**BACKGROUND**

Synapsins are synaptic vesicle-associated phosphoproteins that regulate synaptic vesicle exocytosis and may be involved in synaptogenesis. Evidence suggests that Synapsin I, Synapsin II and Synapsin IIla are ATP-binding proteins that are regulated by Ca\(^{2+}\) and calmodulin binding. Ca\(^{2+}\) has been shown to stimulate ATP binding to Synapsin I, to have no effect on Synapsin II and to inhibit Synapsin IIIa. Synapsin I and Synapsin II both undergo alternative splicing to produce two forms of each protein, Synapsin Ia and Ib and Synapsin IIa and IIb, respectively. Synapsin III gives rise to at least one isoform, Synapsin IIIa. Synapsin III plays unique roles both in early axon outgrowth and in the regulation of synaptic vesicle trafficking. In cultured mouse hippocampal neurons, Synapsin III is expressed early during development, with levels peaking seven days after plating and declining thereafter. Synapsin III is highly concentrated in growth cones.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: SYN3 (human) mapping to 22q12.3; Syn3 (mouse) mapping to 10 C2.

**SOURCE**

Synapsin III (H-90) is a rabbit polyclonal antibody raised against amino acids 31-120 mapping near the N-terminus of Synapsin IIla of human origin.

**PRODUCT**

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**STORAGE**

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**APPLICATIONS**

Synapsin III (H-90) is recommended for detection of Synapsin IIIa, b and c of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100–500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).


Molecular Weight of Synapsin III: 65 kDa.

Positive Controls: Synapsin III (h): 293T Lysate: sc-129896, mouse brain extract: sc-2253 or rat cerebellum extract: sc-2398.

**RECOMMENDED SECONDARY REAGENTS**


**DATA**

**SYNAPSIN III (H-90)**: Western blot analysis of Synapsin III expression in non-transfected: sc-129898, mouse brain tissue (starting dilution range 1:100-1:1000) and human Synapsin III transfected: sc-129896, mouse brain tissue extract (starting dilution range 1:100-1:1000).

**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.