SANTA CRUZ BIOTECHNOLOGY, INC.

NMT1 (B-11): sc-393744

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

N-terminal myristoylation is a cotranslational lipid modification, which is crucial for the targeting and function of many signaling proteins. The N-myristoyltransferases, NMT1 and NMT2, also known as glycylpeptide N-tetradecanoyltransferases, are cytoplasmic proteins that belong to the NMT family of proteins. The proteins in this familiy catalyze the addition of a myristoyl group to the N-terminal glycine residue of eukaryotic, fungal and viral proteins. They are primarily detected in heart, gut, kidney, liver and placenta.

REFERENCES

1. McIlhinney, R.A., et al. 1994. Characterization of a polyhistidine-tagged form of human myristoyl-CoA: protein N-myristoyltransferase produced in *Escherichia coli*. Eur. J. Biochem. 222: 137-146.
2. Weston, S.A., et al. 1998. Crystal structure of the anti-fungal target N-myristoyl transferase. Nat. Struct. Biol. 5: 213-221.
3. Rajala, R.V., et al. 2002. Altered expression and localization of N-myristoyltransferase in experimentally induced rat model of ischemia-reperfusion. J. Cell. Biochem. 86: 509-519.
4. Selvakumar, P., et al. 2004. Expression of methionine aminopeptidase 2, N-myristoyltransferase, and N-myristoyltransferase inhibitor protein 71 in HT29. Biochem. Biophy. Res. Commun. 322: 1012-1017.
5. Sharma, R.K. 2004. Potential role of N-myristoyltransferase in pathogenic conditions. Can. J. Physiol. Pharmacol. 82: 849-859.
6. Lu, Y., et al. 2005. Expression of N-myristoyltransferase in human brain tumors. Neurochem. Res. 30: 9-13.
7. Yang, S.H., et al. 2005. N-myristoyltransferase 1 is essential in early mouse development. J. Biol. Chem. 280: 18990-18995.
8. Price, H.P., et al. 2005. Functional analysis of TbARL1, an N-myristoylated Golgi protein essential for viability in bloodstream trypanosomes. J. Cell Sci. 118: 831-841.

CHROMOSOMAL LOCATION

Genetic locus: NMT1 (human) mapping to 17q21.31; Nmt1 (mouse) mapping to 11 E1.

SOURCE

NMT1 (B-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 147-176 within an internal region of NMT1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393744 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

NMT1 (B-11) is recommended for detection of NMT1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

NMT1 (B-11) is also recommended for detection of NMT1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for NMT1 siRNA (h): sc-61132, NMT1 siRNA (m): sc-61133, NMT1 shRNA Plasmid (h): sc-61132-SH, NMT1 shRNA Plasmid (m): sc-61133-SH, NMT1 shRNA (h) Lentiviral Particles: sc-61132-V and NMT1 shRNA (m) Lentiviral Particles: sc-61133-V.

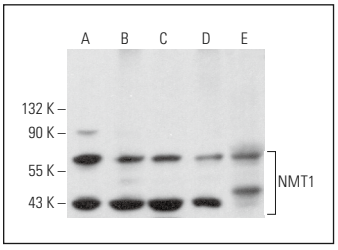
Molecular Weight of NMT1: 66 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

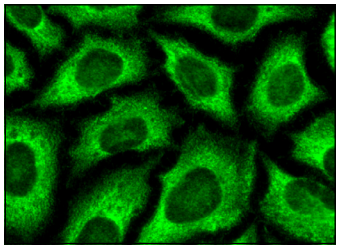
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



NMT1 (B-11): sc-393744. Western blot analysis of NMT1 expression in K-562 (**A**), Hep G2 (**B**), HeLa (**C**) and Neuro-2A (**D**) whole cell lysates and rat heart tissue extract (**E**).



NMT1 (B-11): sc-393744. Immunofluorescence staining of methanol-fixed HeLa cells 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.