

NOD1 (H-176): sc-99163

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 lipopolysaccharides.

REFERENCES

- Bertin, J., et al. 1999. Human CARD 4 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: NOD1 (human) mapping to 7p14.3; Nod1 (mouse) mapping to 6 B3.

SOURCE

NOD1 (H-176) is a rabbit polyclonal antibody raised against amino acids 715-890 mapping near the C-terminus of NOD1 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

NOD1 (H-176) is recommended for detection of NOD1 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 NOD1 siRNA (h): sc-37279, NOD1 siRNA (m): sc-37280, NOD1 shRNA Plasmid (h): sc-37279-SH, NOD1 shRNA Plasmid (m): sc-37280-SH, NOD1 shRNA (h) Lentiviral Particles: sc-37279-V and NOD1 shRNA (m) Lentiviral Particles: sc-37280-V.

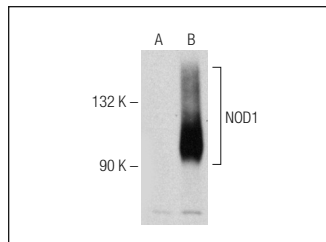
Molecular Weight of NOD1: 108 kDa.

Positive Controls: NOD1 (h): 293T Lysate: sc-113586.

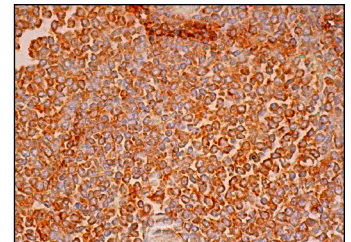
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



NOD1 (H-176): sc-99163. Western blot analysis of NOD1 expression in non-transfected: sc-117752 (A) and human NOD1 transfected: sc-113586 (B) 293T whole cell lysates.



NOD1 (H-176): sc-99163. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in white pulp and cells in red pulp.

SELECT PRODUCT CITATIONS

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

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 or our catalog for detailed protocols and support products.


 MONOS
Satisfaction
Guaranteed

Try **NOD1 (B-4): sc-398696** or **NOD1 (C-9): sc-377111**, our highly recommended monoclonal alternatives to NOD1 (H-176).