

DNMT3b (DNA (cytosine-5)-methyltransferase 3b)

CATALOG NO.: DMT-21-126

LOT NO.:

DESCRIPTION: Full-length human recombinant DNMT3b expressed in *Sf9* insect cells (residues 2-853 (C-terminus); Genbank Accession # NM_006892; N-terminal GST-tag; MW = 121.9 kDa). DNMT3b, a *de novo* DNA methyltransferase, is essential in development and can mediate gene silencing. Overexpression and/or gene amplification of DNMT3b, along with DNA hypermethylation, have been observed in a number of cancers, suggesting that DNMT3b is an oncogene and a promising therapeutic target. For example, DNMT3b expression and DNA methylation are elevated in a subset of breast cancers and both specific knockdown of DNMT3b expression and chemical inhibition of DNMTs enhance the sensitivity of breast cancer lines with this hypermethylation phenotype to cytotoxic chemotherapy agents.

PURITY: >80% by SDS-PAGE.

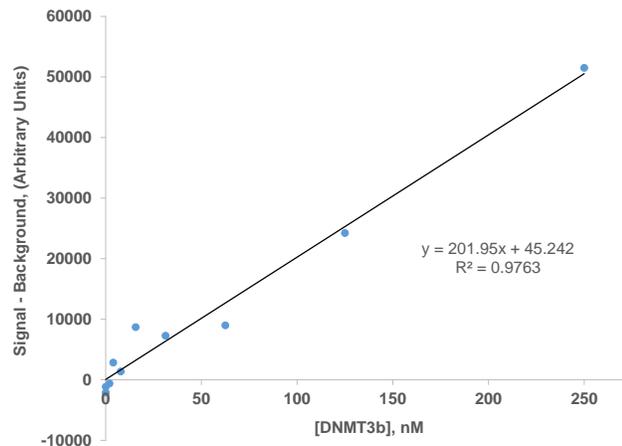
ASSAY CONDITIONS: RBC's DNMT3b displays DNA methyltransferase activity at concentrations of 15.6 nM and above, 30°C, in the DNMT HotSpotSM Assay format (see Figure below). Reaction conditions are: 20 mM Tris-HCl, pH 7.5, 50 mM NaCl, 5 mM EDTA, 5 mM DTT, 0.1 mM PMSF, 1% (v/v) DMSO, 5% (v/v) glycerol with 1 μM [³H]-SAM and 7.5 μg/mL Lambda DNA as substrates.

SUPPLIED AS: ___ μg/μl total protein in 50 mM Tris/HCl pH 8.0, 150 mM NaCl, 3 mM DTT, 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 6 μg of RBC DNMT 3b. MWs of markers at left are, from top (kDa): 220, 160, 120, 100, 90, 80, 70, 60, 50, 40, 30, 25, 20, 15 & 10.



Enzyme Titration of DNMT3b: Methylation of Lambda DNA. Assays were performed in the HotSpotSM format at the indicated enzyme concentrations for 60 min. with 7.5 μg/mL Lambda DNA, 1 μM [³H]-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.