

ARC (h2): 293T Lysate: sc-159884

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.

REFERENCES

1. Koseki, T., et al. 1998. ARC, an inhibitor of apoptosis expressed in skeletal muscle and heart that interacts selectively with caspases. *Proc. Natl. Acad. Sci. USA* 95: 5156-5160.
2. Stoss, O., et al. 1999. Alternative splicing determines the intracellular localization of the novel nuclear protein NOP30 and its interaction with the splicing factor SRp30c. *J. Biol. Chem.* 274: 10951-10962.
3. Li, P.F., et al. 2002. Phosphorylation by protein kinase CK2: a signaling switch for the caspase-inhibiting protein ARC. *Mol. Cell* 10: 247-258.
4. Ekhterae, D., et al. 2003. Apoptosis repressor with caspase domain inhibits cardiomyocyte apoptosis by reducing K⁺ currents. *Am. J. Physiol. Cell Physiol.* 284: C1405-C1410.
5. Jo, D.G., et al. 2004. Calcium binding of ARC mediates regulation of caspase-8 and cell death. *Mol. Cell. Biol.* 24: 9763-9770.

CHROMOSOMAL LOCATION

Genetic locus: NOL3 (human) mapping to 16q22.1.

PRODUCT

ARC (h2): 293T Lysate represents a lysate of human ARC transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

ARC (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive ARC antibodies. Recommended use: 10-20 µl per lane.

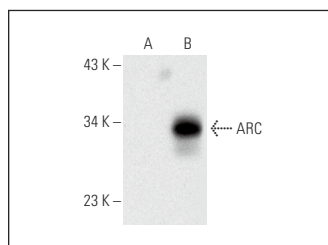
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ARC (G-4): sc-398121 is recommended as a positive control antibody for Western Blot analysis of enhanced human ARC expression in ARC transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



ARC (G-4): sc-398121. Western blot analysis of ARC expression in non-transfected: sc-117752 (A) and human ARC transfected: sc-159884 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.