

# $\alpha$ -Adaptin 2 (A-8): sc-377376

## 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.

## REFERENCES

- 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.
- Robinson, M.S. 1989. Cloning of cDNAs encoding two related 100-kD coated vesicle proteins ( $\alpha$ -adaptins). *J. Cell Biol.* 108: 833-842.
- Robinson, M.S. 1990. Cloning and expression of  $\gamma$ -Adaptin, a component of clathrin-coated vesicles associated with the Golgi apparatus. *J. Cell Biol.* 111: 2319-2326.
- Ponnambalam, S., et al. 1990. Conservation and diversity in families of coated vesicle adaptins. *J. Biol. Chem.* 265: 4814-4820.
- Morris, S.A., et al. 1993. Clathrin assembly protein AP180: primary structure, domain organization and identification of a clathrin binding site. *EMBO J.* 12: 667-675.

## CHROMOSOMAL LOCATION

Genetic locus: AP2A2 (human) mapping to 11p15.5; Ap2a2 (mouse) mapping to 7 F5.

## SOURCE

$\alpha$ -Adaptin 2 (A-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 913-947 near the C-terminus of  $\alpha$ -Adaptin 2 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-377376 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## RESEARCH USE

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

## APPLICATIONS

$\alpha$ -Adaptin 2 (A-8) is recommended for detection of  $\alpha$ -Adaptin 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for  $\alpha$ -Adaptin 2 siRNA (h): sc-43505,  $\alpha$ -Adaptin 2 siRNA (m): sc-29611,  $\alpha$ -Adaptin 2 shRNA Plasmid (h): sc-43505-SH,  $\alpha$ -Adaptin 2 shRNA Plasmid (m): sc-29611-SH,  $\alpha$ -Adaptin 2 shRNA (h) Lentiviral Particles: sc-43505-V and  $\alpha$ -Adaptin 2 shRNA (m) Lentiviral Particles: sc-29611-V.

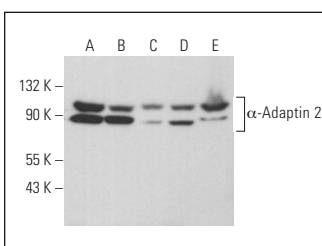
Molecular Weight of  $\alpha$ -Adaptin 2: 100 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, NIH/3T3 whole cell lysate: sc-2210 or F9 cell lysate: sc-2245.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



$\alpha$ -Adaptin 2 (A-8): sc-377376. Western blot analysis of  $\alpha$ -Adaptin 2 expression in F9 (A), NIH/3T3 (B), MCF7 (C), SW480 (D) and KNRK (E) 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.



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