SANTA CRUZ BIOTECHNOLOGY, INC.

AP-3σ (6): sc-136338

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Clathrin-coated pits and vesicles are assembled for receptor-mediated endocytosis through interaction with Clathrin associated protein complexes. Vesicle transport is mediated from the *trans*-Golgi network by the adapter complex AP-1 and from the plasma membrane by the AP-2 complex. AP-3 (also designated AP180 or F1-20) is a synapse-specific Clathrin assembly protein. The protein CALM (Clathrin assembly protein lymphoid myeloid leukemia) is highly homologous to AP180 and may also be involved in Clathrin assembly. AP-3 delta (AP-3δ), AP-3 sigma (AP-3σ) and AP-3 mu (AP-3μ) are important parts of the AP-3 complex.

REFERENCES

1. Robinson, M.S. 1989. Cloning of cDNAs encoding two related 100 kDa coated vesicle proteins (α-adaptins). J. Cell Biol. 108: 833-842.
2. Kirchhausen, T., et al. 1989. Structural and functional division into two domains of the large (100 to 115 kDa) chains of the clathrin-associated protein complex AP-2. Proc. Natl. Acad. Sci. USA 86: 2612-2616.
3. Robinson, M.S. 1990. Cloning and expression of γ-adaptin, a component of clathrin-coated vesicles associated with the Golgi apparatus. J. Cell Biol. 111: 2319-2326.
4. Ponnambalam, S., et al. 1990. Conservation and diversity in families of coated vesicle adaptins. J. Biol. Chem. 265: 4814-4820.
5. Simpson, F., et al. 1997. Characterization of the adaptor-related protein complex, AP-3. J. Cell Biol. 137: 835-845.
6. Lefrancois, S., 2004. An ear-core interaction regulates the recruitment of the AP-3 complex to membranes. Dev. Cell 7: 619-625.
7. Dong, X., et al. 2005. AP-3 directs the intracellular trafficking of HIV-1 Gag and plays a key role in particle assembly. Cell 120: 663-674.

CHROMOSOMAL LOCATION

Genetic locus: AP3S1 (human) mapping to 5q22.3; Ap3s1 (mouse) mapping to 18 C.

SOURCE

AP-3σ (6) is a mouse monoclonal antibody raised against amino acids 70-190 of AP-3σ of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AP-3σ (6) is available conjugated to agarose (sc-136338 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-136338 HRP), 200 µg/ml, for WB, IHC(P) and ELISA.

STORAGE

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

APPLICATIONS

AP-3σ (6) is recommended for detection of AP-3σ 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for AP-3σ siRNA (h): sc-60180, AP-3σ siRNA (m): sc-60181, AP-3σ shRNA Plasmid (h): sc-60180-SH, AP-3σ shRNA Plasmid (m): sc-60181-SH, AP-3σ shRNA (h) Lentiviral Particles: sc-60180-V and AP-3σ shRNA (m) Lentiviral Particles: sc-60181-V.

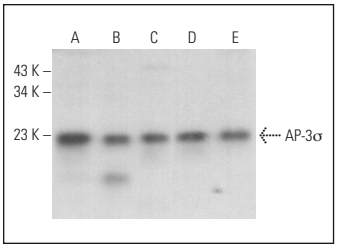
Molecular Weight of AP-3σ: 22 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185, AP-3σ (h): 293T Lysate: sc-176272 or IMR-32 cell lysate: sc-2409.

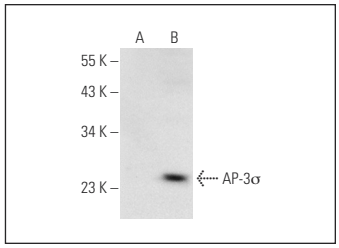
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



AP-3σ (6): sc-136338. Western blot analysis of AP-3σ expression in C6 (**A**), HCT-116 (**B**), Neuro-2A (**C**), IMR-32 (**D**) and NIH/3T3 (**E**) whole cell lysates.



AP-3σ (6): sc-136338. Western blot analysis of AP-3σ expression in non-transfected: sc-117752 (**A**) and human AP-3σ transfected: sc-176272 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Nag, S., et al. 2018. Rab4A organizes endosomal domains for sorting cargo to lysosome-related organelles. J. Cell Sci. 131: jcs216226.
2. Isogawa, K., et al. 2021. Thioxothiazolidin derivative, 4-OST, inhibits melanogenesis by enhancing the specific recruitment of tyrosinase-containing vesicles to lysosome. J. Cell. Biochem. 122: 667-678.

RESEARCH USE

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