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SLC39A14 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP16286a

Specification

SLC39A14 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession Q15043

SLC39A14 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 23516

Other Names
Zinc transporter ZIP14, LIV-1 subfamily of ZIP zinc transporter 4, LZT-Hs4, Solute carrier family 39 member 14, Zrt- and Irt-like protein 14, ZIP-14, SLC39A14, KIAA0062, ZIP14

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.

SLC39A14 Antibody (N-term) Blocking Peptide - Protein Information

Name SLC39A14 (HGNC:20858)

Function
Electroneutral transporter of the plasma membrane mediating the cellular uptake of the divalent metal cations zinc, manganese and iron that are important for tissue homeostasis, metabolism, development and immunity (PubMed:15642354, PubMed:27231142, PubMed:29621230). Functions as an energy-dependent symporter, transporting through the membranes an electroneutral complex composed of a divalent metal cation and two bicarbonate anions (By similarity). Beside these endogenous cellular substrates, can also import cadmium a non-essential metal which is cytotoxic and carcinogenic (By similarity). Controls the cellular uptake by the intestinal epithelium of systemic zinc, which is in turn required to maintain tight junctions and the intestinal permeability (By similarity). Modifies the activity of zinc-dependent phosphodiesterases, thereby indirectly regulating G protein-coupled receptor signaling pathways important for gluconeogenesis and chondrocyte differentiation (By similarity). Regulates insulin receptor signaling, glucose uptake, glycogen synthesis and gluconeogenesis in hepatocytes through the zinc-dependent intracellular catabolism of insulin (PubMed:27703010). Through zinc cellular uptake also plays a role in the adaptation of cells to endoplasmic reticulum stress (By

similarity). Major manganese transporter of the basolateral membrane of intestinal epithelial cells, it plays a central role in manganese systemic homeostasis through intestinal manganese uptake (PubMed:31028174). Also involved in manganese extracellular uptake by cells of the blood-brain barrier (PubMed:31699897). May also play a role in manganese and zinc homeostasis participating in their elimination from the blood through the hepatobiliary excretion (By similarity). Also functions in the extracellular uptake of free iron. May also function intracellularly and mediate the transport from endosomes to cytosol of iron endocytosed by transferrin (PubMed:20682781). Plays a role in innate immunity by regulating the expression of cytokines by activated macrophages (PubMed:23052185).

Cellular Location
Cell membrane; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein. Basolateral cell membrane; Multi-pass membrane protein. Early endosome membrane; Multi-pass membrane protein. Late endosome membrane; Multi-pass membrane protein. Lysosome membrane; Multi- pass membrane protein. Note=Localized and functional at both apical and basolateral membranes of microvascular capillary endothelial cells that constitute the blood-brain barrier (PubMed:31699897). Localized at the basolateral membrane of enterocytes (PubMed:31028174). Enriched at the plasma membrane upon glucose uptake (PubMed:27703010).

Tissue Location
Ubiquitously expressed, with higher expression in liver, pancreas, fetal liver, thyroid gland, left and right ventricle, right atrium and fetal heart (PubMed:7584044, PubMed:15642354, PubMed:20682781). Weakly expressed in spleen, thymus, and peripheral blood leukocytes (PubMed:7584044). Expressed in liver and in brain by large neurons in the globus pallidus, the insular cortex and the dentate nucleus and to a lower extent in the putamen and the caudate nucleus (at protein level) (PubMed:27231142). Expressed in osteoblasts and giant osteoclast-like cells, but not in osteocytes found osteoblastoma and giant cell tumors (at protein level) (PubMed:29621230). Expressed by microvascular capillary endothelial cells that constitute the blood-brain barrier (at protein level) (PubMed:31699897). Expressed by macrophages (PubMed:23052185)

SLC39A14 Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

SLC39A14 Antibody (N-term) Blocking Peptide - Images

SLC39A14 Antibody (N-term) Blocking Peptide - Background

Zinc is an essential cofactor for hundreds of enzymes. Itis involved in protein, nucleic acid, carbohydrate, and lipidmetabolism, as well as in the control of gene transcription,growth, development, and differentiation. SLC39A14 belongs to asubfamily of proteins that show structural characteristics of zinctransporters (Taylor and Nicholson, 2003 [PubMed12659941]).

SLC39A14 Antibody (N-term) Blocking Peptide - References

Ucisik-Akkaya, E., et al. Mol. Hum. Reprod. 16(10):770-777(2010)Gao, J., et al. J. Biol. Chem. 283(31):21462-21468(2008)Liuzzi, J.P., et al. Proc. Natl. Acad. Sci. U.S.A. 102(19):6843-6848(2005)Taylor, K.M., et al. FEBS Lett. 579(2):427-432(2005)Taylor, K.M., et al. Biochim. Biophys. Acta 1611 (1-2), 16-30 (2003) :