SANTA CRUZ BIOTECHNOLOGY, INC.

NAT-8L siRNA (h): sc-89038

BACKGROUND

Acetyltransferases and deacetylases are protein groups most often associated with oncogenesis and cell cycle regulation. NAT-8L (N-acetyltransferase 8-like protein), also known as NAA synthetase (N-acetylaspartate synthetase), NACED or CML3 (camello-like protein 3), is a 302 amino acid single-pass membrane protein of the microsome, mitochondrion and rough endoplasmic reticulum. A member of the camello family and N-acyltransferase (NAT) superfamily, NAT-8L also localizes to the cytoplasm. NAT-8L is expressed in the brain where it assists in the maintenance of intact white matte and plays a role in lipogenesis. The gene encoding NAT-8L maps to human chromosome 4, which represents approximately 6% of the human genome, contains nearly 900 genes and is associated with Huntington's disease, Ellis-van Creveld syndrome and methylmalonic acidemia.

REFERENCES

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3. Krakow, D., et al. 2000. Exclusion of the Ellis-van Creveld region on chromosome 4p16 in some families with asphyxiating thoracic dystrophy and short-rib polydactyly syndromes. Eur. J. Hum. Genet. 8: 645-648.
4. Popsueva, A.E., et al. 2001. Overexpression of camello, a member of a novel protein family, reduces blastomere adhesion and inhibits gastrulation in *Xenopus laevis.* Dev. Biol. 234: 483-496.
5. Dobson, C.M., et al. 2002. Identification of the gene responsible for the cblA complementation group of vitamin B12-responsive methylmalonic acidemia based on analysis of prokaryotic gene arrangements. Proc. Natl. Acad. Sci. USA 99: 15554-15559.
6. Arun, P., et al. 2009. Evidence for mitochondrial and cytoplasmic N-acetylaspartate synthesis in SH-SY5Y neuroblastoma cells. Neurochem. Int. 55: 219-225.
7. Wiame, E., et al. 2010. Molecular identification of aspartate N-acetyltransferase and its mutation in hypoacetylaspartia. Biochem. J. 425: 127-136.

CHROMOSOMAL LOCATION

Genetic locus: NAT8L (human) mapping to 4p16.3.

PRODUCT

NAT-8L siRNA (h) is a pool of 2 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 NAT-8L shRNA Plasmid (h): sc-89038-SH and NAT-8L shRNA (h) Lentiviral Particles: sc-89038-V as alternate gene silencing products.

For independent verification of NAT-8L (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-89038A and sc-89038B.

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

NAT-8L siRNA (h) is recommended for the inhibition of NAT-8L 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 NAT-8L gene expression knockdown using RT-PCR Primer: NAT-8L (h)-PR: sc-89038-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.

PROTOCOLS

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