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VTI1b Antibody

Catalog # ASC11950

Product Information

Application	WB, IHC, E
Primary Accession	Q9UEU0
Other Accession	NP_006361, 5454166
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	26688
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	VTI1b antibody can be used for detection of VTI1b by Western blot at 1 - 2 g/ml. Antibody can also be used for immunohistochemistry starting at 5 g/mL.

Additional Information

Gene ID	10490
Other Names	Vesicle transport through interaction with t-SNAREs homolog 1B, Vesicle transport v-SNARE protein Vti1-like 1, Vti1-rp1, VTI1B, VTI1, VTI1L, VTI1L1, VTI2
Target/Specificity	VTI1b; VTI1b antibody is human, mouse and rat reactive. At least three isoforms of VTI1a are known to exist; this antibody will detect all three isoforms. VTI1b antibody is predicted to not cross-react with VTI1a.
Reconstitution & Storage	VTI1b antibody can be stored at 4°C for three months and -20°C, stable for up to one year.
Precautions	VTI1b Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	VTI1B (HGNC:17793)
Function	SNAREs (soluble N-ethylmaleimide-sensitive factor-attachment protein receptors) are essential proteins for intracellular membrane fusion. SNAREs localized on opposing membranes assemble to form a trans-SNARE complex, an extended, parallel four-helix bundle whose assembly releases energy that drives membrane fusion. The core SNARE complex typically consists of four alpha-helical domains, three from target membrane SNAREs (t-SNAREs) and one from a vesicle SNARE (v- SNARE) (PubMed:21388490, PubMed:23217709). On late endosomes, regulates trafficking from late endosomes to the lysosome (Probable).

Cellular Location	Early endosome membrane; Single-pass type IV membrane protein. Late endosome membrane; Single-pass type IV membrane protein. Lysosome membrane Cytoplasmic granule. Recycling endosome membrane; Single-pass type IV membrane protein
Tissue Location	Expressed in all tissues examined.

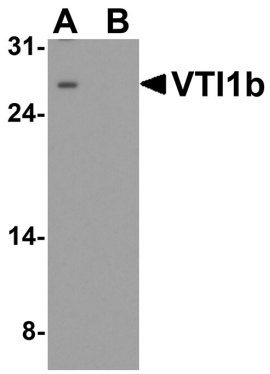
Background

Vesicle transport through interaction with t-SNAREs homolog 1 (VTI1a and VTI1b) are involved in vesicular transport from the late endosomes to the trans-Golgi network (1). They are both localized in the trans-Golgi network, with VTI1a also found in the Golgi apparatus and VTI1b in endosomes (2,3). It is thought that VTI1b along with the SNARE protein VAMP8 mediates the fusion of antimicrobial and canonical autophagosomes with lysosomes, an essential process for autophagy (4).

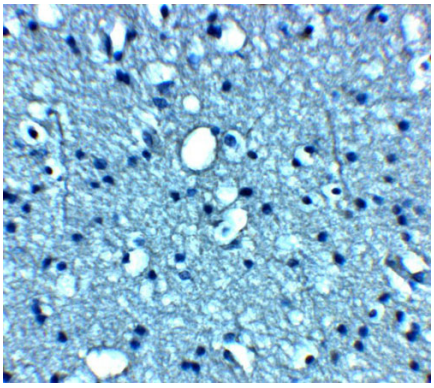
References

Fischer VM and Stevens TH. A human homolog can functionally replace the yeast vesicle-associated SNARE Vti1p in two vesicle transport pathways. J. Biol. Chem. 1998; 273:2624-30.
Kreykenbohm V, Wenzel D, Antonin W et al. The SNAREs vti1a and vti1b have distinct localization and SNARE complex partners. Eur. J. Cell Biol. 2002; 81:273-80.
Antonin W, Riedel D, von Mollard GF, et al. The SNARE Vti1a-beta is localized to small synaptic vesicles and participates in a novel SNARE complex. J. Neurosci. 2000; 20:5724-32.
Furuta N, Fujita N, Noda T, et al. Combinational soluble N-ethylmaleimide-sensitive factor attachment protein receptor proteins VAMP8 and Vti1b mediate fusion of antimicrobial and canonical autophagosomes with lysosomes. Mol. Biol. Cell. 2010; 21:1001-10.

Images



Western blot analysis of VTI1b in HeLa cell lysate with VTI1b antibody at 1 µg/ml in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of VTI1b in human brain tissue with VTI1b antibody at 5 µg/mL.

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