

VAMP 1/2/3

Cat.No. 104 011; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. For reconstitution add 100 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 : 100 up to 1 : 500 (see remarks) IHC: 1 : 100 up to 1 : 500 IHC-P/FFPE: 1 : 500 up to 1 : 1000
Clone	10.1
Subtype	IgG1
Immunogen	Recombinant protein corresponding to AA 1 to 118 from rat Synaptobrevin1 (UniProt Id: Q63666)
Epitop	Epitop: AA 31 to 98 from rat Synaptobrevin1 (UniProt Id: Q63666)
Reactivity	Reacts with: human (P23763, P63027, Q15836), rat (Q63666, P63045, P63025), mouse (Q62442, P63044, P63024), vertebrates, invertebrates. Other species not tested yet.
Specificity	Specific for all three isoforms VAMP 1, 2, 3.
Remarks	ICC: ICC/IHC: This antibody is not recommended for non-neuronal cells. Please use cat. no. 104 102 for such experiments. This antibody reacts with the conserved middle-portion of the molecule. Its affinity/avidity is not very high, thus requiring extended incubation periods and sensitive detection systems. This antibody recognizes the Botulinumtoxin B cleavage product (aa 1 - 76) with reduced affinity. The sensitivity is sufficient for the detection of cleaved recombinant protein. For analysis of toxin treated tissue homogenates cat. no. 104 203 is recommended.

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

Cellubrevin/VAMP3 is the non-neuronal isoform of the synaptobrevin/VAMP family which belongs to the v-SNAREs. Like the neuronal isoforms Synaptobrevin1/VAMP1 and Synaptobrevin2/VAMP2 it is composed of an N-terminal cytoplasmic region and a C-terminal transmembrane domain. Cellubrevin/VAMP3 localizes to an endosomal membrane pool, where it constitutes an essential component of the membrane fusion machinery. Like the synaptobrevins, cellubrevin is a substrate for the tetanus toxin.

Selected References SYSY Antibodies

SV31 is a Zn²⁺-binding synaptic vesicle protein.
Barth J, Zimmermann H, Volkandt W
Journal of neurochemistry (2011) 118(4): 558-70. **WB, ICC**

Synaptotagmin I, synaptobrevin II, and syntaxin I are coexpressed in rat and gerbil pinealocytes.
Redecker P
Cell and tissue research (1996) 283(3): 443-54. **IHC; tested species: rat**

VAPB depletion alters neuritogenesis and phosphoinositide balance in motoneuron-like cells: relevance to VAPB-linked ALS.
Genevini P, Colombo MN, Venditti R, Marcuzzo S, Colombo SF, Bernasconi P, De Matteis MA, Borgese N, Navone F
Journal of cell science (2019) : . **ICC; tested species: mouse**

A common mechanism for the regulation of vesicular SNAREs on phospholipid membranes.
Hu K, Rickman C, Carroll J, Davletov B
The Biochemical journal (2004) 377(Pt 3): 781-5. **WB**

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Schraw TD, Lemons PP, Dean WL, Whiteheart SW
The Biochemical journal (2003) 374(Pt 1): 207-17. **WB; tested species: human**

Selected General References

Mechanisms of synaptic vesicle exocytosis.
Lin RC, Scheller RH
Annual review of cell and developmental biology (2000) 16: 19-49.

Membrane fusion and exocytosis.
Jahn R, Südhof TC
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Export of cellubrevin from the endoplasmic reticulum is controlled by BAP31.
Annaert WG, Becker B, Kistner U, Reth M, Jahn R
The Journal of cell biology (1997) 139(6): 1397-410.

Synaptobrevin binding to synaptophysin: a potential mechanism for controlling the exocytotic fusion machine.
Edelmann L, Hanson PI, Chapman ER, Jahn R
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The synaptic vesicle cycle: a cascade of protein-protein interactions.
Südhof TC
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Cellubrevin is a ubiquitous tetanus-toxin substrate homologous to a putative synaptic vesicle fusion protein.
McMahon HT, Ushkaryov YA, Edelmann L, Link E, Binz T, Niemann H, Jahn R, Südhof TC
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Structures and chromosomal localizations of two human genes encoding synaptobrevins 1 and 2.
Archer BT, Özçelik T, Jahn R, Francke U, Südhof TC
The Journal of biological chemistry (1990) 265(28): 17267-73.

A synaptic vesicle membrane protein is conserved from mammals to Drosophila.
Südhof TC, Baumert M, Perin MS, Jahn R
Neuron (1989) 2(5): 1475-81.

Two vesicle-associated membrane protein genes are differentially expressed in the rat central nervous system.
Elferink LA, Trimble WS, Scheller RH
The Journal of biological chemistry (1989) 264(19): 11061-4.

Synaptobrevin: an integral membrane protein of 18,000 daltons present in small synaptic vesicles of rat brain.
Baumert M, Maycox PR, Navone F, De Camilli P, Jahn R
The EMBO journal (1989) 8(2): 379-84.

VAMP-1: a synaptic vesicle-associated integral membrane protein.
Trimble WS, Cowan DM, Scheller RH
Proceedings of the National Academy of Sciences of the United States of America (1988) 85(12): 4538-42.