SANTA CRUZ BIOTECHNOLOGY, INC.

AP-3μ (K-20): sc-46770

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-3δ, AP-3σ and 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. Singh, B., et al. 2004. Genomic organization and linkage via a bidirectional promoter of the AP-3 (adaptor protein-3) μ3A and AK (adenosine kinase) genes: deletion mutants of AK in Chinese hamster cells extend into the AP-3 μ3A gene. Biochem. J. 378: 519-528.
7. Lefrancois, S., et al. 2004. An ear-core interaction regulates the recruitment of the AP-3 complex to membranes. Dev. Cell 7: 619-625.
8. Coleman, S.H., et al. 2005. Leucine-specific, functional interactions between human immunodeficiency virus type 1 Nef and adaptor protein complexes. J. Virol. 79: 2066-2078.

CHROMOSOMAL LOCATION

Genetic locus: AP3M1 (human) mapping to 10q22.2; AP3M2 (human) mapping to 8p11.21; Ap3m1 (mouse) mapping to 14 A3, Ap3m2 (mouse) mapping to 8 A2.

SOURCE

AP-3μ (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of AP-3μ of human origin.

PRODUCT

Each vial contains 200 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-46770 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AP-3μ (K-20) is recommended for detection of AP-3μ and AP-3μ2 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)], 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-3μ (K-20) is also recommended for detection of AP-3μ and AP-3μ2 in additional species, including equine, canine, bovine, porcine and avian.

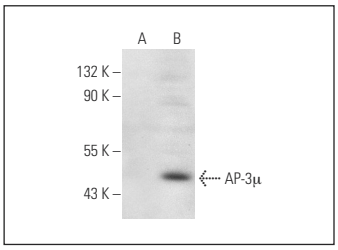
Molecular Weight of AP-3μ: 47 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, AP-3μ (h2): 293T Lysate: sc-176284 or NIH/3T3 whole cell lysate: sc-2210.

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™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 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™ Mounting Medium: sc-24941.

DATA



AP-3μ (K-20): sc-46770. Western blot analysis of AP-3μ expression in non-transfected: sc-117752 (**A**) and human AP-3μ transfected: sc-176284 (**B**) 293T 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 or our catalog for detailed protocols and support products.