SANTA CRUZ BIOTECHNOLOGY, INC.

OATP-A (E-7): sc-365007

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-16α-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 dehydroepiandroserone 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

1. Hsiang, B., et al. 1999. A novel human hepatic organic anion transporting polypeptide (OATP2). J. Biol. Chem. 274: 37161-37168.
2. Konig, J., et al. 2000. Localization and genomic organization of a new hepatocellular organic anion transporting polypeptide. J. Biol. Chem. 275: 23161-23168.
3. 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: SLCO1A2 (human) mapping to 12p12.1.

SOURCE

OATP-A (E-7) is a mouse monoclonal antibody raised against amino acids 611-665 mapping near the C-terminus of OATP-A of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

OATP-A (E-7) is available conjugated to agarose (sc-365007 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365007 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365007 PE), fluorescein (sc-365007 FITC), Alexa Fluor® 488 (sc-365007 AF488), Alexa Fluor® 546 (sc-365007 AF546), Alexa Fluor® 594 (sc-365007 AF594) or Alexa Fluor® 647 (sc-365007 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365007 AF680) or Alexa Fluor® 790 (sc-365007 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

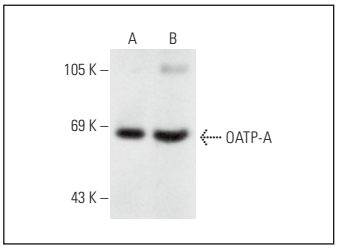
OATP-A (E-7) is recommended for detection of OATP-A of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for OATP-A siRNA (h): sc-42548, OATP-A shRNA Plasmid (h): sc-42548-SH and OATP-A shRNA (h) Lentiviral Particles: sc-42548-V.

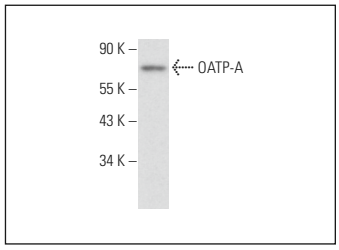
Molecular Weight of OATP-A: 80 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, MCF7 whole cell lysate: sc-2206 or IMR-32 cell lysate: sc-2409.

DATA



OATP-A (E-7): sc-365007. Western blot analysis of OATP-A expression in IMR-32 (**A**) and SH-SY5Y (**B**) whole cell lysates.



OATP-A (E-7): sc-365007. Western blot analysis of OATP-A expression in MCF7 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Morita, T., et al. 2020. pH-dependent transport kinetics of the human organic anion-transporting polypeptide 1A2. Drug Metab. Pharmacokinet. 35: 220-227.
2. Han, H., et al. 2022. Comparison of the transport kinetics of fexofenadine and its pH dependency among OATP1A2 genetic variants. Drug Metab. Pharmacokinet. 47: 100470.
3. Jado, J.C., et al. 2024. *In vitro* evolution and whole genome analysis to study chemotherapy drug resistance in haploid human cells. Sci. Rep. 14: 13989.

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 for detailed protocols and support products.