

New England Biolabs Product Specification

Product Name:	<i>GpC Methyltransferase (M.CviPI)</i>
Catalog #:	<i>M0227S/L</i>
Concentration:	<i>4,000 units/ml</i>
Unit Definition:	<i>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.</i>
Shelf Life:	<i>24 months</i>
Storage Temp:	<i>-20°C</i>
Storage Conditions:	<i>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)</i>
Specification Version:	<i>PS-M0227S/L v1.0</i>
Effective Date:	<i>21 May 2018</i>

Assay Name/Specification (minimum release criteria)

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.

Exonuclease Activity (Radioactivity Release) - A 50 µl reaction in GC Reaction Buffer containing 1 µg of a mixture of single and double-stranded [³H] *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.

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.

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.



Date 21 May 2018

Derek Robinson
Director of Quality Control

