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## New England Biolabs Certificate of Analysis

Product Name: Antarctic Thermolabile UDG

Catalog Number: M0372S
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: 10058013
Expiration Date: 10/2021
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				
<b>NEB Part Number</b>	Component Description	Lot Number	Individual QC Result	
M0372SVIAL	Antarctic Thermolabile UDG	10058014	Pass	
B9014SVIAL	Standard Taq Reaction Buffer Pack	10049383	Pass	

Assay Name/Specification	Lot # 10058013
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.	Pass
Protein Purity Assay (SDS-PAGE) Antarctic Thermolabile UDG is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
<b>qPCR DNA Contamination (E. coli Genomic)</b> 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.	Pass



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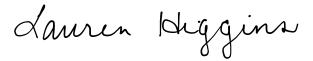
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Assay Name/Specification	Lot # 10058013
RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of f-300 RNA transcript and a minimum of 1 unit of Antarctic Thermolabile UDG is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using agarose gel electrophoresis.	Pass
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.	Pass
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.	Pass
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 determined by capillary electrophoresis.	Pass
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.	Pass
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 RFII as determined by agarose gel electrophoresis.	Pass

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



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Lauren Sears Higgins Production Scientist 07 Nov 2019 Michael Tonello

Packaging Quality Control Inspector

10 Dec 2019