

## New England Biolabs Certificate of Analysis

**Product Name:** MscI  
**Catalog Number:** R0534S  
**Concentration:** 5,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 µl.  
**Packaging Lot Number:** 10130787  
**Expiration Date:** 11/2023  
**Storage Temperature:** -20°C  
**Storage Conditions:** 150 mM KCl, 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 200 µg/ml BSA, 0.05 % Triton®X-100, (pH 7.4 @ 25°C)  
**Specification Version:** PS-R0534S/L v3.0

| MscI Component List |                       |            |                      |
|---------------------|-----------------------|------------|----------------------|
| NEB Part Number     | Component Description | Lot Number | Individual QC Result |
| R0534SVIAL          | MscI                  | 10130786   | Pass                 |
| B6004SVIAL          | rCutSmart™ Buffer     | 10127378   | Pass                 |

| Assay Name/Specification   | Lot # 10130787 |
|--|----------------|
| <b>Exonuclease Activity (Radioactivity Release)</b><br>A 50 µl reaction in CutSmart® Buffer containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 50 units of MscI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.    | Pass           |
| <b>Ligation and Recutting (Terminal Integrity)</b><br>After a 20-fold over-digestion of Lambda DNA with MscI, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with MscI.  | Pass           |
| <b>Non-Specific DNase Activity (16 Hour)</b><br>A 50 µl reaction in CutSmart® Buffer containing 1 µg of Lambda DNA and a minimum of 25 units of MscI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis. | Pass           |
| <b>Protein Purity Assay (SDS-PAGE)</b><br>MscI 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.

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30 Dec 2021



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