SANTA CRUZ BIOTECHNOLOGY, INC.

HS3ST3A1 siRNA (h): sc-93887

BACKGROUND

Heparan sulfate structures, which are responsible for executing multiple biologic activities, are generated and regulated by heparan sulfate biosynthetic enzymes. HS3ST3A1 (heparan sulfate (glucosamine) 3-O-sulfotransferase 3A1), also known as 3OST3A1 or HS3ST3A, is a 406 amino acid single-pass type II membrane protein that localizes to the Golgi apparatus and belongs to the heparan sulfate biosynthetic enzyme family. Expressed ubiquitously and present at higher levels in placenta, heart, kidney and liver, HS3ST3A1 functions as a heparan sulfate glucosaminyl 3-O-sulfotransferase that specifically transfers a sulfuryl group to an N-unsubstituted glucosamine linked to a 2-O-sulfo iduronic acid unit on heparan sulfate. The gene encoding HS3ST3A1 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: HS3ST3A1 (human) mapping to 17p12.

PROTOCOLS

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

PRODUCT

HS3ST3A1 siRNA (h) 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 HS3ST3A1 shRNA Plasmid (h): sc-93887-SH and HS3ST3A1 shRNA (h) Lentiviral Particles: sc-93887-V as alternate gene silencing products.

For independent verification of HS3ST3A1 (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-93887A, sc-93887B and sc-93887C.

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

HS3ST3A1 siRNA (h) is recommended for the inhibition of HS3ST3A1 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 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 HS3ST3A1 gene expression knockdown using RT-PCR Primer: HS3ST3A1 (h)-PR: sc-93887-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.