SANTA CRUZ BIOTECHNOLOGY, INC.

Oatp4 (M-79): sc-134460



BACKGROUND

The organic anion transporter family of proteins mediate hepatic uptake of cardiac glycosides. Oatp4, also known as Slco1b2 (solute carrier organic anion transporter family member 1B2), Slc21a10 (solute carrier family 21 member 10) or LST-1 (liver-specific organic anion transporter 1), is a 689 amino acid member of the organic anion transporter protein family. As a multi-pass membrane protein, Oatp4 mediates the Na⁺ transport of bromosulfophthalein, taurochlate and other organic anions. Oatp4 is also thought to transport steroid conjugates, such as 17- β -glucuronosyl estradiol, dehydroepiandrosterone sulfate, estrone-3-sulfate and prostaglandin E2. Oatp4 is liver-specific and expressed as three isoforms produced by alternative splicing.

REFERENCES

- Kakyo, M., Unno, M., Tokui, T., Nakagomi, R., Nishio, T., Iwasashi, H., Nakai, D., Seki, M., Suzuki, M., Naitoh, T., Matsuno, S., Yawo, H. and Abe, T. 1999. Molecular characterization and functional regulation of a novel rat liverspecific organic anion transporter rlst-1. Gastroenterology 117: 770-775.
- Cattori, V., Hagenbuch, B., Hagenbuch, N., Stieger, B., Ha, R., Winterhalter, K.E. and Meier, P.J. 2000. Identification of organic anion transporting polypeptide 4 (Oatp4) as a major full-length isoform of the liver-specific transporter-1 (rlst-1) in rat liver. FEBS Lett. 474: 242-245.
- Choudhuri, S., Ogura, K. and Klaassen, C.D. 2000. Cloning of the fulllength coding sequence of rat liver-specific organic anion transporter-1 (rlst-1) and a splice variant and partial characterization of the rat lst-1 gene. Biochem. Biophys. Res. Commun. 274: 79-86.
- Cattori, V., van Montfoort, J.E., Stieger, B., Landmann, L., Meijer, D.K., Winterhalter, K.H., Meier, P.J. and Hagenbuch, B. 2001. Localization of organic anion transporting polypeptide 4 (Oatp4) in rat liver and comparison of its substrate specificity with Oatp1, Oatp2 and Oatp3. Pflugers Arch. 443: 188-195.
- Li, N., Choudhuri, S. Cherrington, N.J. and Klaassen, C.D. 2004. Downregulation of mouse organic anion-transporting polypeptide 4 (Oatp4; Oatp1b2; Slc21a10) mRNA by lipopolysaccharide through the toll-like receptor 4 (TLR4). Drug Metab. Dispos. 32: 1265-1271.
- Li, N. and Klaassen, C.D. 2004. Role of liver-enriched transcription factors in the down-regulation of organic anion transporting polypeptide 4 (Oatp4; Oatplb2; slc21a10) by lipopolysaccharide. Mol. Pharmacol. 66: 694-701.
- Li, N. and Klaassen, C.D. 2005. Lipopolysaccharide-induced down-regulation of organic anion transporting polypeptide 4 (Oatp4; Slc21a10) is independent of tumor necrosis factor-α, Interleukin-1β, Interleukin-6, or inducible nitric oxide synthase. Toxicol. Sci. 83: 197-203.
- 8. Moser, K. and White, F.M. 2006. Phosphoproteomic analysis of rat liver by high capacity IMAC and LC-MS/MS. J. Proteome Res. 5: 98-104.

CHROMOSOMAL LOCATION

Genetic locus: Slco1b2 (mouse) mapping to 6 G2.

RESEARCH USE

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

SOURCE

Oatp4 (M-79) is a rabbit polyclonal antibody raised against amino acids 611-689 mapping at the C-terminus of Oatp4 of mouse origin.

PRODUCT

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

APPLICATIONS

Oatp4 (M-79) is recommended for detection of Oatp4 isoforms 1 and 2 of mouse and, to a lesser extent, rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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 Oatp4 siRNA (m): sc-61252, Oatp4 shRNA Plasmid (m): sc-61252-SH and Oatp4 shRNA (m) Lentiviral Particles: sc-61252-V.

Molecular Weight (predicted) of Oatp4: 77 kDa.

Molecular Weight (observed) of Oatp4: 98-107 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.

PROTOCOLS

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

MONOS Satisfation Guaranteed

Try **Oatp4 (D-12): sc-376904**, our highly recommended monoclonal alternative to Oatp4 (M-79).