

**NNMT Antibody (Center)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP1024C**

**Specification**

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**NNMT Antibody (Center) - Product Information**

Application	<b>WB, IHC-P,E</b>
Primary Accession	<a href="#">P40261</a>
Reactivity	<b>Human</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>
Isotype	<b>Rabbit IgG</b>
Antigen Region	<b>77-106</b>

**NNMT Antibody (Center) - Additional Information**

**Gene ID** 4837

**Other Names**

Nicotinamide N-methyltransferase, NNMT

**Target/Specificity**

This NNMT antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 77-106 amino acids from the Central region of human NNMT.

**Dilution**

WB~~1:2000  
IHC-P~~1:10~50

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

NNMT Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

**NNMT Antibody (Center) - 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:[21823666](#), PubMed:[23455543](#),

PubMed:[8182091](#)). 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:[23455543](#), PubMed:[26571212](#), PubMed:[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

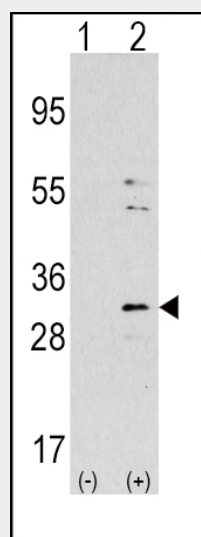
Predominantly expressed in the liver. A lower expression is seen in the kidney, lung, skeletal muscle, placenta and heart. Not detected in the brain or pancreas

#### NNMT Antibody (Center) - Protocols

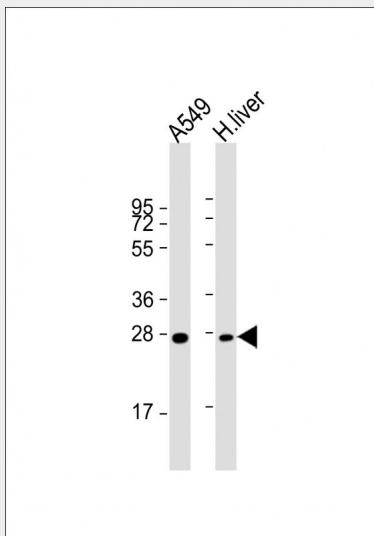
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

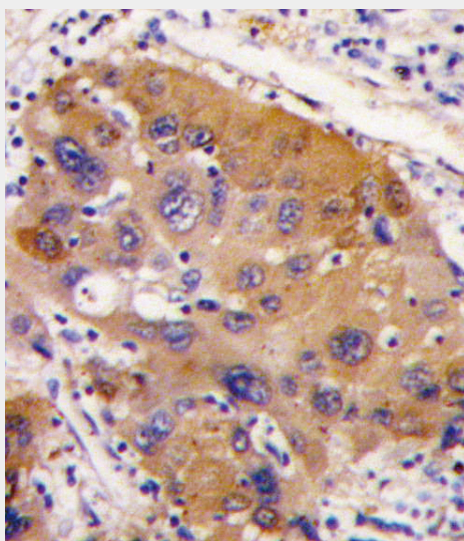
#### NNMT Antibody (Center) - Images



Western blot analysis of NNMT (arrow) using rabbit polyclonal NNMT Antibody (Center)(Cat# AP1024c). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the NNMT gene (Lane 2) (Origene Technologies).



All lanes : Anti-NNMT Antibody (Center) at 1:2000 dilution Lane 1: A549 whole cell lysate Lane 2: human liver lysate Lysates/proteins at 20  $\mu$ g per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 30 kDa Blocking/Dilution buffer: 5% NFDm/TBST.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with NNMT antibody (Center) (Cat# AP1024c), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

#### **NNMT Antibody (Center) - 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 (Center) - 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)