-P | 24.15 | 1.90 | 1.61 |
| 4 | L | 740 | U | O3'-P | -24.09 | 1.32 | 1.61 |
| 5 | M | 468 | U | O3'-P | 24.05 | 1.90 | 1.61 |
| 4 | L | 786 | U | O3'-P | 24.00 | 1.90 | 1.61 |
| 2 | J | 269 | A | O3'-P | 23.99 | 1.90 | 1.61 |
| 1 | I | 380 | A | O3'-P | 23.96 | 1.90 | 1.61 |
| 2 | J | 96 | A | O3'-P | -23.96 | 1.32 | 1.61 |
| 4 | L | 713 | U | O3'-P | 23.89 | 1.89 | 1.61 |
| 1 | I | 379 | A | O3'-P | 23.87 | 1.89 | 1.61 |
| 2 | J | 71 | A | O3'-P | -23.87 | 1.32 | 1.61 |
| 2 | J | 272 | A | O3'-P | 23.78 | 1.89 | 1.61 |
| 1 | I | 237 | A | O3'-P | -23.70 | 1.32 | 1.61 |
| 6 | N | 308 | U | O3'-P | 23.68 | 1.89 | 1.61 |
| 4 | L | 663 | U | O3'-P | 23.58 | 1.89 | 1.61 |
| 5 | M | 386 | U | O3'-P | 23.58 | 1.89 | 1.61 |
| 4 | L | 535 | U | O3'-P | 23.48 | 1.89 | 1.61 |
| 2 | J | 243 | A | O3'-P | 23.48 | 1.89 | 1.61 |
| 6 | N | 487 | U | O3'-P | 23.45 | 1.89 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 4 | L | 565 | U | O3'-P | -23.42 | 1.33 | 1.61 |
| 1 | I | 225 | A | O3'-P | -23.42 | 1.33 | 1.61 |
| 6 | N | 270 | U | O3'-P | 23.39 | 1.89 | 1.61 |
| 5 | M | 280 | U | O3'-P | 23.34 | 1.89 | 1.61 |
| 3 | K | 76 | A | O3'-P | 23.29 | 1.89 | 1.61 |
| 1 | I | 25 | A | O3'-P | -23.17 | 1.33 | 1.61 |
| 3 | K | 44 | A | O3'-P | 23.17 | 1.89 | 1.61 |
| 1 | I | 272 | A | O3'-P | -23.05 | 1.33 | 1.61 |
| 5 | M | 283 | U | O3'-P | 22.92 | 1.88 | 1.61 |
| 3 | K | 196 | A | O3'-P | 22.85 | 1.88 | 1.61 |
| 4 | L | 563 | U | O3'-P | -22.77 | 1.33 | 1.61 |
| 2 | J | 275 | A | O3'-P | 22.74 | 1.88 | 1.61 |
| 1 | I | 178 | A | O3'-P | -22.67 | 1.33 | 1.61 |
| 5 | M | 459 | U | O3'-P | -22.63 | 1.33 | 1.61 |
| 1 | I | 294 | A | O3'-P | 22.61 | 1.88 | 1.61 |
| 1 | I | 262 | A | O3'-P | -22.53 | 1.34 | 1.61 |
| 6 | N | 429 | U | O3'-P | -22.38 | 1.34 | 1.61 |
| 4 | L | 755 | U | O3'-P | -22.30 | 1.34 | 1.61 |
| 3 | K | 155 | A | O3'-P | 22.26 | 1.87 | 1.61 |
| 4 | L | 557 | U | O3'-P | -22.13 | 1.34 | 1.61 |
| 2 | J | 39 | A | O3'-P | -22.10 | 1.34 | 1.61 |
| 4 | L | 813 | U | O3'-P | -22.10 | 1.34 | 1.61 |
| 6 | N | 269 | U | O3'-P | 22.08 | 1.87 | 1.61 |
| 4 | L | 597 | U | O3'-P | -22.06 | 1.34 | 1.61 |
| 5 | M | 462 | U | O3'-P | -22.04 | 1.34 | 1.61 |
| 4 | L | 573 | U | O3'-P | -22.04 | 1.34 | 1.61 |
| 2 | J | 101 | A | O3'-P | -22.02 | 1.34 | 1.61 |
| 1 | I | 53 | A | O3'-P | -22.01 | 1.34 | 1.61 |
| 4 | L | 454 | U | O3'-P | 22.00 | 1.87 | 1.61 |
| 1 | I | 227 | A | O3'-P | -21.96 | 1.34 | 1.61 |
| 4 | L | 822 | U | O3'-P | 21.95 | 1.87 | 1.61 |
| 2 | J | 98 | A | O3'-P | -21.81 | 1.34 | 1.61 |
| 1 | I | 378 | A | O3'-P | 21.77 | 1.87 | 1.61 |
| 4 | L | 602 | U | O3'-P | -21.73 | 1.35 | 1.61 |
| 1 | I | 328 | A | O3'-P | -21.71 | 1.35 | 1.61 |
| 6 | N | 267 | U | O3'-P | 21.70 | 1.87 | 1.61 |
| 5 | M | 279 | U | O3'-P | 21.66 | 1.87 | 1.61 |
| 4 | L | 555 | U | O3'-P | -21.64 | 1.35 | 1.61 |
| 4 | L | 624 | U | O3'-P | 21.64 | 1.87 | 1.61 |
| 6 | N | 266 | U | O3'-P | 21.62 | 1.87 | 1.61 |
| 6 | N | 304 | U | O3'-P | 21.60 | 1.87 | 1.61 |
| 1 | I | 103 | A | O3'-P | 21.58 | 1.87 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 2 | J | 206 | A | O3'-P | -21.56 | 1.35 | 1.61 |
| 4 | L | 720 | U | O3'-P | 21.56 | 1.87 | 1.61 |
| 1 | I | 179 | A | O3'-P | -21.53 | 1.35 | 1.61 |
| 4 | L | 757 | U | O3'-P | -21.53 | 1.35 | 1.61 |
| 4 | L | 576 | U | O3'-P | -21.53 | 1.35 | 1.61 |
| 4 | L | 443 | U | O3'-P | 21.47 | 1.86 | 1.61 |
| 6 | N | 344 | U | O3'-P | 21.39 | 1.86 | 1.61 |
| 3 | K | 232 | A | O3'-P | 21.37 | 1.86 | 1.61 |
| 4 | L | 725 | U | O3'-P | 21.32 | 1.86 | 1.61 |
| 4 | L | 783 | U | O3'-P | 21.32 | 1.86 | 1.61 |
| 3 | K | 224 | A | O3'-P | 21.26 | 1.86 | 1.61 |
| 5 | M | 281 | U | O3'-P | 21.26 | 1.86 | 1.61 |
| 1 | I | 203 | A | O3'-P | -21.21 | 1.35 | 1.61 |
| 5 | M | 310 | U | O3'-P | 21.16 | 1.86 | 1.61 |
| 6 | N | 483 | U | O3'-P | 21.11 | 1.86 | 1.61 |
| 2 | J | 116 | A | O3'-P | 21.09 | 1.86 | 1.61 |
| 4 | L | 685 | U | O3'-P | 21.07 | 1.86 | 1.61 |
| 6 | N | 357 | U | O3'-P | 21.02 | 1.86 | 1.61 |
| 3 | K | 50 | A | O3'-P | 21.00 | 1.86 | 1.61 |
| 6 | N | 409 | U | O3'-P | -20.99 | 1.35 | 1.61 |
| 6 | N | 321 | U | O3'-P | 20.95 | 1.86 | 1.61 |
| 4 | L | 582 | U | O3'-P | -20.94 | 1.36 | 1.61 |
| 6 | N | 300 | U | O3'-P | 20.89 | 1.86 | 1.61 |
| 4 | L | 645 | U | O3'-P | -20.88 | 1.36 | 1.61 |
| 5 | M | 278 | U | O3'-P | 20.84 | 1.86 | 1.61 |
| 3 | K | 205 | A | O3'-P | 20.84 | 1.86 | 1.61 |
| 1 | I | 98 | A | O3'-P | 20.83 | 1.86 | 1.61 |
| 3 | K | 258 | A | O3'-P | 20.83 | 1.86 | 1.61 |
| 3 | K | 264 | A | O3'-P | 20.81 | 1.86 | 1.61 |
| 4 | L | 657 | U | O3'-P | 20.78 | 1.86 | 1.61 |
| 4 | L | 634 | U | O3'-P | -20.77 | 1.36 | 1.61 |
| 1 | I | 356 | A | O3'-P | 20.72 | 1.86 | 1.61 |
| 2 | J | 248 | A | O3'-P | -20.69 | 1.36 | 1.61 |
| 5 | M | 525 | U | O3'-P | -20.68 | 1.36 | 1.61 |
| 4 | L | 600 | U | O3'-P | -20.66 | 1.36 | 1.61 |
| 2 | J | 58 | A | O3'-P | -20.64 | 1.36 | 1.61 |
| 4 | L | 716 | U | O3'-P | -20.62 | 1.36 | 1.61 |
| 1 | I | 4 | A | O3'-P | 20.62 | 1.85 | 1.61 |
| 4 | L | 712 | U | O3'-P | 20.61 | 1.85 | 1.61 |
| 2 | J | 162 | A | O3'-P | 20.61 | 1.85 | 1.61 |
| 4 | L | 799 | U | O3'-P | -20.58 | 1.36 | 1.61 |
| 1 | I | 303 | A | O3'-P | 20.57 | 1.85 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 2 | J | 105 | A | O3'-P | -20.57 | 1.36 | 1.61 |
| 4 | L | 551 | U | O3'-P | 20.55 | 1.85 | 1.61 |
| 4 | L | 556 | U | O3'-P | -20.52 | 1.36 | 1.61 |
| 1 | I | 382 | A | O3'-P | 20.51 | 1.85 | 1.61 |
| 4 | L | 745 | U | O3'-P | -20.51 | 1.36 | 1.61 |
| 3 | K | 151 | A | O3'-P | -20.45 | 1.36 | 1.61 |
| 2 | J | 199 | A | O3'-P | -20.43 | 1.36 | 1.61 |
| 3 | K | 67 | A | O3'-P | 20.36 | 1.85 | 1.61 |
| 3 | K | 51 | A | O3'-P | 20.34 | 1.85 | 1.61 |
| 5 | M | 419 | U | O3'-P | 20.29 | 1.85 | 1.61 |
| 2 | J | 142 | A | O3'-P | -20.28 | 1.36 | 1.61 |
| 2 | J | 85 | A | O3'-P | 20.27 | 1.85 | 1.61 |
| 5 | M | 531 | U | O3'-P | 20.24 | 1.85 | 1.61 |
| 2 | J | 145 | A | O3'-P | 20.24 | 1.85 | 1.61 |
| 4 | L | 468 | U | O3'-P | 20.20 | 1.85 | 1.61 |
| 2 | J | 2 | A | O3'-P | 20.18 | 1.85 | 1.61 |
| 3 | K | 188 | A | O3'-P | 20.16 | 1.85 | 1.61 |
| 1 | I | 187 | A | O3'-P | -20.14 | 1.36 | 1.61 |
| 6 | N | 287 | U | O3'-P | 20.13 | 1.85 | 1.61 |
| 2 | J | 175 | A | O3'-P | -20.04 | 1.37 | 1.61 |
| 4 | L | 620 | U | O3'-P | 20.02 | 1.85 | 1.61 |
| 4 | L | 456 | U | O3'-P | 19.96 | 1.85 | 1.61 |
| 6 | N | 447 | U | O3'-P | -19.95 | 1.37 | 1.61 |
| 4 | L | 632 | U | O3'-P | 19.95 | 1.85 | 1.61 |
| 5 | M | 390 | U | O3'-P | 19.78 | 1.84 | 1.61 |
| 5 | M | 513 | U | O3'-P | -19.69 | 1.37 | 1.61 |
| 4 | L | 751 | U | O3'-P | -19.68 | 1.37 | 1.61 |
| 5 | M | 487 | U | O3'-P | -19.64 | 1.37 | 1.61 |
| 1 | I | 74 | A | O3'-P | -19.64 | 1.37 | 1.61 |
| 3 | K | 105 | A | O3'-P | -19.64 | 1.37 | 1.61 |
| 5 | M | 517 | U | O3'-P | -19.61 | 1.37 | 1.61 |
| 1 | I | 18 | A | O3'-P | -19.57 | 1.37 | 1.61 |
| 5 | M | 551 | U | O3'-P | 19.55 | 1.84 | 1.61 |
| 5 | M | 526 | U | O3'-P | -19.55 | 1.37 | 1.61 |
| 4 | L | 639 | U | O3'-P | -19.54 | 1.37 | 1.61 |
| 4 | L | 588 | U | O3'-P | -19.53 | 1.37 | 1.61 |
| 1 | I | 62 | A | O3'-P | -19.52 | 1.37 | 1.61 |
| 4 | L | 769 | U | O3'-P | -19.52 | 1.37 | 1.61 |
| 6 | N | 434 | U | O3'-P | -19.49 | 1.37 | 1.61 |
| 4 | L | 429 | U | O3'-P | 19.48 | 1.84 | 1.61 |
| 5 | M | 447 | U | O3'-P | -19.45 | 1.37 | 1.61 |
| 2 | J | 64 | A | O3'-P | -19.44 | 1.37 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 6 | N | 268 | U | O3'-P | 19.43 | 1.84 | 1.61 |
| 3 | K | 94 | A | O3'-P | -19.43 | 1.37 | 1.61 |
| 2 | J | 244 | A | O3'-P | 19.42 | 1.84 | 1.61 |
| 4 | L | 584 | U | O3'-P | -19.36 | 1.38 | 1.61 |
| 5 | M | 479 | U | O3'-P | 19.33 | 1.84 | 1.61 |
| 4 | L | 471 | U | O3'-P | 19.33 | 1.84 | 1.61 |
| 4 | L | 739 | U | O3'-P | -19.31 | 1.38 | 1.61 |
| 1 | I | 185 | A | O3'-P | -19.29 | 1.38 | 1.61 |
| 5 | M | 298 | U | O3'-P | -19.27 | 1.38 | 1.61 |
| 3 | K | 128 | A | O3'-P | -19.27 | 1.38 | 1.61 |
| 4 | L | 733 | U | O3'-P | 19.23 | 1.84 | 1.61 |
| 4 | L | 438 | U | O3'-P | 19.22 | 1.84 | 1.61 |
| 4 | L | 669 | U | O3'-P | -19.21 | 1.38 | 1.61 |
| 6 | N | 333 | U | O3'-P | 19.19 | 1.84 | 1.61 |
| 3 | K | 9 | A | O3'-P | 19.11 | 1.84 | 1.61 |
| 4 | L | 575 | U | O3'-P | -19.11 | 1.38 | 1.61 |
| 4 | L | 541 | U | O3'-P | -19.11 | 1.38 | 1.61 |
| 5 | M | 510 | U | O3'-P | -19.08 | 1.38 | 1.61 |
| 3 | K | 197 | A | O3'-P | 19.06 | 1.84 | 1.61 |
| 6 | N | 403 | U | O3'-P | -19.05 | 1.38 | 1.61 |
| 5 | M | 460 | U | O3'-P | -19.05 | 1.38 | 1.61 |
| 6 | N | 507 | U | O3'-P | 19.04 | 1.83 | 1.61 |
| 3 | K | 231 | A | O3'-P | 19.04 | 1.83 | 1.61 |
| 1 | I | 167 | A | O3'-P | 19.02 | 1.83 | 1.61 |
| 3 | K | 21 | A | O3'-P | 19.00 | 1.83 | 1.61 |
| 1 | I | 138 | A | O3'-P | 18.98 | 1.83 | 1.61 |
| 1 | I | 260 | A | O3'-P | -18.97 | 1.38 | 1.61 |
| 2 | J | 247 | A | O3'-P | -18.94 | 1.38 | 1.61 |
| 6 | N | 343 | U | O3'-P | 18.93 | 1.83 | 1.61 |
| 4 | L | 480 | U | O3'-P | 18.90 | 1.83 | 1.61 |
| 3 | K | 180 | A | O3'-P | 18.88 | 1.83 | 1.61 |
| 4 | L | 594 | U | O3'-P | -18.85 | 1.38 | 1.61 |
| 6 | N | 315 | U | O3'-P | 18.82 | 1.83 | 1.61 |
| 1 | I | 171 | A | O3'-P | 18.80 | 1.83 | 1.61 |
| 4 | L | 730 | U | O3'-P | 18.73 | 1.83 | 1.61 |
| 1 | I | 249 | A | O3'-P | -18.69 | 1.38 | 1.61 |
| 4 | L | 770 | U | O3'-P | -18.67 | 1.38 | 1.61 |
| 5 | M | 347 | U | O3'-P | -18.66 | 1.38 | 1.61 |
| 4 | L | 823 | U | O3'-P | 18.66 | 1.83 | 1.61 |
| 3 | K | 90 | A | O3'-P | -18.64 | 1.38 | 1.61 |
| 1 | I | 394 | A | O3'-P | 18.62 | 1.83 | 1.61 |
| 3 | K | 150 | A | O3'-P | 18.61 | 1.83 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 1 | I | 408 | A | O3'-P | 18.60 | 1.83 | 1.61 |
| 4 | L | 768 | U | O3'-P | -18.59 | 1.38 | 1.61 |
| 1 | I | 248 | A | O3'-P | -18.55 | 1.38 | 1.61 |
| 1 | I | 374 | A | O3'-P | 18.53 | 1.83 | 1.61 |
| 4 | L | 583 | U | O3'-P | -18.53 | 1.39 | 1.61 |
| 5 | M | 491 | U | O3'-P | -18.52 | 1.39 | 1.61 |
| 1 | I | 170 | A | O3'-P | 18.49 | 1.83 | 1.61 |
| 6 | N | 285 | U | O3'-P | 18.45 | 1.83 | 1.61 |
| 5 | M | 321 | U | O3'-P | 18.44 | 1.83 | 1.61 |
| 4 | L | 726 | U | O3'-P | 18.39 | 1.83 | 1.61 |
| 1 | I | 212 | A | O3'-P | -18.39 | 1.39 | 1.61 |
| 2 | J | 265 | A | O3'-P | -18.32 | 1.39 | 1.61 |
| 1 | I | 111 | A | O3'-P | 18.31 | 1.83 | 1.61 |
| 2 | J | 1 | A | O3'-P | 18.30 | 1.83 | 1.61 |
| 1 | I | 61 | A | O3'-P | -18.26 | 1.39 | 1.61 |
| 1 | I | 69 | A | O3'-P | -18.25 | 1.39 | 1.61 |
| 6 | N | 458 | U | O3'-P | 18.25 | 1.83 | 1.61 |
| 1 | I | 390 | A | O3'-P | 18.25 | 1.83 | 1.61 |
| 5 | M | 349 | U | O3'-P | -18.15 | 1.39 | 1.61 |
| 2 | J | 163 | A | O3'-P | 18.12 | 1.82 | 1.61 |
| 1 | I | 158 | A | O3'-P | -18.11 | 1.39 | 1.61 |
| 4 | L | 692 | U | O3'-P | -18.11 | 1.39 | 1.61 |
| 6 | N | 391 | U | O3'-P | 18.10 | 1.82 | 1.61 |
| 6 | N | 302 | U | O3'-P | 18.08 | 1.82 | 1.61 |
| 6 | N | 454 | U | O3'-P | 18.05 | 1.82 | 1.61 |
| 4 | L | 774 | U | O3'-P | 18.05 | 1.82 | 1.61 |
| 4 | L | 818 | U | O3'-P | 18.04 | 1.82 | 1.61 |
| 6 | N | 528 | U | O3'-P | 18.03 | 1.82 | 1.61 |
| 3 | K | 219 | A | O3'-P | 18.00 | 1.82 | 1.61 |
| 4 | L | 707 | U | O3'-P | 18.00 | 1.82 | 1.61 |
| 4 | L | 723 | U | O3'-P | 18.00 | 1.82 | 1.61 |
| 1 | I | 275 | A | O3'-P | -17.99 | 1.39 | 1.61 |
| 4 | L | 428 | U | O3'-P | 17.97 | 1.82 | 1.61 |
| 4 | L | 592 | U | O3'-P | -17.95 | 1.39 | 1.61 |
| 6 | N | 479 | U | O3'-P | 17.93 | 1.82 | 1.61 |
| 3 | K | 47 | A | O3'-P | 17.93 | 1.82 | 1.61 |
| 4 | L | 773 | U | O3'-P | 17.91 | 1.82 | 1.61 |
| 1 | I | 1 | A | O3'-P | 17.91 | 1.82 | 1.61 |
| 6 | N | 453 | U | O3'-P | 17.88 | 1.82 | 1.61 |
| 5 | M | 504 | U | O3'-P | -17.86 | 1.39 | 1.61 |
| 1 | I | 395 | A | O3'-P | 17.85 | 1.82 | 1.61 |
| 6 | N | 482 | U | O3'-P | -17.84 | 1.39 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 1 | I | 373 | A | O3'-P | 17.83 | 1.82 | 1.61 |
| 1 | I | 75 | A | O3'-P | -17.80 | 1.39 | 1.61 |
| 4 | L | 580 | U | O3'-P | -17.76 | 1.39 | 1.61 |
| 4 | L | 431 | U | O3'-P | 17.75 | 1.82 | 1.61 |
| 6 | N | 437 | U | O3'-P | -17.74 | 1.39 | 1.61 |
| 6 | N | 342 | U | O3'-P | 17.73 | 1.82 | 1.61 |
| 2 | J | 144 | A | O3'-P | -17.71 | 1.39 | 1.61 |
| 2 | J | 93 | A | O3'-P | -17.70 | 1.40 | 1.61 |
| 4 | L | 572 | U | O3'-P | -17.70 | 1.40 | 1.61 |
| 3 | K | 24 | A | O3'-P | 17.70 | 1.82 | 1.61 |
| 5 | M | 547 | U | O3'-P | 17.61 | 1.82 | 1.61 |
| 1 | I | 84 | A | O3'-P | 17.61 | 1.82 | 1.61 |
| 2 | J | 266 | A | O3'-P | -17.61 | 1.40 | 1.61 |
| 2 | J | 32 | A | O3'-P | -17.60 | 1.40 | 1.61 |
| 5 | M | 455 | U | O3'-P | -17.58 | 1.40 | 1.61 |
| 3 | K | 228 | A | O3'-P | 17.58 | 1.82 | 1.61 |
| 6 | N | 298 | U | O3'-P | 17.56 | 1.82 | 1.61 |
| 5 | M | 277 | U | O3'-P | 17.55 | 1.82 | 1.61 |
| 1 | I | 54 | A | O3'-P | -17.52 | 1.40 | 1.61 |
| 6 | N | 414 | U | O3'-P | 17.52 | 1.82 | 1.61 |
| 6 | N | 347 | U | O3'-P | 17.48 | 1.82 | 1.61 |
| 6 | N | 465 | U | O3'-P | 17.47 | 1.82 | 1.61 |
| 5 | M | 417 | U | O3'-P | -17.47 | 1.40 | 1.61 |
| 6 | N | 486 | U | O3'-P | 17.44 | 1.82 | 1.61 |
| 6 | N | 395 | U | O3'-P | -17.43 | 1.40 | 1.61 |
| 2 | J | 33 | A | O3'-P | -17.42 | 1.40 | 1.61 |
| 3 | K | 262 | A | O3'-P | 17.41 | 1.82 | 1.61 |
| 5 | M | 509 | U | O3'-P | -17.40 | 1.40 | 1.61 |
| 2 | J | 201 | A | O3'-P | -17.34 | 1.40 | 1.61 |
| 1 | I | 173 | A | O3'-P | -17.30 | 1.40 | 1.61 |
| 1 | I | 11 | A | O3'-P | -17.27 | 1.40 | 1.61 |
| 6 | N | 295 | U | O3'-P | 17.27 | 1.81 | 1.61 |
| 6 | N | 521 | U | O3'-P | 17.27 | 1.81 | 1.61 |
| 3 | K | 215 | A | O3'-P | 17.26 | 1.81 | 1.61 |
| 6 | N | 441 | U | O3'-P | -17.21 | 1.40 | 1.61 |
| 1 | I | 201 | A | O3'-P | 17.17 | 1.81 | 1.61 |
| 4 | L | 628 | U | O3'-P | 17.14 | 1.81 | 1.61 |
| 5 | M | 413 | U | O3'-P | 17.13 | 1.81 | 1.61 |
| 6 | N | 436 | U | O3'-P | -17.11 | 1.40 | 1.61 |
| 2 | J | 158 | A | O3'-P | -17.11 | 1.40 | 1.61 |
| 1 | I | 261 | A | O3'-P | -17.11 | 1.40 | 1.61 |
| 5 | M | 478 | U | O3'-P | 17.10 | 1.81 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 4 | L | 724 | U | O3'-P | 17.08 | 1.81 | 1.61 |
| 3 | K | 32 | A | O3'-P | 17.07 | 1.81 | 1.61 |
| 5 | M | 550 | U | O3'-P | 17.06 | 1.81 | 1.61 |
| 4 | L | 749 | U | O3'-P | -17.04 | 1.40 | 1.61 |
| 1 | I | 397 | A | O3'-P | 17.04 | 1.81 | 1.61 |
| 3 | K | 111 | A | O3'-P | -17.02 | 1.40 | 1.61 |
| 4 | L | 460 | U | O3'-P | -17.02 | 1.40 | 1.61 |
| 1 | I | 64 | A | O3'-P | -16.99 | 1.40 | 1.61 |
| 1 | I | 345 | A | O3'-P | 16.96 | 1.81 | 1.61 |
| 6 | N | 313 | U | O3'-P | 16.90 | 1.81 | 1.61 |
| 2 | J | 191 | A | O3'-P | -16.89 | 1.40 | 1.61 |
| 3 | K | 212 | A | O3'-P | 16.88 | 1.81 | 1.61 |
| 1 | I | 140 | A | O3'-P | 16.87 | 1.81 | 1.61 |
| 1 | I | 63 | A | O3'-P | -16.83 | 1.41 | 1.61 |
| 1 | I | 200 | A | O3'-P | 16.81 | 1.81 | 1.61 |
| 3 | K | 160 | A | O3'-P | -16.80 | 1.41 | 1.61 |
| 3 | K | 91 | A | O3'-P | -16.79 | 1.41 | 1.61 |
| 2 | J | 212 | A | O3'-P | 16.78 | 1.81 | 1.61 |
| 6 | N | 412 | U | O3'-P | -16.78 | 1.41 | 1.61 |
| 4 | L | 527 | U | O3'-P | 16.77 | 1.81 | 1.61 |
| 2 | J | 95 | A | O3'-P | -16.74 | 1.41 | 1.61 |
| 4 | L | 453 | U | O3'-P | 16.73 | 1.81 | 1.61 |
| 1 | I | 409 | A | O3'-P | 16.73 | 1.81 | 1.61 |
| 3 | K | 189 | A | O3'-P | 16.73 | 1.81 | 1.61 |
| 6 | N | 466 | U | O3'-P | 16.72 | 1.81 | 1.61 |
| 4 | L | 805 | U | O3'-P | -16.71 | 1.41 | 1.61 |
| 1 | I | 97 | A | O3'-P | -16.70 | 1.41 | 1.61 |
| 2 | J | 107 | A | O3'-P | -16.70 | 1.41 | 1.61 |
| 5 | M | 288 | U | O3'-P | -16.69 | 1.41 | 1.61 |
| 4 | L | 612 | U | O3'-P | -16.62 | 1.41 | 1.61 |
| 3 | K | 137 | A | O3'-P | -16.62 | 1.41 | 1.61 |
| 4 | L | 433 | U | O3'-P | 16.61 | 1.81 | 1.61 |
| 1 | I | 190 | A | O3'-P | -16.60 | 1.41 | 1.61 |
| 5 | M | 519 | U | O3'-P | -16.57 | 1.41 | 1.61 |
| 4 | L | 455 | U | O3'-P | 16.57 | 1.81 | 1.61 |
| 5 | M | 371 | U | O3'-P | -16.57 | 1.41 | 1.61 |
| 5 | M | 429 | U | O3'-P | -16.55 | 1.41 | 1.61 |
| 6 | N | 424 | U | O3'-P | -16.54 | 1.41 | 1.61 |
| 6 | N | 286 | U | O3'-P | 16.47 | 1.80 | 1.61 |
| 1 | I | 204 | A | O3'-P | 16.47 | 1.80 | 1.61 |
| 3 | K | 82 | A | O3'-P | -16.43 | 1.41 | 1.61 |
| 3 | K | 101 | A | O3'-P | -16.42 | 1.41 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 4 | L | 792 | U | O3'-P | -16.39 | 1.41 | 1.61 |
| 4 | L | 444 | U | O3'-P | 16.38 | 1.80 | 1.61 |
| 3 | K | 53 | A | O3'-P | 16.37 | 1.80 | 1.61 |
| 4 | L | 763 | U | O3'-P | -16.37 | 1.41 | 1.61 |
| 6 | N | 511 | U | O3'-P | 16.37 | 1.80 | 1.61 |
| 1 | I | 24 | A | O3'-P | -16.33 | 1.41 | 1.61 |
| 2 | J | 90 | A | O3'-P | -16.31 | 1.41 | 1.61 |
| 2 | J | 253 | A | O3'-P | -16.31 | 1.41 | 1.61 |
| 2 | J | 100 | A | O3'-P | -16.28 | 1.41 | 1.61 |
| 1 | I | 349 | A | O3'-P | 16.26 | 1.80 | 1.61 |
| 3 | K | 25 | A | O3'-P | 16.24 | 1.80 | 1.61 |
| 4 | L | 427 | U | O3'-P | 16.23 | 1.80 | 1.61 |
| 4 | L | 531 | U | O3'-P | 16.23 | 1.80 | 1.61 |
| 1 | I | 12 | A | O3'-P | -16.22 | 1.41 | 1.61 |
| 1 | I | 224 | A | O3'-P | -16.19 | 1.41 | 1.61 |
| 5 | M | 353 | U | O3'-P | -16.16 | 1.41 | 1.61 |
| 4 | L | 771 | U | O3'-P | -16.14 | 1.41 | 1.61 |
| 1 | I | 240 | A | O3'-P | -16.14 | 1.41 | 1.61 |
| 1 | I | 236 | A | O3'-P | -16.08 | 1.41 | 1.61 |
| 2 | J | 36 | A | O3'-P | -16.08 | 1.41 | 1.61 |
| 1 | I | 47 | A | O3'-P | -16.07 | 1.41 | 1.61 |
| 2 | J | 236 | A | O3'-P | 16.07 | 1.80 | 1.61 |
| 6 | N | 452 | U | O3'-P | 16.05 | 1.80 | 1.61 |
| 5 | M | 520 | U | O3'-P | -16.02 | 1.42 | 1.61 |
| 1 | I | 109 | A | O3'-P | 16.00 | 1.80 | 1.61 |
| 1 | I | 383 | A | O3'-P | 15.97 | 1.80 | 1.61 |
| 3 | K | 217 | A | O3'-P | 15.94 | 1.80 | 1.61 |
| 6 | N | 499 | U | O3'-P | 15.92 | 1.80 | 1.61 |
| 6 | N | 529 | U | O3'-P | 15.92 | 1.80 | 1.61 |
| 3 | K | 233 | A | O3'-P | 15.91 | 1.80 | 1.61 |
| 3 | K | 263 | A | O3'-P | 15.89 | 1.80 | 1.61 |
| 2 | J | 106 | A | O3'-P | -15.88 | 1.42 | 1.61 |
| 5 | M | 463 | U | O3'-P | -15.84 | 1.42 | 1.61 |
| 5 | M | 329 | U | O3'-P | 15.82 | 1.80 | 1.61 |
| 4 | L | 800 | U | O3'-P | -15.80 | 1.42 | 1.61 |
| 4 | L | 650 | U | O3'-P | -15.80 | 1.42 | 1.61 |
| 3 | K | 131 | A | O3'-P | -15.79 | 1.42 | 1.61 |
| 5 | M | 305 | U | O3'-P | -15.78 | 1.42 | 1.61 |
| 1 | I | 251 | A | O3'-P | -15.77 | 1.42 | 1.61 |
| 6 | N | 275 | U | O3'-P | 15.75 | 1.80 | 1.61 |
| 4 | L | 579 | U | O3'-P | -15.74 | 1.42 | 1.61 |
| 6 | N | 472 | U | O3'-P | -15.73 | 1.42 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 1 | I | 302 | A | O3'-P | 15.71 | 1.79 | 1.61 |
| 4 | L | 693 | U | O3'-P | -15.68 | 1.42 | 1.61 |
| 5 | M | 395 | U | O3'-P | -15.67 | 1.42 | 1.61 |
| 4 | L | 462 | U | O3'-P | 15.65 | 1.79 | 1.61 |
| 6 | N | 389 | U | O3'-P | 15.63 | 1.79 | 1.61 |
| 4 | L | 649 | U | O3'-P | -15.59 | 1.42 | 1.61 |
| 5 | M | 412 | U | O3'-P | 15.58 | 1.79 | 1.61 |
| 1 | I | 166 | A | O3'-P | 15.57 | 1.79 | 1.61 |
| 1 | I | 104 | A | O3'-P | 15.50 | 1.79 | 1.61 |
| 4 | L | 635 | U | O3'-P | -15.48 | 1.42 | 1.61 |
| 1 | I | 222 | A | O3'-P | -15.44 | 1.42 | 1.61 |
| 3 | K | 171 | A | O3'-P | 15.43 | 1.79 | 1.61 |
| 2 | J | 40 | A | O3'-P | -15.41 | 1.42 | 1.61 |
| 6 | N | 353 | U | O3'-P | 15.40 | 1.79 | 1.61 |
| 1 | I | 80 | A | O3'-P | -15.40 | 1.42 | 1.61 |
| 4 | L | 481 | U | O3'-P | 15.36 | 1.79 | 1.61 |
| 4 | L | 585 | U | O3'-P | -15.32 | 1.42 | 1.61 |
| 5 | M | 345 | U | O3'-P | -15.31 | 1.42 | 1.61 |
| 6 | N | 522 | U | O3'-P | 15.31 | 1.79 | 1.61 |
| 6 | N | 307 | U | O3'-P | 15.29 | 1.79 | 1.61 |
| 5 | M | 409 | U | O3'-P | -15.29 | 1.42 | 1.61 |
| 4 | L | 599 | U | O3'-P | -15.27 | 1.42 | 1.61 |
| 5 | M | 461 | U | O3'-P | -15.24 | 1.42 | 1.61 |
| 6 | N | 345 | U | O3'-P | 15.23 | 1.79 | 1.61 |
| 3 | K | 127 | A | O3'-P | -15.21 | 1.42 | 1.61 |
| 3 | K | 146 | A | O3'-P | 15.20 | 1.79 | 1.61 |
| 4 | L | 523 | U | O3'-P | 15.20 | 1.79 | 1.61 |
| 3 | K | 6 | A | O3'-P | 15.20 | 1.79 | 1.61 |
| 5 | M | 469 | U | O3'-P | 15.17 | 1.79 | 1.61 |
| 1 | I | 157 | A | O3'-P | -15.15 | 1.43 | 1.61 |
| 5 | M | 448 | U | O3'-P | -15.13 | 1.43 | 1.61 |
| 1 | I | 241 | A | O3'-P | -15.13 | 1.43 | 1.61 |
| 4 | L | 781 | U | O3'-P | -15.13 | 1.43 | 1.61 |
| 5 | M | 446 | U | O3'-P | -15.13 | 1.43 | 1.61 |
| 1 | I | 391 | A | O3'-P | 15.12 | 1.79 | 1.61 |
| 1 | I | 22 | A | O3'-P | -15.12 | 1.43 | 1.61 |
| 1 | I | 65 | A | O3'-P | 15.11 | 1.79 | 1.61 |
| 3 | K | 163 | A | O3'-P | -15.11 | 1.43 | 1.61 |
| 1 | I | 66 | A | O3'-P | 15.09 | 1.79 | 1.61 |
| 3 | K | 29 | A | O3'-P | 15.06 | 1.79 | 1.61 |
| 2 | J | 185 | A | O3'-P | -15.05 | 1.43 | 1.61 |
| 1 | I | 318 | A | O3'-P | -15.04 | 1.43 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 2 | J | 125 | A | O3'-P | -15.01 | 1.43 | 1.61 |
| 6 | N | 290 | U | O3'-P | 15.01 | 1.79 | 1.61 |
| 6 | N | 445 | U | O3'-P | 14.99 | 1.79 | 1.61 |
| 4 | L | 472 | U | O3'-P | 14.99 | 1.79 | 1.61 |
| 5 | M | 364 | U | O3'-P | -14.99 | 1.43 | 1.61 |
| 4 | L | 752 | U | O3'-P | -14.96 | 1.43 | 1.61 |
| 1 | I | 52 | A | O3'-P | -14.96 | 1.43 | 1.61 |
| 4 | L | 465 | U | O3'-P | 14.96 | 1.79 | 1.61 |
| 4 | L | 746 | U | O3'-P | -14.95 | 1.43 | 1.61 |
| 5 | M | 410 | U | O3'-P | -14.91 | 1.43 | 1.61 |
| 3 | K | 125 | A | O3'-P | -14.91 | 1.43 | 1.61 |
| 5 | M | 356 | U | O3'-P | 14.88 | 1.79 | 1.61 |
| 6 | N | 419 | U | O3'-P | -14.87 | 1.43 | 1.61 |
| 1 | I | 86 | A | O3'-P | -14.87 | 1.43 | 1.61 |
| 6 | N | 402 | U | O3'-P | -14.86 | 1.43 | 1.61 |
| 4 | L | 526 | U | O3'-P | 14.84 | 1.78 | 1.61 |
| 1 | I | 73 | A | O3'-P | -14.82 | 1.43 | 1.61 |
| 6 | N | 388 | U | O3'-P | 14.79 | 1.78 | 1.61 |
| 4 | L | 728 | U | O3'-P | 14.77 | 1.78 | 1.61 |
| 5 | M | 495 | U | O3'-P | -14.76 | 1.43 | 1.61 |
| 6 | N | 340 | U | O3'-P | 14.76 | 1.78 | 1.61 |
| 2 | J | 254 | A | O3'-P | -14.74 | 1.43 | 1.61 |
| 2 | J | 173 | A | O3'-P | -14.70 | 1.43 | 1.61 |
| 3 | K | 81 | A | O3'-P | -14.69 | 1.43 | 1.61 |
| 5 | M | 452 | U | O3'-P | -14.69 | 1.43 | 1.61 |
| 6 | N | 399 | U | O3'-P | -14.66 | 1.43 | 1.61 |
| 5 | M | 385 | U | O3'-P | 14.55 | 1.78 | 1.61 |
| 2 | J | 245 | A | O3'-P | 14.53 | 1.78 | 1.61 |
| 3 | K | 49 | A | O3'-P | 14.53 | 1.78 | 1.61 |
| 4 | L | 648 | U | O3'-P | -14.51 | 1.43 | 1.61 |
| 5 | M | 284 | U | O3'-P | 14.49 | 1.78 | 1.61 |
| 3 | K | 77 | A | O3'-P | 14.41 | 1.78 | 1.61 |
| 1 | I | 338 | A | O3'-P | -14.39 | 1.43 | 1.61 |
| 2 | J | 44 | A | O3'-P | -14.39 | 1.43 | 1.61 |
| 6 | N | 498 | U | O3'-P | 14.37 | 1.78 | 1.61 |
| 5 | M | 350 | U | O3'-P | -14.36 | 1.44 | 1.61 |
| 4 | L | 812 | U | O3'-P | -14.35 | 1.44 | 1.61 |
| 4 | L | 744 | U | O3'-P | -14.35 | 1.44 | 1.61 |
| 5 | M | 472 | U | O3'-P | -14.34 | 1.44 | 1.61 |
| 5 | M | 501 | U | O3'-P | -14.33 | 1.44 | 1.61 |
| 1 | I | 20 | A | O3'-P | -14.33 | 1.44 | 1.61 |
| 4 | L | 562 | U | O3'-P | -14.32 | 1.44 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 4 | L | 595 | U | O3'-P | -14.29 | 1.44 | 1.61 |
| 6 | N | 381 | U | O3'-P | 14.27 | 1.78 | 1.61 |
| 1 | I | 155 | A | O3'-P | -14.27 | 1.44 | 1.61 |
| 2 | J | 91 | A | O3'-P | -14.26 | 1.44 | 1.61 |
| 3 | K | 253 | A | O3'-P | 14.25 | 1.78 | 1.61 |
| 4 | L | 587 | U | O3'-P | -14.24 | 1.44 | 1.61 |
| 1 | I | 309 | A | O3'-P | -14.21 | 1.44 | 1.61 |
| 1 | I | 123 | A | O3'-P | -14.20 | 1.44 | 1.61 |
| 1 | I | 269 | A | O3'-P | -14.19 | 1.44 | 1.61 |
| 6 | N | 449 | U | O3'-P | -14.19 | 1.44 | 1.61 |
| 1 | I | 398 | A | O3'-P | 14.13 | 1.78 | 1.61 |
| 3 | K | 177 | A | O3'-P | 14.13 | 1.78 | 1.61 |
| 6 | N | 525 | U | O3'-P | 14.13 | 1.78 | 1.61 |
| 4 | L | 718 | U | O3'-P | -14.11 | 1.44 | 1.61 |
| 4 | L | 705 | U | O3'-P | -14.11 | 1.44 | 1.61 |
| 4 | L | 492 | U | O3'-P | -14.10 | 1.44 | 1.61 |
| 1 | I | 367 | A | O3'-P | 14.07 | 1.78 | 1.61 |
| 4 | L | 547 | U | O3'-P | 14.06 | 1.78 | 1.61 |
| 4 | L | 788 | U | O3'-P | 14.03 | 1.77 | 1.61 |
| 1 | I | 293 | A | O3'-P | 14.00 | 1.77 | 1.61 |
| 2 | J | 45 | A | O3'-P | -14.00 | 1.44 | 1.61 |
| 3 | K | 93 | A | O3'-P | -13.99 | 1.44 | 1.61 |
| 4 | L | 804 | U | O3'-P | -13.99 | 1.44 | 1.61 |
| 5 | M | 336 | U | O3'-P | 13.95 | 1.77 | 1.61 |
| 1 | I | 229 | A | O3'-P | -13.91 | 1.44 | 1.61 |
| 6 | N | 301 | U | O3'-P | 13.90 | 1.77 | 1.61 |
| 4 | L | 522 | U | O3'-P | 13.88 | 1.77 | 1.61 |
| 2 | J | 154 | A | O3'-P | 13.88 | 1.77 | 1.61 |
| 6 | N | 386 | U | O3'-P | 13.86 | 1.77 | 1.61 |
| 1 | I | 100 | A | O3'-P | 13.85 | 1.77 | 1.61 |
| 2 | J | 29 | A | O3'-P | -13.85 | 1.44 | 1.61 |
| 1 | I | 259 | A | O3'-P | -13.83 | 1.44 | 1.61 |
| 1 | I | 276 | A | O3'-P | -13.83 | 1.44 | 1.61 |
| 1 | I | 85 | A | O3'-P | -13.82 | 1.44 | 1.61 |
| 5 | M | 309 | U | O3'-P | 13.81 | 1.77 | 1.61 |
| 3 | K | 254 | A | O3'-P | 13.81 | 1.77 | 1.61 |
| 4 | L | 722 | U | O3'-P | 13.80 | 1.77 | 1.61 |
| 3 | K | 216 | A | O3'-P | 13.76 | 1.77 | 1.61 |
| 4 | L | 732 | U | O3'-P | 13.75 | 1.77 | 1.61 |
| 1 | I | 399 | A | O3'-P | 13.71 | 1.77 | 1.61 |
| 4 | L | 806 | U | O3'-P | -13.70 | 1.44 | 1.61 |
| 6 | N | 280 | U | O3'-P | 13.67 | 1.77 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 3 | K | 26 | A | O3'-P | 13.66 | 1.77 | 1.61 |
| 5 | M | 445 | U | O3'-P | -13.66 | 1.44 | 1.61 |
| 3 | K | 114 | A | O3'-P | -13.64 | 1.44 | 1.61 |
| 4 | L | 655 | U | O3'-P | -13.64 | 1.44 | 1.61 |
| 3 | K | 223 | A | O3'-P | 13.63 | 1.77 | 1.61 |
| 2 | J | 94 | A | O3'-P | -13.63 | 1.44 | 1.61 |
| 4 | L | 457 | U | O3'-P | 13.63 | 1.77 | 1.61 |
| 4 | L | 646 | U | O3'-P | -13.63 | 1.44 | 1.61 |
| 4 | L | 623 | U | O3'-P | 13.62 | 1.77 | 1.61 |
| 3 | K | 237 | A | O3'-P | 13.60 | 1.77 | 1.61 |
| 4 | L | 543 | U | O3'-P | -13.57 | 1.44 | 1.61 |
| 3 | K | 130 | A | O3'-P | -13.56 | 1.44 | 1.61 |
| 1 | I | 208 | A | O3'-P | -13.56 | 1.44 | 1.61 |
| 5 | M | 444 | U | O3'-P | 13.55 | 1.77 | 1.61 |
| 2 | J | 169 | A | O3'-P | 13.51 | 1.77 | 1.61 |
| 3 | K | 18 | A | O3'-P | 13.51 | 1.77 | 1.61 |
| 6 | N | 326 | U | O3'-P | 13.51 | 1.77 | 1.61 |
| 4 | L | 706 | U | O3'-P | 13.50 | 1.77 | 1.61 |
| 1 | I | 346 | A | O3'-P | 13.47 | 1.77 | 1.61 |
| 2 | J | 161 | A | O3'-P | -13.45 | 1.45 | 1.61 |
| 1 | I | 350 | A | O3'-P | 13.45 | 1.77 | 1.61 |
| 4 | L | 518 | U | O3'-P | -13.45 | 1.45 | 1.61 |
| 2 | J | 86 | A | O3'-P | 13.44 | 1.77 | 1.61 |
| 4 | L | 665 | U | O3'-P | -13.43 | 1.45 | 1.61 |
| 1 | I | 347 | A | O3'-P | 13.43 | 1.77 | 1.61 |
| 4 | L | 779 | U | O3'-P | -13.43 | 1.45 | 1.61 |
| 1 | I | 114 | A | O3'-P | -13.40 | 1.45 | 1.61 |
| 5 | M | 394 | U | O3'-P | -13.39 | 1.45 | 1.61 |
| 4 | L | 542 | U | O3'-P | -13.38 | 1.45 | 1.61 |
| 4 | L | 793 | U | O3'-P | -13.38 | 1.45 | 1.61 |
| 2 | J | 264 | A | O3'-P | -13.38 | 1.45 | 1.61 |
| 2 | J | 268 | A | O3'-P | 13.32 | 1.77 | 1.61 |
| 4 | L | 798 | U | O3'-P | -13.32 | 1.45 | 1.61 |
| 4 | L | 524 | U | O3'-P | -13.31 | 1.45 | 1.61 |
| 2 | J | 41 | A | O3'-P | 13.30 | 1.77 | 1.61 |
| 4 | L | 479 | U | O3'-P | 13.29 | 1.77 | 1.61 |
| 2 | J | 164 | A | O3'-P | -13.28 | 1.45 | 1.61 |
| 4 | L | 537 | U | O3'-P | 13.28 | 1.77 | 1.61 |
| 3 | K | 143 | A | O3'-P | 13.27 | 1.77 | 1.61 |
| 6 | N | 448 | U | O3'-P | -13.24 | 1.45 | 1.61 |
| 3 | K | 121 | A | O3'-P | -13.24 | 1.45 | 1.61 |
| 1 | I | 244 | A | O3'-P | -13.22 | 1.45 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 2 | J | 119 | A | O3'-P | -13.22 | 1.45 | 1.61 |
| 3 | K | 107 | A | O3'-P | -13.20 | 1.45 | 1.61 |
| 1 | I | 217 | A | O3'-P | 13.13 | 1.76 | 1.61 |
| 1 | I | 295 | A | O3'-P | 13.13 | 1.76 | 1.61 |
| 4 | L | 432 | U | O3'-P | 13.12 | 1.76 | 1.61 |
| 3 | K | 213 | A | O3'-P | 13.09 | 1.76 | 1.61 |
| 2 | J | 21 | A | O3'-P | 13.06 | 1.76 | 1.61 |
| 4 | L | 721 | U | O3'-P | 13.06 | 1.76 | 1.61 |
| 4 | L | 605 | U | O3'-P | -13.05 | 1.45 | 1.61 |
| 6 | N | 390 | U | O3'-P | 13.05 | 1.76 | 1.61 |
| 1 | I | 107 | A | O3'-P | -13.01 | 1.45 | 1.61 |
| 2 | J | 148 | A | O3'-P | -13.01 | 1.45 | 1.61 |
| 4 | L | 672 | U | O3'-P | -13.00 | 1.45 | 1.61 |
| 2 | J | 218 | A | O3'-P | -12.99 | 1.45 | 1.61 |
| 4 | L | 607 | U | O3'-P | 12.99 | 1.76 | 1.61 |
| 2 | J | 84 | A | O3'-P | -12.98 | 1.45 | 1.61 |
| 2 | J | 137 | A | O3'-P | -12.98 | 1.45 | 1.61 |
| 1 | I | 117 | A | O3'-P | 12.97 | 1.76 | 1.61 |
| 2 | J | 140 | A | O3'-P | 12.96 | 1.76 | 1.61 |
| 3 | K | 34 | A | O3'-P | 12.93 | 1.76 | 1.61 |
| 4 | L | 743 | U | O3'-P | -12.93 | 1.45 | 1.61 |
| 4 | L | 638 | U | O3'-P | -12.93 | 1.45 | 1.61 |
| 1 | I | 350 | A | C3'-O3' | -12.90 | 1.24 | 1.42 |
| 4 | L | 593 | U | O3'-P | -12.88 | 1.45 | 1.61 |
| 4 | L | 664 | U | O3'-P | 12.87 | 1.76 | 1.61 |
| 2 | J | 219 | A | O3'-P | -12.86 | 1.45 | 1.61 |
| 2 | J | 87 | A | O3'-P | -12.84 | 1.45 | 1.61 |
| 1 | I | 405 | A | C3'-O3' | -12.84 | 1.24 | 1.42 |
| 1 | I | 253 | A | C3'-O3' | -12.83 | 1.24 | 1.42 |
| 3 | K | 2 | A | O3'-P | 12.82 | 1.76 | 1.61 |
| 5 | M | 325 | U | C3'-O3' | -12.82 | 1.24 | 1.42 |
| 1 | I | 394 | A | C3'-O3' | -12.82 | 1.24 | 1.42 |
| 2 | J | 72 | A | O3'-P | -12.81 | 1.45 | 1.61 |
| 4 | L | 502 | U | O3'-P | -12.81 | 1.45 | 1.61 |
| 1 | I | 361 | A | C3'-O3' | -12.79 | 1.24 | 1.42 |
| 3 | K | 185 | A | O3'-P | 12.79 | 1.76 | 1.61 |
| 1 | I | 264 | A | C3'-O3' | -12.79 | 1.24 | 1.42 |
| 5 | M | 436 | U | O3'-P | -12.78 | 1.45 | 1.61 |
| 1 | I | 56 | A | O3'-P | -12.78 | 1.45 | 1.61 |
| 5 | M | 336 | U | C3'-O3' | -12.78 | 1.24 | 1.42 |
| 5 | M | 361 | U | O3'-P | -12.77 | 1.45 | 1.61 |
| 1 | I | 286 | A | C3'-O3' | -12.77 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 1 | I | 317 | A | C3'-O3' | -12.77 | 1.24 | 1.42 |
| 4 | L | 751 | U | C3'-O3' | -12.77 | 1.24 | 1.42 |
| 6 | N | 376 | U | O3'-P | -12.77 | 1.45 | 1.61 |
| 5 | M | 521 | U | O3'-P | -12.76 | 1.45 | 1.61 |
| 4 | L | 609 | U | C3'-O3' | -12.76 | 1.24 | 1.42 |
| 1 | I | 306 | A | C3'-O3' | -12.75 | 1.24 | 1.42 |
| 6 | N | 312 | U | O3'-P | 12.75 | 1.76 | 1.61 |
| 4 | L | 435 | U | C3'-O3' | -12.75 | 1.24 | 1.42 |
| 4 | L | 587 | U | C3'-O3' | -12.74 | 1.24 | 1.42 |
| 1 | I | 383 | A | C3'-O3' | -12.73 | 1.24 | 1.42 |
| 1 | I | 372 | A | C3'-O3' | -12.73 | 1.24 | 1.42 |
| 3 | K | 84 | A | O3'-P | -12.73 | 1.45 | 1.61 |
| 4 | L | 588 | U | C3'-O3' | -12.73 | 1.24 | 1.42 |
| 1 | I | 328 | A | C3'-O3' | -12.72 | 1.24 | 1.42 |
| 4 | L | 527 | U | C3'-O3' | -12.71 | 1.24 | 1.42 |
| 4 | L | 543 | U | C3'-O3' | -12.70 | 1.24 | 1.42 |
| 4 | L | 490 | U | C3'-O3' | -12.70 | 1.24 | 1.42 |
| 1 | I | 227 | A | C3'-O3' | -12.70 | 1.24 | 1.42 |
| 3 | K | 208 | A | C3'-O3' | -12.69 | 1.24 | 1.42 |
| 3 | K | 198 | A | C3'-O3' | -12.69 | 1.24 | 1.42 |
| 4 | L | 693 | U | C3'-O3' | -12.69 | 1.24 | 1.42 |
| 3 | K | 230 | A | C3'-O3' | -12.69 | 1.24 | 1.42 |
| 1 | I | 283 | A | C3'-O3' | -12.68 | 1.24 | 1.42 |
| 4 | L | 458 | U | C3'-O3' | -12.68 | 1.24 | 1.42 |
| 4 | L | 590 | U | O3'-P | -12.68 | 1.46 | 1.61 |
| 4 | L | 599 | U | C3'-O3' | -12.68 | 1.24 | 1.42 |
| 4 | L | 714 | U | C3'-O3' | -12.68 | 1.24 | 1.42 |
| 5 | M | 358 | U | C3'-O3' | -12.68 | 1.24 | 1.42 |
| 4 | L | 555 | U | C3'-O3' | -12.68 | 1.24 | 1.42 |
| 5 | M | 292 | U | C3'-O3' | -12.68 | 1.24 | 1.42 |
| 4 | L | 554 | U | C3'-O3' | -12.68 | 1.24 | 1.42 |
| 5 | M | 523 | U | O3'-P | -12.68 | 1.46 | 1.61 |
| 1 | I | 303 | A | C3'-O3' | -12.67 | 1.24 | 1.42 |
| 2 | J | 142 | A | C3'-O3' | -12.67 | 1.24 | 1.42 |
| 3 | K | 209 | A | C3'-O3' | -12.67 | 1.24 | 1.42 |
| 4 | L | 501 | U | C3'-O3' | -12.67 | 1.24 | 1.42 |
| 4 | L | 576 | U | C3'-O3' | -12.67 | 1.24 | 1.42 |
| 6 | N | 435 | U | O3'-P | -12.67 | 1.46 | 1.61 |
| 1 | I | 339 | A | C3'-O3' | -12.67 | 1.24 | 1.42 |
| 1 | I | 347 | A | C3'-O3' | -12.67 | 1.24 | 1.42 |
| 3 | K | 186 | A | C3'-O3' | -12.67 | 1.24 | 1.42 |
| 4 | L | 413 | U | C3'-O3' | -12.67 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 4 | L | 479 | U | C3'-O3' | -12.67 | 1.24 | 1.42 |
| 5 | M | 290 | U | C3'-O3' | -12.67 | 1.24 | 1.42 |
| 3 | K | 252 | A | C3'-O3' | -12.66 | 1.24 | 1.42 |
| 5 | M | 347 | U | C3'-O3' | -12.66 | 1.24 | 1.42 |
| 1 | I | 358 | A | C3'-O3' | -12.66 | 1.24 | 1.42 |
| 1 | I | 239 | A | C3'-O3' | -12.66 | 1.24 | 1.42 |
| 4 | L | 468 | U | C3'-O3' | -12.66 | 1.24 | 1.42 |
| 5 | M | 380 | U | C3'-O3' | -12.66 | 1.24 | 1.42 |
| 1 | I | 242 | A | C3'-O3' | -12.66 | 1.24 | 1.42 |
| 2 | J | 140 | A | C3'-O3' | -12.66 | 1.24 | 1.42 |
| 5 | M | 369 | U | C3'-O3' | -12.66 | 1.24 | 1.42 |
| 5 | M | 464 | U | O3'-P | -12.66 | 1.46 | 1.61 |
| 1 | I | 84 | A | C3'-O3' | -12.65 | 1.24 | 1.42 |
| 3 | K | 264 | A | C3'-O3' | -12.65 | 1.24 | 1.42 |
| 4 | L | 593 | U | C3'-O3' | -12.65 | 1.24 | 1.42 |
| 4 | L | 602 | U | C3'-O3' | -12.65 | 1.24 | 1.42 |
| 5 | M | 414 | U | C3'-O3' | -12.65 | 1.24 | 1.42 |
| 3 | K | 197 | A | C3'-O3' | -12.65 | 1.24 | 1.42 |
| 4 | L | 604 | U | C3'-O3' | -12.65 | 1.24 | 1.42 |
| 5 | M | 359 | U | C3'-O3' | -12.65 | 1.24 | 1.42 |
| 3 | K | 68 | A | O3'-P | 12.65 | 1.76 | 1.61 |
| 4 | L | 566 | U | C3'-O3' | -12.65 | 1.24 | 1.42 |
| 5 | M | 301 | U | C3'-O3' | -12.65 | 1.24 | 1.42 |
| 2 | J | 151 | A | C3'-O3' | -12.64 | 1.24 | 1.42 |
| 2 | J | 252 | A | C3'-O3' | -12.64 | 1.24 | 1.42 |
| 4 | L | 565 | U | C3'-O3' | -12.64 | 1.24 | 1.42 |
| 4 | L | 696 | U | C3'-O3' | -12.64 | 1.24 | 1.42 |
| 5 | M | 403 | U | C3'-O3' | -12.64 | 1.24 | 1.42 |
| 2 | J | 206 | A | C3'-O3' | -12.64 | 1.24 | 1.42 |
| 4 | L | 642 | U | C3'-O3' | -12.64 | 1.24 | 1.42 |
| 5 | M | 279 | U | C3'-O3' | -12.64 | 1.24 | 1.42 |
| 5 | M | 392 | U | C3'-O3' | -12.64 | 1.24 | 1.42 |
| 4 | L | 480 | U | C3'-O3' | -12.63 | 1.24 | 1.42 |
| 3 | K | 164 | A | C3'-O3' | -12.63 | 1.24 | 1.42 |
| 3 | K | 263 | A | C3'-O3' | -12.63 | 1.24 | 1.42 |
| 5 | M | 314 | U | C3'-O3' | -12.63 | 1.24 | 1.42 |
| 1 | I | 282 | A | C3'-O3' | -12.63 | 1.24 | 1.42 |
| 2 | J | 195 | A | C3'-O3' | -12.63 | 1.24 | 1.42 |
| 2 | J | 241 | A | C3'-O3' | -12.63 | 1.24 | 1.42 |
| 1 | I | 238 | A | C3'-O3' | -12.63 | 1.24 | 1.42 |
| 4 | L | 521 | U | O3'-P | 12.63 | 1.76 | 1.61 |
| 3 | K | 241 | A | C3'-O3' | -12.63 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 6 | N | 400 | U | O3'-P | -12.63 | 1.46 | 1.61 |
| 1 | I | 101 | A | O3'-P | 12.62 | 1.76 | 1.61 |
| 1 | I | 272 | A | C3'-O3' | -12.62 | 1.24 | 1.42 |
| 2 | J | 263 | A | C3'-O3' | -12.62 | 1.24 | 1.42 |
| 3 | K | 219 | A | C3'-O3' | -12.62 | 1.24 | 1.42 |
| 4 | L | 469 | U | C3'-O3' | -12.62 | 1.24 | 1.42 |
| 4 | L | 725 | U | C3'-O3' | -12.62 | 1.24 | 1.42 |
| 4 | L | 769 | U | C3'-O3' | -12.62 | 1.24 | 1.42 |
| 4 | L | 773 | U | C3'-O3' | -12.62 | 1.24 | 1.42 |
| 1 | I | 295 | A | C3'-O3' | -12.62 | 1.24 | 1.42 |
| 2 | J | 173 | A | C3'-O3' | -12.62 | 1.24 | 1.42 |
| 2 | J | 219 | A | C3'-O3' | -12.62 | 1.24 | 1.42 |
| 5 | M | 281 | U | C3'-O3' | -12.62 | 1.24 | 1.42 |
| 5 | M | 425 | U | C3'-O3' | -12.61 | 1.24 | 1.42 |
| 2 | J | 265 | A | C3'-O3' | -12.61 | 1.24 | 1.42 |
| 3 | K | 242 | A | C3'-O3' | -12.61 | 1.24 | 1.42 |
| 4 | L | 703 | U | C3'-O3' | -12.61 | 1.24 | 1.42 |
| 6 | N | 286 | U | C3'-O3' | -12.61 | 1.24 | 1.42 |
| 1 | I | 201 | A | C3'-O3' | -12.61 | 1.24 | 1.42 |
| 3 | K | 88 | A | C3'-O3' | -12.61 | 1.24 | 1.42 |
| 3 | K | 120 | A | C3'-O3' | -12.61 | 1.24 | 1.42 |
| 3 | K | 253 | A | C3'-O3' | -12.61 | 1.24 | 1.42 |
| 5 | M | 348 | U | C3'-O3' | -12.61 | 1.24 | 1.42 |
| 2 | J | 118 | A | C3'-O3' | -12.61 | 1.24 | 1.42 |
| 4 | L | 457 | U | C3'-O3' | -12.61 | 1.24 | 1.42 |
| 4 | L | 472 | U | C3'-O3' | -12.61 | 1.24 | 1.42 |
| 4 | L | 505 | U | C3'-O3' | -12.61 | 1.24 | 1.42 |
| 4 | L | 577 | U | C3'-O3' | -12.61 | 1.24 | 1.42 |
| 1 | I | 90 | A | O3'-P | -12.60 | 1.46 | 1.61 |
| 1 | I | 104 | A | C3'-O3' | -12.60 | 1.24 | 1.42 |
| 4 | L | 513 | U | C3'-O3' | -12.60 | 1.24 | 1.42 |
| 5 | M | 303 | U | C3'-O3' | -12.60 | 1.24 | 1.42 |
| 1 | I | 344 | A | C3'-O3' | -12.60 | 1.24 | 1.42 |
| 1 | I | 401 | A | C3'-O3' | -12.60 | 1.24 | 1.42 |
| 1 | I | 302 | A | C3'-O3' | -12.60 | 1.24 | 1.42 |
| 3 | K | 99 | A | C3'-O3' | -12.60 | 1.24 | 1.42 |
| 4 | L | 561 | U | O3'-P | -12.60 | 1.46 | 1.61 |
| 5 | M | 450 | U | C3'-O3' | -12.60 | 1.24 | 1.42 |
| 1 | I | 261 | A | C3'-O3' | -12.60 | 1.24 | 1.42 |
| 2 | J | 131 | A | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 2 | J | 230 | A | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 3 | K | 176 | A | C3'-O3' | -12.59 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 4 | L | 483 | U | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 2 | J | 169 | A | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 1 | I | 369 | A | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 2 | J | 184 | A | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 2 | J | 217 | A | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 4 | L | 574 | U | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 4 | L | 692 | U | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 5 | M | 381 | U | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 1 | I | 231 | A | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 2 | J | 52 | A | O3'-P | -12.59 | 1.46 | 1.61 |
| 4 | L | 424 | U | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 4 | L | 681 | U | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 1 | I | 340 | A | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 3 | K | 175 | A | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 4 | L | 533 | U | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 4 | L | 610 | U | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 4 | L | 707 | U | C3'-O3' | -12.59 | 1.24 | 1.42 |
| 4 | L | 740 | U | C3'-O3' | -12.58 | 1.24 | 1.42 |
| 1 | I | 260 | A | C3'-O3' | -12.58 | 1.24 | 1.42 |
| 4 | L | 598 | U | C3'-O3' | -12.58 | 1.24 | 1.42 |
| 4 | L | 747 | U | C3'-O3' | -12.58 | 1.24 | 1.42 |
| 5 | M | 384 | U | C3'-O3' | -12.58 | 1.24 | 1.42 |
| 1 | I | 6 | A | C3'-O3' | -12.58 | 1.24 | 1.42 |
| 1 | I | 275 | A | C3'-O3' | -12.58 | 1.24 | 1.42 |
| 1 | I | 325 | A | C3'-O3' | -12.58 | 1.24 | 1.42 |
| 2 | J | 276 | A | C3'-O3' | -12.58 | 1.24 | 1.42 |
| 5 | M | 533 | U | C3'-O3' | -12.58 | 1.24 | 1.42 |
| 3 | K | 231 | A | C3'-O3' | -12.58 | 1.24 | 1.42 |
| 6 | N | 441 | U | C3'-O3' | -12.58 | 1.24 | 1.42 |
| 1 | I | 60 | A | C3'-O3' | -12.58 | 1.24 | 1.42 |
| 2 | J | 197 | A | C3'-O3' | -12.58 | 1.24 | 1.42 |
| 2 | J | 208 | A | C3'-O3' | -12.58 | 1.24 | 1.42 |
| 2 | J | 250 | A | C3'-O3' | -12.58 | 1.24 | 1.42 |
| 5 | M | 436 | U | C3'-O3' | -12.58 | 1.24 | 1.42 |
| 1 | I | 30 | A | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 1 | I | 121 | A | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 1 | I | 137 | A | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 1 | I | 343 | A | O3'-P | 12.57 | 1.76 | 1.61 |
| 5 | M | 334 | U | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 6 | N | 308 | U | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 1 | I | 81 | A | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 3 | K | 131 | A | C3'-O3' | -12.57 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 4 | L | 523 | U | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 5 | M | 309 | U | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 5 | M | 370 | U | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 1 | I | 362 | A | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 2 | J | 239 | A | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 4 | L | 446 | U | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 4 | L | 569 | U | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 5 | M | 435 | U | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 1 | I | 216 | A | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 4 | L | 524 | U | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 2 | J | 261 | A | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 4 | L | 439 | U | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 4 | L | 516 | U | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 4 | L | 521 | U | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 6 | N | 275 | U | C3'-O3' | -12.57 | 1.24 | 1.42 |
| 1 | I | 364 | A | O3'-P | -12.56 | 1.46 | 1.61 |
| 1 | I | 377 | A | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 3 | K | 153 | A | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 4 | L | 425 | U | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 1 | I | 11 | A | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 1 | I | 38 | A | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 1 | I | 402 | A | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 4 | L | 729 | U | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 1 | I | 205 | A | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 3 | K | 121 | A | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 3 | K | 154 | A | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 4 | L | 544 | U | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 4 | L | 685 | U | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 4 | L | 742 | U | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 4 | L | 824 | U | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 5 | M | 315 | U | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 2 | J | 88 | A | O3'-P | -12.56 | 1.46 | 1.61 |
| 5 | M | 480 | U | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 4 | L | 494 | U | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 5 | M | 298 | U | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 6 | N | 319 | U | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 1 | I | 228 | A | C3'-O3' | -12.56 | 1.24 | 1.42 |
| 1 | I | 322 | A | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 4 | L | 775 | U | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 5 | M | 312 | U | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 6 | N | 297 | U | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 2 | J | 274 | A | C3'-O3' | -12.55 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 4 | L | 428 | U | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 1 | I | 144 | A | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 1 | I | 210 | A | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 2 | J | 180 | A | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 4 | L | 653 | U | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 4 | L | 676 | U | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 5 | M | 326 | U | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 2 | J | 30 | A | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 1 | I | 366 | A | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 2 | J | 162 | A | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 2 | J | 228 | A | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 5 | M | 491 | U | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 6 | N | 430 | U | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 2 | J | 76 | A | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 2 | J | 129 | A | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 4 | L | 484 | U | C3'-O3' | -12.55 | 1.24 | 1.42 |
| 1 | I | 250 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 2 | J | 120 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 4 | L | 784 | U | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 5 | M | 304 | U | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 5 | M | 413 | U | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 3 | K | 181 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 1 | I | 188 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 1 | I | 249 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 1 | I | 391 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 4 | L | 512 | U | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 4 | L | 748 | U | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 4 | L | 753 | U | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 4 | L | 820 | U | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 2 | J | 186 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 3 | K | 142 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 4 | L | 758 | U | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 1 | I | 220 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 2 | J | 153 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 2 | J | 199 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 3 | K | 115 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 3 | K | 148 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 3 | K | 187 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 3 | K | 220 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 4 | L | 813 | U | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 1 | I | 58 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 1 | I | 151 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 3 | K | 259 | A | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 4 | L | 643 | U | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 4 | L | 535 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 4 | L | 687 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 4 | L | 762 | U | C3'-O3' | -12.54 | 1.24 | 1.42 |
| 4 | L | 806 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 1 | I | 25 | A | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 1 | I | 128 | A | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 4 | L | 532 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 5 | M | 538 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 1 | I | 271 | A | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 4 | L | 473 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 4 | L | 632 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 4 | L | 764 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 4 | L | 818 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 6 | N | 281 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 1 | I | 55 | A | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 1 | I | 407 | A | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 4 | L | 586 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 4 | L | 702 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 5 | M | 323 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 5 | M | 505 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 6 | N | 398 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 4 | L | 416 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 4 | L | 731 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 4 | L | 759 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 5 | M | 287 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 5 | M | 424 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 2 | J | 254 | A | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 3 | K | 76 | A | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 3 | K | 72 | A | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 3 | K | 143 | A | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 4 | L | 445 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 4 | L | 538 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 4 | L | 732 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 4 | L | 795 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 4 | L | 564 | U | C3'-O3' | -12.53 | 1.24 | 1.42 |
| 3 | K | 104 | A | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 4 | L | 447 | U | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 4 | L | 526 | U | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 4 | L | 560 | U | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 5 | M | 329 | U | C3'-O3' | -12.52 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 5 | M | 389 | U | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 5 | M | 439 | U | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 1 | I | 222 | A | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 1 | I | 297 | A | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 3 | K | 77 | A | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 4 | L | 726 | U | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 6 | N | 303 | U | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 1 | I | 122 | A | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 2 | J | 158 | A | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 3 | K | 50 | A | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 5 | M | 337 | U | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 5 | M | 527 | U | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 4 | L | 496 | U | O3'-P | -12.52 | 1.46 | 1.61 |
| 1 | I | 292 | A | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 1 | I | 330 | A | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 1 | I | 374 | A | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 2 | J | 107 | A | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 2 | J | 175 | A | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 3 | K | 171 | A | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 4 | L | 623 | U | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 5 | M | 402 | U | C3'-O3' | -12.52 | 1.24 | 1.42 |
| 2 | J | 19 | A | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 2 | J | 164 | A | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 5 | M | 490 | U | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 2 | J | 96 | A | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 2 | J | 272 | A | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 3 | K | 137 | A | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 3 | K | 170 | A | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 4 | L | 671 | U | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 4 | L | 718 | U | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 5 | M | 458 | U | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 3 | K | 11 | A | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 1 | I | 52 | A | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 1 | I | 98 | A | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 2 | J | 91 | A | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 3 | K | 6 | A | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 3 | K | 23 | A | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 3 | K | 193 | A | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 3 | K | 216 | A | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 4 | L | 700 | U | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 4 | L | 742 | U | O3'-P | 12.51 | 1.76 | 1.61 |
| 5 | M | 285 | U | C3'-O3' | -12.51 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 5 | M | 353 | U | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 5 | M | 391 | U | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 5 | M | 446 | U | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 5 | M | 516 | U | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 1 | I | 179 | A | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 2 | J | 260 | A | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 5 | M | 447 | U | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 6 | N | 473 | U | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 3 | K | 165 | A | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 6 | N | 474 | U | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 5 | M | 483 | U | C3'-O3' | -12.51 | 1.24 | 1.42 |
| 3 | K | 105 | A | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 1 | I | 106 | A | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 3 | K | 109 | A | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 4 | L | 549 | U | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 5 | M | 472 | U | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 6 | N | 386 | U | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 4 | L | 500 | U | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 4 | L | 506 | U | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 5 | M | 522 | U | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 3 | K | 60 | A | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 3 | K | 94 | A | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 3 | K | 107 | A | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 4 | L | 607 | U | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 4 | L | 809 | U | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 5 | M | 390 | U | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 1 | I | 123 | A | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 1 | I | 314 | A | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 6 | N | 420 | U | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 1 | I | 78 | A | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 1 | I | 95 | A | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 1 | I | 288 | A | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 4 | L | 451 | U | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 4 | L | 620 | U | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 6 | N | 280 | U | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 6 | N | 435 | U | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 6 | N | 486 | U | C3'-O3' | -12.50 | 1.24 | 1.42 |
| 1 | I | 91 | A | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 1 | I | 101 | A | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 1 | I | 111 | A | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 2 | J | 98 | A | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 3 | K | 158 | A | O3'-P | 12.49 | 1.76 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 4 | L | 434 | U | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 4 | L | 522 | U | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 4 | L | 558 | U | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 4 | L | 596 | U | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 5 | M | 367 | U | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 5 | M | 457 | U | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 1 | I | 113 | A | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 1 | I | 199 | A | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 2 | J | 237 | A | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 3 | K | 110 | A | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 4 | L | 436 | U | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 5 | M | 461 | U | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 6 | N | 431 | U | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 1 | I | 8 | A | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 3 | K | 52 | A | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 3 | K | 63 | A | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 3 | K | 204 | A | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 3 | K | 217 | A | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 4 | L | 441 | U | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 5 | M | 319 | U | O3'-P | 12.49 | 1.76 | 1.61 |
| 6 | N | 292 | U | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 6 | N | 468 | U | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 5 | M | 478 | U | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 6 | N | 495 | U | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 1 | I | 23 | A | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 2 | J | 85 | A | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 3 | K | 85 | A | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 4 | L | 649 | U | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 4 | L | 688 | U | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 5 | M | 395 | U | C3'-O3' | -12.49 | 1.24 | 1.42 |
| 1 | I | 79 | A | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 1 | I | 134 | A | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 1 | I | 160 | A | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 5 | M | 397 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 1 | I | 170 | A | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 3 | K | 30 | A | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 3 | K | 226 | A | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 4 | L | 568 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 4 | L | 621 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 5 | M | 428 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 5 | M | 479 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 6 | N | 461 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 2 | J | 144 | A | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 3 | K | 228 | A | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 4 | L | 517 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 4 | L | 755 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 4 | L | 817 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 3 | K | 83 | A | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 3 | K | 260 | A | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 4 | L | 496 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 4 | L | 663 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 5 | M | 373 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 6 | N | 314 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 6 | N | 324 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 1 | I | 159 | A | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 1 | I | 399 | A | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 2 | J | 69 | A | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 4 | L | 461 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 4 | L | 502 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 4 | L | 608 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 6 | N | 347 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 6 | N | 375 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 3 | K | 237 | A | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 4 | L | 597 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 5 | M | 278 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 5 | M | 307 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 5 | M | 469 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 6 | N | 291 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 6 | N | 340 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 5 | M | 552 | U | C3'-O3' | -12.48 | 1.24 | 1.42 |
| 1 | I | 62 | A | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 3 | K | 159 | A | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 1 | I | 110 | A | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 2 | J | 4 | A | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 2 | J | 8 | A | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 2 | J | 243 | A | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 3 | K | 61 | A | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 3 | K | 192 | A | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 3 | K | 248 | A | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 4 | L | 765 | U | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 5 | M | 362 | U | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 1 | I | 117 | A | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 4 | L | 580 | U | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 4 | L | 689 | U | C3'-O3' | -12.47 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 4 | L | 712 | U | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 4 | L | 799 | U | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 4 | L | 720 | U | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 5 | M | 378 | U | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 5 | M | 445 | U | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 6 | N | 365 | U | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 6 | N | 446 | U | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 6 | N | 475 | U | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 6 | N | 496 | U | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 3 | K | 87 | A | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 3 | K | 93 | A | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 3 | K | 225 | A | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 4 | L | 518 | U | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 4 | L | 582 | U | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 4 | L | 701 | U | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 1 | I | 221 | A | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 1 | I | 336 | A | C3'-O3' | -12.47 | 1.24 | 1.42 |
| 4 | L | 815 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 6 | N | 376 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 6 | N | 513 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 1 | I | 145 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 1 | I | 168 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 1 | I | 370 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 1 | I | 45 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 1 | I | 107 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 2 | J | 87 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 2 | J | 89 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 2 | J | 221 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 3 | K | 258 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 4 | L | 414 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 4 | L | 450 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 5 | M | 293 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 4 | L | 776 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 6 | N | 298 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 6 | N | 374 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 6 | N | 424 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 6 | N | 479 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 1 | I | 67 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 1 | I | 93 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 2 | J | 22 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 2 | J | 41 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 2 | J | 147 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 2 | J | 155 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 2 | J | 188 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 2 | J | 201 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 3 | K | 3 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 3 | K | 84 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 4 | L | 559 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 4 | L | 633 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 4 | L | 664 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 5 | M | 386 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 5 | M | 511 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 5 | M | 523 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 6 | N | 451 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 6 | N | 463 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 1 | I | 76 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 1 | I | 22 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 1 | I | 140 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 1 | I | 212 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 1 | I | 280 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 3 | K | 126 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 5 | M | 508 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 1 | I | 390 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 2 | J | 246 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 3 | K | 44 | A | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 4 | L | 418 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 5 | M | 541 | U | C3'-O3' | -12.46 | 1.24 | 1.42 |
| 6 | N | 270 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 6 | N | 490 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 1 | I | 27 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 1 | I | 65 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 1 | I | 217 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 4 | L | 611 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 4 | L | 636 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 1 | I | 71 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 1 | I | 385 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 2 | J | 227 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 3 | K | 250 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 4 | L | 536 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 4 | L | 631 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 4 | L | 682 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 6 | N | 442 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 6 | N | 500 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 1 | I | 56 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 1 | I | 255 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 1 | I | 357 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 3 | K | 71 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 4 | L | 756 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 3 | K | 239 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 4 | L | 590 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 4 | L | 715 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 5 | M | 331 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 5 | M | 356 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 5 | M | 456 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 6 | N | 419 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 5 | M | 535 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 6 | N | 302 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 6 | N | 327 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 6 | N | 402 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 6 | N | 409 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 6 | N | 413 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 1 | I | 103 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 1 | I | 204 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 1 | I | 388 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 2 | J | 109 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 3 | K | 82 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 3 | K | 98 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 4 | L | 417 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 4 | L | 485 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 6 | N | 357 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 1 | I | 10 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 1 | I | 28 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 1 | I | 308 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 2 | J | 146 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 3 | K | 17 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 3 | K | 41 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 3 | K | 215 | A | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 4 | L | 507 | U | O3'-P | -12.45 | 1.46 | 1.61 |
| 3 | K | 128 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 4 | L | 427 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 6 | N | 325 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 6 | N | 391 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 6 | N | 458 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 6 | N | 462 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 6 | N | 530 | U | C3'-O3' | -12.45 | 1.24 | 1.42 |
| 1 | I | 61 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 1 | I | 164 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 2 | J | 3 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 2 | J | 13 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 2 | J | 44 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 2 | J | 75 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 2 | J | 135 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 3 | K | 118 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 4 | L | 463 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 5 | M | 497 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 2 | J | 125 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 3 | K | 65 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 4 | L | 452 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 4 | L | 515 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 4 | L | 823 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 5 | M | 379 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 6 | N | 313 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 6 | N | 330 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 2 | J | 52 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 1 | I | 26 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 1 | I | 73 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 1 | I | 184 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 2 | J | 179 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 2 | J | 216 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 3 | K | 206 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 4 | L | 433 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 4 | L | 591 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 4 | L | 616 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 2 | J | 271 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 4 | L | 641 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 4 | L | 655 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 4 | L | 677 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 4 | L | 697 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 4 | L | 698 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 4 | L | 709 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 5 | M | 400 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 5 | M | 513 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 1 | I | 254 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 2 | J | 78 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 2 | J | 124 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 2 | J | 202 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 5 | M | 534 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 6 | N | 408 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 6 | N | 489 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 3 | K | 95 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 3 | K | 203 | A | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 5 | M | 468 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 6 | N | 269 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 6 | N | 503 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 6 | N | 509 | U | C3'-O3' | -12.44 | 1.24 | 1.42 |
| 1 | I | 21 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 1 | I | 68 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 1 | I | 269 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 2 | J | 213 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 1 | I | 296 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 2 | J | 235 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 3 | K | 8 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 4 | L | 540 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 4 | L | 658 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 5 | M | 423 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 3 | K | 160 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 3 | K | 245 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 4 | L | 733 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 5 | M | 335 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 4 | L | 786 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 4 | L | 821 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 1 | I | 57 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 1 | I | 124 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 1 | I | 158 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 1 | I | 410 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 3 | K | 14 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 3 | K | 68 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 4 | L | 665 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 2 | J | 55 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 2 | J | 136 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 2 | J | 205 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 3 | K | 74 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 4 | L | 802 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 5 | M | 481 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 5 | M | 496 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 6 | N | 296 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 6 | N | 516 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 4 | L | 660 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 4 | L | 674 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 4 | L | 675 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 4 | L | 741 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 4 | L | 779 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 5 | M | 500 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 5 | M | 357 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 1 | I | 118 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 2 | J | 150 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 1 | I | 17 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 1 | I | 110 | A | O3'-P | 12.43 | 1.76 | 1.61 |
| 1 | I | 133 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 2 | J | 53 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 4 | L | 638 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 1 | I | 147 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 1 | I | 182 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 1 | I | 265 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 2 | J | 152 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 3 | K | 247 | A | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 4 | L | 491 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 4 | L | 619 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 4 | L | 770 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 5 | M | 346 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 5 | M | 546 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 6 | N | 358 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 6 | N | 418 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 6 | N | 457 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 6 | N | 491 | U | C3'-O3' | -12.43 | 1.24 | 1.42 |
| 3 | K | 238 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 781 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 1 | I | 12 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 1 | I | 318 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 1 | I | 333 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 2 | J | 10 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 2 | J | 172 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 2 | J | 210 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 3 | K | 73 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 3 | K | 79 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 3 | K | 162 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 462 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 465 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 792 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 489 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 493 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 542 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 4 | L | 724 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 737 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 6 | N | 341 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 814 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 5 | M | 470 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 1 | I | 7 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 2 | J | 47 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 2 | J | 128 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 3 | K | 39 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 467 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 743 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 5 | M | 340 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 1 | I | 195 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 1 | I | 307 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 1 | I | 396 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 2 | J | 21 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 2 | J | 36 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 5 | M | 351 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 5 | M | 540 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 2 | J | 168 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 2 | J | 218 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 3 | K | 1 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 3 | K | 132 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 3 | K | 227 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 635 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 780 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 790 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 6 | N | 452 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 1 | I | 16 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 1 | I | 192 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 811 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 1 | I | 15 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 1 | I | 69 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 1 | I | 351 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 2 | J | 224 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 1 | I | 177 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 2 | J | 25 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 5 | M | 318 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 6 | N | 368 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 2 | J | 74 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 2 | J | 183 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 3 | K | 182 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 3 | K | 214 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 3 | K | 249 | A | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 571 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 757 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 4 | L | 807 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 5 | M | 467 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 6 | N | 501 | U | C3'-O3' | -12.42 | 1.24 | 1.42 |
| 1 | I | 90 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 1 | I | 389 | A | O3'-P | 12.41 | 1.76 | 1.61 |
| 2 | J | 113 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 2 | J | 259 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 3 | K | 10 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 4 | L | 430 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 5 | M | 345 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 3 | K | 25 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 4 | L | 474 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 6 | N | 343 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 6 | N | 369 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 4 | L | 816 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 5 | M | 434 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 5 | M | 452 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 5 | M | 514 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 6 | N | 346 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 1 | I | 115 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 1 | I | 166 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 1 | I | 120 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 1 | I | 156 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 1 | I | 193 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 2 | J | 86 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 2 | J | 66 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 2 | J | 159 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 2 | J | 275 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 3 | K | 7 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 3 | K | 151 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 5 | M | 296 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 3 | K | 199 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 3 | K | 236 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 6 | N | 397 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 4 | L | 547 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 6 | N | 497 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 6 | N | 518 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 1 | I | 243 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 2 | J | 15 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 2 | J | 207 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 1 | I | 36 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 1 | I | 181 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 1 | I | 183 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 2 | J | 24 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 5 | M | 501 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 2 | J | 54 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 2 | J | 108 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 2 | J | 141 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 2 | J | 248 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 2 | J | 251 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 3 | K | 34 | A | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 4 | L | 537 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 4 | L | 573 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 4 | L | 767 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 4 | L | 777 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 5 | M | 406 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 5 | M | 463 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 5 | M | 484 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 5 | M | 494 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 5 | M | 524 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 6 | N | 320 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 6 | N | 352 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 6 | N | 363 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 6 | N | 364 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 6 | N | 380 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 6 | N | 385 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 6 | N | 525 | U | C3'-O3' | -12.41 | 1.24 | 1.42 |
| 1 | I | 50 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 1 | I | 112 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 1 | I | 135 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 1 | I | 266 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 2 | J | 6 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 2 | J | 232 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 2 | J | 273 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 4 | L | 529 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 4 | L | 668 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 5 | M | 529 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 5 | M | 544 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 5 | M | 549 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 6 | N | 335 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 6 | N | 507 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 5 | M | 313 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 5 | M | 419 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 6 | N | 390 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 6 | N | 478 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 6 | N | 483 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 6 | N | 514 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 2 | J | 31 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 2 | J | 81 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 2 | J | 119 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 3 | K | 112 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 3 | K | 35 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 3 | K | 129 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 3 | K | 173 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 4 | L | 528 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 4 | L | 678 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 5 | M | 441 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 5 | M | 536 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 6 | N | 353 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 6 | N | 484 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 6 | N | 499 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 5 | M | 492 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 6 | N | 362 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 6 | N | 480 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 6 | N | 522 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 1 | I | 88 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 1 | I | 150 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 1 | I | 311 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 2 | J | 42 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 2 | J | 111 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 2 | J | 190 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 3 | K | 261 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 5 | M | 528 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 6 | N | 354 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 1 | I | 1 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 1 | I | 163 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 1 | I | 206 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 1 | I | 363 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 3 | K | 66 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 3 | K | 167 | A | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 5 | M | 368 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 5 | M | 474 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 6 | N | 283 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 6 | N | 387 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 6 | N | 527 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 4 | L | 562 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 6 | N | 505 | U | C3'-O3' | -12.40 | 1.24 | 1.42 |
| 1 | I | 324 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 2 | J | 94 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 2 | J | 194 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 2 | J | 212 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 2 | J | 262 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 4 | L | 449 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 4 | L | 507 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 5 | M | 396 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 5 | M | 512 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 6 | N | 339 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 1 | I | 355 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 2 | J | 11 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 2 | J | 39 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 2 | J | 57 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 2 | J | 268 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 3 | K | 19 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 3 | K | 57 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 5 | M | 412 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 6 | N | 342 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 6 | N | 428 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 1 | I | 34 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 1 | I | 139 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 2 | J | 65 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 4 | L | 613 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 6 | N | 396 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 6 | N | 417 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 1 | I | 59 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 1 | I | 162 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 2 | J | 33 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 2 | J | 234 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 3 | K | 184 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 3 | K | 194 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 3 | K | 205 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 3 | K | 233 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 4 | L | 669 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 4 | L | 711 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 4 | L | 713 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 5 | M | 364 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 5 | M | 543 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 6 | N | 434 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 6 | N | 449 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 6 | N | 456 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 6 | N | 529 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 1 | I | 153 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 2 | J | 165 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 2 | J | 238 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 4 | L | 551 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 3 | K | 37 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 3 | K | 54 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 4 | L | 629 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 4 | L | 644 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 4 | L | 735 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 5 | M | 320 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 6 | N | 336 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 5 | M | 417 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 5 | M | 462 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 5 | M | 485 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 6 | N | 329 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 6 | N | 493 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 1 | I | 35 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 42 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 1 | I | 225 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 2 | J | 50 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 3 | K | 28 | A | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 4 | L | 454 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 2 | J | 12 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 2 | J | 63 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 2 | J | 157 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 3 | K | 21 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 3 | K | 96 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 3 | K | 139 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 509 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 630 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 783 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 6 | N | 351 | U | C3'-O3' | -12.39 | 1.24 | 1.42 |
| 4 | L | 774 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 5 | M | 300 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 5 | M | 488 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 5 | M | 526 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 5 | M | 537 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 6 | N | 464 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 6 | N | 514 | U | O3'-P | 12.38 | 1.76 | 1.61 |
| 1 | I | 3 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 89 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 256 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 2 | J | 58 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 3 | K | 5 | A | O3'-P | 12.38 | 1.76 | 1.61 |
| 3 | K | 22 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 429 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 553 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 793 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 6 | N | 373 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 44 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 72 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 172 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 2 | J | 83 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 622 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 190 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 2 | J | 17 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 2 | J | 249 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 3 | K | 55 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 3 | K | 70 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 3 | K | 138 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 5 | M | 408 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 3 | K | 255 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 499 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 612 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 640 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 5 | M | 440 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 5 | M | 499 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 6 | N | 453 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 6 | N | 487 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 6 | N | 520 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 13 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 46 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 171 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 684 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 19 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 92 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 127 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 138 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 1 | I | 335 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 2 | J | 1 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 2 | J | 18 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 2 | J | 20 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 2 | J | 177 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 3 | K | 189 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 3 | K | 222 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 456 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 656 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 6 | N | 521 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 440 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 624 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 679 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 727 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 5 | M | 375 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 6 | N | 309 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 6 | N | 331 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 6 | N | 524 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 102 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 174 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 29 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 2 | J | 110 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 2 | J | 185 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 3 | K | 32 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 3 | K | 127 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 3 | K | 133 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 3 | K | 145 | A | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 626 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 648 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 4 | L | 721 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 4 | L | 803 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 5 | M | 332 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 5 | M | 545 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 6 | N | 333 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 6 | N | 472 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 6 | N | 485 | U | C3'-O3' | -12.38 | 1.24 | 1.42 |
| 1 | I | 24 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 1 | I | 154 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 1 | I | 213 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 2 | J | 264 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 3 | K | 106 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 3 | K | 134 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 2 | J | 126 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 3 | K | 156 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 3 | K | 200 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 4 | L | 416 | U | O3'-P | 12.37 | 1.75 | 1.61 |
| 4 | L | 520 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 5 | M | 311 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 4 | L | 670 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 4 | L | 734 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 6 | N | 519 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 5 | M | 521 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 5 | M | 525 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 6 | N | 502 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 1 | I | 80 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 1 | I | 146 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 1 | I | 211 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 2 | J | 34 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 2 | J | 77 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 2 | J | 97 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 3 | K | 111 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 4 | L | 531 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 6 | N | 481 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 1 | I | 173 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 2 | J | 105 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 2 | J | 229 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 3 | K | 13 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 4 | L | 647 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 4 | L | 729 | U | O3'-P | 12.37 | 1.75 | 1.61 |
| 5 | M | 365 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 5 | M | 431 | U | O3'-P | 12.37 | 1.75 | 1.61 |
| 5 | M | 502 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 5 | M | 539 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 6 | N | 379 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 6 | N | 440 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 1 | I | 47 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 1 | I | 116 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 1 | I | 169 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 2 | J | 102 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 2 | J | 148 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 2 | J | 154 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 5 | M | 291 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 1 | I | 276 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 2 | J | 2 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 2 | J | 133 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 3 | K | 58 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 3 | K | 161 | A | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 4 | L | 627 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 4 | L | 628 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 5 | M | 342 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 5 | M | 473 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 5 | M | 495 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 6 | N | 287 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 6 | N | 412 | U | C3'-O3' | -12.37 | 1.24 | 1.42 |
| 1 | I | 180 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 2 | J | 16 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 5 | M | 322 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 6 | N | 322 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 1 | I | 48 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 1 | I | 99 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 1 | I | 251 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 2 | J | 9 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 2 | J | 171 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 4 | L | 504 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 4 | L | 541 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 4 | L | 652 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 5 | M | 489 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 4 | L | 659 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 4 | L | 763 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 5 | M | 530 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 5 | M | 548 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 6 | N | 492 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 1 | I | 87 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 1 | I | 20 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 1 | I | 94 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 1 | I | 208 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 1 | I | 189 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 2 | J | 28 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 2 | J | 43 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 2 | J | 103 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 2 | J | 191 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 2 | J | 245 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 2 | J | 258 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 3 | K | 59 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 3 | K | 117 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 4 | L | 615 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 4 | L | 800 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 5 | M | 459 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 3 | K | 26 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 3 | K | 116 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 4 | L | 546 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 4 | L | 667 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 4 | L | 789 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 4 | L | 796 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 5 | M | 355 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 6 | N | 427 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 5 | M | 448 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 5 | M | 451 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 6 | N | 429 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 6 | N | 450 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 1 | I | 39 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 1 | I | 51 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 2 | J | 68 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 2 | J | 92 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 4 | L | 552 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 1 | I | 83 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 2 | J | 121 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 2 | J | 226 | A | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 4 | L | 444 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 4 | L | 471 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 4 | L | 585 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 4 | L | 766 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 5 | M | 422 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 6 | N | 307 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 6 | N | 498 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 6 | N | 506 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 6 | N | 510 | U | C3'-O3' | -12.36 | 1.24 | 1.42 |
| 1 | I | 4 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 1 | I | 100 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 1 | I | 114 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 1 | I | 157 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 1 | I | 258 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 1 | I | 329 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 2 | J | 26 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 2 | J | 32 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 2 | J | 70 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 2 | J | 80 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 2 | J | 143 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 2 | J | 220 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 3 | K | 40 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 3 | K | 244 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 5 | M | 282 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 1 | I | 165 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 1 | I | 178 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 3 | K | 92 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 3 | K | 123 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 4 | L | 645 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 4 | L | 812 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 6 | N | 512 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 4 | L | 691 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 6 | N | 508 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 1 | I | 136 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 1 | I | 155 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 1 | I | 252 | A | O3'-P | -12.35 | 1.46 | 1.61 |
| 2 | J | 99 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 4 | L | 654 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 5 | M | 542 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 6 | N | 395 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 1 | I | 203 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 1 | I | 300 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 6 | N | 407 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 2 | J | 51 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 2 | J | 161 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 2 | J | 176 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 2 | J | 182 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 3 | K | 172 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 4 | L | 819 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 4 | L | 495 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 5 | M | 324 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 1 | I | 18 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 1 | I | 273 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 1 | I | 313 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 2 | J | 114 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 6 | N | 438 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 2 | J | 193 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 2 | J | 198 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 4 | L | 618 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 5 | M | 411 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 6 | N | 267 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 3 | K | 24 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 3 | K | 47 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 3 | K | 140 | A | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 4 | L | 680 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 4 | L | 634 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 4 | L | 704 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 4 | L | 752 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 5 | M | 437 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 5 | M | 550 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 6 | N | 384 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 6 | N | 467 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 6 | N | 528 | U | C3'-O3' | -12.35 | 1.24 | 1.42 |
| 1 | I | 187 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 1 | I | 301 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 1 | I | 373 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 2 | J | 23 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 2 | J | 49 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 3 | K | 31 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 3 | K | 100 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 3 | K | 149 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 3 | K | 150 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 3 | K | 183 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 4 | L | 423 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 4 | L | 579 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 4 | L | 787 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 4 | L | 804 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 4 | L | 745 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 5 | M | 302 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 5 | M | 363 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 5 | M | 401 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 6 | N | 305 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 6 | N | 470 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 1 | I | 70 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 1 | I | 191 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 1 | I | 240 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 1 | I | 277 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 1 | I | 287 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 2 | J | 37 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 3 | K | 157 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 4 | L | 503 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 4 | L | 575 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 4 | L | 650 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 4 | L | 788 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 5 | M | 289 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 5 | M | 487 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 5 | M | 532 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 6 | N | 401 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 1 | I | 41 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 1 | I | 77 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 1 | I | 161 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 1 | I | 194 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 2 | J | 209 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 3 | K | 46 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 3 | K | 103 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 3 | K | 178 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 4 | L | 778 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 5 | M | 433 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 6 | N | 285 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 6 | N | 319 | U | O3'-P | 12.34 | 1.75 | 1.61 |
| 2 | J | 14 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 2 | J | 223 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 3 | K | 89 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 4 | L | 443 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 4 | L | 525 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 6 | N | 288 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 6 | N | 338 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 2 | J | 257 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 3 | K | 114 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 3 | K | 265 | A | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 4 | L | 511 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 4 | L | 794 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 5 | M | 385 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 5 | M | 486 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 5 | M | 547 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 6 | N | 318 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 6 | N | 482 | U | C3'-O3' | -12.34 | 1.24 | 1.42 |
| 1 | I | 43 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 1 | I | 126 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 1 | I | 152 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 1 | I | 380 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 2 | J | 56 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 2 | J | 163 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 2 | J | 106 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 3 | K | 27 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 3 | K | 155 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 3 | K | 211 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 3 | K | 256 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 4 | L | 705 | U | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 4 | L | 716 | U | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 4 | L | 722 | U | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 5 | M | 466 | U | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 6 | N | 403 | U | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 1 | I | 33 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 1 | I | 37 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 2 | J | 215 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 3 | K | 36 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 3 | K | 101 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 4 | L | 470 | U | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 4 | L | 617 | U | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 6 | N | 360 | U | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 1 | I | 82 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 1 | I | 86 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 3 | K | 2 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 3 | K | 135 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 4 | L | 460 | U | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 1 | I | 244 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 2 | J | 64 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 2 | J | 93 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 3 | K | 4 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 3 | K | 5 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 3 | K | 119 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 3 | K | 195 | A | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 4 | L | 487 | U | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 4 | L | 785 | U | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 5 | M | 354 | U | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 5 | M | 519 | U | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 6 | N | 445 | U | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 6 | N | 517 | U | C3'-O3' | -12.33 | 1.24 | 1.42 |
| 1 | I | 257 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 1 | I | 346 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 2 | J | 127 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 3 | K | 38 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 3 | K | 232 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 4 | L | 455 | U | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 4 | L | 646 | U | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 6 | N | 300 | U | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 6 | N | 425 | U | C3'-O3' | -12.32 | 1.24 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 2 | J | 132 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 2 | J | 166 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 2 | J | 270 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 3 | K | 190 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 4 | L | 746 | U | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 4 | L | 772 | U | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 4 | L | 810 | U | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 6 | N | 316 | U | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 6 | N | 465 | U | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 1 | I | 32 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 1 | I | 53 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 1 | I | 132 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 2 | J | 88 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 2 | J | 95 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 3 | K | 56 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 4 | L | 601 | U | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 1 | I | 63 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 1 | I | 96 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 2 | J | 116 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 2 | J | 204 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 3 | K | 16 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 3 | K | 69 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 3 | K | 90 | A | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 6 | N | 469 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 1 | I | 141 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 2 | J | 269 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 4 | L | 419 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 4 | L | 510 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 4 | L | 657 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 4 | L | 690 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 6 | N | 306 | U | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 6 | N | 439 | U | C3'-O3' | -12.32 | 1.24 | 1.42 |
| 4 | L | 625 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 4 | L | 808 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 5 | M | 280 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 6 | N | 423 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 6 | N | 494 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 1 | I | 109 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 1 | I | 218 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 1 | I | 291 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 1 | I | 406 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 3 | K | 141 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 2 | J | 35 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 2 | J | 40 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 4 | L | 481 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 4 | L | 736 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 2 | J | 45 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 2 | J | 61 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 2 | J | 115 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 2 | J | 240 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 3 | K | 9 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 3 | K | 48 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 3 | K | 243 | A | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 4 | L | 438 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 4 | L | 672 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 4 | L | 719 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 4 | L | 771 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 5 | M | 415 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 5 | M | 430 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 5 | M | 510 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 6 | N | 321 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 5 | M | 477 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 6 | N | 460 | U | C3'-O3' | -12.32 | 1.25 | 1.42 |
| 1 | I | 247 | A | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 1 | I | 403 | A | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 2 | J | 130 | A | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 2 | J | 174 | A | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 4 | L | 581 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 4 | L | 717 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 5 | M | 426 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 6 | N | 349 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 6 | N | 459 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 4 | L | 478 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 4 | L | 768 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 4 | L | 782 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 5 | M | 407 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 6 | N | 272 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 1 | I | 75 | A | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 1 | I | 143 | A | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 1 | I | 319 | A | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 3 | K | 130 | A | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 3 | K | 212 | A | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 2 | J | 5 | A | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 3 | K | 75 | A | C3'-O3' | -12.31 | 1.25 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 4 | L | 488 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 6 | N | 277 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 6 | N | 526 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 1 | I | 74 | A | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 1 | I | 131 | A | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 2 | J | 73 | A | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 4 | L | 476 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 5 | M | 398 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 3 | K | 20 | A | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 3 | K | 80 | A | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 3 | K | 254 | A | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 4 | L | 432 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 4 | L | 614 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 6 | N | 311 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 4 | L | 744 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 5 | M | 517 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 1 | I | 167 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 1 | I | 229 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 1 | I | 238 | A | O3'-P | -12.30 | 1.46 | 1.61 |
| 2 | J | 84 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 3 | K | 12 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 3 | K | 179 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 3 | K | 221 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 3 | K | 234 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 6 | N | 276 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 4 | L | 706 | U | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 5 | M | 374 | U | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 5 | M | 551 | U | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 6 | N | 515 | U | C3'-O3' | -12.31 | 1.25 | 1.42 |
| 5 | M | 420 | U | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 6 | N | 299 | U | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 6 | N | 471 | U | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 1 | I | 207 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 3 | K | 67 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 6 | N | 410 | U | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 1 | I | 64 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 1 | I | 66 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 1 | I | 214 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 1 | I | 290 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 2 | J | 62 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 3 | K | 15 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 6 | N | 406 | U | C3'-O3' | -12.30 | 1.25 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 4 | L | 548 | U | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 4 | L | 798 | U | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 6 | N | 447 | U | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 1 | I | 31 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 3 | K | 29 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 3 | K | 124 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 1 | I | 196 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 1 | I | 412 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 2 | J | 27 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 3 | K | 210 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 4 | L | 448 | U | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 4 | L | 557 | U | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 4 | L | 661 | U | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 6 | N | 414 | U | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 1 | I | 40 | A | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 1 | I | 202 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 3 | K | 169 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 3 | K | 223 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 4 | L | 791 | U | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 5 | M | 444 | U | C3'-O3' | -12.30 | 1.25 | 1.42 |
| 5 | M | 515 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 6 | N | 388 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 6 | N | 511 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 2 | J | 122 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 1 | I | 186 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 1 | I | 237 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 2 | J | 231 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 6 | N | 278 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 2 | J | 242 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 3 | K | 43 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 3 | K | 144 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 4 | L | 592 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 4 | L | 730 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 5 | M | 319 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 6 | N | 477 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 1 | I | 9 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 1 | I | 197 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 1 | I | 259 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 1 | I | 368 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 2 | J | 7 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 2 | J | 72 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 2 | J | 181 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 4 | L | 728 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 4 | L | 797 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 4 | L | 801 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 5 | M | 531 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 1 | I | 105 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 1 | I | 245 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 3 | K | 113 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 4 | L | 606 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 6 | N | 328 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 6 | N | 466 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 4 | L | 637 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 6 | N | 332 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 4 | L | 805 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 1 | I | 85 | A | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 1 | I | 175 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 1 | I | 233 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 1 | I | 316 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 2 | J | 48 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 1 | I | 232 | A | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 1 | I | 337 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 2 | J | 137 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 2 | J | 139 | A | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 2 | J | 267 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 3 | K | 18 | A | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 3 | K | 62 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 3 | K | 81 | A | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 4 | L | 754 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 4 | L | 822 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 5 | M | 308 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 5 | M | 443 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 5 | M | 507 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 6 | N | 266 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 6 | N | 310 | U | C3'-O3' | -12.29 | 1.25 | 1.42 |
| 1 | I | 384 | A | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 2 | J | 117 | A | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 2 | J | 71 | A | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 3 | K | 95 | A | O3'-P | -12.28 | 1.46 | 1.61 |
| 4 | L | 556 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 4 | L | 673 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 5 | M | 297 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 5 | M | 330 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 5 | M | 475 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 5 | M | 518 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 6 | N | 488 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 6 | N | 523 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 1 | I | 14 | A | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 3 | K | 45 | A | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 3 | K | 102 | A | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 4 | L | 466 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 4 | L | 477 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 4 | L | 514 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 4 | L | 584 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 5 | M | 286 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 5 | M | 455 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 6 | N | 436 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 6 | N | 504 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 1 | I | 246 | A | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 1 | I | 379 | A | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 2 | J | 82 | A | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 2 | J | 104 | A | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 3 | K | 136 | A | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 4 | L | 498 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 4 | L | 561 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 4 | L | 749 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 4 | L | 699 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 5 | M | 418 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 6 | N | 294 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 5 | M | 503 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 6 | N | 355 | U | C3'-O3' | -12.28 | 1.25 | 1.42 |
| 2 | J | 214 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 3 | K | 78 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 6 | N | 274 | U | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 6 | N | 344 | U | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 6 | N | 350 | U | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 1 | I | 5 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 1 | I | 281 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 1 | I | 284 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 2 | J | 59 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 2 | J | 225 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 2 | J | 253 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 4 | L | 570 | U | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 6 | N | 455 | U | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 2 | J | 149 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 2 | J | 160 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 3 | K | 33 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 4 | L | 595 | U | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 4 | L | 600 | U | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 4 | L | 760 | U | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 1 | I | 125 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 1 | I | 198 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 1 | I | 224 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 4 | L | 708 | U | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 5 | M | 429 | U | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 4 | L | 459 | U | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 5 | M | 506 | U | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 1 | I | 149 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 1 | I | 185 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 1 | I | 305 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 6 | N | 317 | U | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 1 | I | 341 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 2 | J | 29 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 2 | J | 38 | A | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 6 | N | 381 | U | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 4 | L | 545 | U | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 6 | N | 284 | U | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 6 | N | 304 | U | C3'-O3' | -12.27 | 1.25 | 1.42 |
| 6 | N | 451 | U | O3'-P | 12.27 | 1.75 | 1.61 |
| 1 | I | 299 | A | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 3 | K | 49 | A | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 3 | K | 180 | A | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 4 | L | 694 | U | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 5 | M | 387 | U | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 5 | M | 509 | U | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 1 | I | 352 | A | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 1 | I | 392 | A | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 2 | J | 187 | A | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 3 | K | 42 | A | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 3 | K | 91 | A | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 4 | L | 550 | U | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 5 | M | 352 | U | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 6 | N | 295 | U | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 6 | N | 411 | U | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 6 | N | 476 | U | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 2 | J | 100 | A | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 4 | L | 686 | U | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 5 | M | 464 | U | C3'-O3' | -12.26 | 1.25 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 2 | J | 90 | A | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 2 | J | 196 | A | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 3 | K | 64 | A | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 3 | K | 122 | A | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 6 | N | 422 | U | C3'-O3' | -12.26 | 1.25 | 1.42 |
| 4 | L | 723 | U | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 1 | I | 49 | A | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 1 | I | 54 | A | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 1 | I | 209 | A | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 5 | M | 277 | U | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 6 | N | 393 | U | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 3 | K | 201 | A | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 4 | L | 666 | U | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 4 | L | 710 | U | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 5 | M | 520 | U | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 6 | N | 437 | U | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 1 | I | 215 | A | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 1 | I | 323 | A | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 1 | I | 326 | A | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 1 | I | 368 | A | O3'-P | 12.25 | 1.75 | 1.61 |
| 2 | J | 67 | A | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 2 | J | 79 | A | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 4 | L | 415 | U | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 4 | L | 603 | U | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 4 | L | 683 | U | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 4 | L | 750 | U | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 5 | M | 476 | U | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 6 | N | 273 | U | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 6 | N | 443 | U | C3'-O3' | -12.25 | 1.25 | 1.42 |
| 4 | L | 583 | U | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 6 | N | 383 | U | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 1 | I | 395 | A | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 5 | M | 393 | U | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 6 | N | 289 | U | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 6 | N | 404 | U | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 1 | I | 142 | A | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 1 | I | 338 | A | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 3 | K | 51 | A | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 3 | K | 53 | A | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 3 | K | 147 | A | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 3 | K | 166 | A | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 4 | L | 589 | U | C3'-O3' | -12.24 | 1.25 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 4 | L | 738 | U | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 5 | M | 482 | U | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 6 | N | 378 | U | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 6 | N | 421 | U | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 1 | I | 267 | A | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 1 | I | 320 | A | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 3 | K | 146 | A | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 4 | L | 739 | U | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 5 | M | 371 | U | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 6 | N | 377 | U | C3'-O3' | -12.24 | 1.25 | 1.42 |
| 1 | I | 176 | A | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 5 | M | 465 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 2 | J | 138 | A | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 4 | L | 639 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 5 | M | 366 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 1 | I | 378 | A | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 3 | K | 158 | A | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 3 | K | 168 | A | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 3 | K | 188 | A | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 5 | M | 409 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 4 | L | 426 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 4 | L | 437 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 5 | M | 431 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 5 | M | 442 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 5 | M | 471 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 6 | N | 366 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 6 | N | 394 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 6 | N | 399 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 6 | N | 415 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 6 | N | 448 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 1 | I | 262 | A | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 3 | K | 240 | A | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 5 | M | 338 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 5 | M | 493 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 2 | J | 170 | A | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 2 | J | 236 | A | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 4 | L | 605 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 6 | N | 282 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 6 | N | 361 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 6 | N | 454 | U | C3'-O3' | -12.23 | 1.25 | 1.42 |
| 1 | I | 226 | A | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 1 | I | 236 | A | C3'-O3' | -12.22 | 1.25 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 1 | I | 345 | A | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 1 | I | 353 | A | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 1 | I | 371 | A | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 2 | J | 203 | A | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 5 | M | 333 | U | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 5 | M | 410 | U | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 6 | N | 382 | U | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 4 | L | 662 | U | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 5 | M | 360 | U | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 1 | I | 148 | A | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 1 | I | 252 | A | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 4 | L | 464 | U | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 4 | L | 563 | U | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 4 | L | 651 | U | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 5 | M | 310 | U | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 5 | M | 376 | U | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 5 | M | 388 | U | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 6 | N | 389 | U | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 4 | L | 497 | U | C3'-O3' | -12.22 | 1.25 | 1.42 |
| 1 | I | 119 | A | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 1 | I | 219 | A | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 2 | J | 256 | A | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 3 | K | 203 | A | O3'-P | 12.21 | 1.75 | 1.61 |
| 1 | I | 270 | A | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 4 | L | 482 | U | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 1 | I | 21 | A | O3'-P | -12.21 | 1.46 | 1.61 |
| 1 | I | 200 | A | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 1 | I | 321 | A | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 3 | K | 108 | A | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 5 | M | 454 | U | O3'-P | 12.21 | 1.75 | 1.61 |
| 5 | M | 504 | U | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 2 | J | 46 | A | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 5 | M | 344 | U | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 5 | M | 399 | U | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 6 | N | 392 | U | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 1 | I | 130 | A | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 1 | I | 223 | A | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 3 | K | 125 | A | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 3 | K | 262 | A | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 5 | M | 404 | U | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 6 | N | 372 | U | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 2 | J | 247 | A | C3'-O3' | -12.21 | 1.25 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 3 | K | 177 | A | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 3 | K | 191 | A | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 3 | K | 229 | A | C3'-O3' | -12.20 | 1.25 | 1.42 |
| 3 | K | 235 | A | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 5 | M | 377 | U | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 5 | M | 453 | U | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 5 | M | 498 | U | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 5 | M | 454 | U | C3'-O3' | -12.20 | 1.25 | 1.42 |
| 6 | N | 359 | U | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 6 | N | 371 | U | C3'-O3' | -12.21 | 1.25 | 1.42 |
| 1 | I | 367 | A | C3'-O3' | -12.20 | 1.25 | 1.42 |
| 5 | M | 341 | U | C3'-O3' | -12.20 | 1.25 | 1.42 |
| 6 | N | 426 | U | C3'-O3' | -12.20 | 1.25 | 1.42 |
| 2 | J | 192 | A | C3'-O3' | -12.20 | 1.25 | 1.42 |
| 3 | K | 28 | A | O3'-P | 12.20 | 1.75 | 1.61 |
| 5 | M | 321 | U | C3'-O3' | -12.20 | 1.25 | 1.42 |
| 1 | I | 400 | A | C3'-O3' | -12.20 | 1.25 | 1.42 |
| 1 | I | 129 | A | C3'-O3' | -12.20 | 1.25 | 1.42 |
| 2 | J | 60 | A | C3'-O3' | -12.20 | 1.25 | 1.42 |
| 4 | L | 475 | U | C3'-O3' | -12.20 | 1.25 | 1.42 |
| 5 | M | 343 | U | C3'-O3' | -12.20 | 1.25 | 1.42 |
| 6 | N | 290 | U | C3'-O3' | -12.20 | 1.25 | 1.42 |
| 6 | N | 432 | U | C3'-O3' | -12.20 | 1.25 | 1.42 |
| 1 | I | 294 | A | C3'-O3' | -12.19 | 1.25 | 1.42 |
| 5 | M | 316 | U | C3'-O3' | -12.19 | 1.25 | 1.42 |
| 5 | M | 382 | U | C3'-O3' | -12.20 | 1.25 | 1.42 |
| 6 | N | 279 | U | C3'-O3' | -12.20 | 1.25 | 1.42 |
| 6 | N | 405 | U | C3'-O3' | -12.20 | 1.25 | 1.42 |
| 1 | I | 2 | A | C3'-O3' | -12.19 | 1.25 | 1.42 |
| 2 | J | 156 | A | C3'-O3' | -12.19 | 1.25 | 1.42 |
| 3 | K | 86 | A | C3'-O3' | -12.19 | 1.25 | 1.42 |
| 3 | K | 218 | A | C3'-O3' | -12.19 | 1.25 | 1.42 |
| 4 | L | 594 | U | C3'-O3' | -12.19 | 1.25 | 1.42 |
| 6 | N | 433 | U | C3'-O3' | -12.19 | 1.25 | 1.42 |
| 1 | I | 397 | A | C3'-O3' | -12.19 | 1.25 | 1.42 |
| 4 | L | 567 | U | C3'-O3' | -12.19 | 1.25 | 1.42 |
| 6 | N | 312 | U | C3'-O3' | -12.19 | 1.25 | 1.42 |
| 1 | I | 97 | A | C3'-O3' | -12.19 | 1.25 | 1.42 |
| 3 | K | 196 | A | C3'-O3' | -12.19 | 1.25 | 1.42 |
| 3 | K | 213 | A | C3'-O3' | -12.19 | 1.25 | 1.42 |
| 4 | L | 486 | U | C3'-O3' | -12.19 | 1.25 | 1.42 |
| 1 | I | 268 | A | C3'-O3' | -12.18 | 1.25 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 1 | I | 404 | A | C3'-O3' | -12.18 | 1.25 | 1.42 |
| 1 | I | 274 | A | C3'-O3' | -12.18 | 1.25 | 1.42 |
| 1 | I | 359 | A | C3'-O3' | -12.18 | 1.25 | 1.42 |
| 1 | I | 349 | A | C3'-O3' | -12.18 | 1.25 | 1.42 |
| 2 | J | 123 | A | C3'-O3' | -12.18 | 1.25 | 1.42 |
| 6 | N | 271 | U | C3'-O3' | -12.18 | 1.25 | 1.42 |
| 1 | I | 334 | A | C3'-O3' | -12.18 | 1.25 | 1.42 |
| 1 | I | 348 | A | C3'-O3' | -12.18 | 1.25 | 1.42 |
| 3 | K | 202 | A | C3'-O3' | -12.18 | 1.25 | 1.42 |
| 4 | L | 420 | U | C3'-O3' | -12.18 | 1.25 | 1.42 |
| 6 | N | 367 | U | C3'-O3' | -12.18 | 1.25 | 1.42 |
| 1 | I | 234 | A | C3'-O3' | -12.17 | 1.25 | 1.42 |
| 1 | I | 235 | A | C3'-O3' | -12.17 | 1.25 | 1.42 |
| 1 | I | 304 | A | C3'-O3' | -12.17 | 1.25 | 1.42 |
| 1 | I | 382 | A | C3'-O3' | -12.17 | 1.25 | 1.42 |
| 3 | K | 152 | A | C3'-O3' | -12.17 | 1.25 | 1.42 |
| 1 | I | 278 | A | C3'-O3' | -12.17 | 1.25 | 1.42 |
| 3 | K | 185 | A | C3'-O3' | -12.17 | 1.25 | 1.42 |
| 5 | M | 299 | U | C3'-O3' | -12.17 | 1.25 | 1.42 |
| 5 | M | 327 | U | C3'-O3' | -12.17 | 1.25 | 1.42 |
| 5 | M | 449 | U | C3'-O3' | -12.17 | 1.25 | 1.42 |
| 6 | N | 301 | U | C3'-O3' | -12.17 | 1.25 | 1.42 |
| 3 | K | 163 | A | C3'-O3' | -12.17 | 1.25 | 1.42 |
| 1 | I | 411 | A | C3'-O3' | -12.17 | 1.25 | 1.42 |
| 4 | L | 534 | U | C3'-O3' | -12.17 | 1.25 | 1.42 |
| 5 | M | 288 | U | C3'-O3' | -12.17 | 1.25 | 1.42 |
| 3 | K | 97 | A | C3'-O3' | -12.17 | 1.25 | 1.42 |
| 4 | L | 422 | U | C3'-O3' | -12.17 | 1.25 | 1.42 |
| 1 | I | 279 | A | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 2 | J | 134 | A | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 4 | L | 695 | U | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 6 | N | 334 | U | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 4 | L | 578 | U | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 5 | M | 432 | U | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 1 | I | 108 | A | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 1 | I | 327 | A | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 1 | I | 393 | A | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 4 | L | 747 | U | O3'-P | -12.16 | 1.46 | 1.61 |
| 6 | N | 326 | U | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 6 | N | 337 | U | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 6 | N | 370 | U | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 6 | N | 444 | U | C3'-O3' | -12.16 | 1.25 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 1 | I | 331 | A | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 2 | J | 112 | A | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 3 | K | 174 | A | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 4 | L | 419 | U | O3'-P | 12.16 | 1.75 | 1.61 |
| 4 | L | 761 | U | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 5 | M | 405 | U | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 5 | M | 427 | U | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 6 | N | 345 | U | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 6 | N | 400 | U | C3'-O3' | -12.16 | 1.25 | 1.42 |
| 1 | I | 312 | A | C3'-O3' | -12.15 | 1.25 | 1.42 |
| 1 | I | 360 | A | C3'-O3' | -12.15 | 1.25 | 1.42 |
| 6 | N | 315 | U | C3'-O3' | -12.15 | 1.25 | 1.42 |
| 6 | N | 293 | U | C3'-O3' | -12.15 | 1.25 | 1.42 |
| 6 | N | 356 | U | C3'-O3' | -12.15 | 1.25 | 1.42 |
| 1 | I | 315 | A | C3'-O3' | -12.15 | 1.25 | 1.42 |
| 5 | M | 460 | U | C3'-O3' | -12.15 | 1.25 | 1.42 |
| 6 | N | 416 | U | C3'-O3' | -12.15 | 1.25 | 1.42 |
| 5 | M | 283 | U | C3'-O3' | -12.15 | 1.25 | 1.42 |
| 6 | N | 323 | U | C3'-O3' | -12.15 | 1.25 | 1.42 |
| 4 | L | 442 | U | C3'-O3' | -12.14 | 1.25 | 1.42 |
| 6 | N | 480 | U | O3'-P | 12.14 | 1.75 | 1.61 |
| 5 | M | 305 | U | C3'-O3' | -12.14 | 1.25 | 1.42 |
| 1 | I | 408 | A | C3'-O3' | -12.14 | 1.25 | 1.42 |
| 2 | J | 145 | A | C3'-O3' | -12.14 | 1.25 | 1.42 |
| 5 | M | 416 | U | C3'-O3' | -12.14 | 1.25 | 1.42 |
| 4 | L | 572 | U | C3'-O3' | -12.14 | 1.25 | 1.42 |
| 3 | K | 224 | A | C3'-O3' | -12.14 | 1.25 | 1.42 |
| 6 | N | 348 | U | C3'-O3' | -12.14 | 1.25 | 1.42 |
| 1 | I | 248 | A | C3'-O3' | -12.13 | 1.25 | 1.42 |
| 2 | J | 101 | A | C3'-O3' | -12.13 | 1.25 | 1.42 |
| 5 | M | 438 | U | C3'-O3' | -12.13 | 1.25 | 1.42 |
| 3 | K | 207 | A | C3'-O3' | -12.13 | 1.25 | 1.42 |
| 1 | I | 354 | A | C3'-O3' | -12.13 | 1.25 | 1.42 |
| 4 | L | 508 | U | C3'-O3' | -12.13 | 1.25 | 1.42 |
| 5 | M | 294 | U | C3'-O3' | -12.13 | 1.25 | 1.42 |
| 2 | J | 266 | A | C3'-O3' | -12.13 | 1.25 | 1.42 |
| 3 | K | 251 | A | C3'-O3' | -12.13 | 1.25 | 1.42 |
| 1 | I | 356 | A | C3'-O3' | -12.13 | 1.25 | 1.42 |
| 1 | I | 381 | A | C3'-O3' | -12.13 | 1.25 | 1.42 |
| 3 | K | 257 | A | C3'-O3' | -12.12 | 1.25 | 1.42 |
| 5 | M | 421 | U | C3'-O3' | -12.12 | 1.25 | 1.42 |
| 6 | N | 406 | U | O3'-P | -12.12 | 1.46 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 1 | I | 293 | A | C3'-O3' | -12.12 | 1.25 | 1.42 |
| 3 | K | 246 | A | C3'-O3' | -12.12 | 1.25 | 1.42 |
| 2 | J | 211 | A | C3'-O3' | -12.12 | 1.25 | 1.42 |
| 2 | J | 255 | A | C3'-O3' | -12.12 | 1.25 | 1.42 |
| 5 | M | 383 | U | C3'-O3' | -12.11 | 1.25 | 1.42 |
| 5 | M | 349 | U | C3'-O3' | -12.11 | 1.25 | 1.42 |
| 1 | I | 389 | A | C3'-O3' | -12.11 | 1.25 | 1.42 |
| 2 | J | 178 | A | C3'-O3' | -12.11 | 1.25 | 1.42 |
| 4 | L | 492 | U | C3'-O3' | -12.11 | 1.25 | 1.42 |
| 4 | L | 421 | U | C3'-O3' | -12.10 | 1.25 | 1.42 |
| 2 | J | 233 | A | C3'-O3' | -12.10 | 1.25 | 1.42 |
| 1 | I | 285 | A | C3'-O3' | -12.10 | 1.25 | 1.42 |
| 1 | I | 364 | A | C3'-O3' | -12.10 | 1.25 | 1.42 |
| 6 | N | 268 | U | C3'-O3' | -12.10 | 1.25 | 1.42 |
| 1 | I | 310 | A | C3'-O3' | -12.09 | 1.25 | 1.42 |
| 2 | J | 200 | A | C3'-O3' | -12.09 | 1.25 | 1.42 |
| 2 | J | 167 | A | C3'-O3' | -12.09 | 1.25 | 1.42 |
| 4 | L | 453 | U | C3'-O3' | -12.08 | 1.25 | 1.42 |
| 5 | M | 394 | U | C3'-O3' | -12.08 | 1.25 | 1.42 |
| 1 | I | 230 | A | C3'-O3' | -12.08 | 1.25 | 1.42 |
| 1 | I | 332 | A | C3'-O3' | -12.07 | 1.25 | 1.42 |
| 2 | J | 244 | A | C3'-O3' | -12.07 | 1.25 | 1.42 |
| 4 | L | 470 | U | O3'-P | 12.07 | 1.75 | 1.61 |
| 1 | I | 398 | A | C3'-O3' | -12.07 | 1.25 | 1.42 |
| 4 | L | 539 | U | C3'-O3' | -12.07 | 1.25 | 1.42 |
| 5 | M | 295 | U | C3'-O3' | -12.07 | 1.25 | 1.42 |
| 1 | I | 375 | A | C3'-O3' | -12.06 | 1.25 | 1.42 |
| 4 | L | 519 | U | C3'-O3' | -12.06 | 1.25 | 1.42 |
| 1 | I | 387 | A | C3'-O3' | -12.06 | 1.25 | 1.42 |
| 2 | J | 189 | A | C3'-O3' | -12.06 | 1.25 | 1.42 |
| 1 | I | 263 | A | C3'-O3' | -12.05 | 1.25 | 1.42 |
| 5 | M | 284 | U | C3'-O3' | -12.05 | 1.25 | 1.42 |
| 1 | I | 342 | A | C3'-O3' | -12.05 | 1.25 | 1.42 |
| 5 | M | 372 | U | C3'-O3' | -12.05 | 1.25 | 1.42 |
| 1 | I | 365 | A | C3'-O3' | -12.04 | 1.25 | 1.42 |
| 4 | L | 431 | U | C3'-O3' | -12.04 | 1.25 | 1.42 |
| 5 | M | 339 | U | C3'-O3' | -12.04 | 1.25 | 1.42 |
| 1 | I | 289 | A | C3'-O3' | -12.03 | 1.25 | 1.42 |
| 1 | I | 343 | A | C3'-O3' | -12.03 | 1.25 | 1.42 |
| 5 | M | 507 | U | O3'-P | -12.04 | 1.46 | 1.61 |
| 6 | N | 500 | U | O3'-P | 12.03 | 1.75 | 1.61 |
| 1 | I | 409 | A | C3'-O3' | -12.03 | 1.25 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 1 | I | 298 | A | C3'-O3' | -12.03 | 1.25 | 1.42 |
| 2 | J | 222 | A | C3'-O3' | -12.03 | 1.25 | 1.42 |
| 1 | I | 376 | A | C3'-O3' | -12.01 | 1.25 | 1.42 |
| 5 | M | 328 | U | C3'-O3' | -12.01 | 1.25 | 1.42 |
| 3 | K | 141 | A | O3'-P | 12.00 | 1.75 | 1.61 |
| 1 | I | 189 | A | O3'-P | -12.00 | 1.46 | 1.61 |
| 1 | I | 386 | A | C3'-O3' | -12.00 | 1.25 | 1.42 |
| 2 | J | 207 | A | O3'-P | -11.99 | 1.46 | 1.61 |
| 4 | L | 549 | U | O3'-P | -11.99 | 1.46 | 1.61 |
| 5 | M | 317 | U | C3'-O3' | -11.99 | 1.25 | 1.42 |
| 5 | M | 361 | U | C3'-O3' | -11.99 | 1.25 | 1.42 |
| 5 | M | 306 | U | C3'-O3' | -11.99 | 1.25 | 1.42 |
| 1 | I | 307 | A | O3'-P | -11.98 | 1.46 | 1.61 |
| 3 | K | 73 | A | O3'-P | 11.97 | 1.75 | 1.61 |
| 1 | I | 241 | A | C3'-O3' | -11.96 | 1.25 | 1.42 |
| 4 | L | 530 | U | C3'-O3' | -11.95 | 1.25 | 1.42 |
| 2 | J | 54 | A | O3'-P | -11.95 | 1.46 | 1.61 |
| 1 | I | 268 | A | O3'-P | -11.94 | 1.46 | 1.61 |
| 1 | I | 309 | A | C3'-O3' | -11.93 | 1.25 | 1.42 |
| 1 | I | 297 | A | O3'-P | 11.92 | 1.75 | 1.61 |
| 6 | N | 417 | U | O3'-P | -11.91 | 1.46 | 1.61 |
| 5 | M | 350 | U | C3'-O3' | -11.90 | 1.25 | 1.42 |
| 3 | K | 30 | A | O3'-P | 11.88 | 1.75 | 1.61 |
| 1 | I | 174 | A | O3'-P | -11.86 | 1.47 | 1.61 |
| 3 | K | 247 | A | O3'-P | 11.84 | 1.75 | 1.61 |
| 3 | K | 7 | A | O3'-P | 11.82 | 1.75 | 1.61 |
| 4 | L | 802 | U | O3'-P | -11.81 | 1.47 | 1.61 |
| 4 | L | 475 | U | O3'-P | 11.79 | 1.75 | 1.61 |
| 6 | N | 334 | U | O3'-P | 11.79 | 1.75 | 1.61 |
| 2 | J | 261 | A | O3'-P | 11.78 | 1.75 | 1.61 |
| 4 | L | 420 | U | O3'-P | 11.78 | 1.75 | 1.61 |
| 4 | L | 790 | U | O3'-P | 11.78 | 1.75 | 1.61 |
| 6 | N | 401 | U | O3'-P | -11.76 | 1.47 | 1.61 |
| 2 | J | 61 | A | O3'-P | 11.70 | 1.75 | 1.61 |
| 6 | N | 415 | U | O3'-P | 11.70 | 1.75 | 1.61 |
| 6 | N | 382 | U | O3'-P | 11.69 | 1.75 | 1.61 |
| 1 | I | 184 | A | O3'-P | -11.69 | 1.47 | 1.61 |
| 4 | L | 734 | U | O3'-P | -11.69 | 1.47 | 1.61 |
| 5 | M | 425 | U | O3'-P | 11.67 | 1.75 | 1.61 |
| 4 | L | 484 | U | O3'-P | -11.67 | 1.47 | 1.61 |
| 2 | J | 35 | A | O3'-P | -11.66 | 1.47 | 1.61 |
| 5 | M | 480 | U | O3'-P | 11.66 | 1.75 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 1 | I | 26 | A | O3'-P | -11.66 | 1.47 | 1.61 |
| 2 | J | 195 | A | O3'-P | 11.65 | 1.75 | 1.61 |
| 2 | J | 213 | A | O3'-P | 11.65 | 1.75 | 1.61 |
| 1 | I | 126 | A | O3'-P | 11.62 | 1.75 | 1.61 |
| 3 | K | 83 | A | O3'-P | -11.61 | 1.47 | 1.61 |
| 6 | N | 475 | U | O3'-P | -11.59 | 1.47 | 1.61 |
| 4 | L | 772 | U | O3'-P | -11.57 | 1.47 | 1.61 |
| 3 | K | 210 | A | O3'-P | 11.57 | 1.75 | 1.61 |
| 1 | I | 396 | A | O3'-P | 11.55 | 1.75 | 1.61 |
| 6 | N | 356 | U | O3'-P | 11.54 | 1.75 | 1.61 |
| 2 | J | 249 | A | O3'-P | -11.53 | 1.47 | 1.61 |
| 5 | M | 286 | U | O3'-P | -11.52 | 1.47 | 1.61 |
| 5 | M | 528 | U | O3'-P | -11.52 | 1.47 | 1.61 |
| 4 | L | 637 | U | O3'-P | -11.49 | 1.47 | 1.61 |
| 5 | M | 539 | U | O3'-P | -11.48 | 1.47 | 1.61 |
| 4 | L | 511 | U | O3'-P | 11.48 | 1.75 | 1.61 |
| 4 | L | 532 | U | O3'-P | 11.46 | 1.75 | 1.61 |
| 3 | K | 106 | A | O3'-P | -11.46 | 1.47 | 1.61 |
| 1 | I | 8 | A | O3'-P | -11.46 | 1.47 | 1.61 |
| 5 | M | 407 | U | O3'-P | 11.45 | 1.74 | 1.61 |
| 5 | M | 508 | U | O3'-P | -11.45 | 1.47 | 1.61 |
| 6 | N | 413 | U | O3'-P | -11.45 | 1.47 | 1.61 |
| 2 | J | 133 | A | O3'-P | 11.44 | 1.74 | 1.61 |
| 1 | I | 263 | A | O3'-P | -11.42 | 1.47 | 1.61 |
| 4 | L | 782 | U | O3'-P | -11.41 | 1.47 | 1.61 |
| 6 | N | 493 | U | O3'-P | -11.40 | 1.47 | 1.61 |
| 6 | N | 477 | U | O3'-P | 11.39 | 1.74 | 1.61 |
| 4 | L | 463 | U | O3'-P | 11.37 | 1.74 | 1.61 |
| 2 | J | 238 | A | O3'-P | 11.37 | 1.74 | 1.61 |
| 6 | N | 284 | U | O3'-P | 11.32 | 1.74 | 1.61 |
| 4 | L | 653 | U | O3'-P | 11.31 | 1.74 | 1.61 |
| 3 | K | 43 | A | O3'-P | 11.29 | 1.74 | 1.61 |
| 5 | M | 370 | U | O3'-P | -11.28 | 1.47 | 1.61 |
| 3 | K | 102 | A | O3'-P | -11.27 | 1.47 | 1.61 |
| 2 | J | 69 | A | O3'-P | 11.25 | 1.74 | 1.61 |
| 4 | L | 434 | U | O3'-P | 11.24 | 1.74 | 1.61 |
| 6 | N | 375 | U | O3'-P | -11.19 | 1.47 | 1.61 |
| 4 | L | 461 | U | O3'-P | -11.19 | 1.47 | 1.61 |
| 5 | M | 516 | U | O3'-P | -11.19 | 1.47 | 1.61 |
| 3 | K | 4 | A | O3'-P | 11.18 | 1.74 | 1.61 |
| 3 | K | 245 | A | O3'-P | 11.16 | 1.74 | 1.61 |
| 1 | I | 77 | A | O3'-P | -11.14 | 1.47 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 2 | J | 128 | A | O3'-P | -11.14 | 1.47 | 1.61 |
| 3 | K | 37 | A | O3'-P | -11.12 | 1.47 | 1.61 |
| 6 | N | 478 | U | O3'-P | 11.11 | 1.74 | 1.61 |
| 4 | L | 699 | U | O3'-P | 11.10 | 1.74 | 1.61 |
| 4 | L | 640 | U | O3'-P | 11.10 | 1.74 | 1.61 |
| 4 | L | 515 | U | O3'-P | -11.07 | 1.47 | 1.61 |
| 1 | I | 341 | A | O3'-P | -11.01 | 1.48 | 1.61 |
| 5 | M | 481 | U | O3'-P | -11.01 | 1.48 | 1.61 |
| 5 | M | 372 | U | O3'-P | -11.00 | 1.48 | 1.61 |
| 4 | L | 566 | U | O3'-P | -10.98 | 1.48 | 1.61 |
| 1 | I | 68 | A | O3'-P | -10.97 | 1.48 | 1.61 |
| 3 | K | 239 | A | O3'-P | -10.89 | 1.48 | 1.61 |
| 6 | N | 428 | U | O3'-P | -10.89 | 1.48 | 1.61 |
| 6 | N | 488 | U | O3'-P | 10.87 | 1.74 | 1.61 |
| 4 | L | 621 | U | O3'-P | -10.86 | 1.48 | 1.61 |
| 5 | M | 540 | U | O3'-P | -10.86 | 1.48 | 1.61 |
| 5 | M | 367 | U | O3'-P | -10.84 | 1.48 | 1.61 |
| 1 | I | 94 | A | O3'-P | 10.81 | 1.74 | 1.61 |
| 6 | N | 309 | U | O3'-P | 10.81 | 1.74 | 1.61 |
| 4 | L | 754 | U | O3'-P | -10.79 | 1.48 | 1.61 |
| 1 | I | 246 | A | O3'-P | -10.76 | 1.48 | 1.61 |
| 5 | M | 457 | U | O3'-P | -10.73 | 1.48 | 1.61 |
| 2 | J | 194 | A | O3'-P | 10.70 | 1.74 | 1.61 |
| 4 | L | 553 | U | O3'-P | -10.69 | 1.48 | 1.61 |
| 4 | L | 801 | U | O3'-P | -10.68 | 1.48 | 1.61 |
| 4 | L | 636 | U | O3'-P | -10.68 | 1.48 | 1.61 |
| 6 | N | 392 | U | O3'-P | 10.67 | 1.74 | 1.61 |
| 1 | I | 265 | A | O3'-P | -10.66 | 1.48 | 1.61 |
| 5 | M | 476 | U | O3'-P | -10.66 | 1.48 | 1.61 |
| 3 | K | 182 | A | O3'-P | -10.65 | 1.48 | 1.61 |
| 5 | M | 335 | U | O3'-P | 10.63 | 1.74 | 1.61 |
| 5 | M | 418 | U | O3'-P | 10.63 | 1.74 | 1.61 |
| 5 | M | 421 | U | O3'-P | 10.61 | 1.73 | 1.61 |
| 1 | I | 198 | A | O3'-P | 10.61 | 1.73 | 1.61 |
| 3 | K | 156 | A | O3'-P | 10.51 | 1.73 | 1.61 |
| 3 | K | 147 | A | O3'-P | 10.50 | 1.73 | 1.61 |
| 4 | L | 512 | U | O3'-P | -10.50 | 1.48 | 1.61 |
| 5 | M | 450 | U | O3'-P | -10.47 | 1.48 | 1.61 |
| 6 | N | 496 | U | O3'-P | 10.47 | 1.73 | 1.61 |
| 4 | L | 714 | U | O3'-P | 10.46 | 1.73 | 1.61 |
| 2 | J | 178 | A | O3'-P | 10.45 | 1.73 | 1.61 |
| 4 | L | 791 | U | O3'-P | 10.40 | 1.73 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|--------|-------------|----------|
| 1 | I | 130 | A | O3'-P | -10.39 | 1.48 | 1.61 |
| 4 | L | 762 | U | O3'-P | -10.38 | 1.48 | 1.61 |
| 2 | J | 108 | A | O3'-P | -10.37 | 1.48 | 1.61 |
| 3 | K | 8 | A | O3'-P | 10.35 | 1.73 | 1.61 |
| 2 | J | 48 | A | O3'-P | -10.35 | 1.48 | 1.61 |
| 1 | I | 299 | A | O3'-P | -10.33 | 1.48 | 1.61 |
| 3 | K | 257 | A | O3'-P | -10.33 | 1.48 | 1.61 |
| 1 | I | 230 | A | O3'-P | -10.29 | 1.48 | 1.61 |
| 6 | N | 464 | U | O3'-P | 10.29 | 1.73 | 1.61 |
| 1 | I | 213 | A | O3'-P | -10.26 | 1.48 | 1.61 |
| 6 | N | 494 | U | O3'-P | 10.26 | 1.73 | 1.61 |
| 5 | M | 363 | U | O3'-P | 10.23 | 1.73 | 1.61 |
| 6 | N | 407 | U | O3'-P | -10.21 | 1.48 | 1.61 |
| 2 | J | 177 | A | O3'-P | -10.16 | 1.49 | 1.61 |
| 1 | I | 93 | A | O3'-P | 10.14 | 1.73 | 1.61 |
| 4 | L | 506 | U | O3'-P | -10.13 | 1.49 | 1.61 |
| 1 | I | 182 | A | O3'-P | 10.13 | 1.73 | 1.61 |
| 2 | J | 182 | A | O3'-P | -10.12 | 1.49 | 1.61 |
| 1 | I | 270 | A | O3'-P | -10.11 | 1.49 | 1.61 |
| 2 | J | 47 | A | O3'-P | 10.07 | 1.73 | 1.61 |
| 1 | I | 87 | A | O3'-P | -10.06 | 1.49 | 1.61 |
| 4 | L | 647 | U | O3'-P | -10.06 | 1.49 | 1.61 |
| 3 | K | 220 | A | O3'-P | 10.05 | 1.73 | 1.61 |
| 6 | N | 358 | U | O3'-P | 10.05 | 1.73 | 1.61 |
| 1 | I | 271 | A | O3'-P | 10.04 | 1.73 | 1.61 |
| 1 | I | 162 | A | O3'-P | 10.03 | 1.73 | 1.61 |
| 4 | L | 581 | U | O3'-P | -10.04 | 1.49 | 1.61 |
| 4 | L | 483 | U | O3'-P | -10.01 | 1.49 | 1.61 |
| 1 | I | 242 | A | O3'-P | -10.01 | 1.49 | 1.61 |
| 4 | L | 503 | U | O3'-P | -10.00 | 1.49 | 1.61 |
| 1 | I | 45 | A | O3'-P | -9.97 | 1.49 | 1.61 |
| 1 | I | 407 | A | O3'-P | 9.97 | 1.73 | 1.61 |
| 5 | M | 328 | U | O3'-P | 9.97 | 1.73 | 1.61 |
| 6 | N | 363 | U | O3'-P | -9.96 | 1.49 | 1.61 |
| 1 | I | 76 | A | O3'-P | -9.94 | 1.49 | 1.61 |
| 3 | K | 168 | A | O3'-P | 9.94 | 1.73 | 1.61 |
| 1 | I | 195 | A | O3'-P | 9.92 | 1.73 | 1.61 |
| 4 | L | 652 | U | O3'-P | 9.91 | 1.73 | 1.61 |
| 3 | K | 109 | A | O3'-P | 9.88 | 1.73 | 1.61 |
| 5 | M | 392 | U | O3'-P | -9.87 | 1.49 | 1.61 |
| 2 | J | 17 | A | O3'-P | -9.86 | 1.49 | 1.61 |
| 3 | K | 166 | A | O3'-P | -9.81 | 1.49 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 4 | L | 550 | U | O3'-P | -9.77 | 1.49 | 1.61 |
| 5 | M | 348 | U | O3'-P | -9.77 | 1.49 | 1.61 |
| 4 | L | 753 | U | O3'-P | -9.77 | 1.49 | 1.61 |
| 5 | M | 530 | U | O3'-P | 9.76 | 1.72 | 1.61 |
| 5 | M | 306 | U | O3'-P | -9.70 | 1.49 | 1.61 |
| 6 | N | 506 | U | O3'-P | 9.68 | 1.72 | 1.61 |
| 6 | N | 425 | U | O3'-P | -9.63 | 1.49 | 1.61 |
| 5 | M | 435 | U | O3'-P | 9.62 | 1.72 | 1.61 |
| 5 | M | 486 | U | O3'-P | -9.59 | 1.49 | 1.61 |
| 5 | M | 506 | U | O3'-P | 9.59 | 1.72 | 1.61 |
| 6 | N | 372 | U | O3'-P | 9.59 | 1.72 | 1.61 |
| 3 | K | 96 | A | O3'-P | -9.56 | 1.49 | 1.61 |
| 2 | J | 99 | A | O3'-P | -9.54 | 1.49 | 1.61 |
| 4 | L | 703 | U | O3'-P | -9.54 | 1.49 | 1.61 |
| 5 | M | 377 | U | O3'-P | -9.52 | 1.49 | 1.61 |
| 4 | L | 777 | U | O3'-P | -9.52 | 1.49 | 1.61 |
| 1 | I | 372 | A | O3'-P | 9.50 | 1.72 | 1.61 |
| 5 | M | 341 | U | O3'-P | 9.49 | 1.72 | 1.61 |
| 6 | N | 423 | U | O3'-P | -9.48 | 1.49 | 1.61 |
| 3 | K | 138 | A | O3'-P | 9.46 | 1.72 | 1.61 |
| 4 | L | 691 | U | O3'-P | -9.45 | 1.49 | 1.61 |
| 4 | L | 474 | U | O3'-P | 9.43 | 1.72 | 1.61 |
| 2 | J | 216 | A | O3'-P | 9.41 | 1.72 | 1.61 |
| 1 | I | 115 | A | O3'-P | -9.40 | 1.49 | 1.61 |
| 4 | L | 701 | U | O3'-P | -9.39 | 1.49 | 1.61 |
| 3 | K | 201 | A | O3'-P | 9.32 | 1.72 | 1.61 |
| 2 | J | 20 | A | O3'-P | 9.30 | 1.72 | 1.61 |
| 3 | K | 118 | A | O3'-P | -9.30 | 1.50 | 1.61 |
| 5 | M | 511 | U | O3'-P | -9.29 | 1.50 | 1.61 |
| 2 | J | 237 | A | O3'-P | 9.27 | 1.72 | 1.61 |
| 5 | M | 339 | U | O3'-P | 9.27 | 1.72 | 1.61 |
| 5 | M | 499 | U | O3'-P | -9.26 | 1.50 | 1.61 |
| 5 | M | 289 | U | O3'-P | -9.25 | 1.50 | 1.61 |
| 1 | I | 19 | A | O3'-P | -9.25 | 1.50 | 1.61 |
| 3 | K | 157 | A | O3'-P | 9.23 | 1.72 | 1.61 |
| 5 | M | 449 | U | O3'-P | -9.22 | 1.50 | 1.61 |
| 3 | K | 172 | A | O3'-P | 9.22 | 1.72 | 1.61 |
| 2 | J | 110 | A | O3'-P | 9.21 | 1.72 | 1.61 |
| 1 | I | 207 | A | O3'-P | -9.16 | 1.50 | 1.61 |
| 1 | I | 360 | A | O3'-P | 9.14 | 1.72 | 1.61 |
| 5 | M | 532 | U | O3'-P | 9.14 | 1.72 | 1.61 |
| 1 | I | 336 | A | O3'-P | 9.14 | 1.72 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 1 | I | 410 | A | O3'-P | 9.10 | 1.72 | 1.61 |
| 1 | I | 89 | A | O3'-P | -9.08 | 1.50 | 1.61 |
| 2 | J | 118 | A | O3'-P | -9.07 | 1.50 | 1.61 |
| 1 | I | 159 | A | O3'-P | -9.06 | 1.50 | 1.61 |
| 1 | I | 247 | A | O3'-P | -9.06 | 1.50 | 1.61 |
| 2 | J | 15 | A | O3'-P | 9.03 | 1.72 | 1.61 |
| 1 | I | 287 | A | O3'-P | 9.02 | 1.72 | 1.61 |
| 2 | J | 30 | A | O3'-P | -9.02 | 1.50 | 1.61 |
| 1 | I | 194 | A | O3'-P | -9.01 | 1.50 | 1.61 |
| 4 | L | 727 | U | O3'-P | 8.99 | 1.72 | 1.61 |
| 1 | I | 137 | A | O3'-P | 8.99 | 1.72 | 1.61 |
| 2 | J | 89 | A | O3'-P | -8.98 | 1.50 | 1.61 |
| 6 | N | 394 | U | O3'-P | -8.96 | 1.50 | 1.61 |
| 3 | K | 200 | A | O3'-P | 8.95 | 1.71 | 1.61 |
| 4 | L | 437 | U | O3'-P | 8.93 | 1.71 | 1.61 |
| 2 | J | 83 | A | O3'-P | -8.93 | 1.50 | 1.61 |
| 3 | K | 27 | A | O3'-P | 8.93 | 1.71 | 1.61 |
| 5 | M | 331 | U | O3'-P | -8.93 | 1.50 | 1.61 |
| 5 | M | 403 | U | O3'-P | -8.92 | 1.50 | 1.61 |
| 4 | L | 803 | U | O3'-P | -8.84 | 1.50 | 1.61 |
| 4 | L | 477 | U | O3'-P | 8.82 | 1.71 | 1.61 |
| 1 | I | 112 | A | O3'-P | -8.81 | 1.50 | 1.61 |
| 6 | N | 527 | U | O3'-P | 8.74 | 1.71 | 1.61 |
| 5 | M | 426 | U | O3'-P | 8.74 | 1.71 | 1.61 |
| 4 | L | 520 | U | O3'-P | 8.74 | 1.71 | 1.61 |
| 6 | N | 294 | U | O3'-P | -8.73 | 1.50 | 1.61 |
| 1 | I | 134 | A | O3'-P | -8.71 | 1.50 | 1.61 |
| 2 | J | 121 | A | O3'-P | 8.70 | 1.71 | 1.61 |
| 5 | M | 546 | U | O3'-P | -8.69 | 1.50 | 1.61 |
| 6 | N | 408 | U | O3'-P | -8.70 | 1.50 | 1.61 |
| 3 | K | 129 | A | O3'-P | -8.66 | 1.50 | 1.61 |
| 4 | L | 482 | U | O3'-P | 8.66 | 1.71 | 1.61 |
| 4 | L | 684 | U | O3'-P | 8.63 | 1.71 | 1.61 |
| 4 | L | 765 | U | O3'-P | 8.62 | 1.71 | 1.61 |
| 4 | L | 554 | U | O3'-P | 8.62 | 1.71 | 1.61 |
| 3 | K | 183 | A | O3'-P | 8.60 | 1.71 | 1.61 |
| 4 | L | 654 | U | O3'-P | 8.60 | 1.71 | 1.61 |
| 5 | M | 404 | U | O3'-P | -8.60 | 1.50 | 1.61 |
| 6 | N | 502 | U | O3'-P | 8.58 | 1.71 | 1.61 |
| 6 | N | 273 | U | O3'-P | -8.57 | 1.50 | 1.61 |
| 1 | I | 312 | A | O3'-P | -8.56 | 1.50 | 1.61 |
| 2 | J | 25 | A | O3'-P | -8.55 | 1.50 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 2 | J | 73 | A | O3'-P | 8.51 | 1.71 | 1.61 |
| 6 | N | 335 | U | O3'-P | 8.51 | 1.71 | 1.61 |
| 3 | K | 66 | A | O3'-P | 8.48 | 1.71 | 1.61 |
| 3 | K | 153 | A | O3'-P | 8.48 | 1.71 | 1.61 |
| 1 | I | 211 | A | O3'-P | -8.48 | 1.50 | 1.61 |
| 4 | L | 708 | U | O3'-P | 8.47 | 1.71 | 1.61 |
| 2 | J | 124 | A | O3'-P | -8.45 | 1.51 | 1.61 |
| 3 | K | 149 | A | O3'-P | -8.44 | 1.51 | 1.61 |
| 1 | I | 400 | A | O3'-P | 8.44 | 1.71 | 1.61 |
| 1 | I | 234 | A | O3'-P | -8.41 | 1.51 | 1.61 |
| 4 | L | 695 | U | O3'-P | -8.39 | 1.51 | 1.61 |
| 1 | I | 122 | A | O3'-P | -8.38 | 1.51 | 1.61 |
| 1 | I | 334 | A | O3'-P | -8.37 | 1.51 | 1.61 |
| 1 | I | 156 | A | O3'-P | -8.37 | 1.51 | 1.61 |
| 1 | I | 206 | A | O3'-P | 8.33 | 1.71 | 1.61 |
| 5 | M | 338 | U | O3'-P | 8.33 | 1.71 | 1.61 |
| 1 | I | 118 | A | O3'-P | 8.33 | 1.71 | 1.61 |
| 6 | N | 332 | U | O3'-P | 8.29 | 1.71 | 1.61 |
| 1 | I | 43 | A | O3'-P | -8.29 | 1.51 | 1.61 |
| 4 | L | 715 | U | O3'-P | 8.25 | 1.71 | 1.61 |
| 5 | M | 498 | U | O3'-P | 8.24 | 1.71 | 1.61 |
| 6 | N | 442 | U | O3'-P | -8.22 | 1.51 | 1.61 |
| 1 | I | 342 | A | O3'-P | 8.21 | 1.71 | 1.61 |
| 4 | L | 486 | U | O3'-P | -8.20 | 1.51 | 1.61 |
| 3 | K | 126 | A | O3'-P | -8.17 | 1.51 | 1.61 |
| 1 | I | 48 | A | O3'-P | -8.16 | 1.51 | 1.61 |
| 3 | K | 144 | A | O3'-P | 8.16 | 1.71 | 1.61 |
| 5 | M | 384 | U | O3'-P | 8.13 | 1.71 | 1.61 |
| 4 | L | 618 | U | O3'-P | -8.12 | 1.51 | 1.61 |
| 6 | N | 526 | U | O3'-P | 8.11 | 1.70 | 1.61 |
| 2 | J | 202 | A | O3'-P | -8.10 | 1.51 | 1.61 |
| 2 | J | 231 | A | O3'-P | 8.09 | 1.70 | 1.61 |
| 6 | N | 329 | U | O3'-P | 8.09 | 1.70 | 1.61 |
| 6 | N | 370 | U | O3'-P | -8.03 | 1.51 | 1.61 |
| 1 | I | 131 | A | O3'-P | -8.03 | 1.51 | 1.61 |
| 1 | I | 352 | A | O3'-P | -8.02 | 1.51 | 1.61 |
| 2 | J | 122 | A | O3'-P | 8.02 | 1.70 | 1.61 |
| 4 | L | 485 | U | O3'-P | -8.02 | 1.51 | 1.61 |
| 1 | I | 37 | A | O3'-P | 8.01 | 1.70 | 1.61 |
| 4 | L | 697 | U | O3'-P | 7.99 | 1.70 | 1.61 |
| 4 | L | 613 | U | O3'-P | -7.96 | 1.51 | 1.61 |
| 4 | L | 603 | U | O3'-P | -7.95 | 1.51 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 3 | K | 1 | A | O3'-P | 7.95 | 1.70 | 1.61 |
| 3 | K | 72 | A | O3'-P | -7.95 | 1.51 | 1.61 |
| 2 | J | 165 | A | O3'-P | 7.94 | 1.70 | 1.61 |
| 1 | I | 34 | A | O3'-P | 7.94 | 1.70 | 1.61 |
| 1 | I | 401 | A | O3'-P | 7.93 | 1.70 | 1.61 |
| 5 | M | 332 | U | O3'-P | -7.93 | 1.51 | 1.61 |
| 3 | K | 229 | A | O3'-P | 7.92 | 1.70 | 1.61 |
| 4 | L | 519 | U | O3'-P | -7.91 | 1.51 | 1.61 |
| 4 | L | 567 | U | O3'-P | -7.91 | 1.51 | 1.61 |
| 6 | N | 433 | U | O3'-P | -7.86 | 1.51 | 1.61 |
| 1 | I | 119 | A | O3'-P | -7.86 | 1.51 | 1.61 |
| 4 | L | 568 | U | O3'-P | -7.86 | 1.51 | 1.61 |
| 2 | J | 246 | A | O3'-P | -7.85 | 1.51 | 1.61 |
| 5 | M | 316 | U | O3'-P | -7.84 | 1.51 | 1.61 |
| 4 | L | 530 | U | O3'-P | 7.84 | 1.70 | 1.61 |
| 3 | K | 238 | A | O3'-P | 7.81 | 1.70 | 1.61 |
| 2 | J | 224 | A | O3'-P | -7.81 | 1.51 | 1.61 |
| 4 | L | 424 | U | O3'-P | 7.80 | 1.70 | 1.61 |
| 4 | L | 796 | U | O3'-P | 7.80 | 1.70 | 1.61 |
| 4 | L | 748 | U | O3'-P | -7.80 | 1.51 | 1.61 |
| 3 | K | 255 | A | O3'-P | 7.79 | 1.70 | 1.61 |
| 1 | I | 125 | A | O3'-P | 7.78 | 1.70 | 1.61 |
| 1 | I | 188 | A | O3'-P | -7.76 | 1.51 | 1.61 |
| 2 | J | 82 | A | O3'-P | -7.76 | 1.51 | 1.61 |
| 5 | M | 376 | U | O3'-P | -7.73 | 1.51 | 1.61 |
| 4 | L | 421 | U | O3'-P | 7.71 | 1.70 | 1.61 |
| 4 | L | 750 | U | O3'-P | -7.70 | 1.51 | 1.61 |
| 4 | L | 570 | U | O3'-P | 7.68 | 1.70 | 1.61 |
| 5 | M | 467 | U | O3'-P | 7.68 | 1.70 | 1.61 |
| 4 | L | 689 | U | O3'-P | -7.67 | 1.51 | 1.61 |
| 1 | I | 243 | A | O3'-P | -7.67 | 1.51 | 1.61 |
| 5 | M | 542 | U | O3'-P | 7.66 | 1.70 | 1.61 |
| 2 | J | 132 | A | O3'-P | 7.66 | 1.70 | 1.61 |
| 3 | K | 142 | A | O3'-P | 7.65 | 1.70 | 1.61 |
| 4 | L | 466 | U | O3'-P | -7.64 | 1.51 | 1.61 |
| 1 | I | 358 | A | O3'-P | 7.63 | 1.70 | 1.61 |
| 6 | N | 336 | U | O3'-P | 7.63 | 1.70 | 1.61 |
| 1 | I | 6 | A | O3'-P | 7.62 | 1.70 | 1.61 |
| 4 | L | 418 | U | O3'-P | 7.61 | 1.70 | 1.61 |
| 4 | L | 674 | U | O3'-P | 7.61 | 1.70 | 1.61 |
| 5 | M | 290 | U | O3'-P | -7.60 | 1.52 | 1.61 |
| 5 | M | 326 | U | O3'-P | -7.59 | 1.52 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 6 | N | 379 | U | O3'-P | -7.58 | 1.52 | 1.61 |
| 2 | J | 6 | A | O3'-P | 7.58 | 1.70 | 1.61 |
| 5 | M | 362 | U | O3'-P | 7.58 | 1.70 | 1.61 |
| 2 | J | 172 | A | O3'-P | -7.57 | 1.52 | 1.61 |
| 1 | I | 151 | A | O3'-P | 7.55 | 1.70 | 1.61 |
| 1 | I | 317 | A | O3'-P | -7.54 | 1.52 | 1.61 |
| 2 | J | 12 | A | O3'-P | -7.50 | 1.52 | 1.61 |
| 1 | I | 88 | A | O3'-P | 7.50 | 1.70 | 1.61 |
| 1 | I | 108 | A | O3'-P | -7.50 | 1.52 | 1.61 |
| 1 | I | 357 | A | O3'-P | 7.50 | 1.70 | 1.61 |
| 2 | J | 80 | A | O3'-P | -7.49 | 1.52 | 1.61 |
| 3 | K | 59 | A | O3'-P | 7.48 | 1.70 | 1.61 |
| 1 | I | 313 | A | O3'-P | -7.47 | 1.52 | 1.61 |
| 6 | N | 470 | U | O3'-P | 7.47 | 1.70 | 1.61 |
| 1 | I | 369 | A | O3'-P | 7.47 | 1.70 | 1.61 |
| 1 | I | 314 | A | O3'-P | -7.47 | 1.52 | 1.61 |
| 6 | N | 501 | U | O3'-P | 7.46 | 1.70 | 1.61 |
| 4 | L | 546 | U | O3'-P | -7.44 | 1.52 | 1.61 |
| 4 | L | 631 | U | O3'-P | 7.41 | 1.70 | 1.61 |
| 4 | L | 764 | U | O3'-P | 7.40 | 1.70 | 1.61 |
| 6 | N | 311 | U | O3'-P | 7.40 | 1.70 | 1.61 |
| 4 | L | 611 | U | O3'-P | -7.39 | 1.52 | 1.61 |
| 5 | M | 382 | U | O3'-P | 7.39 | 1.70 | 1.61 |
| 3 | K | 78 | A | O3'-P | 7.39 | 1.70 | 1.61 |
| 4 | L | 661 | U | O3'-P | 7.37 | 1.70 | 1.61 |
| 6 | N | 296 | U | O3'-P | 7.36 | 1.70 | 1.61 |
| 4 | L | 820 | U | O3'-P | 7.36 | 1.70 | 1.61 |
| 1 | I | 388 | A | O3'-P | 7.34 | 1.70 | 1.61 |
| 6 | N | 359 | U | O3'-P | 7.34 | 1.70 | 1.61 |
| 2 | J | 192 | A | O3'-P | -7.32 | 1.52 | 1.61 |
| 1 | I | 279 | A | O3'-P | 7.31 | 1.70 | 1.61 |
| 3 | K | 92 | A | O3'-P | -7.31 | 1.52 | 1.61 |
| 6 | N | 292 | U | O3'-P | 7.30 | 1.70 | 1.61 |
| 4 | L | 558 | U | O3'-P | -7.27 | 1.52 | 1.61 |
| 2 | J | 53 | A | O3'-P | -7.26 | 1.52 | 1.61 |
| 1 | I | 192 | A | O3'-P | 7.25 | 1.69 | 1.61 |
| 2 | J | 79 | A | O3'-P | -7.25 | 1.52 | 1.61 |
| 4 | L | 688 | U | O3'-P | -7.25 | 1.52 | 1.61 |
| 1 | I | 120 | A | O3'-P | -7.24 | 1.52 | 1.61 |
| 2 | J | 5 | A | O3'-P | 7.20 | 1.69 | 1.61 |
| 2 | J | 104 | A | O3'-P | -7.19 | 1.52 | 1.61 |
| 1 | I | 304 | A | O3'-P | 7.18 | 1.69 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 3 | K | 38 | A | O3'-P | -7.18 | 1.52 | 1.61 |
| 1 | I | 36 | A | O3'-P | 7.17 | 1.69 | 1.61 |
| 6 | N | 348 | U | O3'-P | -7.17 | 1.52 | 1.61 |
| 4 | L | 789 | U | O3'-P | 7.16 | 1.69 | 1.61 |
| 2 | J | 18 | A | O3'-P | -7.16 | 1.52 | 1.61 |
| 4 | L | 766 | U | O3'-P | 7.15 | 1.69 | 1.61 |
| 3 | K | 112 | A | O3'-P | 7.15 | 1.69 | 1.61 |
| 3 | K | 187 | A | O3'-P | 7.15 | 1.69 | 1.61 |
| 5 | M | 535 | U | O3'-P | -7.14 | 1.52 | 1.61 |
| 3 | K | 198 | A | O3'-P | 7.10 | 1.69 | 1.61 |
| 4 | L | 528 | U | O3'-P | -7.10 | 1.52 | 1.61 |
| 4 | L | 719 | U | O3'-P | -7.10 | 1.52 | 1.61 |
| 2 | J | 263 | A | O3'-P | -7.10 | 1.52 | 1.61 |
| 2 | J | 179 | A | O3'-P | 7.07 | 1.69 | 1.61 |
| 4 | L | 671 | U | O3'-P | -7.07 | 1.52 | 1.61 |
| 5 | M | 544 | U | O3'-P | 7.05 | 1.69 | 1.61 |
| 2 | J | 130 | A | O3'-P | -7.05 | 1.52 | 1.61 |
| 4 | L | 478 | U | O3'-P | 7.04 | 1.69 | 1.61 |
| 4 | L | 817 | U | O3'-P | 7.04 | 1.69 | 1.61 |
| 5 | M | 422 | U | O3'-P | 7.02 | 1.69 | 1.61 |
| 5 | M | 433 | U | O3'-P | -7.01 | 1.52 | 1.61 |
| 2 | J | 223 | A | O3'-P | 6.98 | 1.69 | 1.61 |
| 1 | I | 363 | A | O3'-P | -6.97 | 1.52 | 1.61 |
| 4 | L | 642 | U | O3'-P | -6.97 | 1.52 | 1.61 |
| 4 | L | 821 | U | O3'-P | 6.97 | 1.69 | 1.61 |
| 3 | K | 207 | A | O3'-P | -6.96 | 1.52 | 1.61 |
| 1 | I | 50 | A | O3'-P | 6.95 | 1.69 | 1.61 |
| 4 | L | 578 | U | O3'-P | -6.95 | 1.52 | 1.61 |
| 4 | L | 467 | U | O3'-P | -6.94 | 1.52 | 1.61 |
| 4 | L | 694 | U | O3'-P | -6.93 | 1.52 | 1.61 |
| 1 | I | 321 | A | O3'-P | -6.93 | 1.52 | 1.61 |
| 4 | L | 797 | U | O3'-P | -6.92 | 1.52 | 1.61 |
| 6 | N | 380 | U | O3'-P | -6.89 | 1.52 | 1.61 |
| 4 | L | 759 | U | O3'-P | 6.88 | 1.69 | 1.61 |
| 1 | I | 266 | A | O3'-P | 6.88 | 1.69 | 1.61 |
| 5 | M | 438 | U | O3'-P | 6.88 | 1.69 | 1.61 |
| 4 | L | 538 | U | O3'-P | 6.83 | 1.69 | 1.61 |
| 4 | L | 681 | U | O3'-P | 6.83 | 1.69 | 1.61 |
| 3 | K | 3 | A | O3'-P | 6.83 | 1.69 | 1.61 |
| 5 | M | 396 | U | O3'-P | -6.82 | 1.52 | 1.61 |
| 4 | L | 450 | U | O3'-P | 6.81 | 1.69 | 1.61 |
| 4 | L | 591 | U | O3'-P | -6.81 | 1.52 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 4 | L | 508 | U | O3'-P | 6.80 | 1.69 | 1.61 |
| 1 | I | 181 | A | O3'-P | -6.80 | 1.52 | 1.61 |
| 4 | L | 596 | U | O3'-P | -6.79 | 1.53 | 1.61 |
| 2 | J | 181 | A | O3'-P | -6.78 | 1.53 | 1.61 |
| 1 | I | 55 | A | O3'-P | -6.77 | 1.53 | 1.61 |
| 1 | I | 258 | A | O3'-P | -6.77 | 1.53 | 1.61 |
| 4 | L | 660 | U | O3'-P | 6.76 | 1.69 | 1.61 |
| 2 | J | 235 | A | O3'-P | -6.70 | 1.53 | 1.61 |
| 3 | K | 234 | A | O3'-P | 6.70 | 1.69 | 1.61 |
| 4 | L | 473 | U | O3'-P | 6.69 | 1.69 | 1.61 |
| 2 | J | 38 | A | O3'-P | -6.68 | 1.53 | 1.61 |
| 6 | N | 297 | U | O3'-P | 6.65 | 1.69 | 1.61 |
| 1 | I | 354 | A | O3'-P | 6.59 | 1.69 | 1.61 |
| 3 | K | 119 | A | O3'-P | -6.56 | 1.53 | 1.61 |
| 4 | L | 559 | U | O3'-P | -6.55 | 1.53 | 1.61 |
| 5 | M | 424 | U | O3'-P | -6.55 | 1.53 | 1.61 |
| 2 | J | 112 | A | O3'-P | -6.54 | 1.53 | 1.61 |
| 6 | N | 430 | U | O3'-P | -6.53 | 1.53 | 1.61 |
| 1 | I | 292 | A | O3'-P | 6.51 | 1.69 | 1.61 |
| 2 | J | 183 | A | O3'-P | 6.49 | 1.69 | 1.61 |
| 4 | L | 615 | U | O3'-P | -6.49 | 1.53 | 1.61 |
| 3 | K | 100 | A | O3'-P | -6.48 | 1.53 | 1.61 |
| 6 | N | 404 | U | O3'-P | -6.47 | 1.53 | 1.61 |
| 3 | K | 108 | A | O3'-P | -6.46 | 1.53 | 1.61 |
| 2 | J | 126 | A | O3'-P | -6.45 | 1.53 | 1.61 |
| 2 | J | 233 | A | O3'-P | 6.43 | 1.68 | 1.61 |
| 4 | L | 758 | U | O3'-P | 6.43 | 1.68 | 1.61 |
| 1 | I | 405 | A | O3'-P | -6.42 | 1.53 | 1.61 |
| 1 | I | 365 | A | O3'-P | -6.41 | 1.53 | 1.61 |
| 1 | I | 340 | A | O3'-P | -6.40 | 1.53 | 1.61 |
| 4 | L | 569 | U | O3'-P | -6.39 | 1.53 | 1.61 |
| 3 | K | 136 | A | O3'-P | -6.39 | 1.53 | 1.61 |
| 5 | M | 466 | U | O3'-P | 6.38 | 1.68 | 1.61 |
| 3 | K | 80 | A | O3'-P | -6.37 | 1.53 | 1.61 |
| 2 | J | 129 | A | O3'-P | -6.36 | 1.53 | 1.61 |
| 1 | I | 113 | A | O3'-P | -6.36 | 1.53 | 1.61 |
| 2 | J | 102 | A | O3'-P | -6.35 | 1.53 | 1.61 |
| 1 | I | 164 | A | O3'-P | 6.35 | 1.68 | 1.61 |
| 3 | K | 159 | A | O3'-P | 6.33 | 1.68 | 1.61 |
| 1 | I | 31 | A | O3'-P | 6.28 | 1.68 | 1.61 |
| 1 | I | 180 | A | O3'-P | -6.28 | 1.53 | 1.61 |
| 4 | L | 417 | U | O3'-P | 6.26 | 1.68 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 2 | J | 56 | A | O3'-P | -6.25 | 1.53 | 1.61 |
| 5 | M | 374 | U | O3'-P | 6.25 | 1.68 | 1.61 |
| 5 | M | 302 | U | O3'-P | 6.25 | 1.68 | 1.61 |
| 6 | N | 444 | U | O3'-P | 6.23 | 1.68 | 1.61 |
| 4 | L | 776 | U | O3'-P | -6.22 | 1.53 | 1.61 |
| 6 | N | 490 | U | O3'-P | -6.22 | 1.53 | 1.61 |
| 2 | J | 256 | A | O3'-P | 6.22 | 1.68 | 1.61 |
| 4 | L | 666 | U | O3'-P | -6.21 | 1.53 | 1.61 |
| 3 | K | 71 | A | O3'-P | 6.21 | 1.68 | 1.61 |
| 5 | M | 514 | U | O3'-P | -6.21 | 1.53 | 1.61 |
| 5 | M | 323 | U | O3'-P | -6.20 | 1.53 | 1.61 |
| 5 | M | 483 | U | O3'-P | -6.20 | 1.53 | 1.61 |
| 4 | L | 533 | U | O3'-P | -6.20 | 1.53 | 1.61 |
| 5 | M | 333 | U | O3'-P | -6.18 | 1.53 | 1.61 |
| 1 | I | 59 | A | O3'-P | -6.18 | 1.53 | 1.61 |
| 6 | N | 503 | U | O3'-P | 6.18 | 1.68 | 1.61 |
| 1 | I | 332 | A | O3'-P | -6.18 | 1.53 | 1.61 |
| 1 | I | 361 | A | O3'-P | 6.16 | 1.68 | 1.61 |
| 4 | L | 500 | U | O3'-P | -6.15 | 1.53 | 1.61 |
| 2 | J | 220 | A | O3'-P | -6.14 | 1.53 | 1.61 |
| 5 | M | 327 | U | O3'-P | 6.13 | 1.68 | 1.61 |
| 3 | K | 221 | A | O3'-P | 6.10 | 1.68 | 1.61 |
| 1 | I | 296 | A | O3'-P | -6.10 | 1.53 | 1.61 |
| 2 | J | 74 | A | O3'-P | -6.09 | 1.53 | 1.61 |
| 3 | K | 85 | A | O3'-P | 6.05 | 1.68 | 1.61 |
| 1 | I | 124 | A | O3'-P | -6.05 | 1.53 | 1.61 |
| 1 | I | 393 | A | O3'-P | 6.05 | 1.68 | 1.61 |
| 1 | I | 256 | A | O3'-P | -6.05 | 1.53 | 1.61 |
| 1 | I | 51 | A | O3'-P | 6.04 | 1.68 | 1.61 |
| 1 | I | 330 | A | O3'-P | 6.03 | 1.68 | 1.61 |
| 3 | K | 123 | A | O3'-P | -6.03 | 1.53 | 1.61 |
| 4 | L | 760 | U | O3'-P | -6.01 | 1.53 | 1.61 |
| 4 | L | 616 | U | O3'-P | -5.99 | 1.53 | 1.61 |
| 1 | I | 193 | A | O3'-P | 5.99 | 1.68 | 1.61 |
| 4 | L | 736 | U | O3'-P | 5.98 | 1.68 | 1.61 |
| 6 | N | 418 | U | O3'-P | 5.98 | 1.68 | 1.61 |
| 4 | L | 658 | U | O3'-P | 5.97 | 1.68 | 1.61 |
| 1 | I | 154 | A | O3'-P | 5.97 | 1.68 | 1.61 |
| 2 | J | 215 | A | O3'-P | -5.97 | 1.53 | 1.61 |
| 5 | M | 497 | U | O3'-P | -5.96 | 1.53 | 1.61 |
| 1 | I | 282 | A | O3'-P | 5.96 | 1.68 | 1.61 |
| 3 | K | 222 | A | O3'-P | 5.95 | 1.68 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 5 | M | 365 | U | O3'-P | -5.94 | 1.54 | 1.61 |
| 6 | N | 495 | U | O3'-P | 5.94 | 1.68 | 1.61 |
| 2 | J | 258 | A | O3'-P | 5.94 | 1.68 | 1.61 |
| 1 | I | 136 | A | O3'-P | -5.93 | 1.54 | 1.61 |
| 4 | L | 686 | U | O3'-P | 5.93 | 1.68 | 1.61 |
| 4 | L | 464 | U | O3'-P | 5.93 | 1.68 | 1.61 |
| 4 | L | 425 | U | O3'-P | 5.93 | 1.68 | 1.61 |
| 4 | L | 815 | U | O3'-P | -5.92 | 1.54 | 1.61 |
| 2 | J | 180 | A | O3'-P | 5.91 | 1.68 | 1.61 |
| 4 | L | 608 | U | O3'-P | 5.89 | 1.68 | 1.61 |
| 1 | I | 370 | A | O3'-P | 5.88 | 1.68 | 1.61 |
| 4 | L | 735 | U | O3'-P | -5.88 | 1.54 | 1.61 |
| 5 | M | 368 | U | O3'-P | 5.87 | 1.68 | 1.61 |
| 2 | J | 153 | A | O3'-P | -5.87 | 1.54 | 1.61 |
| 4 | L | 540 | U | O3'-P | 5.87 | 1.68 | 1.61 |
| 4 | L | 505 | U | O3'-P | 5.85 | 1.68 | 1.61 |
| 2 | J | 57 | A | O3'-P | -5.83 | 1.54 | 1.61 |
| 2 | J | 51 | A | O3'-P | -5.82 | 1.54 | 1.61 |
| 3 | K | 87 | A | O3'-P | -5.82 | 1.54 | 1.61 |
| 2 | J | 76 | A | O3'-P | -5.82 | 1.54 | 1.61 |
| 6 | N | 443 | U | O3'-P | -5.81 | 1.54 | 1.61 |
| 5 | M | 471 | U | O3'-P | 5.80 | 1.68 | 1.61 |
| 2 | J | 23 | A | O3'-P | 5.78 | 1.68 | 1.61 |
| 4 | L | 415 | U | O3'-P | 5.78 | 1.68 | 1.61 |
| 1 | I | 402 | A | O3'-P | 5.77 | 1.68 | 1.61 |
| 5 | M | 293 | U | O3'-P | -5.76 | 1.54 | 1.61 |
| 1 | I | 285 | A | O3'-P | -5.76 | 1.54 | 1.61 |
| 6 | N | 306 | U | O3'-P | 5.76 | 1.68 | 1.61 |
| 6 | N | 416 | U | O3'-P | 5.74 | 1.68 | 1.61 |
| 1 | I | 152 | A | O3'-P | -5.68 | 1.54 | 1.61 |
| 4 | L | 704 | U | O3'-P | -5.66 | 1.54 | 1.61 |
| 5 | M | 473 | U | O3'-P | -5.65 | 1.54 | 1.61 |
| 5 | M | 432 | U | O3'-P | -5.64 | 1.54 | 1.61 |
| 6 | N | 420 | U | O3'-P | -5.64 | 1.54 | 1.61 |
| 4 | L | 668 | U | O3'-P | -5.62 | 1.54 | 1.61 |
| 2 | J | 60 | A | O3'-P | 5.61 | 1.67 | 1.61 |
| 2 | J | 226 | A | O3'-P | 5.59 | 1.67 | 1.61 |
| 1 | I | 144 | A | O3'-P | 5.58 | 1.67 | 1.61 |
| 1 | I | 78 | A | O3'-P | -5.58 | 1.54 | 1.61 |
| 1 | I | 23 | A | O3'-P | -5.57 | 1.54 | 1.61 |
| 3 | K | 230 | A | O3'-P | 5.52 | 1.67 | 1.61 |
| 5 | M | 303 | U | O3'-P | -5.50 | 1.54 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 5 | M | 375 | U | O3'-P | -5.50 | 1.54 | 1.61 |
| 1 | I | 377 | A | O3'-P | 5.49 | 1.67 | 1.61 |
| 2 | J | 42 | A | O3'-P | -5.49 | 1.54 | 1.61 |
| 5 | M | 465 | U | O3'-P | -5.49 | 1.54 | 1.61 |
| 5 | M | 489 | U | O3'-P | 5.49 | 1.67 | 1.61 |
| 4 | L | 787 | U | O3'-P | 5.48 | 1.67 | 1.61 |
| 5 | M | 437 | U | O3'-P | 5.48 | 1.67 | 1.61 |
| 2 | J | 221 | A | O3'-P | -5.47 | 1.54 | 1.61 |
| 5 | M | 285 | U | O3'-P | -5.47 | 1.54 | 1.61 |
| 5 | M | 522 | U | O3'-P | -5.47 | 1.54 | 1.61 |
| 5 | M | 451 | U | O3'-P | -5.46 | 1.54 | 1.61 |
| 3 | K | 110 | A | O3'-P | 5.44 | 1.67 | 1.61 |
| 6 | N | 293 | U | O3'-P | 5.44 | 1.67 | 1.61 |
| 5 | M | 512 | U | O3'-P | -5.44 | 1.54 | 1.61 |
| 1 | I | 168 | A | O3'-P | 5.43 | 1.67 | 1.61 |
| 3 | K | 98 | A | O3'-P | 5.41 | 1.67 | 1.61 |
| 1 | I | 323 | A | O3'-P | -5.39 | 1.54 | 1.61 |
| 5 | M | 427 | U | O3'-P | -5.39 | 1.54 | 1.61 |
| 1 | I | 316 | A | O3'-P | 5.39 | 1.67 | 1.61 |
| 6 | N | 377 | U | O3'-P | 5.39 | 1.67 | 1.61 |
| 5 | M | 440 | U | O3'-P | 5.37 | 1.67 | 1.61 |
| 1 | I | 335 | A | O3'-P | 5.37 | 1.67 | 1.61 |
| 5 | M | 402 | U | O3'-P | -5.36 | 1.54 | 1.61 |
| 1 | I | 387 | A | O3'-P | 5.35 | 1.67 | 1.61 |
| 4 | L | 490 | U | O3'-P | -5.35 | 1.54 | 1.61 |
| 6 | N | 467 | U | O3'-P | 5.34 | 1.67 | 1.61 |
| 6 | N | 310 | U | O3'-P | -5.34 | 1.54 | 1.61 |
| 6 | N | 355 | U | O3'-P | 5.31 | 1.67 | 1.61 |
| 4 | L | 574 | U | O3'-P | -5.30 | 1.54 | 1.61 |
| 1 | I | 209 | A | O3'-P | -5.30 | 1.54 | 1.61 |
| 1 | I | 339 | A | O3'-P | -5.30 | 1.54 | 1.61 |
| 6 | N | 276 | U | O3'-P | 5.29 | 1.67 | 1.61 |
| 2 | J | 109 | A | O3'-P | 5.28 | 1.67 | 1.61 |
| 2 | J | 9 | A | O3'-P | -5.28 | 1.54 | 1.61 |
| 3 | K | 214 | A | O3'-P | 5.26 | 1.67 | 1.61 |
| 6 | N | 468 | U | O3'-P | 5.26 | 1.67 | 1.61 |
| 2 | J | 136 | A | O3'-P | 5.25 | 1.67 | 1.61 |
| 1 | I | 44 | A | O3'-P | 5.24 | 1.67 | 1.61 |
| 5 | M | 423 | U | O3'-P | -5.22 | 1.54 | 1.61 |
| 5 | M | 383 | U | O3'-P | 5.21 | 1.67 | 1.61 |
| 1 | I | 133 | A | O3'-P | -5.20 | 1.54 | 1.61 |
| 3 | K | 235 | A | O3'-P | 5.20 | 1.67 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 4 | L | 493 | U | O3'-P | 5.19 | 1.67 | 1.61 |
| 1 | I | 17 | A | O3'-P | -5.18 | 1.54 | 1.61 |
| 1 | I | 403 | A | O3'-P | 5.18 | 1.67 | 1.61 |
| 1 | I | 161 | A | O3'-P | 5.17 | 1.67 | 1.61 |
| 1 | I | 298 | A | O3'-P | 5.16 | 1.67 | 1.61 |
| 1 | I | 191 | A | O3'-P | -5.15 | 1.54 | 1.61 |
| 2 | J | 34 | A | O3'-P | 5.15 | 1.67 | 1.61 |
| 5 | M | 482 | U | O3'-P | -5.14 | 1.54 | 1.61 |
| 4 | L | 810 | U | O3'-P | -5.14 | 1.54 | 1.61 |
| 1 | I | 406 | A | O3'-P | -5.13 | 1.54 | 1.61 |
| 3 | K | 162 | A | O3'-P | 5.12 | 1.67 | 1.61 |
| 5 | M | 355 | U | O3'-P | -5.10 | 1.55 | 1.61 |
| 4 | L | 738 | U | O3'-P | -5.10 | 1.55 | 1.61 |
| 4 | L | 630 | U | O3'-P | 5.06 | 1.67 | 1.61 |
| 4 | L | 548 | U | O3'-P | -5.06 | 1.55 | 1.61 |
| 3 | K | 250 | A | O3'-P | 5.05 | 1.67 | 1.61 |
| 4 | L | 696 | U | O3'-P | -5.05 | 1.55 | 1.61 |
| 6 | N | 474 | U | O3'-P | -5.03 | 1.55 | 1.61 |
| 1 | I | 218 | A | O3'-P | 5.01 | 1.67 | 1.61 |
| 3 | K | 36 | A | O3'-P | 5.00 | 1.67 | 1.61 |

All (4644) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 4 | L | 722 | U | OP2-P-O3' | -44.48 | 7.35 | 105.20 |
| 3 | K | 120 | A | P-O3'-C3' | -44.33 | 66.50 | 119.70 |
| 1 | I | 101 | A | OP2-P-O3' | -41.80 | 13.24 | 105.20 |
| 2 | J | 223 | A | P-O3'-C3' | -41.00 | 70.50 | 119.70 |
| 2 | J | 92 | A | OP2-P-O3' | -40.81 | 15.42 | 105.20 |
| 2 | J | 171 | A | OP2-P-O3' | -39.62 | 18.04 | 105.20 |
| 3 | K | 167 | A | P-O3'-C3' | -38.76 | 73.18 | 119.70 |
| 4 | L | 758 | U | P-O3'-C3' | -38.54 | 73.45 | 119.70 |
| 1 | I | 95 | A | OP2-P-O3' | -38.49 | 20.52 | 105.20 |
| 4 | L | 706 | U | P-O3'-C3' | -38.49 | 73.52 | 119.70 |
| 6 | N | 278 | U | P-O3'-C3' | -38.48 | 73.52 | 119.70 |
| 1 | I | 140 | A | OP2-P-O3' | -37.86 | 21.90 | 105.20 |
| 5 | M | 337 | U | P-O3'-C3' | -37.26 | 74.99 | 119.70 |
| 1 | I | 4 | A | OP2-P-O3' | -37.25 | 23.25 | 105.20 |
| 4 | L | 728 | U | OP2-P-O3' | -36.75 | 24.35 | 105.20 |
| 2 | J | 145 | A | P-O3'-C3' | -36.33 | 76.10 | 119.70 |
| 1 | I | 134 | A | OP1-P-O3' | -36.10 | 25.78 | 105.20 |
| 3 | K | 155 | A | P-O3'-C3' | -35.80 | 76.74 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1 | I | 143 | A | OP2-P-O3' | -35.41 | 27.30 | 105.20 |
| 1 | I | 66 | A | P-O3'-C3' | -35.40 | 77.22 | 119.70 |
| 4 | L | 694 | U | P-O3'-C3' | -35.17 | 77.49 | 119.70 |
| 3 | K | 124 | A | OP2-P-O3' | -35.12 | 27.95 | 105.20 |
| 1 | I | 68 | A | P-O3'-C3' | -34.84 | 77.89 | 119.70 |
| 3 | K | 203 | A | OP2-P-O3' | -34.79 | 28.65 | 105.20 |
| 1 | I | 267 | A | OP2-P-O3' | -34.56 | 29.16 | 105.20 |
| 4 | L | 497 | U | P-O3'-C3' | -34.36 | 78.47 | 119.70 |
| 4 | L | 531 | U | P-O3'-C3' | -34.27 | 78.57 | 119.70 |
| 5 | M | 465 | U | P-O3'-C3' | -34.11 | 78.77 | 119.70 |
| 6 | N | 425 | U | O3'-P-O5' | -33.80 | 39.77 | 104.00 |
| 3 | K | 251 | A | P-O3'-C3' | -33.56 | 79.43 | 119.70 |
| 1 | I | 232 | A | P-O3'-C3' | -33.29 | 79.75 | 119.70 |
| 2 | J | 183 | A | P-O3'-C3' | -33.26 | 79.79 | 119.70 |
| 2 | J | 29 | A | P-O3'-C3' | -33.25 | 79.80 | 119.70 |
| 1 | I | 231 | A | P-O3'-C3' | -33.12 | 79.95 | 119.70 |
| 4 | L | 767 | U | OP2-P-O3' | -32.98 | 32.65 | 105.20 |
| 4 | L | 712 | U | O3'-P-O5' | -32.94 | 41.42 | 104.00 |
| 1 | I | 283 | A | OP2-P-O3' | -32.84 | 32.95 | 105.20 |
| 1 | I | 376 | A | OP2-P-O3' | -32.78 | 33.08 | 105.20 |
| 4 | L | 712 | U | P-O3'-C3' | -32.63 | 80.54 | 119.70 |
| 2 | J | 83 | A | OP2-P-O3' | -32.45 | 33.82 | 105.20 |
| 5 | M | 489 | U | P-O3'-C3' | -32.30 | 80.94 | 119.70 |
| 4 | L | 742 | U | OP2-P-O3' | -32.24 | 34.27 | 105.20 |
| 4 | L | 532 | U | P-O3'-C3' | -32.10 | 81.18 | 119.70 |
| 2 | J | 216 | A | OP2-P-O3' | -32.10 | 34.58 | 105.20 |
| 3 | K | 100 | A | P-O3'-C3' | -32.08 | 81.21 | 119.70 |
| 5 | M | 336 | U | P-O3'-C3' | -31.93 | 81.39 | 119.70 |
| 4 | L | 554 | U | OP2-P-O3' | -31.87 | 35.09 | 105.20 |
| 5 | M | 334 | U | P-O3'-C3' | -31.80 | 81.54 | 119.70 |
| 1 | I | 86 | A | P-O3'-C3' | -31.79 | 81.55 | 119.70 |
| 1 | I | 16 | A | P-O3'-C3' | -31.68 | 81.68 | 119.70 |
| 4 | L | 765 | U | P-O3'-C3' | -31.66 | 81.71 | 119.70 |
| 5 | M | 538 | U | P-O3'-C3' | -31.60 | 81.78 | 119.70 |
| 2 | J | 222 | A | P-O3'-C3' | -31.39 | 82.03 | 119.70 |
| 5 | M | 454 | U | P-O3'-C3' | -31.30 | 82.14 | 119.70 |
| 2 | J | 43 | A | P-O3'-C3' | -31.29 | 82.16 | 119.70 |
| 5 | M | 537 | U | P-O3'-C3' | -31.27 | 82.17 | 119.70 |
| 1 | I | 175 | A | OP2-P-O3' | -31.12 | 36.74 | 105.20 |
| 1 | I | 72 | A | P-O3'-C3' | -31.10 | 82.38 | 119.70 |
| 3 | K | 164 | A | P-O3'-C3' | -31.04 | 82.45 | 119.70 |
| 3 | K | 254 | A | P-O3'-C3' | -31.02 | 82.47 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1 | I | 342 | A | P-O3'-C3' | -30.89 | 82.63 | 119.70 |
| 1 | I | 135 | A | P-O3'-C3' | -30.77 | 82.78 | 119.70 |
| 2 | J | 236 | A | OP2-P-O3' | -30.76 | 37.53 | 105.20 |
| 3 | K | 101 | A | P-O3'-C3' | -30.57 | 83.01 | 119.70 |
| 1 | I | 65 | A | P-O3'-C3' | -30.56 | 83.03 | 119.70 |
| 5 | M | 335 | U | P-O3'-C3' | -30.48 | 83.12 | 119.70 |
| 1 | I | 128 | A | P-O3'-C3' | -30.48 | 83.13 | 119.70 |
| 1 | I | 280 | A | OP2-P-O3' | -30.36 | 38.40 | 105.20 |
| 6 | N | 460 | U | OP2-P-O3' | -30.27 | 38.61 | 105.20 |
| 3 | K | 154 | A | P-O3'-C3' | -30.23 | 83.42 | 119.70 |
| 5 | M | 495 | U | P-O3'-C3' | -30.04 | 83.65 | 119.70 |
| 5 | M | 334 | U | OP2-P-O3' | 29.85 | 170.87 | 105.20 |
| 5 | M | 453 | U | O3'-P-O5' | -29.83 | 47.33 | 104.00 |
| 3 | K | 119 | A | P-O3'-C3' | -29.75 | 84.00 | 119.70 |
| 3 | K | 117 | A | OP2-P-O3' | -29.68 | 39.90 | 105.20 |
| 4 | L | 764 | U | P-O3'-C3' | -29.64 | 84.13 | 119.70 |
| 4 | L | 750 | U | OP2-P-O3' | -29.63 | 40.01 | 105.20 |
| 2 | J | 116 | A | OP2-P-O3' | -29.48 | 40.33 | 105.20 |
| 5 | M | 530 | U | P-O3'-C3' | -29.36 | 84.47 | 119.70 |
| 4 | L | 472 | U | OP2-P-O3' | -29.33 | 40.67 | 105.20 |
| 1 | I | 322 | A | P-O3'-C3' | -29.24 | 84.61 | 119.70 |
| 1 | I | 269 | A | P-O3'-C3' | -29.24 | 84.61 | 119.70 |
| 4 | L | 759 | U | P-O3'-C3' | -29.22 | 84.64 | 119.70 |
| 1 | I | 162 | A | P-O3'-C3' | -29.07 | 84.82 | 119.70 |
| 2 | J | 165 | A | OP2-P-O3' | -29.07 | 41.25 | 105.20 |
| 4 | L | 713 | U | P-O3'-C3' | -28.98 | 84.92 | 119.70 |
| 4 | L | 448 | U | OP2-P-O3' | -28.96 | 41.49 | 105.20 |
| 4 | L | 811 | U | O3'-P-O5' | -28.86 | 49.18 | 104.00 |
| 5 | M | 480 | U | OP2-P-O3' | -28.67 | 42.14 | 105.20 |
| 1 | I | 15 | A | P-O3'-C3' | -28.57 | 85.42 | 119.70 |
| 6 | N | 279 | U | P-O3'-C3' | -28.55 | 85.44 | 119.70 |
| 4 | L | 811 | U | P-O3'-C3' | -28.53 | 85.47 | 119.70 |
| 4 | L | 766 | U | O3'-P-O5' | -28.47 | 49.91 | 104.00 |
| 5 | M | 466 | U | P-O3'-C3' | -28.46 | 85.55 | 119.70 |
| 1 | I | 164 | A | OP2-P-O3' | -28.38 | 42.77 | 105.20 |
| 3 | K | 89 | A | OP2-P-O3' | -28.34 | 42.85 | 105.20 |
| 4 | L | 807 | U | P-O3'-C3' | -28.34 | 85.70 | 119.70 |
| 2 | J | 55 | A | P-O3'-C3' | -28.30 | 85.74 | 119.70 |
| 3 | K | 87 | A | P-O3'-C3' | -28.26 | 85.79 | 119.70 |
| 5 | M | 469 | U | OP2-P-O3' | -28.16 | 43.25 | 105.20 |
| 4 | L | 675 | U | P-O3'-C3' | -28.08 | 86.00 | 119.70 |
| 1 | I | 266 | A | P-O3'-C3' | -28.04 | 86.06 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 5 | M | 328 | U | O3'-P-O5' | 28.03 | 157.26 | 104.00 |
| 5 | M | 387 | U | OP2-P-O3' | -27.95 | 43.71 | 105.20 |
| 4 | L | 530 | U | P-O3'-C3' | -27.91 | 86.21 | 119.70 |
| 5 | M | 368 | U | P-O3'-C3' | -27.89 | 86.23 | 119.70 |
| 5 | M | 406 | U | P-O3'-C3' | -27.88 | 86.24 | 119.70 |
| 3 | K | 253 | A | P-O3'-C3' | -27.87 | 86.26 | 119.70 |
| 3 | K | 105 | A | O3'-P-O5' | -27.76 | 51.26 | 104.00 |
| 3 | K | 154 | A | O3'-P-O5' | -27.74 | 51.29 | 104.00 |
| 1 | I | 179 | A | P-O3'-C3' | -27.74 | 86.41 | 119.70 |
| 1 | I | 43 | A | OP2-P-O3' | -27.72 | 44.22 | 105.20 |
| 4 | L | 713 | U | O3'-P-O5' | -27.66 | 51.44 | 104.00 |
| 3 | K | 121 | A | P-O3'-C3' | -27.57 | 86.62 | 119.70 |
| 4 | L | 711 | U | O3'-P-O5' | -27.53 | 51.69 | 104.00 |
| 4 | L | 779 | U | P-O3'-C3' | -27.49 | 86.71 | 119.70 |
| 2 | J | 186 | A | P-O3'-C3' | -27.43 | 86.78 | 119.70 |
| 1 | I | 250 | A | O3'-P-O5' | -27.40 | 51.94 | 104.00 |
| 3 | K | 109 | A | P-O3'-C3' | -27.39 | 86.84 | 119.70 |
| 2 | J | 89 | A | OP2-P-O3' | -27.30 | 45.13 | 105.20 |
| 4 | L | 699 | U | P-O3'-C3' | -27.29 | 86.95 | 119.70 |
| 5 | M | 488 | U | P-O3'-C3' | -27.26 | 86.99 | 119.70 |
| 1 | I | 129 | A | P-O3'-C3' | -27.24 | 87.01 | 119.70 |
| 1 | I | 31 | A | OP2-P-O3' | -27.08 | 45.63 | 105.20 |
| 1 | I | 137 | A | P-O3'-C3' | -26.98 | 87.32 | 119.70 |
| 3 | K | 71 | A | OP2-P-O3' | -26.96 | 45.88 | 105.20 |
| 1 | I | 13 | A | O3'-P-O5' | -26.90 | 52.89 | 104.00 |
| 4 | L | 437 | U | OP2-P-O3' | -26.83 | 46.17 | 105.20 |
| 5 | M | 319 | U | P-O3'-C3' | -26.82 | 87.52 | 119.70 |
| 2 | J | 201 | A | P-O3'-C3' | -26.79 | 87.56 | 119.70 |
| 1 | I | 233 | A | P-O3'-C3' | -26.76 | 87.58 | 119.70 |
| 5 | M | 488 | U | O3'-P-O5' | -26.76 | 53.16 | 104.00 |
| 4 | L | 724 | U | P-O3'-C3' | -26.75 | 87.60 | 119.70 |
| 1 | I | 73 | A | O3'-P-O5' | -26.73 | 53.22 | 104.00 |
| 1 | I | 54 | A | OP2-P-O3' | -26.71 | 46.44 | 105.20 |
| 2 | J | 204 | A | O3'-P-O5' | -26.66 | 53.34 | 104.00 |
| 5 | M | 386 | U | OP2-P-O3' | -26.62 | 46.64 | 105.20 |
| 1 | I | 349 | A | P-O3'-C3' | -26.61 | 87.77 | 119.70 |
| 2 | J | 182 | A | P-O3'-C3' | -26.61 | 87.77 | 119.70 |
| 6 | N | 440 | U | P-O3'-C3' | -26.59 | 87.79 | 119.70 |
| 5 | M | 319 | U | OP2-P-O3' | 26.58 | 163.67 | 105.20 |
| 1 | I | 329 | A | P-O3'-C3' | -26.49 | 87.91 | 119.70 |
| 4 | L | 723 | U | O3'-P-O5' | -26.47 | 53.70 | 104.00 |
| 1 | I | 282 | A | OP2-P-O3' | -26.44 | 47.04 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 4 | L | 819 | U | OP2-P-O3' | -26.38 | 47.16 | 105.20 |
| 5 | M | 531 | U | P-O3'-C3' | -26.36 | 88.06 | 119.70 |
| 3 | K | 97 | A | P-O3'-C3' | -26.33 | 88.11 | 119.70 |
| 5 | M | 498 | U | OP2-P-O3' | -26.32 | 47.29 | 105.20 |
| 2 | J | 205 | A | P-O3'-C3' | -26.29 | 88.16 | 119.70 |
| 5 | M | 444 | U | OP2-P-O3' | -26.25 | 47.46 | 105.20 |
| 1 | I | 334 | A | P-O3'-C3' | -26.22 | 88.23 | 119.70 |
| 6 | N | 443 | U | P-O3'-C3' | -26.20 | 88.25 | 119.70 |
| 5 | M | 327 | U | O3'-P-O5' | 26.18 | 153.75 | 104.00 |
| 1 | I | 181 | A | P-O3'-C3' | -26.10 | 88.38 | 119.70 |
| 2 | J | 204 | A | P-O3'-C3' | -26.07 | 88.42 | 119.70 |
| 3 | K | 108 | A | P-O3'-C3' | -26.07 | 88.42 | 119.70 |
| 5 | M | 547 | U | OP2-P-O3' | -26.06 | 47.86 | 105.20 |
| 1 | I | 261 | A | O3'-P-O5' | -26.02 | 54.56 | 104.00 |
| 4 | L | 719 | U | OP2-P-O3' | -26.01 | 47.97 | 105.20 |
| 5 | M | 333 | U | P-O3'-C3' | -25.99 | 88.52 | 119.70 |
| 4 | L | 642 | U | P-O3'-C3' | -25.97 | 88.54 | 119.70 |
| 2 | J | 128 | A | P-O3'-C3' | -25.91 | 88.61 | 119.70 |
| 5 | M | 468 | U | OP2-P-O3' | -25.87 | 48.30 | 105.20 |
| 2 | J | 97 | A | OP2-P-O3' | -25.86 | 48.30 | 105.20 |
| 5 | M | 350 | U | P-O3'-C3' | -25.85 | 88.68 | 119.70 |
| 1 | I | 341 | A | P-O3'-C3' | -25.78 | 88.77 | 119.70 |
| 4 | L | 478 | U | P-O3'-C3' | -25.73 | 88.83 | 119.70 |
| 4 | L | 551 | U | OP2-P-O3' | -25.71 | 48.63 | 105.20 |
| 4 | L | 638 | U | P-O3'-C3' | -25.68 | 88.89 | 119.70 |
| 1 | I | 46 | A | OP2-P-O3' | -25.65 | 48.76 | 105.20 |
| 1 | I | 71 | A | P-O3'-C3' | -25.65 | 88.92 | 119.70 |
| 3 | K | 65 | A | P-O3'-C3' | -25.59 | 89.00 | 119.70 |
| 2 | J | 210 | A | P-O3'-C3' | -25.58 | 89.01 | 119.70 |
| 1 | I | 21 | A | O3'-P-O5' | -25.57 | 55.43 | 104.00 |
| 1 | I | 286 | A | P-O3'-C3' | -25.54 | 89.05 | 119.70 |
| 5 | M | 457 | U | P-O3'-C3' | -25.49 | 89.12 | 119.70 |
| 2 | J | 12 | A | P-O3'-C3' | -25.43 | 89.18 | 119.70 |
| 2 | J | 47 | A | P-O3'-C3' | -25.43 | 89.19 | 119.70 |
| 2 | J | 224 | A | P-O3'-C3' | -25.41 | 89.20 | 119.70 |
| 6 | N | 451 | U | P-O3'-C3' | -25.34 | 89.29 | 119.70 |
| 2 | J | 43 | A | OP2-P-O3' | 25.34 | 160.95 | 105.20 |
| 1 | I | 198 | A | OP2-P-O3' | -25.32 | 49.49 | 105.20 |
| 5 | M | 438 | U | P-O3'-C3' | -25.27 | 89.38 | 119.70 |
| 1 | I | 67 | A | P-O3'-C3' | -25.26 | 89.39 | 119.70 |
| 5 | M | 437 | U | P-O3'-C3' | -25.24 | 89.41 | 119.70 |
| 3 | K | 155 | A | O3'-P-O5' | -25.21 | 56.09 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 3 | K | 147 | A | OP2-P-O3' | -25.15 | 49.88 | 105.20 |
| 1 | I | 259 | A | P-O3'-C3' | -25.12 | 89.56 | 119.70 |
| 4 | L | 680 | U | OP2-P-O3' | -25.09 | 49.99 | 105.20 |
| 1 | I | 243 | A | P-O3'-C3' | -25.09 | 89.59 | 119.70 |
| 3 | K | 100 | A | OP2-P-O3' | 25.09 | 160.39 | 105.20 |
| 5 | M | 349 | U | P-O3'-C3' | -25.08 | 89.60 | 119.70 |
| 3 | K | 98 | A | P-O3'-C3' | -25.08 | 89.61 | 119.70 |
| 2 | J | 28 | A | P-O3'-C3' | -25.07 | 89.62 | 119.70 |
| 5 | M | 454 | U | O3'-P-O5' | -25.04 | 56.42 | 104.00 |
| 6 | N | 442 | U | P-O3'-C3' | -24.99 | 89.71 | 119.70 |
| 3 | K | 146 | A | OP2-P-O3' | -24.95 | 50.31 | 105.20 |
| 4 | L | 497 | U | OP2-P-O3' | 24.95 | 160.08 | 105.20 |
| 6 | N | 311 | U | O3'-P-O5' | -24.91 | 56.67 | 104.00 |
| 5 | M | 299 | U | P-O3'-C3' | -24.91 | 89.81 | 119.70 |
| 1 | I | 14 | A | O3'-P-O5' | -24.89 | 56.71 | 104.00 |
| 2 | J | 205 | A | OP2-P-O3' | 24.87 | 159.91 | 105.20 |
| 6 | N | 486 | U | O3'-P-O5' | -24.80 | 56.88 | 104.00 |
| 1 | I | 265 | A | P-O3'-C3' | -24.78 | 89.96 | 119.70 |
| 1 | I | 26 | A | P-O3'-C3' | -24.74 | 90.01 | 119.70 |
| 4 | L | 576 | U | P-O3'-C3' | -24.70 | 90.06 | 119.70 |
| 1 | I | 232 | A | OP2-P-O3' | 24.66 | 159.45 | 105.20 |
| 5 | M | 519 | U | P-O3'-C3' | -24.66 | 90.11 | 119.70 |
| 5 | M | 485 | U | P-O3'-C3' | -24.65 | 90.12 | 119.70 |
| 5 | M | 373 | U | P-O3'-C3' | -24.64 | 90.13 | 119.70 |
| 5 | M | 418 | U | P-O3'-C3' | -24.62 | 90.16 | 119.70 |
| 1 | I | 13 | A | P-O3'-C3' | -24.60 | 90.17 | 119.70 |
| 1 | I | 67 | A | O3'-P-O5' | -24.57 | 57.32 | 104.00 |
| 6 | N | 424 | U | O3'-P-O5' | -24.56 | 57.34 | 104.00 |
| 4 | L | 765 | U | OP2-P-O3' | 24.42 | 158.93 | 105.20 |
| 4 | L | 763 | U | O3'-P-O5' | -24.39 | 57.67 | 104.00 |
| 4 | L | 758 | U | OP2-P-O3' | 24.38 | 158.84 | 105.20 |
| 6 | N | 473 | U | O3'-P-O5' | -24.36 | 57.71 | 104.00 |
| 4 | L | 705 | U | P-O3'-C3' | -24.35 | 90.48 | 119.70 |
| 2 | J | 29 | A | OP2-P-O3' | 24.34 | 158.76 | 105.20 |
| 4 | L | 812 | U | P-O3'-C3' | -24.31 | 90.52 | 119.70 |
| 6 | N | 450 | U | O3'-P-O5' | -24.31 | 57.81 | 104.00 |
| 1 | I | 310 | A | P-O3'-C3' | -24.28 | 90.56 | 119.70 |
| 1 | I | 222 | A | P-O3'-C3' | -24.27 | 90.57 | 119.70 |
| 1 | I | 79 | A | P-O3'-C3' | -24.27 | 90.58 | 119.70 |
| 3 | K | 106 | A | O3'-P-O5' | -24.26 | 57.90 | 104.00 |
| 1 | I | 14 | A | P-O3'-C3' | -24.26 | 90.59 | 119.70 |
| 6 | N | 305 | U | O3'-P-O5' | -24.23 | 57.97 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 4 | L | 711 | U | P-O3'-C3' | -24.22 | 90.64 | 119.70 |
| 5 | M | 534 | U | OP2-P-O3' | -24.21 | 51.93 | 105.20 |
| 3 | K | 99 | A | P-O3'-C3' | -24.21 | 90.65 | 119.70 |
| 3 | K | 168 | A | OP2-P-O3' | 24.21 | 158.45 | 105.20 |
| 2 | J | 51 | A | O3'-P-O5' | -24.20 | 58.03 | 104.00 |
| 4 | L | 517 | U | P-O3'-C3' | -24.18 | 90.68 | 119.70 |
| 1 | I | 113 | A | O3'-P-O5' | -24.14 | 58.13 | 104.00 |
| 4 | L | 780 | U | P-O3'-C3' | -24.13 | 90.74 | 119.70 |
| 6 | N | 459 | U | OP2-P-O3' | -24.13 | 52.11 | 105.20 |
| 2 | J | 56 | A | P-O3'-C3' | -24.09 | 90.79 | 119.70 |
| 2 | J | 178 | A | P-O3'-C3' | -24.04 | 90.85 | 119.70 |
| 6 | N | 430 | U | P-O3'-C3' | -24.04 | 90.86 | 119.70 |
| 3 | K | 118 | A | P-O3'-C3' | -24.03 | 90.86 | 119.70 |
| 5 | M | 336 | U | OP2-P-O3' | 24.02 | 158.05 | 105.20 |
| 3 | K | 54 | A | OP2-P-O3' | -23.99 | 52.42 | 105.20 |
| 5 | M | 296 | U | P-O3'-C3' | -23.94 | 90.97 | 119.70 |
| 1 | I | 74 | A | O3'-P-O5' | -23.92 | 58.55 | 104.00 |
| 4 | L | 577 | U | P-O3'-C3' | -23.89 | 91.03 | 119.70 |
| 2 | J | 79 | A | P-O3'-C3' | -23.87 | 91.06 | 119.70 |
| 6 | N | 450 | U | P-O3'-C3' | -23.87 | 91.06 | 119.70 |
| 1 | I | 305 | A | P-O3'-C3' | -23.83 | 91.10 | 119.70 |
| 5 | M | 510 | U | O3'-P-O5' | -23.80 | 58.77 | 104.00 |
| 5 | M | 530 | U | OP2-P-O3' | 23.80 | 157.55 | 105.20 |
| 5 | M | 489 | U | OP2-P-O3' | 23.79 | 157.54 | 105.20 |
| 2 | J | 37 | A | P-O3'-C3' | -23.79 | 91.15 | 119.70 |
| 1 | I | 262 | A | P-O3'-C3' | -23.78 | 91.16 | 119.70 |
| 5 | M | 504 | U | P-O3'-C3' | -23.75 | 91.20 | 119.70 |
| 1 | I | 240 | A | OP2-P-O3' | -23.63 | 53.21 | 105.20 |
| 5 | M | 458 | U | P-O3'-C3' | -23.62 | 91.36 | 119.70 |
| 4 | L | 558 | U | P-O3'-C3' | -23.59 | 91.39 | 119.70 |
| 2 | J | 48 | A | P-O3'-C3' | -23.56 | 91.42 | 119.70 |
| 2 | J | 68 | A | P-O3'-C3' | -23.56 | 91.43 | 119.70 |
| 6 | N | 316 | U | O3'-P-O5' | -23.52 | 59.31 | 104.00 |
| 5 | M | 354 | U | OP2-P-O3' | -23.52 | 53.47 | 105.20 |
| 4 | L | 755 | U | P-O3'-C3' | -23.51 | 91.49 | 119.70 |
| 1 | I | 119 | A | P-O3'-C3' | -23.50 | 91.50 | 119.70 |
| 2 | J | 207 | A | P-O3'-C3' | -23.50 | 91.50 | 119.70 |
| 2 | J | 69 | A | P-O3'-C3' | -23.48 | 91.53 | 119.70 |
| 5 | M | 323 | U | OP2-P-O3' | 23.48 | 156.85 | 105.20 |
| 1 | I | 321 | A | P-O3'-C3' | -23.44 | 91.57 | 119.70 |
| 4 | L | 776 | U | P-O3'-C3' | -23.44 | 91.57 | 119.70 |
| 5 | M | 329 | U | O3'-P-O5' | 23.44 | 148.53 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 4 | L | 747 | U | P-O3'-C3' | -23.41 | 91.61 | 119.70 |
| 1 | I | 133 | A | OP2-P-O3' | 23.40 | 156.69 | 105.20 |
| 4 | L | 815 | U | P-O3'-C3' | -23.36 | 91.66 | 119.70 |
| 3 | K | 102 | A | O3'-P-O5' | 23.36 | 148.38 | 104.00 |
| 1 | I | 156 | A | O3'-P-O5' | -23.36 | 59.63 | 104.00 |
| 1 | I | 76 | A | P-O3'-C3' | -23.30 | 91.73 | 119.70 |
| 4 | L | 521 | U | P-O3'-C3' | -23.30 | 91.74 | 119.70 |
| 2 | J | 126 | A | P-O3'-C3' | -23.29 | 91.75 | 119.70 |
| 4 | L | 724 | U | OP2-P-O3' | 23.28 | 156.42 | 105.20 |
| 1 | I | 186 | A | O3'-P-O5' | 23.27 | 148.21 | 104.00 |
| 3 | K | 138 | A | OP2-P-O3' | -23.27 | 54.02 | 105.20 |
| 1 | I | 348 | A | P-O3'-C3' | -23.18 | 91.89 | 119.70 |
| 1 | I | 82 | A | P-O3'-C3' | -23.17 | 91.89 | 119.70 |
| 2 | J | 70 | A | P-O3'-C3' | -23.17 | 91.90 | 119.70 |
| 4 | L | 498 | U | P-O3'-C3' | -23.15 | 91.92 | 119.70 |
| 5 | M | 406 | U | OP2-P-O3' | 23.15 | 156.12 | 105.20 |
| 3 | K | 181 | A | OP2-P-O3' | -23.13 | 54.31 | 105.20 |
| 4 | L | 695 | U | P-O3'-C3' | -23.12 | 91.95 | 119.70 |
| 6 | N | 431 | U | P-O3'-C3' | -23.09 | 92.00 | 119.70 |
| 1 | I | 258 | A | P-O3'-C3' | -23.07 | 92.02 | 119.70 |
| 2 | J | 99 | A | O3'-P-O5' | -23.05 | 60.21 | 104.00 |
| 2 | J | 42 | A | O3'-P-O5' | -23.03 | 60.25 | 104.00 |
| 1 | I | 256 | A | P-O3'-C3' | -23.00 | 92.11 | 119.70 |
| 4 | L | 685 | U | OP2-P-O3' | -22.99 | 54.63 | 105.20 |
| 1 | I | 323 | A | P-O3'-C3' | -22.98 | 92.12 | 119.70 |
| 1 | I | 250 | A | P-O3'-C3' | -22.97 | 92.13 | 119.70 |
| 1 | I | 269 | A | OP2-P-O3' | 22.97 | 155.73 | 105.20 |
| 3 | K | 165 | A | P-O3'-C3' | -22.94 | 92.17 | 119.70 |
| 6 | N | 458 | U | OP2-P-O3' | -22.93 | 54.75 | 105.20 |
| 4 | L | 757 | U | O3'-P-O5' | -22.92 | 60.45 | 104.00 |
| 1 | I | 77 | A | P-O3'-C3' | -22.90 | 92.22 | 119.70 |
| 4 | L | 774 | U | O3'-P-O5' | 22.88 | 147.47 | 104.00 |
| 5 | M | 337 | U | OP2-P-O3' | 22.86 | 155.49 | 105.20 |
| 1 | I | 278 | A | O3'-P-O5' | -22.85 | 60.59 | 104.00 |
| 1 | I | 260 | A | P-O3'-C3' | -22.82 | 92.32 | 119.70 |
| 1 | I | 354 | A | P-O3'-C3' | -22.73 | 92.42 | 119.70 |
| 5 | M | 339 | U | P-O3'-C3' | -22.67 | 92.49 | 119.70 |
| 5 | M | 323 | U | O3'-P-O5' | -22.66 | 60.95 | 104.00 |
| 3 | K | 212 | A | O3'-P-O5' | -22.63 | 61.01 | 104.00 |
| 4 | L | 803 | U | O3'-P-O5' | -22.62 | 61.02 | 104.00 |
| 4 | L | 516 | U | P-O3'-C3' | -22.56 | 92.62 | 119.70 |
| 1 | I | 65 | A | OP2-P-O3' | 22.56 | 154.83 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 2 | J | 69 | A | OP2-P-O3' | 22.52 | 154.75 | 105.20 |
| 2 | J | 84 | A | P-O3'-C3' | -22.52 | 92.67 | 119.70 |
| 1 | I | 136 | A | P-O3'-C3' | -22.52 | 92.67 | 119.70 |
| 1 | I | 148 | A | P-O3'-C3' | -22.52 | 92.68 | 119.70 |
| 2 | J | 89 | A | O3'-P-O5' | 22.49 | 146.72 | 104.00 |
| 4 | L | 500 | U | P-O3'-C3' | -22.48 | 92.72 | 119.70 |
| 1 | I | 84 | A | OP2-P-O3' | -22.46 | 55.78 | 105.20 |
| 3 | K | 168 | A | P-O3'-C3' | -22.45 | 92.76 | 119.70 |
| 5 | M | 347 | U | P-O3'-C3' | -22.45 | 92.76 | 119.70 |
| 1 | I | 15 | A | OP2-P-O3' | 22.43 | 154.55 | 105.20 |
| 6 | N | 421 | U | P-O3'-C3' | -22.42 | 92.80 | 119.70 |
| 4 | L | 810 | U | O3'-P-O5' | -22.41 | 61.41 | 104.00 |
| 4 | L | 549 | U | O3'-P-O5' | -22.37 | 61.49 | 104.00 |
| 1 | I | 332 | A | P-O3'-C3' | -22.37 | 92.86 | 119.70 |
| 2 | J | 44 | A | P-O3'-C3' | -22.35 | 92.88 | 119.70 |
| 4 | L | 704 | U | P-O3'-C3' | -22.34 | 92.89 | 119.70 |
| 5 | M | 372 | U | P-O3'-C3' | -22.32 | 92.91 | 119.70 |
| 1 | I | 66 | A | OP2-P-O3' | 22.24 | 154.13 | 105.20 |
| 6 | N | 312 | U | O3'-P-O5' | -22.22 | 61.79 | 104.00 |
| 3 | K | 204 | A | O3'-P-O5' | -22.21 | 61.80 | 104.00 |
| 3 | K | 253 | A | OP2-P-O3' | 22.21 | 154.06 | 105.20 |
| 4 | L | 566 | U | P-O3'-C3' | -22.18 | 93.09 | 119.70 |
| 1 | I | 18 | A | P-O3'-C3' | -22.16 | 93.11 | 119.70 |
| 5 | M | 297 | U | P-O3'-C3' | -22.14 | 93.13 | 119.70 |
| 1 | I | 69 | A | P-O3'-C3' | -22.12 | 93.16 | 119.70 |
| 3 | K | 89 | A | O3'-P-O5' | 22.12 | 146.02 | 104.00 |
| 1 | I | 47 | A | OP2-P-O3' | -22.11 | 56.56 | 105.20 |
| 2 | J | 219 | A | P-O3'-C3' | -22.11 | 93.17 | 119.70 |
| 1 | I | 245 | A | OP2-P-O3' | -22.07 | 56.66 | 105.20 |
| 3 | K | 135 | A | OP2-P-O3' | -22.04 | 56.72 | 105.20 |
| 2 | J | 118 | A | OP2-P-O3' | -22.02 | 56.76 | 105.20 |
| 1 | I | 245 | A | O3'-P-O5' | 22.01 | 145.82 | 104.00 |
| 4 | L | 775 | U | P-O3'-C3' | -21.98 | 93.32 | 119.70 |
| 5 | M | 320 | U | P-O3'-C3' | -21.98 | 93.33 | 119.70 |
| 3 | K | 192 | A | O3'-P-O5' | -21.96 | 62.28 | 104.00 |
| 4 | L | 751 | U | O3'-P-O5' | -21.95 | 62.30 | 104.00 |
| 3 | K | 250 | A | P-O3'-C3' | -21.95 | 93.37 | 119.70 |
| 4 | L | 745 | U | O3'-P-O5' | 21.94 | 145.68 | 104.00 |
| 6 | N | 477 | U | P-O3'-C3' | -21.90 | 93.42 | 119.70 |
| 6 | N | 476 | U | P-O3'-C3' | -21.89 | 93.43 | 119.70 |
| 6 | N | 426 | U | OP2-P-O3' | 21.86 | 153.29 | 105.20 |
| 3 | K | 97 | A | OP2-P-O3' | 21.84 | 153.26 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1 | I | 40 | A | OP2-P-O3' | -21.83 | 57.17 | 105.20 |
| 5 | M | 453 | U | P-O3'-C3' | -21.81 | 93.52 | 119.70 |
| 6 | N | 416 | U | OP2-P-O3' | 21.80 | 153.15 | 105.20 |
| 5 | M | 335 | U | O3'-P-O5' | -21.79 | 62.60 | 104.00 |
| 5 | M | 458 | U | OP2-P-O3' | 21.78 | 153.13 | 105.20 |
| 5 | M | 501 | U | O3'-P-O5' | -21.78 | 62.62 | 104.00 |
| 4 | L | 639 | U | P-O3'-C3' | -21.74 | 93.61 | 119.70 |
| 1 | I | 343 | A | P-O3'-C3' | -21.73 | 93.62 | 119.70 |
| 2 | J | 206 | A | P-O3'-C3' | -21.70 | 93.66 | 119.70 |
| 6 | N | 277 | U | P-O3'-C3' | -21.70 | 93.66 | 119.70 |
| 4 | L | 508 | U | P-O3'-C3' | -21.69 | 93.67 | 119.70 |
| 6 | N | 410 | U | O3'-P-O5' | 21.69 | 145.20 | 104.00 |
| 6 | N | 440 | U | OP2-P-O3' | 21.68 | 152.91 | 105.20 |
| 3 | K | 96 | A | O3'-P-O5' | -21.68 | 62.82 | 104.00 |
| 3 | K | 115 | A | O3'-P-O5' | -21.66 | 62.84 | 104.00 |
| 2 | J | 258 | A | P-O3'-C3' | -21.66 | 93.71 | 119.70 |
| 6 | N | 396 | U | P-O3'-C3' | -21.61 | 93.77 | 119.70 |
| 1 | I | 43 | A | O3'-P-O5' | 21.60 | 145.05 | 104.00 |
| 6 | N | 497 | U | OP2-P-O3' | 21.59 | 152.70 | 105.20 |
| 2 | J | 193 | A | P-O3'-C3' | -21.56 | 93.83 | 119.70 |
| 1 | I | 106 | A | OP2-P-O3' | -21.56 | 57.77 | 105.20 |
| 2 | J | 6 | A | O3'-P-O5' | 21.55 | 144.95 | 104.00 |
| 3 | K | 141 | A | OP2-P-O3' | -21.53 | 57.83 | 105.20 |
| 3 | K | 74 | A | P-O3'-C3' | -21.50 | 93.90 | 119.70 |
| 5 | M | 511 | U | P-O3'-C3' | -21.48 | 93.92 | 119.70 |
| 5 | M | 324 | U | O3'-P-O5' | -21.47 | 63.21 | 104.00 |
| 3 | K | 99 | A | OP2-P-O3' | 21.45 | 152.40 | 105.20 |
| 1 | I | 286 | A | O3'-P-O5' | -21.41 | 63.31 | 104.00 |
| 3 | K | 167 | A | OP2-P-O3' | 21.41 | 152.31 | 105.20 |
| 2 | J | 159 | A | O3'-P-O5' | -21.41 | 63.32 | 104.00 |
| 1 | I | 83 | A | P-O3'-C3' | -21.40 | 94.02 | 119.70 |
| 6 | N | 439 | U | P-O3'-C3' | -21.39 | 94.03 | 119.70 |
| 4 | L | 713 | U | OP2-P-O3' | 21.37 | 152.22 | 105.20 |
| 6 | N | 280 | U | P-O3'-C3' | -21.37 | 94.06 | 119.70 |
| 2 | J | 220 | A | P-O3'-C3' | -21.35 | 94.08 | 119.70 |
| 4 | L | 723 | U | P-O3'-C3' | -21.34 | 94.10 | 119.70 |
| 4 | L | 774 | U | OP2-P-O3' | -21.33 | 58.28 | 105.20 |
| 4 | L | 689 | U | O3'-P-O5' | 21.31 | 144.49 | 104.00 |
| 1 | I | 205 | A | OP2-P-O3' | -21.31 | 58.32 | 105.20 |
| 1 | I | 319 | A | P-O3'-C3' | -21.28 | 94.17 | 119.70 |
| 1 | I | 174 | A | P-O3'-C3' | -21.26 | 94.19 | 119.70 |
| 3 | K | 88 | A | O3'-P-O5' | 21.26 | 144.40 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 4 | L | 504 | U | P-O3'-C3' | -21.17 | 94.29 | 119.70 |
| 5 | M | 466 | U | OP2-P-O3' | 21.17 | 151.78 | 105.20 |
| 4 | L | 707 | U | P-O3'-C3' | -21.16 | 94.31 | 119.70 |
| 2 | J | 86 | A | OP2-P-O3' | -21.15 | 58.67 | 105.20 |
| 4 | L | 680 | U | P-O3'-C3' | 21.14 | 145.07 | 119.70 |
| 2 | J | 62 | A | P-O3'-C3' | -21.14 | 94.34 | 119.70 |
| 5 | M | 348 | U | O3'-P-O5' | -21.08 | 63.94 | 104.00 |
| 5 | M | 454 | U | OP2-P-O3' | 21.08 | 151.57 | 105.20 |
| 4 | L | 729 | U | OP2-P-O3' | -21.07 | 58.83 | 105.20 |
| 5 | M | 502 | U | OP2-P-O3' | -21.07 | 58.84 | 105.20 |
| 1 | I | 68 | A | OP2-P-O3' | 21.07 | 151.55 | 105.20 |
| 6 | N | 485 | U | O3'-P-O5' | -21.06 | 63.98 | 104.00 |
| 1 | I | 316 | A | P-O3'-C3' | -21.06 | 94.43 | 119.70 |
| 3 | K | 226 | A | P-O3'-C3' | 21.05 | 144.96 | 119.70 |
| 2 | J | 129 | A | P-O3'-C3' | -21.03 | 94.46 | 119.70 |
| 4 | L | 435 | U | O3'-P-O5' | -21.01 | 64.08 | 104.00 |
| 6 | N | 379 | U | P-O3'-C3' | -21.01 | 94.49 | 119.70 |
| 4 | L | 593 | U | P-O3'-C3' | -21.00 | 94.49 | 119.70 |
| 4 | L | 549 | U | P-O3'-C3' | -20.98 | 94.52 | 119.70 |
| 3 | K | 155 | A | OP2-P-O3' | 20.98 | 151.35 | 105.20 |
| 5 | M | 468 | U | O3'-P-O5' | 20.95 | 143.81 | 104.00 |
| 5 | M | 444 | U | O3'-P-O5' | 20.94 | 143.78 | 104.00 |
| 1 | I | 91 | A | P-O3'-C3' | -20.87 | 94.66 | 119.70 |
| 4 | L | 505 | U | P-O3'-C3' | -20.87 | 94.66 | 119.70 |
| 1 | I | 17 | A | P-O3'-C3' | -20.85 | 94.68 | 119.70 |
| 3 | K | 142 | A | OP2-P-O3' | -20.84 | 59.34 | 105.20 |
| 1 | I | 271 | A | OP2-P-O3' | -20.83 | 59.38 | 105.20 |
| 6 | N | 389 | U | OP2-P-O3' | -20.82 | 59.40 | 105.20 |
| 3 | K | 247 | A | OP2-P-O3' | -20.81 | 59.41 | 105.20 |
| 1 | I | 268 | A | P-O3'-C3' | -20.80 | 94.73 | 119.70 |
| 4 | L | 806 | U | P-O3'-C3' | -20.80 | 94.74 | 119.70 |
| 3 | K | 120 | A | OP2-P-O3' | 20.80 | 150.96 | 105.20 |
| 2 | J | 236 | A | O3'-P-O5' | 20.80 | 143.51 | 104.00 |
| 5 | M | 484 | U | P-O3'-C3' | -20.80 | 94.75 | 119.70 |
| 3 | K | 73 | A | P-O3'-C3' | -20.79 | 94.75 | 119.70 |
| 5 | M | 515 | U | P-O3'-C3' | -20.78 | 94.77 | 119.70 |
| 4 | L | 590 | U | P-O3'-C3' | -20.77 | 94.78 | 119.70 |
| 1 | I | 329 | A | O3'-P-O5' | -20.76 | 64.56 | 104.00 |
| 4 | L | 769 | U | P-O3'-C3' | -20.76 | 94.79 | 119.70 |
| 1 | I | 358 | A | OP2-P-O3' | -20.75 | 59.54 | 105.20 |
| 4 | L | 746 | U | O3'-P-O5' | 20.75 | 143.43 | 104.00 |
| 4 | L | 625 | U | O3'-P-O5' | 20.75 | 143.42 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 5 | M | 336 | U | O3'-P-O5' | -20.73 | 64.61 | 104.00 |
| 2 | J | 97 | A | O3'-P-O5' | 20.72 | 143.37 | 104.00 |
| 4 | L | 760 | U | P-O3'-C3' | -20.72 | 94.84 | 119.70 |
| 4 | L | 517 | U | OP2-P-O3' | 20.72 | 150.78 | 105.20 |
| 1 | I | 133 | A | P-O3'-C3' | -20.71 | 94.84 | 119.70 |
| 2 | J | 93 | A | P-O3'-C3' | -20.71 | 94.85 | 119.70 |
| 5 | M | 523 | U | O3'-P-O5' | 20.70 | 143.34 | 104.00 |
| 1 | I | 70 | A | P-O3'-C3' | -20.70 | 94.86 | 119.70 |
| 1 | I | 257 | A | P-O3'-C3' | -20.68 | 94.88 | 119.70 |
| 2 | J | 61 | A | OP2-P-O3' | -20.68 | 59.70 | 105.20 |
| 5 | M | 493 | U | O3'-P-O5' | 20.68 | 143.30 | 104.00 |
| 2 | J | 63 | A | P-O3'-C3' | -20.67 | 94.90 | 119.70 |
| 1 | I | 75 | A | P-O3'-C3' | -20.66 | 94.90 | 119.70 |
| 5 | M | 520 | U | P-O3'-C3' | -20.66 | 94.91 | 119.70 |
| 1 | I | 82 | A | OP2-P-O3' | 20.65 | 150.64 | 105.20 |
| 2 | J | 210 | A | OP2-P-O3' | 20.65 | 150.63 | 105.20 |
| 1 | I | 180 | A | P-O3'-C3' | -20.64 | 94.93 | 119.70 |
| 3 | K | 88 | A | P-O3'-C3' | -20.64 | 94.93 | 119.70 |
| 5 | M | 512 | U | O3'-P-O5' | -20.62 | 64.82 | 104.00 |
| 4 | L | 522 | U | P-O3'-C3' | -20.61 | 94.96 | 119.70 |
| 5 | M | 365 | U | P-O3'-C3' | -20.61 | 94.97 | 119.70 |
| 1 | I | 87 | A | P-O3'-C3' | -20.61 | 94.97 | 119.70 |
| 1 | I | 14 | A | OP2-P-O3' | 20.59 | 150.50 | 105.20 |
| 4 | L | 498 | U | OP2-P-O3' | 20.56 | 150.43 | 105.20 |
| 4 | L | 712 | U | OP2-P-O3' | 20.54 | 150.39 | 105.20 |
| 1 | I | 73 | A | OP2-P-O3' | 20.54 | 150.38 | 105.20 |
| 5 | M | 465 | U | OP2-P-O3' | 20.53 | 150.37 | 105.20 |
| 3 | K | 6 | A | P-O3'-C3' | -20.53 | 95.06 | 119.70 |
| 4 | L | 549 | U | OP2-P-O3' | 20.53 | 150.36 | 105.20 |
| 2 | J | 14 | A | P-O3'-C3' | -20.52 | 95.08 | 119.70 |
| 6 | N | 524 | U | OP2-P-O3' | -20.51 | 60.07 | 105.20 |
| 3 | K | 135 | A | O3'-P-O5' | 20.50 | 142.94 | 104.00 |
| 3 | K | 156 | A | OP2-P-O3' | 20.49 | 150.28 | 105.20 |
| 6 | N | 293 | U | O3'-P-O5' | -20.47 | 65.11 | 104.00 |
| 2 | J | 102 | A | O3'-P-O5' | -20.46 | 65.13 | 104.00 |
| 6 | N | 450 | U | OP2-P-O3' | 20.44 | 150.17 | 105.20 |
| 5 | M | 347 | U | OP2-P-O3' | 20.44 | 150.16 | 105.20 |
| 1 | I | 292 | A | P-O3'-C3' | -20.38 | 95.24 | 119.70 |
| 2 | J | 151 | A | P-O3'-C3' | -20.36 | 95.27 | 119.70 |
| 1 | I | 351 | A | OP2-P-O3' | -20.34 | 60.45 | 105.20 |
| 3 | K | 150 | A | O3'-P-O5' | 20.31 | 142.59 | 104.00 |
| 2 | J | 183 | A | OP2-P-O3' | 20.28 | 149.82 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 4 | L | 436 | U | O3'-P-O5' | -20.27 | 65.49 | 104.00 |
| 1 | I | 64 | A | P-O3'-C3' | -20.26 | 95.39 | 119.70 |
| 4 | L | 518 | U | P-O3'-C3' | -20.24 | 95.41 | 119.70 |
| 3 | K | 138 | A | O3'-P-O5' | 20.22 | 142.42 | 104.00 |
| 5 | M | 531 | U | OP2-P-O3' | 20.22 | 149.69 | 105.20 |
| 1 | I | 251 | A | O3'-P-O5' | -20.21 | 65.59 | 104.00 |
| 1 | I | 375 | A | OP2-P-O3' | -20.20 | 60.75 | 105.20 |
| 5 | M | 467 | U | P-O3'-C3' | -20.20 | 95.45 | 119.70 |
| 6 | N | 431 | U | OP2-P-O3' | 20.19 | 149.62 | 105.20 |
| 1 | I | 132 | A | OP2-P-O3' | 20.13 | 149.49 | 105.20 |
| 4 | L | 757 | U | P-O3'-C3' | -20.13 | 95.55 | 119.70 |
| 6 | N | 426 | U | P-O3'-C3' | -20.12 | 95.55 | 119.70 |
| 6 | N | 357 | U | O3'-P-O5' | 20.12 | 142.23 | 104.00 |
| 5 | M | 526 | U | P-O3'-C3' | -20.11 | 95.56 | 119.70 |
| 2 | J | 226 | A | O3'-P-O5' | 20.11 | 142.21 | 104.00 |
| 6 | N | 489 | U | OP2-P-O3' | -20.11 | 60.97 | 105.20 |
| 4 | L | 634 | U | P-O3'-C3' | -20.10 | 95.58 | 119.70 |
| 1 | I | 285 | A | P-O3'-C3' | -20.10 | 95.58 | 119.70 |
| 5 | M | 512 | U | P-O3'-C3' | -20.09 | 95.59 | 119.70 |
| 4 | L | 759 | U | OP2-P-O3' | 20.08 | 149.38 | 105.20 |
| 3 | K | 44 | A | O3'-P-O5' | -20.08 | 65.85 | 104.00 |
| 5 | M | 329 | U | P-O3'-C3' | -20.07 | 95.62 | 119.70 |
| 1 | I | 54 | A | O3'-P-O5' | 20.04 | 142.08 | 104.00 |
| 3 | K | 252 | A | P-O3'-C3' | -20.04 | 95.66 | 119.70 |
| 4 | L | 544 | U | P-O3'-C3' | -20.04 | 95.66 | 119.70 |
| 4 | L | 604 | U | P-O3'-C3' | -20.03 | 95.67 | 119.70 |
| 3 | K | 254 | A | OP2-P-O3' | 20.02 | 149.25 | 105.20 |
| 4 | L | 694 | U | OP2-P-O3' | 20.01 | 149.23 | 105.20 |
| 4 | L | 786 | U | O3'-P-O5' | 19.99 | 141.98 | 104.00 |
| 6 | N | 496 | U | O3'-P-O5' | -19.98 | 66.05 | 104.00 |
| 1 | I | 70 | A | OP2-P-O3' | 19.97 | 149.12 | 105.20 |
| 2 | J | 45 | A | P-O3'-C3' | -19.96 | 95.75 | 119.70 |
| 2 | J | 144 | A | P-O3'-C3' | -19.95 | 95.76 | 119.70 |
| 4 | L | 477 | U | OP2-P-O3' | 19.94 | 149.06 | 105.20 |
| 5 | M | 406 | U | O3'-P-O5' | -19.93 | 66.13 | 104.00 |
| 1 | I | 78 | A | OP2-P-O3' | -19.91 | 61.39 | 105.20 |
| 1 | I | 19 | A | P-O3'-C3' | -19.90 | 95.82 | 119.70 |
| 2 | J | 57 | A | O3'-P-O5' | 19.89 | 141.79 | 104.00 |
| 4 | L | 546 | U | O3'-P-O5' | -19.88 | 66.23 | 104.00 |
| 4 | L | 776 | U | OP2-P-O3' | 19.86 | 148.90 | 105.20 |
| 2 | J | 254 | A | P-O3'-C3' | -19.86 | 95.87 | 119.70 |
| 2 | J | 5 | A | OP2-P-O3' | -19.86 | 61.52 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 3 | K | 172 | A | O3'-P-O5' | 19.86 | 141.72 | 104.00 |
| 4 | L | 689 | U | P-O3'-C3' | -19.85 | 95.88 | 119.70 |
| 5 | M | 338 | U | O3'-P-O5' | 19.85 | 141.72 | 104.00 |
| 6 | N | 417 | U | OP2-P-O3' | 19.85 | 148.87 | 105.20 |
| 4 | L | 557 | U | P-O3'-C3' | -19.82 | 95.91 | 119.70 |
| 2 | J | 166 | A | OP2-P-O3' | -19.81 | 61.61 | 105.20 |
| 3 | K | 163 | A | P-O3'-C3' | -19.81 | 95.92 | 119.70 |
| 1 | I | 228 | A | P-O3'-C3' | -19.80 | 95.94 | 119.70 |
| 1 | I | 320 | A | P-O3'-C3' | -19.80 | 95.94 | 119.70 |
| 1 | I | 78 | A | O3'-P-O5' | 19.80 | 141.61 | 104.00 |
| 2 | J | 184 | A | P-O3'-C3' | -19.79 | 95.95 | 119.70 |
| 5 | M | 318 | U | P-O3'-C3' | -19.78 | 95.96 | 119.70 |
| 6 | N | 526 | U | O3'-P-O5' | -19.78 | 66.42 | 104.00 |
| 6 | N | 425 | U | P-O3'-C3' | -19.78 | 95.97 | 119.70 |
| 6 | N | 446 | U | OP2-P-O3' | -19.77 | 61.70 | 105.20 |
| 1 | I | 74 | A | OP2-P-O3' | 19.77 | 148.69 | 105.20 |
| 1 | I | 231 | A | OP2-P-O3' | 19.76 | 148.67 | 105.20 |
| 6 | N | 364 | U | O3'-P-O5' | 19.75 | 141.52 | 104.00 |
| 4 | L | 666 | U | P-O3'-C3' | -19.74 | 96.01 | 119.70 |
| 1 | I | 82 | A | O3'-P-O5' | -19.74 | 66.50 | 104.00 |
| 4 | L | 746 | U | OP2-P-O3' | -19.72 | 61.81 | 105.20 |
| 4 | L | 777 | U | P-O3'-C3' | -19.72 | 96.03 | 119.70 |
| 1 | I | 73 | A | P-O3'-C3' | -19.71 | 96.05 | 119.70 |
| 2 | J | 85 | A | O3'-P-O5' | 19.71 | 141.46 | 104.00 |
| 6 | N | 349 | U | OP2-P-O3' | -19.69 | 61.88 | 105.20 |
| 6 | N | 281 | U | P-O3'-C3' | -19.67 | 96.10 | 119.70 |
| 4 | L | 810 | U | P-O3'-C3' | -19.64 | 96.13 | 119.70 |
| 6 | N | 379 | U | OP2-P-O3' | 19.64 | 148.41 | 105.20 |
| 1 | I | 388 | A | O3'-P-O5' | -19.60 | 66.75 | 104.00 |
| 2 | J | 11 | A | OP2-P-O3' | 19.59 | 148.31 | 105.20 |
| 1 | I | 230 | A | P-O3'-C3' | -19.58 | 96.20 | 119.70 |
| 2 | J | 152 | A | P-O3'-C3' | -19.58 | 96.21 | 119.70 |
| 3 | K | 157 | A | P-O3'-C3' | -19.56 | 96.22 | 119.70 |
| 5 | M | 507 | U | P-O3'-C3' | -19.55 | 96.24 | 119.70 |
| 1 | I | 161 | A | P-O3'-C3' | -19.54 | 96.25 | 119.70 |
| 1 | I | 48 | A | P-O3'-C3' | -19.53 | 96.27 | 119.70 |
| 4 | L | 638 | U | OP2-P-O3' | 19.52 | 148.13 | 105.20 |
| 1 | I | 80 | A | P-O3'-C3' | -19.51 | 96.29 | 119.70 |
| 4 | L | 766 | U | P-O3'-C3' | -19.51 | 96.29 | 119.70 |
| 5 | M | 511 | U | O3'-P-O5' | -19.50 | 66.94 | 104.00 |
| 5 | M | 328 | U | OP2-P-O3' | -19.50 | 62.30 | 105.20 |
| 5 | M | 410 | U | O3'-P-O5' | -19.50 | 66.95 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 4 | L | 644 | U | P-O3'-C3' | -19.49 | 96.31 | 119.70 |
| 6 | N | 468 | U | O3'-P-O5' | 19.48 | 141.02 | 104.00 |
| 3 | K | 246 | A | OP2-P-O3' | -19.46 | 62.38 | 105.20 |
| 6 | N | 417 | U | O3'-P-O5' | -19.46 | 67.03 | 104.00 |
| 4 | L | 812 | U | OP2-P-O3' | 19.45 | 148.00 | 105.20 |
| 4 | L | 583 | U | P-O3'-C3' | -19.44 | 96.37 | 119.70 |
| 1 | I | 277 | A | O3'-P-O5' | -19.43 | 67.07 | 104.00 |
| 1 | I | 255 | A | P-O3'-C3' | -19.43 | 96.39 | 119.70 |
| 1 | I | 71 | A | OP2-P-O3' | 19.41 | 147.90 | 105.20 |
| 2 | J | 160 | A | O3'-P-O5' | -19.41 | 67.12 | 104.00 |
| 3 | K | 86 | A | P-O3'-C3' | -19.40 | 96.42 | 119.70 |
| 6 | N | 430 | U | OP2-P-O3' | 19.39 | 147.86 | 105.20 |
| 2 | J | 206 | A | OP2-P-O3' | 19.39 | 147.85 | 105.20 |
| 1 | I | 198 | A | O3'-P-O5' | 19.38 | 140.82 | 104.00 |
| 2 | J | 15 | A | P-O3'-C3' | -19.38 | 96.44 | 119.70 |
| 1 | I | 358 | A | O3'-P-O5' | 19.36 | 140.79 | 104.00 |
| 6 | N | 380 | U | P-O3'-C3' | -19.36 | 96.47 | 119.70 |
| 4 | L | 602 | U | P-O3'-C3' | -19.34 | 96.49 | 119.70 |
| 3 | K | 161 | A | P-O3'-C3' | -19.34 | 96.50 | 119.70 |
| 4 | L | 516 | U | O3'-P-O5' | -19.33 | 67.27 | 104.00 |
| 1 | I | 117 | A | P-O3'-C3' | -19.32 | 96.51 | 119.70 |
| 5 | M | 327 | U | OP2-P-O3' | -19.32 | 62.69 | 105.20 |
| 2 | J | 202 | A | P-O3'-C3' | -19.32 | 96.51 | 119.70 |
| 2 | J | 160 | A | OP2-P-O3' | 19.32 | 147.71 | 105.20 |
| 3 | K | 97 | A | O3'-P-O5' | -19.32 | 67.30 | 104.00 |
| 1 | I | 120 | A | P-O3'-C3' | -19.31 | 96.53 | 119.70 |
| 1 | I | 233 | A | OP2-P-O3' | 19.30 | 147.66 | 105.20 |
| 1 | I | 74 | A | P-O3'-C3' | -19.30 | 96.55 | 119.70 |
| 1 | I | 20 | A | O3'-P-O5' | -19.29 | 67.34 | 104.00 |
| 4 | L | 611 | U | O3'-P-O5' | -19.29 | 67.35 | 104.00 |
| 5 | M | 488 | U | OP2-P-O3' | 19.29 | 147.63 | 105.20 |
| 6 | N | 473 | U | P-O3'-C3' | -19.29 | 96.56 | 119.70 |
| 4 | L | 574 | U | O3'-P-O5' | -19.28 | 67.36 | 104.00 |
| 1 | I | 230 | A | OP2-P-O3' | 19.27 | 147.60 | 105.20 |
| 5 | M | 463 | U | P-O3'-C3' | -19.26 | 96.59 | 119.70 |
| 1 | I | 282 | A | O3'-P-O5' | 19.25 | 140.57 | 104.00 |
| 1 | I | 184 | A | P-O3'-C3' | -19.24 | 96.61 | 119.70 |
| 2 | J | 263 | A | P-O3'-C3' | -19.24 | 96.61 | 119.70 |
| 4 | L | 764 | U | O3'-P-O5' | -19.24 | 67.45 | 104.00 |
| 3 | K | 117 | A | O3'-P-O5' | 19.23 | 140.53 | 104.00 |
| 1 | I | 340 | A | OP2-P-O3' | -19.23 | 62.90 | 105.20 |
| 6 | N | 448 | U | P-O3'-C3' | -19.21 | 96.65 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1 | I | 287 | A | OP2-P-O3' | 19.20 | 147.45 | 105.20 |
| 5 | M | 324 | U | P-O3'-C3' | -19.20 | 96.65 | 119.70 |
| 4 | L | 811 | U | OP2-P-O3' | 19.20 | 147.44 | 105.20 |
| 5 | M | 318 | U | OP2-P-O3' | 19.19 | 147.42 | 105.20 |
| 5 | M | 349 | U | OP2-P-O3' | 19.16 | 147.36 | 105.20 |
| 2 | J | 222 | A | OP2-P-O3' | 19.15 | 147.34 | 105.20 |
| 1 | I | 261 | A | P-O3'-C3' | -19.14 | 96.72 | 119.70 |
| 6 | N | 392 | U | OP2-P-O3' | -19.14 | 63.08 | 105.20 |
| 4 | L | 754 | U | P-O3'-C3' | -19.13 | 96.75 | 119.70 |
| 4 | L | 480 | U | P-O3'-C3' | -19.12 | 96.76 | 119.70 |
| 6 | N | 333 | U | O3'-P-O5' | -19.11 | 67.68 | 104.00 |
| 3 | K | 164 | A | OP2-P-O3' | 19.11 | 147.25 | 105.20 |
| 1 | I | 240 | A | O3'-P-O5' | 19.10 | 140.28 | 104.00 |
| 3 | K | 154 | A | OP2-P-O3' | 19.09 | 147.20 | 105.20 |
| 4 | L | 477 | U | P-O3'-C3' | -19.07 | 96.81 | 119.70 |
| 2 | J | 237 | A | OP2-P-O3' | -19.07 | 63.25 | 105.20 |
| 5 | M | 296 | U | OP2-P-O3' | 19.06 | 147.14 | 105.20 |
| 1 | I | 205 | A | O3'-P-O5' | 19.04 | 140.18 | 104.00 |
| 2 | J | 182 | A | O3'-P-O5' | -19.03 | 67.84 | 104.00 |
| 5 | M | 457 | U | OP2-P-O3' | 19.03 | 147.06 | 105.20 |
| 1 | I | 236 | A | P-O3'-C3' | -19.03 | 96.87 | 119.70 |
| 1 | I | 192 | A | P-O3'-C3' | -19.03 | 96.87 | 119.70 |
| 4 | L | 730 | U | OP2-P-O3' | -19.02 | 63.35 | 105.20 |
| 5 | M | 548 | U | OP2-P-O3' | -19.02 | 63.36 | 105.20 |
| 3 | K | 54 | A | O3'-P-O5' | 19.01 | 140.12 | 104.00 |
| 2 | J | 225 | A | O3'-P-O5' | 18.99 | 140.09 | 104.00 |
| 5 | M | 426 | U | O3'-P-O5' | 18.98 | 140.06 | 104.00 |
| 4 | L | 754 | U | OP2-P-O3' | 18.97 | 146.94 | 105.20 |
| 2 | J | 86 | A | O3'-P-O5' | 18.97 | 140.04 | 104.00 |
| 3 | K | 165 | A | OP2-P-O3' | 18.97 | 146.93 | 105.20 |
| 5 | M | 379 | U | O3'-P-O5' | -18.96 | 67.97 | 104.00 |
| 3 | K | 226 | A | OP1-P-O3' | 18.96 | 146.91 | 105.20 |
| 5 | M | 525 | U | P-O3'-C3' | -18.95 | 96.97 | 119.70 |
| 6 | N | 399 | U | P-O3'-C3' | -18.94 | 96.97 | 119.70 |
| 1 | I | 293 | A | P-O3'-C3' | -18.93 | 96.98 | 119.70 |
| 5 | M | 496 | U | O3'-P-O5' | 18.92 | 139.94 | 104.00 |
| 4 | L | 520 | U | P-O3'-C3' | -18.91 | 97.00 | 119.70 |
| 3 | K | 100 | A | O3'-P-O5' | -18.88 | 68.14 | 104.00 |
| 4 | L | 628 | U | O3'-P-O5' | 18.86 | 139.82 | 104.00 |
| 6 | N | 295 | U | OP2-P-O3' | -18.85 | 63.72 | 105.20 |
| 1 | I | 303 | A | P-O3'-C3' | -18.84 | 97.09 | 119.70 |
| 6 | N | 400 | U | P-O3'-C3' | -18.84 | 97.09 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 2 | J | 237 | A | O3'-P-O5' | 18.83 | 139.78 | 104.00 |
| 1 | I | 310 | A | OP2-P-O3' | 18.82 | 146.61 | 105.20 |
| 1 | I | 70 | A | O3'-P-O5' | -18.81 | 68.25 | 104.00 |
| 4 | L | 598 | U | P-O3'-C3' | -18.79 | 97.15 | 119.70 |
| 5 | M | 511 | U | OP2-P-O3' | 18.79 | 146.53 | 105.20 |
| 2 | J | 118 | A | O3'-P-O5' | 18.78 | 139.68 | 104.00 |
| 1 | I | 273 | A | P-O3'-C3' | -18.77 | 97.18 | 119.70 |
| 5 | M | 361 | U | OP2-P-O3' | -18.75 | 63.95 | 105.20 |
| 5 | M | 539 | U | P-O3'-C3' | -18.75 | 97.20 | 119.70 |
| 4 | L | 561 | U | P-O3'-C3' | -18.73 | 97.22 | 119.70 |
| 4 | L | 567 | U | P-O3'-C3' | -18.72 | 97.23 | 119.70 |
| 5 | M | 461 | U | P-O3'-C3' | -18.72 | 97.23 | 119.70 |
| 2 | J | 173 | A | O3'-P-O5' | -18.71 | 68.44 | 104.00 |
| 1 | I | 12 | A | P-O3'-C3' | -18.71 | 97.25 | 119.70 |
| 1 | I | 31 | A | O3'-P-O5' | 18.68 | 139.50 | 104.00 |
| 1 | I | 191 | A | P-O3'-C3' | -18.68 | 97.29 | 119.70 |
| 1 | I | 273 | A | OP2-P-O3' | 18.67 | 146.28 | 105.20 |
| 1 | I | 304 | A | P-O3'-C3' | -18.67 | 97.30 | 119.70 |
| 6 | N | 332 | U | O3'-P-O5' | -18.65 | 68.56 | 104.00 |
| 1 | I | 182 | A | P-O3'-C3' | -18.65 | 97.32 | 119.70 |
| 2 | J | 6 | A | OP2-P-O3' | -18.64 | 64.20 | 105.20 |
| 4 | L | 459 | U | P-O3'-C3' | -18.64 | 97.34 | 119.70 |
| 2 | J | 129 | A | OP2-P-O3' | 18.63 | 146.18 | 105.20 |
| 5 | M | 518 | U | O3'-P-O5' | 18.62 | 139.38 | 104.00 |
| 4 | L | 487 | U | OP2-P-O3' | 18.61 | 146.14 | 105.20 |
| 4 | L | 681 | U | O3'-P-O5' | -18.61 | 68.64 | 104.00 |
| 4 | L | 588 | U | P-O3'-C3' | -18.60 | 97.38 | 119.70 |
| 5 | M | 371 | U | P-O3'-C3' | -18.60 | 97.38 | 119.70 |
| 4 | L | 758 | U | O3'-P-O5' | -18.59 | 68.69 | 104.00 |
| 3 | K | 213 | A | O3'-P-O5' | -18.58 | 68.70 | 104.00 |
| 3 | K | 158 | A | P-O3'-C3' | -18.57 | 97.41 | 119.70 |
| 4 | L | 519 | U | P-O3'-C3' | -18.56 | 97.42 | 119.70 |
| 5 | M | 334 | U | O3'-P-O5' | -18.56 | 68.73 | 104.00 |
| 1 | I | 228 | A | O3'-P-O5' | -18.55 | 68.75 | 104.00 |
| 6 | N | 317 | U | O3'-P-O5' | -18.54 | 68.78 | 104.00 |
| 5 | M | 514 | U | P-O3'-C3' | -18.52 | 97.47 | 119.70 |
| 2 | J | 46 | A | P-O3'-C3' | -18.51 | 97.49 | 119.70 |
| 2 | J | 90 | A | P-O3'-C3' | -18.50 | 97.50 | 119.70 |
| 1 | I | 266 | A | OP2-P-O3' | 18.49 | 145.88 | 105.20 |
| 2 | J | 55 | A | O3'-P-O5' | -18.49 | 68.87 | 104.00 |
| 5 | M | 492 | U | P-O3'-C3' | -18.48 | 97.52 | 119.70 |
| 3 | K | 164 | A | O3'-P-O5' | -18.47 | 68.90 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 2 | J | 147 | A | OP2-P-O3' | -18.47 | 64.56 | 105.20 |
| 1 | I | 344 | A | O3'-P-O5' | 18.46 | 139.08 | 104.00 |
| 4 | L | 559 | U | P-O3'-C3' | -18.45 | 97.55 | 119.70 |
| 1 | I | 131 | A | P-O3'-C3' | -18.44 | 97.57 | 119.70 |
| 2 | J | 194 | A | P-O3'-C3' | -18.44 | 97.57 | 119.70 |
| 1 | I | 46 | A | O3'-P-O5' | 18.43 | 139.01 | 104.00 |
| 4 | L | 810 | U | OP2-P-O3' | 18.42 | 145.72 | 105.20 |
| 4 | L | 633 | U | OP2-P-O3' | -18.41 | 64.69 | 105.20 |
| 4 | L | 532 | U | OP2-P-O3' | 18.41 | 145.70 | 105.20 |
| 2 | J | 209 | A | P-O3'-C3' | -18.40 | 97.62 | 119.70 |
| 1 | I | 44 | A | O3'-P-O5' | 18.40 | 138.96 | 104.00 |
| 5 | M | 330 | U | O3'-P-O5' | 18.40 | 138.96 | 104.00 |
| 1 | I | 44 | A | P-O3'-C3' | -18.36 | 97.66 | 119.70 |
| 6 | N | 327 | U | O3'-P-O5' | -18.35 | 69.13 | 104.00 |
| 4 | L | 565 | U | P-O3'-C3' | -18.34 | 97.69 | 119.70 |
| 4 | L | 599 | U | O3'-P-O5' | -18.33 | 69.17 | 104.00 |
| 4 | L | 605 | U | P-O3'-C3' | -18.31 | 97.73 | 119.70 |
| 5 | M | 505 | U | P-O3'-C3' | -18.30 | 97.74 | 119.70 |
| 2 | J | 57 | A | P-O3'-C3' | -18.30 | 97.74 | 119.70 |
| 2 | J | 80 | A | P-O3'-C3' | -18.29 | 97.76 | 119.70 |
| 6 | N | 392 | U | O3'-P-O5' | 18.28 | 138.74 | 104.00 |
| 2 | J | 24 | A | O3'-P-O5' | 18.28 | 138.73 | 104.00 |
| 1 | I | 138 | A | OP2-P-O3' | 18.27 | 145.41 | 105.20 |
| 4 | L | 556 | U | P-O3'-C3' | -18.26 | 97.79 | 119.70 |
| 2 | J | 13 | A | O3'-P-O5' | 18.25 | 138.68 | 104.00 |
| 4 | L | 523 | U | O3'-P-O5' | 18.24 | 138.66 | 104.00 |
| 5 | M | 299 | U | OP2-P-O3' | 18.24 | 145.32 | 105.20 |
| 1 | I | 161 | A | OP2-P-O3' | 18.23 | 145.32 | 105.20 |
| 4 | L | 589 | U | P-O3'-C3' | -18.23 | 97.82 | 119.70 |
| 6 | N | 484 | U | OP2-P-O3' | 18.22 | 145.29 | 105.20 |
| 4 | L | 744 | U | P-O3'-C3' | -18.21 | 97.84 | 119.70 |
| 5 | M | 410 | U | P-O3'-C3' | -18.21 | 97.84 | 119.70 |
| 2 | J | 228 | A | O3'-P-O5' | -18.20 | 69.41 | 104.00 |
| 6 | N | 485 | U | OP2-P-O3' | 18.20 | 145.25 | 105.20 |
| 5 | M | 377 | U | O3'-P-O5' | -18.18 | 69.46 | 104.00 |
| 6 | N | 338 | U | O3'-P-O5' | -18.17 | 69.48 | 104.00 |
| 4 | L | 501 | U | O3'-P-O5' | 18.17 | 138.52 | 104.00 |
| 6 | N | 468 | U | OP2-P-O3' | -18.17 | 65.23 | 105.20 |
| 6 | N | 318 | U | OP1-P-O3' | 18.16 | 145.16 | 105.20 |
| 2 | J | 61 | A | O3'-P-O5' | 18.16 | 138.51 | 104.00 |
| 3 | K | 133 | A | P-O3'-C3' | -18.16 | 97.91 | 119.70 |
| 3 | K | 92 | A | P-O3'-C3' | -18.16 | 97.91 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 6 | N | 321 | U | O3'-P-O5' | -18.16 | 69.50 | 104.00 |
| 5 | M | 337 | U | OP1-P-O3' | -18.15 | 65.27 | 105.20 |
| 2 | J | 34 | A | O3'-P-O5' | 18.15 | 138.48 | 104.00 |
| 5 | M | 288 | U | P-O3'-C3' | -18.15 | 97.92 | 119.70 |
| 6 | N | 484 | U | O3'-P-O5' | -18.14 | 69.53 | 104.00 |
| 4 | L | 715 | U | OP2-P-O3' | -18.13 | 65.31 | 105.20 |
| 2 | J | 73 | A | OP2-P-O3' | -18.13 | 65.32 | 105.20 |
| 4 | L | 475 | U | P-O3'-C3' | -18.13 | 97.95 | 119.70 |
| 5 | M | 340 | U | P-O3'-C3' | -18.13 | 97.95 | 119.70 |
| 6 | N | 329 | U | O3'-P-O5' | -18.13 | 69.56 | 104.00 |
| 5 | M | 360 | U | O3'-P-O5' | 18.12 | 138.44 | 104.00 |
| 4 | L | 419 | U | OP2-P-O3' | -18.12 | 65.33 | 105.20 |
| 5 | M | 300 | U | P-O3'-C3' | -18.12 | 97.95 | 119.70 |
| 1 | I | 297 | A | P-O3'-C3' | -18.11 | 97.96 | 119.70 |
| 3 | K | 118 | A | OP2-P-O3' | 18.11 | 145.05 | 105.20 |
| 3 | K | 225 | A | P-O3'-C3' | 18.11 | 141.43 | 119.70 |
| 6 | N | 428 | U | P-O3'-C3' | -18.11 | 97.97 | 119.70 |
| 4 | L | 459 | U | OP2-P-O3' | 18.11 | 145.03 | 105.20 |
| 5 | M | 322 | U | OP2-P-O3' | 18.11 | 145.03 | 105.20 |
| 4 | L | 783 | U | OP2-P-O3' | -18.10 | 65.39 | 105.20 |
| 4 | L | 786 | U | OP2-P-O3' | -18.09 | 65.40 | 105.20 |
| 2 | J | 180 | A | O3'-P-O5' | 18.09 | 138.37 | 104.00 |
| 2 | J | 183 | A | OP1-P-O3' | -18.09 | 65.40 | 105.20 |
| 4 | L | 814 | U | P-O3'-C3' | -18.07 | 98.02 | 119.70 |
| 2 | J | 52 | A | P-O3'-C3' | -18.06 | 98.03 | 119.70 |
| 5 | M | 435 | U | OP2-P-O3' | -18.05 | 65.50 | 105.20 |
| 5 | M | 369 | U | P-O3'-C3' | -18.04 | 98.05 | 119.70 |
| 6 | N | 451 | U | O3'-P-O5' | -18.04 | 69.72 | 104.00 |
| 5 | M | 392 | U | O3'-P-O5' | -18.03 | 69.75 | 104.00 |
| 1 | I | 291 | A | P-O3'-C3' | -18.00 | 98.10 | 119.70 |
| 4 | L | 823 | U | OP2-P-O3' | -18.00 | 65.61 | 105.20 |
| 1 | I | 296 | A | OP2-P-O3' | 17.98 | 144.76 | 105.20 |
| 5 | M | 506 | U | P-O3'-C3' | -17.98 | 98.13 | 119.70 |
| 1 | I | 340 | A | O3'-P-O5' | 17.97 | 138.15 | 104.00 |
| 4 | L | 741 | U | O3'-P-O5' | 17.97 | 138.14 | 104.00 |
| 6 | N | 304 | U | OP1-P-O3' | 17.96 | 144.71 | 105.20 |
| 3 | K | 96 | A | P-O3'-C3' | -17.95 | 98.17 | 119.70 |
| 4 | L | 548 | U | O3'-P-O5' | -17.94 | 69.92 | 104.00 |
| 4 | L | 737 | U | O3'-P-O5' | 17.92 | 138.05 | 104.00 |
| 1 | I | 296 | A | P-O3'-C3' | -17.91 | 98.20 | 119.70 |
| 4 | L | 547 | U | O3'-P-O5' | -17.91 | 69.97 | 104.00 |
| 4 | L | 770 | U | P-O3'-C3' | -17.91 | 98.21 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 4 | L | 576 | U | OP2-P-O3' | 17.89 | 144.55 | 105.20 |
| 5 | M | 485 | U | OP2-P-O3' | 17.88 | 144.53 | 105.20 |
| 5 | M | 392 | U | OP2-P-O3' | 17.87 | 144.52 | 105.20 |
| 2 | J | 168 | A | OP2-P-O3' | -17.85 | 65.92 | 105.20 |
| 6 | N | 454 | U | OP2-P-O3' | 17.85 | 144.47 | 105.20 |
| 6 | N | 278 | U | OP2-P-O3' | 17.84 | 144.46 | 105.20 |
| 2 | J | 47 | A | OP2-P-O3' | 17.84 | 144.44 | 105.20 |
| 6 | N | 416 | U | O3'-P-O5' | -17.81 | 70.15 | 104.00 |
| 1 | I | 287 | A | O3'-P-O5' | -17.81 | 70.16 | 104.00 |
| 1 | I | 13 | A | OP2-P-O3' | 17.81 | 144.38 | 105.20 |
| 2 | J | 223 | A | OP1-P-O3' | -17.79 | 66.05 | 105.20 |
| 4 | L | 760 | U | OP2-P-O3' | 17.79 | 144.34 | 105.20 |
| 2 | J | 235 | A | P-O3'-C3' | -17.79 | 98.35 | 119.70 |
| 6 | N | 365 | U | O3'-P-O5' | 17.79 | 137.80 | 104.00 |
| 5 | M | 455 | U | P-O3'-C3' | -17.79 | 98.36 | 119.70 |
| 5 | M | 489 | U | O3'-P-O5' | -17.78 | 70.21 | 104.00 |
| 3 | K | 96 | A | OP2-P-O3' | 17.78 | 144.31 | 105.20 |
| 1 | I | 175 | A | O3'-P-O5' | 17.77 | 137.76 | 104.00 |
| 1 | I | 128 | A | OP2-P-O3' | 17.76 | 144.27 | 105.20 |
| 4 | L | 650 | U | P-O3'-C3' | -17.76 | 98.39 | 119.70 |
| 1 | I | 109 | A | OP2-P-O3' | -17.75 | 66.15 | 105.20 |
| 4 | L | 685 | U | O3'-P-O5' | 17.75 | 137.72 | 104.00 |
| 1 | I | 271 | A | O3'-P-O5' | 17.75 | 137.72 | 104.00 |
| 2 | J | 55 | A | OP2-P-O3' | 17.74 | 144.22 | 105.20 |
| 4 | L | 816 | U | P-O3'-C3' | -17.74 | 98.42 | 119.70 |
| 6 | N | 444 | U | P-O3'-C3' | -17.73 | 98.42 | 119.70 |
| 1 | I | 110 | A | O3'-P-O5' | -17.73 | 70.31 | 104.00 |
| 4 | L | 637 | U | P-O3'-C3' | -17.72 | 98.43 | 119.70 |
| 6 | N | 388 | U | OP2-P-O3' | -17.71 | 66.24 | 105.20 |
| 5 | M | 474 | U | O3'-P-O5' | 17.69 | 137.62 | 104.00 |
| 5 | M | 408 | U | P-O3'-C3' | -17.68 | 98.48 | 119.70 |
| 4 | L | 557 | U | OP2-P-O3' | 17.68 | 144.10 | 105.20 |
| 2 | J | 88 | A | P-O3'-C3' | -17.67 | 98.50 | 119.70 |
| 5 | M | 377 | U | P-O3'-C3' | -17.67 | 98.50 | 119.70 |
| 4 | L | 480 | U | O3'-P-O5' | 17.66 | 137.56 | 104.00 |
| 6 | N | 417 | U | P-O3'-C3' | -17.66 | 98.51 | 119.70 |
| 4 | L | 754 | U | O3'-P-O5' | -17.65 | 70.47 | 104.00 |
| 3 | K | 174 | A | P-O3'-C3' | -17.65 | 98.52 | 119.70 |
| 4 | L | 483 | U | P-O3'-C3' | -17.65 | 98.52 | 119.70 |
| 4 | L | 700 | U | P-O3'-C3' | -17.64 | 98.53 | 119.70 |
| 4 | L | 564 | U | P-O3'-C3' | -17.64 | 98.53 | 119.70 |
| 4 | L | 637 | U | O3'-P-O5' | -17.64 | 70.49 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1 | I | 206 | A | OP2-P-O3' | -17.64 | 66.40 | 105.20 |
| 1 | I | 334 | A | OP2-P-O3' | 17.63 | 143.98 | 105.20 |
| 3 | K | 119 | A | OP2-P-O3' | 17.63 | 143.98 | 105.20 |
| 6 | N | 427 | U | P-O3'-C3' | -17.61 | 98.57 | 119.70 |
| 1 | I | 8 | A | P-O3'-C3' | -17.61 | 98.57 | 119.70 |
| 1 | I | 373 | A | P-O3'-C3' | -17.60 | 98.58 | 119.70 |
| 4 | L | 611 | U | P-O3'-C3' | -17.60 | 98.58 | 119.70 |
| 5 | M | 367 | U | P-O3'-C3' | -17.60 | 98.58 | 119.70 |
| 4 | L | 814 | U | OP2-P-O3' | 17.56 | 143.84 | 105.20 |
| 5 | M | 317 | U | O3'-P-O5' | 17.56 | 137.37 | 104.00 |
| 2 | J | 67 | A | P-O3'-C3' | -17.56 | 98.63 | 119.70 |
| 1 | I | 330 | A | P-O3'-C3' | -17.54 | 98.65 | 119.70 |
| 6 | N | 474 | U | P-O3'-C3' | -17.53 | 98.67 | 119.70 |
| 1 | I | 64 | A | OP2-P-O3' | 17.52 | 143.75 | 105.20 |
| 2 | J | 32 | A | P-O3'-C3' | -17.52 | 98.67 | 119.70 |
| 2 | J | 123 | A | O3'-P-O5' | -17.52 | 70.71 | 104.00 |
| 5 | M | 419 | U | OP2-P-O3' | 17.52 | 143.74 | 105.20 |
| 6 | N | 304 | U | P-O3'-C3' | 17.52 | 140.72 | 119.70 |
| 5 | M | 545 | U | OP2-P-O3' | -17.51 | 66.68 | 105.20 |
| 6 | N | 445 | U | O3'-P-O5' | 17.51 | 137.27 | 104.00 |
| 1 | I | 389 | A | P-O3'-C3' | 17.50 | 140.70 | 119.70 |
| 1 | I | 329 | A | OP2-P-O3' | 17.50 | 143.69 | 105.20 |
| 5 | M | 376 | U | OP2-P-O3' | 17.49 | 143.69 | 105.20 |
| 4 | L | 625 | U | OP2-P-O3' | -17.48 | 66.75 | 105.20 |
| 2 | J | 188 | A | O3'-P-O5' | 17.47 | 137.19 | 104.00 |
| 1 | I | 270 | A | OP2-P-O3' | 17.46 | 143.62 | 105.20 |
| 3 | K | 66 | A | P-O3'-C3' | -17.45 | 98.75 | 119.70 |
| 3 | K | 166 | A | P-O3'-C3' | -17.45 | 98.76 | 119.70 |
| 4 | L | 676 | U | P-O3'-C3' | -17.45 | 98.76 | 119.70 |
| 3 | K | 156 | A | O3'-P-O5' | -17.41 | 70.91 | 104.00 |
| 1 | I | 18 | A | OP2-P-O3' | 17.41 | 143.50 | 105.20 |
| 1 | I | 113 | A | P-O3'-C3' | -17.39 | 98.83 | 119.70 |
| 4 | L | 479 | U | O3'-P-O5' | 17.39 | 137.04 | 104.00 |
| 1 | I | 249 | A | P-O3'-C3' | -17.37 | 98.85 | 119.70 |
| 4 | L | 656 | U | P-O3'-C3' | -17.36 | 98.86 | 119.70 |
| 4 | L | 421 | U | O3'-P-O5' | -17.36 | 71.01 | 104.00 |
| 1 | I | 112 | A | O3'-P-O5' | -17.36 | 71.02 | 104.00 |
| 1 | I | 342 | A | OP2-P-O3' | 17.35 | 143.38 | 105.20 |
| 3 | K | 206 | A | O3'-P-O5' | -17.35 | 71.03 | 104.00 |
| 3 | K | 173 | A | P-O3'-C3' | -17.33 | 98.90 | 119.70 |
| 2 | J | 187 | A | P-O3'-C3' | -17.33 | 98.91 | 119.70 |
| 3 | K | 205 | A | O3'-P-O5' | -17.32 | 71.10 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 6 | N | 474 | U | OP2-P-O3' | 17.29 | 143.23 | 105.20 |
| 5 | M | 393 | U | O3'-P-O5' | -17.29 | 71.16 | 104.00 |
| 1 | I | 72 | A | OP2-P-O3' | 17.28 | 143.22 | 105.20 |
| 3 | K | 180 | A | OP2-P-O3' | -17.28 | 67.18 | 105.20 |
| 5 | M | 453 | U | OP2-P-O3' | 17.28 | 143.22 | 105.20 |
| 1 | I | 128 | A | O3'-P-O5' | -17.25 | 71.23 | 104.00 |
| 6 | N | 434 | U | O3'-P-O5' | -17.24 | 71.24 | 104.00 |
| 6 | N | 311 | U | OP2-P-O3' | 17.24 | 143.12 | 105.20 |
| 1 | I | 266 | A | OP1-P-O3' | -17.23 | 67.30 | 105.20 |
| 4 | L | 651 | U | P-O3'-C3' | -17.23 | 99.03 | 119.70 |
| 2 | J | 59 | A | P-O3'-C3' | -17.21 | 99.04 | 119.70 |
| 4 | L | 634 | U | OP2-P-O3' | 17.21 | 143.06 | 105.20 |
| 4 | L | 674 | U | OP2-P-O3' | 17.20 | 143.05 | 105.20 |
| 1 | I | 130 | A | O3'-P-O5' | 17.20 | 136.67 | 104.00 |
| 3 | K | 171 | A | O3'-P-O5' | 17.19 | 136.67 | 104.00 |
| 1 | I | 194 | A | P-O3'-C3' | -17.18 | 99.08 | 119.70 |
| 6 | N | 526 | U | OP2-P-O3' | 17.17 | 142.98 | 105.20 |
| 2 | J | 132 | A | OP2-P-O3' | 17.16 | 142.96 | 105.20 |
| 4 | L | 779 | U | OP2-P-O3' | 17.15 | 142.93 | 105.20 |
| 1 | I | 375 | A | O3'-P-O5' | 17.14 | 136.57 | 104.00 |
| 2 | J | 127 | A | P-O3'-C3' | -17.14 | 99.13 | 119.70 |
| 5 | M | 310 | U | P-O3'-C3' | -17.14 | 99.14 | 119.70 |
| 4 | L | 496 | U | O3'-P-O5' | -17.13 | 71.45 | 104.00 |
| 1 | I | 66 | A | O3'-P-O5' | -17.13 | 71.45 | 104.00 |
| 5 | M | 437 | U | OP2-P-O3' | 17.12 | 142.87 | 105.20 |
| 1 | I | 220 | A | O3'-P-O5' | 17.12 | 136.52 | 104.00 |
| 1 | I | 65 | A | OP1-P-O3' | -17.12 | 67.54 | 105.20 |
| 4 | L | 706 | U | OP2-P-O3' | 17.11 | 142.85 | 105.20 |
| 3 | K | 169 | A | P-O3'-C3' | -17.08 | 99.21 | 119.70 |
| 5 | M | 547 | U | O3'-P-O5' | 17.07 | 136.44 | 104.00 |
| 3 | K | 47 | A | P-O3'-C3' | -17.07 | 99.22 | 119.70 |
| 1 | I | 159 | A | O3'-P-O5' | 17.06 | 136.41 | 104.00 |
| 3 | K | 119 | A | OP1-P-O3' | -17.06 | 67.67 | 105.20 |
| 1 | I | 61 | A | O3'-P-O5' | -17.05 | 71.60 | 104.00 |
| 1 | I | 344 | A | P-O3'-C3' | -17.03 | 99.26 | 119.70 |
| 2 | J | 54 | A | O3'-P-O5' | -17.03 | 71.64 | 104.00 |
| 5 | M | 361 | U | O3'-P-O5' | 17.03 | 136.36 | 104.00 |
| 4 | L | 727 | U | OP2-P-O3' | -17.03 | 67.74 | 105.20 |
| 2 | J | 25 | A | O3'-P-O5' | 17.02 | 136.34 | 104.00 |
| 1 | I | 213 | A | O3'-P-O5' | -17.01 | 71.68 | 104.00 |
| 4 | L | 787 | U | O3'-P-O5' | 17.01 | 136.32 | 104.00 |
| 1 | I | 338 | A | P-O3'-C3' | -17.00 | 99.30 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 2 | J | 210 | A | O3'-P-O5' | -17.00 | 71.70 | 104.00 |
| 5 | M | 508 | U | P-O3'-C3' | -16.98 | 99.32 | 119.70 |
| 4 | L | 563 | U | O3'-P-O5' | -16.97 | 71.75 | 104.00 |
| 4 | L | 447 | U | OP2-P-O3' | -16.96 | 67.88 | 105.20 |
| 6 | N | 412 | U | P-O3'-C3' | -16.96 | 99.35 | 119.70 |
| 4 | L | 629 | U | P-O3'-C3' | -16.95 | 99.36 | 119.70 |
| 3 | K | 5 | A | O3'-P-O5' | -16.95 | 71.79 | 104.00 |
| 1 | I | 36 | A | P-O3'-C3' | -16.95 | 99.36 | 119.70 |
| 2 | J | 211 | A | P-O3'-C3' | -16.95 | 99.36 | 119.70 |
| 4 | L | 482 | U | P-O3'-C3' | -16.94 | 99.37 | 119.70 |
| 5 | M | 407 | U | P-O3'-C3' | -16.94 | 99.37 | 119.70 |
| 1 | I | 302 | A | P-O3'-C3' | -16.93 | 99.39 | 119.70 |
| 3 | K | 90 | A | P-O3'-C3' | -16.90 | 99.42 | 119.70 |
| 1 | I | 267 | A | O3'-P-O5' | 16.89 | 136.10 | 104.00 |
| 5 | M | 327 | U | P-O3'-C3' | -16.88 | 99.44 | 119.70 |
| 4 | L | 586 | U | O3'-P-O5' | -16.87 | 71.94 | 104.00 |
| 6 | N | 303 | U | OP1-P-O3' | 16.86 | 142.29 | 105.20 |
| 1 | I | 186 | A | OP2-P-O3' | -16.84 | 68.14 | 105.20 |
| 1 | I | 206 | A | O3'-P-O5' | 16.82 | 135.95 | 104.00 |
| 5 | M | 490 | U | O3'-P-O5' | 16.82 | 135.95 | 104.00 |
| 3 | K | 227 | A | OP1-P-O3' | 16.81 | 142.18 | 105.20 |
| 4 | L | 764 | U | OP2-P-O3' | 16.80 | 142.17 | 105.20 |
| 6 | N | 449 | U | OP2-P-O3' | 16.79 | 142.13 | 105.20 |
| 1 | I | 48 | A | OP2-P-O3' | 16.78 | 142.12 | 105.20 |
| 6 | N | 446 | U | O3'-P-O5' | 16.78 | 135.89 | 104.00 |
| 1 | I | 115 | A | O3'-P-O5' | 16.77 | 135.87 | 104.00 |
| 4 | L | 516 | U | OP2-P-O3' | 16.77 | 142.09 | 105.20 |
| 4 | L | 745 | U | OP2-P-O3' | -16.75 | 68.35 | 105.20 |
| 1 | I | 322 | A | OP2-P-O3' | 16.74 | 142.03 | 105.20 |
| 6 | N | 422 | U | P-O3'-C3' | -16.73 | 99.62 | 119.70 |
| 2 | J | 229 | A | OP2-P-O3' | 16.70 | 141.94 | 105.20 |
| 1 | I | 84 | A | O3'-P-O5' | 16.70 | 135.72 | 104.00 |
| 2 | J | 70 | A | OP2-P-O3' | 16.70 | 141.93 | 105.20 |
| 2 | J | 248 | A | P-O3'-C3' | -16.69 | 99.67 | 119.70 |
| 4 | L | 615 | U | P-O3'-C3' | -16.68 | 99.68 | 119.70 |
| 3 | K | 110 | A | OP2-P-O3' | 16.68 | 141.89 | 105.20 |
| 4 | L | 759 | U | OP1-P-O3' | -16.67 | 68.53 | 105.20 |
| 5 | M | 528 | U | P-O3'-C3' | -16.66 | 99.70 | 119.70 |
| 3 | K | 45 | A | O3'-P-O5' | -16.65 | 72.37 | 104.00 |
| 5 | M | 323 | U | P-O3'-C3' | -16.64 | 99.73 | 119.70 |
| 1 | I | 143 | A | P-O3'-C3' | 16.64 | 139.67 | 119.70 |
| 5 | M | 464 | U | O3'-P-O5' | 16.63 | 135.60 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 5 | M | 536 | U | P-O3'-C3' | -16.62 | 99.75 | 119.70 |
| 6 | N | 451 | U | OP2-P-O3' | 16.62 | 141.77 | 105.20 |
| 4 | L | 777 | U | OP2-P-O3' | 16.61 | 141.74 | 105.20 |
| 2 | J | 33 | A | P-O3'-C3' | -16.61 | 99.77 | 119.70 |
| 6 | N | 455 | U | P-O3'-C3' | -16.60 | 99.78 | 119.70 |
| 6 | N | 411 | U | O3'-P-O5' | 16.60 | 135.53 | 104.00 |
| 5 | M | 526 | U | OP2-P-O3' | 16.58 | 141.67 | 105.20 |
| 1 | I | 53 | A | O3'-P-O5' | 16.57 | 135.49 | 104.00 |
| 4 | L | 422 | U | O3'-P-O5' | -16.57 | 72.52 | 104.00 |
| 2 | J | 73 | A | O3'-P-O5' | 16.57 | 135.48 | 104.00 |
| 4 | L | 573 | U | O3'-P-O5' | -16.56 | 72.53 | 104.00 |
| 1 | I | 219 | A | O3'-P-O5' | 16.55 | 135.45 | 104.00 |
| 4 | L | 807 | U | OP1-P-O3' | -16.55 | 68.78 | 105.20 |
| 5 | M | 433 | U | P-O3'-C3' | -16.55 | 99.84 | 119.70 |
| 5 | M | 464 | U | P-O3'-C3' | -16.54 | 99.86 | 119.70 |
| 4 | L | 447 | U | O3'-P-O5' | 16.53 | 135.41 | 104.00 |
| 4 | L | 587 | U | OP2-P-O3' | 16.53 | 141.56 | 105.20 |
| 5 | M | 527 | U | P-O3'-C3' | -16.52 | 99.88 | 119.70 |
| 4 | L | 531 | U | OP2-P-O3' | 16.51 | 141.52 | 105.20 |
| 4 | L | 751 | U | OP2-P-O3' | 16.51 | 141.51 | 105.20 |
| 1 | I | 345 | A | O3'-P-O5' | 16.50 | 135.35 | 104.00 |
| 3 | K | 93 | A | P-O3'-C3' | -16.49 | 99.91 | 119.70 |
| 5 | M | 522 | U | P-O3'-C3' | -16.48 | 99.92 | 119.70 |
| 1 | I | 55 | A | P-O3'-C3' | -16.48 | 99.93 | 119.70 |
| 6 | N | 387 | U | P-O3'-C3' | 16.47 | 139.46 | 119.70 |
| 1 | I | 285 | A | OP2-P-O3' | 16.47 | 141.43 | 105.20 |
| 1 | I | 323 | A | OP2-P-O3' | 16.46 | 141.42 | 105.20 |
| 4 | L | 727 | U | O3'-P-O5' | 16.46 | 135.28 | 104.00 |
| 2 | J | 60 | A | O3'-P-O5' | 16.46 | 135.27 | 104.00 |
| 5 | M | 411 | U | P-O3'-C3' | -16.45 | 99.96 | 119.70 |
| 4 | L | 804 | U | O3'-P-O5' | -16.45 | 72.75 | 104.00 |
| 2 | J | 215 | A | O3'-P-O5' | 16.44 | 135.23 | 104.00 |
| 2 | J | 252 | A | P-O3'-C3' | -16.44 | 99.98 | 119.70 |
| 5 | M | 354 | U | O3'-P-O5' | 16.43 | 135.23 | 104.00 |
| 1 | I | 47 | A | O3'-P-O5' | 16.43 | 135.21 | 104.00 |
| 4 | L | 806 | U | OP2-P-O3' | 16.43 | 141.34 | 105.20 |
| 1 | I | 92 | A | P-O3'-C3' | -16.42 | 100.00 | 119.70 |
| 6 | N | 483 | U | P-O3'-C3' | -16.42 | 100.00 | 119.70 |
| 4 | L | 551 | U | O3'-P-O5' | 16.41 | 135.19 | 104.00 |
| 2 | J | 229 | A | O3'-P-O5' | -16.41 | 72.83 | 104.00 |
| 6 | N | 328 | U | O3'-P-O5' | -16.41 | 72.83 | 104.00 |
| 1 | I | 255 | A | OP2-P-O3' | 16.40 | 141.29 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 3 | K | 247 | A | O3'-P-O5' | 16.40 | 135.16 | 104.00 |
| 5 | M | 420 | U | OP2-P-O3' | 16.39 | 141.27 | 105.20 |
| 2 | J | 115 | A | OP2-P-O3' | -16.39 | 69.14 | 105.20 |
| 3 | K | 148 | A | OP2-P-O3' | -16.39 | 69.15 | 105.20 |
| 3 | K | 80 | A | O3'-P-O5' | -16.38 | 72.89 | 104.00 |
| 5 | M | 396 | U | OP2-P-O3' | 16.37 | 141.22 | 105.20 |
| 4 | L | 711 | U | OP2-P-O3' | 16.37 | 141.22 | 105.20 |
| 6 | N | 393 | U | O3'-P-O5' | 16.36 | 135.08 | 104.00 |
| 6 | N | 398 | U | O3'-P-O5' | 16.34 | 135.04 | 104.00 |
| 5 | M | 512 | U | OP2-P-O3' | 16.32 | 141.11 | 105.20 |
| 2 | J | 43 | A | O3'-P-O5' | -16.32 | 73.00 | 104.00 |
| 1 | I | 26 | A | OP2-P-O3' | 16.31 | 141.08 | 105.20 |
| 2 | J | 93 | A | OP2-P-O3' | 16.31 | 141.07 | 105.20 |
| 1 | I | 15 | A | O3'-P-O5' | -16.30 | 73.03 | 104.00 |
| 1 | I | 132 | A | P-O3'-C3' | -16.28 | 100.16 | 119.70 |
| 2 | J | 200 | A | O3'-P-O5' | 16.28 | 134.93 | 104.00 |
| 4 | L | 724 | U | O3'-P-O5' | -16.28 | 73.07 | 104.00 |
| 2 | J | 101 | A | P-O3'-C3' | -16.27 | 100.18 | 119.70 |
| 2 | J | 23 | A | P-O3'-C3' | -16.27 | 100.18 | 119.70 |
| 6 | N | 428 | U | O3'-P-O5' | 16.25 | 134.87 | 104.00 |
| 3 | K | 73 | A | OP2-P-O3' | 16.24 | 140.94 | 105.20 |
| 5 | M | 299 | U | O3'-P-O5' | -16.24 | 73.14 | 104.00 |
| 6 | N | 310 | U | O3'-P-O5' | -16.24 | 73.14 | 104.00 |
| 2 | J | 185 | A | P-O3'-C3' | -16.23 | 100.22 | 119.70 |
| 1 | I | 50 | A | O3'-P-O5' | 16.23 | 134.84 | 104.00 |
| 5 | M | 378 | U | OP2-P-O3' | -16.22 | 69.52 | 105.20 |
| 3 | K | 53 | A | O3'-P-O5' | 16.22 | 134.81 | 104.00 |
| 4 | L | 818 | U | OP2-P-O3' | -16.22 | 69.52 | 105.20 |
| 5 | M | 486 | U | P-O3'-C3' | -16.21 | 100.24 | 119.70 |
| 2 | J | 38 | A | O3'-P-O5' | 16.21 | 134.79 | 104.00 |
| 1 | I | 341 | A | OP2-P-O3' | 16.14 | 140.70 | 105.20 |
| 5 | M | 476 | U | P-O3'-C3' | -16.13 | 100.34 | 119.70 |
| 2 | J | 21 | A | P-O3'-C3' | -16.11 | 100.37 | 119.70 |
| 2 | J | 216 | A | O3'-P-O5' | 16.10 | 134.59 | 104.00 |
| 1 | I | 231 | A | O3'-P-O5' | -16.09 | 73.43 | 104.00 |
| 3 | K | 248 | A | O3'-P-O5' | 16.09 | 134.57 | 104.00 |
| 6 | N | 358 | U | O3'-P-O5' | 16.08 | 134.55 | 104.00 |
| 2 | J | 188 | A | OP2-P-O3' | -16.07 | 69.86 | 105.20 |
| 5 | M | 450 | U | O3'-P-O5' | -16.06 | 73.48 | 104.00 |
| 4 | L | 507 | U | OP2-P-O3' | 16.06 | 140.53 | 105.20 |
| 6 | N | 303 | U | P-O3'-C3' | 16.05 | 138.96 | 119.70 |
| 6 | N | 429 | U | P-O3'-C3' | -16.05 | 100.44 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 2 | J | 36 | A | P-O3'-C3' | -16.05 | 100.45 | 119.70 |
| 2 | J | 46 | A | O3'-P-O5' | 16.03 | 134.46 | 104.00 |
| 2 | J | 214 | A | P-O3'-C3' | -16.03 | 100.46 | 119.70 |
| 3 | K | 108 | A | OP2-P-O3' | 16.03 | 140.47 | 105.20 |
| 2 | J | 13 | A | P-O3'-C3' | -16.03 | 100.47 | 119.70 |
| 2 | J | 192 | A | P-O3'-C3' | -16.02 | 100.47 | 119.70 |
| 4 | L | 699 | U | OP2-P-O3' | 16.01 | 140.41 | 105.20 |
| 5 | M | 319 | U | O3'-P-O5' | -16.00 | 73.59 | 104.00 |
| 6 | N | 527 | U | P-O3'-C3' | -16.00 | 100.50 | 119.70 |
| 1 | I | 263 | A | P-O3'-C3' | -15.99 | 100.51 | 119.70 |
| 5 | M | 348 | U | P-O3'-C3' | -15.97 | 100.53 | 119.70 |
| 6 | N | 391 | U | O3'-P-O5' | 15.97 | 134.34 | 104.00 |
| 1 | I | 71 | A | O3'-P-O5' | -15.96 | 73.67 | 104.00 |
| 2 | J | 131 | A | P-O3'-C3' | -15.96 | 100.55 | 119.70 |
| 2 | J | 153 | A | P-O3'-C3' | -15.96 | 100.55 | 119.70 |
| 1 | I | 134 | A | O3'-P-O5' | 15.95 | 134.30 | 104.00 |
| 4 | L | 643 | U | P-O3'-C3' | -15.94 | 100.57 | 119.70 |
| 4 | L | 556 | U | O3'-P-O5' | 15.93 | 134.28 | 104.00 |
| 2 | J | 179 | A | O3'-P-O5' | 15.93 | 134.27 | 104.00 |
| 4 | L | 499 | U | P-O3'-C3' | -15.93 | 100.59 | 119.70 |
| 1 | I | 90 | A | OP2-P-O3' | 15.91 | 140.21 | 105.20 |
| 3 | K | 91 | A | P-O3'-C3' | -15.91 | 100.61 | 119.70 |
| 3 | K | 26 | A | OP2-P-O3' | -15.90 | 70.21 | 105.20 |
| 4 | L | 587 | U | O3'-P-O5' | -15.89 | 73.81 | 104.00 |
| 5 | M | 377 | U | OP2-P-O3' | 15.89 | 140.16 | 105.20 |
| 5 | M | 397 | U | P-O3'-C3' | -15.89 | 100.63 | 119.70 |
| 4 | L | 484 | U | P-O3'-C3' | -15.88 | 100.65 | 119.70 |
| 4 | L | 479 | U | P-O3'-C3' | -15.87 | 100.65 | 119.70 |
| 1 | I | 114 | A | P-O3'-C3' | -15.86 | 100.66 | 119.70 |
| 2 | J | 181 | A | O3'-P-O5' | 15.86 | 134.14 | 104.00 |
| 2 | J | 130 | A | OP2-P-O3' | 15.86 | 140.09 | 105.20 |
| 5 | M | 520 | U | OP2-P-O3' | 15.86 | 140.10 | 105.20 |
| 1 | I | 306 | A | P-O3'-C3' | -15.86 | 100.67 | 119.70 |
| 1 | I | 189 | A | P-O3'-C3' | -15.85 | 100.68 | 119.70 |
| 4 | L | 665 | U | O3'-P-O5' | 15.83 | 134.08 | 104.00 |
| 6 | N | 401 | U | P-O3'-C3' | -15.82 | 100.72 | 119.70 |
| 3 | K | 67 | A | O3'-P-O5' | 15.81 | 134.03 | 104.00 |
| 4 | L | 735 | U | P-O3'-C3' | -15.80 | 100.74 | 119.70 |
| 4 | L | 620 | U | OP2-P-O3' | -15.80 | 70.45 | 105.20 |
| 3 | K | 102 | A | P-O3'-C3' | -15.79 | 100.75 | 119.70 |
| 1 | I | 300 | A | O3'-P-O5' | 15.77 | 133.97 | 104.00 |
| 2 | J | 94 | A | P-O3'-C3' | -15.77 | 100.77 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 4 | L | 554 | U | O3'-P-O5' | 15.77 | 133.97 | 104.00 |
| 4 | L | 635 | U | P-O3'-C3' | -15.77 | 100.77 | 119.70 |
| 1 | I | 376 | A | O3'-P-O5' | 15.76 | 133.93 | 104.00 |
| 1 | I | 253 | A | O3'-P-O5' | -15.75 | 74.07 | 104.00 |
| 4 | L | 694 | U | OP1-P-O3' | -15.75 | 70.54 | 105.20 |
| 1 | I | 41 | A | OP2-P-O3' | -15.75 | 70.56 | 105.20 |
| 1 | I | 49 | A | P-O3'-C3' | -15.74 | 100.81 | 119.70 |
| 4 | L | 660 | U | O3'-P-O5' | -15.73 | 74.11 | 104.00 |
| 2 | J | 58 | A | P-O3'-C3' | -15.72 | 100.83 | 119.70 |
| 6 | N | 496 | U | OP2-P-O3' | 15.72 | 139.79 | 105.20 |
| 1 | I | 353 | A | OP2-P-O3' | 15.72 | 139.78 | 105.20 |
| 6 | N | 463 | U | P-O3'-C3' | -15.72 | 100.84 | 119.70 |
| 4 | L | 614 | U | P-O3'-C3' | -15.72 | 100.84 | 119.70 |
| 4 | L | 763 | U | P-O3'-C3' | -15.71 | 100.85 | 119.70 |
| 2 | J | 20 | A | P-O3'-C3' | -15.70 | 100.86 | 119.70 |
| 3 | K | 227 | A | P-O3'-C3' | 15.69 | 138.53 | 119.70 |
| 2 | J | 64 | A | O3'-P-O5' | -15.69 | 74.20 | 104.00 |
| 1 | I | 393 | A | O3'-P-O5' | -15.68 | 74.20 | 104.00 |
| 2 | J | 96 | A | P-O3'-C3' | -15.67 | 100.90 | 119.70 |
| 4 | L | 668 | U | OP1-P-O3' | 15.67 | 139.66 | 105.20 |
| 2 | J | 265 | A | O3'-P-O5' | 15.66 | 133.75 | 104.00 |
| 2 | J | 142 | A | O3'-P-O5' | -15.65 | 74.26 | 104.00 |
| 4 | L | 767 | U | P-O3'-C3' | 15.65 | 138.48 | 119.70 |
| 4 | L | 517 | U | O3'-P-O5' | -15.65 | 74.27 | 104.00 |
| 3 | K | 254 | A | O3'-P-O5' | -15.64 | 74.28 | 104.00 |
| 4 | L | 740 | U | P-O3'-C3' | -15.63 | 100.94 | 119.70 |
| 3 | K | 109 | A | OP2-P-O3' | 15.62 | 139.57 | 105.20 |
| 1 | I | 249 | A | OP2-P-O3' | 15.62 | 139.56 | 105.20 |
| 2 | J | 207 | A | OP2-P-O3' | 15.62 | 139.55 | 105.20 |
| 3 | K | 101 | A | OP2-P-O3' | 15.62 | 139.55 | 105.20 |
| 4 | L | 497 | U | OP1-P-O3' | -15.62 | 70.85 | 105.20 |
| 1 | I | 58 | A | O3'-P-O5' | -15.61 | 74.34 | 104.00 |
| 4 | L | 496 | U | P-O3'-C3' | -15.61 | 100.97 | 119.70 |
| 5 | M | 368 | U | OP2-P-O3' | 15.60 | 139.52 | 105.20 |
| 6 | N | 490 | U | P-O3'-C3' | -15.60 | 100.99 | 119.70 |
| 2 | J | 90 | A | OP2-P-O3' | 15.59 | 139.49 | 105.20 |
| 2 | J | 215 | A | P-O3'-C3' | -15.57 | 101.01 | 119.70 |
| 4 | L | 649 | U | P-O3'-C3' | -15.57 | 101.02 | 119.70 |
| 1 | I | 283 | A | O3'-P-O5' | 15.56 | 133.56 | 104.00 |
| 1 | I | 242 | A | OP2-P-O3' | 15.55 | 139.41 | 105.20 |
| 5 | M | 474 | U | OP2-P-O3' | -15.54 | 71.01 | 105.20 |
| 3 | K | 144 | A | O3'-P-O5' | -15.53 | 74.49 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1 | I | 51 | A | P-O3'-C3' | -15.53 | 101.06 | 119.70 |
| 4 | L | 533 | U | P-O3'-C3' | -15.53 | 101.07 | 119.70 |
| 6 | N | 407 | U | P-O3'-C3' | -15.52 | 101.07 | 119.70 |
| 1 | I | 222 | A | OP2-P-O3' | 15.52 | 139.34 | 105.20 |
| 1 | I | 107 | A | O3'-P-O5' | -15.51 | 74.54 | 104.00 |
| 4 | L | 560 | U | P-O3'-C3' | -15.51 | 101.09 | 119.70 |
| 1 | I | 18 | A | O3'-P-O5' | -15.50 | 74.55 | 104.00 |
| 5 | M | 335 | U | OP2-P-O3' | 15.50 | 139.30 | 105.20 |
| 1 | I | 331 | A | P-O3'-C3' | -15.49 | 101.11 | 119.70 |
| 1 | I | 100 | A | P-O3'-C3' | -15.49 | 101.12 | 119.70 |
| 4 | L | 511 | U | OP2-P-O3' | -15.46 | 71.18 | 105.20 |
| 3 | K | 79 | A | P-O3'-C3' | -15.46 | 101.14 | 119.70 |
| 2 | J | 29 | A | OP1-P-O3' | -15.44 | 71.23 | 105.20 |
| 6 | N | 391 | U | OP2-P-O3' | -15.44 | 71.23 | 105.20 |
| 3 | K | 225 | A | OP1-P-O3' | 15.43 | 139.16 | 105.20 |
| 1 | I | 187 | A | O3'-P-O5' | -15.43 | 74.68 | 104.00 |
| 1 | I | 37 | A | O3'-P-O5' | 15.43 | 133.31 | 104.00 |
| 2 | J | 66 | A | P-O3'-C3' | -15.43 | 101.19 | 119.70 |
| 1 | I | 262 | A | OP2-P-O3' | 15.43 | 139.14 | 105.20 |
| 5 | M | 400 | U | P-O3'-C3' | -15.43 | 101.19 | 119.70 |
| 5 | M | 522 | U | OP2-P-O3' | 15.42 | 139.12 | 105.20 |
| 1 | I | 291 | A | OP2-P-O3' | 15.40 | 139.08 | 105.20 |
| 6 | N | 489 | U | O3'-P-O5' | 15.39 | 133.24 | 104.00 |
| 2 | J | 163 | A | OP2-P-O3' | -15.38 | 71.36 | 105.20 |
| 3 | K | 131 | A | P-O3'-C3' | -15.37 | 101.25 | 119.70 |
| 1 | I | 29 | A | P-O3'-C3' | -15.36 | 101.27 | 119.70 |
| 1 | I | 330 | A | OP2-P-O3' | 15.36 | 139.00 | 105.20 |
| 5 | M | 443 | U | O3'-P-O5' | 15.36 | 133.19 | 104.00 |
| 1 | I | 345 | A | P-O3'-C3' | -15.35 | 101.28 | 119.70 |
| 4 | L | 513 | U | P-O3'-C3' | -15.35 | 101.28 | 119.70 |
| 2 | J | 25 | A | OP2-P-O3' | -15.35 | 71.43 | 105.20 |
| 2 | J | 102 | A | P-O3'-C3' | -15.34 | 101.29 | 119.70 |
| 2 | J | 222 | A | OP1-P-O3' | -15.34 | 71.45 | 105.20 |
| 4 | L | 755 | U | OP2-P-O3' | 15.33 | 138.92 | 105.20 |
| 1 | I | 303 | A | O3'-P-O5' | 15.32 | 133.10 | 104.00 |
| 4 | L | 672 | U | O3'-P-O5' | -15.32 | 74.90 | 104.00 |
| 2 | J | 47 | A | OP1-P-O3' | -15.30 | 71.54 | 105.20 |
| 6 | N | 406 | U | O3'-P-O5' | -15.30 | 74.93 | 104.00 |
| 4 | L | 611 | U | OP2-P-O3' | 15.29 | 138.84 | 105.20 |
| 5 | M | 529 | U | P-O3'-C3' | -15.29 | 101.35 | 119.70 |
| 3 | K | 49 | A | OP2-P-O3' | -15.28 | 71.58 | 105.20 |
| 1 | I | 49 | A | O3'-P-O5' | 15.28 | 133.03 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1 | I | 261 | A | OP2-P-O3' | 15.27 | 138.80 | 105.20 |
| 1 | I | 346 | A | P-O3'-C3' | -15.26 | 101.38 | 119.70 |
| 5 | M | 409 | U | P-O3'-C3' | -15.26 | 101.38 | 119.70 |
| 1 | I | 280 | A | O3'-P-O5' | 15.25 | 132.98 | 104.00 |
| 2 | J | 5 | A | O3'-P-O5' | 15.24 | 132.96 | 104.00 |
| 2 | J | 211 | A | OP2-P-O3' | 15.24 | 138.73 | 105.20 |
| 1 | I | 90 | A | O3'-P-O5' | -15.24 | 75.05 | 104.00 |
| 4 | L | 620 | U | O3'-P-O5' | 15.24 | 132.95 | 104.00 |
| 6 | N | 408 | U | OP2-P-O3' | -15.24 | 71.68 | 105.20 |
| 5 | M | 310 | U | OP2-P-O3' | 15.23 | 138.71 | 105.20 |
| 1 | I | 10 | A | O3'-P-O5' | 15.22 | 132.92 | 104.00 |
| 2 | J | 159 | A | P-O3'-C3' | -15.21 | 101.45 | 119.70 |
| 4 | L | 734 | U | OP2-P-O3' | 15.21 | 138.66 | 105.20 |
| 1 | I | 390 | A | P-O3'-C3' | 15.21 | 137.95 | 119.70 |
| 1 | I | 67 | A | OP2-P-O3' | 15.20 | 138.65 | 105.20 |
| 4 | L | 763 | U | OP2-P-O3' | 15.20 | 138.65 | 105.20 |
| 4 | L | 488 | U | OP2-P-O3' | 15.19 | 138.61 | 105.20 |
| 4 | L | 723 | U | OP2-P-O3' | 15.19 | 138.61 | 105.20 |
| 6 | N | 523 | U | OP2-P-O3' | -15.18 | 71.80 | 105.20 |
| 2 | J | 91 | A | P-O3'-C3' | -15.18 | 101.48 | 119.70 |
| 4 | L | 537 | U | OP2-P-O3' | 15.17 | 138.57 | 105.20 |
| 4 | L | 688 | U | P-O3'-C3' | -15.16 | 101.51 | 119.70 |
| 5 | M | 398 | U | P-O3'-C3' | -15.16 | 101.51 | 119.70 |
| 5 | M | 298 | U | P-O3'-C3' | -15.16 | 101.51 | 119.70 |
| 5 | M | 405 | U | OP2-P-O3' | 15.15 | 138.54 | 105.20 |
| 1 | I | 152 | A | O3'-P-O5' | -15.15 | 75.22 | 104.00 |
| 4 | L | 525 | U | OP2-P-O3' | 15.14 | 138.50 | 105.20 |
| 2 | J | 48 | A | OP2-P-O3' | 15.13 | 138.49 | 105.20 |
| 2 | J | 106 | A | P-O3'-C3' | -15.13 | 101.55 | 119.70 |
| 5 | M | 295 | U | P-O3'-C3' | -15.12 | 101.55 | 119.70 |
| 4 | L | 468 | U | P-O3'-C3' | -15.12 | 101.56 | 119.70 |
| 4 | L | 612 | U | P-O3'-C3' | -15.11 | 101.56 | 119.70 |
| 6 | N | 497 | U | O3'-P-O5' | -15.11 | 75.30 | 104.00 |
| 1 | I | 278 | A | OP2-P-O3' | 15.10 | 138.43 | 105.20 |
| 5 | M | 504 | U | OP2-P-O3' | 15.10 | 138.43 | 105.20 |
| 5 | M | 434 | U | P-O3'-C3' | -15.10 | 101.58 | 119.70 |
| 4 | L | 668 | U | O3'-P-O5' | -15.10 | 75.31 | 104.00 |
| 6 | N | 448 | U | OP2-P-O3' | 15.10 | 138.41 | 105.20 |
| 6 | N | 411 | U | P-O3'-C3' | -15.09 | 101.59 | 119.70 |
| 1 | I | 136 | A | OP2-P-O3' | 15.09 | 138.40 | 105.20 |
| 5 | M | 368 | U | OP1-P-O3' | -15.09 | 72.00 | 105.20 |
| 1 | I | 3 | A | OP2-P-O3' | -15.08 | 72.03 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 6 | N | 277 | U | OP2-P-O3' | 15.07 | 138.36 | 105.20 |
| 4 | L | 448 | U | O3'-P-O5' | 15.06 | 132.61 | 104.00 |
| 6 | N | 497 | U | P-O3'-C3' | -15.06 | 101.63 | 119.70 |
| 6 | N | 474 | U | O3'-P-O5' | -15.05 | 75.41 | 104.00 |
| 4 | L | 632 | U | O3'-P-O5' | 15.04 | 132.58 | 104.00 |
| 5 | M | 448 | U | P-O3'-C3' | -15.04 | 101.65 | 119.70 |
| 4 | L | 760 | U | O3'-P-O5' | -15.03 | 75.45 | 104.00 |
| 4 | L | 738 | U | OP2-P-O3' | -15.02 | 72.16 | 105.20 |
| 3 | K | 214 | A | O3'-P-O5' | -15.01 | 75.48 | 104.00 |
| 6 | N | 338 | U | OP1-P-O3' | 15.01 | 138.22 | 105.20 |
| 5 | M | 328 | U | P-O3'-C3' | -15.01 | 101.69 | 119.70 |
| 6 | N | 482 | U | P-O3'-C3' | -15.00 | 101.70 | 119.70 |
| 1 | I | 232 | A | O3'-P-O5' | -15.00 | 75.50 | 104.00 |
| 2 | J | 63 | A | OP2-P-O3' | 14.96 | 138.12 | 105.20 |
| 2 | J | 75 | A | P-O3'-C3' | -14.96 | 101.75 | 119.70 |
| 1 | I | 106 | A | O3'-P-O5' | 14.96 | 132.42 | 104.00 |
| 1 | I | 355 | A | P-O3'-C3' | -14.95 | 101.76 | 119.70 |
| 1 | I | 242 | A | P-O3'-C3' | -14.95 | 101.77 | 119.70 |
| 5 | M | 333 | U | OP2-P-O3' | 14.94 | 138.07 | 105.20 |
| 5 | M | 288 | U | OP2-P-O3' | 14.94 | 138.06 | 105.20 |
| 1 | I | 197 | A | O3'-P-O5' | 14.93 | 132.38 | 104.00 |
| 2 | J | 254 | A | OP2-P-O3' | 14.92 | 138.02 | 105.20 |
| 1 | I | 238 | A | O3'-P-O5' | -14.91 | 75.67 | 104.00 |
| 3 | K | 146 | A | O3'-P-O5' | 14.91 | 132.33 | 104.00 |
| 2 | J | 225 | A | P-O3'-C3' | -14.91 | 101.81 | 119.70 |
| 4 | L | 496 | U | OP2-P-O3' | 14.91 | 137.99 | 105.20 |
| 6 | N | 498 | U | P-O3'-C3' | -14.88 | 101.84 | 119.70 |
| 3 | K | 209 | A | OP1-P-O3' | 14.88 | 137.93 | 105.20 |
| 4 | L | 693 | U | P-O3'-C3' | -14.87 | 101.85 | 119.70 |
| 1 | I | 161 | A | O3'-P-O5' | -14.87 | 75.74 | 104.00 |
| 2 | J | 115 | A | O3'-P-O5' | 14.87 | 132.26 | 104.00 |
| 5 | M | 483 | U | P-O3'-C3' | -14.87 | 101.85 | 119.70 |
| 5 | M | 529 | U | O3'-P-O5' | 14.87 | 132.25 | 104.00 |
| 1 | I | 9 | A | P-O3'-C3' | -14.86 | 101.86 | 119.70 |
| 1 | I | 135 | A | OP1-P-O3' | -14.86 | 72.50 | 105.20 |
| 3 | K | 168 | A | O3'-P-O5' | -14.84 | 75.80 | 104.00 |
| 4 | L | 806 | U | O3'-P-O5' | -14.84 | 75.80 | 104.00 |
| 2 | J | 223 | A | OP2-P-O3' | 14.84 | 137.85 | 105.20 |
| 1 | I | 168 | A | P-O3'-C3' | -14.84 | 101.90 | 119.70 |
| 1 | I | 382 | A | OP2-P-O3' | -14.84 | 72.56 | 105.20 |
| 4 | L | 739 | U | O3'-P-O5' | 14.84 | 132.19 | 104.00 |
| 3 | K | 46 | A | O3'-P-O5' | -14.83 | 75.82 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 3 | K | 246 | A | O3'-P-O5' | 14.83 | 132.18 | 104.00 |
| 1 | I | 324 | A | O3'-P-O5' | 14.83 | 132.17 | 104.00 |
| 5 | M | 350 | U | OP1-P-O3' | -14.83 | 72.58 | 105.20 |
| 1 | I | 310 | A | O3'-P-O5' | -14.83 | 75.83 | 104.00 |
| 4 | L | 544 | U | OP2-P-O3' | 14.82 | 137.81 | 105.20 |
| 2 | J | 11 | A | P-O3'-C3' | -14.82 | 101.92 | 119.70 |
| 3 | K | 38 | A | OP2-P-O3' | -14.82 | 72.59 | 105.20 |
| 1 | I | 129 | A | OP1-P-O3' | -14.81 | 72.61 | 105.20 |
| 4 | L | 596 | U | O3'-P-O5' | -14.81 | 75.86 | 104.00 |
| 1 | I | 191 | A | OP2-P-O3' | 14.80 | 137.77 | 105.20 |
| 3 | K | 170 | A | P-O3'-C3' | -14.80 | 101.94 | 119.70 |
| 1 | I | 137 | A | OP2-P-O3' | 14.79 | 137.74 | 105.20 |
| 4 | L | 510 | U | OP2-P-O3' | 14.78 | 137.71 | 105.20 |
| 4 | L | 752 | U | P-O3'-C3' | -14.75 | 102.00 | 119.70 |
| 1 | I | 42 | A | P-O3'-C3' | -14.75 | 102.00 | 119.70 |
| 1 | I | 404 | A | O3'-P-O5' | -14.73 | 76.02 | 104.00 |
| 1 | I | 241 | A | P-O3'-C3' | -14.72 | 102.03 | 119.70 |
| 1 | I | 138 | A | P-O3'-C3' | -14.72 | 102.03 | 119.70 |
| 3 | K | 136 | A | P-O3'-C3' | -14.72 | 102.04 | 119.70 |
| 4 | L | 484 | U | OP2-P-O3' | 14.71 | 137.56 | 105.20 |
| 2 | J | 79 | A | OP2-P-O3' | 14.71 | 137.56 | 105.20 |
| 6 | N | 415 | U | OP1-P-O3' | 14.71 | 137.56 | 105.20 |
| 1 | I | 315 | A | OP2-P-O3' | 14.71 | 137.55 | 105.20 |
| 1 | I | 270 | A | O3'-P-O5' | -14.70 | 76.06 | 104.00 |
| 1 | I | 302 | A | O3'-P-O5' | 14.70 | 131.93 | 104.00 |
| 2 | J | 56 | A | OP2-P-O3' | 14.69 | 137.51 | 105.20 |
| 2 | J | 128 | A | OP2-P-O3' | 14.68 | 137.50 | 105.20 |
| 5 | M | 288 | U | O3'-P-O5' | -14.68 | 76.11 | 104.00 |
| 1 | I | 4 | A | P-O3'-C3' | 14.67 | 137.31 | 119.70 |
| 4 | L | 714 | U | O3'-P-O5' | -14.67 | 76.12 | 104.00 |
| 1 | I | 1 | A | OP2-P-O3' | -14.67 | 72.93 | 105.20 |
| 4 | L | 485 | U | P-O3'-C3' | -14.65 | 102.11 | 119.70 |
| 3 | K | 104 | A | OP2-P-O3' | 14.65 | 137.43 | 105.20 |
| 1 | I | 130 | A | P-O3'-C3' | -14.64 | 102.13 | 119.70 |
| 1 | I | 19 | A | OP2-P-O3' | 14.64 | 137.40 | 105.20 |
| 5 | M | 438 | U | OP2-P-O3' | 14.63 | 137.38 | 105.20 |
| 2 | J | 257 | A | P-O3'-C3' | -14.63 | 102.15 | 119.70 |
| 6 | N | 356 | U | O3'-P-O5' | 14.63 | 131.79 | 104.00 |
| 2 | J | 259 | A | P-O3'-C3' | -14.63 | 102.15 | 119.70 |
| 4 | L | 807 | U | OP2-P-O3' | 14.63 | 137.38 | 105.20 |
| 3 | K | 160 | A | P-O3'-C3' | -14.62 | 102.15 | 119.70 |
| 6 | N | 326 | U | OP1-P-O3' | 14.62 | 137.37 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 5 | M | 334 | U | OP1-P-O3' | -14.62 | 73.04 | 105.20 |
| 4 | L | 537 | U | O3'-P-O5' | -14.61 | 76.24 | 104.00 |
| 1 | I | 269 | A | O3'-P-O5' | -14.61 | 76.25 | 104.00 |
| 3 | K | 46 | A | OP2-P-O3' | 14.60 | 137.31 | 105.20 |
| 5 | M | 419 | U | P-O3'-C3' | -14.59 | 102.19 | 119.70 |
| 4 | L | 820 | U | OP1-P-O3' | 14.59 | 137.30 | 105.20 |
| 5 | M | 426 | U | OP2-P-O3' | -14.59 | 73.11 | 105.20 |
| 4 | L | 601 | U | P-O3'-C3' | -14.58 | 102.20 | 119.70 |
| 6 | N | 406 | U | P-O3'-C3' | -14.58 | 102.20 | 119.70 |
| 3 | K | 120 | A | OP1-P-O3' | -14.57 | 73.14 | 105.20 |
| 4 | L | 674 | U | P-O3'-C3' | -14.57 | 102.21 | 119.70 |
| 3 | K | 81 | A | OP2-P-O3' | 14.57 | 137.26 | 105.20 |
| 5 | M | 359 | U | O3'-P-O5' | 14.57 | 131.68 | 104.00 |
| 2 | J | 41 | A | OP2-P-O3' | -14.56 | 73.16 | 105.20 |
| 4 | L | 471 | U | OP2-P-O3' | -14.56 | 73.16 | 105.20 |
| 6 | N | 426 | U | O3'-P-O5' | -14.56 | 76.33 | 104.00 |
| 5 | M | 369 | U | O3'-P-O5' | 14.56 | 131.66 | 104.00 |
| 4 | L | 671 | U | O3'-P-O5' | -14.55 | 76.35 | 104.00 |
| 3 | K | 128 | A | P-O3'-C3' | -14.55 | 102.24 | 119.70 |
| 5 | M | 338 | U | P-O3'-C3' | -14.52 | 102.28 | 119.70 |
| 4 | L | 558 | U | OP1-P-O3' | -14.51 | 73.28 | 105.20 |
| 1 | I | 127 | A | OP2-P-O3' | 14.50 | 137.11 | 105.20 |
| 6 | N | 430 | U | O3'-P-O5' | -14.50 | 76.45 | 104.00 |
| 6 | N | 526 | U | P-O3'-C3' | -14.48 | 102.32 | 119.70 |
| 2 | J | 42 | A | OP2-P-O3' | 14.47 | 137.04 | 105.20 |
| 3 | K | 167 | A | O3'-P-O5' | -14.47 | 76.51 | 104.00 |
| 1 | I | 64 | A | O3'-P-O5' | -14.46 | 76.52 | 104.00 |
| 1 | I | 359 | A | P-O3'-C3' | -14.46 | 102.34 | 119.70 |
| 4 | L | 734 | U | O3'-P-O5' | -14.46 | 76.53 | 104.00 |
| 1 | I | 294 | A | P-O3'-C3' | -14.46 | 102.35 | 119.70 |
| 5 | M | 502 | U | O3'-P-O5' | 14.45 | 131.46 | 104.00 |
| 4 | L | 424 | U | O3'-P-O5' | -14.45 | 76.55 | 104.00 |
| 4 | L | 756 | U | P-O3'-C3' | -14.44 | 102.37 | 119.70 |
| 1 | I | 286 | A | OP2-P-O3' | 14.44 | 136.96 | 105.20 |
| 4 | L | 800 | U | P-O3'-C3' | -14.44 | 102.38 | 119.70 |
| 1 | I | 311 | A | P-O3'-C3' | -14.43 | 102.38 | 119.70 |
| 2 | J | 11 | A | O3'-P-O5' | -14.43 | 76.59 | 104.00 |
| 1 | I | 118 | A | P-O3'-C3' | -14.42 | 102.39 | 119.70 |
| 1 | I | 40 | A | O3'-P-O5' | 14.42 | 131.40 | 104.00 |
| 4 | L | 442 | U | OP2-P-O3' | -14.42 | 73.47 | 105.20 |
| 6 | N | 315 | U | O3'-P-O5' | -14.42 | 76.60 | 104.00 |
| 3 | K | 85 | A | P-O3'-C3' | -14.42 | 102.40 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1 | I | 189 | A | OP2-P-O3' | 14.41 | 136.91 | 105.20 |
| 5 | M | 397 | U | O3'-P-O5' | -14.41 | 76.62 | 104.00 |
| 5 | M | 546 | U | P-O3'-C3' | -14.39 | 102.43 | 119.70 |
| 2 | J | 113 | A | P-O3'-C3' | -14.38 | 102.44 | 119.70 |
| 4 | L | 649 | U | OP2-P-O3' | 14.38 | 136.82 | 105.20 |
| 3 | K | 228 | A | P-O3'-C3' | 14.37 | 136.94 | 119.70 |
| 5 | M | 429 | U | O3'-P-O5' | -14.37 | 76.70 | 104.00 |
| 6 | N | 302 | U | O3'-P-O5' | -14.36 | 76.71 | 104.00 |
| 1 | I | 12 | A | OP2-P-O3' | 14.35 | 136.77 | 105.20 |
| 2 | J | 65 | A | P-O3'-C3' | -14.35 | 102.48 | 119.70 |
| 1 | I | 133 | A | O3'-P-O5' | -14.34 | 76.76 | 104.00 |
| 1 | I | 69 | A | OP2-P-O3' | 14.33 | 136.73 | 105.20 |
| 6 | N | 406 | U | OP2-P-O3' | 14.32 | 136.71 | 105.20 |
| 6 | N | 527 | U | O3'-P-O5' | -14.32 | 76.79 | 104.00 |
| 4 | L | 585 | U | OP2-P-O3' | 14.31 | 136.68 | 105.20 |
| 4 | L | 635 | U | OP2-P-O3' | 14.30 | 136.67 | 105.20 |
| 5 | M | 510 | U | OP2-P-O3' | 14.30 | 136.67 | 105.20 |
| 4 | L | 695 | U | O3'-P-O5' | 14.29 | 131.15 | 104.00 |
| 3 | K | 12 | A | P-O3'-C3' | 14.28 | 136.84 | 119.70 |
| 1 | I | 17 | A | O3'-P-O5' | 14.28 | 131.14 | 104.00 |
| 1 | I | 196 | A | P-O3'-C3' | -14.28 | 102.56 | 119.70 |
| 5 | M | 540 | U | P-O3'-C3' | -14.28 | 102.57 | 119.70 |
| 4 | L | 782 | U | O3'-P-O5' | 14.27 | 131.11 | 104.00 |
| 4 | L | 532 | U | OP1-P-O3' | -14.27 | 73.81 | 105.20 |
| 1 | I | 102 | A | OP1-P-O3' | 14.26 | 136.57 | 105.20 |
| 5 | M | 506 | U | O3'-P-O5' | 14.26 | 131.09 | 104.00 |
| 1 | I | 195 | A | P-O3'-C3' | -14.24 | 102.61 | 119.70 |
| 4 | L | 586 | U | P-O3'-C3' | -14.24 | 102.61 | 119.70 |
| 1 | I | 264 | A | O3'-P-O5' | 14.24 | 131.05 | 104.00 |
| 4 | L | 582 | U | O3'-P-O5' | 14.24 | 131.05 | 104.00 |
| 1 | I | 273 | A | O3'-P-O5' | -14.22 | 76.98 | 104.00 |
| 5 | M | 317 | U | P-O3'-C3' | -14.22 | 102.63 | 119.70 |
| 4 | L | 742 | U | O3'-P-O5' | 14.21 | 131.00 | 104.00 |
| 2 | J | 151 | A | OP2-P-O3' | 14.21 | 136.46 | 105.20 |
| 6 | N | 311 | U | P-O3'-C3' | -14.20 | 102.66 | 119.70 |
| 5 | M | 414 | U | OP2-P-O3' | -14.18 | 74.00 | 105.20 |
| 4 | L | 684 | U | OP2-P-O3' | -14.18 | 74.01 | 105.20 |
| 1 | I | 173 | A | P-O3'-C3' | -14.17 | 102.70 | 119.70 |
| 2 | J | 84 | A | OP2-P-O3' | 14.16 | 136.35 | 105.20 |
| 3 | K | 98 | A | OP2-P-O3' | 14.16 | 136.35 | 105.20 |
| 3 | K | 7 | A | P-O3'-C3' | -14.15 | 102.72 | 119.70 |
| 4 | L | 773 | U | O3'-P-O5' | 14.15 | 130.89 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 5 | M | 326 | U | P-O3'-C3' | -14.15 | 102.71 | 119.70 |
| 5 | M | 455 | U | OP2-P-O3' | 14.15 | 136.34 | 105.20 |
| 6 | N | 326 | U | O3'-P-O5' | -14.15 | 77.11 | 104.00 |
| 4 | L | 456 | U | OP2-P-O3' | -14.14 | 74.08 | 105.20 |
| 6 | N | 449 | U | P-O3'-C3' | -14.14 | 102.73 | 119.70 |
| 1 | I | 100 | A | OP2-P-O3' | 14.14 | 136.31 | 105.20 |
| 2 | J | 38 | A | P-O3'-C3' | -14.13 | 102.74 | 119.70 |
| 4 | L | 471 | U | O3'-P-O5' | 14.13 | 130.85 | 104.00 |
| 1 | I | 322 | A | O3'-P-O5' | -14.13 | 77.16 | 104.00 |
| 4 | L | 705 | U | OP1-P-O3' | -14.12 | 74.13 | 105.20 |
| 1 | I | 281 | A | P-O3'-C3' | -14.11 | 102.77 | 119.70 |
| 3 | K | 38 | A | O3'-P-O5' | 14.11 | 130.81 | 104.00 |
| 4 | L | 788 | U | O3'-P-O5' | 14.11 | 130.81 | 104.00 |
| 3 | K | 202 | A | O3'-P-O5' | -14.11 | 77.20 | 104.00 |
| 1 | I | 103 | A | OP2-P-O3' | -14.11 | 74.17 | 105.20 |
| 1 | I | 90 | A | P-O3'-C3' | -14.10 | 102.78 | 119.70 |
| 2 | J | 230 | A | OP2-P-O3' | 14.09 | 136.20 | 105.20 |
| 5 | M | 493 | U | OP2-P-O3' | -14.09 | 74.21 | 105.20 |
| 6 | N | 306 | U | O3'-P-O5' | -14.09 | 77.24 | 104.00 |
| 6 | N | 408 | U | O3'-P-O5' | 14.08 | 130.75 | 104.00 |
| 1 | I | 251 | A | P-O3'-C3' | -14.07 | 102.81 | 119.70 |
| 1 | I | 263 | A | O3'-P-O5' | 14.07 | 130.74 | 104.00 |
| 4 | L | 525 | U | P-O3'-C3' | -14.07 | 102.81 | 119.70 |
| 4 | L | 717 | U | OP1-P-O3' | 14.07 | 136.16 | 105.20 |
| 4 | L | 515 | U | O3'-P-O5' | -14.06 | 77.28 | 104.00 |
| 6 | N | 401 | U | OP2-P-O3' | 14.06 | 136.14 | 105.20 |
| 1 | I | 260 | A | OP2-P-O3' | 14.06 | 136.13 | 105.20 |
| 6 | N | 435 | U | O3'-P-O5' | 14.06 | 130.71 | 104.00 |
| 2 | J | 182 | A | OP2-P-O3' | 14.05 | 136.11 | 105.20 |
| 4 | L | 456 | U | O3'-P-O5' | 14.05 | 130.69 | 104.00 |
| 6 | N | 364 | U | P-O3'-C3' | -14.04 | 102.85 | 119.70 |
| 3 | K | 237 | A | OP1-P-O3' | 14.03 | 136.07 | 105.20 |
| 6 | N | 458 | U | P-O3'-C3' | 14.03 | 136.54 | 119.70 |
| 4 | L | 622 | U | OP2-P-O3' | 14.03 | 136.06 | 105.20 |
| 4 | L | 820 | U | P-O3'-C3' | 14.03 | 136.53 | 119.70 |
| 2 | J | 45 | A | O3'-P-O5' | 14.02 | 130.65 | 104.00 |
| 5 | M | 534 | U | O3'-P-O5' | 14.02 | 130.64 | 104.00 |
| 1 | I | 243 | A | O3'-P-O5' | -14.02 | 77.36 | 104.00 |
| 5 | M | 374 | U | P-O3'-C3' | -14.02 | 102.88 | 119.70 |
| 4 | L | 698 | U | OP2-P-O3' | 14.00 | 136.01 | 105.20 |
| 5 | M | 290 | U | OP2-P-O3' | 14.00 | 136.01 | 105.20 |
| 5 | M | 423 | U | OP2-P-O3' | -14.00 | 74.40 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 3 | K | 199 | A | O3'-P-O5' | -14.00 | 77.40 | 104.00 |
| 4 | L | 795 | U | P-O3'-C3' | -13.99 | 102.92 | 119.70 |
| 5 | M | 479 | U | OP2-P-O3' | -13.99 | 74.43 | 105.20 |
| 4 | L | 474 | U | P-O3'-C3' | -13.98 | 102.92 | 119.70 |
| 4 | L | 627 | U | P-O3'-C3' | -13.98 | 102.92 | 119.70 |
| 5 | M | 320 | U | OP2-P-O3' | 13.98 | 135.95 | 105.20 |
| 5 | M | 353 | U | P-O3'-C3' | -13.98 | 102.93 | 119.70 |
| 6 | N | 447 | U | P-O3'-C3' | -13.96 | 102.94 | 119.70 |
| 1 | I | 229 | A | OP2-P-O3' | 13.96 | 135.90 | 105.20 |
| 5 | M | 425 | U | P-O3'-C3' | -13.95 | 102.96 | 119.70 |
| 4 | L | 420 | U | OP1-P-O3' | 13.94 | 135.87 | 105.20 |
| 1 | I | 339 | A | P-O3'-C3' | -13.93 | 102.98 | 119.70 |
| 5 | M | 366 | U | P-O3'-C3' | -13.92 | 102.99 | 119.70 |
| 4 | L | 596 | U | P-O3'-C3' | -13.92 | 102.99 | 119.70 |
| 6 | N | 476 | U | OP2-P-O3' | 13.92 | 135.83 | 105.20 |
| 5 | M | 507 | U | O3'-P-O5' | 13.92 | 130.45 | 104.00 |
| 5 | M | 396 | U | P-O3'-C3' | -13.91 | 103.00 | 119.70 |
| 1 | I | 403 | A | O3'-P-O5' | -13.90 | 77.59 | 104.00 |
| 5 | M | 324 | U | OP2-P-O3' | 13.89 | 135.77 | 105.20 |
| 5 | M | 530 | U | O3'-P-O5' | -13.89 | 77.60 | 104.00 |
| 4 | L | 606 | U | P-O3'-C3' | -13.89 | 103.03 | 119.70 |
| 5 | M | 316 | U | P-O3'-C3' | -13.89 | 103.03 | 119.70 |
| 5 | M | 445 | U | O3'-P-O5' | 13.89 | 130.38 | 104.00 |
| 4 | L | 599 | U | P-O3'-C3' | -13.88 | 103.05 | 119.70 |
| 1 | I | 323 | A | OP1-P-O3' | -13.87 | 74.68 | 105.20 |
| 2 | J | 148 | A | P-O3'-C3' | -13.87 | 103.06 | 119.70 |
| 4 | L | 776 | U | O3'-P-O5' | -13.86 | 77.66 | 104.00 |
| 3 | K | 172 | A | OP2-P-O3' | -13.86 | 74.71 | 105.20 |
| 6 | N | 478 | U | P-O3'-C3' | -13.85 | 103.08 | 119.70 |
| 2 | J | 204 | A | OP2-P-O3' | 13.84 | 135.64 | 105.20 |
| 6 | N | 444 | U | O3'-P-O5' | 13.84 | 130.29 | 104.00 |
| 1 | I | 170 | A | O3'-P-O5' | 13.83 | 130.28 | 104.00 |
| 4 | L | 799 | U | O3'-P-O5' | 13.83 | 130.27 | 104.00 |
| 5 | M | 537 | U | OP2-P-O3' | 13.83 | 135.62 | 105.20 |
| 3 | K | 78 | A | P-O3'-C3' | -13.82 | 103.12 | 119.70 |
| 6 | N | 400 | U | OP2-P-O3' | 13.82 | 135.59 | 105.20 |
| 2 | J | 109 | A | O3'-P-O5' | 13.81 | 130.25 | 104.00 |
| 4 | L | 699 | U | O3'-P-O5' | -13.81 | 77.75 | 104.00 |
| 3 | K | 147 | A | O3'-P-O5' | 13.80 | 130.23 | 104.00 |
| 4 | L | 588 | U | O3'-P-O5' | 13.80 | 130.23 | 104.00 |
| 5 | M | 409 | U | O3'-P-O5' | 13.80 | 130.23 | 104.00 |
| 3 | K | 253 | A | OP1-P-O3' | -13.80 | 74.83 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 5 | M | 371 | U | OP2-P-O3' | 13.80 | 135.55 | 105.20 |
| 4 | L | 476 | U | P-O3'-C3' | -13.79 | 103.14 | 119.70 |
| 3 | K | 150 | A | OP2-P-O3' | -13.78 | 74.88 | 105.20 |
| 1 | I | 143 | A | OP1-P-O3' | 13.77 | 135.50 | 105.20 |
| 3 | K | 45 | A | OP2-P-O3' | 13.76 | 135.47 | 105.20 |
| 3 | K | 92 | A | OP2-P-O3' | 13.76 | 135.47 | 105.20 |
| 3 | K | 118 | A | OP1-P-O3' | -13.75 | 74.95 | 105.20 |
| 3 | K | 219 | A | P-O3'-C3' | 13.75 | 136.20 | 119.70 |
| 1 | I | 104 | A | OP2-P-O3' | -13.74 | 74.96 | 105.20 |
| 1 | I | 38 | A | O3'-P-O5' | 13.73 | 130.09 | 104.00 |
| 1 | I | 254 | A | OP2-P-O3' | 13.72 | 135.39 | 105.20 |
| 1 | I | 264 | A | P-O3'-C3' | -13.72 | 103.24 | 119.70 |
| 6 | N | 295 | U | O3'-P-O5' | 13.72 | 130.07 | 104.00 |
| 5 | M | 480 | U | O3'-P-O5' | 13.71 | 130.04 | 104.00 |
| 5 | M | 517 | U | P-O3'-C3' | -13.70 | 103.26 | 119.70 |
| 2 | J | 150 | A | O3'-P-O5' | 13.70 | 130.02 | 104.00 |
| 6 | N | 313 | U | O3'-P-O5' | -13.69 | 77.99 | 104.00 |
| 1 | I | 301 | A | P-O3'-C3' | -13.68 | 103.28 | 119.70 |
| 2 | J | 266 | A | P-O3'-C3' | -13.67 | 103.29 | 119.70 |
| 1 | I | 226 | A | P-O3'-C3' | -13.67 | 103.30 | 119.70 |
| 4 | L | 765 | U | OP1-P-O3' | -13.67 | 75.12 | 105.20 |
| 4 | L | 638 | U | OP1-P-O3' | -13.66 | 75.14 | 105.20 |
| 4 | L | 459 | U | O3'-P-O5' | -13.66 | 78.05 | 104.00 |
| 5 | M | 291 | U | P-O3'-C3' | -13.65 | 103.31 | 119.70 |
| 5 | M | 478 | U | O3'-P-O5' | 13.65 | 129.94 | 104.00 |
| 5 | M | 352 | U | O3'-P-O5' | 13.65 | 129.94 | 104.00 |
| 4 | L | 507 | U | P-O3'-C3' | -13.65 | 103.32 | 119.70 |
| 5 | M | 306 | U | P-O3'-C3' | -13.65 | 103.32 | 119.70 |
| 4 | L | 771 | U | P-O3'-C3' | -13.64 | 103.33 | 119.70 |
| 1 | I | 213 | A | P-O3'-C3' | -13.64 | 103.34 | 119.70 |
| 4 | L | 631 | U | O3'-P-O5' | 13.63 | 129.90 | 104.00 |
| 5 | M | 346 | U | P-O3'-C3' | -13.63 | 103.34 | 119.70 |
| 2 | J | 253 | A | P-O3'-C3' | -13.63 | 103.35 | 119.70 |
| 5 | M | 295 | U | OP2-P-O3' | 13.63 | 135.18 | 105.20 |
| 4 | L | 738 | U | O3'-P-O5' | 13.62 | 129.88 | 104.00 |
| 6 | N | 357 | U | OP2-P-O3' | -13.62 | 75.24 | 105.20 |
| 5 | M | 322 | U | O3'-P-O5' | -13.61 | 78.13 | 104.00 |
| 3 | K | 73 | A | O3'-P-O5' | -13.61 | 78.15 | 104.00 |
| 3 | K | 74 | A | OP2-P-O3' | 13.61 | 135.14 | 105.20 |
| 3 | K | 169 | A | OP2-P-O3' | 13.61 | 135.13 | 105.20 |
| 4 | L | 715 | U | OP1-P-O3' | 13.61 | 135.13 | 105.20 |
| 2 | J | 30 | A | P-O3'-C3' | -13.58 | 103.40 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 6 | N | 333 | U | OP2-P-O3' | 13.58 | 135.07 | 105.20 |
| 3 | K | 208 | A | OP1-P-O3' | 13.57 | 135.06 | 105.20 |
| 4 | L | 487 | U | P-O3'-C3' | -13.57 | 103.41 | 119.70 |
| 2 | J | 94 | A | OP2-P-O3' | 13.57 | 135.05 | 105.20 |
| 6 | N | 425 | U | OP2-P-O3' | 13.56 | 135.04 | 105.20 |
| 4 | L | 819 | U | O3'-P-O5' | 13.56 | 129.76 | 104.00 |
| 5 | M | 417 | U | P-O3'-C3' | -13.56 | 103.43 | 119.70 |
| 5 | M | 531 | U | OP1-P-O3' | -13.56 | 75.37 | 105.20 |
| 3 | K | 62 | A | O3'-P-O5' | 13.56 | 129.76 | 104.00 |
| 1 | I | 16 | A | OP2-P-O3' | 13.55 | 135.01 | 105.20 |
| 1 | I | 101 | A | P-O3'-C3' | 13.54 | 135.95 | 119.70 |
| 4 | L | 719 | U | O3'-P-O5' | 13.54 | 129.73 | 104.00 |
| 4 | L | 739 | U | P-O3'-C3' | -13.54 | 103.45 | 119.70 |
| 2 | J | 132 | A | P-O3'-C3' | -13.54 | 103.45 | 119.70 |
| 2 | J | 228 | A | P-O3'-C3' | -13.54 | 103.45 | 119.70 |
| 1 | I | 348 | A | OP2-P-O3' | 13.54 | 134.98 | 105.20 |
| 5 | M | 519 | U | OP2-P-O3' | 13.53 | 134.97 | 105.20 |
| 4 | L | 587 | U | P-O3'-C3' | -13.53 | 103.46 | 119.70 |
| 5 | M | 523 | U | OP2-P-O3' | -13.53 | 75.44 | 105.20 |
| 1 | I | 136 | A | OP1-P-O3' | -13.52 | 75.45 | 105.20 |
| 4 | L | 548 | U | P-O3'-C3' | -13.52 | 103.48 | 119.70 |
| 4 | L | 794 | U | P-O3'-C3' | -13.52 | 103.48 | 119.70 |
| 1 | I | 119 | A | OP1-P-O3' | -13.51 | 75.47 | 105.20 |
| 4 | L | 535 | U | P-O3'-C3' | -13.51 | 103.49 | 119.70 |
| 1 | I | 315 | A | O3'-P-O5' | -13.51 | 78.33 | 104.00 |
| 1 | I | 21 | A | P-O3'-C3' | -13.50 | 103.50 | 119.70 |
| 1 | I | 203 | A | P-O3'-C3' | -13.50 | 103.50 | 119.70 |
| 5 | M | 333 | U | OP1-P-O3' | -13.50 | 75.50 | 105.20 |
| 5 | M | 423 | U | O3'-P-O5' | 13.49 | 129.64 | 104.00 |
| 1 | I | 149 | A | O3'-P-O5' | 13.49 | 129.63 | 104.00 |
| 4 | L | 523 | U | OP2-P-O3' | -13.46 | 75.58 | 105.20 |
| 4 | L | 785 | U | O3'-P-O5' | 13.46 | 129.58 | 104.00 |
| 5 | M | 462 | U | P-O3'-C3' | -13.46 | 103.55 | 119.70 |
| 6 | N | 523 | U | O3'-P-O5' | 13.46 | 129.57 | 104.00 |
| 1 | I | 147 | A | OP2-P-O3' | 13.46 | 134.80 | 105.20 |
| 5 | M | 332 | U | P-O3'-C3' | -13.46 | 103.55 | 119.70 |
| 5 | M | 496 | U | P-O3'-C3' | -13.45 | 103.56 | 119.70 |
| 2 | J | 209 | A | OP2-P-O3' | 13.45 | 134.79 | 105.20 |
| 1 | I | 326 | A | P-O3'-C3' | -13.45 | 103.56 | 119.70 |
| 4 | L | 658 | U | P-O3'-C3' | -13.45 | 103.57 | 119.70 |
| 2 | J | 221 | A | P-O3'-C3' | -13.43 | 103.58 | 119.70 |
| 4 | L | 595 | U | OP2-P-O3' | 13.43 | 134.75 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 6 | N | 442 | U | O3'-P-O5' | 13.43 | 129.53 | 104.00 |
| 2 | J | 268 | A | O3'-P-O5' | 13.43 | 129.51 | 104.00 |
| 4 | L | 441 | U | OP2-P-O3' | -13.42 | 75.67 | 105.20 |
| 4 | L | 740 | U | OP2-P-O3' | 13.42 | 134.71 | 105.20 |
| 4 | L | 438 | U | OP2-P-O3' | -13.41 | 75.69 | 105.20 |
| 1 | I | 351 | A | O3'-P-O5' | 13.40 | 129.45 | 104.00 |
| 4 | L | 544 | U | O3'-P-O5' | -13.39 | 78.55 | 104.00 |
| 5 | M | 539 | U | O3'-P-O5' | 13.39 | 129.44 | 104.00 |
| 1 | I | 52 | A | P-O3'-C3' | -13.38 | 103.64 | 119.70 |
| 2 | J | 257 | A | OP2-P-O3' | 13.38 | 134.63 | 105.20 |
| 5 | M | 509 | U | P-O3'-C3' | -13.38 | 103.65 | 119.70 |
| 4 | L | 747 | U | OP2-P-O3' | 13.37 | 134.62 | 105.20 |
| 1 | I | 276 | A | O3'-P-O5' | -13.37 | 78.60 | 104.00 |
| 4 | L | 818 | U | O3'-P-O5' | 13.37 | 129.40 | 104.00 |
| 3 | K | 83 | A | O3'-P-O5' | 13.36 | 129.39 | 104.00 |
| 1 | I | 19 | A | O3'-P-O5' | -13.36 | 78.62 | 104.00 |
| 2 | J | 205 | A | O3'-P-O5' | -13.36 | 78.62 | 104.00 |
| 2 | J | 71 | A | P-O3'-C3' | -13.36 | 103.67 | 119.70 |
| 1 | I | 109 | A | OP1-P-O3' | 13.34 | 134.54 | 105.20 |
| 4 | L | 743 | U | P-O3'-C3' | -13.34 | 103.70 | 119.70 |
| 2 | J | 172 | A | O3'-P-O5' | -13.33 | 78.67 | 104.00 |
| 4 | L | 472 | U | O3'-P-O5' | 13.33 | 129.33 | 104.00 |
| 5 | M | 459 | U | P-O3'-C3' | -13.33 | 103.70 | 119.70 |
| 1 | I | 400 | A | OP1-P-O3' | 13.32 | 134.51 | 105.20 |
| 1 | I | 234 | A | P-O3'-C3' | -13.32 | 103.72 | 119.70 |
| 5 | M | 483 | U | OP2-P-O3' | 13.32 | 134.50 | 105.20 |
| 5 | M | 536 | U | OP2-P-O3' | 13.32 | 134.50 | 105.20 |
| 1 | I | 107 | A | P-O3'-C3' | -13.31 | 103.72 | 119.70 |
| 4 | L | 550 | U | P-O3'-C3' | -13.30 | 103.73 | 119.70 |
| 5 | M | 304 | U | OP2-P-O3' | -13.30 | 75.94 | 105.20 |
| 2 | J | 123 | A | OP2-P-O3' | 13.29 | 134.45 | 105.20 |
| 4 | L | 509 | U | OP2-P-O3' | 13.29 | 134.45 | 105.20 |
| 4 | L | 633 | U | O3'-P-O5' | 13.29 | 129.26 | 104.00 |
| 1 | I | 102 | A | P-O3'-C3' | 13.29 | 135.65 | 119.70 |
| 2 | J | 70 | A | OP1-P-O3' | -13.29 | 75.96 | 105.20 |
| 4 | L | 662 | U | OP2-P-O3' | -13.29 | 75.97 | 105.20 |
| 2 | J | 143 | A | P-O3'-C3' | -13.29 | 103.75 | 119.70 |
| 3 | K | 186 | A | P-O3'-C3' | -13.28 | 103.76 | 119.70 |
| 4 | L | 478 | U | OP2-P-O3' | 13.28 | 134.41 | 105.20 |
| 5 | M | 331 | U | P-O3'-C3' | -13.28 | 103.77 | 119.70 |
| 2 | J | 116 | A | O3'-P-O5' | 13.28 | 129.22 | 104.00 |
| 4 | L | 749 | U | P-O3'-C3' | -13.27 | 103.77 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 4 | L | 425 | U | OP2-P-O3' | 13.27 | 134.39 | 105.20 |
| 6 | N | 344 | U | OP2-P-O3' | -13.27 | 76.01 | 105.20 |
| 3 | K | 145 | A | P-O3'-C3' | 13.27 | 135.62 | 119.70 |
| 1 | I | 113 | A | OP2-P-O3' | 13.26 | 134.37 | 105.20 |
| 5 | M | 479 | U | O3'-P-O5' | 13.26 | 129.19 | 104.00 |
| 4 | L | 576 | U | OP1-P-O3' | -13.26 | 76.03 | 105.20 |
| 2 | J | 56 | A | OP1-P-O3' | -13.25 | 76.04 | 105.20 |
| 1 | I | 116 | A | O3'-P-O5' | 13.25 | 129.17 | 104.00 |
| 2 | J | 245 | A | P-O3'-C3' | -13.25 | 103.80 | 119.70 |
| 4 | L | 548 | U | OP2-P-O3' | 13.24 | 134.34 | 105.20 |
| 4 | L | 486 | U | P-O3'-C3' | -13.23 | 103.82 | 119.70 |
| 2 | J | 80 | A | O3'-P-O5' | -13.23 | 78.87 | 104.00 |
| 5 | M | 537 | U | OP1-P-O3' | -13.22 | 76.12 | 105.20 |
| 3 | K | 82 | A | P-O3'-C3' | -13.21 | 103.84 | 119.70 |
| 4 | L | 469 | U | P-O3'-C3' | -13.21 | 103.85 | 119.70 |
| 6 | N | 434 | U | OP2-P-O3' | 13.20 | 134.23 | 105.20 |
| 4 | L | 435 | U | OP2-P-O3' | 13.18 | 134.20 | 105.20 |
| 2 | J | 93 | A | O3'-P-O5' | -13.18 | 78.96 | 104.00 |
| 2 | J | 32 | A | OP2-P-O3' | 13.18 | 134.19 | 105.20 |
| 3 | K | 249 | A | P-O3'-C3' | -13.18 | 103.89 | 119.70 |
| 3 | K | 237 | A | O3'-P-O5' | -13.18 | 78.97 | 104.00 |
| 3 | K | 192 | A | OP1-P-O3' | 13.17 | 134.18 | 105.20 |
| 6 | N | 397 | U | P-O3'-C3' | -13.17 | 103.89 | 119.70 |
| 5 | M | 403 | U | P-O3'-C3' | -13.17 | 103.89 | 119.70 |
| 4 | L | 647 | U | OP2-P-O3' | 13.16 | 134.16 | 105.20 |
| 5 | M | 295 | U | O3'-P-O5' | -13.16 | 78.99 | 104.00 |
| 5 | M | 363 | U | OP2-P-O3' | -13.15 | 76.26 | 105.20 |
| 1 | I | 185 | A | P-O3'-C3' | -13.14 | 103.93 | 119.70 |
| 1 | I | 342 | A | OP1-P-O3' | -13.14 | 76.29 | 105.20 |
| 3 | K | 238 | A | OP1-P-O3' | 13.14 | 134.11 | 105.20 |
| 4 | L | 796 | U | O3'-P-O5' | 13.14 | 128.97 | 104.00 |
| 4 | L | 481 | U | P-O3'-C3' | -13.14 | 103.93 | 119.70 |
| 2 | J | 241 | A | P-O3'-C3' | -13.14 | 103.94 | 119.70 |
| 6 | N | 278 | U | OP1-P-O3' | -13.14 | 76.30 | 105.20 |
| 2 | J | 249 | A | P-O3'-C3' | -13.13 | 103.94 | 119.70 |
| 6 | N | 312 | U | P-O3'-C3' | -13.13 | 103.94 | 119.70 |
| 2 | J | 132 | A | O3'-P-O5' | -13.13 | 79.06 | 104.00 |
| 3 | K | 163 | A | OP2-P-O3' | 13.12 | 134.06 | 105.20 |
| 4 | L | 481 | U | O3'-P-O5' | 13.11 | 128.92 | 104.00 |
| 2 | J | 80 | A | OP2-P-O3' | 13.11 | 134.04 | 105.20 |
| 1 | I | 356 | A | P-O3'-C3' | -13.11 | 103.97 | 119.70 |
| 4 | L | 734 | U | P-O3'-C3' | -13.09 | 103.99 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 4 | L | 822 | U | OP2-P-O3' | -13.08 | 76.43 | 105.20 |
| 2 | J | 226 | A | OP2-P-O3' | -13.07 | 76.43 | 105.20 |
| 3 | K | 108 | A | O3'-P-O5' | -13.07 | 79.17 | 104.00 |
| 2 | J | 257 | A | O3'-P-O5' | -13.06 | 79.18 | 104.00 |
| 3 | K | 30 | A | OP2-P-O3' | -13.06 | 76.46 | 105.20 |
| 6 | N | 384 | U | OP2-P-O3' | -13.06 | 76.47 | 105.20 |
| 6 | N | 473 | U | OP2-P-O3' | 13.06 | 133.93 | 105.20 |
| 2 | J | 130 | A | P-O3'-C3' | -13.05 | 104.03 | 119.70 |
| 2 | J | 131 | A | O3'-P-O5' | -13.05 | 79.20 | 104.00 |
| 3 | K | 111 | A | O3'-P-O5' | 13.05 | 128.80 | 104.00 |
| 1 | I | 58 | A | OP1-P-O3' | 13.05 | 133.91 | 105.20 |
| 1 | I | 77 | A | OP2-P-O3' | 13.05 | 133.91 | 105.20 |
| 1 | I | 169 | A | O3'-P-O5' | 13.05 | 128.80 | 104.00 |
| 1 | I | 187 | A | P-O3'-C3' | -13.05 | 104.04 | 119.70 |
| 1 | I | 132 | A | O3'-P-O5' | -13.04 | 79.22 | 104.00 |
| 6 | N | 439 | U | OP2-P-O3' | 13.04 | 133.88 | 105.20 |
| 5 | M | 540 | U | O3'-P-O5' | 13.04 | 128.77 | 104.00 |
| 3 | K | 75 | A | P-O3'-C3' | -13.03 | 104.06 | 119.70 |
| 4 | L | 673 | U | P-O3'-C3' | -13.03 | 104.06 | 119.70 |
| 4 | L | 733 | U | P-O3'-C3' | -13.02 | 104.08 | 119.70 |
| 3 | K | 49 | A | O3'-P-O5' | 13.02 | 128.73 | 104.00 |
| 6 | N | 327 | U | OP2-P-O3' | 13.01 | 133.83 | 105.20 |
| 6 | N | 409 | U | P-O3'-C3' | -13.01 | 104.08 | 119.70 |
| 2 | J | 107 | A | P-O3'-C3' | -13.01 | 104.09 | 119.70 |
| 2 | J | 4 | A | OP2-P-O3' | -13.00 | 76.59 | 105.20 |
| 1 | I | 204 | A | O3'-P-O5' | 12.99 | 128.69 | 104.00 |
| 4 | L | 533 | U | OP2-P-O3' | 12.99 | 133.77 | 105.20 |
| 4 | L | 524 | U | P-O3'-C3' | -12.98 | 104.12 | 119.70 |
| 2 | J | 117 | A | OP2-P-O3' | -12.98 | 76.64 | 105.20 |
| 2 | J | 143 | A | O3'-P-O5' | 12.98 | 128.66 | 104.00 |
| 5 | M | 364 | U | P-O3'-C3' | -12.98 | 104.13 | 119.70 |
| 5 | M | 495 | U | OP1-P-O3' | -12.98 | 76.65 | 105.20 |
| 4 | L | 501 | U | P-O3'-C3' | -12.97 | 104.13 | 119.70 |
| 1 | I | 259 | A | OP2-P-O3' | 12.97 | 133.74 | 105.20 |
| 4 | L | 575 | U | P-O3'-C3' | -12.96 | 104.14 | 119.70 |
| 4 | L | 550 | U | O3'-P-O5' | 12.96 | 128.63 | 104.00 |
| 1 | I | 75 | A | OP2-P-O3' | 12.95 | 133.69 | 105.20 |
| 1 | I | 296 | A | O3'-P-O5' | -12.94 | 79.41 | 104.00 |
| 2 | J | 30 | A | OP2-P-O3' | 12.94 | 133.68 | 105.20 |
| 4 | L | 680 | U | OP1-P-O3' | 12.94 | 133.67 | 105.20 |
| 1 | I | 135 | A | OP2-P-O3' | 12.94 | 133.66 | 105.20 |
| 1 | I | 59 | A | P-O3'-C3' | -12.93 | 104.19 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 3 | K | 156 | A | P-O3'-C3' | -12.92 | 104.19 | 119.70 |
| 1 | I | 394 | A | O3'-P-O5' | -12.91 | 79.47 | 104.00 |
| 2 | J | 26 | A | P-O3'-C3' | -12.91 | 104.21 | 119.70 |
| 4 | L | 815 | U | OP2-P-O3' | 12.91 | 133.59 | 105.20 |
| 4 | L | 783 | U | O3'-P-O5' | 12.90 | 128.52 | 104.00 |
| 3 | K | 124 | A | O3'-P-O5' | 12.90 | 128.51 | 104.00 |
| 6 | N | 495 | U | OP2-P-O3' | -12.90 | 76.82 | 105.20 |
| 3 | K | 126 | A | P-O3'-C3' | -12.90 | 104.22 | 119.70 |
| 1 | I | 86 | A | OP2-P-O3' | 12.89 | 133.56 | 105.20 |
| 1 | I | 363 | A | O3'-P-O5' | -12.89 | 79.51 | 104.00 |
| 4 | L | 434 | U | O3'-P-O5' | -12.89 | 79.51 | 104.00 |
| 2 | J | 255 | A | P-O3'-C3' | -12.89 | 104.24 | 119.70 |
| 6 | N | 427 | U | OP2-P-O3' | 12.87 | 133.52 | 105.20 |
| 1 | I | 166 | A | P-O3'-C3' | -12.87 | 104.26 | 119.70 |
| 1 | I | 268 | A | OP1-P-O3' | -12.86 | 76.90 | 105.20 |
| 1 | I | 270 | A | P-O3'-C3' | -12.86 | 104.26 | 119.70 |
| 6 | N | 304 | U | O3'-P-O5' | -12.86 | 79.57 | 104.00 |
| 6 | N | 390 | U | O3'-P-O5' | 12.86 | 128.43 | 104.00 |
| 1 | I | 141 | A | O3'-P-O5' | -12.85 | 79.58 | 104.00 |
| 1 | I | 324 | A | P-O3'-C3' | -12.85 | 104.28 | 119.70 |
| 5 | M | 478 | U | OP2-P-O3' | -12.85 | 76.94 | 105.20 |
| 5 | M | 397 | U | OP2-P-O3' | 12.85 | 133.46 | 105.20 |
| 2 | J | 160 | A | P-O3'-C3' | -12.84 | 104.29 | 119.70 |
| 3 | K | 94 | A | O3'-P-O5' | -12.83 | 79.62 | 104.00 |
| 1 | I | 2 | A | OP2-P-O3' | -12.82 | 76.99 | 105.20 |
| 3 | K | 201 | A | O3'-P-O5' | -12.82 | 79.65 | 104.00 |
| 4 | L | 683 | U | OP1-P-O3' | 12.82 | 133.40 | 105.20 |
| 1 | I | 354 | A | OP2-P-O3' | 12.81 | 133.38 | 105.20 |
| 3 | K | 145 | A | OP2-P-O3' | -12.81 | 77.02 | 105.20 |
| 3 | K | 217 | A | O3'-P-O5' | -12.81 | 79.66 | 104.00 |
| 6 | N | 382 | U | OP2-P-O3' | -12.81 | 77.02 | 105.20 |
| 1 | I | 85 | A | P-O3'-C3' | -12.80 | 104.33 | 119.70 |
| 1 | I | 213 | A | OP2-P-O3' | 12.81 | 133.37 | 105.20 |
| 6 | N | 435 | U | OP2-P-O3' | -12.81 | 77.03 | 105.20 |
| 1 | I | 176 | A | OP2-P-O3' | -12.80 | 77.04 | 105.20 |
| 2 | J | 205 | A | OP1-P-O3' | -12.78 | 77.08 | 105.20 |
| 4 | L | 437 | U | O3'-P-O5' | 12.78 | 128.28 | 104.00 |
| 1 | I | 68 | A | OP1-P-O3' | -12.78 | 77.09 | 105.20 |
| 4 | L | 736 | U | O3'-P-O5' | 12.78 | 128.27 | 104.00 |
| 5 | M | 319 | U | OP1-P-O3' | -12.77 | 77.10 | 105.20 |
| 6 | N | 324 | U | O3'-P-O5' | -12.77 | 79.73 | 104.00 |
| 4 | L | 655 | U | P-O3'-C3' | -12.77 | 104.38 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 3 | K | 130 | A | P-O3'-C3' | -12.76 | 104.39 | 119.70 |
| 4 | L | 583 | U | O3'-P-O5' | -12.76 | 79.76 | 104.00 |
| 6 | N | 455 | U | OP2-P-O3' | 12.76 | 133.26 | 105.20 |
| 5 | M | 482 | U | O3'-P-O5' | 12.75 | 128.22 | 104.00 |
| 6 | N | 442 | U | OP1-P-O3' | -12.74 | 77.17 | 105.20 |
| 1 | I | 20 | A | OP2-P-O3' | 12.74 | 133.23 | 105.20 |
| 2 | J | 144 | A | OP1-P-O3' | -12.74 | 77.17 | 105.20 |
| 1 | I | 212 | A | P-O3'-C3' | -12.74 | 104.42 | 119.70 |
| 6 | N | 331 | U | O3'-P-O5' | -12.73 | 79.81 | 104.00 |
| 5 | M | 349 | U | O3'-P-O5' | -12.73 | 79.82 | 104.00 |
| 2 | J | 168 | A | P-O3'-C3' | 12.72 | 134.97 | 119.70 |
| 3 | K | 99 | A | OP1-P-O3' | -12.72 | 77.21 | 105.20 |
| 2 | J | 78 | A | P-O3'-C3' | -12.72 | 104.44 | 119.70 |
| 6 | N | 459 | U | OP1-P-O3' | 12.72 | 133.18 | 105.20 |
| 2 | J | 208 | A | P-O3'-C3' | -12.71 | 104.44 | 119.70 |
| 4 | L | 733 | U | O3'-P-O5' | 12.70 | 128.13 | 104.00 |
| 4 | L | 503 | U | P-O3'-C3' | -12.69 | 104.47 | 119.70 |
| 5 | M | 405 | U | O3'-P-O5' | -12.69 | 79.89 | 104.00 |
| 6 | N | 454 | U | P-O3'-C3' | -12.69 | 104.48 | 119.70 |
| 2 | J | 68 | A | OP2-P-O3' | 12.68 | 133.10 | 105.20 |
| 4 | L | 624 | U | O3'-P-O5' | 12.68 | 128.10 | 104.00 |
| 1 | I | 102 | A | O3'-P-O5' | -12.68 | 79.91 | 104.00 |
| 4 | L | 562 | U | O3'-P-O5' | 12.68 | 128.09 | 104.00 |
| 4 | L | 780 | U | OP1-P-O3' | -12.68 | 77.31 | 105.20 |
| 2 | J | 87 | A | O3'-P-O5' | 12.67 | 128.07 | 104.00 |
| 5 | M | 330 | U | P-O3'-C3' | -12.66 | 104.50 | 119.70 |
| 3 | K | 76 | A | OP2-P-O3' | 12.66 | 133.04 | 105.20 |
| 6 | N | 386 | U | O3'-P-O5' | -12.66 | 79.95 | 104.00 |
| 5 | M | 460 | U | O3'-P-O5' | -12.65 | 79.97 | 104.00 |
| 4 | L | 557 | U | O3'-P-O5' | -12.64 | 79.97 | 104.00 |
| 3 | K | 78 | A | OP2-P-O3' | 12.64 | 133.01 | 105.20 |
| 6 | N | 319 | U | O3'-P-O5' | -12.64 | 79.98 | 104.00 |
| 3 | K | 140 | A | P-O3'-C3' | -12.63 | 104.54 | 119.70 |
| 1 | I | 219 | A | OP2-P-O3' | -12.63 | 77.41 | 105.20 |
| 2 | J | 37 | A | OP1-P-O3' | -12.63 | 77.41 | 105.20 |
| 3 | K | 71 | A | OP1-P-O3' | 12.63 | 132.99 | 105.20 |
| 4 | L | 540 | U | O3'-P-O5' | 12.63 | 128.00 | 104.00 |
| 1 | I | 27 | A | P-O3'-C3' | -12.62 | 104.56 | 119.70 |
| 4 | L | 642 | U | OP1-P-O3' | -12.61 | 77.46 | 105.20 |
| 2 | J | 147 | A | O3'-P-O5' | 12.60 | 127.94 | 104.00 |
| 5 | M | 351 | U | O3'-P-O5' | 12.60 | 127.94 | 104.00 |
| 2 | J | 179 | A | P-O3'-C3' | -12.59 | 104.60 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 3 | K | 110 | A | P-O3'-C3' | -12.58 | 104.60 | 119.70 |
| 4 | L | 418 | U | OP2-P-O3' | -12.58 | 77.52 | 105.20 |
| 4 | L | 639 | U | OP2-P-O3' | 12.58 | 132.88 | 105.20 |
| 2 | J | 258 | A | OP2-P-O3' | 12.57 | 132.86 | 105.20 |
| 3 | K | 211 | A | OP1-P-O3' | 12.57 | 132.86 | 105.20 |
| 1 | I | 21 | A | OP2-P-O3' | 12.57 | 132.85 | 105.20 |
| 3 | K | 198 | A | O3'-P-O5' | -12.57 | 80.12 | 104.00 |
| 4 | L | 578 | U | P-O3'-C3' | -12.55 | 104.64 | 119.70 |
| 4 | L | 509 | U | O3'-P-O5' | -12.55 | 80.16 | 104.00 |
| 6 | N | 351 | U | P-O3'-C3' | -12.55 | 104.64 | 119.70 |
| 1 | I | 244 | A | O3'-P-O5' | 12.54 | 127.82 | 104.00 |
| 2 | J | 41 | A | P-O3'-C3' | 12.53 | 134.74 | 119.70 |
| 3 | K | 201 | A | OP1-P-O3' | 12.53 | 132.77 | 105.20 |
| 5 | M | 466 | U | O3'-P-O5' | -12.53 | 80.19 | 104.00 |
| 4 | L | 757 | U | OP2-P-O3' | 12.53 | 132.76 | 105.20 |
| 2 | J | 28 | A | OP2-P-O3' | 12.52 | 132.75 | 105.20 |
| 5 | M | 499 | U | P-O3'-C3' | -12.52 | 104.67 | 119.70 |
| 4 | L | 695 | U | OP1-P-O3' | -12.52 | 77.66 | 105.20 |
| 2 | J | 4 | A | P-O3'-C3' | 12.52 | 134.72 | 119.70 |
| 5 | M | 420 | U | P-O3'-C3' | -12.51 | 104.69 | 119.70 |
| 3 | K | 52 | A | O3'-P-O5' | 12.49 | 127.73 | 104.00 |
| 1 | I | 251 | A | OP2-P-O3' | 12.48 | 132.66 | 105.20 |
| 3 | K | 61 | A | OP2-P-O3' | -12.48 | 77.74 | 105.20 |
| 4 | L | 730 | U | O3'-P-O5' | 12.48 | 127.71 | 104.00 |
| 1 | I | 371 | A | P-O3'-C3' | -12.47 | 104.74 | 119.70 |
| 4 | L | 500 | U | OP2-P-O3' | 12.47 | 132.63 | 105.20 |
| 6 | N | 464 | U | O3'-P-O5' | 12.47 | 127.69 | 104.00 |
| 1 | I | 170 | A | OP2-P-O3' | -12.46 | 77.79 | 105.20 |
| 5 | M | 284 | U | O3'-P-O5' | 12.46 | 127.67 | 104.00 |
| 5 | M | 314 | U | O3'-P-O5' | 12.46 | 127.67 | 104.00 |
| 3 | K | 26 | A | O3'-P-O5' | 12.46 | 127.67 | 104.00 |
| 3 | K | 137 | A | P-O3'-C3' | -12.46 | 104.75 | 119.70 |
| 2 | J | 265 | A | OP2-P-O3' | -12.45 | 77.80 | 105.20 |
| 3 | K | 80 | A | OP2-P-O3' | 12.45 | 132.59 | 105.20 |
| 6 | N | 410 | U | OP2-P-O3' | -12.43 | 77.85 | 105.20 |
| 1 | I | 250 | A | OP2-P-O3' | 12.43 | 132.53 | 105.20 |
| 4 | L | 510 | U | O3'-P-O5' | -12.41 | 80.42 | 104.00 |
| 6 | N | 312 | U | OP2-P-O3' | 12.41 | 132.50 | 105.20 |
| 1 | I | 91 | A | OP1-P-O3' | -12.40 | 77.92 | 105.20 |
| 1 | I | 313 | A | P-O3'-C3' | -12.40 | 104.82 | 119.70 |
| 4 | L | 461 | U | O3'-P-O5' | -12.38 | 80.47 | 104.00 |
| 6 | N | 431 | U | OP1-P-O3' | -12.38 | 77.97 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 5 | M | 425 | U | O3'-P-O5' | 12.37 | 127.50 | 104.00 |
| 5 | M | 307 | U | O3'-P-O5' | 12.36 | 127.48 | 104.00 |
| 6 | N | 359 | U | P-O3'-C3' | -12.36 | 104.87 | 119.70 |
| 4 | L | 732 | U | P-O3'-C3' | -12.35 | 104.88 | 119.70 |
| 4 | L | 777 | U | O3'-P-O5' | -12.35 | 80.53 | 104.00 |
| 4 | L | 779 | U | OP1-P-O3' | -12.35 | 78.03 | 105.20 |
| 4 | L | 488 | U | O3'-P-O5' | -12.35 | 80.54 | 104.00 |
| 1 | I | 144 | A | O3'-P-O5' | -12.35 | 80.54 | 104.00 |
| 6 | N | 371 | U | P-O3'-C3' | -12.35 | 104.89 | 119.70 |
| 1 | I | 248 | A | P-O3'-C3' | -12.34 | 104.89 | 119.70 |
| 4 | L | 526 | U | OP2-P-O3' | 12.34 | 132.35 | 105.20 |
| 4 | L | 661 | U | O3'-P-O5' | 12.34 | 127.45 | 104.00 |
| 1 | I | 228 | A | OP2-P-O3' | 12.34 | 132.34 | 105.20 |
| 3 | K | 86 | A | O3'-P-O5' | 12.33 | 127.44 | 104.00 |
| 4 | L | 526 | U | O3'-P-O5' | -12.33 | 80.57 | 104.00 |
| 1 | I | 95 | A | O3'-P-O5' | 12.32 | 127.41 | 104.00 |
| 6 | N | 449 | U | O3'-P-O5' | -12.32 | 80.59 | 104.00 |
| 3 | K | 25 | A | O3'-P-O5' | 12.32 | 127.40 | 104.00 |
| 1 | I | 197 | A | P-O3'-C3' | -12.31 | 104.93 | 119.70 |
| 4 | L | 748 | U | P-O3'-C3' | -12.31 | 104.93 | 119.70 |
| 4 | L | 585 | U | P-O3'-C3' | -12.30 | 104.94 | 119.70 |
| 1 | I | 362 | A | P-O3'-C3' | -12.30 | 104.94 | 119.70 |
| 4 | L | 622 | U | P-O3'-C3' | -12.30 | 104.94 | 119.70 |
| 6 | N | 379 | U | O3'-P-O5' | -12.30 | 80.64 | 104.00 |
| 1 | I | 25 | A | P-O3'-C3' | -12.30 | 104.94 | 119.70 |
| 3 | K | 6 | A | OP2-P-O3' | 12.29 | 132.24 | 105.20 |
| 4 | L | 518 | U | OP1-P-O3' | -12.29 | 78.17 | 105.20 |
| 6 | N | 524 | U | O3'-P-O5' | 12.29 | 127.34 | 104.00 |
| 2 | J | 260 | A | P-O3'-C3' | -12.28 | 104.97 | 119.70 |
| 5 | M | 494 | U | P-O3'-C3' | -12.28 | 104.97 | 119.70 |
| 3 | K | 43 | A | OP1-P-O3' | 12.27 | 132.20 | 105.20 |
| 3 | K | 57 | A | OP1-P-O3' | 12.27 | 132.19 | 105.20 |
| 2 | J | 69 | A | O3'-P-O5' | -12.26 | 80.70 | 104.00 |
| 4 | L | 498 | U | O3'-P-O5' | -12.24 | 80.74 | 104.00 |
| 1 | I | 204 | A | OP2-P-O3' | -12.24 | 78.28 | 105.20 |
| 3 | K | 25 | A | OP2-P-O3' | -12.24 | 78.28 | 105.20 |
| 1 | I | 226 | A | O3'-P-O5' | 12.23 | 127.25 | 104.00 |
| 6 | N | 404 | U | P-O3'-C3' | -12.23 | 105.02 | 119.70 |
| 1 | I | 188 | A | OP2-P-O3' | 12.23 | 132.10 | 105.20 |
| 4 | L | 709 | U | O3'-P-O5' | 12.23 | 127.23 | 104.00 |
| 5 | M | 482 | U | P-O3'-C3' | -12.22 | 105.03 | 119.70 |
| 3 | K | 93 | A | OP2-P-O3' | 12.22 | 132.09 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1 | I | 180 | A | OP1-P-O3' | -12.21 | 78.33 | 105.20 |
| 3 | K | 162 | A | O3'-P-O5' | 12.21 | 127.20 | 104.00 |
| 1 | I | 41 | A | O3'-P-O5' | 12.21 | 127.19 | 104.00 |
| 4 | L | 788 | U | P-O3'-C3' | -12.21 | 105.05 | 119.70 |
| 6 | N | 395 | U | P-O3'-C3' | -12.19 | 105.07 | 119.70 |
| 2 | J | 39 | A | P-O3'-C3' | -12.19 | 105.07 | 119.70 |
| 5 | M | 420 | U | O3'-P-O5' | -12.19 | 80.83 | 104.00 |
| 1 | I | 235 | A | O3'-P-O5' | 12.18 | 127.15 | 104.00 |
| 6 | N | 454 | U | O3'-P-O5' | -12.18 | 80.85 | 104.00 |
| 2 | J | 181 | A | OP2-P-O3' | -12.18 | 78.40 | 105.20 |
| 1 | I | 258 | A | OP1-P-O3' | -12.18 | 78.41 | 105.20 |
| 4 | L | 737 | U | P-O3'-C3' | -12.18 | 105.09 | 119.70 |
| 2 | J | 129 | A | O3'-P-O5' | -12.17 | 80.89 | 104.00 |
| 2 | J | 162 | A | O3'-P-O5' | 12.16 | 127.11 | 104.00 |
| 1 | I | 404 | A | OP1-P-O3' | 12.15 | 131.94 | 105.20 |
| 6 | N | 440 | U | OP1-P-O3' | -12.15 | 78.46 | 105.20 |
| 3 | K | 159 | A | P-O3'-C3' | -12.15 | 105.12 | 119.70 |
| 1 | I | 10 | A | OP2-P-O3' | -12.14 | 78.50 | 105.20 |
| 4 | L | 553 | U | OP2-P-O3' | 12.14 | 131.90 | 105.20 |
| 2 | J | 106 | A | OP2-P-O3' | 12.13 | 131.89 | 105.20 |
| 2 | J | 186 | A | OP2-P-O3' | 12.13 | 131.90 | 105.20 |
| 4 | L | 521 | U | OP1-P-O3' | -12.12 | 78.53 | 105.20 |
| 5 | M | 439 | U | P-O3'-C3' | -12.12 | 105.15 | 119.70 |
| 4 | L | 808 | U | P-O3'-C3' | -12.12 | 105.16 | 119.70 |
| 3 | K | 13 | A | OP1-P-O3' | 12.11 | 131.84 | 105.20 |
| 2 | J | 34 | A | OP2-P-O3' | -12.11 | 78.56 | 105.20 |
| 3 | K | 141 | A | O3'-P-O5' | 12.11 | 127.00 | 104.00 |
| 1 | I | 299 | A | OP2-P-O3' | 12.10 | 131.82 | 105.20 |
| 4 | L | 597 | U | P-O3'-C3' | -12.10 | 105.18 | 119.70 |
| 5 | M | 408 | U | OP2-P-O3' | 12.10 | 131.82 | 105.20 |
| 1 | I | 63 | A | P-O3'-C3' | -12.09 | 105.19 | 119.70 |
| 1 | I | 274 | A | O3'-P-O5' | 12.09 | 126.97 | 104.00 |
| 6 | N | 314 | U | O3'-P-O5' | -12.07 | 81.06 | 104.00 |
| 1 | I | 327 | A | O3'-P-O5' | 12.07 | 126.94 | 104.00 |
| 4 | L | 494 | U | P-O3'-C3' | -12.07 | 105.22 | 119.70 |
| 1 | I | 45 | A | O3'-P-O5' | 12.06 | 126.92 | 104.00 |
| 5 | M | 326 | U | O3'-P-O5' | 12.05 | 126.89 | 104.00 |
| 5 | M | 430 | U | OP1-P-O3' | 12.04 | 131.70 | 105.20 |
| 4 | L | 419 | U | P-O3'-C3' | 12.03 | 134.13 | 119.70 |
| 5 | M | 360 | U | P-O3'-C3' | -12.03 | 105.27 | 119.70 |
| 2 | J | 249 | A | OP2-P-O3' | 12.01 | 131.62 | 105.20 |
| 1 | I | 326 | A | OP2-P-O3' | 12.00 | 131.59 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 3 | K | 132 | A | P-O3'-C3' | -12.00 | 105.30 | 119.70 |
| 2 | J | 235 | A | O3'-P-O5' | 11.99 | 126.79 | 104.00 |
| 4 | L | 644 | U | O3'-P-O5' | 11.99 | 126.79 | 104.00 |
| 3 | K | 237 | A | P-O3'-C3' | 11.98 | 134.08 | 119.70 |
| 5 | M | 300 | U | OP2-P-O3' | 11.97 | 131.54 | 105.20 |
| 1 | I | 202 | A | OP2-P-O3' | 11.97 | 131.54 | 105.20 |
| 1 | I | 137 | A | O3'-P-O5' | -11.97 | 81.26 | 104.00 |
| 4 | L | 601 | U | OP2-P-O3' | 11.96 | 131.51 | 105.20 |
| 6 | N | 365 | U | OP2-P-O3' | -11.95 | 78.91 | 105.20 |
| 4 | L | 566 | U | OP1-P-O3' | -11.95 | 78.92 | 105.20 |
| 5 | M | 414 | U | O3'-P-O5' | 11.95 | 126.70 | 104.00 |
| 3 | K | 79 | A | O3'-P-O5' | -11.94 | 81.32 | 104.00 |
| 1 | I | 225 | A | O3'-P-O5' | -11.93 | 81.33 | 104.00 |
| 1 | I | 334 | A | O3'-P-O5' | -11.93 | 81.34 | 104.00 |
| 6 | N | 292 | U | OP1-P-O3' | 11.92 | 131.42 | 105.20 |
| 2 | J | 144 | A | OP2-P-O3' | 11.92 | 131.42 | 105.20 |
| 3 | K | 5 | A | OP2-P-O3' | 11.92 | 131.42 | 105.20 |
| 6 | N | 396 | U | OP2-P-O3' | 11.91 | 131.41 | 105.20 |
| 2 | J | 27 | A | P-O3'-C3' | -11.91 | 105.41 | 119.70 |
| 3 | K | 62 | A | P-O3'-C3' | -11.91 | 105.41 | 119.70 |
| 4 | L | 530 | U | OP2-P-O3' | 11.91 | 131.40 | 105.20 |
| 1 | I | 227 | A | P-O3'-C3' | -11.88 | 105.44 | 119.70 |
| 2 | J | 99 | A | OP2-P-O3' | 11.88 | 131.34 | 105.20 |
| 5 | M | 458 | U | OP1-P-O3' | -11.88 | 79.06 | 105.20 |
| 4 | L | 765 | U | O3'-P-O5' | -11.88 | 81.44 | 104.00 |
| 4 | L | 647 | U | O3'-P-O5' | -11.87 | 81.44 | 104.00 |
| 5 | M | 448 | U | OP2-P-O3' | 11.87 | 131.32 | 105.20 |
| 4 | L | 467 | U | P-O3'-C3' | -11.86 | 105.46 | 119.70 |
| 4 | L | 458 | U | P-O3'-C3' | -11.86 | 105.47 | 119.70 |
| 4 | L | 766 | U | OP2-P-O3' | 11.85 | 131.28 | 105.20 |
| 4 | L | 500 | U | OP1-P-O3' | -11.85 | 79.14 | 105.20 |
| 5 | M | 285 | U | P-O3'-C3' | -11.84 | 105.49 | 119.70 |
| 1 | I | 186 | A | P-O3'-C3' | -11.84 | 105.49 | 119.70 |
| 5 | M | 305 | U | O3'-P-O5' | 11.84 | 126.50 | 104.00 |
| 6 | N | 495 | U | P-O3'-C3' | 11.84 | 133.91 | 119.70 |
| 3 | K | 250 | A | OP1-P-O3' | -11.83 | 79.17 | 105.20 |
| 4 | L | 465 | U | OP2-P-O3' | -11.83 | 79.18 | 105.20 |
| 1 | I | 353 | A | P-O3'-C3' | -11.82 | 105.51 | 119.70 |
| 1 | I | 192 | A | OP2-P-O3' | 11.82 | 131.21 | 105.20 |
| 3 | K | 104 | A | P-O3'-C3' | -11.82 | 105.51 | 119.70 |
| 2 | J | 173 | A | OP1-P-O3' | 11.80 | 131.17 | 105.20 |
| 4 | L | 538 | U | O3'-P-O5' | -11.80 | 81.57 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 5 | M | 465 | U | OP1-P-O3' | -11.80 | 79.23 | 105.20 |
| 1 | I | 165 | A | P-O3'-C3' | -11.80 | 105.54 | 119.70 |
| 1 | I | 188 | A | P-O3'-C3' | -11.80 | 105.54 | 119.70 |
| 2 | J | 85 | A | OP2-P-O3' | -11.80 | 79.25 | 105.20 |
| 3 | K | 225 | A | O3'-P-O5' | -11.79 | 81.60 | 104.00 |
| 1 | I | 235 | A | P-O3'-C3' | -11.79 | 105.56 | 119.70 |
| 4 | L | 580 | U | O3'-P-O5' | 11.78 | 126.38 | 104.00 |
| 6 | N | 388 | U | OP1-P-O3' | 11.78 | 131.12 | 105.20 |
| 6 | N | 325 | U | OP1-P-O3' | 11.78 | 131.11 | 105.20 |
| 2 | J | 199 | A | P-O3'-C3' | -11.78 | 105.57 | 119.70 |
| 3 | K | 95 | A | OP2-P-O3' | 11.77 | 131.10 | 105.20 |
| 1 | I | 81 | A | P-O3'-C3' | -11.77 | 105.58 | 119.70 |
| 5 | M | 475 | U | O3'-P-O5' | 11.77 | 126.35 | 104.00 |
| 6 | N | 381 | U | O3'-P-O5' | 11.76 | 126.35 | 104.00 |
| 4 | L | 577 | U | OP2-P-O3' | 11.76 | 131.06 | 105.20 |
| 5 | M | 485 | U | OP1-P-O3' | -11.75 | 79.35 | 105.20 |
| 2 | J | 102 | A | OP2-P-O3' | 11.75 | 131.05 | 105.20 |
| 4 | L | 775 | U | OP1-P-O3' | -11.74 | 79.37 | 105.20 |
| 1 | I | 171 | A | OP2-P-O3' | -11.73 | 79.38 | 105.20 |
| 3 | K | 166 | A | O3'-P-O5' | 11.73 | 126.29 | 104.00 |
| 2 | J | 156 | A | OP2-P-O3' | 11.73 | 131.01 | 105.20 |
| 1 | I | 230 | A | O3'-P-O5' | -11.73 | 81.72 | 104.00 |
| 6 | N | 301 | U | O3'-P-O5' | -11.72 | 81.72 | 104.00 |
| 4 | L | 477 | U | OP1-P-O3' | -11.72 | 79.41 | 105.20 |
| 1 | I | 142 | A | P-O3'-C3' | 11.72 | 133.76 | 119.70 |
| 6 | N | 389 | U | O3'-P-O5' | 11.71 | 126.24 | 104.00 |
| 4 | L | 592 | U | P-O3'-C3' | -11.70 | 105.66 | 119.70 |
| 2 | J | 219 | A | OP1-P-O3' | -11.70 | 79.46 | 105.20 |
| 3 | K | 165 | A | OP1-P-O3' | -11.70 | 79.47 | 105.20 |
| 1 | I | 337 | A | OP2-P-O3' | 11.69 | 130.92 | 105.20 |
| 1 | I | 333 | A | OP2-P-O3' | 11.69 | 130.91 | 105.20 |
| 3 | K | 142 | A | OP1-P-O3' | 11.68 | 130.91 | 105.20 |
| 4 | L | 781 | U | O3'-P-O5' | 11.68 | 126.19 | 104.00 |
| 4 | L | 546 | U | OP2-P-O3' | 11.68 | 130.89 | 105.20 |
| 4 | L | 793 | U | P-O3'-C3' | -11.68 | 105.69 | 119.70 |
| 5 | M | 373 | U | OP1-P-O3' | -11.68 | 79.51 | 105.20 |
| 6 | N | 499 | U | OP2-P-O3' | -11.68 | 79.51 | 105.20 |
| 1 | I | 85 | A | O3'-P-O5' | 11.67 | 126.18 | 104.00 |
| 1 | I | 402 | A | O3'-P-O5' | -11.67 | 81.82 | 104.00 |
| 5 | M | 320 | U | O3'-P-O5' | -11.67 | 81.82 | 104.00 |
| 1 | I | 220 | A | OP2-P-O3' | -11.67 | 79.53 | 105.20 |
| 6 | N | 359 | U | O3'-P-O5' | 11.67 | 126.17 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 3 | K | 180 | A | P-O3'-C3' | 11.66 | 133.69 | 119.70 |
| 4 | L | 628 | U | OP2-P-O3' | -11.66 | 79.56 | 105.20 |
| 4 | L | 671 | U | OP2-P-O3' | 11.65 | 130.84 | 105.20 |
| 5 | M | 487 | U | P-O3'-C3' | -11.65 | 105.72 | 119.70 |
| 4 | L | 491 | U | O3'-P-O5' | 11.65 | 126.13 | 104.00 |
| 1 | I | 249 | A | OP1-P-O3' | -11.64 | 79.58 | 105.20 |
| 5 | M | 532 | U | P-O3'-C3' | -11.64 | 105.73 | 119.70 |
| 6 | N | 528 | U | P-O3'-C3' | -11.64 | 105.73 | 119.70 |
| 5 | M | 473 | U | P-O3'-C3' | -11.64 | 105.73 | 119.70 |
| 6 | N | 339 | U | O3'-P-O5' | -11.64 | 81.89 | 104.00 |
| 5 | M | 305 | U | OP2-P-O3' | -11.63 | 79.62 | 105.20 |
| 4 | L | 637 | U | OP2-P-O3' | 11.62 | 130.77 | 105.20 |
| 6 | N | 487 | U | O3'-P-O5' | -11.62 | 81.91 | 104.00 |
| 4 | L | 735 | U | OP2-P-O3' | 11.62 | 130.76 | 105.20 |
| 4 | L | 815 | U | OP1-P-O3' | -11.62 | 79.64 | 105.20 |
| 2 | J | 62 | A | OP2-P-O3' | 11.62 | 130.75 | 105.20 |
| 2 | J | 165 | A | O3'-P-O5' | 11.61 | 126.06 | 104.00 |
| 6 | N | 410 | U | P-O3'-C3' | -11.61 | 105.77 | 119.70 |
| 2 | J | 49 | A | OP2-P-O3' | -11.60 | 79.67 | 105.20 |
| 3 | K | 122 | A | OP2-P-O3' | -11.60 | 79.68 | 105.20 |
| 1 | I | 191 | A | O3'-P-O5' | -11.60 | 81.97 | 104.00 |
| 1 | I | 254 | A | P-O3'-C3' | -11.60 | 105.78 | 119.70 |
| 3 | K | 220 | A | P-O3'-C3' | 11.59 | 133.61 | 119.70 |
| 2 | J | 200 | A | OP2-P-O3' | -11.59 | 79.71 | 105.20 |
| 2 | J | 149 | A | O3'-P-O5' | 11.59 | 126.01 | 104.00 |
| 1 | I | 268 | A | OP2-P-O3' | 11.58 | 130.67 | 105.20 |
| 5 | M | 347 | U | OP1-P-O3' | -11.57 | 79.74 | 105.20 |
| 3 | K | 81 | A | P-O3'-C3' | -11.57 | 105.82 | 119.70 |
| 4 | L | 681 | U | OP1-P-O3' | 11.56 | 130.63 | 105.20 |
| 1 | I | 151 | A | O3'-P-O5' | 11.56 | 125.96 | 104.00 |
| 1 | I | 209 | A | O3'-P-O5' | 11.56 | 125.96 | 104.00 |
| 1 | I | 39 | A | O3'-P-O5' | 11.56 | 125.96 | 104.00 |
| 5 | M | 390 | U | O3'-P-O5' | 11.55 | 125.95 | 104.00 |
| 6 | N | 394 | U | P-O3'-C3' | -11.55 | 105.84 | 119.70 |
| 6 | N | 439 | U | O3'-P-O5' | -11.55 | 82.06 | 104.00 |
| 4 | L | 746 | U | P-O3'-C3' | -11.55 | 105.84 | 119.70 |
| 2 | J | 68 | A | O3'-P-O5' | -11.54 | 82.07 | 104.00 |
| 1 | I | 190 | A | P-O3'-C3' | -11.54 | 105.85 | 119.70 |
| 3 | K | 198 | A | OP1-P-O3' | 11.53 | 130.57 | 105.20 |
| 5 | M | 530 | U | OP1-P-O3' | -11.53 | 79.83 | 105.20 |
| 3 | K | 160 | A | OP2-P-O3' | 11.53 | 130.56 | 105.20 |
| 2 | J | 43 | A | OP1-P-O3' | -11.52 | 79.85 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 3 | K | 95 | A | P-O3'-C3' | -11.52 | 105.88 | 119.70 |
| 3 | K | 211 | A | P-O3'-C3' | 11.52 | 133.52 | 119.70 |
| 2 | J | 180 | A | OP2-P-O3' | -11.51 | 79.87 | 105.20 |
| 1 | I | 232 | A | OP1-P-O3' | -11.51 | 79.88 | 105.20 |
| 3 | K | 64 | A | OP2-P-O3' | 11.51 | 130.51 | 105.20 |
| 1 | I | 274 | A | P-O3'-C3' | -11.51 | 105.89 | 119.70 |
| 5 | M | 373 | U | OP2-P-O3' | 11.50 | 130.51 | 105.20 |
| 4 | L | 503 | U | O3'-P-O5' | 11.50 | 125.85 | 104.00 |
| 3 | K | 94 | A | P-O3'-C3' | -11.50 | 105.91 | 119.70 |
| 5 | M | 518 | U | OP2-P-O3' | -11.49 | 79.92 | 105.20 |
| 2 | J | 152 | A | OP2-P-O3' | 11.48 | 130.46 | 105.20 |
| 2 | J | 54 | A | OP2-P-O3' | 11.48 | 130.45 | 105.20 |
| 4 | L | 673 | U | OP2-P-O3' | 11.47 | 130.44 | 105.20 |
| 6 | N | 414 | U | OP2-P-O3' | -11.47 | 79.97 | 105.20 |
| 4 | L | 421 | U | OP2-P-O3' | 11.46 | 130.42 | 105.20 |
| 2 | J | 88 | A | O3'-P-O5' | 11.46 | 125.78 | 104.00 |
| 5 | M | 350 | U | OP2-P-O3' | 11.46 | 130.42 | 105.20 |
| 1 | I | 118 | A | O3'-P-O5' | 11.46 | 125.77 | 104.00 |
| 2 | J | 79 | A | OP1-P-O3' | -11.46 | 79.99 | 105.20 |
| 3 | K | 152 | A | P-O3'-C3' | -11.46 | 105.95 | 119.70 |
| 4 | L | 438 | U | OP1-P-O3' | 11.45 | 130.39 | 105.20 |
| 5 | M | 290 | U | O3'-P-O5' | -11.45 | 82.25 | 104.00 |
| 1 | I | 223 | A | P-O3'-C3' | -11.44 | 105.97 | 119.70 |
| 4 | L | 769 | U | OP1-P-O3' | -11.44 | 80.04 | 105.20 |
| 1 | I | 48 | A | O3'-P-O5' | -11.43 | 82.28 | 104.00 |
| 2 | J | 90 | A | O3'-P-O5' | -11.43 | 82.29 | 104.00 |
| 6 | N | 344 | U | O3'-P-O5' | 11.42 | 125.70 | 104.00 |
| 4 | L | 728 | U | O3'-P-O5' | 11.42 | 125.69 | 104.00 |
| 6 | N | 477 | U | OP2-P-O3' | 11.41 | 130.31 | 105.20 |
| 1 | I | 4 | A | OP1-P-O3' | 11.41 | 130.30 | 105.20 |
| 2 | J | 149 | A | P-O3'-C3' | -11.41 | 106.01 | 119.70 |
| 6 | N | 381 | U | OP2-P-O3' | -11.41 | 80.10 | 105.20 |
| 2 | J | 83 | A | O3'-P-O5' | 11.40 | 125.67 | 104.00 |
| 4 | L | 547 | U | P-O3'-C3' | -11.40 | 106.01 | 119.70 |
| 6 | N | 390 | U | OP2-P-O3' | -11.40 | 80.11 | 105.20 |
| 1 | I | 321 | A | OP2-P-O3' | 11.40 | 130.28 | 105.20 |
| 1 | I | 243 | A | OP2-P-O3' | 11.40 | 130.28 | 105.20 |
| 1 | I | 277 | A | OP1-P-O3' | 11.40 | 130.28 | 105.20 |
| 1 | I | 88 | A | O3'-P-O5' | 11.40 | 125.66 | 104.00 |
| 2 | J | 269 | A | O3'-P-O5' | 11.40 | 125.66 | 104.00 |
| 3 | K | 249 | A | O3'-P-O5' | 11.39 | 125.65 | 104.00 |
| 5 | M | 344 | U | P-O3'-C3' | -11.39 | 106.03 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 6 | N | 494 | U | OP2-P-O3' | -11.39 | 80.13 | 105.20 |
| 1 | I | 357 | A | P-O3'-C3' | -11.39 | 106.03 | 119.70 |
| 1 | I | 17 | A | OP1-P-O3' | -11.39 | 80.15 | 105.20 |
| 1 | I | 28 | A | O3'-P-O5' | 11.39 | 125.64 | 104.00 |
| 5 | M | 378 | U | O3'-P-O5' | 11.39 | 125.64 | 104.00 |
| 6 | N | 277 | U | OP1-P-O3' | -11.39 | 80.15 | 105.20 |
| 2 | J | 49 | A | O3'-P-O5' | 11.38 | 125.61 | 104.00 |
| 2 | J | 154 | A | O3'-P-O5' | 11.37 | 125.61 | 104.00 |
| 4 | L | 602 | U | OP2-P-O3' | 11.37 | 130.21 | 105.20 |
| 3 | K | 168 | A | OP1-P-O3' | -11.37 | 80.19 | 105.20 |
| 5 | M | 462 | U | OP2-P-O3' | 11.37 | 130.20 | 105.20 |
| 5 | M | 322 | U | P-O3'-C3' | -11.36 | 106.07 | 119.70 |
| 6 | N | 413 | U | P-O3'-C3' | -11.36 | 106.06 | 119.70 |
| 5 | M | 315 | U | O3'-P-O5' | 11.36 | 125.58 | 104.00 |
| 3 | K | 175 | A | P-O3'-C3' | -11.36 | 106.07 | 119.70 |
| 4 | L | 513 | U | OP2-P-O3' | 11.35 | 130.17 | 105.20 |
| 4 | L | 418 | U | O3'-P-O5' | 11.35 | 125.56 | 104.00 |
| 6 | N | 421 | U | OP2-P-O3' | 11.35 | 130.16 | 105.20 |
| 4 | L | 648 | U | P-O3'-C3' | -11.35 | 106.09 | 119.70 |
| 4 | L | 529 | U | P-O3'-C3' | -11.34 | 106.09 | 119.70 |
| 4 | L | 704 | U | OP1-P-O3' | -11.34 | 80.25 | 105.20 |
| 5 | M | 290 | U | P-O3'-C3' | -11.34 | 106.09 | 119.70 |
| 2 | J | 184 | A | O3'-P-O5' | 11.34 | 125.54 | 104.00 |
| 1 | I | 76 | A | OP2-P-O3' | 11.33 | 130.13 | 105.20 |
| 2 | J | 142 | A | P-O3'-C3' | -11.33 | 106.10 | 119.70 |
| 1 | I | 30 | A | O3'-P-O5' | 11.33 | 125.53 | 104.00 |
| 3 | K | 212 | A | P-O3'-C3' | -11.33 | 106.11 | 119.70 |
| 2 | J | 212 | A | P-O3'-C3' | -11.32 | 106.12 | 119.70 |
| 5 | M | 387 | U | O3'-P-O5' | 11.32 | 125.51 | 104.00 |
| 3 | K | 157 | A | OP2-P-O3' | 11.31 | 130.09 | 105.20 |
| 1 | I | 297 | A | O3'-P-O5' | -11.31 | 82.51 | 104.00 |
| 4 | L | 560 | U | O3'-P-O5' | 11.31 | 125.48 | 104.00 |
| 3 | K | 68 | A | O3'-P-O5' | 11.30 | 125.47 | 104.00 |
| 3 | K | 51 | A | O3'-P-O5' | 11.30 | 125.47 | 104.00 |
| 4 | L | 608 | U | O3'-P-O5' | 11.29 | 125.45 | 104.00 |
| 4 | L | 627 | U | O3'-P-O5' | 11.29 | 125.46 | 104.00 |
| 1 | I | 181 | A | OP2-P-O3' | 11.28 | 130.02 | 105.20 |
| 1 | I | 257 | A | OP1-P-O3' | -11.29 | 80.37 | 105.20 |
| 2 | J | 234 | A | P-O3'-C3' | -11.28 | 106.16 | 119.70 |
| 3 | K | 102 | A | OP2-P-O3' | -11.28 | 80.39 | 105.20 |
| 1 | I | 265 | A | OP2-P-O3' | 11.27 | 130.00 | 105.20 |
| 6 | N | 280 | U | OP1-P-O3' | -11.27 | 80.40 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1 | I | 124 | A | P-O3'-C3' | -11.27 | 106.18 | 119.70 |
| 4 | L | 425 | U | O3'-P-O5' | -11.27 | 82.59 | 104.00 |
| 2 | J | 69 | A | OP1-P-O3' | -11.26 | 80.42 | 105.20 |
| 6 | N | 486 | U | OP2-P-O3' | 11.26 | 129.98 | 105.20 |
| 4 | L | 743 | U | O3'-P-O5' | 11.26 | 125.39 | 104.00 |
| 3 | K | 122 | A | O3'-P-O5' | 11.25 | 125.38 | 104.00 |
| 4 | L | 767 | U | OP1-P-O3' | 11.25 | 129.95 | 105.20 |
| 6 | N | 330 | U | O3'-P-O5' | -11.24 | 82.64 | 104.00 |
| 5 | M | 500 | U | OP2-P-O3' | -11.24 | 80.47 | 105.20 |
| 3 | K | 158 | A | OP2-P-O3' | 11.24 | 129.92 | 105.20 |
| 3 | K | 32 | A | P-O3'-C3' | -11.23 | 106.22 | 119.70 |
| 2 | J | 190 | A | P-O3'-C3' | -11.23 | 106.23 | 119.70 |
| 3 | K | 121 | A | OP2-P-O3' | 11.23 | 129.90 | 105.20 |
| 4 | L | 583 | U | OP2-P-O3' | 11.23 | 129.90 | 105.20 |
| 3 | K | 145 | A | OP1-P-O3' | 11.22 | 129.88 | 105.20 |
| 5 | M | 381 | U | O3'-P-O5' | -11.21 | 82.70 | 104.00 |
| 5 | M | 386 | U | O3'-P-O5' | 11.21 | 125.30 | 104.00 |
| 2 | J | 176 | A | O3'-P-O5' | 11.21 | 125.30 | 104.00 |
| 2 | J | 242 | A | OP2-P-O3' | -11.20 | 80.56 | 105.20 |
| 1 | I | 218 | A | O3'-P-O5' | 11.20 | 125.27 | 104.00 |
| 4 | L | 419 | U | OP1-P-O3' | 11.18 | 129.79 | 105.20 |
| 6 | N | 445 | U | OP2-P-O3' | -11.17 | 80.63 | 105.20 |
| 1 | I | 237 | A | O3'-P-O5' | -11.17 | 82.78 | 104.00 |
| 1 | I | 389 | A | OP1-P-O3' | 11.16 | 129.76 | 105.20 |
| 1 | I | 127 | A | O3'-P-O5' | -11.16 | 82.80 | 104.00 |
| 4 | L | 610 | U | O3'-P-O5' | -11.16 | 82.80 | 104.00 |
| 4 | L | 802 | U | OP2-P-O3' | 11.16 | 129.75 | 105.20 |
| 5 | M | 548 | U | P-O3'-C3' | 11.16 | 133.09 | 119.70 |
| 6 | N | 393 | U | OP2-P-O3' | -11.16 | 80.66 | 105.20 |
| 5 | M | 345 | U | P-O3'-C3' | -11.15 | 106.32 | 119.70 |
| 5 | M | 545 | U | O3'-P-O5' | 11.15 | 125.19 | 104.00 |
| 6 | N | 343 | U | O3'-P-O5' | 11.15 | 125.18 | 104.00 |
| 1 | I | 237 | A | OP2-P-O3' | 11.15 | 129.73 | 105.20 |
| 4 | L | 729 | U | O3'-P-O5' | 11.15 | 125.18 | 104.00 |
| 2 | J | 71 | A | O3'-P-O5' | -11.15 | 82.82 | 104.00 |
| 1 | I | 22 | A | OP2-P-O3' | 11.14 | 129.72 | 105.20 |
| 4 | L | 797 | U | P-O3'-C3' | -11.14 | 106.33 | 119.70 |
| 1 | I | 127 | A | P-O3'-C3' | -11.13 | 106.34 | 119.70 |
| 3 | K | 248 | A | OP2-P-O3' | -11.13 | 80.70 | 105.20 |
| 4 | L | 632 | U | OP2-P-O3' | -11.13 | 80.70 | 105.20 |
| 5 | M | 346 | U | OP2-P-O3' | 11.12 | 129.67 | 105.20 |
| 1 | I | 75 | A | OP1-P-O3' | -11.12 | 80.75 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 2 | J | 52 | A | OP2-P-O3' | 11.12 | 129.66 | 105.20 |
| 4 | L | 531 | U | OP1-P-O3' | -11.12 | 80.74 | 105.20 |
| 5 | M | 399 | U | P-O3'-C3' | -11.11 | 106.36 | 119.70 |
| 2 | J | 251 | A | P-O3'-C3' | -11.11 | 106.37 | 119.70 |
| 6 | N | 495 | U | OP1-P-O3' | 11.11 | 129.64 | 105.20 |
| 1 | I | 104 | A | OP1-P-O3' | 11.11 | 129.63 | 105.20 |
| 4 | L | 460 | U | P-O3'-C3' | -11.10 | 106.38 | 119.70 |
| 6 | N | 323 | U | O3'-P-O5' | -11.10 | 82.91 | 104.00 |
| 5 | M | 403 | U | O3'-P-O5' | 11.10 | 125.08 | 104.00 |
| 3 | K | 169 | A | O3'-P-O5' | -11.09 | 82.93 | 104.00 |
| 3 | K | 215 | A | P-O3'-C3' | 11.09 | 133.01 | 119.70 |
| 3 | K | 12 | A | OP2-P-O3' | -11.08 | 80.82 | 105.20 |
| 5 | M | 469 | U | O3'-P-O5' | 11.08 | 125.06 | 104.00 |
| 3 | K | 116 | A | P-O3'-C3' | -11.08 | 106.41 | 119.70 |
| 6 | N | 369 | U | P-O3'-C3' | -11.08 | 106.41 | 119.70 |
| 3 | K | 6 | A | O3'-P-O5' | -11.07 | 82.96 | 104.00 |
| 3 | K | 212 | A | OP1-P-O3' | 11.07 | 129.57 | 105.20 |
| 5 | M | 457 | U | O3'-P-O5' | -11.07 | 82.96 | 104.00 |
| 3 | K | 139 | A | O3'-P-O5' | 11.07 | 125.04 | 104.00 |
| 4 | L | 422 | U | OP2-P-O3' | 11.07 | 129.56 | 105.20 |
| 4 | L | 822 | U | O3'-P-O5' | 11.07 | 125.03 | 104.00 |
| 2 | J | 213 | A | O3'-P-O5' | 11.06 | 125.02 | 104.00 |
| 1 | I | 56 | A | O3'-P-O5' | 11.06 | 125.02 | 104.00 |
| 3 | K | 90 | A | OP2-P-O3' | 11.06 | 129.54 | 105.20 |
| 2 | J | 23 | A | O3'-P-O5' | 11.06 | 125.01 | 104.00 |
| 2 | J | 139 | A | P-O3'-C3' | -11.06 | 106.43 | 119.70 |
| 6 | N | 375 | U | P-O3'-C3' | -11.05 | 106.44 | 119.70 |
| 1 | I | 236 | A | O3'-P-O5' | 11.04 | 124.98 | 104.00 |
| 4 | L | 644 | U | OP1-P-O3' | -11.04 | 80.92 | 105.20 |
| 5 | M | 525 | U | OP2-P-O3' | 11.03 | 129.46 | 105.20 |
| 4 | L | 521 | U | O3'-P-O5' | 11.02 | 124.93 | 104.00 |
| 5 | M | 363 | U | O3'-P-O5' | 11.02 | 124.93 | 104.00 |
| 4 | L | 823 | U | O3'-P-O5' | 11.02 | 124.93 | 104.00 |
| 5 | M | 477 | U | P-O3'-C3' | -11.01 | 106.48 | 119.70 |
| 5 | M | 381 | U | OP1-P-O3' | 11.01 | 129.43 | 105.20 |
| 2 | J | 24 | A | OP2-P-O3' | -11.01 | 80.99 | 105.20 |
| 6 | N | 352 | U | O3'-P-O5' | -11.01 | 83.08 | 104.00 |
| 2 | J | 40 | A | O3'-P-O5' | -11.00 | 83.10 | 104.00 |
| 6 | N | 368 | U | P-O3'-C3' | -11.00 | 106.50 | 119.70 |
| 5 | M | 376 | U | O3'-P-O5' | -11.00 | 83.10 | 104.00 |
| 1 | I | 141 | A | OP1-P-O3' | 11.00 | 129.39 | 105.20 |
| 5 | M | 408 | U | OP1-P-O3' | -11.00 | 81.00 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 4 | L | 741 | U | OP2-P-O3' | -11.00 | 81.01 | 105.20 |
| 1 | I | 391 | A | OP2-P-O3' | -10.99 | 81.01 | 105.20 |
| 2 | J | 137 | A | O3'-P-O5' | 10.99 | 124.89 | 104.00 |
| 1 | I | 299 | A | P-O3'-C3' | -10.99 | 106.51 | 119.70 |
| 4 | L | 571 | U | OP1-P-O3' | 10.99 | 129.38 | 105.20 |
| 3 | K | 65 | A | O3'-P-O5' | -10.98 | 83.14 | 104.00 |
| 4 | L | 538 | U | P-O3'-C3' | -10.98 | 106.52 | 119.70 |
| 4 | L | 684 | U | OP1-P-O3' | 10.98 | 129.35 | 105.20 |
| 6 | N | 300 | U | OP1-P-O3' | 10.98 | 129.35 | 105.20 |
| 6 | N | 322 | U | OP1-P-O3' | 10.98 | 129.35 | 105.20 |
| 2 | J | 196 | A | O3'-P-O5' | 10.97 | 124.85 | 104.00 |
| 6 | N | 272 | U | OP2-P-O3' | -10.97 | 81.06 | 105.20 |
| 2 | J | 267 | A | O3'-P-O5' | 10.97 | 124.85 | 104.00 |
| 4 | L | 610 | U | P-O3'-C3' | -10.97 | 106.54 | 119.70 |
| 6 | N | 460 | U | O3'-P-O5' | 10.97 | 124.84 | 104.00 |
| 5 | M | 505 | U | OP1-P-O3' | -10.96 | 81.10 | 105.20 |
| 1 | I | 55 | A | O3'-P-O5' | 10.95 | 124.81 | 104.00 |
| 1 | I | 368 | A | O3'-P-O5' | 10.95 | 124.80 | 104.00 |
| 6 | N | 487 | U | OP1-P-O3' | 10.94 | 129.27 | 105.20 |
| 6 | N | 375 | U | O3'-P-O5' | -10.93 | 83.23 | 104.00 |
| 3 | K | 228 | A | O3'-P-O5' | -10.92 | 83.25 | 104.00 |
| 1 | I | 387 | A | O3'-P-O5' | -10.92 | 83.26 | 104.00 |
| 5 | M | 521 | U | P-O3'-C3' | -10.91 | 106.60 | 119.70 |
| 1 | I | 393 | A | OP2-P-O3' | 10.91 | 129.20 | 105.20 |
| 5 | M | 296 | U | O3'-P-O5' | -10.91 | 83.27 | 104.00 |
| 6 | N | 486 | U | P-O3'-C3' | -10.91 | 106.61 | 119.70 |
| 4 | L | 495 | U | O3'-P-O5' | -10.91 | 83.28 | 104.00 |
| 3 | K | 191 | A | O3'-P-O5' | -10.90 | 83.28 | 104.00 |
| 4 | L | 458 | U | OP2-P-O3' | 10.90 | 129.19 | 105.20 |
| 6 | N | 388 | U | P-O3'-C3' | 10.90 | 132.78 | 119.70 |
| 5 | M | 473 | U | O3'-P-O5' | 10.90 | 124.71 | 104.00 |
| 4 | L | 751 | U | P-O3'-C3' | -10.90 | 106.62 | 119.70 |
| 1 | I | 253 | A | P-O3'-C3' | -10.87 | 106.65 | 119.70 |
| 6 | N | 491 | U | P-O3'-C3' | -10.87 | 106.66 | 119.70 |
| 6 | N | 501 | U | OP2-P-O3' | 10.87 | 129.12 | 105.20 |
| 3 | K | 181 | A | O3'-P-O5' | 10.87 | 124.65 | 104.00 |
| 5 | M | 297 | U | OP2-P-O3' | 10.87 | 129.11 | 105.20 |
| 3 | K | 197 | A | P-O3'-C3' | 10.87 | 132.74 | 119.70 |
| 4 | L | 522 | U | O3'-P-O5' | 10.87 | 124.65 | 104.00 |
| 4 | L | 710 | U | O3'-P-O5' | 10.86 | 124.64 | 104.00 |
| 6 | N | 394 | U | O3'-P-O5' | 10.86 | 124.64 | 104.00 |
| 6 | N | 373 | U | OP2-P-O3' | -10.86 | 81.32 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 2 | J | 81 | A | OP2-P-O3' | 10.85 | 129.08 | 105.20 |
| 4 | L | 703 | U | P-O3'-C3' | -10.85 | 106.68 | 119.70 |
| 1 | I | 304 | A | O3'-P-O5' | 10.85 | 124.61 | 104.00 |
| 5 | M | 286 | U | P-O3'-C3' | -10.85 | 106.69 | 119.70 |
| 1 | I | 152 | A | P-O3'-C3' | -10.84 | 106.69 | 119.70 |
| 2 | J | 170 | A | O3'-P-O5' | 10.84 | 124.59 | 104.00 |
| 6 | N | 352 | U | OP2-P-O3' | 10.83 | 129.02 | 105.20 |
| 4 | L | 797 | U | O3'-P-O5' | 10.82 | 124.55 | 104.00 |
| 1 | I | 20 | A | P-O3'-C3' | -10.81 | 106.73 | 119.70 |
| 4 | L | 750 | U | O3'-P-O5' | 10.81 | 124.54 | 104.00 |
| 4 | L | 571 | U | O3'-P-O5' | -10.80 | 83.49 | 104.00 |
| 3 | K | 87 | A | OP1-P-O3' | -10.79 | 81.45 | 105.20 |
| 1 | I | 87 | A | OP1-P-O3' | -10.79 | 81.47 | 105.20 |
| 4 | L | 492 | U | O3'-P-O5' | 10.79 | 124.50 | 104.00 |
| 2 | J | 53 | A | O3'-P-O5' | 10.78 | 124.48 | 104.00 |
| 6 | N | 309 | U | OP1-P-O3' | 10.78 | 128.91 | 105.20 |
| 4 | L | 474 | U | OP2-P-O3' | 10.77 | 128.90 | 105.20 |
| 3 | K | 128 | A | O3'-P-O5' | -10.77 | 83.53 | 104.00 |
| 4 | L | 660 | U | OP2-P-O3' | 10.77 | 128.89 | 105.20 |
| 2 | J | 72 | A | O3'-P-O5' | -10.76 | 83.55 | 104.00 |
| 1 | I | 372 | A | P-O3'-C3' | -10.76 | 106.79 | 119.70 |
| 6 | N | 387 | U | OP1-P-O3' | 10.76 | 128.87 | 105.20 |
| 3 | K | 214 | A | OP1-P-O3' | 10.76 | 128.86 | 105.20 |
| 3 | K | 218 | A | OP1-P-O3' | 10.76 | 128.86 | 105.20 |
| 1 | I | 153 | A | O3'-P-O5' | -10.75 | 83.57 | 104.00 |
| 2 | J | 202 | A | OP1-P-O3' | -10.75 | 81.55 | 105.20 |
| 1 | I | 133 | A | OP1-P-O3' | -10.75 | 81.56 | 105.20 |
| 1 | I | 386 | A | OP1-P-O3' | 10.74 | 128.83 | 105.20 |
| 2 | J | 263 | A | OP2-P-O3' | 10.74 | 128.82 | 105.20 |
| 1 | I | 2 | A | O3'-P-O5' | 10.73 | 124.39 | 104.00 |
| 2 | J | 184 | A | OP1-P-O3' | -10.73 | 81.59 | 105.20 |
| 6 | N | 376 | U | O3'-P-O5' | -10.73 | 83.61 | 104.00 |
| 5 | M | 524 | U | P-O3'-C3' | -10.72 | 106.83 | 119.70 |
| 2 | J | 176 | A | OP2-P-O3' | -10.72 | 81.61 | 105.20 |
| 5 | M | 463 | U | OP2-P-O3' | 10.72 | 128.78 | 105.20 |
| 1 | I | 216 | A | P-O3'-C3' | -10.72 | 106.84 | 119.70 |
| 1 | I | 327 | A | P-O3'-C3' | -10.72 | 106.84 | 119.70 |
| 2 | J | 161 | A | P-O3'-C3' | -10.71 | 106.85 | 119.70 |
| 2 | J | 231 | A | P-O3'-C3' | -10.70 | 106.86 | 119.70 |
| 4 | L | 614 | U | OP2-P-O3' | 10.70 | 128.74 | 105.20 |
| 1 | I | 233 | A | OP1-P-O3' | -10.69 | 81.68 | 105.20 |
| 2 | J | 197 | A | OP2-P-O3' | -10.69 | 81.68 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 4 | L | 547 | U | OP1-P-O3' | 10.68 | 128.70 | 105.20 |
| 5 | M | 339 | U | OP2-P-O3' | 10.68 | 128.70 | 105.20 |
| 3 | K | 111 | A | OP2-P-O3' | -10.68 | 81.70 | 105.20 |
| 2 | J | 162 | A | OP2-P-O3' | -10.67 | 81.72 | 105.20 |
| 6 | N | 525 | U | O3'-P-O5' | -10.67 | 83.72 | 104.00 |
| 5 | M | 392 | U | P-O3'-C3' | -10.67 | 106.90 | 119.70 |
| 6 | N | 378 | U | OP1-P-O3' | 10.67 | 128.67 | 105.20 |
| 3 | K | 133 | A | OP2-P-O3' | 10.67 | 128.66 | 105.20 |
| 3 | K | 35 | A | O3'-P-O5' | -10.66 | 83.75 | 104.00 |
| 3 | K | 31 | A | P-O3'-C3' | -10.65 | 106.91 | 119.70 |
| 1 | I | 229 | A | O3'-P-O5' | -10.65 | 83.76 | 104.00 |
| 6 | N | 300 | U | OP2-P-O3' | -10.65 | 81.76 | 105.20 |
| 1 | I | 196 | A | O3'-P-O5' | 10.65 | 124.24 | 104.00 |
| 2 | J | 193 | A | OP2-P-O3' | 10.65 | 128.62 | 105.20 |
| 1 | I | 193 | A | O3'-P-O5' | 10.64 | 124.22 | 104.00 |
| 1 | I | 202 | A | P-O3'-C3' | -10.64 | 106.93 | 119.70 |
| 4 | L | 577 | U | O3'-P-O5' | -10.64 | 83.79 | 104.00 |
| 2 | J | 206 | A | OP1-P-O3' | -10.64 | 81.80 | 105.20 |
| 2 | J | 234 | A | OP2-P-O3' | 10.63 | 128.59 | 105.20 |
| 3 | K | 43 | A | O3'-P-O5' | -10.63 | 83.80 | 104.00 |
| 4 | L | 762 | U | O3'-P-O5' | 10.63 | 124.19 | 104.00 |
| 5 | M | 358 | U | P-O3'-C3' | -10.63 | 106.95 | 119.70 |
| 4 | L | 593 | U | OP2-P-O3' | 10.62 | 128.57 | 105.20 |
| 2 | J | 140 | A | P-O3'-C3' | -10.62 | 106.96 | 119.70 |
| 5 | M | 498 | U | P-O3'-C3' | 10.62 | 132.44 | 119.70 |
| 5 | M | 515 | U | OP1-P-O3' | -10.62 | 81.84 | 105.20 |
| 5 | M | 498 | U | OP1-P-O3' | 10.62 | 128.55 | 105.20 |
| 5 | M | 399 | U | O3'-P-O5' | 10.61 | 124.16 | 104.00 |
| 6 | N | 441 | U | P-O3'-C3' | -10.61 | 106.96 | 119.70 |
| 4 | L | 420 | U | O3'-P-O5' | -10.60 | 83.85 | 104.00 |
| 5 | M | 515 | U | O3'-P-O5' | 10.60 | 124.14 | 104.00 |
| 6 | N | 443 | U | O3'-P-O5' | 10.60 | 124.14 | 104.00 |
| 1 | I | 199 | A | P-O3'-C3' | -10.60 | 106.98 | 119.70 |
| 4 | L | 578 | U | OP2-P-O3' | 10.59 | 128.50 | 105.20 |
| 5 | M | 311 | U | O3'-P-O5' | 10.58 | 124.10 | 104.00 |
| 1 | I | 247 | A | P-O3'-C3' | -10.58 | 107.01 | 119.70 |
| 5 | M | 286 | U | O3'-P-O5' | 10.58 | 124.10 | 104.00 |
| 5 | M | 484 | U | OP2-P-O3' | 10.58 | 128.47 | 105.20 |
| 1 | I | 288 | A | OP2-P-O3' | 10.57 | 128.47 | 105.20 |
| 1 | I | 315 | A | P-O3'-C3' | -10.57 | 107.01 | 119.70 |
| 6 | N | 319 | U | OP1-P-O3' | 10.57 | 128.47 | 105.20 |
| 2 | J | 202 | A | O3'-P-O5' | 10.56 | 124.06 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 3 | K | 72 | A | O3'-P-O5' | -10.56 | 83.94 | 104.00 |
| 2 | J | 228 | A | OP2-P-O3' | 10.56 | 128.42 | 105.20 |
| 6 | N | 320 | U | O3'-P-O5' | -10.56 | 83.94 | 104.00 |
| 4 | L | 534 | U | P-O3'-C3' | -10.55 | 107.04 | 119.70 |
| 5 | M | 458 | U | O3'-P-O5' | -10.55 | 83.96 | 104.00 |
| 2 | J | 60 | A | OP2-P-O3' | -10.55 | 82.00 | 105.20 |
| 3 | K | 81 | A | O3'-P-O5' | -10.54 | 83.97 | 104.00 |
| 2 | J | 67 | A | OP2-P-O3' | 10.54 | 128.38 | 105.20 |
| 1 | I | 201 | A | P-O3'-C3' | -10.53 | 107.06 | 119.70 |
| 1 | I | 335 | A | P-O3'-C3' | -10.53 | 107.07 | 119.70 |
| 4 | L | 492 | U | P-O3'-C3' | -10.53 | 107.06 | 119.70 |
| 1 | I | 3 | A | O3'-P-O5' | 10.53 | 124.00 | 104.00 |
| 5 | M | 459 | U | OP2-P-O3' | 10.52 | 128.35 | 105.20 |
| 4 | L | 803 | U | OP2-P-O3' | 10.52 | 128.35 | 105.20 |
| 1 | I | 32 | A | OP2-P-O3' | -10.52 | 82.06 | 105.20 |
| 3 | K | 51 | A | OP2-P-O3' | -10.51 | 82.07 | 105.20 |
| 3 | K | 211 | A | O3'-P-O5' | -10.51 | 84.03 | 104.00 |
| 3 | K | 55 | A | O3'-P-O5' | 10.51 | 123.97 | 104.00 |
| 4 | L | 478 | U | OP1-P-O3' | -10.50 | 82.09 | 105.20 |
| 2 | J | 207 | A | O3'-P-O5' | -10.50 | 84.05 | 104.00 |
| 4 | L | 604 | U | OP2-P-O3' | 10.50 | 128.31 | 105.20 |
| 3 | K | 89 | A | P-O3'-C3' | -10.50 | 107.10 | 119.70 |
| 6 | N | 501 | U | O3'-P-O5' | -10.50 | 84.05 | 104.00 |
| 4 | L | 424 | U | P-O3'-C3' | -10.50 | 107.10 | 119.70 |
| 1 | I | 252 | A | O3'-P-O5' | 10.49 | 123.94 | 104.00 |
| 2 | J | 105 | A | P-O3'-C3' | -10.49 | 107.11 | 119.70 |
| 1 | I | 154 | A | P-O3'-C3' | 10.49 | 132.28 | 119.70 |
| 5 | M | 380 | U | O3'-P-O5' | -10.49 | 84.08 | 104.00 |
| 2 | J | 114 | A | P-O3'-C3' | -10.48 | 107.12 | 119.70 |
| 4 | L | 430 | U | OP1-P-O3' | 10.48 | 128.25 | 105.20 |
| 1 | I | 45 | A | P-O3'-C3' | -10.48 | 107.13 | 119.70 |
| 1 | I | 242 | A | OP1-P-O3' | -10.48 | 82.15 | 105.20 |
| 2 | J | 105 | A | O3'-P-O5' | -10.47 | 84.11 | 104.00 |
| 1 | I | 120 | A | O3'-P-O5' | 10.47 | 123.89 | 104.00 |
| 2 | J | 151 | A | O3'-P-O5' | -10.46 | 84.12 | 104.00 |
| 6 | N | 318 | U | O3'-P-O5' | -10.46 | 84.13 | 104.00 |
| 1 | I | 401 | A | OP1-P-O3' | 10.45 | 128.19 | 105.20 |
| 1 | I | 349 | A | OP2-P-O3' | 10.45 | 128.19 | 105.20 |
| 2 | J | 122 | A | OP1-P-O3' | 10.44 | 128.18 | 105.20 |
| 6 | N | 433 | U | OP2-P-O3' | -10.44 | 82.23 | 105.20 |
| 1 | I | 341 | A | OP1-P-O3' | -10.44 | 82.23 | 105.20 |
| 4 | L | 455 | U | O3'-P-O5' | 10.44 | 123.83 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 2 | J | 35 | A | P-O3'-C3' | -10.44 | 107.18 | 119.70 |
| 5 | M | 456 | U | P-O3'-C3' | -10.43 | 107.18 | 119.70 |
| 2 | J | 197 | A | O3'-P-O5' | 10.43 | 123.82 | 104.00 |
| 3 | K | 113 | A | O3'-P-O5' | -10.43 | 84.18 | 104.00 |
| 1 | I | 129 | A | OP2-P-O3' | 10.43 | 128.14 | 105.20 |
| 3 | K | 240 | A | P-O3'-C3' | -10.43 | 107.19 | 119.70 |
| 4 | L | 642 | U | OP2-P-O3' | 10.43 | 128.14 | 105.20 |
| 5 | M | 419 | U | OP1-P-O3' | -10.42 | 82.27 | 105.20 |
| 1 | I | 390 | A | OP1-P-O3' | 10.42 | 128.12 | 105.20 |
| 5 | M | 283 | U | O3'-P-O5' | 10.42 | 123.80 | 104.00 |
| 1 | I | 154 | A | OP2-P-O3' | -10.41 | 82.29 | 105.20 |
| 1 | I | 156 | A | OP1-P-O3' | 10.41 | 128.10 | 105.20 |
| 4 | L | 497 | U | O3'-P-O5' | -10.41 | 84.22 | 104.00 |
| 3 | K | 226 | A | O3'-P-O5' | -10.40 | 84.23 | 104.00 |
| 1 | I | 277 | A | P-O3'-C3' | -10.40 | 107.22 | 119.70 |
| 1 | I | 307 | A | P-O3'-C3' | -10.39 | 107.23 | 119.70 |
| 6 | N | 343 | U | OP2-P-O3' | -10.39 | 82.34 | 105.20 |
| 4 | L | 425 | U | P-O3'-C3' | -10.38 | 107.24 | 119.70 |
| 5 | M | 410 | U | OP2-P-O3' | 10.38 | 128.04 | 105.20 |
| 1 | I | 134 | A | P-O3'-C3' | -10.38 | 107.24 | 119.70 |
| 1 | I | 98 | A | OP2-P-O3' | -10.38 | 82.37 | 105.20 |
| 1 | I | 367 | A | O3'-P-O5' | 10.37 | 123.70 | 104.00 |
| 5 | M | 451 | U | P-O3'-C3' | -10.37 | 107.26 | 119.70 |
| 5 | M | 538 | U | OP2-P-O3' | 10.37 | 128.00 | 105.20 |
| 4 | L | 603 | U | P-O3'-C3' | -10.36 | 107.27 | 119.70 |
| 2 | J | 63 | A | O3'-P-O5' | -10.36 | 84.32 | 104.00 |
| 4 | L | 567 | U | OP1-P-O3' | -10.36 | 82.41 | 105.20 |
| 3 | K | 80 | A | P-O3'-C3' | -10.36 | 107.27 | 119.70 |
| 5 | M | 546 | U | O3'-P-O5' | 10.36 | 123.68 | 104.00 |
| 2 | J | 130 | A | O3'-P-O5' | -10.35 | 84.33 | 104.00 |
| 1 | I | 174 | A | OP1-P-O3' | -10.35 | 82.43 | 105.20 |
| 4 | L | 755 | U | OP1-P-O3' | -10.35 | 82.43 | 105.20 |
| 5 | M | 513 | U | P-O3'-C3' | -10.35 | 107.29 | 119.70 |
| 3 | K | 214 | A | P-O3'-C3' | 10.34 | 132.11 | 119.70 |
| 1 | I | 78 | A | P-O3'-C3' | -10.33 | 107.30 | 119.70 |
| 1 | I | 91 | A | OP2-P-O3' | 10.33 | 127.94 | 105.20 |
| 6 | N | 281 | U | OP2-P-O3' | 10.33 | 127.94 | 105.20 |
| 2 | J | 72 | A | OP2-P-O3' | 10.33 | 127.93 | 105.20 |
| 4 | L | 511 | U | O3'-P-O5' | 10.33 | 123.63 | 104.00 |
| 4 | L | 595 | U | O3'-P-O5' | -10.33 | 84.38 | 104.00 |
| 5 | M | 396 | U | O3'-P-O5' | -10.32 | 84.38 | 104.00 |
| 5 | M | 365 | U | OP1-P-O3' | -10.32 | 82.50 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1 | I | 391 | A | OP1-P-O3' | 10.31 | 127.89 | 105.20 |
| 2 | J | 145 | A | O3'-P-O5' | -10.31 | 84.41 | 104.00 |
| 2 | J | 192 | A | O3'-P-O5' | 10.31 | 123.58 | 104.00 |
| 5 | M | 357 | U | O3'-P-O5' | 10.30 | 123.58 | 104.00 |
| 6 | N | 308 | U | OP2-P-O3' | -10.30 | 82.53 | 105.20 |
| 6 | N | 341 | U | OP1-P-O3' | 10.30 | 127.87 | 105.20 |
| 4 | L | 756 | U | O3'-P-O5' | 10.30 | 123.57 | 104.00 |
| 6 | N | 434 | U | P-O3'-C3' | -10.30 | 107.34 | 119.70 |
| 4 | L | 650 | U | O3'-P-O5' | 10.30 | 123.56 | 104.00 |
| 6 | N | 320 | U | OP2-P-O3' | 10.30 | 127.86 | 105.20 |
| 6 | N | 458 | U | O3'-P-O5' | 10.30 | 123.56 | 104.00 |
| 2 | J | 122 | A | O3'-P-O5' | -10.30 | 84.44 | 104.00 |
| 5 | M | 298 | U | OP2-P-O3' | 10.29 | 127.84 | 105.20 |
| 1 | I | 180 | A | O3'-P-O5' | 10.28 | 123.54 | 104.00 |
| 6 | N | 386 | U | P-O3'-C3' | 10.28 | 132.04 | 119.70 |
| 5 | M | 411 | U | OP2-P-O3' | 10.28 | 127.81 | 105.20 |
| 2 | J | 82 | A | P-O3'-C3' | -10.27 | 107.38 | 119.70 |
| 1 | I | 278 | A | P-O3'-C3' | -10.27 | 107.38 | 119.70 |
| 3 | K | 148 | A | O3'-P-O5' | 10.27 | 123.51 | 104.00 |
| 2 | J | 252 | A | OP2-P-O3' | 10.26 | 127.77 | 105.20 |
| 2 | J | 124 | A | O3'-P-O5' | 10.26 | 123.49 | 104.00 |
| 1 | I | 103 | A | O3'-P-O5' | 10.26 | 123.48 | 104.00 |
| 5 | M | 467 | U | OP2-P-O3' | 10.26 | 127.76 | 105.20 |
| 1 | I | 290 | A | P-O3'-C3' | -10.25 | 107.40 | 119.70 |
| 3 | K | 106 | A | OP2-P-O3' | 10.25 | 127.75 | 105.20 |
| 5 | M | 548 | U | OP1-P-O3' | 10.25 | 127.75 | 105.20 |
| 1 | I | 189 | A | O3'-P-O5' | -10.25 | 84.53 | 104.00 |
| 3 | K | 12 | A | OP1-P-O3' | 10.25 | 127.74 | 105.20 |
| 2 | J | 146 | A | P-O3'-C3' | -10.24 | 107.41 | 119.70 |
| 3 | K | 204 | A | OP1-P-O3' | 10.24 | 127.73 | 105.20 |
| 5 | M | 379 | U | OP1-P-O3' | 10.24 | 127.72 | 105.20 |
| 4 | L | 597 | U | OP2-P-O3' | 10.24 | 127.72 | 105.20 |
| 1 | I | 269 | A | OP1-P-O3' | -10.23 | 82.68 | 105.20 |
| 2 | J | 247 | A | O3'-P-O5' | 10.23 | 123.44 | 104.00 |
| 6 | N | 281 | U | OP1-P-O3' | -10.23 | 82.68 | 105.20 |
| 6 | N | 321 | U | P-O3'-C3' | -10.23 | 107.42 | 119.70 |
| 2 | J | 127 | A | OP1-P-O3' | -10.23 | 82.70 | 105.20 |
| 1 | I | 285 | A | O3'-P-O5' | -10.23 | 84.57 | 104.00 |
| 1 | I | 396 | A | O3'-P-O5' | -10.23 | 84.57 | 104.00 |
| 4 | L | 599 | U | OP2-P-O3' | 10.22 | 127.69 | 105.20 |
| 3 | K | 127 | A | P-O3'-C3' | -10.22 | 107.44 | 119.70 |
| 5 | M | 418 | U | OP2-P-O3' | 10.21 | 127.67 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1 | I | 140 | A | O3'-P-O5' | 10.21 | 123.40 | 104.00 |
| 4 | L | 735 | U | O3'-P-O5' | -10.21 | 84.61 | 104.00 |
| 1 | I | 262 | A | OP1-P-O3' | -10.20 | 82.76 | 105.20 |
| 2 | J | 224 | A | OP1-P-O3' | -10.20 | 82.76 | 105.20 |
| 4 | L | 665 | U | P-O3'-C3' | -10.20 | 107.46 | 119.70 |
| 1 | I | 162 | A | O3'-P-O5' | -10.20 | 84.62 | 104.00 |
| 6 | N | 351 | U | O3'-P-O5' | -10.20 | 84.62 | 104.00 |
| 4 | L | 504 | U | OP1-P-O3' | -10.19 | 82.78 | 105.20 |
| 5 | M | 310 | U | O3'-P-O5' | -10.19 | 84.64 | 104.00 |
| 4 | L | 495 | U | P-O3'-C3' | -10.18 | 107.48 | 119.70 |
| 6 | N | 415 | U | P-O3'-C3' | 10.18 | 131.92 | 119.70 |
| 2 | J | 264 | A | P-O3'-C3' | -10.18 | 107.48 | 119.70 |
| 3 | K | 125 | A | P-O3'-C3' | -10.18 | 107.49 | 119.70 |
| 2 | J | 214 | A | O3'-P-O5' | 10.17 | 123.32 | 104.00 |
| 3 | K | 221 | A | OP1-P-O3' | 10.17 | 127.57 | 105.20 |
| 1 | I | 112 | A | OP2-P-O3' | 10.17 | 127.57 | 105.20 |
| 3 | K | 100 | A | OP1-P-O3' | -10.16 | 82.84 | 105.20 |
| 1 | I | 30 | A | P-O3'-C3' | -10.16 | 107.51 | 119.70 |
| 5 | M | 528 | U | O3'-P-O5' | 10.16 | 123.30 | 104.00 |
| 5 | M | 522 | U | O3'-P-O5' | -10.15 | 84.72 | 104.00 |
| 4 | L | 487 | U | O3'-P-O5' | -10.15 | 84.72 | 104.00 |
| 4 | L | 630 | U | P-O3'-C3' | -10.15 | 107.52 | 119.70 |
| 4 | L | 574 | U | P-O3'-C3' | -10.14 | 107.53 | 119.70 |
| 1 | I | 332 | A | OP2-P-O3' | 10.14 | 127.51 | 105.20 |
| 3 | K | 67 | A | OP2-P-O3' | -10.14 | 82.89 | 105.20 |
| 1 | I | 287 | A | P-O3'-C3' | -10.14 | 107.54 | 119.70 |
| 5 | M | 428 | U | OP2-P-O3' | 10.14 | 127.50 | 105.20 |
| 2 | J | 230 | A | O3'-P-O5' | -10.13 | 84.74 | 104.00 |
| 1 | I | 229 | A | P-O3'-C3' | -10.13 | 107.54 | 119.70 |
| 4 | L | 457 | U | O3'-P-O5' | 10.13 | 123.24 | 104.00 |
| 1 | I | 297 | A | OP2-P-O3' | 10.13 | 127.48 | 105.20 |
| 4 | L | 579 | U | P-O3'-C3' | -10.12 | 107.56 | 119.70 |
| 5 | M | 437 | U | O3'-P-O5' | -10.11 | 84.78 | 104.00 |
| 2 | J | 146 | A | OP2-P-O3' | 10.11 | 127.45 | 105.20 |
| 3 | K | 220 | A | OP1-P-O3' | 10.11 | 127.44 | 105.20 |
| 4 | L | 530 | U | OP1-P-O3' | -10.11 | 82.97 | 105.20 |
| 4 | L | 683 | U | O3'-P-O5' | -10.11 | 84.80 | 104.00 |
| 2 | J | 39 | A | OP2-P-O3' | 10.10 | 127.42 | 105.20 |
| 5 | M | 494 | U | O3'-P-O5' | 10.10 | 123.19 | 104.00 |
| 6 | N | 412 | U | OP1-P-O3' | -10.10 | 82.99 | 105.20 |
| 6 | N | 443 | U | OP1-P-O3' | -10.09 | 83.00 | 105.20 |
| 2 | J | 173 | A | P-O3'-C3' | 10.09 | 131.81 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 5 | M | 518 | U | P-O3'-C3' | -10.09 | 107.60 | 119.70 |
| 6 | N | 419 | U | O3'-P-O5' | 10.09 | 123.17 | 104.00 |
| 6 | N | 462 | U | P-O3'-C3' | -10.09 | 107.59 | 119.70 |
| 5 | M | 395 | U | OP2-P-O3' | 10.09 | 127.39 | 105.20 |
| 1 | I | 50 | A | OP2-P-O3' | -10.08 | 83.02 | 105.20 |
| 1 | I | 50 | A | P-O3'-C3' | -10.08 | 107.61 | 119.70 |
| 2 | J | 187 | A | O3'-P-O5' | 10.08 | 123.14 | 104.00 |
| 4 | L | 672 | U | P-O3'-C3' | -10.08 | 107.61 | 119.70 |
| 5 | M | 440 | U | O3'-P-O5' | 10.08 | 123.14 | 104.00 |
| 6 | N | 386 | U | OP1-P-O3' | 10.07 | 127.36 | 105.20 |
| 4 | L | 635 | U | O3'-P-O5' | -10.07 | 84.86 | 104.00 |
| 6 | N | 358 | U | P-O3'-C3' | -10.07 | 107.61 | 119.70 |
| 1 | I | 94 | A | OP2-P-O3' | -10.07 | 83.05 | 105.20 |
| 2 | J | 191 | A | P-O3'-C3' | -10.06 | 107.62 | 119.70 |
| 2 | J | 217 | A | OP1-P-O3' | 10.06 | 127.33 | 105.20 |
| 4 | L | 465 | U | O3'-P-O5' | 10.06 | 123.11 | 104.00 |
| 5 | M | 325 | U | P-O3'-C3' | -10.05 | 107.63 | 119.70 |
| 5 | M | 318 | U | O3'-P-O5' | -10.05 | 84.90 | 104.00 |
| 1 | I | 227 | A | OP2-P-O3' | 10.05 | 127.31 | 105.20 |
| 3 | K | 129 | A | P-O3'-C3' | -10.05 | 107.64 | 119.70 |
| 4 | L | 432 | U | OP2-P-O3' | -10.05 | 83.10 | 105.20 |
| 6 | N | 438 | U | P-O3'-C3' | -10.04 | 107.65 | 119.70 |
| 6 | N | 527 | U | OP2-P-O3' | 10.04 | 127.29 | 105.20 |
| 2 | J | 4 | A | OP1-P-O3' | 10.04 | 127.28 | 105.20 |
| 2 | J | 221 | A | OP2-P-O3' | 10.04 | 127.28 | 105.20 |
| 2 | J | 44 | A | OP2-P-O3' | 10.03 | 127.27 | 105.20 |
| 4 | L | 494 | U | OP2-P-O3' | 10.03 | 127.26 | 105.20 |
| 6 | N | 360 | U | P-O3'-C3' | -10.03 | 107.67 | 119.70 |
| 2 | J | 15 | A | O3'-P-O5' | 10.03 | 123.05 | 104.00 |
| 3 | K | 8 | A | P-O3'-C3' | -10.03 | 107.67 | 119.70 |
| 5 | M | 391 | U | O3'-P-O5' | 10.03 | 123.05 | 104.00 |
| 4 | L | 659 | U | P-O3'-C3' | -10.01 | 107.68 | 119.70 |
| 6 | N | 440 | U | O3'-P-O5' | -10.01 | 84.98 | 104.00 |
| 6 | N | 437 | U | P-O3'-C3' | -10.01 | 107.69 | 119.70 |
| 1 | I | 164 | A | OP1-P-O3' | 10.01 | 127.21 | 105.20 |
| 6 | N | 448 | U | O3'-P-O5' | -10.01 | 84.99 | 104.00 |
| 3 | K | 222 | A | P-O3'-C3' | -10.01 | 107.69 | 119.70 |
| 6 | N | 293 | U | OP1-P-O3' | 10.01 | 127.21 | 105.20 |
| 3 | K | 82 | A | OP2-P-O3' | 10.00 | 127.20 | 105.20 |
| 3 | K | 103 | A | P-O3'-C3' | -10.00 | 107.70 | 119.70 |
| 6 | N | 462 | U | OP2-P-O3' | 10.00 | 127.20 | 105.20 |
| 1 | I | 208 | A | P-O3'-C3' | -10.00 | 107.70 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1 | I | 107 | A | OP1-P-O3' | 10.00 | 127.19 | 105.20 |
| 2 | J | 242 | A | O3'-P-O5' | 10.00 | 123.00 | 104.00 |
| 6 | N | 385 | U | OP1-P-O3' | 10.00 | 127.19 | 105.20 |
| 3 | K | 128 | A | OP2-P-O3' | 9.99 | 127.17 | 105.20 |
| 4 | L | 661 | U | OP2-P-O3' | -9.99 | 83.23 | 105.20 |
| 4 | L | 750 | U | P-O3'-C3' | 9.98 | 131.68 | 119.70 |
| 1 | I | 311 | A | OP2-P-O3' | 9.98 | 127.16 | 105.20 |
| 3 | K | 219 | A | OP1-P-O3' | 9.98 | 127.16 | 105.20 |
| 3 | K | 207 | A | P-O3'-C3' | 9.98 | 131.67 | 119.70 |
| 2 | J | 166 | A | OP1-P-O3' | 9.97 | 127.14 | 105.20 |
| 4 | L | 641 | U | P-O3'-C3' | -9.97 | 107.74 | 119.70 |
| 1 | I | 57 | A | O3'-P-O5' | -9.96 | 85.07 | 104.00 |
| 3 | K | 106 | A | P-O3'-C3' | -9.96 | 107.75 | 119.70 |
| 5 | M | 370 | U | OP1-P-O3' | 9.96 | 127.10 | 105.20 |
| 1 | I | 372 | A | OP2-P-O3' | 9.95 | 127.09 | 105.20 |
| 3 | K | 157 | A | O3'-P-O5' | -9.95 | 85.10 | 104.00 |
| 4 | L | 706 | U | OP1-P-O3' | -9.95 | 83.31 | 105.20 |
| 5 | M | 358 | U | O3'-P-O5' | 9.94 | 122.89 | 104.00 |
| 2 | J | 14 | A | O3'-P-O5' | 9.94 | 122.88 | 104.00 |
| 6 | N | 432 | U | P-O3'-C3' | -9.94 | 107.78 | 119.70 |
| 3 | K | 217 | A | OP1-P-O3' | 9.93 | 127.06 | 105.20 |
| 6 | N | 464 | U | P-O3'-C3' | -9.93 | 107.78 | 119.70 |
| 1 | I | 110 | A | OP2-P-O3' | 9.93 | 127.04 | 105.20 |
| 1 | I | 381 | A | OP2-P-O3' | -9.93 | 83.37 | 105.20 |
| 1 | I | 120 | A | OP1-P-O3' | -9.91 | 83.39 | 105.20 |
| 3 | K | 153 | A | OP2-P-O3' | -9.91 | 83.39 | 105.20 |
| 4 | L | 675 | U | OP2-P-O3' | 9.91 | 127.00 | 105.20 |
| 4 | L | 804 | U | OP2-P-O3' | 9.90 | 126.99 | 105.20 |
| 6 | N | 321 | U | OP1-P-O3' | 9.90 | 126.99 | 105.20 |
| 1 | I | 115 | A | OP2-P-O3' | -9.90 | 83.42 | 105.20 |
| 4 | L | 473 | U | P-O3'-C3' | -9.90 | 107.82 | 119.70 |
| 4 | L | 515 | U | OP2-P-O3' | 9.89 | 126.96 | 105.20 |
| 3 | K | 40 | A | O3'-P-O5' | 9.88 | 122.78 | 104.00 |
| 1 | I | 138 | A | O3'-P-O5' | -9.88 | 85.22 | 104.00 |
| 2 | J | 159 | A | OP2-P-O3' | 9.88 | 126.92 | 105.20 |
| 6 | N | 424 | U | OP2-P-O3' | 9.87 | 126.92 | 105.20 |
| 4 | L | 655 | U | O3'-P-O5' | 9.87 | 122.75 | 104.00 |
| 2 | J | 253 | A | OP2-P-O3' | 9.86 | 126.90 | 105.20 |
| 3 | K | 151 | A | O3'-P-O5' | 9.86 | 122.74 | 104.00 |
| 4 | L | 705 | U | O3'-P-O5' | 9.86 | 122.73 | 104.00 |
| 4 | L | 812 | U | OP1-P-O3' | -9.86 | 83.52 | 105.20 |
| 1 | I | 149 | A | OP2-P-O3' | -9.85 | 83.52 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 2 | J | 98 | A | O3'-P-O5' | -9.85 | 85.28 | 104.00 |
| 4 | L | 561 | U | O3'-P-O5' | 9.85 | 122.72 | 104.00 |
| 2 | J | 29 | A | O3'-P-O5' | -9.85 | 85.29 | 104.00 |
| 3 | K | 203 | A | O3'-P-O5' | 9.85 | 122.71 | 104.00 |
| 1 | I | 395 | A | O3'-P-O5' | -9.85 | 85.30 | 104.00 |
| 1 | I | 301 | A | O3'-P-O5' | 9.84 | 122.70 | 104.00 |
| 1 | I | 188 | A | O3'-P-O5' | -9.84 | 85.31 | 104.00 |
| 1 | I | 343 | A | OP1-P-O3' | -9.84 | 83.55 | 105.20 |
| 3 | K | 64 | A | O3'-P-O5' | -9.84 | 85.31 | 104.00 |
| 4 | L | 520 | U | O3'-P-O5' | 9.84 | 122.69 | 104.00 |
| 3 | K | 180 | A | OP1-P-O3' | 9.83 | 126.83 | 105.20 |
| 1 | I | 131 | A | O3'-P-O5' | -9.83 | 85.32 | 104.00 |
| 2 | J | 171 | A | OP1-P-O3' | 9.83 | 126.83 | 105.20 |
| 5 | M | 291 | U | OP2-P-O3' | 9.83 | 126.83 | 105.20 |
| 3 | K | 79 | A | OP2-P-O3' | 9.83 | 126.82 | 105.20 |
| 3 | K | 189 | A | OP1-P-O3' | 9.82 | 126.81 | 105.20 |
| 6 | N | 316 | U | OP2-P-O3' | 9.82 | 126.81 | 105.20 |
| 2 | J | 163 | A | O3'-P-O5' | 9.81 | 122.64 | 104.00 |
| 1 | I | 236 | A | OP1-P-O3' | -9.80 | 83.64 | 105.20 |
| 3 | K | 216 | A | OP1-P-O3' | 9.80 | 126.75 | 105.20 |
| 5 | M | 402 | U | O3'-P-O5' | 9.79 | 122.61 | 104.00 |
| 6 | N | 323 | U | OP2-P-O3' | 9.79 | 126.74 | 105.20 |
| 1 | I | 179 | A | OP2-P-O3' | 9.79 | 126.74 | 105.20 |
| 1 | I | 6 | A | OP2-P-O3' | -9.79 | 83.67 | 105.20 |
| 1 | I | 348 | A | OP1-P-O3' | -9.78 | 83.68 | 105.20 |
| 5 | M | 390 | U | OP2-P-O3' | -9.78 | 83.68 | 105.20 |
| 4 | L | 462 | U | OP1-P-O3' | 9.78 | 126.71 | 105.20 |
| 4 | L | 649 | U | O3'-P-O5' | -9.77 | 85.43 | 104.00 |
| 4 | L | 504 | U | OP2-P-O3' | 9.76 | 126.68 | 105.20 |
| 1 | I | 167 | A | P-O3'-C3' | -9.76 | 107.99 | 119.70 |
| 4 | L | 812 | U | O3'-P-O5' | -9.75 | 85.48 | 104.00 |
| 6 | N | 280 | U | OP2-P-O3' | 9.75 | 126.64 | 105.20 |
| 4 | L | 758 | U | OP1-P-O3' | -9.74 | 83.76 | 105.20 |
| 2 | J | 44 | A | OP1-P-O3' | -9.74 | 83.77 | 105.20 |
| 2 | J | 74 | A | P-O3'-C3' | -9.74 | 108.01 | 119.70 |
| 2 | J | 171 | A | P-O3'-C3' | 9.74 | 131.38 | 119.70 |
| 4 | L | 610 | U | OP2-P-O3' | 9.73 | 126.61 | 105.20 |
| 1 | I | 162 | A | OP2-P-O3' | 9.73 | 126.61 | 105.20 |
| 5 | M | 466 | U | OP1-P-O3' | -9.73 | 83.80 | 105.20 |
| 2 | J | 201 | A | OP2-P-O3' | 9.73 | 126.60 | 105.20 |
| 5 | M | 424 | U | O3'-P-O5' | 9.72 | 122.46 | 104.00 |
| 1 | I | 309 | A | O3'-P-O5' | -9.71 | 85.54 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 5 | M | 434 | U | OP2-P-O3' | 9.72 | 126.58 | 105.20 |
| 6 | N | 387 | U | OP2-P-O3' | -9.71 | 83.83 | 105.20 |
| 6 | N | 305 | U | OP1-P-O3' | 9.71 | 126.57 | 105.20 |
| 5 | M | 308 | U | O3'-P-O5' | 9.71 | 122.45 | 104.00 |
| 5 | M | 484 | U | O3'-P-O5' | -9.71 | 85.55 | 104.00 |
| 1 | I | 81 | A | O3'-P-O5' | 9.70 | 122.44 | 104.00 |
| 4 | L | 556 | U | OP1-P-O3' | -9.70 | 83.86 | 105.20 |
| 5 | M | 538 | U | OP1-P-O3' | -9.70 | 83.87 | 105.20 |
| 1 | I | 325 | A | P-O3'-C3' | -9.69 | 108.07 | 119.70 |
| 4 | L | 623 | U | P-O3'-C3' | -9.69 | 108.07 | 119.70 |
| 1 | I | 52 | A | OP2-P-O3' | 9.68 | 126.50 | 105.20 |
| 3 | K | 50 | A | OP2-P-O3' | -9.68 | 83.91 | 105.20 |
| 2 | J | 53 | A | P-O3'-C3' | -9.67 | 108.09 | 119.70 |
| 4 | L | 453 | U | O3'-P-O5' | 9.67 | 122.38 | 104.00 |
| 4 | L | 588 | U | OP1-P-O3' | -9.67 | 83.92 | 105.20 |
| 5 | M | 467 | U | OP1-P-O3' | -9.67 | 83.93 | 105.20 |
| 2 | J | 260 | A | OP2-P-O3' | 9.67 | 126.47 | 105.20 |
| 3 | K | 93 | A | O3'-P-O5' | -9.66 | 85.64 | 104.00 |
| 6 | N | 334 | U | O3'-P-O5' | -9.66 | 85.65 | 104.00 |
| 4 | L | 689 | U | OP1-P-O3' | -9.65 | 83.96 | 105.20 |
| 1 | I | 164 | A | O3'-P-O5' | 9.64 | 122.32 | 104.00 |
| 2 | J | 92 | A | O3'-P-O5' | 9.64 | 122.33 | 104.00 |
| 4 | L | 640 | U | OP2-P-O3' | -9.64 | 83.99 | 105.20 |
| 4 | L | 688 | U | O3'-P-O5' | 9.64 | 122.32 | 104.00 |
| 1 | I | 159 | A | OP2-P-O3' | -9.63 | 84.01 | 105.20 |
| 4 | L | 451 | U | OP2-P-O3' | -9.63 | 84.01 | 105.20 |
| 3 | K | 68 | A | OP2-P-O3' | -9.63 | 84.02 | 105.20 |
| 4 | L | 724 | U | OP1-P-O3' | -9.62 | 84.02 | 105.20 |
| 5 | M | 429 | U | OP2-P-O3' | 9.62 | 126.37 | 105.20 |
| 1 | I | 241 | A | O3'-P-O5' | -9.61 | 85.73 | 104.00 |
| 1 | I | 256 | A | OP2-P-O3' | 9.60 | 126.32 | 105.20 |
| 6 | N | 524 | U | P-O3'-C3' | 9.60 | 131.22 | 119.70 |
| 4 | L | 803 | U | P-O3'-C3' | -9.59 | 108.19 | 119.70 |
| 1 | I | 69 | A | OP1-P-O3' | -9.58 | 84.12 | 105.20 |
| 3 | K | 215 | A | OP1-P-O3' | 9.58 | 126.28 | 105.20 |
| 4 | L | 454 | U | O3'-P-O5' | 9.58 | 122.21 | 104.00 |
| 6 | N | 384 | U | O3'-P-O5' | 9.58 | 122.21 | 104.00 |
| 1 | I | 363 | A | P-O3'-C3' | -9.58 | 108.21 | 119.70 |
| 5 | M | 331 | U | OP2-P-O3' | 9.57 | 126.26 | 105.20 |
| 6 | N | 415 | U | O3'-P-O5' | -9.57 | 85.81 | 104.00 |
| 5 | M | 427 | U | OP2-P-O3' | -9.57 | 84.15 | 105.20 |
| 4 | L | 795 | U | O3'-P-O5' | 9.56 | 122.17 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 2 | J | 37 | A | O3'-P-O5' | 9.56 | 122.16 | 104.00 |
| 4 | L | 780 | U | O3'-P-O5' | 9.56 | 122.16 | 104.00 |
| 1 | I | 168 | A | O3'-P-O5' | 9.55 | 122.15 | 104.00 |
| 2 | J | 175 | A | O3'-P-O5' | -9.55 | 85.85 | 104.00 |
| 3 | K | 42 | A | OP2-P-O3' | 9.55 | 126.21 | 105.20 |
| 1 | I | 207 | A | OP2-P-O3' | 9.55 | 126.21 | 105.20 |
| 3 | K | 19 | A | P-O3'-C3' | 9.55 | 131.16 | 119.70 |
| 2 | J | 267 | A | P-O3'-C3' | -9.54 | 108.25 | 119.70 |
| 4 | L | 645 | U | O3'-P-O5' | 9.54 | 122.14 | 104.00 |
| 5 | M | 304 | U | OP1-P-O3' | 9.54 | 126.19 | 105.20 |
| 1 | I | 214 | A | O3'-P-O5' | -9.54 | 85.88 | 104.00 |
| 4 | L | 552 | U | OP1-P-O3' | 9.54 | 126.18 | 105.20 |
| 3 | K | 88 | A | OP1-P-O3' | -9.54 | 84.22 | 105.20 |
| 3 | K | 65 | A | OP2-P-O3' | 9.53 | 126.17 | 105.20 |
| 5 | M | 489 | U | OP1-P-O3' | -9.53 | 84.24 | 105.20 |
| 6 | N | 351 | U | OP2-P-O3' | 9.53 | 126.16 | 105.20 |
| 6 | N | 403 | U | P-O3'-C3' | -9.53 | 108.27 | 119.70 |
| 4 | L | 753 | U | P-O3'-C3' | -9.52 | 108.27 | 119.70 |
| 4 | L | 582 | U | P-O3'-C3' | -9.52 | 108.28 | 119.70 |
| 5 | M | 369 | U | OP1-P-O3' | -9.52 | 84.26 | 105.20 |
| 1 | I | 183 | A | O3'-P-O5' | 9.52 | 122.08 | 104.00 |
| 1 | I | 267 | A | P-O3'-C3' | -9.51 | 108.28 | 119.70 |
| 5 | M | 509 | U | OP2-P-O3' | 9.51 | 126.13 | 105.20 |
| 2 | J | 270 | A | O3'-P-O5' | 9.51 | 122.07 | 104.00 |
| 5 | M | 293 | U | P-O3'-C3' | -9.51 | 108.29 | 119.70 |
| 6 | N | 302 | U | P-O3'-C3' | 9.51 | 131.11 | 119.70 |
| 1 | I | 294 | A | O3'-P-O5' | 9.50 | 122.06 | 104.00 |
| 1 | I | 333 | A | P-O3'-C3' | -9.50 | 108.30 | 119.70 |
| 4 | L | 423 | U | O3'-P-O5' | -9.50 | 85.95 | 104.00 |
| 4 | L | 423 | U | OP1-P-O3' | 9.50 | 126.09 | 105.20 |
| 6 | N | 380 | U | OP1-P-O3' | -9.50 | 84.31 | 105.20 |
| 4 | L | 506 | U | P-O3'-C3' | -9.49 | 108.32 | 119.70 |
| 5 | M | 526 | U | OP1-P-O3' | -9.48 | 84.33 | 105.20 |
| 6 | N | 405 | U | O3'-P-O5' | 9.48 | 122.02 | 104.00 |
| 3 | K | 110 | A | OP1-P-O3' | -9.48 | 84.34 | 105.20 |
| 3 | K | 163 | A | O3'-P-O5' | -9.48 | 85.98 | 104.00 |
| 2 | J | 62 | A | OP1-P-O3' | -9.48 | 84.34 | 105.20 |
| 1 | I | 320 | A | OP1-P-O3' | -9.47 | 84.36 | 105.20 |
| 1 | I | 6 | A | O3'-P-O5' | 9.47 | 122.00 | 104.00 |
| 1 | I | 147 | A | P-O3'-C3' | -9.47 | 108.33 | 119.70 |
| 6 | N | 452 | U | P-O3'-C3' | -9.47 | 108.33 | 119.70 |
| 6 | N | 349 | U | O3'-P-O5' | 9.47 | 121.99 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 4 | L | 787 | U | OP2-P-O3' | -9.47 | 84.37 | 105.20 |
| 3 | K | 34 | A | P-O3'-C3' | 9.46 | 131.05 | 119.70 |
| 4 | L | 595 | U | P-O3'-C3' | -9.46 | 108.35 | 119.70 |
| 1 | I | 32 | A | O3'-P-O5' | 9.46 | 121.97 | 104.00 |
| 3 | K | 209 | A | O3'-P-O5' | -9.45 | 86.04 | 104.00 |
| 4 | L | 536 | U | OP2-P-O3' | 9.45 | 126.00 | 105.20 |
| 6 | N | 400 | U | OP1-P-O3' | -9.45 | 84.41 | 105.20 |
| 5 | M | 395 | U | P-O3'-C3' | -9.45 | 108.36 | 119.70 |
| 6 | N | 459 | U | P-O3'-C3' | 9.44 | 131.03 | 119.70 |
| 6 | N | 299 | U | OP2-P-O3' | -9.44 | 84.43 | 105.20 |
| 1 | I | 387 | A | OP2-P-O3' | 9.44 | 125.97 | 105.20 |
| 4 | L | 628 | U | P-O3'-C3' | -9.44 | 108.37 | 119.70 |
| 1 | I | 386 | A | P-O3'-C3' | -9.44 | 108.38 | 119.70 |
| 1 | I | 321 | A | OP1-P-O3' | -9.43 | 84.45 | 105.20 |
| 3 | K | 62 | A | OP2-P-O3' | -9.43 | 84.45 | 105.20 |
| 4 | L | 594 | U | OP2-P-O3' | 9.43 | 125.95 | 105.20 |
| 3 | K | 171 | A | P-O3'-C3' | -9.42 | 108.39 | 119.70 |
| 1 | I | 328 | A | O3'-P-O5' | -9.42 | 86.10 | 104.00 |
| 5 | M | 435 | U | OP1-P-O3' | 9.42 | 125.92 | 105.20 |
| 2 | J | 264 | A | O3'-P-O5' | -9.41 | 86.11 | 104.00 |
| 4 | L | 436 | U | OP2-P-O3' | 9.41 | 125.91 | 105.20 |
| 5 | M | 436 | U | O3'-P-O5' | -9.41 | 86.12 | 104.00 |
| 6 | N | 282 | U | O3'-P-O5' | 9.41 | 121.88 | 104.00 |
| 1 | I | 260 | A | OP1-P-O3' | -9.41 | 84.51 | 105.20 |
| 4 | L | 674 | U | OP1-P-O3' | -9.40 | 84.51 | 105.20 |
| 3 | K | 170 | A | OP2-P-O3' | 9.40 | 125.88 | 105.20 |
| 5 | M | 413 | U | O3'-P-O5' | 9.40 | 121.86 | 104.00 |
| 6 | N | 334 | U | P-O3'-C3' | -9.39 | 108.43 | 119.70 |
| 1 | I | 87 | A | OP2-P-O3' | 9.39 | 125.85 | 105.20 |
| 2 | J | 233 | A | OP2-P-O3' | 9.39 | 125.86 | 105.20 |
| 1 | I | 108 | A | P-O3'-C3' | -9.38 | 108.44 | 119.70 |
| 1 | I | 218 | A | OP2-P-O3' | -9.38 | 84.56 | 105.20 |
| 1 | I | 36 | A | O3'-P-O5' | 9.37 | 121.81 | 104.00 |
| 3 | K | 188 | A | OP2-P-O3' | -9.37 | 84.58 | 105.20 |
| 4 | L | 568 | U | P-O3'-C3' | -9.37 | 108.46 | 119.70 |
| 4 | L | 773 | U | P-O3'-C3' | -9.37 | 108.46 | 119.70 |
| 6 | N | 458 | U | OP1-P-O3' | 9.36 | 125.80 | 105.20 |
| 1 | I | 53 | A | P-O3'-C3' | -9.36 | 108.47 | 119.70 |
| 2 | J | 218 | A | P-O3'-C3' | -9.36 | 108.47 | 119.70 |
| 2 | J | 101 | A | O3'-P-O5' | -9.35 | 86.23 | 104.00 |
| 6 | N | 362 | U | OP2-P-O3' | 9.35 | 125.77 | 105.20 |
| 4 | L | 433 | U | OP1-P-O3' | 9.34 | 125.76 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 6 | N | 401 | U | O3'-P-O5' | -9.34 | 86.25 | 104.00 |
| 5 | M | 539 | U | OP1-P-O3' | -9.34 | 84.65 | 105.20 |
| 4 | L | 720 | U | P-O3'-C3' | -9.34 | 108.50 | 119.70 |
| 5 | M | 367 | U | OP2-P-O3' | 9.34 | 125.74 | 105.20 |
| 6 | N | 358 | U | OP2-P-O3' | -9.33 | 84.68 | 105.20 |
| 1 | I | 388 | A | OP2-P-O3' | 9.33 | 125.72 | 105.20 |
| 1 | I | 23 | A | P-O3'-C3' | -9.32 | 108.52 | 119.70 |
| 2 | J | 99 | A | P-O3'-C3' | -9.32 | 108.52 | 119.70 |
| 1 | I | 200 | A | O3'-P-O5' | 9.31 | 121.70 | 104.00 |
| 3 | K | 195 | A | OP1-P-O3' | 9.31 | 125.69 | 105.20 |
| 1 | I | 183 | A | P-O3'-C3' | -9.31 | 108.53 | 119.70 |
| 6 | N | 369 | U | O3'-P-O5' | 9.31 | 121.69 | 104.00 |
| 6 | N | 424 | U | P-O3'-C3' | -9.31 | 108.53 | 119.70 |
| 3 | K | 142 | A | P-O3'-C3' | 9.30 | 130.87 | 119.70 |
| 1 | I | 368 | A | OP2-P-O3' | -9.29 | 84.75 | 105.20 |
| 4 | L | 498 | U | OP1-P-O3' | -9.29 | 84.76 | 105.20 |
| 6 | N | 349 | U | OP1-P-O3' | 9.29 | 125.64 | 105.20 |
| 2 | J | 85 | A | P-O3'-C3' | -9.29 | 108.55 | 119.70 |
| 1 | I | 303 | A | OP1-P-O3' | -9.29 | 84.77 | 105.20 |
| 2 | J | 219 | A | OP2-P-O3' | 9.29 | 125.63 | 105.20 |
| 4 | L | 594 | U | P-O3'-C3' | -9.29 | 108.56 | 119.70 |
| 5 | M | 443 | U | OP2-P-O3' | -9.29 | 84.77 | 105.20 |
| 1 | I | 271 | A | P-O3'-C3' | -9.28 | 108.56 | 119.70 |
| 4 | L | 708 | U | P-O3'-C3' | -9.28 | 108.56 | 119.70 |
| 3 | K | 75 | A | OP2-P-O3' | 9.28 | 125.62 | 105.20 |
| 1 | I | 370 | A | O3'-P-O5' | 9.27 | 121.62 | 104.00 |
| 2 | J | 95 | A | P-O3'-C3' | -9.27 | 108.57 | 119.70 |
| 3 | K | 206 | A | OP2-P-O3' | 9.27 | 125.60 | 105.20 |
| 3 | K | 105 | A | OP2-P-O3' | 9.27 | 125.59 | 105.20 |
| 1 | I | 171 | A | O3'-P-O5' | 9.27 | 121.61 | 104.00 |
| 4 | L | 640 | U | O3'-P-O5' | 9.26 | 121.59 | 104.00 |
| 4 | L | 526 | U | P-O3'-C3' | -9.26 | 108.59 | 119.70 |
| 6 | N | 310 | U | OP2-P-O3' | 9.26 | 125.57 | 105.20 |
| 6 | N | 329 | U | OP1-P-O3' | 9.26 | 125.57 | 105.20 |
| 6 | N | 366 | U | OP2-P-O3' | -9.26 | 84.84 | 105.20 |
| 2 | J | 88 | A | OP1-P-O3' | -9.25 | 84.85 | 105.20 |
| 3 | K | 113 | A | OP2-P-O3' | 9.25 | 125.54 | 105.20 |
| 2 | J | 198 | A | P-O3'-C3' | -9.24 | 108.61 | 119.70 |
| 2 | J | 138 | A | P-O3'-C3' | -9.24 | 108.61 | 119.70 |
| 6 | N | 398 | U | P-O3'-C3' | -9.24 | 108.62 | 119.70 |
| 1 | I | 139 | A | O3'-P-O5' | 9.23 | 121.54 | 104.00 |
| 2 | J | 34 | A | P-O3'-C3' | -9.23 | 108.62 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 4 | L | 813 | U | P-O3'-C3' | -9.23 | 108.62 | 119.70 |
| 5 | M | 318 | U | OP1-P-O3' | -9.23 | 84.89 | 105.20 |
| 1 | I | 390 | A | OP2-P-O3' | -9.23 | 84.90 | 105.20 |
| 3 | K | 61 | A | O3'-P-O5' | 9.23 | 121.53 | 104.00 |
| 6 | N | 276 | U | P-O3'-C3' | -9.22 | 108.63 | 119.70 |
| 1 | I | 259 | A | OP1-P-O3' | -9.22 | 84.91 | 105.20 |
| 1 | I | 207 | A | P-O3'-C3' | -9.21 | 108.64 | 119.70 |
| 5 | M | 520 | U | O3'-P-O5' | -9.21 | 86.49 | 104.00 |
| 6 | N | 364 | U | OP2-P-O3' | -9.21 | 84.94 | 105.20 |
| 2 | J | 269 | A | OP2-P-O3' | -9.21 | 84.94 | 105.20 |
| 4 | L | 769 | U | O3'-P-O5' | 9.21 | 121.50 | 104.00 |
| 4 | L | 761 | U | P-O3'-C3' | -9.21 | 108.65 | 119.70 |
| 1 | I | 28 | A | P-O3'-C3' | -9.21 | 108.65 | 119.70 |
| 1 | I | 361 | A | OP2-P-O3' | 9.20 | 125.45 | 105.20 |
| 3 | K | 226 | A | OP2-P-O3' | -9.21 | 84.95 | 105.20 |
| 5 | M | 329 | U | OP1-P-O3' | -9.20 | 84.95 | 105.20 |
| 1 | I | 24 | A | P-O3'-C3' | -9.20 | 108.66 | 119.70 |
| 3 | K | 104 | A | O3'-P-O5' | -9.19 | 86.54 | 104.00 |
| 4 | L | 463 | U | OP2-P-O3' | 9.19 | 125.42 | 105.20 |
| 4 | L | 775 | U | OP2-P-O3' | 9.19 | 125.41 | 105.20 |
| 6 | N | 402 | U | P-O3'-C3' | -9.19 | 108.67 | 119.70 |
| 1 | I | 223 | A | OP2-P-O3' | 9.19 | 125.41 | 105.20 |
| 1 | I | 364 | A | O3'-P-O5' | 9.18 | 121.45 | 104.00 |
| 6 | N | 313 | U | OP1-P-O3' | 9.18 | 125.40 | 105.20 |
| 2 | J | 203 | A | P-O3'-C3' | -9.18 | 108.69 | 119.70 |
| 1 | I | 343 | A | OP2-P-O3' | 9.18 | 125.38 | 105.20 |
| 2 | J | 168 | A | OP1-P-O3' | 9.18 | 125.38 | 105.20 |
| 3 | K | 171 | A | OP2-P-O3' | -9.18 | 85.01 | 105.20 |
| 1 | I | 155 | A | OP2-P-O3' | -9.17 | 85.02 | 105.20 |
| 2 | J | 122 | A | P-O3'-C3' | -9.17 | 108.69 | 119.70 |
| 3 | K | 35 | A | P-O3'-C3' | -9.17 | 108.69 | 119.70 |
| 6 | N | 426 | U | OP1-P-O3' | -9.17 | 85.03 | 105.20 |
| 5 | M | 545 | U | P-O3'-C3' | 9.17 | 130.70 | 119.70 |
| 4 | L | 787 | U | P-O3'-C3' | -9.16 | 108.71 | 119.70 |
| 1 | I | 292 | A | OP1-P-O3' | -9.16 | 85.06 | 105.20 |
| 5 | M | 481 | U | OP1-P-O3' | 9.16 | 125.34 | 105.20 |
| 1 | I | 306 | A | OP1-P-O3' | -9.15 | 85.06 | 105.20 |
| 5 | M | 347 | U | O3'-P-O5' | -9.15 | 86.61 | 104.00 |
| 1 | I | 272 | A | OP1-P-O3' | 9.14 | 125.32 | 105.20 |
| 1 | I | 336 | A | OP2-P-O3' | 9.14 | 125.31 | 105.20 |
| 1 | I | 190 | A | OP2-P-O3' | 9.14 | 125.30 | 105.20 |
| 4 | L | 590 | U | OP2-P-O3' | 9.13 | 125.30 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 5 | M | 486 | U | O3'-P-O5' | 9.13 | 121.35 | 104.00 |
| 2 | J | 108 | A | O3'-P-O5' | 9.13 | 121.34 | 104.00 |
| 1 | I | 116 | A | P-O3'-C3' | -9.12 | 108.75 | 119.70 |
| 2 | J | 117 | A | OP1-P-O3' | 9.12 | 125.27 | 105.20 |
| 4 | L | 575 | U | OP2-P-O3' | 9.12 | 125.26 | 105.20 |
| 4 | L | 545 | U | OP2-P-O3' | 9.12 | 125.26 | 105.20 |
| 1 | I | 410 | A | OP2-P-O3' | -9.12 | 85.15 | 105.20 |
| 3 | K | 136 | A | OP1-P-O3' | -9.12 | 85.15 | 105.20 |
| 5 | M | 338 | U | OP2-P-O3' | -9.12 | 85.15 | 105.20 |
| 2 | J | 59 | A | O3'-P-O5' | 9.11 | 121.31 | 104.00 |
| 4 | L | 657 | U | P-O3'-C3' | -9.11 | 108.77 | 119.70 |
| 6 | N | 292 | U | O3'-P-O5' | -9.11 | 86.69 | 104.00 |
| 2 | J | 178 | A | OP2-P-O3' | 9.11 | 125.23 | 105.20 |
| 1 | I | 1 | A | O3'-P-O5' | 9.10 | 121.30 | 104.00 |
| 3 | K | 224 | A | OP1-P-O3' | 9.10 | 125.22 | 105.20 |
| 4 | L | 726 | U | P-O3'-C3' | -9.10 | 108.78 | 119.70 |
| 5 | M | 306 | U | OP2-P-O3' | 9.10 | 125.21 | 105.20 |
| 4 | L | 606 | U | OP2-P-O3' | 9.09 | 125.21 | 105.20 |
| 1 | I | 307 | A | OP2-P-O3' | 9.09 | 125.19 | 105.20 |
| 3 | K | 234 | A | OP2-P-O3' | -9.08 | 85.22 | 105.20 |
| 4 | L | 607 | U | P-O3'-C3' | -9.08 | 108.80 | 119.70 |
| 3 | K | 99 | A | O3'-P-O5' | -9.08 | 86.75 | 104.00 |
| 5 | M | 446 | U | O3'-P-O5' | 9.08 | 121.25 | 104.00 |
| 6 | N | 514 | U | P-O3'-C3' | -9.08 | 108.81 | 119.70 |
| 2 | J | 248 | A | O3'-P-O5' | -9.07 | 86.76 | 104.00 |
| 5 | M | 543 | U | O3'-P-O5' | -9.07 | 86.76 | 104.00 |
| 2 | J | 51 | A | OP2-P-O3' | 9.07 | 125.15 | 105.20 |
| 4 | L | 489 | U | OP1-P-O3' | 9.07 | 125.14 | 105.20 |
| 5 | M | 498 | U | O3'-P-O5' | 9.07 | 121.23 | 104.00 |
| 3 | K | 244 | A | OP2-P-O3' | -9.06 | 85.26 | 105.20 |
| 3 | K | 63 | A | O3'-P-O5' | 9.06 | 121.22 | 104.00 |
| 5 | M | 285 | U | O3'-P-O5' | 9.06 | 121.22 | 104.00 |
| 2 | J | 22 | A | P-O3'-C3' | -9.06 | 108.83 | 119.70 |
| 1 | I | 79 | A | OP2-P-O3' | 9.05 | 125.12 | 105.20 |
| 6 | N | 483 | U | OP1-P-O3' | 9.05 | 125.12 | 105.20 |
| 5 | M | 351 | U | P-O3'-C3' | -9.05 | 108.84 | 119.70 |
| 1 | I | 354 | A | O3'-P-O5' | -9.05 | 86.81 | 104.00 |
| 3 | K | 250 | A | OP2-P-O3' | 9.05 | 125.11 | 105.20 |
| 4 | L | 458 | U | O3'-P-O5' | -9.04 | 86.81 | 104.00 |
| 5 | M | 465 | U | O3'-P-O5' | -9.04 | 86.82 | 104.00 |
| 4 | L | 677 | U | OP2-P-O3' | 9.04 | 125.08 | 105.20 |
| 4 | L | 558 | U | OP2-P-O3' | 9.03 | 125.07 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 4 | L | 641 | U | O3'-P-O5' | 9.03 | 121.16 | 104.00 |
| 1 | I | 238 | A | OP1-P-O3' | 9.03 | 125.05 | 105.20 |
| 1 | I | 100 | A | O3'-P-O5' | -9.02 | 86.86 | 104.00 |
| 3 | K | 70 | A | O3'-P-O5' | -9.02 | 86.87 | 104.00 |
| 5 | M | 374 | U | O3'-P-O5' | 9.02 | 121.14 | 104.00 |
| 3 | K | 91 | A | OP2-P-O3' | 9.02 | 125.04 | 105.20 |
| 6 | N | 272 | U | OP1-P-O3' | 9.01 | 125.03 | 105.20 |
| 1 | I | 257 | A | OP2-P-O3' | 9.01 | 125.02 | 105.20 |
| 1 | I | 382 | A | O3'-P-O5' | 9.01 | 121.11 | 104.00 |
| 3 | K | 227 | A | O3'-P-O5' | -9.01 | 86.89 | 104.00 |
| 4 | L | 506 | U | OP2-P-O3' | 9.00 | 125.01 | 105.20 |
| 2 | J | 191 | A | OP2-P-O3' | 9.00 | 125.00 | 105.20 |
| 2 | J | 238 | A | P-O3'-C3' | -9.00 | 108.90 | 119.70 |
| 2 | J | 225 | A | OP2-P-O3' | -9.00 | 85.40 | 105.20 |
| 1 | I | 377 | A | O3'-P-O5' | 9.00 | 121.09 | 104.00 |
| 2 | J | 41 | A | OP1-P-O3' | 8.99 | 124.99 | 105.20 |
| 1 | I | 258 | A | OP2-P-O3' | 8.99 | 124.98 | 105.20 |
| 4 | L | 489 | U | P-O3'-C3' | -8.99 | 108.92 | 119.70 |
| 1 | I | 37 | A | P-O3'-C3' | -8.98 | 108.92 | 119.70 |
| 2 | J | 51 | A | P-O3'-C3' | -8.98 | 108.92 | 119.70 |
| 2 | J | 255 | A | O3'-P-O5' | 8.98 | 121.06 | 104.00 |
| 4 | L | 509 | U | P-O3'-C3' | -8.98 | 108.92 | 119.70 |
| 1 | I | 9 | A | O3'-P-O5' | 8.97 | 121.05 | 104.00 |
| 4 | L | 814 | U | OP1-P-O3' | -8.97 | 85.46 | 105.20 |
| 1 | I | 122 | A | OP2-P-O3' | 8.97 | 124.94 | 105.20 |
| 3 | K | 129 | A | OP2-P-O3' | 8.97 | 124.94 | 105.20 |
| 4 | L | 508 | U | O3'-P-O5' | -8.97 | 86.96 | 104.00 |
| 3 | K | 13 | A | O3'-P-O5' | -8.97 | 86.96 | 104.00 |
| 1 | I | 181 | A | O3'-P-O5' | -8.96 | 86.97 | 104.00 |
| 4 | L | 604 | U | OP1-P-O3' | -8.96 | 85.49 | 105.20 |
| 6 | N | 296 | U | OP2-P-O3' | -8.95 | 85.50 | 105.20 |
| 4 | L | 525 | U | O3'-P-O5' | -8.95 | 86.99 | 104.00 |
| 3 | K | 150 | A | P-O3'-C3' | -8.95 | 108.96 | 119.70 |
| 4 | L | 645 | U | OP2-P-O3' | -8.95 | 85.52 | 105.20 |
| 3 | K | 202 | A | OP1-P-O3' | 8.94 | 124.87 | 105.20 |
| 6 | N | 422 | U | OP2-P-O3' | 8.94 | 124.87 | 105.20 |
| 1 | I | 362 | A | O3'-P-O5' | -8.94 | 87.02 | 104.00 |
| 1 | I | 159 | A | P-O3'-C3' | -8.93 | 108.98 | 119.70 |
| 2 | J | 243 | A | OP2-P-O3' | -8.92 | 85.57 | 105.20 |
| 5 | M | 476 | U | OP2-P-O3' | 8.92 | 124.83 | 105.20 |
| 6 | N | 418 | U | OP2-P-O3' | -8.92 | 85.57 | 105.20 |
| 1 | I | 79 | A | OP1-P-O3' | -8.92 | 85.58 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 5 | M | 287 | U | OP2-P-O3' | 8.92 | 124.83 | 105.20 |
| 2 | J | 247 | A | OP2-P-O3' | -8.92 | 85.58 | 105.20 |
| 5 | M | 282 | U | O3'-P-O5' | 8.92 | 120.94 | 104.00 |
| 4 | L | 575 | U | OP1-P-O3' | -8.91 | 85.61 | 105.20 |
| 4 | L | 591 | U | O3'-P-O5' | 8.91 | 120.92 | 104.00 |
| 1 | I | 335 | A | O3'-P-O5' | -8.90 | 87.08 | 104.00 |
| 4 | L | 429 | U | OP1-P-O3' | 8.90 | 124.79 | 105.20 |
| 6 | N | 355 | U | O3'-P-O5' | 8.90 | 120.92 | 104.00 |
| 5 | M | 321 | U | P-O3'-C3' | -8.90 | 109.02 | 119.70 |
| 3 | K | 30 | A | O3'-P-O5' | 8.90 | 120.90 | 104.00 |
| 4 | L | 712 | U | OP1-P-O3' | -8.90 | 85.63 | 105.20 |
| 3 | K | 153 | A | O3'-P-O5' | 8.89 | 120.90 | 104.00 |
| 6 | N | 380 | U | OP2-P-O3' | 8.89 | 124.76 | 105.20 |
| 3 | K | 181 | A | OP1-P-O3' | 8.89 | 124.76 | 105.20 |
| 1 | I | 123 | A | P-O3'-C3' | -8.88 | 109.04 | 119.70 |
| 2 | J | 146 | A | O3'-P-O5' | -8.88 | 87.13 | 104.00 |
| 1 | I | 15 | A | OP1-P-O3' | -8.88 | 85.67 | 105.20 |
| 5 | M | 336 | U | OP1-P-O3' | -8.88 | 85.67 | 105.20 |
| 2 | J | 16 | A | P-O3'-C3' | -8.88 | 109.05 | 119.70 |
| 1 | I | 222 | A | O3'-P-O5' | -8.88 | 87.14 | 104.00 |
| 1 | I | 121 | A | OP2-P-O3' | -8.87 | 85.68 | 105.20 |
| 4 | L | 490 | U | P-O3'-C3' | -8.87 | 109.05 | 119.70 |
| 2 | J | 87 | A | P-O3'-C3' | -8.87 | 109.06 | 119.70 |
| 4 | L | 493 | U | P-O3'-C3' | -8.87 | 109.05 | 119.70 |
| 5 | M | 380 | U | OP1-P-O3' | 8.87 | 124.72 | 105.20 |
| 5 | M | 386 | U | OP1-P-O3' | 8.87 | 124.72 | 105.20 |
| 3 | K | 109 | A | O3'-P-O5' | -8.86 | 87.16 | 104.00 |
| 2 | J | 48 | A | O3'-P-O5' | -8.86 | 87.17 | 104.00 |
| 3 | K | 253 | A | O3'-P-O5' | -8.86 | 87.17 | 104.00 |
| 4 | L | 520 | U | OP1-P-O3' | -8.86 | 85.71 | 105.20 |
| 4 | L | 681 | U | P-O3'-C3' | 8.86 | 130.33 | 119.70 |
| 1 | I | 300 | A | OP2-P-O3' | -8.86 | 85.72 | 105.20 |
| 6 | N | 465 | U | OP2-P-O3' | -8.86 | 85.72 | 105.20 |
| 5 | M | 514 | U | OP1-P-O3' | -8.84 | 85.74 | 105.20 |
| 1 | I | 255 | A | OP1-P-O3' | -8.84 | 85.75 | 105.20 |
| 5 | M | 313 | U | O3'-P-O5' | 8.84 | 120.80 | 104.00 |
| 4 | L | 614 | U | O3'-P-O5' | -8.84 | 87.21 | 104.00 |
| 6 | N | 477 | U | OP1-P-O3' | -8.84 | 85.76 | 105.20 |
| 1 | I | 304 | A | OP1-P-O3' | -8.84 | 85.76 | 105.20 |
| 1 | I | 409 | A | OP1-P-O3' | 8.84 | 124.64 | 105.20 |
| 2 | J | 140 | A | OP2-P-O3' | 8.83 | 124.63 | 105.20 |
| 4 | L | 671 | U | P-O3'-C3' | -8.83 | 109.10 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 3 | K | 167 | A | OP1-P-O3' | -8.83 | 85.78 | 105.20 |
| 4 | L | 650 | U | OP1-P-O3' | -8.83 | 85.78 | 105.20 |
| 2 | J | 156 | A | P-O3'-C3' | -8.82 | 109.11 | 119.70 |
| 2 | J | 264 | A | OP2-P-O3' | 8.82 | 124.61 | 105.20 |
| 3 | K | 152 | A | OP1-P-O3' | 8.82 | 124.61 | 105.20 |
| 6 | N | 496 | U | P-O3'-C3' | -8.82 | 109.11 | 119.70 |
| 1 | I | 187 | A | OP2-P-O3' | 8.82 | 124.60 | 105.20 |
| 2 | J | 206 | A | O3'-P-O5' | -8.82 | 87.25 | 104.00 |
| 4 | L | 670 | U | O3'-P-O5' | -8.82 | 87.25 | 104.00 |
| 2 | J | 128 | A | OP1-P-O3' | -8.81 | 85.81 | 105.20 |
| 2 | J | 253 | A | O3'-P-O5' | -8.81 | 87.26 | 104.00 |
| 3 | K | 166 | A | OP1-P-O3' | -8.81 | 85.82 | 105.20 |
| 6 | N | 409 | U | O3'-P-O5' | 8.81 | 120.74 | 104.00 |
| 2 | J | 218 | A | OP2-P-O3' | 8.81 | 124.58 | 105.20 |
| 3 | K | 55 | A | OP2-P-O3' | -8.80 | 85.83 | 105.20 |
| 4 | L | 543 | U | OP1-P-O3' | 8.80 | 124.57 | 105.20 |
| 2 | J | 163 | A | P-O3'-C3' | 8.80 | 130.26 | 119.70 |
| 5 | M | 393 | U | P-O3'-C3' | -8.80 | 109.14 | 119.70 |
| 4 | L | 612 | U | OP2-P-O3' | 8.80 | 124.56 | 105.20 |
| 1 | I | 215 | A | P-O3'-C3' | -8.79 | 109.15 | 119.70 |
| 3 | K | 256 | A | OP2-P-O3' | 8.79 | 124.54 | 105.20 |
| 4 | L | 634 | U | OP1-P-O3' | -8.79 | 85.86 | 105.20 |
| 2 | J | 233 | A | P-O3'-C3' | -8.79 | 109.15 | 119.70 |
| 4 | L | 688 | U | OP1-P-O3' | -8.79 | 85.87 | 105.20 |
| 1 | I | 173 | A | O3'-P-O5' | 8.78 | 120.69 | 104.00 |
| 3 | K | 83 | A | OP2-P-O3' | -8.78 | 85.89 | 105.20 |
| 5 | M | 525 | U | OP1-P-O3' | -8.77 | 85.91 | 105.20 |
| 4 | L | 698 | U | O3'-P-O5' | -8.77 | 87.34 | 104.00 |
| 5 | M | 303 | U | O3'-P-O5' | 8.77 | 120.66 | 104.00 |
| 5 | M | 493 | U | P-O3'-C3' | -8.77 | 109.18 | 119.70 |
| 2 | J | 66 | A | O3'-P-O5' | 8.76 | 120.65 | 104.00 |
| 3 | K | 47 | A | OP1-P-O3' | 8.76 | 124.48 | 105.20 |
| 5 | M | 352 | U | OP2-P-O3' | -8.76 | 85.92 | 105.20 |
| 6 | N | 371 | U | O3'-P-O5' | 8.76 | 120.65 | 104.00 |
| 4 | L | 487 | U | OP1-P-O3' | -8.76 | 85.93 | 105.20 |
| 1 | I | 11 | A | P-O3'-C3' | -8.75 | 109.20 | 119.70 |
| 4 | L | 581 | U | P-O3'-C3' | -8.75 | 109.20 | 119.70 |
| 2 | J | 166 | A | O3'-P-O5' | 8.74 | 120.61 | 104.00 |
| 5 | M | 404 | U | P-O3'-C3' | -8.74 | 109.21 | 119.70 |
| 2 | J | 12 | A | OP2-P-O3' | 8.74 | 124.42 | 105.20 |
| 2 | J | 26 | A | OP2-P-O3' | 8.73 | 124.42 | 105.20 |
| 2 | J | 52 | A | O3'-P-O5' | -8.73 | 87.41 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1 | I | 284 | A | OP2-P-O3' | 8.73 | 124.40 | 105.20 |
| 2 | J | 168 | A | O3'-P-O5' | 8.73 | 120.58 | 104.00 |
| 5 | M | 501 | U | OP1-P-O3' | 8.73 | 124.40 | 105.20 |
| 2 | J | 211 | A | OP1-P-O3' | -8.72 | 86.01 | 105.20 |
| 1 | I | 72 | A | OP1-P-O3' | -8.72 | 86.02 | 105.20 |
| 2 | J | 245 | A | OP2-P-O3' | 8.72 | 124.37 | 105.20 |
| 2 | J | 226 | A | P-O3'-C3' | -8.71 | 109.25 | 119.70 |
| 1 | I | 33 | A | OP2-P-O3' | 8.71 | 124.36 | 105.20 |
| 4 | L | 736 | U | P-O3'-C3' | -8.70 | 109.26 | 119.70 |
| 2 | J | 224 | A | O3'-P-O5' | 8.70 | 120.53 | 104.00 |
| 4 | L | 561 | U | OP1-P-O3' | -8.70 | 86.06 | 105.20 |
| 4 | L | 601 | U | O3'-P-O5' | -8.70 | 87.47 | 104.00 |
| 1 | I | 238 | A | P-O3'-C3' | -8.70 | 109.26 | 119.70 |
| 4 | L | 750 | U | OP1-P-O3' | 8.70 | 124.33 | 105.20 |
| 1 | I | 44 | A | OP1-P-O3' | -8.69 | 86.07 | 105.20 |
| 1 | I | 221 | A | O3'-P-O5' | 8.70 | 120.52 | 104.00 |
| 5 | M | 469 | U | OP1-P-O3' | 8.69 | 124.33 | 105.20 |
| 3 | K | 53 | A | OP2-P-O3' | -8.67 | 86.12 | 105.20 |
| 3 | K | 4 | A | O3'-P-O5' | -8.67 | 87.53 | 104.00 |
| 5 | M | 521 | U | OP2-P-O3' | 8.67 | 124.28 | 105.20 |
| 1 | I | 199 | A | O3'-P-O5' | 8.67 | 120.47 | 104.00 |
| 4 | L | 690 | U | P-O3'-C3' | -8.66 | 109.31 | 119.70 |
| 5 | M | 470 | U | O3'-P-O5' | 8.66 | 120.45 | 104.00 |
| 6 | N | 322 | U | O3'-P-O5' | -8.65 | 87.56 | 104.00 |
| 3 | K | 136 | A | OP2-P-O3' | 8.65 | 124.23 | 105.20 |
| 3 | K | 42 | A | O3'-P-O5' | -8.65 | 87.57 | 104.00 |
| 4 | L | 619 | U | O3'-P-O5' | 8.65 | 120.43 | 104.00 |
| 4 | L | 622 | U | OP1-P-O3' | -8.64 | 86.19 | 105.20 |
| 3 | K | 196 | A | OP2-P-O3' | -8.64 | 86.20 | 105.20 |
| 6 | N | 452 | U | OP2-P-O3' | 8.64 | 124.20 | 105.20 |
| 2 | J | 75 | A | OP2-P-O3' | 8.63 | 124.19 | 105.20 |
| 5 | M | 490 | U | P-O3'-C3' | -8.62 | 109.35 | 119.70 |
| 6 | N | 363 | U | O3'-P-O5' | 8.62 | 120.39 | 104.00 |
| 1 | I | 177 | A | P-O3'-C3' | 8.62 | 130.05 | 119.70 |
| 2 | J | 24 | A | P-O3'-C3' | -8.62 | 109.35 | 119.70 |
| 2 | J | 126 | A | OP2-P-O3' | 8.62 | 124.16 | 105.20 |
| 3 | K | 107 | A | P-O3'-C3' | -8.61 | 109.37 | 119.70 |
| 6 | N | 497 | U | OP1-P-O3' | -8.61 | 86.25 | 105.20 |
| 4 | L | 768 | U | P-O3'-C3' | -8.61 | 109.37 | 119.70 |
| 5 | M | 475 | U | OP2-P-O3' | -8.61 | 86.26 | 105.20 |
| 2 | J | 232 | A | P-O3'-C3' | -8.61 | 109.37 | 119.70 |
| 1 | I | 335 | A | OP1-P-O3' | 8.61 | 124.13 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 3 | K | 184 | A | O3'-P-O5' | 8.60 | 120.35 | 104.00 |
| 4 | L | 574 | U | OP1-P-O3' | 8.60 | 124.12 | 105.20 |
| 5 | M | 415 | U | P-O3'-C3' | -8.60 | 109.38 | 119.70 |
| 6 | N | 368 | U | O3'-P-O5' | 8.59 | 120.33 | 104.00 |
| 3 | K | 18 | A | OP1-P-O3' | 8.59 | 124.10 | 105.20 |
| 1 | I | 111 | A | O3'-P-O5' | -8.59 | 87.68 | 104.00 |
| 1 | I | 403 | A | P-O3'-C3' | 8.59 | 130.01 | 119.70 |
| 2 | J | 94 | A | OP1-P-O3' | -8.59 | 86.30 | 105.20 |
| 2 | J | 21 | A | OP1-P-O3' | -8.59 | 86.31 | 105.20 |
| 2 | J | 27 | A | O3'-P-O5' | 8.59 | 120.32 | 104.00 |
| 3 | K | 144 | A | OP1-P-O3' | 8.58 | 124.08 | 105.20 |
| 5 | M | 435 | U | O3'-P-O5' | 8.58 | 120.31 | 104.00 |
| 2 | J | 266 | A | O3'-P-O5' | 8.58 | 120.30 | 104.00 |
| 2 | J | 28 | A | O3'-P-O5' | -8.57 | 87.71 | 104.00 |
| 4 | L | 442 | U | O3'-P-O5' | 8.57 | 120.29 | 104.00 |
| 4 | L | 491 | U | P-O3'-C3' | -8.57 | 109.42 | 119.70 |
| 3 | K | 162 | A | P-O3'-C3' | -8.57 | 109.42 | 119.70 |
| 6 | N | 487 | U | P-O3'-C3' | -8.57 | 109.42 | 119.70 |
| 1 | I | 233 | A | O3'-P-O5' | -8.56 | 87.73 | 104.00 |
| 4 | L | 682 | U | P-O3'-C3' | 8.56 | 129.97 | 119.70 |
| 5 | M | 376 | U | P-O3'-C3' | -8.56 | 109.43 | 119.70 |
| 3 | K | 94 | A | OP2-P-O3' | 8.56 | 124.03 | 105.20 |
| 5 | M | 457 | U | OP1-P-O3' | -8.56 | 86.38 | 105.20 |
| 3 | K | 58 | A | OP1-P-O3' | 8.56 | 124.02 | 105.20 |
| 2 | J | 64 | A | OP2-P-O3' | 8.55 | 124.02 | 105.20 |
| 1 | I | 138 | A | OP1-P-O3' | -8.55 | 86.39 | 105.20 |
| 5 | M | 297 | U | OP1-P-O3' | -8.55 | 86.40 | 105.20 |
| 3 | K | 107 | A | OP2-P-O3' | 8.54 | 124.00 | 105.20 |
| 1 | I | 214 | A | P-O3'-C3' | -8.53 | 109.46 | 119.70 |
| 1 | I | 68 | A | O3'-P-O5' | -8.53 | 87.80 | 104.00 |
| 2 | J | 100 | A | P-O3'-C3' | -8.53 | 109.47 | 119.70 |
| 4 | L | 596 | U | OP2-P-O3' | 8.53 | 123.95 | 105.20 |
| 5 | M | 296 | U | OP1-P-O3' | -8.52 | 86.45 | 105.20 |
| 6 | N | 325 | U | P-O3'-C3' | 8.52 | 129.93 | 119.70 |
| 1 | I | 166 | A | OP2-P-O3' | 8.52 | 123.94 | 105.20 |
| 2 | J | 58 | A | OP2-P-O3' | 8.52 | 123.94 | 105.20 |
| 2 | J | 120 | A | O3'-P-O5' | 8.52 | 120.18 | 104.00 |
| 5 | M | 307 | U | OP2-P-O3' | -8.52 | 86.46 | 105.20 |
| 5 | M | 359 | U | OP2-P-O3' | -8.51 | 86.47 | 105.20 |
| 5 | M | 348 | U | OP2-P-O3' | 8.51 | 123.93 | 105.20 |
| 4 | L | 535 | U | OP2-P-O3' | 8.51 | 123.92 | 105.20 |
| 3 | K | 87 | A | O3'-P-O5' | 8.51 | 120.17 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 5 | M | 500 | U | O3'-P-O5' | 8.51 | 120.17 | 104.00 |
| 6 | N | 460 | U | P-O3'-C3' | 8.50 | 129.90 | 119.70 |
| 5 | M | 486 | U | OP1-P-O3' | -8.50 | 86.50 | 105.20 |
| 6 | N | 303 | U | O3'-P-O5' | -8.50 | 87.85 | 104.00 |
| 3 | K | 159 | A | O3'-P-O5' | 8.50 | 120.14 | 104.00 |
| 6 | N | 335 | U | OP1-P-O3' | 8.49 | 123.88 | 105.20 |
| 1 | I | 55 | A | OP1-P-O3' | -8.49 | 86.53 | 105.20 |
| 3 | K | 184 | A | OP2-P-O3' | -8.49 | 86.53 | 105.20 |
| 5 | M | 427 | U | O3'-P-O5' | 8.49 | 120.13 | 104.00 |
| 5 | M | 387 | U | OP1-P-O3' | 8.48 | 123.86 | 105.20 |
| 5 | M | 438 | U | OP1-P-O3' | -8.48 | 86.55 | 105.20 |
| 2 | J | 153 | A | OP1-P-O3' | -8.47 | 86.56 | 105.20 |
| 1 | I | 316 | A | O3'-P-O5' | -8.47 | 87.91 | 104.00 |
| 1 | I | 333 | A | OP1-P-O3' | -8.47 | 86.57 | 105.20 |
| 4 | L | 483 | U | OP2-P-O3' | 8.47 | 123.83 | 105.20 |
| 6 | N | 460 | U | OP1-P-O3' | 8.47 | 123.82 | 105.20 |
| 1 | I | 35 | A | P-O3'-C3' | -8.46 | 109.54 | 119.70 |
| 2 | J | 21 | A | OP2-P-O3' | 8.46 | 123.82 | 105.20 |
| 1 | I | 101 | A | OP1-P-O3' | 8.45 | 123.80 | 105.20 |
| 4 | L | 784 | U | OP2-P-O3' | -8.46 | 86.60 | 105.20 |
| 4 | L | 708 | U | O3'-P-O5' | 8.45 | 120.06 | 104.00 |
| 1 | I | 265 | A | O3'-P-O5' | -8.45 | 87.95 | 104.00 |
| 3 | K | 228 | A | OP1-P-O3' | 8.45 | 123.79 | 105.20 |
| 3 | K | 3 | A | OP1-P-O3' | 8.44 | 123.78 | 105.20 |
| 1 | I | 397 | A | OP1-P-O3' | 8.44 | 123.77 | 105.20 |
| 1 | I | 88 | A | P-O3'-C3' | -8.44 | 109.58 | 119.70 |
| 6 | N | 512 | U | OP1-P-O3' | 8.43 | 123.75 | 105.20 |
| 2 | J | 67 | A | OP1-P-O3' | -8.43 | 86.66 | 105.20 |
| 3 | K | 24 | A | OP2-P-O3' | -8.41 | 86.70 | 105.20 |
| 4 | L | 658 | U | OP2-P-O3' | 8.41 | 123.69 | 105.20 |
| 2 | J | 227 | A | P-O3'-C3' | -8.40 | 109.62 | 119.70 |
| 3 | K | 208 | A | OP2-P-O3' | -8.40 | 86.72 | 105.20 |
| 2 | J | 35 | A | O3'-P-O5' | 8.40 | 119.95 | 104.00 |
| 1 | I | 57 | A | OP1-P-O3' | 8.39 | 123.65 | 105.20 |
| 4 | L | 670 | U | OP2-P-O3' | 8.39 | 123.65 | 105.20 |
| 2 | J | 119 | A | OP1-P-O3' | 8.38 | 123.64 | 105.20 |
| 2 | J | 36 | A | OP2-P-O3' | 8.38 | 123.63 | 105.20 |
| 2 | J | 196 | A | OP2-P-O3' | -8.38 | 86.77 | 105.20 |
| 4 | L | 814 | U | O3'-P-O5' | -8.38 | 88.08 | 104.00 |
| 5 | M | 504 | U | O3'-P-O5' | -8.38 | 88.08 | 104.00 |
| 5 | M | 549 | U | P-O3'-C3' | 8.37 | 129.75 | 119.70 |
| 3 | K | 174 | A | OP2-P-O3' | 8.37 | 123.62 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 4 | L | 573 | U | OP2-P-O3' | 8.37 | 123.62 | 105.20 |
| 2 | J | 141 | A | P-O3'-C3' | -8.37 | 109.66 | 119.70 |
| 3 | K | 86 | A | OP1-P-O3' | -8.37 | 86.80 | 105.20 |
| 3 | K | 172 | A | P-O3'-C3' | -8.37 | 109.66 | 119.70 |
| 6 | N | 379 | U | OP1-P-O3' | -8.36 | 86.80 | 105.20 |
| 1 | I | 318 | A | P-O3'-C3' | -8.36 | 109.67 | 119.70 |
| 1 | I | 132 | A | OP1-P-O3' | -8.35 | 86.83 | 105.20 |
| 1 | I | 295 | A | O3'-P-O5' | 8.35 | 119.87 | 104.00 |
| 2 | J | 136 | A | OP2-P-O3' | -8.35 | 86.83 | 105.20 |
| 1 | I | 363 | A | OP2-P-O3' | 8.35 | 123.57 | 105.20 |
| 3 | K | 76 | A | O3'-P-O5' | -8.35 | 88.13 | 104.00 |
| 6 | N | 511 | U | P-O3'-C3' | 8.35 | 129.72 | 119.70 |
| 1 | I | 276 | A | OP2-P-O3' | 8.35 | 123.56 | 105.20 |
| 2 | J | 187 | A | OP1-P-O3' | -8.35 | 86.84 | 105.20 |
| 4 | L | 609 | U | O3'-P-O5' | 8.35 | 119.86 | 104.00 |
| 5 | M | 432 | U | P-O3'-C3' | -8.35 | 109.68 | 119.70 |
| 5 | M | 513 | U | OP2-P-O3' | 8.35 | 123.56 | 105.20 |
| 5 | M | 314 | U | OP2-P-O3' | -8.34 | 86.84 | 105.20 |
| 1 | I | 61 | A | OP2-P-O3' | 8.34 | 123.55 | 105.20 |
| 4 | L | 477 | U | O3'-P-O5' | -8.34 | 88.16 | 104.00 |
| 4 | L | 454 | U | OP2-P-O3' | -8.33 | 86.87 | 105.20 |
| 4 | L | 461 | U | P-O3'-C3' | -8.33 | 109.70 | 119.70 |
| 5 | M | 329 | U | OP2-P-O3' | -8.33 | 86.88 | 105.20 |
| 6 | N | 433 | U | P-O3'-C3' | 8.33 | 129.69 | 119.70 |
| 4 | L | 567 | U | O3'-P-O5' | 8.33 | 119.82 | 104.00 |
| 5 | M | 460 | U | OP2-P-O3' | 8.32 | 123.52 | 105.20 |
| 3 | K | 112 | A | OP2-P-O3' | -8.32 | 86.90 | 105.20 |
| 1 | I | 174 | A | OP2-P-O3' | 8.32 | 123.50 | 105.20 |
| 3 | K | 115 | A | OP1-P-O3' | 8.32 | 123.50 | 105.20 |
| 5 | M | 459 | U | O3'-P-O5' | -8.32 | 88.19 | 104.00 |
| 1 | I | 182 | A | OP1-P-O3' | -8.31 | 86.91 | 105.20 |
| 5 | M | 452 | U | P-O3'-C3' | -8.31 | 109.72 | 119.70 |
| 1 | I | 246 | A | P-O3'-C3' | -8.31 | 109.73 | 119.70 |
| 4 | L | 802 | U | O3'-P-O5' | -8.31 | 88.21 | 104.00 |
| 4 | L | 668 | U | P-O3'-C3' | 8.31 | 129.67 | 119.70 |
| 6 | N | 357 | U | P-O3'-C3' | -8.31 | 109.73 | 119.70 |
| 3 | K | 57 | A | O3'-P-O5' | -8.31 | 88.22 | 104.00 |
| 1 | I | 230 | A | OP1-P-O3' | -8.30 | 86.95 | 105.20 |
| 4 | L | 639 | U | OP1-P-O3' | -8.29 | 86.97 | 105.20 |
| 6 | N | 303 | U | OP2-P-O3' | -8.28 | 86.97 | 105.20 |
| 1 | I | 66 | A | OP1-P-O3' | -8.28 | 86.99 | 105.20 |
| 1 | I | 306 | A | O3'-P-O5' | 8.28 | 119.73 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 3 | K | 201 | A | P-O3'-C3' | 8.28 | 129.63 | 119.70 |
| 5 | M | 360 | U | OP2-P-O3' | -8.28 | 86.99 | 105.20 |
| 2 | J | 220 | A | OP2-P-O3' | 8.27 | 123.39 | 105.20 |
| 1 | I | 281 | A | O3'-P-O5' | -8.27 | 88.29 | 104.00 |
| 5 | M | 523 | U | P-O3'-C3' | -8.27 | 109.78 | 119.70 |
| 1 | I | 26 | A | OP1-P-O3' | -8.27 | 87.02 | 105.20 |
| 3 | K | 196 | A | OP1-P-O3' | 8.27 | 123.38 | 105.20 |
| 3 | K | 229 | A | O3'-P-O5' | -8.27 | 88.29 | 104.00 |
| 1 | I | 98 | A | O3'-P-O5' | 8.26 | 119.70 | 104.00 |
| 4 | L | 626 | U | O3'-P-O5' | 8.26 | 119.69 | 104.00 |
| 1 | I | 295 | A | P-O3'-C3' | -8.26 | 109.79 | 119.70 |
| 5 | M | 312 | U | O3'-P-O5' | 8.26 | 119.69 | 104.00 |
| 3 | K | 105 | A | P-O3'-C3' | -8.26 | 109.79 | 119.70 |
| 4 | L | 666 | U | OP2-P-O3' | 8.25 | 123.35 | 105.20 |
| 4 | L | 540 | U | OP2-P-O3' | -8.25 | 87.05 | 105.20 |
| 5 | M | 424 | U | P-O3'-C3' | -8.25 | 109.81 | 119.70 |
| 5 | M | 294 | U | P-O3'-C3' | -8.24 | 109.81 | 119.70 |
| 3 | K | 229 | A | OP1-P-O3' | 8.24 | 123.33 | 105.20 |
| 5 | M | 471 | U | O3'-P-O5' | 8.24 | 119.65 | 104.00 |
| 3 | K | 90 | A | OP1-P-O3' | -8.24 | 87.08 | 105.20 |
| 5 | M | 490 | U | OP2-P-O3' | -8.23 | 87.09 | 105.20 |
| 4 | L | 564 | U | OP2-P-O3' | 8.23 | 123.31 | 105.20 |
| 1 | I | 144 | A | OP1-P-O3' | 8.23 | 123.30 | 105.20 |
| 3 | K | 71 | A | P-O3'-C3' | 8.23 | 129.57 | 119.70 |
| 4 | L | 631 | U | OP2-P-O3' | -8.23 | 87.10 | 105.20 |
| 3 | K | 56 | A | OP2-P-O3' | 8.22 | 123.29 | 105.20 |
| 4 | L | 729 | U | OP1-P-O3' | 8.22 | 123.28 | 105.20 |
| 4 | L | 510 | U | P-O3'-C3' | -8.22 | 109.84 | 119.70 |
| 1 | I | 353 | A | O3'-P-O5' | -8.21 | 88.41 | 104.00 |
| 2 | J | 238 | A | O3'-P-O5' | 8.21 | 119.59 | 104.00 |
| 1 | I | 172 | A | O3'-P-O5' | 8.20 | 119.59 | 104.00 |
| 6 | N | 469 | U | P-O3'-C3' | -8.20 | 109.86 | 119.70 |
| 4 | L | 488 | U | P-O3'-C3' | -8.20 | 109.86 | 119.70 |
| 4 | L | 654 | U | O3'-P-O5' | 8.20 | 119.58 | 104.00 |
| 4 | L | 805 | U | P-O3'-C3' | -8.20 | 109.86 | 119.70 |
| 4 | L | 772 | U | P-O3'-C3' | -8.19 | 109.87 | 119.70 |
| 5 | M | 283 | U | OP2-P-O3' | -8.19 | 87.18 | 105.20 |
| 1 | I | 320 | A | OP2-P-O3' | 8.19 | 123.22 | 105.20 |
| 4 | L | 778 | U | P-O3'-C3' | -8.19 | 109.87 | 119.70 |
| 4 | L | 749 | U | O3'-P-O5' | 8.19 | 119.56 | 104.00 |
| 3 | K | 213 | A | OP2-P-O3' | 8.19 | 123.21 | 105.20 |
| 5 | M | 412 | U | P-O3'-C3' | -8.19 | 109.88 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1 | I | 72 | A | O3'-P-O5' | -8.19 | 88.45 | 104.00 |
| 6 | N | 299 | U | O3'-P-O5' | 8.18 | 119.55 | 104.00 |
| 5 | M | 385 | U | OP2-P-O3' | -8.18 | 87.20 | 105.20 |
| 6 | N | 339 | U | OP2-P-O3' | 8.18 | 123.20 | 105.20 |
| 4 | L | 679 | U | OP2-P-O3' | -8.18 | 87.22 | 105.20 |
| 5 | M | 549 | U | OP2-P-O3' | -8.17 | 87.22 | 105.20 |
| 1 | I | 225 | A | OP1-P-O3' | 8.17 | 123.18 | 105.20 |
| 4 | L | 572 | U | O3'-P-O5' | 8.17 | 119.52 | 104.00 |
| 4 | L | 664 | U | O3'-P-O5' | 8.17 | 119.52 | 104.00 |
| 4 | L | 785 | U | OP2-P-O3' | -8.17 | 87.23 | 105.20 |
| 2 | J | 145 | A | OP2-P-O3' | 8.16 | 123.16 | 105.20 |
| 6 | N | 282 | U | P-O3'-C3' | -8.16 | 109.90 | 119.70 |
| 4 | L | 522 | U | OP1-P-O3' | -8.16 | 87.25 | 105.20 |
| 4 | L | 634 | U | O3'-P-O5' | -8.16 | 88.50 | 104.00 |
| 4 | L | 482 | U | O3'-P-O5' | 8.15 | 119.49 | 104.00 |
| 5 | M | 448 | U | OP1-P-O3' | -8.15 | 87.26 | 105.20 |
| 6 | N | 331 | U | OP1-P-O3' | 8.15 | 123.14 | 105.20 |
| 1 | I | 158 | A | O3'-P-O5' | 8.15 | 119.48 | 104.00 |
| 3 | K | 188 | A | P-O3'-C3' | 8.14 | 129.47 | 119.70 |
| 4 | L | 593 | U | O3'-P-O5' | -8.14 | 88.53 | 104.00 |
| 2 | J | 165 | A | OP1-P-O3' | 8.13 | 123.09 | 105.20 |
| 4 | L | 566 | U | O3'-P-O5' | 8.13 | 119.45 | 104.00 |
| 2 | J | 84 | A | OP1-P-O3' | -8.13 | 87.31 | 105.20 |
| 6 | N | 407 | U | OP2-P-O3' | 8.13 | 123.08 | 105.20 |
| 4 | L | 569 | U | P-O3'-C3' | -8.12 | 109.95 | 119.70 |
| 2 | J | 12 | A | OP1-P-O3' | -8.12 | 87.33 | 105.20 |
| 5 | M | 372 | U | OP1-P-O3' | -8.12 | 87.35 | 105.20 |
| 1 | I | 22 | A | O3'-P-O5' | -8.11 | 88.59 | 104.00 |
| 3 | K | 19 | A | OP1-P-O3' | 8.11 | 123.04 | 105.20 |
| 2 | J | 45 | A | OP1-P-O3' | -8.11 | 87.37 | 105.20 |
| 6 | N | 318 | U | OP2-P-O3' | -8.11 | 87.37 | 105.20 |
| 1 | I | 195 | A | O3'-P-O5' | 8.10 | 119.40 | 104.00 |
| 1 | I | 119 | A | OP2-P-O3' | 8.10 | 123.02 | 105.20 |
| 4 | L | 820 | U | O3'-P-O5' | -8.10 | 88.61 | 104.00 |
| 1 | I | 123 | A | OP2-P-O3' | 8.10 | 123.02 | 105.20 |
| 1 | I | 169 | A | P-O3'-C3' | -8.10 | 109.98 | 119.70 |
| 2 | J | 214 | A | OP1-P-O3' | -8.10 | 87.39 | 105.20 |
| 1 | I | 253 | A | OP1-P-O3' | 8.09 | 123.00 | 105.20 |
| 3 | K | 148 | A | P-O3'-C3' | 8.09 | 129.41 | 119.70 |
| 4 | L | 725 | U | OP2-P-O3' | 8.09 | 123.00 | 105.20 |
| 3 | K | 204 | A | P-O3'-C3' | -8.08 | 110.00 | 119.70 |
| 5 | M | 406 | U | OP1-P-O3' | -8.08 | 87.43 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 5 | M | 450 | U | P-O3'-C3' | -8.07 | 110.01 | 119.70 |
| 3 | K | 190 | A | OP1-P-O3' | 8.07 | 122.96 | 105.20 |
| 4 | L | 798 | U | O3'-P-O5' | 8.07 | 119.34 | 104.00 |
| 4 | L | 464 | U | OP2-P-O3' | 8.07 | 122.95 | 105.20 |
| 1 | I | 148 | A | OP2-P-O3' | 8.06 | 122.94 | 105.20 |
| 1 | I | 38 | A | P-O3'-C3' | -8.06 | 110.03 | 119.70 |
| 1 | I | 234 | A | O3'-P-O5' | 8.06 | 119.32 | 104.00 |
| 5 | M | 548 | U | O3'-P-O5' | 8.06 | 119.31 | 104.00 |
| 2 | J | 153 | A | OP2-P-O3' | 8.06 | 122.92 | 105.20 |
| 5 | M | 287 | U | P-O3'-C3' | -8.05 | 110.03 | 119.70 |
| 5 | M | 323 | U | OP1-P-O3' | -8.05 | 87.48 | 105.20 |
| 1 | I | 349 | A | OP1-P-O3' | -8.05 | 87.48 | 105.20 |
| 4 | L | 424 | U | OP1-P-O3' | 8.05 | 122.91 | 105.20 |
| 3 | K | 197 | A | OP1-P-O3' | 8.05 | 122.90 | 105.20 |
| 4 | L | 629 | U | OP1-P-O3' | -8.04 | 87.51 | 105.20 |
| 2 | J | 42 | A | P-O3'-C3' | -8.04 | 110.05 | 119.70 |
| 6 | N | 412 | U | OP2-P-O3' | 8.04 | 122.89 | 105.20 |
| 4 | L | 692 | U | OP2-P-O3' | 8.03 | 122.85 | 105.20 |
| 4 | L | 781 | U | OP2-P-O3' | -8.02 | 87.55 | 105.20 |
| 2 | J | 58 | A | OP1-P-O3' | -8.02 | 87.56 | 105.20 |
| 1 | I | 298 | A | O3'-P-O5' | -8.01 | 88.78 | 104.00 |
| 4 | L | 489 | U | O3'-P-O5' | -8.01 | 88.78 | 104.00 |
| 4 | L | 656 | U | O3'-P-O5' | 8.01 | 119.22 | 104.00 |
| 4 | L | 782 | U | P-O3'-C3' | -8.00 | 110.10 | 119.70 |
| 5 | M | 495 | U | O3'-P-O5' | 8.00 | 119.20 | 104.00 |
| 4 | L | 605 | U | OP2-P-O3' | 8.00 | 122.80 | 105.20 |
| 5 | M | 366 | U | O3'-P-O5' | 8.00 | 119.20 | 104.00 |
| 2 | J | 57 | A | OP1-P-O3' | -8.00 | 87.60 | 105.20 |
| 5 | M | 430 | U | O3'-P-O5' | -8.00 | 88.80 | 104.00 |
| 4 | L | 722 | U | OP1-P-O3' | 7.99 | 122.79 | 105.20 |
| 1 | I | 381 | A | P-O3'-C3' | 7.99 | 129.28 | 119.70 |
| 2 | J | 30 | A | O3'-P-O5' | -7.99 | 88.83 | 104.00 |
| 2 | J | 150 | A | OP2-P-O3' | -7.99 | 87.63 | 105.20 |
| 6 | N | 328 | U | OP1-P-O3' | 7.99 | 122.77 | 105.20 |
| 3 | K | 233 | A | O3'-P-O5' | 7.98 | 119.17 | 104.00 |
| 3 | K | 16 | A | OP2-P-O3' | -7.98 | 87.64 | 105.20 |
| 4 | L | 715 | U | P-O3'-C3' | 7.98 | 129.28 | 119.70 |
| 4 | L | 507 | U | OP1-P-O3' | -7.98 | 87.65 | 105.20 |
| 3 | K | 161 | A | OP2-P-O3' | 7.97 | 122.74 | 105.20 |
| 1 | I | 410 | A | OP1-P-O3' | 7.97 | 122.74 | 105.20 |
| 4 | L | 508 | U | OP2-P-O3' | 7.97 | 122.74 | 105.20 |
| 2 | J | 17 | A | OP2-P-O3' | 7.97 | 122.73 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 6 | N | 465 | U | OP1-P-O3' | 7.97 | 122.73 | 105.20 |
| 1 | I | 140 | A | P-O3'-C3' | 7.97 | 129.26 | 119.70 |
| 5 | M | 464 | U | OP1-P-O3' | -7.97 | 87.67 | 105.20 |
| 2 | J | 127 | A | O3'-P-O5' | 7.96 | 119.13 | 104.00 |
| 5 | M | 505 | U | O3'-P-O5' | 7.96 | 119.13 | 104.00 |
| 1 | I | 217 | A | O3'-P-O5' | 7.95 | 119.11 | 104.00 |
| 2 | J | 15 | A | OP1-P-O3' | -7.95 | 87.70 | 105.20 |
| 4 | L | 480 | U | OP1-P-O3' | -7.95 | 87.70 | 105.20 |
| 6 | N | 330 | U | OP2-P-O3' | 7.95 | 122.70 | 105.20 |
| 5 | M | 421 | U | P-O3'-C3' | -7.95 | 110.16 | 119.70 |
| 3 | K | 91 | A | O3'-P-O5' | -7.95 | 88.90 | 104.00 |
| 2 | J | 108 | A | P-O3'-C3' | -7.95 | 110.16 | 119.70 |
| 4 | L | 768 | U | O3'-P-O5' | 7.95 | 119.10 | 104.00 |
| 1 | I | 49 | A | OP1-P-O3' | -7.95 | 87.72 | 105.20 |
| 6 | N | 294 | U | O3'-P-O5' | -7.94 | 88.91 | 104.00 |
| 2 | J | 81 | A | P-O3'-C3' | -7.94 | 110.17 | 119.70 |
| 4 | L | 704 | U | OP2-P-O3' | 7.94 | 122.67 | 105.20 |
| 4 | L | 434 | U | OP2-P-O3' | 7.93 | 122.65 | 105.20 |
| 6 | N | 418 | U | OP1-P-O3' | 7.93 | 122.65 | 105.20 |
| 2 | J | 2 | A | OP2-P-O3' | -7.93 | 87.76 | 105.20 |
| 4 | L | 484 | U | O3'-P-O5' | -7.93 | 88.94 | 104.00 |
| 5 | M | 371 | U | OP1-P-O3' | -7.92 | 87.77 | 105.20 |
| 3 | K | 27 | A | OP2-P-O3' | -7.92 | 87.79 | 105.20 |
| 4 | L | 441 | U | OP1-P-O3' | 7.92 | 122.62 | 105.20 |
| 4 | L | 451 | U | P-O3'-C3' | -7.92 | 110.20 | 119.70 |
| 2 | J | 91 | A | O3'-P-O5' | 7.92 | 119.04 | 104.00 |
| 5 | M | 321 | U | OP1-P-O3' | 7.91 | 122.60 | 105.20 |
| 1 | I | 29 | A | O3'-P-O5' | 7.91 | 119.02 | 104.00 |
| 1 | I | 43 | A | P-O3'-C3' | -7.90 | 110.22 | 119.70 |
| 6 | N | 414 | U | O3'-P-O5' | 7.90 | 119.00 | 104.00 |
| 4 | L | 802 | U | P-O3'-C3' | -7.89 | 110.23 | 119.70 |
| 1 | I | 367 | A | OP2-P-O3' | -7.89 | 87.84 | 105.20 |
| 1 | I | 37 | A | OP2-P-O3' | -7.88 | 87.85 | 105.20 |
| 3 | K | 92 | A | OP1-P-O3' | -7.88 | 87.85 | 105.20 |
| 6 | N | 313 | U | P-O3'-C3' | -7.88 | 110.24 | 119.70 |
| 3 | K | 203 | A | OP1-P-O3' | 7.88 | 122.54 | 105.20 |
| 3 | K | 218 | A | O3'-P-O5' | -7.88 | 89.03 | 104.00 |
| 3 | K | 143 | A | P-O3'-C3' | 7.87 | 129.15 | 119.70 |
| 4 | L | 690 | U | O3'-P-O5' | 7.87 | 118.96 | 104.00 |
| 1 | I | 319 | A | OP2-P-O3' | 7.87 | 122.52 | 105.20 |
| 4 | L | 437 | U | P-O3'-C3' | 7.87 | 129.14 | 119.70 |
| 3 | K | 200 | A | OP1-P-O3' | 7.87 | 122.51 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 5 | M | 436 | U | OP2-P-O3' | 7.87 | 122.51 | 105.20 |
| 2 | J | 89 | A | P-O3'-C3' | -7.86 | 110.26 | 119.70 |
| 4 | L | 821 | U | OP2-P-O3' | 7.86 | 122.50 | 105.20 |
| 4 | L | 460 | U | OP2-P-O3' | 7.85 | 122.47 | 105.20 |
| 4 | L | 662 | U | O3'-P-O5' | 7.85 | 118.92 | 104.00 |
| 6 | N | 382 | U | O3'-P-O5' | 7.85 | 118.91 | 104.00 |
| 3 | K | 101 | A | O3'-P-O5' | -7.85 | 89.09 | 104.00 |
| 1 | I | 406 | A | P-O3'-C3' | -7.85 | 110.28 | 119.70 |
| 1 | I | 369 | A | O3'-P-O5' | 7.84 | 118.91 | 104.00 |
| 6 | N | 431 | U | O3'-P-O5' | -7.84 | 89.10 | 104.00 |
| 1 | I | 214 | A | OP2-P-O3' | 7.84 | 122.45 | 105.20 |
| 2 | J | 270 | A | OP2-P-O3' | -7.84 | 87.95 | 105.20 |
| 4 | L | 432 | U | P-O3'-C3' | 7.84 | 129.11 | 119.70 |
| 6 | N | 376 | U | OP1-P-O3' | 7.84 | 122.44 | 105.20 |
| 2 | J | 185 | A | OP2-P-O3' | 7.83 | 122.43 | 105.20 |
| 4 | L | 590 | U | OP1-P-O3' | -7.83 | 87.97 | 105.20 |
| 1 | I | 330 | A | OP1-P-O3' | -7.83 | 87.97 | 105.20 |
| 2 | J | 236 | A | P-O3'-C3' | -7.83 | 110.31 | 119.70 |
| 6 | N | 518 | U | OP1-P-O3' | 7.83 | 122.42 | 105.20 |
| 2 | J | 133 | A | P-O3'-C3' | -7.83 | 110.31 | 119.70 |
| 1 | I | 336 | A | O3'-P-O5' | -7.83 | 89.13 | 104.00 |
| 3 | K | 177 | A | O3'-P-O5' | -7.82 | 89.15 | 104.00 |
| 4 | L | 427 | U | OP1-P-O3' | 7.82 | 122.40 | 105.20 |
| 3 | K | 227 | A | OP2-P-O3' | -7.81 | 88.01 | 105.20 |
| 2 | J | 96 | A | OP2-P-O3' | 7.81 | 122.38 | 105.20 |
| 4 | L | 693 | U | O3'-P-O5' | -7.81 | 89.16 | 104.00 |
| 4 | L | 720 | U | OP1-P-O3' | 7.81 | 122.38 | 105.20 |
| 2 | J | 8 | A | OP2-P-O3' | 7.81 | 122.38 | 105.20 |
| 5 | M | 507 | U | OP1-P-O3' | -7.81 | 88.03 | 105.20 |
| 4 | L | 511 | U | P-O3'-C3' | 7.80 | 129.07 | 119.70 |
| 5 | M | 461 | U | OP1-P-O3' | -7.80 | 88.03 | 105.20 |
| 6 | N | 332 | U | P-O3'-C3' | -7.80 | 110.34 | 119.70 |
| 2 | J | 66 | A | OP1-P-O3' | -7.80 | 88.04 | 105.20 |
| 5 | M | 308 | U | OP2-P-O3' | -7.80 | 88.04 | 105.20 |
| 5 | M | 402 | U | P-O3'-C3' | -7.80 | 110.34 | 119.70 |
| 4 | L | 519 | U | O3'-P-O5' | 7.80 | 118.82 | 104.00 |
| 6 | N | 398 | U | OP2-P-O3' | -7.79 | 88.06 | 105.20 |
| 5 | M | 407 | U | OP1-P-O3' | 7.79 | 122.34 | 105.20 |
| 5 | M | 462 | U | O3'-P-O5' | -7.79 | 89.20 | 104.00 |
| 3 | K | 16 | A | O3'-P-O5' | 7.78 | 118.79 | 104.00 |
| 5 | M | 514 | U | O3'-P-O5' | 7.78 | 118.78 | 104.00 |
| 1 | I | 386 | A | OP2-P-O3' | -7.77 | 88.10 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 4 | L | 505 | U | OP2-P-O3' | 7.77 | 122.30 | 105.20 |
| 3 | K | 112 | A | OP1-P-O3' | 7.77 | 122.30 | 105.20 |
| 1 | I | 403 | A | OP2-P-O3' | 7.76 | 122.28 | 105.20 |
| 6 | N | 494 | U | OP1-P-O3' | 7.76 | 122.28 | 105.20 |
| 1 | I | 248 | A | O3'-P-O5' | 7.76 | 118.74 | 104.00 |
| 1 | I | 51 | A | O3'-P-O5' | 7.75 | 118.73 | 104.00 |
| 4 | L | 725 | U | O3'-P-O5' | -7.75 | 89.27 | 104.00 |
| 1 | I | 298 | A | OP2-P-O3' | 7.75 | 122.26 | 105.20 |
| 1 | I | 22 | A | P-O3'-C3' | -7.75 | 110.40 | 119.70 |
| 2 | J | 212 | A | O3'-P-O5' | 7.75 | 118.72 | 104.00 |
| 2 | J | 244 | A | P-O3'-C3' | -7.75 | 110.40 | 119.70 |
| 1 | I | 109 | A | P-O3'-C3' | 7.75 | 128.99 | 119.70 |
| 1 | I | 176 | A | OP1-P-O3' | 7.75 | 122.24 | 105.20 |
| 5 | M | 372 | U | OP2-P-O3' | 7.74 | 122.24 | 105.20 |
| 1 | I | 86 | A | O3'-P-O5' | -7.74 | 89.29 | 104.00 |
| 3 | K | 143 | A | O3'-P-O5' | -7.74 | 89.29 | 104.00 |
| 4 | L | 776 | U | OP1-P-O3' | -7.74 | 88.17 | 105.20 |
| 1 | I | 279 | A | OP2-P-O3' | 7.74 | 122.23 | 105.20 |
| 1 | I | 117 | A | O3'-P-O5' | 7.74 | 118.70 | 104.00 |
| 2 | J | 258 | A | O3'-P-O5' | -7.74 | 89.30 | 104.00 |
| 6 | N | 389 | U | OP1-P-O3' | 7.74 | 122.22 | 105.20 |
| 2 | J | 100 | A | OP2-P-O3' | 7.73 | 122.21 | 105.20 |
| 1 | I | 308 | A | OP1-P-O3' | 7.73 | 122.21 | 105.20 |
| 5 | M | 349 | U | OP1-P-O3' | -7.73 | 88.20 | 105.20 |
| 6 | N | 518 | U | P-O3'-C3' | 7.73 | 128.97 | 119.70 |
| 3 | K | 50 | A | P-O3'-C3' | 7.72 | 128.97 | 119.70 |
| 4 | L | 808 | U | O3'-P-O5' | 7.72 | 118.68 | 104.00 |
| 2 | J | 109 | A | P-O3'-C3' | -7.72 | 110.44 | 119.70 |
| 2 | J | 64 | A | P-O3'-C3' | -7.71 | 110.44 | 119.70 |
| 2 | J | 124 | A | OP2-P-O3' | -7.71 | 88.24 | 105.20 |
| 3 | K | 241 | A | P-O3'-C3' | -7.70 | 110.46 | 119.70 |
| 6 | N | 453 | U | OP2-P-O3' | 7.69 | 122.12 | 105.20 |
| 6 | N | 362 | U | P-O3'-C3' | -7.69 | 110.47 | 119.70 |
| 1 | I | 202 | A | OP1-P-O3' | -7.68 | 88.30 | 105.20 |
| 1 | I | 200 | A | P-O3'-C3' | -7.68 | 110.48 | 119.70 |
| 3 | K | 180 | A | O3'-P-O5' | 7.68 | 118.59 | 104.00 |
| 2 | J | 192 | A | OP1-P-O3' | -7.68 | 88.30 | 105.20 |
| 2 | J | 76 | A | O3'-P-O5' | 7.67 | 118.57 | 104.00 |
| 3 | K | 40 | A | P-O3'-C3' | -7.66 | 110.50 | 119.70 |
| 3 | K | 216 | A | O3'-P-O5' | -7.66 | 89.44 | 104.00 |
| 3 | K | 196 | A | P-O3'-C3' | 7.66 | 128.89 | 119.70 |
| 2 | J | 2 | A | OP1-P-O3' | 7.66 | 122.04 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 4 | L | 441 | U | O3'-P-O5' | 7.66 | 118.55 | 104.00 |
| 5 | M | 289 | U | P-O3'-C3' | -7.66 | 110.51 | 119.70 |
| 1 | I | 284 | A | P-O3'-C3' | -7.65 | 110.52 | 119.70 |
| 1 | I | 26 | A | O3'-P-O5' | -7.65 | 89.46 | 104.00 |
| 3 | K | 30 | A | P-O3'-C3' | 7.65 | 128.88 | 119.70 |
| 6 | N | 308 | U | O3'-P-O5' | 7.65 | 118.53 | 104.00 |
| 1 | I | 119 | A | O3'-P-O5' | 7.64 | 118.52 | 104.00 |
| 2 | J | 186 | A | OP1-P-O3' | -7.64 | 88.38 | 105.20 |
| 3 | K | 218 | A | P-O3'-C3' | 7.64 | 128.87 | 119.70 |
| 5 | M | 452 | U | OP2-P-O3' | 7.64 | 122.02 | 105.20 |
| 2 | J | 154 | A | OP2-P-O3' | -7.64 | 88.39 | 105.20 |
| 2 | J | 170 | A | OP2-P-O3' | -7.64 | 88.39 | 105.20 |
| 4 | L | 633 | U | P-O3'-C3' | 7.64 | 128.87 | 119.70 |
| 4 | L | 800 | U | OP2-P-O3' | 7.64 | 122.01 | 105.20 |
| 6 | N | 315 | U | OP2-P-O3' | 7.64 | 122.01 | 105.20 |
| 4 | L | 796 | U | P-O3'-C3' | -7.64 | 110.54 | 119.70 |
| 4 | L | 662 | U | OP1-P-O3' | 7.63 | 122.00 | 105.20 |
| 4 | L | 709 | U | P-O3'-C3' | -7.63 | 110.54 | 119.70 |
| 1 | I | 53 | A | OP2-P-O3' | -7.63 | 88.41 | 105.20 |
| 4 | L | 598 | U | OP1-P-O3' | -7.63 | 88.42 | 105.20 |
| 3 | K | 114 | A | P-O3'-C3' | 7.63 | 128.85 | 119.70 |
| 5 | M | 483 | U | OP1-P-O3' | -7.63 | 88.42 | 105.20 |
| 2 | J | 268 | A | OP2-P-O3' | -7.62 | 88.44 | 105.20 |
| 4 | L | 461 | U | OP2-P-O3' | 7.62 | 121.95 | 105.20 |
| 1 | I | 139 | A | OP2-P-O3' | -7.61 | 88.45 | 105.20 |
| 2 | J | 215 | A | OP1-P-O3' | -7.61 | 88.46 | 105.20 |
| 1 | I | 394 | A | OP1-P-O3' | 7.61 | 121.93 | 105.20 |
| 3 | K | 240 | A | OP2-P-O3' | 7.60 | 121.92 | 105.20 |
| 6 | N | 416 | U | OP1-P-O3' | -7.60 | 88.48 | 105.20 |
| 3 | K | 186 | A | OP2-P-O3' | 7.60 | 121.92 | 105.20 |
| 4 | L | 673 | U | OP1-P-O3' | -7.60 | 88.48 | 105.20 |
| 6 | N | 416 | U | P-O3'-C3' | -7.59 | 110.59 | 119.70 |
| 4 | L | 579 | U | O3'-P-O5' | 7.58 | 118.41 | 104.00 |
| 4 | L | 442 | U | OP1-P-O3' | 7.58 | 121.88 | 105.20 |
| 6 | N | 356 | U | OP2-P-O3' | -7.58 | 88.52 | 105.20 |
| 6 | N | 444 | U | OP1-P-O3' | -7.58 | 88.53 | 105.20 |
| 2 | J | 239 | A | P-O3'-C3' | -7.58 | 110.61 | 119.70 |
| 3 | K | 44 | A | OP2-P-O3' | 7.58 | 121.87 | 105.20 |
| 4 | L | 457 | U | OP2-P-O3' | -7.58 | 88.53 | 105.20 |
| 4 | L | 517 | U | OP1-P-O3' | -7.58 | 88.53 | 105.20 |
| 1 | I | 241 | A | OP2-P-O3' | 7.57 | 121.85 | 105.20 |
| 4 | L | 564 | U | OP1-P-O3' | -7.57 | 88.56 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 4 | L | 665 | U | OP2-P-O3' | -7.57 | 88.56 | 105.20 |
| 6 | N | 317 | U | OP2-P-O3' | 7.57 | 121.85 | 105.20 |
| 5 | M | 421 | U | O3'-P-O5' | -7.56 | 89.64 | 104.00 |
| 1 | I | 405 | A | P-O3'-C3' | -7.56 | 110.63 | 119.70 |
| 3 | K | 141 | A | OP1-P-O3' | 7.55 | 121.82 | 105.20 |
| 5 | M | 400 | U | OP2-P-O3' | 7.55 | 121.81 | 105.20 |
| 4 | L | 441 | U | P-O3'-C3' | 7.55 | 128.76 | 119.70 |
| 5 | M | 365 | U | O3'-P-O5' | 7.54 | 118.33 | 104.00 |
| 4 | L | 415 | U | O3'-P-O5' | -7.54 | 89.67 | 104.00 |
| 5 | M | 495 | U | OP2-P-O3' | 7.54 | 121.79 | 105.20 |
| 3 | K | 230 | A | OP1-P-O3' | 7.54 | 121.78 | 105.20 |
| 3 | K | 53 | A | P-O3'-C3' | -7.53 | 110.66 | 119.70 |
| 5 | M | 315 | U | OP2-P-O3' | -7.53 | 88.63 | 105.20 |
| 6 | N | 499 | U | OP1-P-O3' | 7.53 | 121.77 | 105.20 |
| 6 | N | 309 | U | OP2-P-O3' | -7.53 | 88.63 | 105.20 |
| 1 | I | 405 | A | OP1-P-O3' | 7.53 | 121.76 | 105.20 |
| 4 | L | 501 | U | OP2-P-O3' | -7.53 | 88.64 | 105.20 |
| 4 | L | 518 | U | OP2-P-O3' | 7.51 | 121.73 | 105.20 |
| 5 | M | 364 | U | OP2-P-O3' | 7.51 | 121.73 | 105.20 |
| 3 | K | 229 | A | P-O3'-C3' | 7.51 | 128.72 | 119.70 |
| 4 | L | 774 | U | P-O3'-C3' | -7.51 | 110.68 | 119.70 |
| 1 | I | 316 | A | OP2-P-O3' | 7.51 | 121.72 | 105.20 |
| 1 | I | 163 | A | O3'-P-O5' | 7.50 | 118.26 | 104.00 |
| 2 | J | 83 | A | OP1-P-O3' | 7.50 | 121.70 | 105.20 |
| 3 | K | 178 | A | O3'-P-O5' | -7.50 | 89.75 | 104.00 |
| 5 | M | 381 | U | P-O3'-C3' | 7.50 | 128.70 | 119.70 |
| 5 | M | 499 | U | O3'-P-O5' | 7.50 | 118.24 | 104.00 |
| 5 | M | 510 | U | P-O3'-C3' | -7.50 | 110.70 | 119.70 |
| 3 | K | 50 | A | O3'-P-O5' | 7.50 | 118.24 | 104.00 |
| 6 | N | 332 | U | OP1-P-O3' | 7.50 | 121.69 | 105.20 |
| 1 | I | 155 | A | P-O3'-C3' | 7.49 | 128.69 | 119.70 |
| 3 | K | 255 | A | P-O3'-C3' | -7.49 | 110.71 | 119.70 |
| 4 | L | 684 | U | P-O3'-C3' | 7.49 | 128.69 | 119.70 |
| 4 | L | 700 | U | OP2-P-O3' | 7.49 | 121.67 | 105.20 |
| 5 | M | 421 | U | OP1-P-O3' | 7.49 | 121.67 | 105.20 |
| 4 | L | 741 | U | P-O3'-C3' | -7.48 | 110.72 | 119.70 |
| 4 | L | 686 | U | O3'-P-O5' | 7.48 | 118.21 | 104.00 |
| 4 | L | 794 | U | OP1-P-O3' | -7.48 | 88.75 | 105.20 |
| 2 | J | 109 | A | OP2-P-O3' | -7.48 | 88.75 | 105.20 |
| 3 | K | 238 | A | P-O3'-C3' | 7.47 | 128.67 | 119.70 |
| 5 | M | 536 | U | OP1-P-O3' | -7.47 | 88.77 | 105.20 |
| 1 | I | 272 | A | O3'-P-O5' | -7.47 | 89.81 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 3 | K | 245 | A | O3'-P-O5' | 7.47 | 118.19 | 104.00 |
| 4 | L | 463 | U | O3'-P-O5' | -7.47 | 89.82 | 104.00 |
| 2 | J | 169 | A | OP1-P-O3' | 7.46 | 121.62 | 105.20 |
| 4 | L | 507 | U | O3'-P-O5' | -7.46 | 89.82 | 104.00 |
| 1 | I | 382 | A | OP1-P-O3' | 7.46 | 121.61 | 105.20 |
| 1 | I | 121 | A | OP1-P-O3' | 7.46 | 121.61 | 105.20 |
| 3 | K | 251 | A | OP2-P-O3' | 7.46 | 121.60 | 105.20 |
| 3 | K | 173 | A | OP1-P-O3' | -7.45 | 88.81 | 105.20 |
| 4 | L | 437 | U | OP1-P-O3' | 7.45 | 121.58 | 105.20 |
| 3 | K | 56 | A | O3'-P-O5' | -7.45 | 89.85 | 104.00 |
| 1 | I | 12 | A | OP1-P-O3' | -7.44 | 88.83 | 105.20 |
| 1 | I | 337 | A | P-O3'-C3' | -7.44 | 110.77 | 119.70 |
| 4 | L | 470 | U | P-O3'-C3' | -7.44 | 110.77 | 119.70 |
| 4 | L | 518 | U | O3'-P-O5' | 7.44 | 118.13 | 104.00 |
| 2 | J | 231 | A | OP1-P-O3' | 7.44 | 121.56 | 105.20 |
| 4 | L | 740 | U | O3'-P-O5' | -7.43 | 89.88 | 104.00 |
| 1 | I | 83 | A | OP2-P-O3' | 7.43 | 121.55 | 105.20 |
| 1 | I | 411 | A | OP2-P-O3' | -7.43 | 88.86 | 105.20 |
| 2 | J | 129 | A | OP1-P-O3' | -7.43 | 88.86 | 105.20 |
| 6 | N | 385 | U | P-O3'-C3' | 7.43 | 128.61 | 119.70 |
| 1 | I | 60 | A | P-O3'-C3' | -7.42 | 110.79 | 119.70 |
| 2 | J | 158 | A | P-O3'-C3' | -7.42 | 110.79 | 119.70 |
| 2 | J | 254 | A | OP1-P-O3' | -7.42 | 88.86 | 105.20 |
| 4 | L | 737 | U | OP2-P-O3' | -7.42 | 88.87 | 105.20 |
| 6 | N | 453 | U | P-O3'-C3' | -7.42 | 110.79 | 119.70 |
| 2 | J | 195 | A | P-O3'-C3' | -7.42 | 110.80 | 119.70 |
| 1 | I | 178 | A | P-O3'-C3' | -7.42 | 110.80 | 119.70 |
| 1 | I | 291 | A | OP1-P-O3' | -7.42 | 88.88 | 105.20 |
| 5 | M | 543 | U | OP2-P-O3' | 7.42 | 121.52 | 105.20 |
| 4 | L | 786 | U | P-O3'-C3' | -7.42 | 110.80 | 119.70 |
| 2 | J | 172 | A | OP1-P-O3' | 7.41 | 121.51 | 105.20 |
| 6 | N | 510 | U | P-O3'-C3' | 7.41 | 128.60 | 119.70 |
| 2 | J | 271 | A | O3'-P-O5' | 7.41 | 118.08 | 104.00 |
| 5 | M | 393 | U | OP1-P-O3' | 7.41 | 121.50 | 105.20 |
| 6 | N | 294 | U | OP2-P-O3' | 7.41 | 121.49 | 105.20 |
| 6 | N | 325 | U | O3'-P-O5' | -7.40 | 89.94 | 104.00 |
| 4 | L | 573 | U | P-O3'-C3' | -7.40 | 110.82 | 119.70 |
| 4 | L | 558 | U | O3'-P-O5' | 7.40 | 118.06 | 104.00 |
| 4 | L | 747 | U | O3'-P-O5' | -7.40 | 89.94 | 104.00 |
| 1 | I | 153 | A | OP2-P-O3' | 7.39 | 121.47 | 105.20 |
| 3 | K | 199 | A | OP1-P-O3' | 7.39 | 121.47 | 105.20 |
| 4 | L | 603 | U | OP2-P-O3' | 7.39 | 121.47 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 4 | L | 801 | U | P-O3'-C3' | -7.39 | 110.83 | 119.70 |
| 2 | J | 263 | A | O3'-P-O5' | -7.39 | 89.96 | 104.00 |
| 6 | N | 366 | U | OP1-P-O3' | 7.39 | 121.45 | 105.20 |
| 3 | K | 191 | A | OP2-P-O3' | 7.38 | 121.44 | 105.20 |
| 4 | L | 817 | U | O3'-P-O5' | 7.38 | 118.03 | 104.00 |
| 1 | I | 3 | A | P-O3'-C3' | 7.38 | 128.55 | 119.70 |
| 1 | I | 361 | A | O3'-P-O5' | -7.38 | 89.98 | 104.00 |
| 1 | I | 401 | A | O3'-P-O5' | -7.38 | 89.98 | 104.00 |
| 1 | I | 115 | A | P-O3'-C3' | -7.38 | 110.85 | 119.70 |
| 1 | I | 176 | A | O3'-P-O5' | 7.38 | 118.02 | 104.00 |
| 1 | I | 291 | A | O3'-P-O5' | -7.38 | 89.98 | 104.00 |
| 1 | I | 347 | A | P-O3'-C3' | -7.38 | 110.85 | 119.70 |
| 6 | N | 296 | U | OP1-P-O3' | 7.38 | 121.43 | 105.20 |
| 5 | M | 496 | U | OP2-P-O3' | -7.37 | 88.98 | 105.20 |
| 4 | L | 823 | U | OP1-P-O3' | 7.37 | 121.42 | 105.20 |
| 6 | N | 373 | U | O3'-P-O5' | 7.37 | 118.01 | 104.00 |
| 6 | N | 422 | U | O3'-P-O5' | -7.37 | 89.99 | 104.00 |
| 1 | I | 148 | A | OP1-P-O3' | -7.36 | 89.01 | 105.20 |
| 1 | I | 209 | A | P-O3'-C3' | -7.36 | 110.87 | 119.70 |
| 6 | N | 370 | U | P-O3'-C3' | -7.36 | 110.87 | 119.70 |
| 4 | L | 784 | U | O3'-P-O5' | 7.35 | 117.97 | 104.00 |
| 2 | J | 23 | A | OP1-P-O3' | -7.35 | 89.04 | 105.20 |
| 6 | N | 511 | U | OP1-P-O3' | 7.35 | 121.36 | 105.20 |
| 1 | I | 1 | A | OP1-P-O3' | 7.35 | 121.36 | 105.20 |
| 4 | L | 743 | U | OP1-P-O3' | -7.34 | 89.05 | 105.20 |
| 3 | K | 224 | A | O3'-P-O5' | -7.34 | 90.05 | 104.00 |
| 3 | K | 77 | A | P-O3'-C3' | -7.34 | 110.89 | 119.70 |
| 5 | M | 301 | U | P-O3'-C3' | -7.34 | 110.90 | 119.70 |
| 5 | M | 340 | U | OP2-P-O3' | 7.34 | 121.34 | 105.20 |
| 3 | K | 177 | A | OP2-P-O3' | 7.33 | 121.34 | 105.20 |
| 1 | I | 9 | A | OP1-P-O3' | -7.33 | 89.07 | 105.20 |
| 1 | I | 317 | A | OP2-P-O3' | 7.33 | 121.33 | 105.20 |
| 6 | N | 334 | U | OP2-P-O3' | 7.33 | 121.32 | 105.20 |
| 1 | I | 305 | A | OP2-P-O3' | 7.33 | 121.32 | 105.20 |
| 1 | I | 351 | A | P-O3'-C3' | 7.33 | 128.49 | 119.70 |
| 1 | I | 263 | A | OP1-P-O3' | -7.33 | 89.08 | 105.20 |
| 1 | I | 154 | A | OP1-P-O3' | 7.32 | 121.31 | 105.20 |
| 6 | N | 372 | U | P-O3'-C3' | -7.32 | 110.91 | 119.70 |
| 1 | I | 182 | A | O3'-P-O5' | 7.32 | 117.91 | 104.00 |
| 1 | I | 275 | A | P-O3'-C3' | 7.32 | 128.49 | 119.70 |
| 3 | K | 72 | A | OP2-P-O3' | 7.31 | 121.29 | 105.20 |
| 4 | L | 433 | U | OP2-P-O3' | -7.31 | 89.12 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 4 | L | 534 | U | O3'-P-O5' | -7.31 | 90.11 | 104.00 |
| 5 | M | 508 | U | OP1-P-O3' | -7.31 | 89.13 | 105.20 |
| 2 | J | 274 | A | OP2-P-O3' | -7.30 | 89.13 | 105.20 |
| 5 | M | 311 | U | P-O3'-C3' | -7.30 | 110.94 | 119.70 |
| 4 | L | 674 | U | O3'-P-O5' | -7.30 | 90.13 | 104.00 |
| 6 | N | 337 | U | P-O3'-C3' | 7.30 | 128.46 | 119.70 |
| 4 | L | 731 | U | OP2-P-O3' | 7.29 | 121.25 | 105.20 |
| 6 | N | 515 | U | OP2-P-O3' | 7.29 | 121.24 | 105.20 |
| 2 | J | 193 | A | OP1-P-O3' | -7.28 | 89.18 | 105.20 |
| 1 | I | 147 | A | OP1-P-O3' | -7.28 | 89.19 | 105.20 |
| 6 | N | 423 | U | P-O3'-C3' | -7.28 | 110.97 | 119.70 |
| 3 | K | 234 | A | OP1-P-O3' | 7.28 | 121.21 | 105.20 |
| 5 | M | 331 | U | OP1-P-O3' | -7.28 | 89.19 | 105.20 |
| 5 | M | 356 | U | P-O3'-C3' | -7.28 | 110.97 | 119.70 |
| 2 | J | 135 | A | OP1-P-O3' | 7.28 | 121.21 | 105.20 |
| 3 | K | 29 | A | P-O3'-C3' | 7.28 | 128.43 | 119.70 |
| 5 | M | 300 | U | OP1-P-O3' | -7.28 | 89.19 | 105.20 |
| 1 | I | 38 | A | OP2-P-O3' | -7.27 | 89.20 | 105.20 |
| 3 | K | 101 | A | OP1-P-O3' | -7.27 | 89.20 | 105.20 |
| 3 | K | 244 | A | P-O3'-C3' | 7.27 | 128.42 | 119.70 |
| 1 | I | 358 | A | P-O3'-C3' | -7.26 | 110.99 | 119.70 |
| 6 | N | 382 | U | OP1-P-O3' | 7.26 | 121.17 | 105.20 |
| 2 | J | 75 | A | OP1-P-O3' | -7.25 | 89.24 | 105.20 |
| 2 | J | 169 | A | OP2-P-O3' | -7.25 | 89.25 | 105.20 |
| 4 | L | 679 | U | OP1-P-O3' | 7.25 | 121.15 | 105.20 |
| 6 | N | 411 | U | OP1-P-O3' | -7.25 | 89.25 | 105.20 |
| 1 | I | 293 | A | O3'-P-O5' | 7.24 | 117.75 | 104.00 |
| 3 | K | 148 | A | OP1-P-O3' | 7.24 | 121.12 | 105.20 |
| 5 | M | 330 | U | OP2-P-O3' | -7.24 | 89.28 | 105.20 |
| 5 | M | 437 | U | OP1-P-O3' | -7.24 | 89.28 | 105.20 |
| 4 | L | 430 | U | O3'-P-O5' | -7.23 | 90.26 | 104.00 |
| 6 | N | 402 | U | O3'-P-O5' | -7.23 | 90.26 | 104.00 |
| 2 | J | 235 | A | OP1-P-O3' | -7.22 | 89.30 | 105.20 |
| 3 | K | 77 | A | OP2-P-O3' | 7.22 | 121.09 | 105.20 |
| 4 | L | 466 | U | P-O3'-C3' | -7.22 | 111.03 | 119.70 |
| 1 | I | 96 | A | O3'-P-O5' | -7.22 | 90.28 | 104.00 |
| 6 | N | 419 | U | OP2-P-O3' | -7.22 | 89.32 | 105.20 |
| 6 | N | 504 | U | P-O3'-C3' | -7.22 | 111.04 | 119.70 |
| 3 | K | 76 | A | P-O3'-C3' | -7.21 | 111.04 | 119.70 |
| 3 | K | 252 | A | O3'-P-O5' | 7.21 | 117.71 | 104.00 |
| 1 | I | 288 | A | P-O3'-C3' | -7.21 | 111.05 | 119.70 |
| 1 | I | 400 | A | OP2-P-O3' | -7.21 | 89.33 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 4 | L | 475 | U | O3'-P-O5' | 7.21 | 117.70 | 104.00 |
| 3 | K | 174 | A | OP1-P-O3' | -7.21 | 89.33 | 105.20 |
| 3 | K | 78 | A | O3'-P-O5' | -7.21 | 90.30 | 104.00 |
| 4 | L | 794 | U | O3'-P-O5' | 7.20 | 117.68 | 104.00 |
| 1 | I | 391 | A | P-O3'-C3' | 7.20 | 128.34 | 119.70 |
| 4 | L | 640 | U | P-O3'-C3' | -7.20 | 111.06 | 119.70 |
| 4 | L | 658 | U | OP1-P-O3' | -7.20 | 89.36 | 105.20 |
| 4 | L | 728 | U | P-O3'-C3' | 7.20 | 128.33 | 119.70 |
| 1 | I | 149 | A | P-O3'-C3' | -7.19 | 111.07 | 119.70 |
| 2 | J | 221 | A | OP1-P-O3' | -7.19 | 89.37 | 105.20 |
| 6 | N | 433 | U | O3'-P-O5' | 7.19 | 117.67 | 104.00 |
| 3 | K | 58 | A | OP2-P-O3' | -7.19 | 89.38 | 105.20 |
| 5 | M | 450 | U | OP2-P-O3' | 7.19 | 121.02 | 105.20 |
| 6 | N | 428 | U | OP1-P-O3' | -7.18 | 89.41 | 105.20 |
| 3 | K | 149 | A | P-O3'-C3' | -7.18 | 111.09 | 119.70 |
| 3 | K | 97 | A | OP1-P-O3' | -7.17 | 89.42 | 105.20 |
| 3 | K | 123 | A | O3'-P-O5' | 7.17 | 117.62 | 104.00 |
| 2 | J | 180 | A | P-O3'-C3' | -7.16 | 111.11 | 119.70 |
| 1 | I | 290 | A | O3'-P-O5' | -7.16 | 90.40 | 104.00 |
| 1 | I | 350 | A | P-O3'-C3' | -7.16 | 111.11 | 119.70 |
| 2 | J | 114 | A | O3'-P-O5' | 7.16 | 117.60 | 104.00 |
| 3 | K | 243 | A | O3'-P-O5' | 7.16 | 117.60 | 104.00 |
| 1 | I | 94 | A | O3'-P-O5' | 7.15 | 117.59 | 104.00 |
| 1 | I | 245 | A | P-O3'-C3' | -7.15 | 111.12 | 119.70 |
| 2 | J | 104 | A | P-O3'-C3' | -7.15 | 111.12 | 119.70 |
| 2 | J | 17 | A | O3'-P-O5' | -7.15 | 90.42 | 104.00 |
| 4 | L | 431 | U | OP1-P-O3' | 7.15 | 120.92 | 105.20 |
| 6 | N | 524 | U | OP1-P-O3' | 7.14 | 120.92 | 105.20 |
| 5 | M | 460 | U | P-O3'-C3' | -7.14 | 111.13 | 119.70 |
| 6 | N | 341 | U | OP2-P-O3' | -7.14 | 89.49 | 105.20 |
| 3 | K | 161 | A | OP1-P-O3' | -7.13 | 89.50 | 105.20 |
| 3 | K | 200 | A | P-O3'-C3' | 7.13 | 128.26 | 119.70 |
| 3 | K | 139 | A | OP2-P-O3' | -7.13 | 89.52 | 105.20 |
| 5 | M | 385 | U | O3'-P-O5' | 7.13 | 117.54 | 104.00 |
| 2 | J | 41 | A | O3'-P-O5' | 7.12 | 117.53 | 104.00 |
| 4 | L | 683 | U | P-O3'-C3' | 7.12 | 128.25 | 119.70 |
| 2 | J | 161 | A | OP2-P-O3' | 7.12 | 120.86 | 105.20 |
| 5 | M | 425 | U | OP1-P-O3' | -7.12 | 89.55 | 105.20 |
| 6 | N | 318 | U | P-O3'-C3' | 7.12 | 128.24 | 119.70 |
| 3 | K | 205 | A | OP2-P-O3' | 7.11 | 120.85 | 105.20 |
| 5 | M | 378 | U | P-O3'-C3' | 7.11 | 128.24 | 119.70 |
| 2 | J | 163 | A | OP1-P-O3' | 7.11 | 120.84 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 4 | L | 482 | U | OP1-P-O3' | -7.11 | 89.56 | 105.20 |
| 1 | I | 362 | A | OP1-P-O3' | 7.10 | 120.83 | 105.20 |
| 4 | L | 823 | U | P-O3'-C3' | 7.10 | 128.22 | 119.70 |
| 5 | M | 351 | U | OP2-P-O3' | -7.10 | 89.58 | 105.20 |
| 6 | N | 300 | U | P-O3'-C3' | 7.10 | 128.22 | 119.70 |
| 1 | I | 381 | A | O3'-P-O5' | 7.09 | 117.48 | 104.00 |
| 2 | J | 13 | A | OP1-P-O3' | -7.09 | 89.60 | 105.20 |
| 5 | M | 519 | U | O3'-P-O5' | -7.09 | 90.53 | 104.00 |
| 1 | I | 192 | A | OP1-P-O3' | -7.09 | 89.61 | 105.20 |
| 3 | K | 165 | A | O3'-P-O5' | -7.09 | 90.54 | 104.00 |
| 2 | J | 11 | A | OP1-P-O3' | -7.08 | 89.61 | 105.20 |
| 3 | K | 143 | A | OP1-P-O3' | 7.08 | 120.77 | 105.20 |
| 5 | M | 529 | U | OP1-P-O3' | -7.08 | 89.63 | 105.20 |
| 4 | L | 749 | U | OP1-P-O3' | -7.08 | 89.64 | 105.20 |
| 5 | M | 409 | U | OP1-P-O3' | -7.08 | 89.63 | 105.20 |
| 2 | J | 131 | A | OP2-P-O3' | 7.07 | 120.76 | 105.20 |
| 4 | L | 451 | U | O3'-P-O5' | 7.06 | 117.42 | 104.00 |
| 1 | I | 318 | A | OP2-P-O3' | 7.06 | 120.74 | 105.20 |
| 2 | J | 112 | A | O3'-P-O5' | 7.06 | 117.42 | 104.00 |
| 3 | K | 245 | A | OP2-P-O3' | -7.06 | 89.66 | 105.20 |
| 3 | K | 115 | A | P-O3'-C3' | -7.06 | 111.23 | 119.70 |
| 4 | L | 813 | U | O3'-P-O5' | -7.06 | 90.59 | 104.00 |
| 6 | N | 436 | U | OP1-P-O3' | 7.05 | 120.72 | 105.20 |
| 6 | N | 479 | U | P-O3'-C3' | -7.04 | 111.25 | 119.70 |
| 1 | I | 56 | A | P-O3'-C3' | -7.04 | 111.25 | 119.70 |
| 6 | N | 349 | U | P-O3'-C3' | 7.04 | 128.15 | 119.70 |
| 5 | M | 545 | U | OP1-P-O3' | 7.04 | 120.68 | 105.20 |
| 1 | I | 155 | A | O3'-P-O5' | 7.03 | 117.36 | 104.00 |
| 3 | K | 151 | A | OP2-P-O3' | -7.03 | 89.74 | 105.20 |
| 3 | K | 230 | A | O3'-P-O5' | -7.03 | 90.65 | 104.00 |
| 5 | M | 376 | U | OP1-P-O3' | -7.03 | 89.74 | 105.20 |
| 5 | M | 443 | U | P-O3'-C3' | -7.03 | 111.27 | 119.70 |
| 2 | J | 230 | A | P-O3'-C3' | -7.02 | 111.28 | 119.70 |
| 3 | K | 142 | A | O3'-P-O5' | 7.02 | 117.33 | 104.00 |
| 4 | L | 563 | U | OP2-P-O3' | 7.02 | 120.63 | 105.20 |
| 4 | L | 615 | U | OP2-P-O3' | 7.01 | 120.63 | 105.20 |
| 4 | L | 515 | U | P-O3'-C3' | -7.01 | 111.28 | 119.70 |
| 1 | I | 77 | A | O3'-P-O5' | -7.01 | 90.68 | 104.00 |
| 4 | L | 445 | U | OP1-P-O3' | 7.00 | 120.61 | 105.20 |
| 3 | K | 160 | A | O3'-P-O5' | -7.00 | 90.70 | 104.00 |
| 1 | I | 152 | A | OP2-P-O3' | 7.00 | 120.60 | 105.20 |
| 4 | L | 732 | U | O3'-P-O5' | 7.00 | 117.29 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 2 | J | 32 | A | O3'-P-O5' | -6.99 | 90.71 | 104.00 |
| 4 | L | 745 | U | P-O3'-C3' | -6.99 | 111.31 | 119.70 |
| 6 | N | 423 | U | OP2-P-O3' | 6.99 | 120.58 | 105.20 |
| 2 | J | 259 | A | OP2-P-O3' | 6.99 | 120.58 | 105.20 |
| 4 | L | 591 | U | P-O3'-C3' | -6.99 | 111.31 | 119.70 |
| 4 | L | 431 | U | P-O3'-C3' | 6.99 | 128.09 | 119.70 |
| 6 | N | 385 | U | OP2-P-O3' | -6.99 | 89.83 | 105.20 |
| 2 | J | 123 | A | P-O3'-C3' | -6.98 | 111.32 | 119.70 |
| 2 | J | 126 | A | OP1-P-O3' | -6.98 | 89.85 | 105.20 |
| 4 | L | 725 | U | P-O3'-C3' | -6.98 | 111.33 | 119.70 |
| 2 | J | 105 | A | OP2-P-O3' | 6.97 | 120.54 | 105.20 |
| 6 | N | 324 | U | OP1-P-O3' | 6.97 | 120.54 | 105.20 |
| 2 | J | 198 | A | OP2-P-O3' | 6.97 | 120.53 | 105.20 |
| 5 | M | 444 | U | P-O3'-C3' | -6.95 | 111.36 | 119.70 |
| 1 | I | 300 | A | P-O3'-C3' | -6.95 | 111.36 | 119.70 |
| 2 | J | 229 | A | P-O3'-C3' | -6.94 | 111.37 | 119.70 |
| 3 | K | 40 | A | OP2-P-O3' | -6.94 | 89.93 | 105.20 |
| 4 | L | 789 | U | O3'-P-O5' | 6.94 | 117.19 | 104.00 |
| 3 | K | 34 | A | O3'-P-O5' | -6.94 | 90.82 | 104.00 |
| 6 | N | 488 | U | P-O3'-C3' | 6.94 | 128.03 | 119.70 |
| 2 | J | 156 | A | O3'-P-O5' | -6.94 | 90.82 | 104.00 |
| 3 | K | 19 | A | OP2-P-O3' | -6.93 | 89.94 | 105.20 |
| 3 | K | 133 | A | OP1-P-O3' | -6.93 | 89.95 | 105.20 |
| 1 | I | 23 | A | OP2-P-O3' | 6.93 | 120.44 | 105.20 |
| 4 | L | 657 | U | O3'-P-O5' | 6.92 | 117.15 | 104.00 |
| 1 | I | 332 | A | OP1-P-O3' | -6.92 | 89.98 | 105.20 |
| 4 | L | 545 | U | P-O3'-C3' | -6.91 | 111.41 | 119.70 |
| 5 | M | 346 | U | OP1-P-O3' | -6.91 | 90.00 | 105.20 |
| 5 | M | 282 | U | OP2-P-O3' | -6.91 | 90.00 | 105.20 |
| 6 | N | 336 | U | O3'-P-O5' | -6.91 | 90.87 | 104.00 |
| 5 | M | 471 | U | OP2-P-O3' | -6.91 | 90.01 | 105.20 |
| 4 | L | 717 | U | OP2-P-O3' | -6.90 | 90.01 | 105.20 |
| 5 | M | 284 | U | P-O3'-C3' | -6.90 | 111.42 | 119.70 |
| 3 | K | 232 | A | O3'-P-O5' | 6.90 | 117.10 | 104.00 |
| 1 | I | 27 | A | O3'-P-O5' | 6.89 | 117.10 | 104.00 |
| 6 | N | 314 | U | OP1-P-O3' | 6.89 | 120.37 | 105.20 |
| 1 | I | 255 | A | O3'-P-O5' | -6.89 | 90.91 | 104.00 |
| 6 | N | 273 | U | O3'-P-O5' | -6.89 | 90.92 | 104.00 |
| 5 | M | 445 | U | OP2-P-O3' | -6.88 | 90.05 | 105.20 |
| 1 | I | 346 | A | O3'-P-O5' | 6.88 | 117.08 | 104.00 |
| 5 | M | 497 | U | OP1-P-O3' | 6.88 | 120.34 | 105.20 |
| 1 | I | 353 | A | OP1-P-O3' | -6.88 | 90.06 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 6 | N | 461 | U | OP1-P-O3' | 6.88 | 120.33 | 105.20 |
| 2 | J | 136 | A | O3'-P-O5' | 6.87 | 117.05 | 104.00 |
| 4 | L | 565 | U | OP1-P-O3' | -6.86 | 90.11 | 105.20 |
| 3 | K | 197 | A | O3'-P-O5' | -6.85 | 90.98 | 104.00 |
| 1 | I | 42 | A | O3'-P-O5' | 6.85 | 117.02 | 104.00 |
| 1 | I | 395 | A | OP1-P-O3' | 6.85 | 120.28 | 105.20 |
| 4 | L | 679 | U | P-O3'-C3' | 6.85 | 127.92 | 119.70 |
| 4 | L | 767 | U | O3'-P-O5' | 6.85 | 117.02 | 104.00 |
| 5 | M | 549 | U | OP1-P-O3' | 6.85 | 120.27 | 105.20 |
| 1 | I | 399 | A | P-O3'-C3' | 6.84 | 127.91 | 119.70 |
| 1 | I | 288 | A | O3'-P-O5' | -6.84 | 91.01 | 104.00 |
| 5 | M | 379 | U | P-O3'-C3' | 6.83 | 127.90 | 119.70 |
| 4 | L | 529 | U | OP1-P-O3' | -6.83 | 90.17 | 105.20 |
| 6 | N | 430 | U | OP1-P-O3' | -6.83 | 90.17 | 105.20 |
| 2 | J | 201 | A | OP1-P-O3' | -6.83 | 90.19 | 105.20 |
| 6 | N | 503 | U | OP2-P-O3' | -6.83 | 90.18 | 105.20 |
| 4 | L | 707 | U | OP1-P-O3' | -6.82 | 90.19 | 105.20 |
| 3 | K | 238 | A | O3'-P-O5' | -6.82 | 91.04 | 104.00 |
| 5 | M | 527 | U | OP2-P-O3' | 6.82 | 120.20 | 105.20 |
| 1 | I | 39 | A | P-O3'-C3' | -6.82 | 111.52 | 119.70 |
| 3 | K | 188 | A | O3'-P-O5' | 6.82 | 116.96 | 104.00 |
| 3 | K | 210 | A | O3'-P-O5' | -6.82 | 91.04 | 104.00 |
| 2 | J | 134 | A | O3'-P-O5' | 6.82 | 116.95 | 104.00 |
| 4 | L | 585 | U | O3'-P-O5' | -6.81 | 91.05 | 104.00 |
| 1 | I | 7 | A | P-O3'-C3' | -6.81 | 111.52 | 119.70 |
| 6 | N | 363 | U | OP2-P-O3' | -6.81 | 90.22 | 105.20 |
| 3 | K | 39 | A | O3'-P-O5' | 6.81 | 116.94 | 104.00 |
| 2 | J | 59 | A | OP1-P-O3' | -6.81 | 90.22 | 105.20 |
| 5 | M | 531 | U | O3'-P-O5' | -6.81 | 91.07 | 104.00 |
| 6 | N | 437 | U | OP2-P-O3' | 6.81 | 120.17 | 105.20 |
| 2 | J | 210 | A | OP1-P-O3' | -6.80 | 90.24 | 105.20 |
| 3 | K | 85 | A | OP2-P-O3' | 6.79 | 120.14 | 105.20 |
| 5 | M | 447 | U | O3'-P-O5' | -6.79 | 91.10 | 104.00 |
| 6 | N | 374 | U | OP2-P-O3' | 6.79 | 120.14 | 105.20 |
| 3 | K | 254 | A | OP1-P-O3' | -6.79 | 90.27 | 105.20 |
| 4 | L | 511 | U | OP1-P-O3' | 6.79 | 120.13 | 105.20 |
| 4 | L | 455 | U | OP2-P-O3' | -6.78 | 90.28 | 105.20 |
| 3 | K | 44 | A | OP1-P-O3' | 6.78 | 120.12 | 105.20 |
| 1 | I | 338 | A | OP2-P-O3' | 6.78 | 120.11 | 105.20 |
| 2 | J | 76 | A | P-O3'-C3' | -6.78 | 111.57 | 119.70 |
| 1 | I | 330 | A | O3'-P-O5' | -6.77 | 91.13 | 104.00 |
| 6 | N | 498 | U | OP2-P-O3' | 6.77 | 120.10 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1 | I | 370 | A | OP2-P-O3' | -6.77 | 90.31 | 105.20 |
| 3 | K | 34 | A | OP1-P-O3' | 6.77 | 120.09 | 105.20 |
| 4 | L | 432 | U | OP1-P-O3' | 6.77 | 120.09 | 105.20 |
| 4 | L | 483 | U | OP1-P-O3' | -6.76 | 90.33 | 105.20 |
| 4 | L | 819 | U | P-O3'-C3' | 6.75 | 127.81 | 119.70 |
| 1 | I | 313 | A | OP2-P-O3' | 6.75 | 120.06 | 105.20 |
| 6 | N | 333 | U | P-O3'-C3' | -6.75 | 111.60 | 119.70 |
| 1 | I | 411 | A | O3'-P-O5' | 6.75 | 116.83 | 104.00 |
| 5 | M | 451 | U | OP1-P-O3' | 6.75 | 120.05 | 105.20 |
| 3 | K | 74 | A | O3'-P-O5' | -6.75 | 91.18 | 104.00 |
| 4 | L | 612 | U | OP1-P-O3' | -6.75 | 90.36 | 105.20 |
| 4 | L | 672 | U | OP2-P-O3' | 6.75 | 120.04 | 105.20 |
| 4 | L | 719 | U | OP1-P-O3' | 6.75 | 120.04 | 105.20 |
| 1 | I | 83 | A | OP1-P-O3' | -6.74 | 90.37 | 105.20 |
| 4 | L | 586 | U | OP2-P-O3' | 6.74 | 120.02 | 105.20 |
| 4 | L | 690 | U | OP2-P-O3' | -6.74 | 90.38 | 105.20 |
| 4 | L | 710 | U | OP2-P-O3' | -6.74 | 90.38 | 105.20 |
| 3 | K | 10 | A | O3'-P-O5' | -6.73 | 91.21 | 104.00 |
| 4 | L | 550 | U | OP1-P-O3' | -6.73 | 90.39 | 105.20 |
| 4 | L | 542 | U | O3'-P-O5' | 6.73 | 116.78 | 104.00 |
| 4 | L | 529 | U | O3'-P-O5' | 6.72 | 116.78 | 104.00 |
| 4 | L | 698 | U | P-O3'-C3' | -6.72 | 111.63 | 119.70 |
| 1 | I | 302 | A | OP1-P-O3' | -6.72 | 90.41 | 105.20 |
| 3 | K | 193 | A | O3'-P-O5' | -6.71 | 91.24 | 104.00 |
| 4 | L | 566 | U | OP2-P-O3' | 6.71 | 119.97 | 105.20 |
| 6 | N | 298 | U | O3'-P-O5' | 6.71 | 116.76 | 104.00 |
| 6 | N | 499 | U | O3'-P-O5' | 6.71 | 116.76 | 104.00 |
| 1 | I | 314 | A | OP2-P-O3' | 6.71 | 119.97 | 105.20 |
| 2 | J | 133 | A | OP2-P-O3' | 6.71 | 119.96 | 105.20 |
| 2 | J | 142 | A | OP1-P-O3' | 6.71 | 119.97 | 105.20 |
| 2 | J | 166 | A | P-O3'-C3' | 6.71 | 127.75 | 119.70 |
| 4 | L | 819 | U | OP1-P-O3' | 6.71 | 119.96 | 105.20 |
| 3 | K | 71 | A | O3'-P-O5' | 6.71 | 116.75 | 104.00 |
| 1 | I | 125 | A | P-O3'-C3' | -6.70 | 111.66 | 119.70 |
| 6 | N | 467 | U | OP2-P-O3' | 6.70 | 119.94 | 105.20 |
| 5 | M | 503 | U | O3'-P-O5' | 6.70 | 116.73 | 104.00 |
| 3 | K | 140 | A | O3'-P-O5' | 6.70 | 116.73 | 104.00 |
| 4 | L | 619 | U | P-O3'-C3' | -6.70 | 111.67 | 119.70 |
| 5 | M | 508 | U | O3'-P-O5' | 6.69 | 116.72 | 104.00 |
| 3 | K | 178 | A | OP2-P-O3' | 6.68 | 119.91 | 105.20 |
| 1 | I | 338 | A | O3'-P-O5' | -6.68 | 91.30 | 104.00 |
| 3 | K | 52 | A | OP2-P-O3' | -6.68 | 90.50 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 4 | L | 585 | U | OP1-P-O3' | -6.68 | 90.50 | 105.20 |
| 1 | I | 62 | A | O3'-P-O5' | 6.68 | 116.68 | 104.00 |
| 1 | I | 305 | A | OP1-P-O3' | -6.68 | 90.51 | 105.20 |
| 1 | I | 130 | A | OP1-P-O3' | -6.67 | 90.52 | 105.20 |
| 4 | L | 560 | U | OP1-P-O3' | -6.67 | 90.54 | 105.20 |
| 6 | N | 347 | U | OP2-P-O3' | -6.66 | 90.54 | 105.20 |
| 3 | K | 98 | A | OP1-P-O3' | -6.66 | 90.54 | 105.20 |
| 3 | K | 249 | A | OP1-P-O3' | -6.66 | 90.54 | 105.20 |
| 3 | K | 251 | A | OP1-P-O3' | -6.66 | 90.54 | 105.20 |
| 6 | N | 314 | U | P-O3'-C3' | -6.66 | 111.71 | 119.70 |
| 2 | J | 3 | A | P-O3'-C3' | 6.66 | 127.69 | 119.70 |
| 1 | I | 176 | A | P-O3'-C3' | 6.66 | 127.69 | 119.70 |
| 5 | M | 455 | U | OP1-P-O3' | -6.66 | 90.56 | 105.20 |
| 2 | J | 271 | A | OP2-P-O3' | -6.65 | 90.56 | 105.20 |
| 4 | L | 799 | U | OP2-P-O3' | -6.65 | 90.56 | 105.20 |
| 6 | N | 330 | U | P-O3'-C3' | -6.65 | 111.72 | 119.70 |
| 3 | K | 30 | A | OP1-P-O3' | 6.65 | 119.83 | 105.20 |
| 3 | K | 120 | A | O3'-P-O5' | -6.65 | 91.37 | 104.00 |
| 4 | L | 771 | U | O3'-P-O5' | 6.65 | 116.63 | 104.00 |
| 2 | J | 116 | A | OP1-P-O3' | 6.64 | 119.82 | 105.20 |
| 1 | I | 51 | A | OP1-P-O3' | -6.64 | 90.59 | 105.20 |
| 4 | L | 706 | U | O3'-P-O5' | -6.64 | 91.38 | 104.00 |
| 6 | N | 356 | U | P-O3'-C3' | -6.64 | 111.73 | 119.70 |
| 4 | L | 581 | U | OP1-P-O3' | 6.63 | 119.79 | 105.20 |
| 4 | L | 705 | U | OP2-P-O3' | 6.63 | 119.79 | 105.20 |
| 6 | N | 355 | U | OP2-P-O3' | -6.63 | 90.61 | 105.20 |
| 4 | L | 495 | U | OP2-P-O3' | 6.63 | 119.78 | 105.20 |
| 4 | L | 493 | U | O3'-P-O5' | 6.63 | 116.59 | 104.00 |
| 4 | L | 586 | U | OP1-P-O3' | 6.63 | 119.78 | 105.20 |
| 1 | I | 104 | A | P-O3'-C3' | 6.62 | 127.65 | 119.70 |
| 3 | K | 20 | A | P-O3'-C3' | 6.62 | 127.64 | 119.70 |
| 1 | I | 379 | A | OP1-P-O3' | 6.62 | 119.76 | 105.20 |
| 1 | I | 248 | A | OP1-P-O3' | -6.61 | 90.66 | 105.20 |
| 4 | L | 513 | U | OP1-P-O3' | -6.61 | 90.65 | 105.20 |
| 4 | L | 431 | U | O3'-P-O5' | -6.61 | 91.44 | 104.00 |
| 6 | N | 340 | U | OP1-P-O3' | 6.61 | 119.74 | 105.20 |
| 4 | L | 545 | U | OP1-P-O3' | -6.61 | 90.67 | 105.20 |
| 4 | L | 682 | U | O3'-P-O5' | -6.61 | 91.45 | 104.00 |
| 1 | I | 65 | A | O3'-P-O5' | -6.61 | 91.45 | 104.00 |
| 1 | I | 383 | A | OP1-P-O3' | 6.60 | 119.73 | 105.20 |
| 2 | J | 77 | A | P-O3'-C3' | -6.60 | 111.78 | 119.70 |
| 4 | L | 608 | U | P-O3'-C3' | -6.60 | 111.78 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 3 | K | 132 | A | O3'-P-O5' | 6.60 | 116.53 | 104.00 |
| 4 | L | 589 | U | OP1-P-O3' | -6.59 | 90.69 | 105.20 |
| 6 | N | 337 | U | OP1-P-O3' | 6.59 | 119.71 | 105.20 |
| 6 | N | 476 | U | O3'-P-O5' | -6.59 | 91.47 | 104.00 |
| 4 | L | 669 | U | OP2-P-O3' | 6.59 | 119.70 | 105.20 |
| 1 | I | 203 | A | OP2-P-O3' | 6.59 | 119.69 | 105.20 |
| 2 | J | 33 | A | OP2-P-O3' | 6.59 | 119.69 | 105.20 |
| 4 | L | 782 | U | OP2-P-O3' | -6.58 | 90.72 | 105.20 |
| 5 | M | 418 | U | O3'-P-O5' | -6.58 | 91.49 | 104.00 |
| 6 | N | 505 | U | O3'-P-O5' | 6.58 | 116.51 | 104.00 |
| 2 | J | 178 | A | OP1-P-O3' | -6.58 | 90.72 | 105.20 |
| 4 | L | 753 | U | OP2-P-O3' | 6.57 | 119.66 | 105.20 |
| 3 | K | 98 | A | O3'-P-O5' | -6.57 | 91.52 | 104.00 |
| 6 | N | 454 | U | OP1-P-O3' | -6.57 | 90.75 | 105.20 |
| 1 | I | 344 | A | OP1-P-O3' | -6.57 | 90.76 | 105.20 |
| 3 | K | 262 | A | OP2-P-O3' | -6.57 | 90.76 | 105.20 |
| 5 | M | 517 | U | O3'-P-O5' | 6.56 | 116.47 | 104.00 |
| 4 | L | 419 | U | O3'-P-O5' | 6.56 | 116.46 | 104.00 |
| 3 | K | 156 | A | OP1-P-O3' | -6.56 | 90.77 | 105.20 |
| 3 | K | 72 | A | P-O3'-C3' | -6.55 | 111.83 | 119.70 |
| 5 | M | 419 | U | O3'-P-O5' | -6.55 | 91.55 | 104.00 |
| 1 | I | 405 | A | O3'-P-O5' | -6.55 | 91.55 | 104.00 |
| 2 | J | 60 | A | P-O3'-C3' | -6.55 | 111.84 | 119.70 |
| 3 | K | 176 | A | P-O3'-C3' | -6.55 | 111.84 | 119.70 |
| 1 | I | 334 | A | OP1-P-O3' | -6.54 | 90.81 | 105.20 |
| 3 | K | 102 | A | OP1-P-O3' | -6.54 | 90.81 | 105.20 |
| 3 | K | 179 | A | OP1-P-O3' | 6.54 | 119.59 | 105.20 |
| 5 | M | 520 | U | OP1-P-O3' | -6.54 | 90.81 | 105.20 |
| 6 | N | 459 | U | O3'-P-O5' | 6.54 | 116.43 | 104.00 |
| 3 | K | 244 | A | O3'-P-O5' | 6.54 | 116.42 | 104.00 |
| 1 | I | 275 | A | OP1-P-O3' | 6.54 | 119.58 | 105.20 |
| 3 | K | 56 | A | P-O3'-C3' | -6.53 | 111.86 | 119.70 |
| 4 | L | 719 | U | P-O3'-C3' | 6.53 | 127.54 | 119.70 |
| 1 | I | 11 | A | O3'-P-O5' | -6.53 | 91.59 | 104.00 |
| 6 | N | 285 | U | O3'-P-O5' | 6.53 | 116.41 | 104.00 |
| 4 | L | 627 | U | OP1-P-O3' | -6.53 | 90.84 | 105.20 |
| 4 | L | 730 | U | OP1-P-O3' | 6.52 | 119.55 | 105.20 |
| 5 | M | 317 | U | OP2-P-O3' | -6.52 | 90.85 | 105.20 |
| 1 | I | 117 | A | OP1-P-O3' | -6.52 | 90.85 | 105.20 |
| 3 | K | 109 | A | OP1-P-O3' | -6.52 | 90.85 | 105.20 |
| 2 | J | 154 | A | P-O3'-C3' | -6.52 | 111.88 | 119.70 |
| 2 | J | 252 | A | OP1-P-O3' | -6.52 | 90.86 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 5 | M | 526 | U | O3'-P-O5' | -6.52 | 91.61 | 104.00 |
| 6 | N | 306 | U | OP2-P-O3' | 6.52 | 119.54 | 105.20 |
| 3 | K | 147 | A | OP1-P-O3' | 6.52 | 119.54 | 105.20 |
| 5 | M | 461 | U | OP2-P-O3' | 6.52 | 119.54 | 105.20 |
| 6 | N | 347 | U | O3'-P-O5' | 6.52 | 116.38 | 104.00 |
| 1 | I | 216 | A | O3'-P-O5' | 6.51 | 116.38 | 104.00 |
| 4 | L | 629 | U | O3'-P-O5' | 6.51 | 116.38 | 104.00 |
| 2 | J | 31 | A | P-O3'-C3' | -6.51 | 111.89 | 119.70 |
| 4 | L | 714 | U | OP2-P-O3' | 6.51 | 119.52 | 105.20 |
| 4 | L | 472 | U | OP1-P-O3' | 6.51 | 119.52 | 105.20 |
| 3 | K | 110 | A | O3'-P-O5' | -6.50 | 91.64 | 104.00 |
| 3 | K | 231 | A | P-O3'-C3' | -6.50 | 111.89 | 119.70 |
| 2 | J | 38 | A | OP1-P-O3' | -6.50 | 90.90 | 105.20 |
| 4 | L | 502 | U | OP2-P-O3' | -6.50 | 90.91 | 105.20 |
| 6 | N | 297 | U | P-O3'-C3' | -6.49 | 111.91 | 119.70 |
| 1 | I | 111 | A | OP1-P-O3' | 6.49 | 119.48 | 105.20 |
| 3 | K | 243 | A | OP2-P-O3' | -6.49 | 90.93 | 105.20 |
| 4 | L | 535 | U | O3'-P-O5' | -6.49 | 91.67 | 104.00 |
| 5 | M | 375 | U | P-O3'-C3' | -6.49 | 111.91 | 119.70 |
| 5 | M | 407 | U | OP2-P-O3' | -6.49 | 90.93 | 105.20 |
| 5 | M | 439 | U | O3'-P-O5' | 6.49 | 116.32 | 104.00 |
| 6 | N | 445 | U | P-O3'-C3' | -6.48 | 111.92 | 119.70 |
| 1 | I | 36 | A | OP1-P-O3' | -6.48 | 90.94 | 105.20 |
| 3 | K | 85 | A | OP1-P-O3' | -6.48 | 90.95 | 105.20 |
| 2 | J | 194 | A | OP2-P-O3' | 6.48 | 119.45 | 105.20 |
| 5 | M | 433 | U | O3'-P-O5' | -6.48 | 91.69 | 104.00 |
| 4 | L | 415 | U | OP1-P-O3' | 6.47 | 119.44 | 105.20 |
| 4 | L | 636 | U | OP2-P-O3' | 6.47 | 119.44 | 105.20 |
| 3 | K | 210 | A | P-O3'-C3' | 6.47 | 127.47 | 119.70 |
| 1 | I | 164 | A | P-O3'-C3' | 6.47 | 127.46 | 119.70 |
| 5 | M | 343 | U | O3'-P-O5' | 6.47 | 116.29 | 104.00 |
| 2 | J | 254 | A | O3'-P-O5' | -6.47 | 91.71 | 104.00 |
| 5 | M | 482 | U | OP1-P-O3' | -6.47 | 90.97 | 105.20 |
| 6 | N | 373 | U | OP1-P-O3' | 6.47 | 119.43 | 105.20 |
| 2 | J | 18 | A | OP2-P-O3' | -6.46 | 90.99 | 105.20 |
| 5 | M | 440 | U | OP2-P-O3' | -6.46 | 90.99 | 105.20 |
| 1 | I | 42 | A | OP1-P-O3' | -6.46 | 90.99 | 105.20 |
| 4 | L | 630 | U | O3'-P-O5' | 6.46 | 116.27 | 104.00 |
| 2 | J | 199 | A | O3'-P-O5' | 6.45 | 116.26 | 104.00 |
| 6 | N | 525 | U | P-O3'-C3' | 6.45 | 127.44 | 119.70 |
| 2 | J | 213 | A | P-O3'-C3' | -6.45 | 111.96 | 119.70 |
| 3 | K | 130 | A | OP2-P-O3' | 6.45 | 119.39 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 6 | N | 304 | U | OP2-P-O3' | -6.44 | 91.02 | 105.20 |
| 6 | N | 332 | U | OP2-P-O3' | 6.44 | 119.38 | 105.20 |
| 6 | N | 394 | U | OP1-P-O3' | -6.44 | 91.02 | 105.20 |
| 1 | I | 382 | A | P-O3'-C3' | 6.44 | 127.43 | 119.70 |
| 3 | K | 57 | A | P-O3'-C3' | 6.44 | 127.43 | 119.70 |
| 4 | L | 598 | U | O3'-P-O5' | 6.44 | 116.24 | 104.00 |
| 1 | I | 166 | A | OP1-P-O3' | -6.44 | 91.04 | 105.20 |
| 2 | J | 161 | A | OP1-P-O3' | -6.44 | 91.04 | 105.20 |
| 2 | J | 249 | A | OP1-P-O3' | -6.44 | 91.04 | 105.20 |
| 4 | L | 770 | U | OP2-P-O3' | 6.44 | 119.36 | 105.20 |
| 5 | M | 455 | U | O3'-P-O5' | -6.44 | 91.77 | 104.00 |
| 1 | I | 344 | A | OP2-P-O3' | -6.43 | 91.05 | 105.20 |
| 4 | L | 533 | U | OP1-P-O3' | -6.43 | 91.05 | 105.20 |
| 3 | K | 115 | A | OP2-P-O3' | 6.43 | 119.35 | 105.20 |
| 3 | K | 205 | A | OP1-P-O3' | 6.43 | 119.35 | 105.20 |
| 1 | I | 222 | A | OP1-P-O3' | -6.42 | 91.07 | 105.20 |
| 1 | I | 196 | A | OP1-P-O3' | -6.42 | 91.08 | 105.20 |
| 5 | M | 370 | U | OP2-P-O3' | -6.41 | 91.09 | 105.20 |
| 1 | I | 231 | A | OP1-P-O3' | -6.41 | 91.11 | 105.20 |
| 4 | L | 796 | U | OP2-P-O3' | -6.41 | 91.11 | 105.20 |
| 5 | M | 284 | U | OP2-P-O3' | -6.41 | 91.11 | 105.20 |
| 3 | K | 130 | A | OP1-P-O3' | -6.40 | 91.11 | 105.20 |
| 4 | L | 717 | U | O3'-P-O5' | -6.40 | 91.83 | 104.00 |
| 5 | M | 504 | U | OP1-P-O3' | -6.40 | 91.11 | 105.20 |
| 2 | J | 74 | A | O3'-P-O5' | 6.40 | 116.16 | 104.00 |
| 1 | I | 396 | A | OP2-P-O3' | 6.40 | 119.27 | 105.20 |
| 1 | I | 254 | A | O3'-P-O5' | -6.39 | 91.85 | 104.00 |
| 6 | N | 382 | U | P-O3'-C3' | 6.39 | 127.37 | 119.70 |
| 4 | L | 733 | U | OP1-P-O3' | -6.39 | 91.14 | 105.20 |
| 6 | N | 396 | U | O3'-P-O5' | -6.39 | 91.86 | 104.00 |
| 2 | J | 3 | A | OP1-P-O3' | 6.39 | 119.25 | 105.20 |
| 4 | L | 613 | U | OP2-P-O3' | 6.39 | 119.25 | 105.20 |
| 1 | I | 195 | A | OP1-P-O3' | -6.38 | 91.16 | 105.20 |
| 1 | I | 285 | A | OP1-P-O3' | -6.38 | 91.16 | 105.20 |
| 5 | M | 477 | U | O3'-P-O5' | 6.38 | 116.12 | 104.00 |
| 6 | N | 455 | U | O3'-P-O5' | -6.38 | 91.87 | 104.00 |
| 1 | I | 3 | A | OP1-P-O3' | 6.38 | 119.23 | 105.20 |
| 6 | N | 476 | U | OP1-P-O3' | -6.38 | 91.17 | 105.20 |
| 4 | L | 739 | U | OP1-P-O3' | -6.38 | 91.17 | 105.20 |
| 5 | M | 494 | U | OP1-P-O3' | -6.38 | 91.17 | 105.20 |
| 4 | L | 563 | U | OP1-P-O3' | 6.36 | 119.19 | 105.20 |
| 3 | K | 47 | A | O3'-P-O5' | -6.36 | 91.92 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 2 | J | 243 | A | OP1-P-O3' | 6.36 | 119.19 | 105.20 |
| 5 | M | 534 | U | OP1-P-O3' | 6.36 | 119.18 | 105.20 |
| 4 | L | 809 | U | O3'-P-O5' | 6.35 | 116.07 | 104.00 |
| 4 | L | 821 | U | O3'-P-O5' | -6.35 | 91.93 | 104.00 |
| 3 | K | 63 | A | OP2-P-O3' | -6.35 | 91.23 | 105.20 |
| 6 | N | 350 | U | OP1-P-O3' | 6.35 | 119.17 | 105.20 |
| 1 | I | 80 | A | OP1-P-O3' | -6.35 | 91.24 | 105.20 |
| 4 | L | 621 | U | P-O3'-C3' | -6.35 | 112.08 | 119.70 |
| 4 | L | 562 | U | P-O3'-C3' | -6.34 | 112.09 | 119.70 |
| 4 | L | 538 | U | OP1-P-O3' | 6.34 | 119.14 | 105.20 |
| 2 | J | 116 | A | P-O3'-C3' | 6.34 | 127.30 | 119.70 |
| 3 | K | 134 | A | O3'-P-O5' | 6.33 | 116.04 | 104.00 |
| 2 | J | 91 | A | OP1-P-O3' | -6.33 | 91.26 | 105.20 |
| 6 | N | 433 | U | OP1-P-O3' | 6.33 | 119.13 | 105.20 |
| 1 | I | 16 | A | O3'-P-O5' | -6.33 | 91.97 | 104.00 |
| 5 | M | 312 | U | OP2-P-O3' | -6.33 | 91.27 | 105.20 |
| 6 | N | 289 | U | P-O3'-C3' | -6.33 | 112.11 | 119.70 |
| 4 | L | 536 | U | O3'-P-O5' | -6.33 | 91.98 | 104.00 |
| 4 | L | 680 | U | O3'-P-O5' | 6.33 | 116.02 | 104.00 |
| 6 | N | 475 | U | P-O3'-C3' | -6.33 | 112.11 | 119.70 |
| 6 | N | 414 | U | OP1-P-O3' | 6.32 | 119.11 | 105.20 |
| 1 | I | 311 | A | OP1-P-O3' | -6.32 | 91.30 | 105.20 |
| 1 | I | 244 | A | OP2-P-O3' | -6.32 | 91.30 | 105.20 |
| 3 | K | 24 | A | O3'-P-O5' | 6.32 | 116.00 | 104.00 |
| 3 | K | 258 | A | OP1-P-O3' | 6.32 | 119.09 | 105.20 |
| 5 | M | 480 | U | OP1-P-O3' | 6.32 | 119.09 | 105.20 |
| 6 | N | 471 | U | O3'-P-O5' | 6.31 | 116.00 | 104.00 |
| 1 | I | 239 | A | OP2-P-O3' | 6.31 | 119.08 | 105.20 |
| 4 | L | 744 | U | O3'-P-O5' | 6.31 | 115.99 | 104.00 |
| 1 | I | 237 | A | P-O3'-C3' | -6.31 | 112.13 | 119.70 |
| 5 | M | 337 | U | O3'-P-O5' | -6.31 | 92.02 | 104.00 |
| 1 | I | 299 | A | O3'-P-O5' | -6.30 | 92.02 | 104.00 |
| 6 | N | 522 | U | OP2-P-O3' | -6.30 | 91.33 | 105.20 |
| 3 | K | 123 | A | P-O3'-C3' | -6.30 | 112.14 | 119.70 |
| 6 | N | 317 | U | OP1-P-O3' | 6.30 | 119.06 | 105.20 |
| 4 | L | 484 | U | OP1-P-O3' | -6.29 | 91.36 | 105.20 |
| 6 | N | 494 | U | P-O3'-C3' | 6.29 | 127.25 | 119.70 |
| 4 | L | 429 | U | O3'-P-O5' | -6.29 | 92.05 | 104.00 |
| 4 | L | 624 | U | P-O3'-C3' | -6.29 | 112.15 | 119.70 |
| 5 | M | 388 | U | OP2-P-O3' | -6.29 | 91.36 | 105.20 |
| 6 | N | 502 | U | OP2-P-O3' | 6.29 | 119.03 | 105.20 |
| 2 | J | 246 | A | P-O3'-C3' | -6.28 | 112.16 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 5 | M | 378 | U | OP1-P-O3' | 6.28 | 119.02 | 105.20 |
| 1 | I | 272 | A | P-O3'-C3' | -6.28 | 112.17 | 119.70 |
| 2 | J | 57 | A | OP2-P-O3' | -6.28 | 91.39 | 105.20 |
| 1 | I | 85 | A | OP1-P-O3' | -6.27 | 91.41 | 105.20 |
| 4 | L | 804 | U | P-O3'-C3' | -6.27 | 112.18 | 119.70 |
| 1 | I | 292 | A | OP2-P-O3' | 6.27 | 118.99 | 105.20 |
| 2 | J | 71 | A | OP2-P-O3' | 6.26 | 118.98 | 105.20 |
| 4 | L | 559 | U | OP2-P-O3' | 6.26 | 118.97 | 105.20 |
| 5 | M | 446 | U | OP2-P-O3' | -6.26 | 91.44 | 105.20 |
| 6 | N | 427 | U | OP1-P-O3' | -6.25 | 91.45 | 105.20 |
| 2 | J | 209 | A | OP1-P-O3' | -6.25 | 91.46 | 105.20 |
| 6 | N | 494 | U | O3'-P-O5' | 6.25 | 115.86 | 104.00 |
| 1 | I | 167 | A | O3'-P-O5' | 6.24 | 115.86 | 104.00 |
| 4 | L | 781 | U | P-O3'-C3' | -6.24 | 112.21 | 119.70 |
| 2 | J | 152 | A | OP1-P-O3' | -6.24 | 91.47 | 105.20 |
| 6 | N | 441 | U | O3'-P-O5' | 6.24 | 115.85 | 104.00 |
| 6 | N | 378 | U | OP2-P-O3' | -6.23 | 91.49 | 105.20 |
| 4 | L | 428 | U | O3'-P-O5' | -6.23 | 92.16 | 104.00 |
| 2 | J | 26 | A | OP1-P-O3' | -6.23 | 91.50 | 105.20 |
| 3 | K | 144 | A | P-O3'-C3' | 6.22 | 127.17 | 119.70 |
| 4 | L | 799 | U | P-O3'-C3' | -6.22 | 112.23 | 119.70 |
| 4 | L | 432 | U | O3'-P-O5' | 6.22 | 115.82 | 104.00 |
| 5 | M | 396 | U | OP1-P-O3' | -6.22 | 91.52 | 105.20 |
| 2 | J | 46 | A | OP1-P-O3' | -6.21 | 91.54 | 105.20 |
| 3 | K | 121 | A | OP1-P-O3' | -6.21 | 91.54 | 105.20 |
| 3 | K | 69 | A | OP1-P-O3' | 6.21 | 118.85 | 105.20 |
| 3 | K | 58 | A | P-O3'-C3' | 6.21 | 127.15 | 119.70 |
| 4 | L | 467 | U | O3'-P-O5' | 6.21 | 115.79 | 104.00 |
| 5 | M | 302 | U | P-O3'-C3' | -6.20 | 112.26 | 119.70 |
| 3 | K | 152 | A | O3'-P-O5' | -6.20 | 92.22 | 104.00 |
| 4 | L | 557 | U | OP1-P-O3' | -6.20 | 91.57 | 105.20 |
| 1 | I | 292 | A | O3'-P-O5' | 6.19 | 115.76 | 104.00 |
| 1 | I | 273 | A | OP1-P-O3' | -6.19 | 91.59 | 105.20 |
| 2 | J | 175 | A | OP2-P-O3' | 6.19 | 118.81 | 105.20 |
| 4 | L | 479 | U | OP1-P-O3' | -6.19 | 91.59 | 105.20 |
| 1 | I | 365 | A | O3'-P-O5' | 6.19 | 115.75 | 104.00 |
| 1 | I | 71 | A | OP1-P-O3' | -6.18 | 91.59 | 105.20 |
| 4 | L | 704 | U | O3'-P-O5' | 6.18 | 115.75 | 104.00 |
| 4 | L | 761 | U | OP1-P-O3' | 6.18 | 118.80 | 105.20 |
| 6 | N | 301 | U | OP1-P-O3' | 6.18 | 118.80 | 105.20 |
| 6 | N | 302 | U | OP1-P-O3' | 6.18 | 118.80 | 105.20 |
| 1 | I | 16 | A | OP1-P-O3' | -6.18 | 91.61 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1 | I | 296 | A | OP1-P-O3' | -6.18 | 91.61 | 105.20 |
| 5 | M | 505 | U | OP2-P-O3' | 6.18 | 118.79 | 105.20 |
| 1 | I | 25 | A | OP2-P-O3' | 6.17 | 118.78 | 105.20 |
| 1 | I | 408 | A | O3'-P-O5' | -6.17 | 92.28 | 104.00 |
| 5 | M | 359 | U | P-O3'-C3' | -6.17 | 112.30 | 119.70 |
| 6 | N | 485 | U | P-O3'-C3' | -6.17 | 112.30 | 119.70 |
| 2 | J | 104 | A | O3'-P-O5' | 6.16 | 115.71 | 104.00 |
| 2 | J | 147 | A | OP1-P-O3' | 6.16 | 118.76 | 105.20 |
| 1 | I | 365 | A | OP2-P-O3' | -6.16 | 91.65 | 105.20 |
| 4 | L | 677 | U | P-O3'-C3' | -6.16 | 112.31 | 119.70 |
| 1 | I | 351 | A | OP1-P-O3' | 6.16 | 118.75 | 105.20 |
| 1 | I | 165 | A | O3'-P-O5' | -6.15 | 92.31 | 104.00 |
| 4 | L | 580 | U | P-O3'-C3' | -6.15 | 112.32 | 119.70 |
| 3 | K | 105 | A | OP1-P-O3' | 6.15 | 118.73 | 105.20 |
| 1 | I | 324 | A | OP1-P-O3' | -6.14 | 91.68 | 105.20 |
| 6 | N | 472 | U | OP1-P-O3' | 6.14 | 118.72 | 105.20 |
| 4 | L | 605 | U | OP1-P-O3' | -6.14 | 91.69 | 105.20 |
| 4 | L | 713 | U | OP1-P-O3' | -6.14 | 91.69 | 105.20 |
| 2 | J | 268 | A | P-O3'-C3' | -6.14 | 112.33 | 119.70 |
| 6 | N | 463 | U | OP1-P-O3' | -6.14 | 91.70 | 105.20 |
| 1 | I | 276 | A | P-O3'-C3' | -6.14 | 112.34 | 119.70 |
| 3 | K | 88 | A | OP2-P-O3' | -6.14 | 91.70 | 105.20 |
| 1 | I | 223 | A | O3'-P-O5' | -6.13 | 92.34 | 104.00 |
| 2 | J | 51 | A | OP1-P-O3' | 6.13 | 118.69 | 105.20 |
| 2 | J | 133 | A | OP1-P-O3' | -6.13 | 91.70 | 105.20 |
| 4 | L | 820 | U | OP2-P-O3' | -6.13 | 91.71 | 105.20 |
| 1 | I | 254 | A | OP1-P-O3' | -6.13 | 91.71 | 105.20 |
| 1 | I | 96 | A | P-O3'-C3' | -6.13 | 112.35 | 119.70 |
| 2 | J | 240 | A | P-O3'-C3' | -6.12 | 112.35 | 119.70 |
| 2 | J | 274 | A | O3'-P-O5' | 6.12 | 115.63 | 104.00 |
| 6 | N | 516 | U | OP1-P-O3' | 6.12 | 118.65 | 105.20 |
| 2 | J | 142 | A | OP2-P-O3' | 6.11 | 118.64 | 105.20 |
| 3 | K | 182 | A | P-O3'-C3' | 6.11 | 127.03 | 119.70 |
| 3 | K | 132 | A | OP1-P-O3' | -6.11 | 91.77 | 105.20 |
| 5 | M | 339 | U | OP1-P-O3' | -6.11 | 91.76 | 105.20 |
| 1 | I | 81 | A | OP1-P-O3' | -6.11 | 91.77 | 105.20 |
| 3 | K | 27 | A | O3'-P-O5' | 6.10 | 115.60 | 104.00 |
| 5 | M | 322 | U | OP1-P-O3' | -6.10 | 91.77 | 105.20 |
| 4 | L | 459 | U | OP1-P-O3' | -6.10 | 91.78 | 105.20 |
| 4 | L | 572 | U | P-O3'-C3' | -6.10 | 112.38 | 119.70 |
| 5 | M | 535 | U | OP2-P-O3' | 6.10 | 118.61 | 105.20 |
| 5 | M | 412 | U | OP2-P-O3' | 6.09 | 118.61 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 5 | M | 445 | U | P-O3'-C3' | -6.09 | 112.39 | 119.70 |
| 6 | N | 295 | U | P-O3'-C3' | 6.09 | 127.01 | 119.70 |
| 1 | I | 371 | A | OP2-P-O3' | 6.09 | 118.59 | 105.20 |
| 3 | K | 217 | A | P-O3'-C3' | -6.09 | 112.39 | 119.70 |
| 4 | L | 645 | U | P-O3'-C3' | -6.08 | 112.40 | 119.70 |
| 2 | J | 97 | A | P-O3'-C3' | -6.08 | 112.40 | 119.70 |
| 6 | N | 267 | U | O3'-P-O5' | 6.08 | 115.55 | 104.00 |
| 6 | N | 384 | U | OP1-P-O3' | 6.08 | 118.57 | 105.20 |
| 6 | N | 302 | U | OP2-P-O3' | 6.08 | 118.57 | 105.20 |
| 1 | I | 178 | A | OP2-P-O3' | 6.07 | 118.56 | 105.20 |
| 4 | L | 798 | U | P-O3'-C3' | -6.07 | 112.42 | 119.70 |
| 6 | N | 274 | U | OP2-P-O3' | 6.07 | 118.54 | 105.20 |
| 2 | J | 48 | A | OP1-P-O3' | -6.06 | 91.86 | 105.20 |
| 4 | L | 693 | U | OP1-P-O3' | 6.06 | 118.54 | 105.20 |
| 1 | I | 103 | A | OP1-P-O3' | 6.06 | 118.52 | 105.20 |
| 5 | M | 348 | U | OP1-P-O3' | 6.06 | 118.52 | 105.20 |
| 1 | I | 60 | A | OP1-P-O3' | 6.05 | 118.52 | 105.20 |
| 3 | K | 240 | A | O3'-P-O5' | -6.05 | 92.50 | 104.00 |
| 6 | N | 319 | U | P-O3'-C3' | 6.05 | 126.96 | 119.70 |
| 1 | I | 48 | A | OP1-P-O3' | -6.05 | 91.89 | 105.20 |
| 6 | N | 372 | U | O3'-P-O5' | 6.04 | 115.48 | 104.00 |
| 1 | I | 310 | A | OP1-P-O3' | -6.04 | 91.92 | 105.20 |
| 2 | J | 81 | A | O3'-P-O5' | -6.04 | 92.53 | 104.00 |
| 5 | M | 292 | U | O3'-P-O5' | 6.04 | 115.47 | 104.00 |
| 4 | L | 428 | U | OP1-P-O3' | 6.03 | 118.48 | 105.20 |
| 6 | N | 405 | U | P-O3'-C3' | -6.03 | 112.46 | 119.70 |
| 4 | L | 452 | U | O3'-P-O5' | 6.03 | 115.45 | 104.00 |
| 4 | L | 523 | U | P-O3'-C3' | -6.03 | 112.47 | 119.70 |
| 4 | L | 554 | U | P-O3'-C3' | -6.03 | 112.47 | 119.70 |
| 5 | M | 496 | U | OP1-P-O3' | -6.03 | 91.94 | 105.20 |
| 2 | J | 125 | A | P-O3'-C3' | -6.02 | 112.48 | 119.70 |
| 5 | M | 393 | U | OP2-P-O3' | 6.02 | 118.44 | 105.20 |
| 1 | I | 94 | A | OP1-P-O3' | 6.01 | 118.43 | 105.20 |
| 4 | L | 524 | U | O3'-P-O5' | 6.01 | 115.43 | 104.00 |
| 1 | I | 25 | A | OP1-P-O3' | -6.01 | 91.98 | 105.20 |
| 1 | I | 212 | A | OP2-P-O3' | 6.01 | 118.42 | 105.20 |
| 2 | J | 107 | A | OP2-P-O3' | 6.01 | 118.42 | 105.20 |
| 2 | J | 256 | A | O3'-P-O5' | 6.01 | 115.42 | 104.00 |
| 3 | K | 177 | A | P-O3'-C3' | -6.01 | 112.49 | 119.70 |
| 1 | I | 217 | A | P-O3'-C3' | -6.01 | 112.49 | 119.70 |
| 2 | J | 40 | A | OP2-P-O3' | 6.01 | 118.42 | 105.20 |
| 2 | J | 209 | A | O3'-P-O5' | -6.00 | 92.59 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 4 | L | 436 | U | P-O3'-C3' | 6.00 | 126.90 | 119.70 |
| 5 | M | 501 | U | OP2-P-O3' | 6.00 | 118.40 | 105.20 |
| 4 | L | 762 | U | OP2-P-O3' | -6.00 | 92.00 | 105.20 |
| 2 | J | 200 | A | P-O3'-C3' | -6.00 | 112.51 | 119.70 |
| 1 | I | 372 | A | OP1-P-O3' | -5.99 | 92.02 | 105.20 |
| 4 | L | 689 | U | OP2-P-O3' | -5.99 | 92.02 | 105.20 |
| 2 | J | 137 | A | OP2-P-O3' | -5.99 | 92.02 | 105.20 |
| 4 | L | 542 | U | P-O3'-C3' | -5.98 | 112.53 | 119.70 |
| 5 | M | 328 | U | OP1-P-O3' | -5.98 | 92.05 | 105.20 |
| 5 | M | 528 | U | OP1-P-O3' | -5.97 | 92.06 | 105.20 |
| 2 | J | 120 | A | P-O3'-C3' | -5.97 | 112.54 | 119.70 |
| 2 | J | 164 | A | P-O3'-C3' | -5.97 | 112.54 | 119.70 |
| 3 | K | 84 | A | P-O3'-C3' | -5.96 | 112.55 | 119.70 |
| 1 | I | 313 | A | O3'-P-O5' | -5.96 | 92.68 | 104.00 |
| 3 | K | 125 | A | OP1-P-O3' | -5.96 | 92.09 | 105.20 |
| 4 | L | 675 | U | OP1-P-O3' | -5.96 | 92.09 | 105.20 |
| 6 | N | 375 | U | OP2-P-O3' | 5.96 | 118.31 | 105.20 |
| 2 | J | 213 | A | OP2-P-O3' | -5.96 | 92.09 | 105.20 |
| 3 | K | 61 | A | OP1-P-O3' | 5.96 | 118.31 | 105.20 |
| 1 | I | 360 | A | OP2-P-O3' | 5.95 | 118.30 | 105.20 |
| 4 | L | 703 | U | O3'-P-O5' | -5.95 | 92.69 | 104.00 |
| 5 | M | 436 | U | P-O3'-C3' | -5.95 | 112.56 | 119.70 |
| 4 | L | 467 | U | OP1-P-O3' | -5.95 | 92.11 | 105.20 |
| 6 | N | 283 | U | P-O3'-C3' | -5.94 | 112.57 | 119.70 |
| 2 | J | 10 | A | O3'-P-O5' | 5.94 | 115.29 | 104.00 |
| 3 | K | 194 | A | OP1-P-O3' | 5.94 | 118.27 | 105.20 |
| 2 | J | 37 | A | OP2-P-O3' | 5.94 | 118.27 | 105.20 |
| 5 | M | 365 | U | OP2-P-O3' | 5.94 | 118.27 | 105.20 |
| 1 | I | 82 | A | OP1-P-O3' | -5.93 | 92.14 | 105.20 |
| 6 | N | 514 | U | OP2-P-O3' | 5.93 | 118.25 | 105.20 |
| 4 | L | 624 | U | OP2-P-O3' | -5.92 | 92.17 | 105.20 |
| 1 | I | 264 | A | OP1-P-O3' | -5.92 | 92.17 | 105.20 |
| 3 | K | 258 | A | P-O3'-C3' | -5.92 | 112.59 | 119.70 |
| 1 | I | 328 | A | OP2-P-O3' | 5.92 | 118.22 | 105.20 |
| 1 | I | 347 | A | OP2-P-O3' | 5.92 | 118.22 | 105.20 |
| 2 | J | 107 | A | OP1-P-O3' | -5.92 | 92.18 | 105.20 |
| 1 | I | 129 | A | O3'-P-O5' | 5.92 | 115.24 | 104.00 |
| 2 | J | 113 | A | OP1-P-O3' | -5.92 | 92.18 | 105.20 |
| 6 | N | 348 | U | P-O3'-C3' | 5.92 | 126.80 | 119.70 |
| 1 | I | 345 | A | OP1-P-O3' | -5.91 | 92.19 | 105.20 |
| 2 | J | 14 | A | OP1-P-O3' | -5.91 | 92.21 | 105.20 |
| 6 | N | 365 | U | P-O3'-C3' | -5.90 | 112.62 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 2 | J | 119 | A | OP2-P-O3' | -5.90 | 92.22 | 105.20 |
| 4 | L | 525 | U | OP1-P-O3' | -5.90 | 92.22 | 105.20 |
| 6 | N | 285 | U | OP2-P-O3' | -5.90 | 92.22 | 105.20 |
| 1 | I | 7 | A | O3'-P-O5' | 5.90 | 115.21 | 104.00 |
| 4 | L | 672 | U | OP1-P-O3' | 5.90 | 118.17 | 105.20 |
| 4 | L | 780 | U | OP2-P-O3' | 5.89 | 118.17 | 105.20 |
| 4 | L | 442 | U | P-O3'-C3' | 5.89 | 126.77 | 119.70 |
| 5 | M | 532 | U | O3'-P-O5' | 5.89 | 115.19 | 104.00 |
| 1 | I | 171 | A | P-O3'-C3' | 5.89 | 126.76 | 119.70 |
| 4 | L | 536 | U | P-O3'-C3' | -5.89 | 112.64 | 119.70 |
| 5 | M | 449 | U | OP2-P-O3' | 5.88 | 118.14 | 105.20 |
| 1 | I | 280 | A | P-O3'-C3' | 5.88 | 126.75 | 119.70 |
| 2 | J | 134 | A | P-O3'-C3' | -5.88 | 112.64 | 119.70 |
| 3 | K | 205 | A | P-O3'-C3' | -5.88 | 112.65 | 119.70 |
| 4 | L | 481 | U | OP1-P-O3' | -5.88 | 92.27 | 105.20 |
| 5 | M | 450 | U | OP1-P-O3' | 5.88 | 118.13 | 105.20 |
| 1 | I | 154 | A | O3'-P-O5' | 5.88 | 115.16 | 104.00 |
| 2 | J | 134 | A | OP2-P-O3' | -5.87 | 92.28 | 105.20 |
| 4 | L | 476 | U | O3'-P-O5' | 5.87 | 115.16 | 104.00 |
| 6 | N | 389 | U | P-O3'-C3' | 5.87 | 126.75 | 119.70 |
| 3 | K | 170 | A | OP1-P-O3' | -5.87 | 92.28 | 105.20 |
| 3 | K | 261 | A | OP2-P-O3' | -5.87 | 92.28 | 105.20 |
| 3 | K | 215 | A | O3'-P-O5' | -5.87 | 92.85 | 104.00 |
| 6 | N | 480 | U | OP2-P-O3' | 5.86 | 118.10 | 105.20 |
| 6 | N | 521 | U | OP2-P-O3' | 5.86 | 118.09 | 105.20 |
| 2 | J | 174 | A | OP2-P-O3' | -5.85 | 92.33 | 105.20 |
| 3 | K | 23 | A | O3'-P-O5' | 5.85 | 115.12 | 104.00 |
| 6 | N | 291 | U | O3'-P-O5' | 5.85 | 115.12 | 104.00 |
| 1 | I | 381 | A | OP1-P-O3' | 5.85 | 118.07 | 105.20 |
| 3 | K | 264 | A | O3'-P-O5' | 5.85 | 115.11 | 104.00 |
| 4 | L | 479 | U | OP2-P-O3' | -5.84 | 92.34 | 105.20 |
| 1 | I | 325 | A | OP1-P-O3' | 5.84 | 118.05 | 105.20 |
| 4 | L | 439 | U | OP2-P-O3' | 5.84 | 118.04 | 105.20 |
| 4 | L | 613 | U | P-O3'-C3' | -5.83 | 112.70 | 119.70 |
| 2 | J | 117 | A | O3'-P-O5' | 5.83 | 115.08 | 104.00 |
| 2 | J | 9 | A | OP1-P-O3' | 5.83 | 118.02 | 105.20 |
| 6 | N | 457 | U | OP2-P-O3' | -5.83 | 92.38 | 105.20 |
| 3 | K | 74 | A | OP1-P-O3' | -5.82 | 92.39 | 105.20 |
| 6 | N | 267 | U | OP2-P-O3' | -5.82 | 92.39 | 105.20 |
| 6 | N | 413 | U | OP2-P-O3' | 5.82 | 118.01 | 105.20 |
| 3 | K | 188 | A | OP1-P-O3' | 5.82 | 118.01 | 105.20 |
| 4 | L | 638 | U | O3'-P-O5' | -5.82 | 92.94 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 2 | J | 243 | A | O3'-P-O5' | 5.82 | 115.06 | 104.00 |
| 4 | L | 578 | U | OP1-P-O3' | -5.82 | 92.40 | 105.20 |
| 4 | L | 648 | U | O3'-P-O5' | -5.82 | 92.95 | 104.00 |
| 4 | L | 809 | U | OP2-P-O3' | -5.82 | 92.40 | 105.20 |
| 1 | I | 326 | A | O3'-P-O5' | -5.81 | 92.96 | 104.00 |
| 1 | I | 387 | A | P-O3'-C3' | -5.81 | 112.73 | 119.70 |
| 2 | J | 3 | A | OP2-P-O3' | -5.81 | 92.42 | 105.20 |
| 6 | N | 374 | U | O3'-P-O5' | -5.81 | 92.96 | 104.00 |
| 5 | M | 362 | U | P-O3'-C3' | -5.80 | 112.73 | 119.70 |
| 1 | I | 12 | A | O3'-P-O5' | -5.80 | 92.98 | 104.00 |
| 4 | L | 414 | U | OP1-P-O3' | 5.80 | 117.96 | 105.20 |
| 2 | J | 18 | A | OP1-P-O3' | 5.80 | 117.96 | 105.20 |
| 1 | I | 240 | A | P-O3'-C3' | -5.80 | 112.74 | 119.70 |
| 5 | M | 431 | U | OP2-P-O3' | 5.79 | 117.95 | 105.20 |
| 6 | N | 515 | U | P-O3'-C3' | -5.79 | 112.75 | 119.70 |
| 4 | L | 714 | U | OP1-P-O3' | 5.79 | 117.95 | 105.20 |
| 4 | L | 783 | U | OP1-P-O3' | 5.79 | 117.95 | 105.20 |
| 1 | I | 158 | A | P-O3'-C3' | -5.79 | 112.76 | 119.70 |
| 4 | L | 466 | U | OP2-P-O3' | 5.78 | 117.92 | 105.20 |
| 4 | L | 584 | U | O3'-P-O5' | 5.78 | 114.98 | 104.00 |
| 4 | L | 710 | U | P-O3'-C3' | -5.78 | 112.77 | 119.70 |
| 3 | K | 244 | A | OP1-P-O3' | 5.78 | 117.91 | 105.20 |
| 3 | K | 173 | A | O3'-P-O5' | 5.77 | 114.97 | 104.00 |
| 2 | J | 262 | A | OP2-P-O3' | 5.77 | 117.90 | 105.20 |
| 3 | K | 26 | A | P-O3'-C3' | 5.77 | 126.62 | 119.70 |
| 3 | K | 213 | A | OP1-P-O3' | 5.76 | 117.88 | 105.20 |
| 5 | M | 550 | U | OP1-P-O3' | 5.76 | 117.88 | 105.20 |
| 5 | M | 463 | U | OP1-P-O3' | -5.76 | 92.52 | 105.20 |
| 1 | I | 5 | A | OP1-P-O3' | 5.76 | 117.87 | 105.20 |
| 1 | I | 151 | A | OP2-P-O3' | -5.76 | 92.54 | 105.20 |
| 2 | J | 130 | A | OP1-P-O3' | -5.75 | 92.54 | 105.20 |
| 5 | M | 390 | U | P-O3'-C3' | -5.75 | 112.80 | 119.70 |
| 1 | I | 212 | A | OP1-P-O3' | -5.75 | 92.56 | 105.20 |
| 1 | I | 239 | A | P-O3'-C3' | -5.75 | 112.80 | 119.70 |
| 4 | L | 562 | U | OP2-P-O3' | -5.75 | 92.56 | 105.20 |
| 3 | K | 82 | A | O3'-P-O5' | -5.74 | 93.09 | 104.00 |
| 4 | L | 451 | U | OP1-P-O3' | 5.74 | 117.83 | 105.20 |
| 5 | M | 535 | U | O3'-P-O5' | -5.74 | 93.09 | 104.00 |
| 5 | M | 543 | U | P-O3'-C3' | -5.74 | 112.81 | 119.70 |
| 6 | N | 483 | U | O3'-P-O5' | -5.74 | 93.09 | 104.00 |
| 4 | L | 696 | U | OP1-P-O3' | 5.74 | 117.83 | 105.20 |
| 1 | I | 226 | A | OP1-P-O3' | -5.74 | 92.58 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 5 | M | 341 | U | O3'-P-O5' | 5.74 | 114.90 | 104.00 |
| 2 | J | 106 | A | O3'-P-O5' | -5.74 | 93.10 | 104.00 |
| 5 | M | 500 | U | OP1-P-O3' | 5.73 | 117.81 | 105.20 |
| 2 | J | 13 | A | OP2-P-O3' | -5.73 | 92.59 | 105.20 |
| 1 | I | 346 | A | OP1-P-O3' | -5.72 | 92.61 | 105.20 |
| 1 | I | 402 | A | OP2-P-O3' | 5.72 | 117.79 | 105.20 |
| 3 | K | 230 | A | P-O3'-C3' | -5.72 | 112.83 | 119.70 |
| 5 | M | 384 | U | O3'-P-O5' | -5.72 | 93.12 | 104.00 |
| 1 | I | 399 | A | OP2-P-O3' | -5.72 | 92.61 | 105.20 |
| 3 | K | 236 | A | P-O3'-C3' | 5.72 | 126.57 | 119.70 |
| 6 | N | 308 | U | OP1-P-O3' | 5.72 | 117.79 | 105.20 |
| 2 | J | 239 | A | O3'-P-O5' | 5.72 | 114.86 | 104.00 |
| 6 | N | 324 | U | P-O3'-C3' | 5.72 | 126.56 | 119.70 |
| 4 | L | 744 | U | OP1-P-O3' | -5.71 | 92.63 | 105.20 |
| 3 | K | 207 | A | OP1-P-O3' | 5.71 | 117.77 | 105.20 |
| 1 | I | 307 | A | O3'-P-O5' | -5.71 | 93.15 | 104.00 |
| 5 | M | 356 | U | O3'-P-O5' | 5.71 | 114.85 | 104.00 |
| 5 | M | 491 | U | O3'-P-O5' | 5.71 | 114.85 | 104.00 |
| 4 | L | 524 | U | OP1-P-O3' | -5.71 | 92.64 | 105.20 |
| 6 | N | 510 | U | OP1-P-O3' | 5.71 | 117.75 | 105.20 |
| 3 | K | 60 | A | OP2-P-O3' | 5.70 | 117.75 | 105.20 |
| 3 | K | 210 | A | OP2-P-O3' | 5.70 | 117.74 | 105.20 |
| 4 | L | 652 | U | O3'-P-O5' | 5.69 | 114.81 | 104.00 |
| 6 | N | 388 | U | O3'-P-O5' | 5.69 | 114.82 | 104.00 |
| 6 | N | 402 | U | OP2-P-O3' | 5.69 | 117.72 | 105.20 |
| 1 | I | 380 | A | OP1-P-O3' | 5.69 | 117.72 | 105.20 |
| 3 | K | 41 | A | O3'-P-O5' | 5.68 | 114.80 | 104.00 |
| 1 | I | 40 | A | OP1-P-O3' | 5.68 | 117.69 | 105.20 |
| 2 | J | 77 | A | O3'-P-O5' | 5.68 | 114.79 | 104.00 |
| 2 | J | 243 | A | P-O3'-C3' | 5.68 | 126.52 | 119.70 |
| 2 | J | 119 | A | P-O3'-C3' | -5.68 | 112.89 | 119.70 |
| 3 | K | 182 | A | OP1-P-O3' | 5.68 | 117.69 | 105.20 |
| 4 | L | 664 | U | OP2-P-O3' | -5.67 | 92.72 | 105.20 |
| 2 | J | 248 | A | OP2-P-O3' | 5.67 | 117.67 | 105.20 |
| 1 | I | 279 | A | P-O3'-C3' | -5.67 | 112.90 | 119.70 |
| 5 | M | 330 | U | OP1-P-O3' | -5.67 | 92.73 | 105.20 |
| 6 | N | 348 | U | OP1-P-O3' | 5.67 | 117.67 | 105.20 |
| 6 | N | 420 | U | P-O3'-C3' | -5.66 | 112.90 | 119.70 |
| 5 | M | 519 | U | OP1-P-O3' | -5.66 | 92.74 | 105.20 |
| 1 | I | 388 | A | P-O3'-C3' | 5.66 | 126.49 | 119.70 |
| 6 | N | 363 | U | P-O3'-C3' | -5.66 | 112.91 | 119.70 |
| 4 | L | 646 | U | P-O3'-C3' | -5.66 | 112.91 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 2 | J | 179 | A | OP1-P-O3' | -5.65 | 92.77 | 105.20 |
| 4 | L | 687 | U | P-O3'-C3' | -5.65 | 112.92 | 119.70 |
| 5 | M | 298 | U | OP1-P-O3' | -5.65 | 92.76 | 105.20 |
| 1 | I | 337 | A | OP1-P-O3' | -5.65 | 92.77 | 105.20 |
| 3 | K | 23 | A | OP2-P-O3' | -5.65 | 92.77 | 105.20 |
| 1 | I | 76 | A | OP1-P-O3' | -5.65 | 92.78 | 105.20 |
| 3 | K | 2 | A | OP1-P-O3' | 5.65 | 117.62 | 105.20 |
| 4 | L | 633 | U | OP1-P-O3' | 5.65 | 117.62 | 105.20 |
| 6 | N | 463 | U | OP2-P-O3' | 5.65 | 117.62 | 105.20 |
| 4 | L | 553 | U | O3'-P-O5' | -5.64 | 93.28 | 104.00 |
| 5 | M | 413 | U | OP2-P-O3' | -5.64 | 92.80 | 105.20 |
| 1 | I | 59 | A | OP1-P-O3' | -5.64 | 92.80 | 105.20 |
| 1 | I | 140 | A | OP1-P-O3' | 5.64 | 117.60 | 105.20 |
| 4 | L | 626 | U | OP2-P-O3' | -5.64 | 92.80 | 105.20 |
| 1 | I | 169 | A | OP2-P-O3' | -5.63 | 92.80 | 105.20 |
| 4 | L | 615 | U | OP1-P-O3' | -5.63 | 92.81 | 105.20 |
| 5 | M | 476 | U | OP1-P-O3' | -5.63 | 92.81 | 105.20 |
| 1 | I | 244 | A | P-O3'-C3' | -5.63 | 112.94 | 119.70 |
| 1 | I | 383 | A | OP2-P-O3' | -5.63 | 92.81 | 105.20 |
| 2 | J | 127 | A | OP2-P-O3' | 5.63 | 117.58 | 105.20 |
| 5 | M | 317 | U | OP1-P-O3' | -5.62 | 92.83 | 105.20 |
| 3 | K | 158 | A | OP1-P-O3' | -5.62 | 92.83 | 105.20 |
| 4 | L | 773 | U | OP2-P-O3' | -5.62 | 92.83 | 105.20 |
| 2 | J | 125 | A | O3'-P-O5' | 5.62 | 114.68 | 104.00 |
| 1 | I | 400 | A | P-O3'-C3' | 5.62 | 126.44 | 119.70 |
| 1 | I | 39 | A | OP2-P-O3' | -5.62 | 92.84 | 105.20 |
| 5 | M | 454 | U | OP1-P-O3' | -5.62 | 92.85 | 105.20 |
| 6 | N | 482 | U | OP2-P-O3' | 5.62 | 117.55 | 105.20 |
| 3 | K | 112 | A | P-O3'-C3' | -5.61 | 112.96 | 119.70 |
| 4 | L | 771 | U | OP1-P-O3' | -5.61 | 92.86 | 105.20 |
| 6 | N | 306 | U | OP1-P-O3' | 5.61 | 117.54 | 105.20 |
| 1 | I | 317 | A | P-O3'-C3' | -5.61 | 112.97 | 119.70 |
| 3 | K | 146 | A | OP1-P-O3' | 5.61 | 117.54 | 105.20 |
| 3 | K | 263 | A | O3'-P-O5' | 5.61 | 114.66 | 104.00 |
| 5 | M | 399 | U | OP1-P-O3' | -5.61 | 92.86 | 105.20 |
| 1 | I | 27 | A | OP1-P-O3' | -5.60 | 92.88 | 105.20 |
| 3 | K | 31 | A | OP1-P-O3' | 5.60 | 117.52 | 105.20 |
| 1 | I | 150 | A | O3'-P-O5' | 5.59 | 114.63 | 104.00 |
| 1 | I | 258 | A | O3'-P-O5' | 5.59 | 114.63 | 104.00 |
| 2 | J | 6 | A | P-O3'-C3' | -5.59 | 112.99 | 119.70 |
| 6 | N | 361 | U | P-O3'-C3' | -5.58 | 113.00 | 119.70 |
| 1 | I | 142 | A | OP1-P-O3' | 5.58 | 117.48 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1 | I | 160 | A | OP2-P-O3' | 5.58 | 117.47 | 105.20 |
| 5 | M | 481 | U | OP2-P-O3' | -5.58 | 92.93 | 105.20 |
| 1 | I | 152 | A | OP1-P-O3' | 5.58 | 117.47 | 105.20 |
| 6 | N | 493 | U | OP1-P-O3' | 5.57 | 117.45 | 105.20 |
| 2 | J | 27 | A | OP1-P-O3' | -5.57 | 92.95 | 105.20 |
| 1 | I | 70 | A | OP1-P-O3' | -5.56 | 92.96 | 105.20 |
| 3 | K | 87 | A | OP2-P-O3' | 5.56 | 117.44 | 105.20 |
| 1 | I | 314 | A | O3'-P-O5' | -5.55 | 93.45 | 104.00 |
| 3 | K | 235 | A | P-O3'-C3' | -5.55 | 113.03 | 119.70 |
| 4 | L | 460 | U | OP1-P-O3' | -5.55 | 92.98 | 105.20 |
| 4 | L | 574 | U | OP2-P-O3' | 5.55 | 117.42 | 105.20 |
| 3 | K | 48 | A | O3'-P-O5' | 5.55 | 114.55 | 104.00 |
| 5 | M | 363 | U | P-O3'-C3' | 5.54 | 126.35 | 119.70 |
| 1 | I | 389 | A | OP2-P-O3' | -5.54 | 93.01 | 105.20 |
| 4 | L | 785 | U | P-O3'-C3' | -5.54 | 113.05 | 119.70 |
| 1 | I | 256 | A | O3'-P-O5' | -5.54 | 93.48 | 104.00 |
| 3 | K | 95 | A | O3'-P-O5' | -5.53 | 93.48 | 104.00 |
| 6 | N | 305 | U | OP2-P-O3' | 5.53 | 117.37 | 105.20 |
| 1 | I | 293 | A | OP1-P-O3' | -5.53 | 93.05 | 105.20 |
| 3 | K | 141 | A | P-O3'-C3' | 5.52 | 126.33 | 119.70 |
| 2 | J | 143 | A | OP1-P-O3' | -5.51 | 93.07 | 105.20 |
| 1 | I | 93 | A | OP2-P-O3' | 5.51 | 117.32 | 105.20 |
| 1 | I | 161 | A | OP1-P-O3' | -5.51 | 93.08 | 105.20 |
| 5 | M | 485 | U | O3'-P-O5' | -5.51 | 93.54 | 104.00 |
| 4 | L | 553 | U | P-O3'-C3' | -5.50 | 113.09 | 119.70 |
| 1 | I | 155 | A | OP1-P-O3' | 5.50 | 117.31 | 105.20 |
| 1 | I | 167 | A | OP1-P-O3' | -5.50 | 93.10 | 105.20 |
| 5 | M | 345 | U | OP2-P-O3' | 5.50 | 117.30 | 105.20 |
| 6 | N | 449 | U | OP1-P-O3' | -5.48 | 93.14 | 105.20 |
| 4 | L | 625 | U | P-O3'-C3' | -5.48 | 113.12 | 119.70 |
| 2 | J | 121 | A | O3'-P-O5' | 5.48 | 114.41 | 104.00 |
| 3 | K | 24 | A | OP1-P-O3' | 5.48 | 117.25 | 105.20 |
| 4 | L | 476 | U | OP1-P-O3' | -5.48 | 93.15 | 105.20 |
| 5 | M | 362 | U | OP1-P-O3' | 5.48 | 117.25 | 105.20 |
| 4 | L | 641 | U | OP1-P-O3' | -5.48 | 93.15 | 105.20 |
| 2 | J | 157 | A | O3'-P-O5' | 5.47 | 114.40 | 104.00 |
| 5 | M | 316 | U | O3'-P-O5' | 5.47 | 114.40 | 104.00 |
| 6 | N | 340 | U | O3'-P-O5' | -5.47 | 93.60 | 104.00 |
| 1 | I | 284 | A | OP1-P-O3' | -5.47 | 93.17 | 105.20 |
| 3 | K | 50 | A | OP1-P-O3' | 5.47 | 117.23 | 105.20 |
| 6 | N | 519 | U | OP2-P-O3' | -5.47 | 93.17 | 105.20 |
| 1 | I | 80 | A | O3'-P-O5' | 5.47 | 114.39 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 4 | L | 805 | U | OP2-P-O3' | 5.46 | 117.22 | 105.20 |
| 1 | I | 279 | A | OP1-P-O3' | -5.46 | 93.18 | 105.20 |
| 1 | I | 171 | A | OP1-P-O3' | 5.46 | 117.21 | 105.20 |
| 2 | J | 207 | A | OP1-P-O3' | -5.46 | 93.19 | 105.20 |
| 4 | L | 682 | U | OP2-P-O3' | 5.46 | 117.21 | 105.20 |
| 5 | M | 522 | U | OP1-P-O3' | -5.46 | 93.19 | 105.20 |
| 4 | L | 567 | U | OP2-P-O3' | 5.46 | 117.20 | 105.20 |
| 4 | L | 702 | U | O3'-P-O5' | 5.46 | 114.36 | 104.00 |
| 5 | M | 477 | U | OP1-P-O3' | -5.45 | 93.20 | 105.20 |
| 1 | I | 175 | A | P-O3'-C3' | -5.45 | 113.16 | 119.70 |
| 1 | I | 197 | A | OP1-P-O3' | -5.45 | 93.22 | 105.20 |
| 4 | L | 805 | U | O3'-P-O5' | -5.44 | 93.66 | 104.00 |
| 1 | I | 179 | A | O3'-P-O5' | -5.44 | 93.67 | 104.00 |
| 4 | L | 676 | U | O3'-P-O5' | 5.43 | 114.33 | 104.00 |
| 1 | I | 352 | A | OP1-P-O3' | 5.43 | 117.15 | 105.20 |
| 3 | K | 103 | A | OP2-P-O3' | 5.43 | 117.15 | 105.20 |
| 2 | J | 211 | A | O3'-P-O5' | -5.43 | 93.68 | 104.00 |
| 5 | M | 417 | U | O3'-P-O5' | -5.43 | 93.68 | 104.00 |
| 6 | N | 503 | U | O3'-P-O5' | 5.43 | 114.32 | 104.00 |
| 1 | I | 220 | A | P-O3'-C3' | -5.43 | 113.19 | 119.70 |
| 1 | I | 157 | A | OP2-P-O3' | 5.43 | 117.14 | 105.20 |
| 1 | I | 63 | A | O3'-P-O5' | -5.42 | 93.70 | 104.00 |
| 3 | K | 67 | A | P-O3'-C3' | -5.42 | 113.20 | 119.70 |
| 1 | I | 355 | A | OP2-P-O3' | 5.42 | 117.12 | 105.20 |
| 6 | N | 519 | U | OP1-P-O3' | 5.42 | 117.11 | 105.20 |
| 5 | M | 502 | U | OP1-P-O3' | 5.41 | 117.11 | 105.20 |
| 4 | L | 474 | U | OP1-P-O3' | -5.41 | 93.30 | 105.20 |
| 1 | I | 60 | A | O3'-P-O5' | -5.41 | 93.73 | 104.00 |
| 3 | K | 52 | A | P-O3'-C3' | -5.41 | 113.21 | 119.70 |
| 3 | K | 238 | A | OP2-P-O3' | -5.40 | 93.31 | 105.20 |
| 5 | M | 304 | U | O3'-P-O5' | 5.40 | 114.26 | 104.00 |
| 5 | M | 383 | U | OP1-P-O3' | 5.40 | 117.08 | 105.20 |
| 5 | M | 473 | U | OP1-P-O3' | -5.39 | 93.33 | 105.20 |
| 6 | N | 397 | U | OP2-P-O3' | 5.39 | 117.06 | 105.20 |
| 6 | N | 295 | U | OP1-P-O3' | 5.39 | 117.06 | 105.20 |
| 3 | K | 250 | A | O3'-P-O5' | 5.39 | 114.24 | 104.00 |
| 4 | L | 626 | U | P-O3'-C3' | -5.39 | 113.24 | 119.70 |
| 3 | K | 129 | A | O3'-P-O5' | -5.38 | 93.77 | 104.00 |
| 4 | L | 501 | U | OP1-P-O3' | -5.38 | 93.35 | 105.20 |
| 3 | K | 155 | A | OP1-P-O3' | -5.38 | 93.36 | 105.20 |
| 4 | L | 527 | U | OP1-P-O3' | 5.38 | 117.04 | 105.20 |
| 4 | L | 617 | U | O3'-P-O5' | 5.38 | 114.22 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 5 | M | 338 | U | OP1-P-O3' | -5.38 | 93.37 | 105.20 |
| 4 | L | 769 | U | OP2-P-O3' | 5.38 | 117.03 | 105.20 |
| 5 | M | 352 | U | P-O3'-C3' | -5.38 | 113.25 | 119.70 |
| 5 | M | 433 | U | OP1-P-O3' | 5.38 | 117.02 | 105.20 |
| 3 | K | 66 | A | OP1-P-O3' | -5.37 | 93.39 | 105.20 |
| 6 | N | 525 | U | OP1-P-O3' | 5.37 | 117.01 | 105.20 |
| 2 | J | 155 | A | OP1-P-O3' | 5.37 | 117.00 | 105.20 |
| 6 | N | 346 | U | P-O3'-C3' | -5.36 | 113.26 | 119.70 |
| 1 | I | 41 | A | OP1-P-O3' | 5.36 | 117.00 | 105.20 |
| 6 | N | 457 | U | OP1-P-O3' | 5.36 | 117.00 | 105.20 |
| 3 | K | 261 | A | OP1-P-O3' | 5.36 | 116.99 | 105.20 |
| 3 | K | 2 | A | OP2-P-O3' | -5.36 | 93.41 | 105.20 |
| 3 | K | 209 | A | OP2-P-O3' | -5.36 | 93.41 | 105.20 |
| 1 | I | 98 | A | OP1-P-O3' | 5.35 | 116.98 | 105.20 |
| 2 | J | 234 | A | OP1-P-O3' | -5.35 | 93.42 | 105.20 |
| 3 | K | 261 | A | P-O3'-C3' | 5.35 | 126.12 | 119.70 |
| 4 | L | 475 | U | OP1-P-O3' | -5.35 | 93.43 | 105.20 |
| 4 | L | 413 | U | OP2-P-O3' | -5.35 | 93.44 | 105.20 |
| 3 | K | 36 | A | P-O3'-C3' | -5.35 | 113.28 | 119.70 |
| 3 | K | 223 | A | P-O3'-C3' | -5.34 | 113.29 | 119.70 |
| 6 | N | 424 | U | OP1-P-O3' | 5.34 | 116.95 | 105.20 |
| 2 | J | 132 | A | OP1-P-O3' | -5.34 | 93.45 | 105.20 |
| 1 | I | 96 | A | OP1-P-O3' | 5.33 | 116.93 | 105.20 |
| 1 | I | 193 | A | P-O3'-C3' | -5.33 | 113.30 | 119.70 |
| 4 | L | 756 | U | OP1-P-O3' | -5.33 | 93.47 | 105.20 |
| 2 | J | 87 | A | OP2-P-O3' | -5.33 | 93.47 | 105.20 |
| 4 | L | 519 | U | OP1-P-O3' | -5.33 | 93.48 | 105.20 |
| 4 | L | 777 | U | OP1-P-O3' | -5.33 | 93.48 | 105.20 |
| 3 | K | 35 | A | OP2-P-O3' | 5.33 | 116.92 | 105.20 |
| 4 | L | 669 | U | O3'-P-O5' | -5.32 | 93.89 | 104.00 |
| 5 | M | 449 | U | P-O3'-C3' | -5.32 | 113.31 | 119.70 |
| 5 | M | 287 | U | OP1-P-O3' | -5.32 | 93.50 | 105.20 |
| 6 | N | 432 | U | O3'-P-O5' | 5.32 | 114.10 | 104.00 |
| 6 | N | 368 | U | OP1-P-O3' | -5.31 | 93.51 | 105.20 |
| 6 | N | 316 | U | OP1-P-O3' | 5.31 | 116.88 | 105.20 |
| 3 | K | 173 | A | OP2-P-O3' | 5.31 | 116.88 | 105.20 |
| 1 | I | 97 | A | P-O3'-C3' | -5.30 | 113.33 | 119.70 |
| 3 | K | 10 | A | OP2-P-O3' | 5.30 | 116.87 | 105.20 |
| 4 | L | 494 | U | OP1-P-O3' | -5.30 | 93.53 | 105.20 |
| 4 | L | 747 | U | OP1-P-O3' | -5.30 | 93.53 | 105.20 |
| 6 | N | 309 | U | P-O3'-C3' | 5.30 | 126.06 | 119.70 |
| 6 | N | 502 | U | O3'-P-O5' | -5.30 | 93.93 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 3 | K | 252 | A | OP1-P-O3' | -5.30 | 93.55 | 105.20 |
| 1 | I | 274 | A | OP1-P-O3' | -5.29 | 93.55 | 105.20 |
| 4 | L | 709 | U | OP2-P-O3' | -5.29 | 93.56 | 105.20 |
| 4 | L | 565 | U | O3'-P-O5' | 5.29 | 114.06 | 104.00 |
| 1 | I | 59 | A | OP2-P-O3' | 5.29 | 116.83 | 105.20 |
| 1 | I | 345 | A | OP2-P-O3' | -5.29 | 93.56 | 105.20 |
| 2 | J | 250 | A | P-O3'-C3' | -5.29 | 113.36 | 119.70 |
| 4 | L | 636 | U | P-O3'-C3' | -5.29 | 113.36 | 119.70 |
| 4 | L | 655 | U | OP1-P-O3' | -5.28 | 93.58 | 105.20 |
| 1 | I | 309 | A | OP2-P-O3' | 5.28 | 116.81 | 105.20 |
| 5 | M | 447 | U | OP1-P-O3' | 5.28 | 116.81 | 105.20 |
| 3 | K | 41 | A | OP2-P-O3' | -5.27 | 93.60 | 105.20 |
| 5 | M | 491 | U | P-O3'-C3' | -5.27 | 113.37 | 119.70 |
| 2 | J | 32 | A | OP1-P-O3' | -5.27 | 93.60 | 105.20 |
| 4 | L | 534 | U | OP2-P-O3' | 5.27 | 116.80 | 105.20 |
| 6 | N | 415 | U | OP2-P-O3' | -5.27 | 93.61 | 105.20 |
| 4 | L | 589 | U | O3'-P-O5' | 5.27 | 114.01 | 104.00 |
| 5 | M | 534 | U | P-O3'-C3' | 5.27 | 126.02 | 119.70 |
| 6 | N | 335 | U | O3'-P-O5' | -5.27 | 93.99 | 104.00 |
| 4 | L | 533 | U | O3'-P-O5' | -5.27 | 93.99 | 104.00 |
| 4 | L | 555 | U | O3'-P-O5' | 5.27 | 114.01 | 104.00 |
| 3 | K | 104 | A | OP1-P-O3' | -5.26 | 93.62 | 105.20 |
| 1 | I | 52 | A | OP1-P-O3' | -5.26 | 93.62 | 105.20 |
| 2 | J | 125 | A | OP2-P-O3' | -5.26 | 93.63 | 105.20 |
| 6 | N | 427 | U | O3'-P-O5' | -5.25 | 94.02 | 104.00 |
| 1 | I | 122 | A | O3'-P-O5' | -5.25 | 94.03 | 104.00 |
| 6 | N | 436 | U | O3'-P-O5' | -5.25 | 94.03 | 104.00 |
| 5 | M | 394 | U | OP1-P-O3' | 5.24 | 116.74 | 105.20 |
| 5 | M | 310 | U | OP1-P-O3' | -5.24 | 93.67 | 105.20 |
| 4 | L | 427 | U | O3'-P-O5' | -5.24 | 94.05 | 104.00 |
| 6 | N | 272 | U | P-O3'-C3' | 5.24 | 125.98 | 119.70 |
| 1 | I | 410 | A | P-O3'-C3' | 5.23 | 125.98 | 119.70 |
| 3 | K | 256 | A | P-O3'-C3' | -5.23 | 113.42 | 119.70 |
| 5 | M | 388 | U | O3'-P-O5' | 5.23 | 113.94 | 104.00 |
| 5 | M | 506 | U | OP1-P-O3' | -5.23 | 93.69 | 105.20 |
| 6 | N | 448 | U | OP1-P-O3' | -5.23 | 93.70 | 105.20 |
| 6 | N | 455 | U | OP1-P-O3' | -5.23 | 93.70 | 105.20 |
| 3 | K | 27 | A | OP1-P-O3' | 5.23 | 116.70 | 105.20 |
| 3 | K | 264 | A | OP2-P-O3' | -5.22 | 93.71 | 105.20 |
| 3 | K | 26 | A | OP1-P-O3' | 5.22 | 116.68 | 105.20 |
| 4 | L | 707 | U | OP2-P-O3' | 5.21 | 116.66 | 105.20 |
| 5 | M | 355 | U | OP2-P-O3' | 5.21 | 116.66 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 4 | L | 543 | U | OP2-P-O3' | -5.21 | 93.75 | 105.20 |
| 4 | L | 740 | U | OP1-P-O3' | -5.21 | 93.75 | 105.20 |
| 3 | K | 137 | A | OP1-P-O3' | -5.20 | 93.76 | 105.20 |
| 5 | M | 326 | U | OP1-P-O3' | -5.20 | 93.76 | 105.20 |
| 4 | L | 670 | U | P-O3'-C3' | -5.20 | 113.46 | 119.70 |
| 4 | L | 707 | U | O3'-P-O5' | 5.20 | 113.88 | 104.00 |
| 5 | M | 367 | U | O3'-P-O5' | -5.20 | 94.13 | 104.00 |
| 4 | L | 413 | U | O3'-P-O5' | 5.19 | 113.87 | 104.00 |
| 1 | I | 11 | A | OP1-P-O3' | 5.19 | 116.62 | 105.20 |
| 4 | L | 592 | U | OP2-P-O3' | 5.19 | 116.62 | 105.20 |
| 6 | N | 506 | U | OP2-P-O3' | -5.19 | 93.78 | 105.20 |
| 5 | M | 492 | U | OP1-P-O3' | -5.19 | 93.78 | 105.20 |
| 5 | M | 304 | U | P-O3'-C3' | 5.19 | 125.93 | 119.70 |
| 5 | M | 420 | U | OP1-P-O3' | -5.19 | 93.79 | 105.20 |
| 2 | J | 98 | A | P-O3'-C3' | -5.19 | 113.48 | 119.70 |
| 1 | I | 130 | A | OP2-P-O3' | -5.18 | 93.79 | 105.20 |
| 6 | N | 322 | U | P-O3'-C3' | -5.18 | 113.48 | 119.70 |
| 6 | N | 438 | U | OP2-P-O3' | 5.18 | 116.60 | 105.20 |
| 2 | J | 245 | A | OP1-P-O3' | -5.18 | 93.80 | 105.20 |
| 4 | L | 608 | U | OP2-P-O3' | -5.18 | 93.81 | 105.20 |
| 4 | L | 728 | U | OP1-P-O3' | 5.18 | 116.59 | 105.20 |
| 6 | N | 364 | U | OP1-P-O3' | -5.18 | 93.81 | 105.20 |
| 4 | L | 445 | U | OP2-P-O3' | -5.18 | 93.81 | 105.20 |
| 2 | J | 135 | A | OP2-P-O3' | -5.17 | 93.82 | 105.20 |
| 4 | L | 426 | U | O3'-P-O5' | -5.17 | 94.17 | 104.00 |
| 2 | J | 150 | A | P-O3'-C3' | -5.17 | 113.50 | 119.70 |
| 3 | K | 219 | A | O3'-P-O5' | -5.17 | 94.19 | 104.00 |
| 4 | L | 602 | U | O3'-P-O5' | -5.17 | 94.19 | 104.00 |
| 4 | L | 737 | U | OP1-P-O3' | -5.17 | 93.84 | 105.20 |
| 1 | I | 246 | A | OP2-P-O3' | 5.16 | 116.56 | 105.20 |
| 1 | I | 393 | A | P-O3'-C3' | -5.16 | 113.51 | 119.70 |
| 1 | I | 399 | A | OP1-P-O3' | 5.16 | 116.55 | 105.20 |
| 4 | L | 549 | U | OP1-P-O3' | -5.16 | 93.86 | 105.20 |
| 3 | K | 221 | A | OP2-P-O3' | -5.15 | 93.86 | 105.20 |
| 4 | L | 553 | U | OP1-P-O3' | -5.15 | 93.86 | 105.20 |
| 1 | I | 357 | A | OP1-P-O3' | -5.15 | 93.87 | 105.20 |
| 1 | I | 369 | A | P-O3'-C3' | -5.15 | 113.52 | 119.70 |
| 4 | L | 416 | U | O3'-P-O5' | -5.15 | 94.21 | 104.00 |
| 4 | L | 503 | U | OP1-P-O3' | -5.15 | 93.86 | 105.20 |
| 5 | M | 550 | U | P-O3'-C3' | -5.15 | 113.52 | 119.70 |
| 3 | K | 70 | A | OP1-P-O3' | 5.15 | 116.53 | 105.20 |
| 6 | N | 417 | U | OP1-P-O3' | -5.15 | 93.88 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1 | I | 158 | A | OP2-P-O3' | -5.14 | 93.88 | 105.20 |
| 4 | L | 565 | U | OP2-P-O3' | 5.14 | 116.52 | 105.20 |
| 4 | L | 630 | U | OP2-P-O3' | -5.14 | 93.88 | 105.20 |
| 6 | N | 328 | U | OP2-P-O3' | 5.14 | 116.52 | 105.20 |
| 4 | L | 729 | U | P-O3'-C3' | 5.14 | 125.87 | 119.70 |
| 2 | J | 117 | A | P-O3'-C3' | 5.14 | 125.87 | 119.70 |
| 1 | I | 402 | A | OP1-P-O3' | 5.14 | 116.50 | 105.20 |
| 3 | K | 262 | A | O3'-P-O5' | 5.14 | 113.76 | 104.00 |
| 1 | I | 73 | A | OP1-P-O3' | -5.13 | 93.92 | 105.20 |
| 1 | I | 89 | A | OP2-P-O3' | -5.13 | 93.92 | 105.20 |
| 4 | L | 435 | U | P-O3'-C3' | -5.12 | 113.56 | 119.70 |
| 4 | L | 721 | U | P-O3'-C3' | 5.12 | 125.84 | 119.70 |
| 1 | I | 177 | A | OP1-P-O3' | 5.12 | 116.45 | 105.20 |
| 4 | L | 603 | U | OP1-P-O3' | -5.12 | 93.95 | 105.20 |
| 4 | L | 629 | U | OP2-P-O3' | 5.12 | 116.46 | 105.20 |
| 1 | I | 172 | A | P-O3'-C3' | -5.11 | 113.57 | 119.70 |
| 4 | L | 647 | U | P-O3'-C3' | -5.11 | 113.57 | 119.70 |
| 5 | M | 432 | U | O3'-P-O5' | 5.11 | 113.70 | 104.00 |
| 4 | L | 676 | U | OP1-P-O3' | -5.11 | 93.97 | 105.20 |
| 4 | L | 677 | U | OP1-P-O3' | -5.10 | 93.97 | 105.20 |
| 4 | L | 502 | U | O3'-P-O5' | 5.10 | 113.69 | 104.00 |
| 1 | I | 281 | A | OP1-P-O3' | 5.09 | 116.41 | 105.20 |
| 1 | I | 355 | A | OP1-P-O3' | -5.09 | 93.99 | 105.20 |
| 2 | J | 241 | A | OP1-P-O3' | -5.09 | 93.99 | 105.20 |
| 4 | L | 580 | U | OP2-P-O3' | -5.09 | 93.99 | 105.20 |
| 6 | N | 484 | U | P-O3'-C3' | -5.09 | 113.59 | 119.70 |
| 2 | J | 177 | A | P-O3'-C3' | -5.09 | 113.59 | 119.70 |
| 4 | L | 609 | U | P-O3'-C3' | -5.09 | 113.59 | 119.70 |
| 4 | L | 731 | U | O3'-P-O5' | -5.09 | 94.33 | 104.00 |
| 6 | N | 275 | U | P-O3'-C3' | -5.09 | 113.59 | 119.70 |
| 1 | I | 61 | A | OP1-P-O3' | 5.09 | 116.39 | 105.20 |
| 2 | J | 179 | A | OP2-P-O3' | -5.09 | 94.01 | 105.20 |
| 6 | N | 383 | U | O3'-P-O5' | -5.09 | 94.33 | 104.00 |
| 1 | I | 287 | A | OP1-P-O3' | -5.08 | 94.02 | 105.20 |
| 4 | L | 616 | U | O3'-P-O5' | 5.08 | 113.66 | 104.00 |
| 1 | I | 77 | A | OP1-P-O3' | -5.08 | 94.02 | 105.20 |
| 3 | K | 43 | A | P-O3'-C3' | -5.08 | 113.60 | 119.70 |
| 5 | M | 451 | U | O3'-P-O5' | -5.08 | 94.35 | 104.00 |
| 1 | I | 1 | A | P-O3'-C3' | 5.08 | 125.79 | 119.70 |
| 6 | N | 371 | U | OP1-P-O3' | -5.07 | 94.04 | 105.20 |
| 2 | J | 174 | A | O3'-P-O5' | 5.07 | 113.64 | 104.00 |
| 1 | I | 14 | A | OP1-P-O3' | -5.07 | 94.05 | 105.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 4 | L | 597 | U | OP1-P-O3' | -5.07 | 94.05 | 105.20 |
| 2 | J | 98 | A | OP2-P-O3' | 5.06 | 116.34 | 105.20 |
| 1 | I | 89 | A | OP1-P-O3' | 5.06 | 116.34 | 105.20 |
| 1 | I | 406 | A | OP2-P-O3' | 5.06 | 116.34 | 105.20 |
| 2 | J | 101 | A | OP2-P-O3' | 5.06 | 116.33 | 105.20 |
| 1 | I | 180 | A | OP2-P-O3' | 5.06 | 116.32 | 105.20 |
| 5 | M | 387 | U | P-O3'-C3' | 5.06 | 125.77 | 119.70 |
| 1 | I | 106 | A | OP1-P-O3' | 5.05 | 116.32 | 105.20 |
| 4 | L | 636 | U | O3'-P-O5' | -5.05 | 94.39 | 104.00 |
| 4 | L | 752 | U | O3'-P-O5' | 5.05 | 113.61 | 104.00 |
| 4 | L | 791 | U | O3'-P-O5' | 5.05 | 113.60 | 104.00 |
| 3 | K | 14 | A | O3'-P-O5' | -5.05 | 94.40 | 104.00 |
| 6 | N | 273 | U | OP2-P-O3' | 5.05 | 116.32 | 105.20 |
| 4 | L | 801 | U | OP2-P-O3' | 5.05 | 116.30 | 105.20 |
| 5 | M | 468 | U | P-O3'-C3' | -5.05 | 113.64 | 119.70 |
| 3 | K | 125 | A | OP2-P-O3' | 5.04 | 116.30 | 105.20 |
| 4 | L | 659 | U | O3'-P-O5' | -5.04 | 94.42 | 104.00 |
| 5 | M | 391 | U | P-O3'-C3' | -5.04 | 113.65 | 119.70 |
| 1 | I | 63 | A | OP1-P-O3' | 5.04 | 116.28 | 105.20 |
| 1 | I | 64 | A | OP1-P-O3' | -5.04 | 94.12 | 105.20 |
| 2 | J | 106 | A | OP1-P-O3' | -5.04 | 94.12 | 105.20 |
| 1 | I | 108 | A | O3'-P-O5' | -5.04 | 94.43 | 104.00 |
| 4 | L | 657 | U | OP1-P-O3' | -5.04 | 94.12 | 105.20 |
| 5 | M | 438 | U | O3'-P-O5' | -5.03 | 94.44 | 104.00 |
| 6 | N | 437 | U | O3'-P-O5' | -5.03 | 94.44 | 104.00 |
| 2 | J | 242 | A | P-O3'-C3' | 5.03 | 125.73 | 119.70 |
| 3 | K | 224 | A | P-O3'-C3' | 5.03 | 125.73 | 119.70 |
| 6 | N | 377 | U | O3'-P-O5' | 5.02 | 113.54 | 104.00 |
| 4 | L | 537 | U | P-O3'-C3' | -5.02 | 113.67 | 119.70 |
| 6 | N | 525 | U | OP2-P-O3' | 5.02 | 116.25 | 105.20 |
| 5 | M | 434 | U | O3'-P-O5' | -5.02 | 94.47 | 104.00 |
| 6 | N | 500 | U | OP1-P-O3' | 5.02 | 116.24 | 105.20 |
| 4 | L | 589 | U | OP2-P-O3' | 5.02 | 116.24 | 105.20 |
| 5 | M | 340 | U | OP1-P-O3' | -5.02 | 94.16 | 105.20 |
| 5 | M | 341 | U | P-O3'-C3' | -5.02 | 113.68 | 119.70 |
| 3 | K | 106 | A | OP1-P-O3' | 5.01 | 116.23 | 105.20 |
| 4 | L | 448 | U | OP1-P-O3' | 5.01 | 116.23 | 105.20 |
| 1 | I | 131 | A | OP2-P-O3' | 5.01 | 116.22 | 105.20 |
| 5 | M | 516 | U | P-O3'-C3' | -5.01 | 113.69 | 119.70 |
| 1 | I | 92 | A | O3'-P-O5' | 5.01 | 113.52 | 104.00 |
| 3 | K | 35 | A | OP1-P-O3' | 5.01 | 116.22 | 105.20 |
| 4 | L | 775 | U | O3'-P-O5' | 5.01 | 113.51 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 6 | N | 466 | U | P-O3'-C3' | 5.01 | 125.71 | 119.70 |
| 4 | L | 659 | U | OP1-P-O3' | 5.00 | 116.21 | 105.20 |
| 6 | N | 520 | U | P-O3'-C3' | 5.00 | 125.70 | 119.70 |
| 4 | L | 631 | U | P-O3'-C3' | -5.00 | 113.70 | 119.70 |
| 4 | L | 754 | U | OP1-P-O3' | -5.00 | 94.20 | 105.20 |
| 5 | M | 313 | U | OP2-P-O3' | -5.00 | 94.19 | 105.20 |

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

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

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1 | I | 9061 | 0 | 4518 | 4048 | 715 |
| 2 | J | 6069 | 0 | 3032 | 2589 | 1135 |
| 3 | K | 5827 | 0 | 2926 | 1867 | 622 |
| 4 | L | 8237 | 0 | 4114 | 3497 | 802 |
| 5 | M | 5517 | 0 | 2762 | 2245 | 1030 |
| 6 | N | 5297 | 0 | 2665 | 1656 | 473 |
| All | All | 40008 | 0 | 20017 | 15802 | 2447 |

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 263.

All (15802) 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) |
|---------------|---------------|--------------------------|-------------------|
| 2:J:47:A:C2' | 2:J:48:A:H5' | 1.27 | 1.65 |
| 5:M:319:U:C2' | 5:M:320:U:H5' | 1.25 | 1.57 |
| 4:L:477:U:C2' | 4:L:478:U:H5' | 1.35 | 1.56 |
| 3:K:168:A:C2' | 3:K:169:A:H5' | 1.34 | 1.54 |
| 1:I:65:A:C2' | 1:I:66:A:C5' | 1.85 | 1.53 |
| 3:K:253:A:C2' | 3:K:254:A:H5' | 1.38 | 1.53 |
| 5:M:419:U:C2' | 5:M:420:U:H5' | 1.39 | 1.53 |
| 4:L:722:U:C2 | 4:L:723:U:C5 | 1.95 | 1.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 3:K:110:A:C2' | 3:K:111:A:H5' | 1.39 | 1.49 |
| 5:M:337:U:C2' | 5:M:338:U:C5' | 1.90 | 1.48 |
| 4:L:638:U:C2' | 4:L:639:U:C5' | 1.91 | 1.48 |
| 2:J:205:A:C2' | 2:J:206:A:C5' | 1.92 | 1.47 |
| 5:M:531:U:C2' | 5:M:532:U:H5' | 1.44 | 1.47 |
| 1:I:267:A:C2 | 1:I:268:A:C5 | 2.00 | 1.47 |
| 4:L:723:U:C4 | 4:L:724:U:C4 | 2.01 | 1.46 |
| 2:J:29:A:C2' | 2:J:30:A:C5' | 1.89 | 1.45 |
| 4:L:497:U:C2' | 4:L:498:U:H5' | 1.26 | 1.45 |
| 1:I:136:A:C2' | 1:I:137:A:H5' | 1.43 | 1.45 |
| 1:I:279:A:O2' | 1:I:280:A:C5' | 1.65 | 1.44 |
| 2:J:69:A:C2' | 2:J:70:A:H5' | 1.44 | 1.44 |
| 5:M:319:U:C2' | 5:M:320:U:C5' | 1.91 | 1.43 |
| 3:K:110:A:O2' | 3:K:111:A:C5' | 1.66 | 1.43 |
| 6:N:497:U:C2' | 6:N:498:U:H5' | 1.48 | 1.43 |
| 4:L:759:U:C2' | 4:L:760:U:H5' | 1.25 | 1.43 |
| 2:J:8:A:O2' | 2:J:9:A:C5' | 1.67 | 1.42 |
| 4:L:705:U:O2' | 4:L:706:U:C5' | 1.67 | 1.42 |
| 1:I:323:A:C2' | 1:I:324:A:C5' | 1.98 | 1.42 |
| 2:J:117:A:O2' | 2:J:118:A:C5' | 1.65 | 1.42 |
| 2:J:183:A:C2' | 2:J:184:A:C5' | 1.91 | 1.42 |
| 4:L:759:U:C2' | 4:L:760:U:C5' | 1.94 | 1.42 |
| 4:L:487:U:C2' | 4:L:488:U:H5' | 1.49 | 1.42 |
| 1:I:133:A:C2' | 1:I:134:A:H5' | 1.35 | 1.41 |
| 3:K:251:A:H3' | 3:K:252:A:P | 1.59 | 1.41 |
| 1:I:131:A:N6 | 1:I:132:A:N6 | 1.70 | 1.40 |
| 4:L:718:U:O2' | 4:L:719:U:C5' | 1.67 | 1.40 |
| 2:J:92:A:C2 | 2:J:93:A:C5 | 2.10 | 1.40 |
| 4:L:674:U:C2' | 4:L:675:U:H5' | 1.51 | 1.40 |
| 3:K:119:A:C2' | 3:K:120:A:H5' | 1.24 | 1.39 |
| 4:L:638:U:C2' | 4:L:639:U:H5' | 1.27 | 1.39 |
| 1:I:376:A:N6 | 1:I:377:A:N6 | 1.69 | 1.39 |
| 5:M:428:U:O2' | 5:M:429:U:C5' | 1.68 | 1.39 |
| 1:I:65:A:C2' | 1:I:66:A:H5' | 1.11 | 1.39 |
| 4:L:576:U:C2' | 4:L:577:U:H5' | 1.50 | 1.39 |
| 3:K:152:A:N6 | 3:K:153:A:N6 | 1.66 | 1.39 |
| 6:N:420:U:O2' | 6:N:421:U:C5' | 1.68 | 1.39 |
| 4:L:807:U:C2' | 4:L:808:U:H5' | 1.36 | 1.39 |
| 1:I:323:A:O2' | 1:I:324:A:C5' | 1.70 | 1.39 |
| 2:J:70:A:C2' | 2:J:71:A:H5' | 1.41 | 1.39 |
| 5:M:347:U:O2' | 5:M:348:U:C5' | 1.69 | 1.39 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 6:N:426:U:O2' | 6:N:427:U:C5' | 1.68 | 1.39 |
| 5:M:323:U:O2' | 5:M:324:U:C4' | 1.70 | 1.38 |
| 3:K:168:A:C2' | 3:K:169:A:C5' | 2.00 | 1.38 |
| 4:L:807:U:O2' | 4:L:808:U:C5' | 1.70 | 1.38 |
| 2:J:47:A:C2' | 2:J:48:A:C5' | 2.01 | 1.38 |
| 3:K:119:A:C2' | 3:K:120:A:C5' | 1.92 | 1.38 |
| 4:L:518:U:O2' | 4:L:519:U:C5' | 1.67 | 1.38 |
| 5:M:408:U:O2' | 5:M:409:U:C5' | 1.71 | 1.38 |
| 1:I:62:A:O2' | 1:I:63:A:C5' | 1.68 | 1.38 |
| 5:M:323:U:O2' | 5:M:324:U:C5' | 1.67 | 1.38 |
| 4:L:550:U:O2' | 4:L:551:U:C5' | 1.70 | 1.37 |
| 1:I:323:A:C2' | 1:I:324:A:H5' | 1.30 | 1.37 |
| 4:L:497:U:C2' | 4:L:498:U:C5' | 1.97 | 1.37 |
| 4:L:557:U:O2' | 4:L:558:U:H5' | 1.25 | 1.37 |
| 1:I:133:A:C2' | 1:I:134:A:C5' | 1.96 | 1.37 |
| 5:M:319:U:O2' | 5:M:320:U:H5' | 1.21 | 1.36 |
| 2:J:136:A:C2 | 2:J:137:A:C4 | 2.12 | 1.36 |
| 2:J:56:A:C2' | 2:J:57:A:H5' | 1.48 | 1.36 |
| 5:M:337:U:C2' | 5:M:338:U:H5' | 1.21 | 1.36 |
| 5:M:350:U:O2' | 5:M:351:U:C5' | 1.73 | 1.36 |
| 4:L:807:U:C2' | 4:L:808:U:C5' | 2.02 | 1.36 |
| 1:I:138:A:C2' | 1:I:139:A:H5' | 1.54 | 1.36 |
| 4:L:759:U:O2' | 4:L:760:U:C5' | 1.68 | 1.36 |
| 4:L:780:U:O2' | 4:L:781:U:H5' | 1.19 | 1.36 |
| 3:K:118:A:O2' | 3:K:119:A:C5' | 1.71 | 1.36 |
| 2:J:26:A:O2' | 2:J:27:A:H5' | 1.19 | 1.35 |
| 1:I:132:A:C2' | 1:I:133:A:H5' | 1.55 | 1.35 |
| 3:K:119:A:O2' | 3:K:120:A:C5' | 1.71 | 1.35 |
| 6:N:440:U:C2' | 6:N:441:U:H5' | 1.50 | 1.35 |
| 6:N:481:U:O2' | 6:N:482:U:C5' | 1.73 | 1.35 |
| 6:N:425:U:H2' | 6:N:426:U:C6 | 1.60 | 1.35 |
| 6:N:483:U:C4 | 6:N:484:U:O4 | 1.78 | 1.35 |
| 4:L:460:U:O2' | 4:L:461:U:H5' | 1.22 | 1.35 |
| 4:L:779:U:O2' | 4:L:780:U:H5' | 1.23 | 1.35 |
| 5:M:458:U:C2' | 5:M:459:U:H5' | 1.43 | 1.35 |
| 3:K:165:A:C2' | 3:K:166:A:H5' | 1.44 | 1.35 |
| 4:L:739:U:O2' | 4:L:740:U:C5' | 1.72 | 1.35 |
| 1:I:136:A:O2' | 1:I:137:A:C5' | 1.73 | 1.35 |
| 4:L:694:U:O2' | 4:L:695:U:H5' | 1.21 | 1.35 |
| 1:I:119:A:O2' | 1:I:120:A:C5' | 1.73 | 1.34 |
| 5:M:347:U:C2' | 5:M:348:U:H5' | 1.53 | 1.34 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 2:J:183:A:H2' | 2:J:184:A:C5' | 1.51 | 1.34 |
| 3:K:99:A:C2' | 3:K:100:A:C5' | 2.05 | 1.34 |
| 2:J:29:A:C2' | 2:J:30:A:H5' | 1.26 | 1.34 |
| 4:L:814:U:C2' | 4:L:815:U:H5' | 1.57 | 1.34 |
| 4:L:622:U:O2' | 4:L:623:U:C5' | 1.75 | 1.34 |
| 4:L:749:U:O2' | 4:L:750:U:H5' | 1.18 | 1.34 |
| 5:M:405:U:C2' | 5:M:406:U:H5' | 1.58 | 1.34 |
| 6:N:274:U:O2' | 6:N:275:U:H5' | 1.23 | 1.34 |
| 4:L:652:U:O2' | 4:L:653:U:H5' | 1.21 | 1.34 |
| 5:M:405:U:O2' | 5:M:406:U:C5' | 1.73 | 1.34 |
| 2:J:145:A:C5 | 2:J:146:A:N7 | 1.96 | 1.33 |
| 2:J:249:A:O2' | 2:J:250:A:H5' | 1.23 | 1.33 |
| 4:L:576:U:O2' | 4:L:577:U:C5' | 1.77 | 1.33 |
| 1:I:86:A:N6 | 1:I:87:A:N6 | 1.74 | 1.33 |
| 2:J:79:A:O2' | 2:J:80:A:H5' | 1.25 | 1.33 |
| 2:J:183:A:C2' | 2:J:184:A:H5' | 1.17 | 1.33 |
| 3:K:107:A:O2' | 3:K:108:A:H5' | 1.16 | 1.33 |
| 4:L:715:U:O2' | 4:L:716:U:C5' | 1.74 | 1.33 |
| 5:M:322:U:O2' | 5:M:323:U:H5' | 1.19 | 1.33 |
| 2:J:265:A:O2' | 2:J:266:A:H5' | 1.25 | 1.33 |
| 6:N:485:U:O3' | 6:N:486:U:C5' | 1.75 | 1.33 |
| 1:I:142:A:O2' | 1:I:143:A:H5' | 1.22 | 1.33 |
| 1:I:179:A:N6 | 1:I:180:A:N6 | 1.72 | 1.33 |
| 1:I:376:A:C6 | 1:I:377:A:N6 | 1.97 | 1.33 |
| 1:I:69:A:O2' | 1:I:70:A:H5' | 1.26 | 1.33 |
| 1:I:78:A:N3 | 1:I:79:A:C8 | 1.97 | 1.33 |
| 1:I:353:A:C2' | 1:I:354:A:H5' | 1.58 | 1.33 |
| 2:J:184:A:O2' | 2:J:185:A:H5' | 1.24 | 1.33 |
| 4:L:661:U:O2' | 4:L:662:U:H5' | 1.23 | 1.33 |
| 4:L:765:U:C2' | 4:L:766:U:H5' | 1.38 | 1.33 |
| 1:I:85:A:O2' | 1:I:86:A:C5' | 1.77 | 1.33 |
| 5:M:392:U:O2' | 5:M:393:U:H5' | 1.27 | 1.32 |
| 3:K:99:A:C2' | 3:K:100:A:H5' | 1.40 | 1.32 |
| 4:L:722:U:H2' | 4:L:723:U:C5 | 1.64 | 1.32 |
| 5:M:458:U:C2' | 5:M:459:U:C5' | 2.06 | 1.32 |
| 1:I:254:A:O2' | 1:I:255:A:H5' | 1.29 | 1.32 |
| 1:I:55:A:O2' | 1:I:56:A:H5' | 1.19 | 1.32 |
| 2:J:205:A:O2' | 2:J:206:A:C5' | 1.76 | 1.32 |
| 5:M:455:U:O2' | 5:M:456:U:H5' | 1.27 | 1.32 |
| 3:K:130:A:O2' | 3:K:131:A:H5' | 1.28 | 1.32 |
| 3:K:256:A:O2' | 3:K:257:A:H5' | 1.22 | 1.32 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:677:U:O2' | 4:L:678:U:H5' | 1.25 | 1.32 |
| 5:M:336:U:H2' | 5:M:337:U:O4' | 1.20 | 1.32 |
| 4:L:622:U:C2' | 4:L:623:U:H5' | 1.60 | 1.32 |
| 4:L:768:U:O2' | 4:L:769:U:C5' | 1.77 | 1.32 |
| 5:M:494:U:O2' | 5:M:495:U:H5' | 1.19 | 1.32 |
| 5:M:531:U:O2' | 5:M:532:U:H5' | 1.24 | 1.32 |
| 2:J:11:A:O2' | 2:J:12:A:H5' | 1.22 | 1.31 |
| 3:K:110:A:C2' | 3:K:111:A:C5' | 2.07 | 1.31 |
| 3:K:251:A:C3' | 3:K:252:A:P | 2.17 | 1.31 |
| 4:L:722:U:O2 | 4:L:723:U:C5 | 1.78 | 1.31 |
| 1:I:134:A:C2 | 1:I:135:A:N7 | 1.98 | 1.31 |
| 4:L:765:U:C2' | 4:L:766:U:C5' | 2.08 | 1.31 |
| 2:J:69:A:O2' | 2:J:70:A:H5' | 1.20 | 1.31 |
| 4:L:812:U:O2' | 4:L:813:U:H5' | 1.21 | 1.31 |
| 4:L:477:U:C2' | 4:L:478:U:C5' | 2.07 | 1.31 |
| 5:M:368:U:C2' | 5:M:369:U:H5' | 1.50 | 1.31 |
| 5:M:483:U:O2' | 5:M:484:U:H5' | 1.15 | 1.31 |
| 3:K:95:A:O2' | 3:K:96:A:H5' | 1.28 | 1.31 |
| 5:M:395:U:O2' | 5:M:396:U:H5' | 1.20 | 1.31 |
| 5:M:408:U:C2' | 5:M:409:U:H5' | 1.59 | 1.31 |
| 1:I:267:A:N3 | 1:I:268:A:N7 | 1.79 | 1.31 |
| 1:I:103:A:O2' | 1:I:104:A:C5' | 1.78 | 1.31 |
| 1:I:267:A:C2 | 1:I:268:A:N7 | 1.97 | 1.31 |
| 4:L:765:U:O2' | 4:L:766:U:H5' | 1.25 | 1.31 |
| 1:I:138:A:O2' | 1:I:139:A:H5' | 1.24 | 1.30 |
| 1:I:88:A:O2' | 1:I:89:A:H5' | 1.14 | 1.30 |
| 3:K:105:A:H2' | 3:K:106:A:C8 | 1.65 | 1.30 |
| 5:M:435:U:O2' | 5:M:436:U:C5' | 1.77 | 1.30 |
| 4:L:464:U:O2' | 4:L:465:U:H5' | 1.31 | 1.30 |
| 4:L:488:U:O2' | 4:L:489:U:H5' | 1.30 | 1.30 |
| 2:J:205:A:C2' | 2:J:206:A:H5' | 1.33 | 1.30 |
| 1:I:33:A:O2' | 1:I:34:A:H5' | 1.18 | 1.30 |
| 3:K:136:A:O2' | 3:K:137:A:C5' | 1.79 | 1.30 |
| 1:I:163:A:O2' | 1:I:164:A:C5' | 1.80 | 1.30 |
| 2:J:124:A:O2' | 2:J:125:A:C5' | 1.80 | 1.30 |
| 2:J:222:A:O2' | 2:J:223:A:H5' | 1.12 | 1.30 |
| 3:K:118:A:C2' | 3:K:119:A:H5' | 1.39 | 1.30 |
| 5:M:347:U:C2' | 5:M:348:U:C5' | 2.08 | 1.30 |
| 5:M:371:U:O2' | 5:M:372:U:H5' | 1.29 | 1.30 |
| 5:M:425:U:O2' | 5:M:426:U:H5' | 1.15 | 1.30 |
| 5:M:432:U:O2' | 5:M:433:U:H5' | 1.12 | 1.30 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:65:A:O2' | 1:I:66:A:C5' | 1.73 | 1.30 |
| 2:J:43:A:C2' | 2:J:44:A:H5' | 1.50 | 1.30 |
| 4:L:722:U:H2' | 4:L:723:U:C6 | 1.65 | 1.30 |
| 3:K:156:A:C2' | 3:K:157:A:H5' | 1.60 | 1.30 |
| 4:L:588:U:O2' | 4:L:589:U:H5' | 1.13 | 1.30 |
| 6:N:440:U:O2' | 6:N:441:U:H5' | 1.12 | 1.30 |
| 4:L:540:U:O2' | 4:L:541:U:H5' | 1.31 | 1.29 |
| 1:I:136:A:C2' | 1:I:137:A:C5' | 2.09 | 1.29 |
| 1:I:202:A:O2' | 1:I:203:A:C5' | 1.79 | 1.29 |
| 5:M:449:U:O2' | 5:M:450:U:C5' | 1.78 | 1.29 |
| 5:M:453:U:H2' | 5:M:454:U:O4' | 1.30 | 1.29 |
| 6:N:281:U:O2' | 6:N:282:U:H5' | 1.23 | 1.29 |
| 2:J:47:A:O2' | 2:J:48:A:C5' | 1.79 | 1.29 |
| 6:N:412:U:O2' | 6:N:413:U:C5' | 1.79 | 1.29 |
| 3:K:81:A:O2' | 3:K:82:A:H5' | 1.28 | 1.29 |
| 4:L:547:U:C4 | 4:L:548:U:O4 | 1.85 | 1.29 |
| 1:I:12:A:O2' | 1:I:13:A:H5' | 1.32 | 1.29 |
| 1:I:267:A:N3 | 1:I:268:A:C8 | 2.00 | 1.29 |
| 1:I:178:A:O2' | 1:I:179:A:H5' | 1.26 | 1.29 |
| 4:L:724:U:C2' | 4:L:725:U:H5' | 1.63 | 1.29 |
| 6:N:423:U:O2' | 6:N:424:U:H5' | 1.23 | 1.29 |
| 4:L:438:U:C4 | 4:L:439:U:O4 | 1.85 | 1.29 |
| 4:L:566:U:O2' | 4:L:567:U:H5' | 1.13 | 1.29 |
| 6:N:431:U:O2' | 6:N:432:U:C5' | 1.81 | 1.29 |
| 4:L:634:U:O2' | 4:L:635:U:H5' | 1.16 | 1.29 |
| 6:N:362:U:O2' | 6:N:363:U:H5' | 1.20 | 1.29 |
| 6:N:431:U:C2' | 6:N:432:U:C5' | 2.10 | 1.29 |
| 6:N:442:U:O2' | 6:N:443:U:H5' | 1.19 | 1.29 |
| 1:I:347:A:O2' | 1:I:348:A:H5' | 1.19 | 1.28 |
| 2:J:117:A:C2 | 2:J:118:A:C4 | 2.21 | 1.28 |
| 2:J:11:A:C2' | 2:J:12:A:H5' | 1.63 | 1.28 |
| 4:L:736:U:O2' | 4:L:737:U:H5' | 1.17 | 1.28 |
| 1:I:147:A:O2' | 1:I:148:A:H5' | 1.18 | 1.28 |
| 1:I:230:A:O2' | 1:I:231:A:H5' | 1.20 | 1.28 |
| 1:I:255:A:O2' | 1:I:256:A:H5' | 1.27 | 1.28 |
| 1:I:258:A:O2' | 1:I:259:A:H5' | 1.13 | 1.28 |
| 5:M:318:U:O2' | 5:M:319:U:H5' | 1.20 | 1.28 |
| 1:I:134:A:C2 | 1:I:135:A:C5 | 2.21 | 1.28 |
| 3:K:165:A:C2' | 3:K:166:A:C5' | 2.11 | 1.28 |
| 4:L:463:U:O2' | 4:L:464:U:H5' | 1.24 | 1.28 |
| 4:L:723:U:H2' | 4:L:724:U:O4' | 1.24 | 1.28 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:815:U:O2' | 4:L:816:U:H5' | 1.24 | 1.28 |
| 2:J:229:A:O2' | 2:J:230:A:H5' | 1.26 | 1.28 |
| 2:J:234:A:O2' | 2:J:235:A:H5' | 1.32 | 1.28 |
| 2:J:83:A:C2 | 2:J:84:A:C5 | 2.21 | 1.28 |
| 3:K:253:A:C2' | 3:K:254:A:C5' | 2.10 | 1.28 |
| 1:I:270:A:O2' | 1:I:271:A:H5' | 1.20 | 1.28 |
| 1:I:271:A:N3 | 1:I:272:A:C8 | 2.00 | 1.28 |
| 2:J:160:A:O2' | 2:J:161:A:H5' | 1.31 | 1.28 |
| 5:M:525:U:O2' | 5:M:526:U:H5' | 1.24 | 1.28 |
| 1:I:87:A:O2' | 1:I:88:A:H5' | 1.11 | 1.28 |
| 4:L:775:U:O2' | 4:L:776:U:H5' | 1.13 | 1.28 |
| 1:I:101:A:N1 | 1:I:102:A:N6 | 1.80 | 1.28 |
| 2:J:221:A:O2' | 2:J:222:A:H5' | 1.18 | 1.28 |
| 1:I:109:A:C2 | 1:I:110:A:C4 | 2.22 | 1.28 |
| 6:N:449:U:O2' | 6:N:450:U:H5' | 1.25 | 1.28 |
| 3:K:132:A:O2' | 3:K:133:A:H5' | 1.20 | 1.28 |
| 3:K:250:A:O2' | 3:K:251:A:H5' | 1.26 | 1.28 |
| 3:K:168:A:O2' | 3:K:169:A:H5' | 1.18 | 1.27 |
| 5:M:539:U:O2' | 5:M:540:U:H5' | 1.17 | 1.27 |
| 1:I:270:A:C2' | 1:I:271:A:H5' | 1.63 | 1.27 |
| 3:K:118:A:C2' | 3:K:119:A:C5' | 2.03 | 1.27 |
| 6:N:424:U:H2' | 6:N:425:U:C6 | 1.68 | 1.27 |
| 1:I:284:A:O2' | 1:I:285:A:C5' | 1.81 | 1.27 |
| 2:J:43:A:C2' | 2:J:44:A:C5' | 2.11 | 1.27 |
| 3:K:100:A:O2' | 3:K:101:A:H5' | 1.31 | 1.27 |
| 5:M:501:U:H2' | 5:M:502:U:C6 | 1.67 | 1.27 |
| 2:J:230:A:O2' | 2:J:231:A:H5' | 1.18 | 1.27 |
| 5:M:452:U:O2' | 5:M:453:U:H5' | 1.10 | 1.27 |
| 1:I:248:A:O2' | 1:I:249:A:H5' | 1.15 | 1.27 |
| 3:K:99:A:O2' | 3:K:100:A:C5' | 1.82 | 1.27 |
| 4:L:487:U:O2' | 4:L:488:U:C5' | 1.82 | 1.27 |
| 5:M:544:U:O2' | 5:M:545:U:C5' | 1.81 | 1.27 |
| 1:I:73:A:C2' | 1:I:74:A:O4' | 1.81 | 1.27 |
| 4:L:498:U:O2' | 4:L:499:U:H5' | 1.29 | 1.27 |
| 2:J:130:A:O2' | 2:J:131:A:H5' | 1.30 | 1.27 |
| 5:M:369:U:O2' | 5:M:370:U:H5' | 1.33 | 1.27 |
| 1:I:277:A:N6 | 1:I:278:A:N6 | 1.80 | 1.27 |
| 6:N:400:U:O2' | 6:N:401:U:H5' | 1.13 | 1.27 |
| 6:N:492:U:O2' | 6:N:493:U:H5' | 1.28 | 1.27 |
| 2:J:92:A:N3 | 2:J:93:A:N7 | 1.81 | 1.27 |
| 3:K:253:A:O2' | 3:K:254:A:H5' | 1.14 | 1.27 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 3:K:90:A:O2' | 3:K:91:A:H5' | 1.17 | 1.27 |
| 5:M:323:U:C2' | 5:M:324:U:O4' | 1.79 | 1.27 |
| 1:I:109:A:O2' | 1:I:110:A:C5' | 1.83 | 1.26 |
| 1:I:229:A:O2' | 1:I:230:A:H5' | 1.32 | 1.26 |
| 1:I:74:A:H2' | 1:I:75:A:O4' | 1.23 | 1.26 |
| 2:J:204:A:N6 | 2:J:205:A:N6 | 1.81 | 1.26 |
| 3:K:64:A:O2' | 3:K:65:A:H5' | 1.24 | 1.26 |
| 4:L:794:U:O2' | 4:L:795:U:H5' | 1.15 | 1.26 |
| 6:N:280:U:O2' | 6:N:281:U:H5' | 1.34 | 1.26 |
| 6:N:426:U:C2' | 6:N:427:U:C5' | 2.06 | 1.26 |
| 1:I:172:A:O2' | 1:I:173:A:H5' | 1.11 | 1.26 |
| 4:L:691:U:O2' | 4:L:692:U:H5' | 1.30 | 1.26 |
| 4:L:755:U:O2' | 4:L:756:U:H5' | 1.20 | 1.26 |
| 5:M:318:U:C2' | 5:M:319:U:H5' | 1.65 | 1.26 |
| 5:M:454:U:H2' | 5:M:455:U:O4' | 1.35 | 1.26 |
| 5:M:485:U:O2' | 5:M:486:U:H5' | 1.19 | 1.26 |
| 2:J:58:A:O2' | 2:J:59:A:H5' | 1.12 | 1.26 |
| 3:K:65:A:N6 | 3:K:66:A:N6 | 1.83 | 1.26 |
| 5:M:396:U:O2' | 5:M:397:U:H5' | 1.25 | 1.26 |
| 1:I:252:A:O2' | 1:I:253:A:H5' | 1.13 | 1.26 |
| 1:I:262:A:O2' | 1:I:263:A:H5' | 1.26 | 1.26 |
| 4:L:501:U:O2' | 4:L:502:U:H5' | 1.29 | 1.26 |
| 4:L:507:U:C2' | 4:L:508:U:H5' | 1.65 | 1.26 |
| 4:L:762:U:O2' | 4:L:763:U:C5' | 1.82 | 1.26 |
| 5:M:350:U:C2' | 5:M:351:U:H5' | 1.58 | 1.26 |
| 5:M:486:U:O2' | 5:M:487:U:H5' | 1.29 | 1.26 |
| 6:N:320:U:O2' | 6:N:321:U:H5' | 1.25 | 1.26 |
| 6:N:485:U:O3' | 6:N:486:U:H5' | 1.21 | 1.26 |
| 2:J:117:A:O2' | 2:J:118:A:H5' | 1.11 | 1.26 |
| 2:J:122:A:N6 | 2:J:123:A:N6 | 1.83 | 1.26 |
| 2:J:37:A:O2' | 2:J:38:A:H5' | 1.25 | 1.26 |
| 5:M:482:U:O2' | 5:M:483:U:H5' | 1.21 | 1.26 |
| 1:I:317:A:O2' | 1:I:318:A:H5' | 1.15 | 1.26 |
| 4:L:647:U:O2' | 4:L:648:U:H5' | 1.31 | 1.26 |
| 1:I:184:A:N6 | 1:I:185:A:N6 | 1.84 | 1.26 |
| 2:J:69:A:C2' | 2:J:70:A:C5' | 2.12 | 1.26 |
| 6:N:485:U:H2' | 6:N:486:U:O4' | 1.35 | 1.26 |
| 1:I:91:A:C2' | 1:I:92:A:H5' | 1.64 | 1.25 |
| 2:J:222:A:C2' | 2:J:223:A:H5' | 1.43 | 1.25 |
| 4:L:497:U:O2' | 4:L:498:U:H5' | 1.16 | 1.25 |
| 4:L:638:U:O2' | 4:L:639:U:C5' | 1.75 | 1.25 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:673:U:O2' | 4:L:674:U:H5' | 1.08 | 1.25 |
| 4:L:722:U:C2 | 4:L:723:U:C4 | 2.24 | 1.25 |
| 1:I:260:A:O2' | 1:I:261:A:H5' | 1.33 | 1.25 |
| 2:J:124:A:O2' | 2:J:125:A:H5' | 1.09 | 1.25 |
| 1:I:283:A:C2 | 1:I:284:A:C5 | 2.24 | 1.25 |
| 2:J:218:A:O2' | 2:J:219:A:H5' | 1.19 | 1.25 |
| 4:L:594:U:O2' | 4:L:595:U:H5' | 1.31 | 1.25 |
| 4:L:692:U:O2' | 4:L:693:U:H5' | 1.11 | 1.25 |
| 2:J:83:A:N3 | 2:J:84:A:C8 | 2.03 | 1.25 |
| 4:L:595:U:O2' | 4:L:596:U:H5' | 1.32 | 1.25 |
| 2:J:120:A:O2' | 2:J:121:A:H5' | 1.29 | 1.25 |
| 2:J:70:A:C2' | 2:J:71:A:C5' | 2.09 | 1.25 |
| 1:I:361:A:O2' | 1:I:362:A:H5' | 1.18 | 1.25 |
| 2:J:153:A:O2' | 2:J:154:A:H5' | 1.20 | 1.25 |
| 2:J:182:A:N6 | 2:J:183:A:N6 | 1.83 | 1.25 |
| 2:J:206:A:O2' | 2:J:207:A:C5' | 1.83 | 1.25 |
| 4:L:603:U:O2' | 4:L:604:U:H5' | 1.34 | 1.25 |
| 4:L:814:U:O2' | 4:L:815:U:H5' | 1.15 | 1.25 |
| 5:M:331:U:O2' | 5:M:332:U:H5' | 1.15 | 1.25 |
| 5:M:464:U:O2' | 5:M:465:U:H5' | 1.10 | 1.25 |
| 1:I:74:A:O2' | 1:I:75:A:H5' | 1.35 | 1.25 |
| 6:N:411:U:O2' | 6:N:412:U:H5' | 1.34 | 1.25 |
| 2:J:211:A:O2' | 2:J:212:A:H5' | 1.23 | 1.25 |
| 5:M:323:U:H2' | 5:M:324:U:O4' | 1.31 | 1.25 |
| 5:M:419:U:O2' | 5:M:420:U:C5' | 1.84 | 1.25 |
| 1:I:274:A:O2' | 1:I:275:A:C5' | 1.84 | 1.25 |
| 2:J:101:A:N6 | 2:J:102:A:N6 | 1.84 | 1.25 |
| 6:N:338:U:H2' | 6:N:339:U:C6 | 1.72 | 1.25 |
| 6:N:380:U:O2' | 6:N:381:U:H5' | 1.27 | 1.25 |
| 6:N:405:U:O2' | 6:N:406:U:H5' | 1.32 | 1.25 |
| 2:J:222:A:C2' | 2:J:223:A:C5' | 2.12 | 1.25 |
| 4:L:484:U:O2' | 4:L:485:U:H5' | 1.30 | 1.25 |
| 4:L:668:U:H2' | 4:L:669:U:C6 | 1.70 | 1.25 |
| 4:L:695:U:O2' | 4:L:696:U:H5' | 1.13 | 1.25 |
| 6:N:440:U:C2' | 6:N:441:U:C5' | 2.14 | 1.25 |
| 1:I:243:A:N6 | 1:I:244:A:N6 | 1.85 | 1.25 |
| 1:I:25:A:O2' | 1:I:26:A:H5' | 1.15 | 1.25 |
| 1:I:269:A:O2' | 1:I:270:A:H5' | 1.31 | 1.25 |
| 2:J:176:A:O2' | 2:J:177:A:H5' | 1.31 | 1.25 |
| 3:K:203:A:C2 | 3:K:204:A:C5 | 2.25 | 1.25 |
| 4:L:708:U:O2' | 4:L:709:U:H5' | 1.32 | 1.25 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:469:U:C2 | 5:M:470:U:C5 | 2.23 | 1.25 |
| 6:N:374:U:O2' | 6:N:375:U:H5' | 1.35 | 1.25 |
| 4:L:674:U:O2' | 4:L:675:U:H5' | 1.08 | 1.24 |
| 4:L:715:U:H2' | 4:L:716:U:C6 | 1.72 | 1.24 |
| 1:I:175:A:C2 | 1:I:176:A:C5 | 2.24 | 1.24 |
| 1:I:227:A:O2' | 1:I:228:A:H5' | 1.31 | 1.24 |
| 2:J:107:A:O2' | 2:J:108:A:H5' | 1.34 | 1.24 |
| 2:J:119:A:N6 | 2:J:120:A:N6 | 1.83 | 1.24 |
| 2:J:70:A:O2' | 2:J:71:A:C5' | 1.83 | 1.24 |
| 4:L:525:U:O2' | 4:L:526:U:H5' | 1.33 | 1.24 |
| 4:L:698:U:O2' | 4:L:699:U:H5' | 1.13 | 1.24 |
| 6:N:417:U:O2' | 6:N:418:U:H5' | 1.37 | 1.24 |
| 6:N:431:U:C2' | 6:N:432:U:H5' | 1.46 | 1.24 |
| 1:I:133:A:O2' | 1:I:134:A:C5' | 1.80 | 1.24 |
| 1:I:295:A:O2' | 1:I:296:A:H5' | 1.25 | 1.24 |
| 3:K:156:A:O2' | 3:K:157:A:H5' | 1.32 | 1.24 |
| 3:K:165:A:O2' | 3:K:166:A:H5' | 1.07 | 1.24 |
| 4:L:682:U:O2' | 4:L:683:U:H5' | 1.07 | 1.24 |
| 5:M:491:U:O2' | 5:M:492:U:H5' | 1.35 | 1.24 |
| 2:J:127:A:O2' | 2:J:128:A:C5' | 1.86 | 1.24 |
| 4:L:811:U:H2' | 4:L:812:U:O4' | 1.32 | 1.24 |
| 5:M:485:U:C2' | 5:M:486:U:H5' | 1.65 | 1.24 |
| 6:N:311:U:H2' | 6:N:312:U:O4' | 1.33 | 1.24 |
| 1:I:82:A:H2' | 1:I:83:A:O4' | 1.30 | 1.24 |
| 2:J:192:A:O2' | 2:J:193:A:H5' | 1.33 | 1.24 |
| 2:J:233:A:O2' | 2:J:234:A:H5' | 1.34 | 1.24 |
| 2:J:67:A:O2' | 2:J:68:A:H5' | 1.35 | 1.24 |
| 4:L:500:U:O2' | 4:L:501:U:H5' | 1.10 | 1.24 |
| 1:I:207:A:O2' | 1:I:208:A:H5' | 1.27 | 1.24 |
| 2:J:143:A:C2 | 2:J:144:A:N9 | 2.05 | 1.24 |
| 4:L:567:U:O2' | 4:L:568:U:H5' | 1.12 | 1.24 |
| 4:L:704:U:O2' | 4:L:705:U:H5' | 1.29 | 1.24 |
| 5:M:391:U:O2' | 5:M:392:U:H5' | 1.34 | 1.24 |
| 5:M:458:U:O2' | 5:M:459:U:C5' | 1.86 | 1.24 |
| 2:J:248:A:N6 | 2:J:249:A:N6 | 1.82 | 1.24 |
| 2:J:66:A:O2' | 2:J:67:A:H5' | 1.34 | 1.24 |
| 4:L:507:U:O2' | 4:L:508:U:C5' | 1.85 | 1.24 |
| 5:M:419:U:C2' | 5:M:420:U:C5' | 2.14 | 1.24 |
| 6:N:277:U:O2' | 6:N:278:U:H5' | 1.09 | 1.24 |
| 1:I:120:A:O2' | 1:I:121:A:H5' | 1.38 | 1.24 |
| 1:I:17:A:O2' | 1:I:18:A:C5' | 1.86 | 1.24 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:236:A:O2' | 1:I:237:A:H5' | 1.10 | 1.24 |
| 1:I:30:A:O2' | 1:I:31:A:H5' | 1.36 | 1.24 |
| 4:L:572:U:O2' | 4:L:573:U:C5' | 1.86 | 1.24 |
| 1:I:103:A:O2' | 1:I:104:A:H5' | 1.30 | 1.23 |
| 3:K:104:A:O2' | 3:K:105:A:C5' | 1.85 | 1.23 |
| 4:L:477:U:O2' | 4:L:478:U:C5' | 1.86 | 1.23 |
| 4:L:649:U:O2' | 4:L:650:U:H5' | 1.36 | 1.23 |
| 5:M:368:U:O2' | 5:M:369:U:H5' | 1.06 | 1.23 |
| 5:M:420:U:O2' | 5:M:421:U:H5' | 1.33 | 1.23 |
| 6:N:454:U:O2' | 6:N:455:U:H5' | 1.37 | 1.23 |
| 1:I:135:A:O2' | 1:I:136:A:H5' | 1.28 | 1.23 |
| 5:M:526:U:O2' | 5:M:527:U:H5' | 1.08 | 1.23 |
| 1:I:232:A:C2' | 1:I:233:A:H5' | 1.60 | 1.23 |
| 4:L:597:U:O2' | 4:L:598:U:H5' | 1.30 | 1.23 |
| 1:I:81:A:O2' | 1:I:82:A:H5' | 1.06 | 1.23 |
| 3:K:124:A:C2 | 3:K:125:A:C5 | 2.25 | 1.23 |
| 5:M:382:U:O2' | 5:M:383:U:H5' | 1.07 | 1.23 |
| 5:M:433:U:C4 | 5:M:434:U:O4 | 1.91 | 1.23 |
| 5:M:453:U:C2' | 5:M:454:U:O4' | 1.86 | 1.23 |
| 6:N:346:U:O3' | 6:N:347:U:P | 1.96 | 1.23 |
| 2:J:206:A:C2' | 2:J:207:A:H5' | 1.59 | 1.23 |
| 5:M:405:U:C2' | 5:M:406:U:C5' | 2.14 | 1.23 |
| 1:I:129:A:C2' | 1:I:130:A:H5' | 1.68 | 1.23 |
| 5:M:387:U:C2 | 5:M:388:U:C5 | 2.25 | 1.23 |
| 5:M:448:U:O2' | 5:M:449:U:H5' | 1.08 | 1.23 |
| 5:M:474:U:O3' | 5:M:475:U:P | 1.96 | 1.23 |
| 1:I:97:A:O2' | 1:I:98:A:H5' | 1.16 | 1.23 |
| 4:L:554:U:C2 | 4:L:555:U:C5 | 2.27 | 1.23 |
| 4:L:713:U:H2' | 4:L:714:U:O4' | 1.09 | 1.23 |
| 4:L:723:U:C5 | 4:L:724:U:C5 | 2.25 | 1.23 |
| 2:J:168:A:O3' | 2:J:169:A:P | 1.97 | 1.23 |
| 4:L:510:U:O2' | 4:L:511:U:H5' | 1.32 | 1.23 |
| 1:I:14:A:H2' | 1:I:15:A:O4' | 1.38 | 1.23 |
| 1:I:355:A:O3' | 1:I:356:A:P | 1.97 | 1.23 |
| 3:K:166:A:O2' | 3:K:167:A:H5' | 1.06 | 1.23 |
| 4:L:743:U:O2' | 4:L:744:U:C5' | 1.84 | 1.22 |
| 6:N:288:U:O3' | 6:N:289:U:P | 1.98 | 1.22 |
| 2:J:206:A:C2' | 2:J:207:A:C5' | 2.15 | 1.22 |
| 3:K:100:A:C2' | 3:K:101:A:C5' | 2.15 | 1.22 |
| 4:L:537:U:O2' | 4:L:538:U:H5' | 1.39 | 1.22 |
| 4:L:576:U:C2' | 4:L:577:U:C5' | 2.08 | 1.22 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:346:U:O2' | 5:M:347:U:H5' | 1.06 | 1.22 |
| 1:I:174:A:O2' | 1:I:175:A:H5' | 1.32 | 1.22 |
| 1:I:270:A:C2' | 1:I:271:A:C5' | 2.18 | 1.22 |
| 2:J:219:A:O2' | 2:J:220:A:H5' | 1.09 | 1.22 |
| 5:M:407:U:C4 | 5:M:408:U:O4 | 1.93 | 1.22 |
| 5:M:488:U:H2' | 5:M:489:U:O4' | 1.38 | 1.22 |
| 5:M:549:U:O3' | 5:M:550:U:P | 1.97 | 1.22 |
| 1:I:257:A:O2' | 1:I:258:A:H5' | 1.08 | 1.22 |
| 1:I:385:A:O3' | 1:I:386:A:P | 1.97 | 1.22 |
| 2:J:214:A:O2' | 2:J:215:A:H5' | 1.08 | 1.22 |
| 2:J:43:A:O2' | 2:J:44:A:H5' | 1.31 | 1.22 |
| 3:K:15:A:O3' | 3:K:16:A:P | 1.97 | 1.22 |
| 3:K:89:A:O2' | 3:K:90:A:P | 1.96 | 1.22 |
| 6:N:387:U:O3' | 6:N:388:U:P | 1.97 | 1.22 |
| 1:I:132:A:O2' | 1:I:133:A:H5' | 1.10 | 1.22 |
| 2:J:265:A:O2' | 2:J:266:A:C5' | 1.87 | 1.22 |
| 3:K:112:A:N6 | 3:K:113:A:N6 | 1.86 | 1.22 |
| 4:L:487:U:C2' | 4:L:488:U:C5' | 2.15 | 1.22 |
| 4:L:694:U:C2' | 4:L:695:U:H5' | 1.52 | 1.22 |
| 1:I:106:A:N3 | 1:I:107:A:C8 | 2.06 | 1.22 |
| 5:M:335:U:C4 | 5:M:336:U:C4 | 2.28 | 1.22 |
| 5:M:428:U:C2' | 5:M:429:U:H5' | 1.69 | 1.22 |
| 6:N:303:U:O3' | 6:N:304:U:P | 1.96 | 1.22 |
| 6:N:379:U:O2' | 6:N:380:U:H5' | 1.29 | 1.22 |
| 6:N:416:U:C2' | 6:N:417:U:O4' | 1.82 | 1.22 |
| 6:N:450:U:H2' | 6:N:451:U:O4' | 1.39 | 1.22 |
| 6:N:484:U:O3' | 6:N:485:U:H5' | 1.36 | 1.22 |
| 2:J:100:A:O2' | 2:J:101:A:H5' | 1.09 | 1.22 |
| 4:L:646:U:O2' | 4:L:647:U:H5' | 1.38 | 1.22 |
| 5:M:336:U:C2' | 5:M:337:U:C5' | 2.16 | 1.22 |
| 1:I:232:A:O2' | 1:I:233:A:H5' | 1.38 | 1.22 |
| 1:I:291:A:O2' | 1:I:292:A:H5' | 1.38 | 1.22 |
| 1:I:353:A:O2' | 1:I:354:A:H5' | 1.08 | 1.22 |
| 1:I:56:A:O2' | 1:I:57:A:C5' | 1.86 | 1.22 |
| 3:K:208:A:O3' | 3:K:209:A:P | 1.98 | 1.22 |
| 3:K:31:A:N6 | 3:K:32:A:N6 | 1.85 | 1.22 |
| 2:J:88:A:O2' | 2:J:89:A:C5' | 1.87 | 1.22 |
| 6:N:394:U:O2' | 6:N:395:U:C5' | 1.85 | 1.22 |
| 1:I:132:A:C2' | 1:I:133:A:C5' | 2.15 | 1.22 |
| 1:I:239:A:O2' | 1:I:240:A:H5' | 1.04 | 1.22 |
| 3:K:19:A:O3' | 3:K:20:A:P | 1.97 | 1.22 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:578:U:O2' | 4:L:579:U:H5' | 1.36 | 1.21 |
| 4:L:746:U:O2 | 4:L:747:U:C6 | 1.92 | 1.21 |
| 3:K:14:A:O3' | 3:K:15:A:P | 1.98 | 1.21 |
| 3:K:13:A:O3' | 3:K:14:A:P | 1.98 | 1.21 |
| 4:L:717:U:C4 | 4:L:718:U:O4 | 1.92 | 1.21 |
| 5:M:322:U:C2' | 5:M:323:U:H5' | 1.69 | 1.21 |
| 1:I:119:A:C2' | 1:I:120:A:H5' | 1.70 | 1.21 |
| 1:I:277:A:C6 | 1:I:278:A:N6 | 2.07 | 1.21 |
| 1:I:299:A:O2' | 1:I:300:A:H5' | 1.34 | 1.21 |
| 1:I:306:A:O2' | 1:I:307:A:C5' | 1.88 | 1.21 |
| 4:L:740:U:O2' | 4:L:741:U:H5' | 1.37 | 1.21 |
| 6:N:427:U:O2' | 6:N:428:U:H5' | 1.38 | 1.21 |
| 1:I:49:A:O2' | 1:I:50:A:H5' | 1.40 | 1.21 |
| 2:J:56:A:O2' | 2:J:57:A:C5' | 1.88 | 1.21 |
| 3:K:155:A:H2' | 3:K:156:A:O4' | 1.40 | 1.21 |
| 4:L:713:U:C2' | 4:L:714:U:O4' | 1.87 | 1.21 |
| 5:M:510:U:H2' | 5:M:511:U:H6 | 1.06 | 1.21 |
| 1:I:122:A:O2' | 1:I:123:A:H5' | 1.08 | 1.21 |
| 2:J:133:A:O2' | 2:J:134:A:C5' | 1.87 | 1.21 |
| 4:L:702:U:O2' | 4:L:703:U:H5' | 1.38 | 1.21 |
| 4:L:733:U:O2' | 4:L:734:U:H5' | 1.39 | 1.21 |
| 4:L:751:U:O2' | 4:L:752:U:H5' | 1.39 | 1.21 |
| 4:L:447:U:O3' | 4:L:448:U:P | 1.98 | 1.21 |
| 6:N:426:U:C2' | 6:N:427:U:H5' | 1.60 | 1.21 |
| 1:I:360:A:O2' | 1:I:361:A:H5' | 1.38 | 1.21 |
| 3:K:10:A:O3' | 3:K:11:A:P | 1.97 | 1.21 |
| 4:L:688:U:O2' | 4:L:689:U:C5' | 1.88 | 1.21 |
| 4:L:757:U:C2 | 4:L:758:U:C5 | 2.29 | 1.21 |
| 5:M:379:U:H2' | 5:M:380:U:C6 | 1.75 | 1.21 |
| 1:I:337:A:O2' | 1:I:338:A:C5' | 1.87 | 1.21 |
| 2:J:143:A:C2 | 2:J:144:A:C4 | 2.27 | 1.21 |
| 2:J:191:A:O2' | 2:J:192:A:H5' | 1.39 | 1.21 |
| 5:M:333:U:C2' | 5:M:334:U:H5' | 1.64 | 1.21 |
| 4:L:612:U:O2' | 4:L:613:U:H5' | 1.37 | 1.21 |
| 4:L:682:U:O2' | 4:L:683:U:C5' | 1.89 | 1.21 |
| 5:M:530:U:C2' | 5:M:531:U:H5' | 1.52 | 1.21 |
| 1:I:314:A:O2' | 1:I:315:A:H5' | 1.40 | 1.20 |
| 4:L:445:U:O3' | 4:L:446:U:P | 1.98 | 1.20 |
| 4:L:574:U:H2' | 4:L:575:U:C6 | 1.77 | 1.20 |
| 4:L:584:U:O2' | 4:L:585:U:H5' | 1.35 | 1.20 |
| 5:M:399:U:O2' | 5:M:400:U:H5' | 1.39 | 1.20 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:106:A:O2' | 1:I:107:A:C5' | 1.88 | 1.20 |
| 1:I:116:A:O2' | 1:I:117:A:H5' | 1.34 | 1.20 |
| 2:J:21:A:O2' | 2:J:22:A:H5' | 1.36 | 1.20 |
| 4:L:533:U:O2' | 4:L:534:U:H5' | 1.41 | 1.20 |
| 4:L:554:U:O2 | 4:L:555:U:C5 | 1.93 | 1.20 |
| 3:K:244:A:O3' | 3:K:245:A:P | 1.98 | 1.20 |
| 1:I:202:A:C2' | 1:I:203:A:H5' | 1.71 | 1.20 |
| 1:I:250:A:N6 | 1:I:251:A:N6 | 1.90 | 1.20 |
| 2:J:104:A:O2' | 2:J:105:A:H5' | 1.37 | 1.20 |
| 2:J:132:A:O2' | 2:J:133:A:H5' | 1.41 | 1.20 |
| 3:K:178:A:O3' | 3:K:179:A:P | 2.00 | 1.20 |
| 4:L:767:U:C2 | 4:L:768:U:C5 | 2.28 | 1.20 |
| 1:I:126:A:O2' | 1:I:127:A:H5' | 1.36 | 1.20 |
| 1:I:132:A:O2' | 1:I:133:A:C5' | 1.89 | 1.20 |
| 1:I:75:A:C2' | 1:I:76:A:H5' | 1.71 | 1.20 |
| 2:J:270:A:O3' | 2:J:271:A:P | 1.98 | 1.20 |
| 4:L:762:U:O2' | 4:L:763:U:H5' | 1.05 | 1.20 |
| 1:I:233:A:O2' | 1:I:234:A:H5' | 1.39 | 1.20 |
| 4:L:694:U:C2' | 4:L:695:U:C5' | 2.17 | 1.20 |
| 5:M:505:U:O2' | 5:M:506:U:C5' | 1.87 | 1.20 |
| 1:I:287:A:O2' | 1:I:288:A:H5' | 1.34 | 1.20 |
| 3:K:125:A:O2' | 3:K:126:A:H5' | 1.05 | 1.20 |
| 3:K:16:A:O3' | 3:K:17:A:P | 2.00 | 1.20 |
| 4:L:642:U:O2' | 4:L:643:U:H5' | 1.42 | 1.20 |
| 3:K:46:A:O3' | 3:K:47:A:P | 2.00 | 1.20 |
| 4:L:677:U:O3' | 4:L:678:U:P | 1.98 | 1.20 |
| 6:N:457:U:O3' | 6:N:458:U:P | 2.00 | 1.20 |
| 1:I:372:A:O2' | 1:I:373:A:H5' | 1.40 | 1.20 |
| 1:I:73:A:O2' | 1:I:74:A:C5' | 1.88 | 1.20 |
| 2:J:103:A:O2' | 2:J:104:A:C5' | 1.90 | 1.20 |
| 6:N:467:U:O2' | 6:N:468:U:C5' | 1.88 | 1.20 |
| 1:I:287:A:C2' | 1:I:288:A:H5' | 1.72 | 1.19 |
| 1:I:78:A:C2 | 1:I:79:A:C4 | 2.30 | 1.19 |
| 2:J:271:A:O3' | 2:J:272:A:P | 1.98 | 1.19 |
| 3:K:104:A:O2' | 3:K:105:A:H5' | 1.04 | 1.19 |
| 4:L:518:U:C2' | 4:L:519:U:H5' | 1.70 | 1.19 |
| 1:I:175:A:O2' | 1:I:176:A:P | 1.99 | 1.19 |
| 2:J:254:A:O2' | 2:J:255:A:H5' | 1.41 | 1.19 |
| 2:J:56:A:C2' | 2:J:57:A:C5' | 2.14 | 1.19 |
| 5:M:530:U:O2' | 5:M:531:U:H5' | 1.39 | 1.19 |
| 2:J:72:A:O2' | 2:J:73:A:H5' | 1.37 | 1.19 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:506:U:O2' | 4:L:507:U:H5' | 1.42 | 1.19 |
| 4:L:585:U:O2' | 4:L:586:U:C5' | 1.90 | 1.19 |
| 1:I:22:A:O2' | 1:I:23:A:H5' | 1.42 | 1.19 |
| 4:L:536:U:O3' | 4:L:537:U:P | 2.00 | 1.19 |
| 5:M:368:U:C2' | 5:M:369:U:C5' | 2.21 | 1.19 |
| 1:I:134:A:N3 | 1:I:135:A:N7 | 1.88 | 1.19 |
| 4:L:466:U:O2' | 4:L:467:U:H5' | 1.05 | 1.19 |
| 6:N:425:U:C2' | 6:N:426:U:O4' | 1.90 | 1.19 |
| 1:I:135:A:C2' | 1:I:136:A:H5' | 1.73 | 1.19 |
| 1:I:283:A:O2' | 1:I:284:A:P | 2.00 | 1.19 |
| 2:J:229:A:O2' | 2:J:230:A:C5' | 1.90 | 1.19 |
| 5:M:308:U:O3' | 5:M:309:U:P | 2.01 | 1.19 |
| 5:M:536:U:O2' | 5:M:537:U:H5' | 1.42 | 1.19 |
| 5:M:373:U:O2' | 5:M:374:U:H5' | 1.43 | 1.19 |
| 6:N:497:U:O2' | 6:N:498:U:H5' | 1.43 | 1.19 |
| 1:I:271:A:C2 | 1:I:272:A:C5 | 2.31 | 1.19 |
| 3:K:23:A:O3' | 3:K:24:A:P | 2.00 | 1.19 |
| 4:L:477:U:O2' | 4:L:478:U:H5' | 1.01 | 1.19 |
| 4:L:769:U:O2' | 4:L:770:U:C5' | 1.91 | 1.19 |
| 1:I:15:A:C2' | 1:I:16:A:H5' | 1.72 | 1.19 |
| 1:I:330:A:O2' | 1:I:331:A:H5' | 1.39 | 1.19 |
| 1:I:56:A:O2' | 1:I:57:A:H5' | 1.04 | 1.19 |
| 3:K:62:A:N6 | 3:K:63:A:N6 | 1.91 | 1.19 |
| 4:L:587:U:O2' | 4:L:588:U:H5' | 1.42 | 1.19 |
| 4:L:728:U:C2 | 4:L:729:U:C5 | 2.31 | 1.19 |
| 4:L:754:U:O2' | 4:L:755:U:H5' | 1.43 | 1.19 |
| 6:N:305:U:H2' | 6:N:306:U:C6 | 1.77 | 1.19 |
| 1:I:145:A:O3' | 1:I:146:A:P | 2.01 | 1.19 |
| 1:I:273:A:C2' | 1:I:274:A:H5' | 1.71 | 1.19 |
| 3:K:156:A:C2' | 3:K:157:A:C5' | 2.20 | 1.19 |
| 4:L:563:U:H2' | 4:L:564:U:C6 | 1.77 | 1.19 |
| 5:M:530:U:C2' | 5:M:531:U:C5' | 2.20 | 1.19 |
| 1:I:73:A:H2' | 1:I:74:A:O4' | 1.34 | 1.18 |
| 2:J:202:A:O2' | 2:J:203:A:C5' | 1.90 | 1.18 |
| 4:L:757:U:H2' | 4:L:758:U:C6 | 1.77 | 1.18 |
| 5:M:336:U:C2' | 5:M:337:U:H5' | 1.57 | 1.18 |
| 5:M:496:U:O2' | 5:M:497:U:H5' | 1.40 | 1.18 |
| 5:M:515:U:O2' | 5:M:516:U:H5' | 1.39 | 1.18 |
| 1:I:133:A:O2' | 1:I:134:A:H5' | 1.04 | 1.18 |
| 4:L:686:U:O2' | 4:L:687:U:H5' | 1.40 | 1.18 |
| 5:M:531:U:C2' | 5:M:532:U:C5' | 2.20 | 1.18 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 3:K:243:A:O3' | 3:K:244:A:P | 2.01 | 1.18 |
| 3:K:260:A:O3' | 3:K:261:A:P | 2.01 | 1.18 |
| 4:L:676:U:O3' | 4:L:677:U:P | 2.00 | 1.18 |
| 5:M:338:U:O2' | 5:M:339:U:H5' | 1.42 | 1.18 |
| 5:M:348:U:H2' | 5:M:349:U:C6 | 1.78 | 1.18 |
| 1:I:190:A:O2' | 1:I:191:A:H5' | 1.38 | 1.18 |
| 1:I:68:A:C2' | 1:I:69:A:H5' | 1.73 | 1.18 |
| 2:J:241:A:O3' | 2:J:242:A:P | 2.02 | 1.18 |
| 3:K:136:A:C2' | 3:K:137:A:H5' | 1.72 | 1.18 |
| 3:K:54:A:O3' | 3:K:55:A:P | 2.00 | 1.18 |
| 4:L:487:U:O2' | 4:L:488:U:H5' | 1.01 | 1.18 |
| 4:L:532:U:O2' | 4:L:533:U:H5' | 1.43 | 1.18 |
| 4:L:776:U:O2' | 4:L:777:U:H5' | 1.42 | 1.18 |
| 5:M:458:U:O2' | 5:M:459:U:H5' | 1.01 | 1.18 |
| 1:I:212:A:O2' | 1:I:213:A:H5' | 1.43 | 1.18 |
| 1:I:68:A:O2' | 1:I:69:A:H5' | 1.44 | 1.18 |
| 3:K:59:A:O2' | 3:K:60:A:H5' | 1.41 | 1.18 |
| 4:L:448:U:C2 | 4:L:449:U:C5 | 2.32 | 1.18 |
| 6:N:497:U:C2' | 6:N:498:U:C5' | 2.19 | 1.18 |
| 1:I:95:A:C2 | 1:I:96:A:C5 | 2.31 | 1.18 |
| 2:J:94:A:O2' | 2:J:95:A:H5' | 1.01 | 1.18 |
| 4:L:564:U:O2' | 4:L:565:U:H5' | 1.42 | 1.18 |
| 6:N:271:U:O3' | 6:N:272:U:P | 2.02 | 1.18 |
| 1:I:75:A:O2' | 1:I:76:A:C5' | 1.92 | 1.18 |
| 2:J:129:A:O2' | 2:J:130:A:H5' | 1.42 | 1.18 |
| 2:J:183:A:O2' | 2:J:184:A:C5' | 1.87 | 1.18 |
| 4:L:803:U:H2' | 4:L:804:U:C6 | 1.77 | 1.18 |
| 5:M:333:U:O2' | 5:M:334:U:H5' | 1.03 | 1.18 |
| 1:I:272:A:N6 | 1:I:273:A:N6 | 1.89 | 1.18 |
| 1:I:341:A:O2' | 1:I:342:A:H5' | 1.40 | 1.18 |
| 2:J:75:A:O2' | 2:J:76:A:H5' | 1.44 | 1.18 |
| 3:K:251:A:O3' | 3:K:252:A:P | 2.02 | 1.18 |
| 4:L:532:U:C2' | 4:L:533:U:H5' | 1.68 | 1.18 |
| 4:L:585:U:O2' | 4:L:586:U:H5' | 1.01 | 1.18 |
| 4:L:750:U:C2 | 4:L:751:U:C5 | 2.32 | 1.18 |
| 2:J:13:A:O2' | 2:J:14:A:H5' | 1.39 | 1.18 |
| 3:K:249:A:O2' | 3:K:250:A:H5' | 1.44 | 1.18 |
| 5:M:365:U:O2' | 5:M:366:U:H5' | 1.42 | 1.18 |
| 6:N:325:U:O3' | 6:N:326:U:P | 2.01 | 1.18 |
| 1:I:167:A:O2' | 1:I:168:A:H5' | 1.42 | 1.18 |
| 1:I:232:A:C2' | 1:I:233:A:C5' | 2.20 | 1.18 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:510:U:H2' | 5:M:511:U:C6 | 1.79 | 1.18 |
| 1:I:239:A:O2' | 1:I:240:A:C5' | 1.91 | 1.17 |
| 6:N:485:U:O3' | 6:N:486:U:P | 2.00 | 1.17 |
| 1:I:318:A:O2' | 1:I:319:A:H5' | 1.41 | 1.17 |
| 4:L:500:U:C2' | 4:L:501:U:H5' | 1.70 | 1.17 |
| 4:L:529:U:O2' | 4:L:530:U:H5' | 1.02 | 1.17 |
| 5:M:464:U:O2' | 5:M:465:U:C5' | 1.91 | 1.17 |
| 2:J:54:A:O2' | 2:J:55:A:H5' | 1.43 | 1.17 |
| 4:L:658:U:O2' | 4:L:659:U:H5' | 1.41 | 1.17 |
| 5:M:466:U:C2' | 5:M:467:U:H5' | 1.65 | 1.17 |
| 1:I:42:A:O2' | 1:I:43:A:H5' | 1.44 | 1.17 |
| 3:K:63:A:O3' | 3:K:64:A:P | 2.01 | 1.17 |
| 3:K:92:A:O2' | 3:K:93:A:H5' | 1.39 | 1.17 |
| 5:M:336:U:C4 | 5:M:337:U:C5 | 2.33 | 1.17 |
| 1:I:17:A:O2' | 1:I:18:A:H5' | 1.00 | 1.17 |
| 1:I:373:A:N6 | 1:I:374:A:N6 | 1.90 | 1.17 |
| 1:I:78:A:C2 | 1:I:79:A:C5 | 2.33 | 1.17 |
| 4:L:674:U:C2' | 4:L:675:U:C5' | 2.22 | 1.17 |
| 4:L:814:U:C2' | 4:L:815:U:C5' | 2.23 | 1.17 |
| 5:M:337:U:O2' | 5:M:338:U:H5' | 1.01 | 1.17 |
| 5:M:348:U:C2 | 5:M:349:U:C5 | 2.33 | 1.17 |
| 4:L:439:U:O3' | 4:L:440:U:P | 2.03 | 1.17 |
| 1:I:74:A:C2' | 1:I:75:A:C5' | 2.19 | 1.17 |
| 4:L:802:U:O2' | 4:L:803:U:H5' | 1.45 | 1.17 |
| 5:M:335:U:C4 | 5:M:336:U:O4 | 1.98 | 1.17 |
| 5:M:435:U:O2' | 5:M:436:U:H5' | 1.36 | 1.17 |
| 1:I:240:A:N3 | 1:I:241:A:C8 | 2.12 | 1.17 |
| 2:J:239:A:O3' | 2:J:240:A:P | 2.01 | 1.17 |
| 3:K:156:A:H2' | 3:K:157:A:O4' | 1.45 | 1.17 |
| 3:K:210:A:O2' | 3:K:211:A:H5' | 1.40 | 1.17 |
| 4:L:705:U:C2' | 4:L:706:U:H5' | 1.74 | 1.17 |
| 5:M:337:U:H2' | 5:M:338:U:C5' | 1.53 | 1.17 |
| 1:I:186:A:N3 | 1:I:187:A:C8 | 2.13 | 1.17 |
| 2:J:205:A:O2' | 2:J:206:A:H5' | 0.99 | 1.17 |
| 2:J:211:A:C2' | 2:J:212:A:H5' | 1.74 | 1.17 |
| 3:K:42:A:O2' | 3:K:43:A:H5' | 1.39 | 1.17 |
| 6:N:454:U:C2' | 6:N:455:U:H5' | 1.75 | 1.17 |
| 1:I:335:A:N6 | 1:I:336:A:N6 | 1.92 | 1.17 |
| 1:I:40:A:O3' | 1:I:41:A:P | 2.03 | 1.17 |
| 4:L:767:U:H2' | 4:L:768:U:C6 | 1.80 | 1.17 |
| 6:N:471:U:O2' | 6:N:472:U:H5' | 1.44 | 1.17 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 6:N:484:U:O3' | 6:N:485:U:C5' | 1.93 | 1.17 |
| 1:I:284:A:C2' | 1:I:285:A:H5' | 1.74 | 1.16 |
| 3:K:137:A:O2' | 3:K:138:A:H5' | 1.46 | 1.16 |
| 3:K:212:A:N6 | 3:K:213:A:N6 | 1.92 | 1.16 |
| 3:K:54:A:O3' | 3:K:55:A:OP2 | 1.61 | 1.16 |
| 6:N:289:U:O3' | 6:N:290:U:P | 2.03 | 1.16 |
| 5:M:314:U:O3' | 5:M:315:U:P | 2.03 | 1.16 |
| 1:I:101:A:C2 | 1:I:102:A:C5 | 2.34 | 1.16 |
| 1:I:134:A:C6 | 1:I:135:A:N6 | 2.11 | 1.16 |
| 3:K:154:A:H2' | 3:K:155:A:O4' | 1.43 | 1.16 |
| 3:K:192:A:H2' | 3:K:193:A:C8 | 1.80 | 1.16 |
| 3:K:89:A:C2 | 3:K:90:A:C5 | 2.33 | 1.16 |
| 4:L:440:U:O3' | 4:L:441:U:P | 2.04 | 1.16 |
| 2:J:173:A:H2' | 2:J:174:A:C8 | 1.80 | 1.16 |
| 3:K:45:A:O3' | 3:K:46:A:P | 2.03 | 1.16 |
| 4:L:673:U:C2' | 4:L:674:U:H5' | 1.76 | 1.16 |
| 6:N:279:U:H3' | 6:N:280:U:P | 1.83 | 1.16 |
| 1:I:246:A:O2' | 1:I:247:A:H5' | 1.44 | 1.16 |
| 1:I:353:A:C2' | 1:I:354:A:C5' | 2.23 | 1.16 |
| 2:J:103:A:O2' | 2:J:104:A:H5' | 0.99 | 1.16 |
| 2:J:29:A:H2' | 2:J:30:A:C5' | 1.62 | 1.16 |
| 5:M:514:U:O2' | 5:M:515:U:H5' | 1.43 | 1.16 |
| 1:I:129:A:O2' | 1:I:130:A:H5' | 0.99 | 1.16 |
| 1:I:73:A:O2' | 1:I:74:A:C4' | 1.92 | 1.16 |
| 2:J:216:A:C2 | 2:J:217:A:C5 | 2.33 | 1.16 |
| 2:J:222:A:H2' | 2:J:223:A:C5' | 1.72 | 1.16 |
| 6:N:277:U:C2' | 6:N:278:U:H5' | 1.74 | 1.16 |
| 1:I:82:A:C2' | 1:I:83:A:H5' | 1.73 | 1.16 |
| 2:J:27:A:O2' | 2:J:28:A:H5' | 1.42 | 1.16 |
| 2:J:94:A:O2' | 2:J:95:A:C5' | 1.92 | 1.16 |
| 3:K:184:A:O3' | 3:K:185:A:P | 2.03 | 1.16 |
| 4:L:504:U:O2' | 4:L:505:U:H5' | 1.45 | 1.16 |
| 4:L:521:U:O2' | 4:L:522:U:H5' | 1.44 | 1.16 |
| 6:N:327:U:H2' | 6:N:328:U:O4' | 1.40 | 1.16 |
| 1:I:91:A:O2' | 1:I:92:A:C5' | 1.93 | 1.16 |
| 5:M:407:U:N3 | 5:M:408:U:O4 | 1.77 | 1.16 |
| 5:M:467:U:O2' | 5:M:468:U:H5' | 1.45 | 1.16 |
| 1:I:269:A:C2' | 1:I:270:A:C5' | 2.23 | 1.16 |
| 2:J:47:A:H2' | 2:J:48:A:C5' | 1.68 | 1.16 |
| 6:N:455:U:O3' | 6:N:456:U:P | 2.04 | 1.16 |
| 1:I:274:A:O2' | 1:I:275:A:H5' | 0.98 | 1.16 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:11:A:C2' | 2:J:12:A:C5' | 2.24 | 1.16 |
| 2:J:156:A:O2' | 2:J:157:A:H5' | 1.39 | 1.16 |
| 2:J:83:A:C2 | 2:J:84:A:C4 | 2.33 | 1.16 |
| 3:K:243:A:HO3' | 3:K:244:A:P | 1.68 | 1.16 |
| 4:L:585:U:C2' | 4:L:586:U:H5' | 1.75 | 1.16 |
| 1:I:146:A:O3' | 1:I:147:A:P | 2.04 | 1.15 |
| 4:L:451:U:O3' | 4:L:452:U:P | 2.03 | 1.15 |
| 4:L:811:U:C2' | 4:L:812:U:O4' | 1.92 | 1.15 |
| 1:I:296:A:O2' | 1:I:297:A:H5' | 1.43 | 1.15 |
| 1:I:95:A:C6 | 1:I:96:A:N6 | 2.13 | 1.15 |
| 2:J:81:A:O2' | 2:J:82:A:H5' | 1.44 | 1.15 |
| 3:K:33:A:O3' | 3:K:34:A:P | 2.03 | 1.15 |
| 5:M:392:U:O2' | 5:M:393:U:C5' | 1.95 | 1.15 |
| 4:L:549:U:O2' | 4:L:550:U:H5' | 1.43 | 1.15 |
| 6:N:425:U:H2' | 6:N:426:U:O4' | 1.42 | 1.15 |
| 6:N:341:U:O3' | 6:N:342:U:P | 2.03 | 1.15 |
| 1:I:269:A:C2' | 1:I:270:A:H5' | 1.66 | 1.15 |
| 4:L:446:U:O3' | 4:L:447:U:P | 2.04 | 1.15 |
| 4:L:549:U:H2' | 4:L:550:U:O4' | 1.43 | 1.15 |
| 5:M:419:U:O2' | 5:M:420:U:H5' | 0.99 | 1.15 |
| 6:N:299:U:O3' | 6:N:300:U:P | 2.05 | 1.15 |
| 6:N:484:U:H2' | 6:N:485:U:O4' | 1.46 | 1.15 |
| 1:I:255:A:C2' | 1:I:256:A:H5' | 1.75 | 1.15 |
| 4:L:650:U:O2' | 4:L:651:U:H5' | 1.41 | 1.15 |
| 5:M:489:U:C2' | 5:M:490:U:H5' | 1.72 | 1.15 |
| 1:I:147:A:C2' | 1:I:148:A:H5' | 1.75 | 1.15 |
| 2:J:202:A:O2' | 2:J:203:A:H5' | 0.99 | 1.15 |
| 3:K:89:A:N3 | 3:K:90:A:C8 | 2.15 | 1.15 |
| 6:N:518:U:O3' | 6:N:519:U:P | 2.03 | 1.15 |
| 1:I:140:A:C6 | 1:I:141:A:N6 | 2.14 | 1.15 |
| 4:L:807:U:H2' | 4:L:808:U:C5' | 1.70 | 1.15 |
| 1:I:101:A:C2 | 1:I:102:A:C6 | 2.35 | 1.15 |
| 2:J:62:A:O2' | 2:J:63:A:H5' | 1.47 | 1.15 |
| 3:K:241:A:O3' | 3:K:242:A:P | 2.05 | 1.15 |
| 1:I:279:A:C2' | 1:I:280:A:H5' | 1.76 | 1.14 |
| 4:L:572:U:O2' | 4:L:573:U:H5' | 0.99 | 1.14 |
| 4:L:661:U:O2' | 4:L:662:U:C5' | 1.93 | 1.14 |
| 1:I:106:A:O2' | 1:I:107:A:P | 2.04 | 1.14 |
| 2:J:236:A:C2 | 2:J:237:A:N7 | 2.15 | 1.14 |
| 2:J:29:A:O2' | 2:J:30:A:H5' | 0.97 | 1.14 |
| 5:M:346:U:O2' | 5:M:347:U:C5' | 1.95 | 1.14 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 6:N:520:U:O3' | 6:N:521:U:P | 2.05 | 1.14 |
| 1:I:101:A:C6 | 1:I:102:A:N6 | 2.16 | 1.14 |
| 1:I:129:A:O2' | 1:I:130:A:C5' | 1.95 | 1.14 |
| 6:N:279:U:C3' | 6:N:280:U:P | 2.35 | 1.14 |
| 1:I:252:A:O2' | 1:I:253:A:C5' | 1.95 | 1.14 |
| 2:J:161:A:O2' | 2:J:162:A:H5' | 1.00 | 1.14 |
| 1:I:180:A:C2 | 1:I:181:A:N9 | 2.16 | 1.14 |
| 3:K:97:A:H2' | 3:K:98:A:O4' | 1.47 | 1.14 |
| 4:L:517:U:O2' | 4:L:518:U:H5' | 1.46 | 1.14 |
| 4:L:557:U:C2' | 4:L:558:U:H5' | 1.71 | 1.14 |
| 4:L:622:U:C2' | 4:L:623:U:C5' | 2.25 | 1.14 |
| 4:L:657:U:O2' | 4:L:658:U:H5' | 1.45 | 1.14 |
| 5:M:405:U:O2' | 5:M:406:U:H5' | 0.99 | 1.14 |
| 6:N:364:U:O2' | 6:N:365:U:H5' | 1.46 | 1.14 |
| 6:N:403:U:O2' | 6:N:404:U:H5' | 1.44 | 1.14 |
| 1:I:91:A:O2' | 1:I:92:A:H5' | 0.96 | 1.14 |
| 2:J:89:A:C2 | 2:J:90:A:C5 | 2.35 | 1.14 |
| 4:L:507:U:C2' | 4:L:508:U:C5' | 2.25 | 1.14 |
| 4:L:746:U:O2' | 4:L:747:U:H5' | 1.48 | 1.14 |
| 4:L:769:U:O2' | 4:L:770:U:H5' | 0.98 | 1.14 |
| 1:I:109:A:H2' | 1:I:110:A:H8 | 1.01 | 1.14 |
| 2:J:183:A:O2' | 2:J:184:A:H5' | 0.96 | 1.14 |
| 3:K:46:A:O2' | 3:K:47:A:H5' | 1.47 | 1.14 |
| 6:N:398:U:O2' | 6:N:399:U:H5' | 1.46 | 1.14 |
| 1:I:237:A:O2' | 1:I:238:A:H5' | 1.45 | 1.14 |
| 1:I:270:A:H2' | 1:I:271:A:O4' | 1.46 | 1.14 |
| 1:I:337:A:O2' | 1:I:338:A:H5' | 0.99 | 1.14 |
| 2:J:160:A:C2' | 2:J:161:A:H5' | 1.76 | 1.14 |
| 5:M:349:U:O2' | 5:M:350:U:H5' | 1.45 | 1.14 |
| 5:M:408:U:C2' | 5:M:409:U:C5' | 2.23 | 1.14 |
| 6:N:484:U:O3' | 6:N:485:U:P | 2.05 | 1.14 |
| 6:N:485:U:C2' | 6:N:486:U:O4' | 1.95 | 1.14 |
| 2:J:176:A:O2' | 2:J:177:A:C5' | 1.95 | 1.14 |
| 2:J:92:A:O2' | 2:J:93:A:P | 2.05 | 1.14 |
| 2:J:97:A:C2 | 2:J:98:A:C5 | 2.35 | 1.14 |
| 2:J:3:A:O3' | 2:J:4:A:P | 2.05 | 1.14 |
| 3:K:179:A:O3' | 3:K:180:A:P | 2.05 | 1.14 |
| 4:L:779:U:C2' | 4:L:780:U:H5' | 1.70 | 1.14 |
| 4:L:799:U:O2' | 4:L:800:U:H5' | 1.44 | 1.14 |
| 5:M:319:U:C3' | 5:M:320:U:H5' | 1.63 | 1.14 |
| 1:I:184:A:N6 | 1:I:185:A:H62 | 1.44 | 1.13 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:324:A:O2' | 1:I:325:A:H5' | 1.45 | 1.13 |
| 1:I:78:A:C2 | 1:I:79:A:C8 | 2.35 | 1.13 |
| 2:J:161:A:O2' | 2:J:162:A:C5' | 1.94 | 1.13 |
| 4:L:497:U:H2' | 4:L:498:U:C5' | 1.64 | 1.13 |
| 5:M:335:U:O4 | 5:M:336:U:O4 | 1.64 | 1.13 |
| 1:I:106:A:C2 | 1:I:107:A:C5 | 2.36 | 1.13 |
| 5:M:406:U:C2' | 5:M:407:U:H5' | 1.72 | 1.13 |
| 6:N:368:U:O2' | 6:N:369:U:H5' | 1.45 | 1.13 |
| 6:N:485:U:C3' | 6:N:486:U:H5' | 1.77 | 1.13 |
| 2:J:129:A:C2' | 2:J:130:A:H5' | 1.75 | 1.13 |
| 4:L:436:U:H2' | 4:L:437:U:C6 | 1.83 | 1.13 |
| 4:L:507:U:O2' | 4:L:508:U:H5' | 0.97 | 1.13 |
| 4:L:766:U:H2' | 4:L:767:U:C6 | 1.83 | 1.13 |
| 6:N:378:U:C4 | 6:N:379:U:O4 | 2.01 | 1.13 |
| 6:N:394:U:O2' | 6:N:395:U:H5' | 0.98 | 1.13 |
| 6:N:497:U:H2' | 6:N:498:U:O4' | 1.47 | 1.13 |
| 4:L:674:U:O2' | 4:L:675:U:C5' | 1.97 | 1.13 |
| 2:J:160:A:O2' | 2:J:161:A:C5' | 1.97 | 1.13 |
| 4:L:498:U:C2' | 4:L:499:U:H5' | 1.68 | 1.13 |
| 6:N:322:U:O3' | 6:N:323:U:P | 2.06 | 1.13 |
| 1:I:127:A:O2' | 1:I:128:A:H5' | 1.48 | 1.13 |
| 1:I:281:A:N6 | 1:I:282:A:N6 | 1.95 | 1.13 |
| 1:I:74:A:C2' | 1:I:75:A:O4' | 1.97 | 1.13 |
| 3:K:166:A:O2' | 3:K:167:A:C5' | 1.97 | 1.13 |
| 3:K:89:A:C2 | 3:K:90:A:N7 | 2.16 | 1.13 |
| 4:L:529:U:O2' | 4:L:530:U:C5' | 1.96 | 1.13 |
| 4:L:698:U:C2' | 4:L:699:U:H5' | 1.77 | 1.13 |
| 4:L:723:U:C6 | 4:L:724:U:C5 | 2.36 | 1.13 |
| 1:I:75:A:O2' | 1:I:76:A:H5' | 0.96 | 1.13 |
| 3:K:152:A:C6 | 3:K:153:A:N6 | 2.17 | 1.13 |
| 4:L:692:U:O2' | 4:L:693:U:C5' | 1.97 | 1.13 |
| 6:N:342:U:O2' | 6:N:343:U:H5' | 1.47 | 1.13 |
| 5:M:526:U:C2' | 5:M:527:U:H5' | 1.73 | 1.13 |
| 6:N:400:U:C2' | 6:N:401:U:H5' | 1.79 | 1.13 |
| 2:J:88:A:O2' | 2:J:89:A:H5' | 0.96 | 1.13 |
| 6:N:462:U:O2' | 6:N:463:U:H5' | 1.46 | 1.13 |
| 4:L:554:U:O2 | 4:L:555:U:C6 | 2.02 | 1.12 |
| 4:L:688:U:O2' | 4:L:689:U:H5' | 0.97 | 1.12 |
| 4:L:694:U:H2' | 4:L:695:U:C5' | 1.77 | 1.12 |
| 5:M:364:U:O2' | 5:M:365:U:H5' | 1.48 | 1.12 |
| 5:M:431:U:O2' | 5:M:432:U:H5' | 1.47 | 1.12 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:457:U:O2' | 5:M:458:U:H5' | 1.48 | 1.12 |
| 1:I:353:A:O2' | 1:I:354:A:C5' | 1.97 | 1.12 |
| 1:I:48:A:O2' | 1:I:49:A:H5' | 1.48 | 1.12 |
| 1:I:90:A:O2' | 1:I:91:A:H5' | 1.49 | 1.12 |
| 4:L:627:U:O2' | 4:L:628:U:H5' | 1.49 | 1.12 |
| 4:L:715:U:O2' | 4:L:716:U:H5' | 1.37 | 1.12 |
| 1:I:160:A:O2' | 1:I:161:A:H5' | 1.49 | 1.12 |
| 1:I:81:A:O2' | 1:I:82:A:C5' | 1.96 | 1.12 |
| 2:J:44:A:O2' | 2:J:45:A:H5' | 1.50 | 1.12 |
| 4:L:765:U:H2' | 4:L:766:U:C5' | 1.78 | 1.12 |
| 5:M:406:U:C2' | 5:M:407:U:C5' | 2.27 | 1.12 |
| 1:I:106:A:O2' | 1:I:107:A:O5' | 1.66 | 1.12 |
| 1:I:86:A:C5 | 1:I:87:A:N7 | 2.17 | 1.12 |
| 2:J:165:A:C2 | 2:J:166:A:C5 | 2.37 | 1.12 |
| 2:J:79:A:C2' | 2:J:80:A:H5' | 1.75 | 1.12 |
| 3:K:127:A:O2' | 3:K:128:A:H5' | 1.45 | 1.12 |
| 4:L:557:U:C2' | 4:L:558:U:C5' | 2.23 | 1.12 |
| 1:I:230:A:C2' | 1:I:231:A:H5' | 1.70 | 1.12 |
| 4:L:467:U:O2' | 4:L:468:U:H5' | 1.47 | 1.12 |
| 4:L:759:U:H2' | 4:L:760:U:C5' | 1.68 | 1.12 |
| 5:M:319:U:O2' | 5:M:320:U:C5' | 1.93 | 1.12 |
| 5:M:465:U:C2' | 5:M:466:U:H5' | 1.79 | 1.12 |
| 1:I:138:A:C2' | 1:I:139:A:C5' | 2.26 | 1.12 |
| 1:I:163:A:O2' | 1:I:164:A:H5' | 0.95 | 1.12 |
| 1:I:52:A:O2' | 1:I:53:A:H5' | 1.48 | 1.12 |
| 1:I:101:A:N3 | 1:I:102:A:N7 | 1.96 | 1.12 |
| 1:I:283:A:N3 | 1:I:284:A:C8 | 2.17 | 1.12 |
| 2:J:119:A:N6 | 2:J:120:A:H62 | 1.44 | 1.12 |
| 2:J:206:A:O2' | 2:J:207:A:H5' | 0.94 | 1.12 |
| 3:K:41:A:O2' | 3:K:42:A:H5' | 1.46 | 1.12 |
| 3:K:63:A:O2' | 3:K:64:A:H5' | 1.49 | 1.12 |
| 4:L:484:U:C2' | 4:L:485:U:H5' | 1.79 | 1.12 |
| 4:L:638:U:H2' | 4:L:639:U:C5' | 1.64 | 1.12 |
| 4:L:742:U:O2 | 4:L:743:U:C5 | 2.01 | 1.12 |
| 5:M:322:U:O2' | 5:M:323:U:C5' | 1.96 | 1.12 |
| 1:I:175:A:C2 | 1:I:176:A:N7 | 2.16 | 1.12 |
| 2:J:170:A:O2' | 2:J:171:A:H5' | 1.49 | 1.12 |
| 2:J:50:A:O2' | 2:J:51:A:H5' | 1.47 | 1.12 |
| 6:N:379:U:C2' | 6:N:380:U:C5' | 2.27 | 1.12 |
| 6:N:425:U:C2' | 6:N:426:U:H6 | 1.61 | 1.12 |
| 1:I:233:A:C2' | 1:I:234:A:H5' | 1.70 | 1.11 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:268:A:C2 | 1:I:269:A:N9 | 2.18 | 1.11 |
| 1:I:73:A:O2' | 1:I:74:A:H5' | 1.35 | 1.11 |
| 2:J:70:A:H2' | 2:J:71:A:C5' | 1.79 | 1.11 |
| 3:K:99:A:O2' | 3:K:100:A:H5' | 0.97 | 1.11 |
| 3:K:153:A:C2 | 3:K:154:A:C4 | 2.38 | 1.11 |
| 3:K:259:A:O3' | 3:K:260:A:P | 2.08 | 1.11 |
| 4:L:693:U:C4 | 4:L:694:U:O4 | 2.03 | 1.11 |
| 6:N:383:U:O2' | 6:N:384:U:H5' | 1.49 | 1.11 |
| 1:I:106:A:O2' | 1:I:107:A:H5' | 1.50 | 1.11 |
| 1:I:13:A:H2' | 1:I:14:A:O4' | 1.50 | 1.11 |
| 1:I:364:A:O2' | 1:I:365:A:H5' | 1.50 | 1.11 |
| 1:I:384:A:O3' | 1:I:385:A:P | 2.08 | 1.11 |
| 2:J:89:A:C2 | 2:J:90:A:N7 | 2.16 | 1.11 |
| 4:L:729:U:C2 | 4:L:730:U:C5 | 2.38 | 1.11 |
| 4:L:742:U:C2 | 4:L:743:U:C5 | 2.38 | 1.11 |
| 1:I:306:A:O2' | 1:I:307:A:H5' | 0.94 | 1.11 |
| 1:I:64:A:O2' | 1:I:65:A:H5' | 1.50 | 1.11 |
| 1:I:96:A:N6 | 1:I:97:A:N6 | 1.98 | 1.11 |
| 2:J:160:A:C2' | 2:J:161:A:C5' | 2.26 | 1.11 |
| 2:J:231:A:N6 | 2:J:232:A:N6 | 1.99 | 1.11 |
| 5:M:350:U:C2' | 5:M:351:U:C5' | 2.17 | 1.11 |
| 1:I:157:A:O2' | 1:I:158:A:H5' | 1.50 | 1.11 |
| 3:K:76:A:O2' | 3:K:77:A:H5' | 1.48 | 1.11 |
| 4:L:557:U:C2 | 4:L:558:U:C6 | 2.38 | 1.11 |
| 1:I:315:A:O2' | 1:I:316:A:H5' | 1.51 | 1.11 |
| 1:I:342:A:C2' | 1:I:343:A:H5' | 1.79 | 1.11 |
| 2:J:119:A:C6 | 2:J:120:A:N6 | 2.18 | 1.11 |
| 4:L:513:U:O2' | 4:L:514:U:H5' | 1.51 | 1.11 |
| 5:M:333:U:C2' | 5:M:334:U:C5' | 2.28 | 1.11 |
| 5:M:406:U:O2' | 5:M:407:U:H5' | 1.47 | 1.11 |
| 6:N:484:U:C2' | 6:N:485:U:H5' | 1.79 | 1.11 |
| 1:I:287:A:C2' | 1:I:288:A:C5' | 2.28 | 1.11 |
| 2:J:236:A:O2' | 2:J:237:A:P | 2.09 | 1.11 |
| 4:L:724:U:C2' | 4:L:725:U:C5' | 2.28 | 1.11 |
| 4:L:751:U:H2' | 4:L:752:U:H6 | 1.07 | 1.11 |
| 5:M:319:U:H2' | 5:M:320:U:O4' | 1.48 | 1.11 |
| 1:I:87:A:C2' | 1:I:88:A:H5' | 1.81 | 1.11 |
| 1:I:9:A:O2' | 1:I:10:A:H5' | 1.50 | 1.11 |
| 4:L:743:U:O2' | 4:L:744:U:H5' | 0.95 | 1.11 |
| 4:L:746:U:C2 | 4:L:747:U:C5 | 2.39 | 1.11 |
| 5:M:296:U:C2' | 5:M:297:U:H5' | 1.81 | 1.11 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:318:U:C2' | 5:M:319:U:C5' | 2.28 | 1.11 |
| 1:I:143:A:H2' | 1:I:144:A:C8 | 1.84 | 1.11 |
| 2:J:171:A:C2 | 2:J:172:A:C5 | 2.38 | 1.11 |
| 5:M:327:U:O2' | 5:M:328:U:P | 2.07 | 1.11 |
| 5:M:541:U:O2' | 5:M:542:U:H5' | 1.50 | 1.11 |
| 6:N:430:U:O2' | 6:N:431:U:H5' | 1.48 | 1.11 |
| 3:K:88:A:C2 | 3:K:89:A:C8 | 2.38 | 1.11 |
| 5:M:435:U:O2' | 5:M:436:U:O5' | 1.68 | 1.11 |
| 5:M:520:U:O2' | 5:M:521:U:H5' | 1.50 | 1.11 |
| 5:M:544:U:O2' | 5:M:545:U:H5' | 0.95 | 1.11 |
| 6:N:293:U:H2' | 6:N:294:U:C6 | 1.85 | 1.11 |
| 1:I:122:A:O2' | 1:I:123:A:C5' | 1.97 | 1.11 |
| 1:I:156:A:H2' | 1:I:157:A:C8 | 1.84 | 1.11 |
| 2:J:136:A:C2 | 2:J:137:A:N9 | 2.19 | 1.11 |
| 3:K:88:A:O2' | 3:K:89:A:H5' | 1.49 | 1.10 |
| 4:L:618:U:O2' | 4:L:619:U:H5' | 1.51 | 1.10 |
| 1:I:320:A:O2' | 1:I:321:A:H5' | 1.51 | 1.10 |
| 3:K:74:A:O3' | 3:K:75:A:P | 2.09 | 1.10 |
| 5:M:337:U:O2' | 5:M:338:U:C5' | 1.94 | 1.10 |
| 4:L:712:U:C2 | 4:L:713:U:C6 | 2.39 | 1.10 |
| 4:L:724:U:O2' | 4:L:725:U:H5' | 1.49 | 1.10 |
| 4:L:758:U:N3 | 4:L:759:U:C5 | 2.20 | 1.10 |
| 5:M:298:U:O2' | 5:M:299:U:H5' | 1.47 | 1.10 |
| 2:J:39:A:O2' | 2:J:40:A:H5' | 1.48 | 1.10 |
| 4:L:580:U:O2' | 4:L:581:U:H5' | 1.49 | 1.10 |
| 5:M:382:U:O2' | 5:M:383:U:C5' | 2.00 | 1.10 |
| 1:I:336:A:O2' | 1:I:337:A:H5' | 1.50 | 1.10 |
| 1:I:405:A:N6 | 1:I:406:A:N6 | 2.00 | 1.10 |
| 3:K:125:A:O2' | 3:K:126:A:C5' | 1.98 | 1.10 |
| 3:K:49:A:O2' | 3:K:50:A:H5' | 1.51 | 1.10 |
| 4:L:569:U:O2' | 4:L:570:U:H5' | 1.50 | 1.10 |
| 5:M:322:U:C2' | 5:M:323:U:C5' | 2.29 | 1.10 |
| 5:M:430:U:C4 | 5:M:431:U:O4 | 2.04 | 1.10 |
| 6:N:467:U:O2' | 6:N:468:U:H5' | 0.93 | 1.10 |
| 2:J:89:A:O2' | 2:J:90:A:P | 2.08 | 1.10 |
| 4:L:494:U:O2' | 4:L:495:U:H5' | 1.50 | 1.10 |
| 4:L:812:U:C2' | 4:L:813:U:H5' | 1.73 | 1.10 |
| 5:M:348:U:H2' | 5:M:349:U:H6 | 1.11 | 1.10 |
| 6:N:466:U:O2' | 6:N:467:U:H5' | 1.49 | 1.10 |
| 1:I:134:A:N3 | 1:I:135:A:C8 | 2.19 | 1.10 |
| 1:I:70:A:O2' | 1:I:71:A:H5' | 1.48 | 1.10 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 2:J:171:A:H2' | 2:J:172:A:C8 | 1.86 | 1.10 |
| 2:J:83:A:C4 | 2:J:84:A:N7 | 2.20 | 1.10 |
| 2:J:94:A:C2' | 2:J:95:A:H5' | 1.82 | 1.10 |
| 5:M:333:U:O2' | 5:M:334:U:C5' | 2.00 | 1.10 |
| 6:N:279:U:O3' | 6:N:280:U:P | 2.10 | 1.10 |
| 1:I:323:A:H2' | 1:I:324:A:C5' | 1.69 | 1.10 |
| 4:L:524:U:O2' | 4:L:525:U:H5' | 1.46 | 1.10 |
| 4:L:736:U:O2' | 4:L:737:U:C5' | 2.00 | 1.10 |
| 1:I:44:A:O2' | 1:I:45:A:H5' | 1.52 | 1.10 |
| 3:K:124:A:N3 | 3:K:125:A:N7 | 2.00 | 1.10 |
| 3:K:253:A:H2' | 3:K:254:A:C5' | 1.79 | 1.10 |
| 4:L:634:U:C2' | 4:L:635:U:H5' | 1.78 | 1.10 |
| 5:M:290:U:O2' | 5:M:291:U:H5' | 1.51 | 1.10 |
| 2:J:100:A:O2' | 2:J:101:A:C5' | 2.00 | 1.10 |
| 2:J:97:A:O2' | 2:J:98:A:P | 2.10 | 1.10 |
| 4:L:678:U:O3' | 4:L:679:U:P | 2.10 | 1.10 |
| 4:L:681:U:H2' | 4:L:682:U:C6 | 1.86 | 1.10 |
| 5:M:526:U:O2' | 5:M:527:U:C5' | 1.99 | 1.10 |
| 6:N:516:U:O3' | 6:N:517:U:P | 2.09 | 1.10 |
| 1:I:58:A:H2' | 1:I:59:A:C8 | 1.85 | 1.09 |
| 1:I:88:A:O2' | 1:I:89:A:C5' | 2.00 | 1.09 |
| 2:J:56:A:H2' | 2:J:57:A:C5' | 1.80 | 1.09 |
| 3:K:100:A:C2' | 3:K:101:A:H5' | 1.63 | 1.09 |
| 4:L:775:U:C2' | 4:L:776:U:H5' | 1.81 | 1.09 |
| 5:M:336:U:C4 | 5:M:337:U:C4 | 2.40 | 1.09 |
| 6:N:379:U:C2' | 6:N:380:U:H5' | 1.66 | 1.09 |
| 2:J:230:A:O2' | 2:J:231:A:C5' | 1.99 | 1.09 |
| 3:K:167:A:C5 | 3:K:168:A:N7 | 2.20 | 1.09 |
| 5:M:522:U:O2' | 5:M:523:U:H5' | 1.49 | 1.09 |
| 1:I:175:A:N3 | 1:I:176:A:C8 | 2.20 | 1.09 |
| 3:K:77:A:O2' | 3:K:78:A:H5' | 1.51 | 1.09 |
| 4:L:746:U:O2' | 4:L:747:U:C5' | 2.00 | 1.09 |
| 5:M:396:U:C2' | 5:M:397:U:H5' | 1.82 | 1.09 |
| 1:I:17:A:C2 | 1:I:18:A:C8 | 2.41 | 1.09 |
| 1:I:236:A:O2' | 1:I:237:A:C5' | 2.01 | 1.09 |
| 1:I:358:A:O2' | 1:I:359:A:P | 2.09 | 1.09 |
| 2:J:143:A:C2 | 2:J:144:A:C8 | 2.40 | 1.09 |
| 2:J:229:A:C2' | 2:J:230:A:H5' | 1.82 | 1.09 |
| 3:K:242:A:O3' | 3:K:243:A:P | 2.10 | 1.09 |
| 3:K:85:A:O2' | 3:K:86:A:H5' | 1.52 | 1.09 |
| 4:L:563:U:H2' | 4:L:564:U:H6 | 1.03 | 1.09 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:698:U:O2' | 4:L:699:U:C5' | 1.99 | 1.09 |
| 1:I:102:A:H2' | 1:I:103:A:C8 | 1.88 | 1.09 |
| 1:I:106:A:C2 | 1:I:107:A:C4 | 2.40 | 1.09 |
| 1:I:326:A:O2' | 1:I:327:A:H5' | 1.53 | 1.09 |
| 2:J:127:A:C2' | 2:J:128:A:H5' | 1.81 | 1.09 |
| 2:J:92:A:C2 | 2:J:93:A:N7 | 2.19 | 1.09 |
| 4:L:466:U:O2' | 4:L:467:U:C5' | 1.99 | 1.09 |
| 4:L:588:U:O2' | 4:L:589:U:C5' | 2.00 | 1.09 |
| 4:L:746:U:O2' | 4:L:747:U:P | 2.09 | 1.09 |
| 5:M:505:U:O2' | 5:M:506:U:H5' | 0.92 | 1.09 |
| 1:I:193:A:O2' | 1:I:194:A:H5' | 1.50 | 1.09 |
| 5:M:453:U:H2' | 5:M:454:U:C6 | 1.87 | 1.09 |
| 6:N:440:U:O2' | 6:N:441:U:C5' | 2.01 | 1.09 |
| 1:I:186:A:C2 | 1:I:187:A:C5 | 2.41 | 1.09 |
| 3:K:252:A:O3' | 3:K:253:A:P | 2.10 | 1.09 |
| 4:L:695:U:O2' | 4:L:696:U:C5' | 2.00 | 1.09 |
| 4:L:734:U:O2' | 4:L:735:U:H5' | 1.51 | 1.09 |
| 6:N:426:U:O2' | 6:N:427:U:H5' | 0.92 | 1.09 |
| 1:I:270:A:O2' | 1:I:271:A:C5' | 2.01 | 1.09 |
| 2:J:143:A:N3 | 2:J:144:A:C8 | 2.19 | 1.09 |
| 2:J:214:A:O2' | 2:J:215:A:C5' | 2.00 | 1.09 |
| 2:J:223:A:C2' | 2:J:224:A:H5' | 1.82 | 1.09 |
| 2:J:84:A:O2' | 2:J:85:A:H5' | 1.49 | 1.09 |
| 4:L:459:U:O2' | 4:L:460:U:H5' | 1.50 | 1.09 |
| 1:I:119:A:C2' | 1:I:120:A:C5' | 2.28 | 1.09 |
| 1:I:136:A:H2' | 1:I:137:A:C5' | 1.82 | 1.09 |
| 1:I:14:A:C2' | 1:I:15:A:O4' | 2.00 | 1.09 |
| 1:I:240:A:C2 | 1:I:241:A:C5 | 2.40 | 1.09 |
| 1:I:311:A:O2' | 1:I:312:A:H5' | 1.51 | 1.09 |
| 1:I:82:A:C2' | 1:I:83:A:C5' | 2.27 | 1.09 |
| 2:J:127:A:O2' | 2:J:128:A:H5' | 0.91 | 1.09 |
| 4:L:751:U:O2' | 4:L:752:U:C5' | 2.00 | 1.09 |
| 4:L:751:U:H2' | 4:L:752:U:C6 | 1.86 | 1.09 |
| 5:M:448:U:C2' | 5:M:449:U:H5' | 1.81 | 1.09 |
| 1:I:142:A:O2' | 1:I:143:A:C5' | 1.99 | 1.09 |
| 1:I:94:A:O2' | 1:I:95:A:H5' | 1.52 | 1.09 |
| 2:J:133:A:O2' | 2:J:134:A:H5' | 0.93 | 1.09 |
| 2:J:265:A:N3 | 2:J:266:A:C8 | 2.21 | 1.09 |
| 3:K:117:A:C2 | 3:K:118:A:C5 | 2.40 | 1.09 |
| 5:M:392:U:C2' | 5:M:393:U:C5' | 2.31 | 1.09 |
| 1:I:63:A:N6 | 1:I:64:A:N6 | 2.01 | 1.08 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 3:K:106:A:H2' | 3:K:107:A:C8 | 1.87 | 1.08 |
| 5:M:455:U:C2' | 5:M:456:U:H5' | 1.78 | 1.08 |
| 5:M:477:U:O2' | 5:M:478:U:H5' | 1.52 | 1.08 |
| 5:M:489:U:C2' | 5:M:490:U:C5' | 2.30 | 1.08 |
| 6:N:431:U:O2' | 6:N:432:U:H5' | 0.93 | 1.08 |
| 1:I:109:A:H2' | 1:I:110:A:C8 | 1.88 | 1.08 |
| 1:I:67:A:N6 | 1:I:68:A:N6 | 1.99 | 1.08 |
| 3:K:156:A:O2' | 3:K:157:A:C5' | 2.01 | 1.08 |
| 3:K:168:A:O2' | 3:K:169:A:C5' | 1.92 | 1.08 |
| 4:L:739:U:O2' | 4:L:740:U:H5' | 0.92 | 1.08 |
| 4:L:815:U:C2' | 4:L:816:U:H5' | 1.81 | 1.08 |
| 6:N:519:U:O3' | 6:N:520:U:P | 2.11 | 1.08 |
| 2:J:11:A:O2' | 2:J:12:A:C5' | 2.02 | 1.08 |
| 4:L:757:U:H2' | 4:L:758:U:H6 | 1.03 | 1.08 |
| 6:N:323:U:O2' | 6:N:324:U:H5' | 1.53 | 1.08 |
| 1:I:172:A:O2' | 1:I:173:A:C5' | 2.00 | 1.08 |
| 1:I:196:A:O2' | 1:I:197:A:H5' | 1.49 | 1.08 |
| 2:J:106:A:O2' | 2:J:107:A:H5' | 1.52 | 1.08 |
| 3:K:71:A:H2' | 3:K:72:A:H8 | 1.05 | 1.08 |
| 4:L:705:U:C2' | 4:L:706:U:C5' | 2.29 | 1.08 |
| 6:N:327:U:O2' | 6:N:328:U:H5' | 1.53 | 1.08 |
| 1:I:266:A:C2 | 1:I:267:A:N9 | 2.20 | 1.08 |
| 1:I:342:A:O2' | 1:I:343:A:H5' | 1.53 | 1.08 |
| 2:J:136:A:N3 | 2:J:137:A:C8 | 2.21 | 1.08 |
| 2:J:8:A:C2' | 2:J:9:A:H5' | 1.84 | 1.08 |
| 4:L:711:U:H2' | 4:L:712:U:C6 | 1.87 | 1.08 |
| 5:M:452:U:O2' | 5:M:453:U:C5' | 2.02 | 1.08 |
| 6:N:434:U:H2' | 6:N:435:U:H6 | 1.15 | 1.08 |
| 1:I:230:A:C2' | 1:I:231:A:C5' | 2.29 | 1.08 |
| 2:J:56:A:O2' | 2:J:57:A:H5' | 0.92 | 1.08 |
| 4:L:421:U:O2' | 4:L:422:U:H5' | 1.51 | 1.08 |
| 4:L:501:U:O2' | 4:L:502:U:C5' | 2.01 | 1.08 |
| 4:L:693:U:C2 | 4:L:694:U:C5 | 2.40 | 1.08 |
| 4:L:711:U:H2' | 4:L:712:U:O4' | 1.51 | 1.08 |
| 5:M:510:U:O2' | 5:M:511:U:H5' | 1.51 | 1.08 |
| 1:I:262:A:C2' | 1:I:263:A:H5' | 1.82 | 1.08 |
| 1:I:273:A:O2' | 1:I:274:A:H5' | 1.49 | 1.08 |
| 1:I:358:A:N3 | 1:I:359:A:C8 | 2.21 | 1.08 |
| 1:I:85:A:O2' | 1:I:86:A:H5' | 0.90 | 1.08 |
| 4:L:690:U:C2 | 4:L:691:U:C5 | 2.42 | 1.08 |
| 1:I:166:A:O2' | 1:I:167:A:H5' | 1.51 | 1.08 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:287:A:O2' | 1:I:288:A:C5' | 2.00 | 1.08 |
| 1:I:403:A:O2' | 1:I:404:A:H5' | 1.54 | 1.08 |
| 3:K:155:A:C5 | 3:K:156:A:N7 | 2.22 | 1.08 |
| 4:L:546:U:H2' | 4:L:547:U:H6 | 1.16 | 1.08 |
| 4:L:573:U:H2' | 4:L:574:U:H6 | 1.12 | 1.08 |
| 4:L:723:U:C4 | 4:L:724:U:O4 | 2.05 | 1.08 |
| 4:L:758:U:C2' | 4:L:759:U:H5' | 1.82 | 1.08 |
| 5:M:435:U:O2 | 5:M:436:U:C6 | 2.06 | 1.08 |
| 5:M:509:U:O2' | 5:M:510:U:H5' | 1.53 | 1.08 |
| 5:M:371:U:C2' | 5:M:372:U:H5' | 1.83 | 1.08 |
| 6:N:484:U:C3' | 6:N:485:U:H5' | 1.84 | 1.08 |
| 1:I:254:A:C2' | 1:I:255:A:H5' | 1.84 | 1.08 |
| 1:I:78:A:O2' | 1:I:79:A:P | 2.11 | 1.08 |
| 5:M:368:U:O2' | 5:M:369:U:C5' | 2.02 | 1.08 |
| 5:M:448:U:O2' | 5:M:449:U:C5' | 2.02 | 1.08 |
| 1:I:129:A:C2' | 1:I:130:A:C5' | 2.30 | 1.07 |
| 2:J:204:A:C5 | 2:J:205:A:N7 | 2.22 | 1.07 |
| 3:K:120:A:C6 | 3:K:121:A:N7 | 2.21 | 1.07 |
| 4:L:459:U:C2' | 4:L:460:U:H5' | 1.84 | 1.07 |
| 4:L:728:U:O2 | 4:L:729:U:C5 | 2.06 | 1.07 |
| 4:L:763:U:H2' | 4:L:764:U:C6 | 1.88 | 1.07 |
| 6:N:316:U:H2' | 6:N:317:U:C6 | 1.88 | 1.07 |
| 1:I:151:A:O2' | 1:I:152:A:H5' | 1.54 | 1.07 |
| 2:J:29:A:O2' | 2:J:30:A:C5' | 1.88 | 1.07 |
| 4:L:660:U:O2' | 4:L:661:U:H5' | 1.51 | 1.07 |
| 1:I:134:A:C4 | 1:I:135:A:N7 | 2.22 | 1.07 |
| 2:J:160:A:H2' | 2:J:161:A:O4' | 1.53 | 1.07 |
| 2:J:30:A:O2' | 2:J:31:A:H5' | 1.52 | 1.07 |
| 3:K:120:A:C5 | 3:K:121:A:N7 | 2.22 | 1.07 |
| 1:I:162:A:C5 | 1:I:163:A:N7 | 2.23 | 1.07 |
| 1:I:65:A:H2' | 1:I:66:A:C5' | 1.56 | 1.07 |
| 4:L:791:U:O2' | 4:L:792:U:H5' | 1.54 | 1.07 |
| 5:M:392:U:C2' | 5:M:393:U:H5' | 1.83 | 1.07 |
| 5:M:406:U:H2' | 5:M:407:U:O4' | 1.50 | 1.07 |
| 6:N:496:U:H2' | 6:N:497:U:O4' | 1.55 | 1.07 |
| 1:I:82:A:O2' | 1:I:83:A:H5' | 1.52 | 1.07 |
| 3:K:71:A:H2' | 3:K:72:A:C8 | 1.89 | 1.07 |
| 3:K:97:A:C2' | 3:K:98:A:H5' | 1.76 | 1.07 |
| 4:L:438:U:N3 | 4:L:439:U:O4 | 1.87 | 1.07 |
| 4:L:549:U:C2' | 4:L:550:U:C5' | 2.30 | 1.07 |
| 4:L:746:U:C2 | 4:L:747:U:C6 | 2.42 | 1.07 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 6:N:501:U:O2' | 6:N:502:U:H5' | 1.53 | 1.07 |
| 1:I:43:A:C2 | 1:I:44:A:C5 | 2.41 | 1.07 |
| 2:J:97:A:C2 | 2:J:98:A:N7 | 2.23 | 1.07 |
| 4:L:715:U:H2' | 4:L:716:U:H6 | 0.96 | 1.07 |
| 4:L:745:U:C2 | 4:L:746:U:C5 | 2.43 | 1.07 |
| 2:J:130:A:C2' | 2:J:131:A:H5' | 1.83 | 1.07 |
| 2:J:147:A:O2' | 2:J:148:A:C5' | 2.02 | 1.07 |
| 3:K:165:A:H2' | 3:K:166:A:C5' | 1.80 | 1.07 |
| 4:L:635:U:O2' | 4:L:636:U:H5' | 1.52 | 1.07 |
| 6:N:467:U:C2' | 6:N:468:U:H5' | 1.84 | 1.07 |
| 1:I:186:A:O2' | 1:I:187:A:P | 2.12 | 1.07 |
| 2:J:216:A:C2 | 2:J:217:A:N7 | 2.22 | 1.07 |
| 3:K:43:A:N6 | 3:K:44:A:N6 | 2.03 | 1.07 |
| 4:L:613:U:O2' | 4:L:614:U:H5' | 1.54 | 1.07 |
| 5:M:311:U:O3' | 5:M:312:U:P | 2.12 | 1.07 |
| 5:M:429:U:H2' | 5:M:430:U:H6 | 1.20 | 1.07 |
| 1:I:362:A:N6 | 1:I:363:A:N6 | 2.03 | 1.07 |
| 1:I:65:A:O2' | 1:I:66:A:H5' | 0.90 | 1.07 |
| 5:M:348:U:N3 | 5:M:349:U:C4 | 2.23 | 1.07 |
| 6:N:453:U:O2' | 6:N:454:U:H5' | 1.54 | 1.07 |
| 6:N:484:U:O2' | 6:N:485:U:H5' | 1.54 | 1.07 |
| 2:J:136:A:N3 | 2:J:137:A:N9 | 2.02 | 1.07 |
| 5:M:410:U:C2 | 5:M:411:U:C5 | 2.41 | 1.07 |
| 5:M:548:U:O3' | 5:M:549:U:P | 2.12 | 1.07 |
| 1:I:131:A:N6 | 1:I:132:A:H62 | 1.37 | 1.06 |
| 1:I:333:A:C2 | 1:I:334:A:N9 | 2.22 | 1.06 |
| 3:K:203:A:N3 | 3:K:204:A:N7 | 2.03 | 1.06 |
| 3:K:253:A:O2' | 3:K:254:A:C5' | 2.03 | 1.06 |
| 4:L:561:U:O2' | 4:L:562:U:H5' | 1.54 | 1.06 |
| 4:L:573:U:H2' | 4:L:574:U:C6 | 1.88 | 1.06 |
| 4:L:722:U:N3 | 4:L:723:U:O4 | 1.88 | 1.06 |
| 1:I:296:A:C2' | 1:I:297:A:H5' | 1.84 | 1.06 |
| 1:I:333:A:C2 | 1:I:334:A:C4 | 2.42 | 1.06 |
| 4:L:778:U:O2' | 4:L:779:U:H5' | 1.55 | 1.06 |
| 5:M:425:U:O2' | 5:M:426:U:C5' | 2.03 | 1.06 |
| 1:I:240:A:O2' | 1:I:241:A:P | 2.13 | 1.06 |
| 5:M:335:U:C4 | 5:M:336:U:C5 | 2.44 | 1.06 |
| 5:M:368:U:H2' | 5:M:369:U:C5' | 1.80 | 1.06 |
| 1:I:109:A:O2' | 1:I:110:A:H5' | 1.44 | 1.06 |
| 4:L:639:U:O2' | 4:L:640:U:H5' | 1.52 | 1.06 |
| 5:M:296:U:O2' | 5:M:297:U:H5' | 1.55 | 1.06 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:489:U:O2' | 5:M:490:U:H5' | 1.53 | 1.06 |
| 6:N:339:U:O2' | 6:N:340:U:H5' | 1.56 | 1.06 |
| 1:I:337:A:C2' | 1:I:338:A:H5' | 1.84 | 1.06 |
| 1:I:95:A:N3 | 1:I:96:A:N7 | 2.02 | 1.06 |
| 3:K:120:A:C2' | 3:K:121:A:H5' | 1.85 | 1.06 |
| 3:K:97:A:C2' | 3:K:98:A:C5' | 2.34 | 1.06 |
| 4:L:777:U:O2' | 4:L:778:U:H5' | 1.55 | 1.06 |
| 5:M:405:U:H2' | 5:M:406:U:O4' | 1.55 | 1.06 |
| 6:N:376:U:H2' | 6:N:377:U:H6 | 1.19 | 1.06 |
| 1:I:133:A:H2' | 1:I:134:A:O4' | 1.55 | 1.06 |
| 1:I:361:A:O2' | 1:I:362:A:C5' | 2.02 | 1.06 |
| 1:I:43:A:N3 | 1:I:44:A:C8 | 2.23 | 1.06 |
| 2:J:205:A:H2' | 2:J:206:A:C5' | 1.80 | 1.06 |
| 2:J:89:A:N3 | 2:J:90:A:C8 | 2.24 | 1.06 |
| 4:L:771:U:O2' | 4:L:772:U:H5' | 1.53 | 1.06 |
| 5:M:531:U:H2' | 5:M:532:U:C5' | 1.82 | 1.06 |
| 6:N:304:U:H2' | 6:N:305:U:C6 | 1.91 | 1.06 |
| 1:I:186:A:C2 | 1:I:187:A:C8 | 2.43 | 1.06 |
| 1:I:287:A:H2' | 1:I:288:A:O4' | 1.52 | 1.06 |
| 2:J:51:A:H2' | 2:J:52:A:C8 | 1.89 | 1.06 |
| 2:J:97:A:N3 | 2:J:98:A:C8 | 2.23 | 1.06 |
| 3:K:119:A:H2' | 3:K:120:A:C5' | 1.59 | 1.06 |
| 4:L:715:U:O2' | 4:L:716:U:O5' | 1.70 | 1.06 |
| 2:J:229:A:C2' | 2:J:230:A:C5' | 2.33 | 1.06 |
| 2:J:69:A:O2' | 2:J:70:A:C5' | 2.03 | 1.06 |
| 4:L:498:U:C2' | 4:L:499:U:C5' | 2.31 | 1.06 |
| 4:L:546:U:H2' | 4:L:547:U:C6 | 1.89 | 1.06 |
| 5:M:393:U:H2' | 5:M:394:U:C6 | 1.90 | 1.06 |
| 5:M:466:U:C2' | 5:M:467:U:C5' | 2.33 | 1.06 |
| 3:K:165:A:O2' | 3:K:166:A:C5' | 1.99 | 1.06 |
| 3:K:62:A:N6 | 3:K:63:A:H62 | 1.50 | 1.06 |
| 4:L:574:U:C2 | 4:L:575:U:C5 | 2.44 | 1.06 |
| 4:L:585:U:C2' | 4:L:586:U:C5' | 2.33 | 1.06 |
| 4:L:803:U:H2' | 4:L:804:U:H6 | 1.09 | 1.06 |
| 4:L:811:U:H2' | 4:L:812:U:C6 | 1.90 | 1.06 |
| 1:I:257:A:C2' | 1:I:258:A:H5' | 1.85 | 1.05 |
| 2:J:17:A:O2' | 2:J:18:A:H5' | 1.54 | 1.05 |
| 2:J:219:A:O2' | 2:J:220:A:C5' | 2.03 | 1.05 |
| 2:J:236:A:C2 | 2:J:237:A:C5 | 2.44 | 1.05 |
| 4:L:811:U:C2 | 4:L:812:U:C6 | 2.43 | 1.05 |
| 1:I:131:A:C6 | 1:I:132:A:N6 | 2.23 | 1.05 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:175:A:N3 | 1:I:176:A:N7 | 2.04 | 1.05 |
| 1:I:91:A:C2' | 1:I:92:A:C5' | 2.32 | 1.05 |
| 2:J:70:A:O2' | 2:J:71:A:H5' | 0.89 | 1.05 |
| 4:L:598:U:O2' | 4:L:599:U:H5' | 1.55 | 1.05 |
| 5:M:485:U:C2' | 5:M:486:U:C5' | 2.32 | 1.05 |
| 1:I:273:A:H2' | 1:I:274:A:O4' | 1.54 | 1.05 |
| 4:L:517:U:C2' | 4:L:518:U:H5' | 1.80 | 1.05 |
| 6:N:449:U:C2' | 6:N:450:U:H5' | 1.85 | 1.05 |
| 2:J:157:A:O2' | 2:J:158:A:H5' | 1.55 | 1.05 |
| 2:J:182:A:C5 | 2:J:183:A:N7 | 2.24 | 1.05 |
| 2:J:47:A:O2' | 2:J:48:A:H5' | 0.88 | 1.05 |
| 5:M:428:U:C2' | 5:M:429:U:C5' | 2.29 | 1.05 |
| 5:M:526:U:C2' | 5:M:527:U:C5' | 2.31 | 1.05 |
| 6:N:326:U:H2' | 6:N:327:U:C6 | 1.89 | 1.05 |
| 6:N:376:U:H2' | 6:N:377:U:C6 | 1.91 | 1.05 |
| 6:N:416:U:H2' | 6:N:417:U:O4' | 1.27 | 1.05 |
| 6:N:459:U:H2' | 6:N:460:U:C6 | 1.91 | 1.05 |
| 6:N:487:U:C4 | 6:N:488:U:O4 | 2.07 | 1.05 |
| 1:I:257:A:O2' | 1:I:258:A:C5' | 2.04 | 1.05 |
| 1:I:317:A:O2' | 1:I:318:A:C5' | 2.04 | 1.05 |
| 3:K:168:A:H2' | 3:K:169:A:C5' | 1.84 | 1.05 |
| 4:L:758:U:C2 | 4:L:759:U:C6 | 2.45 | 1.05 |
| 5:M:511:U:H2' | 5:M:512:U:O4' | 1.56 | 1.05 |
| 6:N:281:U:C2' | 6:N:282:U:H5' | 1.87 | 1.05 |
| 1:I:189:A:O2' | 1:I:190:A:H5' | 1.55 | 1.05 |
| 1:I:41:A:O2' | 1:I:42:A:H5' | 1.56 | 1.05 |
| 2:J:142:A:N6 | 2:J:143:A:N6 | 2.03 | 1.05 |
| 2:J:99:A:H2' | 2:J:100:A:C8 | 1.90 | 1.05 |
| 3:K:118:A:H2' | 3:K:119:A:C5' | 1.80 | 1.05 |
| 5:M:432:U:O2' | 5:M:433:U:C5' | 2.05 | 1.05 |
| 5:M:513:U:O2' | 5:M:514:U:H5' | 1.54 | 1.05 |
| 2:J:121:A:O2' | 2:J:122:A:H5' | 1.57 | 1.05 |
| 2:J:132:A:C2' | 2:J:133:A:H5' | 1.86 | 1.05 |
| 4:L:604:U:O2' | 4:L:605:U:H5' | 1.52 | 1.05 |
| 5:M:300:U:O2' | 5:M:301:U:H5' | 1.56 | 1.05 |
| 5:M:312:U:O3' | 5:M:313:U:P | 2.14 | 1.05 |
| 5:M:348:U:C4 | 5:M:349:U:O4 | 2.08 | 1.05 |
| 6:N:510:U:O3' | 6:N:511:U:P | 2.14 | 1.05 |
| 1:I:150:A:O2' | 1:I:151:A:H5' | 1.54 | 1.05 |
| 1:I:268:A:C2 | 1:I:269:A:C4 | 2.44 | 1.05 |
| 4:L:737:U:O2' | 4:L:738:U:H5' | 1.57 | 1.05 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:319:U:H2' | 5:M:320:U:C5' | 1.76 | 1.05 |
| 5:M:457:U:C2' | 5:M:458:U:H5' | 1.86 | 1.05 |
| 5:M:494:U:O2' | 5:M:495:U:C5' | 2.05 | 1.05 |
| 6:N:277:U:O2' | 6:N:278:U:C5' | 2.04 | 1.05 |
| 6:N:294:U:O2' | 6:N:295:U:H5' | 1.56 | 1.05 |
| 6:N:486:U:H2' | 6:N:487:U:C6 | 1.92 | 1.05 |
| 2:J:216:A:N3 | 2:J:217:A:N7 | 2.04 | 1.05 |
| 2:J:32:A:O2' | 2:J:33:A:H5' | 1.55 | 1.05 |
| 6:N:474:U:O2' | 6:N:475:U:H5' | 1.57 | 1.05 |
| 1:I:15:A:O2' | 1:I:16:A:H5' | 1.56 | 1.05 |
| 1:I:43:A:O2' | 1:I:44:A:P | 2.14 | 1.05 |
| 3:K:103:A:O2' | 3:K:104:A:H5' | 1.56 | 1.05 |
| 4:L:768:U:O2' | 4:L:769:U:H5' | 0.88 | 1.05 |
| 1:I:79:A:O2' | 1:I:80:A:H5' | 1.55 | 1.04 |
| 4:L:722:U:C2' | 4:L:723:U:C6 | 2.40 | 1.04 |
| 1:I:248:A:O2' | 1:I:249:A:C5' | 2.03 | 1.04 |
| 2:J:58:A:O2' | 2:J:59:A:C5' | 2.05 | 1.04 |
| 3:K:191:A:O2' | 3:K:192:A:H5' | 1.57 | 1.04 |
| 4:L:660:U:H2' | 4:L:661:U:O4' | 1.54 | 1.04 |
| 5:M:458:U:H2' | 5:M:459:U:C5' | 1.87 | 1.04 |
| 5:M:524:U:C2 | 5:M:525:U:C5 | 2.44 | 1.04 |
| 6:N:317:U:H2' | 6:N:318:U:C6 | 1.92 | 1.04 |
| 1:I:70:A:C2' | 1:I:71:A:H5' | 1.87 | 1.04 |
| 3:K:99:A:H2' | 3:K:100:A:C5' | 1.86 | 1.04 |
| 4:L:567:U:O2' | 4:L:568:U:C5' | 2.05 | 1.04 |
| 6:N:425:U:C2' | 6:N:426:U:C6 | 2.37 | 1.04 |
| 1:I:180:A:C2 | 1:I:181:A:C8 | 2.45 | 1.04 |
| 1:I:186:A:C2 | 1:I:187:A:N7 | 2.25 | 1.04 |
| 2:J:54:A:H2' | 2:J:55:A:O4' | 1.55 | 1.04 |
| 4:L:448:U:C4 | 4:L:449:U:O4 | 2.10 | 1.04 |
| 6:N:311:U:C2' | 6:N:312:U:O4' | 2.03 | 1.04 |
| 1:I:133:A:H2' | 1:I:134:A:C5' | 1.84 | 1.04 |
| 1:I:283:A:C2 | 1:I:284:A:N7 | 2.25 | 1.04 |
| 1:I:330:A:C2' | 1:I:331:A:H5' | 1.86 | 1.04 |
| 1:I:74:A:C4 | 1:I:75:A:C8 | 2.45 | 1.04 |
| 2:J:83:A:O2' | 2:J:84:A:P | 2.16 | 1.04 |
| 3:K:168:A:H2' | 3:K:169:A:O4' | 1.54 | 1.04 |
| 4:L:673:U:O2' | 4:L:674:U:C5' | 2.04 | 1.04 |
| 4:L:706:U:C4 | 4:L:707:U:C5 | 2.44 | 1.04 |
| 6:N:485:U:C2' | 6:N:486:U:H5' | 1.87 | 1.04 |
| 1:I:242:A:C2 | 1:I:243:A:C4 | 2.46 | 1.04 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:59:A:O2' | 1:I:60:A:H5' | 1.55 | 1.04 |
| 2:J:147:A:O2' | 2:J:148:A:H5' | 1.56 | 1.04 |
| 2:J:242:A:O3' | 2:J:243:A:P | 2.14 | 1.04 |
| 3:K:117:A:O2' | 3:K:118:A:P | 2.14 | 1.04 |
| 3:K:168:A:C3' | 3:K:169:A:H5' | 1.75 | 1.04 |
| 4:L:488:U:C2' | 4:L:489:U:H5' | 1.88 | 1.04 |
| 4:L:570:U:O2' | 4:L:571:U:H5' | 1.58 | 1.04 |
| 6:N:412:U:C2' | 6:N:413:U:H5' | 1.87 | 1.04 |
| 1:I:164:A:C2 | 1:I:165:A:C5 | 2.46 | 1.04 |
| 1:I:325:A:N6 | 1:I:326:A:N6 | 2.05 | 1.04 |
| 1:I:4:A:H2' | 1:I:5:A:C8 | 1.92 | 1.04 |
| 2:J:218:A:O2' | 2:J:219:A:C5' | 2.04 | 1.04 |
| 2:J:43:A:H2' | 2:J:44:A:O4' | 1.57 | 1.04 |
| 3:K:100:A:H2' | 3:K:101:A:O4' | 1.57 | 1.04 |
| 3:K:45:A:O3' | 3:K:46:A:H5' | 1.58 | 1.04 |
| 3:K:96:A:O2' | 3:K:97:A:H5' | 1.58 | 1.04 |
| 4:L:779:U:C2' | 4:L:780:U:C5' | 2.32 | 1.04 |
| 4:L:804:U:H2' | 4:L:805:U:H6 | 1.20 | 1.04 |
| 5:M:407:U:C2 | 5:M:408:U:C5 | 2.46 | 1.04 |
| 5:M:483:U:O2' | 5:M:484:U:C5' | 2.05 | 1.04 |
| 6:N:417:U:H2' | 6:N:418:U:O4' | 1.58 | 1.04 |
| 1:I:21:A:H2' | 1:I:22:A:C8 | 1.92 | 1.04 |
| 2:J:28:A:N6 | 2:J:29:A:N6 | 2.06 | 1.04 |
| 3:K:38:A:O2' | 3:K:39:A:H5' | 1.58 | 1.04 |
| 4:L:541:U:O2' | 4:L:542:U:H5' | 1.58 | 1.04 |
| 1:I:134:A:N6 | 1:I:135:A:N6 | 2.04 | 1.04 |
| 1:I:273:A:C2' | 1:I:274:A:C5' | 2.35 | 1.04 |
| 2:J:122:A:C6 | 2:J:123:A:N6 | 2.25 | 1.04 |
| 2:J:230:A:C2' | 2:J:231:A:H5' | 1.88 | 1.04 |
| 4:L:634:U:C2' | 4:L:635:U:C5' | 2.35 | 1.04 |
| 4:L:814:U:O2' | 4:L:815:U:C5' | 2.06 | 1.04 |
| 5:M:433:U:O4 | 5:M:434:U:O4 | 1.73 | 1.04 |
| 1:I:179:A:C5 | 1:I:180:A:N7 | 2.25 | 1.03 |
| 1:I:43:A:C2 | 1:I:44:A:N7 | 2.26 | 1.03 |
| 2:J:117:A:H2' | 2:J:118:A:H8 | 1.20 | 1.03 |
| 2:J:92:A:N3 | 2:J:93:A:C8 | 2.25 | 1.03 |
| 1:I:258:A:C2' | 1:I:259:A:H5' | 1.88 | 1.03 |
| 1:I:278:A:H2' | 1:I:279:A:O4' | 1.56 | 1.03 |
| 3:K:142:A:H2' | 3:K:143:A:H8 | 1.17 | 1.03 |
| 4:L:645:U:C2 | 4:L:646:U:C5 | 2.47 | 1.03 |
| 4:L:722:U:C2' | 4:L:723:U:C5 | 2.40 | 1.03 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:450:U:H2' | 5:M:451:U:C6 | 1.93 | 1.03 |
| 6:N:320:U:O2' | 6:N:321:U:C5' | 2.05 | 1.03 |
| 6:N:524:U:O3' | 6:N:525:U:P | 2.15 | 1.03 |
| 1:I:284:A:O2' | 1:I:285:A:H5' | 0.87 | 1.03 |
| 1:I:373:A:N6 | 1:I:374:A:H62 | 1.50 | 1.03 |
| 4:L:649:U:C2' | 4:L:650:U:H5' | 1.84 | 1.03 |
| 6:N:475:U:O2' | 6:N:476:U:H5' | 1.57 | 1.03 |
| 1:I:68:A:C2' | 1:I:69:A:C5' | 2.34 | 1.03 |
| 1:I:95:A:C2 | 1:I:96:A:N7 | 2.24 | 1.03 |
| 2:J:210:A:C2' | 2:J:211:A:H5' | 1.87 | 1.03 |
| 4:L:812:U:C2' | 4:L:813:U:C5' | 2.31 | 1.03 |
| 5:M:444:U:C2 | 5:M:445:U:C5 | 2.46 | 1.03 |
| 1:I:14:A:O2' | 1:I:15:A:H5' | 1.58 | 1.03 |
| 1:I:183:A:C2 | 1:I:184:A:N9 | 2.26 | 1.03 |
| 1:I:244:A:O2' | 1:I:245:A:H5' | 1.56 | 1.03 |
| 1:I:357:A:O2' | 1:I:358:A:H5' | 1.58 | 1.03 |
| 4:L:450:U:O2' | 4:L:451:U:H5' | 1.56 | 1.03 |
| 4:L:540:U:O2' | 4:L:541:U:C5' | 2.05 | 1.03 |
| 6:N:417:U:C2' | 6:N:418:U:H5' | 1.82 | 1.03 |
| 1:I:112:A:H2' | 1:I:113:A:C8 | 1.94 | 1.03 |
| 1:I:271:A:C2 | 1:I:272:A:C4 | 2.47 | 1.03 |
| 4:L:634:U:O2' | 4:L:635:U:C5' | 2.06 | 1.03 |
| 5:M:466:U:O2' | 5:M:467:U:H5' | 1.58 | 1.03 |
| 1:I:183:A:C2 | 1:I:184:A:C4 | 2.47 | 1.03 |
| 1:I:194:A:N6 | 1:I:195:A:N6 | 2.07 | 1.03 |
| 4:L:690:U:C4 | 4:L:691:U:O4 | 2.12 | 1.03 |
| 4:L:750:U:O2 | 4:L:751:U:C5 | 2.09 | 1.03 |
| 5:M:347:U:O2' | 5:M:348:U:H5' | 0.85 | 1.03 |
| 5:M:435:U:H2' | 5:M:436:U:H6 | 1.22 | 1.03 |
| 1:I:202:A:O2' | 1:I:203:A:H5' | 0.86 | 1.03 |
| 3:K:234:A:N6 | 3:K:235:A:N6 | 2.07 | 1.03 |
| 4:L:449:U:O2' | 4:L:450:U:H5' | 1.56 | 1.03 |
| 4:L:509:U:O2' | 4:L:510:U:H5' | 1.59 | 1.03 |
| 4:L:757:U:N3 | 4:L:758:U:C4 | 2.26 | 1.03 |
| 5:M:336:U:C2 | 5:M:337:U:C6 | 2.47 | 1.03 |
| 5:M:482:U:O2' | 5:M:483:U:C5' | 2.06 | 1.03 |
| 6:N:417:U:C2' | 6:N:418:U:C5' | 2.33 | 1.03 |
| 6:N:481:U:C2' | 6:N:482:U:H5' | 1.87 | 1.03 |
| 1:I:112:A:H2' | 1:I:113:A:H8 | 1.22 | 1.03 |
| 1:I:230:A:O2' | 1:I:231:A:C5' | 2.06 | 1.03 |
| 1:I:238:A:N6 | 1:I:239:A:N6 | 2.07 | 1.03 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:249:A:C2 | 1:I:250:A:C4 | 2.46 | 1.03 |
| 2:J:101:A:N6 | 2:J:102:A:H62 | 1.51 | 1.03 |
| 4:L:550:U:O2' | 4:L:551:U:H5' | 0.85 | 1.03 |
| 5:M:450:U:H2' | 5:M:451:U:H6 | 1.23 | 1.03 |
| 6:N:425:U:C2 | 6:N:426:U:C5 | 2.47 | 1.03 |
| 1:I:103:A:O2' | 1:I:104:A:O5' | 1.77 | 1.03 |
| 3:K:117:A:C2 | 3:K:118:A:N7 | 2.26 | 1.03 |
| 3:K:131:A:N6 | 3:K:132:A:N6 | 2.06 | 1.03 |
| 4:L:760:U:O2' | 4:L:761:U:H5' | 1.58 | 1.03 |
| 5:M:539:U:O2' | 5:M:540:U:C5' | 2.05 | 1.03 |
| 1:I:87:A:O2' | 1:I:88:A:C5' | 2.07 | 1.02 |
| 2:J:187:A:O2' | 2:J:188:A:H5' | 1.57 | 1.02 |
| 3:K:97:A:O2' | 3:K:98:A:H5' | 1.57 | 1.02 |
| 4:L:518:U:C2' | 4:L:519:U:C5' | 2.28 | 1.02 |
| 6:N:380:U:C2' | 6:N:381:U:H5' | 1.88 | 1.02 |
| 6:N:449:U:O2' | 6:N:450:U:C5' | 2.07 | 1.02 |
| 6:N:483:U:O4 | 6:N:484:U:O4 | 1.75 | 1.02 |
| 6:N:526:U:H2' | 6:N:527:U:O4' | 1.59 | 1.02 |
| 1:I:95:A:O2' | 1:I:96:A:P | 2.17 | 1.02 |
| 2:J:71:A:N6 | 2:J:72:A:N6 | 2.06 | 1.02 |
| 5:M:420:U:C2' | 5:M:421:U:H5' | 1.88 | 1.02 |
| 5:M:483:U:C2' | 5:M:484:U:H5' | 1.90 | 1.02 |
| 1:I:149:A:O3' | 1:I:150:A:P | 2.17 | 1.02 |
| 1:I:253:A:N6 | 1:I:254:A:N6 | 2.07 | 1.02 |
| 2:J:83:A:H2' | 2:J:84:A:H8 | 1.17 | 1.02 |
| 4:L:695:U:HO2' | 4:L:696:U:H5' | 1.23 | 1.02 |
| 5:M:441:U:O2' | 5:M:442:U:H5' | 1.57 | 1.02 |
| 1:I:250:A:H2' | 1:I:251:A:C8 | 1.95 | 1.02 |
| 3:K:75:A:O3' | 3:K:76:A:P | 2.17 | 1.02 |
| 4:L:500:U:C2' | 4:L:501:U:C5' | 2.35 | 1.02 |
| 4:L:723:U:O4 | 4:L:724:U:O4 | 1.77 | 1.02 |
| 4:L:810:U:H2' | 4:L:811:U:O4' | 1.58 | 1.02 |
| 5:M:373:U:C2' | 5:M:374:U:H5' | 1.90 | 1.02 |
| 1:I:341:A:C2' | 1:I:342:A:H5' | 1.88 | 1.02 |
| 1:I:97:A:O2' | 1:I:98:A:C5' | 2.07 | 1.02 |
| 2:J:171:A:H2' | 2:J:172:A:H8 | 1.21 | 1.02 |
| 2:J:84:A:C2' | 2:J:85:A:H5' | 1.85 | 1.02 |
| 4:L:684:U:C4 | 4:L:685:U:O4 | 2.11 | 1.02 |
| 4:L:820:U:H2' | 4:L:821:U:C6 | 1.93 | 1.02 |
| 5:M:410:U:H2' | 5:M:411:U:C6 | 1.94 | 1.02 |
| 6:N:484:U:C2' | 6:N:485:U:O4' | 2.07 | 1.02 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:25:A:O2' | 1:I:26:A:C5' | 2.08 | 1.02 |
| 1:I:73:A:C2 | 1:I:74:A:C4 | 2.48 | 1.02 |
| 2:J:42:A:H2' | 2:J:43:A:O4' | 1.58 | 1.02 |
| 3:K:136:A:C2' | 3:K:137:A:C5' | 2.34 | 1.02 |
| 4:L:477:U:H2' | 4:L:478:U:C5' | 1.83 | 1.02 |
| 2:J:222:A:O2' | 2:J:223:A:C5' | 2.07 | 1.02 |
| 3:K:49:A:O2' | 3:K:50:A:C5' | 2.07 | 1.02 |
| 4:L:622:U:O2' | 4:L:623:U:H5' | 0.84 | 1.02 |
| 4:L:723:U:C4 | 4:L:724:U:C5 | 2.44 | 1.02 |
| 5:M:449:U:O2' | 5:M:450:U:H5' | 0.85 | 1.02 |
| 1:I:271:A:C2 | 1:I:272:A:C8 | 2.48 | 1.02 |
| 2:J:90:A:O2' | 2:J:91:A:H5' | 1.57 | 1.02 |
| 4:L:500:U:O2' | 4:L:501:U:C5' | 2.06 | 1.02 |
| 1:I:134:A:N1 | 1:I:135:A:C6 | 2.27 | 1.02 |
| 1:I:284:A:C2' | 1:I:285:A:C5' | 2.37 | 1.02 |
| 3:K:11:A:O3' | 3:K:12:A:P | 2.17 | 1.02 |
| 6:N:434:U:H2' | 6:N:435:U:C6 | 1.95 | 1.02 |
| 1:I:113:A:H2' | 1:I:114:A:C8 | 1.95 | 1.02 |
| 1:I:134:A:N6 | 1:I:135:A:H62 | 1.57 | 1.02 |
| 2:J:129:A:C2' | 2:J:130:A:C5' | 2.37 | 1.02 |
| 3:K:104:A:C2' | 3:K:105:A:H5' | 1.87 | 1.02 |
| 5:M:465:U:O2' | 5:M:466:U:H5' | 1.59 | 1.02 |
| 1:I:26:A:O2' | 1:I:27:A:H5' | 1.60 | 1.01 |
| 1:I:283:A:N3 | 1:I:284:A:N7 | 2.08 | 1.01 |
| 1:I:40:A:O3' | 1:I:41:A:OP2 | 1.75 | 1.01 |
| 3:K:154:A:C4 | 3:K:155:A:C8 | 2.48 | 1.01 |
| 3:K:154:A:C5 | 3:K:155:A:N7 | 2.28 | 1.01 |
| 3:K:90:A:O2' | 3:K:91:A:C5' | 2.08 | 1.01 |
| 6:N:328:U:H2' | 6:N:329:U:C6 | 1.95 | 1.01 |
| 6:N:425:U:O2' | 6:N:426:U:O4' | 1.76 | 1.01 |
| 6:N:440:U:H2' | 6:N:441:U:C5' | 1.89 | 1.01 |
| 1:I:233:A:C2' | 1:I:234:A:C5' | 2.36 | 1.01 |
| 1:I:70:A:C2' | 1:I:71:A:C5' | 2.38 | 1.01 |
| 2:J:204:A:C6 | 2:J:205:A:N6 | 2.28 | 1.01 |
| 2:J:215:A:O2' | 2:J:216:A:H5' | 1.58 | 1.01 |
| 3:K:64:A:O2' | 3:K:65:A:C5' | 2.07 | 1.01 |
| 4:L:436:U:H2' | 4:L:437:U:H6 | 1.17 | 1.01 |
| 5:M:318:U:O2' | 5:M:319:U:C5' | 2.08 | 1.01 |
| 5:M:410:U:H2' | 5:M:411:U:H6 | 1.23 | 1.01 |
| 1:I:15:A:C2' | 1:I:16:A:C5' | 2.35 | 1.01 |
| 1:I:46:A:C2 | 1:I:47:A:C5 | 2.46 | 1.01 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 3:K:214:A:H2' | 3:K:215:A:C8 | 1.94 | 1.01 |
| 4:L:489:U:C4 | 4:L:490:U:O4 | 2.13 | 1.01 |
| 4:L:679:U:O3' | 4:L:680:U:P | 2.17 | 1.01 |
| 6:N:412:U:O2' | 6:N:413:U:H5' | 0.85 | 1.01 |
| 6:N:450:U:C2' | 6:N:451:U:O4' | 2.06 | 1.01 |
| 1:I:109:A:O2' | 1:I:110:A:O5' | 1.77 | 1.01 |
| 2:J:223:A:H2' | 2:J:224:A:C5' | 1.88 | 1.01 |
| 2:J:249:A:C2' | 2:J:250:A:H5' | 1.88 | 1.01 |
| 3:K:124:A:C2 | 3:K:125:A:N7 | 2.28 | 1.01 |
| 3:K:203:A:O2' | 3:K:204:A:P | 2.16 | 1.01 |
| 4:L:755:U:C2' | 4:L:756:U:H5' | 1.87 | 1.01 |
| 5:M:355:U:O2' | 5:M:356:U:H5' | 1.59 | 1.01 |
| 6:N:401:U:O2' | 6:N:402:U:H5' | 1.57 | 1.01 |
| 1:I:33:A:O2' | 1:I:34:A:C5' | 2.08 | 1.01 |
| 1:I:348:A:O2' | 1:I:349:A:H5' | 1.58 | 1.01 |
| 2:J:204:A:C6 | 2:J:205:A:C6 | 2.48 | 1.01 |
| 2:J:225:A:C2 | 2:J:226:A:C8 | 2.49 | 1.01 |
| 4:L:525:U:C2' | 4:L:526:U:H5' | 1.90 | 1.01 |
| 4:L:566:U:O2' | 4:L:567:U:C5' | 2.07 | 1.01 |
| 4:L:758:U:C2' | 4:L:759:U:C5' | 2.36 | 1.01 |
| 4:L:821:U:O2' | 4:L:822:U:H5' | 1.57 | 1.01 |
| 5:M:455:U:C2' | 5:M:456:U:C5' | 2.37 | 1.01 |
| 2:J:92:A:C4 | 2:J:93:A:N7 | 2.29 | 1.01 |
| 4:L:723:U:C2' | 4:L:724:U:O4' | 2.08 | 1.01 |
| 4:L:810:U:H2' | 4:L:811:U:H6 | 1.24 | 1.01 |
| 4:L:810:U:O2' | 4:L:811:U:H5' | 1.60 | 1.01 |
| 5:M:407:U:N3 | 5:M:408:U:C4 | 2.29 | 1.01 |
| 5:M:463:U:O2' | 5:M:464:U:H5' | 1.58 | 1.01 |
| 5:M:488:U:C2' | 5:M:489:U:O4' | 2.08 | 1.01 |
| 1:I:291:A:C2' | 1:I:292:A:H5' | 1.91 | 1.01 |
| 1:I:75:A:C2' | 1:I:76:A:C5' | 2.31 | 1.01 |
| 1:I:78:A:O2' | 1:I:79:A:H5' | 1.58 | 1.01 |
| 2:J:166:A:H2' | 2:J:167:A:H8 | 1.25 | 1.01 |
| 2:J:260:A:O2' | 2:J:261:A:H5' | 1.60 | 1.01 |
| 3:K:95:A:C2' | 3:K:96:A:H5' | 1.91 | 1.01 |
| 4:L:532:U:C2' | 4:L:533:U:C5' | 2.39 | 1.01 |
| 4:L:547:U:H2' | 4:L:548:U:C6 | 1.95 | 1.01 |
| 4:L:638:U:O2' | 4:L:639:U:H5' | 0.84 | 1.01 |
| 4:L:794:U:O2' | 4:L:795:U:C5' | 2.08 | 1.01 |
| 5:M:467:U:C2' | 5:M:468:U:H5' | 1.90 | 1.01 |
| 6:N:442:U:O2' | 6:N:443:U:C5' | 2.09 | 1.01 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:67:A:C5 | 1:I:68:A:N7 | 2.29 | 1.01 |
| 2:J:229:A:O2' | 2:J:230:A:C4' | 2.08 | 1.01 |
| 3:K:96:A:H2' | 3:K:97:A:O4' | 1.59 | 1.01 |
| 4:L:463:U:O2' | 4:L:464:U:C5' | 2.08 | 1.01 |
| 4:L:763:U:H2' | 4:L:764:U:H6 | 1.16 | 1.01 |
| 5:M:480:U:C2 | 5:M:481:U:C5 | 2.49 | 1.01 |
| 6:N:415:U:H2' | 6:N:416:U:C6 | 1.95 | 1.01 |
| 1:I:197:A:O2' | 1:I:198:A:H5' | 1.59 | 1.01 |
| 1:I:277:A:H2' | 1:I:278:A:C8 | 1.95 | 1.01 |
| 1:I:358:A:C2 | 1:I:359:A:C5 | 2.49 | 1.01 |
| 2:J:160:A:C2' | 2:J:161:A:O4' | 2.08 | 1.01 |
| 2:J:252:A:O2' | 2:J:253:A:H5' | 1.60 | 1.01 |
| 3:K:155:A:C4 | 3:K:156:A:C8 | 2.49 | 1.01 |
| 4:L:751:U:C2' | 4:L:752:U:C5' | 2.38 | 1.01 |
| 5:M:410:U:C4 | 5:M:411:U:O4 | 2.13 | 1.01 |
| 5:M:433:U:C2 | 5:M:434:U:C5 | 2.48 | 1.01 |
| 6:N:321:U:C4 | 6:N:322:U:O4 | 2.14 | 1.01 |
| 1:I:242:A:C2 | 1:I:243:A:N9 | 2.29 | 1.01 |
| 2:J:42:A:C2' | 2:J:43:A:O4' | 2.09 | 1.01 |
| 3:K:120:A:C6 | 3:K:121:A:C5 | 2.48 | 1.01 |
| 3:K:204:A:H2' | 3:K:205:A:C8 | 1.96 | 1.01 |
| 4:L:517:U:C2' | 4:L:518:U:C5' | 2.38 | 1.01 |
| 4:L:617:U:O2' | 4:L:618:U:H5' | 1.60 | 1.01 |
| 4:L:749:U:O2' | 4:L:750:U:C5' | 2.07 | 1.01 |
| 5:M:381:U:H2' | 5:M:382:U:C6 | 1.96 | 1.01 |
| 6:N:362:U:O2' | 6:N:363:U:C5' | 2.08 | 1.01 |
| 3:K:107:A:O2' | 3:K:108:A:C5' | 2.08 | 1.00 |
| 3:K:167:A:N6 | 3:K:168:A:N6 | 2.09 | 1.00 |
| 3:K:71:A:C2 | 3:K:72:A:C5 | 2.49 | 1.00 |
| 4:L:435:U:H2' | 4:L:436:U:O4' | 1.59 | 1.00 |
| 4:L:510:U:C2' | 4:L:511:U:H5' | 1.89 | 1.00 |
| 4:L:718:U:O2' | 4:L:719:U:H5' | 0.83 | 1.00 |
| 5:M:313:U:O3' | 5:M:314:U:P | 2.19 | 1.00 |
| 1:I:102:A:H2' | 1:I:103:A:H8 | 1.25 | 1.00 |
| 1:I:55:A:O2' | 1:I:56:A:C5' | 2.09 | 1.00 |
| 3:K:112:A:N6 | 3:K:113:A:H62 | 1.52 | 1.00 |
| 5:M:336:U:H2' | 5:M:337:U:C4' | 1.91 | 1.00 |
| 2:J:26:A:O2' | 2:J:27:A:C5' | 2.09 | 1.00 |
| 4:L:631:U:O2' | 4:L:632:U:H5' | 1.59 | 1.00 |
| 5:M:535:U:O2' | 5:M:536:U:H5' | 1.61 | 1.00 |
| 6:N:388:U:H2' | 6:N:389:U:C6 | 1.96 | 1.00 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:70:A:H2' | 1:I:71:A:O4' | 1.62 | 1.00 |
| 2:J:204:A:C4 | 2:J:205:A:N7 | 2.29 | 1.00 |
| 2:J:94:A:C2' | 2:J:95:A:C5' | 2.39 | 1.00 |
| 3:K:131:A:N6 | 3:K:132:A:H62 | 1.60 | 1.00 |
| 6:N:425:U:C2 | 6:N:426:U:C6 | 2.48 | 1.00 |
| 6:N:431:U:H2' | 6:N:432:U:C5' | 1.90 | 1.00 |
| 1:I:200:A:O2' | 1:I:201:A:H5' | 1.60 | 1.00 |
| 1:I:285:A:O2' | 1:I:286:A:H5' | 1.61 | 1.00 |
| 1:I:69:A:C2' | 1:I:70:A:H5' | 1.91 | 1.00 |
| 3:K:12:A:O3' | 3:K:13:A:P | 2.18 | 1.00 |
| 3:K:139:A:O2' | 3:K:140:A:H5' | 1.61 | 1.00 |
| 5:M:386:U:C2 | 5:M:387:U:C5 | 2.49 | 1.00 |
| 6:N:400:U:O2' | 6:N:401:U:C5' | 2.08 | 1.00 |
| 4:L:466:U:C2' | 4:L:467:U:H5' | 1.90 | 1.00 |
| 4:L:529:U:HO2' | 4:L:530:U:H5' | 1.20 | 1.00 |
| 1:I:180:A:C2 | 1:I:181:A:C4 | 2.50 | 1.00 |
| 4:L:483:U:O2' | 4:L:484:U:H5' | 1.62 | 1.00 |
| 5:M:444:U:O2' | 5:M:445:U:P | 2.19 | 1.00 |
| 6:N:277:U:C2' | 6:N:278:U:C5' | 2.38 | 1.00 |
| 1:I:135:A:H2' | 1:I:136:A:C5' | 1.91 | 1.00 |
| 2:J:147:A:N3 | 2:J:148:A:C8 | 2.30 | 1.00 |
| 2:J:161:A:C2' | 2:J:162:A:H5' | 1.90 | 1.00 |
| 2:J:171:A:N3 | 2:J:172:A:N7 | 2.09 | 1.00 |
| 4:L:706:U:N3 | 4:L:707:U:C5 | 2.28 | 1.00 |
| 4:L:776:U:C2' | 4:L:777:U:H5' | 1.83 | 1.00 |
| 5:M:352:U:O2' | 5:M:353:U:H5' | 1.61 | 1.00 |
| 5:M:505:U:HO2' | 5:M:506:U:H5' | 1.24 | 1.00 |
| 1:I:13:A:C2' | 1:I:14:A:O4' | 2.08 | 1.00 |
| 1:I:258:A:O2' | 1:I:259:A:C5' | 2.08 | 1.00 |
| 3:K:162:A:O2' | 3:K:163:A:H5' | 1.61 | 1.00 |
| 4:L:576:U:H2' | 4:L:577:U:C5' | 1.86 | 1.00 |
| 4:L:751:U:C2' | 4:L:752:U:O4' | 2.09 | 1.00 |
| 4:L:775:U:O2' | 4:L:776:U:C5' | 2.09 | 1.00 |
| 4:L:780:U:C2' | 4:L:781:U:H5' | 1.92 | 1.00 |
| 5:M:336:U:O2' | 5:M:337:U:H5' | 1.62 | 1.00 |
| 5:M:461:U:O2' | 5:M:462:U:H5' | 1.62 | 1.00 |
| 6:N:456:U:O3' | 6:N:457:U:P | 2.20 | 1.00 |
| 3:K:225:A:H2' | 3:K:226:A:C8 | 1.97 | 1.00 |
| 3:K:74:A:C3' | 3:K:75:A:P | 2.50 | 1.00 |
| 4:L:776:U:C2' | 4:L:777:U:C5' | 2.40 | 1.00 |
| 1:I:103:A:C2 | 1:I:104:A:C4 | 2.49 | 0.99 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:129:A:H2' | 1:I:130:A:C5' | 1.92 | 0.99 |
| 1:I:181:A:N6 | 1:I:182:A:N6 | 2.09 | 0.99 |
| 1:I:73:A:O2' | 1:I:74:A:O4' | 1.74 | 0.99 |
| 2:J:219:A:C2' | 2:J:220:A:H5' | 1.92 | 0.99 |
| 4:L:586:U:C4 | 4:L:587:U:O4 | 2.15 | 0.99 |
| 4:L:669:U:O2' | 4:L:670:U:H5' | 1.61 | 0.99 |
| 4:L:804:U:H2' | 4:L:805:U:C6 | 1.95 | 0.99 |
| 5:M:331:U:O2' | 5:M:332:U:C5' | 2.09 | 0.99 |
| 5:M:335:U:C2 | 5:M:336:U:C5 | 2.49 | 0.99 |
| 5:M:489:U:H2' | 5:M:490:U:O4' | 1.62 | 0.99 |
| 6:N:418:U:C4 | 6:N:419:U:O4 | 2.15 | 0.99 |
| 6:N:424:U:H2' | 6:N:425:U:H6 | 1.01 | 0.99 |
| 1:I:202:A:C2' | 1:I:203:A:C5' | 2.35 | 0.99 |
| 1:I:221:A:O2' | 1:I:222:A:H5' | 1.61 | 0.99 |
| 1:I:333:A:N3 | 1:I:334:A:C1' | 2.25 | 0.99 |
| 1:I:74:A:C2' | 1:I:75:A:H5' | 1.76 | 0.99 |
| 2:J:145:A:C6 | 2:J:146:A:C5 | 2.44 | 0.99 |
| 3:K:136:A:O2' | 3:K:137:A:H5' | 0.83 | 0.99 |
| 4:L:576:U:O2' | 4:L:577:U:H5' | 0.83 | 0.99 |
| 4:L:724:U:H2' | 4:L:725:U:O4' | 1.62 | 0.99 |
| 5:M:419:U:H2' | 5:M:420:U:C5' | 1.89 | 0.99 |
| 1:I:138:A:O2' | 1:I:139:A:C5' | 2.10 | 0.99 |
| 1:I:44:A:C2 | 1:I:45:A:C8 | 2.50 | 0.99 |
| 2:J:117:A:N3 | 2:J:118:A:C8 | 2.29 | 0.99 |
| 2:J:64:A:H2' | 2:J:65:A:H8 | 1.27 | 0.99 |
| 5:M:303:U:O2' | 5:M:304:U:H5' | 1.61 | 0.99 |
| 5:M:335:U:N3 | 5:M:336:U:C4 | 2.30 | 0.99 |
| 1:I:103:A:N3 | 1:I:104:A:C8 | 2.31 | 0.99 |
| 1:I:353:A:HO2' | 1:I:354:A:H5' | 1.20 | 0.99 |
| 2:J:13:A:C2 | 2:J:14:A:C8 | 2.49 | 0.99 |
| 5:M:469:U:O2 | 5:M:470:U:C6 | 2.15 | 0.99 |
| 5:M:510:U:C2' | 5:M:511:U:O4' | 2.10 | 0.99 |
| 1:I:109:A:C2 | 1:I:110:A:C5 | 2.51 | 0.99 |
| 1:I:109:A:N3 | 1:I:110:A:C8 | 2.30 | 0.99 |
| 1:I:66:A:C2' | 1:I:67:A:H5' | 1.92 | 0.99 |
| 2:J:147:A:C2 | 2:J:148:A:C5 | 2.50 | 0.99 |
| 3:K:212:A:C6 | 3:K:213:A:N6 | 2.30 | 0.99 |
| 4:L:698:U:C2' | 4:L:699:U:C5' | 2.41 | 0.99 |
| 4:L:779:U:HO2' | 4:L:780:U:H5' | 1.20 | 0.99 |
| 6:N:438:U:O2' | 6:N:439:U:H5' | 1.61 | 0.99 |
| 1:I:119:A:C2 | 1:I:120:A:N9 | 2.31 | 0.99 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:27:A:O2' | 1:I:28:A:H5' | 1.62 | 0.99 |
| 2:J:69:A:H2' | 2:J:70:A:C5' | 1.90 | 0.99 |
| 3:K:239:A:O2' | 3:K:240:A:H5' | 1.62 | 0.99 |
| 3:K:71:A:C2 | 3:K:72:A:C4 | 2.50 | 0.99 |
| 5:M:416:U:H2' | 5:M:417:U:H6 | 1.26 | 0.99 |
| 6:N:400:U:C2' | 6:N:401:U:C5' | 2.40 | 0.99 |
| 1:I:147:A:O2' | 1:I:148:A:C5' | 2.10 | 0.99 |
| 1:I:13:A:C4 | 1:I:14:A:C8 | 2.50 | 0.99 |
| 1:I:75:A:HO2' | 1:I:76:A:H5' | 1.18 | 0.99 |
| 2:J:29:A:C4 | 2:J:30:A:C8 | 2.50 | 0.99 |
| 3:K:110:A:H2' | 3:K:111:A:C5' | 1.90 | 0.99 |
| 3:K:170:A:O2' | 3:K:171:A:H5' | 1.62 | 0.99 |
| 5:M:449:U:C2' | 5:M:450:U:H5' | 1.91 | 0.99 |
| 6:N:406:U:H2' | 6:N:407:U:O4' | 1.62 | 0.99 |
| 6:N:448:U:O2' | 6:N:449:U:H5' | 1.61 | 0.99 |
| 1:I:250:A:C5 | 1:I:251:A:N7 | 2.30 | 0.99 |
| 1:I:262:A:C2' | 1:I:263:A:C5' | 2.40 | 0.99 |
| 4:L:649:U:C2' | 4:L:650:U:C5' | 2.40 | 0.99 |
| 6:N:481:U:O2' | 6:N:482:U:H5' | 0.82 | 0.99 |
| 1:I:15:A:H2' | 1:I:16:A:O4' | 1.63 | 0.99 |
| 1:I:316:A:N6 | 1:I:317:A:N6 | 2.11 | 0.99 |
| 2:J:145:A:C4 | 2:J:146:A:N7 | 2.31 | 0.99 |
| 2:J:79:A:C2' | 2:J:80:A:C5' | 2.40 | 0.99 |
| 4:L:552:U:C4 | 4:L:553:U:O4 | 2.15 | 0.99 |
| 4:L:740:U:C2' | 4:L:741:U:H5' | 1.90 | 0.99 |
| 6:N:329:U:H2' | 6:N:330:U:C6 | 1.96 | 0.99 |
| 6:N:449:U:C2' | 6:N:450:U:C5' | 2.40 | 0.99 |
| 1:I:272:A:C6 | 1:I:273:A:N6 | 2.30 | 0.99 |
| 1:I:95:A:C4 | 1:I:96:A:N7 | 2.31 | 0.99 |
| 4:L:557:U:H2' | 4:L:558:U:O4' | 1.62 | 0.99 |
| 2:J:38:A:O2' | 2:J:39:A:H5' | 1.63 | 0.98 |
| 4:L:599:U:H2' | 4:L:600:U:C6 | 1.98 | 0.98 |
| 4:L:715:U:O2 | 4:L:716:U:C6 | 2.15 | 0.98 |
| 1:I:62:A:O2' | 1:I:63:A:H5' | 0.81 | 0.98 |
| 2:J:135:A:N6 | 2:J:136:A:N6 | 2.10 | 0.98 |
| 2:J:165:A:N3 | 2:J:166:A:C8 | 2.29 | 0.98 |
| 2:J:211:A:C2' | 2:J:212:A:C5' | 2.41 | 0.98 |
| 4:L:448:U:N3 | 4:L:449:U:O4 | 1.96 | 0.98 |
| 4:L:676:U:C3' | 4:L:677:U:P | 2.51 | 0.98 |
| 4:L:690:U:N3 | 4:L:691:U:C5 | 2.30 | 0.98 |
| 4:L:772:U:O2' | 4:L:773:U:H5' | 1.63 | 0.98 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:811:U:C2 | 4:L:812:U:C5 | 2.52 | 0.98 |
| 5:M:341:U:O2' | 5:M:342:U:H5' | 1.62 | 0.98 |
| 5:M:505:U:C2' | 5:M:506:U:H5' | 1.92 | 0.98 |
| 6:N:394:U:HO2' | 6:N:395:U:H5' | 1.18 | 0.98 |
| 1:I:135:A:C2' | 1:I:136:A:C5' | 2.38 | 0.98 |
| 1:I:287:A:C2' | 1:I:288:A:O4' | 2.11 | 0.98 |
| 2:J:42:A:O2' | 2:J:43:A:H5' | 1.62 | 0.98 |
| 3:K:146:A:N3 | 3:K:147:A:C8 | 2.31 | 0.98 |
| 4:L:769:U:C2' | 4:L:770:U:H5' | 1.92 | 0.98 |
| 5:M:462:U:O2' | 5:M:463:U:H5' | 1.63 | 0.98 |
| 6:N:388:U:H2' | 6:N:389:U:H6 | 1.23 | 0.98 |
| 2:J:11:A:H2' | 2:J:12:A:O4' | 1.64 | 0.98 |
| 2:J:211:A:HO2' | 2:J:212:A:H5' | 1.23 | 0.98 |
| 3:K:31:A:N6 | 3:K:32:A:H62 | 1.53 | 0.98 |
| 4:L:693:U:N3 | 4:L:694:U:C4 | 2.32 | 0.98 |
| 4:L:763:U:H2' | 4:L:764:U:O4' | 1.63 | 0.98 |
| 5:M:327:U:O2 | 5:M:328:U:C6 | 2.15 | 0.98 |
| 5:M:409:U:O2 | 5:M:410:U:C6 | 2.15 | 0.98 |
| 5:M:429:U:O2' | 5:M:430:U:H5' | 1.62 | 0.98 |
| 6:N:349:U:H2' | 6:N:350:U:H6 | 1.26 | 0.98 |
| 6:N:484:U:C2' | 6:N:485:U:C5' | 2.40 | 0.98 |
| 1:I:122:A:C2' | 1:I:123:A:H5' | 1.92 | 0.98 |
| 1:I:18:A:O2' | 1:I:19:A:H5' | 1.62 | 0.98 |
| 1:I:299:A:HO2' | 1:I:300:A:H5' | 1.18 | 0.98 |
| 1:I:306:A:HO2' | 1:I:307:A:H5' | 1.29 | 0.98 |
| 3:K:237:A:H2' | 3:K:238:A:C8 | 1.98 | 0.98 |
| 5:M:473:U:O2' | 5:M:474:U:H5' | 1.62 | 0.98 |
| 2:J:62:A:C2' | 2:J:63:A:H5' | 1.93 | 0.98 |
| 4:L:484:U:C2' | 4:L:485:U:C5' | 2.40 | 0.98 |
| 4:L:717:U:N3 | 4:L:718:U:O4 | 1.97 | 0.98 |
| 1:I:321:A:O2' | 1:I:322:A:H5' | 1.62 | 0.98 |
| 2:J:200:A:O2' | 2:J:201:A:H5' | 1.61 | 0.98 |
| 4:L:537:U:C2' | 4:L:538:U:H5' | 1.93 | 0.98 |
| 5:M:336:U:C5 | 5:M:337:U:C5 | 2.51 | 0.98 |
| 5:M:448:U:C2' | 5:M:449:U:C5' | 2.42 | 0.98 |
| 5:M:510:U:H2' | 5:M:511:U:O4' | 1.64 | 0.98 |
| 1:I:255:A:C2' | 1:I:256:A:C5' | 2.40 | 0.98 |
| 2:J:92:A:C2 | 2:J:93:A:C6 | 2.52 | 0.98 |
| 3:K:110:A:O2' | 3:K:111:A:H5' | 0.81 | 0.98 |
| 3:K:173:A:O2' | 3:K:174:A:H5' | 1.64 | 0.98 |
| 3:K:65:A:N6 | 3:K:66:A:H62 | 1.58 | 0.98 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:673:U:C2' | 4:L:674:U:C5' | 2.41 | 0.98 |
| 5:M:349:U:C2' | 5:M:350:U:H5' | 1.89 | 0.98 |
| 5:M:381:U:H2' | 5:M:382:U:H6 | 1.28 | 0.98 |
| 5:M:429:U:H2' | 5:M:430:U:C6 | 1.98 | 0.98 |
| 1:I:211:A:O2' | 1:I:212:A:H5' | 1.62 | 0.98 |
| 4:L:683:U:H2' | 4:L:684:U:C6 | 1.99 | 0.98 |
| 4:L:743:U:HO2' | 4:L:744:U:H5' | 1.17 | 0.98 |
| 5:M:393:U:H2' | 5:M:394:U:H6 | 1.26 | 0.98 |
| 6:N:434:U:O2' | 6:N:435:U:H5' | 1.64 | 0.98 |
| 1:I:306:A:C2' | 1:I:307:A:H5' | 1.94 | 0.98 |
| 2:J:8:A:O2' | 2:J:9:A:H5' | 0.81 | 0.98 |
| 3:K:156:A:C2' | 3:K:157:A:O4' | 2.11 | 0.98 |
| 3:K:89:A:C2 | 3:K:90:A:C8 | 2.51 | 0.98 |
| 4:L:556:U:O2 | 4:L:557:U:C6 | 2.17 | 0.98 |
| 5:M:360:U:O2' | 5:M:361:U:H5' | 1.64 | 0.98 |
| 6:N:375:U:H2' | 6:N:376:U:H6 | 1.28 | 0.98 |
| 1:I:236:A:HO2' | 1:I:237:A:H5' | 1.18 | 0.97 |
| 1:I:25:A:HO2' | 1:I:26:A:H5' | 1.20 | 0.97 |
| 1:I:271:A:H2 | 1:I:272:A:C4 | 1.82 | 0.97 |
| 1:I:286:A:N6 | 1:I:287:A:N6 | 2.12 | 0.97 |
| 1:I:74:A:O2' | 1:I:75:A:C5' | 2.10 | 0.97 |
| 1:I:78:A:C2 | 1:I:79:A:N9 | 2.31 | 0.97 |
| 3:K:100:A:C4 | 3:K:101:A:C8 | 2.51 | 0.97 |
| 4:L:691:U:O2' | 4:L:692:U:C5' | 2.12 | 0.97 |
| 4:L:812:U:O2' | 4:L:813:U:C5' | 2.11 | 0.97 |
| 5:M:334:U:C2 | 5:M:335:U:C6 | 2.52 | 0.97 |
| 5:M:396:U:O2' | 5:M:397:U:C5' | 2.11 | 0.97 |
| 5:M:410:U:N3 | 5:M:411:U:C4 | 2.31 | 0.97 |
| 5:M:518:U:O2' | 5:M:519:U:H5' | 1.61 | 0.97 |
| 6:N:426:U:C2 | 6:N:427:U:C6 | 2.51 | 0.97 |
| 1:I:119:A:C2 | 1:I:120:A:C8 | 2.51 | 0.97 |
| 1:I:179:A:N6 | 1:I:180:A:H62 | 1.39 | 0.97 |
| 1:I:272:A:N6 | 1:I:273:A:H62 | 1.61 | 0.97 |
| 2:J:166:A:C2 | 2:J:167:A:C4 | 2.52 | 0.97 |
| 2:J:221:A:O2' | 2:J:222:A:C5' | 2.12 | 0.97 |
| 3:K:104:A:C2' | 3:K:105:A:C5' | 2.35 | 0.97 |
| 3:K:43:A:C6 | 3:K:44:A:N6 | 2.32 | 0.97 |
| 4:L:652:U:O2' | 4:L:653:U:C5' | 2.12 | 0.97 |
| 4:L:715:U:C2' | 4:L:716:U:H6 | 1.77 | 0.97 |
| 4:L:758:U:O2' | 4:L:759:U:H5' | 1.64 | 0.97 |
| 5:M:536:U:C2' | 5:M:537:U:H5' | 1.95 | 0.97 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:547:U:C2 | 5:M:548:U:C5 | 2.51 | 0.97 |
| 1:I:347:A:O2' | 1:I:348:A:C5' | 2.12 | 0.97 |
| 2:J:16:A:O2' | 2:J:17:A:H5' | 1.62 | 0.97 |
| 2:J:205:A:C2 | 2:J:206:A:C4 | 2.51 | 0.97 |
| 3:K:124:A:O2' | 3:K:125:A:P | 2.20 | 0.97 |
| 5:M:336:U:C2' | 5:M:337:U:O4' | 2.11 | 0.97 |
| 5:M:395:U:O2' | 5:M:396:U:C5' | 2.12 | 0.97 |
| 6:N:338:U:H2' | 6:N:339:U:H6 | 1.27 | 0.97 |
| 1:I:376:A:C4 | 1:I:377:A:N7 | 2.33 | 0.97 |
| 2:J:43:A:H2' | 2:J:44:A:C5' | 1.93 | 0.97 |
| 3:K:100:A:O2' | 3:K:101:A:C5' | 2.11 | 0.97 |
| 3:K:119:A:C2 | 3:K:120:A:N9 | 2.31 | 0.97 |
| 4:L:690:U:N3 | 4:L:691:U:C4 | 2.31 | 0.97 |
| 5:M:465:U:C2' | 5:M:466:U:C5' | 2.42 | 0.97 |
| 6:N:375:U:C2 | 6:N:376:U:C5 | 2.52 | 0.97 |
| 1:I:78:A:O2' | 1:I:79:A:C5' | 2.11 | 0.97 |
| 2:J:138:A:N6 | 2:J:139:A:N6 | 2.13 | 0.97 |
| 2:J:204:A:H2' | 2:J:205:A:C8 | 1.99 | 0.97 |
| 3:K:117:A:N3 | 3:K:118:A:C8 | 2.32 | 0.97 |
| 3:K:153:A:N3 | 3:K:154:A:C8 | 2.33 | 0.97 |
| 4:L:501:U:HO2' | 4:L:502:U:H5' | 1.18 | 0.97 |
| 4:L:751:U:H2' | 4:L:752:U:O4' | 1.64 | 0.97 |
| 4:L:758:U:C2 | 4:L:759:U:C5 | 2.52 | 0.97 |
| 5:M:350:U:H2' | 5:M:351:U:C5' | 1.89 | 0.97 |
| 1:I:359:A:N6 | 1:I:360:A:N6 | 2.13 | 0.97 |
| 3:K:120:A:C4 | 3:K:121:A:C8 | 2.52 | 0.97 |
| 4:L:448:U:N3 | 4:L:449:U:C4 | 2.32 | 0.97 |
| 4:L:601:U:O2' | 4:L:602:U:H5' | 1.65 | 0.97 |
| 4:L:647:U:C2' | 4:L:648:U:H5' | 1.94 | 0.97 |
| 4:L:718:U:H2' | 4:L:719:U:H6 | 1.30 | 0.97 |
| 4:L:810:U:H2' | 4:L:811:U:C6 | 1.99 | 0.97 |
| 5:M:445:U:O2' | 5:M:446:U:H5' | 1.64 | 0.97 |
| 6:N:417:U:O2' | 6:N:418:U:C5' | 2.12 | 0.97 |
| 1:I:261:A:H2' | 1:I:262:A:O4' | 1.63 | 0.97 |
| 2:J:202:A:C2 | 2:J:203:A:C8 | 2.52 | 0.97 |
| 4:L:549:U:C2' | 4:L:550:U:O4' | 2.13 | 0.97 |
| 4:L:582:U:O2 | 4:L:583:U:C6 | 2.18 | 0.97 |
| 4:L:629:U:O2' | 4:L:630:U:H5' | 1.63 | 0.97 |
| 5:M:396:U:C2' | 5:M:397:U:C5' | 2.42 | 0.97 |
| 2:J:144:A:C2 | 5:M:410:U:C2 | 2.53 | 0.97 |
| 5:M:460:U:C4 | 5:M:461:U:C4 | 2.52 | 0.97 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:274:U:O2' | 6:N:275:U:C5' | 2.13 | 0.97 |
| 6:N:485:U:C2' | 6:N:486:U:C5' | 2.43 | 0.97 |
| 1:I:142:A:HO2' | 1:I:143:A:H5' | 1.15 | 0.97 |
| 2:J:140:A:O2' | 2:J:141:A:H5' | 1.62 | 0.97 |
| 2:J:143:A:H2 | 2:J:144:A:C4 | 1.81 | 0.97 |
| 4:L:814:U:H2' | 4:L:815:U:C5' | 1.95 | 0.97 |
| 5:M:501:U:H2' | 5:M:502:U:H6 | 1.02 | 0.97 |
| 2:J:217:A:C6 | 2:J:218:A:N6 | 2.32 | 0.97 |
| 3:K:203:A:N3 | 3:K:204:A:C8 | 2.32 | 0.97 |
| 4:L:637:U:H2' | 4:L:638:U:H6 | 1.30 | 0.97 |
| 4:L:766:U:C4 | 4:L:767:U:C4 | 2.53 | 0.97 |
| 5:M:435:U:H2' | 5:M:436:U:C6 | 1.99 | 0.97 |
| 5:M:511:U:C2' | 5:M:512:U:H5' | 1.95 | 0.97 |
| 6:N:442:U:HO2' | 6:N:443:U:H5' | 1.19 | 0.97 |
| 1:I:73:A:C4 | 1:I:74:A:C8 | 2.53 | 0.97 |
| 1:I:96:A:C6 | 1:I:97:A:C6 | 2.53 | 0.97 |
| 2:J:11:A:HO2' | 2:J:12:A:H5' | 1.17 | 0.97 |
| 2:J:210:A:O2' | 2:J:211:A:H5' | 1.63 | 0.97 |
| 3:K:71:A:N3 | 3:K:72:A:C8 | 2.33 | 0.97 |
| 3:K:81:A:O2' | 3:K:82:A:C5' | 2.12 | 0.97 |
| 5:M:428:U:O2' | 5:M:429:U:H5' | 0.79 | 0.97 |
| 5:M:433:U:N3 | 5:M:434:U:C4 | 2.33 | 0.97 |
| 5:M:525:U:C2' | 5:M:526:U:H5' | 1.94 | 0.97 |
| 6:N:280:U:C2' | 6:N:281:U:H5' | 1.94 | 0.97 |
| 6:N:324:U:H2' | 6:N:325:U:C6 | 1.98 | 0.97 |
| 1:I:17:A:N3 | 1:I:18:A:C8 | 2.33 | 0.96 |
| 1:I:61:A:H2' | 1:I:62:A:H8 | 1.28 | 0.96 |
| 3:K:250:A:C2' | 3:K:251:A:H5' | 1.94 | 0.96 |
| 4:L:488:U:O2' | 4:L:489:U:C5' | 2.12 | 0.96 |
| 4:L:537:U:O2' | 4:L:538:U:C5' | 2.11 | 0.96 |
| 5:M:319:U:H2' | 5:M:320:U:C4' | 1.95 | 0.96 |
| 5:M:335:U:N3 | 5:M:336:U:C5 | 2.33 | 0.96 |
| 5:M:488:U:C2 | 5:M:489:U:C6 | 2.53 | 0.96 |
| 1:I:323:A:C2 | 1:I:324:A:N9 | 2.33 | 0.96 |
| 2:J:202:A:HO2' | 2:J:203:A:H5' | 1.16 | 0.96 |
| 2:J:93:A:O2' | 2:J:94:A:H5' | 1.64 | 0.96 |
| 3:K:146:A:C2 | 3:K:147:A:C5 | 2.52 | 0.96 |
| 5:M:387:U:H2' | 5:M:388:U:H6 | 1.30 | 0.96 |
| 1:I:103:A:HO2' | 1:I:104:A:H5' | 1.23 | 0.96 |
| 1:I:161:A:C2' | 1:I:162:A:H5' | 1.94 | 0.96 |
| 1:I:249:A:C2 | 1:I:250:A:N9 | 2.33 | 0.96 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:280:A:C2 | 1:I:281:A:C5 | 2.51 | 0.96 |
| 4:L:574:U:C4 | 4:L:575:U:O4 | 2.16 | 0.96 |
| 4:L:672:U:H2' | 4:L:673:U:H6 | 1.30 | 0.96 |
| 5:M:454:U:C2' | 5:M:455:U:O4' | 2.14 | 0.96 |
| 5:M:530:U:H2' | 5:M:531:U:C5' | 1.94 | 0.96 |
| 6:N:324:U:H2' | 6:N:325:U:H6 | 1.28 | 0.96 |
| 6:N:412:U:C2' | 6:N:413:U:C5' | 2.42 | 0.96 |
| 2:J:58:A:C2' | 2:J:59:A:H5' | 1.95 | 0.96 |
| 2:J:8:A:C2' | 2:J:9:A:C5' | 2.42 | 0.96 |
| 3:K:119:A:O2' | 3:K:120:A:H5' | 0.79 | 0.96 |
| 3:K:181:A:C2 | 3:K:182:A:C5 | 2.53 | 0.96 |
| 3:K:74:A:H3' | 3:K:75:A:P | 2.05 | 0.96 |
| 3:K:92:A:C2' | 3:K:93:A:H5' | 1.93 | 0.96 |
| 4:L:472:U:C2 | 4:L:473:U:C5 | 2.52 | 0.96 |
| 6:N:305:U:H2' | 6:N:306:U:H6 | 1.26 | 0.96 |
| 1:I:186:A:O2' | 1:I:187:A:H5' | 1.65 | 0.96 |
| 1:I:250:A:C6 | 1:I:251:A:N6 | 2.33 | 0.96 |
| 2:J:265:A:C2 | 2:J:266:A:C5 | 2.53 | 0.96 |
| 3:K:256:A:O2' | 3:K:257:A:C5' | 2.13 | 0.96 |
| 4:L:436:U:O2' | 4:L:437:U:H5' | 1.65 | 0.96 |
| 5:M:338:U:O2' | 5:M:339:U:C5' | 2.13 | 0.96 |
| 5:M:486:U:HO2' | 5:M:487:U:H5' | 1.21 | 0.96 |
| 3:K:118:A:O2' | 3:K:119:A:H5' | 0.78 | 0.96 |
| 4:L:755:U:O2' | 4:L:756:U:C5' | 2.12 | 0.96 |
| 5:M:395:U:C2' | 5:M:396:U:H5' | 1.96 | 0.96 |
| 6:N:379:U:HO2' | 6:N:380:U:H5' | 1.26 | 0.96 |
| 1:I:279:A:C2' | 1:I:280:A:C5' | 2.40 | 0.96 |
| 1:I:61:A:H2' | 1:I:62:A:C8 | 1.99 | 0.96 |
| 1:I:82:A:C4 | 1:I:83:A:C8 | 2.52 | 0.96 |
| 1:I:86:A:C6 | 1:I:87:A:C5 | 2.53 | 0.96 |
| 4:L:574:U:H2' | 4:L:575:U:H6 | 1.15 | 0.96 |
| 4:L:672:U:H2' | 4:L:673:U:C6 | 2.00 | 0.96 |
| 4:L:755:U:C2' | 4:L:756:U:C5' | 2.42 | 0.96 |
| 5:M:480:U:O2' | 5:M:481:U:P | 2.23 | 0.96 |
| 5:M:485:U:O2' | 5:M:486:U:C5' | 2.13 | 0.96 |
| 6:N:454:U:C2' | 6:N:455:U:C5' | 2.43 | 0.96 |
| 1:I:259:A:O2' | 1:I:260:A:H5' | 1.64 | 0.96 |
| 1:I:62:A:C2 | 1:I:63:A:C4 | 2.53 | 0.96 |
| 5:M:387:U:H2' | 5:M:388:U:C6 | 2.00 | 0.96 |
| 1:I:270:A:C2 | 1:I:271:A:C4 | 2.54 | 0.96 |
| 1:I:355:A:C3' | 1:I:356:A:P | 2.54 | 0.96 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:95:A:N6 | 1:I:96:A:N6 | 2.13 | 0.96 |
| 2:J:133:A:C2' | 2:J:134:A:H5' | 1.95 | 0.96 |
| 3:K:155:A:N6 | 3:K:156:A:N6 | 2.13 | 0.96 |
| 4:L:547:U:N3 | 4:L:548:U:C4 | 2.33 | 0.96 |
| 4:L:780:U:O2' | 4:L:781:U:C5' | 2.13 | 0.96 |
| 1:I:65:A:C2 | 1:I:66:A:N9 | 2.34 | 0.96 |
| 2:J:160:A:O2' | 2:J:161:A:C4' | 2.14 | 0.96 |
| 2:J:92:A:N1 | 2:J:93:A:C6 | 2.33 | 0.96 |
| 4:L:688:U:HO2' | 4:L:689:U:H5' | 1.21 | 0.96 |
| 4:L:751:U:O2' | 4:L:752:U:O4' | 1.84 | 0.96 |
| 4:L:777:U:C2' | 4:L:778:U:H5' | 1.90 | 0.96 |
| 5:M:392:U:H2' | 5:M:393:U:O4' | 1.64 | 0.96 |
| 6:N:450:U:O2' | 6:N:451:U:H5' | 1.59 | 0.96 |
| 1:I:296:A:C2' | 1:I:297:A:C5' | 2.44 | 0.95 |
| 2:J:184:A:O2' | 2:J:185:A:C5' | 2.14 | 0.95 |
| 3:K:167:A:C6 | 3:K:168:A:C5 | 2.54 | 0.95 |
| 3:K:226:A:H2' | 3:K:227:A:C8 | 2.01 | 0.95 |
| 4:L:717:U:C2 | 4:L:718:U:C5 | 2.54 | 0.95 |
| 4:L:759:U:O2' | 4:L:760:U:H5' | 0.79 | 0.95 |
| 5:M:510:U:O2' | 5:M:511:U:C5' | 2.13 | 0.95 |
| 6:N:420:U:O2' | 6:N:421:U:H5' | 0.78 | 0.95 |
| 1:I:103:A:O2' | 1:I:104:A:P | 2.23 | 0.95 |
| 1:I:95:A:N1 | 1:I:96:A:C6 | 2.33 | 0.95 |
| 4:L:750:U:H2' | 4:L:751:U:C6 | 2.01 | 0.95 |
| 6:N:411:U:O2' | 6:N:412:U:C5' | 2.13 | 0.95 |
| 1:I:119:A:O2' | 1:I:120:A:H5' | 0.78 | 0.95 |
| 1:I:266:A:C2 | 1:I:267:A:C4 | 2.54 | 0.95 |
| 1:I:58:A:H2' | 1:I:59:A:H8 | 1.25 | 0.95 |
| 2:J:153:A:C2' | 2:J:154:A:H5' | 1.95 | 0.95 |
| 2:J:47:A:HO2' | 2:J:48:A:H5' | 1.13 | 0.95 |
| 4:L:681:U:H2' | 4:L:682:U:H6 | 1.29 | 0.95 |
| 5:M:417:U:C4 | 5:M:418:U:O4 | 2.19 | 0.95 |
| 5:M:498:U:H2' | 5:M:499:U:C6 | 2.01 | 0.95 |
| 6:N:423:U:O2' | 6:N:424:U:C5' | 2.14 | 0.95 |
| 6:N:517:U:O3' | 6:N:518:U:P | 2.23 | 0.95 |
| 1:I:267:A:C4 | 1:I:268:A:N7 | 2.34 | 0.95 |
| 1:I:87:A:C2' | 1:I:88:A:C5' | 2.42 | 0.95 |
| 3:K:46:A:O3' | 3:K:47:A:H5' | 1.66 | 0.95 |
| 3:K:60:A:O2' | 3:K:61:A:H5' | 1.66 | 0.95 |
| 4:L:599:U:H2' | 4:L:600:U:H6 | 1.26 | 0.95 |
| 4:L:611:U:H2' | 4:L:612:U:H6 | 1.31 | 0.95 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:327:U:C2 | 5:M:328:U:C5 | 2.53 | 0.95 |
| 5:M:376:U:H2' | 5:M:377:U:O4' | 1.62 | 0.95 |
| 5:M:496:U:O2' | 5:M:497:U:C5' | 2.14 | 0.95 |
| 1:I:101:A:H2' | 1:I:102:A:C8 | 2.00 | 0.95 |
| 1:I:250:A:C4 | 1:I:251:A:N7 | 2.35 | 0.95 |
| 1:I:85:A:C2 | 1:I:86:A:C4 | 2.53 | 0.95 |
| 2:J:117:A:O2' | 2:J:118:A:O5' | 1.83 | 0.95 |
| 2:J:229:A:C2' | 2:J:230:A:O4' | 2.14 | 0.95 |
| 4:L:814:U:HO2' | 4:L:815:U:H5' | 1.27 | 0.95 |
| 5:M:354:U:C2 | 5:M:355:U:C5 | 2.54 | 0.95 |
| 5:M:451:U:C4 | 5:M:452:U:O4 | 2.19 | 0.95 |
| 6:N:327:U:C2' | 6:N:328:U:O4' | 2.12 | 0.95 |
| 1:I:250:A:C6 | 1:I:251:A:C6 | 2.53 | 0.95 |
| 2:J:64:A:H2' | 2:J:65:A:C8 | 2.01 | 0.95 |
| 3:K:64:A:C2' | 3:K:65:A:H5' | 1.96 | 0.95 |
| 5:M:508:U:O2' | 5:M:509:U:H5' | 1.66 | 0.95 |
| 1:I:136:A:O2' | 1:I:137:A:H5' | 0.78 | 0.95 |
| 1:I:174:A:HO2' | 1:I:175:A:H5' | 1.32 | 0.95 |
| 2:J:111:A:O2' | 2:J:112:A:H5' | 1.64 | 0.95 |
| 2:J:221:A:C2' | 2:J:222:A:H5' | 1.95 | 0.95 |
| 4:L:532:U:H2' | 4:L:533:U:C5' | 1.94 | 0.95 |
| 4:L:583:U:C2 | 4:L:584:U:C5 | 2.55 | 0.95 |
| 4:L:719:U:C2 | 4:L:720:U:C5 | 2.55 | 0.95 |
| 4:L:722:U:O2' | 4:L:723:U:P | 2.24 | 0.95 |
| 5:M:319:U:C3' | 5:M:320:U:C5' | 2.22 | 0.95 |
| 5:M:331:U:C2' | 5:M:332:U:H5' | 1.95 | 0.95 |
| 6:N:485:U:O2' | 6:N:486:U:H5' | 1.65 | 0.95 |
| 2:J:101:A:C6 | 2:J:102:A:N6 | 2.34 | 0.95 |
| 2:J:123:A:O2' | 2:J:124:A:H5' | 1.66 | 0.95 |
| 2:J:153:A:O2' | 2:J:154:A:C5' | 2.15 | 0.95 |
| 2:J:209:A:O2' | 2:J:210:A:H5' | 1.66 | 0.95 |
| 2:J:215:A:C2 | 2:J:216:A:C8 | 2.54 | 0.95 |
| 3:K:181:A:H2' | 3:K:182:A:H8 | 1.30 | 0.95 |
| 4:L:510:U:O2' | 4:L:511:U:C5' | 2.14 | 0.95 |
| 4:L:758:U:C4 | 4:L:759:U:C5 | 2.55 | 0.95 |
| 5:M:346:U:C2' | 5:M:347:U:H5' | 1.95 | 0.95 |
| 5:M:349:U:C2' | 5:M:350:U:C5' | 2.44 | 0.95 |
| 5:M:369:U:HO2' | 5:M:370:U:H5' | 1.32 | 0.95 |
| 6:N:386:U:H2' | 6:N:387:U:C6 | 2.00 | 0.95 |
| 1:I:33:A:C2' | 1:I:34:A:H5' | 1.97 | 0.95 |
| 1:I:47:A:C2 | 1:I:48:A:C5 | 2.54 | 0.95 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:153:A:HO2' | 2:J:154:A:H5' | 1.32 | 0.95 |
| 3:K:105:A:C2' | 3:K:106:A:H8 | 1.79 | 0.95 |
| 3:K:164:A:C5 | 3:K:165:A:N7 | 2.34 | 0.95 |
| 4:L:690:U:O4 | 4:L:691:U:O4 | 1.83 | 0.95 |
| 4:L:711:U:C2 | 4:L:712:U:C5 | 2.55 | 0.95 |
| 4:L:722:U:C2 | 4:L:723:U:H5 | 1.80 | 0.95 |
| 4:L:797:U:O2' | 4:L:798:U:H5' | 1.65 | 0.95 |
| 5:M:333:U:H2' | 5:M:334:U:C5' | 1.94 | 0.95 |
| 6:N:318:U:H2' | 6:N:319:U:C6 | 2.01 | 0.95 |
| 6:N:485:U:O2' | 6:N:486:U:C4' | 2.15 | 0.95 |
| 1:I:13:A:H2' | 1:I:14:A:C8 | 2.01 | 0.95 |
| 1:I:79:A:C4 | 1:I:80:A:C8 | 2.55 | 0.95 |
| 2:J:130:A:C2' | 2:J:131:A:C5' | 2.44 | 0.95 |
| 3:K:45:A:O2' | 3:K:46:A:H5' | 1.66 | 0.95 |
| 4:L:460:U:HO2' | 4:L:461:U:H5' | 1.19 | 0.95 |
| 1:I:119:A:HO2' | 1:I:120:A:H5' | 1.31 | 0.94 |
| 1:I:147:A:HO2' | 1:I:148:A:H5' | 1.23 | 0.94 |
| 1:I:225:A:H2' | 1:I:226:A:H8 | 1.31 | 0.94 |
| 1:I:88:A:HO2' | 1:I:89:A:H5' | 1.18 | 0.94 |
| 3:K:81:A:C2' | 3:K:82:A:H5' | 1.95 | 0.94 |
| 3:K:92:A:HO2' | 3:K:93:A:H5' | 1.31 | 0.94 |
| 4:L:668:U:H2' | 4:L:669:U:H6 | 1.18 | 0.94 |
| 4:L:754:U:C2' | 4:L:755:U:C5' | 2.42 | 0.94 |
| 1:I:134:A:N1 | 1:I:135:A:C5 | 2.35 | 0.94 |
| 1:I:65:A:HO2' | 1:I:66:A:H5' | 1.20 | 0.94 |
| 2:J:205:A:H2' | 2:J:206:A:O4' | 1.67 | 0.94 |
| 2:J:265:A:C2 | 2:J:266:A:C4 | 2.55 | 0.94 |
| 3:K:112:A:C6 | 3:K:113:A:N6 | 2.33 | 0.94 |
| 3:K:132:A:O2' | 3:K:133:A:C5' | 2.13 | 0.94 |
| 3:K:88:A:N3 | 3:K:89:A:C8 | 2.33 | 0.94 |
| 4:L:581:U:C2 | 4:L:582:U:C5 | 2.54 | 0.94 |
| 4:L:711:U:C2' | 4:L:712:U:O4' | 2.15 | 0.94 |
| 5:M:337:U:C2 | 5:M:338:U:C6 | 2.55 | 0.94 |
| 5:M:370:U:C2 | 5:M:371:U:C5 | 2.55 | 0.94 |
| 5:M:405:U:O2' | 5:M:406:U:C4' | 2.15 | 0.94 |
| 5:M:435:U:O2' | 5:M:436:U:P | 2.24 | 0.94 |
| 6:N:416:U:O2 | 6:N:417:U:C1' | 2.15 | 0.94 |
| 6:N:473:U:H2' | 6:N:474:U:C6 | 2.02 | 0.94 |
| 1:I:127:A:C2' | 1:I:128:A:H5' | 1.97 | 0.94 |
| 1:I:66:A:C4 | 1:I:67:A:C8 | 2.55 | 0.94 |
| 1:I:82:A:C6 | 1:I:83:A:C5 | 2.55 | 0.94 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:198:A:O2' | 2:J:199:A:H5' | 1.65 | 0.94 |
| 2:J:56:A:HO2' | 2:J:57:A:H5' | 1.26 | 0.94 |
| 3:K:46:A:C2' | 3:K:47:A:H5' | 1.97 | 0.94 |
| 4:L:547:U:C2 | 4:L:548:U:C5 | 2.55 | 0.94 |
| 4:L:574:U:N3 | 4:L:575:U:C4 | 2.35 | 0.94 |
| 4:L:811:U:H2' | 4:L:812:U:H6 | 1.25 | 0.94 |
| 5:M:392:U:H2' | 5:M:393:U:H6 | 1.30 | 0.94 |
| 5:M:433:U:C4 | 5:M:434:U:C4 | 2.54 | 0.94 |
| 1:I:278:A:C2' | 1:I:279:A:O4' | 2.14 | 0.94 |
| 1:I:325:A:N6 | 1:I:326:A:H62 | 1.63 | 0.94 |
| 1:I:96:A:C5 | 1:I:97:A:N7 | 2.34 | 0.94 |
| 1:I:96:A:C6 | 1:I:97:A:C5 | 2.55 | 0.94 |
| 2:J:92:A:N1 | 2:J:93:A:N6 | 2.15 | 0.94 |
| 3:K:181:A:N3 | 3:K:182:A:C8 | 2.34 | 0.94 |
| 4:L:593:U:C2 | 4:L:594:U:C5 | 2.55 | 0.94 |
| 5:M:323:U:O2' | 5:M:324:U:H5' | 1.22 | 0.94 |
| 6:N:317:U:H2' | 6:N:318:U:H6 | 1.28 | 0.94 |
| 6:N:406:U:O2' | 6:N:407:U:H5' | 1.66 | 0.94 |
| 1:I:102:A:C6 | 1:I:103:A:C6 | 2.55 | 0.94 |
| 1:I:178:A:O2' | 1:I:179:A:C5' | 2.15 | 0.94 |
| 2:J:225:A:O2' | 2:J:226:A:H5' | 1.68 | 0.94 |
| 2:J:92:A:C6 | 2:J:93:A:N6 | 2.35 | 0.94 |
| 3:K:167:A:C4 | 3:K:168:A:C8 | 2.55 | 0.94 |
| 4:L:549:U:C2' | 4:L:550:U:H5' | 1.82 | 0.94 |
| 5:M:483:U:HO2' | 5:M:484:U:H5' | 1.22 | 0.94 |
| 5:M:537:U:O2' | 5:M:538:U:H5' | 1.67 | 0.94 |
| 1:I:243:A:C5 | 1:I:244:A:N7 | 2.35 | 0.94 |
| 1:I:303:A:O2' | 1:I:304:A:H5' | 1.66 | 0.94 |
| 2:J:225:A:N3 | 2:J:226:A:C8 | 2.35 | 0.94 |
| 4:L:587:U:C2' | 4:L:588:U:H5' | 1.97 | 0.94 |
| 4:L:766:U:C4 | 4:L:767:U:O4 | 2.20 | 0.94 |
| 5:M:347:U:H2' | 5:M:348:U:C5' | 1.97 | 0.94 |
| 5:M:371:U:C2' | 5:M:372:U:C5' | 2.44 | 0.94 |
| 6:N:375:U:H2' | 6:N:376:U:C6 | 2.02 | 0.94 |
| 6:N:399:U:C2 | 6:N:400:U:C5 | 2.56 | 0.94 |
| 1:I:245:A:N3 | 1:I:246:A:C8 | 2.35 | 0.94 |
| 1:I:323:A:O2' | 1:I:324:A:H5' | 0.77 | 0.94 |
| 1:I:91:A:H2' | 1:I:92:A:C5' | 1.96 | 0.94 |
| 2:J:127:A:C2' | 2:J:128:A:C5' | 2.43 | 0.94 |
| 2:J:210:A:H2' | 2:J:211:A:O4' | 1.67 | 0.94 |
| 4:L:424:U:C4 | 4:L:425:U:O4 | 2.21 | 0.94 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:634:U:HO2' | 4:L:635:U:H5' | 1.19 | 0.94 |
| 4:L:767:U:H2' | 4:L:768:U:H6 | 1.22 | 0.94 |
| 5:M:454:U:C2 | 5:M:455:U:C6 | 2.55 | 0.94 |
| 5:M:457:U:C2' | 5:M:458:U:C5' | 2.45 | 0.94 |
| 5:M:530:U:H2' | 5:M:531:U:O4' | 1.68 | 0.94 |
| 6:N:362:U:HO2' | 6:N:363:U:H5' | 1.23 | 0.94 |
| 1:I:335:A:N6 | 1:I:336:A:H62 | 1.65 | 0.94 |
| 1:I:52:A:HO2' | 1:I:53:A:H5' | 1.25 | 0.94 |
| 1:I:54:A:C2 | 1:I:55:A:C5 | 2.55 | 0.94 |
| 1:I:78:A:N1 | 1:I:79:A:C5 | 2.35 | 0.94 |
| 2:J:230:A:C2' | 2:J:231:A:C5' | 2.46 | 0.94 |
| 4:L:579:U:O2' | 4:L:580:U:H5' | 1.67 | 0.94 |
| 4:L:595:U:O2' | 4:L:596:U:C5' | 2.16 | 0.94 |
| 6:N:332:U:H2' | 6:N:333:U:C6 | 2.02 | 0.94 |
| 2:J:204:A:N6 | 2:J:205:A:H62 | 1.62 | 0.94 |
| 2:J:229:A:H2' | 2:J:230:A:O4' | 1.67 | 0.94 |
| 3:K:105:A:C2' | 3:K:106:A:C8 | 2.51 | 0.94 |
| 3:K:115:A:H2' | 3:K:116:A:C8 | 2.03 | 0.94 |
| 4:L:487:U:HO2' | 4:L:488:U:H5' | 1.17 | 0.94 |
| 4:L:637:U:H2' | 4:L:638:U:C6 | 2.03 | 0.94 |
| 5:M:469:U:H2' | 5:M:470:U:C6 | 2.03 | 0.94 |
| 6:N:488:U:O2' | 6:N:489:U:H5' | 1.68 | 0.94 |
| 1:I:100:A:O2' | 1:I:101:A:H5' | 1.68 | 0.94 |
| 1:I:143:A:H2' | 1:I:144:A:H8 | 1.32 | 0.94 |
| 1:I:207:A:HO2' | 1:I:208:A:H5' | 1.23 | 0.94 |
| 3:K:252:A:C3' | 3:K:253:A:P | 2.54 | 0.94 |
| 4:L:597:U:HO2' | 4:L:598:U:H5' | 1.00 | 0.94 |
| 5:M:417:U:C2 | 5:M:418:U:C5 | 2.56 | 0.94 |
| 5:M:451:U:C2 | 5:M:452:U:C5 | 2.55 | 0.94 |
| 5:M:453:U:O2' | 5:M:454:U:O4' | 1.86 | 0.94 |
| 5:M:510:U:O2' | 5:M:511:U:O4' | 1.85 | 0.94 |
| 5:M:511:U:O2' | 5:M:512:U:H5' | 1.66 | 0.94 |
| 6:N:497:U:H2' | 6:N:498:U:C5' | 1.98 | 0.94 |
| 1:I:285:A:C2' | 1:I:286:A:H5' | 1.98 | 0.94 |
| 1:I:295:A:O2' | 1:I:296:A:C5' | 2.16 | 0.94 |
| 1:I:335:A:C6 | 1:I:336:A:N6 | 2.36 | 0.94 |
| 4:L:638:U:C2 | 4:L:639:U:C6 | 2.55 | 0.94 |
| 4:L:720:U:C4 | 4:L:721:U:O4 | 2.21 | 0.94 |
| 5:M:409:U:C2 | 5:M:410:U:C6 | 2.55 | 0.94 |
| 6:N:426:U:O2' | 6:N:427:U:C4' | 2.16 | 0.94 |
| 6:N:427:U:HO2' | 6:N:428:U:H5' | 1.30 | 0.94 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:260:A:C2' | 1:I:261:A:H5' | 1.94 | 0.93 |
| 1:I:261:A:H2' | 1:I:262:A:C8 | 2.02 | 0.93 |
| 2:J:142:A:C6 | 2:J:143:A:N6 | 2.36 | 0.93 |
| 2:J:29:A:HO2' | 2:J:30:A:H5' | 1.14 | 0.93 |
| 2:J:88:A:C2 | 2:J:89:A:C8 | 2.56 | 0.93 |
| 4:L:557:U:O2' | 4:L:558:U:C5' | 2.12 | 0.93 |
| 1:I:123:A:O2' | 1:I:124:A:H5' | 1.68 | 0.93 |
| 1:I:232:A:H2' | 1:I:233:A:O4' | 1.68 | 0.93 |
| 1:I:238:A:C6 | 1:I:239:A:N6 | 2.36 | 0.93 |
| 1:I:287:A:O2' | 1:I:288:A:C4' | 2.16 | 0.93 |
| 1:I:68:A:H2' | 1:I:69:A:C5' | 1.99 | 0.93 |
| 2:J:142:A:H2' | 2:J:143:A:H8 | 1.33 | 0.93 |
| 3:K:124:A:N3 | 3:K:125:A:C8 | 2.36 | 0.93 |
| 3:K:154:A:C2' | 3:K:155:A:O4' | 2.16 | 0.93 |
| 3:K:168:A:HO2' | 3:K:169:A:H5' | 1.33 | 0.93 |
| 3:K:45:A:O3' | 3:K:46:A:C5' | 2.16 | 0.93 |
| 4:L:637:U:C2 | 4:L:638:U:C5 | 2.56 | 0.93 |
| 4:L:729:U:C4 | 4:L:730:U:O4 | 2.21 | 0.93 |
| 5:M:324:U:H2' | 5:M:325:U:C6 | 2.03 | 0.93 |
| 5:M:350:U:O2' | 5:M:351:U:H5' | 0.76 | 0.93 |
| 5:M:368:U:HO2' | 5:M:369:U:H5' | 1.33 | 0.93 |
| 6:N:474:U:C2' | 6:N:475:U:H5' | 1.99 | 0.93 |
| 6:N:481:U:C2' | 6:N:482:U:C5' | 2.44 | 0.93 |
| 6:N:484:U:O2' | 6:N:485:U:C5' | 2.15 | 0.93 |
| 1:I:85:A:C2 | 1:I:86:A:N9 | 2.36 | 0.93 |
| 2:J:223:A:O2' | 2:J:224:A:H5' | 1.67 | 0.93 |
| 2:J:98:A:H2' | 2:J:99:A:H8 | 1.32 | 0.93 |
| 3:K:104:A:C2 | 3:K:105:A:C4 | 2.55 | 0.93 |
| 4:L:807:U:O2' | 4:L:808:U:H5' | 0.76 | 0.93 |
| 4:L:810:U:C2' | 4:L:811:U:C5' | 2.46 | 0.93 |
| 6:N:459:U:H2' | 6:N:460:U:H6 | 1.30 | 0.93 |
| 6:N:483:U:N3 | 6:N:484:U:C4 | 2.37 | 0.93 |
| 1:I:138:A:H2' | 1:I:139:A:C5' | 1.99 | 0.93 |
| 1:I:263:A:O2' | 1:I:264:A:H5' | 1.66 | 0.93 |
| 1:I:376:A:C2 | 1:I:377:A:C5 | 2.57 | 0.93 |
| 2:J:26:A:HO2' | 2:J:27:A:H5' | 1.24 | 0.93 |
| 3:K:99:A:HO2' | 3:K:100:A:H5' | 1.12 | 0.93 |
| 3:K:207:A:O2' | 3:K:208:A:H5' | 1.68 | 0.93 |
| 4:L:689:U:O2' | 4:L:690:U:H5' | 1.67 | 0.93 |
| 4:L:806:U:O2' | 4:L:807:U:H5' | 1.69 | 0.93 |
| 5:M:386:U:O2 | 5:M:387:U:C6 | 2.20 | 0.93 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:468:U:O2' | 5:M:469:U:P | 2.26 | 0.93 |
| 6:N:430:U:C2' | 6:N:431:U:H5' | 1.92 | 0.93 |
| 1:I:239:A:HO2' | 1:I:240:A:H5' | 1.18 | 0.93 |
| 1:I:243:A:N6 | 1:I:244:A:H62 | 1.57 | 0.93 |
| 1:I:63:A:N6 | 1:I:64:A:H62 | 1.67 | 0.93 |
| 2:J:120:A:O2' | 2:J:121:A:C5' | 2.16 | 0.93 |
| 2:J:204:A:C4 | 2:J:205:A:C8 | 2.57 | 0.93 |
| 4:L:815:U:C2' | 4:L:816:U:C5' | 2.45 | 0.93 |
| 1:I:128:A:C5 | 1:I:129:A:N7 | 2.37 | 0.93 |
| 1:I:132:A:H2' | 1:I:133:A:O4' | 1.68 | 0.93 |
| 1:I:229:A:O2' | 1:I:230:A:C5' | 2.16 | 0.93 |
| 1:I:54:A:C2 | 1:I:55:A:N7 | 2.36 | 0.93 |
| 1:I:69:A:HO2' | 1:I:70:A:H5' | 1.26 | 0.93 |
| 1:I:85:A:N3 | 1:I:86:A:C8 | 2.37 | 0.93 |
| 3:K:256:A:HO2' | 3:K:257:A:H5' | 1.30 | 0.93 |
| 4:L:596:U:H2' | 4:L:597:U:H6 | 1.34 | 0.93 |
| 4:L:677:U:HO2' | 4:L:678:U:H5' | 1.14 | 0.93 |
| 4:L:702:U:O2' | 4:L:703:U:C5' | 2.17 | 0.93 |
| 4:L:729:U:N3 | 4:L:730:U:C4 | 2.37 | 0.93 |
| 4:L:810:U:C2' | 4:L:811:U:O4' | 2.17 | 0.93 |
| 5:M:318:U:HO2' | 5:M:319:U:H5' | 1.16 | 0.93 |
| 6:N:333:U:H2' | 6:N:334:U:O4' | 1.69 | 0.93 |
| 1:I:12:A:C2' | 1:I:13:A:H5' | 1.97 | 0.93 |
| 1:I:82:A:C2' | 1:I:83:A:O4' | 2.15 | 0.93 |
| 2:J:88:A:C2' | 2:J:89:A:H5' | 1.98 | 0.93 |
| 4:L:466:U:HO2' | 4:L:467:U:H5' | 1.19 | 0.93 |
| 4:L:722:U:O2 | 4:L:723:U:C6 | 2.22 | 0.93 |
| 4:L:769:U:HO2' | 4:L:770:U:H5' | 1.22 | 0.93 |
| 5:M:425:U:HO2' | 5:M:426:U:H5' | 1.20 | 0.93 |
| 6:N:274:U:HO2' | 6:N:275:U:H5' | 1.14 | 0.93 |
| 6:N:424:U:C2' | 6:N:425:U:H6 | 1.81 | 0.93 |
| 1:I:156:A:H2' | 1:I:157:A:H8 | 1.30 | 0.93 |
| 1:I:194:A:N6 | 1:I:195:A:H62 | 1.65 | 0.93 |
| 1:I:231:A:C5 | 1:I:232:A:N7 | 2.37 | 0.93 |
| 1:I:46:A:N3 | 1:I:47:A:C8 | 2.36 | 0.93 |
| 2:J:131:A:N6 | 2:J:132:A:N6 | 2.16 | 0.93 |
| 2:J:182:A:N6 | 2:J:183:A:H62 | 1.67 | 0.93 |
| 3:K:142:A:H2' | 3:K:143:A:C8 | 2.03 | 0.93 |
| 4:L:704:U:C2' | 4:L:705:U:H5' | 1.99 | 0.93 |
| 5:M:538:U:N3 | 5:M:539:U:C5 | 2.37 | 0.93 |
| 6:N:429:U:C2 | 6:N:430:U:C5 | 2.57 | 0.93 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:164:A:H2' | 1:I:165:A:H8 | 1.31 | 0.93 |
| 1:I:232:A:H2' | 1:I:233:A:C5' | 1.97 | 0.93 |
| 1:I:240:A:C2 | 1:I:241:A:C8 | 2.57 | 0.93 |
| 1:I:67:A:C4 | 1:I:68:A:C8 | 2.57 | 0.93 |
| 2:J:173:A:H2' | 2:J:174:A:H8 | 1.18 | 0.93 |
| 2:J:214:A:C2' | 2:J:215:A:H5' | 1.99 | 0.93 |
| 3:K:152:A:N6 | 3:K:153:A:H62 | 1.42 | 0.93 |
| 4:L:563:U:C2 | 4:L:564:U:C5 | 2.57 | 0.93 |
| 4:L:604:U:C2' | 4:L:605:U:H5' | 1.98 | 0.93 |
| 4:L:673:U:HO2' | 4:L:674:U:H5' | 1.25 | 0.93 |
| 4:L:765:U:O2' | 4:L:766:U:C5' | 2.14 | 0.93 |
| 5:M:346:U:C2' | 5:M:347:U:C5' | 2.47 | 0.93 |
| 5:M:466:U:H2' | 5:M:467:U:O4' | 1.69 | 0.93 |
| 6:N:379:U:O2' | 6:N:380:U:C5' | 2.17 | 0.93 |
| 2:J:100:A:HO2' | 2:J:101:A:H5' | 1.15 | 0.93 |
| 2:J:210:A:C2' | 2:J:211:A:C5' | 2.46 | 0.93 |
| 3:K:160:A:O2' | 3:K:161:A:H5' | 1.69 | 0.93 |
| 4:L:459:U:C2' | 4:L:460:U:C5' | 2.46 | 0.93 |
| 4:L:460:U:O2' | 4:L:461:U:C5' | 2.15 | 0.93 |
| 4:L:498:U:O2' | 4:L:499:U:C5' | 2.17 | 0.93 |
| 4:L:691:U:HO2' | 4:L:692:U:H5' | 1.27 | 0.93 |
| 5:M:452:U:HO2' | 5:M:453:U:H5' | 1.15 | 0.93 |
| 5:M:525:U:HO2' | 5:M:526:U:H5' | 1.22 | 0.93 |
| 6:N:328:U:H2' | 6:N:329:U:H6 | 1.30 | 0.93 |
| 6:N:400:U:HO2' | 6:N:401:U:H5' | 1.11 | 0.93 |
| 2:J:72:A:C2' | 2:J:73:A:H5' | 1.99 | 0.92 |
| 2:J:83:A:C4 | 2:J:84:A:C8 | 2.56 | 0.92 |
| 3:K:253:A:HO2' | 3:K:254:A:H5' | 1.32 | 0.92 |
| 3:K:46:A:O2' | 3:K:47:A:C5' | 2.16 | 0.92 |
| 4:L:690:U:C4 | 4:L:691:U:C4 | 2.57 | 0.92 |
| 5:M:405:U:C2' | 5:M:406:U:O4' | 2.15 | 0.92 |
| 6:N:349:U:H2' | 6:N:350:U:C6 | 2.03 | 0.92 |
| 6:N:374:U:O2' | 6:N:375:U:C5' | 2.16 | 0.92 |
| 6:N:425:U:N3 | 6:N:426:U:C4 | 2.36 | 0.92 |
| 6:N:497:U:C3' | 6:N:498:U:H5' | 1.76 | 0.92 |
| 1:I:226:A:O2' | 1:I:227:A:H5' | 1.69 | 0.92 |
| 1:I:260:A:HO2' | 1:I:261:A:H5' | 1.26 | 0.92 |
| 1:I:271:A:C2 | 1:I:272:A:N7 | 2.36 | 0.92 |
| 2:J:23:A:O2' | 2:J:24:A:H5' | 1.69 | 0.92 |
| 2:J:47:A:H2' | 2:J:48:A:O5' | 1.68 | 0.92 |
| 3:K:133:A:O2' | 3:K:134:A:H5' | 1.68 | 0.92 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:566:U:C2' | 4:L:567:U:H5' | 1.98 | 0.92 |
| 4:L:751:U:O2' | 4:L:752:U:C4' | 2.16 | 0.92 |
| 4:L:779:U:H2' | 4:L:780:U:C5' | 1.97 | 0.92 |
| 5:M:408:U:O2' | 5:M:409:U:H5' | 0.74 | 0.92 |
| 5:M:468:U:C2 | 5:M:469:U:C5 | 2.58 | 0.92 |
| 6:N:455:U:C3' | 6:N:456:U:P | 2.57 | 0.92 |
| 6:N:492:U:HO2' | 6:N:493:U:H5' | 1.26 | 0.92 |
| 1:I:116:A:O2' | 1:I:117:A:C5' | 2.18 | 0.92 |
| 1:I:26:A:C2' | 1:I:27:A:H5' | 1.98 | 0.92 |
| 2:J:249:A:O2' | 2:J:250:A:C5' | 2.17 | 0.92 |
| 2:J:28:A:C5 | 2:J:29:A:N7 | 2.36 | 0.92 |
| 3:K:155:A:C6 | 3:K:156:A:C5 | 2.58 | 0.92 |
| 3:K:212:A:H2' | 3:K:213:A:C8 | 2.04 | 0.92 |
| 4:L:488:U:C2' | 4:L:489:U:C5' | 2.47 | 0.92 |
| 5:M:420:U:O2' | 5:M:421:U:C5' | 2.16 | 0.92 |
| 5:M:437:U:C2' | 5:M:438:U:H5' | 1.99 | 0.92 |
| 1:I:21:A:H2' | 1:I:22:A:H8 | 1.33 | 0.92 |
| 1:I:262:A:HO2' | 1:I:263:A:H5' | 1.34 | 0.92 |
| 2:J:13:A:N3 | 2:J:14:A:C8 | 2.38 | 0.92 |
| 2:J:217:A:N6 | 2:J:218:A:N6 | 2.18 | 0.92 |
| 3:K:119:A:HO2' | 3:K:120:A:H5' | 1.19 | 0.92 |
| 4:L:500:U:H2' | 4:L:501:U:C5' | 1.99 | 0.92 |
| 4:L:647:U:O2' | 4:L:648:U:C5' | 2.15 | 0.92 |
| 4:L:770:U:N3 | 4:L:771:U:C5 | 2.36 | 0.92 |
| 4:L:775:U:C2' | 4:L:776:U:C5' | 2.45 | 0.92 |
| 5:M:380:U:H2' | 5:M:381:U:C6 | 2.04 | 0.92 |
| 5:M:392:U:C2' | 5:M:393:U:O4' | 2.16 | 0.92 |
| 6:N:338:U:C4 | 6:N:339:U:O4 | 2.22 | 0.92 |
| 2:J:144:A:C2 | 2:J:145:A:C4 | 2.58 | 0.92 |
| 2:J:161:A:HO2' | 2:J:162:A:H5' | 1.14 | 0.92 |
| 2:J:214:A:HO2' | 2:J:215:A:H5' | 1.12 | 0.92 |
| 4:L:547:U:C4 | 4:L:548:U:C4 | 2.57 | 0.92 |
| 4:L:711:U:H2' | 4:L:712:U:H6 | 1.23 | 0.92 |
| 4:L:757:U:N3 | 4:L:758:U:C5 | 2.36 | 0.92 |
| 4:L:764:U:C4 | 4:L:765:U:C4 | 2.57 | 0.92 |
| 5:M:392:U:O2' | 5:M:393:U:C4' | 2.18 | 0.92 |
| 1:I:257:A:C2' | 1:I:258:A:C5' | 2.47 | 0.92 |
| 1:I:269:A:H2' | 1:I:270:A:O4' | 1.69 | 0.92 |
| 2:J:223:A:C6 | 2:J:224:A:N7 | 2.37 | 0.92 |
| 2:J:254:A:C2' | 2:J:255:A:H5' | 1.97 | 0.92 |
| 2:J:83:A:N1 | 2:J:84:A:C5 | 2.36 | 0.92 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:106:A:H2' | 3:K:107:A:H8 | 1.28 | 0.92 |
| 3:K:146:A:O2' | 3:K:147:A:P | 2.27 | 0.92 |
| 4:L:557:U:H2' | 4:L:558:U:C5' | 1.99 | 0.92 |
| 4:L:603:U:HO2' | 4:L:604:U:H5' | 1.30 | 0.92 |
| 4:L:722:U:N3 | 4:L:723:U:C4 | 2.35 | 0.92 |
| 4:L:781:U:C2 | 4:L:782:U:C5 | 2.58 | 0.92 |
| 5:M:488:U:H2' | 5:M:489:U:C6 | 2.03 | 0.92 |
| 6:N:277:U:HO2' | 6:N:278:U:H5' | 1.25 | 0.92 |
| 1:I:163:A:HO2' | 1:I:164:A:H5' | 1.13 | 0.92 |
| 1:I:245:A:C2 | 1:I:246:A:C5 | 2.57 | 0.92 |
| 1:I:55:A:HO2' | 1:I:56:A:H5' | 1.28 | 0.92 |
| 1:I:74:A:C6 | 1:I:75:A:C5 | 2.58 | 0.92 |
| 4:L:420:U:H2' | 4:L:421:U:C6 | 2.05 | 0.92 |
| 4:L:491:U:O2 | 4:L:492:U:C6 | 2.22 | 0.92 |
| 4:L:758:U:H2' | 4:L:759:U:O4' | 1.68 | 0.92 |
| 5:M:306:U:O2' | 5:M:307:U:H5' | 1.70 | 0.92 |
| 5:M:539:U:HO2' | 5:M:540:U:H5' | 1.12 | 0.92 |
| 6:N:423:U:HO2' | 6:N:424:U:H5' | 1.23 | 0.92 |
| 1:I:229:A:C2' | 1:I:230:A:H5' | 1.99 | 0.92 |
| 1:I:255:A:HO2' | 1:I:256:A:H5' | 1.22 | 0.92 |
| 1:I:358:A:C2 | 1:I:359:A:C8 | 2.57 | 0.92 |
| 1:I:95:A:N3 | 1:I:96:A:C8 | 2.36 | 0.92 |
| 2:J:202:A:C2' | 2:J:203:A:H5' | 2.00 | 0.92 |
| 2:J:211:A:O2' | 2:J:212:A:C5' | 2.17 | 0.92 |
| 2:J:51:A:H2' | 2:J:52:A:H8 | 1.33 | 0.92 |
| 2:J:61:A:N3 | 2:J:62:A:C8 | 2.38 | 0.92 |
| 2:J:84:A:C2' | 2:J:85:A:C5' | 2.47 | 0.92 |
| 3:K:204:A:N6 | 3:K:205:A:N6 | 2.18 | 0.92 |
| 3:K:49:A:N3 | 3:K:50:A:C8 | 2.37 | 0.92 |
| 5:M:379:U:H2' | 5:M:380:U:H6 | 1.15 | 0.92 |
| 5:M:391:U:O2' | 5:M:392:U:C5' | 2.18 | 0.92 |
| 6:N:318:U:C4 | 6:N:319:U:O4 | 2.21 | 0.92 |
| 6:N:405:U:O2' | 6:N:406:U:C5' | 2.17 | 0.92 |
| 1:I:188:A:O2' | 1:I:189:A:H5' | 1.70 | 0.92 |
| 1:I:388:A:H2' | 1:I:389:A:C8 | 2.05 | 0.92 |
| 1:I:67:A:C6 | 1:I:68:A:C6 | 2.58 | 0.92 |
| 1:I:85:A:C2 | 1:I:86:A:C8 | 2.57 | 0.92 |
| 3:K:156:A:C3' | 3:K:157:A:H5' | 1.81 | 0.92 |
| 4:L:649:U:C2 | 4:L:650:U:C6 | 2.57 | 0.92 |
| 4:L:764:U:C4 | 4:L:765:U:C5 | 2.57 | 0.92 |
| 5:M:382:U:HO2' | 5:M:383:U:H5' | 1.28 | 0.92 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:416:U:O2 | 5:M:417:U:N1 | 2.03 | 0.92 |
| 5:M:453:U:H2' | 5:M:454:U:H6 | 1.25 | 0.92 |
| 5:M:454:U:C4 | 5:M:455:U:C5 | 2.57 | 0.92 |
| 5:M:537:U:C2' | 5:M:538:U:H5' | 1.99 | 0.92 |
| 6:N:327:U:C2' | 6:N:328:U:H5' | 2.00 | 0.92 |
| 1:I:265:A:N6 | 1:I:266:A:N6 | 2.18 | 0.92 |
| 1:I:340:A:C2 | 1:I:341:A:C5 | 2.57 | 0.92 |
| 2:J:42:A:H2' | 2:J:43:A:C8 | 2.04 | 0.92 |
| 3:K:102:A:C2 | 3:K:103:A:C8 | 2.59 | 0.92 |
| 3:K:125:A:C2' | 3:K:126:A:H5' | 1.99 | 0.92 |
| 4:L:474:U:O2' | 4:L:475:U:H5' | 1.70 | 0.92 |
| 4:L:497:U:O2' | 4:L:498:U:C5' | 2.06 | 0.92 |
| 4:L:529:U:C2' | 4:L:530:U:H5' | 1.99 | 0.92 |
| 4:L:661:U:HO2' | 4:L:662:U:H5' | 1.12 | 0.92 |
| 4:L:674:U:H2' | 4:L:675:U:C5' | 1.96 | 0.92 |
| 5:M:296:U:C2' | 5:M:297:U:C5' | 2.47 | 0.92 |
| 5:M:328:U:C2 | 5:M:329:U:C5 | 2.58 | 0.92 |
| 1:I:236:A:C2 | 1:I:237:A:C8 | 2.58 | 0.91 |
| 1:I:376:A:C6 | 1:I:377:A:C6 | 2.57 | 0.91 |
| 1:I:8:A:N6 | 1:I:9:A:N6 | 2.18 | 0.91 |
| 2:J:122:A:N6 | 2:J:123:A:H62 | 1.64 | 0.91 |
| 2:J:130:A:O2' | 2:J:131:A:C5' | 2.18 | 0.91 |
| 2:J:142:A:H2' | 2:J:143:A:C8 | 2.04 | 0.91 |
| 2:J:144:A:C2 | 2:J:145:A:N9 | 2.38 | 0.91 |
| 2:J:159:A:H2' | 2:J:160:A:C8 | 2.05 | 0.91 |
| 2:J:206:A:H2' | 2:J:207:A:C5' | 1.99 | 0.91 |
| 2:J:88:A:HO2' | 2:J:89:A:H5' | 1.12 | 0.91 |
| 4:L:769:U:C2' | 4:L:770:U:C5' | 2.45 | 0.91 |
| 4:L:813:U:C2 | 4:L:814:U:C5 | 2.57 | 0.91 |
| 5:M:412:U:O2' | 5:M:413:U:H5' | 1.70 | 0.91 |
| 5:M:495:U:O2' | 5:M:496:U:H5' | 1.70 | 0.91 |
| 1:I:113:A:H2' | 1:I:114:A:H8 | 1.34 | 0.91 |
| 1:I:128:A:N6 | 1:I:129:A:N6 | 2.18 | 0.91 |
| 1:I:129:A:C2 | 1:I:130:A:C8 | 2.58 | 0.91 |
| 1:I:134:A:N1 | 1:I:135:A:N6 | 2.19 | 0.91 |
| 1:I:292:A:O2' | 1:I:293:A:H5' | 1.71 | 0.91 |
| 1:I:372:A:C2' | 1:I:373:A:H5' | 2.00 | 0.91 |
| 1:I:374:A:O2' | 1:I:375:A:H5' | 1.70 | 0.91 |
| 2:J:132:A:C2' | 2:J:133:A:C5' | 2.47 | 0.91 |
| 2:J:184:A:C2 | 2:J:185:A:C8 | 2.59 | 0.91 |
| 2:J:88:A:C2 | 2:J:89:A:N9 | 2.38 | 0.91 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:498:U:HO2' | 4:L:499:U:H5' | 1.19 | 0.91 |
| 6:N:331:U:H2' | 6:N:332:U:C6 | 2.04 | 0.91 |
| 6:N:376:U:C2 | 6:N:377:U:C5 | 2.57 | 0.91 |
| 6:N:430:U:C2' | 6:N:431:U:C5' | 2.45 | 0.91 |
| 6:N:484:U:O2' | 6:N:485:U:C4' | 2.17 | 0.91 |
| 6:N:526:U:O2' | 6:N:527:U:H5' | 1.70 | 0.91 |
| 1:I:180:A:N3 | 1:I:181:A:C8 | 2.38 | 0.91 |
| 1:I:270:A:C2' | 1:I:271:A:O4' | 2.17 | 0.91 |
| 1:I:337:A:C2' | 1:I:338:A:C5' | 2.45 | 0.91 |
| 1:I:67:A:C4 | 1:I:68:A:N7 | 2.39 | 0.91 |
| 2:J:83:A:H2' | 2:J:84:A:C8 | 2.03 | 0.91 |
| 3:K:113:A:O2' | 3:K:114:A:H5' | 1.69 | 0.91 |
| 4:L:763:U:O2' | 4:L:764:U:H5' | 1.70 | 0.91 |
| 5:M:420:U:C2' | 5:M:421:U:C5' | 2.47 | 0.91 |
| 6:N:492:U:O2' | 6:N:493:U:C5' | 2.17 | 0.91 |
| 1:I:207:A:C2' | 1:I:208:A:H5' | 2.00 | 0.91 |
| 1:I:348:A:C2' | 1:I:349:A:H5' | 2.00 | 0.91 |
| 1:I:91:A:HO2' | 1:I:92:A:H5' | 1.31 | 0.91 |
| 2:J:192:A:HO2' | 2:J:193:A:H5' | 1.32 | 0.91 |
| 4:L:694:U:C2 | 4:L:695:U:C6 | 2.58 | 0.91 |
| 4:L:705:U:O2' | 4:L:706:U:H5' | 0.74 | 0.91 |
| 5:M:319:U:HO2' | 5:M:320:U:H5' | 1.33 | 0.91 |
| 5:M:337:U:HO2' | 5:M:338:U:H5' | 1.30 | 0.91 |
| 1:I:343:A:O2' | 1:I:344:A:H5' | 1.69 | 0.91 |
| 4:L:553:U:O2 | 4:L:554:U:C1' | 2.18 | 0.91 |
| 4:L:586:U:H2' | 4:L:587:U:C6 | 2.05 | 0.91 |
| 4:L:642:U:C2' | 4:L:643:U:H5' | 1.99 | 0.91 |
| 4:L:733:U:HO2' | 4:L:734:U:H5' | 1.35 | 0.91 |
| 4:L:738:U:C2 | 4:L:739:U:C5 | 2.58 | 0.91 |
| 4:L:777:U:C2' | 4:L:778:U:C5' | 2.49 | 0.91 |
| 5:M:331:U:HO2' | 5:M:332:U:H5' | 1.15 | 0.91 |
| 5:M:410:U:C4 | 5:M:411:U:C4 | 2.59 | 0.91 |
| 5:M:460:U:C2 | 5:M:461:U:C6 | 2.57 | 0.91 |
| 1:I:163:A:C2 | 1:I:164:A:C4 | 2.59 | 0.91 |
| 1:I:342:A:C2' | 1:I:343:A:C5' | 2.48 | 0.91 |
| 1:I:43:A:C2 | 1:I:44:A:C8 | 2.58 | 0.91 |
| 1:I:68:A:C4 | 1:I:69:A:C8 | 2.58 | 0.91 |
| 2:J:136:A:H2 | 2:J:137:A:C4 | 1.65 | 0.91 |
| 2:J:231:A:N6 | 2:J:232:A:H62 | 1.65 | 0.91 |
| 2:J:89:A:N3 | 2:J:90:A:N7 | 2.17 | 0.91 |
| 4:L:515:U:H2' | 4:L:516:U:H6 | 1.35 | 0.91 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:586:U:C2 | 4:L:587:U:C5 | 2.58 | 0.91 |
| 4:L:766:U:H2' | 4:L:767:U:H6 | 1.28 | 0.91 |
| 5:M:453:U:C2 | 5:M:454:U:C6 | 2.59 | 0.91 |
| 5:M:464:U:HO2' | 5:M:465:U:H5' | 1.30 | 0.91 |
| 6:N:364:U:O2' | 6:N:365:U:C5' | 2.19 | 0.91 |
| 6:N:424:U:C2 | 6:N:425:U:C5 | 2.59 | 0.91 |
| 6:N:483:U:N3 | 6:N:484:U:O4 | 2.03 | 0.91 |
| 1:I:107:A:C4 | 1:I:108:A:N7 | 2.39 | 0.91 |
| 1:I:16:A:N6 | 1:I:17:A:N6 | 2.17 | 0.91 |
| 1:I:178:A:HO2' | 1:I:179:A:H5' | 1.29 | 0.91 |
| 1:I:327:A:O2' | 1:I:328:A:H5' | 1.70 | 0.91 |
| 2:J:166:A:N3 | 2:J:167:A:C8 | 2.39 | 0.91 |
| 2:J:183:A:C2 | 2:J:184:A:N9 | 2.38 | 0.91 |
| 4:L:499:U:C4 | 4:L:500:U:O4 | 2.23 | 0.91 |
| 4:L:566:U:HO2' | 4:L:567:U:H5' | 1.25 | 0.91 |
| 4:L:723:U:C2 | 4:L:724:U:C6 | 2.59 | 0.91 |
| 5:M:523:U:C2 | 5:M:524:U:C5 | 2.59 | 0.91 |
| 6:N:406:U:C2 | 6:N:407:U:C6 | 2.59 | 0.91 |
| 6:N:420:U:C2' | 6:N:421:U:H5' | 2.00 | 0.91 |
| 6:N:483:U:C4 | 6:N:484:U:C4 | 2.59 | 0.91 |
| 1:I:107:A:C5 | 1:I:108:A:N7 | 2.39 | 0.91 |
| 1:I:56:A:HO2' | 1:I:57:A:H5' | 1.26 | 0.91 |
| 2:J:147:A:O2' | 2:J:148:A:O5' | 1.88 | 0.91 |
| 3:K:90:A:C2' | 3:K:91:A:H5' | 2.00 | 0.91 |
| 4:L:510:U:C2' | 4:L:511:U:C5' | 2.48 | 0.91 |
| 6:N:392:U:C2 | 6:N:393:U:C5 | 2.58 | 0.91 |
| 1:I:278:A:O2' | 1:I:279:A:H5' | 1.71 | 0.91 |
| 1:I:33:A:HO2' | 1:I:34:A:C5' | 1.81 | 0.91 |
| 1:I:341:A:C2' | 1:I:342:A:C5' | 2.49 | 0.91 |
| 2:J:130:A:HO2' | 2:J:131:A:H5' | 1.35 | 0.91 |
| 2:J:234:A:HO2' | 2:J:235:A:H5' | 1.26 | 0.91 |
| 2:J:265:A:HO2' | 2:J:266:A:H5' | 1.33 | 0.91 |
| 2:J:69:A:H2' | 2:J:70:A:O4' | 1.71 | 0.91 |
| 4:L:571:U:H2' | 4:L:572:U:C6 | 2.06 | 0.91 |
| 4:L:684:U:C2 | 4:L:685:U:C5 | 2.59 | 0.91 |
| 4:L:711:U:C2 | 4:L:712:U:C6 | 2.59 | 0.91 |
| 4:L:734:U:H2' | 4:L:735:U:H6 | 1.36 | 0.91 |
| 4:L:740:U:C2' | 4:L:741:U:C5' | 2.47 | 0.91 |
| 5:M:335:U:C5 | 5:M:336:U:H5 | 1.88 | 0.91 |
| 5:M:522:U:C2' | 5:M:523:U:H5' | 2.00 | 0.91 |
| 6:N:319:U:H2' | 6:N:320:U:C6 | 2.06 | 0.91 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:496:U:O2' | 6:N:497:U:H5' | 1.68 | 0.91 |
| 1:I:109:A:HO2' | 1:I:110:A:H5' | 1.36 | 0.91 |
| 1:I:112:A:O2' | 1:I:113:A:H5' | 1.71 | 0.91 |
| 1:I:119:A:C2 | 1:I:120:A:C4 | 2.59 | 0.91 |
| 1:I:186:A:O2' | 1:I:187:A:C5' | 2.19 | 0.91 |
| 1:I:316:A:N6 | 1:I:317:A:H62 | 1.69 | 0.91 |
| 1:I:46:A:C2 | 1:I:47:A:N7 | 2.39 | 0.91 |
| 1:I:53:A:O2' | 1:I:54:A:H5' | 1.68 | 0.91 |
| 2:J:13:A:O2' | 2:J:14:A:C5' | 2.18 | 0.91 |
| 2:J:165:A:H2' | 2:J:166:A:H8 | 1.32 | 0.91 |
| 2:J:43:A:HO2' | 2:J:44:A:H5' | 1.20 | 0.91 |
| 4:L:597:U:O2' | 4:L:598:U:C5' | 2.19 | 0.91 |
| 4:L:652:U:HO2' | 4:L:653:U:H5' | 1.36 | 0.91 |
| 5:M:324:U:H2' | 5:M:325:U:H6 | 1.35 | 0.91 |
| 6:N:420:U:HO2' | 6:N:421:U:H5' | 1.14 | 0.91 |
| 1:I:274:A:C2 | 1:I:275:A:C8 | 2.60 | 0.90 |
| 2:J:117:A:N3 | 2:J:118:A:N9 | 2.19 | 0.90 |
| 2:J:83:A:N1 | 2:J:84:A:C6 | 2.38 | 0.90 |
| 3:K:151:A:O2' | 3:K:152:A:H5' | 1.71 | 0.90 |
| 4:L:549:U:O2' | 4:L:550:U:C5' | 2.18 | 0.90 |
| 4:L:587:U:C2' | 4:L:588:U:C5' | 2.48 | 0.90 |
| 4:L:596:U:H2' | 4:L:597:U:C6 | 2.05 | 0.90 |
| 5:M:485:U:H2' | 5:M:486:U:C5' | 2.00 | 0.90 |
| 5:M:525:U:O2' | 5:M:526:U:C5' | 2.17 | 0.90 |
| 3:K:252:A:N6 | 6:N:280:U:O4 | 2.03 | 0.90 |
| 1:I:106:A:C2 | 1:I:107:A:C8 | 2.59 | 0.90 |
| 1:I:14:A:C4 | 1:I:15:A:C8 | 2.59 | 0.90 |
| 1:I:225:A:H2' | 1:I:226:A:C8 | 2.06 | 0.90 |
| 1:I:347:A:HO2' | 1:I:348:A:H5' | 1.30 | 0.90 |
| 2:J:100:A:C2' | 2:J:101:A:H5' | 2.01 | 0.90 |
| 2:J:219:A:C2' | 2:J:220:A:C5' | 2.49 | 0.90 |
| 3:K:130:A:O2' | 3:K:131:A:C5' | 2.19 | 0.90 |
| 3:K:81:A:C2' | 3:K:82:A:C5' | 2.49 | 0.90 |
| 4:L:655:U:O2' | 4:L:656:U:H5' | 1.71 | 0.90 |
| 4:L:768:U:HO2' | 4:L:769:U:H5' | 1.29 | 0.90 |
| 5:M:416:U:O2 | 5:M:417:U:C6 | 2.25 | 0.90 |
| 5:M:416:U:O2 | 5:M:417:U:C1' | 2.18 | 0.90 |
| 1:I:129:A:HO2' | 1:I:130:A:H5' | 1.24 | 0.90 |
| 1:I:227:A:O2' | 1:I:228:A:C5' | 2.20 | 0.90 |
| 1:I:41:A:N3 | 1:I:42:A:C8 | 2.39 | 0.90 |
| 2:J:99:A:H2' | 2:J:100:A:H8 | 1.27 | 0.90 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:58:A:HO2' | 2:J:59:A:H5' | 1.30 | 0.90 |
| 4:L:717:U:N3 | 4:L:718:U:C4 | 2.39 | 0.90 |
| 5:M:335:U:C5 | 5:M:336:U:C5 | 2.60 | 0.90 |
| 5:M:386:U:O2' | 5:M:387:U:P | 2.29 | 0.90 |
| 5:M:531:U:O2' | 5:M:532:U:C5' | 2.15 | 0.90 |
| 3:K:147:A:C2 | 3:K:148:A:C5 | 2.58 | 0.90 |
| 4:L:425:U:O2' | 4:L:426:U:H5' | 1.70 | 0.90 |
| 4:L:587:U:H2' | 4:L:588:U:H6 | 1.36 | 0.90 |
| 4:L:766:U:C2 | 4:L:767:U:C5 | 2.60 | 0.90 |
| 5:M:371:U:HO2' | 5:M:372:U:H5' | 1.12 | 0.90 |
| 1:I:232:A:C4 | 1:I:233:A:C8 | 2.60 | 0.90 |
| 1:I:240:A:C2 | 1:I:241:A:C4 | 2.59 | 0.90 |
| 1:I:275:A:H2' | 1:I:276:A:H8 | 1.33 | 0.90 |
| 1:I:322:A:C5 | 1:I:323:A:N7 | 2.39 | 0.90 |
| 1:I:69:A:C2' | 1:I:70:A:C5' | 2.48 | 0.90 |
| 2:J:205:A:O2' | 2:J:206:A:C4' | 2.20 | 0.90 |
| 3:K:107:A:C2' | 3:K:108:A:H5' | 2.01 | 0.90 |
| 3:K:120:A:H2' | 3:K:121:A:C5' | 2.01 | 0.90 |
| 3:K:192:A:C6 | 3:K:193:A:N6 | 2.40 | 0.90 |
| 3:K:96:A:C2' | 3:K:97:A:C5' | 2.49 | 0.90 |
| 4:L:421:U:H2' | 4:L:422:U:O4' | 1.72 | 0.90 |
| 4:L:436:U:O2' | 4:L:437:U:O4' | 1.89 | 0.90 |
| 5:M:387:U:O2 | 5:M:388:U:C6 | 2.24 | 0.90 |
| 1:I:129:A:C2 | 1:I:130:A:N9 | 2.40 | 0.90 |
| 1:I:161:A:O2' | 1:I:162:A:H5' | 1.69 | 0.90 |
| 1:I:238:A:H2' | 1:I:239:A:C8 | 2.07 | 0.90 |
| 1:I:269:A:H2' | 1:I:270:A:C5' | 2.02 | 0.90 |
| 2:J:116:A:C2 | 2:J:117:A:C5 | 2.60 | 0.90 |
| 2:J:171:A:C4 | 2:J:172:A:N7 | 2.40 | 0.90 |
| 3:K:251:A:N6 | 3:K:252:A:H62 | 1.69 | 0.90 |
| 4:L:757:U:C4 | 4:L:758:U:O4 | 2.24 | 0.90 |
| 4:L:766:U:H2' | 4:L:767:U:O4' | 1.70 | 0.90 |
| 4:L:820:U:H2' | 4:L:821:U:H6 | 1.31 | 0.90 |
| 5:M:466:U:H2' | 5:M:467:U:C5' | 1.98 | 0.90 |
| 5:M:480:U:O2 | 5:M:481:U:C5 | 2.24 | 0.90 |
| 6:N:339:U:H2' | 6:N:340:U:H6 | 1.36 | 0.90 |
| 1:I:322:A:N6 | 1:I:323:A:N6 | 2.20 | 0.90 |
| 1:I:41:A:C2 | 1:I:42:A:C4 | 2.59 | 0.90 |
| 2:J:219:A:HO2' | 2:J:220:A:H5' | 1.33 | 0.90 |
| 2:J:236:A:N3 | 2:J:237:A:N7 | 2.19 | 0.90 |
| 2:J:37:A:C2' | 2:J:38:A:H5' | 2.01 | 0.90 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:517:U:H2' | 4:L:518:U:O4' | 1.71 | 0.90 |
| 4:L:518:U:O2' | 4:L:519:U:H5' | 0.72 | 0.90 |
| 5:M:455:U:C2 | 5:M:456:U:C6 | 2.59 | 0.90 |
| 5:M:504:U:O2' | 5:M:505:U:H5' | 1.70 | 0.90 |
| 5:M:511:U:C2' | 5:M:512:U:C5' | 2.50 | 0.90 |
| 1:I:240:A:O2' | 1:I:241:A:C5' | 2.20 | 0.90 |
| 1:I:307:A:O2' | 1:I:308:A:H5' | 1.71 | 0.90 |
| 1:I:67:A:H2' | 1:I:68:A:O4' | 1.72 | 0.90 |
| 3:K:201:A:H2' | 3:K:202:A:C8 | 2.05 | 0.90 |
| 4:L:742:U:O2' | 4:L:743:U:P | 2.30 | 0.90 |
| 4:L:754:U:H2' | 4:L:755:U:H6 | 1.34 | 0.90 |
| 4:L:754:U:O2' | 4:L:755:U:C5' | 2.20 | 0.90 |
| 5:M:347:U:C2 | 5:M:348:U:C6 | 2.59 | 0.90 |
| 5:M:526:U:HO2' | 5:M:527:U:H5' | 1.12 | 0.90 |
| 6:N:316:U:H2' | 6:N:317:U:H6 | 1.28 | 0.90 |
| 1:I:245:A:O2' | 1:I:246:A:P | 2.29 | 0.90 |
| 1:I:261:A:C4 | 1:I:262:A:C8 | 2.60 | 0.90 |
| 1:I:282:A:C2 | 1:I:283:A:C5 | 2.60 | 0.90 |
| 1:I:85:A:HO2' | 1:I:86:A:H5' | 1.13 | 0.90 |
| 4:L:421:U:O2' | 4:L:422:U:C5' | 2.19 | 0.90 |
| 4:L:546:U:O2' | 4:L:547:U:H5' | 1.71 | 0.90 |
| 6:N:320:U:C2' | 6:N:321:U:H5' | 2.02 | 0.90 |
| 6:N:454:U:O2' | 6:N:455:U:C5' | 2.20 | 0.90 |
| 1:I:46:A:O2' | 1:I:47:A:P | 2.30 | 0.90 |
| 1:I:4:A:C2 | 1:I:5:A:C5 | 2.59 | 0.90 |
| 2:J:124:A:HO2' | 2:J:125:A:H5' | 1.30 | 0.90 |
| 2:J:262:A:O2' | 2:J:263:A:H5' | 1.72 | 0.90 |
| 3:K:130:A:HO2' | 3:K:131:A:H5' | 1.33 | 0.90 |
| 3:K:132:A:HO2' | 3:K:133:A:H5' | 1.31 | 0.90 |
| 3:K:166:A:HO2' | 3:K:167:A:H5' | 1.09 | 0.90 |
| 3:K:192:A:N6 | 3:K:193:A:N6 | 2.19 | 0.90 |
| 3:K:44:A:H2' | 3:K:45:A:C8 | 2.07 | 0.90 |
| 4:L:548:U:H2' | 4:L:549:U:H6 | 1.36 | 0.90 |
| 5:M:408:U:H2' | 5:M:409:U:C5' | 2.01 | 0.90 |
| 6:N:379:U:H2' | 6:N:380:U:O4' | 1.72 | 0.90 |
| 6:N:409:U:C2 | 6:N:410:U:C5 | 2.60 | 0.90 |
| 6:N:442:U:C2' | 6:N:443:U:H5' | 2.01 | 0.90 |
| 6:N:497:U:O2' | 6:N:498:U:C5' | 2.17 | 0.90 |
| 1:I:143:A:C2 | 1:I:144:A:C5 | 2.60 | 0.89 |
| 1:I:164:A:H2' | 1:I:165:A:C8 | 2.08 | 0.89 |
| 1:I:222:A:O2' | 1:I:223:A:H5' | 1.71 | 0.89 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:376:A:N1 | 1:I:377:A:C6 | 2.39 | 0.89 |
| 1:I:71:A:C2' | 1:I:72:A:H5' | 1.99 | 0.89 |
| 2:J:195:A:O2' | 2:J:196:A:H5' | 1.72 | 0.89 |
| 2:J:222:A:HO2' | 2:J:223:A:H5' | 1.36 | 0.89 |
| 2:J:34:A:O2' | 2:J:35:A:H5' | 1.72 | 0.89 |
| 4:L:751:U:C2' | 4:L:752:U:H5' | 1.99 | 0.89 |
| 6:N:378:U:C2 | 6:N:379:U:C5 | 2.61 | 0.89 |
| 6:N:483:U:C2 | 6:N:484:U:C5 | 2.60 | 0.89 |
| 1:I:147:A:C2' | 1:I:148:A:C5' | 2.49 | 0.89 |
| 1:I:388:A:O2' | 1:I:389:A:H5' | 1.72 | 0.89 |
| 1:I:48:A:C2' | 1:I:49:A:H5' | 1.99 | 0.89 |
| 2:J:29:A:C2 | 2:J:30:A:C4 | 2.60 | 0.89 |
| 2:J:43:A:O2' | 2:J:44:A:C5' | 2.15 | 0.89 |
| 4:L:543:U:C2 | 4:L:544:U:C5 | 2.60 | 0.89 |
| 4:L:599:U:C2 | 4:L:600:U:C5 | 2.59 | 0.89 |
| 4:L:714:U:H2' | 4:L:715:U:C6 | 2.06 | 0.89 |
| 5:M:460:U:H2' | 5:M:461:U:H6 | 1.34 | 0.89 |
| 5:M:463:U:C2 | 5:M:464:U:C6 | 2.59 | 0.89 |
| 6:N:459:U:C2 | 6:N:460:U:C5 | 2.60 | 0.89 |
| 1:I:353:A:H2' | 1:I:354:A:C5' | 1.99 | 0.89 |
| 1:I:81:A:HO2' | 1:I:82:A:H5' | 1.26 | 0.89 |
| 2:J:103:A:HO2' | 2:J:104:A:H5' | 1.20 | 0.89 |
| 2:J:136:A:C2 | 2:J:137:A:C5 | 2.60 | 0.89 |
| 2:J:249:A:HO2' | 2:J:250:A:H5' | 1.07 | 0.89 |
| 2:J:54:A:O2' | 2:J:55:A:C5' | 2.21 | 0.89 |
| 2:J:81:A:C2' | 2:J:82:A:H5' | 2.01 | 0.89 |
| 3:K:192:A:H2' | 3:K:193:A:H8 | 1.29 | 0.89 |
| 3:K:65:A:C5 | 3:K:66:A:N7 | 2.39 | 0.89 |
| 4:L:421:U:H2' | 4:L:422:U:H6 | 1.37 | 0.89 |
| 4:L:487:U:H2' | 4:L:488:U:C5' | 2.00 | 0.89 |
| 4:L:811:U:N3 | 4:L:812:U:C5 | 2.41 | 0.89 |
| 5:M:452:U:C2' | 5:M:453:U:H5' | 2.01 | 0.89 |
| 5:M:483:U:C2' | 5:M:484:U:C5' | 2.49 | 0.89 |
| 6:N:327:U:C2' | 6:N:328:U:C5' | 2.50 | 0.89 |
| 1:I:177:A:O2' | 1:I:178:A:H5' | 1.70 | 0.89 |
| 1:I:258:A:C2' | 1:I:259:A:C5' | 2.48 | 0.89 |
| 1:I:310:A:C2' | 1:I:311:A:H5' | 1.99 | 0.89 |
| 1:I:49:A:C2 | 1:I:50:A:C8 | 2.61 | 0.89 |
| 2:J:216:A:O2' | 2:J:217:A:P | 2.29 | 0.89 |
| 3:K:95:A:C2' | 3:K:96:A:C5' | 2.50 | 0.89 |
| 4:L:422:U:O2' | 4:L:423:U:H5' | 1.72 | 0.89 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:525:U:C2' | 4:L:526:U:C5' | 2.51 | 0.89 |
| 5:M:422:U:O2' | 5:M:423:U:H5' | 1.73 | 0.89 |
| 5:M:495:U:N3 | 5:M:496:U:C5 | 2.40 | 0.89 |
| 1:I:183:A:N3 | 1:I:184:A:C8 | 2.41 | 0.89 |
| 1:I:74:A:C2 | 1:I:75:A:C4 | 2.60 | 0.89 |
| 1:I:78:A:C4 | 1:I:79:A:C8 | 2.59 | 0.89 |
| 1:I:86:A:N6 | 1:I:87:A:H62 | 1.50 | 0.89 |
| 2:J:83:A:N3 | 2:J:84:A:N7 | 2.18 | 0.89 |
| 4:L:421:U:H2' | 4:L:422:U:C6 | 2.08 | 0.89 |
| 4:L:466:U:C2' | 4:L:467:U:C5' | 2.49 | 0.89 |
| 4:L:557:U:HO2' | 4:L:558:U:H5' | 0.97 | 0.89 |
| 4:L:715:U:HO2' | 4:L:716:U:H5' | 1.30 | 0.89 |
| 5:M:319:U:C2' | 5:M:320:U:C4' | 2.49 | 0.89 |
| 5:M:322:U:H2' | 5:M:323:U:O4' | 1.72 | 0.89 |
| 1:I:109:A:H2 | 1:I:110:A:C4 | 1.87 | 0.89 |
| 1:I:136:A:C2 | 1:I:137:A:N9 | 2.41 | 0.89 |
| 1:I:140:A:C2 | 1:I:141:A:C5 | 2.60 | 0.89 |
| 1:I:254:A:C2' | 1:I:255:A:C5' | 2.50 | 0.89 |
| 2:J:37:A:O2' | 2:J:38:A:C5' | 2.18 | 0.89 |
| 2:J:61:A:C2 | 2:J:62:A:C5 | 2.60 | 0.89 |
| 5:M:380:U:H2' | 5:M:381:U:H6 | 1.37 | 0.89 |
| 1:I:223:A:O2' | 1:I:224:A:H5' | 1.73 | 0.89 |
| 1:I:245:A:C2 | 1:I:246:A:N7 | 2.40 | 0.89 |
| 1:I:267:A:N1 | 1:I:268:A:C6 | 2.40 | 0.89 |
| 1:I:310:A:O2' | 1:I:311:A:H5' | 1.73 | 0.89 |
| 1:I:66:A:C2' | 1:I:67:A:C5' | 2.49 | 0.89 |
| 2:J:143:A:N3 | 2:J:144:A:N9 | 2.20 | 0.89 |
| 3:K:142:A:C2 | 3:K:143:A:C4 | 2.61 | 0.89 |
| 4:L:478:U:O2' | 4:L:479:U:H5' | 1.73 | 0.89 |
| 4:L:537:U:C2' | 4:L:538:U:C5' | 2.51 | 0.89 |
| 4:L:550:U:C2' | 4:L:551:U:H5' | 2.03 | 0.89 |
| 4:L:587:U:O2' | 4:L:588:U:C5' | 2.21 | 0.89 |
| 4:L:594:U:HO2' | 4:L:595:U:H5' | 1.36 | 0.89 |
| 4:L:677:U:C2' | 4:L:678:U:H5' | 2.02 | 0.89 |
| 5:M:455:U:HO2' | 5:M:456:U:H5' | 1.09 | 0.89 |
| 5:M:459:U:H2' | 5:M:460:U:H6 | 1.37 | 0.89 |
| 5:M:512:U:H2' | 5:M:513:U:O4' | 1.72 | 0.89 |
| 6:N:293:U:H2' | 6:N:294:U:H6 | 1.31 | 0.89 |
| 6:N:311:U:O2' | 6:N:312:U:H5' | 1.71 | 0.89 |
| 6:N:360:U:O2' | 6:N:361:U:H5' | 1.72 | 0.89 |
| 2:J:161:A:C2' | 2:J:162:A:C5' | 2.49 | 0.89 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 3:K:166:A:H2' | 3:K:167:A:O5' | 1.72 | 0.89 |
| 4:L:590:U:O2' | 4:L:591:U:H5' | 1.72 | 0.89 |
| 4:L:677:U:O2' | 4:L:678:U:C5' | 2.19 | 0.89 |
| 4:L:767:U:H2' | 4:L:768:U:C5 | 2.07 | 0.89 |
| 6:N:380:U:C2' | 6:N:381:U:C5' | 2.51 | 0.89 |
| 6:N:441:U:O2' | 6:N:442:U:H5' | 1.70 | 0.89 |
| 1:I:183:A:C2 | 1:I:184:A:C8 | 2.60 | 0.89 |
| 2:J:117:A:C2 | 2:J:118:A:C5 | 2.60 | 0.89 |
| 2:J:215:A:N3 | 2:J:216:A:C8 | 2.40 | 0.89 |
| 2:J:37:A:HO2' | 2:J:38:A:H5' | 1.13 | 0.89 |
| 2:J:91:A:O2' | 2:J:92:A:H5' | 1.73 | 0.89 |
| 4:L:595:U:C2' | 4:L:596:U:H5' | 2.01 | 0.89 |
| 4:L:667:U:O2' | 4:L:668:U:H5' | 1.71 | 0.89 |
| 4:L:757:U:C2' | 4:L:758:U:H6 | 1.85 | 0.89 |
| 6:N:467:U:C2' | 6:N:468:U:C5' | 2.49 | 0.89 |
| 1:I:115:A:O2' | 1:I:116:A:H5' | 1.73 | 0.89 |
| 1:I:132:A:H2' | 1:I:133:A:C5' | 2.02 | 0.89 |
| 1:I:174:A:C2' | 1:I:175:A:H5' | 2.02 | 0.89 |
| 1:I:269:A:C4 | 1:I:270:A:C8 | 2.60 | 0.89 |
| 2:J:202:A:N3 | 2:J:203:A:C8 | 2.41 | 0.89 |
| 3:K:166:A:C2' | 3:K:167:A:H5' | 2.01 | 0.89 |
| 3:K:1:A:O2' | 3:K:2:A:H5' | 1.73 | 0.89 |
| 3:K:57:A:H2' | 3:K:58:A:C8 | 2.08 | 0.89 |
| 4:L:459:U:H2' | 4:L:460:U:O4' | 1.73 | 0.89 |
| 4:L:460:U:C2' | 4:L:461:U:H5' | 2.01 | 0.89 |
| 4:L:611:U:H2' | 4:L:612:U:C6 | 2.07 | 0.89 |
| 4:L:764:U:N3 | 4:L:765:U:C5 | 2.41 | 0.89 |
| 5:M:498:U:C2 | 5:M:499:U:C5 | 2.60 | 0.89 |
| 5:M:501:U:C2' | 5:M:502:U:H6 | 1.85 | 0.89 |
| 6:N:349:U:C2 | 6:N:350:U:C5 | 2.61 | 0.89 |
| 1:I:277:A:C6 | 1:I:278:A:C6 | 2.61 | 0.88 |
| 2:J:128:A:O2' | 2:J:129:A:H5' | 1.72 | 0.88 |
| 3:K:120:A:C2' | 3:K:121:A:C5' | 2.50 | 0.88 |
| 3:K:129:A:O2' | 3:K:130:A:H5' | 1.73 | 0.88 |
| 3:K:78:A:O2' | 3:K:79:A:H5' | 1.72 | 0.88 |
| 4:L:567:U:C2' | 4:L:568:U:H5' | 2.02 | 0.88 |
| 4:L:722:U:O2 | 4:L:723:U:C4 | 2.20 | 0.88 |
| 4:L:751:U:C2 | 4:L:752:U:C6 | 2.61 | 0.88 |
| 4:L:754:U:H2' | 4:L:755:U:O4' | 1.72 | 0.88 |
| 5:M:369:U:O2' | 5:M:370:U:C5' | 2.18 | 0.88 |
| 1:I:333:A:C2 | 1:I:334:A:C1' | 2.56 | 0.88 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:203:A:O2' | 2:J:204:A:H5' | 1.74 | 0.88 |
| 2:J:265:A:C2 | 2:J:266:A:C8 | 2.61 | 0.88 |
| 2:J:54:A:C2' | 2:J:55:A:H5' | 2.03 | 0.88 |
| 3:K:117:A:N3 | 3:K:118:A:N7 | 2.20 | 0.88 |
| 3:K:174:A:O2' | 3:K:175:A:H5' | 1.72 | 0.88 |
| 3:K:256:A:C2' | 3:K:257:A:H5' | 2.03 | 0.88 |
| 4:L:544:U:C4 | 4:L:545:U:C4 | 2.61 | 0.88 |
| 5:M:321:U:C4 | 5:M:322:U:O4 | 2.26 | 0.88 |
| 5:M:333:U:HO2' | 5:M:334:U:H5' | 1.30 | 0.88 |
| 1:I:109:A:HO2' | 1:I:110:A:C5' | 1.84 | 0.88 |
| 1:I:179:A:C6 | 1:I:180:A:C5 | 2.62 | 0.88 |
| 1:I:248:A:HO2' | 1:I:249:A:H5' | 1.35 | 0.88 |
| 1:I:280:A:C2 | 1:I:281:A:N7 | 2.42 | 0.88 |
| 1:I:69:A:O2' | 1:I:70:A:C5' | 2.18 | 0.88 |
| 2:J:127:A:HO2' | 2:J:128:A:H5' | 1.07 | 0.88 |
| 2:J:176:A:N3 | 2:J:177:A:C8 | 2.40 | 0.88 |
| 2:J:47:A:C2 | 2:J:48:A:N9 | 2.42 | 0.88 |
| 3:K:49:A:HO2' | 3:K:50:A:H5' | 1.39 | 0.88 |
| 4:L:594:U:O2' | 4:L:595:U:C5' | 2.18 | 0.88 |
| 4:L:723:U:N3 | 4:L:724:U:C4 | 2.41 | 0.88 |
| 4:L:768:U:C2' | 4:L:769:U:H5' | 2.02 | 0.88 |
| 4:L:770:U:C2 | 4:L:771:U:C5 | 2.61 | 0.88 |
| 1:I:342:A:H2' | 1:I:343:A:C5' | 2.02 | 0.88 |
| 1:I:45:A:O2' | 1:I:46:A:H5' | 1.73 | 0.88 |
| 1:I:62:A:C2' | 1:I:63:A:H5' | 2.04 | 0.88 |
| 2:J:236:A:N3 | 2:J:237:A:C8 | 2.41 | 0.88 |
| 2:J:248:A:C5 | 2:J:249:A:N7 | 2.41 | 0.88 |
| 3:K:153:A:C2 | 3:K:154:A:N9 | 2.41 | 0.88 |
| 3:K:166:A:C2 | 3:K:167:A:N9 | 2.41 | 0.88 |
| 3:K:95:A:HO2' | 3:K:96:A:H5' | 1.36 | 0.88 |
| 4:L:573:U:C2 | 4:L:574:U:C5 | 2.62 | 0.88 |
| 5:M:489:U:C2 | 5:M:490:U:C6 | 2.60 | 0.88 |
| 5:M:502:U:O2' | 5:M:503:U:H5' | 1.73 | 0.88 |
| 6:N:316:U:H2' | 6:N:317:U:O4' | 1.73 | 0.88 |
| 6:N:426:U:H2' | 6:N:427:U:H6 | 1.36 | 0.88 |
| 1:I:185:A:O2' | 1:I:186:A:H5' | 1.74 | 0.88 |
| 1:I:21:A:H2' | 1:I:22:A:O4' | 1.73 | 0.88 |
| 1:I:274:A:C2 | 1:I:275:A:C4 | 2.62 | 0.88 |
| 1:I:66:A:C5 | 1:I:67:A:N7 | 2.42 | 0.88 |
| 2:J:183:A:HO2' | 2:J:184:A:H5' | 1.33 | 0.88 |
| 4:L:584:U:O2' | 4:L:585:U:C5' | 2.19 | 0.88 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:328:U:O2' | 5:M:329:U:P | 2.29 | 0.88 |
| 5:M:408:U:H2' | 5:M:409:U:O5' | 1.73 | 0.88 |
| 5:M:476:U:O2' | 5:M:477:U:H5' | 1.72 | 0.88 |
| 6:N:526:U:C2' | 6:N:527:U:H5' | 2.03 | 0.88 |
| 1:I:231:A:C4 | 1:I:232:A:C8 | 2.61 | 0.88 |
| 1:I:257:A:HO2' | 1:I:258:A:H5' | 1.32 | 0.88 |
| 1:I:25:A:C2' | 1:I:26:A:H5' | 2.02 | 0.88 |
| 1:I:279:A:O2' | 1:I:280:A:H5' | 0.70 | 0.88 |
| 1:I:64:A:C2' | 1:I:65:A:H5' | 2.02 | 0.88 |
| 1:I:66:A:H2' | 1:I:67:A:O4' | 1.74 | 0.88 |
| 1:I:78:A:C2 | 1:I:79:A:N7 | 2.41 | 0.88 |
| 2:J:249:A:C2' | 2:J:250:A:C5' | 2.50 | 0.88 |
| 2:J:29:A:H2' | 2:J:30:A:O4' | 1.74 | 0.88 |
| 3:K:114:A:C2 | 3:K:115:A:C4 | 2.60 | 0.88 |
| 3:K:166:A:C2 | 3:K:167:A:C8 | 2.62 | 0.88 |
| 3:K:54:A:C3' | 3:K:55:A:OP2 | 2.21 | 0.88 |
| 4:L:815:U:HO2' | 4:L:816:U:H5' | 1.35 | 0.88 |
| 5:M:525:U:C2' | 5:M:526:U:C5' | 2.51 | 0.88 |
| 5:M:529:U:O2' | 5:M:530:U:H5' | 1.72 | 0.88 |
| 1:I:274:A:C2 | 1:I:275:A:N9 | 2.41 | 0.88 |
| 1:I:41:A:O2' | 1:I:42:A:C5' | 2.21 | 0.88 |
| 1:I:74:A:H2' | 1:I:75:A:C4' | 2.03 | 0.88 |
| 2:J:29:A:H2' | 2:J:30:A:C4' | 2.03 | 0.88 |
| 2:J:34:A:N3 | 2:J:35:A:C8 | 2.42 | 0.88 |
| 3:K:118:A:C2 | 3:K:119:A:C4 | 2.61 | 0.88 |
| 3:K:118:A:C2 | 3:K:119:A:N9 | 2.42 | 0.88 |
| 4:L:436:U:C2' | 4:L:437:U:O4' | 2.21 | 0.88 |
| 4:L:461:U:H2' | 4:L:462:U:H6 | 1.37 | 0.88 |
| 4:L:624:U:O2' | 4:L:625:U:H5' | 1.74 | 0.88 |
| 4:L:715:U:HO2' | 4:L:716:U:C5' | 1.76 | 0.88 |
| 4:L:810:U:C2' | 4:L:811:U:H5' | 2.01 | 0.88 |
| 5:M:330:U:O2' | 5:M:331:U:H5' | 1.74 | 0.88 |
| 6:N:440:U:HO2' | 6:N:441:U:H5' | 1.36 | 0.88 |
| 1:I:254:A:HO2' | 1:I:255:A:H5' | 1.10 | 0.88 |
| 1:I:67:A:H2' | 1:I:68:A:C8 | 2.08 | 0.88 |
| 2:J:117:A:C2 | 2:J:118:A:N9 | 2.40 | 0.88 |
| 2:J:166:A:C2 | 2:J:167:A:C5 | 2.62 | 0.88 |
| 2:J:221:A:HO2' | 2:J:222:A:H5' | 1.30 | 0.88 |
| 2:J:248:A:N6 | 2:J:249:A:H62 | 1.64 | 0.88 |
| 2:J:42:A:O2' | 2:J:43:A:O4' | 1.91 | 0.88 |
| 3:K:89:A:N3 | 3:K:90:A:N7 | 2.18 | 0.88 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:520:U:O2' | 4:L:521:U:H5' | 1.73 | 0.88 |
| 4:L:756:U:C2 | 4:L:757:U:C5 | 2.62 | 0.88 |
| 5:M:386:U:H2' | 5:M:387:U:C6 | 2.09 | 0.88 |
| 5:M:534:U:C2 | 5:M:535:U:C5 | 2.61 | 0.88 |
| 5:M:548:U:HO3' | 5:M:549:U:P | 1.94 | 0.88 |
| 6:N:363:U:C2 | 6:N:364:U:C5 | 2.61 | 0.88 |
| 6:N:365:U:O2' | 6:N:366:U:H5' | 1.73 | 0.88 |
| 1:I:251:A:H2' | 1:I:252:A:C8 | 2.09 | 0.88 |
| 1:I:65:A:C2 | 1:I:66:A:C4 | 2.61 | 0.88 |
| 1:I:90:A:C2' | 1:I:91:A:H5' | 2.04 | 0.88 |
| 2:J:229:A:C2 | 2:J:230:A:C4 | 2.61 | 0.88 |
| 2:J:67:A:C2' | 2:J:68:A:H5' | 2.04 | 0.88 |
| 3:K:156:A:O2' | 3:K:157:A:C4' | 2.22 | 0.88 |
| 4:L:496:U:H2' | 4:L:497:U:H6 | 1.37 | 0.88 |
| 4:L:578:U:C2' | 4:L:579:U:H5' | 2.03 | 0.88 |
| 4:L:583:U:H2' | 4:L:584:U:H6 | 1.39 | 0.88 |
| 4:L:672:U:C2 | 4:L:673:U:C5 | 2.62 | 0.88 |
| 4:L:806:U:H2' | 4:L:807:U:H6 | 1.37 | 0.88 |
| 5:M:449:U:C2' | 5:M:450:U:C5' | 2.49 | 0.88 |
| 5:M:469:U:H2' | 5:M:470:U:H6 | 1.39 | 0.88 |
| 5:M:486:U:O2' | 5:M:487:U:C5' | 2.20 | 0.88 |
| 6:N:460:U:C2 | 6:N:461:U:C5 | 2.62 | 0.88 |
| 1:I:179:A:H61 | 1:I:180:A:N6 | 1.65 | 0.88 |
| 1:I:240:A:O2' | 1:I:241:A:H5' | 1.72 | 0.88 |
| 1:I:323:A:C2 | 1:I:324:A:C4 | 2.61 | 0.88 |
| 2:J:125:A:N6 | 2:J:126:A:N6 | 2.22 | 0.88 |
| 2:J:133:A:HO2' | 2:J:134:A:H5' | 1.15 | 0.88 |
| 2:J:147:A:O2' | 2:J:148:A:P | 2.31 | 0.88 |
| 2:J:165:A:C4 | 2:J:166:A:N7 | 2.41 | 0.88 |
| 2:J:216:A:N1 | 2:J:217:A:N6 | 2.21 | 0.88 |
| 2:J:58:A:C2' | 2:J:59:A:C5' | 2.51 | 0.88 |
| 2:J:88:A:C2' | 2:J:89:A:C5' | 2.51 | 0.88 |
| 3:K:165:A:HO2' | 3:K:166:A:H5' | 1.30 | 0.88 |
| 3:K:96:A:C2' | 3:K:97:A:H5' | 2.02 | 0.88 |
| 4:L:541:U:H2' | 4:L:542:U:H6 | 1.38 | 0.88 |
| 4:L:589:U:O2' | 4:L:590:U:H5' | 1.74 | 0.88 |
| 4:L:596:U:C2 | 4:L:597:U:C5 | 2.61 | 0.88 |
| 4:L:722:U:H2' | 4:L:723:U:H6 | 1.39 | 0.88 |
| 5:M:501:U:C2' | 5:M:502:U:C6 | 2.57 | 0.88 |
| 1:I:260:A:C2' | 1:I:261:A:C5' | 2.51 | 0.87 |
| 1:I:277:A:N6 | 1:I:278:A:H62 | 1.64 | 0.87 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:361:A:C2' | 1:I:362:A:H5' | 2.03 | 0.87 |
| 1:I:84:A:C2 | 1:I:85:A:C5 | 2.62 | 0.87 |
| 3:K:105:A:C4 | 3:K:106:A:N7 | 2.42 | 0.87 |
| 3:K:181:A:C2 | 3:K:182:A:C4 | 2.61 | 0.87 |
| 4:L:533:U:C2' | 4:L:534:U:H5' | 2.03 | 0.87 |
| 4:L:709:U:O2' | 4:L:710:U:H5' | 1.74 | 0.87 |
| 4:L:728:U:N3 | 4:L:729:U:O4 | 2.07 | 0.87 |
| 4:L:736:U:HO2' | 4:L:737:U:H5' | 1.06 | 0.87 |
| 5:M:297:U:O2' | 5:M:298:U:H5' | 1.74 | 0.87 |
| 5:M:447:U:H2' | 5:M:448:U:H6 | 1.39 | 0.87 |
| 6:N:281:U:C2' | 6:N:282:U:C5' | 2.52 | 0.87 |
| 6:N:480:U:O2' | 6:N:481:U:H5' | 1.73 | 0.87 |
| 1:I:122:A:C2' | 1:I:123:A:C5' | 2.51 | 0.87 |
| 1:I:281:A:N6 | 1:I:282:A:H62 | 1.69 | 0.87 |
| 1:I:340:A:N3 | 1:I:341:A:C8 | 2.43 | 0.87 |
| 3:K:167:A:C6 | 3:K:168:A:N7 | 2.43 | 0.87 |
| 4:L:718:U:C2' | 4:L:719:U:C5' | 2.52 | 0.87 |
| 4:L:764:U:C2 | 4:L:765:U:C5 | 2.63 | 0.87 |
| 4:L:794:U:C2' | 4:L:795:U:H5' | 2.04 | 0.87 |
| 4:L:810:U:C2 | 4:L:811:U:C6 | 2.63 | 0.87 |
| 1:I:17:A:HO2' | 1:I:18:A:H5' | 1.06 | 0.87 |
| 1:I:233:A:H2' | 1:I:234:A:C5' | 2.02 | 0.87 |
| 1:I:246:A:HO2' | 1:I:247:A:H5' | 1.33 | 0.87 |
| 2:J:182:A:C6 | 2:J:183:A:C6 | 2.62 | 0.87 |
| 2:J:34:A:C2 | 2:J:35:A:C8 | 2.62 | 0.87 |
| 2:J:56:A:C2 | 2:J:57:A:N9 | 2.42 | 0.87 |
| 2:J:88:A:C2 | 2:J:89:A:C4 | 2.62 | 0.87 |
| 3:K:211:A:H2' | 3:K:212:A:C8 | 2.09 | 0.87 |
| 4:L:501:U:O2 | 4:L:502:U:C6 | 2.28 | 0.87 |
| 4:L:576:U:C2 | 4:L:577:U:C6 | 2.61 | 0.87 |
| 5:M:319:U:C2' | 5:M:320:U:O4' | 2.20 | 0.87 |
| 5:M:463:U:C2' | 5:M:464:U:H5' | 2.04 | 0.87 |
| 5:M:465:U:H2' | 5:M:466:U:C5' | 2.04 | 0.87 |
| 6:N:462:U:C2' | 6:N:463:U:H5' | 2.03 | 0.87 |
| 1:I:164:A:N3 | 1:I:165:A:C8 | 2.43 | 0.87 |
| 1:I:187:A:H2' | 1:I:188:A:H8 | 1.39 | 0.87 |
| 1:I:270:A:C4 | 1:I:271:A:C8 | 2.62 | 0.87 |
| 1:I:286:A:C5 | 1:I:287:A:N7 | 2.42 | 0.87 |
| 1:I:299:A:O2' | 1:I:300:A:C5' | 2.22 | 0.87 |
| 1:I:306:A:C2 | 1:I:307:A:C8 | 2.62 | 0.87 |
| 2:J:135:A:N6 | 2:J:136:A:H62 | 1.72 | 0.87 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:176:A:HO2' | 2:J:177:A:H5' | 1.40 | 0.87 |
| 2:J:206:A:C2 | 2:J:207:A:C4 | 2.62 | 0.87 |
| 2:J:241:A:C3' | 2:J:242:A:P | 2.61 | 0.87 |
| 2:J:89:A:C2 | 2:J:90:A:C8 | 2.61 | 0.87 |
| 3:K:114:A:H2' | 3:K:115:A:H8 | 1.37 | 0.87 |
| 3:K:45:A:H2' | 3:K:46:A:O4' | 1.74 | 0.87 |
| 4:L:557:U:C4 | 4:L:558:U:C5 | 2.62 | 0.87 |
| 4:L:647:U:C2' | 4:L:648:U:C5' | 2.51 | 0.87 |
| 4:L:660:U:C2' | 4:L:661:U:O4' | 2.23 | 0.87 |
| 4:L:723:U:C5 | 4:L:724:U:C4 | 2.56 | 0.87 |
| 4:L:755:U:HO2' | 4:L:756:U:H5' | 1.10 | 0.87 |
| 6:N:399:U:N3 | 6:N:400:U:C5 | 2.41 | 0.87 |
| 6:N:435:U:O2' | 6:N:436:U:H5' | 1.74 | 0.87 |
| 6:N:485:U:O2' | 6:N:486:U:C5' | 2.22 | 0.87 |
| 1:I:207:A:O2' | 1:I:208:A:C5' | 2.20 | 0.87 |
| 1:I:56:A:C2 | 1:I:57:A:C4 | 2.63 | 0.87 |
| 2:J:191:A:C2' | 2:J:192:A:H5' | 2.05 | 0.87 |
| 4:L:559:U:C2 | 4:L:560:U:C5 | 2.62 | 0.87 |
| 4:L:799:U:O2' | 4:L:800:U:C5' | 2.21 | 0.87 |
| 6:N:384:U:O2' | 6:N:385:U:H5' | 1.74 | 0.87 |
| 1:I:12:A:O2' | 1:I:13:A:C5' | 2.21 | 0.87 |
| 1:I:238:A:H2' | 1:I:239:A:H8 | 1.39 | 0.87 |
| 1:I:268:A:C2 | 1:I:269:A:C8 | 2.62 | 0.87 |
| 1:I:291:A:C2' | 1:I:292:A:C5' | 2.53 | 0.87 |
| 2:J:145:A:C6 | 2:J:146:A:N7 | 2.43 | 0.87 |
| 2:J:79:A:H2' | 2:J:80:A:C5' | 2.03 | 0.87 |
| 4:L:612:U:HO2' | 4:L:613:U:H5' | 1.38 | 0.87 |
| 4:L:638:U:HO2' | 4:L:639:U:H5' | 1.07 | 0.87 |
| 4:L:724:U:C3' | 4:L:725:U:H5' | 1.85 | 0.87 |
| 4:L:767:U:O2 | 4:L:768:U:C5 | 2.27 | 0.87 |
| 5:M:377:U:H2' | 5:M:378:U:H6 | 1.39 | 0.87 |
| 5:M:465:U:C2 | 5:M:466:U:C6 | 2.63 | 0.87 |
| 6:N:377:U:H2' | 6:N:378:U:H6 | 1.37 | 0.87 |
| 1:I:255:A:O2' | 1:I:256:A:C5' | 2.20 | 0.87 |
| 1:I:299:A:C2' | 1:I:300:A:H5' | 2.04 | 0.87 |
| 1:I:55:A:C2 | 1:I:56:A:C8 | 2.62 | 0.87 |
| 1:I:8:A:N6 | 1:I:9:A:H62 | 1.73 | 0.87 |
| 2:J:205:A:HO2' | 2:J:206:A:H5' | 1.09 | 0.87 |
| 2:J:223:A:C2' | 2:J:224:A:C5' | 2.49 | 0.87 |
| 2:J:242:A:HO3' | 2:J:243:A:P | 1.94 | 0.87 |
| 3:K:203:A:H2' | 3:K:204:A:C8 | 2.10 | 0.87 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:417:U:O2' | 4:L:418:U:H5' | 1.74 | 0.87 |
| 4:L:572:U:HO2' | 4:L:573:U:H5' | 1.34 | 0.87 |
| 5:M:348:U:C4 | 5:M:349:U:C4 | 2.63 | 0.87 |
| 5:M:393:U:C2 | 5:M:394:U:C5 | 2.63 | 0.87 |
| 6:N:281:U:HO2' | 6:N:282:U:H5' | 1.36 | 0.87 |
| 1:I:119:A:N3 | 1:I:120:A:C8 | 2.43 | 0.87 |
| 1:I:181:A:N6 | 1:I:182:A:H62 | 1.70 | 0.87 |
| 2:J:214:A:C2 | 2:J:215:A:N9 | 2.43 | 0.87 |
| 2:J:54:A:C2' | 2:J:55:A:C5' | 2.52 | 0.87 |
| 2:J:88:A:N3 | 2:J:89:A:C8 | 2.43 | 0.87 |
| 3:K:210:A:O2' | 3:K:211:A:C5' | 2.22 | 0.87 |
| 3:K:46:A:O3' | 3:K:47:A:C5' | 2.22 | 0.87 |
| 4:L:722:U:O2' | 4:L:723:U:O5' | 1.91 | 0.87 |
| 5:M:392:U:H2' | 5:M:393:U:C6 | 2.10 | 0.87 |
| 5:M:481:U:C2 | 5:M:482:U:C5 | 2.63 | 0.87 |
| 5:M:523:U:O2 | 5:M:524:U:C6 | 2.27 | 0.87 |
| 6:N:430:U:C2 | 6:N:431:U:C6 | 2.63 | 0.87 |
| 1:I:267:A:C2 | 1:I:268:A:C6 | 2.62 | 0.87 |
| 2:J:129:A:H2' | 2:J:130:A:O4' | 1.73 | 0.87 |
| 2:J:22:A:O2' | 2:J:23:A:H5' | 1.75 | 0.87 |
| 3:K:38:A:O2' | 3:K:39:A:C5' | 2.22 | 0.87 |
| 4:L:552:U:C2 | 4:L:553:U:C5 | 2.63 | 0.87 |
| 4:L:556:U:C2 | 4:L:557:U:C6 | 2.63 | 0.87 |
| 4:L:770:U:C4 | 4:L:771:U:C4 | 2.62 | 0.87 |
| 6:N:406:U:C2' | 6:N:407:U:H5' | 2.05 | 0.87 |
| 6:N:476:U:C2' | 6:N:477:U:H5' | 2.04 | 0.87 |
| 6:N:489:U:O2' | 6:N:490:U:P | 2.33 | 0.87 |
| 1:I:130:A:C2 | 1:I:131:A:C8 | 2.63 | 0.86 |
| 1:I:240:A:C2 | 1:I:241:A:N7 | 2.43 | 0.86 |
| 1:I:270:A:H2' | 1:I:271:A:C5' | 2.00 | 0.86 |
| 1:I:304:A:O2' | 1:I:305:A:H5' | 1.74 | 0.86 |
| 3:K:107:A:HO2' | 3:K:108:A:H5' | 1.11 | 0.86 |
| 3:K:167:A:C2' | 3:K:168:A:H5' | 2.04 | 0.86 |
| 3:K:251:A:H3' | 3:K:252:A:OP2 | 1.73 | 0.86 |
| 4:L:500:U:HO2' | 4:L:501:U:H5' | 1.34 | 0.86 |
| 4:L:548:U:H2' | 4:L:549:U:C6 | 2.10 | 0.86 |
| 4:L:766:U:C2' | 4:L:767:U:H6 | 1.88 | 0.86 |
| 5:M:520:U:C2' | 5:M:521:U:H5' | 2.02 | 0.86 |
| 1:I:172:A:HO2' | 1:I:173:A:H5' | 1.35 | 0.86 |
| 1:I:330:A:C2' | 1:I:331:A:C5' | 2.53 | 0.86 |
| 1:I:71:A:O2' | 1:I:72:A:H5' | 1.76 | 0.86 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:86:A:H61 | 1:I:87:A:N6 | 1.71 | 0.86 |
| 2:J:223:A:H2' | 2:J:224:A:H5' | 1.49 | 0.86 |
| 3:K:168:A:H2' | 3:K:169:A:C4' | 2.06 | 0.86 |
| 5:M:453:U:O2' | 5:M:454:U:H5' | 1.75 | 0.86 |
| 5:M:462:U:H2' | 5:M:463:U:H6 | 1.40 | 0.86 |
| 5:M:515:U:HO2' | 5:M:516:U:H5' | 1.37 | 0.86 |
| 1:I:250:A:C4 | 1:I:251:A:C8 | 2.64 | 0.86 |
| 1:I:62:A:C2' | 1:I:63:A:C5' | 2.53 | 0.86 |
| 4:L:504:U:C2' | 4:L:505:U:H5' | 2.04 | 0.86 |
| 4:L:757:U:C2 | 4:L:758:U:C6 | 2.63 | 0.86 |
| 4:L:766:U:N3 | 4:L:767:U:C4 | 2.43 | 0.86 |
| 1:I:106:A:H2' | 1:I:107:A:H8 | 1.40 | 0.86 |
| 1:I:131:A:C5 | 1:I:132:A:N7 | 2.44 | 0.86 |
| 1:I:157:A:HO2' | 1:I:158:A:H5' | 1.38 | 0.86 |
| 1:I:254:A:O2' | 1:I:255:A:C5' | 2.20 | 0.86 |
| 1:I:56:A:N3 | 1:I:57:A:C8 | 2.43 | 0.86 |
| 2:J:124:A:N3 | 2:J:125:A:C8 | 2.43 | 0.86 |
| 2:J:165:A:C2 | 2:J:166:A:C4 | 2.63 | 0.86 |
| 2:J:171:A:C6 | 2:J:172:A:N6 | 2.43 | 0.86 |
| 3:K:198:A:H2' | 3:K:199:A:C8 | 2.11 | 0.86 |
| 4:L:544:U:C4 | 4:L:545:U:C5 | 2.63 | 0.86 |
| 4:L:694:U:HO2' | 4:L:695:U:H5' | 1.36 | 0.86 |
| 4:L:718:U:C2' | 4:L:719:U:H5' | 2.04 | 0.86 |
| 5:M:376:U:C2' | 5:M:377:U:O4' | 2.22 | 0.86 |
| 5:M:488:U:O2' | 5:M:489:U:H5' | 1.73 | 0.86 |
| 6:N:302:U:H2' | 6:N:303:U:C6 | 2.10 | 0.86 |
| 6:N:417:U:C2' | 6:N:418:U:O4' | 2.22 | 0.86 |
| 6:N:427:U:C2' | 6:N:428:U:H5' | 2.05 | 0.86 |
| 6:N:450:U:H2' | 6:N:451:U:H6 | 1.40 | 0.86 |
| 1:I:133:A:O2' | 1:I:134:A:C4' | 2.22 | 0.86 |
| 1:I:274:A:N3 | 1:I:275:A:C8 | 2.44 | 0.86 |
| 1:I:40:A:HO3' | 1:I:41:A:P | 1.90 | 0.86 |
| 3:K:154:A:N6 | 3:K:155:A:N6 | 2.24 | 0.86 |
| 4:L:746:U:O2' | 4:L:747:U:O5' | 1.92 | 0.86 |
| 5:M:323:U:O2' | 5:M:324:U:O4' | 1.84 | 0.86 |
| 5:M:361:U:C2 | 5:M:362:U:C5 | 2.63 | 0.86 |
| 5:M:433:U:N3 | 5:M:434:U:C5 | 2.43 | 0.86 |
| 5:M:465:U:C4 | 5:M:466:U:C5 | 2.63 | 0.86 |
| 6:N:386:U:H2' | 6:N:387:U:H6 | 1.40 | 0.86 |
| 6:N:426:U:H2' | 6:N:427:U:O4' | 1.73 | 0.86 |
| 6:N:450:U:C2 | 6:N:451:U:C6 | 2.64 | 0.86 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:496:U:C2' | 6:N:497:U:H5' | 2.05 | 0.86 |
| 1:I:106:A:H2 | 1:I:107:A:C4 | 1.89 | 0.86 |
| 1:I:12:A:C2' | 1:I:13:A:C5' | 2.53 | 0.86 |
| 1:I:133:A:H2' | 1:I:134:A:C4' | 2.05 | 0.86 |
| 2:J:132:A:O2' | 2:J:133:A:C5' | 2.23 | 0.86 |
| 2:J:168:A:O3' | 2:J:169:A:OP2 | 1.92 | 0.86 |
| 2:J:233:A:O2' | 2:J:234:A:C5' | 2.23 | 0.86 |
| 2:J:72:A:O2' | 2:J:73:A:C5' | 2.23 | 0.86 |
| 5:M:349:U:C2 | 5:M:350:U:C6 | 2.63 | 0.86 |
| 5:M:430:U:C2 | 5:M:431:U:C5 | 2.64 | 0.86 |
| 5:M:468:U:O2 | 5:M:469:U:C5 | 2.29 | 0.86 |
| 6:N:398:U:O2' | 6:N:399:U:C5' | 2.22 | 0.86 |
| 6:N:410:U:C2 | 6:N:411:U:C5 | 2.64 | 0.86 |
| 6:N:425:U:C4 | 6:N:426:U:C4 | 2.63 | 0.86 |
| 1:I:133:A:HO2' | 1:I:134:A:H5' | 1.05 | 0.86 |
| 1:I:164:A:O2' | 1:I:165:A:P | 2.34 | 0.86 |
| 1:I:306:A:C2' | 1:I:307:A:C5' | 2.52 | 0.86 |
| 1:I:73:A:H2' | 1:I:74:A:C8 | 2.11 | 0.86 |
| 2:J:54:A:C2' | 2:J:55:A:O4' | 2.22 | 0.86 |
| 2:J:84:A:H2' | 2:J:85:A:C5' | 2.06 | 0.86 |
| 3:K:101:A:C5 | 3:K:102:A:N7 | 2.44 | 0.86 |
| 3:K:188:A:O2' | 3:K:189:A:H5' | 1.74 | 0.86 |
| 3:K:254:A:C2' | 3:K:255:A:H5' | 2.05 | 0.86 |
| 3:K:46:A:H2' | 3:K:47:A:O4' | 1.76 | 0.86 |
| 3:K:76:A:C2' | 3:K:77:A:H5' | 2.05 | 0.86 |
| 4:L:643:U:C2 | 4:L:644:U:C5 | 2.63 | 0.86 |
| 4:L:686:U:O2' | 4:L:687:U:C5' | 2.24 | 0.86 |
| 4:L:688:U:C2' | 4:L:689:U:H5' | 2.04 | 0.86 |
| 4:L:714:U:H2' | 4:L:715:U:H6 | 1.40 | 0.86 |
| 4:L:731:U:O2' | 4:L:732:U:H5' | 1.74 | 0.86 |
| 4:L:765:U:H2' | 4:L:766:U:O4' | 1.74 | 0.86 |
| 5:M:464:U:H2' | 5:M:465:U:O5' | 1.75 | 0.86 |
| 5:M:465:U:N3 | 5:M:466:U:C5 | 2.43 | 0.86 |
| 6:N:379:U:H2' | 6:N:380:U:C5' | 2.04 | 0.86 |
| 6:N:486:U:H2' | 6:N:487:U:H6 | 1.37 | 0.86 |
| 1:I:236:A:N3 | 1:I:237:A:C8 | 2.44 | 0.86 |
| 1:I:252:A:HO2' | 1:I:253:A:H5' | 1.33 | 0.86 |
| 1:I:358:A:C2 | 1:I:359:A:N7 | 2.44 | 0.86 |
| 1:I:403:A:O2' | 1:I:404:A:C5' | 2.24 | 0.86 |
| 1:I:4:A:C6 | 1:I:5:A:N6 | 2.44 | 0.86 |
| 2:J:29:A:C2 | 2:J:30:A:N9 | 2.43 | 0.86 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:100:A:H2' | 3:K:101:A:C5' | 2.05 | 0.86 |
| 4:L:435:U:O2' | 4:L:436:U:H5' | 1.76 | 0.86 |
| 4:L:448:U:C2 | 4:L:449:U:H5 | 1.92 | 0.86 |
| 4:L:682:U:H2' | 4:L:683:U:H6 | 1.39 | 0.86 |
| 4:L:739:U:O2 | 4:L:740:U:C6 | 2.28 | 0.86 |
| 5:M:290:U:C2' | 5:M:291:U:H5' | 2.05 | 0.86 |
| 5:M:315:U:O2' | 5:M:316:U:H5' | 1.76 | 0.86 |
| 6:N:417:U:H2' | 6:N:418:U:H6 | 1.41 | 0.86 |
| 1:I:182:A:O2' | 1:I:183:A:H5' | 1.74 | 0.86 |
| 1:I:78:A:H2 | 1:I:79:A:C4 | 1.92 | 0.86 |
| 2:J:117:A:H2 | 2:J:118:A:C4 | 1.89 | 0.86 |
| 2:J:43:A:C4 | 2:J:44:A:C8 | 2.63 | 0.86 |
| 3:K:120:A:C5 | 3:K:121:A:C8 | 2.63 | 0.86 |
| 3:K:164:A:N6 | 3:K:165:A:N6 | 2.24 | 0.86 |
| 3:K:82:A:O2' | 3:K:83:A:H5' | 1.72 | 0.86 |
| 4:L:463:U:C2' | 4:L:464:U:H5' | 2.06 | 0.86 |
| 4:L:547:U:O4 | 4:L:548:U:O4 | 1.93 | 0.86 |
| 5:M:316:U:N3 | 5:M:317:U:C5 | 2.44 | 0.86 |
| 5:M:512:U:H2' | 5:M:513:U:H6 | 1.39 | 0.86 |
| 6:N:496:U:C2' | 6:N:497:U:O4' | 2.24 | 0.86 |
| 1:I:277:A:C4 | 1:I:278:A:N7 | 2.44 | 0.86 |
| 2:J:202:A:C2' | 2:J:203:A:C5' | 2.54 | 0.86 |
| 4:L:722:U:N1 | 4:L:723:U:H5 | 1.74 | 0.86 |
| 4:L:722:U:C2' | 4:L:723:U:H5 | 1.88 | 0.86 |
| 5:M:288:U:H2' | 5:M:289:U:H6 | 1.40 | 0.86 |
| 5:M:455:U:H2' | 5:M:456:U:C5' | 2.04 | 0.86 |
| 5:M:501:U:C2 | 5:M:502:U:C5 | 2.63 | 0.86 |
| 5:M:505:U:C2' | 5:M:506:U:C5' | 2.51 | 0.86 |
| 1:I:17:A:C2 | 1:I:18:A:N9 | 2.44 | 0.85 |
| 1:I:229:A:C2' | 1:I:230:A:C5' | 2.53 | 0.85 |
| 1:I:288:A:O2' | 1:I:289:A:H5' | 1.75 | 0.85 |
| 1:I:329:A:H2' | 1:I:330:A:O4' | 1.76 | 0.85 |
| 1:I:91:A:H2' | 1:I:92:A:O5' | 1.74 | 0.85 |
| 2:J:55:A:C5 | 2:J:56:A:N7 | 2.43 | 0.85 |
| 2:J:63:A:O2' | 2:J:64:A:H5' | 1.75 | 0.85 |
| 2:J:72:A:C2' | 2:J:73:A:C5' | 2.53 | 0.85 |
| 3:K:57:A:H2' | 3:K:58:A:H8 | 1.40 | 0.85 |
| 4:L:451:U:H3' | 4:L:452:U:OP2 | 1.74 | 0.85 |
| 4:L:540:U:HO2' | 4:L:541:U:H5' | 1.36 | 0.85 |
| 4:L:550:U:H2' | 4:L:551:U:O5' | 1.74 | 0.85 |
| 4:L:683:U:H2' | 4:L:684:U:H6 | 1.41 | 0.85 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:336:U:H2' | 5:M:337:U:C5' | 1.97 | 0.85 |
| 5:M:410:U:N3 | 5:M:411:U:C5 | 2.44 | 0.85 |
| 6:N:436:U:H2' | 6:N:437:U:H6 | 1.38 | 0.85 |
| 1:I:14:A:O2' | 1:I:15:A:C5' | 2.24 | 0.85 |
| 1:I:192:A:O2' | 1:I:193:A:H5' | 1.76 | 0.85 |
| 1:I:323:A:HO2' | 1:I:324:A:H5' | 1.04 | 0.85 |
| 1:I:404:A:N6 | 1:I:405:A:N6 | 2.25 | 0.85 |
| 1:I:64:A:C2' | 1:I:65:A:C5' | 2.54 | 0.85 |
| 1:I:86:A:N6 | 1:I:87:A:C6 | 2.43 | 0.85 |
| 2:J:103:A:C2' | 2:J:104:A:H5' | 2.06 | 0.85 |
| 3:K:96:A:C2' | 3:K:97:A:O4' | 2.23 | 0.85 |
| 4:L:587:U:H2' | 4:L:588:U:O4' | 1.76 | 0.85 |
| 4:L:593:U:N3 | 4:L:594:U:C5 | 2.44 | 0.85 |
| 4:L:649:U:H2' | 4:L:650:U:O4' | 1.76 | 0.85 |
| 4:L:708:U:O2' | 4:L:709:U:C5' | 2.22 | 0.85 |
| 4:L:743:U:C2' | 4:L:744:U:H5' | 2.05 | 0.85 |
| 4:L:777:U:H2' | 4:L:778:U:O4' | 1.75 | 0.85 |
| 5:M:488:U:H2' | 5:M:489:U:H6 | 1.35 | 0.85 |
| 1:I:11:A:N6 | 1:I:12:A:N6 | 2.22 | 0.85 |
| 1:I:133:A:C2' | 1:I:134:A:O4' | 2.22 | 0.85 |
| 1:I:314:A:O2' | 1:I:315:A:C5' | 2.24 | 0.85 |
| 1:I:376:A:N6 | 1:I:377:A:H62 | 1.50 | 0.85 |
| 1:I:82:A:H2' | 1:I:83:A:C4' | 2.06 | 0.85 |
| 3:K:120:A:N6 | 3:K:121:A:N6 | 2.23 | 0.85 |
| 3:K:142:A:O2' | 3:K:143:A:H5' | 1.77 | 0.85 |
| 4:L:422:U:H2' | 4:L:423:U:C6 | 2.10 | 0.85 |
| 4:L:502:U:C2 | 4:L:503:U:C5 | 2.64 | 0.85 |
| 4:L:550:U:C2' | 4:L:551:U:C5' | 2.53 | 0.85 |
| 4:L:571:U:C4 | 4:L:572:U:O4 | 2.30 | 0.85 |
| 4:L:660:U:C2' | 4:L:661:U:H5' | 2.06 | 0.85 |
| 1:I:101:A:C2 | 1:I:102:A:N6 | 2.41 | 0.85 |
| 1:I:280:A:N3 | 1:I:281:A:N7 | 2.25 | 0.85 |
| 1:I:282:A:C2 | 1:I:283:A:N7 | 2.44 | 0.85 |
| 1:I:315:A:C2' | 1:I:316:A:H5' | 2.07 | 0.85 |
| 1:I:388:A:C2' | 1:I:389:A:O4' | 2.24 | 0.85 |
| 1:I:75:A:H2' | 1:I:76:A:C5' | 2.03 | 0.85 |
| 1:I:85:A:H2' | 1:I:86:A:O5' | 1.75 | 0.85 |
| 2:J:159:A:N6 | 2:J:160:A:N6 | 2.25 | 0.85 |
| 2:J:204:A:C6 | 2:J:205:A:C5 | 2.65 | 0.85 |
| 3:K:105:A:H2' | 3:K:106:A:H8 | 1.06 | 0.85 |
| 3:K:168:A:C2' | 3:K:169:A:O4' | 2.24 | 0.85 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:203:A:H2' | 3:K:204:A:H8 | 1.41 | 0.85 |
| 3:K:214:A:H2' | 3:K:215:A:H8 | 1.33 | 0.85 |
| 4:L:421:U:C2' | 4:L:422:U:O4' | 2.24 | 0.85 |
| 4:L:693:U:O4 | 4:L:694:U:O4 | 1.92 | 0.85 |
| 4:L:768:U:C2' | 4:L:769:U:C5' | 2.53 | 0.85 |
| 1:I:109:A:N3 | 1:I:110:A:N9 | 2.23 | 0.85 |
| 1:I:13:A:C5 | 1:I:14:A:N7 | 2.44 | 0.85 |
| 1:I:295:A:HO2' | 1:I:296:A:H5' | 1.37 | 0.85 |
| 1:I:324:A:C2 | 1:I:325:A:C8 | 2.65 | 0.85 |
| 1:I:85:A:C2' | 1:I:86:A:H5' | 2.05 | 0.85 |
| 2:J:61:A:O2' | 2:J:62:A:P | 2.34 | 0.85 |
| 3:K:236:A:O2' | 3:K:237:A:H5' | 1.74 | 0.85 |
| 4:L:422:U:H2' | 4:L:423:U:H6 | 1.38 | 0.85 |
| 4:L:499:U:C2 | 4:L:500:U:C5 | 2.65 | 0.85 |
| 4:L:595:U:C2' | 4:L:596:U:C5' | 2.55 | 0.85 |
| 4:L:760:U:C2' | 4:L:761:U:H5' | 2.01 | 0.85 |
| 6:N:362:U:C2' | 6:N:363:U:H5' | 2.07 | 0.85 |
| 6:N:485:U:O3' | 6:N:486:U:O5' | 1.94 | 0.85 |
| 2:J:117:A:H2' | 2:J:118:A:C8 | 2.11 | 0.85 |
| 2:J:98:A:H2' | 2:J:99:A:C8 | 2.11 | 0.85 |
| 3:K:119:A:C2 | 3:K:120:A:C4 | 2.64 | 0.85 |
| 3:K:155:A:C2' | 3:K:156:A:O4' | 2.23 | 0.85 |
| 3:K:31:A:C6 | 3:K:32:A:N6 | 2.45 | 0.85 |
| 4:L:461:U:H2' | 4:L:462:U:C6 | 2.12 | 0.85 |
| 4:L:693:U:N3 | 4:L:694:U:C5 | 2.44 | 0.85 |
| 5:M:432:U:HO2' | 5:M:433:U:H5' | 1.32 | 0.85 |
| 5:M:524:U:N3 | 5:M:525:U:C5 | 2.45 | 0.85 |
| 6:N:489:U:O2' | 6:N:490:U:H5' | 1.77 | 0.85 |
| 1:I:248:A:N3 | 1:I:249:A:C8 | 2.45 | 0.85 |
| 1:I:269:A:O2' | 1:I:270:A:C5' | 2.20 | 0.85 |
| 1:I:70:A:O2' | 1:I:71:A:C5' | 2.24 | 0.85 |
| 1:I:86:A:C6 | 1:I:87:A:N7 | 2.45 | 0.85 |
| 2:J:104:A:O2' | 2:J:105:A:C5' | 2.25 | 0.85 |
| 2:J:127:A:H2' | 2:J:128:A:O5' | 1.75 | 0.85 |
| 2:J:229:A:O2' | 2:J:230:A:O4' | 1.95 | 0.85 |
| 2:J:40:A:H2' | 2:J:41:A:H8 | 1.41 | 0.85 |
| 4:L:811:U:N3 | 4:L:812:U:C4 | 2.44 | 0.85 |
| 5:M:459:U:O2' | 5:M:460:U:H5' | 1.77 | 0.85 |
| 5:M:523:U:O2' | 5:M:524:U:H5' | 1.76 | 0.85 |
| 6:N:426:U:H2' | 6:N:427:U:C5' | 2.04 | 0.85 |
| 1:I:317:A:HO2' | 1:I:318:A:H5' | 0.92 | 0.85 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:69:A:C3' | 2:J:70:A:H5' | 1.92 | 0.85 |
| 3:K:154:A:C6 | 3:K:155:A:C5 | 2.65 | 0.85 |
| 3:K:202:A:H2' | 3:K:203:A:C8 | 2.12 | 0.85 |
| 4:L:550:U:C2' | 4:L:551:U:O5' | 2.25 | 0.85 |
| 4:L:586:U:N3 | 4:L:587:U:C4 | 2.45 | 0.85 |
| 4:L:671:U:H2' | 4:L:672:U:H6 | 1.40 | 0.85 |
| 4:L:811:U:O2' | 4:L:812:U:O4' | 1.94 | 0.85 |
| 5:M:494:U:HO2' | 5:M:495:U:H5' | 1.39 | 0.85 |
| 6:N:406:U:C4 | 6:N:407:U:C4 | 2.64 | 0.85 |
| 1:I:187:A:H2' | 1:I:188:A:C8 | 2.12 | 0.85 |
| 1:I:195:A:O2' | 1:I:196:A:H5' | 1.77 | 0.85 |
| 1:I:245:A:C2 | 1:I:246:A:C8 | 2.64 | 0.85 |
| 1:I:277:A:H2' | 1:I:278:A:H8 | 1.36 | 0.85 |
| 1:I:87:A:H2' | 1:I:88:A:C5' | 2.06 | 0.85 |
| 2:J:237:A:N3 | 2:J:238:A:C8 | 2.45 | 0.85 |
| 2:J:37:A:C2 | 2:J:38:A:C8 | 2.65 | 0.85 |
| 2:J:97:A:N3 | 2:J:98:A:N7 | 2.22 | 0.85 |
| 3:K:132:A:C2' | 3:K:133:A:H5' | 2.07 | 0.85 |
| 3:K:38:A:N3 | 3:K:39:A:C8 | 2.45 | 0.85 |
| 3:K:95:A:O2' | 3:K:96:A:C5' | 2.20 | 0.85 |
| 4:L:489:U:C2 | 4:L:490:U:C5 | 2.65 | 0.85 |
| 4:L:496:U:O2' | 4:L:497:U:H5' | 1.75 | 0.85 |
| 4:L:507:U:HO2' | 4:L:508:U:H5' | 1.06 | 0.85 |
| 4:L:565:U:O2' | 4:L:566:U:H5' | 1.77 | 0.85 |
| 4:L:639:U:C2' | 4:L:640:U:H5' | 2.07 | 0.85 |
| 6:N:331:U:H2' | 6:N:332:U:H6 | 1.39 | 0.85 |
| 6:N:468:U:C2 | 6:N:469:U:C5 | 2.65 | 0.85 |
| 6:N:486:U:H2' | 6:N:487:U:O4' | 1.77 | 0.85 |
| 1:I:126:A:O2' | 1:I:127:A:C5' | 2.23 | 0.85 |
| 1:I:134:A:C2 | 1:I:135:A:C8 | 2.60 | 0.85 |
| 1:I:140:A:N6 | 1:I:141:A:N6 | 2.24 | 0.85 |
| 1:I:239:A:C2' | 1:I:240:A:H5' | 2.07 | 0.85 |
| 1:I:30:A:O2' | 1:I:31:A:C5' | 2.23 | 0.85 |
| 1:I:328:A:H2' | 1:I:329:A:H8 | 1.41 | 0.85 |
| 1:I:388:A:O2' | 1:I:389:A:O4' | 1.94 | 0.85 |
| 2:J:204:A:H2' | 2:J:205:A:H8 | 1.41 | 0.85 |
| 4:L:497:U:C2 | 4:L:498:U:C6 | 2.65 | 0.85 |
| 4:L:760:U:C2' | 4:L:761:U:C5' | 2.55 | 0.85 |
| 5:M:377:U:O2' | 5:M:378:U:H5' | 1.76 | 0.85 |
| 5:M:442:U:O2' | 5:M:443:U:H5' | 1.75 | 0.85 |
| 5:M:502:U:O2' | 5:M:503:U:P | 2.34 | 0.85 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:512:U:H2' | 5:M:513:U:C6 | 2.12 | 0.85 |
| 1:I:10:A:O2' | 1:I:11:A:H5' | 1.76 | 0.84 |
| 1:I:338:A:N6 | 1:I:339:A:N6 | 2.24 | 0.84 |
| 2:J:128:A:C2' | 2:J:129:A:H5' | 2.07 | 0.84 |
| 2:J:135:A:C6 | 2:J:136:A:N6 | 2.45 | 0.84 |
| 3:K:100:A:C2 | 3:K:101:A:C4 | 2.65 | 0.84 |
| 3:K:147:A:N3 | 3:K:148:A:C8 | 2.45 | 0.84 |
| 3:K:153:A:H2 | 3:K:154:A:C4 | 1.93 | 0.84 |
| 3:K:166:A:C2' | 3:K:167:A:C5' | 2.55 | 0.84 |
| 3:K:49:A:O2' | 3:K:50:A:P | 2.35 | 0.84 |
| 4:L:495:U:H2' | 4:L:496:U:H6 | 1.41 | 0.84 |
| 4:L:516:U:H2' | 4:L:517:U:O4' | 1.76 | 0.84 |
| 4:L:586:U:H2' | 4:L:587:U:H6 | 1.42 | 0.84 |
| 4:L:815:U:H2' | 4:L:816:U:C5' | 2.07 | 0.84 |
| 5:M:407:U:C2 | 5:M:408:U:H5 | 1.95 | 0.84 |
| 5:M:488:U:C2 | 5:M:489:U:C5 | 2.64 | 0.84 |
| 6:N:524:U:O3' | 6:N:525:U:OP2 | 1.91 | 0.84 |
| 1:I:236:A:C2' | 1:I:237:A:H5' | 2.06 | 0.84 |
| 2:J:175:A:H2' | 2:J:176:A:H8 | 1.42 | 0.84 |
| 2:J:218:A:HO2' | 2:J:219:A:H5' | 1.03 | 0.84 |
| 2:J:48:A:O2' | 2:J:49:A:H5' | 1.76 | 0.84 |
| 2:J:72:A:H2' | 2:J:73:A:O4' | 1.77 | 0.84 |
| 3:K:114:A:N3 | 3:K:115:A:C8 | 2.45 | 0.84 |
| 4:L:435:U:H2' | 4:L:436:U:C6 | 2.12 | 0.84 |
| 4:L:515:U:H2' | 4:L:516:U:C6 | 2.12 | 0.84 |
| 4:L:549:U:C2 | 4:L:550:U:C6 | 2.65 | 0.84 |
| 4:L:550:U:HO2' | 4:L:551:U:H5' | 1.03 | 0.84 |
| 4:L:763:U:C2' | 4:L:764:U:O4' | 2.25 | 0.84 |
| 5:M:287:U:C2 | 5:M:288:U:C6 | 2.65 | 0.84 |
| 5:M:350:U:HO2' | 5:M:351:U:H5' | 1.05 | 0.84 |
| 6:N:450:U:H2' | 6:N:451:U:C6 | 2.11 | 0.84 |
| 1:I:103:A:H2 | 1:I:104:A:C4 | 1.94 | 0.84 |
| 1:I:138:A:H2' | 1:I:139:A:O4' | 1.77 | 0.84 |
| 1:I:16:A:C5 | 1:I:17:A:N7 | 2.45 | 0.84 |
| 1:I:90:A:C2' | 1:I:91:A:C5' | 2.55 | 0.84 |
| 2:J:182:A:C6 | 2:J:183:A:C5 | 2.65 | 0.84 |
| 3:K:135:A:C2 | 3:K:136:A:C5 | 2.66 | 0.84 |
| 3:K:203:A:O2' | 3:K:204:A:O5' | 1.93 | 0.84 |
| 4:L:478:U:C2' | 4:L:479:U:H5' | 2.07 | 0.84 |
| 4:L:566:U:C2' | 4:L:567:U:C5' | 2.54 | 0.84 |
| 4:L:770:U:C4 | 4:L:771:U:C5 | 2.64 | 0.84 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:780:U:C2' | 4:L:781:U:C5' | 2.52 | 0.84 |
| 6:N:436:U:H2' | 6:N:437:U:C6 | 2.12 | 0.84 |
| 1:I:162:A:C6 | 1:I:163:A:C5 | 2.64 | 0.84 |
| 1:I:376:A:N6 | 1:I:377:A:H61 | 1.71 | 0.84 |
| 2:J:136:A:H2' | 2:J:137:A:H8 | 1.38 | 0.84 |
| 3:K:147:A:O2' | 3:K:148:A:P | 2.34 | 0.84 |
| 3:K:88:A:O2' | 3:K:89:A:C5' | 2.25 | 0.84 |
| 4:L:588:U:HO2' | 4:L:589:U:H5' | 1.05 | 0.84 |
| 4:L:722:U:H2' | 4:L:723:U:H5 | 1.36 | 0.84 |
| 5:M:288:U:O2' | 5:M:289:U:H5' | 1.77 | 0.84 |
| 5:M:331:U:C2' | 5:M:332:U:C5' | 2.56 | 0.84 |
| 5:M:395:U:C2' | 5:M:396:U:C5' | 2.55 | 0.84 |
| 1:I:20:A:H2' | 1:I:21:A:C8 | 2.13 | 0.84 |
| 1:I:231:A:N6 | 1:I:232:A:N6 | 2.26 | 0.84 |
| 1:I:375:A:N3 | 1:I:376:A:C8 | 2.45 | 0.84 |
| 2:J:234:A:C2' | 2:J:235:A:H5' | 2.06 | 0.84 |
| 2:J:254:A:C2' | 2:J:255:A:C5' | 2.54 | 0.84 |
| 2:J:92:A:H2' | 2:J:93:A:C8 | 2.13 | 0.84 |
| 3:K:99:A:C2 | 3:K:100:A:C4 | 2.65 | 0.84 |
| 3:K:105:A:C4 | 3:K:106:A:C8 | 2.66 | 0.84 |
| 3:K:253:A:C3' | 3:K:254:A:H5' | 2.03 | 0.84 |
| 4:L:525:U:O2' | 4:L:526:U:C5' | 2.21 | 0.84 |
| 4:L:584:U:H2' | 4:L:585:U:H6 | 1.42 | 0.84 |
| 4:L:728:U:C2 | 4:L:729:U:H5 | 1.86 | 0.84 |
| 4:L:761:U:C2 | 4:L:762:U:C5 | 2.65 | 0.84 |
| 4:L:775:U:H2' | 4:L:776:U:C5' | 2.07 | 0.84 |
| 5:M:480:U:O2 | 5:M:481:U:C6 | 2.30 | 0.84 |
| 5:M:502:U:O2 | 5:M:503:U:C6 | 2.29 | 0.84 |
| 1:I:376:A:C2 | 1:I:377:A:N7 | 2.45 | 0.84 |
| 1:I:48:A:C2' | 1:I:49:A:C5' | 2.55 | 0.84 |
| 2:J:144:A:C2 | 2:J:145:A:C8 | 2.65 | 0.84 |
| 2:J:176:A:C2 | 2:J:177:A:C5 | 2.66 | 0.84 |
| 2:J:209:A:C2' | 2:J:210:A:H5' | 2.08 | 0.84 |
| 2:J:42:A:O2' | 2:J:43:A:C5' | 2.25 | 0.84 |
| 2:J:84:A:C4 | 2:J:85:A:C8 | 2.66 | 0.84 |
| 3:K:164:A:C4 | 3:K:165:A:C8 | 2.65 | 0.84 |
| 4:L:436:U:H2' | 4:L:437:U:O4' | 1.77 | 0.84 |
| 4:L:622:U:H2' | 4:L:623:U:C5' | 2.07 | 0.84 |
| 4:L:692:U:H2' | 4:L:693:U:H6 | 1.41 | 0.84 |
| 5:M:406:U:C2' | 5:M:407:U:O4' | 2.25 | 0.84 |
| 5:M:406:U:C2 | 5:M:407:U:C6 | 2.65 | 0.84 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:420:U:C2' | 6:N:421:U:C5' | 2.55 | 0.84 |
| 1:I:227:A:C2' | 1:I:228:A:H5' | 2.08 | 0.84 |
| 1:I:261:A:O2' | 1:I:262:A:H5' | 1.77 | 0.84 |
| 1:I:4:A:H2' | 1:I:5:A:H8 | 1.32 | 0.84 |
| 1:I:96:A:N6 | 1:I:97:A:C6 | 2.44 | 0.84 |
| 3:K:203:A:C2 | 3:K:204:A:C6 | 2.66 | 0.84 |
| 4:L:646:U:HO2' | 4:L:647:U:H5' | 1.39 | 0.84 |
| 4:L:734:U:C2' | 4:L:735:U:H5' | 2.07 | 0.84 |
| 4:L:774:U:C2 | 4:L:775:U:C5 | 2.66 | 0.84 |
| 5:M:310:U:C2' | 5:M:311:U:H5' | 2.07 | 0.84 |
| 6:N:279:U:H3' | 6:N:280:U:OP2 | 1.77 | 0.84 |
| 6:N:473:U:H2' | 6:N:474:U:O4' | 1.77 | 0.84 |
| 1:I:303:A:C2 | 1:I:304:A:C8 | 2.65 | 0.84 |
| 1:I:79:A:C5 | 1:I:80:A:N7 | 2.45 | 0.84 |
| 2:J:113:A:O2' | 2:J:114:A:H5' | 1.78 | 0.84 |
| 4:L:682:U:C2' | 4:L:683:U:H5' | 2.07 | 0.84 |
| 5:M:402:U:O2' | 5:M:403:U:H5' | 1.78 | 0.84 |
| 5:M:405:U:H2' | 5:M:406:U:C5' | 2.06 | 0.84 |
| 5:M:435:U:C2 | 5:M:436:U:C6 | 2.66 | 0.84 |
| 6:N:384:U:H2' | 6:N:385:U:H6 | 1.41 | 0.84 |
| 6:N:489:U:O2 | 6:N:490:U:C6 | 2.31 | 0.84 |
| 1:I:136:A:C2 | 1:I:137:A:C4 | 2.66 | 0.84 |
| 2:J:205:A:C4 | 2:J:206:A:C8 | 2.66 | 0.84 |
| 2:J:57:A:C2 | 2:J:58:A:C8 | 2.65 | 0.84 |
| 4:L:437:U:C2 | 4:L:438:U:C5 | 2.65 | 0.84 |
| 4:L:537:U:H2' | 4:L:538:U:O4' | 1.77 | 0.84 |
| 4:L:711:U:N3 | 4:L:712:U:C4 | 2.46 | 0.84 |
| 5:M:335:U:O5' | 5:M:336:U:OP2 | 1.96 | 0.84 |
| 5:M:373:U:C2' | 5:M:374:U:C5' | 2.55 | 0.84 |
| 5:M:491:U:O2' | 5:M:492:U:C5' | 2.24 | 0.84 |
| 5:M:519:U:N3 | 5:M:520:U:C5 | 2.45 | 0.84 |
| 6:N:477:U:O2' | 6:N:478:U:H5' | 1.78 | 0.84 |
| 1:I:161:A:H2' | 1:I:162:A:O4' | 1.76 | 0.84 |
| 1:I:266:A:C2 | 1:I:267:A:C8 | 2.65 | 0.84 |
| 2:J:106:A:C2' | 2:J:107:A:H5' | 2.06 | 0.84 |
| 2:J:26:A:C2' | 2:J:27:A:H5' | 2.07 | 0.84 |
| 2:J:97:A:C2 | 2:J:98:A:C8 | 2.64 | 0.84 |
| 3:K:142:A:N3 | 3:K:143:A:C8 | 2.45 | 0.84 |
| 4:L:601:U:H2' | 4:L:602:U:H6 | 1.41 | 0.84 |
| 5:M:318:U:H2' | 5:M:319:U:C5' | 2.06 | 0.84 |
| 5:M:510:U:C2' | 5:M:511:U:H6 | 1.90 | 0.84 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:521:U:O2' | 5:M:522:U:H5' | 1.77 | 0.84 |
| 1:I:103:A:C2 | 1:I:104:A:C5 | 2.66 | 0.83 |
| 1:I:112:A:C2 | 1:I:113:A:C5 | 2.65 | 0.83 |
| 1:I:256:A:N6 | 1:I:257:A:N6 | 2.26 | 0.83 |
| 1:I:25:A:C2' | 1:I:26:A:C5' | 2.56 | 0.83 |
| 1:I:58:A:C6 | 1:I:59:A:N6 | 2.46 | 0.83 |
| 1:I:85:A:C2' | 1:I:86:A:C5' | 2.55 | 0.83 |
| 2:J:102:A:H2' | 2:J:103:A:C8 | 2.13 | 0.83 |
| 4:L:551:U:C2 | 4:L:552:U:C5 | 2.66 | 0.83 |
| 4:L:597:U:C2' | 4:L:598:U:H5' | 2.07 | 0.83 |
| 4:L:722:U:N1 | 4:L:723:U:C5 | 2.44 | 0.83 |
| 4:L:724:U:H2' | 4:L:725:U:C5' | 2.07 | 0.83 |
| 5:M:319:U:O2' | 5:M:320:U:C4' | 2.26 | 0.83 |
| 5:M:432:U:C2' | 5:M:433:U:H5' | 2.08 | 0.83 |
| 5:M:496:U:HO2' | 5:M:497:U:H5' | 1.39 | 0.83 |
| 6:N:339:U:H2' | 6:N:340:U:C6 | 2.13 | 0.83 |
| 6:N:474:U:C2' | 6:N:475:U:C5' | 2.55 | 0.83 |
| 1:I:133:A:C2' | 1:I:134:A:C4' | 2.55 | 0.83 |
| 1:I:13:A:C2 | 1:I:14:A:C4 | 2.66 | 0.83 |
| 1:I:242:A:N3 | 1:I:243:A:C1' | 2.41 | 0.83 |
| 1:I:74:A:C2' | 1:I:75:A:C4' | 2.56 | 0.83 |
| 3:K:42:A:O2' | 3:K:43:A:C5' | 2.24 | 0.83 |
| 4:L:497:U:H2' | 4:L:498:U:O4' | 1.77 | 0.83 |
| 4:L:518:U:H2' | 4:L:519:U:C5' | 2.05 | 0.83 |
| 4:L:603:U:C2' | 4:L:604:U:H5' | 2.08 | 0.83 |
| 5:M:335:U:C6 | 5:M:336:U:H5 | 1.95 | 0.83 |
| 1:I:131:A:C6 | 1:I:132:A:C6 | 2.67 | 0.83 |
| 1:I:140:A:N3 | 1:I:141:A:N7 | 2.26 | 0.83 |
| 1:I:250:A:H2' | 1:I:251:A:H8 | 1.39 | 0.83 |
| 1:I:74:A:C5 | 1:I:75:A:N7 | 2.47 | 0.83 |
| 2:J:123:A:H2' | 2:J:124:A:O4' | 1.77 | 0.83 |
| 2:J:42:A:C2' | 2:J:43:A:C5' | 2.56 | 0.83 |
| 3:K:121:A:N6 | 3:K:122:A:N6 | 2.27 | 0.83 |
| 4:L:508:U:C2 | 4:L:509:U:C5 | 2.65 | 0.83 |
| 4:L:711:U:C2' | 4:L:712:U:H6 | 1.92 | 0.83 |
| 4:L:754:U:C2' | 4:L:755:U:H5' | 1.92 | 0.83 |
| 4:L:779:U:O2' | 4:L:780:U:C5' | 2.19 | 0.83 |
| 4:L:782:U:O2' | 4:L:783:U:H5' | 1.77 | 0.83 |
| 5:M:502:U:O2' | 5:M:503:U:C5' | 2.26 | 0.83 |
| 5:M:527:U:O2' | 5:M:528:U:H5' | 1.79 | 0.83 |
| 6:N:310:U:H2' | 6:N:311:U:C6 | 2.13 | 0.83 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:424:U:C2' | 6:N:425:U:C6 | 2.56 | 0.83 |
| 1:I:261:A:C2' | 1:I:262:A:O4' | 2.27 | 0.83 |
| 1:I:388:A:H2' | 1:I:389:A:O4' | 1.77 | 0.83 |
| 2:J:204:A:H2' | 2:J:205:A:O4' | 1.78 | 0.83 |
| 2:J:28:A:C4 | 2:J:29:A:C8 | 2.67 | 0.83 |
| 3:K:203:A:C2 | 3:K:204:A:N7 | 2.41 | 0.83 |
| 4:L:438:U:N3 | 4:L:439:U:C4 | 2.46 | 0.83 |
| 4:L:578:U:HO2' | 4:L:579:U:H5' | 1.38 | 0.83 |
| 1:I:321:A:C2' | 1:I:322:A:H5' | 2.09 | 0.83 |
| 1:I:71:A:H2' | 1:I:72:A:O4' | 1.78 | 0.83 |
| 2:J:144:A:C2 | 5:M:410:U:O2 | 2.31 | 0.83 |
| 2:J:156:A:C2' | 2:J:157:A:H5' | 2.06 | 0.83 |
| 2:J:219:A:C2 | 2:J:220:A:C8 | 2.66 | 0.83 |
| 4:L:452:U:O2' | 4:L:453:U:H5' | 1.77 | 0.83 |
| 4:L:592:U:O2' | 4:L:593:U:H5' | 1.78 | 0.83 |
| 4:L:717:U:H2' | 4:L:718:U:C6 | 2.13 | 0.83 |
| 4:L:811:U:O2' | 4:L:812:U:H5' | 1.73 | 0.83 |
| 5:M:395:U:HO2' | 5:M:396:U:H5' | 1.02 | 0.83 |
| 5:M:399:U:HO2' | 5:M:400:U:H5' | 1.40 | 0.83 |
| 6:N:374:U:H2' | 6:N:375:U:H6 | 1.43 | 0.83 |
| 6:N:473:U:H2' | 6:N:474:U:H6 | 1.39 | 0.83 |
| 1:I:119:A:H2' | 1:I:120:A:C5' | 2.01 | 0.83 |
| 1:I:13:A:O2' | 1:I:14:A:H5' | 1.76 | 0.83 |
| 1:I:62:A:C2 | 1:I:63:A:N9 | 2.47 | 0.83 |
| 1:I:67:A:C6 | 1:I:68:A:N6 | 2.45 | 0.83 |
| 1:I:97:A:C2' | 1:I:98:A:H5' | 2.08 | 0.83 |
| 2:J:153:A:C2' | 2:J:154:A:C5' | 2.57 | 0.83 |
| 2:J:160:A:C2 | 2:J:161:A:C4 | 2.66 | 0.83 |
| 2:J:28:A:N6 | 2:J:29:A:H62 | 1.73 | 0.83 |
| 2:J:94:A:HO2' | 2:J:95:A:H5' | 1.06 | 0.83 |
| 3:K:90:A:C2' | 3:K:91:A:C5' | 2.55 | 0.83 |
| 4:L:464:U:O2' | 4:L:465:U:C5' | 2.22 | 0.83 |
| 4:L:715:U:O2 | 4:L:716:U:N1 | 2.12 | 0.83 |
| 4:L:766:U:C2' | 4:L:767:U:C6 | 2.59 | 0.83 |
| 6:N:406:U:C2' | 6:N:407:U:C5' | 2.57 | 0.83 |
| 6:N:441:U:C2 | 6:N:442:U:C6 | 2.65 | 0.83 |
| 1:I:358:A:O2' | 1:I:359:A:H5' | 1.78 | 0.83 |
| 1:I:67:A:C6 | 1:I:68:A:C5 | 2.66 | 0.83 |
| 1:I:87:A:HO2' | 1:I:88:A:H5' | 1.42 | 0.83 |
| 2:J:142:A:N6 | 2:J:143:A:H62 | 1.75 | 0.83 |
| 2:J:75:A:C2' | 2:J:76:A:H5' | 2.08 | 0.83 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:102:A:N3 | 3:K:103:A:C8 | 2.46 | 0.83 |
| 3:K:125:A:C2' | 3:K:126:A:C5' | 2.56 | 0.83 |
| 3:K:213:A:H2' | 3:K:214:A:C8 | 2.13 | 0.83 |
| 4:L:435:U:C2' | 4:L:436:U:O4' | 2.26 | 0.83 |
| 4:L:600:U:H2' | 4:L:601:U:H6 | 1.44 | 0.83 |
| 4:L:715:U:C2 | 4:L:716:U:C6 | 2.67 | 0.83 |
| 6:N:359:U:O2' | 6:N:360:U:H5' | 1.79 | 0.83 |
| 6:N:442:U:C2' | 6:N:443:U:C5' | 2.55 | 0.83 |
| 3:K:33:A:O2' | 3:K:34:A:H5' | 1.79 | 0.83 |
| 4:L:486:U:C2 | 4:L:487:U:C5 | 2.67 | 0.83 |
| 4:L:513:U:C2' | 4:L:514:U:H5' | 2.08 | 0.83 |
| 4:L:571:U:C2 | 4:L:572:U:C5 | 2.67 | 0.83 |
| 5:M:454:U:C4 | 5:M:455:U:C4 | 2.66 | 0.83 |
| 6:N:278:U:C2' | 6:N:279:U:H5' | 2.09 | 0.83 |
| 1:I:156:A:N6 | 1:I:157:A:N6 | 2.26 | 0.83 |
| 2:J:221:A:C2' | 2:J:222:A:C5' | 2.56 | 0.83 |
| 2:J:67:A:HO2' | 2:J:68:A:H5' | 1.43 | 0.83 |
| 3:K:142:A:C2 | 3:K:143:A:C5 | 2.66 | 0.83 |
| 3:K:80:A:O2' | 3:K:81:A:H5' | 1.79 | 0.83 |
| 4:L:777:U:C2 | 4:L:778:U:C6 | 2.67 | 0.83 |
| 6:N:321:U:H2' | 6:N:322:U:C6 | 2.12 | 0.83 |
| 6:N:477:U:C2' | 6:N:478:U:H5' | 2.09 | 0.83 |
| 1:I:101:A:N1 | 1:I:102:A:C6 | 2.41 | 0.83 |
| 1:I:138:A:HO2' | 1:I:139:A:H5' | 1.41 | 0.83 |
| 1:I:14:A:C2 | 1:I:15:A:C4 | 2.67 | 0.83 |
| 1:I:192:A:C2' | 1:I:193:A:H5' | 2.09 | 0.83 |
| 1:I:202:A:HO2' | 1:I:203:A:H5' | 1.04 | 0.83 |
| 1:I:79:A:C6 | 1:I:80:A:C5 | 2.67 | 0.83 |
| 1:I:96:A:C4 | 1:I:97:A:C8 | 2.66 | 0.83 |
| 2:J:214:A:C2 | 2:J:215:A:C8 | 2.67 | 0.83 |
| 2:J:83:A:C2 | 2:J:84:A:C8 | 2.65 | 0.83 |
| 2:J:86:A:C2 | 2:J:87:A:N7 | 2.47 | 0.83 |
| 4:L:443:U:O2' | 4:L:444:U:H5' | 1.79 | 0.83 |
| 4:L:538:U:H2' | 4:L:539:U:C6 | 2.13 | 0.83 |
| 4:L:668:U:C2 | 4:L:669:U:C5 | 2.67 | 0.83 |
| 4:L:692:U:C2' | 4:L:693:U:H5' | 2.08 | 0.83 |
| 4:L:811:U:C2' | 4:L:812:U:H6 | 1.91 | 0.83 |
| 5:M:323:U:C2' | 5:M:324:U:C4' | 2.26 | 0.83 |
| 5:M:348:U:N3 | 5:M:349:U:C5 | 2.45 | 0.83 |
| 5:M:435:U:HO2' | 5:M:436:U:H5' | 1.39 | 0.83 |
| 6:N:449:U:H2' | 6:N:450:U:H6 | 1.44 | 0.83 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:237:A:O2' | 1:I:238:A:C5' | 2.25 | 0.82 |
| 1:I:250:A:N6 | 1:I:251:A:H62 | 1.74 | 0.82 |
| 1:I:317:A:C2' | 1:I:318:A:H5' | 2.08 | 0.82 |
| 1:I:86:A:C6 | 1:I:87:A:C6 | 2.67 | 0.82 |
| 2:J:70:A:C2 | 2:J:71:A:N9 | 2.47 | 0.82 |
| 3:K:144:A:H2' | 3:K:145:A:C8 | 2.13 | 0.82 |
| 3:K:49:A:C2 | 3:K:50:A:C5 | 2.67 | 0.82 |
| 3:K:5:A:O2' | 3:K:6:A:H5' | 1.77 | 0.82 |
| 4:L:549:U:H2' | 4:L:550:U:H6 | 1.44 | 0.82 |
| 4:L:577:U:N3 | 4:L:578:U:C5 | 2.47 | 0.82 |
| 4:L:660:U:O2' | 4:L:661:U:C5' | 2.27 | 0.82 |
| 4:L:743:U:C2' | 4:L:744:U:C5' | 2.57 | 0.82 |
| 5:M:304:U:C2 | 5:M:305:U:C5 | 2.67 | 0.82 |
| 5:M:447:U:C2 | 5:M:448:U:C5 | 2.67 | 0.82 |
| 6:N:281:U:O2' | 6:N:282:U:C5' | 2.19 | 0.82 |
| 6:N:368:U:HO2' | 6:N:369:U:H5' | 1.43 | 0.82 |
| 1:I:270:A:H2' | 1:I:271:A:C4' | 2.09 | 0.82 |
| 1:I:306:A:C2 | 1:I:307:A:N9 | 2.47 | 0.82 |
| 2:J:228:A:H2' | 2:J:229:A:C8 | 2.14 | 0.82 |
| 2:J:231:A:C6 | 2:J:232:A:N6 | 2.46 | 0.82 |
| 3:K:212:A:C6 | 3:K:213:A:C6 | 2.66 | 0.82 |
| 3:K:64:A:C2' | 3:K:65:A:C5' | 2.56 | 0.82 |
| 4:L:723:U:C5 | 4:L:724:U:H5 | 1.93 | 0.82 |
| 4:L:739:U:C2 | 4:L:740:U:C6 | 2.67 | 0.82 |
| 5:M:350:U:C2 | 5:M:351:U:C6 | 2.67 | 0.82 |
| 5:M:453:U:C2' | 5:M:454:U:H6 | 1.91 | 0.82 |
| 5:M:458:U:HO2' | 5:M:459:U:H5' | 1.02 | 0.82 |
| 6:N:310:U:H2' | 6:N:311:U:H6 | 1.42 | 0.82 |
| 6:N:326:U:H2' | 6:N:327:U:H6 | 1.44 | 0.82 |
| 6:N:443:U:N3 | 6:N:444:U:C5 | 2.46 | 0.82 |
| 1:I:306:A:H2' | 1:I:307:A:O5' | 1.79 | 0.82 |
| 1:I:389:A:H2' | 1:I:390:A:H8 | 1.44 | 0.82 |
| 1:I:82:A:C5 | 1:I:83:A:N7 | 2.47 | 0.82 |
| 2:J:100:A:C2' | 2:J:101:A:C5' | 2.57 | 0.82 |
| 2:J:124:A:C2 | 2:J:125:A:C4 | 2.67 | 0.82 |
| 2:J:127:A:C2 | 2:J:128:A:N9 | 2.47 | 0.82 |
| 2:J:147:A:H2' | 2:J:148:A:H8 | 1.42 | 0.82 |
| 2:J:182:A:C4 | 2:J:183:A:C8 | 2.67 | 0.82 |
| 3:K:135:A:C2 | 3:K:136:A:N7 | 2.47 | 0.82 |
| 4:L:684:U:N3 | 4:L:685:U:C4 | 2.46 | 0.82 |
| 4:L:721:U:H2' | 4:L:722:U:H6 | 1.42 | 0.82 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:757:U:C4 | 4:L:758:U:C4 | 2.67 | 0.82 |
| 5:M:460:U:H2' | 5:M:461:U:C6 | 2.12 | 0.82 |
| 5:M:510:U:O2' | 5:M:511:U:C4' | 2.27 | 0.82 |
| 6:N:497:U:H2' | 6:N:498:U:C4' | 2.09 | 0.82 |
| 1:I:161:A:C2' | 1:I:162:A:C5' | 2.58 | 0.82 |
| 1:I:273:A:H2' | 1:I:274:A:C5' | 2.08 | 0.82 |
| 1:I:296:A:H2' | 1:I:297:A:O4' | 1.78 | 0.82 |
| 1:I:364:A:HO2' | 1:I:365:A:H5' | 1.44 | 0.82 |
| 1:I:86:A:C4 | 1:I:87:A:C8 | 2.68 | 0.82 |
| 2:J:182:A:C4 | 2:J:183:A:N7 | 2.47 | 0.82 |
| 4:L:497:U:H2' | 4:L:498:U:C4' | 2.08 | 0.82 |
| 4:L:538:U:C2 | 4:L:539:U:C5 | 2.67 | 0.82 |
| 4:L:755:U:C2 | 4:L:756:U:C6 | 2.67 | 0.82 |
| 4:L:812:U:H2' | 4:L:813:U:C5' | 2.09 | 0.82 |
| 5:M:377:U:H2' | 5:M:378:U:O4' | 1.79 | 0.82 |
| 5:M:382:U:C2' | 5:M:383:U:H5' | 2.08 | 0.82 |
| 5:M:452:U:C2' | 5:M:453:U:C5' | 2.58 | 0.82 |
| 6:N:303:U:H2' | 6:N:304:U:C6 | 2.13 | 0.82 |
| 1:I:141:A:H2' | 1:I:142:A:C8 | 2.15 | 0.82 |
| 1:I:252:A:N3 | 1:I:253:A:C8 | 2.47 | 0.82 |
| 1:I:262:A:H2' | 1:I:263:A:C5' | 2.08 | 0.82 |
| 1:I:278:A:H2' | 1:I:279:A:C8 | 2.13 | 0.82 |
| 1:I:334:A:O2' | 1:I:335:A:H5' | 1.79 | 0.82 |
| 2:J:190:A:N6 | 2:J:191:A:N6 | 2.28 | 0.82 |
| 3:K:90:A:HO2' | 3:K:91:A:H5' | 1.04 | 0.82 |
| 4:L:586:U:C4 | 4:L:587:U:C4 | 2.67 | 0.82 |
| 4:L:778:U:C2 | 4:L:779:U:C6 | 2.67 | 0.82 |
| 5:M:451:U:N3 | 5:M:452:U:C4 | 2.47 | 0.82 |
| 5:M:454:U:N3 | 5:M:455:U:C5 | 2.47 | 0.82 |
| 5:M:510:U:C2' | 5:M:511:U:C5' | 2.51 | 0.82 |
| 6:N:427:U:C2' | 6:N:428:U:C5' | 2.57 | 0.82 |
| 1:I:70:A:C2' | 1:I:71:A:O4' | 2.27 | 0.82 |
| 2:J:224:A:O2' | 2:J:225:A:H5' | 1.78 | 0.82 |
| 2:J:69:A:HO2' | 2:J:70:A:H5' | 1.42 | 0.82 |
| 3:K:152:A:N6 | 3:K:153:A:H61 | 1.75 | 0.82 |
| 4:L:705:U:C2 | 4:L:706:U:C6 | 2.66 | 0.82 |
| 4:L:803:U:C2 | 4:L:804:U:C5 | 2.67 | 0.82 |
| 5:M:323:U:H2' | 5:M:324:U:H6 | 1.43 | 0.82 |
| 5:M:450:U:C2 | 5:M:451:U:C5 | 2.66 | 0.82 |
| 6:N:277:U:H2' | 6:N:278:U:C5' | 2.10 | 0.82 |
| 6:N:403:U:HO2' | 6:N:404:U:H5' | 1.40 | 0.82 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:431:U:HO2' | 6:N:432:U:H5' | 1.00 | 0.82 |
| 1:I:31:A:C2 | 1:I:32:A:N7 | 2.47 | 0.82 |
| 1:I:404:A:H2' | 1:I:405:A:C8 | 2.14 | 0.82 |
| 2:J:142:A:C4 | 2:J:143:A:N7 | 2.46 | 0.82 |
| 2:J:171:A:C2 | 2:J:172:A:C6 | 2.68 | 0.82 |
| 2:J:234:A:O2' | 2:J:235:A:C5' | 2.23 | 0.82 |
| 2:J:254:A:HO2' | 2:J:255:A:H5' | 1.44 | 0.82 |
| 4:L:484:U:O2' | 4:L:485:U:C5' | 2.22 | 0.82 |
| 4:L:544:U:H2' | 4:L:545:U:O4' | 1.79 | 0.82 |
| 4:L:577:U:C2 | 4:L:578:U:C5 | 2.67 | 0.82 |
| 4:L:595:U:H2' | 4:L:596:U:H6 | 1.42 | 0.82 |
| 4:L:746:U:C2' | 4:L:747:U:O5' | 2.25 | 0.82 |
| 6:N:380:U:HO2' | 6:N:381:U:H5' | 1.44 | 0.82 |
| 6:N:402:U:H2' | 6:N:403:U:H6 | 1.44 | 0.82 |
| 1:I:130:A:N3 | 1:I:131:A:C8 | 2.48 | 0.82 |
| 1:I:131:A:H61 | 1:I:132:A:N6 | 1.72 | 0.82 |
| 1:I:265:A:N6 | 1:I:266:A:H62 | 1.78 | 0.82 |
| 2:J:192:A:O2' | 2:J:193:A:C5' | 2.24 | 0.82 |
| 2:J:44:A:C2' | 2:J:45:A:H5' | 2.09 | 0.82 |
| 2:J:66:A:HO2' | 2:J:67:A:H5' | 1.39 | 0.82 |
| 3:K:29:A:O2' | 3:K:30:A:H5' | 1.80 | 0.82 |
| 4:L:495:U:H2' | 4:L:496:U:C6 | 2.14 | 0.82 |
| 4:L:583:U:N3 | 4:L:584:U:C5 | 2.46 | 0.82 |
| 4:L:750:U:H2' | 4:L:751:U:C5 | 2.15 | 0.82 |
| 4:L:761:U:C4 | 4:L:762:U:O4 | 2.32 | 0.82 |
| 5:M:436:U:O2' | 5:M:437:U:H5' | 1.80 | 0.82 |
| 6:N:280:U:HO2' | 6:N:281:U:H5' | 1.45 | 0.82 |
| 6:N:378:U:N3 | 6:N:379:U:C4 | 2.48 | 0.82 |
| 6:N:426:U:C2' | 6:N:427:U:O4' | 2.27 | 0.82 |
| 6:N:429:U:N3 | 6:N:430:U:C5 | 2.48 | 0.82 |
| 6:N:473:U:C4 | 6:N:474:U:C4 | 2.67 | 0.82 |
| 1:I:17:A:C2' | 1:I:18:A:H5' | 2.08 | 0.82 |
| 1:I:26:A:C2' | 1:I:27:A:C5' | 2.58 | 0.82 |
| 1:I:44:A:N3 | 1:I:45:A:C8 | 2.46 | 0.82 |
| 2:J:144:A:N3 | 2:J:145:A:C8 | 2.48 | 0.82 |
| 2:J:38:A:C2 | 2:J:39:A:C8 | 2.68 | 0.82 |
| 3:K:100:A:C2' | 3:K:101:A:O4' | 2.26 | 0.82 |
| 3:K:195:A:N6 | 3:K:196:A:N6 | 2.27 | 0.82 |
| 3:K:92:A:C2' | 3:K:93:A:C5' | 2.56 | 0.82 |
| 4:L:722:U:C2' | 4:L:723:U:H6 | 1.87 | 0.82 |
| 5:M:299:U:O2' | 5:M:300:U:H5' | 1.78 | 0.82 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:526:U:H2' | 5:M:527:U:C5' | 2.09 | 0.82 |
| 6:N:305:U:C2' | 6:N:306:U:C6 | 2.63 | 0.82 |
| 1:I:358:A:O2' | 1:I:359:A:C5' | 2.26 | 0.82 |
| 2:J:170:A:O2' | 2:J:171:A:C5' | 2.27 | 0.82 |
| 2:J:202:A:C2 | 2:J:203:A:N9 | 2.48 | 0.82 |
| 2:J:99:A:H2' | 2:J:100:A:O4' | 1.80 | 0.82 |
| 3:K:84:A:O2' | 3:K:85:A:H5' | 1.79 | 0.82 |
| 4:L:693:U:C4 | 4:L:694:U:C4 | 2.68 | 0.82 |
| 6:N:497:U:C2' | 6:N:498:U:O4' | 2.27 | 0.82 |
| 1:I:107:A:H2' | 1:I:108:A:C8 | 2.15 | 0.81 |
| 1:I:240:A:O2' | 1:I:241:A:O5' | 1.97 | 0.81 |
| 1:I:258:A:C2 | 1:I:259:A:C8 | 2.67 | 0.81 |
| 1:I:31:A:C2 | 1:I:32:A:C5 | 2.68 | 0.81 |
| 1:I:362:A:N6 | 1:I:363:A:H62 | 1.76 | 0.81 |
| 1:I:94:A:O2' | 1:I:95:A:C5' | 2.28 | 0.81 |
| 2:J:83:A:C2 | 2:J:84:A:N7 | 2.48 | 0.81 |
| 3:K:105:A:C2' | 3:K:106:A:O4' | 2.28 | 0.81 |
| 3:K:234:A:N6 | 3:K:235:A:H62 | 1.73 | 0.81 |
| 4:L:487:U:H2' | 4:L:488:U:O4' | 1.80 | 0.81 |
| 4:L:496:U:H2' | 4:L:497:U:C6 | 2.14 | 0.81 |
| 4:L:730:U:O2' | 4:L:731:U:H5' | 1.80 | 0.81 |
| 4:L:763:U:C2 | 4:L:764:U:C6 | 2.67 | 0.81 |
| 4:L:807:U:C2 | 4:L:808:U:C6 | 2.68 | 0.81 |
| 5:M:407:U:O4 | 5:M:408:U:O4 | 1.97 | 0.81 |
| 5:M:447:U:H2' | 5:M:448:U:C6 | 2.15 | 0.81 |
| 5:M:469:U:O2 | 5:M:470:U:C5 | 2.28 | 0.81 |
| 6:N:471:U:O2' | 6:N:472:U:C5' | 2.27 | 0.81 |
| 1:I:120:A:C2 | 1:I:121:A:C8 | 2.68 | 0.81 |
| 1:I:127:A:C2' | 1:I:128:A:C5' | 2.58 | 0.81 |
| 1:I:179:A:C6 | 1:I:180:A:C6 | 2.68 | 0.81 |
| 1:I:252:A:C2 | 1:I:253:A:C4 | 2.67 | 0.81 |
| 1:I:49:A:O2' | 1:I:50:A:C5' | 2.24 | 0.81 |
| 2:J:101:A:C5 | 2:J:102:A:N7 | 2.47 | 0.81 |
| 2:J:129:A:H2' | 2:J:130:A:C5' | 2.09 | 0.81 |
| 2:J:137:A:C2 | 5:M:417:U:O2 | 2.32 | 0.81 |
| 2:J:165:A:H2' | 2:J:166:A:C8 | 2.15 | 0.81 |
| 4:L:541:U:C2 | 4:L:542:U:C6 | 2.68 | 0.81 |
| 4:L:560:U:O2' | 4:L:561:U:H5' | 1.80 | 0.81 |
| 4:L:696:U:C2 | 4:L:697:U:C5 | 2.68 | 0.81 |
| 4:L:743:U:H2' | 4:L:744:U:O5' | 1.79 | 0.81 |
| 5:M:386:U:H2' | 5:M:387:U:H6 | 1.45 | 0.81 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:312:U:H2' | 6:N:313:U:C6 | 2.15 | 0.81 |
| 6:N:462:U:HO2' | 6:N:463:U:H5' | 1.46 | 0.81 |
| 1:I:13:A:H2' | 1:I:14:A:H8 | 1.42 | 0.81 |
| 1:I:191:A:C2' | 1:I:192:A:H5' | 2.10 | 0.81 |
| 1:I:18:A:C4 | 1:I:19:A:C8 | 2.68 | 0.81 |
| 1:I:20:A:H2' | 1:I:21:A:H8 | 1.45 | 0.81 |
| 1:I:267:A:H2 | 1:I:268:A:C5 | 1.91 | 0.81 |
| 1:I:283:A:C4 | 1:I:284:A:N7 | 2.48 | 0.81 |
| 2:J:159:A:H2' | 2:J:160:A:H8 | 1.44 | 0.81 |
| 3:K:105:A:C2 | 3:K:106:A:C5 | 2.68 | 0.81 |
| 3:K:154:A:O2' | 3:K:155:A:H5' | 1.78 | 0.81 |
| 3:K:168:A:C3' | 3:K:169:A:C5' | 2.34 | 0.81 |
| 3:K:237:A:H2' | 3:K:238:A:H8 | 1.41 | 0.81 |
| 4:L:547:U:H2' | 4:L:548:U:H6 | 1.45 | 0.81 |
| 4:L:551:U:O2 | 4:L:552:U:C5 | 2.33 | 0.81 |
| 4:L:754:U:C2 | 4:L:755:U:C6 | 2.68 | 0.81 |
| 4:L:754:U:H2' | 4:L:755:U:C6 | 2.15 | 0.81 |
| 4:L:805:U:H2' | 4:L:806:U:H6 | 1.43 | 0.81 |
| 5:M:373:U:H2' | 5:M:374:U:C5' | 2.10 | 0.81 |
| 5:M:460:U:C2 | 5:M:461:U:C5 | 2.68 | 0.81 |
| 6:N:446:U:C2 | 6:N:447:U:C5 | 2.69 | 0.81 |
| 6:N:448:U:C2' | 6:N:449:U:H5' | 2.10 | 0.81 |
| 1:I:20:A:O2' | 1:I:21:A:H5' | 1.79 | 0.81 |
| 1:I:253:A:C6 | 1:I:254:A:N6 | 2.48 | 0.81 |
| 1:I:334:A:C2' | 1:I:335:A:H5' | 2.09 | 0.81 |
| 2:J:166:A:H2' | 2:J:167:A:C8 | 2.14 | 0.81 |
| 2:J:205:A:C2' | 2:J:206:A:C4' | 2.58 | 0.81 |
| 2:J:205:A:H2' | 2:J:206:A:C4' | 2.10 | 0.81 |
| 2:J:62:A:C2' | 2:J:63:A:C5' | 2.59 | 0.81 |
| 3:K:136:A:H2' | 3:K:137:A:O5' | 1.77 | 0.81 |
| 3:K:168:A:C2' | 3:K:169:A:C4' | 2.58 | 0.81 |
| 4:L:612:U:C2' | 4:L:613:U:H5' | 2.10 | 0.81 |
| 4:L:812:U:C2 | 4:L:813:U:C6 | 2.67 | 0.81 |
| 5:M:323:U:O2' | 5:M:324:U:H4' | 1.79 | 0.81 |
| 5:M:464:U:O2 | 5:M:465:U:C6 | 2.32 | 0.81 |
| 5:M:471:U:O2' | 5:M:472:U:H5' | 1.80 | 0.81 |
| 5:M:502:U:H2' | 5:M:503:U:H6 | 1.45 | 0.81 |
| 6:N:388:U:O2' | 6:N:389:U:H5' | 1.79 | 0.81 |
| 6:N:525:U:H2' | 6:N:526:U:H6 | 1.45 | 0.81 |
| 1:I:113:A:H2' | 1:I:114:A:O4' | 1.80 | 0.81 |
| 1:I:259:A:C2' | 1:I:260:A:H5' | 2.11 | 0.81 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:261:A:H2' | 1:I:262:A:H8 | 1.40 | 0.81 |
| 1:I:55:A:N3 | 1:I:56:A:C8 | 2.49 | 0.81 |
| 2:J:143:A:C2 | 2:J:144:A:C5 | 2.69 | 0.81 |
| 2:J:200:A:N3 | 2:J:201:A:C8 | 2.48 | 0.81 |
| 2:J:205:A:C2' | 2:J:206:A:O4' | 2.28 | 0.81 |
| 2:J:247:A:O2' | 2:J:248:A:H5' | 1.79 | 0.81 |
| 2:J:42:A:H2' | 2:J:43:A:H8 | 1.44 | 0.81 |
| 3:K:136:A:C2 | 3:K:137:A:N9 | 2.48 | 0.81 |
| 3:K:250:A:C2' | 3:K:251:A:C5' | 2.59 | 0.81 |
| 4:L:439:U:O2' | 4:L:440:U:H5' | 1.80 | 0.81 |
| 4:L:567:U:H2' | 4:L:568:U:O5' | 1.81 | 0.81 |
| 4:L:802:U:H2' | 4:L:803:U:H6 | 1.46 | 0.81 |
| 5:M:323:U:C2 | 5:M:324:U:C6 | 2.68 | 0.81 |
| 5:M:348:U:C2' | 5:M:349:U:H6 | 1.92 | 0.81 |
| 5:M:377:U:H2' | 5:M:378:U:C6 | 2.15 | 0.81 |
| 6:N:329:U:H2' | 6:N:330:U:H6 | 1.40 | 0.81 |
| 1:I:255:A:H2' | 1:I:256:A:C5' | 2.11 | 0.81 |
| 1:I:33:A:C2' | 1:I:34:A:C5' | 2.58 | 0.81 |
| 2:J:21:A:C2' | 2:J:22:A:H5' | 2.11 | 0.81 |
| 2:J:56:A:C2 | 2:J:57:A:C4 | 2.69 | 0.81 |
| 2:J:73:A:N3 | 2:J:74:A:C8 | 2.48 | 0.81 |
| 3:K:136:A:C2 | 3:K:137:A:C4 | 2.69 | 0.81 |
| 3:K:209:A:C6 | 3:K:210:A:N6 | 2.49 | 0.81 |
| 3:K:45:A:C2' | 3:K:46:A:O4' | 2.28 | 0.81 |
| 4:L:464:U:C2' | 4:L:465:U:H5' | 2.10 | 0.81 |
| 4:L:472:U:O2' | 4:L:473:U:P | 2.38 | 0.81 |
| 4:L:576:U:HO2' | 4:L:577:U:H5' | 1.02 | 0.81 |
| 4:L:742:U:C2 | 4:L:743:U:H5 | 1.99 | 0.81 |
| 4:L:813:U:H2' | 4:L:814:U:H6 | 1.43 | 0.81 |
| 5:M:449:U:HO2' | 5:M:450:U:H5' | 1.02 | 0.81 |
| 1:I:13:A:C4 | 1:I:14:A:N7 | 2.48 | 0.81 |
| 1:I:22:A:O2' | 1:I:23:A:C5' | 2.28 | 0.81 |
| 1:I:257:A:H2' | 1:I:258:A:O5' | 1.79 | 0.81 |
| 1:I:266:A:C2 | 1:I:267:A:C1' | 2.63 | 0.81 |
| 1:I:56:A:C2 | 1:I:57:A:C8 | 2.69 | 0.81 |
| 1:I:62:A:HO2' | 1:I:63:A:H5' | 1.44 | 0.81 |
| 2:J:107:A:HO2' | 2:J:108:A:H5' | 1.41 | 0.81 |
| 2:J:165:A:N1 | 2:J:166:A:C6 | 2.49 | 0.81 |
| 2:J:83:A:O2' | 2:J:84:A:O5' | 1.97 | 0.81 |
| 3:K:105:A:O2' | 3:K:106:A:O4' | 1.98 | 0.81 |
| 4:L:544:U:C2 | 4:L:545:U:C6 | 2.68 | 0.81 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:602:U:O2' | 4:L:603:U:H5' | 1.80 | 0.81 |
| 4:L:605:U:O2' | 4:L:606:U:H5' | 1.80 | 0.81 |
| 4:L:740:U:C2 | 4:L:741:U:C6 | 2.68 | 0.81 |
| 4:L:783:U:O2' | 4:L:784:U:H5' | 1.80 | 0.81 |
| 5:M:466:U:C4 | 5:M:467:U:C5 | 2.69 | 0.81 |
| 5:M:519:U:C2 | 5:M:520:U:C5 | 2.69 | 0.81 |
| 6:N:440:U:C2 | 6:N:441:U:C6 | 2.68 | 0.81 |
| 1:I:181:A:C2 | 4:L:645:U:C2 | 2.68 | 0.81 |
| 1:I:239:A:C2' | 1:I:240:A:C5' | 2.57 | 0.81 |
| 1:I:248:A:C2 | 1:I:249:A:C8 | 2.69 | 0.81 |
| 2:J:104:A:HO2' | 2:J:105:A:H5' | 1.43 | 0.81 |
| 3:K:110:A:C2 | 3:K:111:A:C4 | 2.68 | 0.81 |
| 3:K:168:A:O2' | 3:K:169:A:C4' | 2.28 | 0.81 |
| 4:L:557:U:C4 | 4:L:558:U:C4 | 2.68 | 0.81 |
| 4:L:594:U:H2' | 4:L:595:U:H6 | 1.45 | 0.81 |
| 4:L:660:U:C2' | 4:L:661:U:C5' | 2.59 | 0.81 |
| 5:M:300:U:C2' | 5:M:301:U:H5' | 2.10 | 0.81 |
| 5:M:458:U:H2' | 5:M:459:U:O4' | 1.80 | 0.81 |
| 1:I:181:A:C5 | 1:I:182:A:N7 | 2.48 | 0.81 |
| 1:I:191:A:O2' | 1:I:192:A:H5' | 1.81 | 0.81 |
| 1:I:228:A:N6 | 1:I:229:A:N6 | 2.27 | 0.81 |
| 1:I:230:A:H2' | 1:I:231:A:O4' | 1.81 | 0.81 |
| 1:I:250:A:H2' | 1:I:251:A:O4' | 1.81 | 0.81 |
| 1:I:317:A:HO2' | 1:I:318:A:C5' | 1.85 | 0.81 |
| 1:I:43:A:N3 | 1:I:44:A:N7 | 2.26 | 0.81 |
| 1:I:67:A:N6 | 1:I:68:A:H62 | 1.78 | 0.81 |
| 1:I:78:A:O2' | 1:I:79:A:O5' | 1.98 | 0.81 |
| 2:J:166:A:O2' | 2:J:167:A:H5' | 1.81 | 0.81 |
| 2:J:215:A:C2 | 2:J:216:A:N7 | 2.49 | 0.81 |
| 2:J:27:A:O2' | 2:J:28:A:C5' | 2.28 | 0.81 |
| 3:K:110:A:O2' | 3:K:111:A:C4' | 2.29 | 0.81 |
| 3:K:166:A:C2 | 3:K:167:A:C4 | 2.68 | 0.81 |
| 3:K:204:A:C6 | 3:K:205:A:N6 | 2.49 | 0.81 |
| 4:L:425:U:C2' | 4:L:426:U:H5' | 2.11 | 0.81 |
| 4:L:646:U:O2' | 4:L:647:U:C5' | 2.27 | 0.81 |
| 4:L:673:U:H2' | 4:L:674:U:C5' | 2.11 | 0.81 |
| 4:L:750:U:O2 | 4:L:751:U:C6 | 2.34 | 0.81 |
| 4:L:764:U:O4 | 4:L:765:U:O4 | 1.99 | 0.81 |
| 4:L:810:U:O2' | 4:L:811:U:C5' | 2.29 | 0.81 |
| 5:M:417:U:O4 | 5:M:418:U:O4 | 1.99 | 0.81 |
| 5:M:454:U:O2' | 5:M:455:U:H5' | 1.79 | 0.81 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:456:U:C2 | 5:M:457:U:C5 | 2.68 | 0.81 |
| 6:N:302:U:H2' | 6:N:303:U:H6 | 1.45 | 0.81 |
| 6:N:413:U:O2' | 6:N:414:U:H5' | 1.80 | 0.81 |
| 6:N:430:U:H2' | 6:N:431:U:H6 | 1.44 | 0.81 |
| 1:I:13:A:C2 | 1:I:14:A:C5 | 2.69 | 0.81 |
| 1:I:187:A:N6 | 1:I:188:A:N6 | 2.29 | 0.81 |
| 1:I:274:A:HO2' | 1:I:275:A:H5' | 1.00 | 0.81 |
| 1:I:283:A:O2' | 1:I:284:A:O5' | 1.99 | 0.81 |
| 1:I:310:A:C2' | 1:I:311:A:C5' | 2.59 | 0.81 |
| 1:I:81:A:C2' | 1:I:82:A:H5' | 2.11 | 0.81 |
| 2:J:146:A:O2' | 2:J:147:A:H5' | 1.81 | 0.81 |
| 2:J:147:A:C2 | 2:J:148:A:C4 | 2.69 | 0.81 |
| 3:K:101:A:N6 | 3:K:102:A:N6 | 2.29 | 0.81 |
| 3:K:124:A:C4 | 3:K:125:A:N7 | 2.48 | 0.81 |
| 3:K:164:A:H2' | 3:K:165:A:O4' | 1.81 | 0.81 |
| 3:K:80:A:H2' | 3:K:81:A:H8 | 1.46 | 0.81 |
| 4:L:498:U:H2' | 4:L:499:U:C5' | 2.09 | 0.81 |
| 4:L:635:U:C2' | 4:L:636:U:H5' | 2.10 | 0.81 |
| 4:L:704:U:HO2' | 4:L:705:U:H5' | 1.46 | 0.81 |
| 4:L:811:U:C4 | 4:L:812:U:C5 | 2.68 | 0.81 |
| 5:M:387:U:N3 | 5:M:388:U:C4 | 2.48 | 0.81 |
| 5:M:502:U:C2 | 5:M:503:U:C5 | 2.69 | 0.81 |
| 5:M:505:U:H2' | 5:M:506:U:O5' | 1.79 | 0.81 |
| 6:N:423:U:C2' | 6:N:424:U:H5' | 2.10 | 0.81 |
| 6:N:526:U:C2' | 6:N:527:U:C5' | 2.59 | 0.81 |
| 6:N:525:U:H2' | 6:N:526:U:C6 | 2.15 | 0.81 |
| 1:I:17:A:C2' | 1:I:18:A:C5' | 2.59 | 0.81 |
| 1:I:189:A:C2' | 1:I:190:A:H5' | 2.10 | 0.81 |
| 1:I:230:A:H2' | 1:I:231:A:C5' | 2.10 | 0.81 |
| 1:I:236:A:C2 | 1:I:237:A:N9 | 2.49 | 0.81 |
| 1:I:268:A:N3 | 1:I:269:A:C8 | 2.48 | 0.81 |
| 1:I:275:A:H2' | 1:I:276:A:C8 | 2.15 | 0.81 |
| 1:I:353:A:H2' | 1:I:354:A:O4' | 1.79 | 0.81 |
| 2:J:156:A:O2' | 2:J:157:A:C5' | 2.26 | 0.81 |
| 2:J:225:A:C2 | 2:J:226:A:C4 | 2.68 | 0.81 |
| 5:M:409:U:O2 | 5:M:410:U:O4' | 1.99 | 0.81 |
| 5:M:455:U:O2' | 5:M:456:U:C5' | 2.20 | 0.81 |
| 5:M:467:U:HO2' | 5:M:468:U:H5' | 1.46 | 0.81 |
| 6:N:294:U:H2' | 6:N:295:U:H6 | 1.45 | 0.81 |
| 1:I:133:A:C2 | 1:I:134:A:C4 | 2.69 | 0.80 |
| 1:I:243:A:C6 | 1:I:244:A:N6 | 2.48 | 0.80 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:276:A:H2' | 1:I:277:A:H8 | 1.45 | 0.80 |
| 1:I:375:A:C2 | 1:I:376:A:C5 | 2.69 | 0.80 |
| 1:I:86:A:H62 | 1:I:87:A:H62 | 1.26 | 0.80 |
| 2:J:107:A:C2' | 2:J:108:A:H5' | 2.11 | 0.80 |
| 2:J:245:A:O2' | 2:J:246:A:H5' | 1.80 | 0.80 |
| 3:K:136:A:H2' | 3:K:137:A:C5' | 2.09 | 0.80 |
| 3:K:150:A:C2 | 3:K:151:A:C8 | 2.69 | 0.80 |
| 3:K:225:A:H2' | 3:K:226:A:H8 | 1.45 | 0.80 |
| 3:K:42:A:C2' | 3:K:43:A:H5' | 2.10 | 0.80 |
| 4:L:447:U:O3' | 4:L:448:U:OP2 | 1.98 | 0.80 |
| 4:L:695:U:C2' | 4:L:696:U:H5' | 2.10 | 0.80 |
| 4:L:803:U:C2' | 4:L:804:U:H6 | 1.91 | 0.80 |
| 5:M:417:U:N3 | 5:M:418:U:C4 | 2.49 | 0.80 |
| 5:M:491:U:HO2' | 5:M:492:U:H5' | 1.46 | 0.80 |
| 6:N:296:U:C4 | 6:N:297:U:O4 | 2.33 | 0.80 |
| 6:N:397:U:O2' | 6:N:398:U:H5' | 1.80 | 0.80 |
| 6:N:485:U:C3' | 6:N:486:U:C5' | 2.46 | 0.80 |
| 1:I:130:A:O2' | 1:I:131:A:H5' | 1.81 | 0.80 |
| 1:I:325:A:C6 | 1:I:326:A:N6 | 2.48 | 0.80 |
| 1:I:53:A:N3 | 1:I:54:A:C8 | 2.49 | 0.80 |
| 1:I:85:A:C2' | 1:I:86:A:O5' | 2.27 | 0.80 |
| 2:J:225:A:C2 | 2:J:226:A:N9 | 2.49 | 0.80 |
| 2:J:248:A:C6 | 2:J:249:A:N6 | 2.48 | 0.80 |
| 2:J:40:A:H2' | 2:J:41:A:C8 | 2.16 | 0.80 |
| 3:K:166:A:N3 | 3:K:167:A:C8 | 2.49 | 0.80 |
| 3:K:46:A:C2' | 3:K:47:A:C5' | 2.59 | 0.80 |
| 4:L:436:U:O2' | 4:L:437:U:C5' | 2.27 | 0.80 |
| 4:L:584:U:C2 | 4:L:585:U:C6 | 2.68 | 0.80 |
| 4:L:733:U:O2' | 4:L:734:U:C5' | 2.26 | 0.80 |
| 4:L:739:U:C2' | 4:L:740:U:C5' | 2.58 | 0.80 |
| 4:L:760:U:H2' | 4:L:761:U:H6 | 1.45 | 0.80 |
| 4:L:783:U:O2 | 4:L:784:U:C6 | 2.34 | 0.80 |
| 4:L:806:U:C2 | 4:L:807:U:C5 | 2.69 | 0.80 |
| 4:L:806:U:C2 | 4:L:807:U:C6 | 2.69 | 0.80 |
| 5:M:299:U:C2' | 5:M:300:U:H5' | 2.09 | 0.80 |
| 5:M:488:U:C4 | 5:M:489:U:C5 | 2.70 | 0.80 |
| 5:M:496:U:O2 | 5:M:497:U:C6 | 2.34 | 0.80 |
| 5:M:522:U:C2' | 5:M:523:U:C5' | 2.59 | 0.80 |
| 6:N:349:U:O2' | 6:N:350:U:H5' | 1.81 | 0.80 |
| 1:I:236:A:C2' | 1:I:237:A:C5' | 2.58 | 0.80 |
| 1:I:376:A:N1 | 1:I:377:A:C5 | 2.48 | 0.80 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:47:A:C2 | 1:I:48:A:N7 | 2.49 | 0.80 |
| 2:J:206:A:C4 | 2:J:207:A:C8 | 2.69 | 0.80 |
| 2:J:215:A:C2 | 2:J:216:A:C5 | 2.70 | 0.80 |
| 2:J:78:A:O2' | 2:J:79:A:H5' | 1.80 | 0.80 |
| 3:K:97:A:C4 | 3:K:98:A:C8 | 2.69 | 0.80 |
| 4:L:484:U:H2' | 4:L:485:U:C5' | 2.10 | 0.80 |
| 4:L:543:U:C4 | 4:L:544:U:O4 | 2.34 | 0.80 |
| 4:L:611:U:H2' | 4:L:612:U:O4' | 1.82 | 0.80 |
| 4:L:816:U:C2 | 4:L:817:U:C5 | 2.68 | 0.80 |
| 5:M:347:U:O2' | 5:M:348:U:C4' | 2.29 | 0.80 |
| 5:M:488:U:N3 | 5:M:489:U:C5 | 2.50 | 0.80 |
| 6:N:292:U:H2' | 6:N:293:U:C6 | 2.16 | 0.80 |
| 6:N:338:U:C2 | 6:N:339:U:C5 | 2.69 | 0.80 |
| 6:N:401:U:C2' | 6:N:402:U:H5' | 2.11 | 0.80 |
| 6:N:481:U:HO2' | 6:N:482:U:H5' | 1.00 | 0.80 |
| 1:I:179:A:C6 | 1:I:180:A:N6 | 2.49 | 0.80 |
| 1:I:281:A:C6 | 1:I:282:A:N6 | 2.50 | 0.80 |
| 1:I:63:A:C6 | 1:I:64:A:N6 | 2.49 | 0.80 |
| 1:I:66:A:O2' | 1:I:67:A:H5' | 1.80 | 0.80 |
| 1:I:71:A:C2' | 1:I:72:A:C5' | 2.58 | 0.80 |
| 2:J:136:A:C2 | 2:J:137:A:C8 | 2.69 | 0.80 |
| 2:J:207:A:O2' | 2:J:208:A:H5' | 1.80 | 0.80 |
| 2:J:211:A:H2' | 2:J:212:A:C5' | 2.11 | 0.80 |
| 2:J:214:A:C2' | 2:J:215:A:C5' | 2.58 | 0.80 |
| 3:K:114:A:C2 | 3:K:115:A:C5 | 2.69 | 0.80 |
| 3:K:124:A:C2 | 3:K:125:A:C6 | 2.69 | 0.80 |
| 4:L:658:U:HO2' | 4:L:659:U:H5' | 1.43 | 0.80 |
| 4:L:814:U:H2' | 4:L:815:U:O4' | 1.82 | 0.80 |
| 5:M:469:U:N3 | 5:M:470:U:C4 | 2.49 | 0.80 |
| 5:M:472:U:H2' | 5:M:473:U:H6 | 1.47 | 0.80 |
| 5:M:526:U:C2 | 5:M:527:U:C6 | 2.69 | 0.80 |
| 6:N:380:U:H2' | 6:N:381:U:C5' | 2.10 | 0.80 |
| 6:N:415:U:H2' | 6:N:416:U:H6 | 1.45 | 0.80 |
| 6:N:427:U:C2 | 6:N:428:U:C6 | 2.70 | 0.80 |
| 1:I:241:A:N6 | 1:I:242:A:N6 | 2.30 | 0.80 |
| 1:I:389:A:H2' | 1:I:390:A:C8 | 2.15 | 0.80 |
| 1:I:43:A:N1 | 1:I:44:A:C5 | 2.49 | 0.80 |
| 1:I:51:A:O2' | 1:I:52:A:H5' | 1.81 | 0.80 |
| 1:I:62:A:N3 | 1:I:63:A:C8 | 2.48 | 0.80 |
| 2:J:118:A:C2 | 2:J:119:A:C5 | 2.69 | 0.80 |
| 2:J:132:A:H2' | 2:J:133:A:O4' | 1.81 | 0.80 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 2:J:217:A:N6 | 2:J:218:A:H62 | 1.77 | 0.80 |
| 2:J:30:A:C2' | 2:J:31:A:H5' | 2.12 | 0.80 |
| 3:K:107:A:C2' | 3:K:108:A:C5' | 2.59 | 0.80 |
| 3:K:49:A:C2 | 3:K:50:A:C4 | 2.70 | 0.80 |
| 4:L:438:U:C2 | 4:L:439:U:C5 | 2.69 | 0.80 |
| 4:L:581:U:C4 | 4:L:582:U:O4 | 2.34 | 0.80 |
| 5:M:348:U:C2' | 5:M:349:U:C6 | 2.65 | 0.80 |
| 5:M:364:U:C2' | 5:M:365:U:H5' | 2.10 | 0.80 |
| 5:M:460:U:O2' | 5:M:461:U:H5' | 1.82 | 0.80 |
| 5:M:466:U:C2 | 5:M:467:U:C6 | 2.70 | 0.80 |
| 6:N:291:U:O2' | 6:N:292:U:H5' | 1.81 | 0.80 |
| 6:N:312:U:H2' | 6:N:313:U:O4' | 1.80 | 0.80 |
| 1:I:101:A:C4 | 1:I:102:A:N7 | 2.50 | 0.80 |
| 1:I:162:A:O5' | 1:I:163:A:OP2 | 2.00 | 0.80 |
| 1:I:17:A:C2 | 1:I:18:A:C4 | 2.69 | 0.80 |
| 1:I:62:A:C2' | 1:I:63:A:O5' | 2.30 | 0.80 |
| 1:I:72:A:C2' | 1:I:73:A:H5' | 2.11 | 0.80 |
| 1:I:81:A:C2 | 1:I:82:A:C8 | 2.70 | 0.80 |
| 3:K:164:A:C6 | 3:K:165:A:C5 | 2.69 | 0.80 |
| 3:K:85:A:C2' | 3:K:86:A:H5' | 2.11 | 0.80 |
| 4:L:521:U:C2' | 4:L:522:U:H5' | 2.10 | 0.80 |
| 4:L:529:U:C2' | 4:L:530:U:C5' | 2.59 | 0.80 |
| 4:L:662:U:C2 | 4:L:663:U:C5 | 2.69 | 0.80 |
| 4:L:671:U:H2' | 4:L:672:U:C6 | 2.16 | 0.80 |
| 4:L:688:U:H2' | 4:L:689:U:O5' | 1.82 | 0.80 |
| 4:L:780:U:H2' | 4:L:781:U:C5' | 2.11 | 0.80 |
| 6:N:322:U:C4 | 6:N:323:U:O4 | 2.35 | 0.80 |
| 1:I:407:A:O2' | 1:I:408:A:H5' | 1.82 | 0.80 |
| 1:I:65:A:C2 | 1:I:66:A:C8 | 2.70 | 0.80 |
| 2:J:265:A:O2' | 2:J:266:A:O5' | 1.99 | 0.80 |
| 2:J:37:A:C2' | 2:J:38:A:C5' | 2.60 | 0.80 |
| 4:L:551:U:O2' | 4:L:552:U:P | 2.39 | 0.80 |
| 4:L:567:U:C2' | 4:L:568:U:C5' | 2.59 | 0.80 |
| 4:L:658:U:C2' | 4:L:659:U:H5' | 2.10 | 0.80 |
| 4:L:734:U:C2' | 4:L:735:U:C5' | 2.59 | 0.80 |
| 4:L:776:U:H2' | 4:L:777:U:O4' | 1.82 | 0.80 |
| 4:L:781:U:N3 | 4:L:782:U:C5 | 2.49 | 0.80 |
| 5:M:370:U:H2' | 5:M:371:U:C6 | 2.16 | 0.80 |
| 6:N:320:U:C2' | 6:N:321:U:C5' | 2.60 | 0.80 |
| 6:N:320:U:H2' | 6:N:321:U:H6 | 1.46 | 0.80 |
| 6:N:442:U:C2 | 6:N:443:U:C6 | 2.70 | 0.80 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:455:U:H3' | 6:N:456:U:P | 2.21 | 0.80 |
| 6:N:474:U:H2' | 6:N:475:U:O4' | 1.81 | 0.80 |
| 6:N:485:U:O2' | 6:N:486:U:O4' | 1.97 | 0.80 |
| 1:I:251:A:H2' | 1:I:252:A:H8 | 1.43 | 0.80 |
| 1:I:287:A:C3' | 1:I:288:A:H5' | 1.89 | 0.80 |
| 2:J:214:A:H2' | 2:J:215:A:O5' | 1.80 | 0.80 |
| 2:J:218:A:C2' | 2:J:219:A:H5' | 2.11 | 0.80 |
| 3:K:41:A:O2' | 3:K:42:A:C5' | 2.29 | 0.80 |
| 3:K:5:A:H2' | 3:K:6:A:O4' | 1.80 | 0.80 |
| 3:K:61:A:N6 | 3:K:62:A:N6 | 2.30 | 0.80 |
| 4:L:460:U:C2' | 4:L:461:U:C5' | 2.59 | 0.80 |
| 4:L:507:U:H2' | 4:L:508:U:C5' | 2.09 | 0.80 |
| 4:L:664:U:O2' | 4:L:665:U:H5' | 1.81 | 0.80 |
| 4:L:712:U:H2' | 4:L:713:U:C6 | 2.14 | 0.80 |
| 4:L:763:U:C2' | 4:L:764:U:H6 | 1.94 | 0.80 |
| 5:M:438:U:C2' | 5:M:439:U:H5' | 2.11 | 0.80 |
| 5:M:544:U:C2' | 5:M:545:U:H5' | 2.12 | 0.80 |
| 6:N:447:U:O2' | 6:N:448:U:H5' | 1.82 | 0.80 |
| 6:N:463:U:O2' | 6:N:464:U:H5' | 1.82 | 0.80 |
| 1:I:260:A:O2' | 1:I:261:A:C5' | 2.26 | 0.80 |
| 2:J:11:A:H2' | 2:J:12:A:C5' | 2.11 | 0.80 |
| 2:J:79:A:O2' | 2:J:80:A:C5' | 2.21 | 0.80 |
| 2:J:86:A:C2 | 2:J:87:A:C5 | 2.68 | 0.80 |
| 4:L:657:U:HO2' | 4:L:658:U:H5' | 1.43 | 0.80 |
| 4:L:718:U:C2 | 4:L:719:U:C6 | 2.70 | 0.80 |
| 4:L:779:U:C2 | 4:L:780:U:C6 | 2.69 | 0.80 |
| 5:M:467:U:C2' | 5:M:468:U:C5' | 2.59 | 0.80 |
| 6:N:378:U:N3 | 6:N:379:U:O4 | 2.12 | 0.80 |
| 6:N:436:U:C2 | 6:N:437:U:C5 | 2.70 | 0.80 |
| 1:I:128:A:C4 | 1:I:129:A:C8 | 2.70 | 0.80 |
| 1:I:258:A:HO2' | 1:I:259:A:H5' | 1.44 | 0.80 |
| 1:I:262:A:O2' | 1:I:263:A:C5' | 2.20 | 0.80 |
| 1:I:267:A:C2 | 1:I:268:A:C4 | 2.69 | 0.80 |
| 1:I:300:A:O2' | 1:I:301:A:H5' | 1.80 | 0.80 |
| 2:J:90:A:C2' | 2:J:91:A:H5' | 2.08 | 0.80 |
| 3:K:101:A:C4 | 3:K:102:A:C8 | 2.69 | 0.80 |
| 3:K:104:A:C4 | 3:K:105:A:C8 | 2.70 | 0.80 |
| 4:L:669:U:H2' | 4:L:670:U:H6 | 1.46 | 0.80 |
| 5:M:444:U:O2 | 5:M:445:U:C6 | 2.35 | 0.80 |
| 5:M:524:U:H2' | 5:M:525:U:H6 | 1.47 | 0.80 |
| 5:M:536:U:C2' | 5:M:537:U:C5' | 2.60 | 0.80 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:539:U:C2' | 5:M:540:U:H5' | 2.12 | 0.80 |
| 1:I:306:A:C2 | 1:I:307:A:C4 | 2.71 | 0.79 |
| 1:I:340:A:C2 | 1:I:341:A:N7 | 2.50 | 0.79 |
| 1:I:38:A:O2' | 1:I:39:A:H5' | 1.80 | 0.79 |
| 1:I:95:A:N1 | 1:I:96:A:C5 | 2.50 | 0.79 |
| 2:J:182:A:C6 | 2:J:183:A:N6 | 2.50 | 0.79 |
| 3:K:181:A:H2' | 3:K:182:A:C8 | 2.17 | 0.79 |
| 4:L:636:U:O2' | 4:L:637:U:H5' | 1.81 | 0.79 |
| 4:L:644:U:O2 | 4:L:645:U:C6 | 2.35 | 0.79 |
| 4:L:649:U:H2' | 4:L:650:U:C5' | 2.11 | 0.79 |
| 4:L:719:U:H2' | 4:L:720:U:C6 | 2.17 | 0.79 |
| 5:M:392:U:O2' | 5:M:393:U:O4' | 2.00 | 0.79 |
| 6:N:319:U:H2' | 6:N:320:U:H6 | 1.47 | 0.79 |
| 6:N:326:U:C4 | 6:N:327:U:O4 | 2.35 | 0.79 |
| 1:I:403:A:H2' | 1:I:404:A:C8 | 2.17 | 0.79 |
| 1:I:43:A:C4 | 1:I:44:A:N7 | 2.51 | 0.79 |
| 2:J:136:A:N3 | 2:J:137:A:C1' | 2.45 | 0.79 |
| 2:J:189:A:O2' | 2:J:190:A:H5' | 1.81 | 0.79 |
| 2:J:55:A:N6 | 2:J:56:A:N6 | 2.29 | 0.79 |
| 3:K:120:A:H2' | 3:K:121:A:H5' | 1.62 | 0.79 |
| 3:K:204:A:H2' | 3:K:205:A:H8 | 1.44 | 0.79 |
| 4:L:438:U:O4 | 4:L:439:U:O4 | 1.99 | 0.79 |
| 4:L:711:U:C4 | 4:L:712:U:C4 | 2.70 | 0.79 |
| 4:L:713:U:H2' | 4:L:714:U:C4' | 2.09 | 0.79 |
| 4:L:749:U:HO2' | 4:L:750:U:H5' | 1.47 | 0.79 |
| 4:L:764:U:N3 | 4:L:765:U:C4 | 2.51 | 0.79 |
| 4:L:770:U:C2 | 4:L:771:U:C6 | 2.70 | 0.79 |
| 5:M:323:U:H2' | 5:M:324:U:C6 | 2.17 | 0.79 |
| 6:N:400:U:H2' | 6:N:401:U:C5' | 2.12 | 0.79 |
| 6:N:454:U:H2' | 6:N:455:U:O4' | 1.81 | 0.79 |
| 1:I:179:A:C6 | 1:I:180:A:N7 | 2.50 | 0.79 |
| 1:I:184:A:H61 | 1:I:185:A:N6 | 1.77 | 0.79 |
| 1:I:190:A:O2' | 1:I:191:A:C5' | 2.26 | 0.79 |
| 1:I:310:A:H2' | 1:I:311:A:O4' | 1.81 | 0.79 |
| 3:K:105:A:H2' | 3:K:106:A:O4' | 1.81 | 0.79 |
| 3:K:121:A:C5 | 3:K:122:A:N7 | 2.50 | 0.79 |
| 3:K:56:A:O2' | 3:K:57:A:H5' | 1.81 | 0.79 |
| 4:L:557:U:N3 | 4:L:558:U:C5 | 2.51 | 0.79 |
| 4:L:585:U:HO2' | 4:L:586:U:C5' | 1.78 | 0.79 |
| 4:L:765:U:C2 | 4:L:766:U:C6 | 2.71 | 0.79 |
| 5:M:416:U:H2' | 5:M:417:U:C6 | 2.16 | 0.79 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:113:A:C4 | 1:I:114:A:C8 | 2.70 | 0.79 |
| 1:I:226:A:N3 | 1:I:227:A:C8 | 2.50 | 0.79 |
| 1:I:261:A:C5 | 1:I:262:A:N7 | 2.50 | 0.79 |
| 1:I:283:A:C2 | 1:I:284:A:C8 | 2.70 | 0.79 |
| 1:I:376:A:N3 | 1:I:377:A:N7 | 2.30 | 0.79 |
| 1:I:388:A:H2' | 1:I:389:A:H8 | 1.46 | 0.79 |
| 2:J:202:A:C2 | 2:J:203:A:C4 | 2.69 | 0.79 |
| 2:J:205:A:C2 | 2:J:206:A:N9 | 2.49 | 0.79 |
| 4:L:587:U:H2' | 4:L:588:U:C6 | 2.16 | 0.79 |
| 4:L:618:U:HO2' | 4:L:619:U:H5' | 1.44 | 0.79 |
| 4:L:635:U:H2' | 4:L:636:U:H6 | 1.46 | 0.79 |
| 4:L:692:U:C2' | 4:L:693:U:C5' | 2.61 | 0.79 |
| 4:L:711:U:N3 | 4:L:712:U:C5 | 2.50 | 0.79 |
| 5:M:430:U:N3 | 5:M:431:U:C4 | 2.50 | 0.79 |
| 5:M:463:U:N3 | 5:M:464:U:C5 | 2.51 | 0.79 |
| 5:M:467:U:H2' | 5:M:468:U:C5' | 2.12 | 0.79 |
| 5:M:535:U:H2' | 5:M:536:U:H6 | 1.46 | 0.79 |
| 6:N:313:U:H2' | 6:N:314:U:C6 | 2.18 | 0.79 |
| 6:N:364:U:O2 | 6:N:365:U:C6 | 2.34 | 0.79 |
| 6:N:389:U:C2 | 6:N:390:U:C5 | 2.70 | 0.79 |
| 1:I:163:A:C2 | 1:I:164:A:N9 | 2.50 | 0.79 |
| 1:I:18:A:C2' | 1:I:19:A:C5' | 2.59 | 0.79 |
| 1:I:207:A:C2' | 1:I:208:A:C5' | 2.61 | 0.79 |
| 1:I:238:A:N6 | 1:I:239:A:H62 | 1.80 | 0.79 |
| 1:I:343:A:C2' | 1:I:344:A:H5' | 2.13 | 0.79 |
| 1:I:375:A:O2' | 1:I:376:A:P | 2.40 | 0.79 |
| 1:I:400:A:C6 | 1:I:401:A:N6 | 2.51 | 0.79 |
| 2:J:93:A:C2' | 2:J:94:A:H5' | 2.12 | 0.79 |
| 3:K:154:A:C6 | 3:K:155:A:C6 | 2.71 | 0.79 |
| 4:L:562:U:O2' | 4:L:563:U:H5' | 1.81 | 0.79 |
| 4:L:602:U:C2 | 4:L:603:U:C5 | 2.70 | 0.79 |
| 5:M:324:U:C2 | 5:M:325:U:C5 | 2.70 | 0.79 |
| 5:M:338:U:O2 | 5:M:339:U:C6 | 2.35 | 0.79 |
| 6:N:297:U:O2' | 6:N:298:U:H5' | 1.82 | 0.79 |
| 6:N:349:U:O2 | 6:N:350:U:C6 | 2.35 | 0.79 |
| 1:I:109:A:C2' | 1:I:110:A:H8 | 1.90 | 0.79 |
| 1:I:130:A:C2 | 1:I:131:A:N7 | 2.51 | 0.79 |
| 1:I:95:A:HO2' | 1:I:96:A:P | 2.06 | 0.79 |
| 2:J:66:A:O2' | 2:J:67:A:C5' | 2.26 | 0.79 |
| 3:K:142:A:O2' | 3:K:143:A:C5' | 2.30 | 0.79 |
| 4:L:510:U:H2' | 4:L:511:U:O4' | 1.83 | 0.79 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:546:U:H2' | 4:L:547:U:O4' | 1.82 | 0.79 |
| 4:L:559:U:N3 | 4:L:560:U:C5 | 2.51 | 0.79 |
| 4:L:569:U:HO2' | 4:L:570:U:H5' | 1.47 | 0.79 |
| 4:L:589:U:N3 | 4:L:590:U:C5 | 2.51 | 0.79 |
| 4:L:688:U:C2' | 4:L:689:U:C5' | 2.59 | 0.79 |
| 4:L:757:U:C2' | 4:L:758:U:C6 | 2.64 | 0.79 |
| 6:N:394:U:C2' | 6:N:395:U:H5' | 2.13 | 0.79 |
| 6:N:416:U:O2 | 6:N:417:U:H1' | 1.82 | 0.79 |
| 1:I:131:A:C4 | 1:I:132:A:N7 | 2.50 | 0.79 |
| 1:I:179:A:C4 | 1:I:180:A:N7 | 2.50 | 0.79 |
| 1:I:309:A:H2' | 1:I:310:A:H8 | 1.47 | 0.79 |
| 1:I:324:A:N3 | 1:I:325:A:C8 | 2.50 | 0.79 |
| 1:I:4:A:N3 | 1:I:5:A:N7 | 2.30 | 0.79 |
| 1:I:67:A:H2' | 1:I:68:A:H8 | 1.48 | 0.79 |
| 3:K:124:A:H2' | 3:K:125:A:H8 | 1.48 | 0.79 |
| 3:K:156:A:H2' | 3:K:157:A:C5' | 2.12 | 0.79 |
| 3:K:45:A:C2' | 3:K:46:A:H5' | 2.13 | 0.79 |
| 4:L:528:U:O2' | 4:L:529:U:H5' | 1.81 | 0.79 |
| 4:L:642:U:HO2' | 4:L:643:U:H5' | 1.45 | 0.79 |
| 4:L:694:U:N3 | 4:L:695:U:C5 | 2.51 | 0.79 |
| 4:L:746:U:N3 | 4:L:747:U:C5 | 2.50 | 0.79 |
| 4:L:763:U:C2' | 4:L:764:U:C5' | 2.61 | 0.79 |
| 1:I:322:A:C4 | 1:I:323:A:C8 | 2.71 | 0.79 |
| 1:I:90:A:O2' | 1:I:91:A:C5' | 2.29 | 0.79 |
| 2:J:5:A:N6 | 2:J:6:A:N6 | 2.31 | 0.79 |
| 3:K:199:A:H2' | 3:K:200:A:C8 | 2.18 | 0.79 |
| 4:L:582:U:C2 | 4:L:583:U:C6 | 2.71 | 0.79 |
| 4:L:677:U:C3' | 4:L:678:U:P | 2.71 | 0.79 |
| 4:L:776:U:O2' | 4:L:777:U:C5' | 2.27 | 0.79 |
| 5:M:335:U:C6 | 5:M:336:U:C5 | 2.70 | 0.79 |
| 5:M:399:U:O2' | 5:M:400:U:C5' | 2.26 | 0.79 |
| 5:M:469:U:O2' | 5:M:470:U:P | 2.41 | 0.79 |
| 5:M:498:U:H2' | 5:M:499:U:C5 | 2.17 | 0.79 |
| 1:I:164:A:O2' | 1:I:165:A:O5' | 2.00 | 0.79 |
| 1:I:16:A:N6 | 1:I:17:A:H62 | 1.80 | 0.79 |
| 1:I:22:A:C2' | 1:I:23:A:H5' | 2.13 | 0.79 |
| 1:I:79:A:N1 | 1:I:80:A:C5 | 2.51 | 0.79 |
| 3:K:206:A:H2' | 3:K:207:A:C8 | 2.17 | 0.79 |
| 4:L:567:U:HO2' | 4:L:568:U:H5' | 1.43 | 0.79 |
| 4:L:723:U:N1 | 4:L:724:U:C6 | 2.50 | 0.79 |
| 4:L:734:U:H2' | 4:L:735:U:C6 | 2.17 | 0.79 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:764:U:C4 | 4:L:765:U:O4 | 2.35 | 0.79 |
| 5:M:520:U:C2' | 5:M:521:U:C5' | 2.58 | 0.79 |
| 6:N:437:U:H2' | 6:N:438:U:H6 | 1.46 | 0.79 |
| 6:N:529:U:O2' | 6:N:530:U:H5' | 1.82 | 0.79 |
| 1:I:112:A:C2 | 1:I:113:A:C4 | 2.71 | 0.79 |
| 1:I:385:A:O2' | 1:I:386:A:H5' | 1.83 | 0.79 |
| 1:I:387:A:O2' | 1:I:388:A:H5' | 1.82 | 0.79 |
| 2:J:216:A:C2 | 2:J:217:A:C6 | 2.71 | 0.79 |
| 2:J:239:A:C3' | 2:J:240:A:P | 2.71 | 0.79 |
| 2:J:92:A:H2' | 2:J:93:A:H8 | 1.45 | 0.79 |
| 3:K:152:A:H61 | 3:K:153:A:N6 | 1.80 | 0.79 |
| 3:K:201:A:H2' | 3:K:202:A:H8 | 1.46 | 0.79 |
| 4:L:421:U:C2' | 4:L:422:U:H5' | 2.13 | 0.79 |
| 4:L:509:U:C2' | 4:L:510:U:H5' | 2.13 | 0.79 |
| 4:L:636:U:H2' | 4:L:637:U:H6 | 1.48 | 0.79 |
| 4:L:762:U:O2 | 4:L:763:U:C6 | 2.36 | 0.79 |
| 4:L:768:U:H2' | 4:L:769:U:O5' | 1.83 | 0.79 |
| 5:M:498:U:H2' | 5:M:499:U:H6 | 1.46 | 0.79 |
| 6:N:346:U:C3' | 6:N:347:U:P | 2.70 | 0.79 |
| 1:I:282:A:O2' | 1:I:283:A:P | 2.40 | 0.78 |
| 1:I:333:A:N3 | 1:I:334:A:N9 | 2.30 | 0.78 |
| 2:J:172:A:H2' | 2:J:173:A:C8 | 2.17 | 0.78 |
| 2:J:222:A:C4 | 2:J:223:A:C8 | 2.71 | 0.78 |
| 3:K:46:A:C2' | 3:K:47:A:O4' | 2.30 | 0.78 |
| 3:K:96:A:C4 | 3:K:97:A:C8 | 2.71 | 0.78 |
| 4:L:498:U:H2' | 4:L:499:U:O4' | 1.82 | 0.78 |
| 4:L:568:U:C2 | 4:L:569:U:C5 | 2.71 | 0.78 |
| 4:L:580:U:O2' | 4:L:581:U:C5' | 2.31 | 0.78 |
| 4:L:589:U:C2 | 4:L:590:U:C5 | 2.71 | 0.78 |
| 4:L:739:U:C2' | 4:L:740:U:H5' | 2.13 | 0.78 |
| 4:L:752:U:C2 | 4:L:753:U:C5 | 2.72 | 0.78 |
| 4:L:759:U:C2 | 4:L:760:U:C6 | 2.71 | 0.78 |
| 4:L:776:U:C2 | 4:L:777:U:C6 | 2.71 | 0.78 |
| 5:M:351:U:C2 | 5:M:352:U:C5 | 2.71 | 0.78 |
| 5:M:357:U:O2' | 5:M:358:U:H5' | 1.82 | 0.78 |
| 5:M:489:U:N3 | 5:M:490:U:C5 | 2.52 | 0.78 |
| 6:N:425:U:H2' | 6:N:426:U:C1' | 2.13 | 0.78 |
| 6:N:425:U:O2' | 6:N:426:U:H5' | 1.80 | 0.78 |
| 6:N:496:U:C2' | 6:N:497:U:C5' | 2.60 | 0.78 |
| 6:N:499:U:C4 | 6:N:500:U:O4 | 2.36 | 0.78 |
| 1:I:358:A:O2' | 1:I:359:A:O5' | 2.01 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:49:A:N3 | 1:I:50:A:C8 | 2.51 | 0.78 |
| 2:J:206:A:HO2' | 2:J:207:A:H5' | 0.99 | 0.78 |
| 3:K:43:A:N6 | 3:K:44:A:H62 | 1.80 | 0.78 |
| 3:K:63:A:O2' | 3:K:64:A:C5' | 2.30 | 0.78 |
| 4:L:435:U:H2' | 4:L:436:U:H6 | 1.46 | 0.78 |
| 4:L:487:U:O2' | 4:L:488:U:C4' | 2.31 | 0.78 |
| 4:L:598:U:C2 | 4:L:599:U:C6 | 2.71 | 0.78 |
| 4:L:637:U:N3 | 4:L:638:U:C4 | 2.51 | 0.78 |
| 4:L:695:U:C2' | 4:L:696:U:C5' | 2.62 | 0.78 |
| 4:L:706:U:C4 | 4:L:707:U:H5 | 1.99 | 0.78 |
| 5:M:509:U:H2' | 5:M:510:U:H6 | 1.48 | 0.78 |
| 6:N:395:U:O2' | 6:N:396:U:H5' | 1.83 | 0.78 |
| 6:N:450:U:O2' | 6:N:451:U:C5' | 2.30 | 0.78 |
| 1:I:236:A:C2 | 1:I:237:A:C4 | 2.70 | 0.78 |
| 1:I:237:A:H2' | 1:I:238:A:H8 | 1.47 | 0.78 |
| 1:I:287:A:HO2' | 1:I:288:A:C4' | 1.96 | 0.78 |
| 1:I:333:A:C2 | 1:I:334:A:H1' | 2.18 | 0.78 |
| 2:J:248:A:C6 | 2:J:249:A:C6 | 2.71 | 0.78 |
| 2:J:90:A:C2' | 2:J:91:A:C5' | 2.62 | 0.78 |
| 3:K:155:A:C6 | 3:K:156:A:C6 | 2.71 | 0.78 |
| 4:L:611:U:O2' | 4:L:612:U:H5' | 1.84 | 0.78 |
| 4:L:650:U:O2' | 4:L:651:U:C5' | 2.30 | 0.78 |
| 5:M:371:U:H2' | 5:M:372:U:C5' | 2.11 | 0.78 |
| 5:M:454:U:C2 | 5:M:455:U:C5 | 2.72 | 0.78 |
| 5:M:458:U:C2 | 5:M:459:U:C6 | 2.71 | 0.78 |
| 5:M:457:U:C2 | 5:M:458:U:C6 | 2.71 | 0.78 |
| 1:I:140:A:C4 | 1:I:141:A:N7 | 2.52 | 0.78 |
| 1:I:15:A:H2' | 1:I:16:A:C5' | 2.11 | 0.78 |
| 1:I:282:A:N3 | 1:I:283:A:C8 | 2.51 | 0.78 |
| 1:I:306:A:N3 | 1:I:307:A:C8 | 2.52 | 0.78 |
| 1:I:324:A:O2' | 1:I:325:A:C5' | 2.27 | 0.78 |
| 1:I:348:A:HO2' | 1:I:349:A:H5' | 1.46 | 0.78 |
| 1:I:47:A:N3 | 1:I:48:A:C8 | 2.51 | 0.78 |
| 2:J:26:A:C2' | 2:J:27:A:C5' | 2.60 | 0.78 |
| 3:K:154:A:H2' | 3:K:155:A:C8 | 2.18 | 0.78 |
| 3:K:46:A:O2' | 3:K:47:A:C4' | 2.32 | 0.78 |
| 3:K:62:A:H61 | 3:K:63:A:N6 | 1.79 | 0.78 |
| 3:K:89:A:N1 | 3:K:90:A:C5 | 2.52 | 0.78 |
| 4:L:532:U:HO2' | 4:L:533:U:H5' | 1.45 | 0.78 |
| 4:L:553:U:C2 | 4:L:554:U:C6 | 2.72 | 0.78 |
| 4:L:642:U:C2' | 4:L:643:U:C5' | 2.61 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:649:U:O2' | 4:L:650:U:C5' | 2.26 | 0.78 |
| 4:L:769:U:C2 | 4:L:770:U:C6 | 2.72 | 0.78 |
| 5:M:417:U:N3 | 5:M:418:U:C5 | 2.51 | 0.78 |
| 6:N:311:U:H2' | 6:N:312:U:C6 | 2.18 | 0.78 |
| 6:N:316:U:C2' | 6:N:317:U:O4' | 2.32 | 0.78 |
| 1:I:104:A:C6 | 1:I:105:A:N6 | 2.51 | 0.78 |
| 1:I:152:A:H2' | 1:I:153:A:C8 | 2.18 | 0.78 |
| 1:I:263:A:C2 | 1:I:264:A:C8 | 2.72 | 0.78 |
| 1:I:299:A:C2' | 1:I:300:A:C5' | 2.61 | 0.78 |
| 2:J:219:A:N3 | 2:J:220:A:C8 | 2.52 | 0.78 |
| 2:J:228:A:H2' | 2:J:229:A:H8 | 1.48 | 0.78 |
| 2:J:55:A:C4 | 2:J:56:A:C8 | 2.71 | 0.78 |
| 3:K:80:A:H2' | 3:K:81:A:C8 | 2.17 | 0.78 |
| 4:L:472:U:O2 | 4:L:473:U:C5 | 2.35 | 0.78 |
| 4:L:544:U:C2' | 4:L:545:U:H5' | 2.13 | 0.78 |
| 4:L:555:U:H2' | 4:L:556:U:H6 | 1.48 | 0.78 |
| 4:L:583:U:H2' | 4:L:584:U:C6 | 2.18 | 0.78 |
| 4:L:671:U:O2' | 4:L:672:U:H5' | 1.83 | 0.78 |
| 4:L:750:U:H2' | 4:L:751:U:H6 | 1.47 | 0.78 |
| 4:L:760:U:H2' | 4:L:761:U:O4' | 1.84 | 0.78 |
| 6:N:327:U:H2' | 6:N:328:U:C6 | 2.19 | 0.78 |
| 1:I:13:A:O2' | 1:I:14:A:O4' | 2.01 | 0.78 |
| 1:I:166:A:C2' | 1:I:167:A:H5' | 2.14 | 0.78 |
| 1:I:279:A:C2 | 1:I:280:A:C4 | 2.71 | 0.78 |
| 1:I:66:A:C6 | 1:I:67:A:N7 | 2.51 | 0.78 |
| 1:I:75:A:C2 | 1:I:76:A:C4 | 2.72 | 0.78 |
| 2:J:184:A:N3 | 2:J:185:A:C8 | 2.52 | 0.78 |
| 2:J:216:A:N3 | 2:J:217:A:C8 | 2.52 | 0.78 |
| 2:J:61:A:C2 | 2:J:62:A:C8 | 2.72 | 0.78 |
| 3:K:104:A:N3 | 3:K:105:A:C8 | 2.52 | 0.78 |
| 3:K:192:A:C2' | 3:K:193:A:C8 | 2.65 | 0.78 |
| 4:L:634:U:C2 | 4:L:635:U:C6 | 2.71 | 0.78 |
| 4:L:727:U:O2' | 4:L:728:U:H5' | 1.82 | 0.78 |
| 4:L:763:U:C2 | 4:L:764:U:C5 | 2.71 | 0.78 |
| 5:M:338:U:O2' | 5:M:339:U:P | 2.40 | 0.78 |
| 6:N:305:U:C2' | 6:N:306:U:H6 | 1.97 | 0.78 |
| 1:I:143:A:C2 | 1:I:144:A:C6 | 2.71 | 0.78 |
| 1:I:14:A:O2' | 1:I:15:A:O4' | 2.01 | 0.78 |
| 1:I:179:A:H62 | 1:I:180:A:H62 | 1.32 | 0.78 |
| 1:I:21:A:C2' | 1:I:22:A:O4' | 2.32 | 0.78 |
| 1:I:285:A:C2' | 1:I:286:A:C5' | 2.60 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:359:A:N6 | 1:I:360:A:H62 | 1.79 | 0.78 |
| 2:J:236:A:C2 | 2:J:237:A:C8 | 2.70 | 0.78 |
| 2:J:95:A:O2' | 2:J:96:A:H5' | 1.83 | 0.78 |
| 3:K:234:A:C6 | 3:K:235:A:N6 | 2.51 | 0.78 |
| 4:L:517:U:C2 | 4:L:518:U:C6 | 2.72 | 0.78 |
| 4:L:588:U:C2 | 4:L:589:U:C6 | 2.71 | 0.78 |
| 4:L:685:U:C2 | 4:L:686:U:C5 | 2.72 | 0.78 |
| 4:L:702:U:H2' | 4:L:703:U:H6 | 1.49 | 0.78 |
| 5:M:504:U:N3 | 5:M:505:U:C5 | 2.52 | 0.78 |
| 6:N:327:U:O2' | 6:N:328:U:C5' | 2.30 | 0.78 |
| 6:N:383:U:H2' | 6:N:384:U:H6 | 1.49 | 0.78 |
| 6:N:399:U:C4 | 6:N:400:U:O4 | 2.37 | 0.78 |
| 6:N:526:U:C2' | 6:N:527:U:O4' | 2.31 | 0.78 |
| 1:I:100:A:C2' | 1:I:101:A:H5' | 2.14 | 0.78 |
| 1:I:132:A:C2' | 1:I:133:A:O4' | 2.32 | 0.78 |
| 1:I:135:A:C2 | 1:I:136:A:C8 | 2.72 | 0.78 |
| 1:I:257:A:H2' | 1:I:258:A:C5' | 2.13 | 0.78 |
| 1:I:267:A:C2 | 1:I:268:A:C8 | 2.58 | 0.78 |
| 1:I:362:A:C6 | 1:I:363:A:N6 | 2.52 | 0.78 |
| 1:I:66:A:N1 | 1:I:67:A:C5 | 2.51 | 0.78 |
| 2:J:191:A:C2' | 2:J:192:A:C5' | 2.61 | 0.78 |
| 2:J:96:A:O2' | 2:J:97:A:H5' | 1.83 | 0.78 |
| 3:K:211:A:H2' | 3:K:212:A:H8 | 1.44 | 0.78 |
| 4:L:538:U:H2' | 4:L:539:U:H6 | 1.48 | 0.78 |
| 4:L:552:U:N3 | 4:L:553:U:C4 | 2.52 | 0.78 |
| 4:L:634:U:H2' | 4:L:635:U:C5' | 2.14 | 0.78 |
| 4:L:638:U:H2' | 4:L:639:U:C4' | 2.13 | 0.78 |
| 4:L:724:U:C3' | 4:L:725:U:C5' | 2.42 | 0.78 |
| 5:M:299:U:H2' | 5:M:300:U:O4' | 1.83 | 0.78 |
| 5:M:484:U:C2 | 5:M:485:U:C5 | 2.71 | 0.78 |
| 1:I:243:A:C6 | 1:I:244:A:C6 | 2.71 | 0.78 |
| 1:I:258:A:H2' | 1:I:259:A:C5' | 2.12 | 0.78 |
| 1:I:326:A:C2' | 1:I:327:A:H5' | 2.14 | 0.78 |
| 2:J:127:A:H2' | 2:J:128:A:C5' | 2.14 | 0.78 |
| 2:J:160:A:O2' | 2:J:161:A:O4' | 2.00 | 0.78 |
| 2:J:171:A:N3 | 2:J:172:A:C8 | 2.52 | 0.78 |
| 2:J:171:A:O2' | 2:J:172:A:P | 2.41 | 0.78 |
| 2:J:218:A:C2 | 2:J:219:A:C4 | 2.71 | 0.78 |
| 2:J:225:A:N1 | 2:J:226:A:C5 | 2.52 | 0.78 |
| 2:J:237:A:C2 | 2:J:238:A:C8 | 2.72 | 0.78 |
| 2:J:28:A:C6 | 2:J:29:A:C5 | 2.72 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:28:A:C4 | 2:J:29:A:N7 | 2.52 | 0.78 |
| 2:J:92:A:O2' | 2:J:93:A:O5' | 2.01 | 0.78 |
| 3:K:153:A:C2 | 3:K:154:A:C5 | 2.71 | 0.78 |
| 3:K:152:A:C6 | 3:K:153:A:C6 | 2.71 | 0.78 |
| 4:L:549:U:H2' | 4:L:550:U:C6 | 2.18 | 0.78 |
| 4:L:660:U:H2' | 4:L:661:U:H6 | 1.49 | 0.78 |
| 4:L:661:U:O2 | 4:L:662:U:C6 | 2.36 | 0.78 |
| 4:L:716:U:C2 | 4:L:717:U:C5 | 2.72 | 0.78 |
| 4:L:747:U:N3 | 4:L:748:U:C5 | 2.52 | 0.78 |
| 4:L:813:U:H2' | 4:L:814:U:C6 | 2.18 | 0.78 |
| 5:M:410:U:O4 | 5:M:411:U:O4 | 2.00 | 0.78 |
| 5:M:416:U:C2 | 5:M:417:U:C6 | 2.71 | 0.78 |
| 5:M:460:U:N3 | 5:M:461:U:C4 | 2.51 | 0.78 |
| 6:N:338:U:C2' | 6:N:339:U:C6 | 2.61 | 0.78 |
| 6:N:440:U:H2' | 6:N:441:U:O4' | 1.84 | 0.78 |
| 6:N:501:U:C2' | 6:N:502:U:H5' | 2.13 | 0.78 |
| 1:I:227:A:C2' | 1:I:228:A:C5' | 2.62 | 0.78 |
| 1:I:266:A:N3 | 1:I:267:A:C1' | 2.47 | 0.78 |
| 1:I:52:A:C2' | 1:I:53:A:H5' | 2.14 | 0.78 |
| 1:I:54:A:N3 | 1:I:55:A:N7 | 2.31 | 0.78 |
| 1:I:92:A:N6 | 1:I:93:A:N6 | 2.32 | 0.78 |
| 2:J:101:A:C4 | 2:J:102:A:N7 | 2.52 | 0.78 |
| 2:J:11:A:C2' | 2:J:12:A:O4' | 2.32 | 0.78 |
| 2:J:165:A:N3 | 2:J:166:A:N7 | 2.31 | 0.78 |
| 3:K:156:A:C2' | 3:K:157:A:C4' | 2.62 | 0.78 |
| 3:K:219:A:H2' | 3:K:220:A:H8 | 1.49 | 0.78 |
| 4:L:451:U:C3' | 4:L:452:U:P | 2.72 | 0.78 |
| 4:L:555:U:C2 | 4:L:556:U:C5 | 2.72 | 0.78 |
| 4:L:598:U:C2 | 4:L:599:U:C5 | 2.71 | 0.78 |
| 4:L:598:U:N3 | 4:L:599:U:C5 | 2.52 | 0.78 |
| 4:L:603:U:O2' | 4:L:604:U:C5' | 2.27 | 0.78 |
| 4:L:644:U:C2 | 4:L:645:U:C6 | 2.72 | 0.78 |
| 4:L:713:U:C2 | 4:L:714:U:C6 | 2.72 | 0.78 |
| 4:L:778:U:H2' | 4:L:779:U:H6 | 1.49 | 0.78 |
| 4:L:794:U:HO2' | 4:L:795:U:H5' | 1.44 | 0.78 |
| 5:M:316:U:C2 | 5:M:317:U:C5 | 2.71 | 0.78 |
| 5:M:322:U:O2' | 5:M:323:U:C4' | 2.32 | 0.78 |
| 5:M:444:U:O2 | 5:M:445:U:C5 | 2.35 | 0.78 |
| 5:M:504:U:C2 | 5:M:505:U:C5 | 2.71 | 0.78 |
| 6:N:406:U:C4 | 6:N:407:U:C5 | 2.72 | 0.78 |
| 6:N:417:U:H2' | 6:N:418:U:C6 | 2.19 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:104:A:N6 | 1:I:105:A:N6 | 2.32 | 0.77 |
| 1:I:140:A:N1 | 1:I:141:A:N6 | 2.33 | 0.77 |
| 1:I:267:A:N1 | 1:I:268:A:C5 | 2.51 | 0.77 |
| 2:J:127:A:C2 | 2:J:128:A:C8 | 2.71 | 0.77 |
| 2:J:218:A:C2 | 2:J:219:A:C5 | 2.73 | 0.77 |
| 2:J:8:A:O2' | 2:J:9:A:C4' | 2.32 | 0.77 |
| 4:L:488:U:H2' | 4:L:489:U:O4' | 1.85 | 0.77 |
| 4:L:537:U:H2' | 4:L:538:U:H6 | 1.49 | 0.77 |
| 4:L:802:U:C2' | 4:L:803:U:H5' | 2.13 | 0.77 |
| 4:L:806:U:H2' | 4:L:807:U:C6 | 2.19 | 0.77 |
| 5:M:530:U:O2' | 5:M:531:U:C5' | 2.26 | 0.77 |
| 5:M:536:U:HO2' | 5:M:537:U:H5' | 1.45 | 0.77 |
| 5:M:548:U:O3' | 5:M:549:U:OP2 | 1.97 | 0.77 |
| 1:I:113:A:C4 | 1:I:114:A:N7 | 2.52 | 0.77 |
| 1:I:213:A:H2' | 1:I:214:A:C8 | 2.20 | 0.77 |
| 1:I:284:A:C2 | 1:I:285:A:C4 | 2.72 | 0.77 |
| 1:I:357:A:HO2' | 1:I:358:A:H5' | 1.49 | 0.77 |
| 1:I:358:A:C2 | 1:I:359:A:C4 | 2.73 | 0.77 |
| 1:I:70:A:C4 | 1:I:71:A:C8 | 2.72 | 0.77 |
| 1:I:81:A:C2 | 1:I:82:A:C4 | 2.73 | 0.77 |
| 3:K:125:A:HO2' | 3:K:126:A:H5' | 1.45 | 0.77 |
| 3:K:217:A:N6 | 3:K:218:A:N6 | 2.33 | 0.77 |
| 3:K:219:A:H2' | 3:K:220:A:C8 | 2.19 | 0.77 |
| 4:L:537:U:C2' | 4:L:538:U:O4' | 2.32 | 0.77 |
| 4:L:575:U:C2 | 4:L:576:U:C6 | 2.72 | 0.77 |
| 4:L:704:U:C2' | 4:L:705:U:C5' | 2.59 | 0.77 |
| 4:L:704:U:O2' | 4:L:705:U:C5' | 2.24 | 0.77 |
| 4:L:768:U:C2' | 4:L:769:U:O5' | 2.31 | 0.77 |
| 4:L:802:U:O2' | 4:L:803:U:C5' | 2.30 | 0.77 |
| 4:L:808:U:C2 | 4:L:809:U:C5 | 2.71 | 0.77 |
| 5:M:299:U:C2 | 5:M:300:U:C6 | 2.72 | 0.77 |
| 5:M:453:U:C2' | 5:M:454:U:C6 | 2.66 | 0.77 |
| 6:N:274:U:C2' | 6:N:275:U:H5' | 2.14 | 0.77 |
| 1:I:130:A:C2 | 1:I:131:A:C5 | 2.72 | 0.77 |
| 1:I:143:A:N3 | 1:I:144:A:N7 | 2.33 | 0.77 |
| 1:I:152:A:N6 | 1:I:153:A:N6 | 2.32 | 0.77 |
| 1:I:239:A:C2 | 1:I:240:A:C4 | 2.73 | 0.77 |
| 1:I:68:A:C5 | 1:I:69:A:N7 | 2.52 | 0.77 |
| 1:I:97:A:C2' | 1:I:98:A:C5' | 2.62 | 0.77 |
| 2:J:42:A:C2' | 2:J:43:A:H5' | 2.14 | 0.77 |
| 3:K:105:A:N1 | 3:K:106:A:C6 | 2.53 | 0.77 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:192:A:C2' | 3:K:193:A:H8 | 1.98 | 0.77 |
| 4:L:506:U:C2' | 4:L:507:U:H5' | 2.14 | 0.77 |
| 4:L:647:U:H2' | 4:L:648:U:O4' | 1.83 | 0.77 |
| 4:L:715:U:O2' | 4:L:716:U:P | 2.42 | 0.77 |
| 4:L:728:U:H2' | 4:L:729:U:C5 | 2.20 | 0.77 |
| 5:M:346:U:H2' | 5:M:347:U:H6 | 1.48 | 0.77 |
| 5:M:427:U:C2 | 5:M:428:U:C5 | 2.72 | 0.77 |
| 6:N:306:U:H2' | 6:N:307:U:C6 | 2.19 | 0.77 |
| 6:N:441:U:C2 | 6:N:442:U:C5 | 2.73 | 0.77 |
| 6:N:489:U:O2' | 6:N:490:U:C5' | 2.32 | 0.77 |
| 1:I:10:A:N3 | 1:I:11:A:C8 | 2.52 | 0.77 |
| 1:I:140:A:N1 | 1:I:141:A:C6 | 2.53 | 0.77 |
| 1:I:240:A:H2' | 1:I:241:A:H8 | 1.48 | 0.77 |
| 1:I:66:A:C6 | 1:I:67:A:C5 | 2.73 | 0.77 |
| 1:I:91:A:C2 | 1:I:92:A:N9 | 2.53 | 0.77 |
| 2:J:257:A:O2' | 2:J:258:A:H5' | 1.84 | 0.77 |
| 2:J:43:A:H2' | 2:J:44:A:C4' | 2.13 | 0.77 |
| 4:L:476:U:O2' | 4:L:477:U:H5' | 1.84 | 0.77 |
| 4:L:558:U:C2 | 4:L:559:U:C6 | 2.72 | 0.77 |
| 4:L:594:U:C2' | 4:L:595:U:H5' | 2.13 | 0.77 |
| 4:L:597:U:C2' | 4:L:598:U:C5' | 2.61 | 0.77 |
| 4:L:715:U:C2' | 4:L:716:U:C6 | 2.59 | 0.77 |
| 5:M:288:U:H2' | 5:M:289:U:C6 | 2.20 | 0.77 |
| 5:M:292:U:O2' | 5:M:293:U:H5' | 1.84 | 0.77 |
| 5:M:373:U:HO2' | 5:M:374:U:H5' | 1.47 | 0.77 |
| 5:M:482:U:HO2' | 5:M:483:U:H5' | 1.46 | 0.77 |
| 6:N:280:U:C2' | 6:N:281:U:C5' | 2.62 | 0.77 |
| 6:N:323:U:H2' | 6:N:324:U:H6 | 1.49 | 0.77 |
| 6:N:332:U:H2' | 6:N:333:U:H6 | 1.44 | 0.77 |
| 6:N:379:U:C2 | 6:N:380:U:C6 | 2.73 | 0.77 |
| 1:I:107:A:H2' | 1:I:108:A:H8 | 1.49 | 0.77 |
| 1:I:132:A:O2' | 1:I:133:A:C4' | 2.32 | 0.77 |
| 1:I:250:A:C6 | 1:I:251:A:C5 | 2.72 | 0.77 |
| 1:I:278:A:C2' | 1:I:279:A:C5' | 2.61 | 0.77 |
| 2:J:176:A:C2 | 2:J:177:A:C4 | 2.73 | 0.77 |
| 2:J:265:A:O2' | 2:J:266:A:P | 2.39 | 0.77 |
| 4:L:467:U:HO2' | 4:L:468:U:H5' | 1.50 | 0.77 |
| 4:L:509:U:H2' | 4:L:510:U:H6 | 1.49 | 0.77 |
| 4:L:536:U:C3' | 4:L:537:U:P | 2.73 | 0.77 |
| 4:L:588:U:C2' | 4:L:589:U:H5' | 2.15 | 0.77 |
| 4:L:593:U:H2' | 4:L:594:U:H6 | 1.48 | 0.77 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:734:U:O2' | 4:L:735:U:C5' | 2.32 | 0.77 |
| 4:L:760:U:C2 | 4:L:761:U:C6 | 2.73 | 0.77 |
| 5:M:335:U:C2 | 5:M:336:U:C6 | 2.71 | 0.77 |
| 5:M:365:U:C2' | 5:M:366:U:H5' | 2.13 | 0.77 |
| 5:M:489:U:H2' | 5:M:490:U:C5' | 2.12 | 0.77 |
| 5:M:524:U:N3 | 5:M:525:U:C4 | 2.53 | 0.77 |
| 6:N:476:U:O2' | 6:N:477:U:H5' | 1.84 | 0.77 |
| 1:I:132:A:C2 | 1:I:133:A:C4 | 2.72 | 0.77 |
| 1:I:18:A:C2' | 1:I:19:A:H5' | 2.10 | 0.77 |
| 1:I:253:A:H2' | 1:I:254:A:C8 | 2.19 | 0.77 |
| 1:I:262:A:C4 | 1:I:263:A:C8 | 2.72 | 0.77 |
| 2:J:171:A:N1 | 2:J:172:A:C6 | 2.53 | 0.77 |
| 2:J:218:A:N3 | 2:J:219:A:C8 | 2.53 | 0.77 |
| 2:J:70:A:C2 | 2:J:71:A:C4 | 2.72 | 0.77 |
| 3:K:154:A:C4 | 3:K:155:A:N7 | 2.50 | 0.77 |
| 3:K:96:A:O2' | 3:K:97:A:C5' | 2.32 | 0.77 |
| 4:L:423:U:H2' | 4:L:424:U:C6 | 2.19 | 0.77 |
| 4:L:524:U:HO2' | 4:L:525:U:H5' | 1.47 | 0.77 |
| 4:L:578:U:O2' | 4:L:579:U:C5' | 2.28 | 0.77 |
| 4:L:681:U:C2' | 4:L:682:U:C6 | 2.68 | 0.77 |
| 5:M:290:U:C2' | 5:M:291:U:C5' | 2.63 | 0.77 |
| 6:N:418:U:C2 | 6:N:419:U:C5 | 2.73 | 0.77 |
| 1:I:183:A:H2 | 1:I:184:A:C4 | 2.03 | 0.77 |
| 1:I:265:A:C5 | 1:I:266:A:N7 | 2.53 | 0.77 |
| 1:I:311:A:C2' | 1:I:312:A:H5' | 2.14 | 0.77 |
| 1:I:320:A:C2' | 1:I:321:A:H5' | 2.15 | 0.77 |
| 1:I:322:A:C6 | 1:I:323:A:C5 | 2.72 | 0.77 |
| 1:I:347:A:C2' | 1:I:348:A:H5' | 2.14 | 0.77 |
| 1:I:41:A:H2' | 1:I:42:A:H8 | 1.50 | 0.77 |
| 2:J:165:A:N1 | 2:J:166:A:C5 | 2.53 | 0.77 |
| 2:J:55:A:H2' | 2:J:56:A:O4' | 1.84 | 0.77 |
| 3:K:130:A:C2' | 3:K:131:A:H5' | 2.15 | 0.77 |
| 4:L:496:U:H2' | 4:L:497:U:O4' | 1.84 | 0.77 |
| 4:L:508:U:N3 | 4:L:509:U:C5 | 2.52 | 0.77 |
| 4:L:682:U:C2' | 4:L:683:U:C5' | 2.63 | 0.77 |
| 5:M:337:U:H2' | 5:M:338:U:C4' | 2.13 | 0.77 |
| 5:M:459:U:C2 | 5:M:460:U:C5 | 2.72 | 0.77 |
| 6:N:348:U:H2' | 6:N:349:U:H6 | 1.50 | 0.77 |
| 1:I:184:A:C6 | 1:I:185:A:N6 | 2.53 | 0.77 |
| 1:I:231:A:C2' | 1:I:232:A:H5' | 2.14 | 0.77 |
| 1:I:231:A:C6 | 1:I:232:A:C5 | 2.72 | 0.77 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:261:A:C2' | 1:I:262:A:C5' | 2.63 | 0.77 |
| 1:I:276:A:H2' | 1:I:277:A:C8 | 2.18 | 0.77 |
| 1:I:97:A:C2 | 1:I:98:A:C4 | 2.73 | 0.77 |
| 2:J:102:A:H2' | 2:J:103:A:H8 | 1.49 | 0.77 |
| 2:J:223:A:C4 | 2:J:224:A:C8 | 2.73 | 0.77 |
| 2:J:43:A:C2' | 2:J:44:A:O4' | 2.33 | 0.77 |
| 2:J:47:A:C2 | 2:J:48:A:C4 | 2.73 | 0.77 |
| 3:K:140:A:N6 | 3:K:141:A:N6 | 2.32 | 0.77 |
| 3:K:207:A:H2' | 3:K:208:A:H8 | 1.49 | 0.77 |
| 3:K:251:A:N6 | 3:K:252:A:N6 | 2.32 | 0.77 |
| 3:K:59:A:O2' | 3:K:60:A:C5' | 2.29 | 0.77 |
| 4:L:499:U:O4 | 4:L:500:U:O4 | 2.01 | 0.77 |
| 4:L:531:U:C2' | 4:L:532:U:H5' | 2.13 | 0.77 |
| 4:L:574:U:C2' | 4:L:575:U:C6 | 2.65 | 0.77 |
| 4:L:637:U:N3 | 4:L:638:U:C5 | 2.53 | 0.77 |
| 4:L:751:U:C2' | 4:L:752:U:H6 | 1.94 | 0.77 |
| 4:L:770:U:N3 | 4:L:771:U:C4 | 2.53 | 0.77 |
| 5:M:322:U:C2' | 5:M:323:U:O4' | 2.32 | 0.77 |
| 5:M:464:U:C2' | 5:M:465:U:O5' | 2.29 | 0.77 |
| 5:M:487:U:C2 | 5:M:488:U:C5 | 2.72 | 0.77 |
| 5:M:497:U:C2 | 5:M:498:U:C5 | 2.71 | 0.77 |
| 6:N:402:U:C2 | 6:N:403:U:C5 | 2.72 | 0.77 |
| 1:I:164:A:N3 | 1:I:165:A:N7 | 2.33 | 0.77 |
| 1:I:206:A:N3 | 1:I:207:A:C8 | 2.52 | 0.77 |
| 1:I:243:A:C4 | 1:I:244:A:N7 | 2.53 | 0.77 |
| 1:I:291:A:O2' | 1:I:292:A:C5' | 2.29 | 0.77 |
| 1:I:315:A:C2' | 1:I:316:A:C5' | 2.62 | 0.77 |
| 1:I:333:A:N3 | 1:I:334:A:O4' | 2.18 | 0.77 |
| 1:I:54:A:C6 | 1:I:55:A:N6 | 2.53 | 0.77 |
| 1:I:55:A:H2' | 1:I:56:A:O5' | 1.84 | 0.77 |
| 2:J:214:A:C2 | 2:J:215:A:C4 | 2.72 | 0.77 |
| 2:J:71:A:N6 | 2:J:72:A:H62 | 1.83 | 0.77 |
| 3:K:110:A:C2 | 3:K:111:A:N9 | 2.53 | 0.77 |
| 3:K:135:A:N3 | 3:K:136:A:C8 | 2.52 | 0.77 |
| 3:K:146:A:C2 | 3:K:147:A:C4 | 2.72 | 0.77 |
| 3:K:252:A:H3' | 3:K:253:A:P | 2.25 | 0.77 |
| 4:L:553:U:H2' | 4:L:554:U:O4' | 1.84 | 0.77 |
| 4:L:581:U:N3 | 4:L:582:U:C4 | 2.52 | 0.77 |
| 4:L:647:U:H2' | 4:L:648:U:H6 | 1.50 | 0.77 |
| 4:L:705:U:H2' | 4:L:706:U:C5' | 2.05 | 0.77 |
| 5:M:417:U:C4 | 5:M:418:U:C4 | 2.73 | 0.77 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:495:U:C2 | 5:M:496:U:C6 | 2.73 | 0.77 |
| 6:N:413:U:C2 | 6:N:414:U:C6 | 2.72 | 0.77 |
| 1:I:10:A:C2 | 1:I:11:A:C5 | 2.73 | 0.77 |
| 1:I:174:A:C2' | 1:I:175:A:C5' | 2.61 | 0.77 |
| 1:I:68:A:C6 | 1:I:69:A:N7 | 2.53 | 0.77 |
| 2:J:107:A:O2' | 2:J:108:A:C5' | 2.27 | 0.77 |
| 2:J:32:A:C2' | 2:J:33:A:H5' | 2.15 | 0.77 |
| 3:K:228:A:H2' | 3:K:229:A:C8 | 2.20 | 0.77 |
| 4:L:462:U:C4 | 4:L:463:U:O4 | 2.37 | 0.77 |
| 4:L:495:U:C2 | 4:L:496:U:C5 | 2.73 | 0.77 |
| 4:L:712:U:C4 | 4:L:713:U:C5 | 2.73 | 0.77 |
| 4:L:747:U:C2 | 4:L:748:U:C5 | 2.72 | 0.77 |
| 6:N:425:U:N3 | 6:N:426:U:C5 | 2.53 | 0.77 |
| 6:N:428:U:N3 | 6:N:429:U:C5 | 2.52 | 0.77 |
| 1:I:84:A:C2 | 1:I:85:A:N7 | 2.52 | 0.76 |
| 1:I:96:A:C4 | 1:I:97:A:N7 | 2.53 | 0.76 |
| 2:J:200:A:C2 | 2:J:201:A:C8 | 2.72 | 0.76 |
| 2:J:27:A:N3 | 2:J:28:A:C8 | 2.53 | 0.76 |
| 2:J:72:A:C2 | 2:J:73:A:C4 | 2.73 | 0.76 |
| 3:K:202:A:H2' | 3:K:203:A:H8 | 1.49 | 0.76 |
| 4:L:421:U:O2' | 4:L:422:U:O4' | 2.02 | 0.76 |
| 4:L:584:U:HO2' | 4:L:585:U:H5' | 1.47 | 0.76 |
| 4:L:730:U:O2 | 4:L:731:U:C6 | 2.38 | 0.76 |
| 4:L:816:U:N3 | 4:L:817:U:C5 | 2.53 | 0.76 |
| 5:M:305:U:O2' | 5:M:306:U:H5' | 1.86 | 0.76 |
| 5:M:448:U:H2' | 5:M:449:U:C5' | 2.15 | 0.76 |
| 5:M:460:U:H2' | 5:M:461:U:O4' | 1.84 | 0.76 |
| 5:M:463:U:C2' | 5:M:464:U:C5' | 2.62 | 0.76 |
| 5:M:488:U:C4 | 5:M:489:U:C4 | 2.73 | 0.76 |
| 1:I:102:A:N6 | 1:I:103:A:N6 | 2.33 | 0.76 |
| 1:I:129:A:C2 | 1:I:130:A:C4 | 2.72 | 0.76 |
| 1:I:44:A:O2' | 1:I:45:A:C5' | 2.32 | 0.76 |
| 1:I:94:A:C2 | 1:I:95:A:C4 | 2.72 | 0.76 |
| 2:J:152:A:O2' | 2:J:153:A:H5' | 1.84 | 0.76 |
| 2:J:183:A:C2 | 2:J:184:A:C4 | 2.73 | 0.76 |
| 2:J:99:A:C2' | 2:J:100:A:O4' | 2.33 | 0.76 |
| 3:K:106:A:H2' | 3:K:107:A:O4' | 1.84 | 0.76 |
| 3:K:124:A:N1 | 3:K:125:A:C6 | 2.52 | 0.76 |
| 4:L:484:U:C2 | 4:L:485:U:C6 | 2.72 | 0.76 |
| 4:L:571:U:H2' | 4:L:572:U:H6 | 1.48 | 0.76 |
| 4:L:625:U:C2 | 4:L:626:U:C5 | 2.73 | 0.76 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:705:U:O2 | 4:L:706:U:C6 | 2.38 | 0.76 |
| 5:M:287:U:H2' | 5:M:288:U:H6 | 1.49 | 0.76 |
| 5:M:324:U:H2' | 5:M:325:U:O4' | 1.84 | 0.76 |
| 6:N:485:U:C3' | 6:N:486:U:P | 2.73 | 0.76 |
| 1:I:142:A:H2' | 1:I:143:A:H8 | 1.49 | 0.76 |
| 1:I:178:A:C2' | 1:I:179:A:H5' | 2.15 | 0.76 |
| 1:I:53:A:C2 | 1:I:54:A:C8 | 2.73 | 0.76 |
| 2:J:138:A:N6 | 2:J:139:A:H62 | 1.81 | 0.76 |
| 2:J:94:A:C2 | 2:J:95:A:C4 | 2.72 | 0.76 |
| 3:K:256:A:C2' | 3:K:257:A:C5' | 2.64 | 0.76 |
| 4:L:528:U:H2' | 4:L:529:U:H6 | 1.51 | 0.76 |
| 4:L:615:U:O2' | 4:L:616:U:H5' | 1.86 | 0.76 |
| 4:L:730:U:O2' | 4:L:731:U:P | 2.43 | 0.76 |
| 4:L:794:U:C2' | 4:L:795:U:C5' | 2.63 | 0.76 |
| 4:L:811:U:C4 | 4:L:812:U:C4 | 2.73 | 0.76 |
| 5:M:405:U:C2' | 5:M:406:U:C4' | 2.63 | 0.76 |
| 5:M:407:U:N3 | 5:M:408:U:C5 | 2.52 | 0.76 |
| 5:M:481:U:H2' | 5:M:482:U:C6 | 2.21 | 0.76 |
| 5:M:544:U:H2' | 5:M:545:U:H6 | 1.49 | 0.76 |
| 6:N:430:U:H2' | 6:N:431:U:O4' | 1.85 | 0.76 |
| 6:N:473:U:C2 | 6:N:474:U:C5 | 2.72 | 0.76 |
| 6:N:497:U:HO2' | 6:N:498:U:H5' | 1.48 | 0.76 |
| 1:I:152:A:H2' | 1:I:153:A:H8 | 1.51 | 0.76 |
| 1:I:186:A:C2 | 1:I:187:A:C4 | 2.72 | 0.76 |
| 1:I:57:A:H2' | 1:I:58:A:C8 | 2.20 | 0.76 |
| 1:I:79:A:C2' | 1:I:80:A:H5' | 2.15 | 0.76 |
| 1:I:79:A:C6 | 1:I:80:A:N7 | 2.53 | 0.76 |
| 1:I:90:A:H2' | 1:I:91:A:O4' | 1.85 | 0.76 |
| 2:J:175:A:H2' | 2:J:176:A:C8 | 2.20 | 0.76 |
| 2:J:237:A:C2 | 2:J:238:A:C5 | 2.73 | 0.76 |
| 3:K:167:A:C2' | 3:K:168:A:C5' | 2.63 | 0.76 |
| 4:L:420:U:C4 | 4:L:421:U:O4 | 2.37 | 0.76 |
| 4:L:558:U:O2 | 4:L:559:U:C6 | 2.37 | 0.76 |
| 4:L:599:U:N3 | 4:L:600:U:C4 | 2.54 | 0.76 |
| 4:L:770:U:O4 | 4:L:771:U:O4 | 2.03 | 0.76 |
| 5:M:346:U:C2 | 5:M:347:U:C6 | 2.73 | 0.76 |
| 5:M:544:U:HO2' | 5:M:545:U:H5' | 0.95 | 0.76 |
| 6:N:409:U:N3 | 6:N:410:U:C5 | 2.54 | 0.76 |
| 6:N:411:U:O2 | 6:N:412:U:C6 | 2.38 | 0.76 |
| 6:N:460:U:O2 | 6:N:461:U:C5 | 2.38 | 0.76 |
| 6:N:470:U:O2' | 6:N:471:U:H5' | 1.84 | 0.76 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:103:A:H2' | 1:I:104:A:H8 | 1.51 | 0.76 |
| 1:I:175:A:O2' | 1:I:176:A:O5' | 2.03 | 0.76 |
| 1:I:179:A:C4 | 1:I:180:A:C8 | 2.74 | 0.76 |
| 1:I:213:A:H2' | 1:I:214:A:H8 | 1.49 | 0.76 |
| 1:I:278:A:C2' | 1:I:279:A:H5' | 2.16 | 0.76 |
| 1:I:57:A:H2' | 1:I:58:A:H8 | 1.51 | 0.76 |
| 1:I:81:A:N3 | 1:I:82:A:C8 | 2.53 | 0.76 |
| 2:J:171:A:C2' | 2:J:172:A:H8 | 1.95 | 0.76 |
| 2:J:218:A:C2' | 2:J:219:A:C5' | 2.63 | 0.76 |
| 2:J:58:A:C2 | 2:J:59:A:C4 | 2.73 | 0.76 |
| 2:J:71:A:C5 | 2:J:72:A:N7 | 2.53 | 0.76 |
| 3:K:153:A:N3 | 3:K:154:A:N9 | 2.32 | 0.76 |
| 3:K:227:A:H2' | 3:K:228:A:C8 | 2.20 | 0.76 |
| 4:L:536:U:O2' | 4:L:537:U:H5' | 1.86 | 0.76 |
| 4:L:610:U:H2' | 4:L:611:U:H6 | 1.50 | 0.76 |
| 4:L:737:U:O2' | 4:L:738:U:C5' | 2.33 | 0.76 |
| 5:M:514:U:C2' | 5:M:515:U:H5' | 2.15 | 0.76 |
| 5:M:525:U:C2 | 5:M:526:U:C6 | 2.74 | 0.76 |
| 5:M:539:U:C2' | 5:M:540:U:C5' | 2.63 | 0.76 |
| 5:M:541:U:H2' | 5:M:542:U:H6 | 1.50 | 0.76 |
| 6:N:281:U:H2' | 6:N:282:U:C5' | 2.14 | 0.76 |
| 6:N:399:U:N3 | 6:N:400:U:C4 | 2.54 | 0.76 |
| 6:N:430:U:O2' | 6:N:431:U:C5' | 2.31 | 0.76 |
| 6:N:431:U:C2 | 6:N:432:U:C6 | 2.74 | 0.76 |
| 1:I:222:A:C2' | 1:I:223:A:H5' | 2.14 | 0.76 |
| 1:I:329:A:C4 | 1:I:330:A:C8 | 2.73 | 0.76 |
| 1:I:41:A:C2 | 1:I:42:A:C5 | 2.74 | 0.76 |
| 2:J:172:A:H2' | 2:J:173:A:H8 | 1.50 | 0.76 |
| 3:K:150:A:N3 | 3:K:151:A:C8 | 2.54 | 0.76 |
| 3:K:166:A:C2' | 3:K:167:A:O5' | 2.33 | 0.76 |
| 3:K:203:A:HO2' | 3:K:204:A:C5' | 1.97 | 0.76 |
| 3:K:45:A:O2' | 3:K:46:A:C5' | 2.33 | 0.76 |
| 4:L:471:U:O2' | 4:L:472:U:H5' | 1.84 | 0.76 |
| 4:L:494:U:C2' | 4:L:495:U:H5' | 2.15 | 0.76 |
| 4:L:565:U:C2 | 4:L:566:U:C5 | 2.74 | 0.76 |
| 4:L:583:U:N3 | 4:L:584:U:C4 | 2.54 | 0.76 |
| 4:L:645:U:N3 | 4:L:646:U:C4 | 2.53 | 0.76 |
| 4:L:668:U:C2' | 4:L:669:U:C6 | 2.63 | 0.76 |
| 4:L:691:U:H2' | 4:L:692:U:H6 | 1.49 | 0.76 |
| 4:L:739:U:HO2' | 4:L:740:U:H5' | 0.94 | 0.76 |
| 4:L:743:U:C2' | 4:L:744:U:O5' | 2.32 | 0.76 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:755:U:H2' | 4:L:756:U:C5' | 2.16 | 0.76 |
| 4:L:766:U:C6 | 4:L:767:U:C5 | 2.74 | 0.76 |
| 4:L:775:U:HO2' | 4:L:776:U:H5' | 1.50 | 0.76 |
| 4:L:793:U:N3 | 4:L:794:U:C5 | 2.54 | 0.76 |
| 5:M:430:U:H2' | 5:M:431:U:C6 | 2.20 | 0.76 |
| 5:M:513:U:H2' | 5:M:514:U:H6 | 1.50 | 0.76 |
| 1:I:128:A:C6 | 1:I:129:A:C5 | 2.73 | 0.76 |
| 1:I:156:A:C2' | 1:I:157:A:C8 | 2.68 | 0.76 |
| 1:I:184:A:C5 | 1:I:185:A:N7 | 2.54 | 0.76 |
| 1:I:197:A:C2 | 1:I:198:A:C8 | 2.74 | 0.76 |
| 1:I:268:A:C4 | 1:I:269:A:C8 | 2.74 | 0.76 |
| 1:I:79:A:N3 | 1:I:80:A:C8 | 2.54 | 0.76 |
| 2:J:181:A:C2 | 2:J:182:A:C5 | 2.74 | 0.76 |
| 2:J:201:A:C5 | 2:J:202:A:N7 | 2.54 | 0.76 |
| 2:J:201:A:N6 | 2:J:202:A:N6 | 2.32 | 0.76 |
| 2:J:222:A:C2 | 2:J:223:A:N9 | 2.54 | 0.76 |
| 2:J:29:A:C6 | 2:J:30:A:C5 | 2.73 | 0.76 |
| 2:J:62:A:H2' | 2:J:63:A:C5' | 2.16 | 0.76 |
| 2:J:84:A:C6 | 2:J:85:A:C5 | 2.74 | 0.76 |
| 3:K:117:A:C2 | 3:K:118:A:C8 | 2.74 | 0.76 |
| 3:K:119:A:C4 | 3:K:120:A:C8 | 2.73 | 0.76 |
| 4:L:424:U:H2' | 4:L:425:U:C6 | 2.20 | 0.76 |
| 4:L:727:U:O2 | 4:L:728:U:C6 | 2.39 | 0.76 |
| 5:M:299:U:C2' | 5:M:300:U:C5' | 2.64 | 0.76 |
| 5:M:372:U:O2' | 5:M:373:U:H5' | 1.86 | 0.76 |
| 5:M:453:U:C2 | 5:M:454:U:C5 | 2.73 | 0.76 |
| 6:N:459:U:O2 | 6:N:460:U:C6 | 2.39 | 0.76 |
| 6:N:459:U:H2' | 6:N:460:U:C5 | 2.21 | 0.76 |
| 1:I:95:A:N1 | 1:I:96:A:N6 | 2.34 | 0.76 |
| 2:J:118:A:C2 | 2:J:119:A:N7 | 2.54 | 0.76 |
| 2:J:233:A:C2' | 2:J:234:A:H5' | 2.14 | 0.76 |
| 3:K:41:A:C2 | 3:K:42:A:C4 | 2.74 | 0.76 |
| 4:L:489:U:N3 | 4:L:490:U:C4 | 2.53 | 0.76 |
| 4:L:531:U:N3 | 4:L:532:U:C5 | 2.54 | 0.76 |
| 4:L:547:U:N3 | 4:L:548:U:O4 | 2.17 | 0.76 |
| 4:L:753:U:H2' | 4:L:754:U:H6 | 1.49 | 0.76 |
| 5:M:305:U:H2' | 5:M:306:U:H6 | 1.50 | 0.76 |
| 5:M:512:U:O2' | 5:M:513:U:H5' | 1.84 | 0.76 |
| 6:N:378:U:O4 | 6:N:379:U:O4 | 2.04 | 0.76 |
| 6:N:427:U:O2' | 6:N:428:U:C5' | 2.27 | 0.76 |
| 6:N:441:U:N3 | 6:N:442:U:C5 | 2.53 | 0.76 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:481:U:H2' | 6:N:482:U:H6 | 1.50 | 0.76 |
| 1:I:122:A:HO2' | 1:I:123:A:C5' | 1.87 | 0.76 |
| 1:I:135:A:C2 | 1:I:136:A:N9 | 2.54 | 0.76 |
| 1:I:198:A:C2 | 1:I:199:A:C5 | 2.74 | 0.76 |
| 1:I:267:A:N1 | 1:I:268:A:N6 | 2.34 | 0.76 |
| 1:I:274:A:C2' | 1:I:275:A:H5' | 2.14 | 0.76 |
| 2:J:237:A:O2' | 2:J:238:A:P | 2.43 | 0.76 |
| 3:K:124:A:N1 | 3:K:125:A:N6 | 2.34 | 0.76 |
| 3:K:127:A:HO2' | 3:K:128:A:H5' | 1.49 | 0.76 |
| 3:K:254:A:H2' | 3:K:255:A:O4' | 1.86 | 0.76 |
| 3:K:97:A:C2' | 3:K:98:A:O4' | 2.30 | 0.76 |
| 4:L:550:U:O2 | 4:L:551:U:C6 | 2.39 | 0.76 |
| 4:L:723:U:C6 | 4:L:724:U:H5 | 1.97 | 0.76 |
| 4:L:762:U:H2' | 4:L:763:U:H6 | 1.51 | 0.76 |
| 4:L:806:U:C2' | 4:L:807:U:H5' | 2.14 | 0.76 |
| 5:M:438:U:O2' | 5:M:439:U:H5' | 1.86 | 0.76 |
| 5:M:480:U:H2' | 5:M:481:U:C6 | 2.21 | 0.76 |
| 5:M:504:U:C2 | 5:M:505:U:C6 | 2.74 | 0.76 |
| 5:M:537:U:H2' | 5:M:538:U:C5' | 2.15 | 0.76 |
| 6:N:422:U:C2 | 6:N:423:U:C5 | 2.74 | 0.76 |
| 1:I:248:A:C2 | 1:I:249:A:C4 | 2.74 | 0.76 |
| 1:I:25:A:C2 | 1:I:26:A:C4 | 2.74 | 0.76 |
| 1:I:88:A:C2 | 1:I:89:A:C8 | 2.73 | 0.76 |
| 2:J:112:A:O2' | 2:J:113:A:H5' | 1.85 | 0.76 |
| 2:J:61:A:C2 | 2:J:62:A:N7 | 2.53 | 0.76 |
| 3:K:161:A:O2' | 3:K:162:A:H5' | 1.85 | 0.76 |
| 3:K:165:A:H2' | 3:K:166:A:O4' | 1.86 | 0.76 |
| 4:L:533:U:C2' | 4:L:534:U:C5' | 2.63 | 0.76 |
| 4:L:580:U:HO2' | 4:L:581:U:H5' | 1.51 | 0.76 |
| 4:L:645:U:N3 | 4:L:646:U:C5 | 2.54 | 0.76 |
| 4:L:682:U:HO2' | 4:L:683:U:H5' | 0.88 | 0.76 |
| 4:L:686:U:HO2' | 4:L:687:U:H5' | 1.49 | 0.76 |
| 5:M:336:U:O4 | 5:M:337:U:C4 | 2.38 | 0.76 |
| 5:M:336:U:N3 | 5:M:337:U:C5 | 2.54 | 0.76 |
| 5:M:378:U:C2 | 5:M:379:U:C5 | 2.74 | 0.76 |
| 5:M:474:U:O3' | 5:M:475:U:OP2 | 2.04 | 0.76 |
| 5:M:510:U:C2 | 5:M:511:U:C6 | 2.73 | 0.76 |
| 6:N:327:U:H2' | 6:N:328:U:H6 | 1.49 | 0.76 |
| 6:N:427:U:H2' | 6:N:428:U:H6 | 1.48 | 0.76 |
| 6:N:515:U:O2' | 6:N:516:U:H5' | 1.85 | 0.76 |
| 1:I:296:A:O2' | 1:I:297:A:C5' | 2.29 | 0.75 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:329:A:C5 | 1:I:330:A:N7 | 2.53 | 0.75 |
| 2:J:204:A:N1 | 2:J:205:A:C6 | 2.54 | 0.75 |
| 3:K:104:A:C2 | 3:K:105:A:C5 | 2.74 | 0.75 |
| 3:K:116:A:N6 | 3:K:117:A:N6 | 2.34 | 0.75 |
| 3:K:241:A:C3' | 3:K:242:A:P | 2.74 | 0.75 |
| 3:K:46:A:C3' | 3:K:47:A:H5' | 2.16 | 0.75 |
| 4:L:424:U:C4 | 4:L:425:U:C4 | 2.74 | 0.75 |
| 4:L:607:U:O2' | 4:L:608:U:H5' | 1.86 | 0.75 |
| 4:L:641:U:O2 | 4:L:642:U:C6 | 2.40 | 0.75 |
| 5:M:333:U:C2 | 5:M:334:U:C6 | 2.73 | 0.75 |
| 5:M:365:U:HO2' | 5:M:366:U:H5' | 1.51 | 0.75 |
| 6:N:288:U:C3' | 6:N:289:U:P | 2.74 | 0.75 |
| 6:N:321:U:C4 | 6:N:322:U:C4 | 2.73 | 0.75 |
| 6:N:489:U:C2 | 6:N:490:U:C5 | 2.73 | 0.75 |
| 1:I:190:A:C2' | 1:I:191:A:H5' | 2.16 | 0.75 |
| 1:I:21:A:C4 | 1:I:22:A:C8 | 2.73 | 0.75 |
| 1:I:232:A:O2' | 1:I:233:A:C5' | 2.26 | 0.75 |
| 2:J:165:A:O2' | 2:J:166:A:P | 2.43 | 0.75 |
| 2:J:224:A:C4 | 2:J:225:A:C8 | 2.75 | 0.75 |
| 4:L:477:U:H2' | 4:L:478:U:O4' | 1.85 | 0.75 |
| 4:L:526:U:O2' | 4:L:527:U:H5' | 1.87 | 0.75 |
| 4:L:572:U:C2' | 4:L:573:U:H5' | 2.13 | 0.75 |
| 4:L:604:U:C2' | 4:L:605:U:C5' | 2.63 | 0.75 |
| 5:M:464:U:C2 | 5:M:465:U:C6 | 2.73 | 0.75 |
| 5:M:511:U:C2 | 5:M:512:U:C6 | 2.74 | 0.75 |
| 5:M:537:U:C2' | 5:M:538:U:C5' | 2.65 | 0.75 |
| 6:N:313:U:C4 | 6:N:314:U:O4 | 2.40 | 0.75 |
| 1:I:156:A:C2' | 1:I:157:A:H8 | 1.98 | 0.75 |
| 1:I:328:A:H2' | 1:I:329:A:C8 | 2.19 | 0.75 |
| 1:I:64:A:C4 | 1:I:65:A:C8 | 2.74 | 0.75 |
| 1:I:81:A:C2 | 1:I:82:A:N9 | 2.54 | 0.75 |
| 2:J:184:A:C2' | 2:J:185:A:H5' | 2.17 | 0.75 |
| 3:K:146:A:C2 | 3:K:147:A:C8 | 2.74 | 0.75 |
| 3:K:89:A:C4 | 3:K:90:A:N7 | 2.55 | 0.75 |
| 3:K:93:A:O2' | 3:K:94:A:H5' | 1.87 | 0.75 |
| 3:K:96:A:H2' | 3:K:97:A:C8 | 2.21 | 0.75 |
| 4:L:606:U:O2' | 4:L:607:U:H5' | 1.86 | 0.75 |
| 4:L:712:U:N1 | 4:L:713:U:C6 | 2.54 | 0.75 |
| 4:L:765:U:H2' | 4:L:766:U:C4' | 2.16 | 0.75 |
| 5:M:316:U:C2 | 5:M:317:U:C6 | 2.75 | 0.75 |
| 5:M:349:U:H2' | 5:M:350:U:O4' | 1.86 | 0.75 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:371:U:O2' | 5:M:372:U:C5' | 2.23 | 0.75 |
| 6:N:394:U:C2' | 6:N:395:U:C5' | 2.65 | 0.75 |
| 6:N:466:U:O2' | 6:N:467:U:C5' | 2.33 | 0.75 |
| 6:N:472:U:H2' | 6:N:473:U:H6 | 1.52 | 0.75 |
| 1:I:101:A:H2' | 1:I:102:A:H8 | 1.48 | 0.75 |
| 1:I:190:A:HO2' | 1:I:191:A:H5' | 1.50 | 0.75 |
| 1:I:20:A:H2' | 1:I:21:A:O4' | 1.85 | 0.75 |
| 1:I:266:A:N3 | 1:I:267:A:O4' | 2.19 | 0.75 |
| 1:I:284:A:H2' | 1:I:285:A:C5' | 2.15 | 0.75 |
| 2:J:133:A:C2' | 2:J:134:A:C5' | 2.59 | 0.75 |
| 2:J:265:A:C2' | 2:J:266:A:O5' | 2.35 | 0.75 |
| 3:K:151:A:C2 | 3:K:152:A:C5 | 2.74 | 0.75 |
| 4:L:555:U:O2' | 4:L:556:U:H5' | 1.86 | 0.75 |
| 4:L:578:U:C2' | 4:L:579:U:C5' | 2.64 | 0.75 |
| 4:L:588:U:O2 | 4:L:589:U:C6 | 2.40 | 0.75 |
| 4:L:638:U:H2' | 4:L:639:U:O4' | 1.85 | 0.75 |
| 4:L:660:U:H2' | 4:L:661:U:C6 | 2.20 | 0.75 |
| 4:L:680:U:H2' | 4:L:681:U:C5 | 2.21 | 0.75 |
| 4:L:728:U:C2 | 4:L:729:U:C4 | 2.73 | 0.75 |
| 5:M:296:U:H2' | 5:M:297:U:C5' | 2.15 | 0.75 |
| 5:M:406:U:H2' | 5:M:407:U:C5' | 2.16 | 0.75 |
| 5:M:498:U:O2 | 5:M:499:U:C5 | 2.39 | 0.75 |
| 6:N:273:U:H2' | 6:N:274:U:H6 | 1.50 | 0.75 |
| 6:N:407:U:O2' | 6:N:408:U:H5' | 1.86 | 0.75 |
| 6:N:493:U:H2' | 6:N:494:U:H6 | 1.51 | 0.75 |
| 1:I:115:A:N3 | 1:I:116:A:C8 | 2.55 | 0.75 |
| 1:I:129:A:N3 | 1:I:130:A:C8 | 2.54 | 0.75 |
| 1:I:341:A:H2' | 1:I:342:A:C5' | 2.15 | 0.75 |
| 1:I:404:A:C6 | 1:I:405:A:N6 | 2.54 | 0.75 |
| 2:J:83:A:C6 | 2:J:84:A:C6 | 2.75 | 0.75 |
| 4:L:546:U:C2' | 4:L:547:U:O4' | 2.35 | 0.75 |
| 4:L:574:U:C2' | 4:L:575:U:H6 | 1.97 | 0.75 |
| 4:L:585:U:H2' | 4:L:586:U:C5' | 2.16 | 0.75 |
| 4:L:588:U:C2' | 4:L:589:U:C5' | 2.63 | 0.75 |
| 4:L:723:U:H2' | 4:L:724:U:C6 | 2.22 | 0.75 |
| 4:L:793:U:C2 | 4:L:794:U:C5 | 2.75 | 0.75 |
| 4:L:819:U:C2 | 4:L:820:U:C5 | 2.74 | 0.75 |
| 5:M:295:U:O2' | 5:M:296:U:H5' | 1.87 | 0.75 |
| 5:M:486:U:C2' | 5:M:487:U:H5' | 2.16 | 0.75 |
| 5:M:518:U:O2' | 5:M:519:U:C5' | 2.34 | 0.75 |
| 6:N:394:U:H2' | 6:N:395:U:O5' | 1.86 | 0.75 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 6:N:430:U:C2 | 6:N:431:U:C5 | 2.75 | 0.75 |
| 6:N:439:U:C2 | 6:N:440:U:C5 | 2.74 | 0.75 |
| 1:I:112:A:O2' | 1:I:113:A:O4' | 2.03 | 0.75 |
| 1:I:156:A:C6 | 1:I:157:A:N6 | 2.55 | 0.75 |
| 1:I:15:A:C4 | 1:I:16:A:C8 | 2.75 | 0.75 |
| 1:I:165:A:N6 | 1:I:166:A:N6 | 2.33 | 0.75 |
| 1:I:318:A:O2' | 1:I:319:A:C5' | 2.30 | 0.75 |
| 2:J:142:A:C5 | 2:J:143:A:N7 | 2.54 | 0.75 |
| 2:J:142:A:C6 | 2:J:143:A:C6 | 2.74 | 0.75 |
| 2:J:200:A:O2' | 2:J:201:A:C5' | 2.35 | 0.75 |
| 2:J:50:A:O2' | 2:J:51:A:C5' | 2.32 | 0.75 |
| 3:K:110:A:H2' | 3:K:111:A:O5' | 1.87 | 0.75 |
| 3:K:167:A:N6 | 3:K:168:A:H62 | 1.84 | 0.75 |
| 4:L:508:U:C4 | 4:L:509:U:O4 | 2.40 | 0.75 |
| 4:L:597:U:H2' | 4:L:598:U:H6 | 1.51 | 0.75 |
| 4:L:662:U:N3 | 4:L:663:U:O4 | 2.20 | 0.75 |
| 4:L:670:U:O2' | 4:L:671:U:H5' | 1.87 | 0.75 |
| 4:L:676:U:H3' | 4:L:677:U:P | 2.25 | 0.75 |
| 4:L:693:U:H2' | 4:L:694:U:C6 | 2.21 | 0.75 |
| 4:L:693:U:H2' | 4:L:694:U:H6 | 1.51 | 0.75 |
| 5:M:298:U:C2' | 5:M:299:U:H5' | 2.17 | 0.75 |
| 5:M:326:U:O2' | 5:M:327:U:H5' | 1.87 | 0.75 |
| 5:M:507:U:N3 | 5:M:508:U:C5 | 2.54 | 0.75 |
| 5:M:539:U:C2 | 5:M:540:U:C6 | 2.74 | 0.75 |
| 6:N:371:U:O2' | 6:N:372:U:H5' | 1.87 | 0.75 |
| 1:I:155:A:H2' | 1:I:156:A:H8 | 1.51 | 0.75 |
| 1:I:186:A:O2' | 1:I:187:A:O5' | 2.04 | 0.75 |
| 1:I:226:A:C2 | 1:I:227:A:C8 | 2.75 | 0.75 |
| 1:I:249:A:N3 | 1:I:250:A:C8 | 2.53 | 0.75 |
| 1:I:274:A:H2' | 1:I:275:A:O5' | 1.86 | 0.75 |
| 1:I:277:A:N6 | 1:I:278:A:H61 | 1.78 | 0.75 |
| 1:I:278:A:O2' | 1:I:279:A:O4' | 2.03 | 0.75 |
| 1:I:352:A:O2' | 1:I:353:A:H5' | 1.87 | 0.75 |
| 1:I:56:A:C2 | 1:I:57:A:N9 | 2.54 | 0.75 |
| 2:J:101:A:C6 | 2:J:102:A:C6 | 2.75 | 0.75 |
| 2:J:184:A:H2' | 2:J:185:A:O5' | 1.84 | 0.75 |
| 2:J:192:A:C2' | 2:J:193:A:H5' | 2.17 | 0.75 |
| 3:K:198:A:H2' | 3:K:199:A:H8 | 1.49 | 0.75 |
| 3:K:54:A:C2 | 3:K:55:A:N7 | 2.54 | 0.75 |
| 4:L:518:U:C2 | 4:L:519:U:C6 | 2.75 | 0.75 |
| 4:L:572:U:C2' | 4:L:573:U:C5' | 2.63 | 0.75 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:806:U:C2' | 4:L:807:U:C5' | 2.65 | 0.75 |
| 5:M:371:U:C2 | 5:M:372:U:C6 | 2.74 | 0.75 |
| 5:M:460:U:C4 | 5:M:461:U:C5 | 2.74 | 0.75 |
| 1:I:106:A:C2 | 1:I:107:A:N7 | 2.53 | 0.75 |
| 1:I:174:A:O2' | 1:I:175:A:C5' | 2.26 | 0.75 |
| 1:I:242:A:N3 | 1:I:243:A:N9 | 2.35 | 0.75 |
| 2:J:181:A:N3 | 2:J:182:A:C8 | 2.55 | 0.75 |
| 2:J:42:A:O2' | 2:J:43:A:C4' | 2.35 | 0.75 |
| 3:K:49:A:O2' | 3:K:50:A:O5' | 2.04 | 0.75 |
| 5:M:453:U:O2' | 5:M:454:U:C5' | 2.35 | 0.75 |
| 6:N:301:U:H2' | 6:N:302:U:C6 | 2.22 | 0.75 |
| 6:N:428:U:C2 | 6:N:429:U:C5 | 2.75 | 0.75 |
| 1:I:140:A:C2 | 1:I:141:A:N7 | 2.54 | 0.75 |
| 1:I:163:A:N3 | 1:I:164:A:C8 | 2.55 | 0.75 |
| 1:I:73:A:H2' | 1:I:74:A:H8 | 1.51 | 0.75 |
| 1:I:86:A:C4 | 1:I:87:A:N7 | 2.54 | 0.75 |
| 3:K:164:A:C2' | 3:K:165:A:H5' | 2.16 | 0.75 |
| 3:K:75:A:C3' | 3:K:76:A:P | 2.75 | 0.75 |
| 4:L:521:U:H2' | 4:L:522:U:O5' | 1.87 | 0.75 |
| 4:L:542:U:C2 | 4:L:543:U:C5 | 2.75 | 0.75 |
| 4:L:746:U:H2' | 4:L:747:U:H6 | 1.52 | 0.75 |
| 4:L:758:U:N3 | 4:L:759:U:C4 | 2.55 | 0.75 |
| 6:N:304:U:H2' | 6:N:305:U:H6 | 1.51 | 0.75 |
| 6:N:380:U:H2' | 6:N:381:U:O5' | 1.87 | 0.75 |
| 1:I:122:A:HO2' | 1:I:123:A:H5' | 0.92 | 0.74 |
| 1:I:14:A:H2' | 1:I:15:A:C8 | 2.22 | 0.74 |
| 1:I:257:A:C2 | 1:I:258:A:C8 | 2.74 | 0.74 |
| 1:I:68:A:C6 | 1:I:69:A:C5 | 2.76 | 0.74 |
| 2:J:165:A:C2 | 2:J:166:A:N7 | 2.56 | 0.74 |
| 2:J:223:A:C2 | 2:J:224:A:C8 | 2.75 | 0.74 |
| 2:J:29:A:C5 | 2:J:30:A:C8 | 2.74 | 0.74 |
| 2:J:8:A:C2 | 2:J:9:A:C4 | 2.75 | 0.74 |
| 2:J:93:A:C4 | 2:J:94:A:C8 | 2.74 | 0.74 |
| 3:K:102:A:C2 | 3:K:103:A:N7 | 2.55 | 0.74 |
| 3:K:153:A:C2 | 3:K:154:A:C8 | 2.74 | 0.74 |
| 3:K:191:A:O2' | 3:K:192:A:C5' | 2.35 | 0.74 |
| 3:K:38:A:C2 | 3:K:39:A:C5 | 2.74 | 0.74 |
| 4:L:554:U:C2 | 4:L:555:U:H5 | 2.02 | 0.74 |
| 5:M:346:U:HO2' | 5:M:347:U:H5' | 0.94 | 0.74 |
| 5:M:406:U:O2' | 5:M:407:U:C5' | 2.27 | 0.74 |
| 5:M:437:U:O2' | 5:M:438:U:H5' | 1.86 | 0.74 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:502:U:H2' | 5:M:503:U:C6 | 2.21 | 0.74 |
| 5:M:527:U:N3 | 5:M:528:U:C5 | 2.55 | 0.74 |
| 5:M:540:U:C2 | 5:M:541:U:C5 | 2.75 | 0.74 |
| 6:N:403:U:O2' | 6:N:404:U:C5' | 2.33 | 0.74 |
| 6:N:417:U:C2 | 6:N:418:U:C6 | 2.75 | 0.74 |
| 1:I:106:A:C2 | 1:I:107:A:N9 | 2.55 | 0.74 |
| 1:I:244:A:N3 | 1:I:245:A:C8 | 2.55 | 0.74 |
| 1:I:309:A:H2' | 1:I:310:A:C8 | 2.22 | 0.74 |
| 2:J:120:A:HO2' | 2:J:121:A:H5' | 1.49 | 0.74 |
| 2:J:224:A:C6 | 2:J:225:A:N7 | 2.55 | 0.74 |
| 2:J:38:A:N3 | 2:J:39:A:C8 | 2.55 | 0.74 |
| 3:K:153:A:H2' | 3:K:154:A:H8 | 1.48 | 0.74 |
| 4:L:592:U:C2 | 4:L:593:U:C5 | 2.75 | 0.74 |
| 4:L:708:U:HO2' | 4:L:709:U:H5' | 1.53 | 0.74 |
| 4:L:781:U:C2 | 4:L:782:U:C6 | 2.75 | 0.74 |
| 5:M:327:U:C2 | 5:M:328:U:C6 | 2.73 | 0.74 |
| 5:M:332:U:C2 | 5:M:333:U:C5 | 2.75 | 0.74 |
| 5:M:428:U:HO2' | 5:M:429:U:H5' | 0.92 | 0.74 |
| 6:N:408:U:C2 | 6:N:409:U:C5 | 2.76 | 0.74 |
| 6:N:449:U:H2' | 6:N:450:U:O4' | 1.87 | 0.74 |
| 6:N:460:U:H2' | 6:N:461:U:C6 | 2.23 | 0.74 |
| 1:I:109:A:O2' | 1:I:110:A:P | 2.45 | 0.74 |
| 1:I:198:A:C2 | 1:I:199:A:N7 | 2.54 | 0.74 |
| 1:I:268:A:C2 | 1:I:269:A:C1' | 2.70 | 0.74 |
| 1:I:337:A:HO2' | 1:I:338:A:H5' | 0.92 | 0.74 |
| 1:I:403:A:H2' | 1:I:404:A:H8 | 1.50 | 0.74 |
| 1:I:46:A:N3 | 1:I:47:A:N7 | 2.34 | 0.74 |
| 1:I:70:A:C2 | 1:I:71:A:C4 | 2.75 | 0.74 |
| 2:J:192:A:C2 | 2:J:193:A:C8 | 2.75 | 0.74 |
| 2:J:93:A:C2' | 2:J:94:A:C5' | 2.64 | 0.74 |
| 3:K:101:A:C6 | 3:K:102:A:N7 | 2.56 | 0.74 |
| 4:L:421:U:C2' | 4:L:422:U:C5' | 2.66 | 0.74 |
| 4:L:602:U:N3 | 4:L:603:U:C5 | 2.55 | 0.74 |
| 4:L:640:U:C2 | 4:L:641:U:C5 | 2.75 | 0.74 |
| 4:L:764:U:C2 | 4:L:765:U:C6 | 2.75 | 0.74 |
| 1:I:264:A:O2' | 1:I:265:A:H5' | 1.86 | 0.74 |
| 1:I:323:A:C2 | 1:I:324:A:C1' | 2.71 | 0.74 |
| 3:K:120:A:O2' | 3:K:121:A:H5' | 1.87 | 0.74 |
| 3:K:99:A:C2 | 3:K:100:A:N9 | 2.55 | 0.74 |
| 4:L:635:U:C2' | 4:L:636:U:C5' | 2.64 | 0.74 |
| 4:L:718:U:C2' | 4:L:719:U:O5' | 2.36 | 0.74 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:79:A:C2 | 4:L:747:U:C2 | 2.75 | 0.74 |
| 5:M:459:U:H2' | 5:M:460:U:C6 | 2.21 | 0.74 |
| 5:M:541:U:O2' | 5:M:542:U:C5' | 2.34 | 0.74 |
| 5:M:546:U:N3 | 5:M:547:U:C5 | 2.55 | 0.74 |
| 1:I:116:A:HO2' | 1:I:117:A:H5' | 1.53 | 0.74 |
| 1:I:88:A:C2 | 1:I:89:A:C4 | 2.75 | 0.74 |
| 2:J:57:A:C2 | 2:J:58:A:N7 | 2.56 | 0.74 |
| 2:J:84:A:HO2' | 2:J:85:A:H5' | 1.52 | 0.74 |
| 3:K:78:A:C2' | 3:K:79:A:H5' | 2.18 | 0.74 |
| 4:L:720:U:O4 | 4:L:721:U:O4 | 2.04 | 0.74 |
| 4:L:740:U:H2' | 4:L:741:U:C5' | 2.17 | 0.74 |
| 5:M:299:U:H2' | 5:M:300:U:H6 | 1.52 | 0.74 |
| 5:M:318:U:H2' | 5:M:319:U:O4' | 1.87 | 0.74 |
| 5:M:361:U:O2 | 5:M:362:U:C6 | 2.41 | 0.74 |
| 5:M:428:U:H2' | 5:M:429:U:C5' | 2.16 | 0.74 |
| 6:N:335:U:C4 | 6:N:336:U:O4 | 2.41 | 0.74 |
| 1:I:135:A:C4 | 1:I:136:A:C8 | 2.75 | 0.74 |
| 1:I:14:A:O2' | 1:I:15:A:C4' | 2.35 | 0.74 |
| 1:I:269:A:C2 | 4:L:557:U:C2 | 2.76 | 0.74 |
| 1:I:364:A:O2' | 1:I:365:A:C5' | 2.33 | 0.74 |
| 1:I:79:A:C2' | 1:I:80:A:C5' | 2.64 | 0.74 |
| 2:J:106:A:C2' | 2:J:107:A:C5' | 2.65 | 0.74 |
| 3:K:119:A:C2 | 3:K:120:A:C8 | 2.75 | 0.74 |
| 3:K:203:A:C4 | 3:K:204:A:N7 | 2.55 | 0.74 |
| 3:K:209:A:N6 | 3:K:210:A:N6 | 2.36 | 0.74 |
| 3:K:71:A:O2' | 3:K:72:A:P | 2.45 | 0.74 |
| 3:K:88:A:C2 | 3:K:89:A:N9 | 2.55 | 0.74 |
| 3:K:97:A:H2' | 3:K:98:A:C5' | 2.16 | 0.74 |
| 4:L:499:U:N3 | 4:L:500:U:C5 | 2.56 | 0.74 |
| 4:L:553:U:O2 | 4:L:554:U:O4' | 2.05 | 0.74 |
| 4:L:719:U:H2' | 4:L:720:U:H6 | 1.50 | 0.74 |
| 4:L:727:U:O2' | 4:L:728:U:P | 2.44 | 0.74 |
| 4:L:754:U:C2' | 4:L:755:U:O4' | 2.34 | 0.74 |
| 5:M:305:U:C2 | 5:M:306:U:C5 | 2.76 | 0.74 |
| 5:M:349:U:N3 | 5:M:350:U:C5 | 2.55 | 0.74 |
| 6:N:278:U:N3 | 6:N:279:U:C5 | 2.55 | 0.74 |
| 1:I:250:A:C2' | 1:I:251:A:H8 | 2.00 | 0.74 |
| 2:J:192:A:H2' | 2:J:193:A:O5' | 1.88 | 0.74 |
| 2:J:99:A:O2' | 2:J:100:A:H5' | 1.87 | 0.74 |
| 3:K:124:A:H2' | 3:K:125:A:C8 | 2.22 | 0.74 |
| 3:K:249:A:C2 | 3:K:250:A:C8 | 2.76 | 0.74 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:805:U:C2 | 4:L:806:U:C5 | 2.76 | 0.74 |
| 5:M:457:U:H2' | 5:M:458:U:C5' | 2.18 | 0.74 |
| 5:M:503:U:C2 | 5:M:504:U:C5 | 2.76 | 0.74 |
| 5:M:512:U:C2 | 5:M:513:U:C6 | 2.75 | 0.74 |
| 5:M:518:U:O2 | 5:M:519:U:C6 | 2.40 | 0.74 |
| 6:N:277:U:H2' | 6:N:278:U:O5' | 1.87 | 0.74 |
| 6:N:323:U:C2' | 6:N:324:U:H5' | 2.18 | 0.74 |
| 6:N:337:U:H2' | 6:N:338:U:H6 | 1.51 | 0.74 |
| 6:N:362:U:C2' | 6:N:363:U:C5' | 2.65 | 0.74 |
| 6:N:366:U:C2 | 6:N:367:U:C5 | 2.76 | 0.74 |
| 6:N:448:U:C2' | 6:N:449:U:C5' | 2.66 | 0.74 |
| 1:I:189:A:C2' | 1:I:190:A:C5' | 2.65 | 0.74 |
| 1:I:243:A:H61 | 1:I:244:A:N6 | 1.85 | 0.74 |
| 1:I:277:A:C5 | 1:I:278:A:N7 | 2.56 | 0.74 |
| 3:K:90:A:N3 | 3:K:91:A:C8 | 2.56 | 0.74 |
| 4:L:421:U:O2' | 4:L:422:U:C4' | 2.36 | 0.74 |
| 4:L:499:U:N3 | 4:L:500:U:C4 | 2.56 | 0.74 |
| 4:L:602:U:H2' | 4:L:603:U:H6 | 1.51 | 0.74 |
| 4:L:639:U:C2' | 4:L:640:U:C5' | 2.64 | 0.74 |
| 4:L:682:U:H2' | 4:L:683:U:C6 | 2.21 | 0.74 |
| 4:L:699:U:C4 | 4:L:700:U:C5 | 2.76 | 0.74 |
| 4:L:783:U:O2' | 4:L:784:U:P | 2.45 | 0.74 |
| 5:M:297:U:C2' | 5:M:298:U:H5' | 2.17 | 0.74 |
| 5:M:370:U:H2' | 5:M:371:U:H6 | 1.51 | 0.74 |
| 5:M:420:U:H2' | 5:M:421:U:H6 | 1.53 | 0.74 |
| 5:M:474:U:C3' | 5:M:475:U:P | 2.75 | 0.74 |
| 5:M:527:U:C2 | 5:M:528:U:C6 | 2.76 | 0.74 |
| 6:N:339:U:O2' | 6:N:340:U:C5' | 2.34 | 0.74 |
| 6:N:425:U:N1 | 6:N:426:U:C6 | 2.56 | 0.74 |
| 1:I:272:A:H2' | 1:I:273:A:H8 | 1.53 | 0.74 |
| 1:I:348:A:C2' | 1:I:349:A:C5' | 2.66 | 0.74 |
| 1:I:360:A:O2' | 1:I:361:A:C5' | 2.28 | 0.74 |
| 1:I:388:A:O2' | 1:I:389:A:C5' | 2.36 | 0.74 |
| 2:J:42:A:C2 | 2:J:43:A:C4 | 2.76 | 0.74 |
| 2:J:81:A:C2' | 2:J:82:A:C5' | 2.66 | 0.74 |
| 4:L:574:U:C4 | 4:L:575:U:C4 | 2.75 | 0.74 |
| 4:L:666:U:N3 | 4:L:667:U:C5 | 2.56 | 0.74 |
| 4:L:771:U:HO2' | 4:L:772:U:H5' | 1.49 | 0.74 |
| 5:M:377:U:C2' | 5:M:378:U:H5' | 2.17 | 0.74 |
| 6:N:406:U:H2' | 6:N:407:U:H6 | 1.52 | 0.74 |
| 1:I:175:A:C2 | 1:I:176:A:C8 | 2.70 | 0.74 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:243:A:C6 | 1:I:244:A:C5 | 2.75 | 0.74 |
| 1:I:400:A:N6 | 1:I:401:A:N6 | 2.36 | 0.74 |
| 1:I:44:A:HO2' | 1:I:45:A:H5' | 1.51 | 0.74 |
| 2:J:207:A:C2' | 2:J:208:A:H5' | 2.18 | 0.74 |
| 2:J:254:A:O2' | 2:J:255:A:C5' | 2.31 | 0.74 |
| 2:J:48:A:C2' | 2:J:49:A:H5' | 2.17 | 0.74 |
| 2:J:67:A:C2' | 2:J:68:A:C5' | 2.65 | 0.74 |
| 3:K:105:A:C2 | 3:K:106:A:C4 | 2.76 | 0.74 |
| 3:K:115:A:H2' | 3:K:116:A:H8 | 1.47 | 0.74 |
| 3:K:71:A:C2' | 3:K:72:A:H8 | 1.94 | 0.74 |
| 1:I:184:A:C2 | 4:L:642:U:C2 | 2.75 | 0.74 |
| 4:L:684:U:C4 | 4:L:685:U:C4 | 2.76 | 0.74 |
| 4:L:716:U:H2' | 4:L:717:U:H6 | 1.52 | 0.74 |
| 4:L:803:U:H2' | 4:L:804:U:O4' | 1.87 | 0.74 |
| 4:L:810:U:C2 | 4:L:811:U:C5 | 2.75 | 0.74 |
| 5:M:394:U:C2 | 5:M:395:U:C5 | 2.76 | 0.74 |
| 5:M:420:U:H2' | 5:M:421:U:O4' | 1.88 | 0.74 |
| 6:N:377:U:O2 | 6:N:378:U:C6 | 2.41 | 0.74 |
| 6:N:430:U:N3 | 6:N:431:U:C5 | 2.56 | 0.74 |
| 6:N:474:U:H2' | 6:N:475:U:H6 | 1.53 | 0.74 |
| 1:I:103:A:C2 | 1:I:104:A:C8 | 2.76 | 0.73 |
| 1:I:167:A:HO2' | 1:I:168:A:H5' | 1.49 | 0.73 |
| 1:I:55:A:C2' | 1:I:56:A:H5' | 2.16 | 0.73 |
| 1:I:81:A:C2' | 1:I:82:A:C5' | 2.66 | 0.73 |
| 2:J:130:A:H2' | 2:J:131:A:O4' | 1.88 | 0.73 |
| 3:K:136:A:C2' | 3:K:137:A:O5' | 2.34 | 0.73 |
| 3:K:168:A:C2 | 3:K:169:A:C4 | 2.76 | 0.73 |
| 3:K:253:A:H2' | 3:K:254:A:O5' | 1.87 | 0.73 |
| 3:K:88:A:H2' | 3:K:89:A:O5' | 1.82 | 0.73 |
| 4:L:711:U:C2' | 4:L:712:U:C6 | 2.67 | 0.73 |
| 5:M:407:U:C4 | 5:M:408:U:C4 | 2.75 | 0.73 |
| 5:M:437:U:C2' | 5:M:438:U:C5' | 2.66 | 0.73 |
| 5:M:488:U:N3 | 5:M:489:U:C4 | 2.56 | 0.73 |
| 5:M:538:U:C2 | 5:M:539:U:C5 | 2.76 | 0.73 |
| 6:N:412:U:C2 | 6:N:413:U:C6 | 2.76 | 0.73 |
| 1:I:242:A:C2 | 1:I:243:A:C1' | 2.71 | 0.73 |
| 1:I:260:A:C4 | 1:I:261:A:C8 | 2.77 | 0.73 |
| 1:I:315:A:O2' | 1:I:316:A:C5' | 2.32 | 0.73 |
| 2:J:26:A:N3 | 2:J:27:A:C8 | 2.56 | 0.73 |
| 2:J:50:A:C2 | 2:J:51:A:C4 | 2.76 | 0.73 |
| 3:K:105:A:C6 | 3:K:106:A:C6 | 2.76 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:119:A:C2 | 3:K:120:A:C1' | 2.71 | 0.73 |
| 4:L:553:U:C2' | 4:L:554:U:O4' | 2.36 | 0.73 |
| 4:L:577:U:C4 | 4:L:578:U:C5 | 2.76 | 0.73 |
| 5:M:327:U:N3 | 5:M:328:U:C5 | 2.55 | 0.73 |
| 5:M:387:U:C2 | 5:M:388:U:C6 | 2.72 | 0.73 |
| 5:M:430:U:N3 | 5:M:431:U:O4 | 2.21 | 0.73 |
| 5:M:435:U:O2 | 5:M:436:U:N1 | 2.20 | 0.73 |
| 5:M:453:U:H2' | 5:M:454:U:C1' | 2.18 | 0.73 |
| 5:M:453:U:O2' | 5:M:454:U:C4' | 2.35 | 0.73 |
| 5:M:477:U:HO2' | 5:M:478:U:H5' | 1.53 | 0.73 |
| 5:M:507:U:C2 | 5:M:508:U:C5 | 2.77 | 0.73 |
| 6:N:318:U:N3 | 6:N:319:U:O4 | 2.21 | 0.73 |
| 6:N:424:U:H2' | 6:N:425:U:O4' | 1.86 | 0.73 |
| 6:N:434:U:C2 | 6:N:435:U:C6 | 2.77 | 0.73 |
| 1:I:175:A:C4 | 1:I:176:A:N7 | 2.56 | 0.73 |
| 1:I:179:A:N6 | 1:I:180:A:C6 | 2.55 | 0.73 |
| 1:I:238:A:C4 | 1:I:239:A:N7 | 2.56 | 0.73 |
| 1:I:261:A:C4 | 1:I:262:A:N7 | 2.56 | 0.73 |
| 1:I:88:A:N3 | 1:I:89:A:C8 | 2.56 | 0.73 |
| 2:J:170:A:HO2' | 2:J:171:A:H5' | 1.53 | 0.73 |
| 2:J:234:A:C2' | 2:J:235:A:C5' | 2.66 | 0.73 |
| 2:J:260:A:C2' | 2:J:261:A:H5' | 2.18 | 0.73 |
| 3:K:88:A:HO2' | 3:K:89:A:H5' | 1.54 | 0.73 |
| 4:L:537:U:O2' | 4:L:538:U:C4' | 2.36 | 0.73 |
| 4:L:579:U:C2 | 4:L:580:U:C6 | 2.75 | 0.73 |
| 4:L:643:U:N3 | 4:L:644:U:C5 | 2.56 | 0.73 |
| 4:L:680:U:H2' | 4:L:681:U:C6 | 2.24 | 0.73 |
| 4:L:711:U:C4 | 4:L:712:U:C5 | 2.75 | 0.73 |
| 4:L:745:U:N3 | 4:L:746:U:C5 | 2.55 | 0.73 |
| 5:M:296:U:H2' | 5:M:297:U:O4' | 1.88 | 0.73 |
| 5:M:349:U:H2' | 5:M:350:U:H6 | 1.54 | 0.73 |
| 5:M:409:U:O2 | 5:M:410:U:C1' | 2.36 | 0.73 |
| 5:M:439:U:O2' | 5:M:440:U:H5' | 1.89 | 0.73 |
| 1:I:115:A:C2 | 1:I:116:A:C8 | 2.76 | 0.73 |
| 1:I:202:A:H2' | 1:I:203:A:C5' | 2.17 | 0.73 |
| 1:I:228:A:C5 | 1:I:229:A:N7 | 2.56 | 0.73 |
| 1:I:274:A:C2' | 1:I:275:A:C5' | 2.66 | 0.73 |
| 1:I:283:A:C2 | 1:I:284:A:C4 | 2.76 | 0.73 |
| 1:I:283:A:H2' | 1:I:284:A:H8 | 1.52 | 0.73 |
| 1:I:82:A:C5 | 1:I:83:A:C8 | 2.76 | 0.73 |
| 1:I:87:A:C2 | 1:I:88:A:N9 | 2.56 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:143:A:C4 | 2:J:144:A:C8 | 2.76 | 0.73 |
| 2:J:156:A:C2' | 2:J:157:A:C5' | 2.66 | 0.73 |
| 2:J:217:A:H2' | 2:J:218:A:H8 | 1.53 | 0.73 |
| 3:K:138:A:C2 | 3:K:139:A:C5 | 2.76 | 0.73 |
| 4:L:437:U:H2' | 4:L:438:U:C6 | 2.24 | 0.73 |
| 4:L:510:U:H2' | 4:L:511:U:H6 | 1.53 | 0.73 |
| 4:L:550:U:C2 | 4:L:551:U:C6 | 2.75 | 0.73 |
| 4:L:665:U:C2 | 4:L:666:U:C5 | 2.76 | 0.73 |
| 4:L:681:U:H2' | 4:L:682:U:O4' | 1.87 | 0.73 |
| 4:L:758:U:H2' | 4:L:759:U:C5' | 2.17 | 0.73 |
| 4:L:804:U:O2' | 4:L:805:U:H5' | 1.88 | 0.73 |
| 4:L:806:U:N3 | 4:L:807:U:C5 | 2.56 | 0.73 |
| 5:M:290:U:H2' | 5:M:291:U:H6 | 1.54 | 0.73 |
| 5:M:400:U:O2' | 5:M:401:U:H5' | 1.89 | 0.73 |
| 5:M:504:U:C2' | 5:M:505:U:H5' | 2.18 | 0.73 |
| 6:N:524:U:HO3' | 6:N:525:U:P | 2.00 | 0.73 |
| 1:I:13:A:N1 | 1:I:14:A:C6 | 2.57 | 0.73 |
| 1:I:222:A:C4 | 1:I:223:A:C8 | 2.76 | 0.73 |
| 1:I:376:A:H61 | 1:I:377:A:N6 | 1.80 | 0.73 |
| 1:I:65:A:H2' | 1:I:66:A:C4' | 2.19 | 0.73 |
| 1:I:69:A:C4 | 1:I:70:A:C8 | 2.77 | 0.73 |
| 1:I:75:A:C2 | 1:I:76:A:N9 | 2.57 | 0.73 |
| 2:J:124:A:C2 | 2:J:125:A:C5 | 2.76 | 0.73 |
| 2:J:160:A:C2' | 2:J:161:A:C4' | 2.66 | 0.73 |
| 2:J:252:A:C2' | 2:J:253:A:H5' | 2.18 | 0.73 |
| 2:J:51:A:H2' | 2:J:52:A:O4' | 1.89 | 0.73 |
| 3:K:230:A:N6 | 3:K:231:A:N6 | 2.37 | 0.73 |
| 3:K:88:A:C2 | 3:K:89:A:N7 | 2.56 | 0.73 |
| 4:L:591:U:O2' | 4:L:592:U:H5' | 1.88 | 0.73 |
| 4:L:630:U:C2 | 4:L:631:U:C5 | 2.76 | 0.73 |
| 4:L:694:U:O2' | 4:L:695:U:C5' | 2.18 | 0.73 |
| 4:L:768:U:C2 | 4:L:769:U:C6 | 2.76 | 0.73 |
| 5:M:347:U:H2' | 5:M:348:U:H6 | 1.53 | 0.73 |
| 5:M:349:U:O2' | 5:M:350:U:C5' | 2.33 | 0.73 |
| 6:N:289:U:C3' | 6:N:290:U:P | 2.75 | 0.73 |
| 6:N:402:U:H2' | 6:N:403:U:C6 | 2.22 | 0.73 |
| 6:N:492:U:H2' | 6:N:493:U:H6 | 1.53 | 0.73 |
| 1:I:239:A:N3 | 1:I:240:A:C8 | 2.57 | 0.73 |
| 1:I:247:A:N6 | 1:I:248:A:N6 | 2.37 | 0.73 |
| 1:I:340:A:O2' | 1:I:341:A:P | 2.45 | 0.73 |
| 1:I:361:A:C2' | 1:I:362:A:C5' | 2.63 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:92:A:N6 | 1:I:93:A:H62 | 1.87 | 0.73 |
| 2:J:108:A:O2' | 2:J:109:A:H5' | 1.87 | 0.73 |
| 2:J:13:A:C2 | 2:J:14:A:C4 | 2.76 | 0.73 |
| 3:K:65:A:C6 | 3:K:66:A:N6 | 2.57 | 0.73 |
| 3:K:71:A:C4 | 3:K:72:A:N7 | 2.56 | 0.73 |
| 4:L:484:U:H2' | 4:L:485:U:O4' | 1.88 | 0.73 |
| 4:L:592:U:H2' | 4:L:593:U:H6 | 1.52 | 0.73 |
| 4:L:706:U:C4 | 4:L:707:U:C4 | 2.76 | 0.73 |
| 4:L:730:U:H2' | 4:L:731:U:H6 | 1.54 | 0.73 |
| 4:L:749:U:C2' | 4:L:750:U:H5' | 2.19 | 0.73 |
| 4:L:811:U:O2' | 4:L:812:U:C5' | 2.37 | 0.73 |
| 5:M:295:U:H2' | 5:M:296:U:H6 | 1.51 | 0.73 |
| 5:M:345:U:C2 | 5:M:346:U:C5 | 2.77 | 0.73 |
| 5:M:418:U:N3 | 5:M:419:U:C5 | 2.56 | 0.73 |
| 5:M:494:U:C2 | 5:M:495:U:C6 | 2.76 | 0.73 |
| 5:M:520:U:C2 | 5:M:521:U:C6 | 2.75 | 0.73 |
| 6:N:302:U:O2' | 6:N:303:U:H5' | 1.87 | 0.73 |
| 6:N:311:U:H2' | 6:N:312:U:H6 | 1.54 | 0.73 |
| 6:N:327:U:C2 | 6:N:328:U:C6 | 2.76 | 0.73 |
| 6:N:433:U:H2' | 6:N:434:U:H6 | 1.53 | 0.73 |
| 6:N:460:U:H2' | 6:N:461:U:C5 | 2.24 | 0.73 |
| 1:I:113:A:C5 | 1:I:114:A:N7 | 2.56 | 0.73 |
| 1:I:16:A:C6 | 1:I:17:A:N7 | 2.56 | 0.73 |
| 1:I:193:A:O2' | 1:I:194:A:C5' | 2.35 | 0.73 |
| 1:I:268:A:N3 | 1:I:269:A:N9 | 2.37 | 0.73 |
| 1:I:82:A:C2 | 1:I:83:A:C4 | 2.76 | 0.73 |
| 2:J:105:A:H2' | 2:J:106:A:H8 | 1.54 | 0.73 |
| 2:J:13:A:H2' | 2:J:14:A:O5' | 1.87 | 0.73 |
| 2:J:179:A:C2 | 2:J:180:A:C8 | 2.77 | 0.73 |
| 2:J:64:A:C2 | 2:J:65:A:C5 | 2.77 | 0.73 |
| 3:K:132:A:C2' | 3:K:133:A:C5' | 2.66 | 0.73 |
| 3:K:206:A:H2' | 3:K:207:A:H8 | 1.54 | 0.73 |
| 3:K:73:A:C2' | 3:K:74:A:H5' | 2.19 | 0.73 |
| 4:L:422:U:H2' | 4:L:423:U:O4' | 1.87 | 0.73 |
| 4:L:431:U:H2' | 4:L:432:U:C6 | 2.23 | 0.73 |
| 4:L:572:U:C2' | 4:L:573:U:O5' | 2.37 | 0.73 |
| 4:L:740:U:O2' | 4:L:741:U:C5' | 2.29 | 0.73 |
| 5:M:335:U:H2' | 5:M:336:U:C6 | 2.23 | 0.73 |
| 5:M:495:U:HO2' | 5:M:496:U:H5' | 1.54 | 0.73 |
| 6:N:424:U:N3 | 6:N:425:U:C4 | 2.57 | 0.73 |
| 6:N:473:U:C4 | 6:N:474:U:O4 | 2.42 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:120:A:H2' | 1:I:121:A:O5' | 1.88 | 0.73 |
| 1:I:287:A:C2' | 1:I:288:A:C4' | 2.67 | 0.73 |
| 2:J:246:A:O2' | 2:J:247:A:H5' | 1.89 | 0.73 |
| 2:J:248:A:C4 | 2:J:249:A:N7 | 2.57 | 0.73 |
| 3:K:147:A:H2' | 3:K:148:A:H8 | 1.52 | 0.73 |
| 3:K:165:A:C2 | 3:K:166:A:C4 | 2.77 | 0.73 |
| 3:K:206:A:O2' | 3:K:207:A:H5' | 1.88 | 0.73 |
| 4:L:612:U:C2' | 4:L:613:U:C5' | 2.67 | 0.73 |
| 4:L:650:U:HO2' | 4:L:651:U:H5' | 1.51 | 0.73 |
| 4:L:724:U:O2' | 4:L:725:U:C5' | 2.31 | 0.73 |
| 5:M:393:U:N3 | 5:M:394:U:C4 | 2.57 | 0.73 |
| 5:M:515:U:H2' | 5:M:516:U:O5' | 1.88 | 0.73 |
| 6:N:434:U:C2 | 6:N:435:U:C5 | 2.76 | 0.73 |
| 6:N:451:U:H2' | 6:N:452:U:O4' | 1.89 | 0.73 |
| 6:N:485:U:C2' | 6:N:486:U:C4' | 2.64 | 0.73 |
| 1:I:101:A:C2 | 1:I:102:A:N7 | 2.52 | 0.73 |
| 1:I:249:A:N3 | 1:I:250:A:N9 | 2.37 | 0.73 |
| 1:I:252:A:C2 | 1:I:253:A:C8 | 2.75 | 0.73 |
| 1:I:327:A:C2 | 1:I:328:A:C8 | 2.76 | 0.73 |
| 1:I:47:A:H2' | 1:I:48:A:H8 | 1.53 | 0.73 |
| 1:I:54:A:N3 | 1:I:55:A:C8 | 2.57 | 0.73 |
| 2:J:123:A:C2' | 2:J:124:A:H5' | 2.19 | 0.73 |
| 2:J:39:A:C2' | 2:J:40:A:H5' | 2.18 | 0.73 |
| 2:J:43:A:C2 | 2:J:44:A:C4 | 2.77 | 0.73 |
| 3:K:101:A:C6 | 3:K:102:A:C5 | 2.77 | 0.73 |
| 3:K:133:A:C2' | 3:K:134:A:H5' | 2.18 | 0.73 |
| 3:K:146:A:H2' | 3:K:147:A:H8 | 1.54 | 0.73 |
| 4:L:587:U:C2 | 4:L:588:U:C6 | 2.77 | 0.73 |
| 4:L:639:U:C2 | 4:L:640:U:C6 | 2.77 | 0.73 |
| 4:L:693:U:N3 | 4:L:694:U:O4 | 2.19 | 0.73 |
| 4:L:695:U:O2 | 4:L:696:U:C6 | 2.41 | 0.73 |
| 5:M:538:U:C4 | 5:M:539:U:C5 | 2.76 | 0.73 |
| 6:N:439:U:N3 | 6:N:440:U:C5 | 2.57 | 0.73 |
| 6:N:448:U:H2' | 6:N:449:U:H6 | 1.53 | 0.73 |
| 1:I:9:A:HO2' | 1:I:10:A:H5' | 1.50 | 0.73 |
| 1:I:206:A:C2 | 1:I:207:A:C5 | 2.77 | 0.73 |
| 1:I:371:A:O2' | 1:I:372:A:H5' | 1.88 | 0.73 |
| 1:I:88:A:C2 | 1:I:89:A:N9 | 2.56 | 0.73 |
| 2:J:122:A:C6 | 2:J:123:A:C6 | 2.77 | 0.73 |
| 2:J:13:A:C2 | 2:J:14:A:N9 | 2.56 | 0.73 |
| 3:K:138:A:C2 | 3:K:139:A:N7 | 2.57 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:515:U:O2' | 4:L:516:U:H5' | 1.89 | 0.73 |
| 4:L:589:U:C2 | 4:L:590:U:C6 | 2.77 | 0.73 |
| 4:L:601:U:C2 | 4:L:602:U:C5 | 2.77 | 0.73 |
| 4:L:688:U:C2' | 4:L:689:U:O5' | 2.37 | 0.73 |
| 4:L:712:U:C2 | 4:L:713:U:N1 | 2.56 | 0.73 |
| 4:L:756:U:N3 | 4:L:757:U:C5 | 2.57 | 0.73 |
| 5:M:342:U:H2' | 5:M:343:U:H6 | 1.53 | 0.73 |
| 5:M:454:U:H2' | 5:M:455:U:C6 | 2.23 | 0.73 |
| 5:M:456:U:H2' | 5:M:457:U:H6 | 1.52 | 0.73 |
| 6:N:393:U:O2' | 6:N:394:U:H5' | 1.89 | 0.73 |
| 1:I:72:A:C4 | 1:I:73:A:C8 | 2.77 | 0.72 |
| 2:J:198:A:C4 | 2:J:199:A:C8 | 2.76 | 0.72 |
| 2:J:63:A:C2' | 2:J:64:A:H5' | 2.19 | 0.72 |
| 3:K:118:A:C4 | 3:K:119:A:C8 | 2.77 | 0.72 |
| 3:K:156:A:H2' | 3:K:157:A:C4' | 2.19 | 0.72 |
| 3:K:189:A:N6 | 3:K:190:A:N6 | 2.37 | 0.72 |
| 3:K:226:A:H2' | 3:K:227:A:H8 | 1.52 | 0.72 |
| 3:K:99:A:H2' | 3:K:100:A:O4' | 1.89 | 0.72 |
| 4:L:585:U:H2' | 4:L:586:U:H6 | 1.54 | 0.72 |
| 4:L:668:U:C4 | 4:L:669:U:O4 | 2.42 | 0.72 |
| 4:L:750:U:O2' | 4:L:751:U:P | 2.47 | 0.72 |
| 4:L:810:U:O2' | 4:L:811:U:O4' | 2.07 | 0.72 |
| 5:M:299:U:N3 | 5:M:300:U:C5 | 2.57 | 0.72 |
| 5:M:414:U:C2 | 5:M:415:U:C5 | 2.76 | 0.72 |
| 5:M:418:U:C4 | 5:M:419:U:C5 | 2.77 | 0.72 |
| 5:M:436:U:H2' | 5:M:437:U:H6 | 1.52 | 0.72 |
| 5:M:484:U:N3 | 5:M:485:U:C5 | 2.57 | 0.72 |
| 6:N:338:U:N3 | 6:N:339:U:C4 | 2.57 | 0.72 |
| 1:I:116:A:C2 | 1:I:117:A:C8 | 2.76 | 0.72 |
| 1:I:187:A:C4 | 1:I:188:A:N7 | 2.58 | 0.72 |
| 1:I:249:A:C2 | 1:I:250:A:C8 | 2.76 | 0.72 |
| 3:K:159:A:O2' | 3:K:160:A:H5' | 1.89 | 0.72 |
| 3:K:174:A:C2' | 3:K:175:A:H5' | 2.19 | 0.72 |
| 4:L:474:U:C2' | 4:L:475:U:H5' | 2.19 | 0.72 |
| 4:L:541:U:H2' | 4:L:542:U:C6 | 2.24 | 0.72 |
| 4:L:548:U:H2' | 4:L:549:U:O4' | 1.89 | 0.72 |
| 4:L:594:U:C2' | 4:L:595:U:C5' | 2.66 | 0.72 |
| 4:L:604:U:HO2' | 4:L:605:U:H5' | 1.52 | 0.72 |
| 4:L:689:U:O2 | 4:L:690:U:C6 | 2.42 | 0.72 |
| 2:J:137:A:C2 | 5:M:417:U:C2 | 2.77 | 0.72 |
| 1:I:227:A:HO2' | 1:I:228:A:H5' | 1.52 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:22:A:C2' | 1:I:23:A:C5' | 2.67 | 0.72 |
| 1:I:258:A:N3 | 1:I:259:A:C8 | 2.57 | 0.72 |
| 1:I:286:A:C4 | 1:I:287:A:C8 | 2.77 | 0.72 |
| 1:I:56:A:C2' | 1:I:57:A:O5' | 2.38 | 0.72 |
| 2:J:179:A:O2' | 2:J:180:A:H5' | 1.89 | 0.72 |
| 2:J:98:A:C2 | 2:J:99:A:C5 | 2.77 | 0.72 |
| 4:L:424:U:C2 | 4:L:425:U:C5 | 2.77 | 0.72 |
| 5:M:322:U:H2' | 5:M:323:U:C5' | 2.19 | 0.72 |
| 5:M:348:U:N1 | 5:M:349:U:C5 | 2.57 | 0.72 |
| 5:M:392:U:C2 | 5:M:393:U:C6 | 2.78 | 0.72 |
| 5:M:397:U:H2' | 5:M:398:U:H6 | 1.54 | 0.72 |
| 5:M:463:U:C4 | 5:M:464:U:C5 | 2.76 | 0.72 |
| 5:M:491:U:C2 | 5:M:492:U:C6 | 2.76 | 0.72 |
| 6:N:365:U:O2 | 6:N:366:U:C6 | 2.43 | 0.72 |
| 6:N:394:U:C2' | 6:N:395:U:O5' | 2.37 | 0.72 |
| 6:N:424:U:C2 | 6:N:425:U:C6 | 2.77 | 0.72 |
| 6:N:426:U:C2' | 6:N:427:U:C4' | 2.68 | 0.72 |
| 6:N:502:U:O2' | 6:N:503:U:H5' | 1.90 | 0.72 |
| 1:I:402:A:H2' | 1:I:403:A:H8 | 1.55 | 0.72 |
| 1:I:55:A:C2 | 1:I:56:A:C4 | 2.77 | 0.72 |
| 1:I:67:A:N1 | 1:I:68:A:C6 | 2.57 | 0.72 |
| 2:J:110:A:O2' | 2:J:111:A:H5' | 1.88 | 0.72 |
| 2:J:57:A:N3 | 2:J:58:A:C8 | 2.57 | 0.72 |
| 3:K:250:A:H2' | 3:K:251:A:O5' | 1.88 | 0.72 |
| 4:L:611:U:C2 | 4:L:612:U:C5 | 2.76 | 0.72 |
| 4:L:667:U:H2' | 4:L:668:U:H6 | 1.53 | 0.72 |
| 4:L:730:U:O2' | 4:L:731:U:C5' | 2.37 | 0.72 |
| 4:L:776:U:H2' | 4:L:777:U:H6 | 1.54 | 0.72 |
| 5:M:345:U:H2' | 5:M:346:U:H6 | 1.54 | 0.72 |
| 5:M:370:U:C4 | 5:M:371:U:O4 | 2.42 | 0.72 |
| 5:M:377:U:C2 | 5:M:378:U:C6 | 2.78 | 0.72 |
| 5:M:454:U:H2' | 5:M:455:U:H6 | 1.55 | 0.72 |
| 6:N:333:U:O2' | 6:N:334:U:H5' | 1.89 | 0.72 |
| 6:N:425:U:H2' | 6:N:426:U:H6 | 1.01 | 0.72 |
| 6:N:462:U:C2' | 6:N:463:U:C5' | 2.68 | 0.72 |
| 6:N:469:U:C4 | 6:N:470:U:O4 | 2.42 | 0.72 |
| 1:I:103:A:C2 | 1:I:104:A:N9 | 2.56 | 0.72 |
| 1:I:106:A:C2' | 1:I:107:A:O5' | 2.36 | 0.72 |
| 1:I:177:A:H2' | 1:I:178:A:H8 | 1.55 | 0.72 |
| 1:I:202:A:C2 | 1:I:203:A:C4 | 2.77 | 0.72 |
| 1:I:228:A:H2' | 1:I:229:A:C8 | 2.24 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:237:A:C2' | 1:I:238:A:C5' | 2.68 | 0.72 |
| 1:I:249:A:C4 | 1:I:250:A:C8 | 2.77 | 0.72 |
| 1:I:251:A:C4 | 1:I:252:A:C8 | 2.78 | 0.72 |
| 1:I:263:A:N3 | 1:I:264:A:C8 | 2.57 | 0.72 |
| 1:I:271:A:C2 | 1:I:272:A:N9 | 2.58 | 0.72 |
| 1:I:281:A:C5 | 1:I:282:A:N7 | 2.58 | 0.72 |
| 1:I:323:A:HO2' | 1:I:324:A:C5' | 1.76 | 0.72 |
| 1:I:334:A:C2' | 1:I:335:A:C5' | 2.67 | 0.72 |
| 1:I:402:A:H2' | 1:I:403:A:C8 | 2.24 | 0.72 |
| 1:I:4:A:C4 | 1:I:5:A:N7 | 2.58 | 0.72 |
| 2:J:116:A:C2 | 2:J:117:A:N7 | 2.57 | 0.72 |
| 2:J:127:A:C2' | 2:J:128:A:O5' | 2.37 | 0.72 |
| 4:L:633:U:C2 | 4:L:634:U:C5 | 2.78 | 0.72 |
| 4:L:645:U:C2 | 4:L:646:U:H5 | 2.06 | 0.72 |
| 4:L:695:U:C2 | 4:L:696:U:C6 | 2.78 | 0.72 |
| 4:L:722:U:HO2' | 4:L:723:U:C5' | 2.02 | 0.72 |
| 5:M:370:U:N3 | 5:M:371:U:C4 | 2.57 | 0.72 |
| 5:M:460:U:N3 | 5:M:461:U:C5 | 2.57 | 0.72 |
| 5:M:472:U:C2 | 5:M:473:U:C5 | 2.77 | 0.72 |
| 6:N:405:U:HO2' | 6:N:406:U:H5' | 1.54 | 0.72 |
| 6:N:426:U:H2' | 6:N:427:U:C6 | 2.22 | 0.72 |
| 1:I:151:A:O2' | 1:I:152:A:C5' | 2.35 | 0.72 |
| 1:I:237:A:C2' | 1:I:238:A:H5' | 2.20 | 0.72 |
| 1:I:271:A:N3 | 1:I:272:A:N7 | 2.36 | 0.72 |
| 1:I:327:A:N3 | 1:I:328:A:C8 | 2.56 | 0.72 |
| 2:J:176:A:H2' | 2:J:177:A:H8 | 1.54 | 0.72 |
| 2:J:26:A:C2 | 2:J:27:A:C4 | 2.78 | 0.72 |
| 2:J:85:A:C2 | 2:J:86:A:C8 | 2.77 | 0.72 |
| 3:K:14:A:C3' | 3:K:15:A:P | 2.77 | 0.72 |
| 3:K:170:A:C2' | 3:K:171:A:H5' | 2.19 | 0.72 |
| 3:K:192:A:C6 | 3:K:193:A:C6 | 2.78 | 0.72 |
| 4:L:448:U:O2 | 4:L:449:U:C5 | 2.43 | 0.72 |
| 4:L:611:U:C2 | 4:L:612:U:C6 | 2.77 | 0.72 |
| 4:L:694:U:C4 | 4:L:695:U:C5 | 2.78 | 0.72 |
| 4:L:723:U:C2 | 4:L:724:U:C5 | 2.78 | 0.72 |
| 4:L:729:U:N3 | 4:L:730:U:C5 | 2.56 | 0.72 |
| 4:L:766:U:C2' | 4:L:767:U:O4' | 2.37 | 0.72 |
| 4:L:770:U:C4 | 4:L:771:U:O4 | 2.43 | 0.72 |
| 5:M:451:U:N3 | 5:M:452:U:C5 | 2.58 | 0.72 |
| 5:M:472:U:H2' | 5:M:473:U:C6 | 2.24 | 0.72 |
| 5:M:520:U:H2' | 5:M:521:U:H6 | 1.53 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:530:U:C2 | 5:M:531:U:C6 | 2.76 | 0.72 |
| 6:N:338:U:C2' | 6:N:339:U:H6 | 2.02 | 0.72 |
| 6:N:384:U:H2' | 6:N:385:U:C6 | 2.25 | 0.72 |
| 6:N:401:U:C2' | 6:N:402:U:C5' | 2.67 | 0.72 |
| 1:I:127:A:H2' | 1:I:128:A:O4' | 1.90 | 0.72 |
| 1:I:231:A:C2' | 1:I:232:A:C5' | 2.68 | 0.72 |
| 2:J:66:A:C2 | 2:J:67:A:C8 | 2.78 | 0.72 |
| 3:K:141:A:H2' | 3:K:142:A:H8 | 1.53 | 0.72 |
| 3:K:151:A:N3 | 3:K:152:A:C8 | 2.58 | 0.72 |
| 3:K:41:A:HO2' | 3:K:42:A:H5' | 1.51 | 0.72 |
| 4:L:466:U:C2 | 4:L:467:U:C6 | 2.78 | 0.72 |
| 4:L:564:U:O2' | 4:L:565:U:C5' | 2.32 | 0.72 |
| 4:L:642:U:H2' | 4:L:643:U:C5' | 2.18 | 0.72 |
| 4:L:689:U:C2 | 4:L:690:U:C5 | 2.78 | 0.72 |
| 4:L:706:U:O4 | 4:L:707:U:O4 | 2.07 | 0.72 |
| 4:L:745:U:O2 | 4:L:746:U:C6 | 2.43 | 0.72 |
| 4:L:767:U:C2 | 4:L:768:U:C4 | 2.77 | 0.72 |
| 5:M:504:U:H2' | 5:M:505:U:H6 | 1.53 | 0.72 |
| 5:M:515:U:C2' | 5:M:516:U:H5' | 2.18 | 0.72 |
| 6:N:278:U:C4 | 6:N:279:U:C5 | 2.78 | 0.72 |
| 6:N:418:U:O4 | 6:N:419:U:O4 | 2.08 | 0.72 |
| 1:I:237:A:H2' | 1:I:238:A:C8 | 2.25 | 0.72 |
| 1:I:287:A:O2' | 1:I:288:A:O4' | 2.08 | 0.72 |
| 2:J:116:A:N3 | 2:J:117:A:N7 | 2.37 | 0.72 |
| 2:J:226:A:C2 | 2:J:227:A:C8 | 2.78 | 0.72 |
| 2:J:265:A:H2' | 2:J:266:A:H8 | 1.54 | 0.72 |
| 3:K:131:A:C6 | 3:K:132:A:N6 | 2.57 | 0.72 |
| 3:K:228:A:H2' | 3:K:229:A:H8 | 1.55 | 0.72 |
| 4:L:463:U:C2' | 4:L:464:U:C5' | 2.67 | 0.72 |
| 4:L:501:U:O2' | 4:L:502:U:P | 2.44 | 0.72 |
| 4:L:504:U:HO2' | 4:L:505:U:H5' | 1.54 | 0.72 |
| 4:L:645:U:C4 | 4:L:646:U:O4 | 2.42 | 0.72 |
| 4:L:813:U:N3 | 4:L:814:U:C4 | 2.57 | 0.72 |
| 4:L:821:U:C2' | 4:L:822:U:H5' | 2.18 | 0.72 |
| 5:M:410:U:C2 | 5:M:411:U:C6 | 2.77 | 0.72 |
| 5:M:512:U:C2' | 5:M:513:U:H5' | 2.20 | 0.72 |
| 6:N:425:U:O2' | 6:N:426:U:C5' | 2.36 | 0.72 |
| 1:I:110:A:H2' | 1:I:111:A:C8 | 2.25 | 0.72 |
| 1:I:248:A:C2 | 1:I:249:A:C5 | 2.77 | 0.72 |
| 1:I:258:A:C2 | 1:I:259:A:N9 | 2.58 | 0.72 |
| 2:J:103:A:C2' | 2:J:104:A:C5' | 2.64 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:119:A:H61 | 2:J:120:A:N6 | 1.84 | 0.72 |
| 2:J:157:A:HO2' | 2:J:158:A:H5' | 1.55 | 0.72 |
| 3:K:212:A:N6 | 3:K:213:A:H61 | 1.88 | 0.72 |
| 3:K:250:A:H2' | 3:K:251:A:C5' | 2.19 | 0.72 |
| 3:K:45:A:O2' | 3:K:46:A:O4' | 2.07 | 0.72 |
| 4:L:728:U:H2' | 4:L:729:U:C6 | 2.25 | 0.72 |
| 5:M:376:U:O2 | 5:M:377:U:C1' | 2.38 | 0.72 |
| 5:M:491:U:H2' | 5:M:492:U:H6 | 1.55 | 0.72 |
| 5:M:495:U:C2' | 5:M:496:U:H5' | 2.19 | 0.72 |
| 6:N:280:U:H2' | 6:N:281:U:C5' | 2.20 | 0.72 |
| 6:N:306:U:H2' | 6:N:307:U:H6 | 1.53 | 0.72 |
| 1:I:13:A:C6 | 1:I:14:A:C5 | 2.78 | 0.72 |
| 1:I:270:A:C2' | 1:I:271:A:C4' | 2.66 | 0.72 |
| 1:I:275:A:O2' | 1:I:276:A:H5' | 1.90 | 0.72 |
| 1:I:306:A:C2' | 1:I:307:A:O5' | 2.38 | 0.72 |
| 1:I:350:A:O2' | 1:I:351:A:H5' | 1.90 | 0.72 |
| 1:I:37:A:O2' | 1:I:38:A:H5' | 1.90 | 0.72 |
| 1:I:62:A:H2' | 1:I:63:A:O5' | 1.87 | 0.72 |
| 2:J:183:A:C4 | 2:J:184:A:C8 | 2.77 | 0.72 |
| 2:J:55:A:C6 | 2:J:56:A:C5 | 2.77 | 0.72 |
| 3:K:104:A:H2' | 3:K:105:A:H8 | 1.54 | 0.72 |
| 3:K:253:A:H2' | 3:K:254:A:O4' | 1.90 | 0.72 |
| 4:L:436:U:O2' | 4:L:437:U:C4' | 2.38 | 0.72 |
| 4:L:504:U:C2' | 4:L:505:U:C5' | 2.68 | 0.72 |
| 4:L:604:U:H2' | 4:L:605:U:C5' | 2.19 | 0.72 |
| 4:L:681:U:C2' | 4:L:682:U:H6 | 2.01 | 0.72 |
| 4:L:734:U:H2' | 4:L:735:U:O4' | 1.88 | 0.72 |
| 4:L:799:U:O2 | 4:L:800:U:C6 | 2.43 | 0.72 |
| 5:M:377:U:C2' | 5:M:378:U:C5' | 2.68 | 0.72 |
| 5:M:481:U:H2' | 5:M:482:U:H6 | 1.53 | 0.72 |
| 6:N:375:U:N3 | 6:N:376:U:C4 | 2.58 | 0.72 |
| 1:I:109:A:C2 | 1:I:110:A:N9 | 2.57 | 0.71 |
| 1:I:120:A:N3 | 1:I:121:A:C8 | 2.58 | 0.71 |
| 1:I:18:A:H2' | 1:I:19:A:O4' | 1.90 | 0.71 |
| 1:I:286:A:N6 | 1:I:287:A:H62 | 1.87 | 0.71 |
| 2:J:82:A:O2' | 2:J:83:A:H5' | 1.89 | 0.71 |
| 3:K:45:A:C3' | 3:K:46:A:H5' | 2.20 | 0.71 |
| 3:K:62:A:C6 | 3:K:63:A:N6 | 2.57 | 0.71 |
| 3:K:88:A:C2 | 3:K:89:A:C5 | 2.78 | 0.71 |
| 4:L:704:U:H2' | 4:L:705:U:C5' | 2.20 | 0.71 |
| 4:L:762:U:HO2' | 4:L:763:U:H5' | 1.51 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:787:U:O2' | 4:L:788:U:H5' | 1.90 | 0.71 |
| 4:L:813:U:N3 | 4:L:814:U:C5 | 2.58 | 0.71 |
| 5:M:486:U:H2' | 5:M:487:U:O5' | 1.89 | 0.71 |
| 5:M:519:U:C2 | 5:M:520:U:C6 | 2.78 | 0.71 |
| 6:N:312:U:H2' | 6:N:313:U:H6 | 1.54 | 0.71 |
| 6:N:408:U:H2' | 6:N:409:U:H6 | 1.55 | 0.71 |
| 6:N:433:U:C2 | 6:N:434:U:C5 | 2.78 | 0.71 |
| 6:N:443:U:C2 | 6:N:444:U:C5 | 2.77 | 0.71 |
| 1:I:248:A:C2' | 1:I:249:A:H5' | 2.19 | 0.71 |
| 1:I:268:A:N3 | 1:I:269:A:C1' | 2.53 | 0.71 |
| 1:I:270:A:C6 | 1:I:271:A:C5 | 2.77 | 0.71 |
| 2:J:107:A:C2' | 2:J:108:A:C5' | 2.67 | 0.71 |
| 3:K:100:A:H2' | 3:K:101:A:C4' | 2.20 | 0.71 |
| 3:K:137:A:C2' | 3:K:138:A:H5' | 2.21 | 0.71 |
| 4:L:503:U:O2' | 4:L:504:U:H5' | 1.91 | 0.71 |
| 4:L:544:U:O2' | 4:L:545:U:H5' | 1.90 | 0.71 |
| 4:L:586:U:O4 | 4:L:587:U:O4 | 2.05 | 0.71 |
| 4:L:600:U:H2' | 4:L:601:U:C6 | 2.25 | 0.71 |
| 4:L:648:U:C2 | 4:L:649:U:C5 | 2.78 | 0.71 |
| 4:L:674:U:H2' | 4:L:675:U:O4' | 1.90 | 0.71 |
| 4:L:815:U:O2' | 4:L:816:U:C5' | 2.20 | 0.71 |
| 5:M:434:U:O2' | 5:M:435:U:H5' | 1.90 | 0.71 |
| 6:N:325:U:H2' | 6:N:326:U:C6 | 2.25 | 0.71 |
| 6:N:337:U:H2' | 6:N:338:U:C6 | 2.25 | 0.71 |
| 6:N:442:U:H2' | 6:N:443:U:C5' | 2.16 | 0.71 |
| 6:N:497:U:C3' | 6:N:498:U:C5' | 2.46 | 0.71 |
| 1:I:106:A:C4 | 1:I:107:A:C8 | 2.78 | 0.71 |
| 1:I:112:A:O2' | 1:I:113:A:C5' | 2.37 | 0.71 |
| 1:I:191:A:H2' | 1:I:192:A:O4' | 1.90 | 0.71 |
| 1:I:279:A:C2 | 1:I:280:A:N9 | 2.58 | 0.71 |
| 1:I:41:A:C2 | 1:I:42:A:C8 | 2.79 | 0.71 |
| 1:I:69:A:H2' | 1:I:70:A:C5' | 2.19 | 0.71 |
| 2:J:129:A:C4 | 2:J:130:A:C8 | 2.78 | 0.71 |
| 2:J:160:A:C3' | 2:J:161:A:C5' | 2.44 | 0.71 |
| 2:J:56:A:C4 | 2:J:57:A:C8 | 2.78 | 0.71 |
| 2:J:66:A:C2' | 2:J:67:A:H5' | 2.19 | 0.71 |
| 3:K:199:A:H2' | 3:K:200:A:H8 | 1.51 | 0.71 |
| 3:K:220:A:H2' | 3:K:221:A:H8 | 1.54 | 0.71 |
| 4:L:575:U:O2 | 4:L:576:U:C6 | 2.43 | 0.71 |
| 4:L:622:U:H2' | 4:L:623:U:O5' | 1.90 | 0.71 |
| 4:L:756:U:O2' | 4:L:757:U:H5' | 1.90 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:758:U:H2' | 4:L:759:U:H6 | 1.56 | 0.71 |
| 4:L:766:U:C2 | 4:L:767:U:C6 | 2.78 | 0.71 |
| 5:M:319:U:C2' | 5:M:320:U:O5' | 2.37 | 0.71 |
| 5:M:349:U:H2' | 5:M:350:U:C5' | 2.21 | 0.71 |
| 5:M:387:U:O2' | 5:M:388:U:P | 2.47 | 0.71 |
| 5:M:456:U:O2' | 5:M:457:U:H5' | 1.90 | 0.71 |
| 6:N:496:U:H2' | 6:N:497:U:C6 | 2.25 | 0.71 |
| 1:I:183:A:N3 | 1:I:184:A:N9 | 2.39 | 0.71 |
| 1:I:248:A:H2' | 1:I:249:A:O5' | 1.90 | 0.71 |
| 1:I:272:A:C4 | 1:I:273:A:N7 | 2.58 | 0.71 |
| 1:I:30:A:C2 | 1:I:31:A:C8 | 2.78 | 0.71 |
| 1:I:45:A:N3 | 1:I:46:A:C8 | 2.58 | 0.71 |
| 1:I:94:A:H2' | 1:I:95:A:H8 | 1.55 | 0.71 |
| 2:J:117:A:C4 | 2:J:118:A:C8 | 2.78 | 0.71 |
| 2:J:127:A:C2 | 2:J:128:A:C4 | 2.77 | 0.71 |
| 2:J:136:A:H2 | 2:J:137:A:N3 | 1.87 | 0.71 |
| 2:J:182:A:N6 | 2:J:183:A:C6 | 2.59 | 0.71 |
| 2:J:193:A:O2' | 2:J:194:A:H5' | 1.89 | 0.71 |
| 2:J:217:A:H2' | 2:J:218:A:C8 | 2.26 | 0.71 |
| 2:J:219:A:H2' | 2:J:220:A:C5' | 2.19 | 0.71 |
| 2:J:25:A:C2 | 2:J:26:A:C5 | 2.79 | 0.71 |
| 2:J:71:A:C6 | 2:J:72:A:N6 | 2.57 | 0.71 |
| 3:K:173:A:C2' | 3:K:174:A:H5' | 2.19 | 0.71 |
| 3:K:44:A:H2' | 3:K:45:A:H8 | 1.55 | 0.71 |
| 3:K:49:A:C2 | 3:K:50:A:C8 | 2.78 | 0.71 |
| 1:I:334:A:C2 | 4:L:492:U:C2 | 2.78 | 0.71 |
| 4:L:791:U:O2' | 4:L:792:U:C5' | 2.35 | 0.71 |
| 5:M:347:U:HO2' | 5:M:348:U:H5' | 0.90 | 0.71 |
| 5:M:423:U:C2 | 5:M:424:U:C5 | 2.77 | 0.71 |
| 6:N:423:U:C2' | 6:N:424:U:C5' | 2.68 | 0.71 |
| 6:N:487:U:O4 | 6:N:488:U:O4 | 2.08 | 0.71 |
| 1:I:163:A:C2' | 1:I:164:A:C5' | 2.69 | 0.71 |
| 1:I:174:A:C2 | 1:I:175:A:C8 | 2.78 | 0.71 |
| 1:I:230:A:C2 | 1:I:231:A:C4 | 2.78 | 0.71 |
| 1:I:283:A:N1 | 1:I:284:A:C6 | 2.59 | 0.71 |
| 1:I:284:A:C2 | 1:I:285:A:N9 | 2.58 | 0.71 |
| 1:I:317:A:C2' | 1:I:318:A:C5' | 2.65 | 0.71 |
| 1:I:58:A:N6 | 1:I:59:A:N6 | 2.39 | 0.71 |
| 2:J:176:A:O2' | 2:J:177:A:O5' | 2.09 | 0.71 |
| 2:J:224:A:C2 | 2:J:225:A:C8 | 2.78 | 0.71 |
| 3:K:105:A:C6 | 3:K:106:A:N6 | 2.58 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:106:A:C4 | 3:K:107:A:C8 | 2.79 | 0.71 |
| 3:K:137:A:HO2' | 3:K:138:A:H5' | 1.53 | 0.71 |
| 3:K:18:A:N6 | 3:K:19:A:N6 | 2.38 | 0.71 |
| 4:L:563:U:C2' | 4:L:564:U:H6 | 1.93 | 0.71 |
| 4:L:601:U:C2 | 4:L:602:U:C6 | 2.78 | 0.71 |
| 4:L:742:U:O2 | 4:L:743:U:C6 | 2.42 | 0.71 |
| 5:M:543:U:H2' | 5:M:544:U:H6 | 1.56 | 0.71 |
| 6:N:352:U:O2' | 6:N:353:U:H5' | 1.91 | 0.71 |
| 6:N:425:U:O2' | 6:N:426:U:C4' | 2.38 | 0.71 |
| 6:N:452:U:O2' | 6:N:453:U:H5' | 1.90 | 0.71 |
| 6:N:490:U:N3 | 6:N:491:U:C5 | 2.59 | 0.71 |
| 1:I:231:A:C6 | 1:I:232:A:N7 | 2.58 | 0.71 |
| 1:I:244:A:O2' | 1:I:245:A:C5' | 2.37 | 0.71 |
| 1:I:251:A:H2' | 1:I:252:A:O4' | 1.89 | 0.71 |
| 1:I:270:A:C3' | 1:I:271:A:H5' | 2.05 | 0.71 |
| 1:I:300:A:N3 | 1:I:301:A:C8 | 2.59 | 0.71 |
| 1:I:315:A:H2' | 1:I:316:A:O4' | 1.91 | 0.71 |
| 1:I:336:A:O2' | 1:I:337:A:C5' | 2.34 | 0.71 |
| 1:I:55:A:C2 | 1:I:56:A:N9 | 2.58 | 0.71 |
| 2:J:159:A:C5 | 2:J:160:A:N7 | 2.59 | 0.71 |
| 2:J:58:A:N3 | 2:J:59:A:C8 | 2.59 | 0.71 |
| 3:K:146:A:C2 | 3:K:147:A:N7 | 2.58 | 0.71 |
| 3:K:165:A:C2 | 3:K:166:A:N9 | 2.59 | 0.71 |
| 4:L:477:U:H2' | 4:L:478:U:O5' | 1.91 | 0.71 |
| 4:L:517:U:H2' | 4:L:518:U:C5' | 2.19 | 0.71 |
| 4:L:557:U:H2' | 4:L:558:U:C4' | 2.19 | 0.71 |
| 4:L:562:U:C2 | 4:L:563:U:C5 | 2.79 | 0.71 |
| 4:L:585:U:C2 | 4:L:586:U:C6 | 2.79 | 0.71 |
| 4:L:603:U:C2' | 4:L:604:U:C5' | 2.68 | 0.71 |
| 4:L:699:U:N3 | 4:L:700:U:C5 | 2.59 | 0.71 |
| 4:L:786:U:O2' | 4:L:787:U:P | 2.48 | 0.71 |
| 4:L:813:U:C4 | 4:L:814:U:O4 | 2.43 | 0.71 |
| 5:M:319:U:C2 | 5:M:320:U:C6 | 2.79 | 0.71 |
| 5:M:405:U:H2' | 5:M:406:U:H6 | 1.56 | 0.71 |
| 5:M:546:U:C2 | 5:M:547:U:C5 | 2.79 | 0.71 |
| 6:N:449:U:C2 | 6:N:450:U:C6 | 2.79 | 0.71 |
| 6:N:484:U:O2' | 6:N:485:U:O4' | 2.09 | 0.71 |
| 1:I:136:A:C2 | 1:I:137:A:C8 | 2.78 | 0.71 |
| 1:I:141:A:H2' | 1:I:142:A:H8 | 1.53 | 0.71 |
| 1:I:178:A:C2' | 1:I:179:A:C5' | 2.68 | 0.71 |
| 1:I:64:A:O2' | 1:I:65:A:C5' | 2.33 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 2:J:117:A:O2' | 2:J:118:A:P | 2.48 | 0.71 |
| 2:J:210:A:C4 | 2:J:211:A:C8 | 2.79 | 0.71 |
| 2:J:32:A:C2' | 2:J:33:A:C5' | 2.69 | 0.71 |
| 2:J:94:A:H2' | 2:J:95:A:O5' | 1.89 | 0.71 |
| 3:K:100:A:C5 | 3:K:101:A:N7 | 2.59 | 0.71 |
| 3:K:110:A:H2' | 3:K:111:A:O4' | 1.91 | 0.71 |
| 3:K:181:A:O2' | 3:K:182:A:P | 2.47 | 0.71 |
| 4:L:489:U:O4 | 4:L:490:U:O4 | 2.09 | 0.71 |
| 4:L:491:U:C2 | 4:L:492:U:C6 | 2.78 | 0.71 |
| 4:L:767:U:C2' | 4:L:768:U:H6 | 2.03 | 0.71 |
| 5:M:288:U:C2 | 5:M:289:U:C6 | 2.78 | 0.71 |
| 5:M:299:U:C2 | 5:M:300:U:C5 | 2.78 | 0.71 |
| 5:M:367:U:C2 | 5:M:368:U:C5 | 2.78 | 0.71 |
| 5:M:455:U:H2' | 5:M:456:U:O4' | 1.90 | 0.71 |
| 5:M:516:U:C2 | 5:M:517:U:C5 | 2.79 | 0.71 |
| 5:M:544:U:C2' | 5:M:545:U:C5' | 2.69 | 0.71 |
| 6:N:425:U:N1 | 6:N:426:U:C5 | 2.57 | 0.71 |
| 6:N:433:U:H2' | 6:N:434:U:C6 | 2.25 | 0.71 |
| 1:I:111:A:H2' | 1:I:112:A:H8 | 1.55 | 0.71 |
| 1:I:250:A:C2' | 1:I:251:A:C8 | 2.72 | 0.71 |
| 1:I:298:A:O2' | 1:I:299:A:H5' | 1.91 | 0.71 |
| 1:I:373:A:C6 | 1:I:374:A:N6 | 2.59 | 0.71 |
| 1:I:402:A:O2' | 1:I:403:A:H5' | 1.90 | 0.71 |
| 2:J:45:A:C2 | 2:J:46:A:C8 | 2.79 | 0.71 |
| 2:J:73:A:C2 | 2:J:74:A:C8 | 2.78 | 0.71 |
| 3:K:152:A:C5 | 3:K:153:A:N7 | 2.59 | 0.71 |
| 3:K:191:A:H2' | 3:K:192:A:H8 | 1.55 | 0.71 |
| 3:K:209:A:H2' | 3:K:210:A:C8 | 2.25 | 0.71 |
| 3:K:254:A:C2' | 3:K:255:A:C5' | 2.68 | 0.71 |
| 3:K:94:A:H2' | 3:K:95:A:H8 | 1.55 | 0.71 |
| 4:L:472:U:H2' | 4:L:473:U:C6 | 2.25 | 0.71 |
| 4:L:564:U:C2 | 4:L:565:U:C6 | 2.78 | 0.71 |
| 4:L:564:U:C2' | 4:L:565:U:H5' | 2.19 | 0.71 |
| 4:L:566:U:H2' | 4:L:567:U:C5' | 2.21 | 0.71 |
| 4:L:571:U:N3 | 4:L:572:U:C4 | 2.59 | 0.71 |
| 4:L:599:U:C4 | 4:L:600:U:C4 | 2.79 | 0.71 |
| 4:L:672:U:N3 | 4:L:673:U:C4 | 2.59 | 0.71 |
| 5:M:288:U:C2 | 5:M:289:U:C5 | 2.77 | 0.71 |
| 5:M:369:U:H2' | 5:M:370:U:O5' | 1.90 | 0.71 |
| 6:N:281:U:H2' | 6:N:282:U:O5' | 1.90 | 0.71 |
| 6:N:349:U:C2 | 6:N:350:U:C6 | 2.79 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 6:N:395:U:C2 | 6:N:396:U:C6 | 2.79 | 0.71 |
| 3:K:88:A:N6 | 6:N:444:U:O4 | 2.24 | 0.71 |
| 1:I:137:A:C5 | 1:I:138:A:N7 | 2.59 | 0.71 |
| 1:I:19:A:O2' | 1:I:20:A:H5' | 1.91 | 0.71 |
| 1:I:21:A:O2' | 1:I:22:A:H5' | 1.91 | 0.71 |
| 1:I:239:A:C2' | 1:I:240:A:O5' | 2.38 | 0.71 |
| 1:I:259:A:C2' | 1:I:260:A:C5' | 2.69 | 0.71 |
| 1:I:26:A:C4 | 1:I:27:A:C8 | 2.79 | 0.71 |
| 1:I:387:A:H2' | 1:I:388:A:O4' | 1.90 | 0.71 |
| 2:J:183:A:C2 | 2:J:184:A:C8 | 2.79 | 0.71 |
| 2:J:188:A:C2 | 2:J:189:A:C5 | 2.78 | 0.71 |
| 2:J:214:A:N3 | 2:J:215:A:C8 | 2.58 | 0.71 |
| 2:J:59:A:O2' | 2:J:60:A:H5' | 1.90 | 0.71 |
| 2:J:99:A:O2' | 2:J:100:A:O4' | 2.08 | 0.71 |
| 4:L:507:U:C2' | 4:L:508:U:O5' | 2.38 | 0.71 |
| 4:L:543:U:N3 | 4:L:544:U:C4 | 2.59 | 0.71 |
| 4:L:565:U:N3 | 4:L:566:U:C5 | 2.59 | 0.71 |
| 4:L:599:U:N3 | 4:L:600:U:C5 | 2.59 | 0.71 |
| 4:L:666:U:C2 | 4:L:667:U:C5 | 2.79 | 0.71 |
| 4:L:744:U:C2 | 4:L:745:U:C5 | 2.79 | 0.71 |
| 5:M:428:U:O2' | 5:M:429:U:C4' | 2.37 | 0.71 |
| 5:M:435:U:C2 | 5:M:436:U:C5 | 2.79 | 0.71 |
| 5:M:515:U:O2' | 5:M:516:U:C5' | 2.31 | 0.71 |
| 6:N:408:U:O2' | 6:N:409:U:H5' | 1.91 | 0.71 |
| 6:N:488:U:H2' | 6:N:489:U:H6 | 1.54 | 0.71 |
| 1:I:213:A:O2' | 1:I:214:A:H5' | 1.90 | 0.71 |
| 1:I:405:A:C6 | 1:I:406:A:N6 | 2.58 | 0.71 |
| 1:I:72:A:C5 | 1:I:73:A:N7 | 2.59 | 0.71 |
| 1:I:73:A:H2' | 1:I:74:A:C4' | 2.15 | 0.71 |
| 2:J:225:A:C2 | 2:J:226:A:C5 | 2.78 | 0.71 |
| 2:J:51:A:C2' | 2:J:52:A:H8 | 2.04 | 0.71 |
| 3:K:99:A:O2' | 3:K:100:A:C4' | 2.39 | 0.71 |
| 3:K:121:A:C6 | 3:K:122:A:N7 | 2.58 | 0.71 |
| 3:K:150:A:C2 | 3:K:151:A:N7 | 2.58 | 0.71 |
| 4:L:447:U:C3' | 4:L:448:U:P | 2.79 | 0.71 |
| 4:L:458:U:O2' | 4:L:459:U:H5' | 1.91 | 0.71 |
| 4:L:500:U:C2 | 4:L:501:U:C6 | 2.79 | 0.71 |
| 4:L:566:U:C2 | 4:L:567:U:C6 | 2.79 | 0.71 |
| 4:L:706:U:C2 | 4:L:707:U:C5 | 2.79 | 0.71 |
| 4:L:744:U:N3 | 4:L:745:U:C5 | 2.59 | 0.71 |
| 4:L:751:U:C2 | 4:L:752:U:C5 | 2.79 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:346:U:HO2' | 5:M:347:U:C5' | 1.87 | 0.71 |
| 5:M:348:U:O4 | 5:M:349:U:O4 | 2.06 | 0.71 |
| 5:M:488:U:C2' | 5:M:489:U:H6 | 2.03 | 0.71 |
| 5:M:512:U:C2 | 5:M:513:U:C5 | 2.78 | 0.71 |
| 5:M:527:U:C2 | 5:M:528:U:C5 | 2.78 | 0.71 |
| 6:N:326:U:C2 | 6:N:327:U:C5 | 2.78 | 0.71 |
| 6:N:473:U:N3 | 6:N:474:U:C4 | 2.59 | 0.71 |
| 6:N:486:U:C2' | 6:N:487:U:O4' | 2.38 | 0.71 |
| 6:N:496:U:H2' | 6:N:497:U:H6 | 1.56 | 0.71 |
| 1:I:143:A:C2' | 1:I:144:A:H8 | 2.01 | 0.70 |
| 1:I:240:A:C4 | 1:I:241:A:C8 | 2.79 | 0.70 |
| 1:I:338:A:N6 | 1:I:339:A:H62 | 1.88 | 0.70 |
| 1:I:60:A:N6 | 1:I:61:A:N6 | 2.38 | 0.70 |
| 1:I:74:A:O2' | 1:I:75:A:C4' | 2.39 | 0.70 |
| 2:J:123:A:H2' | 2:J:124:A:C8 | 2.25 | 0.70 |
| 2:J:203:A:H2' | 2:J:204:A:H8 | 1.55 | 0.70 |
| 2:J:99:A:C4 | 2:J:100:A:C8 | 2.79 | 0.70 |
| 3:K:102:A:C2 | 3:K:103:A:C5 | 2.79 | 0.70 |
| 3:K:167:A:N6 | 3:K:168:A:C6 | 2.59 | 0.70 |
| 3:K:220:A:H2' | 3:K:221:A:C8 | 2.26 | 0.70 |
| 3:K:47:A:C5 | 3:K:48:A:N7 | 2.58 | 0.70 |
| 4:L:437:U:O2 | 4:L:438:U:C5 | 2.44 | 0.70 |
| 4:L:581:U:H2' | 4:L:582:U:C6 | 2.26 | 0.70 |
| 4:L:612:U:O2' | 4:L:613:U:C5' | 2.29 | 0.70 |
| 4:L:746:U:H2' | 4:L:747:U:O5' | 1.89 | 0.70 |
| 5:M:322:U:H2' | 5:M:323:U:H6 | 1.56 | 0.70 |
| 5:M:379:U:C2' | 5:M:380:U:H6 | 1.98 | 0.70 |
| 5:M:405:U:H2' | 5:M:406:U:C4' | 2.19 | 0.70 |
| 5:M:451:U:O4 | 5:M:452:U:O4 | 2.08 | 0.70 |
| 5:M:499:U:O2' | 5:M:500:U:H5' | 1.91 | 0.70 |
| 5:M:505:U:C2' | 5:M:506:U:O5' | 2.39 | 0.70 |
| 5:M:525:U:H2' | 5:M:526:U:C5' | 2.20 | 0.70 |
| 6:N:484:U:HO3' | 6:N:485:U:P | 2.14 | 0.70 |
| 6:N:487:U:C2 | 6:N:488:U:C5 | 2.79 | 0.70 |
| 6:N:490:U:C2 | 6:N:491:U:C5 | 2.78 | 0.70 |
| 1:I:9:A:C2 | 1:I:10:A:C8 | 2.79 | 0.70 |
| 1:I:203:A:O2' | 1:I:204:A:H5' | 1.90 | 0.70 |
| 1:I:240:A:N1 | 1:I:241:A:C5 | 2.59 | 0.70 |
| 1:I:257:A:C2 | 1:I:258:A:N9 | 2.59 | 0.70 |
| 1:I:260:A:H2' | 1:I:261:A:C5' | 2.20 | 0.70 |
| 1:I:267:A:C2 | 4:L:559:U:C2 | 2.79 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:323:A:C4 | 1:I:324:A:C8 | 2.79 | 0.70 |
| 1:I:386:A:C5 | 1:I:387:A:N7 | 2.60 | 0.70 |
| 1:I:46:A:C2 | 1:I:47:A:C8 | 2.76 | 0.70 |
| 1:I:64:A:H2' | 1:I:65:A:O4' | 1.90 | 0.70 |
| 1:I:95:A:C6 | 1:I:96:A:C6 | 2.79 | 0.70 |
| 2:J:117:A:C2' | 2:J:118:A:O5' | 2.39 | 0.70 |
| 2:J:187:A:C2 | 2:J:188:A:C8 | 2.78 | 0.70 |
| 2:J:215:A:O2' | 2:J:216:A:C5' | 2.38 | 0.70 |
| 2:J:265:A:H2 | 2:J:266:A:C4 | 2.09 | 0.70 |
| 2:J:30:A:C2' | 2:J:31:A:C5' | 2.69 | 0.70 |
| 2:J:54:A:C2 | 2:J:55:A:C4 | 2.78 | 0.70 |
| 2:J:94:A:N3 | 2:J:95:A:C8 | 2.59 | 0.70 |
| 3:K:118:A:C2 | 3:K:119:A:C8 | 2.79 | 0.70 |
| 3:K:135:A:O2' | 3:K:136:A:P | 2.49 | 0.70 |
| 3:K:250:A:C2 | 3:K:251:A:C8 | 2.78 | 0.70 |
| 4:L:517:U:O2' | 4:L:518:U:C5' | 2.31 | 0.70 |
| 4:L:572:U:C2 | 4:L:573:U:C6 | 2.80 | 0.70 |
| 4:L:690:U:C4 | 4:L:691:U:C5 | 2.78 | 0.70 |
| 4:L:792:U:H2' | 4:L:793:U:H6 | 1.56 | 0.70 |
| 4:L:802:U:C2' | 4:L:803:U:C5' | 2.69 | 0.70 |
| 5:M:323:U:H2' | 5:M:324:U:C4' | 1.99 | 0.70 |
| 5:M:327:U:O2' | 5:M:328:U:H5' | 1.91 | 0.70 |
| 5:M:530:U:H2' | 5:M:531:U:C4' | 2.21 | 0.70 |
| 6:N:401:U:H2' | 6:N:402:U:H6 | 1.54 | 0.70 |
| 6:N:435:U:C2 | 6:N:436:U:C5 | 2.79 | 0.70 |
| 1:I:156:A:C6 | 1:I:157:A:C6 | 2.78 | 0.70 |
| 1:I:231:A:H2' | 1:I:232:A:O4' | 1.91 | 0.70 |
| 1:I:278:A:O2' | 1:I:279:A:C5' | 2.38 | 0.70 |
| 2:J:122:A:N6 | 2:J:123:A:H61 | 1.87 | 0.70 |
| 2:J:161:A:H2' | 2:J:162:A:O5' | 1.90 | 0.70 |
| 2:J:219:A:C2 | 2:J:220:A:C4 | 2.80 | 0.70 |
| 4:L:488:U:H2' | 4:L:489:U:H6 | 1.54 | 0.70 |
| 4:L:508:U:N3 | 4:L:509:U:C4 | 2.59 | 0.70 |
| 4:L:544:U:N3 | 4:L:545:U:C5 | 2.59 | 0.70 |
| 4:L:596:U:N3 | 4:L:597:U:C4 | 2.59 | 0.70 |
| 4:L:641:U:C2 | 4:L:642:U:C6 | 2.79 | 0.70 |
| 4:L:646:U:H2' | 4:L:647:U:H6 | 1.56 | 0.70 |
| 4:L:738:U:C2 | 4:L:739:U:H5 | 2.09 | 0.70 |
| 4:L:761:U:N3 | 4:L:762:U:C4 | 2.59 | 0.70 |
| 4:L:794:U:H2' | 4:L:795:U:O5' | 1.90 | 0.70 |
| 4:L:800:U:C2 | 4:L:801:U:C5 | 2.79 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:314:U:C3' | 5:M:315:U:P | 2.79 | 0.70 |
| 5:M:337:U:N3 | 5:M:338:U:C5 | 2.60 | 0.70 |
| 5:M:409:U:O2 | 5:M:410:U:N1 | 2.24 | 0.70 |
| 5:M:433:U:C4 | 5:M:434:U:C5 | 2.79 | 0.70 |
| 5:M:497:U:H2' | 5:M:498:U:C6 | 2.26 | 0.70 |
| 5:M:517:U:O2' | 5:M:518:U:H5' | 1.90 | 0.70 |
| 6:N:320:U:H2' | 6:N:321:U:C6 | 2.26 | 0.70 |
| 6:N:484:U:C3' | 6:N:485:U:P | 2.79 | 0.70 |
| 1:I:242:A:C4 | 1:I:243:A:C8 | 2.80 | 0.70 |
| 1:I:272:A:C6 | 1:I:273:A:C6 | 2.79 | 0.70 |
| 1:I:280:A:O2' | 1:I:281:A:P | 2.49 | 0.70 |
| 1:I:54:A:C4 | 1:I:55:A:N7 | 2.59 | 0.70 |
| 1:I:73:A:N3 | 1:I:74:A:N9 | 2.40 | 0.70 |
| 1:I:75:A:C4 | 1:I:76:A:C8 | 2.79 | 0.70 |
| 2:J:143:A:C2 | 2:J:144:A:C1' | 2.74 | 0.70 |
| 2:J:203:A:C2 | 2:J:204:A:C5 | 2.80 | 0.70 |
| 2:J:204:A:C5 | 2:J:205:A:C5 | 2.79 | 0.70 |
| 2:J:225:A:C4 | 2:J:226:A:C8 | 2.79 | 0.70 |
| 2:J:69:A:C2 | 2:J:70:A:C4 | 2.80 | 0.70 |
| 3:K:106:A:C2' | 3:K:107:A:H8 | 2.02 | 0.70 |
| 3:K:218:A:H2' | 3:K:219:A:C8 | 2.27 | 0.70 |
| 3:K:238:A:H2' | 3:K:239:A:C8 | 2.26 | 0.70 |
| 4:L:572:U:H2' | 4:L:573:U:O5' | 1.90 | 0.70 |
| 4:L:595:U:H2' | 4:L:596:U:C6 | 2.26 | 0.70 |
| 4:L:762:U:C2' | 4:L:763:U:O5' | 2.40 | 0.70 |
| 6:N:425:U:C4 | 6:N:426:U:O4 | 2.45 | 0.70 |
| 6:N:484:U:HO2' | 6:N:485:U:C4' | 2.04 | 0.70 |
| 6:N:489:U:H2' | 6:N:490:U:H6 | 1.55 | 0.70 |
| 6:N:526:U:H2' | 6:N:527:U:H6 | 1.56 | 0.70 |
| 1:I:163:A:C2' | 1:I:164:A:H5' | 2.18 | 0.70 |
| 1:I:273:A:H2' | 1:I:274:A:C4' | 2.22 | 0.70 |
| 1:I:286:A:C4 | 1:I:287:A:N7 | 2.59 | 0.70 |
| 1:I:327:A:C2 | 1:I:328:A:C5 | 2.79 | 0.70 |
| 1:I:376:A:N3 | 1:I:377:A:C8 | 2.59 | 0.70 |
| 2:J:159:A:C4 | 2:J:160:A:N7 | 2.59 | 0.70 |
| 2:J:161:A:C2 | 2:J:162:A:C4 | 2.79 | 0.70 |
| 2:J:264:A:H2' | 2:J:265:A:H8 | 1.57 | 0.70 |
| 2:J:27:A:C2 | 2:J:28:A:C8 | 2.78 | 0.70 |
| 2:J:37:A:N3 | 2:J:38:A:C8 | 2.60 | 0.70 |
| 2:J:83:A:O2' | 2:J:84:A:C5' | 2.39 | 0.70 |
| 3:K:100:A:N1 | 3:K:101:A:C5 | 2.60 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 3:K:105:A:C5 | 3:K:106:A:N7 | 2.59 | 0.70 |
| 3:K:120:A:N6 | 3:K:121:A:C6 | 2.58 | 0.70 |
| 3:K:125:A:C2 | 3:K:126:A:C4 | 2.80 | 0.70 |
| 3:K:249:A:O2' | 3:K:250:A:C5' | 2.32 | 0.70 |
| 4:L:516:U:C2' | 4:L:517:U:H5' | 2.21 | 0.70 |
| 4:L:531:U:C4 | 4:L:532:U:C5 | 2.80 | 0.70 |
| 4:L:546:U:O2' | 4:L:547:U:O4' | 2.09 | 0.70 |
| 4:L:587:U:C2' | 4:L:588:U:O4' | 2.40 | 0.70 |
| 4:L:634:U:H2' | 4:L:635:U:H6 | 1.56 | 0.70 |
| 4:L:713:U:O2' | 4:L:714:U:H5' | 1.76 | 0.70 |
| 4:L:723:U:O4 | 4:L:724:U:C4 | 2.32 | 0.70 |
| 4:L:780:U:C2 | 4:L:781:U:C6 | 2.80 | 0.70 |
| 5:M:410:U:C4 | 5:M:411:U:C5 | 2.78 | 0.70 |
| 5:M:448:U:H2' | 5:M:449:U:O5' | 1.91 | 0.70 |
| 6:N:296:U:C2 | 6:N:297:U:C5 | 2.80 | 0.70 |
| 6:N:362:U:H2' | 6:N:363:U:H6 | 1.57 | 0.70 |
| 6:N:439:U:H2' | 6:N:440:U:H6 | 1.57 | 0.70 |
| 1:I:162:A:C4 | 1:I:163:A:N7 | 2.59 | 0.70 |
| 1:I:225:A:N6 | 1:I:226:A:N6 | 2.39 | 0.70 |
| 1:I:401:A:N6 | 1:I:402:A:N6 | 2.39 | 0.70 |
| 1:I:78:A:C2' | 1:I:79:A:O5' | 2.34 | 0.70 |
| 1:I:84:A:N3 | 1:I:85:A:C8 | 2.60 | 0.70 |
| 2:J:123:A:C2' | 2:J:124:A:C5' | 2.70 | 0.70 |
| 2:J:125:A:N6 | 2:J:126:A:H62 | 1.88 | 0.70 |
| 2:J:34:A:C2 | 2:J:35:A:C5 | 2.80 | 0.70 |
| 3:K:96:A:C2 | 3:K:97:A:C4 | 2.80 | 0.70 |
| 4:L:498:U:C2 | 4:L:499:U:C6 | 2.80 | 0.70 |
| 4:L:524:U:C2' | 4:L:525:U:H5' | 2.22 | 0.70 |
| 4:L:718:U:H2' | 4:L:719:U:C6 | 2.20 | 0.70 |
| 4:L:717:U:O4 | 4:L:718:U:O4 | 2.09 | 0.70 |
| 5:M:290:U:O2' | 5:M:291:U:C5' | 2.37 | 0.70 |
| 5:M:364:U:C2' | 5:M:365:U:C5' | 2.69 | 0.70 |
| 5:M:457:U:H2' | 5:M:458:U:O4' | 1.92 | 0.70 |
| 5:M:463:U:H2' | 5:M:464:U:C5' | 2.21 | 0.70 |
| 5:M:490:U:O2' | 5:M:491:U:H5' | 1.91 | 0.70 |
| 6:N:487:U:N3 | 6:N:488:U:C4 | 2.59 | 0.70 |
| 1:I:111:A:H2' | 1:I:112:A:C8 | 2.26 | 0.70 |
| 1:I:120:A:C2' | 1:I:121:A:H5' | 2.22 | 0.70 |
| 1:I:256:A:C5 | 1:I:257:A:N7 | 2.60 | 0.70 |
| 1:I:330:A:O2' | 1:I:331:A:C5' | 2.31 | 0.70 |
| 1:I:403:A:O2' | 1:I:404:A:O4' | 2.09 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:55:A:C2' | 1:I:56:A:C5' | 2.69 | 0.70 |
| 1:I:71:A:C4 | 1:I:72:A:C8 | 2.80 | 0.70 |
| 2:J:128:A:C2' | 2:J:129:A:C5' | 2.68 | 0.70 |
| 2:J:140:A:C2' | 2:J:141:A:H5' | 2.21 | 0.70 |
| 2:J:188:A:N3 | 2:J:189:A:C8 | 2.60 | 0.70 |
| 2:J:204:A:C2' | 2:J:205:A:H8 | 2.03 | 0.70 |
| 2:J:72:A:C4 | 2:J:73:A:C8 | 2.79 | 0.70 |
| 3:K:138:A:N3 | 3:K:139:A:C8 | 2.59 | 0.70 |
| 3:K:34:A:H2' | 3:K:35:A:H8 | 1.55 | 0.70 |
| 3:K:87:A:C6 | 3:K:88:A:N7 | 2.60 | 0.70 |
| 4:L:496:U:C2 | 4:L:497:U:C6 | 2.80 | 0.70 |
| 4:L:557:U:C2 | 4:L:558:U:C5 | 2.79 | 0.70 |
| 4:L:572:U:H2' | 4:L:573:U:H6 | 1.55 | 0.70 |
| 4:L:757:U:N1 | 4:L:758:U:C5 | 2.59 | 0.70 |
| 4:L:811:U:C2' | 4:L:812:U:C6 | 2.69 | 0.70 |
| 5:M:310:U:O2' | 5:M:311:U:H5' | 1.90 | 0.70 |
| 5:M:393:U:C4 | 5:M:394:U:O4 | 2.44 | 0.70 |
| 5:M:454:U:N3 | 5:M:455:U:C4 | 2.60 | 0.70 |
| 6:N:323:U:H2' | 6:N:324:U:C6 | 2.27 | 0.70 |
| 6:N:333:U:C2' | 6:N:334:U:O4' | 2.39 | 0.70 |
| 6:N:388:U:O2' | 6:N:389:U:C5' | 2.39 | 0.70 |
| 6:N:487:U:C4 | 6:N:488:U:C4 | 2.79 | 0.70 |
| 1:I:17:A:C2 | 1:I:18:A:C5 | 2.79 | 0.70 |
| 1:I:190:A:C2' | 1:I:191:A:C5' | 2.70 | 0.70 |
| 1:I:191:A:C2' | 1:I:192:A:C5' | 2.70 | 0.70 |
| 1:I:240:A:N3 | 1:I:241:A:N7 | 2.38 | 0.70 |
| 1:I:253:A:H2' | 1:I:254:A:H8 | 1.56 | 0.70 |
| 1:I:372:A:C2' | 1:I:373:A:C5' | 2.68 | 0.70 |
| 1:I:45:A:C2 | 1:I:46:A:C8 | 2.79 | 0.70 |
| 1:I:69:A:N3 | 1:I:70:A:C8 | 2.59 | 0.70 |
| 1:I:73:A:HO2' | 1:I:74:A:C4' | 1.88 | 0.70 |
| 1:I:81:A:H2' | 1:I:82:A:O5' | 1.89 | 0.70 |
| 2:J:123:A:C2' | 2:J:124:A:O4' | 2.40 | 0.70 |
| 2:J:143:A:N3 | 2:J:144:A:C1' | 2.54 | 0.70 |
| 2:J:166:A:O2' | 2:J:167:A:C5' | 2.39 | 0.70 |
| 2:J:28:A:C6 | 2:J:29:A:N7 | 2.60 | 0.70 |
| 2:J:44:A:C2' | 2:J:45:A:C5' | 2.68 | 0.70 |
| 3:K:130:A:C2' | 3:K:131:A:C5' | 2.70 | 0.70 |
| 3:K:42:A:C2' | 3:K:43:A:C5' | 2.69 | 0.70 |
| 3:K:63:A:HO2' | 3:K:64:A:H5' | 1.55 | 0.70 |
| 4:L:564:U:HO2' | 4:L:565:U:H5' | 1.57 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:637:U:C4 | 4:L:638:U:C4 | 2.80 | 0.70 |
| 4:L:760:U:H2' | 4:L:761:U:C6 | 2.27 | 0.70 |
| 4:L:777:U:H2' | 4:L:778:U:C5' | 2.20 | 0.70 |
| 5:M:349:U:C2 | 5:M:350:U:C5 | 2.80 | 0.70 |
| 5:M:348:U:C2 | 5:M:349:U:C6 | 2.79 | 0.70 |
| 5:M:494:U:O2 | 5:M:495:U:C6 | 2.44 | 0.70 |
| 5:M:498:U:O2 | 5:M:499:U:C6 | 2.45 | 0.70 |
| 6:N:422:U:H2' | 6:N:423:U:H6 | 1.57 | 0.70 |
| 6:N:437:U:C2 | 6:N:438:U:C5 | 2.80 | 0.70 |
| 1:I:334:A:C4 | 1:I:335:A:C8 | 2.80 | 0.70 |
| 2:J:222:A:C2 | 2:J:223:A:C4 | 2.80 | 0.70 |
| 2:J:225:A:H2' | 2:J:226:A:O5' | 1.92 | 0.70 |
| 2:J:89:A:C4 | 2:J:90:A:N7 | 2.59 | 0.70 |
| 3:K:253:A:C2 | 3:K:254:A:C4 | 2.80 | 0.70 |
| 3:K:71:A:O2' | 3:K:72:A:C5' | 2.40 | 0.70 |
| 4:L:431:U:H2' | 4:L:432:U:H6 | 1.55 | 0.70 |
| 4:L:482:U:O2' | 4:L:483:U:H5' | 1.92 | 0.70 |
| 4:L:581:U:H2' | 4:L:582:U:H6 | 1.56 | 0.70 |
| 5:M:304:U:C4 | 5:M:305:U:O4 | 2.45 | 0.70 |
| 5:M:396:U:H2' | 5:M:397:U:O4' | 1.92 | 0.70 |
| 5:M:421:U:C2 | 5:M:422:U:C5 | 2.78 | 0.70 |
| 5:M:432:U:C2' | 5:M:433:U:C5' | 2.66 | 0.70 |
| 6:N:399:U:O4 | 6:N:400:U:O4 | 2.08 | 0.70 |
| 6:N:434:U:O2' | 6:N:435:U:C5' | 2.38 | 0.70 |
| 6:N:469:U:C2 | 6:N:470:U:C5 | 2.80 | 0.70 |
| 1:I:106:A:HO2' | 1:I:107:A:H5' | 1.56 | 0.70 |
| 1:I:128:A:H2' | 1:I:129:A:O4' | 1.92 | 0.70 |
| 1:I:16:A:C6 | 1:I:17:A:C5 | 2.80 | 0.70 |
| 1:I:336:A:C2' | 1:I:337:A:H5' | 2.22 | 0.70 |
| 1:I:47:A:N3 | 1:I:48:A:N7 | 2.40 | 0.70 |
| 1:I:62:A:C2 | 1:I:63:A:C8 | 2.80 | 0.70 |
| 1:I:65:A:O2' | 1:I:66:A:C4' | 2.40 | 0.70 |
| 1:I:74:A:C6 | 1:I:75:A:C6 | 2.79 | 0.70 |
| 1:I:93:A:O2' | 1:I:94:A:H5' | 1.91 | 0.70 |
| 2:J:248:A:C6 | 2:J:249:A:C5 | 2.80 | 0.70 |
| 2:J:270:A:C3' | 2:J:271:A:P | 2.79 | 0.70 |
| 2:J:71:A:C4 | 2:J:72:A:N7 | 2.60 | 0.70 |
| 2:J:89:A:N1 | 2:J:90:A:C5 | 2.60 | 0.70 |
| 2:J:94:A:H2' | 2:J:95:A:C5' | 2.21 | 0.70 |
| 3:K:117:A:C4 | 3:K:118:A:N7 | 2.59 | 0.70 |
| 3:K:167:A:C5 | 3:K:168:A:C8 | 2.78 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:65:A:C6 | 3:K:66:A:C6 | 2.79 | 0.70 |
| 4:L:435:U:C2' | 4:L:436:U:H5' | 2.21 | 0.70 |
| 4:L:698:U:H2' | 4:L:699:U:O4' | 1.92 | 0.70 |
| 5:M:482:U:O2 | 5:M:483:U:C6 | 2.45 | 0.70 |
| 6:N:434:U:H2' | 6:N:435:U:O4' | 1.91 | 0.70 |
| 6:N:476:U:C2' | 6:N:477:U:C5' | 2.70 | 0.70 |
| 1:I:226:A:C2 | 1:I:227:A:C5 | 2.80 | 0.69 |
| 1:I:79:A:C2 | 1:I:80:A:C4 | 2.80 | 0.69 |
| 2:J:103:A:C2 | 2:J:104:A:C4 | 2.79 | 0.69 |
| 2:J:156:A:HO2' | 2:J:157:A:H5' | 1.54 | 0.69 |
| 2:J:206:A:H2' | 2:J:207:A:O4' | 1.91 | 0.69 |
| 3:K:108:A:C4 | 3:K:109:A:C8 | 2.80 | 0.69 |
| 3:K:38:A:H2' | 3:K:39:A:H8 | 1.56 | 0.69 |
| 4:L:496:U:C2' | 4:L:497:U:H5' | 2.20 | 0.69 |
| 4:L:554:U:H2' | 4:L:555:U:C6 | 2.26 | 0.69 |
| 4:L:610:U:H2' | 4:L:611:U:C6 | 2.27 | 0.69 |
| 4:L:766:U:C4 | 4:L:767:U:C5 | 2.80 | 0.69 |
| 5:M:368:U:C2 | 5:M:369:U:C6 | 2.80 | 0.69 |
| 6:N:364:U:O2' | 6:N:365:U:P | 2.45 | 0.69 |
| 6:N:425:U:C4 | 6:N:426:U:C5 | 2.80 | 0.69 |
| 1:I:180:A:C2 | 1:I:181:A:C1' | 2.75 | 0.69 |
| 1:I:286:A:H2' | 1:I:287:A:C8 | 2.28 | 0.69 |
| 1:I:323:A:N3 | 1:I:324:A:C1' | 2.54 | 0.69 |
| 1:I:78:A:C4 | 1:I:79:A:N7 | 2.59 | 0.69 |
| 2:J:191:A:O2' | 2:J:192:A:C5' | 2.31 | 0.69 |
| 2:J:249:A:H2' | 2:J:250:A:C5' | 2.22 | 0.69 |
| 2:J:73:A:C2 | 2:J:74:A:C5 | 2.81 | 0.69 |
| 3:K:113:A:H2' | 3:K:114:A:H8 | 1.56 | 0.69 |
| 3:K:136:A:C2 | 3:K:137:A:C8 | 2.80 | 0.69 |
| 3:K:81:A:C2 | 3:K:82:A:C4 | 2.80 | 0.69 |
| 3:K:88:A:C2 | 3:K:89:A:C4 | 2.80 | 0.69 |
| 4:L:492:U:C2 | 4:L:493:U:C5 | 2.80 | 0.69 |
| 4:L:499:U:C4 | 4:L:500:U:C4 | 2.79 | 0.69 |
| 4:L:506:U:O2' | 4:L:507:U:C5' | 2.32 | 0.69 |
| 4:L:602:U:C2 | 4:L:603:U:C6 | 2.80 | 0.69 |
| 4:L:749:U:H2' | 4:L:750:U:O5' | 1.90 | 0.69 |
| 5:M:316:U:C4 | 5:M:317:U:C5 | 2.79 | 0.69 |
| 5:M:354:U:O2 | 5:M:355:U:C5 | 2.46 | 0.69 |
| 5:M:396:U:H2' | 5:M:397:U:H6 | 1.58 | 0.69 |
| 5:M:489:U:C4 | 5:M:490:U:C5 | 2.79 | 0.69 |
| 5:M:497:U:H2' | 5:M:498:U:H6 | 1.55 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:534:U:H2' | 5:M:535:U:C6 | 2.27 | 0.69 |
| 6:N:375:U:N3 | 6:N:376:U:C5 | 2.61 | 0.69 |
| 6:N:484:U:C2' | 6:N:485:U:C4' | 2.69 | 0.69 |
| 6:N:485:U:HO2' | 6:N:486:U:C4' | 2.05 | 0.69 |
| 1:I:116:A:N3 | 1:I:117:A:C8 | 2.60 | 0.69 |
| 1:I:11:A:H2' | 1:I:12:A:H8 | 1.57 | 0.69 |
| 1:I:132:A:C2' | 1:I:133:A:O5' | 2.40 | 0.69 |
| 1:I:156:A:C4 | 1:I:157:A:N7 | 2.60 | 0.69 |
| 1:I:235:A:N3 | 1:I:236:A:C8 | 2.60 | 0.69 |
| 1:I:248:A:C2' | 1:I:249:A:C5' | 2.69 | 0.69 |
| 1:I:266:A:N3 | 1:I:267:A:C8 | 2.60 | 0.69 |
| 1:I:274:A:C2' | 1:I:275:A:O5' | 2.39 | 0.69 |
| 1:I:355:A:H3' | 1:I:356:A:P | 2.32 | 0.69 |
| 1:I:61:A:O2' | 1:I:62:A:H5' | 1.92 | 0.69 |
| 2:J:34:A:C2 | 2:J:35:A:C4 | 2.79 | 0.69 |
| 2:J:58:A:H2' | 2:J:59:A:C5' | 2.22 | 0.69 |
| 3:K:108:A:C5 | 3:K:109:A:N7 | 2.60 | 0.69 |
| 3:K:125:A:H2' | 3:K:126:A:O5' | 1.91 | 0.69 |
| 3:K:204:A:C6 | 3:K:205:A:C6 | 2.81 | 0.69 |
| 3:K:34:A:H2' | 3:K:35:A:C8 | 2.28 | 0.69 |
| 4:L:519:U:C2 | 4:L:520:U:C5 | 2.80 | 0.69 |
| 4:L:540:U:O2 | 4:L:541:U:C6 | 2.46 | 0.69 |
| 4:L:662:U:C4 | 4:L:663:U:O4 | 2.45 | 0.69 |
| 4:L:757:U:C4 | 4:L:758:U:C5 | 2.80 | 0.69 |
| 4:L:764:U:H2' | 4:L:765:U:O4' | 1.92 | 0.69 |
| 4:L:805:U:H2' | 4:L:806:U:C6 | 2.24 | 0.69 |
| 5:M:291:U:O2' | 5:M:292:U:H5' | 1.91 | 0.69 |
| 5:M:298:U:H2' | 5:M:299:U:H6 | 1.56 | 0.69 |
| 5:M:335:U:H2' | 5:M:336:U:O4' | 1.92 | 0.69 |
| 5:M:406:U:H2' | 5:M:407:U:H6 | 1.57 | 0.69 |
| 5:M:408:U:C2 | 5:M:409:U:C6 | 2.79 | 0.69 |
| 5:M:428:U:H2' | 5:M:429:U:H6 | 1.58 | 0.69 |
| 5:M:462:U:H2' | 5:M:463:U:C6 | 2.26 | 0.69 |
| 5:M:464:U:C2' | 5:M:465:U:C5' | 2.69 | 0.69 |
| 5:M:469:U:C2 | 5:M:470:U:C4 | 2.79 | 0.69 |
| 5:M:502:U:O2' | 5:M:503:U:O5' | 2.10 | 0.69 |
| 5:M:510:U:C2' | 5:M:511:U:H5' | 2.12 | 0.69 |
| 6:N:400:U:C2 | 6:N:401:U:C6 | 2.80 | 0.69 |
| 1:I:119:A:C4 | 1:I:120:A:C8 | 2.80 | 0.69 |
| 1:I:253:A:N6 | 1:I:254:A:H62 | 1.88 | 0.69 |
| 1:I:270:A:C2 | 1:I:271:A:N9 | 2.61 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:300:A:C2 | 1:I:301:A:C8 | 2.80 | 0.69 |
| 1:I:340:A:C2 | 1:I:341:A:C8 | 2.81 | 0.69 |
| 1:I:72:A:O2' | 1:I:73:A:H5' | 1.91 | 0.69 |
| 2:J:124:A:C2 | 2:J:125:A:C8 | 2.80 | 0.69 |
| 2:J:207:A:C4 | 2:J:208:A:C8 | 2.81 | 0.69 |
| 2:J:48:A:C4 | 2:J:49:A:C8 | 2.80 | 0.69 |
| 2:J:71:A:H2' | 2:J:72:A:H8 | 1.56 | 0.69 |
| 3:K:165:A:C4 | 3:K:166:A:C8 | 2.79 | 0.69 |
| 3:K:45:A:O2' | 3:K:46:A:C4' | 2.41 | 0.69 |
| 3:K:95:A:H2' | 3:K:96:A:C5' | 2.23 | 0.69 |
| 4:L:557:U:C2' | 4:L:558:U:O4' | 2.36 | 0.69 |
| 4:L:567:U:C2' | 4:L:568:U:O5' | 2.41 | 0.69 |
| 4:L:637:U:C2 | 4:L:638:U:C6 | 2.80 | 0.69 |
| 4:L:740:U:H2' | 4:L:741:U:O4' | 1.92 | 0.69 |
| 4:L:743:U:C2 | 4:L:744:U:C6 | 2.80 | 0.69 |
| 5:M:361:U:H2' | 5:M:362:U:H6 | 1.58 | 0.69 |
| 5:M:512:U:C2' | 5:M:513:U:C5' | 2.69 | 0.69 |
| 6:N:435:U:H2' | 6:N:436:U:H6 | 1.56 | 0.69 |
| 6:N:497:U:C2' | 6:N:498:U:C4' | 2.67 | 0.69 |
| 6:N:526:U:H2' | 6:N:527:U:C6 | 2.27 | 0.69 |
| 1:I:137:A:N6 | 1:I:138:A:N6 | 2.40 | 0.69 |
| 1:I:143:A:H2' | 1:I:144:A:N7 | 2.06 | 0.69 |
| 1:I:160:A:C2' | 1:I:161:A:H5' | 2.22 | 0.69 |
| 1:I:259:A:C4 | 1:I:260:A:C8 | 2.80 | 0.69 |
| 1:I:404:A:H2' | 1:I:405:A:H8 | 1.55 | 0.69 |
| 1:I:405:A:N6 | 1:I:406:A:H62 | 1.87 | 0.69 |
| 1:I:53:A:C2 | 1:I:54:A:C5 | 2.81 | 0.69 |
| 1:I:69:A:C2 | 1:I:70:A:C4 | 2.79 | 0.69 |
| 1:I:87:A:C2 | 1:I:88:A:C4 | 2.80 | 0.69 |
| 2:J:174:A:H2' | 2:J:175:A:H8 | 1.57 | 0.69 |
| 2:J:201:A:C6 | 2:J:202:A:N7 | 2.60 | 0.69 |
| 2:J:6:A:C2 | 2:J:7:A:N7 | 2.60 | 0.69 |
| 2:J:79:A:HO2' | 2:J:80:A:H5' | 1.54 | 0.69 |
| 2:J:83:A:C6 | 2:J:84:A:N6 | 2.60 | 0.69 |
| 2:J:90:A:C4 | 2:J:91:A:C8 | 2.80 | 0.69 |
| 3:K:120:A:N1 | 3:K:121:A:C5 | 2.59 | 0.69 |
| 3:K:65:A:H62 | 3:K:66:A:H62 | 1.39 | 0.69 |
| 4:L:466:U:H2' | 4:L:467:U:C5' | 2.22 | 0.69 |
| 4:L:496:U:C2' | 4:L:497:U:C5' | 2.71 | 0.69 |
| 4:L:552:U:H2' | 4:L:553:U:C6 | 2.27 | 0.69 |
| 4:L:557:U:H2' | 4:L:558:U:H6 | 1.56 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:637:U:C4 | 4:L:638:U:O4 | 2.46 | 0.69 |
| 4:L:690:U:C2 | 4:L:691:U:C6 | 2.79 | 0.69 |
| 4:L:723:U:N1 | 4:L:724:U:C5 | 2.61 | 0.69 |
| 4:L:762:U:C2 | 4:L:763:U:C6 | 2.81 | 0.69 |
| 4:L:766:U:O4 | 4:L:767:U:O4 | 2.11 | 0.69 |
| 5:M:387:U:O2 | 5:M:388:U:C5 | 2.40 | 0.69 |
| 5:M:411:U:O2' | 5:M:412:U:H5' | 1.91 | 0.69 |
| 5:M:429:U:O2' | 5:M:430:U:C5' | 2.37 | 0.69 |
| 5:M:446:U:O2' | 5:M:447:U:H5' | 1.92 | 0.69 |
| 5:M:522:U:H2' | 5:M:523:U:H6 | 1.58 | 0.69 |
| 6:N:293:U:C2' | 6:N:294:U:C6 | 2.73 | 0.69 |
| 6:N:323:U:O2' | 6:N:324:U:C5' | 2.36 | 0.69 |
| 6:N:425:U:H2' | 6:N:426:U:N1 | 2.06 | 0.69 |
| 6:N:472:U:H2' | 6:N:473:U:C6 | 2.26 | 0.69 |
| 1:I:113:A:C2 | 1:I:114:A:C5 | 2.81 | 0.69 |
| 1:I:188:A:C2' | 1:I:189:A:H5' | 2.22 | 0.69 |
| 1:I:212:A:O2' | 1:I:213:A:C5' | 2.32 | 0.69 |
| 1:I:273:A:C4 | 1:I:274:A:C8 | 2.79 | 0.69 |
| 1:I:318:A:C2' | 1:I:319:A:H5' | 2.22 | 0.69 |
| 1:I:321:A:C2' | 1:I:322:A:C5' | 2.70 | 0.69 |
| 2:J:181:A:O2' | 2:J:182:A:H5' | 1.92 | 0.69 |
| 2:J:58:A:C4 | 2:J:59:A:C8 | 2.81 | 0.69 |
| 2:J:83:A:C2' | 2:J:84:A:H8 | 2.00 | 0.69 |
| 2:J:94:A:C2' | 2:J:95:A:O5' | 2.37 | 0.69 |
| 3:K:100:A:N3 | 3:K:101:A:C8 | 2.61 | 0.69 |
| 3:K:104:A:O2' | 3:K:105:A:C4' | 2.41 | 0.69 |
| 3:K:167:A:H2' | 3:K:168:A:O4' | 1.93 | 0.69 |
| 4:L:582:U:H2' | 4:L:583:U:H6 | 1.57 | 0.69 |
| 4:L:701:U:O2' | 4:L:702:U:H5' | 1.92 | 0.69 |
| 5:M:426:U:C2 | 5:M:427:U:C5 | 2.81 | 0.69 |
| 5:M:452:U:H2' | 5:M:453:U:H6 | 1.57 | 0.69 |
| 5:M:489:U:C2' | 5:M:490:U:O4' | 2.40 | 0.69 |
| 5:M:495:U:C2 | 5:M:496:U:C5 | 2.80 | 0.69 |
| 6:N:301:U:H2' | 6:N:302:U:H6 | 1.56 | 0.69 |
| 6:N:412:U:O2 | 6:N:413:U:C6 | 2.45 | 0.69 |
| 6:N:427:U:C2 | 6:N:428:U:C5 | 2.80 | 0.69 |
| 6:N:430:U:H2' | 6:N:431:U:C6 | 2.28 | 0.69 |
| 6:N:451:U:N3 | 6:N:452:U:C5 | 2.61 | 0.69 |
| 1:I:113:A:N6 | 1:I:114:A:N6 | 2.40 | 0.69 |
| 1:I:120:A:O2' | 1:I:121:A:C5' | 2.29 | 0.69 |
| 1:I:254:A:H2' | 1:I:255:A:C5' | 2.23 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:330:A:H2' | 1:I:331:A:C5' | 2.22 | 0.69 |
| 2:J:118:A:N3 | 2:J:119:A:C8 | 2.60 | 0.69 |
| 2:J:165:A:C6 | 2:J:166:A:N6 | 2.61 | 0.69 |
| 2:J:171:A:N1 | 2:J:172:A:N6 | 2.40 | 0.69 |
| 2:J:68:A:N6 | 2:J:69:A:N6 | 2.40 | 0.69 |
| 3:K:150:A:C2 | 3:K:151:A:C5 | 2.81 | 0.69 |
| 3:K:213:A:H2' | 3:K:214:A:H8 | 1.56 | 0.69 |
| 3:K:239:A:HO2' | 3:K:240:A:H5' | 1.57 | 0.69 |
| 3:K:97:A:H2' | 3:K:98:A:C4' | 2.22 | 0.69 |
| 4:L:445:U:C3' | 4:L:446:U:P | 2.81 | 0.69 |
| 4:L:461:U:C2 | 4:L:462:U:C5 | 2.80 | 0.69 |
| 4:L:585:U:C2' | 4:L:586:U:O5' | 2.39 | 0.69 |
| 4:L:706:U:C2 | 4:L:707:U:C6 | 2.81 | 0.69 |
| 4:L:737:U:O2 | 4:L:738:U:C6 | 2.46 | 0.69 |
| 4:L:800:U:H2' | 4:L:801:U:H6 | 1.58 | 0.69 |
| 5:M:404:U:C2 | 5:M:405:U:C5 | 2.80 | 0.69 |
| 6:N:322:U:C3' | 6:N:323:U:P | 2.80 | 0.69 |
| 6:N:370:U:H2' | 6:N:371:U:H6 | 1.58 | 0.69 |
| 6:N:425:U:C6 | 6:N:426:U:C5 | 2.79 | 0.69 |
| 6:N:451:U:C2 | 6:N:452:U:C5 | 2.81 | 0.69 |
| 6:N:453:U:C2' | 6:N:454:U:H5' | 2.22 | 0.69 |
| 1:I:223:A:H2' | 1:I:224:A:H8 | 1.58 | 0.69 |
| 1:I:233:A:C4 | 1:I:234:A:C8 | 2.81 | 0.69 |
| 1:I:26:A:HO2' | 1:I:27:A:H5' | 1.57 | 0.69 |
| 1:I:284:A:H2' | 1:I:285:A:O5' | 1.93 | 0.69 |
| 1:I:286:A:C6 | 1:I:287:A:C6 | 2.80 | 0.69 |
| 1:I:56:A:H2' | 1:I:57:A:O5' | 1.92 | 0.69 |
| 2:J:183:A:H2' | 2:J:184:A:C4' | 2.22 | 0.69 |
| 2:J:206:A:C2 | 2:J:207:A:N9 | 2.60 | 0.69 |
| 2:J:216:A:N1 | 2:J:217:A:C6 | 2.61 | 0.69 |
| 2:J:224:A:N1 | 2:J:225:A:C5 | 2.61 | 0.69 |
| 3:K:168:A:C2' | 3:K:169:A:O5' | 2.41 | 0.69 |
| 4:L:486:U:N3 | 4:L:487:U:C5 | 2.60 | 0.69 |
| 4:L:489:U:H2' | 4:L:490:U:C6 | 2.28 | 0.69 |
| 4:L:601:U:H2' | 4:L:602:U:C6 | 2.26 | 0.69 |
| 4:L:661:U:HO2' | 4:L:662:U:C5' | 1.92 | 0.69 |
| 4:L:748:U:C2 | 4:L:749:U:C5 | 2.81 | 0.69 |
| 5:M:289:U:C2 | 5:M:290:U:C5 | 2.81 | 0.69 |
| 5:M:353:U:C2 | 5:M:354:U:C5 | 2.81 | 0.69 |
| 5:M:410:U:C2' | 5:M:411:U:H6 | 2.03 | 0.69 |
| 5:M:518:U:C2 | 5:M:519:U:C5 | 2.81 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:518:U:C2 | 5:M:519:U:C6 | 2.81 | 0.69 |
| 6:N:384:U:C2 | 6:N:385:U:C5 | 2.80 | 0.69 |
| 6:N:434:U:C2' | 6:N:435:U:C5' | 2.70 | 0.69 |
| 6:N:476:U:C4 | 6:N:477:U:C5 | 2.81 | 0.69 |
| 1:I:105:A:O2' | 1:I:106:A:H5' | 1.93 | 0.69 |
| 1:I:129:A:C4 | 1:I:130:A:C8 | 2.81 | 0.69 |
| 1:I:224:A:H2' | 1:I:225:A:H8 | 1.58 | 0.69 |
| 2:J:100:A:C2 | 2:J:101:A:C4 | 2.81 | 0.69 |
| 2:J:159:A:C6 | 2:J:160:A:N6 | 2.61 | 0.69 |
| 2:J:209:A:C2' | 2:J:210:A:C5' | 2.71 | 0.69 |
| 2:J:252:A:HO2' | 2:J:253:A:H5' | 1.57 | 0.69 |
| 2:J:69:A:C3' | 2:J:70:A:C5' | 2.51 | 0.69 |
| 3:K:156:A:HO2' | 3:K:157:A:C4' | 2.05 | 0.69 |
| 3:K:228:A:O2' | 3:K:229:A:H5' | 1.93 | 0.69 |
| 3:K:59:A:HO2' | 3:K:60:A:H5' | 1.58 | 0.69 |
| 3:K:90:A:C2 | 3:K:91:A:C4 | 2.80 | 0.69 |
| 4:L:564:U:C2' | 4:L:565:U:C5' | 2.71 | 0.69 |
| 4:L:750:U:C2 | 4:L:751:U:H5 | 2.09 | 0.69 |
| 4:L:798:U:C2 | 4:L:799:U:C5 | 2.81 | 0.69 |
| 6:N:273:U:H2' | 6:N:274:U:C6 | 2.28 | 0.69 |
| 6:N:279:U:N3 | 6:N:280:U:C5 | 2.61 | 0.69 |
| 6:N:316:U:C2' | 6:N:317:U:H6 | 2.05 | 0.69 |
| 6:N:394:U:O2 | 6:N:395:U:C6 | 2.46 | 0.69 |
| 6:N:428:U:O2' | 6:N:429:U:H5' | 1.92 | 0.69 |
| 1:I:143:A:C2' | 1:I:144:A:C8 | 2.68 | 0.69 |
| 1:I:243:A:C4 | 1:I:244:A:C8 | 2.81 | 0.69 |
| 1:I:25:A:N3 | 1:I:26:A:C8 | 2.61 | 0.69 |
| 1:I:328:A:O2' | 1:I:329:A:H5' | 1.93 | 0.69 |
| 1:I:42:A:HO2' | 1:I:43:A:H5' | 1.55 | 0.69 |
| 1:I:44:A:H2' | 1:I:45:A:O5' | 1.92 | 0.69 |
| 2:J:191:A:C4 | 2:J:192:A:C8 | 2.81 | 0.69 |
| 2:J:29:A:N1 | 2:J:30:A:C4 | 2.60 | 0.69 |
| 2:J:37:A:H2' | 2:J:38:A:C5' | 2.20 | 0.69 |
| 2:J:73:A:O2' | 2:J:74:A:P | 2.51 | 0.69 |
| 3:K:106:A:C4 | 3:K:107:A:N7 | 2.61 | 0.69 |
| 3:K:118:A:N3 | 3:K:119:A:C8 | 2.61 | 0.69 |
| 3:K:144:A:H2' | 3:K:145:A:H8 | 1.53 | 0.69 |
| 3:K:15:A:C3' | 3:K:16:A:P | 2.81 | 0.69 |
| 3:K:71:A:O2' | 3:K:72:A:O5' | 2.11 | 0.69 |
| 4:L:509:U:H2' | 4:L:510:U:C6 | 2.28 | 0.69 |
| 4:L:543:U:H2' | 4:L:544:U:C6 | 2.27 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:581:U:N3 | 4:L:582:U:C5 | 2.61 | 0.69 |
| 4:L:599:U:C4 | 4:L:600:U:O4 | 2.45 | 0.69 |
| 4:L:659:U:C2 | 4:L:660:U:C5 | 2.81 | 0.69 |
| 4:L:697:U:O2' | 4:L:698:U:H5' | 1.93 | 0.69 |
| 4:L:783:U:H2' | 4:L:784:U:H6 | 1.57 | 0.69 |
| 5:M:369:U:O2 | 5:M:370:U:C6 | 2.46 | 0.69 |
| 5:M:431:U:C2' | 5:M:432:U:H5' | 2.22 | 0.69 |
| 5:M:458:U:O2' | 5:M:459:U:C4' | 2.40 | 0.69 |
| 5:M:462:U:C2 | 5:M:463:U:C5 | 2.80 | 0.69 |
| 5:M:524:U:H2' | 5:M:525:U:C6 | 2.28 | 0.69 |
| 6:N:410:U:C2 | 6:N:411:U:H5 | 2.11 | 0.69 |
| 6:N:448:U:C2 | 6:N:449:U:C6 | 2.80 | 0.69 |
| 6:N:501:U:O2' | 6:N:502:U:C5' | 2.38 | 0.69 |
| 1:I:133:A:C4 | 1:I:134:A:C8 | 2.80 | 0.69 |
| 1:I:21:A:C2' | 1:I:22:A:H8 | 2.05 | 0.69 |
| 1:I:241:A:H2' | 1:I:242:A:H8 | 1.58 | 0.69 |
| 1:I:33:A:HO2' | 1:I:34:A:H5' | 0.86 | 0.69 |
| 1:I:42:A:C2' | 1:I:43:A:H5' | 2.23 | 0.69 |
| 1:I:43:A:N1 | 1:I:44:A:C6 | 2.61 | 0.69 |
| 1:I:85:A:C4 | 1:I:86:A:C8 | 2.81 | 0.69 |
| 2:J:124:A:H2' | 2:J:125:A:H8 | 1.56 | 0.69 |
| 2:J:265:A:C2 | 2:J:266:A:N7 | 2.61 | 0.69 |
| 3:K:69:A:N6 | 3:K:70:A:N6 | 2.41 | 0.69 |
| 3:K:76:A:O2' | 3:K:77:A:C5' | 2.34 | 0.69 |
| 4:L:472:U:O2 | 4:L:473:U:C6 | 2.46 | 0.69 |
| 4:L:541:U:HO2' | 4:L:542:U:H5' | 1.55 | 0.69 |
| 4:L:544:U:C2' | 4:L:545:U:C5' | 2.71 | 0.69 |
| 4:L:577:U:C4 | 4:L:578:U:C4 | 2.80 | 0.69 |
| 4:L:661:U:O2' | 4:L:662:U:P | 2.50 | 0.69 |
| 4:L:728:U:O2' | 4:L:729:U:P | 2.50 | 0.69 |
| 4:L:766:U:C5 | 4:L:767:U:C5 | 2.81 | 0.69 |
| 4:L:783:U:C2 | 4:L:784:U:C5 | 2.81 | 0.69 |
| 5:M:361:U:O2' | 5:M:362:U:H5' | 1.93 | 0.69 |
| 5:M:509:U:HO2' | 5:M:510:U:H5' | 1.57 | 0.69 |
| 5:M:511:U:C2' | 5:M:512:U:O4' | 2.39 | 0.69 |
| 6:N:305:U:H2' | 6:N:306:U:O4' | 1.91 | 0.69 |
| 6:N:315:U:H2' | 6:N:316:U:C6 | 2.27 | 0.69 |
| 6:N:330:U:H2' | 6:N:331:U:H6 | 1.58 | 0.69 |
| 6:N:349:U:O2' | 6:N:350:U:C5' | 2.41 | 0.69 |
| 6:N:419:U:C2 | 6:N:420:U:C5 | 2.80 | 0.69 |
| 1:I:132:A:C3' | 1:I:133:A:C5' | 2.55 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:13:A:C6 | 1:I:14:A:C6 | 2.81 | 0.68 |
| 1:I:13:A:N1 | 1:I:14:A:C5 | 2.60 | 0.68 |
| 1:I:153:A:H2' | 1:I:154:A:H8 | 1.58 | 0.68 |
| 1:I:174:A:H2' | 1:I:175:A:C5' | 2.23 | 0.68 |
| 1:I:375:A:C2 | 1:I:376:A:C8 | 2.81 | 0.68 |
| 2:J:206:A:N3 | 2:J:207:A:C8 | 2.61 | 0.68 |
| 2:J:69:A:H2' | 2:J:70:A:C4' | 2.22 | 0.68 |
| 3:K:102:A:N1 | 3:K:103:A:C5 | 2.61 | 0.68 |
| 3:K:96:A:H2' | 3:K:97:A:H8 | 1.56 | 0.68 |
| 4:L:423:U:H2' | 4:L:424:U:H6 | 1.57 | 0.68 |
| 4:L:533:U:O2' | 4:L:534:U:C5' | 2.31 | 0.68 |
| 4:L:564:U:C2 | 4:L:565:U:C5 | 2.81 | 0.68 |
| 4:L:763:U:O2' | 4:L:764:U:C5' | 2.41 | 0.68 |
| 4:L:767:U:C2' | 4:L:768:U:C6 | 2.70 | 0.68 |
| 4:L:803:U:C2' | 4:L:804:U:C6 | 2.65 | 0.68 |
| 5:M:286:U:C2 | 5:M:287:U:C5 | 2.81 | 0.68 |
| 5:M:328:U:O2 | 5:M:329:U:C6 | 2.45 | 0.68 |
| 5:M:425:U:C2' | 5:M:426:U:H5' | 2.20 | 0.68 |
| 5:M:430:U:O4 | 5:M:431:U:O4 | 2.10 | 0.68 |
| 5:M:486:U:C2' | 5:M:487:U:C5' | 2.71 | 0.68 |
| 5:M:494:U:C2' | 5:M:495:U:C5' | 2.71 | 0.68 |
| 6:N:294:U:H2' | 6:N:295:U:C6 | 2.26 | 0.68 |
| 6:N:471:U:HO2' | 6:N:472:U:H5' | 1.58 | 0.68 |
| 1:I:102:A:C2 | 1:I:103:A:C4 | 2.81 | 0.68 |
| 1:I:101:A:HO2' | 1:I:102:A:P | 2.16 | 0.68 |
| 1:I:11:A:N6 | 1:I:12:A:H62 | 1.91 | 0.68 |
| 1:I:228:A:H2' | 1:I:229:A:H8 | 1.58 | 0.68 |
| 1:I:248:A:C2' | 1:I:249:A:O5' | 2.40 | 0.68 |
| 1:I:266:A:C4 | 1:I:267:A:C8 | 2.81 | 0.68 |
| 1:I:25:A:C4 | 1:I:26:A:C8 | 2.82 | 0.68 |
| 1:I:82:A:H2' | 1:I:83:A:C5' | 2.09 | 0.68 |
| 2:J:173:A:C2' | 2:J:174:A:H8 | 2.01 | 0.68 |
| 2:J:192:A:N3 | 2:J:193:A:C8 | 2.61 | 0.68 |
| 2:J:250:A:O2' | 2:J:251:A:H5' | 1.93 | 0.68 |
| 2:J:39:A:C2' | 2:J:40:A:C5' | 2.71 | 0.68 |
| 3:K:151:A:H2' | 3:K:152:A:H8 | 1.57 | 0.68 |
| 3:K:212:A:C4 | 3:K:213:A:N7 | 2.61 | 0.68 |
| 4:L:459:U:H2' | 4:L:460:U:C5' | 2.22 | 0.68 |
| 4:L:519:U:N3 | 4:L:520:U:C5 | 2.61 | 0.68 |
| 4:L:684:U:H2' | 4:L:685:U:C6 | 2.28 | 0.68 |
| 4:L:747:U:O2' | 4:L:748:U:H5' | 1.93 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:749:U:C2' | 4:L:750:U:C5' | 2.70 | 0.68 |
| 4:L:811:U:H2' | 4:L:812:U:C1' | 2.24 | 0.68 |
| 4:L:814:U:C2 | 4:L:815:U:C6 | 2.80 | 0.68 |
| 5:M:523:U:O2' | 5:M:524:U:P | 2.46 | 0.68 |
| 6:N:499:U:C2 | 6:N:500:U:C5 | 2.81 | 0.68 |
| 1:I:162:A:C6 | 1:I:163:A:N7 | 2.62 | 0.68 |
| 1:I:275:A:C2 | 1:I:276:A:C5 | 2.81 | 0.68 |
| 1:I:296:A:H2' | 1:I:297:A:C5' | 2.22 | 0.68 |
| 1:I:337:A:C2 | 1:I:338:A:C4 | 2.81 | 0.68 |
| 1:I:78:A:N3 | 1:I:79:A:N9 | 2.40 | 0.68 |
| 2:J:160:A:C3' | 2:J:161:A:H5' | 1.92 | 0.68 |
| 2:J:161:A:H2' | 2:J:162:A:C5' | 2.24 | 0.68 |
| 2:J:245:A:C2' | 2:J:246:A:H5' | 2.23 | 0.68 |
| 2:J:247:A:H2' | 2:J:248:A:H8 | 1.59 | 0.68 |
| 2:J:28:A:C6 | 2:J:29:A:C6 | 2.81 | 0.68 |
| 2:J:47:A:C2 | 2:J:48:A:C8 | 2.81 | 0.68 |
| 3:K:192:A:C4 | 3:K:193:A:N7 | 2.61 | 0.68 |
| 3:K:38:A:C2 | 3:K:39:A:C4 | 2.81 | 0.68 |
| 4:L:537:U:H2' | 4:L:538:U:C6 | 2.27 | 0.68 |
| 4:L:548:U:O2' | 4:L:549:U:H5' | 1.92 | 0.68 |
| 4:L:593:U:N3 | 4:L:594:U:C4 | 2.61 | 0.68 |
| 4:L:727:U:C2 | 4:L:728:U:C5 | 2.81 | 0.68 |
| 5:M:405:U:O2 | 5:M:406:U:C1' | 2.41 | 0.68 |
| 5:M:456:U:N3 | 5:M:457:U:C5 | 2.62 | 0.68 |
| 5:M:500:U:C2 | 5:M:501:U:C5 | 2.81 | 0.68 |
| 6:N:454:U:H2' | 6:N:455:U:C5' | 2.23 | 0.68 |
| 1:I:12:A:C2 | 1:I:13:A:C4 | 2.81 | 0.68 |
| 1:I:187:A:C5 | 1:I:188:A:N7 | 2.61 | 0.68 |
| 1:I:232:A:H2' | 1:I:233:A:C4' | 2.23 | 0.68 |
| 1:I:246:A:O2' | 1:I:247:A:C5' | 2.33 | 0.68 |
| 1:I:257:A:C2 | 1:I:258:A:C4 | 2.82 | 0.68 |
| 1:I:73:A:C2 | 1:I:74:A:C5 | 2.81 | 0.68 |
| 2:J:131:A:N6 | 2:J:132:A:H62 | 1.89 | 0.68 |
| 2:J:235:A:O2' | 2:J:236:A:H5' | 1.94 | 0.68 |
| 3:K:127:A:O2' | 3:K:128:A:C5' | 2.35 | 0.68 |
| 3:K:164:A:C2' | 3:K:165:A:C5' | 2.71 | 0.68 |
| 3:K:217:A:H2' | 3:K:218:A:C8 | 2.28 | 0.68 |
| 3:K:61:A:N6 | 3:K:62:A:H62 | 1.89 | 0.68 |
| 3:K:65:A:C6 | 3:K:66:A:C5 | 2.81 | 0.68 |
| 4:L:448:U:N3 | 4:L:449:U:C5 | 2.59 | 0.68 |
| 4:L:487:U:C2' | 4:L:488:U:O4' | 2.42 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:583:U:C2 | 4:L:584:U:C6 | 2.82 | 0.68 |
| 4:L:766:U:N1 | 4:L:767:U:C5 | 2.62 | 0.68 |
| 4:L:783:U:O2' | 4:L:784:U:C5' | 2.40 | 0.68 |
| 4:L:799:U:H2' | 4:L:800:U:H6 | 1.59 | 0.68 |
| 4:L:806:U:H2' | 4:L:807:U:O4' | 1.93 | 0.68 |
| 5:M:311:U:C3' | 5:M:312:U:P | 2.81 | 0.68 |
| 5:M:336:U:C2' | 5:M:337:U:C4' | 2.60 | 0.68 |
| 5:M:365:U:C2' | 5:M:366:U:C5' | 2.72 | 0.68 |
| 5:M:372:U:N3 | 5:M:373:U:C5 | 2.61 | 0.68 |
| 1:I:147:A:H2' | 1:I:148:A:C5' | 2.21 | 0.68 |
| 1:I:222:A:C2' | 1:I:223:A:C5' | 2.69 | 0.68 |
| 1:I:230:A:C4 | 1:I:231:A:C8 | 2.80 | 0.68 |
| 1:I:233:A:H2' | 1:I:234:A:O4' | 1.94 | 0.68 |
| 1:I:250:A:N1 | 1:I:251:A:C6 | 2.62 | 0.68 |
| 1:I:65:A:C4 | 1:I:66:A:C8 | 2.81 | 0.68 |
| 1:I:68:A:N1 | 1:I:69:A:C5 | 2.61 | 0.68 |
| 2:J:101:A:H2' | 2:J:102:A:H8 | 1.59 | 0.68 |
| 3:K:105:A:O2' | 3:K:106:A:H5' | 1.94 | 0.68 |
| 3:K:141:A:C2 | 3:K:142:A:C5 | 2.80 | 0.68 |
| 3:K:163:A:O2' | 3:K:164:A:H5' | 1.94 | 0.68 |
| 3:K:236:A:H2' | 3:K:237:A:H8 | 1.59 | 0.68 |
| 3:K:77:A:C2' | 3:K:78:A:H5' | 2.23 | 0.68 |
| 4:L:419:U:C2 | 4:L:420:U:C5 | 2.81 | 0.68 |
| 4:L:546:U:O2' | 4:L:547:U:C5' | 2.40 | 0.68 |
| 4:L:722:U:HO2' | 4:L:723:U:P | 2.07 | 0.68 |
| 5:M:298:U:C2' | 5:M:299:U:C5' | 2.71 | 0.68 |
| 6:N:412:U:H2' | 6:N:413:U:C5' | 2.22 | 0.68 |
| 6:N:420:U:C2' | 6:N:421:U:O5' | 2.40 | 0.68 |
| 6:N:493:U:H2' | 6:N:494:U:C6 | 2.28 | 0.68 |
| 6:N:525:U:O2' | 6:N:526:U:H5' | 1.92 | 0.68 |
| 1:I:258:A:C2 | 1:I:259:A:C4 | 2.82 | 0.68 |
| 1:I:272:A:H2' | 1:I:273:A:C8 | 2.27 | 0.68 |
| 2:J:124:A:O2' | 2:J:125:A:O5' | 2.10 | 0.68 |
| 2:J:13:A:C2 | 2:J:14:A:C5 | 2.81 | 0.68 |
| 2:J:144:A:C4 | 2:J:145:A:C8 | 2.82 | 0.68 |
| 2:J:265:A:C2 | 2:J:266:A:N9 | 2.61 | 0.68 |
| 2:J:54:A:H2' | 2:J:55:A:C8 | 2.29 | 0.68 |
| 3:K:31:A:H61 | 3:K:32:A:N6 | 1.89 | 0.68 |
| 4:L:626:U:C2 | 4:L:627:U:C5 | 2.82 | 0.68 |
| 4:L:687:U:C2 | 4:L:688:U:C5 | 2.82 | 0.68 |
| 4:L:767:U:O2 | 4:L:768:U:C6 | 2.47 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:801:U:H2' | 4:L:802:U:H6 | 1.59 | 0.68 |
| 5:M:379:U:C2' | 5:M:380:U:C6 | 2.66 | 0.68 |
| 5:M:460:U:C4 | 5:M:461:U:O4 | 2.46 | 0.68 |
| 5:M:523:U:O2' | 5:M:524:U:C5' | 2.40 | 0.68 |
| 5:M:545:U:C2 | 5:M:546:U:C5 | 2.82 | 0.68 |
| 1:I:102:A:C6 | 1:I:103:A:C5 | 2.81 | 0.68 |
| 1:I:106:A:N3 | 1:I:107:A:N9 | 2.42 | 0.68 |
| 1:I:278:A:H2' | 1:I:279:A:H8 | 1.54 | 0.68 |
| 1:I:360:A:C2' | 1:I:361:A:H5' | 2.23 | 0.68 |
| 1:I:42:A:O2' | 1:I:43:A:C5' | 2.33 | 0.68 |
| 1:I:74:A:C5 | 1:I:75:A:C5 | 2.82 | 0.68 |
| 1:I:75:A:N3 | 1:I:76:A:C8 | 2.61 | 0.68 |
| 1:I:85:A:C2 | 1:I:86:A:C5 | 2.82 | 0.68 |
| 2:J:183:A:C2 | 2:J:184:A:C1' | 2.77 | 0.68 |
| 2:J:193:A:C2' | 2:J:194:A:H5' | 2.23 | 0.68 |
| 2:J:200:A:C2 | 2:J:201:A:C4 | 2.82 | 0.68 |
| 2:J:224:A:C6 | 2:J:225:A:C5 | 2.81 | 0.68 |
| 2:J:67:A:O2' | 2:J:68:A:C5' | 2.28 | 0.68 |
| 2:J:88:A:C4 | 2:J:89:A:C8 | 2.81 | 0.68 |
| 3:K:167:A:C6 | 3:K:168:A:C6 | 2.82 | 0.68 |
| 3:K:195:A:C6 | 3:K:196:A:N6 | 2.62 | 0.68 |
| 3:K:89:A:C2 | 3:K:90:A:C4 | 2.81 | 0.68 |
| 4:L:423:U:C4 | 4:L:424:U:O4 | 2.46 | 0.68 |
| 4:L:435:U:C2' | 4:L:436:U:C5' | 2.72 | 0.68 |
| 4:L:563:U:N3 | 4:L:564:U:C4 | 2.62 | 0.68 |
| 4:L:627:U:HO2' | 4:L:628:U:H5' | 1.57 | 0.68 |
| 4:L:640:U:C4 | 4:L:641:U:O4 | 2.46 | 0.68 |
| 4:L:701:U:H2' | 4:L:702:U:H6 | 1.57 | 0.68 |
| 4:L:703:U:C2 | 4:L:704:U:C5 | 2.82 | 0.68 |
| 4:L:719:U:O2' | 4:L:720:U:P | 2.50 | 0.68 |
| 4:L:724:U:C2' | 4:L:725:U:O4' | 2.38 | 0.68 |
| 4:L:730:U:H2' | 4:L:731:U:C6 | 2.29 | 0.68 |
| 4:L:743:U:O2 | 4:L:744:U:C6 | 2.47 | 0.68 |
| 5:M:321:U:C2 | 5:M:322:U:C5 | 2.82 | 0.68 |
| 5:M:360:U:O2' | 5:M:361:U:C5' | 2.40 | 0.68 |
| 5:M:506:U:N3 | 5:M:507:U:C5 | 2.62 | 0.68 |
| 5:M:509:U:C2 | 5:M:510:U:C5 | 2.82 | 0.68 |
| 6:N:385:U:H2' | 6:N:386:U:C6 | 2.29 | 0.68 |
| 6:N:418:U:N3 | 6:N:419:U:C4 | 2.61 | 0.68 |
| 6:N:465:U:C2 | 6:N:466:U:C5 | 2.81 | 0.68 |
| 6:N:466:U:H2' | 6:N:467:U:H6 | 1.57 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 6:N:482:U:C2 | 6:N:483:U:C5 | 2.80 | 0.68 |
| 6:N:484:U:O3' | 6:N:485:U:O5' | 2.11 | 0.68 |
| 6:N:487:U:H2' | 6:N:488:U:C6 | 2.27 | 0.68 |
| 1:I:231:A:O2' | 1:I:232:A:H5' | 1.94 | 0.68 |
| 1:I:22:A:HO2' | 1:I:23:A:H5' | 1.58 | 0.68 |
| 1:I:272:A:C5 | 1:I:273:A:N7 | 2.62 | 0.68 |
| 1:I:52:A:C2' | 1:I:53:A:C5' | 2.71 | 0.68 |
| 1:I:87:A:C2 | 1:I:88:A:C8 | 2.81 | 0.68 |
| 1:I:95:A:C2 | 1:I:96:A:C8 | 2.81 | 0.68 |
| 2:J:11:A:O2' | 2:J:12:A:C4' | 2.41 | 0.68 |
| 2:J:182:A:H61 | 2:J:183:A:N6 | 1.91 | 0.68 |
| 2:J:191:A:C2 | 2:J:192:A:C4 | 2.82 | 0.68 |
| 2:J:223:A:C6 | 2:J:224:A:C5 | 2.82 | 0.68 |
| 2:J:29:A:C2' | 2:J:30:A:C4' | 2.68 | 0.68 |
| 3:K:121:A:N6 | 3:K:122:A:H62 | 1.89 | 0.68 |
| 3:K:13:A:C3' | 3:K:14:A:P | 2.82 | 0.68 |
| 3:K:250:A:O2' | 3:K:251:A:C5' | 2.22 | 0.68 |
| 3:K:254:A:C4 | 3:K:255:A:C8 | 2.81 | 0.68 |
| 4:L:424:U:N3 | 4:L:425:U:C4 | 2.62 | 0.68 |
| 4:L:577:U:N3 | 4:L:578:U:C4 | 2.62 | 0.68 |
| 4:L:652:U:C2' | 4:L:653:U:H5' | 2.24 | 0.68 |
| 4:L:734:U:C2 | 4:L:735:U:C6 | 2.82 | 0.68 |
| 4:L:776:U:H2' | 4:L:777:U:C5' | 2.21 | 0.68 |
| 4:L:778:U:C2 | 4:L:779:U:C5 | 2.81 | 0.68 |
| 6:N:348:U:H2' | 6:N:349:U:C6 | 2.28 | 0.68 |
| 1:I:49:A:H2' | 1:I:50:A:O5' | 1.94 | 0.68 |
| 1:I:56:A:C2' | 1:I:57:A:C5' | 2.72 | 0.68 |
| 1:I:74:A:C5 | 1:I:75:A:C8 | 2.81 | 0.68 |
| 2:J:99:A:C2 | 2:J:100:A:C5 | 2.81 | 0.68 |
| 2:J:130:A:H2' | 2:J:131:A:C5' | 2.23 | 0.68 |
| 2:J:153:A:H2' | 2:J:154:A:C5' | 2.23 | 0.68 |
| 2:J:171:A:C2' | 2:J:172:A:C8 | 2.71 | 0.68 |
| 3:K:181:A:O2' | 3:K:182:A:H5' | 1.93 | 0.68 |
| 4:L:424:U:O4 | 4:L:425:U:O4 | 2.11 | 0.68 |
| 4:L:462:U:C2 | 4:L:463:U:C5 | 2.82 | 0.68 |
| 4:L:505:U:N3 | 4:L:506:U:C5 | 2.62 | 0.68 |
| 4:L:509:U:C2' | 4:L:510:U:C5' | 2.71 | 0.68 |
| 4:L:529:U:H2' | 4:L:530:U:O5' | 1.92 | 0.68 |
| 4:L:552:U:O4 | 4:L:553:U:O4 | 2.12 | 0.68 |
| 4:L:597:U:C2 | 4:L:598:U:C6 | 2.82 | 0.68 |
| 4:L:771:U:C2 | 4:L:772:U:C6 | 2.82 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:804:U:C2 | 4:L:805:U:C5 | 2.82 | 0.68 |
| 5:M:335:U:H2' | 5:M:336:U:H6 | 1.57 | 0.68 |
| 5:M:367:U:N3 | 5:M:368:U:C5 | 2.62 | 0.68 |
| 5:M:387:U:N3 | 5:M:388:U:C5 | 2.61 | 0.68 |
| 5:M:535:U:H2' | 5:M:536:U:C6 | 2.28 | 0.68 |
| 5:M:537:U:N3 | 5:M:538:U:C5 | 2.62 | 0.68 |
| 6:N:311:U:O2' | 6:N:312:U:C5' | 2.41 | 0.68 |
| 6:N:431:U:O2' | 6:N:432:U:C4' | 2.42 | 0.68 |
| 6:N:451:U:H2' | 6:N:452:U:H6 | 1.59 | 0.68 |
| 6:N:473:U:C2' | 6:N:474:U:H6 | 2.07 | 0.68 |
| 1:I:113:A:C2' | 1:I:114:A:O4' | 2.41 | 0.68 |
| 1:I:238:A:C6 | 1:I:239:A:C6 | 2.82 | 0.68 |
| 1:I:244:A:C2 | 1:I:245:A:C8 | 2.82 | 0.68 |
| 1:I:270:A:N1 | 1:I:271:A:C4 | 2.62 | 0.68 |
| 1:I:270:A:N3 | 1:I:271:A:C1' | 2.57 | 0.68 |
| 3:K:121:A:C4 | 3:K:122:A:C8 | 2.81 | 0.68 |
| 3:K:191:A:H2' | 3:K:192:A:C8 | 2.28 | 0.68 |
| 3:K:35:A:N6 | 3:K:36:A:N6 | 2.42 | 0.68 |
| 3:K:46:A:O2' | 3:K:47:A:O4' | 2.12 | 0.68 |
| 3:K:99:A:C4 | 3:K:100:A:C8 | 2.81 | 0.68 |
| 4:L:517:U:H2' | 4:L:518:U:H6 | 1.59 | 0.68 |
| 4:L:549:U:C2' | 4:L:550:U:C4' | 2.72 | 0.68 |
| 4:L:661:U:H2' | 4:L:662:U:H6 | 1.59 | 0.68 |
| 4:L:688:U:O2 | 4:L:689:U:C6 | 2.46 | 0.68 |
| 4:L:715:U:C2 | 4:L:716:U:C5 | 2.82 | 0.68 |
| 4:L:716:U:H2' | 4:L:717:U:C6 | 2.28 | 0.68 |
| 4:L:747:U:C2 | 4:L:748:U:C6 | 2.82 | 0.68 |
| 4:L:799:U:C2 | 4:L:800:U:C5 | 2.81 | 0.68 |
| 5:M:316:U:C4 | 5:M:317:U:C4 | 2.81 | 0.68 |
| 5:M:397:U:H2' | 5:M:398:U:C6 | 2.29 | 0.68 |
| 5:M:446:U:H2' | 5:M:447:U:H6 | 1.58 | 0.68 |
| 5:M:451:U:H2' | 5:M:452:U:C6 | 2.29 | 0.68 |
| 5:M:462:U:C2 | 5:M:463:U:C6 | 2.82 | 0.68 |
| 5:M:514:U:H2' | 5:M:515:U:O5' | 1.92 | 0.68 |
| 6:N:374:U:H2' | 6:N:375:U:C6 | 2.26 | 0.68 |
| 6:N:380:U:C2 | 6:N:381:U:C6 | 2.82 | 0.68 |
| 1:I:110:A:H2' | 1:I:111:A:O4' | 1.94 | 0.67 |
| 1:I:175:A:N1 | 1:I:176:A:C6 | 2.63 | 0.67 |
| 1:I:235:A:O2' | 1:I:236:A:H5' | 1.94 | 0.67 |
| 1:I:316:A:C6 | 1:I:317:A:N6 | 2.62 | 0.67 |
| 1:I:54:A:N1 | 1:I:55:A:C6 | 2.62 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:56:A:C2 | 1:I:57:A:C5 | 2.82 | 0.67 |
| 1:I:4:A:C2 | 1:I:5:A:C6 | 2.82 | 0.67 |
| 1:I:96:A:H2' | 1:I:97:A:H8 | 1.58 | 0.67 |
| 2:J:136:A:C4 | 2:J:137:A:C8 | 2.82 | 0.67 |
| 2:J:176:A:C2 | 2:J:177:A:C8 | 2.82 | 0.67 |
| 2:J:21:A:HO2' | 2:J:22:A:H5' | 1.58 | 0.67 |
| 2:J:51:A:C2' | 2:J:52:A:C8 | 2.74 | 0.67 |
| 2:J:58:A:C2 | 2:J:59:A:C8 | 2.82 | 0.67 |
| 3:K:101:A:N6 | 3:K:102:A:H62 | 1.92 | 0.67 |
| 3:K:125:A:C2' | 3:K:126:A:O5' | 2.43 | 0.67 |
| 3:K:46:A:C3' | 3:K:47:A:P | 2.82 | 0.67 |
| 4:L:425:U:H2' | 4:L:426:U:O4' | 1.94 | 0.67 |
| 4:L:463:U:H2' | 4:L:464:U:H6 | 1.57 | 0.67 |
| 4:L:638:U:O2 | 4:L:639:U:O4' | 2.12 | 0.67 |
| 4:L:722:U:C1' | 4:L:723:U:C5 | 2.77 | 0.67 |
| 4:L:742:U:H2' | 4:L:743:U:C6 | 2.29 | 0.67 |
| 4:L:782:U:C2 | 4:L:783:U:C5 | 2.83 | 0.67 |
| 4:L:793:U:C4 | 4:L:794:U:C4 | 2.82 | 0.67 |
| 4:L:821:U:HO2' | 4:L:822:U:H5' | 1.58 | 0.67 |
| 5:M:361:U:O2' | 5:M:362:U:P | 2.51 | 0.67 |
| 5:M:504:U:C2' | 5:M:505:U:C5' | 2.71 | 0.67 |
| 6:N:389:U:H2' | 6:N:390:U:H6 | 1.57 | 0.67 |
| 6:N:395:U:N3 | 6:N:396:U:C5 | 2.62 | 0.67 |
| 6:N:483:U:N3 | 6:N:484:U:C5 | 2.62 | 0.67 |
| 1:I:159:A:C2 | 1:I:160:A:C8 | 2.83 | 0.67 |
| 1:I:187:A:C6 | 1:I:188:A:N6 | 2.63 | 0.67 |
| 1:I:252:A:C2 | 1:I:253:A:N9 | 2.61 | 0.67 |
| 1:I:400:A:H2' | 1:I:401:A:C8 | 2.29 | 0.67 |
| 2:J:116:A:O2' | 2:J:117:A:P | 2.53 | 0.67 |
| 2:J:43:A:C2' | 2:J:44:A:C4' | 2.72 | 0.67 |
| 2:J:56:A:C2 | 2:J:57:A:C8 | 2.82 | 0.67 |
| 3:K:121:A:C6 | 3:K:122:A:C5 | 2.82 | 0.67 |
| 3:K:135:A:C2 | 3:K:136:A:C8 | 2.81 | 0.67 |
| 3:K:212:A:C5 | 3:K:213:A:N7 | 2.62 | 0.67 |
| 3:K:253:A:C2 | 3:K:254:A:N9 | 2.62 | 0.67 |
| 3:K:38:A:C2 | 3:K:39:A:C8 | 2.83 | 0.67 |
| 3:K:54:A:C2 | 3:K:55:A:C5 | 2.81 | 0.67 |
| 4:L:423:U:C2 | 4:L:424:U:C5 | 2.81 | 0.67 |
| 4:L:541:U:C2 | 4:L:542:U:C5 | 2.82 | 0.67 |
| 4:L:590:U:C2' | 4:L:591:U:H5' | 2.24 | 0.67 |
| 4:L:710:U:C2 | 4:L:711:U:C5 | 2.83 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:720:U:C4 | 4:L:721:U:C4 | 2.81 | 0.67 |
| 4:L:768:U:O2 | 4:L:769:U:C6 | 2.47 | 0.67 |
| 4:L:807:U:O2 | 4:L:808:U:O4' | 2.12 | 0.67 |
| 5:M:288:U:C2' | 5:M:289:U:H5' | 2.23 | 0.67 |
| 5:M:416:U:O2 | 5:M:417:U:O4' | 2.12 | 0.67 |
| 5:M:458:U:H2' | 5:M:459:U:C4' | 2.25 | 0.67 |
| 5:M:459:U:C2 | 5:M:460:U:C6 | 2.82 | 0.67 |
| 5:M:463:U:C2 | 5:M:464:U:C5 | 2.82 | 0.67 |
| 5:M:469:U:C2 | 5:M:470:U:C6 | 2.72 | 0.67 |
| 5:M:485:U:C2 | 5:M:486:U:C6 | 2.82 | 0.67 |
| 6:N:333:U:H2' | 6:N:334:U:C6 | 2.28 | 0.67 |
| 6:N:406:U:H2' | 6:N:407:U:C6 | 2.29 | 0.67 |
| 6:N:458:U:C2 | 6:N:459:U:C5 | 2.82 | 0.67 |
| 1:I:135:A:HO2' | 1:I:136:A:H5' | 1.52 | 0.67 |
| 1:I:180:A:C4 | 1:I:181:A:C8 | 2.82 | 0.67 |
| 1:I:236:A:C4 | 1:I:237:A:C8 | 2.81 | 0.67 |
| 1:I:240:A:HO2' | 1:I:241:A:H5' | 1.57 | 0.67 |
| 1:I:247:A:N6 | 1:I:248:A:H62 | 1.92 | 0.67 |
| 1:I:72:A:C2' | 1:I:73:A:C5' | 2.73 | 0.67 |
| 1:I:82:A:N6 | 1:I:83:A:C6 | 2.62 | 0.67 |
| 1:I:91:A:C2 | 1:I:92:A:C8 | 2.81 | 0.67 |
| 2:J:153:A:H2' | 2:J:154:A:O5' | 1.92 | 0.67 |
| 2:J:253:A:H2' | 2:J:254:A:H8 | 1.57 | 0.67 |
| 2:J:71:A:C6 | 2:J:72:A:C6 | 2.82 | 0.67 |
| 3:K:206:A:H2' | 3:K:207:A:O4' | 1.93 | 0.67 |
| 3:K:249:A:N3 | 3:K:250:A:C8 | 2.62 | 0.67 |
| 3:K:251:A:C6 | 3:K:252:A:N7 | 2.62 | 0.67 |
| 3:K:61:A:C6 | 3:K:62:A:N6 | 2.62 | 0.67 |
| 3:K:76:A:C2' | 3:K:77:A:C5' | 2.71 | 0.67 |
| 4:L:420:U:H2' | 4:L:421:U:H6 | 1.55 | 0.67 |
| 4:L:507:U:H2' | 4:L:508:U:O5' | 1.94 | 0.67 |
| 4:L:508:U:O4 | 4:L:509:U:O4 | 2.12 | 0.67 |
| 4:L:516:U:H2' | 4:L:517:U:H6 | 1.58 | 0.67 |
| 4:L:538:U:N3 | 4:L:539:U:C4 | 2.63 | 0.67 |
| 4:L:547:U:C6 | 4:L:548:U:H5 | 2.12 | 0.67 |
| 4:L:553:U:H2' | 4:L:554:U:H6 | 1.58 | 0.67 |
| 4:L:668:U:C2' | 4:L:669:U:H6 | 2.01 | 0.67 |
| 4:L:736:U:HO2' | 4:L:737:U:C5' | 1.94 | 0.67 |
| 4:L:745:U:O2 | 4:L:746:U:C5 | 2.48 | 0.67 |
| 4:L:747:U:H2' | 4:L:748:U:H6 | 1.59 | 0.67 |
| 4:L:768:U:H2' | 4:L:769:U:H6 | 1.59 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:786:U:C2 | 4:L:787:U:C5 | 2.83 | 0.67 |
| 4:L:812:U:H2' | 4:L:813:U:O4' | 1.94 | 0.67 |
| 5:M:396:U:H2' | 5:M:397:U:C5' | 2.24 | 0.67 |
| 5:M:428:U:C2' | 5:M:429:U:O5' | 2.41 | 0.67 |
| 5:M:487:U:N3 | 5:M:488:U:C5 | 2.62 | 0.67 |
| 5:M:501:U:N3 | 5:M:502:U:C4 | 2.62 | 0.67 |
| 5:M:503:U:H2' | 5:M:504:U:H6 | 1.59 | 0.67 |
| 6:N:413:U:N3 | 6:N:414:U:C5 | 2.62 | 0.67 |
| 1:I:212:A:C2' | 1:I:213:A:H5' | 2.23 | 0.67 |
| 1:I:363:A:H2' | 1:I:364:A:C8 | 2.30 | 0.67 |
| 1:I:60:A:C6 | 1:I:61:A:N6 | 2.63 | 0.67 |
| 2:J:128:A:C4 | 2:J:129:A:C8 | 2.83 | 0.67 |
| 2:J:165:A:C2 | 2:J:166:A:C8 | 2.83 | 0.67 |
| 2:J:219:A:C2 | 2:J:220:A:N9 | 2.63 | 0.67 |
| 2:J:87:A:C2 | 2:J:88:A:C5 | 2.82 | 0.67 |
| 3:K:197:A:H2' | 3:K:198:A:C8 | 2.29 | 0.67 |
| 3:K:254:A:C5 | 3:K:255:A:N7 | 2.62 | 0.67 |
| 3:K:45:A:C2' | 3:K:46:A:C5' | 2.72 | 0.67 |
| 3:K:92:A:H2' | 3:K:93:A:C5' | 2.25 | 0.67 |
| 3:K:94:A:H2' | 3:K:95:A:C8 | 2.28 | 0.67 |
| 4:L:506:U:C2' | 4:L:507:U:C5' | 2.72 | 0.67 |
| 4:L:627:U:O2' | 4:L:628:U:C5' | 2.38 | 0.67 |
| 4:L:742:U:H2' | 4:L:743:U:C5 | 2.29 | 0.67 |
| 4:L:764:U:C5 | 4:L:765:U:H5 | 2.13 | 0.67 |
| 4:L:812:U:H2' | 4:L:813:U:H6 | 1.60 | 0.67 |
| 6:N:437:U:H2' | 6:N:438:U:C6 | 2.29 | 0.67 |
| 1:I:13:A:O2' | 1:I:14:A:C5' | 2.42 | 0.67 |
| 1:I:197:A:N3 | 1:I:198:A:C8 | 2.62 | 0.67 |
| 1:I:225:A:C6 | 1:I:226:A:N6 | 2.63 | 0.67 |
| 1:I:249:A:N3 | 1:I:250:A:C1' | 2.58 | 0.67 |
| 1:I:269:A:C2 | 1:I:270:A:C4 | 2.81 | 0.67 |
| 2:J:220:A:N6 | 2:J:221:A:N6 | 2.42 | 0.67 |
| 2:J:55:A:C2' | 2:J:56:A:H5' | 2.24 | 0.67 |
| 2:J:66:A:H2' | 2:J:67:A:O5' | 1.95 | 0.67 |
| 3:K:100:A:C2' | 3:K:101:A:C4' | 2.72 | 0.67 |
| 3:K:124:A:C6 | 3:K:125:A:N6 | 2.62 | 0.67 |
| 3:K:138:A:C2 | 3:K:139:A:C8 | 2.83 | 0.67 |
| 3:K:141:A:N3 | 3:K:142:A:C8 | 2.63 | 0.67 |
| 3:K:160:A:C2' | 3:K:161:A:H5' | 2.24 | 0.67 |
| 3:K:178:A:C3' | 3:K:179:A:P | 2.83 | 0.67 |
| 4:L:464:U:C2' | 4:L:465:U:C5' | 2.72 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:466:U:H2' | 4:L:467:U:O5' | 1.94 | 0.67 |
| 4:L:585:U:HO2' | 4:L:586:U:H5' | 0.84 | 0.67 |
| 4:L:596:U:N3 | 4:L:597:U:C5 | 2.62 | 0.67 |
| 4:L:599:U:C2 | 4:L:600:U:C6 | 2.83 | 0.67 |
| 4:L:712:U:H2' | 4:L:713:U:H6 | 1.59 | 0.67 |
| 4:L:721:U:O2 | 4:L:722:U:C1' | 2.43 | 0.67 |
| 4:L:729:U:H2' | 4:L:730:U:C6 | 2.30 | 0.67 |
| 4:L:767:U:C2 | 4:L:768:U:H5 | 2.09 | 0.67 |
| 4:L:781:U:H2' | 4:L:782:U:H6 | 1.60 | 0.67 |
| 5:M:295:U:H2' | 5:M:296:U:C6 | 2.29 | 0.67 |
| 5:M:481:U:C4 | 5:M:482:U:O4 | 2.47 | 0.67 |
| 6:N:492:U:C2' | 6:N:493:U:H5' | 2.23 | 0.67 |
| 1:I:12:A:C4 | 1:I:13:A:C8 | 2.82 | 0.67 |
| 1:I:159:A:N3 | 1:I:160:A:C8 | 2.63 | 0.67 |
| 1:I:250:A:C5 | 1:I:251:A:C5 | 2.83 | 0.67 |
| 1:I:270:A:O2' | 1:I:271:A:C4' | 2.42 | 0.67 |
| 1:I:341:A:C4 | 1:I:342:A:C8 | 2.81 | 0.67 |
| 1:I:364:A:N3 | 1:I:365:A:C8 | 2.62 | 0.67 |
| 1:I:42:A:N3 | 1:I:43:A:C8 | 2.63 | 0.67 |
| 1:I:75:A:C2 | 1:I:76:A:C8 | 2.82 | 0.67 |
| 1:I:79:A:C2 | 1:I:80:A:C8 | 2.83 | 0.67 |
| 1:I:94:A:HO2' | 1:I:95:A:H5' | 1.59 | 0.67 |
| 2:J:18:A:H2' | 2:J:19:A:H8 | 1.60 | 0.67 |
| 2:J:205:A:N3 | 2:J:206:A:C8 | 2.62 | 0.67 |
| 2:J:223:A:C5 | 2:J:224:A:N7 | 2.63 | 0.67 |
| 2:J:230:A:C2 | 2:J:231:A:C4 | 2.83 | 0.67 |
| 3:K:131:A:H61 | 3:K:132:A:N6 | 1.91 | 0.67 |
| 3:K:179:A:HO3' | 3:K:180:A:P | 2.15 | 0.67 |
| 3:K:71:A:C4 | 3:K:72:A:C8 | 2.82 | 0.67 |
| 4:L:489:U:C4 | 4:L:490:U:C4 | 2.83 | 0.67 |
| 4:L:507:U:H2' | 4:L:508:U:O4' | 1.95 | 0.67 |
| 4:L:586:U:N3 | 4:L:587:U:C5 | 2.63 | 0.67 |
| 4:L:601:U:C2' | 4:L:602:U:H5' | 2.24 | 0.67 |
| 5:M:419:U:H2' | 5:M:420:U:O4' | 1.94 | 0.67 |
| 5:M:425:U:H2' | 5:M:426:U:O5' | 1.93 | 0.67 |
| 5:M:437:U:C4 | 5:M:438:U:C5 | 2.83 | 0.67 |
| 5:M:489:U:O2' | 5:M:490:U:C5' | 2.37 | 0.67 |
| 6:N:389:U:H2' | 6:N:390:U:C6 | 2.29 | 0.67 |
| 6:N:471:U:H2' | 6:N:472:U:H6 | 1.59 | 0.67 |
| 6:N:473:U:C4 | 6:N:474:U:C5 | 2.83 | 0.67 |
| 1:I:11:A:C6 | 1:I:12:A:N6 | 2.62 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:140:A:H2' | 1:I:141:A:C8 | 2.30 | 0.67 |
| 1:I:18:A:H2' | 1:I:19:A:H8 | 1.58 | 0.67 |
| 1:I:257:A:C2' | 1:I:258:A:O5' | 2.41 | 0.67 |
| 1:I:281:A:C6 | 1:I:282:A:C6 | 2.83 | 0.67 |
| 1:I:292:A:C2 | 1:I:293:A:C8 | 2.83 | 0.67 |
| 1:I:353:A:C2 | 1:I:354:A:C4 | 2.82 | 0.67 |
| 2:J:147:A:C2 | 2:J:148:A:N7 | 2.63 | 0.67 |
| 2:J:42:A:C4 | 2:J:43:A:C8 | 2.83 | 0.67 |
| 2:J:83:A:C2 | 2:J:84:A:N9 | 2.61 | 0.67 |
| 3:K:145:A:H2' | 3:K:146:A:H8 | 1.59 | 0.67 |
| 3:K:147:A:C2 | 3:K:148:A:N7 | 2.62 | 0.67 |
| 3:K:169:A:O2' | 3:K:170:A:H5' | 1.93 | 0.67 |
| 3:K:49:A:H2' | 3:K:50:A:H8 | 1.60 | 0.67 |
| 4:L:505:U:C2 | 4:L:506:U:C5 | 2.83 | 0.67 |
| 4:L:514:U:H2' | 4:L:515:U:H6 | 1.59 | 0.67 |
| 4:L:631:U:O2' | 4:L:632:U:C5' | 2.38 | 0.67 |
| 5:M:337:U:H2' | 5:M:338:U:O4' | 1.95 | 0.67 |
| 5:M:364:U:C2 | 5:M:365:U:C6 | 2.83 | 0.67 |
| 5:M:382:U:C2' | 5:M:383:U:C5' | 2.69 | 0.67 |
| 5:M:406:U:H2' | 5:M:407:U:C4' | 2.24 | 0.67 |
| 5:M:435:U:C2' | 5:M:436:U:O5' | 2.42 | 0.67 |
| 2:J:15:A:N6 | 5:M:539:U:O4 | 2.26 | 0.67 |
| 6:N:278:U:H2' | 6:N:279:U:H5' | 1.76 | 0.67 |
| 6:N:365:U:O2' | 6:N:366:U:C5' | 2.40 | 0.67 |
| 6:N:370:U:O2' | 6:N:371:U:H5' | 1.94 | 0.67 |
| 1:I:202:A:H2' | 1:I:203:A:O5' | 1.93 | 0.67 |
| 1:I:37:A:C2 | 1:I:38:A:C8 | 2.83 | 0.67 |
| 1:I:405:A:C5 | 1:I:406:A:N7 | 2.63 | 0.67 |
| 1:I:48:A:C4 | 1:I:49:A:C8 | 2.82 | 0.67 |
| 1:I:78:A:H2' | 1:I:79:A:H8 | 1.60 | 0.67 |
| 2:J:160:A:C4 | 2:J:161:A:C8 | 2.83 | 0.67 |
| 2:J:184:A:C2' | 2:J:185:A:C5' | 2.72 | 0.67 |
| 2:J:214:A:C2' | 2:J:215:A:O5' | 2.43 | 0.67 |
| 3:K:103:A:N3 | 3:K:104:A:C8 | 2.62 | 0.67 |
| 3:K:203:A:C2' | 3:K:204:A:H8 | 2.07 | 0.67 |
| 3:K:208:A:C6 | 3:K:209:A:N6 | 2.63 | 0.67 |
| 3:K:38:A:O2' | 3:K:39:A:P | 2.53 | 0.67 |
| 3:K:64:A:H2' | 3:K:65:A:O4' | 1.95 | 0.67 |
| 4:L:584:U:C2 | 4:L:585:U:C5 | 2.83 | 0.67 |
| 5:M:300:U:C2' | 5:M:301:U:C5' | 2.72 | 0.67 |
| 5:M:334:U:O2 | 5:M:335:U:C1' | 2.42 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:381:U:C4 | 5:M:382:U:C4 | 2.83 | 0.67 |
| 5:M:421:U:H2' | 5:M:422:U:C6 | 2.30 | 0.67 |
| 5:M:436:U:C2 | 5:M:437:U:C6 | 2.82 | 0.67 |
| 5:M:466:U:H2' | 5:M:467:U:C4' | 2.25 | 0.67 |
| 5:M:539:U:O2 | 5:M:540:U:C6 | 2.48 | 0.67 |
| 6:N:435:U:O2' | 6:N:436:U:C5' | 2.42 | 0.67 |
| 1:I:232:A:C5 | 1:I:233:A:N7 | 2.62 | 0.67 |
| 1:I:261:A:C2' | 1:I:262:A:H5' | 2.24 | 0.67 |
| 1:I:269:A:C5 | 1:I:270:A:N7 | 2.63 | 0.67 |
| 2:J:123:A:H2' | 2:J:124:A:H8 | 1.60 | 0.67 |
| 2:J:224:A:C2' | 2:J:225:A:H5' | 2.25 | 0.67 |
| 2:J:226:A:N3 | 2:J:227:A:C8 | 2.63 | 0.67 |
| 2:J:28:A:N1 | 2:J:29:A:C5 | 2.62 | 0.67 |
| 2:J:37:A:C2 | 2:J:38:A:N9 | 2.63 | 0.67 |
| 2:J:58:A:C2 | 2:J:59:A:N9 | 2.63 | 0.67 |
| 2:J:84:A:C5 | 2:J:85:A:N7 | 2.63 | 0.67 |
| 3:K:182:A:H2' | 3:K:183:A:H8 | 1.59 | 0.67 |
| 3:K:187:A:O2' | 3:K:188:A:H5' | 1.95 | 0.67 |
| 3:K:229:A:H2' | 3:K:230:A:C8 | 2.30 | 0.67 |
| 3:K:54:A:C3' | 3:K:55:A:P | 2.83 | 0.67 |
| 3:K:90:A:C2 | 3:K:91:A:C8 | 2.82 | 0.67 |
| 4:L:525:U:H2' | 4:L:526:U:H6 | 1.60 | 0.67 |
| 4:L:547:U:N1 | 4:L:548:U:C5 | 2.62 | 0.67 |
| 4:L:563:U:C2' | 4:L:564:U:C6 | 2.69 | 0.67 |
| 4:L:728:U:N3 | 4:L:729:U:C4 | 2.62 | 0.67 |
| 4:L:815:U:C2 | 4:L:816:U:C6 | 2.83 | 0.67 |
| 5:M:328:U:N3 | 5:M:329:U:C5 | 2.63 | 0.67 |
| 5:M:449:U:C2' | 5:M:450:U:O5' | 2.43 | 0.67 |
| 6:N:320:U:H2' | 6:N:321:U:O4' | 1.95 | 0.67 |
| 6:N:377:U:C2 | 6:N:378:U:C6 | 2.83 | 0.67 |
| 6:N:388:U:O2 | 6:N:389:U:C6 | 2.48 | 0.67 |
| 6:N:417:U:O2' | 6:N:418:U:C4' | 2.43 | 0.67 |
| 1:I:206:A:C2 | 1:I:207:A:C8 | 2.83 | 0.67 |
| 1:I:308:A:H2' | 1:I:309:A:H8 | 1.60 | 0.67 |
| 1:I:348:A:H2' | 1:I:349:A:C5' | 2.25 | 0.67 |
| 1:I:393:A:O2' | 1:I:394:A:H5' | 1.95 | 0.67 |
| 1:I:65:A:N3 | 1:I:66:A:C8 | 2.63 | 0.67 |
| 1:I:77:A:O2' | 1:I:78:A:H5' | 1.95 | 0.67 |
| 2:J:127:A:N3 | 2:J:128:A:C8 | 2.63 | 0.67 |
| 2:J:247:A:N3 | 2:J:248:A:C8 | 2.62 | 0.67 |
| 2:J:254:A:C4 | 2:J:255:A:C8 | 2.83 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 2:J:73:A:O2' | 2:J:74:A:H5' | 1.95 | 0.67 |
| 3:K:152:A:C4 | 3:K:153:A:N7 | 2.63 | 0.67 |
| 3:K:43:A:H2' | 3:K:44:A:C8 | 2.29 | 0.67 |
| 4:L:490:U:C2 | 4:L:491:U:C5 | 2.83 | 0.67 |
| 4:L:611:U:C2' | 4:L:612:U:H5' | 2.25 | 0.67 |
| 4:L:628:U:O2' | 4:L:629:U:H5' | 1.95 | 0.67 |
| 4:L:651:U:N3 | 4:L:652:U:C5 | 2.63 | 0.67 |
| 4:L:668:U:N3 | 4:L:669:U:C4 | 2.63 | 0.67 |
| 4:L:803:U:C2 | 4:L:804:U:C6 | 2.82 | 0.67 |
| 4:L:811:U:O2' | 4:L:812:U:C4' | 2.43 | 0.67 |
| 5:M:347:U:H2' | 5:M:348:U:O4' | 1.94 | 0.67 |
| 5:M:495:U:H2' | 5:M:496:U:C5' | 2.24 | 0.67 |
| 6:N:392:U:N3 | 6:N:393:U:C5 | 2.62 | 0.67 |
| 1:I:157:A:O2' | 1:I:158:A:C5' | 2.37 | 0.66 |
| 1:I:225:A:C4 | 1:I:226:A:N7 | 2.63 | 0.66 |
| 1:I:23:A:O2' | 1:I:24:A:H5' | 1.95 | 0.66 |
| 1:I:256:A:N6 | 1:I:257:A:H62 | 1.91 | 0.66 |
| 1:I:282:A:N3 | 1:I:283:A:N7 | 2.42 | 0.66 |
| 1:I:283:A:N1 | 1:I:284:A:C5 | 2.63 | 0.66 |
| 1:I:286:A:C6 | 1:I:287:A:C5 | 2.84 | 0.66 |
| 1:I:41:A:C2 | 1:I:42:A:N9 | 2.63 | 0.66 |
| 2:J:101:A:H61 | 2:J:102:A:N6 | 1.86 | 0.66 |
| 2:J:102:A:H2' | 2:J:103:A:O4' | 1.95 | 0.66 |
| 2:J:147:A:C2 | 2:J:148:A:C8 | 2.82 | 0.66 |
| 2:J:155:A:H2' | 2:J:156:A:H8 | 1.60 | 0.66 |
| 3:K:88:A:N1 | 3:K:89:A:C5 | 2.64 | 0.66 |
| 4:L:542:U:N3 | 4:L:543:U:C5 | 2.63 | 0.66 |
| 4:L:564:U:H2' | 4:L:565:U:H6 | 1.60 | 0.66 |
| 4:L:635:U:C2 | 4:L:636:U:C6 | 2.82 | 0.66 |
| 4:L:722:U:C4 | 4:L:723:U:O4 | 2.48 | 0.66 |
| 4:L:777:U:C4 | 4:L:778:U:C5 | 2.82 | 0.66 |
| 5:M:330:U:O2 | 5:M:331:U:C6 | 2.48 | 0.66 |
| 5:M:435:U:C2' | 5:M:436:U:H6 | 2.01 | 0.66 |
| 5:M:449:U:H2' | 5:M:450:U:H6 | 1.61 | 0.66 |
| 5:M:480:U:O2' | 5:M:481:U:O5' | 2.13 | 0.66 |
| 5:M:531:U:H2' | 5:M:532:U:O5' | 1.95 | 0.66 |
| 6:N:333:U:C2' | 6:N:334:U:H5' | 2.25 | 0.66 |
| 6:N:395:U:C2 | 6:N:396:U:C5 | 2.83 | 0.66 |
| 6:N:428:U:C2 | 6:N:429:U:C6 | 2.83 | 0.66 |
| 1:I:140:A:H2' | 1:I:141:A:H8 | 1.60 | 0.66 |
| 1:I:21:A:C4 | 1:I:22:A:N7 | 2.63 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:54:A:O2' | 1:I:55:A:P | 2.54 | 0.66 |
| 1:I:96:A:C5 | 1:I:97:A:C5 | 2.82 | 0.66 |
| 2:J:105:A:N6 | 2:J:106:A:N6 | 2.44 | 0.66 |
| 2:J:142:A:N1 | 2:J:143:A:C6 | 2.63 | 0.66 |
| 2:J:229:A:H2' | 2:J:230:A:C8 | 2.31 | 0.66 |
| 3:K:166:A:C4 | 3:K:167:A:C8 | 2.83 | 0.66 |
| 4:L:559:U:N3 | 4:L:560:U:C4 | 2.63 | 0.66 |
| 4:L:752:U:N3 | 4:L:753:U:C5 | 2.63 | 0.66 |
| 5:M:494:U:H2' | 5:M:495:U:H6 | 1.59 | 0.66 |
| 6:N:274:U:H2' | 6:N:275:U:H6 | 1.60 | 0.66 |
| 6:N:376:U:N3 | 6:N:377:U:C4 | 2.63 | 0.66 |
| 1:I:102:A:C2' | 1:I:103:A:C8 | 2.74 | 0.66 |
| 1:I:164:A:C2 | 1:I:165:A:N7 | 2.63 | 0.66 |
| 1:I:164:A:C2' | 1:I:165:A:H8 | 2.07 | 0.66 |
| 1:I:167:A:C2' | 1:I:168:A:H5' | 2.24 | 0.66 |
| 1:I:231:A:N6 | 1:I:232:A:H62 | 1.91 | 0.66 |
| 1:I:232:A:C2 | 1:I:233:A:C4 | 2.83 | 0.66 |
| 1:I:252:A:C2' | 1:I:253:A:O5' | 2.43 | 0.66 |
| 1:I:280:A:N3 | 1:I:281:A:C8 | 2.63 | 0.66 |
| 1:I:67:A:C2' | 1:I:68:A:O4' | 2.43 | 0.66 |
| 2:J:119:A:C4 | 2:J:120:A:N7 | 2.64 | 0.66 |
| 2:J:177:A:O2' | 2:J:178:A:H5' | 1.95 | 0.66 |
| 2:J:236:A:N1 | 2:J:237:A:C6 | 2.64 | 0.66 |
| 2:J:240:A:O2' | 2:J:241:A:H5' | 1.95 | 0.66 |
| 2:J:64:A:C4 | 2:J:65:A:N7 | 2.64 | 0.66 |
| 3:K:122:A:O2' | 3:K:123:A:H5' | 1.95 | 0.66 |
| 3:K:130:A:N3 | 3:K:131:A:C8 | 2.64 | 0.66 |
| 3:K:132:A:C2 | 3:K:133:A:C4 | 2.84 | 0.66 |
| 4:L:549:U:H2' | 4:L:550:U:C4' | 2.24 | 0.66 |
| 4:L:639:U:N3 | 4:L:640:U:C5 | 2.63 | 0.66 |
| 4:L:641:U:O2 | 4:L:642:U:O4' | 2.13 | 0.66 |
| 4:L:654:U:O2' | 4:L:655:U:H5' | 1.94 | 0.66 |
| 4:L:713:U:H2' | 4:L:714:U:C6 | 2.30 | 0.66 |
| 5:M:405:U:C2' | 5:M:406:U:O5' | 2.43 | 0.66 |
| 5:M:421:U:C4 | 5:M:422:U:O4 | 2.48 | 0.66 |
| 5:M:468:U:O2 | 5:M:469:U:C6 | 2.48 | 0.66 |
| 5:M:526:U:H2' | 5:M:527:U:H6 | 1.59 | 0.66 |
| 6:N:321:U:C2 | 6:N:322:U:C5 | 2.83 | 0.66 |
| 6:N:383:U:C2' | 6:N:384:U:H5' | 2.25 | 0.66 |
| 6:N:475:U:HO2' | 6:N:476:U:H5' | 1.60 | 0.66 |
| 1:I:145:A:C3' | 1:I:146:A:P | 2.82 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:163:A:C2 | 1:I:164:A:C8 | 2.84 | 0.66 |
| 1:I:264:A:C2 | 1:I:265:A:C8 | 2.83 | 0.66 |
| 1:I:26:A:H2' | 1:I:27:A:C5' | 2.24 | 0.66 |
| 2:J:157:A:O2' | 2:J:158:A:C5' | 2.40 | 0.66 |
| 2:J:203:A:N3 | 2:J:204:A:C8 | 2.64 | 0.66 |
| 2:J:204:A:O5' | 2:J:205:A:OP2 | 2.13 | 0.66 |
| 2:J:207:A:C2' | 2:J:208:A:C5' | 2.73 | 0.66 |
| 3:K:136:A:N3 | 3:K:137:A:C8 | 2.64 | 0.66 |
| 4:L:611:U:C2' | 4:L:612:U:C5' | 2.74 | 0.66 |
| 4:L:649:U:C4 | 4:L:650:U:C5 | 2.83 | 0.66 |
| 1:I:120:A:C2 | 4:L:706:U:C2 | 2.83 | 0.66 |
| 4:L:731:U:H2' | 4:L:732:U:H6 | 1.60 | 0.66 |
| 4:L:775:U:C2 | 4:L:776:U:C6 | 2.83 | 0.66 |
| 5:M:335:U:N1 | 5:M:336:U:C5 | 2.64 | 0.66 |
| 5:M:366:U:C2 | 5:M:367:U:C5 | 2.83 | 0.66 |
| 5:M:448:U:C2 | 5:M:449:U:C6 | 2.84 | 0.66 |
| 5:M:511:U:H2' | 5:M:512:U:H6 | 1.61 | 0.66 |
| 1:I:113:A:N1 | 1:I:114:A:C6 | 2.64 | 0.66 |
| 1:I:174:A:N3 | 1:I:175:A:C8 | 2.63 | 0.66 |
| 1:I:41:A:O2' | 1:I:42:A:P | 2.52 | 0.66 |
| 1:I:65:A:C2' | 1:I:66:A:C4' | 2.73 | 0.66 |
| 2:J:204:A:H61 | 2:J:205:A:N6 | 1.90 | 0.66 |
| 2:J:237:A:C2 | 2:J:238:A:N7 | 2.64 | 0.66 |
| 2:J:236:A:N1 | 2:J:237:A:C5 | 2.64 | 0.66 |
| 2:J:75:A:C2' | 2:J:76:A:C5' | 2.72 | 0.66 |
| 2:J:9:A:H2' | 2:J:10:A:H8 | 1.61 | 0.66 |
| 3:K:165:A:H2' | 3:K:166:A:C4' | 2.25 | 0.66 |
| 3:K:166:A:H2' | 3:K:167:A:C5' | 2.24 | 0.66 |
| 3:K:208:A:N6 | 3:K:209:A:N6 | 2.43 | 0.66 |
| 3:K:65:A:H61 | 3:K:66:A:N6 | 1.87 | 0.66 |
| 4:L:766:U:N3 | 4:L:767:U:C5 | 2.63 | 0.66 |
| 5:M:375:U:O2' | 5:M:376:U:H5' | 1.95 | 0.66 |
| 5:M:394:U:H2' | 5:M:395:U:H6 | 1.61 | 0.66 |
| 5:M:514:U:C2' | 5:M:515:U:C5' | 2.73 | 0.66 |
| 6:N:398:U:O2 | 6:N:399:U:C6 | 2.48 | 0.66 |
| 6:N:406:U:N3 | 6:N:407:U:C5 | 2.64 | 0.66 |
| 1:I:113:A:C2' | 1:I:114:A:H8 | 2.08 | 0.66 |
| 1:I:332:A:O2' | 1:I:333:A:H5' | 1.94 | 0.66 |
| 1:I:363:A:H2' | 1:I:364:A:H8 | 1.58 | 0.66 |
| 1:I:393:A:H2' | 1:I:394:A:O4' | 1.96 | 0.66 |
| 1:I:72:A:C6 | 1:I:73:A:N7 | 2.64 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:90:A:C4 | 1:I:91:A:C8 | 2.84 | 0.66 |
| 2:J:11:A:C3' | 2:J:12:A:H5' | 2.01 | 0.66 |
| 2:J:145:A:C4 | 2:J:146:A:C8 | 2.84 | 0.66 |
| 4:L:513:U:C2' | 4:L:514:U:C5' | 2.72 | 0.66 |
| 4:L:521:U:C2' | 4:L:522:U:C5' | 2.73 | 0.66 |
| 4:L:684:U:O4 | 4:L:685:U:O4 | 2.12 | 0.66 |
| 4:L:801:U:O2' | 4:L:802:U:H5' | 1.95 | 0.66 |
| 5:M:324:U:C2 | 5:M:325:U:C6 | 2.83 | 0.66 |
| 5:M:347:U:O2 | 5:M:348:U:C6 | 2.48 | 0.66 |
| 6:N:321:U:O4 | 6:N:322:U:O4 | 2.13 | 0.66 |
| 6:N:431:U:H2' | 6:N:432:U:O4' | 1.96 | 0.66 |
| 1:I:112:A:C2' | 1:I:113:A:O4' | 2.44 | 0.66 |
| 1:I:131:A:C6 | 1:I:132:A:C5 | 2.84 | 0.66 |
| 1:I:316:A:C5 | 1:I:317:A:N7 | 2.63 | 0.66 |
| 1:I:326:A:C2' | 1:I:327:A:C5' | 2.74 | 0.66 |
| 2:J:105:A:H2' | 2:J:106:A:C8 | 2.30 | 0.66 |
| 2:J:108:A:C4 | 2:J:109:A:C8 | 2.83 | 0.66 |
| 2:J:192:A:C2 | 2:J:193:A:N9 | 2.63 | 0.66 |
| 2:J:214:A:H2' | 2:J:215:A:C5' | 2.25 | 0.66 |
| 2:J:271:A:C3' | 2:J:272:A:P | 2.84 | 0.66 |
| 3:K:106:A:C2' | 3:K:107:A:O4' | 2.43 | 0.66 |
| 3:K:127:A:C2' | 3:K:128:A:H5' | 2.26 | 0.66 |
| 3:K:171:A:C2 | 3:K:172:A:C8 | 2.83 | 0.66 |
| 3:K:217:A:C6 | 3:K:218:A:N6 | 2.64 | 0.66 |
| 4:L:424:U:H2' | 4:L:425:U:H6 | 1.61 | 0.66 |
| 4:L:516:U:C2 | 4:L:517:U:C6 | 2.84 | 0.66 |
| 4:L:579:U:C2 | 4:L:580:U:C5 | 2.83 | 0.66 |
| 4:L:638:U:C2' | 4:L:639:U:C4' | 2.73 | 0.66 |
| 4:L:727:U:O2' | 4:L:728:U:C5' | 2.43 | 0.66 |
| 4:L:749:U:C2' | 4:L:750:U:O5' | 2.43 | 0.66 |
| 4:L:750:U:C2 | 4:L:751:U:C4 | 2.83 | 0.66 |
| 4:L:778:U:C2' | 4:L:779:U:H5' | 2.25 | 0.66 |
| 5:M:328:U:O2 | 5:M:329:U:C5 | 2.49 | 0.66 |
| 5:M:378:U:H2' | 5:M:379:U:H6 | 1.61 | 0.66 |
| 5:M:451:U:C4 | 5:M:452:U:C4 | 2.83 | 0.66 |
| 6:N:274:U:C2' | 6:N:275:U:C5' | 2.73 | 0.66 |
| 6:N:321:U:N3 | 6:N:322:U:C4 | 2.64 | 0.66 |
| 6:N:383:U:O2' | 6:N:384:U:C5' | 2.37 | 0.66 |
| 6:N:384:U:C2 | 6:N:385:U:C6 | 2.83 | 0.66 |
| 6:N:388:U:C2 | 6:N:389:U:C5 | 2.84 | 0.66 |
| 6:N:413:U:C2 | 6:N:414:U:C5 | 2.84 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:10:A:C2 | 1:I:11:A:C8 | 2.83 | 0.66 |
| 1:I:109:A:C4 | 1:I:110:A:C8 | 2.84 | 0.66 |
| 1:I:164:A:O2' | 1:I:165:A:C5' | 2.44 | 0.66 |
| 1:I:19:A:C4 | 1:I:20:A:C8 | 2.84 | 0.66 |
| 1:I:206:A:O2' | 1:I:207:A:P | 2.54 | 0.66 |
| 1:I:261:A:C6 | 1:I:262:A:C5 | 2.84 | 0.66 |
| 1:I:286:A:H2' | 1:I:287:A:O4' | 1.95 | 0.66 |
| 1:I:291:A:H2' | 1:I:292:A:C5' | 2.26 | 0.66 |
| 1:I:310:A:C4 | 1:I:311:A:C8 | 2.84 | 0.66 |
| 1:I:66:A:C2 | 1:I:67:A:C4 | 2.84 | 0.66 |
| 2:J:159:A:C6 | 2:J:160:A:C6 | 2.83 | 0.66 |
| 2:J:175:A:O2' | 2:J:176:A:H5' | 1.96 | 0.66 |
| 2:J:70:A:C4 | 2:J:71:A:C8 | 2.84 | 0.66 |
| 3:K:112:A:H61 | 3:K:113:A:N6 | 1.90 | 0.66 |
| 3:K:119:A:N3 | 3:K:120:A:C1' | 2.59 | 0.66 |
| 3:K:204:A:C2' | 3:K:205:A:C8 | 2.77 | 0.66 |
| 3:K:87:A:C2 | 3:K:88:A:C8 | 2.84 | 0.66 |
| 4:L:516:U:H2' | 4:L:517:U:C6 | 2.31 | 0.66 |
| 4:L:672:U:C4 | 4:L:673:U:O4 | 2.48 | 0.66 |
| 4:L:677:U:C2' | 4:L:678:U:C5' | 2.73 | 0.66 |
| 4:L:682:U:O2' | 4:L:683:U:C4' | 2.44 | 0.66 |
| 4:L:684:U:H2' | 4:L:685:U:H6 | 1.61 | 0.66 |
| 4:L:689:U:O2' | 4:L:690:U:C5' | 2.43 | 0.66 |
| 4:L:719:U:O2 | 4:L:720:U:C5 | 2.48 | 0.66 |
| 4:L:749:U:C2 | 4:L:750:U:C6 | 2.83 | 0.66 |
| 5:M:329:U:C2 | 5:M:330:U:C5 | 2.83 | 0.66 |
| 5:M:521:U:H2' | 5:M:522:U:H6 | 1.61 | 0.66 |
| 5:M:528:U:N3 | 5:M:529:U:C5 | 2.64 | 0.66 |
| 6:N:278:U:H2' | 6:N:279:U:C5' | 2.26 | 0.66 |
| 6:N:377:U:H2' | 6:N:378:U:C6 | 2.26 | 0.66 |
| 6:N:383:U:H2' | 6:N:384:U:C6 | 2.31 | 0.66 |
| 6:N:421:U:N3 | 6:N:422:U:C5 | 2.64 | 0.66 |
| 6:N:422:U:N3 | 6:N:423:U:C5 | 2.63 | 0.66 |
| 6:N:434:U:C2' | 6:N:435:U:H5' | 2.25 | 0.66 |
| 6:N:476:U:H2' | 6:N:477:U:C5' | 2.26 | 0.66 |
| 1:I:132:A:C2' | 1:I:133:A:C4' | 2.73 | 0.66 |
| 1:I:12:A:N3 | 1:I:13:A:C8 | 2.64 | 0.66 |
| 1:I:172:A:C2' | 1:I:173:A:H5' | 2.23 | 0.66 |
| 1:I:175:A:C2 | 1:I:176:A:C6 | 2.84 | 0.66 |
| 1:I:217:A:O2' | 1:I:218:A:H5' | 1.96 | 0.66 |
| 1:I:226:A:N1 | 1:I:227:A:C5 | 2.64 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:240:A:C4 | 1:I:241:A:N7 | 2.64 | 0.66 |
| 1:I:262:A:C2 | 1:I:263:A:C4 | 2.84 | 0.66 |
| 1:I:266:A:N3 | 1:I:267:A:N9 | 2.44 | 0.66 |
| 1:I:280:A:N1 | 1:I:281:A:N6 | 2.42 | 0.66 |
| 1:I:282:A:C2 | 1:I:283:A:C8 | 2.84 | 0.66 |
| 1:I:304:A:C2 | 1:I:305:A:C8 | 2.84 | 0.66 |
| 1:I:30:A:N3 | 1:I:31:A:C8 | 2.63 | 0.66 |
| 1:I:386:A:C4 | 1:I:387:A:N7 | 2.63 | 0.66 |
| 2:J:161:A:C2' | 2:J:162:A:O5' | 2.42 | 0.66 |
| 3:K:132:A:C2 | 3:K:133:A:N9 | 2.64 | 0.66 |
| 3:K:139:A:O2' | 3:K:140:A:C5' | 2.43 | 0.66 |
| 4:L:420:U:C2 | 4:L:421:U:C5 | 2.83 | 0.66 |
| 4:L:496:U:C2 | 4:L:497:U:C5 | 2.84 | 0.66 |
| 4:L:506:U:H2' | 4:L:507:U:H6 | 1.60 | 0.66 |
| 4:L:532:U:C2 | 4:L:533:U:C6 | 2.84 | 0.66 |
| 4:L:721:U:H2' | 4:L:722:U:C6 | 2.29 | 0.66 |
| 4:L:755:U:H2' | 4:L:756:U:H6 | 1.61 | 0.66 |
| 4:L:755:U:N3 | 4:L:756:U:C5 | 2.63 | 0.66 |
| 4:L:767:U:N3 | 4:L:768:U:C4 | 2.63 | 0.66 |
| 4:L:769:U:O2 | 4:L:770:U:C6 | 2.49 | 0.66 |
| 5:M:395:U:H2' | 5:M:396:U:H6 | 1.61 | 0.66 |
| 5:M:454:U:C5 | 5:M:455:U:C5 | 2.84 | 0.66 |
| 5:M:519:U:O2' | 5:M:520:U:H5' | 1.95 | 0.66 |
| 6:N:391:U:O2' | 6:N:392:U:H5' | 1.94 | 0.66 |
| 6:N:435:U:O2 | 6:N:436:U:C6 | 2.49 | 0.66 |
| 6:N:486:U:C2' | 6:N:487:U:H6 | 2.09 | 0.66 |
| 1:I:113:A:C6 | 1:I:114:A:C6 | 2.84 | 0.66 |
| 1:I:143:A:C6 | 1:I:144:A:N6 | 2.64 | 0.66 |
| 1:I:405:A:C6 | 1:I:406:A:C6 | 2.84 | 0.66 |
| 1:I:55:A:C2' | 1:I:56:A:O5' | 2.43 | 0.66 |
| 1:I:66:A:C2 | 1:I:67:A:C5 | 2.84 | 0.66 |
| 2:J:119:A:C6 | 2:J:120:A:C6 | 2.84 | 0.66 |
| 2:J:166:A:C4 | 2:J:167:A:C8 | 2.84 | 0.66 |
| 2:J:23:A:C2 | 2:J:24:A:C8 | 2.84 | 0.66 |
| 2:J:93:A:H2' | 2:J:94:A:O4' | 1.96 | 0.66 |
| 3:K:80:A:H2' | 3:K:81:A:O4' | 1.96 | 0.66 |
| 4:L:449:U:H2' | 4:L:450:U:H6 | 1.61 | 0.66 |
| 4:L:572:U:O2 | 4:L:573:U:C6 | 2.49 | 0.66 |
| 4:L:636:U:H2' | 4:L:637:U:C6 | 2.31 | 0.66 |
| 4:L:647:U:H2' | 4:L:648:U:C6 | 2.31 | 0.66 |
| 4:L:696:U:H2' | 4:L:697:U:H6 | 1.60 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:757:U:O4 | 4:L:758:U:O4 | 2.14 | 0.66 |
| 5:M:290:U:H2' | 5:M:291:U:O4' | 1.95 | 0.66 |
| 5:M:308:U:C3' | 5:M:309:U:P | 2.82 | 0.66 |
| 2:J:224:A:N6 | 5:M:330:U:O4 | 2.29 | 0.66 |
| 5:M:484:U:H2' | 5:M:485:U:H6 | 1.61 | 0.66 |
| 5:M:491:U:C2' | 5:M:492:U:H5' | 2.26 | 0.66 |
| 6:N:280:U:H2' | 6:N:281:U:O5' | 1.95 | 0.66 |
| 6:N:427:U:N3 | 6:N:428:U:C5 | 2.64 | 0.66 |
| 1:I:231:A:C4 | 1:I:232:A:N7 | 2.62 | 0.65 |
| 1:I:257:A:N3 | 1:I:258:A:C8 | 2.63 | 0.65 |
| 1:I:63:A:C5 | 1:I:64:A:N7 | 2.64 | 0.65 |
| 1:I:86:A:C6 | 1:I:87:A:N6 | 2.61 | 0.65 |
| 1:I:9:A:N3 | 1:I:10:A:C8 | 2.64 | 0.65 |
| 2:J:192:A:C2' | 2:J:193:A:C5' | 2.73 | 0.65 |
| 2:J:48:A:C2' | 2:J:49:A:C5' | 2.73 | 0.65 |
| 3:K:105:A:N6 | 3:K:106:A:N6 | 2.43 | 0.65 |
| 3:K:154:A:H2' | 3:K:155:A:H8 | 1.61 | 0.65 |
| 3:K:207:A:H2' | 3:K:208:A:C8 | 2.30 | 0.65 |
| 3:K:73:A:H2' | 3:K:74:A:O4' | 1.96 | 0.65 |
| 4:L:575:U:H2' | 4:L:576:U:H6 | 1.60 | 0.65 |
| 4:L:613:U:H2' | 4:L:614:U:H6 | 1.61 | 0.65 |
| 4:L:622:U:C2' | 4:L:623:U:O5' | 2.40 | 0.65 |
| 4:L:724:U:H2' | 4:L:725:U:C4' | 2.26 | 0.65 |
| 4:L:753:U:C2 | 4:L:754:U:C5 | 2.84 | 0.65 |
| 4:L:764:U:C5 | 4:L:765:U:C5 | 2.84 | 0.65 |
| 5:M:324:U:N3 | 5:M:325:U:C5 | 2.64 | 0.65 |
| 5:M:451:U:H2' | 5:M:452:U:H6 | 1.61 | 0.65 |
| 5:M:457:U:N3 | 5:M:458:U:C5 | 2.64 | 0.65 |
| 5:M:481:U:N3 | 5:M:482:U:C4 | 2.64 | 0.65 |
| 5:M:489:U:C2 | 5:M:490:U:C5 | 2.83 | 0.65 |
| 6:N:335:U:C2 | 6:N:336:U:C5 | 2.84 | 0.65 |
| 6:N:403:U:H2' | 6:N:404:U:H6 | 1.62 | 0.65 |
| 6:N:419:U:H2' | 6:N:420:U:H6 | 1.61 | 0.65 |
| 6:N:450:U:O2' | 6:N:451:U:O4' | 2.12 | 0.65 |
| 6:N:501:U:C2' | 6:N:502:U:C5' | 2.74 | 0.65 |
| 1:I:135:A:C2 | 1:I:136:A:C4 | 2.84 | 0.65 |
| 1:I:191:A:C4 | 1:I:192:A:C8 | 2.84 | 0.65 |
| 1:I:253:A:C6 | 1:I:254:A:C6 | 2.83 | 0.65 |
| 1:I:286:A:C6 | 1:I:287:A:N6 | 2.64 | 0.65 |
| 1:I:288:A:C2' | 1:I:289:A:H5' | 2.26 | 0.65 |
| 1:I:317:A:C2 | 1:I:318:A:C4 | 2.84 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:406:A:O2' | 1:I:407:A:H5' | 1.95 | 0.65 |
| 1:I:42:A:C4 | 1:I:43:A:C8 | 2.85 | 0.65 |
| 2:J:99:A:C2 | 2:J:100:A:C4 | 2.84 | 0.65 |
| 2:J:102:A:N6 | 2:J:103:A:N6 | 2.44 | 0.65 |
| 2:J:236:A:C4 | 2:J:237:A:N7 | 2.63 | 0.65 |
| 2:J:75:A:HO2' | 2:J:76:A:H5' | 1.61 | 0.65 |
| 3:K:113:A:H2' | 3:K:114:A:C8 | 2.32 | 0.65 |
| 3:K:128:A:H2' | 3:K:129:A:H8 | 1.60 | 0.65 |
| 3:K:155:A:N6 | 3:K:156:A:H62 | 1.94 | 0.65 |
| 4:L:425:U:C2' | 4:L:426:U:C5' | 2.74 | 0.65 |
| 4:L:430:U:H2' | 4:L:431:U:C6 | 2.31 | 0.65 |
| 4:L:451:U:C4 | 4:L:452:U:O4 | 2.49 | 0.65 |
| 4:L:507:U:C2 | 4:L:508:U:C6 | 2.84 | 0.65 |
| 4:L:593:U:H2' | 4:L:594:U:C6 | 2.29 | 0.65 |
| 4:L:711:U:O2' | 4:L:712:U:H5' | 1.94 | 0.65 |
| 4:L:723:U:C2' | 4:L:724:U:H6 | 2.10 | 0.65 |
| 4:L:724:U:C2 | 4:L:725:U:C6 | 2.83 | 0.65 |
| 4:L:753:U:H2' | 4:L:754:U:C6 | 2.30 | 0.65 |
| 4:L:764:U:H2' | 4:L:765:U:C6 | 2.31 | 0.65 |
| 5:M:336:U:N3 | 5:M:337:U:C6 | 2.63 | 0.65 |
| 5:M:370:U:N3 | 5:M:371:U:O4 | 2.29 | 0.65 |
| 5:M:430:U:C4 | 5:M:431:U:C4 | 2.83 | 0.65 |
| 5:M:462:U:C2' | 5:M:463:U:H5' | 2.26 | 0.65 |
| 5:M:498:U:O2' | 5:M:499:U:P | 2.54 | 0.65 |
| 5:M:534:U:H2' | 5:M:535:U:H6 | 1.59 | 0.65 |
| 6:N:374:U:C2' | 6:N:375:U:H5' | 2.25 | 0.65 |
| 6:N:442:U:O2 | 6:N:443:U:C6 | 2.50 | 0.65 |
| 6:N:482:U:N3 | 6:N:483:U:C5 | 2.64 | 0.65 |
| 1:I:132:A:H2' | 1:I:133:A:C4' | 2.26 | 0.65 |
| 1:I:136:A:C4 | 1:I:137:A:C8 | 2.84 | 0.65 |
| 1:I:155:A:O2' | 1:I:156:A:H5' | 1.96 | 0.65 |
| 1:I:186:A:H2 | 1:I:187:A:C4 | 2.14 | 0.65 |
| 1:I:196:A:C2 | 1:I:197:A:C8 | 2.84 | 0.65 |
| 1:I:273:A:C2' | 1:I:274:A:O4' | 2.38 | 0.65 |
| 1:I:375:A:C2 | 1:I:376:A:N7 | 2.65 | 0.65 |
| 1:I:45:A:C2 | 1:I:46:A:C5 | 2.84 | 0.65 |
| 1:I:94:A:N3 | 1:I:95:A:C8 | 2.64 | 0.65 |
| 2:J:205:A:N3 | 2:J:206:A:N9 | 2.44 | 0.65 |
| 3:K:114:A:H2 | 3:K:115:A:C4 | 2.12 | 0.65 |
| 3:K:89:A:N1 | 3:K:90:A:C6 | 2.64 | 0.65 |
| 4:L:504:U:H2' | 4:L:505:U:C5' | 2.27 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:509:U:H2' | 4:L:510:U:O4' | 1.96 | 0.65 |
| 4:L:561:U:C2 | 4:L:562:U:C6 | 2.85 | 0.65 |
| 4:L:563:U:C2 | 4:L:564:U:C6 | 2.84 | 0.65 |
| 4:L:670:U:H2' | 4:L:671:U:H6 | 1.62 | 0.65 |
| 4:L:751:U:C2' | 4:L:752:U:O5' | 2.40 | 0.65 |
| 4:L:759:U:O2' | 4:L:760:U:C4' | 2.44 | 0.65 |
| 4:L:760:U:C2 | 4:L:761:U:C5 | 2.84 | 0.65 |
| 5:M:330:U:C2 | 5:M:331:U:C5 | 2.84 | 0.65 |
| 5:M:387:U:C2 | 5:M:388:U:C4 | 2.84 | 0.65 |
| 5:M:417:U:H2' | 5:M:418:U:H6 | 1.61 | 0.65 |
| 5:M:424:U:C2 | 5:M:425:U:C5 | 2.84 | 0.65 |
| 5:M:434:U:C2' | 5:M:435:U:H5' | 2.26 | 0.65 |
| 5:M:511:U:C4 | 5:M:512:U:C5 | 2.83 | 0.65 |
| 5:M:513:U:C2' | 5:M:514:U:H5' | 2.26 | 0.65 |
| 6:N:294:U:O2' | 6:N:295:U:C5' | 2.41 | 0.65 |
| 1:I:102:A:C2' | 1:I:103:A:H8 | 2.03 | 0.65 |
| 1:I:103:A:N3 | 1:I:104:A:N9 | 2.44 | 0.65 |
| 1:I:109:A:N3 | 1:I:110:A:C4 | 2.61 | 0.65 |
| 1:I:228:A:C4 | 1:I:229:A:C8 | 2.84 | 0.65 |
| 1:I:231:A:N1 | 1:I:232:A:C5 | 2.65 | 0.65 |
| 1:I:260:A:N3 | 1:I:261:A:C8 | 2.64 | 0.65 |
| 1:I:269:A:C6 | 1:I:270:A:C5 | 2.84 | 0.65 |
| 1:I:287:A:C2 | 1:I:288:A:C4 | 2.84 | 0.65 |
| 1:I:338:A:C5 | 1:I:339:A:N7 | 2.64 | 0.65 |
| 1:I:388:A:O2' | 1:I:389:A:C4' | 2.45 | 0.65 |
| 1:I:82:A:C6 | 1:I:83:A:C6 | 2.84 | 0.65 |
| 2:J:131:A:C6 | 2:J:132:A:N6 | 2.64 | 0.65 |
| 2:J:160:A:HO2' | 2:J:161:A:C4' | 2.07 | 0.65 |
| 2:J:198:A:C2' | 2:J:199:A:H5' | 2.25 | 0.65 |
| 2:J:25:A:C2 | 2:J:26:A:N7 | 2.64 | 0.65 |
| 2:J:27:A:C2 | 2:J:28:A:C5 | 2.84 | 0.65 |
| 2:J:71:A:H2' | 2:J:72:A:C8 | 2.31 | 0.65 |
| 2:J:97:A:O2' | 2:J:98:A:O5' | 2.13 | 0.65 |
| 4:L:478:U:C2' | 4:L:479:U:C5' | 2.74 | 0.65 |
| 4:L:583:U:C4 | 4:L:584:U:C4 | 2.84 | 0.65 |
| 4:L:649:U:H2' | 4:L:650:U:H6 | 1.60 | 0.65 |
| 4:L:658:U:C2' | 4:L:659:U:C5' | 2.75 | 0.65 |
| 4:L:706:U:C2' | 4:L:707:U:H5' | 2.26 | 0.65 |
| 4:L:741:U:C2 | 4:L:742:U:C5 | 2.83 | 0.65 |
| 5:M:302:U:O2' | 5:M:303:U:H5' | 1.97 | 0.65 |
| 5:M:318:U:C2 | 5:M:319:U:C6 | 2.85 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:393:U:C2 | 6:N:394:U:C5 | 2.84 | 0.65 |
| 6:N:406:U:C2 | 6:N:407:U:C5 | 2.85 | 0.65 |
| 6:N:476:U:C2 | 6:N:477:U:C6 | 2.84 | 0.65 |
| 1:I:122:A:C2 | 1:I:123:A:C4 | 2.84 | 0.65 |
| 1:I:133:A:C2 | 1:I:134:A:N9 | 2.65 | 0.65 |
| 1:I:150:A:HO2' | 1:I:151:A:H5' | 1.60 | 0.65 |
| 1:I:20:A:C4 | 1:I:21:A:C8 | 2.85 | 0.65 |
| 1:I:306:A:H2' | 1:I:307:A:C5' | 2.27 | 0.65 |
| 1:I:314:A:H2' | 1:I:315:A:H8 | 1.60 | 0.65 |
| 1:I:337:A:HO2' | 1:I:338:A:C5' | 1.87 | 0.65 |
| 1:I:387:A:C2' | 1:I:388:A:H5' | 2.26 | 0.65 |
| 1:I:38:A:C2 | 1:I:39:A:C8 | 2.84 | 0.65 |
| 1:I:46:A:H2' | 1:I:47:A:H8 | 1.62 | 0.65 |
| 1:I:79:A:H2' | 1:I:80:A:C5' | 2.25 | 0.65 |
| 1:I:81:A:C2' | 1:I:82:A:O5' | 2.44 | 0.65 |
| 2:J:102:A:C5 | 2:J:103:A:N7 | 2.64 | 0.65 |
| 2:J:152:A:C2' | 2:J:153:A:H5' | 2.26 | 0.65 |
| 2:J:181:A:C2 | 2:J:182:A:N7 | 2.65 | 0.65 |
| 2:J:182:A:O5' | 2:J:183:A:OP2 | 2.13 | 0.65 |
| 2:J:39:A:O2' | 2:J:40:A:C5' | 2.36 | 0.65 |
| 3:K:204:A:C2' | 3:K:205:A:H8 | 2.10 | 0.65 |
| 3:K:4:A:H2' | 3:K:5:A:H8 | 1.61 | 0.65 |
| 4:L:477:U:H2' | 4:L:478:U:C4' | 2.27 | 0.65 |
| 4:L:487:U:C2' | 4:L:488:U:O5' | 2.45 | 0.65 |
| 4:L:521:U:H2' | 4:L:522:U:C5' | 2.26 | 0.65 |
| 4:L:583:U:C4 | 4:L:584:U:O4 | 2.50 | 0.65 |
| 4:L:673:U:H2' | 4:L:674:U:O5' | 1.96 | 0.65 |
| 4:L:697:U:H2' | 4:L:698:U:H6 | 1.61 | 0.65 |
| 4:L:715:U:H2' | 4:L:716:U:C5 | 2.29 | 0.65 |
| 4:L:729:U:H2' | 4:L:730:U:H6 | 1.59 | 0.65 |
| 4:L:793:U:C2 | 4:L:794:U:C6 | 2.84 | 0.65 |
| 5:M:360:U:O2 | 5:M:361:U:C6 | 2.50 | 0.65 |
| 5:M:376:U:C2 | 5:M:377:U:C6 | 2.84 | 0.65 |
| 5:M:377:U:C2 | 5:M:378:U:C5 | 2.84 | 0.65 |
| 5:M:419:U:O2' | 5:M:420:U:C4' | 2.44 | 0.65 |
| 5:M:469:U:H2' | 5:M:470:U:C5 | 2.31 | 0.65 |
| 6:N:420:U:H2' | 6:N:421:U:O5' | 1.96 | 0.65 |
| 6:N:473:U:C2 | 6:N:474:U:C6 | 2.84 | 0.65 |
| 6:N:512:U:C2 | 6:N:513:U:C5 | 2.85 | 0.65 |
| 1:I:106:A:N3 | 1:I:107:A:N7 | 2.44 | 0.65 |
| 1:I:261:A:C6 | 1:I:262:A:C6 | 2.84 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:329:A:N6 | 1:I:330:A:N6 | 2.44 | 0.65 |
| 1:I:59:A:N3 | 1:I:60:A:C8 | 2.65 | 0.65 |
| 1:I:66:A:H2' | 1:I:67:A:C5' | 2.25 | 0.65 |
| 2:J:124:A:C2' | 2:J:125:A:O5' | 2.44 | 0.65 |
| 2:J:233:A:C2' | 2:J:234:A:C5' | 2.74 | 0.65 |
| 2:J:69:A:C2' | 2:J:70:A:O4' | 2.42 | 0.65 |
| 4:L:763:U:C2' | 4:L:764:U:C6 | 2.73 | 0.65 |
| 5:M:298:U:C2 | 5:M:299:U:C6 | 2.84 | 0.65 |
| 5:M:436:U:H2' | 5:M:437:U:C6 | 2.31 | 0.65 |
| 5:M:494:U:C2 | 5:M:495:U:C5 | 2.84 | 0.65 |
| 6:N:451:U:C2 | 6:N:452:U:C6 | 2.85 | 0.65 |
| 6:N:451:U:H2' | 6:N:452:U:C6 | 2.32 | 0.65 |
| 1:I:107:A:C6 | 1:I:108:A:C5 | 2.83 | 0.65 |
| 1:I:10:A:O2' | 1:I:11:A:C5' | 2.44 | 0.65 |
| 1:I:131:A:N6 | 1:I:132:A:H61 | 1.89 | 0.65 |
| 1:I:142:A:H2' | 1:I:143:A:C8 | 2.32 | 0.65 |
| 1:I:232:A:C6 | 1:I:233:A:C5 | 2.84 | 0.65 |
| 1:I:251:A:O2' | 1:I:252:A:H5' | 1.95 | 0.65 |
| 1:I:327:A:C2 | 1:I:328:A:N7 | 2.65 | 0.65 |
| 1:I:373:A:H61 | 1:I:374:A:N6 | 1.87 | 0.65 |
| 1:I:48:A:O2' | 1:I:49:A:C5' | 2.34 | 0.65 |
| 2:J:160:A:H2' | 2:J:161:A:C8 | 2.31 | 0.65 |
| 2:J:181:A:C2 | 2:J:182:A:C8 | 2.85 | 0.65 |
| 2:J:28:A:H61 | 2:J:29:A:N6 | 1.95 | 0.65 |
| 2:J:50:A:H2' | 2:J:51:A:H8 | 1.62 | 0.65 |
| 2:J:81:A:O2' | 2:J:82:A:C5' | 2.35 | 0.65 |
| 3:K:197:A:H2' | 3:K:198:A:H8 | 1.60 | 0.65 |
| 3:K:215:A:H2' | 3:K:216:A:C8 | 2.32 | 0.65 |
| 3:K:70:A:O2' | 3:K:71:A:H5' | 1.96 | 0.65 |
| 4:L:599:U:C2' | 4:L:600:U:H6 | 2.08 | 0.65 |
| 4:L:661:U:O2' | 4:L:662:U:O5' | 2.15 | 0.65 |
| 4:L:696:U:H2' | 4:L:697:U:C6 | 2.32 | 0.65 |
| 4:L:723:U:H2' | 4:L:724:U:C1' | 2.25 | 0.65 |
| 5:M:332:U:N3 | 5:M:333:U:C5 | 2.65 | 0.65 |
| 5:M:392:U:HO2' | 5:M:393:U:C4' | 2.08 | 0.65 |
| 5:M:410:U:N1 | 5:M:411:U:C5 | 2.65 | 0.65 |
| 5:M:540:U:N3 | 5:M:541:U:C5 | 2.64 | 0.65 |
| 6:N:424:U:C2' | 6:N:425:U:O4' | 2.44 | 0.65 |
| 6:N:449:U:H2' | 6:N:450:U:C5' | 2.27 | 0.65 |
| 6:N:489:U:H2' | 6:N:490:U:C6 | 2.32 | 0.65 |
| 1:I:18:A:C5 | 1:I:19:A:N7 | 2.65 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:239:A:H2' | 1:I:240:A:H8 | 1.62 | 0.65 |
| 1:I:260:A:C2 | 1:I:261:A:C4 | 2.85 | 0.65 |
| 1:I:295:A:C2' | 1:I:296:A:H5' | 2.26 | 0.65 |
| 1:I:314:A:C2' | 1:I:315:A:H5' | 2.27 | 0.65 |
| 1:I:60:A:H2' | 1:I:61:A:H8 | 1.62 | 0.65 |
| 1:I:66:A:N6 | 1:I:67:A:N6 | 2.44 | 0.65 |
| 1:I:90:A:H2' | 1:I:91:A:H8 | 1.61 | 0.65 |
| 2:J:151:A:C2' | 2:J:152:A:H5' | 2.27 | 0.65 |
| 2:J:150:A:O2' | 2:J:151:A:H5' | 1.97 | 0.65 |
| 2:J:68:A:C5 | 2:J:69:A:N7 | 2.65 | 0.65 |
| 3:K:120:A:N6 | 3:K:121:A:H62 | 1.94 | 0.65 |
| 3:K:204:A:C4 | 3:K:205:A:N7 | 2.65 | 0.65 |
| 4:L:516:U:O2' | 4:L:517:U:H5' | 1.97 | 0.65 |
| 4:L:530:U:C2' | 4:L:531:U:H5' | 2.27 | 0.65 |
| 4:L:605:U:C2' | 4:L:606:U:H5' | 2.27 | 0.65 |
| 4:L:722:U:C1' | 4:L:723:U:H5 | 2.09 | 0.65 |
| 4:L:754:U:C2 | 4:L:755:U:C5 | 2.85 | 0.65 |
| 4:L:764:U:H2' | 4:L:765:U:H6 | 1.59 | 0.65 |
| 4:L:802:U:H2' | 4:L:803:U:C6 | 2.30 | 0.65 |
| 5:M:288:U:N3 | 5:M:289:U:C5 | 2.65 | 0.65 |
| 5:M:337:U:C4 | 5:M:338:U:C5 | 2.84 | 0.65 |
| 5:M:350:U:HO2' | 5:M:351:U:C5' | 1.76 | 0.65 |
| 5:M:364:U:HO2' | 5:M:365:U:H5' | 1.57 | 0.65 |
| 5:M:418:U:C4 | 5:M:419:U:C4 | 2.85 | 0.65 |
| 5:M:510:U:C2' | 5:M:511:U:C6 | 2.69 | 0.65 |
| 6:N:318:U:C2 | 6:N:319:U:C5 | 2.84 | 0.65 |
| 6:N:323:U:C2' | 6:N:324:U:C5' | 2.75 | 0.65 |
| 6:N:368:U:O2' | 6:N:369:U:C5' | 2.36 | 0.65 |
| 6:N:387:U:H2' | 6:N:388:U:C6 | 2.32 | 0.65 |
| 1:I:136:A:N3 | 1:I:137:A:C8 | 2.65 | 0.65 |
| 1:I:153:A:H2' | 1:I:154:A:C8 | 2.31 | 0.65 |
| 1:I:198:A:N3 | 1:I:199:A:C8 | 2.65 | 0.65 |
| 1:I:237:A:C2 | 1:I:238:A:C4 | 2.85 | 0.65 |
| 1:I:283:A:H2' | 1:I:284:A:C8 | 2.31 | 0.65 |
| 1:I:31:A:N3 | 1:I:32:A:N7 | 2.44 | 0.65 |
| 1:I:324:A:C2 | 1:I:325:A:C5 | 2.85 | 0.65 |
| 1:I:377:A:O2' | 1:I:378:A:H5' | 1.97 | 0.65 |
| 1:I:53:A:O2' | 1:I:54:A:C5' | 2.45 | 0.65 |
| 2:J:160:A:H2' | 2:J:161:A:C5' | 2.26 | 0.65 |
| 2:J:230:A:H2' | 2:J:231:A:O4' | 1.96 | 0.65 |
| 2:J:253:A:O2' | 2:J:254:A:H5' | 1.96 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 3:K:229:A:H2' | 3:K:230:A:H8 | 1.61 | 0.65 |
| 3:K:71:A:O2' | 3:K:72:A:H5' | 1.96 | 0.65 |
| 4:L:437:U:O2' | 4:L:438:U:P | 2.54 | 0.65 |
| 4:L:483:U:C2' | 4:L:484:U:H5' | 2.27 | 0.65 |
| 4:L:573:U:C2 | 4:L:574:U:C6 | 2.85 | 0.65 |
| 4:L:593:U:C2 | 4:L:594:U:C6 | 2.85 | 0.65 |
| 4:L:712:U:N3 | 4:L:713:U:C5 | 2.65 | 0.65 |
| 4:L:719:U:O2 | 4:L:720:U:C6 | 2.49 | 0.65 |
| 4:L:766:U:C6 | 4:L:767:U:H5 | 2.13 | 0.65 |
| 4:L:791:U:H2' | 4:L:792:U:H6 | 1.62 | 0.65 |
| 4:L:810:U:C3' | 4:L:811:U:C5' | 2.45 | 0.65 |
| 4:L:814:U:C2' | 4:L:815:U:O5' | 2.45 | 0.65 |
| 5:M:288:U:C2' | 5:M:289:U:C5' | 2.74 | 0.65 |
| 5:M:352:U:O2' | 5:M:353:U:C5' | 2.39 | 0.65 |
| 5:M:428:U:H2' | 5:M:429:U:O5' | 1.97 | 0.65 |
| 5:M:449:U:H2' | 5:M:450:U:O5' | 1.97 | 0.65 |
| 6:N:406:U:C2' | 6:N:407:U:O4' | 2.43 | 0.65 |
| 6:N:411:U:H2' | 6:N:412:U:O5' | 1.96 | 0.65 |
| 6:N:413:U:H2' | 6:N:414:U:H6 | 1.62 | 0.65 |
| 6:N:423:U:H2' | 6:N:424:U:H6 | 1.60 | 0.65 |
| 1:I:102:A:C4 | 1:I:103:A:N7 | 2.65 | 0.65 |
| 1:I:205:A:C2 | 1:I:206:A:N7 | 2.65 | 0.65 |
| 1:I:252:A:C2 | 1:I:253:A:C5 | 2.84 | 0.65 |
| 1:I:267:A:H2' | 1:I:268:A:H8 | 1.61 | 0.65 |
| 2:J:254:A:H2' | 2:J:255:A:C5' | 2.26 | 0.65 |
| 2:J:54:A:C4 | 2:J:55:A:C8 | 2.84 | 0.65 |
| 2:J:87:A:C2 | 2:J:88:A:N7 | 2.65 | 0.65 |
| 2:J:89:A:N1 | 2:J:90:A:C6 | 2.65 | 0.65 |
| 3:K:95:A:C2 | 3:K:96:A:C4 | 2.84 | 0.65 |
| 4:L:516:U:C2' | 4:L:517:U:C5' | 2.75 | 0.65 |
| 4:L:635:U:O2' | 4:L:636:U:C5' | 2.38 | 0.65 |
| 4:L:650:U:C2 | 4:L:651:U:C6 | 2.85 | 0.65 |
| 4:L:651:U:C2 | 4:L:652:U:C5 | 2.85 | 0.65 |
| 4:L:704:U:C2 | 4:L:705:U:C6 | 2.84 | 0.65 |
| 4:L:799:U:C2 | 4:L:800:U:C6 | 2.85 | 0.65 |
| 4:L:810:U:C2' | 4:L:811:U:H6 | 2.06 | 0.65 |
| 5:M:509:U:C2 | 5:M:510:U:C6 | 2.85 | 0.65 |
| 5:M:517:U:C2 | 5:M:518:U:C5 | 2.85 | 0.65 |
| 6:N:396:U:N3 | 6:N:397:U:C5 | 2.64 | 0.65 |
| 6:N:441:U:H2' | 6:N:442:U:H6 | 1.61 | 0.65 |
| 6:N:521:U:O2' | 6:N:522:U:H5' | 1.97 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:107:A:O5' | 1:I:108:A:OP2 | 2.14 | 0.64 |
| 1:I:112:A:C4 | 1:I:113:A:C8 | 2.86 | 0.64 |
| 1:I:135:A:N3 | 1:I:136:A:C8 | 2.65 | 0.64 |
| 1:I:163:A:C2' | 1:I:164:A:O5' | 2.44 | 0.64 |
| 1:I:180:A:H2 | 1:I:181:A:C4 | 2.13 | 0.64 |
| 1:I:198:A:O2' | 1:I:199:A:P | 2.54 | 0.64 |
| 1:I:253:A:C5 | 1:I:254:A:N7 | 2.65 | 0.64 |
| 2:J:200:A:C2 | 2:J:201:A:C5 | 2.85 | 0.64 |
| 2:J:64:A:C4 | 2:J:65:A:C8 | 2.86 | 0.64 |
| 2:J:66:A:N3 | 2:J:67:A:C8 | 2.64 | 0.64 |
| 3:K:100:A:C6 | 3:K:101:A:C5 | 2.85 | 0.64 |
| 3:K:109:A:C2' | 3:K:110:A:H5' | 2.26 | 0.64 |
| 3:K:132:A:H2' | 3:K:133:A:O5' | 1.95 | 0.64 |
| 3:K:257:A:H2' | 3:K:258:A:H8 | 1.62 | 0.64 |
| 3:K:5:A:C2' | 3:K:6:A:O4' | 2.45 | 0.64 |
| 3:K:5:A:C2' | 3:K:6:A:H5' | 2.27 | 0.64 |
| 3:K:98:A:C2' | 3:K:99:A:H5' | 2.26 | 0.64 |
| 4:L:451:U:C3' | 4:L:452:U:OP2 | 2.45 | 0.64 |
| 4:L:466:U:H2' | 4:L:467:U:H6 | 1.63 | 0.64 |
| 4:L:477:U:O2' | 4:L:478:U:C4' | 2.44 | 0.64 |
| 4:L:512:U:H2' | 4:L:513:U:H6 | 1.62 | 0.64 |
| 4:L:547:U:C2 | 4:L:548:U:C4 | 2.85 | 0.64 |
| 4:L:585:U:H2' | 4:L:586:U:O5' | 1.96 | 0.64 |
| 4:L:601:U:C2' | 4:L:602:U:C5' | 2.75 | 0.64 |
| 4:L:650:U:C2' | 4:L:651:U:H5' | 2.27 | 0.64 |
| 5:M:304:U:N3 | 5:M:305:U:O4 | 2.30 | 0.64 |
| 5:M:537:U:H2' | 5:M:538:U:H5' | 1.77 | 0.64 |
| 6:N:365:U:C2 | 6:N:366:U:C5 | 2.85 | 0.64 |
| 1:I:120:A:HO2' | 1:I:121:A:H5' | 1.61 | 0.64 |
| 1:I:151:A:N3 | 1:I:152:A:C8 | 2.65 | 0.64 |
| 1:I:270:A:C2' | 1:I:271:A:O5' | 2.41 | 0.64 |
| 1:I:64:A:C2 | 1:I:65:A:C4 | 2.85 | 0.64 |
| 1:I:69:A:C2 | 1:I:70:A:C8 | 2.85 | 0.64 |
| 2:J:161:A:C2 | 2:J:162:A:N9 | 2.65 | 0.64 |
| 2:J:201:A:C4 | 2:J:202:A:C8 | 2.84 | 0.64 |
| 2:J:225:A:O2' | 2:J:226:A:C5' | 2.44 | 0.64 |
| 2:J:29:A:C5 | 2:J:30:A:N7 | 2.65 | 0.64 |
| 2:J:85:A:N3 | 2:J:86:A:C8 | 2.65 | 0.64 |
| 3:K:101:A:N1 | 3:K:102:A:C5 | 2.65 | 0.64 |
| 3:K:119:A:N3 | 3:K:120:A:O4' | 2.30 | 0.64 |
| 3:K:155:A:C6 | 3:K:156:A:N7 | 2.63 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:63:A:C3' | 3:K:64:A:P | 2.84 | 0.64 |
| 3:K:63:A:HO3' | 3:K:64:A:P | 2.19 | 0.64 |
| 4:L:580:U:C2 | 4:L:581:U:C6 | 2.86 | 0.64 |
| 5:M:392:U:C2' | 5:M:393:U:O5' | 2.44 | 0.64 |
| 5:M:410:U:C2' | 5:M:411:U:C6 | 2.79 | 0.64 |
| 5:M:437:U:H2' | 5:M:438:U:C5' | 2.27 | 0.64 |
| 5:M:437:U:H2' | 5:M:438:U:O4' | 1.97 | 0.64 |
| 5:M:519:U:H2' | 5:M:520:U:H6 | 1.61 | 0.64 |
| 6:N:330:U:H2' | 6:N:331:U:C6 | 2.31 | 0.64 |
| 6:N:364:U:H2' | 6:N:365:U:O5' | 1.97 | 0.64 |
| 6:N:378:U:C4 | 6:N:379:U:C4 | 2.83 | 0.64 |
| 6:N:472:U:C2 | 6:N:473:U:C5 | 2.85 | 0.64 |
| 1:I:102:A:C4 | 1:I:103:A:C8 | 2.86 | 0.64 |
| 1:I:186:A:N3 | 1:I:187:A:N7 | 2.41 | 0.64 |
| 1:I:234:A:O2' | 1:I:235:A:H5' | 1.97 | 0.64 |
| 1:I:261:A:C2 | 1:I:262:A:C4 | 2.85 | 0.64 |
| 1:I:279:A:H2' | 1:I:280:A:C5' | 2.27 | 0.64 |
| 1:I:375:A:O2' | 1:I:376:A:H5' | 1.97 | 0.64 |
| 1:I:60:A:N6 | 1:I:61:A:H62 | 1.96 | 0.64 |
| 1:I:87:A:C4 | 1:I:88:A:C8 | 2.84 | 0.64 |
| 1:I:97:A:C2 | 1:I:98:A:N9 | 2.65 | 0.64 |
| 2:J:102:A:C4 | 2:J:103:A:C8 | 2.85 | 0.64 |
| 2:J:201:A:C6 | 2:J:202:A:C5 | 2.85 | 0.64 |
| 2:J:62:A:HO2' | 2:J:63:A:H5' | 1.62 | 0.64 |
| 2:J:83:A:C5 | 2:J:84:A:N7 | 2.66 | 0.64 |
| 3:K:119:A:N3 | 3:K:120:A:C8 | 2.66 | 0.64 |
| 3:K:86:A:O2' | 3:K:87:A:H5' | 1.97 | 0.64 |
| 3:K:92:A:O2' | 3:K:93:A:C5' | 2.32 | 0.64 |
| 4:L:507:U:H2' | 4:L:508:U:H6 | 1.61 | 0.64 |
| 4:L:518:U:O2 | 4:L:519:U:C6 | 2.51 | 0.64 |
| 4:L:622:U:O2' | 4:L:623:U:C4' | 2.45 | 0.64 |
| 4:L:688:U:C2 | 4:L:689:U:C6 | 2.85 | 0.64 |
| 4:L:698:U:H2' | 4:L:699:U:C5' | 2.25 | 0.64 |
| 4:L:708:U:C2' | 4:L:709:U:H5' | 2.26 | 0.64 |
| 5:M:324:U:N3 | 5:M:325:U:C4 | 2.65 | 0.64 |
| 5:M:337:U:N3 | 5:M:338:U:C6 | 2.64 | 0.64 |
| 5:M:347:U:HO2' | 5:M:348:U:C5' | 1.82 | 0.64 |
| 5:M:353:U:N3 | 5:M:354:U:C5 | 2.65 | 0.64 |
| 5:M:392:U:C2' | 5:M:393:U:C4' | 2.75 | 0.64 |
| 6:N:318:U:H2' | 6:N:319:U:C5 | 2.32 | 0.64 |
| 6:N:323:U:H2' | 6:N:324:U:O4' | 1.97 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:449:U:H2' | 6:N:450:U:C6 | 2.28 | 0.64 |
| 6:N:450:U:C2 | 6:N:451:U:C5 | 2.85 | 0.64 |
| 6:N:495:U:H2' | 6:N:496:U:C6 | 2.30 | 0.64 |
| 1:I:172:A:C2 | 1:I:173:A:C4 | 2.86 | 0.64 |
| 1:I:16:A:C4 | 1:I:17:A:C8 | 2.85 | 0.64 |
| 1:I:187:A:C4 | 1:I:188:A:C8 | 2.85 | 0.64 |
| 1:I:19:A:C2' | 1:I:20:A:H5' | 2.27 | 0.64 |
| 1:I:229:A:C2 | 1:I:230:A:C4 | 2.85 | 0.64 |
| 1:I:235:A:C2 | 1:I:236:A:C5 | 2.84 | 0.64 |
| 1:I:235:A:C2 | 1:I:236:A:C8 | 2.85 | 0.64 |
| 1:I:238:A:C5 | 1:I:239:A:N7 | 2.65 | 0.64 |
| 2:J:123:A:O2' | 2:J:124:A:C5' | 2.42 | 0.64 |
| 3:K:115:A:N6 | 3:K:116:A:N6 | 2.45 | 0.64 |
| 3:K:164:A:C6 | 3:K:165:A:C6 | 2.86 | 0.64 |
| 4:L:574:U:C2 | 4:L:575:U:C4 | 2.84 | 0.64 |
| 4:L:574:U:N1 | 4:L:575:U:C5 | 2.66 | 0.64 |
| 4:L:577:U:O4 | 4:L:578:U:O4 | 2.15 | 0.64 |
| 4:L:645:U:N3 | 4:L:646:U:O4 | 2.30 | 0.64 |
| 4:L:646:U:C2' | 4:L:647:U:H5' | 2.27 | 0.64 |
| 4:L:669:U:H2' | 4:L:670:U:C6 | 2.30 | 0.64 |
| 4:L:717:U:H2' | 4:L:718:U:H6 | 1.62 | 0.64 |
| 4:L:763:U:C2' | 4:L:764:U:H5' | 2.20 | 0.64 |
| 4:L:803:U:N3 | 4:L:804:U:C4 | 2.66 | 0.64 |
| 4:L:808:U:N3 | 4:L:809:U:C5 | 2.66 | 0.64 |
| 5:M:403:U:O2' | 5:M:404:U:H5' | 1.96 | 0.64 |
| 5:M:412:U:HO2' | 5:M:413:U:H5' | 1.61 | 0.64 |
| 6:N:384:U:O2 | 6:N:385:U:C6 | 2.50 | 0.64 |
| 1:I:128:A:C2' | 1:I:129:A:H5' | 2.27 | 0.64 |
| 1:I:227:A:C2 | 1:I:228:A:C4 | 2.85 | 0.64 |
| 1:I:242:A:N3 | 1:I:243:A:C8 | 2.66 | 0.64 |
| 1:I:329:A:C2' | 1:I:330:A:H5' | 2.26 | 0.64 |
| 2:J:165:A:C4 | 2:J:166:A:C8 | 2.85 | 0.64 |
| 2:J:176:A:O2' | 2:J:177:A:P | 2.54 | 0.64 |
| 2:J:192:A:C2 | 2:J:193:A:C4 | 2.85 | 0.64 |
| 2:J:21:A:C2' | 2:J:22:A:C5' | 2.75 | 0.64 |
| 2:J:32:A:C4 | 2:J:33:A:C8 | 2.85 | 0.64 |
| 3:K:100:A:C2 | 3:K:101:A:C5 | 2.85 | 0.64 |
| 3:K:101:A:C2' | 3:K:102:A:H5' | 2.27 | 0.64 |
| 3:K:103:A:C2 | 3:K:104:A:C5 | 2.86 | 0.64 |
| 3:K:40:A:N6 | 3:K:41:A:N6 | 2.45 | 0.64 |
| 3:K:47:A:C4 | 3:K:48:A:N7 | 2.65 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:458:U:H2' | 4:L:459:U:H6 | 1.63 | 0.64 |
| 4:L:538:U:C4 | 4:L:539:U:O4 | 2.50 | 0.64 |
| 4:L:618:U:H2' | 4:L:619:U:H6 | 1.63 | 0.64 |
| 4:L:675:U:C4 | 4:L:676:U:C5 | 2.85 | 0.64 |
| 4:L:713:U:C4 | 4:L:714:U:C5 | 2.86 | 0.64 |
| 4:L:718:U:H2' | 4:L:719:U:O5' | 1.98 | 0.64 |
| 4:L:723:U:C2' | 4:L:724:U:C6 | 2.81 | 0.64 |
| 5:M:296:U:HO2' | 5:M:297:U:H5' | 1.60 | 0.64 |
| 5:M:321:U:O4 | 5:M:322:U:O4 | 2.16 | 0.64 |
| 5:M:428:U:HO2' | 5:M:429:U:C5' | 1.83 | 0.64 |
| 5:M:459:U:N3 | 5:M:460:U:C5 | 2.66 | 0.64 |
| 5:M:482:U:H2' | 5:M:483:U:O5' | 1.96 | 0.64 |
| 5:M:509:U:C2' | 5:M:510:U:H5' | 2.27 | 0.64 |
| 6:N:421:U:C2 | 6:N:422:U:C5 | 2.85 | 0.64 |
| 6:N:430:U:H2' | 6:N:431:U:C5' | 2.27 | 0.64 |
| 6:N:451:U:C4 | 6:N:452:U:C5 | 2.85 | 0.64 |
| 1:I:239:A:H2' | 1:I:240:A:O5' | 1.98 | 0.64 |
| 1:I:251:A:C5 | 1:I:252:A:N7 | 2.65 | 0.64 |
| 1:I:321:A:H2' | 1:I:322:A:C5' | 2.27 | 0.64 |
| 1:I:4:A:N1 | 1:I:5:A:C6 | 2.66 | 0.64 |
| 2:J:206:A:O2' | 2:J:207:A:C4' | 2.45 | 0.64 |
| 2:J:51:A:C4 | 2:J:52:A:N7 | 2.66 | 0.64 |
| 3:K:104:A:H2' | 3:K:105:A:C5' | 2.28 | 0.64 |
| 3:K:114:A:H2' | 3:K:115:A:C8 | 2.26 | 0.64 |
| 3:K:150:A:O2' | 3:K:151:A:P | 2.54 | 0.64 |
| 3:K:156:A:C3' | 3:K:157:A:C5' | 2.42 | 0.64 |
| 3:K:181:A:O2' | 3:K:182:A:C5' | 2.45 | 0.64 |
| 3:K:81:A:H2' | 3:K:82:A:O4' | 1.98 | 0.64 |
| 4:L:555:U:H2' | 4:L:556:U:C6 | 2.32 | 0.64 |
| 4:L:577:U:C4 | 4:L:578:U:O4 | 2.50 | 0.64 |
| 4:L:579:U:N3 | 4:L:580:U:C5 | 2.66 | 0.64 |
| 4:L:583:U:C4 | 4:L:584:U:C5 | 2.86 | 0.64 |
| 4:L:584:U:O2 | 4:L:585:U:C6 | 2.51 | 0.64 |
| 4:L:588:U:HO2' | 4:L:589:U:C5' | 1.94 | 0.64 |
| 4:L:713:U:C2' | 4:L:714:U:C4' | 2.54 | 0.64 |
| 4:L:717:U:C2 | 4:L:718:U:C4 | 2.83 | 0.64 |
| 4:L:735:U:H2' | 4:L:736:U:H6 | 1.63 | 0.64 |
| 5:M:288:U:H2' | 5:M:289:U:O4' | 1.97 | 0.64 |
| 5:M:299:U:H2' | 5:M:300:U:C6 | 2.31 | 0.64 |
| 5:M:306:U:C2' | 5:M:307:U:H5' | 2.27 | 0.64 |
| 5:M:336:U:C5 | 5:M:337:U:H5 | 2.12 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:338:U:H2' | 5:M:339:U:O5' | 1.97 | 0.64 |
| 5:M:342:U:H2' | 5:M:343:U:C6 | 2.32 | 0.64 |
| 5:M:386:U:O2' | 5:M:387:U:O5' | 2.16 | 0.64 |
| 5:M:419:U:H2' | 5:M:420:U:O5' | 1.97 | 0.64 |
| 6:N:313:U:C2 | 6:N:314:U:C5 | 2.85 | 0.64 |
| 6:N:399:U:C4 | 6:N:400:U:C4 | 2.85 | 0.64 |
| 1:I:21:A:C5 | 1:I:22:A:N7 | 2.65 | 0.64 |
| 1:I:228:A:C4 | 1:I:229:A:N7 | 2.65 | 0.64 |
| 1:I:242:A:H2' | 1:I:243:A:O4' | 1.96 | 0.64 |
| 1:I:331:A:N6 | 1:I:332:A:N6 | 2.45 | 0.64 |
| 1:I:352:A:H2' | 1:I:353:A:H8 | 1.61 | 0.64 |
| 2:J:221:A:H2' | 2:J:222:A:C5' | 2.28 | 0.64 |
| 3:K:140:A:N6 | 3:K:141:A:H62 | 1.95 | 0.64 |
| 3:K:167:A:H61 | 3:K:168:A:N6 | 1.96 | 0.64 |
| 3:K:212:A:H2' | 3:K:213:A:H8 | 1.58 | 0.64 |
| 3:K:254:A:O2' | 3:K:255:A:H5' | 1.98 | 0.64 |
| 4:L:537:U:O2' | 4:L:538:U:O4' | 2.15 | 0.64 |
| 4:L:580:U:H2' | 4:L:581:U:H6 | 1.61 | 0.64 |
| 4:L:643:U:N3 | 4:L:644:U:C4 | 2.65 | 0.64 |
| 4:L:683:U:C2 | 4:L:684:U:C5 | 2.86 | 0.64 |
| 4:L:755:U:C2 | 4:L:756:U:C5 | 2.86 | 0.64 |
| 4:L:758:U:C4 | 4:L:759:U:H5 | 2.15 | 0.64 |
| 4:L:761:U:N3 | 4:L:762:U:C5 | 2.66 | 0.64 |
| 4:L:800:U:N3 | 4:L:801:U:C5 | 2.66 | 0.64 |
| 5:M:290:U:HO2' | 5:M:291:U:H5' | 1.59 | 0.64 |
| 5:M:317:U:C2 | 5:M:318:U:C5 | 2.85 | 0.64 |
| 5:M:362:U:C2 | 5:M:363:U:C5 | 2.85 | 0.64 |
| 5:M:381:U:C2 | 5:M:382:U:C5 | 2.85 | 0.64 |
| 5:M:446:U:C2 | 5:M:447:U:C5 | 2.85 | 0.64 |
| 5:M:476:U:C2' | 5:M:477:U:H5' | 2.26 | 0.64 |
| 6:N:321:U:H2' | 6:N:322:U:H6 | 1.63 | 0.64 |
| 6:N:418:U:N3 | 6:N:419:U:O4 | 2.31 | 0.64 |
| 6:N:485:U:H2' | 6:N:486:U:C6 | 2.33 | 0.64 |
| 1:I:196:A:H2' | 1:I:197:A:O5' | 1.97 | 0.64 |
| 1:I:202:A:C2 | 1:I:203:A:N9 | 2.66 | 0.64 |
| 1:I:241:A:C5 | 1:I:242:A:N7 | 2.66 | 0.64 |
| 1:I:25:A:C2 | 1:I:26:A:N9 | 2.65 | 0.64 |
| 1:I:270:A:N3 | 1:I:271:A:N9 | 2.45 | 0.64 |
| 1:I:335:A:C6 | 1:I:336:A:C6 | 2.86 | 0.64 |
| 1:I:365:A:H2' | 1:I:366:A:H8 | 1.61 | 0.64 |
| 1:I:403:A:C2' | 1:I:404:A:O4' | 2.46 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:62:A:C4 | 1:I:63:A:C8 | 2.85 | 0.64 |
| 1:I:67:A:N1 | 1:I:68:A:C5 | 2.66 | 0.64 |
| 1:I:78:A:H2' | 1:I:79:A:O5' | 1.98 | 0.64 |
| 2:J:224:A:C5 | 2:J:225:A:N7 | 2.66 | 0.64 |
| 4:L:477:U:C3' | 4:L:478:U:C5' | 2.64 | 0.64 |
| 4:L:508:U:C4 | 4:L:509:U:C4 | 2.85 | 0.64 |
| 4:L:549:U:O2' | 4:L:550:U:C4' | 2.46 | 0.64 |
| 4:L:601:U:N3 | 4:L:602:U:C5 | 2.66 | 0.64 |
| 4:L:749:U:O2 | 4:L:750:U:C6 | 2.50 | 0.64 |
| 5:M:405:U:C2 | 5:M:406:U:C6 | 2.85 | 0.64 |
| 6:N:456:U:C3' | 6:N:457:U:P | 2.85 | 0.64 |
| 6:N:460:U:O2' | 6:N:461:U:P | 2.56 | 0.64 |
| 6:N:468:U:N3 | 6:N:469:U:C5 | 2.66 | 0.64 |
| 6:N:474:U:H2' | 6:N:475:U:C6 | 2.33 | 0.64 |
| 1:I:146:A:C3' | 1:I:147:A:P | 2.84 | 0.64 |
| 1:I:182:A:C2 | 1:I:183:A:C8 | 2.86 | 0.64 |
| 1:I:272:A:C2 | 4:L:554:U:O2 | 2.50 | 0.64 |
| 1:I:67:A:C2 | 1:I:68:A:C5 | 2.85 | 0.64 |
| 2:J:146:A:H2' | 2:J:147:A:H8 | 1.62 | 0.64 |
| 2:J:182:A:H2' | 2:J:183:A:C8 | 2.33 | 0.64 |
| 2:J:190:A:N6 | 2:J:191:A:H62 | 1.94 | 0.64 |
| 2:J:264:A:O2' | 2:J:265:A:H5' | 1.98 | 0.64 |
| 2:J:63:A:C4 | 2:J:64:A:C8 | 2.86 | 0.64 |
| 3:K:162:A:C2 | 3:K:163:A:C8 | 2.86 | 0.64 |
| 3:K:253:A:H2' | 3:K:254:A:C4' | 2.27 | 0.64 |
| 3:K:90:A:C2 | 3:K:91:A:C5 | 2.85 | 0.64 |
| 4:L:516:U:C4 | 4:L:517:U:C5 | 2.85 | 0.64 |
| 4:L:542:U:C2 | 4:L:543:U:C6 | 2.85 | 0.64 |
| 4:L:561:U:HO2' | 4:L:562:U:H5' | 1.59 | 0.64 |
| 4:L:736:U:O2 | 4:L:737:U:C6 | 2.51 | 0.64 |
| 4:L:769:U:H2' | 4:L:770:U:C5' | 2.16 | 0.64 |
| 5:M:391:U:HO2' | 5:M:392:U:H5' | 1.62 | 0.64 |
| 5:M:436:U:H2' | 5:M:437:U:O4' | 1.97 | 0.64 |
| 5:M:458:U:C2' | 5:M:459:U:C4' | 2.76 | 0.64 |
| 5:M:465:U:H2' | 5:M:466:U:O4' | 1.98 | 0.64 |
| 5:M:519:U:C4 | 5:M:520:U:C5 | 2.86 | 0.64 |
| 5:M:523:U:O2 | 5:M:524:U:C5 | 2.48 | 0.64 |
| 6:N:394:U:C2 | 6:N:395:U:C6 | 2.86 | 0.64 |
| 6:N:420:U:H2' | 6:N:421:U:H6 | 1.62 | 0.64 |
| 6:N:484:U:C3' | 6:N:485:U:C5' | 2.56 | 0.64 |
| 1:I:180:A:N3 | 1:I:181:A:N9 | 2.42 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:196:A:C2' | 1:I:197:A:H5' | 2.28 | 0.64 |
| 1:I:226:A:C4 | 1:I:227:A:C8 | 2.86 | 0.64 |
| 1:I:42:A:C2' | 1:I:43:A:C5' | 2.75 | 0.64 |
| 1:I:77:A:C4 | 1:I:78:A:C8 | 2.86 | 0.64 |
| 1:I:90:A:C2 | 1:I:91:A:C4 | 2.86 | 0.64 |
| 1:I:91:A:C2 | 1:I:92:A:C4 | 2.86 | 0.64 |
| 2:J:147:A:H2' | 2:J:148:A:C8 | 2.29 | 0.64 |
| 2:J:202:A:C2 | 2:J:203:A:C5 | 2.85 | 0.64 |
| 2:J:29:A:N1 | 2:J:30:A:C5 | 2.66 | 0.64 |
| 2:J:63:A:C2' | 2:J:64:A:C5' | 2.75 | 0.64 |
| 3:K:253:A:C3' | 3:K:254:A:C5' | 2.60 | 0.64 |
| 3:K:97:A:C6 | 3:K:98:A:C5 | 2.86 | 0.64 |
| 4:L:491:U:H2' | 4:L:492:U:H6 | 1.63 | 0.64 |
| 4:L:501:U:H2' | 4:L:502:U:O5' | 1.97 | 0.64 |
| 4:L:507:U:O2' | 4:L:508:U:C4' | 2.46 | 0.64 |
| 4:L:542:U:H2' | 4:L:543:U:H6 | 1.63 | 0.64 |
| 4:L:546:U:C2' | 4:L:547:U:C5' | 2.75 | 0.64 |
| 4:L:552:U:C4 | 4:L:553:U:C4 | 2.86 | 0.64 |
| 4:L:638:U:O2 | 4:L:639:U:C1' | 2.45 | 0.64 |
| 4:L:715:U:C2' | 4:L:716:U:O5' | 2.46 | 0.64 |
| 4:L:772:U:H2' | 4:L:773:U:H6 | 1.63 | 0.64 |
| 4:L:793:U:C4 | 4:L:794:U:C5 | 2.85 | 0.64 |
| 4:L:811:U:N1 | 4:L:812:U:C6 | 2.65 | 0.64 |
| 5:M:354:U:H2' | 5:M:355:U:C6 | 2.33 | 0.64 |
| 6:N:316:U:C2' | 6:N:317:U:C6 | 2.75 | 0.64 |
| 6:N:468:U:C2 | 6:N:469:U:H5 | 2.12 | 0.64 |
| 1:I:18:A:H2' | 1:I:19:A:C8 | 2.33 | 0.63 |
| 1:I:229:A:H2' | 1:I:230:A:O4' | 1.97 | 0.63 |
| 1:I:233:A:O2' | 1:I:234:A:C5' | 2.33 | 0.63 |
| 1:I:239:A:C2 | 1:I:240:A:C5 | 2.86 | 0.63 |
| 1:I:79:A:N6 | 1:I:80:A:N6 | 2.45 | 0.63 |
| 2:J:131:A:C5 | 2:J:132:A:N7 | 2.66 | 0.63 |
| 2:J:143:A:H2 | 2:J:144:A:N9 | 1.78 | 0.63 |
| 2:J:229:A:HO2' | 2:J:230:A:C4' | 2.10 | 0.63 |
| 2:J:26:A:C4 | 2:J:27:A:C8 | 2.86 | 0.63 |
| 3:K:103:A:H2' | 3:K:104:A:H8 | 1.62 | 0.63 |
| 4:L:460:U:C2 | 4:L:461:U:C6 | 2.85 | 0.63 |
| 4:L:565:U:C2 | 4:L:566:U:C6 | 2.86 | 0.63 |
| 4:L:778:U:C2' | 4:L:779:U:C5' | 2.76 | 0.63 |
| 5:M:331:U:H2' | 5:M:332:U:O5' | 1.98 | 0.63 |
| 5:M:520:U:C2 | 5:M:521:U:C5 | 2.86 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:364:U:C2 | 6:N:365:U:C6 | 2.85 | 0.63 |
| 1:I:14:A:C5 | 1:I:15:A:N7 | 2.66 | 0.63 |
| 1:I:202:A:C2' | 1:I:203:A:O5' | 2.43 | 0.63 |
| 1:I:205:A:C2 | 1:I:206:A:C5 | 2.86 | 0.63 |
| 1:I:213:A:C4 | 1:I:214:A:C8 | 2.86 | 0.63 |
| 1:I:241:A:N6 | 1:I:242:A:H62 | 1.95 | 0.63 |
| 1:I:261:A:C2' | 1:I:262:A:H8 | 2.09 | 0.63 |
| 1:I:279:A:C2' | 1:I:280:A:O5' | 2.45 | 0.63 |
| 1:I:42:A:C2 | 1:I:43:A:C8 | 2.86 | 0.63 |
| 1:I:68:A:H2' | 1:I:69:A:O4' | 1.99 | 0.63 |
| 1:I:82:A:C2' | 1:I:83:A:C4' | 2.71 | 0.63 |
| 2:J:188:A:C2 | 2:J:189:A:N7 | 2.66 | 0.63 |
| 2:J:229:A:H2' | 2:J:230:A:H8 | 1.61 | 0.63 |
| 2:J:26:A:C2 | 2:J:27:A:C5 | 2.85 | 0.63 |
| 2:J:30:A:O2' | 2:J:31:A:C5' | 2.39 | 0.63 |
| 2:J:57:A:C2 | 2:J:58:A:C5 | 2.86 | 0.63 |
| 3:K:181:A:C2 | 3:K:182:A:C8 | 2.86 | 0.63 |
| 3:K:251:A:H61 | 3:K:252:A:N6 | 1.95 | 0.63 |
| 4:L:486:U:H2' | 4:L:487:U:H6 | 1.62 | 0.63 |
| 4:L:533:U:H2' | 4:L:534:U:H6 | 1.64 | 0.63 |
| 4:L:594:U:C2 | 4:L:595:U:C6 | 2.87 | 0.63 |
| 4:L:617:U:HO2' | 4:L:618:U:H5' | 1.62 | 0.63 |
| 4:L:712:U:C2' | 4:L:713:U:H6 | 2.11 | 0.63 |
| 4:L:730:U:C2 | 4:L:731:U:C5 | 2.86 | 0.63 |
| 4:L:739:U:HO2' | 4:L:740:U:C5' | 1.81 | 0.63 |
| 4:L:778:U:N3 | 4:L:779:U:C5 | 2.65 | 0.63 |
| 5:M:298:U:HO2' | 5:M:299:U:H5' | 1.61 | 0.63 |
| 5:M:543:U:H2' | 5:M:544:U:C6 | 2.32 | 0.63 |
| 6:N:458:U:H2' | 6:N:459:U:C6 | 2.32 | 0.63 |
| 1:I:100:A:C2' | 1:I:101:A:C5' | 2.76 | 0.63 |
| 1:I:84:A:O2' | 1:I:85:A:P | 2.56 | 0.63 |
| 2:J:145:A:N7 | 2:J:146:A:N7 | 2.45 | 0.63 |
| 2:J:235:A:C2 | 2:J:236:A:C8 | 2.86 | 0.63 |
| 2:J:265:A:C4 | 2:J:266:A:C8 | 2.85 | 0.63 |
| 2:J:79:A:C4 | 2:J:80:A:C8 | 2.86 | 0.63 |
| 2:J:94:A:C2 | 2:J:95:A:C8 | 2.86 | 0.63 |
| 3:K:10:A:C3' | 3:K:11:A:P | 2.83 | 0.63 |
| 3:K:137:A:C2' | 3:K:138:A:C5' | 2.76 | 0.63 |
| 3:K:152:A:H62 | 3:K:153:A:H62 | 1.42 | 0.63 |
| 4:L:428:U:H2' | 4:L:429:U:C6 | 2.34 | 0.63 |
| 4:L:460:U:H2' | 4:L:461:U:O5' | 1.99 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:612:U:C2 | 4:L:613:U:C6 | 2.85 | 0.63 |
| 4:L:740:U:H2' | 4:L:741:U:H6 | 1.62 | 0.63 |
| 5:M:418:U:C2 | 5:M:419:U:C5 | 2.85 | 0.63 |
| 5:M:445:U:C2 | 5:M:446:U:C5 | 2.86 | 0.63 |
| 5:M:483:U:H2' | 5:M:484:U:H6 | 1.62 | 0.63 |
| 5:M:514:U:C2 | 5:M:515:U:C6 | 2.87 | 0.63 |
| 5:M:515:U:C2' | 5:M:516:U:C5' | 2.76 | 0.63 |
| 6:N:367:U:C2 | 6:N:368:U:C5 | 2.86 | 0.63 |
| 6:N:426:U:H2' | 6:N:427:U:C4' | 2.27 | 0.63 |
| 1:I:186:A:N1 | 1:I:187:A:C5 | 2.66 | 0.63 |
| 1:I:269:A:H2' | 1:I:270:A:C4' | 2.27 | 0.63 |
| 1:I:279:A:H2' | 1:I:280:A:O5' | 1.97 | 0.63 |
| 1:I:311:A:C2' | 1:I:312:A:C5' | 2.76 | 0.63 |
| 1:I:38:A:N3 | 1:I:39:A:C8 | 2.67 | 0.63 |
| 2:J:104:A:N3 | 2:J:105:A:C8 | 2.66 | 0.63 |
| 2:J:223:A:N1 | 2:J:224:A:C5 | 2.66 | 0.63 |
| 2:J:257:A:C2' | 2:J:258:A:H5' | 2.29 | 0.63 |
| 2:J:28:A:C6 | 2:J:29:A:N6 | 2.65 | 0.63 |
| 2:J:31:A:O2' | 2:J:32:A:H5' | 1.99 | 0.63 |
| 3:K:110:A:N3 | 3:K:111:A:C1' | 2.62 | 0.63 |
| 3:K:85:A:C2' | 3:K:86:A:C5' | 2.76 | 0.63 |
| 4:L:526:U:C2' | 4:L:527:U:H5' | 2.28 | 0.63 |
| 4:L:543:U:H2' | 4:L:544:U:H6 | 1.61 | 0.63 |
| 4:L:564:U:N3 | 4:L:565:U:C5 | 2.66 | 0.63 |
| 4:L:573:U:N3 | 4:L:574:U:C4 | 2.66 | 0.63 |
| 4:L:781:U:N3 | 4:L:782:U:C4 | 2.67 | 0.63 |
| 4:L:803:U:C2' | 4:L:804:U:O4' | 2.46 | 0.63 |
| 5:M:450:U:N3 | 5:M:451:U:C4 | 2.67 | 0.63 |
| 5:M:461:U:C2' | 5:M:462:U:H5' | 2.27 | 0.63 |
| 5:M:496:U:H2' | 5:M:497:U:O5' | 1.97 | 0.63 |
| 5:M:544:U:HO2' | 5:M:545:U:C5' | 1.88 | 0.63 |
| 6:N:453:U:HO2' | 6:N:454:U:H5' | 1.62 | 0.63 |
| 6:N:461:U:C2 | 6:N:462:U:C5 | 2.86 | 0.63 |
| 6:N:488:U:H2' | 6:N:489:U:C6 | 2.33 | 0.63 |
| 6:N:501:U:HO2' | 6:N:502:U:H5' | 1.61 | 0.63 |
| 6:N:512:U:C4 | 6:N:513:U:O4 | 2.52 | 0.63 |
| 1:I:10:A:C2 | 1:I:11:A:N7 | 2.66 | 0.63 |
| 1:I:149:A:C3' | 1:I:150:A:P | 2.87 | 0.63 |
| 1:I:194:A:H61 | 1:I:195:A:N6 | 1.95 | 0.63 |
| 1:I:285:A:H2' | 1:I:286:A:O4' | 1.98 | 0.63 |
| 1:I:322:A:C6 | 1:I:323:A:N7 | 2.66 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:216:A:C4 | 2:J:217:A:N7 | 2.67 | 0.63 |
| 2:J:219:A:C4 | 2:J:220:A:C8 | 2.87 | 0.63 |
| 2:J:230:A:O2' | 2:J:231:A:C4' | 2.45 | 0.63 |
| 2:J:69:A:C2' | 2:J:70:A:O5' | 2.46 | 0.63 |
| 3:K:99:A:N3 | 3:K:100:A:C8 | 2.67 | 0.63 |
| 4:L:422:U:C2' | 4:L:423:U:H5' | 2.29 | 0.63 |
| 4:L:465:U:C2 | 4:L:466:U:C5 | 2.87 | 0.63 |
| 4:L:471:U:O2 | 4:L:472:U:C6 | 2.52 | 0.63 |
| 4:L:567:U:C2 | 4:L:568:U:C6 | 2.86 | 0.63 |
| 4:L:613:U:C2' | 4:L:614:U:H5' | 2.28 | 0.63 |
| 4:L:621:U:C2 | 4:L:622:U:C5 | 2.87 | 0.63 |
| 4:L:665:U:N3 | 4:L:666:U:C5 | 2.66 | 0.63 |
| 4:L:737:U:HO2' | 4:L:738:U:H5' | 1.59 | 0.63 |
| 4:L:779:U:N3 | 4:L:780:U:C5 | 2.67 | 0.63 |
| 4:L:810:U:N3 | 4:L:811:U:C5 | 2.67 | 0.63 |
| 4:L:820:U:C2 | 4:L:821:U:C5 | 2.86 | 0.63 |
| 4:L:820:U:C4 | 4:L:821:U:O4 | 2.51 | 0.63 |
| 5:M:295:U:C2' | 5:M:296:U:H5' | 2.29 | 0.63 |
| 5:M:465:U:C2 | 5:M:466:U:C5 | 2.86 | 0.63 |
| 5:M:536:U:H2' | 5:M:537:U:C5' | 2.27 | 0.63 |
| 6:N:315:U:H2' | 6:N:316:U:H6 | 1.63 | 0.63 |
| 6:N:437:U:O2' | 6:N:438:U:H5' | 1.99 | 0.63 |
| 6:N:481:U:C2' | 6:N:482:U:O5' | 2.45 | 0.63 |
| 1:I:132:A:C4 | 1:I:133:A:C8 | 2.87 | 0.63 |
| 1:I:172:A:C2' | 1:I:173:A:C5' | 2.77 | 0.63 |
| 1:I:179:A:N1 | 1:I:180:A:C5 | 2.67 | 0.63 |
| 1:I:181:A:H61 | 1:I:182:A:N6 | 1.96 | 0.63 |
| 1:I:213:A:H2' | 1:I:214:A:O4' | 1.97 | 0.63 |
| 1:I:244:A:C2 | 1:I:245:A:C4 | 2.87 | 0.63 |
| 1:I:333:A:N3 | 1:I:334:A:C8 | 2.67 | 0.63 |
| 1:I:340:A:O2' | 1:I:341:A:H5' | 1.98 | 0.63 |
| 1:I:40:A:C3' | 1:I:41:A:OP2 | 2.44 | 0.63 |
| 1:I:64:A:H2' | 1:I:65:A:H8 | 1.63 | 0.63 |
| 2:J:224:A:H2' | 2:J:225:A:C5' | 2.28 | 0.63 |
| 3:K:117:A:N1 | 3:K:118:A:C6 | 2.67 | 0.63 |
| 3:K:131:A:C5 | 3:K:132:A:N7 | 2.66 | 0.63 |
| 3:K:132:A:C2 | 3:K:133:A:C8 | 2.86 | 0.63 |
| 3:K:41:A:H2' | 3:K:42:A:H8 | 1.64 | 0.63 |
| 4:L:501:U:C2' | 4:L:502:U:O5' | 2.43 | 0.63 |
| 4:L:510:U:C2' | 4:L:511:U:O4' | 2.47 | 0.63 |
| 4:L:524:U:C2 | 4:L:525:U:C6 | 2.86 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:598:U:H2' | 4:L:599:U:H6 | 1.64 | 0.63 |
| 4:L:648:U:H2' | 4:L:649:U:H6 | 1.63 | 0.63 |
| 4:L:760:U:O2' | 4:L:761:U:C5' | 2.41 | 0.63 |
| 6:N:385:U:H2' | 6:N:386:U:H6 | 1.62 | 0.63 |
| 6:N:474:U:O2' | 6:N:475:U:C5' | 2.41 | 0.63 |
| 1:I:113:A:C6 | 1:I:114:A:N6 | 2.67 | 0.63 |
| 1:I:128:A:N6 | 1:I:129:A:H62 | 1.96 | 0.63 |
| 1:I:295:A:C2 | 1:I:296:A:C8 | 2.86 | 0.63 |
| 1:I:340:A:H2' | 1:I:341:A:H8 | 1.64 | 0.63 |
| 1:I:401:A:H2' | 1:I:402:A:C8 | 2.34 | 0.63 |
| 1:I:43:A:C2 | 1:I:44:A:C4 | 2.85 | 0.63 |
| 1:I:58:A:C4 | 1:I:59:A:N7 | 2.67 | 0.63 |
| 2:J:84:A:C2 | 2:J:85:A:C4 | 2.87 | 0.63 |
| 2:J:83:A:C6 | 2:J:84:A:C5 | 2.87 | 0.63 |
| 3:K:138:A:N1 | 3:K:139:A:C5 | 2.66 | 0.63 |
| 3:K:156:A:C2 | 3:K:157:A:C4 | 2.86 | 0.63 |
| 3:K:207:A:O2' | 3:K:208:A:C5' | 2.46 | 0.63 |
| 3:K:212:A:C2' | 3:K:213:A:C8 | 2.79 | 0.63 |
| 3:K:90:A:C4 | 3:K:91:A:C8 | 2.87 | 0.63 |
| 4:L:490:U:H2' | 4:L:491:U:H6 | 1.63 | 0.63 |
| 4:L:574:U:N3 | 4:L:575:U:C5 | 2.60 | 0.63 |
| 4:L:595:U:C2 | 4:L:596:U:C6 | 2.87 | 0.63 |
| 4:L:598:U:C2' | 4:L:599:U:H5' | 2.29 | 0.63 |
| 4:L:635:U:H2' | 4:L:636:U:C6 | 2.31 | 0.63 |
| 4:L:634:U:H2' | 4:L:635:U:O4' | 1.99 | 0.63 |
| 4:L:713:U:H2' | 4:L:714:U:C1' | 2.23 | 0.63 |
| 5:M:354:U:O2 | 5:M:355:U:C6 | 2.52 | 0.63 |
| 5:M:389:U:H2' | 5:M:390:U:H6 | 1.62 | 0.63 |
| 5:M:422:U:H2' | 5:M:423:U:H6 | 1.62 | 0.63 |
| 6:N:291:U:H2' | 6:N:292:U:H6 | 1.63 | 0.63 |
| 6:N:292:U:H2' | 6:N:293:U:H6 | 1.60 | 0.63 |
| 6:N:333:U:H2' | 6:N:334:U:H6 | 1.62 | 0.63 |
| 6:N:468:U:C4 | 6:N:469:U:O4 | 2.52 | 0.63 |
| 6:N:501:U:H2' | 6:N:502:U:H6 | 1.62 | 0.63 |
| 6:N:501:U:H2' | 6:N:502:U:O4' | 1.98 | 0.63 |
| 1:I:197:A:O2' | 1:I:198:A:C5' | 2.43 | 0.63 |
| 1:I:251:A:C4 | 1:I:252:A:N7 | 2.67 | 0.63 |
| 1:I:253:A:C4 | 1:I:254:A:N7 | 2.66 | 0.63 |
| 1:I:277:A:C2' | 1:I:278:A:H8 | 2.08 | 0.63 |
| 1:I:320:A:C2' | 1:I:321:A:C5' | 2.77 | 0.63 |
| 1:I:323:A:C2 | 1:I:324:A:C8 | 2.85 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:147:A:HO2' | 2:J:148:A:H5' | 1.64 | 0.63 |
| 2:J:218:A:C2 | 2:J:219:A:C8 | 2.86 | 0.63 |
| 2:J:259:A:O2' | 2:J:260:A:H5' | 1.99 | 0.63 |
| 2:J:29:A:N3 | 2:J:30:A:C1' | 2.62 | 0.63 |
| 2:J:45:A:N3 | 2:J:46:A:C8 | 2.67 | 0.63 |
| 2:J:51:A:C4 | 2:J:52:A:C8 | 2.86 | 0.63 |
| 3:K:253:A:C4 | 3:K:254:A:C8 | 2.87 | 0.63 |
| 4:L:434:U:H2' | 4:L:435:U:H6 | 1.64 | 0.63 |
| 4:L:436:U:C2' | 4:L:437:U:C5' | 2.76 | 0.63 |
| 4:L:459:U:C2 | 4:L:460:U:C6 | 2.86 | 0.63 |
| 4:L:478:U:H2' | 4:L:479:U:C5' | 2.27 | 0.63 |
| 4:L:502:U:H2' | 4:L:503:U:H6 | 1.63 | 0.63 |
| 4:L:791:U:HO2' | 4:L:792:U:H5' | 1.62 | 0.63 |
| 5:M:354:U:O2' | 5:M:355:U:P | 2.56 | 0.63 |
| 5:M:406:U:H2' | 5:M:407:U:C6 | 2.34 | 0.63 |
| 5:M:445:U:O2' | 5:M:446:U:C5' | 2.42 | 0.63 |
| 5:M:495:U:C4 | 5:M:496:U:C5 | 2.87 | 0.63 |
| 5:M:537:U:C2 | 5:M:538:U:C6 | 2.87 | 0.63 |
| 6:N:384:U:O2' | 6:N:385:U:C5' | 2.46 | 0.63 |
| 1:I:128:A:C6 | 1:I:129:A:C6 | 2.87 | 0.63 |
| 1:I:13:A:N6 | 1:I:14:A:N6 | 2.46 | 0.63 |
| 1:I:194:A:C5 | 1:I:195:A:N7 | 2.67 | 0.63 |
| 1:I:265:A:C4 | 1:I:266:A:C8 | 2.87 | 0.63 |
| 1:I:280:A:H2' | 1:I:281:A:H8 | 1.63 | 0.63 |
| 1:I:284:A:C2' | 1:I:285:A:O5' | 2.44 | 0.63 |
| 1:I:48:A:C2 | 1:I:49:A:C4 | 2.87 | 0.63 |
| 1:I:97:A:H2' | 1:I:98:A:O5' | 1.98 | 0.63 |
| 2:J:116:A:N3 | 2:J:117:A:C8 | 2.67 | 0.63 |
| 2:J:17:A:O2' | 2:J:18:A:C5' | 2.40 | 0.63 |
| 2:J:4:A:H2' | 2:J:5:A:H8 | 1.63 | 0.63 |
| 2:J:96:A:C4 | 2:J:97:A:C8 | 2.86 | 0.63 |
| 3:K:207:A:HO2' | 3:K:208:A:H5' | 1.62 | 0.63 |
| 3:K:215:A:H2' | 3:K:216:A:H8 | 1.63 | 0.63 |
| 3:K:45:A:C3' | 3:K:46:A:P | 2.86 | 0.63 |
| 4:L:466:U:C2' | 4:L:467:U:O5' | 2.46 | 0.63 |
| 4:L:723:U:N3 | 4:L:724:U:C5 | 2.63 | 0.63 |
| 4:L:814:U:H2' | 4:L:815:U:O5' | 1.98 | 0.63 |
| 5:M:323:U:O2 | 5:M:324:U:C1' | 2.47 | 0.63 |
| 5:M:373:U:C2 | 5:M:374:U:C6 | 2.87 | 0.63 |
| 5:M:406:U:N3 | 5:M:407:U:C5 | 2.67 | 0.63 |
| 5:M:455:U:N3 | 5:M:456:U:C5 | 2.67 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:512:U:N3 | 5:M:513:U:C5 | 2.66 | 0.63 |
| 6:N:277:U:C2 | 6:N:278:U:C6 | 2.86 | 0.63 |
| 6:N:313:U:H2' | 6:N:314:U:H6 | 1.62 | 0.63 |
| 6:N:445:U:O2' | 6:N:446:U:H5' | 1.98 | 0.63 |
| 6:N:449:U:C2' | 6:N:450:U:O5' | 2.46 | 0.63 |
| 1:I:14:A:C2 | 1:I:15:A:C5 | 2.87 | 0.62 |
| 1:I:154:A:H2' | 1:I:155:A:H8 | 1.64 | 0.62 |
| 1:I:175:A:C2 | 1:I:176:A:C4 | 2.86 | 0.62 |
| 1:I:241:A:C4 | 1:I:242:A:N7 | 2.67 | 0.62 |
| 1:I:376:A:C6 | 1:I:377:A:C5 | 2.86 | 0.62 |
| 1:I:48:A:H2' | 1:I:49:A:O4' | 1.98 | 0.62 |
| 1:I:63:A:C4 | 1:I:64:A:N7 | 2.67 | 0.62 |
| 1:I:66:A:N3 | 1:I:67:A:C8 | 2.67 | 0.62 |
| 2:J:11:A:H2' | 2:J:12:A:C4' | 2.29 | 0.62 |
| 2:J:13:A:C2' | 2:J:14:A:O5' | 2.45 | 0.62 |
| 2:J:210:A:H2' | 2:J:211:A:C5' | 2.26 | 0.62 |
| 2:J:218:A:H2' | 2:J:219:A:H8 | 1.64 | 0.62 |
| 2:J:224:A:N3 | 2:J:225:A:C8 | 2.67 | 0.62 |
| 2:J:248:A:H61 | 2:J:249:A:N6 | 1.92 | 0.62 |
| 2:J:50:A:HO2' | 2:J:51:A:H5' | 1.61 | 0.62 |
| 2:J:97:A:C2 | 2:J:98:A:C4 | 2.86 | 0.62 |
| 3:K:119:A:H2' | 3:K:120:A:C4' | 2.29 | 0.62 |
| 3:K:125:A:C2 | 3:K:126:A:N9 | 2.67 | 0.62 |
| 3:K:145:A:H2' | 3:K:146:A:C8 | 2.34 | 0.62 |
| 3:K:250:A:HO2' | 3:K:251:A:H5' | 1.55 | 0.62 |
| 4:L:467:U:C2' | 4:L:468:U:H5' | 2.28 | 0.62 |
| 4:L:504:U:H2' | 4:L:505:U:O5' | 1.99 | 0.62 |
| 4:L:561:U:C2' | 4:L:562:U:H5' | 2.28 | 0.62 |
| 4:L:648:U:N3 | 4:L:649:U:C5 | 2.66 | 0.62 |
| 4:L:757:U:H2' | 4:L:758:U:O4' | 1.98 | 0.62 |
| 5:M:418:U:O4 | 5:M:419:U:O4 | 2.16 | 0.62 |
| 5:M:480:U:H2' | 5:M:481:U:H6 | 1.63 | 0.62 |
| 5:M:489:U:H2' | 5:M:490:U:H6 | 1.64 | 0.62 |
| 6:N:310:U:O2' | 6:N:311:U:H5' | 1.99 | 0.62 |
| 6:N:474:U:C2 | 6:N:475:U:C6 | 2.86 | 0.62 |
| 6:N:477:U:H2' | 6:N:478:U:C5' | 2.29 | 0.62 |
| 6:N:497:U:O2' | 6:N:498:U:C4' | 2.46 | 0.62 |
| 1:I:120:A:C2' | 1:I:121:A:C5' | 2.77 | 0.62 |
| 1:I:172:A:N3 | 1:I:173:A:C8 | 2.67 | 0.62 |
| 1:I:190:A:C2 | 1:I:191:A:C4 | 2.87 | 0.62 |
| 1:I:241:A:H2' | 1:I:242:A:C8 | 2.34 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:25:A:H2' | 1:I:26:A:C5' | 2.28 | 0.62 |
| 1:I:329:A:C2' | 1:I:330:A:C5' | 2.77 | 0.62 |
| 1:I:357:A:C2' | 1:I:358:A:H5' | 2.29 | 0.62 |
| 1:I:403:A:H2' | 1:I:404:A:O4' | 1.99 | 0.62 |
| 1:I:87:A:N3 | 1:I:88:A:C8 | 2.67 | 0.62 |
| 2:J:107:A:H2' | 2:J:108:A:O5' | 1.98 | 0.62 |
| 2:J:108:A:N3 | 2:J:109:A:C8 | 2.67 | 0.62 |
| 2:J:120:A:N3 | 2:J:121:A:C8 | 2.67 | 0.62 |
| 2:J:66:A:C2' | 2:J:67:A:C5' | 2.76 | 0.62 |
| 3:K:122:A:N3 | 3:K:123:A:C8 | 2.67 | 0.62 |
| 3:K:168:A:H2' | 3:K:169:A:O5' | 1.99 | 0.62 |
| 3:K:97:A:C5 | 3:K:98:A:N7 | 2.66 | 0.62 |
| 4:L:434:U:H2' | 4:L:435:U:C6 | 2.33 | 0.62 |
| 4:L:493:U:C2 | 4:L:494:U:C5 | 2.87 | 0.62 |
| 4:L:672:U:N3 | 4:L:673:U:C5 | 2.67 | 0.62 |
| 4:L:692:U:H2' | 4:L:693:U:C6 | 2.30 | 0.62 |
| 4:L:718:U:O2 | 4:L:719:U:C6 | 2.51 | 0.62 |
| 4:L:783:U:H2' | 4:L:784:U:C6 | 2.34 | 0.62 |
| 5:M:327:U:O2' | 5:M:328:U:C5' | 2.46 | 0.62 |
| 5:M:461:U:HO2' | 5:M:462:U:H5' | 1.63 | 0.62 |
| 5:M:483:U:H2' | 5:M:484:U:C5' | 2.28 | 0.62 |
| 5:M:491:U:C2' | 5:M:492:U:C5' | 2.77 | 0.62 |
| 5:M:492:U:N3 | 5:M:493:U:C5 | 2.68 | 0.62 |
| 5:M:506:U:C2 | 5:M:507:U:C5 | 2.87 | 0.62 |
| 5:M:512:U:C2' | 5:M:513:U:O4' | 2.45 | 0.62 |
| 6:N:426:U:O2 | 6:N:427:U:C6 | 2.53 | 0.62 |
| 6:N:439:U:C2 | 6:N:440:U:C6 | 2.87 | 0.62 |
| 1:I:192:A:C2' | 1:I:193:A:C5' | 2.77 | 0.62 |
| 1:I:212:A:N3 | 1:I:213:A:C8 | 2.67 | 0.62 |
| 1:I:261:A:N6 | 1:I:262:A:N6 | 2.46 | 0.62 |
| 1:I:275:A:C2 | 4:L:551:U:C2 | 2.87 | 0.62 |
| 1:I:333:A:C2 | 1:I:334:A:C8 | 2.86 | 0.62 |
| 1:I:68:A:C2 | 1:I:69:A:C4 | 2.87 | 0.62 |
| 1:I:70:A:H2' | 1:I:71:A:C5' | 2.29 | 0.62 |
| 1:I:73:A:N3 | 1:I:74:A:C8 | 2.67 | 0.62 |
| 2:J:108:A:C2 | 2:J:109:A:C4 | 2.87 | 0.62 |
| 2:J:255:A:O2' | 2:J:256:A:H5' | 1.99 | 0.62 |
| 2:J:41:A:H2' | 2:J:42:A:H8 | 1.63 | 0.62 |
| 3:K:130:A:C2 | 3:K:131:A:C8 | 2.87 | 0.62 |
| 3:K:169:A:C2' | 3:K:170:A:H5' | 2.28 | 0.62 |
| 3:K:238:A:H2' | 3:K:239:A:H8 | 1.62 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:65:A:N6 | 3:K:66:A:C6 | 2.65 | 0.62 |
| 3:K:86:A:C2 | 3:K:87:A:C8 | 2.87 | 0.62 |
| 4:L:544:U:C2 | 4:L:545:U:C5 | 2.88 | 0.62 |
| 4:L:544:U:C5 | 4:L:545:U:C5 | 2.87 | 0.62 |
| 4:L:548:U:C2 | 4:L:549:U:C5 | 2.87 | 0.62 |
| 4:L:629:U:C2' | 4:L:630:U:H5' | 2.28 | 0.62 |
| 4:L:711:U:C4 | 4:L:712:U:O4 | 2.52 | 0.62 |
| 4:L:738:U:N3 | 4:L:739:U:O4 | 2.32 | 0.62 |
| 5:M:341:U:HO2' | 5:M:342:U:H5' | 1.63 | 0.62 |
| 5:M:350:U:O2 | 5:M:351:U:C6 | 2.52 | 0.62 |
| 5:M:361:U:H2' | 5:M:362:U:C6 | 2.34 | 0.62 |
| 5:M:474:U:C2' | 5:M:475:U:P | 2.88 | 0.62 |
| 5:M:489:U:H2' | 5:M:490:U:C4' | 2.30 | 0.62 |
| 5:M:495:U:C2' | 5:M:496:U:C5' | 2.75 | 0.62 |
| 5:M:520:U:N3 | 5:M:521:U:C5 | 2.67 | 0.62 |
| 6:N:399:U:C4 | 6:N:400:U:C5 | 2.87 | 0.62 |
| 6:N:429:U:H2' | 6:N:430:U:H6 | 1.61 | 0.62 |
| 6:N:496:U:O2' | 6:N:497:U:C5' | 2.43 | 0.62 |
| 1:I:101:A:O2' | 1:I:102:A:P | 2.58 | 0.62 |
| 1:I:12:A:H2' | 1:I:13:A:C5' | 2.29 | 0.62 |
| 1:I:153:A:O2' | 1:I:154:A:H5' | 1.98 | 0.62 |
| 1:I:14:A:H2' | 1:I:15:A:H8 | 1.62 | 0.62 |
| 1:I:18:A:C2 | 1:I:19:A:C4 | 2.87 | 0.62 |
| 1:I:268:A:N3 | 1:I:269:A:O4' | 2.32 | 0.62 |
| 1:I:353:A:C2' | 1:I:354:A:O5' | 2.48 | 0.62 |
| 1:I:82:A:C5 | 1:I:83:A:C5 | 2.86 | 0.62 |
| 1:I:97:A:C4 | 1:I:98:A:C8 | 2.88 | 0.62 |
| 2:J:179:A:N3 | 2:J:180:A:C8 | 2.67 | 0.62 |
| 2:J:17:A:C2' | 2:J:18:A:H5' | 2.28 | 0.62 |
| 2:J:28:A:H2' | 2:J:29:A:H8 | 1.65 | 0.62 |
| 2:J:34:A:O2' | 2:J:35:A:C5' | 2.44 | 0.62 |
| 3:K:111:A:N3 | 3:K:112:A:C8 | 2.68 | 0.62 |
| 3:K:203:A:N1 | 3:K:204:A:C6 | 2.67 | 0.62 |
| 3:K:89:A:O2' | 3:K:90:A:O5' | 2.16 | 0.62 |
| 4:L:471:U:O2' | 4:L:472:U:C5' | 2.47 | 0.62 |
| 1:I:86:A:C2 | 4:L:740:U:C2 | 2.88 | 0.62 |
| 4:L:751:U:C2' | 4:L:752:U:C4' | 2.76 | 0.62 |
| 4:L:758:U:C4 | 4:L:759:U:C4 | 2.86 | 0.62 |
| 4:L:767:U:O2' | 4:L:768:U:P | 2.57 | 0.62 |
| 5:M:290:U:H2' | 5:M:291:U:C6 | 2.35 | 0.62 |
| 5:M:299:U:C4 | 5:M:300:U:C5 | 2.86 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:316:U:N3 | 5:M:317:U:C4 | 2.67 | 0.62 |
| 5:M:367:U:H2' | 5:M:368:U:H6 | 1.63 | 0.62 |
| 5:M:378:U:H2' | 5:M:379:U:C6 | 2.34 | 0.62 |
| 5:M:458:U:C2' | 5:M:459:U:O4' | 2.45 | 0.62 |
| 5:M:510:U:C2 | 5:M:511:U:C5 | 2.87 | 0.62 |
| 6:N:450:U:O2' | 6:N:451:U:C4' | 2.47 | 0.62 |
| 1:I:15:A:H2' | 1:I:16:A:C4' | 2.30 | 0.62 |
| 1:I:318:A:C2' | 1:I:319:A:C5' | 2.77 | 0.62 |
| 1:I:322:A:C2' | 1:I:323:A:H5' | 2.28 | 0.62 |
| 1:I:376:A:C5 | 1:I:377:A:N7 | 2.67 | 0.62 |
| 1:I:44:A:C2 | 1:I:45:A:N9 | 2.67 | 0.62 |
| 2:J:29:A:C6 | 2:J:30:A:N7 | 2.67 | 0.62 |
| 2:J:57:A:N1 | 2:J:58:A:C5 | 2.67 | 0.62 |
| 2:J:83:A:H2 | 2:J:84:A:C4 | 2.09 | 0.62 |
| 3:K:125:A:N3 | 3:K:126:A:C8 | 2.67 | 0.62 |
| 3:K:139:A:N3 | 3:K:140:A:C8 | 2.67 | 0.62 |
| 3:K:90:A:HO2' | 3:K:91:A:C5' | 1.97 | 0.62 |
| 3:K:94:A:N6 | 3:K:95:A:N6 | 2.47 | 0.62 |
| 4:L:428:U:H2' | 4:L:429:U:H6 | 1.64 | 0.62 |
| 4:L:451:U:HO3' | 4:L:452:U:P | 2.18 | 0.62 |
| 4:L:460:U:H2' | 4:L:461:U:H6 | 1.64 | 0.62 |
| 4:L:488:U:C2' | 4:L:489:U:O4' | 2.47 | 0.62 |
| 4:L:494:U:C2' | 4:L:495:U:C5' | 2.78 | 0.62 |
| 4:L:573:U:C2' | 4:L:574:U:H6 | 2.01 | 0.62 |
| 4:L:642:U:C2 | 4:L:643:U:C6 | 2.88 | 0.62 |
| 4:L:816:U:N3 | 4:L:817:U:C4 | 2.67 | 0.62 |
| 5:M:303:U:H2' | 5:M:304:U:H6 | 1.64 | 0.62 |
| 5:M:310:U:H2' | 5:M:311:U:O4' | 1.99 | 0.62 |
| 5:M:338:U:HO2' | 5:M:339:U:H5' | 1.63 | 0.62 |
| 5:M:348:U:C6 | 5:M:349:U:H5 | 2.18 | 0.62 |
| 5:M:354:U:H2' | 5:M:355:U:H6 | 1.65 | 0.62 |
| 5:M:372:U:C2 | 5:M:373:U:C6 | 2.87 | 0.62 |
| 5:M:453:U:N3 | 5:M:454:U:C5 | 2.67 | 0.62 |
| 6:N:276:U:C2 | 6:N:277:U:C5 | 2.88 | 0.62 |
| 6:N:324:U:O2' | 6:N:325:U:H5' | 2.00 | 0.62 |
| 6:N:326:U:N3 | 6:N:327:U:C4 | 2.68 | 0.62 |
| 6:N:328:U:C2 | 6:N:329:U:C5 | 2.88 | 0.62 |
| 6:N:489:U:O2' | 6:N:490:U:O5' | 2.17 | 0.62 |
| 1:I:13:A:N3 | 1:I:14:A:C8 | 2.68 | 0.62 |
| 1:I:212:A:C2' | 1:I:213:A:C5' | 2.77 | 0.62 |
| 1:I:223:A:C4 | 1:I:224:A:C8 | 2.87 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:246:A:C2' | 1:I:247:A:H5' | 2.28 | 0.62 |
| 1:I:263:A:H2' | 1:I:264:A:O5' | 1.99 | 0.62 |
| 1:I:271:A:H2' | 1:I:272:A:H8 | 1.62 | 0.62 |
| 1:I:280:A:C6 | 1:I:281:A:N6 | 2.68 | 0.62 |
| 1:I:72:A:C6 | 1:I:73:A:C5 | 2.87 | 0.62 |
| 2:J:132:A:C2' | 2:J:133:A:O4' | 2.47 | 0.62 |
| 2:J:201:A:N6 | 2:J:202:A:H62 | 1.96 | 0.62 |
| 2:J:264:A:H2' | 2:J:265:A:C8 | 2.34 | 0.62 |
| 2:J:26:A:C2 | 2:J:27:A:C8 | 2.87 | 0.62 |
| 3:K:235:A:O2' | 3:K:236:A:H5' | 2.00 | 0.62 |
| 4:L:438:U:C4 | 4:L:439:U:C4 | 2.82 | 0.62 |
| 4:L:501:U:C2 | 4:L:502:U:C6 | 2.88 | 0.62 |
| 4:L:503:U:C2 | 4:L:504:U:C5 | 2.88 | 0.62 |
| 4:L:525:U:H2' | 4:L:526:U:O4' | 2.00 | 0.62 |
| 4:L:534:U:C2 | 4:L:535:U:C5 | 2.87 | 0.62 |
| 4:L:605:U:C2 | 4:L:606:U:C6 | 2.88 | 0.62 |
| 4:L:639:U:C2 | 4:L:640:U:C5 | 2.88 | 0.62 |
| 4:L:649:U:N3 | 4:L:650:U:C5 | 2.68 | 0.62 |
| 4:L:685:U:O2' | 4:L:686:U:P | 2.57 | 0.62 |
| 4:L:745:U:C2 | 4:L:746:U:H5 | 2.11 | 0.62 |
| 5:M:462:U:C2' | 5:M:463:U:C5' | 2.77 | 0.62 |
| 6:N:305:U:C2' | 6:N:306:U:O4' | 2.47 | 0.62 |
| 6:N:447:U:C2 | 6:N:448:U:C6 | 2.88 | 0.62 |
| 1:I:13:A:C2' | 1:I:14:A:H8 | 2.11 | 0.62 |
| 1:I:152:A:C6 | 1:I:153:A:N6 | 2.68 | 0.62 |
| 1:I:181:A:C4 | 1:I:182:A:N7 | 2.68 | 0.62 |
| 1:I:18:A:C2 | 1:I:19:A:C5 | 2.87 | 0.62 |
| 1:I:18:A:O2' | 1:I:19:A:C5' | 2.44 | 0.62 |
| 1:I:189:A:C4 | 1:I:190:A:C8 | 2.88 | 0.62 |
| 1:I:190:A:N3 | 1:I:191:A:C8 | 2.67 | 0.62 |
| 1:I:252:A:H2' | 1:I:253:A:O5' | 1.98 | 0.62 |
| 1:I:347:A:C2' | 1:I:348:A:C5' | 2.76 | 0.62 |
| 1:I:59:A:C2 | 1:I:60:A:C8 | 2.87 | 0.62 |
| 1:I:88:A:H2' | 1:I:89:A:O5' | 1.99 | 0.62 |
| 2:J:11:A:C2 | 2:J:12:A:C4 | 2.88 | 0.62 |
| 2:J:171:A:N3 | 2:J:172:A:C5 | 2.62 | 0.62 |
| 2:J:188:A:C2 | 2:J:189:A:C8 | 2.88 | 0.62 |
| 2:J:83:A:C2' | 2:J:84:A:O5' | 2.47 | 0.62 |
| 2:J:97:A:C4 | 2:J:98:A:N7 | 2.67 | 0.62 |
| 3:K:142:A:O2' | 3:K:143:A:O5' | 2.18 | 0.62 |
| 3:K:210:A:C2' | 3:K:211:A:H5' | 2.29 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:243:A:C3' | 3:K:244:A:P | 2.86 | 0.62 |
| 3:K:41:A:N3 | 3:K:42:A:C8 | 2.68 | 0.62 |
| 4:L:487:U:H2' | 4:L:488:U:O5' | 2.00 | 0.62 |
| 4:L:524:U:C2' | 4:L:525:U:C5' | 2.78 | 0.62 |
| 4:L:525:U:H2' | 4:L:526:U:C5' | 2.29 | 0.62 |
| 4:L:771:U:C2' | 4:L:772:U:H5' | 2.29 | 0.62 |
| 5:M:305:U:H2' | 5:M:306:U:C6 | 2.34 | 0.62 |
| 5:M:328:U:C2 | 5:M:329:U:H5 | 2.13 | 0.62 |
| 5:M:417:U:H2' | 5:M:418:U:C6 | 2.34 | 0.62 |
| 6:N:310:U:H2' | 6:N:311:U:O4' | 1.99 | 0.62 |
| 6:N:332:U:C2 | 6:N:333:U:C5 | 2.87 | 0.62 |
| 6:N:473:U:N3 | 6:N:474:U:C5 | 2.67 | 0.62 |
| 1:I:151:A:C2 | 1:I:152:A:C8 | 2.88 | 0.62 |
| 1:I:181:A:C6 | 1:I:182:A:C5 | 2.87 | 0.62 |
| 1:I:25:A:C2 | 1:I:26:A:C8 | 2.88 | 0.62 |
| 1:I:271:A:C4 | 1:I:272:A:C8 | 2.86 | 0.62 |
| 1:I:311:A:HO2' | 1:I:312:A:H5' | 1.60 | 0.62 |
| 1:I:96:A:H2' | 1:I:97:A:C8 | 2.34 | 0.62 |
| 2:J:101:A:H2' | 2:J:102:A:C8 | 2.35 | 0.62 |
| 2:J:25:A:N3 | 2:J:26:A:C8 | 2.67 | 0.62 |
| 2:J:27:A:C2 | 2:J:28:A:C4 | 2.88 | 0.62 |
| 2:J:52:A:C5 | 2:J:53:A:N7 | 2.68 | 0.62 |
| 2:J:85:A:C2 | 2:J:86:A:N7 | 2.68 | 0.62 |
| 2:J:94:A:C4 | 2:J:95:A:C8 | 2.88 | 0.62 |
| 2:J:98:A:C4 | 2:J:99:A:N7 | 2.68 | 0.62 |
| 3:K:108:A:C2' | 3:K:109:A:H5' | 2.30 | 0.62 |
| 3:K:147:A:N3 | 3:K:148:A:N7 | 2.48 | 0.62 |
| 3:K:213:A:H2' | 3:K:214:A:O4' | 1.98 | 0.62 |
| 3:K:221:A:N6 | 3:K:222:A:N6 | 2.47 | 0.62 |
| 3:K:65:A:C4 | 3:K:66:A:N7 | 2.67 | 0.62 |
| 4:L:509:U:O2' | 4:L:510:U:C5' | 2.41 | 0.62 |
| 4:L:600:U:C2 | 4:L:601:U:C5 | 2.88 | 0.62 |
| 4:L:637:U:C4 | 4:L:638:U:C5 | 2.88 | 0.62 |
| 4:L:671:U:H2' | 4:L:672:U:O4' | 2.00 | 0.62 |
| 4:L:771:U:H2' | 4:L:772:U:O5' | 2.00 | 0.62 |
| 5:M:349:U:C4 | 5:M:350:U:C5 | 2.88 | 0.62 |
| 5:M:355:U:H2' | 5:M:356:U:H6 | 1.64 | 0.62 |
| 5:M:372:U:C2' | 5:M:373:U:H5' | 2.29 | 0.62 |
| 5:M:406:U:C2' | 5:M:407:U:C4' | 2.77 | 0.62 |
| 5:M:509:U:O2' | 5:M:510:U:C5' | 2.39 | 0.62 |
| 6:N:424:U:O2' | 6:N:425:U:H5' | 2.00 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:442:U:N3 | 6:N:443:U:C5 | 2.68 | 0.62 |
| 6:N:447:U:C2 | 6:N:448:U:C5 | 2.87 | 0.62 |
| 6:N:447:U:N3 | 6:N:448:U:C5 | 2.68 | 0.62 |
| 1:I:135:A:C6 | 1:I:136:A:N7 | 2.67 | 0.62 |
| 1:I:17:A:C2 | 1:I:18:A:N7 | 2.66 | 0.62 |
| 1:I:242:A:C2 | 1:I:243:A:H1' | 2.34 | 0.62 |
| 1:I:267:A:C6 | 1:I:268:A:N6 | 2.68 | 0.62 |
| 1:I:287:A:H2' | 1:I:288:A:C5' | 2.25 | 0.62 |
| 1:I:334:A:C5 | 1:I:335:A:N7 | 2.68 | 0.62 |
| 1:I:334:A:H2' | 1:I:335:A:O4' | 2.00 | 0.62 |
| 1:I:37:A:N3 | 1:I:38:A:C8 | 2.68 | 0.62 |
| 1:I:97:A:C2' | 1:I:98:A:O5' | 2.47 | 0.62 |
| 2:J:100:A:H2' | 2:J:101:A:O5' | 1.99 | 0.62 |
| 3:K:106:A:C5 | 3:K:107:A:N7 | 2.67 | 0.62 |
| 3:K:107:A:C2 | 3:K:108:A:C4 | 2.88 | 0.62 |
| 3:K:124:A:O2' | 3:K:125:A:O5' | 2.17 | 0.62 |
| 3:K:173:A:HO2' | 3:K:174:A:H5' | 1.61 | 0.62 |
| 3:K:218:A:H2' | 3:K:219:A:H8 | 1.63 | 0.62 |
| 3:K:49:A:H2 | 3:K:50:A:C4 | 2.18 | 0.62 |
| 3:K:57:A:C6 | 3:K:58:A:N6 | 2.67 | 0.62 |
| 3:K:68:A:O2' | 3:K:69:A:H5' | 1.99 | 0.62 |
| 3:K:95:A:C4 | 3:K:96:A:C8 | 2.87 | 0.62 |
| 4:L:425:U:HO2' | 4:L:426:U:H5' | 1.64 | 0.62 |
| 4:L:486:U:N3 | 4:L:487:U:C4 | 2.67 | 0.62 |
| 4:L:547:U:C2' | 4:L:548:U:C6 | 2.78 | 0.62 |
| 4:L:546:U:C2' | 4:L:547:U:H5' | 2.30 | 0.62 |
| 5:M:336:U:O4 | 5:M:337:U:O4 | 2.17 | 0.62 |
| 5:M:436:U:C2' | 5:M:437:U:H5' | 2.30 | 0.62 |
| 5:M:453:U:N3 | 5:M:454:U:C4 | 2.68 | 0.62 |
| 5:M:467:U:H2' | 5:M:468:U:O5' | 2.00 | 0.62 |
| 5:M:511:U:H2' | 5:M:512:U:C6 | 2.35 | 0.62 |
| 6:N:311:U:O2' | 6:N:312:U:O4' | 2.17 | 0.62 |
| 6:N:342:U:O2' | 6:N:343:U:C5' | 2.37 | 0.62 |
| 6:N:341:U:C3' | 6:N:342:U:P | 2.86 | 0.62 |
| 6:N:358:U:C2 | 6:N:359:U:C5 | 2.87 | 0.62 |
| 6:N:426:U:C2 | 6:N:427:U:C5 | 2.88 | 0.62 |
| 6:N:495:U:C2 | 6:N:496:U:C5 | 2.88 | 0.62 |
| 1:I:112:A:H2' | 1:I:113:A:O4' | 2.00 | 0.62 |
| 1:I:174:A:C4 | 1:I:175:A:C8 | 2.87 | 0.62 |
| 1:I:178:A:C2 | 1:I:179:A:C4 | 2.88 | 0.62 |
| 1:I:248:A:C2 | 1:I:249:A:N9 | 2.68 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:323:A:N3 | 1:I:324:A:O4' | 2.33 | 0.62 |
| 1:I:47:A:O2' | 1:I:48:A:P | 2.57 | 0.62 |
| 1:I:61:A:C2 | 1:I:62:A:C5 | 2.88 | 0.62 |
| 2:J:142:A:C4 | 2:J:143:A:C8 | 2.87 | 0.62 |
| 2:J:15:A:C2 | 2:J:16:A:C8 | 2.88 | 0.62 |
| 2:J:159:A:C4 | 2:J:160:A:C8 | 2.87 | 0.62 |
| 2:J:218:A:C2' | 2:J:219:A:O5' | 2.47 | 0.62 |
| 2:J:29:A:N3 | 2:J:30:A:N9 | 2.48 | 0.62 |
| 2:J:34:A:O2' | 2:J:35:A:P | 2.57 | 0.62 |
| 2:J:55:A:C2' | 2:J:56:A:C5' | 2.78 | 0.62 |
| 3:K:147:A:H2' | 3:K:148:A:C8 | 2.34 | 0.62 |
| 3:K:158:A:O2' | 3:K:159:A:H5' | 2.00 | 0.62 |
| 3:K:212:A:H62 | 3:K:213:A:N6 | 1.97 | 0.62 |
| 4:L:510:U:H2' | 4:L:511:U:C6 | 2.33 | 0.62 |
| 4:L:689:U:N3 | 4:L:690:U:C5 | 2.68 | 0.62 |
| 2:J:224:A:N1 | 5:M:330:U:C4 | 2.68 | 0.62 |
| 5:M:336:U:C6 | 5:M:337:U:C5 | 2.88 | 0.62 |
| 5:M:522:U:C2 | 5:M:523:U:C6 | 2.88 | 0.62 |
| 5:M:524:U:C4 | 5:M:525:U:O4 | 2.53 | 0.62 |
| 6:N:316:U:O2' | 6:N:317:U:H5' | 2.00 | 0.62 |
| 6:N:403:U:C2' | 6:N:404:U:H5' | 2.30 | 0.62 |
| 6:N:440:U:H2' | 6:N:441:U:C4' | 2.29 | 0.62 |
| 1:I:101:A:C2' | 1:I:102:A:H8 | 2.13 | 0.61 |
| 1:I:128:A:C4 | 1:I:129:A:N7 | 2.68 | 0.61 |
| 1:I:143:A:C4 | 1:I:144:A:N7 | 2.68 | 0.61 |
| 1:I:169:A:O2' | 1:I:170:A:H5' | 2.00 | 0.61 |
| 1:I:390:A:H2' | 1:I:391:A:H8 | 1.64 | 0.61 |
| 2:J:122:A:H2' | 2:J:123:A:C8 | 2.35 | 0.61 |
| 2:J:221:A:H2' | 2:J:222:A:O5' | 2.00 | 0.61 |
| 2:J:90:A:H2' | 2:J:91:A:O4' | 2.00 | 0.61 |
| 2:J:92:A:C2' | 2:J:93:A:H8 | 2.13 | 0.61 |
| 3:K:117:A:N1 | 3:K:118:A:C5 | 2.68 | 0.61 |
| 3:K:154:A:C5 | 3:K:155:A:C5 | 2.87 | 0.61 |
| 3:K:16:A:C3' | 3:K:17:A:P | 2.87 | 0.61 |
| 3:K:208:A:C3' | 3:K:209:A:P | 2.87 | 0.61 |
| 3:K:45:A:O3' | 3:K:46:A:O5' | 2.17 | 0.61 |
| 3:K:91:A:H2' | 3:K:92:A:H8 | 1.63 | 0.61 |
| 4:L:534:U:H2' | 4:L:535:U:H6 | 1.64 | 0.61 |
| 4:L:598:U:C2' | 4:L:599:U:C5' | 2.78 | 0.61 |
| 4:L:598:U:HO2' | 4:L:599:U:H5' | 1.65 | 0.61 |
| 4:L:712:U:O2 | 4:L:713:U:C1' | 2.48 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:722:U:O2' | 4:L:723:U:H6 | 1.83 | 0.61 |
| 4:L:763:U:O2' | 4:L:764:U:O4' | 2.17 | 0.61 |
| 4:L:794:U:C2' | 4:L:795:U:O5' | 2.48 | 0.61 |
| 5:M:304:U:N3 | 5:M:305:U:C4 | 2.68 | 0.61 |
| 5:M:434:U:C2 | 5:M:435:U:C6 | 2.87 | 0.61 |
| 5:M:518:U:O2' | 5:M:519:U:P | 2.55 | 0.61 |
| 5:M:520:U:O2' | 5:M:521:U:C5' | 2.38 | 0.61 |
| 6:N:342:U:C2' | 6:N:343:U:H5' | 2.30 | 0.61 |
| 6:N:475:U:C2' | 6:N:476:U:H5' | 2.29 | 0.61 |
| 1:I:236:A:C2 | 1:I:237:A:C5 | 2.89 | 0.61 |
| 1:I:250:A:O5' | 1:I:251:A:OP2 | 2.18 | 0.61 |
| 1:I:265:A:C4 | 1:I:266:A:N7 | 2.68 | 0.61 |
| 1:I:329:A:C6 | 1:I:330:A:C5 | 2.88 | 0.61 |
| 2:J:117:A:C2 | 2:J:118:A:C8 | 2.84 | 0.61 |
| 2:J:122:A:C5 | 2:J:123:A:N7 | 2.69 | 0.61 |
| 2:J:160:A:C2' | 2:J:161:A:O5' | 2.46 | 0.61 |
| 2:J:223:A:C5 | 2:J:224:A:C8 | 2.87 | 0.61 |
| 2:J:29:A:N3 | 2:J:30:A:C8 | 2.68 | 0.61 |
| 2:J:44:A:H2' | 2:J:45:A:C5' | 2.28 | 0.61 |
| 2:J:47:A:C2 | 2:J:48:A:C1' | 2.83 | 0.61 |
| 3:K:151:A:O2' | 3:K:152:A:C5' | 2.45 | 0.61 |
| 3:K:194:A:H2' | 3:K:195:A:H8 | 1.65 | 0.61 |
| 3:K:37:A:H2' | 3:K:38:A:H8 | 1.64 | 0.61 |
| 3:K:4:A:H2' | 3:K:5:A:C8 | 2.34 | 0.61 |
| 3:K:54:A:C2' | 3:K:55:A:P | 2.89 | 0.61 |
| 3:K:55:A:O2' | 3:K:56:A:H5' | 1.99 | 0.61 |
| 4:L:429:U:H2' | 4:L:430:U:C6 | 2.35 | 0.61 |
| 4:L:460:U:C2' | 4:L:461:U:O5' | 2.49 | 0.61 |
| 4:L:481:U:O2' | 4:L:482:U:H5' | 1.99 | 0.61 |
| 4:L:502:U:H2' | 4:L:503:U:C6 | 2.36 | 0.61 |
| 4:L:529:U:C2' | 4:L:530:U:O5' | 2.47 | 0.61 |
| 4:L:590:U:C2 | 4:L:591:U:C6 | 2.88 | 0.61 |
| 4:L:692:U:C2' | 4:L:693:U:O5' | 2.47 | 0.61 |
| 4:L:698:U:H2' | 4:L:699:U:H6 | 1.65 | 0.61 |
| 4:L:713:U:O2' | 4:L:714:U:O4' | 2.18 | 0.61 |
| 4:L:777:U:N3 | 4:L:778:U:C5 | 2.68 | 0.61 |
| 5:M:296:U:C2 | 5:M:297:U:C6 | 2.88 | 0.61 |
| 5:M:336:U:N1 | 5:M:337:U:C6 | 2.67 | 0.61 |
| 5:M:346:U:O2 | 5:M:347:U:C6 | 2.53 | 0.61 |
| 5:M:347:U:C2' | 5:M:348:U:O4' | 2.49 | 0.61 |
| 5:M:351:U:N3 | 5:M:352:U:C5 | 2.68 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:461:U:C2 | 5:M:462:U:C6 | 2.88 | 0.61 |
| 5:M:505:U:O2 | 5:M:506:U:C6 | 2.53 | 0.61 |
| 6:N:327:U:H2' | 6:N:328:U:C4' | 2.29 | 0.61 |
| 6:N:336:U:H2' | 6:N:337:U:H6 | 1.64 | 0.61 |
| 1:I:206:A:O2' | 1:I:207:A:H5' | 2.00 | 0.61 |
| 1:I:400:A:H2' | 1:I:401:A:H8 | 1.65 | 0.61 |
| 1:I:58:A:C2' | 1:I:59:A:H8 | 2.08 | 0.61 |
| 1:I:62:A:N3 | 1:I:63:A:N9 | 2.48 | 0.61 |
| 1:I:68:A:N3 | 1:I:69:A:C8 | 2.68 | 0.61 |
| 1:I:96:A:H62 | 1:I:97:A:N6 | 1.96 | 0.61 |
| 2:J:100:A:C2' | 2:J:101:A:O5' | 2.46 | 0.61 |
| 2:J:122:A:C4 | 2:J:123:A:N7 | 2.69 | 0.61 |
| 2:J:198:A:C2' | 2:J:199:A:C5' | 2.78 | 0.61 |
| 2:J:44:A:C2 | 2:J:45:A:C8 | 2.89 | 0.61 |
| 3:K:104:A:H2' | 3:K:105:A:C8 | 2.35 | 0.61 |
| 3:K:193:A:O2' | 3:K:194:A:H5' | 2.00 | 0.61 |
| 3:K:99:A:C2 | 3:K:100:A:C8 | 2.88 | 0.61 |
| 4:L:508:U:C4 | 4:L:509:U:C5 | 2.88 | 0.61 |
| 4:L:528:U:H2' | 4:L:529:U:C6 | 2.33 | 0.61 |
| 4:L:590:U:N3 | 4:L:591:U:C5 | 2.67 | 0.61 |
| 4:L:656:U:N3 | 4:L:657:U:C5 | 2.69 | 0.61 |
| 4:L:723:U:C6 | 4:L:724:U:C6 | 2.87 | 0.61 |
| 4:L:786:U:O2 | 4:L:787:U:C6 | 2.53 | 0.61 |
| 5:M:310:U:C2' | 5:M:311:U:C5' | 2.78 | 0.61 |
| 5:M:355:U:C2' | 5:M:356:U:H5' | 2.29 | 0.61 |
| 5:M:502:U:C2 | 5:M:503:U:C6 | 2.89 | 0.61 |
| 5:M:528:U:C2 | 5:M:529:U:C5 | 2.88 | 0.61 |
| 5:M:541:U:H2' | 5:M:542:U:C6 | 2.34 | 0.61 |
| 5:M:548:U:H2' | 5:M:549:U:C6 | 2.35 | 0.61 |
| 6:N:331:U:C2 | 6:N:332:U:C5 | 2.88 | 0.61 |
| 6:N:339:U:C2' | 6:N:340:U:H5' | 2.30 | 0.61 |
| 6:N:465:U:C4 | 6:N:466:U:O4 | 2.52 | 0.61 |
| 1:I:109:A:H2 | 1:I:110:A:N3 | 1.98 | 0.61 |
| 1:I:174:A:C2 | 1:I:175:A:C4 | 2.89 | 0.61 |
| 1:I:194:A:C6 | 1:I:195:A:N6 | 2.68 | 0.61 |
| 1:I:244:A:HO2' | 1:I:245:A:H5' | 1.64 | 0.61 |
| 1:I:287:A:H2' | 1:I:288:A:C4' | 2.30 | 0.61 |
| 1:I:358:A:H2 | 1:I:359:A:C4 | 2.19 | 0.61 |
| 1:I:46:A:C4 | 1:I:47:A:N7 | 2.68 | 0.61 |
| 1:I:54:A:N1 | 1:I:55:A:N6 | 2.48 | 0.61 |
| 1:I:73:A:H2' | 1:I:74:A:C1' | 2.29 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:88:A:C2' | 1:I:89:A:H5' | 2.26 | 0.61 |
| 2:J:107:A:C2 | 2:J:108:A:C4 | 2.88 | 0.61 |
| 2:J:106:A:C4 | 2:J:107:A:C8 | 2.88 | 0.61 |
| 2:J:182:A:H2' | 2:J:183:A:H8 | 1.65 | 0.61 |
| 2:J:197:A:O2' | 2:J:198:A:H5' | 1.99 | 0.61 |
| 2:J:236:A:C6 | 2:J:237:A:N6 | 2.67 | 0.61 |
| 3:K:130:A:H2' | 3:K:131:A:O5' | 2.00 | 0.61 |
| 3:K:142:A:O2' | 3:K:143:A:P | 2.57 | 0.61 |
| 3:K:181:A:C4 | 3:K:182:A:N7 | 2.69 | 0.61 |
| 3:K:81:A:H2' | 3:K:82:A:H8 | 1.66 | 0.61 |
| 3:K:96:A:O2' | 3:K:97:A:O4' | 2.18 | 0.61 |
| 4:L:557:U:N3 | 4:L:558:U:C4 | 2.69 | 0.61 |
| 4:L:627:U:H2' | 4:L:628:U:O5' | 2.00 | 0.61 |
| 5:M:298:U:O2' | 5:M:299:U:C5' | 2.36 | 0.61 |
| 5:M:303:U:O2' | 5:M:304:U:C5' | 2.43 | 0.61 |
| 5:M:392:U:C3' | 5:M:393:U:C5' | 2.54 | 0.61 |
| 6:N:294:U:C2' | 6:N:295:U:H5' | 2.29 | 0.61 |
| 6:N:320:U:O2' | 6:N:321:U:C4' | 2.48 | 0.61 |
| 6:N:341:U:HO3' | 6:N:342:U:P | 2.23 | 0.61 |
| 6:N:425:U:C3' | 6:N:426:U:H6 | 2.12 | 0.61 |
| 1:I:132:A:HO2' | 1:I:133:A:C4' | 2.13 | 0.61 |
| 1:I:156:A:C5 | 1:I:157:A:N7 | 2.68 | 0.61 |
| 1:I:181:A:C4 | 1:I:182:A:C8 | 2.89 | 0.61 |
| 1:I:188:A:C2' | 1:I:189:A:C5' | 2.79 | 0.61 |
| 1:I:245:A:N1 | 1:I:246:A:C5 | 2.68 | 0.61 |
| 1:I:324:A:H2' | 1:I:325:A:O5' | 2.01 | 0.61 |
| 1:I:65:A:H2' | 1:I:66:A:O4' | 2.00 | 0.61 |
| 1:I:90:A:H2' | 1:I:91:A:C8 | 2.34 | 0.61 |
| 2:J:11:A:C2' | 2:J:12:A:C4' | 2.78 | 0.61 |
| 2:J:120:A:C2 | 2:J:121:A:C8 | 2.89 | 0.61 |
| 2:J:184:A:C2 | 2:J:185:A:N9 | 2.68 | 0.61 |
| 3:K:103:A:C4 | 3:K:104:A:C8 | 2.88 | 0.61 |
| 3:K:138:A:N6 | 3:K:139:A:N6 | 2.47 | 0.61 |
| 3:K:23:A:C3' | 3:K:24:A:P | 2.88 | 0.61 |
| 4:L:460:U:H2' | 4:L:461:U:C5' | 2.30 | 0.61 |
| 4:L:606:U:C2' | 4:L:607:U:H5' | 2.30 | 0.61 |
| 4:L:669:U:C2' | 4:L:670:U:H5' | 2.30 | 0.61 |
| 4:L:699:U:C2 | 4:L:700:U:C5 | 2.87 | 0.61 |
| 4:L:711:U:O2' | 4:L:712:U:O4' | 2.18 | 0.61 |
| 5:M:487:U:H2' | 5:M:488:U:H6 | 1.63 | 0.61 |
| 5:M:496:U:C2 | 5:M:497:U:C6 | 2.89 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:361:U:H2' | 6:N:362:U:H6 | 1.66 | 0.61 |
| 6:N:475:U:H2' | 6:N:476:U:H6 | 1.65 | 0.61 |
| 6:N:527:U:H2' | 6:N:528:U:H6 | 1.66 | 0.61 |
| 1:I:11:A:H2' | 1:I:12:A:C8 | 2.34 | 0.61 |
| 1:I:277:A:C2' | 1:I:278:A:C8 | 2.79 | 0.61 |
| 1:I:285:A:H2' | 1:I:286:A:C5' | 2.31 | 0.61 |
| 1:I:44:A:C2 | 1:I:45:A:N7 | 2.68 | 0.61 |
| 1:I:66:A:C4 | 1:I:67:A:N7 | 2.66 | 0.61 |
| 1:I:89:A:H2' | 1:I:90:A:H8 | 1.64 | 0.61 |
| 2:J:128:A:H2' | 2:J:129:A:C5' | 2.28 | 0.61 |
| 2:J:147:A:H2 | 2:J:148:A:C4 | 2.15 | 0.61 |
| 2:J:202:A:C4 | 2:J:203:A:C8 | 2.88 | 0.61 |
| 2:J:226:A:C2 | 2:J:227:A:N7 | 2.68 | 0.61 |
| 3:K:167:A:H2' | 3:K:168:A:C5' | 2.30 | 0.61 |
| 3:K:241:A:HO3' | 3:K:242:A:P | 2.22 | 0.61 |
| 3:K:5:A:H2' | 3:K:6:A:C8 | 2.36 | 0.61 |
| 3:K:80:A:C2 | 3:K:81:A:C5 | 2.89 | 0.61 |
| 4:L:437:U:H2' | 4:L:438:U:H6 | 1.65 | 0.61 |
| 4:L:471:U:O2' | 4:L:472:U:P | 2.58 | 0.61 |
| 4:L:484:U:C2' | 4:L:485:U:O5' | 2.49 | 0.61 |
| 4:L:548:U:C2 | 4:L:549:U:C6 | 2.88 | 0.61 |
| 4:L:568:U:N3 | 4:L:569:U:C5 | 2.69 | 0.61 |
| 4:L:574:U:O4 | 4:L:575:U:O4 | 2.19 | 0.61 |
| 4:L:595:U:H2' | 4:L:596:U:O4' | 2.00 | 0.61 |
| 4:L:639:U:H2' | 4:L:640:U:C5' | 2.29 | 0.61 |
| 5:M:331:U:H2' | 5:M:332:U:C5' | 2.29 | 0.61 |
| 5:M:437:U:C2 | 5:M:438:U:C6 | 2.89 | 0.61 |
| 5:M:438:U:C2' | 5:M:439:U:C5' | 2.77 | 0.61 |
| 5:M:456:U:C2 | 5:M:457:U:C6 | 2.89 | 0.61 |
| 5:M:491:U:H2' | 5:M:492:U:O5' | 2.01 | 0.61 |
| 6:N:457:U:C3' | 6:N:458:U:P | 2.88 | 0.61 |
| 6:N:492:U:C2' | 6:N:493:U:C5' | 2.78 | 0.61 |
| 1:I:115:A:O2' | 1:I:116:A:C5' | 2.49 | 0.61 |
| 1:I:123:A:C2' | 1:I:124:A:H5' | 2.30 | 0.61 |
| 1:I:135:A:N1 | 1:I:136:A:C5 | 2.68 | 0.61 |
| 1:I:185:A:N3 | 1:I:186:A:C8 | 2.68 | 0.61 |
| 1:I:20:A:C2' | 1:I:21:A:C5' | 2.78 | 0.61 |
| 1:I:227:A:N3 | 1:I:228:A:C8 | 2.69 | 0.61 |
| 1:I:236:A:N1 | 1:I:237:A:C5 | 2.68 | 0.61 |
| 1:I:258:A:C4 | 1:I:259:A:C8 | 2.88 | 0.61 |
| 2:J:102:A:C4 | 2:J:103:A:N7 | 2.68 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:13:A:C2 | 2:J:14:A:N7 | 2.69 | 0.61 |
| 2:J:151:A:O2' | 2:J:152:A:H5' | 2.01 | 0.61 |
| 2:J:204:A:C2' | 2:J:205:A:C8 | 2.77 | 0.61 |
| 2:J:229:A:C2' | 2:J:230:A:C4' | 2.74 | 0.61 |
| 2:J:44:A:C4 | 2:J:45:A:C8 | 2.88 | 0.61 |
| 3:K:100:A:O2' | 3:K:101:A:C4' | 2.49 | 0.61 |
| 3:K:139:A:C2 | 3:K:140:A:C4 | 2.89 | 0.61 |
| 3:K:34:A:O2' | 3:K:35:A:H5' | 2.00 | 0.61 |
| 4:L:417:U:H2' | 4:L:418:U:H6 | 1.65 | 0.61 |
| 4:L:810:U:O2' | 4:L:811:U:C4' | 2.47 | 0.61 |
| 4:L:816:U:C4 | 4:L:817:U:O4 | 2.53 | 0.61 |
| 5:M:348:U:C4 | 5:M:349:U:C5 | 2.87 | 0.61 |
| 5:M:430:U:H2' | 5:M:431:U:H6 | 1.65 | 0.61 |
| 5:M:541:U:HO2' | 5:M:542:U:H5' | 1.64 | 0.61 |
| 6:N:271:U:C3' | 6:N:272:U:P | 2.87 | 0.61 |
| 6:N:350:U:C4 | 6:N:351:U:O4 | 2.54 | 0.61 |
| 6:N:390:U:C2 | 6:N:391:U:C5 | 2.89 | 0.61 |
| 6:N:406:U:N3 | 6:N:407:U:C4 | 2.69 | 0.61 |
| 6:N:449:U:C2' | 6:N:450:U:O4' | 2.49 | 0.61 |
| 6:N:467:U:H2' | 6:N:468:U:C5' | 2.28 | 0.61 |
| 1:I:102:A:C5 | 1:I:103:A:C5 | 2.88 | 0.61 |
| 1:I:16:A:H61 | 1:I:17:A:N6 | 1.99 | 0.61 |
| 1:I:401:A:C6 | 1:I:402:A:N6 | 2.69 | 0.61 |
| 1:I:90:A:C2' | 1:I:91:A:O4' | 2.48 | 0.61 |
| 2:J:101:A:C6 | 2:J:102:A:C5 | 2.89 | 0.61 |
| 2:J:222:A:C2 | 2:J:223:A:C8 | 2.89 | 0.61 |
| 2:J:69:A:C4 | 2:J:70:A:C8 | 2.89 | 0.61 |
| 2:J:6:A:C2 | 2:J:7:A:C5 | 2.89 | 0.61 |
| 2:J:86:A:N3 | 2:J:87:A:C8 | 2.69 | 0.61 |
| 2:J:91:A:C2 | 2:J:92:A:C8 | 2.88 | 0.61 |
| 3:K:118:A:O2' | 3:K:119:A:C4' | 2.47 | 0.61 |
| 3:K:130:A:C2 | 3:K:131:A:C4 | 2.88 | 0.61 |
| 3:K:9:A:O2' | 3:K:10:A:H5' | 2.00 | 0.61 |
| 4:L:517:U:C2' | 4:L:518:U:O4' | 2.46 | 0.61 |
| 4:L:524:U:H2' | 4:L:525:U:O5' | 2.01 | 0.61 |
| 4:L:537:U:HO2' | 4:L:538:U:C4' | 2.14 | 0.61 |
| 4:L:551:U:O2 | 4:L:552:U:C6 | 2.53 | 0.61 |
| 4:L:580:U:C2 | 4:L:581:U:C5 | 2.89 | 0.61 |
| 4:L:612:U:H2' | 4:L:613:U:H6 | 1.66 | 0.61 |
| 4:L:736:U:H2' | 4:L:737:U:O5' | 2.00 | 0.61 |
| 5:M:432:U:H2' | 5:M:433:U:O5' | 1.99 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:452:U:C2' | 5:M:453:U:O5' | 2.48 | 0.61 |
| 6:N:410:U:N3 | 6:N:411:U:C5 | 2.68 | 0.61 |
| 1:I:118:A:N6 | 1:I:119:A:H62 | 1.98 | 0.61 |
| 1:I:150:A:O2' | 1:I:151:A:C5' | 2.42 | 0.61 |
| 1:I:183:A:C2 | 1:I:184:A:C5 | 2.88 | 0.61 |
| 1:I:199:A:O2' | 1:I:200:A:H5' | 2.01 | 0.61 |
| 1:I:227:A:C4 | 1:I:228:A:C8 | 2.88 | 0.61 |
| 1:I:276:A:O2' | 1:I:277:A:H5' | 2.01 | 0.61 |
| 1:I:307:A:H2' | 1:I:308:A:H8 | 1.64 | 0.61 |
| 1:I:61:A:C4 | 1:I:62:A:C8 | 2.89 | 0.61 |
| 1:I:78:A:N1 | 1:I:79:A:C6 | 2.68 | 0.61 |
| 2:J:119:A:N6 | 2:J:120:A:H61 | 1.91 | 0.61 |
| 2:J:118:A:O2' | 2:J:119:A:P | 2.57 | 0.61 |
| 2:J:187:A:N3 | 2:J:188:A:C8 | 2.68 | 0.61 |
| 2:J:21:A:C2 | 2:J:22:A:C8 | 2.89 | 0.61 |
| 2:J:260:A:C2' | 2:J:261:A:C5' | 2.79 | 0.61 |
| 2:J:34:A:C2 | 2:J:35:A:N9 | 2.68 | 0.61 |
| 2:J:61:A:C2 | 2:J:62:A:C4 | 2.88 | 0.61 |
| 3:K:101:A:O2' | 3:K:102:A:H5' | 1.99 | 0.61 |
| 3:K:104:A:H2' | 3:K:105:A:O4' | 2.01 | 0.61 |
| 3:K:137:A:H2' | 3:K:138:A:O5' | 2.01 | 0.61 |
| 3:K:155:A:N6 | 3:K:156:A:C6 | 2.68 | 0.61 |
| 3:K:160:A:C2' | 3:K:161:A:C5' | 2.79 | 0.61 |
| 3:K:99:A:H2' | 3:K:100:A:C4' | 2.30 | 0.61 |
| 4:L:488:U:H2' | 4:L:489:U:C6 | 2.35 | 0.61 |
| 4:L:585:U:H2' | 4:L:586:U:O4' | 2.00 | 0.61 |
| 4:L:588:U:C2 | 4:L:589:U:C5 | 2.89 | 0.61 |
| 4:L:700:U:C2 | 4:L:701:U:C5 | 2.88 | 0.61 |
| 4:L:762:U:C2' | 4:L:763:U:C5' | 2.78 | 0.61 |
| 4:L:762:U:H2' | 4:L:763:U:O5' | 2.01 | 0.61 |
| 4:L:770:U:H2' | 4:L:771:U:H6 | 1.65 | 0.61 |
| 5:M:346:U:H2' | 5:M:347:U:C5' | 2.29 | 0.61 |
| 5:M:375:U:H2' | 5:M:376:U:H6 | 1.63 | 0.61 |
| 5:M:386:U:H2' | 5:M:387:U:C5 | 2.36 | 0.61 |
| 5:M:468:U:C2 | 5:M:469:U:H5 | 2.14 | 0.61 |
| 5:M:522:U:O2' | 5:M:523:U:C5' | 2.37 | 0.61 |
| 5:M:547:U:N3 | 5:M:548:U:C4 | 2.69 | 0.61 |
| 6:N:314:U:H2' | 6:N:315:U:C6 | 2.35 | 0.61 |
| 6:N:417:U:H2' | 6:N:418:U:C5' | 2.28 | 0.61 |
| 1:I:140:A:O2' | 1:I:141:A:P | 2.59 | 0.61 |
| 1:I:142:A:C2 | 1:I:143:A:C4 | 2.89 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:252:A:C2' | 1:I:253:A:C5' | 2.79 | 0.61 |
| 1:I:269:A:C2' | 1:I:270:A:O4' | 2.47 | 0.61 |
| 1:I:320:A:C2 | 1:I:321:A:C8 | 2.88 | 0.61 |
| 1:I:322:A:C6 | 1:I:323:A:C6 | 2.89 | 0.61 |
| 1:I:59:A:C2 | 1:I:60:A:C5 | 2.89 | 0.61 |
| 2:J:116:A:H2' | 2:J:117:A:H8 | 1.66 | 0.61 |
| 2:J:204:A:C2 | 2:J:205:A:C5 | 2.88 | 0.61 |
| 2:J:215:A:H2' | 2:J:216:A:O5' | 1.99 | 0.61 |
| 2:J:53:A:O2' | 2:J:54:A:H5' | 2.01 | 0.61 |
| 2:J:73:A:C2 | 2:J:74:A:C4 | 2.88 | 0.61 |
| 2:J:90:A:O2' | 2:J:91:A:C5' | 2.43 | 0.61 |
| 3:K:122:A:H2' | 3:K:123:A:H8 | 1.66 | 0.61 |
| 3:K:163:A:C2' | 3:K:164:A:H5' | 2.31 | 0.61 |
| 3:K:31:A:C5 | 3:K:32:A:N7 | 2.69 | 0.61 |
| 3:K:87:A:N1 | 3:K:88:A:C5 | 2.69 | 0.61 |
| 4:L:422:U:O2' | 4:L:423:U:C5' | 2.49 | 0.61 |
| 4:L:439:U:C3' | 4:L:440:U:P | 2.87 | 0.61 |
| 4:L:541:U:O2' | 4:L:542:U:C5' | 2.44 | 0.61 |
| 4:L:577:U:H2' | 4:L:578:U:H6 | 1.66 | 0.61 |
| 4:L:596:U:C4 | 4:L:597:U:O4 | 2.54 | 0.61 |
| 4:L:605:U:N3 | 4:L:606:U:C5 | 2.68 | 0.61 |
| 4:L:611:U:N3 | 4:L:612:U:C5 | 2.69 | 0.61 |
| 4:L:650:U:C2' | 4:L:651:U:C5' | 2.79 | 0.61 |
| 4:L:760:U:N3 | 4:L:761:U:C5 | 2.68 | 0.61 |
| 4:L:777:U:H2' | 4:L:778:U:H6 | 1.66 | 0.61 |
| 5:M:455:U:C4 | 5:M:456:U:C5 | 2.89 | 0.61 |
| 5:M:483:U:H2' | 5:M:484:U:O5' | 2.00 | 0.61 |
| 5:M:494:U:C2' | 5:M:495:U:H5' | 2.24 | 0.61 |
| 6:N:379:U:C2' | 6:N:380:U:O4' | 2.47 | 0.61 |
| 6:N:401:U:C2 | 6:N:402:U:C6 | 2.88 | 0.61 |
| 6:N:454:U:C2' | 6:N:455:U:O4' | 2.49 | 0.61 |
| 1:I:222:A:C5 | 1:I:223:A:N7 | 2.69 | 0.60 |
| 1:I:230:A:C2' | 1:I:231:A:O4' | 2.49 | 0.60 |
| 1:I:242:A:C2 | 1:I:243:A:C8 | 2.88 | 0.60 |
| 1:I:309:A:O2' | 1:I:310:A:H5' | 2.01 | 0.60 |
| 1:I:320:A:HO2' | 1:I:321:A:H5' | 1.66 | 0.60 |
| 1:I:365:A:O2' | 1:I:366:A:H5' | 2.01 | 0.60 |
| 1:I:385:A:C3' | 1:I:386:A:P | 2.87 | 0.60 |
| 1:I:67:A:C2' | 1:I:68:A:H8 | 2.14 | 0.60 |
| 2:J:99:A:C4 | 2:J:100:A:N7 | 2.69 | 0.60 |
| 2:J:165:A:C6 | 2:J:166:A:C6 | 2.89 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 2:J:252:A:C2' | 2:J:253:A:C5' | 2.79 | 0.60 |
| 2:J:69:A:C2' | 2:J:70:A:C4' | 2.77 | 0.60 |
| 2:J:84:A:H2' | 2:J:85:A:O4' | 2.01 | 0.60 |
| 2:J:91:A:N3 | 2:J:92:A:C8 | 2.69 | 0.60 |
| 3:K:110:A:C2' | 3:K:111:A:C4' | 2.79 | 0.60 |
| 3:K:163:A:C4 | 3:K:164:A:C8 | 2.88 | 0.60 |
| 3:K:40:A:N6 | 3:K:41:A:H62 | 1.98 | 0.60 |
| 4:L:559:U:H2' | 4:L:560:U:H6 | 1.65 | 0.60 |
| 4:L:738:U:N3 | 4:L:739:U:C4 | 2.69 | 0.60 |
| 4:L:811:U:H2' | 4:L:812:U:C4' | 2.27 | 0.60 |
| 5:M:324:U:C2' | 5:M:325:U:H6 | 2.13 | 0.60 |
| 5:M:376:U:H2' | 5:M:377:U:H6 | 1.64 | 0.60 |
| 5:M:420:U:H2' | 5:M:421:U:C6 | 2.35 | 0.60 |
| 5:M:480:U:H2' | 5:M:481:U:C5 | 2.35 | 0.60 |
| 5:M:496:U:C2 | 5:M:497:U:C5 | 2.88 | 0.60 |
| 5:M:531:U:H2' | 5:M:532:U:O4' | 2.01 | 0.60 |
| 6:N:316:U:O2' | 6:N:317:U:O4' | 2.19 | 0.60 |
| 6:N:318:U:N3 | 6:N:319:U:C4 | 2.69 | 0.60 |
| 6:N:365:U:O2' | 6:N:366:U:P | 2.55 | 0.60 |
| 6:N:377:U:O2 | 6:N:378:U:N1 | 2.34 | 0.60 |
| 6:N:420:U:O2 | 6:N:421:U:C6 | 2.53 | 0.60 |
| 6:N:481:U:H2' | 6:N:482:U:O5' | 2.01 | 0.60 |
| 6:N:527:U:H2' | 6:N:528:U:C6 | 2.35 | 0.60 |
| 1:I:11:A:C4 | 1:I:12:A:N7 | 2.69 | 0.60 |
| 1:I:157:A:C2' | 1:I:158:A:H5' | 2.30 | 0.60 |
| 1:I:244:A:C2 | 1:I:245:A:C5 | 2.89 | 0.60 |
| 1:I:280:A:N1 | 1:I:281:A:C6 | 2.69 | 0.60 |
| 1:I:303:A:N3 | 1:I:304:A:C8 | 2.69 | 0.60 |
| 1:I:343:A:H2' | 1:I:344:A:C5' | 2.31 | 0.60 |
| 1:I:49:A:HO2' | 1:I:50:A:H5' | 1.60 | 0.60 |
| 2:J:69:A:H2' | 2:J:70:A:O5' | 1.99 | 0.60 |
| 3:K:205:A:H2' | 3:K:206:A:C8 | 2.36 | 0.60 |
| 3:K:56:A:H2' | 3:K:57:A:H8 | 1.66 | 0.60 |
| 4:L:531:U:H2' | 4:L:532:U:C5' | 2.30 | 0.60 |
| 4:L:700:U:N3 | 4:L:701:U:C5 | 2.69 | 0.60 |
| 4:L:746:U:H2' | 4:L:747:U:C6 | 2.36 | 0.60 |
| 5:M:327:U:H2' | 5:M:328:U:O5' | 2.01 | 0.60 |
| 5:M:460:U:C2' | 5:M:461:U:C5' | 2.79 | 0.60 |
| 5:M:522:U:H2' | 5:M:523:U:O4' | 2.01 | 0.60 |
| 5:M:534:U:O2' | 5:M:535:U:P | 2.59 | 0.60 |
| 6:N:415:U:C2 | 6:N:416:U:C5 | 2.89 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:104:A:N6 | 1:I:105:A:H62 | 1.97 | 0.60 |
| 1:I:131:A:H2' | 1:I:132:A:H8 | 1.66 | 0.60 |
| 1:I:175:A:H2' | 1:I:176:A:H8 | 1.65 | 0.60 |
| 1:I:18:A:C2 | 4:L:808:U:C2 | 2.89 | 0.60 |
| 1:I:205:A:N3 | 1:I:206:A:C8 | 2.70 | 0.60 |
| 1:I:237:A:C4 | 1:I:238:A:C8 | 2.88 | 0.60 |
| 1:I:242:A:N3 | 1:I:243:A:O4' | 2.34 | 0.60 |
| 1:I:277:A:N1 | 1:I:278:A:C6 | 2.69 | 0.60 |
| 1:I:278:A:O2' | 1:I:279:A:C4' | 2.49 | 0.60 |
| 1:I:283:A:C2 | 1:I:284:A:C6 | 2.88 | 0.60 |
| 1:I:296:A:C4 | 1:I:297:A:C8 | 2.89 | 0.60 |
| 1:I:31:A:N3 | 1:I:32:A:C8 | 2.69 | 0.60 |
| 1:I:375:A:H2' | 1:I:376:A:H8 | 1.66 | 0.60 |
| 1:I:54:A:N6 | 1:I:55:A:N6 | 2.49 | 0.60 |
| 1:I:62:A:H2' | 1:I:63:A:H8 | 1.67 | 0.60 |
| 1:I:74:A:H2' | 1:I:75:A:C8 | 2.36 | 0.60 |
| 1:I:8:A:C5 | 1:I:9:A:N7 | 2.70 | 0.60 |
| 2:J:12:A:C6 | 2:J:13:A:N7 | 2.68 | 0.60 |
| 3:K:28:A:O2' | 3:K:29:A:H5' | 2.02 | 0.60 |
| 4:L:689:U:C2 | 4:L:690:U:C6 | 2.90 | 0.60 |
| 4:L:756:U:H2' | 4:L:757:U:H6 | 1.65 | 0.60 |
| 4:L:763:U:N3 | 4:L:764:U:C5 | 2.69 | 0.60 |
| 4:L:798:U:H2' | 4:L:799:U:H6 | 1.66 | 0.60 |
| 5:M:289:U:H2' | 5:M:290:U:H6 | 1.65 | 0.60 |
| 5:M:318:U:C2' | 5:M:319:U:O5' | 2.47 | 0.60 |
| 5:M:423:U:H2' | 5:M:424:U:H6 | 1.65 | 0.60 |
| 5:M:425:U:C2' | 5:M:426:U:C5' | 2.77 | 0.60 |
| 5:M:448:U:C2' | 5:M:449:U:O5' | 2.42 | 0.60 |
| 5:M:469:U:N3 | 5:M:470:U:C5 | 2.65 | 0.60 |
| 5:M:513:U:C2 | 5:M:514:U:C6 | 2.89 | 0.60 |
| 6:N:367:U:H2' | 6:N:368:U:H6 | 1.65 | 0.60 |
| 6:N:448:U:C2 | 6:N:449:U:C5 | 2.89 | 0.60 |
| 6:N:470:U:H2' | 6:N:471:U:H6 | 1.65 | 0.60 |
| 1:I:259:A:H2' | 1:I:260:A:C5' | 2.29 | 0.60 |
| 1:I:274:A:C2 | 1:I:275:A:C5 | 2.89 | 0.60 |
| 1:I:372:A:HO2' | 1:I:373:A:H5' | 1.62 | 0.60 |
| 1:I:42:A:C2 | 1:I:43:A:C4 | 2.89 | 0.60 |
| 1:I:65:A:N3 | 1:I:66:A:C1' | 2.65 | 0.60 |
| 2:J:129:A:O2' | 2:J:130:A:C5' | 2.32 | 0.60 |
| 2:J:51:A:C2' | 2:J:52:A:O4' | 2.50 | 0.60 |
| 2:J:54:A:H2' | 2:J:55:A:H8 | 1.66 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 2:J:56:A:N3 | 2:J:57:A:C8 | 2.69 | 0.60 |
| 3:K:181:A:C4 | 3:K:182:A:C8 | 2.89 | 0.60 |
| 4:L:415:U:H2' | 4:L:416:U:C6 | 2.37 | 0.60 |
| 4:L:569:U:H2' | 4:L:570:U:H6 | 1.67 | 0.60 |
| 4:L:573:U:N3 | 4:L:574:U:C5 | 2.69 | 0.60 |
| 4:L:665:U:O2' | 4:L:666:U:H5' | 2.02 | 0.60 |
| 4:L:713:U:O2' | 4:L:714:U:C5' | 2.44 | 0.60 |
| 5:M:428:U:H2' | 5:M:429:U:O4' | 2.01 | 0.60 |
| 5:M:483:U:C2' | 5:M:484:U:O5' | 2.48 | 0.60 |
| 5:M:486:U:C2 | 5:M:487:U:C6 | 2.89 | 0.60 |
| 5:M:503:U:N3 | 5:M:504:U:C5 | 2.70 | 0.60 |
| 6:N:379:U:H2' | 6:N:380:U:C4' | 2.30 | 0.60 |
| 6:N:473:U:C2' | 6:N:474:U:C6 | 2.81 | 0.60 |
| 1:I:172:A:C2 | 1:I:173:A:C8 | 2.90 | 0.60 |
| 1:I:184:A:C2 | 4:L:642:U:O2 | 2.54 | 0.60 |
| 1:I:281:A:C4 | 1:I:282:A:N7 | 2.69 | 0.60 |
| 1:I:300:A:C2 | 1:I:301:A:C5 | 2.89 | 0.60 |
| 1:I:4:A:N1 | 1:I:5:A:N6 | 2.49 | 0.60 |
| 1:I:74:A:N3 | 1:I:75:A:N9 | 2.49 | 0.60 |
| 2:J:198:A:C6 | 2:J:199:A:C5 | 2.90 | 0.60 |
| 2:J:45:A:N1 | 2:J:46:A:C5 | 2.70 | 0.60 |
| 2:J:72:A:C2' | 2:J:73:A:O4' | 2.48 | 0.60 |
| 2:J:76:A:O2' | 2:J:77:A:H5' | 2.02 | 0.60 |
| 2:J:94:A:C2 | 2:J:95:A:C5 | 2.89 | 0.60 |
| 3:K:125:A:C2 | 3:K:126:A:C8 | 2.90 | 0.60 |
| 3:K:167:A:N1 | 3:K:168:A:C5 | 2.69 | 0.60 |
| 3:K:212:A:C2' | 3:K:213:A:H8 | 2.14 | 0.60 |
| 3:K:73:A:O2' | 3:K:74:A:H5' | 2.01 | 0.60 |
| 4:L:487:U:C2' | 4:L:488:U:C4' | 2.79 | 0.60 |
| 4:L:554:U:H2' | 4:L:555:U:C5 | 2.36 | 0.60 |
| 4:L:643:U:C4 | 4:L:644:U:O4 | 2.55 | 0.60 |
| 1:I:119:A:N6 | 4:L:707:U:O4 | 2.33 | 0.60 |
| 4:L:823:U:C2 | 4:L:824:U:C5 | 2.90 | 0.60 |
| 5:M:318:U:H2' | 5:M:319:U:O5' | 2.02 | 0.60 |
| 5:M:381:U:N3 | 5:M:382:U:C4 | 2.70 | 0.60 |
| 5:M:394:U:H2' | 5:M:395:U:C6 | 2.36 | 0.60 |
| 5:M:509:U:C2' | 5:M:510:U:C5' | 2.79 | 0.60 |
| 5:M:527:U:H2' | 5:M:528:U:H6 | 1.64 | 0.60 |
| 6:N:363:U:N3 | 6:N:364:U:C5 | 2.69 | 0.60 |
| 6:N:366:U:H2' | 6:N:367:U:C6 | 2.37 | 0.60 |
| 6:N:513:U:H2' | 6:N:514:U:H6 | 1.66 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:119:A:N1 | 1:I:120:A:C5 | 2.69 | 0.60 |
| 1:I:163:A:H2' | 1:I:164:A:O5' | 2.01 | 0.60 |
| 1:I:208:A:O2' | 1:I:209:A:H5' | 2.02 | 0.60 |
| 1:I:212:A:HO2' | 1:I:213:A:H5' | 1.66 | 0.60 |
| 1:I:308:A:H2' | 1:I:309:A:C8 | 2.36 | 0.60 |
| 1:I:62:A:C2 | 1:I:63:A:C5 | 2.89 | 0.60 |
| 2:J:144:A:N3 | 2:J:145:A:N9 | 2.49 | 0.60 |
| 2:J:206:A:HO2' | 2:J:207:A:C5' | 1.92 | 0.60 |
| 2:J:62:A:H2' | 2:J:63:A:O5' | 2.01 | 0.60 |
| 2:J:97:A:N1 | 2:J:98:A:C5 | 2.69 | 0.60 |
| 2:J:8:A:C2' | 2:J:9:A:O5' | 2.49 | 0.60 |
| 3:K:158:A:C2' | 3:K:159:A:H5' | 2.31 | 0.60 |
| 3:K:167:A:O2' | 3:K:168:A:H5' | 2.00 | 0.60 |
| 3:K:62:A:C5 | 3:K:63:A:N7 | 2.70 | 0.60 |
| 3:K:81:A:C4 | 3:K:82:A:C8 | 2.89 | 0.60 |
| 4:L:459:U:O2' | 4:L:460:U:C5' | 2.38 | 0.60 |
| 4:L:580:U:O2 | 4:L:581:U:C6 | 2.55 | 0.60 |
| 4:L:666:U:C4 | 4:L:667:U:C5 | 2.89 | 0.60 |
| 4:L:712:U:O2 | 4:L:713:U:N1 | 2.34 | 0.60 |
| 4:L:732:U:C2 | 4:L:733:U:C5 | 2.89 | 0.60 |
| 4:L:803:U:O2' | 4:L:804:U:H5' | 2.02 | 0.60 |
| 5:M:319:U:H2' | 5:M:320:U:O5' | 1.97 | 0.60 |
| 5:M:338:U:C2 | 5:M:339:U:C6 | 2.89 | 0.60 |
| 5:M:463:U:C4 | 5:M:464:U:C4 | 2.90 | 0.60 |
| 5:M:547:U:C2 | 5:M:548:U:H5 | 2.16 | 0.60 |
| 6:N:368:U:C2' | 6:N:369:U:H5' | 2.30 | 0.60 |
| 6:N:434:U:C2' | 6:N:435:U:O4' | 2.50 | 0.60 |
| 6:N:439:U:H2' | 6:N:440:U:C6 | 2.36 | 0.60 |
| 6:N:451:U:C2' | 6:N:452:U:H5' | 2.31 | 0.60 |
| 1:I:128:A:C6 | 1:I:129:A:N7 | 2.69 | 0.60 |
| 1:I:132:A:H2' | 1:I:133:A:O5' | 2.01 | 0.60 |
| 1:I:184:A:C6 | 1:I:185:A:C6 | 2.90 | 0.60 |
| 1:I:193:A:N3 | 1:I:194:A:C8 | 2.70 | 0.60 |
| 1:I:228:A:C6 | 1:I:229:A:C6 | 2.90 | 0.60 |
| 1:I:31:A:O2' | 1:I:32:A:P | 2.59 | 0.60 |
| 1:I:353:A:C2' | 1:I:354:A:O4' | 2.50 | 0.60 |
| 1:I:381:A:O2' | 1:I:382:A:H5' | 2.00 | 0.60 |
| 1:I:69:A:N1 | 1:I:70:A:C5 | 2.70 | 0.60 |
| 1:I:84:A:N3 | 1:I:85:A:N7 | 2.50 | 0.60 |
| 2:J:99:A:C2' | 2:J:100:A:C8 | 2.78 | 0.60 |
| 2:J:153:A:C2 | 2:J:154:A:C4 | 2.90 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 2:J:170:A:N3 | 2:J:171:A:C8 | 2.69 | 0.60 |
| 2:J:187:A:H2' | 2:J:188:A:O5' | 2.01 | 0.60 |
| 2:J:191:A:H2' | 2:J:192:A:C5' | 2.31 | 0.60 |
| 2:J:202:A:H2' | 2:J:203:A:C5' | 2.28 | 0.60 |
| 2:J:205:A:N1 | 2:J:206:A:C5 | 2.70 | 0.60 |
| 2:J:221:A:C2 | 2:J:222:A:C4 | 2.90 | 0.60 |
| 2:J:253:A:H2' | 2:J:254:A:C8 | 2.36 | 0.60 |
| 2:J:29:A:C2' | 2:J:30:A:O4' | 2.47 | 0.60 |
| 2:J:44:A:HO2' | 2:J:45:A:H5' | 1.66 | 0.60 |
| 2:J:5:A:C6 | 2:J:6:A:N6 | 2.69 | 0.60 |
| 2:J:70:A:C2 | 2:J:71:A:C8 | 2.88 | 0.60 |
| 2:J:80:A:C4 | 2:J:81:A:C8 | 2.90 | 0.60 |
| 3:K:108:A:N6 | 3:K:109:A:N6 | 2.50 | 0.60 |
| 3:K:125:A:H2' | 3:K:126:A:C5' | 2.31 | 0.60 |
| 3:K:164:A:O2' | 3:K:165:A:H5' | 2.02 | 0.60 |
| 3:K:65:A:O5' | 3:K:66:A:OP2 | 2.18 | 0.60 |
| 4:L:793:U:N3 | 4:L:794:U:C4 | 2.70 | 0.60 |
| 5:M:517:U:N3 | 5:M:518:U:C5 | 2.69 | 0.60 |
| 6:N:336:U:H2' | 6:N:337:U:C6 | 2.37 | 0.60 |
| 6:N:469:U:O4 | 6:N:470:U:O4 | 2.19 | 0.60 |
| 1:I:106:A:H2' | 1:I:107:A:C8 | 2.29 | 0.60 |
| 1:I:120:A:C2' | 1:I:121:A:O5' | 2.50 | 0.60 |
| 1:I:162:A:C4 | 1:I:163:A:C8 | 2.89 | 0.60 |
| 1:I:181:A:C6 | 1:I:182:A:N6 | 2.70 | 0.60 |
| 1:I:232:A:C6 | 1:I:233:A:N7 | 2.69 | 0.60 |
| 1:I:235:A:N1 | 1:I:236:A:C5 | 2.69 | 0.60 |
| 1:I:240:A:C2' | 1:I:241:A:O5' | 2.41 | 0.60 |
| 1:I:376:A:H2' | 1:I:377:A:H8 | 1.66 | 0.60 |
| 1:I:403:A:C2' | 1:I:404:A:H5' | 2.32 | 0.60 |
| 2:J:124:A:C2 | 2:J:125:A:N9 | 2.70 | 0.60 |
| 2:J:153:A:C2' | 2:J:154:A:O5' | 2.50 | 0.60 |
| 2:J:174:A:O2' | 2:J:175:A:H5' | 2.02 | 0.60 |
| 2:J:205:A:C2 | 2:J:206:A:C8 | 2.90 | 0.60 |
| 2:J:217:A:C4 | 2:J:218:A:N7 | 2.70 | 0.60 |
| 2:J:44:A:N3 | 2:J:45:A:C8 | 2.70 | 0.60 |
| 3:K:200:A:H2' | 3:K:201:A:H8 | 1.67 | 0.60 |
| 3:K:80:A:C4 | 3:K:81:A:C8 | 2.89 | 0.60 |
| 4:L:566:U:O2 | 4:L:567:U:C6 | 2.55 | 0.60 |
| 4:L:661:U:C2 | 4:L:662:U:C6 | 2.89 | 0.60 |
| 4:L:713:U:O2' | 4:L:714:U:C4' | 2.50 | 0.60 |
| 5:M:452:U:H2' | 5:M:453:U:O5' | 2.01 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:505:U:H2' | 5:M:506:U:C5' | 2.26 | 0.60 |
| 6:N:293:U:C2' | 6:N:294:U:H6 | 2.07 | 0.60 |
| 6:N:391:U:O2 | 6:N:392:U:C6 | 2.54 | 0.60 |
| 6:N:429:U:N3 | 6:N:430:U:C4 | 2.69 | 0.60 |
| 6:N:435:U:H2' | 6:N:436:U:C6 | 2.37 | 0.60 |
| 1:I:126:A:C2' | 1:I:127:A:H5' | 2.29 | 0.60 |
| 1:I:127:A:O2' | 1:I:128:A:C5' | 2.35 | 0.60 |
| 1:I:134:A:H61 | 1:I:135:A:N6 | 1.95 | 0.60 |
| 1:I:166:A:HO2' | 1:I:167:A:H5' | 1.66 | 0.60 |
| 1:I:206:A:C2 | 1:I:207:A:N7 | 2.69 | 0.60 |
| 1:I:215:A:O2' | 1:I:216:A:H5' | 2.01 | 0.60 |
| 1:I:60:A:H2' | 1:I:61:A:C8 | 2.37 | 0.60 |
| 1:I:95:A:H2' | 1:I:96:A:H8 | 1.66 | 0.60 |
| 2:J:100:A:N3 | 2:J:101:A:C8 | 2.69 | 0.60 |
| 2:J:108:A:N1 | 2:J:109:A:C5 | 2.69 | 0.60 |
| 2:J:17:A:H2' | 2:J:18:A:H8 | 1.66 | 0.60 |
| 2:J:247:A:C2 | 2:J:248:A:C5 | 2.90 | 0.60 |
| 2:J:51:A:N6 | 2:J:52:A:N6 | 2.50 | 0.60 |
| 3:K:137:A:C4 | 3:K:138:A:C8 | 2.90 | 0.60 |
| 3:K:146:A:N3 | 3:K:147:A:N7 | 2.49 | 0.60 |
| 4:L:422:U:C2' | 4:L:423:U:O4' | 2.49 | 0.60 |
| 4:L:530:U:N3 | 4:L:531:U:C5 | 2.70 | 0.60 |
| 4:L:630:U:N3 | 4:L:631:U:C5 | 2.69 | 0.60 |
| 4:L:812:U:N3 | 4:L:813:U:C5 | 2.69 | 0.60 |
| 5:M:321:U:N3 | 5:M:322:U:C4 | 2.69 | 0.60 |
| 5:M:395:U:H2' | 5:M:396:U:C5' | 2.30 | 0.60 |
| 5:M:411:U:C2' | 5:M:412:U:H5' | 2.32 | 0.60 |
| 5:M:417:U:C4 | 5:M:418:U:C5 | 2.90 | 0.60 |
| 5:M:496:U:O2' | 5:M:497:U:P | 2.52 | 0.60 |
| 6:N:278:U:C2' | 6:N:279:U:C5' | 2.80 | 0.60 |
| 1:I:108:A:N6 | 1:I:109:A:N6 | 2.50 | 0.60 |
| 1:I:152:A:C4 | 1:I:153:A:N7 | 2.70 | 0.60 |
| 1:I:187:A:N6 | 1:I:188:A:H62 | 2.00 | 0.60 |
| 1:I:18:A:N1 | 1:I:19:A:C5 | 2.70 | 0.60 |
| 1:I:20:A:C2' | 1:I:21:A:O4' | 2.49 | 0.60 |
| 1:I:229:A:H2' | 1:I:230:A:H8 | 1.67 | 0.60 |
| 1:I:255:A:H2' | 1:I:256:A:O4' | 2.02 | 0.60 |
| 1:I:265:A:C6 | 1:I:266:A:C5 | 2.90 | 0.60 |
| 1:I:41:A:C4 | 1:I:42:A:C8 | 2.90 | 0.60 |
| 1:I:43:A:C4 | 1:I:44:A:C8 | 2.90 | 0.60 |
| 1:I:57:A:C6 | 1:I:58:A:C6 | 2.89 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 2:J:153:A:C2 | 2:J:154:A:C8 | 2.90 | 0.60 |
| 2:J:204:A:C2' | 2:J:205:A:O4' | 2.49 | 0.60 |
| 2:J:52:A:C4 | 2:J:53:A:C8 | 2.90 | 0.60 |
| 2:J:83:A:N3 | 2:J:84:A:N9 | 2.49 | 0.60 |
| 2:J:94:A:C2 | 2:J:95:A:N9 | 2.70 | 0.60 |
| 3:K:104:A:C2 | 3:K:105:A:N9 | 2.69 | 0.60 |
| 3:K:111:A:H2' | 3:K:112:A:H8 | 1.67 | 0.60 |
| 3:K:150:A:O2' | 3:K:151:A:H5' | 2.02 | 0.60 |
| 3:K:79:A:H2' | 3:K:80:A:H8 | 1.66 | 0.60 |
| 4:L:567:U:H2' | 4:L:568:U:C5' | 2.28 | 0.60 |
| 4:L:662:U:N3 | 4:L:663:U:C4 | 2.69 | 0.60 |
| 5:M:365:U:H2' | 5:M:366:U:C5' | 2.31 | 0.60 |
| 5:M:466:U:N3 | 5:M:467:U:C5 | 2.69 | 0.60 |
| 5:M:516:U:H2' | 5:M:517:U:H6 | 1.65 | 0.60 |
| 5:M:528:U:O2' | 5:M:529:U:H5' | 2.01 | 0.60 |
| 5:M:538:U:C2 | 5:M:539:U:C6 | 2.90 | 0.60 |
| 6:N:404:U:C2 | 6:N:405:U:C5 | 2.90 | 0.60 |
| 6:N:425:U:C5 | 6:N:426:U:C5 | 2.90 | 0.60 |
| 6:N:477:U:C2' | 6:N:478:U:C5' | 2.78 | 0.60 |
| 1:I:115:A:C2 | 1:I:116:A:C5 | 2.90 | 0.59 |
| 1:I:180:A:N3 | 1:I:181:A:O4' | 2.35 | 0.59 |
| 1:I:181:A:C6 | 1:I:182:A:N7 | 2.70 | 0.59 |
| 1:I:228:A:N6 | 1:I:229:A:H62 | 2.00 | 0.59 |
| 1:I:241:A:C6 | 1:I:242:A:N6 | 2.69 | 0.59 |
| 2:J:160:A:H2' | 2:J:161:A:H8 | 1.65 | 0.59 |
| 2:J:183:A:N3 | 2:J:184:A:O4' | 2.35 | 0.59 |
| 2:J:198:A:C2 | 2:J:199:A:C4 | 2.90 | 0.59 |
| 2:J:262:A:H2' | 2:J:263:A:H8 | 1.66 | 0.59 |
| 2:J:39:A:C4 | 2:J:40:A:C8 | 2.90 | 0.59 |
| 2:J:93:A:H2' | 2:J:94:A:H8 | 1.67 | 0.59 |
| 3:K:108:A:O2' | 3:K:109:A:H5' | 2.02 | 0.59 |
| 3:K:120:A:H61 | 3:K:121:A:N6 | 1.99 | 0.59 |
| 3:K:128:A:H2' | 3:K:129:A:C8 | 2.37 | 0.59 |
| 4:L:477:U:C2' | 4:L:478:U:C4' | 2.80 | 0.59 |
| 4:L:534:U:H2' | 4:L:535:U:C6 | 2.37 | 0.59 |
| 4:L:563:U:N3 | 4:L:564:U:C5 | 2.70 | 0.59 |
| 4:L:647:U:C2' | 4:L:648:U:O4' | 2.49 | 0.59 |
| 4:L:692:U:C2 | 4:L:693:U:C6 | 2.90 | 0.59 |
| 4:L:756:U:C2 | 4:L:757:U:C6 | 2.90 | 0.59 |
| 5:M:297:U:C2' | 5:M:298:U:C5' | 2.80 | 0.59 |
| 5:M:329:U:N3 | 5:M:330:U:C5 | 2.69 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:331:U:C2' | 5:M:332:U:O5' | 2.50 | 0.59 |
| 5:M:342:U:C2 | 5:M:343:U:C5 | 2.90 | 0.59 |
| 5:M:348:U:N3 | 5:M:349:U:O4 | 2.25 | 0.59 |
| 5:M:405:U:H2' | 5:M:406:U:C6 | 2.35 | 0.59 |
| 5:M:488:U:O2' | 5:M:489:U:C5' | 2.45 | 0.59 |
| 6:N:342:U:H2' | 6:N:343:U:H6 | 1.66 | 0.59 |
| 6:N:424:U:N3 | 6:N:425:U:C5 | 2.70 | 0.59 |
| 1:I:130:A:N1 | 1:I:131:A:C5 | 2.71 | 0.59 |
| 1:I:138:A:H2' | 1:I:139:A:C4' | 2.31 | 0.59 |
| 1:I:151:A:HO2' | 1:I:152:A:H5' | 1.63 | 0.59 |
| 1:I:17:A:C4 | 1:I:18:A:C8 | 2.90 | 0.59 |
| 1:I:189:A:O2' | 1:I:190:A:C5' | 2.41 | 0.59 |
| 1:I:273:A:C6 | 1:I:274:A:C5 | 2.90 | 0.59 |
| 1:I:278:A:C4 | 1:I:279:A:C8 | 2.90 | 0.59 |
| 1:I:44:A:C2 | 1:I:45:A:C5 | 2.90 | 0.59 |
| 1:I:54:A:H2' | 1:I:55:A:H8 | 1.66 | 0.59 |
| 1:I:68:A:C5 | 1:I:69:A:C8 | 2.89 | 0.59 |
| 1:I:82:A:O2' | 1:I:83:A:C5' | 2.35 | 0.59 |
| 1:I:8:A:C6 | 1:I:9:A:N6 | 2.70 | 0.59 |
| 2:J:121:A:O2' | 2:J:122:A:C5' | 2.44 | 0.59 |
| 2:J:124:A:O2' | 2:J:125:A:P | 2.61 | 0.59 |
| 2:J:67:A:C2 | 2:J:68:A:C8 | 2.90 | 0.59 |
| 2:J:67:A:H2' | 2:J:68:A:O5' | 2.02 | 0.59 |
| 2:J:87:A:N3 | 2:J:88:A:C8 | 2.70 | 0.59 |
| 3:K:103:A:C2 | 3:K:104:A:C4 | 2.91 | 0.59 |
| 3:K:106:A:C6 | 3:K:107:A:C6 | 2.89 | 0.59 |
| 3:K:168:A:C4 | 3:K:169:A:C8 | 2.89 | 0.59 |
| 3:K:193:A:H2' | 3:K:194:A:H8 | 1.65 | 0.59 |
| 3:K:81:A:C2' | 3:K:82:A:O5' | 2.50 | 0.59 |
| 4:L:521:U:O2' | 4:L:522:U:C5' | 2.36 | 0.59 |
| 4:L:529:U:H2' | 4:L:530:U:C5' | 2.32 | 0.59 |
| 4:L:589:U:H2' | 4:L:590:U:H6 | 1.67 | 0.59 |
| 4:L:648:U:C4 | 4:L:649:U:C4 | 2.89 | 0.59 |
| 4:L:657:U:C2' | 4:L:658:U:H5' | 2.30 | 0.59 |
| 4:L:699:U:C4 | 4:L:700:U:C4 | 2.89 | 0.59 |
| 4:L:739:U:H2' | 4:L:740:U:H6 | 1.68 | 0.59 |
| 5:M:298:U:C2 | 5:M:299:U:C5 | 2.89 | 0.59 |
| 5:M:396:U:C2 | 5:M:397:U:C6 | 2.91 | 0.59 |
| 5:M:460:U:C2' | 5:M:461:U:H5' | 2.32 | 0.59 |
| 5:M:482:U:C2' | 5:M:483:U:O5' | 2.48 | 0.59 |
| 5:M:525:U:H2' | 5:M:526:U:H6 | 1.67 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:317:U:H2' | 6:N:318:U:O4' | 2.02 | 0.59 |
| 6:N:374:U:C2' | 6:N:375:U:C5' | 2.80 | 0.59 |
| 6:N:378:U:H2' | 6:N:379:U:C6 | 2.37 | 0.59 |
| 1:I:12:A:C2 | 1:I:13:A:C5 | 2.90 | 0.59 |
| 1:I:175:A:H2 | 1:I:176:A:C5 | 2.14 | 0.59 |
| 1:I:30:A:HO2' | 1:I:31:A:H5' | 1.63 | 0.59 |
| 2:J:248:A:C4 | 2:J:249:A:C8 | 2.91 | 0.59 |
| 2:J:254:A:C2 | 2:J:255:A:C4 | 2.91 | 0.59 |
| 2:J:88:A:N1 | 2:J:89:A:C5 | 2.70 | 0.59 |
| 3:K:110:A:C2' | 3:K:111:A:O4' | 2.50 | 0.59 |
| 3:K:117:A:H2' | 3:K:118:A:H8 | 1.65 | 0.59 |
| 3:K:128:A:C4 | 3:K:129:A:C8 | 2.90 | 0.59 |
| 3:K:188:A:O2' | 3:K:189:A:C5' | 2.49 | 0.59 |
| 3:K:195:A:N6 | 3:K:196:A:H62 | 1.97 | 0.59 |
| 3:K:204:A:C5 | 3:K:205:A:N7 | 2.70 | 0.59 |
| 4:L:436:U:C2' | 4:L:437:U:H5' | 2.32 | 0.59 |
| 4:L:516:U:C2 | 4:L:517:U:C5 | 2.90 | 0.59 |
| 4:L:516:U:N3 | 4:L:517:U:C5 | 2.70 | 0.59 |
| 4:L:547:U:C6 | 4:L:548:U:C5 | 2.90 | 0.59 |
| 4:L:758:U:H2' | 4:L:759:U:C6 | 2.36 | 0.59 |
| 4:L:783:U:C2 | 4:L:784:U:C6 | 2.91 | 0.59 |
| 5:M:306:U:HO2' | 5:M:307:U:H5' | 1.66 | 0.59 |
| 5:M:410:U:C6 | 5:M:411:U:H5 | 2.19 | 0.59 |
| 6:N:383:U:C2' | 6:N:384:U:C5' | 2.80 | 0.59 |
| 6:N:391:U:O2' | 6:N:392:U:P | 2.60 | 0.59 |
| 6:N:417:U:C2' | 6:N:418:U:C4' | 2.79 | 0.59 |
| 6:N:419:U:O2' | 6:N:420:U:H5' | 2.01 | 0.59 |
| 6:N:431:U:HO2' | 6:N:432:U:C5' | 1.87 | 0.59 |
| 6:N:486:U:C2' | 6:N:487:U:C6 | 2.77 | 0.59 |
| 1:I:112:A:C2' | 1:I:113:A:C5' | 2.81 | 0.59 |
| 1:I:13:A:C2' | 1:I:14:A:C8 | 2.83 | 0.59 |
| 1:I:175:A:N1 | 1:I:176:A:C5 | 2.69 | 0.59 |
| 1:I:177:A:O2' | 1:I:178:A:C5' | 2.48 | 0.59 |
| 1:I:187:A:C6 | 1:I:188:A:C6 | 2.91 | 0.59 |
| 1:I:20:A:C2' | 1:I:21:A:H5' | 2.32 | 0.59 |
| 1:I:261:A:O2' | 1:I:262:A:C5' | 2.49 | 0.59 |
| 1:I:267:A:H2 | 1:I:268:A:C4 | 2.14 | 0.59 |
| 1:I:278:A:C2 | 1:I:279:A:C4 | 2.90 | 0.59 |
| 1:I:286:A:H2' | 1:I:287:A:H8 | 1.65 | 0.59 |
| 1:I:337:A:H2' | 1:I:338:A:C5' | 2.31 | 0.59 |
| 1:I:364:A:C2 | 1:I:365:A:C8 | 2.90 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 2:J:216:A:C6 | 2:J:217:A:N6 | 2.69 | 0.59 |
| 2:J:29:A:C2 | 2:J:30:A:C1' | 2.86 | 0.59 |
| 2:J:38:A:H2' | 2:J:39:A:O5' | 2.01 | 0.59 |
| 2:J:47:A:HO2' | 2:J:48:A:C5' | 1.85 | 0.59 |
| 3:K:127:A:C2' | 3:K:128:A:C5' | 2.81 | 0.59 |
| 3:K:132:A:N3 | 3:K:133:A:C8 | 2.71 | 0.59 |
| 3:K:168:A:C2 | 3:K:169:A:N9 | 2.70 | 0.59 |
| 3:K:47:A:O5' | 3:K:48:A:OP2 | 2.20 | 0.59 |
| 3:K:93:A:C4 | 3:K:94:A:C8 | 2.90 | 0.59 |
| 3:K:95:A:H2' | 3:K:96:A:O4' | 2.02 | 0.59 |
| 4:L:511:U:C2 | 4:L:512:U:C5 | 2.89 | 0.59 |
| 4:L:514:U:H2' | 4:L:515:U:C6 | 2.37 | 0.59 |
| 4:L:621:U:H2' | 4:L:622:U:H6 | 1.66 | 0.59 |
| 4:L:630:U:C4 | 4:L:631:U:O4 | 2.55 | 0.59 |
| 4:L:635:U:C2 | 4:L:636:U:C5 | 2.91 | 0.59 |
| 4:L:747:U:C2' | 4:L:748:U:H5' | 2.33 | 0.59 |
| 5:M:322:U:H2' | 5:M:323:U:C6 | 2.37 | 0.59 |
| 5:M:352:U:O2 | 5:M:353:U:C6 | 2.55 | 0.59 |
| 5:M:364:U:H2' | 5:M:365:U:C5' | 2.32 | 0.59 |
| 5:M:365:U:C2 | 5:M:366:U:C6 | 2.91 | 0.59 |
| 5:M:429:U:H2' | 5:M:430:U:O4' | 2.02 | 0.59 |
| 5:M:457:U:H2' | 5:M:458:U:H6 | 1.66 | 0.59 |
| 5:M:461:U:N3 | 5:M:462:U:C5 | 2.70 | 0.59 |
| 5:M:535:U:O2' | 5:M:536:U:C5' | 2.45 | 0.59 |
| 6:N:481:U:C2 | 6:N:482:U:C6 | 2.90 | 0.59 |
| 6:N:526:U:O2' | 6:N:527:U:C5' | 2.48 | 0.59 |
| 1:I:9:A:H2' | 1:I:10:A:O5' | 2.03 | 0.59 |
| 1:I:11:A:C5 | 1:I:12:A:N7 | 2.71 | 0.59 |
| 1:I:144:A:H2' | 1:I:145:A:C8 | 2.36 | 0.59 |
| 1:I:180:A:N3 | 1:I:181:A:C1' | 2.65 | 0.59 |
| 1:I:180:A:H2 | 1:I:181:A:N9 | 1.95 | 0.59 |
| 1:I:193:A:C2 | 1:I:194:A:C8 | 2.90 | 0.59 |
| 1:I:21:A:C2' | 1:I:22:A:C5' | 2.79 | 0.59 |
| 1:I:250:A:C2' | 1:I:251:A:O4' | 2.49 | 0.59 |
| 1:I:280:A:C4 | 1:I:281:A:N7 | 2.70 | 0.59 |
| 1:I:321:A:C4 | 1:I:322:A:C8 | 2.90 | 0.59 |
| 1:I:323:A:N3 | 1:I:324:A:C8 | 2.71 | 0.59 |
| 1:I:63:A:C6 | 1:I:64:A:C6 | 2.91 | 0.59 |
| 1:I:74:A:O2' | 1:I:75:A:O4' | 2.20 | 0.59 |
| 2:J:107:A:C4 | 2:J:108:A:C8 | 2.90 | 0.59 |
| 2:J:132:A:H2' | 2:J:133:A:C5' | 2.30 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 2:J:186:A:C6 | 2:J:187:A:N7 | 2.71 | 0.59 |
| 2:J:229:A:C2' | 2:J:230:A:O5' | 2.51 | 0.59 |
| 2:J:72:A:H2' | 2:J:73:A:C5' | 2.31 | 0.59 |
| 2:J:83:A:O2' | 2:J:84:A:H5' | 2.00 | 0.59 |
| 2:J:95:A:C2 | 2:J:96:A:C5 | 2.91 | 0.59 |
| 3:K:106:A:C2' | 3:K:107:A:C8 | 2.73 | 0.59 |
| 3:K:164:A:C6 | 3:K:165:A:N7 | 2.70 | 0.59 |
| 4:L:483:U:C2 | 4:L:484:U:C6 | 2.91 | 0.59 |
| 4:L:573:U:O2' | 4:L:574:U:H5' | 2.03 | 0.59 |
| 4:L:598:U:O2' | 4:L:599:U:C5' | 2.43 | 0.59 |
| 4:L:702:U:H2' | 4:L:703:U:C6 | 2.32 | 0.59 |
| 5:M:320:U:N3 | 5:M:321:U:C5 | 2.70 | 0.59 |
| 5:M:359:U:C2 | 5:M:360:U:C5 | 2.91 | 0.59 |
| 5:M:386:U:O2 | 5:M:387:U:C5 | 2.45 | 0.59 |
| 5:M:387:U:H2' | 5:M:388:U:C5 | 2.38 | 0.59 |
| 5:M:405:U:C3' | 5:M:406:U:H5' | 2.07 | 0.59 |
| 5:M:429:U:C2' | 5:M:430:U:C5' | 2.80 | 0.59 |
| 5:M:452:U:C2 | 5:M:453:U:C6 | 2.90 | 0.59 |
| 5:M:513:U:C2' | 5:M:514:U:C5' | 2.79 | 0.59 |
| 6:N:320:U:C2' | 6:N:321:U:O4' | 2.50 | 0.59 |
| 1:I:192:A:H2' | 1:I:193:A:C5' | 2.32 | 0.59 |
| 1:I:21:A:O2' | 1:I:22:A:O4' | 2.19 | 0.59 |
| 1:I:267:A:H2' | 1:I:268:A:C8 | 2.37 | 0.59 |
| 1:I:362:A:C5 | 1:I:363:A:N7 | 2.70 | 0.59 |
| 1:I:390:A:H2' | 1:I:391:A:C8 | 2.37 | 0.59 |
| 1:I:72:A:H2' | 1:I:73:A:C5' | 2.33 | 0.59 |
| 2:J:125:A:C6 | 2:J:126:A:N6 | 2.71 | 0.59 |
| 2:J:11:A:C2' | 2:J:12:A:O5' | 2.49 | 0.59 |
| 2:J:186:A:C5 | 2:J:187:A:N7 | 2.71 | 0.59 |
| 2:J:204:A:N1 | 2:J:205:A:C5 | 2.71 | 0.59 |
| 2:J:215:A:N1 | 2:J:216:A:C5 | 2.71 | 0.59 |
| 2:J:226:A:C2 | 2:J:227:A:C5 | 2.90 | 0.59 |
| 2:J:51:A:C5 | 2:J:52:A:N7 | 2.71 | 0.59 |
| 2:J:64:A:O2' | 2:J:65:A:H5' | 2.02 | 0.59 |
| 2:J:92:A:H2 | 2:J:93:A:C5 | 2.12 | 0.59 |
| 4:L:472:U:H2' | 4:L:473:U:H6 | 1.66 | 0.59 |
| 4:L:569:U:O2' | 4:L:570:U:C5' | 2.39 | 0.59 |
| 4:L:626:U:N3 | 4:L:627:U:C5 | 2.70 | 0.59 |
| 4:L:720:U:C2 | 4:L:721:U:C5 | 2.91 | 0.59 |
| 5:M:415:U:O2' | 5:M:416:U:H5' | 2.03 | 0.59 |
| 5:M:445:U:O2 | 5:M:446:U:C6 | 2.55 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:514:U:H2' | 5:M:515:U:C5' | 2.32 | 0.59 |
| 6:N:309:U:H2' | 6:N:310:U:C6 | 2.37 | 0.59 |
| 6:N:402:U:N3 | 6:N:403:U:C5 | 2.71 | 0.59 |
| 1:I:133:A:HO2' | 1:I:134:A:C5' | 1.89 | 0.59 |
| 1:I:319:A:N6 | 1:I:320:A:N6 | 2.51 | 0.59 |
| 1:I:335:A:C5 | 1:I:336:A:N7 | 2.70 | 0.59 |
| 1:I:343:A:C2' | 1:I:344:A:C5' | 2.80 | 0.59 |
| 2:J:207:A:C5 | 2:J:208:A:N7 | 2.71 | 0.59 |
| 2:J:220:A:C5 | 2:J:221:A:N7 | 2.71 | 0.59 |
| 2:J:248:A:H62 | 2:J:249:A:H62 | 1.47 | 0.59 |
| 2:J:51:A:C6 | 2:J:52:A:C6 | 2.90 | 0.59 |
| 2:J:55:A:C6 | 2:J:56:A:C6 | 2.91 | 0.59 |
| 2:J:69:A:O2' | 2:J:70:A:C4' | 2.48 | 0.59 |
| 3:K:100:A:C6 | 3:K:101:A:N7 | 2.71 | 0.59 |
| 3:K:104:A:N1 | 3:K:105:A:C5 | 2.71 | 0.59 |
| 3:K:121:A:C6 | 6:N:411:U:O4 | 2.55 | 0.59 |
| 3:K:171:A:O2' | 3:K:172:A:H5' | 2.02 | 0.59 |
| 3:K:94:A:C5 | 3:K:95:A:N7 | 2.70 | 0.59 |
| 3:K:99:A:C2' | 3:K:100:A:C4' | 2.80 | 0.59 |
| 4:L:531:U:C2' | 4:L:532:U:C5' | 2.81 | 0.59 |
| 4:L:557:U:N3 | 4:L:558:U:C6 | 2.70 | 0.59 |
| 4:L:561:U:N3 | 4:L:562:U:C5 | 2.70 | 0.59 |
| 4:L:712:U:C2 | 4:L:713:U:C5 | 2.88 | 0.59 |
| 4:L:748:U:N3 | 4:L:749:U:C5 | 2.71 | 0.59 |
| 4:L:799:U:H2' | 4:L:800:U:O5' | 2.03 | 0.59 |
| 5:M:326:U:N3 | 5:M:327:U:C5 | 2.71 | 0.59 |
| 5:M:345:U:N3 | 5:M:346:U:C5 | 2.71 | 0.59 |
| 5:M:388:U:H2' | 5:M:389:U:H6 | 1.67 | 0.59 |
| 5:M:428:U:C2 | 5:M:429:U:C6 | 2.91 | 0.59 |
| 6:N:408:U:O2 | 6:N:409:U:C6 | 2.55 | 0.59 |
| 6:N:450:U:N3 | 6:N:451:U:C5 | 2.70 | 0.59 |
| 6:N:481:U:H2' | 6:N:482:U:C5' | 2.31 | 0.59 |
| 1:I:129:A:N1 | 1:I:130:A:C5 | 2.71 | 0.59 |
| 1:I:22:A:H2' | 1:I:23:A:H8 | 1.66 | 0.59 |
| 1:I:245:A:N3 | 1:I:246:A:N7 | 2.48 | 0.59 |
| 1:I:248:A:C4 | 1:I:249:A:C8 | 2.90 | 0.59 |
| 1:I:316:A:H61 | 1:I:317:A:N6 | 2.00 | 0.59 |
| 1:I:353:A:H2' | 1:I:354:A:O5' | 2.01 | 0.59 |
| 1:I:4:A:C2' | 1:I:5:A:H8 | 2.11 | 0.59 |
| 1:I:64:A:H2' | 1:I:65:A:C8 | 2.38 | 0.59 |
| 1:I:74:A:N9 | 1:I:75:A:C8 | 2.70 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:104:A:C2 | 2:J:105:A:C8 | 2.90 | 0.59 |
| 2:J:180:A:C2 | 2:J:181:A:N7 | 2.71 | 0.59 |
| 2:J:184:A:C2 | 2:J:185:A:C4 | 2.90 | 0.59 |
| 2:J:203:A:C4 | 2:J:204:A:C8 | 2.91 | 0.59 |
| 2:J:216:A:HO2' | 2:J:217:A:P | 2.23 | 0.59 |
| 2:J:84:A:C5 | 2:J:85:A:C8 | 2.91 | 0.59 |
| 3:K:154:A:C2 | 3:K:155:A:C4 | 2.91 | 0.59 |
| 3:K:161:A:C2' | 3:K:162:A:H5' | 2.33 | 0.59 |
| 4:L:437:U:H2' | 4:L:438:U:C5 | 2.38 | 0.59 |
| 4:L:447:U:C2' | 4:L:448:U:P | 2.90 | 0.59 |
| 4:L:540:U:H2' | 4:L:541:U:H6 | 1.68 | 0.59 |
| 4:L:552:U:N3 | 4:L:553:U:O4 | 2.33 | 0.59 |
| 4:L:581:U:N3 | 4:L:582:U:O4 | 2.36 | 0.59 |
| 4:L:584:U:C2' | 4:L:585:U:O5' | 2.50 | 0.59 |
| 4:L:648:U:C4 | 4:L:649:U:O4 | 2.56 | 0.59 |
| 4:L:794:U:H2' | 4:L:795:U:C5' | 2.32 | 0.59 |
| 5:M:322:U:HO2' | 5:M:323:U:C4' | 2.16 | 0.59 |
| 5:M:352:U:HO2' | 5:M:353:U:H5' | 1.67 | 0.59 |
| 5:M:409:U:H2' | 5:M:410:U:H6 | 1.67 | 0.59 |
| 5:M:445:U:H2' | 5:M:446:U:H6 | 1.68 | 0.59 |
| 5:M:488:U:O2' | 5:M:489:U:O4' | 2.19 | 0.59 |
| 6:N:281:U:C2' | 6:N:282:U:O5' | 2.51 | 0.59 |
| 6:N:406:U:H2' | 6:N:407:U:C5' | 2.32 | 0.59 |
| 6:N:416:U:H2' | 6:N:417:U:H6 | 1.68 | 0.59 |
| 1:I:102:A:C6 | 1:I:103:A:N6 | 2.68 | 0.59 |
| 1:I:164:A:C2 | 1:I:165:A:C4 | 2.90 | 0.59 |
| 1:I:183:A:N3 | 1:I:184:A:C1' | 2.66 | 0.59 |
| 1:I:196:A:O2' | 1:I:197:A:C5' | 2.39 | 0.59 |
| 1:I:19:A:H2' | 1:I:20:A:O4' | 2.02 | 0.59 |
| 1:I:260:A:C2 | 1:I:261:A:C8 | 2.90 | 0.59 |
| 1:I:271:A:N3 | 1:I:272:A:N9 | 2.49 | 0.59 |
| 1:I:322:A:N6 | 1:I:323:A:H62 | 1.98 | 0.59 |
| 1:I:329:A:H2' | 1:I:330:A:C8 | 2.38 | 0.59 |
| 1:I:342:A:C4 | 1:I:343:A:C8 | 2.91 | 0.59 |
| 1:I:353:A:H2' | 1:I:354:A:C4' | 2.32 | 0.59 |
| 1:I:86:A:O5' | 1:I:87:A:OP2 | 2.21 | 0.59 |
| 2:J:166:A:C2 | 2:J:167:A:C8 | 2.91 | 0.59 |
| 2:J:176:A:H2 | 2:J:177:A:C4 | 2.20 | 0.59 |
| 2:J:184:A:C2' | 2:J:185:A:O5' | 2.47 | 0.59 |
| 3:K:101:A:C4 | 3:K:102:A:N7 | 2.69 | 0.59 |
| 3:K:162:A:N3 | 3:K:163:A:C8 | 2.70 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:203:A:C2 | 3:K:204:A:C4 | 2.88 | 0.59 |
| 3:K:212:A:N6 | 3:K:213:A:H62 | 1.93 | 0.59 |
| 3:K:85:A:H2' | 3:K:86:A:C5' | 2.33 | 0.59 |
| 4:L:435:U:O2' | 4:L:436:U:C5' | 2.50 | 0.59 |
| 4:L:498:U:H2' | 4:L:499:U:H6 | 1.68 | 0.59 |
| 4:L:577:U:C2 | 4:L:578:U:C6 | 2.91 | 0.59 |
| 4:L:579:U:H2' | 4:L:580:U:H6 | 1.66 | 0.59 |
| 4:L:600:U:O2' | 4:L:601:U:H5' | 2.03 | 0.59 |
| 4:L:681:U:C4 | 4:L:682:U:C4 | 2.90 | 0.59 |
| 4:L:728:U:H2' | 4:L:729:U:H5 | 1.68 | 0.59 |
| 4:L:761:U:O4 | 4:L:762:U:O4 | 2.19 | 0.59 |
| 4:L:804:U:C2 | 4:L:805:U:C6 | 2.90 | 0.59 |
| 4:L:814:U:H2' | 4:L:815:U:C4' | 2.31 | 0.59 |
| 5:M:366:U:N3 | 5:M:367:U:C5 | 2.71 | 0.59 |
| 6:N:463:U:C2' | 6:N:464:U:H5' | 2.33 | 0.59 |
| 1:I:165:A:N6 | 1:I:166:A:H62 | 2.00 | 0.59 |
| 1:I:17:A:N1 | 1:I:18:A:C5 | 2.71 | 0.59 |
| 1:I:221:A:O2' | 1:I:222:A:C5' | 2.45 | 0.59 |
| 1:I:239:A:C4 | 1:I:240:A:C8 | 2.91 | 0.59 |
| 1:I:240:A:C2 | 1:I:241:A:N9 | 2.70 | 0.59 |
| 1:I:317:A:N3 | 1:I:318:A:C8 | 2.71 | 0.59 |
| 1:I:46:A:N1 | 1:I:47:A:C5 | 2.71 | 0.59 |
| 1:I:63:A:H2' | 1:I:64:A:H8 | 1.68 | 0.59 |
| 1:I:97:A:N3 | 1:I:98:A:C8 | 2.71 | 0.59 |
| 2:J:99:A:C2' | 2:J:100:A:C5' | 2.80 | 0.59 |
| 2:J:133:A:C2 | 2:J:134:A:C4 | 2.91 | 0.59 |
| 2:J:13:A:N1 | 2:J:14:A:C5 | 2.70 | 0.59 |
| 2:J:37:A:C2 | 2:J:38:A:C4 | 2.91 | 0.59 |
| 2:J:64:A:N1 | 2:J:65:A:C6 | 2.71 | 0.59 |
| 2:J:71:A:C4 | 2:J:72:A:C8 | 2.91 | 0.59 |
| 2:J:88:A:C2 | 2:J:89:A:C5 | 2.90 | 0.59 |
| 3:K:154:A:N9 | 3:K:155:A:C8 | 2.70 | 0.59 |
| 3:K:155:A:O2' | 3:K:156:A:H5' | 1.98 | 0.59 |
| 4:L:489:U:N3 | 4:L:490:U:O4 | 2.34 | 0.59 |
| 4:L:516:U:C4 | 4:L:517:U:C4 | 2.91 | 0.59 |
| 4:L:691:U:H2' | 4:L:692:U:C6 | 2.36 | 0.59 |
| 4:L:692:U:HO2' | 4:L:693:U:H5' | 1.57 | 0.59 |
| 4:L:762:U:O2' | 4:L:763:U:O5' | 2.19 | 0.59 |
| 4:L:799:U:C2' | 4:L:800:U:O5' | 2.49 | 0.59 |
| 4:L:820:U:C4 | 4:L:821:U:C4 | 2.91 | 0.59 |
| 5:M:286:U:N3 | 5:M:287:U:C5 | 2.70 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:425:U:O2 | 5:M:426:U:C6 | 2.56 | 0.59 |
| 5:M:441:U:H2' | 5:M:442:U:H6 | 1.68 | 0.59 |
| 5:M:479:U:O2' | 5:M:480:U:H5' | 2.01 | 0.59 |
| 6:N:413:U:C2' | 6:N:414:U:H5' | 2.33 | 0.59 |
| 6:N:416:U:O2 | 6:N:417:U:O4' | 2.21 | 0.59 |
| 6:N:427:U:H2' | 6:N:428:U:C5' | 2.32 | 0.59 |
| 1:I:112:A:N3 | 1:I:113:A:C8 | 2.71 | 0.58 |
| 1:I:119:A:C2 | 1:I:120:A:C5 | 2.91 | 0.58 |
| 1:I:212:A:H2' | 1:I:213:A:O5' | 2.03 | 0.58 |
| 1:I:214:A:H2' | 1:I:215:A:H8 | 1.68 | 0.58 |
| 1:I:239:A:C2 | 1:I:240:A:C8 | 2.91 | 0.58 |
| 1:I:323:A:N3 | 1:I:324:A:N9 | 2.50 | 0.58 |
| 1:I:35:A:O2' | 1:I:36:A:H5' | 2.02 | 0.58 |
| 1:I:403:A:O2' | 1:I:404:A:C4' | 2.50 | 0.58 |
| 1:I:49:A:C2 | 1:I:50:A:C4 | 2.91 | 0.58 |
| 1:I:55:A:C2 | 1:I:56:A:C5 | 2.91 | 0.58 |
| 1:I:86:A:N1 | 1:I:87:A:C5 | 2.71 | 0.58 |
| 2:J:18:A:O2' | 2:J:19:A:H5' | 2.02 | 0.58 |
| 2:J:210:A:C2' | 2:J:211:A:O4' | 2.47 | 0.58 |
| 2:J:24:A:C2 | 2:J:25:A:C8 | 2.91 | 0.58 |
| 2:J:63:A:C2 | 2:J:64:A:C5 | 2.90 | 0.58 |
| 3:K:224:A:H2' | 3:K:225:A:C8 | 2.37 | 0.58 |
| 4:L:413:U:H2' | 4:L:414:U:H6 | 1.68 | 0.58 |
| 4:L:486:U:H2' | 4:L:487:U:C6 | 2.38 | 0.58 |
| 4:L:530:U:O2' | 4:L:531:U:H5' | 2.03 | 0.58 |
| 4:L:562:U:H2' | 4:L:563:U:H6 | 1.67 | 0.58 |
| 4:L:611:U:C2' | 4:L:612:U:O4' | 2.51 | 0.58 |
| 4:L:675:U:N3 | 4:L:676:U:C5 | 2.71 | 0.58 |
| 4:L:684:U:N3 | 4:L:685:U:C5 | 2.70 | 0.58 |
| 4:L:713:U:H2' | 4:L:714:U:H6 | 1.68 | 0.58 |
| 4:L:751:U:C2' | 4:L:752:U:C6 | 2.75 | 0.58 |
| 4:L:753:U:O2' | 4:L:754:U:H5' | 2.03 | 0.58 |
| 4:L:776:U:N3 | 4:L:777:U:C5 | 2.71 | 0.58 |
| 4:L:780:U:HO2' | 4:L:781:U:H5' | 1.58 | 0.58 |
| 4:L:821:U:C2' | 4:L:822:U:C5' | 2.80 | 0.58 |
| 5:M:471:U:H2' | 5:M:472:U:H6 | 1.67 | 0.58 |
| 5:M:483:U:C2 | 5:M:484:U:C6 | 2.90 | 0.58 |
| 5:M:496:U:C2' | 5:M:497:U:O5' | 2.47 | 0.58 |
| 5:M:518:U:H2' | 5:M:519:U:O5' | 2.02 | 0.58 |
| 5:M:527:U:C2' | 5:M:528:U:H5' | 2.33 | 0.58 |
| 6:N:364:U:C2 | 6:N:365:U:C5 | 2.91 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 6:N:413:U:C4 | 6:N:414:U:C5 | 2.91 | 0.58 |
| 6:N:468:U:N3 | 6:N:469:U:C4 | 2.71 | 0.58 |
| 1:I:116:A:C2 | 1:I:117:A:C4 | 2.90 | 0.58 |
| 1:I:64:A:C2 | 1:I:65:A:C5 | 2.91 | 0.58 |
| 2:J:118:A:H2' | 2:J:119:A:H8 | 1.69 | 0.58 |
| 2:J:61:A:O2' | 2:J:62:A:H5' | 2.03 | 0.58 |
| 3:K:188:A:H2' | 3:K:189:A:H8 | 1.68 | 0.58 |
| 3:K:46:A:HO2' | 3:K:47:A:C4' | 2.13 | 0.58 |
| 3:K:71:A:N3 | 3:K:72:A:N7 | 2.50 | 0.58 |
| 3:K:82:A:C2' | 3:K:83:A:H5' | 2.33 | 0.58 |
| 4:L:422:U:C2' | 4:L:423:U:C5' | 2.81 | 0.58 |
| 4:L:426:U:H2' | 4:L:427:U:H6 | 1.67 | 0.58 |
| 4:L:489:U:H2' | 4:L:490:U:H6 | 1.67 | 0.58 |
| 4:L:497:U:C4 | 4:L:498:U:C5 | 2.90 | 0.58 |
| 4:L:525:U:C2 | 4:L:526:U:C6 | 2.91 | 0.58 |
| 4:L:618:U:C2 | 4:L:619:U:C6 | 2.91 | 0.58 |
| 4:L:667:U:H2' | 4:L:668:U:C6 | 2.35 | 0.58 |
| 4:L:703:U:H2' | 4:L:704:U:H6 | 1.65 | 0.58 |
| 2:J:226:A:C2 | 5:M:328:U:C2 | 2.91 | 0.58 |
| 2:J:224:A:C6 | 5:M:330:U:O4 | 2.56 | 0.58 |
| 5:M:346:U:C2 | 5:M:347:U:C5 | 2.92 | 0.58 |
| 5:M:437:U:C3' | 5:M:438:U:C5' | 2.80 | 0.58 |
| 5:M:519:U:C2' | 5:M:520:U:H5' | 2.32 | 0.58 |
| 1:I:110:A:H2' | 1:I:111:A:H8 | 1.65 | 0.58 |
| 1:I:113:A:O2' | 1:I:114:A:H5' | 2.03 | 0.58 |
| 1:I:137:A:C4 | 1:I:138:A:C8 | 2.91 | 0.58 |
| 1:I:166:A:C2' | 1:I:167:A:C5' | 2.81 | 0.58 |
| 1:I:178:A:N3 | 1:I:179:A:C8 | 2.71 | 0.58 |
| 1:I:196:A:N3 | 1:I:197:A:C8 | 2.71 | 0.58 |
| 1:I:320:A:H2' | 1:I:321:A:O5' | 2.02 | 0.58 |
| 1:I:332:A:C2' | 1:I:333:A:H5' | 2.32 | 0.58 |
| 1:I:337:A:C2' | 1:I:338:A:O5' | 2.51 | 0.58 |
| 1:I:43:A:H2' | 1:I:44:A:H8 | 1.68 | 0.58 |
| 1:I:54:A:N6 | 1:I:55:A:H62 | 2.00 | 0.58 |
| 1:I:56:A:C4 | 1:I:57:A:C8 | 2.91 | 0.58 |
| 1:I:85:A:N1 | 1:I:86:A:C5 | 2.71 | 0.58 |
| 2:J:126:A:C5 | 2:J:127:A:N7 | 2.71 | 0.58 |
| 2:J:155:A:H2' | 2:J:156:A:C8 | 2.37 | 0.58 |
| 2:J:171:A:C2 | 2:J:172:A:N7 | 2.58 | 0.58 |
| 2:J:218:A:C4 | 2:J:219:A:C8 | 2.91 | 0.58 |
| 2:J:225:A:C2 | 2:J:226:A:N7 | 2.71 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:101:A:C2' | 3:K:102:A:C5' | 2.81 | 0.58 |
| 3:K:249:A:H2' | 3:K:250:A:O5' | 2.02 | 0.58 |
| 3:K:90:A:H2' | 3:K:91:A:C5' | 2.31 | 0.58 |
| 4:L:526:U:H2' | 4:L:527:U:H6 | 1.67 | 0.58 |
| 4:L:539:U:H2' | 4:L:540:U:H6 | 1.68 | 0.58 |
| 4:L:544:U:N3 | 4:L:545:U:C4 | 2.72 | 0.58 |
| 4:L:639:U:H2' | 4:L:640:U:H6 | 1.68 | 0.58 |
| 4:L:639:U:HO2' | 4:L:640:U:H5' | 1.67 | 0.58 |
| 4:L:680:U:C2 | 4:L:681:U:C5 | 2.91 | 0.58 |
| 4:L:771:U:C2 | 4:L:772:U:C5 | 2.92 | 0.58 |
| 4:L:804:U:H2' | 4:L:805:U:O4' | 2.02 | 0.58 |
| 5:M:318:U:C3' | 5:M:319:U:C5' | 2.70 | 0.58 |
| 5:M:399:U:H2' | 5:M:400:U:O5' | 2.03 | 0.58 |
| 6:N:281:U:C2 | 6:N:282:U:C6 | 2.91 | 0.58 |
| 6:N:422:U:H2' | 6:N:423:U:C6 | 2.36 | 0.58 |
| 6:N:518:U:HO3' | 6:N:519:U:P | 2.20 | 0.58 |
| 1:I:101:A:H2' | 1:I:102:A:N7 | 2.19 | 0.58 |
| 1:I:131:A:H2' | 1:I:132:A:C8 | 2.39 | 0.58 |
| 1:I:155:A:C2 | 1:I:156:A:C5 | 2.92 | 0.58 |
| 1:I:19:A:C2' | 1:I:20:A:C5' | 2.81 | 0.58 |
| 1:I:18:A:N3 | 1:I:19:A:C8 | 2.70 | 0.58 |
| 1:I:268:A:N1 | 1:I:269:A:C5 | 2.71 | 0.58 |
| 1:I:273:A:C2 | 1:I:274:A:C4 | 2.91 | 0.58 |
| 1:I:336:A:C2' | 1:I:337:A:C5' | 2.81 | 0.58 |
| 1:I:344:A:C2 | 1:I:345:A:C8 | 2.92 | 0.58 |
| 1:I:401:A:H2' | 1:I:402:A:H8 | 1.68 | 0.58 |
| 1:I:67:A:C5 | 1:I:68:A:C5 | 2.88 | 0.58 |
| 1:I:69:A:C2 | 1:I:70:A:C5 | 2.92 | 0.58 |
| 1:I:70:A:H2' | 1:I:71:A:C8 | 2.37 | 0.58 |
| 1:I:79:A:C4 | 1:I:80:A:N7 | 2.68 | 0.58 |
| 2:J:120:A:C2 | 2:J:121:A:C4 | 2.90 | 0.58 |
| 2:J:225:A:N1 | 5:M:329:U:C4 | 2.72 | 0.58 |
| 3:K:155:A:O5' | 3:K:156:A:OP2 | 2.20 | 0.58 |
| 3:K:164:A:C4 | 3:K:165:A:N7 | 2.70 | 0.58 |
| 4:L:486:U:C4 | 4:L:487:U:O4 | 2.57 | 0.58 |
| 4:L:526:U:H2' | 4:L:527:U:O4' | 2.03 | 0.58 |
| 4:L:541:U:C2' | 4:L:542:U:H5' | 2.32 | 0.58 |
| 4:L:547:U:N3 | 4:L:548:U:C5 | 2.70 | 0.58 |
| 4:L:638:U:O2' | 4:L:639:U:C4' | 2.49 | 0.58 |
| 4:L:792:U:C2 | 4:L:793:U:C5 | 2.91 | 0.58 |
| 5:M:324:U:C4 | 5:M:325:U:C4 | 2.91 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:444:U:C2 | 5:M:445:U:H5 | 2.12 | 0.58 |
| 5:M:451:U:N3 | 5:M:452:U:O4 | 2.34 | 0.58 |
| 5:M:505:U:C2 | 5:M:506:U:C6 | 2.91 | 0.58 |
| 5:M:511:U:C4 | 5:M:512:U:C4 | 2.91 | 0.58 |
| 6:N:395:U:H2' | 6:N:396:U:H6 | 1.68 | 0.58 |
| 6:N:396:U:C2 | 6:N:397:U:C5 | 2.91 | 0.58 |
| 6:N:417:U:O2' | 6:N:418:U:O4' | 2.21 | 0.58 |
| 1:I:103:A:C2' | 1:I:104:A:O5' | 2.51 | 0.58 |
| 1:I:174:A:C2 | 1:I:175:A:N9 | 2.71 | 0.58 |
| 1:I:222:A:N1 | 1:I:223:A:C5 | 2.72 | 0.58 |
| 1:I:228:A:C6 | 1:I:229:A:N6 | 2.71 | 0.58 |
| 1:I:231:A:C6 | 1:I:232:A:C6 | 2.91 | 0.58 |
| 1:I:232:A:N1 | 1:I:233:A:C5 | 2.72 | 0.58 |
| 1:I:237:A:C2 | 1:I:238:A:C5 | 2.91 | 0.58 |
| 1:I:255:A:H2' | 1:I:256:A:O5' | 2.03 | 0.58 |
| 1:I:262:A:N3 | 1:I:263:A:C8 | 2.71 | 0.58 |
| 1:I:295:A:N3 | 1:I:296:A:C8 | 2.72 | 0.58 |
| 1:I:324:A:C2 | 1:I:325:A:C4 | 2.92 | 0.58 |
| 1:I:388:A:C2' | 1:I:389:A:C5' | 2.82 | 0.58 |
| 1:I:63:A:H61 | 1:I:64:A:N6 | 2.00 | 0.58 |
| 2:J:103:A:N3 | 2:J:104:A:C8 | 2.71 | 0.58 |
| 2:J:143:A:N1 | 2:J:144:A:C5 | 2.70 | 0.58 |
| 2:J:160:A:H2' | 2:J:161:A:C4' | 2.30 | 0.58 |
| 3:K:103:A:O2' | 3:K:104:A:C5' | 2.41 | 0.58 |
| 3:K:131:A:C4 | 3:K:132:A:N7 | 2.71 | 0.58 |
| 3:K:210:A:H2' | 3:K:211:A:H8 | 1.67 | 0.58 |
| 3:K:216:A:H2' | 3:K:217:A:C8 | 2.38 | 0.58 |
| 3:K:217:A:H2' | 3:K:218:A:H8 | 1.68 | 0.58 |
| 3:K:31:A:C6 | 3:K:32:A:C6 | 2.92 | 0.58 |
| 4:L:552:U:N3 | 4:L:553:U:C5 | 2.71 | 0.58 |
| 4:L:574:U:N3 | 4:L:575:U:O4 | 2.30 | 0.58 |
| 4:L:584:U:H2' | 4:L:585:U:C6 | 2.32 | 0.58 |
| 4:L:712:U:C4 | 4:L:713:U:C4 | 2.92 | 0.58 |
| 4:L:761:U:H2' | 4:L:762:U:C6 | 2.39 | 0.58 |
| 5:M:295:U:H2' | 5:M:296:U:O4' | 2.04 | 0.58 |
| 5:M:317:U:N3 | 5:M:318:U:C5 | 2.71 | 0.58 |
| 5:M:330:U:O2' | 5:M:331:U:C5' | 2.49 | 0.58 |
| 5:M:433:U:H2' | 5:M:434:U:C6 | 2.38 | 0.58 |
| 5:M:453:U:C4 | 5:M:454:U:C5 | 2.91 | 0.58 |
| 5:M:462:U:N3 | 5:M:463:U:C5 | 2.72 | 0.58 |
| 5:M:520:U:H2' | 5:M:521:U:C5' | 2.33 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:534:U:O2 | 5:M:535:U:C6 | 2.56 | 0.58 |
| 6:N:469:U:N3 | 6:N:470:U:C5 | 2.71 | 0.58 |
| 1:I:322:A:H2' | 1:I:323:A:O4' | 2.02 | 0.58 |
| 1:I:44:A:C2 | 1:I:45:A:C4 | 2.92 | 0.58 |
| 1:I:54:A:N1 | 1:I:55:A:C5 | 2.70 | 0.58 |
| 1:I:77:A:C2' | 1:I:78:A:H5' | 2.34 | 0.58 |
| 1:I:88:A:C2' | 1:I:89:A:C5' | 2.80 | 0.58 |
| 2:J:12:A:C4 | 2:J:13:A:C8 | 2.91 | 0.58 |
| 2:J:241:A:H3' | 2:J:242:A:P | 2.44 | 0.58 |
| 3:K:118:A:N3 | 3:K:119:A:N9 | 2.52 | 0.58 |
| 3:K:133:A:C2' | 3:K:134:A:C5' | 2.81 | 0.58 |
| 4:L:545:U:H2' | 4:L:546:U:H6 | 1.69 | 0.58 |
| 4:L:546:U:C2 | 4:L:547:U:C6 | 2.91 | 0.58 |
| 4:L:584:U:H2' | 4:L:585:U:O5' | 2.02 | 0.58 |
| 4:L:592:U:N3 | 4:L:593:U:C5 | 2.72 | 0.58 |
| 4:L:661:U:C2' | 4:L:662:U:O5' | 2.51 | 0.58 |
| 4:L:706:U:C5 | 4:L:707:U:H5 | 2.22 | 0.58 |
| 4:L:734:U:C2' | 4:L:735:U:O4' | 2.52 | 0.58 |
| 4:L:737:U:C2 | 4:L:738:U:C5 | 2.91 | 0.58 |
| 4:L:736:U:C2' | 4:L:737:U:O5' | 2.51 | 0.58 |
| 4:L:809:U:C2 | 4:L:810:U:C5 | 2.91 | 0.58 |
| 5:M:315:U:HO2' | 5:M:316:U:H5' | 1.68 | 0.58 |
| 5:M:429:U:C2' | 5:M:430:U:H5' | 2.33 | 0.58 |
| 5:M:447:U:N3 | 5:M:448:U:C5 | 2.71 | 0.58 |
| 5:M:491:U:C2' | 5:M:492:U:O5' | 2.51 | 0.58 |
| 6:N:448:U:N3 | 6:N:449:U:C5 | 2.71 | 0.58 |
| 6:N:485:U:H2' | 6:N:486:U:H6 | 1.67 | 0.58 |
| 1:I:183:A:C2 | 1:I:184:A:C1' | 2.86 | 0.58 |
| 1:I:205:A:O2' | 1:I:206:A:P | 2.61 | 0.58 |
| 1:I:259:A:N1 | 1:I:260:A:C5 | 2.72 | 0.58 |
| 1:I:340:A:N3 | 1:I:341:A:N7 | 2.51 | 0.58 |
| 1:I:53:A:C2 | 1:I:54:A:N7 | 2.71 | 0.58 |
| 1:I:53:A:H2' | 1:I:54:A:O5' | 2.04 | 0.58 |
| 1:I:65:A:C2 | 1:I:66:A:C1' | 2.86 | 0.58 |
| 1:I:64:A:N3 | 1:I:65:A:C8 | 2.71 | 0.58 |
| 2:J:107:A:N3 | 2:J:108:A:C8 | 2.71 | 0.58 |
| 2:J:142:A:C2 | 2:J:143:A:C5 | 2.90 | 0.58 |
| 2:J:161:A:N3 | 2:J:162:A:C8 | 2.71 | 0.58 |
| 2:J:92:A:C2 | 2:J:93:A:C4 | 2.87 | 0.58 |
| 3:K:130:A:C2' | 3:K:131:A:O5' | 2.52 | 0.58 |
| 3:K:137:A:C2 | 3:K:138:A:C4 | 2.92 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:155:A:N1 | 3:K:156:A:C5 | 2.72 | 0.58 |
| 3:K:173:A:C2' | 3:K:174:A:C5' | 2.82 | 0.58 |
| 4:L:484:U:H2' | 4:L:485:U:H6 | 1.68 | 0.58 |
| 4:L:523:U:C2 | 4:L:524:U:C5 | 2.91 | 0.58 |
| 4:L:617:U:H2' | 4:L:618:U:H6 | 1.67 | 0.58 |
| 4:L:641:U:O2 | 4:L:642:U:C1' | 2.51 | 0.58 |
| 4:L:644:U:O2 | 4:L:645:U:O4' | 2.21 | 0.58 |
| 4:L:693:U:C4 | 4:L:694:U:C5 | 2.91 | 0.58 |
| 5:M:343:U:O2' | 5:M:344:U:H5' | 2.04 | 0.58 |
| 5:M:377:U:N3 | 5:M:378:U:C5 | 2.72 | 0.58 |
| 5:M:458:U:HO2' | 5:M:459:U:C5' | 1.89 | 0.58 |
| 2:J:89:A:C2 | 5:M:465:U:C2 | 2.90 | 0.58 |
| 2:J:47:A:N6 | 5:M:507:U:O4 | 2.36 | 0.58 |
| 5:M:533:U:H2' | 5:M:534:U:H6 | 1.67 | 0.58 |
| 6:N:441:U:H2' | 6:N:442:U:O5' | 2.04 | 0.58 |
| 1:I:113:A:C6 | 1:I:114:A:C5 | 2.92 | 0.58 |
| 1:I:134:A:H2' | 1:I:135:A:H8 | 1.68 | 0.58 |
| 1:I:157:A:H2' | 1:I:158:A:H8 | 1.68 | 0.58 |
| 1:I:232:A:C5 | 1:I:233:A:C8 | 2.92 | 0.58 |
| 1:I:247:A:C6 | 1:I:248:A:N6 | 2.72 | 0.58 |
| 1:I:359:A:C5 | 1:I:360:A:N7 | 2.71 | 0.58 |
| 2:J:13:A:C4 | 2:J:14:A:C8 | 2.92 | 0.58 |
| 2:J:171:A:HO2' | 2:J:172:A:C5' | 2.17 | 0.58 |
| 2:J:206:A:C2 | 2:J:207:A:C8 | 2.91 | 0.58 |
| 2:J:218:A:H2' | 2:J:219:A:O5' | 2.04 | 0.58 |
| 2:J:224:A:C2' | 2:J:225:A:C5' | 2.82 | 0.58 |
| 2:J:27:A:C4 | 2:J:28:A:C8 | 2.92 | 0.58 |
| 2:J:5:A:C2 | 2:J:6:A:C5 | 2.92 | 0.58 |
| 2:J:67:A:N3 | 2:J:68:A:C8 | 2.71 | 0.58 |
| 3:K:138:A:C4 | 3:K:139:A:N7 | 2.71 | 0.58 |
| 3:K:170:A:C2' | 3:K:171:A:C5' | 2.81 | 0.58 |
| 3:K:80:A:C2 | 3:K:81:A:C4 | 2.91 | 0.58 |
| 4:L:497:U:N3 | 4:L:498:U:C5 | 2.71 | 0.58 |
| 4:L:512:U:C2 | 4:L:513:U:C5 | 2.92 | 0.58 |
| 4:L:514:U:C2 | 4:L:515:U:C5 | 2.92 | 0.58 |
| 4:L:543:U:N3 | 4:L:544:U:C5 | 2.72 | 0.58 |
| 4:L:594:U:C2' | 4:L:595:U:O5' | 2.52 | 0.58 |
| 4:L:650:U:C2 | 4:L:651:U:C5 | 2.92 | 0.58 |
| 4:L:674:U:H2' | 4:L:675:U:O5' | 2.02 | 0.58 |
| 4:L:698:U:O2' | 4:L:699:U:C4' | 2.51 | 0.58 |
| 4:L:717:U:C4 | 4:L:718:U:C4 | 2.82 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:810:U:HO2' | 4:L:811:U:C4' | 2.17 | 0.58 |
| 5:M:345:U:H2' | 5:M:346:U:C6 | 2.37 | 0.58 |
| 5:M:395:U:C2' | 5:M:396:U:O5' | 2.51 | 0.58 |
| 5:M:406:U:C4 | 5:M:407:U:C5 | 2.92 | 0.58 |
| 5:M:432:U:C2' | 5:M:433:U:O5' | 2.52 | 0.58 |
| 5:M:486:U:C2' | 5:M:487:U:O5' | 2.48 | 0.58 |
| 3:K:253:A:N6 | 6:N:279:U:O4 | 2.37 | 0.58 |
| 6:N:338:U:C4 | 6:N:339:U:C4 | 2.91 | 0.58 |
| 6:N:378:U:N3 | 6:N:379:U:C5 | 2.72 | 0.58 |
| 6:N:403:U:C2 | 6:N:404:U:C6 | 2.91 | 0.58 |
| 6:N:426:U:O2' | 6:N:427:U:O4' | 2.20 | 0.58 |
| 1:I:1:A:N6 | 1:I:2:A:N6 | 2.51 | 0.58 |
| 1:I:261:A:C2 | 1:I:262:A:C5 | 2.91 | 0.58 |
| 1:I:282:A:C4 | 1:I:283:A:N7 | 2.72 | 0.58 |
| 1:I:303:A:H2' | 1:I:304:A:O5' | 2.04 | 0.58 |
| 1:I:31:A:C6 | 1:I:32:A:N6 | 2.71 | 0.58 |
| 1:I:353:A:C2 | 1:I:354:A:N9 | 2.72 | 0.58 |
| 1:I:365:A:C2 | 1:I:366:A:C5 | 2.92 | 0.58 |
| 1:I:49:A:C2 | 1:I:50:A:C5 | 2.92 | 0.58 |
| 1:I:70:A:H2' | 1:I:71:A:H8 | 1.69 | 0.58 |
| 1:I:79:A:HO2' | 1:I:80:A:H5' | 1.65 | 0.58 |
| 2:J:153:A:C2 | 2:J:154:A:N9 | 2.72 | 0.58 |
| 2:J:158:A:N6 | 2:J:159:A:N6 | 2.51 | 0.58 |
| 2:J:202:A:N1 | 2:J:203:A:C5 | 2.72 | 0.58 |
| 2:J:67:A:H2' | 2:J:68:A:C5' | 2.33 | 0.58 |
| 3:K:102:A:O2' | 3:K:103:A:H5' | 2.04 | 0.58 |
| 3:K:80:A:C2' | 3:K:81:A:C5' | 2.81 | 0.58 |
| 3:K:89:A:C4 | 3:K:90:A:C8 | 2.92 | 0.58 |
| 3:K:93:A:C2' | 3:K:94:A:H5' | 2.33 | 0.58 |
| 3:K:94:A:C4 | 3:K:95:A:C8 | 2.91 | 0.58 |
| 3:K:99:A:C2' | 3:K:100:A:O4' | 2.52 | 0.58 |
| 4:L:489:U:N3 | 4:L:490:U:C5 | 2.72 | 0.58 |
| 4:L:533:U:C2 | 4:L:534:U:C6 | 2.92 | 0.58 |
| 4:L:543:U:N3 | 4:L:544:U:O4 | 2.36 | 0.58 |
| 4:L:553:U:O2 | 4:L:554:U:N1 | 2.36 | 0.58 |
| 4:L:613:U:HO2' | 4:L:614:U:H5' | 1.64 | 0.58 |
| 4:L:646:U:C2' | 4:L:647:U:C5' | 2.81 | 0.58 |
| 5:M:287:U:O2 | 5:M:288:U:C6 | 2.57 | 0.58 |
| 5:M:320:U:C2 | 5:M:321:U:C5 | 2.91 | 0.58 |
| 5:M:420:U:C2' | 5:M:421:U:O4' | 2.51 | 0.58 |
| 5:M:455:U:H2' | 5:M:456:U:H6 | 1.67 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:484:U:H2' | 5:M:485:U:C6 | 2.39 | 0.58 |
| 6:N:338:U:C2 | 6:N:339:U:C4 | 2.92 | 0.58 |
| 1:I:102:A:C5 | 1:I:103:A:N7 | 2.72 | 0.58 |
| 1:I:105:A:H2' | 1:I:106:A:H8 | 1.68 | 0.58 |
| 1:I:131:A:N1 | 1:I:132:A:C6 | 2.72 | 0.58 |
| 1:I:180:A:C2 | 1:I:181:A:C5 | 2.90 | 0.58 |
| 1:I:226:A:C2 | 1:I:227:A:C4 | 2.92 | 0.58 |
| 1:I:21:A:C2' | 1:I:22:A:C8 | 2.77 | 0.58 |
| 1:I:242:A:C2' | 1:I:243:A:O4' | 2.51 | 0.58 |
| 1:I:254:A:H2' | 1:I:255:A:O4' | 2.04 | 0.58 |
| 1:I:314:A:C2' | 1:I:315:A:C5' | 2.81 | 0.58 |
| 1:I:323:A:C2 | 1:I:324:A:H1' | 2.38 | 0.58 |
| 1:I:45:A:C2 | 1:I:46:A:N7 | 2.72 | 0.58 |
| 1:I:59:A:HO2' | 1:I:60:A:H5' | 1.67 | 0.58 |
| 2:J:182:A:H62 | 2:J:183:A:H62 | 1.48 | 0.58 |
| 2:J:211:A:H2' | 2:J:212:A:O5' | 2.04 | 0.58 |
| 2:J:215:A:C2 | 2:J:216:A:C4 | 2.92 | 0.58 |
| 2:J:224:A:C2 | 2:J:225:A:N9 | 2.72 | 0.58 |
| 2:J:230:A:C2' | 2:J:231:A:O4' | 2.51 | 0.58 |
| 2:J:71:A:C6 | 2:J:72:A:C5 | 2.91 | 0.58 |
| 3:K:111:A:C2 | 3:K:112:A:C5 | 2.92 | 0.58 |
| 3:K:135:A:N3 | 3:K:136:A:N7 | 2.52 | 0.58 |
| 3:K:191:A:C2' | 3:K:192:A:H5' | 2.33 | 0.58 |
| 4:L:464:U:H2' | 4:L:465:U:H6 | 1.68 | 0.58 |
| 4:L:531:U:C2 | 4:L:532:U:C6 | 2.92 | 0.58 |
| 4:L:565:U:H2' | 4:L:566:U:H6 | 1.68 | 0.58 |
| 4:L:592:U:C2 | 4:L:593:U:C6 | 2.92 | 0.58 |
| 4:L:650:U:O2 | 4:L:651:U:C6 | 2.57 | 0.58 |
| 4:L:656:U:C2 | 4:L:657:U:C5 | 2.92 | 0.58 |
| 4:L:758:U:C2' | 4:L:759:U:O4' | 2.47 | 0.58 |
| 4:L:809:U:H2' | 4:L:810:U:H6 | 1.68 | 0.58 |
| 5:M:396:U:C2' | 5:M:397:U:O5' | 2.52 | 0.58 |
| 5:M:460:U:C5 | 5:M:461:U:C5 | 2.92 | 0.58 |
| 5:M:498:U:C2' | 5:M:499:U:H6 | 2.17 | 0.58 |
| 6:N:391:U:C2 | 6:N:392:U:C5 | 2.92 | 0.58 |
| 1:I:15:A:C2' | 1:I:16:A:O4' | 2.47 | 0.57 |
| 1:I:326:A:O2' | 1:I:327:A:C5' | 2.42 | 0.57 |
| 1:I:329:A:O2' | 1:I:330:A:H5' | 2.04 | 0.57 |
| 1:I:345:A:C2 | 1:I:346:A:C8 | 2.92 | 0.57 |
| 1:I:364:A:C2 | 1:I:365:A:C5 | 2.92 | 0.57 |
| 1:I:74:A:N6 | 1:I:75:A:C6 | 2.72 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:95:A:H2' | 1:I:96:A:C8 | 2.39 | 0.57 |
| 2:J:138:A:C6 | 2:J:139:A:N6 | 2.72 | 0.57 |
| 2:J:38:A:C2 | 2:J:39:A:C5 | 2.92 | 0.57 |
| 2:J:86:A:N3 | 2:J:87:A:N7 | 2.51 | 0.57 |
| 3:K:127:A:N3 | 3:K:128:A:C8 | 2.72 | 0.57 |
| 3:K:137:A:N3 | 3:K:138:A:C8 | 2.72 | 0.57 |
| 3:K:258:A:N6 | 3:K:259:A:N6 | 2.52 | 0.57 |
| 3:K:43:A:C6 | 3:K:44:A:C6 | 2.92 | 0.57 |
| 3:K:79:A:H2' | 3:K:80:A:C8 | 2.39 | 0.57 |
| 4:L:436:U:C2' | 4:L:437:U:H6 | 2.04 | 0.57 |
| 4:L:584:U:C2' | 4:L:585:U:C5' | 2.82 | 0.57 |
| 4:L:670:U:H2' | 4:L:671:U:C6 | 2.39 | 0.57 |
| 4:L:703:U:N3 | 4:L:704:U:C5 | 2.72 | 0.57 |
| 4:L:763:U:N3 | 4:L:764:U:C4 | 2.71 | 0.57 |
| 4:L:813:U:C4 | 4:L:814:U:C4 | 2.92 | 0.57 |
| 5:M:395:U:C2 | 5:M:396:U:C6 | 2.92 | 0.57 |
| 5:M:526:U:H2' | 5:M:527:U:O4' | 2.03 | 0.57 |
| 6:N:408:U:H2' | 6:N:409:U:C6 | 2.36 | 0.57 |
| 6:N:425:U:C2 | 6:N:426:U:C4 | 2.91 | 0.57 |
| 6:N:448:U:H2' | 6:N:449:U:C6 | 2.38 | 0.57 |
| 6:N:527:U:C2 | 6:N:528:U:C5 | 2.92 | 0.57 |
| 1:I:113:A:C2 | 1:I:114:A:C4 | 2.91 | 0.57 |
| 1:I:143:A:N1 | 1:I:144:A:N6 | 2.52 | 0.57 |
| 1:I:152:A:C5 | 1:I:153:A:N7 | 2.71 | 0.57 |
| 1:I:159:A:C2 | 1:I:160:A:C5 | 2.92 | 0.57 |
| 1:I:255:A:C2' | 1:I:256:A:O5' | 2.52 | 0.57 |
| 1:I:323:A:H2' | 1:I:324:A:C4' | 2.30 | 0.57 |
| 1:I:324:A:C2 | 1:I:325:A:N7 | 2.72 | 0.57 |
| 1:I:335:A:C4 | 1:I:336:A:N7 | 2.72 | 0.57 |
| 1:I:76:A:C4 | 1:I:77:A:C8 | 2.92 | 0.57 |
| 2:J:217:A:N1 | 2:J:218:A:C6 | 2.72 | 0.57 |
| 2:J:219:A:C2 | 2:J:220:A:C5 | 2.92 | 0.57 |
| 2:J:88:A:H2' | 2:J:89:A:C5' | 2.24 | 0.57 |
| 2:J:89:A:O2' | 2:J:90:A:O5' | 2.23 | 0.57 |
| 2:J:99:A:O2' | 2:J:100:A:C5' | 2.53 | 0.57 |
| 3:K:128:A:C5 | 3:K:129:A:N7 | 2.72 | 0.57 |
| 3:K:162:A:O2' | 3:K:163:A:C5' | 2.45 | 0.57 |
| 3:K:242:A:C3' | 3:K:243:A:P | 2.90 | 0.57 |
| 3:K:78:A:C2' | 3:K:79:A:C5' | 2.82 | 0.57 |
| 4:L:487:U:H2' | 4:L:488:U:C4' | 2.34 | 0.57 |
| 4:L:578:U:H2' | 4:L:579:U:H6 | 1.68 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:598:U:O2 | 4:L:599:U:C6 | 2.57 | 0.57 |
| 4:L:691:U:O2 | 4:L:692:U:C6 | 2.57 | 0.57 |
| 4:L:794:U:C2 | 4:L:795:U:C6 | 2.93 | 0.57 |
| 5:M:348:U:C2 | 5:M:349:U:C4 | 2.79 | 0.57 |
| 5:M:361:U:O2 | 5:M:362:U:C5 | 2.57 | 0.57 |
| 5:M:421:U:N3 | 5:M:422:U:C4 | 2.72 | 0.57 |
| 5:M:457:U:C2 | 5:M:458:U:C5 | 2.92 | 0.57 |
| 5:M:463:U:H2' | 5:M:464:U:H6 | 1.69 | 0.57 |
| 5:M:484:U:N3 | 5:M:485:U:C4 | 2.73 | 0.57 |
| 5:M:508:U:C2 | 5:M:509:U:C5 | 2.92 | 0.57 |
| 6:N:335:U:H2' | 6:N:336:U:C6 | 2.38 | 0.57 |
| 6:N:385:U:C2 | 6:N:386:U:C5 | 2.92 | 0.57 |
| 6:N:401:U:H2' | 6:N:402:U:C6 | 2.39 | 0.57 |
| 6:N:462:U:H2' | 6:N:463:U:C5' | 2.34 | 0.57 |
| 6:N:489:U:C2 | 6:N:490:U:C6 | 2.90 | 0.57 |
| 1:I:143:A:N3 | 1:I:144:A:C5 | 2.71 | 0.57 |
| 1:I:184:A:C6 | 1:I:185:A:C5 | 2.92 | 0.57 |
| 1:I:18:A:C4 | 1:I:19:A:N7 | 2.72 | 0.57 |
| 1:I:226:A:C2 | 1:I:227:A:N7 | 2.73 | 0.57 |
| 1:I:229:A:C4 | 1:I:230:A:C8 | 2.93 | 0.57 |
| 1:I:260:A:N1 | 1:I:261:A:C5 | 2.72 | 0.57 |
| 1:I:49:A:C2 | 1:I:50:A:N9 | 2.72 | 0.57 |
| 1:I:95:A:N6 | 1:I:96:A:H62 | 1.88 | 0.57 |
| 2:J:99:A:C2' | 2:J:100:A:H8 | 2.07 | 0.57 |
| 2:J:126:A:C4 | 2:J:127:A:C8 | 2.91 | 0.57 |
| 2:J:131:A:H2' | 2:J:132:A:C8 | 2.39 | 0.57 |
| 2:J:221:A:C2' | 2:J:222:A:O5' | 2.52 | 0.57 |
| 2:J:41:A:C2 | 2:J:42:A:C5 | 2.93 | 0.57 |
| 2:J:79:A:C2 | 2:J:80:A:C4 | 2.91 | 0.57 |
| 2:J:97:A:H2' | 2:J:98:A:H8 | 1.69 | 0.57 |
| 3:K:104:A:C2' | 3:K:105:A:O4' | 2.52 | 0.57 |
| 3:K:110:A:H2' | 3:K:111:A:C4' | 2.34 | 0.57 |
| 3:K:139:A:C2 | 3:K:140:A:C8 | 2.92 | 0.57 |
| 3:K:42:A:H2' | 3:K:43:A:O4' | 2.04 | 0.57 |
| 3:K:82:A:H2' | 3:K:83:A:H8 | 1.68 | 0.57 |
| 4:L:463:U:H2' | 4:L:464:U:C6 | 2.38 | 0.57 |
| 4:L:501:U:O2' | 4:L:502:U:O5' | 2.22 | 0.57 |
| 4:L:541:U:C2' | 4:L:542:U:C5' | 2.82 | 0.57 |
| 4:L:552:U:H2' | 4:L:553:U:H6 | 1.65 | 0.57 |
| 4:L:562:U:O2 | 4:L:563:U:C6 | 2.58 | 0.57 |
| 4:L:576:U:H2' | 4:L:577:U:O4' | 2.03 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:649:U:C4 | 4:L:650:U:C4 | 2.92 | 0.57 |
| 4:L:751:U:C3' | 4:L:752:U:H5' | 2.11 | 0.57 |
| 4:L:776:U:C2 | 4:L:777:U:C5 | 2.92 | 0.57 |
| 5:M:306:U:H2' | 5:M:307:U:H6 | 1.69 | 0.57 |
| 5:M:315:U:H2' | 5:M:316:U:H6 | 1.69 | 0.57 |
| 5:M:326:U:C2 | 5:M:327:U:C5 | 2.92 | 0.57 |
| 5:M:433:U:C6 | 5:M:434:U:H5 | 2.22 | 0.57 |
| 5:M:460:U:O4 | 5:M:461:U:O4 | 2.22 | 0.57 |
| 6:N:358:U:N3 | 6:N:359:U:C5 | 2.73 | 0.57 |
| 6:N:447:U:H2' | 6:N:448:U:H6 | 1.68 | 0.57 |
| 1:I:106:A:N1 | 1:I:107:A:C5 | 2.72 | 0.57 |
| 1:I:190:A:C2 | 1:I:191:A:C5 | 2.92 | 0.57 |
| 1:I:19:A:C5 | 1:I:20:A:N7 | 2.72 | 0.57 |
| 1:I:205:A:C2 | 1:I:206:A:C8 | 2.92 | 0.57 |
| 1:I:261:A:O2' | 1:I:262:A:O4' | 2.23 | 0.57 |
| 1:I:55:A:C4 | 1:I:56:A:C8 | 2.92 | 0.57 |
| 1:I:70:A:O2' | 1:I:71:A:C4' | 2.52 | 0.57 |
| 2:J:104:A:C2' | 2:J:105:A:H5' | 2.34 | 0.57 |
| 2:J:170:A:C2 | 2:J:171:A:C8 | 2.92 | 0.57 |
| 2:J:192:A:C4 | 2:J:193:A:C8 | 2.92 | 0.57 |
| 2:J:249:A:C2 | 2:J:250:A:C4 | 2.91 | 0.57 |
| 2:J:248:A:H2' | 2:J:249:A:H8 | 1.69 | 0.57 |
| 2:J:253:A:C4 | 2:J:254:A:C8 | 2.93 | 0.57 |
| 2:J:34:A:N1 | 2:J:35:A:C5 | 2.72 | 0.57 |
| 2:J:38:A:O2' | 2:J:39:A:C5' | 2.45 | 0.57 |
| 2:J:68:A:N6 | 2:J:69:A:H62 | 2.02 | 0.57 |
| 2:J:86:A:O2' | 2:J:87:A:P | 2.62 | 0.57 |
| 2:J:93:A:C5 | 2:J:94:A:N7 | 2.72 | 0.57 |
| 3:K:106:A:O2' | 3:K:107:A:H5' | 2.04 | 0.57 |
| 3:K:58:A:H2' | 3:K:59:A:H8 | 1.68 | 0.57 |
| 4:L:472:U:H2' | 4:L:473:U:C5 | 2.39 | 0.57 |
| 4:L:501:U:C2 | 4:L:502:U:C5 | 2.92 | 0.57 |
| 4:L:546:U:C2' | 4:L:547:U:H6 | 2.04 | 0.57 |
| 4:L:556:U:C2 | 4:L:557:U:C5 | 2.92 | 0.57 |
| 4:L:559:U:C4 | 4:L:560:U:O4 | 2.58 | 0.57 |
| 4:L:613:U:O2' | 4:L:614:U:C5' | 2.43 | 0.57 |
| 4:L:669:U:C2 | 4:L:670:U:C6 | 2.92 | 0.57 |
| 4:L:673:U:C2' | 4:L:674:U:O5' | 2.49 | 0.57 |
| 4:L:718:U:O2' | 4:L:719:U:C4' | 2.50 | 0.57 |
| 4:L:756:U:O2 | 4:L:757:U:C6 | 2.57 | 0.57 |
| 4:L:771:U:C2' | 4:L:772:U:C5' | 2.83 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:820:U:N3 | 4:L:821:U:C4 | 2.72 | 0.57 |
| 5:M:393:U:C4 | 5:M:394:U:C4 | 2.93 | 0.57 |
| 5:M:393:U:C2' | 5:M:394:U:H6 | 2.09 | 0.57 |
| 5:M:397:U:H2' | 5:M:398:U:O4' | 2.04 | 0.57 |
| 5:M:438:U:H2' | 5:M:439:U:C5' | 2.34 | 0.57 |
| 5:M:527:U:C4 | 5:M:528:U:C5 | 2.93 | 0.57 |
| 6:N:450:U:C2' | 6:N:451:U:H6 | 2.15 | 0.57 |
| 1:I:110:A:O2' | 1:I:111:A:H5' | 2.05 | 0.57 |
| 1:I:116:A:H2' | 1:I:117:A:O5' | 2.04 | 0.57 |
| 1:I:178:A:C2' | 1:I:179:A:O5' | 2.50 | 0.57 |
| 1:I:184:A:C4 | 1:I:185:A:N7 | 2.72 | 0.57 |
| 1:I:184:A:C6 | 1:I:185:A:N7 | 2.73 | 0.57 |
| 1:I:266:A:C2 | 1:I:267:A:H1' | 2.38 | 0.57 |
| 1:I:310:A:H2' | 1:I:311:A:C5' | 2.34 | 0.57 |
| 1:I:352:A:C2 | 1:I:353:A:C4 | 2.93 | 0.57 |
| 1:I:71:A:H2' | 1:I:72:A:C5' | 2.35 | 0.57 |
| 2:J:105:A:C5 | 2:J:106:A:N7 | 2.72 | 0.57 |
| 2:J:133:A:H2' | 2:J:134:A:O5' | 2.05 | 0.57 |
| 2:J:17:A:C2' | 2:J:18:A:C5' | 2.83 | 0.57 |
| 2:J:187:A:C2' | 2:J:188:A:H5' | 2.34 | 0.57 |
| 2:J:192:A:C2' | 2:J:193:A:O5' | 2.49 | 0.57 |
| 2:J:223:A:C2 | 2:J:224:A:N9 | 2.72 | 0.57 |
| 2:J:66:A:C2 | 2:J:67:A:C4 | 2.92 | 0.57 |
| 3:K:121:A:N1 | 3:K:122:A:C5 | 2.71 | 0.57 |
| 3:K:164:A:N6 | 3:K:165:A:C6 | 2.72 | 0.57 |
| 3:K:250:A:N3 | 3:K:251:A:C8 | 2.73 | 0.57 |
| 3:K:80:A:C2' | 3:K:81:A:H5' | 2.34 | 0.57 |
| 4:L:450:U:C2' | 4:L:451:U:H5' | 2.35 | 0.57 |
| 4:L:580:U:H2' | 4:L:581:U:O5' | 2.04 | 0.57 |
| 4:L:591:U:C2 | 4:L:592:U:C5 | 2.91 | 0.57 |
| 4:L:604:U:H2' | 4:L:605:U:O5' | 2.04 | 0.57 |
| 4:L:793:U:H2' | 4:L:794:U:H6 | 1.69 | 0.57 |
| 5:M:361:U:O2' | 5:M:362:U:C5' | 2.52 | 0.57 |
| 5:M:464:U:C2 | 5:M:465:U:C5 | 2.92 | 0.57 |
| 5:M:479:U:C2 | 5:M:480:U:C5 | 2.92 | 0.57 |
| 5:M:513:U:C2 | 5:M:514:U:C5 | 2.93 | 0.57 |
| 6:N:339:U:C2' | 6:N:340:U:C5' | 2.83 | 0.57 |
| 6:N:411:U:C2 | 6:N:412:U:C6 | 2.92 | 0.57 |
| 6:N:444:U:O2' | 6:N:445:U:H5' | 2.04 | 0.57 |
| 6:N:466:U:H2' | 6:N:467:U:C6 | 2.37 | 0.57 |
| 1:I:107:A:C5' | 1:I:108:A:OP2 | 2.52 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:128:A:C2' | 1:I:129:A:C5' | 2.81 | 0.57 |
| 1:I:14:A:N1 | 1:I:15:A:C5 | 2.73 | 0.57 |
| 1:I:223:A:H2' | 1:I:224:A:C8 | 2.40 | 0.57 |
| 1:I:74:A:N1 | 1:I:75:A:C4 | 2.72 | 0.57 |
| 2:J:132:A:C2 | 2:J:133:A:C4 | 2.92 | 0.57 |
| 2:J:56:A:C2 | 2:J:57:A:C1' | 2.87 | 0.57 |
| 2:J:69:A:C2 | 2:J:70:A:N9 | 2.72 | 0.57 |
| 3:K:107:A:C2' | 3:K:108:A:O5' | 2.51 | 0.57 |
| 3:K:147:A:O2' | 3:K:148:A:O5' | 2.22 | 0.57 |
| 3:K:173:A:H2' | 3:K:174:A:C5' | 2.35 | 0.57 |
| 3:K:3:A:H2' | 3:K:4:A:H8 | 1.69 | 0.57 |
| 3:K:75:A:H3' | 3:K:76:A:P | 2.44 | 0.57 |
| 3:K:83:A:C2 | 3:K:84:A:C5 | 2.93 | 0.57 |
| 4:L:419:U:C4 | 4:L:420:U:O4 | 2.57 | 0.57 |
| 4:L:419:U:N3 | 4:L:420:U:O4 | 2.37 | 0.57 |
| 4:L:483:U:C2 | 4:L:484:U:C5 | 2.92 | 0.57 |
| 4:L:485:U:C2 | 4:L:486:U:C5 | 2.92 | 0.57 |
| 4:L:541:U:N3 | 4:L:542:U:C5 | 2.72 | 0.57 |
| 4:L:599:U:C4 | 4:L:600:U:C5 | 2.92 | 0.57 |
| 4:L:750:U:C2' | 4:L:751:U:H6 | 2.16 | 0.57 |
| 4:L:749:U:H2' | 4:L:750:U:H6 | 1.68 | 0.57 |
| 4:L:774:U:N3 | 4:L:775:U:C5 | 2.73 | 0.57 |
| 4:L:784:U:H2' | 4:L:785:U:H6 | 1.68 | 0.57 |
| 5:M:292:U:H2' | 5:M:293:U:H6 | 1.70 | 0.57 |
| 5:M:315:U:C2 | 5:M:316:U:C6 | 2.92 | 0.57 |
| 5:M:393:U:N3 | 5:M:394:U:C5 | 2.73 | 0.57 |
| 5:M:447:U:N3 | 5:M:448:U:C4 | 2.72 | 0.57 |
| 5:M:453:U:C4 | 5:M:454:U:C4 | 2.92 | 0.57 |
| 5:M:547:U:N3 | 5:M:548:U:C5 | 2.73 | 0.57 |
| 6:N:406:U:C5 | 6:N:407:U:C5 | 2.92 | 0.57 |
| 6:N:412:U:H2' | 6:N:413:U:H6 | 1.69 | 0.57 |
| 6:N:439:U:C4 | 6:N:440:U:C5 | 2.92 | 0.57 |
| 1:I:107:A:C5 | 1:I:108:A:C5 | 2.93 | 0.57 |
| 1:I:178:A:H2' | 1:I:179:A:O5' | 2.05 | 0.57 |
| 1:I:273:A:O2' | 1:I:274:A:C5' | 2.37 | 0.57 |
| 1:I:322:A:C4 | 1:I:323:A:N7 | 2.72 | 0.57 |
| 1:I:329:A:C4 | 1:I:330:A:N7 | 2.72 | 0.57 |
| 1:I:32:A:H2' | 1:I:33:A:H8 | 1.69 | 0.57 |
| 2:J:265:A:H2' | 2:J:266:A:O5' | 2.04 | 0.57 |
| 2:J:32:A:N3 | 2:J:33:A:C8 | 2.72 | 0.57 |
| 3:K:104:A:N3 | 3:K:105:A:N9 | 2.52 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:111:A:O2' | 3:K:112:A:H5' | 2.04 | 0.57 |
| 3:K:115:A:C2' | 3:K:116:A:H8 | 2.16 | 0.57 |
| 3:K:4:A:O2' | 3:K:5:A:H5' | 2.03 | 0.57 |
| 3:K:98:A:O2' | 3:K:99:A:H5' | 2.04 | 0.57 |
| 4:L:415:U:H2' | 4:L:416:U:H6 | 1.70 | 0.57 |
| 4:L:563:U:O2' | 4:L:564:U:H5' | 2.04 | 0.57 |
| 4:L:585:U:O2' | 4:L:586:U:C4' | 2.53 | 0.57 |
| 4:L:602:U:C2' | 4:L:603:U:H5' | 2.34 | 0.57 |
| 4:L:672:U:C4 | 4:L:673:U:C4 | 2.93 | 0.57 |
| 5:M:381:U:C4 | 5:M:382:U:O4 | 2.57 | 0.57 |
| 5:M:444:U:N3 | 5:M:445:U:C5 | 2.72 | 0.57 |
| 5:M:515:U:C2 | 5:M:516:U:C6 | 2.93 | 0.57 |
| 5:M:525:U:N3 | 5:M:526:U:C5 | 2.73 | 0.57 |
| 6:N:485:U:C3' | 6:N:486:U:O5' | 2.50 | 0.57 |
| 6:N:492:U:C2 | 6:N:493:U:C6 | 2.93 | 0.57 |
| 6:N:512:U:H2' | 6:N:513:U:C6 | 2.40 | 0.57 |
| 1:I:101:A:C2' | 1:I:102:A:C8 | 2.81 | 0.57 |
| 1:I:21:A:C2 | 1:I:22:A:C4 | 2.93 | 0.57 |
| 1:I:264:A:N3 | 1:I:265:A:C8 | 2.73 | 0.57 |
| 1:I:338:A:C4 | 1:I:339:A:N7 | 2.73 | 0.57 |
| 1:I:77:A:C5 | 1:I:78:A:N7 | 2.73 | 0.57 |
| 1:I:79:A:C2 | 1:I:80:A:C5 | 2.93 | 0.57 |
| 2:J:166:A:O2' | 2:J:167:A:P | 2.61 | 0.57 |
| 2:J:183:A:N3 | 2:J:184:A:C1' | 2.68 | 0.57 |
| 2:J:249:A:H2' | 2:J:250:A:O5' | 2.04 | 0.57 |
| 2:J:48:A:C5 | 2:J:49:A:N7 | 2.73 | 0.57 |
| 2:J:80:A:C5 | 2:J:81:A:N7 | 2.72 | 0.57 |
| 3:K:184:A:C3' | 3:K:185:A:P | 2.90 | 0.57 |
| 3:K:260:A:C3' | 3:K:261:A:P | 2.90 | 0.57 |
| 4:L:567:U:O2 | 4:L:568:U:C6 | 2.58 | 0.57 |
| 4:L:570:U:H2' | 4:L:571:U:H6 | 1.70 | 0.57 |
| 4:L:588:U:N3 | 4:L:589:U:C5 | 2.73 | 0.57 |
| 4:L:627:U:C2' | 4:L:628:U:H5' | 2.34 | 0.57 |
| 4:L:669:U:HO2' | 4:L:670:U:H5' | 1.66 | 0.57 |
| 4:L:690:U:H2' | 4:L:691:U:H6 | 1.69 | 0.57 |
| 4:L:715:U:HO2' | 4:L:716:U:C4' | 2.17 | 0.57 |
| 4:L:739:U:C2 | 4:L:740:U:C5 | 2.93 | 0.57 |
| 4:L:802:U:HO2' | 4:L:803:U:H5' | 1.68 | 0.57 |
| 5:M:322:U:C2' | 5:M:323:U:O5' | 2.51 | 0.57 |
| 5:M:393:U:C2' | 5:M:394:U:C6 | 2.80 | 0.57 |
| 5:M:420:U:H2' | 5:M:421:U:C5' | 2.32 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:461:U:C2 | 5:M:462:U:C5 | 2.92 | 0.57 |
| 5:M:530:U:C2' | 5:M:531:U:O4' | 2.48 | 0.57 |
| 6:N:296:U:N3 | 6:N:297:U:C4 | 2.72 | 0.57 |
| 6:N:377:U:O2 | 6:N:378:U:C1' | 2.53 | 0.57 |
| 1:I:169:A:C2 | 1:I:170:A:C8 | 2.93 | 0.57 |
| 1:I:257:A:C4 | 1:I:258:A:C8 | 2.93 | 0.57 |
| 1:I:79:A:C2 | 1:I:80:A:N9 | 2.73 | 0.57 |
| 1:I:82:A:N1 | 1:I:83:A:C4 | 2.72 | 0.57 |
| 2:J:103:A:C2' | 2:J:104:A:O5' | 2.53 | 0.57 |
| 2:J:133:A:C2 | 2:J:134:A:C8 | 2.93 | 0.57 |
| 2:J:14:A:N6 | 2:J:15:A:H62 | 2.03 | 0.57 |
| 2:J:187:A:HO2' | 2:J:188:A:H5' | 1.69 | 0.57 |
| 2:J:228:A:C4 | 2:J:229:A:C8 | 2.93 | 0.57 |
| 2:J:233:A:C2 | 2:J:234:A:C4 | 2.93 | 0.57 |
| 2:J:237:A:O2' | 2:J:238:A:H5' | 2.05 | 0.57 |
| 2:J:247:A:C2 | 2:J:248:A:C4 | 2.92 | 0.57 |
| 3:K:106:A:C2 | 3:K:107:A:C5 | 2.92 | 0.57 |
| 4:L:517:U:N3 | 4:L:518:U:C5 | 2.73 | 0.57 |
| 4:L:781:U:O2 | 4:L:782:U:C6 | 2.58 | 0.57 |
| 5:M:331:U:C2 | 5:M:332:U:C6 | 2.92 | 0.57 |
| 5:M:461:U:C2' | 5:M:462:U:C5' | 2.83 | 0.57 |
| 5:M:531:U:C3' | 5:M:532:U:C5' | 2.73 | 0.57 |
| 6:N:416:U:C2 | 6:N:417:U:C6 | 2.93 | 0.57 |
| 6:N:426:U:N3 | 6:N:427:U:C5 | 2.73 | 0.57 |
| 6:N:430:U:C2' | 6:N:431:U:O4' | 2.52 | 0.57 |
| 6:N:469:U:N3 | 6:N:470:U:C4 | 2.73 | 0.57 |
| 1:I:133:A:N3 | 1:I:134:A:C1' | 2.68 | 0.57 |
| 1:I:14:A:C6 | 1:I:15:A:C5 | 2.92 | 0.57 |
| 1:I:189:A:H2' | 1:I:190:A:O4' | 2.05 | 0.57 |
| 1:I:21:A:C2 | 1:I:22:A:C5 | 2.93 | 0.57 |
| 1:I:224:A:H2' | 1:I:225:A:C8 | 2.40 | 0.57 |
| 1:I:241:A:C4 | 1:I:242:A:C8 | 2.93 | 0.57 |
| 1:I:259:A:N3 | 1:I:260:A:C8 | 2.72 | 0.57 |
| 2:J:116:A:H2' | 2:J:117:A:C8 | 2.40 | 0.57 |
| 2:J:222:A:H2' | 2:J:223:A:C4' | 2.33 | 0.57 |
| 3:K:109:A:C4 | 3:K:110:A:C8 | 2.93 | 0.57 |
| 3:K:114:A:C2 | 3:K:115:A:C8 | 2.93 | 0.57 |
| 3:K:115:A:C2' | 3:K:116:A:C8 | 2.86 | 0.57 |
| 3:K:122:A:C2 | 3:K:123:A:C5 | 2.93 | 0.57 |
| 3:K:81:A:H2' | 3:K:82:A:C5' | 2.35 | 0.57 |
| 4:L:538:U:N3 | 4:L:539:U:C5 | 2.72 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:579:U:H2' | 4:L:580:U:O5' | 2.05 | 0.57 |
| 4:L:604:U:C2 | 4:L:605:U:C6 | 2.93 | 0.57 |
| 4:L:640:U:N3 | 4:L:641:U:C4 | 2.73 | 0.57 |
| 4:L:686:U:H2' | 4:L:687:U:H6 | 1.70 | 0.57 |
| 4:L:800:U:H2' | 4:L:801:U:C6 | 2.40 | 0.57 |
| 5:M:403:U:C2 | 5:M:404:U:C5 | 2.93 | 0.57 |
| 5:M:448:U:H2' | 5:M:449:U:H6 | 1.69 | 0.57 |
| 5:M:543:U:O2' | 5:M:544:U:H5' | 2.05 | 0.57 |
| 6:N:276:U:H2' | 6:N:277:U:H6 | 1.70 | 0.57 |
| 6:N:302:U:H2' | 6:N:303:U:O4' | 2.05 | 0.57 |
| 6:N:317:U:O2' | 6:N:318:U:H5' | 2.04 | 0.57 |
| 6:N:382:U:C2 | 6:N:383:U:C5 | 2.93 | 0.57 |
| 6:N:392:U:N3 | 6:N:393:U:C4 | 2.73 | 0.57 |
| 6:N:393:U:O2 | 6:N:394:U:C6 | 2.57 | 0.57 |
| 6:N:411:U:C2' | 6:N:412:U:O5' | 2.51 | 0.57 |
| 6:N:424:U:C4 | 6:N:425:U:C4 | 2.93 | 0.57 |
| 6:N:455:U:C2' | 6:N:456:U:H5' | 2.34 | 0.57 |
| 1:I:187:A:C2 | 1:I:188:A:C5 | 2.93 | 0.56 |
| 1:I:265:A:C6 | 1:I:266:A:N7 | 2.72 | 0.56 |
| 1:I:299:A:C2 | 1:I:300:A:C4 | 2.93 | 0.56 |
| 1:I:335:A:H2' | 1:I:336:A:C8 | 2.40 | 0.56 |
| 1:I:338:A:C6 | 1:I:339:A:N6 | 2.73 | 0.56 |
| 1:I:393:A:H2' | 1:I:394:A:C8 | 2.39 | 0.56 |
| 1:I:394:A:H2' | 1:I:395:A:C8 | 2.40 | 0.56 |
| 1:I:46:A:C2 | 1:I:47:A:C4 | 2.93 | 0.56 |
| 2:J:107:A:C2' | 2:J:108:A:O5' | 2.51 | 0.56 |
| 2:J:12:A:C5 | 2:J:13:A:N7 | 2.72 | 0.56 |
| 2:J:166:A:C2 | 2:J:167:A:N9 | 2.73 | 0.56 |
| 2:J:182:A:H2' | 2:J:183:A:O4' | 2.04 | 0.56 |
| 2:J:186:A:C4 | 2:J:187:A:C8 | 2.93 | 0.56 |
| 2:J:229:A:C4 | 2:J:230:A:C8 | 2.93 | 0.56 |
| 2:J:237:A:C2 | 2:J:238:A:C4 | 2.93 | 0.56 |
| 2:J:47:A:C4 | 2:J:48:A:C8 | 2.93 | 0.56 |
| 2:J:55:A:C4 | 2:J:56:A:N7 | 2.73 | 0.56 |
| 2:J:85:A:O2' | 2:J:86:A:H5' | 2.04 | 0.56 |
| 2:J:90:A:C2 | 2:J:91:A:C4 | 2.92 | 0.56 |
| 3:K:181:A:N1 | 3:K:182:A:C5 | 2.73 | 0.56 |
| 3:K:182:A:O2' | 3:K:183:A:H5' | 2.05 | 0.56 |
| 3:K:88:A:C4 | 3:K:89:A:C8 | 2.92 | 0.56 |
| 4:L:421:U:HO2' | 4:L:422:U:C4' | 2.18 | 0.56 |
| 4:L:459:U:H2' | 4:L:460:U:H6 | 1.69 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:462:U:N3 | 4:L:463:U:C4 | 2.73 | 0.56 |
| 4:L:492:U:N3 | 4:L:493:U:C5 | 2.73 | 0.56 |
| 4:L:515:U:C2 | 4:L:516:U:C5 | 2.93 | 0.56 |
| 4:L:578:U:H2' | 4:L:579:U:C5' | 2.35 | 0.56 |
| 4:L:619:U:O2' | 4:L:620:U:H5' | 2.04 | 0.56 |
| 4:L:637:U:C2' | 4:L:638:U:H6 | 2.12 | 0.56 |
| 4:L:699:U:C2 | 4:L:700:U:C6 | 2.92 | 0.56 |
| 4:L:720:U:N3 | 4:L:721:U:C4 | 2.72 | 0.56 |
| 4:L:750:U:C2' | 4:L:751:U:C6 | 2.83 | 0.56 |
| 4:L:821:U:H2' | 4:L:822:U:H6 | 1.70 | 0.56 |
| 5:M:322:U:C2 | 5:M:323:U:C6 | 2.93 | 0.56 |
| 2:J:215:A:C2 | 5:M:339:U:C2 | 2.93 | 0.56 |
| 5:M:377:U:C2' | 5:M:378:U:O4' | 2.51 | 0.56 |
| 5:M:397:U:C2 | 5:M:398:U:C5 | 2.93 | 0.56 |
| 5:M:460:U:C2' | 5:M:461:U:H6 | 2.13 | 0.56 |
| 5:M:482:U:C2 | 5:M:483:U:C6 | 2.92 | 0.56 |
| 5:M:490:U:C2 | 5:M:491:U:C5 | 2.93 | 0.56 |
| 5:M:508:U:H2' | 5:M:509:U:O5' | 2.05 | 0.56 |
| 5:M:510:U:C2' | 5:M:511:U:C4' | 2.83 | 0.56 |
| 6:N:311:U:O2' | 6:N:312:U:C4' | 2.53 | 0.56 |
| 6:N:333:U:C2' | 6:N:334:U:C5' | 2.82 | 0.56 |
| 6:N:349:U:O2' | 6:N:350:U:P | 2.63 | 0.56 |
| 6:N:366:U:H2' | 6:N:367:U:H6 | 1.70 | 0.56 |
| 6:N:473:U:C6 | 6:N:474:U:C5 | 2.93 | 0.56 |
| 1:I:219:A:C2 | 1:I:220:A:C5 | 2.94 | 0.56 |
| 1:I:88:A:C2' | 1:I:89:A:O5' | 2.52 | 0.56 |
| 2:J:103:A:C2 | 2:J:104:A:N9 | 2.72 | 0.56 |
| 2:J:159:A:H2' | 2:J:160:A:O4' | 2.05 | 0.56 |
| 2:J:253:A:C2 | 2:J:254:A:C5 | 2.93 | 0.56 |
| 2:J:5:A:C4 | 2:J:6:A:N7 | 2.73 | 0.56 |
| 2:J:98:A:N1 | 2:J:99:A:C6 | 2.73 | 0.56 |
| 3:K:104:A:C2 | 3:K:105:A:C8 | 2.94 | 0.56 |
| 3:K:146:A:O2' | 3:K:147:A:O5' | 2.23 | 0.56 |
| 3:K:155:A:C5 | 3:K:156:A:C5 | 2.88 | 0.56 |
| 3:K:254:A:C6 | 3:K:255:A:C5 | 2.93 | 0.56 |
| 3:K:259:A:C3' | 3:K:260:A:P | 2.91 | 0.56 |
| 4:L:420:U:N3 | 4:L:421:U:C4 | 2.74 | 0.56 |
| 4:L:570:U:O2' | 4:L:571:U:C5' | 2.44 | 0.56 |
| 4:L:582:U:C2 | 4:L:583:U:C5 | 2.93 | 0.56 |
| 4:L:759:U:O2 | 4:L:760:U:C6 | 2.58 | 0.56 |
| 4:L:771:U:N3 | 4:L:772:U:C5 | 2.73 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:501:U:C2 | 5:M:502:U:C6 | 2.92 | 0.56 |
| 6:N:294:U:HO2' | 6:N:295:U:H5' | 1.67 | 0.56 |
| 6:N:313:U:N3 | 6:N:314:U:C4 | 2.73 | 0.56 |
| 6:N:332:U:C4 | 6:N:333:U:O4 | 2.58 | 0.56 |
| 6:N:396:U:C4 | 6:N:397:U:C5 | 2.94 | 0.56 |
| 6:N:480:U:C2' | 6:N:481:U:H5' | 2.36 | 0.56 |
| 6:N:502:U:H2' | 6:N:503:U:H6 | 1.69 | 0.56 |
| 1:I:190:A:C4 | 1:I:191:A:C8 | 2.93 | 0.56 |
| 1:I:197:A:H2' | 1:I:198:A:O5' | 2.05 | 0.56 |
| 1:I:212:A:C2 | 1:I:213:A:C8 | 2.93 | 0.56 |
| 1:I:259:A:C6 | 1:I:260:A:N7 | 2.74 | 0.56 |
| 1:I:265:A:H61 | 1:I:266:A:N6 | 2.03 | 0.56 |
| 1:I:280:A:H2' | 1:I:281:A:C8 | 2.40 | 0.56 |
| 1:I:307:A:C2 | 1:I:308:A:C5 | 2.93 | 0.56 |
| 1:I:48:A:H2' | 1:I:49:A:C5' | 2.34 | 0.56 |
| 1:I:54:A:C2 | 1:I:55:A:C8 | 2.93 | 0.56 |
| 1:I:8:A:H61 | 1:I:9:A:N6 | 2.03 | 0.56 |
| 2:J:108:A:C2 | 2:J:109:A:C8 | 2.93 | 0.56 |
| 2:J:119:A:H2' | 2:J:120:A:H8 | 1.70 | 0.56 |
| 2:J:229:A:C2 | 2:J:230:A:C5 | 2.93 | 0.56 |
| 2:J:39:A:H2' | 2:J:40:A:H8 | 1.71 | 0.56 |
| 2:J:83:A:N6 | 2:J:84:A:N6 | 2.53 | 0.56 |
| 3:K:107:A:H2' | 3:K:108:A:O5' | 2.04 | 0.56 |
| 3:K:178:A:O2' | 3:K:179:A:H5' | 2.05 | 0.56 |
| 3:K:182:A:H2' | 3:K:183:A:C8 | 2.40 | 0.56 |
| 3:K:70:A:H2' | 3:K:71:A:C8 | 2.40 | 0.56 |
| 4:L:544:U:H2' | 4:L:545:U:H6 | 1.69 | 0.56 |
| 4:L:612:U:H2' | 4:L:613:U:C5' | 2.36 | 0.56 |
| 4:L:701:U:H2' | 4:L:702:U:C6 | 2.39 | 0.56 |
| 4:L:782:U:O2 | 4:L:783:U:C6 | 2.58 | 0.56 |
| 4:L:812:U:C2 | 4:L:813:U:C5 | 2.93 | 0.56 |
| 5:M:304:U:H2' | 5:M:305:U:C6 | 2.39 | 0.56 |
| 5:M:326:U:C2 | 5:M:327:U:C6 | 2.92 | 0.56 |
| 5:M:331:U:H2' | 5:M:332:U:H6 | 1.71 | 0.56 |
| 5:M:386:U:C2 | 5:M:387:U:C6 | 2.83 | 0.56 |
| 5:M:391:U:O2 | 5:M:392:U:C6 | 2.58 | 0.56 |
| 5:M:433:U:H2' | 5:M:434:U:H6 | 1.69 | 0.56 |
| 5:M:512:U:C4 | 5:M:513:U:C5 | 2.93 | 0.56 |
| 6:N:292:U:C2 | 6:N:293:U:C5 | 2.93 | 0.56 |
| 6:N:327:U:C2' | 6:N:328:U:C4' | 2.83 | 0.56 |
| 6:N:403:U:C2' | 6:N:404:U:C5' | 2.83 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 6:N:473:U:C5 | 6:N:474:U:C5 | 2.93 | 0.56 |
| 6:N:499:U:N3 | 6:N:500:U:O4 | 2.37 | 0.56 |
| 1:I:15:A:C5 | 1:I:16:A:N7 | 2.73 | 0.56 |
| 1:I:160:A:C2' | 1:I:161:A:C5' | 2.84 | 0.56 |
| 1:I:172:A:C2' | 1:I:173:A:O5' | 2.53 | 0.56 |
| 1:I:228:A:C6 | 1:I:229:A:C5 | 2.94 | 0.56 |
| 1:I:243:A:C2 | 4:L:583:U:C2 | 2.92 | 0.56 |
| 1:I:279:A:O2' | 1:I:280:A:C4' | 2.49 | 0.56 |
| 1:I:280:A:C2 | 1:I:281:A:C6 | 2.93 | 0.56 |
| 1:I:285:A:C4 | 1:I:286:A:C8 | 2.93 | 0.56 |
| 1:I:292:A:C2' | 1:I:293:A:H5' | 2.36 | 0.56 |
| 1:I:323:A:H2' | 1:I:324:A:O4' | 2.06 | 0.56 |
| 1:I:352:A:C4 | 1:I:353:A:C8 | 2.94 | 0.56 |
| 1:I:9:A:O2' | 1:I:10:A:C5' | 2.39 | 0.56 |
| 2:J:104:A:C2 | 2:J:105:A:C4 | 2.93 | 0.56 |
| 2:J:126:A:C6 | 2:J:127:A:N7 | 2.74 | 0.56 |
| 2:J:143:A:N3 | 2:J:144:A:O4' | 2.38 | 0.56 |
| 2:J:192:A:H2' | 2:J:193:A:C5' | 2.36 | 0.56 |
| 2:J:35:A:O2' | 2:J:36:A:H5' | 2.05 | 0.56 |
| 2:J:73:A:H2' | 2:J:74:A:H8 | 1.71 | 0.56 |
| 3:K:132:A:C2' | 3:K:133:A:O5' | 2.53 | 0.56 |
| 3:K:136:A:C4 | 3:K:137:A:C8 | 2.93 | 0.56 |
| 3:K:171:A:N3 | 3:K:172:A:C8 | 2.73 | 0.56 |
| 3:K:43:A:H2' | 3:K:44:A:H8 | 1.69 | 0.56 |
| 3:K:5:A:C2' | 3:K:6:A:C5' | 2.82 | 0.56 |
| 3:K:83:A:N3 | 3:K:84:A:C8 | 2.73 | 0.56 |
| 3:K:97:A:O2' | 3:K:98:A:C5' | 2.41 | 0.56 |
| 4:L:548:U:C2' | 4:L:549:U:H5' | 2.35 | 0.56 |
| 4:L:586:U:C4 | 4:L:587:U:C5 | 2.93 | 0.56 |
| 4:L:590:U:C2 | 4:L:591:U:C5 | 2.94 | 0.56 |
| 4:L:669:U:C2' | 4:L:670:U:C5' | 2.84 | 0.56 |
| 4:L:735:U:O2' | 4:L:736:U:H5' | 2.04 | 0.56 |
| 5:M:291:U:C2' | 5:M:292:U:H5' | 2.35 | 0.56 |
| 5:M:305:U:C2 | 5:M:306:U:C6 | 2.94 | 0.56 |
| 5:M:397:U:O2' | 5:M:398:U:H5' | 2.05 | 0.56 |
| 5:M:406:U:C2 | 5:M:407:U:C5 | 2.93 | 0.56 |
| 5:M:423:U:H2' | 5:M:424:U:C6 | 2.40 | 0.56 |
| 5:M:456:U:H2' | 5:M:457:U:C6 | 2.39 | 0.56 |
| 6:N:318:U:H2' | 6:N:319:U:H6 | 1.68 | 0.56 |
| 6:N:417:U:H2' | 6:N:418:U:C4' | 2.35 | 0.56 |
| 6:N:482:U:H2' | 6:N:483:U:H6 | 1.69 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:172:A:C2 | 1:I:173:A:N9 | 2.73 | 0.56 |
| 1:I:207:A:H2' | 1:I:208:A:C5' | 2.34 | 0.56 |
| 1:I:255:A:C4 | 1:I:256:A:C8 | 2.94 | 0.56 |
| 1:I:372:A:H2' | 1:I:373:A:C5' | 2.35 | 0.56 |
| 1:I:376:A:C2 | 1:I:377:A:C8 | 2.94 | 0.56 |
| 1:I:388:A:C2' | 1:I:389:A:H5' | 2.36 | 0.56 |
| 1:I:73:A:N1 | 1:I:74:A:C5 | 2.73 | 0.56 |
| 2:J:146:A:C2 | 2:J:147:A:C5 | 2.93 | 0.56 |
| 2:J:166:A:C4 | 2:J:167:A:N7 | 2.74 | 0.56 |
| 2:J:182:A:C5 | 2:J:183:A:C5 | 2.89 | 0.56 |
| 2:J:197:A:H2' | 2:J:198:A:H8 | 1.71 | 0.56 |
| 2:J:205:A:C2 | 2:J:206:A:C5 | 2.93 | 0.56 |
| 2:J:257:A:H2' | 2:J:258:A:O4' | 2.06 | 0.56 |
| 2:J:43:A:C6 | 2:J:44:A:C5 | 2.93 | 0.56 |
| 2:J:48:A:N1 | 2:J:49:A:C5 | 2.73 | 0.56 |
| 2:J:62:A:C4 | 2:J:63:A:C8 | 2.94 | 0.56 |
| 2:J:6:A:C2 | 2:J:7:A:C8 | 2.94 | 0.56 |
| 3:K:106:A:N6 | 3:K:107:A:N6 | 2.53 | 0.56 |
| 3:K:118:A:H2' | 3:K:119:A:O4' | 2.05 | 0.56 |
| 3:K:132:A:H2' | 3:K:133:A:C5' | 2.34 | 0.56 |
| 3:K:153:A:C4 | 3:K:154:A:C8 | 2.94 | 0.56 |
| 3:K:155:A:O5' | 3:K:156:A:P | 2.63 | 0.56 |
| 3:K:15:A:O2' | 3:K:16:A:H5' | 2.05 | 0.56 |
| 3:K:163:A:C5 | 3:K:164:A:N7 | 2.74 | 0.56 |
| 3:K:253:A:C2 | 3:K:254:A:C8 | 2.94 | 0.56 |
| 3:K:75:A:HO3' | 3:K:76:A:P | 2.27 | 0.56 |
| 3:K:77:A:HO2' | 3:K:78:A:H5' | 1.68 | 0.56 |
| 4:L:484:U:H2' | 4:L:485:U:O5' | 2.04 | 0.56 |
| 4:L:549:U:O2' | 4:L:550:U:O4' | 2.23 | 0.56 |
| 4:L:665:U:C2 | 4:L:666:U:C6 | 2.93 | 0.56 |
| 4:L:674:U:C2' | 4:L:675:U:O5' | 2.53 | 0.56 |
| 4:L:727:U:H2' | 4:L:728:U:H6 | 1.69 | 0.56 |
| 4:L:740:U:N3 | 4:L:741:U:C5 | 2.74 | 0.56 |
| 4:L:766:U:C3' | 4:L:767:U:H6 | 2.19 | 0.56 |
| 5:M:320:U:H2' | 5:M:321:U:H6 | 1.70 | 0.56 |
| 5:M:324:U:C4 | 5:M:325:U:C5 | 2.94 | 0.56 |
| 5:M:420:U:C2 | 5:M:421:U:C6 | 2.94 | 0.56 |
| 5:M:443:U:C2 | 5:M:444:U:C5 | 2.94 | 0.56 |
| 5:M:474:U:C3' | 5:M:475:U:OP2 | 2.53 | 0.56 |
| 5:M:524:U:C2 | 5:M:525:U:C6 | 2.93 | 0.56 |
| 6:N:487:U:N3 | 6:N:488:U:O4 | 2.39 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:245:A:C2 | 1:I:246:A:C4 | 2.94 | 0.56 |
| 1:I:24:A:H2' | 1:I:25:A:H8 | 1.71 | 0.56 |
| 1:I:279:A:N3 | 1:I:280:A:C8 | 2.74 | 0.56 |
| 1:I:295:A:C2 | 1:I:296:A:C4 | 2.93 | 0.56 |
| 1:I:333:A:H2 | 1:I:334:A:C4 | 2.18 | 0.56 |
| 1:I:361:A:O2' | 1:I:362:A:C4' | 2.54 | 0.56 |
| 2:J:108:A:C6 | 2:J:109:A:C5 | 2.94 | 0.56 |
| 2:J:119:A:C5 | 2:J:120:A:N7 | 2.73 | 0.56 |
| 2:J:129:A:H2' | 2:J:130:A:C4' | 2.35 | 0.56 |
| 2:J:149:A:O2' | 2:J:150:A:H5' | 2.06 | 0.56 |
| 2:J:162:A:N6 | 2:J:163:A:N6 | 2.54 | 0.56 |
| 2:J:183:A:N3 | 2:J:184:A:C8 | 2.73 | 0.56 |
| 2:J:198:A:C5 | 2:J:199:A:N7 | 2.73 | 0.56 |
| 2:J:204:A:N9 | 2:J:205:A:C8 | 2.73 | 0.56 |
| 2:J:228:A:C4 | 2:J:229:A:N7 | 2.73 | 0.56 |
| 2:J:34:A:C2 | 2:J:35:A:N7 | 2.73 | 0.56 |
| 2:J:95:A:N3 | 2:J:96:A:C8 | 2.73 | 0.56 |
| 2:J:95:A:H2' | 2:J:96:A:H8 | 1.70 | 0.56 |
| 3:K:73:A:C2' | 3:K:74:A:C5' | 2.83 | 0.56 |
| 4:L:754:U:N3 | 4:L:755:U:C5 | 2.74 | 0.56 |
| 4:L:755:U:O2 | 4:L:756:U:C6 | 2.59 | 0.56 |
| 5:M:408:U:O2 | 5:M:409:U:C6 | 2.59 | 0.56 |
| 6:N:387:U:H2' | 6:N:388:U:H6 | 1.71 | 0.56 |
| 3:K:121:A:N1 | 6:N:411:U:C4 | 2.73 | 0.56 |
| 6:N:491:U:O2' | 6:N:492:U:H5' | 2.05 | 0.56 |
| 6:N:501:U:H2' | 6:N:502:U:C6 | 2.40 | 0.56 |
| 1:I:132:A:C2 | 1:I:133:A:N9 | 2.73 | 0.56 |
| 1:I:198:A:C2 | 1:I:199:A:C8 | 2.93 | 0.56 |
| 1:I:292:A:N3 | 1:I:293:A:C8 | 2.74 | 0.56 |
| 2:J:136:A:H2' | 2:J:137:A:C8 | 2.30 | 0.56 |
| 2:J:206:A:C2' | 2:J:207:A:O4' | 2.53 | 0.56 |
| 2:J:234:A:C2 | 2:J:235:A:C4 | 2.93 | 0.56 |
| 2:J:68:A:C4 | 2:J:69:A:C8 | 2.93 | 0.56 |
| 3:K:5:A:O2' | 3:K:6:A:C5' | 2.53 | 0.56 |
| 3:K:95:A:C2' | 3:K:96:A:O5' | 2.53 | 0.56 |
| 4:L:524:U:O2' | 4:L:525:U:C5' | 2.37 | 0.56 |
| 4:L:532:U:N3 | 4:L:533:U:C5 | 2.73 | 0.56 |
| 4:L:622:U:C2 | 4:L:623:U:C6 | 2.93 | 0.56 |
| 4:L:625:U:O2' | 4:L:626:U:P | 2.63 | 0.56 |
| 4:L:757:U:C6 | 4:L:758:U:H5 | 2.23 | 0.56 |
| 4:L:765:U:C2' | 4:L:766:U:C4' | 2.80 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:816:U:O4 | 4:L:817:U:O4 | 2.23 | 0.56 |
| 5:M:296:U:C3' | 5:M:297:U:C5' | 2.72 | 0.56 |
| 5:M:305:U:O2 | 5:M:306:U:C6 | 2.58 | 0.56 |
| 5:M:360:U:C2 | 5:M:361:U:C5 | 2.93 | 0.56 |
| 5:M:371:U:H2' | 5:M:372:U:H6 | 1.71 | 0.56 |
| 5:M:404:U:N3 | 5:M:405:U:C5 | 2.74 | 0.56 |
| 5:M:477:U:C2' | 5:M:478:U:H5' | 2.35 | 0.56 |
| 5:M:507:U:C2 | 5:M:508:U:C6 | 2.93 | 0.56 |
| 6:N:295:U:C2 | 6:N:296:U:C5 | 2.93 | 0.56 |
| 6:N:312:U:C2' | 6:N:313:U:O4' | 2.53 | 0.56 |
| 6:N:339:U:H2' | 6:N:340:U:O4' | 2.05 | 0.56 |
| 6:N:476:U:H2' | 6:N:477:U:O4' | 2.06 | 0.56 |
| 6:N:477:U:H2' | 6:N:478:U:H5' | 1.87 | 0.56 |
| 1:I:223:A:C2 | 1:I:224:A:C5 | 2.94 | 0.56 |
| 1:I:362:A:C6 | 1:I:363:A:C6 | 2.93 | 0.56 |
| 1:I:403:A:C2' | 1:I:404:A:C5' | 2.83 | 0.56 |
| 1:I:53:A:C2 | 1:I:54:A:C4 | 2.94 | 0.56 |
| 1:I:53:A:N1 | 1:I:54:A:C5 | 2.74 | 0.56 |
| 1:I:57:A:C4 | 1:I:58:A:C8 | 2.94 | 0.56 |
| 2:J:107:A:H2' | 2:J:108:A:C5' | 2.34 | 0.56 |
| 2:J:129:A:C2 | 2:J:130:A:C4 | 2.93 | 0.56 |
| 2:J:153:A:N3 | 2:J:154:A:C8 | 2.74 | 0.56 |
| 2:J:166:A:N1 | 2:J:167:A:C5 | 2.73 | 0.56 |
| 2:J:173:A:C2' | 2:J:174:A:C8 | 2.73 | 0.56 |
| 2:J:222:A:H2' | 2:J:223:A:O4' | 2.05 | 0.56 |
| 2:J:254:A:N3 | 2:J:255:A:C8 | 2.74 | 0.56 |
| 2:J:45:A:O2' | 2:J:46:A:H5' | 2.05 | 0.56 |
| 2:J:79:A:C2 | 2:J:80:A:N9 | 2.73 | 0.56 |
| 2:J:97:A:N1 | 2:J:98:A:C6 | 2.74 | 0.56 |
| 3:K:166:A:N1 | 3:K:167:A:C5 | 2.74 | 0.56 |
| 4:L:488:U:H2' | 4:L:489:U:C5' | 2.34 | 0.56 |
| 4:L:533:U:H2' | 4:L:534:U:C5' | 2.36 | 0.56 |
| 4:L:540:U:O2' | 4:L:541:U:P | 2.62 | 0.56 |
| 4:L:648:U:H2' | 4:L:649:U:C6 | 2.40 | 0.56 |
| 4:L:662:U:C2 | 4:L:663:U:H5 | 2.20 | 0.56 |
| 4:L:671:U:C2' | 4:L:672:U:H5' | 2.34 | 0.56 |
| 4:L:718:U:O2 | 4:L:719:U:N1 | 2.39 | 0.56 |
| 4:L:736:U:C2 | 4:L:737:U:C6 | 2.93 | 0.56 |
| 4:L:754:U:O2' | 4:L:755:U:C4' | 2.54 | 0.56 |
| 5:M:389:U:O2' | 5:M:390:U:H5' | 2.05 | 0.56 |
| 5:M:410:U:C6 | 5:M:411:U:C5 | 2.94 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:436:U:C2' | 5:M:437:U:C5' | 2.84 | 0.56 |
| 5:M:488:U:C5 | 5:M:489:U:C5 | 2.93 | 0.56 |
| 5:M:508:U:N3 | 5:M:509:U:C5 | 2.74 | 0.56 |
| 6:N:379:U:H2' | 6:N:380:U:H6 | 1.69 | 0.56 |
| 6:N:499:U:N3 | 6:N:500:U:C4 | 2.74 | 0.56 |
| 1:I:9:A:C2' | 1:I:10:A:H5' | 2.35 | 0.56 |
| 1:I:164:A:C2 | 1:I:165:A:C6 | 2.94 | 0.56 |
| 1:I:189:A:H2' | 1:I:190:A:H8 | 1.71 | 0.56 |
| 1:I:246:A:C2' | 1:I:247:A:C5' | 2.83 | 0.56 |
| 1:I:252:A:H2' | 1:I:253:A:H8 | 1.71 | 0.56 |
| 1:I:263:A:C2 | 1:I:264:A:C5 | 2.94 | 0.56 |
| 1:I:30:A:C2 | 1:I:31:A:C4 | 2.93 | 0.56 |
| 1:I:337:A:H2' | 1:I:338:A:O5' | 2.06 | 0.56 |
| 1:I:76:A:C5 | 1:I:77:A:N7 | 2.73 | 0.56 |
| 2:J:146:A:H2' | 2:J:147:A:C8 | 2.40 | 0.56 |
| 2:J:158:A:H2' | 2:J:159:A:H8 | 1.70 | 0.56 |
| 2:J:216:A:H2 | 2:J:217:A:C5 | 2.16 | 0.56 |
| 2:J:235:A:N3 | 2:J:236:A:C8 | 2.74 | 0.56 |
| 2:J:43:A:C5 | 2:J:44:A:N7 | 2.74 | 0.56 |
| 2:J:47:A:N3 | 2:J:48:A:C1' | 2.69 | 0.56 |
| 2:J:75:A:H2' | 2:J:76:A:C5' | 2.35 | 0.56 |
| 2:J:90:A:H2' | 2:J:91:A:H8 | 1.71 | 0.56 |
| 2:J:97:A:O2' | 2:J:98:A:C5' | 2.54 | 0.56 |
| 2:J:9:A:H2' | 2:J:10:A:C8 | 2.40 | 0.56 |
| 3:K:120:A:N6 | 3:K:121:A:C5 | 2.74 | 0.56 |
| 3:K:129:A:C2' | 3:K:130:A:H5' | 2.35 | 0.56 |
| 3:K:82:A:C4 | 3:K:83:A:C8 | 2.94 | 0.56 |
| 3:K:84:A:C4 | 3:K:85:A:C8 | 2.94 | 0.56 |
| 4:L:557:U:H2' | 4:L:558:U:C6 | 2.39 | 0.56 |
| 4:L:616:U:H2' | 4:L:617:U:H6 | 1.71 | 0.56 |
| 4:L:638:U:N3 | 4:L:639:U:C6 | 2.73 | 0.56 |
| 4:L:643:U:H2' | 4:L:644:U:H6 | 1.70 | 0.56 |
| 4:L:736:U:C2' | 4:L:737:U:C5' | 2.83 | 0.56 |
| 4:L:761:U:H2' | 4:L:762:U:H6 | 1.70 | 0.56 |
| 5:M:349:U:H2' | 5:M:350:U:C6 | 2.38 | 0.56 |
| 5:M:352:U:C2 | 5:M:353:U:C6 | 2.93 | 0.56 |
| 5:M:386:U:O2' | 5:M:387:U:C5' | 2.54 | 0.56 |
| 5:M:391:U:H2' | 5:M:392:U:H6 | 1.70 | 0.56 |
| 5:M:421:U:H2' | 5:M:422:U:H6 | 1.67 | 0.56 |
| 1:I:127:A:H2' | 1:I:128:A:C5' | 2.36 | 0.56 |
| 1:I:137:A:C6 | 1:I:138:A:C5 | 2.93 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:185:A:C2 | 1:I:186:A:C5 | 2.93 | 0.56 |
| 1:I:193:A:C2 | 1:I:194:A:C4 | 2.94 | 0.56 |
| 1:I:226:A:O2' | 1:I:227:A:C5' | 2.51 | 0.56 |
| 1:I:265:A:C6 | 1:I:266:A:N6 | 2.74 | 0.56 |
| 1:I:332:A:C4 | 1:I:333:A:C8 | 2.93 | 0.56 |
| 1:I:341:A:N3 | 1:I:342:A:C8 | 2.73 | 0.56 |
| 1:I:375:A:O2' | 1:I:376:A:C5' | 2.54 | 0.56 |
| 1:I:66:A:N6 | 1:I:67:A:H62 | 2.04 | 0.56 |
| 2:J:219:A:N1 | 2:J:220:A:C5 | 2.74 | 0.56 |
| 2:J:257:A:H2' | 2:J:258:A:H8 | 1.70 | 0.56 |
| 2:J:66:A:C2' | 2:J:67:A:O5' | 2.54 | 0.56 |
| 2:J:87:A:C2 | 2:J:88:A:C8 | 2.93 | 0.56 |
| 3:K:173:A:H2' | 3:K:174:A:O5' | 2.06 | 0.56 |
| 3:K:60:A:C2' | 3:K:61:A:H5' | 2.36 | 0.56 |
| 3:K:71:A:N1 | 3:K:72:A:C6 | 2.74 | 0.56 |
| 4:L:449:U:C2 | 4:L:450:U:C6 | 2.94 | 0.56 |
| 4:L:459:U:C2' | 4:L:460:U:O4' | 2.52 | 0.56 |
| 4:L:557:U:C2' | 4:L:558:U:C4' | 2.83 | 0.56 |
| 4:L:561:U:C2' | 4:L:562:U:C5' | 2.82 | 0.56 |
| 4:L:594:U:H2' | 4:L:595:U:C6 | 2.33 | 0.56 |
| 4:L:638:U:HO2' | 4:L:639:U:C5' | 1.87 | 0.56 |
| 4:L:652:U:C2' | 4:L:653:U:C5' | 2.82 | 0.56 |
| 4:L:659:U:C4 | 4:L:660:U:O4 | 2.59 | 0.56 |
| 4:L:729:U:O4 | 4:L:730:U:O4 | 2.24 | 0.56 |
| 4:L:737:U:H2' | 4:L:738:U:O5' | 2.05 | 0.56 |
| 4:L:740:U:C4 | 4:L:741:U:C5 | 2.94 | 0.56 |
| 4:L:742:U:C2 | 4:L:743:U:C4 | 2.92 | 0.56 |
| 4:L:776:U:H2' | 4:L:777:U:C6 | 2.37 | 0.56 |
| 4:L:785:U:C2 | 4:L:786:U:C5 | 2.93 | 0.56 |
| 5:M:534:U:O2 | 5:M:535:U:C5 | 2.58 | 0.56 |
| 6:N:292:U:C4 | 6:N:293:U:O4 | 2.59 | 0.56 |
| 6:N:376:U:N3 | 6:N:377:U:C5 | 2.73 | 0.56 |
| 3:K:89:A:C2 | 6:N:443:U:C2 | 2.94 | 0.56 |
| 6:N:448:U:H2' | 6:N:449:U:O4' | 2.06 | 0.56 |
| 6:N:476:U:N3 | 6:N:477:U:C5 | 2.73 | 0.56 |
| 1:I:181:A:C6 | 1:I:182:A:C6 | 2.93 | 0.56 |
| 1:I:187:A:N1 | 1:I:188:A:C6 | 2.74 | 0.56 |
| 1:I:225:A:C2 | 1:I:226:A:C5 | 2.94 | 0.56 |
| 1:I:315:A:H2' | 1:I:316:A:H8 | 1.70 | 0.56 |
| 1:I:342:A:HO2' | 1:I:343:A:H5' | 1.66 | 0.56 |
| 1:I:361:A:HO2' | 1:I:362:A:C4' | 2.18 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 2:J:118:A:N3 | 2:J:119:A:N7 | 2.53 | 0.56 |
| 2:J:142:A:C6 | 2:J:143:A:C5 | 2.94 | 0.56 |
| 2:J:80:A:O2' | 2:J:81:A:H5' | 2.06 | 0.56 |
| 3:K:119:A:N3 | 3:K:120:A:N9 | 2.53 | 0.56 |
| 3:K:151:A:C2 | 3:K:152:A:C8 | 2.94 | 0.56 |
| 3:K:160:A:C4 | 3:K:161:A:C8 | 2.94 | 0.56 |
| 3:K:193:A:H2' | 3:K:194:A:C8 | 2.40 | 0.56 |
| 3:K:70:A:H2' | 3:K:71:A:H8 | 1.70 | 0.56 |
| 4:L:483:U:C2' | 4:L:484:U:C5' | 2.83 | 0.56 |
| 4:L:499:U:C4 | 4:L:500:U:C5 | 2.93 | 0.56 |
| 4:L:557:U:C5 | 4:L:558:U:C5 | 2.95 | 0.56 |
| 4:L:590:U:C2' | 4:L:591:U:C5' | 2.82 | 0.56 |
| 4:L:615:U:C2' | 4:L:616:U:H5' | 2.36 | 0.56 |
| 4:L:673:U:C2 | 4:L:674:U:C6 | 2.93 | 0.56 |
| 4:L:697:U:H2' | 4:L:698:U:C6 | 2.39 | 0.56 |
| 4:L:703:U:H2' | 4:L:704:U:C6 | 2.41 | 0.56 |
| 4:L:708:U:C2' | 4:L:709:U:C5' | 2.84 | 0.56 |
| 4:L:750:U:O2' | 4:L:751:U:O5' | 2.24 | 0.56 |
| 4:L:777:U:C4 | 4:L:778:U:C4 | 2.94 | 0.56 |
| 5:M:371:U:H2' | 5:M:372:U:O4' | 2.05 | 0.56 |
| 5:M:515:U:H2' | 5:M:516:U:C5' | 2.36 | 0.56 |
| 5:M:520:U:H2' | 5:M:521:U:O4' | 2.06 | 0.56 |
| 6:N:352:U:C2' | 6:N:353:U:H5' | 2.36 | 0.56 |
| 6:N:368:U:H2' | 6:N:369:U:O5' | 2.06 | 0.56 |
| 6:N:383:U:C2 | 6:N:384:U:C6 | 2.94 | 0.56 |
| 6:N:407:U:C2' | 6:N:408:U:H5' | 2.36 | 0.56 |
| 6:N:481:U:O2' | 6:N:482:U:C4' | 2.51 | 0.56 |
| 1:I:12:A:C2 | 1:I:13:A:C8 | 2.95 | 0.55 |
| 1:I:161:A:H2' | 1:I:162:A:C5' | 2.34 | 0.55 |
| 1:I:163:A:N3 | 1:I:164:A:N9 | 2.54 | 0.55 |
| 1:I:202:A:N3 | 1:I:203:A:C8 | 2.74 | 0.55 |
| 1:I:220:A:C2 | 1:I:221:A:C8 | 2.94 | 0.55 |
| 1:I:228:A:H2' | 1:I:229:A:O4' | 2.06 | 0.55 |
| 1:I:27:A:C2' | 1:I:28:A:H5' | 2.36 | 0.55 |
| 1:I:322:A:C2' | 1:I:323:A:C5' | 2.84 | 0.55 |
| 1:I:358:A:H2' | 1:I:359:A:H8 | 1.71 | 0.55 |
| 1:I:364:A:C2 | 1:I:365:A:C4 | 2.94 | 0.55 |
| 1:I:65:A:N3 | 1:I:66:A:N9 | 2.52 | 0.55 |
| 2:J:105:A:C4 | 2:J:106:A:N7 | 2.73 | 0.55 |
| 2:J:45:A:C6 | 2:J:46:A:N7 | 2.75 | 0.55 |
| 2:J:93:A:C2 | 2:J:94:A:C4 | 2.94 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 3:K:102:A:H2' | 3:K:103:A:O5' | 2.03 | 0.55 |
| 3:K:152:A:H62 | 3:K:153:A:N6 | 1.92 | 0.55 |
| 3:K:236:A:H2' | 3:K:237:A:C8 | 2.39 | 0.55 |
| 4:L:561:U:C2 | 4:L:562:U:C5 | 2.94 | 0.55 |
| 4:L:592:U:H2' | 4:L:593:U:C6 | 2.39 | 0.55 |
| 4:L:595:U:C2' | 4:L:596:U:O5' | 2.54 | 0.55 |
| 4:L:635:U:H2' | 4:L:636:U:O4' | 2.07 | 0.55 |
| 4:L:640:U:N3 | 4:L:641:U:C5 | 2.73 | 0.55 |
| 4:L:648:U:N3 | 4:L:649:U:C4 | 2.74 | 0.55 |
| 4:L:735:U:C2 | 4:L:736:U:C5 | 2.95 | 0.55 |
| 4:L:767:U:N3 | 4:L:768:U:O4 | 2.39 | 0.55 |
| 4:L:778:U:O2' | 4:L:779:U:C5' | 2.43 | 0.55 |
| 5:M:315:U:C2 | 5:M:316:U:C5 | 2.94 | 0.55 |
| 5:M:427:U:C4 | 5:M:428:U:O4 | 2.59 | 0.55 |
| 5:M:508:U:C2 | 5:M:509:U:C6 | 2.93 | 0.55 |
| 5:M:513:U:O2' | 5:M:514:U:C5' | 2.42 | 0.55 |
| 5:M:521:U:C2' | 5:M:522:U:H5' | 2.35 | 0.55 |
| 6:N:350:U:C2 | 6:N:351:U:C5 | 2.93 | 0.55 |
| 6:N:396:U:C2 | 6:N:397:U:C6 | 2.95 | 0.55 |
| 6:N:418:U:C4 | 6:N:419:U:C4 | 2.93 | 0.55 |
| 6:N:432:U:C2 | 6:N:433:U:C5 | 2.94 | 0.55 |
| 6:N:439:U:N3 | 6:N:440:U:C4 | 2.74 | 0.55 |
| 1:I:116:A:C2 | 1:I:117:A:N9 | 2.73 | 0.55 |
| 1:I:120:A:C2 | 1:I:121:A:N9 | 2.74 | 0.55 |
| 1:I:134:A:C5 | 1:I:135:A:N7 | 2.73 | 0.55 |
| 1:I:191:A:C6 | 1:I:192:A:C5 | 2.93 | 0.55 |
| 1:I:249:A:C2 | 1:I:250:A:C1' | 2.89 | 0.55 |
| 1:I:255:A:C2 | 1:I:256:A:C4 | 2.94 | 0.55 |
| 1:I:27:A:HO2' | 1:I:28:A:H5' | 1.70 | 0.55 |
| 1:I:314:A:H2' | 1:I:315:A:C8 | 2.41 | 0.55 |
| 1:I:346:A:O2' | 1:I:347:A:H5' | 2.06 | 0.55 |
| 1:I:48:A:N3 | 1:I:49:A:C8 | 2.74 | 0.55 |
| 1:I:66:A:N1 | 1:I:67:A:C6 | 2.74 | 0.55 |
| 1:I:97:A:H2' | 1:I:98:A:C5' | 2.36 | 0.55 |
| 2:J:117:A:H2 | 2:J:118:A:N3 | 2.04 | 0.55 |
| 2:J:144:A:C2 | 2:J:145:A:C5 | 2.93 | 0.55 |
| 2:J:228:A:N6 | 2:J:229:A:N6 | 2.54 | 0.55 |
| 2:J:236:A:N1 | 2:J:237:A:N6 | 2.54 | 0.55 |
| 2:J:27:A:C2' | 2:J:28:A:C5' | 2.84 | 0.55 |
| 2:J:28:A:N3 | 2:J:29:A:C8 | 2.74 | 0.55 |
| 3:K:119:A:N1 | 3:K:120:A:C4 | 2.74 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:181:A:O2' | 3:K:182:A:O5' | 2.24 | 0.55 |
| 3:K:46:A:O3' | 3:K:47:A:O5' | 2.23 | 0.55 |
| 4:L:483:U:H2' | 4:L:484:U:H6 | 1.71 | 0.55 |
| 4:L:576:U:H2' | 4:L:577:U:H6 | 1.71 | 0.55 |
| 4:L:641:U:H2' | 4:L:642:U:H6 | 1.71 | 0.55 |
| 4:L:729:U:C4 | 4:L:730:U:C4 | 2.86 | 0.55 |
| 4:L:761:U:C4 | 4:L:762:U:C4 | 2.93 | 0.55 |
| 4:L:760:U:C2' | 4:L:761:U:O4' | 2.54 | 0.55 |
| 4:L:776:U:C2' | 4:L:777:U:O4' | 2.52 | 0.55 |
| 5:M:395:U:H2' | 5:M:396:U:O5' | 2.05 | 0.55 |
| 5:M:425:U:C2' | 5:M:426:U:O5' | 2.52 | 0.55 |
| 5:M:442:U:H2' | 5:M:443:U:H6 | 1.70 | 0.55 |
| 5:M:509:U:H2' | 5:M:510:U:C6 | 2.35 | 0.55 |
| 5:M:547:U:O2 | 5:M:548:U:C5 | 2.58 | 0.55 |
| 6:N:446:U:O2 | 6:N:447:U:C6 | 2.59 | 0.55 |
| 1:I:109:A:C2' | 1:I:110:A:O5' | 2.54 | 0.55 |
| 1:I:143:A:N1 | 1:I:144:A:C6 | 2.75 | 0.55 |
| 1:I:185:A:C2 | 1:I:186:A:C8 | 2.94 | 0.55 |
| 1:I:229:A:C2' | 1:I:230:A:O5' | 2.53 | 0.55 |
| 1:I:21:A:C6 | 1:I:22:A:C6 | 2.94 | 0.55 |
| 1:I:248:A:N1 | 1:I:249:A:C5 | 2.75 | 0.55 |
| 1:I:262:A:C2 | 1:I:263:A:N9 | 2.74 | 0.55 |
| 1:I:30:A:H2' | 1:I:31:A:O5' | 2.05 | 0.55 |
| 1:I:328:A:C2 | 1:I:329:A:C5 | 2.94 | 0.55 |
| 1:I:333:A:H2 | 1:I:334:A:H1' | 1.67 | 0.55 |
| 1:I:373:A:C5 | 1:I:374:A:N7 | 2.75 | 0.55 |
| 1:I:58:A:N1 | 1:I:59:A:C6 | 2.75 | 0.55 |
| 1:I:96:A:N1 | 1:I:97:A:C5 | 2.73 | 0.55 |
| 2:J:102:A:C6 | 2:J:103:A:C6 | 2.95 | 0.55 |
| 2:J:159:A:C2' | 2:J:160:A:H8 | 2.16 | 0.55 |
| 2:J:175:A:C2 | 2:J:176:A:C5 | 2.94 | 0.55 |
| 2:J:180:A:C2 | 2:J:181:A:C8 | 2.94 | 0.55 |
| 2:J:260:A:HO2' | 2:J:261:A:H5' | 1.71 | 0.55 |
| 2:J:41:A:H2' | 2:J:42:A:C8 | 2.40 | 0.55 |
| 2:J:79:A:C2 | 2:J:80:A:C8 | 2.95 | 0.55 |
| 3:K:105:A:O2' | 3:K:106:A:C5' | 2.54 | 0.55 |
| 3:K:105:A:C6 | 3:K:106:A:C5 | 2.94 | 0.55 |
| 3:K:174:A:C2' | 3:K:175:A:C5' | 2.84 | 0.55 |
| 3:K:64:A:O2' | 3:K:65:A:C4' | 2.54 | 0.55 |
| 4:L:458:U:C2' | 4:L:459:U:H5' | 2.36 | 0.55 |
| 4:L:618:U:C2' | 4:L:619:U:H5' | 2.35 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:698:U:C2' | 4:L:699:U:O4' | 2.55 | 0.55 |
| 4:L:724:U:C2' | 4:L:725:U:C4' | 2.83 | 0.55 |
| 4:L:734:U:C2 | 4:L:735:U:C5 | 2.94 | 0.55 |
| 4:L:745:U:H2' | 4:L:746:U:H6 | 1.71 | 0.55 |
| 4:L:810:U:C2' | 4:L:811:U:C4' | 2.84 | 0.55 |
| 5:M:297:U:H2' | 5:M:298:U:C5' | 2.36 | 0.55 |
| 5:M:419:U:H2' | 5:M:420:U:C4' | 2.36 | 0.55 |
| 5:M:450:U:N3 | 5:M:451:U:C5 | 2.74 | 0.55 |
| 5:M:517:U:C2 | 5:M:518:U:C6 | 2.95 | 0.55 |
| 5:M:522:U:H2' | 5:M:523:U:C5' | 2.35 | 0.55 |
| 6:N:296:U:O4 | 6:N:297:U:O4 | 2.24 | 0.55 |
| 6:N:388:U:C2 | 6:N:389:U:C6 | 2.94 | 0.55 |
| 6:N:398:U:O2' | 6:N:399:U:P | 2.63 | 0.55 |
| 6:N:446:U:H2' | 6:N:447:U:H6 | 1.70 | 0.55 |
| 1:I:120:A:C2 | 1:I:121:A:C4 | 2.94 | 0.55 |
| 1:I:191:A:C5 | 1:I:192:A:N7 | 2.74 | 0.55 |
| 1:I:196:A:C2 | 1:I:197:A:N9 | 2.74 | 0.55 |
| 1:I:212:A:C2 | 1:I:213:A:C4 | 2.94 | 0.55 |
| 1:I:232:A:C2' | 1:I:233:A:O4' | 2.47 | 0.55 |
| 1:I:250:A:C2 | 1:I:251:A:C5 | 2.95 | 0.55 |
| 1:I:252:A:C4 | 1:I:253:A:C8 | 2.94 | 0.55 |
| 1:I:256:A:C6 | 1:I:257:A:C5 | 2.95 | 0.55 |
| 1:I:268:A:N1 | 1:I:269:A:C4 | 2.72 | 0.55 |
| 1:I:341:A:C2 | 1:I:342:A:C4 | 2.95 | 0.55 |
| 1:I:375:A:C2 | 1:I:376:A:C4 | 2.94 | 0.55 |
| 1:I:43:A:C6 | 1:I:44:A:N6 | 2.74 | 0.55 |
| 1:I:47:A:C4 | 1:I:48:A:N7 | 2.75 | 0.55 |
| 1:I:68:A:C2 | 1:I:69:A:C8 | 2.94 | 0.55 |
| 1:I:71:A:C5 | 1:I:72:A:N7 | 2.74 | 0.55 |
| 2:J:106:A:H2' | 2:J:107:A:C5' | 2.34 | 0.55 |
| 2:J:147:A:N3 | 2:J:148:A:N7 | 2.53 | 0.55 |
| 2:J:257:A:C2' | 2:J:258:A:C5' | 2.84 | 0.55 |
| 2:J:29:A:C2 | 2:J:30:A:C8 | 2.94 | 0.55 |
| 3:K:108:A:C6 | 3:K:109:A:C5 | 2.95 | 0.55 |
| 3:K:113:A:O2' | 3:K:114:A:C5' | 2.49 | 0.55 |
| 3:K:18:A:C6 | 3:K:19:A:N6 | 2.74 | 0.55 |
| 4:L:447:U:C3' | 4:L:448:U:OP2 | 2.54 | 0.55 |
| 4:L:694:U:H2' | 4:L:695:U:O4' | 2.06 | 0.55 |
| 4:L:708:U:H2' | 4:L:709:U:O5' | 2.06 | 0.55 |
| 4:L:738:U:N3 | 4:L:739:U:C5 | 2.74 | 0.55 |
| 4:L:781:U:O2' | 4:L:782:U:H5' | 2.06 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:322:U:C2' | 5:M:323:U:C4' | 2.82 | 0.55 |
| 5:M:412:U:C2' | 5:M:413:U:H5' | 2.37 | 0.55 |
| 5:M:427:U:N3 | 5:M:428:U:C5 | 2.74 | 0.55 |
| 5:M:462:U:O2' | 5:M:463:U:C5' | 2.48 | 0.55 |
| 5:M:482:U:C2' | 5:M:483:U:C5' | 2.83 | 0.55 |
| 6:N:405:U:O2 | 6:N:406:U:C6 | 2.59 | 0.55 |
| 6:N:446:U:O2' | 6:N:447:U:P | 2.64 | 0.55 |
| 6:N:467:U:H2' | 6:N:468:U:O5' | 2.06 | 0.55 |
| 6:N:513:U:O2' | 6:N:514:U:H5' | 2.06 | 0.55 |
| 1:I:131:A:H62 | 1:I:132:A:H62 | 1.43 | 0.55 |
| 1:I:163:A:H2' | 1:I:164:A:H8 | 1.71 | 0.55 |
| 1:I:172:A:H2' | 1:I:173:A:O5' | 2.05 | 0.55 |
| 1:I:177:A:H2' | 1:I:178:A:C8 | 2.38 | 0.55 |
| 1:I:200:A:HO2' | 1:I:201:A:H5' | 1.67 | 0.55 |
| 1:I:22:A:C2 | 1:I:23:A:C4 | 2.94 | 0.55 |
| 1:I:274:A:H2 | 1:I:275:A:C4 | 2.23 | 0.55 |
| 2:J:11:A:C3' | 2:J:12:A:C5' | 2.56 | 0.55 |
| 2:J:15:A:O2' | 2:J:16:A:H5' | 2.07 | 0.55 |
| 2:J:206:A:N1 | 2:J:207:A:C5 | 2.74 | 0.55 |
| 2:J:222:A:N3 | 2:J:223:A:C8 | 2.75 | 0.55 |
| 2:J:249:A:C4 | 2:J:250:A:C8 | 2.95 | 0.55 |
| 2:J:27:A:C2' | 2:J:28:A:H5' | 2.36 | 0.55 |
| 2:J:37:A:C4 | 2:J:38:A:C8 | 2.94 | 0.55 |
| 2:J:40:A:C2 | 2:J:41:A:C5 | 2.94 | 0.55 |
| 2:J:47:A:N3 | 2:J:48:A:O4' | 2.40 | 0.55 |
| 3:K:108:A:C2' | 3:K:109:A:C5' | 2.85 | 0.55 |
| 3:K:114:A:N3 | 3:K:115:A:N9 | 2.53 | 0.55 |
| 4:L:414:U:C2 | 4:L:415:U:C5 | 2.94 | 0.55 |
| 4:L:437:U:O2 | 4:L:438:U:C6 | 2.60 | 0.55 |
| 4:L:448:U:O4 | 4:L:449:U:O4 | 2.23 | 0.55 |
| 4:L:496:U:N3 | 4:L:497:U:C5 | 2.74 | 0.55 |
| 4:L:544:U:O4 | 4:L:545:U:O4 | 2.24 | 0.55 |
| 4:L:576:U:O2' | 4:L:577:U:C4' | 2.53 | 0.55 |
| 4:L:599:U:H2' | 4:L:600:U:O4' | 2.06 | 0.55 |
| 4:L:616:U:C2 | 4:L:617:U:C5 | 2.95 | 0.55 |
| 4:L:628:U:O2 | 4:L:629:U:C6 | 2.60 | 0.55 |
| 4:L:638:U:C2' | 4:L:639:U:O4' | 2.53 | 0.55 |
| 4:L:642:U:N3 | 4:L:643:U:C5 | 2.75 | 0.55 |
| 4:L:668:U:C2 | 4:L:669:U:C4 | 2.95 | 0.55 |
| 4:L:694:U:H2' | 4:L:695:U:C4' | 2.36 | 0.55 |
| 4:L:758:U:H2' | 4:L:759:U:C4' | 2.36 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:348:U:C6 | 5:M:349:U:C5 | 2.94 | 0.55 |
| 5:M:364:U:H2' | 5:M:365:U:H6 | 1.70 | 0.55 |
| 5:M:364:U:H2' | 5:M:365:U:O5' | 2.07 | 0.55 |
| 5:M:388:U:C2 | 5:M:389:U:C5 | 2.95 | 0.55 |
| 6:N:311:U:C2 | 6:N:312:U:C6 | 2.95 | 0.55 |
| 6:N:405:U:H2' | 6:N:406:U:H6 | 1.69 | 0.55 |
| 6:N:438:U:H2' | 6:N:439:U:H6 | 1.70 | 0.55 |
| 1:I:214:A:H2' | 1:I:215:A:C8 | 2.42 | 0.55 |
| 1:I:237:A:N3 | 1:I:238:A:C8 | 2.75 | 0.55 |
| 1:I:249:A:C2 | 1:I:250:A:C5 | 2.94 | 0.55 |
| 1:I:261:A:C2' | 1:I:262:A:C8 | 2.83 | 0.55 |
| 1:I:83:A:O2' | 1:I:84:A:H5' | 2.07 | 0.55 |
| 1:I:85:A:N3 | 1:I:86:A:N9 | 2.50 | 0.55 |
| 1:I:91:A:N3 | 1:I:92:A:C8 | 2.75 | 0.55 |
| 2:J:124:A:H2 | 2:J:125:A:C4 | 2.21 | 0.55 |
| 2:J:131:A:H2' | 2:J:132:A:H8 | 1.71 | 0.55 |
| 2:J:184:A:C2 | 2:J:185:A:C5 | 2.94 | 0.55 |
| 2:J:214:A:C4 | 2:J:215:A:C8 | 2.94 | 0.55 |
| 2:J:5:A:N1 | 2:J:6:A:C5 | 2.75 | 0.55 |
| 2:J:70:A:N3 | 2:J:71:A:C8 | 2.74 | 0.55 |
| 2:J:81:A:H2' | 2:J:82:A:C5' | 2.36 | 0.55 |
| 4:L:477:U:C2' | 4:L:478:U:O4' | 2.54 | 0.55 |
| 4:L:549:U:C2 | 4:L:550:U:C5 | 2.95 | 0.55 |
| 4:L:569:U:C2' | 4:L:570:U:H5' | 2.36 | 0.55 |
| 4:L:614:U:H2' | 4:L:615:U:H6 | 1.72 | 0.55 |
| 4:L:659:U:H2' | 4:L:660:U:C6 | 2.42 | 0.55 |
| 4:L:730:U:O2' | 4:L:731:U:O5' | 2.24 | 0.55 |
| 4:L:732:U:N3 | 4:L:733:U:C5 | 2.75 | 0.55 |
| 4:L:752:U:H2' | 4:L:753:U:H6 | 1.71 | 0.55 |
| 4:L:778:U:H2' | 4:L:779:U:O5' | 2.07 | 0.55 |
| 4:L:792:U:O2' | 4:L:793:U:H5' | 2.05 | 0.55 |
| 5:M:318:U:H2' | 5:M:319:U:H6 | 1.71 | 0.55 |
| 5:M:418:U:C4 | 5:M:419:U:O4 | 2.60 | 0.55 |
| 5:M:432:U:H2' | 5:M:433:U:H6 | 1.72 | 0.55 |
| 5:M:452:U:H2' | 5:M:453:U:C5' | 2.37 | 0.55 |
| 5:M:466:U:C4 | 5:M:467:U:C4 | 2.95 | 0.55 |
| 5:M:511:U:H2' | 5:M:512:U:C5' | 2.33 | 0.55 |
| 5:M:514:U:HO2' | 5:M:515:U:H5' | 1.65 | 0.55 |
| 6:N:398:U:H2' | 6:N:399:U:O5' | 2.07 | 0.55 |
| 6:N:431:U:H2' | 6:N:432:U:C4' | 2.37 | 0.55 |
| 6:N:524:U:C3' | 6:N:525:U:OP2 | 2.54 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:113:A:C2' | 1:I:114:A:C5' | 2.85 | 0.55 |
| 1:I:113:A:C2' | 1:I:114:A:C8 | 2.80 | 0.55 |
| 1:I:157:A:C2' | 1:I:158:A:C5' | 2.84 | 0.55 |
| 1:I:196:A:C2' | 1:I:197:A:C5' | 2.85 | 0.55 |
| 1:I:221:A:N3 | 1:I:222:A:C8 | 2.75 | 0.55 |
| 1:I:223:A:N3 | 1:I:224:A:C8 | 2.75 | 0.55 |
| 1:I:316:A:C4 | 1:I:317:A:N7 | 2.75 | 0.55 |
| 1:I:337:A:O2' | 1:I:338:A:C4' | 2.51 | 0.55 |
| 1:I:80:A:O2' | 1:I:81:A:H5' | 2.06 | 0.55 |
| 2:J:103:A:H2' | 2:J:104:A:O5' | 2.06 | 0.55 |
| 2:J:107:A:C2 | 2:J:108:A:C8 | 2.95 | 0.55 |
| 2:J:122:A:H2' | 2:J:123:A:H8 | 1.72 | 0.55 |
| 2:J:126:A:C6 | 2:J:127:A:C5 | 2.95 | 0.55 |
| 2:J:134:A:N6 | 2:J:135:A:H62 | 2.04 | 0.55 |
| 2:J:161:A:C2 | 2:J:162:A:C8 | 2.94 | 0.55 |
| 2:J:206:A:N3 | 2:J:207:A:N9 | 2.55 | 0.55 |
| 2:J:28:A:C2 | 2:J:29:A:C5 | 2.95 | 0.55 |
| 2:J:42:A:C2' | 2:J:43:A:C4' | 2.85 | 0.55 |
| 2:J:66:A:C2 | 2:J:67:A:N9 | 2.74 | 0.55 |
| 3:K:147:A:C2 | 3:K:148:A:C4 | 2.95 | 0.55 |
| 3:K:154:A:N1 | 3:K:155:A:C5 | 2.74 | 0.55 |
| 3:K:167:A:O5' | 3:K:168:A:OP2 | 2.24 | 0.55 |
| 3:K:257:A:H2' | 3:K:258:A:C8 | 2.40 | 0.55 |
| 3:K:45:A:HO2' | 3:K:46:A:C4' | 2.20 | 0.55 |
| 3:K:81:A:N3 | 3:K:82:A:C8 | 2.75 | 0.55 |
| 3:K:92:A:H2' | 3:K:93:A:O5' | 2.07 | 0.55 |
| 4:L:618:U:O2' | 4:L:619:U:C5' | 2.40 | 0.55 |
| 4:L:620:U:C2 | 4:L:621:U:C5 | 2.94 | 0.55 |
| 4:L:646:U:C2 | 4:L:647:U:C6 | 2.95 | 0.55 |
| 5:M:323:U:O2 | 5:M:324:U:N1 | 2.40 | 0.55 |
| 5:M:544:U:H2' | 5:M:545:U:C6 | 2.35 | 0.55 |
| 6:N:309:U:C2 | 6:N:310:U:C5 | 2.95 | 0.55 |
| 6:N:367:U:H2' | 6:N:368:U:C6 | 2.42 | 0.55 |
| 6:N:370:U:H2' | 6:N:371:U:C6 | 2.40 | 0.55 |
| 6:N:437:U:N3 | 6:N:438:U:C5 | 2.75 | 0.55 |
| 1:I:138:A:C2' | 1:I:139:A:O4' | 2.51 | 0.55 |
| 1:I:212:A:C2' | 1:I:213:A:O5' | 2.54 | 0.55 |
| 1:I:235:A:C2 | 1:I:236:A:N7 | 2.75 | 0.55 |
| 1:I:235:A:C4 | 1:I:236:A:C8 | 2.95 | 0.55 |
| 1:I:237:A:C2' | 1:I:238:A:O5' | 2.55 | 0.55 |
| 1:I:270:A:C5 | 1:I:271:A:C8 | 2.95 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:305:A:C6 | 1:I:306:A:N7 | 2.75 | 0.55 |
| 1:I:320:A:H2' | 1:I:321:A:C5' | 2.36 | 0.55 |
| 1:I:61:A:H2' | 1:I:62:A:O4' | 2.07 | 0.55 |
| 1:I:67:A:C2 | 1:I:68:A:C4 | 2.94 | 0.55 |
| 2:J:32:A:C2 | 2:J:33:A:C4 | 2.94 | 0.55 |
| 2:J:78:A:C2' | 2:J:79:A:H5' | 2.36 | 0.55 |
| 2:J:8:A:H2' | 2:J:9:A:H8 | 1.72 | 0.55 |
| 2:J:8:A:C2 | 2:J:9:A:N9 | 2.75 | 0.55 |
| 3:K:97:A:C2' | 3:K:98:A:C4' | 2.83 | 0.55 |
| 4:L:414:U:H2' | 4:L:415:U:H6 | 1.72 | 0.55 |
| 4:L:498:U:C2' | 4:L:499:U:O4' | 2.53 | 0.55 |
| 4:L:531:U:O2' | 4:L:532:U:H5' | 2.05 | 0.55 |
| 4:L:564:U:O2 | 4:L:565:U:C6 | 2.59 | 0.55 |
| 4:L:578:U:C2 | 4:L:579:U:C6 | 2.95 | 0.55 |
| 4:L:745:U:O2' | 4:L:746:U:P | 2.61 | 0.55 |
| 4:L:819:U:H2' | 4:L:820:U:C6 | 2.42 | 0.55 |
| 5:M:300:U:H2' | 5:M:301:U:C5' | 2.37 | 0.55 |
| 5:M:347:U:C2' | 5:M:348:U:C4' | 2.81 | 0.55 |
| 5:M:353:U:H2' | 5:M:354:U:H6 | 1.72 | 0.55 |
| 5:M:367:U:C2 | 5:M:368:U:C6 | 2.95 | 0.55 |
| 5:M:398:U:N3 | 5:M:399:U:C5 | 2.74 | 0.55 |
| 6:N:294:U:C2' | 6:N:295:U:C5' | 2.84 | 0.55 |
| 6:N:335:U:N3 | 6:N:336:U:C4 | 2.75 | 0.55 |
| 6:N:416:U:H2' | 6:N:417:U:C6 | 2.42 | 0.55 |
| 1:I:151:A:C2 | 1:I:152:A:C5 | 2.95 | 0.55 |
| 1:I:167:A:O2' | 1:I:168:A:C5' | 2.35 | 0.55 |
| 1:I:189:A:C2 | 1:I:190:A:C4 | 2.95 | 0.55 |
| 1:I:222:A:N3 | 1:I:223:A:C8 | 2.75 | 0.55 |
| 1:I:366:A:O2' | 1:I:367:A:H5' | 2.06 | 0.55 |
| 1:I:405:A:C4 | 1:I:406:A:N7 | 2.75 | 0.55 |
| 1:I:404:A:C6 | 1:I:405:A:C6 | 2.95 | 0.55 |
| 2:J:211:A:H2' | 2:J:212:A:O4' | 2.06 | 0.55 |
| 2:J:265:A:N1 | 2:J:266:A:C5 | 2.74 | 0.55 |
| 2:J:84:A:C6 | 2:J:85:A:N7 | 2.75 | 0.55 |
| 2:J:89:A:H2' | 2:J:90:A:H8 | 1.72 | 0.55 |
| 3:K:146:A:N1 | 3:K:147:A:C5 | 2.74 | 0.55 |
| 3:K:181:A:C2 | 3:K:182:A:N7 | 2.74 | 0.55 |
| 3:K:189:A:C6 | 3:K:190:A:N6 | 2.75 | 0.55 |
| 3:K:224:A:H2' | 3:K:225:A:H8 | 1.72 | 0.55 |
| 3:K:54:A:O2' | 3:K:55:A:P | 2.65 | 0.55 |
| 4:L:423:U:N3 | 4:L:424:U:C4 | 2.75 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:443:U:H2' | 4:L:444:U:H6 | 1.72 | 0.55 |
| 4:L:483:U:N3 | 4:L:484:U:C5 | 2.75 | 0.55 |
| 4:L:496:U:C2' | 4:L:497:U:O4' | 2.55 | 0.55 |
| 4:L:650:U:N3 | 4:L:651:U:C5 | 2.75 | 0.55 |
| 4:L:655:U:C2 | 4:L:656:U:C6 | 2.95 | 0.55 |
| 4:L:711:U:C5 | 4:L:712:U:C5 | 2.95 | 0.55 |
| 5:M:290:U:C2 | 5:M:291:U:C6 | 2.95 | 0.55 |
| 5:M:295:U:C2' | 5:M:296:U:C5' | 2.84 | 0.55 |
| 5:M:306:U:C2' | 5:M:307:U:C5' | 2.85 | 0.55 |
| 5:M:313:U:C3' | 5:M:314:U:P | 2.94 | 0.55 |
| 5:M:517:U:H2' | 5:M:518:U:H6 | 1.72 | 0.55 |
| 6:N:298:U:O2' | 6:N:299:U:H5' | 2.07 | 0.55 |
| 6:N:326:U:C2' | 6:N:327:U:C6 | 2.79 | 0.55 |
| 6:N:341:U:C4 | 6:N:342:U:O4 | 2.59 | 0.55 |
| 6:N:355:U:C2 | 6:N:356:U:C5 | 2.95 | 0.55 |
| 6:N:459:U:C2' | 6:N:460:U:H6 | 2.12 | 0.55 |
| 1:I:10:A:O2' | 1:I:11:A:P | 2.65 | 0.55 |
| 1:I:178:A:H2' | 1:I:179:A:H8 | 1.72 | 0.55 |
| 1:I:190:A:C2' | 1:I:191:A:O5' | 2.54 | 0.55 |
| 1:I:237:A:H2' | 1:I:238:A:O4' | 2.07 | 0.55 |
| 1:I:242:A:N1 | 1:I:243:A:C4 | 2.75 | 0.55 |
| 1:I:243:A:C6 | 1:I:244:A:N7 | 2.73 | 0.55 |
| 1:I:274:A:C4 | 1:I:275:A:C8 | 2.95 | 0.55 |
| 1:I:283:A:O2' | 1:I:284:A:C5' | 2.55 | 0.55 |
| 1:I:295:A:C2' | 1:I:296:A:C5' | 2.85 | 0.55 |
| 1:I:340:A:O2' | 1:I:341:A:C5' | 2.55 | 0.55 |
| 1:I:353:A:C4 | 1:I:354:A:C8 | 2.95 | 0.55 |
| 1:I:376:A:O2' | 1:I:377:A:P | 2.65 | 0.55 |
| 1:I:387:A:C2' | 1:I:388:A:C5' | 2.84 | 0.55 |
| 1:I:61:A:C4 | 1:I:62:A:N7 | 2.75 | 0.55 |
| 1:I:67:A:C2' | 1:I:68:A:C5' | 2.83 | 0.55 |
| 2:J:119:A:N1 | 2:J:120:A:C6 | 2.75 | 0.55 |
| 2:J:131:A:C4 | 2:J:132:A:N7 | 2.75 | 0.55 |
| 2:J:200:A:C2 | 2:J:201:A:N9 | 2.74 | 0.55 |
| 2:J:221:A:N3 | 2:J:222:A:C8 | 2.75 | 0.55 |
| 2:J:32:A:C2 | 2:J:33:A:C5 | 2.95 | 0.55 |
| 3:K:103:A:C2' | 3:K:104:A:H5' | 2.36 | 0.55 |
| 3:K:3:A:H2' | 3:K:4:A:C8 | 2.41 | 0.55 |
| 3:K:41:A:C2 | 3:K:42:A:N9 | 2.75 | 0.55 |
| 4:L:487:U:C2 | 4:L:488:U:C6 | 2.95 | 0.55 |
| 4:L:488:U:O2' | 4:L:489:U:C4' | 2.54 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:491:U:O2 | 4:L:492:U:N1 | 2.39 | 0.55 |
| 4:L:512:U:H2' | 4:L:513:U:C6 | 2.40 | 0.55 |
| 1:I:307:A:C2 | 4:L:519:U:C2 | 2.95 | 0.55 |
| 4:L:536:U:C2' | 4:L:537:U:H5' | 2.37 | 0.55 |
| 4:L:610:U:C2 | 4:L:611:U:C5 | 2.94 | 0.55 |
| 4:L:633:U:H2' | 4:L:634:U:C6 | 2.42 | 0.55 |
| 4:L:678:U:C3' | 4:L:679:U:P | 2.91 | 0.55 |
| 4:L:699:U:C2' | 4:L:700:U:H5' | 2.36 | 0.55 |
| 4:L:792:U:H2' | 4:L:793:U:C6 | 2.39 | 0.55 |
| 4:L:802:U:C2 | 4:L:803:U:C6 | 2.94 | 0.55 |
| 5:M:476:U:C2 | 5:M:477:U:C6 | 2.95 | 0.55 |
| 5:M:519:U:N3 | 5:M:520:U:C4 | 2.74 | 0.55 |
| 6:N:420:U:C2 | 6:N:421:U:C6 | 2.95 | 0.55 |
| 1:I:15:A:C6 | 1:I:16:A:C5 | 2.94 | 0.54 |
| 1:I:17:A:H2 | 1:I:18:A:C4 | 2.24 | 0.54 |
| 1:I:219:A:C2 | 1:I:220:A:N7 | 2.74 | 0.54 |
| 1:I:268:A:C2 | 1:I:269:A:C5 | 2.96 | 0.54 |
| 1:I:269:A:C5 | 1:I:270:A:C8 | 2.95 | 0.54 |
| 2:J:105:A:C4 | 2:J:106:A:C8 | 2.94 | 0.54 |
| 2:J:228:A:C5 | 2:J:229:A:N7 | 2.75 | 0.54 |
| 2:J:84:A:C2 | 2:J:85:A:N9 | 2.74 | 0.54 |
| 2:J:89:A:C2 | 2:J:90:A:C4 | 2.93 | 0.54 |
| 3:K:105:A:C2' | 3:K:106:A:C5' | 2.85 | 0.54 |
| 3:K:112:A:C6 | 3:K:113:A:C6 | 2.95 | 0.54 |
| 3:K:141:A:H2' | 3:K:142:A:C8 | 2.38 | 0.54 |
| 3:K:146:A:C4 | 3:K:147:A:N7 | 2.75 | 0.54 |
| 3:K:147:A:C2 | 3:K:148:A:C8 | 2.94 | 0.54 |
| 3:K:151:A:C2 | 3:K:152:A:N7 | 2.75 | 0.54 |
| 4:L:610:U:O2' | 4:L:611:U:H5' | 2.07 | 0.54 |
| 4:L:803:U:N3 | 4:L:804:U:C5 | 2.75 | 0.54 |
| 4:L:811:U:C5 | 4:L:812:U:C5 | 2.94 | 0.54 |
| 4:L:818:U:C2 | 4:L:819:U:C5 | 2.95 | 0.54 |
| 5:M:294:U:C2 | 5:M:295:U:C5 | 2.95 | 0.54 |
| 5:M:372:U:C2 | 5:M:373:U:C5 | 2.94 | 0.54 |
| 5:M:473:U:HO2' | 5:M:474:U:H5' | 1.67 | 0.54 |
| 5:M:528:U:C2 | 5:M:529:U:C6 | 2.94 | 0.54 |
| 6:N:429:U:C2 | 6:N:430:U:C6 | 2.95 | 0.54 |
| 6:N:473:U:O4 | 6:N:474:U:O4 | 2.24 | 0.54 |
| 1:I:159:A:N1 | 1:I:160:A:C5 | 2.76 | 0.54 |
| 1:I:198:A:N3 | 1:I:199:A:N7 | 2.55 | 0.54 |
| 1:I:202:A:C2 | 1:I:203:A:C8 | 2.96 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:251:A:N6 | 1:I:252:A:N6 | 2.54 | 0.54 |
| 1:I:256:A:C4 | 1:I:257:A:C8 | 2.96 | 0.54 |
| 1:I:26:A:H2' | 1:I:27:A:O4' | 2.07 | 0.54 |
| 2:J:128:A:C5 | 2:J:129:A:N7 | 2.75 | 0.54 |
| 2:J:156:A:C2 | 2:J:157:A:C4 | 2.95 | 0.54 |
| 2:J:203:A:C2 | 5:M:351:U:C2 | 2.95 | 0.54 |
| 2:J:230:A:HO2' | 2:J:231:A:C4' | 2.20 | 0.54 |
| 2:J:230:A:H2' | 2:J:231:A:C5' | 2.35 | 0.54 |
| 2:J:39:A:C2 | 2:J:40:A:C4 | 2.95 | 0.54 |
| 3:K:113:A:C2' | 3:K:114:A:H5' | 2.36 | 0.54 |
| 3:K:194:A:H2' | 3:K:195:A:C8 | 2.42 | 0.54 |
| 3:K:250:A:C2 | 3:K:251:A:N9 | 2.75 | 0.54 |
| 3:K:64:A:C2' | 3:K:65:A:O4' | 2.55 | 0.54 |
| 3:K:94:A:C4 | 3:K:95:A:N7 | 2.75 | 0.54 |
| 4:L:416:U:H2' | 4:L:417:U:C6 | 2.42 | 0.54 |
| 4:L:745:U:N3 | 4:L:746:U:C4 | 2.75 | 0.54 |
| 5:M:335:U:P | 5:M:336:U:OP2 | 2.66 | 0.54 |
| 5:M:369:U:C2 | 5:M:370:U:C6 | 2.95 | 0.54 |
| 5:M:370:U:N3 | 5:M:371:U:C5 | 2.75 | 0.54 |
| 5:M:440:U:O2' | 5:M:441:U:H5' | 2.07 | 0.54 |
| 5:M:476:U:C2' | 5:M:477:U:C5' | 2.85 | 0.54 |
| 5:M:498:U:O2' | 5:M:499:U:O5' | 2.25 | 0.54 |
| 5:M:515:U:C2' | 5:M:516:U:O5' | 2.55 | 0.54 |
| 5:M:523:U:N3 | 5:M:524:U:C5 | 2.76 | 0.54 |
| 5:M:531:U:C2 | 5:M:532:U:C6 | 2.95 | 0.54 |
| 6:N:418:U:N3 | 6:N:419:U:C5 | 2.75 | 0.54 |
| 6:N:440:U:C2' | 6:N:441:U:O4' | 2.55 | 0.54 |
| 6:N:474:U:C2' | 6:N:475:U:O4' | 2.53 | 0.54 |
| 6:N:483:U:O5' | 6:N:484:U:OP2 | 2.26 | 0.54 |
| 1:I:180:A:N1 | 1:I:181:A:C5 | 2.75 | 0.54 |
| 1:I:282:A:N1 | 1:I:283:A:C5 | 2.75 | 0.54 |
| 1:I:291:A:C2 | 1:I:292:A:C4 | 2.96 | 0.54 |
| 1:I:317:A:C2' | 1:I:318:A:O5' | 2.55 | 0.54 |
| 1:I:38:A:C2 | 1:I:39:A:C4 | 2.96 | 0.54 |
| 1:I:58:A:C6 | 1:I:59:A:C6 | 2.96 | 0.54 |
| 1:I:67:A:C2' | 1:I:68:A:C8 | 2.87 | 0.54 |
| 1:I:70:A:O2' | 1:I:71:A:O4' | 2.25 | 0.54 |
| 1:I:73:A:C5 | 1:I:74:A:N7 | 2.76 | 0.54 |
| 2:J:101:A:C4 | 2:J:102:A:C8 | 2.95 | 0.54 |
| 2:J:118:A:C2 | 2:J:119:A:C8 | 2.95 | 0.54 |
| 2:J:138:A:C5 | 2:J:139:A:N7 | 2.76 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:139:A:O2' | 2:J:140:A:H5' | 2.07 | 0.54 |
| 2:J:186:A:C2' | 2:J:187:A:H5' | 2.37 | 0.54 |
| 2:J:220:A:N6 | 2:J:221:A:H62 | 2.04 | 0.54 |
| 2:J:223:A:C6 | 2:J:224:A:C8 | 2.95 | 0.54 |
| 2:J:230:A:C2' | 2:J:231:A:O5' | 2.55 | 0.54 |
| 2:J:263:A:C5 | 2:J:264:A:N7 | 2.75 | 0.54 |
| 2:J:63:A:N3 | 2:J:64:A:C8 | 2.75 | 0.54 |
| 2:J:85:A:C2 | 2:J:86:A:C5 | 2.94 | 0.54 |
| 2:J:93:A:H2' | 2:J:94:A:C8 | 2.43 | 0.54 |
| 3:K:148:A:H2' | 3:K:149:A:H8 | 1.72 | 0.54 |
| 3:K:191:A:C2' | 3:K:192:A:C5' | 2.86 | 0.54 |
| 4:L:416:U:H2' | 4:L:417:U:H6 | 1.70 | 0.54 |
| 4:L:508:U:H2' | 4:L:509:U:H6 | 1.72 | 0.54 |
| 4:L:630:U:N3 | 4:L:631:U:C4 | 2.76 | 0.54 |
| 4:L:649:U:C2 | 4:L:650:U:C5 | 2.94 | 0.54 |
| 4:L:766:U:C5' | 4:L:767:U:P | 2.95 | 0.54 |
| 4:L:766:U:C5 | 4:L:767:U:H5 | 2.23 | 0.54 |
| 4:L:771:U:H2' | 4:L:772:U:H6 | 1.71 | 0.54 |
| 4:L:782:U:H2' | 4:L:783:U:H6 | 1.72 | 0.54 |
| 5:M:363:U:H2' | 5:M:364:U:H6 | 1.71 | 0.54 |
| 5:M:399:U:C2' | 5:M:400:U:H5' | 2.37 | 0.54 |
| 5:M:428:U:C2' | 5:M:429:U:O4' | 2.55 | 0.54 |
| 5:M:431:U:O2' | 5:M:432:U:C5' | 2.40 | 0.54 |
| 5:M:449:U:C2 | 5:M:450:U:C6 | 2.95 | 0.54 |
| 5:M:453:U:HO2' | 5:M:454:U:C4' | 2.13 | 0.54 |
| 5:M:509:U:N3 | 5:M:510:U:C5 | 2.76 | 0.54 |
| 6:N:318:U:C2 | 6:N:319:U:C4 | 2.96 | 0.54 |
| 3:K:154:A:C2 | 6:N:378:U:C2 | 2.96 | 0.54 |
| 3:K:154:A:C2 | 6:N:378:U:O2 | 2.61 | 0.54 |
| 6:N:493:U:C2 | 6:N:494:U:C5 | 2.96 | 0.54 |
| 6:N:495:U:H2' | 6:N:496:U:H6 | 1.71 | 0.54 |
| 1:I:152:A:C6 | 1:I:153:A:C6 | 2.96 | 0.54 |
| 1:I:384:A:HO3' | 1:I:385:A:P | 2.26 | 0.54 |
| 2:J:150:A:C2 | 2:J:151:A:C8 | 2.95 | 0.54 |
| 2:J:21:A:H2' | 2:J:22:A:O5' | 2.07 | 0.54 |
| 2:J:24:A:C2 | 2:J:25:A:N7 | 2.75 | 0.54 |
| 2:J:23:A:H2' | 2:J:24:A:O5' | 2.07 | 0.54 |
| 2:J:54:A:O2' | 2:J:55:A:C4' | 2.54 | 0.54 |
| 2:J:58:A:N1 | 2:J:59:A:C5 | 2.75 | 0.54 |
| 2:J:65:A:C4 | 2:J:66:A:C8 | 2.96 | 0.54 |
| 3:K:103:A:C2' | 3:K:104:A:C5' | 2.85 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:125:A:C4 | 3:K:126:A:C8 | 2.95 | 0.54 |
| 3:K:192:A:C5 | 3:K:193:A:N7 | 2.75 | 0.54 |
| 3:K:256:A:C2 | 3:K:257:A:C4 | 2.96 | 0.54 |
| 3:K:6:A:C5 | 3:K:7:A:N7 | 2.74 | 0.54 |
| 4:L:458:U:H2' | 4:L:459:U:C6 | 2.42 | 0.54 |
| 4:L:506:U:C2 | 4:L:507:U:C6 | 2.96 | 0.54 |
| 4:L:515:U:H2' | 4:L:516:U:O4' | 2.06 | 0.54 |
| 4:L:660:U:C2 | 4:L:661:U:C6 | 2.95 | 0.54 |
| 4:L:689:U:HO2' | 4:L:690:U:H5' | 1.70 | 0.54 |
| 4:L:774:U:O2' | 4:L:775:U:P | 2.65 | 0.54 |
| 4:L:798:U:O2' | 4:L:799:U:H5' | 2.08 | 0.54 |
| 5:M:381:U:C2 | 5:M:382:U:C6 | 2.95 | 0.54 |
| 5:M:446:U:H2' | 5:M:447:U:C6 | 2.40 | 0.54 |
| 5:M:512:U:N3 | 5:M:513:U:C4 | 2.76 | 0.54 |
| 5:M:529:U:H2' | 5:M:530:U:O5' | 2.06 | 0.54 |
| 5:M:539:U:H2' | 5:M:540:U:C5' | 2.31 | 0.54 |
| 6:N:400:U:H2' | 6:N:401:U:H6 | 1.71 | 0.54 |
| 6:N:409:U:N3 | 6:N:410:U:C4 | 2.75 | 0.54 |
| 6:N:459:U:O2' | 6:N:460:U:P | 2.66 | 0.54 |
| 6:N:484:U:H2' | 6:N:485:U:C4' | 2.33 | 0.54 |
| 1:I:12:A:N1 | 1:I:13:A:C5 | 2.76 | 0.54 |
| 1:I:18:A:C6 | 1:I:19:A:C5 | 2.96 | 0.54 |
| 1:I:20:A:O2' | 1:I:21:A:C5' | 2.55 | 0.54 |
| 1:I:213:A:C2' | 1:I:214:A:C5' | 2.86 | 0.54 |
| 1:I:269:A:N1 | 1:I:270:A:C5 | 2.75 | 0.54 |
| 1:I:307:A:C2' | 1:I:308:A:H5' | 2.37 | 0.54 |
| 1:I:366:A:H2' | 1:I:367:A:H8 | 1.73 | 0.54 |
| 1:I:4:A:H2' | 1:I:5:A:N7 | 2.23 | 0.54 |
| 1:I:57:A:N6 | 1:I:58:A:N6 | 2.55 | 0.54 |
| 2:J:148:A:N6 | 2:J:149:A:N6 | 2.56 | 0.54 |
| 2:J:150:A:N3 | 2:J:151:A:C8 | 2.75 | 0.54 |
| 2:J:165:A:N6 | 2:J:166:A:N6 | 2.56 | 0.54 |
| 2:J:203:A:N1 | 2:J:204:A:C5 | 2.76 | 0.54 |
| 2:J:26:A:H2' | 2:J:27:A:C5' | 2.38 | 0.54 |
| 2:J:26:A:H2' | 2:J:27:A:H8 | 1.71 | 0.54 |
| 2:J:55:A:O2' | 2:J:56:A:H5' | 2.08 | 0.54 |
| 3:K:137:A:C2 | 3:K:138:A:C8 | 2.96 | 0.54 |
| 3:K:155:A:C5 | 3:K:156:A:C8 | 2.82 | 0.54 |
| 3:K:154:A:C2' | 3:K:155:A:H8 | 2.20 | 0.54 |
| 3:K:65:A:C4 | 3:K:66:A:C8 | 2.96 | 0.54 |
| 3:K:80:A:O2' | 3:K:81:A:C5' | 2.54 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 3:K:92:A:C4 | 3:K:93:A:C8 | 2.96 | 0.54 |
| 4:L:462:U:H2' | 4:L:463:U:C6 | 2.42 | 0.54 |
| 4:L:467:U:O2' | 4:L:468:U:C5' | 2.38 | 0.54 |
| 4:L:517:U:H2' | 4:L:518:U:C6 | 2.40 | 0.54 |
| 4:L:526:U:H2' | 4:L:527:U:C6 | 2.42 | 0.54 |
| 4:L:576:U:O2 | 4:L:577:U:C6 | 2.60 | 0.54 |
| 4:L:587:U:C2' | 4:L:588:U:O5' | 2.51 | 0.54 |
| 4:L:603:U:H2' | 4:L:604:U:H6 | 1.72 | 0.54 |
| 4:L:649:U:H2' | 4:L:650:U:C4' | 2.37 | 0.54 |
| 4:L:660:U:O2' | 4:L:661:U:C4' | 2.56 | 0.54 |
| 1:I:130:A:C2 | 4:L:696:U:C2 | 2.95 | 0.54 |
| 4:L:759:U:H2' | 4:L:760:U:C4' | 2.35 | 0.54 |
| 4:L:805:U:N3 | 4:L:806:U:C5 | 2.75 | 0.54 |
| 4:L:806:U:N3 | 4:L:807:U:C4 | 2.76 | 0.54 |
| 5:M:323:U:H2' | 5:M:324:U:O5' | 2.04 | 0.54 |
| 5:M:336:U:C2 | 5:M:337:U:N1 | 2.75 | 0.54 |
| 5:M:343:U:H2' | 5:M:344:U:H6 | 1.72 | 0.54 |
| 5:M:486:U:H2' | 5:M:487:U:C5' | 2.38 | 0.54 |
| 5:M:545:U:H2' | 5:M:546:U:C6 | 2.43 | 0.54 |
| 6:N:450:U:C4 | 6:N:451:U:C5 | 2.96 | 0.54 |
| 6:N:483:U:C6 | 6:N:484:U:H5 | 2.25 | 0.54 |
| 1:I:115:A:C2 | 1:I:116:A:C4 | 2.95 | 0.54 |
| 1:I:182:A:C2' | 1:I:183:A:H5' | 2.38 | 0.54 |
| 1:I:184:A:H62 | 1:I:185:A:H62 | 1.45 | 0.54 |
| 1:I:191:A:H2' | 1:I:192:A:C5' | 2.38 | 0.54 |
| 1:I:223:A:C2' | 1:I:224:A:H5' | 2.38 | 0.54 |
| 1:I:243:A:H2' | 1:I:244:A:H8 | 1.72 | 0.54 |
| 1:I:279:A:C2 | 1:I:280:A:C8 | 2.95 | 0.54 |
| 1:I:334:A:H2' | 1:I:335:A:C5' | 2.38 | 0.54 |
| 1:I:55:A:N1 | 1:I:56:A:C5 | 2.76 | 0.54 |
| 1:I:64:A:H2' | 1:I:65:A:C5' | 2.37 | 0.54 |
| 1:I:76:A:O2' | 1:I:77:A:H5' | 2.08 | 0.54 |
| 1:I:94:A:C2 | 1:I:95:A:C5 | 2.95 | 0.54 |
| 2:J:179:A:C2 | 2:J:180:A:N7 | 2.75 | 0.54 |
| 2:J:39:A:N3 | 2:J:40:A:C8 | 2.75 | 0.54 |
| 2:J:4:A:H2' | 2:J:5:A:C8 | 2.42 | 0.54 |
| 2:J:67:A:C2 | 2:J:68:A:C4 | 2.96 | 0.54 |
| 3:K:100:A:C5 | 3:K:101:A:C8 | 2.96 | 0.54 |
| 3:K:116:A:N6 | 3:K:117:A:H62 | 2.06 | 0.54 |
| 3:K:127:A:H2' | 3:K:128:A:O5' | 2.08 | 0.54 |
| 3:K:38:A:O2' | 3:K:39:A:O5' | 2.25 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 3:K:88:A:O2' | 3:K:89:A:P | 2.53 | 0.54 |
| 3:K:91:A:C4 | 3:K:92:A:C8 | 2.95 | 0.54 |
| 4:L:485:U:N3 | 4:L:486:U:C5 | 2.76 | 0.54 |
| 4:L:591:U:H2' | 4:L:592:U:H6 | 1.72 | 0.54 |
| 4:L:603:U:H2' | 4:L:604:U:C5' | 2.37 | 0.54 |
| 4:L:718:U:O2 | 4:L:719:U:C1' | 2.56 | 0.54 |
| 4:L:760:U:H2' | 4:L:761:U:C5' | 2.37 | 0.54 |
| 4:L:778:U:C2' | 4:L:779:U:O5' | 2.54 | 0.54 |
| 5:M:297:U:C2 | 5:M:298:U:C6 | 2.95 | 0.54 |
| 5:M:382:U:H2' | 5:M:383:U:H6 | 1.73 | 0.54 |
| 5:M:405:U:H2' | 5:M:406:U:O5' | 2.06 | 0.54 |
| 5:M:454:U:C2' | 5:M:455:U:H6 | 2.20 | 0.54 |
| 5:M:478:U:C2 | 5:M:479:U:C5 | 2.95 | 0.54 |
| 5:M:513:U:H2' | 5:M:514:U:C6 | 2.37 | 0.54 |
| 6:N:414:U:C2 | 6:N:415:U:C5 | 2.95 | 0.54 |
| 6:N:473:U:C2' | 6:N:474:U:O4' | 2.52 | 0.54 |
| 1:I:122:A:H2' | 1:I:123:A:O4' | 2.06 | 0.54 |
| 1:I:130:A:H2' | 1:I:131:A:O5' | 2.06 | 0.54 |
| 1:I:136:A:C2 | 1:I:137:A:C1' | 2.91 | 0.54 |
| 1:I:229:A:H2' | 1:I:230:A:C8 | 2.43 | 0.54 |
| 1:I:324:A:C2' | 1:I:325:A:O5' | 2.55 | 0.54 |
| 1:I:333:A:C2' | 1:I:334:A:O4' | 2.56 | 0.54 |
| 1:I:50:A:C2 | 1:I:51:A:C8 | 2.96 | 0.54 |
| 1:I:64:A:N1 | 1:I:65:A:C5 | 2.76 | 0.54 |
| 1:I:73:A:C6 | 1:I:74:A:C5 | 2.96 | 0.54 |
| 2:J:11:A:C4 | 2:J:12:A:C8 | 2.96 | 0.54 |
| 2:J:209:A:H2' | 2:J:210:A:C5' | 2.36 | 0.54 |
| 2:J:43:A:N1 | 2:J:44:A:C5 | 2.75 | 0.54 |
| 2:J:63:A:N1 | 2:J:64:A:C5 | 2.76 | 0.54 |
| 2:J:72:A:H2' | 2:J:73:A:H8 | 1.73 | 0.54 |
| 2:J:6:A:N3 | 2:J:7:A:C8 | 2.76 | 0.54 |
| 3:K:105:A:N1 | 3:K:106:A:C5 | 2.76 | 0.54 |
| 3:K:130:A:C2 | 3:K:131:A:C5 | 2.96 | 0.54 |
| 3:K:146:A:O2' | 3:K:147:A:H5' | 2.08 | 0.54 |
| 3:K:87:A:N3 | 3:K:88:A:C8 | 2.76 | 0.54 |
| 4:L:414:U:H2' | 4:L:415:U:C6 | 2.43 | 0.54 |
| 4:L:670:U:C2' | 4:L:671:U:H5' | 2.38 | 0.54 |
| 4:L:694:U:N3 | 4:L:695:U:C6 | 2.72 | 0.54 |
| 4:L:787:U:C2 | 4:L:788:U:C5 | 2.96 | 0.54 |
| 5:M:345:U:O2' | 5:M:346:U:H5' | 2.07 | 0.54 |
| 5:M:369:U:C2' | 5:M:370:U:O5' | 2.51 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:397:U:C2 | 5:M:398:U:C6 | 2.96 | 0.54 |
| 5:M:404:U:H2' | 5:M:405:U:H6 | 1.71 | 0.54 |
| 5:M:434:U:N3 | 5:M:435:U:C5 | 2.75 | 0.54 |
| 5:M:459:U:C2' | 5:M:460:U:C5' | 2.86 | 0.54 |
| 6:N:353:U:H2' | 6:N:354:U:H6 | 1.73 | 0.54 |
| 1:I:240:A:H2 | 1:I:241:A:C4 | 2.18 | 0.54 |
| 1:I:239:A:C2 | 1:I:240:A:N9 | 2.76 | 0.54 |
| 1:I:323:A:O2' | 1:I:324:A:C4' | 2.53 | 0.54 |
| 1:I:47:A:C2 | 1:I:48:A:C8 | 2.95 | 0.54 |
| 1:I:70:A:C2 | 1:I:71:A:C5 | 2.95 | 0.54 |
| 2:J:133:A:N3 | 2:J:134:A:C8 | 2.75 | 0.54 |
| 2:J:136:A:C2 | 2:J:137:A:C1' | 2.89 | 0.54 |
| 2:J:163:A:H2' | 2:J:164:A:H8 | 1.72 | 0.54 |
| 2:J:170:A:C2 | 2:J:171:A:C4 | 2.95 | 0.54 |
| 2:J:180:A:C2 | 2:J:181:A:C5 | 2.96 | 0.54 |
| 2:J:223:A:N3 | 2:J:224:A:C8 | 2.75 | 0.54 |
| 2:J:229:A:N3 | 2:J:230:A:N9 | 2.56 | 0.54 |
| 2:J:47:A:N3 | 2:J:48:A:C8 | 2.75 | 0.54 |
| 3:K:109:A:O2' | 3:K:110:A:H5' | 2.07 | 0.54 |
| 3:K:115:A:C6 | 3:K:116:A:C6 | 2.96 | 0.54 |
| 3:K:121:A:C4 | 3:K:122:A:N7 | 2.76 | 0.54 |
| 3:K:13:A:N6 | 3:K:14:A:N6 | 2.56 | 0.54 |
| 3:K:33:A:C3' | 3:K:34:A:P | 2.92 | 0.54 |
| 3:K:91:A:N6 | 3:K:92:A:N6 | 2.56 | 0.54 |
| 3:K:93:A:H2' | 3:K:94:A:H8 | 1.72 | 0.54 |
| 4:L:549:U:H2' | 4:L:550:U:C5' | 2.25 | 0.54 |
| 4:L:584:U:C2' | 4:L:585:U:H5' | 2.36 | 0.54 |
| 4:L:603:U:H2' | 4:L:604:U:O5' | 2.08 | 0.54 |
| 4:L:692:U:H2' | 4:L:693:U:O5' | 2.07 | 0.54 |
| 5:M:389:U:H2' | 5:M:390:U:C6 | 2.41 | 0.54 |
| 5:M:429:U:C2 | 5:M:430:U:C6 | 2.96 | 0.54 |
| 5:M:453:U:N1 | 5:M:454:U:C6 | 2.75 | 0.54 |
| 5:M:457:U:C4 | 5:M:458:U:C5 | 2.95 | 0.54 |
| 5:M:507:U:O2' | 5:M:508:U:H5' | 2.07 | 0.54 |
| 6:N:404:U:N3 | 6:N:405:U:C5 | 2.76 | 0.54 |
| 6:N:408:U:C2 | 6:N:409:U:C6 | 2.95 | 0.54 |
| 6:N:450:U:H2' | 6:N:451:U:C4' | 2.28 | 0.54 |
| 1:I:133:A:N3 | 1:I:134:A:N9 | 2.56 | 0.54 |
| 1:I:13:A:O2' | 1:I:14:A:C4' | 2.55 | 0.54 |
| 1:I:213:A:C2' | 1:I:214:A:H5' | 2.38 | 0.54 |
| 1:I:315:A:H2' | 1:I:316:A:C8 | 2.42 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:335:A:H2' | 1:I:336:A:H8 | 1.73 | 0.54 |
| 1:I:347:A:C2 | 1:I:348:A:C8 | 2.96 | 0.54 |
| 1:I:391:A:N6 | 1:I:392:A:N6 | 2.56 | 0.54 |
| 1:I:48:A:C2 | 1:I:49:A:C5 | 2.95 | 0.54 |
| 1:I:57:A:C6 | 1:I:58:A:C5 | 2.96 | 0.54 |
| 1:I:61:A:C2 | 1:I:62:A:C4 | 2.96 | 0.54 |
| 1:I:81:A:C2 | 1:I:82:A:C5 | 2.96 | 0.54 |
| 2:J:200:A:O2' | 2:J:201:A:P | 2.62 | 0.54 |
| 2:J:22:A:C2 | 2:J:23:A:C5 | 2.96 | 0.54 |
| 2:J:28:A:N1 | 2:J:29:A:C6 | 2.76 | 0.54 |
| 2:J:43:A:C2 | 2:J:44:A:N9 | 2.76 | 0.54 |
| 3:K:105:A:N3 | 3:K:106:A:C8 | 2.76 | 0.54 |
| 3:K:107:A:N3 | 3:K:108:A:C8 | 2.76 | 0.54 |
| 3:K:138:A:O2' | 3:K:139:A:P | 2.64 | 0.54 |
| 3:K:137:A:C2' | 3:K:138:A:O5' | 2.55 | 0.54 |
| 3:K:142:A:C4 | 3:K:143:A:C8 | 2.96 | 0.54 |
| 3:K:146:A:O2' | 3:K:147:A:C5' | 2.56 | 0.54 |
| 3:K:200:A:H2' | 3:K:201:A:C8 | 2.42 | 0.54 |
| 3:K:31:A:H62 | 3:K:32:A:H62 | 1.52 | 0.54 |
| 3:K:88:A:C2' | 3:K:89:A:O5' | 2.44 | 0.54 |
| 4:L:432:U:H2' | 4:L:433:U:H6 | 1.73 | 0.54 |
| 4:L:474:U:C2' | 4:L:475:U:C5' | 2.85 | 0.54 |
| 4:L:495:U:N3 | 4:L:496:U:C5 | 2.75 | 0.54 |
| 4:L:556:U:H2' | 4:L:557:U:H6 | 1.73 | 0.54 |
| 4:L:571:U:C4 | 4:L:572:U:C4 | 2.96 | 0.54 |
| 4:L:735:U:H2' | 4:L:736:U:C6 | 2.42 | 0.54 |
| 4:L:737:U:C2 | 4:L:738:U:C6 | 2.95 | 0.54 |
| 4:L:749:U:C2 | 4:L:750:U:C5 | 2.96 | 0.54 |
| 4:L:782:U:C2 | 4:L:783:U:C6 | 2.96 | 0.54 |
| 5:M:352:U:H2' | 5:M:353:U:H6 | 1.72 | 0.54 |
| 5:M:438:U:N3 | 5:M:439:U:C5 | 2.76 | 0.54 |
| 5:M:479:U:H2' | 5:M:480:U:H6 | 1.73 | 0.54 |
| 5:M:488:U:N1 | 5:M:489:U:C6 | 2.75 | 0.54 |
| 5:M:514:U:C2' | 5:M:515:U:O5' | 2.54 | 0.54 |
| 6:N:449:U:O2' | 6:N:450:U:C4' | 2.54 | 0.54 |
| 6:N:465:U:N3 | 6:N:466:U:O4 | 2.41 | 0.54 |
| 1:I:140:A:C2 | 1:I:141:A:C6 | 2.96 | 0.54 |
| 1:I:155:A:H2' | 1:I:156:A:C8 | 2.38 | 0.54 |
| 1:I:211:A:O2' | 1:I:212:A:C5' | 2.49 | 0.54 |
| 1:I:238:A:N1 | 1:I:239:A:C6 | 2.76 | 0.54 |
| 1:I:250:A:N9 | 1:I:251:A:C8 | 2.76 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:259:A:C2 | 1:I:260:A:C8 | 2.95 | 0.54 |
| 1:I:27:A:C2 | 1:I:28:A:C8 | 2.96 | 0.54 |
| 1:I:295:A:C2 | 1:I:296:A:N9 | 2.76 | 0.54 |
| 1:I:306:A:C2 | 1:I:307:A:C5 | 2.96 | 0.54 |
| 1:I:341:A:C2 | 1:I:342:A:C8 | 2.96 | 0.54 |
| 1:I:352:A:H2' | 1:I:353:A:C8 | 2.41 | 0.54 |
| 1:I:46:A:N1 | 1:I:47:A:C6 | 2.75 | 0.54 |
| 1:I:70:A:C2' | 1:I:71:A:C4' | 2.85 | 0.54 |
| 1:I:70:A:C2' | 1:I:71:A:O5' | 2.50 | 0.54 |
| 2:J:157:A:N3 | 2:J:158:A:C8 | 2.76 | 0.54 |
| 2:J:198:A:H2' | 2:J:199:A:H8 | 1.73 | 0.54 |
| 2:J:23:A:N3 | 2:J:24:A:C8 | 2.76 | 0.54 |
| 2:J:27:A:N1 | 2:J:28:A:C5 | 2.76 | 0.54 |
| 2:J:47:A:H2' | 2:J:48:A:C4' | 2.35 | 0.54 |
| 3:K:82:A:C2' | 3:K:83:A:C5' | 2.86 | 0.54 |
| 3:K:91:A:C5 | 3:K:92:A:N7 | 2.76 | 0.54 |
| 4:L:531:U:H2' | 4:L:532:U:H5' | 1.86 | 0.54 |
| 4:L:548:U:C2' | 4:L:549:U:C5' | 2.85 | 0.54 |
| 4:L:557:U:C2 | 4:L:558:U:N1 | 2.76 | 0.54 |
| 4:L:596:U:C4 | 4:L:597:U:C4 | 2.96 | 0.54 |
| 4:L:659:U:H2' | 4:L:660:U:H6 | 1.73 | 0.54 |
| 5:M:381:U:C2' | 5:M:382:U:C6 | 2.83 | 0.54 |
| 5:M:396:U:H2' | 5:M:397:U:C6 | 2.42 | 0.54 |
| 5:M:454:U:C5 | 5:M:455:U:H5 | 2.25 | 0.54 |
| 5:M:459:U:C2' | 5:M:460:U:H5' | 2.37 | 0.54 |
| 5:M:493:U:C2 | 5:M:494:U:C5 | 2.96 | 0.54 |
| 5:M:498:U:C2' | 5:M:499:U:C6 | 2.85 | 0.54 |
| 6:N:403:U:H2' | 6:N:404:U:O5' | 2.07 | 0.54 |
| 6:N:438:U:C2' | 6:N:439:U:H5' | 2.37 | 0.54 |
| 6:N:451:U:C4 | 6:N:452:U:C4 | 2.96 | 0.54 |
| 6:N:467:U:C2' | 6:N:468:U:O5' | 2.56 | 0.54 |
| 6:N:469:U:C4 | 6:N:470:U:C4 | 2.96 | 0.54 |
| 1:I:10:A:HO2' | 1:I:11:A:H5' | 1.71 | 0.53 |
| 1:I:140:A:N3 | 1:I:141:A:C8 | 2.75 | 0.53 |
| 1:I:13:A:C6 | 1:I:14:A:N6 | 2.76 | 0.53 |
| 1:I:183:A:C4 | 1:I:184:A:C8 | 2.96 | 0.53 |
| 1:I:262:A:N1 | 1:I:263:A:C5 | 2.76 | 0.53 |
| 1:I:291:A:H2' | 1:I:292:A:O4' | 2.08 | 0.53 |
| 1:I:306:A:C4 | 1:I:307:A:C8 | 2.96 | 0.53 |
| 1:I:323:A:N1 | 1:I:324:A:C4 | 2.75 | 0.53 |
| 1:I:331:A:N6 | 1:I:332:A:H62 | 2.06 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:47:A:H2' | 1:I:48:A:C8 | 2.38 | 0.53 |
| 1:I:74:A:C4 | 1:I:75:A:N9 | 2.75 | 0.53 |
| 2:J:161:A:C4 | 2:J:162:A:C8 | 2.96 | 0.53 |
| 2:J:181:A:H2' | 2:J:182:A:H8 | 1.73 | 0.53 |
| 2:J:205:A:N3 | 2:J:206:A:C1' | 2.71 | 0.53 |
| 2:J:224:A:C2 | 2:J:225:A:C4 | 2.96 | 0.53 |
| 2:J:36:A:C5 | 2:J:37:A:N7 | 2.76 | 0.53 |
| 2:J:51:A:C6 | 2:J:52:A:N6 | 2.77 | 0.53 |
| 2:J:52:A:N6 | 2:J:53:A:N6 | 2.56 | 0.53 |
| 2:J:91:A:H2' | 2:J:92:A:O5' | 2.08 | 0.53 |
| 2:J:96:A:N3 | 2:J:97:A:C8 | 2.76 | 0.53 |
| 3:K:107:A:H2' | 3:K:108:A:C5' | 2.37 | 0.53 |
| 3:K:119:A:C2 | 3:K:120:A:H1' | 2.43 | 0.53 |
| 3:K:128:A:N6 | 3:K:129:A:N6 | 2.56 | 0.53 |
| 3:K:174:A:H2' | 3:K:175:A:C5' | 2.39 | 0.53 |
| 3:K:29:A:H2' | 3:K:30:A:H8 | 1.72 | 0.53 |
| 3:K:87:A:C4 | 3:K:88:A:C8 | 2.95 | 0.53 |
| 4:L:589:U:C2' | 4:L:590:U:H5' | 2.38 | 0.53 |
| 4:L:602:U:C2' | 4:L:603:U:C5' | 2.85 | 0.53 |
| 4:L:649:U:H2' | 4:L:650:U:C6 | 2.43 | 0.53 |
| 4:L:674:U:H2' | 4:L:675:U:C4' | 2.38 | 0.53 |
| 5:M:527:U:C2' | 5:M:528:U:C5' | 2.86 | 0.53 |
| 6:N:338:U:N1 | 6:N:339:U:C5 | 2.76 | 0.53 |
| 6:N:409:U:H2' | 6:N:410:U:H6 | 1.74 | 0.53 |
| 6:N:459:U:C2 | 6:N:460:U:C6 | 2.94 | 0.53 |
| 1:I:113:A:N1 | 1:I:114:A:C5 | 2.76 | 0.53 |
| 1:I:122:A:C2' | 1:I:123:A:O5' | 2.55 | 0.53 |
| 1:I:156:A:C4 | 1:I:157:A:C8 | 2.96 | 0.53 |
| 1:I:196:A:C2 | 1:I:197:A:C4 | 2.96 | 0.53 |
| 1:I:202:A:O2' | 1:I:203:A:C4' | 2.52 | 0.53 |
| 1:I:259:A:C5 | 1:I:260:A:N7 | 2.76 | 0.53 |
| 1:I:26:A:C5 | 1:I:27:A:N7 | 2.76 | 0.53 |
| 1:I:272:A:H61 | 1:I:273:A:N6 | 1.98 | 0.53 |
| 1:I:281:A:C6 | 1:I:282:A:C5 | 2.96 | 0.53 |
| 1:I:296:A:C2' | 1:I:297:A:O5' | 2.57 | 0.53 |
| 1:I:315:A:C2' | 1:I:316:A:O4' | 2.55 | 0.53 |
| 1:I:353:A:O2' | 1:I:354:A:C4' | 2.56 | 0.53 |
| 1:I:41:A:O2' | 1:I:42:A:O5' | 2.25 | 0.53 |
| 1:I:49:A:C2 | 1:I:50:A:N7 | 2.76 | 0.53 |
| 1:I:70:A:H2' | 1:I:71:A:C4' | 2.38 | 0.53 |
| 2:J:126:A:C2' | 2:J:127:A:H5' | 2.38 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:126:A:O2' | 2:J:127:A:H5' | 2.08 | 0.53 |
| 2:J:201:A:N1 | 2:J:202:A:C5 | 2.76 | 0.53 |
| 2:J:206:A:C2 | 2:J:207:A:C5 | 2.95 | 0.53 |
| 2:J:257:A:H2' | 2:J:258:A:C8 | 2.43 | 0.53 |
| 2:J:99:A:N1 | 2:J:100:A:C6 | 2.76 | 0.53 |
| 3:K:216:A:H2' | 3:K:217:A:H8 | 1.73 | 0.53 |
| 3:K:71:A:N1 | 3:K:72:A:C5 | 2.74 | 0.53 |
| 4:L:419:U:H2' | 4:L:420:U:C6 | 2.42 | 0.53 |
| 4:L:497:U:N3 | 4:L:498:U:C6 | 2.76 | 0.53 |
| 4:L:504:U:C2 | 4:L:505:U:C6 | 2.96 | 0.53 |
| 4:L:547:U:C2' | 4:L:548:U:H6 | 2.17 | 0.53 |
| 4:L:583:U:O4 | 4:L:584:U:O4 | 2.26 | 0.53 |
| 4:L:628:U:O2' | 4:L:629:U:P | 2.66 | 0.53 |
| 4:L:648:U:C4 | 4:L:649:U:C5 | 2.96 | 0.53 |
| 4:L:711:U:H2' | 4:L:712:U:C1' | 2.38 | 0.53 |
| 4:L:771:U:C2' | 4:L:772:U:O5' | 2.56 | 0.53 |
| 4:L:819:U:O2 | 4:L:820:U:C5 | 2.61 | 0.53 |
| 5:M:298:U:N3 | 5:M:299:U:C5 | 2.76 | 0.53 |
| 5:M:360:U:C2 | 5:M:361:U:C6 | 2.96 | 0.53 |
| 5:M:374:U:C2 | 5:M:375:U:C5 | 2.97 | 0.53 |
| 5:M:395:U:HO2' | 5:M:396:U:C5' | 1.95 | 0.53 |
| 5:M:427:U:N3 | 5:M:428:U:C4 | 2.76 | 0.53 |
| 5:M:436:U:C4 | 5:M:437:U:C4 | 2.96 | 0.53 |
| 5:M:449:U:H2' | 5:M:450:U:C5' | 2.33 | 0.53 |
| 5:M:464:U:C2' | 5:M:465:U:H5' | 2.23 | 0.53 |
| 5:M:467:U:C2 | 5:M:468:U:C6 | 2.96 | 0.53 |
| 5:M:501:U:H2' | 5:M:502:U:O4' | 2.09 | 0.53 |
| 6:N:370:U:C2 | 6:N:371:U:C5 | 2.96 | 0.53 |
| 6:N:413:U:C4 | 6:N:414:U:C4 | 2.95 | 0.53 |
| 6:N:485:U:H3' | 6:N:486:U:P | 2.47 | 0.53 |
| 6:N:503:U:C2 | 6:N:504:U:C5 | 2.97 | 0.53 |
| 1:I:123:A:C2' | 1:I:124:A:C5' | 2.86 | 0.53 |
| 1:I:149:A:H3' | 1:I:150:A:OP2 | 2.09 | 0.53 |
| 1:I:243:A:H2' | 1:I:244:A:C8 | 2.43 | 0.53 |
| 1:I:256:A:C6 | 1:I:257:A:N7 | 2.76 | 0.53 |
| 1:I:263:A:N1 | 1:I:264:A:C5 | 2.76 | 0.53 |
| 1:I:304:A:H2' | 1:I:305:A:O5' | 2.08 | 0.53 |
| 1:I:59:A:O2' | 1:I:60:A:C5' | 2.43 | 0.53 |
| 2:J:131:A:C6 | 2:J:132:A:C6 | 2.96 | 0.53 |
| 2:J:173:A:O2' | 2:J:174:A:H5' | 2.07 | 0.53 |
| 2:J:24:A:N3 | 2:J:25:A:C8 | 2.77 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:42:A:C2 | 2:J:43:A:C5 | 2.97 | 0.53 |
| 2:J:46:A:N6 | 2:J:47:A:H62 | 2.06 | 0.53 |
| 3:K:105:A:C4 | 3:K:106:A:C5 | 2.96 | 0.53 |
| 3:K:106:A:N1 | 3:K:107:A:C6 | 2.76 | 0.53 |
| 3:K:155:A:H2' | 3:K:156:A:C8 | 2.43 | 0.53 |
| 3:K:206:A:C2' | 3:K:207:A:O4' | 2.55 | 0.53 |
| 3:K:227:A:H2' | 3:K:228:A:H8 | 1.68 | 0.53 |
| 3:K:65:A:C6 | 3:K:66:A:N7 | 2.76 | 0.53 |
| 3:K:70:A:H2' | 3:K:71:A:O4' | 2.08 | 0.53 |
| 3:K:95:A:H2' | 3:K:96:A:O5' | 2.07 | 0.53 |
| 4:L:425:U:H2' | 4:L:426:U:H6 | 1.72 | 0.53 |
| 4:L:467:U:H2' | 4:L:468:U:O5' | 2.09 | 0.53 |
| 4:L:580:U:C2' | 4:L:581:U:O5' | 2.55 | 0.53 |
| 4:L:596:U:C2 | 4:L:597:U:C6 | 2.96 | 0.53 |
| 4:L:605:U:C2' | 4:L:606:U:C5' | 2.85 | 0.53 |
| 4:L:631:U:O2 | 4:L:632:U:C6 | 2.62 | 0.53 |
| 4:L:703:U:C4 | 4:L:704:U:O4 | 2.61 | 0.53 |
| 4:L:751:U:HO2' | 4:L:752:U:C4' | 2.08 | 0.53 |
| 4:L:771:U:O2' | 4:L:772:U:C5' | 2.43 | 0.53 |
| 5:M:388:U:H2' | 5:M:389:U:C6 | 2.43 | 0.53 |
| 5:M:432:U:C2 | 5:M:433:U:C6 | 2.96 | 0.53 |
| 5:M:525:U:C2 | 5:M:526:U:C5 | 2.96 | 0.53 |
| 6:N:303:U:H2' | 6:N:304:U:H6 | 1.71 | 0.53 |
| 6:N:428:U:O2 | 6:N:429:U:C6 | 2.61 | 0.53 |
| 1:I:102:A:N6 | 1:I:103:A:C6 | 2.74 | 0.53 |
| 1:I:13:A:H2' | 1:I:14:A:C1' | 2.38 | 0.53 |
| 1:I:14:A:N3 | 1:I:15:A:C8 | 2.75 | 0.53 |
| 1:I:175:A:H2' | 1:I:176:A:C8 | 2.44 | 0.53 |
| 1:I:212:A:C4 | 1:I:213:A:C8 | 2.96 | 0.53 |
| 1:I:251:A:C2' | 1:I:252:A:C5' | 2.87 | 0.53 |
| 1:I:251:A:C2' | 1:I:252:A:O4' | 2.57 | 0.53 |
| 1:I:270:A:HO2' | 1:I:271:A:C4' | 2.21 | 0.53 |
| 1:I:321:A:HO2' | 1:I:322:A:H5' | 1.68 | 0.53 |
| 1:I:333:A:C4 | 1:I:334:A:C8 | 2.96 | 0.53 |
| 1:I:359:A:C6 | 1:I:360:A:N6 | 2.76 | 0.53 |
| 1:I:69:A:C2 | 1:I:70:A:N9 | 2.76 | 0.53 |
| 2:J:130:A:C2' | 2:J:131:A:O5' | 2.57 | 0.53 |
| 2:J:230:A:H2' | 2:J:231:A:H8 | 1.73 | 0.53 |
| 2:J:233:A:N3 | 2:J:234:A:C8 | 2.76 | 0.53 |
| 2:J:263:A:C4 | 2:J:264:A:C8 | 2.97 | 0.53 |
| 2:J:32:A:H2' | 2:J:33:A:H8 | 1.72 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:520:U:C2' | 4:L:521:U:H5' | 2.38 | 0.53 |
| 4:L:520:U:H2' | 4:L:521:U:O5' | 2.08 | 0.53 |
| 4:L:524:U:C2' | 4:L:525:U:O5' | 2.57 | 0.53 |
| 4:L:627:U:C2 | 4:L:628:U:C6 | 2.96 | 0.53 |
| 4:L:637:U:H2' | 4:L:638:U:O4' | 2.07 | 0.53 |
| 4:L:682:U:H2' | 4:L:683:U:O4' | 2.08 | 0.53 |
| 4:L:746:U:N3 | 4:L:747:U:C4 | 2.77 | 0.53 |
| 4:L:754:U:O2' | 4:L:755:U:O4' | 2.25 | 0.53 |
| 5:M:285:U:O2' | 5:M:286:U:H5' | 2.09 | 0.53 |
| 5:M:295:U:C2 | 5:M:296:U:C6 | 2.96 | 0.53 |
| 5:M:326:U:H2' | 5:M:327:U:O5' | 2.08 | 0.53 |
| 5:M:360:U:H2' | 5:M:361:U:O5' | 2.06 | 0.53 |
| 2:J:137:A:H2 | 5:M:417:U:O2 | 1.91 | 0.53 |
| 5:M:458:U:H2' | 5:M:459:U:H6 | 1.73 | 0.53 |
| 5:M:508:U:C2' | 5:M:509:U:H5' | 2.38 | 0.53 |
| 5:M:546:U:C2 | 5:M:547:U:C6 | 2.96 | 0.53 |
| 3:K:167:A:C2 | 6:N:365:U:C2 | 2.96 | 0.53 |
| 6:N:441:U:O2 | 6:N:442:U:C6 | 2.61 | 0.53 |
| 6:N:475:U:C2' | 6:N:476:U:C5' | 2.86 | 0.53 |
| 1:I:283:A:C4 | 1:I:284:A:C8 | 2.94 | 0.53 |
| 1:I:291:A:C4 | 1:I:292:A:C8 | 2.96 | 0.53 |
| 1:I:319:A:N6 | 1:I:320:A:H62 | 2.06 | 0.53 |
| 1:I:338:A:H2' | 1:I:339:A:H8 | 1.72 | 0.53 |
| 1:I:33:A:C2 | 1:I:34:A:C4 | 2.97 | 0.53 |
| 1:I:5:A:H2' | 1:I:6:A:H8 | 1.73 | 0.53 |
| 2:J:134:A:N6 | 2:J:135:A:N6 | 2.55 | 0.53 |
| 2:J:12:A:O2' | 2:J:13:A:H5' | 2.09 | 0.53 |
| 2:J:191:A:C2' | 2:J:192:A:O5' | 2.55 | 0.53 |
| 2:J:25:A:C2 | 2:J:26:A:C8 | 2.96 | 0.53 |
| 2:J:29:A:O2' | 2:J:30:A:C4' | 2.55 | 0.53 |
| 2:J:34:A:C4 | 2:J:35:A:C8 | 2.96 | 0.53 |
| 2:J:48:A:N3 | 2:J:49:A:C8 | 2.76 | 0.53 |
| 2:J:50:A:N3 | 2:J:51:A:C8 | 2.77 | 0.53 |
| 3:K:103:A:N1 | 3:K:104:A:C5 | 2.76 | 0.53 |
| 3:K:118:A:H2' | 3:K:119:A:C4' | 2.36 | 0.53 |
| 3:K:122:A:C2 | 3:K:123:A:C4 | 2.96 | 0.53 |
| 3:K:210:A:H2' | 3:K:211:A:C8 | 2.43 | 0.53 |
| 3:K:44:A:H2' | 3:K:45:A:O4' | 2.09 | 0.53 |
| 4:L:429:U:H2' | 4:L:430:U:H6 | 1.74 | 0.53 |
| 4:L:487:U:H2' | 4:L:488:U:H6 | 1.72 | 0.53 |
| 4:L:490:U:H2' | 4:L:491:U:C6 | 2.43 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:559:U:H2' | 4:L:560:U:C6 | 2.43 | 0.53 |
| 4:L:594:U:C2 | 4:L:595:U:C5 | 2.97 | 0.53 |
| 4:L:613:U:C2' | 4:L:614:U:C5' | 2.86 | 0.53 |
| 4:L:711:U:C6 | 4:L:712:U:C5 | 2.96 | 0.53 |
| 4:L:711:U:N1 | 4:L:712:U:C6 | 2.76 | 0.53 |
| 4:L:735:U:C2 | 4:L:736:U:C6 | 2.96 | 0.53 |
| 4:L:778:U:HO2' | 4:L:779:U:H5' | 1.67 | 0.53 |
| 5:M:347:U:C2 | 5:M:348:U:C5 | 2.96 | 0.53 |
| 5:M:376:U:O2 | 5:M:377:U:O4' | 2.25 | 0.53 |
| 5:M:431:U:C2' | 5:M:432:U:C5' | 2.86 | 0.53 |
| 5:M:445:U:C2 | 5:M:446:U:C6 | 2.96 | 0.53 |
| 5:M:511:U:N3 | 5:M:512:U:C5 | 2.76 | 0.53 |
| 6:N:327:U:O2' | 6:N:328:U:C4' | 2.57 | 0.53 |
| 6:N:405:U:H2' | 6:N:406:U:O5' | 2.09 | 0.53 |
| 6:N:460:U:H2' | 6:N:461:U:H6 | 1.73 | 0.53 |
| 6:N:483:U:C4 | 6:N:484:U:C5 | 2.96 | 0.53 |
| 1:I:112:A:N1 | 1:I:113:A:C6 | 2.76 | 0.53 |
| 1:I:10:A:H2' | 1:I:11:A:H8 | 1.73 | 0.53 |
| 1:I:136:A:N3 | 1:I:137:A:N9 | 2.57 | 0.53 |
| 1:I:186:A:C2 | 1:I:187:A:N9 | 2.74 | 0.53 |
| 1:I:247:A:H2' | 1:I:248:A:H8 | 1.72 | 0.53 |
| 1:I:269:A:C6 | 1:I:270:A:N7 | 2.76 | 0.53 |
| 1:I:329:A:C2' | 1:I:330:A:O4' | 2.55 | 0.53 |
| 1:I:53:A:C4 | 1:I:54:A:C8 | 2.96 | 0.53 |
| 1:I:65:A:N1 | 1:I:66:A:C5 | 2.76 | 0.53 |
| 2:J:100:A:H2' | 2:J:101:A:C5' | 2.36 | 0.53 |
| 2:J:133:A:C2 | 2:J:134:A:N9 | 2.77 | 0.53 |
| 2:J:216:A:H2' | 2:J:217:A:H8 | 1.74 | 0.53 |
| 2:J:45:A:C4 | 2:J:46:A:C8 | 2.97 | 0.53 |
| 2:J:58:A:C2 | 2:J:59:A:C5 | 2.97 | 0.53 |
| 2:J:8:A:H2' | 2:J:9:A:C5' | 2.37 | 0.53 |
| 3:K:103:A:C2 | 3:K:104:A:C8 | 2.97 | 0.53 |
| 3:K:106:A:C6 | 3:K:107:A:N6 | 2.77 | 0.53 |
| 3:K:129:A:H2' | 3:K:130:A:H8 | 1.72 | 0.53 |
| 3:K:45:A:HO3' | 3:K:46:A:P | 2.27 | 0.53 |
| 3:K:62:A:C6 | 3:K:63:A:N7 | 2.76 | 0.53 |
| 3:K:96:A:C5 | 3:K:97:A:N7 | 2.76 | 0.53 |
| 4:L:426:U:O2' | 4:L:427:U:H5' | 2.08 | 0.53 |
| 4:L:497:U:C2' | 4:L:498:U:C4' | 2.76 | 0.53 |
| 4:L:507:U:C2' | 4:L:508:U:O4' | 2.56 | 0.53 |
| 4:L:515:U:C2 | 4:L:516:U:C6 | 2.97 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:576:U:H2' | 4:L:577:U:C4' | 2.39 | 0.53 |
| 4:L:605:U:C2 | 4:L:606:U:C5 | 2.97 | 0.53 |
| 4:L:622:U:H2' | 4:L:623:U:H6 | 1.72 | 0.53 |
| 4:L:634:U:N3 | 4:L:635:U:C5 | 2.77 | 0.53 |
| 4:L:751:U:O2 | 4:L:752:U:C6 | 2.61 | 0.53 |
| 4:L:765:U:N3 | 4:L:766:U:C5 | 2.76 | 0.53 |
| 5:M:324:U:C2' | 5:M:325:U:O4' | 2.56 | 0.53 |
| 5:M:339:U:N3 | 5:M:340:U:C5 | 2.76 | 0.53 |
| 5:M:477:U:O2' | 5:M:478:U:C5' | 2.43 | 0.53 |
| 5:M:500:U:H2' | 5:M:501:U:C6 | 2.44 | 0.53 |
| 5:M:501:U:C4 | 5:M:502:U:O4 | 2.62 | 0.53 |
| 6:N:361:U:H2' | 6:N:362:U:C6 | 2.43 | 0.53 |
| 6:N:434:U:C2' | 6:N:435:U:H6 | 2.05 | 0.53 |
| 6:N:451:U:C2' | 6:N:452:U:C5' | 2.87 | 0.53 |
| 6:N:455:U:O2' | 6:N:456:U:H5' | 2.09 | 0.53 |
| 1:I:141:A:N6 | 1:I:142:A:N6 | 2.57 | 0.53 |
| 1:I:144:A:H2' | 1:I:145:A:H8 | 1.73 | 0.53 |
| 1:I:163:A:C2 | 1:I:164:A:C5 | 2.97 | 0.53 |
| 1:I:190:A:H2' | 1:I:191:A:O5' | 2.09 | 0.53 |
| 1:I:197:A:HO2' | 1:I:198:A:H5' | 1.71 | 0.53 |
| 1:I:227:A:H2' | 1:I:228:A:H8 | 1.72 | 0.53 |
| 1:I:269:A:N3 | 1:I:270:A:C8 | 2.76 | 0.53 |
| 1:I:320:A:N3 | 1:I:321:A:C8 | 2.77 | 0.53 |
| 1:I:70:A:C3' | 1:I:71:A:H5' | 2.01 | 0.53 |
| 1:I:77:A:N1 | 1:I:78:A:C5 | 2.77 | 0.53 |
| 1:I:79:A:N1 | 4:L:747:U:N3 | 2.56 | 0.53 |
| 1:I:85:A:H2 | 1:I:86:A:C4 | 2.21 | 0.53 |
| 2:J:123:A:C2 | 2:J:124:A:C4 | 2.97 | 0.53 |
| 2:J:137:A:O2' | 2:J:138:A:H5' | 2.09 | 0.53 |
| 2:J:176:A:C2 | 2:J:177:A:N7 | 2.75 | 0.53 |
| 2:J:217:A:N1 | 2:J:218:A:N6 | 2.55 | 0.53 |
| 2:J:234:A:N3 | 2:J:235:A:C8 | 2.77 | 0.53 |
| 2:J:38:A:C2 | 2:J:39:A:N7 | 2.76 | 0.53 |
| 3:K:102:A:C4 | 3:K:103:A:C8 | 2.96 | 0.53 |
| 3:K:109:A:C5 | 3:K:110:A:N7 | 2.77 | 0.53 |
| 3:K:115:A:C4 | 3:K:116:A:N7 | 2.77 | 0.53 |
| 3:K:127:A:C2 | 3:K:128:A:C4 | 2.95 | 0.53 |
| 3:K:143:A:H2' | 3:K:144:A:C8 | 2.44 | 0.53 |
| 3:K:90:A:N1 | 3:K:91:A:C5 | 2.77 | 0.53 |
| 3:K:96:A:O2' | 3:K:97:A:C4' | 2.57 | 0.53 |
| 4:L:553:U:O2 | 4:L:554:U:H1' | 2.05 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:576:U:N3 | 4:L:577:U:C5 | 2.77 | 0.53 |
| 4:L:594:U:H2' | 4:L:595:U:O5' | 2.09 | 0.53 |
| 4:L:671:U:C2' | 4:L:672:U:C5' | 2.87 | 0.53 |
| 4:L:712:U:C5 | 4:L:713:U:C5 | 2.96 | 0.53 |
| 4:L:795:U:C2 | 4:L:796:U:C5 | 2.97 | 0.53 |
| 5:M:287:U:O2 | 5:M:288:U:C1' | 2.57 | 0.53 |
| 5:M:297:U:N3 | 5:M:298:U:C5 | 2.77 | 0.53 |
| 6:N:357:U:C2 | 6:N:358:U:C5 | 2.96 | 0.53 |
| 6:N:403:U:C2' | 6:N:404:U:O5' | 2.57 | 0.53 |
| 6:N:434:U:N3 | 6:N:435:U:C5 | 2.77 | 0.53 |
| 1:I:169:A:N3 | 1:I:170:A:C8 | 2.76 | 0.53 |
| 1:I:195:A:C2 | 1:I:196:A:C8 | 2.97 | 0.53 |
| 1:I:232:A:N3 | 1:I:233:A:C8 | 2.76 | 0.53 |
| 1:I:246:A:N3 | 1:I:247:A:C8 | 2.77 | 0.53 |
| 1:I:268:A:H2 | 1:I:269:A:C4 | 2.22 | 0.53 |
| 1:I:298:A:H2' | 1:I:299:A:H8 | 1.73 | 0.53 |
| 1:I:30:A:C2' | 1:I:31:A:H5' | 2.37 | 0.53 |
| 1:I:334:A:C6 | 1:I:335:A:C5 | 2.97 | 0.53 |
| 1:I:65:A:N3 | 1:I:66:A:O4' | 2.41 | 0.53 |
| 2:J:103:A:C2 | 2:J:104:A:C8 | 2.97 | 0.53 |
| 2:J:140:A:C2' | 2:J:141:A:C5' | 2.87 | 0.53 |
| 2:J:228:A:H2' | 2:J:229:A:O4' | 2.08 | 0.53 |
| 2:J:30:A:C4 | 2:J:31:A:C8 | 2.97 | 0.53 |
| 2:J:63:A:H2' | 2:J:64:A:H8 | 1.74 | 0.53 |
| 3:K:146:A:H2' | 3:K:147:A:C8 | 2.39 | 0.53 |
| 3:K:156:A:C2' | 3:K:157:A:O5' | 2.57 | 0.53 |
| 3:K:210:A:C2' | 3:K:211:A:C5' | 2.87 | 0.53 |
| 4:L:510:U:O2' | 4:L:511:U:C4' | 2.57 | 0.53 |
| 4:L:581:U:O4 | 4:L:582:U:O4 | 2.27 | 0.53 |
| 4:L:593:U:C4 | 4:L:594:U:C5 | 2.96 | 0.53 |
| 4:L:692:U:O2 | 4:L:693:U:C6 | 2.61 | 0.53 |
| 4:L:711:U:N1 | 4:L:712:U:C5 | 2.76 | 0.53 |
| 4:L:735:U:N3 | 4:L:736:U:C5 | 2.77 | 0.53 |
| 4:L:738:U:C4 | 4:L:739:U:O4 | 2.61 | 0.53 |
| 4:L:747:U:C2' | 4:L:748:U:C5' | 2.87 | 0.53 |
| 4:L:807:U:O2 | 4:L:808:U:C6 | 2.61 | 0.53 |
| 5:M:320:U:C2 | 5:M:321:U:C6 | 2.97 | 0.53 |
| 5:M:327:U:O2' | 5:M:328:U:O5' | 2.27 | 0.53 |
| 5:M:330:U:HO2' | 5:M:331:U:H5' | 1.71 | 0.53 |
| 5:M:369:U:C2' | 5:M:370:U:H5' | 2.35 | 0.53 |
| 5:M:538:U:C4 | 5:M:539:U:H5 | 2.24 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:544:U:O2' | 5:M:545:U:C4' | 2.54 | 0.53 |
| 6:N:515:U:C2' | 6:N:516:U:H5' | 2.39 | 0.53 |
| 6:N:527:U:C4 | 6:N:528:U:C4 | 2.96 | 0.53 |
| 1:I:122:A:H2' | 1:I:123:A:C5' | 2.35 | 0.53 |
| 1:I:138:A:C2 | 1:I:139:A:C4 | 2.96 | 0.53 |
| 1:I:178:A:C4 | 1:I:179:A:C8 | 2.96 | 0.53 |
| 1:I:223:A:C2' | 1:I:224:A:C5' | 2.87 | 0.53 |
| 1:I:233:A:C2 | 1:I:234:A:C4 | 2.97 | 0.53 |
| 1:I:245:A:C4 | 1:I:246:A:N7 | 2.77 | 0.53 |
| 1:I:249:A:H2' | 1:I:250:A:O4' | 2.08 | 0.53 |
| 1:I:31:A:C4 | 1:I:32:A:N7 | 2.76 | 0.53 |
| 1:I:347:A:C2 | 1:I:348:A:C4 | 2.97 | 0.53 |
| 1:I:399:A:H2' | 1:I:400:A:H8 | 1.74 | 0.53 |
| 1:I:42:A:N1 | 1:I:43:A:C5 | 2.77 | 0.53 |
| 1:I:48:A:H2' | 1:I:49:A:H8 | 1.74 | 0.53 |
| 1:I:64:A:C2' | 1:I:65:A:O4' | 2.57 | 0.53 |
| 1:I:68:A:C2 | 1:I:69:A:N9 | 2.77 | 0.53 |
| 1:I:94:A:C2 | 1:I:95:A:N9 | 2.77 | 0.53 |
| 2:J:210:A:C5 | 2:J:211:A:N7 | 2.77 | 0.53 |
| 2:J:221:A:C2 | 2:J:222:A:C8 | 2.97 | 0.53 |
| 2:J:222:A:C5 | 2:J:223:A:C8 | 2.97 | 0.53 |
| 2:J:222:A:C6 | 2:J:223:A:N7 | 2.76 | 0.53 |
| 2:J:247:A:C2 | 2:J:248:A:C8 | 2.97 | 0.53 |
| 2:J:61:A:H2' | 2:J:62:A:H8 | 1.73 | 0.53 |
| 4:L:587:U:C2 | 4:L:588:U:C5 | 2.97 | 0.53 |
| 4:L:597:U:C2 | 4:L:598:U:C5 | 2.96 | 0.53 |
| 4:L:709:U:C2 | 4:L:710:U:C5 | 2.97 | 0.53 |
| 4:L:733:U:H2' | 4:L:734:U:O5' | 2.08 | 0.53 |
| 4:L:744:U:C2 | 4:L:745:U:C6 | 2.97 | 0.53 |
| 4:L:759:U:O2 | 4:L:760:U:O4' | 2.26 | 0.53 |
| 4:L:791:U:H2' | 4:L:792:U:C6 | 2.44 | 0.53 |
| 5:M:398:U:C2 | 5:M:399:U:C5 | 2.97 | 0.53 |
| 5:M:489:U:H2' | 5:M:490:U:C6 | 2.44 | 0.53 |
| 5:M:492:U:C2 | 5:M:493:U:C5 | 2.97 | 0.53 |
| 5:M:499:U:C2 | 5:M:500:U:C5 | 2.97 | 0.53 |
| 5:M:500:U:H2' | 5:M:501:U:H6 | 1.74 | 0.53 |
| 6:N:283:U:C2 | 6:N:284:U:C5 | 2.96 | 0.53 |
| 6:N:423:U:C2 | 6:N:424:U:C6 | 2.97 | 0.53 |
| 6:N:437:U:C2 | 6:N:438:U:C6 | 2.97 | 0.53 |
| 6:N:446:U:H2' | 6:N:447:U:C6 | 2.44 | 0.53 |
| 6:N:494:U:C2 | 6:N:495:U:C5 | 2.97 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:102:A:N1 | 1:I:103:A:C6 | 2.76 | 0.53 |
| 1:I:174:A:N1 | 1:I:175:A:C5 | 2.77 | 0.53 |
| 1:I:213:A:C2 | 1:I:214:A:C5 | 2.97 | 0.53 |
| 1:I:274:A:HO2' | 1:I:275:A:C5' | 1.89 | 0.53 |
| 1:I:362:A:C4 | 1:I:363:A:N7 | 2.77 | 0.53 |
| 1:I:58:A:C2' | 1:I:59:A:C8 | 2.78 | 0.53 |
| 2:J:149:A:C2 | 2:J:150:A:C8 | 2.97 | 0.53 |
| 2:J:248:A:N6 | 2:J:249:A:C6 | 2.66 | 0.53 |
| 2:J:266:A:O2' | 2:J:267:A:H5' | 2.09 | 0.53 |
| 2:J:33:A:C4 | 2:J:34:A:C8 | 2.96 | 0.53 |
| 2:J:81:A:H2' | 2:J:82:A:O4' | 2.08 | 0.53 |
| 3:K:100:A:C2 | 3:K:101:A:N9 | 2.77 | 0.53 |
| 3:K:101:A:N3 | 3:K:102:A:C8 | 2.77 | 0.53 |
| 3:K:106:A:C2 | 3:K:107:A:C4 | 2.97 | 0.53 |
| 3:K:251:A:C5 | 3:K:252:A:N7 | 2.76 | 0.53 |
| 3:K:33:A:HO2' | 3:K:34:A:H5' | 1.73 | 0.53 |
| 3:K:58:A:H2' | 3:K:59:A:C8 | 2.44 | 0.53 |
| 3:K:63:A:C2' | 3:K:64:A:P | 2.97 | 0.53 |
| 3:K:92:A:C2' | 3:K:93:A:O5' | 2.56 | 0.53 |
| 4:L:427:U:H2' | 4:L:428:U:C6 | 2.44 | 0.53 |
| 4:L:446:U:C3' | 4:L:447:U:P | 2.92 | 0.53 |
| 4:L:448:U:C2 | 4:L:449:U:C4 | 2.82 | 0.53 |
| 4:L:477:U:C2 | 4:L:478:U:C6 | 2.96 | 0.53 |
| 4:L:495:U:N3 | 4:L:496:U:C4 | 2.77 | 0.53 |
| 4:L:549:U:N3 | 4:L:550:U:C5 | 2.77 | 0.53 |
| 4:L:554:U:H2' | 4:L:555:U:H6 | 1.70 | 0.53 |
| 4:L:586:U:N1 | 4:L:587:U:C5 | 2.77 | 0.53 |
| 4:L:682:U:C2' | 4:L:683:U:O4' | 2.57 | 0.53 |
| 4:L:778:U:H2' | 4:L:779:U:C6 | 2.38 | 0.53 |
| 4:L:809:U:H2' | 4:L:810:U:C6 | 2.44 | 0.53 |
| 5:M:316:U:O4 | 5:M:317:U:O4 | 2.27 | 0.53 |
| 5:M:320:U:C4 | 5:M:321:U:C5 | 2.97 | 0.53 |
| 5:M:369:U:C2' | 5:M:370:U:C5' | 2.86 | 0.53 |
| 5:M:437:U:N3 | 5:M:438:U:C5 | 2.77 | 0.53 |
| 5:M:473:U:O2' | 5:M:474:U:C5' | 2.47 | 0.53 |
| 5:M:491:U:C2 | 5:M:492:U:C5 | 2.97 | 0.53 |
| 6:N:299:U:C3' | 6:N:300:U:P | 2.94 | 0.53 |
| 6:N:348:U:O2' | 6:N:349:U:H5' | 2.08 | 0.53 |
| 6:N:350:U:C4 | 6:N:351:U:C4 | 2.97 | 0.53 |
| 6:N:364:U:C2' | 6:N:365:U:O5' | 2.49 | 0.53 |
| 6:N:401:U:H2' | 6:N:402:U:O4' | 2.08 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:421:U:H2' | 6:N:422:U:H6 | 1.74 | 0.53 |
| 6:N:431:U:H2' | 6:N:432:U:H6 | 1.73 | 0.53 |
| 1:I:163:A:C4 | 1:I:164:A:C8 | 2.97 | 0.52 |
| 1:I:262:A:C2 | 1:I:263:A:C8 | 2.97 | 0.52 |
| 1:I:261:A:N1 | 1:I:262:A:C6 | 2.77 | 0.52 |
| 1:I:340:A:C2 | 1:I:341:A:C4 | 2.98 | 0.52 |
| 1:I:33:A:H2' | 1:I:34:A:C5' | 2.38 | 0.52 |
| 1:I:40:A:C3' | 1:I:41:A:P | 2.92 | 0.52 |
| 1:I:50:A:N1 | 1:I:51:A:C5 | 2.77 | 0.52 |
| 1:I:70:A:N3 | 1:I:71:A:C8 | 2.77 | 0.52 |
| 2:J:101:A:N1 | 2:J:102:A:C6 | 2.77 | 0.52 |
| 2:J:127:A:HO2' | 2:J:128:A:C5' | 1.96 | 0.52 |
| 2:J:193:A:C2' | 2:J:194:A:C5' | 2.87 | 0.52 |
| 2:J:264:A:C4 | 2:J:265:A:C8 | 2.97 | 0.52 |
| 2:J:52:A:C6 | 2:J:53:A:C5 | 2.97 | 0.52 |
| 2:J:61:A:N3 | 2:J:62:A:N7 | 2.57 | 0.52 |
| 2:J:64:A:C2 | 2:J:65:A:C4 | 2.97 | 0.52 |
| 2:J:70:A:C2 | 2:J:71:A:C1' | 2.92 | 0.52 |
| 2:J:80:A:H2' | 2:J:81:A:O4' | 2.09 | 0.52 |
| 2:J:93:A:N3 | 2:J:94:A:C8 | 2.77 | 0.52 |
| 3:K:147:A:O2' | 3:K:148:A:C5' | 2.57 | 0.52 |
| 3:K:156:A:O2' | 3:K:157:A:O4' | 2.22 | 0.52 |
| 3:K:163:A:C2' | 3:K:164:A:C5' | 2.87 | 0.52 |
| 3:K:49:A:C2 | 3:K:50:A:N7 | 2.76 | 0.52 |
| 3:K:7:A:N6 | 3:K:8:A:N6 | 2.56 | 0.52 |
| 4:L:467:U:C2' | 4:L:468:U:C5' | 2.86 | 0.52 |
| 4:L:474:U:HO2' | 4:L:475:U:H5' | 1.70 | 0.52 |
| 4:L:603:U:C2 | 4:L:604:U:C6 | 2.98 | 0.52 |
| 4:L:716:U:N3 | 4:L:717:U:C5 | 2.76 | 0.52 |
| 4:L:731:U:H2' | 4:L:732:U:C6 | 2.42 | 0.52 |
| 4:L:747:U:C4 | 4:L:748:U:C5 | 2.97 | 0.52 |
| 4:L:757:U:C6 | 4:L:758:U:C5 | 2.96 | 0.52 |
| 4:L:800:U:C2 | 4:L:801:U:C6 | 2.97 | 0.52 |
| 4:L:806:U:C4 | 4:L:807:U:C5 | 2.97 | 0.52 |
| 5:M:407:U:N1 | 5:M:408:U:H5 | 2.07 | 0.52 |
| 5:M:481:U:N3 | 5:M:482:U:C5 | 2.77 | 0.52 |
| 5:M:486:U:HO2' | 5:M:487:U:C5' | 2.09 | 0.52 |
| 5:M:494:U:N3 | 5:M:495:U:C5 | 2.77 | 0.52 |
| 5:M:520:U:H2' | 5:M:521:U:C6 | 2.39 | 0.52 |
| 6:N:313:U:C4 | 6:N:314:U:C4 | 2.97 | 0.52 |
| 6:N:368:U:C2' | 6:N:369:U:C5' | 2.88 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 6:N:410:U:O2 | 6:N:411:U:C5 | 2.61 | 0.52 |
| 6:N:458:U:H2' | 6:N:459:U:C5 | 2.44 | 0.52 |
| 6:N:481:U:H2' | 6:N:482:U:C6 | 2.38 | 0.52 |
| 1:I:120:A:H2' | 1:I:121:A:C5' | 2.40 | 0.52 |
| 1:I:190:A:H2' | 1:I:191:A:H8 | 1.73 | 0.52 |
| 1:I:206:A:H2' | 1:I:207:A:H8 | 1.73 | 0.52 |
| 1:I:211:A:H2' | 1:I:212:A:H8 | 1.74 | 0.52 |
| 1:I:222:A:C6 | 1:I:223:A:N7 | 2.77 | 0.52 |
| 1:I:225:A:N1 | 1:I:226:A:C6 | 2.78 | 0.52 |
| 1:I:270:A:H2' | 1:I:271:A:O5' | 2.06 | 0.52 |
| 1:I:55:A:H2' | 1:I:56:A:C5' | 2.39 | 0.52 |
| 1:I:72:A:N1 | 1:I:73:A:C5 | 2.77 | 0.52 |
| 2:J:104:A:C2 | 2:J:105:A:C5 | 2.97 | 0.52 |
| 2:J:107:A:C2 | 2:J:108:A:N9 | 2.78 | 0.52 |
| 2:J:141:A:O2' | 2:J:142:A:H5' | 2.09 | 0.52 |
| 2:J:168:A:C3' | 2:J:169:A:OP2 | 2.57 | 0.52 |
| 2:J:203:A:C2 | 2:J:204:A:C4 | 2.97 | 0.52 |
| 2:J:43:A:C5 | 2:J:44:A:C8 | 2.97 | 0.52 |
| 2:J:77:A:O2' | 2:J:78:A:H5' | 2.09 | 0.52 |
| 2:J:96:A:N1 | 2:J:97:A:C5 | 2.77 | 0.52 |
| 3:K:110:A:N3 | 3:K:111:A:N9 | 2.57 | 0.52 |
| 3:K:113:A:C2 | 3:K:114:A:C4 | 2.98 | 0.52 |
| 3:K:115:A:C5 | 3:K:116:A:N7 | 2.77 | 0.52 |
| 3:K:138:A:C6 | 3:K:139:A:N6 | 2.77 | 0.52 |
| 3:K:17:A:O2' | 3:K:18:A:H5' | 2.09 | 0.52 |
| 3:K:233:A:O2' | 3:K:234:A:H5' | 2.09 | 0.52 |
| 3:K:35:A:C5 | 3:K:36:A:N7 | 2.78 | 0.52 |
| 3:K:96:A:C2 | 3:K:97:A:C5 | 2.97 | 0.52 |
| 4:L:494:U:O2' | 4:L:495:U:C5' | 2.42 | 0.52 |
| 4:L:508:U:H2' | 4:L:509:U:C6 | 2.44 | 0.52 |
| 4:L:574:U:C2 | 4:L:575:U:C6 | 2.94 | 0.52 |
| 4:L:655:U:C2 | 4:L:656:U:C5 | 2.97 | 0.52 |
| 4:L:695:U:N3 | 4:L:696:U:C5 | 2.77 | 0.52 |
| 4:L:696:U:N3 | 4:L:697:U:C4 | 2.77 | 0.52 |
| 4:L:729:U:C2 | 4:L:730:U:C6 | 2.97 | 0.52 |
| 4:L:793:U:C4 | 4:L:794:U:O4 | 2.62 | 0.52 |
| 4:L:821:U:H2' | 4:L:822:U:O4' | 2.09 | 0.52 |
| 5:M:321:U:C4 | 5:M:322:U:C4 | 2.96 | 0.52 |
| 5:M:334:U:N3 | 5:M:335:U:C6 | 2.77 | 0.52 |
| 5:M:338:U:C2' | 5:M:339:U:O5' | 2.49 | 0.52 |
| 5:M:379:U:H2' | 5:M:380:U:O4' | 2.09 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:397:U:C2' | 5:M:398:U:H5' | 2.40 | 0.52 |
| 5:M:509:U:C2' | 5:M:510:U:O5' | 2.57 | 0.52 |
| 5:M:535:U:C2' | 5:M:536:U:H5' | 2.38 | 0.52 |
| 5:M:548:U:H2' | 5:M:549:U:H6 | 1.74 | 0.52 |
| 6:N:440:U:C2' | 6:N:441:U:C4' | 2.87 | 0.52 |
| 6:N:443:U:C2 | 6:N:444:U:C6 | 2.96 | 0.52 |
| 6:N:459:U:C2' | 6:N:460:U:C6 | 2.81 | 0.52 |
| 1:I:109:A:C2' | 1:I:110:A:C8 | 2.76 | 0.52 |
| 1:I:11:A:C6 | 1:I:12:A:C6 | 2.97 | 0.52 |
| 1:I:138:A:C3' | 1:I:139:A:C5' | 2.72 | 0.52 |
| 1:I:155:A:N3 | 1:I:156:A:C8 | 2.77 | 0.52 |
| 1:I:222:A:C6 | 1:I:223:A:C5 | 2.97 | 0.52 |
| 1:I:234:A:C2 | 1:I:235:A:C8 | 2.97 | 0.52 |
| 1:I:251:A:C6 | 1:I:252:A:C6 | 2.97 | 0.52 |
| 1:I:258:A:N1 | 1:I:259:A:C5 | 2.76 | 0.52 |
| 1:I:317:A:H2' | 1:I:318:A:O5' | 2.10 | 0.52 |
| 1:I:322:A:N6 | 1:I:323:A:C6 | 2.77 | 0.52 |
| 1:I:327:A:HO2' | 1:I:328:A:H5' | 1.72 | 0.52 |
| 1:I:333:A:H2' | 1:I:334:A:O4' | 2.09 | 0.52 |
| 1:I:347:A:N3 | 1:I:348:A:C8 | 2.77 | 0.52 |
| 1:I:6:A:O2' | 1:I:7:A:H5' | 2.10 | 0.52 |
| 2:J:100:A:C4 | 2:J:101:A:C8 | 2.97 | 0.52 |
| 2:J:147:A:C2' | 2:J:148:A:O5' | 2.56 | 0.52 |
| 2:J:159:A:N6 | 2:J:160:A:H62 | 2.05 | 0.52 |
| 2:J:207:A:H2' | 2:J:208:A:O4' | 2.08 | 0.52 |
| 2:J:222:A:C6 | 2:J:223:A:C5 | 2.98 | 0.52 |
| 2:J:55:A:C6 | 2:J:56:A:N7 | 2.77 | 0.52 |
| 2:J:65:A:C5 | 2:J:66:A:N7 | 2.77 | 0.52 |
| 2:J:72:A:H2' | 2:J:73:A:C8 | 2.45 | 0.52 |
| 2:J:79:A:N3 | 2:J:80:A:C8 | 2.77 | 0.52 |
| 3:K:119:A:HO2' | 3:K:120:A:C5' | 1.91 | 0.52 |
| 3:K:169:A:C2' | 3:K:170:A:C5' | 2.88 | 0.52 |
| 3:K:181:A:N3 | 3:K:182:A:N7 | 2.55 | 0.52 |
| 3:K:45:A:H2' | 3:K:46:A:C8 | 2.44 | 0.52 |
| 3:K:72:A:C4 | 3:K:73:A:C8 | 2.98 | 0.52 |
| 3:K:80:A:C2' | 3:K:81:A:O4' | 2.57 | 0.52 |
| 4:L:712:U:C2' | 4:L:713:U:C6 | 2.84 | 0.52 |
| 4:L:730:U:C2 | 4:L:731:U:C6 | 2.97 | 0.52 |
| 5:M:289:U:H2' | 5:M:290:U:C6 | 2.44 | 0.52 |
| 5:M:522:U:H2' | 5:M:523:U:C6 | 2.41 | 0.52 |
| 5:M:531:U:H2' | 5:M:532:U:C4' | 2.37 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:273:U:C2 | 6:N:274:U:C5 | 2.97 | 0.52 |
| 6:N:466:U:HO2' | 6:N:467:U:H5' | 1.67 | 0.52 |
| 1:I:101:A:N3 | 1:I:102:A:C5 | 2.53 | 0.52 |
| 1:I:19:A:H2' | 1:I:20:A:H8 | 1.74 | 0.52 |
| 1:I:225:A:C5 | 1:I:226:A:N7 | 2.78 | 0.52 |
| 1:I:227:A:H2' | 1:I:228:A:C5' | 2.39 | 0.52 |
| 1:I:292:A:H2' | 1:I:293:A:O5' | 2.09 | 0.52 |
| 1:I:30:A:C2 | 1:I:31:A:N9 | 2.77 | 0.52 |
| 1:I:360:A:C2' | 1:I:361:A:C5' | 2.85 | 0.52 |
| 1:I:373:A:H62 | 1:I:374:A:H62 | 1.48 | 0.52 |
| 1:I:49:A:C2' | 1:I:50:A:O5' | 2.53 | 0.52 |
| 1:I:59:A:C2' | 1:I:60:A:H5' | 2.37 | 0.52 |
| 2:J:117:A:C2 | 2:J:118:A:N3 | 2.75 | 0.52 |
| 2:J:206:A:H2' | 2:J:207:A:C4' | 2.38 | 0.52 |
| 2:J:222:A:N1 | 2:J:223:A:C5 | 2.77 | 0.52 |
| 2:J:46:A:N6 | 2:J:47:A:N6 | 2.57 | 0.52 |
| 2:J:54:A:O2' | 2:J:55:A:O4' | 2.27 | 0.52 |
| 2:J:63:A:C2 | 2:J:64:A:C4 | 2.97 | 0.52 |
| 2:J:70:A:H2' | 2:J:71:A:O4' | 2.08 | 0.52 |
| 2:J:80:A:C2' | 2:J:81:A:H5' | 2.40 | 0.52 |
| 3:K:130:A:C4 | 3:K:131:A:C8 | 2.98 | 0.52 |
| 3:K:212:A:C5 | 3:K:213:A:C5 | 2.98 | 0.52 |
| 3:K:239:A:H2' | 3:K:240:A:H8 | 1.74 | 0.52 |
| 3:K:244:A:C3' | 3:K:245:A:P | 2.92 | 0.52 |
| 3:K:93:A:C2' | 3:K:94:A:C5' | 2.87 | 0.52 |
| 3:K:97:A:C2 | 3:K:98:A:C4 | 2.97 | 0.52 |
| 4:L:432:U:H2' | 4:L:433:U:C6 | 2.45 | 0.52 |
| 4:L:473:U:C4 | 4:L:474:U:C4 | 2.98 | 0.52 |
| 4:L:546:U:C2 | 4:L:547:U:C5 | 2.97 | 0.52 |
| 4:L:588:U:H2' | 4:L:589:U:C5' | 2.36 | 0.52 |
| 4:L:645:U:H2' | 4:L:646:U:H6 | 1.73 | 0.52 |
| 4:L:666:U:C2 | 4:L:667:U:C6 | 2.97 | 0.52 |
| 4:L:693:U:C2 | 4:L:694:U:H5 | 2.20 | 0.52 |
| 4:L:709:U:C2 | 4:L:710:U:C6 | 2.97 | 0.52 |
| 4:L:777:U:C2 | 4:L:778:U:C5 | 2.97 | 0.52 |
| 5:M:293:U:C2 | 5:M:294:U:C5 | 2.97 | 0.52 |
| 5:M:334:U:O2 | 5:M:335:U:O4' | 2.27 | 0.52 |
| 5:M:334:U:N3 | 5:M:335:U:C5 | 2.78 | 0.52 |
| 5:M:419:U:C2' | 5:M:420:U:C4' | 2.87 | 0.52 |
| 5:M:438:U:C2 | 5:M:439:U:C6 | 2.97 | 0.52 |
| 5:M:479:U:O2 | 5:M:480:U:C6 | 2.62 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:485:U:H2' | 5:M:486:U:O4' | 2.09 | 0.52 |
| 5:M:488:U:C2' | 5:M:489:U:C6 | 2.81 | 0.52 |
| 5:M:523:U:H2' | 5:M:524:U:H6 | 1.74 | 0.52 |
| 5:M:526:U:N3 | 5:M:527:U:C5 | 2.78 | 0.52 |
| 6:N:407:U:H2' | 6:N:408:U:H6 | 1.75 | 0.52 |
| 6:N:423:U:H2' | 6:N:424:U:O5' | 2.09 | 0.52 |
| 6:N:436:U:N3 | 6:N:437:U:C4 | 2.77 | 0.52 |
| 6:N:467:U:H2' | 6:N:468:U:H6 | 1.74 | 0.52 |
| 1:I:120:A:C4 | 1:I:121:A:C8 | 2.98 | 0.52 |
| 1:I:185:A:C4 | 1:I:186:A:C8 | 2.98 | 0.52 |
| 1:I:188:A:H2' | 1:I:189:A:O4' | 2.10 | 0.52 |
| 1:I:244:A:C4 | 1:I:245:A:C8 | 2.98 | 0.52 |
| 1:I:302:A:C2 | 1:I:303:A:C8 | 2.97 | 0.52 |
| 1:I:312:A:H2' | 1:I:313:A:H8 | 1.74 | 0.52 |
| 1:I:337:A:N3 | 1:I:338:A:C8 | 2.77 | 0.52 |
| 1:I:63:A:H2' | 1:I:64:A:C8 | 2.44 | 0.52 |
| 2:J:191:A:H2' | 2:J:192:A:O5' | 2.09 | 0.52 |
| 2:J:248:A:H2' | 2:J:249:A:C8 | 2.44 | 0.52 |
| 2:J:36:A:C4 | 2:J:37:A:C8 | 2.96 | 0.52 |
| 3:K:127:A:C2 | 3:K:128:A:C8 | 2.98 | 0.52 |
| 3:K:155:A:N9 | 3:K:156:A:C8 | 2.77 | 0.52 |
| 3:K:5:A:H2' | 3:K:6:A:H8 | 1.74 | 0.52 |
| 3:K:89:A:H2' | 3:K:90:A:H8 | 1.74 | 0.52 |
| 3:K:99:A:N3 | 3:K:100:A:N9 | 2.58 | 0.52 |
| 4:L:463:U:O2' | 4:L:464:U:C4' | 2.57 | 0.52 |
| 4:L:576:U:HO2' | 4:L:577:U:C5' | 1.89 | 0.52 |
| 4:L:674:U:O2' | 4:L:675:U:C4' | 2.57 | 0.52 |
| 4:L:706:U:N3 | 4:L:707:U:C4 | 2.74 | 0.52 |
| 4:L:721:U:C2 | 4:L:722:U:C6 | 2.97 | 0.52 |
| 4:L:723:U:N3 | 4:L:724:U:N3 | 2.56 | 0.52 |
| 4:L:731:U:C2' | 4:L:732:U:H5' | 2.39 | 0.52 |
| 4:L:735:U:C2' | 4:L:736:U:H5' | 2.40 | 0.52 |
| 4:L:810:U:C2' | 4:L:811:U:C6 | 2.85 | 0.52 |
| 4:L:814:U:C2' | 4:L:815:U:O4' | 2.56 | 0.52 |
| 5:M:295:U:C2 | 5:M:296:U:C5 | 2.98 | 0.52 |
| 5:M:324:U:C2' | 5:M:325:U:C6 | 2.88 | 0.52 |
| 5:M:347:U:N3 | 5:M:348:U:C5 | 2.77 | 0.52 |
| 5:M:449:U:HO2' | 5:M:450:U:C5' | 1.90 | 0.52 |
| 5:M:511:U:H2' | 5:M:512:U:C4' | 2.39 | 0.52 |
| 5:M:519:U:C2' | 5:M:520:U:C5' | 2.86 | 0.52 |
| 6:N:399:U:H2' | 6:N:400:U:H6 | 1.73 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:423:U:C2' | 6:N:424:U:O5' | 2.57 | 0.52 |
| 6:N:440:U:N3 | 6:N:441:U:C5 | 2.78 | 0.52 |
| 6:N:448:U:H2' | 6:N:449:U:C5' | 2.40 | 0.52 |
| 6:N:511:U:H2' | 6:N:512:U:C6 | 2.45 | 0.52 |
| 6:N:511:U:H2' | 6:N:512:U:H6 | 1.75 | 0.52 |
| 1:I:107:A:C4 | 1:I:108:A:C8 | 2.97 | 0.52 |
| 1:I:108:A:H2' | 1:I:109:A:H8 | 1.74 | 0.52 |
| 1:I:14:A:C4 | 1:I:15:A:N7 | 2.77 | 0.52 |
| 1:I:230:A:N3 | 1:I:231:A:C8 | 2.78 | 0.52 |
| 1:I:291:A:C2' | 1:I:292:A:O5' | 2.58 | 0.52 |
| 1:I:361:A:H2' | 1:I:362:A:O4' | 2.10 | 0.52 |
| 1:I:364:A:H2' | 1:I:365:A:H8 | 1.74 | 0.52 |
| 1:I:44:A:N1 | 1:I:45:A:C5 | 2.78 | 0.52 |
| 1:I:84:A:C2 | 1:I:85:A:C8 | 2.96 | 0.52 |
| 1:I:8:A:C4 | 1:I:9:A:N7 | 2.78 | 0.52 |
| 2:J:16:A:C2' | 2:J:17:A:H5' | 2.40 | 0.52 |
| 2:J:183:A:N1 | 2:J:184:A:C4 | 2.77 | 0.52 |
| 2:J:64:A:C5 | 2:J:65:A:N7 | 2.78 | 0.52 |
| 2:J:84:A:N1 | 2:J:85:A:C5 | 2.78 | 0.52 |
| 2:J:90:A:H2' | 2:J:91:A:C5' | 2.39 | 0.52 |
| 3:K:100:A:C4 | 3:K:101:A:N7 | 2.78 | 0.52 |
| 3:K:110:A:C2 | 3:K:111:A:C1' | 2.93 | 0.52 |
| 3:K:112:A:N6 | 3:K:113:A:H61 | 1.95 | 0.52 |
| 3:K:212:A:O5' | 3:K:213:A:OP2 | 2.28 | 0.52 |
| 3:K:238:A:N6 | 3:K:239:A:N6 | 2.57 | 0.52 |
| 3:K:87:A:C5 | 3:K:88:A:N7 | 2.78 | 0.52 |
| 3:K:98:A:C4 | 3:K:99:A:C8 | 2.98 | 0.52 |
| 4:L:483:U:H2' | 4:L:484:U:O5' | 2.09 | 0.52 |
| 4:L:488:U:HO2' | 4:L:489:U:C4' | 2.22 | 0.52 |
| 4:L:635:U:N3 | 4:L:636:U:C5 | 2.78 | 0.52 |
| 5:M:335:U:C2' | 5:M:336:U:H6 | 2.22 | 0.52 |
| 5:M:352:U:C2 | 5:M:353:U:C5 | 2.97 | 0.52 |
| 5:M:434:U:C2' | 5:M:435:U:C5' | 2.87 | 0.52 |
| 5:M:455:U:C2 | 5:M:456:U:C5 | 2.97 | 0.52 |
| 5:M:465:U:C4 | 5:M:466:U:C4 | 2.96 | 0.52 |
| 6:N:396:U:C2' | 6:N:397:U:H5' | 2.39 | 0.52 |
| 6:N:496:U:O2' | 6:N:497:U:O4' | 2.27 | 0.52 |
| 1:I:244:A:H2' | 1:I:245:A:H8 | 1.75 | 0.52 |
| 1:I:281:A:H61 | 1:I:282:A:N6 | 1.99 | 0.52 |
| 1:I:348:A:H2' | 1:I:349:A:O5' | 2.10 | 0.52 |
| 1:I:358:A:C2 | 1:I:359:A:N9 | 2.78 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:79:A:C6 | 1:I:80:A:C6 | 2.98 | 0.52 |
| 2:J:133:A:C2' | 2:J:134:A:O5' | 2.56 | 0.52 |
| 2:J:153:A:C4 | 2:J:154:A:C8 | 2.98 | 0.52 |
| 2:J:22:A:N3 | 2:J:23:A:C8 | 2.77 | 0.52 |
| 3:K:10:A:O2' | 3:K:11:A:H5' | 2.10 | 0.52 |
| 3:K:146:A:C4 | 3:K:147:A:C8 | 2.98 | 0.52 |
| 3:K:195:A:H2' | 3:K:196:A:C8 | 2.45 | 0.52 |
| 4:L:502:U:N3 | 4:L:503:U:C5 | 2.76 | 0.52 |
| 4:L:659:U:N3 | 4:L:660:U:C5 | 2.78 | 0.52 |
| 4:L:723:U:H2' | 4:L:724:U:H6 | 1.66 | 0.52 |
| 5:M:353:U:O2' | 5:M:354:U:H5' | 2.10 | 0.52 |
| 5:M:399:U:O2 | 5:M:400:U:C6 | 2.62 | 0.52 |
| 2:J:118:A:C2 | 5:M:436:U:C2 | 2.97 | 0.52 |
| 5:M:436:U:C2 | 5:M:437:U:C5 | 2.98 | 0.52 |
| 6:N:332:U:C2' | 6:N:333:U:H6 | 2.20 | 0.52 |
| 6:N:398:U:C2 | 6:N:399:U:C6 | 2.97 | 0.52 |
| 6:N:441:U:C4 | 6:N:442:U:C5 | 2.98 | 0.52 |
| 6:N:451:U:N3 | 6:N:452:U:C4 | 2.76 | 0.52 |
| 6:N:484:U:H2' | 6:N:485:U:C6 | 2.45 | 0.52 |
| 6:N:492:U:H2' | 6:N:493:U:C6 | 2.41 | 0.52 |
| 1:I:104:A:C2 | 4:L:722:U:O2 | 2.62 | 0.52 |
| 1:I:131:A:C4 | 1:I:132:A:C8 | 2.97 | 0.52 |
| 1:I:164:A:O2' | 1:I:165:A:H5' | 2.09 | 0.52 |
| 1:I:186:A:C2' | 1:I:187:A:O5' | 2.47 | 0.52 |
| 1:I:220:A:C2 | 1:I:221:A:N7 | 2.78 | 0.52 |
| 1:I:219:A:N3 | 1:I:220:A:C8 | 2.78 | 0.52 |
| 1:I:22:A:H2' | 1:I:23:A:C8 | 2.45 | 0.52 |
| 1:I:262:A:H2' | 1:I:263:A:O4' | 2.10 | 0.52 |
| 1:I:296:A:C2' | 1:I:297:A:O4' | 2.53 | 0.52 |
| 1:I:318:A:C2 | 1:I:319:A:C4 | 2.98 | 0.52 |
| 1:I:318:A:N3 | 1:I:319:A:C8 | 2.78 | 0.52 |
| 1:I:31:A:N1 | 1:I:32:A:C6 | 2.77 | 0.52 |
| 1:I:52:A:C4 | 1:I:53:A:C8 | 2.97 | 0.52 |
| 1:I:66:A:C2 | 4:L:760:U:C2 | 2.97 | 0.52 |
| 2:J:128:A:HO2' | 2:J:129:A:H5' | 1.70 | 0.52 |
| 2:J:128:A:C6 | 2:J:129:A:N7 | 2.77 | 0.52 |
| 2:J:184:A:HO2' | 2:J:185:A:H5' | 1.60 | 0.52 |
| 2:J:43:A:O2' | 2:J:44:A:C4' | 2.57 | 0.52 |
| 2:J:73:A:C2 | 2:J:74:A:N7 | 2.78 | 0.52 |
| 3:K:108:A:C4 | 3:K:109:A:N7 | 2.78 | 0.52 |
| 3:K:128:A:C4 | 3:K:129:A:N7 | 2.78 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 3:K:137:A:H2' | 3:K:138:A:C5' | 2.40 | 0.52 |
| 3:K:147:A:O2' | 3:K:148:A:H5' | 2.10 | 0.52 |
| 3:K:62:A:C6 | 3:K:63:A:C6 | 2.98 | 0.52 |
| 3:K:91:A:C4 | 3:K:92:A:N7 | 2.78 | 0.52 |
| 4:L:440:U:C3' | 4:L:441:U:P | 2.93 | 0.52 |
| 4:L:449:U:O2' | 4:L:450:U:C5' | 2.45 | 0.52 |
| 4:L:525:U:C2' | 4:L:526:U:O5' | 2.58 | 0.52 |
| 4:L:545:U:C2 | 4:L:546:U:C6 | 2.98 | 0.52 |
| 4:L:555:U:C2 | 4:L:556:U:C6 | 2.97 | 0.52 |
| 4:L:637:U:O4 | 4:L:638:U:O4 | 2.28 | 0.52 |
| 4:L:655:U:H2' | 4:L:656:U:O5' | 2.08 | 0.52 |
| 4:L:721:U:O2 | 4:L:722:U:N1 | 2.42 | 0.52 |
| 4:L:754:U:H2' | 4:L:755:U:C5' | 2.33 | 0.52 |
| 4:L:793:U:O4 | 4:L:794:U:O4 | 2.28 | 0.52 |
| 5:M:320:U:C2' | 5:M:321:U:H5' | 2.39 | 0.52 |
| 5:M:347:U:H2' | 5:M:348:U:C4' | 2.39 | 0.52 |
| 5:M:382:U:H2' | 5:M:383:U:O5' | 2.10 | 0.52 |
| 5:M:403:U:N3 | 5:M:404:U:C5 | 2.77 | 0.52 |
| 6:N:278:U:C2 | 6:N:279:U:C6 | 2.98 | 0.52 |
| 6:N:375:U:C2 | 6:N:376:U:C6 | 2.97 | 0.52 |
| 6:N:403:U:C2 | 6:N:404:U:C5 | 2.98 | 0.52 |
| 6:N:413:U:C2' | 6:N:414:U:C5' | 2.87 | 0.52 |
| 6:N:466:U:C2' | 6:N:467:U:H5' | 2.38 | 0.52 |
| 1:I:203:A:C4 | 1:I:204:A:C8 | 2.97 | 0.52 |
| 1:I:234:A:N3 | 1:I:235:A:C8 | 2.78 | 0.52 |
| 1:I:282:A:H2' | 1:I:283:A:H8 | 1.75 | 0.52 |
| 1:I:307:A:N3 | 1:I:308:A:C8 | 2.78 | 0.52 |
| 1:I:329:A:C6 | 1:I:330:A:C6 | 2.98 | 0.52 |
| 1:I:56:A:H2' | 1:I:57:A:H8 | 1.75 | 0.52 |
| 1:I:75:A:N1 | 1:I:76:A:C5 | 2.78 | 0.52 |
| 1:I:80:A:C4 | 1:I:81:A:C8 | 2.98 | 0.52 |
| 1:I:81:A:C4 | 1:I:82:A:C8 | 2.98 | 0.52 |
| 2:J:100:A:C2 | 2:J:101:A:C8 | 2.97 | 0.52 |
| 2:J:100:A:C2 | 2:J:101:A:N9 | 2.78 | 0.52 |
| 2:J:130:A:C2' | 2:J:131:A:O4' | 2.58 | 0.52 |
| 2:J:135:A:C4 | 2:J:136:A:N7 | 2.78 | 0.52 |
| 2:J:152:A:C2' | 2:J:153:A:C5' | 2.88 | 0.52 |
| 2:J:183:A:H2' | 2:J:184:A:O4' | 2.08 | 0.52 |
| 2:J:203:A:H2' | 2:J:204:A:C8 | 2.42 | 0.52 |
| 2:J:233:A:C2 | 2:J:234:A:C5 | 2.98 | 0.52 |
| 2:J:70:A:H2' | 2:J:71:A:C4' | 2.38 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 2:J:85:A:O2' | 2:J:86:A:P | 2.66 | 0.52 |
| 2:J:93:A:N1 | 2:J:94:A:C5 | 2.78 | 0.52 |
| 3:K:118:A:N1 | 3:K:119:A:C5 | 2.78 | 0.52 |
| 3:K:120:A:C2 | 3:K:121:A:C8 | 2.98 | 0.52 |
| 4:L:510:U:H2' | 4:L:511:U:C5' | 2.34 | 0.52 |
| 4:L:586:U:C6 | 4:L:587:U:H5 | 2.28 | 0.52 |
| 4:L:681:U:C2' | 4:L:682:U:O4' | 2.57 | 0.52 |
| 4:L:703:U:C4 | 4:L:704:U:C4 | 2.98 | 0.52 |
| 4:L:762:U:O2' | 4:L:763:U:P | 2.66 | 0.52 |
| 4:L:765:U:C2' | 4:L:766:U:O4' | 2.52 | 0.52 |
| 5:M:287:U:H2' | 5:M:288:U:O4' | 2.10 | 0.52 |
| 5:M:337:U:O2 | 5:M:338:U:O4' | 2.27 | 0.52 |
| 5:M:372:U:C4 | 5:M:373:U:C5 | 2.97 | 0.52 |
| 5:M:401:U:C2 | 5:M:402:U:C5 | 2.98 | 0.52 |
| 5:M:401:U:H2' | 5:M:402:U:H6 | 1.74 | 0.52 |
| 5:M:460:U:C6 | 5:M:461:U:C5 | 2.98 | 0.52 |
| 5:M:473:U:C2 | 5:M:474:U:C5 | 2.98 | 0.52 |
| 2:J:58:A:N6 | 5:M:496:U:O4 | 2.42 | 0.52 |
| 5:M:504:U:C4 | 5:M:505:U:C5 | 2.98 | 0.52 |
| 5:M:539:U:N3 | 5:M:540:U:C5 | 2.78 | 0.52 |
| 6:N:424:U:C4 | 6:N:425:U:O4 | 2.63 | 0.52 |
| 6:N:427:U:H2' | 6:N:428:U:C6 | 2.36 | 0.52 |
| 6:N:485:U:H2' | 6:N:486:U:C4' | 2.31 | 0.52 |
| 1:I:164:A:C4 | 1:I:165:A:N7 | 2.77 | 0.52 |
| 1:I:190:A:C2 | 1:I:191:A:C8 | 2.98 | 0.52 |
| 1:I:240:A:N1 | 1:I:241:A:C6 | 2.78 | 0.52 |
| 1:I:243:A:O5' | 1:I:244:A:OP2 | 2.28 | 0.52 |
| 1:I:300:A:C2 | 1:I:301:A:N7 | 2.78 | 0.52 |
| 1:I:343:A:H2' | 1:I:344:A:H5' | 1.90 | 0.52 |
| 2:J:184:A:C2 | 2:J:185:A:N7 | 2.78 | 0.52 |
| 2:J:188:A:O2' | 2:J:189:A:P | 2.66 | 0.52 |
| 2:J:195:A:C2' | 2:J:196:A:H5' | 2.40 | 0.52 |
| 2:J:209:A:C4 | 2:J:210:A:C8 | 2.98 | 0.52 |
| 2:J:229:A:C3' | 2:J:230:A:H5' | 2.04 | 0.52 |
| 2:J:26:A:N1 | 2:J:27:A:C5 | 2.78 | 0.52 |
| 2:J:43:A:N3 | 2:J:44:A:C8 | 2.78 | 0.52 |
| 2:J:90:A:N3 | 2:J:91:A:C8 | 2.78 | 0.52 |
| 3:K:213:A:C2' | 3:K:214:A:O4' | 2.58 | 0.52 |
| 3:K:241:A:H3' | 3:K:242:A:P | 2.49 | 0.52 |
| 3:K:72:A:O2' | 3:K:73:A:H5' | 2.10 | 0.52 |
| 4:L:513:U:H2' | 4:L:514:U:C5' | 2.39 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:550:U:H2' | 4:L:551:U:H6 | 1.75 | 0.52 |
| 4:L:555:U:O2 | 4:L:556:U:C6 | 2.63 | 0.52 |
| 4:L:597:U:H2' | 4:L:598:U:C5' | 2.38 | 0.52 |
| 4:L:625:U:O2 | 4:L:626:U:C6 | 2.63 | 0.52 |
| 4:L:638:U:N3 | 4:L:639:U:C5 | 2.78 | 0.52 |
| 4:L:647:U:H2' | 4:L:648:U:C5' | 2.37 | 0.52 |
| 4:L:695:U:C2 | 4:L:696:U:C5 | 2.98 | 0.52 |
| 5:M:322:U:H2' | 5:M:323:U:C4' | 2.40 | 0.52 |
| 5:M:333:U:N3 | 5:M:334:U:C5 | 2.78 | 0.52 |
| 5:M:450:U:C2 | 5:M:451:U:C6 | 2.97 | 0.52 |
| 5:M:516:U:H2' | 5:M:517:U:C6 | 2.44 | 0.52 |
| 6:N:454:U:O2' | 6:N:455:U:C4' | 2.58 | 0.52 |
| 6:N:461:U:H2' | 6:N:462:U:C6 | 2.45 | 0.52 |
| 6:N:468:U:N3 | 6:N:469:U:O4 | 2.43 | 0.52 |
| 1:I:159:A:C2 | 1:I:160:A:N7 | 2.78 | 0.51 |
| 1:I:181:A:C2 | 4:L:645:U:O2 | 2.62 | 0.51 |
| 1:I:244:A:H2' | 1:I:245:A:O5' | 2.09 | 0.51 |
| 1:I:261:A:N1 | 1:I:262:A:C5 | 2.78 | 0.51 |
| 1:I:314:A:C2 | 1:I:315:A:C4 | 2.98 | 0.51 |
| 1:I:330:A:H2' | 1:I:331:A:O4' | 2.09 | 0.51 |
| 1:I:40:A:C2 | 1:I:41:A:C5 | 2.99 | 0.51 |
| 1:I:4:A:O2' | 1:I:5:A:P | 2.67 | 0.51 |
| 2:J:104:A:C2' | 2:J:105:A:C5' | 2.88 | 0.51 |
| 2:J:129:A:C6 | 2:J:130:A:C5 | 2.98 | 0.51 |
| 2:J:157:A:H2' | 2:J:158:A:H8 | 1.75 | 0.51 |
| 2:J:97:A:O2' | 2:J:98:A:H5' | 2.11 | 0.51 |
| 3:K:127:A:C4 | 3:K:128:A:C8 | 2.98 | 0.51 |
| 3:K:128:A:O2' | 3:K:129:A:H5' | 2.10 | 0.51 |
| 3:K:203:A:C2' | 3:K:204:A:C8 | 2.87 | 0.51 |
| 3:K:43:A:C4 | 3:K:44:A:N7 | 2.78 | 0.51 |
| 3:K:56:A:H2' | 3:K:57:A:C8 | 2.44 | 0.51 |
| 4:L:628:U:C2 | 4:L:629:U:C5 | 2.97 | 0.51 |
| 4:L:634:U:C2 | 4:L:635:U:C5 | 2.98 | 0.51 |
| 4:L:743:U:H2' | 4:L:744:U:H6 | 1.75 | 0.51 |
| 4:L:750:U:N3 | 4:L:751:U:C4 | 2.78 | 0.51 |
| 4:L:816:U:C4 | 4:L:817:U:C4 | 2.98 | 0.51 |
| 5:M:322:U:O2' | 5:M:323:U:O4' | 2.27 | 0.51 |
| 5:M:418:U:N3 | 5:M:419:U:C4 | 2.78 | 0.51 |
| 5:M:504:U:H2' | 5:M:505:U:C6 | 2.39 | 0.51 |
| 5:M:511:U:C2 | 5:M:512:U:C5 | 2.98 | 0.51 |
| 6:N:405:U:C2 | 6:N:406:U:C6 | 2.98 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 6:N:407:U:C2 | 6:N:408:U:C6 | 2.98 | 0.51 |
| 6:N:471:U:H2' | 6:N:472:U:C6 | 2.44 | 0.51 |
| 1:I:126:A:C2' | 1:I:127:A:C5' | 2.89 | 0.51 |
| 1:I:182:A:N3 | 1:I:183:A:C8 | 2.79 | 0.51 |
| 1:I:221:A:C2 | 1:I:222:A:C8 | 2.98 | 0.51 |
| 1:I:249:A:C2' | 1:I:250:A:O4' | 2.58 | 0.51 |
| 1:I:251:A:C6 | 1:I:252:A:C5 | 2.98 | 0.51 |
| 1:I:265:A:C6 | 1:I:266:A:C6 | 2.97 | 0.51 |
| 1:I:317:A:H2' | 1:I:318:A:H8 | 1.75 | 0.51 |
| 1:I:361:A:H2' | 1:I:362:A:H8 | 1.75 | 0.51 |
| 1:I:387:A:C4 | 1:I:388:A:C8 | 2.98 | 0.51 |
| 1:I:50:A:N6 | 1:I:51:A:N6 | 2.59 | 0.51 |
| 2:J:146:A:C2' | 2:J:147:A:H5' | 2.39 | 0.51 |
| 2:J:159:A:C2' | 2:J:160:A:C8 | 2.89 | 0.51 |
| 2:J:177:A:H2' | 2:J:178:A:H8 | 1.76 | 0.51 |
| 2:J:179:A:C2 | 2:J:180:A:C5 | 2.98 | 0.51 |
| 2:J:193:A:C4 | 2:J:194:A:C8 | 2.97 | 0.51 |
| 2:J:21:A:N3 | 2:J:22:A:C8 | 2.78 | 0.51 |
| 2:J:21:A:H2' | 2:J:22:A:C5' | 2.41 | 0.51 |
| 2:J:247:A:C4 | 2:J:248:A:C8 | 2.97 | 0.51 |
| 2:J:65:A:N6 | 2:J:66:A:N6 | 2.58 | 0.51 |
| 2:J:72:A:C2' | 2:J:73:A:O5' | 2.58 | 0.51 |
| 2:J:75:A:H2' | 2:J:76:A:O5' | 2.09 | 0.51 |
| 3:K:121:A:H61 | 3:K:122:A:N6 | 2.07 | 0.51 |
| 3:K:209:A:H2' | 3:K:210:A:H8 | 1.71 | 0.51 |
| 3:K:238:A:C6 | 3:K:239:A:N6 | 2.78 | 0.51 |
| 3:K:49:A:C2 | 3:K:50:A:N9 | 2.77 | 0.51 |
| 3:K:63:A:N3 | 3:K:64:A:C8 | 2.77 | 0.51 |
| 4:L:418:U:C2 | 4:L:419:U:C5 | 2.97 | 0.51 |
| 4:L:450:U:H2' | 4:L:451:U:H6 | 1.76 | 0.51 |
| 4:L:494:U:H2' | 4:L:495:U:H6 | 1.75 | 0.51 |
| 4:L:502:U:N3 | 4:L:503:U:C4 | 2.79 | 0.51 |
| 4:L:503:U:N3 | 4:L:504:U:C5 | 2.79 | 0.51 |
| 4:L:564:U:H2' | 4:L:565:U:C5' | 2.41 | 0.51 |
| 4:L:615:U:C2 | 4:L:616:U:C6 | 2.98 | 0.51 |
| 4:L:660:U:O2' | 4:L:661:U:O4' | 2.28 | 0.51 |
| 5:M:306:U:C2 | 5:M:307:U:C6 | 2.99 | 0.51 |
| 5:M:372:U:C2' | 5:M:373:U:C5' | 2.88 | 0.51 |
| 5:M:530:U:C2' | 5:M:531:U:C4' | 2.85 | 0.51 |
| 6:N:335:U:H2' | 6:N:336:U:H6 | 1.76 | 0.51 |
| 6:N:474:U:H2' | 6:N:475:U:C5' | 2.37 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:116:A:C2' | 1:I:117:A:O5' | 2.57 | 0.51 |
| 1:I:188:A:H2' | 1:I:189:A:H8 | 1.76 | 0.51 |
| 1:I:222:A:H2' | 1:I:223:A:C5' | 2.39 | 0.51 |
| 1:I:227:A:C2 | 1:I:228:A:C5 | 2.98 | 0.51 |
| 1:I:22:A:C4 | 1:I:23:A:C8 | 2.98 | 0.51 |
| 1:I:251:A:C2 | 1:I:252:A:C5 | 2.98 | 0.51 |
| 1:I:250:A:C4 | 1:I:251:A:C5 | 2.98 | 0.51 |
| 1:I:313:A:C5 | 1:I:314:A:N7 | 2.79 | 0.51 |
| 1:I:42:A:C2 | 1:I:43:A:N9 | 2.79 | 0.51 |
| 1:I:60:A:C4 | 1:I:61:A:N7 | 2.79 | 0.51 |
| 2:J:113:A:C2' | 2:J:114:A:H5' | 2.40 | 0.51 |
| 2:J:17:A:H2' | 2:J:18:A:C8 | 2.44 | 0.51 |
| 2:J:235:A:H2' | 2:J:236:A:O5' | 2.09 | 0.51 |
| 2:J:257:A:C4 | 2:J:258:A:C8 | 2.98 | 0.51 |
| 2:J:26:A:C2 | 2:J:27:A:N9 | 2.79 | 0.51 |
| 2:J:67:A:C2' | 2:J:68:A:O5' | 2.57 | 0.51 |
| 3:K:114:A:C2 | 3:K:115:A:N9 | 2.77 | 0.51 |
| 3:K:85:A:HO2' | 3:K:86:A:H5' | 1.69 | 0.51 |
| 4:L:456:U:C2 | 4:L:457:U:C5 | 2.98 | 0.51 |
| 4:L:517:U:H2' | 4:L:518:U:C4' | 2.40 | 0.51 |
| 4:L:529:U:C2 | 4:L:530:U:C6 | 2.98 | 0.51 |
| 4:L:590:U:H2' | 4:L:591:U:C5' | 2.40 | 0.51 |
| 4:L:611:U:N3 | 4:L:612:U:C4 | 2.79 | 0.51 |
| 4:L:617:U:O2' | 4:L:618:U:C5' | 2.45 | 0.51 |
| 4:L:634:U:H2' | 4:L:635:U:C6 | 2.43 | 0.51 |
| 4:L:659:U:N3 | 4:L:660:U:C4 | 2.79 | 0.51 |
| 4:L:699:U:H2' | 4:L:700:U:O4' | 2.10 | 0.51 |
| 4:L:758:U:O2' | 4:L:759:U:C5' | 2.49 | 0.51 |
| 4:L:764:U:C2' | 4:L:765:U:H5' | 2.38 | 0.51 |
| 4:L:797:U:HO2' | 4:L:798:U:H5' | 1.72 | 0.51 |
| 5:M:289:U:N3 | 5:M:290:U:C5 | 2.78 | 0.51 |
| 5:M:336:U:N3 | 5:M:337:U:C4 | 2.72 | 0.51 |
| 5:M:379:U:C2 | 5:M:380:U:C5 | 2.98 | 0.51 |
| 5:M:380:U:C2 | 5:M:381:U:C5 | 2.98 | 0.51 |
| 5:M:399:U:C2 | 5:M:400:U:C6 | 2.98 | 0.51 |
| 5:M:423:U:O2 | 5:M:424:U:C6 | 2.64 | 0.51 |
| 5:M:518:U:N3 | 5:M:519:U:C5 | 2.79 | 0.51 |
| 6:N:327:U:C2' | 6:N:328:U:H6 | 2.22 | 0.51 |
| 6:N:424:U:O2' | 6:N:425:U:O4' | 2.26 | 0.51 |
| 6:N:431:U:C2' | 6:N:432:U:O4' | 2.57 | 0.51 |
| 6:N:441:U:C2' | 6:N:442:U:H5' | 2.41 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 6:N:453:U:C2' | 6:N:454:U:C5' | 2.88 | 0.51 |
| 6:N:470:U:H2' | 6:N:471:U:C6 | 2.45 | 0.51 |
| 1:I:107:A:N1 | 1:I:108:A:C6 | 2.72 | 0.51 |
| 1:I:21:A:C2' | 1:I:22:A:H5' | 2.40 | 0.51 |
| 1:I:225:A:C6 | 1:I:226:A:C6 | 2.99 | 0.51 |
| 1:I:230:A:H2' | 1:I:231:A:C4' | 2.40 | 0.51 |
| 1:I:230:A:O2' | 1:I:231:A:C4' | 2.57 | 0.51 |
| 1:I:260:A:C2 | 1:I:261:A:C5 | 2.99 | 0.51 |
| 1:I:263:A:C4 | 1:I:264:A:C8 | 2.99 | 0.51 |
| 1:I:296:A:C2 | 1:I:297:A:C4 | 2.98 | 0.51 |
| 1:I:329:A:H2' | 1:I:330:A:H8 | 1.74 | 0.51 |
| 1:I:341:A:N1 | 1:I:342:A:C5 | 2.78 | 0.51 |
| 1:I:3:A:H2' | 1:I:4:A:H8 | 1.75 | 0.51 |
| 2:J:176:A:C2' | 2:J:177:A:O5' | 2.56 | 0.51 |
| 2:J:255:A:C2 | 2:J:256:A:C8 | 2.99 | 0.51 |
| 2:J:28:A:O2' | 2:J:29:A:H5' | 2.11 | 0.51 |
| 2:J:33:A:H2' | 2:J:34:A:H8 | 1.75 | 0.51 |
| 2:J:80:A:H2' | 2:J:81:A:H8 | 1.75 | 0.51 |
| 2:J:99:A:C2' | 2:J:100:A:H5' | 2.41 | 0.51 |
| 3:K:108:A:H2' | 3:K:109:A:O4' | 2.09 | 0.51 |
| 3:K:180:A:C6 | 3:K:181:A:N6 | 2.78 | 0.51 |
| 3:K:81:A:C2 | 3:K:82:A:C5 | 2.98 | 0.51 |
| 4:L:473:U:C2 | 4:L:474:U:C5 | 2.98 | 0.51 |
| 4:L:498:U:H2' | 4:L:499:U:C4' | 2.40 | 0.51 |
| 4:L:510:U:C2 | 4:L:511:U:C6 | 2.98 | 0.51 |
| 4:L:555:U:N3 | 4:L:556:U:C5 | 2.79 | 0.51 |
| 4:L:577:U:H2' | 4:L:578:U:C6 | 2.43 | 0.51 |
| 4:L:647:U:C2 | 4:L:648:U:C6 | 2.98 | 0.51 |
| 4:L:657:U:O2' | 4:L:658:U:C5' | 2.38 | 0.51 |
| 4:L:772:U:C2' | 4:L:773:U:H5' | 2.41 | 0.51 |
| 4:L:797:U:H2' | 4:L:798:U:O5' | 2.11 | 0.51 |
| 5:M:285:U:C2 | 5:M:286:U:C5 | 2.98 | 0.51 |
| 5:M:355:U:C2' | 5:M:356:U:C5' | 2.87 | 0.51 |
| 5:M:489:U:C2' | 5:M:490:U:C4' | 2.88 | 0.51 |
| 6:N:449:U:H2' | 6:N:450:U:O5' | 2.10 | 0.51 |
| 6:N:505:U:O2' | 6:N:506:U:H5' | 2.10 | 0.51 |
| 1:I:112:A:C2' | 1:I:113:A:H5' | 2.39 | 0.51 |
| 1:I:134:A:C6 | 1:I:135:A:C6 | 2.82 | 0.51 |
| 1:I:229:A:C2' | 1:I:230:A:O4' | 2.59 | 0.51 |
| 1:I:275:A:N3 | 1:I:276:A:C8 | 2.79 | 0.51 |
| 1:I:295:A:H2' | 1:I:296:A:O5' | 2.10 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:299:A:H2' | 1:I:300:A:C5' | 2.41 | 0.51 |
| 1:I:328:A:C4 | 1:I:329:A:C8 | 2.99 | 0.51 |
| 1:I:341:A:O2' | 1:I:342:A:C5' | 2.34 | 0.51 |
| 1:I:358:A:N1 | 1:I:359:A:C5 | 2.78 | 0.51 |
| 1:I:66:A:C2' | 1:I:67:A:O4' | 2.54 | 0.51 |
| 1:I:80:A:N3 | 1:I:81:A:C8 | 2.79 | 0.51 |
| 2:J:14:A:N6 | 2:J:15:A:N6 | 2.59 | 0.51 |
| 2:J:48:A:C2 | 2:J:49:A:C5 | 2.98 | 0.51 |
| 2:J:72:A:C6 | 2:J:73:A:C5 | 2.98 | 0.51 |
| 3:K:74:A:C2' | 3:K:75:A:H5' | 2.40 | 0.51 |
| 3:K:81:A:H2' | 3:K:82:A:C8 | 2.43 | 0.51 |
| 4:L:517:U:C2 | 4:L:518:U:C5 | 2.97 | 0.51 |
| 4:L:524:U:H2' | 4:L:525:U:H6 | 1.75 | 0.51 |
| 4:L:549:U:C4 | 4:L:550:U:C5 | 2.98 | 0.51 |
| 4:L:666:U:N3 | 4:L:667:U:C4 | 2.79 | 0.51 |
| 4:L:696:U:N3 | 4:L:697:U:C5 | 2.78 | 0.51 |
| 4:L:743:U:H2' | 4:L:744:U:C5' | 2.36 | 0.51 |
| 4:L:780:U:O2 | 4:L:781:U:C6 | 2.63 | 0.51 |
| 4:L:801:U:H2' | 4:L:802:U:C6 | 2.42 | 0.51 |
| 5:M:318:U:C2' | 5:M:319:U:O4' | 2.56 | 0.51 |
| 5:M:317:U:O2' | 5:M:318:U:H5' | 2.10 | 0.51 |
| 5:M:371:U:N3 | 5:M:372:U:C5 | 2.79 | 0.51 |
| 5:M:420:U:C2' | 5:M:421:U:O5' | 2.58 | 0.51 |
| 5:M:425:U:C2 | 5:M:426:U:C6 | 2.99 | 0.51 |
| 5:M:486:U:O2 | 5:M:487:U:C6 | 2.63 | 0.51 |
| 5:M:518:U:C2' | 5:M:519:U:O5' | 2.54 | 0.51 |
| 6:N:329:U:C2' | 6:N:330:U:H6 | 2.18 | 0.51 |
| 6:N:338:U:N3 | 6:N:339:U:O4 | 2.41 | 0.51 |
| 6:N:393:U:H2' | 6:N:394:U:H6 | 1.75 | 0.51 |
| 6:N:398:U:C2' | 6:N:399:U:O5' | 2.57 | 0.51 |
| 6:N:419:U:C2 | 6:N:420:U:C6 | 2.98 | 0.51 |
| 6:N:425:U:C1' | 6:N:426:U:C6 | 2.93 | 0.51 |
| 1:I:138:A:O2' | 1:I:139:A:C4' | 2.59 | 0.51 |
| 1:I:159:A:O2' | 1:I:160:A:H5' | 2.10 | 0.51 |
| 1:I:207:A:C2 | 1:I:208:A:C4 | 2.99 | 0.51 |
| 1:I:266:A:N1 | 1:I:267:A:C4 | 2.76 | 0.51 |
| 1:I:266:A:N1 | 1:I:267:A:C5 | 2.79 | 0.51 |
| 1:I:287:A:C2' | 1:I:288:A:O5' | 2.58 | 0.51 |
| 1:I:361:A:C2 | 1:I:362:A:C4 | 2.98 | 0.51 |
| 1:I:4:A:N3 | 1:I:5:A:C8 | 2.78 | 0.51 |
| 1:I:80:A:N1 | 1:I:81:A:C5 | 2.79 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:90:A:C2' | 1:I:91:A:O5' | 2.56 | 0.51 |
| 2:J:119:A:H2' | 2:J:120:A:C8 | 2.45 | 0.51 |
| 2:J:33:A:N1 | 2:J:34:A:C5 | 2.78 | 0.51 |
| 2:J:33:A:C2 | 2:J:34:A:C5 | 2.98 | 0.51 |
| 2:J:57:A:H2' | 2:J:58:A:O5' | 2.09 | 0.51 |
| 2:J:61:A:O2' | 2:J:62:A:C5' | 2.59 | 0.51 |
| 3:K:106:A:O2' | 3:K:107:A:O4' | 2.28 | 0.51 |
| 3:K:118:A:N3 | 3:K:119:A:C1' | 2.73 | 0.51 |
| 3:K:160:A:H2' | 3:K:161:A:H8 | 1.76 | 0.51 |
| 3:K:97:A:C5 | 3:K:98:A:C8 | 2.97 | 0.51 |
| 4:L:525:U:H2' | 4:L:526:U:C6 | 2.44 | 0.51 |
| 4:L:581:U:C4 | 4:L:582:U:C4 | 2.99 | 0.51 |
| 4:L:737:U:O2' | 4:L:738:U:P | 2.64 | 0.51 |
| 4:L:744:U:O2' | 4:L:745:U:H5' | 2.10 | 0.51 |
| 4:L:758:U:O2 | 4:L:759:U:C6 | 2.62 | 0.51 |
| 4:L:764:U:C6 | 4:L:765:U:C5 | 2.99 | 0.51 |
| 4:L:816:U:C4 | 4:L:817:U:C5 | 2.98 | 0.51 |
| 5:M:300:U:C2 | 5:M:301:U:C6 | 2.98 | 0.51 |
| 5:M:414:U:C4 | 5:M:415:U:O4 | 2.63 | 0.51 |
| 5:M:429:U:C2' | 5:M:430:U:O4' | 2.58 | 0.51 |
| 5:M:434:U:C4 | 5:M:435:U:C5 | 2.98 | 0.51 |
| 5:M:488:U:H2' | 5:M:489:U:C1' | 2.37 | 0.51 |
| 6:N:321:U:C6 | 6:N:322:U:H5 | 2.28 | 0.51 |
| 6:N:327:U:O2' | 6:N:328:U:O4' | 2.28 | 0.51 |
| 6:N:332:U:N3 | 6:N:333:U:C4 | 2.78 | 0.51 |
| 6:N:381:U:C2 | 6:N:382:U:C5 | 2.98 | 0.51 |
| 6:N:405:U:C2' | 6:N:406:U:O5' | 2.59 | 0.51 |
| 6:N:407:U:N3 | 6:N:408:U:C5 | 2.79 | 0.51 |
| 6:N:465:U:N3 | 6:N:466:U:C4 | 2.79 | 0.51 |
| 1:I:101:A:N3 | 1:I:102:A:C8 | 2.75 | 0.51 |
| 1:I:272:A:N6 | 1:I:273:A:H61 | 1.99 | 0.51 |
| 1:I:83:A:C4 | 1:I:84:A:C8 | 2.99 | 0.51 |
| 2:J:14:A:C6 | 2:J:15:A:N7 | 2.79 | 0.51 |
| 2:J:159:A:C6 | 2:J:160:A:C5 | 2.98 | 0.51 |
| 2:J:204:A:C4 | 2:J:205:A:C5 | 2.97 | 0.51 |
| 2:J:44:A:N1 | 2:J:45:A:C5 | 2.79 | 0.51 |
| 2:J:96:A:C5 | 2:J:97:A:N7 | 2.79 | 0.51 |
| 2:J:96:A:H2' | 2:J:97:A:H8 | 1.75 | 0.51 |
| 2:J:98:A:C4 | 2:J:99:A:C8 | 2.97 | 0.51 |
| 3:K:117:A:O2' | 3:K:118:A:O5' | 2.28 | 0.51 |
| 3:K:119:A:N1 | 3:K:120:A:C5 | 2.78 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 3:K:90:A:C2 | 3:K:91:A:N9 | 2.78 | 0.51 |
| 4:L:426:U:H2' | 4:L:427:U:C6 | 2.44 | 0.51 |
| 4:L:435:U:O2' | 4:L:436:U:O4' | 2.27 | 0.51 |
| 4:L:451:U:C2 | 4:L:452:U:C5 | 2.99 | 0.51 |
| 4:L:559:U:C4 | 4:L:560:U:C5 | 2.98 | 0.51 |
| 4:L:589:U:C2' | 4:L:590:U:C5' | 2.88 | 0.51 |
| 4:L:615:U:N3 | 4:L:616:U:C5 | 2.78 | 0.51 |
| 4:L:666:U:C4 | 4:L:667:U:C4 | 2.99 | 0.51 |
| 5:M:399:U:C2' | 5:M:400:U:O5' | 2.58 | 0.51 |
| 5:M:470:U:C2 | 5:M:471:U:C5 | 2.99 | 0.51 |
| 5:M:484:U:C4 | 5:M:485:U:C5 | 2.98 | 0.51 |
| 5:M:509:U:O2 | 5:M:510:U:C6 | 2.63 | 0.51 |
| 5:M:512:U:C4 | 5:M:513:U:C4 | 2.98 | 0.51 |
| 6:N:360:U:H2' | 6:N:361:U:H6 | 1.75 | 0.51 |
| 6:N:362:U:C2' | 6:N:363:U:O5' | 2.58 | 0.51 |
| 6:N:411:U:C2 | 6:N:412:U:C5 | 2.98 | 0.51 |
| 6:N:519:U:C3' | 6:N:520:U:P | 2.96 | 0.51 |
| 1:I:120:A:C2 | 1:I:121:A:C5 | 2.99 | 0.51 |
| 1:I:122:A:H2' | 1:I:123:A:H8 | 1.76 | 0.51 |
| 1:I:136:A:N3 | 1:I:137:A:C1' | 2.73 | 0.51 |
| 1:I:165:A:C6 | 1:I:166:A:N6 | 2.78 | 0.51 |
| 1:I:20:A:C2 | 1:I:21:A:C4 | 2.99 | 0.51 |
| 1:I:25:A:N1 | 1:I:26:A:C5 | 2.79 | 0.51 |
| 1:I:26:A:C6 | 1:I:27:A:C5 | 2.99 | 0.51 |
| 1:I:310:A:C5 | 1:I:311:A:N7 | 2.78 | 0.51 |
| 1:I:405:A:C6 | 1:I:406:A:C5 | 2.99 | 0.51 |
| 1:I:404:A:C4 | 1:I:405:A:N7 | 2.78 | 0.51 |
| 1:I:411:A:H2' | 1:I:412:A:H8 | 1.75 | 0.51 |
| 2:J:12:A:N1 | 2:J:13:A:C5 | 2.78 | 0.51 |
| 2:J:145:A:N1 | 2:J:146:A:C5 | 2.78 | 0.51 |
| 2:J:151:A:C2' | 2:J:152:A:C5' | 2.88 | 0.51 |
| 2:J:167:A:O2' | 2:J:168:A:H5' | 2.11 | 0.51 |
| 2:J:174:A:C4 | 2:J:175:A:C8 | 2.99 | 0.51 |
| 2:J:180:A:N3 | 2:J:181:A:C8 | 2.78 | 0.51 |
| 2:J:185:A:H2' | 2:J:186:A:H8 | 1.76 | 0.51 |
| 2:J:218:A:N1 | 2:J:219:A:C5 | 2.79 | 0.51 |
| 2:J:46:A:C6 | 2:J:47:A:N7 | 2.79 | 0.51 |
| 3:K:122:A:C2 | 3:K:123:A:C8 | 2.99 | 0.51 |
| 3:K:135:A:N1 | 3:K:136:A:C5 | 2.78 | 0.51 |
| 3:K:253:A:N3 | 3:K:254:A:C8 | 2.79 | 0.51 |
| 3:K:42:A:H2' | 3:K:43:A:H8 | 1.76 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:62:A:C6 | 3:K:63:A:C5 | 2.99 | 0.51 |
| 3:K:71:A:C2 | 3:K:72:A:C8 | 2.97 | 0.51 |
| 4:L:451:U:H3' | 4:L:452:U:P | 2.46 | 0.51 |
| 4:L:501:U:HO2' | 4:L:502:U:C5' | 2.02 | 0.51 |
| 4:L:578:U:H2' | 4:L:579:U:O5' | 2.11 | 0.51 |
| 4:L:587:U:H2' | 4:L:588:U:C5' | 2.37 | 0.51 |
| 4:L:602:U:H2' | 4:L:603:U:C6 | 2.37 | 0.51 |
| 4:L:629:U:H2' | 4:L:630:U:O5' | 2.09 | 0.51 |
| 4:L:629:U:C2' | 4:L:630:U:C5' | 2.89 | 0.51 |
| 4:L:719:U:H2' | 4:L:720:U:C5 | 2.45 | 0.51 |
| 4:L:733:U:O2 | 4:L:734:U:C6 | 2.64 | 0.51 |
| 4:L:769:U:N3 | 4:L:770:U:C5 | 2.79 | 0.51 |
| 4:L:784:U:C2 | 4:L:785:U:C5 | 2.98 | 0.51 |
| 5:M:386:U:O2' | 5:M:387:U:H5' | 2.10 | 0.51 |
| 5:M:396:U:C2' | 5:M:397:U:O4' | 2.57 | 0.51 |
| 5:M:405:U:O2' | 5:M:406:U:O4' | 2.26 | 0.51 |
| 6:N:363:U:N3 | 6:N:364:U:C4 | 2.78 | 0.51 |
| 6:N:424:U:N1 | 6:N:425:U:C5 | 2.79 | 0.51 |
| 6:N:480:U:H2' | 6:N:481:U:H6 | 1.74 | 0.51 |
| 1:I:112:A:O2' | 1:I:113:A:C4' | 2.59 | 0.51 |
| 1:I:128:A:N6 | 1:I:129:A:C6 | 2.78 | 0.51 |
| 1:I:176:A:C6 | 1:I:177:A:N6 | 2.79 | 0.51 |
| 1:I:241:A:C6 | 1:I:242:A:C6 | 2.99 | 0.51 |
| 1:I:263:A:O2' | 1:I:264:A:C5' | 2.50 | 0.51 |
| 1:I:282:A:N1 | 1:I:283:A:C6 | 2.79 | 0.51 |
| 1:I:337:A:C2 | 1:I:338:A:N9 | 2.79 | 0.51 |
| 1:I:36:A:O2' | 1:I:37:A:H5' | 2.11 | 0.51 |
| 1:I:72:A:N6 | 1:I:73:A:N6 | 2.58 | 0.51 |
| 2:J:120:A:C2' | 2:J:121:A:H5' | 2.34 | 0.51 |
| 2:J:123:A:O2' | 2:J:124:A:O4' | 2.28 | 0.51 |
| 2:J:133:A:H2' | 2:J:134:A:C5' | 2.40 | 0.51 |
| 2:J:24:A:C2 | 2:J:25:A:C5 | 2.99 | 0.51 |
| 2:J:30:A:H2' | 2:J:31:A:H8 | 1.76 | 0.51 |
| 2:J:34:A:H2' | 2:J:35:A:O5' | 2.10 | 0.51 |
| 2:J:96:A:C2' | 2:J:97:A:H5' | 2.40 | 0.51 |
| 3:K:109:A:C2' | 3:K:110:A:C5' | 2.88 | 0.51 |
| 3:K:38:A:C2 | 3:K:39:A:N7 | 2.78 | 0.51 |
| 3:K:70:A:C4 | 3:K:71:A:C8 | 2.99 | 0.51 |
| 3:K:82:A:C2 | 3:K:83:A:C5 | 2.99 | 0.51 |
| 4:L:463:U:H2' | 4:L:464:U:O4' | 2.10 | 0.51 |
| 4:L:568:U:H2' | 4:L:569:U:H6 | 1.76 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:626:U:H2' | 4:L:627:U:H6 | 1.75 | 0.51 |
| 4:L:672:U:C2 | 4:L:673:U:C6 | 2.98 | 0.51 |
| 4:L:671:U:C2 | 4:L:672:U:C6 | 2.99 | 0.51 |
| 4:L:717:U:N1 | 4:L:718:U:C5 | 2.79 | 0.51 |
| 4:L:723:U:C5 | 4:L:724:U:O4 | 2.60 | 0.51 |
| 4:L:748:U:H2' | 4:L:749:U:H6 | 1.76 | 0.51 |
| 5:M:362:U:C4 | 5:M:363:U:O4 | 2.63 | 0.51 |
| 5:M:470:U:H2' | 5:M:471:U:H6 | 1.75 | 0.51 |
| 5:M:526:U:C2 | 5:M:527:U:C5 | 2.99 | 0.51 |
| 5:M:536:U:C2 | 5:M:537:U:C6 | 2.99 | 0.51 |
| 6:N:286:U:O2' | 6:N:287:U:H5' | 2.10 | 0.51 |
| 6:N:320:U:HO2' | 6:N:321:U:C4' | 2.24 | 0.51 |
| 6:N:363:U:H2' | 6:N:364:U:H6 | 1.75 | 0.51 |
| 6:N:394:U:H2' | 6:N:395:U:H6 | 1.74 | 0.51 |
| 6:N:426:U:O2 | 6:N:427:U:N1 | 2.44 | 0.51 |
| 6:N:484:U:H2' | 6:N:485:U:H6 | 1.75 | 0.51 |
| 1:I:105:A:H2' | 1:I:106:A:C8 | 2.46 | 0.51 |
| 1:I:167:A:C2' | 1:I:168:A:C5' | 2.89 | 0.51 |
| 1:I:212:A:C2 | 1:I:213:A:C5 | 2.99 | 0.51 |
| 1:I:222:A:C2 | 1:I:223:A:C5 | 2.99 | 0.51 |
| 1:I:21:A:N6 | 1:I:22:A:N6 | 2.59 | 0.51 |
| 1:I:240:A:H2' | 1:I:241:A:C8 | 2.38 | 0.51 |
| 1:I:248:A:C2 | 1:I:249:A:N7 | 2.78 | 0.51 |
| 1:I:260:A:C2 | 1:I:261:A:N9 | 2.79 | 0.51 |
| 1:I:353:A:C2' | 1:I:354:A:C4' | 2.89 | 0.51 |
| 1:I:74:A:H2' | 1:I:75:A:C5' | 2.15 | 0.51 |
| 2:J:120:A:C2' | 2:J:121:A:C5' | 2.88 | 0.51 |
| 2:J:13:A:O2' | 2:J:14:A:P | 2.61 | 0.51 |
| 2:J:208:A:O2' | 2:J:209:A:H5' | 2.10 | 0.51 |
| 2:J:229:A:N3 | 2:J:230:A:C8 | 2.79 | 0.51 |
| 2:J:59:A:C2 | 2:J:60:A:C8 | 2.99 | 0.51 |
| 2:J:8:A:H2' | 2:J:9:A:O4' | 2.11 | 0.51 |
| 3:K:101:A:C6 | 3:K:102:A:C6 | 2.99 | 0.51 |
| 3:K:113:A:C2' | 3:K:114:A:C5' | 2.88 | 0.51 |
| 3:K:82:A:N3 | 3:K:83:A:C8 | 2.79 | 0.51 |
| 4:L:530:U:H2' | 4:L:531:U:C5' | 2.40 | 0.51 |
| 4:L:542:U:O2' | 4:L:543:U:H5' | 2.10 | 0.51 |
| 4:L:562:U:C2 | 4:L:563:U:C6 | 2.99 | 0.51 |
| 4:L:618:U:C2' | 4:L:619:U:C5' | 2.89 | 0.51 |
| 4:L:658:U:H2' | 4:L:659:U:C5' | 2.40 | 0.51 |
| 4:L:698:U:C2' | 4:L:699:U:O5' | 2.59 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:802:U:H2' | 4:L:803:U:O4' | 2.11 | 0.51 |
| 5:M:353:U:C2 | 5:M:354:U:C6 | 2.98 | 0.51 |
| 5:M:372:U:H2' | 5:M:373:U:C5' | 2.40 | 0.51 |
| 5:M:464:U:O2' | 5:M:465:U:P | 2.60 | 0.51 |
| 5:M:476:U:H2' | 5:M:477:U:H6 | 1.75 | 0.51 |
| 6:N:332:U:C4 | 6:N:333:U:C4 | 2.99 | 0.51 |
| 6:N:375:U:C4 | 6:N:376:U:O4 | 2.64 | 0.51 |
| 1:I:197:A:C2 | 1:I:198:A:C4 | 2.99 | 0.50 |
| 1:I:281:A:H2' | 1:I:282:A:H8 | 1.76 | 0.50 |
| 1:I:291:A:H2' | 1:I:292:A:O5' | 2.11 | 0.50 |
| 1:I:53:A:C2' | 1:I:54:A:O5' | 2.55 | 0.50 |
| 1:I:84:A:H2' | 1:I:85:A:H8 | 1.77 | 0.50 |
| 2:J:12:A:C6 | 2:J:13:A:C5 | 2.99 | 0.50 |
| 2:J:18:A:H2' | 2:J:19:A:C8 | 2.44 | 0.50 |
| 2:J:25:A:H2' | 2:J:26:A:H8 | 1.76 | 0.50 |
| 2:J:38:A:C2 | 2:J:39:A:C4 | 2.99 | 0.50 |
| 2:J:64:A:N3 | 2:J:65:A:C8 | 2.79 | 0.50 |
| 2:J:8:A:C2' | 2:J:9:A:O4' | 2.58 | 0.50 |
| 3:K:217:A:N6 | 3:K:218:A:H62 | 2.09 | 0.50 |
| 3:K:91:A:H2' | 3:K:92:A:C8 | 2.43 | 0.50 |
| 4:L:470:U:C2 | 4:L:471:U:C5 | 2.99 | 0.50 |
| 4:L:544:U:H2' | 4:L:545:U:C6 | 2.46 | 0.50 |
| 4:L:574:U:C6 | 4:L:575:U:H5 | 2.30 | 0.50 |
| 4:L:605:U:H2' | 4:L:606:U:C5' | 2.41 | 0.50 |
| 4:L:640:U:N3 | 4:L:641:U:O4 | 2.44 | 0.50 |
| 4:L:723:U:H3' | 4:L:724:U:H6 | 1.76 | 0.50 |
| 5:M:333:U:O2 | 5:M:334:U:C6 | 2.64 | 0.50 |
| 5:M:363:U:H2' | 5:M:364:U:C6 | 2.46 | 0.50 |
| 5:M:410:U:C5 | 5:M:411:U:C5 | 2.99 | 0.50 |
| 5:M:420:U:O2' | 5:M:421:U:C4' | 2.58 | 0.50 |
| 5:M:432:U:H2' | 5:M:433:U:C5' | 2.40 | 0.50 |
| 5:M:484:U:C2 | 5:M:485:U:C6 | 2.99 | 0.50 |
| 5:M:518:U:H2' | 5:M:519:U:H6 | 1.76 | 0.50 |
| 6:N:340:U:H2' | 6:N:341:U:C6 | 2.46 | 0.50 |
| 6:N:350:U:H2' | 6:N:351:U:C6 | 2.46 | 0.50 |
| 6:N:430:U:O2 | 6:N:431:U:C6 | 2.64 | 0.50 |
| 1:I:9:A:C2 | 1:I:10:A:C5 | 2.99 | 0.50 |
| 1:I:222:A:C2 | 1:I:223:A:C4 | 2.99 | 0.50 |
| 1:I:265:A:N1 | 1:I:266:A:C5 | 2.79 | 0.50 |
| 1:I:27:A:N3 | 1:I:28:A:C8 | 2.79 | 0.50 |
| 1:I:326:A:C2 | 1:I:327:A:C4 | 2.99 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:327:A:O2' | 1:I:328:A:C5' | 2.52 | 0.50 |
| 1:I:77:A:C2' | 1:I:78:A:C5' | 2.89 | 0.50 |
| 2:J:190:A:C6 | 2:J:191:A:N6 | 2.78 | 0.50 |
| 2:J:210:A:H2' | 2:J:211:A:C4' | 2.41 | 0.50 |
| 2:J:35:A:N3 | 2:J:36:A:C8 | 2.80 | 0.50 |
| 3:K:108:A:C6 | 3:K:109:A:N7 | 2.78 | 0.50 |
| 3:K:120:A:C6 | 3:K:121:A:C8 | 2.94 | 0.50 |
| 3:K:143:A:H2' | 3:K:144:A:H8 | 1.76 | 0.50 |
| 3:K:19:A:C3' | 3:K:20:A:P | 2.94 | 0.50 |
| 3:K:254:A:H2' | 3:K:255:A:C5' | 2.40 | 0.50 |
| 4:L:413:U:H2' | 4:L:414:U:C6 | 2.46 | 0.50 |
| 4:L:434:U:H2' | 4:L:435:U:O4' | 2.11 | 0.50 |
| 4:L:584:U:N3 | 4:L:585:U:C5 | 2.79 | 0.50 |
| 4:L:622:U:H2' | 4:L:623:U:O4' | 2.11 | 0.50 |
| 4:L:723:U:C3' | 4:L:724:U:H6 | 2.24 | 0.50 |
| 5:M:299:U:N3 | 5:M:300:U:C4 | 2.79 | 0.50 |
| 5:M:338:U:C2 | 5:M:339:U:C5 | 2.99 | 0.50 |
| 5:M:428:U:O2 | 5:M:429:U:C1' | 2.60 | 0.50 |
| 5:M:441:U:C2' | 5:M:442:U:H5' | 2.39 | 0.50 |
| 6:N:383:U:H2' | 6:N:384:U:O4' | 2.11 | 0.50 |
| 6:N:389:U:O2 | 6:N:390:U:C6 | 2.64 | 0.50 |
| 6:N:431:U:C2' | 6:N:432:U:C4' | 2.86 | 0.50 |
| 6:N:440:U:H2' | 6:N:441:U:H6 | 1.76 | 0.50 |
| 6:N:441:U:N3 | 6:N:442:U:C4 | 2.79 | 0.50 |
| 1:I:137:A:C6 | 1:I:138:A:N7 | 2.80 | 0.50 |
| 1:I:196:A:C2' | 1:I:197:A:O5' | 2.59 | 0.50 |
| 1:I:263:A:C2 | 1:I:264:A:C4 | 3.00 | 0.50 |
| 1:I:299:A:C2' | 1:I:300:A:O5' | 2.58 | 0.50 |
| 1:I:299:A:H2' | 1:I:300:A:H8 | 1.76 | 0.50 |
| 1:I:336:A:H2' | 1:I:337:A:H8 | 1.75 | 0.50 |
| 1:I:343:A:H2' | 1:I:344:A:O5' | 2.12 | 0.50 |
| 1:I:361:A:HO2' | 1:I:362:A:C5' | 2.23 | 0.50 |
| 1:I:392:A:H2' | 1:I:393:A:H8 | 1.76 | 0.50 |
| 1:I:66:A:C6 | 1:I:67:A:C6 | 2.99 | 0.50 |
| 1:I:76:A:C6 | 1:I:77:A:N7 | 2.79 | 0.50 |
| 2:J:106:A:C2 | 2:J:107:A:C4 | 2.99 | 0.50 |
| 2:J:125:A:C5 | 2:J:126:A:N7 | 2.79 | 0.50 |
| 2:J:247:A:O2' | 2:J:248:A:C5' | 2.55 | 0.50 |
| 2:J:40:A:O2' | 2:J:41:A:H5' | 2.11 | 0.50 |
| 2:J:43:A:C6 | 2:J:44:A:N7 | 2.80 | 0.50 |
| 2:J:54:A:H2' | 2:J:55:A:C4' | 2.42 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:93:A:C2 | 2:J:94:A:C5 | 2.99 | 0.50 |
| 3:K:100:A:N3 | 3:K:101:A:N9 | 2.60 | 0.50 |
| 3:K:124:A:HO2' | 3:K:125:A:C5' | 2.25 | 0.50 |
| 3:K:127:A:C2' | 3:K:128:A:O5' | 2.59 | 0.50 |
| 3:K:141:A:C2 | 3:K:142:A:C4 | 2.98 | 0.50 |
| 3:K:249:A:C2 | 3:K:250:A:C4 | 2.99 | 0.50 |
| 3:K:35:A:H2' | 3:K:36:A:C8 | 2.46 | 0.50 |
| 3:K:83:A:C2 | 3:K:84:A:C8 | 3.00 | 0.50 |
| 4:L:521:U:C2 | 4:L:522:U:C6 | 3.00 | 0.50 |
| 4:L:524:U:H2' | 4:L:525:U:C5' | 2.41 | 0.50 |
| 4:L:540:U:O2' | 4:L:541:U:O5' | 2.29 | 0.50 |
| 4:L:554:U:C2 | 4:L:555:U:C4 | 2.97 | 0.50 |
| 4:L:587:U:O2' | 4:L:588:U:C4' | 2.59 | 0.50 |
| 4:L:627:U:C2' | 4:L:628:U:C5' | 2.89 | 0.50 |
| 4:L:703:U:N3 | 4:L:704:U:C4 | 2.79 | 0.50 |
| 4:L:751:U:N3 | 4:L:752:U:C5 | 2.80 | 0.50 |
| 4:L:783:U:O2' | 4:L:784:U:O5' | 2.29 | 0.50 |
| 5:M:287:U:H2' | 5:M:288:U:C6 | 2.39 | 0.50 |
| 5:M:454:U:N1 | 5:M:455:U:C6 | 2.78 | 0.50 |
| 6:N:401:U:C2 | 6:N:402:U:C5 | 3.00 | 0.50 |
| 1:I:119:A:C2 | 1:I:120:A:C1' | 2.95 | 0.50 |
| 1:I:176:A:H2' | 1:I:177:A:H8 | 1.76 | 0.50 |
| 1:I:187:A:C6 | 1:I:188:A:C5 | 3.00 | 0.50 |
| 1:I:196:A:C4 | 1:I:197:A:C8 | 2.99 | 0.50 |
| 1:I:21:A:C6 | 1:I:22:A:C5 | 3.00 | 0.50 |
| 1:I:223:A:C2 | 1:I:224:A:C4 | 2.99 | 0.50 |
| 1:I:244:A:C2' | 1:I:245:A:O5' | 2.59 | 0.50 |
| 1:I:287:A:C3' | 1:I:288:A:C5' | 2.49 | 0.50 |
| 1:I:304:A:N3 | 1:I:305:A:C8 | 2.79 | 0.50 |
| 1:I:307:A:C2' | 1:I:308:A:C5' | 2.90 | 0.50 |
| 1:I:324:A:C2 | 1:I:325:A:N9 | 2.80 | 0.50 |
| 1:I:342:A:C2 | 1:I:343:A:C8 | 2.99 | 0.50 |
| 1:I:52:A:H2' | 1:I:53:A:O5' | 2.11 | 0.50 |
| 2:J:104:A:H2' | 2:J:105:A:O5' | 2.11 | 0.50 |
| 2:J:127:A:C4 | 2:J:128:A:C8 | 3.00 | 0.50 |
| 2:J:185:A:C4 | 2:J:186:A:C8 | 2.99 | 0.50 |
| 2:J:216:A:H2' | 2:J:217:A:C8 | 2.46 | 0.50 |
| 2:J:28:A:H2' | 2:J:29:A:C8 | 2.46 | 0.50 |
| 2:J:32:A:N1 | 2:J:33:A:C5 | 2.79 | 0.50 |
| 2:J:92:A:HO2' | 2:J:93:A:C5' | 2.24 | 0.50 |
| 3:K:111:A:C2 | 3:K:112:A:C8 | 2.99 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:120:A:C6 | 3:K:121:A:C6 | 2.97 | 0.50 |
| 3:K:191:A:H2' | 3:K:192:A:O4' | 2.10 | 0.50 |
| 3:K:213:A:O2' | 3:K:214:A:H5' | 2.11 | 0.50 |
| 3:K:71:A:C2' | 3:K:72:A:C8 | 2.79 | 0.50 |
| 3:K:77:A:C2' | 3:K:78:A:C5' | 2.88 | 0.50 |
| 4:L:471:U:C2 | 4:L:472:U:C5 | 2.99 | 0.50 |
| 4:L:480:U:N3 | 4:L:481:U:C5 | 2.79 | 0.50 |
| 4:L:533:U:C2' | 4:L:534:U:O5' | 2.59 | 0.50 |
| 4:L:544:U:H2' | 4:L:545:U:C5' | 2.39 | 0.50 |
| 4:L:550:U:O2' | 4:L:551:U:P | 2.65 | 0.50 |
| 4:L:589:U:HO2' | 4:L:590:U:H5' | 1.74 | 0.50 |
| 4:L:595:U:H2' | 4:L:596:U:C5' | 2.40 | 0.50 |
| 4:L:619:U:C2 | 4:L:620:U:C5 | 3.00 | 0.50 |
| 4:L:652:U:H2' | 4:L:653:U:H6 | 1.75 | 0.50 |
| 4:L:666:U:H2' | 4:L:667:U:H6 | 1.77 | 0.50 |
| 4:L:674:U:C3' | 4:L:675:U:C5' | 2.78 | 0.50 |
| 4:L:691:U:C2 | 4:L:692:U:C6 | 3.00 | 0.50 |
| 4:L:811:U:C6 | 4:L:812:U:C5 | 3.00 | 0.50 |
| 5:M:358:U:C2 | 5:M:359:U:C5 | 2.99 | 0.50 |
| 5:M:516:U:N3 | 5:M:517:U:C5 | 2.79 | 0.50 |
| 5:M:539:U:C2 | 5:M:540:U:C5 | 2.99 | 0.50 |
| 5:M:541:U:C2' | 5:M:542:U:H5' | 2.41 | 0.50 |
| 5:M:545:U:H2' | 5:M:546:U:H6 | 1.76 | 0.50 |
| 6:N:419:U:N3 | 6:N:420:U:C5 | 2.79 | 0.50 |
| 6:N:455:U:HO3' | 6:N:456:U:P | 2.31 | 0.50 |
| 6:N:521:U:H2' | 6:N:522:U:H6 | 1.77 | 0.50 |
| 1:I:118:A:C2 | 1:I:119:A:N7 | 2.80 | 0.50 |
| 1:I:135:A:C6 | 1:I:136:A:C5 | 3.00 | 0.50 |
| 1:I:175:A:N1 | 1:I:176:A:N6 | 2.59 | 0.50 |
| 1:I:243:A:H62 | 1:I:244:A:H62 | 1.50 | 0.50 |
| 1:I:262:A:C6 | 1:I:263:A:C5 | 2.99 | 0.50 |
| 1:I:305:A:C5 | 1:I:306:A:N7 | 2.80 | 0.50 |
| 1:I:307:A:C4 | 1:I:308:A:C8 | 3.00 | 0.50 |
| 1:I:33:A:H2' | 1:I:34:A:O4' | 2.12 | 0.50 |
| 1:I:73:A:C4 | 1:I:74:A:N7 | 2.80 | 0.50 |
| 1:I:81:A:H2' | 1:I:82:A:C5' | 2.42 | 0.50 |
| 2:J:33:A:C5 | 2:J:34:A:N7 | 2.80 | 0.50 |
| 2:J:45:A:C2 | 2:J:46:A:N7 | 2.80 | 0.50 |
| 2:J:53:A:N3 | 2:J:54:A:C8 | 2.80 | 0.50 |
| 2:J:5:A:N3 | 2:J:6:A:C8 | 2.79 | 0.50 |
| 2:J:73:A:O2' | 2:J:74:A:C5' | 2.59 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:93:A:O2' | 2:J:94:A:C5' | 2.49 | 0.50 |
| 3:K:120:A:N3 | 3:K:121:A:C8 | 2.79 | 0.50 |
| 3:K:198:A:C6 | 3:K:199:A:N6 | 2.80 | 0.50 |
| 3:K:212:A:C3' | 3:K:213:A:H8 | 2.25 | 0.50 |
| 3:K:221:A:H2' | 3:K:222:A:C8 | 2.47 | 0.50 |
| 3:K:232:A:O2' | 3:K:233:A:H5' | 2.11 | 0.50 |
| 4:L:417:U:H2' | 4:L:418:U:C6 | 2.46 | 0.50 |
| 4:L:706:U:H2' | 4:L:707:U:C5' | 2.42 | 0.50 |
| 5:M:312:U:C3' | 5:M:313:U:P | 2.99 | 0.50 |
| 5:M:473:U:H2' | 5:M:474:U:O5' | 2.10 | 0.50 |
| 6:N:329:U:C2' | 6:N:330:U:C6 | 2.84 | 0.50 |
| 6:N:362:U:C2 | 6:N:363:U:C6 | 3.00 | 0.50 |
| 6:N:402:U:N3 | 6:N:403:U:C4 | 2.79 | 0.50 |
| 6:N:421:U:C2 | 6:N:422:U:C6 | 3.00 | 0.50 |
| 6:N:441:U:HO2' | 6:N:442:U:H5' | 1.72 | 0.50 |
| 1:I:220:A:N3 | 1:I:221:A:C8 | 2.80 | 0.50 |
| 1:I:21:A:N1 | 1:I:22:A:C6 | 2.80 | 0.50 |
| 1:I:270:A:C5 | 1:I:271:A:N7 | 2.80 | 0.50 |
| 1:I:294:A:N6 | 4:L:532:U:O4 | 2.44 | 0.50 |
| 1:I:80:A:C2 | 1:I:81:A:C8 | 2.99 | 0.50 |
| 2:J:175:A:C4 | 2:J:176:A:C8 | 3.00 | 0.50 |
| 2:J:191:A:H2' | 2:J:192:A:O4' | 2.11 | 0.50 |
| 2:J:206:A:C2' | 2:J:207:A:C4' | 2.88 | 0.50 |
| 2:J:262:A:H2' | 2:J:263:A:C8 | 2.46 | 0.50 |
| 2:J:30:A:C2 | 2:J:31:A:C4 | 2.99 | 0.50 |
| 2:J:49:A:H2' | 2:J:50:A:H8 | 1.77 | 0.50 |
| 2:J:86:A:C2 | 2:J:87:A:C8 | 3.00 | 0.50 |
| 3:K:109:A:C6 | 3:K:110:A:N7 | 2.80 | 0.50 |
| 3:K:154:A:C6 | 3:K:155:A:N6 | 2.77 | 0.50 |
| 3:K:41:A:C4 | 3:K:42:A:C8 | 3.00 | 0.50 |
| 3:K:55:A:H2' | 3:K:56:A:H8 | 1.77 | 0.50 |
| 3:K:65:A:H62 | 3:K:66:A:N6 | 1.94 | 0.50 |
| 4:L:478:U:C2 | 4:L:479:U:C6 | 3.00 | 0.50 |
| 4:L:548:U:C2' | 4:L:549:U:O4' | 2.59 | 0.50 |
| 4:L:695:U:H2' | 4:L:696:U:C5' | 2.31 | 0.50 |
| 4:L:701:U:C2 | 4:L:702:U:C5 | 2.99 | 0.50 |
| 4:L:712:U:N3 | 4:L:713:U:C4 | 2.80 | 0.50 |
| 4:L:757:U:O2' | 4:L:758:U:H5' | 2.12 | 0.50 |
| 4:L:764:U:C6 | 4:L:765:U:H5 | 2.29 | 0.50 |
| 4:L:795:U:N3 | 4:L:796:U:C5 | 2.79 | 0.50 |
| 5:M:293:U:O2' | 5:M:294:U:H5' | 2.12 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:310:U:H2' | 5:M:311:U:C5' | 2.41 | 0.50 |
| 5:M:367:U:H2' | 5:M:368:U:C6 | 2.45 | 0.50 |
| 5:M:390:U:C2 | 5:M:391:U:C5 | 2.99 | 0.50 |
| 5:M:470:U:O2' | 5:M:471:U:H5' | 2.12 | 0.50 |
| 6:N:309:U:C4 | 6:N:310:U:O4 | 2.64 | 0.50 |
| 6:N:353:U:H2' | 6:N:354:U:C6 | 2.46 | 0.50 |
| 6:N:407:U:C2 | 6:N:408:U:C5 | 2.99 | 0.50 |
| 6:N:434:U:O2' | 6:N:435:U:O4' | 2.29 | 0.50 |
| 6:N:476:U:C4 | 6:N:477:U:C4 | 2.99 | 0.50 |
| 6:N:512:U:H2' | 6:N:513:U:H6 | 1.75 | 0.50 |
| 1:I:106:A:C4 | 1:I:107:A:N7 | 2.80 | 0.50 |
| 1:I:230:A:C2 | 1:I:231:A:N9 | 2.80 | 0.50 |
| 1:I:268:A:C2 | 1:I:269:A:H1' | 2.45 | 0.50 |
| 1:I:290:A:H2' | 1:I:291:A:H8 | 1.76 | 0.50 |
| 1:I:321:A:C2 | 1:I:322:A:C8 | 2.99 | 0.50 |
| 1:I:41:A:C2' | 1:I:42:A:O5' | 2.59 | 0.50 |
| 1:I:77:A:C6 | 1:I:78:A:N7 | 2.80 | 0.50 |
| 1:I:90:A:C2 | 1:I:91:A:C5 | 3.00 | 0.50 |
| 2:J:123:A:C4 | 2:J:124:A:C8 | 2.99 | 0.50 |
| 2:J:130:A:C2 | 2:J:131:A:C4 | 3.00 | 0.50 |
| 2:J:183:A:N1 | 2:J:184:A:C5 | 2.80 | 0.50 |
| 2:J:189:A:HO2' | 2:J:190:A:H5' | 1.77 | 0.50 |
| 2:J:193:A:H2' | 2:J:194:A:C5' | 2.40 | 0.50 |
| 2:J:211:A:C2 | 2:J:212:A:C4 | 3.00 | 0.50 |
| 2:J:231:A:C5 | 2:J:232:A:N7 | 2.80 | 0.50 |
| 2:J:235:A:N1 | 2:J:236:A:C5 | 2.79 | 0.50 |
| 2:J:70:A:N3 | 2:J:71:A:C1' | 2.75 | 0.50 |
| 3:K:152:A:C6 | 3:K:153:A:C5 | 2.99 | 0.50 |
| 3:K:37:A:H2' | 3:K:38:A:C8 | 2.44 | 0.50 |
| 3:K:72:A:H2' | 3:K:73:A:O4' | 2.11 | 0.50 |
| 4:L:493:U:N3 | 4:L:494:U:C5 | 2.80 | 0.50 |
| 4:L:579:U:C2' | 4:L:580:U:H5' | 2.42 | 0.50 |
| 4:L:603:U:C2' | 4:L:604:U:O5' | 2.60 | 0.50 |
| 4:L:626:U:C2 | 4:L:627:U:C6 | 3.00 | 0.50 |
| 4:L:685:U:O2 | 4:L:686:U:C6 | 2.64 | 0.50 |
| 4:L:727:U:H2' | 4:L:728:U:C6 | 2.47 | 0.50 |
| 4:L:779:U:H2' | 4:L:780:U:O4' | 2.11 | 0.50 |
| 5:M:293:U:H2' | 5:M:294:U:H6 | 1.77 | 0.50 |
| 5:M:347:U:H2' | 5:M:348:U:C6 | 2.42 | 0.50 |
| 5:M:422:U:H2' | 5:M:423:U:C6 | 2.43 | 0.50 |
| 5:M:463:U:N3 | 5:M:464:U:C4 | 2.79 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:463:U:HO2' | 5:M:464:U:H5' | 1.72 | 0.50 |
| 6:N:317:U:C2' | 6:N:318:U:O4' | 2.59 | 0.50 |
| 6:N:435:U:O2' | 6:N:436:U:P | 2.70 | 0.50 |
| 6:N:462:U:H2' | 6:N:463:U:H6 | 1.77 | 0.50 |
| 1:I:9:A:C2' | 1:I:10:A:C5' | 2.90 | 0.50 |
| 1:I:134:A:C2 | 1:I:135:A:C4 | 2.95 | 0.50 |
| 1:I:13:A:N9 | 1:I:14:A:C8 | 2.78 | 0.50 |
| 1:I:207:A:C2' | 1:I:208:A:O5' | 2.59 | 0.50 |
| 1:I:270:A:C2 | 1:I:271:A:N3 | 2.79 | 0.50 |
| 1:I:276:A:C4 | 1:I:277:A:C8 | 3.00 | 0.50 |
| 1:I:299:A:C4 | 1:I:300:A:C8 | 3.00 | 0.50 |
| 1:I:299:A:N3 | 1:I:300:A:C8 | 2.80 | 0.50 |
| 1:I:318:A:H2' | 1:I:319:A:H8 | 1.76 | 0.50 |
| 1:I:338:A:C4 | 1:I:339:A:C8 | 2.99 | 0.50 |
| 1:I:393:A:H2' | 1:I:394:A:H8 | 1.75 | 0.50 |
| 1:I:57:A:C5 | 1:I:58:A:N7 | 2.80 | 0.50 |
| 1:I:64:A:C5 | 1:I:65:A:N7 | 2.80 | 0.50 |
| 1:I:96:A:C2 | 1:I:97:A:C4 | 3.00 | 0.50 |
| 1:I:97:A:H2' | 1:I:98:A:H8 | 1.77 | 0.50 |
| 2:J:231:A:C6 | 2:J:232:A:C6 | 3.00 | 0.50 |
| 2:J:256:A:O2' | 2:J:257:A:H5' | 2.12 | 0.50 |
| 2:J:44:A:C2 | 2:J:45:A:C4 | 3.00 | 0.50 |
| 2:J:53:A:C2 | 2:J:54:A:C8 | 2.99 | 0.50 |
| 2:J:56:A:N3 | 2:J:57:A:C1' | 2.75 | 0.50 |
| 3:K:115:A:C6 | 3:K:116:A:N6 | 2.80 | 0.50 |
| 3:K:115:A:H2' | 3:K:116:A:O4' | 2.11 | 0.50 |
| 3:K:124:A:C2' | 3:K:125:A:H8 | 2.23 | 0.50 |
| 3:K:132:A:C4 | 3:K:133:A:C8 | 3.00 | 0.50 |
| 3:K:169:A:H2' | 3:K:170:A:O4' | 2.11 | 0.50 |
| 4:L:561:U:O2 | 4:L:562:U:C6 | 2.65 | 0.50 |
| 4:L:566:U:N3 | 4:L:567:U:C5 | 2.79 | 0.50 |
| 4:L:643:U:H2' | 4:L:644:U:C6 | 2.46 | 0.50 |
| 4:L:645:U:H2' | 4:L:646:U:C6 | 2.47 | 0.50 |
| 4:L:664:U:H2' | 4:L:665:U:H6 | 1.75 | 0.50 |
| 4:L:810:U:N3 | 4:L:811:U:C4 | 2.80 | 0.50 |
| 5:M:392:U:H2' | 5:M:393:U:C5' | 2.31 | 0.50 |
| 5:M:473:U:O2 | 5:M:474:U:C6 | 2.64 | 0.50 |
| 5:M:503:U:C2 | 5:M:504:U:C6 | 2.99 | 0.50 |
| 6:N:300:U:C2 | 6:N:301:U:C5 | 3.00 | 0.50 |
| 6:N:350:U:H2' | 6:N:351:U:H6 | 1.77 | 0.50 |
| 6:N:395:U:C2' | 6:N:396:U:H5' | 2.42 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:475:U:C2 | 6:N:476:U:C6 | 3.00 | 0.50 |
| 6:N:490:U:C4 | 6:N:491:U:O4 | 2.65 | 0.50 |
| 1:I:10:A:C2 | 1:I:11:A:C4 | 3.00 | 0.50 |
| 1:I:120:A:N1 | 1:I:121:A:C5 | 2.80 | 0.50 |
| 1:I:158:A:H2' | 1:I:159:A:H8 | 1.77 | 0.50 |
| 1:I:182:A:H2' | 1:I:183:A:O5' | 2.12 | 0.50 |
| 1:I:207:A:H2' | 1:I:208:A:O5' | 2.11 | 0.50 |
| 1:I:236:A:HO2' | 1:I:237:A:C5' | 2.07 | 0.50 |
| 1:I:270:A:C2 | 1:I:271:A:H1' | 2.47 | 0.50 |
| 1:I:271:A:N1 | 1:I:272:A:C5 | 2.76 | 0.50 |
| 1:I:284:A:N3 | 1:I:285:A:C8 | 2.80 | 0.50 |
| 1:I:307:A:H2' | 1:I:308:A:C8 | 2.46 | 0.50 |
| 1:I:315:A:C2 | 1:I:316:A:C4 | 2.99 | 0.50 |
| 1:I:386:A:C6 | 1:I:387:A:C5 | 2.98 | 0.50 |
| 1:I:58:A:C2 | 1:I:59:A:C5 | 3.00 | 0.50 |
| 2:J:117:A:N3 | 2:J:118:A:C1' | 2.75 | 0.50 |
| 2:J:128:A:C6 | 2:J:129:A:C5 | 3.00 | 0.50 |
| 2:J:160:A:C2 | 2:J:161:A:C5 | 3.00 | 0.50 |
| 2:J:57:A:N1 | 2:J:58:A:N7 | 2.59 | 0.50 |
| 2:J:80:A:H2' | 2:J:81:A:C8 | 2.47 | 0.50 |
| 3:K:104:A:O2' | 3:K:105:A:O4' | 2.30 | 0.50 |
| 3:K:152:A:H2' | 3:K:153:A:C8 | 2.47 | 0.50 |
| 3:K:203:A:N1 | 3:K:204:A:N6 | 2.59 | 0.50 |
| 3:K:249:A:C2 | 3:K:250:A:C5 | 2.99 | 0.50 |
| 3:K:254:A:C6 | 3:K:255:A:N7 | 2.79 | 0.50 |
| 3:K:85:A:H2' | 3:K:86:A:O5' | 2.11 | 0.50 |
| 3:K:95:A:C2 | 3:K:96:A:N9 | 2.80 | 0.50 |
| 3:K:96:A:C2' | 3:K:97:A:C4' | 2.89 | 0.50 |
| 4:L:415:U:C2 | 4:L:416:U:C5 | 3.00 | 0.50 |
| 4:L:424:U:N3 | 4:L:425:U:C5 | 2.79 | 0.50 |
| 4:L:433:U:C4 | 4:L:434:U:O4 | 2.65 | 0.50 |
| 4:L:490:U:N3 | 4:L:491:U:C5 | 2.80 | 0.50 |
| 4:L:571:U:N3 | 4:L:572:U:O4 | 2.42 | 0.50 |
| 4:L:710:U:N3 | 4:L:711:U:C5 | 2.80 | 0.50 |
| 4:L:801:U:C2 | 4:L:802:U:C5 | 2.99 | 0.50 |
| 4:L:813:U:O4 | 4:L:814:U:O4 | 2.28 | 0.50 |
| 5:M:343:U:C2 | 5:M:344:U:C5 | 3.00 | 0.50 |
| 5:M:471:U:H2' | 5:M:472:U:C6 | 2.47 | 0.50 |
| 6:N:276:U:H2' | 6:N:277:U:C6 | 2.47 | 0.50 |
| 6:N:526:U:C2 | 6:N:527:U:C6 | 2.99 | 0.50 |
| 1:I:110:A:C2' | 1:I:111:A:O4' | 2.59 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:225:A:C4 | 1:I:226:A:C8 | 3.00 | 0.49 |
| 1:I:47:A:N1 | 1:I:48:A:C6 | 2.80 | 0.49 |
| 1:I:70:A:N1 | 1:I:71:A:C5 | 2.80 | 0.49 |
| 1:I:74:A:H2' | 1:I:75:A:C1' | 2.32 | 0.49 |
| 1:I:76:A:C2' | 1:I:77:A:H5' | 2.41 | 0.49 |
| 2:J:135:A:H2' | 2:J:136:A:H8 | 1.76 | 0.49 |
| 2:J:149:A:N3 | 2:J:150:A:C8 | 2.80 | 0.49 |
| 2:J:151:A:C4 | 2:J:152:A:C8 | 3.00 | 0.49 |
| 2:J:234:A:H2' | 2:J:235:A:O5' | 2.12 | 0.49 |
| 2:J:254:A:H2' | 2:J:255:A:O4' | 2.12 | 0.49 |
| 2:J:266:A:N3 | 2:J:267:A:C8 | 2.80 | 0.49 |
| 2:J:56:A:N1 | 2:J:57:A:C5 | 2.80 | 0.49 |
| 3:K:104:A:HO2' | 3:K:105:A:C4' | 2.22 | 0.49 |
| 3:K:131:A:C6 | 3:K:132:A:C6 | 2.99 | 0.49 |
| 3:K:154:A:O5' | 3:K:155:A:OP2 | 2.30 | 0.49 |
| 3:K:221:A:H2' | 3:K:222:A:H8 | 1.77 | 0.49 |
| 3:K:31:A:C4 | 3:K:32:A:N7 | 2.80 | 0.49 |
| 3:K:98:A:C2' | 3:K:99:A:C5' | 2.89 | 0.49 |
| 4:L:447:U:C2 | 4:L:448:U:C5 | 2.99 | 0.49 |
| 4:L:450:U:HO2' | 4:L:451:U:H5' | 1.68 | 0.49 |
| 4:L:544:U:C4 | 4:L:545:U:O4 | 2.65 | 0.49 |
| 4:L:559:U:C4 | 4:L:560:U:C4 | 3.00 | 0.49 |
| 4:L:568:U:N3 | 4:L:569:U:C4 | 2.80 | 0.49 |
| 4:L:597:U:HO2' | 4:L:598:U:C5' | 1.94 | 0.49 |
| 4:L:693:U:N1 | 4:L:694:U:C5 | 2.77 | 0.49 |
| 4:L:782:U:O2' | 4:L:783:U:C5' | 2.56 | 0.49 |
| 6:N:422:U:N3 | 6:N:423:U:C4 | 2.80 | 0.49 |
| 6:N:490:U:N3 | 6:N:491:U:C4 | 2.79 | 0.49 |
| 6:N:527:U:N3 | 6:N:528:U:C5 | 2.80 | 0.49 |
| 1:I:154:A:H2' | 1:I:155:A:C8 | 2.45 | 0.49 |
| 1:I:210:A:H2' | 1:I:211:A:H8 | 1.77 | 0.49 |
| 1:I:241:A:C2 | 1:I:242:A:C5 | 3.00 | 0.49 |
| 1:I:259:A:C2 | 1:I:260:A:C4 | 3.01 | 0.49 |
| 1:I:313:A:N6 | 1:I:314:A:N6 | 2.60 | 0.49 |
| 1:I:317:A:C2 | 1:I:318:A:C5 | 3.00 | 0.49 |
| 1:I:325:A:H61 | 1:I:326:A:N6 | 2.00 | 0.49 |
| 1:I:371:A:C2' | 1:I:372:A:H5' | 2.41 | 0.49 |
| 1:I:405:A:H2' | 1:I:406:A:H8 | 1.77 | 0.49 |
| 1:I:41:A:N1 | 1:I:42:A:C5 | 2.80 | 0.49 |
| 1:I:74:A:H2' | 1:I:75:A:H8 | 1.77 | 0.49 |
| 2:J:200:A:C4 | 2:J:201:A:C8 | 3.00 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:229:A:H2' | 2:J:230:A:C5' | 2.33 | 0.49 |
| 2:J:231:A:H61 | 2:J:232:A:N6 | 2.03 | 0.49 |
| 2:J:258:A:C2' | 2:J:259:A:H5' | 2.42 | 0.49 |
| 2:J:48:A:C6 | 2:J:49:A:N7 | 2.80 | 0.49 |
| 2:J:68:A:C4 | 2:J:69:A:N7 | 2.80 | 0.49 |
| 2:J:84:A:N1 | 2:J:85:A:C4 | 2.80 | 0.49 |
| 2:J:8:A:H2' | 2:J:9:A:O5' | 2.11 | 0.49 |
| 3:K:81:A:C2' | 3:K:82:A:O4' | 2.58 | 0.49 |
| 4:L:418:U:H2' | 4:L:419:U:H6 | 1.77 | 0.49 |
| 4:L:463:U:HO2' | 4:L:464:U:C4' | 2.25 | 0.49 |
| 4:L:526:U:C2' | 4:L:527:U:C5' | 2.89 | 0.49 |
| 4:L:612:U:C2 | 4:L:613:U:C5 | 3.00 | 0.49 |
| 4:L:641:U:O2 | 4:L:642:U:N1 | 2.44 | 0.49 |
| 4:L:704:U:N3 | 4:L:705:U:C5 | 2.80 | 0.49 |
| 4:L:740:U:C2 | 4:L:741:U:C5 | 2.99 | 0.49 |
| 4:L:805:U:O2' | 4:L:806:U:H5' | 2.12 | 0.49 |
| 5:M:330:U:H2' | 5:M:331:U:O5' | 2.11 | 0.49 |
| 5:M:336:U:O2' | 5:M:337:U:C5' | 2.45 | 0.49 |
| 5:M:373:U:N3 | 5:M:374:U:C5 | 2.80 | 0.49 |
| 5:M:434:U:H2' | 5:M:435:U:H6 | 1.77 | 0.49 |
| 5:M:490:U:O2 | 5:M:491:U:C6 | 2.65 | 0.49 |
| 5:M:491:U:O2 | 5:M:492:U:C6 | 2.65 | 0.49 |
| 5:M:509:U:H2' | 5:M:510:U:O5' | 2.12 | 0.49 |
| 5:M:537:U:C4 | 5:M:538:U:C5 | 3.00 | 0.49 |
| 6:N:311:U:H2' | 6:N:312:U:C1' | 2.37 | 0.49 |
| 6:N:460:U:H2' | 6:N:461:U:H5 | 1.75 | 0.49 |
| 1:I:231:A:H61 | 1:I:232:A:N6 | 2.08 | 0.49 |
| 1:I:287:A:H2' | 1:I:288:A:C8 | 2.47 | 0.49 |
| 1:I:27:A:H2' | 1:I:28:A:O5' | 2.12 | 0.49 |
| 1:I:316:A:C6 | 1:I:317:A:C6 | 2.99 | 0.49 |
| 1:I:319:A:C5 | 1:I:320:A:N7 | 2.80 | 0.49 |
| 1:I:384:A:C3' | 1:I:385:A:P | 2.96 | 0.49 |
| 1:I:52:A:H2' | 1:I:53:A:C5' | 2.41 | 0.49 |
| 1:I:80:A:C6 | 1:I:81:A:N7 | 2.80 | 0.49 |
| 1:I:91:A:C4 | 1:I:92:A:C8 | 3.00 | 0.49 |
| 1:I:97:A:C2 | 1:I:98:A:C8 | 3.00 | 0.49 |
| 2:J:151:A:H2' | 2:J:152:A:O4' | 2.12 | 0.49 |
| 2:J:164:A:H2' | 2:J:165:A:H8 | 1.77 | 0.49 |
| 2:J:217:A:C6 | 2:J:218:A:C6 | 3.00 | 0.49 |
| 2:J:57:A:O2' | 2:J:58:A:H5' | 2.13 | 0.49 |
| 2:J:65:A:H2' | 2:J:66:A:H8 | 1.76 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 2:J:90:A:H2' | 2:J:91:A:C8 | 2.47 | 0.49 |
| 2:J:93:A:C6 | 2:J:94:A:C5 | 3.00 | 0.49 |
| 3:K:105:A:H2' | 3:K:106:A:N9 | 2.19 | 0.49 |
| 3:K:154:A:N1 | 3:K:155:A:C6 | 2.80 | 0.49 |
| 3:K:173:A:C2 | 3:K:174:A:C8 | 3.00 | 0.49 |
| 3:K:195:A:H2' | 3:K:196:A:H8 | 1.75 | 0.49 |
| 3:K:37:A:O2' | 3:K:38:A:H5' | 2.12 | 0.49 |
| 3:K:41:A:C2 | 3:K:42:A:C5 | 3.00 | 0.49 |
| 3:K:50:A:O2' | 3:K:51:A:H5' | 2.12 | 0.49 |
| 3:K:59:A:C2 | 3:K:60:A:C4 | 3.01 | 0.49 |
| 3:K:76:A:H2' | 3:K:77:A:O4' | 2.12 | 0.49 |
| 4:L:485:U:H2' | 4:L:486:U:H6 | 1.77 | 0.49 |
| 4:L:586:U:C2' | 4:L:587:U:H6 | 2.21 | 0.49 |
| 4:L:647:U:C2' | 4:L:648:U:O5' | 2.61 | 0.49 |
| 4:L:709:U:H2' | 4:L:710:U:H6 | 1.77 | 0.49 |
| 4:L:811:U:N1 | 4:L:812:U:C5 | 2.78 | 0.49 |
| 5:M:364:U:C2' | 5:M:365:U:O5' | 2.58 | 0.49 |
| 5:M:499:U:N3 | 5:M:500:U:C5 | 2.80 | 0.49 |
| 5:M:504:U:H2' | 5:M:505:U:C5' | 2.42 | 0.49 |
| 3:K:120:A:C2 | 6:N:412:U:C2 | 3.00 | 0.49 |
| 6:N:442:U:C2 | 6:N:443:U:C5 | 2.99 | 0.49 |
| 6:N:444:U:N3 | 6:N:445:U:C5 | 2.80 | 0.49 |
| 6:N:446:U:O2 | 6:N:447:U:C5 | 2.66 | 0.49 |
| 1:I:118:A:N6 | 1:I:119:A:N6 | 2.60 | 0.49 |
| 1:I:17:A:N6 | 4:L:809:U:O4 | 2.46 | 0.49 |
| 1:I:206:A:C2 | 1:I:207:A:C4 | 3.00 | 0.49 |
| 1:I:236:A:H2' | 1:I:237:A:C5' | 2.28 | 0.49 |
| 1:I:25:A:HO2' | 1:I:26:A:C5' | 2.08 | 0.49 |
| 1:I:315:A:C4 | 1:I:316:A:C8 | 3.01 | 0.49 |
| 1:I:325:A:C5 | 1:I:326:A:N7 | 2.81 | 0.49 |
| 1:I:45:A:HO2' | 1:I:46:A:H5' | 1.76 | 0.49 |
| 1:I:56:A:H2 | 1:I:57:A:C4 | 2.27 | 0.49 |
| 1:I:67:A:N9 | 1:I:68:A:C8 | 2.80 | 0.49 |
| 2:J:120:A:C2 | 2:J:121:A:N9 | 2.80 | 0.49 |
| 2:J:12:A:C2' | 2:J:13:A:H5' | 2.42 | 0.49 |
| 2:J:129:A:C2' | 2:J:130:A:O4' | 2.54 | 0.49 |
| 2:J:14:A:C2 | 5:M:540:U:C2 | 3.00 | 0.49 |
| 2:J:13:A:C2' | 2:J:14:A:C5' | 2.90 | 0.49 |
| 2:J:160:A:N3 | 2:J:161:A:N9 | 2.59 | 0.49 |
| 2:J:207:A:C6 | 2:J:208:A:C5 | 3.00 | 0.49 |
| 2:J:249:A:H2' | 2:J:250:A:O4' | 2.12 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:113:A:C2 | 3:K:114:A:C5 | 3.00 | 0.49 |
| 3:K:129:A:C2' | 3:K:130:A:C5' | 2.91 | 0.49 |
| 3:K:138:A:N1 | 3:K:139:A:C6 | 2.80 | 0.49 |
| 3:K:154:A:C2 | 3:K:155:A:C5 | 3.01 | 0.49 |
| 3:K:239:A:O2' | 3:K:240:A:C5' | 2.49 | 0.49 |
| 3:K:54:A:N3 | 3:K:55:A:N7 | 2.60 | 0.49 |
| 3:K:57:A:N6 | 3:K:58:A:N6 | 2.60 | 0.49 |
| 3:K:92:A:C2 | 3:K:93:A:C4 | 3.01 | 0.49 |
| 4:L:430:U:H2' | 4:L:431:U:H6 | 1.76 | 0.49 |
| 4:L:539:U:O2' | 4:L:540:U:H5' | 2.12 | 0.49 |
| 4:L:540:U:C2' | 4:L:541:U:O5' | 2.59 | 0.49 |
| 4:L:548:U:N3 | 4:L:549:U:C5 | 2.81 | 0.49 |
| 4:L:560:U:H2' | 4:L:561:U:O5' | 2.11 | 0.49 |
| 4:L:594:U:O2 | 4:L:595:U:C6 | 2.66 | 0.49 |
| 4:L:598:U:H2' | 4:L:599:U:C5' | 2.41 | 0.49 |
| 4:L:649:U:C2' | 4:L:650:U:O4' | 2.53 | 0.49 |
| 4:L:691:U:C2' | 4:L:692:U:C5' | 2.90 | 0.49 |
| 5:M:316:U:H2' | 5:M:317:U:H6 | 1.76 | 0.49 |
| 5:M:396:U:H2' | 5:M:397:U:O5' | 2.12 | 0.49 |
| 5:M:410:U:C5 | 5:M:411:U:H5 | 2.30 | 0.49 |
| 5:M:415:U:H2' | 5:M:416:U:H6 | 1.77 | 0.49 |
| 5:M:429:U:C2 | 5:M:430:U:C5 | 3.00 | 0.49 |
| 5:M:445:U:H2' | 5:M:446:U:O5' | 2.13 | 0.49 |
| 5:M:515:U:O2 | 5:M:516:U:C6 | 2.65 | 0.49 |
| 5:M:533:U:H2' | 5:M:534:U:C6 | 2.47 | 0.49 |
| 6:N:279:U:C2 | 6:N:280:U:C5 | 3.00 | 0.49 |
| 6:N:396:U:O2' | 6:N:397:U:H5' | 2.11 | 0.49 |
| 6:N:413:U:HO2' | 6:N:414:U:H5' | 1.74 | 0.49 |
| 6:N:422:U:C2 | 6:N:423:U:C6 | 2.99 | 0.49 |
| 1:I:112:A:C4 | 1:I:113:A:N7 | 2.80 | 0.49 |
| 1:I:152:A:C4 | 1:I:153:A:C8 | 3.00 | 0.49 |
| 1:I:158:A:N6 | 1:I:159:A:N6 | 2.60 | 0.49 |
| 1:I:175:A:O2' | 1:I:176:A:C5' | 2.61 | 0.49 |
| 1:I:185:A:N1 | 1:I:186:A:C5 | 2.80 | 0.49 |
| 1:I:186:A:C4 | 1:I:187:A:C8 | 2.95 | 0.49 |
| 1:I:186:A:H2' | 1:I:187:A:O5' | 2.11 | 0.49 |
| 1:I:192:A:HO2' | 1:I:193:A:H5' | 1.76 | 0.49 |
| 1:I:227:A:C2 | 1:I:228:A:C8 | 3.01 | 0.49 |
| 1:I:229:A:H2' | 1:I:230:A:C5' | 2.39 | 0.49 |
| 1:I:246:A:C2 | 1:I:247:A:C4 | 3.01 | 0.49 |
| 1:I:245:A:H2' | 1:I:246:A:H8 | 1.77 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:249:A:N1 | 1:I:250:A:C5 | 2.81 | 0.49 |
| 1:I:67:A:O2' | 1:I:68:A:H5' | 2.13 | 0.49 |
| 1:I:95:A:C2 | 1:I:96:A:C4 | 2.96 | 0.49 |
| 2:J:102:A:C6 | 2:J:103:A:C5 | 3.00 | 0.49 |
| 2:J:120:A:H2' | 2:J:121:A:O5' | 2.11 | 0.49 |
| 2:J:132:A:O2' | 2:J:133:A:C4' | 2.60 | 0.49 |
| 2:J:146:A:C4 | 2:J:147:A:C8 | 3.00 | 0.49 |
| 2:J:197:A:C2 | 2:J:198:A:C5 | 3.01 | 0.49 |
| 2:J:36:A:N6 | 2:J:37:A:N6 | 2.60 | 0.49 |
| 2:J:64:A:N1 | 2:J:65:A:C5 | 2.80 | 0.49 |
| 2:J:91:A:C2 | 2:J:92:A:C5 | 3.01 | 0.49 |
| 2:J:91:A:C4 | 2:J:92:A:C8 | 3.01 | 0.49 |
| 3:K:151:A:C2 | 3:K:152:A:C4 | 3.00 | 0.49 |
| 4:L:438:U:C2 | 4:L:439:U:H5 | 2.25 | 0.49 |
| 4:L:461:U:N3 | 4:L:462:U:C5 | 2.81 | 0.49 |
| 4:L:475:U:N3 | 4:L:476:U:C5 | 2.81 | 0.49 |
| 4:L:529:U:HO2' | 4:L:530:U:C5' | 2.00 | 0.49 |
| 4:L:542:U:N3 | 4:L:543:U:C4 | 2.80 | 0.49 |
| 4:L:585:U:C2' | 4:L:586:U:O4' | 2.60 | 0.49 |
| 4:L:685:U:O2 | 4:L:686:U:C5 | 2.66 | 0.49 |
| 4:L:766:U:N1 | 4:L:767:U:C6 | 2.80 | 0.49 |
| 4:L:777:U:H2' | 4:L:778:U:C6 | 2.46 | 0.49 |
| 5:M:387:U:C4 | 5:M:388:U:O4 | 2.65 | 0.49 |
| 5:M:391:U:C2 | 5:M:392:U:C6 | 3.01 | 0.49 |
| 5:M:410:U:H2' | 5:M:411:U:O4' | 2.12 | 0.49 |
| 5:M:430:U:N3 | 5:M:431:U:C5 | 2.79 | 0.49 |
| 5:M:503:U:H2' | 5:M:504:U:C6 | 2.43 | 0.49 |
| 6:N:401:U:O2' | 6:N:402:U:C5' | 2.45 | 0.49 |
| 6:N:419:U:H2' | 6:N:420:U:C6 | 2.45 | 0.49 |
| 6:N:431:U:O2 | 6:N:432:U:C6 | 2.65 | 0.49 |
| 6:N:447:U:C2' | 6:N:448:U:H5' | 2.41 | 0.49 |
| 1:I:156:A:H2' | 1:I:157:A:O4' | 2.12 | 0.49 |
| 1:I:179:A:N1 | 1:I:180:A:C6 | 2.80 | 0.49 |
| 1:I:213:A:C4 | 1:I:214:A:N7 | 2.80 | 0.49 |
| 1:I:247:A:C4 | 1:I:248:A:N7 | 2.81 | 0.49 |
| 1:I:250:A:C2 | 4:L:576:U:C2 | 3.00 | 0.49 |
| 1:I:25:A:C2 | 1:I:26:A:C5 | 3.01 | 0.49 |
| 1:I:278:A:C2' | 1:I:279:A:C4' | 2.90 | 0.49 |
| 1:I:317:A:C2 | 1:I:318:A:C8 | 3.00 | 0.49 |
| 1:I:324:A:C2 | 4:L:502:U:C2 | 3.00 | 0.49 |
| 1:I:348:A:C4 | 1:I:349:A:C8 | 3.01 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:358:A:N3 | 1:I:359:A:N7 | 2.49 | 0.49 |
| 1:I:59:A:C2 | 1:I:60:A:C4 | 3.01 | 0.49 |
| 2:J:144:A:N1 | 2:J:145:A:C5 | 2.80 | 0.49 |
| 2:J:264:A:C2 | 2:J:265:A:C5 | 3.00 | 0.49 |
| 2:J:98:A:C6 | 2:J:99:A:N6 | 2.80 | 0.49 |
| 3:K:166:A:C2 | 3:K:167:A:C5 | 3.00 | 0.49 |
| 3:K:221:A:C6 | 3:K:222:A:N6 | 2.80 | 0.49 |
| 3:K:69:A:N6 | 3:K:70:A:H62 | 2.11 | 0.49 |
| 3:K:71:A:N3 | 3:K:72:A:N9 | 2.61 | 0.49 |
| 4:L:510:U:HO2' | 4:L:511:U:C4' | 2.25 | 0.49 |
| 4:L:588:U:H2' | 4:L:589:U:H6 | 1.78 | 0.49 |
| 4:L:693:U:C6 | 4:L:694:U:H5 | 2.30 | 0.49 |
| 4:L:713:U:N3 | 4:L:714:U:C5 | 2.81 | 0.49 |
| 4:L:780:U:N3 | 4:L:781:U:C5 | 2.80 | 0.49 |
| 5:M:332:U:H2' | 5:M:333:U:H6 | 1.78 | 0.49 |
| 5:M:501:U:N3 | 5:M:502:U:C5 | 2.81 | 0.49 |
| 5:M:523:U:C2 | 5:M:524:U:C6 | 2.91 | 0.49 |
| 6:N:321:U:C6 | 6:N:322:U:C5 | 3.00 | 0.49 |
| 6:N:396:U:H2' | 6:N:397:U:H6 | 1.78 | 0.49 |
| 6:N:405:U:C2' | 6:N:406:U:C5' | 2.91 | 0.49 |
| 6:N:436:U:N3 | 6:N:437:U:C5 | 2.80 | 0.49 |
| 6:N:441:U:C2' | 6:N:442:U:O5' | 2.59 | 0.49 |
| 1:I:105:A:C2 | 1:I:106:A:C4 | 3.01 | 0.49 |
| 1:I:105:A:C4 | 1:I:106:A:C8 | 3.01 | 0.49 |
| 1:I:9:A:C2 | 1:I:10:A:C4 | 3.01 | 0.49 |
| 1:I:161:A:C4 | 1:I:162:A:C8 | 3.01 | 0.49 |
| 1:I:19:A:H2' | 1:I:20:A:C8 | 2.48 | 0.49 |
| 1:I:213:A:C5 | 1:I:214:A:N7 | 2.81 | 0.49 |
| 1:I:219:A:C2 | 1:I:220:A:C8 | 3.00 | 0.49 |
| 1:I:251:A:C2 | 1:I:252:A:C4 | 3.01 | 0.49 |
| 1:I:277:A:C6 | 1:I:278:A:C5 | 3.00 | 0.49 |
| 1:I:28:A:O2' | 1:I:29:A:H5' | 2.13 | 0.49 |
| 1:I:322:A:O2' | 1:I:323:A:H5' | 2.13 | 0.49 |
| 1:I:333:A:N1 | 1:I:334:A:C4 | 2.80 | 0.49 |
| 1:I:376:A:H2' | 1:I:377:A:C8 | 2.47 | 0.49 |
| 1:I:393:A:C2' | 1:I:394:A:H5' | 2.41 | 0.49 |
| 1:I:74:A:C2 | 1:I:75:A:N9 | 2.80 | 0.49 |
| 1:I:83:A:C2' | 1:I:84:A:H5' | 2.42 | 0.49 |
| 2:J:199:A:N3 | 2:J:200:A:C8 | 2.81 | 0.49 |
| 2:J:54:A:C2' | 2:J:55:A:C4' | 2.91 | 0.49 |
| 2:J:98:A:N3 | 2:J:99:A:C8 | 2.81 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:137:A:C2 | 3:K:138:A:N9 | 2.81 | 0.49 |
| 3:K:179:A:C3' | 3:K:180:A:P | 2.93 | 0.49 |
| 3:K:207:A:HO2' | 3:K:208:A:C5' | 2.25 | 0.49 |
| 4:L:473:U:N3 | 4:L:474:U:C5 | 2.81 | 0.49 |
| 4:L:492:U:H2' | 4:L:493:U:H6 | 1.78 | 0.49 |
| 4:L:522:U:N3 | 4:L:523:U:C5 | 2.81 | 0.49 |
| 4:L:541:U:C2' | 4:L:542:U:O5' | 2.61 | 0.49 |
| 4:L:549:U:HO2' | 4:L:550:U:C4' | 2.26 | 0.49 |
| 4:L:551:U:H2' | 4:L:552:U:C6 | 2.47 | 0.49 |
| 4:L:764:U:O5' | 4:L:765:U:OP2 | 2.31 | 0.49 |
| 4:L:772:U:C2 | 4:L:773:U:C6 | 3.01 | 0.49 |
| 4:L:779:U:C4 | 4:L:780:U:C5 | 3.01 | 0.49 |
| 5:M:530:U:N3 | 5:M:531:U:C5 | 2.80 | 0.49 |
| 6:N:416:U:O2 | 6:N:417:U:N1 | 2.46 | 0.49 |
| 6:N:488:U:O2' | 6:N:489:U:C5' | 2.51 | 0.49 |
| 6:N:516:U:C3' | 6:N:517:U:P | 2.98 | 0.49 |
| 1:I:189:A:N3 | 1:I:190:A:C8 | 2.81 | 0.49 |
| 1:I:194:A:C4 | 1:I:195:A:N7 | 2.81 | 0.49 |
| 1:I:231:A:C2 | 1:I:232:A:C5 | 3.00 | 0.49 |
| 1:I:231:A:H2' | 1:I:232:A:C5' | 2.43 | 0.49 |
| 1:I:318:A:C2' | 1:I:319:A:O5' | 2.60 | 0.49 |
| 1:I:332:A:C6 | 1:I:333:A:N7 | 2.81 | 0.49 |
| 1:I:48:A:N1 | 1:I:49:A:C5 | 2.80 | 0.49 |
| 1:I:51:A:C2' | 1:I:52:A:H5' | 2.41 | 0.49 |
| 1:I:71:A:C6 | 1:I:72:A:C5 | 3.01 | 0.49 |
| 1:I:74:A:N1 | 1:I:75:A:C5 | 2.80 | 0.49 |
| 1:I:90:A:N3 | 1:I:91:A:C8 | 2.81 | 0.49 |
| 2:J:186:A:C6 | 2:J:187:A:C5 | 3.00 | 0.49 |
| 2:J:201:A:C4 | 2:J:202:A:N7 | 2.81 | 0.49 |
| 2:J:218:A:C2 | 2:J:219:A:N9 | 2.80 | 0.49 |
| 2:J:237:A:N1 | 2:J:238:A:C5 | 2.80 | 0.49 |
| 2:J:37:A:N1 | 2:J:38:A:C5 | 2.80 | 0.49 |
| 2:J:40:A:C4 | 2:J:41:A:N7 | 2.81 | 0.49 |
| 3:K:133:A:H2' | 3:K:134:A:C5' | 2.42 | 0.49 |
| 3:K:139:A:C2 | 3:K:140:A:N9 | 2.80 | 0.49 |
| 3:K:155:A:C2 | 3:K:156:A:C4 | 3.01 | 0.49 |
| 3:K:18:A:N6 | 3:K:19:A:H62 | 2.09 | 0.49 |
| 3:K:53:A:C2 | 3:K:54:A:C8 | 3.00 | 0.49 |
| 4:L:546:U:O2' | 4:L:547:U:C4' | 2.60 | 0.49 |
| 4:L:687:U:H2' | 4:L:688:U:H6 | 1.76 | 0.49 |
| 4:L:747:U:H2' | 4:L:748:U:C6 | 2.44 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:762:U:C2 | 4:L:763:U:C5 | 3.01 | 0.49 |
| 5:M:321:U:N3 | 5:M:322:U:O4 | 2.46 | 0.49 |
| 5:M:339:U:C2' | 5:M:340:U:H5' | 2.42 | 0.49 |
| 5:M:345:U:C2 | 5:M:346:U:C6 | 3.00 | 0.49 |
| 5:M:423:U:O2' | 5:M:424:U:H5' | 2.12 | 0.49 |
| 5:M:450:U:C4 | 5:M:451:U:O4 | 2.66 | 0.49 |
| 6:N:300:U:H2' | 6:N:301:U:C6 | 2.47 | 0.49 |
| 6:N:314:U:H2' | 6:N:315:U:H6 | 1.76 | 0.49 |
| 6:N:320:U:O2' | 6:N:321:U:O4' | 2.30 | 0.49 |
| 6:N:382:U:H2' | 6:N:383:U:H6 | 1.77 | 0.49 |
| 6:N:406:U:O2' | 6:N:407:U:C5' | 2.51 | 0.49 |
| 1:I:161:A:C3' | 1:I:162:A:C5' | 2.67 | 0.49 |
| 1:I:197:A:C2 | 1:I:198:A:C5 | 3.01 | 0.49 |
| 1:I:216:A:O2' | 1:I:217:A:H5' | 2.13 | 0.49 |
| 1:I:226:A:H2' | 1:I:227:A:H8 | 1.77 | 0.49 |
| 1:I:22:A:C2' | 1:I:23:A:O5' | 2.60 | 0.49 |
| 1:I:256:A:C4 | 1:I:257:A:N7 | 2.81 | 0.49 |
| 1:I:281:A:H2' | 1:I:282:A:C8 | 2.48 | 0.49 |
| 1:I:300:A:O2' | 1:I:301:A:C5' | 2.56 | 0.49 |
| 1:I:357:A:C2' | 1:I:358:A:C5' | 2.91 | 0.49 |
| 1:I:42:A:H2' | 1:I:43:A:C5' | 2.40 | 0.49 |
| 1:I:62:A:H2 | 1:I:63:A:C4 | 2.27 | 0.49 |
| 1:I:89:A:H2' | 1:I:90:A:C8 | 2.47 | 0.49 |
| 2:J:106:A:H2' | 2:J:107:A:O4' | 2.12 | 0.49 |
| 2:J:187:A:C2' | 2:J:188:A:C5' | 2.91 | 0.49 |
| 2:J:224:A:C6 | 5:M:330:U:C4 | 3.01 | 0.49 |
| 2:J:225:A:C6 | 2:J:226:A:N7 | 2.81 | 0.49 |
| 2:J:38:A:N1 | 2:J:39:A:C5 | 2.81 | 0.49 |
| 2:J:5:A:C6 | 2:J:6:A:C6 | 3.01 | 0.49 |
| 2:J:61:A:N1 | 2:J:62:A:C5 | 2.81 | 0.49 |
| 2:J:93:A:H2' | 2:J:94:A:C5' | 2.42 | 0.49 |
| 3:K:172:A:C2 | 3:K:173:A:C8 | 3.00 | 0.49 |
| 3:K:181:A:N1 | 3:K:182:A:C6 | 2.81 | 0.49 |
| 4:L:499:U:H2' | 4:L:500:U:H6 | 1.77 | 0.49 |
| 4:L:504:U:C2' | 4:L:505:U:O5' | 2.60 | 0.49 |
| 4:L:528:U:C2 | 4:L:529:U:C5 | 3.01 | 0.49 |
| 4:L:531:U:C2 | 4:L:532:U:C5 | 3.01 | 0.49 |
| 4:L:533:U:H2' | 4:L:534:U:O5' | 2.12 | 0.49 |
| 4:L:633:U:H2' | 4:L:634:U:H6 | 1.76 | 0.49 |
| 4:L:636:U:C2 | 4:L:637:U:C5 | 3.00 | 0.49 |
| 4:L:674:U:C2' | 4:L:675:U:O4' | 2.61 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:716:U:N3 | 4:L:717:U:C4 | 2.81 | 0.49 |
| 4:L:723:U:C5' | 4:L:724:U:P | 3.01 | 0.49 |
| 5:M:315:U:O2' | 5:M:316:U:C5' | 2.57 | 0.49 |
| 5:M:315:U:O2 | 5:M:316:U:C6 | 2.66 | 0.49 |
| 5:M:318:U:H2' | 5:M:319:U:C4' | 2.42 | 0.49 |
| 5:M:320:U:H2' | 5:M:321:U:C6 | 2.48 | 0.49 |
| 5:M:346:U:H2' | 5:M:347:U:C6 | 2.39 | 0.49 |
| 5:M:397:U:N3 | 5:M:398:U:C5 | 2.80 | 0.49 |
| 5:M:399:U:C2' | 5:M:400:U:C5' | 2.90 | 0.49 |
| 5:M:406:U:O2' | 5:M:407:U:C4' | 2.60 | 0.49 |
| 6:N:302:U:C2' | 6:N:303:U:O4' | 2.61 | 0.49 |
| 6:N:309:U:H2' | 6:N:310:U:H6 | 1.78 | 0.49 |
| 6:N:342:U:H2' | 6:N:343:U:C6 | 2.47 | 0.49 |
| 6:N:406:U:H2' | 6:N:407:U:C4' | 2.42 | 0.49 |
| 6:N:427:U:O2 | 6:N:428:U:C6 | 2.66 | 0.49 |
| 6:N:459:U:O2 | 6:N:460:U:C5 | 2.61 | 0.49 |
| 6:N:461:U:H2' | 6:N:462:U:H6 | 1.77 | 0.49 |
| 1:I:188:A:C4 | 1:I:189:A:C8 | 3.00 | 0.49 |
| 1:I:18:A:C2' | 1:I:19:A:O4' | 2.60 | 0.49 |
| 1:I:222:A:H2' | 1:I:223:A:O4' | 2.13 | 0.49 |
| 1:I:229:A:N3 | 1:I:230:A:C8 | 2.81 | 0.49 |
| 1:I:250:A:N1 | 1:I:251:A:C5 | 2.80 | 0.49 |
| 1:I:263:A:C2 | 1:I:264:A:N7 | 2.80 | 0.49 |
| 1:I:332:A:C5 | 1:I:333:A:N7 | 2.81 | 0.49 |
| 1:I:52:A:C2' | 1:I:53:A:O5' | 2.60 | 0.49 |
| 1:I:57:A:C2 | 1:I:58:A:C4 | 3.01 | 0.49 |
| 1:I:77:A:N3 | 1:I:78:A:C8 | 2.81 | 0.49 |
| 1:I:6:A:H2' | 1:I:7:A:H8 | 1.78 | 0.49 |
| 2:J:130:A:C4 | 2:J:131:A:C8 | 3.00 | 0.49 |
| 2:J:220:A:C4 | 2:J:221:A:C8 | 3.01 | 0.49 |
| 2:J:235:A:C4 | 2:J:236:A:C8 | 3.01 | 0.49 |
| 2:J:23:A:C2' | 2:J:24:A:H5' | 2.42 | 0.49 |
| 2:J:66:A:C4 | 2:J:67:A:C8 | 3.01 | 0.49 |
| 3:K:152:A:H2' | 3:K:153:A:H8 | 1.78 | 0.49 |
| 3:K:165:A:N3 | 3:K:166:A:C1' | 2.76 | 0.49 |
| 4:L:449:U:C2' | 4:L:450:U:H5' | 2.39 | 0.49 |
| 4:L:473:U:C4 | 4:L:474:U:O4 | 2.66 | 0.49 |
| 4:L:558:U:O2 | 4:L:559:U:O4' | 2.30 | 0.49 |
| 4:L:579:U:C2' | 4:L:580:U:O5' | 2.61 | 0.49 |
| 4:L:665:U:O2 | 4:L:666:U:C6 | 2.66 | 0.49 |
| 4:L:691:U:C2' | 4:L:692:U:O5' | 2.60 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:721:U:O2 | 4:L:722:U:O4' | 2.31 | 0.49 |
| 5:M:344:U:O2' | 5:M:345:U:H5' | 2.13 | 0.49 |
| 5:M:350:U:N3 | 5:M:351:U:C5 | 2.81 | 0.49 |
| 5:M:360:U:O2' | 5:M:361:U:P | 2.66 | 0.49 |
| 5:M:392:U:H2' | 5:M:393:U:C4' | 2.40 | 0.49 |
| 5:M:455:U:H2' | 5:M:456:U:C4' | 2.42 | 0.49 |
| 5:M:457:U:O2' | 5:M:458:U:C5' | 2.39 | 0.49 |
| 5:M:480:U:O2' | 5:M:481:U:C5' | 2.61 | 0.49 |
| 5:M:487:U:C2 | 5:M:488:U:C6 | 3.00 | 0.49 |
| 6:N:362:U:H2' | 6:N:363:U:O5' | 2.12 | 0.49 |
| 1:I:102:A:C4 | 1:I:103:A:C5 | 3.01 | 0.48 |
| 1:I:151:A:C2 | 1:I:152:A:C4 | 3.01 | 0.48 |
| 1:I:16:A:N1 | 1:I:17:A:C5 | 2.81 | 0.48 |
| 1:I:182:A:HO2' | 1:I:183:A:H5' | 1.76 | 0.48 |
| 1:I:231:A:N3 | 1:I:232:A:C8 | 2.79 | 0.48 |
| 1:I:241:A:N1 | 1:I:242:A:C6 | 2.81 | 0.48 |
| 1:I:261:A:N3 | 1:I:262:A:C8 | 2.81 | 0.48 |
| 1:I:274:A:N3 | 1:I:275:A:N9 | 2.59 | 0.48 |
| 1:I:306:A:N6 | 4:L:520:U:O4 | 2.46 | 0.48 |
| 1:I:325:A:C4 | 1:I:326:A:N7 | 2.81 | 0.48 |
| 2:J:108:A:C5 | 2:J:109:A:N7 | 2.81 | 0.48 |
| 2:J:124:A:H2' | 2:J:125:A:O5' | 2.13 | 0.48 |
| 2:J:202:A:C2 | 2:J:203:A:N7 | 2.79 | 0.48 |
| 2:J:27:A:H2' | 2:J:28:A:H8 | 1.77 | 0.48 |
| 2:J:91:A:N1 | 2:J:92:A:C5 | 2.81 | 0.48 |
| 2:J:99:A:C5 | 2:J:100:A:N7 | 2.80 | 0.48 |
| 3:K:122:A:N6 | 6:N:410:U:O4 | 2.46 | 0.48 |
| 3:K:256:A:H2' | 3:K:257:A:C5' | 2.42 | 0.48 |
| 4:L:565:U:O2 | 4:L:566:U:C6 | 2.66 | 0.48 |
| 4:L:648:U:O4 | 4:L:649:U:O4 | 2.30 | 0.48 |
| 4:L:655:U:N3 | 4:L:656:U:C5 | 2.81 | 0.48 |
| 4:L:714:U:O2' | 4:L:715:U:H5' | 2.12 | 0.48 |
| 4:L:764:U:C2' | 4:L:765:U:C5' | 2.91 | 0.48 |
| 5:M:469:U:O2' | 5:M:470:U:O5' | 2.31 | 0.48 |
| 5:M:475:U:C2 | 5:M:476:U:C5 | 3.01 | 0.48 |
| 5:M:502:U:C2' | 5:M:503:U:O5' | 2.59 | 0.48 |
| 5:M:514:U:N3 | 5:M:515:U:C5 | 2.80 | 0.48 |
| 5:M:522:U:C2' | 5:M:523:U:O5' | 2.61 | 0.48 |
| 6:N:278:U:O2' | 6:N:279:U:H5' | 2.12 | 0.48 |
| 6:N:325:U:C3' | 6:N:326:U:P | 2.96 | 0.48 |
| 6:N:413:U:N3 | 6:N:414:U:C4 | 2.81 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:441:U:C2' | 6:N:442:U:C5' | 2.91 | 0.48 |
| 1:I:115:A:H2' | 1:I:116:A:O5' | 2.11 | 0.48 |
| 1:I:12:A:H2' | 1:I:13:A:H8 | 1.77 | 0.48 |
| 1:I:189:A:C2' | 1:I:190:A:O5' | 2.60 | 0.48 |
| 1:I:259:A:C6 | 1:I:260:A:C5 | 3.01 | 0.48 |
| 1:I:304:A:C2' | 1:I:305:A:H5' | 2.43 | 0.48 |
| 1:I:332:A:C2' | 1:I:333:A:C5' | 2.91 | 0.48 |
| 1:I:356:A:N6 | 1:I:357:A:N6 | 2.61 | 0.48 |
| 1:I:45:A:N1 | 1:I:46:A:C5 | 2.82 | 0.48 |
| 1:I:52:A:O2' | 1:I:53:A:C5' | 2.39 | 0.48 |
| 1:I:59:A:H2' | 1:I:60:A:O5' | 2.12 | 0.48 |
| 2:J:104:A:C2' | 2:J:105:A:O5' | 2.61 | 0.48 |
| 2:J:108:A:C2 | 2:J:109:A:N9 | 2.81 | 0.48 |
| 2:J:135:A:C6 | 2:J:136:A:C6 | 3.01 | 0.48 |
| 2:J:190:A:C5 | 2:J:191:A:N7 | 2.81 | 0.48 |
| 2:J:195:A:HO2' | 2:J:196:A:H5' | 1.77 | 0.48 |
| 2:J:198:A:C2' | 2:J:199:A:O5' | 2.61 | 0.48 |
| 2:J:221:A:C2 | 2:J:222:A:N9 | 2.81 | 0.48 |
| 2:J:33:A:N6 | 2:J:34:A:N6 | 2.60 | 0.48 |
| 2:J:48:A:C2 | 2:J:49:A:C4 | 3.01 | 0.48 |
| 3:K:154:A:H2' | 3:K:155:A:C1' | 2.40 | 0.48 |
| 3:K:189:A:N6 | 3:K:190:A:H62 | 2.10 | 0.48 |
| 3:K:250:A:C2 | 3:K:251:A:C4 | 3.01 | 0.48 |
| 3:K:249:A:C2' | 3:K:250:A:O5' | 2.60 | 0.48 |
| 3:K:74:A:O3' | 3:K:75:A:H5' | 2.14 | 0.48 |
| 3:K:88:A:N1 | 3:K:89:A:N7 | 2.61 | 0.48 |
| 4:L:635:U:H2' | 4:L:636:U:C5' | 2.43 | 0.48 |
| 4:L:646:U:C2' | 4:L:647:U:O5' | 2.61 | 0.48 |
| 4:L:658:U:H2' | 4:L:659:U:O5' | 2.13 | 0.48 |
| 4:L:682:U:O2' | 4:L:683:U:O4' | 2.31 | 0.48 |
| 4:L:773:U:O2' | 4:L:774:U:H5' | 2.13 | 0.48 |
| 4:L:777:U:H2' | 4:L:778:U:C4' | 2.43 | 0.48 |
| 4:L:787:U:O2 | 4:L:788:U:C6 | 2.66 | 0.48 |
| 4:L:818:U:H2' | 4:L:819:U:H6 | 1.78 | 0.48 |
| 5:M:299:U:H2' | 5:M:300:U:C5' | 2.42 | 0.48 |
| 5:M:354:U:C2 | 5:M:355:U:H5 | 2.27 | 0.48 |
| 5:M:400:U:C2 | 5:M:401:U:C5 | 3.00 | 0.48 |
| 5:M:433:U:N1 | 5:M:434:U:C5 | 2.80 | 0.48 |
| 5:M:454:U:C6 | 5:M:455:U:C5 | 3.01 | 0.48 |
| 5:M:461:U:H2' | 5:M:462:U:C5' | 2.43 | 0.48 |
| 6:N:291:U:H2' | 6:N:292:U:C6 | 2.45 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 6:N:293:U:H2' | 6:N:294:U:O4' | 2.13 | 0.48 |
| 6:N:368:U:C2 | 6:N:369:U:C6 | 3.02 | 0.48 |
| 6:N:369:U:C2 | 6:N:370:U:C5 | 3.01 | 0.48 |
| 6:N:391:U:O2' | 6:N:392:U:C5' | 2.61 | 0.48 |
| 6:N:452:U:C2' | 6:N:453:U:H5' | 2.43 | 0.48 |
| 1:I:123:A:H2' | 1:I:124:A:H8 | 1.78 | 0.48 |
| 1:I:193:A:C2 | 1:I:194:A:N9 | 2.81 | 0.48 |
| 1:I:297:A:N6 | 1:I:298:A:N6 | 2.61 | 0.48 |
| 1:I:334:A:C6 | 1:I:335:A:N7 | 2.81 | 0.48 |
| 1:I:38:A:C2 | 1:I:39:A:N9 | 2.81 | 0.48 |
| 1:I:49:A:C2' | 1:I:50:A:C5' | 2.91 | 0.48 |
| 1:I:53:A:H2' | 1:I:54:A:H8 | 1.78 | 0.48 |
| 2:J:125:A:C4 | 2:J:126:A:N7 | 2.81 | 0.48 |
| 2:J:15:A:N3 | 2:J:16:A:C8 | 2.82 | 0.48 |
| 2:J:174:A:N3 | 2:J:175:A:C8 | 2.82 | 0.48 |
| 2:J:183:A:C5 | 2:J:184:A:C8 | 3.01 | 0.48 |
| 2:J:18:A:C2 | 2:J:19:A:C4 | 3.01 | 0.48 |
| 2:J:64:A:C6 | 2:J:65:A:N6 | 2.81 | 0.48 |
| 2:J:87:A:N1 | 2:J:88:A:C5 | 2.80 | 0.48 |
| 3:K:100:A:H2' | 3:K:101:A:H8 | 1.79 | 0.48 |
| 3:K:101:A:H61 | 3:K:102:A:N6 | 2.09 | 0.48 |
| 3:K:36:A:N6 | 3:K:37:A:N6 | 2.60 | 0.48 |
| 3:K:72:A:H2' | 3:K:73:A:C8 | 2.48 | 0.48 |
| 4:L:569:U:C2' | 4:L:570:U:C5' | 2.92 | 0.48 |
| 4:L:592:U:O2 | 4:L:593:U:C6 | 2.66 | 0.48 |
| 4:L:595:U:C2' | 4:L:596:U:O4' | 2.61 | 0.48 |
| 4:L:613:U:H2' | 4:L:614:U:C6 | 2.46 | 0.48 |
| 4:L:627:U:C2' | 4:L:628:U:O5' | 2.61 | 0.48 |
| 4:L:668:U:H2' | 4:L:669:U:C5 | 2.38 | 0.48 |
| 4:L:702:U:O2 | 4:L:703:U:C6 | 2.66 | 0.48 |
| 4:L:747:U:N3 | 4:L:748:U:C4 | 2.81 | 0.48 |
| 4:L:763:U:C4 | 4:L:764:U:C5 | 3.01 | 0.48 |
| 4:L:763:U:C4 | 4:L:764:U:C4 | 3.01 | 0.48 |
| 4:L:769:U:C2 | 4:L:770:U:C5 | 3.01 | 0.48 |
| 4:L:774:U:C2 | 4:L:775:U:H5 | 2.24 | 0.48 |
| 5:M:391:U:C2' | 5:M:392:U:O5' | 2.61 | 0.48 |
| 5:M:476:U:N3 | 5:M:477:U:C5 | 2.81 | 0.48 |
| 6:N:352:U:H2' | 6:N:353:U:O4' | 2.13 | 0.48 |
| 6:N:460:U:O2 | 6:N:461:U:C6 | 2.66 | 0.48 |
| 6:N:461:U:C4 | 6:N:462:U:O4 | 2.66 | 0.48 |
| 6:N:496:U:O2' | 6:N:497:U:C4' | 2.62 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:130:A:C2 | 1:I:131:A:C4 | 3.01 | 0.48 |
| 1:I:132:A:C3' | 1:I:133:A:H5' | 2.00 | 0.48 |
| 1:I:134:A:H2' | 1:I:135:A:C8 | 2.47 | 0.48 |
| 1:I:16:A:C6 | 1:I:17:A:C6 | 3.02 | 0.48 |
| 1:I:240:A:H2' | 1:I:241:A:O5' | 2.14 | 0.48 |
| 1:I:243:A:N6 | 1:I:244:A:C6 | 2.71 | 0.48 |
| 1:I:244:A:N1 | 1:I:245:A:C5 | 2.81 | 0.48 |
| 1:I:321:A:N3 | 1:I:322:A:C8 | 2.81 | 0.48 |
| 1:I:354:A:C5 | 1:I:355:A:N7 | 2.81 | 0.48 |
| 2:J:102:A:C6 | 2:J:103:A:N6 | 2.81 | 0.48 |
| 2:J:108:A:C2 | 2:J:109:A:C5 | 3.02 | 0.48 |
| 2:J:14:A:N1 | 2:J:15:A:C5 | 2.81 | 0.48 |
| 2:J:182:A:N1 | 2:J:183:A:C5 | 2.81 | 0.48 |
| 2:J:186:A:N6 | 2:J:187:A:N6 | 2.62 | 0.48 |
| 2:J:197:A:N3 | 2:J:198:A:C8 | 2.81 | 0.48 |
| 2:J:220:A:C6 | 2:J:221:A:N7 | 2.81 | 0.48 |
| 2:J:248:A:H62 | 2:J:249:A:N6 | 1.95 | 0.48 |
| 2:J:5:A:H2' | 2:J:6:A:H8 | 1.77 | 0.48 |
| 3:K:102:A:C6 | 3:K:103:A:N7 | 2.82 | 0.48 |
| 3:K:108:A:N1 | 3:K:109:A:C5 | 2.82 | 0.48 |
| 3:K:135:A:H2' | 3:K:136:A:H8 | 1.79 | 0.48 |
| 3:K:72:A:H2' | 3:K:73:A:H8 | 1.77 | 0.48 |
| 3:K:81:A:H2' | 3:K:82:A:O5' | 2.13 | 0.48 |
| 3:K:84:A:C2 | 3:K:85:A:C4 | 3.01 | 0.48 |
| 4:L:509:U:C2 | 4:L:510:U:C6 | 3.01 | 0.48 |
| 4:L:549:U:C2' | 4:L:550:U:H6 | 2.19 | 0.48 |
| 4:L:599:U:O4 | 4:L:600:U:O4 | 2.30 | 0.48 |
| 4:L:699:U:N3 | 4:L:700:U:C4 | 2.81 | 0.48 |
| 4:L:746:U:O2 | 4:L:747:U:N1 | 2.41 | 0.48 |
| 4:L:765:U:C4 | 4:L:766:U:C5 | 3.01 | 0.48 |
| 4:L:779:U:C2 | 4:L:780:U:C5 | 3.02 | 0.48 |
| 5:M:322:U:H2' | 5:M:323:U:O5' | 2.14 | 0.48 |
| 5:M:377:U:C3' | 5:M:378:U:C5' | 2.70 | 0.48 |
| 5:M:391:U:H2' | 5:M:392:U:O5' | 2.12 | 0.48 |
| 2:J:128:A:C2 | 5:M:426:U:C2 | 3.01 | 0.48 |
| 5:M:526:U:O2 | 5:M:527:U:C6 | 2.66 | 0.48 |
| 6:N:296:U:N3 | 6:N:297:U:C5 | 2.82 | 0.48 |
| 6:N:312:U:C2' | 6:N:313:U:H6 | 2.26 | 0.48 |
| 6:N:395:U:C4 | 6:N:396:U:C5 | 3.02 | 0.48 |
| 6:N:401:U:H2' | 6:N:402:U:C5' | 2.42 | 0.48 |
| 6:N:425:U:C6 | 6:N:426:U:H5 | 2.29 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:527:U:C4 | 6:N:528:U:C5 | 3.02 | 0.48 |
| 1:I:138:A:H2' | 1:I:139:A:O5' | 2.14 | 0.48 |
| 1:I:22:A:H2' | 1:I:23:A:O4' | 2.12 | 0.48 |
| 1:I:269:A:C2 | 1:I:270:A:N9 | 2.81 | 0.48 |
| 1:I:273:A:C5 | 1:I:274:A:C8 | 3.02 | 0.48 |
| 1:I:342:A:C6 | 1:I:343:A:N7 | 2.81 | 0.48 |
| 1:I:388:A:C2 | 1:I:389:A:C4 | 3.01 | 0.48 |
| 2:J:142:A:N1 | 2:J:143:A:C5 | 2.81 | 0.48 |
| 2:J:192:A:N1 | 2:J:193:A:C5 | 2.81 | 0.48 |
| 2:J:199:A:O2' | 2:J:200:A:H5' | 2.12 | 0.48 |
| 2:J:200:A:H2' | 2:J:201:A:H8 | 1.78 | 0.48 |
| 2:J:225:A:C2' | 2:J:226:A:O5' | 2.54 | 0.48 |
| 2:J:234:A:H2' | 2:J:235:A:C5' | 2.42 | 0.48 |
| 2:J:253:A:C4 | 2:J:254:A:N7 | 2.82 | 0.48 |
| 2:J:45:A:C2 | 2:J:46:A:C5 | 3.00 | 0.48 |
| 2:J:48:A:C6 | 2:J:49:A:C5 | 3.02 | 0.48 |
| 2:J:54:A:H2' | 2:J:55:A:C5' | 2.41 | 0.48 |
| 2:J:66:A:H2' | 2:J:67:A:C5' | 2.42 | 0.48 |
| 2:J:92:A:C2 | 2:J:93:A:C8 | 2.90 | 0.48 |
| 3:K:157:A:C5 | 3:K:158:A:N7 | 2.81 | 0.48 |
| 3:K:173:A:C4 | 3:K:174:A:C8 | 3.01 | 0.48 |
| 3:K:248:A:C2 | 3:K:249:A:C8 | 3.01 | 0.48 |
| 3:K:248:A:N3 | 3:K:249:A:C8 | 2.81 | 0.48 |
| 3:K:55:A:N3 | 3:K:56:A:C8 | 2.81 | 0.48 |
| 3:K:59:A:H2' | 3:K:60:A:H8 | 1.79 | 0.48 |
| 3:K:86:A:H2' | 3:K:87:A:O5' | 2.13 | 0.48 |
| 4:L:515:U:C2' | 4:L:516:U:H5' | 2.43 | 0.48 |
| 4:L:724:U:H2' | 4:L:725:U:H6 | 1.79 | 0.48 |
| 4:L:810:U:H2' | 4:L:811:U:C4' | 2.43 | 0.48 |
| 5:M:316:U:C4 | 5:M:317:U:O4 | 2.66 | 0.48 |
| 5:M:375:U:H2' | 5:M:376:U:C6 | 2.46 | 0.48 |
| 5:M:377:U:C4 | 5:M:378:U:C5 | 3.02 | 0.48 |
| 5:M:383:U:H2' | 5:M:384:U:H6 | 1.79 | 0.48 |
| 5:M:400:U:C2' | 5:M:401:U:H5' | 2.44 | 0.48 |
| 5:M:521:U:C2' | 5:M:522:U:C5' | 2.92 | 0.48 |
| 6:N:382:U:H2' | 6:N:383:U:C6 | 2.48 | 0.48 |
| 6:N:416:U:C1' | 6:N:417:U:O4' | 2.57 | 0.48 |
| 6:N:454:U:H2' | 6:N:455:U:H6 | 1.78 | 0.48 |
| 6:N:486:U:C2 | 6:N:487:U:C5 | 3.01 | 0.48 |
| 1:I:128:A:O2' | 1:I:129:A:H5' | 2.14 | 0.48 |
| 1:I:185:A:HO2' | 1:I:186:A:H5' | 1.74 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:235:A:H2' | 1:I:236:A:H8 | 1.78 | 0.48 |
| 1:I:362:A:H2' | 1:I:363:A:C8 | 2.48 | 0.48 |
| 1:I:45:A:H2' | 1:I:46:A:O5' | 2.13 | 0.48 |
| 1:I:59:A:C2' | 1:I:60:A:C5' | 2.91 | 0.48 |
| 1:I:88:A:C2 | 1:I:89:A:C5 | 3.01 | 0.48 |
| 2:J:144:A:H2 | 2:J:145:A:C4 | 2.28 | 0.48 |
| 2:J:191:A:C2 | 2:J:192:A:N9 | 2.81 | 0.48 |
| 2:J:63:A:H2' | 2:J:64:A:O4' | 2.13 | 0.48 |
| 2:J:67:A:C4 | 2:J:68:A:C8 | 3.02 | 0.48 |
| 3:K:100:A:C2 | 3:K:101:A:C8 | 3.02 | 0.48 |
| 3:K:119:A:H2' | 3:K:120:A:O4' | 2.13 | 0.48 |
| 4:L:434:U:O2' | 4:L:435:U:H5' | 2.13 | 0.48 |
| 4:L:461:U:C2 | 4:L:462:U:C6 | 3.02 | 0.48 |
| 4:L:471:U:H2' | 4:L:472:U:H6 | 1.77 | 0.48 |
| 4:L:619:U:C2 | 4:L:620:U:C6 | 3.01 | 0.48 |
| 4:L:712:U:N3 | 4:L:713:U:C6 | 2.81 | 0.48 |
| 5:M:321:U:N3 | 5:M:322:U:C5 | 2.82 | 0.48 |
| 5:M:330:U:C2 | 5:M:331:U:C6 | 3.02 | 0.48 |
| 5:M:334:U:H2' | 5:M:335:U:H6 | 1.78 | 0.48 |
| 5:M:381:U:C2' | 5:M:382:U:H6 | 2.13 | 0.48 |
| 5:M:393:U:C2 | 5:M:394:U:C6 | 3.02 | 0.48 |
| 5:M:402:U:H2' | 5:M:403:U:H6 | 1.79 | 0.48 |
| 5:M:419:U:C2' | 5:M:420:U:O4' | 2.60 | 0.48 |
| 5:M:501:U:C4 | 5:M:502:U:C4 | 3.02 | 0.48 |
| 5:M:524:U:C2 | 5:M:525:U:H5 | 2.25 | 0.48 |
| 6:N:278:U:C4 | 6:N:279:U:H5 | 2.28 | 0.48 |
| 6:N:429:U:H2' | 6:N:430:U:C6 | 2.46 | 0.48 |
| 3:K:102:A:N6 | 6:N:430:U:O4 | 2.47 | 0.48 |
| 6:N:439:U:C4 | 6:N:440:U:C4 | 3.02 | 0.48 |
| 6:N:502:U:H2' | 6:N:503:U:C6 | 2.48 | 0.48 |
| 6:N:520:U:C3' | 6:N:521:U:P | 2.96 | 0.48 |
| 1:I:200:A:C2 | 1:I:201:A:C8 | 3.02 | 0.48 |
| 1:I:232:A:C2 | 1:I:233:A:N9 | 2.81 | 0.48 |
| 1:I:262:A:C5 | 1:I:263:A:N7 | 2.81 | 0.48 |
| 1:I:298:A:H2' | 1:I:299:A:C8 | 2.48 | 0.48 |
| 1:I:30:A:C2' | 1:I:31:A:C5' | 2.91 | 0.48 |
| 1:I:87:A:N1 | 1:I:88:A:C5 | 2.82 | 0.48 |
| 1:I:94:A:C2 | 1:I:95:A:C8 | 3.01 | 0.48 |
| 2:J:191:A:N3 | 2:J:192:A:C8 | 2.81 | 0.48 |
| 2:J:198:A:N1 | 2:J:199:A:C5 | 2.82 | 0.48 |
| 2:J:18:A:C4 | 2:J:19:A:C8 | 3.02 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:200:A:H2' | 2:J:201:A:O5' | 2.13 | 0.48 |
| 2:J:207:A:H2' | 2:J:208:A:C5' | 2.44 | 0.48 |
| 2:J:222:A:N1 | 2:J:223:A:C4 | 2.82 | 0.48 |
| 2:J:245:A:C2' | 2:J:246:A:C5' | 2.91 | 0.48 |
| 2:J:48:A:H2' | 2:J:49:A:C5' | 2.43 | 0.48 |
| 2:J:52:A:O2' | 2:J:53:A:H5' | 2.12 | 0.48 |
| 2:J:56:A:N1 | 2:J:57:A:C4 | 2.81 | 0.48 |
| 2:J:5:A:N6 | 2:J:6:A:H62 | 2.09 | 0.48 |
| 3:K:107:A:C4 | 3:K:108:A:C8 | 3.01 | 0.48 |
| 3:K:131:A:C6 | 3:K:132:A:N7 | 2.81 | 0.48 |
| 3:K:153:A:H2' | 3:K:154:A:C8 | 2.39 | 0.48 |
| 3:K:165:A:C2 | 3:K:166:A:C1' | 2.97 | 0.48 |
| 3:K:35:A:H2' | 3:K:36:A:H8 | 1.77 | 0.48 |
| 3:K:63:A:C2 | 3:K:64:A:C8 | 3.01 | 0.48 |
| 3:K:93:A:C5 | 3:K:94:A:N7 | 2.82 | 0.48 |
| 4:L:527:U:C2 | 4:L:528:U:C5 | 3.01 | 0.48 |
| 4:L:631:U:H2' | 4:L:632:U:H6 | 1.78 | 0.48 |
| 4:L:713:U:C4 | 4:L:714:U:C4 | 3.02 | 0.48 |
| 4:L:781:U:H2' | 4:L:782:U:C6 | 2.46 | 0.48 |
| 4:L:782:U:N3 | 4:L:783:U:C5 | 2.81 | 0.48 |
| 4:L:811:U:C4 | 4:L:812:U:O4 | 2.66 | 0.48 |
| 4:L:820:U:C2' | 4:L:821:U:C6 | 2.84 | 0.48 |
| 5:M:367:U:O2' | 5:M:368:U:H5' | 2.13 | 0.48 |
| 5:M:424:U:H2' | 5:M:425:U:H6 | 1.79 | 0.48 |
| 5:M:428:U:H2' | 5:M:429:U:C6 | 2.45 | 0.48 |
| 5:M:481:U:N3 | 5:M:482:U:O4 | 2.46 | 0.48 |
| 5:M:488:U:C6 | 5:M:489:U:C5 | 3.02 | 0.48 |
| 6:N:286:U:H2' | 6:N:287:U:H6 | 1.79 | 0.48 |
| 6:N:322:U:O4 | 6:N:323:U:O4 | 2.31 | 0.48 |
| 6:N:325:U:H2' | 6:N:326:U:H6 | 1.74 | 0.48 |
| 6:N:329:U:C2 | 6:N:330:U:C5 | 3.01 | 0.48 |
| 6:N:334:U:H2' | 6:N:335:U:H6 | 1.79 | 0.48 |
| 6:N:395:U:H2' | 6:N:396:U:O5' | 2.14 | 0.48 |
| 6:N:490:U:C4 | 6:N:491:U:C5 | 3.02 | 0.48 |
| 6:N:510:U:HO3' | 6:N:511:U:P | 2.29 | 0.48 |
| 6:N:512:U:N3 | 6:N:513:U:C4 | 2.82 | 0.48 |
| 1:I:166:A:H2' | 1:I:167:A:C5' | 2.44 | 0.48 |
| 1:I:178:A:C2 | 1:I:179:A:C8 | 3.01 | 0.48 |
| 1:I:199:A:C4 | 1:I:200:A:C8 | 3.01 | 0.48 |
| 1:I:206:A:O2' | 1:I:207:A:C5' | 2.62 | 0.48 |
| 1:I:26:A:C6 | 1:I:27:A:N7 | 2.82 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:290:A:N6 | 1:I:291:A:N6 | 2.62 | 0.48 |
| 1:I:307:A:C2 | 1:I:308:A:C4 | 3.01 | 0.48 |
| 1:I:403:A:HO2' | 1:I:404:A:C4' | 2.26 | 0.48 |
| 1:I:50:A:N3 | 1:I:51:A:C8 | 2.82 | 0.48 |
| 2:J:135:A:H61 | 2:J:136:A:N6 | 2.06 | 0.48 |
| 2:J:159:A:N1 | 2:J:160:A:C6 | 2.82 | 0.48 |
| 2:J:160:A:N3 | 2:J:161:A:C8 | 2.82 | 0.48 |
| 2:J:186:A:O2' | 2:J:187:A:H5' | 2.13 | 0.48 |
| 2:J:198:A:N3 | 2:J:199:A:C8 | 2.82 | 0.48 |
| 2:J:210:A:C6 | 2:J:211:A:C5 | 3.01 | 0.48 |
| 2:J:217:A:C2 | 2:J:218:A:C5 | 3.01 | 0.48 |
| 2:J:234:A:C2' | 2:J:235:A:O5' | 2.60 | 0.48 |
| 2:J:263:A:N6 | 2:J:264:A:N6 | 2.61 | 0.48 |
| 2:J:33:A:N3 | 2:J:34:A:C8 | 2.82 | 0.48 |
| 2:J:52:A:C2' | 2:J:53:A:H5' | 2.44 | 0.48 |
| 2:J:55:A:N6 | 2:J:56:A:H62 | 2.11 | 0.48 |
| 2:J:59:A:H2' | 2:J:60:A:O5' | 2.14 | 0.48 |
| 2:J:68:A:C6 | 2:J:69:A:C5 | 3.01 | 0.48 |
| 2:J:90:A:N1 | 2:J:91:A:C5 | 2.82 | 0.48 |
| 2:J:96:A:C2 | 2:J:97:A:C5 | 3.02 | 0.48 |
| 2:J:96:A:C2' | 2:J:97:A:C5' | 2.92 | 0.48 |
| 3:K:99:A:N1 | 3:K:100:A:C5 | 2.82 | 0.48 |
| 3:K:106:A:C6 | 3:K:107:A:C5 | 3.01 | 0.48 |
| 3:K:135:A:C4 | 3:K:136:A:N7 | 2.82 | 0.48 |
| 3:K:136:A:N3 | 3:K:137:A:N9 | 2.62 | 0.48 |
| 3:K:55:A:C2 | 3:K:56:A:C5 | 3.02 | 0.48 |
| 3:K:83:A:C2 | 3:K:84:A:N7 | 2.82 | 0.48 |
| 4:L:459:U:C2' | 4:L:460:U:O5' | 2.61 | 0.48 |
| 4:L:496:U:O2' | 4:L:497:U:C5' | 2.56 | 0.48 |
| 4:L:510:U:C2' | 4:L:511:U:O5' | 2.61 | 0.48 |
| 4:L:527:U:H2' | 4:L:528:U:C6 | 2.49 | 0.48 |
| 4:L:587:U:O2' | 4:L:588:U:O4' | 2.32 | 0.48 |
| 4:L:614:U:C2 | 4:L:615:U:C5 | 3.02 | 0.48 |
| 4:L:673:U:H2' | 4:L:674:U:H6 | 1.79 | 0.48 |
| 4:L:706:U:C2' | 4:L:707:U:C5' | 2.90 | 0.48 |
| 4:L:727:U:C2 | 4:L:728:U:C6 | 3.01 | 0.48 |
| 4:L:734:U:C2' | 4:L:735:U:O5' | 2.58 | 0.48 |
| 5:M:342:U:O2' | 5:M:343:U:H5' | 2.13 | 0.48 |
| 5:M:374:U:N3 | 5:M:375:U:C5 | 2.82 | 0.48 |
| 5:M:414:U:N3 | 5:M:415:U:C4 | 2.82 | 0.48 |
| 5:M:463:U:H2' | 5:M:464:U:O4' | 2.13 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:474:U:C2 | 5:M:475:U:C5 | 3.01 | 0.48 |
| 5:M:513:U:C2' | 5:M:514:U:O5' | 2.61 | 0.48 |
| 6:N:326:U:N3 | 6:N:327:U:O4 | 2.45 | 0.48 |
| 6:N:327:U:C3' | 6:N:328:U:C5' | 2.67 | 0.48 |
| 1:I:131:A:C6 | 1:I:132:A:N7 | 2.82 | 0.48 |
| 1:I:152:A:N6 | 1:I:153:A:H62 | 2.07 | 0.48 |
| 1:I:196:A:H2' | 1:I:197:A:C5' | 2.44 | 0.48 |
| 1:I:222:A:H2' | 1:I:223:A:H8 | 1.79 | 0.48 |
| 1:I:243:A:N1 | 1:I:244:A:C6 | 2.82 | 0.48 |
| 1:I:284:A:C4 | 1:I:285:A:C8 | 3.01 | 0.48 |
| 1:I:303:A:C2 | 1:I:304:A:N9 | 2.81 | 0.48 |
| 1:I:42:A:C2 | 1:I:43:A:C5 | 3.02 | 0.48 |
| 1:I:56:A:N3 | 1:I:57:A:N9 | 2.61 | 0.48 |
| 2:J:100:A:H2' | 2:J:101:A:H8 | 1.77 | 0.48 |
| 2:J:120:A:C2' | 2:J:121:A:O5' | 2.62 | 0.48 |
| 2:J:203:A:C2 | 2:J:204:A:C8 | 3.02 | 0.48 |
| 2:J:221:A:C4 | 2:J:222:A:C8 | 3.02 | 0.48 |
| 2:J:230:A:H2' | 2:J:231:A:C8 | 2.49 | 0.48 |
| 2:J:65:A:N1 | 2:J:66:A:C5 | 2.82 | 0.48 |
| 3:K:100:A:H2' | 3:K:101:A:C8 | 2.48 | 0.48 |
| 3:K:105:A:N9 | 3:K:106:A:C8 | 2.81 | 0.48 |
| 3:K:154:A:O2' | 3:K:155:A:O4' | 2.32 | 0.48 |
| 3:K:56:A:C2' | 3:K:57:A:H5' | 2.44 | 0.48 |
| 3:K:62:A:C4 | 3:K:63:A:N7 | 2.82 | 0.48 |
| 4:L:478:U:H2' | 4:L:479:U:O5' | 2.13 | 0.48 |
| 4:L:488:U:C2' | 4:L:489:U:O5' | 2.61 | 0.48 |
| 4:L:499:U:H2' | 4:L:500:U:C6 | 2.48 | 0.48 |
| 4:L:540:U:C2 | 4:L:541:U:C6 | 3.02 | 0.48 |
| 4:L:615:U:C2 | 4:L:616:U:C5 | 3.02 | 0.48 |
| 4:L:728:U:H2' | 4:L:729:U:H6 | 1.79 | 0.48 |
| 4:L:742:U:H2' | 4:L:743:U:H5 | 1.78 | 0.48 |
| 4:L:753:U:N3 | 4:L:754:U:C5 | 2.82 | 0.48 |
| 4:L:772:U:C2 | 4:L:773:U:C5 | 3.01 | 0.48 |
| 4:L:805:U:C2 | 4:L:806:U:C6 | 3.01 | 0.48 |
| 5:M:285:U:N3 | 5:M:286:U:C5 | 2.82 | 0.48 |
| 5:M:294:U:H2' | 5:M:295:U:H6 | 1.78 | 0.48 |
| 5:M:304:U:H2' | 5:M:305:U:H6 | 1.79 | 0.48 |
| 5:M:334:U:C4 | 5:M:335:U:C5 | 3.02 | 0.48 |
| 5:M:365:U:N3 | 5:M:366:U:C5 | 2.82 | 0.48 |
| 5:M:400:U:H2' | 5:M:401:U:H6 | 1.77 | 0.48 |
| 5:M:454:U:O4 | 5:M:455:U:O4 | 2.31 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:521:U:C2 | 5:M:522:U:C6 | 3.02 | 0.48 |
| 5:M:547:U:C4 | 5:M:548:U:O4 | 2.67 | 0.48 |
| 6:N:341:U:H3' | 6:N:342:U:OP2 | 2.14 | 0.48 |
| 6:N:482:U:C2 | 6:N:483:U:C6 | 3.02 | 0.48 |
| 1:I:109:A:HO2' | 1:I:110:A:C4' | 2.26 | 0.48 |
| 1:I:132:A:N3 | 1:I:133:A:N9 | 2.62 | 0.48 |
| 1:I:14:A:N3 | 1:I:15:A:N9 | 2.62 | 0.48 |
| 1:I:198:A:C4 | 1:I:199:A:N7 | 2.82 | 0.48 |
| 1:I:232:A:C2' | 1:I:233:A:C4' | 2.86 | 0.48 |
| 1:I:244:A:C2 | 1:I:245:A:N9 | 2.82 | 0.48 |
| 1:I:264:A:H2' | 1:I:265:A:O5' | 2.14 | 0.48 |
| 1:I:270:A:C2 | 1:I:271:A:C1' | 2.97 | 0.48 |
| 1:I:38:A:C4 | 1:I:39:A:C8 | 3.01 | 0.48 |
| 1:I:404:A:N6 | 1:I:405:A:H62 | 2.11 | 0.48 |
| 1:I:43:A:N6 | 1:I:44:A:N6 | 2.61 | 0.48 |
| 1:I:52:A:N3 | 1:I:53:A:C8 | 2.81 | 0.48 |
| 2:J:116:A:C4 | 2:J:117:A:N7 | 2.82 | 0.48 |
| 2:J:166:A:O2' | 2:J:167:A:O5' | 2.31 | 0.48 |
| 2:J:203:A:O2' | 2:J:204:A:C5' | 2.56 | 0.48 |
| 2:J:237:A:H2' | 2:J:238:A:H8 | 1.78 | 0.48 |
| 2:J:253:A:N3 | 2:J:254:A:C8 | 2.82 | 0.48 |
| 2:J:265:A:N3 | 2:J:266:A:N9 | 2.57 | 0.48 |
| 2:J:266:A:C2 | 2:J:267:A:C8 | 3.02 | 0.48 |
| 2:J:59:A:C2' | 2:J:60:A:H5' | 2.44 | 0.48 |
| 3:K:102:A:C2 | 3:K:103:A:C4 | 3.02 | 0.48 |
| 3:K:64:A:H2' | 3:K:65:A:H8 | 1.79 | 0.48 |
| 4:L:521:U:HO2' | 4:L:522:U:H5' | 1.71 | 0.48 |
| 4:L:646:U:H2' | 4:L:647:U:O5' | 2.14 | 0.48 |
| 4:L:647:U:O2' | 4:L:648:U:C4' | 2.62 | 0.48 |
| 4:L:784:U:H2' | 4:L:785:U:C6 | 2.48 | 0.48 |
| 4:L:798:U:N3 | 4:L:799:U:C5 | 2.82 | 0.48 |
| 4:L:803:U:O2' | 4:L:804:U:O4' | 2.30 | 0.48 |
| 5:M:324:U:C2' | 5:M:325:U:C5' | 2.92 | 0.48 |
| 5:M:346:U:N3 | 5:M:347:U:C5 | 2.82 | 0.48 |
| 5:M:450:U:C2' | 5:M:451:U:H6 | 2.10 | 0.48 |
| 5:M:454:U:C4 | 5:M:455:U:O4 | 2.67 | 0.48 |
| 6:N:378:U:H2' | 6:N:379:U:H6 | 1.79 | 0.48 |
| 6:N:430:U:C4 | 6:N:431:U:C5 | 3.02 | 0.48 |
| 6:N:505:U:H2' | 6:N:506:U:H6 | 1.78 | 0.48 |
| 1:I:114:A:C5 | 1:I:115:A:N7 | 2.81 | 0.47 |
| 1:I:15:A:C5 | 1:I:16:A:C8 | 3.01 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:223:A:N1 | 1:I:224:A:C5 | 2.82 | 0.47 |
| 1:I:311:A:H2' | 1:I:312:A:C5' | 2.43 | 0.47 |
| 1:I:326:A:N3 | 1:I:327:A:C8 | 2.82 | 0.47 |
| 1:I:52:A:C2 | 1:I:53:A:C4 | 3.01 | 0.47 |
| 1:I:67:A:H61 | 1:I:68:A:N6 | 2.00 | 0.47 |
| 1:I:77:A:C2 | 1:I:78:A:C5 | 3.03 | 0.47 |
| 2:J:146:A:C2 | 2:J:147:A:C4 | 3.02 | 0.47 |
| 2:J:188:A:O2' | 2:J:189:A:H5' | 2.13 | 0.47 |
| 2:J:62:A:C2 | 2:J:63:A:C4 | 3.02 | 0.47 |
| 3:K:101:A:H2' | 3:K:102:A:C5' | 2.44 | 0.47 |
| 3:K:108:A:H2' | 3:K:109:A:H8 | 1.79 | 0.47 |
| 3:K:118:A:C2 | 3:K:119:A:C1' | 2.97 | 0.47 |
| 3:K:249:A:C2' | 3:K:250:A:C5' | 2.92 | 0.47 |
| 3:K:64:A:C2 | 3:K:65:A:C4 | 3.02 | 0.47 |
| 3:K:68:A:N3 | 3:K:69:A:C8 | 2.82 | 0.47 |
| 3:K:86:A:N3 | 3:K:87:A:C8 | 2.81 | 0.47 |
| 4:L:509:U:C2' | 4:L:510:U:O4' | 2.61 | 0.47 |
| 4:L:534:U:N3 | 4:L:535:U:C5 | 2.82 | 0.47 |
| 4:L:539:U:H2' | 4:L:540:U:C6 | 2.49 | 0.47 |
| 4:L:562:U:O2' | 4:L:563:U:C5' | 2.58 | 0.47 |
| 4:L:736:U:H2' | 4:L:737:U:H6 | 1.79 | 0.47 |
| 4:L:771:U:O2 | 4:L:772:U:C6 | 2.67 | 0.47 |
| 4:L:810:U:C2' | 4:L:811:U:O5' | 2.51 | 0.47 |
| 5:M:301:U:H2' | 5:M:302:U:H6 | 1.78 | 0.47 |
| 5:M:350:U:O2 | 5:M:351:U:O4' | 2.32 | 0.47 |
| 5:M:394:U:N3 | 5:M:395:U:C5 | 2.81 | 0.47 |
| 5:M:424:U:N3 | 5:M:425:U:C5 | 2.81 | 0.47 |
| 5:M:430:U:C2 | 5:M:431:U:C4 | 3.01 | 0.47 |
| 5:M:461:U:H2' | 5:M:462:U:H6 | 1.78 | 0.47 |
| 5:M:477:U:H2' | 5:M:478:U:O5' | 2.13 | 0.47 |
| 5:M:499:U:C2 | 5:M:500:U:C6 | 3.02 | 0.47 |
| 5:M:528:U:H2' | 5:M:529:U:O5' | 2.14 | 0.47 |
| 5:M:530:U:C4 | 5:M:531:U:C5 | 3.02 | 0.47 |
| 6:N:277:U:O2 | 6:N:278:U:C6 | 2.67 | 0.47 |
| 6:N:332:U:C2' | 6:N:333:U:C6 | 2.88 | 0.47 |
| 6:N:369:U:O2' | 6:N:370:U:H5' | 2.15 | 0.47 |
| 6:N:402:U:C2 | 6:N:403:U:C6 | 3.01 | 0.47 |
| 6:N:424:U:C2' | 6:N:425:U:C5' | 2.92 | 0.47 |
| 6:N:451:U:O2' | 6:N:452:U:H5' | 2.14 | 0.47 |
| 6:N:492:U:C2' | 6:N:493:U:O5' | 2.62 | 0.47 |
| 1:I:9:A:C2' | 1:I:10:A:O5' | 2.61 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:122:A:H2' | 1:I:123:A:O5' | 2.13 | 0.47 |
| 1:I:220:A:C2 | 1:I:221:A:C5 | 3.01 | 0.47 |
| 1:I:248:A:H2' | 1:I:249:A:H8 | 1.79 | 0.47 |
| 1:I:251:A:C2' | 1:I:252:A:H5' | 2.43 | 0.47 |
| 1:I:269:A:C2' | 1:I:270:A:C4' | 2.88 | 0.47 |
| 1:I:276:A:C2 | 1:I:277:A:C5 | 3.03 | 0.47 |
| 1:I:30:A:C2' | 1:I:31:A:O5' | 2.61 | 0.47 |
| 1:I:73:A:C2 | 1:I:74:A:N9 | 2.80 | 0.47 |
| 2:J:157:A:C2 | 2:J:158:A:C5 | 3.02 | 0.47 |
| 2:J:174:A:H2' | 2:J:175:A:C8 | 2.43 | 0.47 |
| 3:K:142:A:C2 | 3:K:143:A:C8 | 3.03 | 0.47 |
| 3:K:260:A:HO3' | 3:K:261:A:P | 2.30 | 0.47 |
| 3:K:69:A:C6 | 3:K:70:A:N6 | 2.82 | 0.47 |
| 3:K:91:A:C2 | 3:K:92:A:C5 | 3.01 | 0.47 |
| 4:L:433:U:C2 | 4:L:434:U:C5 | 3.02 | 0.47 |
| 4:L:479:U:N3 | 4:L:480:U:C5 | 2.83 | 0.47 |
| 4:L:488:U:C2 | 4:L:489:U:C6 | 3.02 | 0.47 |
| 4:L:571:U:N3 | 4:L:572:U:C5 | 2.82 | 0.47 |
| 4:L:573:U:H2' | 4:L:574:U:O4' | 2.13 | 0.47 |
| 4:L:606:U:C2' | 4:L:607:U:C5' | 2.92 | 0.47 |
| 4:L:625:U:N3 | 4:L:626:U:C5 | 2.82 | 0.47 |
| 4:L:705:U:N3 | 4:L:706:U:C5 | 2.82 | 0.47 |
| 4:L:745:U:C2 | 4:L:746:U:C6 | 2.93 | 0.47 |
| 4:L:759:U:H2' | 4:L:760:U:O4' | 2.13 | 0.47 |
| 5:M:290:U:H2' | 5:M:291:U:C5' | 2.43 | 0.47 |
| 5:M:324:U:O2' | 5:M:325:U:H5' | 2.14 | 0.47 |
| 5:M:392:U:C3' | 5:M:393:U:H5' | 2.04 | 0.47 |
| 5:M:396:U:O2' | 5:M:397:U:C4' | 2.62 | 0.47 |
| 5:M:429:U:O2' | 5:M:430:U:O4' | 2.31 | 0.47 |
| 5:M:436:U:C4 | 5:M:437:U:C5 | 3.02 | 0.47 |
| 5:M:472:U:N3 | 5:M:473:U:C5 | 2.82 | 0.47 |
| 5:M:546:U:C4 | 5:M:547:U:C5 | 3.02 | 0.47 |
| 6:N:339:U:C2' | 6:N:340:U:O4' | 2.62 | 0.47 |
| 6:N:398:U:C2 | 6:N:399:U:C5 | 3.02 | 0.47 |
| 6:N:413:U:H2' | 6:N:414:U:C6 | 2.47 | 0.47 |
| 6:N:473:U:N1 | 6:N:474:U:C5 | 2.82 | 0.47 |
| 1:I:102:A:C2 | 1:I:103:A:C5 | 3.02 | 0.47 |
| 1:I:115:A:C2 | 1:I:116:A:N7 | 2.82 | 0.47 |
| 1:I:14:A:H2' | 1:I:15:A:C4' | 2.24 | 0.47 |
| 1:I:194:A:C6 | 1:I:195:A:N7 | 2.82 | 0.47 |
| 1:I:197:A:C2 | 1:I:198:A:N9 | 2.82 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:213:A:C2 | 1:I:214:A:C4 | 3.02 | 0.47 |
| 1:I:22:A:HO2' | 1:I:23:A:C5' | 2.21 | 0.47 |
| 1:I:262:A:C6 | 1:I:263:A:N7 | 2.82 | 0.47 |
| 1:I:272:A:N1 | 1:I:273:A:C6 | 2.82 | 0.47 |
| 1:I:300:A:C2 | 1:I:301:A:C4 | 3.03 | 0.47 |
| 1:I:338:A:C6 | 1:I:339:A:C5 | 3.02 | 0.47 |
| 1:I:359:A:H61 | 1:I:360:A:N6 | 2.07 | 0.47 |
| 2:J:124:A:C2' | 2:J:125:A:C5' | 2.87 | 0.47 |
| 2:J:137:A:N3 | 2:J:138:A:C8 | 2.82 | 0.47 |
| 2:J:203:A:C4 | 2:J:204:A:N7 | 2.82 | 0.47 |
| 2:J:266:A:C4 | 2:J:267:A:C8 | 3.03 | 0.47 |
| 2:J:27:A:C2 | 2:J:28:A:N7 | 2.83 | 0.47 |
| 2:J:33:A:C4 | 2:J:34:A:N7 | 2.82 | 0.47 |
| 2:J:40:A:C4 | 2:J:41:A:C8 | 3.02 | 0.47 |
| 2:J:49:A:C2 | 2:J:50:A:C5 | 3.02 | 0.47 |
| 3:K:165:A:C2' | 3:K:166:A:C4' | 2.88 | 0.47 |
| 3:K:252:A:H3' | 3:K:253:A:OP2 | 2.13 | 0.47 |
| 3:K:29:A:H2' | 3:K:30:A:C8 | 2.50 | 0.47 |
| 3:K:50:A:H2' | 3:K:51:A:H8 | 1.79 | 0.47 |
| 3:K:6:A:C6 | 3:K:7:A:C5 | 3.02 | 0.47 |
| 4:L:462:U:N3 | 4:L:463:U:O4 | 2.47 | 0.47 |
| 4:L:478:U:N3 | 4:L:479:U:C5 | 2.82 | 0.47 |
| 4:L:506:U:C2' | 4:L:507:U:O5' | 2.62 | 0.47 |
| 4:L:579:U:O2 | 4:L:580:U:C6 | 2.67 | 0.47 |
| 4:L:614:U:N3 | 4:L:615:U:C5 | 2.83 | 0.47 |
| 4:L:652:U:H2' | 4:L:653:U:O5' | 2.15 | 0.47 |
| 4:L:669:U:O2' | 4:L:670:U:C5' | 2.48 | 0.47 |
| 4:L:670:U:H2' | 4:L:671:U:O4' | 2.14 | 0.47 |
| 4:L:721:U:O2 | 4:L:722:U:C6 | 2.67 | 0.47 |
| 4:L:733:U:C2' | 4:L:734:U:H5' | 2.40 | 0.47 |
| 4:L:797:U:C2 | 4:L:798:U:C6 | 3.03 | 0.47 |
| 5:M:288:U:C4 | 5:M:289:U:C5 | 3.02 | 0.47 |
| 5:M:341:U:H2' | 5:M:342:U:H6 | 1.79 | 0.47 |
| 5:M:369:U:C2 | 5:M:370:U:C5 | 3.02 | 0.47 |
| 5:M:431:U:H2' | 5:M:432:U:H6 | 1.79 | 0.47 |
| 5:M:440:U:H2' | 5:M:441:U:H6 | 1.79 | 0.47 |
| 2:J:48:A:C2 | 5:M:506:U:C2 | 3.02 | 0.47 |
| 5:M:521:U:H2' | 5:M:522:U:C6 | 2.45 | 0.47 |
| 5:M:536:U:H2' | 5:M:537:U:O5' | 2.13 | 0.47 |
| 6:N:356:U:O2' | 6:N:357:U:H5' | 2.14 | 0.47 |
| 6:N:404:U:H2' | 6:N:405:U:H6 | 1.79 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:435:U:C2 | 6:N:436:U:C6 | 3.02 | 0.47 |
| 6:N:481:U:O2 | 6:N:482:U:C1' | 2.63 | 0.47 |
| 6:N:490:U:O4 | 6:N:491:U:O4 | 2.32 | 0.47 |
| 1:I:137:A:C2' | 1:I:138:A:H5' | 2.45 | 0.47 |
| 1:I:176:A:N6 | 1:I:177:A:N6 | 2.63 | 0.47 |
| 1:I:19:A:C6 | 1:I:20:A:C5 | 3.02 | 0.47 |
| 1:I:259:A:HO2' | 1:I:260:A:H5' | 1.76 | 0.47 |
| 1:I:272:A:C6 | 1:I:273:A:C5 | 3.02 | 0.47 |
| 1:I:31:A:C2 | 1:I:32:A:C8 | 3.02 | 0.47 |
| 1:I:330:A:H2' | 1:I:331:A:O5' | 2.14 | 0.47 |
| 1:I:338:A:C6 | 1:I:339:A:C6 | 3.02 | 0.47 |
| 1:I:381:A:H2' | 1:I:382:A:H8 | 1.77 | 0.47 |
| 1:I:405:A:H2' | 1:I:406:A:C8 | 2.49 | 0.47 |
| 1:I:41:A:H2' | 1:I:42:A:C8 | 2.41 | 0.47 |
| 2:J:108:A:H2' | 2:J:109:A:O5' | 2.14 | 0.47 |
| 2:J:248:A:C6 | 2:J:249:A:N7 | 2.81 | 0.47 |
| 2:J:252:A:H2' | 2:J:253:A:C5' | 2.44 | 0.47 |
| 2:J:50:A:C4 | 2:J:51:A:C8 | 3.02 | 0.47 |
| 2:J:80:A:N6 | 2:J:81:A:N6 | 2.62 | 0.47 |
| 2:J:90:A:C2 | 2:J:91:A:C5 | 3.01 | 0.47 |
| 3:K:43:A:N6 | 3:K:44:A:H61 | 2.01 | 0.47 |
| 3:K:72:A:C5 | 3:K:73:A:N7 | 2.83 | 0.47 |
| 4:L:424:U:C4 | 4:L:425:U:C5 | 3.03 | 0.47 |
| 4:L:459:U:H2' | 4:L:460:U:C4' | 2.43 | 0.47 |
| 4:L:497:U:C2' | 4:L:498:U:O4' | 2.55 | 0.47 |
| 4:L:524:U:C2 | 4:L:525:U:C5 | 3.03 | 0.47 |
| 4:L:530:U:C2' | 4:L:531:U:C5' | 2.92 | 0.47 |
| 4:L:586:U:C2 | 4:L:587:U:C6 | 3.02 | 0.47 |
| 4:L:669:U:C2 | 4:L:670:U:C5 | 3.02 | 0.47 |
| 4:L:700:U:H2' | 4:L:701:U:H6 | 1.79 | 0.47 |
| 4:L:778:U:C4 | 4:L:779:U:C5 | 3.03 | 0.47 |
| 4:L:813:U:C2 | 4:L:814:U:C6 | 3.01 | 0.47 |
| 5:M:300:U:H2' | 5:M:301:U:H6 | 1.79 | 0.47 |
| 5:M:376:U:H2' | 5:M:377:U:C6 | 2.47 | 0.47 |
| 5:M:385:U:H2' | 5:M:386:U:H6 | 1.80 | 0.47 |
| 5:M:466:U:N3 | 5:M:467:U:C6 | 2.82 | 0.47 |
| 5:M:525:U:O2 | 5:M:526:U:C6 | 2.66 | 0.47 |
| 5:M:544:U:C2' | 5:M:545:U:O5' | 2.61 | 0.47 |
| 6:N:365:U:H2' | 6:N:366:U:H6 | 1.79 | 0.47 |
| 6:N:391:U:H2' | 6:N:392:U:H6 | 1.79 | 0.47 |
| 6:N:411:U:O2' | 6:N:412:U:P | 2.64 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:470:U:HO2' | 6:N:471:U:H5' | 1.79 | 0.47 |
| 1:I:107:A:C2' | 1:I:108:A:H8 | 2.22 | 0.47 |
| 1:I:115:A:C4 | 1:I:116:A:C8 | 3.02 | 0.47 |
| 1:I:121:A:N6 | 1:I:122:A:N6 | 2.62 | 0.47 |
| 1:I:121:A:H2' | 1:I:122:A:H8 | 1.78 | 0.47 |
| 1:I:199:A:C2 | 1:I:200:A:C8 | 3.02 | 0.47 |
| 1:I:214:A:O2' | 1:I:215:A:H5' | 2.14 | 0.47 |
| 1:I:305:A:C4 | 1:I:306:A:C8 | 3.03 | 0.47 |
| 1:I:30:A:C2 | 1:I:31:A:C5 | 3.02 | 0.47 |
| 1:I:333:A:N3 | 1:I:334:A:H1' | 2.14 | 0.47 |
| 1:I:376:A:H61 | 1:I:377:A:H61 | 1.51 | 0.47 |
| 1:I:83:A:C6 | 1:I:84:A:N7 | 2.82 | 0.47 |
| 2:J:132:A:C4 | 2:J:133:A:C8 | 3.02 | 0.47 |
| 2:J:182:A:N1 | 2:J:183:A:C6 | 2.83 | 0.47 |
| 2:J:205:A:HO2' | 2:J:206:A:C5' | 1.94 | 0.47 |
| 2:J:228:A:C2 | 2:J:229:A:C5 | 3.02 | 0.47 |
| 2:J:47:A:H2' | 2:J:48:A:O4' | 2.13 | 0.47 |
| 2:J:62:A:C2 | 2:J:63:A:C8 | 3.03 | 0.47 |
| 2:J:94:A:N1 | 2:J:95:A:C5 | 2.83 | 0.47 |
| 3:K:131:A:C6 | 3:K:132:A:C5 | 3.03 | 0.47 |
| 3:K:130:A:C2 | 3:K:131:A:N9 | 2.83 | 0.47 |
| 3:K:139:A:H2' | 3:K:140:A:H8 | 1.80 | 0.47 |
| 3:K:181:A:C2 | 3:K:182:A:N9 | 2.83 | 0.47 |
| 3:K:208:A:H3' | 3:K:209:A:OP2 | 2.14 | 0.47 |
| 3:K:236:A:O2' | 3:K:237:A:C5' | 2.56 | 0.47 |
| 4:L:436:U:HO2' | 4:L:437:U:C4' | 2.24 | 0.47 |
| 4:L:483:U:C2' | 4:L:484:U:O5' | 2.62 | 0.47 |
| 4:L:562:U:N3 | 4:L:563:U:C5 | 2.82 | 0.47 |
| 4:L:566:U:C2 | 4:L:567:U:C5 | 3.02 | 0.47 |
| 4:L:571:U:O4 | 4:L:572:U:O4 | 2.32 | 0.47 |
| 4:L:579:U:C2' | 4:L:580:U:C5' | 2.93 | 0.47 |
| 1:I:237:A:C2 | 4:L:589:U:C2 | 3.03 | 0.47 |
| 4:L:640:U:O4 | 4:L:641:U:O4 | 2.32 | 0.47 |
| 4:L:707:U:N3 | 4:L:708:U:C5 | 2.82 | 0.47 |
| 4:L:790:U:H2' | 4:L:791:U:H6 | 1.79 | 0.47 |
| 5:M:297:U:H2' | 5:M:298:U:O5' | 2.13 | 0.47 |
| 5:M:338:U:O2' | 5:M:339:U:O5' | 2.32 | 0.47 |
| 5:M:341:U:O2' | 5:M:342:U:C5' | 2.50 | 0.47 |
| 5:M:383:U:H2' | 5:M:384:U:C6 | 2.49 | 0.47 |
| 2:J:145:A:C2 | 5:M:409:U:C2 | 3.02 | 0.47 |
| 5:M:441:U:O2' | 5:M:442:U:C5' | 2.46 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:477:U:C2' | 5:M:478:U:C5' | 2.92 | 0.47 |
| 5:M:482:U:C2 | 5:M:483:U:C5 | 3.03 | 0.47 |
| 5:M:502:U:O2 | 5:M:503:U:C5 | 2.64 | 0.47 |
| 5:M:535:U:C2' | 5:M:536:U:C5' | 2.92 | 0.47 |
| 5:M:538:U:N3 | 5:M:539:U:C4 | 2.83 | 0.47 |
| 6:N:273:U:O2' | 6:N:274:U:H5' | 2.14 | 0.47 |
| 6:N:280:U:C2 | 6:N:281:U:C6 | 3.02 | 0.47 |
| 6:N:279:U:C4 | 6:N:280:U:C5 | 3.03 | 0.47 |
| 6:N:363:U:C2 | 6:N:364:U:H5 | 2.24 | 0.47 |
| 6:N:513:U:H2' | 6:N:514:U:C6 | 2.46 | 0.47 |
| 1:I:126:A:H2' | 1:I:127:A:H8 | 1.79 | 0.47 |
| 1:I:181:A:N1 | 1:I:182:A:C5 | 2.82 | 0.47 |
| 1:I:185:A:H2' | 1:I:186:A:H8 | 1.80 | 0.47 |
| 1:I:189:A:H2' | 1:I:190:A:C8 | 2.49 | 0.47 |
| 1:I:246:A:H2' | 1:I:247:A:O5' | 2.15 | 0.47 |
| 1:I:395:A:H2' | 1:I:396:A:C8 | 2.49 | 0.47 |
| 1:I:396:A:H2' | 1:I:397:A:H8 | 1.80 | 0.47 |
| 1:I:403:A:C2 | 1:I:404:A:C4 | 3.03 | 0.47 |
| 1:I:82:A:N9 | 1:I:83:A:C8 | 2.82 | 0.47 |
| 2:J:146:A:N3 | 2:J:147:A:C8 | 2.83 | 0.47 |
| 2:J:146:A:C2' | 2:J:147:A:C5' | 2.92 | 0.47 |
| 2:J:157:A:C2 | 2:J:158:A:C4 | 3.02 | 0.47 |
| 2:J:164:A:O2' | 2:J:165:A:H5' | 2.15 | 0.47 |
| 2:J:184:A:N1 | 2:J:185:A:C5 | 2.83 | 0.47 |
| 2:J:188:A:H2' | 2:J:189:A:H8 | 1.80 | 0.47 |
| 2:J:207:A:N1 | 2:J:208:A:C5 | 2.83 | 0.47 |
| 2:J:50:A:C2 | 2:J:51:A:N9 | 2.82 | 0.47 |
| 2:J:57:A:C6 | 2:J:58:A:N7 | 2.82 | 0.47 |
| 2:J:70:A:N3 | 2:J:71:A:N9 | 2.62 | 0.47 |
| 3:K:11:A:C3' | 3:K:12:A:P | 2.98 | 0.47 |
| 3:K:168:A:N3 | 3:K:169:A:C1' | 2.77 | 0.47 |
| 3:K:172:A:C2 | 3:K:173:A:N7 | 2.82 | 0.47 |
| 3:K:207:A:OP1 | 6:N:318:U:OP1 | 2.32 | 0.47 |
| 3:K:41:A:C2 | 3:K:42:A:C8 | 3.02 | 0.47 |
| 3:K:83:A:H2' | 3:K:84:A:H8 | 1.79 | 0.47 |
| 3:K:87:A:O2' | 3:K:88:A:H5' | 2.14 | 0.47 |
| 3:K:96:A:C6 | 3:K:97:A:C5 | 3.03 | 0.47 |
| 4:L:423:U:C4 | 4:L:424:U:C4 | 3.03 | 0.47 |
| 4:L:438:U:C2 | 4:L:439:U:C4 | 3.00 | 0.47 |
| 4:L:505:U:C4 | 4:L:506:U:C5 | 3.03 | 0.47 |
| 4:L:557:U:N1 | 4:L:558:U:C6 | 2.78 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:585:U:H2' | 4:L:586:U:C6 | 2.41 | 0.47 |
| 4:L:597:U:H2' | 4:L:598:U:C6 | 2.40 | 0.47 |
| 4:L:599:U:C2' | 4:L:600:U:C6 | 2.84 | 0.47 |
| 4:L:606:U:H2' | 4:L:607:U:H6 | 1.80 | 0.47 |
| 4:L:663:U:H2' | 4:L:664:U:H6 | 1.79 | 0.47 |
| 4:L:665:U:H2' | 4:L:666:U:H6 | 1.78 | 0.47 |
| 4:L:699:U:H2' | 4:L:700:U:H6 | 1.79 | 0.47 |
| 4:L:723:U:C2 | 4:L:724:U:N1 | 2.83 | 0.47 |
| 5:M:288:U:N3 | 5:M:289:U:C4 | 2.83 | 0.47 |
| 5:M:382:U:C2' | 5:M:383:U:O5' | 2.61 | 0.47 |
| 5:M:421:U:N3 | 5:M:422:U:C5 | 2.82 | 0.47 |
| 5:M:473:U:C2 | 5:M:474:U:C6 | 3.02 | 0.47 |
| 5:M:487:U:N3 | 5:M:488:U:C4 | 2.83 | 0.47 |
| 6:N:317:U:C2' | 6:N:318:U:H6 | 2.13 | 0.47 |
| 6:N:321:U:C2' | 6:N:322:U:C6 | 2.93 | 0.47 |
| 6:N:326:U:C2 | 6:N:327:U:C4 | 3.03 | 0.47 |
| 6:N:362:U:H2' | 6:N:363:U:C6 | 2.44 | 0.47 |
| 6:N:491:U:H2' | 6:N:492:U:H6 | 1.80 | 0.47 |
| 6:N:506:U:H2' | 6:N:507:U:H6 | 1.80 | 0.47 |
| 1:I:116:A:C2' | 1:I:117:A:C5' | 2.92 | 0.47 |
| 1:I:16:A:C4 | 1:I:17:A:N7 | 2.80 | 0.47 |
| 1:I:225:A:N6 | 1:I:226:A:H62 | 2.12 | 0.47 |
| 1:I:299:A:H2' | 1:I:300:A:O5' | 2.15 | 0.47 |
| 1:I:318:A:H2' | 1:I:319:A:O5' | 2.14 | 0.47 |
| 1:I:325:A:C6 | 1:I:326:A:C6 | 3.02 | 0.47 |
| 1:I:364:A:C2' | 1:I:365:A:O5' | 2.63 | 0.47 |
| 1:I:396:A:H2' | 1:I:397:A:C8 | 2.48 | 0.47 |
| 1:I:67:A:N3 | 1:I:68:A:C8 | 2.82 | 0.47 |
| 2:J:148:A:C5 | 2:J:149:A:N7 | 2.83 | 0.47 |
| 2:J:233:A:C2 | 2:J:234:A:C8 | 3.02 | 0.47 |
| 2:J:254:A:N1 | 2:J:255:A:C5 | 2.82 | 0.47 |
| 2:J:32:A:O2' | 2:J:33:A:C5' | 2.43 | 0.47 |
| 2:J:32:A:H2' | 2:J:33:A:C5' | 2.43 | 0.47 |
| 2:J:62:A:C2 | 2:J:63:A:N9 | 2.83 | 0.47 |
| 2:J:65:A:C4 | 2:J:66:A:N7 | 2.83 | 0.47 |
| 3:K:247:A:C2 | 3:K:248:A:C5 | 3.02 | 0.47 |
| 3:K:96:A:N3 | 3:K:97:A:C8 | 2.82 | 0.47 |
| 3:K:99:A:C2 | 3:K:100:A:C5 | 3.02 | 0.47 |
| 4:L:484:U:H2' | 4:L:485:U:C4' | 2.45 | 0.47 |
| 4:L:485:U:O2' | 4:L:486:U:H5' | 2.14 | 0.47 |
| 4:L:573:U:C2' | 4:L:574:U:C6 | 2.79 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:612:U:N3 | 4:L:613:U:C5 | 2.83 | 0.47 |
| 4:L:778:U:H2' | 4:L:779:U:C5' | 2.42 | 0.47 |
| 4:L:808:U:N3 | 4:L:809:U:C4 | 2.82 | 0.47 |
| 4:L:812:U:H2' | 4:L:813:U:C6 | 2.46 | 0.47 |
| 4:L:812:U:O2 | 4:L:813:U:C6 | 2.68 | 0.47 |
| 5:M:300:U:H2' | 5:M:301:U:O5' | 2.15 | 0.47 |
| 5:M:324:U:C4 | 5:M:325:U:O4 | 2.67 | 0.47 |
| 5:M:401:U:H2' | 5:M:402:U:C6 | 2.50 | 0.47 |
| 5:M:408:U:O2' | 5:M:409:U:C4' | 2.57 | 0.47 |
| 5:M:501:U:N1 | 5:M:502:U:C5 | 2.83 | 0.47 |
| 5:M:508:U:C2' | 5:M:509:U:C5' | 2.92 | 0.47 |
| 6:N:283:U:N3 | 6:N:284:U:C5 | 2.83 | 0.47 |
| 6:N:323:U:C2' | 6:N:324:U:O4' | 2.62 | 0.47 |
| 6:N:322:U:C4 | 6:N:323:U:C4 | 3.02 | 0.47 |
| 1:I:112:A:N1 | 1:I:113:A:C5 | 2.82 | 0.47 |
| 1:I:116:A:C2 | 1:I:117:A:C5 | 3.02 | 0.47 |
| 1:I:189:A:C2 | 1:I:190:A:C5 | 3.03 | 0.47 |
| 1:I:209:A:N3 | 1:I:210:A:C8 | 2.82 | 0.47 |
| 1:I:21:A:O2' | 1:I:22:A:C5' | 2.60 | 0.47 |
| 1:I:31:A:H2' | 1:I:32:A:H8 | 1.80 | 0.47 |
| 2:J:102:A:C2' | 2:J:103:A:H8 | 2.24 | 0.47 |
| 2:J:144:A:N3 | 2:J:145:A:C1' | 2.78 | 0.47 |
| 2:J:156:A:H2' | 2:J:157:A:H8 | 1.79 | 0.47 |
| 2:J:25:A:N1 | 2:J:26:A:C5 | 2.83 | 0.47 |
| 2:J:35:A:C2 | 2:J:36:A:C8 | 3.02 | 0.47 |
| 2:J:64:A:N6 | 2:J:65:A:N6 | 2.63 | 0.47 |
| 2:J:65:A:O2' | 2:J:66:A:H5' | 2.15 | 0.47 |
| 2:J:72:A:C2 | 2:J:73:A:N9 | 2.82 | 0.47 |
| 2:J:90:A:C5 | 2:J:91:A:N7 | 2.83 | 0.47 |
| 3:K:124:A:C2 | 3:K:125:A:C4 | 2.98 | 0.47 |
| 3:K:141:A:C4 | 3:K:142:A:N7 | 2.83 | 0.47 |
| 3:K:259:A:HO3' | 3:K:260:A:P | 2.28 | 0.47 |
| 3:K:63:A:C2 | 3:K:64:A:C4 | 3.03 | 0.47 |
| 4:L:475:U:C2 | 4:L:476:U:C5 | 3.03 | 0.47 |
| 4:L:671:U:C2 | 4:L:672:U:C5 | 3.02 | 0.47 |
| 4:L:729:U:N3 | 4:L:730:U:O4 | 2.34 | 0.47 |
| 4:L:777:U:C2' | 4:L:778:U:O4' | 2.56 | 0.47 |
| 5:M:287:U:O2 | 5:M:288:U:N1 | 2.48 | 0.47 |
| 5:M:318:U:O2' | 5:M:319:U:C4' | 2.62 | 0.47 |
| 5:M:370:U:C2 | 5:M:371:U:C4 | 3.01 | 0.47 |
| 5:M:402:U:C2 | 5:M:403:U:C6 | 3.03 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:335:U:C4 | 6:N:336:U:C4 | 3.02 | 0.47 |
| 6:N:417:U:C2 | 6:N:418:U:C5 | 3.03 | 0.47 |
| 6:N:444:U:C2 | 6:N:445:U:C5 | 3.03 | 0.47 |
| 6:N:473:U:C6 | 6:N:474:U:H5 | 2.32 | 0.47 |
| 6:N:478:U:O2' | 6:N:479:U:H5' | 2.15 | 0.47 |
| 1:I:177:A:C2 | 1:I:178:A:C5 | 3.03 | 0.47 |
| 1:I:241:A:C6 | 1:I:242:A:C5 | 3.02 | 0.47 |
| 1:I:243:A:N1 | 1:I:244:A:C5 | 2.82 | 0.47 |
| 1:I:246:A:C2 | 1:I:247:A:C8 | 3.03 | 0.47 |
| 1:I:261:A:C6 | 1:I:262:A:N6 | 2.83 | 0.47 |
| 1:I:365:A:N3 | 1:I:366:A:C8 | 2.82 | 0.47 |
| 2:J:162:A:N6 | 2:J:163:A:H62 | 2.12 | 0.47 |
| 2:J:255:A:N3 | 2:J:256:A:C8 | 2.82 | 0.47 |
| 2:J:39:A:C2 | 2:J:40:A:C5 | 3.03 | 0.47 |
| 2:J:50:A:H2' | 2:J:51:A:C8 | 2.46 | 0.47 |
| 2:J:73:A:N1 | 2:J:74:A:C5 | 2.83 | 0.47 |
| 2:J:93:A:C4 | 2:J:94:A:N7 | 2.82 | 0.47 |
| 3:K:117:A:H2' | 3:K:118:A:C8 | 2.48 | 0.47 |
| 3:K:117:A:C6 | 3:K:118:A:N6 | 2.83 | 0.47 |
| 3:K:166:A:HO2' | 3:K:167:A:C5' | 2.00 | 0.47 |
| 3:K:203:A:O2' | 3:K:204:A:C5' | 2.58 | 0.47 |
| 3:K:247:A:C2 | 3:K:248:A:N7 | 2.83 | 0.47 |
| 3:K:253:A:O2' | 3:K:254:A:C4' | 2.61 | 0.47 |
| 3:K:38:A:C2' | 3:K:39:A:O5' | 2.60 | 0.47 |
| 3:K:98:A:C5 | 3:K:99:A:N7 | 2.83 | 0.47 |
| 4:L:513:U:H2' | 4:L:514:U:H6 | 1.79 | 0.47 |
| 4:L:559:U:O4 | 4:L:560:U:O4 | 2.32 | 0.47 |
| 4:L:611:U:C2' | 4:L:612:U:H6 | 2.15 | 0.47 |
| 4:L:653:U:H2' | 4:L:654:U:H6 | 1.79 | 0.47 |
| 4:L:655:U:H2' | 4:L:656:U:H6 | 1.80 | 0.47 |
| 4:L:660:U:H2' | 4:L:661:U:C4' | 2.44 | 0.47 |
| 4:L:708:U:C2 | 4:L:709:U:C6 | 3.02 | 0.47 |
| 4:L:709:U:O2 | 4:L:710:U:C6 | 2.68 | 0.47 |
| 4:L:723:U:O2' | 4:L:724:U:H5' | 2.15 | 0.47 |
| 4:L:724:U:C2' | 4:L:725:U:O5' | 2.57 | 0.47 |
| 5:M:298:U:H2' | 5:M:299:U:C5' | 2.44 | 0.47 |
| 5:M:519:U:H2' | 5:M:520:U:C6 | 2.46 | 0.47 |
| 6:N:282:U:C2 | 6:N:283:U:C5 | 3.03 | 0.47 |
| 6:N:335:U:O4 | 6:N:336:U:O4 | 2.32 | 0.47 |
| 6:N:397:U:H2' | 6:N:398:U:H6 | 1.80 | 0.47 |
| 6:N:452:U:H2' | 6:N:453:U:H6 | 1.79 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:108:A:C5 | 1:I:109:A:N7 | 2.83 | 0.47 |
| 1:I:258:A:C2 | 1:I:259:A:C5 | 3.02 | 0.47 |
| 1:I:266:A:H2 | 1:I:267:A:H1' | 1.79 | 0.47 |
| 1:I:27:A:C2' | 1:I:28:A:C5' | 2.93 | 0.47 |
| 1:I:305:A:N6 | 1:I:306:A:N6 | 2.63 | 0.47 |
| 1:I:322:A:N1 | 1:I:323:A:C5 | 2.82 | 0.47 |
| 1:I:353:A:N3 | 1:I:354:A:C1' | 2.77 | 0.47 |
| 1:I:75:A:C2 | 1:I:76:A:C5 | 3.03 | 0.47 |
| 2:J:158:A:C5 | 2:J:159:A:N7 | 2.82 | 0.47 |
| 2:J:184:A:H2' | 2:J:185:A:C5' | 2.40 | 0.47 |
| 2:J:185:A:C5 | 2:J:186:A:N7 | 2.83 | 0.47 |
| 2:J:200:A:C2 | 2:J:201:A:N7 | 2.83 | 0.47 |
| 2:J:247:A:N1 | 2:J:248:A:C5 | 2.83 | 0.47 |
| 2:J:48:A:H2' | 2:J:49:A:H8 | 1.80 | 0.47 |
| 3:K:116:A:C5 | 3:K:117:A:N7 | 2.82 | 0.47 |
| 3:K:141:A:C2 | 3:K:142:A:C8 | 3.03 | 0.47 |
| 3:K:164:A:N6 | 3:K:165:A:H62 | 2.09 | 0.47 |
| 3:K:253:A:C2' | 3:K:254:A:O4' | 2.62 | 0.47 |
| 4:L:541:U:N3 | 4:L:542:U:C4 | 2.83 | 0.47 |
| 4:L:542:U:H2' | 4:L:543:U:C6 | 2.49 | 0.47 |
| 4:L:650:U:H2' | 4:L:651:U:C5' | 2.44 | 0.47 |
| 4:L:754:U:C2' | 4:L:755:U:C4' | 2.93 | 0.47 |
| 4:L:759:U:C2' | 4:L:760:U:C4' | 2.86 | 0.47 |
| 4:L:768:U:H2' | 4:L:769:U:C5' | 2.37 | 0.47 |
| 4:L:800:U:O2' | 4:L:801:U:H5' | 2.15 | 0.47 |
| 5:M:303:U:O2 | 5:M:304:U:C6 | 2.67 | 0.47 |
| 5:M:363:U:C2 | 5:M:364:U:C5 | 3.02 | 0.47 |
| 5:M:415:U:C2 | 5:M:416:U:C5 | 3.03 | 0.47 |
| 5:M:434:U:C2 | 5:M:435:U:C5 | 3.02 | 0.47 |
| 5:M:453:U:H2' | 5:M:454:U:C4' | 2.30 | 0.47 |
| 5:M:527:U:H2' | 5:M:528:U:C5' | 2.45 | 0.47 |
| 6:N:304:U:C2' | 6:N:305:U:C6 | 2.81 | 0.47 |
| 6:N:305:U:C3' | 6:N:306:U:H6 | 2.28 | 0.47 |
| 6:N:349:U:O2' | 6:N:350:U:O5' | 2.33 | 0.47 |
| 6:N:393:U:O2' | 6:N:394:U:C5' | 2.61 | 0.47 |
| 6:N:397:U:C2' | 6:N:398:U:H5' | 2.45 | 0.47 |
| 6:N:492:U:H2' | 6:N:493:U:O5' | 2.15 | 0.47 |
| 6:N:499:U:O4 | 6:N:500:U:O4 | 2.31 | 0.47 |
| 1:I:138:A:C2 | 1:I:139:A:N9 | 2.83 | 0.47 |
| 1:I:138:A:C2' | 1:I:139:A:O5' | 2.63 | 0.47 |
| 1:I:157:A:H2' | 1:I:158:A:C8 | 2.49 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:187:A:N1 | 1:I:188:A:C5 | 2.83 | 0.47 |
| 1:I:209:A:C2 | 1:I:210:A:C8 | 3.03 | 0.47 |
| 1:I:209:A:O2' | 1:I:210:A:H5' | 2.14 | 0.47 |
| 1:I:263:A:C2' | 1:I:264:A:O5' | 2.59 | 0.47 |
| 1:I:270:A:N3 | 1:I:271:A:H1' | 2.30 | 0.47 |
| 1:I:279:A:N3 | 1:I:280:A:N9 | 2.63 | 0.47 |
| 1:I:310:A:C6 | 1:I:311:A:C5 | 3.03 | 0.47 |
| 1:I:318:A:C4 | 1:I:319:A:C8 | 3.03 | 0.47 |
| 1:I:362:A:H2' | 1:I:363:A:H8 | 1.79 | 0.47 |
| 1:I:364:A:H2' | 1:I:365:A:O5' | 2.14 | 0.47 |
| 1:I:63:A:C6 | 1:I:64:A:C5 | 3.03 | 0.47 |
| 1:I:92:A:C5 | 1:I:93:A:N7 | 2.83 | 0.47 |
| 2:J:115:A:C2 | 2:J:116:A:N7 | 2.83 | 0.47 |
| 2:J:14:A:C2 | 2:J:15:A:N7 | 2.82 | 0.47 |
| 2:J:260:A:H2' | 2:J:261:A:C5' | 2.45 | 0.47 |
| 2:J:30:A:H2' | 2:J:31:A:C5' | 2.45 | 0.47 |
| 2:J:30:A:N3 | 2:J:31:A:C8 | 2.83 | 0.47 |
| 3:K:131:A:N1 | 3:K:132:A:C5 | 2.83 | 0.47 |
| 3:K:138:A:N3 | 3:K:139:A:N7 | 2.61 | 0.47 |
| 3:K:154:A:N3 | 3:K:155:A:C8 | 2.83 | 0.47 |
| 3:K:198:A:N6 | 3:K:199:A:N6 | 2.62 | 0.47 |
| 3:K:206:A:C2' | 3:K:207:A:H5' | 2.45 | 0.47 |
| 3:K:54:A:N3 | 3:K:55:A:C8 | 2.83 | 0.47 |
| 3:K:68:A:C2 | 3:K:69:A:C5 | 3.03 | 0.47 |
| 3:K:6:A:N6 | 3:K:7:A:N6 | 2.63 | 0.47 |
| 4:L:589:U:C4 | 4:L:590:U:C5 | 3.03 | 0.47 |
| 4:L:605:U:H2' | 4:L:606:U:H6 | 1.80 | 0.47 |
| 4:L:665:U:H2' | 4:L:666:U:O5' | 2.15 | 0.47 |
| 4:L:722:U:HO2' | 4:L:723:U:H6 | 1.62 | 0.47 |
| 1:I:82:A:C2 | 4:L:744:U:C2 | 3.03 | 0.47 |
| 4:L:750:U:O2 | 4:L:751:U:C4 | 2.67 | 0.47 |
| 4:L:804:U:C2' | 4:L:805:U:C5' | 2.92 | 0.47 |
| 5:M:301:U:C2 | 5:M:302:U:C5 | 3.02 | 0.47 |
| 5:M:383:U:C2 | 5:M:384:U:C5 | 3.02 | 0.47 |
| 5:M:488:U:C4 | 5:M:489:U:O4 | 2.68 | 0.47 |
| 5:M:504:U:N3 | 5:M:505:U:C4 | 2.83 | 0.47 |
| 5:M:523:U:H2' | 5:M:524:U:O5' | 2.14 | 0.47 |
| 5:M:549:U:C3' | 5:M:550:U:P | 2.93 | 0.47 |
| 6:N:311:U:C2' | 6:N:312:U:H6 | 2.25 | 0.47 |
| 6:N:315:U:H2' | 6:N:316:U:O4' | 2.14 | 0.47 |
| 6:N:342:U:C2' | 6:N:343:U:C5' | 2.92 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:401:U:C2' | 6:N:402:U:O5' | 2.62 | 0.47 |
| 6:N:421:U:O2' | 6:N:422:U:H5' | 2.15 | 0.47 |
| 6:N:440:U:O2' | 6:N:441:U:C4' | 2.59 | 0.47 |
| 1:I:14:A:H2' | 1:I:15:A:C1' | 2.39 | 0.46 |
| 1:I:178:A:C2 | 1:I:179:A:C5 | 3.03 | 0.46 |
| 1:I:17:A:HO2' | 1:I:18:A:C5' | 1.98 | 0.46 |
| 1:I:20:A:C4 | 1:I:21:A:N7 | 2.84 | 0.46 |
| 1:I:240:A:HO2' | 1:I:241:A:C5' | 2.22 | 0.46 |
| 1:I:277:A:O5' | 1:I:278:A:OP2 | 2.33 | 0.46 |
| 1:I:321:A:N1 | 1:I:322:A:C5 | 2.83 | 0.46 |
| 1:I:3:A:C2 | 1:I:4:A:C5 | 3.03 | 0.46 |
| 1:I:57:A:C4 | 1:I:58:A:N7 | 2.83 | 0.46 |
| 1:I:82:A:C6 | 1:I:83:A:C4 | 3.03 | 0.46 |
| 1:I:8:A:C6 | 1:I:9:A:N7 | 2.83 | 0.46 |
| 2:J:156:A:H2' | 2:J:157:A:O4' | 2.15 | 0.46 |
| 2:J:166:A:N3 | 2:J:167:A:N9 | 2.62 | 0.46 |
| 2:J:226:A:N1 | 2:J:227:A:C5 | 2.83 | 0.46 |
| 3:K:102:A:O2' | 3:K:103:A:P | 2.64 | 0.46 |
| 3:K:121:A:C6 | 3:K:122:A:C6 | 3.03 | 0.46 |
| 3:K:161:A:C2' | 3:K:162:A:C5' | 2.93 | 0.46 |
| 3:K:170:A:H2' | 3:K:171:A:C5' | 2.45 | 0.46 |
| 3:K:253:A:C2' | 3:K:254:A:C4' | 2.87 | 0.46 |
| 3:K:80:A:N3 | 3:K:81:A:C8 | 2.84 | 0.46 |
| 3:K:81:A:O2' | 3:K:82:A:C4' | 2.62 | 0.46 |
| 3:K:90:A:H2' | 3:K:91:A:H8 | 1.79 | 0.46 |
| 3:K:93:A:H2' | 3:K:94:A:C8 | 2.49 | 0.46 |
| 4:L:536:U:H3' | 4:L:537:U:P | 2.55 | 0.46 |
| 4:L:547:U:C4 | 4:L:548:U:C5 | 3.01 | 0.46 |
| 4:L:614:U:O2' | 4:L:615:U:H5' | 2.15 | 0.46 |
| 4:L:643:U:O4 | 4:L:644:U:O4 | 2.32 | 0.46 |
| 4:L:681:U:C2 | 4:L:682:U:C6 | 3.03 | 0.46 |
| 4:L:736:U:O2' | 4:L:737:U:P | 2.70 | 0.46 |
| 4:L:750:U:H2' | 4:L:751:U:H5 | 1.77 | 0.46 |
| 5:M:384:U:H2' | 5:M:385:U:H6 | 1.79 | 0.46 |
| 5:M:404:U:H2' | 5:M:405:U:C6 | 2.50 | 0.46 |
| 5:M:469:U:C2' | 5:M:470:U:H6 | 2.19 | 0.46 |
| 5:M:476:U:C2 | 5:M:477:U:C5 | 3.03 | 0.46 |
| 5:M:497:U:N3 | 5:M:498:U:C4 | 2.83 | 0.46 |
| 6:N:293:U:C2 | 6:N:294:U:C5 | 3.03 | 0.46 |
| 6:N:334:U:H2' | 6:N:335:U:C6 | 2.50 | 0.46 |
| 6:N:462:U:C2 | 6:N:463:U:C6 | 3.03 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:119:A:H2 | 1:I:120:A:C4 | 2.29 | 0.46 |
| 1:I:183:A:N3 | 1:I:184:A:O4' | 2.48 | 0.46 |
| 1:I:241:A:N1 | 1:I:242:A:C5 | 2.83 | 0.46 |
| 1:I:4:A:C2' | 1:I:5:A:C8 | 2.81 | 0.46 |
| 1:I:74:A:N3 | 1:I:75:A:C1' | 2.78 | 0.46 |
| 1:I:82:A:N6 | 1:I:83:A:N6 | 2.63 | 0.46 |
| 2:J:124:A:N3 | 2:J:125:A:N9 | 2.63 | 0.46 |
| 2:J:184:A:C4 | 2:J:185:A:C8 | 3.03 | 0.46 |
| 2:J:185:A:O2' | 2:J:186:A:H5' | 2.14 | 0.46 |
| 2:J:191:A:H2' | 2:J:192:A:H8 | 1.81 | 0.46 |
| 2:J:204:A:C2' | 2:J:205:A:C5' | 2.92 | 0.46 |
| 2:J:29:A:C2 | 2:J:30:A:H1' | 2.50 | 0.46 |
| 2:J:80:A:C6 | 2:J:81:A:C5 | 3.03 | 0.46 |
| 3:K:110:A:C4 | 3:K:111:A:C8 | 3.03 | 0.46 |
| 3:K:123:A:O2' | 3:K:124:A:H5' | 2.15 | 0.46 |
| 3:K:249:A:C2' | 3:K:250:A:H5' | 2.38 | 0.46 |
| 3:K:84:A:H2' | 3:K:85:A:H8 | 1.79 | 0.46 |
| 4:L:506:U:H2' | 4:L:507:U:O5' | 2.15 | 0.46 |
| 4:L:559:U:C2 | 4:L:560:U:C6 | 3.03 | 0.46 |
| 4:L:609:U:O2' | 4:L:610:U:H5' | 2.15 | 0.46 |
| 4:L:618:U:H2' | 4:L:619:U:O5' | 2.14 | 0.46 |
| 4:L:621:U:N3 | 4:L:622:U:C5 | 2.82 | 0.46 |
| 4:L:650:U:H2' | 4:L:651:U:H6 | 1.80 | 0.46 |
| 4:L:668:U:N1 | 4:L:669:U:C5 | 2.83 | 0.46 |
| 4:L:688:U:H2' | 4:L:689:U:H6 | 1.80 | 0.46 |
| 4:L:690:U:H2' | 4:L:691:U:C6 | 2.50 | 0.46 |
| 4:L:796:U:C2 | 4:L:797:U:C5 | 3.03 | 0.46 |
| 4:L:819:U:O2' | 4:L:820:U:P | 2.73 | 0.46 |
| 5:M:305:U:O2' | 5:M:306:U:C5' | 2.59 | 0.46 |
| 5:M:334:U:O2 | 5:M:335:U:N1 | 2.48 | 0.46 |
| 5:M:407:U:O5' | 5:M:408:U:OP2 | 2.33 | 0.46 |
| 5:M:434:U:H2' | 5:M:435:U:C5' | 2.46 | 0.46 |
| 5:M:460:U:C2' | 5:M:461:U:C6 | 2.92 | 0.46 |
| 5:M:508:U:H2' | 5:M:509:U:H6 | 1.79 | 0.46 |
| 5:M:536:U:H2' | 5:M:537:U:H6 | 1.81 | 0.46 |
| 6:N:289:U:H3' | 6:N:290:U:P | 2.53 | 0.46 |
| 6:N:376:U:C2 | 6:N:377:U:C6 | 3.02 | 0.46 |
| 6:N:438:U:C2' | 6:N:439:U:C5' | 2.94 | 0.46 |
| 6:N:439:U:C2' | 6:N:440:U:H5' | 2.45 | 0.46 |
| 1:I:113:A:N3 | 1:I:114:A:C8 | 2.83 | 0.46 |
| 1:I:115:A:N1 | 1:I:116:A:C5 | 2.83 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:131:A:H61 | 1:I:132:A:H61 | 1.56 | 0.46 |
| 1:I:134:A:N1 | 1:I:135:A:N7 | 2.52 | 0.46 |
| 1:I:189:A:H2' | 1:I:190:A:C5' | 2.43 | 0.46 |
| 1:I:198:A:N1 | 1:I:199:A:C5 | 2.83 | 0.46 |
| 1:I:199:A:N3 | 1:I:200:A:C8 | 2.83 | 0.46 |
| 1:I:257:A:N1 | 1:I:258:A:C5 | 2.84 | 0.46 |
| 1:I:335:A:N6 | 1:I:336:A:H61 | 2.02 | 0.46 |
| 1:I:338:A:H2' | 1:I:339:A:C8 | 2.50 | 0.46 |
| 1:I:33:A:C2' | 1:I:34:A:O5' | 2.63 | 0.46 |
| 1:I:391:A:C6 | 1:I:392:A:N6 | 2.83 | 0.46 |
| 1:I:56:A:N1 | 1:I:57:A:C5 | 2.83 | 0.46 |
| 1:I:65:A:HO2' | 1:I:66:A:C5' | 1.93 | 0.46 |
| 1:I:68:A:H2' | 1:I:69:A:C4' | 2.45 | 0.46 |
| 2:J:100:A:C2 | 2:J:101:A:C5 | 3.03 | 0.46 |
| 2:J:117:A:N1 | 2:J:118:A:C5 | 2.83 | 0.46 |
| 2:J:128:A:N1 | 2:J:129:A:C5 | 2.83 | 0.46 |
| 2:J:200:A:N1 | 2:J:201:A:C5 | 2.83 | 0.46 |
| 2:J:228:A:C6 | 2:J:229:A:N6 | 2.84 | 0.46 |
| 2:J:98:A:O2' | 2:J:99:A:H5' | 2.16 | 0.46 |
| 3:K:100:A:O2' | 3:K:101:A:O4' | 2.33 | 0.46 |
| 3:K:163:A:C6 | 3:K:164:A:C5 | 3.04 | 0.46 |
| 3:K:192:A:C3' | 3:K:193:A:H8 | 2.29 | 0.46 |
| 4:L:524:U:N3 | 4:L:525:U:C5 | 2.84 | 0.46 |
| 4:L:530:U:C2 | 4:L:531:U:C6 | 3.04 | 0.46 |
| 4:L:586:U:C6 | 4:L:587:U:C5 | 3.03 | 0.46 |
| 4:L:602:U:N3 | 4:L:603:U:C4 | 2.83 | 0.46 |
| 4:L:606:U:C2 | 4:L:607:U:C6 | 3.03 | 0.46 |
| 4:L:660:U:C2' | 4:L:661:U:C4' | 2.94 | 0.46 |
| 4:L:663:U:H2' | 4:L:664:U:C6 | 2.51 | 0.46 |
| 4:L:687:U:H2' | 4:L:688:U:C6 | 2.49 | 0.46 |
| 4:L:704:U:O2 | 4:L:705:U:C6 | 2.67 | 0.46 |
| 4:L:797:U:C2 | 4:L:798:U:C5 | 3.03 | 0.46 |
| 4:L:815:U:N3 | 4:L:816:U:C5 | 2.83 | 0.46 |
| 5:M:323:U:H2' | 5:M:324:U:C1' | 2.38 | 0.46 |
| 5:M:324:U:C2' | 5:M:325:U:H5' | 2.45 | 0.46 |
| 5:M:344:U:C2 | 5:M:345:U:C5 | 3.03 | 0.46 |
| 6:N:279:U:HO3' | 6:N:280:U:P | 2.30 | 0.46 |
| 6:N:296:U:N3 | 6:N:297:U:O4 | 2.48 | 0.46 |
| 6:N:322:U:H3' | 6:N:323:U:P | 2.54 | 0.46 |
| 6:N:330:U:O2' | 6:N:331:U:H5' | 2.15 | 0.46 |
| 6:N:352:U:H2' | 6:N:353:U:H6 | 1.80 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 6:N:458:U:H2' | 6:N:459:U:H6 | 1.77 | 0.46 |
| 6:N:487:U:H2' | 6:N:488:U:H6 | 1.77 | 0.46 |
| 1:I:114:A:N6 | 1:I:115:A:N6 | 2.63 | 0.46 |
| 1:I:123:A:C4 | 1:I:124:A:C8 | 3.03 | 0.46 |
| 1:I:203:A:H2' | 1:I:204:A:H8 | 1.79 | 0.46 |
| 1:I:245:A:C4 | 1:I:246:A:C8 | 3.03 | 0.46 |
| 1:I:246:A:C2' | 1:I:247:A:O5' | 2.64 | 0.46 |
| 1:I:324:A:N1 | 1:I:325:A:C5 | 2.84 | 0.46 |
| 1:I:349:A:C6 | 1:I:350:A:N7 | 2.83 | 0.46 |
| 1:I:77:A:H2' | 1:I:78:A:H8 | 1.81 | 0.46 |
| 2:J:111:A:O2' | 2:J:112:A:C5' | 2.51 | 0.46 |
| 2:J:198:A:H2' | 2:J:199:A:C5' | 2.45 | 0.46 |
| 2:J:22:A:C2 | 2:J:23:A:C8 | 3.04 | 0.46 |
| 2:J:234:A:C2 | 2:J:235:A:C8 | 3.04 | 0.46 |
| 2:J:241:A:O2' | 2:J:242:A:H5' | 2.15 | 0.46 |
| 2:J:3:A:C3' | 2:J:4:A:P | 2.98 | 0.46 |
| 2:J:6:A:N1 | 2:J:7:A:C5 | 2.84 | 0.46 |
| 2:J:98:A:N1 | 2:J:99:A:C5 | 2.83 | 0.46 |
| 3:K:107:A:C2 | 3:K:108:A:C8 | 3.04 | 0.46 |
| 3:K:118:A:C2' | 3:K:119:A:C4' | 2.88 | 0.46 |
| 3:K:130:A:H2' | 3:K:131:A:C5' | 2.43 | 0.46 |
| 3:K:94:A:C6 | 3:K:95:A:C6 | 3.03 | 0.46 |
| 3:K:96:A:N1 | 3:K:97:A:C5 | 2.84 | 0.46 |
| 4:L:457:U:C2 | 4:L:458:U:C5 | 3.03 | 0.46 |
| 4:L:479:U:C2 | 4:L:480:U:C5 | 3.03 | 0.46 |
| 4:L:513:U:C2 | 4:L:514:U:C6 | 3.03 | 0.46 |
| 4:L:517:U:C4 | 4:L:518:U:C5 | 3.03 | 0.46 |
| 4:L:539:U:C2 | 4:L:540:U:C5 | 3.04 | 0.46 |
| 4:L:574:U:C4 | 4:L:575:U:C5 | 3.03 | 0.46 |
| 4:L:589:U:O2 | 4:L:590:U:C6 | 2.68 | 0.46 |
| 4:L:604:U:C2' | 4:L:605:U:O5' | 2.62 | 0.46 |
| 4:L:661:U:H2' | 4:L:662:U:O5' | 2.15 | 0.46 |
| 4:L:683:U:C4 | 4:L:684:U:O4 | 2.68 | 0.46 |
| 4:L:744:U:H2' | 4:L:745:U:H6 | 1.81 | 0.46 |
| 4:L:782:U:H2' | 4:L:783:U:O5' | 2.15 | 0.46 |
| 4:L:803:U:C2' | 4:L:804:U:C5' | 2.93 | 0.46 |
| 4:L:806:U:C2' | 4:L:807:U:O4' | 2.63 | 0.46 |
| 5:M:303:U:C2 | 5:M:304:U:C5 | 3.03 | 0.46 |
| 5:M:436:U:N3 | 5:M:437:U:C5 | 2.83 | 0.46 |
| 5:M:483:U:O2 | 5:M:484:U:C6 | 2.68 | 0.46 |
| 6:N:297:U:C2' | 6:N:298:U:H5' | 2.46 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:354:U:H2' | 6:N:355:U:H6 | 1.79 | 0.46 |
| 6:N:439:U:O2' | 6:N:440:U:H5' | 2.15 | 0.46 |
| 6:N:477:U:C2 | 6:N:478:U:C6 | 3.03 | 0.46 |
| 1:I:122:A:C2 | 1:I:123:A:N9 | 2.83 | 0.46 |
| 1:I:128:A:N1 | 1:I:129:A:C5 | 2.84 | 0.46 |
| 1:I:130:A:O2' | 1:I:131:A:C5' | 2.58 | 0.46 |
| 1:I:142:A:N3 | 1:I:143:A:C8 | 2.84 | 0.46 |
| 1:I:147:A:H2' | 1:I:148:A:O4' | 2.15 | 0.46 |
| 1:I:158:A:C2 | 1:I:159:A:C5 | 3.04 | 0.46 |
| 1:I:233:A:H2' | 1:I:234:A:C4' | 2.44 | 0.46 |
| 1:I:23:A:H2' | 1:I:24:A:H8 | 1.81 | 0.46 |
| 1:I:290:A:H2' | 1:I:291:A:C8 | 2.50 | 0.46 |
| 1:I:51:A:C2 | 1:I:52:A:C8 | 3.04 | 0.46 |
| 1:I:61:A:N1 | 1:I:62:A:C6 | 2.84 | 0.46 |
| 2:J:119:A:N1 | 2:J:120:A:N6 | 2.61 | 0.46 |
| 2:J:124:A:C4 | 2:J:125:A:C8 | 3.04 | 0.46 |
| 2:J:176:A:C2 | 2:J:177:A:N9 | 2.83 | 0.46 |
| 2:J:187:A:C2' | 2:J:188:A:O5' | 2.64 | 0.46 |
| 2:J:211:A:C4 | 2:J:212:A:C8 | 3.03 | 0.46 |
| 2:J:266:A:N1 | 2:J:267:A:C5 | 2.84 | 0.46 |
| 2:J:46:A:C2 | 2:J:47:A:C8 | 3.03 | 0.46 |
| 2:J:5:A:C2 | 2:J:6:A:N7 | 2.84 | 0.46 |
| 3:K:117:A:C2 | 3:K:118:A:C4 | 2.98 | 0.46 |
| 3:K:165:A:N1 | 3:K:166:A:C4 | 2.84 | 0.46 |
| 3:K:164:A:O5' | 3:K:165:A:OP2 | 2.32 | 0.46 |
| 3:K:89:A:O2' | 3:K:90:A:C5' | 2.63 | 0.46 |
| 3:K:94:A:C6 | 3:K:95:A:C5 | 3.04 | 0.46 |
| 4:L:419:U:N3 | 4:L:420:U:C4 | 2.84 | 0.46 |
| 4:L:448:U:H2' | 4:L:449:U:C6 | 2.51 | 0.46 |
| 4:L:459:U:H2' | 4:L:460:U:C6 | 2.49 | 0.46 |
| 4:L:467:U:H2' | 4:L:468:U:H6 | 1.80 | 0.46 |
| 4:L:525:U:H2' | 4:L:526:U:O5' | 2.15 | 0.46 |
| 4:L:561:U:H2' | 4:L:562:U:C5' | 2.41 | 0.46 |
| 4:L:579:U:HO2' | 4:L:580:U:H5' | 1.77 | 0.46 |
| 4:L:712:U:O5' | 4:L:713:U:P | 2.74 | 0.46 |
| 4:L:742:U:O2' | 4:L:743:U:O5' | 2.33 | 0.46 |
| 4:L:769:U:H2' | 4:L:770:U:H6 | 1.81 | 0.46 |
| 4:L:777:U:O2' | 4:L:778:U:C5' | 2.45 | 0.46 |
| 4:L:814:U:H2' | 4:L:815:U:H6 | 1.80 | 0.46 |
| 4:L:821:U:H2' | 4:L:822:U:C6 | 2.51 | 0.46 |
| 5:M:339:U:C4 | 5:M:340:U:C5 | 3.04 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:364:U:N3 | 5:M:365:U:C5 | 2.83 | 0.46 |
| 5:M:379:U:O2' | 5:M:380:U:H5' | 2.15 | 0.46 |
| 5:M:403:U:C2 | 5:M:404:U:C6 | 3.03 | 0.46 |
| 5:M:408:U:H2' | 5:M:409:U:H6 | 1.80 | 0.46 |
| 5:M:449:U:O2 | 5:M:450:U:C6 | 2.68 | 0.46 |
| 5:M:492:U:C2 | 5:M:493:U:C6 | 3.04 | 0.46 |
| 6:N:295:U:H2' | 6:N:296:U:C6 | 2.51 | 0.46 |
| 6:N:412:U:C2 | 6:N:413:U:C5 | 3.03 | 0.46 |
| 6:N:438:U:HO2' | 6:N:439:U:H5' | 1.76 | 0.46 |
| 1:I:100:A:H2' | 1:I:101:A:O4' | 2.15 | 0.46 |
| 1:I:102:A:H2' | 1:I:103:A:O4' | 2.15 | 0.46 |
| 1:I:132:A:N3 | 1:I:133:A:C8 | 2.84 | 0.46 |
| 1:I:139:A:O2' | 1:I:140:A:H5' | 2.16 | 0.46 |
| 1:I:167:A:C2 | 1:I:168:A:C8 | 3.04 | 0.46 |
| 1:I:190:A:H2' | 1:I:191:A:C5' | 2.46 | 0.46 |
| 1:I:286:A:O5' | 1:I:287:A:OP2 | 2.34 | 0.46 |
| 1:I:363:A:C4 | 1:I:364:A:C8 | 3.03 | 0.46 |
| 1:I:38:A:H2' | 1:I:39:A:O5' | 2.15 | 0.46 |
| 1:I:45:A:C2 | 1:I:46:A:C4 | 3.03 | 0.46 |
| 1:I:78:A:C6 | 1:I:79:A:C5 | 3.02 | 0.46 |
| 1:I:96:A:C6 | 1:I:97:A:N6 | 2.65 | 0.46 |
| 2:J:105:A:C6 | 2:J:106:A:N6 | 2.84 | 0.46 |
| 2:J:120:A:C2 | 2:J:121:A:C5 | 3.04 | 0.46 |
| 2:J:137:A:H2' | 2:J:138:A:H8 | 1.80 | 0.46 |
| 2:J:30:A:C2' | 2:J:31:A:O5' | 2.63 | 0.46 |
| 2:J:30:A:H2' | 2:J:31:A:O4' | 2.15 | 0.46 |
| 2:J:68:A:C6 | 2:J:69:A:N7 | 2.84 | 0.46 |
| 3:K:120:A:H2' | 3:K:121:A:O4' | 2.16 | 0.46 |
| 3:K:67:A:C2 | 3:K:68:A:C8 | 3.04 | 0.46 |
| 3:K:71:A:C2 | 3:K:72:A:N9 | 2.83 | 0.46 |
| 4:L:600:U:C2 | 4:L:601:U:C6 | 3.04 | 0.46 |
| 4:L:611:U:C4 | 4:L:612:U:C5 | 3.04 | 0.46 |
| 4:L:619:U:H2' | 4:L:620:U:H6 | 1.80 | 0.46 |
| 4:L:648:U:C2 | 4:L:649:U:C6 | 3.04 | 0.46 |
| 4:L:703:U:C4 | 4:L:704:U:C5 | 3.04 | 0.46 |
| 4:L:787:U:C2 | 4:L:788:U:C6 | 3.04 | 0.46 |
| 5:M:299:U:C4 | 5:M:300:U:C4 | 3.03 | 0.46 |
| 5:M:300:U:HO2' | 5:M:301:U:H5' | 1.76 | 0.46 |
| 5:M:348:U:H2' | 5:M:349:U:O4' | 2.16 | 0.46 |
| 5:M:382:U:H2' | 5:M:383:U:C5' | 2.46 | 0.46 |
| 5:M:464:U:N3 | 5:M:465:U:C5 | 2.83 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 2:J:46:A:N6 | 5:M:508:U:O4 | 2.48 | 0.46 |
| 6:N:328:U:C2' | 6:N:329:U:C6 | 2.85 | 0.46 |
| 6:N:360:U:C2' | 6:N:361:U:H5' | 2.45 | 0.46 |
| 6:N:399:U:C2 | 6:N:400:U:C6 | 3.03 | 0.46 |
| 6:N:473:U:C5 | 6:N:474:U:H5 | 2.33 | 0.46 |
| 6:N:498:U:O2' | 6:N:499:U:H5' | 2.15 | 0.46 |
| 6:N:527:U:C4 | 6:N:528:U:O4 | 2.69 | 0.46 |
| 1:I:159:A:C4 | 1:I:160:A:C8 | 3.04 | 0.46 |
| 1:I:190:A:N1 | 1:I:191:A:C5 | 2.84 | 0.46 |
| 1:I:261:A:N9 | 1:I:262:A:C8 | 2.84 | 0.46 |
| 1:I:275:A:C2 | 1:I:276:A:C4 | 3.03 | 0.46 |
| 1:I:316:A:C6 | 1:I:317:A:C5 | 3.04 | 0.46 |
| 1:I:76:A:N6 | 1:I:77:A:N6 | 2.64 | 0.46 |
| 2:J:115:A:C2 | 2:J:116:A:C5 | 3.03 | 0.46 |
| 2:J:191:A:C6 | 2:J:192:A:C5 | 3.04 | 0.46 |
| 2:J:207:A:C6 | 2:J:208:A:N7 | 2.84 | 0.46 |
| 2:J:215:A:C2 | 2:J:216:A:N9 | 2.83 | 0.46 |
| 2:J:48:A:H2' | 2:J:49:A:O4' | 2.16 | 0.46 |
| 3:K:106:A:C2' | 3:K:107:A:C5' | 2.93 | 0.46 |
| 3:K:162:A:H2' | 3:K:163:A:O5' | 2.16 | 0.46 |
| 3:K:230:A:C6 | 3:K:231:A:N6 | 2.84 | 0.46 |
| 3:K:42:A:H2' | 3:K:43:A:C8 | 2.50 | 0.46 |
| 3:K:49:A:C2' | 3:K:50:A:O5' | 2.63 | 0.46 |
| 4:L:425:U:H2' | 4:L:426:U:C6 | 2.50 | 0.46 |
| 4:L:486:U:C4 | 4:L:487:U:C4 | 3.03 | 0.46 |
| 4:L:578:U:C2' | 4:L:579:U:O5' | 2.60 | 0.46 |
| 4:L:646:U:H2' | 4:L:647:U:C6 | 2.44 | 0.46 |
| 4:L:699:U:O4 | 4:L:700:U:O4 | 2.34 | 0.46 |
| 4:L:706:U:H2' | 4:L:707:U:H5' | 1.97 | 0.46 |
| 4:L:711:U:O4 | 4:L:712:U:O4 | 2.34 | 0.46 |
| 4:L:753:U:C2 | 4:L:754:U:C6 | 3.04 | 0.46 |
| 5:M:337:U:C2' | 5:M:338:U:C4' | 2.82 | 0.46 |
| 5:M:362:U:N3 | 5:M:363:U:C5 | 2.84 | 0.46 |
| 5:M:400:U:N3 | 5:M:401:U:C5 | 2.84 | 0.46 |
| 5:M:453:U:H2' | 5:M:454:U:N1 | 2.27 | 0.46 |
| 5:M:467:U:C2' | 5:M:468:U:O5' | 2.63 | 0.46 |
| 5:M:519:U:C4 | 5:M:520:U:C4 | 3.04 | 0.46 |
| 5:M:523:U:C2' | 5:M:524:U:O5' | 2.57 | 0.46 |
| 6:N:290:U:H2' | 6:N:291:U:H6 | 1.81 | 0.46 |
| 6:N:340:U:H2' | 6:N:341:U:H6 | 1.80 | 0.46 |
| 6:N:481:U:H2' | 6:N:482:U:O4' | 2.15 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:483:U:N1 | 6:N:484:U:H5 | 2.14 | 0.46 |
| 6:N:486:U:O2' | 6:N:487:U:O4' | 2.34 | 0.46 |
| 1:I:113:A:C2' | 1:I:114:A:H5' | 2.45 | 0.46 |
| 1:I:138:A:C2' | 1:I:139:A:C4' | 2.88 | 0.46 |
| 1:I:20:A:C2 | 1:I:21:A:C5 | 3.03 | 0.46 |
| 1:I:226:A:C4 | 1:I:227:A:N7 | 2.84 | 0.46 |
| 1:I:231:A:N1 | 1:I:232:A:C6 | 2.84 | 0.46 |
| 1:I:249:A:N3 | 1:I:250:A:O4' | 2.48 | 0.46 |
| 1:I:254:A:C2 | 1:I:255:A:C4 | 3.03 | 0.46 |
| 1:I:260:A:C6 | 1:I:261:A:N7 | 2.84 | 0.46 |
| 1:I:26:A:N1 | 1:I:27:A:C5 | 2.84 | 0.46 |
| 1:I:284:A:C2 | 1:I:285:A:C8 | 3.04 | 0.46 |
| 1:I:361:A:C2' | 1:I:362:A:O4' | 2.63 | 0.46 |
| 1:I:44:A:C4 | 1:I:45:A:C8 | 3.04 | 0.46 |
| 1:I:49:A:N1 | 1:I:50:A:C5 | 2.83 | 0.46 |
| 2:J:101:A:C6 | 2:J:102:A:N7 | 2.84 | 0.46 |
| 2:J:220:A:C6 | 2:J:221:A:C5 | 3.04 | 0.46 |
| 2:J:254:A:C2 | 2:J:255:A:C8 | 3.04 | 0.46 |
| 2:J:36:A:H2' | 2:J:37:A:H8 | 1.80 | 0.46 |
| 2:J:56:A:N3 | 2:J:57:A:N9 | 2.61 | 0.46 |
| 2:J:80:A:C2' | 2:J:81:A:C5' | 2.94 | 0.46 |
| 3:K:107:A:H2' | 3:K:108:A:H8 | 1.80 | 0.46 |
| 3:K:139:A:C4 | 3:K:140:A:C8 | 3.04 | 0.46 |
| 4:L:515:U:C2' | 4:L:516:U:C5' | 2.93 | 0.46 |
| 4:L:527:U:H2' | 4:L:528:U:H6 | 1.81 | 0.46 |
| 4:L:543:U:O4 | 4:L:544:U:O4 | 2.32 | 0.46 |
| 4:L:560:U:C2 | 4:L:561:U:C6 | 3.03 | 0.46 |
| 4:L:569:U:C2 | 4:L:570:U:C6 | 3.04 | 0.46 |
| 4:L:638:U:C4 | 4:L:639:U:C5 | 3.03 | 0.46 |
| 5:M:473:U:H2' | 5:M:474:U:H6 | 1.81 | 0.46 |
| 5:M:498:U:O2' | 5:M:499:U:C5' | 2.64 | 0.46 |
| 5:M:529:U:C2 | 5:M:530:U:C6 | 3.03 | 0.46 |
| 5:M:532:U:C2 | 5:M:533:U:C5 | 3.03 | 0.46 |
| 5:M:533:U:C2 | 5:M:534:U:C5 | 3.04 | 0.46 |
| 5:M:537:U:HO2' | 5:M:538:U:H5' | 1.79 | 0.46 |
| 6:N:305:U:O2' | 6:N:306:U:O4' | 2.31 | 0.46 |
| 6:N:363:U:H2' | 6:N:364:U:C6 | 2.50 | 0.46 |
| 6:N:376:U:C4 | 6:N:377:U:O4 | 2.69 | 0.46 |
| 6:N:408:U:O2' | 6:N:409:U:C5' | 2.60 | 0.46 |
| 6:N:445:U:C2 | 6:N:446:U:C5 | 3.04 | 0.46 |
| 1:I:126:A:C2 | 1:I:127:A:C4 | 3.04 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:129:A:C2 | 1:I:130:A:C1' | 2.99 | 0.46 |
| 1:I:141:A:C6 | 1:I:142:A:N6 | 2.84 | 0.46 |
| 1:I:22:A:N3 | 1:I:23:A:C8 | 2.84 | 0.46 |
| 1:I:26:A:C2 | 1:I:27:A:C4 | 3.04 | 0.46 |
| 1:I:291:A:N3 | 1:I:292:A:C8 | 2.83 | 0.46 |
| 1:I:306:A:N1 | 1:I:307:A:C5 | 2.84 | 0.46 |
| 1:I:313:A:C4 | 1:I:314:A:C8 | 3.04 | 0.46 |
| 1:I:330:A:C2' | 1:I:331:A:O5' | 2.64 | 0.46 |
| 1:I:396:A:O2' | 1:I:397:A:H5' | 2.16 | 0.46 |
| 1:I:66:A:H2' | 1:I:67:A:C4' | 2.45 | 0.46 |
| 1:I:66:A:C2 | 1:I:67:A:C8 | 3.04 | 0.46 |
| 1:I:76:A:C6 | 1:I:77:A:C5 | 3.04 | 0.46 |
| 2:J:116:A:N1 | 2:J:117:A:C6 | 2.84 | 0.46 |
| 2:J:12:A:N6 | 2:J:13:A:N6 | 2.64 | 0.46 |
| 2:J:14:A:C2 | 2:J:15:A:C8 | 3.04 | 0.46 |
| 2:J:199:A:C4 | 2:J:200:A:C8 | 3.04 | 0.46 |
| 2:J:249:A:C2 | 2:J:250:A:N9 | 2.84 | 0.46 |
| 2:J:55:A:N6 | 2:J:56:A:C6 | 2.84 | 0.46 |
| 2:J:65:A:N3 | 2:J:66:A:C8 | 2.84 | 0.46 |
| 2:J:73:A:C4 | 2:J:74:A:C8 | 3.04 | 0.46 |
| 3:K:100:A:HO2' | 3:K:101:A:C4' | 2.27 | 0.46 |
| 3:K:155:A:N1 | 3:K:156:A:C6 | 2.84 | 0.46 |
| 3:K:212:A:H3' | 3:K:213:A:H8 | 1.80 | 0.46 |
| 3:K:71:A:H2 | 3:K:72:A:C4 | 2.26 | 0.46 |
| 4:L:449:U:C2' | 4:L:450:U:C5' | 2.94 | 0.46 |
| 4:L:466:U:HO2' | 4:L:467:U:C5' | 2.09 | 0.46 |
| 4:L:506:U:H2' | 4:L:507:U:C5' | 2.45 | 0.46 |
| 4:L:596:U:C4 | 4:L:597:U:C5 | 3.04 | 0.46 |
| 4:L:645:U:O4 | 4:L:646:U:O4 | 2.34 | 0.46 |
| 4:L:803:U:C4 | 4:L:804:U:C4 | 3.03 | 0.46 |
| 5:M:320:U:O2' | 5:M:321:U:H5' | 2.15 | 0.46 |
| 5:M:419:U:O2 | 5:M:420:U:O4' | 2.34 | 0.46 |
| 5:M:482:U:H2' | 5:M:483:U:H6 | 1.79 | 0.46 |
| 5:M:495:U:O2 | 5:M:496:U:C6 | 2.69 | 0.46 |
| 5:M:513:U:N3 | 5:M:514:U:C5 | 2.84 | 0.46 |
| 6:N:322:U:H2' | 6:N:323:U:C6 | 2.51 | 0.46 |
| 6:N:322:U:HO3' | 6:N:323:U:P | 2.30 | 0.46 |
| 6:N:327:U:H2' | 6:N:328:U:C5' | 2.36 | 0.46 |
| 6:N:423:U:H2' | 6:N:424:U:C5' | 2.44 | 0.46 |
| 1:I:136:A:N1 | 4:L:690:U:C4 | 2.84 | 0.46 |
| 1:I:165:A:C5 | 1:I:166:A:N7 | 2.84 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:178:A:H2' | 1:I:179:A:C5' | 2.45 | 0.46 |
| 1:I:194:A:C6 | 1:I:195:A:C6 | 3.04 | 0.46 |
| 1:I:20:A:C5 | 1:I:21:A:N7 | 2.85 | 0.46 |
| 1:I:222:A:C4 | 1:I:223:A:N7 | 2.83 | 0.46 |
| 1:I:234:A:C2 | 1:I:235:A:C5 | 3.04 | 0.46 |
| 1:I:235:A:C4 | 1:I:236:A:N7 | 2.84 | 0.46 |
| 1:I:278:A:HO2' | 1:I:279:A:C4' | 2.27 | 0.46 |
| 1:I:31:A:N1 | 1:I:32:A:C5 | 2.84 | 0.46 |
| 1:I:357:A:C2 | 1:I:358:A:C8 | 3.04 | 0.46 |
| 1:I:38:A:N1 | 1:I:39:A:C5 | 2.84 | 0.46 |
| 1:I:46:A:H2' | 1:I:47:A:C8 | 2.47 | 0.46 |
| 1:I:60:A:N1 | 1:I:61:A:C6 | 2.84 | 0.46 |
| 2:J:132:A:C2' | 2:J:133:A:O5' | 2.64 | 0.46 |
| 2:J:134:A:C6 | 2:J:135:A:N6 | 2.84 | 0.46 |
| 2:J:142:A:H61 | 2:J:143:A:N6 | 2.07 | 0.46 |
| 2:J:18:A:N3 | 2:J:19:A:C8 | 2.84 | 0.46 |
| 2:J:214:A:N1 | 2:J:215:A:C5 | 2.84 | 0.46 |
| 2:J:22:A:H2' | 2:J:23:A:H8 | 1.81 | 0.46 |
| 2:J:253:A:N1 | 2:J:254:A:C5 | 2.83 | 0.46 |
| 2:J:75:A:C2 | 2:J:76:A:C8 | 3.04 | 0.46 |
| 3:K:129:A:C4 | 3:K:130:A:C8 | 3.04 | 0.46 |
| 3:K:53:A:C2 | 3:K:54:A:N7 | 2.84 | 0.46 |
| 3:K:71:A:C2 | 3:K:72:A:N7 | 2.84 | 0.46 |
| 4:L:518:U:O2 | 4:L:519:U:O4' | 2.34 | 0.46 |
| 4:L:538:U:C4 | 4:L:539:U:C4 | 3.03 | 0.46 |
| 4:L:563:U:H2' | 4:L:564:U:O4' | 2.16 | 0.46 |
| 4:L:565:U:C2' | 4:L:566:U:H5' | 2.45 | 0.46 |
| 4:L:633:U:O2 | 4:L:634:U:C5 | 2.69 | 0.46 |
| 4:L:661:U:H2' | 4:L:662:U:C6 | 2.45 | 0.46 |
| 4:L:673:U:H2' | 4:L:674:U:O4' | 2.16 | 0.46 |
| 1:I:137:A:C2 | 4:L:689:U:C2 | 3.04 | 0.46 |
| 4:L:691:U:C2 | 4:L:692:U:C5 | 3.04 | 0.46 |
| 4:L:717:U:N1 | 4:L:718:U:H5 | 2.13 | 0.46 |
| 4:L:727:U:O2' | 4:L:728:U:O5' | 2.33 | 0.46 |
| 1:I:137:A:N6 | 1:I:138:A:H62 | 2.12 | 0.45 |
| 1:I:221:A:C2 | 1:I:222:A:C5 | 3.04 | 0.45 |
| 1:I:283:A:C6 | 1:I:284:A:N6 | 2.84 | 0.45 |
| 1:I:31:A:N1 | 1:I:32:A:N6 | 2.64 | 0.45 |
| 1:I:358:A:C4 | 1:I:359:A:C8 | 3.00 | 0.45 |
| 1:I:45:A:O2' | 1:I:46:A:C5' | 2.55 | 0.45 |
| 1:I:46:A:O2' | 1:I:47:A:O5' | 2.34 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:83:A:C5 | 1:I:84:A:N7 | 2.85 | 0.45 |
| 2:J:199:A:C2 | 2:J:200:A:C5 | 3.04 | 0.45 |
| 2:J:254:A:C2 | 2:J:255:A:C5 | 3.04 | 0.45 |
| 2:J:258:A:C4 | 2:J:259:A:C8 | 3.04 | 0.45 |
| 2:J:27:A:C2 | 2:J:28:A:N9 | 2.84 | 0.45 |
| 2:J:5:A:N1 | 2:J:6:A:C6 | 2.84 | 0.45 |
| 2:J:60:A:C2 | 2:J:61:A:N7 | 2.84 | 0.45 |
| 3:K:112:A:C5 | 3:K:113:A:N7 | 2.84 | 0.45 |
| 3:K:118:A:C2 | 3:K:119:A:C5 | 3.04 | 0.45 |
| 3:K:154:A:N6 | 3:K:155:A:C6 | 2.79 | 0.45 |
| 3:K:204:A:N6 | 3:K:205:A:H62 | 2.09 | 0.45 |
| 3:K:206:A:C2' | 3:K:207:A:C5' | 2.94 | 0.45 |
| 3:K:5:A:O2' | 3:K:6:A:O4' | 2.34 | 0.45 |
| 3:K:96:A:C4 | 3:K:97:A:N7 | 2.83 | 0.45 |
| 4:L:427:U:H2' | 4:L:428:U:H6 | 1.80 | 0.45 |
| 4:L:590:U:H2' | 4:L:591:U:H6 | 1.80 | 0.45 |
| 4:L:640:U:C2 | 4:L:641:U:H5 | 2.31 | 0.45 |
| 4:L:643:U:C4 | 4:L:644:U:C4 | 3.04 | 0.45 |
| 4:L:708:U:C2' | 4:L:709:U:O5' | 2.64 | 0.45 |
| 4:L:751:U:O2 | 4:L:752:U:N1 | 2.48 | 0.45 |
| 5:M:332:U:N3 | 5:M:333:U:C4 | 2.84 | 0.45 |
| 5:M:352:U:H2' | 5:M:353:U:O5' | 2.15 | 0.45 |
| 5:M:384:U:H2' | 5:M:385:U:C6 | 2.51 | 0.45 |
| 5:M:491:U:H2' | 5:M:492:U:C5' | 2.47 | 0.45 |
| 5:M:501:U:C2 | 5:M:502:U:C4 | 3.04 | 0.45 |
| 5:M:524:U:C4 | 5:M:525:U:C4 | 3.03 | 0.45 |
| 6:N:368:U:C2' | 6:N:369:U:O5' | 2.65 | 0.45 |
| 6:N:400:U:HO2' | 6:N:401:U:C5' | 2.03 | 0.45 |
| 6:N:401:U:N3 | 6:N:402:U:C5 | 2.84 | 0.45 |
| 6:N:407:U:C2' | 6:N:408:U:C5' | 2.94 | 0.45 |
| 6:N:449:U:C2 | 6:N:450:U:C5 | 3.04 | 0.45 |
| 1:I:121:A:C6 | 1:I:122:A:N6 | 2.84 | 0.45 |
| 1:I:173:A:N6 | 1:I:174:A:N6 | 2.63 | 0.45 |
| 1:I:193:A:H2' | 1:I:194:A:O5' | 2.16 | 0.45 |
| 1:I:224:A:O2' | 1:I:225:A:H5' | 2.16 | 0.45 |
| 1:I:263:A:HO2' | 1:I:264:A:H5' | 1.77 | 0.45 |
| 1:I:270:A:N1 | 1:I:271:A:C5 | 2.83 | 0.45 |
| 1:I:274:A:N1 | 1:I:275:A:C5 | 2.84 | 0.45 |
| 1:I:321:A:C6 | 1:I:322:A:N7 | 2.84 | 0.45 |
| 1:I:326:A:C4 | 1:I:327:A:C8 | 3.04 | 0.45 |
| 1:I:337:A:C2 | 1:I:338:A:C8 | 3.05 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:343:A:C2 | 1:I:344:A:C8 | 3.04 | 0.45 |
| 1:I:49:A:C4 | 1:I:50:A:C8 | 3.05 | 0.45 |
| 1:I:60:A:C2 | 1:I:61:A:C5 | 3.05 | 0.45 |
| 2:J:12:A:C2 | 2:J:13:A:C8 | 3.04 | 0.45 |
| 2:J:129:A:C5 | 2:J:130:A:N7 | 2.84 | 0.45 |
| 2:J:215:A:C4 | 2:J:216:A:C8 | 3.03 | 0.45 |
| 2:J:229:A:C2 | 2:J:230:A:N9 | 2.84 | 0.45 |
| 2:J:36:A:O2' | 2:J:37:A:H5' | 2.16 | 0.45 |
| 2:J:51:A:N1 | 2:J:52:A:C6 | 2.84 | 0.45 |
| 3:K:115:A:C4 | 3:K:116:A:C8 | 3.04 | 0.45 |
| 3:K:169:A:C4 | 3:K:170:A:C8 | 3.05 | 0.45 |
| 3:K:59:A:C2' | 3:K:60:A:H5' | 2.40 | 0.45 |
| 3:K:82:A:H2' | 3:K:83:A:C8 | 2.50 | 0.45 |
| 4:L:468:U:C2 | 4:L:469:U:C5 | 3.04 | 0.45 |
| 4:L:537:U:C2' | 4:L:538:U:C4' | 2.95 | 0.45 |
| 4:L:586:U:C2' | 4:L:587:U:C6 | 2.90 | 0.45 |
| 4:L:597:U:O2 | 4:L:598:U:C6 | 2.69 | 0.45 |
| 4:L:619:U:N3 | 4:L:620:U:C5 | 2.85 | 0.45 |
| 4:L:621:U:H2' | 4:L:622:U:C6 | 2.49 | 0.45 |
| 4:L:654:U:H2' | 4:L:655:U:H6 | 1.81 | 0.45 |
| 4:L:668:U:N3 | 4:L:669:U:O4 | 2.47 | 0.45 |
| 4:L:713:U:C5' | 4:L:714:U:P | 3.05 | 0.45 |
| 5:M:310:U:C3' | 5:M:311:U:C5' | 2.94 | 0.45 |
| 5:M:336:U:C6 | 5:M:337:U:C6 | 3.04 | 0.45 |
| 5:M:349:U:C2' | 5:M:350:U:O4' | 2.62 | 0.45 |
| 5:M:377:U:C2' | 5:M:378:U:H6 | 2.21 | 0.45 |
| 5:M:399:U:H2' | 5:M:400:U:H6 | 1.80 | 0.45 |
| 5:M:414:U:N3 | 5:M:415:U:C5 | 2.83 | 0.45 |
| 5:M:512:U:C2' | 5:M:513:U:H6 | 2.17 | 0.45 |
| 5:M:521:U:C2 | 5:M:522:U:C5 | 3.03 | 0.45 |
| 6:N:321:U:N1 | 6:N:322:U:C5 | 2.84 | 0.45 |
| 6:N:445:U:O2 | 6:N:446:U:C6 | 2.69 | 0.45 |
| 1:I:12:A:C2 | 1:I:13:A:N9 | 2.85 | 0.45 |
| 1:I:11:A:C4 | 1:I:12:A:C8 | 3.04 | 0.45 |
| 1:I:131:A:N1 | 1:I:132:A:C5 | 2.85 | 0.45 |
| 1:I:136:A:N1 | 1:I:137:A:C5 | 2.85 | 0.45 |
| 1:I:188:A:H2' | 1:I:189:A:C8 | 2.51 | 0.45 |
| 1:I:194:A:C6 | 1:I:195:A:C5 | 3.04 | 0.45 |
| 1:I:193:A:HO2' | 1:I:194:A:H5' | 1.73 | 0.45 |
| 1:I:18:A:C6 | 1:I:19:A:N7 | 2.84 | 0.45 |
| 1:I:213:A:C2' | 1:I:214:A:O4' | 2.64 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:255:A:C2 | 1:I:256:A:N9 | 2.85 | 0.45 |
| 1:I:265:A:H2' | 1:I:266:A:H8 | 1.79 | 0.45 |
| 1:I:297:A:C5 | 1:I:298:A:N7 | 2.85 | 0.45 |
| 1:I:327:A:C2 | 1:I:328:A:C4 | 3.04 | 0.45 |
| 1:I:32:A:C2 | 1:I:33:A:C5 | 3.04 | 0.45 |
| 1:I:336:A:H2' | 1:I:337:A:C8 | 2.51 | 0.45 |
| 1:I:341:A:C6 | 1:I:342:A:N7 | 2.84 | 0.45 |
| 1:I:48:A:H2' | 1:I:49:A:C8 | 2.51 | 0.45 |
| 2:J:103:A:H2' | 2:J:104:A:H8 | 1.81 | 0.45 |
| 2:J:150:A:C2 | 2:J:151:A:C5 | 3.05 | 0.45 |
| 2:J:19:A:H2' | 2:J:20:A:H8 | 1.81 | 0.45 |
| 2:J:28:A:C2' | 2:J:29:A:C5' | 2.94 | 0.45 |
| 2:J:38:A:C4 | 2:J:39:A:C8 | 3.04 | 0.45 |
| 2:J:95:A:C4 | 2:J:96:A:C8 | 3.04 | 0.45 |
| 3:K:156:A:C4 | 3:K:157:A:C8 | 3.04 | 0.45 |
| 3:K:72:A:C6 | 3:K:73:A:C5 | 3.04 | 0.45 |
| 4:L:418:U:H2' | 4:L:419:U:C6 | 2.52 | 0.45 |
| 4:L:467:U:C2' | 4:L:468:U:O5' | 2.64 | 0.45 |
| 4:L:473:U:C4 | 4:L:474:U:C5 | 3.05 | 0.45 |
| 4:L:511:U:H2' | 4:L:512:U:C6 | 2.51 | 0.45 |
| 4:L:601:U:H2' | 4:L:602:U:O4' | 2.16 | 0.45 |
| 4:L:627:U:O2 | 4:L:628:U:C6 | 2.70 | 0.45 |
| 4:L:630:U:O4 | 4:L:631:U:O4 | 2.35 | 0.45 |
| 4:L:735:U:H2' | 4:L:736:U:O4' | 2.16 | 0.45 |
| 4:L:741:U:N3 | 4:L:742:U:C5 | 2.84 | 0.45 |
| 4:L:802:U:C2' | 4:L:803:U:O5' | 2.63 | 0.45 |
| 5:M:299:U:C2' | 5:M:300:U:O4' | 2.60 | 0.45 |
| 5:M:379:U:C2' | 5:M:380:U:O4' | 2.65 | 0.45 |
| 5:M:447:U:C2 | 5:M:448:U:C6 | 3.04 | 0.45 |
| 5:M:479:U:C2 | 5:M:480:U:C6 | 3.04 | 0.45 |
| 6:N:337:U:O2' | 6:N:338:U:H5' | 2.17 | 0.45 |
| 6:N:379:U:N3 | 6:N:380:U:C5 | 2.84 | 0.45 |
| 6:N:403:U:O2 | 6:N:404:U:C6 | 2.69 | 0.45 |
| 6:N:484:U:C3' | 6:N:485:U:O5' | 2.64 | 0.45 |
| 1:I:107:A:C2 | 4:L:719:U:O2 | 2.70 | 0.45 |
| 1:I:109:A:C2 | 1:I:110:A:N3 | 2.72 | 0.45 |
| 1:I:114:A:C4 | 1:I:115:A:C8 | 3.03 | 0.45 |
| 1:I:212:A:H2' | 1:I:213:A:C5' | 2.47 | 0.45 |
| 1:I:230:A:C2' | 1:I:231:A:C4' | 2.93 | 0.45 |
| 1:I:231:A:H2' | 1:I:232:A:H8 | 1.81 | 0.45 |
| 1:I:238:A:C4 | 1:I:239:A:C8 | 3.04 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:251:A:C2' | 1:I:252:A:H8 | 2.20 | 0.45 |
| 1:I:284:A:N3 | 1:I:285:A:N9 | 2.64 | 0.45 |
| 1:I:311:A:H2' | 1:I:312:A:O5' | 2.17 | 0.45 |
| 1:I:346:A:C2 | 1:I:347:A:C8 | 3.04 | 0.45 |
| 1:I:375:A:O2' | 1:I:376:A:O5' | 2.35 | 0.45 |
| 1:I:77:A:C4 | 1:I:78:A:N7 | 2.84 | 0.45 |
| 2:J:109:A:C2 | 2:J:110:A:C8 | 3.04 | 0.45 |
| 2:J:170:A:C2 | 2:J:171:A:C5 | 3.04 | 0.45 |
| 2:J:207:A:H2' | 2:J:208:A:H8 | 1.82 | 0.45 |
| 2:J:230:A:C4 | 2:J:231:A:C8 | 3.05 | 0.45 |
| 2:J:230:A:H2' | 2:J:231:A:O5' | 2.16 | 0.45 |
| 2:J:29:A:N3 | 2:J:30:A:O4' | 2.50 | 0.45 |
| 2:J:55:A:H2' | 2:J:56:A:C8 | 2.51 | 0.45 |
| 2:J:56:A:H2' | 2:J:57:A:O4' | 2.16 | 0.45 |
| 3:K:119:A:C5 | 3:K:120:A:C8 | 3.04 | 0.45 |
| 3:K:159:A:C2 | 3:K:160:A:C8 | 3.04 | 0.45 |
| 3:K:63:A:N6 | 6:N:469:U:O4 | 2.49 | 0.45 |
| 3:K:79:A:C4 | 3:K:80:A:C8 | 3.04 | 0.45 |
| 4:L:433:U:H2' | 4:L:434:U:C6 | 2.52 | 0.45 |
| 4:L:467:U:C2 | 4:L:468:U:C6 | 3.04 | 0.45 |
| 4:L:516:U:N3 | 4:L:517:U:C4 | 2.84 | 0.45 |
| 4:L:545:U:O2 | 4:L:546:U:C6 | 2.69 | 0.45 |
| 4:L:562:U:HO2' | 4:L:563:U:H5' | 1.81 | 0.45 |
| 4:L:574:U:C6 | 4:L:575:U:C5 | 3.04 | 0.45 |
| 4:L:582:U:O2 | 4:L:583:U:N1 | 2.49 | 0.45 |
| 4:L:590:U:HO2' | 4:L:591:U:H5' | 1.79 | 0.45 |
| 4:L:605:U:C4 | 4:L:606:U:C5 | 3.03 | 0.45 |
| 4:L:634:U:O2 | 4:L:635:U:C6 | 2.70 | 0.45 |
| 4:L:752:U:C2 | 4:L:753:U:C6 | 3.05 | 0.45 |
| 4:L:757:U:C5 | 4:L:758:U:H5 | 2.34 | 0.45 |
| 4:L:771:U:H2' | 4:L:772:U:C5' | 2.45 | 0.45 |
| 5:M:286:U:H2' | 5:M:287:U:H6 | 1.80 | 0.45 |
| 5:M:287:U:C2' | 5:M:288:U:O4' | 2.64 | 0.45 |
| 5:M:452:U:O2 | 5:M:453:U:C6 | 2.69 | 0.45 |
| 5:M:488:U:O2' | 5:M:489:U:C4' | 2.64 | 0.45 |
| 5:M:513:U:H2' | 5:M:514:U:O5' | 2.17 | 0.45 |
| 6:N:277:U:H2' | 6:N:278:U:H6 | 1.81 | 0.45 |
| 6:N:316:U:C2' | 6:N:317:U:C5' | 2.94 | 0.45 |
| 6:N:357:U:O2' | 6:N:358:U:P | 2.70 | 0.45 |
| 6:N:393:U:C2 | 6:N:394:U:C6 | 3.04 | 0.45 |
| 1:I:103:A:H2' | 1:I:104:A:C8 | 2.39 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:108:A:H2' | 1:I:109:A:C8 | 2.51 | 0.45 |
| 1:I:17:A:H2' | 1:I:18:A:C5' | 2.35 | 0.45 |
| 1:I:229:A:C2 | 1:I:230:A:C5 | 3.04 | 0.45 |
| 1:I:331:A:C5 | 1:I:332:A:N7 | 2.85 | 0.45 |
| 1:I:354:A:C4 | 1:I:355:A:C8 | 3.05 | 0.45 |
| 1:I:59:A:C2 | 1:I:60:A:N7 | 2.84 | 0.45 |
| 1:I:70:A:C5 | 1:I:71:A:N7 | 2.85 | 0.45 |
| 1:I:73:A:C2' | 1:I:74:A:H8 | 2.23 | 0.45 |
| 2:J:104:A:H2' | 2:J:105:A:H8 | 1.82 | 0.45 |
| 2:J:135:A:H2' | 2:J:136:A:C8 | 2.52 | 0.45 |
| 2:J:142:A:C2' | 2:J:143:A:H8 | 2.15 | 0.45 |
| 2:J:157:A:C2 | 2:J:158:A:C8 | 3.05 | 0.45 |
| 2:J:200:A:C2' | 2:J:201:A:O5' | 2.61 | 0.45 |
| 2:J:230:A:N3 | 2:J:231:A:C8 | 2.84 | 0.45 |
| 2:J:252:A:H2' | 2:J:253:A:O5' | 2.17 | 0.45 |
| 2:J:91:A:C2' | 2:J:92:A:H5' | 2.46 | 0.45 |
| 3:K:102:A:N1 | 3:K:103:A:N7 | 2.62 | 0.45 |
| 3:K:111:A:N1 | 3:K:112:A:C5 | 2.85 | 0.45 |
| 3:K:146:A:H2 | 3:K:147:A:C4 | 2.32 | 0.45 |
| 3:K:57:A:C4 | 3:K:58:A:N7 | 2.84 | 0.45 |
| 3:K:84:A:C2' | 3:K:85:A:H5' | 2.47 | 0.45 |
| 4:L:424:U:C6 | 4:L:425:U:H5 | 2.35 | 0.45 |
| 4:L:491:U:O2 | 4:L:492:U:O4' | 2.34 | 0.45 |
| 4:L:503:U:C2 | 4:L:504:U:C6 | 3.05 | 0.45 |
| 4:L:530:U:C4 | 4:L:531:U:C5 | 3.04 | 0.45 |
| 4:L:565:U:C2' | 4:L:566:U:C5' | 2.95 | 0.45 |
| 4:L:599:U:N1 | 4:L:600:U:C5 | 2.84 | 0.45 |
| 4:L:629:U:H2' | 4:L:630:U:C5' | 2.46 | 0.45 |
| 4:L:757:U:C2 | 4:L:758:U:C4 | 2.85 | 0.45 |
| 4:L:767:U:O2' | 4:L:768:U:O5' | 2.35 | 0.45 |
| 4:L:794:U:O2 | 4:L:795:U:C6 | 2.69 | 0.45 |
| 5:M:392:U:H2' | 5:M:393:U:O5' | 2.17 | 0.45 |
| 5:M:433:U:C5 | 5:M:434:U:H5 | 2.34 | 0.45 |
| 5:M:464:U:H2' | 5:M:465:U:H6 | 1.80 | 0.45 |
| 5:M:476:U:H2' | 5:M:477:U:C5' | 2.46 | 0.45 |
| 5:M:508:U:C2' | 5:M:509:U:O5' | 2.63 | 0.45 |
| 5:M:529:U:O2' | 5:M:530:U:C5' | 2.56 | 0.45 |
| 5:M:529:U:C2 | 5:M:530:U:C5 | 3.04 | 0.45 |
| 6:N:302:U:O2' | 6:N:303:U:O4' | 2.35 | 0.45 |
| 6:N:346:U:H3' | 6:N:347:U:P | 2.55 | 0.45 |
| 6:N:362:U:O2 | 6:N:363:U:C6 | 2.70 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:494:U:H2' | 6:N:495:U:C6 | 2.51 | 0.45 |
| 6:N:522:U:C2 | 6:N:523:U:C5 | 3.05 | 0.45 |
| 1:I:158:A:N6 | 1:I:159:A:H62 | 2.13 | 0.45 |
| 1:I:261:A:C5 | 1:I:262:A:C5 | 3.04 | 0.45 |
| 1:I:317:A:C2 | 1:I:318:A:N9 | 2.84 | 0.45 |
| 1:I:364:A:HO2' | 1:I:365:A:C5' | 2.22 | 0.45 |
| 1:I:91:A:C2 | 1:I:92:A:C1' | 2.99 | 0.45 |
| 2:J:118:A:C4 | 2:J:119:A:N7 | 2.85 | 0.45 |
| 2:J:156:A:H2' | 2:J:157:A:C5' | 2.45 | 0.45 |
| 2:J:228:A:C6 | 2:J:229:A:C6 | 3.05 | 0.45 |
| 2:J:231:A:C4 | 2:J:232:A:N7 | 2.85 | 0.45 |
| 2:J:83:A:C2' | 2:J:84:A:C8 | 2.87 | 0.45 |
| 2:J:99:A:N3 | 2:J:100:A:C8 | 2.84 | 0.45 |
| 3:K:249:A:C2 | 3:K:250:A:N9 | 2.84 | 0.45 |
| 3:K:38:A:C4 | 3:K:39:A:C8 | 3.05 | 0.45 |
| 3:K:82:A:C2 | 3:K:83:A:C4 | 3.04 | 0.45 |
| 4:L:484:U:N3 | 4:L:485:U:C5 | 2.84 | 0.45 |
| 4:L:507:U:H2' | 4:L:508:U:C6 | 2.48 | 0.45 |
| 4:L:553:U:H2' | 4:L:554:U:C6 | 2.45 | 0.45 |
| 4:L:631:U:C2 | 4:L:632:U:C6 | 3.05 | 0.45 |
| 4:L:681:U:C2 | 4:L:682:U:C5 | 3.05 | 0.45 |
| 4:L:766:U:H2' | 4:L:767:U:C1' | 2.46 | 0.45 |
| 4:L:774:U:O2 | 4:L:775:U:C5 | 2.68 | 0.45 |
| 4:L:799:U:N3 | 4:L:800:U:C5 | 2.85 | 0.45 |
| 4:L:813:U:C4 | 4:L:814:U:C5 | 3.04 | 0.45 |
| 5:M:355:U:C2 | 5:M:356:U:C6 | 3.05 | 0.45 |
| 5:M:451:U:C4 | 5:M:452:U:C5 | 3.05 | 0.45 |
| 6:N:294:U:H2' | 6:N:295:U:O4' | 2.16 | 0.45 |
| 6:N:406:U:C2' | 6:N:407:U:H6 | 2.25 | 0.45 |
| 6:N:438:U:C2 | 6:N:439:U:C6 | 3.05 | 0.45 |
| 1:I:129:A:C2 | 1:I:130:A:C5 | 3.05 | 0.45 |
| 1:I:142:A:C2' | 1:I:143:A:C5' | 2.94 | 0.45 |
| 1:I:226:A:C6 | 1:I:227:A:N7 | 2.85 | 0.45 |
| 1:I:246:A:H2' | 1:I:247:A:H8 | 1.81 | 0.45 |
| 1:I:254:A:H2' | 1:I:255:A:O5' | 2.16 | 0.45 |
| 1:I:25:A:H2' | 1:I:26:A:H8 | 1.82 | 0.45 |
| 1:I:277:A:C4 | 1:I:278:A:C8 | 3.04 | 0.45 |
| 1:I:283:A:H2 | 1:I:284:A:C4 | 2.30 | 0.45 |
| 1:I:288:A:C2' | 1:I:289:A:C5' | 2.94 | 0.45 |
| 1:I:296:A:H2' | 1:I:297:A:C4' | 2.46 | 0.45 |
| 1:I:330:A:C2 | 1:I:331:A:C4 | 3.05 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:41:A:N3 | 1:I:42:A:N9 | 2.63 | 0.45 |
| 2:J:111:A:HO2' | 2:J:112:A:H5' | 1.75 | 0.45 |
| 2:J:173:A:H2' | 2:J:174:A:O4' | 2.16 | 0.45 |
| 2:J:183:A:C6 | 2:J:184:A:N7 | 2.84 | 0.45 |
| 2:J:47:A:N3 | 2:J:48:A:N9 | 2.63 | 0.45 |
| 2:J:91:A:C2' | 2:J:92:A:O5' | 2.65 | 0.45 |
| 2:J:94:A:H2' | 2:J:95:A:H8 | 1.81 | 0.45 |
| 3:K:113:A:H2' | 3:K:114:A:O4' | 2.16 | 0.45 |
| 3:K:121:A:N1 | 6:N:411:U:O4 | 2.50 | 0.45 |
| 3:K:127:A:H2' | 3:K:128:A:H8 | 1.82 | 0.45 |
| 3:K:154:A:O2' | 3:K:155:A:C5' | 2.53 | 0.45 |
| 3:K:168:A:N3 | 3:K:169:A:N9 | 2.65 | 0.45 |
| 3:K:88:A:C2' | 3:K:89:A:C5' | 2.94 | 0.45 |
| 3:K:92:A:N3 | 3:K:93:A:C8 | 2.85 | 0.45 |
| 4:L:461:U:N3 | 4:L:462:U:C4 | 2.85 | 0.45 |
| 4:L:465:U:C4 | 4:L:466:U:O4 | 2.69 | 0.45 |
| 4:L:595:U:H2' | 4:L:596:U:O5' | 2.17 | 0.45 |
| 4:L:597:U:N3 | 4:L:598:U:C5 | 2.85 | 0.45 |
| 4:L:728:U:C4 | 4:L:729:U:O4 | 2.68 | 0.45 |
| 4:L:735:U:C4 | 4:L:736:U:C5 | 3.04 | 0.45 |
| 4:L:745:U:H2' | 4:L:746:U:C6 | 2.51 | 0.45 |
| 4:L:778:U:O2 | 4:L:779:U:C6 | 2.70 | 0.45 |
| 4:L:807:U:O2 | 4:L:808:U:C1' | 2.64 | 0.45 |
| 5:M:305:U:N3 | 5:M:306:U:C5 | 2.85 | 0.45 |
| 5:M:377:U:N3 | 5:M:378:U:C4 | 2.85 | 0.45 |
| 5:M:397:U:C2' | 5:M:398:U:C5' | 2.94 | 0.45 |
| 5:M:402:U:C2 | 5:M:403:U:C5 | 3.04 | 0.45 |
| 5:M:447:U:C4 | 5:M:448:U:O4 | 2.70 | 0.45 |
| 5:M:499:U:H2' | 5:M:500:U:H6 | 1.81 | 0.45 |
| 5:M:527:U:N3 | 5:M:528:U:C4 | 2.84 | 0.45 |
| 6:N:344:U:C2 | 6:N:345:U:C5 | 3.05 | 0.45 |
| 6:N:350:U:N3 | 6:N:351:U:C4 | 2.84 | 0.45 |
| 6:N:361:U:C2 | 6:N:362:U:C5 | 3.05 | 0.45 |
| 6:N:504:U:H2' | 6:N:505:U:H6 | 1.81 | 0.45 |
| 1:I:113:A:O2' | 1:I:114:A:O4' | 2.31 | 0.45 |
| 1:I:139:A:N3 | 1:I:140:A:C8 | 2.85 | 0.45 |
| 1:I:18:A:H2' | 1:I:19:A:C5' | 2.42 | 0.45 |
| 1:I:237:A:C2' | 1:I:238:A:O4' | 2.65 | 0.45 |
| 1:I:251:A:N1 | 1:I:252:A:C6 | 2.85 | 0.45 |
| 1:I:284:A:N3 | 1:I:285:A:C1' | 2.80 | 0.45 |
| 1:I:285:A:C2' | 1:I:286:A:O5' | 2.65 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:323:A:N1 | 1:I:324:A:C5 | 2.85 | 0.45 |
| 1:I:332:A:N1 | 1:I:333:A:C5 | 2.85 | 0.45 |
| 1:I:361:A:H2' | 1:I:362:A:C8 | 2.51 | 0.45 |
| 1:I:387:A:C2 | 1:I:388:A:C4 | 3.04 | 0.45 |
| 1:I:72:A:H2' | 1:I:73:A:O4' | 2.17 | 0.45 |
| 2:J:111:A:H2' | 2:J:112:A:H8 | 1.82 | 0.45 |
| 2:J:181:A:C2 | 2:J:182:A:C4 | 3.04 | 0.45 |
| 2:J:199:A:N1 | 2:J:200:A:C5 | 2.85 | 0.45 |
| 2:J:210:A:C2 | 2:J:211:A:C4 | 3.05 | 0.45 |
| 2:J:230:A:O2' | 2:J:231:A:O4' | 2.32 | 0.45 |
| 2:J:234:A:C2 | 2:J:235:A:C5 | 3.04 | 0.45 |
| 2:J:67:A:C2 | 2:J:68:A:C5 | 3.04 | 0.45 |
| 3:K:107:A:C2 | 3:K:108:A:N9 | 2.84 | 0.45 |
| 3:K:133:A:C4 | 3:K:134:A:C8 | 3.05 | 0.45 |
| 3:K:256:A:C2' | 3:K:257:A:O5' | 2.64 | 0.45 |
| 3:K:69:A:H2' | 3:K:70:A:H8 | 1.81 | 0.45 |
| 4:L:458:U:C2' | 4:L:459:U:C5' | 2.95 | 0.45 |
| 4:L:572:U:H2' | 4:L:573:U:C5' | 2.46 | 0.45 |
| 4:L:657:U:C2' | 4:L:658:U:C5' | 2.94 | 0.45 |
| 4:L:687:U:N3 | 4:L:688:U:C5 | 2.85 | 0.45 |
| 4:L:709:U:H2' | 4:L:710:U:O5' | 2.16 | 0.45 |
| 4:L:818:U:H2' | 4:L:819:U:C6 | 2.52 | 0.45 |
| 5:M:445:U:C2' | 5:M:446:U:O5' | 2.62 | 0.45 |
| 5:M:536:U:C2' | 5:M:537:U:O5' | 2.64 | 0.45 |
| 5:M:542:U:H2' | 5:M:543:U:H6 | 1.81 | 0.45 |
| 6:N:348:U:C2 | 6:N:349:U:C5 | 3.04 | 0.45 |
| 6:N:357:U:O2 | 6:N:358:U:C6 | 2.70 | 0.45 |
| 6:N:406:U:C2' | 6:N:407:U:O5' | 2.61 | 0.45 |
| 6:N:413:U:H2' | 6:N:414:U:C5' | 2.47 | 0.45 |
| 6:N:415:U:H2' | 6:N:416:U:C5 | 2.49 | 0.45 |
| 6:N:500:U:H2' | 6:N:501:U:H6 | 1.81 | 0.45 |
| 1:I:185:A:C2 | 1:I:186:A:C4 | 3.05 | 0.45 |
| 1:I:186:A:H2' | 1:I:187:A:H8 | 1.82 | 0.45 |
| 1:I:231:A:C2 | 1:I:232:A:C4 | 3.05 | 0.45 |
| 1:I:273:A:C2' | 1:I:274:A:O5' | 2.61 | 0.45 |
| 1:I:305:A:N1 | 1:I:306:A:C5 | 2.85 | 0.45 |
| 1:I:369:A:O2' | 1:I:370:A:H5' | 2.16 | 0.45 |
| 1:I:410:A:H2' | 1:I:411:A:H8 | 1.82 | 0.45 |
| 1:I:59:A:C2' | 1:I:60:A:O5' | 2.65 | 0.45 |
| 1:I:74:A:C2 | 1:I:75:A:N3 | 2.84 | 0.45 |
| 1:I:77:A:C6 | 1:I:78:A:C5 | 3.04 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:80:A:C5 | 1:I:81:A:N7 | 2.85 | 0.45 |
| 2:J:107:A:N1 | 2:J:108:A:C5 | 2.85 | 0.45 |
| 2:J:11:A:H2' | 2:J:12:A:O5' | 2.13 | 0.45 |
| 2:J:138:A:C6 | 2:J:139:A:C6 | 3.05 | 0.45 |
| 2:J:175:A:C4 | 2:J:176:A:N7 | 2.85 | 0.45 |
| 2:J:186:A:N1 | 2:J:187:A:C5 | 2.85 | 0.45 |
| 2:J:214:A:C2 | 2:J:215:A:C1' | 2.99 | 0.45 |
| 2:J:38:A:C2 | 2:J:39:A:N9 | 2.85 | 0.45 |
| 2:J:47:A:O2' | 2:J:48:A:C4' | 2.59 | 0.45 |
| 2:J:56:A:N3 | 2:J:57:A:O4' | 2.50 | 0.45 |
| 2:J:84:A:N3 | 2:J:85:A:C8 | 2.85 | 0.45 |
| 2:J:8:A:N3 | 2:J:9:A:N9 | 2.64 | 0.45 |
| 3:K:105:A:H2' | 3:K:106:A:C1' | 2.47 | 0.45 |
| 3:K:137:A:N1 | 3:K:138:A:C5 | 2.85 | 0.45 |
| 3:K:138:A:N6 | 3:K:139:A:H62 | 2.14 | 0.45 |
| 4:L:610:U:C2 | 4:L:611:U:C6 | 3.04 | 0.45 |
| 4:L:615:U:C2' | 4:L:616:U:C5' | 2.95 | 0.45 |
| 4:L:699:U:C3' | 4:L:700:U:C5' | 2.83 | 0.45 |
| 4:L:698:U:HO2' | 4:L:699:U:C4' | 2.30 | 0.45 |
| 4:L:705:U:O2 | 4:L:706:U:O4' | 2.35 | 0.45 |
| 4:L:757:U:C2' | 4:L:758:U:O4' | 2.64 | 0.45 |
| 4:L:779:U:H2' | 4:L:780:U:H6 | 1.82 | 0.45 |
| 4:L:800:U:N3 | 4:L:801:U:C4 | 2.85 | 0.45 |
| 4:L:816:U:H2' | 4:L:817:U:H6 | 1.81 | 0.45 |
| 5:M:330:U:N3 | 5:M:331:U:C5 | 2.85 | 0.45 |
| 6:N:399:U:H2' | 6:N:400:U:C6 | 2.52 | 0.45 |
| 6:N:447:U:C2' | 6:N:448:U:C5' | 2.95 | 0.45 |
| 6:N:529:U:H2' | 6:N:530:U:H6 | 1.81 | 0.45 |
| 1:I:127:A:C4 | 1:I:128:A:C8 | 3.05 | 0.45 |
| 1:I:209:A:C2 | 1:I:210:A:C5 | 3.05 | 0.45 |
| 1:I:249:A:H2 | 1:I:250:A:C4 | 2.23 | 0.45 |
| 1:I:326:A:H2' | 1:I:327:A:C5' | 2.47 | 0.45 |
| 1:I:327:A:H2' | 1:I:328:A:O5' | 2.16 | 0.45 |
| 1:I:339:A:O2' | 1:I:340:A:H5' | 2.17 | 0.45 |
| 1:I:43:A:O2' | 1:I:44:A:O5' | 2.34 | 0.45 |
| 1:I:50:A:C6 | 1:I:51:A:N7 | 2.85 | 0.45 |
| 2:J:105:A:C6 | 2:J:106:A:C6 | 3.04 | 0.45 |
| 2:J:181:A:O2' | 2:J:182:A:C5' | 2.62 | 0.45 |
| 2:J:183:A:N3 | 2:J:184:A:N9 | 2.63 | 0.45 |
| 2:J:187:A:C2 | 2:J:188:A:C4 | 3.05 | 0.45 |
| 2:J:246:A:H2' | 2:J:247:A:H8 | 1.81 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:95:A:C2 | 2:J:96:A:C8 | 3.05 | 0.45 |
| 3:K:112:A:C4 | 3:K:113:A:N7 | 2.85 | 0.45 |
| 3:K:30:A:H2' | 3:K:31:A:H8 | 1.82 | 0.45 |
| 4:L:463:U:C2' | 4:L:464:U:O4' | 2.65 | 0.45 |
| 4:L:471:U:H2' | 4:L:472:U:C6 | 2.52 | 0.45 |
| 4:L:530:U:H2' | 4:L:531:U:H5' | 1.98 | 0.45 |
| 4:L:541:U:H2' | 4:L:542:U:O5' | 2.17 | 0.45 |
| 4:L:624:U:O2' | 4:L:625:U:C5' | 2.57 | 0.45 |
| 4:L:662:U:N3 | 4:L:663:U:C5 | 2.85 | 0.45 |
| 4:L:677:U:H2' | 4:L:678:U:C5' | 2.46 | 0.45 |
| 4:L:738:U:O2 | 4:L:739:U:C5 | 2.70 | 0.45 |
| 4:L:758:U:C5 | 4:L:759:U:H5 | 2.35 | 0.45 |
| 4:L:770:U:C5 | 4:L:771:U:C5 | 3.05 | 0.45 |
| 4:L:804:U:C2' | 4:L:805:U:H5' | 2.46 | 0.45 |
| 5:M:303:U:H2' | 5:M:304:U:C6 | 2.49 | 0.45 |
| 5:M:302:U:H2' | 5:M:303:U:H6 | 1.82 | 0.45 |
| 5:M:331:U:HO2' | 5:M:332:U:C5' | 2.06 | 0.45 |
| 5:M:360:U:C2' | 5:M:361:U:O5' | 2.62 | 0.45 |
| 5:M:362:U:N3 | 5:M:363:U:C4 | 2.85 | 0.45 |
| 6:N:274:U:C2' | 6:N:275:U:O5' | 2.64 | 0.45 |
| 6:N:359:U:H2' | 6:N:360:U:O5' | 2.16 | 0.45 |
| 6:N:365:U:C2 | 6:N:366:U:C6 | 3.05 | 0.45 |
| 6:N:443:U:C4 | 6:N:444:U:C5 | 3.05 | 0.45 |
| 6:N:463:U:C2' | 6:N:464:U:C5' | 2.95 | 0.45 |
| 6:N:482:U:C4 | 6:N:483:U:C5 | 3.05 | 0.45 |
| 6:N:496:U:C2' | 6:N:497:U:C4' | 2.94 | 0.45 |
| 1:I:111:A:C2 | 1:I:112:A:C5 | 3.04 | 0.44 |
| 1:I:175:A:H2 | 1:I:176:A:C4 | 2.34 | 0.44 |
| 1:I:179:A:O5' | 1:I:180:A:OP2 | 2.34 | 0.44 |
| 1:I:347:A:H2' | 1:I:348:A:O5' | 2.16 | 0.44 |
| 1:I:61:A:C2' | 1:I:62:A:O4' | 2.65 | 0.44 |
| 1:I:74:A:HO2' | 1:I:75:A:C4' | 2.30 | 0.44 |
| 1:I:96:A:N1 | 1:I:97:A:C6 | 2.84 | 0.44 |
| 2:J:102:A:O2' | 2:J:103:A:H5' | 2.17 | 0.44 |
| 2:J:119:A:H61 | 2:J:120:A:H61 | 1.58 | 0.44 |
| 2:J:122:A:H61 | 2:J:123:A:N6 | 2.00 | 0.44 |
| 2:J:13:A:N6 | 5:M:541:U:O4 | 2.50 | 0.44 |
| 2:J:181:A:O2' | 2:J:182:A:P | 2.75 | 0.44 |
| 2:J:183:A:C2 | 2:J:184:A:H1' | 2.50 | 0.44 |
| 2:J:209:A:H2' | 2:J:210:A:O4' | 2.17 | 0.44 |
| 2:J:249:A:N3 | 2:J:250:A:C8 | 2.85 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:31:A:H2' | 2:J:32:A:H8 | 1.82 | 0.44 |
| 2:J:39:A:H2' | 2:J:40:A:C5' | 2.46 | 0.44 |
| 2:J:51:A:C2 | 2:J:52:A:C5 | 3.04 | 0.44 |
| 2:J:98:A:N6 | 2:J:99:A:N6 | 2.65 | 0.44 |
| 3:K:154:A:C6 | 3:K:155:A:N7 | 2.76 | 0.44 |
| 3:K:203:A:H2 | 3:K:204:A:C5 | 2.17 | 0.44 |
| 3:K:209:A:N6 | 3:K:210:A:H62 | 2.14 | 0.44 |
| 3:K:254:A:N6 | 3:K:255:A:N6 | 2.65 | 0.44 |
| 3:K:91:A:N1 | 3:K:92:A:C5 | 2.85 | 0.44 |
| 3:K:93:A:H2' | 3:K:94:A:O4' | 2.17 | 0.44 |
| 4:L:554:U:C2' | 4:L:555:U:H6 | 2.29 | 0.44 |
| 4:L:606:U:HO2' | 4:L:607:U:H5' | 1.82 | 0.44 |
| 4:L:819:U:H2' | 4:L:820:U:C5 | 2.53 | 0.44 |
| 5:M:450:U:C4 | 5:M:451:U:C4 | 3.06 | 0.44 |
| 6:N:484:U:H3' | 6:N:485:U:P | 2.56 | 0.44 |
| 1:I:136:A:N3 | 1:I:137:A:O4' | 2.50 | 0.44 |
| 1:I:26:A:N3 | 1:I:27:A:C8 | 2.85 | 0.44 |
| 1:I:317:A:C4 | 1:I:318:A:C8 | 3.06 | 0.44 |
| 1:I:332:A:C6 | 1:I:333:A:C5 | 3.05 | 0.44 |
| 1:I:365:A:H2' | 1:I:366:A:C8 | 2.47 | 0.44 |
| 1:I:37:A:C2 | 1:I:38:A:C5 | 3.05 | 0.44 |
| 1:I:47:A:N1 | 1:I:48:A:C5 | 2.85 | 0.44 |
| 1:I:54:A:H2' | 1:I:55:A:C8 | 2.51 | 0.44 |
| 1:I:79:A:H2' | 1:I:80:A:H8 | 1.82 | 0.44 |
| 1:I:82:A:C2 | 1:I:83:A:N9 | 2.86 | 0.44 |
| 2:J:108:A:H2' | 2:J:109:A:H8 | 1.82 | 0.44 |
| 2:J:116:A:C2 | 2:J:117:A:C6 | 3.03 | 0.44 |
| 2:J:158:A:H2' | 2:J:159:A:C8 | 2.50 | 0.44 |
| 2:J:253:A:C5 | 2:J:254:A:N7 | 2.85 | 0.44 |
| 2:J:33:A:O2' | 2:J:34:A:H5' | 2.16 | 0.44 |
| 2:J:38:A:C2' | 2:J:39:A:O5' | 2.60 | 0.44 |
| 2:J:63:A:H2' | 2:J:64:A:C8 | 2.52 | 0.44 |
| 3:K:139:A:C2 | 3:K:140:A:C5 | 3.05 | 0.44 |
| 3:K:161:A:C4 | 3:K:162:A:C8 | 3.05 | 0.44 |
| 3:K:165:A:C2' | 3:K:166:A:O4' | 2.60 | 0.44 |
| 4:L:569:U:H2' | 4:L:570:U:O5' | 2.17 | 0.44 |
| 4:L:621:U:O2' | 4:L:622:U:H5' | 2.17 | 0.44 |
| 4:L:711:U:C5 | 4:L:712:U:H5 | 2.35 | 0.44 |
| 4:L:757:U:C2' | 4:L:758:U:C5' | 2.93 | 0.44 |
| 4:L:762:U:H2' | 4:L:763:U:C6 | 2.40 | 0.44 |
| 5:M:298:U:O2 | 5:M:299:U:C6 | 2.70 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:306:U:C2 | 5:M:307:U:C5 | 3.06 | 0.44 |
| 5:M:411:U:C2' | 5:M:412:U:C5' | 2.95 | 0.44 |
| 5:M:522:U:C2 | 5:M:523:U:C5 | 3.06 | 0.44 |
| 6:N:398:U:H2' | 6:N:399:U:H6 | 1.81 | 0.44 |
| 6:N:434:U:C2' | 6:N:435:U:O5' | 2.59 | 0.44 |
| 6:N:474:U:C2 | 6:N:475:U:C5 | 3.05 | 0.44 |
| 6:N:518:U:C3' | 6:N:519:U:P | 2.97 | 0.44 |
| 6:N:527:U:N3 | 6:N:528:U:C4 | 2.84 | 0.44 |
| 1:I:130:A:C4 | 1:I:131:A:C8 | 3.05 | 0.44 |
| 1:I:140:A:N6 | 1:I:141:A:H61 | 2.13 | 0.44 |
| 1:I:15:A:C2 | 1:I:16:A:C4 | 3.05 | 0.44 |
| 1:I:164:A:C2 | 4:L:662:U:C2 | 3.05 | 0.44 |
| 1:I:295:A:C2' | 1:I:296:A:O5' | 2.66 | 0.44 |
| 1:I:336:A:C2 | 1:I:337:A:C4 | 3.05 | 0.44 |
| 1:I:358:A:C2' | 1:I:359:A:O5' | 2.58 | 0.44 |
| 1:I:373:A:C6 | 1:I:374:A:C6 | 3.06 | 0.44 |
| 1:I:71:A:C2' | 1:I:72:A:O4' | 2.58 | 0.44 |
| 2:J:199:A:H2' | 2:J:200:A:H8 | 1.82 | 0.44 |
| 2:J:88:A:N3 | 2:J:89:A:N9 | 2.59 | 0.44 |
| 3:K:103:A:H2' | 3:K:104:A:C8 | 2.49 | 0.44 |
| 3:K:127:A:C2 | 3:K:128:A:C5 | 3.05 | 0.44 |
| 3:K:40:A:C6 | 3:K:41:A:N6 | 2.86 | 0.44 |
| 3:K:60:A:C2' | 3:K:61:A:C5' | 2.96 | 0.44 |
| 3:K:79:A:N6 | 3:K:80:A:N6 | 2.65 | 0.44 |
| 4:L:451:U:O4 | 4:L:452:U:O4 | 2.35 | 0.44 |
| 4:L:468:U:N3 | 4:L:469:U:C5 | 2.85 | 0.44 |
| 4:L:545:U:O2 | 4:L:546:U:O4' | 2.35 | 0.44 |
| 4:L:560:U:N3 | 4:L:561:U:C5 | 2.85 | 0.44 |
| 4:L:655:U:C2' | 4:L:656:U:O5' | 2.65 | 0.44 |
| 4:L:682:U:C2' | 4:L:683:U:O5' | 2.65 | 0.44 |
| 4:L:713:U:C2 | 4:L:714:U:C5 | 3.05 | 0.44 |
| 4:L:751:U:H2' | 4:L:752:U:C4' | 2.46 | 0.44 |
| 4:L:772:U:C2' | 4:L:773:U:C5' | 2.95 | 0.44 |
| 4:L:804:U:C2' | 4:L:805:U:O4' | 2.65 | 0.44 |
| 5:M:291:U:H2' | 5:M:292:U:H6 | 1.82 | 0.44 |
| 5:M:317:U:C2 | 5:M:318:U:C6 | 3.06 | 0.44 |
| 5:M:523:U:O2' | 5:M:524:U:O5' | 2.35 | 0.44 |
| 5:M:536:U:O2' | 5:M:537:U:C5' | 2.36 | 0.44 |
| 6:N:411:U:C2' | 6:N:412:U:C5' | 2.94 | 0.44 |
| 6:N:427:U:H2' | 6:N:428:U:O4' | 2.17 | 0.44 |
| 6:N:455:U:O3' | 6:N:456:U:H5' | 2.17 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:16:A:N6 | 1:I:17:A:C6 | 2.84 | 0.44 |
| 1:I:174:A:C2 | 1:I:175:A:C5 | 3.05 | 0.44 |
| 1:I:229:A:H2' | 1:I:230:A:O5' | 2.17 | 0.44 |
| 1:I:22:A:HO2' | 1:I:23:A:C4' | 2.29 | 0.44 |
| 1:I:277:A:C5 | 1:I:278:A:C5 | 3.05 | 0.44 |
| 1:I:292:A:C2' | 1:I:293:A:C5' | 2.95 | 0.44 |
| 1:I:324:A:C4 | 1:I:325:A:C8 | 3.05 | 0.44 |
| 1:I:326:A:C2 | 1:I:327:A:C5 | 3.05 | 0.44 |
| 1:I:332:A:H2' | 1:I:333:A:C5' | 2.47 | 0.44 |
| 1:I:64:A:C4 | 1:I:65:A:N7 | 2.85 | 0.44 |
| 1:I:90:A:H2' | 1:I:91:A:C5' | 2.43 | 0.44 |
| 2:J:127:A:C2 | 2:J:128:A:C1' | 3.00 | 0.44 |
| 2:J:166:A:N1 | 2:J:167:A:C6 | 2.86 | 0.44 |
| 2:J:178:A:C6 | 2:J:179:A:N7 | 2.85 | 0.44 |
| 2:J:222:A:C2 | 2:J:223:A:C1' | 3.00 | 0.44 |
| 2:J:237:A:O2' | 2:J:238:A:C5' | 2.66 | 0.44 |
| 2:J:64:A:H2' | 2:J:65:A:O4' | 2.17 | 0.44 |
| 2:J:76:A:N3 | 2:J:77:A:C8 | 2.84 | 0.44 |
| 3:K:131:A:H2' | 3:K:132:A:H8 | 1.82 | 0.44 |
| 4:L:529:U:O2 | 4:L:530:U:C6 | 2.71 | 0.44 |
| 4:L:613:U:C2 | 4:L:614:U:C6 | 3.05 | 0.44 |
| 4:L:614:U:H2' | 4:L:615:U:C6 | 2.50 | 0.44 |
| 4:L:725:U:H2' | 4:L:726:U:H6 | 1.83 | 0.44 |
| 1:I:89:A:C2 | 4:L:737:U:C2 | 3.05 | 0.44 |
| 4:L:781:U:H2' | 4:L:782:U:O5' | 2.17 | 0.44 |
| 4:L:810:U:O2 | 4:L:811:U:C6 | 2.71 | 0.44 |
| 4:L:812:U:C2' | 4:L:813:U:O4' | 2.63 | 0.44 |
| 5:M:295:U:N3 | 5:M:296:U:C5 | 2.86 | 0.44 |
| 5:M:364:U:C2 | 5:M:365:U:C5 | 3.05 | 0.44 |
| 5:M:484:U:C4 | 5:M:485:U:C4 | 3.05 | 0.44 |
| 5:M:535:U:HO2' | 5:M:536:U:H5' | 1.73 | 0.44 |
| 1:I:12:A:H2' | 1:I:13:A:O4' | 2.17 | 0.44 |
| 1:I:179:A:H2' | 1:I:180:A:H8 | 1.83 | 0.44 |
| 1:I:212:A:H2' | 1:I:213:A:H8 | 1.82 | 0.44 |
| 1:I:228:A:N1 | 1:I:229:A:C6 | 2.85 | 0.44 |
| 1:I:233:A:C6 | 1:I:234:A:C5 | 3.06 | 0.44 |
| 1:I:233:A:C2 | 1:I:234:A:N9 | 2.86 | 0.44 |
| 1:I:235:A:C2 | 1:I:236:A:C4 | 3.05 | 0.44 |
| 1:I:245:A:O2' | 1:I:246:A:H5' | 2.16 | 0.44 |
| 1:I:320:A:C2' | 1:I:321:A:O5' | 2.63 | 0.44 |
| 1:I:328:A:N3 | 1:I:329:A:C8 | 2.86 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:394:A:H2' | 1:I:395:A:H8 | 1.80 | 0.44 |
| 1:I:49:A:C2' | 1:I:50:A:H5' | 2.40 | 0.44 |
| 2:J:130:A:H2' | 2:J:131:A:O5' | 2.16 | 0.44 |
| 2:J:138:A:H61 | 2:J:139:A:N6 | 2.08 | 0.44 |
| 2:J:152:A:C4 | 2:J:153:A:C8 | 3.05 | 0.44 |
| 2:J:16:A:N3 | 2:J:17:A:C8 | 2.86 | 0.44 |
| 2:J:189:A:H2' | 2:J:190:A:H8 | 1.83 | 0.44 |
| 2:J:87:A:H2' | 2:J:88:A:H8 | 1.83 | 0.44 |
| 3:K:105:A:C5 | 3:K:106:A:C5 | 3.05 | 0.44 |
| 3:K:141:A:O2' | 3:K:142:A:P | 2.76 | 0.44 |
| 3:K:163:A:H2' | 3:K:164:A:O4' | 2.17 | 0.44 |
| 3:K:256:A:H2' | 3:K:257:A:O5' | 2.17 | 0.44 |
| 3:K:79:A:C5 | 3:K:80:A:N7 | 2.86 | 0.44 |
| 3:K:84:A:N3 | 3:K:85:A:C8 | 2.85 | 0.44 |
| 4:L:449:U:H2' | 4:L:450:U:C6 | 2.48 | 0.44 |
| 4:L:593:U:C4 | 4:L:594:U:C4 | 3.05 | 0.44 |
| 4:L:757:U:C5 | 4:L:758:U:C5 | 3.05 | 0.44 |
| 4:L:781:U:C4 | 4:L:782:U:C4 | 3.05 | 0.44 |
| 5:M:298:U:H2' | 5:M:299:U:C6 | 2.44 | 0.44 |
| 5:M:357:U:H2' | 5:M:358:U:H6 | 1.82 | 0.44 |
| 5:M:381:U:H2' | 5:M:382:U:O4' | 2.18 | 0.44 |
| 5:M:460:U:N1 | 5:M:461:U:C5 | 2.85 | 0.44 |
| 5:M:471:U:O2' | 5:M:472:U:C5' | 2.58 | 0.44 |
| 5:M:541:U:C2' | 5:M:542:U:C5' | 2.96 | 0.44 |
| 6:N:350:U:O4 | 6:N:351:U:O4 | 2.35 | 0.44 |
| 1:I:119:A:N3 | 1:I:120:A:N9 | 2.55 | 0.44 |
| 1:I:185:A:C2' | 1:I:186:A:H5' | 2.48 | 0.44 |
| 1:I:292:A:C2 | 1:I:293:A:C5 | 3.06 | 0.44 |
| 1:I:327:A:N1 | 1:I:328:A:C5 | 2.85 | 0.44 |
| 1:I:340:A:O2' | 1:I:341:A:O5' | 2.36 | 0.44 |
| 1:I:341:A:H2' | 1:I:342:A:O4' | 2.18 | 0.44 |
| 1:I:409:A:H2' | 1:I:410:A:C8 | 2.52 | 0.44 |
| 1:I:82:A:N1 | 1:I:83:A:C5 | 2.85 | 0.44 |
| 1:I:94:A:H2' | 1:I:95:A:C8 | 2.43 | 0.44 |
| 2:J:112:A:HO2' | 2:J:113:A:H5' | 1.80 | 0.44 |
| 2:J:143:A:C2 | 2:J:144:A:N7 | 2.79 | 0.44 |
| 2:J:148:A:H2' | 2:J:149:A:H8 | 1.83 | 0.44 |
| 2:J:204:A:C2 | 2:J:205:A:C4 | 3.05 | 0.44 |
| 2:J:207:A:N3 | 2:J:208:A:C8 | 2.86 | 0.44 |
| 2:J:234:A:C4 | 2:J:235:A:C8 | 3.05 | 0.44 |
| 2:J:235:A:C6 | 2:J:236:A:N7 | 2.85 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:35:A:C2 | 2:J:36:A:C5 | 3.05 | 0.44 |
| 2:J:51:A:C6 | 2:J:52:A:C5 | 3.06 | 0.44 |
| 2:J:65:A:C2 | 2:J:66:A:C5 | 3.06 | 0.44 |
| 2:J:68:A:H2' | 2:J:69:A:H8 | 1.82 | 0.44 |
| 3:K:105:A:C2 | 3:K:106:A:C6 | 3.02 | 0.44 |
| 3:K:110:A:N3 | 3:K:111:A:C8 | 2.86 | 0.44 |
| 3:K:162:A:C2 | 3:K:163:A:C4 | 3.05 | 0.44 |
| 3:K:210:A:C2 | 3:K:211:A:C4 | 3.05 | 0.44 |
| 3:K:255:A:O2' | 3:K:256:A:H5' | 2.18 | 0.44 |
| 3:K:83:A:O2' | 3:K:84:A:H5' | 2.18 | 0.44 |
| 3:K:87:A:C6 | 3:K:88:A:C5 | 3.06 | 0.44 |
| 3:K:87:A:N1 | 3:K:88:A:N7 | 2.66 | 0.44 |
| 4:L:482:U:C2 | 4:L:483:U:C5 | 3.06 | 0.44 |
| 4:L:494:U:H2' | 4:L:495:U:C5' | 2.48 | 0.44 |
| 4:L:614:U:C2' | 4:L:615:U:H5' | 2.47 | 0.44 |
| 4:L:643:U:C4 | 4:L:644:U:C5 | 3.06 | 0.44 |
| 4:L:698:U:H2' | 4:L:699:U:O5' | 2.17 | 0.44 |
| 4:L:729:U:O2 | 4:L:730:U:C6 | 2.70 | 0.44 |
| 4:L:775:U:O2 | 4:L:776:U:C6 | 2.71 | 0.44 |
| 4:L:804:U:N3 | 4:L:805:U:C5 | 2.85 | 0.44 |
| 5:M:457:U:H2' | 5:M:458:U:C6 | 2.50 | 0.44 |
| 5:M:491:U:N3 | 5:M:492:U:C5 | 2.86 | 0.44 |
| 5:M:508:U:O2 | 5:M:509:U:C6 | 2.71 | 0.44 |
| 6:N:395:U:C2' | 6:N:396:U:C5' | 2.95 | 0.44 |
| 6:N:483:U:N1 | 6:N:484:U:C5 | 2.85 | 0.44 |
| 6:N:523:U:C2 | 6:N:524:U:C5 | 3.05 | 0.44 |
| 1:I:122:A:C2' | 1:I:123:A:O4' | 2.66 | 0.44 |
| 1:I:139:A:H2' | 1:I:140:A:H8 | 1.83 | 0.44 |
| 1:I:169:A:C2 | 1:I:170:A:C5 | 3.05 | 0.44 |
| 1:I:170:A:N3 | 1:I:171:A:C8 | 2.85 | 0.44 |
| 1:I:198:A:H2' | 1:I:199:A:H8 | 1.83 | 0.44 |
| 1:I:203:A:C2' | 1:I:204:A:H5' | 2.47 | 0.44 |
| 1:I:212:A:N1 | 1:I:213:A:C5 | 2.85 | 0.44 |
| 1:I:221:A:HO2' | 1:I:222:A:H5' | 1.78 | 0.44 |
| 1:I:242:A:N1 | 1:I:243:A:C5 | 2.86 | 0.44 |
| 1:I:242:A:N3 | 1:I:243:A:H1' | 2.30 | 0.44 |
| 1:I:263:A:C2 | 1:I:264:A:N9 | 2.85 | 0.44 |
| 1:I:273:A:C5 | 1:I:274:A:N7 | 2.85 | 0.44 |
| 1:I:284:A:H2' | 1:I:285:A:O4' | 2.18 | 0.44 |
| 1:I:328:A:C4 | 1:I:329:A:N7 | 2.86 | 0.44 |
| 1:I:388:A:HO2' | 1:I:389:A:C4' | 2.25 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:61:A:N3 | 1:I:62:A:C8 | 2.86 | 0.44 |
| 1:I:89:A:C2 | 1:I:90:A:C5 | 3.06 | 0.44 |
| 2:J:126:A:H2' | 2:J:127:A:C5' | 2.48 | 0.44 |
| 2:J:125:A:H2' | 2:J:126:A:H8 | 1.82 | 0.44 |
| 2:J:132:A:HO2' | 2:J:133:A:C4' | 2.30 | 0.44 |
| 2:J:218:A:C2 | 2:J:219:A:N7 | 2.86 | 0.44 |
| 2:J:238:A:O2' | 2:J:239:A:H5' | 2.18 | 0.44 |
| 2:J:245:A:H2' | 2:J:246:A:C5' | 2.47 | 0.44 |
| 2:J:44:A:C6 | 2:J:45:A:N7 | 2.86 | 0.44 |
| 2:J:89:A:C4 | 2:J:90:A:C8 | 3.01 | 0.44 |
| 3:K:132:A:HO2' | 3:K:133:A:C5' | 2.14 | 0.44 |
| 3:K:140:A:C5 | 3:K:141:A:N7 | 2.85 | 0.44 |
| 3:K:17:A:H2' | 3:K:18:A:H8 | 1.83 | 0.44 |
| 3:K:92:A:H2' | 3:K:93:A:O4' | 2.18 | 0.44 |
| 3:K:95:A:N3 | 3:K:96:A:C8 | 2.86 | 0.44 |
| 4:L:439:U:C2' | 4:L:440:U:H5' | 2.46 | 0.44 |
| 4:L:444:U:H2' | 4:L:445:U:H6 | 1.83 | 0.44 |
| 4:L:513:U:H2' | 4:L:514:U:O5' | 2.17 | 0.44 |
| 4:L:615:U:H2' | 4:L:616:U:H6 | 1.83 | 0.44 |
| 4:L:683:U:N3 | 4:L:684:U:C4 | 2.86 | 0.44 |
| 4:L:698:U:H2' | 4:L:699:U:C6 | 2.48 | 0.44 |
| 4:L:792:U:C2 | 4:L:793:U:C6 | 3.05 | 0.44 |
| 5:M:355:U:H2' | 5:M:356:U:C6 | 2.48 | 0.44 |
| 5:M:403:U:H2' | 5:M:404:U:O5' | 2.18 | 0.44 |
| 5:M:411:U:H2' | 5:M:412:U:H6 | 1.83 | 0.44 |
| 5:M:437:U:C4 | 5:M:438:U:C4 | 3.05 | 0.44 |
| 6:N:313:U:O4 | 6:N:314:U:O4 | 2.35 | 0.44 |
| 6:N:406:U:N1 | 6:N:407:U:C6 | 2.86 | 0.44 |
| 6:N:461:U:N3 | 6:N:462:U:C4 | 2.86 | 0.44 |
| 6:N:516:U:HO3' | 6:N:517:U:P | 2.32 | 0.44 |
| 1:I:136:A:H2' | 1:I:137:A:O4' | 2.18 | 0.44 |
| 1:I:146:A:O2' | 1:I:147:A:H5' | 2.17 | 0.44 |
| 1:I:157:A:C2 | 1:I:158:A:C4 | 3.06 | 0.44 |
| 1:I:195:A:C2' | 1:I:196:A:H5' | 2.47 | 0.44 |
| 1:I:18:A:N1 | 1:I:19:A:C6 | 2.86 | 0.44 |
| 1:I:199:A:N1 | 1:I:200:A:C5 | 2.86 | 0.44 |
| 1:I:21:A:C6 | 1:I:22:A:N6 | 2.86 | 0.44 |
| 1:I:231:A:H2' | 1:I:232:A:C8 | 2.53 | 0.44 |
| 1:I:307:A:O2' | 1:I:308:A:C5' | 2.55 | 0.44 |
| 1:I:334:A:C2 | 4:L:492:U:O2 | 2.70 | 0.44 |
| 1:I:341:A:C2 | 1:I:342:A:N9 | 2.86 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:400:A:N6 | 1:I:401:A:H62 | 2.08 | 0.44 |
| 1:I:407:A:H2' | 1:I:408:A:H8 | 1.82 | 0.44 |
| 1:I:61:A:C2' | 1:I:62:A:H8 | 2.14 | 0.44 |
| 1:I:82:A:N3 | 1:I:83:A:N9 | 2.66 | 0.44 |
| 1:I:94:A:C4 | 1:I:95:A:C8 | 3.05 | 0.44 |
| 2:J:113:A:C2 | 2:J:114:A:C8 | 3.06 | 0.44 |
| 2:J:158:A:C4 | 2:J:159:A:N7 | 2.86 | 0.44 |
| 2:J:198:A:H2' | 2:J:199:A:O4' | 2.18 | 0.44 |
| 2:J:225:A:C6 | 2:J:226:A:C5 | 3.05 | 0.44 |
| 2:J:228:A:N1 | 2:J:229:A:C6 | 2.86 | 0.44 |
| 2:J:232:A:H2' | 2:J:233:A:H8 | 1.81 | 0.44 |
| 2:J:258:A:O2' | 2:J:259:A:H5' | 2.18 | 0.44 |
| 2:J:29:A:HO2' | 2:J:30:A:C5' | 1.99 | 0.44 |
| 3:K:111:A:C4 | 3:K:112:A:C8 | 3.06 | 0.44 |
| 3:K:206:A:O2' | 3:K:207:A:C5' | 2.63 | 0.44 |
| 4:L:422:U:O2' | 4:L:423:U:O4' | 2.35 | 0.44 |
| 4:L:473:U:O4 | 4:L:474:U:O4 | 2.36 | 0.44 |
| 4:L:474:U:H2' | 4:L:475:U:C5' | 2.48 | 0.44 |
| 4:L:498:U:H2' | 4:L:499:U:C6 | 2.51 | 0.44 |
| 4:L:575:U:O2 | 4:L:576:U:N1 | 2.50 | 0.44 |
| 4:L:637:U:N1 | 4:L:638:U:C5 | 2.85 | 0.44 |
| 4:L:652:U:C2' | 4:L:653:U:O5' | 2.66 | 0.44 |
| 4:L:713:U:C2' | 4:L:714:U:H6 | 2.30 | 0.44 |
| 4:L:720:U:N3 | 4:L:721:U:C5 | 2.85 | 0.44 |
| 4:L:812:U:H2' | 4:L:813:U:C4' | 2.47 | 0.44 |
| 5:M:325:U:C2 | 5:M:326:U:C5 | 3.06 | 0.44 |
| 5:M:349:U:N3 | 5:M:350:U:C4 | 2.86 | 0.44 |
| 5:M:456:U:O2 | 5:M:457:U:C6 | 2.71 | 0.44 |
| 5:M:529:U:O2 | 5:M:530:U:C6 | 2.71 | 0.44 |
| 5:M:538:U:C4 | 5:M:539:U:C4 | 3.06 | 0.44 |
| 6:N:276:U:N3 | 6:N:277:U:C5 | 2.86 | 0.44 |
| 6:N:284:U:C2 | 6:N:285:U:C5 | 3.05 | 0.44 |
| 6:N:328:U:C2' | 6:N:329:U:H6 | 2.14 | 0.44 |
| 6:N:352:U:H2' | 6:N:353:U:C6 | 2.53 | 0.44 |
| 6:N:400:U:H2' | 6:N:401:U:O4' | 2.18 | 0.44 |
| 6:N:490:U:C4 | 6:N:491:U:C4 | 3.05 | 0.44 |
| 6:N:504:U:C2 | 6:N:505:U:C5 | 3.06 | 0.44 |
| 1:I:207:A:C4 | 1:I:208:A:C8 | 3.05 | 0.44 |
| 1:I:231:A:C6 | 1:I:232:A:N6 | 2.86 | 0.44 |
| 1:I:251:A:N1 | 1:I:252:A:C5 | 2.86 | 0.44 |
| 1:I:272:A:C2 | 4:L:554:U:C2 | 3.06 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:299:A:H2' | 1:I:300:A:O4' | 2.17 | 0.44 |
| 1:I:323:A:C2' | 1:I:324:A:C4' | 2.86 | 0.44 |
| 1:I:354:A:C2' | 1:I:355:A:H5' | 2.48 | 0.44 |
| 2:J:121:A:HO2' | 2:J:122:A:H5' | 1.76 | 0.44 |
| 2:J:191:A:N1 | 2:J:192:A:C5 | 2.86 | 0.44 |
| 2:J:236:A:N6 | 2:J:237:A:N6 | 2.66 | 0.44 |
| 2:J:34:A:C2' | 2:J:35:A:O5' | 2.63 | 0.44 |
| 2:J:51:A:O2' | 2:J:52:A:H5' | 2.18 | 0.44 |
| 2:J:59:A:C4 | 2:J:60:A:C8 | 3.05 | 0.44 |
| 3:K:101:A:C2 | 3:K:102:A:C5 | 3.05 | 0.44 |
| 3:K:131:A:N1 | 3:K:132:A:C6 | 2.86 | 0.44 |
| 3:K:146:A:C2 | 3:K:147:A:N9 | 2.86 | 0.44 |
| 3:K:153:A:N3 | 3:K:154:A:C1' | 2.81 | 0.44 |
| 4:L:541:U:O2 | 4:L:542:U:C6 | 2.71 | 0.44 |
| 4:L:580:U:N3 | 4:L:581:U:C5 | 2.85 | 0.44 |
| 4:L:655:U:C2' | 4:L:656:U:H5' | 2.47 | 0.44 |
| 4:L:672:U:C2' | 4:L:673:U:H6 | 2.15 | 0.44 |
| 4:L:686:U:O2 | 4:L:687:U:C6 | 2.70 | 0.44 |
| 4:L:797:U:O2' | 4:L:798:U:C5' | 2.51 | 0.44 |
| 5:M:320:U:H2' | 5:M:321:U:O4' | 2.17 | 0.44 |
| 5:M:335:U:C2' | 5:M:336:U:C6 | 2.98 | 0.44 |
| 5:M:423:U:O2 | 5:M:424:U:C5 | 2.70 | 0.44 |
| 5:M:438:U:C4 | 5:M:439:U:C5 | 3.05 | 0.44 |
| 5:M:465:U:H2' | 5:M:466:U:C4' | 2.48 | 0.44 |
| 5:M:492:U:C4 | 5:M:493:U:C5 | 3.06 | 0.44 |
| 6:N:388:U:H2' | 6:N:389:U:C5 | 2.46 | 0.44 |
| 3:K:132:A:N6 | 6:N:400:U:O4 | 2.50 | 0.44 |
| 6:N:464:U:C2 | 6:N:465:U:C5 | 3.05 | 0.44 |
| 6:N:472:U:N3 | 6:N:473:U:C5 | 2.86 | 0.44 |
| 6:N:489:U:C2' | 6:N:490:U:O5' | 2.64 | 0.44 |
| 1:I:135:A:C5 | 1:I:136:A:C8 | 3.05 | 0.43 |
| 1:I:14:A:N1 | 1:I:15:A:C6 | 2.86 | 0.43 |
| 1:I:223:A:C4 | 1:I:224:A:N7 | 2.85 | 0.43 |
| 1:I:330:A:C4 | 1:I:331:A:C8 | 3.06 | 0.43 |
| 1:I:62:A:N1 | 1:I:63:A:C5 | 2.86 | 0.43 |
| 1:I:77:A:N6 | 1:I:78:A:N6 | 2.66 | 0.43 |
| 1:I:82:A:C4 | 1:I:83:A:N9 | 2.84 | 0.43 |
| 2:J:144:A:C2 | 2:J:145:A:C1' | 3.01 | 0.43 |
| 2:J:259:A:C2' | 2:J:260:A:H5' | 2.48 | 0.43 |
| 2:J:42:A:H2' | 2:J:43:A:C1' | 2.46 | 0.43 |
| 2:J:91:A:HO2' | 2:J:92:A:H5' | 1.81 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:110:A:C2 | 3:K:111:A:C8 | 3.06 | 0.43 |
| 3:K:124:A:C2 | 3:K:125:A:C8 | 2.94 | 0.43 |
| 3:K:142:A:C4 | 3:K:143:A:N7 | 2.85 | 0.43 |
| 3:K:154:A:N6 | 3:K:155:A:H62 | 2.10 | 0.43 |
| 3:K:163:A:H2' | 3:K:164:A:H8 | 1.82 | 0.43 |
| 3:K:192:A:N6 | 3:K:193:A:H62 | 2.12 | 0.43 |
| 3:K:43:A:C5 | 3:K:44:A:N7 | 2.86 | 0.43 |
| 4:L:458:U:C2 | 4:L:459:U:C6 | 3.06 | 0.43 |
| 4:L:544:U:O4 | 4:L:545:U:C4 | 2.70 | 0.43 |
| 4:L:556:U:N3 | 4:L:557:U:C5 | 2.86 | 0.43 |
| 4:L:608:U:C2 | 4:L:609:U:C5 | 3.05 | 0.43 |
| 4:L:693:U:N1 | 4:L:694:U:H5 | 2.14 | 0.43 |
| 5:M:511:U:C5 | 5:M:512:U:C5 | 3.06 | 0.43 |
| 6:N:295:U:H2' | 6:N:296:U:H6 | 1.83 | 0.43 |
| 6:N:327:U:C4 | 6:N:328:U:C4 | 3.06 | 0.43 |
| 6:N:388:U:O2' | 6:N:389:U:P | 2.76 | 0.43 |
| 6:N:444:U:H2' | 6:N:445:U:O5' | 2.17 | 0.43 |
| 6:N:450:U:N3 | 6:N:451:U:C4 | 2.86 | 0.43 |
| 1:I:103:A:C4 | 1:I:104:A:C8 | 3.03 | 0.43 |
| 1:I:122:A:O2' | 1:I:123:A:C4' | 2.61 | 0.43 |
| 1:I:202:A:HO2' | 1:I:203:A:C5' | 1.95 | 0.43 |
| 1:I:247:A:C5 | 1:I:248:A:N7 | 2.85 | 0.43 |
| 1:I:252:A:N1 | 1:I:253:A:C5 | 2.86 | 0.43 |
| 1:I:256:A:C6 | 1:I:257:A:C6 | 3.06 | 0.43 |
| 1:I:283:A:C2' | 1:I:284:A:O5' | 2.63 | 0.43 |
| 1:I:286:A:C5 | 1:I:287:A:C5 | 3.07 | 0.43 |
| 1:I:337:A:H2' | 1:I:338:A:H8 | 1.83 | 0.43 |
| 1:I:393:A:C2' | 1:I:394:A:C5' | 2.97 | 0.43 |
| 1:I:65:A:C2 | 1:I:66:A:C5 | 3.05 | 0.43 |
| 1:I:79:A:C2 | 4:L:747:U:O2 | 2.70 | 0.43 |
| 2:J:103:A:H2' | 2:J:104:A:C5' | 2.48 | 0.43 |
| 2:J:105:A:C6 | 2:J:106:A:C5 | 3.06 | 0.43 |
| 2:J:135:A:C5 | 2:J:136:A:N7 | 2.86 | 0.43 |
| 2:J:137:A:C2 | 2:J:138:A:C5 | 3.06 | 0.43 |
| 2:J:12:A:N3 | 2:J:13:A:C8 | 2.86 | 0.43 |
| 2:J:202:A:N6 | 5:M:352:U:O4 | 2.51 | 0.43 |
| 2:J:218:A:H2' | 2:J:219:A:C5' | 2.48 | 0.43 |
| 2:J:233:A:H2' | 2:J:234:A:H8 | 1.83 | 0.43 |
| 2:J:262:A:C2' | 2:J:263:A:H5' | 2.46 | 0.43 |
| 2:J:61:A:O2' | 2:J:62:A:O5' | 2.35 | 0.43 |
| 2:J:66:A:C2 | 2:J:67:A:C5 | 3.05 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:78:A:C2' | 2:J:79:A:C5' | 2.96 | 0.43 |
| 3:K:117:A:N1 | 3:K:118:A:N6 | 2.66 | 0.43 |
| 3:K:143:A:O2' | 3:K:144:A:H5' | 2.18 | 0.43 |
| 3:K:165:A:N3 | 3:K:166:A:N9 | 2.67 | 0.43 |
| 3:K:174:A:H2' | 3:K:175:A:O5' | 2.18 | 0.43 |
| 3:K:62:A:N1 | 3:K:63:A:C5 | 2.86 | 0.43 |
| 3:K:64:A:HO2' | 3:K:65:A:C4' | 2.30 | 0.43 |
| 3:K:87:A:C2 | 3:K:88:A:N7 | 2.86 | 0.43 |
| 4:L:498:U:N3 | 4:L:499:U:C5 | 2.86 | 0.43 |
| 4:L:503:U:H2' | 4:L:504:U:O5' | 2.18 | 0.43 |
| 4:L:507:U:C2' | 4:L:508:U:C4' | 2.95 | 0.43 |
| 4:L:541:U:C4 | 4:L:542:U:C4 | 3.05 | 0.43 |
| 4:L:733:U:C2' | 4:L:734:U:C5' | 2.96 | 0.43 |
| 4:L:778:U:N3 | 4:L:779:U:C4 | 2.86 | 0.43 |
| 5:M:391:U:C2' | 5:M:392:U:C5' | 2.95 | 0.43 |
| 6:N:473:U:C2' | 6:N:474:U:C5' | 2.96 | 0.43 |
| 1:I:11:A:N1 | 1:I:12:A:C6 | 2.86 | 0.43 |
| 1:I:254:A:C2' | 1:I:255:A:O5' | 2.64 | 0.43 |
| 1:I:259:A:C2 | 1:I:260:A:C5 | 3.06 | 0.43 |
| 1:I:329:A:C6 | 1:I:330:A:N7 | 2.86 | 0.43 |
| 1:I:356:A:N6 | 1:I:357:A:H62 | 2.16 | 0.43 |
| 1:I:36:A:C2 | 1:I:37:A:C8 | 3.06 | 0.43 |
| 1:I:39:A:O2' | 1:I:40:A:H5' | 2.18 | 0.43 |
| 1:I:74:A:N6 | 1:I:75:A:N6 | 2.66 | 0.43 |
| 2:J:138:A:C4 | 2:J:139:A:N7 | 2.86 | 0.43 |
| 2:J:175:A:N3 | 2:J:176:A:C8 | 2.87 | 0.43 |
| 2:J:224:A:C5 | 2:J:225:A:C8 | 3.06 | 0.43 |
| 2:J:258:A:C5 | 2:J:259:A:N7 | 2.86 | 0.43 |
| 2:J:50:A:C2 | 2:J:51:A:C5 | 3.06 | 0.43 |
| 2:J:63:A:H2' | 2:J:64:A:C5' | 2.49 | 0.43 |
| 2:J:69:A:N3 | 2:J:70:A:C8 | 2.87 | 0.43 |
| 3:K:151:A:H2' | 3:K:152:A:C8 | 2.46 | 0.43 |
| 3:K:154:A:C2' | 3:K:155:A:C8 | 2.93 | 0.43 |
| 3:K:184:A:HO3' | 3:K:185:A:P | 2.29 | 0.43 |
| 3:K:64:A:H2' | 3:K:65:A:C8 | 2.52 | 0.43 |
| 4:L:491:U:O2 | 4:L:492:U:C1' | 2.66 | 0.43 |
| 4:L:548:U:C2' | 4:L:549:U:H6 | 2.20 | 0.43 |
| 4:L:614:U:C2 | 4:L:615:U:C6 | 3.05 | 0.43 |
| 4:L:636:U:C2 | 4:L:637:U:C6 | 3.06 | 0.43 |
| 4:L:700:U:C4 | 4:L:701:U:C5 | 3.06 | 0.43 |
| 4:L:740:U:H2' | 4:L:741:U:C6 | 2.47 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:772:U:H2' | 4:L:773:U:C6 | 2.50 | 0.43 |
| 4:L:776:U:H2' | 4:L:777:U:C4' | 2.48 | 0.43 |
| 4:L:806:U:H2' | 4:L:807:U:C5' | 2.46 | 0.43 |
| 5:M:287:U:O2 | 5:M:288:U:O4' | 2.35 | 0.43 |
| 5:M:393:U:N1 | 5:M:394:U:C5 | 2.86 | 0.43 |
| 5:M:504:U:H2' | 5:M:505:U:O4' | 2.18 | 0.43 |
| 5:M:546:U:N3 | 5:M:547:U:C4 | 2.86 | 0.43 |
| 6:N:317:U:O2' | 6:N:318:U:O4' | 2.36 | 0.43 |
| 6:N:430:U:N3 | 6:N:431:U:C4 | 2.85 | 0.43 |
| 6:N:483:U:H2' | 6:N:484:U:C6 | 2.53 | 0.43 |
| 1:I:200:A:C2' | 1:I:201:A:H5' | 2.47 | 0.43 |
| 1:I:202:A:C4 | 1:I:203:A:C8 | 3.06 | 0.43 |
| 1:I:227:A:N1 | 1:I:228:A:C5 | 2.86 | 0.43 |
| 1:I:236:A:C2 | 1:I:237:A:N7 | 2.85 | 0.43 |
| 1:I:253:A:C6 | 1:I:254:A:C5 | 3.06 | 0.43 |
| 1:I:287:A:H2' | 1:I:288:A:H8 | 1.82 | 0.43 |
| 1:I:28:A:C2 | 1:I:29:A:C8 | 3.06 | 0.43 |
| 1:I:348:A:C2 | 1:I:349:A:C8 | 3.07 | 0.43 |
| 1:I:375:A:N3 | 1:I:376:A:N7 | 2.65 | 0.43 |
| 1:I:399:A:O2' | 1:I:400:A:H5' | 2.19 | 0.43 |
| 1:I:51:A:H2' | 1:I:52:A:O5' | 2.18 | 0.43 |
| 1:I:81:A:N1 | 1:I:82:A:C5 | 2.87 | 0.43 |
| 2:J:99:A:N1 | 2:J:100:A:C5 | 2.86 | 0.43 |
| 2:J:126:A:N1 | 2:J:127:A:C5 | 2.87 | 0.43 |
| 2:J:156:A:C2' | 2:J:157:A:O5' | 2.66 | 0.43 |
| 2:J:165:A:C6 | 2:J:166:A:C5 | 3.07 | 0.43 |
| 2:J:17:A:C2 | 2:J:18:A:C4 | 3.06 | 0.43 |
| 2:J:218:A:H2' | 2:J:219:A:C8 | 2.50 | 0.43 |
| 2:J:225:A:O2' | 2:J:226:A:P | 2.64 | 0.43 |
| 2:J:226:A:N1 | 5:M:328:U:C4 | 2.86 | 0.43 |
| 2:J:252:A:C4 | 2:J:253:A:C8 | 3.06 | 0.43 |
| 2:J:28:A:C2' | 2:J:29:A:H5' | 2.48 | 0.43 |
| 2:J:54:A:C2' | 2:J:55:A:O5' | 2.62 | 0.43 |
| 2:J:63:A:C5 | 2:J:64:A:N7 | 2.86 | 0.43 |
| 2:J:95:A:N1 | 2:J:96:A:C5 | 2.85 | 0.43 |
| 2:J:96:A:C4 | 2:J:97:A:N7 | 2.87 | 0.43 |
| 3:K:109:A:C6 | 3:K:110:A:C5 | 3.07 | 0.43 |
| 3:K:121:A:C2' | 3:K:122:A:H5' | 2.49 | 0.43 |
| 3:K:162:A:HO2' | 3:K:163:A:H5' | 1.72 | 0.43 |
| 3:K:212:A:C5' | 3:K:213:A:OP2 | 2.66 | 0.43 |
| 3:K:79:A:C4 | 3:K:80:A:N7 | 2.86 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:81:A:HO2' | 3:K:82:A:C4' | 2.32 | 0.43 |
| 3:K:98:A:C6 | 3:K:99:A:N7 | 2.87 | 0.43 |
| 4:L:450:U:C2' | 4:L:451:U:C5' | 2.96 | 0.43 |
| 4:L:529:U:H2' | 4:L:530:U:H6 | 1.82 | 0.43 |
| 4:L:560:U:C2 | 4:L:561:U:C5 | 3.06 | 0.43 |
| 4:L:572:U:C2 | 4:L:573:U:C5 | 3.06 | 0.43 |
| 4:L:598:U:C4 | 4:L:599:U:C5 | 3.07 | 0.43 |
| 4:L:688:U:H2' | 4:L:689:U:C5' | 2.37 | 0.43 |
| 4:L:754:U:H2' | 4:L:755:U:C4' | 2.48 | 0.43 |
| 1:I:56:A:C2 | 4:L:770:U:C2 | 3.06 | 0.43 |
| 5:M:317:U:H2' | 5:M:318:U:O5' | 2.17 | 0.43 |
| 5:M:329:U:O2 | 5:M:330:U:C6 | 2.71 | 0.43 |
| 5:M:400:U:C2 | 5:M:401:U:C6 | 3.06 | 0.43 |
| 5:M:446:U:O2 | 5:M:447:U:C6 | 2.71 | 0.43 |
| 5:M:459:U:N3 | 5:M:460:U:C4 | 2.85 | 0.43 |
| 6:N:291:U:HO2' | 6:N:292:U:H5' | 1.81 | 0.43 |
| 6:N:364:U:O2' | 6:N:365:U:O5' | 2.36 | 0.43 |
| 6:N:408:U:O2' | 6:N:409:U:P | 2.73 | 0.43 |
| 1:I:103:A:C2 | 1:I:104:A:N7 | 2.87 | 0.43 |
| 1:I:122:A:C4 | 1:I:123:A:C8 | 3.06 | 0.43 |
| 1:I:247:A:H2' | 1:I:248:A:C8 | 2.52 | 0.43 |
| 1:I:313:A:C6 | 1:I:314:A:C5 | 3.07 | 0.43 |
| 1:I:352:A:C6 | 1:I:353:A:C5 | 3.06 | 0.43 |
| 1:I:38:A:C2 | 1:I:39:A:C5 | 3.07 | 0.43 |
| 1:I:406:A:C2' | 1:I:407:A:H5' | 2.49 | 0.43 |
| 1:I:65:A:C2' | 1:I:66:A:O4' | 2.63 | 0.43 |
| 1:I:76:A:N1 | 1:I:77:A:C5 | 2.86 | 0.43 |
| 1:I:8:A:C6 | 1:I:9:A:C5 | 3.06 | 0.43 |
| 2:J:128:A:N3 | 2:J:129:A:C8 | 2.86 | 0.43 |
| 2:J:263:A:C6 | 2:J:264:A:C5 | 3.07 | 0.43 |
| 2:J:44:A:C2 | 2:J:45:A:N9 | 2.87 | 0.43 |
| 2:J:8:A:N3 | 2:J:9:A:C8 | 2.87 | 0.43 |
| 3:K:230:A:H2' | 3:K:231:A:C8 | 2.53 | 0.43 |
| 3:K:46:A:C2 | 3:K:47:A:C4 | 3.06 | 0.43 |
| 3:K:80:A:O2' | 3:K:81:A:O4' | 2.37 | 0.43 |
| 3:K:96:A:C2' | 3:K:97:A:O5' | 2.53 | 0.43 |
| 4:L:495:U:C2 | 4:L:496:U:C6 | 3.07 | 0.43 |
| 4:L:503:U:H2' | 4:L:504:U:H6 | 1.82 | 0.43 |
| 4:L:507:U:H2' | 4:L:508:U:C4' | 2.48 | 0.43 |
| 4:L:589:U:N3 | 4:L:590:U:C4 | 2.86 | 0.43 |
| 4:L:589:U:H2' | 4:L:590:U:C5' | 2.49 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:724:U:O2' | 4:L:725:U:C4' | 2.66 | 0.43 |
| 4:L:734:U:N3 | 4:L:735:U:C5 | 2.86 | 0.43 |
| 4:L:754:U:O2 | 4:L:755:U:C6 | 2.71 | 0.43 |
| 4:L:797:U:H2' | 4:L:798:U:H6 | 1.82 | 0.43 |
| 5:M:432:U:O2 | 5:M:433:U:C6 | 2.72 | 0.43 |
| 5:M:514:U:C2 | 5:M:515:U:C5 | 3.06 | 0.43 |
| 5:M:537:U:C2 | 5:M:538:U:C5 | 3.05 | 0.43 |
| 1:I:1:A:C6 | 1:I:2:A:N6 | 2.87 | 0.43 |
| 1:I:208:A:H2' | 1:I:209:A:H8 | 1.84 | 0.43 |
| 1:I:238:A:C6 | 1:I:239:A:C5 | 3.07 | 0.43 |
| 1:I:245:A:N1 | 1:I:246:A:C6 | 2.86 | 0.43 |
| 1:I:287:A:C4 | 1:I:288:A:C8 | 3.06 | 0.43 |
| 1:I:326:A:H2' | 1:I:327:A:H8 | 1.84 | 0.43 |
| 1:I:359:A:C6 | 1:I:360:A:C6 | 3.06 | 0.43 |
| 1:I:88:A:C4 | 1:I:89:A:C8 | 3.05 | 0.43 |
| 3:K:105:A:N3 | 3:K:106:A:C4 | 2.86 | 0.43 |
| 3:K:121:A:N3 | 3:K:122:A:C8 | 2.87 | 0.43 |
| 3:K:146:A:N1 | 3:K:147:A:C6 | 2.87 | 0.43 |
| 3:K:164:A:H2' | 3:K:165:A:C5' | 2.48 | 0.43 |
| 3:K:191:A:C2' | 3:K:192:A:O4' | 2.67 | 0.43 |
| 3:K:6:A:C4 | 3:K:7:A:C8 | 3.06 | 0.43 |
| 4:L:593:U:C4 | 4:L:594:U:O4 | 2.71 | 0.43 |
| 4:L:670:U:C2' | 4:L:671:U:C5' | 2.96 | 0.43 |
| 4:L:674:U:C2 | 4:L:675:U:C6 | 3.07 | 0.43 |
| 4:L:728:U:O2 | 4:L:729:U:C4 | 2.65 | 0.43 |
| 4:L:766:U:H5'' | 4:L:767:U:P | 2.58 | 0.43 |
| 4:L:789:U:H2' | 4:L:790:U:H6 | 1.83 | 0.43 |
| 5:M:296:U:N3 | 5:M:297:U:C5 | 2.87 | 0.43 |
| 5:M:316:U:O2' | 5:M:317:U:H5' | 2.18 | 0.43 |
| 5:M:418:U:C2 | 5:M:419:U:C6 | 3.06 | 0.43 |
| 5:M:456:U:N3 | 5:M:457:U:C4 | 2.86 | 0.43 |
| 5:M:487:U:H2' | 5:M:488:U:C6 | 2.47 | 0.43 |
| 6:N:274:U:H2' | 6:N:275:U:O5' | 2.18 | 0.43 |
| 6:N:379:U:H2' | 6:N:380:U:C6 | 2.51 | 0.43 |
| 6:N:459:U:C2 | 6:N:460:U:C4 | 3.07 | 0.43 |
| 1:I:115:A:H2' | 1:I:116:A:H8 | 1.83 | 0.43 |
| 1:I:238:A:C2 | 1:I:239:A:C5 | 3.07 | 0.43 |
| 1:I:252:A:N3 | 1:I:253:A:N9 | 2.66 | 0.43 |
| 1:I:314:A:N3 | 1:I:315:A:C8 | 2.87 | 0.43 |
| 1:I:337:A:H2' | 1:I:338:A:O4' | 2.19 | 0.43 |
| 1:I:359:A:C6 | 1:I:360:A:C5 | 3.06 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:366:A:H2' | 1:I:367:A:C8 | 2.53 | 0.43 |
| 1:I:404:A:C5 | 1:I:405:A:N7 | 2.86 | 0.43 |
| 1:I:4:A:C2 | 1:I:5:A:N7 | 2.78 | 0.43 |
| 2:J:101:A:N6 | 2:J:102:A:H61 | 2.03 | 0.43 |
| 2:J:152:A:H2' | 2:J:153:A:C5' | 2.49 | 0.43 |
| 2:J:174:A:C2 | 2:J:175:A:C5 | 3.07 | 0.43 |
| 2:J:179:A:H2' | 2:J:180:A:O5' | 2.19 | 0.43 |
| 2:J:203:A:C2 | 2:J:204:A:N7 | 2.87 | 0.43 |
| 2:J:206:A:H2' | 2:J:207:A:H8 | 1.83 | 0.43 |
| 2:J:252:A:N3 | 2:J:253:A:C8 | 2.86 | 0.43 |
| 2:J:33:A:C6 | 2:J:34:A:N7 | 2.87 | 0.43 |
| 2:J:46:A:N1 | 2:J:47:A:C5 | 2.86 | 0.43 |
| 2:J:48:A:C4 | 2:J:49:A:N7 | 2.85 | 0.43 |
| 2:J:7:A:H2' | 2:J:8:A:H8 | 1.84 | 0.43 |
| 2:J:96:A:C6 | 2:J:97:A:C5 | 3.06 | 0.43 |
| 3:K:102:A:C4 | 3:K:103:A:N7 | 2.87 | 0.43 |
| 3:K:108:A:N6 | 3:K:109:A:H62 | 2.16 | 0.43 |
| 3:K:128:A:C6 | 3:K:129:A:C5 | 3.06 | 0.43 |
| 3:K:157:A:N6 | 3:K:158:A:N6 | 2.67 | 0.43 |
| 3:K:46:A:H2' | 3:K:47:A:C8 | 2.54 | 0.43 |
| 3:K:70:A:C2 | 3:K:71:A:C4 | 3.06 | 0.43 |
| 3:K:98:A:H2' | 3:K:99:A:C5' | 2.48 | 0.43 |
| 4:L:486:U:O4 | 4:L:487:U:O4 | 2.36 | 0.43 |
| 4:L:547:U:C5 | 4:L:548:U:C5 | 3.07 | 0.43 |
| 4:L:550:U:H2' | 4:L:551:U:C5' | 2.37 | 0.43 |
| 1:I:232:A:N6 | 4:L:594:U:O4 | 2.52 | 0.43 |
| 4:L:609:U:H2' | 4:L:610:U:H6 | 1.83 | 0.43 |
| 4:L:617:U:H2' | 4:L:618:U:C6 | 2.51 | 0.43 |
| 4:L:661:U:C2 | 4:L:662:U:C5 | 3.07 | 0.43 |
| 4:L:699:U:C2' | 4:L:700:U:C5' | 2.96 | 0.43 |
| 4:L:737:U:C2' | 4:L:738:U:O5' | 2.58 | 0.43 |
| 4:L:763:U:O2' | 4:L:764:U:C4' | 2.66 | 0.43 |
| 4:L:770:U:O2' | 4:L:771:U:H5' | 2.19 | 0.43 |
| 4:L:806:U:O2' | 4:L:807:U:C5' | 2.52 | 0.43 |
| 5:M:290:U:C2' | 5:M:291:U:O5' | 2.66 | 0.43 |
| 5:M:367:U:N3 | 5:M:368:U:C4 | 2.86 | 0.43 |
| 5:M:367:U:C4 | 5:M:368:U:C5 | 3.06 | 0.43 |
| 2:J:184:A:C2 | 5:M:370:U:C2 | 3.07 | 0.43 |
| 5:M:421:U:C4 | 5:M:422:U:C4 | 3.07 | 0.43 |
| 5:M:427:U:H2' | 5:M:428:U:H6 | 1.84 | 0.43 |
| 5:M:524:U:O4 | 5:M:525:U:O4 | 2.37 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 6:N:282:U:O2' | 6:N:283:U:H5' | 2.18 | 0.43 |
| 6:N:350:U:N3 | 6:N:351:U:C5 | 2.87 | 0.43 |
| 6:N:380:U:N3 | 6:N:381:U:C5 | 2.86 | 0.43 |
| 6:N:388:U:O2' | 6:N:389:U:O5' | 2.36 | 0.43 |
| 6:N:415:U:C4 | 6:N:416:U:O4 | 2.71 | 0.43 |
| 6:N:434:U:N3 | 6:N:435:U:C4 | 2.87 | 0.43 |
| 6:N:458:U:O2 | 6:N:459:U:C5 | 2.71 | 0.43 |
| 6:N:462:U:H2' | 6:N:463:U:O4' | 2.18 | 0.43 |
| 6:N:486:U:C2 | 6:N:487:U:C6 | 3.07 | 0.43 |
| 1:I:100:A:C2 | 1:I:101:A:C4 | 3.06 | 0.43 |
| 1:I:127:A:C2' | 1:I:128:A:O4' | 2.63 | 0.43 |
| 1:I:11:A:C6 | 1:I:12:A:C5 | 3.07 | 0.43 |
| 1:I:135:A:N1 | 1:I:136:A:C4 | 2.87 | 0.43 |
| 1:I:143:A:N3 | 1:I:144:A:C8 | 2.86 | 0.43 |
| 1:I:15:A:O2' | 1:I:16:A:C5' | 2.44 | 0.43 |
| 1:I:192:A:C4 | 1:I:193:A:C8 | 3.07 | 0.43 |
| 1:I:203:A:N3 | 1:I:204:A:C8 | 2.87 | 0.43 |
| 1:I:211:A:N3 | 1:I:212:A:C8 | 2.87 | 0.43 |
| 1:I:246:A:C2 | 1:I:247:A:C5 | 3.07 | 0.43 |
| 1:I:255:A:N3 | 1:I:256:A:C8 | 2.87 | 0.43 |
| 1:I:340:A:N1 | 1:I:341:A:C5 | 2.85 | 0.43 |
| 1:I:33:A:H2' | 1:I:34:A:O5' | 2.19 | 0.43 |
| 1:I:364:A:C4 | 1:I:365:A:C8 | 3.07 | 0.43 |
| 1:I:398:A:H2' | 1:I:399:A:H8 | 1.83 | 0.43 |
| 1:I:78:A:HO2' | 1:I:79:A:H5' | 1.75 | 0.43 |
| 2:J:118:A:C2 | 5:M:436:U:O2 | 2.72 | 0.43 |
| 2:J:15:A:C2 | 2:J:16:A:N7 | 2.87 | 0.43 |
| 2:J:161:A:HO2' | 2:J:162:A:C5' | 2.02 | 0.43 |
| 2:J:187:A:C4 | 2:J:188:A:C8 | 3.06 | 0.43 |
| 2:J:64:A:C6 | 2:J:65:A:C6 | 3.06 | 0.43 |
| 2:J:79:A:N1 | 2:J:80:A:C5 | 2.86 | 0.43 |
| 3:K:109:A:N1 | 3:K:110:A:C5 | 2.87 | 0.43 |
| 3:K:114:A:C4 | 3:K:115:A:C8 | 3.05 | 0.43 |
| 3:K:142:A:H2 | 3:K:143:A:C4 | 2.32 | 0.43 |
| 3:K:147:A:C4 | 3:K:148:A:N7 | 2.87 | 0.43 |
| 3:K:53:A:N3 | 3:K:54:A:C8 | 2.87 | 0.43 |
| 3:K:76:A:H2' | 3:K:77:A:C5' | 2.49 | 0.43 |
| 3:K:8:A:N6 | 3:K:9:A:N6 | 2.66 | 0.43 |
| 4:L:557:U:O2 | 4:L:558:U:C1' | 2.66 | 0.43 |
| 4:L:571:U:C2 | 4:L:572:U:C4 | 3.07 | 0.43 |
| 4:L:585:U:O2 | 4:L:586:U:C6 | 2.72 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:618:U:C2' | 4:L:619:U:O5' | 2.66 | 0.43 |
| 4:L:626:U:N3 | 4:L:627:U:C4 | 2.87 | 0.43 |
| 4:L:749:U:N3 | 4:L:750:U:C5 | 2.87 | 0.43 |
| 4:L:750:U:N3 | 4:L:751:U:O4 | 2.52 | 0.43 |
| 4:L:810:U:C4 | 4:L:811:U:C5 | 3.06 | 0.43 |
| 5:M:297:U:C2 | 5:M:298:U:C5 | 3.07 | 0.43 |
| 5:M:319:U:O2 | 5:M:320:U:C1' | 2.67 | 0.43 |
| 5:M:387:U:N1 | 5:M:388:U:C5 | 2.82 | 0.43 |
| 5:M:515:U:N3 | 5:M:516:U:C5 | 2.86 | 0.43 |
| 6:N:356:U:C2 | 6:N:357:U:C5 | 3.07 | 0.43 |
| 6:N:370:U:C2 | 6:N:371:U:C6 | 3.07 | 0.43 |
| 6:N:421:U:C2' | 6:N:422:U:H5' | 2.49 | 0.43 |
| 6:N:462:U:O2' | 6:N:463:U:C5' | 2.39 | 0.43 |
| 6:N:526:U:O2' | 6:N:527:U:O4' | 2.36 | 0.43 |
| 1:I:129:A:C6 | 1:I:130:A:N7 | 2.86 | 0.43 |
| 1:I:128:A:H61 | 1:I:129:A:N6 | 2.14 | 0.43 |
| 1:I:134:A:C6 | 1:I:135:A:N7 | 2.85 | 0.43 |
| 1:I:136:A:O2' | 1:I:137:A:C4' | 2.58 | 0.43 |
| 1:I:156:A:C6 | 1:I:157:A:C5 | 3.06 | 0.43 |
| 1:I:334:A:N1 | 1:I:335:A:C5 | 2.86 | 0.43 |
| 1:I:349:A:C2' | 1:I:350:A:H5' | 2.48 | 0.43 |
| 1:I:358:A:HO2' | 1:I:359:A:H5' | 1.80 | 0.43 |
| 1:I:39:A:C2 | 1:I:40:A:C8 | 3.07 | 0.43 |
| 1:I:409:A:H2' | 1:I:410:A:H8 | 1.83 | 0.43 |
| 1:I:55:A:C2 | 1:I:56:A:N7 | 2.85 | 0.43 |
| 1:I:57:A:C2 | 4:L:769:U:C2 | 3.07 | 0.43 |
| 1:I:9:A:C4 | 1:I:10:A:C8 | 3.07 | 0.43 |
| 2:J:103:A:C2 | 2:J:104:A:C5 | 3.07 | 0.43 |
| 2:J:145:A:N1 | 2:J:146:A:C6 | 2.67 | 0.43 |
| 2:J:203:A:C2' | 2:J:204:A:C5' | 2.97 | 0.43 |
| 2:J:234:A:H2' | 2:J:235:A:H8 | 1.83 | 0.43 |
| 2:J:32:A:H2' | 2:J:33:A:C8 | 2.53 | 0.43 |
| 2:J:36:A:C6 | 2:J:37:A:C5 | 3.07 | 0.43 |
| 2:J:63:A:C2' | 2:J:64:A:O5' | 2.66 | 0.43 |
| 2:J:75:A:C2' | 2:J:76:A:O5' | 2.66 | 0.43 |
| 2:J:98:A:C5 | 2:J:99:A:N7 | 2.87 | 0.43 |
| 3:K:158:A:C2' | 3:K:159:A:C5' | 2.97 | 0.43 |
| 3:K:212:A:C6 | 3:K:213:A:C5 | 3.05 | 0.43 |
| 3:K:250:A:C4 | 3:K:251:A:C8 | 3.07 | 0.43 |
| 3:K:91:A:O2' | 3:K:92:A:H5' | 2.19 | 0.43 |
| 4:L:568:U:H2' | 4:L:569:U:C6 | 2.53 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 4:L:612:U:O2 | 4:L:613:U:C6 | 2.72 | 0.43 |
| 4:L:629:U:C2 | 4:L:630:U:C6 | 3.07 | 0.43 |
| 4:L:709:U:O2' | 4:L:710:U:C5' | 2.57 | 0.43 |
| 4:L:717:U:H2' | 4:L:718:U:C5 | 2.51 | 0.43 |
| 4:L:735:U:C2' | 4:L:736:U:C5' | 2.96 | 0.43 |
| 4:L:742:U:N3 | 4:L:743:U:O4 | 2.51 | 0.43 |
| 4:L:772:U:O2' | 4:L:773:U:C5' | 2.51 | 0.43 |
| 4:L:807:U:N3 | 4:L:808:U:C6 | 2.86 | 0.43 |
| 4:L:807:U:N3 | 4:L:808:U:C5 | 2.87 | 0.43 |
| 5:M:296:U:H2' | 5:M:297:U:H6 | 1.84 | 0.43 |
| 5:M:371:U:C2 | 5:M:372:U:C5 | 3.06 | 0.43 |
| 5:M:475:U:H2' | 5:M:476:U:H6 | 1.84 | 0.43 |
| 5:M:488:U:C5 | 5:M:489:U:H5 | 2.36 | 0.43 |
| 5:M:497:U:N3 | 5:M:498:U:C5 | 2.86 | 0.43 |
| 5:M:501:U:C2' | 5:M:502:U:O4' | 2.67 | 0.43 |
| 6:N:335:U:N3 | 6:N:336:U:C5 | 2.87 | 0.43 |
| 6:N:420:U:H2' | 6:N:421:U:C5' | 2.46 | 0.43 |
| 6:N:438:U:O2' | 6:N:439:U:C5' | 2.50 | 0.43 |
| 6:N:439:U:H2' | 6:N:440:U:O4' | 2.19 | 0.43 |
| 6:N:441:U:C4 | 6:N:442:U:C4 | 3.06 | 0.43 |
| 6:N:441:U:H2' | 6:N:442:U:C5' | 2.49 | 0.43 |
| 6:N:499:U:N3 | 6:N:500:U:C5 | 2.87 | 0.43 |
| 1:I:130:A:N1 | 1:I:131:A:N7 | 2.67 | 0.43 |
| 1:I:165:A:H2' | 1:I:166:A:H8 | 1.84 | 0.43 |
| 1:I:172:A:H2' | 1:I:173:A:H8 | 1.84 | 0.43 |
| 1:I:181:A:H2' | 1:I:182:A:H8 | 1.84 | 0.43 |
| 1:I:226:A:HO2' | 1:I:227:A:H5' | 1.79 | 0.43 |
| 1:I:228:A:C2 | 1:I:229:A:C5 | 3.07 | 0.43 |
| 1:I:267:A:C2' | 1:I:268:A:H8 | 2.29 | 0.43 |
| 1:I:282:A:C6 | 1:I:283:A:N6 | 2.87 | 0.43 |
| 1:I:284:A:C2 | 1:I:285:A:C1' | 3.02 | 0.43 |
| 1:I:300:A:N1 | 1:I:301:A:C5 | 2.87 | 0.43 |
| 1:I:321:A:C2 | 1:I:322:A:C4 | 3.07 | 0.43 |
| 1:I:37:A:C2 | 1:I:38:A:C4 | 3.07 | 0.43 |
| 2:J:102:A:C2' | 2:J:103:A:O4' | 2.66 | 0.43 |
| 2:J:105:A:N6 | 2:J:106:A:H62 | 2.17 | 0.43 |
| 2:J:126:A:N6 | 2:J:127:A:N6 | 2.67 | 0.43 |
| 2:J:160:A:H2' | 2:J:161:A:O5' | 2.19 | 0.43 |
| 2:J:17:A:HO2' | 2:J:18:A:H5' | 1.72 | 0.43 |
| 2:J:198:A:H2' | 2:J:199:A:O5' | 2.18 | 0.43 |
| 2:J:254:A:H2' | 2:J:255:A:H8 | 1.84 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:256:A:C2 | 2:J:257:A:C5 | 3.07 | 0.43 |
| 2:J:260:A:C4 | 2:J:261:A:C8 | 3.07 | 0.43 |
| 2:J:30:A:C2 | 2:J:31:A:C5 | 3.07 | 0.43 |
| 2:J:32:A:C2 | 2:J:33:A:C8 | 3.06 | 0.43 |
| 2:J:7:A:N6 | 2:J:8:A:N6 | 2.66 | 0.43 |
| 2:J:96:A:C2 | 2:J:97:A:C4 | 3.06 | 0.43 |
| 3:K:108:A:H2' | 3:K:109:A:C8 | 2.53 | 0.43 |
| 3:K:188:A:H2' | 3:K:189:A:C8 | 2.52 | 0.43 |
| 3:K:191:A:C2 | 3:K:192:A:C4 | 3.06 | 0.43 |
| 3:K:31:A:C6 | 3:K:32:A:C5 | 3.07 | 0.43 |
| 3:K:47:A:C6 | 3:K:48:A:C5 | 3.01 | 0.43 |
| 3:K:68:A:H2' | 3:K:69:A:H8 | 1.83 | 0.43 |
| 4:L:413:U:O2' | 4:L:414:U:H5' | 2.18 | 0.43 |
| 4:L:442:U:C2 | 4:L:443:U:C5 | 3.06 | 0.43 |
| 4:L:505:U:N3 | 4:L:506:U:C4 | 2.86 | 0.43 |
| 4:L:545:U:O2 | 4:L:546:U:C1' | 2.67 | 0.43 |
| 4:L:556:U:O2 | 4:L:557:U:N1 | 2.51 | 0.43 |
| 4:L:632:U:C2 | 4:L:633:U:C5 | 3.07 | 0.43 |
| 4:L:646:U:C2 | 4:L:647:U:C5 | 3.07 | 0.43 |
| 4:L:647:U:HO2' | 4:L:648:U:C4' | 2.32 | 0.43 |
| 4:L:734:U:H2' | 4:L:735:U:C5' | 2.46 | 0.43 |
| 1:I:63:A:C2 | 4:L:763:U:C2 | 3.07 | 0.43 |
| 5:M:290:U:C2' | 5:M:291:U:O4' | 2.65 | 0.43 |
| 5:M:344:U:H2' | 5:M:345:U:H6 | 1.83 | 0.43 |
| 5:M:347:U:O2 | 5:M:348:U:N1 | 2.52 | 0.43 |
| 5:M:375:U:C2 | 5:M:376:U:C5 | 3.06 | 0.43 |
| 5:M:395:U:H2' | 5:M:396:U:O4' | 2.18 | 0.43 |
| 5:M:430:U:N1 | 5:M:431:U:C5 | 2.87 | 0.43 |
| 5:M:440:U:C2 | 5:M:441:U:C5 | 3.06 | 0.43 |
| 5:M:488:U:N1 | 5:M:489:U:C5 | 2.87 | 0.43 |
| 5:M:503:U:O2' | 5:M:504:U:H5' | 2.19 | 0.43 |
| 5:M:514:U:O2 | 5:M:515:U:C6 | 2.71 | 0.43 |
| 5:M:547:U:H2' | 5:M:548:U:C6 | 2.54 | 0.43 |
| 6:N:283:U:H2' | 6:N:284:U:H6 | 1.84 | 0.43 |
| 6:N:297:U:H2' | 6:N:298:U:H6 | 1.84 | 0.43 |
| 6:N:392:U:O2 | 6:N:393:U:C6 | 2.71 | 0.43 |
| 6:N:397:U:C2 | 6:N:398:U:C5 | 3.07 | 0.43 |
| 6:N:406:U:C6 | 6:N:407:U:C5 | 3.07 | 0.43 |
| 6:N:449:U:HO2' | 6:N:450:U:C4' | 2.32 | 0.43 |
| 6:N:466:U:C2' | 6:N:467:U:C5' | 2.97 | 0.43 |
| 6:N:493:U:O2' | 6:N:494:U:H5' | 2.19 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:128:A:O5' | 1:I:129:A:OP2 | 2.37 | 0.42 |
| 1:I:13:A:N3 | 1:I:14:A:N9 | 2.67 | 0.42 |
| 1:I:162:A:N7 | 1:I:163:A:N7 | 2.65 | 0.42 |
| 1:I:300:A:H2' | 1:I:301:A:O5' | 2.19 | 0.42 |
| 1:I:319:A:C6 | 1:I:320:A:N7 | 2.87 | 0.42 |
| 1:I:45:A:C2 | 4:L:781:U:C2 | 3.06 | 0.42 |
| 1:I:72:A:N3 | 1:I:73:A:C8 | 2.87 | 0.42 |
| 2:J:101:A:N1 | 2:J:102:A:C5 | 2.86 | 0.42 |
| 2:J:106:A:N3 | 2:J:107:A:C8 | 2.87 | 0.42 |
| 2:J:108:A:C6 | 2:J:109:A:N7 | 2.87 | 0.42 |
| 2:J:187:A:N1 | 2:J:188:A:C5 | 2.87 | 0.42 |
| 2:J:192:A:C2 | 2:J:193:A:C5 | 3.07 | 0.42 |
| 2:J:267:A:C2 | 2:J:268:A:C8 | 3.06 | 0.42 |
| 2:J:39:A:H2' | 2:J:40:A:C8 | 2.53 | 0.42 |
| 2:J:57:A:C4 | 2:J:58:A:C8 | 3.06 | 0.42 |
| 2:J:5:A:C5 | 2:J:6:A:N7 | 2.87 | 0.42 |
| 3:K:129:A:N3 | 3:K:130:A:C8 | 2.87 | 0.42 |
| 3:K:80:A:C4 | 3:K:81:A:N7 | 2.87 | 0.42 |
| 3:K:87:A:N6 | 3:K:88:A:N6 | 2.67 | 0.42 |
| 4:L:462:U:O4 | 4:L:463:U:O4 | 2.35 | 0.42 |
| 4:L:483:U:H2' | 4:L:484:U:C5' | 2.48 | 0.42 |
| 4:L:486:U:C4 | 4:L:487:U:C5 | 3.07 | 0.42 |
| 4:L:496:U:C4 | 4:L:497:U:C5 | 3.07 | 0.42 |
| 4:L:580:U:C2' | 4:L:581:U:C5' | 2.97 | 0.42 |
| 4:L:642:U:C2 | 4:L:643:U:C5 | 3.07 | 0.42 |
| 4:L:672:U:C4 | 4:L:673:U:C5 | 3.07 | 0.42 |
| 4:L:705:U:C2 | 4:L:706:U:C5 | 3.05 | 0.42 |
| 4:L:711:U:C5' | 4:L:712:U:P | 3.05 | 0.42 |
| 4:L:814:U:O2' | 4:L:815:U:C4' | 2.67 | 0.42 |
| 5:M:296:U:H2' | 5:M:297:U:C4' | 2.49 | 0.42 |
| 5:M:317:U:O2 | 5:M:318:U:C6 | 2.72 | 0.42 |
| 5:M:385:U:H2' | 5:M:386:U:C6 | 2.54 | 0.42 |
| 5:M:443:U:N3 | 5:M:444:U:C5 | 2.87 | 0.42 |
| 5:M:450:U:C2' | 5:M:451:U:C6 | 2.84 | 0.42 |
| 5:M:547:U:N3 | 5:M:548:U:O4 | 2.51 | 0.42 |
| 6:N:292:U:N3 | 6:N:293:U:C4 | 2.87 | 0.42 |
| 6:N:304:U:H2' | 6:N:305:U:C5 | 2.49 | 0.42 |
| 1:I:158:A:C4 | 1:I:159:A:N7 | 2.88 | 0.42 |
| 1:I:189:A:N1 | 1:I:190:A:C5 | 2.88 | 0.42 |
| 1:I:195:A:N3 | 1:I:196:A:C8 | 2.87 | 0.42 |
| 1:I:229:A:O2' | 1:I:230:A:C4' | 2.65 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:256:A:H61 | 1:I:257:A:N6 | 2.13 | 0.42 |
| 1:I:284:A:O2' | 1:I:285:A:C4' | 2.62 | 0.42 |
| 1:I:316:A:H2' | 1:I:317:A:H8 | 1.84 | 0.42 |
| 1:I:357:A:H2' | 1:I:358:A:O5' | 2.19 | 0.42 |
| 1:I:401:A:N6 | 1:I:402:A:H62 | 2.14 | 0.42 |
| 1:I:44:A:C2' | 1:I:45:A:O5' | 2.55 | 0.42 |
| 1:I:70:A:HO2' | 1:I:71:A:C4' | 2.31 | 0.42 |
| 1:I:71:A:C2 | 1:I:72:A:C4 | 3.07 | 0.42 |
| 2:J:125:A:C6 | 2:J:126:A:C6 | 3.07 | 0.42 |
| 2:J:131:A:C6 | 2:J:132:A:C5 | 3.07 | 0.42 |
| 2:J:143:A:H2 | 2:J:144:A:C1' | 2.27 | 0.42 |
| 2:J:163:A:H2' | 2:J:164:A:C8 | 2.53 | 0.42 |
| 2:J:211:A:C2 | 2:J:212:A:N9 | 2.87 | 0.42 |
| 2:J:21:A:C2 | 2:J:22:A:C4 | 3.07 | 0.42 |
| 2:J:246:A:N3 | 2:J:247:A:C8 | 2.88 | 0.42 |
| 2:J:25:A:C4 | 2:J:26:A:N7 | 2.87 | 0.42 |
| 2:J:37:A:C2 | 2:J:38:A:C5 | 3.07 | 0.42 |
| 2:J:37:A:HO2' | 2:J:38:A:C5' | 2.05 | 0.42 |
| 2:J:65:A:C6 | 2:J:66:A:N7 | 2.87 | 0.42 |
| 3:K:135:A:N1 | 3:K:136:A:C6 | 2.88 | 0.42 |
| 3:K:173:A:N3 | 3:K:174:A:C8 | 2.87 | 0.42 |
| 3:K:192:A:N1 | 3:K:193:A:C6 | 2.86 | 0.42 |
| 3:K:208:A:N6 | 3:K:209:A:H62 | 2.17 | 0.42 |
| 3:K:248:A:C2 | 3:K:249:A:C5 | 3.07 | 0.42 |
| 3:K:45:A:C3' | 3:K:46:A:C5' | 2.87 | 0.42 |
| 4:L:420:U:N3 | 4:L:421:U:O4 | 2.51 | 0.42 |
| 4:L:425:U:H2' | 4:L:426:U:C5' | 2.48 | 0.42 |
| 4:L:427:U:C2 | 4:L:428:U:C5 | 3.06 | 0.42 |
| 4:L:436:U:C2' | 4:L:437:U:C6 | 2.77 | 0.42 |
| 4:L:466:U:O2 | 4:L:467:U:C6 | 2.72 | 0.42 |
| 4:L:501:U:H2' | 4:L:502:U:H6 | 1.83 | 0.42 |
| 4:L:594:U:H2' | 4:L:595:U:C5' | 2.47 | 0.42 |
| 4:L:610:U:N3 | 4:L:611:U:C5 | 2.87 | 0.42 |
| 4:L:636:U:C2' | 4:L:637:U:H5' | 2.48 | 0.42 |
| 4:L:639:U:C4 | 4:L:640:U:C5 | 3.07 | 0.42 |
| 1:I:119:A:N6 | 4:L:707:U:C4 | 2.87 | 0.42 |
| 5:M:297:U:HO2' | 5:M:298:U:H5' | 1.81 | 0.42 |
| 5:M:394:U:N3 | 5:M:395:U:C4 | 2.86 | 0.42 |
| 5:M:405:U:O2 | 5:M:406:U:O4' | 2.37 | 0.42 |
| 5:M:473:U:C2' | 5:M:474:U:O5' | 2.66 | 0.42 |
| 5:M:476:U:H2' | 5:M:477:U:O5' | 2.19 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:485:U:N3 | 5:M:486:U:C5 | 2.87 | 0.42 |
| 5:M:489:U:N3 | 5:M:490:U:C4 | 2.87 | 0.42 |
| 5:M:503:U:N3 | 5:M:504:U:C4 | 2.87 | 0.42 |
| 6:N:290:U:H2' | 6:N:291:U:C6 | 2.54 | 0.42 |
| 6:N:390:U:N3 | 6:N:391:U:C5 | 2.87 | 0.42 |
| 3:K:137:A:C2 | 6:N:395:U:C2 | 3.06 | 0.42 |
| 6:N:438:U:C2 | 6:N:439:U:C5 | 3.07 | 0.42 |
| 6:N:454:U:H2' | 6:N:455:U:C4' | 2.49 | 0.42 |
| 6:N:484:U:H2' | 6:N:485:U:C5' | 2.34 | 0.42 |
| 1:I:115:A:C2 | 1:I:116:A:N9 | 2.87 | 0.42 |
| 1:I:134:A:C4 | 1:I:135:A:C8 | 2.91 | 0.42 |
| 1:I:13:A:C5 | 1:I:14:A:C5 | 3.04 | 0.42 |
| 1:I:156:A:N1 | 1:I:157:A:C6 | 2.87 | 0.42 |
| 1:I:260:A:C5 | 1:I:261:A:N7 | 2.87 | 0.42 |
| 1:I:48:A:C2' | 1:I:49:A:O4' | 2.66 | 0.42 |
| 1:I:66:A:H61 | 1:I:67:A:N6 | 2.16 | 0.42 |
| 1:I:78:A:C5 | 1:I:79:A:N7 | 2.87 | 0.42 |
| 2:J:185:A:N1 | 2:J:186:A:C5 | 2.87 | 0.42 |
| 2:J:199:A:C2 | 2:J:200:A:C8 | 3.07 | 0.42 |
| 2:J:204:A:N6 | 2:J:205:A:H61 | 2.01 | 0.42 |
| 2:J:215:A:C2' | 2:J:216:A:O5' | 2.56 | 0.42 |
| 2:J:32:A:H2' | 2:J:33:A:O4' | 2.19 | 0.42 |
| 2:J:78:A:C4 | 2:J:79:A:C8 | 3.06 | 0.42 |
| 2:J:91:A:C2 | 2:J:92:A:C4 | 3.07 | 0.42 |
| 3:K:133:A:H2' | 3:K:134:A:O5' | 2.19 | 0.42 |
| 3:K:152:A:N1 | 3:K:153:A:C6 | 2.87 | 0.42 |
| 4:L:483:U:O2 | 4:L:484:U:C6 | 2.73 | 0.42 |
| 4:L:595:U:HO2' | 4:L:596:U:C4' | 2.32 | 0.42 |
| 4:L:609:U:C2 | 4:L:610:U:C5 | 3.07 | 0.42 |
| 5:M:291:U:C2' | 5:M:292:U:C5' | 2.97 | 0.42 |
| 5:M:315:U:H2' | 5:M:316:U:O5' | 2.18 | 0.42 |
| 5:M:365:U:O2 | 5:M:366:U:C6 | 2.73 | 0.42 |
| 5:M:407:U:C4 | 5:M:408:U:C5 | 3.07 | 0.42 |
| 5:M:434:U:H2' | 5:M:435:U:O4' | 2.19 | 0.42 |
| 5:M:460:U:N1 | 5:M:461:U:C6 | 2.85 | 0.42 |
| 5:M:465:U:N3 | 5:M:466:U:C4 | 2.87 | 0.42 |
| 5:M:538:U:C2' | 5:M:539:U:H5' | 2.48 | 0.42 |
| 6:N:406:U:C4 | 6:N:407:U:O4 | 2.71 | 0.42 |
| 6:N:432:U:N3 | 6:N:433:U:C5 | 2.87 | 0.42 |
| 6:N:459:U:O2' | 6:N:460:U:H5' | 2.19 | 0.42 |
| 6:N:463:U:C2 | 6:N:464:U:C6 | 3.06 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:124:A:N6 | 1:I:125:A:N6 | 2.67 | 0.42 |
| 1:I:15:A:C2' | 1:I:16:A:C4' | 2.94 | 0.42 |
| 1:I:167:A:H2' | 1:I:168:A:O5' | 2.19 | 0.42 |
| 1:I:176:A:H2' | 1:I:177:A:C8 | 2.54 | 0.42 |
| 1:I:221:A:C2 | 1:I:222:A:C4 | 3.07 | 0.42 |
| 1:I:251:A:C6 | 1:I:252:A:N6 | 2.88 | 0.42 |
| 1:I:316:A:C6 | 1:I:317:A:N7 | 2.87 | 0.42 |
| 1:I:329:A:N1 | 1:I:330:A:C5 | 2.87 | 0.42 |
| 1:I:341:A:HO2' | 1:I:342:A:H5' | 1.70 | 0.42 |
| 1:I:39:A:N3 | 1:I:40:A:C8 | 2.87 | 0.42 |
| 1:I:61:A:C2' | 1:I:62:A:C5' | 2.97 | 0.42 |
| 1:I:8:A:C6 | 1:I:9:A:C6 | 3.08 | 0.42 |
| 2:J:57:A:C2 | 5:M:497:U:C2 | 3.08 | 0.42 |
| 2:J:62:A:N3 | 2:J:63:A:C8 | 2.87 | 0.42 |
| 2:J:67:A:C2 | 2:J:68:A:N9 | 2.87 | 0.42 |
| 2:J:76:A:C2 | 2:J:77:A:C5 | 3.07 | 0.42 |
| 2:J:89:A:N1 | 2:J:90:A:N6 | 2.66 | 0.42 |
| 2:J:92:A:N6 | 2:J:93:A:N6 | 2.65 | 0.42 |
| 3:K:118:A:C2' | 3:K:119:A:O4' | 2.67 | 0.42 |
| 3:K:122:A:C4 | 3:K:123:A:C8 | 3.08 | 0.42 |
| 3:K:13:A:H2' | 3:K:14:A:C8 | 2.55 | 0.42 |
| 3:K:165:A:N3 | 3:K:166:A:C8 | 2.86 | 0.42 |
| 3:K:173:A:C2 | 3:K:174:A:N9 | 2.87 | 0.42 |
| 3:K:239:A:C2' | 3:K:240:A:H5' | 2.47 | 0.42 |
| 3:K:251:A:HO3' | 3:K:252:A:P | 2.32 | 0.42 |
| 3:K:82:A:C2' | 3:K:83:A:O5' | 2.67 | 0.42 |
| 4:L:540:U:H2' | 4:L:541:U:O5' | 2.20 | 0.42 |
| 4:L:557:U:O2 | 4:L:558:U:N1 | 2.52 | 0.42 |
| 4:L:587:U:N3 | 4:L:588:U:C5 | 2.87 | 0.42 |
| 4:L:591:U:O2 | 4:L:592:U:C6 | 2.72 | 0.42 |
| 4:L:595:U:C2 | 4:L:596:U:C5 | 3.07 | 0.42 |
| 4:L:600:U:N3 | 4:L:601:U:C5 | 2.87 | 0.42 |
| 4:L:646:U:O2 | 4:L:647:U:C6 | 2.73 | 0.42 |
| 4:L:680:U:H2' | 4:L:681:U:H5 | 1.76 | 0.42 |
| 4:L:764:U:N1 | 4:L:765:U:C5 | 2.88 | 0.42 |
| 4:L:767:U:C2' | 4:L:768:U:C5 | 2.91 | 0.42 |
| 4:L:811:U:O2 | 4:L:812:U:C6 | 2.67 | 0.42 |
| 5:M:293:U:N3 | 5:M:294:U:C5 | 2.88 | 0.42 |
| 5:M:296:U:C2' | 5:M:297:U:O5' | 2.62 | 0.42 |
| 5:M:318:U:C2' | 5:M:319:U:C4' | 2.96 | 0.42 |
| 5:M:455:U:C4 | 5:M:456:U:C4 | 3.07 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:477:U:H2' | 5:M:478:U:H6 | 1.83 | 0.42 |
| 5:M:485:U:H2' | 5:M:486:U:H6 | 1.84 | 0.42 |
| 6:N:316:U:C2 | 6:N:317:U:C6 | 3.08 | 0.42 |
| 6:N:365:U:O2 | 6:N:366:U:C5 | 2.73 | 0.42 |
| 6:N:395:U:C2' | 6:N:396:U:O5' | 2.68 | 0.42 |
| 1:I:120:A:C2 | 1:I:121:A:N7 | 2.87 | 0.42 |
| 1:I:143:A:HO2' | 1:I:144:A:P | 2.43 | 0.42 |
| 1:I:143:A:O2' | 1:I:144:A:P | 2.77 | 0.42 |
| 1:I:164:A:C2' | 1:I:165:A:C8 | 2.90 | 0.42 |
| 1:I:218:A:H2' | 1:I:219:A:H8 | 1.85 | 0.42 |
| 1:I:223:A:C5 | 1:I:224:A:N7 | 2.87 | 0.42 |
| 1:I:311:A:N3 | 1:I:312:A:C8 | 2.88 | 0.42 |
| 1:I:324:A:C2' | 1:I:325:A:C5' | 2.98 | 0.42 |
| 1:I:40:A:C2 | 1:I:41:A:N7 | 2.88 | 0.42 |
| 1:I:59:A:C4 | 1:I:60:A:C8 | 3.07 | 0.42 |
| 2:J:145:A:C8 | 2:J:146:A:N7 | 2.88 | 0.42 |
| 2:J:148:A:C4 | 2:J:149:A:C8 | 3.07 | 0.42 |
| 2:J:160:A:C2 | 2:J:161:A:N9 | 2.87 | 0.42 |
| 2:J:198:A:HO2' | 2:J:199:A:H5' | 1.77 | 0.42 |
| 2:J:233:A:H2' | 2:J:234:A:O5' | 2.19 | 0.42 |
| 2:J:239:A:H3' | 2:J:240:A:P | 2.59 | 0.42 |
| 2:J:45:A:C5 | 2:J:46:A:N7 | 2.88 | 0.42 |
| 2:J:54:A:C6 | 2:J:55:A:C5 | 3.07 | 0.42 |
| 2:J:66:A:N1 | 2:J:67:A:C5 | 2.87 | 0.42 |
| 2:J:80:A:C4 | 2:J:81:A:N7 | 2.87 | 0.42 |
| 2:J:89:A:C6 | 2:J:90:A:N6 | 2.87 | 0.42 |
| 3:K:130:A:N1 | 3:K:131:A:C5 | 2.88 | 0.42 |
| 3:K:161:A:H2' | 3:K:162:A:C5' | 2.49 | 0.42 |
| 3:K:177:A:O2' | 3:K:178:A:H5' | 2.19 | 0.42 |
| 3:K:82:A:N1 | 3:K:83:A:C5 | 2.87 | 0.42 |
| 3:K:94:A:O2' | 3:K:95:A:H5' | 2.19 | 0.42 |
| 4:L:461:U:O2' | 4:L:462:U:H5' | 2.20 | 0.42 |
| 4:L:496:U:N3 | 4:L:497:U:C4 | 2.87 | 0.42 |
| 4:L:520:U:C2 | 4:L:521:U:C6 | 3.07 | 0.42 |
| 4:L:573:U:C4 | 4:L:574:U:C4 | 3.08 | 0.42 |
| 4:L:634:U:C2' | 4:L:635:U:O4' | 2.66 | 0.42 |
| 1:I:80:A:N1 | 4:L:746:U:C4 | 2.87 | 0.42 |
| 4:L:760:U:C4 | 4:L:761:U:C5 | 3.08 | 0.42 |
| 4:L:763:U:C2' | 4:L:764:U:C4' | 2.98 | 0.42 |
| 4:L:781:U:C4 | 4:L:782:U:C5 | 3.07 | 0.42 |
| 4:L:787:U:H2' | 4:L:788:U:O5' | 2.19 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:286:U:C2 | 5:M:287:U:C6 | 3.07 | 0.42 |
| 5:M:336:U:C2 | 5:M:337:U:C5 | 2.96 | 0.42 |
| 5:M:348:U:C5 | 5:M:349:U:H5 | 2.36 | 0.42 |
| 5:M:351:U:C2 | 5:M:352:U:H5 | 2.35 | 0.42 |
| 5:M:411:U:C2 | 5:M:412:U:C6 | 3.07 | 0.42 |
| 5:M:460:U:C2' | 5:M:461:U:O4' | 2.61 | 0.42 |
| 5:M:527:U:C4 | 5:M:528:U:C4 | 3.07 | 0.42 |
| 6:N:316:U:C2' | 6:N:317:U:H5' | 2.50 | 0.42 |
| 6:N:339:U:O2' | 6:N:340:U:O4' | 2.37 | 0.42 |
| 6:N:376:U:C2 | 6:N:377:U:C4 | 3.07 | 0.42 |
| 6:N:377:U:O2 | 6:N:378:U:O4' | 2.37 | 0.42 |
| 6:N:482:U:H2' | 6:N:483:U:C6 | 2.52 | 0.42 |
| 6:N:482:U:N3 | 6:N:483:U:C4 | 2.87 | 0.42 |
| 1:I:186:A:C4 | 1:I:187:A:N7 | 2.87 | 0.42 |
| 1:I:198:A:N1 | 1:I:199:A:C6 | 2.88 | 0.42 |
| 1:I:19:A:C4 | 1:I:20:A:N7 | 2.86 | 0.42 |
| 1:I:253:A:C4 | 1:I:254:A:C8 | 3.08 | 0.42 |
| 1:I:275:A:O2' | 1:I:276:A:C5' | 2.64 | 0.42 |
| 1:I:299:A:C2 | 1:I:300:A:C5 | 3.06 | 0.42 |
| 1:I:376:A:C6 | 1:I:377:A:N7 | 2.88 | 0.42 |
| 1:I:392:A:O2' | 1:I:393:A:H5' | 2.19 | 0.42 |
| 1:I:73:A:C2 | 1:I:74:A:N3 | 2.86 | 0.42 |
| 2:J:186:A:C2' | 2:J:187:A:C5' | 2.97 | 0.42 |
| 2:J:233:A:C2' | 2:J:234:A:O5' | 2.68 | 0.42 |
| 2:J:35:A:N1 | 2:J:36:A:C5 | 2.87 | 0.42 |
| 2:J:42:A:HO2' | 2:J:43:A:C4' | 2.21 | 0.42 |
| 2:J:70:A:N3 | 2:J:71:A:O4' | 2.53 | 0.42 |
| 2:J:72:A:H2' | 2:J:73:A:C4' | 2.50 | 0.42 |
| 2:J:73:A:C2 | 2:J:74:A:N9 | 2.87 | 0.42 |
| 2:J:78:A:H2' | 2:J:79:A:O5' | 2.20 | 0.42 |
| 2:J:82:A:C2' | 2:J:83:A:H5' | 2.50 | 0.42 |
| 2:J:96:A:C6 | 2:J:97:A:N7 | 2.87 | 0.42 |
| 3:K:110:A:N3 | 3:K:111:A:O4' | 2.52 | 0.42 |
| 3:K:113:A:C4 | 3:K:114:A:C8 | 3.06 | 0.42 |
| 3:K:142:A:C2 | 3:K:143:A:N9 | 2.86 | 0.42 |
| 3:K:142:A:N3 | 3:K:143:A:N9 | 2.67 | 0.42 |
| 3:K:171:A:C2 | 3:K:172:A:N7 | 2.87 | 0.42 |
| 3:K:172:A:N3 | 3:K:173:A:C8 | 2.88 | 0.42 |
| 3:K:256:A:H2' | 3:K:257:A:H8 | 1.85 | 0.42 |
| 3:K:27:A:N6 | 3:K:28:A:N6 | 2.67 | 0.42 |
| 3:K:35:A:C6 | 3:K:36:A:C6 | 3.07 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:38:A:C2 | 3:K:39:A:N9 | 2.87 | 0.42 |
| 3:K:45:A:H2' | 3:K:46:A:H8 | 1.83 | 0.42 |
| 3:K:64:A:C2' | 3:K:65:A:O5' | 2.68 | 0.42 |
| 4:L:435:U:C2 | 4:L:436:U:C6 | 3.07 | 0.42 |
| 4:L:443:U:H2' | 4:L:444:U:C6 | 2.52 | 0.42 |
| 4:L:472:U:C2 | 4:L:473:U:H5 | 2.27 | 0.42 |
| 1:I:269:A:C2 | 4:L:557:U:N3 | 2.88 | 0.42 |
| 4:L:692:U:O2' | 4:L:693:U:C4' | 2.64 | 0.42 |
| 4:L:708:U:O2 | 4:L:709:U:C6 | 2.73 | 0.42 |
| 4:L:713:U:C5 | 4:L:714:U:C5 | 3.07 | 0.42 |
| 4:L:739:U:N3 | 4:L:740:U:C5 | 2.88 | 0.42 |
| 5:M:292:U:C2 | 5:M:293:U:C5 | 3.07 | 0.42 |
| 5:M:306:U:N3 | 5:M:307:U:C5 | 2.88 | 0.42 |
| 5:M:469:U:N3 | 5:M:470:U:O4 | 2.53 | 0.42 |
| 5:M:486:U:C2 | 5:M:487:U:C5 | 3.07 | 0.42 |
| 6:N:477:U:H2' | 6:N:478:U:O5' | 2.20 | 0.42 |
| 6:N:501:U:C2' | 6:N:502:U:O4' | 2.66 | 0.42 |
| 1:I:114:A:C6 | 1:I:115:A:N7 | 2.88 | 0.42 |
| 1:I:122:A:H2' | 1:I:123:A:C8 | 2.55 | 0.42 |
| 1:I:133:A:N3 | 1:I:134:A:C8 | 2.87 | 0.42 |
| 1:I:134:A:C6 | 1:I:135:A:C5 | 3.04 | 0.42 |
| 1:I:178:A:C2 | 1:I:179:A:N9 | 2.87 | 0.42 |
| 1:I:187:A:N1 | 4:L:639:U:C2 | 2.87 | 0.42 |
| 1:I:257:A:C2 | 1:I:258:A:C5 | 3.07 | 0.42 |
| 1:I:275:A:HO2' | 1:I:276:A:H5' | 1.84 | 0.42 |
| 1:I:283:A:N1 | 1:I:284:A:N6 | 2.67 | 0.42 |
| 1:I:64:A:C6 | 1:I:65:A:C5 | 3.08 | 0.42 |
| 1:I:69:A:C6 | 1:I:70:A:N7 | 2.87 | 0.42 |
| 2:J:102:A:C2 | 2:J:103:A:C5 | 3.08 | 0.42 |
| 2:J:158:A:C4 | 2:J:159:A:C8 | 3.08 | 0.42 |
| 2:J:170:A:O2' | 2:J:171:A:P | 2.78 | 0.42 |
| 2:J:187:A:C2 | 2:J:188:A:N9 | 2.86 | 0.42 |
| 2:J:252:A:C2 | 2:J:253:A:C8 | 3.07 | 0.42 |
| 2:J:264:A:C4 | 2:J:265:A:N7 | 2.87 | 0.42 |
| 2:J:263:A:O2' | 2:J:264:A:H5' | 2.19 | 0.42 |
| 2:J:39:A:N1 | 2:J:40:A:C5 | 2.88 | 0.42 |
| 2:J:55:A:H2' | 2:J:56:A:H8 | 1.85 | 0.42 |
| 2:J:75:A:C2 | 2:J:76:A:C4 | 3.07 | 0.42 |
| 3:K:130:A:H2' | 3:K:131:A:H8 | 1.85 | 0.42 |
| 3:K:139:A:H2' | 3:K:140:A:O5' | 2.18 | 0.42 |
| 3:K:164:A:N1 | 3:K:165:A:C5 | 2.87 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 3:K:217:A:C6 | 3:K:218:A:C6 | 3.08 | 0.42 |
| 3:K:239:A:N3 | 3:K:240:A:C8 | 2.88 | 0.42 |
| 3:K:56:A:C2 | 3:K:57:A:C5 | 3.08 | 0.42 |
| 3:K:59:A:C2' | 3:K:60:A:C5' | 2.97 | 0.42 |
| 3:K:87:A:N6 | 3:K:88:A:H62 | 2.18 | 0.42 |
| 4:L:485:U:C2 | 4:L:486:U:C6 | 3.08 | 0.42 |
| 4:L:525:U:C2' | 4:L:526:U:O4' | 2.67 | 0.42 |
| 4:L:576:U:C2 | 4:L:577:U:C5 | 3.05 | 0.42 |
| 4:L:599:U:O2' | 4:L:600:U:H5' | 2.20 | 0.42 |
| 4:L:611:U:O2' | 4:L:612:U:C5' | 2.62 | 0.42 |
| 4:L:768:U:C2 | 4:L:769:U:C5 | 3.07 | 0.42 |
| 5:M:330:U:O2' | 5:M:331:U:P | 2.70 | 0.42 |
| 5:M:351:U:N3 | 5:M:352:U:C4 | 2.87 | 0.42 |
| 5:M:402:U:H2' | 5:M:403:U:O5' | 2.19 | 0.42 |
| 6:N:354:U:C2 | 6:N:355:U:C5 | 3.08 | 0.42 |
| 6:N:379:U:C4 | 6:N:380:U:C5 | 3.08 | 0.42 |
| 6:N:463:U:H2' | 6:N:464:U:C5' | 2.49 | 0.42 |
| 1:I:9:A:N1 | 1:I:10:A:C5 | 2.87 | 0.42 |
| 1:I:152:A:C6 | 1:I:153:A:C5 | 3.08 | 0.42 |
| 1:I:316:A:C4 | 1:I:317:A:C8 | 3.08 | 0.42 |
| 1:I:395:A:H2' | 1:I:396:A:H8 | 1.84 | 0.42 |
| 1:I:59:A:N1 | 1:I:60:A:C5 | 2.87 | 0.42 |
| 1:I:6:A:N3 | 1:I:7:A:C8 | 2.88 | 0.42 |
| 1:I:83:A:C6 | 1:I:84:A:C5 | 3.07 | 0.42 |
| 1:I:96:A:N3 | 1:I:97:A:C8 | 2.88 | 0.42 |
| 2:J:137:A:C2 | 2:J:138:A:C8 | 3.08 | 0.42 |
| 2:J:187:A:C2 | 2:J:188:A:C5 | 3.08 | 0.42 |
| 2:J:21:A:C2' | 2:J:22:A:O5' | 2.68 | 0.42 |
| 2:J:5:A:C2 | 2:J:6:A:C8 | 3.07 | 0.42 |
| 2:J:89:A:O2' | 2:J:90:A:C5' | 2.67 | 0.42 |
| 3:K:134:A:H2' | 3:K:135:A:H8 | 1.83 | 0.42 |
| 3:K:144:A:O2' | 3:K:145:A:H5' | 2.20 | 0.42 |
| 3:K:14:A:H3' | 3:K:15:A:P | 2.59 | 0.42 |
| 3:K:171:A:C2 | 3:K:172:A:C5 | 3.07 | 0.42 |
| 3:K:204:A:C4 | 3:K:205:A:C8 | 3.07 | 0.42 |
| 3:K:205:A:H2' | 3:K:206:A:H8 | 1.81 | 0.42 |
| 3:K:253:A:N1 | 3:K:254:A:C5 | 2.87 | 0.42 |
| 3:K:47:A:N1 | 3:K:48:A:C6 | 2.86 | 0.42 |
| 3:K:85:A:C4 | 3:K:86:A:C8 | 3.08 | 0.42 |
| 4:L:451:U:N3 | 4:L:452:U:O4 | 2.52 | 0.42 |
| 4:L:500:U:N3 | 4:L:501:U:C5 | 2.88 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:501:U:C2' | 4:L:502:U:C5' | 2.94 | 0.42 |
| 4:L:503:U:O2 | 4:L:504:U:C6 | 2.73 | 0.42 |
| 4:L:506:U:H2' | 4:L:507:U:C6 | 2.47 | 0.42 |
| 4:L:512:U:N3 | 4:L:513:U:C5 | 2.88 | 0.42 |
| 4:L:537:U:C2 | 4:L:538:U:C6 | 3.08 | 0.42 |
| 4:L:602:U:C4 | 4:L:603:U:C5 | 3.07 | 0.42 |
| 4:L:666:U:O4 | 4:L:667:U:O4 | 2.38 | 0.42 |
| 4:L:681:U:N3 | 4:L:682:U:C4 | 2.87 | 0.42 |
| 4:L:692:U:C2 | 4:L:693:U:C5 | 3.07 | 0.42 |
| 4:L:706:U:O4 | 4:L:707:U:C4 | 2.66 | 0.42 |
| 4:L:711:U:O2' | 4:L:712:U:C5' | 2.63 | 0.42 |
| 4:L:745:U:H2' | 4:L:746:U:O5' | 2.20 | 0.42 |
| 4:L:804:U:C2' | 4:L:805:U:H6 | 2.09 | 0.42 |
| 5:M:323:U:C2' | 5:M:324:U:O5' | 2.27 | 0.42 |
| 5:M:343:U:H2' | 5:M:344:U:C6 | 2.54 | 0.42 |
| 5:M:382:U:C2 | 5:M:383:U:C6 | 3.07 | 0.42 |
| 5:M:507:U:O2 | 5:M:508:U:C6 | 2.73 | 0.42 |
| 5:M:524:U:C4 | 5:M:525:U:C5 | 3.07 | 0.42 |
| 5:M:536:U:H2' | 5:M:537:U:O4' | 2.19 | 0.42 |
| 6:N:396:U:C2' | 6:N:397:U:C5' | 2.98 | 0.42 |
| 6:N:424:U:C2 | 6:N:425:U:C4 | 3.05 | 0.42 |
| 1:I:115:A:C2' | 1:I:116:A:O5' | 2.63 | 0.42 |
| 1:I:152:A:N1 | 1:I:153:A:C6 | 2.88 | 0.42 |
| 1:I:197:A:C2' | 1:I:198:A:O5' | 2.64 | 0.42 |
| 1:I:230:A:N1 | 1:I:231:A:C5 | 2.88 | 0.42 |
| 1:I:239:A:N1 | 1:I:240:A:C5 | 2.88 | 0.42 |
| 1:I:318:A:C2 | 1:I:319:A:C5 | 3.07 | 0.42 |
| 1:I:337:A:C2 | 1:I:338:A:C5 | 3.08 | 0.42 |
| 1:I:338:A:C6 | 1:I:339:A:N7 | 2.88 | 0.42 |
| 1:I:40:A:C2' | 1:I:41:A:P | 3.08 | 0.42 |
| 1:I:41:A:H2 | 1:I:42:A:C4 | 2.30 | 0.42 |
| 1:I:61:A:C5 | 1:I:62:A:N7 | 2.87 | 0.42 |
| 2:J:124:A:C2 | 2:J:125:A:N7 | 2.88 | 0.42 |
| 2:J:151:A:C5 | 2:J:152:A:N7 | 2.88 | 0.42 |
| 2:J:156:A:N3 | 2:J:157:A:C8 | 2.87 | 0.42 |
| 2:J:181:A:N1 | 2:J:182:A:C5 | 2.88 | 0.42 |
| 2:J:187:A:H2' | 2:J:188:A:C5' | 2.50 | 0.42 |
| 2:J:201:A:C6 | 2:J:202:A:C6 | 3.08 | 0.42 |
| 2:J:222:A:C5 | 2:J:223:A:N7 | 2.88 | 0.42 |
| 2:J:24:A:N1 | 2:J:25:A:C5 | 2.87 | 0.42 |
| 2:J:253:A:C2' | 2:J:254:A:H5' | 2.50 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:44:A:C2 | 2:J:45:A:C5 | 3.08 | 0.42 |
| 2:J:56:A:H2' | 2:J:57:A:C4' | 2.45 | 0.42 |
| 2:J:75:A:N3 | 2:J:76:A:C8 | 2.88 | 0.42 |
| 3:K:141:A:N1 | 3:K:142:A:C5 | 2.87 | 0.42 |
| 3:K:152:A:H61 | 3:K:153:A:H61 | 1.53 | 0.42 |
| 3:K:257:A:O2' | 3:K:258:A:H5' | 2.20 | 0.42 |
| 3:K:39:A:O2' | 3:K:40:A:H5' | 2.20 | 0.42 |
| 3:K:57:A:C2 | 3:K:58:A:C5 | 3.07 | 0.42 |
| 3:K:64:A:H2' | 3:K:65:A:C5' | 2.43 | 0.42 |
| 3:K:70:A:C6 | 3:K:71:A:C5 | 3.07 | 0.42 |
| 3:K:85:A:C2 | 3:K:86:A:N9 | 2.88 | 0.42 |
| 4:L:417:U:C2' | 4:L:418:U:H5' | 2.48 | 0.42 |
| 4:L:520:U:C2' | 4:L:521:U:C5' | 2.98 | 0.42 |
| 4:L:532:U:C4 | 4:L:533:U:C5 | 3.08 | 0.42 |
| 4:L:562:U:H2' | 4:L:563:U:O5' | 2.19 | 0.42 |
| 4:L:616:U:H2' | 4:L:617:U:C6 | 2.52 | 0.42 |
| 4:L:622:U:C2' | 4:L:623:U:O4' | 2.68 | 0.42 |
| 4:L:704:U:C2 | 4:L:705:U:C5 | 3.08 | 0.42 |
| 4:L:718:U:H2' | 4:L:719:U:C5' | 2.44 | 0.42 |
| 4:L:721:U:C2' | 4:L:722:U:O4' | 2.67 | 0.42 |
| 4:L:742:U:N3 | 4:L:743:U:C4 | 2.88 | 0.42 |
| 4:L:765:U:N3 | 4:L:766:U:C6 | 2.88 | 0.42 |
| 4:L:811:U:C5 | 4:L:812:U:H5 | 2.36 | 0.42 |
| 4:L:817:U:C2 | 4:L:818:U:C5 | 3.07 | 0.42 |
| 4:L:819:U:H2' | 4:L:820:U:H6 | 1.83 | 0.42 |
| 5:M:348:U:C5 | 5:M:349:U:C5 | 3.07 | 0.42 |
| 5:M:365:U:C2 | 5:M:366:U:C5 | 3.08 | 0.42 |
| 5:M:397:U:C4 | 5:M:398:U:C5 | 3.08 | 0.42 |
| 5:M:444:U:N3 | 5:M:445:U:C4 | 2.88 | 0.42 |
| 6:N:274:U:C2 | 6:N:275:U:C6 | 3.08 | 0.42 |
| 6:N:322:U:C2 | 6:N:323:U:C5 | 3.08 | 0.42 |
| 6:N:326:U:C4 | 6:N:327:U:C4 | 3.06 | 0.42 |
| 6:N:328:U:N3 | 6:N:329:U:C4 | 2.88 | 0.42 |
| 6:N:408:U:N3 | 6:N:409:U:C5 | 2.88 | 0.42 |
| 6:N:521:U:H2' | 6:N:522:U:C6 | 2.54 | 0.42 |
| 1:I:156:A:C5 | 1:I:157:A:C5 | 3.08 | 0.42 |
| 1:I:177:A:N3 | 1:I:178:A:C8 | 2.87 | 0.42 |
| 1:I:195:A:H2' | 1:I:196:A:O5' | 2.20 | 0.42 |
| 1:I:211:A:HO2' | 1:I:212:A:H5' | 1.79 | 0.42 |
| 1:I:320:A:C4 | 1:I:321:A:C8 | 3.07 | 0.42 |
| 1:I:357:A:N3 | 1:I:358:A:C8 | 2.88 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:73:A:N1 | 1:I:74:A:C6 | 2.88 | 0.42 |
| 1:I:80:A:C2 | 1:I:81:A:C5 | 3.08 | 0.42 |
| 2:J:126:A:C2' | 2:J:127:A:C5' | 2.98 | 0.42 |
| 2:J:131:A:C4 | 2:J:132:A:C8 | 3.08 | 0.42 |
| 2:J:159:A:C2 | 2:J:160:A:C5 | 3.08 | 0.42 |
| 2:J:16:A:C2' | 2:J:17:A:C5' | 2.98 | 0.42 |
| 2:J:173:A:C2' | 2:J:174:A:O4' | 2.68 | 0.42 |
| 2:J:173:A:O2' | 2:J:174:A:O4' | 2.34 | 0.42 |
| 2:J:201:A:H61 | 2:J:202:A:N6 | 2.13 | 0.42 |
| 3:K:141:A:C2 | 3:K:142:A:N7 | 2.87 | 0.42 |
| 3:K:151:A:C2' | 3:K:152:A:O5' | 2.68 | 0.42 |
| 3:K:175:A:N6 | 3:K:176:A:N6 | 2.68 | 0.42 |
| 3:K:208:A:H2' | 3:K:209:A:C8 | 2.54 | 0.42 |
| 3:K:85:A:C2 | 3:K:86:A:C4 | 3.08 | 0.42 |
| 4:L:480:U:C2 | 4:L:481:U:C5 | 3.08 | 0.42 |
| 4:L:541:U:H2' | 4:L:542:U:O4' | 2.20 | 0.42 |
| 4:L:554:U:C2' | 4:L:555:U:C6 | 3.00 | 0.42 |
| 4:L:561:U:H2' | 4:L:562:U:H6 | 1.85 | 0.42 |
| 4:L:563:U:C4 | 4:L:564:U:O4 | 2.73 | 0.42 |
| 4:L:602:U:O2 | 4:L:603:U:C6 | 2.73 | 0.42 |
| 4:L:698:U:C2 | 4:L:699:U:C6 | 3.08 | 0.42 |
| 4:L:703:U:O4 | 4:L:704:U:O4 | 2.38 | 0.42 |
| 4:L:712:U:O2 | 4:L:713:U:H1' | 2.19 | 0.42 |
| 4:L:766:U:O5' | 4:L:767:U:OP2 | 2.38 | 0.42 |
| 4:L:804:U:O2' | 4:L:805:U:C5' | 2.64 | 0.42 |
| 5:M:315:U:N3 | 5:M:316:U:C5 | 2.88 | 0.42 |
| 5:M:361:U:O2' | 5:M:362:U:O5' | 2.38 | 0.42 |
| 5:M:377:U:O2' | 5:M:378:U:C5' | 2.56 | 0.42 |
| 5:M:405:U:O2 | 5:M:406:U:H1' | 2.16 | 0.42 |
| 5:M:442:U:C2' | 5:M:443:U:H5' | 2.49 | 0.42 |
| 6:N:389:U:C2 | 6:N:390:U:C6 | 3.08 | 0.42 |
| 6:N:459:U:O2' | 6:N:460:U:C5' | 2.68 | 0.42 |
| 1:I:233:A:N3 | 1:I:234:A:C8 | 2.87 | 0.41 |
| 1:I:276:A:C4 | 1:I:277:A:N7 | 2.87 | 0.41 |
| 1:I:27:A:C4 | 1:I:28:A:C8 | 3.08 | 0.41 |
| 1:I:308:A:C2 | 1:I:309:A:C5 | 3.08 | 0.41 |
| 1:I:32:A:N3 | 1:I:33:A:C8 | 2.88 | 0.41 |
| 1:I:372:A:O2' | 1:I:373:A:C5' | 2.34 | 0.41 |
| 1:I:52:A:H2' | 1:I:53:A:H8 | 1.85 | 0.41 |
| 1:I:70:A:C6 | 1:I:71:A:C5 | 3.08 | 0.41 |
| 2:J:156:A:C4 | 2:J:157:A:C8 | 3.08 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:8:A:O2' | 2:J:9:A:O4' | 2.38 | 0.41 |
| 3:K:105:A:O2' | 3:K:106:A:C4' | 2.68 | 0.41 |
| 3:K:123:A:H2' | 3:K:124:A:H8 | 1.85 | 0.41 |
| 3:K:128:A:C2 | 3:K:129:A:C5 | 3.08 | 0.41 |
| 3:K:150:A:O2' | 3:K:151:A:C5' | 2.68 | 0.41 |
| 3:K:165:A:C2 | 3:K:166:A:C8 | 3.08 | 0.41 |
| 3:K:240:A:O2' | 3:K:241:A:H5' | 2.19 | 0.41 |
| 3:K:42:A:C2 | 3:K:43:A:C4 | 3.08 | 0.41 |
| 3:K:46:A:C2' | 3:K:47:A:C4' | 2.96 | 0.41 |
| 3:K:60:A:H2' | 3:K:61:A:H8 | 1.85 | 0.41 |
| 3:K:6:A:H2' | 3:K:7:A:O4' | 2.20 | 0.41 |
| 3:K:85:A:C2 | 3:K:86:A:C8 | 3.08 | 0.41 |
| 4:L:546:U:C2' | 4:L:547:U:C6 | 2.80 | 0.41 |
| 4:L:756:U:HO2' | 4:L:757:U:H5' | 1.81 | 0.41 |
| 4:L:794:U:H2' | 4:L:795:U:H6 | 1.83 | 0.41 |
| 5:M:277:U:H2' | 5:M:278:U:H6 | 1.85 | 0.41 |
| 5:M:320:U:C2' | 5:M:321:U:C5' | 2.98 | 0.41 |
| 5:M:335:U:N1 | 5:M:336:U:C6 | 2.86 | 0.41 |
| 5:M:399:U:C2 | 5:M:400:U:C5 | 3.08 | 0.41 |
| 5:M:550:U:C2 | 5:M:551:U:C5 | 3.07 | 0.41 |
| 6:N:310:U:C2' | 6:N:311:U:H5' | 2.49 | 0.41 |
| 6:N:425:U:O4 | 6:N:426:U:O4 | 2.37 | 0.41 |
| 6:N:432:U:H2' | 6:N:433:U:H6 | 1.84 | 0.41 |
| 6:N:454:U:C2' | 6:N:455:U:C4' | 2.98 | 0.41 |
| 6:N:468:U:O4 | 6:N:469:U:O4 | 2.38 | 0.41 |
| 6:N:474:U:C2' | 6:N:475:U:O5' | 2.62 | 0.41 |
| 1:I:125:A:H2' | 1:I:126:A:H8 | 1.83 | 0.41 |
| 1:I:139:A:C4 | 1:I:140:A:C8 | 3.09 | 0.41 |
| 1:I:173:A:N1 | 1:I:174:A:C5 | 2.88 | 0.41 |
| 1:I:213:A:N3 | 1:I:214:A:C8 | 2.88 | 0.41 |
| 1:I:281:A:C4 | 1:I:282:A:C8 | 3.08 | 0.41 |
| 1:I:318:A:C2 | 1:I:319:A:C8 | 3.08 | 0.41 |
| 1:I:320:A:C2 | 1:I:321:A:C4 | 3.08 | 0.41 |
| 1:I:359:A:C4 | 1:I:360:A:N7 | 2.88 | 0.41 |
| 1:I:363:A:C4 | 1:I:364:A:N7 | 2.88 | 0.41 |
| 1:I:44:A:C2' | 1:I:45:A:C5' | 2.98 | 0.41 |
| 1:I:76:A:C2' | 1:I:77:A:C5' | 2.98 | 0.41 |
| 2:J:185:A:N6 | 2:J:186:A:N6 | 2.68 | 0.41 |
| 2:J:220:A:C4 | 2:J:221:A:N7 | 2.88 | 0.41 |
| 2:J:50:A:C2' | 2:J:51:A:H5' | 2.46 | 0.41 |
| 2:J:5:A:C6 | 2:J:6:A:C5 | 3.08 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 2:J:72:A:N3 | 2:J:73:A:N9 | 2.67 | 0.41 |
| 2:J:94:A:O2' | 2:J:95:A:C4' | 2.62 | 0.41 |
| 3:K:110:A:C2 | 3:K:111:A:H1' | 2.54 | 0.41 |
| 3:K:162:A:C2 | 3:K:163:A:C5 | 3.08 | 0.41 |
| 3:K:161:A:H2' | 3:K:162:A:O5' | 2.19 | 0.41 |
| 3:K:165:A:C5 | 3:K:166:A:C8 | 3.08 | 0.41 |
| 3:K:170:A:H2' | 3:K:171:A:O5' | 2.19 | 0.41 |
| 3:K:186:A:O2' | 3:K:187:A:H5' | 2.20 | 0.41 |
| 3:K:28:A:H2' | 3:K:29:A:H8 | 1.84 | 0.41 |
| 3:K:80:A:N1 | 3:K:81:A:C5 | 2.89 | 0.41 |
| 3:K:89:A:C2' | 3:K:90:A:O5' | 2.59 | 0.41 |
| 4:L:413:U:C2 | 4:L:414:U:C5 | 3.08 | 0.41 |
| 4:L:691:U:H2' | 4:L:692:U:O5' | 2.19 | 0.41 |
| 4:L:699:U:H2' | 4:L:700:U:C6 | 2.55 | 0.41 |
| 4:L:713:U:HO2' | 4:L:714:U:C4' | 2.32 | 0.41 |
| 4:L:714:U:H2' | 4:L:715:U:O4' | 2.19 | 0.41 |
| 4:L:731:U:C2' | 4:L:732:U:C5' | 2.97 | 0.41 |
| 4:L:742:U:O2 | 4:L:743:U:C4 | 2.66 | 0.41 |
| 4:L:749:U:H2' | 4:L:750:U:C5' | 2.45 | 0.41 |
| 4:L:755:U:H2' | 4:L:756:U:O4' | 2.20 | 0.41 |
| 4:L:797:U:O2 | 4:L:798:U:C6 | 2.73 | 0.41 |
| 4:L:802:U:C2 | 4:L:803:U:C5 | 3.09 | 0.41 |
| 4:L:804:U:N3 | 4:L:805:U:C4 | 2.88 | 0.41 |
| 5:M:331:U:O2 | 5:M:332:U:C6 | 2.73 | 0.41 |
| 5:M:363:U:O2' | 5:M:364:U:H5' | 2.20 | 0.41 |
| 5:M:395:U:H2' | 5:M:396:U:C6 | 2.48 | 0.41 |
| 5:M:441:U:C2' | 5:M:442:U:C5' | 2.98 | 0.41 |
| 5:M:484:U:C4 | 5:M:485:U:O4 | 2.73 | 0.41 |
| 5:M:496:U:H2' | 5:M:497:U:H6 | 1.85 | 0.41 |
| 5:M:510:U:H2' | 5:M:511:U:C1' | 2.48 | 0.41 |
| 5:M:538:U:O4 | 5:M:539:U:O4 | 2.39 | 0.41 |
| 6:N:296:U:C4 | 6:N:297:U:C4 | 3.05 | 0.41 |
| 6:N:391:U:C2 | 6:N:392:U:C6 | 3.08 | 0.41 |
| 6:N:435:U:C2' | 6:N:436:U:O5' | 2.68 | 0.41 |
| 6:N:445:U:O2' | 6:N:446:U:P | 2.75 | 0.41 |
| 6:N:526:U:HO2' | 6:N:527:U:C4' | 2.33 | 0.41 |
| 1:I:172:A:C2 | 1:I:173:A:C5 | 3.08 | 0.41 |
| 1:I:211:A:C2' | 1:I:212:A:H5' | 2.47 | 0.41 |
| 1:I:221:A:H2' | 1:I:222:A:H8 | 1.84 | 0.41 |
| 1:I:228:A:N1 | 1:I:229:A:C5 | 2.88 | 0.41 |
| 1:I:21:A:N1 | 1:I:22:A:C5 | 2.88 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:232:A:C2 | 1:I:233:A:C8 | 3.08 | 0.41 |
| 1:I:250:A:C2' | 1:I:251:A:C5' | 2.98 | 0.41 |
| 1:I:260:A:C6 | 1:I:261:A:C5 | 3.08 | 0.41 |
| 1:I:325:A:H2' | 1:I:326:A:H8 | 1.85 | 0.41 |
| 1:I:342:A:N3 | 1:I:343:A:C8 | 2.88 | 0.41 |
| 1:I:399:A:H2' | 1:I:400:A:C8 | 2.55 | 0.41 |
| 1:I:45:A:C4 | 1:I:46:A:C8 | 3.08 | 0.41 |
| 1:I:9:A:C2 | 1:I:10:A:N9 | 2.89 | 0.41 |
| 2:J:135:A:N1 | 2:J:136:A:C6 | 2.89 | 0.41 |
| 2:J:230:A:C2 | 2:J:231:A:C5 | 3.08 | 0.41 |
| 2:J:247:A:H2' | 2:J:248:A:C8 | 2.48 | 0.41 |
| 2:J:70:A:O2' | 2:J:71:A:C4' | 2.62 | 0.41 |
| 3:K:136:A:C2 | 3:K:137:A:C1' | 3.03 | 0.41 |
| 3:K:144:A:H2' | 3:K:145:A:O4' | 2.20 | 0.41 |
| 3:K:230:A:H2' | 3:K:231:A:H8 | 1.85 | 0.41 |
| 3:K:71:A:C2' | 3:K:72:A:O5' | 2.69 | 0.41 |
| 4:L:494:U:C2 | 4:L:495:U:C6 | 3.08 | 0.41 |
| 4:L:518:U:H2' | 4:L:519:U:H6 | 1.85 | 0.41 |
| 4:L:533:U:H2' | 4:L:534:U:C6 | 2.50 | 0.41 |
| 4:L:569:U:C2' | 4:L:570:U:O5' | 2.68 | 0.41 |
| 4:L:595:U:O2' | 4:L:596:U:C4' | 2.67 | 0.41 |
| 4:L:667:U:O2' | 4:L:668:U:C5' | 2.55 | 0.41 |
| 4:L:692:U:HO2' | 4:L:693:U:C5' | 2.23 | 0.41 |
| 4:L:742:U:H2' | 4:L:743:U:H6 | 1.79 | 0.41 |
| 4:L:770:U:H2' | 4:L:771:U:C6 | 2.49 | 0.41 |
| 4:L:782:U:C2' | 4:L:783:U:O5' | 2.68 | 0.41 |
| 4:L:786:U:O2' | 4:L:787:U:H5' | 2.20 | 0.41 |
| 4:L:802:U:H2' | 4:L:803:U:C5' | 2.49 | 0.41 |
| 4:L:805:U:N3 | 4:L:806:U:C4 | 2.89 | 0.41 |
| 4:L:811:U:HO2' | 4:L:812:U:C4' | 2.27 | 0.41 |
| 5:M:379:U:O2' | 5:M:380:U:O4' | 2.37 | 0.41 |
| 5:M:387:U:O2' | 5:M:388:U:O5' | 2.37 | 0.41 |
| 5:M:504:U:O2 | 5:M:505:U:C6 | 2.73 | 0.41 |
| 6:N:359:U:C2 | 6:N:360:U:C6 | 3.07 | 0.41 |
| 6:N:409:U:C2 | 6:N:410:U:H5 | 2.30 | 0.41 |
| 6:N:424:U:C4 | 6:N:425:U:C5 | 3.08 | 0.41 |
| 6:N:518:U:H2' | 6:N:519:U:C6 | 2.55 | 0.41 |
| 6:N:526:U:C2' | 6:N:527:U:C4' | 2.98 | 0.41 |
| 1:I:128:A:H2' | 1:I:129:A:C8 | 2.55 | 0.41 |
| 1:I:137:A:H2' | 1:I:138:A:O4' | 2.20 | 0.41 |
| 1:I:20:A:O2' | 1:I:21:A:O4' | 2.37 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:226:A:C2' | 1:I:227:A:C5' | 2.98 | 0.41 |
| 1:I:227:A:C2 | 1:I:228:A:N9 | 2.88 | 0.41 |
| 1:I:249:A:N1 | 1:I:250:A:C4 | 2.87 | 0.41 |
| 1:I:24:A:C4 | 1:I:25:A:C8 | 3.09 | 0.41 |
| 1:I:292:A:N1 | 1:I:293:A:C5 | 2.88 | 0.41 |
| 1:I:340:A:C4 | 1:I:341:A:N7 | 2.88 | 0.41 |
| 1:I:67:A:C4 | 1:I:68:A:C5 | 3.05 | 0.41 |
| 1:I:7:A:O2' | 1:I:8:A:H5' | 2.20 | 0.41 |
| 1:I:93:A:H2' | 1:I:94:A:H8 | 1.85 | 0.41 |
| 2:J:193:A:C6 | 2:J:194:A:N7 | 2.89 | 0.41 |
| 2:J:201:A:C2' | 2:J:202:A:H5' | 2.50 | 0.41 |
| 2:J:202:A:H2 | 2:J:203:A:C4 | 2.33 | 0.41 |
| 2:J:204:A:N3 | 2:J:205:A:C8 | 2.87 | 0.41 |
| 2:J:215:A:N1 | 2:J:216:A:N7 | 2.67 | 0.41 |
| 2:J:226:A:N1 | 5:M:328:U:N3 | 2.68 | 0.41 |
| 2:J:68:A:H2' | 2:J:69:A:C8 | 2.56 | 0.41 |
| 2:J:81:A:C2 | 2:J:82:A:C4 | 3.08 | 0.41 |
| 2:J:8:A:H2' | 2:J:9:A:C8 | 2.52 | 0.41 |
| 3:K:105:A:N3 | 3:K:106:A:C5 | 2.87 | 0.41 |
| 3:K:145:A:C6 | 3:K:146:A:N6 | 2.88 | 0.41 |
| 3:K:73:A:C4 | 3:K:74:A:C8 | 3.08 | 0.41 |
| 3:K:83:A:N1 | 3:K:84:A:C5 | 2.89 | 0.41 |
| 4:L:484:U:H2' | 4:L:485:U:C6 | 2.53 | 0.41 |
| 4:L:484:U:C4 | 4:L:485:U:C5 | 3.09 | 0.41 |
| 4:L:516:U:C2' | 4:L:517:U:O4' | 2.57 | 0.41 |
| 4:L:544:U:C6 | 4:L:545:U:C5 | 3.09 | 0.41 |
| 4:L:660:U:HO2' | 4:L:661:U:C4' | 2.29 | 0.41 |
| 4:L:725:U:O2' | 4:L:726:U:H5' | 2.20 | 0.41 |
| 4:L:765:U:O2' | 4:L:766:U:C4' | 2.68 | 0.41 |
| 5:M:304:U:C2 | 5:M:305:U:H5 | 2.31 | 0.41 |
| 6:N:312:U:C2 | 6:N:313:U:C5 | 3.09 | 0.41 |
| 6:N:364:U:N3 | 6:N:365:U:C5 | 2.89 | 0.41 |
| 6:N:379:U:C2' | 6:N:380:U:C4' | 2.90 | 0.41 |
| 6:N:443:U:O2' | 6:N:444:U:H5' | 2.21 | 0.41 |
| 1:I:100:A:C4 | 1:I:101:A:C8 | 3.09 | 0.41 |
| 1:I:131:A:O5' | 1:I:132:A:OP2 | 2.38 | 0.41 |
| 1:I:135:A:C5 | 1:I:136:A:N7 | 2.87 | 0.41 |
| 1:I:147:A:H2' | 1:I:148:A:O5' | 2.21 | 0.41 |
| 1:I:16:A:C2' | 1:I:17:A:H5' | 2.51 | 0.41 |
| 1:I:170:A:C2 | 1:I:171:A:C8 | 3.08 | 0.41 |
| 1:I:226:A:C5 | 1:I:227:A:N7 | 2.88 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:233:A:C5 | 1:I:234:A:N7 | 2.89 | 0.41 |
| 1:I:234:A:N1 | 1:I:235:A:C5 | 2.88 | 0.41 |
| 1:I:23:A:C2' | 1:I:24:A:H5' | 2.50 | 0.41 |
| 1:I:286:A:C2' | 1:I:287:A:H8 | 2.33 | 0.41 |
| 1:I:336:A:H2' | 1:I:337:A:O4' | 2.19 | 0.41 |
| 1:I:43:A:C5 | 1:I:44:A:N7 | 2.88 | 0.41 |
| 1:I:57:A:H2' | 1:I:58:A:O4' | 2.21 | 0.41 |
| 2:J:99:A:C6 | 2:J:100:A:C6 | 3.08 | 0.41 |
| 2:J:102:A:N1 | 2:J:103:A:C6 | 2.89 | 0.41 |
| 2:J:106:A:H2' | 2:J:107:A:H8 | 1.86 | 0.41 |
| 2:J:109:A:N3 | 2:J:110:A:C8 | 2.88 | 0.41 |
| 2:J:129:A:C5 | 2:J:130:A:C8 | 3.08 | 0.41 |
| 2:J:15:A:N1 | 2:J:16:A:C5 | 2.89 | 0.41 |
| 2:J:174:A:C4 | 2:J:175:A:N7 | 2.89 | 0.41 |
| 2:J:18:A:C2 | 2:J:19:A:C5 | 3.08 | 0.41 |
| 2:J:207:A:C4 | 2:J:208:A:N7 | 2.88 | 0.41 |
| 2:J:236:A:N6 | 2:J:237:A:H62 | 2.17 | 0.41 |
| 2:J:91:A:C2' | 2:J:92:A:C5' | 2.98 | 0.41 |
| 2:J:93:A:C6 | 2:J:94:A:N7 | 2.89 | 0.41 |
| 2:J:97:A:H2 | 2:J:98:A:C4 | 2.35 | 0.41 |
| 3:K:166:A:C2 | 3:K:167:A:C1' | 3.03 | 0.41 |
| 3:K:212:A:C5 | 3:K:213:A:N6 | 2.86 | 0.41 |
| 3:K:56:A:C2' | 3:K:57:A:C5' | 2.99 | 0.41 |
| 3:K:6:A:C2' | 3:K:7:A:H5' | 2.50 | 0.41 |
| 4:L:504:U:N3 | 4:L:505:U:C5 | 2.89 | 0.41 |
| 4:L:520:U:H2' | 4:L:521:U:C5' | 2.51 | 0.41 |
| 4:L:631:U:H2' | 4:L:632:U:O5' | 2.21 | 0.41 |
| 4:L:757:U:O2 | 4:L:758:U:C6 | 2.72 | 0.41 |
| 5:M:296:U:H2' | 5:M:297:U:O5' | 2.20 | 0.41 |
| 5:M:344:U:N3 | 5:M:345:U:C5 | 2.89 | 0.41 |
| 5:M:368:U:N3 | 5:M:369:U:C5 | 2.89 | 0.41 |
| 5:M:405:U:O2 | 5:M:406:U:N1 | 2.54 | 0.41 |
| 5:M:406:U:O2' | 5:M:407:U:O4' | 2.39 | 0.41 |
| 5:M:433:U:C5 | 5:M:434:U:C5 | 3.08 | 0.41 |
| 5:M:445:U:N3 | 5:M:446:U:C5 | 2.89 | 0.41 |
| 5:M:458:U:O2 | 5:M:459:U:C6 | 2.73 | 0.41 |
| 5:M:465:U:H2' | 5:M:466:U:H6 | 1.85 | 0.41 |
| 5:M:547:U:O2' | 5:M:548:U:P | 2.78 | 0.41 |
| 6:N:373:U:C2 | 6:N:374:U:C5 | 3.08 | 0.41 |
| 6:N:392:U:C2 | 6:N:393:U:C6 | 3.06 | 0.41 |
| 6:N:397:U:C2 | 6:N:398:U:C6 | 3.08 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 6:N:487:U:C6 | 6:N:488:U:H5 | 2.38 | 0.41 |
| 6:N:526:U:H2' | 6:N:527:U:C5' | 2.48 | 0.41 |
| 1:I:106:A:C2' | 1:I:107:A:H8 | 2.22 | 0.41 |
| 1:I:127:A:C2' | 1:I:128:A:O5' | 2.68 | 0.41 |
| 1:I:185:A:C2' | 1:I:186:A:C5' | 2.99 | 0.41 |
| 1:I:17:A:H2 | 1:I:18:A:N9 | 2.12 | 0.41 |
| 1:I:202:A:N3 | 1:I:203:A:N9 | 2.69 | 0.41 |
| 1:I:233:A:C6 | 1:I:234:A:N7 | 2.89 | 0.41 |
| 1:I:268:A:H2 | 1:I:269:A:H1' | 1.84 | 0.41 |
| 1:I:27:A:C2 | 1:I:28:A:C4 | 3.08 | 0.41 |
| 1:I:347:A:C2 | 1:I:348:A:C5 | 3.09 | 0.41 |
| 1:I:347:A:C2 | 1:I:348:A:N9 | 2.88 | 0.41 |
| 1:I:387:A:H2' | 1:I:388:A:C8 | 2.55 | 0.41 |
| 1:I:397:A:H2' | 1:I:398:A:C8 | 2.55 | 0.41 |
| 1:I:5:A:H2' | 1:I:6:A:C8 | 2.53 | 0.41 |
| 1:I:75:A:N3 | 1:I:76:A:N9 | 2.66 | 0.41 |
| 2:J:104:A:C2 | 2:J:105:A:N9 | 2.89 | 0.41 |
| 2:J:10:A:H2' | 2:J:11:A:H8 | 1.86 | 0.41 |
| 2:J:165:A:C5 | 2:J:166:A:N7 | 2.87 | 0.41 |
| 2:J:187:A:N6 | 5:M:367:U:O4 | 2.54 | 0.41 |
| 2:J:50:A:C2' | 2:J:51:A:C5' | 2.98 | 0.41 |
| 2:J:53:A:C2 | 2:J:54:A:C5 | 3.08 | 0.41 |
| 2:J:52:A:H2' | 2:J:53:A:H8 | 1.86 | 0.41 |
| 3:K:150:A:C2 | 3:K:151:A:C4 | 3.09 | 0.41 |
| 3:K:235:A:C2' | 3:K:236:A:H5' | 2.50 | 0.41 |
| 3:K:96:A:H2' | 3:K:97:A:C4' | 2.45 | 0.41 |
| 1:I:350:A:N6 | 4:L:476:U:O4 | 2.54 | 0.41 |
| 4:L:652:U:C2 | 4:L:653:U:C6 | 3.08 | 0.41 |
| 4:L:669:U:C2' | 4:L:670:U:O5' | 2.68 | 0.41 |
| 4:L:798:U:H2' | 4:L:799:U:C6 | 2.50 | 0.41 |
| 5:M:347:U:O2' | 5:M:348:U:O4' | 2.38 | 0.41 |
| 5:M:358:U:N3 | 5:M:359:U:C5 | 2.88 | 0.41 |
| 5:M:361:U:N3 | 5:M:362:U:C5 | 2.88 | 0.41 |
| 5:M:466:U:C5 | 5:M:467:U:C5 | 3.08 | 0.41 |
| 5:M:543:U:C2 | 5:M:544:U:C5 | 3.09 | 0.41 |
| 6:N:274:U:H2' | 6:N:275:U:C6 | 2.47 | 0.41 |
| 6:N:400:U:N3 | 6:N:401:U:C5 | 2.88 | 0.41 |
| 6:N:438:U:H2' | 6:N:439:U:O5' | 2.20 | 0.41 |
| 6:N:473:U:C2' | 6:N:474:U:H5' | 2.50 | 0.41 |
| 6:N:474:U:N3 | 6:N:475:U:C5 | 2.88 | 0.41 |
| 6:N:480:U:C2' | 6:N:481:U:C5' | 2.98 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 6:N:487:U:N3 | 6:N:488:U:C5 | 2.88 | 0.41 |
| 1:I:108:A:C4 | 1:I:109:A:N7 | 2.89 | 0.41 |
| 1:I:132:A:O2' | 1:I:133:A:O4' | 2.36 | 0.41 |
| 1:I:19:A:N1 | 1:I:20:A:C5 | 2.89 | 0.41 |
| 1:I:208:A:C4 | 1:I:209:A:C8 | 3.08 | 0.41 |
| 1:I:213:A:N1 | 1:I:214:A:C5 | 2.89 | 0.41 |
| 1:I:256:A:N1 | 1:I:257:A:C5 | 2.89 | 0.41 |
| 1:I:266:A:H2' | 1:I:267:A:O4' | 2.15 | 0.41 |
| 1:I:300:A:H2' | 1:I:301:A:H8 | 1.86 | 0.41 |
| 1:I:33:A:H2' | 1:I:34:A:H8 | 1.85 | 0.41 |
| 1:I:50:A:C6 | 1:I:51:A:C5 | 3.08 | 0.41 |
| 1:I:59:A:H2' | 1:I:60:A:H8 | 1.86 | 0.41 |
| 1:I:72:A:C5 | 1:I:73:A:C8 | 3.08 | 0.41 |
| 2:J:185:A:C4 | 2:J:186:A:N7 | 2.88 | 0.41 |
| 2:J:267:A:O2' | 2:J:268:A:H5' | 2.20 | 0.41 |
| 2:J:59:A:N3 | 2:J:60:A:C8 | 2.89 | 0.41 |
| 2:J:70:A:N1 | 2:J:71:A:C5 | 2.88 | 0.41 |
| 2:J:71:A:H61 | 2:J:72:A:N6 | 2.11 | 0.41 |
| 2:J:95:A:C2 | 2:J:96:A:C4 | 3.08 | 0.41 |
| 2:J:96:A:C2 | 2:J:97:A:C8 | 3.08 | 0.41 |
| 3:K:125:A:C2 | 3:K:126:A:C5 | 3.08 | 0.41 |
| 3:K:148:A:H2' | 3:K:149:A:C8 | 2.53 | 0.41 |
| 3:K:155:A:N7 | 3:K:156:A:N7 | 2.65 | 0.41 |
| 3:K:160:A:H2' | 3:K:161:A:C5' | 2.51 | 0.41 |
| 3:K:167:A:N3 | 3:K:168:A:C8 | 2.88 | 0.41 |
| 3:K:70:A:C2' | 3:K:71:A:H5' | 2.51 | 0.41 |
| 3:K:78:A:H2' | 3:K:79:A:C5' | 2.51 | 0.41 |
| 3:K:78:A:H2' | 3:K:79:A:O4' | 2.21 | 0.41 |
| 3:K:91:A:N6 | 3:K:92:A:H62 | 2.18 | 0.41 |
| 4:L:492:U:O2' | 4:L:493:U:H5' | 2.20 | 0.41 |
| 4:L:505:U:H2' | 4:L:506:U:H6 | 1.84 | 0.41 |
| 4:L:554:U:N3 | 4:L:555:U:C5 | 2.84 | 0.41 |
| 4:L:562:U:H2' | 4:L:563:U:C6 | 2.52 | 0.41 |
| 4:L:618:U:C2 | 4:L:619:U:C5 | 3.08 | 0.41 |
| 4:L:676:U:H3' | 4:L:677:U:OP2 | 2.21 | 0.41 |
| 4:L:710:U:H2' | 4:L:711:U:H6 | 1.85 | 0.41 |
| 4:L:720:U:C4 | 4:L:721:U:C5 | 3.09 | 0.41 |
| 5:M:339:U:O2' | 5:M:340:U:H5' | 2.20 | 0.41 |
| 5:M:349:U:H2' | 5:M:350:U:C4' | 2.49 | 0.41 |
| 5:M:386:U:N3 | 5:M:387:U:C4 | 2.89 | 0.41 |
| 5:M:386:U:C2' | 5:M:387:U:H6 | 2.23 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:420:U:H2' | 5:M:421:U:O5' | 2.20 | 0.41 |
| 5:M:442:U:H2' | 5:M:443:U:C6 | 2.53 | 0.41 |
| 5:M:448:U:H2' | 5:M:449:U:O4' | 2.20 | 0.41 |
| 5:M:477:U:C2 | 5:M:478:U:C6 | 3.08 | 0.41 |
| 5:M:499:U:H2' | 5:M:500:U:O5' | 2.20 | 0.41 |
| 5:M:529:U:N3 | 5:M:530:U:C5 | 2.88 | 0.41 |
| 5:M:532:U:N3 | 5:M:533:U:C5 | 2.89 | 0.41 |
| 6:N:302:U:O2' | 6:N:303:U:C5' | 2.62 | 0.41 |
| 6:N:320:U:C2' | 6:N:321:U:O5' | 2.69 | 0.41 |
| 6:N:403:U:N3 | 6:N:404:U:C5 | 2.89 | 0.41 |
| 6:N:415:U:N3 | 6:N:416:U:C4 | 2.89 | 0.41 |
| 6:N:425:U:C5 | 6:N:426:U:H5 | 2.37 | 0.41 |
| 6:N:506:U:H2' | 6:N:507:U:C6 | 2.55 | 0.41 |
| 1:I:121:A:H2' | 1:I:122:A:C8 | 2.55 | 0.41 |
| 1:I:193:A:C2 | 1:I:194:A:C5 | 3.09 | 0.41 |
| 1:I:197:A:C4 | 1:I:198:A:C8 | 3.09 | 0.41 |
| 1:I:22:A:C2 | 1:I:23:A:C5 | 3.08 | 0.41 |
| 1:I:276:A:H2' | 1:I:277:A:O4' | 2.20 | 0.41 |
| 1:I:286:A:N1 | 1:I:287:A:C6 | 2.87 | 0.41 |
| 1:I:312:A:H2' | 1:I:313:A:C8 | 2.55 | 0.41 |
| 1:I:314:A:C2 | 1:I:315:A:C5 | 3.08 | 0.41 |
| 1:I:315:A:C2' | 1:I:316:A:O5' | 2.66 | 0.41 |
| 1:I:341:A:C2 | 1:I:342:A:C5 | 3.09 | 0.41 |
| 1:I:348:A:C2' | 1:I:349:A:O5' | 2.65 | 0.41 |
| 1:I:52:A:C2 | 1:I:53:A:C8 | 3.09 | 0.41 |
| 1:I:67:A:C2' | 1:I:68:A:H5' | 2.41 | 0.41 |
| 1:I:69:A:H2' | 1:I:70:A:H8 | 1.86 | 0.41 |
| 1:I:9:A:N6 | 4:L:817:U:O4 | 2.54 | 0.41 |
| 2:J:113:A:H2' | 2:J:114:A:O5' | 2.20 | 0.41 |
| 2:J:143:A:H2' | 2:J:144:A:H8 | 1.85 | 0.41 |
| 2:J:16:A:C2 | 2:J:17:A:C8 | 3.08 | 0.41 |
| 2:J:171:A:H2' | 2:J:172:A:N7 | 2.26 | 0.41 |
| 2:J:186:A:H2' | 2:J:187:A:C5' | 2.51 | 0.41 |
| 2:J:237:A:C4 | 2:J:238:A:C8 | 3.08 | 0.41 |
| 2:J:247:A:C2' | 2:J:248:A:O5' | 2.69 | 0.41 |
| 2:J:46:A:C2 | 2:J:47:A:N7 | 2.89 | 0.41 |
| 3:K:111:A:C2 | 3:K:112:A:C4 | 3.09 | 0.41 |
| 3:K:111:A:C2 | 3:K:112:A:N7 | 2.89 | 0.41 |
| 3:K:129:A:C2 | 3:K:130:A:C5 | 3.08 | 0.41 |
| 3:K:170:A:C4 | 3:K:171:A:C8 | 3.08 | 0.41 |
| 3:K:174:A:C4 | 3:K:175:A:C8 | 3.09 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 3:K:217:A:C4 | 3:K:218:A:N7 | 2.89 | 0.41 |
| 3:K:249:A:C2 | 3:K:250:A:N7 | 2.89 | 0.41 |
| 3:K:254:A:C5 | 3:K:255:A:C8 | 3.08 | 0.41 |
| 3:K:46:A:C3' | 3:K:47:A:C5' | 2.85 | 0.41 |
| 4:L:454:U:C2 | 4:L:455:U:C5 | 3.09 | 0.41 |
| 4:L:470:U:H2' | 4:L:471:U:H6 | 1.85 | 0.41 |
| 4:L:540:U:H2' | 4:L:541:U:C6 | 2.53 | 0.41 |
| 4:L:569:U:C2 | 4:L:570:U:C5 | 3.08 | 0.41 |
| 4:L:587:U:C2' | 4:L:588:U:C4' | 2.99 | 0.41 |
| 4:L:592:U:C2' | 4:L:593:U:O5' | 2.68 | 0.41 |
| 4:L:668:U:C4 | 4:L:669:U:C4 | 3.07 | 0.41 |
| 4:L:785:U:N3 | 4:L:786:U:C5 | 2.89 | 0.41 |
| 4:L:799:U:C2' | 4:L:800:U:C5' | 2.98 | 0.41 |
| 5:M:335:U:O5' | 5:M:336:U:P | 2.79 | 0.41 |
| 5:M:415:U:C2 | 5:M:416:U:C6 | 3.09 | 0.41 |
| 5:M:462:U:O2 | 5:M:463:U:C6 | 2.74 | 0.41 |
| 5:M:486:U:H2' | 5:M:487:U:H6 | 1.84 | 0.41 |
| 5:M:522:U:H2' | 5:M:523:U:O5' | 2.20 | 0.41 |
| 5:M:522:U:N3 | 5:M:523:U:C5 | 2.89 | 0.41 |
| 6:N:279:U:C4 | 6:N:280:U:H5 | 2.38 | 0.41 |
| 6:N:312:U:O2' | 6:N:313:U:H5' | 2.21 | 0.41 |
| 6:N:331:U:N3 | 6:N:332:U:C4 | 2.89 | 0.41 |
| 6:N:349:U:C2' | 6:N:350:U:O5' | 2.68 | 0.41 |
| 6:N:413:U:H2' | 6:N:414:U:O5' | 2.21 | 0.41 |
| 1:I:15:A:C6 | 1:I:16:A:N7 | 2.89 | 0.41 |
| 1:I:196:A:N1 | 1:I:197:A:C5 | 2.89 | 0.41 |
| 1:I:222:A:C2 | 1:I:223:A:C8 | 3.09 | 0.41 |
| 1:I:24:A:C2 | 1:I:25:A:C5 | 3.08 | 0.41 |
| 1:I:271:A:C4 | 1:I:272:A:N7 | 2.88 | 0.41 |
| 1:I:46:A:C4 | 1:I:47:A:C8 | 3.07 | 0.41 |
| 2:J:113:A:C2' | 2:J:114:A:C5' | 2.99 | 0.41 |
| 2:J:138:A:C6 | 2:J:139:A:C5 | 3.08 | 0.41 |
| 2:J:170:A:C2 | 2:J:171:A:N9 | 2.88 | 0.41 |
| 2:J:185:A:C2 | 2:J:186:A:C5 | 3.09 | 0.41 |
| 2:J:201:A:N3 | 2:J:202:A:C8 | 2.89 | 0.41 |
| 2:J:30:A:N1 | 5:M:524:U:C4 | 2.88 | 0.41 |
| 2:J:51:A:O2' | 2:J:52:A:O4' | 2.39 | 0.41 |
| 2:J:54:A:HO2' | 2:J:55:A:C4' | 2.33 | 0.41 |
| 2:J:76:A:H2' | 2:J:77:A:H8 | 1.86 | 0.41 |
| 3:K:138:A:H2' | 3:K:139:A:H8 | 1.85 | 0.41 |
| 3:K:160:A:N3 | 3:K:161:A:C8 | 2.88 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 3:K:33:A:O2' | 3:K:34:A:C5' | 2.60 | 0.41 |
| 3:K:69:A:H2' | 3:K:70:A:C8 | 2.56 | 0.41 |
| 3:K:99:A:N3 | 3:K:100:A:C1' | 2.84 | 0.41 |
| 4:L:435:U:C2' | 4:L:436:U:H6 | 2.24 | 0.41 |
| 4:L:451:U:N3 | 4:L:452:U:C4 | 2.89 | 0.41 |
| 4:L:542:U:C4 | 4:L:543:U:C4 | 3.08 | 0.41 |
| 4:L:649:U:N3 | 4:L:650:U:C4 | 2.88 | 0.41 |
| 4:L:694:U:C2 | 4:L:695:U:C5 | 2.98 | 0.41 |
| 4:L:724:U:N3 | 4:L:725:U:C5 | 2.89 | 0.41 |
| 4:L:772:U:H2' | 4:L:773:U:O5' | 2.21 | 0.41 |
| 4:L:800:U:C4 | 4:L:801:U:C5 | 3.09 | 0.41 |
| 5:M:392:U:C2 | 5:M:393:U:C5 | 3.09 | 0.41 |
| 5:M:465:U:C4 | 5:M:466:U:H5 | 2.34 | 0.41 |
| 5:M:479:U:H2' | 5:M:480:U:C6 | 2.53 | 0.41 |
| 5:M:534:U:H2' | 5:M:535:U:C5 | 2.56 | 0.41 |
| 6:N:321:U:C2' | 6:N:322:U:H6 | 2.32 | 0.41 |
| 6:N:406:U:O4 | 6:N:407:U:O4 | 2.39 | 0.41 |
| 3:K:119:A:C2 | 6:N:413:U:C2 | 3.09 | 0.41 |
| 6:N:418:U:C2 | 6:N:419:U:H5 | 2.36 | 0.41 |
| 6:N:434:U:O2 | 6:N:435:U:C6 | 2.74 | 0.41 |
| 6:N:451:U:C3' | 6:N:452:U:C5' | 2.70 | 0.41 |
| 6:N:461:U:N3 | 6:N:462:U:C5 | 2.89 | 0.41 |
| 6:N:472:U:N3 | 6:N:473:U:C4 | 2.88 | 0.41 |
| 1:I:100:A:H2' | 1:I:101:A:C5' | 2.49 | 0.41 |
| 1:I:235:A:C6 | 1:I:236:A:N7 | 2.88 | 0.41 |
| 1:I:270:A:H2' | 1:I:271:A:C8 | 2.56 | 0.41 |
| 1:I:309:A:C2 | 1:I:310:A:C5 | 3.09 | 0.41 |
| 1:I:342:A:C2 | 1:I:343:A:N9 | 2.89 | 0.41 |
| 1:I:359:A:C6 | 1:I:360:A:N7 | 2.89 | 0.41 |
| 1:I:363:A:C5 | 1:I:364:A:N7 | 2.88 | 0.41 |
| 1:I:378:A:O2' | 1:I:379:A:H5' | 2.21 | 0.41 |
| 1:I:68:A:C2 | 1:I:69:A:C5 | 3.08 | 0.41 |
| 2:J:11:A:C2 | 2:J:12:A:N9 | 2.89 | 0.41 |
| 2:J:255:A:C2 | 2:J:256:A:C5 | 3.09 | 0.41 |
| 2:J:33:A:N6 | 2:J:34:A:H62 | 2.19 | 0.41 |
| 2:J:55:A:N1 | 2:J:56:A:C5 | 2.89 | 0.41 |
| 2:J:60:A:C2 | 2:J:61:A:C5 | 3.09 | 0.41 |
| 2:J:68:A:N1 | 2:J:69:A:C5 | 2.88 | 0.41 |
| 2:J:79:A:H2' | 2:J:80:A:O4' | 2.21 | 0.41 |
| 3:K:100:A:N1 | 3:K:101:A:C6 | 2.89 | 0.41 |
| 3:K:113:A:N3 | 3:K:114:A:C8 | 2.89 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 3:K:180:A:N6 | 3:K:181:A:N6 | 2.69 | 0.41 |
| 3:K:195:A:C4 | 3:K:196:A:N7 | 2.89 | 0.41 |
| 3:K:203:A:H2 | 3:K:204:A:C4 | 2.37 | 0.41 |
| 3:K:253:A:N6 | 6:N:279:U:C4 | 2.89 | 0.41 |
| 3:K:67:A:N3 | 3:K:68:A:C8 | 2.89 | 0.41 |
| 4:L:424:U:C6 | 4:L:425:U:C5 | 3.09 | 0.41 |
| 4:L:458:U:H2' | 4:L:459:U:O4' | 2.20 | 0.41 |
| 4:L:460:U:O2 | 4:L:461:U:C6 | 2.74 | 0.41 |
| 4:L:462:U:H2' | 4:L:463:U:H6 | 1.84 | 0.41 |
| 4:L:533:U:C2 | 4:L:534:U:C5 | 3.09 | 0.41 |
| 4:L:534:U:N3 | 4:L:535:U:C4 | 2.89 | 0.41 |
| 4:L:542:U:C4 | 4:L:543:U:C5 | 3.08 | 0.41 |
| 4:L:548:U:N3 | 4:L:549:U:C4 | 2.89 | 0.41 |
| 4:L:551:U:C2 | 4:L:552:U:H5 | 2.33 | 0.41 |
| 4:L:555:U:O2' | 4:L:556:U:C5' | 2.65 | 0.41 |
| 4:L:592:U:H2' | 4:L:593:U:O5' | 2.21 | 0.41 |
| 4:L:601:U:H2' | 4:L:602:U:C5' | 2.51 | 0.41 |
| 4:L:631:U:C2 | 4:L:632:U:C5 | 3.09 | 0.41 |
| 4:L:637:U:C2' | 4:L:638:U:C6 | 2.89 | 0.41 |
| 4:L:660:U:H2' | 4:L:661:U:C5' | 2.45 | 0.41 |
| 4:L:759:U:O2 | 4:L:760:U:C1' | 2.69 | 0.41 |
| 4:L:770:U:C5 | 4:L:771:U:H5 | 2.39 | 0.41 |
| 5:M:362:U:H2' | 5:M:363:U:C6 | 2.56 | 0.41 |
| 5:M:408:U:O2 | 5:M:409:U:O4' | 2.38 | 0.41 |
| 5:M:429:U:C2' | 5:M:430:U:O5' | 2.69 | 0.41 |
| 5:M:435:U:C2' | 5:M:436:U:C6 | 2.84 | 0.41 |
| 6:N:272:U:C2 | 6:N:273:U:C5 | 3.09 | 0.41 |
| 6:N:326:U:C2' | 6:N:327:U:H6 | 2.23 | 0.41 |
| 6:N:400:U:O2 | 6:N:401:U:C6 | 2.73 | 0.41 |
| 6:N:449:U:O2' | 6:N:450:U:O4' | 2.38 | 0.41 |
| 6:N:459:U:N3 | 6:N:460:U:C4 | 2.89 | 0.41 |
| 6:N:481:U:C2' | 6:N:482:U:O4' | 2.68 | 0.41 |
| 6:N:496:U:C2 | 6:N:497:U:C6 | 3.09 | 0.41 |
| 1:I:159:A:C2 | 1:I:160:A:C4 | 3.09 | 0.41 |
| 1:I:170:A:O2' | 1:I:171:A:H5' | 2.20 | 0.41 |
| 1:I:233:A:N1 | 1:I:234:A:C5 | 2.88 | 0.41 |
| 1:I:247:A:C2 | 1:I:248:A:C5 | 3.09 | 0.41 |
| 1:I:246:A:C4 | 1:I:247:A:C8 | 3.08 | 0.41 |
| 1:I:271:A:C2 | 4:L:555:U:N3 | 2.89 | 0.41 |
| 1:I:309:A:C4 | 1:I:310:A:C8 | 3.09 | 0.41 |
| 1:I:323:A:H2 | 1:I:324:A:H1' | 1.84 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:397:A:H2' | 1:I:398:A:H8 | 1.86 | 0.41 |
| 1:I:3:A:O2' | 1:I:4:A:H5' | 2.20 | 0.41 |
| 1:I:50:A:C4 | 1:I:51:A:C8 | 3.09 | 0.41 |
| 1:I:57:A:O2' | 1:I:58:A:H5' | 2.20 | 0.41 |
| 1:I:90:A:O2' | 1:I:91:A:O4' | 2.38 | 0.41 |
| 2:J:101:A:H62 | 2:J:102:A:H62 | 1.56 | 0.41 |
| 2:J:104:A:C4 | 2:J:105:A:C8 | 3.08 | 0.41 |
| 2:J:113:A:N3 | 2:J:114:A:C8 | 2.89 | 0.41 |
| 2:J:205:A:C5 | 2:J:206:A:C8 | 3.08 | 0.41 |
| 2:J:220:A:N1 | 2:J:221:A:C5 | 2.89 | 0.41 |
| 2:J:240:A:C2' | 2:J:241:A:H5' | 2.49 | 0.41 |
| 2:J:252:A:C2' | 2:J:253:A:O5' | 2.69 | 0.41 |
| 2:J:266:A:C2 | 2:J:267:A:C5 | 3.09 | 0.41 |
| 2:J:90:A:C6 | 2:J:91:A:C5 | 3.09 | 0.41 |
| 3:K:129:A:H2' | 3:K:130:A:C8 | 2.53 | 0.41 |
| 3:K:212:A:C8 | 3:K:213:A:N7 | 2.89 | 0.41 |
| 3:K:89:A:C6 | 3:K:90:A:N6 | 2.89 | 0.41 |
| 3:K:94:A:C6 | 3:K:95:A:N6 | 2.89 | 0.41 |
| 4:L:541:U:C4 | 4:L:542:U:C5 | 3.08 | 0.41 |
| 4:L:551:U:H2' | 4:L:552:U:C5 | 2.56 | 0.41 |
| 4:L:567:U:H2' | 4:L:568:U:H6 | 1.86 | 0.41 |
| 4:L:638:U:H2' | 4:L:639:U:H6 | 1.86 | 0.41 |
| 4:L:666:U:C4 | 4:L:667:U:O4 | 2.74 | 0.41 |
| 4:L:740:U:C4 | 4:L:741:U:C4 | 3.09 | 0.41 |
| 4:L:774:U:O2 | 4:L:775:U:C6 | 2.74 | 0.41 |
| 4:L:775:U:N3 | 4:L:776:U:C5 | 2.89 | 0.41 |
| 5:M:319:U:H2' | 5:M:320:U:H6 | 1.86 | 0.41 |
| 5:M:339:U:C2 | 5:M:340:U:C6 | 3.08 | 0.41 |
| 5:M:360:U:N3 | 5:M:361:U:C5 | 2.89 | 0.41 |
| 6:N:343:U:H2' | 6:N:344:U:H6 | 1.86 | 0.41 |
| 6:N:419:U:O2 | 6:N:420:U:C6 | 2.74 | 0.41 |
| 6:N:428:U:HO2' | 6:N:429:U:H5' | 1.86 | 0.41 |
| 6:N:491:U:C2 | 6:N:492:U:C5 | 3.09 | 0.41 |
| 1:I:13:A:N3 | 1:I:14:A:C4 | 2.90 | 0.40 |
| 1:I:149:A:C3' | 1:I:150:A:OP2 | 2.68 | 0.40 |
| 1:I:151:A:H2' | 1:I:152:A:H8 | 1.86 | 0.40 |
| 1:I:159:A:H2' | 1:I:160:A:O5' | 2.20 | 0.40 |
| 1:I:165:A:H2' | 1:I:166:A:C8 | 2.56 | 0.40 |
| 1:I:173:A:N6 | 1:I:174:A:H62 | 2.18 | 0.40 |
| 1:I:182:A:C2' | 1:I:183:A:C5' | 2.98 | 0.40 |
| 1:I:218:A:C2 | 1:I:219:A:C5 | 3.09 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 1:I:230:A:H2' | 1:I:231:A:H8 | 1.86 | 0.40 |
| 1:I:274:A:O2' | 1:I:275:A:P | 2.71 | 0.40 |
| 1:I:298:A:C2' | 1:I:299:A:H5' | 2.51 | 0.40 |
| 1:I:335:A:H61 | 1:I:336:A:N6 | 2.01 | 0.40 |
| 1:I:342:A:N1 | 1:I:343:A:C5 | 2.89 | 0.40 |
| 1:I:372:A:H2' | 1:I:373:A:O5' | 2.21 | 0.40 |
| 1:I:387:A:C6 | 1:I:388:A:C5 | 3.08 | 0.40 |
| 1:I:53:A:C2 | 1:I:54:A:N9 | 2.89 | 0.40 |
| 1:I:61:A:O2' | 1:I:62:A:C5' | 2.64 | 0.40 |
| 1:I:70:A:H2' | 1:I:71:A:O5' | 2.21 | 0.40 |
| 2:J:76:A:C2 | 2:J:77:A:C8 | 3.08 | 0.40 |
| 2:J:78:A:H2' | 2:J:79:A:C5' | 2.51 | 0.40 |
| 2:J:84:A:H2' | 2:J:85:A:C4' | 2.51 | 0.40 |
| 2:J:97:A:C2 | 2:J:98:A:C6 | 3.03 | 0.40 |
| 3:K:109:A:H2' | 3:K:110:A:C5' | 2.51 | 0.40 |
| 3:K:11:A:HO3' | 3:K:12:A:P | 2.36 | 0.40 |
| 3:K:155:A:C2 | 3:K:156:A:C5 | 3.10 | 0.40 |
| 3:K:96:A:H2' | 3:K:97:A:C5' | 2.44 | 0.40 |
| 4:L:419:U:H2' | 4:L:420:U:C5 | 2.55 | 0.40 |
| 4:L:432:U:C2 | 4:L:433:U:C5 | 3.09 | 0.40 |
| 4:L:444:U:H2' | 4:L:445:U:C6 | 2.57 | 0.40 |
| 4:L:476:U:C2 | 4:L:477:U:C5 | 3.09 | 0.40 |
| 4:L:482:U:N3 | 4:L:483:U:C5 | 2.89 | 0.40 |
| 4:L:513:U:C2' | 4:L:514:U:O5' | 2.69 | 0.40 |
| 4:L:543:U:C4 | 4:L:544:U:C4 | 3.04 | 0.40 |
| 4:L:554:U:N3 | 4:L:555:U:C4 | 2.89 | 0.40 |
| 4:L:563:U:C4 | 4:L:564:U:C4 | 3.09 | 0.40 |
| 4:L:669:U:H2' | 4:L:670:U:O4' | 2.21 | 0.40 |
| 4:L:715:U:O2 | 4:L:716:U:C1' | 2.69 | 0.40 |
| 5:M:321:U:H2' | 5:M:322:U:C6 | 2.56 | 0.40 |
| 5:M:411:U:N3 | 5:M:412:U:C5 | 2.89 | 0.40 |
| 5:M:417:U:C2 | 5:M:418:U:C6 | 3.07 | 0.40 |
| 5:M:427:U:H2' | 5:M:428:U:C6 | 2.55 | 0.40 |
| 5:M:460:U:C2' | 5:M:461:U:O5' | 2.66 | 0.40 |
| 5:M:461:U:O2 | 5:M:462:U:C6 | 2.74 | 0.40 |
| 5:M:472:U:N3 | 5:M:473:U:C4 | 2.90 | 0.40 |
| 6:N:379:U:O2' | 6:N:380:U:C4' | 2.69 | 0.40 |
| 6:N:481:U:HO2' | 6:N:482:U:C5' | 1.92 | 0.40 |
| 6:N:500:U:H2' | 6:N:501:U:C6 | 2.55 | 0.40 |
| 6:N:514:U:O2' | 6:N:515:U:H5' | 2.21 | 0.40 |
| 6:N:528:U:C2 | 6:N:529:U:C5 | 3.09 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 1:I:127:A:C2 | 1:I:128:A:C4 | 3.09 | 0.40 |
| 1:I:144:A:N6 | 1:I:145:A:N6 | 2.69 | 0.40 |
| 1:I:177:A:C2 | 1:I:178:A:C4 | 3.10 | 0.40 |
| 1:I:202:A:H2' | 1:I:203:A:O4' | 2.22 | 0.40 |
| 1:I:21:A:N3 | 1:I:22:A:C8 | 2.89 | 0.40 |
| 1:I:253:A:C2' | 1:I:254:A:H8 | 2.31 | 0.40 |
| 1:I:273:A:C2 | 1:I:274:A:N9 | 2.89 | 0.40 |
| 1:I:286:A:N1 | 1:I:287:A:C5 | 2.90 | 0.40 |
| 1:I:292:A:C2 | 1:I:293:A:N7 | 2.89 | 0.40 |
| 1:I:347:A:C2' | 1:I:348:A:O5' | 2.68 | 0.40 |
| 1:I:45:A:C2' | 1:I:46:A:O5' | 2.68 | 0.40 |
| 1:I:50:A:C5 | 1:I:51:A:N7 | 2.89 | 0.40 |
| 1:I:85:A:H2' | 1:I:86:A:H8 | 1.86 | 0.40 |
| 2:J:132:A:H2' | 2:J:133:A:H8 | 1.86 | 0.40 |
| 2:J:12:A:H2' | 2:J:13:A:C5' | 2.51 | 0.40 |
| 2:J:167:A:H2' | 2:J:168:A:H8 | 1.86 | 0.40 |
| 2:J:207:A:C2 | 2:J:208:A:C4 | 3.09 | 0.40 |
| 2:J:267:A:N3 | 2:J:268:A:C8 | 2.90 | 0.40 |
| 2:J:30:A:H2' | 2:J:31:A:O5' | 2.21 | 0.40 |
| 2:J:35:A:C4 | 2:J:36:A:C8 | 3.09 | 0.40 |
| 2:J:36:A:C4 | 2:J:37:A:N7 | 2.89 | 0.40 |
| 2:J:43:A:N3 | 2:J:44:A:N9 | 2.68 | 0.40 |
| 3:K:122:A:N1 | 3:K:123:A:C5 | 2.88 | 0.40 |
| 3:K:128:A:N1 | 3:K:129:A:C5 | 2.89 | 0.40 |
| 3:K:131:A:C4 | 3:K:132:A:C8 | 3.09 | 0.40 |
| 3:K:164:A:H2' | 3:K:165:A:C8 | 2.56 | 0.40 |
| 3:K:165:A:C6 | 3:K:166:A:C5 | 3.09 | 0.40 |
| 3:K:72:A:C2' | 3:K:73:A:H5' | 2.51 | 0.40 |
| 3:K:79:A:C2 | 3:K:80:A:C5 | 3.08 | 0.40 |
| 3:K:91:A:N3 | 3:K:92:A:C8 | 2.89 | 0.40 |
| 3:K:93:A:N1 | 3:K:94:A:C5 | 2.89 | 0.40 |
| 3:K:93:A:N3 | 3:K:94:A:C8 | 2.89 | 0.40 |
| 4:L:420:U:C4 | 4:L:421:U:C4 | 3.09 | 0.40 |
| 4:L:577:U:C5 | 4:L:578:U:H5 | 2.39 | 0.40 |
| 4:L:601:U:N3 | 4:L:602:U:C4 | 2.88 | 0.40 |
| 4:L:702:U:C2' | 4:L:703:U:O5' | 2.69 | 0.40 |
| 4:L:740:U:H2' | 4:L:741:U:C4' | 2.51 | 0.40 |
| 4:L:792:U:N3 | 4:L:793:U:C5 | 2.89 | 0.40 |
| 4:L:806:U:O2 | 4:L:807:U:C6 | 2.74 | 0.40 |
| 4:L:822:U:C2 | 4:L:823:U:C5 | 3.09 | 0.40 |
| 5:M:285:U:C2 | 5:M:286:U:C6 | 3.10 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 5:M:292:U:H2' | 5:M:293:U:C6 | 2.54 | 0.40 |
| 5:M:309:U:H2' | 5:M:310:U:H6 | 1.86 | 0.40 |
| 5:M:352:U:C2' | 5:M:353:U:O5' | 2.67 | 0.40 |
| 5:M:404:U:N3 | 5:M:405:U:C4 | 2.89 | 0.40 |
| 2:J:146:A:N6 | 5:M:408:U:O4 | 2.54 | 0.40 |
| 5:M:426:U:N3 | 5:M:427:U:C5 | 2.88 | 0.40 |
| 5:M:433:U:N1 | 5:M:434:U:H5 | 2.18 | 0.40 |
| 5:M:446:U:C2 | 5:M:447:U:C6 | 3.09 | 0.40 |
| 5:M:523:U:H2' | 5:M:524:U:C6 | 2.55 | 0.40 |
| 6:N:316:U:O2' | 6:N:317:U:C5' | 2.69 | 0.40 |
| 6:N:360:U:C2 | 6:N:361:U:C6 | 3.10 | 0.40 |
| 6:N:368:U:H2' | 6:N:369:U:H6 | 1.85 | 0.40 |
| 6:N:417:U:N3 | 6:N:418:U:C5 | 2.89 | 0.40 |
| 6:N:439:U:C2' | 6:N:440:U:C5' | 2.99 | 0.40 |
| 6:N:450:U:C2' | 6:N:451:U:C6 | 2.94 | 0.40 |
| 6:N:502:U:C2' | 6:N:503:U:H5' | 2.50 | 0.40 |
| 1:I:142:A:C2 | 1:I:143:A:C5 | 3.09 | 0.40 |
| 1:I:189:A:H2' | 1:I:190:A:O5' | 2.21 | 0.40 |
| 1:I:200:A:N3 | 1:I:201:A:C8 | 2.89 | 0.40 |
| 1:I:277:A:H61 | 1:I:278:A:N6 | 2.02 | 0.40 |
| 1:I:332:A:N3 | 1:I:333:A:C8 | 2.90 | 0.40 |
| 1:I:337:A:C4 | 1:I:338:A:C8 | 3.10 | 0.40 |
| 1:I:341:A:C5 | 1:I:342:A:N7 | 2.90 | 0.40 |
| 1:I:374:A:C2' | 1:I:375:A:H5' | 2.47 | 0.40 |
| 1:I:37:A:H2' | 1:I:38:A:O5' | 2.21 | 0.40 |
| 1:I:37:A:N1 | 1:I:38:A:C5 | 2.90 | 0.40 |
| 1:I:48:A:C2 | 1:I:49:A:C8 | 3.09 | 0.40 |
| 1:I:3:A:N3 | 1:I:4:A:C8 | 2.89 | 0.40 |
| 2:J:166:A:C2' | 2:J:167:A:O5' | 2.69 | 0.40 |
| 2:J:175:A:C2 | 2:J:176:A:C4 | 3.10 | 0.40 |
| 2:J:204:A:H62 | 2:J:205:A:H62 | 1.57 | 0.40 |
| 2:J:263:A:H2' | 2:J:264:A:H8 | 1.86 | 0.40 |
| 2:J:68:A:C6 | 2:J:69:A:C6 | 3.10 | 0.40 |
| 2:J:71:A:N1 | 2:J:72:A:C6 | 2.88 | 0.40 |
| 3:K:129:A:C2 | 3:K:130:A:C4 | 3.09 | 0.40 |
| 3:K:161:A:C2 | 3:K:162:A:C8 | 3.10 | 0.40 |
| 3:K:160:A:H2' | 3:K:161:A:O4' | 2.22 | 0.40 |
| 3:K:165:A:O2' | 3:K:166:A:C4' | 2.66 | 0.40 |
| 3:K:197:A:O2' | 3:K:198:A:H5' | 2.21 | 0.40 |
| 3:K:199:A:N6 | 3:K:200:A:N6 | 2.70 | 0.40 |
| 3:K:42:A:C2' | 3:K:43:A:O4' | 2.68 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 3:K:57:A:N1 | 3:K:58:A:C6 | 2.89 | 0.40 |
| 4:L:567:U:C2 | 4:L:568:U:C5 | 3.10 | 0.40 |
| 4:L:692:U:H2' | 4:L:693:U:C5' | 2.49 | 0.40 |
| 4:L:788:U:C2 | 4:L:789:U:C5 | 3.08 | 0.40 |
| 5:M:303:U:C2 | 5:M:304:U:C6 | 3.08 | 0.40 |
| 5:M:323:U:C2 | 5:M:324:U:N1 | 2.90 | 0.40 |
| 5:M:403:U:H2' | 5:M:404:U:H6 | 1.86 | 0.40 |
| 5:M:486:U:N3 | 5:M:487:U:C5 | 2.89 | 0.40 |
| 6:N:310:U:C2 | 6:N:311:U:C6 | 3.09 | 0.40 |
| 6:N:312:U:C2 | 6:N:313:U:C6 | 3.09 | 0.40 |
| 6:N:312:U:C2' | 6:N:313:U:H5' | 2.50 | 0.40 |
| 6:N:322:U:N3 | 6:N:323:U:C4 | 2.90 | 0.40 |
| 6:N:362:U:H2' | 6:N:363:U:C5' | 2.47 | 0.40 |
| 6:N:425:U:O2 | 6:N:426:U:C6 | 2.72 | 0.40 |
| 6:N:517:U:H2' | 6:N:518:U:C6 | 2.56 | 0.40 |
| 6:N:517:U:O3' | 6:N:518:U:OP2 | 2.39 | 0.40 |
| 6:N:520:U:H2' | 6:N:521:U:H6 | 1.87 | 0.40 |
| 1:I:157:A:C2' | 1:I:158:A:O5' | 2.69 | 0.40 |
| 1:I:239:A:H2' | 1:I:240:A:C8 | 2.48 | 0.40 |
| 1:I:239:A:N3 | 1:I:240:A:N9 | 2.70 | 0.40 |
| 1:I:271:A:H2' | 1:I:272:A:C8 | 2.49 | 0.40 |
| 1:I:305:A:C6 | 1:I:306:A:C5 | 3.10 | 0.40 |
| 1:I:319:A:C4 | 1:I:320:A:C8 | 3.09 | 0.40 |
| 1:I:326:A:C2' | 1:I:327:A:O5' | 2.69 | 0.40 |
| 1:I:354:A:N6 | 1:I:355:A:N6 | 2.70 | 0.40 |
| 1:I:397:A:N6 | 1:I:398:A:N6 | 2.70 | 0.40 |
| 1:I:79:A:N6 | 1:I:80:A:C6 | 2.90 | 0.40 |
| 2:J:116:A:N1 | 2:J:117:A:N6 | 2.70 | 0.40 |
| 2:J:193:A:C5 | 2:J:194:A:N7 | 2.90 | 0.40 |
| 2:J:214:A:HO2' | 2:J:215:A:C5' | 2.04 | 0.40 |
| 2:J:229:A:H2' | 2:J:230:A:C4' | 2.44 | 0.40 |
| 2:J:65:A:C6 | 2:J:66:A:C5 | 3.09 | 0.40 |
| 3:K:41:A:C2' | 3:K:42:A:O5' | 2.69 | 0.40 |
| 4:L:421:U:C2' | 4:L:422:U:C4' | 2.99 | 0.40 |
| 4:L:477:U:O2 | 4:L:478:U:O4' | 2.39 | 0.40 |
| 4:L:607:U:C2' | 4:L:608:U:H5' | 2.51 | 0.40 |
| 4:L:674:U:C2' | 4:L:675:U:C4' | 2.93 | 0.40 |
| 4:L:702:U:C2 | 4:L:703:U:C6 | 3.09 | 0.40 |
| 4:L:737:U:H2' | 4:L:738:U:H6 | 1.87 | 0.40 |
| 4:L:801:U:C2 | 4:L:802:U:C6 | 3.09 | 0.40 |
| 5:M:300:U:C2' | 5:M:301:U:O5' | 2.67 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|----------------|---------------|--------------------------|-------------------|
| 5:M:323:U:C2' | 5:M:324:U:H6 | 2.24 | 0.40 |
| 5:M:421:U:O4 | 5:M:422:U:O4 | 2.39 | 0.40 |
| 5:M:496:U:N3 | 5:M:497:U:C5 | 2.90 | 0.40 |
| 6:N:374:U:HO2' | 6:N:375:U:C4' | 2.35 | 0.40 |
| 6:N:475:U:C2' | 6:N:476:U:O5' | 2.70 | 0.40 |
| 1:I:166:A:H2' | 1:I:167:A:O5' | 2.21 | 0.40 |
| 1:I:197:A:C2 | 1:I:198:A:N7 | 2.89 | 0.40 |
| 1:I:224:A:C2 | 1:I:225:A:C5 | 3.09 | 0.40 |
| 1:I:22:A:H2' | 1:I:23:A:O5' | 2.22 | 0.40 |
| 1:I:264:A:C2 | 1:I:265:A:C5 | 3.09 | 0.40 |
| 1:I:273:A:N1 | 1:I:274:A:C4 | 2.89 | 0.40 |
| 1:I:279:A:H2 | 1:I:280:A:C4 | 2.37 | 0.40 |
| 1:I:345:A:N3 | 1:I:346:A:C8 | 2.89 | 0.40 |
| 1:I:363:A:O2' | 1:I:364:A:H5' | 2.21 | 0.40 |
| 1:I:68:A:N6 | 1:I:69:A:N6 | 2.69 | 0.40 |
| 2:J:110:A:H2' | 2:J:111:A:H8 | 1.87 | 0.40 |
| 2:J:112:A:N3 | 2:J:113:A:C8 | 2.89 | 0.40 |
| 2:J:146:A:N1 | 2:J:147:A:C5 | 2.90 | 0.40 |
| 2:J:190:A:C4 | 2:J:191:A:N7 | 2.90 | 0.40 |
| 2:J:226:A:O2' | 2:J:227:A:H5' | 2.21 | 0.40 |
| 2:J:264:A:N3 | 2:J:265:A:C8 | 2.89 | 0.40 |
| 2:J:42:A:N3 | 2:J:43:A:C8 | 2.89 | 0.40 |
| 2:J:48:A:C2 | 2:J:49:A:C8 | 3.09 | 0.40 |
| 2:J:59:A:H2' | 2:J:60:A:C5' | 2.51 | 0.40 |
| 2:J:72:A:H2' | 2:J:73:A:O5' | 2.21 | 0.40 |
| 2:J:99:A:O2' | 2:J:100:A:C4' | 2.69 | 0.40 |
| 3:K:103:A:C4 | 3:K:104:A:N7 | 2.90 | 0.40 |
| 3:K:123:A:N3 | 3:K:124:A:C8 | 2.89 | 0.40 |
| 3:K:172:A:C2 | 3:K:173:A:C5 | 3.10 | 0.40 |
| 3:K:172:A:N1 | 3:K:173:A:C5 | 2.90 | 0.40 |
| 3:K:234:A:C6 | 3:K:235:A:C6 | 3.08 | 0.40 |
| 3:K:92:A:C2 | 3:K:93:A:C8 | 3.10 | 0.40 |
| 4:L:494:U:H2' | 4:L:495:U:O5' | 2.22 | 0.40 |
| 4:L:541:U:H2' | 4:L:542:U:C5' | 2.51 | 0.40 |
| 4:L:553:U:O2 | 4:L:554:U:C6 | 2.72 | 0.40 |
| 4:L:587:U:HO2' | 4:L:588:U:C4' | 2.34 | 0.40 |
| 4:L:653:U:H2' | 4:L:654:U:C6 | 2.56 | 0.40 |
| 4:L:672:U:O4 | 4:L:673:U:O4 | 2.39 | 0.40 |
| 4:L:709:U:N3 | 4:L:710:U:C5 | 2.90 | 0.40 |
| 4:L:722:U:H2' | 4:L:724:U:H5 | 1.87 | 0.40 |
| 4:L:745:U:O2' | 4:L:746:U:H5' | 2.22 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|---------------|--------------------------|-------------------|
| 4:L:821:U:H2' | 4:L:822:U:C5' | 2.51 | 0.40 |
| 5:M:296:U:C4 | 5:M:297:U:C5 | 3.10 | 0.40 |
| 5:M:392:U:O2 | 5:M:393:U:C6 | 2.75 | 0.40 |
| 2:J:144:A:N1 | 5:M:410:U:C2 | 2.87 | 0.40 |
| 5:M:511:U:C2' | 5:M:512:U:H6 | 2.33 | 0.40 |
| 6:N:282:U:N3 | 6:N:283:U:C5 | 2.89 | 0.40 |
| 6:N:294:U:C2 | 6:N:295:U:C6 | 3.09 | 0.40 |
| 6:N:300:U:C4 | 6:N:301:U:O4 | 2.75 | 0.40 |
| 6:N:494:U:H2' | 6:N:495:U:H6 | 1.86 | 0.40 |

All (2447) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:150:A:OP2 | 4:L:465:U:C3'[3_556] | 0.12 | 2.08 |
| 4:L:752:U:OP2 | 5:M:500:U:P[3_556] | 0.21 | 1.99 |
| 4:L:758:U:C5' | 5:M:510:U:N3[3_556] | 0.23 | 1.97 |
| 2:J:48:A:C1' | 4:L:754:U:O3'[3_546] | 0.25 | 1.95 |
| 2:J:43:A:C1' | 4:L:759:U:C2'[3_546] | 0.28 | 1.92 |
| 2:J:46:A:C4 | 4:L:756:U:N1[3_546] | 0.30 | 1.90 |
| 3:K:143:A:N1 | 5:M:390:U:C6[4_556] | 0.31 | 1.89 |
| 2:J:170:A:C5 | 3:K:150:A:C8[4_456] | 0.34 | 1.86 |
| 4:L:752:U:C1' | 5:M:499:U:OP1[3_556] | 0.36 | 1.84 |
| 2:J:169:A:O2' | 3:K:151:A:C6[4_456] | 0.36 | 1.84 |
| 4:L:751:U:C2' | 5:M:499:U:C5'[3_556] | 0.36 | 1.84 |
| 3:K:12:A:C8 | 5:M:313:U:O4[2_664] | 0.38 | 1.82 |
| 4:L:469:U:O4 | 4:L:679:U:N1[3_546] | 0.38 | 1.82 |
| 1:I:67:A:C2 | 2:J:44:A:O3'[3_556] | 0.38 | 1.82 |
| 1:I:150:A:OP1 | 4:L:465:U:O2'[3_556] | 0.39 | 1.81 |
| 2:J:48:A:C3' | 4:L:754:U:C4'[3_546] | 0.41 | 1.79 |
| 1:I:62:A:C1' | 5:M:504:U:C2'[3_556] | 0.42 | 1.78 |
| 3:K:142:A:C2 | 5:M:390:U:C5'[4_556] | 0.42 | 1.78 |
| 4:L:469:U:C6 | 4:L:679:U:C3'[3_546] | 0.42 | 1.78 |
| 1:I:64:A:N3 | 5:M:503:U:P[3_556] | 0.43 | 1.77 |
| 1:I:67:A:N1 | 2:J:45:A:P[3_556] | 0.43 | 1.77 |
| 1:I:65:A:C3' | 5:M:502:U:O5'[3_556] | 0.44 | 1.76 |
| 1:I:66:A:P | 5:M:502:U:OP2[3_556] | 0.44 | 1.76 |
| 2:J:43:A:O4' | 4:L:760:U:C5'[3_546] | 0.45 | 1.75 |
| 1:I:143:A:C1' | 4:L:471:U:O2'[3_556] | 0.45 | 1.75 |
| 3:K:148:A:P | 5:M:385:U:O5'[4_556] | 0.46 | 1.74 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:62:A:N7 | 5:M:505:U:P[3_556] | 0.46 | 1.74 |
| 2:J:44:A:OP2 | 4:L:760:U:C5[3_546] | 0.47 | 1.73 |
| 5:M:391:U:O2' | 6:N:389:U:OP2[4_456] | 0.47 | 1.73 |
| 1:I:70:A:N1 | 2:J:46:A:C3'[3_556] | 0.48 | 1.72 |
| 5:M:391:U:C5 | 6:N:388:U:O2[4_456] | 0.48 | 1.72 |
| 1:I:64:A:C4' | 5:M:502:U:O2[3_556] | 0.48 | 1.72 |
| 3:K:143:A:N7 | 5:M:389:U:O2'[4_556] | 0.49 | 1.71 |
| 2:J:168:A:P | 6:N:383:U:O5'[4_456] | 0.49 | 1.71 |
| 2:J:240:A:OP1 | 6:N:514:U:OP1[2_666] | 0.50 | 1.70 |
| 2:J:48:A:N9 | 4:L:755:U:P[3_546] | 0.50 | 1.70 |
| 2:J:164:A:O4' | 6:N:387:U:O5'[4_456] | 0.51 | 1.69 |
| 3:K:144:A:O5' | 5:M:389:U:P[4_556] | 0.51 | 1.69 |
| 2:J:169:A:OP2 | 6:N:382:U:C1'[4_456] | 0.51 | 1.69 |
| 1:I:65:A:O4' | 5:M:502:U:C4'[3_556] | 0.52 | 1.68 |
| 2:J:47:A:N9 | 4:L:755:U:N1[3_546] | 0.52 | 1.68 |
| 3:K:149:A:O4' | 5:M:383:U:N3[4_556] | 0.53 | 1.67 |
| 2:J:44:A:C8 | 4:L:759:U:C6[3_546] | 0.53 | 1.67 |
| 2:J:243:A:C8 | 6:N:517:U:C2[2_666] | 0.54 | 1.66 |
| 2:J:48:A:C5' | 4:L:754:U:C1'[3_546] | 0.55 | 1.65 |
| 2:J:164:A:C6 | 6:N:387:U:N3[4_456] | 0.55 | 1.65 |
| 2:J:169:A:N3 | 3:K:150:A:N6[4_456] | 0.55 | 1.65 |
| 2:J:242:A:O3' | 3:K:15:A:C4[2_666] | 0.55 | 1.65 |
| 2:J:165:A:OP2 | 6:N:386:U:C4'[4_456] | 0.56 | 1.64 |
| 4:L:757:U:C4' | 5:M:509:U:C2[3_556] | 0.56 | 1.64 |
| 3:K:12:A:C4 | 5:M:313:U:C5[2_664] | 0.57 | 1.63 |
| 1:I:63:A:C3' | 5:M:503:U:O2[3_556] | 0.57 | 1.63 |
| 1:I:62:A:C2 | 5:M:504:U:C5'[3_556] | 0.57 | 1.63 |
| 2:J:43:A:N9 | 4:L:759:U:C3'[3_546] | 0.58 | 1.62 |
| 2:J:47:A:C3' | 4:L:754:U:C2[3_546] | 0.59 | 1.61 |
| 1:I:63:A:N3 | 5:M:503:U:O3'[3_556] | 0.59 | 1.61 |
| 2:J:244:A:N6 | 6:N:517:U:C5'[2_666] | 0.60 | 1.60 |
| 1:I:65:A:OP1 | 5:M:502:U:C5[3_556] | 0.60 | 1.60 |
| 1:I:62:A:C8 | 5:M:505:U:O5'[3_556] | 0.60 | 1.60 |
| 1:I:143:A:C5 | 4:L:471:U:O4'[3_556] | 0.60 | 1.60 |
| 4:L:756:U:O3' | 5:M:508:U:N3[3_556] | 0.60 | 1.60 |
| 3:K:149:A:C4' | 5:M:383:U:C2[4_556] | 0.61 | 1.59 |
| 3:K:142:A:N1 | 5:M:390:U:C4'[4_556] | 0.61 | 1.59 |
| 5:M:312:U:C4' | 6:N:519:U:O2[2_666] | 0.61 | 1.59 |
| 3:K:149:A:OP2 | 5:M:384:U:C1'[4_556] | 0.61 | 1.59 |
| 2:J:44:A:N3 | 4:L:758:U:N1[3_546] | 0.61 | 1.59 |
| 2:J:46:A:N9 | 4:L:756:U:C2[3_546] | 0.62 | 1.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 5:M:391:U:C2 | 6:N:388:U:C2'[4_456] | 0.62 | 1.58 |
| 1:I:64:A:O3' | 5:M:502:U:N1[3_556] | 0.62 | 1.58 |
| 4:L:751:U:C3' | 5:M:499:U:C4'[3_556] | 0.63 | 1.57 |
| 2:J:242:A:C2 | 6:N:518:U:O4[2_666] | 0.63 | 1.57 |
| 2:J:46:A:C8 | 4:L:756:U:N3[3_546] | 0.63 | 1.57 |
| 1:I:69:A:C5 | 2:J:45:A:O3'[3_556] | 0.63 | 1.57 |
| 1:I:66:A:C5' | 5:M:502:U:OP1[3_556] | 0.63 | 1.57 |
| 5:M:312:U:O4' | 6:N:519:U:C2[2_666] | 0.64 | 1.56 |
| 2:J:44:A:C1' | 4:L:758:U:O2[3_546] | 0.64 | 1.56 |
| 3:K:143:A:N9 | 5:M:389:U:O3'[4_556] | 0.65 | 1.55 |
| 1:I:59:A:O5' | 2:J:41:A:OP1[3_556] | 0.65 | 1.55 |
| 2:J:44:A:C5' | 4:L:759:U:O2[3_546] | 0.66 | 1.54 |
| 2:J:45:A:N9 | 4:L:757:U:N3[3_546] | 0.66 | 1.54 |
| 1:I:62:A:P | 5:M:505:U:C2'[3_556] | 0.66 | 1.54 |
| 1:I:62:A:C4 | 5:M:504:U:C3'[3_556] | 0.68 | 1.52 |
| 2:J:170:A:O5' | 3:K:151:A:C8[4_456] | 0.68 | 1.52 |
| 1:I:65:A:O3' | 5:M:501:U:O3'[3_556] | 0.68 | 1.52 |
| 1:I:149:A:OP1 | 4:L:465:U:C5[3_556] | 0.68 | 1.52 |
| 2:J:43:A:C2 | 4:L:758:U:C2'[3_546] | 0.68 | 1.52 |
| 2:J:48:A:O4' | 4:L:754:U:C2'[3_546] | 0.68 | 1.52 |
| 5:M:392:U:C5' | 6:N:389:U:OP1[4_456] | 0.69 | 1.51 |
| 1:I:63:A:N3 | 5:M:503:U:C3'[3_556] | 0.69 | 1.51 |
| 2:J:242:A:C4' | 3:K:15:A:C5[2_666] | 0.69 | 1.51 |
| 3:K:145:A:OP2 | 5:M:388:U:O5'[4_556] | 0.70 | 1.50 |
| 3:K:144:A:C6 | 5:M:389:U:N3[4_556] | 0.70 | 1.50 |
| 2:J:169:A:O4' | 6:N:381:U:N3[4_456] | 0.70 | 1.50 |
| 4:L:751:U:O3' | 5:M:499:U:C3'[3_556] | 0.70 | 1.50 |
| 1:I:64:A:C2' | 5:M:502:U:C1'[3_556] | 0.71 | 1.49 |
| 5:M:390:U:C2 | 6:N:388:U:N3[4_456] | 0.71 | 1.49 |
| 3:K:148:A:C4 | 5:M:385:U:O4[4_556] | 0.71 | 1.49 |
| 1:I:351:A:O3' | 4:L:677:U:OP1[3_546] | 0.72 | 1.48 |
| 2:J:43:A:C4' | 4:L:760:U:C4'[3_546] | 0.72 | 1.48 |
| 4:L:469:U:C2' | 4:L:680:U:OP2[3_546] | 0.72 | 1.48 |
| 5:M:390:U:O2 | 6:N:388:U:C4[4_456] | 0.72 | 1.48 |
| 1:I:64:A:C2 | 5:M:503:U:OP1[3_556] | 0.72 | 1.48 |
| 1:I:71:A:N6 | 2:J:47:A:OP1[3_556] | 0.73 | 1.47 |
| 1:I:352:A:OP2 | 4:L:677:U:P[3_546] | 0.73 | 1.47 |
| 1:I:356:A:N6 | 4:L:679:U:N3[3_546] | 0.74 | 1.46 |
| 1:I:62:A:N9 | 5:M:504:U:C3'[3_556] | 0.74 | 1.46 |
| 2:J:43:A:N1 | 4:L:758:U:C3'[3_546] | 0.75 | 1.45 |
| 1:I:69:A:C6 | 2:J:46:A:P[3_556] | 0.75 | 1.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:171:A:OP2 | 3:K:151:A:OP1[4_456] | 0.75 | 1.45 |
| 2:J:171:A:OP2 | 3:K:151:A:P[4_456] | 0.75 | 1.45 |
| 4:L:752:U:O4' | 5:M:499:U:P[3_556] | 0.76 | 1.44 |
| 2:J:169:A:C6 | 3:K:149:A:C6[4_456] | 0.76 | 1.44 |
| 2:J:164:A:N9 | 6:N:387:U:C6[4_456] | 0.76 | 1.44 |
| 1:I:150:A:C8 | 4:L:466:U:OP1[3_556] | 0.77 | 1.43 |
| 3:K:148:A:C5 | 5:M:385:U:O4[4_556] | 0.77 | 1.43 |
| 1:I:63:A:C3' | 5:M:503:U:C2[3_556] | 0.77 | 1.43 |
| 1:I:146:A:N1 | 1:I:356:A:N7[3_556] | 0.78 | 1.42 |
| 1:I:63:A:P | 5:M:504:U:N3[3_556] | 0.78 | 1.42 |
| 3:K:12:A:C4' | 5:M:314:U:C4[2_664] | 0.78 | 1.42 |
| 1:I:63:A:C5 | 5:M:504:U:OP2[3_556] | 0.78 | 1.42 |
| 3:K:144:A:N7 | 5:M:389:U:C6[4_556] | 0.79 | 1.41 |
| 2:J:170:A:N7 | 3:K:150:A:C4[4_456] | 0.79 | 1.41 |
| 1:I:146:A:C5 | 1:I:356:A:C8[3_556] | 0.79 | 1.41 |
| 2:J:171:A:N7 | 3:K:150:A:C5'[4_456] | 0.79 | 1.41 |
| 2:J:48:A:N3 | 4:L:755:U:OP1[3_546] | 0.80 | 1.40 |
| 2:J:163:A:N3 | 6:N:387:U:C2'[4_456] | 0.80 | 1.40 |
| 2:J:169:A:C4' | 6:N:381:U:O2[4_456] | 0.80 | 1.40 |
| 1:I:71:A:N1 | 2:J:47:A:C5'[3_556] | 0.80 | 1.40 |
| 2:J:236:A:O3' | 6:N:522:U:O2'[2_666] | 0.80 | 1.40 |
| 1:I:62:A:N3 | 5:M:504:U:C4'[3_556] | 0.80 | 1.40 |
| 5:M:312:U:P | 6:N:520:U:C5[2_666] | 0.80 | 1.40 |
| 3:K:143:A:N9 | 5:M:389:U:C3'[4_556] | 0.81 | 1.39 |
| 2:J:48:A:P | 4:L:754:U:C5[3_546] | 0.81 | 1.39 |
| 1:I:62:A:C5' | 5:M:505:U:C1'[3_556] | 0.81 | 1.39 |
| 1:I:64:A:C4 | 5:M:503:U:O5'[3_556] | 0.81 | 1.39 |
| 5:M:312:U:O5' | 6:N:520:U:C5[2_666] | 0.82 | 1.38 |
| 1:I:63:A:C6 | 5:M:504:U:OP2[3_556] | 0.82 | 1.38 |
| 1:I:69:A:N6 | 2:J:46:A:OP2[3_556] | 0.82 | 1.38 |
| 1:I:146:A:C6 | 1:I:356:A:N7[3_556] | 0.83 | 1.37 |
| 2:J:169:A:N6 | 3:K:149:A:C6[4_456] | 0.83 | 1.37 |
| 3:K:147:A:C4' | 5:M:386:U:OP2[4_556] | 0.83 | 1.37 |
| 2:J:170:A:P | 3:K:151:A:N9[4_456] | 0.83 | 1.37 |
| 2:J:170:A:O5' | 3:K:151:A:N9[4_456] | 0.83 | 1.37 |
| 1:I:64:A:O2' | 5:M:502:U:C1'[3_556] | 0.83 | 1.37 |
| 3:K:13:A:C4' | 5:M:313:U:O2'[2_664] | 0.84 | 1.36 |
| 1:I:67:A:C6 | 2:J:45:A:OP2[3_556] | 0.84 | 1.36 |
| 1:I:146:A:C3' | 1:I:356:A:OP1[3_556] | 0.84 | 1.36 |
| 2:J:169:A:C4 | 3:K:150:A:N6[4_456] | 0.84 | 1.36 |
| 1:I:62:A:O3' | 5:M:504:U:O2[3_556] | 0.84 | 1.36 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:149:A:C4' | 4:L:466:U:C5[3_556] | 0.85 | 1.35 |
| 2:J:168:A:C4 | 6:N:383:U:O4[4_456] | 0.85 | 1.35 |
| 2:J:169:A:C5' | 6:N:381:U:O2[4_456] | 0.85 | 1.35 |
| 2:J:44:A:C2 | 4:L:758:U:C6[3_546] | 0.85 | 1.35 |
| 2:J:168:A:C5' | 6:N:383:U:OP2[4_456] | 0.85 | 1.35 |
| 2:J:45:A:C8 | 4:L:758:U:C4[3_546] | 0.85 | 1.35 |
| 1:I:146:A:O4' | 1:I:356:A:C5'[3_556] | 0.85 | 1.35 |
| 3:K:144:A:N6 | 5:M:389:U:N3[4_556] | 0.86 | 1.34 |
| 1:I:64:A:OP2 | 5:M:503:U:N3[3_556] | 0.86 | 1.34 |
| 1:I:64:A:C3' | 5:M:502:U:N1[3_556] | 0.86 | 1.34 |
| 4:L:756:U:C3' | 5:M:508:U:N3[3_556] | 0.86 | 1.34 |
| 2:J:244:A:C8 | 6:N:517:U:O2'[2_666] | 0.86 | 1.34 |
| 1:I:64:A:P | 5:M:503:U:N3[3_556] | 0.86 | 1.34 |
| 2:J:170:A:N7 | 3:K:150:A:C5[4_456] | 0.87 | 1.33 |
| 1:I:66:A:O5' | 5:M:502:U:OP1[3_556] | 0.87 | 1.33 |
| 3:K:143:A:C3' | 5:M:389:U:C5'[4_556] | 0.87 | 1.33 |
| 3:K:147:A:O5' | 5:M:386:U:P[4_556] | 0.87 | 1.33 |
| 4:L:469:U:C1' | 4:L:680:U:P[3_546] | 0.88 | 1.32 |
| 2:J:164:A:O2' | 6:N:387:U:OP2[4_456] | 0.88 | 1.32 |
| 1:I:65:A:O3' | 5:M:502:U:P[3_556] | 0.88 | 1.32 |
| 1:I:143:A:N7 | 4:L:471:U:O4'[3_556] | 0.88 | 1.32 |
| 5:M:392:U:O5' | 6:N:389:U:OP1[4_456] | 0.88 | 1.32 |
| 4:L:757:U:C4' | 5:M:509:U:O2[3_556] | 0.88 | 1.32 |
| 2:J:45:A:N9 | 4:L:757:U:C2[3_546] | 0.88 | 1.32 |
| 1:I:69:A:C4 | 2:J:45:A:O3'[3_556] | 0.88 | 1.32 |
| 2:J:44:A:P | 4:L:760:U:C6[3_546] | 0.88 | 1.32 |
| 2:J:44:A:N3 | 4:L:758:U:C6[3_546] | 0.89 | 1.31 |
| 2:J:243:A:C8 | 6:N:517:U:O2[2_666] | 0.89 | 1.31 |
| 3:K:147:A:C6 | 5:M:386:U:O4[4_556] | 0.89 | 1.31 |
| 3:K:12:A:N6 | 5:M:312:U:C4[2_664] | 0.89 | 1.31 |
| 2:J:42:A:O3' | 4:L:761:U:OP2[3_546] | 0.89 | 1.31 |
| 2:J:168:A:N1 | 3:K:148:A:N6[4_456] | 0.90 | 1.30 |
| 1:I:68:A:C2 | 2:J:45:A:C4'[3_556] | 0.90 | 1.30 |
| 2:J:242:A:O3' | 3:K:15:A:N3[2_666] | 0.90 | 1.30 |
| 1:I:146:A:N1 | 1:I:356:A:C5[3_556] | 0.90 | 1.30 |
| 2:J:43:A:C6 | 4:L:759:U:O5'[3_546] | 0.90 | 1.30 |
| 2:J:44:A:P | 4:L:760:U:N1[3_546] | 0.90 | 1.30 |
| 2:J:49:A:OP1 | 4:L:753:U:O2'[3_546] | 0.91 | 1.29 |
| 1:I:64:A:C2' | 5:M:502:U:C2'[3_556] | 0.91 | 1.29 |
| 5:M:391:U:N1 | 6:N:388:U:C2'[4_456] | 0.91 | 1.29 |
| 2:J:167:A:OP1 | 6:N:384:U:OP1[4_456] | 0.91 | 1.29 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 3:K:148:A:OP2 | 5:M:385:U:C4'[4_556] | 0.91 | 1.29 |
| 2:J:244:A:N6 | 6:N:517:U:O5'[2_666] | 0.91 | 1.29 |
| 2:J:243:A:N7 | 6:N:517:U:C2[2_666] | 0.91 | 1.29 |
| 3:K:147:A:C5' | 5:M:386:U:OP2[4_556] | 0.92 | 1.28 |
| 2:J:170:A:N6 | 3:K:149:A:C4[4_456] | 0.92 | 1.28 |
| 2:J:44:A:O5' | 4:L:759:U:O2[3_546] | 0.92 | 1.28 |
| 1:I:352:A:OP1 | 4:L:676:U:C3'[3_546] | 0.93 | 1.27 |
| 2:J:167:A:C5' | 6:N:384:U:OP2[4_456] | 0.93 | 1.27 |
| 2:J:43:A:N6 | 4:L:759:U:OP2[3_546] | 0.93 | 1.27 |
| 1:I:59:A:OP2 | 2:J:41:A:C5'[3_556] | 0.94 | 1.26 |
| 1:I:69:A:N3 | 2:J:45:A:O2'[3_556] | 0.94 | 1.26 |
| 2:J:44:A:O5' | 4:L:759:U:C2[3_546] | 0.94 | 1.26 |
| 5:M:312:U:O4' | 6:N:519:U:N3[2_666] | 0.95 | 1.25 |
| 1:I:351:A:C3' | 4:L:677:U:OP1[3_546] | 0.95 | 1.25 |
| 2:J:242:A:C5 | 6:N:517:U:O4[2_666] | 0.95 | 1.25 |
| 1:I:144:A:OP2 | 4:L:472:U:C1'[3_556] | 0.96 | 1.24 |
| 2:J:170:A:OP1 | 3:K:151:A:C1'[4_456] | 0.96 | 1.24 |
| 2:J:164:A:C4' | 6:N:387:U:O5'[4_456] | 0.96 | 1.24 |
| 1:I:69:A:C5 | 2:J:46:A:P[3_556] | 0.96 | 1.24 |
| 1:I:68:A:C2 | 2:J:45:A:C5'[3_556] | 0.96 | 1.24 |
| 3:K:12:A:N6 | 5:M:312:U:C5[2_664] | 0.96 | 1.24 |
| 2:J:164:A:N7 | 6:N:387:U:N1[4_456] | 0.96 | 1.24 |
| 1:I:62:A:C5' | 5:M:505:U:O4'[3_556] | 0.96 | 1.24 |
| 2:J:49:A:OP2 | 4:L:754:U:O5'[3_546] | 0.97 | 1.23 |
| 3:K:146:A:C6 | 5:M:387:U:O4[4_556] | 0.97 | 1.23 |
| 1:I:61:A:C3' | 5:M:505:U:O3'[3_556] | 0.97 | 1.23 |
| 3:K:12:A:N9 | 5:M:313:U:C4[2_664] | 0.97 | 1.23 |
| 3:K:149:A:C5' | 5:M:383:U:O2[4_556] | 0.97 | 1.23 |
| 2:J:43:A:C5' | 4:L:760:U:C3'[3_546] | 0.97 | 1.23 |
| 2:J:47:A:C3' | 4:L:754:U:N3[3_546] | 0.97 | 1.23 |
| 2:J:242:A:C3' | 3:K:15:A:C5[2_666] | 0.97 | 1.23 |
| 5:M:391:U:P | 6:N:390:U:C5[4_456] | 0.97 | 1.23 |
| 2:J:43:A:C6 | 4:L:759:U:P[3_546] | 0.98 | 1.22 |
| 1:I:64:A:C4 | 5:M:503:U:P[3_556] | 0.98 | 1.22 |
| 5:M:390:U:C2' | 6:N:389:U:O4[4_456] | 0.98 | 1.22 |
| 2:J:171:A:N7 | 3:K:150:A:C4'[4_456] | 0.98 | 1.22 |
| 2:J:168:A:OP1 | 6:N:383:U:C5'[4_456] | 0.98 | 1.22 |
| 2:J:171:A:C5 | 3:K:150:A:C5'[4_456] | 0.98 | 1.22 |
| 1:I:70:A:C4 | 2:J:46:A:C4'[3_556] | 0.98 | 1.22 |
| 2:J:48:A:O5' | 4:L:754:U:C6[3_546] | 0.98 | 1.22 |
| 2:J:244:A:C5 | 6:N:517:U:O3'[2_666] | 0.99 | 1.21 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:142:A:O2' | 4:L:472:U:OP2[3_556] | 0.99 | 1.21 |
| 2:J:170:A:C5 | 3:K:150:A:N7[4_456] | 0.99 | 1.21 |
| 2:J:44:A:OP1 | 4:L:760:U:C2[3_546] | 0.99 | 1.21 |
| 2:J:170:A:N6 | 3:K:149:A:N3[4_456] | 0.99 | 1.21 |
| 4:L:756:U:O3' | 5:M:508:U:C2[3_556] | 0.99 | 1.21 |
| 3:K:147:A:O5' | 5:M:386:U:O5'[4_556] | 0.99 | 1.21 |
| 1:I:70:A:N3 | 2:J:46:A:C4'[3_556] | 1.00 | 1.20 |
| 3:K:149:A:C8 | 5:M:384:U:C4[4_556] | 1.00 | 1.20 |
| 4:L:752:U:P | 5:M:499:U:C3'[3_556] | 1.00 | 1.20 |
| 2:J:42:A:N9 | 4:L:760:U:OP1[3_546] | 1.00 | 1.20 |
| 1:I:62:A:N3 | 5:M:504:U:C5'[3_556] | 1.00 | 1.20 |
| 2:J:43:A:N3 | 4:L:759:U:O4'[3_546] | 1.00 | 1.20 |
| 4:L:469:U:C4 | 4:L:679:U:C1'[3_546] | 1.01 | 1.19 |
| 2:J:49:A:P | 4:L:754:U:C5'[3_546] | 1.01 | 1.19 |
| 1:I:61:A:C2' | 5:M:505:U:C4'[3_556] | 1.01 | 1.19 |
| 2:J:44:A:OP2 | 4:L:760:U:C6[3_546] | 1.01 | 1.19 |
| 4:L:757:U:OP2 | 5:M:508:U:O4[3_556] | 1.01 | 1.19 |
| 2:J:168:A:C5 | 6:N:383:U:O4[4_456] | 1.01 | 1.19 |
| 2:J:45:A:C4 | 4:L:757:U:C6[3_546] | 1.01 | 1.19 |
| 1:I:143:A:N9 | 4:L:471:U:C2'[3_556] | 1.01 | 1.19 |
| 3:K:142:A:N1 | 5:M:390:U:C5'[4_556] | 1.01 | 1.19 |
| 2:J:45:A:N3 | 4:L:757:U:C6[3_546] | 1.01 | 1.19 |
| 4:L:469:U:C1' | 4:L:680:U:OP2[3_546] | 1.01 | 1.19 |
| 1:I:62:A:O5' | 5:M:505:U:C1'[3_556] | 1.02 | 1.18 |
| 3:K:148:A:OP1 | 5:M:385:U:C5'[4_556] | 1.02 | 1.18 |
| 1:I:64:A:C3' | 5:M:502:U:C2[3_556] | 1.02 | 1.18 |
| 3:K:143:A:C1' | 5:M:389:U:O3'[4_556] | 1.02 | 1.18 |
| 2:J:164:A:C4' | 6:N:387:U:P[4_456] | 1.02 | 1.18 |
| 1:I:64:A:O2' | 5:M:502:U:O4'[3_556] | 1.02 | 1.18 |
| 5:M:390:U:O2' | 6:N:389:U:O4[4_456] | 1.03 | 1.17 |
| 2:J:164:A:C4 | 6:N:387:U:C5[4_456] | 1.03 | 1.17 |
| 2:J:43:A:C3' | 4:L:760:U:O4'[3_546] | 1.03 | 1.17 |
| 2:J:169:A:C6 | 3:K:149:A:N6[4_456] | 1.03 | 1.17 |
| 3:K:144:A:C2 | 5:M:390:U:O4[4_556] | 1.03 | 1.17 |
| 1:I:70:A:N6 | 2:J:47:A:OP2[3_556] | 1.03 | 1.17 |
| 2:J:167:A:O5' | 6:N:384:U:P[4_456] | 1.04 | 1.16 |
| 1:I:143:A:O3' | 4:L:472:U:C1'[3_556] | 1.04 | 1.16 |
| 1:I:62:A:C5 | 5:M:505:U:P[3_556] | 1.04 | 1.16 |
| 1:I:67:A:C6 | 2:J:45:A:P[3_556] | 1.04 | 1.16 |
| 2:J:164:A:C3' | 6:N:386:U:O3'[4_456] | 1.04 | 1.16 |
| 3:K:147:A:N1 | 5:M:386:U:O4[4_556] | 1.04 | 1.16 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 3:K:149:A:C8 | 5:M:384:U:O4[4_556] | 1.04 | 1.16 |
| 2:J:169:A:O4' | 6:N:381:U:C2[4_456] | 1.04 | 1.16 |
| 3:K:145:A:OP1 | 5:M:388:U:OP1[4_556] | 1.06 | 1.14 |
| 3:K:147:A:C5 | 5:M:386:U:C4[4_556] | 1.06 | 1.14 |
| 4:L:756:U:O2' | 5:M:508:U:O2[3_556] | 1.06 | 1.14 |
| 2:J:168:A:OP2 | 6:N:383:U:C4'[4_456] | 1.06 | 1.14 |
| 1:I:65:A:O5' | 5:M:502:U:C6[3_556] | 1.06 | 1.14 |
| 1:I:65:A:OP1 | 5:M:502:U:C4[3_556] | 1.06 | 1.14 |
| 2:J:48:A:C5' | 4:L:754:U:N1[3_546] | 1.06 | 1.14 |
| 1:I:143:A:O3' | 4:L:472:U:N1[3_556] | 1.06 | 1.14 |
| 2:J:47:A:C6 | 4:L:756:U:OP2[3_546] | 1.06 | 1.14 |
| 3:K:147:A:C5' | 5:M:386:U:P[4_556] | 1.06 | 1.14 |
| 1:I:146:A:C4 | 1:I:356:A:C8[3_556] | 1.06 | 1.14 |
| 2:J:171:A:C6 | 3:K:149:A:O2'[4_456] | 1.07 | 1.13 |
| 2:J:48:A:O4' | 4:L:754:U:C3'[3_546] | 1.07 | 1.13 |
| 1:I:146:A:C1' | 1:I:356:A:O5'[3_556] | 1.07 | 1.13 |
| 1:I:62:A:C2 | 5:M:504:U:O5'[3_556] | 1.07 | 1.13 |
| 2:J:170:A:OP1 | 3:K:151:A:C2'[4_456] | 1.07 | 1.13 |
| 2:J:48:A:P | 4:L:754:U:C6[3_546] | 1.07 | 1.13 |
| 3:K:142:A:C6 | 5:M:390:U:C4'[4_556] | 1.07 | 1.13 |
| 1:I:59:A:P | 2:J:41:A:P[3_556] | 1.07 | 1.13 |
| 1:I:71:A:C6 | 2:J:47:A:OP1[3_556] | 1.07 | 1.13 |
| 5:M:391:U:C2 | 6:N:388:U:C1'[4_456] | 1.07 | 1.13 |
| 4:L:756:U:OP1 | 5:M:507:U:N3[3_556] | 1.07 | 1.13 |
| 3:K:147:A:O3' | 5:M:385:U:C3'[4_556] | 1.07 | 1.13 |
| 2:J:44:A:N9 | 4:L:759:U:C6[3_546] | 1.07 | 1.13 |
| 4:L:751:U:O2' | 5:M:499:U:C5'[3_556] | 1.08 | 1.12 |
| 2:J:48:A:O5' | 4:L:754:U:N1[3_546] | 1.08 | 1.12 |
| 2:J:44:A:OP1 | 4:L:760:U:N1[3_546] | 1.08 | 1.12 |
| 2:J:44:A:C4 | 4:L:758:U:N1[3_546] | 1.08 | 1.12 |
| 3:K:143:A:C8 | 5:M:389:U:O2'[4_556] | 1.08 | 1.12 |
| 1:I:64:A:C5' | 5:M:502:U:O2[3_556] | 1.09 | 1.11 |
| 2:J:45:A:C4 | 4:L:757:U:N1[3_546] | 1.09 | 1.11 |
| 1:I:352:A:OP2 | 4:L:677:U:OP2[3_546] | 1.09 | 1.11 |
| 3:K:148:A:N7 | 5:M:385:U:C4[4_556] | 1.09 | 1.11 |
| 3:K:144:A:OP2 | 5:M:388:U:O2'[4_556] | 1.09 | 1.11 |
| 2:J:170:A:C8 | 3:K:150:A:C4[4_456] | 1.09 | 1.11 |
| 2:J:43:A:C8 | 4:L:760:U:P[3_546] | 1.09 | 1.11 |
| 1:I:142:A:C2' | 4:L:472:U:OP2[3_556] | 1.09 | 1.11 |
| 5:M:391:U:N3 | 6:N:388:U:C1'[4_456] | 1.10 | 1.10 |
| 3:K:149:A:O4' | 5:M:383:U:C4[4_556] | 1.10 | 1.10 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:43:A:C5 | 4:L:759:U:O5'[3_546] | 1.10 | 1.10 |
| 4:L:751:U:C3' | 5:M:499:U:C3'[3_556] | 1.10 | 1.10 |
| 1:I:62:A:N9 | 5:M:504:U:C2'[3_556] | 1.10 | 1.10 |
| 2:J:166:A:C6 | 6:N:385:U:O4[4_456] | 1.10 | 1.10 |
| 3:K:149:A:C5' | 5:M:383:U:C2[4_556] | 1.10 | 1.10 |
| 1:I:67:A:N6 | 2:J:45:A:OP2[3_556] | 1.10 | 1.10 |
| 1:I:70:A:C5 | 2:J:46:A:C5'[3_556] | 1.10 | 1.10 |
| 1:I:59:A:P | 2:J:40:A:O3'[3_556] | 1.10 | 1.10 |
| 2:J:242:A:P | 3:K:16:A:N6[2_666] | 1.10 | 1.10 |
| 2:J:43:A:O3' | 4:L:760:U:O4'[3_546] | 1.11 | 1.09 |
| 3:K:143:A:N7 | 5:M:389:U:C2'[4_556] | 1.11 | 1.09 |
| 4:L:469:U:C5 | 4:L:679:U:C4'[3_546] | 1.11 | 1.09 |
| 5:M:391:U:OP1 | 6:N:390:U:C5[4_456] | 1.11 | 1.09 |
| 5:M:391:U:C6 | 6:N:389:U:C6[4_456] | 1.11 | 1.09 |
| 2:J:46:A:C8 | 4:L:756:U:C2[3_546] | 1.11 | 1.09 |
| 2:J:170:A:P | 3:K:151:A:C1'[4_456] | 1.11 | 1.09 |
| 1:I:63:A:O5' | 5:M:504:U:C2[3_556] | 1.11 | 1.09 |
| 3:K:149:A:OP2 | 5:M:384:U:N1[4_556] | 1.11 | 1.09 |
| 2:J:47:A:O3' | 4:L:754:U:C2[3_546] | 1.12 | 1.08 |
| 2:J:168:A:C6 | 3:K:148:A:N6[4_456] | 1.12 | 1.08 |
| 4:L:469:U:C4 | 4:L:679:U:N1[3_546] | 1.12 | 1.08 |
| 2:J:169:A:C8 | 6:N:382:U:C4[4_456] | 1.12 | 1.08 |
| 1:I:63:A:P | 5:M:504:U:C2[3_556] | 1.12 | 1.08 |
| 2:J:242:A:C3' | 3:K:15:A:C6[2_666] | 1.12 | 1.08 |
| 1:I:68:A:N1 | 2:J:45:A:C4'[3_556] | 1.12 | 1.08 |
| 1:I:69:A:N1 | 2:J:46:A:O5'[3_556] | 1.13 | 1.07 |
| 1:I:62:A:C2' | 5:M:504:U:C1'[3_556] | 1.13 | 1.07 |
| 1:I:143:A:O4' | 4:L:472:U:O5'[3_556] | 1.13 | 1.07 |
| 2:J:46:A:C2 | 4:L:756:U:O4'[3_546] | 1.13 | 1.07 |
| 2:J:167:A:O5' | 6:N:384:U:OP2[4_456] | 1.13 | 1.07 |
| 3:K:148:A:C5' | 5:M:385:U:OP2[4_556] | 1.13 | 1.07 |
| 3:K:147:A:OP2 | 5:M:386:U:C5'[4_556] | 1.13 | 1.07 |
| 2:J:167:A:C6 | 6:N:384:U:O4[4_456] | 1.13 | 1.07 |
| 2:J:168:A:N6 | 3:K:148:A:N1[4_456] | 1.13 | 1.07 |
| 4:L:752:U:O4' | 5:M:499:U:O5'[3_556] | 1.13 | 1.07 |
| 2:J:169:A:P | 6:N:382:U:O4'[4_456] | 1.13 | 1.07 |
| 1:I:69:A:C6 | 2:J:46:A:OP2[3_556] | 1.14 | 1.06 |
| 1:I:143:A:C8 | 4:L:471:U:C2'[3_556] | 1.14 | 1.06 |
| 1:I:144:A:P | 4:L:472:U:C1'[3_556] | 1.14 | 1.06 |
| 2:J:164:A:C8 | 6:N:387:U:C6[4_456] | 1.14 | 1.06 |
| 4:L:757:U:C5' | 5:M:509:U:C2[3_556] | 1.14 | 1.06 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:61:A:O3' | 5:M:505:U:C2'[3_556] | 1.15 | 1.05 |
| 5:M:390:U:O2 | 6:N:388:U:N3[4_456] | 1.15 | 1.05 |
| 5:M:309:U:C4 | 6:N:517:U:OP1[2_666] | 1.15 | 1.05 |
| 4:L:752:U:C4' | 5:M:499:U:O5'[3_556] | 1.15 | 1.05 |
| 4:L:758:U:C5' | 5:M:510:U:C2[3_556] | 1.15 | 1.05 |
| 2:J:164:A:O5' | 6:N:386:U:O2'[4_456] | 1.15 | 1.05 |
| 1:I:70:A:C4 | 2:J:46:A:C5'[3_556] | 1.15 | 1.05 |
| 2:J:47:A:N9 | 4:L:755:U:C6[3_546] | 1.15 | 1.05 |
| 2:J:44:A:C8 | 4:L:759:U:C5[3_546] | 1.16 | 1.04 |
| 1:I:62:A:C1' | 5:M:504:U:O2'[3_556] | 1.16 | 1.04 |
| 2:J:164:A:C8 | 6:N:387:U:N1[4_456] | 1.16 | 1.04 |
| 1:I:61:A:C3' | 5:M:505:U:C3'[3_556] | 1.16 | 1.04 |
| 1:I:63:A:O3' | 5:M:503:U:C2[3_556] | 1.16 | 1.04 |
| 1:I:70:A:C2 | 2:J:46:A:C2'[3_556] | 1.16 | 1.04 |
| 2:J:169:A:N6 | 3:K:149:A:C5[4_456] | 1.16 | 1.04 |
| 2:J:47:A:C2' | 4:L:754:U:O2[3_546] | 1.16 | 1.04 |
| 2:J:244:A:C4 | 6:N:517:U:O3'[2_666] | 1.16 | 1.04 |
| 1:I:64:A:N9 | 5:M:503:U:O5'[3_556] | 1.16 | 1.04 |
| 3:K:148:A:C8 | 5:M:385:U:C5[4_556] | 1.16 | 1.04 |
| 1:I:150:A:OP2 | 4:L:465:U:O3'[3_556] | 1.16 | 1.04 |
| 3:K:144:A:C5' | 5:M:389:U:OP2[4_556] | 1.17 | 1.03 |
| 2:J:46:A:C4 | 4:L:756:U:C6[3_546] | 1.17 | 1.03 |
| 3:K:148:A:P | 5:M:385:U:C5'[4_556] | 1.17 | 1.03 |
| 2:J:48:A:C1' | 4:L:754:U:C3'[3_546] | 1.17 | 1.03 |
| 2:J:243:A:N7 | 6:N:517:U:N1[2_666] | 1.17 | 1.03 |
| 2:J:169:A:O3' | 3:K:151:A:C4[4_456] | 1.17 | 1.03 |
| 3:K:144:A:P | 5:M:388:U:O3'[4_556] | 1.17 | 1.03 |
| 2:J:47:A:O3' | 4:L:754:U:N3[3_546] | 1.17 | 1.03 |
| 1:I:61:A:O3' | 5:M:505:U:C3'[3_556] | 1.17 | 1.03 |
| 3:K:12:A:C4' | 5:M:314:U:C5[2_664] | 1.17 | 1.03 |
| 2:J:242:A:C4 | 6:N:517:U:O4[2_666] | 1.17 | 1.03 |
| 4:L:469:U:C6 | 4:L:679:U:O3'[3_546] | 1.17 | 1.03 |
| 1:I:64:A:O3' | 5:M:502:U:C6[3_556] | 1.17 | 1.03 |
| 2:J:43:A:N6 | 4:L:759:U:P[3_546] | 1.17 | 1.03 |
| 1:I:65:A:C3' | 5:M:502:U:P[3_556] | 1.18 | 1.02 |
| 1:I:63:A:O3' | 5:M:503:U:O2[3_556] | 1.18 | 1.02 |
| 2:J:48:A:C4' | 4:L:754:U:O4'[3_546] | 1.18 | 1.02 |
| 2:J:243:A:N3 | 6:N:518:U:C6[2_666] | 1.18 | 1.02 |
| 1:I:64:A:C1' | 5:M:502:U:O2'[3_556] | 1.18 | 1.02 |
| 4:L:469:U:C5 | 4:L:679:U:O4'[3_546] | 1.18 | 1.02 |
| 1:I:70:A:C6 | 2:J:46:A:C3'[3_556] | 1.18 | 1.02 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:43:A:C1' | 4:L:759:U:O2'[3_546] | 1.18 | 1.02 |
| 2:J:163:A:N1 | 6:N:387:U:O2[4_456] | 1.18 | 1.02 |
| 3:K:142:A:C2 | 5:M:390:U:O5'[4_556] | 1.18 | 1.02 |
| 1:I:65:A:P | 5:M:502:U:C5[3_556] | 1.18 | 1.02 |
| 2:J:164:A:C5 | 6:N:387:U:C2[4_456] | 1.18 | 1.02 |
| 2:J:168:A:OP2 | 6:N:383:U:C3'[4_456] | 1.18 | 1.02 |
| 1:I:65:A:O4' | 5:M:502:U:C5'[3_556] | 1.18 | 1.02 |
| 2:J:45:A:C8 | 4:L:758:U:C5[3_546] | 1.18 | 1.02 |
| 1:I:64:A:C1' | 5:M:502:U:C2'[3_556] | 1.18 | 1.02 |
| 1:I:143:A:C8 | 4:L:471:U:C3'[3_556] | 1.18 | 1.02 |
| 5:M:391:U:C2' | 6:N:389:U:P[4_456] | 1.19 | 1.01 |
| 3:K:143:A:C5 | 5:M:389:U:C2'[4_556] | 1.19 | 1.01 |
| 2:J:48:A:N9 | 4:L:755:U:O5'[3_546] | 1.19 | 1.01 |
| 1:I:63:A:C2 | 5:M:503:U:O3'[3_556] | 1.19 | 1.01 |
| 2:J:48:A:O3' | 4:L:754:U:C5'[3_546] | 1.19 | 1.01 |
| 3:K:144:A:N7 | 5:M:389:U:N1[4_556] | 1.19 | 1.01 |
| 2:J:164:A:C4 | 6:N:387:U:C6[4_456] | 1.19 | 1.01 |
| 1:I:64:A:OP1 | 2:J:51:A:N1[3_556] | 1.19 | 1.01 |
| 1:I:150:A:P | 4:L:465:U:O2'[3_556] | 1.19 | 1.01 |
| 2:J:242:A:C4' | 3:K:15:A:N7[2_666] | 1.19 | 1.01 |
| 4:L:751:U:O2' | 5:M:499:U:O5'[3_556] | 1.19 | 1.01 |
| 3:K:149:A:C1' | 5:M:383:U:N3[4_556] | 1.19 | 1.01 |
| 2:J:242:A:OP2 | 3:K:16:A:N6[2_666] | 1.20 | 1.00 |
| 2:J:168:A:N6 | 3:K:148:A:C6[4_456] | 1.20 | 1.00 |
| 2:J:164:A:C5 | 6:N:387:U:N3[4_456] | 1.20 | 1.00 |
| 1:I:69:A:C2 | 2:J:45:A:O2'[3_556] | 1.20 | 1.00 |
| 2:J:47:A:C8 | 4:L:755:U:C2[3_546] | 1.20 | 1.00 |
| 2:J:43:A:O3' | 4:L:760:U:C1'[3_546] | 1.20 | 1.00 |
| 1:I:150:A:P | 4:L:465:U:C2'[3_556] | 1.20 | 1.00 |
| 2:J:244:A:N7 | 6:N:517:U:C3'[2_666] | 1.20 | 1.00 |
| 2:J:48:A:C4 | 4:L:755:U:P[3_546] | 1.20 | 1.00 |
| 2:J:47:A:C2' | 4:L:754:U:C2[3_546] | 1.21 | 0.99 |
| 2:J:171:A:N9 | 3:K:150:A:O5'[4_456] | 1.21 | 0.99 |
| 1:I:67:A:N1 | 2:J:44:A:O3'[3_556] | 1.21 | 0.99 |
| 1:I:68:A:N1 | 2:J:45:A:C5'[3_556] | 1.21 | 0.99 |
| 2:J:48:A:OP2 | 4:L:754:U:C5[3_546] | 1.21 | 0.99 |
| 2:J:243:A:N9 | 6:N:517:U:O2[2_666] | 1.21 | 0.99 |
| 1:I:63:A:C2' | 5:M:503:U:C1'[3_556] | 1.21 | 0.99 |
| 2:J:48:A:C3' | 4:L:754:U:C5'[3_546] | 1.21 | 0.99 |
| 2:J:165:A:OP2 | 6:N:386:U:C5'[4_456] | 1.22 | 0.98 |
| 4:L:469:U:N1 | 4:L:679:U:O3'[3_546] | 1.22 | 0.98 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:66:A:P | 5:M:502:U:P[3_556] | 1.22 | 0.98 |
| 2:J:171:A:C4 | 3:K:150:A:P[4_456] | 1.22 | 0.98 |
| 1:I:62:A:C8 | 5:M:505:U:P[3_556] | 1.22 | 0.98 |
| 2:J:244:A:C5 | 6:N:517:U:C3'[2_666] | 1.22 | 0.98 |
| 3:K:144:A:O5' | 5:M:389:U:OP2[4_556] | 1.22 | 0.98 |
| 2:J:45:A:N3 | 4:L:757:U:N1[3_546] | 1.22 | 0.98 |
| 4:L:757:U:P | 5:M:508:U:N3[3_556] | 1.22 | 0.98 |
| 1:I:70:A:C2 | 2:J:46:A:C3'[3_556] | 1.22 | 0.98 |
| 4:L:757:U:C5' | 5:M:509:U:N1[3_556] | 1.22 | 0.98 |
| 1:I:65:A:C4' | 5:M:502:U:C5'[3_556] | 1.23 | 0.97 |
| 1:I:63:A:C4' | 5:M:503:U:O2[3_556] | 1.23 | 0.97 |
| 1:I:352:A:C4' | 4:L:676:U:OP2[3_546] | 1.23 | 0.97 |
| 2:J:43:A:C4' | 4:L:760:U:O4'[3_546] | 1.23 | 0.97 |
| 2:J:45:A:C2 | 4:L:757:U:C6[3_546] | 1.23 | 0.97 |
| 2:J:48:A:C4 | 4:L:755:U:OP1[3_546] | 1.23 | 0.97 |
| 4:L:469:U:C5 | 4:L:679:U:C3'[3_546] | 1.23 | 0.97 |
| 4:L:751:U:C4' | 5:M:499:U:C4'[3_556] | 1.23 | 0.97 |
| 1:I:143:A:N9 | 4:L:471:U:O2'[3_556] | 1.23 | 0.97 |
| 1:I:143:A:N6 | 4:L:470:U:O2'[3_556] | 1.23 | 0.97 |
| 4:L:469:U:N1 | 4:L:679:U:C3'[3_546] | 1.23 | 0.97 |
| 2:J:48:A:C4' | 4:L:754:U:C1'[3_546] | 1.24 | 0.96 |
| 1:I:59:A:OP1 | 2:J:41:A:P[3_556] | 1.24 | 0.96 |
| 2:J:169:A:C1' | 6:N:381:U:N3[4_456] | 1.24 | 0.96 |
| 2:J:169:A:O3' | 3:K:151:A:N3[4_456] | 1.24 | 0.96 |
| 1:I:144:A:OP2 | 4:L:472:U:N1[3_556] | 1.24 | 0.96 |
| 2:J:47:A:C8 | 4:L:755:U:N1[3_546] | 1.24 | 0.96 |
| 2:J:48:A:O3' | 4:L:754:U:C4'[3_546] | 1.24 | 0.96 |
| 2:J:45:A:N7 | 4:L:758:U:C5[3_546] | 1.24 | 0.96 |
| 1:I:352:A:P | 4:L:677:U:OP2[3_546] | 1.24 | 0.96 |
| 1:I:143:A:C8 | 4:L:471:U:C1'[3_556] | 1.24 | 0.96 |
| 2:J:47:A:N1 | 4:L:756:U:OP2[3_546] | 1.25 | 0.95 |
| 1:I:146:A:C3' | 1:I:356:A:P[3_556] | 1.25 | 0.95 |
| 1:I:357:A:N6 | 4:L:679:U:O2[3_546] | 1.25 | 0.95 |
| 1:I:68:A:C6 | 2:J:45:A:O5'[3_556] | 1.25 | 0.95 |
| 1:I:143:A:N9 | 4:L:471:U:C1'[3_556] | 1.25 | 0.95 |
| 1:I:356:A:C2 | 4:L:680:U:N3[3_546] | 1.25 | 0.95 |
| 1:I:65:A:C4' | 5:M:502:U:O5'[3_556] | 1.25 | 0.95 |
| 4:L:752:U:N1 | 5:M:499:U:OP1[3_556] | 1.25 | 0.95 |
| 1:I:351:A:O3' | 4:L:677:U:P[3_546] | 1.25 | 0.95 |
| 1:I:62:A:C2' | 5:M:504:U:N1[3_556] | 1.25 | 0.95 |
| 2:J:48:A:C4' | 4:L:754:U:C4'[3_546] | 1.25 | 0.95 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:71:A:C6 | 2:J:47:A:P[3_556] | 1.25 | 0.95 |
| 1:I:146:A:N9 | 1:I:356:A:O5'[3_556] | 1.25 | 0.95 |
| 2:J:42:A:C1' | 4:L:760:U:OP1[3_546] | 1.25 | 0.95 |
| 4:L:758:U:OP2 | 5:M:509:U:O4[3_556] | 1.25 | 0.95 |
| 3:K:12:A:C5' | 5:M:314:U:C4[2_664] | 1.25 | 0.95 |
| 3:K:148:A:C5 | 5:M:385:U:C4[4_556] | 1.26 | 0.94 |
| 3:K:149:A:C1' | 5:M:383:U:C4[4_556] | 1.26 | 0.94 |
| 5:M:312:U:C4' | 6:N:519:U:C2[2_666] | 1.26 | 0.94 |
| 1:I:352:A:P | 4:L:677:U:P[3_546] | 1.26 | 0.94 |
| 4:L:758:U:O5' | 5:M:510:U:C4[3_556] | 1.26 | 0.94 |
| 3:K:12:A:N3 | 5:M:313:U:C6[2_664] | 1.26 | 0.94 |
| 2:J:171:A:C8 | 3:K:150:A:O5'[4_456] | 1.26 | 0.94 |
| 4:L:758:U:O5' | 5:M:510:U:N3[3_556] | 1.26 | 0.94 |
| 2:J:167:A:N1 | 6:N:384:U:O4[4_456] | 1.27 | 0.93 |
| 2:J:45:A:C1' | 4:L:757:U:C2[3_546] | 1.27 | 0.93 |
| 1:I:59:A:OP1 | 2:J:41:A:O5'[3_556] | 1.27 | 0.93 |
| 1:I:70:A:N1 | 2:J:46:A:C2'[3_556] | 1.27 | 0.93 |
| 5:M:391:U:C4 | 6:N:388:U:O2[4_456] | 1.27 | 0.93 |
| 1:I:64:A:C4' | 5:M:502:U:C2[3_556] | 1.27 | 0.93 |
| 1:I:62:A:N7 | 5:M:505:U:OP1[3_556] | 1.27 | 0.93 |
| 5:M:309:U:O4 | 6:N:517:U:OP1[2_666] | 1.28 | 0.92 |
| 2:J:243:A:N7 | 6:N:517:U:N3[2_666] | 1.28 | 0.92 |
| 2:J:244:A:N7 | 6:N:517:U:C2'[2_666] | 1.28 | 0.92 |
| 5:M:391:U:O2' | 6:N:389:U:P[4_456] | 1.28 | 0.92 |
| 5:M:390:U:C2' | 6:N:389:U:C4[4_456] | 1.28 | 0.92 |
| 3:K:12:A:N7 | 5:M:313:U:O4[2_664] | 1.28 | 0.92 |
| 3:K:147:A:C6 | 5:M:386:U:C4[4_556] | 1.28 | 0.92 |
| 3:K:144:A:O5' | 5:M:388:U:O3'[4_556] | 1.28 | 0.92 |
| 1:I:356:A:N3 | 4:L:680:U:N3[3_546] | 1.29 | 0.91 |
| 1:I:352:A:OP1 | 4:L:676:U:C2'[3_546] | 1.29 | 0.91 |
| 1:I:141:A:O4' | 1:I:348:A:OP1[3_556] | 1.29 | 0.91 |
| 2:J:168:A:OP1 | 6:N:383:U:O5'[4_456] | 1.29 | 0.91 |
| 2:J:43:A:C4' | 4:L:760:U:C5'[3_546] | 1.29 | 0.91 |
| 5:M:391:U:C2' | 6:N:389:U:OP2[4_456] | 1.29 | 0.91 |
| 1:I:63:A:O5' | 5:M:504:U:N3[3_556] | 1.29 | 0.91 |
| 1:I:62:A:O4' | 5:M:504:U:O2'[3_556] | 1.29 | 0.91 |
| 1:I:65:A:C3' | 5:M:501:U:O3'[3_556] | 1.29 | 0.91 |
| 4:L:757:U:O5' | 5:M:509:U:C4[3_556] | 1.29 | 0.91 |
| 2:J:47:A:N3 | 4:L:755:U:C4'[3_546] | 1.29 | 0.91 |
| 1:I:64:A:O3' | 5:M:502:U:C2[3_556] | 1.29 | 0.91 |
| 1:I:63:A:C4 | 5:M:503:U:C3'[3_556] | 1.29 | 0.91 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 5:M:391:U:P | 6:N:390:U:C4[4_456] | 1.29 | 0.91 |
| 1:I:61:A:O5' | 5:M:506:U:OP1[3_556] | 1.29 | 0.91 |
| 3:K:12:A:N3 | 5:M:313:U:C5[2_664] | 1.30 | 0.90 |
| 2:J:43:A:C2' | 4:L:759:U:C1'[3_546] | 1.30 | 0.90 |
| 1:I:63:A:C4 | 5:M:504:U:P[3_556] | 1.30 | 0.90 |
| 2:J:170:A:C6 | 3:K:150:A:C8[4_456] | 1.30 | 0.90 |
| 1:I:146:A:O5' | 1:I:355:A:O3'[3_556] | 1.30 | 0.90 |
| 4:L:752:U:C1' | 5:M:499:U:P[3_556] | 1.30 | 0.90 |
| 1:I:146:A:O3' | 1:I:356:A:OP1[3_556] | 1.30 | 0.90 |
| 4:L:469:U:O4 | 4:L:679:U:C1'[3_546] | 1.30 | 0.90 |
| 3:K:149:A:C4' | 5:M:383:U:O2[4_556] | 1.31 | 0.89 |
| 2:J:49:A:O5' | 4:L:754:U:C5'[3_546] | 1.31 | 0.89 |
| 4:L:758:U:P | 5:M:510:U:C4[3_556] | 1.31 | 0.89 |
| 1:I:67:A:C4 | 2:J:45:A:OP1[3_556] | 1.31 | 0.89 |
| 3:K:149:A:C4' | 5:M:383:U:N3[4_556] | 1.31 | 0.89 |
| 1:I:62:A:C3' | 5:M:504:U:O2[3_556] | 1.31 | 0.89 |
| 2:J:165:A:P | 6:N:386:U:C5'[4_456] | 1.31 | 0.89 |
| 2:J:169:A:C4 | 3:K:150:A:C6[4_456] | 1.31 | 0.89 |
| 4:L:756:U:OP1 | 5:M:507:U:C2[3_556] | 1.31 | 0.89 |
| 1:I:355:A:N6 | 4:L:679:U:O4[3_546] | 1.32 | 0.88 |
| 2:J:165:A:O5' | 6:N:386:U:O5'[4_456] | 1.32 | 0.88 |
| 2:J:169:A:C4' | 6:N:381:U:C2[4_456] | 1.32 | 0.88 |
| 2:J:48:A:C4' | 4:L:754:U:C2'[3_546] | 1.32 | 0.88 |
| 4:L:470:U:O4 | 4:L:679:U:C4[3_546] | 1.32 | 0.88 |
| 5:M:391:U:C2' | 6:N:389:U:O5'[4_456] | 1.32 | 0.88 |
| 1:I:62:A:N9 | 5:M:504:U:O3'[3_556] | 1.32 | 0.88 |
| 2:J:48:A:OP1 | 4:L:754:U:C5[3_546] | 1.32 | 0.88 |
| 3:K:12:A:N9 | 5:M:313:U:C5[2_664] | 1.32 | 0.88 |
| 2:J:171:A:N3 | 3:K:149:A:O3'[4_456] | 1.32 | 0.88 |
| 3:K:12:A:C5' | 5:M:314:U:O4[2_664] | 1.32 | 0.88 |
| 2:J:169:A:O2' | 3:K:151:A:N1[4_456] | 1.32 | 0.88 |
| 1:I:142:A:N3 | 4:L:471:U:O3'[3_556] | 1.32 | 0.88 |
| 3:K:12:A:C8 | 5:M:313:U:C4[2_664] | 1.33 | 0.87 |
| 2:J:43:A:N1 | 4:L:759:U:P[3_546] | 1.33 | 0.87 |
| 2:J:48:A:C2' | 4:L:754:U:O3'[3_546] | 1.33 | 0.87 |
| 5:M:312:U:OP2 | 6:N:520:U:C4[2_666] | 1.33 | 0.87 |
| 1:I:65:A:C5' | 5:M:502:U:C6[3_556] | 1.33 | 0.87 |
| 2:J:170:A:C4 | 3:K:150:A:C8[4_456] | 1.33 | 0.87 |
| 1:I:146:A:N6 | 1:I:355:A:C6[3_556] | 1.33 | 0.87 |
| 1:I:69:A:C2 | 2:J:45:A:C2'[3_556] | 1.33 | 0.87 |
| 3:K:144:A:C5' | 5:M:389:U:P[4_556] | 1.34 | 0.86 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:70:A:C2 | 2:J:46:A:C4'[3_556] | 1.34 | 0.86 |
| 2:J:45:A:C1' | 4:L:757:U:O2[3_546] | 1.34 | 0.86 |
| 5:M:390:U:N3 | 6:N:388:U:N3[4_456] | 1.34 | 0.86 |
| 2:J:43:A:N1 | 4:L:759:U:O5'[3_546] | 1.34 | 0.86 |
| 1:I:62:A:C4' | 5:M:505:U:O4'[3_556] | 1.34 | 0.86 |
| 2:J:171:A:C8 | 3:K:150:A:C5'[4_456] | 1.34 | 0.86 |
| 3:K:148:A:OP2 | 5:M:385:U:O4'[4_556] | 1.34 | 0.86 |
| 2:J:167:A:C4' | 6:N:384:U:OP2[4_456] | 1.34 | 0.86 |
| 3:K:147:A:OP2 | 5:M:386:U:C4'[4_556] | 1.34 | 0.86 |
| 2:J:43:A:C2 | 4:L:758:U:C3'[3_546] | 1.34 | 0.86 |
| 1:I:59:A:OP1 | 2:J:40:A:O3'[3_556] | 1.34 | 0.86 |
| 2:J:46:A:C5 | 4:L:756:U:C6[3_546] | 1.34 | 0.86 |
| 2:J:46:A:N9 | 4:L:756:U:N3[3_546] | 1.34 | 0.86 |
| 5:M:391:U:OP1 | 6:N:390:U:C4[4_456] | 1.34 | 0.86 |
| 2:J:48:A:C8 | 4:L:755:U:OP2[3_546] | 1.34 | 0.86 |
| 1:I:143:A:O2' | 4:L:472:U:O4'[3_556] | 1.34 | 0.86 |
| 2:J:168:A:P | 6:N:383:U:C5'[4_456] | 1.34 | 0.86 |
| 1:I:62:A:O5' | 5:M:505:U:C2'[3_556] | 1.34 | 0.86 |
| 3:K:144:A:C4' | 5:M:389:U:OP2[4_556] | 1.35 | 0.85 |
| 1:I:65:A:P | 5:M:502:U:C6[3_556] | 1.35 | 0.85 |
| 1:I:65:A:N7 | 5:M:503:U:OP2[3_556] | 1.35 | 0.85 |
| 1:I:63:A:C1' | 5:M:503:U:C2'[3_556] | 1.35 | 0.85 |
| 3:K:13:A:C5' | 5:M:313:U:O2'[2_664] | 1.35 | 0.85 |
| 4:L:469:U:C6 | 4:L:679:U:C4'[3_546] | 1.35 | 0.85 |
| 2:J:240:A:C5 | 3:K:12:A:OP2[2_666] | 1.35 | 0.85 |
| 2:J:47:A:C3' | 4:L:754:U:O2[3_546] | 1.35 | 0.85 |
| 1:I:62:A:P | 5:M:505:U:C3'[3_556] | 1.35 | 0.85 |
| 2:J:164:A:C5 | 6:N:387:U:N1[4_456] | 1.35 | 0.85 |
| 2:J:47:A:C1' | 4:L:755:U:N1[3_546] | 1.35 | 0.85 |
| 3:K:143:A:N1 | 5:M:390:U:N1[4_556] | 1.35 | 0.85 |
| 1:I:59:A:O5' | 2:J:41:A:P[3_556] | 1.35 | 0.85 |
| 2:J:240:A:C6 | 3:K:12:A:OP2[2_666] | 1.35 | 0.85 |
| 2:J:49:A:OP2 | 4:L:754:U:P[3_546] | 1.35 | 0.85 |
| 3:K:13:A:O4' | 5:M:313:U:O2'[2_664] | 1.35 | 0.85 |
| 4:L:758:U:OP1 | 5:M:510:U:O4[3_556] | 1.35 | 0.85 |
| 3:K:146:A:OP1 | 5:M:387:U:OP1[4_556] | 1.35 | 0.85 |
| 5:M:391:U:C5 | 6:N:388:U:C2[4_456] | 1.35 | 0.85 |
| 3:K:148:A:N7 | 5:M:385:U:N3[4_556] | 1.35 | 0.85 |
| 1:I:65:A:C8 | 5:M:503:U:OP2[3_556] | 1.35 | 0.85 |
| 3:K:13:A:C5 | 5:M:312:U:O2[2_664] | 1.35 | 0.85 |
| 3:K:146:A:O5' | 5:M:387:U:OP2[4_556] | 1.36 | 0.84 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 3:K:13:A:C6 | 5:M:312:U:O2[2_664] | 1.36 | 0.84 |
| 1:I:61:A:O3' | 5:M:505:U:O2'[3_556] | 1.36 | 0.84 |
| 2:J:170:A:N7 | 3:K:150:A:N9[4_456] | 1.36 | 0.84 |
| 2:J:164:A:N1 | 6:N:387:U:N3[4_456] | 1.36 | 0.84 |
| 1:I:141:A:C1' | 1:I:348:A:OP1[3_556] | 1.36 | 0.84 |
| 2:J:164:A:N1 | 6:N:387:U:C4[4_456] | 1.36 | 0.84 |
| 4:L:751:U:O3' | 5:M:499:U:C4'[3_556] | 1.36 | 0.84 |
| 3:K:143:A:C8 | 5:M:389:U:C2'[4_556] | 1.36 | 0.84 |
| 2:J:169:A:C8 | 6:N:382:U:N3[4_456] | 1.36 | 0.84 |
| 2:J:236:A:OP1 | 6:N:521:U:O2'[2_666] | 1.36 | 0.84 |
| 2:J:164:A:N1 | 6:N:387:U:O4[4_456] | 1.36 | 0.84 |
| 5:M:310:U:O4 | 6:N:517:U:OP2[2_666] | 1.36 | 0.84 |
| 4:L:752:U:C5' | 5:M:499:U:O5'[3_556] | 1.36 | 0.84 |
| 4:L:757:U:C5' | 5:M:509:U:N3[3_556] | 1.37 | 0.83 |
| 1:I:66:A:OP2 | 5:M:502:U:OP2[3_556] | 1.37 | 0.83 |
| 4:L:752:U:C4' | 5:M:499:U:P[3_556] | 1.37 | 0.83 |
| 5:M:390:U:C2 | 6:N:388:U:C4[4_456] | 1.37 | 0.83 |
| 1:I:63:A:OP2 | 5:M:504:U:N3[3_556] | 1.37 | 0.83 |
| 1:I:62:A:O5' | 5:M:505:U:O4'[3_556] | 1.37 | 0.83 |
| 4:L:757:U:OP1 | 5:M:509:U:C5[3_556] | 1.37 | 0.83 |
| 2:J:46:A:C5 | 4:L:756:U:N1[3_546] | 1.37 | 0.83 |
| 2:J:168:A:O5' | 6:N:383:U:O5'[4_456] | 1.37 | 0.83 |
| 4:L:756:U:P | 5:M:507:U:N3[3_556] | 1.37 | 0.83 |
| 1:I:59:A:P | 2:J:41:A:O5'[3_556] | 1.37 | 0.83 |
| 1:I:64:A:C2 | 5:M:503:U:P[3_556] | 1.37 | 0.83 |
| 2:J:164:A:C3' | 6:N:386:U:C3'[4_456] | 1.37 | 0.83 |
| 2:J:240:A:C6 | 3:K:12:A:P[2_666] | 1.37 | 0.83 |
| 2:J:244:A:C6 | 6:N:517:U:C5'[2_666] | 1.37 | 0.83 |
| 2:J:43:A:C4 | 4:L:759:U:C4'[3_546] | 1.37 | 0.83 |
| 3:K:144:A:C6 | 5:M:389:U:C4[4_556] | 1.38 | 0.82 |
| 5:M:312:U:O4' | 6:N:519:U:O2[2_666] | 1.38 | 0.82 |
| 1:I:61:A:C2' | 5:M:505:U:C5'[3_556] | 1.38 | 0.82 |
| 3:K:13:A:O4' | 5:M:313:U:C2'[2_664] | 1.38 | 0.82 |
| 5:M:391:U:C2 | 6:N:388:U:O2'[4_456] | 1.38 | 0.82 |
| 2:J:46:A:N1 | 4:L:756:U:O5'[3_546] | 1.38 | 0.82 |
| 2:J:242:A:O2' | 3:K:14:A:C2[2_666] | 1.38 | 0.82 |
| 4:L:757:U:O3' | 5:M:510:U:C5[3_556] | 1.38 | 0.82 |
| 1:I:149:A:C2' | 4:L:466:U:O5'[3_556] | 1.38 | 0.82 |
| 2:J:43:A:N9 | 4:L:759:U:C2'[3_546] | 1.38 | 0.82 |
| 3:K:149:A:OP2 | 5:M:384:U:O4'[4_556] | 1.38 | 0.82 |
| 2:J:48:A:P | 4:L:754:U:C4[3_546] | 1.38 | 0.82 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:42:A:N3 | 4:L:759:U:O3'[3_546] | 1.38 | 0.82 |
| 1:I:62:A:C4 | 5:M:504:U:O3'[3_556] | 1.38 | 0.82 |
| 2:J:46:A:N3 | 4:L:756:U:N1[3_546] | 1.38 | 0.82 |
| 2:J:45:A:C4 | 4:L:757:U:C5[3_546] | 1.39 | 0.81 |
| 1:I:145:A:C2 | 1:I:356:A:C1'[3_556] | 1.39 | 0.81 |
| 1:I:63:A:O5' | 5:M:504:U:N1[3_556] | 1.39 | 0.81 |
| 1:I:352:A:C5' | 4:L:676:U:O5'[3_546] | 1.39 | 0.81 |
| 5:M:391:U:O2 | 6:N:388:U:C2'[4_456] | 1.39 | 0.81 |
| 2:J:242:A:OP1 | 3:K:16:A:N6[2_666] | 1.39 | 0.81 |
| 3:K:148:A:C8 | 5:M:385:U:C4[4_556] | 1.39 | 0.81 |
| 2:J:171:A:N3 | 3:K:150:A:OP1[4_456] | 1.39 | 0.81 |
| 4:L:752:U:OP2 | 5:M:499:U:O3'[3_556] | 1.39 | 0.81 |
| 4:L:757:U:O3' | 5:M:510:U:C4[3_556] | 1.39 | 0.81 |
| 2:J:43:A:O4' | 4:L:759:U:O2'[3_546] | 1.39 | 0.81 |
| 2:J:43:A:C2' | 4:L:759:U:C2'[3_546] | 1.39 | 0.81 |
| 2:J:242:A:C3' | 3:K:15:A:C4[2_666] | 1.39 | 0.81 |
| 1:I:63:A:C4 | 5:M:503:U:O3'[3_556] | 1.39 | 0.81 |
| 3:K:18:A:O4' | 5:M:306:U:OP1[2_664] | 1.39 | 0.81 |
| 3:K:149:A:O4' | 5:M:383:U:C2[4_556] | 1.39 | 0.81 |
| 3:K:147:A:C3' | 5:M:385:U:C3'[4_556] | 1.40 | 0.80 |
| 1:I:143:A:O3' | 4:L:472:U:O4'[3_556] | 1.40 | 0.80 |
| 3:K:143:A:C6 | 5:M:390:U:C6[4_556] | 1.40 | 0.80 |
| 2:J:48:A:C5' | 4:L:754:U:O4'[3_546] | 1.40 | 0.80 |
| 1:I:71:A:C5 | 2:J:46:A:O3'[3_556] | 1.40 | 0.80 |
| 2:J:171:A:P | 3:K:151:A:OP2[4_456] | 1.40 | 0.80 |
| 3:K:149:A:C1' | 5:M:383:U:O4[4_556] | 1.40 | 0.80 |
| 1:I:146:A:C4' | 1:I:356:A:OP1[3_556] | 1.40 | 0.80 |
| 1:I:143:A:C3' | 4:L:472:U:C6[3_556] | 1.40 | 0.80 |
| 5:M:391:U:O2 | 6:N:388:U:C4'[4_456] | 1.40 | 0.80 |
| 2:J:167:A:OP2 | 6:N:384:U:C5'[4_456] | 1.40 | 0.80 |
| 4:L:469:U:O4 | 4:L:679:U:C2[3_546] | 1.40 | 0.80 |
| 1:I:66:A:OP1 | 5:M:502:U:OP2[3_556] | 1.40 | 0.80 |
| 3:K:13:A:O4' | 5:M:313:U:C1'[2_664] | 1.40 | 0.80 |
| 2:J:169:A:O2' | 3:K:151:A:N6[4_456] | 1.40 | 0.80 |
| 1:I:64:A:N3 | 5:M:503:U:OP1[3_556] | 1.40 | 0.80 |
| 2:J:44:A:C1' | 4:L:758:U:C2[3_546] | 1.41 | 0.79 |
| 5:M:309:U:N3 | 6:N:517:U:OP1[2_666] | 1.41 | 0.79 |
| 2:J:164:A:C2 | 6:N:387:U:O4[4_456] | 1.41 | 0.79 |
| 4:L:751:U:C2' | 5:M:499:U:C4'[3_556] | 1.41 | 0.79 |
| 2:J:171:A:C4 | 3:K:150:A:O5'[4_456] | 1.41 | 0.79 |
| 1:I:71:A:N1 | 2:J:47:A:O5'[3_556] | 1.41 | 0.79 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:44:A:C2' | 4:L:758:U:O2[3_546] | 1.41 | 0.79 |
| 2:J:47:A:C4' | 4:L:754:U:O2[3_546] | 1.41 | 0.79 |
| 3:K:148:A:C2' | 5:M:384:U:C5[4_556] | 1.41 | 0.79 |
| 2:J:164:A:C2 | 6:N:387:U:C4[4_456] | 1.41 | 0.79 |
| 2:J:164:A:C4' | 6:N:386:U:O3'[4_456] | 1.41 | 0.79 |
| 2:J:168:A:N7 | 6:N:383:U:C4[4_456] | 1.41 | 0.79 |
| 2:J:169:A:C5 | 3:K:149:A:N6[4_456] | 1.41 | 0.79 |
| 1:I:65:A:C1' | 5:M:502:U:C5'[3_556] | 1.41 | 0.79 |
| 5:M:390:U:C3' | 6:N:389:U:N3[4_456] | 1.41 | 0.79 |
| 2:J:169:A:N7 | 6:N:382:U:N3[4_456] | 1.41 | 0.79 |
| 5:M:391:U:OP2 | 6:N:389:U:O2[4_456] | 1.42 | 0.78 |
| 2:J:166:A:O5' | 6:N:385:U:OP2[4_456] | 1.42 | 0.78 |
| 2:J:43:A:N1 | 4:L:758:U:O3'[3_546] | 1.42 | 0.78 |
| 1:I:61:A:C3' | 5:M:505:U:C4'[3_556] | 1.42 | 0.78 |
| 4:L:757:U:OP2 | 5:M:508:U:C4[3_556] | 1.42 | 0.78 |
| 2:J:44:A:N9 | 4:L:758:U:C2[3_546] | 1.42 | 0.78 |
| 1:I:62:A:C4 | 5:M:504:U:C4'[3_556] | 1.42 | 0.78 |
| 1:I:146:A:N6 | 1:I:355:A:N1[3_556] | 1.42 | 0.78 |
| 4:L:756:U:C3' | 5:M:508:U:C2[3_556] | 1.42 | 0.78 |
| 2:J:171:A:N6 | 3:K:149:A:O2'[4_456] | 1.42 | 0.78 |
| 3:K:148:A:OP2 | 5:M:385:U:C3'[4_556] | 1.42 | 0.78 |
| 2:J:46:A:C4 | 4:L:756:U:C2[3_546] | 1.42 | 0.78 |
| 2:J:243:A:OP2 | 3:K:15:A:C2[2_666] | 1.43 | 0.77 |
| 2:J:170:A:C5 | 3:K:150:A:N9[4_456] | 1.43 | 0.77 |
| 1:I:71:A:C2 | 2:J:47:A:C5'[3_556] | 1.43 | 0.77 |
| 3:K:143:A:C2 | 5:M:390:U:C6[4_556] | 1.43 | 0.77 |
| 2:J:48:A:N7 | 4:L:755:U:OP2[3_546] | 1.43 | 0.77 |
| 5:M:312:U:OP1 | 6:N:520:U:C6[2_666] | 1.43 | 0.77 |
| 2:J:46:A:N3 | 4:L:756:U:O4'[3_546] | 1.43 | 0.77 |
| 2:J:46:A:N9 | 4:L:756:U:N1[3_546] | 1.43 | 0.77 |
| 2:J:244:A:C5 | 6:N:517:U:C4'[2_666] | 1.43 | 0.77 |
| 2:J:170:A:C8 | 3:K:150:A:C5[4_456] | 1.43 | 0.77 |
| 2:J:168:A:O3' | 6:N:382:U:C1'[4_456] | 1.43 | 0.77 |
| 1:I:146:A:C6 | 1:I:356:A:C8[3_556] | 1.43 | 0.77 |
| 2:J:45:A:C1' | 4:L:757:U:N3[3_546] | 1.43 | 0.77 |
| 2:J:168:A:O3' | 6:N:382:U:O4'[4_456] | 1.43 | 0.77 |
| 2:J:45:A:C5 | 4:L:757:U:C5[3_546] | 1.43 | 0.77 |
| 2:J:163:A:C6 | 6:N:387:U:O2[4_456] | 1.44 | 0.76 |
| 2:J:242:A:C4' | 3:K:15:A:C6[2_666] | 1.44 | 0.76 |
| 2:J:243:A:C8 | 6:N:517:U:N3[2_666] | 1.44 | 0.76 |
| 3:K:142:A:N3 | 5:M:390:U:C5'[4_556] | 1.44 | 0.76 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 5:M:309:U:O4 | 6:N:517:U:P[2_666] | 1.44 | 0.76 |
| 2:J:164:A:C6 | 6:N:387:U:C4[4_456] | 1.44 | 0.76 |
| 2:J:163:A:N3 | 6:N:387:U:O2'[4_456] | 1.44 | 0.76 |
| 2:J:43:A:O4' | 4:L:760:U:O5'[3_546] | 1.44 | 0.76 |
| 4:L:757:U:C4' | 5:M:509:U:N3[3_556] | 1.44 | 0.76 |
| 2:J:171:A:C2 | 3:K:149:A:O3'[4_456] | 1.44 | 0.76 |
| 1:I:64:A:N3 | 5:M:502:U:O3'[3_556] | 1.44 | 0.76 |
| 3:K:148:A:O5' | 5:M:385:U:O5'[4_556] | 1.44 | 0.76 |
| 2:J:47:A:N6 | 4:L:756:U:OP2[3_546] | 1.44 | 0.76 |
| 1:I:62:A:OP1 | 5:M:505:U:C2'[3_556] | 1.44 | 0.76 |
| 3:K:147:A:C5 | 5:M:386:U:O4[4_556] | 1.44 | 0.76 |
| 5:M:391:U:O2 | 6:N:388:U:C3'[4_456] | 1.45 | 0.75 |
| 1:I:62:A:OP2 | 5:M:506:U:OP2[3_556] | 1.45 | 0.75 |
| 2:J:169:A:P | 6:N:382:U:C1'[4_456] | 1.45 | 0.75 |
| 2:J:165:A:P | 6:N:386:U:O5'[4_456] | 1.45 | 0.75 |
| 2:J:166:A:OP1 | 6:N:385:U:OP1[4_456] | 1.45 | 0.75 |
| 2:J:48:A:C4' | 4:L:754:U:C3'[3_546] | 1.45 | 0.75 |
| 4:L:758:U:P | 5:M:510:U:O4[3_556] | 1.45 | 0.75 |
| 3:K:144:A:N6 | 5:M:389:U:C2[4_556] | 1.45 | 0.75 |
| 1:I:63:A:C5 | 5:M:504:U:P[3_556] | 1.45 | 0.75 |
| 1:I:65:A:O3' | 5:M:501:U:C3'[3_556] | 1.45 | 0.75 |
| 1:I:143:A:C4 | 4:L:471:U:O4'[3_556] | 1.45 | 0.75 |
| 2:J:165:A:C6 | 6:N:386:U:O4[4_456] | 1.45 | 0.75 |
| 4:L:752:U:O4' | 5:M:499:U:OP1[3_556] | 1.45 | 0.75 |
| 1:I:62:A:C5 | 5:M:505:U:OP2[3_556] | 1.45 | 0.75 |
| 1:I:143:A:N7 | 4:L:471:U:C4'[3_556] | 1.45 | 0.75 |
| 2:J:168:A:C5 | 6:N:383:U:C4[4_456] | 1.45 | 0.75 |
| 2:J:47:A:N9 | 4:L:755:U:C1'[3_546] | 1.45 | 0.75 |
| 1:I:67:A:C2 | 2:J:45:A:P[3_556] | 1.45 | 0.75 |
| 1:I:62:A:OP2 | 5:M:506:U:P[3_556] | 1.46 | 0.74 |
| 2:J:46:A:N3 | 4:L:756:U:C1'[3_546] | 1.46 | 0.74 |
| 5:M:391:U:OP2 | 6:N:390:U:C5[4_456] | 1.46 | 0.74 |
| 2:J:240:A:C5 | 3:K:12:A:P[2_666] | 1.46 | 0.74 |
| 1:I:61:A:C5' | 5:M:506:U:OP1[3_556] | 1.46 | 0.74 |
| 5:M:391:U:OP2 | 6:N:389:U:C2[4_456] | 1.46 | 0.74 |
| 3:K:147:A:P | 5:M:386:U:O5'[4_556] | 1.46 | 0.74 |
| 4:L:752:U:O2' | 5:M:499:U:OP2[3_556] | 1.46 | 0.74 |
| 1:I:63:A:OP2 | 5:M:505:U:C4[3_556] | 1.46 | 0.74 |
| 2:J:47:A:N3 | 4:L:755:U:O5'[3_546] | 1.46 | 0.74 |
| 3:K:144:A:C5 | 5:M:389:U:C4[4_556] | 1.46 | 0.74 |
| 2:J:164:A:O4' | 6:N:387:U:C5'[4_456] | 1.46 | 0.74 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:45:A:C8 | 4:L:758:U:O4[3_546] | 1.46 | 0.74 |
| 3:K:149:A:P | 5:M:384:U:O4'[4_556] | 1.46 | 0.74 |
| 2:J:44:A:C4 | 4:L:758:U:C6[3_546] | 1.46 | 0.74 |
| 1:I:63:A:OP2 | 5:M:505:U:C5[3_556] | 1.46 | 0.74 |
| 1:I:146:A:O4' | 1:I:356:A:O5'[3_556] | 1.47 | 0.73 |
| 1:I:68:A:N1 | 2:J:45:A:O5'[3_556] | 1.47 | 0.73 |
| 2:J:164:A:C2' | 6:N:387:U:OP2[4_456] | 1.47 | 0.73 |
| 3:K:148:A:OP1 | 5:M:385:U:O5'[4_556] | 1.47 | 0.73 |
| 2:J:43:A:N3 | 4:L:759:U:C4'[3_546] | 1.47 | 0.73 |
| 2:J:169:A:C8 | 6:N:382:U:O4[4_456] | 1.47 | 0.73 |
| 3:K:12:A:C5' | 5:M:314:U:N3[2_664] | 1.47 | 0.73 |
| 2:J:44:A:OP2 | 4:L:760:U:C4[3_546] | 1.47 | 0.73 |
| 2:J:47:A:C2 | 4:L:755:U:O5'[3_546] | 1.47 | 0.73 |
| 1:I:62:A:C1' | 5:M:504:U:C1'[3_556] | 1.47 | 0.73 |
| 2:J:244:A:N7 | 6:N:517:U:C4'[2_666] | 1.47 | 0.73 |
| 3:K:12:A:C4' | 5:M:314:U:O4[2_664] | 1.48 | 0.72 |
| 2:J:171:A:N1 | 3:K:149:A:O2'[4_456] | 1.48 | 0.72 |
| 2:J:167:A:C5 | 6:N:384:U:C4[4_456] | 1.48 | 0.72 |
| 2:J:48:A:C1' | 4:L:755:U:P[3_546] | 1.48 | 0.72 |
| 2:J:49:A:P | 4:L:754:U:O5'[3_546] | 1.48 | 0.72 |
| 1:I:150:A:OP2 | 4:L:465:U:C2'[3_556] | 1.48 | 0.72 |
| 1:I:67:A:C5 | 2:J:45:A:OP1[3_556] | 1.48 | 0.72 |
| 4:L:756:U:OP1 | 5:M:507:U:C4[3_556] | 1.48 | 0.72 |
| 1:I:144:A:OP1 | 4:L:472:U:O2'[3_556] | 1.48 | 0.72 |
| 4:L:752:U:P | 5:M:499:U:O3'[3_556] | 1.48 | 0.72 |
| 3:K:149:A:N7 | 5:M:384:U:O4[4_556] | 1.48 | 0.72 |
| 4:L:469:U:C5 | 4:L:679:U:C1'[3_546] | 1.48 | 0.72 |
| 5:M:390:U:O3' | 6:N:390:U:C4[4_456] | 1.48 | 0.72 |
| 2:J:167:A:OP2 | 6:N:384:U:O5'[4_456] | 1.49 | 0.71 |
| 1:I:65:A:O4' | 5:M:502:U:C3'[3_556] | 1.49 | 0.71 |
| 4:L:752:U:C3' | 5:M:499:U:OP2[3_556] | 1.49 | 0.71 |
| 2:J:48:A:N9 | 4:L:755:U:OP2[3_546] | 1.49 | 0.71 |
| 2:J:48:A:C5 | 4:L:755:U:OP2[3_546] | 1.49 | 0.71 |
| 2:J:242:A:N1 | 6:N:518:U:O4[2_666] | 1.49 | 0.71 |
| 2:J:244:A:N7 | 6:N:517:U:O2'[2_666] | 1.49 | 0.71 |
| 4:L:758:U:OP1 | 5:M:510:U:C4[3_556] | 1.49 | 0.71 |
| 3:K:12:A:N1 | 5:M:312:U:N1[2_664] | 1.49 | 0.71 |
| 2:J:44:A:O4' | 4:L:759:U:N1[3_546] | 1.49 | 0.71 |
| 5:M:390:U:O3' | 6:N:390:U:O4[4_456] | 1.49 | 0.71 |
| 1:I:59:A:OP2 | 2:J:41:A:O5'[3_556] | 1.50 | 0.70 |
| 3:K:146:A:N6 | 5:M:387:U:O4[4_556] | 1.50 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:62:A:C8 | 5:M:504:U:O3'[3_556] | 1.50 | 0.70 |
| 2:J:167:A:P | 6:N:384:U:OP1[4_456] | 1.50 | 0.70 |
| 1:I:143:A:C4' | 4:L:472:U:O5'[3_556] | 1.50 | 0.70 |
| 2:J:168:A:C8 | 6:N:383:U:C5[4_456] | 1.50 | 0.70 |
| 1:I:71:A:N6 | 2:J:47:A:P[3_556] | 1.50 | 0.70 |
| 1:I:63:A:O4' | 5:M:504:U:O4'[3_556] | 1.50 | 0.70 |
| 1:I:356:A:C2 | 4:L:680:U:C2[3_546] | 1.50 | 0.70 |
| 2:J:170:A:N7 | 3:K:150:A:N7[4_456] | 1.50 | 0.70 |
| 2:J:164:A:C5' | 6:N:387:U:C5'[4_456] | 1.50 | 0.70 |
| 1:I:146:A:C2 | 1:I:356:A:N7[3_556] | 1.50 | 0.70 |
| 4:L:469:U:C4 | 4:L:679:U:C2'[3_546] | 1.50 | 0.70 |
| 2:J:169:A:O2' | 3:K:151:A:C5[4_456] | 1.50 | 0.70 |
| 1:I:62:A:O3' | 5:M:504:U:C2[3_556] | 1.50 | 0.70 |
| 2:J:165:A:O3' | 6:N:386:U:OP2[4_456] | 1.50 | 0.70 |
| 4:L:751:U:O3' | 5:M:499:U:C2'[3_556] | 1.51 | 0.69 |
| 2:J:43:A:O4' | 4:L:759:U:C2'[3_546] | 1.51 | 0.69 |
| 1:I:65:A:P | 5:M:502:U:C4[3_556] | 1.51 | 0.69 |
| 3:K:148:A:C2' | 5:M:384:U:C6[4_556] | 1.51 | 0.69 |
| 5:M:312:U:O5' | 6:N:520:U:C4[2_666] | 1.51 | 0.69 |
| 2:J:48:A:O4' | 4:L:754:U:O2'[3_546] | 1.51 | 0.69 |
| 4:L:757:U:C3' | 5:M:509:U:N3[3_556] | 1.51 | 0.69 |
| 1:I:63:A:C2' | 5:M:503:U:N1[3_556] | 1.51 | 0.69 |
| 2:J:47:A:N3 | 4:L:755:U:C5'[3_546] | 1.51 | 0.69 |
| 1:I:59:A:OP1 | 2:J:40:A:C3'[3_556] | 1.51 | 0.69 |
| 2:J:169:A:OP2 | 6:N:382:U:N1[4_456] | 1.51 | 0.69 |
| 2:J:45:A:C8 | 4:L:757:U:N3[3_546] | 1.51 | 0.69 |
| 4:L:757:U:O4' | 5:M:509:U:O2[3_556] | 1.51 | 0.69 |
| 2:J:43:A:O3' | 4:L:759:U:O2[3_546] | 1.51 | 0.69 |
| 2:J:165:A:C3' | 6:N:386:U:OP2[4_456] | 1.51 | 0.69 |
| 1:I:62:A:O2' | 5:M:504:U:C1'[3_556] | 1.51 | 0.69 |
| 4:L:470:U:N3 | 4:L:680:U:O4[3_546] | 1.51 | 0.69 |
| 2:J:171:A:N3 | 3:K:150:A:P[4_456] | 1.52 | 0.68 |
| 3:K:13:A:C1' | 5:M:313:U:O4'[2_664] | 1.52 | 0.68 |
| 4:L:752:U:OP2 | 5:M:500:U:O5'[3_556] | 1.52 | 0.68 |
| 2:J:164:A:C3' | 6:N:387:U:P[4_456] | 1.52 | 0.68 |
| 2:J:42:A:O2' | 4:L:760:U:C5'[3_546] | 1.52 | 0.68 |
| 1:I:68:A:N1 | 2:J:45:A:C3'[3_556] | 1.52 | 0.68 |
| 1:I:149:A:C4' | 4:L:466:U:C6[3_556] | 1.52 | 0.68 |
| 4:L:470:U:O4 | 4:L:679:U:C5[3_546] | 1.52 | 0.68 |
| 2:J:43:A:C8 | 4:L:759:U:C3'[3_546] | 1.52 | 0.68 |
| 2:J:43:A:C1' | 4:L:759:U:C3'[3_546] | 1.52 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 5:M:391:U:O2 | 6:N:388:U:O2'[4_456] | 1.52 | 0.68 |
| 2:J:165:A:OP2 | 6:N:386:U:O4'[4_456] | 1.52 | 0.68 |
| 4:L:752:U:C2' | 5:M:499:U:OP2[3_556] | 1.52 | 0.68 |
| 5:M:391:U:C6 | 6:N:389:U:C5[4_456] | 1.52 | 0.68 |
| 1:I:67:A:N1 | 2:J:44:A:C3'[3_556] | 1.53 | 0.67 |
| 3:K:144:A:P | 5:M:389:U:P[4_556] | 1.53 | 0.67 |
| 4:L:752:U:C4' | 5:M:499:U:OP2[3_556] | 1.53 | 0.67 |
| 2:J:171:A:P | 3:K:151:A:P[4_456] | 1.53 | 0.67 |
| 1:I:65:A:N9 | 5:M:502:U:O3'[3_556] | 1.53 | 0.67 |
| 2:J:43:A:C4 | 4:L:759:U:C3'[3_546] | 1.53 | 0.67 |
| 1:I:352:A:O5' | 4:L:677:U:OP2[3_546] | 1.53 | 0.67 |
| 2:J:44:A:O5' | 4:L:759:U:N3[3_546] | 1.53 | 0.67 |
| 1:I:62:A:O5' | 5:M:505:U:C3'[3_556] | 1.53 | 0.67 |
| 2:J:47:A:O2' | 4:L:754:U:C1'[3_546] | 1.53 | 0.67 |
| 3:K:12:A:N9 | 5:M:313:U:O4[2_664] | 1.53 | 0.67 |
| 3:K:12:A:O4' | 5:M:314:U:O4[2_664] | 1.53 | 0.67 |
| 1:I:62:A:N7 | 5:M:505:U:O5'[3_556] | 1.53 | 0.67 |
| 3:K:149:A:O5' | 5:M:383:U:O2[4_556] | 1.53 | 0.67 |
| 2:J:48:A:C3' | 4:L:754:U:C3'[3_546] | 1.54 | 0.66 |
| 2:J:164:A:O3' | 6:N:386:U:O3'[4_456] | 1.54 | 0.66 |
| 2:J:45:A:C4 | 4:L:757:U:C2[3_546] | 1.54 | 0.66 |
| 2:J:240:A:C5 | 3:K:12:A:OP1[2_666] | 1.54 | 0.66 |
| 1:I:143:A:C8 | 4:L:471:U:O4'[3_556] | 1.54 | 0.66 |
| 2:J:48:A:C2' | 4:L:754:U:C4'[3_546] | 1.54 | 0.66 |
| 4:L:752:U:OP2 | 5:M:500:U:OP1[3_556] | 1.54 | 0.66 |
| 1:I:143:A:C1' | 4:L:471:U:C2'[3_556] | 1.54 | 0.66 |
| 1:I:143:A:O5' | 4:L:472:U:C5[3_556] | 1.54 | 0.66 |
| 1:I:69:A:C6 | 2:J:46:A:O5'[3_556] | 1.54 | 0.66 |
| 1:I:62:A:C8 | 5:M:505:U:C5'[3_556] | 1.54 | 0.66 |
| 4:L:758:U:C4' | 5:M:510:U:O2[3_556] | 1.54 | 0.66 |
| 3:K:147:A:N6 | 5:M:386:U:N3[4_556] | 1.54 | 0.66 |
| 2:J:44:A:C5' | 4:L:759:U:C2[3_546] | 1.54 | 0.66 |
| 1:I:352:A:OP2 | 4:L:677:U:O5'[3_546] | 1.54 | 0.66 |
| 1:I:65:A:C2' | 5:M:502:U:O5'[3_556] | 1.54 | 0.66 |
| 4:L:752:U:O5' | 5:M:499:U:C3'[3_556] | 1.54 | 0.66 |
| 2:J:45:A:C5 | 4:L:757:U:C6[3_546] | 1.54 | 0.66 |
| 1:I:143:A:O4' | 4:L:471:U:O2'[3_556] | 1.54 | 0.66 |
| 2:J:240:A:C6 | 3:K:12:A:O5'[2_666] | 1.54 | 0.66 |
| 4:L:757:U:O5' | 5:M:509:U:N3[3_556] | 1.55 | 0.65 |
| 5:M:312:U:P | 6:N:520:U:C4[2_666] | 1.55 | 0.65 |
| 2:J:240:A:N6 | 3:K:12:A:OP2[2_666] | 1.55 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:65:A:C2' | 5:M:502:U:C5'[3_556] | 1.55 | 0.65 |
| 2:J:171:A:N7 | 3:K:150:A:O5'[4_456] | 1.55 | 0.65 |
| 1:I:69:A:C5 | 2:J:45:A:C3'[3_556] | 1.55 | 0.65 |
| 2:J:165:A:OP1 | 6:N:386:U:C5'[4_456] | 1.55 | 0.65 |
| 3:K:148:A:O3' | 5:M:384:U:O4'[4_556] | 1.55 | 0.65 |
| 2:J:45:A:N7 | 4:L:758:U:C4[3_546] | 1.55 | 0.65 |
| 3:K:144:A:N3 | 5:M:390:U:O4[4_556] | 1.55 | 0.65 |
| 2:J:171:A:C5 | 3:K:150:A:O5'[4_456] | 1.55 | 0.65 |
| 1:I:68:A:N3 | 2:J:45:A:C5'[3_556] | 1.55 | 0.65 |
| 3:K:143:A:C8 | 5:M:389:U:C3'[4_556] | 1.55 | 0.65 |
| 2:J:43:A:P | 4:L:761:U:OP2[3_546] | 1.55 | 0.65 |
| 3:K:144:A:C8 | 5:M:389:U:C6[4_556] | 1.55 | 0.65 |
| 2:J:168:A:C2' | 6:N:382:U:C6[4_456] | 1.55 | 0.65 |
| 2:J:164:A:C8 | 6:N:387:U:C1'[4_456] | 1.56 | 0.64 |
| 1:I:64:A:N1 | 5:M:503:U:OP1[3_556] | 1.56 | 0.64 |
| 2:J:170:A:C2' | 3:K:151:A:OP2[4_456] | 1.56 | 0.64 |
| 2:J:47:A:O2' | 4:L:754:U:O2[3_546] | 1.56 | 0.64 |
| 2:J:165:A:OP2 | 6:N:386:U:C3'[4_456] | 1.56 | 0.64 |
| 1:I:70:A:N1 | 2:J:46:A:O3'[3_556] | 1.56 | 0.64 |
| 4:L:752:U:P | 5:M:500:U:P[3_556] | 1.56 | 0.64 |
| 2:J:48:A:N9 | 4:L:754:U:O3'[3_546] | 1.56 | 0.64 |
| 2:J:163:A:C4 | 6:N:387:U:O2'[4_456] | 1.56 | 0.64 |
| 3:K:144:A:C5' | 5:M:389:U:OP1[4_556] | 1.56 | 0.64 |
| 1:I:142:A:C1' | 4:L:472:U:OP2[3_556] | 1.56 | 0.64 |
| 1:I:150:A:P | 4:L:465:U:O3'[3_556] | 1.56 | 0.64 |
| 2:J:46:A:N9 | 4:L:756:U:O2[3_546] | 1.56 | 0.64 |
| 1:I:64:A:OP1 | 2:J:51:A:C6[3_556] | 1.57 | 0.63 |
| 3:K:18:A:C1' | 5:M:306:U:OP1[2_664] | 1.57 | 0.63 |
| 2:J:164:A:C5 | 6:N:387:U:C4[4_456] | 1.57 | 0.63 |
| 2:J:170:A:P | 3:K:151:A:C4[4_456] | 1.57 | 0.63 |
| 1:I:149:A:O2' | 4:L:466:U:O4'[3_556] | 1.57 | 0.63 |
| 2:J:171:A:P | 3:K:151:A:OP1[4_456] | 1.57 | 0.63 |
| 1:I:356:A:N6 | 4:L:679:U:C2[3_546] | 1.57 | 0.63 |
| 2:J:243:A:C4 | 6:N:518:U:C5[2_666] | 1.57 | 0.63 |
| 3:K:149:A:N7 | 5:M:384:U:N3[4_556] | 1.57 | 0.63 |
| 1:I:67:A:N3 | 2:J:45:A:OP1[3_556] | 1.57 | 0.63 |
| 1:I:61:A:O3' | 5:M:505:U:O3'[3_556] | 1.57 | 0.63 |
| 4:L:758:U:C5' | 5:M:510:U:C4[3_556] | 1.57 | 0.63 |
| 2:J:240:A:N6 | 3:K:12:A:O5'[2_666] | 1.57 | 0.63 |
| 2:J:166:A:N6 | 6:N:385:U:O4[4_456] | 1.57 | 0.63 |
| 2:J:165:A:N6 | 3:K:145:A:N1[4_456] | 1.57 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:62:A:N7 | 5:M:505:U:OP2[3_556] | 1.57 | 0.63 |
| 2:J:48:A:C1' | 4:L:755:U:O5'[3_546] | 1.57 | 0.63 |
| 3:K:148:A:C3' | 5:M:384:U:C6[4_556] | 1.58 | 0.62 |
| 5:M:312:U:O5' | 6:N:520:U:C6[2_666] | 1.58 | 0.62 |
| 2:J:48:A:C4 | 4:L:755:U:OP2[3_546] | 1.58 | 0.62 |
| 2:J:167:A:C6 | 6:N:384:U:C4[4_456] | 1.58 | 0.62 |
| 1:I:67:A:N1 | 2:J:45:A:OP2[3_556] | 1.58 | 0.62 |
| 2:J:164:A:C8 | 6:N:387:U:O4'[4_456] | 1.58 | 0.62 |
| 5:M:390:U:O2 | 6:N:388:U:O4[4_456] | 1.58 | 0.62 |
| 2:J:169:A:N9 | 3:K:150:A:N1[4_456] | 1.58 | 0.62 |
| 2:J:44:A:N9 | 4:L:759:U:C5[3_546] | 1.58 | 0.62 |
| 1:I:69:A:C5 | 2:J:46:A:OP1[3_556] | 1.58 | 0.62 |
| 4:L:752:U:P | 5:M:499:U:C2'[3_556] | 1.58 | 0.62 |
| 3:K:145:A:C5 | 5:M:389:U:O4[4_556] | 1.58 | 0.62 |
| 1:I:66:A:O5' | 5:M:502:U:P[3_556] | 1.58 | 0.62 |
| 2:J:169:A:N3 | 3:K:150:A:C6[4_456] | 1.58 | 0.62 |
| 3:K:144:A:N7 | 5:M:389:U:C5[4_556] | 1.59 | 0.61 |
| 1:I:62:A:C5 | 5:M:504:U:O3'[3_556] | 1.59 | 0.61 |
| 3:K:143:A:N1 | 5:M:390:U:C5[4_556] | 1.59 | 0.61 |
| 1:I:150:A:P | 4:L:465:U:C3'[3_556] | 1.59 | 0.61 |
| 1:I:64:A:C5 | 5:M:503:U:O5'[3_556] | 1.59 | 0.61 |
| 3:K:149:A:C5' | 5:M:383:U:N1[4_556] | 1.59 | 0.61 |
| 1:I:63:A:C4 | 5:M:504:U:OP2[3_556] | 1.59 | 0.61 |
| 2:J:43:A:C4 | 4:L:759:U:O5'[3_546] | 1.59 | 0.61 |
| 4:L:757:U:C5' | 5:M:509:U:C6[3_556] | 1.59 | 0.61 |
| 2:J:243:A:P | 3:K:15:A:N3[2_666] | 1.59 | 0.61 |
| 2:J:242:A:O3' | 3:K:15:A:C5[2_666] | 1.59 | 0.61 |
| 2:J:242:A:C3' | 3:K:15:A:N1[2_666] | 1.59 | 0.61 |
| 1:I:146:A:O2' | 1:I:357:A:OP2[3_556] | 1.59 | 0.61 |
| 2:J:168:A:C5' | 6:N:383:U:P[4_456] | 1.59 | 0.61 |
| 1:I:146:A:C5 | 1:I:356:A:N7[3_556] | 1.60 | 0.60 |
| 4:L:751:U:C1' | 5:M:499:U:C5'[3_556] | 1.60 | 0.60 |
| 2:J:165:A:N6 | 3:K:145:A:N6[4_456] | 1.60 | 0.60 |
| 2:J:170:A:C5' | 3:K:151:A:C8[4_456] | 1.60 | 0.60 |
| 3:K:144:A:C5 | 5:M:389:U:C5[4_556] | 1.60 | 0.60 |
| 2:J:164:A:C4 | 6:N:387:U:C4[4_456] | 1.60 | 0.60 |
| 2:J:47:A:C1' | 4:L:754:U:O2[3_546] | 1.60 | 0.60 |
| 3:K:143:A:C4 | 5:M:389:U:C2'[4_556] | 1.60 | 0.60 |
| 2:J:47:A:C1' | 4:L:755:U:C1'[3_546] | 1.60 | 0.60 |
| 1:I:62:A:C2' | 5:M:504:U:C2[3_556] | 1.60 | 0.60 |
| 2:J:43:A:C5' | 4:L:760:U:C4'[3_546] | 1.60 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 3:K:147:A:C2 | 5:M:386:U:O4[4_556] | 1.60 | 0.60 |
| 2:J:163:A:N3 | 6:N:387:U:C1'[4_456] | 1.60 | 0.60 |
| 2:J:47:A:N7 | 4:L:756:U:C5[3_546] | 1.60 | 0.60 |
| 1:I:64:A:OP2 | 5:M:503:U:C4[3_556] | 1.60 | 0.60 |
| 1:I:62:A:C2' | 5:M:504:U:C2'[3_556] | 1.60 | 0.60 |
| 4:L:751:U:O2' | 5:M:498:U:O2'[3_556] | 1.60 | 0.60 |
| 2:J:44:A:OP1 | 4:L:760:U:O2[3_546] | 1.60 | 0.60 |
| 2:J:243:A:C5 | 6:N:517:U:N1[2_666] | 1.60 | 0.60 |
| 1:I:70:A:C5 | 2:J:46:A:C4'[3_556] | 1.60 | 0.60 |
| 3:K:147:A:P | 5:M:386:U:C5'[4_556] | 1.60 | 0.60 |
| 2:J:164:A:C5 | 6:N:387:U:C6[4_456] | 1.61 | 0.59 |
| 2:J:49:A:OP2 | 4:L:753:U:O3'[3_546] | 1.61 | 0.59 |
| 3:K:144:A:C5 | 5:M:389:U:N3[4_556] | 1.61 | 0.59 |
| 2:J:46:A:N7 | 4:L:756:U:N3[3_546] | 1.61 | 0.59 |
| 5:M:311:U:O2 | 6:N:519:U:O4[2_666] | 1.61 | 0.59 |
| 2:J:168:A:N6 | 3:K:148:A:N6[4_456] | 1.61 | 0.59 |
| 2:J:48:A:C2' | 4:L:754:U:C3'[3_546] | 1.61 | 0.59 |
| 2:J:171:A:C4 | 3:K:150:A:OP1[4_456] | 1.61 | 0.59 |
| 1:I:143:A:C8 | 4:L:471:U:C4'[3_556] | 1.61 | 0.59 |
| 2:J:48:A:C3' | 4:L:754:U:O4'[3_546] | 1.61 | 0.59 |
| 1:I:63:A:P | 5:M:504:U:O2[3_556] | 1.61 | 0.59 |
| 2:J:43:A:C8 | 4:L:760:U:OP2[3_546] | 1.61 | 0.59 |
| 1:I:149:A:C5' | 4:L:466:U:C5[3_556] | 1.61 | 0.59 |
| 3:K:147:A:O4' | 5:M:386:U:OP2[4_556] | 1.61 | 0.59 |
| 1:I:63:A:N9 | 5:M:503:U:C2'[3_556] | 1.62 | 0.58 |
| 2:J:171:A:O5' | 3:K:151:A:OP2[4_456] | 1.62 | 0.58 |
| 1:I:150:A:OP2 | 4:L:465:U:C4'[3_556] | 1.62 | 0.58 |
| 2:J:169:A:C2' | 3:K:150:A:N1[4_456] | 1.62 | 0.58 |
| 2:J:48:A:O4' | 4:L:754:U:O3'[3_546] | 1.62 | 0.58 |
| 2:J:170:A:N7 | 3:K:150:A:C8[4_456] | 1.62 | 0.58 |
| 2:J:48:A:OP1 | 4:L:754:U:C6[3_546] | 1.62 | 0.58 |
| 1:I:357:A:C6 | 4:L:679:U:O2[3_546] | 1.62 | 0.58 |
| 2:J:167:A:C5 | 6:N:384:U:O4[4_456] | 1.62 | 0.58 |
| 1:I:63:A:C2' | 5:M:503:U:O2[3_556] | 1.62 | 0.58 |
| 5:M:312:U:C3' | 6:N:519:U:O2[2_666] | 1.62 | 0.58 |
| 1:I:63:A:N1 | 5:M:504:U:OP2[3_556] | 1.62 | 0.58 |
| 1:I:143:A:C3' | 4:L:472:U:O4'[3_556] | 1.62 | 0.58 |
| 2:J:46:A:N7 | 4:L:757:U:C5[3_546] | 1.62 | 0.58 |
| 2:J:42:A:O3' | 4:L:761:U:P[3_546] | 1.62 | 0.58 |
| 2:J:47:A:N3 | 4:L:755:U:C3'[3_546] | 1.62 | 0.58 |
| 2:J:42:A:C2' | 4:L:760:U:O5'[3_546] | 1.62 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:43:A:C1' | 4:L:759:U:C1'[3_546] | 1.62 | 0.58 |
| 4:L:469:U:C5 | 4:L:679:U:C2'[3_546] | 1.62 | 0.58 |
| 4:L:751:U:C2' | 5:M:499:U:O5'[3_556] | 1.62 | 0.58 |
| 2:J:168:A:N7 | 6:N:383:U:N3[4_456] | 1.62 | 0.58 |
| 2:J:47:A:C2' | 4:L:754:U:N1[3_546] | 1.62 | 0.58 |
| 3:K:147:A:O3' | 5:M:385:U:C4'[4_556] | 1.63 | 0.57 |
| 2:J:167:A:O5' | 6:N:384:U:O5'[4_456] | 1.63 | 0.57 |
| 1:I:67:A:C2 | 2:J:44:A:C3'[3_556] | 1.63 | 0.57 |
| 2:J:164:A:N7 | 6:N:387:U:C2[4_456] | 1.63 | 0.57 |
| 4:L:758:U:OP2 | 5:M:509:U:C4[3_556] | 1.63 | 0.57 |
| 3:K:17:A:O3' | 5:M:305:U:OP1[2_664] | 1.63 | 0.57 |
| 2:J:171:A:N9 | 3:K:150:A:P[4_456] | 1.63 | 0.57 |
| 1:I:62:A:N3 | 5:M:504:U:O5'[3_556] | 1.63 | 0.57 |
| 3:K:143:A:C4 | 5:M:389:U:C3'[4_556] | 1.63 | 0.57 |
| 1:I:150:A:OP1 | 4:L:465:U:C2'[3_556] | 1.63 | 0.57 |
| 4:L:763:U:N3 | 5:M:504:U:OP1[3_556] | 1.63 | 0.57 |
| 4:L:756:U:O3' | 5:M:508:U:C4[3_556] | 1.63 | 0.57 |
| 3:K:147:A:OP1 | 5:M:386:U:OP1[4_556] | 1.63 | 0.57 |
| 3:K:147:A:C5' | 5:M:386:U:OP1[4_556] | 1.63 | 0.57 |
| 1:I:64:A:C3' | 5:M:502:U:C1'[3_556] | 1.63 | 0.57 |
| 1:I:356:A:N3 | 4:L:680:U:C2[3_546] | 1.63 | 0.57 |
| 1:I:62:A:C3' | 5:M:505:U:C6[3_556] | 1.63 | 0.57 |
| 1:I:69:A:N7 | 2:J:45:A:O3'[3_556] | 1.64 | 0.56 |
| 2:J:168:A:O3' | 6:N:382:U:C3'[4_456] | 1.64 | 0.56 |
| 3:K:147:A:C5 | 5:M:386:U:C5[4_556] | 1.64 | 0.56 |
| 3:K:148:A:C5' | 5:M:385:U:P[4_556] | 1.64 | 0.56 |
| 1:I:70:A:C2 | 2:J:46:A:C1'[3_556] | 1.64 | 0.56 |
| 2:J:43:A:C6 | 4:L:759:U:OP2[3_546] | 1.64 | 0.56 |
| 4:L:469:U:O4 | 4:L:679:U:C6[3_546] | 1.64 | 0.56 |
| 1:I:70:A:N3 | 2:J:46:A:O4'[3_556] | 1.64 | 0.56 |
| 3:K:149:A:C8 | 5:M:384:U:N3[4_556] | 1.64 | 0.56 |
| 2:J:168:A:C8 | 6:N:383:U:C4[4_456] | 1.64 | 0.56 |
| 2:J:44:A:N1 | 4:L:758:U:C6[3_546] | 1.64 | 0.56 |
| 3:K:147:A:O5' | 5:M:386:U:OP2[4_556] | 1.64 | 0.56 |
| 1:I:70:A:C2 | 2:J:46:A:O2'[3_556] | 1.64 | 0.56 |
| 3:K:148:A:O3' | 5:M:384:U:C6[4_556] | 1.64 | 0.56 |
| 2:J:46:A:N3 | 4:L:756:U:C6[3_546] | 1.64 | 0.56 |
| 3:K:12:A:C4 | 5:M:313:U:C4[2_664] | 1.64 | 0.56 |
| 2:J:169:A:N6 | 3:K:149:A:N6[4_456] | 1.64 | 0.56 |
| 1:I:70:A:N9 | 2:J:46:A:C5'[3_556] | 1.64 | 0.56 |
| 1:I:64:A:P | 5:M:503:U:C2[3_556] | 1.64 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 4:L:751:U:C3' | 5:M:499:U:O3'[3_556] | 1.64 | 0.56 |
| 2:J:242:A:N9 | 3:K:14:A:N6[2_666] | 1.64 | 0.56 |
| 3:K:13:A:N9 | 5:M:313:U:O4'[2_664] | 1.64 | 0.56 |
| 2:J:164:A:C1' | 6:N:387:U:O5'[4_456] | 1.64 | 0.56 |
| 2:J:44:A:C4 | 4:L:758:U:C2[3_546] | 1.64 | 0.56 |
| 1:I:146:A:C2 | 1:I:356:A:C5[3_556] | 1.64 | 0.56 |
| 1:I:70:A:N7 | 2:J:46:A:C5'[3_556] | 1.65 | 0.55 |
| 3:K:143:A:O3' | 5:M:389:U:OP1[4_556] | 1.65 | 0.55 |
| 1:I:65:A:O3' | 5:M:502:U:O5'[3_556] | 1.65 | 0.55 |
| 3:K:143:A:C8 | 5:M:389:U:O3'[4_556] | 1.65 | 0.55 |
| 3:K:148:A:OP2 | 5:M:385:U:C5'[4_556] | 1.65 | 0.55 |
| 4:L:758:U:C4' | 5:M:510:U:N3[3_556] | 1.65 | 0.55 |
| 1:I:64:A:O4' | 5:M:502:U:O2[3_556] | 1.65 | 0.55 |
| 2:J:44:A:N7 | 4:L:759:U:C5[3_546] | 1.65 | 0.55 |
| 1:I:67:A:N1 | 2:J:45:A:O5'[3_556] | 1.65 | 0.55 |
| 3:K:12:A:O3' | 5:M:314:U:C6[2_664] | 1.65 | 0.55 |
| 2:J:169:A:O4' | 6:N:381:U:O2[4_456] | 1.65 | 0.55 |
| 2:J:42:A:C2' | 4:L:760:U:OP1[3_546] | 1.65 | 0.55 |
| 4:L:758:U:OP1 | 5:M:510:U:C5[3_556] | 1.65 | 0.55 |
| 2:J:168:A:OP2 | 6:N:383:U:O4'[4_456] | 1.65 | 0.55 |
| 1:I:58:A:O3' | 2:J:40:A:O3'[3_556] | 1.65 | 0.55 |
| 1:I:143:A:O3' | 4:L:472:U:C6[3_556] | 1.65 | 0.55 |
| 2:J:171:A:C4 | 3:K:150:A:C5'[4_456] | 1.65 | 0.55 |
| 4:L:752:U:OP2 | 5:M:500:U:OP2[3_556] | 1.65 | 0.55 |
| 1:I:65:A:C8 | 5:M:502:U:O3'[3_556] | 1.65 | 0.55 |
| 1:I:67:A:C2 | 2:J:45:A:OP1[3_556] | 1.66 | 0.54 |
| 3:K:146:A:N1 | 5:M:387:U:O4[4_556] | 1.66 | 0.54 |
| 4:L:469:U:N3 | 4:L:679:U:C2'[3_546] | 1.66 | 0.54 |
| 1:I:143:A:C4 | 4:L:471:U:C1'[3_556] | 1.66 | 0.54 |
| 3:K:147:A:O3' | 5:M:385:U:O3'[4_556] | 1.66 | 0.54 |
| 2:J:164:A:N7 | 6:N:387:U:C6[4_456] | 1.66 | 0.54 |
| 1:I:64:A:O5' | 5:M:503:U:C5[3_556] | 1.66 | 0.54 |
| 1:I:68:A:N7 | 2:J:45:A:OP1[3_556] | 1.66 | 0.54 |
| 5:M:390:U:C2' | 6:N:389:U:N3[4_456] | 1.66 | 0.54 |
| 1:I:62:A:O4' | 5:M:505:U:O4'[3_556] | 1.66 | 0.54 |
| 1:I:67:A:N3 | 2:J:44:A:O3'[3_556] | 1.66 | 0.54 |
| 3:K:143:A:O3' | 5:M:389:U:C5'[4_556] | 1.66 | 0.54 |
| 2:J:164:A:N3 | 6:N:387:U:C5[4_456] | 1.66 | 0.54 |
| 2:J:242:A:O4' | 3:K:15:A:N6[2_666] | 1.66 | 0.54 |
| 1:I:141:A:O2' | 1:I:348:A:OP2[3_556] | 1.66 | 0.54 |
| 3:K:149:A:N7 | 5:M:384:U:C4[4_556] | 1.66 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:143:A:O4' | 4:L:472:U:P[3_556] | 1.66 | 0.54 |
| 2:J:165:A:C5 | 6:N:386:U:C4[4_456] | 1.66 | 0.54 |
| 1:I:356:A:C2 | 4:L:680:U:C4[3_546] | 1.66 | 0.54 |
| 3:K:143:A:N6 | 5:M:390:U:O4'[4_556] | 1.67 | 0.53 |
| 1:I:64:A:C3' | 5:M:502:U:O2[3_556] | 1.67 | 0.53 |
| 2:J:240:A:N6 | 3:K:12:A:P[2_666] | 1.67 | 0.53 |
| 3:K:142:A:N1 | 5:M:390:U:C3'[4_556] | 1.67 | 0.53 |
| 3:K:143:A:C6 | 5:M:390:U:O4'[4_556] | 1.67 | 0.53 |
| 1:I:64:A:C2' | 5:M:502:U:N1[3_556] | 1.67 | 0.53 |
| 1:I:65:A:C5' | 5:M:502:U:O4'[3_556] | 1.67 | 0.53 |
| 2:J:244:A:C6 | 6:N:517:U:C4'[2_666] | 1.67 | 0.53 |
| 2:J:48:A:P | 4:L:754:U:N1[3_546] | 1.67 | 0.53 |
| 5:M:312:U:C1' | 6:N:519:U:N3[2_666] | 1.67 | 0.53 |
| 3:K:12:A:C2' | 5:M:313:U:C2[2_664] | 1.67 | 0.53 |
| 2:J:167:A:P | 6:N:384:U:O5'[4_456] | 1.67 | 0.53 |
| 2:J:48:A:OP2 | 4:L:754:U:C4[3_546] | 1.67 | 0.53 |
| 1:I:149:A:O3' | 4:L:465:U:C2'[3_556] | 1.67 | 0.53 |
| 1:I:65:A:C3' | 5:M:502:U:C5'[3_556] | 1.67 | 0.53 |
| 4:L:470:U:O4 | 4:L:679:U:O4[3_546] | 1.67 | 0.53 |
| 4:L:756:U:OP1 | 5:M:507:U:N1[3_556] | 1.67 | 0.53 |
| 1:I:62:A:O4' | 5:M:504:U:C2'[3_556] | 1.67 | 0.53 |
| 2:J:169:A:C6 | 3:K:149:A:C5[4_456] | 1.67 | 0.53 |
| 2:J:243:A:OP2 | 3:K:15:A:N3[2_666] | 1.67 | 0.53 |
| 2:J:242:A:O3' | 3:K:15:A:C2[2_666] | 1.68 | 0.52 |
| 1:I:65:A:C2' | 5:M:502:U:OP1[3_556] | 1.68 | 0.52 |
| 1:I:69:A:N1 | 2:J:45:A:C2'[3_556] | 1.68 | 0.52 |
| 5:M:312:U:OP2 | 6:N:520:U:O4[2_666] | 1.68 | 0.52 |
| 1:I:63:A:C2' | 5:M:503:U:C2[3_556] | 1.68 | 0.52 |
| 2:J:171:A:N7 | 3:K:150:A:O4'[4_456] | 1.68 | 0.52 |
| 1:I:352:A:O4' | 4:L:676:U:OP2[3_546] | 1.68 | 0.52 |
| 1:I:64:A:O5' | 5:M:503:U:C4[3_556] | 1.68 | 0.52 |
| 3:K:145:A:OP2 | 5:M:388:U:P[4_556] | 1.68 | 0.52 |
| 4:L:756:U:O5' | 5:M:507:U:N3[3_556] | 1.68 | 0.52 |
| 1:I:143:A:C2' | 4:L:472:U:O4'[3_556] | 1.68 | 0.52 |
| 1:I:63:A:N9 | 5:M:504:U:O5'[3_556] | 1.68 | 0.52 |
| 2:J:47:A:O4' | 4:L:754:U:O2[3_546] | 1.68 | 0.52 |
| 1:I:62:A:N1 | 5:M:504:U:OP1[3_556] | 1.68 | 0.52 |
| 2:J:169:A:C5 | 3:K:149:A:C6[4_456] | 1.68 | 0.52 |
| 2:J:164:A:N9 | 6:N:387:U:N1[4_456] | 1.68 | 0.52 |
| 1:I:61:A:C5 | 5:M:505:U:OP1[3_556] | 1.68 | 0.52 |
| 1:I:70:A:C2 | 2:J:46:A:O4'[3_556] | 1.68 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 4:L:470:U:C2 | 4:L:680:U:O4[3_546] | 1.68 | 0.52 |
| 1:I:143:A:N7 | 4:L:471:U:C1'[3_556] | 1.68 | 0.52 |
| 3:K:143:A:N9 | 5:M:389:U:C2'[4_556] | 1.68 | 0.52 |
| 3:K:143:A:C2 | 5:M:390:U:C5[4_556] | 1.68 | 0.52 |
| 1:I:63:A:C2' | 5:M:503:U:C2'[3_556] | 1.68 | 0.52 |
| 2:J:164:A:C4' | 6:N:387:U:C5'[4_456] | 1.68 | 0.52 |
| 4:L:751:U:C4' | 5:M:499:U:O4'[3_556] | 1.69 | 0.51 |
| 1:I:61:A:C4' | 5:M:505:U:O3'[3_556] | 1.69 | 0.51 |
| 1:I:150:A:O5' | 4:L:465:U:O3'[3_556] | 1.69 | 0.51 |
| 2:J:242:A:C4 | 3:K:14:A:N6[2_666] | 1.69 | 0.51 |
| 1:I:63:A:C8 | 5:M:504:U:C6[3_556] | 1.69 | 0.51 |
| 1:I:64:A:C8 | 5:M:503:U:C6[3_556] | 1.69 | 0.51 |
| 3:K:146:A:C3' | 5:M:386:U:O3'[4_556] | 1.69 | 0.51 |
| 4:L:758:U:O5' | 5:M:510:U:O4[3_556] | 1.69 | 0.51 |
| 2:J:43:A:N3 | 4:L:758:U:C2'[3_546] | 1.69 | 0.51 |
| 2:J:242:A:C1' | 3:K:14:A:C6[2_666] | 1.69 | 0.51 |
| 2:J:45:A:N1 | 4:L:757:U:C6[3_546] | 1.69 | 0.51 |
| 3:K:148:A:N9 | 5:M:385:U:C5[4_556] | 1.69 | 0.51 |
| 3:K:143:A:C1' | 5:M:389:U:C3'[4_556] | 1.69 | 0.51 |
| 2:J:244:A:N7 | 6:N:517:U:O3'[2_666] | 1.69 | 0.51 |
| 2:J:164:A:N3 | 6:N:387:U:C4[4_456] | 1.69 | 0.51 |
| 1:I:62:A:N3 | 5:M:504:U:O4'[3_556] | 1.69 | 0.51 |
| 2:J:164:A:C5 | 6:N:387:U:C5[4_456] | 1.70 | 0.50 |
| 2:J:164:A:C6 | 6:N:387:U:C2[4_456] | 1.70 | 0.50 |
| 5:M:312:U:P | 6:N:520:U:C6[2_666] | 1.70 | 0.50 |
| 2:J:43:A:N3 | 4:L:759:U:C5'[3_546] | 1.70 | 0.50 |
| 1:I:63:A:O2' | 5:M:503:U:C1'[3_556] | 1.70 | 0.50 |
| 2:J:47:A:C8 | 4:L:755:U:N3[3_546] | 1.70 | 0.50 |
| 2:J:169:A:OP1 | 6:N:382:U:O4'[4_456] | 1.70 | 0.50 |
| 1:I:70:A:C5 | 2:J:46:A:O5'[3_556] | 1.70 | 0.50 |
| 3:K:144:A:OP1 | 5:M:388:U:O3'[4_556] | 1.70 | 0.50 |
| 2:J:243:A:N3 | 6:N:518:U:C5[2_666] | 1.70 | 0.50 |
| 2:J:240:A:OP1 | 6:N:514:U:P[2_666] | 1.70 | 0.50 |
| 1:I:61:A:O3' | 5:M:505:U:C4'[3_556] | 1.70 | 0.50 |
| 4:L:758:U:P | 5:M:510:U:C5[3_556] | 1.70 | 0.50 |
| 2:J:169:A:C2' | 3:K:151:A:C6[4_456] | 1.70 | 0.50 |
| 1:I:64:A:C4 | 5:M:503:U:OP2[3_556] | 1.70 | 0.50 |
| 1:I:143:A:O2' | 4:L:472:U:C4'[3_556] | 1.70 | 0.50 |
| 3:K:148:A:N9 | 5:M:385:U:O4[4_556] | 1.71 | 0.49 |
| 4:L:469:U:C1' | 4:L:679:U:O3'[3_546] | 1.71 | 0.49 |
| 1:I:70:A:C6 | 2:J:47:A:OP2[3_556] | 1.71 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:62:A:N3 | 5:M:504:U:C3'[3_556] | 1.71 | 0.49 |
| 1:I:353:A:OP1 | 4:L:676:U:O4[3_546] | 1.71 | 0.49 |
| 2:J:43:A:C4 | 4:L:759:U:C5'[3_546] | 1.71 | 0.49 |
| 1:I:71:A:N7 | 2:J:46:A:O3'[3_556] | 1.71 | 0.49 |
| 2:J:170:A:O3' | 3:K:151:A:O5'[4_456] | 1.71 | 0.49 |
| 2:J:169:A:C2' | 3:K:151:A:C5[4_456] | 1.71 | 0.49 |
| 2:J:46:A:C4 | 4:L:756:U:C1'[3_546] | 1.71 | 0.49 |
| 1:I:65:A:C5' | 5:M:501:U:C2'[3_556] | 1.71 | 0.49 |
| 2:J:43:A:O3' | 4:L:760:U:N1[3_546] | 1.71 | 0.49 |
| 1:I:146:A:C6 | 1:I:356:A:C5[3_556] | 1.71 | 0.49 |
| 2:J:240:A:P | 6:N:514:U:OP1[2_666] | 1.71 | 0.49 |
| 1:I:70:A:C6 | 2:J:46:A:O3'[3_556] | 1.71 | 0.49 |
| 3:K:147:A:OP2 | 5:M:386:U:C3'[4_556] | 1.72 | 0.48 |
| 2:J:236:A:C3' | 6:N:522:U:O2'[2_666] | 1.72 | 0.48 |
| 2:J:169:A:C2 | 3:K:150:A:N6[4_456] | 1.72 | 0.48 |
| 2:J:47:A:O3' | 4:L:754:U:N1[3_546] | 1.72 | 0.48 |
| 1:I:62:A:N7 | 5:M:504:U:O3'[3_556] | 1.72 | 0.48 |
| 1:I:65:A:O4' | 5:M:502:U:O4'[3_556] | 1.72 | 0.48 |
| 2:J:171:A:C8 | 3:K:150:A:C4'[4_456] | 1.72 | 0.48 |
| 2:J:243:A:N7 | 6:N:517:U:C6[2_666] | 1.72 | 0.48 |
| 3:K:147:A:N7 | 5:M:386:U:C5[4_556] | 1.72 | 0.48 |
| 1:I:65:A:C8 | 5:M:502:U:C3'[3_556] | 1.72 | 0.48 |
| 2:J:44:A:O4' | 4:L:759:U:C1'[3_546] | 1.72 | 0.48 |
| 2:J:243:A:N9 | 6:N:517:U:C2[2_666] | 1.72 | 0.48 |
| 3:K:144:A:C3' | 5:M:389:U:OP2[4_556] | 1.72 | 0.48 |
| 5:M:311:U:O2 | 6:N:519:U:C5[2_666] | 1.72 | 0.48 |
| 1:I:352:A:P | 4:L:676:U:C3'[3_546] | 1.72 | 0.48 |
| 1:I:69:A:N1 | 2:J:46:A:P[3_556] | 1.72 | 0.48 |
| 2:J:165:A:C5 | 6:N:386:U:O4[4_456] | 1.72 | 0.48 |
| 1:I:352:A:OP1 | 4:L:676:U:O3'[3_546] | 1.72 | 0.48 |
| 2:J:45:A:N9 | 4:L:757:U:C4[3_546] | 1.72 | 0.48 |
| 1:I:65:A:P | 5:M:502:U:N1[3_556] | 1.72 | 0.48 |
| 2:J:47:A:C2 | 4:L:755:U:C5'[3_546] | 1.73 | 0.47 |
| 1:I:64:A:O5' | 5:M:503:U:N3[3_556] | 1.73 | 0.47 |
| 3:K:13:A:C8 | 5:M:313:U:N1[2_664] | 1.73 | 0.47 |
| 3:K:148:A:C4 | 5:M:385:U:C4[4_556] | 1.73 | 0.47 |
| 3:K:149:A:C4' | 5:M:383:U:N1[4_556] | 1.73 | 0.47 |
| 1:I:59:A:P | 2:J:41:A:OP1[3_556] | 1.73 | 0.47 |
| 1:I:146:A:OP2 | 1:I:355:A:C4'[3_556] | 1.73 | 0.47 |
| 5:M:392:U:C6 | 6:N:388:U:O2'[4_456] | 1.73 | 0.47 |
| 1:I:146:A:C1' | 1:I:356:A:C5'[3_556] | 1.73 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:62:A:N1 | 5:M:504:U:O5'[3_556] | 1.73 | 0.47 |
| 2:J:167:A:P | 6:N:384:U:P[4_456] | 1.73 | 0.47 |
| 1:I:63:A:C4 | 5:M:504:U:O5'[3_556] | 1.73 | 0.47 |
| 5:M:312:U:C6 | 6:N:519:U:O4[2_666] | 1.73 | 0.47 |
| 2:J:45:A:C4 | 4:L:757:U:N3[3_546] | 1.73 | 0.47 |
| 1:I:62:A:C3' | 5:M:504:U:C2[3_556] | 1.73 | 0.47 |
| 2:J:240:A:N7 | 3:K:12:A:OP2[2_666] | 1.73 | 0.47 |
| 5:M:392:U:C4' | 6:N:389:U:OP1[4_456] | 1.73 | 0.47 |
| 2:J:166:A:N6 | 6:N:386:U:O4[4_456] | 1.73 | 0.47 |
| 1:I:65:A:C4' | 5:M:502:U:C4'[3_556] | 1.73 | 0.47 |
| 1:I:67:A:C6 | 2:J:45:A:OP1[3_556] | 1.73 | 0.47 |
| 1:I:63:A:O3' | 5:M:503:U:N3[3_556] | 1.73 | 0.47 |
| 2:J:166:A:N1 | 6:N:385:U:O4[4_456] | 1.73 | 0.47 |
| 1:I:61:A:O2' | 5:M:505:U:C4'[3_556] | 1.73 | 0.47 |
| 2:J:168:A:O2' | 6:N:382:U:C6[4_456] | 1.73 | 0.47 |
| 1:I:142:A:C4 | 4:L:471:U:O3'[3_556] | 1.74 | 0.46 |
| 3:K:12:A:N6 | 5:M:312:U:N3[2_664] | 1.74 | 0.46 |
| 2:J:168:A:OP2 | 6:N:383:U:C5'[4_456] | 1.74 | 0.46 |
| 1:I:143:A:O4' | 4:L:471:U:C2'[3_556] | 1.74 | 0.46 |
| 4:L:469:U:O4' | 4:L:679:U:O3'[3_546] | 1.74 | 0.46 |
| 2:J:42:A:C2 | 4:L:759:U:C5'[3_546] | 1.74 | 0.46 |
| 1:I:63:A:N3 | 5:M:503:U:C4'[3_556] | 1.74 | 0.46 |
| 3:K:13:A:O4' | 5:M:313:U:O4'[2_664] | 1.74 | 0.46 |
| 1:I:63:A:N3 | 5:M:504:U:P[3_556] | 1.74 | 0.46 |
| 1:I:145:A:N6 | 1:I:355:A:C2[3_556] | 1.74 | 0.46 |
| 3:K:12:A:C3' | 5:M:314:U:C5[2_664] | 1.74 | 0.46 |
| 2:J:163:A:O2' | 6:N:387:U:C4'[4_456] | 1.74 | 0.46 |
| 2:J:43:A:N9 | 4:L:759:U:O3'[3_546] | 1.74 | 0.46 |
| 3:K:13:A:C8 | 5:M:313:U:C1'[2_664] | 1.74 | 0.46 |
| 1:I:356:A:C6 | 4:L:679:U:N3[3_546] | 1.74 | 0.46 |
| 2:J:240:A:C5' | 6:N:514:U:OP2[2_666] | 1.75 | 0.45 |
| 2:J:236:A:O3' | 6:N:522:U:C2'[2_666] | 1.75 | 0.45 |
| 2:J:165:A:N1 | 3:K:145:A:N6[4_456] | 1.75 | 0.45 |
| 2:J:43:A:C2 | 4:L:759:U:O5'[3_546] | 1.75 | 0.45 |
| 2:J:244:A:C8 | 6:N:517:U:C2'[2_666] | 1.75 | 0.45 |
| 4:L:469:U:O2' | 4:L:680:U:OP2[3_546] | 1.75 | 0.45 |
| 3:K:149:A:N9 | 5:M:384:U:O4[4_556] | 1.75 | 0.45 |
| 1:I:62:A:O5' | 5:M:505:U:C4'[3_556] | 1.75 | 0.45 |
| 3:K:143:A:C3' | 5:M:389:U:O5'[4_556] | 1.75 | 0.45 |
| 1:I:64:A:N3 | 5:M:503:U:OP2[3_556] | 1.75 | 0.45 |
| 5:M:311:U:O2 | 6:N:519:U:C4[2_666] | 1.75 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:171:A:N9 | 3:K:150:A:OP1[4_456] | 1.75 | 0.45 |
| 4:L:756:U:C5' | 5:M:507:U:O2[3_556] | 1.75 | 0.45 |
| 2:J:43:A:C2 | 4:L:758:U:O2'[3_546] | 1.75 | 0.45 |
| 2:J:48:A:C8 | 4:L:755:U:P[3_546] | 1.75 | 0.45 |
| 4:L:758:U:C4' | 5:M:510:U:C2[3_556] | 1.75 | 0.45 |
| 3:K:146:A:N6 | 5:M:388:U:O4[4_556] | 1.76 | 0.44 |
| 2:J:44:A:C8 | 4:L:759:U:N1[3_546] | 1.76 | 0.44 |
| 2:J:167:A:C5' | 6:N:384:U:P[4_456] | 1.76 | 0.44 |
| 2:J:236:A:OP1 | 6:N:522:U:C5'[2_666] | 1.76 | 0.44 |
| 2:J:164:A:N9 | 6:N:387:U:C5[4_456] | 1.76 | 0.44 |
| 2:J:244:A:N6 | 6:N:517:U:C4'[2_666] | 1.76 | 0.44 |
| 1:I:69:A:C4 | 2:J:45:A:C3'[3_556] | 1.76 | 0.44 |
| 3:K:146:A:O3' | 5:M:386:U:O3'[4_556] | 1.76 | 0.44 |
| 2:J:169:A:OP2 | 6:N:382:U:O4'[4_456] | 1.76 | 0.44 |
| 3:K:18:A:O4' | 5:M:305:U:O3'[2_664] | 1.76 | 0.44 |
| 4:L:751:U:C3' | 5:M:499:U:C5'[3_556] | 1.76 | 0.44 |
| 2:J:44:A:C2' | 4:L:758:U:C2[3_546] | 1.76 | 0.44 |
| 2:J:47:A:N3 | 4:L:755:U:O4'[3_546] | 1.76 | 0.44 |
| 2:J:165:A:N6 | 3:K:145:A:C6[4_456] | 1.76 | 0.44 |
| 2:J:167:A:N6 | 6:N:384:U:N3[4_456] | 1.76 | 0.44 |
| 2:J:42:A:C4 | 4:L:760:U:OP1[3_546] | 1.76 | 0.44 |
| 3:K:18:A:O4' | 5:M:306:U:P[2_664] | 1.76 | 0.44 |
| 1:I:62:A:O5' | 5:M:505:U:N1[3_556] | 1.76 | 0.44 |
| 2:J:167:A:C2 | 6:N:384:U:O4[4_456] | 1.76 | 0.44 |
| 1:I:59:A:P | 2:J:41:A:C5'[3_556] | 1.76 | 0.44 |
| 3:K:147:A:OP2 | 5:M:386:U:O5'[4_556] | 1.76 | 0.44 |
| 2:J:168:A:O3' | 6:N:382:U:C4'[4_456] | 1.76 | 0.44 |
| 1:I:69:A:N9 | 2:J:45:A:O3'[3_556] | 1.76 | 0.44 |
| 1:I:63:A:C2 | 5:M:503:U:C3'[3_556] | 1.76 | 0.44 |
| 2:J:43:A:C4 | 4:L:759:U:O4'[3_546] | 1.76 | 0.44 |
| 1:I:145:A:N3 | 1:I:356:A:O4'[3_556] | 1.77 | 0.43 |
| 1:I:143:A:C5 | 4:L:471:U:C4'[3_556] | 1.77 | 0.43 |
| 4:L:469:U:O4' | 4:L:680:U:P[3_546] | 1.77 | 0.43 |
| 1:I:65:A:O5' | 5:M:502:U:N1[3_556] | 1.77 | 0.43 |
| 2:J:164:A:C4 | 6:N:387:U:N1[4_456] | 1.77 | 0.43 |
| 2:J:48:A:C1' | 4:L:755:U:C5'[3_546] | 1.77 | 0.43 |
| 5:M:391:U:P | 6:N:390:U:O4[4_456] | 1.77 | 0.43 |
| 2:J:43:A:O5' | 4:L:760:U:O5'[3_546] | 1.77 | 0.43 |
| 4:L:758:U:O4' | 5:M:510:U:O2[3_556] | 1.77 | 0.43 |
| 2:J:239:A:N6 | 3:K:11:A:O3'[2_666] | 1.77 | 0.43 |
| 2:J:48:A:C8 | 4:L:755:U:O5'[3_546] | 1.77 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:44:A:N3 | 4:L:758:U:C1'[3_546] | 1.77 | 0.43 |
| 5:M:391:U:C1' | 6:N:388:U:C3'[4_456] | 1.77 | 0.43 |
| 2:J:43:A:N1 | 4:L:758:U:C2'[3_546] | 1.77 | 0.43 |
| 4:L:757:U:OP2 | 5:M:508:U:N3[3_556] | 1.77 | 0.43 |
| 5:M:390:U:O2 | 6:N:388:U:C5[4_456] | 1.77 | 0.43 |
| 2:J:171:A:C1' | 3:K:150:A:OP1[4_456] | 1.77 | 0.43 |
| 3:K:149:A:C3' | 5:M:383:U:O2[4_556] | 1.77 | 0.43 |
| 1:I:62:A:O2' | 5:M:504:U:N1[3_556] | 1.77 | 0.43 |
| 2:J:43:A:N6 | 4:L:759:U:OP1[3_546] | 1.78 | 0.42 |
| 2:J:45:A:N7 | 4:L:758:U:O4[3_546] | 1.78 | 0.42 |
| 2:J:170:A:OP1 | 3:K:151:A:O2'[4_456] | 1.78 | 0.42 |
| 1:I:63:A:OP1 | 2:J:49:A:N1[3_556] | 1.78 | 0.42 |
| 2:J:164:A:P | 6:N:386:U:O2'[4_456] | 1.78 | 0.42 |
| 1:I:64:A:O5' | 5:M:503:U:C6[3_556] | 1.78 | 0.42 |
| 1:I:150:A:N7 | 4:L:466:U:OP1[3_556] | 1.78 | 0.42 |
| 2:J:43:A:N9 | 4:L:759:U:C4'[3_546] | 1.78 | 0.42 |
| 1:I:65:A:P | 5:M:502:U:N3[3_556] | 1.78 | 0.42 |
| 2:J:169:A:N7 | 6:N:382:U:O4[4_456] | 1.78 | 0.42 |
| 2:J:164:A:N6 | 6:N:387:U:N3[4_456] | 1.78 | 0.42 |
| 1:I:62:A:C2' | 5:M:504:U:O2[3_556] | 1.78 | 0.42 |
| 3:K:12:A:C5 | 5:M:313:U:C5[2_664] | 1.78 | 0.42 |
| 3:K:17:A:O2' | 5:M:306:U:OP2[2_664] | 1.78 | 0.42 |
| 1:I:149:A:O2' | 4:L:466:U:C4'[3_556] | 1.78 | 0.42 |
| 3:K:17:A:O2' | 5:M:305:U:C3'[2_664] | 1.78 | 0.42 |
| 1:I:352:A:P | 4:L:676:U:O3'[3_546] | 1.78 | 0.42 |
| 3:K:143:A:O4' | 5:M:389:U:O3'[4_556] | 1.78 | 0.42 |
| 2:J:163:A:N9 | 6:N:387:U:O2'[4_456] | 1.78 | 0.42 |
| 2:J:45:A:C4 | 4:L:757:U:C4[3_546] | 1.78 | 0.42 |
| 5:M:391:U:OP2 | 6:N:390:U:C6[4_456] | 1.78 | 0.42 |
| 1:I:59:A:OP1 | 2:J:41:A:OP2[3_556] | 1.78 | 0.42 |
| 5:M:391:U:C3' | 6:N:389:U:O5'[4_456] | 1.78 | 0.42 |
| 3:K:148:A:N9 | 5:M:385:U:C4[4_556] | 1.78 | 0.42 |
| 2:J:169:A:N7 | 6:N:382:U:C4[4_456] | 1.79 | 0.41 |
| 2:J:42:A:C3' | 4:L:761:U:OP2[3_546] | 1.79 | 0.41 |
| 1:I:141:A:O3' | 1:I:349:A:OP2[3_556] | 1.79 | 0.41 |
| 1:I:69:A:C5 | 2:J:46:A:OP2[3_556] | 1.79 | 0.41 |
| 4:L:751:U:C5' | 5:M:499:U:O2'[3_556] | 1.79 | 0.41 |
| 2:J:164:A:O3' | 6:N:387:U:P[4_456] | 1.79 | 0.41 |
| 1:I:64:A:P | 5:M:503:U:C4[3_556] | 1.79 | 0.41 |
| 4:L:757:U:P | 5:M:508:U:C4[3_556] | 1.79 | 0.41 |
| 2:J:237:A:OP2 | 6:N:522:U:O2'[2_666] | 1.79 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:48:A:O3' | 4:L:754:U:O4'[3_546] | 1.79 | 0.41 |
| 4:L:757:U:C5' | 5:M:509:U:C4[3_556] | 1.79 | 0.41 |
| 2:J:170:A:C6 | 3:K:150:A:N7[4_456] | 1.79 | 0.41 |
| 2:J:48:A:OP1 | 4:L:753:U:C2[3_546] | 1.79 | 0.41 |
| 2:J:44:A:C2 | 4:L:757:U:C2'[3_546] | 1.79 | 0.41 |
| 1:I:143:A:C4' | 4:L:472:U:C6[3_556] | 1.79 | 0.41 |
| 1:I:65:A:C1' | 5:M:502:U:C4'[3_556] | 1.79 | 0.41 |
| 1:I:68:A:C6 | 2:J:45:A:C5'[3_556] | 1.79 | 0.41 |
| 1:I:71:A:C5 | 2:J:47:A:OP1[3_556] | 1.79 | 0.41 |
| 3:K:144:A:O5' | 5:M:389:U:O5'[4_556] | 1.79 | 0.41 |
| 3:K:12:A:C6 | 5:M:312:U:N3[2_664] | 1.79 | 0.41 |
| 2:J:47:A:C1' | 4:L:755:U:C6[3_546] | 1.79 | 0.41 |
| 1:I:69:A:C6 | 2:J:45:A:O3'[3_556] | 1.79 | 0.41 |
| 2:J:168:A:O3' | 6:N:382:U:N1[4_456] | 1.80 | 0.40 |
| 5:M:391:U:C6 | 6:N:388:U:O2[4_456] | 1.80 | 0.40 |
| 1:I:65:A:C4' | 5:M:502:U:O4'[3_556] | 1.80 | 0.40 |
| 1:I:64:A:N9 | 5:M:502:U:C2'[3_556] | 1.80 | 0.40 |
| 2:J:43:A:C3' | 4:L:759:U:O2[3_546] | 1.80 | 0.40 |
| 2:J:170:A:O3' | 3:K:151:A:OP2[4_456] | 1.80 | 0.40 |
| 1:I:149:A:OP1 | 4:L:465:U:C6[3_556] | 1.80 | 0.40 |
| 2:J:170:A:O4' | 3:K:151:A:N7[4_456] | 1.80 | 0.40 |
| 5:M:392:U:O5' | 6:N:389:U:P[4_456] | 1.80 | 0.40 |
| 2:J:44:A:N7 | 4:L:759:U:C6[3_546] | 1.80 | 0.40 |
| 2:J:165:A:N7 | 6:N:386:U:N3[4_456] | 1.80 | 0.40 |
| 2:J:49:A:OP2 | 4:L:753:U:C3'[3_546] | 1.80 | 0.40 |
| 3:K:147:A:C6 | 5:M:386:U:N3[4_556] | 1.80 | 0.40 |
| 2:J:242:A:C2 | 6:N:518:U:C4[2_666] | 1.80 | 0.40 |
| 2:J:168:A:OP1 | 6:N:383:U:P[4_456] | 1.80 | 0.40 |
| 1:I:62:A:O2' | 5:M:504:U:O2[3_556] | 1.80 | 0.40 |
| 2:J:170:A:C5 | 3:K:150:A:C5[4_456] | 1.80 | 0.40 |
| 2:J:171:A:N9 | 3:K:150:A:C5'[4_456] | 1.80 | 0.40 |
| 3:K:145:A:C6 | 5:M:389:U:O4[4_556] | 1.80 | 0.40 |
| 2:J:48:A:P | 4:L:754:U:N3[3_546] | 1.80 | 0.40 |
| 2:J:46:A:C6 | 4:L:756:U:C6[3_546] | 1.81 | 0.39 |
| 4:L:756:U:C4' | 5:M:508:U:C2[3_556] | 1.81 | 0.39 |
| 1:I:62:A:OP2 | 5:M:505:U:C3'[3_556] | 1.81 | 0.39 |
| 3:K:148:A:N7 | 5:M:385:U:O4[4_556] | 1.81 | 0.39 |
| 1:I:65:A:C4' | 5:M:501:U:O3'[3_556] | 1.81 | 0.39 |
| 2:J:44:A:N3 | 4:L:758:U:C2[3_546] | 1.81 | 0.39 |
| 2:J:168:A:N3 | 6:N:383:U:O4[4_456] | 1.81 | 0.39 |
| 2:J:45:A:O4' | 4:L:757:U:O2[3_546] | 1.81 | 0.39 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:169:A:C1' | 3:K:150:A:N1[4_456] | 1.81 | 0.39 |
| 2:J:43:A:C2 | 4:L:759:U:C5'[3_546] | 1.81 | 0.39 |
| 1:I:62:A:C4 | 5:M:505:U:P[3_556] | 1.81 | 0.39 |
| 3:K:149:A:P | 5:M:384:U:C6[4_556] | 1.81 | 0.39 |
| 3:K:149:A:OP1 | 5:M:384:U:O4'[4_556] | 1.81 | 0.39 |
| 2:J:168:A:N9 | 6:N:383:U:O4[4_456] | 1.81 | 0.39 |
| 1:I:149:A:P | 4:L:465:U:C5[3_556] | 1.81 | 0.39 |
| 2:J:163:A:C2 | 6:N:387:U:O2[4_456] | 1.81 | 0.39 |
| 2:J:164:A:C5' | 6:N:386:U:O3'[4_456] | 1.81 | 0.39 |
| 2:J:171:A:C4 | 3:K:149:A:O3'[4_456] | 1.81 | 0.39 |
| 1:I:67:A:N1 | 2:J:45:A:OP1[3_556] | 1.81 | 0.39 |
| 2:J:168:A:C2' | 6:N:382:U:C5[4_456] | 1.81 | 0.39 |
| 3:K:145:A:OP1 | 5:M:388:U:P[4_556] | 1.81 | 0.39 |
| 3:K:17:A:O2' | 5:M:305:U:O3'[2_664] | 1.81 | 0.39 |
| 1:I:62:A:C5 | 5:M:504:U:C3'[3_556] | 1.81 | 0.39 |
| 2:J:165:A:N7 | 6:N:386:U:C4[4_456] | 1.81 | 0.39 |
| 3:K:12:A:C4 | 5:M:313:U:C6[2_664] | 1.81 | 0.39 |
| 3:K:145:A:C6 | 5:M:388:U:O4[4_556] | 1.81 | 0.39 |
| 1:I:63:A:O5' | 5:M:504:U:C6[3_556] | 1.81 | 0.39 |
| 5:M:391:U:C4 | 6:N:388:U:C2[4_456] | 1.81 | 0.39 |
| 2:J:43:A:O4' | 4:L:760:U:C4'[3_546] | 1.81 | 0.39 |
| 2:J:171:A:C8 | 3:K:150:A:C3'[4_456] | 1.81 | 0.39 |
| 2:J:45:A:N9 | 4:L:757:U:N1[3_546] | 1.81 | 0.39 |
| 3:K:142:A:N6 | 5:M:390:U:C4'[4_556] | 1.81 | 0.39 |
| 3:K:143:A:C5 | 5:M:389:U:O2'[4_556] | 1.81 | 0.39 |
| 2:J:170:A:C8 | 3:K:150:A:N9[4_456] | 1.82 | 0.38 |
| 4:L:469:U:O2 | 4:L:680:U:C6[3_546] | 1.82 | 0.38 |
| 2:J:168:A:C4 | 6:N:383:U:C4[4_456] | 1.82 | 0.38 |
| 4:L:751:U:O3' | 5:M:499:U:O4'[3_556] | 1.82 | 0.38 |
| 2:J:170:A:C4 | 3:K:150:A:N7[4_456] | 1.82 | 0.38 |
| 3:K:143:A:N6 | 5:M:390:U:C1'[4_556] | 1.82 | 0.38 |
| 2:J:168:A:C5' | 6:N:382:U:O3'[4_456] | 1.82 | 0.38 |
| 1:I:64:A:N9 | 5:M:502:U:O2'[3_556] | 1.82 | 0.38 |
| 3:K:12:A:N1 | 5:M:312:U:C2[2_664] | 1.82 | 0.38 |
| 4:L:756:U:OP1 | 5:M:507:U:C5[3_556] | 1.82 | 0.38 |
| 2:J:44:A:C2' | 4:L:758:U:N3[3_546] | 1.82 | 0.38 |
| 4:L:752:U:O2' | 5:M:498:U:O3'[3_556] | 1.82 | 0.38 |
| 4:L:752:U:OP1 | 5:M:499:U:C2'[3_556] | 1.82 | 0.38 |
| 1:I:70:A:C8 | 2:J:46:A:C5'[3_556] | 1.82 | 0.38 |
| 2:J:242:A:N3 | 6:N:518:U:O4[2_666] | 1.82 | 0.38 |
| 1:I:63:A:O5' | 5:M:504:U:C4[3_556] | 1.82 | 0.38 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:242:A:N7 | 6:N:517:U:O4[2_666] | 1.82 | 0.38 |
| 3:K:145:A:O5' | 5:M:388:U:OP2[4_556] | 1.82 | 0.38 |
| 3:K:144:A:C6 | 5:M:389:U:C2[4_556] | 1.82 | 0.38 |
| 3:K:143:A:C4 | 5:M:390:U:O5'[4_556] | 1.82 | 0.38 |
| 2:J:43:A:C4' | 4:L:760:U:C3'[3_546] | 1.82 | 0.38 |
| 4:L:757:U:P | 5:M:509:U:C5[3_556] | 1.82 | 0.38 |
| 1:I:69:A:N6 | 2:J:46:A:P[3_556] | 1.82 | 0.38 |
| 2:J:244:A:N9 | 6:N:517:U:O3'[2_666] | 1.82 | 0.38 |
| 1:I:63:A:C1' | 5:M:503:U:O2'[3_556] | 1.82 | 0.38 |
| 1:I:65:A:OP1 | 5:M:502:U:C6[3_556] | 1.82 | 0.38 |
| 2:J:242:A:O4' | 3:K:15:A:N7[2_666] | 1.82 | 0.38 |
| 2:J:164:A:C3' | 6:N:387:U:OP2[4_456] | 1.82 | 0.38 |
| 2:J:47:A:C8 | 4:L:755:U:C6[3_546] | 1.82 | 0.38 |
| 2:J:242:A:C8 | 3:K:15:A:N6[2_666] | 1.82 | 0.38 |
| 4:L:757:U:C5' | 5:M:509:U:C5[3_556] | 1.82 | 0.38 |
| 2:J:242:A:OP1 | 3:K:16:A:C6[2_666] | 1.83 | 0.37 |
| 2:J:45:A:C6 | 4:L:757:U:C6[3_546] | 1.83 | 0.37 |
| 1:I:63:A:OP1 | 5:M:504:U:N3[3_556] | 1.83 | 0.37 |
| 3:K:144:A:OP2 | 5:M:388:U:C2'[4_556] | 1.83 | 0.37 |
| 2:J:168:A:O3' | 6:N:382:U:C2'[4_456] | 1.83 | 0.37 |
| 3:K:148:A:N3 | 5:M:385:U:O4[4_556] | 1.83 | 0.37 |
| 5:M:391:U:C2 | 6:N:388:U:C3'[4_456] | 1.83 | 0.37 |
| 2:J:47:A:N9 | 4:L:755:U:C2[3_546] | 1.83 | 0.37 |
| 1:I:146:A:C2' | 1:I:356:A:O5'[3_556] | 1.83 | 0.37 |
| 2:J:47:A:C2 | 4:L:755:U:C3'[3_546] | 1.83 | 0.37 |
| 5:M:391:U:C1' | 6:N:388:U:C2'[4_456] | 1.83 | 0.37 |
| 1:I:62:A:N1 | 5:M:504:U:C5'[3_556] | 1.83 | 0.37 |
| 4:L:757:U:C3' | 5:M:509:U:O2[3_556] | 1.83 | 0.37 |
| 4:L:752:U:O3' | 5:M:499:U:OP2[3_556] | 1.83 | 0.37 |
| 3:K:143:A:C2' | 5:M:389:U:O5'[4_556] | 1.83 | 0.37 |
| 2:J:47:A:C4 | 4:L:755:U:C3'[3_546] | 1.83 | 0.37 |
| 1:I:146:A:N1 | 1:I:356:A:C6[3_556] | 1.83 | 0.37 |
| 4:L:756:U:C2' | 5:M:508:U:O2[3_556] | 1.83 | 0.37 |
| 2:J:164:A:N7 | 6:N:387:U:C1'[4_456] | 1.83 | 0.37 |
| 1:I:62:A:P | 5:M:505:U:O2'[3_556] | 1.83 | 0.37 |
| 1:I:143:A:C5 | 4:L:471:U:C1'[3_556] | 1.83 | 0.37 |
| 1:I:69:A:N3 | 2:J:45:A:C2'[3_556] | 1.83 | 0.37 |
| 3:K:12:A:N6 | 5:M:312:U:C6[2_664] | 1.83 | 0.37 |
| 2:J:236:A:C5' | 6:N:522:U:C4'[2_666] | 1.83 | 0.37 |
| 4:L:468:U:O2 | 4:L:679:U:O2'[3_546] | 1.84 | 0.36 |
| 1:I:146:A:N6 | 1:I:355:A:C5[3_556] | 1.84 | 0.36 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 3:K:149:A:N9 | 5:M:383:U:O4[4_556] | 1.84 | 0.36 |
| 2:J:169:A:OP2 | 6:N:382:U:C2'[4_456] | 1.84 | 0.36 |
| 1:I:68:A:C5 | 2:J:45:A:OP1[3_556] | 1.84 | 0.36 |
| 2:J:242:A:C2' | 3:K:14:A:N1[2_666] | 1.84 | 0.36 |
| 2:J:170:A:C5' | 3:K:151:A:N9[4_456] | 1.84 | 0.36 |
| 1:I:70:A:N1 | 2:J:46:A:C4'[3_556] | 1.84 | 0.36 |
| 2:J:46:A:N3 | 4:L:755:U:O2[3_546] | 1.84 | 0.36 |
| 1:I:146:A:C8 | 1:I:356:A:O5'[3_556] | 1.84 | 0.36 |
| 2:J:170:A:O5' | 3:K:151:A:N7[4_456] | 1.84 | 0.36 |
| 1:I:62:A:N9 | 5:M:505:U:O5'[3_556] | 1.84 | 0.36 |
| 1:I:146:A:N3 | 1:I:356:A:C8[3_556] | 1.84 | 0.36 |
| 5:M:312:U:OP1 | 6:N:520:U:C5[2_666] | 1.84 | 0.36 |
| 1:I:352:A:OP2 | 4:L:677:U:OP1[3_546] | 1.84 | 0.36 |
| 2:J:169:A:N9 | 3:K:150:A:C6[4_456] | 1.84 | 0.36 |
| 2:J:44:A:N9 | 4:L:758:U:O2[3_546] | 1.84 | 0.36 |
| 4:L:757:U:O3' | 5:M:510:U:N3[3_556] | 1.84 | 0.36 |
| 2:J:164:A:O3' | 6:N:387:U:OP2[4_456] | 1.84 | 0.36 |
| 5:M:391:U:O2 | 6:N:388:U:O4'[4_456] | 1.84 | 0.36 |
| 3:K:144:A:OP2 | 5:M:388:U:O3'[4_556] | 1.85 | 0.35 |
| 1:I:143:A:N9 | 4:L:471:U:O4'[3_556] | 1.85 | 0.35 |
| 1:I:144:A:P | 4:L:472:U:C2'[3_556] | 1.85 | 0.35 |
| 1:I:69:A:C6 | 2:J:45:A:C3'[3_556] | 1.85 | 0.35 |
| 2:J:47:A:C1' | 4:L:755:U:O4'[3_546] | 1.85 | 0.35 |
| 2:J:169:A:C5 | 3:K:149:A:N1[4_456] | 1.85 | 0.35 |
| 3:K:148:A:C6 | 5:M:385:U:O4[4_556] | 1.85 | 0.35 |
| 2:J:43:A:N7 | 4:L:760:U:OP2[3_546] | 1.85 | 0.35 |
| 1:I:62:A:C8 | 5:M:504:U:C3'[3_556] | 1.85 | 0.35 |
| 3:K:143:A:N9 | 5:M:390:U:P[4_556] | 1.85 | 0.35 |
| 2:J:242:A:C3' | 3:K:15:A:C2[2_666] | 1.85 | 0.35 |
| 5:M:312:U:C5' | 6:N:520:U:C6[2_666] | 1.85 | 0.35 |
| 2:J:168:A:C6 | 3:K:148:A:C6[4_456] | 1.85 | 0.35 |
| 1:I:149:A:OP1 | 4:L:465:U:C4[3_556] | 1.85 | 0.35 |
| 1:I:71:A:C6 | 2:J:47:A:O5'[3_556] | 1.85 | 0.35 |
| 5:M:390:U:C2 | 6:N:388:U:O4[4_456] | 1.85 | 0.35 |
| 1:I:66:A:OP1 | 5:M:502:U:P[3_556] | 1.85 | 0.35 |
| 2:J:165:A:P | 6:N:386:U:C4'[4_456] | 1.85 | 0.35 |
| 2:J:44:A:OP1 | 4:L:760:U:C1'[3_546] | 1.85 | 0.35 |
| 1:I:149:A:O2' | 4:L:466:U:O5'[3_556] | 1.85 | 0.35 |
| 3:K:146:A:C5 | 5:M:387:U:O4[4_556] | 1.86 | 0.34 |
| 1:I:64:A:C2' | 5:M:502:U:O4'[3_556] | 1.86 | 0.34 |
| 1:I:64:A:N3 | 5:M:503:U:O5'[3_556] | 1.86 | 0.34 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:242:A:O5' | 3:K:15:A:N6[2_666] | 1.86 | 0.34 |
| 2:J:47:A:C4 | 4:L:755:U:C6[3_546] | 1.86 | 0.34 |
| 2:J:168:A:N9 | 6:N:383:U:C5[4_456] | 1.86 | 0.34 |
| 1:I:63:A:C8 | 5:M:504:U:O5'[3_556] | 1.86 | 0.34 |
| 2:J:167:A:N1 | 3:K:147:A:N6[4_456] | 1.86 | 0.34 |
| 2:J:43:A:C2' | 4:L:759:U:O2[3_546] | 1.86 | 0.34 |
| 2:J:170:A:N6 | 3:K:149:A:N9[4_456] | 1.86 | 0.34 |
| 4:L:757:U:C3' | 5:M:509:U:C2[3_556] | 1.86 | 0.34 |
| 1:I:64:A:C5' | 5:M:502:U:C2[3_556] | 1.86 | 0.34 |
| 1:I:63:A:C4 | 5:M:503:U:C2'[3_556] | 1.86 | 0.34 |
| 2:J:165:A:C6 | 3:K:145:A:N6[4_456] | 1.86 | 0.34 |
| 2:J:242:A:O3' | 3:K:15:A:N9[2_666] | 1.86 | 0.34 |
| 2:J:46:A:C8 | 4:L:756:U:C4[3_546] | 1.86 | 0.34 |
| 2:J:243:A:C8 | 6:N:517:U:N1[2_666] | 1.86 | 0.34 |
| 5:M:312:U:C6 | 6:N:519:U:N3[2_666] | 1.86 | 0.34 |
| 2:J:48:A:N9 | 4:L:755:U:OP1[3_546] | 1.86 | 0.34 |
| 1:I:66:A:C5' | 5:M:502:U:P[3_556] | 1.86 | 0.34 |
| 1:I:63:A:C3' | 5:M:503:U:N3[3_556] | 1.86 | 0.34 |
| 1:I:62:A:C5 | 5:M:505:U:OP1[3_556] | 1.86 | 0.34 |
| 1:I:64:A:OP1 | 2:J:51:A:C2[3_556] | 1.87 | 0.33 |
| 3:K:148:A:C5 | 5:M:385:U:N3[4_556] | 1.87 | 0.33 |
| 2:J:47:A:C4' | 4:L:754:U:C2[3_546] | 1.87 | 0.33 |
| 5:M:312:U:C5' | 6:N:520:U:C5[2_666] | 1.87 | 0.33 |
| 2:J:46:A:C5 | 4:L:756:U:C5[3_546] | 1.87 | 0.33 |
| 1:I:65:A:C2' | 5:M:502:U:P[3_556] | 1.87 | 0.33 |
| 2:J:242:A:O2' | 3:K:14:A:N1[2_666] | 1.87 | 0.33 |
| 4:L:757:U:O3' | 5:M:510:U:C6[3_556] | 1.87 | 0.33 |
| 3:K:144:A:C2 | 5:M:390:U:C4[4_556] | 1.87 | 0.33 |
| 1:I:62:A:OP1 | 5:M:506:U:O5'[3_556] | 1.87 | 0.33 |
| 3:K:149:A:O4' | 5:M:383:U:C5[4_556] | 1.87 | 0.33 |
| 2:J:43:A:C1' | 4:L:760:U:C5[3_546] | 1.87 | 0.33 |
| 2:J:46:A:C8 | 4:L:756:U:O2[3_546] | 1.87 | 0.33 |
| 3:K:147:A:C4 | 5:M:386:U:O4[4_556] | 1.87 | 0.33 |
| 2:J:47:A:C4 | 4:L:755:U:N1[3_546] | 1.87 | 0.33 |
| 2:J:243:A:N7 | 6:N:517:U:C4[2_666] | 1.87 | 0.33 |
| 4:L:752:U:C2' | 5:M:499:U:OP1[3_556] | 1.87 | 0.33 |
| 3:K:143:A:C6 | 5:M:390:U:N1[4_556] | 1.87 | 0.33 |
| 2:J:46:A:N7 | 4:L:756:U:C2[3_546] | 1.87 | 0.33 |
| 1:I:65:A:O3' | 5:M:502:U:OP2[3_556] | 1.87 | 0.33 |
| 2:J:163:A:C2 | 6:N:387:U:C2'[4_456] | 1.87 | 0.33 |
| 2:J:169:A:P | 6:N:382:U:N1[4_456] | 1.88 | 0.32 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:63:A:C6 | 5:M:504:U:P[3_556] | 1.88 | 0.32 |
| 1:I:144:A:P | 4:L:472:U:O2'[3_556] | 1.88 | 0.32 |
| 4:L:756:U:O3' | 5:M:508:U:N1[3_556] | 1.88 | 0.32 |
| 3:K:12:A:O4' | 5:M:314:U:C4[2_664] | 1.88 | 0.32 |
| 2:J:46:A:C2 | 4:L:756:U:C6[3_546] | 1.88 | 0.32 |
| 5:M:391:U:O2 | 6:N:388:U:C1'[4_456] | 1.88 | 0.32 |
| 2:J:47:A:C3' | 4:L:754:U:N1[3_546] | 1.88 | 0.32 |
| 2:J:170:A:C3' | 3:K:151:A:OP2[4_456] | 1.88 | 0.32 |
| 2:J:242:A:C6 | 6:N:517:U:O4[2_666] | 1.88 | 0.32 |
| 3:K:147:A:C3' | 5:M:385:U:O3'[4_556] | 1.88 | 0.32 |
| 3:K:142:A:N1 | 5:M:390:U:O4'[4_556] | 1.88 | 0.32 |
| 2:J:169:A:C6 | 3:K:149:A:N1[4_456] | 1.88 | 0.32 |
| 1:I:62:A:N9 | 5:M:505:U:P[3_556] | 1.88 | 0.32 |
| 3:K:145:A:P | 5:M:388:U:P[4_556] | 1.88 | 0.32 |
| 1:I:63:A:C5' | 5:M:504:U:N1[3_556] | 1.88 | 0.32 |
| 1:I:69:A:N7 | 2:J:46:A:OP1[3_556] | 1.88 | 0.32 |
| 2:J:44:A:P | 4:L:760:U:C5[3_546] | 1.88 | 0.32 |
| 3:K:149:A:C3' | 5:M:383:U:N3[4_556] | 1.88 | 0.32 |
| 1:I:143:A:C5' | 4:L:472:U:C6[3_556] | 1.88 | 0.32 |
| 4:L:757:U:C4' | 5:M:509:U:N1[3_556] | 1.88 | 0.32 |
| 4:L:757:U:O4' | 5:M:509:U:C2[3_556] | 1.88 | 0.32 |
| 4:L:751:U:O3' | 5:M:499:U:C1'[3_556] | 1.88 | 0.32 |
| 2:J:167:A:O3' | 6:N:383:U:O5'[4_456] | 1.88 | 0.32 |
| 4:L:755:U:O3' | 5:M:507:U:C2[3_556] | 1.88 | 0.32 |
| 2:J:242:A:O2' | 3:K:14:A:N3[2_666] | 1.88 | 0.32 |
| 1:I:63:A:N3 | 5:M:503:U:C2'[3_556] | 1.88 | 0.32 |
| 1:I:62:A:O2' | 5:M:504:U:C2[3_556] | 1.89 | 0.31 |
| 2:J:44:A:C2 | 4:L:758:U:N1[3_546] | 1.89 | 0.31 |
| 4:L:758:U:OP2 | 5:M:509:U:N3[3_556] | 1.89 | 0.31 |
| 3:K:143:A:N3 | 5:M:390:U:OP2[4_556] | 1.89 | 0.31 |
| 2:J:43:A:C8 | 4:L:759:U:O3'[3_546] | 1.89 | 0.31 |
| 2:J:165:A:OP2 | 6:N:386:U:O5'[4_456] | 1.89 | 0.31 |
| 1:I:64:A:C8 | 5:M:503:U:O5'[3_556] | 1.89 | 0.31 |
| 2:J:169:A:N9 | 3:K:150:A:N6[4_456] | 1.89 | 0.31 |
| 3:K:144:A:N6 | 5:M:389:U:O2[4_556] | 1.89 | 0.31 |
| 1:I:144:A:P | 4:L:472:U:O4'[3_556] | 1.89 | 0.31 |
| 1:I:65:A:OP1 | 5:M:502:U:O4[3_556] | 1.89 | 0.31 |
| 2:J:48:A:O5' | 4:L:754:U:C1'[3_546] | 1.89 | 0.31 |
| 1:I:62:A:C1' | 5:M:504:U:C3'[3_556] | 1.89 | 0.31 |
| 2:J:45:A:N9 | 4:L:757:U:O2[3_546] | 1.89 | 0.31 |
| 2:J:169:A:N6 | 3:K:149:A:N1[4_456] | 1.89 | 0.31 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:351:A:C4' | 4:L:677:U:OP1[3_546] | 1.89 | 0.31 |
| 3:K:147:A:P | 5:M:386:U:OP1[4_556] | 1.89 | 0.31 |
| 2:J:48:A:OP1 | 4:L:753:U:O2[3_546] | 1.89 | 0.31 |
| 3:K:142:A:C2 | 5:M:390:U:C4'[4_556] | 1.89 | 0.31 |
| 1:I:64:A:O5' | 5:M:503:U:N1[3_556] | 1.89 | 0.31 |
| 4:L:757:U:O5' | 5:M:509:U:C5[3_556] | 1.89 | 0.31 |
| 5:M:392:U:OP2 | 6:N:389:U:O3'[4_456] | 1.90 | 0.30 |
| 1:I:64:A:O3' | 5:M:502:U:C5[3_556] | 1.90 | 0.30 |
| 2:J:42:A:C4 | 4:L:759:U:O3'[3_546] | 1.90 | 0.30 |
| 1:I:69:A:C2 | 2:J:46:A:C5'[3_556] | 1.90 | 0.30 |
| 2:J:170:A:N1 | 3:K:149:A:C2'[4_456] | 1.90 | 0.30 |
| 2:J:42:A:C2' | 4:L:760:U:C5'[3_546] | 1.90 | 0.30 |
| 2:J:242:A:O4' | 3:K:15:A:C5[2_666] | 1.90 | 0.30 |
| 3:K:143:A:C1' | 5:M:390:U:P[4_556] | 1.90 | 0.30 |
| 1:I:66:A:C4' | 5:M:502:U:OP1[3_556] | 1.90 | 0.30 |
| 2:J:243:A:C2 | 6:N:518:U:C6[2_666] | 1.90 | 0.30 |
| 1:I:63:A:C3' | 5:M:503:U:N1[3_556] | 1.90 | 0.30 |
| 4:L:752:U:P | 5:M:500:U:OP2[3_556] | 1.90 | 0.30 |
| 4:L:756:U:OP1 | 5:M:507:U:C6[3_556] | 1.90 | 0.30 |
| 2:J:237:A:P | 6:N:522:U:O2'[2_666] | 1.90 | 0.30 |
| 3:K:147:A:O5' | 5:M:386:U:OP1[4_556] | 1.90 | 0.30 |
| 3:K:147:A:C3' | 5:M:386:U:OP2[4_556] | 1.90 | 0.30 |
| 2:J:168:A:OP2 | 6:N:383:U:O5'[4_456] | 1.90 | 0.30 |
| 3:K:142:A:C6 | 5:M:390:U:C5'[4_556] | 1.90 | 0.30 |
| 4:L:752:U:O5' | 5:M:500:U:OP2[3_556] | 1.90 | 0.30 |
| 2:J:45:A:C5 | 4:L:758:U:C5[3_546] | 1.90 | 0.30 |
| 2:J:45:A:N9 | 4:L:758:U:C5[3_546] | 1.90 | 0.30 |
| 3:K:147:A:C4 | 5:M:386:U:C5[4_556] | 1.90 | 0.30 |
| 3:K:144:A:C5 | 5:M:389:U:C6[4_556] | 1.90 | 0.30 |
| 2:J:43:A:C2' | 4:L:759:U:N1[3_546] | 1.90 | 0.30 |
| 2:J:49:A:OP1 | 4:L:753:U:C2'[3_546] | 1.90 | 0.30 |
| 2:J:47:A:N7 | 4:L:756:U:C6[3_546] | 1.90 | 0.30 |
| 2:J:43:A:C4' | 4:L:760:U:O5'[3_546] | 1.91 | 0.29 |
| 2:J:44:A:OP2 | 4:L:760:U:N1[3_546] | 1.91 | 0.29 |
| 2:J:164:A:OP2 | 6:N:386:U:O2'[4_456] | 1.91 | 0.29 |
| 3:K:147:A:C8 | 5:M:386:U:C5[4_556] | 1.91 | 0.29 |
| 2:J:170:A:C8 | 3:K:150:A:N3[4_456] | 1.91 | 0.29 |
| 2:J:167:A:C3' | 6:N:384:U:OP2[4_456] | 1.91 | 0.29 |
| 3:K:143:A:C4 | 5:M:389:U:O3'[4_556] | 1.91 | 0.29 |
| 1:I:68:A:C4 | 2:J:45:A:C5'[3_556] | 1.91 | 0.29 |
| 2:J:48:A:C5' | 4:L:754:U:C2'[3_546] | 1.91 | 0.29 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 3:K:13:A:N9 | 5:M:313:U:C1'[2_664] | 1.91 | 0.29 |
| 3:K:145:A:OP2 | 5:M:388:U:C5'[4_556] | 1.91 | 0.29 |
| 2:J:42:A:C2' | 4:L:760:U:P[3_546] | 1.91 | 0.29 |
| 2:J:242:A:C1' | 3:K:14:A:N6[2_666] | 1.91 | 0.29 |
| 3:K:12:A:N6 | 5:M:312:U:O4[2_664] | 1.91 | 0.29 |
| 2:J:44:A:C2 | 4:L:758:U:C5[3_546] | 1.91 | 0.29 |
| 1:I:143:A:C3' | 4:L:472:U:N1[3_556] | 1.91 | 0.29 |
| 1:I:352:A:O2' | 4:L:675:U:OP2[3_546] | 1.91 | 0.29 |
| 2:J:164:A:O3' | 6:N:386:U:C3'[4_456] | 1.91 | 0.29 |
| 2:J:168:A:C3' | 6:N:382:U:N1[4_456] | 1.91 | 0.29 |
| 2:J:47:A:O3' | 4:L:754:U:C4[3_546] | 1.91 | 0.29 |
| 1:I:71:A:N3 | 2:J:46:A:O2'[3_556] | 1.91 | 0.29 |
| 2:J:168:A:N9 | 6:N:383:U:C4[4_456] | 1.91 | 0.29 |
| 2:J:166:A:N6 | 3:K:146:A:N6[4_456] | 1.91 | 0.29 |
| 5:M:312:U:N1 | 6:N:519:U:N3[2_666] | 1.91 | 0.29 |
| 1:I:64:A:O3' | 5:M:502:U:N3[3_556] | 1.91 | 0.29 |
| 3:K:146:A:C6 | 5:M:387:U:C4[4_556] | 1.91 | 0.29 |
| 5:M:312:U:O4' | 6:N:519:U:N1[2_666] | 1.91 | 0.29 |
| 3:K:148:A:C5' | 5:M:384:U:C3'[4_556] | 1.91 | 0.29 |
| 1:I:356:A:C2 | 4:L:680:U:N1[3_546] | 1.92 | 0.28 |
| 3:K:12:A:C6 | 5:M:312:U:C4[2_664] | 1.92 | 0.28 |
| 2:J:44:A:N9 | 4:L:758:U:N1[3_546] | 1.92 | 0.28 |
| 2:J:170:A:OP2 | 3:K:151:A:C1'[4_456] | 1.92 | 0.28 |
| 3:K:18:A:C5' | 5:M:305:U:C4'[2_664] | 1.92 | 0.28 |
| 5:M:391:U:N3 | 6:N:388:U:C2'[4_456] | 1.92 | 0.28 |
| 2:J:46:A:C1' | 4:L:756:U:C2[3_546] | 1.92 | 0.28 |
| 4:L:752:U:O4' | 5:M:499:U:C5'[3_556] | 1.92 | 0.28 |
| 2:J:44:A:C4' | 4:L:759:U:C2[3_546] | 1.92 | 0.28 |
| 1:I:69:A:C4 | 2:J:46:A:P[3_556] | 1.92 | 0.28 |
| 1:I:146:A:C4 | 1:I:356:A:N9[3_556] | 1.92 | 0.28 |
| 1:I:64:A:O5' | 5:M:503:U:C2[3_556] | 1.92 | 0.28 |
| 2:J:243:A:C5 | 6:N:517:U:C2[2_666] | 1.92 | 0.28 |
| 1:I:62:A:OP1 | 5:M:505:U:O2'[3_556] | 1.92 | 0.28 |
| 2:J:43:A:C5' | 4:L:760:U:O3'[3_546] | 1.92 | 0.28 |
| 3:K:149:A:C5' | 5:M:383:U:C1'[4_556] | 1.92 | 0.28 |
| 2:J:49:A:P | 4:L:753:U:O3'[3_546] | 1.92 | 0.28 |
| 2:J:47:A:O2' | 4:L:754:U:C2[3_546] | 1.92 | 0.28 |
| 4:L:469:U:C6 | 4:L:679:U:C2'[3_546] | 1.92 | 0.28 |
| 2:J:170:A:O5' | 3:K:151:A:C1'[4_456] | 1.92 | 0.28 |
| 2:J:242:A:O4' | 3:K:15:A:C6[2_666] | 1.92 | 0.28 |
| 1:I:142:A:N3 | 4:L:471:U:C4'[3_556] | 1.92 | 0.28 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:170:A:N6 | 3:K:149:A:C2[4_456] | 1.92 | 0.28 |
| 2:J:47:A:O5' | 4:L:755:U:N3[3_546] | 1.92 | 0.28 |
| 1:I:143:A:N9 | 4:L:471:U:C3'[3_556] | 1.92 | 0.28 |
| 1:I:146:A:N6 | 1:I:355:A:C2[3_556] | 1.92 | 0.28 |
| 1:I:70:A:N7 | 2:J:46:A:OP1[3_556] | 1.93 | 0.27 |
| 4:L:469:U:C4 | 4:L:679:U:O4'[3_546] | 1.93 | 0.27 |
| 3:K:147:A:N7 | 5:M:386:U:C4[4_556] | 1.93 | 0.27 |
| 2:J:242:A:N3 | 3:K:14:A:N6[2_666] | 1.93 | 0.27 |
| 1:I:69:A:C2 | 2:J:46:A:O5'[3_556] | 1.93 | 0.27 |
| 1:I:62:A:OP1 | 5:M:506:U:O4'[3_556] | 1.93 | 0.27 |
| 3:K:13:A:N6 | 5:M:312:U:O2[2_664] | 1.93 | 0.27 |
| 2:J:170:A:OP1 | 3:K:151:A:N9[4_456] | 1.93 | 0.27 |
| 4:L:752:U:C2' | 5:M:499:U:P[3_556] | 1.93 | 0.27 |
| 3:K:149:A:O5' | 5:M:384:U:C6[4_556] | 1.93 | 0.27 |
| 2:J:240:A:N1 | 3:K:12:A:O5'[2_666] | 1.93 | 0.27 |
| 2:J:47:A:O4' | 4:L:755:U:N1[3_546] | 1.93 | 0.27 |
| 2:J:44:A:P | 4:L:760:U:C2[3_546] | 1.93 | 0.27 |
| 1:I:63:A:C5 | 5:M:504:U:O5'[3_556] | 1.93 | 0.27 |
| 2:J:163:A:C4 | 6:N:387:U:C2'[4_456] | 1.93 | 0.27 |
| 3:K:144:A:O5' | 5:M:389:U:OP1[4_556] | 1.93 | 0.27 |
| 1:I:356:A:N1 | 4:L:680:U:C5[3_546] | 1.93 | 0.27 |
| 3:K:143:A:O3' | 5:M:389:U:P[4_556] | 1.93 | 0.27 |
| 2:J:43:A:C2 | 4:L:758:U:O3'[3_546] | 1.93 | 0.27 |
| 5:M:392:U:C5 | 6:N:388:U:O2'[4_456] | 1.93 | 0.27 |
| 3:K:148:A:OP2 | 5:M:385:U:O5'[4_556] | 1.93 | 0.27 |
| 1:I:149:A:C3' | 4:L:466:U:C6[3_556] | 1.93 | 0.27 |
| 2:J:45:A:N3 | 4:L:757:U:C5[3_546] | 1.93 | 0.27 |
| 1:I:65:A:N9 | 5:M:502:U:C3'[3_556] | 1.93 | 0.27 |
| 2:J:169:A:N9 | 6:N:382:U:O4[4_456] | 1.93 | 0.27 |
| 2:J:44:A:O4' | 4:L:758:U:O2[3_546] | 1.93 | 0.27 |
| 3:K:149:A:C2' | 5:M:383:U:N3[4_556] | 1.93 | 0.27 |
| 1:I:142:A:N3 | 4:L:471:U:C3'[3_556] | 1.93 | 0.27 |
| 2:J:45:A:C6 | 4:L:757:U:C5[3_546] | 1.94 | 0.26 |
| 4:L:756:U:C3' | 5:M:508:U:C4[3_556] | 1.94 | 0.26 |
| 1:I:64:A:C2' | 5:M:502:U:C3'[3_556] | 1.94 | 0.26 |
| 3:K:143:A:C2' | 5:M:389:U:C5'[4_556] | 1.94 | 0.26 |
| 5:M:392:U:C5' | 6:N:389:U:P[4_456] | 1.94 | 0.26 |
| 2:J:242:A:C3' | 3:K:15:A:N3[2_666] | 1.94 | 0.26 |
| 3:K:12:A:C2' | 5:M:313:U:N3[2_664] | 1.94 | 0.26 |
| 2:J:169:A:O5' | 6:N:381:U:O2[4_456] | 1.94 | 0.26 |
| 1:I:61:A:N3 | 5:M:504:U:O3'[3_556] | 1.94 | 0.26 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:168:A:C6 | 6:N:383:U:O4[4_456] | 1.94 | 0.26 |
| 1:I:149:A:O2' | 4:L:466:U:C6[3_556] | 1.94 | 0.26 |
| 4:L:469:U:N1 | 4:L:680:U:OP2[3_546] | 1.94 | 0.26 |
| 1:I:144:A:OP2 | 4:L:472:U:O4'[3_556] | 1.94 | 0.26 |
| 1:I:63:A:C5' | 5:M:504:U:C2[3_556] | 1.94 | 0.26 |
| 1:I:142:A:C2 | 4:L:471:U:C4'[3_556] | 1.94 | 0.26 |
| 5:M:390:U:N1 | 6:N:388:U:N3[4_456] | 1.94 | 0.26 |
| 1:I:142:A:C5 | 4:L:471:U:C5'[3_556] | 1.94 | 0.26 |
| 2:J:46:A:N7 | 4:L:756:U:C4[3_546] | 1.94 | 0.26 |
| 1:I:146:A:O4' | 1:I:356:A:C4'[3_556] | 1.94 | 0.26 |
| 4:L:751:U:O3' | 5:M:499:U:O3'[3_556] | 1.94 | 0.26 |
| 2:J:48:A:OP1 | 4:L:754:U:C4[3_546] | 1.94 | 0.26 |
| 5:M:390:U:N3 | 6:N:388:U:C2[4_456] | 1.94 | 0.26 |
| 2:J:48:A:C5' | 4:L:754:U:C6[3_546] | 1.94 | 0.26 |
| 2:J:166:A:C5 | 6:N:385:U:O4[4_456] | 1.94 | 0.26 |
| 2:J:46:A:C5 | 4:L:756:U:C2[3_546] | 1.94 | 0.26 |
| 3:K:146:A:C3' | 5:M:387:U:OP2[4_556] | 1.94 | 0.26 |
| 1:I:150:A:N9 | 4:L:466:U:OP1[3_556] | 1.95 | 0.25 |
| 2:J:167:A:O5' | 6:N:384:U:OP1[4_456] | 1.95 | 0.25 |
| 2:J:168:A:C4' | 6:N:382:U:C3'[4_456] | 1.95 | 0.25 |
| 3:K:147:A:O3' | 5:M:385:U:C5'[4_556] | 1.95 | 0.25 |
| 1:I:146:A:N1 | 1:I:356:A:C8[3_556] | 1.95 | 0.25 |
| 2:J:170:A:O2' | 3:K:151:A:OP2[4_456] | 1.95 | 0.25 |
| 3:K:12:A:C4' | 5:M:314:U:N3[2_664] | 1.95 | 0.25 |
| 2:J:168:A:O2' | 6:N:382:U:C5[4_456] | 1.95 | 0.25 |
| 1:I:64:A:O4' | 5:M:503:U:O4'[3_556] | 1.95 | 0.25 |
| 2:J:165:A:C5 | 6:N:387:U:O4[4_456] | 1.95 | 0.25 |
| 2:J:46:A:C2 | 4:L:756:U:C4'[3_546] | 1.95 | 0.25 |
| 1:I:65:A:O2' | 5:M:502:U:C5'[3_556] | 1.95 | 0.25 |
| 1:I:64:A:C1' | 5:M:502:U:C1'[3_556] | 1.95 | 0.25 |
| 2:J:42:A:N6 | 4:L:759:U:OP1[3_546] | 1.95 | 0.25 |
| 2:J:47:A:N1 | 4:L:756:U:P[3_546] | 1.95 | 0.25 |
| 3:K:144:A:N1 | 5:M:389:U:N3[4_556] | 1.95 | 0.25 |
| 4:L:758:U:P | 5:M:509:U:N3[3_556] | 1.95 | 0.25 |
| 2:J:240:A:C4 | 3:K:12:A:OP1[2_666] | 1.95 | 0.25 |
| 2:J:240:A:N7 | 3:K:12:A:OP1[2_666] | 1.95 | 0.25 |
| 3:K:143:A:O3' | 5:M:389:U:O5'[4_556] | 1.95 | 0.25 |
| 2:J:171:A:OP2 | 3:K:151:A:O5'[4_456] | 1.95 | 0.25 |
| 5:M:391:U:N1 | 6:N:388:U:C1'[4_456] | 1.95 | 0.25 |
| 1:I:356:A:N1 | 4:L:680:U:C4[3_546] | 1.95 | 0.25 |
| 1:I:65:A:O4' | 5:M:502:U:O5'[3_556] | 1.95 | 0.25 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:48:A:O4' | 4:L:755:U:C5'[3_546] | 1.95 | 0.25 |
| 2:J:47:A:O2' | 4:L:754:U:N1[3_546] | 1.95 | 0.25 |
| 2:J:47:A:C4' | 4:L:754:U:N3[3_546] | 1.95 | 0.25 |
| 1:I:146:A:C8 | 1:I:355:A:C2'[3_556] | 1.95 | 0.25 |
| 5:M:391:U:O2' | 6:N:388:U:O3'[4_456] | 1.96 | 0.24 |
| 3:K:148:A:OP1 | 5:M:385:U:P[4_556] | 1.96 | 0.24 |
| 1:I:143:A:C2' | 4:L:471:U:O2'[3_556] | 1.96 | 0.24 |
| 5:M:391:U:OP2 | 6:N:389:U:N3[4_456] | 1.96 | 0.24 |
| 2:J:242:A:O5' | 3:K:15:A:C6[2_666] | 1.96 | 0.24 |
| 1:I:63:A:C2 | 5:M:504:U:P[3_556] | 1.96 | 0.24 |
| 1:I:70:A:C6 | 2:J:46:A:C4'[3_556] | 1.96 | 0.24 |
| 1:I:65:A:O5' | 5:M:502:U:C5[3_556] | 1.96 | 0.24 |
| 1:I:351:A:O3' | 4:L:676:U:O3'[3_546] | 1.96 | 0.24 |
| 1:I:65:A:C5 | 5:M:503:U:OP2[3_556] | 1.96 | 0.24 |
| 2:J:170:A:O5' | 3:K:151:A:C4[4_456] | 1.96 | 0.24 |
| 2:J:243:A:C4 | 6:N:518:U:C6[2_666] | 1.96 | 0.24 |
| 3:K:142:A:C6 | 5:M:390:U:O4'[4_556] | 1.96 | 0.24 |
| 2:J:47:A:C4 | 4:L:755:U:C1'[3_546] | 1.96 | 0.24 |
| 2:J:48:A:N9 | 4:L:754:U:C3'[3_546] | 1.96 | 0.24 |
| 1:I:144:A:OP2 | 4:L:472:U:C2[3_556] | 1.96 | 0.24 |
| 3:K:146:A:N6 | 5:M:387:U:C4[4_556] | 1.96 | 0.24 |
| 2:J:166:A:OP2 | 6:N:386:U:OP2[4_456] | 1.96 | 0.24 |
| 3:K:13:A:O4' | 5:M:313:U:C4'[2_664] | 1.96 | 0.24 |
| 3:K:149:A:C3' | 5:M:383:U:C2[4_556] | 1.96 | 0.24 |
| 3:K:142:A:N1 | 5:M:390:U:O5'[4_556] | 1.96 | 0.24 |
| 3:K:148:A:N7 | 5:M:385:U:C5[4_556] | 1.96 | 0.24 |
| 1:I:61:A:P | 5:M:506:U:OP1[3_556] | 1.96 | 0.24 |
| 2:J:240:A:N7 | 3:K:12:A:P[2_666] | 1.96 | 0.24 |
| 2:J:163:A:C2' | 6:N:387:U:O4'[4_456] | 1.96 | 0.24 |
| 2:J:167:A:OP2 | 6:N:384:U:C4'[4_456] | 1.97 | 0.23 |
| 1:I:61:A:C4 | 5:M:505:U:OP1[3_556] | 1.97 | 0.23 |
| 2:J:242:A:C2' | 3:K:15:A:C5[2_666] | 1.97 | 0.23 |
| 2:J:163:A:C2 | 6:N:388:U:C6[4_456] | 1.97 | 0.23 |
| 2:J:163:A:C1' | 6:N:387:U:O2'[4_456] | 1.97 | 0.23 |
| 1:I:64:A:O5' | 5:M:502:U:O2[3_556] | 1.97 | 0.23 |
| 2:J:44:A:O2' | 4:L:758:U:O2[3_546] | 1.97 | 0.23 |
| 1:I:65:A:P | 5:M:502:U:C2[3_556] | 1.97 | 0.23 |
| 1:I:149:A:O2' | 4:L:466:U:C3'[3_556] | 1.97 | 0.23 |
| 2:J:48:A:O4' | 4:L:755:U:O5'[3_546] | 1.97 | 0.23 |
| 2:J:47:A:C2' | 4:L:754:U:C1'[3_546] | 1.97 | 0.23 |
| 2:J:170:A:C2 | 3:K:150:A:O5'[4_456] | 1.97 | 0.23 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:143:A:C6 | 4:L:471:U:O4'[3_556] | 1.97 | 0.23 |
| 1:I:63:A:OP2 | 5:M:504:U:C4[3_556] | 1.97 | 0.23 |
| 2:J:242:A:N9 | 6:N:517:U:O4[2_666] | 1.97 | 0.23 |
| 5:M:391:U:C1' | 6:N:389:U:OP2[4_456] | 1.97 | 0.23 |
| 1:I:65:A:C5' | 5:M:502:U:N1[3_556] | 1.97 | 0.23 |
| 2:J:48:A:OP1 | 4:L:753:U:N3[3_546] | 1.97 | 0.23 |
| 1:I:62:A:P | 5:M:506:U:O5'[3_556] | 1.97 | 0.23 |
| 2:J:244:A:C6 | 6:N:517:U:C3'[2_666] | 1.98 | 0.22 |
| 1:I:142:A:C6 | 4:L:471:U:C5'[3_556] | 1.98 | 0.22 |
| 5:M:391:U:C1' | 6:N:388:U:O3'[4_456] | 1.98 | 0.22 |
| 1:I:142:A:N7 | 4:L:471:U:OP1[3_556] | 1.98 | 0.22 |
| 3:K:149:A:P | 5:M:384:U:N1[4_556] | 1.98 | 0.22 |
| 1:I:70:A:N7 | 2:J:46:A:O5'[3_556] | 1.98 | 0.22 |
| 1:I:63:A:OP2 | 5:M:505:U:O4[3_556] | 1.98 | 0.22 |
| 2:J:169:A:C4' | 6:N:381:U:N3[4_456] | 1.98 | 0.22 |
| 1:I:62:A:C2 | 5:M:504:U:C4'[3_556] | 1.98 | 0.22 |
| 3:K:148:A:C3' | 5:M:384:U:N1[4_556] | 1.98 | 0.22 |
| 2:J:168:A:C3' | 6:N:382:U:C3'[4_456] | 1.98 | 0.22 |
| 1:I:71:A:C5 | 2:J:47:A:P[3_556] | 1.98 | 0.22 |
| 2:J:169:A:N1 | 3:K:149:A:C6[4_456] | 1.98 | 0.22 |
| 3:K:148:A:P | 5:M:385:U:C4'[4_556] | 1.98 | 0.22 |
| 5:M:391:U:C2 | 6:N:388:U:O4'[4_456] | 1.98 | 0.22 |
| 2:J:169:A:C5' | 6:N:381:U:C2[4_456] | 1.98 | 0.22 |
| 3:K:17:A:C4' | 5:M:305:U:OP1[2_664] | 1.98 | 0.22 |
| 1:I:70:A:C5 | 2:J:46:A:C3'[3_556] | 1.98 | 0.22 |
| 1:I:62:A:OP1 | 5:M:506:U:C5'[3_556] | 1.98 | 0.22 |
| 1:I:68:A:N6 | 2:J:45:A:O5'[3_556] | 1.98 | 0.22 |
| 1:I:146:A:C5 | 1:I:356:A:N9[3_556] | 1.98 | 0.22 |
| 3:K:148:A:OP1 | 5:M:384:U:O3'[4_556] | 1.98 | 0.22 |
| 1:I:61:A:C6 | 5:M:505:U:OP1[3_556] | 1.98 | 0.22 |
| 2:J:43:A:C3' | 4:L:760:U:C1'[3_546] | 1.98 | 0.22 |
| 2:J:45:A:C8 | 4:L:757:U:C4[3_546] | 1.98 | 0.22 |
| 2:J:45:A:C2 | 4:L:756:U:O2[3_546] | 1.98 | 0.22 |
| 2:J:163:A:C4 | 6:N:387:U:C1'[4_456] | 1.98 | 0.22 |
| 2:J:170:A:O3' | 3:K:151:A:P[4_456] | 1.98 | 0.22 |
| 2:J:44:A:C4' | 4:L:759:U:O2[3_546] | 1.98 | 0.22 |
| 4:L:469:U:C4 | 4:L:679:U:C6[3_546] | 1.99 | 0.21 |
| 2:J:170:A:C3' | 3:K:151:A:O5'[4_456] | 1.99 | 0.21 |
| 1:I:146:A:C5' | 1:I:356:A:OP1[3_556] | 1.99 | 0.21 |
| 1:I:63:A:O5' | 5:M:504:U:C5[3_556] | 1.99 | 0.21 |
| 4:L:751:U:C3' | 5:M:499:U:O4'[3_556] | 1.99 | 0.21 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 5:M:311:U:C2 | 6:N:519:U:O4[2_666] | 1.99 | 0.21 |
| 3:K:144:A:C5 | 5:M:389:U:C2[4_556] | 1.99 | 0.21 |
| 3:K:148:A:O3' | 5:M:384:U:O5'[4_556] | 1.99 | 0.21 |
| 2:J:47:A:O4' | 4:L:755:U:C2[3_546] | 1.99 | 0.21 |
| 3:K:146:A:C5' | 5:M:387:U:OP2[4_556] | 1.99 | 0.21 |
| 2:J:243:A:C1' | 6:N:517:U:O2[2_666] | 1.99 | 0.21 |
| 2:J:164:A:C3' | 6:N:387:U:O5'[4_456] | 1.99 | 0.21 |
| 3:K:143:A:N6 | 5:M:390:U:N1[4_556] | 1.99 | 0.21 |
| 3:K:149:A:OP2 | 5:M:384:U:C6[4_556] | 1.99 | 0.21 |
| 2:J:168:A:N7 | 6:N:383:U:O4[4_456] | 1.99 | 0.21 |
| 2:J:243:A:N7 | 6:N:517:U:C5[2_666] | 1.99 | 0.21 |
| 1:I:356:A:N6 | 4:L:679:U:C4[3_546] | 1.99 | 0.21 |
| 2:J:45:A:N3 | 4:L:756:U:O2[3_546] | 1.99 | 0.21 |
| 3:K:147:A:C4 | 5:M:386:U:C4[4_556] | 1.99 | 0.21 |
| 3:K:13:A:C1' | 5:M:313:U:C1'[2_664] | 1.99 | 0.21 |
| 2:J:244:A:C8 | 6:N:517:U:O3'[2_666] | 1.99 | 0.21 |
| 2:J:46:A:C1' | 4:L:756:U:O2[3_546] | 1.99 | 0.21 |
| 2:J:164:A:C4 | 6:N:387:U:N3[4_456] | 1.99 | 0.21 |
| 1:I:62:A:P | 5:M:506:U:P[3_556] | 1.99 | 0.21 |
| 2:J:168:A:O5' | 6:N:383:U:P[4_456] | 1.99 | 0.21 |
| 1:I:59:A:C5' | 2:J:41:A:OP1[3_556] | 1.99 | 0.21 |
| 4:L:470:U:O2 | 4:L:680:U:O4[3_546] | 1.99 | 0.21 |
| 2:J:43:A:C3' | 4:L:760:U:C6[3_546] | 1.99 | 0.21 |
| 2:J:168:A:C5' | 6:N:382:U:C3'[4_456] | 1.99 | 0.21 |
| 3:K:12:A:C3' | 5:M:313:U:N3[2_664] | 1.99 | 0.21 |
| 1:I:69:A:C8 | 2:J:45:A:O3'[3_556] | 1.99 | 0.21 |
| 1:I:70:A:C2 | 2:J:46:A:O3'[3_556] | 2.00 | 0.20 |
| 1:I:61:A:OP1 | 5:M:506:U:OP1[3_556] | 2.00 | 0.20 |
| 3:K:147:A:P | 5:M:386:U:P[4_556] | 2.00 | 0.20 |
| 3:K:146:A:C3' | 5:M:386:U:C3'[4_556] | 2.00 | 0.20 |
| 2:J:42:A:N1 | 4:L:759:U:C5'[3_546] | 2.00 | 0.20 |
| 1:I:64:A:C2 | 5:M:503:U:OP2[3_556] | 2.00 | 0.20 |
| 2:J:44:A:N3 | 4:L:758:U:C5[3_546] | 2.00 | 0.20 |
| 4:L:756:U:O3' | 5:M:508:U:O2[3_556] | 2.00 | 0.20 |
| 3:K:12:A:O3' | 5:M:314:U:N1[2_664] | 2.00 | 0.20 |
| 3:K:144:A:N1 | 5:M:390:U:O4[4_556] | 2.00 | 0.20 |
| 4:L:757:U:P | 5:M:509:U:C4[3_556] | 2.00 | 0.20 |
| 5:M:391:U:N1 | 6:N:388:U:C3'[4_456] | 2.00 | 0.20 |
| 2:J:168:A:C5 | 6:N:383:U:N3[4_456] | 2.00 | 0.20 |
| 5:M:391:U:O2 | 6:N:388:U:O3'[4_456] | 2.00 | 0.20 |
| 2:J:170:A:N6 | 3:K:149:A:C5[4_456] | 2.00 | 0.20 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 5:M:391:U:C6 | 6:N:388:U:C2[4_456] | 2.00 | 0.20 |
| 3:K:145:A:P | 5:M:388:U:OP2[4_556] | 2.00 | 0.20 |
| 2:J:242:A:C4' | 3:K:15:A:C4[2_666] | 2.00 | 0.20 |
| 2:J:165:A:P | 6:N:386:U:C3'[4_456] | 2.00 | 0.20 |
| 2:J:242:A:C5' | 3:K:15:A:C5[2_666] | 2.00 | 0.20 |
| 2:J:49:A:P | 4:L:753:U:O2'[3_546] | 2.00 | 0.20 |
| 5:M:312:U:OP2 | 6:N:520:U:C5[2_666] | 2.00 | 0.20 |
| 3:K:12:A:O4' | 5:M:314:U:C5[2_664] | 2.00 | 0.20 |
| 3:K:13:A:N6 | 5:M:312:U:C2[2_664] | 2.01 | 0.19 |
| 2:J:48:A:C4' | 4:L:754:U:O2'[3_546] | 2.01 | 0.19 |
| 2:J:49:A:OP2 | 4:L:754:U:C5'[3_546] | 2.01 | 0.19 |
| 2:J:46:A:C2 | 4:L:756:U:C1'[3_546] | 2.01 | 0.19 |
| 3:K:149:A:P | 5:M:384:U:C1'[4_556] | 2.01 | 0.19 |
| 2:J:43:A:C5' | 4:L:760:U:O5'[3_546] | 2.01 | 0.19 |
| 2:J:169:A:N7 | 3:K:149:A:N1[4_456] | 2.01 | 0.19 |
| 4:L:469:U:O4' | 4:L:680:U:OP1[3_546] | 2.01 | 0.19 |
| 2:J:170:A:C4 | 3:K:150:A:N9[4_456] | 2.01 | 0.19 |
| 1:I:64:A:O2' | 5:M:502:U:C2'[3_556] | 2.01 | 0.19 |
| 2:J:170:A:C2 | 3:K:150:A:OP2[4_456] | 2.01 | 0.19 |
| 2:J:169:A:N1 | 3:K:149:A:C5[4_456] | 2.01 | 0.19 |
| 2:J:167:A:C5 | 6:N:384:U:C5[4_456] | 2.01 | 0.19 |
| 1:I:62:A:P | 5:M:505:U:O3'[3_556] | 2.01 | 0.19 |
| 3:K:12:A:C6 | 5:M:312:U:C2[2_664] | 2.01 | 0.19 |
| 3:K:148:A:O3' | 5:M:384:U:N1[4_556] | 2.01 | 0.19 |
| 4:L:469:U:C2' | 4:L:680:U:P[3_546] | 2.01 | 0.19 |
| 2:J:171:A:OP2 | 3:K:151:A:OP2[4_456] | 2.01 | 0.19 |
| 4:L:751:U:O2' | 5:M:499:U:C4'[3_556] | 2.01 | 0.19 |
| 2:J:44:A:P | 4:L:760:U:C1'[3_546] | 2.01 | 0.19 |
| 1:I:62:A:N9 | 5:M:504:U:O2'[3_556] | 2.01 | 0.19 |
| 5:M:391:U:C2' | 6:N:388:U:O3'[4_456] | 2.01 | 0.19 |
| 2:J:169:A:O3' | 3:K:151:A:C2[4_456] | 2.01 | 0.19 |
| 1:I:67:A:C5 | 2:J:45:A:P[3_556] | 2.01 | 0.19 |
| 3:K:149:A:O5' | 5:M:383:U:C2[4_556] | 2.01 | 0.19 |
| 3:K:145:A:C5 | 5:M:388:U:O4[4_556] | 2.02 | 0.18 |
| 2:J:169:A:C1' | 6:N:381:U:C4[4_456] | 2.02 | 0.18 |
| 2:J:43:A:N3 | 4:L:759:U:O5'[3_546] | 2.02 | 0.18 |
| 1:I:67:A:C5 | 2:J:45:A:OP2[3_556] | 2.02 | 0.18 |
| 2:J:170:A:C5 | 3:K:150:A:C4[4_456] | 2.02 | 0.18 |
| 2:J:48:A:P | 4:L:754:U:C2[3_546] | 2.02 | 0.18 |
| 5:M:312:U:C6 | 6:N:519:U:C4[2_666] | 2.02 | 0.18 |
| 1:I:71:A:C6 | 2:J:46:A:O3'[3_556] | 2.02 | 0.18 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 4:L:756:U:P | 5:M:507:U:C4[3_556] | 2.02 | 0.18 |
| 5:M:391:U:O4 | 6:N:388:U:O2[4_456] | 2.02 | 0.18 |
| 2:J:168:A:C4' | 6:N:383:U:OP2[4_456] | 2.02 | 0.18 |
| 5:M:312:U:C1' | 6:N:519:U:C2[2_666] | 2.02 | 0.18 |
| 1:I:146:A:C4 | 1:I:356:A:N7[3_556] | 2.02 | 0.18 |
| 1:I:146:A:C2 | 1:I:356:A:C8[3_556] | 2.02 | 0.18 |
| 2:J:167:A:C4 | 6:N:384:U:O4[4_456] | 2.02 | 0.18 |
| 5:M:391:U:C5 | 6:N:389:U:C6[4_456] | 2.02 | 0.18 |
| 2:J:169:A:N1 | 3:K:149:A:N6[4_456] | 2.02 | 0.18 |
| 5:M:310:U:O4 | 6:N:517:U:P[2_666] | 2.02 | 0.18 |
| 1:I:64:A:C5 | 5:M:503:U:P[3_556] | 2.02 | 0.18 |
| 1:I:62:A:N1 | 5:M:504:U:P[3_556] | 2.02 | 0.18 |
| 1:I:356:A:N3 | 4:L:680:U:O2[3_546] | 2.02 | 0.18 |
| 3:K:148:A:O3' | 5:M:384:U:C4'[4_556] | 2.02 | 0.18 |
| 2:J:46:A:C8 | 4:L:757:U:C5[3_546] | 2.02 | 0.18 |
| 1:I:143:A:O4' | 4:L:472:U:C5'[3_556] | 2.02 | 0.18 |
| 3:K:12:A:N7 | 5:M:313:U:C4[2_664] | 2.02 | 0.18 |
| 2:J:242:A:C1' | 3:K:14:A:N1[2_666] | 2.02 | 0.18 |
| 1:I:69:A:N3 | 2:J:45:A:O3'[3_556] | 2.02 | 0.18 |
| 2:J:168:A:O3' | 6:N:382:U:C6[4_456] | 2.02 | 0.18 |
| 3:K:148:A:O3' | 5:M:384:U:C1'[4_556] | 2.02 | 0.18 |
| 4:L:758:U:O3' | 5:M:511:U:N3[3_556] | 2.02 | 0.18 |
| 2:J:166:A:C6 | 6:N:385:U:C4[4_456] | 2.03 | 0.17 |
| 3:K:149:A:O4' | 5:M:383:U:N1[4_556] | 2.03 | 0.17 |
| 2:J:168:A:P | 6:N:383:U:P[4_456] | 2.03 | 0.17 |
| 3:K:142:A:N6 | 5:M:390:U:O2'[4_556] | 2.03 | 0.17 |
| 2:J:47:A:C2 | 4:L:755:U:C4'[3_546] | 2.03 | 0.17 |
| 3:K:143:A:C3' | 5:M:389:U:C4'[4_556] | 2.03 | 0.17 |
| 2:J:165:A:OP1 | 6:N:386:U:O5'[4_456] | 2.03 | 0.17 |
| 2:J:241:A:OP1 | 6:N:514:U:C5[2_666] | 2.03 | 0.17 |
| 5:M:309:U:O4 | 6:N:516:U:O3'[2_666] | 2.03 | 0.17 |
| 3:K:12:A:C2 | 5:M:312:U:C2'[2_664] | 2.03 | 0.17 |
| 3:K:144:A:N1 | 5:M:389:U:O4[4_556] | 2.03 | 0.17 |
| 1:I:65:A:N9 | 5:M:503:U:OP2[3_556] | 2.03 | 0.17 |
| 1:I:146:A:C2' | 1:I:356:A:P[3_556] | 2.03 | 0.17 |
| 1:I:68:A:N1 | 2:J:45:A:O4'[3_556] | 2.03 | 0.17 |
| 4:L:469:U:C2 | 4:L:679:U:C2'[3_546] | 2.03 | 0.17 |
| 2:J:48:A:C3' | 4:L:754:U:O5'[3_546] | 2.03 | 0.17 |
| 2:J:46:A:N1 | 4:L:756:U:C6[3_546] | 2.03 | 0.17 |
| 3:K:142:A:C4 | 5:M:390:U:C5'[4_556] | 2.03 | 0.17 |
| 5:M:312:U:C5 | 6:N:519:U:O4[2_666] | 2.03 | 0.17 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 3:K:147:A:O3' | 5:M:385:U:O5'[4_556] | 2.03 | 0.17 |
| 2:J:167:A:OP1 | 6:N:384:U:P[4_456] | 2.03 | 0.17 |
| 2:J:244:A:N7 | 6:N:517:U:C1'[2_666] | 2.03 | 0.17 |
| 1:I:142:A:N9 | 4:L:471:U:O3'[3_556] | 2.03 | 0.17 |
| 5:M:390:U:O3' | 6:N:389:U:N3[4_456] | 2.03 | 0.17 |
| 1:I:64:A:OP2 | 5:M:503:U:C2[3_556] | 2.03 | 0.17 |
| 2:J:43:A:O2' | 4:L:759:U:C1'[3_546] | 2.03 | 0.17 |
| 5:M:391:U:OP1 | 6:N:390:U:O4[4_456] | 2.03 | 0.17 |
| 2:J:163:A:C2' | 6:N:387:U:C4'[4_456] | 2.03 | 0.17 |
| 3:K:147:A:N7 | 5:M:386:U:C6[4_556] | 2.03 | 0.17 |
| 5:M:312:U:OP2 | 6:N:520:U:N3[2_666] | 2.03 | 0.17 |
| 2:J:164:A:C4' | 6:N:387:U:OP1[4_456] | 2.03 | 0.17 |
| 1:I:142:A:O2' | 4:L:472:U:P[3_556] | 2.04 | 0.16 |
| 2:J:242:A:C5' | 3:K:15:A:C6[2_666] | 2.04 | 0.16 |
| 3:K:148:A:P | 5:M:385:U:P[4_556] | 2.04 | 0.16 |
| 1:I:65:A:O2' | 5:M:502:U:OP1[3_556] | 2.04 | 0.16 |
| 2:J:44:A:P | 4:L:759:U:O2[3_546] | 2.04 | 0.16 |
| 4:L:758:U:C5' | 5:M:510:U:O2[3_556] | 2.04 | 0.16 |
| 1:I:62:A:C5' | 5:M:505:U:C2'[3_556] | 2.04 | 0.16 |
| 2:J:165:A:OP1 | 6:N:386:U:OP1[4_456] | 2.04 | 0.16 |
| 2:J:244:A:C6 | 6:N:517:U:O3'[2_666] | 2.04 | 0.16 |
| 1:I:149:A:O3' | 4:L:466:U:C6[3_556] | 2.04 | 0.16 |
| 1:I:66:A:O5' | 5:M:502:U:OP2[3_556] | 2.04 | 0.16 |
| 1:I:64:A:C2' | 5:M:502:U:O2'[3_556] | 2.04 | 0.16 |
| 2:J:47:A:C2' | 4:L:755:U:C6[3_546] | 2.04 | 0.16 |
| 3:K:144:A:O5' | 5:M:388:U:C3'[4_556] | 2.04 | 0.16 |
| 3:K:145:A:P | 5:M:388:U:OP1[4_556] | 2.04 | 0.16 |
| 2:J:242:A:OP1 | 3:K:16:A:C5[2_666] | 2.04 | 0.16 |
| 2:J:45:A:C8 | 4:L:758:U:N3[3_546] | 2.04 | 0.16 |
| 3:K:12:A:O3' | 5:M:314:U:C5[2_664] | 2.04 | 0.16 |
| 2:J:169:A:O3' | 3:K:151:A:N9[4_456] | 2.04 | 0.16 |
| 2:J:167:A:N6 | 3:K:147:A:N1[4_456] | 2.04 | 0.16 |
| 2:J:48:A:C2' | 4:L:754:U:C5'[3_546] | 2.04 | 0.16 |
| 2:J:170:A:C6 | 3:K:149:A:C4[4_456] | 2.04 | 0.16 |
| 4:L:759:U:OP1 | 5:M:511:U:O4[3_556] | 2.04 | 0.16 |
| 2:J:170:A:C5' | 3:K:151:A:N7[4_456] | 2.04 | 0.16 |
| 2:J:43:A:C2' | 4:L:759:U:O2'[3_546] | 2.04 | 0.16 |
| 2:J:166:A:N6 | 6:N:385:U:C4[4_456] | 2.04 | 0.16 |
| 1:I:149:A:O2' | 4:L:466:U:C1'[3_556] | 2.04 | 0.16 |
| 1:I:145:A:C2 | 1:I:356:A:O4'[3_556] | 2.05 | 0.15 |
| 1:I:143:A:N7 | 4:L:471:U:C3'[3_556] | 2.05 | 0.15 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 3:K:13:A:N7 | 5:M:312:U:O2[2_664] | 2.05 | 0.15 |
| 5:M:390:U:O3' | 6:N:390:U:N3[4_456] | 2.05 | 0.15 |
| 2:J:43:A:C6 | 4:L:758:U:C3'[3_546] | 2.05 | 0.15 |
| 2:J:167:A:N7 | 6:N:384:U:C5[4_456] | 2.05 | 0.15 |
| 2:J:243:A:C5 | 6:N:518:U:C5[2_666] | 2.05 | 0.15 |
| 1:I:68:A:C5 | 2:J:45:A:O5'[3_556] | 2.05 | 0.15 |
| 1:I:62:A:P | 5:M:505:U:C1'[3_556] | 2.05 | 0.15 |
| 1:I:146:A:C3' | 1:I:356:A:OP2[3_556] | 2.05 | 0.15 |
| 4:L:469:U:N1 | 4:L:680:U:P[3_546] | 2.05 | 0.15 |
| 2:J:243:A:C5 | 6:N:517:U:C6[2_666] | 2.05 | 0.15 |
| 4:L:756:U:C2' | 5:M:508:U:N3[3_556] | 2.05 | 0.15 |
| 2:J:170:A:OP2 | 3:K:151:A:N9[4_456] | 2.05 | 0.15 |
| 2:J:242:A:C4 | 6:N:517:U:C4[2_666] | 2.05 | 0.15 |
| 2:J:168:A:C3' | 6:N:382:U:C2'[4_456] | 2.05 | 0.15 |
| 1:I:149:A:C5' | 4:L:466:U:C4[3_556] | 2.05 | 0.15 |
| 1:I:71:A:N1 | 2:J:47:A:P[3_556] | 2.05 | 0.15 |
| 2:J:243:A:C2 | 6:N:518:U:C5[2_666] | 2.05 | 0.15 |
| 3:K:148:A:N3 | 5:M:384:U:O4[4_556] | 2.05 | 0.15 |
| 2:J:44:A:O5' | 4:L:760:U:C6[3_546] | 2.05 | 0.15 |
| 3:K:145:A:N7 | 5:M:389:U:O4[4_556] | 2.05 | 0.15 |
| 2:J:45:A:N1 | 4:L:757:U:O5'[3_546] | 2.05 | 0.15 |
| 3:K:12:A:C1' | 5:M:313:U:C4[2_664] | 2.05 | 0.15 |
| 1:I:149:A:C4' | 4:L:466:U:C4[3_556] | 2.05 | 0.15 |
| 3:K:146:A:OP2 | 5:M:387:U:O5'[4_556] | 2.05 | 0.15 |
| 2:J:45:A:C5 | 4:L:757:U:C4[3_546] | 2.06 | 0.14 |
| 3:K:12:A:C2' | 5:M:313:U:N1[2_664] | 2.06 | 0.14 |
| 1:I:71:A:C4 | 2:J:46:A:O2'[3_556] | 2.06 | 0.14 |
| 5:M:390:U:C2 | 6:N:388:U:C2[4_456] | 2.06 | 0.14 |
| 4:L:757:U:O5' | 5:M:509:U:O4[3_556] | 2.06 | 0.14 |
| 1:I:143:A:N9 | 4:L:471:U:C4'[3_556] | 2.06 | 0.14 |
| 1:I:356:A:C2 | 4:L:680:U:C5[3_546] | 2.06 | 0.14 |
| 4:L:755:U:O3' | 5:M:507:U:O2[3_556] | 2.06 | 0.14 |
| 2:J:43:A:N9 | 4:L:760:U:P[3_546] | 2.06 | 0.14 |
| 1:I:64:A:O3' | 5:M:502:U:C1'[3_556] | 2.06 | 0.14 |
| 3:K:147:A:N9 | 5:M:386:U:C5[4_556] | 2.06 | 0.14 |
| 5:M:391:U:N1 | 6:N:389:U:C6[4_456] | 2.06 | 0.14 |
| 2:J:239:A:N1 | 3:K:12:A:OP1[2_666] | 2.06 | 0.14 |
| 1:I:63:A:N7 | 5:M:504:U:O5'[3_556] | 2.06 | 0.14 |
| 1:I:59:A:O5' | 2:J:40:A:O3'[3_556] | 2.06 | 0.14 |
| 3:K:148:A:O5' | 5:M:385:U:P[4_556] | 2.06 | 0.14 |
| 2:J:239:A:N6 | 3:K:11:A:O2'[2_666] | 2.06 | 0.14 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:167:A:C6 | 6:N:384:U:N3[4_456] | 2.06 | 0.14 |
| 1:I:146:A:N7 | 1:I:356:A:C8[3_556] | 2.06 | 0.14 |
| 1:I:62:A:C5' | 5:M:505:U:N1[3_556] | 2.06 | 0.14 |
| 1:I:146:A:C3' | 1:I:356:A:O5'[3_556] | 2.06 | 0.14 |
| 2:J:169:A:O4' | 6:N:381:U:C4[4_456] | 2.06 | 0.14 |
| 3:K:144:A:C5 | 5:M:389:U:N1[4_556] | 2.06 | 0.14 |
| 4:L:469:U:C1' | 4:L:680:U:OP1[3_546] | 2.06 | 0.14 |
| 1:I:65:A:C1' | 5:M:502:U:C3'[3_556] | 2.06 | 0.14 |
| 1:I:64:A:C4' | 5:M:502:U:N1[3_556] | 2.06 | 0.14 |
| 2:J:168:A:O5' | 6:N:383:U:OP2[4_456] | 2.06 | 0.14 |
| 1:I:143:A:O5' | 4:L:472:U:C6[3_556] | 2.06 | 0.14 |
| 3:K:12:A:N1 | 5:M:312:U:C6[2_664] | 2.06 | 0.14 |
| 1:I:63:A:N6 | 5:M:504:U:OP2[3_556] | 2.07 | 0.13 |
| 3:K:143:A:C8 | 5:M:389:U:C4'[4_556] | 2.07 | 0.13 |
| 2:J:43:A:C5 | 4:L:759:U:C5'[3_546] | 2.07 | 0.13 |
| 5:M:312:U:C5' | 6:N:519:U:C2[2_666] | 2.07 | 0.13 |
| 5:M:391:U:C4 | 6:N:388:U:C1'[4_456] | 2.07 | 0.13 |
| 1:I:146:A:N9 | 1:I:356:A:C5'[3_556] | 2.07 | 0.13 |
| 2:J:44:A:N9 | 4:L:758:U:N3[3_546] | 2.07 | 0.13 |
| 2:J:167:A:OP2 | 6:N:384:U:C3'[4_456] | 2.07 | 0.13 |
| 3:K:144:A:N7 | 5:M:389:U:C2[4_556] | 2.07 | 0.13 |
| 3:K:12:A:O2' | 5:M:314:U:C5[2_664] | 2.07 | 0.13 |
| 5:M:391:U:N1 | 6:N:388:U:O2'[4_456] | 2.07 | 0.13 |
| 4:L:469:U:N3 | 4:L:679:U:N1[3_546] | 2.07 | 0.13 |
| 3:K:147:A:C5 | 5:M:386:U:N3[4_556] | 2.07 | 0.13 |
| 3:K:13:A:OP2 | 5:M:313:U:O2[2_664] | 2.07 | 0.13 |
| 3:K:148:A:OP2 | 5:M:385:U:C1'[4_556] | 2.07 | 0.13 |
| 1:I:69:A:N1 | 2:J:46:A:C5'[3_556] | 2.07 | 0.13 |
| 1:I:356:A:N6 | 4:L:679:U:O2[3_546] | 2.07 | 0.13 |
| 2:J:44:A:C5 | 4:L:758:U:C6[3_546] | 2.07 | 0.13 |
| 2:J:44:A:N1 | 4:L:758:U:O5'[3_546] | 2.07 | 0.13 |
| 4:L:468:U:N3 | 4:L:679:U:C1'[3_546] | 2.07 | 0.13 |
| 2:J:244:A:N7 | 6:N:517:U:O4'[2_666] | 2.07 | 0.13 |
| 1:I:149:A:OP2 | 4:L:465:U:OP2[3_556] | 2.07 | 0.13 |
| 2:J:42:A:C2 | 4:L:759:U:C4'[3_546] | 2.07 | 0.13 |
| 2:J:43:A:C2' | 4:L:760:U:O4'[3_546] | 2.07 | 0.13 |
| 2:J:44:A:C1' | 4:L:759:U:C6[3_546] | 2.07 | 0.13 |
| 1:I:62:A:C4' | 5:M:505:U:C1'[3_556] | 2.07 | 0.13 |
| 1:I:149:A:O4' | 4:L:466:U:C5[3_556] | 2.07 | 0.13 |
| 2:J:43:A:C6 | 4:L:758:U:O3'[3_546] | 2.07 | 0.13 |
| 4:L:469:U:C3' | 4:L:680:U:OP2[3_546] | 2.07 | 0.13 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:165:A:N1 | 6:N:386:U:O4[4_456] | 2.07 | 0.13 |
| 1:I:63:A:O4' | 5:M:504:U:C6[3_556] | 2.07 | 0.13 |
| 2:J:44:A:N1 | 4:L:757:U:C3'[3_546] | 2.07 | 0.13 |
| 2:J:165:A:C6 | 6:N:386:U:C4[4_456] | 2.07 | 0.13 |
| 3:K:144:A:C8 | 5:M:389:U:C5[4_556] | 2.07 | 0.13 |
| 3:K:17:A:C3' | 5:M:305:U:OP1[2_664] | 2.07 | 0.13 |
| 3:K:144:A:P | 5:M:389:U:OP1[4_556] | 2.07 | 0.13 |
| 5:M:392:U:OP2 | 6:N:389:U:C3'[4_456] | 2.07 | 0.13 |
| 3:K:144:A:C6 | 5:M:389:U:O4[4_556] | 2.07 | 0.13 |
| 3:K:13:A:O5' | 5:M:313:U:O2[2_664] | 2.07 | 0.13 |
| 4:L:751:U:O4' | 5:M:499:U:C4'[3_556] | 2.08 | 0.12 |
| 1:I:357:A:N6 | 4:L:679:U:C2[3_546] | 2.08 | 0.12 |
| 2:J:164:A:O4' | 6:N:387:U:P[4_456] | 2.08 | 0.12 |
| 3:K:143:A:C4 | 5:M:390:U:P[4_556] | 2.08 | 0.12 |
| 3:K:143:A:N6 | 5:M:389:U:O2[4_556] | 2.08 | 0.12 |
| 3:K:146:A:P | 5:M:387:U:OP1[4_556] | 2.08 | 0.12 |
| 3:K:148:A:C8 | 5:M:385:U:O4[4_556] | 2.08 | 0.12 |
| 2:J:47:A:C4 | 4:L:755:U:O4'[3_546] | 2.08 | 0.12 |
| 2:J:44:A:O4' | 4:L:759:U:C2[3_546] | 2.08 | 0.12 |
| 1:I:143:A:C8 | 4:L:471:U:N1[3_556] | 2.08 | 0.12 |
| 1:I:149:A:C3' | 4:L:466:U:C5[3_556] | 2.08 | 0.12 |
| 3:K:148:A:O2' | 5:M:384:U:C5[4_556] | 2.08 | 0.12 |
| 3:K:12:A:N9 | 5:M:313:U:N3[2_664] | 2.08 | 0.12 |
| 2:J:169:A:C5 | 3:K:150:A:N6[4_456] | 2.08 | 0.12 |
| 4:L:756:U:C3' | 5:M:508:U:O2[3_556] | 2.08 | 0.12 |
| 2:J:171:A:N7 | 3:K:150:A:C3'[4_456] | 2.08 | 0.12 |
| 4:L:752:U:OP2 | 5:M:499:U:C3'[3_556] | 2.08 | 0.12 |
| 2:J:48:A:O4' | 4:L:754:U:C1'[3_546] | 2.08 | 0.12 |
| 1:I:62:A:C4 | 5:M:504:U:C5'[3_556] | 2.08 | 0.12 |
| 2:J:168:A:N1 | 3:K:148:A:C6[4_456] | 2.08 | 0.12 |
| 4:L:755:U:O3' | 5:M:507:U:N3[3_556] | 2.08 | 0.12 |
| 2:J:164:A:C2 | 6:N:387:U:N3[4_456] | 2.08 | 0.12 |
| 1:I:65:A:C4' | 5:M:501:U:C2'[3_556] | 2.08 | 0.12 |
| 1:I:145:A:N3 | 1:I:356:A:C1'[3_556] | 2.08 | 0.12 |
| 3:K:146:A:O5' | 5:M:387:U:P[4_556] | 2.08 | 0.12 |
| 1:I:66:A:P | 5:M:502:U:OP1[3_556] | 2.08 | 0.12 |
| 3:K:147:A:OP2 | 5:M:386:U:O3'[4_556] | 2.08 | 0.12 |
| 3:K:145:A:P | 5:M:388:U:O5'[4_556] | 2.08 | 0.12 |
| 2:J:169:A:C3' | 3:K:151:A:C4[4_456] | 2.09 | 0.11 |
| 3:K:149:A:OP2 | 5:M:384:U:C2'[4_556] | 2.09 | 0.11 |
| 3:K:148:A:C5' | 5:M:384:U:O3'[4_556] | 2.09 | 0.11 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:43:A:C5' | 4:L:760:U:C5'[3_546] | 2.09 | 0.11 |
| 1:I:65:A:C1' | 5:M:502:U:O5'[3_556] | 2.09 | 0.11 |
| 4:L:469:U:C2 | 4:L:679:U:C3'[3_546] | 2.09 | 0.11 |
| 3:K:13:A:C4' | 5:M:313:U:C2'[2_664] | 2.09 | 0.11 |
| 2:J:47:A:O3' | 4:L:754:U:O2[3_546] | 2.09 | 0.11 |
| 5:M:391:U:O2' | 6:N:389:U:OP1[4_456] | 2.09 | 0.11 |
| 5:M:391:U:OP1 | 6:N:390:U:C6[4_456] | 2.09 | 0.11 |
| 2:J:242:A:C4' | 3:K:15:A:N6[2_666] | 2.09 | 0.11 |
| 1:I:63:A:C2 | 5:M:504:U:OP2[3_556] | 2.09 | 0.11 |
| 4:L:752:U:O5' | 5:M:499:U:O5'[3_556] | 2.09 | 0.11 |
| 2:J:169:A:O3' | 3:K:151:A:C5[4_456] | 2.09 | 0.11 |
| 1:I:63:A:N1 | 5:M:504:U:P[3_556] | 2.09 | 0.11 |
| 5:M:390:U:N3 | 6:N:388:U:C4[4_456] | 2.09 | 0.11 |
| 2:J:43:A:C2' | 4:L:759:U:C2[3_546] | 2.09 | 0.11 |
| 2:J:49:A:OP2 | 4:L:753:U:C2'[3_546] | 2.09 | 0.11 |
| 1:I:146:A:C1' | 1:I:356:A:C3'[3_556] | 2.09 | 0.11 |
| 2:J:43:A:OP1 | 4:L:761:U:OP2[3_546] | 2.09 | 0.11 |
| 3:K:147:A:N3 | 5:M:386:U:O4[4_556] | 2.09 | 0.11 |
| 1:I:142:A:C1' | 4:L:471:U:O3'[3_556] | 2.09 | 0.11 |
| 2:J:164:A:O5' | 6:N:386:U:C2'[4_456] | 2.09 | 0.11 |
| 1:I:143:A:N7 | 4:L:471:U:C5'[3_556] | 2.09 | 0.11 |
| 2:J:171:A:OP2 | 3:K:150:A:O3'[4_456] | 2.09 | 0.11 |
| 1:I:146:A:C4' | 1:I:356:A:C5'[3_556] | 2.09 | 0.11 |
| 2:J:243:A:N7 | 6:N:517:U:O2[2_666] | 2.09 | 0.11 |
| 2:J:242:A:C5 | 6:N:517:U:C4[2_666] | 2.09 | 0.11 |
| 1:I:61:A:C5' | 5:M:505:U:O3'[3_556] | 2.09 | 0.11 |
| 2:J:168:A:P | 6:N:383:U:C4'[4_456] | 2.09 | 0.11 |
| 1:I:146:A:N6 | 1:I:356:A:N7[3_556] | 2.09 | 0.11 |
| 2:J:163:A:N1 | 6:N:387:U:C2[4_456] | 2.09 | 0.11 |
| 2:J:164:A:C5' | 6:N:387:U:O5'[4_456] | 2.09 | 0.11 |
| 1:I:70:A:N3 | 2:J:46:A:C3'[3_556] | 2.09 | 0.11 |
| 2:J:43:A:C3' | 4:L:760:U:C4'[3_546] | 2.09 | 0.11 |
| 3:K:13:A:O4' | 5:M:313:U:C3'[2_664] | 2.09 | 0.11 |
| 4:L:469:U:N1 | 4:L:679:U:C2'[3_546] | 2.09 | 0.11 |
| 5:M:312:U:C2' | 6:N:519:U:O2[2_666] | 2.09 | 0.11 |
| 1:I:64:A:OP2 | 5:M:503:U:O4[3_556] | 2.10 | 0.10 |
| 5:M:312:U:C5' | 6:N:519:U:O2[2_666] | 2.10 | 0.10 |
| 2:J:48:A:N3 | 4:L:755:U:P[3_546] | 2.10 | 0.10 |
| 2:J:165:A:N7 | 6:N:387:U:C5[4_456] | 2.10 | 0.10 |
| 2:J:239:A:C6 | 3:K:11:A:O3'[2_666] | 2.10 | 0.10 |
| 2:J:167:A:N6 | 6:N:385:U:C4[4_456] | 2.10 | 0.10 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:47:A:OP2 | 4:L:755:U:O4[3_546] | 2.10 | 0.10 |
| 1:I:59:A:C5' | 2:J:41:A:P[3_556] | 2.10 | 0.10 |
| 2:J:169:A:O5' | 6:N:382:U:C6[4_456] | 2.10 | 0.10 |
| 2:J:170:A:N7 | 3:K:150:A:N3[4_456] | 2.10 | 0.10 |
| 2:J:43:A:N9 | 4:L:759:U:C1'[3_546] | 2.10 | 0.10 |
| 1:I:65:A:OP2 | 5:M:502:U:C4[3_556] | 2.10 | 0.10 |
| 4:L:752:U:C3' | 5:M:499:U:P[3_556] | 2.10 | 0.10 |
| 3:K:143:A:N3 | 5:M:390:U:O5'[4_556] | 2.10 | 0.10 |
| 1:I:143:A:N6 | 4:L:470:U:C2'[3_556] | 2.10 | 0.10 |
| 2:J:171:A:C6 | 3:K:149:A:C2'[4_456] | 2.10 | 0.10 |
| 2:J:49:A:O5' | 4:L:754:U:O5'[3_546] | 2.10 | 0.10 |
| 4:L:756:U:O2' | 5:M:508:U:C2[3_556] | 2.10 | 0.10 |
| 1:I:65:A:C1' | 5:M:502:U:O3'[3_556] | 2.10 | 0.10 |
| 3:K:143:A:C1' | 5:M:390:U:OP2[4_556] | 2.10 | 0.10 |
| 3:K:17:A:O3' | 5:M:305:U:C5'[2_664] | 2.10 | 0.10 |
| 1:I:64:A:C3' | 5:M:502:U:C6[3_556] | 2.10 | 0.10 |
| 1:I:61:A:C2 | 5:M:504:U:O3'[3_556] | 2.10 | 0.10 |
| 1:I:68:A:C5 | 2:J:45:A:C5'[3_556] | 2.10 | 0.10 |
| 4:L:757:U:O2' | 5:M:510:U:N1[3_556] | 2.10 | 0.10 |
| 2:J:45:A:C8 | 4:L:757:U:C2[3_546] | 2.10 | 0.10 |
| 3:K:148:A:C8 | 5:M:385:U:C6[4_556] | 2.10 | 0.10 |
| 2:J:244:A:C6 | 6:N:517:U:O5'[2_666] | 2.10 | 0.10 |
| 1:I:149:A:C5' | 4:L:466:U:O4[3_556] | 2.11 | 0.09 |
| 1:I:68:A:C2 | 2:J:45:A:O4'[3_556] | 2.11 | 0.09 |
| 2:J:47:A:N9 | 4:L:755:U:O4'[3_546] | 2.11 | 0.09 |
| 2:J:48:A:C1' | 4:L:754:U:C2'[3_546] | 2.11 | 0.09 |
| 1:I:62:A:C2 | 5:M:504:U:P[3_556] | 2.11 | 0.09 |
| 3:K:147:A:N6 | 5:M:386:U:C4[4_556] | 2.11 | 0.09 |
| 1:I:145:A:N1 | 1:I:356:A:C1'[3_556] | 2.11 | 0.09 |
| 5:M:312:U:C1' | 6:N:519:U:O2[2_666] | 2.11 | 0.09 |
| 1:I:62:A:OP2 | 5:M:506:U:O5'[3_556] | 2.11 | 0.09 |
| 1:I:146:A:C8 | 1:I:356:A:O4'[3_556] | 2.11 | 0.09 |
| 2:J:169:A:C4 | 3:K:150:A:N1[4_456] | 2.11 | 0.09 |
| 3:K:144:A:N1 | 5:M:390:U:C4[4_556] | 2.11 | 0.09 |
| 1:I:144:A:OP1 | 4:L:472:U:C2'[3_556] | 2.11 | 0.09 |
| 3:K:12:A:C5 | 5:M:313:U:C4[2_664] | 2.11 | 0.09 |
| 2:J:48:A:C2 | 4:L:755:U:OP1[3_546] | 2.11 | 0.09 |
| 1:I:62:A:O3' | 5:M:504:U:N3[3_556] | 2.11 | 0.09 |
| 1:I:71:A:C6 | 2:J:47:A:C5'[3_556] | 2.11 | 0.09 |
| 4:L:757:U:O3' | 5:M:509:U:N3[3_556] | 2.11 | 0.09 |
| 3:K:18:A:N9 | 5:M:306:U:OP1[2_664] | 2.11 | 0.09 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:242:A:C2' | 3:K:15:A:C6[2_666] | 2.11 | 0.09 |
| 2:J:45:A:C2' | 4:L:757:U:N3[3_546] | 2.11 | 0.09 |
| 2:J:43:A:N7 | 4:L:760:U:P[3_546] | 2.11 | 0.09 |
| 1:I:70:A:N1 | 2:J:47:A:P[3_556] | 2.11 | 0.09 |
| 1:I:65:A:C3' | 5:M:501:U:C3'[3_556] | 2.11 | 0.09 |
| 2:J:168:A:C3' | 6:N:382:U:C6[4_456] | 2.11 | 0.09 |
| 1:I:63:A:N7 | 5:M:504:U:OP2[3_556] | 2.11 | 0.09 |
| 3:K:12:A:C6 | 5:M:312:U:C5[2_664] | 2.11 | 0.09 |
| 3:K:18:A:C5' | 5:M:305:U:O3'[2_664] | 2.11 | 0.09 |
| 1:I:62:A:C6 | 5:M:505:U:OP2[3_556] | 2.11 | 0.09 |
| 3:K:144:A:N1 | 5:M:389:U:C4[4_556] | 2.11 | 0.09 |
| 2:J:48:A:O5' | 4:L:754:U:C5[3_546] | 2.11 | 0.09 |
| 2:J:236:A:O3' | 6:N:522:U:C1'[2_666] | 2.11 | 0.09 |
| 1:I:146:A:C4' | 1:I:356:A:P[3_556] | 2.11 | 0.09 |
| 1:I:64:A:C5 | 5:M:503:U:OP2[3_556] | 2.11 | 0.09 |
| 1:I:69:A:C4 | 2:J:45:A:O2'[3_556] | 2.12 | 0.08 |
| 2:J:164:A:O5' | 6:N:386:U:O3'[4_456] | 2.12 | 0.08 |
| 4:L:469:U:C4 | 4:L:679:U:C3'[3_546] | 2.12 | 0.08 |
| 1:I:62:A:C5' | 5:M:505:U:C4'[3_556] | 2.12 | 0.08 |
| 2:J:164:A:O4' | 6:N:387:U:C4'[4_456] | 2.12 | 0.08 |
| 2:J:170:A:P | 3:K:151:A:C8[4_456] | 2.12 | 0.08 |
| 5:M:391:U:O4' | 6:N:389:U:C5[4_456] | 2.12 | 0.08 |
| 2:J:42:A:C8 | 4:L:760:U:OP1[3_546] | 2.12 | 0.08 |
| 1:I:61:A:O3' | 5:M:505:U:C1'[3_556] | 2.12 | 0.08 |
| 2:J:44:A:OP2 | 4:L:760:U:N3[3_546] | 2.12 | 0.08 |
| 4:L:756:U:P | 5:M:507:U:C2[3_556] | 2.12 | 0.08 |
| 2:J:44:A:N1 | 4:L:757:U:C2'[3_546] | 2.12 | 0.08 |
| 2:J:166:A:C3' | 6:N:385:U:OP2[4_456] | 2.12 | 0.08 |
| 2:J:165:A:O5' | 6:N:386:U:P[4_456] | 2.12 | 0.08 |
| 2:J:169:A:C3' | 3:K:150:A:C2[4_456] | 2.12 | 0.08 |
| 2:J:166:A:C6 | 6:N:386:U:O4[4_456] | 2.12 | 0.08 |
| 5:M:390:U:O2' | 6:N:389:U:C4[4_456] | 2.12 | 0.08 |
| 1:I:69:A:N7 | 2:J:46:A:P[3_556] | 2.12 | 0.08 |
| 3:K:12:A:C2' | 5:M:314:U:C5[2_664] | 2.12 | 0.08 |
| 2:J:46:A:C4 | 4:L:756:U:C5[3_546] | 2.12 | 0.08 |
| 4:L:757:U:OP1 | 5:M:509:U:C4[3_556] | 2.12 | 0.08 |
| 1:I:70:A:N1 | 2:J:47:A:OP2[3_556] | 2.12 | 0.08 |
| 2:J:43:A:C2 | 4:L:758:U:C1'[3_546] | 2.12 | 0.08 |
| 2:J:43:A:C6 | 4:L:759:U:OP1[3_546] | 2.12 | 0.08 |
| 5:M:312:U:OP1 | 6:N:520:U:N1[2_666] | 2.12 | 0.08 |
| 1:I:67:A:N6 | 2:J:45:A:P[3_556] | 2.12 | 0.08 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 2:J:242:A:OP2 | 3:K:16:A:C6[2_666] | 2.12 | 0.08 |
| 3:K:143:A:N9 | 5:M:389:U:C4'[4_556] | 2.12 | 0.08 |
| 2:J:44:A:N9 | 4:L:759:U:N1[3_546] | 2.12 | 0.08 |
| 3:K:17:A:C5' | 5:M:305:U:OP1[2_664] | 2.12 | 0.08 |
| 2:J:169:A:C2' | 3:K:150:A:C2[4_456] | 2.13 | 0.07 |
| 4:L:469:U:O2 | 4:L:680:U:O5'[3_546] | 2.13 | 0.07 |
| 2:J:169:A:O5' | 6:N:382:U:N1[4_456] | 2.13 | 0.07 |
| 2:J:165:A:N6 | 6:N:386:U:N3[4_456] | 2.13 | 0.07 |
| 2:J:44:A:C6 | 4:L:758:U:C6[3_546] | 2.13 | 0.07 |
| 1:I:64:A:O2' | 5:M:502:U:C4'[3_556] | 2.13 | 0.07 |
| 2:J:43:A:C8 | 4:L:760:U:O5'[3_546] | 2.13 | 0.07 |
| 2:J:44:A:OP1 | 4:L:760:U:N3[3_546] | 2.13 | 0.07 |
| 2:J:44:A:C5 | 4:L:759:U:C5[3_546] | 2.13 | 0.07 |
| 3:K:13:A:C6 | 5:M:312:U:C2[2_664] | 2.13 | 0.07 |
| 1:I:64:A:O2' | 5:M:502:U:N1[3_556] | 2.13 | 0.07 |
| 3:K:18:A:C4' | 5:M:305:U:O3'[2_664] | 2.13 | 0.07 |
| 1:I:64:A:N9 | 5:M:503:U:C5'[3_556] | 2.13 | 0.07 |
| 2:J:164:A:C2' | 6:N:387:U:P[4_456] | 2.13 | 0.07 |
| 2:J:47:A:C6 | 4:L:756:U:P[3_546] | 2.13 | 0.07 |
| 2:J:165:A:C8 | 6:N:387:U:C5[4_456] | 2.13 | 0.07 |
| 4:L:752:U:P | 5:M:500:U:O5'[3_556] | 2.13 | 0.07 |
| 1:I:62:A:OP2 | 5:M:505:U:C2'[3_556] | 2.13 | 0.07 |
| 3:K:145:A:N6 | 5:M:388:U:O4[4_556] | 2.13 | 0.07 |
| 1:I:146:A:N1 | 1:I:356:A:C4[3_556] | 2.13 | 0.07 |
| 1:I:145:A:C3' | 1:I:355:A:O2'[3_556] | 2.13 | 0.07 |
| 2:J:242:A:OP1 | 3:K:16:A:N7[2_666] | 2.13 | 0.07 |
| 2:J:171:A:N1 | 3:K:149:A:O3'[4_456] | 2.13 | 0.07 |
| 5:M:391:U:N3 | 6:N:388:U:O2'[4_456] | 2.13 | 0.07 |
| 2:J:44:A:C4 | 4:L:758:U:C5[3_546] | 2.13 | 0.07 |
| 4:L:752:U:O4' | 5:M:499:U:OP2[3_556] | 2.13 | 0.07 |
| 2:J:47:A:O5' | 4:L:755:U:C4[3_546] | 2.13 | 0.07 |
| 2:J:242:A:N9 | 3:K:15:A:N6[2_666] | 2.13 | 0.07 |
| 5:M:391:U:OP2 | 6:N:390:U:C4[4_456] | 2.13 | 0.07 |
| 1:I:70:A:C6 | 2:J:46:A:O5'[3_556] | 2.13 | 0.07 |
| 1:I:143:A:O2' | 4:L:472:U:C5'[3_556] | 2.13 | 0.07 |
| 2:J:48:A:OP2 | 4:L:754:U:C6[3_546] | 2.14 | 0.06 |
| 1:I:143:A:C4 | 4:L:471:U:C4'[3_556] | 2.14 | 0.06 |
| 1:I:352:A:C4' | 4:L:676:U:P[3_546] | 2.14 | 0.06 |
| 3:K:146:A:O3' | 5:M:386:U:C3'[4_556] | 2.14 | 0.06 |
| 2:J:243:A:C4 | 6:N:517:U:C2'[2_666] | 2.14 | 0.06 |
| 3:K:147:A:O2' | 5:M:385:U:O5'[4_556] | 2.14 | 0.06 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 5:M:390:U:C1' | 6:N:389:U:O4[4_456] | 2.14 | 0.06 |
| 2:J:43:A:N1 | 4:L:759:U:C5'[3_546] | 2.14 | 0.06 |
| 2:J:164:A:O5' | 6:N:387:U:C5'[4_456] | 2.14 | 0.06 |
| 3:K:148:A:C4' | 5:M:384:U:O5'[4_556] | 2.14 | 0.06 |
| 2:J:46:A:N1 | 4:L:756:U:C5'[3_546] | 2.14 | 0.06 |
| 2:J:163:A:C2 | 6:N:387:U:C2[4_456] | 2.14 | 0.06 |
| 4:L:756:U:OP2 | 5:M:507:U:O4[3_556] | 2.14 | 0.06 |
| 3:K:146:A:C5 | 5:M:387:U:C4[4_556] | 2.14 | 0.06 |
| 2:J:49:A:OP1 | 4:L:753:U:O3'[3_546] | 2.14 | 0.06 |
| 4:L:756:U:C2' | 5:M:508:U:C2[3_556] | 2.14 | 0.06 |
| 1:I:64:A:N7 | 5:M:503:U:O5'[3_556] | 2.14 | 0.06 |
| 1:I:62:A:OP2 | 5:M:505:U:O3'[3_556] | 2.14 | 0.06 |
| 3:K:143:A:N7 | 5:M:389:U:C1'[4_556] | 2.14 | 0.06 |
| 3:K:147:A:C4' | 5:M:386:U:P[4_556] | 2.14 | 0.06 |
| 4:L:469:U:C4 | 4:L:679:U:C2[3_546] | 2.14 | 0.06 |
| 2:J:165:A:N6 | 6:N:386:U:O4[4_456] | 2.14 | 0.06 |
| 1:I:143:A:C5' | 4:L:472:U:C5[3_556] | 2.14 | 0.06 |
| 2:J:169:A:N6 | 3:K:149:A:N7[4_456] | 2.14 | 0.06 |
| 1:I:351:A:C3' | 4:L:677:U:P[3_546] | 2.14 | 0.06 |
| 3:K:12:A:C3' | 5:M:313:U:C2[2_664] | 2.14 | 0.06 |
| 2:J:44:A:C4 | 4:L:759:U:C5[3_546] | 2.14 | 0.06 |
| 2:J:166:A:OP2 | 6:N:385:U:O5'[4_456] | 2.14 | 0.06 |
| 2:J:242:A:N3 | 6:N:517:U:O4[2_666] | 2.14 | 0.06 |
| 3:K:13:A:C5' | 5:M:313:U:C2'[2_664] | 2.14 | 0.06 |
| 1:I:146:A:N3 | 1:I:356:A:N7[3_556] | 2.14 | 0.06 |
| 3:K:144:A:N6 | 5:M:389:U:C4[4_556] | 2.14 | 0.06 |
| 3:K:146:A:N6 | 5:M:387:U:N3[4_556] | 2.14 | 0.06 |
| 2:J:47:A:C4 | 4:L:755:U:C2'[3_546] | 2.15 | 0.05 |
| 2:J:166:A:N7 | 6:N:386:U:O4[4_456] | 2.15 | 0.05 |
| 1:I:63:A:N1 | 5:M:503:U:O3'[3_556] | 2.15 | 0.05 |
| 2:J:168:A:C6 | 3:K:148:A:N1[4_456] | 2.15 | 0.05 |
| 3:K:149:A:N9 | 5:M:383:U:N3[4_556] | 2.15 | 0.05 |
| 1:I:64:A:C2 | 5:M:502:U:O3'[3_556] | 2.15 | 0.05 |
| 5:M:391:U:N3 | 6:N:388:U:N1[4_456] | 2.15 | 0.05 |
| 2:J:168:A:N7 | 6:N:384:U:C5[4_456] | 2.15 | 0.05 |
| 1:I:146:A:P | 1:I:355:A:O3'[3_556] | 2.15 | 0.05 |
| 3:K:144:A:O4' | 5:M:389:U:OP2[4_556] | 2.15 | 0.05 |
| 2:J:168:A:N3 | 6:N:382:U:O4[4_456] | 2.15 | 0.05 |
| 3:K:145:A:N6 | 5:M:388:U:N3[4_556] | 2.15 | 0.05 |
| 3:K:143:A:C6 | 5:M:390:U:C1'[4_556] | 2.15 | 0.05 |
| 1:I:62:A:N9 | 5:M:504:U:C4'[3_556] | 2.15 | 0.05 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 1:I:148:A:O2' | 4:L:467:U:O4[3_556] | 2.15 | 0.05 |
| 2:J:171:A:OP1 | 3:K:151:A:OP1[4_456] | 2.15 | 0.05 |
| 1:I:63:A:O4' | 5:M:504:U:C1'[3_556] | 2.15 | 0.05 |
| 2:J:43:A:C5' | 4:L:761:U:P[3_546] | 2.15 | 0.05 |
| 1:I:146:A:N7 | 1:I:355:A:C2'[3_556] | 2.15 | 0.05 |
| 2:J:43:A:N3 | 4:L:758:U:O2'[3_546] | 2.15 | 0.05 |
| 1:I:143:A:C3' | 4:L:472:U:C1'[3_556] | 2.16 | 0.04 |
| 2:J:164:A:C4 | 6:N:387:U:C2[4_456] | 2.16 | 0.04 |
| 1:I:143:A:N7 | 4:L:471:U:C6[3_556] | 2.16 | 0.04 |
| 2:J:236:A:P | 6:N:521:U:O2'[2_666] | 2.16 | 0.04 |
| 2:J:169:A:C3' | 6:N:381:U:O2[4_456] | 2.16 | 0.04 |
| 3:K:12:A:C5 | 5:M:313:U:O4[2_664] | 2.16 | 0.04 |
| 1:I:66:A:OP1 | 5:M:501:U:O5'[3_556] | 2.16 | 0.04 |
| 2:J:49:A:OP2 | 4:L:754:U:OP2[3_546] | 2.16 | 0.04 |
| 2:J:166:A:C5' | 6:N:385:U:OP2[4_456] | 2.16 | 0.04 |
| 1:I:149:A:O2' | 4:L:466:U:C5'[3_556] | 2.16 | 0.04 |
| 2:J:44:A:N6 | 4:L:758:U:OP2[3_546] | 2.16 | 0.04 |
| 1:I:61:A:O5' | 5:M:505:U:O3'[3_556] | 2.16 | 0.04 |
| 1:I:352:A:C5' | 4:L:676:U:P[3_546] | 2.16 | 0.04 |
| 1:I:356:A:C2 | 4:L:680:U:C6[3_546] | 2.16 | 0.04 |
| 1:I:64:A:O4' | 5:M:503:U:C6[3_556] | 2.16 | 0.04 |
| 2:J:243:A:N6 | 6:N:517:U:C6[2_666] | 2.16 | 0.04 |
| 3:K:147:A:N6 | 5:M:386:U:O4[4_556] | 2.16 | 0.04 |
| 3:K:12:A:O3' | 5:M:313:U:O2[2_664] | 2.16 | 0.04 |
| 2:J:45:A:C5 | 4:L:757:U:N1[3_546] | 2.16 | 0.04 |
| 4:L:757:U:O2' | 5:M:510:U:C2[3_556] | 2.16 | 0.04 |
| 1:I:63:A:P | 5:M:504:U:C4[3_556] | 2.16 | 0.04 |
| 1:I:62:A:C4' | 5:M:504:U:O2[3_556] | 2.16 | 0.04 |
| 2:J:167:A:O4' | 6:N:384:U:OP2[4_456] | 2.16 | 0.04 |
| 2:J:45:A:N1 | 4:L:756:U:C2'[3_546] | 2.16 | 0.04 |
| 2:J:166:A:P | 6:N:385:U:OP1[4_456] | 2.16 | 0.04 |
| 1:I:64:A:OP2 | 5:M:504:U:C4[3_556] | 2.16 | 0.04 |
| 5:M:392:U:C6 | 6:N:389:U:C5'[4_456] | 2.16 | 0.04 |
| 4:L:756:U:C4' | 5:M:508:U:N3[3_556] | 2.16 | 0.04 |
| 2:J:164:A:C6 | 6:N:387:U:O4[4_456] | 2.16 | 0.04 |
| 3:K:147:A:OP1 | 5:M:386:U:C5'[4_556] | 2.16 | 0.04 |
| 2:J:170:A:N1 | 3:K:150:A:C8[4_456] | 2.17 | 0.03 |
| 4:L:752:U:O5' | 5:M:499:U:O3'[3_556] | 2.17 | 0.03 |
| 2:J:244:A:C8 | 6:N:517:U:C3'[2_666] | 2.17 | 0.03 |
| 2:J:48:A:C4 | 4:L:755:U:O5'[3_546] | 2.17 | 0.03 |
| 5:M:391:U:C6 | 6:N:388:U:C2'[4_456] | 2.17 | 0.03 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 3:K:149:A:C5 | 5:M:384:U:O4[4_556] | 2.17 | 0.03 |
| 1:I:146:A:C8 | 1:I:356:A:C5'[3_556] | 2.17 | 0.03 |
| 3:K:143:A:C4' | 5:M:389:U:C5'[4_556] | 2.17 | 0.03 |
| 2:J:45:A:N9 | 4:L:758:U:C4[3_546] | 2.17 | 0.03 |
| 2:J:43:A:O2' | 4:L:759:U:O2'[3_546] | 2.17 | 0.03 |
| 2:J:42:A:N3 | 4:L:759:U:C3'[3_546] | 2.17 | 0.03 |
| 4:L:757:U:C2' | 5:M:509:U:O2[3_556] | 2.17 | 0.03 |
| 2:J:44:A:N1 | 4:L:758:U:C5[3_546] | 2.17 | 0.03 |
| 3:K:12:A:O2' | 5:M:314:U:C6[2_664] | 2.17 | 0.03 |
| 2:J:168:A:C3' | 6:N:382:U:C1'[4_456] | 2.17 | 0.03 |
| 1:I:143:A:N7 | 4:L:471:U:N1[3_556] | 2.17 | 0.03 |
| 3:K:144:A:OP2 | 5:M:388:U:C3'[4_556] | 2.17 | 0.03 |
| 1:I:70:A:N1 | 2:J:46:A:C1'[3_556] | 2.17 | 0.03 |
| 2:J:165:A:N7 | 6:N:386:U:C5[4_456] | 2.17 | 0.03 |
| 4:L:751:U:C1' | 5:M:499:U:C4'[3_556] | 2.17 | 0.03 |
| 2:J:46:A:C2 | 4:L:755:U:C2'[3_546] | 2.17 | 0.03 |
| 4:L:758:U:C5' | 5:M:510:U:N1[3_556] | 2.17 | 0.03 |
| 2:J:167:A:C5' | 6:N:384:U:OP1[4_456] | 2.17 | 0.03 |
| 1:I:146:A:C1' | 1:I:356:A:C4'[3_556] | 2.17 | 0.03 |
| 1:I:64:A:C4 | 5:M:503:U:C5'[3_556] | 2.17 | 0.03 |
| 1:I:150:A:O5' | 4:L:466:U:P[3_556] | 2.17 | 0.03 |
| 2:J:242:A:P | 3:K:16:A:C6[2_666] | 2.18 | 0.02 |
| 4:L:469:U:O4 | 4:L:679:U:O2[3_546] | 2.18 | 0.02 |
| 2:J:47:A:C2' | 4:L:754:U:C2'[3_546] | 2.18 | 0.02 |
| 2:J:168:A:C2' | 6:N:382:U:N1[4_456] | 2.18 | 0.02 |
| 1:I:146:A:C4' | 1:I:356:A:O5'[3_556] | 2.18 | 0.02 |
| 1:I:65:A:OP1 | 5:M:502:U:N3[3_556] | 2.18 | 0.02 |
| 2:J:168:A:OP2 | 6:N:383:U:C2'[4_456] | 2.18 | 0.02 |
| 3:K:147:A:C8 | 5:M:386:U:C6[4_556] | 2.18 | 0.02 |
| 2:J:168:A:OP1 | 6:N:383:U:OP1[4_456] | 2.18 | 0.02 |
| 2:J:170:A:N7 | 3:K:150:A:C6[4_456] | 2.18 | 0.02 |
| 2:J:48:A:O4' | 4:L:754:U:C4'[3_546] | 2.18 | 0.02 |
| 1:I:62:A:C3' | 5:M:505:U:N1[3_556] | 2.18 | 0.02 |
| 1:I:62:A:C4 | 5:M:504:U:C2'[3_556] | 2.18 | 0.02 |
| 2:J:164:A:C1' | 6:N:387:U:C6[4_456] | 2.18 | 0.02 |
| 2:J:48:A:O2' | 4:L:754:U:O3'[3_546] | 2.18 | 0.02 |
| 2:J:45:A:C2 | 4:L:757:U:C5[3_546] | 2.18 | 0.02 |
| 4:L:752:U:C1' | 5:M:499:U:OP2[3_556] | 2.18 | 0.02 |
| 2:J:46:A:N1 | 4:L:756:U:O4'[3_546] | 2.18 | 0.02 |
| 1:I:352:A:OP1 | 4:L:677:U:P[3_546] | 2.18 | 0.02 |
| 3:K:145:A:OP1 | 5:M:388:U:OP2[4_556] | 2.18 | 0.02 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|----------------------|--------------------------|-------------------|
| 3:K:145:A:N7 | 5:M:388:U:C4[4_556] | 2.18 | 0.02 |
| 1:I:68:A:C2 | 2:J:45:A:C3'[3_556] | 2.18 | 0.02 |
| 3:K:149:A:N9 | 5:M:383:U:C4[4_556] | 2.18 | 0.02 |
| 4:L:756:U:C4' | 5:M:508:U:N1[3_556] | 2.18 | 0.02 |
| 2:J:45:A:C2 | 4:L:757:U:N1[3_546] | 2.18 | 0.02 |
| 2:J:171:A:O5' | 3:K:150:A:O3'[4_456] | 2.18 | 0.02 |
| 2:J:46:A:O4' | 4:L:756:U:O2[3_546] | 2.18 | 0.02 |
| 1:I:71:A:C4 | 2:J:46:A:O3'[3_556] | 2.18 | 0.02 |
| 1:I:68:A:C8 | 2:J:45:A:OP1[3_556] | 2.18 | 0.02 |
| 2:J:163:A:C5 | 6:N:387:U:O2[4_456] | 2.18 | 0.02 |
| 1:I:61:A:C2' | 5:M:505:U:C3'[3_556] | 2.18 | 0.02 |
| 1:I:64:A:C4 | 5:M:502:U:O3'[3_556] | 2.18 | 0.02 |
| 2:J:242:A:C8 | 6:N:517:U:O4[2_666] | 2.18 | 0.02 |
| 3:K:149:A:O4' | 5:M:383:U:O4[4_556] | 2.18 | 0.02 |
| 2:J:45:A:N3 | 4:L:757:U:C2[3_546] | 2.18 | 0.02 |
| 1:I:63:A:N9 | 5:M:503:U:C3'[3_556] | 2.18 | 0.02 |
| 2:J:168:A:N7 | 6:N:384:U:C4[4_456] | 2.18 | 0.02 |
| 5:M:391:U:C4 | 6:N:388:U:N1[4_456] | 2.18 | 0.02 |
| 2:J:171:A:C2' | 3:K:150:A:OP1[4_456] | 2.18 | 0.02 |
| 3:K:12:A:C6 | 5:M:312:U:N1[2_664] | 2.19 | 0.01 |
| 2:J:165:A:C5 | 6:N:386:U:N3[4_456] | 2.19 | 0.01 |
| 1:I:64:A:N9 | 5:M:503:U:P[3_556] | 2.19 | 0.01 |
| 2:J:43:A:C1' | 4:L:759:U:O3'[3_546] | 2.19 | 0.01 |
| 3:K:144:A:C4 | 5:M:389:U:C5[4_556] | 2.19 | 0.01 |
| 1:I:65:A:C3' | 5:M:502:U:OP2[3_556] | 2.19 | 0.01 |
| 4:L:757:U:C1' | 5:M:509:U:O2[3_556] | 2.19 | 0.01 |
| 1:I:64:A:C4 | 5:M:503:U:OP1[3_556] | 2.19 | 0.01 |
| 2:J:45:A:N3 | 4:L:757:U:C1'[3_546] | 2.19 | 0.01 |
| 2:J:168:A:N7 | 6:N:383:U:C5[4_456] | 2.19 | 0.01 |
| 1:I:149:A:O2' | 4:L:466:U:N1[3_556] | 2.19 | 0.01 |
| 2:J:242:A:C1' | 3:K:15:A:N6[2_666] | 2.19 | 0.01 |
| 2:J:44:A:C4 | 4:L:759:U:C6[3_546] | 2.19 | 0.01 |
| 2:J:42:A:O2' | 4:L:760:U:C4'[3_546] | 2.19 | 0.01 |
| 2:J:167:A:N6 | 6:N:385:U:O4[4_456] | 2.19 | 0.01 |
| 2:J:167:A:N7 | 6:N:384:U:C4[4_456] | 2.19 | 0.01 |
| 3:K:13:A:C1' | 5:M:313:U:C4'[2_664] | 2.19 | 0.01 |
| 2:J:47:A:C8 | 4:L:755:U:O2[3_546] | 2.19 | 0.01 |
| 2:J:168:A:C2 | 3:K:148:A:N6[4_456] | 2.19 | 0.01 |
| 2:J:43:A:N1 | 4:L:758:U:C4'[3_546] | 2.19 | 0.01 |
| 4:L:757:U:P | 5:M:508:U:C2[3_556] | 2.19 | 0.01 |
| 5:M:390:U:C3' | 6:N:389:U:C4[4_456] | 2.19 | 0.01 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-------------|----------------------|--------------------------|-------------------|
| 2:J:46:A:C2 | 4:L:756:U:N1[3_546] | 2.19 | 0.01 |
| 2:J:44:A:C4 | 4:L:758:U:C1'[3_546] | 2.19 | 0.01 |

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

There are no protein molecules in this entry.

5.3.2 Protein sidechains [i](#)

There are no protein molecules in this entry.

5.3.3 RNA [i](#)

| Mol | Chain | Analysed | Backbone Outliers | Pucker Outliers |
|-----|-------|-----------------|-------------------|-----------------|
| 1 | I | 411/412 (99%) | 57 (13%) | 40 (9%) |
| 2 | J | 275/276 (99%) | 46 (16%) | 29 (10%) |
| 3 | K | 264/265 (99%) | 32 (12%) | 20 (7%) |
| 4 | L | 411/412 (99%) | 55 (13%) | 39 (9%) |
| 5 | M | 275/276 (99%) | 47 (17%) | 27 (9%) |
| 6 | N | 262/265 (98%) | 25 (9%) | 19 (7%) |
| All | All | 1898/1906 (99%) | 262 (13%) | 174 (9%) |

All (262) RNA backbone outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | I | 4 | A |
| 1 | I | 5 | A |
| 1 | I | 11 | A |
| 1 | I | 16 | A |
| 1 | I | 32 | A |
| 1 | I | 41 | A |
| 1 | I | 42 | A |
| 1 | I | 44 | A |
| 1 | I | 47 | A |
| 1 | I | 48 | A |
| 1 | I | 55 | A |
| 1 | I | 66 | A |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | I | 69 | A |
| 1 | I | 79 | A |
| 1 | I | 85 | A |
| 1 | I | 95 | A |
| 1 | I | 96 | A |
| 1 | I | 102 | A |
| 1 | I | 104 | A |
| 1 | I | 107 | A |
| 1 | I | 110 | A |
| 1 | I | 116 | A |
| 1 | I | 134 | A |
| 1 | I | 135 | A |
| 1 | I | 136 | A |
| 1 | I | 137 | A |
| 1 | I | 141 | A |
| 1 | I | 144 | A |
| 1 | I | 164 | A |
| 1 | I | 165 | A |
| 1 | I | 171 | A |
| 1 | I | 176 | A |
| 1 | I | 184 | A |
| 1 | I | 187 | A |
| 1 | I | 199 | A |
| 1 | I | 206 | A |
| 1 | I | 207 | A |
| 1 | I | 221 | A |
| 1 | I | 233 | A |
| 1 | I | 241 | A |
| 1 | I | 246 | A |
| 1 | I | 251 | A |
| 1 | I | 267 | A |
| 1 | I | 268 | A |
| 1 | I | 270 | A |
| 1 | I | 272 | A |
| 1 | I | 281 | A |
| 1 | I | 283 | A |
| 1 | I | 284 | A |
| 1 | I | 324 | A |
| 1 | I | 341 | A |
| 1 | I | 343 | A |
| 1 | I | 352 | A |
| 1 | I | 359 | A |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | I | 376 | A |
| 1 | I | 377 | A |
| 1 | I | 382 | A |
| 2 | J | 5 | A |
| 2 | J | 6 | A |
| 2 | J | 7 | A |
| 2 | J | 26 | A |
| 2 | J | 30 | A |
| 2 | J | 35 | A |
| 2 | J | 44 | A |
| 2 | J | 48 | A |
| 2 | J | 62 | A |
| 2 | J | 70 | A |
| 2 | J | 71 | A |
| 2 | J | 74 | A |
| 2 | J | 84 | A |
| 2 | J | 86 | A |
| 2 | J | 87 | A |
| 2 | J | 90 | A |
| 2 | J | 93 | A |
| 2 | J | 98 | A |
| 2 | J | 116 | A |
| 2 | J | 117 | A |
| 2 | J | 118 | A |
| 2 | J | 119 | A |
| 2 | J | 125 | A |
| 2 | J | 137 | A |
| 2 | J | 144 | A |
| 2 | J | 148 | A |
| 2 | J | 164 | A |
| 2 | J | 166 | A |
| 2 | J | 167 | A |
| 2 | J | 169 | A |
| 2 | J | 171 | A |
| 2 | J | 172 | A |
| 2 | J | 177 | A |
| 2 | J | 182 | A |
| 2 | J | 184 | A |
| 2 | J | 189 | A |
| 2 | J | 198 | A |
| 2 | J | 201 | A |
| 2 | J | 206 | A |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 2 | J | 217 | A |
| 2 | J | 223 | A |
| 2 | J | 224 | A |
| 2 | J | 227 | A |
| 2 | J | 237 | A |
| 2 | J | 238 | A |
| 2 | J | 266 | A |
| 3 | K | 39 | A |
| 3 | K | 50 | A |
| 3 | K | 55 | A |
| 3 | K | 64 | A |
| 3 | K | 72 | A |
| 3 | K | 90 | A |
| 3 | K | 100 | A |
| 3 | K | 101 | A |
| 3 | K | 115 | A |
| 3 | K | 118 | A |
| 3 | K | 119 | A |
| 3 | K | 120 | A |
| 3 | K | 121 | A |
| 3 | K | 123 | A |
| 3 | K | 125 | A |
| 3 | K | 136 | A |
| 3 | K | 139 | A |
| 3 | K | 142 | A |
| 3 | K | 143 | A |
| 3 | K | 147 | A |
| 3 | K | 148 | A |
| 3 | K | 149 | A |
| 3 | K | 151 | A |
| 3 | K | 154 | A |
| 3 | K | 166 | A |
| 3 | K | 169 | A |
| 3 | K | 182 | A |
| 3 | K | 189 | A |
| 3 | K | 204 | A |
| 3 | K | 247 | A |
| 3 | K | 248 | A |
| 3 | K | 254 | A |
| 4 | L | 438 | U |
| 4 | L | 448 | U |
| 4 | L | 449 | U |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 4 | L | 472 | U |
| 4 | L | 473 | U |
| 4 | L | 478 | U |
| 4 | L | 492 | U |
| 4 | L | 498 | U |
| 4 | L | 502 | U |
| 4 | L | 533 | U |
| 4 | L | 541 | U |
| 4 | L | 552 | U |
| 4 | L | 555 | U |
| 4 | L | 557 | U |
| 4 | L | 577 | U |
| 4 | L | 583 | U |
| 4 | L | 621 | U |
| 4 | L | 626 | U |
| 4 | L | 629 | U |
| 4 | L | 632 | U |
| 4 | L | 634 | U |
| 4 | L | 639 | U |
| 4 | L | 642 | U |
| 4 | L | 662 | U |
| 4 | L | 681 | U |
| 4 | L | 686 | U |
| 4 | L | 695 | U |
| 4 | L | 713 | U |
| 4 | L | 714 | U |
| 4 | L | 716 | U |
| 4 | L | 720 | U |
| 4 | L | 722 | U |
| 4 | L | 723 | U |
| 4 | L | 725 | U |
| 4 | L | 728 | U |
| 4 | L | 729 | U |
| 4 | L | 730 | U |
| 4 | L | 731 | U |
| 4 | L | 737 | U |
| 4 | L | 738 | U |
| 4 | L | 743 | U |
| 4 | L | 746 | U |
| 4 | L | 747 | U |
| 4 | L | 751 | U |
| 4 | L | 759 | U |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 4 | L | 760 | U |
| 4 | L | 763 | U |
| 4 | L | 766 | U |
| 4 | L | 768 | U |
| 4 | L | 775 | U |
| 4 | L | 784 | U |
| 4 | L | 787 | U |
| 4 | L | 808 | U |
| 4 | L | 819 | U |
| 4 | L | 820 | U |
| 5 | M | 306 | U |
| 5 | M | 320 | U |
| 5 | M | 324 | U |
| 5 | M | 328 | U |
| 5 | M | 329 | U |
| 5 | M | 334 | U |
| 5 | M | 335 | U |
| 5 | M | 337 | U |
| 5 | M | 338 | U |
| 5 | M | 339 | U |
| 5 | M | 348 | U |
| 5 | M | 351 | U |
| 5 | M | 353 | U |
| 5 | M | 355 | U |
| 5 | M | 361 | U |
| 5 | M | 362 | U |
| 5 | M | 364 | U |
| 5 | M | 369 | U |
| 5 | M | 379 | U |
| 5 | M | 387 | U |
| 5 | M | 388 | U |
| 5 | M | 407 | U |
| 5 | M | 410 | U |
| 5 | M | 417 | U |
| 5 | M | 424 | U |
| 5 | M | 436 | U |
| 5 | M | 445 | U |
| 5 | M | 459 | U |
| 5 | M | 466 | U |
| 5 | M | 469 | U |
| 5 | M | 470 | U |
| 5 | M | 475 | U |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 5 | M | 480 | U |
| 5 | M | 481 | U |
| 5 | M | 490 | U |
| 5 | M | 494 | U |
| 5 | M | 497 | U |
| 5 | M | 499 | U |
| 5 | M | 503 | U |
| 5 | M | 519 | U |
| 5 | M | 524 | U |
| 5 | M | 531 | U |
| 5 | M | 532 | U |
| 5 | M | 535 | U |
| 5 | M | 546 | U |
| 5 | M | 548 | U |
| 5 | M | 549 | U |
| 6 | N | 279 | U |
| 6 | N | 296 | U |
| 6 | N | 350 | U |
| 6 | N | 358 | U |
| 6 | N | 365 | U |
| 6 | N | 366 | U |
| 6 | N | 378 | U |
| 6 | N | 385 | U |
| 6 | N | 389 | U |
| 6 | N | 390 | U |
| 6 | N | 392 | U |
| 6 | N | 393 | U |
| 6 | N | 394 | U |
| 6 | N | 399 | U |
| 6 | N | 409 | U |
| 6 | N | 432 | U |
| 6 | N | 436 | U |
| 6 | N | 441 | U |
| 6 | N | 446 | U |
| 6 | N | 447 | U |
| 6 | N | 459 | U |
| 6 | N | 460 | U |
| 6 | N | 461 | U |
| 6 | N | 490 | U |
| 6 | N | 525 | U |

All (174) RNA pucker outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | I | 3 | A |
| 1 | I | 4 | A |
| 1 | I | 10 | A |
| 1 | I | 31 | A |
| 1 | I | 40 | A |
| 1 | I | 41 | A |
| 1 | I | 43 | A |
| 1 | I | 46 | A |
| 1 | I | 47 | A |
| 1 | I | 54 | A |
| 1 | I | 78 | A |
| 1 | I | 79 | A |
| 1 | I | 84 | A |
| 1 | I | 94 | A |
| 1 | I | 95 | A |
| 1 | I | 101 | A |
| 1 | I | 103 | A |
| 1 | I | 106 | A |
| 1 | I | 109 | A |
| 1 | I | 134 | A |
| 1 | I | 140 | A |
| 1 | I | 143 | A |
| 1 | I | 164 | A |
| 1 | I | 175 | A |
| 1 | I | 183 | A |
| 1 | I | 186 | A |
| 1 | I | 198 | A |
| 1 | I | 205 | A |
| 1 | I | 206 | A |
| 1 | I | 240 | A |
| 1 | I | 245 | A |
| 1 | I | 267 | A |
| 1 | I | 271 | A |
| 1 | I | 280 | A |
| 1 | I | 282 | A |
| 1 | I | 283 | A |
| 1 | I | 340 | A |
| 1 | I | 358 | A |
| 1 | I | 375 | A |
| 1 | I | 376 | A |
| 2 | J | 34 | A |
| 2 | J | 61 | A |
| 2 | J | 73 | A |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 2 | J | 83 | A |
| 2 | J | 85 | A |
| 2 | J | 86 | A |
| 2 | J | 89 | A |
| 2 | J | 92 | A |
| 2 | J | 97 | A |
| 2 | J | 116 | A |
| 2 | J | 117 | A |
| 2 | J | 118 | A |
| 2 | J | 124 | A |
| 2 | J | 136 | A |
| 2 | J | 143 | A |
| 2 | J | 147 | A |
| 2 | J | 165 | A |
| 2 | J | 166 | A |
| 2 | J | 170 | A |
| 2 | J | 171 | A |
| 2 | J | 176 | A |
| 2 | J | 181 | A |
| 2 | J | 188 | A |
| 2 | J | 200 | A |
| 2 | J | 216 | A |
| 2 | J | 236 | A |
| 2 | J | 237 | A |
| 2 | J | 242 | A |
| 2 | J | 265 | A |
| 3 | K | 38 | A |
| 3 | K | 49 | A |
| 3 | K | 54 | A |
| 3 | K | 71 | A |
| 3 | K | 89 | A |
| 3 | K | 114 | A |
| 3 | K | 117 | A |
| 3 | K | 124 | A |
| 3 | K | 135 | A |
| 3 | K | 138 | A |
| 3 | K | 141 | A |
| 3 | K | 142 | A |
| 3 | K | 146 | A |
| 3 | K | 147 | A |
| 3 | K | 150 | A |
| 3 | K | 153 | A |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 3 | K | 181 | A |
| 3 | K | 188 | A |
| 3 | K | 203 | A |
| 3 | K | 243 | A |
| 4 | L | 437 | U |
| 4 | L | 447 | U |
| 4 | L | 448 | U |
| 4 | L | 471 | U |
| 4 | L | 472 | U |
| 4 | L | 491 | U |
| 4 | L | 501 | U |
| 4 | L | 540 | U |
| 4 | L | 551 | U |
| 4 | L | 554 | U |
| 4 | L | 556 | U |
| 4 | L | 582 | U |
| 4 | L | 625 | U |
| 4 | L | 628 | U |
| 4 | L | 631 | U |
| 4 | L | 633 | U |
| 4 | L | 641 | U |
| 4 | L | 661 | U |
| 4 | L | 680 | U |
| 4 | L | 685 | U |
| 4 | L | 715 | U |
| 4 | L | 719 | U |
| 4 | L | 722 | U |
| 4 | L | 727 | U |
| 4 | L | 728 | U |
| 4 | L | 730 | U |
| 4 | L | 736 | U |
| 4 | L | 737 | U |
| 4 | L | 742 | U |
| 4 | L | 745 | U |
| 4 | L | 746 | U |
| 4 | L | 750 | U |
| 4 | L | 762 | U |
| 4 | L | 767 | U |
| 4 | L | 774 | U |
| 4 | L | 783 | U |
| 4 | L | 786 | U |
| 4 | L | 818 | U |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 4 | L | 819 | U |
| 5 | M | 327 | U |
| 5 | M | 328 | U |
| 5 | M | 338 | U |
| 5 | M | 354 | U |
| 5 | M | 360 | U |
| 5 | M | 361 | U |
| 5 | M | 386 | U |
| 5 | M | 387 | U |
| 5 | M | 409 | U |
| 5 | M | 416 | U |
| 5 | M | 423 | U |
| 5 | M | 435 | U |
| 5 | M | 444 | U |
| 5 | M | 468 | U |
| 5 | M | 469 | U |
| 5 | M | 474 | U |
| 5 | M | 479 | U |
| 5 | M | 480 | U |
| 5 | M | 493 | U |
| 5 | M | 496 | U |
| 5 | M | 498 | U |
| 5 | M | 502 | U |
| 5 | M | 518 | U |
| 5 | M | 523 | U |
| 5 | M | 534 | U |
| 5 | M | 547 | U |
| 5 | M | 548 | U |
| 6 | N | 295 | U |
| 6 | N | 349 | U |
| 6 | N | 357 | U |
| 6 | N | 364 | U |
| 6 | N | 365 | U |
| 6 | N | 377 | U |
| 6 | N | 384 | U |
| 6 | N | 388 | U |
| 6 | N | 389 | U |
| 6 | N | 391 | U |
| 6 | N | 398 | U |
| 6 | N | 408 | U |
| 6 | N | 435 | U |
| 6 | N | 445 | U |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 6 | N | 446 | U |
| 6 | N | 458 | U |
| 6 | N | 459 | U |
| 6 | N | 460 | U |
| 6 | N | 489 | U |

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 carbohydrates in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

| Mol | Chain | Number of breaks |
|-----|-------|------------------|
| 4 | L | 134 |
| 1 | I | 113 |
| 6 | N | 112 |
| 3 | K | 104 |
| 5 | M | 68 |
| 2 | J | 64 |

All chain breaks are listed below:

| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | N | 517:U | O3' | 518:U | P | 2.23 |
| 1 | N | 456:U | O3' | 457:U | P | 2.20 |

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| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | M | 313:U | O3' | 314:U | P | 2.19 |
| 1 | K | 12:A | O3' | 13:A | P | 2.18 |
| 1 | I | 149:A | O3' | 150:A | P | 2.17 |
| 1 | K | 11:A | O3' | 12:A | P | 2.17 |
| 1 | K | 75:A | O3' | 76:A | P | 2.17 |
| 1 | L | 679:U | O3' | 680:U | P | 2.17 |
| 1 | N | 524:U | O3' | 525:U | P | 2.15 |
| 1 | J | 242:A | O3' | 243:A | P | 2.14 |
| 1 | M | 312:U | O3' | 313:U | P | 2.14 |
| 1 | N | 510:U | O3' | 511:U | P | 2.14 |
| 1 | M | 311:U | O3' | 312:U | P | 2.12 |
| 1 | M | 548:U | O3' | 549:U | P | 2.12 |
| 1 | N | 519:U | O3' | 520:U | P | 2.11 |
| 1 | K | 242:A | O3' | 243:A | P | 2.10 |
| 1 | K | 252:A | O3' | 253:A | P | 2.10 |
| 1 | L | 678:U | O3' | 679:U | P | 2.10 |
| 1 | N | 279:U | O3' | 280:U | P | 2.10 |
| 1 | K | 74:A | O3' | 75:A | P | 2.09 |
| 1 | N | 516:U | O3' | 517:U | P | 2.09 |
| 1 | I | 384:A | O3' | 385:A | P | 2.08 |
| 1 | K | 259:A | O3' | 260:A | P | 2.08 |
| 1 | N | 322:U | O3' | 323:U | P | 2.06 |
| 1 | J | 3:A | O3' | 4:A | P | 2.05 |
| 1 | K | 179:A | O3' | 180:A | P | 2.05 |
| 1 | K | 241:A | O3' | 242:A | P | 2.05 |
| 1 | N | 299:U | O3' | 300:U | P | 2.05 |
| 1 | N | 484:U | O3' | 485:U | P | 2.05 |
| 1 | N | 520:U | O3' | 521:U | P | 2.05 |
| 1 | I | 146:A | O3' | 147:A | P | 2.04 |
| 1 | L | 440:U | O3' | 441:U | P | 2.04 |
| 1 | L | 446:U | O3' | 447:U | P | 2.04 |
| 1 | N | 455:U | O3' | 456:U | P | 2.04 |
| 1 | I | 40:A | O3' | 41:A | P | 2.03 |
| 1 | K | 33:A | O3' | 34:A | P | 2.03 |
| 1 | K | 45:A | O3' | 46:A | P | 2.03 |
| 1 | K | 184:A | O3' | 185:A | P | 2.03 |
| 1 | L | 439:U | O3' | 440:U | P | 2.03 |
| 1 | L | 451:U | O3' | 452:U | P | 2.03 |
| 1 | M | 314:U | O3' | 315:U | P | 2.03 |
| 1 | N | 289:U | O3' | 290:U | P | 2.03 |
| 1 | N | 341:U | O3' | 342:U | P | 2.03 |
| 1 | N | 518:U | O3' | 519:U | P | 2.03 |

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| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | J | 241:A | O3' | 242:A | P | 2.02 |
| 1 | K | 251:A | O3' | 252:A | P | 2.02 |
| 1 | N | 271:U | O3' | 272:U | P | 2.02 |
| 1 | I | 145:A | O3' | 146:A | P | 2.01 |
| 1 | J | 239:A | O3' | 240:A | P | 2.01 |
| 1 | K | 63:A | O3' | 64:A | P | 2.01 |
| 1 | K | 243:A | O3' | 244:A | P | 2.01 |
| 1 | K | 260:A | O3' | 261:A | P | 2.01 |
| 1 | M | 308:U | O3' | 309:U | P | 2.01 |
| 1 | N | 325:U | O3' | 326:U | P | 2.01 |
| 1 | K | 16:A | O3' | 17:A | P | 2.00 |
| 1 | K | 23:A | O3' | 24:A | P | 2.00 |
| 1 | K | 46:A | O3' | 47:A | P | 2.00 |
| 1 | K | 54:A | O3' | 55:A | P | 2.00 |
| 1 | K | 178:A | O3' | 179:A | P | 2.00 |
| 1 | L | 536:U | O3' | 537:U | P | 2.00 |
| 1 | L | 676:U | O3' | 677:U | P | 2.00 |
| 1 | N | 457:U | O3' | 458:U | P | 2.00 |
| 1 | N | 485:U | O3' | 486:U | P | 2.00 |
| 1 | J | 270:A | O3' | 271:A | P | 1.98 |
| 1 | J | 271:A | O3' | 272:A | P | 1.98 |
| 1 | K | 13:A | O3' | 14:A | P | 1.98 |
| 1 | K | 14:A | O3' | 15:A | P | 1.98 |
| 1 | K | 208:A | O3' | 209:A | P | 1.98 |
| 1 | K | 244:A | O3' | 245:A | P | 1.98 |
| 1 | L | 445:U | O3' | 446:U | P | 1.98 |
| 1 | L | 447:U | O3' | 448:U | P | 1.98 |
| 1 | L | 677:U | O3' | 678:U | P | 1.98 |
| 1 | N | 288:U | O3' | 289:U | P | 1.98 |
| 1 | I | 355:A | O3' | 356:A | P | 1.97 |
| 1 | I | 385:A | O3' | 386:A | P | 1.97 |
| 1 | J | 168:A | O3' | 169:A | P | 1.97 |
| 1 | K | 10:A | O3' | 11:A | P | 1.97 |
| 1 | K | 15:A | O3' | 16:A | P | 1.97 |
| 1 | K | 19:A | O3' | 20:A | P | 1.97 |
| 1 | M | 549:U | O3' | 550:U | P | 1.97 |
| 1 | N | 387:U | O3' | 388:U | P | 1.97 |
| 1 | I | 143:A | O3' | 144:A | P | 1.96 |
| 1 | K | 20:A | O3' | 21:A | P | 1.96 |
| 1 | K | 225:A | O3' | 226:A | P | 1.96 |
| 1 | M | 307:U | O3' | 308:U | P | 1.96 |
| 1 | M | 474:U | O3' | 475:U | P | 1.96 |

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| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | N | 303:U | O3' | 304:U | P | 1.96 |
| 1 | N | 346:U | O3' | 347:U | P | 1.96 |
| 1 | I | 150:A | O3' | 151:A | P | 1.95 |
| 1 | I | 351:A | O3' | 352:A | P | 1.95 |
| 1 | J | 115:A | O3' | 116:A | P | 1.95 |
| 1 | K | 22:A | O3' | 23:A | P | 1.95 |
| 1 | L | 442:U | O3' | 443:U | P | 1.95 |
| 1 | L | 469:U | O3' | 470:U | P | 1.95 |
| 1 | L | 675:U | O3' | 676:U | P | 1.95 |
| 1 | L | 680:U | O3' | 681:U | P | 1.95 |
| 1 | M | 282:U | O3' | 283:U | P | 1.95 |
| 1 | N | 459:U | O3' | 460:U | P | 1.95 |
| 1 | N | 497:U | O3' | 498:U | P | 1.95 |
| 1 | N | 509:U | O3' | 510:U | P | 1.95 |
| 1 | I | 344:A | O3' | 345:A | P | 1.94 |
| 1 | J | 274:A | O3' | 275:A | P | 1.94 |
| 1 | L | 441:U | O3' | 442:U | P | 1.94 |
| 1 | N | 352:U | O3' | 353:U | P | 1.94 |
| 1 | N | 515:U | O3' | 516:U | P | 1.94 |
| 1 | N | 523:U | O3' | 524:U | P | 1.94 |
| 1 | I | 95:A | O3' | 96:A | P | 1.93 |
| 1 | I | 147:A | O3' | 148:A | P | 1.93 |
| 1 | J | 273:A | O3' | 274:A | P | 1.93 |
| 1 | K | 209:A | O3' | 210:A | P | 1.93 |
| 1 | K | 227:A | O3' | 228:A | P | 1.93 |
| 1 | N | 318:U | O3' | 319:U | P | 1.93 |
| 1 | N | 373:U | O3' | 374:U | P | 1.93 |
| 1 | I | 2:A | O3' | 3:A | P | 1.92 |
| 1 | I | 3:A | O3' | 4:A | P | 1.92 |
| 1 | I | 99:A | O3' | 100:A | P | 1.92 |
| 1 | I | 205:A | O3' | 206:A | P | 1.92 |
| 1 | J | 4:A | O3' | 5:A | P | 1.92 |
| 1 | J | 240:A | O3' | 241:A | P | 1.92 |
| 1 | K | 226:A | O3' | 227:A | P | 1.92 |
| 1 | K | 261:A | O3' | 262:A | P | 1.92 |
| 1 | L | 430:U | O3' | 431:U | P | 1.92 |
| 1 | L | 448:U | O3' | 449:U | P | 1.92 |
| 1 | L | 452:U | O3' | 453:U | P | 1.92 |
| 1 | L | 819:U | O3' | 820:U | P | 1.92 |
| 1 | M | 340:U | O3' | 341:U | P | 1.92 |
| 1 | N | 508:U | O3' | 509:U | P | 1.92 |
| 1 | I | 289:A | O3' | 290:A | P | 1.91 |

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| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | J | 170:A | O3' | 171:A | P | 1.91 |
| 1 | J | 196:A | O3' | 197:A | P | 1.91 |
| 1 | K | 190:A | O3' | 191:A | P | 1.91 |
| 1 | K | 218:A | O3' | 219:A | P | 1.91 |
| 1 | K | 246:A | O3' | 247:A | P | 1.91 |
| 1 | I | 148:A | O3' | 149:A | P | 1.90 |
| 1 | I | 220:A | O3' | 221:A | P | 1.90 |
| 1 | I | 288:A | O3' | 289:A | P | 1.90 |
| 1 | I | 381:A | O3' | 382:A | P | 1.90 |
| 1 | L | 786:U | O3' | 787:U | P | 1.90 |
| 1 | M | 468:U | O3' | 469:U | P | 1.90 |
| 1 | M | 493:U | O3' | 494:U | P | 1.90 |
| 1 | N | 272:U | O3' | 273:U | P | 1.90 |
| 1 | N | 278:U | O3' | 279:U | P | 1.90 |
| 1 | N | 314:U | O3' | 315:U | P | 1.90 |
| 1 | N | 351:U | O3' | 352:U | P | 1.90 |
| 1 | N | 460:U | O3' | 461:U | P | 1.90 |
| 1 | I | 379:A | O3' | 380:A | P | 1.89 |
| 1 | I | 380:A | O3' | 381:A | P | 1.89 |
| 1 | J | 243:A | O3' | 244:A | P | 1.89 |
| 1 | J | 269:A | O3' | 270:A | P | 1.89 |
| 1 | J | 272:A | O3' | 273:A | P | 1.89 |
| 1 | K | 76:A | O3' | 77:A | P | 1.89 |
| 1 | L | 535:U | O3' | 536:U | P | 1.89 |
| 1 | L | 663:U | O3' | 664:U | P | 1.89 |
| 1 | L | 713:U | O3' | 714:U | P | 1.89 |
| 1 | M | 280:U | O3' | 281:U | P | 1.89 |
| 1 | M | 386:U | O3' | 387:U | P | 1.89 |
| 1 | N | 270:U | O3' | 271:U | P | 1.89 |
| 1 | N | 308:U | O3' | 309:U | P | 1.89 |
| 1 | N | 487:U | O3' | 488:U | P | 1.89 |
| 1 | I | 294:A | O3' | 295:A | P | 1.88 |
| 1 | J | 275:A | O3' | 276:A | P | 1.88 |
| 1 | K | 44:A | O3' | 45:A | P | 1.88 |
| 1 | K | 196:A | O3' | 197:A | P | 1.88 |
| 1 | M | 283:U | O3' | 284:U | P | 1.88 |
| 1 | I | 103:A | O3' | 104:A | P | 1.87 |
| 1 | I | 378:A | O3' | 379:A | P | 1.87 |
| 1 | K | 155:A | O3' | 156:A | P | 1.87 |
| 1 | L | 454:U | O3' | 455:U | P | 1.87 |
| 1 | L | 624:U | O3' | 625:U | P | 1.87 |
| 1 | L | 720:U | O3' | 721:U | P | 1.87 |

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| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | L | 822:U | O3' | 823:U | P | 1.87 |
| 1 | M | 279:U | O3' | 280:U | P | 1.87 |
| 1 | N | 266:U | O3' | 267:U | P | 1.87 |
| 1 | N | 267:U | O3' | 268:U | P | 1.87 |
| 1 | N | 269:U | O3' | 270:U | P | 1.87 |
| 1 | N | 304:U | O3' | 305:U | P | 1.87 |
| 1 | I | 98:A | O3' | 99:A | P | 1.86 |
| 1 | I | 356:A | O3' | 357:A | P | 1.86 |
| 1 | J | 116:A | O3' | 117:A | P | 1.86 |
| 1 | K | 50:A | O3' | 51:A | P | 1.86 |
| 1 | K | 205:A | O3' | 206:A | P | 1.86 |
| 1 | K | 224:A | O3' | 225:A | P | 1.86 |
| 1 | K | 232:A | O3' | 233:A | P | 1.86 |
| 1 | K | 258:A | O3' | 259:A | P | 1.86 |
| 1 | K | 264:A | O3' | 265:A | P | 1.86 |
| 1 | L | 443:U | O3' | 444:U | P | 1.86 |
| 1 | L | 657:U | O3' | 658:U | P | 1.86 |
| 1 | L | 685:U | O3' | 686:U | P | 1.86 |
| 1 | L | 725:U | O3' | 726:U | P | 1.86 |
| 1 | L | 783:U | O3' | 784:U | P | 1.86 |
| 1 | M | 278:U | O3' | 279:U | P | 1.86 |
| 1 | M | 281:U | O3' | 282:U | P | 1.86 |
| 1 | M | 310:U | O3' | 311:U | P | 1.86 |
| 1 | N | 300:U | O3' | 301:U | P | 1.86 |
| 1 | N | 321:U | O3' | 322:U | P | 1.86 |
| 1 | N | 344:U | O3' | 345:U | P | 1.86 |
| 1 | N | 357:U | O3' | 358:U | P | 1.86 |
| 1 | N | 483:U | O3' | 484:U | P | 1.86 |
| 1 | I | 4:A | O3' | 5:A | P | 1.85 |
| 1 | I | 303:A | O3' | 304:A | P | 1.85 |
| 1 | I | 382:A | O3' | 383:A | P | 1.85 |
| 1 | J | 2:A | O3' | 3:A | P | 1.85 |
| 1 | J | 85:A | O3' | 86:A | P | 1.85 |
| 1 | J | 145:A | O3' | 146:A | P | 1.85 |
| 1 | J | 162:A | O3' | 163:A | P | 1.85 |
| 1 | K | 51:A | O3' | 52:A | P | 1.85 |
| 1 | K | 67:A | O3' | 68:A | P | 1.85 |
| 1 | K | 188:A | O3' | 189:A | P | 1.85 |
| 1 | L | 456:U | O3' | 457:U | P | 1.85 |
| 1 | L | 468:U | O3' | 469:U | P | 1.85 |
| 1 | L | 551:U | O3' | 552:U | P | 1.85 |
| 1 | L | 620:U | O3' | 621:U | P | 1.85 |

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| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | L | 632:U | O3' | 633:U | P | 1.85 |
| 1 | L | 712:U | O3' | 713:U | P | 1.85 |
| 1 | M | 419:U | O3' | 420:U | P | 1.85 |
| 1 | M | 531:U | O3' | 532:U | P | 1.85 |
| 1 | N | 287:U | O3' | 288:U | P | 1.85 |
| 1 | I | 167:A | O3' | 168:A | P | 1.84 |
| 1 | J | 244:A | O3' | 245:A | P | 1.84 |
| 1 | K | 9:A | O3' | 10:A | P | 1.84 |
| 1 | K | 197:A | O3' | 198:A | P | 1.84 |
| 1 | K | 231:A | O3' | 232:A | P | 1.84 |
| 1 | L | 429:U | O3' | 430:U | P | 1.84 |
| 1 | L | 438:U | O3' | 439:U | P | 1.84 |
| 1 | L | 471:U | O3' | 472:U | P | 1.84 |
| 1 | L | 733:U | O3' | 734:U | P | 1.84 |
| 1 | M | 390:U | O3' | 391:U | P | 1.84 |
| 1 | M | 479:U | O3' | 480:U | P | 1.84 |
| 1 | M | 551:U | O3' | 552:U | P | 1.84 |
| 1 | N | 268:U | O3' | 269:U | P | 1.84 |
| 1 | N | 333:U | O3' | 334:U | P | 1.84 |
| 1 | N | 507:U | O3' | 508:U | P | 1.84 |
| 1 | I | 111:A | O3' | 112:A | P | 1.83 |
| 1 | I | 138:A | O3' | 139:A | P | 1.83 |
| 1 | I | 170:A | O3' | 171:A | P | 1.83 |
| 1 | I | 171:A | O3' | 172:A | P | 1.83 |
| 1 | I | 374:A | O3' | 375:A | P | 1.83 |
| 1 | I | 390:A | O3' | 391:A | P | 1.83 |
| 1 | I | 394:A | O3' | 395:A | P | 1.83 |
| 1 | I | 408:A | O3' | 409:A | P | 1.83 |
| 1 | J | 1:A | O3' | 2:A | P | 1.83 |
| 1 | K | 21:A | O3' | 22:A | P | 1.83 |
| 1 | K | 150:A | O3' | 151:A | P | 1.83 |
| 1 | K | 180:A | O3' | 181:A | P | 1.83 |
| 1 | L | 480:U | O3' | 481:U | P | 1.83 |
| 1 | L | 726:U | O3' | 727:U | P | 1.83 |
| 1 | L | 730:U | O3' | 731:U | P | 1.83 |
| 1 | L | 823:U | O3' | 824:U | P | 1.83 |
| 1 | M | 321:U | O3' | 322:U | P | 1.83 |
| 1 | N | 285:U | O3' | 286:U | P | 1.83 |
| 1 | N | 315:U | O3' | 316:U | P | 1.83 |
| 1 | N | 343:U | O3' | 344:U | P | 1.83 |
| 1 | N | 458:U | O3' | 459:U | P | 1.83 |
| 1 | I | 1:A | O3' | 2:A | P | 1.82 |

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| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | I | 84:A | O3' | 85:A | P | 1.82 |
| 1 | I | 373:A | O3' | 374:A | P | 1.82 |
| 1 | I | 395:A | O3' | 396:A | P | 1.82 |
| 1 | J | 163:A | O3' | 164:A | P | 1.82 |
| 1 | K | 24:A | O3' | 25:A | P | 1.82 |
| 1 | K | 47:A | O3' | 48:A | P | 1.82 |
| 1 | K | 219:A | O3' | 220:A | P | 1.82 |
| 1 | K | 228:A | O3' | 229:A | P | 1.82 |
| 1 | K | 262:A | O3' | 263:A | P | 1.82 |
| 1 | L | 428:U | O3' | 429:U | P | 1.82 |
| 1 | L | 431:U | O3' | 432:U | P | 1.82 |
| 1 | L | 707:U | O3' | 708:U | P | 1.82 |
| 1 | L | 723:U | O3' | 724:U | P | 1.82 |
| 1 | L | 773:U | O3' | 774:U | P | 1.82 |
| 1 | L | 774:U | O3' | 775:U | P | 1.82 |
| 1 | L | 818:U | O3' | 819:U | P | 1.82 |
| 1 | M | 277:U | O3' | 278:U | P | 1.82 |
| 1 | M | 547:U | O3' | 548:U | P | 1.82 |
| 1 | N | 298:U | O3' | 299:U | P | 1.82 |
| 1 | N | 302:U | O3' | 303:U | P | 1.82 |
| 1 | N | 342:U | O3' | 343:U | P | 1.82 |
| 1 | N | 347:U | O3' | 348:U | P | 1.82 |
| 1 | N | 391:U | O3' | 392:U | P | 1.82 |
| 1 | N | 414:U | O3' | 415:U | P | 1.82 |
| 1 | N | 453:U | O3' | 454:U | P | 1.82 |
| 1 | N | 454:U | O3' | 455:U | P | 1.82 |
| 1 | N | 465:U | O3' | 466:U | P | 1.82 |
| 1 | N | 479:U | O3' | 480:U | P | 1.82 |
| 1 | N | 486:U | O3' | 487:U | P | 1.82 |
| 1 | N | 528:U | O3' | 529:U | P | 1.82 |
| 1 | I | 140:A | O3' | 141:A | P | 1.81 |
| 1 | I | 200:A | O3' | 201:A | P | 1.81 |
| 1 | I | 201:A | O3' | 202:A | P | 1.81 |
| 1 | I | 345:A | O3' | 346:A | P | 1.81 |
| 1 | I | 397:A | O3' | 398:A | P | 1.81 |
| 1 | I | 409:A | O3' | 410:A | P | 1.81 |
| 1 | J | 212:A | O3' | 213:A | P | 1.81 |
| 1 | K | 32:A | O3' | 33:A | P | 1.81 |
| 1 | K | 189:A | O3' | 190:A | P | 1.81 |
| 1 | K | 212:A | O3' | 213:A | P | 1.81 |
| 1 | K | 215:A | O3' | 216:A | P | 1.81 |
| 1 | L | 433:U | O3' | 434:U | P | 1.81 |

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| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | L | 453:U | O3' | 454:U | P | 1.81 |
| 1 | L | 455:U | O3' | 456:U | P | 1.81 |
| 1 | L | 527:U | O3' | 528:U | P | 1.81 |
| 1 | L | 628:U | O3' | 629:U | P | 1.81 |
| 1 | L | 724:U | O3' | 725:U | P | 1.81 |
| 1 | M | 413:U | O3' | 414:U | P | 1.81 |
| 1 | M | 478:U | O3' | 479:U | P | 1.81 |
| 1 | M | 550:U | O3' | 551:U | P | 1.81 |
| 1 | N | 295:U | O3' | 296:U | P | 1.81 |
| 1 | N | 313:U | O3' | 314:U | P | 1.81 |
| 1 | N | 466:U | O3' | 467:U | P | 1.81 |
| 1 | N | 521:U | O3' | 522:U | P | 1.81 |
| 1 | I | 109:A | O3' | 110:A | P | 1.80 |
| 1 | I | 204:A | O3' | 205:A | P | 1.80 |
| 1 | I | 302:A | O3' | 303:A | P | 1.80 |
| 1 | I | 349:A | O3' | 350:A | P | 1.80 |
| 1 | I | 383:A | O3' | 384:A | P | 1.80 |
| 1 | J | 236:A | O3' | 237:A | P | 1.80 |
| 1 | K | 25:A | O3' | 26:A | P | 1.80 |
| 1 | K | 53:A | O3' | 54:A | P | 1.80 |
| 1 | K | 217:A | O3' | 218:A | P | 1.80 |
| 1 | K | 233:A | O3' | 234:A | P | 1.80 |
| 1 | K | 263:A | O3' | 264:A | P | 1.80 |
| 1 | L | 427:U | O3' | 428:U | P | 1.80 |
| 1 | L | 444:U | O3' | 445:U | P | 1.80 |
| 1 | L | 531:U | O3' | 532:U | P | 1.80 |
| 1 | M | 329:U | O3' | 330:U | P | 1.80 |
| 1 | N | 275:U | O3' | 276:U | P | 1.80 |
| 1 | N | 286:U | O3' | 287:U | P | 1.80 |
| 1 | N | 452:U | O3' | 453:U | P | 1.80 |
| 1 | N | 499:U | O3' | 500:U | P | 1.80 |
| 1 | N | 511:U | O3' | 512:U | P | 1.80 |
| 1 | N | 529:U | O3' | 530:U | P | 1.80 |
| 1 | I | 65:A | O3' | 66:A | P | 1.79 |
| 1 | I | 66:A | O3' | 67:A | P | 1.79 |
| 1 | I | 104:A | O3' | 105:A | P | 1.79 |
| 1 | I | 166:A | O3' | 167:A | P | 1.79 |
| 1 | I | 391:A | O3' | 392:A | P | 1.79 |
| 1 | K | 6:A | O3' | 7:A | P | 1.79 |
| 1 | K | 29:A | O3' | 30:A | P | 1.79 |
| 1 | K | 146:A | O3' | 147:A | P | 1.79 |
| 1 | K | 171:A | O3' | 172:A | P | 1.79 |

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| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | L | 462:U | O3' | 463:U | P | 1.79 |
| 1 | L | 465:U | O3' | 466:U | P | 1.79 |
| 1 | L | 472:U | O3' | 473:U | P | 1.79 |
| 1 | L | 481:U | O3' | 482:U | P | 1.79 |
| 1 | L | 523:U | O3' | 524:U | P | 1.79 |
| 1 | L | 526:U | O3' | 527:U | P | 1.79 |
| 1 | M | 356:U | O3' | 357:U | P | 1.79 |
| 1 | M | 412:U | O3' | 413:U | P | 1.79 |
| 1 | M | 469:U | O3' | 470:U | P | 1.79 |
| 1 | N | 290:U | O3' | 291:U | P | 1.79 |
| 1 | N | 307:U | O3' | 308:U | P | 1.79 |
| 1 | N | 345:U | O3' | 346:U | P | 1.79 |
| 1 | N | 353:U | O3' | 354:U | P | 1.79 |
| 1 | N | 389:U | O3' | 390:U | P | 1.79 |
| 1 | N | 445:U | O3' | 446:U | P | 1.79 |
| 1 | N | 522:U | O3' | 523:U | P | 1.79 |
| 1 | I | 293:A | O3' | 294:A | P | 1.78 |
| 1 | I | 367:A | O3' | 368:A | P | 1.78 |
| 1 | I | 398:A | O3' | 399:A | P | 1.78 |
| 1 | J | 245:A | O3' | 246:A | P | 1.78 |
| 1 | K | 49:A | O3' | 50:A | P | 1.78 |
| 1 | K | 77:A | O3' | 78:A | P | 1.78 |
| 1 | K | 177:A | O3' | 178:A | P | 1.78 |
| 1 | K | 253:A | O3' | 254:A | P | 1.78 |
| 1 | L | 547:U | O3' | 548:U | P | 1.78 |
| 1 | L | 728:U | O3' | 729:U | P | 1.78 |
| 1 | L | 788:U | O3' | 789:U | P | 1.78 |
| 1 | M | 284:U | O3' | 285:U | P | 1.78 |
| 1 | M | 385:U | O3' | 386:U | P | 1.78 |
| 1 | N | 340:U | O3' | 341:U | P | 1.78 |
| 1 | N | 381:U | O3' | 382:U | P | 1.78 |
| 1 | N | 388:U | O3' | 389:U | P | 1.78 |
| 1 | N | 498:U | O3' | 499:U | P | 1.78 |
| 1 | N | 525:U | O3' | 526:U | P | 1.78 |
| 1 | I | 100:A | O3' | 101:A | P | 1.77 |
| 1 | I | 346:A | O3' | 347:A | P | 1.77 |
| 1 | I | 347:A | O3' | 348:A | P | 1.77 |
| 1 | I | 350:A | O3' | 351:A | P | 1.77 |
| 1 | I | 399:A | O3' | 400:A | P | 1.77 |
| 1 | J | 41:A | O3' | 42:A | P | 1.77 |
| 1 | J | 86:A | O3' | 87:A | P | 1.77 |
| 1 | J | 154:A | O3' | 155:A | P | 1.77 |

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| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | J | 169:A | O3' | 170:A | P | 1.77 |
| 1 | J | 268:A | O3' | 269:A | P | 1.77 |
| 1 | K | 18:A | O3' | 19:A | P | 1.77 |
| 1 | K | 26:A | O3' | 27:A | P | 1.77 |
| 1 | K | 143:A | O3' | 144:A | P | 1.77 |
| 1 | K | 216:A | O3' | 217:A | P | 1.77 |
| 1 | K | 223:A | O3' | 224:A | P | 1.77 |
| 1 | K | 237:A | O3' | 238:A | P | 1.77 |
| 1 | K | 254:A | O3' | 255:A | P | 1.77 |
| 1 | L | 457:U | O3' | 458:U | P | 1.77 |
| 1 | L | 479:U | O3' | 480:U | P | 1.77 |
| 1 | L | 522:U | O3' | 523:U | P | 1.77 |
| 1 | L | 537:U | O3' | 538:U | P | 1.77 |
| 1 | L | 623:U | O3' | 624:U | P | 1.77 |
| 1 | L | 706:U | O3' | 707:U | P | 1.77 |
| 1 | L | 722:U | O3' | 723:U | P | 1.77 |
| 1 | L | 732:U | O3' | 733:U | P | 1.77 |
| 1 | M | 309:U | O3' | 310:U | P | 1.77 |
| 1 | M | 336:U | O3' | 337:U | P | 1.77 |
| 1 | M | 444:U | O3' | 445:U | P | 1.77 |
| 1 | N | 280:U | O3' | 281:U | P | 1.77 |
| 1 | N | 301:U | O3' | 302:U | P | 1.77 |
| 1 | N | 326:U | O3' | 327:U | P | 1.77 |
| 1 | N | 386:U | O3' | 387:U | P | 1.77 |
| 1 | I | 101:A | O3' | 102:A | P | 1.76 |
| 1 | I | 110:A | O3' | 111:A | P | 1.76 |
| 1 | I | 117:A | O3' | 118:A | P | 1.76 |
| 1 | I | 217:A | O3' | 218:A | P | 1.76 |
| 1 | I | 295:A | O3' | 296:A | P | 1.76 |
| 1 | I | 343:A | O3' | 344:A | P | 1.76 |
| 1 | I | 389:A | O3' | 390:A | P | 1.76 |
| 1 | J | 21:A | O3' | 22:A | P | 1.76 |
| 1 | J | 140:A | O3' | 141:A | P | 1.76 |
| 1 | K | 2:A | O3' | 3:A | P | 1.76 |
| 1 | K | 5:A | O3' | 6:A | P | 1.76 |
| 1 | K | 34:A | O3' | 35:A | P | 1.76 |
| 1 | K | 68:A | O3' | 69:A | P | 1.76 |
| 1 | K | 158:A | O3' | 159:A | P | 1.76 |
| 1 | K | 185:A | O3' | 186:A | P | 1.76 |
| 1 | K | 213:A | O3' | 214:A | P | 1.76 |
| 1 | L | 416:U | O3' | 417:U | P | 1.76 |
| 1 | L | 432:U | O3' | 433:U | P | 1.76 |

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| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | L | 521:U | O3' | 522:U | P | 1.76 |
| 1 | L | 607:U | O3' | 608:U | P | 1.76 |
| 1 | L | 664:U | O3' | 665:U | P | 1.76 |
| 1 | L | 721:U | O3' | 722:U | P | 1.76 |
| 1 | L | 729:U | O3' | 730:U | P | 1.76 |
| 1 | L | 742:U | O3' | 743:U | P | 1.76 |
| 1 | M | 319:U | O3' | 320:U | P | 1.76 |
| 1 | M | 431:U | O3' | 432:U | P | 1.76 |
| 1 | N | 312:U | O3' | 313:U | P | 1.76 |
| 1 | N | 319:U | O3' | 320:U | P | 1.76 |
| 1 | N | 390:U | O3' | 391:U | P | 1.76 |
| 1 | N | 514:U | O3' | 515:U | P | 1.76 |
| 1 | I | 297:A | O3' | 298:A | P | 1.75 |
| 1 | I | 368:A | O3' | 369:A | P | 1.75 |
| 1 | K | 28:A | O3' | 29:A | P | 1.75 |
| 1 | K | 73:A | O3' | 74:A | P | 1.75 |
| 1 | K | 141:A | O3' | 142:A | P | 1.75 |
| 1 | K | 203:A | O3' | 204:A | P | 1.75 |
| 1 | L | 419:U | O3' | 420:U | P | 1.75 |
| 1 | L | 470:U | O3' | 471:U | P | 1.75 |
| 1 | M | 454:U | O3' | 455:U | P | 1.75 |
| 1 | N | 451:U | O3' | 452:U | P | 1.75 |
| 1 | N | 480:U | O3' | 481:U | P | 1.75 |
| 1 | N | 500:U | O3' | 501:U | P | 1.75 |
| 1 | I | 11:A | O3' | 12:A | P | 1.40 |
| 1 | I | 54:A | O3' | 55:A | P | 1.40 |
| 1 | I | 173:A | O3' | 174:A | P | 1.40 |
| 1 | J | 32:A | O3' | 33:A | P | 1.40 |
| 1 | J | 33:A | O3' | 34:A | P | 1.40 |
| 1 | J | 201:A | O3' | 202:A | P | 1.40 |
| 1 | J | 266:A | O3' | 267:A | P | 1.40 |
| 1 | M | 417:U | O3' | 418:U | P | 1.40 |
| 1 | M | 455:U | O3' | 456:U | P | 1.40 |
| 1 | M | 509:U | O3' | 510:U | P | 1.40 |
| 1 | N | 395:U | O3' | 396:U | P | 1.40 |
| 1 | I | 61:A | O3' | 62:A | P | 1.39 |
| 1 | I | 69:A | O3' | 70:A | P | 1.39 |
| 1 | I | 75:A | O3' | 76:A | P | 1.39 |
| 1 | I | 158:A | O3' | 159:A | P | 1.39 |
| 1 | I | 212:A | O3' | 213:A | P | 1.39 |
| 1 | I | 275:A | O3' | 276:A | P | 1.39 |
| 1 | J | 93:A | O3' | 94:A | P | 1.39 |

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| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | J | 144:A | O3' | 145:A | P | 1.39 |
| 1 | J | 265:A | O3' | 266:A | P | 1.39 |
| 1 | L | 572:U | O3' | 573:U | P | 1.39 |
| 1 | L | 580:U | O3' | 581:U | P | 1.39 |
| 1 | L | 592:U | O3' | 593:U | P | 1.39 |
| 1 | L | 692:U | O3' | 693:U | P | 1.39 |
| 1 | M | 349:U | O3' | 350:U | P | 1.39 |
| 1 | M | 504:U | O3' | 505:U | P | 1.39 |
| 1 | N | 437:U | O3' | 438:U | P | 1.39 |
| 1 | N | 482:U | O3' | 483:U | P | 1.39 |
| 1 | I | 185:A | O3' | 186:A | P | 1.38 |
| 1 | I | 248:A | O3' | 249:A | P | 1.38 |
| 1 | I | 249:A | O3' | 250:A | P | 1.38 |
| 1 | I | 260:A | O3' | 261:A | P | 1.38 |
| 1 | J | 247:A | O3' | 248:A | P | 1.38 |
| 1 | K | 90:A | O3' | 91:A | P | 1.38 |
| 1 | K | 128:A | O3' | 129:A | P | 1.38 |
| 1 | L | 541:U | O3' | 542:U | P | 1.38 |
| 1 | L | 575:U | O3' | 576:U | P | 1.38 |
| 1 | L | 583:U | O3' | 584:U | P | 1.38 |
| 1 | L | 594:U | O3' | 595:U | P | 1.38 |
| 1 | L | 669:U | O3' | 670:U | P | 1.38 |
| 1 | L | 739:U | O3' | 740:U | P | 1.38 |
| 1 | L | 768:U | O3' | 769:U | P | 1.38 |
| 1 | L | 770:U | O3' | 771:U | P | 1.38 |
| 1 | M | 298:U | O3' | 299:U | P | 1.38 |
| 1 | M | 347:U | O3' | 348:U | P | 1.38 |
| 1 | M | 460:U | O3' | 461:U | P | 1.38 |
| 1 | M | 491:U | O3' | 492:U | P | 1.38 |
| 1 | M | 510:U | O3' | 511:U | P | 1.38 |
| 1 | N | 403:U | O3' | 404:U | P | 1.38 |
| 1 | I | 18:A | O3' | 19:A | P | 1.37 |
| 1 | I | 62:A | O3' | 63:A | P | 1.37 |
| 1 | I | 74:A | O3' | 75:A | P | 1.37 |
| 1 | I | 187:A | O3' | 188:A | P | 1.37 |
| 1 | J | 64:A | O3' | 65:A | P | 1.37 |
| 1 | J | 175:A | O3' | 176:A | P | 1.37 |
| 1 | K | 94:A | O3' | 95:A | P | 1.37 |
| 1 | K | 105:A | O3' | 106:A | P | 1.37 |
| 1 | L | 584:U | O3' | 585:U | P | 1.37 |
| 1 | L | 588:U | O3' | 589:U | P | 1.37 |
| 1 | L | 639:U | O3' | 640:U | P | 1.37 |

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| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | L | 751:U | O3' | 752:U | P | 1.37 |
| 1 | L | 769:U | O3' | 770:U | P | 1.37 |
| 1 | M | 447:U | O3' | 448:U | P | 1.37 |
| 1 | M | 487:U | O3' | 488:U | P | 1.37 |
| 1 | M | 513:U | O3' | 514:U | P | 1.37 |
| 1 | M | 517:U | O3' | 518:U | P | 1.37 |
| 1 | M | 526:U | O3' | 527:U | P | 1.37 |
| 1 | N | 434:U | O3' | 435:U | P | 1.37 |
| 1 | N | 447:U | O3' | 448:U | P | 1.37 |
| 1 | J | 58:A | O3' | 59:A | P | 1.36 |
| 1 | J | 105:A | O3' | 106:A | P | 1.36 |
| 1 | J | 142:A | O3' | 143:A | P | 1.36 |
| 1 | J | 199:A | O3' | 200:A | P | 1.36 |
| 1 | J | 248:A | O3' | 249:A | P | 1.36 |
| 1 | K | 151:A | O3' | 152:A | P | 1.36 |
| 1 | L | 556:U | O3' | 557:U | P | 1.36 |
| 1 | L | 582:U | O3' | 583:U | P | 1.36 |
| 1 | L | 600:U | O3' | 601:U | P | 1.36 |
| 1 | L | 634:U | O3' | 635:U | P | 1.36 |
| 1 | L | 645:U | O3' | 646:U | P | 1.36 |
| 1 | L | 716:U | O3' | 717:U | P | 1.36 |
| 1 | L | 745:U | O3' | 746:U | P | 1.36 |
| 1 | L | 799:U | O3' | 800:U | P | 1.36 |
| 1 | M | 525:U | O3' | 526:U | P | 1.36 |
| 1 | N | 409:U | O3' | 410:U | P | 1.36 |
| 1 | I | 179:A | O3' | 180:A | P | 1.35 |
| 1 | I | 203:A | O3' | 204:A | P | 1.35 |
| 1 | I | 328:A | O3' | 329:A | P | 1.35 |
| 1 | J | 98:A | O3' | 99:A | P | 1.35 |
| 1 | J | 206:A | O3' | 207:A | P | 1.35 |
| 1 | L | 555:U | O3' | 556:U | P | 1.35 |
| 1 | L | 576:U | O3' | 577:U | P | 1.35 |
| 1 | L | 602:U | O3' | 603:U | P | 1.35 |
| 1 | L | 757:U | O3' | 758:U | P | 1.35 |
| 1 | I | 53:A | O3' | 54:A | P | 1.34 |
| 1 | I | 178:A | O3' | 179:A | P | 1.34 |
| 1 | I | 227:A | O3' | 228:A | P | 1.34 |
| 1 | I | 262:A | O3' | 263:A | P | 1.34 |
| 1 | J | 39:A | O3' | 40:A | P | 1.34 |
| 1 | J | 101:A | O3' | 102:A | P | 1.34 |
| 1 | L | 557:U | O3' | 558:U | P | 1.34 |
| 1 | L | 573:U | O3' | 574:U | P | 1.34 |

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| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | L | 597:U | O3' | 598:U | P | 1.34 |
| 1 | L | 755:U | O3' | 756:U | P | 1.34 |
| 1 | L | 813:U | O3' | 814:U | P | 1.34 |
| 1 | M | 459:U | O3' | 460:U | P | 1.34 |
| 1 | M | 462:U | O3' | 463:U | P | 1.34 |
| 1 | N | 429:U | O3' | 430:U | P | 1.34 |
| 1 | I | 25:A | O3' | 26:A | P | 1.33 |
| 1 | I | 225:A | O3' | 226:A | P | 1.33 |
| 1 | I | 272:A | O3' | 273:A | P | 1.33 |
| 1 | L | 563:U | O3' | 564:U | P | 1.33 |
| 1 | L | 565:U | O3' | 566:U | P | 1.33 |
| 1 | I | 237:A | O3' | 238:A | P | 1.32 |
| 1 | J | 27:A | O3' | 28:A | P | 1.32 |
| 1 | J | 65:A | O3' | 66:A | P | 1.32 |
| 1 | J | 71:A | O3' | 72:A | P | 1.32 |
| 1 | J | 96:A | O3' | 97:A | P | 1.32 |
| 1 | L | 740:U | O3' | 741:U | P | 1.32 |
| 1 | I | 42:A | O3' | 43:A | P | 1.31 |
| 1 | J | 26:A | O3' | 27:A | P | 1.31 |
| 1 | J | 174:A | O3' | 175:A | P | 1.31 |
| 1 | J | 198:A | O3' | 199:A | P | 1.31 |
| 1 | L | 564:U | O3' | 565:U | P | 1.31 |
| 1 | M | 346:U | O3' | 347:U | P | 1.31 |
| 1 | I | 223:A | O3' | 224:A | P | 1.30 |
| 1 | L | 601:U | O3' | 602:U | P | 1.30 |
| 1 | L | 756:U | O3' | 757:U | P | 1.30 |
| 1 | L | 767:U | O3' | 768:U | P | 1.30 |
| 1 | M | 503:U | O3' | 504:U | P | 1.30 |
| 1 | I | 96:A | O3' | 97:A | P | 1.29 |
| 1 | I | 235:A | O3' | 236:A | P | 1.29 |
| 1 | L | 778:U | O3' | 779:U | P | 1.29 |
| 1 | M | 287:U | O3' | 288:U | P | 1.29 |
| 1 | M | 527:U | O3' | 528:U | P | 1.29 |
| 1 | I | 239:A | O3' | 240:A | P | 1.28 |
| 1 | L | 589:U | O3' | 590:U | P | 1.27 |
| 1 | K | 104:A | O3' | 105:A | P | 1.26 |
| 1 | M | 494:U | O3' | 495:U | P | 1.26 |
| 1 | J | 203:A | O3' | 204:A | P | 1.25 |
| 1 | K | 103:A | O3' | 104:A | P | 1.25 |
| 1 | I | 226:A | O3' | 227:A | P | 1.24 |
| 1 | N | 427:U | O3' | 428:U | P | 1.24 |
| 1 | L | 598:U | O3' | 599:U | P | 1.23 |

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| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | M | 456:U | O3' | 457:U | P | 1.23 |
| 1 | M | 524:U | O3' | 525:U | P | 1.23 |
| 1 | N | 426:U | O3' | 427:U | P | 1.23 |
| 1 | J | 28:A | O3' | 29:A | P | 1.22 |
| 1 | I | 79:A | O3' | 80:A | P | 1.13 |

6 Fit of model and data [i](#)

6.1 Protein, DNA and RNA chains [i](#)

EDS failed to run properly - this section is therefore empty.

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

EDS failed to run properly - this section is therefore empty.

6.3 Carbohydrates [i](#)

EDS failed to run properly - this section is therefore empty.

6.4 Ligands [i](#)

EDS failed to run properly - this section is therefore empty.

6.5 Other polymers [i](#)

EDS failed to run properly - this section is therefore empty.