SANTA CRUZ BIOTECHNOLOGY, INC.

Apaf-1 (H-324): sc-8339

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (Mg^{2+}-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 IKKg. 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 lipopolysaccharides.

REFERENCES

1. 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.
2. Inohara, N., et al. 1999. Nod1, an Apaf-1-like activator of caspase-9 and NFκB. 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 (H-324) is a rabbit polyclonal antibody raised against amino acids 871-1001 mapping at the C-terminus of Apaf-1 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

Apaf-1 (H-324) 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), 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 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.

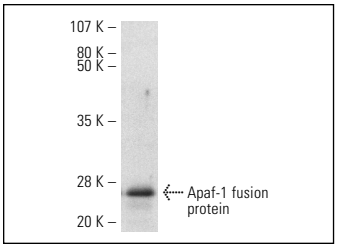
STORAGE

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

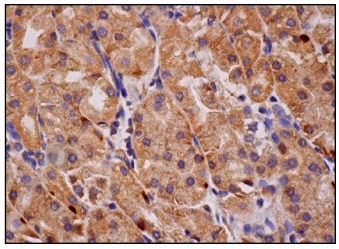
RESEARCH USE

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

DATA



Apaf-1 (H-324): sc-8339. Western blot analysis of human recombinant fragment of Apaf-1 fusion protein.



Apaf-1 (H-324): sc-8339. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Fu, W.N., et al. 2003. Role of DNA methylation in the suppression of Apaf-1 protein in human leukaemia. Oncogene 22: 451-455.
2. Drago-Ferrante, R., et al. 2008. Low doses of paclitaxel potently induce apoptosis in human retinoblastoma Y79 cells by up-regulating E2F1. Int. J. Oncol. 33: 677-687.
3. Shukla, S., et al. 2008. Apigenin-induced prostate cancer cell death is initiated by reactive oxygen species and p53 activation. Free Radic. Biol. Med. 44: 1833-1845.
4. Bogazzi, F., et al. 2008. Transgenic mice overexpressing growth hormone (GH) have reduced or increased cardiac apoptosis through activation of multiple GH-dependent or -independent cell death pathways. Endocrinology 149: 5758-5769.
5. Gajate, C., et al. 2009. Lipid raft connection between extrinsic and intrinsic apoptotic pathways. Biochem. Biophys. Res. Commun. 380: 780-784.
6. Tian, Z., et al. 2009. Cytotoxic diarylheptanoid induces cell cycle arrest and apoptosis via increasing ATF3 and stabilizing p53 in SH-SY5Y cells. Cancer Chemother. Pharmacol. 63: 1131-1139.
7. Rockwell, K.R., et al. 2009. Biologically distinct conformations of Bcl-x can be resolved using 2D isoelectric focusing. Mol. Immunol. 46: 1605-1612.
8. Seervi, M., et al. 2011. Essential requirement of cytochrome c release for caspase activation by procaspase-activating compound defined by cellular models. Cell Death Dis. 2: e207.
9. Saha, A., et al. 2012. E2F1 mediated apoptosis induced by the DNA damage response is blocked by EBV nuclear antigen 3C in lymphoblastoid cells. PLoS Pathog. 8: e1002573.