Recombinant Human DNMT2/TRDMT1 Protein (GST Tag)

Catalog No. PKSH031193

Note: Centrifuge before opening to ensure complete recovery of vial contents.

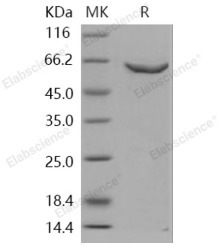
Description

Synonyms	DMNT2;DNMT2;MHSAIIP;PUMET;RNMT1
Species	Human
Expression Host	Baculovirus-Insect Cells
Sequence	Met 1-Glu 391
Accession	NP_004403.1
Calculated Molecular Weight	71.0 kDa
Observed molecular weight	60 kDa
Tag	N-GST
Bioactivity	Not validated for activity

Properties

Purity	> 94 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 50mM Tris, 100mM NaCl, 0.5mM GSH, 0.5mM PMSF, pH 8.0 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



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Background

DNMT2, also known as tRNA (cytosine-5-)-methyltransferase, DNA methyltransferase homolog HsaIIP, and TRDMT1,

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is a member of the DNA methyltransferase family of enzymes. DNMT2 enzymes have been widely conserved during evolution and contain all of the signature motifs of DNA (cytosine-5)-methyltransferases. It contains all 10 sequence motifs that are conserved among m(5)C MTases, including the consensus S:-adenosyl-L-methionine-binding motifs and the active site ProCys dipeptide, and its structure is very similar to prokaryotic DNA methyltransferases. DNMT2 has close homologs in plants, insects and Schizosaccharomyces pombe, but no related sequence can be found in the genomes of Saccharomyces cerevisiae or Caenorhabditis elegans. While the biological function of DNMT2 is not yet known, the strong binding to DNA suggests that DNMT2 may mark specific sequences in the genome by binding to DNA through the specific target-recognizing motif. However, the DNA methyltransferase activity of these proteins is comparatively weak and their biochemical and functional properties remain enigmatic. Recent evidence now shows that Dnmt2 has a novel tRNA methyltransferase activity, raising the possibility that the biological roles of these proteins might be broader than previously thought.

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