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

ZIP3 Antibody

Catalog # ASC11245

Product Information

Application	WB, E, IHC-P
Primary Accession	Q9BRY0
Other Accession	NP_653165, 32490561
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	33601
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	ZIP3 antibody can be used for detection of ZIP3 by Western blot at 1 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL.

Additional Information

Gene ID	29985
Other Names	Zinc transporter ZIP3, Solute carrier family 39 member 3, Zrt- and Irt-like protein 3, ZIP-3, SLC39A3, ZIP3
Target/Specificity	SLC39A3;
Reconstitution & Storage	ZIP3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	ZIP3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SLC39A3 (HGNC:17128)
Synonyms	ZIP3
Function	Transporter for the divalent cation Zn(2+). Mediates the influx of Zn(2+) into cells from extracellular space. Controls Zn(2+) accumulation into dentate gyrus granule cells in the hippocampus. Mediates Zn(2+) reuptake from the secreted milk within the alveolar lumen.
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:Q99K24}; Multi-pass membrane protein. Apical cell membrane {ECO:0000250|UniProtKB:Q99K24}; Multi-pass membrane protein. Note=Localized primarily at the cell surface but also

found in a perinuclear compartment in HC11 cells. In mammary epithelial cell, localized primary to the apical membrane {ECO:0000250|UniProtKB:Q99K24}

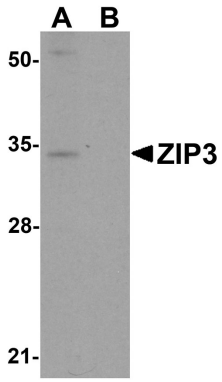
Background

ZIP3 Antibody: The zinc transporter ZIP3, also known as SLC39A3, 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. Similar to knock-outs of ZIP1 and ZIP2, ZIP3-null mice have no phenotypic differences compared to wild-type mice. Only when ZIP1, ZIP2, and ZIP3 genes are all eliminated and these mutant mice are fed a zinc-deficient diet do abnormalities such as reduced embryonic-membrane bound alkaline phosphatase activity and abnormal development occur, indicating that the ZIP1-3 proteins play an important, noncompensatory role when zinc is deficient. More recent studies have shown that ZIP2 and ZIP3 are down regulated in human prostate adenocarcinomatous glands, and may be important in the retention of zinc in the cellular compartment.

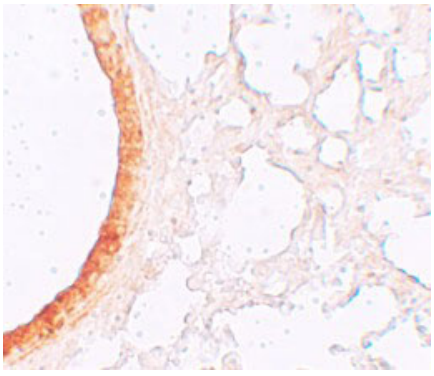
References

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.
Kambe T, Geiser J, Lahner B, et al. Slc39a1 to 3 (subfamily II) Zip genes in mice have unique cell-specific functions during adaptation to zinc deficiency. Am. J. Physiol. Regul. Integr. Comp. Physiol.2008; 294:R1474-81.

Images



Western blot analysis of ZIP3 in mouse lung tissue lysate with ZIP3 antibody at 1 µg/mL in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of ZIP3 in mouse lung tissue with ZIP3 antibody at 5 µg/mL.