

## Synaptotagmin 2 cytoplasmic domain

Cat.No. 105 123; 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 (AP staining) <b>IP:</b> yes <b>ICC:</b> yes <b>IHC:</b> not tested yet <b>IHC-P/FFPE:</b> not tested yet
Immunogen	Synthetic peptide corresponding to AA 406 to 422 from rat Synaptotagmin2 (UniProt Id: P29101)
Reactivity	Reacts with: human (Q8N9I0), rat (P29101), mouse (P46097). Other species not tested yet.
Specificity	Specific for synaptotagmin 2.
matching control	105-12P

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

**Synaptotagmin 2** is an integral membrane glycoprotein of neuronal synaptic vesicles. It is very similar to synaptotagmin 1 but shows a partly complementary expression pattern in the CNS. Synaptotagmin 2 lacks a CAMK II/PKC phosphorylation site which is present in synaptotagmin 1. Recently synaptotagmin 2 has been shown to be an alternative Ca<sup>2+</sup> sensor for fast secretion.

### Selected References SYSY Antibodies

- Composition of isolated synaptic boutons reveals the amounts of vesicle trafficking proteins. Wilhelm BG, Mandad S, Truckenbrodt S, Kröhnert K, Schäfer C, Rammner B, Koo SJ, Claßen GA, Krauss M, Haucke V, Urlaub H, et al. *Science (New York, N.Y.)* (2014) 344(6187): 1023-8. **ICC; tested species: rat**
- Proteomic analysis of wild-type and mutant huntingtin-associated proteins in mouse brains identifies unique interactions and involvement in protein synthesis. Culver BP, Savas JN, Park SK, Choi JH, Zheng S, Zeitlin SO, Yates JR, Tanese N *The Journal of biological chemistry* (2012) 287(26): 21599-614. **WB**
- Synaptotagmin IV determines the linear Ca<sup>2+</sup> dependence of vesicle fusion at auditory ribbon synapses. Johnson SL, Franz C, Kuhn S, Furness DN, Rüttiger L, Münkner S, Rivolta MN, Seward EP, Herschman HR, Engel J, Knipper M, et al. *Nature neuroscience* (2010) 13(1): 45-52. **IHC**
- Loss of β2-laminin alters calcium sensitivity and voltage-gated calcium channel maturation of neurotransmission at the neuromuscular junction. Chand KK, Lee KM, Schenning MP, Lavidis NA, Noakes PG *The Journal of physiology* (2015) 593(1): 245-65. **IHC**
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- Novel application of human neurons derived from induced pluripotent stem cells for highly sensitive botulinum neurotoxin detection. Whitemarsh RC, Strathman MJ, Chase LG, Stankewicz C, Tepp WH, Johnson EA, Pellett S *Toxicological sciences : an official journal of the Society of Toxicology* (2012) 126(2): 426-35. **WB**

### Selected General References

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- Genetic analysis of synaptotagmin 2 in spontaneous and Ca<sup>2+</sup>-triggered neurotransmitter release. Pang ZP, Sun J, Rizo J, Maximov A, Südhof TC *The EMBO journal* (2006) 25(10): 2039-50.
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- Synaptotagmin II negatively regulates Ca<sup>2+</sup>-triggered exocytosis of lysosomes in mast cells. Baram D, Adachi R, Medalia O, Tuvim M, Dickey BF, Mekori YA, Sagi-Eisenberg R *The Journal of experimental medicine* (1999) 189(10): 1649-58.
- Synaptotagmin II. A novel differentially distributed form of synaptotagmin. Geppert M, Archer BT, Südhof TC *The Journal of biological chemistry* (1991) 266(21): 13548-52.