Nucleotide-Binding Oligomerization Domain-Containing Protein 2 (NOD2) Mouse Recombinant Protein

PRODUCT OVERVIEW

Product Name	Nucleotide-binding oligomerization domain-containing protein 2 (Nod2), Recombinant Protein
Full Product Name	Recombinant Mouse Nucleotide-binding oligomerization domain-containing protein 2 (Nod2) , partial
Product Gene Name	Nod2 recombinant protein
Product Synonym Gene Name	Nod2
Sequence	MRSSCCDMCS QEEFQAQRSQ LVALLISGSL EGFESILDWL LSWDVLSRED YEGLSLPGQP LSHSARRLLD TVWNKGVWGC QKLLEAVQEA QANSHTFELY GSWDTHSLHP TRDLQSHRPA IVRRLYNHVE AMLELAREGG FLSQYECEEI RLPIFTSSQR ARRLLDLAAV KANGLAAFLL QHVRELPAPL PLPYEAAECQ
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	115,301 Da
Sequence Positions	1-200. Partial
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for Q8K3Z0
Species	Mouse
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for Nod2 recombinant protein	This gene is a member of the Nod1 Apaf-1 family and encodes a protein with two caspase recruitment (CARD) domains and six leucine-rich repeats (LRRs). The protein is primarily expressed in the peripheral blood leukocytes. It plays a role in the immune response to intracellular bacterial lipopolysaccharides (LPS) by recognizing the muramyl dipeptide (MDP) derived from them and activating the NFKB protein. Mutations in this gene have been associated with Crohn disease and Blau syndrome.
Other Notes	Small volumes of Nod2 recombinant protein 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 Nod2 purchase	MBS1420485 is a recombinant protein targeting Nod2. Also known as Recombinant Mouse Nucleotide-binding oligomerization domain-containing protein 2 (Nod2) , partial. Host: E Coli or Yeast or Baculovirus or Mammalian Cell.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Nod2. It may not necessarily be applicable to this product.

NCBI GI #	29427819

NCBI GeneID	257632
NCBI Accession #	Q8K3Z0.1
UniProt Primary Accession #	Q8K3Z0
UniProt Related Accession #	Q8K3Z0
NCBI Official Full Name	Nucleotide-binding oligomerization domain-containing protein 2
NCBI Official Synonym Full Names	nucleotide-binding oligomerization domain containing 2
NCBI Official Symbol	Nod2
NCBI Official Synonym Symbols	CD; ACUG; BLAU; IBD1; Nlrc2; Card15; F830032C23Rik
UniProt Protein Name	Nucleotide-binding oligomerization domain-containing protein 2
UniProt Synonym Protein Names	Caspase recruitment domain-containing protein 15
Protein Family	Nucleotide-binding oligomerization domain-containing protein
UniProt Gene Name	Nod2
UniProt Synonym Gene Names	Card15
NCBI Protein Information	nucleotide-binding oligomerization domain-containing protein 2
UniProt Comments for Nod2	Involved in gastrointestinal immunity. Upon stimulation by muramyl dipeptide (MDP), a fragment of bacterial peptidoglycan, binds the proximal adapter receptor-interacting RIPK2, which recruits ubiquitin ligases as XIAP, BIRC2, BIRC3, INAVA and the LUBAC complex, triggering activation of MAP kinases and activation of NF-kappa-B signaling. This in turn leads to the transcriptional activation of hundreds of genes involved in immune response (PubMed:22607974). Required for MDP-induced NLRP1-dependent CASP1 activation and IL1B release in macrophages (PubMed:18511561). Component of an autophagy-mediated antibacterial pathway together with ATG16L1. Plays also a role in sensing single-stranded RNA (ssRNA) from viruses. Interacts with mitochondrial antiviral signaling/MAVS, leading to activation of interferon regulatory factor-3/IRF3 and expression of type I interferon.
Research Articles on Nod2	**1.** we conclude that coordinate engagement of NOD2 and TLR2 constitutes a key step in the genesis of Lp-mediated protection from a lethal respiratory virus infection, and represents a critical target for modulation of virus-induced inflammatory pathology.
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