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SLC22A1 Rabbit pAb

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Catalog # AP93971

Product Information

Application	WB
Primary Accession	O08966
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	61521
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse SLC22A1
Epitope Specificity	51-150/556
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	Preservative: 0.02% Proclin300, Constituents: 1% BSA, 0.01M PBS, pH7.4.
SUBCELLULAR LOCATION	Basolateral cell membrane.
SIMILARITY	Belongs to the major facilitator superfamily. Organic cation transporter family.
Post-translational modifications	Phosphorylated.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene is involved in the sodium-independent transport and excretion of organic anions, some of which are potentially toxic. The encoded protein is an integral membrane protein and is found mainly in the kidney and in the placenta, where it may act to prevent potentially harmful organic anions from reaching the fetus. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	20517
Other Names	Solute carrier family 22 member 1, Organic cation transporter 1, mOCT1, Slc22a1 {ECO:0000312|MGI:MGI:108111}
Target/Specificity	Widely expressed with high level in liver. Isoform 1 and isoform 2 are expressed in liver. Isoform 1, isoform 2, isoform 3 and isoform 4 are expressed in glial cell lines.
Dilution	WB=1:500-2000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce

Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

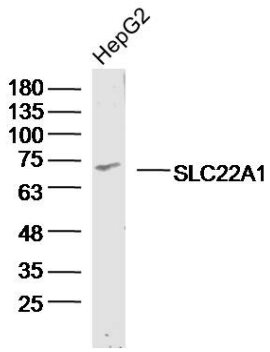
Name	Slc22a1 {ECO:0000312|MGI:MGI:108111}
Function	Electrogenic voltage-dependent transporter that mediates the transport of a variety of organic cations such as endogenous bioactive amines, cationic drugs and xenobiotics (PubMed:10216142, PubMed:11463829, PubMed:12176030, PubMed:23458604, PubMed:24961373). Functions as a pH- and Na(+)-independent, bidirectional transporter (By similarity). Cation cellular uptake or release is driven by the electrochemical potential (i.e. membrane potential and concentration gradient) and substrate selectivity (By similarity). Hydrophobicity is a major requirement for recognition in polyvalent substrates and inhibitors (PubMed:23458604). Primarily expressed in the basolateral membrane of hepatocytes and proximal tubules and involved in the uptake and disposition of cationic compounds from the blood by hepatic and renal clearance (By similarity). Most likely functions as an uptake carrier in enterocytes contributing to the intestinal elimination of organic cations from the systemic circulation (PubMed:11463829, PubMed:24961373). Transports endogenous monoamines such as N-1-methylnicotinamide (NMN), guanidine, neurotransmitters dopamine, serotonin, noradrenaline, adrenaline and histamine, and quaternary ammonium compound such as choline (PubMed:24961373, PubMed:35469921). Also transports natural polyamines such as spermidine, agmatine and putrescine at low affinity, but relatively high turnover (PubMed:23458604). Involved in the hepatic and intestinal uptake of the vitamin B1/thiamine, hence regulating hepatic lipid and energy metabolism (PubMed:24961373). Contributes to the influx and efflux of fatty acid carriers carnitines and acylcarnitines across the basolateral membrane of hepatocytes, from the liver to the systemic circulation and inversely and may be involved in regulating the systemic availability of hepatic acylcarnitines (PubMed:28942964, PubMed:34040533). Also capable of transporting non-amine endogenous compounds such as prostaglandin E2 (PGE2) and prostaglandin F2-alpha (PGF2-alpha) (By similarity). May contribute to the transport of cationic compounds in testes across the blood-testis-barrier (By similarity). Also mediates the uptake of xenobiotics tributylmethylammonium (TBuMA), quinidine, N-methyl-quinine (NMQ), N- methyl-quinidine (NMQD) N-(4,4-azo-n-pentyl)-quinuclidine (APQ), azidoprocainamide methoiodide (AMP), N-(4,4-azo-n-pentyl)-21- deoxyajmalinium (APDA) and 4-(4-(dimethylamino)styryl)-N- methylpyridinium (ASP) (PubMed:11463829).
Cellular Location	Basolateral cell membrane; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein. Lateral cell membrane {ECO:0000250|UniProtKB:O15245}; Multi-pass membrane protein. Basal cell membrane {ECO:0000250|UniProtKB:O15245}; Multi-pass membrane protein. Note=Localized to the sinusoidal/basolateral membrane of hepatocytes (PubMed:28942964) Mainly localized to the basolateral membrane of renal proximal tubular cells (By similarity). However, also identified at the apical side of proximal tubular cells (By similarity). Mainly expressed at the lateral membrane of enterocytes (By similarity). Also observed at the apical side of enterocytes (PubMed:23680637). Localized to the basal membrane of Sertoli cells (By similarity). {ECO:0000250|UniProtKB:O15245, ECO:0000250|UniProtKB:Q63089, ECO:0000269|PubMed:23680637, ECO:0000269|PubMed:28942964}

Tissue Location	Expressed in kidney (PubMed:11463829, PubMed:16381671, PubMed:23680637, PubMed:28942964, PubMed:8854860) Expressed in liver (PubMed:11463829, PubMed:16381671, PubMed:24961373, PubMed:28942964, PubMed:8854860). In liver, mainly expressed in the central vein (PubMed:24961373). Expressed in intestines (PubMed:11463829, PubMed:23680637, PubMed:28942964). Weakly expressed in adrenals and in lacting mammary glands (PubMed:8854860)

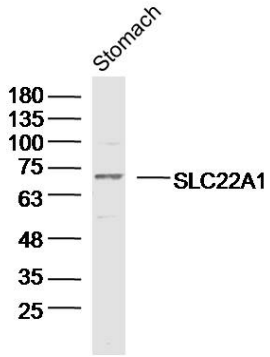
Background

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Images



Sample:HepG2 Cell(Human) Lysate at 40 ug Primary: Anti-SLC22A1(AP93971)at 1/300 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 61kD Observed band size: 70kD



Sample:Stomach (Mouse) Lysate at 40 ug Primary: Anti-SLC22A1(AP93971)at 1/300 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 61kD Observed band size: 70kD