

## New England Biolabs Certificate of Analysis

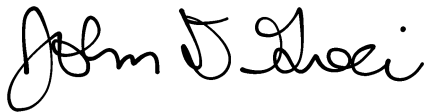
**Product Name:** Exonuclease I (E.coli)  
**Catalog Number:** M0293S  
**Concentration:** 20,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme that will catalyze the release of 10 nmol of acid-soluble nucleotide in a total reaction volume of 100 µl in 30 minutes at 37°C in 1X Exonuclease I Reaction Buffer with 0.17 mg/ml single-stranded [<sup>3</sup>H]-DNA.  
**Packaging Lot Number:** 10066734  
**Expiration Date:** 12/2021  
**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 (E.coli) Component List |                               |            |                      |
|---------------------------------------|-------------------------------|------------|----------------------|
| NEB Part Number                       | Component Description         | Lot Number | Individual QC Result |
| M0293SVIAL                            | Exonuclease I (E.coli)        | 10062603   | Pass                 |
| B0293SVIAL                            | Exonuclease I Reaction Buffer | 10065992   | Pass                 |

| Assay Name/Specification  | Lot # 10066734 |
|---|----------------|
| <p><b>Endonuclease Activity (Circular Single Stranded DNA)</b><br/>           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 (E. coli) incubated for 16 hours at 37°C results in &lt;10% conversion to linear DNA as determined by agarose gel electrophoresis.</p> | Pass           |
| <p><b>Endonuclease Activity (Nicking)</b><br/>           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 (E. coli) incubated for 16 hours at 37°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>                     | Pass           |
| <p><b>Exonuclease Activity (Radioactivity Release, Double Stranded)</b><br/>           A 50 µl in Exonuclease I Reaction Buffer containing 0.2 µg [<sup>3</sup>H] CpG methylated Lambda DNA and a minimum of 50 units of Exonuclease I (E. coli) incubated for 4 hours at 37°C releases &lt;0.5% of the total radioactivity.</p>                                  | Pass           |

| Assay Name/Specification   | Lot # 10066734 |
|--|----------------|
| <p><b>Protein Purity Assay (SDS-PAGE)</b><br/>Exonuclease I (E. coli) is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>   | <b>Pass</b>    |
| <p><b>qPCR DNA Contamination (E. coli Genomic)</b><br/>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> | <b>Pass</b>    |
| <p><b>RNase Activity (Extended Digestion)</b><br/>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, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>  | <b>Pass</b>    |

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



John Greci  
Production Scientist  
30 Jun 2020



Michael Tonello  
Packaging Quality Control Inspector  
30 Jun 2020