

## Synaptotagmin 1 luminal domain

Cat.No. 105 3FB; Monoclonal mouse antibody, 100 µg Fab1 fragment

### Data Sheet

Reconstitution/ Storage	100 µg purified Fab1 fragment, lyophilized. For reconstitution add 100 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> yes (see remarks) <b>IP:</b> not tested yet <b>ICC:</b> 1 : 100 up to 1 : 500 (see remarks) <b>IHC:</b> 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	<b>WB:</b> The full IgG (cat. no. 105 311) is recommended.  <b>ICC:</b> A Fab-specific secondary reagent is recommended for detection.

**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 Ca<sup>2+</sup>-binding C2-domains. Ca<sup>2+</sup>-binding to synaptotagmin triggers exocytosis of synaptic vesicles, thus linking Ca<sup>2+</sup>-influx during depolarization to neurotransmitter release. Lumenal 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 Ca<sup>2+</sup> 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.