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Slc22a5 Rabbit pAb

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Catalog # AP58897

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	O76082
Reactivity	Human
Predicted	Rat, Pig, Dog, Mouse, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	62752
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Slc22a5
Epitope Specificity	101-210/557
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; Multi-pass membrane protein.
DISEASE	Defects in SLC22A5 are the cause of systemic primary carnitine deficiency (CDSP) [MIM:212140]. CDSP is an autosomal recessive disorder of fatty acid oxidation caused by defective carnitine transport. Present early in life with hypoketotic hypoglycemia and acute metabolic decompensation, or later in life with skeletal myopathy or cardiomyopathy.
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 a plasma integral membrane protein which functions both as an organic cation transporter and as a sodium-dependent high affinity carnitine transporter. The encoded protein is involved in the active cellular uptake of carnitine. Mutations in this gene are the cause of systemic primary carnitine deficiency (CDSP), an autosomal recessive disorder manifested early in life by hypoketotic hypoglycemia and acute metabolic decompensation, and later in life by skeletal myopathy or cardiomyopathy. [provided by RefSeq, Jul 2008].

Additional Information

Gene ID	6584
Other Names	Organic cation/carnitine transporter 2, High-affinity sodium-dependent carnitine cotransporter, Solute carrier family 22 member 5, SLC22A5 (HGNC:10969)

Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
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	SLC22A5 (HGNC:10969)
Function	Sodium-ion dependent, high affinity carnitine transporter. Involved in the active cellular uptake of carnitine. Transports one sodium ion with one molecule of carnitine (PubMed:10454528, PubMed:10525100, PubMed:10966938, PubMed:17509700, PubMed:20722056, PubMed:33124720). Also transports organic cations such as tetraethylammonium (TEA) without the involvement of sodium. Relative uptake activity ratio of carnitine to TEA is 11.3 (PubMed:10454528, PubMed:10525100, PubMed:10966938). In intestinal epithelia, transports the quorum-sensing pentapeptide CSF (competence and sporulation factor) from B.subtilis which induces cytoprotective heat shock proteins contributing to intestinal homeostasis (PubMed:18005709). May also contribute to regulate the transport of organic compounds in testis across the blood-testis-barrier (Probable).
Cellular Location	Cell membrane; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein. Basal cell membrane; Multi-pass membrane protein. Note=In intestinal cells, apical expression is induced by TNF. Localized to the basal membrane of Sertoli cells (PubMed:35307651).
Tissue Location	Strongly expressed in kidney, skeletal muscle, heart and placenta (PubMed:10454528). Primarily expressed by surface epithelial cells of the colon (at protein level) (PubMed:18005709) Expressed in CD68 macrophage and CD43 T-cells but not in CD20 B-cells (PubMed:10454528). In testis, localized to Sertoli cell basal membranes, peritubular myoid cells and Leydig cells (PubMed:35307651)

Background

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