**BACKGROUND**

Dendritic spines are dynamic structures that alter their shape and size by remodeling the cytoskeleton in response to changes in synaptic activity. Synaptopodin is a prion-like protein expressed in mature dendritic spines and renal podocytes. Synaptopodin appears to play a role in the Actin-based plasticity of spines by linking Actin to the spine apparatus.

In the principal neurons of the hippocampus, Synaptopodin preferentially localizes to the spine neck. Synaptopodin expression increases during long-term potentiation (LTP) in vivo and elevated levels of Synaptopodin correlate with the persistence of LTP. In renal podocytes, Synaptopodin localizes to the foot processes. Synaptopodin is absent in the sclerosed glomeruli of diabetic nephrotic syndrome. Myopodin, a member of the Synaptopodin family, is expressed in skeletal muscle and cardiac muscle. Like Synaptopodin, myopodin associates with Actin and appears to display Actin-bundling activity. Myopodin is frequently absent in invasive prostate cancer and may serve as a prognostic marker for prostate cancers.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: SYNPO (human) mapping to 5q33.1; Synpo (mouse) mapping between amino acids 660-684 within an internal region of Synaptopodin of human origin.

**SOURCE**

Synaptopodin (D-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 660-684 within an internal region of Synaptopodin 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.

Synaptopodin (D-9) is available conjugated to agarose (sc-515842 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515842 HRP), 200 µg/ml, for WB, (H)COP and ELISA; to either phycoerythrin (sc-515842 PE), fluorescein (sc-515842 FITC), Alexa Fluor® 488 (sc-515842 AF488), Alexa Fluor® 546 (sc-515842 AF546), Alexa Fluor® 594 (sc-515842 AF594) or Alexa Fluor® 647 (sc-515842 AF647), 200 µg/ml, for WB (RGB), IF, (H)COP and FCM; and to either Alexa Fluor® 680 (sc-515842 AF680) or Alexa Fluor® 790 (sc-515842 AF790), 200 µg/ml, for Near-Infrared (NI) WB, IF and FCM.

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**STORAGE**

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

**APPLICATIONS**

Synaptopodin (D-9) is recommended for detection of Synaptopodin 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).


Molecular Weight of Synaptopodin: 100 kDa.

Positive Controls: A549 cell lysate: sc-2413, HeLa whole cell lysate: sc-2200 or rat brain extract: sc-2392.

**DATA**

![Synaptopodin (D-9): Western blot analysis of Synaptopodin expression in A498 (A) and HeLa (B) whole cell extracts and rat brain (C) and human skeletal muscle (D) tissue extracts.](image)

![Synaptopodin (D-9) Alexa Fluor® 488: Western blot analysis of Synaptopodin expression in Neuro-2A whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214.](image)

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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