**BACKGROUND**

Synaptotagmins are a large gene family of synaptic vesicle type III integral membrane proteins that function as regulators of both exocytosis and endocytosis and are involved in neurotransmitter secretion from small secretory vesicles. Calcium binds to Synaptotagmin I which triggers neurotransmitter release at the synapse. Synaptotagmin II is phosphorylated by WNK1 in a process that regulates calcium-dependent interactions. Synaptotagmin III is involved in calcium-dependent exocytosis of secretory vesicles in endocrine cells and neurons. Synaptotagmin IV is expressed in neuronal tissues, and has the highest mRNA levels in the hippocampus. The proximity of the cells and neurons. Synaptotagmin IV is expressed in neuronal tissues, and has the highest mRNA levels in the hippocampus. The proximity of the Synaptotagmin IV gene to markers of several psychiatric disorders suggest an involvement of synaptotagmin IV in human disease. Synaptotagmin VI interacts with adaptor protein-2 in a calcium-independent manner. Synaptotagmin VII is widely expressed in non-neuronal tissues.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: SYT1 (human) mapping to 1q32.1; Syt1 (mouse) mapping to 10 D1, Syt2 (mouse) mapping to 1 E4.

**SOURCE**

Synaptotagmin I/II (H-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 301-318 within an internal region of Synaptotagmin I of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Synaptotagmin I/II (H-9) is available conjugated to agarose (sc-393392 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393392 HRP), 200 µg/ml, for WB, HCOIP and ELISA; to either phycoerythrin (sc-393392 PE), fluorescein (sc-393392 FITC), Alexa Fluor® 488 (sc-393392 AF488), Alexa Fluor® 546 (sc-393392 AF546), Alexa Fluor® 594 (sc-393392 AF594) or Alexa Fluor® 647 (sc-393392 AF647), 200 µg/ml, for WB (RGB), IF, IHCIP and FCM; and to either Alexa Fluor® 680 (sc-393392 AF680) or Alexa Fluor® 790 (sc-393392 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393392 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**APPLICATIONS**

Synaptotagmin I/II (H-9) is recommended for detection of Synaptotagmin I/II of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Synaptotagmin I/II siRNA (h); sc-44135, Synaptotagmin I/II shRNA Plasmid (h): sc-44135-SH and Synaptotagmin I/II shRNA (h) Lentiviral Particles: sc-44135-V.

Molecular Weight of Synaptotagmin I/II: 40/65 kDa.


**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

**DATA**

**STORAGE**

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

**RESEARCH USE**

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