

Anti-Phospho-Ser^{62,67} Synapsin I Antibody



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Catalog #: p1560-6267

Size: 100 µl

Cite this Antibody: PhosphoSolutions Cat# p1560-6267, RRID:AB_2492245

Host	Applications	Species Tested	Species Reactivity*	Molecular Weight
Rabbit	WB 1:1000	R	B, M	~78 kDa

Product Description: Affinity purified rabbit polyclonal antibody.

Biological Significance: 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). Ser⁵⁴⁹ along with Ser⁶² and Ser⁶⁷ are the sites of Synapsin I that are phosphorylated by MAP kinase (Czernik et al., 1987; Jovanovic et al., 1996).

Antigen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser^{62,67} of rat synapsin I.

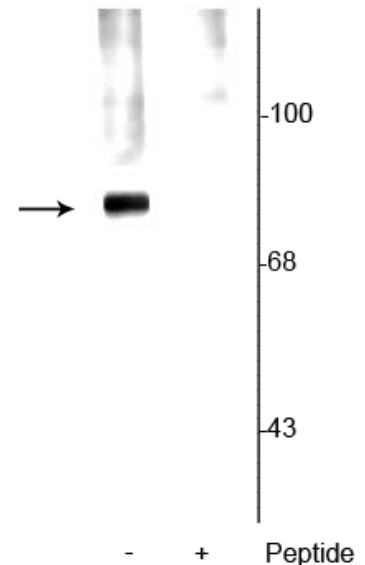
Antibody Specificity: Specific for endogenous levels of the ~78 kDa synapsin I doublet phosphorylated at Ser^{62,67}. Immunolabeling is blocked by preadsorption with the phosphopeptide used as antigen, but not by the corresponding non-phosphopeptide.

Purification Method: Prepared from pooled rabbit serum by affinity purification via sequential chromatography on phospho and non-phosphopeptide affinity columns.

Quality Control Tests: Western blots performed on each lot.

Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol.

Storage and Stability: Shipped on blue ice. Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.



Western blot of rat cortical lysate showing specific labeling of the ~78 kDa synapsin protein phosphorylated at Ser^{62,67} in the first lane (-). Phosphospecificity is shown in the second lane (+) where immunolabeling is blocked by preadsorption with the phosphopeptide used as antigen, but not by the corresponding non-phosphopeptide (not shown).

Product Specific References:

Vargas, K.J., Schrod, N., Davis, T., Fernandez-Busnadiego, R., Taguchi, Y.V., Laugks, U., Lucic, V. and Chandra, S.S., 2017. Synucleins Have Multiple Effects on Presynaptic Architecture. *Cell Reports*, 18(1), pp.161-173.

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General References:

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.

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

Nayak AS, Moore CI, Browning MD** (1996) CAM kinase II phosphorylation of the presynaptic protein synapsin is persistently increased during expression of long-term potentiation. *Proc Natl Acad Sci (USA)* 93:15451-15456.

**Dr. Michael Browning, co-author of the cited paper above is the President and founder of PhosphoSolutions.