

New England Biolabs Certificate of Analysis

Product Name: Human DNA (cytosine-5) Methyltransferase (Dnmt1)
Catalog #: M0230S/L
Concentration: 2,000 units/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 #: 0391712
Assay Date: 12/2017
Expiration Date: 12/2018
Storage Temp: -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
Effective Date: 22 May 2018

Assay Name/Specification (minimum release criteria)	Lot #0391712
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
Exonuclease Activity (Radioactivity Release) - A 50 µl reaction in CutSmart® Buffer containing 1 µg of a mixture of single and double-stranded [³ H] <i>E. coli</i> 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 37°C 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 incubated at 37°C. After incubation for 16 hours, >90% of the substrate RNA remains intact as determined by gel electrophoresis using fluorescent detection.	Pass



Authorized by
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22 May 2018



Inspected by
Mala Samaranayake
01 Dec 2017

