

# ST6GAL2 siRNA (h): sc-105192

## BACKGROUND

ST6GAL2 (ST6  $\beta$ -galactosamide  $\alpha$ -2,6-sialyltransferase 2), also known as SIAT2 (sialyltransferase 2) or ST6GalII, is a 529 amino acid single-pass type II membrane protein that belongs to the glycosyltransferase 29 family. Localizing to the Golgi stack membrane, ST6GAL2 is weakly expressed in some tissues, such as small intestine, colon and fetal brain. ST6GAL2 transfers sialic acid from the donor of substrate CMP-sialic acid to galactose-containing acceptor substrates, has  $\alpha$ -2,6-sialyltransferase activity toward oligosaccharides that have the Gal- $\beta$ -1,4-GlcNAc sequence at the non-reducing end of their carbohydrate groups, and has weak or no activities toward glycoproteins and glycolipids. The gene that encodes ST6GAL2 spans over 85 kb and maps to human chromosome 2q12.2. The 3' untranslated region of ST6GAL2 contains an Alu repetitive element, and the resulting protein exists as two alternatively spliced isoforms.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: ST6GAL2 (human) mapping to 2q12.2.

## PRODUCT

ST6GAL2 siRNA (h) 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ST6GAL2 shRNA Plasmid (h): sc-105192-SH and ST6GAL2 shRNA (h) Lentiviral Particles: sc-105192-V as alternate gene silencing products.

For independent verification of ST6GAL2 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-105192A and sc-105192B.

## 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

ST6GAL2 siRNA (h) is recommended for the inhibition of ST6GAL2 expression in human 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 ST6GAL2 gene expression knockdown using RT-PCR Primer: ST6GAL2 (h)-PR: sc-105192-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.