SANTA CRUZ BIOTECHNOLOGY, INC.

INMT siRNA (h): sc-89715

BACKGROUND

Methylation is an important reaction in the metabolism of many drugs, other xenobiotics and endogenous molecules. A methyltransferase is a type of transferase enzyme that transfers a methyl group from a donor to an acceptor. INMT (indolethylamine N-methyltransferase), also known as Temt or aromatic alkylamine N-methyltransferase, is a 264 amino acid protein belonging to the NNMT/PNMT/TEMT family. Localized to the cytoplasm, INMT catalyzes the N-methylation of tryptamine and structurally related compounds. Existing as a monomer, INMT may have a role in the *in vivo* synthesis of psychoactive compounds or neurotoxins. The gene encoding INMT maps to human chromosome 7p14.3 and mouse chromosome 6 B3.

REFERENCES

1. Bhikharidas, B., et al. 1975. Indolamine N-methyltransferase activity in human tissues. J. Neurochem. 24: 203-205.
2. Rokach, J., et al. 1980. Inhibitors of indoleethylamine N-methyltransferase. Derivatives of 3-methyl-2-thiazolidinimine. *In vitro, in vivo,* and metabolic studies. J. Med. Chem. 23: 773-780.
3. Irace, G., et al. 1982. Purification and molecular properties of rabbit lung indolamine N-methyltransferase. Biochemistry 21: 1464-1470.
4. Li, E., et al. 1992. Targeted mutation of the DNA methyltransferase gene results in embryonic lethality. Cell 69: 915-926.
5. Fujioka, M. 1992. Mammalian small molecule methyltransferases: their structural and functional features. Int. J. Biochem. 24: 1917-1924.
6. Thompson, M.A. and Weinshilboum, R.M. 1998. Rabbit lung indolethylamine N-methyltransferase. cDNA and gene cloning and characterization. J. Biol. Chem. 273: 34502-34510.
7. Thompson, M.A., et al. 1999. Human indolethylamine N-methyltransferase: cDNA cloning and expression, gene cloning, and chromosomal localization. Genomics 61: 285-297.

CHROMOSOMAL LOCATION

Genetic locus: INMT (human) mapping to 7p14.3.

PRODUCT

INMT siRNA (h) 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 INMT shRNA Plasmid (h): sc-89715-SH and INMT shRNA (h) Lentiviral Particles: sc-89715-V as alternate gene silencing products.

For independent verification of INMT (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-89715A, sc-89715B and sc-89715C.

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

INMT siRNA (h) is recommended for the inhibition of INMT expression in human 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 INMT gene expression knockdown using RT-PCR Primer: INMT (h)-PR: sc-89715-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.