

NOD2 (H-300): sc-30199

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.

CHROMOSOMAL LOCATION

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

SOURCE

NOD2 (H-300) is a rabbit polyclonal antibody raised against amino acids 611-910 mapping near the C-terminus 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.

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 (H-300) is recommended for detection of NOD2 isoforms 1 and 2 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).

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.

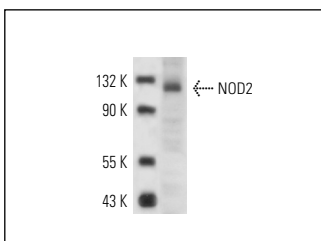
Molecular Weight of NOD2: 115 kDa.

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 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.

DATA



NOD2 (H-300): sc-30199. Western blot analysis of NOD2 expression in RAW 264.7 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Uehara, A., et al. 2007. Various human epithelial cells express functional toll-like receptors, NOD1 and NOD2 to produce anti-microbial peptides, but not proinflammatory cytokines. *Mol. Immunol.* 44: 3100-3111.
2. Hsu, Y.M., et al. 2007. The adaptor protein CARD9 is required for innate immune responses to intracellular pathogens. *Nat. Immunol.* 8: 198-205.
3. Uehara, A., et al. 2007. Antibodies to proteinase 3 prime human monocytic cells via protease-activated receptor-2 and NFκB for Toll-like receptor- and NOD-dependent activation. *Mol. Immunol.* 44: 3552-3562.
4. King, A.E., et al. 2009. Differential expression and regulation of nuclear oligomerization domain proteins NOD1 and NOD2 in human endometrium: a potential role in innate immune protection and menstruation. *Mol. Hum. Reprod.* 15: 311-319.
5. Fernández-Velasco M., et al. 2012. NOD1 activation induces cardiac dysfunction and modulates cardiac fibrosis and cardiomyocyte apoptosis. *PLoS ONE* 7: e45260.

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