

Amphiphysin I (C-20): sc-8537

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., Veh, R.W., Meyer, H.E., and Kilimann, M.W. 1992. Amphiphysin, a novel protein associated with synaptic vesicles. *EMBO J.* 11: 2521-2530.
2. Sakamuro, D., Elliott, K.J., Wechsler-Reya, R., and Prendergast, G.C. 1996. BIN1 is a novel Myc-interacting protein with features of a tumour suppressor. *Nat. Genet.* 14: 69-77.
3. Yamamoto, R., Li, X., Winter, S., Francke, U. and Kilimann, M.W. 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., Romero, F., Cussac, D., Vayssiere, B., Berger, R., Tavitian, A., and Camonis, J.H. 1997. A new member of the amphiphysin family connecting endocytosis and signal transduction pathways. *J. Biol. Chem.* 272: 15101-15105.

CHROMOSOMAL LOCATION

Genetic locus: AMPH1 (human) mapping to 7p14-p13; Amph (mouse) mapping to 13 A2.

SOURCE

Amphiphysin I (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Amphiphysin I 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.

Blocking peptide available for competition studies, sc-8537 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Amphiphysin I (C-20) is recommended for detection of Amphiphysin I 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 I (C-20) is also recommended for detection of Amphiphysin I in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Amphiphysin I siRNA (h): sc-29671, Amphiphysin I siRNA (m): sc-29672, Amphiphysin I shRNA Plasmid (h): sc-29671-SH, Amphiphysin I shRNA Plasmid (m): sc-29672-SH, Amphiphysin I shRNA (h) Lentiviral Particles: sc-29671-V and Amphiphysin I shRNA (m) Lentiviral Particles: sc-29672-V.

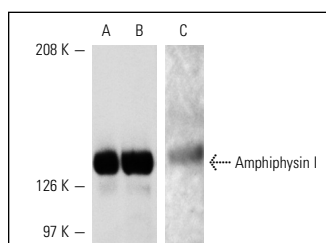
Molecular Weight of Amphiphysin I: 128 kDa.

Positive Controls: mouse brain extract: sc-2253, rat brain extract: sc-2392 or F9 cell lysate: sc-2245.

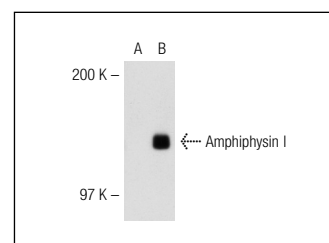
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Western blot analysis of Amphiphysin I expression in rat (A,C) and mouse (B) brain extracts. Antibodies tested include Amphiphysin I (N-19): sc-8536 (A,B) and Amphiphysin I (C-20): sc-8537 (C).



Amphiphysin I (C-20): sc-8537. Western blot analysis of Amphiphysin I expression in non-transfected: sc-117752 (A) and human Amphiphysin I transfected: sc-114254 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.