SANTA CRUZ BIOTECHNOLOGY, INC.

Sialyltransferase 10 siRNA (m): sc-76496

BACKGROUND

Sialyltransferase 10, also known as type 2 lactosamine α-2,3-sialyltransferase or ST3GAL6, is a 331 amino acid protein belonging to the glycosyltransferase 29 family. Localized to the Golgi apparatus membrane, Sialyltransferase 10 is a single-pass type II membrane protein. Sialyltransferases, such as Sialyltransferase 10, catalyze the transfer of sialic acid from cytidine 5' monophospho-N-acetylneuraminic acid (CMP-NeuAc) to terminal positions of glycoprotein and glycolipid carbohydrate groups. Terminal NeuAc residues are key determinants of carbohydrate structures, such as the sialyl-Lewis X determinants. Unlike other members of the family, such as St3Gal-III and St3Gal-IV, Sialyltransferase 10 exhibits a restricted substrate specificity. Specifically, it utilizes Galβ1,4GlcNAc on glycoproteins, and neolactotetraosylceramide and neolactohexaosylceramide, but not lactotetraosylceramide, lactosylceramide, or asialo-GM1. Sialyltransferase 10 is localized to chromosome 3q12.1.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: St3gal6 (mouse) mapping to 16 C1.2.

PROTOCOLS

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

PRODUCT

Sialyltransferase 10 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Sialyltransferase 10 shRNA Plasmid (m): sc-76496-SH and Sialyltransferase 10 shRNA (m) Lentiviral Particles: sc-76496-V as alternate gene silencing products.

For independent verification of Sialyltransferase 10 (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-76496A, sc-76496B and sc-76496C.

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

Sialyltransferase 10 siRNA (m) is recommended for the inhibition of Sialyltransferase 10 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 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 Sialyltransferase 10 gene expression knockdown using RT-PCR Primer: Sialyltransferase 10 (m)-PR: sc-76496-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.