

Vti1a (D8U3M) Rabbit mAb

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Applications: W, IP, IF-IC	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 26	Source/Isotype: Rabbit IgG	UniProt ID: #Q96AJ9	Entrez-Gene Id: 143187
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Product Usage Information**Application**

Western Blotting
Immunoprecipitation
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:50
1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Vti1a (D8U3M) Rabbit mAb recognizes endogenous levels of total Vti1a protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg127 of human Vti1a protein.

Background

Vesicle transport through interaction with t-SNAREs homolog 1 (Vti1) has two protein members, Vti1a and Vti1b. Human Vti1 was first identified as a homolog of the yeast v-SNARE Vti1p and was able to functionally rescue the phenotype of Vti1p-deficient yeast (1). The mammalian proteins Vti1a and Vti1b exhibit distinct but overlapping localization. Vti1a and Vti1b are both localized in the trans-Golgi network, with Vti1a also found in the Golgi apparatus and Vti1b in endosomes (2). Vti1 proteins have been implicated in a number of protein-protein interactions with partners such as VAMP4, syntaxin 6, syntaxin 8, syntaxin 16, and synaptobrevin (2-4).

Research studies demonstrate that Vti1a residing on synaptic vesicles is involved in maintaining spontaneous neurotransmitter release (5).

Background References

1. Fischer von Mollard, G. and Stevens, T.H. (1998) *J Biol Chem* 273, 2624-30.
2. Kreykenbohm, V. et al. (2002) *Eur J Cell Biol* 81, 273-80.
3. Antonin, W. et al. (2000) *J Neurosci* 20, 5724-32.
4. Atlashkin, V. et al. (2003) *Mol Cell Biol* 23, 5198-207.
5. Ramirez, D.M. et al. (2012) *Neuron* 73, 121-34.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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