

SV2 B

Cat.No. 119 111; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

| | |
|----------------------------|--|
| Reconstitution/ Storage | 100 µg purified IgG, lyophilized. Azide was added before lyophilization. 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) (see remarks) IP: yes ICC: 1 : 100 up to 1 : 500 (see remarks) IHC: 1 : 200 IHC-P/FFPE: 1 : 500 |
| Clone | 246E8 |
| Subtype | IgG2b (κ light chain) |
| Immunogen | Synthetic peptide corresponding to AA 2 to 17 from rat SV2B (UniProt Id: Q63564) |
| Epitop | Epitop: AA 2 to 17 from rat SV2B (UniProt Id: Q63564) |
| Reactivity | Reacts with: human (Q7L112), rat (Q63564), mouse (Q8BG39). Other species not tested yet. |
| Specificity | Specific for SV 2B. |
| matching control | 119-1P |
| Remarks | WB: SV 2 aggregates after boiling, making it necessary to run SDS-PAGE only with non-boiled samples. ICC: ICC/IHC: The biotin-labeled antibody is not recommended for these applications. |

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

SV 2s (synaptic vesicle protein 2) are integral membrane glycoproteins present in all synaptic vesicles. They have 12 transmembrane domains predicted by sequence analysis. There are three characterized isoforms, SV 2A, SV 2B and SV 2C. SV 2A is expressed ubiquitously throughout the brain and is probably involved in the maintenance of a pool of synaptic vesicles competent for calcium- stimulated exocytosis. **SV 2B** has a more restricted distribution with varying degrees of coexpression with SV 2A. SV 2C is more closely related to SV 2A but shows a very restricted expression pattern. The highest expression levels were observed in phylogenetically old brain areas like pallidum, the midbrain and the olfactory bulb. SV2 expression has also been observed in other organs. In kidney it localizes to podocytes.

Selected References SYSY Antibodies

Loss of photoreceptors results in upregulation of synaptic proteins in bipolar cells and amacrine cells.
Dagar S, Nagar S, Goel M, Cherukuri P, Dhingra NK
PloS one (2014) 9(3): e90250. **IHC, WB; tested species: mouse**

Ubiquitin-Synaptobrevin Fusion Protein Causes Degeneration of Presynaptic Motor Terminals in Mice.
Liu Y, Li H, Sugiura Y, Han W, Gallardo G, Khvotchev M, Zhang Y, Kavalali ET, Südhof TC, Lin W
The Journal of neuroscience : the official journal of the Society for Neuroscience (2015) 35(33): 11514-31. **WB**

Selected General References

SV2 modulates the size of the readily releasable pool of secretory vesicles.

Xu T, Bajjalieh SM
Nature cell biology (2001) 3(8): 691-8.

Genetics of synaptic vesicle function: toward the complete functional anatomy of an organelle.
Fernández-Chacón R, Südhof TC
Annual review of physiology (1999) 61: 753-76.

The synaptic vesicle cycle: a cascade of protein-protein interactions.
Südhof TC
Nature (1995) 375(6533): 645-53.

Synaptic vesicles and exocytosis.
Jahn R, Südhof TC
Annual review of neuroscience (1994) 17: 219-46.

Differential expression of synaptic vesicle protein 2 (SV2) isoforms.
Bajjalieh SM, Frantz GD, Weimann JM, McConnell SK, Scheller RH
The Journal of neuroscience : the official journal of the Society for Neuroscience (1994) 14(9): 5223-35.

SV2, a brain synaptic vesicle protein homologous to bacterial transporters.
Bajjalieh SM, Peterson K, Shinghal R, Scheller RH
Science (New York, N.Y.) (1992) 257(5074): 1271-3.

The synaptic vesicle protein SV2 is a novel type of transmembrane transporter.
Feany MB, Lee S, Edwards RH, Buckley KM
Cell (1992) 70(5): 861-7.