Active Recombinant Mouse Dnmt1

Cat. No. Dnmt1-139M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	mouse Dnmt1 deleting the N-terminal 290 amino acid residues, was expressed using a baculovirus expression system
Species	Mouse
Source	Insect Cells
Description	DNA methylation is significant for epigenetic regulation of gene expression, X chromosome inactivation, genomic imprinting, and development. Abberant methylation patterns are associated with certain human tumors and developmental abnormalities. In vertebrates, there are two types of DNA methyltransferase activities; de novo and maintenance types. Two DNA methyltransferases, Dnmt3a and Dnmt3b, are responsible for the creation of methylation patterns at an early stage of embryogenesis (de novo-type), while Dnmt1 is responsible for the maintenance of methylation patterns during replication. Dnmt1 favors to methylate the hemimethylated DNA and preferentially methylates one strand of the double-stranded DNA during its processive methylation.
Form	0.5mg protein/ml in 0.2M NaCl, 10mM HEPES (pH 7.4), 50% glycerol
Bio-activity	17 units/ul
Purity	Greater than 95% protein determined by SDS-PAGE (CBB staining)
Unit Definition	1 unit is defined as the amount of the enzyme that transfer 1 pmole of methyl group to

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	poly dI-dC substrate during 30 minutes at 37℃
Applications	1) In vitro metylation of cytosine residues in hemimethylated DNA at 5"…CG…3".2) Antigen for anti-mammalian Dnmt1 antibodies
Storage	Store at -20℃

GENE INFORMATION

Gene Name	Dnmt1 DNA methyltransferase (cytosine-5) 1 [Mus musculus]
Official Symbol	Dnmt1
Synonyms	DNMT1; DNA methyltransferase (cytosine-5) 1; DNA (cytosine-5)-methyltransferase 1; DNA MTase MmuI; DNA methyltransferase MmuI; Dnmt; MCMT; Met1; Cxxc9; MTase; Met-1; Dnmt1o; m.MmuI; MommeD2;
Gene ID	13433
mRNA Refseq	NM_001199431
Protein Refseq	NP_001186360
Pathway	Cysteine and methionine metabolism, organism-specific biosystem; Cysteine and methionine metabolism, conserved biosystem; Metabolic pathways, organism-specific biosystem; Methionine degradation, organism-specific biosystem; Methionine degradation, conserved biosystem; One Carbon Metabolism, organism-specific biosystem; PluriNetWork, organism-specific biosystem;
Function	DNA (cytosine-5-)-methyltransferase activity; DNA (cytosine-5-)-methyltransferase activity; DNA (cytosine-5-)-methyltransferase activity, acting on CpG substrates; DNA

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	binding; DNA binding; DNA-methyltransferase activity; catalytic activity; double-stranded DNA binding; histone deacetylase binding; metal ion binding; methyl-CpG binding; methyltransferase activity; protein binding; protein domain specific binding; transcription factor binding; transferase activity; unmethylated CpG binding; zinc ion binding;

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