SANTA CRUZ BIOTECHNOLOGY, INC.

Sialyltransferase 7F siRNA (m): sc-63023

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The Power to Question

BACKGROUND

Sialyltransferase 7F, also known as SIAT7F and ST6GalNAc VI, is a 333 amino acid Golgi type II transmembrane glycosyltransferase expressed in the proximal tubule epithelial cells of kidney. Sialtransferase 7F belongs to the ST6GalNAc family of sialyltransferases involved in the biosynthesis of α-series gangliosides. Gangliosides are glycosphingolipids with sialic acids in the carbohydrate portion and are critical components to a variety of cellular events including cell adhesion, protein targeting, cell-cell interation and mediation of invasion of vectors. Sialyltransferase 7F acts on the substrates GD1a, GT1b and GM1b, and is responsible for the biosynthesis of DSGG (disialylgalactosylgloboside) from MSGG (monosialylgalactosylgloboside) in kidney. In addition, Sialyltransferase 7E can catalyze the synthesis of disialyl Lc4 from sialyl Lc4, leading to the synthesis of disialyl Lewis a.

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CHROMOSOMAL LOCATION

Genetic locus: St6galnac6 (mouse) mapping to 2 B.

PRODUCT

Sialyltransferase 7F 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 7F shRNA Plasmid (m): sc-63023-SH and Sialyltransferase 7F shRNA (m) Lentiviral Particles: sc-63023-V as alternate gene silencing products.

For independent verification of Sialyltransferase 7F (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-63023A, sc-63023B and sc-63023C.

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 7F siRNA (m) is recommended for the inhibition of Sialyltransferase 7F 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 7F gene expression knockdown using RT-PCR Primer: Sialyltransferase 7F (m)-PR: sc-63023-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.

PROTOCOLS

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