SANTA CRUZ BIOTECHNOLOGY, INC.

β3Gn-TL1 siRNA (m): sc-141444

BACKGROUND

β3Gn-TL1, also known as UDP-GlcNAc:βGal β-1,3-N-acetylglucosaminyltransferase-like protein 1, is a 361 amino acid protein that is widely expressed and belongs to the glycosyltransferase 2 family. β3Gn-TL1 is involved in transferase activity, specifically transferring glycosyl groups. Glycosyltransferases β3Gn-TL1 a large group of enzymes that are involved in a wide range of functions in all living organisms. β3Gn-TL1 is highly expressed in adult pancreas, moderately in kidney, spleen, thymus, prostate, testis and ovary, and weakly in small intestine, colon, peripheral blood leukocyte and liver. The β3Gn-TL1 gene is conserved in chimpanzee, mouse, rat, chicken, zebrafish and *C. elegans*, and maps to human chromosome 17q25.3. Chromosome 17 makes up over 2.5% of the human genome with about 81 million bases encoding over 1,200 genes. Alexander disease, Birt-Hogg-Dube syndrome and Canavan disease are all associated with chromosome 17.

REFERENCES

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3. Ota, T., et al. 2004. Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat. Genet. 36: 40-45.
4. Al-Dirbashi, O.Y., et al. 2007. Quantification of N-acetylaspartic acid in urine by LC-MS/MS for the diagnosis of Canavan disease. J. Inherit. Metab. Dis. 30: 612.
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CHROMOSOMAL LOCATION

Genetic locus: B3gntl1 (mouse) mapping to 11 E2.

PRODUCT

β3Gn-TL1 siRNA (m) is a pool of 2 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 β3Gn-TL1 shRNA Plasmid (m): sc-141444-SH and β3Gn-TL1 shRNA (m) Lentiviral Particles: sc-141444-V as alternate gene silencing products.

For independent verification of β3Gn-TL1 (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-141444A and sc-141444B.

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

β3Gn-TL1 siRNA (m) is recommended for the inhibition of β3Gn-TL1 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 β3Gn-TL1 gene expression knockdown using RT-PCR Primer: β3Gn-TL1 (m)-PR: sc-141444-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.