



**PhosphoSolutions®**  
Antibodies that work™

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## Anti-Phospho-Thr<sup>202</sup> Synaptotagmin

**Catalog Number:** p1570-202

**Size:** 100 µl

**\$310.00**

**Product Description:** Affinity purified rabbit polyclonal antibody

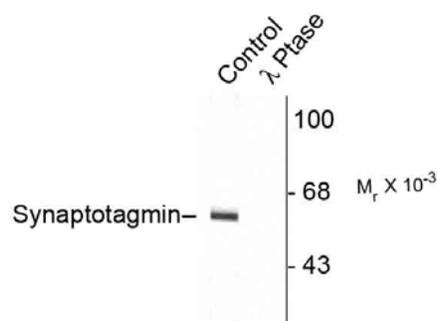
**Applications:** WB: 1:1000

**Antigen:** Phosphopeptide corresponding to amino acid residues surrounding the phospho-Thr<sup>202</sup> of synaptotagmin.

**Species reactivity:** The antibody has been directly tested for reactivity in Western blots with rat tissue. It is anticipated that the antibody will react with bovine, canine, chicken, human, mouse, non-human primate and zebra fish based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

**Background:** Synaptotagmin is widely regarded as the primary calcium sensor for synaptic vesicle exocytosis (Fernandez-Chacon et al., 2001; Wang et al., 2003). Moreover, recent studies indicate that the protein also plays a key role in endocytosis (Poskanzer et al., 2003). Synaptotagmin can be phosphorylated by multiple protein kinases and this may play a key role in modulation of synaptotagmin's ability to influence both the exocytotic and endocytotic components of synaptic transmission (Hilfiker et al., 1999; Lee et al., 2004).

### Anti-Phospho Thr<sup>202</sup> Synaptotagmin



**Western blot** of rat cortex lysate showing specific immunolabeling of the ~60k - ~62k synaptotagmin phosphorylated at Thr<sup>202</sup> (Control). The phosphospecificity of this labeling is shown in the second lane (*lambda*-phosphatase: λ-Ptase). The blot is identical to the control except that it was incubated in λ-Ptase (1200 units for 30 min) before being exposed to the Thr<sup>202</sup> synaptotagmin antibody. The immunolabeling is completely eliminated by treatment with λ-Ptase.

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**WB** = Western Blot   **IF** = Immunofluorescence   **IHC** = Immunohistochemistry   **IP** = Immunoprecipitation

**Packaging:** 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.

**Storage and Stability.** For long term storage -20°C is recommended. Stable at -20°C for at least 1 year.

**Shipment:** Domestic - Blue Ice; International - Blue Ice or Dry Ice.

**Purification Method:** Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

**Antibody Specificity:** Specific for the ~60k - 62k synaptotagmin protein phosphorylated at Thr<sup>202</sup>. The immunolabeling is completely eliminated by  $\lambda$ -phosphatase treatment

**Quality Control Tests:** Western blots performed on each lot.

**References:**

- Fernandez-Chacon R, Konigstorfer A, Gerber SH, Garcia J, Matos MF, Stevens CF, Brose N, Rizo J, Rosenmund C, Sudhof TC (2001) Synaptotagmin I functions as a calcium regulator of release probability. *Nature (London)* 410:41-49.
- Hilfiker S, Pieribone VA, Nordstedt C, Greengard P, Czernik AJ (1999) Regulation of synaptotagmin I phosphorylation by multiple protein kinases. *J Neurochem* 73:921-932.
- Lee BH, Min X, Heise CJ, Xu BE, Chen S, Shu H, Luby-Phelps K, Goldsmith EJ, Cobb MH (2004) WNK1 phosphorylates synaptotagmin 2 and modulates its membrane binding. *Mol Cell* 15:741-751.
- Poskanzer KE, Marek KW, Sweeney ST, Davis GW (2003) Synaptotagmin I is necessary for compensatory synaptic vesicle endocytosis *in vivo*. *Nature (London)* 426:559-563.
- Wang CT, Lu JC, Bai JH, Chang PY, Martin TFJ, Chapman ER, Jackson MB (2003) Different domains of synaptotagmin control the choice between kiss-and-run and full fusion. *Nature (London)* 424:943-947.

Note: Dr. Andrew Czernik, a co-author of one of the cited papers, is the Chief Scientific Officer of PhosphoSolutions.

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