

## New England Biolabs Certificate of Analysis

**Product Name:** MspI  
**Catalog Number:** R0106M  
**Concentration:** 100,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in rCutSmart Buffer in 1 hour at 37°C in a total reaction volume of 50 µl.  
**Packaging Lot Number:** 10192893  
**Expiration Date:** 05/2025  
**Storage Temperature:** -20°C  
**Storage Conditions:** 10 mM Tris-HCl, 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 200 µg/ml rAlbumin (pH 7.4 @ 25°C)  
**Specification Version:** PS-R0106T/M v2.0

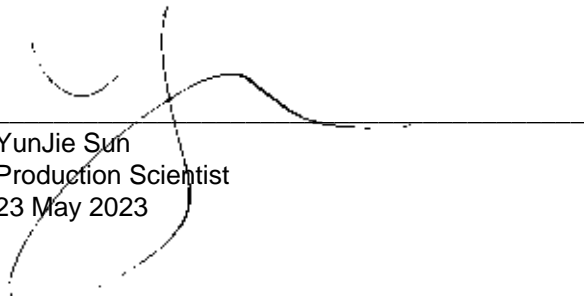
| MspI Component List |                              |            |                      |
|---------------------|------------------------------|------------|----------------------|
| NEB Part Number     | Component Description        | Lot Number | Individual QC Result |
| R0106MVIAl          | MspI                         | 10192535   | Pass                 |
| B7024AVIAl          | Gel Loading Dye, Purple (6X) | 10189226   | Pass                 |
| B6004SVIAl          | rCutSmart™ Buffer            | 10184702   | Pass                 |

| Assay Name/Specification                                                                                                                                                                                                                                                                          | Lot # 10192893 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>Exonuclease Activity (Radioactivity Release)</b><br>A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> H] E. coli DNA and a minimum of 100 units of MspI incubated for 4 hours at 37°C releases <0.1% of the total radioactivity. | Pass           |
| <b>Functional Testing (15 minute Digest)</b><br>A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of Lambda DNA and 1 µl of MspI incubated for 15 minutes at 37°C results in complete digestion as determined by agarose gel electrophoresis.                                                 | Pass           |
| <b>Ligation and Recutting (Terminal Integrity)</b><br>After a 20-fold over-digestion of Lambda DNA with MspI, >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 MspI.                                           | Pass           |
| <b>Non-Specific DNase Activity (16 Hour)</b><br>A 50 µl reaction in rCutSmart™ Buffer containing 1 µg of Lambda DNA and a minimum of                                                                                                                                                              | Pass           |

| Assay Name/Specification                                                                                                                                                                                                                                                                                                                                                                            | Lot # 10192893 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <p>100 units of MspI incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>                                                                                                                                                                                                                              |                |
| <p><b>Protein Purity Assay (SDS-PAGE)</b><br/>MspI 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 MspI 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>    |

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

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23 May 2023



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