

**Phospho-Thr202 Synaptotagmin Antibody**  
Affinity purified rabbit polyclonal antibody  
Catalog # AN1026

## Specification

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### Phospho-Thr202 Synaptotagmin Antibody - Product Information

Application	WB, IHC
Primary Accession	<a href="#">P21707</a>
Reactivity	Rat
Predicted	Bovine, Chicken, Human, Mouse, Monkey, Zebrafish
Host	Rabbit
Clonality	polyclonal
Calculated MW	60/62 KDa

### Phospho-Thr202 Synaptotagmin Antibody - Additional Information

Gene ID	25716
Gene Name	SYT1

**Other Names**

Synaptotagmin-1, Synaptotagmin I, SytI, p65, Syt1

#### Target/Specificity

Synthetic phospho-peptide corresponding to amino acid residues surrounding Thr202 conjugated to KLH.

#### Dilution

WB~~ 1:1000

IHC~~ 1:400

#### Format

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 Thr202. The immunolabeling is completely eliminated by  $\lambda$ -phosphatase treatment. In some lysates and/or various tissues, additional bands may be seen at ~ 45k, 75k and 150k.

#### Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

#### Precautions

Phospho-Thr202 Synaptotagmin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

#### Shipping

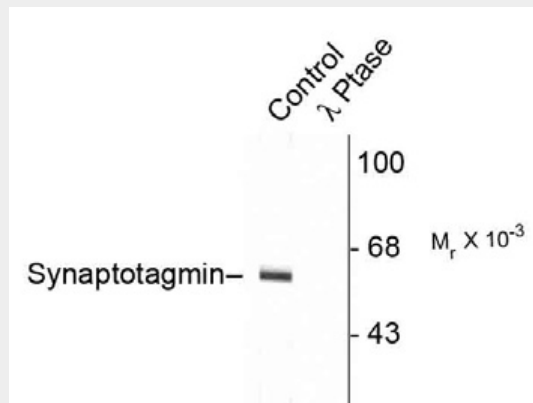
Blue Ice

## Phospho-Thr202 Synaptotagmin Antibody - Protocols

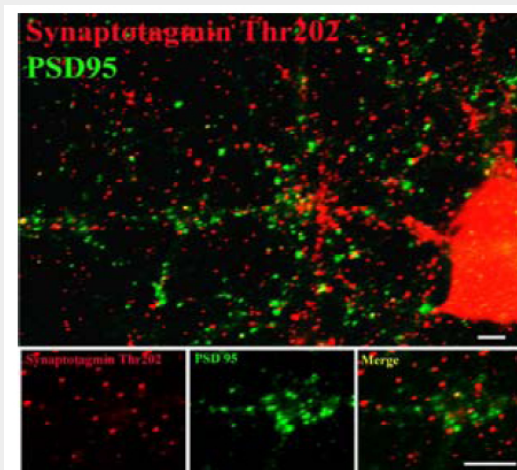
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Phospho-Thr202 Synaptotagmin Antibody - Images



Western blot of rat cortex lysate showing specific immunolabeling of the ~62k synaptotagmin phosphorylated at Thr202 (Control). Phosphospecificity is shown in the second lane (lambda-phosphatase:  $\lambda$ -Ptase). The blot is identical to the control except that it was incubated in  $\lambda$ -Ptase (1200 units for 30 min) before being exposed to the Thr202 synaptotagmin antibody. The immunolabeling is completely eliminated by treatment with  $\lambda$ -Ptase.



Immunostaining of 14 DIV rat cortical neurons showing synaptotagmin when phosphorylated at Thr202 in red and PSD95 in green.

## Phospho-Thr202 Synaptotagmin Antibody - 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).

### **Phospho-Thr202 Synaptotagmin Antibody - 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.