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SANTA CRUZ BIOTECHNOLOGY, INC.

Oatp1 siRNA (m): sc-150156

BACKGROUND

The organic anion transporter family of proteins mediate hepatic uptake of cardiac glycosides. Oatp1 (organic anion-transporting polypeptide 1), also known as Slco1a1 (solute carrier organic anion transporter family, member 1a1), Slc21a1 or Oatp1a1, is a 670 amino acid multi-pass membrane protein belonging to the organo anion transporter family. Containing one Kazal-like domain, Oatp1 interacts with PDZK1, which is required for hepatocyte surface expression. Oatp1 is highly expressed in liver and is expressed at lower levels in kidney. Oatp1 mediates sodium-independent transport of organic anions such as taurocholate, prostaglandin E2 (PGE2), sulfotransferase 2A1 (SULT2A1), 17-β-glucuronosyl estradiol, estrone-3-sulfate, sulfobromophthalein (BSP), ouabain and gadoxetate. Oatp1 is encoded by a gene located on mouse chromosome 6 G2.

REFERENCES

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3. Isern, J., et al. 2001. Functional analysis and androgen-regulated expression of mouse organic anion transporting polypeptide 1 (Oatp1) in the kidney. Biochim. Biophys. Acta 1518: 73-78.
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6. Donner, M.G., et al. 2007. Obstructive cholestasis induces TNF-α- and IL-1 -mediated periportal downregulation of Bsep and zonal regulation of Ntcp, Oatp1a4, and Oatp1b2. Am. J. Physiol. Gastrointest. Liver Physiol. 293: G1134-G1146.

CHROMOSOMAL LOCATION

Genetic locus: Slco1a1 (mouse) mapping to 6 G2.

PRODUCT

Oatp1 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 Oatp1 shRNA Plasmid (m): sc-150156-SH and Oatp1 shRNA (m) Lentiviral Particles: sc-150156-V as alternate gene silencing products.

For independent verification of Oatp1 (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-150156A, sc-150156B and sc-150156C.

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

Oatp1 siRNA (m) is recommended for the inhibition of Oatp1 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 Oatp1 gene expression knockdown using RT-PCR Primer: Oatp1 (m)-PR: sc-150156-PR (20 µl, 383 bp). 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.