

New England Biolabs Certificate of Analysis

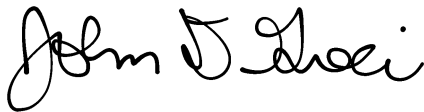
Product Name: Exonuclease I (*E.coli*)
Catalog Number: M0293S
Concentration: 20,000 U/ml
Unit Definition: One unit is defined as the amount of enzyme that will catalyze the release of 10 nmol of acid-soluble nucleotide in a total reaction volume of 100 µl in 30 minutes at 37°C in 1X Exonuclease I Reaction Buffer with 0.17 mg/ml single-stranded [³H]-DNA.
Lot Number: 10043564
Expiration Date: 04/2021
Storage Temperature: -20°C
Storage Conditions: 100 mM NaCl, 10 mM Tris-HCl, 0.5 mM EDTA, 5 mM BME, 50 % Glycerol, 100 µg/ml BSA, (pH 7.5 @ 25°C)
Specification Version: PS-M0293S/L v1.0

Exonuclease I (<i>E.coli</i>) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0293SVIAL	Exonuclease I (<i>E.coli</i>)	10041581	Pass
B0293SVIAL	Exonuclease I Reaction Buffer	10038960	Pass

Assay Name/Specification	Lot # 10043564
<p>Endonuclease Activity (Circular Single Stranded DNA) A 50 µl reaction in Exonuclease I Reaction Buffer containing 1 µg of M13mp18 Single-stranded DNA and a minimum of 100 units of Exonuclease I (<i>E. coli</i>) incubated for 16 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 Exonuclease I Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 units of Exonuclease I (<i>E. coli</i>) incubated for 16 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<p>Exonuclease Activity (Radioactivity Release, Double Stranded) A 50 µl in Exonuclease I Reaction Buffer containing 0.2 µg [³H] CpG methylated Lambda DNA and a minimum of 50 units of Exonuclease I (<i>E. coli</i>) incubated for 4 hours at 37°C releases <0.5% of the total radioactivity.</p>	Pass

Assay Name/Specification	Lot # 10043564
<p>Protein Purity Assay (SDS-PAGE) Exonuclease I (E. coli) is $\geq 95\%$ pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	Pass
<p>qPCR DNA Contamination (E. coli Genomic) A minimum of 20 units of Exonuclease I (E. coli) 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>RNase Activity (Extended 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 Exonuclease I (E. coli) is incubated at 37°C. After incubation for 16 hours, $>90\%$ of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	Pass

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



John Greci
Production Scientist
04 Apr 2019



Jay Minichiello
Packaging Quality Control Inspector
10 May 2019