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GAL3ST2 siRNA (m): sc-145307

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 integrins and the ability to adhere to selectins.

REFERENCES

- Hirahara, Y., et al. 2000. cDNA cloning, genomic cloning, and tissue-specific regulation of mouse cerebroside sulfotransferase. *Eur. J. Biochem.* 267: 1909-1917.
- Honke, K., et al. 2001. Molecular cloning and characterization of a human β -Gal-3'-sulfotransferase that acts on both type 1 and type 2 (Gal β 1-3/1-4GlcNAc-R) oligosaccharides. *J. Biol. Chem.* 276: 267-274.
- Suzuki, A., et al. 2001. Molecular cloning and expression of a novel human β -Gal-3-O-sulfotransferase that acts preferentially on N-acetyl-lactosamine in N- and O-glycans. *J. Biol. Chem.* 276: 24388-24395.
- El-Fasakhany, F.M., et al. 2001. A novel human Gal-3-O-sulfotransferase: molecular cloning, characterization, and its implications in biosynthesis of (SO(4)-3)Gal β 1-4(Fuc α 1-3)GlcNAc. *J. Biol. Chem.* 276: 26988-26994.
- Seko, A., et al. 2002. Down-regulation of Gal 3-O-sulfotransferase-2 (Gal3ST-2) expression in human colonic non-mucinous adenocarcinoma. *Jpn. J. Cancer Res.* 93: 507-515.
- Chandrasekaran, E.V., et al. 2004. Identification of physiologically relevant substrates for cloned Gal: 3-O-sulfotransferases (Gal3STs): distinct high affinity of Gal3ST-2 and LS180 sulfotransferase for the globo H backbone, Gal3ST-3 for N-glycan multiterminal Gal β 1, 4GlcNAc β units and 6-sulfoGal β 1, 4GlcNAc β , and Gal3ST-4 for the mucin core-2 trisaccharide. *J. Biol. Chem.* 279: 10032-10041.
- Shi, B.Z., et al. 2005. Gal3ST-2 involved in tumor metastasis process by regulation of adhesion ability to selectins and expression of integrins. *Biochem. Biophys. Res. Commun.* 332: 934-940.
- Seko, A., et al. 2005. Porcine, mouse and human galactose 3-O-sulphotransferase-2 enzymes have different substrate specificities; the porcine enzyme requires basic compounds for its catalytic activity. *Biochem. J.* 391: 77-85.
- Soga, K., et al. 2008. Alteration of the expression profiles of acidic mucin, sialyltransferase, and sulfotransferases in the intestinal epithelium of rats infected with the nematode *Nippostrongylus brasiliensis*. *Parasitol. Res.* 103: 1427-1434.

CHROMOSOMAL LOCATION

Genetic locus: Gal3st2 (mouse) mapping to 1 D.

PRODUCT

GAL3ST2 siRNA (m) is a target-specific 19-25 nt siRNA 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 (m): sc-145307-SH and GAL3ST2 shRNA (m) Lentiviral Particles: sc-145307-V as alternate gene silencing products.

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 (m) is recommended for the inhibition of GAL3ST2 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 GAL3ST2 gene expression knockdown using RT-PCR Primer: GAL3ST2 (m)-PR: sc-145307-PR (20 μl). Annealing temperature for the primers should be $55-60^{\circ}\text{C}$ and the extension temperature should be $68-72^{\circ}\text{C}$.

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.