

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: 10219527
Expiration Date: 05/2025
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)	10187129	Pass
B9003SVIAL	S-adenosylmethionine (SAM)	10210241	Pass
B0227SVIAL	GC Reaction Buffer	10181123	Pass

Assay Name/Specification	Lot # 10219527
Endonuclease Activity (Nicking) 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
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in GC Reaction Buffer containing 1 µg of a mixture of single and double-stranded [³ 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
Functional Testing (Methyltransferase) 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 # 10219527
<p>Non-Specific DNase Activity (16 Hour) 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>Pass</p>

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

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Jamie Souza
Production Scientist
08 May 2023



Josh Hersey
Packaging Quality Control Inspector
29 Nov 2023