Synaptobrevin 1

Cat.No. 104 002; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

Data Sheet

**Reconstitution/Storage**
200 µl antiserum, lyophilized. For reconstitution add 200 µl H₂O, 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/FPPE: yes
EM: yes

**Immunogen**
Synthetic peptide corresponding to AA 2 to 14 from rat Synaptobrevin1 (UniProt Id: Q63666)

**Reactivity**
Reacts with: human (P23763), rat (Q63666), mouse (Q62442), monkey, hamster.
No signal: chicken, cat.
Other species not tested yet.

**Specificity**
Specific for VAMP 1, no cross reactivity to VAMP 2 and VAMP 3.

**matching control**
104-0P

Selected References SYSY Antibodies

Composition of isolated synaptic boutons reveals the amounts of vesicle trafficking proteins.

Distribution of SNAP25, VAMP1 and VAMP2 in mature and developing deep cerebellar nuclei after estrogen administration.
Manpa P, Mameli O, Caria MA, Torrejón-Escribano B, Blasi J

Rbf01 Regulates Synaptic Transmission through the Inhibitory Neuron-Specific vsSNARE Vamp1.

Combinatorial SNARE complexes modulate the secretion of cytolytic granules in human neutrophils.

Synaptophysin I controls the targeting of VAMP2/synaptobrevin II to synaptic vesicles.
Pennuto M, Bonanomi D, Benfenati F, Valtorta F

Sherry DM, Wang MM, Frishman LJ
Molecular vision (2003) 9: 673-88. WB, IHC

SNAREs in mammalian sperm: possible implications for fertilization.

Olanzapine Reverses MK-801-Induced Cognitive Deficits and Region-Specific Alterations of NMDA Receptor Subunits.

Genetically-controlled Vesicle-Associated Membrane Protein 1 expression may contribute to Alzheimer’s pathophysiology and susceptibility.
Molecular neurodegeneration (2015) 10: 18. WB

Widespread sequence variations in VAMP1 across vertebrates suggest a potential selective pressure from botulinum neurotoxins.

Pro-brain-derived neurotrophic factor induces GABAergic neurotransmission by activating endocytosis and repression of GABAAR receptors.

Synaptic function is modulated by LRRK2 and glutamate release is increased in cortical neurons of G2019S LRRK2 knock-in mice.

Exocytosis at the hair cell ribbon synapse apparently operates without neuronal SNARE proteins.

Increased neurotransmitter release at the neuromuscular junction in a mouse model of polyglutamine disease.

LRRK2 controls synaptic vesicle storage and mobilization within the recycling pool.

Pro-brain-derived neurotrophic factor induces GABAergic neurotransmission by activating endocytosis and repression of GABAAR receptors.

Synaptobrevins/VAMPs represents a family of integral membrane proteins of 11-13 kDa with the N-terminal 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 vSNAREs. It is the sole target for tetanus and several of the botulinum neurotoxins which cleave the protein at single sites in the C-terminal portion of the molecule.