

## New England Biolabs Certificate of Analysis

**Product Name:** *HaeIII Methyltransferase*  
**Catalog Number:** *M0224S*  
**Concentration:** *10,000 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 10 µl against cleavage by HaeIII restriction endonuclease.*  
**Lot Number:** *10026164*  
**Expiration Date:** *10/2019*  
**Storage Temperature:** *-20°C*  
**Storage Conditions:** *50 mM Tris-HCl, 50 mM KCl, 10 mM EDTA, 1 mM DTT, 200 µg/ml BSA, 50 % Glycerol, (pH 7.5 @ 25°C)*  
**Specification Version:** *PS-M0224S/L v1.0*

HaeIII Methyltransferase Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0224SVIAL	HaeIII Methyltransferase	10024741	Pass
B9003SVIAL	S-adenosylmethionine (SAM)	10018391	Pass
B0224SVIAL	HaeIII Methyltransferase Reaction Buffer	10027137	Pass

Assay Name/Specification	Lot # 10026164
<p><b>Endonuclease Activity (Nicking)</b>            A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled pBR322 DNA and a minimum of 100 units of HaeIII Methyltransferase incubated for 4 hours at 37°C results in &lt;10% conversion to the nicked form as determined by agarose gel electrophoresis.</p>	Pass
<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 100 units of HaeIII Methyltransferase incubated for 4 hours at 37°C releases &lt;0.1% of the total radioactivity.</p>	Pass
<p><b>Non-Specific DNase Activity (16 Hour)</b>            A 50 µl reaction in CutSmart® Buffer containing 1 µg of Lambda-HindIII DNA and a minimum of 100 units of HaeIII 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>	Pass

Assay Name/Specification	Lot # 10026164
<p><b>Protein Purity Assay (SDS-PAGE)</b> HaeIII Methyltransferase is <math>\geq 95\%</math> pure as determined by SDS-PAGE analysis using Coomassie Blue detection.</p>	<b>Pass</b>
<p><b>RNase Activity (Extended Digestion)</b> A 10 <math>\mu</math>l reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 <math>\mu</math>l of HaeIII 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.



Tony Spear-Alfonso  
Production Scientist  
21 Aug 2018



Michael Tonello  
Packaging Quality Control Inspector  
05 Nov 2018