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- Expressversand

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# ST8Sia V siRNA (m): sc-153869

## BACKGROUND

Sialyltransferases are responsible for the transfer of sialic acid, a negatively charged acidic sugar, from its common nucleotide sugar donor to carbohydrate groups of glycoproteins and glycolipids where it then forms sialylglycoconjugates to influence a number of biological processes. Twenty mammalian sialyltransferase family members have been characterized to date. ST8Sia V, also known as ST8SIA5 (ST8  $\alpha$ -N-acetyl-neuraminide  $\alpha$ -2,8-sialyltransferase 5), SIAT8E or ST8SIA5, is a 376 amino acid single-pass type II membrane protein of the Golgi apparatus that is suggested to participate in the synthesis of certain gangliosides. A member of the glycosyltransferase 29 family, ST8Sia V is involved in protein modification and glycosylation, and is expressed in skeletal muscle, heart and brain.

## REFERENCES

1. Tsuji, S. 1996. Molecular cloning and functional analysis of sialyltransferases. *J. Biochem.* 120: 1-13.
2. Yoshikawa, T., Sanders, A.R., Esterling, L.E., Overhauser, J., Garnes, J.A., Lennon, G., Grewal and R., Detera-Wadleigh, S.D. 1997. Isolation of chromosome 18-specific brain transcripts as positional candidates for bipolar disorder. *Am. J. Med. Genet.* 74: 140-149.
3. Kim, Y.J., Kim, K.S., Do, S., Kim, C.H., Kim and S.K., Lee, Y.C. 1997. Molecular cloning and expression of human  $\alpha$ 2,8-sialyltransferase (hST8Sia V). *Biochem. Biophys. Res. Commun.* 235: 327-330.
4. Harduin-Lepers, A., Vallejo-Ruiz, V., Krzewinski-Recchi, M.A., Samyn-Petit, B., Julien and S., Delannoy, P. 2001. The human sialyltransferase family. *Biochimie* 83: 727-737.
5. Takashima, S., Ishida, H.K., Inazu, T., Ando, T., Ishida, H., Kiso, M., Tsuji and S., Tsujimoto, M. 2002. Molecular cloning and expression of a sixth type of  $\alpha$  2,8-sialyltransferase (ST8Sia VI) that sialylates O-glycans. *J. Biol. Chem.* 277: 24030-24038.
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## CHROMOSOMAL LOCATION

Genetic locus: St8sia5 (mouse) mapping to 18 E3.

## PRODUCT

ST8Sia V 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ST8Sia V shRNA Plasmid (m): sc-153869-SH and ST8Sia V shRNA (m) Lentiviral Particles: sc-153869-V as alternate gene silencing products.

For independent verification of ST8Sia V (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-153869A, sc-153869B and sc-153869C.

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

## APPLICATIONS

ST8Sia V siRNA (m) is recommended for the inhibition of ST8Sia V 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  $\mu$ M in 66  $\mu$ 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 ST8Sia V gene expression knockdown using RT-PCR Primer: ST8Sia V (m)-PR: sc-153869-PR (20  $\mu$ 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.