

NMT1 (E-9): sc-393702

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 glycoprotein N-tetradecanoyltransferases, are cytoplasmic proteins that belong to the NMT family of proteins. The proteins in this family 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

- 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.
- Weston, S.A., et al. 1998. Crystal structure of the anti-fungal target N-myristoyl transferase. *Nat. Struct. Biol.* 5: 213-221.
- 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.
- Selvakumar, P., et al. 2004. Expression of methionine aminopeptidase 2, N-myristoyltransferase, and N-myristoyltransferase inhibitor protein 71 in HT29. *Biochem. Biophys. Res. Commun.* 322: 1012-1017.

CHROMOSOMAL LOCATION

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

SOURCE

NMT1 (E-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 146-179 within an internal region of NMT1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NMT1 (E-9) is available conjugated to agarose (sc-393702 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393702 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393702 PE), fluorescein (sc-393702 FITC), Alexa Fluor[®] 488 (sc-393702 AF488), Alexa Fluor[®] 546 (sc-393702 AF546), Alexa Fluor[®] 594 (sc-393702 AF594) or Alexa Fluor[®] 647 (sc-393702 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393702 AF680) or Alexa Fluor[®] 790 (sc-393702 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393702 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

NMT1 (E-9) 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 (E-9) 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.

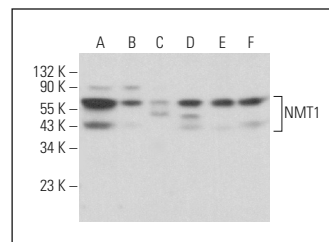
Molecular Weight of NMT1: 66 kDa.

Positive Controls: DU 145 cell lysate: sc-2268, K-562 whole cell lysate: sc-2203 or A-10 cell lysate: sc-3806.

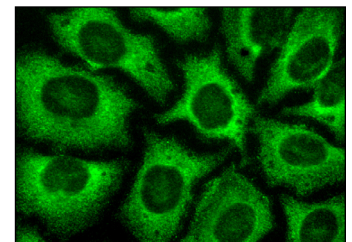
RECOMMENDED SUPPORT REAGENTS

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 (E-9): sc-393702. Western blot analysis of NMT1 expression in K-562 (A), HEL 92.1.7 (B), EOC 20 (C), DU 145 (D), A-10 (E) and L6 (F) whole cell lysates.



NMT1 (E-9): sc-393702. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Kosciuk, T., et al. 2020. NMT1 and NMT2 are lysine myristoyltransferases regulating the ARF6 GTPase cycle. *Nat. Commun.* 11: 1067.

RESEARCH USE

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

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