SANTA CRUZ BIOTECHNOLOGY, INC.

OATP-D siRNA (m): sc-62714

BACKGROUND

The organic anion transporter family of proteins mediate hepatic uptake of cardiac glycosides. OATP-D (organic anion transporter D), also known as SLCO1B3 (solute carrier organic anion transporter family member 1B3), SLC21A11 (solute carrier family 21 member 11) or PGE1 transporter, is a 710 amino acid member of the organic anion transporter protein family. As a multi-pass membrane protein, OATP-D mediates the Na^+-independent transport of vasopressin, prostaglandins (PG) E1 and E2, thyroxine (T4), deltorphin II and other organic anions, but not estrone-3-sulfate, DPDPE, taurocholate, DHEAS or digoxin. OATP-D is ubiquitously expressed with highest levels present in leukocytes and spleen. OATP-D is expressed as four isoforms produced by alternative splicing events.

REFERENCES

1. Hsiang, B., et al. 1999. A novel human hepatic organic anion transporting polypeptide (OATP2). Identification of a liver-specific human organic anion transporting polypeptide and identification of rat and human hydroxymethylglutaryl-CoA reductase inhibitor transporters. J. Biol. Chem. 274: 37161-37168.
2. Konig, J., et al. 2000. Localization and genomic organization of a new hepatocellular organic anion transporting polypeptide. J. Biol. Chem. 275: 23161-23168.
3. 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.
4. 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.
5. Patel, P., et al. 2002. Semi quantitative expression analysis of Mdr-3, FIC1, BSEP, OATP-A, OATP-C, OATP-D, OATP-E and NTCP gene transcripts in 1st and 3rd trimester human placenta. Placenta 24: 39-44.
6. Adachi, H., et al. 2003. Molecular characterization of human and rat organic anion transporter OATP-D. Am. J. Physiol. Renal Physiol. 285: F1188-F1197.

CHROMOSOMAL LOCATION

Genetic locus: Slco3a1 (mouse) mapping to 7 D2.

PRODUCT

OATP-D 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-D shRNA Plasmid (m): sc-62714-SH and OATP-D shRNA (m) Lentiviral Particles: sc-62714-V as alternate gene silencing products.

For independent verification of OATP-D (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-62714A, sc-62714B and sc-62714C.

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-D siRNA (m) is recommended for the inhibition of OATP-D 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-D gene expression knockdown using RT-PCR Primer: OATP-D (m)-PR: sc-62714-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.