

New England Biolabs Certificate of Analysis

Product Name: Antarctic Thermolabile UDG
Catalog #: M0372S/L
Concentration: 1,000 units/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.
Lot #: 0011712
Assay Date: 12/2017
Expiration Date: 12/2019
Storage Temp: -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
Effective Date: 02 Oct 2017

Assay Name/Specification (minimum release criteria)	Lot #0011712
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

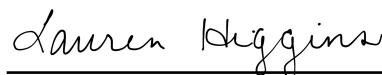


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Assay Name/Specification (minimum release criteria)	Lot #0011712
<p>Non-Specific DNase Activity (16 Hour) - A 50 µl reaction in Standard <i>Taq</i> Reaction Buffer containing 1 µg of HindIII digested Lambda DNA and a minimum of 50 units of Antarctic 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>Protein Purity Assay (SDS-PAGE) - Antarctic Thermolabile UDG is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<p>qPCR DNA Contamination (<i>E. coli</i> Genomic) - A minimum of 1 unit of Antarctic Thermolabile UDG is screened for the presence of <i>E. coli</i> genomic DNA using SYBR® Green qPCR with primers specific for the <i>E. coli</i> 16S rRNA locus. Results are quantified using a standard curve generated from purified <i>E. coli</i> genomic DNA. The measured level of <i>E. coli</i> genomic DNA contamination is ≤ 1 <i>E. coli</i> genome.</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



Authorized by
Derek Robinson
02 Oct 2017



Inspected by
Lauren Higgins
22 Nov 2017

