

NMT1 (h): 293 Lysate: sc-110896

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 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., Patel, P.B. and McGlone, K. 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., Camble, R., Colls, J., Rosenbrock, G., Taylor, I., Egerton, M., Tucker, A.D., Tunnicliffe, A., Mistry, A., Mancina, F., de la Fortelle, E., Irwin, J., Bricogne, G. and Paupit, R.A. 1998. Crystal structure of the anti-fungal target N-myristoyl transferase. *Nat. Struct. Biol.* 5: 213-221.
- Rajala, R.V., Kakkar, R., Kanthan, R., Radhi, J.M., Wang, X., Wang, R., Datla, R.S. and Sharma, R.K. 2002. Altered expression and localization of N-myristoyltransferase in experimentally induced rat model of ischemia-reperfusion. *J. Cell. Biochem.* 86: 509-519.
- Selvakumar, P., Lakshmikuttyamma, A., Lawman, Z., Bonham, K., Dimmock, J.R. and Sharma, R.K. 2004. Expression of methionine aminopeptidase 2, N-myristoyltransferase, and N-myristoyltransferase inhibitor protein 71 in HT29. *Biochem. Biophys. Res. Commun.* 322: 1012-1017.
- Sharma, R.K. 2004. Potential role of N-myristoyltransferase in pathogenic conditions. *Can. J. Physiol. Pharmacol.* 82: 849-859.
- Lu, Y., Selvakumar, P., Ali, K., Shrivastav, A., Bajaj, G., Resch, L., Griebel, R., Fournay, D., Meguro, K. and Sharma, R.K. 2005. Expression of N-myristoyltransferase in human brain tumors. *Neurochem. Res.* 30: 9-13.
- Yang, S.H., Shrivastav, A., Kosinski, C., Sharma, R.K., Chen, M.H., Berthiaume, L.G., Peters, L.L., Chuang, P.T., Young, S.G. and Bergo, M.O. 2005. N-myristoyltransferase 1 is essential in early mouse development. *J. Biol. Chem.* 280: 18990-18995.
- Price, H.P., Panethymitaki, C., Goulding, D. and Smith, D.F. 2005. Functional analysis of TbARL1, an N-myristoylated Golgi protein essential for viability in bloodstream trypanosomes. *J. Cell Sci.* 118: 831-841.
- Pasha, M.K., Sharma, R.K. and Rajput, A.H. 2005. Increased myocardial N-myristoyltransferase activity in rotenone model of Parkinsonism. *Int. J. Mol. Med.* 15: 987-991.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: NMT1 (human) mapping to 17q21.31.

PRODUCT

NMT1 (h): 293 Lysate represents a lysate of human NMT1 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

NMT1 (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive NMT1 antibodies. Recommended use: 10-20 µl per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

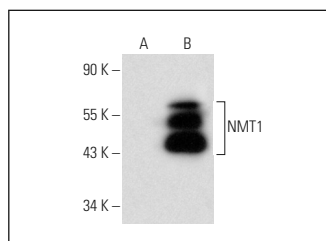
NMT1 (A-3): sc-365723 is recommended as a positive control antibody for Western Blot analysis of enhanced human NMT1 expression in NMT1 transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

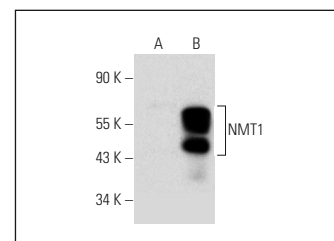
To ensure optimal results, the following support reagents are recommended:

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.

DATA



NMT1 (A-3): sc-365723. Western blot analysis of NMT1 expression in non-transfected: sc-110760 (A) and human NMT1 transfected: sc-110896 (B) 293 whole cell lysates.



NMT1 (B-11): sc-393744. Western blot analysis of NMT1 expression in non-transfected: sc-110760 (A) and human NMT1 transfected: sc-110896 (B) 293 whole cell lysates.

RESEARCH USE

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