

# $\alpha$ -Adaptin 1 (M-16): sc-6421

## 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 ( $\gamma$ -Adaptin and  $\beta$ -Adaptin for AP-1;  $\alpha$ -Adaptin 1,  $\alpha$ -Adaptin 2 and  $\beta$ 2-Adaptin for AP-2) and two smaller subunits known as AP50 and AP17. The  $\alpha$ - and  $\beta$ -Adaptin chains have a similar two-domain organization with C-terminal domains that vary in both sequence and length.  $\alpha$ -Adaptin splice variants 1 and 2 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 (mouse) mapping to 7 B4.

## SOURCE

$\alpha$ -Adaptin 1 (M-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of  $\alpha$ -Adaptin 1 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6421 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

$\alpha$ -Adaptin 1 (M-16) is recommended for detection of  $\alpha$ -Adaptin 1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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); may cross-react with  $\alpha$ -Adaptin 2.

$\alpha$ -Adaptin 1 (M-16) is also recommended for detection of  $\alpha$ -Adaptin 1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for  $\alpha$ -Adaptin 1 siRNA (m): sc-29609,  $\alpha$ -Adaptin 1 shRNA Plasmid (m): sc-29609-SH and  $\alpha$ -Adaptin 1 shRNA (m) Lentiviral Particles: sc-29609-V.

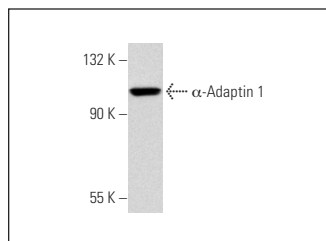
Molecular Weight of  $\alpha$ -Adaptin 1: 100 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214 or NIH/3T3 whole cell lysate: sc-2210.

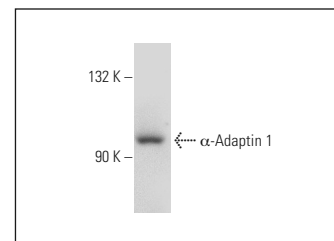
## RECOMMENDED SECONDARY REAGENTS

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



$\alpha$ -Adaptin 1 (M-16): sc-6421. Western blot analysis of  $\alpha$ -Adaptin 1 expression in KNRK whole cell lysate.



$\alpha$ -Adaptin 1 (M-16): sc-6421. Western blot analysis of  $\alpha$ -Adaptin 1 expression in NIH/3T3 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Manzano-Leon, N., et al. 2006.  $\beta$ -adaptin: key molecule for microglial scavenger receptor function under oxidative stress. *Biochem. Biophys. Res. Commun.* 351: 588-594.
- Rudinskiy, N., et al. 2009. Calpain hydrolysis of  $\alpha$ - and  $\beta$ 2-adaptins decreases clathrin-dependent endocytosis and may promote neurodegeneration. *J. Biol. Chem.* 284: 12447-12458.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try  **$\alpha$ -Adaptin 1/2 (C-8): sc-17771** or  **$\alpha$ -Adaptin 1 (C-5): sc-398024**, our highly recommended monoclonal alternatives to  $\alpha$ -Adaptin 1 (M-16). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see  **$\alpha$ -Adaptin 1/2 (C-8): sc-17771**.