SANTA CRUZ BIOTECHNOLOGY, INC.

AP-3β (3B4): sc-517083

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The widely expressed adaptor-like complex AP-3 is involved in protein sorting in exocytic/endocytic pathways and is composed of four distinct subunits. One of these subunits, AP-3β, also known as β3A-Adaptin, is closely related to the neuron-specific protein β-NAP and shares 61% overall identity. β-NAP (also known as β-3B-Adaptin) is a homolog of the β/β'-Adaptins. β-NAP is related to one of the adaptor subunits of Clathrin-coated vesicles and is also part of an adaptor-like complex which is not associated with Clathrin. Casein kinase I selectively phosphorylates the AP-3β and β-NAP subunits at its hinge domain; inhibiting the kinase hinders the recruitment of AP-3 to synaptic vesicles.

REFERENCES

1. Simpson, F., et al. 1996. A novel adaptor-related protein complex. J. Cell Biol. 133: 749-760.
2. Dell'Angelica, E.C., et al. 1997. β3A-adaptin, a subunit of the adaptor-like complex AP-3. J. Biol. Chem. 272: 15078-15084.
3. Dell'Angelica, E.C., et al. 1997. AP-3: an adaptor-like protein complex with ubiquitous expression. EMBO J. 16: 917-928.
4. Simpson, F., et al. 1997. Characterization of the adaptor-related protein complex, AP-3. J. Cell Biol. 137: 835-845.
5. Dell'Angelica, E.C., et al. 1998. Association of the AP-3 adaptor complex with clathrin. Science 280: 431-434.
6. Mullins, C., et al. 2000. Distinct requirements for the AP-3 adaptor complex in pigment granule and synaptic vesicle biogenesis in *Drosophila melanogaster*. Mol. Gen. Genet. 263: 1003-1014.
7. Faundez, V.V., et al. 2000. The AP-3 complex required for endosomal synaptic vesicle biogenesis is associated with a casein kinase Iα-like isoform. Mol. Biol. Cell 11: 2591-2604.

CHROMOSOMAL LOCATION

Genetic locus: AP3B1 (human) mapping to 5q14.1; Ap3b1 (mouse) mapping to 13 D1.

SOURCE

AP-3β (3B4) is a mouse monoclonal antibody raised against amino acids 995-1094 representing partial length AP-3β of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} 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.

PROTOCOLS

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

APPLICATIONS

AP-3β (3B4) is recommended for detection of AP-3β 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

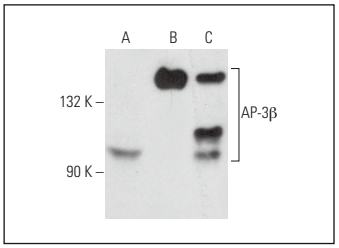
Suitable for use as control antibody for AP-3β siRNA (h): sc-41165, AP-3β siRNA (m): sc-41166, AP-3β shRNA Plasmid (h): sc-41165-SH, AP-3β shRNA Plasmid (m): sc-41166-SH, AP-3β shRNA (h) Lentiviral Particles: sc-41165-V and AP-3β shRNA (m) Lentiviral Particles: sc-41166-V.

Positive Controls: COLO 205 whole cell lysate: sc-364177, M1 whole cell lysate: sc-364782 or RIN-m5F whole cell lysate: sc-364792.

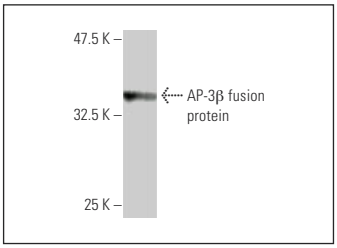
RECOMMENDED SUPPORT REAGENTS

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-3β (3B4): sc-517083. Western blot analysis of AP-3β expression in COLO 205 (**A**), M1 (**B**) and RIN-m5F (**C**) whole cell lysates.



AP-3β (3B4): sc-517083. Western blot analysis of human recombinant AP-3β fusion protein.

SELECT PRODUCT CITATIONS

1. Subramanian, G., et al. 2024. AP3B1 has type I interferon-independent antiviral function against SARS-CoV-2. Viruses 16: 1377.

RESEARCH USE

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