Data Sheet (Cat.No.TMPC-00236)

TargetMol

DNMT1 Protein, Mouse, Recombinant (GST)

General Information

Protein Construction:	Recombinant mouse DNMT1 (766-end) was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag.
Species:	Mouse
Expression Host:	Baculovirus-Insect Cells
Accession:	Q7TSJ0
Molecular Weight:	~132 kDa

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it.
Purity:	>70% as determined by SDS-PAGE.
Formulation:	Supplied as sterile 50 mM Tris-HCl, pH 7.5, 50 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF, 25% glycerol.

Preparation and Storage

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Enzymes are highly recommended to be shipped at frozen temperature with dry ice. Shipment made at ambient temperature may seriously affect the activity of the ordered products.

Protein Background

DNA methylation is mediated by a conserved family of DNA methyltransferases (Dnmts). The human genome encodes three active Dnmts (Dnmt1, Dnmt3a and Dnmt3b), the tRNA methyltransferase Dnmt2, and the regulatory protein Dnmt3L. in addition to its DNA methylating activity, DNMT1 can act on gene transcription by modulating permissive H3K4 and repressive H3K27 trimethylation in developing inhibitory interneurons similar to what was found in other cell types. In particular, the transcriptional control of Pak6 was accomplished by interactions of DNMT1 with the Polycomb-repressor complex 2 (PCR2) core enzyme EZH2, mediating repressive H3K27 trimethylation at regulatory regions of the Pak6 gene locus. DNMT1 in promoting interneuron migration through the transcriptional control over key genes like Pak6 achieved by a crosstalk with histone tail methylation.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481