

New England Biolabs Certificate of Analysis

Product Name: Antarctic Thermolabile UDG
Catalog Number: M0372L
Concentration: 1,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme that catalyzes the release of 60 pmol of uracil per minute from double-stranded, uracil-containing DNA. Activity is measured by release of [3H]-uracil in a 50 µl reaction containing 0.2 µg DNA (104-105 cpm/µg) in 30 minutes at 37°C.
Packaging Lot Number: 10137674
Expiration Date: 02/2024
Storage Temperature: -20°C
Storage Conditions: 50 mM NaCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, (pH 7.4 @ 25°C)
Specification Version: PS-M0372S/L v1.0

| Antarctic Thermolabile UDG Component List | | | |
|-------------------------------------------|-----------------------------------|------------|----------------------|
| NEB Part Number | Component Description | Lot Number | Individual QC Result |
| M0372LVIAL | Antarctic Thermolabile UDG | 10137673 | Pass |
| B9014SVIAL | Standard Taq Reaction Buffer Pack | 10128730 | Pass |

| Assay Name/Specification | Lot # 10137674 |
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| <p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in Standard Taq Reaction Buffer containing 1 µg of HindIII digested Lambda DNA and a minimum of 50 units of Antarctic Thermolabile UDG incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p> | Pass |
| <p>DNase Activity (Labeled Oligo, 3' extension) A 50 µl reaction in NEBuffer 4 containing a 20 nM solution of a fluorescent labeled double-stranded oligonucleotide containing a 3' extension and a minimum of 1 unit of Antarctic Thermolabile UDG incubated for 16 hours at 37°C yields <5% degradation as determined by capillary electrophoresis.</p> | Pass |
| <p>DNase Activity (Labeled Oligo, 5' extension) A 50 µl reaction in NEBuffer 4 containing a 20 nM solution of a fluorescent labeled double-stranded oligonucleotide containing a 5' extension and a minimum of 1 unit of Antarctic Thermolabile UDG incubated for 16 hours at 37°C yields <5% degradation as</p> | Pass |

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| determined by capillary electrophoresis. | |
| <p>Double Stranded DNase Activity (Labeled Oligo) A 50 µl reaction in NEBuffer 4 containing a 20 nM solution of a fluorescent labeled double-stranded oligonucleotide containing a blunt end and a minimum of 1 unit of Antarctic Thermolabile UDG incubated for 16 hours at 37°C yields <5% degradation as determined by capillary electrophoresis.</p> | Pass |
| <p>Protein Purity Assay (SDS-PAGE) Antarctic Thermolabile UDG is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p> | Pass |
| <p>RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of f-300 RNA transcript and a minimum of 1 unit of Antarctic Thermolabile UDG is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using agarose gel electrophoresis.</p> | Pass |
| <p>Single Stranded DNase Activity (FAM-Labeled Oligo) A 50 µl reaction in NEBuffer 4 containing a 20 nM solution of a fluorescent internal labeled oligonucleotide and a minimum of 1 unit of Antarctic Thermolabile UDG incubated for 16 hours at 37°C yields <5% degradation as determined by capillary electrophoresis.</p> | Pass |
| <p>qPCR DNA Contamination (E. coli Genomic) A minimum of 1 unit of Antarctic Thermolabile UDG is screened for the presence of E. coli genomic DNA using SYBR® Green qPCR with primers specific for the E. coli 16S rRNA locus. Results are quantified using a standard curve generated from purified E. coli genomic DNA. The measured level of E. coli genomic DNA contamination is ≤ 1 E. coli genome.</p> | Pass |
| <p>Endonuclease Activity (Nicking) A 50 µl reaction in Standard Taq Reaction Buffer containing 1 µg of supercoiled PhiX174 RF I DNA and a minimum of 15 units of Antarctic Thermolabile UDG incubated for 4 hours at 37°C results in <20% conversion to RFI as determined by agarose gel electrophoresis.</p> | Pass |

This product has been tested and shown to be in compliance with all specifications.

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

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11 Feb 2022

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11 Feb 2022