

# GalNAcT-2 siRNA (m): sc-145318

## BACKGROUND

GalNAcT-2 (chondroitin sulfate N-acetylgalactosaminyltransferase 2), also known as CSGALNACT2 or CHGN2, is a 542 amino acid single-pass type II membrane protein belonging to the chondroitin N-acetylgalactosaminyltransferase family. Localizing to Golgi apparatus, GalNAcT-2 is ubiquitously expressed with high levels found in small intestine, leukocytes, and spleen. GalNAcT-2 plays an essential role in elongation of chondroitin chains by adding GalNAc to the core tetrasaccharide linker. GalNAcT-22 also transfers 1,4-N-acetylgalactosamine (GalNAc) from UDP-GalNAc to the non-reducing end of glucuronic acid. GalNAcT-2 exists as two alternatively spliced isoforms.

## REFERENCES

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2. Hellberg, A., Poole, J. and Olsson, M.L. 2002. Molecular basis of the globoside-deficient P(k) blood group phenotype. Identification of four inactivating mutations in the UDP-N-acetylgalactosamine: globotriaosylceramide 3- $\beta$ -N-acetylgalactosaminyltransferase gene. *J. Biol. Chem.* 277: 29455-29459.
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4. Uyama, T., Kitagawa, H., Tanaka, J., Tamura, J., Ogawa, T. and Sugahara, K. 2003. Molecular cloning and expression of a second chondroitin N-acetylgalactosaminyltransferase involved in the initiation and elongation of chondroitin/dermatan sulfate. *J. Biol. Chem.* 278: 3072-3078.
5. Kitagawa, H., Izumikawa, T., Uyama, T. and Sugahara, K. 2003. Molecular cloning of a chondroitin polymerizing factor that cooperates with chondroitin synthase for chondroitin polymerization. *J. Biol. Chem.* 278: 23666-23671.

## CHROMOSOMAL LOCATION

Genetic locus: Csgalnact2 (mouse) mapping to 6 F1.

## PRODUCT

GalNAcT-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 GalNAcT-2 shRNA Plasmid (m): sc-145318-SH and GalNAcT-2 shRNA (m) Lentiviral Particles: sc-145318-V as alternate gene silencing products.

For independent verification of GalNAcT-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-145318A, sc-145318B and sc-145318C.

## 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

GalNAcT-2 siRNA (m) is recommended for the inhibition of GalNAcT-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 GalNAcT-2 gene expression knockdown using RT-PCR Primer: GalNAcT-2 (m)-PR: sc-145318-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.

## PROTOCOLS

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