

α -Adaptin 1/2 (AP.6): sc-32284

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. The AP-1 and AP-2 adapter protein complexes consist of Clathrin binding adaptin proteins (γ -Adaptin and β -Adaptin for AP-1; α -Adaptin 1, α -Adaptin 2 and β 2-Adaptin for AP-2) and two smaller subunits known as AP50 and AP17. The α - and β -Adaptin chains have a similar two-domain organization with C-terminal domains that vary in both sequence and length. α -Adaptin splice variants A and C display variable relative expression levels and differential distribution in different tissues. AP180 (also designated AP-3 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.

CHROMOSOMAL LOCATION

Genetic locus: AP2A1 (human) mapping to 19q13.33, AP2A2 (human) mapping to 11p15.5; Ap2a1 (mouse) mapping to 7 B4, Ap2a2 (mouse) mapping to 7 F5.

SOURCE

α -Adaptin 1/2 (AP.6) is a mouse monoclonal antibody raised against adaptor protein purified from brain tissue homogenate of bovine origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

α -Adaptin 1/2 (AP.6) is recommended for detection of α -Adaptin 1 and α -Adaptin 2, as well as an alternatively spliced isoform of α -Adaptin 1 found in neurons of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

α -Adaptin 1/2 (AP.6) is also recommended for detection of α -Adaptin 1 and α -Adaptin 2, as well as an alternatively spliced isoform of α -Adaptin 1 found in neurons in additional species, including bovine.

Suitable for use as control antibody for α -Adaptin 1/2 siRNA (h): sc-29610, α -Adaptin 1/2 siRNA (m): sc-43506, α -Adaptin 1/2 shRNA Plasmid (h): sc-29610-SH, α -Adaptin 1/2 shRNA Plasmid (m): sc-43506-SH, α -Adaptin 1/2 shRNA (h) Lentiviral Particles: sc-29610-V and α -Adaptin 1/2 shRNA (m) Lentiviral Particles: sc-43506-V.

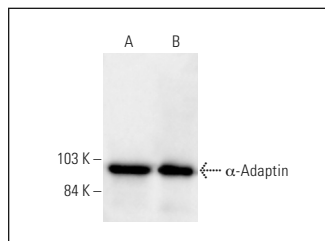
Molecular Weight of α -Adaptin 1/2: 100 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, NIH/3T3 whole cell lysate: sc-2210 or mouse liver extract: sc-2256.

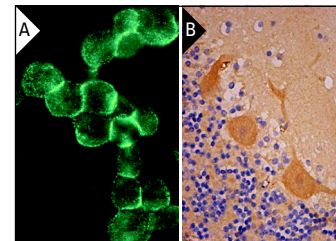
STORAGE

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

DATA



Western Blot analysis of α -Adaptin expression in Hep G2 whole cell (A) lysate immunoprecipitated with α -Adaptin (AP.6): sc-32284 (B) and detected with α -Adaptin (C-8): sc-17771 (A,B).



α -Adaptin (AP.6): sc-32284. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing cytoplasmic staining of Purkinje cells and cells in molecular layer (B).

SELECT PRODUCT CITATIONS

- Chetrit, D., et al. 2009. Dab2 regulates clathrin assembly and cell spreading. *Biochem. J.* 418: 701-715.
- Capuano, C., et al. 2012. PIP2-dependent regulation of Munc13-4 endocytic recycling: impact on the cytosolic secretory pathway. *Blood* 119: 2252-2262.
- Matsuoka, H., et al. 2013. Nerve growth factor-induced endocytosis of TWIK-related acid-sensitive K⁺ 1 channels in adrenal medullary cells and PC12 cells. *Pflugers Arch.* 465: 1051-1064.
- Matsuoka, H. and Inoue, M. 2017. Molecular mechanism for muscarinic M₁ receptor-mediated endocytosis of TWIK-related acid-sensitive K⁺ 1 channels in rat adrenal medullary cells. *J. Physiol.* 595: 6851-6867.

RESEARCH USE

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

PROTOCOLS

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



See **α -Adaptin 1/2 (C-8): sc-17771** for α -Adaptin 1/2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.