

# AIF (E-11): sc-390619

## BACKGROUND

A key event in the apoptotic process is the opening of the mitochondrial permeability transition pore, an event that is regulated by Bcl-2 family proteins, resulting in the release of several proteins from the mitochondrial intermembrane space. Several of these proteins participate in apoptosis, including cytochrome c, procaspases 2, 3, and 9, and AIF (apoptosis-inducing factor). AIF has been shown to cause DNA fragmentation and chromatin condensation and to induce the release of cytochrome c and caspase-9 from mitochondria. Bcl-2 overexpression has been shown to prevent the release of AIF from mitochondria, but not to block its apoptogenic activity.

## CHROMOSOMAL LOCATION

Genetic locus: AIFM1 (human) mapping to Xq26.1; Aifm1 (mouse) mapping to X A4.

## SOURCE

AIF (E-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 586-612 at the C-terminus of AIF of mouse origin.

## PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-390619 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

AIF (E-11) is recommended for detection of AIF 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

AIF (E-11) is also recommended for detection of AIF in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for AIF siRNA (h): sc-29193, AIF siRNA (m): sc-29194, AIF shRNA Plasmid (h): sc-29193-SH, AIF shRNA Plasmid (m): sc-29194-SH, AIF shRNA (h) Lentiviral Particles: sc-29193-V and AIF shRNA (m) Lentiviral Particles: sc-29194-V.

Molecular Weight of AIF: 57 kDa.

Positive Controls: CTLL-2 cell lysate: sc-2242 or HeLa whole cell lysate: sc-2200.

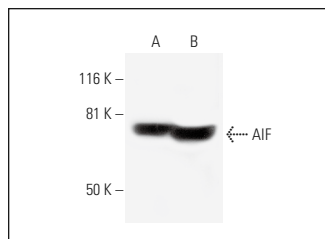
## STORAGE

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

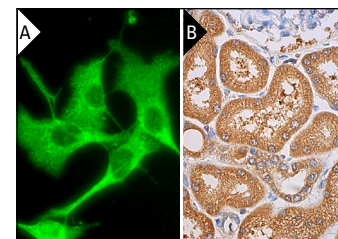
## RESEARCH USE

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

## DATA



AIF (E-11): sc-390619. Western blot analysis of AIF expression in CTLL-2 (A) and HeLa (B) whole cell lysates.



AIF (E-11): sc-390619. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (B).

## SELECT PRODUCT CITATIONS

- Li, Y., et al. 2016. Xanthohumol inhibits proliferation of laryngeal squamous cell carcinoma. *Oncol. Lett.* 12: 5289-5294.
- Park, H.J., et al. 2017. Ganglioside GM3 induces cumulus cell apoptosis through inhibition of epidermal growth factor receptor-mediated PI3K/Akt signaling pathways during *in vitro* maturation of pig oocytes. *Mol. Reprod. Dev.* 84: 702-711.
- Park, H.J., et al. 2018. Melatonin improves oocyte maturation and mitochondrial functions by reducing bisphenol A-derived superoxide in porcine oocytes *in vitro*. *Int. J. Mol. Sci.* 19: 3422.
- Hu, W., et al. 2020. Regulation of JNK signaling pathway and RIPK3/AIF in necroptosis-mediated global cerebral ischemia/reperfusion injury in rats. *Exp. Neurol.* 331: 113374.
- Xu, Y., et al. 2021. RIP3 facilitates necroptosis through CaMKII and AIF after intracerebral hemorrhage in mice. *Neurosci. Lett.* 749: 135699.
- Cardamone, M.D., et al. 2022. Neuralized-like protein 4 (NEURL4) mediates ADP-ribosylation of mitochondrial proteins. *J. Cell Biol.* 221: e202101021.

## PROTOCOLS

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



See **AIF (E-1): sc-13116** for AIF antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.