Synaptic Systems

Rudolf-Wissell-Str. 28
37079 Göttingen, Germany
Phone: +49 551-50556-0
Fax: +49 551-50556-384
E-mail: sales@sysy.com
Web: www.sysy.com

Vti1a

Cat.No. 165 002; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	200 µl antiserum, lyophilized. For reconstitution add 200 µl H_2O, then aliquot and store at -20°C until use.
Applications	**WB**: 1 : 1000 (AP staining) **IP**: yes **ICC**: 1 : 500 **IHC**: 1 : 500 **IHC-P/FFPE**: not tested yet
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

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 compex 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

The COG complex interacts directly with Syntaxin 6 and positively regulates endosome-to-TGN retrograde transport.
Laufman O, Hong W, Lev S
The Journal of cell biology (2011) 194(3): 459-72. **WB, ICC**

Annexin A6 and Late Endosomal Cholesterol Modulate Integrin Recycling and Cell Migration.
García-Melero A, Reverter M, Hoque M, Meneses-Salas E, Koese M, Conway JR, Johnsen CH, Alvarez-Guaita A, Morales-Paytuvi F, Elmaghrabi YA, Pol A, et al.
The Journal of biological chemistry (2016) 291(3): 1320-35. **WB**

Composition of isolated synaptic boutons reveals the amounts of vesicle trafficking proteins.
Wilhelm BG, Mandad S, Truckenbrodt S, Kröhnert K, Schäfer C, Rammner B, Koo SJ, Claßen GA, Krauss M, Haucke V, Urlaub H, et al.
Science (New York, N.Y.) (2014) 344(6187): 1023-8. **WB**

Calsyntenin-1 shelters APP from proteolytic processing during anterograde axonal transport.
Steuble M, Diep TM, Schätzle P, Ludwig A, Tagaya M, Kunz B, Sonderegger P
Biology open (2012) 1(8): 761-74. **WB**

Dual roles of the mammalian GARP complex in tethering and SNARE complex assembly at the trans-golgi network.
Pérez-Victoria FJ, Bonifacino JS
Molecular and cellular biology (2009) 29(19): 5251-63. **WB**

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.