SANTA CRUZ BIOTECHNOLOGY, INC.

OATP-B siRNA (m): sc-62712

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

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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, SLCO1B1). Pharmacogenetics 14: 429-440.

CHROMOSOMAL LOCATION

Genetic locus: Slco2b1 (mouse) mapping to 7 E2.

PRODUCT

OATP-B 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 OATP-B shRNA Plasmid (m): sc-62712-SH and OATP-B shRNA (m) Lentiviral Particles: sc-62712-V as alternate gene silencing products.

For independent verification of OATP-B (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-62712A, sc-62712B and sc-62712C.

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 (m) is recommended for the inhibition of OATP-B 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 OATP-B gene expression knockdown using RT-PCR Primer: OATP-B (m)-PR: sc-62712-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.