

## New England Biolabs Certificate of Analysis

**Product Name:** GpC Methyltransferase (M.CviPI)  
**Catalog Number:** M0227S  
**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 10 µl against cleavage by HaeIII restriction endonuclease.  
**Lot Number:** 10030073  
**Expiration Date:** 10/2020  
**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 v1.0

| GpC Methyltransferase (M.CviPI) Component List |                                 |            |                      |
|--|---------------------------------|------------|----------------------|
| NEB Part Number                                | Component Description           | Lot Number | Individual QC Result |
| M0227SVIAL                                     | GpC Methyltransferase (M.CviPI) | 10026163   | Pass                 |
| B9003SVIAL                                     | S-adenosylmethionine (SAM)      | 10028001   | Pass                 |
| B0227SVIAL                                     | GC Reaction Buffer              | 10008190   | Pass                 |

| Assay Name/Specification  | Lot # 10030073 |
|---|----------------|
| <b>Endonuclease Activity (Nicking)</b><br>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><br>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><br>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 # 10030073     |
|---|--------------------|
| <p><b>Non-Specific DNase Activity (16 Hour)</b><br/>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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Tim Meixsell  
Production Scientist  
15 May 2018




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Michael Tonello  
Packaging Quality Control Inspector  
20 Nov 2018