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SLCO1B1 Antibody

Catalog # ASC11931

Product Information

Application	WB, IF, E
Primary Accession	Q9Y6L6
Other Accession	NP_006437, 225543525
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	76449
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	SLCO1B1 antibody can be used for detection of SLCO1B1 by Western blot at 1 - 2 □g/ml. For immunofluorescence start at 20 □g/mL.

Additional Information

Gene ID	10599
Other Names	Solute carrier organic anion transporter family member 1B1, Liver-specific organic anion transporter 1, LST-1, OATP-C, Sodium-independent organic anion-transporting polypeptide 2, OATP-2, Solute carrier family 21 member 6, SLCO1B1, LST1, OATP1B1, OATP2, OATPC, SLC21A6
Target/Specificity	SLCO1B1; SLCO1B1 antibody is human specific. At least four isoforms of SLCO1B1 are known to exist. This antibody is predicted to not cross-react with other SLCO1B proteins.
Reconstitution & Storage	SLCO1B1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	SLCO1B1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SLCO1B1
Synonyms	LST1, OATP1B1, OATP2, OATPC, SLC21A6
Function	Mediates the Na(+)-independent uptake of organic anions (PubMed:10358072, PubMed:15159445, PubMed:17412826). Shows broad substrate specificity, can transport both organic anions such as bile acid taurocholate (cholyltaurine) and conjugated steroids (dehydroepiandrosterone 3-sulfate, 17-beta-glucuronosyl estradiol, and estrone 3-sulfate), as well as eicosanoids (prostaglandin E2, thromboxane B2,

	leukotriene C4, and leukotriene E4), and thyroid hormones (T4/L-thyroxine, and T3/3,3',5'-triiodo-L-thyronine) (PubMed:10358072, PubMed:10601278, PubMed:10873595, PubMed:11159893, PubMed:12196548, PubMed:12568656, PubMed:15159445, PubMed:15970799, PubMed:16627748, PubMed:17412826, PubMed:19129463, PubMed:26979622). Can take up bilirubin glucuronides from plasma into the liver, contributing to the detoxification-enhancing liver-blood shuttling loop (PubMed:22232210). Involved in the clearance of endogenous and exogenous substrates from the liver (PubMed:10358072, PubMed:10601278). Transports coproporphyrin I and III, by-products of heme synthesis, and may be involved in their hepatic disposition (PubMed:26383540). May contribute to regulate the transport of organic compounds in testes across the blood-testis-barrier (Probable). Can transport HMG-CoA reductase inhibitors (also known as statins), such as pravastatin and pitavastatin, a clinically important class of hypolipidemic drugs (PubMed:10601278, PubMed:15159445, PubMed:15970799). May play an important role in plasma and tissue distribution of the structurally diverse chemotherapeutic drug methotrexate (PubMed:23243220). May also transport antihypertension agents, such as the angiotensin-converting enzyme (ACE) inhibitor prodrug enalapril, and the highly selective angiotensin II AT1-receptor antagonist valsartan, in the liver (PubMed:16624871, PubMed:16627748). Shows a pH-sensitive substrate specificity towards prostaglandin E2 and T4 which may be ascribed to the protonation state of the binding site and leads to a stimulation of substrate transport in an acidic microenvironment (PubMed:19129463). Hydrogencarbonate/HCO3(-) acts as the probable counteranion that exchanges for organic anions (PubMed:19129463).
Cellular Location	Basolateral cell membrane; Multi-pass membrane protein. Basal cell membrane; Multi-pass membrane protein. Note=Detected in basolateral membranes of hepatocytes (PubMed:12196548). Localized to the basal membrane of Sertoli cells (PubMed:35307651).
Tissue Location	Highly expressed in liver, at the basolateral membranes of centrilobular hepatocytes (PubMed:10358072, PubMed:10601278, PubMed:10873595, PubMed:12196548, PubMed:22232210) Expressed in liver (at protein level) (PubMed:15159445). Expressed in fetal liver (PubMed:10873595). Not detected in heart, brain, placenta, lung, skeletal muscle, kidney, pancreas, spleen, thymus, prostate, testis, ovary, small intestine, colon and leukocyte (PubMed:10358072, PubMed:10873595). In testis, primarily localized to the basal membrane of Sertoli cells and weakly expressed in Leydig cells and within the tubules (PubMed:35307651).

Background

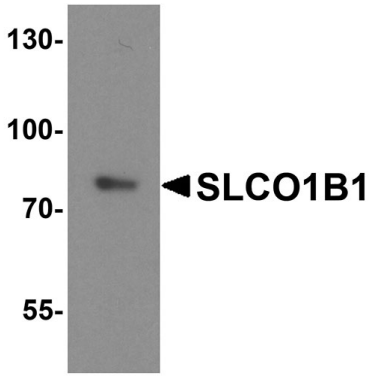
SLCO1B1 is a transmembrane receptor that mediates the sodium-independent uptake of numerous endogenous compounds including bilirubin, 17-beta-glucuronosyl estradiol and may play an important role in the clearance of bile acids and organic anions from the liver (1,2). It contains one Kazal-like domain and belongs to the organo-anion transporter family (2,3). SLCO1B1 is highly expressed in liver and is localized to the basolateral hepatocyte membrane. It is responsible for the hepatic uptake of the liver-specific hydroxymethylglutaryl-CoA reductase inhibitor in mouse, rat and human (3,4).

References

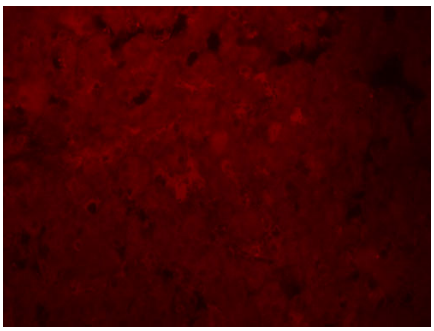
Abe T, Kakyo M, Tokui T, et al. Identification of a novel gene family encoding human liver-specific organic anion transporter LST-1. J. Biol. Chem. 1999; 274:17159-63.
Konig J, Cui Y, Nies AT, et al. A novel human organic anion transporting polypeptide localized to the basolateral hepatocyte membrane. Am. J. Physiol. Gastrointest. Liver Physiol. 2000; 278:G156-64.
Michalski C, Cui Y, Nies AT, et al. A naturally occurring mutation in the SLC21A6 gene causing impaired

membrane localization of the hepatocyte uptake transporter. J. Biol. Chem. 2002; 277:43058-63.
Yao J, Hong W, Huang J, et al. N-Glycosylation dictates proper processing of organic anion transporting polypeptide 1B1. PLoS One 2012; 7:e52563.

Images



Western blot analysis of SLCO1B1 in human liver tissue lysate with SLCO1B1 antibody at 1 µg/ml.



Immunofluorescence of SLCO1B1 in human liver tissue with SLCO1B1 antibody at 20 µg/ml.