SANTA CRUZ BIOTECHNOLOGY, INC.

NOD9 (H-142): sc-292091

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The leucine-rich (LRR) repeat 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 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 NFκB and JNK pathways by inducing reactive oxygen species production. EMBO Rep. 9: 293-300.
7. Moore, C.B., et al. 2008. NLRX1 is a regulator of mitochondrial antiviral immunity. Nature 451: 573-577.
8. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 611947. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: NLRX1 (human) mapping to 11q23.3; Nlrx1 (mouse) mapping to 9 A5.2.

SOURCE

NOD9 (H-142) is a rabbit polyclonal antibody raised against amino acids 89-230 mapping within an internal region of NOD9 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.

APPLICATIONS

NOD9 (H-142) is recommended for detection of NOD9 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).

NOD9 (H-142) is also recommended for detection of NOD9 in additional species, including equine, canine, bovine and porcine.

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.

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.

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.