

**BACKGROUND**

Nicotinamide N-methyltransferase (NNMT) catalyzes the N-methylation of nicotinamide and other pyridines. NNMT activity in the human liver has a bimodal frequency distribution, indicating that its enzyme activity may be modulated through a genetic polymorphism, which could have functional implications for individual differences in drug and xenobiotic toxicity. The gene that encodes human NNMT is approximately 16.5 kb in length, consists of three exons and two introns and maps to 11q23.2. NNMT isolated from the human liver was determined to be 969 nucleotides in length, with a 792 nucleotide open reading frame that encodes a 264 amino acid protein. The NNMT gene is presumed to be a significant genetic determinant of plasma homocysteine levels in Spanish families, since it encodes an enzyme involved in homocysteine synthesis.

**REFERENCES**

1. Yan, L., et al. 1998. Mouse nicotinamide N-methyltransferase gene: molecular cloning, structural characterization, and chromosomal localization. *DNA Cell Biol.* 17: 659-667.
2. Yan, L., et al. 1999. Human nicotinamide N-methyltransferase pharmacogenetics: gene sequence analysis and promoter characterization. *Pharmacogenetics* 9: 307-316.
3. Parsons, R.B., et al. 2002. Expression of nicotinamide N-methyltransferase (E.C. 2.1.1.1) in the Parkinsonian brain. *J. Neuropathol. Exp. Neurol.* 61: 111-124.

**CHROMOSOMAL LOCATION**

Genetic locus: NNMT (human) mapping to 11q23.2.

**SOURCE**

NNMT (L-22) is a purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of NNMT of human origin.

**PRODUCT**

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

**APPLICATIONS**

NNMT (L-22) is recommended for detection of NNMT of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

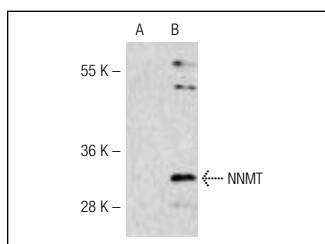
Suitable for use as control antibody for NNMT siRNA (h): sc-61213, NNMT shRNA Plasmid (h): sc-61213-SH and NNMT shRNA (h) Lentiviral Particles: sc-61213-V.

Molecular Weight of NNMT: 30 kDa.

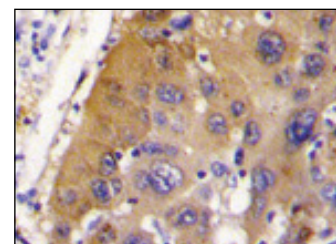
Positive Controls: Hep G2 cell lysate: sc-2227.

**RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

**DATA**

NNMT (L-22): sc-130829. Western blot analysis of NNMT expression in non-transfected (A) and human NNMT transfected (B) 293 whole cell lysates.



NNMT (L-22): sc-130829. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human hepatocarcinoma tissue showing cytoplasmic localization.

**STORAGE**

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

**PROTOCOLS**

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **NNMT (G-4): sc-376048**, our highly recommended monoclonal alternative to NNMT (L-22).