

## New England Biolabs Certificate of Analysis

**Product Name:** BamHI Methyltransferase  
**Catalog Number:** M0223S  
**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 BamHI restriction endonuclease.  
**Lot Number:** 10031186  
**Expiration Date:** 12/2019  
**Storage Temperature:** -20°C  
**Storage Conditions:** 50 mM Tris-HCl, 1 mM DTT, 10 mM EDTA, 50 % Glycerol, 200 µg/ml BSA, (pH 7.5 @ 25°C)  
**Specification Version:** PS-M0223S/L v1.0

BamHI Methyltransferase Component List			
NEB Part Number	Component Description	Lot Number	Individual QC Result
M0223SVIAL	BamHI Methyltransferase	10031186	Pass
B9003SVIAL	S-adenosylmethionine (SAM)	10028001	Pass
B0223SVIAL	BamHI Methyltransferase Reaction Buffer	0031704	Pass

Assay Name/Specification	Lot # 10031186
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in NEBuffer 2 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 BamHI Methyltransferase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
<b>Non-Specific DNase Activity (16 Hour)</b> A 50 µl reaction in NEBuffer 2 containing 1 µg of HindIII digested Lambda DNA and a minimum of 40 units of BamHI Methyltransferase incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
<b>Functional Testing (Methyltransferase)</b> A 10 µl reaction in BamHI Methyltransferase Reaction Buffer supplemented with 80 µM SAM containing 1 µg of Lambda DNA and 1 unit of BamHI Methyltransferase incubated for 1 hour at 37°C followed by heat inactivation results in ≥ 95% protection from digestion with 10 units of BamHI in CutSmart® Buffer with 10 mM MgCl <sub>2</sub> incubated at	Pass

Assay Name/Specification	Lot # 10031186
37°C for 30 minutes as determined by agarose gel electrophoresis.	

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



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Ben Penta  
Production Scientist  
16 Nov 2018



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Michael Tonello  
Packaging Quality Control Inspector  
07 Dec 2018