



## Polyclonal Anti- Synaptopodin (Sepharose Bead Conjugate)

**Catalogue No.** PA1384-S

**Lot No.** 0131112028427

**Ig type:** rabbit IgG

**Size:** 100µg/vial

### Specificity

Human, rat.

No cross reactivity  
with other proteins.

### Recommended application

*(Immunoprecipitation(IP))*

### Immunogen

A synthetic peptide corresponding to a sequence at the middle region of human synaptopodin (495-509 aa), identical to the related mouse and rat sequence.

### Purification

Immunogen affinity purified.

### Formulation

50% slurry in PBS pH 7.2 with 0.01mg  
NaN<sub>3</sub>a<sub>3</sub> preservative.

### Storage

Store at 4°C for frequent use.

### Description:

This Antagene antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated sepharose beads. It is useful for immunoprecipitation assays

## BACKGROUND

The spine apparatus (SA) is a specialized form of endoplasmic reticulum (ER) that is found in a subpopulation of dendritic spines in central neurons. The SA consists of a series of stacked discs that are thought to be connected to each other and to the dendritic system of ER-tubules. The actin binding protein synaptopodin (which has originally been described in podocytes of the kidney) is an essential component of the SA. Mice that lack the gene for synaptopodin do not form a spine apparatus. The SA is believed to play a critical role in learning and memory. In summary, an important function of the spine apparatus is the regulation of plasticity at individual synapses, a process known as metaplasticity. The International Radiation Hybrid Mapping Consortium mapped the SYNPO gene to chromosome 5.

## REFERENCE

- 1.Gray (1959). "Electron microscopy of synaptic contacts on dendrite spines of the cerebral cortex". *Nature* 183 (4675): 1592–3.
- 2.Cooney; Hurlburt, JL; Selig, DK; Harris, KM; Fiala, JC (2002). "Endosomal compartments serve multiple hippocampal dendritic spines from a widespread rather than a local store of recycling membrane". *The Journal of neuroscience : the official journal of the Society for Neuroscience* 22 (6): 2215–24.
- 3.Deller; Merten, T; Roth, SU; Mundel, P; Frotscher, M (2000). "Actin-associated protein synaptopodin in the rat hippocampal formation: localization in the spine neck and close association with the spine apparatus of principal neurons". *The Journal of Comparative Neurology* 418 (2): 164–81

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