

NNMT Protein, Human (GST)

Cat. No.:	HY-P701318
Synonyms:	Nicotinamide N-methyltransferase; EC:2.1.1.1; NNMT
Species:	Human
Source:	E. coli
Accession:	P40261 (M1-L264)
Gene ID:	4837
Molecular Weight:	56.6 kDa

PROPERTIES

Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.22 μ m filtered solution of PBS, 6% Trehalose, pH 7.4.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>Nicotinamide N-Methyltransferase (NNMT) is responsible for catalyzing the N-methylation of nicotinamide, utilizing the universal methyl donor S-adenosyl-L-methionine to produce N1-methylnicotinamide and S-adenosyl-L-homocysteine, representing a prominent pathway for nicotinamide/vitamin B3 clearance. This enzymatic activity plays a central role in cellular methylation potential regulation by consuming S-adenosyl-L-methionine, thus limiting its availability for other methyltransferases. NNMT actively orchestrates genome-wide epigenetic and transcriptional changes through the hypomethylation of repressive chromatin marks, such as H3K27me3, and contributes to the establishment of low levels of repressive histone marks in pluripotent embryonic stem cell pre-implantation state during development. Functionally, NNMT acts as a metabolic regulator impacting white adipose tissue energy expenditure, hepatic gluconeogenesis, and cholesterol biosynthesis. In white adipocytes, it regulates polyamine flux and controls NAD(+) levels through the salvage pathway. Additionally, NNMT, by producing N1-methylnicotinamide, influences protein acetylation in hepatocytes, repressing the ubiquitination and enhancing the stability of the SIRT1 deacetylase. Furthermore, NNMT exhibits versatility by N-methylating other pyridines structurally related to nicotinamide, suggesting a role in xenobiotic detoxification.</p>
------------	--

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA