

# NAT-8 siRNA (h): sc-94277

## BACKGROUND

Acetyltransferases and deacetylases are protein groups most often associated with oncogenesis and cell cycle regulation. NAT-8 (N-acetyltransferase 8), also known as GLA, CML1 (camello-like protein 1) or TSC510, is a 227 amino acid multi-pass membrane protein that plays a role in gastrulation regulation. A member of the camello family, NAT-8 contains one N-acetyltransferase domain and is expressed in kidney and liver. The gene encoding NAT-8 maps to human chromosome 2, which consists of 237 million bases, encodes over 1,400 genes and makes up approximately 8% of the human genome. A number of genetic diseases are linked to genes on chromosome 2 including Harlequin ichthyosis, sitosterolemia and Alström syndrome.

## REFERENCES

1. Patel, S.B., et al. 1998. Mapping a gene involved in regulating dietary cholesterol absorption. The sitosterolemia locus is found at chromosome 2p21. *J. Clin. Invest.* 102: 1041-1044.
2. Ozaki, K., et al. 1998. Isolation and mapping of a novel human kidney- and liver-specific gene homologous to the bacterial acetyltransferases. *J. Hum. Genet.* 43: 255-258.
3. Zumsteg, U., et al. 2000. Alstrom syndrome: confirmation of linkage to chromosome 2p12-13 and phenotypic heterogeneity in three affected sibs. *J. Med. Genet.* 37: E8.
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. Kelsell, D.P., et al. 2005. Mutations in ABCA12 underlie the severe congenital skin disease harlequin ichthyosis. *Am. J. Hum. Genet.* 76: 794-803.
6. Juhanson, P., et al. 2008. N-acetyltransferase 8, a positional candidate for blood pressure and renal regulation: resequencing, association and in silico study. *BMC Med. Genet.* 9: 25.
7. Ariyannur, P.S., et al. 2010. Methamphetamine-induced neuronal protein NAT8L is the NAA biosynthetic enzyme: implications for specialized acetyl coenzyme A metabolism in the CNS. *Brain Res.* 1335: 1-13.
8. Veiga-da-Cunha, M., et al. 2010. Molecular identification of NAT8 as the enzyme that acetylates cysteine S-conjugates to mercapturic acids. *J. Biol. Chem.* 285: 18888-18898.
9. Suhre, K., et al. 2011. Human metabolic individuality in biomedical and pharmaceutical research. *Nature* 477: 54-60.

## CHROMOSOMAL LOCATION

Genetic locus: NAT8 (human) mapping to 2p13.1.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## PRODUCT

NAT-8 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NAT-8 shRNA Plasmid (h): sc-94277-SH and NAT-8 shRNA (h) Lentiviral Particles: sc-94277-V as alternate gene silencing products.

For independent verification of NAT-8 (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-94277A and sc-94277B.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

NAT-8 siRNA (h) is recommended for the inhibition of NAT-8 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  $\mu$ M in 66  $\mu$ l. 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-8 gene expression knockdown using RT-PCR Primer: NAT-8 (h)-PR: sc-94277-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.