abcam

ab222094

Anti-SLCO2B1/OATP2B1 antibody [EPR22212]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR22212
Purification technique	Affinity purification Protein A
Concentration	0.439 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/50
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information SLCO2B1

Function

Mediates the Na(+)-independent transport of steroid sulfate conjugates and other specific organic anions (PubMed:10873595, PubMed:11159893, PubMed:11932330, PubMed:12724351, PubMed:14610227, PubMed:16908597, PubMed:18501590, PubMed:20507927, PubMed:22201122, PubMed:23531488, PubMed:25132355, PubMed:26383540, PubMed:27576593, PubMed:28408210, PubMed:29871943, PubMed:34628357). Responsible for the transport of estrone 3-sulfate (E1S) through the basal membrane of syncytiotrophoblast, highlighting a potential role in the placental absorption of fetal-derived sulfated steroids including the steroid hormone precursor dehydroepiandrosterone sulfate (DHEA-S) (PubMed:11932330, PubMed:12409283). Also facilitates the uptake of sulfated steroids at the basal/sinusoidal membrane of hepatocytes, therefore accounting for the major part of organic anions clearance of liver (PubMed:11159893). Mediates the intestinal uptake of sulfated steroids (PubMed:12724351, PubMed:28408210). Mediates the uptake of the neurosteroids DHEA-S and pregnenolone sulfate (PregS) into the endothelial cells of the blood-brain barrier as the first step to enter the brain (PubMed:16908597, PubMed:25132355). Also plays a role in the reuptake of neuropeptides such as substance P/TAC1 and vasoactive intestinal peptide/VIP released from retinal neurons (PubMed:25132355). May act as a heme transporter that promotes cellular iron availability via heme oxygenase/HMOX2 and independently of TFRC (PubMed:35714613). Also transports heme by-product coproporphyrin III (CPIII), and may be involved in their hepatic disposition (PubMed:26383540). Mediates the uptake of other substrates such as prostaglandins D2 (PGD2), E1 (PGE1) and E2 (PGE2), taurocholate, L-thyroxine, leukotriene C4 and thromboxane B2 (PubMed:10873595, PubMed:14610227, PubMed:19129463, PubMed:29871943, Ref.25). May contribute to regulate the transport of organic compounds in testis across the blood-testis-barrier (Probable). Shows a pH-sensitive substrate specificity 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:14610227, PubMed:19129463, PubMed:22201122). The exact transport mechanism has not been yet deciphered but most likely involves an anion exchange, coupling the cellular uptake of organic substrate with the efflux of an anionic compound (PubMed:19129463, PubMed:20507927, PubMed:26277985). Hydrogencarbonate/HCO3(-) acts as a probable counteranion that exchanges for organic anions (PubMed:19129463). Cytoplasmic glutamate may also act as counteranion in the placenta (PubMed:26277985). An inwardly directed proton gradient has also been proposed as the driving force of E1S uptake with a (H(+):E1S) stoichiometry of (1:1)

(PubMed:20507927). Isoform 3. Has estrone 3-sulfate (E1S) transport activity comparable with the full-length isoform 1.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The SLCO2B1 also known as OATP2B1 is a member of the organic anion transporting polypeptides family. It functions as a transporter responsible for mediating the uptake of various drugs hormones and other organic compounds. This protein has a molecular mass of about 80 kDa. SLCO2B1 is primarily expressed in the human intestine and liver with significant presence in the brain lung and placenta. It plays a role in the absorption and clearance of pharmacologically relevant compounds.

Biological function summary	SLCO2B1 regulates the transport of endogenous and exogenous substrates across cell membranes. It does not form part of a larger protein complex but interacts with many substrates such as steroid hormones and therapeutic agents. SLCO2B1 influences how drugs are distributed and eliminated affecting the pharmacokinetics and bioavailability in tissues where it is expressed.
Pathways	SLCO2B1 integrates into processes related to drug metabolism and transport. It is important in the absorption and elimination phases within the pharmacokinetic pathway and has a role in the metabolism of steroid hormones. In this context SLCO2B1 cooperates with other transporters and metabolizing enzymes including cytochrome P450s to control the intracellular concentration of various substances.
Associated diseases and disorders	SLCO2B1 plays a role in influencing drug efficacy and toxicity impacting personalized medicine approaches for individuals with specific genetic transporter variants. SLCO2B1 has implications in cardiovascular diseases related to the pharmacological metabolism of drugs affecting heart rhythm. Additionally its function in hormone regulation connects it with metabolic disorders. In these diseases SLCO2B1 interacts with proteins like MDR1 which also impact drug transport and resistance.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

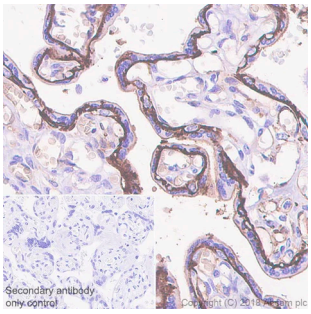
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

3 product images

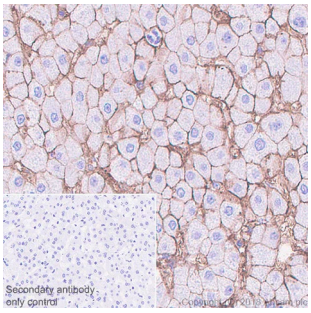


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SLCO2B1/OATP2B1 antibody [EPR22212] (ab222094)

SLCO2B1/OATP2B1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SLCO2B1/OATP2B1 antibody

Immunohistochemical analysis of paraffin-embedded human placenta tissue labeling SLCO2B1/OATP2B1 with ab222094 at 1/500 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Basolateral membranous staining on human placenta (PMID: 17020956; PMID: 20159975) is observed. Counter stained with Hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

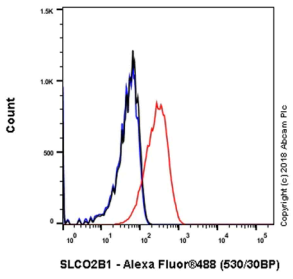


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SLCO2B1/OATP2B1 antibody [EPR22212] (ab222094)

SLCO2B1/OATP2B1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SLCO2B1/OATP2B1 antibody

Immunohistochemical analysis of paraffin-embedded human liver tissue labeling SLCO2B1/OATP2B1 with ab222094 at 1/500 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Membranous staining on human liver (PMID: 17178262; PMID: 11159893; PMID: 23987090) is observed. Counter stained with Hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Flow Cytometry - Anti-SLCO2B1/OATP2B1 antibody [EPR22212] (ab222094)

SLCO2B1/OATP2B1 Flow Cytometry staining using rabbit Anti-SLCO2B1/OATP2B1 antibody

Flow cytometric analysis of Huh7 (human hepatocellular carcinoma epithelial cell line) cells labeling SLCO2B1/OATP2B1 with ab222094 at 1/50 (red) compared with a Rabbit monoclonal IgG (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077), at 1/2000 dilution was used as the secondary antibody. Gated on viable cells.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.