# New England Biolabs
## Product Specification

**Product Name:** CpG Methyltransferase (M.SssI)

**Catalog #:** M0226S/L

**Concentration:** 4,000 units/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.

**Shelf Life:** 12 months

**Storage Temp:** -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

**Effective Date:** 16 May 2018

<table>
<thead>
<tr>
<th>Assay Name/Specification</th>
<th>(minimum release criteria)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Endonuclease Activity (Nicking)</strong></td>
<td>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 &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</td>
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<tr>
<td><strong>Exonuclease Activity (Radioactivity Release)</strong></td>
<td>A 50 µl reaction in NEBuffer 2 containing 1 µg of a mixture of single and double-stranded [³H] E. coli DNA and a minimum of 100 units of CpG Methyltransferase (M.SssI) incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</td>
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<tr>
<td><strong>Functional Testing (Methyltransferase)</strong></td>
<td>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 gel electrophoresis.</td>
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<tr>
<td><strong>Non-Specific DNase Activity (16 Hour)</strong></td>
<td>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.</td>
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**Derek Robinson**  
Director of Quality Control

**Date** 16 May 2018