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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 dl.dC substrate in a total reaction volume of 25 µl in 30 minutes at 37°C.*
Lot #:	*0391710*
Assay Date:	*10/2017*
Expiration Date:	*10/2018*
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 #0391710**
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] *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 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
Derek Robinson
22 May 2018

Inspected by
Mala Samaranayake
13 Oct 2017

nqa ISO 9001 Registered Quality Management
nqa ISO 14001 Registered Environmental Management
nqa ISO 13485 Registered Medical Devices