SANTA CRUZ BIOTECHNOLOGY, INC.

NMT2 siRNA (m): sc-61135

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-tetradecan-oyltransferases, 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

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2. Weston, S.A., et al. 1998. Crystal structure of the anti-fungal target N-myristoyltransferase. 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. Biophys. 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: Nmt2 (mouse) mapping to 2 A1.

PRODUCT

NMT2 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NMT2 shRNA Plasmid (m): sc-61135-SH and NMT2 shRNA (m) Lentiviral Particles: sc-61135-V as alternate gene silencing products.

For independent verification of NMT2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-61135A, sc-61135B and sc-61135C.

PROTOCOLS

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

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCL, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

NMT2 siRNA (m) is recommended for the inhibition of NMT2 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor NMT2 gene expression knockdown using RT-PCR Primer: NMT2 (m)-PR: sc-61135-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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