NEW ENGLAND BioLabs Inc.
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# New England Biolabs
# Certificate of Analysis

| | |
|---|---|
| *Product Name:* | *Msz Exonuclease I* |
| *Catalog Number:* | *M0527S* |
| *Concentration:* | *10,000 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 15 minutes at 55°C in 1X rCutSmart Buffer with 0.17 mg/ml single-stranded [³H]-DNA* |
| *Packaging Lot Number:* | *10163113* |
| *Expiration Date:* | *09/2024* |
| *Storage Temperature:* | *-20°C* |
| *Storage Conditions:* | *10 mM Tris-HCl , 50 mM KCl , 1 mM DTT , 0.1 mM EDTA , 50 % Glycerol, (pH 7.4 @ 25°C)* |
| *Specification Version:* | *PS-M0527S v2.0* |

| **Msz Exonuclease I Component List** | | | |
|---|---|---|---|
| **NEB Part Number** | **Component Description** | **Lot Number** | **Individual QC Result** |
| M0527SVIAL | Msz Exonuclease I | 10161886 | **Pass** |
| B6004SVIAL | rCutSmart™ Buffer | 10156430 | **Pass** |

| **Assay Name/Specification** | **Lot # 10163113** |
|---|---|
| **RNase Activity (Extended Digestion)**<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 Msz Exonuclease I 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. | **Pass** |
| **Endonuclease Activity (Circular Single Stranded DNA)**<br>A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of M13mp18 Single-stranded DNA and a minimum of 100 units of Msz Exonuclease I incubated for 16 hours at 37ºC results in <10% conversion to linear DNA as determined by agarose gel electrophoresis. | **Pass** |
| **Endonuclease Activity (Nicking)**<br>A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 100 units of Msz Exonuclease I incubated for 16 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis. | **Pass** |

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| Assay Name/Specification | Lot # 10163113 |
|---|---|
| **qPCR DNA Contamination (E. coli Genomic)**<br>A minimum of 10 units of Msz 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** |
| **Protein Purity Assay (SDS-PAGE)**<br>Msz Exonuclease I is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection. | **Pass** |

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

Jenna Ware
Production Scientist
24 Aug 2022

Michael Tonello
Packaging Quality Control Inspector
24 Aug 2022