

## Phospho-Ser549 Synapsin I Antibody

Affinity purified rabbit polyclonal antibody Catalog # AN1112

# **Specification**

# Phospho-Ser549 Synapsin I Antibody - Product Information

Application WB, IHC
Primary Accession P17599
Reactivity Rat

Predicted Bovine, Human, Mouse, Monkey

Host Rabbit
Clonality polyclonal
Calculated MW 78 KDa

# Phospho-Ser549 Synapsin I Antibody - Additional Information

Gene ID 281510 Gene Name SYN1

**Other Names** 

Synapsin-1, Synapsin I, SYN1

#### Target/Specificity

Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser549 conjugated to KLH.

#### **Dilution**

WB~~ 1:1000 IHC~~ 1:500

#### **Format**

Prepared from rabbit serum by affinity purification via sequential chromatography on phosphoand dephospho-peptide affinity columns.

# **Antibody Specificity**

Specific for  $\sim$ 78k synapsin I doublet phosphorylated at Ser549.Immunolabeling of the synapsin I band is blocked by $\lambda$ -phosphatase treatment.

### **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-Ser549 Synapsin I Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

# **Shipping**

Blue Ice

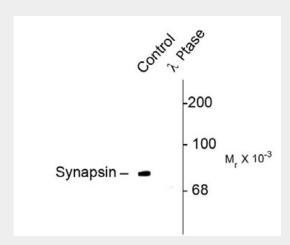


## Phospho-Ser549 Synapsin I Antibody - Protocols

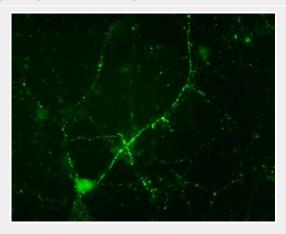
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

# Phospho-Ser549 Synapsin I Antibody - Images



Western blot of rat cortex lysate showing specific immunolabeling of the  $\sim$ 78k synapsin I phosphorylated at Ser549 (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 phospho Ser549 synapsin I antibody. The immunolabeling is completely eliminated by treatment with  $\lambda$ -Ptase.



Immunostaining of cultured mouse caudate neurons showing synapsin I when phosphorylated at Ser549. Cells and photo courtesy of QBMCellScience.

### Phospho-Ser549 Synapsin I Antibody - Background

Synapsin I plays a key role in synaptic plasticity in brain (Feng et al., 2002; Nayak et al., 1996). This effect is due in large part to the ab



ility of the synapsins to regulate the availability of synaptic vesicles for release. The role of synapsin in synaptic plasticity and in synaptogensis is regulated by phosphorylation (Jovanovic et al., 2001; Kao et al., 2002). Ser 549 along with Ser 62 and Ser 67 are the sites of synapsin I that are phosphorylated by MAP kinase (Jovanovic et al., 1996). Phosphorylation and subsequent dephosphorylation of this site is thought to play a key role in synaptic vesicle trafficking.

# Phospho-Ser549 Synapsin I Antibody - References

Jovanovic JN, Benfenati, F, Siow YL, Sihra TS, Sanghera JS, Pelech SL, Greeng ard P,Czernik AJ (1996)

Neurotrophins stimulate phosphoryl

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Czernik AJ, Pang DT, Greengard P (1987) Amino acid sequences surrounding the cAMP-dependent and calcium/calmodulin-dependent phosphorylation sites in rat and bovine synapsin I. Proc Natl Acad Sci (USA) 84:7518-7522.

Feng J, Chi P, Blanpied TA, Xu YM, Magarinos AM, Fe

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Kao HT, Song HJ, Porton B, Ming GL, Hoh J, Abraham M, Czernik AJ, Pieribone VA, Poo MM, Greengard P (2002) A protein kinase A-dependent molecular switch in synapsin s regulates neurite outgrowth. Nature Neurosci 5:431-437.

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