

New England Biolabs Certificate of Analysis

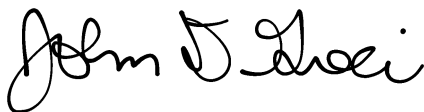
Product Name: *Thermolabile Exonuclease I*
Catalog Number: M0568S
Concentration: 20,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme that will catalyze the release of 2 nmol of acid-soluble nucleotide in a total reaction volume of 100 µl in 6 minutes at 37°C in NEBuffer 3.1 with 0.17 mg/ml single-stranded [³H]-E.coli DNA.
Packaging Lot Number: 10070709
Expiration Date: 08/2021
Storage Temperature: -20°C
Storage Conditions: 10 mM Tris-HCl, 250 mM NaCl, 0.1 mM EDTA, 1 mM DTT, 200 µg/ml BSA, 50% Glycerol, (pH 7.4 @ 25°C)
Specification Version: PS-M0568S/L v1.0

Thermolabile Exonuclease I Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0568SVIAL	Thermolabile Exonuclease I	10053279	Pass
B7203SVIAL	NEBuffer™ 3.1	10053976	Pass

Assay Name/Specification	Lot # 10070709
Protein Purity Assay (SDS-PAGE) Thermolabile Exonuclease I is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
qPCR DNA Contamination (E. coli Genomic) A minimum of 20 units of Thermolabile Exonuclease I 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
RNase Activity Assay (4 Hour Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of Thermolabile Exonuclease I is incubated at 37°C. After incubation for 4 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	Pass

Assay Name/Specification	Lot # 10070709
<p>Endonuclease Activity (Circular Single Stranded DNA) A 50 µl reaction in CutSmart® Buffer containing 1 µg of M13 single-stranded DNA and a minimum of 100 units of Thermolabile Exonuclease I incubated for 4 hours at 37°C results in <10% conversion to linear DNA as determined by agarose gel electrophoresis.</p>	Pass
<p>Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 units of Thermolabile Exonuclease I incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<p>Functional Testing (Thermolability) A 20 µl reaction in Standard Taq Reaction Buffer containing 20 pmol of 20-mer ssDNA and 20 units of Thermolabile Exonuclease I was incubated for 4 minutes at 37°C followed by heat inactivation for 1 minute at 80°C. The addition of 20 pmol of 20-mer ssDNA and incubation for 40 minutes at 37°C results in no cleavage of additional substrate as determined by capillary electrophoresis.</p>	Pass
<p>Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart® Buffer containing 1 µg of PhiX174-HaeIII DNA and a minimum of 100 units of Thermolabile Exonuclease I 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

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



John Greci
Production Scientist
07 May 2020



Jay Minichiello
Packaging Quality Control Inspector
07 May 2020