

## ARG52429 anti-Synapsin 1 phospho (Ser9) antibody

Package: 50 µl  
Store at: -20°C

### Summary

|                     |   |
|---------------------|---|
| Product Description | Rabbit Polyclonal antibody recognizes Synapsin 1 phospho (Ser9)       |
| Tested Reactivity   | Rat   |
| Predict Reactivity  | Hu, Ms, Bov, Xenopus laevis, Zfsh                                     |
| Tested Application  | IHC-P, WB   |
| Host                | Rabbit  |
| Clonality           | Polyclonal  |
| Isotype             | IgG   |
| Target Name         | Synapsin 1  |
| Species             | Rat   |
| Immunogen           | KLH-conjugated phosphospecific peptide around Ser9 of Rat Synapsin 1. |
| Conjugation         | Un-conjugated   |
| Alternate Names     | SYNI; Brain protein 4.1; Synapsin-1; SYN1a; SYN1b; Synapsin I         |

### Application Instructions

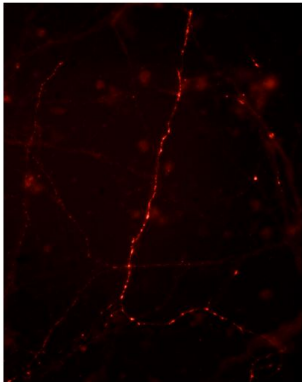
| Application table | Application   | Dilution |
|-------------------|---|----------|
|                   | IHC-P   | 1:500    |
|                   | WB  | 1:1000   |
| Application Note  | <p>Specific for ~78k synapsin I doublet protein phosphorylated at Ser9 . The antibody also weakly labels the ~55k synapsin II protein which has a similar phosphorylation site to that of Ser9 on synapsin I. Immunolabeling is blocked by preadsorption of the antibody with the phosphopeptide used as antigen but not by the corresponding dephosphopeptide. Immunolabeling is also completely eliminated by treatment with λ phosphatase.</p> <p>* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.</p> |          |

### Properties

|                     |   |
|---------------------|---|
| Form                | Liquid  |
| Purification        | Affinity Purified   |
| Buffer              | 10 mM HEPES (pH 7.5), 150 mM NaCl, 0.1 mg/ml BSA and 50% Glycerol   |
| Stabilizer          | 0.1 mg/ml BSA, 50% Glycerol   |
| Storage instruction | For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use. |
| Note                | For laboratory research only, not for drug, diagnostic or other use.  |

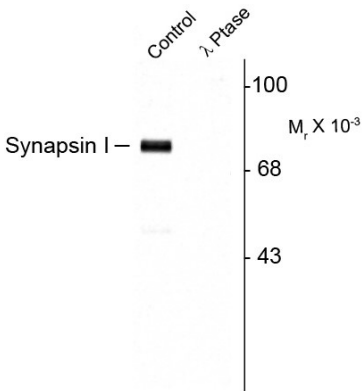
|                |  |
|----------------|--|
| Database links | <a href="#">GeneID: 24949 Rat</a><br><a href="#">Swiss-port # P09951 Rat</a>   |
| Gene Symbol    | Syn1   |
| Gene Full Name | synapsin I   |
| Background     | Synapsin I plays a key role in synaptic plasticity in brain (Feng et al., 2002; 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. In addition to its role in plasticity, the expression of synapsin I is a precise indicator of synapse formation (Moore and Bernstein, 1989; Stone et al., 1994). Thus, synapsin I immunocytochemistry provides a valuable tool for the study of synaptogenesis. The role of synapsin in synaptic plasticity and in synaptogenesis is regulated by phosphorylation (Jovanovic et al., 2001; Kao et al., 2002). Serine 9 is the site on synapsin I that is phosphorylated by cAMP-dependent protein kinase and by calcium calmodulin kinase I (Czernik et al., 1987). Phosphorylation of this site is thought to regulate synaptic vesicle function and neurite outgrowth (Kao et al., 2002). |
| Function       | Neuronal phosphoprotein that coats synaptic vesicles, binds to the cytoskeleton, and is believed to function in the regulation of neurotransmitter release. [UniProt]  |
| Research Area  | Neuroscience antibody  |
| Calculated Mw  | 74 kDa   |
| PTM            | Substrate of at least four different protein kinases. It is probable that phosphorylation plays a role in the regulation of synapsin-1 in the nerve terminal.<br>Phosphorylation at Ser-9 dissociates synapsins from synaptic vesicles.  |

Images



ARG52429 anti-Synapsin 1 phospho (Ser9) antibody ICC/IF image

Immunofluorescence: Cultured Mouse caudate neurons stained with ARG52429 anti-Synapsin 1 phospho (Ser9) antibody showing Synapsin 1 when phosphorylated at Ser9.



ARG52429 anti-Synapsin 1 phospho (Ser9) antibody WB image

Western blot: Rat cortex lysate showing specific immunolabeling of ~78 kDa Synapsin 1 phosphorylated at Ser9 (Control) stained with ARG52429 anti-Synapsin 1 phospho (Ser9) antibody. Phosphospecificity is shown in the second lane (lambda-phosphatase: λ-Ptase).