

# p41-ARCb (C-15): sc-65168

## 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.

## REFERENCES

1. Welch, M.D., DePace, A.H., Verma, S., Iwamatsu, A. and Mitchison, T.J. 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., Yang, Z., Qian, M. and Zhu, X. 2001. Interactions among subunits of human Arp2/3 complex: p20-ARC as the hub. *Biochem. Biophys. Res. Commun.* 280: 513-517.
3. Kaneda, A., Kaminishi, M., Nakanishi, Y., Sugimura, T. and Ushijima, T. 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., Li, F., Barnes, C.J., Bagheri-Yarmand, R. and Kumar, R. 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., Kaminishi, M., Sugimura, T. and Ushijima, T. 2004. Decreased expression of the seven Arp2/3 complex genes in human gastric cancers. *Cancer Lett.* 212: 203-210.
6. Kumagai, K., Nimura, Y., Mizota, A., Miyahara, N., Aoki, M., Furusawa, Y., Takiguchi, M., Yamamoto, S. and Seki, N. 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-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of p41-ARCb of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-65168 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

p41-ARCb (C-15) is recommended for detection of p41-ARCb of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 (C-15) is also recommended for detection of p41-ARCb in additional species, including equine, 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, PC-3 cell lysate: sc-2220 or SK-BR-3 cell lysate: sc-2218.

## 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) 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.