

Apaf-1 (18H2): sc-135624

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 NFκB. *J. Biol. Chem.* 274: 14560-14567.
- Inohara, N., et al. 2000. An induced proximity model for NFκB activation in the Nod1/RICK and RIP signaling pathways. *J. Biol. Chem.* 275: 27823-27831.
- Inohara, N., et al. 2001. Human Nod1 confers responsiveness to bacterial lipopolysaccharides. *J. Biol. Chem.* 276: 2551-2554.
- Ogura, Y., et al. 2001. Nod2, a Nod1/Apaf-1 family member that is restricted to monocytes and activates NFκB. *J. Biol. Chem.* 276: 4812-4818.

CHROMOSOMAL LOCATION

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

SOURCE

Apaf-1 (18H2) is a rat monoclonal antibody raised against a recombinant protein corresponding to amino acids 1-97 of Apaf-1 of mouse origin.

PRODUCT

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

Apaf-1 (18H2) is available conjugated to agarose (sc-135624 AC), 500 μg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-135624 HRP), 200 μg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-135624 PE), fluorescein (sc-135624 FITC), Alexa Fluor[®] 488 (sc-135624 AF488), Alexa Fluor[®] 546 (sc-135624 AF546), Alexa Fluor[®] 594 (sc-135624 AF594) or Alexa Fluor[®] 647 (sc-135624 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-135624 AF680) or Alexa Fluor[®] 790 (sc-135624 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

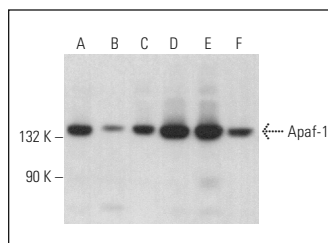
Apaf-1 (18H2) is recommended for detection of the Apaf-1 CARD domain of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with rat Apaf-1.

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.

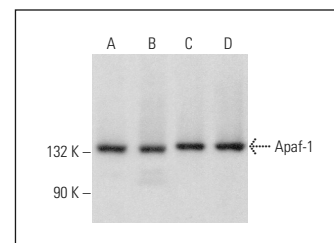
Molecular Weight of Apaf-1: 130 kDa.

Positive Controls: EOC 20 whole cell lysate: sc-364187, THP-1 cell lysate: sc-2238 or IMR-32 cell lysate: sc-2409.

DATA



Apaf-1 (18H2): sc-135624. Western blot analysis of Apaf-1 expression in HUVEC-C (A), SW-13 (B), C2C12 (C), THP-1 (D), ACHN (E) and MCF7 (F) whole cell lysates.



Apaf-1 (18H2): sc-135624. Western blot analysis of Apaf-1 expression in IMR-32 (A), PC-3 (B), EOC 20 (C) and BYDP (D) whole cell lysates.

SELECT PRODUCT CITATIONS

- Liu, W., et al. 2018. Olfactomedin 4 contributes to hydrogen peroxide-induced NADPH oxidase activation and apoptosis in mouse neutrophils. *Am. J. Physiol., Cell Physiol.* 315: C494-C501.

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.

PROTOCOLS

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