**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 IIIa 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 III. 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 three isoforms: Synapsin IIIa, IIb and IIc. Synapsin III is highly concentrated in growth cones.

**CHROMOSOMAL LOCATION**

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

**SOURCE**

Synapsin Ia/b (C-20) is available as either goat (sc-8295) or rabbit (sc-8295-R) affinity purified polyclonal antibody raised against a peptide mapping at the C-terminus of Synapsin Ia/b 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.

Blocking peptide available for competition studies, sc-8295 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**STORAGE**

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

**APPLICATIONS**

Synapsin Ia/b (C-20) is recommended for detection of Synapsin Ia/b 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); may cross-react with EMLIN-2. Synapsin Ia/b (C-20) is also recommended for detection of Synapsin Ia/b in additional species, including canine, bovine and porcine.

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 Synapsin Ia: 80 kDa.

Molecular Weight of Synapsin Ib: 86 kDa.

**RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2033 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

**Try Synapsin Ia/b (A-8): sc-376623, our highly recommended monoclonal alternative to Synapsin Ia/b (C-20).**