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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-peptideused as antigen but not be 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

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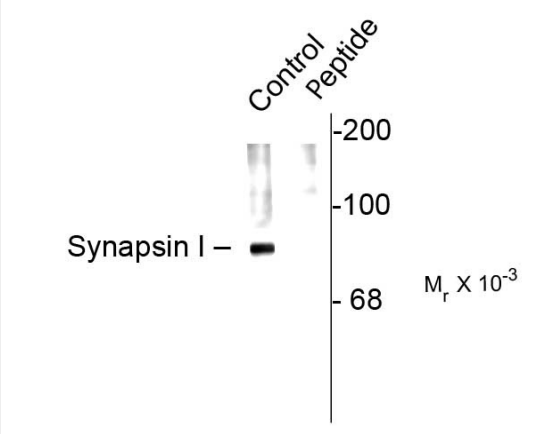
Phospho-Ser62,67 Synapsin I Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- 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 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 (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 phosphoryl
ation 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, 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+
-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
s regulates neurite outgrowth. Nature Neurosci 5:431-
437.
Nayak AS, Moore CI, Browning MD (1996) CAM kinase II phos
phorylation of the presyn
aptic protein synapsin is
persistently increased during expression of long-term po
tentiation. 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
.
J. Biol. Chem., Jan 2009; 284: 174 – 181
Sergio Leal-Ortiz, Clarissa L. Waites, Ryan Terry-Lorenzo
, Pedro Zamorano, Eckart D.
Gundelfinger, and Craig C.
Garner (2008)
Piccolo modulation of Synapsin1a dynamics regulates synaptic vesicle exocytosis
.
J. Cell Biol., 181:
831 - 846.