

γ 1-Adaptin (I-19): sc-6427

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 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

1. 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.
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 (I-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus 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.

Blocking peptide available for competition studies, sc-6427 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

γ 1-Adaptin (I-19) 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 (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 (I-19) is also recommended for detection of γ 1-Adaptin in additional species, including equine, canine, bovine, porcine and avian.

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.

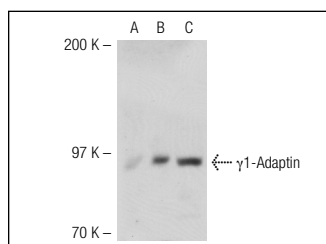
Molecular Weight of γ 1-Adaptin: 91 kDa.

Positive Controls: BC₃H1 cell lysate: sc-2299, HISM cell lysate: sc-2229 or γ 1-Adaptin (h): 293T Lysate: sc-113591.

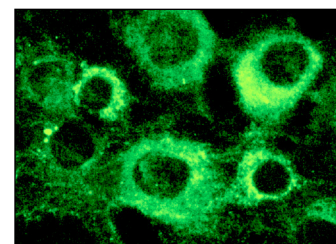
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



γ 1-Adaptin (I-19): sc-6427. 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 (I-19): sc-6427. Immunofluorescence staining of methanol-fixed BC₃H1 cells showing cytoplasmic localization.

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.