

## DNMT1

(DNA (cytosine-5)-methyltransferase 1)

**CATALOG NO.:** DMT-21-124

**LOT NO.:**

**DESCRIPTION:** Full-length human recombinant DNMT1 (residues 2-1632 (C-terminus); Genbank Accession # NM\_001130823; MW = 209 kDa) expressed in *Sf9* insect cells with an N-terminal GST-tag. DNA (cytosine-5)-methyltransferase 1 (DNMT1) methylates CpG residues, preferentially methylating hemimethylated DNA to maintain the methylation pattern in the new strand of replicated DNA.

**PURITY:** >85% by SDS-PAGE.

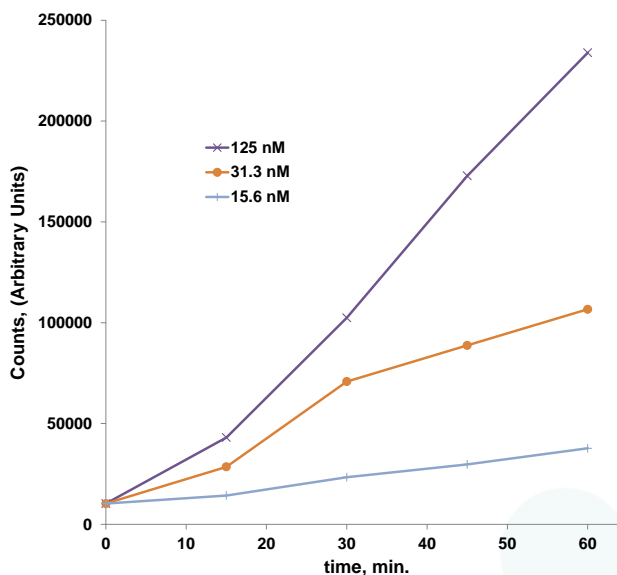
**ASSAY CONDITIONS:** RBC's DNMT1 displays DNA methyltransferase activity at concentrations of 15.6 nM and above, 30°C, in the DNMT HotSpot<sup>SM</sup> Assay format (see Figure below). Reaction conditions are: 20 mM Tris-HCl, pH 7.5, 50 mM NaCl, 5 mM EDTA, 5 mM DTT, 0.1 mM PMSF, 1% (v/v) DMSO, 5% (v/v) glycerol with 1 µM [<sup>3</sup>H]-SAM and 1 µg/mL poly(dI-dC) as substrates.

**SUPPLIED AS:** \_\_\_ µg/µl total protein in 20 mM Tris/HCl pH 7.5, 120 mM NaCl, 1 mM TCEP, 10% glycerol (v/v).

**STORAGE:** -70°C. Thaw quickly and store on ice before use. The remaining, unused, undiluted enzyme should be refrozen quickly by, for example, snap freezing in a dry/ice ethanol bath or liquid nitrogen. Freezing and storage of diluted enzyme is not recommended.



**Coomassie blue stained SDS-PAGE of 2 µg of RBC DNMT1.** MWs of markers at left are, from top (kDa): 220, 160, 120, 100, 90, 80, 70, 60, 50, 40, 30, 25, 20, & 15.



**Time Courses of DNMT1 Methylation of Poly(dI-dC).** Assays were performed in the HotSpot<sup>SM</sup> format at the indicated enzyme concentrations with 1 µg/mL poly(dI-dC), 1 µM [<sup>3</sup>H]-SAM, under the assay conditions described above. Each point represents the mean of two determinations.

This product is not intended for therapeutic or diagnostic use in animals or in humans.

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