

NOD1 (C-9): sc-377111

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 (Mg^{2+} -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 NF κ B. The self-association of NOD1 mediates proximity of RICK and the interaction of RICK with IKK γ . 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 NF κ B 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 NF κ B. *J. Biol. Chem.* 274: 12955-12958.
- Inohara, N., et al. 1999. NOD1, an Apaf-1-like activator of caspase-9 and nuclear factor- κ B. *J. Biol. Chem.* 274: 14560-14567.
- Inohara, N., et al. 2000. An induced proximity model for NF κ B 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 NF κ B. *J. Biol. Chem.* 276: 4812-4818.
- Hlaing, T., et al. 2001. Molecular cloning and characterization of DEFAP-L and -S, two isoforms of a novel member of the mammalian CED-4 family of apoptosis proteins. *J. Biol. Chem.* 276: 9230-9238.

CHROMOSOMAL LOCATION

Genetic locus: NOD1 (human) mapping to 7p14.3.

SOURCE

NOD1 (C-9) is a mouse monoclonal antibody raised against amino acids 715-890 mapping near the C-terminus of NOD1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain 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.

APPLICATIONS

NOD1 (C-9) is recommended for detection of NOD1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 NOD1 siRNA (h): sc-37279, NOD1 shRNA Plasmid (h): sc-37279-SH and NOD1 shRNA (h) Lentiviral Particles: sc-37279-V.

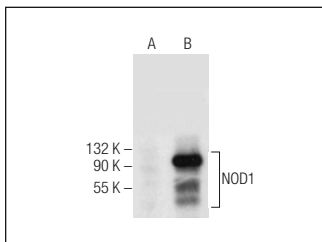
Molecular Weight of NOD1: 108 kDa.

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

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



NOD1 (C-9): sc-377111. Western blot analysis of NOD1 expression in non-transfected: sc-117752 (A) and human NOD1 transfected: sc-113586 (B) 293T whole cell lysates.

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.