

p-Synapsin Ia/b (Ser 603): sc-135708

BACKGROUND

Synapsin I, which exists as two alternatively spliced isoforms designated Synapsin Ia and Synapsin Ib, has been characterized as one of the major phosphoproteins in nerve terminals and is thought to be involved in the regulation of neurotransmitter release. Synapsin I cross-links synaptic vesicles and the cytoskeleton, and the interactions of synapsins with Actin filaments and synaptic vesicles are regulated by phosphorylation by calmodulin-dependent protein kinase II and cAMP-dependent protein kinase. Posttranslational modifications of Synapsin I result in phosphorylation of the protein at different sites and by different kinases. The Ser 553 residue of Synapsin I is phosphorylated *in vivo*. This phosphorylation site is immediately followed by a proline, suggesting that Synapsin I is an *in vivo* substrate of the proline-directed protein kinase, Cdk5.

REFERENCES

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3. Melloni, R.H., Jr. and DeGennaro, L.J. 1994. Temporal onset of Synapsin I gene expression coincides with neuronal differentiation during the development of the nervous system. *J. Comp. Neurol.* 342: 449-462.
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8. Kao, H.T., et al. 1998. A third member of the Synapsin gene family. *Proc. Natl. Acad. Sci. USA* 95: 4667-4672.
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CHROMOSOMAL LOCATION

Genetic locus: SYN1 (human) mapping to Xp11.23; Syn1 (mouse) mapping to X A1.3.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

SOURCE

p-Synapsin Ia/b (Ser 603) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Ser 603 of Synapsin Ia/b of rat origin.

PRODUCT

Each vial contains IgG in 100 µl of 10 mM HEPES with 150 mM NaCl, 50% glycerol and < 0.1% BSA.

APPLICATIONS

p-Synapsin Ia/b (Ser 603) is recommended for detection of Ser 603 phosphorylated Synapsin Ia/b of rat origin and correspondingly Ser 605 phosphorylated Synapsin Ia/b of mouse and human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000) and immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)]; also reactive with additional species, including cow, *Xenopus* and zebrafish.

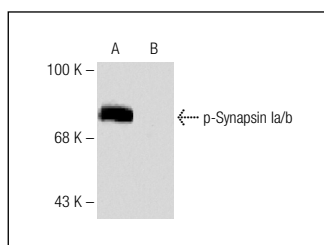
Suitable for use as control antibody for Synapsin Ia/b siRNA (h): sc-37012, Synapsin Ia/b siRNA (m): sc-37013, Synapsin Ia/b shRNA Plasmid (h): sc-37012-SH, Synapsin Ia/b shRNA Plasmid (m): sc-37013-SH, Synapsin Ia/b shRNA (h) Lentiviral Particles: sc-37012-V and Synapsin Ia/b shRNA (m) Lentiviral Particles: sc-37013-V.

Molecular Weight of p-Synapsin Ia: 80 kDa.

Molecular Weight of p-Synapsin Ib: 86 kDa.

Positive Controls: rat cerebellum extract: sc-2398, rat brain extract: sc-2392 or rat prefrontal cortex tissue extract.

DATA



p-Synapsin Ia/b (Ser 603): sc-135708. Western blot analysis of Synapsin Ia/b phosphorylation in untreated (A) and lambda protein phosphatase (sc-200312A) treated (B) rat prefrontal cortex tissue extracts.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.