

Synaptotagmin 1 luminal domain

Cat.No. 105 311; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. 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 IP: yes ICC: 1 : 50 up to 1 : 300 IHC: 1 : 500 IHC-P/FFPE: not tested yet
Clone	604.2
Subtype	IgG1 (κ light chain)
Immunogen	Synthetic peptide corresponding to AA 1 to 12 from rat Synaptotagmin1 (UniProt Id: P21707)
Epitop	Epitop: AA 1 to 12 from rat Synaptotagmin1 (UniProt Id: P21707)
Reactivity	Reacts with: rat (P21707). No signal: mouse (P46096), zebrafish. Other species not tested yet.
Specificity	Specific for rat synaptotagmin 1, no cross-reactivity to other synaptotagmins.
Remarks	This antibody is intended to be used for direct labeling of recycling synapses in primary neuronal cultures.

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

Synaptotagmin 1 also known as **p65**, is an integral membrane glycoprotein of neuronal synaptic vesicles and secretory granules of neuroendocrine cells that is widely (but not ubiquitously) expressed in the central and peripheral nervous system. It has a variable N-terminal domain that is exposed to the lumen of the vesicle and a conserved cytoplasmic tail that contains two Ca²⁺-binding C2-domains. Ca²⁺-binding to synaptotagmin triggers exocytosis of synaptic vesicles, thus linking Ca²⁺-influx during depolarization to neurotransmitter release. Luminal antibodies were used in living neurons to label synaptic vesicles from the outside via endocytotic uptake.

Selected References SYSY Antibodies

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Thalhammer A, Contestabile A, Ermolyuk YS, Ng T, Volynski KE, Soong TW, Goda Y, Cingolani LA
Cell reports (2017) 20(2): 333-343. **ICC, UPTAKE; tested species: rat**

Newly produced synaptic vesicle proteins are preferentially used in synaptic transmission.
Truckenbrodt S, Viplav A, Jähne S, Vogts A, Denker A, Wildhagen H, Fornasiero EF, Rizzoli SO
The EMBO journal (2018) : . **ICC, UPTAKE; tested species: rat**

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The Journal of biological chemistry (1994) 269(8): 5735-41. **WB; tested species: rat**

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Nature communications (2017) 8(1): 1412. **UPTAKE; tested species: rat**

Endosomal sorting of readily releasable synaptic vesicles.
Hoopmann P, Punge A, Barysch SV, Westphal V, Bückers J, Opazo F, Bethani I, Lauterbach MA, Hell SW, Rizzoli SO
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RAB3 and synaptotagmin: the yin and yang of synaptic membrane fusion.
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Annual review of neuroscience (1998) 21: 75-95.

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Phospholipid binding by a synaptic vesicle protein homologous to the regulatory region of protein kinase C.
Perin MS, Fried VA, Mignery GA, Jahn R, Südhof TC
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