SANTA CRUZ BIOTECHNOLOGY, INC.

AP-4ε (32): sc-135835

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

AP-4 (adapter-related protein complex 4) is a heterotetrameric complex comprised of subunits designated AP-4β, AP-4ε, AP-4μ and AP-4σ. AP-4 mediates the incorporation of cargo into transport vesicles by interacting with motifs present in the cytoplasmic tails of their specific cargo proteins at different intracellular locations. AP-4 localizes on the cytoplasmic face of the *trans*-Golgi network (TGN), clathrin coat machinery of endosomes, and transport vesicles. AP-4 can position together with the CI-MPR (cation-independent mannose 6-phosphate receptor). AP-4 may influence trafficking of glutamate receptor δ2 (Grid2) in the brain. AP-4 participates in basolateral sorting in epithelial cells. AP-4 complex is expressed ubiquitously in many regions of brain, with localization on the Golgi-like structures in the cell bodies and dendrites of neurons.

REFERENCES

1. Hirst, J., et al. 1999. Characterization of a fourth adaptor-related protein complex. Mol. Biol. Cell 10: 2787-2802.
2. Dell'Angelica, E.C., et al. 1999. AP-4, a novel protein complex related to clathrin adaptors. J. Biol. Chem. 274: 7278-7285.
3. Boehm, M., et al. 2001. Functional and physical interactions of the adaptor protein complex AP-4 with ADP-ribosylation factors (ARFs). EMBO J. 20: 6265-6276.
4. Aguilar, R.C., et al. 2001. Signal-binding specificity of the μ4 subunit of the adaptor protein complex AP-4. J. Biol. Chem. 276: 13145-13152.
5. Simmen, T., et al. 2002. AP-4 binds basolateral signals and participates in basolateral sorting in epithelial MDCK cells. Nat. Cell Biol. 4: 154-159.
6. Yap, C.C., et al. 2003. Adaptor protein complex-4 (AP-4) is expressed in the central nervous system neurons and interacts with glutamate receptor δ2. Mol. Cell. Neurosci. 24: 283-295.
7. Barois, N., et al. 2005. The adaptor protein AP-4 as a component of the clathrin coat machinery: a morphological study. Biochem. J. 385: 503-510.

CHROMOSOMAL LOCATION

Genetic locus: AP4E1 (human) mapping to 15q21.2.

SOURCE

AP-4ε (32) is a mouse monoclonal antibody raised against amino acids 685-793 of AP-4ε of human 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.

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.

APPLICATIONS

AP-4ε (32) is recommended for detection of AP-4ε of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for AP-4ε siRNA (h): sc-105078, AP-4ε shRNA Plasmid (h): sc-105078-SH and AP-4ε shRNA (h) Lentiviral Particles: sc-105078-V.

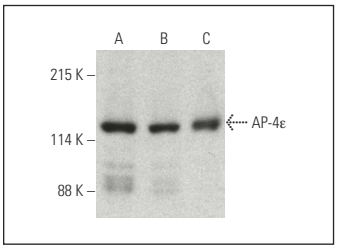
Molecular Weight of AP-4ε: 127 kDa.

Positive Controls: U-251-MG whole cell lysate: sc-364176, SK-MEL-24 whole cell lysate: sc-364259 or SK-MEL-28 cell lysate: sc-2236.

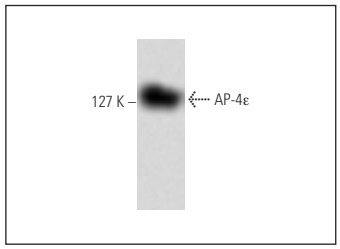
RECOMMENDED SUPPORT REAGENTS

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).

DATA



AP-4ε (32): sc-135835. Western blot analysis of AP-4ε expression in SK-MEL-24 (**A**), SK-MEL-28 (**B**) and U-251-MG (**C**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



AP-4ε (32): sc-135835. Western blot analysis of AP-4ε expression in SK-MEL-5 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Meng, D., et al. 2021. ArfGAP1 inhibits mTORC1 lysosomal localization and activation. EMBO J. 40: e106412.

PROTOCOLS

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