

γ 1-Adaptin (M-300): sc-10763

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 β 1 for AP-1, α and β 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. 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. *Ann. Rev. Cell Dev. Biol.* 12: 575-625.

CHROMOSOMAL LOCATION

Genetic locus: AP1G1 (human) mapping to 16q22.2; Ap1g1 (mouse) mapping to 8 D3.

SOURCE

γ 1-Adaptin (M-300) is a rabbit polyclonal antibody raised against amino acids 653-821 of γ 1-Adaptin of mouse origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

γ 1-Adaptin (M-300) is recommended for detection of γ 1-Adaptin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence and 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).

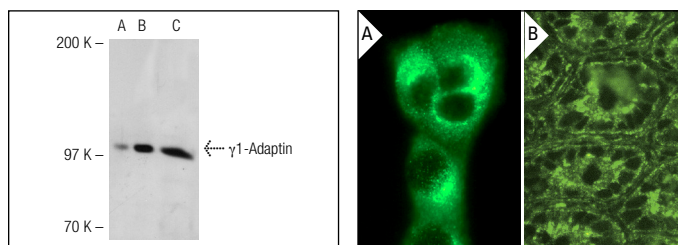
γ 1-Adaptin (M-300) is also recommended for detection of γ 1-Adaptin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for γ 1-Adaptin siRNA (h): sc-29578, γ 1-Adaptin siRNA (m): sc-29579, γ 1-Adaptin shRNA Plasmid (h): sc-29578-SH, γ 1-Adaptin shRNA Plasmid (m): sc-29579-SH, γ 1-Adaptin shRNA (h) Lentiviral Particles: sc-29578-V and γ 1-Adaptin shRNA (m) Lentiviral Particles: sc-29579-V.

Molecular Weight of γ 1-Adaptin: 91 kDa.

Positive Controls: BC₃H1 cell lysate: sc-2299, PC-12 cell lysate: sc-2250 or γ 1-Adaptin (h): 293T Lysate: sc-113591.

DATA



γ 1-Adaptin (M-300): sc-10763. Western blot analysis of γ 1-Adaptin expression in non-transfected 293T: sc-117752 (A), human γ 1-Adaptin transfected 293T: sc-113591 (B) and HISM (C) whole cell lysates.

γ 1-Adaptin (M-300): sc-10763. Immunofluorescence staining of methanol-fixed BC₃H1 cells (A) showing cytoplasmic localization and of normal mouse intestine frozen section (B) showing membrane and cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Hill, K., et al. 2003. Munc18 interacting proteins: ADP-ribosylation factor-dependent coat proteins that regulate the traffic of β -Alzheimer's precursor protein. *J. Biol. Chem.* 278: 36032-36040.
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4. Bechler, M.E. and Brown, W.J. 2013. PAFAH 1b phospholipase A₂ subunits have distinct roles in maintaining Golgi structure and function. *Biochim. Biophys. Acta* 1831: 595-601.

RESEARCH USE

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