

Amphiphysin II (H-100): sc-30099

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. An 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.

REFERENCES

1. Lichte, B., et al. 1992. Amphiphysin, a novel protein associated with synaptic vesicles. *EMBO J.* 11: 2521-2530.
2. Sakamuro, D., et al. 1996. BIN1 is a novel Myc-interacting protein with features of a tumour suppressor. *Nat. Genet.* 14: 69-77.
3. Yamamoto, R., et al. 1995. Primary structure of human amphiphysin, the dominant autoantigen of paraneoplastic stiff-man syndrome, and mapping of its gene (AMPH) to chromosome 7p13-p14. *Hum. Mol. Genet.* 4: 265-268.
4. Leprince, C., et al. 1997. A new member of the amphiphysin family connecting endocytosis and signal transduction pathways. *J. Biol. Chem.* 272: 15101-15105.
5. Wigge, P., et al. 1997. Amphiphysin heterodimers: potential role in Clathrin-mediated endocytosis. *Mol. Biol. Cell.* 8: 2004-2015.
6. Wechsler-Reya, R., et al. 1997. Structural analysis of the human BIN1 gene. Evidence for tissue-specific transcriptional regulation and alternate RNA splicing. *J. Biol. Chem.* 272: 31453-31458.

CHROMOSOMAL LOCATION

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

SOURCE

Amphiphysin II (H-100) is a rabbit polyclonal 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 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 (H-100) is recommended for detection of all Amphiphysin II isoforms of mouse, rat and 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)], 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).

Amphiphysin II (H-100) is also recommended for detection of all Amphiphysin II isoforms in additional species, including equine, canine and porcine.

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.

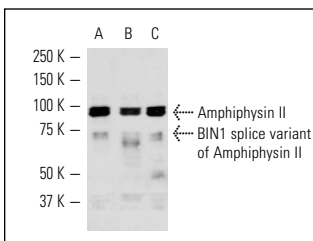
Molecular Weight of BIN1 splice variant of Amphiphysin II: 70 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, H4 cell lysate: sc-2408 or Sol8 cell lysate: sc-2249.

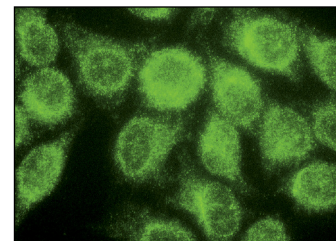
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Amphiphysin II (H-100): sc-30099. Western blot analysis of Amphiphysin II and BIN1 splice variant of Amphiphysin II expression in IMR-32 (A), H4 (B) and Sol8 (C) whole cell lysates.



Amphiphysin II (H-100): sc-30099. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

RESEARCH USE

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