

## New England Biolabs Certificate of Analysis

**Product Name:** Human DNA (c-5) MTase (Dnmt1)  
**Catalog Number:** M0230S  
**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:** 10028046  
**Expiration Date:** 11/2019  
**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
M0230SVIAL	Human DNA (cytosine-5) Methyltransferase (Dnmt1)	10028047	Pass
B9003SVIAL	S-adenosylmethionine (SAM)	10018391	Pass
B9001SVIAL	Purified BSA	10014762	Pass
B0230SVIAL	Dnmt1 Reaction Buffer	10028186	Pass

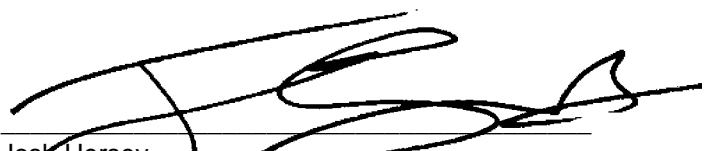
Assay Name/Specification	Lot # 10028046
<b>Endonuclease Activity (Nicking)</b> A 50 µl reaction in CutSmart® Buffer containing 1 µg of supercoiled PhiX174 DNA and a minimum of 6 units of Human DNA (cytosine-5) Methyltransferase (Dnmt1) incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> A 50 µl reaction in CutSmart® Buffer containing 1 µg of a mixture of single and double-stranded [ <sup>3</sup> 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
<b>Non-Specific DNase Activity (16 Hour)</b> 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	Pass

Assay Name/Specification	Lot # 10028046
<p>16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.</p> <p><b>RNase Activity (Extended Digestion)</b> 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 incubated at 37°C. After incubation for 16 hours, &gt;90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.</p>	<p><b>Pass</b></p>

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



Tony Spear-Alfonso  
Production Scientist  
21 Aug 2018



Josh Hersey  
Packaging Quality Control Inspector  
09 Nov 2018