

## Product Information

**Anti-phospho-Synaptotagmin [pSer<sup>309</sup>]**  
produced in rabbit, affinity isolated antibody

Catalog Number **S3821**

### Product Description

Anti-phospho-Synaptotagmin [pSer<sup>309</sup>] is developed in rabbit using a synthetic phosphopeptide corresponding to amino acid residues surrounding the serine 309 of synaptotagmin (Syt) as immunogen. The sequence of the immunogen is identical in synaptotagmins I, II and III in human, mouse and rat. The antiserum is affinity purified using sequential chromatography on phospho- and non-phosphopeptide affinity columns.

The antibody specifically recognizes human, mouse and rat forms of synaptotagmin phosphorylated at serine 309 by immunoblotting.

The synaptotagmins are integral membrane proteins of synaptic vesicles thought to serve as Ca<sup>2+</sup> sensors in the process of vesicular trafficking and exocytosis. Synaptotagmins contain a short extracellular domain, a single N-terminal transmembrane domain, and tandem C2 domains that can bind several Ca<sup>2+</sup> ions. New studies on calcium binding to synaptotagmin I demonstrate that SytI is necessary for the endocytosis of synaptic vesicles that have undergone exocytosis using a functional SytI protein. Synaptotagmin can be phosphorylated by multiple protein kinases and this may play a key role in modulation of synaptotagmin ability to influence both the exocytotic and endocytotic components of synaptic transmission.

### Reagent

Supplied as a solution at 100  $\mu$ L in 10 mM HEPES, pH 7.5, 150 mM NaCl with 100  $\mu$ g/mL BSA and 50% glycerol.

### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices

### Storage/Stability

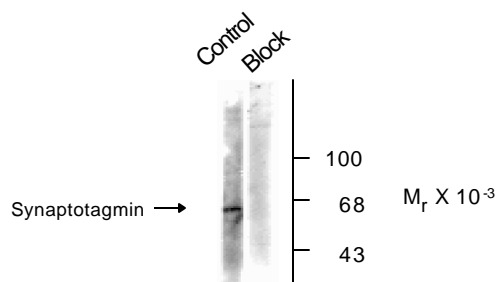
Store at  $-20^{\circ}\text{C}$ . Upon initial thawing, freeze the solution in working aliquots for extended storage. Avoid repeated freezing and thawing to prevent denaturing the antibody. Do not store in frost-free freezers. Working dilution samples should be discarded if not used within 12 hours. The antibody is stable for at least 12 months when stored appropriately.

### Product Profile

The supplied reagent is sufficient for 10 blots. A recommended working dilution of 1:1000 is determined by immunoblotting using rat brain lysate.

**Note:** In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

### Anti-Phospho-Ser<sup>309</sup> Synaptotagmin



**Immunoblot:** 10  $\mu$ g of rat brain lysate shows specific immunolabeling of synaptotagmin phosphorylated at serine 309. The antibody was specifically blocked by the phosphopeptide used as antigen. The corresponding non-phosphopeptide did not block the immunolabeling (not shown).

## References

1. Poskanzer, K.E., et al., Synaptotagmin I is necessary for compensatory synaptic vesicle endocytosis *in vivo*, *Nature* (London,) **426**, 559 – 563 (2003).
2. Wang, C.T. et al., Different domains of synaptotagmin control the choice between kiss-and-run and full fusion. *Nature* (London), **424**, 943-947 (2003).
3. Fernandez-Chacon, R., et al., Synaptotagmin I functions as a calcium regulator of release probability, *Nature* (London ), **410**, (2001) 41 - 49.
4. Hilfiker, S. Regulation of synaptotagmin I phosphorylation by multiple protein kinases, *J. Neurochem.* **73**, 921 – 932 (1999).

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