

# $\gamma$ 1-Adaptin (B-2): sc-25291

## 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 ( $\gamma$  and  $\beta$ 1 for AP-1,  $\alpha$  and  $\beta$ 2 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 kDa 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.
- Ball, C.L., et al. 1995. Expression and localization of  $\alpha$ -adaptin isoforms. *J. Cell Sci.* 108: 2865-2875.
- Mellman, I. 1996. Endocytosis and molecular sorting. *Annu. Rev. Cell Dev. Biol.* 12: 575-625.
- Dreyling, M.H., et al. 1996. The t(10;11) (p13;q14) in the U937 cell line results in the fusion of the AF10 gene and CALM, encoding a new member of the AP-3 clathrin assembly protein family. *Proc. Natl. Acad. Sci. USA* 93: 4804-4809.

## CHROMOSOMAL LOCATION

Genetic locus: Ap1g1 (mouse) mapping to 8 D3.

## SOURCE

$\gamma$ 1-Adaptin (B-2) is a mouse monoclonal antibody raised against amino acids 653-821 of  $\gamma$ 1-Adaptin 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.

## APPLICATIONS

$\gamma$ 1-Adaptin (B-2) is recommended for detection of  $\gamma$ 1-Adaptin of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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  $\gamma$ 1-Adaptin siRNA (m): sc-29579,  $\gamma$ 1-Adaptin shRNA Plasmid (m): sc-29579-SH and  $\gamma$ 1-Adaptin shRNA (m) Lentiviral Particles: sc-29579-V.

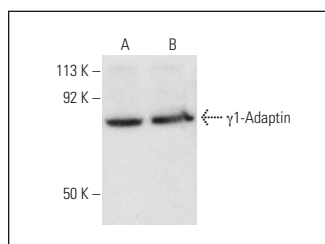
Molecular Weight of  $\gamma$ 1-Adaptin: 91 kDa.

Positive Controls: BC<sub>3</sub>H1 cell lysate: sc-2299 or PC-12 cell lysate: sc-2250.

## 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



$\gamma$ 1-Adaptin (B-2): sc-25291. Western blot analysis of  $\gamma$ 1-Adaptin expression in BC<sub>3</sub>H1 (A) and PC-12 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Suzuki, T., et al. 2005. Zinc transporters, ZnT5 and ZnT7, are required for the activation of alkaline phosphatases, zinc-requiring enzymes that are glycosylphosphatidylinositol-anchored to the cytoplasmic membrane. *J. Biol. Chem.* 280: 637-643.

## 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.