

Amphiphysin II (D-3): sc-74486

BACKGROUND

Amphiphysin is a brain-enriched protein that exhibits N-terminal lipid interaction and functions as a dimer. Amphiphysin contains a membrane-bending BAR domain, a middle clathrin- and adaptor-binding domain, and a C-terminal SH3 domain. In the brain, Amphiphysin I and II form heterodimers that bind to the clathrin-associated GTPase Dynamin via their SH3 domains. This association is essential for synaptic vesicle recycling in neurons, as it precedes the binding of Dynamin to the clathrin-coated pits and the subsequent vesicle budding. In other tissues, Amphiphysin may play a key role in other membrane bending and curvature stabilization events. The mammalian amphiphysins, Amphiphysin I and Amphiphysin II, have similar overall structure. A ubiquitous splice form of Amphiphysin II that does not contain clathrin or adaptor interactions is highly expressed in muscle tissue and is involved in the formation and stabilization of the T tubule network.

CHROMOSOMAL LOCATION

Genetic locus: BIN1 (human) mapping to 2q14.3; Bin1 (mouse) mapping to 18 B1.

SOURCE

Amphiphysin II (D-3) is a mouse monoclonal antibody raised against amino acids 421-520 mapping within an internal region of Amphiphysin II of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Amphiphysin II (D-3) is recommended for detection of all Amphiphysin II isoforms 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), 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).

Suitable for use as control antibody for Amphiphysin II siRNA (h): sc-29804, Amphiphysin II siRNA (m): sc-29805, Amphiphysin II shRNA Plasmid (h): sc-29804-SH, Amphiphysin II shRNA Plasmid (m): sc-29805-SH, Amphiphysin II shRNA (h) Lentiviral Particles: sc-29804-V and Amphiphysin II shRNA (m) Lentiviral Particles: sc-29805-V.

Molecular Weight of Amphiphysin II: 90 kDa.

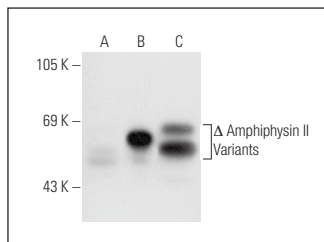
Molecular Weight of Amphiphysin II BIN1 splice variant: 70 kDa.

Positive Controls: Amphiphysin II (h2): 293T Lysate: sc-176827, HeLa whole cell lysate: sc-2200 or L8 cell lysate: sc-3807.

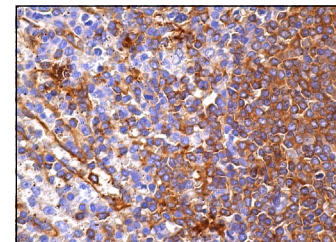
RECOMMENDED SUPPORT REAGENTS

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



Amphiphysin II (D-3): sc-74486. Western blot analysis of Amphiphysin II expression in non-transfected 293T: sc-117752 (A), truncated human Amphiphysin II transfected 293T: sc-176827 (B) and HeLa (C) whole cell lysates.



Amphiphysin II (D-3): sc-74486. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in red and white pulps.

RESEARCH USE

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.



See **Amphiphysin II (2F11): sc-23918** for Amphiphysin II antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.