

GalNAc-TL6 siRNA (m): sc-140056

BACKGROUND

The UDP-N-acetyl- α -D-galactosamine:polypeptide N-acetylgalactosaminyltransferase (GalNAc-T) family of enzymes are substrate-specific proteins that catalyze the transfer of GalNAc (N-acetylgalactosaminyl) to serine and threonine residues onto various proteins, thereby initiating mucin-type O-linked glycosylation in the Golgi apparatus. GalNAc-TL6 (polypeptide N-acetylgalactosaminyltransferase-like 6), also known as A830023L05, 1700021K10Rik or 4930431L04Rik, is a 601 amino acid protein that belongs to the GalNAc-T subfamily. Most GalNAc-T family of proteins localize to Golgi apparatus and catalyze the initial reaction in O-linked oligosaccharide biosynthesis. GalNAc-TL6 consist of a ricin B-type lectin domain, which binds to GalNAc and contributes to glycopeptide specificity, and a carbohydrate-binding domain, which is found in a variety of molecules serving diverse functions such as enzymatic activity, inhibitory toxicity and signal transduction.

REFERENCES

1. Porowska, H., et al. 1999. Activity of partially purified UDP-N-acetyl- α -D-galactosamine:polypeptide N-acetylgalactosaminyltransferase with different peptide acceptors. *Acta Biochim. Pol.* 46: 365-370.
2. Kumar, S., et al. 2001. Identification and initial characterization of 5000 expressed sequenced tags (ESTs) each from adult human normal and osteoarthritic cartilage cDNA libraries. *Osteoarthr. Cartil.* 9: 641-653.
3. Schwientek, T., et al. 2002. Functional conservation of subfamilies of putative UDP-N-acetylgalactosamine:polypeptide N-acetylgalactosaminyltransferases in *Drosophila*, *Caenorhabditis elegans*, and mammals. One subfamily composed of I(2)35Aa is essential in *Drosophila*. *J. Biol. Chem.* 277: 22623-22638.
4. Argüeso, P., et al. 2003. The cell-layer- and cell-type-specific distribution of GalNAc-transferases in the ocular surface epithelia is altered during keratinization. *Invest. Ophthalmol. Vis. Sci.* 44: 86-92.
5. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the mammalian gene collection (MGC). *Genome Res.* 14: 2121-2127.
6. Herr, P., et al. 2008. Regulation of TGF- β signalling by N-acetylgalactosaminyltransferase-like 1. *Development* 135: 1813-1822.

CHROMOSOMAL LOCATION

Genetic locus: Galnt16 (mouse) mapping to 8 B3.1.

PRODUCT

GalNAc-TL6 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GalNAc-TL6 shRNA Plasmid (m): sc-140056-SH and GalNAc-TL6 shRNA (m) Lentiviral Particles: sc-140056-V as alternate gene silencing products.

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

APPLICATIONS

GalNAc-TL6 siRNA (m) is recommended for the inhibition of GalNAc-TL6 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 μ M in 66 μ 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 GalNAc-TL6 gene expression knockdown using RT-PCR Primer: GalNAc-TL6 (m)-PR: sc-140056-PR (20 μ 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.