

Fis1 (B-5): sc-376447

BACKGROUND

Fis1 localizes to the outer mitochondrial membrane and, along with dynamin-related protein (Drp1), participates in mitochondrial fission. Fission and fusion mechanisms regulate mitochondrial morphology within the cell. Fission frequency is determined by the level of Fis1 molecules at the mitochondrial surface. Fis1 contains a C-terminal domain, which is required for mitochondrial localization, and an N-terminal domain, which is necessary for mitochondrial fission. Fragmentation of the mitochondrial network by Fis1 leads to cytochrome c release and apoptosis. The mitochondrial fission mechanisms may be involved in positively and negatively regulating apoptosis.

CHROMOSOMAL LOCATION

Genetic locus: FIS1 (human) mapping to 7q22.1; Fis1 (mouse) mapping to 5 G2.

SOURCE

Fis1 (B-5) is a mouse monoclonal antibody raised against amino acids 1-152 representing full length Fis1 of human origin.

PRODUCT

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

Fis1 (B-5) is available conjugated to agarose (sc-376447 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376447 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376447 PE), fluorescein (sc-376447 FITC), Alexa Fluor® 488 (sc-376447 AF488), Alexa Fluor® 546 (sc-376447 AF546), Alexa Fluor® 594 (sc-376447 AF594) or Alexa Fluor® 647 (sc-376447 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376447 AF680) or Alexa Fluor® 790 (sc-376447 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Fis1 (B-5) is recommended for detection of Fis1 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).

Suitable for use as control antibody for Fis1 siRNA (h): sc-60643, Fis1 siRNA (m): sc-60644, Fis1 shRNA Plasmid (h): sc-60643-SH, Fis1 shRNA Plasmid (m): sc-60644-SH, Fis1 shRNA (h) Lentiviral Particles: sc-60643-V and Fis1 shRNA (m) Lentiviral Particles: sc-60644-V.

Molecular Weight of Fis1: 17 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, SK-BR-3 cell lysate: sc-2218 or HeLa whole cell lysate: sc-2200.

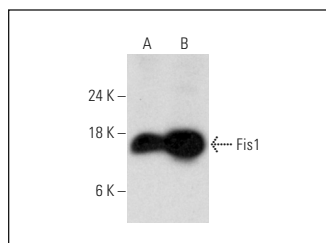
STORAGE

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

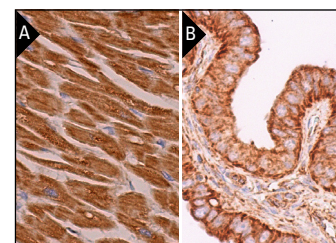
RESEARCH USE

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

DATA



Fis1 (B-5): sc-376447. Western blot analysis of Fis1 expression in HeLa (A) and SK-BR-3 (B) whole cell lysates.



Fis1 (B-5): sc-376447. Immunoperoxidase staining of formalin fixed, paraffin-embedded human myocardium tissue showing cytoplasmic staining of myocytes (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Zhou, X., et al. 2017. Impaired mitochondrial fusion, autophagy, biogenesis and dysregulated lipid metabolism is associated with preeclampsia. *Exp. Cell Res.* 359: 195-204.
- Tang, Q., et al. 2018. Dynamin-related protein 1-mediated mitochondrial fission contributes to IR-783-induced apoptosis in human breast cancer cells. *J. Cell. Mol. Med.* 22: 4474-4485.
- Bi, J., et al. 2019. Irisin alleviates liver ischemia-reperfusion injury by inhibiting excessive mitochondrial fission, promoting mitochondrial biogenesis and decreasing oxidative stress. *Redox Biol.* 20: 296-306.
- Prola, A., et al. 2019. ER stress induces cardiac dysfunction through architectural modifications and alteration of mitochondrial function in cardiomyocytes. *Cardiovasc. Res.* 115: 328-342.
- Zhu, J., et al. 2019. Activation of SK/K_{Ca} channel attenuates spinal cord ischemia-reperfusion injury via anti-oxidative activity and inhibition of mitochondrial dysfunction in rabbits. *Front. Pharmacol.* 10: 325.
- Koo, J.H. and Kang, E.B. 2019. Effects of treadmill exercise on the regulatory mechanisms of mitochondrial dynamics and oxidative stress in the brains of high-fat diet fed rats. *J. Exerc. Nutrition Biochem.* 23: 28-35.
- Li, P., et al. 2019. IR-783 inhibits breast cancer cell proliferation and migration by inducing mitochondrial fission. *Int. J. Oncol.* 55: 415-424.
- Hasnat, M., et al. 2020. Mitochondria-dependent apoptosis in triptolide-induced hepatotoxicity is associated with the Drp1 activation. *Toxicol. Mech. Methods* 30: 124-133.

PROTOCOLS

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

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