

AP-2 μ 1 (N-16): sc-49151

BACKGROUND

Adaptins are heterotetrameric subunits of adaptors, which are complexes involved in the formation of clathrin-coated pits for vesicle-mediated endocytosis. Clathrin and its associated heterotetrameric protein complexes make up the main protein components of the coat surrounding the cytoplasmic face of coated vesicles. The adaptin family, comprising α , β , β' and γ classes, is also responsible for the transport of ligand-receptor complexes from plasma membranes and the *trans*-Golgi network to lysosomes. Two main types of adaptor proteins (APs), AP-1 and AP-2, are found in clathrin-coated structures located at the Golgi complex and the plasma membrane of mammalian cells, respectively. Adaptor protein complex 2 (AP-2) is composed of two large adaptins (α 1A/AP2A1 and β 1/AP2B1), a medium adaptin (μ 2/AP-2 μ 1) and a small adaptin (σ 2 long/AP2S1). AP-2 μ 1, a 435 amino acid protein, links clathrin to receptors in coated vesicles.

REFERENCES

1. Takatsu, H., Sakurai, M., Shin, H.W., Murakami, K. and Nakayama, K. 1998. Identification and characterization of novel clathrin adaptor-related proteins. *J. Biol. Chem.* 273: 24693-24700.
2. Nakatsu, F., Kadohira, T., Gilbert, D.J., Jenkins, N.A., Kakuta, H., Copeland, N.G., Saito, T. and Ohno, H. 1999. Genomic structure and chromosome mapping of the genes encoding clathrin-associated adaptor medium chains μ 1A (AP1M1) and μ 1B (AP1M2). *Cytogenet. Cell Genet.* 87: 53-58.
3. Shim, J., Sternberg, P.W. and Lee, J. 2000. Distinct and redundant functions of μ 1 medium chains of the AP-1 clathrin-associated protein complex in the nematode *Caenorhabditis elegans*. *Mol. Biol. Cell* 11: 2743-2756.
4. Boehm, M. and Bonifacino, J.S. 2001. Adaptins: the final recount. *Mol. Biol. Cell* 12: 2907-2920.
5. Takatsu, H., Futatsumori, M., Yoshino, K., Yoshida, Y., Shin, H.W. and Nakayama, K. 2001. Similar subunit interactions contribute to assembly of clathrin adaptor complexes and COPI complex: analysis using yeast three-hybrid system. *Biochem. Biophys. Res. Commun.* 284: 1083-1089.

CHROMOSOMAL LOCATION

Genetic locus: AP2M1 (human) mapping to 3q27.1; Ap2m1 (mouse) mapping to 16 A3.

SOURCE

AP-2 μ 1 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of AP-2 μ 1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-49151 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

AP-2 μ 1 (N-16) is recommended for detection of AP-2 μ 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

AP-2 μ 1 (N-16) is also recommended for detection of AP-2 μ 1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for AP-2 μ 1 siRNA (h): sc-60184, AP-2 μ 1 siRNA (m): sc-60185, AP-2 μ 1 shRNA Plasmid (h): sc-60184-SH, AP-2 μ 1 shRNA Plasmid (m): sc-60185-SH, AP-2 μ 1 shRNA (h) Lentiviral Particles: sc-60184-V and AP-2 μ 1 shRNA (m) Lentiviral Particles: sc-60185-V.

Molecular Weight of AP-2 μ 1: 50 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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) 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.

STORAGE

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

PROTOCOLS

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