

## 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.  
**Packaging Lot Number:** 10094047  
**Expiration Date:** 12/2021  
**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

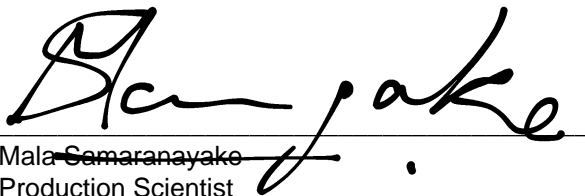
| Human DNA (c-5) MTase (Dnmt1) Component List |                                                  |            |                      |
|----------------------------------------------|--------------------------------------------------|------------|----------------------|
| NEB Part Number                              | Component Description                            | Lot Number | Individual QC Result |
| M0230SVIAL                                   | Human DNA (cytosine-5) Methyltransferase (Dnmt1) | 10094048   | Pass                 |
| B9003SVIAL                                   | S-adenosylmethionine (SAM)                       | 10085449   | Pass                 |
| B9001SVIAL                                   | Purified BSA                                     | 10059427   | Pass                 |
| B0230SVIAL                                   | Dnmt1 Reaction Buffer                            | 10069817   | Pass                 |

| Assay Name/Specification                                                                                                                                                                                                                                                                                                                    | Lot # 10094047 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>Endonuclease Activity (Nicking)</b><br>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><br>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><br>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 # 10094047     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| <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><br/>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.

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22 Dec 2020



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22 Dec 2020