

## New England Biolabs Certificate of Analysis

**Product Name:** CpG Methyltransferase (M.SssI)  
**Catalog Number:** M0226L  
**Concentration:** 4,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to protect 1 µg of Lambda DNA in a total reaction volume of 20 µl in 1 hour at 37°C against cleavage by BstUI restriction endonuclease.  
**Lot Number:** 10043537  
**Expiration Date:** 04/2020  
**Storage Temperature:** -20°C  
**Storage Conditions:** 10 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 200 µg/ml BSA, (pH 7.4 @ 25°C)  
**Specification Version:** PS-M0226S/L v1.0

| CpG Methyltransferase (M.SssI) Component List |                                |            |                      |
|-----------------------------------------------|--------------------------------|------------|----------------------|
| NEB Part Number                               | Component Description          | Lot Number | Individual QC Result |
| M0226LVIAL                                    | CpG Methyltransferase (M.SssI) | 10043532   | Pass                 |
| B9003SVIAL                                    | S-adenosylmethionine (SAM)     | 10041003   | Pass                 |
| B7002SVIAL                                    | NEBuffer™ 2                    | 10033147   | Pass                 |

| Assay Name/Specification                                                                                                                                                                                                                                                                                                                                                                 | Lot # 10043537 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>Endonuclease Activity (Nicking)</b><br>A 50 µl reaction in NEBuffer 2 containing 1 µg of supercoiled PhiX174 DNA and a minimum of 40 units of CpG Methyltransferase (M.SssI) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.                                                                                | Pass           |
| <b>Exonuclease Activity (Radioactivity Release)</b><br>A 50 µl reaction in NEBuffer 2 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 CpG Methyltransferase (M.SssI) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.                                                                     | Pass           |
| <b>Functional Testing (Methyltransferase)</b><br>A 20 µl reaction in NEBuffer 2 supplemented with 160 µM SAM containing 1 µg of Lambda DNA and 1 unit of CpG Methyltransferase (M.SssI) incubated for 1 hour at 37°C followed by heat inactivation results in ≥ 95% protection from digestion with 10 units of BstUI in NEBuffer 2 incubated at 60°C for 1 hour as determined by agarose | Pass           |

| Assay Name/Specification                                                                                                                                                                                                                                                                                                                                    | Lot # 10043537     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| <p>gel electrophoresis.</p> <p><b>Non-Specific DNase Activity (16 Hour)</b><br/>A 50 µl reaction in NEBuffer 2 containing 1 µg of Lambda DNA and a minimum of 100 units of CpG Methyltransferase (M.SssI) 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>Pass</b></p> |

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



Tony Spear-Alfonso  
Production Scientist  
10 Jan 2019



Michael Tonello  
Packaging Quality Control Inspector  
30 Apr 2019