

Vti1a

Cat.No. 165 005; Polyclonal Guinea pig antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Guinea pig serum albumin was added for stabilization. For reconstitution add 50 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1 : 1000 (AP staining) IP: yes ICC: 1 : 500 (see remarks) IHC: yes IHC-P/FFPE: 1 : 200
Immunogen	Recombinant protein corresponding to AA 2 to 185 from mouse Vti1a (UniProt Id: O89116)
Reactivity	Reacts with: rat (Q9JI51), mouse (O89116). Other species not tested yet.
Specificity	Specific for vti1a. (K.O. verified)
matching control	165-0P
Remarks	ICC: 4 % PFA fixation is recommended.

TO BE USED IN VITRO / FOR RESEARCH ONLY NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Vti1a and Vti1b are mammalian SNARE proteins which have been identified as homologs of the yeast Vtip protein which is part of several SNARE complexes involved in transport.

Vti1a interacts with the cis-Golgi t-SNARE syntaxin 5 and the trans-Golgi network SNAREs syntaxin 6, syntaxin 16 and vamp 4.

Recently a brain-specific splice variant of Vti1a has been described. This Vti1a-β protein is associated with small synaptic vesicles, clathrin coated vesicles and endosomes. It is part of a SNARE complex different from the synaptic exocytotic complex since it does not co-immunoprecipitate with syntaxin 1 or SNAP 25. It is composed of syntaxin 6, syntaxin 16, vamp 4 and Vti1a-β which may play a role in biogenesis and/or recycling of synaptic vesicles. Nevertheless it behaves like a typical SNARE complex and can bind NSF and α/β-SNAP.

Selected References SYSY Antibodies

Control of Insulin Granule Formation and Function by the ABC Transporters ABCG1 and ABCA1 and by Oxysterol Binding Protein OSBP.
Hussain SS, Harris MT, Kreutzberger AJB, Inouye CM, Doyle CA, Castle AM, Arvan P, Castle JD
Molecular biology of the cell (2018) : . **ICC; tested species: rat**

Selected General References

The identification of a novel endoplasmic reticulum to Golgi SNARE complex used by the prechylomicron transport vesicle.
Siddiqi SA, Siddiqi S, Mahan J, Peggs K, Gorelick FS, Mansbach CM
The Journal of biological chemistry (2006) 281(30): 20974-82.

Homotypic fusion of early endosomes: SNAREs do not determine fusion specificity.
Brandhorst D, Zwilling D, Rizzoli SO, Lippert U, Lang T, Jahn R
Proceedings of the National Academy of Sciences of the United States of America (2006) 103(8): 2701-6.

The v-SNARE Vti1a regulates insulin-stimulated glucose transport and Acrp30 secretion in 3T3-L1 adipocytes.
Bose A, Guilherme A, Huang S, Hubbard AC, Lane CR, Soriano NA, Czech MP
The Journal of biological chemistry (2005) 280(44): 36946-51.

Early/recycling endosomes-to-TGN transport involves two SNARE complexes and a Rab6 isoform.
Mallard F, Tang BL, Galli T, Tenza D, Saint-Pol A, Yue X, Antony C, Hong W, Goud B, Johannes L
The Journal of cell biology (2002) 156(4): 653-64.

The SNAREs vti1a and vti1b have distinct localization and SNARE complex partners.
Kreykenbohm V, Wenzel D, Antonin W, Atlachkine V, von Mollard GF
European journal of cell biology (2002) 81(5): 273-80.

The SNARE Vti1a-beta is localized to small synaptic vesicles and participates in a novel SNARE complex.
Antonin W, Riedel D, von Mollard GF
The Journal of neuroscience : the official journal of the Society for Neuroscience (2000) 20(15): 5724-32.