

## New England Biolabs Product Specification

<i>Product Name:</i>	<i>HpaII Methyltransferase</i>
<i>Catalog #:</i>	<i>M0214S/L/V</i>
<i>Concentration:</i>	<i>4,000 units/ml</i>
<i>Unit Definition:</i>	<i>One unit is defined as the amount of enzyme required to protect 1 µg of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 µl against cleavage by HpaII restriction endonuclease.</i>
<i>Shelf Life:</i>	<i>12 months</i>
<i>Storage Temp:</i>	<i>-20°C</i>
<i>Storage Conditions:</i>	<i>150 mM NaCl, 50 mM Tris-HCl, 0.1 mM EDTA, 5 mM TCEP-HCl, 50 % Glycerol, 200 µg/ml BSA, (pH 7.5 @ 25°C)</i>
<i>Specification Version:</i>	<i>PS-M0214S/L v2.0</i>
<i>Effective Date:</i>	<i>31 Jan 2018</i>

### Assay Name/Specification (minimum release criteria)

**Exonuclease Activity (Radioactivity Release)** - 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 40 units of HpaII Methyltransferase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.

**Methylase Activity (dam Methylase)** - A 20 µl reaction in CutSmart® Buffer supplemented with 80 µM S-adenosylmethionine containing 1 µg Lambda DNA and a minimum of 40 units of HpaII Methyltransferase incubated for 4 hours at 37°C did not protect the DNA from digestion by MboI as determined by agarose gel electrophoresis.

**Non-Specific DNase Activity (16 Hour)** - A 50 µl reaction in CutSmart® Buffer containing 1 µg of HaeIII digested PhiX174 RF I DNA and a minimum of 40 units of HpaII Methyltransferase incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.

**Protein Purity Assay (SDS-PAGE)** - HpaII Methyltransferase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.

**RNase Activity (Extended Digestion)** - A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of HpaII Methyltransferase 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.

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Date 31 Jan 2018

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Derek Robinson  
Quality Approver

