

OATP-A (C-15): sc-18428

BACKGROUND

The organic anion transporting polypeptides, OATP-A (also designated OATP1, OATP1A2 and SLC21A3) and OATP-C (also designated OATP2, SLC21A6 and LST1), mediate hepatic uptake of cardiac glycosides. The expression of OATP-C, but not OATP-A, is inducible by phenobarbital and pregnenolone-16 α -carbonitrile, resulting in the increased capacity of the liver to extract cardiac glycosides from the plasma. OATP-A is expressed in liver and kidney and helps mediate sodium-independent uptake of the anionic steroid conjugates dehydroepiandrosterone sulfate, estradiol-17-glucuronide and prostaglandin. OATP-C is exclusively expressed in liver and is localized to the basolateral hepatocyte membrane. Although OATP-C mRNA levels decrease during pregnancy and increase postpartum, OATP-C protein levels remain relatively constant. OATP-C transports taurocholic acid, the adrenal androgen dehydroepiandrosterone sulfate, thyroid hormone, hydroxymethylglutaryl-CoA reductase inhibitor and pravastatin. OATP-C is therefore a novel organic anion transport protein that has overlapping but not identical substrate specificities with other subtypes of OATP. OATP-A and OATP-C 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.

REFERENCES

- Hsiang, B., et al. 1999. A novel human hepatic organic anion transporting polypeptide (OATP2). *J. Biol. Chem.* 274: 37161-37168.
- Konig, J., et al. 2000. Localization and genomic organization of a new hepatocellular organic anion transporting polypeptide. *J. Biol. Chem.* 275: 23161-23168.
- Rausch-Derra, et al. 2001. Differential effects of microsomal enzyme-inducing chemicals on the hepatic expression of rat organic anion transporters, OATP1 and OATP2. *Hepatology* 33: 1469-1478.
- Isern, J., et al. 2001. Functional analysis and androgen-regulated expression of mouse organic anion transporting polypeptide 1 (Oatp1) in the kidney. *Biochem. Biophys. Acta* 1518: 73-78.
- Cao, J., et al. 2001. Differential regulation of hepatic bile salt and organic anion transporters in pregnant and postpartum rats and the role of prolactin. *Hepatology* 33: 140-147.

CHROMOSOMAL LOCATION

Genetic locus: SLC01A2 (human) mapping to 12p12.

SOURCE

OATP-A (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of OATP-A of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-18428 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

OATP-A (C-15) is recommended for detection of OATP-A of human 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-A siRNA (h): sc-42548, OATP-A shRNA Plasmid (h): sc-42548-SH and OATP-A shRNA (h) Lentiviral Particles: sc-42548-V.

Molecular Weight of OATP-A: 80 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237.

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.

SELECT PRODUCT CITATIONS

- Miki, Y., et al. 2006. Expression of the steroid and xenobiotic receptor and its possible target gene, organic anion transporting polypeptide-A, in human breast carcinoma. *Cancer Res.* 66: 535-542.

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.



Try **OATP-A (E-7): sc-365007**, our highly recommended monoclonal alternative to OATP-A (C-15).