

PRODUCT DATA SHEET

Product Name: ANTI-PHOSPHO-Ser⁵⁴⁹ SYNAPSIN I ANTIBODY

Product Code: P40030-100

Pack Size: 100 µL

Description: 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 (Jovanovic et al., 1996). Phosphorylation and subsequent dephosphorylation of this site is thought to play a key role in synaptic vesicle trafficking.

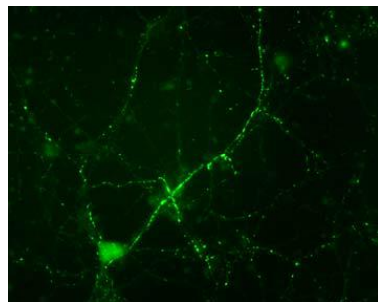
Physical State: Liquid; Buffer contents: 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per mL BSA and 50% glycerol

Storage/Stability: Stable at -20 °C for at least 1 year. For long term storage -20 °C is recommended

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

Shipping Conditions: Domestic: Blue Ice
International: Blue Ice or Dry Ice

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



Host Species: Rabbit (Polyclonal)

Mr (kDa): 78

Immunogen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser⁵⁴⁹ of synapsin I. Specific for ~78k synapsin I doublet protein phosphorylated at Ser⁵⁴⁹.

Species Reactivity: The antibody has been directly tested for reactivity in Western blots with rat tissue. It is anticipated that the antibody will react with human, mouse, non-human primate, bovine and canine tissues based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

Recommended Antibody Dilutions:

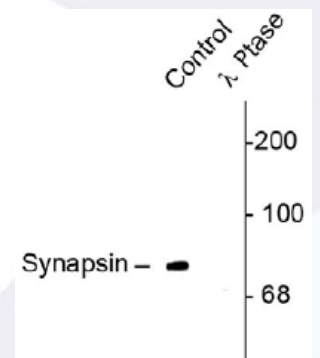
WB: 1:1000
IHC: 1:500

References:

- 1) Jovanovic JN et al. (1996) *Neurobiology* 93:3679-3683.
- 2) Czernik AJ et al. (1987) *Proc Natl Acad Sci (USA)* 84:7518-7522.
- 3) Feng J et al. (2002) *J Neurosci* 22:4372-4380.
- 4) Jovanovic JN et al. (2001) *J Neurosci* 21:7944-7953.
- 5) Kao HT et al. (2002) *Nature Neurosci* 5:431-437.
- 6) Nayak AS et al. (1996) *Proc Natl Acad Sci (USA)* 93:15451-15456.

Western Blot

Rat cortex lysate showing specific immunolabeling of ~78k synapsin I phosphorylated at Ser⁵⁴⁹ (Control). Immunolabeling is completely eliminated by treatment with λ-Phosphatase, lane 2.



Application Key: WB – Western Blot IF – Immunofluorescence IHC – Immunohistochemistry IP - Immunoprecipitation

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P/N: 74112 Rev 01