SANTA CRUZ BIOTECHNOLOGY, INC.

Oatp3 siRNA (m): sc-61250

BACKGROUND

The organic anion transporting polypeptide (OATP) family of proteins play a role in drug absorption, distribution and excretion. OATP proteins mediate the uptake of a broad range of substrates, including bile salts, hormones, drugs and antibiotics, and they are expressed in various tissues, such as gut, brain, kidney and liver. Oatp3, also known as Slco1a5 and Slc21a7, is a 670 amino acid member of the OATP protein family. As a multi-pass membrane protein, Oatp3 mediates the transport of organic anions, such as thyroid hormones and taurocholate during the absorption of bile acids in the liver. The gene that encodes Oatp3 maps to mouse chromosome 6 G2.

REFERENCES

1. Cattori, V., et al. 2001. Localization of organic anion transporting polypeptide 4 (OATP4) and comparison of its substrate specificity with OATP1, OATP2 and OATP3. Pflugers Arch. 443: 188-195.
2. Walters, H.C., et al. 2001. Expression, transport properties, and chromosomal location of organic anion transporter subtype 3. Am. J. Physiol. Gastrointest. Liver Physiol. 279: G1188-G1200.
3. Yarim, M., et al. 2004. Application of QSAR analysis to organic anion transporting polypeptide 1a5 (OATP1a5) substrates. Bioorg. Med. Chem. 13: 463-471.
4. Hosoya, K., et al. 2004. Transporter mRNA expres epithelial cell line (TR-SIE). Drug Metab. Pharmacokinet. 19: 264-269.
5. Kusuhara, H. and Sugiyama, Y. 2004. Efflux transport systems for organic anions and cations at the blood-CSF barrier. Adv. Drug Deliv. Rev. 56: 1741-1763.
6. Ohtsuki, S., et al. 2004. Localization of organic anion transporting polypeptide 3 (OATP3) in mouse brain parenchymal and capillary endothelial cells. J. Neurochem. 90: 743-749.
7. Maeda, T., et al. 2005. Regulation of drug transporters by the farnesoid X receptor in mice. Mol. Pharm. 1: 281-289.

CHROMOSOMAL LOCATION

Genetic locus: Sclo1a5 (mouse) mapping to 6 G2.

PRODUCT

Oatp3 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 Oatp3 shRNA Plasmid (m): sc-61250-SH and Oatp3 shRNA (m) Lentiviral Particles: sc-61250-V as alternate gene silencing products.

For independent verification of Oatp3 (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-61250A, sc-61250B and sc-61250C.

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

Oatp3 siRNA (m) is recommended for the inhibition of Oatp3 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 Oatp3 gene expression knockdown using RT-PCR Primer: Oatp3 (m)-PR: sc-61250-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.