

## ZIP6 Antibody

Catalog # ASC11247

### Specification

## ZIP6 Antibody - Product Information

Application Primary Accession Other Accession Reactivity Host Clonality Isotype Application Notes WB, IHC-P, IF, E <u>Q13433</u> <u>NP\_001092876</u>, <u>153252214</u> Human, Mouse Rabbit Polyclonal IgG ZIP6 antibody can be used for detection of ZIP6 by Western blot at 1 μg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 μg/mL. For immunofluorescence start at 20 μg/mL.

## ZIP6 Antibody - Additional Information

Gene ID Target/Specificity SLC39A6; 25800

**Reconstitution & Storage** Antibody can be stored at 4°C up to one year. Antibodies should not be exposed to prolonged high temperatures.

**Precautions** ZIP6 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## ZIP6 Antibody - Protein Information

Name SLC39A6 (<u>HGNC:18607</u>)

Synonyms LIV1, ZIP6

Function

Zinc-influx transporter which plays a role in zinc homeostasis and in the induction of epithelial-to-mesenchymal transition (EMT) (PubMed:<a href="http://www.uniprot.org/citations/12839489" target="\_blank">12839489</a>, PubMed:<a href="http://www.uniprot.org/citations/18272141" target="\_blank">12839489</a>, PubMed:<a href="http://www.uniprot.org/citations/21422171" target="\_blank">21422171</a>, PubMed:<a href="http://www.uniprot.org/citations/23919497" target="\_blank">23919497</a>, PubMed:<a href="http://www.uniprot.org/citations/27274087" target="\_blank">27274087</a>, PubMed:<a href="http://www.uniprot.org/citations/27274087" target="\_blank">23919497</a>, PubMed:<a href="http://www.uniprot.org/citations/27274087" target="\_blank">27274087</a>, PubMed:<a href="http://www.uniprot.org/citations/34394081" target="\_blank">34394081</a>). When associated with SLC39A10, the heterodimer formed by SLC39A10 and SLC39A6 mediates cellular



zinc uptake to trigger cells to undergo epithelial- to- mesenchymal transition (EMT) (PubMed:<a href="http://www.uniprot.org/citations/27274087" target=" blank">27274087</a>). The SLC39A10-SLC39A6 heterodimer also controls NCAM1 phosphorylation and its integration into focal adhesion complexes during EMT (By similarity). Zinc influx inactivates GSK3B, enabling unphosphorylated SNAI1 in the nucleus to down-regulate adherence genes such as CDH1, causing loss of cell adherence (PubMed:<a href="http://www.uniprot.org/citations/23919497" target=" blank">23919497</a>). In addition, the SLC39A10-SLC39A6 heterodimer plays an essentiel role in initiating mitosis by importing zinc into cells to initiate a pathway resulting in the onset of mitosis (PubMed: <a href="http://www.uniprot.org/citations/32797246" target=" blank">32797246</a>). Participates in the T-cell receptor signaling regulation by mediating cellular zinc uptake into activated lymphocytes (PubMed:<a href="http://www.uniprot.org/citations/21422171" target=" blank">21422171</a>, PubMed:<a href="http://www.uniprot.org/citations/30552163" target=" blank">30552163</a>, PubMed:<a href="http://www.uniprot.org/citations/34394081" target=" blank">34394081</a>). Regulates the zinc influx necessary for proper meiotic progression to metaphase II (MII) that allows the oocyte-to-egg transition (PubMed:<a href="http://www.uniprot.org/citations/25143461" target=" blank">25143461</a>).

#### **Cellular Location**

Cell membrane; Multi-pass membrane protein. Cell projection, lamellipodium membrane; Multi-pass membrane protein. Membrane raft; Multi-pass membrane protein. Apical cell membrane {ECO:0000250|UniProtKB:Q4V887} Note=Localizes to lipid rafts in T cells and is recruited into the immunological synapse in response to TCR stimulation (PubMed:34394081) In the choroid plexus is limited to the apical membrane in epithelial cells (By similarity). {ECO:0000250|UniProtKB:Q4V887, ECO:0000269|PubMed:34394081}

#### **Tissue Location**

Highly expressed in the breast, prostate, placenta, kidney, pituitary and corpus callosum (PubMed:12839489). Weakly expressed in heart and intestine. Also highly expressed in cells derived from an adenocarcinoma of the cervix and lung carcinoma (PubMed:12839489).

### ZIP6 Antibody - Protocols

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

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

#### ZIP6 Antibody - Images





Western blot analysis of ZIP6 in mouse lung tissue lysate with ZIP6 antibody at 1  $\mu$ g/mL.



Immunohistochemistry of ZIP6 in mouse lung tissue with ZIP6 antibody at 5 µg/mL.



Immunofluorescence of ZIP6 in mouse lung tissue with ZIP6 antibody at 20  $\mu\text{g/mL}.$ 

# ZIP6 Antibody - Background

ZIP6 Antibody: The zinc transporter ZIP6, also known as SLC39A6, is a member of a family of divalent ion transporters. Zinc is an essential ion for cells and plays significant roles in the growth,



development, and differentiation. ZIP6 was initially identified as LIV-1, an estrogen-regulated gene that has been implicated in metastatic breast cancer. Elevated ZIP6 expression has also been reported in human cervical cancer and the HeLa cell line; down-regulation of ZIP6 expression in HeLa by RNAi inhibited cell proliferation, colony formation, migration and invasiveness, as well as decreasing Snail and Slug levels, suggesting ZIP6 plays a regulatory role on the ERK1/2-Snail/Slug pathway.

## ZIP6 Antibody - References

Dufner-Beattie J, Langmade SJ, Wang F, et al. Structure, function, and regulation of a subfamily of mouse zinc transporter genes. J. Biol. Chem.2003; 278:50142-50.

Eide DJ. The SLC39 family of metal ion transporters. Pflugers Arch.2004; 447:796-800. Taylor KM and Nicohlson RI. The LZT proteins; the LIV-1 subfamily of zinc transporters. Biochim. Biophys. Acta.2003; 1611:16-30.

Taylor KM. LIV-1 breast cancer protein belongs to new family of histidine-rich membrane proteins with potential to control intracellular ZN2+ homeostasis. IUBMB Life2000; 49:249-53.