

β-1,4-GalNAc-T4 siRNA (h): sc-97066

BACKGROUND

β-1,4-GalNAc-T4 (β-1,4-N-acetyl-galactosaminyl transferase 4), also known as N-acetyl-β-glucosaminyl-glycoprotein 4-β-N-acetylgalactosaminyltransferase 1 or B4GALNT4, is a 1,039 amino acid protein belonging to the chondroitin N-acetylgalactosaminyltransferase family. Encoded by a gene that maps to human chromosome 11p15.5, β-1,4-GalNAc-T4 is highly expressed in ovary and in adult and fetal brain. β-1,4-GalNAc-T4 is also expressed in fetal kidney and lung, and exhibits subcellular localization in Golgi apparatus. β-1,4-GalNAc-T4 spans cell membranes singularly, with its N-terminus on the cytoplasmic side of the membrane. Located close to the N-terminus, the transmembrane domain of β-1,4-GalNAc-T4 functions as an anchor. β-1,4-GalNAc-T4 participates in N-acetyl-β-glucosaminyl-glycoprotein 4-β-N-acetylgalactosaminyltransferase activities.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: B4GALNT4 (human) mapping to 11p15.5.

PROTOCOLS

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

PRODUCT

β-1,4-GalNAc-T4 siRNA (h) 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 μM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see β-1,4-GalNAc-T4 shRNA Plasmid (h): sc-97066-SH and β-1,4-GalNAc-T4 shRNA (h) Lentiviral Particles: sc-97066-V as alternate gene silencing products.

For independent verification of β-1,4-GalNAc-T4 (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-97066A, sc-97066B and sc-97066C.

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

β-1,4-GalNAc-T4 siRNA (h) is recommended for the inhibition of β-1,4-GalNAc-T4 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 β-1,4-GalNAc-T4 gene expression knockdown using RT-PCR Primer: β-1,4-GalNAc-T4 (h)-PR: sc-97066-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.