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# NAG-2 siRNA (m): sc-149798

## BACKGROUND

NAG-2 (novel antigen 2), also known as TSPAN4 (tetraspanin-4), TM4SF7 (transmembrane 4 superfamily member 7) or TETRASPAN, is a 238 amino acid multi-pass membrane protein that forms a complex with integrins and belongs to the tetraspanin (TM4SF) family. Most members of the TM4SF family are cell-surface proteins that are characterized by the presence of four hydrophobic domains. The TM4SF proteins mediate signal transduction events that play a role in the regulation of cell development, activation, growth and motility. Widely expressed, NAG-2 is encoded by a gene that maps to human chromosome 11p15.5. Chromosome 11 houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

## REFERENCES

1. Tachibana, I., et al. 1997. NAG-2, a novel transmembrane-4 superfamily (TM4SF) protein that complexes with integrins and other TM4SF proteins. *J. Biol. Chem.* 272: 29181-29189.
2. Todd, S.C., et al. 1998. Sequences and expression of six new members of the tetraspanin/TM4SF family. *Biochim. Biophys. Acta* 1399: 101-104.
3. Fabiani, J.E., et al. 2000. Hereditary angioedema. Long-term follow-up of 88 patients. Experience of the Argentine Allergy and Immunology Institute. *Allergol. Immunopathol.* 28: 267-271.
4. Jira, P.E., et al. 2003. Smith-Lemli-Opitz syndrome and the DHCR7 gene. *Ann. Hum. Genet.* 67: 269-280.
5. Sjöblom, T., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. *Science* 314: 268-274.
6. Schuchman, E.H. 2007. The pathogenesis and treatment of acid sphingomyelinase-deficient Niemann-Pick disease. *J. Inherit. Metab. Dis.* 30: 654-663.

## CHROMOSOMAL LOCATION

Genetic locus: Tspan4 (mouse) mapping to 7 F5.

## PRODUCT

NAG-2 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NAG-2 shRNA Plasmid (m): sc-149798-SH and NAG-2 shRNA (m) Lentiviral Particles: sc-149798-V as alternate gene silencing products.

For independent verification of NAG-2 (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-149798A, sc-149798B and sc-149798C.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog 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  $\mu$ 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

NAG-2 siRNA (m) is recommended for the inhibition of NAG-2 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  $\mu$ 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 NAG-2 gene expression knockdown using RT-PCR Primer: NAG-2 (m)-PR: sc-149798-PR (20  $\mu$ l). 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.