

Synaptotagmin 1 cytoplasmic tail

Cat.No. 105 011C3; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized, fluorescence-labeled with Oyster [®] 550. Rabbit serum albumin was added for stabilization. For reconstitution add 100 µl H ₂ O to get a 1mg/ml solution in PBS. Either add 1:1 (v/v) glycerol, then aliquot and store at -20°C until use, or store aliquots at -80°C without additives. Reconstitute immediately upon receipt! Avoid bright light when working with the antibody to minimize photo bleaching of the fluorescent dye. The mounting agent Aquatex [®] (Merck Chemicals) is not compatible with Oyster dyes!
Applications	WB: N/A IP: N/A ICC: 1 : 100 up to 1 : 500 IHC: 1 : 500 IHC-P/FFPE: 1 : 500
Label	Oyster 550
Clone	41.1
Subtype	IgG2a (κ light chain)
Immunogen	Recombinant protein corresponding to AA 80 to 421 from rat Synaptotagmin1 (UniProt Id: P21707)
Epitop	Epitop: AA 150 to 240 from rat Synaptotagmin1 (UniProt Id: P21707)
Reactivity	Reacts with: human (P21579), rat (P21707), mouse (P46096), mammals, zebrafish. Other species not tested yet.
Specificity	Specific for mammalian synaptotagmin 1, no cross-reactivity to other synaptotagmins. (K.O. verified)

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

Synaptotagmin oligomerization is essential for calcium control of regulated exocytosis.
Bello OD, Jouannot O, Chaudhuri A, Stroeve E, Coleman J, Volynski KE, Rothman JE, Krishnakumar SS
Proceedings of the National Academy of Sciences of the United States of America (2018) 115(32): E7624-E7631. **ICC; KO verified; tested species: rat**

Selected General References

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The synaptic vesicle cycle: a cascade of protein-protein interactions.
Südhof TC
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Synaptic vesicles and exocytosis.
Jahn R, Südhof TC
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Synaptotagmin I: a major Ca²⁺ sensor for transmitter release at a central synapse.
Geppert M, Goda Y, Hammer RE, Li C, Rosahl TW, Stevens CF, Südhof TC
Cell (1994) 79(4): 717-27.

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Phospholipid binding by a synaptic vesicle protein homologous to the regulatory region of protein kinase C.
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Nature (1990) 345(6272): 260-3.