10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

SLCO4C1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11795B

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q6ZQN7
Other Accession	NP_851322.3
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB29203
Calculated MW	78948
Antigen Region	516-544

Additional Information

Gene ID	353189
Other Names	Solute carrier organic anion transporter family member 4C1, OATP-H, Organic anion transporter M1, OATP-M1, Solute carrier family 21 member 20, SO4C1
Target/Specificity	This SLCO4C1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 516-544 amino acids from the C-terminal region of human SLCO4C1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SLCO4C1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SLCO4C1 {ECO:0000312|EMBL:EAW49099.1, ECO:0000312|HGNC:HGNC:23612}
Function	Mediates the transport of organic anions such as steroids (estrone 3-sulfate,

	chenodeoxycholate, glycocholate) and thyroid hormones (3,3',5-triiodo-L-thyronine (T3), L-thyroxine (T4)), in the kidney (PubMed:14993604, PubMed:19129463, PubMed:20610891). Capable of transporting cAMP and pharmacological substances such as digoxin, ouabain and methotrexate (PubMed:14993604). Transport is independent of sodium, chloride ion, and ATP (PubMed:14993604). Transport activity is stimulated by an acidic extracellular environment due to increased substrate affinity to the transporter (PubMed:19129463). The driving force for this transport activity is currently not known (By similarity). The role of hydrogencarbonate (HCO3(-), bicarbonate) as the probable counteranion that exchanges for organic anions is still not well defined (PubMed:19129463). Functions as an uptake transporter at the apical membrane, suggesting a role in renal reabsorption (By similarity). Involved in the renal secretion of the uremic toxin ADMA (N(omega),N(omega)-dimethyl-L-arginine or asymmetrical dimethylarginine), which is associated to cardiovascular events and mortality, and the structurally related amino acids L-arginine and L- homoarginine (a cardioprotective biomarker) (PubMed:30865704). Can act bidirectionally, suggesting a dual protective role of this transport protein; exporting L-homoarginine after being synthesized in proximal tubule cells, and mediating uptake of ADMA from the blood into proximal tubule cells where it is degraded by the enzyme dimethylarginine dimethylaminohydrolase 1 (DDAH1) (PubMed:30865704, PubMed:32642843). May be involved in sperm maturation by enabling directed movement of organic anions and compounds within or between cells (By similarity). This ion-transporting process is important to maintain the strict epididymal homeostasis necessary for sperm maturation (By similarity). May have a role in secretory functions since seminal vesicle epithelial cells are assumed to secrete proteins involved in decapacitation by modifying surface proteins to facilitate the acquisition of the ability to fertilize the egg (By similarity).
Cellular Location	Basolateral cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:Q71MB6}. Note=Detected at the basolateral membrane of the proximal tubule cell in the kidney {ECO:0000250|UniProtKB:Q71MB6, ECO:0000269|PubMed:30865704}
Tissue Location	Predominantly expressed in kidney but also weakly expressed in both fetal liver and kidney

Background

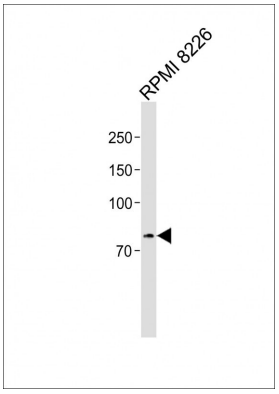
SLCO4C1 belongs to the organic anion transporter (OATP) family. OATPs are involved in the membrane transport of bile acids, conjugated steroids, thyroid hormone, eicosanoids, peptides, and numerous drugs in many tissues (Mikkaichi et al., 2004 [PubMed 14993604]).

References

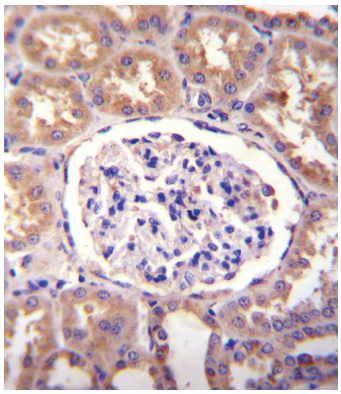
Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Yamaguchi, H., et al. Drug Metab. Pharmacokinet. 25(3):314-317(2010)
Toyohara, T., et al. J. Am. Soc. Nephrol. 20(12):2546-2555(2009)
Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009)
Tripodi, G., et al. Am. J. Hypertens. 22(4):357-363(2009)

Images

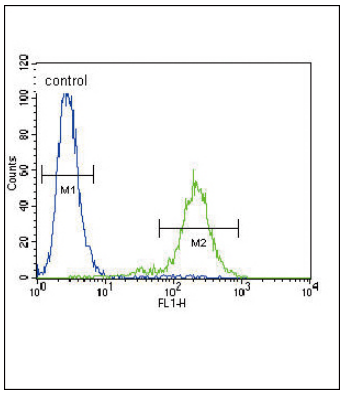
All lanes: Anti-SLCO4C1 Antibody (C-term) at 1:1000 dilution + RPMI 8226 whole cell lysate Lysates/proteins at



20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 79 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



SLCO4C1 Antibody (C-term) (Cat. #AP11795b)immunohistochemistry analysis in formalin fixed and paraffin embedded human kidney tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of SLCO4C1 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.



SLCO4C1 Antibody (C-term) (Cat. #AP911795b) flow cytometric analysis of NCI-H460 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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