240 County Road
Ipswich, MA 01938-2723
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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 20 µl against cleavage by HaeIII restriction endonuclease.*
Packaging Lot Number:	*10238795*
Expiration Date:	*05/2026*
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**
M0227SVIAL	GpC Methyltransferase (M.CviPI)	10238793	**Pass**
B9003SVIAL	S-adenosylmethionine (SAM)	10233985	**Pass**
B0227SVIAL	GC Reaction Buffer	10211810	**Pass**

Assay Name/Specification	**Lot # 10238795**
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**

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Assay Name/Specification	Lot # 10238795
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 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**

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

One or more products referenced in this document may be covered by a 3rd-party trademark. Please visit www.neb.com/trademarks for additional information.

Nicole Castagnozzi
Production Scientist
20 May 2024

Michael Tonello
Packaging Quality Control Inspector
12 Jun 2024