

# Recombinant Human DNMT2/TRDMT1 Protein (GST Tag)



Catalog Number:PKSH031193

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

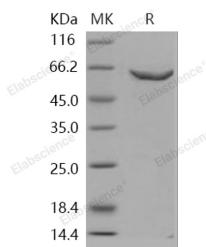
## Description

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

## Properties

Purity	> 94 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per $\mu$ g 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°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C 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% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed m
Reconstitution	Please refer to the printed manual for detailed information.

## Data



> 94 % as determined by reducing SDS-PAGE.

## Background

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

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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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