

NOD2 (P-18): sc-23587

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, NOD1 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.
- 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. 2000. Human NOD1 confers responsiveness to bacterial lipopolysaccharides. *J. Biol. Chem.* 276: 2551-2554.

CHROMOSOMAL LOCATION

Genetic locus: NOD2 (human) mapping to 16q12.1; Nod2 (mouse) mapping to 8 C3.

SOURCE

NOD2 (P-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NOD2 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.

Blocking peptide available for competition studies, sc-23587 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

NOD2 (P-18) is recommended for detection of NOD2 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).

NOD2 (P-18) is also recommended for detection of NOD2 in additional species, including canine and bovine.

Suitable for use as control antibody for NOD2 siRNA (h): sc-43973, NOD2 siRNA (m): sc-44983, NOD2 shRNA Plasmid (h): sc-43973-SH, NOD2 shRNA Plasmid (m): sc-44983-SH, NOD2 shRNA (h) Lentiviral Particles: sc-43973-V and NOD2 shRNA (m) Lentiviral Particles: sc-44983-V.

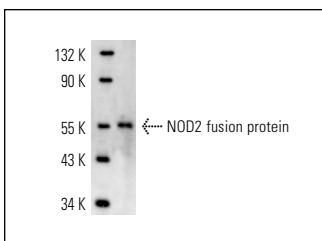
Molecular Weight of NOD2: 115 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



NOD2 (P-18): sc-23587. Western blot analysis of human recombinant NOD2 fusion protein.

SELECT PRODUCT CITATIONS

- Tan, X., et al. 2012. Down-regulation of NOD1 in neutrophils of periparturient dairy cows. *Vet. Immunol. Immunopathol.* 150: 133-139.



Try **NOD2 (2D9): sc-56168**, our highly recommended monoclonal alternative to NOD2 (P-18). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **NOD2 (2D9): sc-56168**.