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Nod1 Antibody

Store at -20C
#3545

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 95	Source/Isotype: Rabbit	UniProt ID: #Q9Y239	Entrez-Gene Id: 10392
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Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Nod1 Antibody detects endogenous levels of Nod1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of Nod1 protein. Antibodies were purified by protein A and peptide affinity chromatography.

Background

Nod1/CARD4 is a cytosolic protein structurally related to Apaf-1 and plant drug-resistance proteins that has been implicated in apoptosis and inflammatory responses to certain pathogenic bacteria (1-3). It contains an amino-terminal caspase recruitment domain (CARD) that is linked to a central nucleotide-binding domain (NBD; also known as a NOD domain) and is followed by carboxy-terminal leucine-rich repeats (LRR) (1). Like Apaf-1, Nod1 induces apoptosis by a CARD/NBD-dependent activation of caspase-9 (1). The primary function of Nod1 is thought to be as a sensor for certain pathogenic microbes and triggering inflammatory responses including the activation of NF-κB and JNK pathways (4-6). The LRR of Nod1 appears to be involved in recognition of microbial components and the CARD domain induces NF-κB activation in cooperation with the CARD containing kinase, RICK/RIP2/CARDIAK (1,5,6). Mutations in Nod1 have been linked increased susceptibility to asthma (7) and inflammatory bowel disease (8).

Background References

- Inohara, N. et al. (1999) *J. Biol. Chem.* 274, 14560-14567.
- Inohara, N. and Nuñez, G. (2003) *Nat. Rev. Immunol.* 3, 371-382.
- Fritz, J.H. et al. (2006) *Nat. Immunol.* 7, 1250-1257.
- Girardin, S.E. et al. (2001) *EMBO Rep.* 2, 736-742.
- Inohara, N. et al. (2001) *J. Biol. Chem.* 276, 2551-2554.
- Inohara, N. et al. (2000) *J. Biol. Chem.* 275, 27823-27831.
- Hysi, P. et al. (2005) *Hum. Mol. Genet.* 14, 935-941.
- McGovern, D.P. et al. (2005) *Hum. Mol. Genet.* 14, 1245-1250.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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