SANTA CRUZ BIOTECHNOLOGY, INC.

HS3ST4 siRNA (m): sc-144034

BACKGROUND

Heparan sulfate structures, which are responsible for executing multiple biologic activities, are generated and regulated by heparan sulfate biosynthetic enzymes. HS3ST4 (heparan sulfate (glucosamine) 3-O-sulfotransferase 4), also known as 3OST4, is a 456 amino acid single-pass type II membrane protein that localizes to the Golgi apparatus and belongs to the sulfotransferase 1 family. Expressed in a brain-specific manner, HS3ST4 functions to catalyze the transfer of a sulfuryl group to an N-unsubstituted glucosamine bound to a 2-O-sulfo iduronic acid unit on heparan sulfate, effectively playing a role in the generation of 3-O-sulfated glucosaminyl residues in heparan sulfate. The gene encoding HS3ST4 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Hs3st4 (mouse) mapping to 7 F3.

PRODUCT

HS3ST4 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see HS3ST4 shRNA Plasmid (m): sc-144034-SH and HS3ST4 shRNA (m) Lentiviral Particles: sc-144034-V as alternate gene silencing products.

For independent verification of HS3ST4 (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-144034A, sc-144034B and sc-144034C.

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

HS3ST4 siRNA (m) is recommended for the inhibition of HS3ST4 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 HS3ST4 gene expression knockdown using RT-PCR Primer: HS3ST4 (m)-PR: sc-144034-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.