

# St3Gal-II siRNA (m): sc-153860

## BACKGROUND

Cell type-specific expression of unique carbohydrate structures on cell surface glycoproteins and glycolipids provides information relevant to cell-cell interactions in developing and adult organisms. Sialyltransferases contribute to the diversity of carbohydrate structures through their attachment of sialic acid to various terminal positions on glycolipid and glycoprotein (N-linked and O-linked) carbohydrate groups. St3Gal-II (St3  $\beta$ -galactoside  $\alpha$ -2,3-sialyltransferase 2), also known as SIAT4B, Gal-NAc6S, ST3GAL2 or ST3GAL.A.2, is a member of the glycosyltransferase 29 family of proteins. Predominantly expressed in heart and skeletal muscle, St3Gal-II exists as a single-pass membrane protein localizing to the Golgi apparatus. In addition to forward sialylation reactions (the transfer of NeuAc from CMP-NeuAc to galactose-containing substrates), St3Gal-II readily catalyzes reversible sialylation reactions (the transfer of NeuAc from sialylated donors to CMP (cytidine 5'-monophosphate)). This reverse reaction provides newly synthesized CMP-NeuAc which is then available for transfer to another acceptor.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: St3gal2 (mouse) mapping to 8 E1.

## PRODUCT

St3Gal-II 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 St3Gal-II shRNA Plasmid (m): sc-153860-SH and St3Gal-II shRNA (m) Lentiviral Particles: sc-153860-V as alternate gene silencing products.

For independent verification of St3Gal-II (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-153860A, sc-153860B and sc-153860C.

## 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

St3Gal-II siRNA (m) is recommended for the inhibition of St3Gal-II 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 St3Gal-II gene expression knockdown using RT-PCR Primer: St3Gal-II (m)-PR: sc-153860-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.