

OATP-B siRNA (h): sc-62711

BACKGROUND

The organic anion transporter family of proteins mediate hepatic uptake of cardiac glycosides. OATP-A and OATP-C are both pravastatin transporters, suggesting that they are responsible for the hepatic uptake of the liver-specific hydroxymethylglutaryl-CoA reductase inhibitor in mouse, rat and human. OATP-A is expressed in liver and kidney and helps mediate sodium-independent uptake of the anionic steroid conjugates dehydroepiandrosterone sulfate, estradiol-17-glucuronide and prostaglandin. OATP-C is exclusively expressed in liver and is localized to the basolateral hepatocyte membrane. OATP-B, also known as Slco2b1 or Slc21a9, mediates the NA^+ independent transport of organic anions such as taurocholate, leukotriene C₄, thromboxane B₂ and iloprost during the absorption of bile acids in the liver.

REFERENCES

1. Nagase, T., et al. 1999. Prediction of the coding sequences of unidentified human genes. XII. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 5: 355-364.
2. St-Pierre, M.V., et al. 2002. Characterization of an organic anion transporting polypeptide (OATP-B) in human placenta. J. Clin. Endocrinol. Metab. 87: 1856-1863.
3. Pizzagalli, F., et al. 2002. Identification of a novel human organic anion transporting polypeptide as a high affinity thyroxine transporter. Mol. Endocrinol. 16: 2283-2296.
4. Cai, S.Y., et al. 2002. An evolutionarily ancient Oatp: insights into conserved functional domains of these proteins. Am. J. Physiol. Gastrointest. Liver Physiol. 282: G702-G710.
5. Takagi, M., et al. 2004. Enhancement of the inhibitory activity of Oatp antisense oligonucleotides by incorporation of 2'-O,4'-C-ethylene-bridged nucleic acids (ENA) without a loss of subtype selectivity. Biochemistry 43: 4501-4510.
6. Niemi, M., et al. 2004. High plasma pravastatin concentrations are associated with single nucleotide polymorphisms and haplotypes of organic anion transporting polypeptide-C (OATP-C, SLC01B1). Pharmacogenetics 14: 429-440.

CHROMOSOMAL LOCATION

Genetic locus: SLC02B1 (human) mapping to 11q13.4.

PRODUCT

OATP-B 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 OATP-B shRNA Plasmid (h): sc-62711-SH and OATP-B shRNA (h) Lentiviral Particles: sc-62711-V as alternate gene silencing products.

For independent verification of OATP-B (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-62711A, sc-62711B and sc-62711C.

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

OATP-B siRNA (h) is recommended for the inhibition of OATP-B 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 OATP-B gene expression knockdown using RT-PCR Primer: OATP-B (h)-PR: sc-62711-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.