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SLC22A4 Rabbit pAb

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Catalog # AP58021

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q9Z306
Reactivity	Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	62290
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse SLC22A4
Epitope Specificity	461-553/553
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Membrane.
DISEASE	Genetic variations in SLC22A4 are a cause of susceptibility to rheumatoid arthritis (RA) [MIM:180300]. It is a systemic inflammatory disease with autoimmune features and a complex genetic component. It primarily affects the joints and is characterized by inflammatory changes in the synovial membranes and articular structures, widespread fibrinoid degeneration of the collagen fibers in mesenchymal tissues, and by atrophy and rarefaction of bony structures.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Polyspecific organic cation transporters in the liver, kidney, intestine, and other organs are critical for elimination of many endogenous small organic cations as well as a wide array of drugs and environmental toxins. The encoded protein is an organic cation transporter and plasma integral membrane protein containing eleven putative transmembrane domains as well as a nucleotide-binding site motif. Transport by this protein is at least partially ATP-dependent. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	30805
Other Names	Solute carrier family 22 member 4, Organic cation/carnitine transporter 1, Octn1, Slc22a4 {ECO:0000312|MGI:MGI:1353479}, Octn1
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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

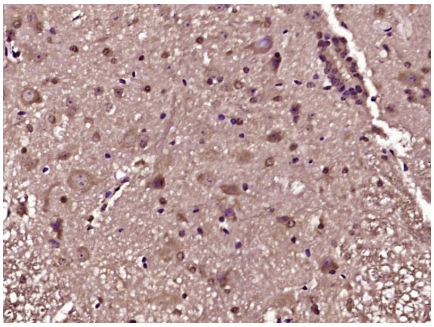
Name	Slc22a4 {ECO:0000312|MGI:MGI:1353479}
Synonyms	Octn1
Function	Transporter that mediates the transport of endogenous and microbial zwitterions and organic cations (PubMed:11010964, PubMed:20224991, PubMed:20601551). Functions as a Na(+)-dependent and pH-dependent high affinity microbial symporter of potent food-derived antioxidant ergothioeine (By similarity). Transports one sodium ion with one ergothioeine molecule (By similarity). Involved in the absorption of ergothioneine from the luminal/apical side of the small intestine and renal tubular cells, and into non-parenchymal liver cells, thereby contributing to maintain steady-state ergothioneine level in the body (PubMed:20224991, PubMed:20601551). Also mediates the bidirectional transport of acetycholine, although the exact transport mechanism has not been fully identified yet (By similarity). Most likely exports anti-inflammatory acetylcholine in non-neuronal tissues, thereby contributing to the non-neuronal cholinergic system (By similarity). Displays a general physiological role linked to better survival by controlling inflammation and oxidative stress, which may be related to ergothioneine and acetycholine transports (PubMed:20224991). May also function as a low-affinity Na(+)-dependent transporter of L- carnitine through the mitochondrial membrane, thereby maintaining intracellular carnitine homeostasis (PubMed:11010964, PubMed:16729965). May contribute to regulate the transport of cationic compounds in testis across the blood-testis-barrier (By similarity).
Cellular Location	Apical cell membrane; Multi-pass membrane protein. Mitochondrion membrane; Multi-pass membrane protein. Basal cell membrane {ECO:0000250|UniProtKB:Q9H015}; Multi-pass membrane protein. Note=Localized to the apical membrane of small intestines (PubMed:20601551). Localized to the apical membrane of cortical proximal tubular epithelial cells in kidney (PubMed:15832501).
Tissue Location	Expressed in kidney (PubMed:11010964, PubMed:15832501). Expressed in small intestines (PubMed:20601551) Expressed in liver in non-parenchymal liver tissue such as sinusoidal vessels (PubMed:11010964, PubMed:20601551). Weakly expressed in lung and brain (PubMed:11010964). Expressed in testis and spleen (PubMed:11010964). Expressed in heart (PubMed:16729965)

Background

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Images

Paraformaldehyde-fixed, paraffin embedded (Mouse spinal cord); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase



by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (SLC22A4) Polyclonal Antibody, Unconjugated (AP58021) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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