10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

SLC39A14 / ZIP14 Antibody (Internal)
Rabbit Polyclonal Antibody
Catalog # ALS10949

Specification

SLC39A14 / ZIP14 Antibody (Internal) - Product Information

Application	**IHC-P**
Primary Accession	Q15043
Reactivity	**Human, Pig, Horse, Dog**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**54kDa KDa**
Dilution	**IHC-P~~N/A**

SLC39A14 / ZIP14 Antibody (Internal) - 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

Target/Specificity
Human SLC39A14. BLAST analysis of the peptide immunogen showed no homology with other human proteins.

Reconstitution & Storage
Long term: -70°C; Short term: +4°C

Precautions
SLC39A14 / ZIP14 Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

SLC39A14 / ZIP14 Antibody (Internal) - 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:15642354, PubMed:20682781, PubMed:7584044). 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 / ZIP14 Antibody (Internal) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

SLC39A14 / ZIP14 Antibody (Internal) - Images

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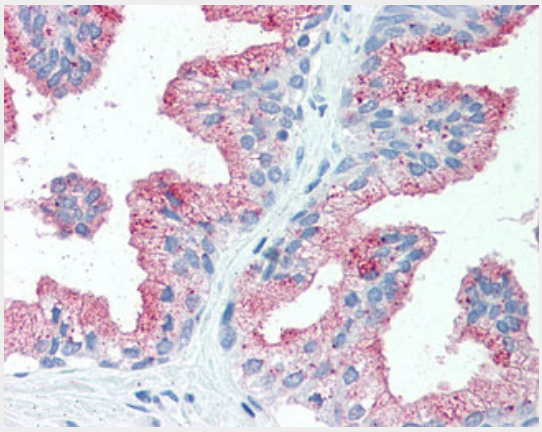
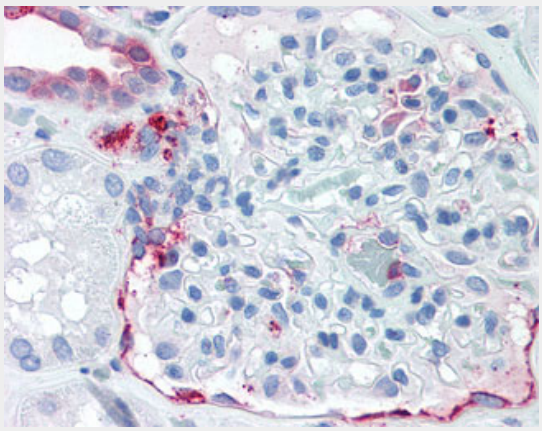


Anti-SLC39A14 antibody ALS10949 IHC of human prostate.



Anti-SLC39A14 antibody ALS10949 IHC of human kidney.

SLC39A14 / ZIP14 Antibody (Internal) - Background

May mediate cellular uptake of nontransferrin-bound iron (By similarity). Broad-scope metal ion transporter with a preference for zinc uptake.

SLC39A14 / ZIP14 Antibody (Internal) - References

Nomura N.,et al.DNA Res. 1:223-229(1994).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Nusbaum C.,et al.Nature 439:331-335(2006).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
Taylor K.M.,et al.Biochim. Biophys. Acta 1611:16-30(2003).