

# AP-2 $\mu$ 1 (K-13): sc-49150

## 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  $\alpha$ ,  $\beta$ ,  $\beta'$  and  $\gamma$  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 ( $\alpha$ 1A/AP2A1 and  $\beta$ 1/AP2B1), a medium Adaptin ( $\mu$ 2/AP-2 $\mu$ 1) and a small Adaptin ( $\sigma$ 2 long/AP2S1). AP-2 $\mu$ 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  $\mu$ 1A (AP1M1) and  $\mu$ 1B (AP1M2). *Cytogenet. Cell Genet.* 87: 53-58.
3. Shim, J., Sternberg, P.W. and Lee, J. 2000. Distinct and redundant functions of  $\mu$ 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.
6. K Role of the Adaptins, Dynamin-like GTPases and Rab proteins in metabolic disorders and various infections Postepy Hig. Med. Dosw. 3

## CHROMOSOMAL LOCATION

Genetic locus: AP2M1 (human) mapping to 3q28; Ap2m1 (mouse) mapping to 16 A3.

## SOURCE

AP-2 $\mu$ 1 (K-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of AP-2 $\mu$ 1 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-49150 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

AP-2 $\mu$ 1 (K-13) is recommended for detection of AP-2 $\mu$ 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

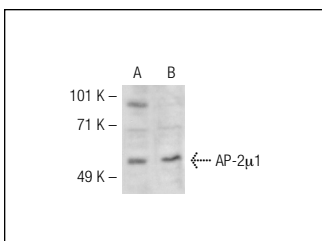
Suitable for use as control antibody for AP-2 $\mu$ 1 siRNA (h): sc-60184 and AP-2 $\mu$ 1 siRNA (m): sc-60185.

Molecular Weight of AP-2 $\mu$ 1: 50 kDa.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz<sup>™</sup>: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



AP-2 $\mu$ 1 (K-13): sc-49150. Western blot analysis of AP-2 $\mu$ 1 expression in 293 (A) and HeLa (B) whole cell lysates.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.