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ZIP9 Antibody

Catalog # ASC11250

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9NUM3
Other Accession	NP_060845, 237874617
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	32251
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	ZIP9 antibody can be used for detection of ZIP9 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	55334
Other Names	Zinc transporter ZIP9, Solute carrier family 39 member 9, Zrt- and Irt-like protein 9, ZIP-9, SLC39A9, ZIP9
Target/Specificity	Slc39a9; ZIP9 antibody is predicted to not cross-react with other ZIP family members.
Reconstitution & Storage	ZIP9 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	ZIP9 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SLC39A9 (HGNC:20182)
Synonyms	ZIP9
Function	Transports zinc ions across cell and organelle membranes into the cytoplasm and regulates intracellular zinc homeostasis (PubMed:19420709, PubMed:25014355, PubMed:28219737). Participates in the zinc ions efflux out of the secretory compartments (PubMed:19420709). Regulates intracellular zinc level, resulting in the enhancement of AKT1 and MAPK3/MAPK1 (Erk1/2) phosphorylation in response to the BCR activation (PubMed:23505453). Also

	functions as a membrane androgen receptor that mediates, through a G protein, the non- classical androgen signaling pathway, characterized by the activation of MAPK3/MAPK1 (Erk1/2) and transcription factors CREB1 or ATF1 (By similarity). This pathway contributes to CLDN1 and CLDN5 expression and tight junction formation between adjacent Sertoli cells (By similarity). Mediates androgen-induced vascular endothelial cell proliferation through activation of an inhibitory G protein leading to the AKT1 and MAPK3/MAPK1 (Erk1/2) activation which in turn modulate inhibition (phosphorylation) of GSK3B and CCND1 transcription (PubMed:34555425). Moreover, has dual functions as a membrane-bound androgen receptor and as an androgen-dependent zinc transporter both of which are mediated through an inhibitory G protein (Gi) that mediates both MAP kinase and zinc signaling leading to the androgen-dependent apoptotic process (PubMed:25014355, PubMed:28219737).
Cellular Location	Golgi apparatus, trans-Golgi network membrane. Cell membrane; Multi-pass membrane protein. Cytoplasm, perinuclear region Mitochondrion. Nucleus
Tissue Location	Highly expressed in pancreas, testis, and pituitary and moderately in the kidney, liver, uterus, heart, prostate, and brain, whereas expression is lower in the ovary and colon

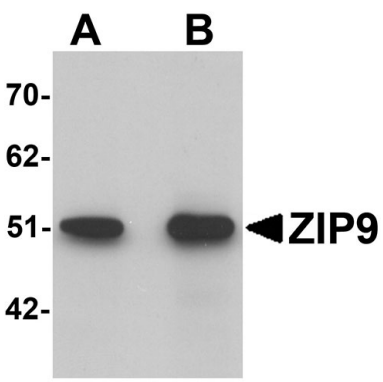
Background

ZIP9 Antibody: The zinc transporter ZIP9, also known as SLC39A9, 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. The zinc transporter family is divided into four subfamilies (I, II, LIV-1 and gufA). ZIP9 is a multipass membrane protein that belongs to the ZIP transporter subfamily I. It is located at the trans-Golgi network regardless of zinc presence and is thought to be a zinc homeostasis regulator acting in the secretory pathway without significantly altering cytosolic zinc homeostasis.

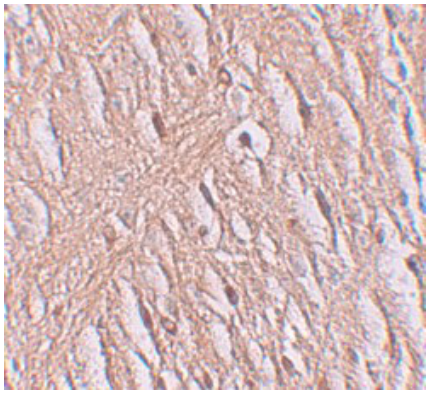
References

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.
Matsuura W, Yamazaki T, Yamaguchi-Iwai Y, et al. SLC39A9 (ZIP9) regulates zinc homeostasis in the secretory pathway: characterization of the ZIP subfamily protein in vertebrate cells. Biosci. Biotechnol. Biochem.2009; 73:1142-1148.

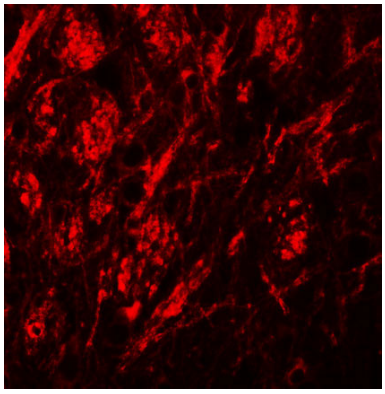
Images



Western blot analysis of ZIP9 in HepG2 cell lysate with ZIP9 antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of ZIP9 in human brain tissue with ZIP9 antibody at 2.5 µg/mL.



Immunofluorescence of ZIP9 in human brain tissue with ZIP9 antibody at 20 µg/mL.

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