Synaptobrevin 2

Cat.No. 104 202; 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 up to 1: 10000 (AP staining)
IP: yes
ICC: 1: 500 up to 1: 2000
IHC: 1: 500
IHC-P/FPPE: 1: 200
EM: yes

ImmunoGen
Synthetic peptide corresponding to 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.D. verified)

Remarks
This antibody recognizes the Botulinum toxin 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

Selected References SYSY Antibodies

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

Synaptophysin 1: Cerebral synaptic vesicles in the presynaptic active zone to prevent short-term depression.
Rajappapina V, Cauhier-Kemper A, Böning D, Hülse J, Klimpauf J

Dopamine secretion is mediated by sparse active zone-like release sites.

Distribution of SNAP25, VAMP1 and VAMP2 in mature and developing deep cerebellar nuclei after estrogen administration.
Manca P, Rameli O, Caria MA, Torrejon-Escribano B, Blasi J
Neuroscience (2014) 266: 102-15. IHC, WB

Synapsin-dependent reserve pool of synaptic vesicles supports replenishment of the readily releasable pool under intense synaptic transmission.
Vasileva M, Horstmann H, Guemann C, Gütler D, Kuner T

A novel flat-embedding method to prepare ultrathin cryosections from cultured cells in their in situ orientation.
Oorschot V, de Wit H, Annaert WG, Klumperman J

Parkin contributes to synaptic vesicle autophagy in Bassoon-deficient mice.

Live neuron high-content screening reveals synaptotoxic activity in Alzheimer Mouse Model Homogenates.
Jiang H, Esparza TJ, Kummer TT, Zhong H, Retig J, Brody DL
Scientific reports (2020) 10(1): 3412. ICC; tested species: mouse

Characterisation of GLUT4 trafficking in HeLa cells: comparable kinetics and orthologous trafficking mechanisms to 3T3-L1 adipocytes.
PeerJ (2020) 8: e8751. WB; KD verified; tested species: mouse

Phospholipase D1 Ablation Disrupts Mouse Longitudinal Hippocampal Axis Organization and Functioning.
Cell reports (2020) 30(12): 4197-4208.e6. WB; tested species: mouse

Intersectin-Mediated Clearance of SNARE Complexes Is Required For Fast Neurotransmission.

Differential distribution of v-SNAREs 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 peptidogenic 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/VAMPs 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.

Synaptobrevin/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.
Molecular neurodegeneration (2019) 14(1): 43. WB; tested species: mouse