SANTA CRUZ BIOTECHNOLOGY, INC.

HNMT (FL-292): sc-98772

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Histamine is a biogenic amine that functions as a neurotransmitter in the gut and plays an important role in the immune system, specifically by dilating blood vessels in response to allergic reactions. HNMT (Histamine N-methyltransferase), also known as HMT, HNMT-S1 or HNMT-S2, is a 292 amino acid protein that exists as a monomer and belongs to the methyltransferase superfamily. Localized to the cytoplasm, HNMT catalytically inactivates histamine by N-methylation and, via this inactivation, plays an essential role in the degradation of histamine. Through its ability to regulate and reduce the amount of histamine within the cell, HNMT participates in the airway response and limits the severity of allergic reactions. A common genetic polymorphism in HNMT may be linked to a predisposition to asthma. HNMT is expressed as multiple isoforms due to alternative splicing events.

REFERENCES

1. Yamauchi, K., et al. 1994. Structure and function of human histamine N-methyltransferase: critical enzyme in histamine metabolism in airway. Am. J. Physiol. 267: L342-L349.
2. Girard, B., et al. 1994. Human histamine N-methyltransferase pharmacogenetics: cloning and expression of kidney cDNA. Mol. Pharmacol. 45: 461-468.
3. Aksoy, S., et al. 1996. Human histamine N-methyltransferase gene: structural characterization and chromosomal location. Biochem. Biophys. Res. Commun. 219: 548-554.
4. Preuss, C.V., et al. 1998. Human histamine N-methyltransferase pharmacogenetics: common genetic polymorphisms that alter activity. Mol. Pharmacol. 53: 708-717.
5. Yan, L., et al. 2000. Histamine N-methyltransferase pharmacogenetics: association of a common functional polymorphism with asthma. Pharmaco-genetics 10: 261-266.
6. Horton, J.R., et al. 2001. Two polymorphic forms of human histamine methyltransferase: structural, thermal and kinetic comparisons. Structure 9: 837-849.

CHROMOSOMAL LOCATION

Genetic locus: HNMT (human) mapping to 2q22.1; Hnmt (mouse) mapping to 2 A3.

SOURCE

HNMT (FL-292) is a rabbit polyclonal antibody raised against amino acids 1-292 representing full length HNMT of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

HNMT (FL-292) is recommended for detection of HNMT of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HNMT (FL-292) is also recommended for detection of HNMT in additional species, including equine, canine and bovine.

Suitable for use as control antibody for HNMT siRNA (h): sc-94838, HNMT siRNA (m): sc-146060, HNMT shRNA Plasmid (h): sc-94838-SH, HNMT shRNA Plasmid (m): sc-146060-SH, HNMT shRNA (h) Lentiviral Particles: sc-94838-V and HNMT shRNA (m) Lentiviral Particles: sc-146060-V.

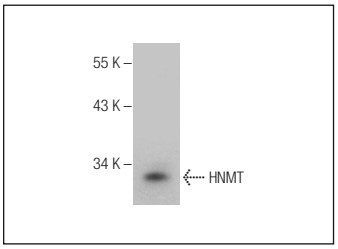
Molecular Weight of HNMT: 33 kDa.

Positive Controls: human liver extract: sc-363766 or HeLa whole cell lysate: sc-2200.

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.

DATA



HNMT (FL-292): sc-98772. Western blot analysis of HNMT expression in human liver tissue extract.

RESEARCH USE

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