

## New England Biolabs Certificate of Analysis

**Product Name:** GpC Methyltransferase (M.CviPI)  
**Catalog Number:** M0227L  
**Concentration:** 4,000 U/ml  
**Unit Definition:** One unit is defined as the amount of enzyme required to protect 1 µg Lambda DNA in 1 hour at 37°C in a total reaction volume of 20 µl against cleavage by HaeIII restriction endonuclease.  
**Packaging Lot Number:** 10094825  
**Expiration Date:** 10/2022  
**Storage Temperature:** -20°C  
**Storage Conditions:** 15 mM Tris-HCl, 200 mM NaCl, 1 mM DTT, 0.1 mM EDTA, 50 % Glycerol, 200 µg/ml BSA, (pH 7.4 @ 25°C)  
**Specification Version:** PS-M0227S/L v2.0

GpC Methyltransferase (M.CviPI) Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0227LVIAL	GpC Methyltransferase (M.CviPI)	10084263	Pass
B9003SVIAL	S-adenosylmethionine (SAM)	10091460	Pass
B0227SVIAL	GC Reaction Buffer	10066607	Pass

Assay Name/Specification	Lot # 10094825
<b>Endonuclease Activity (Nicking)</b> A 50 µl reaction in GC Reaction Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 40 units of GpC Methyltransferase (M.CviPI) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in GC Reaction 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 GpC Methyltransferase (M.CviPI) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
<b>Functional Testing (Methyltransferase)</b> A 20 µl reaction in GC Reaction Buffer supplemented with 160 µM SAM containing 1 µg of Lambda DNA and 1 unit of GpC Methyltransferase (M.CviPI) incubated for 1 hour at 37°C followed by heat inactivation results in ≥ 95% protection from digestion with 10 units of HaeIII in NEBuffer 2 incubated at 37°C for 1 hour as determined by agarose gel electrophoresis.	Pass

Assay Name/Specification	Lot # 10094825
<p><b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in GC Reaction Buffer containing 1 µg of Lambda DNA and a minimum of 40 units of GpC Methyltransferase (M.CviPI) incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p>	<p><b>Pass</b></p>

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

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Timothy Meixsell  
Production Scientist  
15 Jan 2021



Josh Hersey  
Packaging Quality Control Inspector  
15 Jan 2021