

Apaf-1 (2E10): sc-65890

BACKGROUND

The mammalian homologs of the Ced-4 proteins, Apaf-1 (Ced-4), Nod1 (CARD4) and Nod2 contain a caspase recruitment domain (CARD) and a putative nucleotide binding domain, signified by a consensus Walker's A box (P-loop) and B box (Mg²⁺-binding site). Nod1 contains a putative regulatory domain and multiple leucine-rich repeats. Nod1 is a member of a growing family of intracellular proteins which share structural homology to the apoptosis regulator Apaf-1. Nod1 associates with the CARD-containing kinase RICK and activates NFκB. The self-association of Nod1 mediates proximity of RICK and the interaction of RICK with IKKγ. In addition, Nod-1 binds to multiple caspases with long prodomains, but specifically activates caspase-9 and promotes caspase-9-induced apoptosis. Nod2 is composed of two N-terminal CARDs, a nucleotide-binding domain, and multiple C-terminal leucine-rich repeats. The expression of Nod2 is highly restricted to monocytes, and activates NFκB in response to bacterial lipopoly-saccharides.

REFERENCES

- Bertin, J., et al. 1999. Human CARD4 protein is a novel CED-4/Apaf-1 cell death family member that activates NFκB. *J. Biol. Chem.* 274: 12955-12958.
- Inohara, N., et al. 1999. Nod1, an Apaf-1-like activator of caspase-9 and nuclear factor-κB. *J. Biol. Chem.* 274: 14560-14567.

CHROMOSOMAL LOCATION

Genetic locus: APAF1 (human) mapping to 12q23.1; Apaf1 (mouse) mapping to 10 C2.

SOURCE

Apaf-1 (2E10) is a mouse monoclonal antibody raised against a peptide corresponding to amino acids near the C-terminus of Apaf-1 of human origin.

PRODUCT

Each vial contains 100 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Apaf-1 (2E10) is recommended for detection of Apaf-1 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Apaf-1 siRNA (h): sc-29201, Apaf-1 siRNA (m): sc-37147, Apaf-1 shRNA Plasmid (h): sc-29201-SH, Apaf-1 shRNA Plasmid (m): sc-37147-SH, Apaf-1 shRNA (h) Lentiviral Particles: sc-29201-V and Apaf-1 shRNA (m) Lentiviral Particles: sc-37147-V.

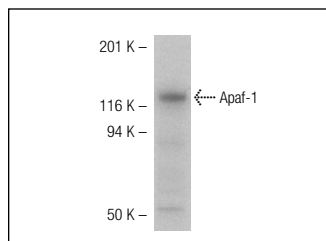
Molecular Weight of Apaf-1: 130 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, PC-12 cell lysate: sc-2250 or ECV304 cell lysate: sc-2269.

STORAGE

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

DATA



Apaf-1 (2E10): sc-65890. Western blot analysis of expression in K-562 whole cell lysate.

SELECT PRODUCT CITATIONS

- Harish Kumar, G., et al. 2008. Nimbolide a limonoid from *Azadirachta indica* inhibits proliferation and induces apoptosis of human choriocarcinoma (BeWo) cells. *Invest. New Drugs* 27: 246-252.
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- Vinothini, G., et al. 2011. Mitochondria-mediated apoptosis in patients with adenocarcinoma of the breast: correlation with histological grade and menopausal status. *Breast* 20: 86-92.
- Manikandan, P., et al. 2012. Investigation of the chemopreventive potential of neem leaf subfractions in the hamster buccal pouch model and phytochemical characterization. *Eur. J. Med. Chem.* 56: 271-281.
- Sabirzhanov, B., et al. 2012. Over-expression of HSP70 attenuates caspase-dependent and caspase-independent pathways and inhibits neuronal apoptosis. *J. Neurochem.* 123: 542-554.
- Paul, A., et al. 2013. Cytotoxicity and apoptotic signalling cascade induced by chelidonine-loaded PLGA nanoparticles in Hep G2 cells *in vitro* and bioavailability of nano-chelidonine in mice *in vivo*. *Toxicol. Lett.* 222: 10-22.
- Anitha, P., et al. 2013. 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.
- Radwan, F.F., et al. 2015. Reduction of myeloid-derived suppressor cells and lymphoma growth by a natural triterpenoid. *J. Cell. Biochem.* 116: 102-114.
- Tian, L., et al. 2017. Siamese crocodile bile induces apoptosis in NCI-H1299 human non-small cell lung cancer cells via a mitochondria-mediated intrinsic pathway and inhibits tumorigenesis. *Mol. Med. Rep.* 15: 1727-1737.

RESEARCH USE

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