

# p41-ARCb (C-4): sc-137202

## 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.

## REFERENCES

1. Welch, M.D., et al. 1997. The human Arp2/3 complex is composed of evolutionarily conserved subunits and is localized to cellular regions of dynamic Actin filament assembly. *J. Cell Biol.* 138: 375-384.
2. Zhao, X., et al. 2001. Interactions among subunits of human Arp2/3 complex: p20-Arc as the hub. *Biochem. Biophys. Res. Commun.* 280: 513-517.
3. Kaneda, A., et al. 2002. Reduced expression of the Insulin-induced protein 1 and p41 Arp2/3 complex genes in human gastric cancers. *Int. J. Cancer* 100: 57-62.
4. Vadlamudi, R.K., et al. 2004. P41-Arc subunit of human Arp2/3 complex is a p21-activated kinase-1-interacting substrate. *EMBO Rep.* 5: 154-160.
5. Kaneda, A., et al. 2004. Decreased expression of the seven ARPC2/3 complex genes in human gastric cancers. *Cancer Lett.* 212: 203-210.
6. Kumagai, K., et al. 2006. Arpc1b gene is a candidate prediction marker for choroidal malignant melanomas sensitive to radiotherapy. *Invest. Ophthalmol. Vis. Sci.* 47: 2300-2304.

## CHROMOSOMAL LOCATION

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

## SOURCE

p41-ARCb (C-4) 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<sub>2b</sub> kappa light chain 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.

## PROTOCOLS

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

## APPLICATIONS

p41-ARCb (C-4) 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.

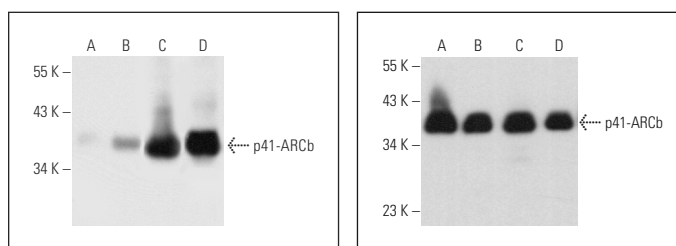
Molecular Weight of p41-ARCb: 41 kDa.

Positive Controls: p41-ARCb (m2): 293T Lysate: sc-122325, U-698-M whole cell lysate: sc-364799 or human platelet extract: sc-363773.

## 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-4): sc-137202. Western blot analysis of p41-ARCb expression in non-transfected 293T: sc-117752 (A), mouse p41-ARCb transfected 293T: sc-122325 (B), U-698-M (C) whole cell lysates and human platelet extract (D).

p41-ARCb (C-4): sc-137202. Western blot analysis of p41-ARCb expression in HeLa (A), Hep G2 (B), C32 (C) and M1 (D) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Molinie, N., et al. 2019. Cortical branched Actin determines cell cycle progression. *Cell Res.* 29: 432-445.

## RESEARCH USE

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