NEW ENGLAND BioLabs Inc.
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New England Biolabs
Certificate of Analysis

Product Name:	*HpaII Methyltransferase*
Catalog Number:	*M0214S*
Concentration:	*4,000 U/ml*
Unit Definition:	*One unit is defined as the amount of enzyme required to protect 1 µg of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 µl against cleavage by HpaII restriction endonuclease.*
Packaging Lot Number:	*10168971*
Expiration Date:	*11/2023*
Storage Temperature:	*-20°C*
Storage Conditions:	*150 mM NaCl, 50 mM Tris-HCl, 0.1 mM EDTA, 5 mM TCEP-HCl, 50 % Glycerol, 200 µg/ml BSA, (pH 7.5 @ 25°C)*
Specification Version:	*PS-M0214S/L v2.0*

HpaII Methyltransferase Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
M0214SVIAL	HpaII Methyltransferase	10168984	**Pass**
B9003SVIAL	S-adenosylmethionine (SAM)	10157973	**Pass**
B6004SVIAL	rCutSmart™ Buffer	10173160	**Pass**

Assay Name/Specification	**Lot # 10168971**
Exonuclease Activity (Radioactivity Release) A 50 µl reaction in CutSmart® Buffer containing 1 µg of a mixture of single and double-stranded [^{3}H] E. coli DNA and a minimum of 40 units of HpaII Methyltransferase incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	**Pass**
Methylase Activity (dam Methylase) A 20 µl reaction in CutSmart® Buffer supplemented with 80 µM S-adenosylmethionine containing 1 µg Lambda DNA and a minimum of 40 units of HpaII Methyltransferase incubated for 4 hours at 37°C did not protect the DNA from digestion by MboI as determined by agarose gel electrophoresis.	**Pass**
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart® Buffer containing 1 µg of HaeIII digested PhiX174 RF I DNA and a minimum of 40 units of HpaII Methyltransferase incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**Pass**

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Assay Name/Specification	Lot # 10168971
Protein Purity Assay (SDS-PAGE) HpaII Methyltransferase is ≥ 95% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	**Pass**
RNase Activity (Extended Digestion) A 10 µl reaction in NEBuffer 4 containing 40 ng of a 300 base single-stranded RNA and a minimum of 1 µl of HpaII Methyltransferase is incubated at 37ºC. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	**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.

Jamie Souza
Production Scientist
10 Nov 2022

Michael Tonello
Packaging Quality Control Inspector
17 Jan 2023