

p41-ARCb (C-3): sc-137125

BACKGROUND

The Arp2/3 (Actin-related protein 2/3) complex consists of seven subunits, all of which are Actin-related proteins. The complex is involved in the control of Actin polymerization and in mediating the formation of branched Actin networks. The p41 subunit of Arp2/3 exists in multiple versions which arise due to post-translational modifications and vary in function depending on cell type or developmental stage. p41-ARCb, also known as ARPC1B (Actin-related protein 2/3 complex subunit 1B) or ARC41 (Arp2/3 complex 41 kDa subunit), is a 372 amino acid version of the p41 subunit of the Arp2/3 complex. Localized to the cytoplasm and cytoskeleton, p41-ARCb is involved in regulating the assembly and maintenance of the complex and, unlike the other Arp2/3 subunits, is not primarily involved in Actin polymerization.

CHROMOSOMAL LOCATION

Genetic locus: ARPC1B (human) mapping to 7q22.1, Arpc1b (mouse) mapping to 5 G2.

SOURCE

p41-ARCb (C-3) is a mouse monoclonal antibody raised against amino acids 291-344 mapping near the C-terminus of p41-ARCb of human 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.

p41-ARCb (C-3) is available conjugated to agarose (sc-137125 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137125 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137125 PE), fluorescein (sc-137125 FITC), Alexa Fluor® 488 (sc-137125 AF488), Alexa Fluor® 546 (sc-137125 AF546), Alexa Fluor® 594 (sc-137125 AF594) or Alexa Fluor® 647 (sc-137125 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-137125 AF680) or Alexa Fluor® 790 (sc-137125 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

p41-ARCb (C-3) is recommended for detection of p41-ARCb 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 p41-ARCb siRNA (h): sc-62745, p41-ARCb siRNA (m): sc-62746, p41-ARCb shRNA Plasmid (h): sc-62745-SH, p41-ARCb shRNA Plasmid (m): sc-62746-SH, p41-ARCb shRNA (h) Lentiviral Particles: sc-62745-V and p41-ARCb shRNA (m) Lentiviral Particles: sc-62746-V.

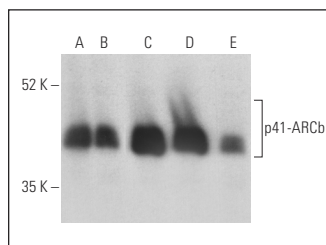
Molecular Weight of p41-ARCb: 41 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, U-698-M whole cell lysate: sc-364799 or COLO 320DM cell lysate: sc-2226.

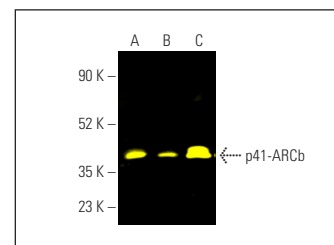
RECOMMENDED SUPPORT REAGENTS

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



p41-ARCb (C-3): sc-137125. Western blot analysis of p41-ARCb expression in Hep G2 (A), HeLa (B), U-698-M (C), PC-3 (D) and COLO 320DM (E) whole cell lysates. Detection reagent used: m-IgG_{2b} BP-HRP: sc-542741.



p41-ARCb (C-3): sc-137125. Fluorescent western blot analysis of p41-ARCb expression in U-698-M (A) and PC-3 (B) whole cell lysates and human platelet extract (C). Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_{2b} BP-CFL 488: sc-542745.

SELECT PRODUCT CITATIONS

- Mohan, A.S., et al. 2019. Enhanced dendritic Actin network formation in extended lamellipodia drives proliferation in growth-challenged Rac1^{P29S} melanoma cells. *Dev. Cell* 49: 444-460.e9.
- Ni, W., et al. 2023. Actin related protein 2/3 complex subunit 1 up-regulation in the hypothalamus prevents high-fat diet induced obesity. *Eur. J. Neurosci.* 57: 64-77.
- Sadhu, L., et al. 2023. ARPC5 isoforms and their regulation by calcium-calmodulin-N-WASP drive distinct Arp2/3-dependent actin remodeling events in CD4 T cells. *Elife* 12: e82450.

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.