

# Synaptojanin 2 (D-11): sc-390247

## 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

1. Mitchell, C.A., et al. 1996. Regulation of second messengers by the inositol polyphosphate 5-phosphatases. *Biochem. Soc. Trans.* 24: 994-1000.
2. Nemoto, Y., et al. 1997. Synaptojanin 2, a novel synaptojanin isoform with a distinct targeting domain and expression pattern. *J. Biol. Chem.* 272: 30817-30821.

## CHROMOSOMAL LOCATION

Genetic locus: SYNJ2 (human) mapping to 6q25.3; Synj2 (mouse) mapping to 17 A1.

## SOURCE

Synaptojanin 2 (D-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1109-1135 at the C-terminus of Synaptojanin 2 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Synaptojanin 2 (D-11) is available conjugated to agarose (sc-390247 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390247 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390247 PE), fluorescein (sc-390247 FITC), Alexa Fluor® 488 (sc-390247 AF488), Alexa Fluor® 546 (sc-390247 AF546), Alexa Fluor® 594 (sc-390247 AF594) or Alexa Fluor® 647 (sc-390247 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390247 AF680) or Alexa Fluor® 790 (sc-390247 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390247 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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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

Synaptojanin 2 (D-11) is recommended for detection of all Synaptojanin 2 isoforms (α-ζ) of mouse origin and Synaptojanin 2 of human and rat 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Synaptojanin 2 (D-11) is also recommended for detection of all Synaptojanin 2 in additional species, including bovine and porcine.

Suitable for use as control antibody for Synaptojanin 2 siRNA (h): sc-39080, Synaptojanin 2 siRNA (m): sc-39081, Synaptojanin 2 shRNA Plasmid (h): sc-39080-SH, Synaptojanin 2 shRNA Plasmid (m): sc-39081-SH, Synaptojanin 2 shRNA (h) Lentiviral Particles: sc-39080-V and Synaptojanin 2 shRNA (m) Lentiviral Particles: sc-39081-V.

Molecular Weight of Synaptojanin 2 splice variants: 160/165 kDa.

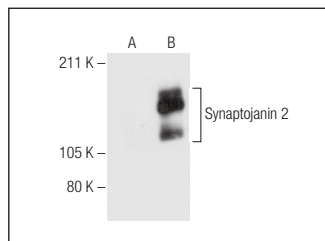
Positive Controls: Synaptojanin 2 (m): 293T Lysate: sc-123864.

## RECOMMENDED SUPPORT REAGENTS

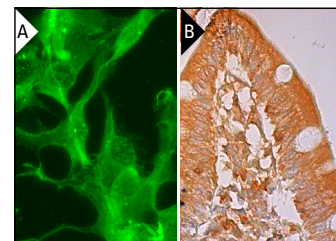
To ensure optimal results, the following support reagents are recommended:

- 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).
- 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.
- 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Synaptojanin 2 (D-11): sc-390247. Western blot analysis of Synaptojanin 2 expression in non-transfected: sc-117752 (A) and mouse Synaptojanin 2 transfected: sc-123864 (B) 293T whole cell lysates.



Synaptojanin 2 (D-11): sc-390247. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing membrane and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells (B).

## RESEARCH USE

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