

20-1115: Polyclonal antibody to NOD2 (Card15)

Clonality :	Polyclonal
Application :	WB,IHC,IP
Reactivity :	Human
Gene :	NOD2
Gene ID :	64127
Uniprot ID :	Q9HC29
Format :	Sera
Alternative Name :	NOD2,CARD15,IBD1
Isotype :	Rabbit IgG
Immunogen Information :	A synthetic peptide of human NOD2/CARD15 (amino acids 582-600 LGFLVRAKGVVGSTAPLE) was used as immunogen for this antibody

Description

Innate immunity is present in all animals and is the common mode of defense against microorganisms. It detects microorganisms by specific proteins called pattern-recognition molecules (PRMs) (reviewed in Werts et al. 2006). There is a limited set of PRMs in each animal genome, and it has been postulated that the PRMs were evolutionarily selected to detect conserved components or motifs of microorganisms called pathogen-associated molecular patterns (PAMPs). PAMPs are found in a wide range of microorganisms and recognition of PAMPs by PRMs activates inflammatory signaling pathways, thereby stimulating an immune response. NOD (nucleotide-binding oligomerization domain) proteins are a family of cytosolic proteins which have been implicated in innate recognition of bacteria, the induction of inflammatory responses, and the regulation of caspase activation and apoptosis. NOD2/CARD15 is a PRM that recognizes specific peptidoglycan (PGN) components of bacterial cell walls (reviewed in Strober et al. 2006, and Inohara et al. 2003). NOD2 is expressed in cells that are exposed to PGN under physiological conditions including antigen-presenting cells (APCs) such as macrophages and dendritic cells, and epithelial cells (reviewed in Strober et al. 2006). NOD2 is thought to play a role in the pathogenesis of human gastrointestinal disease. Polymorphisms and mutations in NOD2 are associated with susceptibility to Crohn's disease, a chronic inflammatory bowel disease (Leung et al., 2006). Additionally, polymorphisms in NOD2 have also been found to be associated with Graft-versus-Host Disease (GVHD) (Holler et al., 2004). This association of NOD2 gene polymorphisms with gastrointestinal disease and GVHD suggests that NOD2 gene polymorphisms play a role in pro-inflammatory diseases. This antibody recognizes NOD2, a 1040 amino acid protein. This antibody also recognizes NOD2 alternatively spliced and mutated forms which contain the peptide immunogen sequence including NOD2 short, a 273 amino acid protein.

Product Info

Amount :	50 µl
Content :	50 µl sera
Storage condition :	Store the antibody at 4°C, stable for 6 months. For long-term storage, store at -20°C. Avoid repeated freeze and thaw cycles.

Application Note

WB: 1:1000-1:2000, IHC (paraffin): 1:1000-1:5000, IHC (frozen): Users should optimize, IP: 1:50-1:200

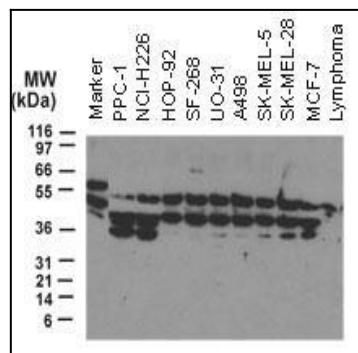


Fig:1 Western blot analysis of NOD2 using 20-1115 at 1:2000. 30 ug total protein was loaded per lane. Samples from human tumor cell lines: PPC-1 (prostate carcinoma), NCI-H226 and NCI-H332M (lung carcinoma), SF-268 (glioblastoma), UO-31 and A498 (renal/kidney carcinoma), SK-MEL-5 and SK-MEL-28 (melanoma), and MCF-7 (breast carcinoma). Lymphoma is from a cell line generated from a tumor growing in nude mice following injection of primary human lymphoma cells.

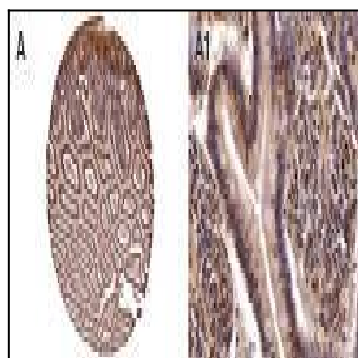


Fig:2 Formalin-fixed, paraffin-embedded normal human colon stained for NOD2 expression using 20-1115 at 1:2000. A, tissue core from a colon tissue microarray. A1, high magnification of A. Hematoxylin-eosin counterstain.