SANTA CRUZ BIOTECHNOLOGY, INC.

ACAP1 (G-4): sc-137172

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ACAP1, also designated Centaurin-β 1 (CENTB1 or Cnt-b1), is a member of the ADP ribosylation factor family of Arf6 GTPase-activating proteins (GAP). GAPs are important regulators of Arf function by controlling the return of Arf to its inactive state. ACAP1 is related to AGAP1 and ASAP1, and all three proteins are similarly expressed in fibroblast cells such as NIH/3T3. Internalization and recycling of integrin receptors is important in cell adhesion and migration modulation, and once inside a cell, proteins and membranes are transported to the endosome where they are sorted for recycling or degradation. ACAP1 promotes cargo sorting by associating directly to recycling cargo proteins. Preventing this interaction inhibits protein recycling. ACAP1 binds transferrin receptors, promoting their transport to the plasma membrane from the endosome. Akt induced phosphorylation of ACAP1 at Ser 554 regulates ACAP1 interaction to integrin in endosomes, and downregulation of Akt or ACAP1 may inhibit cell migration on Fibronectin.

REFERENCES

1. Jackson, T.R., et al. 2000. ACAPs are ARF6 GTPase-activating proteins that function in the cell periphery. J. Cell Biol. 151: 627-638.
2. Furman, C., et al. 2002. DEF-1/ASAP1 is a GTPase-activating protein (GAP) for ARF1 that enhances cell motility through a GAP-dependent mechanism. J. Biol. Chem. 277: 7962-7969.
3. Nie, Z., et al. 2003. Specific regulation of the adaptor protein complex AP-3 by the ARF GAP AGAP1. Dev. Cell 5: 513-521.

CHROMOSOMAL LOCATION

Genetic locus: ACAP1 (human) mapping to 17p13.1; Acap1 (mouse) mapping to 11 B3.

SOURCE

ACAP1 (G-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 218-254 within an internal region of ACAP1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ACAP1 (G-4) is available conjugated to agarose (sc-137172 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-137172 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137172 PE), fluorescein (sc-137172 FITC), Alexa Fluor® 488 (sc-137172 AF488), Alexa Fluor® 546 (sc-137172 AF546), Alexa Fluor® 594 (sc-137172 AF594) or Alexa Fluor® 647 (sc-137172 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-137172 AF680) or Alexa Fluor® 790 (sc-137172 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-137172 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

ACAP1 (G-4) is recommended for detection of ACAP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 ACAP1 siRNA (h): sc-44442, ACAP1 siRNA (m): sc-45741, ACAP1 shRNA Plasmid (h): sc-44442-SH, ACAP1 shRNA Plasmid (m): sc-45741-SH, ACAP1 shRNA (h) Lentiviral Particles: sc-44442-V and ACAP1 shRNA (m) Lentiviral Particles: sc-45741-V.

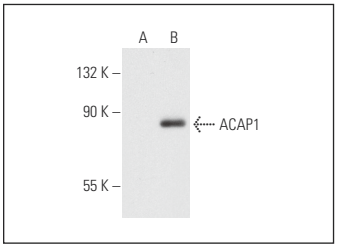
Molecular Weight of ACAP1: 80 kDa.

Positive Controls: ACAP1 (h): 293 Lysate: sc-113342, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



ACAP1 (G-4): sc-137172. Western blot analysis of ACAP1 expression in non-transfected: sc-110760 (**A**) and human ACAP1 transfected: sc-113342 (**B**) 293 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.