

# p20-ARC (FL-168): sc-68394

## 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. p20-ARC, also known as ARPC4 (actin-related protein 2/3 complex subunit 4) or ARC20 (Arp2/3 complex 20 kDa subunit), is a 168 amino acid actin-binding component of Arp2/3. Localized to the cytoplasm and cytoskeleton, p20-ARC can, unlike other actin-related proteins, interact with several of the Arp2/3 subunits. This suggests that p20-ARC acts as a hub in the complex and may play a key role in Arp2/3 complex formation. Two isoforms of p20-ARC exist due to alternative splicing events.

## 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. Robinson, R.C., Turbedsky, K., Kaiser, D.A., Marchand, J.B., Higgs, H.N., Choe, S. and Pollard, T.D. 2001. Crystal structure of Arp2/3 complex. *Science* 294: 1679-1684.
4. Millard, T.H., Behrendt, B., Launay, S., Fütterer, K. and Machesky, L.M. 2002. Identification and characterisation of a novel human isoform of Arp2/3 complex subunit p16-ARC/ARPC5. *Cell Motil. Cytoskeleton* 54: 81-90.
5. Terasaki, A.G., Morikawa, K., Suzuki, H., Oshima, K. and Ohashi, K. 2002. Characterization of Arp2/3 complex in chicken tissues. *Cell Struct. Funct.* 27: 383-391.
6. Beltzner, C.C. and Pollard, T.D. 2004. Identification of functionally important residues of Arp2/3 complex by analysis of homology models from diverse species. *J. Mol. Biol.* 336: 551-565.

## CHROMOSOMAL LOCATION

Genetic locus: ARPC4 (human) mapping to 3p25.3; Arpc4 (mouse) mapping to 6 E3.

## SOURCE

p20-ARC (FL-168) is a rabbit polyclonal antibody raised against amino acids 1-168 representing full length p20-ARC 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.

## STORAGE

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

## APPLICATIONS

p20-ARC (FL-168) is recommended for detection of p20-ARC of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

p20-ARC (FL-168) is also recommended for detection of p20-ARC in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for p20-ARC siRNA (h): sc-62737, p20-ARC siRNA (m): sc-155923, p20-ARC shRNA Plasmid (h): sc-62737-SH, p20-ARC shRNA Plasmid (m): sc-155923-SH, p20-ARC shRNA (h) Lentiviral Particles: sc-62737-V and p20-ARC shRNA (m) Lentiviral Particles: sc-155923-V.

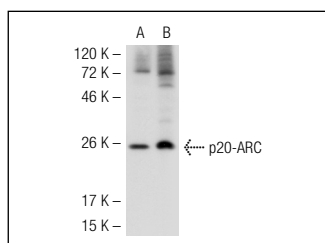
Molecular Weight of p20-ARC: 20 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



p20-ARC (FL-168): sc-68394. Western blot analysis of p20-ARC expression in 293T (A) and HeLa (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Yang, J.H., Liu, Q.F., Wu, S.W., Zhang, L.F. and Cai, Y. 2011. Effects of lanthanum chloride on the expression of immediate early genes in the hippocampus of rats. *Zhonghua Yu Fang Yi Xue Za Zhi* 45: 340-343.

## RESEARCH USE

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