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NOD3 Antibody

Catalog # ASC11189

Product Information

Application	WB, IF, E
Primary Accession	Q7RTR2
Other Accession	EAW85351, 119605757
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	114658
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	NOD3 antibody can be used for detection of NOD3 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunofluorescence starting at 20 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	197358
Other Names	Protein NLRC3, CARD15-like protein, Caterpiller protein 16.2, CLR16.2, Nucleotide-binding oligomerization domain protein 3, NLRC3, NOD3
Target/Specificity	NLRC3;
Reconstitution & Storage	NOD3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	NOD3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NLRC3
Synonyms	NOD3
Function	Negative regulator of the innate immune response (PubMed: 15705585, PubMed:22863753, PubMed:25277106). Attenuates signaling pathways activated by Toll-like receptors (TLRs) and the DNA sensor STING/TMEM173 in response to pathogen-associated molecular patterns, such as intracellular poly(dA:dT), but not poly(I:C), or in response to DNA virus infection, including that of Herpes simplex virus 1 (HSV1) (By similarity) (PubMed:22863753). May affect TLR4 signaling by acting at the level of TRAF6 ubiquitination, decreasing

the activating 'Lys-63'-linked ubiquitination and leaving unchanged the degradative 'Lys-48'-linked ubiquitination (PubMed:22863753). Inhibits the PI3K-AKT-mTOR pathway possibly by directly interacting with the posphatidylinositol 3-kinase regulatory subunit p85 (PIK3R1/PIK3R2) and disrupting the association between PIK3R1/PIK3R2 and the catalytic subunit p110 (PIK3CA/PIK3CB/PIK3CD) and reducing PIK3R1/PIK3R2 activation. Via its regulation of the PI3K-AKT-mTOR pathway, controls cell proliferation, predominantly in intestinal epithelial cells (By similarity). May also affect NOD1- or NOD2-mediated NF-kappa-B activation (PubMed:25277106). Might also affect the inflammatory response by preventing NLRP3 inflammasome formation, CASP1 cleavage and IL1B maturation (PubMed:25277106).

Cellular Location Cytoplasm

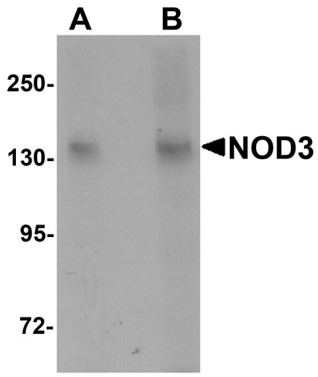
Background

NOD3 Antibody: NOD3 is a member of the NOD (nucleotide-binding oligomerization domain) family, a group of proteins that are involved in innate immune defense. NOD3 also known as NLR family CARD containing 3 (NLRC3), is predominantly expressed in the immune system, particularly in T lymphocytes, and its expression is strongly down-regulated following stimulation of the T-cell receptor complex and CD28, suggesting that NOD3 plays a role in attenuating the activation of T cells. NOD3 inhibits NF-kappaB, AP-1 and NFAT transcriptional activation in Jurkat T cells downstream of CD3/CD28 stimulation or treatment with PMA/ionomycin and decreases IL-2 and CD25 mRNA induction in activated cells.

References

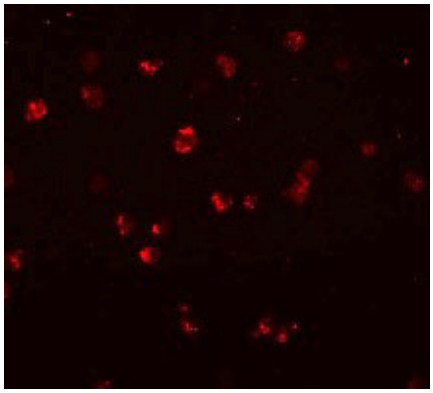
Kufer TA, Banks DJ, and Philpott DJ. Innate immune sensing of microbes by Nod proteins. Ann. NY Acad. Sci.2006; 1072:19-27.
Conti BJ, Davis BK, Zhang J, et al. CATERPILLER 16.2 (CLR16.2), a novel NBD/LRR family member that negatively regulates T cell function. J. Biol. Chem.2005; 280:18375-85.

Images



Western blot analysis of NOD3 in 3T3 cell lysate with NOD3 antibody at (A) 1 and (B) 2 µg/mL.

Immunofluorescence of NOD3 in Jurkat cells with NOD3 antibody at 20 µg/mL.



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