SANTA CRUZ BIOTECHNOLOGY, INC.

OATP8 siRNA (h): sc-61253

BACKGROUND

The organic anion transporter family of proteins mediate hepatic uptake of cardiac glycosides. OATP8 (organic anion transporter 8), also known as SLCO1B3 (solute carrier organic anion transporter family member 1B3), SLC21A8 (solute carrier family 21 member 8) or LST-2 (liver-specific organic anion transporter 2), is a 702 amino acid member of the organic anion transporter protein family. As a multi-pass membrane protein, OATP8 mediates the Na^+-independent transport of triiodothyronine (T3), leukotriene C4, taurochlate and other organic anions. OATP8 is also thought to transport steroid conjugates, such as 17-β-glucuronosyl estradiol and dehydroepiandrosterone sulfate (DHEAS). Oatp4 is highly expressed in liver and is N-glycosylated.

REFERENCES

1. König, J., et al. 2000. Localization and genomic organization of a transporting polypeptide. J. Biol. Chem. 275: 23161-23168.
2. Abe, T., et al. 2001. LST-2, a human liver-specific organic anion transporter, determines methotrexate sensitivity in gastrointestinal cancers. Gastroenterology 120: 1689-1699.
3. Meier-Abt, F., et al. 2004. Identification of phalloidin uptake systems of rat and human liver. Biochim. Biophys. Acta 1664: 64-69.
4. Letschert, K., et al. 2004. Mutations in the SLCO1B3 gene affecting the substrate specificity of the hepatocellular uptake transporter OATP1B3 (OATP8). Pharmacogenetics 14: 441-452.
5. Letschert, K., et al. 2005. Vectorial transport of the peptide CCK-8 by double-transfected MDCKII cells stably expressing the organic anion transporter OATP1B3 (OATP8) and the export pump ABCC2. J. Pharmacol. Exp. Ther. 313: 549-556.

CHROMOSOMAL LOCATION

Genetic locus: SLCO1B3 (human) mapping to 12p12.2.

PRODUCT

OATP8 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 OATP8 shRNA Plasmid (h): sc-61253-SH and OATP8 shRNA (h) Lentiviral Particles: sc-61253-V as alternate gene silencing products.

For independent verification of OATP8 (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-61253A, sc-61253B and sc-61253C.

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.

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

OATP8 siRNA (h) is recommended for the inhibition of OATP8 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 OATP8 gene expression knockdown using RT-PCR Primer: OATP8 (h)-PR: sc-61253-PR (20 µl, 400 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.