

# $\alpha$ -Adaptin 1 (C-5): sc-398024

## 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 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.

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: AP2A1 (human) mapping to 19q13.33; Ap2a1 (mouse) mapping to 7 B4.

## SOURCE

$\alpha$ -Adaptin 1 (C-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 954-977 at the C-terminus of  $\alpha$ -Adaptin 1 of mouse origin.

## PRODUCT

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

$\alpha$ -Adaptin 1 (C-5) is available conjugated to agarose (sc-398024 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398024 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398024 PE), fluorescein (sc-398024 FITC), Alexa Fluor<sup>®</sup> 488 (sc-398024 AF488), Alexa Fluor<sup>®</sup> 546 (sc-398024 AF546), Alexa Fluor<sup>®</sup> 594 (sc-398024 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-398024 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-398024 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-398024 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398024 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## RESEARCH USE

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

## APPLICATIONS

$\alpha$ -Adaptin 1 (C-5) is recommended for detection of  $\alpha$ -Adaptin 1 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

$\alpha$ -Adaptin 1 (C-5) 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 (h): sc-29608,  $\alpha$ -Adaptin 1 siRNA (m): sc-29609,  $\alpha$ -Adaptin 1 shRNA Plasmid (h): sc-29608-SH,  $\alpha$ -Adaptin 1 shRNA Plasmid (m): sc-29609-SH,  $\alpha$ -Adaptin 1 shRNA (h) Lentiviral Particles: sc-29608-V and  $\alpha$ -Adaptin 1 shRNA (m) Lentiviral Particles: sc-29609-V.

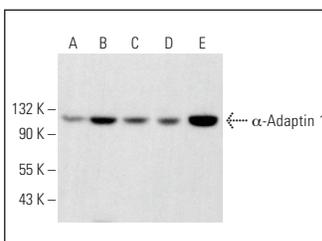
Molecular Weight of  $\alpha$ -Adaptin 1: 100 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, COLO 205 whole cell lysate: sc-364177 or Neuro-2A whole cell lysate: sc-364185.

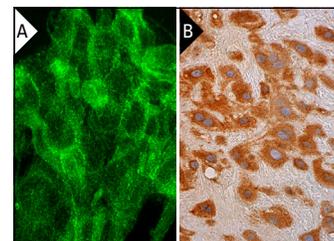
## RECOMMENDED SUPPORT REAGENTS

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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



$\alpha$ -Adaptin 1 (C-5): sc-398024. Western blot analysis of  $\alpha$ -Adaptin 1 expression in Hep G2 (A), Caki-1 (B), COLO 205 (C), Neuro-2A (D) and AT3B-1 (E) whole cell lysates.



$\alpha$ -Adaptin 1 (C-5): sc-398024. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of decidual cells (B).

## STORAGE

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