

# p16-ARC (C-3): sc-166760

## 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. p16-ARC, also known as ARPC5 (Actin-related protein 2/3 complex subunit 5) or ARC16 (Arp2/3 complex 16 kDa subunit), is a 151 amino acid subunit of the Arp2/3 complex. Thought to play a role in maintaining the integrity of Arp2/3, p16-ARC is a substrate for MAPKAPK-2 which, through phosphorylation of p16-ARC, may participate in Arp2/3 regulatory functions and remodeling of the Actin cytoskeleton. Two isoforms of p16-ARC exist due to alternative splicing events.

## CHROMOSOMAL LOCATION

Genetic locus: ARPC5 (human) mapping to 1q25.3; Arpc5 (mouse) mapping to 1 G3.

## SOURCE

p16-ARC (C-3) is a mouse monoclonal antibody raised against amino acids 1-151 representing full length p16-ARC 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.

p16-ARC (C-3) is available conjugated to agarose (sc-166760 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166760 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166760 PE), fluorescein (sc-166760 FITC), Alexa Fluor® 488 (sc-166760 AF488), Alexa Fluor® 546 (sc-166760 AF546), Alexa Fluor® 594 (sc-166760 AF594) or Alexa Fluor® 647 (sc-166760 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166760 AF680) or Alexa Fluor® 790 (sc-166760 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

p16-ARC (C-3) is recommended for detection of p16-ARC 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 p16-ARC siRNA (h): sc-62733, p16-ARC siRNA (m): sc-62734, p16-ARC shRNA Plasmid (h): sc-62733-SH, p16-ARC shRNA Plasmid (m): sc-62734-SH, p16-ARC shRNA (h) Lentiviral Particles: sc-62733-V and p16-ARC shRNA (m) Lentiviral Particles: sc-62734-V.

Molecular Weight of p16-ARC: 16 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HL-60 whole cell lysate: sc-2209 or HT-1080 whole cell lysate: sc-364183.

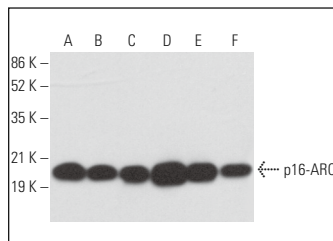
## STORAGE

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

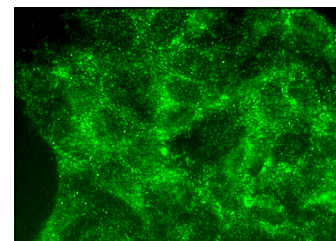
## RESEARCH USE

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

## DATA



p16-ARC (C-3): sc-166760. Western blot analysis of p16-ARC expression in HeLa (A), Hep G2 (B), U-87 MG (C), HL-60 (D), HT-1080 (E) and DU 145 (F) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



p16-ARC (C-3): sc-166760. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic and membrane localization.

## SELECT PRODUCT CITATIONS

1. Ichikawa, D., et al. 2011. GRAIL (gene related to anergy in lymphocytes) regulates cytoskeletal reorganization through ubiquitination and degradation of Arp2/3 subunit 5 and coronin 1A. *J. Biol. Chem.* 286: 43465-43474.
2. Kádár, E., et al. 2013. Intracranial self stimulation upregulates the expression of synaptic plasticity related genes and Arc protein expression in rat hippocampus. *Genes Brain Behav.* 12: 771-779.
3. Kühbacher, A., et al. 2015. Genome-wide siRNA screen identifies complementary signaling pathways involved in *Listeria* infection and reveals different Actin nucleation mechanisms during *Listeria* cell invasion and Actin comet tail formation. *MBio* 6: e00598-15.
4. Nakagawa, H., et al. 2018. Sodium butyrate induces senescence and inhibits the invasiveness of glioblastoma cells. *Oncol. Lett.* 15: 1495-1502.
5. Zhang, P., et al. 2019. Hyperglycemia-induced inflamm-aging accelerates gingival senescence via NLR4 phosphorylation. *J. Biol. Chem.* 294: 18807-18819.
6. Kondrikov, D., et al. 2020. Kynurenine inhibits autophagy and promotes senescence in aged bone marrow mesenchymal stem cells through the aryl hydrocarbon receptor pathway. *Exp. Gerontol.* 130: 110805.
7. Wang, Q., et al. 2021. Diabetes fuels periodontal lesions via GLUT1-driven macrophage inflammation. *Int. J. Oral Sci.* 13: 11.
8. Sun, Y., et al. 2022. Noninvasive urinary protein signatures associated with colorectal cancer diagnosis and metastasis. *Nat. Commun.* 13: 2757.
9. Wang, M., et al. 2023. TAZ reduces UVA-mediated photoaging through regulates cell proliferation in skin fibroblasts. *Photochem. Photobiol.* 99: 153-159.

## PROTOCOLS

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

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