

AP-2 μ 1 (H-112): sc-99026

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., et al. 1998. Identification and characterization of novel Clathrin adaptor-related proteins. *J. Biol. Chem.* 273: 24693-24700.
2. Nakatsu, F., et al. 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., et al. 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., et al. 2001. Adaptins: the final recount. *Mol. Biol. Cell* 12: 2907-2920.
5. Takatsu, H., et al. 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.
6. Kierczak, M., et al. 2003. Role of the adaptins, Dynamin-like GTPases and Rab proteins in metabolic disorders and various infections. *Postepy Hig. Med. Dosw.* 57: 727-737.

CHROMOSOMAL LOCATION

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

SOURCE

AP-2 μ 1 (H-112) is a rabbit polyclonal antibody raised against amino acids 1-112 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.

STORAGE

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

APPLICATIONS

AP-2 μ 1 (H-112) 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), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

AP-2 μ 1 (H-112) 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 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.

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.