

# NOD9 (F-2): sc-374514



The Power to Question

## BACKGROUND

The leucine-rich (LRR) repeat is a 20-30 amino acid motif that forms a hydrophobic  $\alpha/\beta$  horseshoe fold, allowing it to accommodate several leucine residues within a tightly packed core. All LRR repeats contain a variable segment and a highly conserved segment, the latter of which accounts for 11 or 12 residues of the entire LRR motif. NOD9, also known as NLRX1, NOD26 or NOD5, is a 975 amino acid outer mitochondrial membrane protein that contains one NACHT domain and four LRR repeats. Expressed at high levels in heart, muscle and mammary gland, NOD9 plays a role in antiviral signaling, specifically via inhibition of virus-induced helicases, thereby acting as a negative regulator of antiviral responses. Two isoforms of NOD9 exist due to alternative splicing events.

## REFERENCES

1. Inohara, N., et al. 2003. NODs: intracellular proteins involved in inflammation and apoptosis. *Nat. Rev. Immunol.* 3: 371-382.
2. Inohara, C., et al. 2005. NOD-LRR proteins: role in host-microbial interactions and inflammatory disease. *Annu. Rev. Biochem.* 74: 355-383.
3. O'Neill, L.A. 2008. Innate immunity: squelching anti-viral signalling with NLRX1. *Curr. Biol.* 18: R302-R304.
4. Komuro, A., et al. 2008. Negative regulation of cytoplasmic RNA-mediated antiviral signaling. *Cytokine* 43: 350-358.
5. Meylan, E., et al. 2008. NLRX1: friend or foe? *EMBO Rep.* 9: 243-245.
6. Tattoli, I., et al. 2008. NLRX1 is a mitochondrial NOD-like receptor that amplifies NF $\kappa$ B and JNK pathways by inducing reactive oxygen species production. *EMBO Rep.* 9: 293-300.

## CHROMOSOMAL LOCATION

Genetic locus: NLRX1 (human) mapping to 11q23.3; Nlr1 (mouse) mapping to 9 A5.2.

## SOURCE

NOD9 (F-2) is a mouse monoclonal antibody raised against amino acids 89-230 mapping within an internal region of NOD9 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NOD9 (F-2) is available conjugated to agarose (sc-374514 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374514 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374514 PE), fluorescein (sc-374514 FITC), Alexa Fluor<sup>®</sup> 488 (sc-374514 AF488), Alexa Fluor<sup>®</sup> 546 (sc-374514 AF546), Alexa Fluor<sup>®</sup> 594 (sc-374514 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-374514 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-374514 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-374514 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

NOD9 (F-2) is recommended for detection of NOD9 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 NOD9 siRNA (h): sc-96800, NOD9 siRNA (m): sc-150019, NOD9 shRNA Plasmid (h): sc-96800-SH, NOD9 shRNA Plasmid (m): sc-150019-SH, NOD9 shRNA (h) Lentiviral Particles: sc-96800-V and NOD9 shRNA (m) Lentiviral Particles: sc-150019-V.

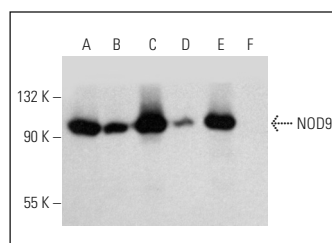
Molecular Weight of NOD9: 108 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MCF7 whole cell lysate: sc-2206 or RAW 264.7 whole cell lysate: sc-2211.

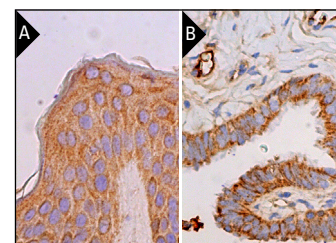
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



NOD9 (F-2): sc-374514. Western blot analysis of NOD9 expression in HeLa (A), MCF7 (B), Hep G2 (C), Sol8 (D), RAW 264.7 (E) and NRK (F) whole cell lysates. Note lack of reactivity with rat NOD9 in lane F.



NOD9 (F-2): sc-374514. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes and melanocytes (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells (B).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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