

Synaptotagmin 1 luminal domain

Cat.No. 105-10P; control peptide, 100 µg peptide (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg peptide, 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. Control peptides should also be stored at -20°C when still lyophilized!
Immunogen	Synthetic peptide corresponding to AA 1 to 8 from mouse Synaptotagmin1 (UniProt Id: P46096)
Recommended dilution	Optimal concentrations should be determined by the end-user.
matching antibodies	105 102, 105 103, 105 103BT, 105 103C2, 105 103C3, 105 103C5, 105 103CpH, 105 104, 105 105, 105 106, 105 103AF
Remarks	This control peptide consists of the synthetic peptide MVSASRPE (aa 1-8 in mouse synaptotagmin 1) that has been used for immunization. It has been tested in preadsorption experiments and blocks efficiently and specifically the corresponding signal in Western blots. The amount of peptide needed for efficient blocking depends on the titer and on the affinity of the antibody to the antigen.

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 General References

- RAB3 and synaptotagmin: the yin and yang of synaptic membrane fusion.
Geppert M, Südhof TC
Annual review of neuroscience (1998) 21: 75-95.
- 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.
- 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.
- Synaptotagmin: a calcium sensor on the synaptic vesicle surface.
Brose N, Petrenko AG, Südhof TC, Jahn R
Science (New York, N.Y.) (1992) 256(5059): 1021-5.
- 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
Nature (1990) 345(6272): 260-3.