

# p41-ARCb (H-1): sc-271342

## 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 posttranslational 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 (H-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 278-314 within an internal region of p41-ARCb of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271342 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## RESEARCH USE

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

## APPLICATIONS

p41-ARCb (H-1) 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).

p41-ARCb (H-1) is also recommended for detection of p41-ARCb in additional species, including canine, bovine, porcine and avian.

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.

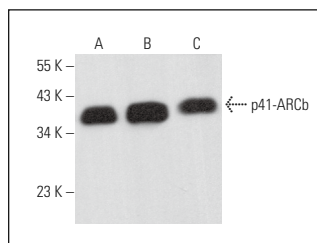
Molecular Weight of p41-ARCb: 41 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HEK293 whole cell lysate: sc-45136 or Hep G2 cell lysate: sc-2227.

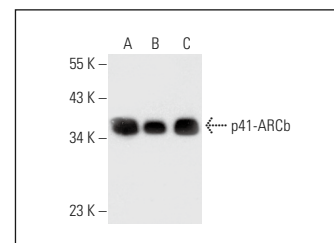
## RECOMMENDED SUPPORT REAGENTS

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 (H-1): sc-271342. Western blot analysis of p41-ARCb expression in M1 (A) and NIH/3T3 (B) whole cell lysates and rat lung tissue extract (C).



p41-ARCb (H-1): sc-271342. Western blot analysis of p41-ARCb expression in Hep G2 (A), HEK293 (B) and HeLa (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Abella, J.V., et al. 2016. Isoform diversity in the Arp2/3 complex determines Actin filament dynamics. *Nat. Cell Biol.* 18: 76-86.
- Choi, J., et al. 2019. Pimozide suppresses cancer cell migration and tumor metastasis through binding to ARPC2, a subunit of the Arp2/3 complex. *Cancer Sci.* 110: 3788-3801.
- Li, J., et al. 2021. EVA1A ameliorates atherosclerosis by promoting re-endothelialization of injured arteries via Rac1/Cdc42/Arpc1b. *Cardiovasc. Res.* 117: 450-461.
- Fabler, F., et al. 2023. Arpc5 isoforms regulate Arp2/3 complex-dependent protrusion through differential Ena/VASP positioning. *Sci. Adv.* 9: eadd6495.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.