

## 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.*  
**Lot Number:** *10050229*  
**Expiration Date:** *07/2020*  
**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	10050228	Pass
B9003SVIAL	S-adenosylmethionine (SAM)	10049759	Pass
B7204SVIAL	CutSmart® Buffer	10046080	Pass

Assay Name/Specification	Lot # 10050229
<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.	Pass
<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.	Pass
<b>Protein Purity Assay (SDS-PAGE)</b> HpaII Methyltransferase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass
<b>RNase Activity (Extended Digestion)</b>	Pass

Assay Name/Specification	Lot # 10050229
<p>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> <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>	<p><b>Pass</b></p>

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



Jean Bastable  
Production Scientist  
03 Jul 2019

Michael Tonello  
Packaging Quality Control Inspector  
01 Aug 2019