

## SV2 A

Cat.No. 119 003; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

### Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Rabbit serum albumin was added for stabilization. For reconstitution add 50 µl H <sub>2</sub> O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	<b>WB:</b> 1 : 1000 up to 1 : 2000 (AP staining) (see remarks) <b>IP:</b> yes <b>ICC:</b> 1 : 500 up to 1 : 1000 <b>IHC:</b> 1 : 500 up to 1 : 1000 <b>IHC-P/FFPE:</b> 1 : 500
Immunogen	Synthetic peptide corresponding to AA 2 to 17 from human SV2A (UniProt Id: Q7L0J3)
Reactivity	Reacts with: human (Q7L0J3), rat (Q02563), mouse (Q9JIS5), Guinea pig, cow, hamster, chicken, zebrafish. Other species not tested yet.
matching control	119-0P
Remarks	<b>WB:</b> SV 2A aggregates after boiling, making it necessary to run SDS-PAGE only with non-boiled samples.

**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 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.