

OATP-E (P-16): sc-51170



The Power to Question

BACKGROUND

The organic anion transporter family of proteins includes OATP1, OATP2, OATP3, OATP4, OATP-E, Oatp-F and OATP8. OATP1 and OATP2 mediate hepatic uptake of cardiac glycosides and 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. The integral multi-pass membrane proteins OATP3, OATP4, OATP-E, Oatp-F and OATP8 (also designated SLC21A7, SLC21A10, SLC04A1 and SLC01B3, respectively) mediate the NA⁺-independent transport of organic anions such as taurocholate, leukotriene C4, thyroid hormones T3 and T4 dehydroepian-drosterone sulfate (DHEAS) and methotrexate during the absorption of bile acids in the liver. Oatp-E exists in four isoforms and demonstrates nearly ubiquitous expression, the exceptions being spleen tissue and leukocytes.

REFERENCES

1. Tamai, I., Nezu, J., Uchino, H., Sai, Y., Oku, A., Shimane, M. and Tsuji, A. 2000. Molecular identification and characterization of novel members of the human organic anion transporter (OATP) family. *Biochem. Biophys. Res. Commun.* 273: 251-260.
2. Fujiwara, K., Adachi, H., Nishio, T., Unno, M., Tokui, T., Okabe, M., Onogawa, T., Suzuki, T., Asano, N., Tanemoto, M., Seki, M., Shiiba, K., Suzuki, M., Kondo, Y., Nunoki, K., Shimosegawa, T., Iinuma, K., Ito, S., Matsuno, S. and Abe, T. 2001. Identification of thyroid hormone transporters in humans: different molecules are involved in a tissue-specific manner. *Endocrinology* 142: 2005-2012.
3. Ito, A., Yamaguchi, K., Tomita, H., Suzuki, T., Onogawa, T., Sato, T., Mizutamari, H., Mikkaichi, T., Nishio, T., Suzuki, T., Unno, M., Sasano, H., Abe, T. and Tamai, M. 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., Sugawara, J., Sato, T., Mizutamari, H., Suzuki, T., Ito, A., Mikkaichi, T., Onogawa, T., Tanemoto, M., Unno, M., Abe, T. and Okamura, K. 2003. Expression of organic anion transporting polypeptide E (OATP-E) in human placenta. *Placenta* 24: 144-148.
5. Nozawa, T., Suzuki, M., Takahashi, K., Yabuuchi, H., Maeda, T., Tsuji, A. and Tamai, I. 2004. Involvement of estrone-3-sulfate transporters in proliferation of hormone-dependent breast cancer cells. *J. Pharmacol. Exp. Ther.* 311: 1032-1037.
6. Sai, Y., Kaneko, Y., Ito, S., Mitsuoka, K., Kato, Y., Tamai, I., Artursson, P. and Tsuji, A. 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: SLC04A1 (human) mapping to 20q13.33; Slco4a1 (mouse) mapping to 2 H4.

SOURCE

OATP-E (P-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of OATP-E of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-51170 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

OATP-E (P-16) is recommended for detection of all isoforms of OATP-E of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for OATP-E siRNA (m): sc-61248.

Molecular Weight of OATP-E: 68 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

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