Data Sheet (Cat.No.TMPY-02340)

TargetMol

HNMT Protein, Human, Recombinant (GST)

General Information

Synonyms:	HMT;HNMT-S1;HNMT-S2;histamine N-methyltransferase
Protein Construction:	A DNA sequence encoding the human HNMT (AAH20677.1) (Met 1-Ala 292) was fused with the GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	AAH20677.1
Molecular Weight:	60.5 kDa (predicted); 50 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 0.15M NaCl, pH 7.5. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. 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:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

HNMT (Histamine N-methyltransferase) is a Protein Coding gene. This gene encodes the first enzyme which is found in the cytosol and uses S-adenosyl-L-methionine as the methyl donor. HNMT, the major enzyme for the metabolism of histamine in the rat brain, is potently inhibited by 9-amino-1,2,3,4-tetrahydroacridine (tacrine). Methylation is an important pathway in the biotransformation of many drugs, neurotransmitters, and xenobiotic compounds. Histamine N-methyltransferase (HNMT) catalyzes the N tau-methylation of histamine and structurally

related compounds. Histamine N-methyltransferase (HNMT) is believed to be the sole pathway for termination of the neurotransmitter action of histamine in the mammalian brain. That highlights the importance of the inclusion of HNMT for genetic testing of individuals presenting with intellectual disability.

Reference

Yan L., et al., 2000, Pharmacogenetics 10:261-266.
Horton J.R., et al., 2001, Structure 9:837-849.
Hillier L.W., et al., 2005, Nature 434:724-731.