Synaptic Systems

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Synaptogyrin 1

Cat.No. 103 002; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	200 µl antiserum, lyophilized. For reconstitution add 200 µl H_2O, then aliquot and store at -20°C until use.
Applications	**WB**: 1 : 1000 up to 1 : 5000 (AP staining) **IP**: yes **ICC**: 1 : 100 up to 1 : 500 **IHC**: 1 : 200 **IHC-P/FFPE**: 1 : 500 **ELISA**: yes (see remarks)
Immunogen	Synthetic peptide corresponding to AA 220 to 234 from rat Synaptogyrin1 (UniProt Id: Q62876)
Reactivity	Reacts with: human (O43759), rat (Q62876), mouse (O55100), hamster, chicken. No signal: zebrafish. Other species not tested yet.
Specificity	Specific for synaptogyrin 1.
matching control	103-0P
Remarks	**ELISA**: Suitable as detector antibody for sandwich-ELISA with cat. no. 103 011 as capture antibody (protocol for sandwich-ELISA).

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

Synaptogyrins are tyrosine-phosphorylated proteins with two neuronal (**synaptogyrin 1** and 3) and one ubiquitous, synaptogyrin 2 or cellugyrin isoform.
Synaptogyrins are integral membrane proteins and localize to the membrane of small vesicles.
Synaptogyrin 1 and 3 are expressed in the brain whereby the latter shows a more restricted expression pattern with high levels in the mossy fiber region of the hippocampus, substantia nigra pars reticulata, pallidum, and deep cerebellar nuclei.
Synaptogyrin 2/cellugyrin, a close relative, is expressed in all tissues, for instance, in distinct populations of GLUT 4 containing vesicles.

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, IHC; tested species: mouse,rat**

Distribution of synaptic vesicle proteins in the mammalian retina identifies obligatory and facultative components of ribbon synapses.
Von Kriegstein K, Schmitz F, Link E, Südhof TC
The European journal of neuroscience (1999) 11(4): 1335-48. **WB**

SV31 is a Zn2+-binding synaptic vesicle protein.
Barth J, Zimmermann H, Volknandt W
Journal of neurochemistry (2011) 118(4): 558-70. **WB**

Selected General References

Essential roles in synaptic plasticity for synaptogyrin I and synaptophysin I.
Janz R, Südhof TC, Hammer RE, Unni V, Siegelbaum SA, Bolshakov VY
Neuron (1999) 24(3): 687-700.

Cellugyrin, a novel ubiquitous form of synaptogyrin that is phosphorylated by pp60c-src.
Janz R, Südhof TC
The Journal of biological chemistry (1998) 273(5): 2851-7.

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.