BACKGROUND

The inositol polyphosphate 5-phosphatases selectively remove the phosphate from the 5-position of various phosphatidylinositols, which generate second messengers in response to extracellular signals. Synaptojanins are characterized by an N-terminal SAC1-like sequence, a central 5-phosphate domain, and a unique C-terminal sequence and have been shown to use phosphatidylinositol 4,5-bisphosphate as a substrate. Synaptojanins exist as two isoforms, synaptojanin 1 and 2, which differ in the C-terminal domain, and each isoform has multiple variants produced by alternative splicing. Synaptojanin 1 is expressed as two major forms: the shorter is found in brain while the longer is expressed in peripheral tissues. Eight splice variants of synaptojanin 2 have been detected, including a brain specific isoform. Synaptojanins are thought to participate in the endocytosis of synaptic vesicles and the regulation of the actin cytoskeleton.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: SYNJ1 (human) mapping to 21q22.11; Synj1 (mouse) mapping to 16 C3.3.

SOURCE

Synaptojanin 1 (AC1) is a mouse monoclonal antibody raised against amino acids 1156-1286 of Synaptojanin 1 of rat origin.

PRODUCT

Each vial contains 200 µg IgGκ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Synaptojanin 1 (AC1) is recommended for detection of the 145 kDa isoform of Synaptojanin 1 of mouse, rat and, to a lesser extent, 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Synaptojanin 1 siRNA (h): sc-39079, Synaptojanin 1 siRNA (m): sc-153973, Synaptojanin 1 shRNA Plasmid (h): sc-39079-SH, Synaptojanin 1 shRNA Plasmid (m): sc-153973-SH, Synaptojanin 1 shRNA (h) Lentiviral Particles: sc-39079-V and Synaptojanin 1 shRNA (m) Lentiviral Particles: sc-153973-V.

Molecular Weight of Synaptojanin 1: 145/170 kDa

Positive Controls: rat brain extract: sc-2392 or EOC 20 whole cell lysate: sc-364187 or rat testis extract: sc-2400.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

DATA

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

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

PROTOCOLS

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