NEW ENGLAND BioLabs Inc.
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240 County Road
Ipswich, MA 01938-2723
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New England Biolabs
Certificate of Analysis

Product Name:	*Human DNA (c-5) MTase (Dnmt1)*
Catalog Number:	*M0230L*
Concentration:	*2,000 U/ml*
Unit Definition:	*One unit is the amount of enzyme required to catalyze the transfer of 1 pmol of methyl group to poly dI.dC substrate in a total reaction volume of 25 µl in 30 minutes at 37°C.*
Lot Number:	*10053616*
Expiration Date:	*08/2020*
Storage Temperature:	*-20°C*
Storage Conditions:	*50 mM Tris-HCl, 200 mM NaCl, 1 mM DTT, 1 mM EDTA, 50 % Glycerol, (pH 7.5 @ 25°C)*
Specification Version:	*PS-M0230S/L v1.0*

Human DNA (c-5) MTase (Dnmt1) Component List			
NEB Part Number	**Component Description**	**Lot Number**	**Individual QC Result**
M0230LVIAL	Human DNA (cytosine-5) Methyltransferase (Dnmt1)	10053615	**Pass**
B9003SVIAL	S-adenosylmethionine (SAM)	10049759	**Pass**
B9001SVIAL	Purified BSA	10014762	**Pass**
B0230SVIAL	Dnmt1 Reaction Buffer	10043394	**Pass**

Assay Name/Specification	**Lot # 10053616**
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 10 units of Human DNA (cytosine-5) Methyltransferase (Dnmt1) incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	**Pass**
Non-Specific DNase Activity (16 Hour) A 50 µl reaction in CutSmart® Buffer containing 1 µg of PhiX174-HaeIII DNA and a minimum of 6 units of Human DNA (cytosine-5) Methyltransferase (Dnmt1) incubated for 16 hours at 37ºC results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	**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 2 units of Human DNA (cytosine-5) Methyltransferase (Dnmt1) is	**Pass**

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Assay Name/Specification	Lot # 10053616
incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	
Endonuclease Activity (Nicking) A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 6 units of Human DNA (cytosine-5) Methyltransferase (Dnmt1) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	**Pass**

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

Tony Spear-Alfonso
Production Scientist
12 Sep 2018

Josh Hersey
Packaging Quality Control Inspector
12 Sep 2019