

Smac (H-177): sc-22766

BACKGROUND

The activation of caspases is a key regulatory step in apoptosis. Once cytochrome c is released from the mitochondria into the cytosol, it binds Apaf-1 to form an oligomeric cytochrome c/Apaf-1 complex, which induces caspase activation. Inhibitors of apoptosis proteins (IAPs) are a family of proteins that regulate the cytochrome c/Apaf-1 caspase activating pathway. Like cytochrome c, Smac (for second mitochondria-derived activator of caspase, also designated DIABLO in mouse, for direct IAP binding protein with low PI) promotes caspase activation in the cytochrome c/Apaf-1/caspase-9 pathway by binding IAPs and preventing them from inhibiting caspases. In healthy cells, Smac is a mitochondrial protein, but when cells undergo apoptosis, Smac is released into the cytosol.

CHROMOSOMAL LOCATION

Genetic locus: DIABLO (human) mapping to 12q24.31; Diablo (mouse) mapping to 5 F.

SOURCE

Smac (H-177) is a rabbit polyclonal antibody raised against amino acids 63-239 of Smac of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Smac (H-177) is recommended for detection of Smac of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Smac (H-177) is also recommended for detection of Smac in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Smac siRNA (h): sc-36505, Smac siRNA (m): sc-36506, Smac shRNA Plasmid (h): sc-36505-SH, Smac shRNA Plasmid (m): sc-36506-SH, Smac shRNA (h) Lentiviral Particles: sc-36505-V and Smac shRNA (m) Lentiviral Particles: sc-36506-V.

Molecular Weight of Smac: 21/27 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Smac (h): 293T Lysate: sc-159888 or DU 145 cell lysate: sc-2268.

STORAGE

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

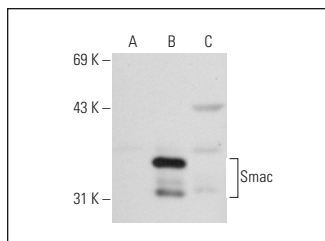
PROTOCOLS

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

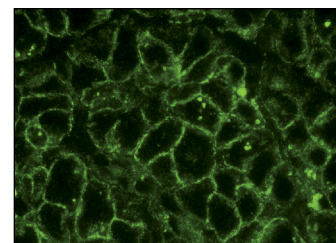
RESEARCH USE

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

DATA



Smac (H-177): sc-22766. Western blot analysis of Smac expression in non-transfected 293T: sc-117752 (A), human Smac transfected 293T: sc-159888 (B) and HeLa (C) whole cell lysates.



Smac (H-177): sc-22766. Immunofluorescence staining of normal mouse lymph node frozen section showing membrane staining.

SELECT PRODUCT CITATIONS

- Murugan, R.S., et al. 2010. Intrinsic apoptosis and NFκB signaling are potential molecular targets for chemoprevention by black tea polyphenols in Hep G2 cells *in vitro* and in a rat hepatocarcinogenesis model *in vivo*. *Food Chem. Toxicol.* 48: 3281-3287.
- Anitha, P., et al. 2011. Ellagic acid coordinately attenuates Wnt/β-catenin and NFκB signaling pathways to induce intrinsic apoptosis in an animal model of oral oncogenesis. *Eur. J. Nutr.* 52: 75-84.
- Thiyagarajan, P., et al. 2011. Dietary chlorophyllin inhibits the canonical NFκB signaling pathway and induces intrinsic apoptosis in a hamster model of oral oncogenesis. *Food Chem. Toxicol.* 50: 867-876.
- Kavitha, K., et al. 2012. Nimbolide, a neem limonoid abrogates canonical NFκB and Wnt signaling to induce caspase-dependent apoptosis in human hepatocarcinoma (HepG2) cells. *Eur. J. Pharmacol.* 681: 6-14.
- Huang, Y., et al. 2012. Gene silencing of Toll-like receptor 2 inhibits proliferation of human liver cancer cells and secretion of inflammatory cytokines. *PLoS ONE* 7: e38890.
- Bai, X., et al. 2016. Effects of maslinic acid on the proliferation and apoptosis of A549 lung cancer cells. *Mol. Med. Rep.* 13: 117-122.

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Try **Smac (C-10): sc-393118** or **Smac (56): sc-136302**, our highly recommended monoclonal alternatives to Smac (H-177).