SANTA CRUZ BIOTECHNOLOGY, INC.

ARC (F-11): sc-374177

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ARC (apoptosis repressor with CARD domain), also designated nucleolar protein 3 (NOL3, NOP, NOP30) is a caspase-inhibiting protein that requires phosphorylation in order to prevent apoptosis. 5.5- and 1.0-kb ARC human transcripts are present in skeletal muscle and heart. Expression of the 1.0-kb transcript inhibits apoptosis in a dose-dependent manner when coexpressed with caspase-8. ARC interacts with caspase-2 and caspase-8 through its N-terminal death effector domain and is able to bind to caspase-8 in the mitochondria. ARC inhibits apoptosis induced by stimulation of CD95/FAS, tumor necrosis factor receptor-1 and TRAMP/death receptor-3. It is phosphorylated at threonine 149 by CK2, and this phosphorylation targets ARC to mitochondria.

CHROMOSOMAL LOCATION

Genetic locus: NOL3 (human) mapping to 16q22.1; Nol3 (mouse) mapping to 8 D3.

SOURCE

ARC (F-11) is a mouse monoclonal antibody raised against amino acids 1-150 mapping at the N-terminus of ARC of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ARC (F-11) is available conjugated to agarose (sc-374177 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374177 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374177 PE), fluorescein (sc-374177 FITC), Alexa Fluor® 488 (sc-374177 AF488), Alexa Fluor® 546 (sc-374177 AF546), Alexa Fluor® 594 (sc-374177 AF594) or Alexa Fluor® 647 (sc-374177 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374177 AF680) or Alexa Fluor® 790 (sc-374177 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

ARC (F-11) is recommended for detection of 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 ARC siRNA (h): sc-29722, ARC siRNA (m): sc-29723, ARC shRNA Plasmid (h): sc-29722-SH, ARC shRNA Plasmid (m): sc-29723-SH, ARC shRNA (h) Lentiviral Particles: sc-29722-V and ARC shRNA (m) Lentiviral Particles: sc-29723-V.

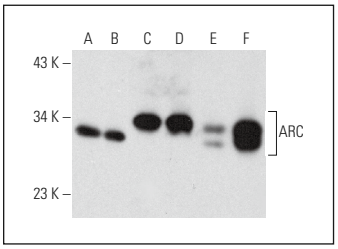
Molecular Weight of ARC: 30 kDa.

Positive Controls: EOC 20 whole cell lysate: sc-364187, HeLa whole cell lysate: sc-2200 or Neuro-2A whole cell lysate: sc-364185.

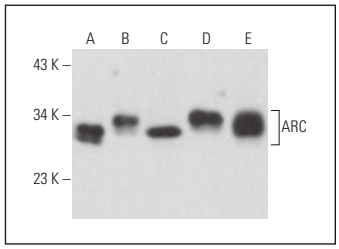
RECOMMENDED SUPPORT REAGENTS

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



ARC (F-11): sc-374177. Western blot analysis of ARC expression in HeLa (**A**), NCI-H292 (**B**), Neuro-2A (**C**), EOC 20 (**D**), C6 (**E**) and H19-7/IGF-IR (**F**) whole cell lysates.



ARC (F-11): sc-374177. Western blot analysis of ARC expression in HeLa (**A**) and SH-SY5Y (**B**) nuclear extracts and AT3B-1 whole cell lysate (**C**) and mouse brain (**D**) and rat brain (**E**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Heo, S.Y., et al. 2017. A heptameric peptide purified from *Spirulina sp.* gastrointestinal hydrolysate inhibits Angiotensin I-converting enzyme- and Angiotensin II-induced vascular dysfunction in human endothelial cells. Int. J. Mol. Med. 39: 1072-1082.
2. Lv, L., et al. 2019. Expression alterations of apoptosis repressor with caspase recruitment domain in Aβ25-35-induced hippocampal neurotoxicity. Neuroreport 30: 1-7.
3. Xu, T., et al. 2019. ARC regulates programmed necrosis and myocardial ischemia/reperfusion injury through the inhibition of mPTP opening. Redox Biol. 20: 414-426.
4. Mushtaq, I., et al. 2021. N-acetyl cysteine, selenium, and ascorbic acid rescue diabetic cardiac hypertrophy via mitochondrial-associated redox regulators. Molecules 26: 7285.

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 for detailed protocols and support products.