SANTA CRUZ BIOTECHNOLOGY, INC.

GAL3ST2 siRNA (h): sc-94894

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The Power to Question

BACKGROUND

Sulfotransferase enzymes catalyze the sulfate conjugation of many hormones, neurotransmitters, drugs and xenobiotic compounds. These enzymes differ in their tissue distribution and substrate specificity, although the gene structure (number and length of exons) is similar among family members. GAL3ST2 (galactose-3-O-sulfotransferase 2), also known as GP3ST, is a 398 amino acid single-pass type II membrane protein belonging to the galactose-3-O-sulfotransferase family. GAL3ST2 localizes to Golgi apparatus and is ubiquitously expressed with high levels of expression found in heart, stomach, colon, liver and spleen. Strongly inhibited by Cu^{2+} and Zn^{2+}, GAL3ST2 catalyzes sulfonation by transferring a sulfate group to the 3' position of non-reducing β-galactosyl residues and may also be involved in tumor metastasis by regulating the expression of intergrins and the ability to adhere to selectins.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: GAL3ST2 (human) mapping to 2q37.3.

PRODUCT

GAL3ST2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GAL3ST2 shRNA Plasmid (h): sc-94894-SH and GAL3ST2 shRNA (h) Lentiviral Particles: sc-94894-V as alternate gene silencing products.

For independent verification of GAL3ST2 (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-94894A and sc-94894B.

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

GAL3ST2 siRNA (h) is recommended for the inhibition of GAL3ST2 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 GAL3ST2 gene expression knockdown using RT-PCR Primer: GAL3ST2 (h)-PR: sc-94894-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.

PROTOCOLS

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