SANTA CRUZ BIOTECHNOLOGY, INC.

OATP-E siRNA (h): sc-61247

BACKGROUND

The organic anion transporter family of proteins mediate hepatic uptake of cardiac glycosides. OATP-E (organic anion transporter E), also known as SLCO4A1 (solute carrier organic anion transporter family member 4A1), SLC21A12 (solute carrier family 21 member 12) or POAT, is a 722 amino acid member of the organic anion transporter protein family. As a multi-pass membrane protein, OATP-E mediates the Na^+-independent transport of estrone-3-sulfate, taurocholate and the thyroid hormones T3 (triiodo-L-thyronine), T4 (thyroxine) and rT3. OATP-E is ubiquitously expressed except in leukocytes and spleen. OATP-E is expressed as four isoforms produced by alternative splicing events.

REFERENCES

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2. Fujiwara, K., et al. 2001. Identification of thyroid hormone transporters in humans: different molecules are involved in a tissue-specific manner. Endocrinology 142: 2005-2012.
3. Ito, A., et al. 2003 Distribution of rat organic anion transporting polypeptide-E (OATP-E) in the rat eye. Invest. Ophthalmol. Vis. Sci. 44: 4877-4884.
4. Sato, K., et al. 2003. Expression of organic anion transporting polypeptide E (OATP-E) in human placenta. Placenta 24: 144-148.
5. Nozawa, T., et al. 2004. Involvement of estrone-3-sulfate transporters in proliferation of hormone-dependent breast cancer cells. J. Pharmacol. Exp. Ther. 311: 1032-1037.
6. Wang, P., et al. 2005. Interaction with PDZK1 is required for expression of organic anion transporting protein 1A1 on the hepatocyte surface. J. Biol. Chem. 280: 30143-30149.
7. Sai, Y., et al. 2006. Predominant contribution of organic anion transporting polypeptide OATP-B (OATP2B1) to apical uptake of estrone-3-sulfate by human intestinal Caco-2 cells. Drug Metab. Dispos. 34: 1423-1431.

CHROMOSOMAL LOCATION

Genetic locus: SLCO4A1 (human) mapping to 20q13.33.

PRODUCT

OATP-E 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-E shRNA Plasmid (h): sc-61247-SH and OATP-E shRNA (h) Lentiviral Particles: sc-61247-V as alternate gene silencing products.

For independent verification of OATP-E (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-61247A, sc-61247B and sc-61247C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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-E siRNA (h) is recommended for the inhibition of OATP-E 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-E gene expression knockdown using RT-PCR Primer: OATP-E (h)-PR: sc-61247-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.