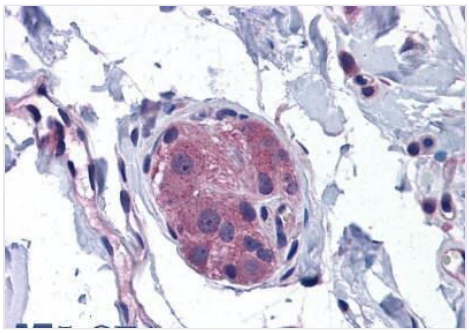
CARD4 (NOD1) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	CARD4 (NOD1), Polyclonal Antibody
Full Product Name	CARD4, CT (Nucleotide-binding Oligomerization Domain-containing Protein 1, Caspase Recruitment Domain-containing Protein 4, NOD1)
Product Gene Name	anti-NOD1 antibody
Product Synonym Names	Anti -CARD4, CT (Nucleotide-binding Oligomerization Domain-containing Protein 1, Caspase Recruitment Domain-containing Protein 4, NOD1)
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, 0.02% sodium azide.
Purity/Purification	Affinity Purified Purified by immunoaffinity chromatography.
Specificity	Recognizes human NOD1. Species sequence homology: mouse and rat.
Preparation and Storage	May be stored at 4 degree C for short-term only. Aliquot to avoid repeated freezing and thawing. Store at -20 degree C. Aliquots are stable for at least 12 months. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.
Molecular Weight	107,691 Da
Chromosome Location	Chromosome: 7; NC_000007.13 (30464143..30518426, complement). Location: 7p15-p14
OMIM	605980
3D Structure	ModBase 3D Structure for Q9Y239
Immunogen	Synthetic peptide corresponding to 16aa from human NOD1 at C-terminus.
Product Categories/Family for anti-NOD1 antibody	Antibodies; Abs to Apoptosis; Caspase
Applications Tested/Suitable for anti-NOD1 antibody	ELISA (EL/EIA), Western Blot (WB), Immunohistochemistry (IHC)
Application Notes for anti-NOD1 antibody	Suitable for use in ELISA, Western Blot and Immunohistochemistry. Dilution: Western Blot: 1-2ug/ml Immunohistochemistry (Formalin fixed paraffin embedded): 5ug/ml
Related Product Information for anti-NOD1 antibody	CARD4 is a member of the NOD (nucleotide-binding oligomerization domain) family. This member is a cytosolic protein. It contains an N-terminal caspase recruitment domain (CARD), a centrally located nucleotide-binding domain (NBD), and 10 tandem leucine-rich repeats (LRRs) in its C-terminus. The CARD is involved in apoptotic signaling, LRRs participate in protein-protein interactions, and mutations in the NBD may affect the process of oligomerization and subsequent function of the LRR domain. This protein is an intracellular pattern-recognition receptor (PRR) that initiates inflammation in response to a subset of bacteria through the detection of bacterial diaminopimelic acid.
Other Notes	Small volumes of anti-NOD1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

Searchable Terms for NOD1 purchase	MBS647458 is an antibody targeting NOD1. Also known as CARD4, CT (Nucleotide-binding Oligomerization Domain-containing Protein 1, Caspase Recruitment Domain-containing Protein 4, NOD1). Reactive in Human. Host: Rabbit.



Immunohistochemistry (IHC) of anti-NOD1 antibody
Human Small Intestine, Submucosal Plexus: Formalin-Fixed, Paraffin-Embedded (FFPE)

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for NOD1. It may not necessarily be applicable to this product.

NCBI GI #	4760400
NCBI GeneID	10392
NCBI Accession #	AAD29125.1
UniProt Primary Accession #	Q9Y239
UniProt Secondary Accession #	Q549U4; Q8IWF5
UniProt Related Accession #	Q9Y239
NCBI Official Full Name	CARD4
NCBI Official Synonym Full Names	nucleotide-binding oligomerization domain containing 1
NCBI Official Symbol	NOD1
NCBI Official Synonym Symbols	CARD4; NLRC1; CLR7.1
UniProt Protein Name	Nucleotide-binding oligomerization domain-containing protein 1
UniProt Synonym Protein Names	Caspase recruitment domain-containing protein 4
Protein Family	Nucleotide-binding oligomerization domain-containing protein
UniProt Gene Name	NOD1
UniProt Synonym Gene Names	CARD4
UniProt Entry Name	NOD1_HUMAN
NCBI Protein Information	nucleotide-binding oligomerization domain-containing protein 1; NLR family, CARD domain containing 1; caspase recruitment domain family, member 4; caspase recruitment domain-containing protein 4; nucleotide-binding oligomerization domain, leucine rich repeat and CARD domain containing 1
NCBI Summary for NOD1	This gene encodes a member of the NOD (nucleotide-binding oligomerization domain) family. This member is a cytosolic protein. It contains an N-terminal caspase recruitment domain (CARD), a centrally located nucleotide-binding domain (NBD), and 10 tandem leucine-rich repeats (LRRs) in its C terminus. The CARD is involved in apoptotic signaling, LRRs participate in protein-protein interactions, and mutations in the NBD may affect the process of oligomerization and subsequent function of the LRR domain. This protein is an intracellular pattern-recognition receptor (PRR) that initiates inflammation in response to a subset of bacteria through the detection of bacterial diaminopimelic acid. Multiple alternatively spliced transcript variants differring in the 5' UTR have been described, but the full-length nature of these variants has not been determined. [provided by RefSeq, Oct 2009]

UniProt Comments for NOD1	Function: Enhances caspase-9-mediated apoptosis. Induces NF-kappa-B activity via RIPK2 and IKK-gamma. Confers responsiveness to intracellular bacterial lipopolysaccharides (LPS). Forms an intracellular sensing system along with ARHGEF2 for the detection of microbial effectors during cell invasion by pathogens. Required for RHOA and RIPK2 dependent NF-kappa-B signaling pathway activation upon S.flexneri cell invasion. Involved not only in sensing peptidoglycan (PGN)-derived muropeptides but also in the activation of NF-kappa-B by Shigella effector proteins IpgB2 and OspB. Recruits NLRP10 to the cell membrane following bacterial infection. Ref.5 Ref.7 Ref.8 Ref.11 Subunit structure: Homodimer. Self-associates. Binds to caspase-9 and RIPK2 by CARD-CARD interaction. Interacts with ARHGEF2. Interacts with NLRP10 and recruits it to the cell membrane following invasive bacterial infection. Ref.7 Ref.8 Ref.10 Ref.11 Ref.12 Subcellular location: Cytoplasm. Cell membrane. Apical cell membrane. Basolateral cell membrane. Note: Detected in the cytoplasm and at the cell membrane. Following bacterial infection, localizes to bacterial entry sites in the cell membrane. Recruited to the basolateral and apical membranes in polarized epithelial cells. Ref.6 Ref.7 Tissue specificity: Highly expressed in adult heart, skeletal muscle, pancreas, spleen and ovary. Also detected in placenta, lung, liver, kidney, thymus, testis, small intestine and colon. Sequence similarities: Contains 1 CARD domain.Contains 9 LRR (leucine-rich) repeats.Contains 1 NACHT domain.
Research Articles on NOD1	**1.** A novel function for Ankrd17 in Nod1 and Nod2 mediated anti-bacterial innate immune pathways.
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