

## **Synapsin I Antibody**

Affinity purified rabbit polyclonal antibody Catalog # AN1233

### **Specification**

# **Synapsin I Antibody - Product Information**

Application WB, IF Primary Accession P17599

Reactivity Human, Mouse, Rat

Host Rabbit
Clonality polyclonal
Calculated MW 78 KDa

# **Synapsin I Antibody - Additional Information**

Gene ID 281510
Gene Name SYN1
Other Names

Synapsin-1, Synapsin I, SYN1

### Target/Specificity

Native protein purified from bovine brain.

#### **Dilution**

WB~~ 1:1000 IF~~ 1:1000

#### Format

Prepared from rabbit serum by affinity purification using a column to which the native protein was coupled.

# **Antibody Specificity**

Specific for the ~78k synapsin I doublet in Western blots of rat brainextracts. Immunolabeling blocked by preadsorption of antibody with the protein used togenerate the antibody.

### 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**

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

### Shipping

Blue Ice

### **Synapsin I Antibody - Protocols**



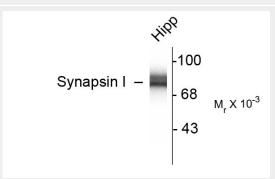
Provided below are standard protocols that you may find useful for product applications.

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

# Synapsin I Antibody - Images



Western blot of 10 ug of rat hippocampal (Hipp) lysate showing specific immunolabeling of the  $\sim$ 78k synapsin I doublet protein.



Immunostaining of cultured rat caudate neurons showing punctate distribution of synapsin in green and MAP in red. Cells and photo courtesy of QBMCellScience.

# 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 ability of the synapsins to regulate the availability of synaptic vesicles for release. In addition to its role in plasticity, the expression of synapsin I is a precise indicator of synapse formation (Moore and Bernstein, 1989; Stone et al., 1994). Thus, synapsin I immunocytochemistry provides a valuable tool for the study of synaptogenesis. The role of synapsin in synaptic plasticity and in synaptogensis is regulated by phosphorylation (Jovanovic et al., 2001; Kao et al., 2002).

### **Synapsin I Antibody - References**



Feng J, Chi P, Blanpied TA, Xu YM, Magarinos AM, Fe rreira A, Takahashi RH, Kao HT, McEwen BS, Ryan TA,

Augustine GJ, Greengard P (2002) Regulation of neurotransmitter release by synapsin III. J Neurosci 22:4372-

4380.

Jovanovic JN, Sihra TS, Nairn AC, Hemmings HC, Jr., Gr eengard P, Czernik AJ (2001) Opposing changes in phosphorylation of specific sites in synapsin I during Ca 2+

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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.

Moore RY, Bernstein M (1989) Synaptogenesis in the rat suprachiasmatic nucleus demonstrated by electron

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Kurtis D. Davies, Susan M. Goebel-Goody, St

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Long Term Synaptic

Depression That Is Associated with GluR1 Dephosphorylation but Not

-Amino-3-hydroxy-5-methyl-4-

isoxazolepropionic Acid (AMPA) Receptor Internalization

J. Biol. Chem.,

283: 33138 - 33146.

Note: Dr. Michael Browning, co-author of the cited papers is the President and founder

PhosphoSolutions.