

## New England Biolabs Certificate of Analysis

**Product Name:** *HpaII Methyltransferase*  
**Catalog Number:** *M0214S*  
**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 1 hour at 37°C in a total reaction volume of 50 µl against cleavage by HpaII restriction endonuclease.*  
**Packaging Lot Number:** *10246040*  
**Expiration Date:** *06/2025*  
**Storage Temperature:** *-20°C*  
**Storage Conditions:** *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)*  
**Specification Version:** *PS-M0214S/L v2.0*

HpaII Methyltransferase Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0214SVIAL	HpaII Methyltransferase	10246041	Pass
B9003SVIAL	S-adenosylmethionine (SAM)	10233985	Pass
B6004SVIAL	rCutSmart™ Buffer	10241728	Pass

Assay Name/Specification	Lot # 10246040
<p><b>Exonuclease Activity (Radioactivity Release)</b>            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 &lt;0.1% of the total radioactivity.</p>	<b>Pass</b>
<p><b>Methylase Activity (dam Methylase)</b>            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.</p>	<b>Pass</b>
<p><b>Non-Specific DNase Activity (16 Hour)</b>            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.</p>	<b>Pass</b>

Assay Name/Specification	Lot # 10246040
<p><b>Protein Purity Assay (SDS-PAGE)</b> HpaII Methyltransferase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	<b>Pass</b>
<p><b>RNase Activity (Extended Digestion)</b> 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, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	<b>Pass</b>

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

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