

Phospho-Ser62,67 Synapsin I Antibody
Affinity purified rabbit polyclonal antibody
Catalog # AN1113

Specification

Phospho-Ser62,67 Synapsin I Antibody - Product Information

Application	WB
Primary Accession	P17599
Reactivity	Rat
Predicted	Bovine, Mouse
Host	Rabbit
Clonality	polyclonal
Calculated MW	78 KDa

Phospho-Ser62,67 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 Ser62/67 conjugated to KLH.

Dilution

WB~~ 1:1000

Format

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

Antibody Specificity

Specific for ~78k synapsin I doublet phosphorylated at Ser62,67. Immunolabeling of the synapsin I band is blocked by preadsorption with the phospho-peptide used as antigen but not by the corresponding dephospho-peptide..

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-Ser62,67 Synapsin I Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping

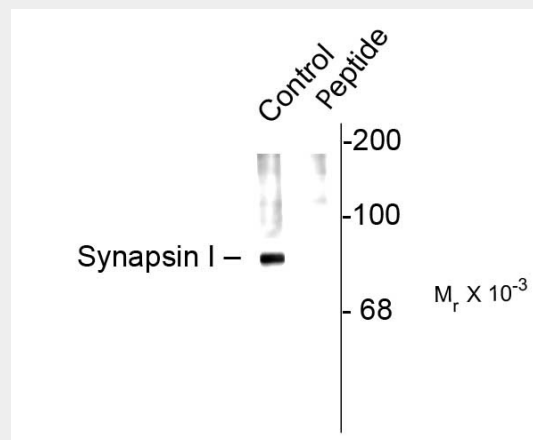
Blue Ice

Phospho-Ser62,67 Synapsin I 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-Ser62,67 Synapsin I Antibody - Images



Western blot of rat cortex lysate showing specific labeling of the ~78k synapsin protein phosphorylated at Ser 62,67 (Control). Immunolabeling is blocked by preadsorption with the phospho-peptide used as antigen (Peptide) but not by the corresponding dephospho-peptide (not shown).

Phospho-Ser62,67 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. The role of synapsin in synaptic plasticity and in synaptogenesis 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 (Czernik et al., 1987; Jovanovic et al., 1996).

Phospho-Ser62,67 Synapsin I Antibody - References

Jovanovic JN, Benfenati, F, Siow YL, Sihra TS, Sanghera JS, Pelech SL, Greengard P, Czernik AJ (1996) Neurotrophins stimulate phosphorylation of Synapsin I by MAP kinase and regulate Synapsin I-actin interactions. *Neurobiology* 93:3679-3683.
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, Ferreira 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., Greengard P, Czernik AJ (2001) Opposing changes in phosphorylation of specific sites in synapsin I during Ca^{2+}

-dependent glutamate release in isolated nerve terminals. *J Neurosci* 21:7944-7953.

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 I regulates neurite outgrowth. *Nature Neurosci* 5:431-437.

Nayak AS, Moore CI, Browning MD (1996) CAM kinase II phosphorylation of the presynaptic protein synapsin I

is persistently increased during expression of long-term potentiation. *Proc Natl Acad Sci (USA)* 93:15451-15456.

Melanie K. Tallent, Neal Varghis, Yuliya Skorobogatko, Lisa Hernandez-Cuebas, Kelly Whelan, David J. Vocadlo, and Keith Vosseller (2009)

In Vivo

Modulation of

O

-GlcNAc Levels Regulates Hippocampal Synaptic Plasticity through Interplay with Phosphorylation

.
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Sergio Leal-Ortiz, Clarissa L. Waites, Ryan Terry-Lorenzo

, Pedro Zamorano, Eckart D.

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Piccolo modulation of Synapsin1a dynamics regulates synaptic vesicle exocytosis

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J. Cell Biol., 181:

831 - 846.