SYSY **Synaptic Systems**

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Synaptobrevin 2

Cat.No. 104 211; Monoclonal mouse antibody, 50 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	50 μg purified IgG, lyophilized. For reconstitution add 50 μl H_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1 : 10000 up to 1 : 100000 (AP staining) IP: yes (see remarks) ICC: 1 : 1000 IHC: 1 : 500 up to 1 : 1000 IHC-P/FFPE: 1 : 500 EM: yes ELISA: yes (see remarks)
Clone	69.1
Subtype	IgG1 (κ light chain)
Immunogen	Synthetic peptide corresponding to AA 2 to 17 from rat Synaptobrevin2 (UniProt Id: P63045)
Epitop	Epitop: AA 2 to 17 from rat Synaptobrevin2 (UniProt Id: P63045)
Reactivity	Reacts with: human (P63027), rat (P63045), mouse (P63044), hamster. No signal: chicken, zebrafish. Other species not tested yet.
Specificity	Specific for VAMP 2. No cross-reactivity to VAMP 1 and VAMP 3. (K.O. verified)
matching control	104-2P
Remarks	IP : This antibody quantitatively precipitates synaptobrevin 2 from detergent extracts regardless of whether the protein is associated.
	ELISA : Suitable as capture antibody for sandwich-ELISA with cat. no. 104 102 or 104 203 as detector antibodies (protocol for sandwich-ELISA). Although the epitope for this antibody is still present in the Botulinumtoxin B cleavage product (aa 1 - 76), it is not recognized for unknown reasons.

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

Synaptobrevins/VAMPs represents a family of integral membrane proteins of 11-13 kDa with the Nterminal region exposed to the cytoplasm and a C-terminal transmembrane domain. Two isoforms were identified in the mammalian CNS, synaptobrevin 1 (VAMP 1 or p18-1) and synaptobrevin 2 (VAMP 2 or p18-2) that differ in their distribution within different brain regions. Synaptobrevin 1 is highly conserved between vertebrates and invertebrates. It is a major

constituent of synaptic vesicles and peptidergic secretory granules in all neurons examined so far. In addition, it is present on secretory granules of neuroendocrine cells. Low levels of synaptobrevin 2 are present in many other tissues where the protein resides on specialized microvesicles.

In non-neuronal cells the third isoform, cellubrevin (VAMP 3), is present where it is localized to an endosomal membrane pool.

Synaptobrevin/VAMP is an essential component of the exocytotic fusion machine, related to a larger protein family referred to as v-SNAREs. It is the sole target for tetanus and several of the botulinal neurotoxins which cleave the protein at single sites in the C-terminal portion of the molecule.

Selected References SYSY Antibodies

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Tetanus neurotoxin-induced epilepsy in mouse visual cortex. Mainardi M, Pietrasanta M, Vannini E, Rossetto O, Caleo M Epilepsia (2012) 53(7): e132-6. WB, ICC; tested species: mouse

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