SANTA CRUZ BIOTECHNOLOGY, INC.

γ1-Adaptin (100/3): sc-58214

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 and β1 for AP-1, α and β2 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.

REFERENCES

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2. Robinson, M.S. 1989. Cloning of cDNAs encoding two related 100 kDa coated vesicle proteins (α-Adaptins). J. Cell Biol. 108: 833-842.
3. Robinson, M.S. 1990. Cloning and expression of γ-Adaptin, a component of clathrin-coated vesicles associated with the Golgi apparatus. J. Cell Biol. 111: 2319-2326.
4. Ponnambalam, S., et al. 1990. Conservation and diversity in families of coated vesicle adaptins. J. Biol. Chem. 265: 4814-4820.
5. 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.
6. Ball, C.L., et al. 1995. Expression and localization of α-Adaptin isoforms. J. Cell Sci. 108: 2865-2875.
7. Mellman, I. 1996. Endocytosis and molecular sorting. Annu. Rev. Cell Dev. Biol. 12: 575-625.
8. 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.
9. Nogi, T., et al. 2002. Structural basis for the accessory protein recruitment by the γ-Adaptin ear domain. Nat. Struct. Biol. 9: 527-531.

SOURCE

γ1-Adaptin (100/3) is a mouse monoclonal antibody raised against full length γ1-Adaptin of bovine origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

γ1-Adaptin (100/3) is recommended for detection of γ1-Adaptin 100 kDa in bovine liver, human heart fibroblasts and Madin-Darby bovine kidney cultured cells (MDBK) of bovine and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with any components in the 110-115 kDa range from above mentioned sources, rat pheochromocytoma cultured cells (PC12), neuroblastoma or astrocytes, or with the γ-subunit in rat and mouse.

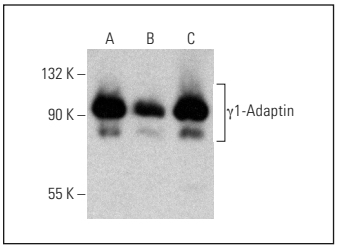
Molecular Weight of γ1-Adaptin: 91 kDa.

Positive Controls: HISM cell lysate: sc-2229 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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).

DATA



γ1-Adaptin (100/3): sc-58214. Western blot analysis of γ1-Adaptin expression in 293T (**A**), HISM (**B**) and HeLa (**C**) 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.

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.