

NOD1 (S-20): sc-33873

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 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.

CHROMOSOMAL LOCATION

Genetic locus: NOD1 (human) mapping to 7p14.3; Nod1 (mouse) mapping to 6 B3.

SOURCE

NOD1 (S-20) is an affinity purified goat polyclonal antibody raised against a peptide 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.

Blocking peptide available for competition studies, sc-33873 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.

PROTOCOLS

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

APPLICATIONS

NOD1 (S-20) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NOD1 (S-20) is also recommended for detection of NOD1 in additional species, including canine and porcine.

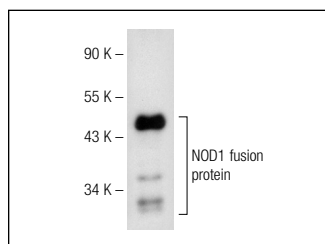
Suitable for use as control antibody for NOD1 siRNA (h): sc-37279, NOD1 siRNA (m): sc-37280, NOD1 shRNA Plasmid (h): sc-37279-SH, NOD1 shRNA Plasmid (m): sc-37280-SH, NOD1 shRNA (h) Lentiviral Particles: sc-37279-V and NOD1 shRNA (m) Lentiviral Particles: sc-37280-V.

Molecular Weight of NOD1: 108 kDa.

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



NOD1 (S-20): sc-33873. Western blot analysis of human recombinant NOD1 fusion protein.

SELECT PRODUCT CITATIONS

- 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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Try **NOD1 (B-4): sc-398696** or **NOD1 (C-9): sc-377111**, our highly recommended monoclonal alternatives to NOD1 (S-20).