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SLC22A5 Antibody (C-term) Blocking peptide
Synthetic peptide
Catalog # BP12694b

Specification

SLC22A5 Antibody (C-term) Blocking peptide - Product Information

Primary Accession O76082

SLC22A5 Antibody (C-term) Blocking peptide - Additional Information

Gene ID 6584

Other Names
Solute carrier family 22 member 5, High-affinity sodium-dependent carnitine cotransporter, Organic cation/carnitine transporter 2, SLC22A5, OCTN2

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

SLC22A5 Antibody (C-term) Blocking peptide - 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 Bacillus Subtilis wich 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)

SLC22A5 Antibody (C-term) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

SLC22A5 Antibody (C-term) Blocking peptide - Images

SLC22A5 Antibody (C-term) Blocking peptide - Background

Polyspecific organic cation transporters in the liver,kidney, intestine, and other organs are critical for elimination ofmany endogenous small organic cations as well as a wide array ofdrugs and environmental toxins. The encoded protein is a plasmaintegral membrane protein which functions both as an organic cationtransporter and as a sodium-dependent high affinity carnitinetransporter. The encoded protein is involved in the active cellularuptake of carnitine. Mutations in this gene are the cause ofsystemic primary carnitine deficiency (CDSP), an autosomalrecessive disorder manifested early in life by hypoketotichypoglycemia and acute metabolic decompensation, and later in lifeby skeletal myopathy or cardiomyopathy.

SLC22A5 Antibody (C-term) Blocking peptide - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)Fransen, K., et al. Hum. Mol. Genet. 19(17):3482-3488(2010)D'Argenio, G., et al. J. Biol. Chem. 285(35):27078-27087(2010)Li, F.Y., et al. Hum. Mutat. 31 (8), E1632-E1651 (2010) :Ridruechai, C., et al. Genes Immun. 11(5):416-422(2010)