

NOD3 (E-4): sc-398947

BACKGROUND

The leucine-rich repeat (LRR) is a 20-30 amino acid motif that forms a hydrophobic α/β horseshoe fold, allowing it to accommodate several leucine residues within a tightly packed core. All LRRs contain a variable segment and a highly conserved segment, the latter of which accounts for 11 or 12 residues of the entire LRR motif. NOD3 (nucleotide-binding oligomerization domain protein 3), also known as NLRC3 (NLR family, CARD domain containing 3), is a 1,065 amino acid protein that localizes to the cytoplasm and contains one NACHT domain and 17 LRRs. Expressed in peripheral blood mononuclear cells, NOD3 is thought to modulate T-cell activation and may be involved in transcriptional control events related to T-cell activation. Multiple isoforms of NOD3 exist due to alternative splicing events.

REFERENCES

1. Kobe, B., et al. 1994. The leucine-rich repeat: a versatile binding motif. *Trends Biochem. Sci.* 19: 415-421.
2. Kobe, B., et al. 1995. Proteins with leucine-rich repeats. *Curr. Opin. Struct. Biol.* 5: 409-416.
3. Kobe, B., et al. 2001. The leucine-rich repeat as a protein recognition motif. *Curr. Opin. Struct. Biol.* 11: 725-732.
4. Inohara, N., et al. 2003. NODs: intracellular proteins involved in inflammation and apoptosis. *Nat. Rev. Immunol.* 3: 371-382.
5. Matsushima, N., et al. 2005. Structural analysis of leucine-rich-repeat variants in proteins associated with human diseases. *Cell. Mol. Life Sci.* 62: 2771-2791.

CHROMOSOMAL LOCATION

Genetic locus: NLRC3 (human) mapping to 16p13.3; Nlr3 (mouse) mapping to 16 A1.

SOURCE

NOD3 (E-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1041-1061 at the C-terminus of NOD3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NOD3 (E-4) is available conjugated to agarose (sc-398947 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398947 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398947 PE), fluorescein (sc-398947 FITC), Alexa Fluor® 488 (sc-398947 AF488), Alexa Fluor® 546 (sc-398947 AF546), Alexa Fluor® 594 (sc-398947 AF594) or Alexa Fluor® 647 (sc-398947 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398947 AF680) or Alexa Fluor® 790 (sc-398947 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398947 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

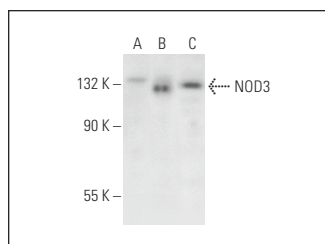
NOD3 (E-4) is recommended for detection of NOD3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for NOD3 siRNA (h): sc-75941, NOD3 siRNA (m): sc-75942, NOD3 shRNA Plasmid (h): sc-75941-SH, NOD3 shRNA Plasmid (m): sc-75942-SH, NOD3 shRNA (h) Lentiviral Particles: sc-75941-V and NOD3 shRNA (m) Lentiviral Particles: sc-75942-V.

Molecular Weight of NOD3: 115 kDa.

Positive Controls: NOD3 (m): 293T Lysate: sc-179012 or Raji whole cell lysate: sc-364236.

DATA



NOD3 (E-4): sc-398947. Western blot analysis of Nlr3 expression in non-transfected 293T: sc-117752 (A), mouse NOD3 transfected 293T: sc-179012 (B) and Raji (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Li, X., et al. 2019. Viral DNA binding to NLRC3, an inhibitory nucleic acid sensor, unleashes STING, a cyclic dinucleotide receptor that activates type I interferon. *Immunity* 50: 591-599.e6.
2. Biliktu, M., et al. 2020. Pharmacological inhibition of soluble epoxide hydrolase attenuates chronic experimental autoimmune encephalomyelitis by modulating inflammatory and anti-inflammatory pathways in an inflammasome-dependent and -independent manner. *Inflammopharmacology* 28: 1509-1524.
3. Kang, J.H., et al. 2020. NLRC3 silencing accelerates the invasion of hepatocellular carcinoma cell via IL-6 induced JAK2/Stat3 pathway activation. *Cell Biol. Int.* 44: 2053-2064.

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.