

NNMT Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP1024a**Specification**

NNMT Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [P40261](#)**NNMT Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 4837**Other Names**

Nicotinamide N-methyltransferase, NNMT

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP1024a](/product/products/AP1024a) was selected from the N-term region of human NNMT. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

NNMT Antibody (N-term) Blocking Peptide - Protein Information**Name** NNMT {ECO:0000303|PubMed:23455543}**Function**

Catalyzes the N-methylation of nicotinamide using the universal methyl donor S-adenosyl-L-methionine to form N1-methylnicotinamide and S-adenosyl-L-homocysteine, a predominant nicotinamide/vitamin B3 clearance pathway (PubMed:[8182091](http://www.uniprot.org/citations/8182091), PubMed:[21823666](http://www.uniprot.org/citations/21823666), PubMed:[23455543](http://www.uniprot.org/citations/23455543)). Plays a central role in regulating cellular methylation potential, by consuming S-adenosyl-L-methionine and limiting its availability for other methyltransferases. Actively mediates genome-wide epigenetic and transcriptional changes through hypomethylation of repressive chromatin marks, such as H3K27me3 (PubMed:[26571212](http://www.uniprot.org/citations/26571212), PubMed:[23455543](http://www.uniprot.org/citations/23455543), PubMed:[31043742](http://www.uniprot.org/citations/31043742)

target="_blank">31043742). In a developmental context, contributes to low levels of the repressive histone marks that characterize pluripotent embryonic stem cell pre-implantation state (PubMed:26571212). Acts as a metabolic regulator primarily on white adipose tissue energy expenditure as well as hepatic gluconeogenesis and cholesterol biosynthesis. In white adipocytes, regulates polyamine flux by consuming S-adenosyl-L-methionine which provides for propylamine group in polyamine biosynthesis, whereas by consuming nicotinamide controls NAD(+) levels through the salvage pathway (By similarity). Via its product N1-methylnicotinamide regulates protein acetylation in hepatocytes, by repressing the ubiquitination and increasing the stability of SIRT1 deacetylase (By similarity). Can also N-methylate other pyridines structurally related to nicotinamide and play a role in xenobiotic detoxification (PubMed:30044909).

Cellular Location

Cytoplasm.

Tissue Location

Predominantly expressed in the liver. A lower expression is seen in the kidney, lung, skeletal muscle, placenta and heart. Not detected in the brain or pancreas

NNMT Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

NNMT Antibody (N-term) Blocking Peptide - Images

NNMT Antibody (N-term) Blocking Peptide - Background

N-methylation is one method by which drug and other xenobiotic compounds are metabolized by the liver. NNMT is the protein responsible for this enzymatic activity, which uses S-adenosyl methionine as the methyl donor.

NNMT Antibody (N-term) Blocking Peptide - References

Xu,J., Thyroid 16 (2), 151-160 (2006)Roessler,M., Clin. Cancer Res. 11 (18), 6550-6557 (2005)Souto,J.C., Am. J. Hum. Genet. 76 (6), 925-933 (2005)