NLRP12 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	NLRP12, Polyclonal Antibody
Full Product Name	NLRP12 Antibody
Product Gene Name	anti-NLRP12 antibody
Product Synonym Names	CLR19.3; FCAS2; Monarch 1; Monarch-1; NACHT, leucine rich repeat and PYD containing 12; NACHT, LRR and PYD containing protein 12; NACHT, LRR and PYD domains-containing protein 12; NAL12_HUMAN; NLR family, pyrin domain containing 12; NLRP12; Nucleotide-binding oligomerization domain, leucine rich repeat and pyrin domain containing 12; OTTHUMP00000067227; PAN6; PYPAF7; PYRIN containing APAF1 like protein 7; PYRIN-containing APAF1-like protein 7; Regulated by nitric oxide; RNO; RNO2
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin (Thermo Fisher Scientific).
Concentration	1mg/ml (lot specific)
Specificity	NLRP12 Antibody detects endogenous levels of NLRP12.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.
Antibody/Peptide Pairs	NLRP12 peptide (MBS9632631) is used for blocking the activity of NLRP12 antibody (MBS9630248)
Molecular Weight	120,329 Da
OMIM	gene 611762
3D Structure	ModBase 3D Structure for P59046
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Immunogen	A synthesized peptide derived from human NLRP12.
Conjugation	Unconjugated
Similarity	Belongs to the NLRP family.
Subunit Structure	Interacts (via pyrin domain) with ASC. Interacts (via pyrin domain) with FAF1 (via UBA domain). Interacts with MAP3K14; this interaction promotes proteasomal degradation of MAP3K14. Interacts with NOD2; this interaction promotes degradation of NOD2 through the ubiquitin-proteasome pathway. Interacts with HSPA1A and HSPA8. Interacts with HSP90AA1. Interacts with TRIM25; this interaction inhibits DDX58-mediated signaling pathway.
Tissue Specificity	Detected only in peripheral blood leukocytes, predominantly in eosinophils and granulocytes, and at lower levels in monocytes.

Function	Plays an essential role as an potent mitigator of inflammation. Primarily expressed in dendritic cells and macrophages, inhibits both canonical and non-canonical NF-kappa-B and ERK activation pathways. Functions as a negative regulator of NOD2 by targeting it to degradation via the proteasome pathway. In turn, promotes bacterial tolerance. Inhibits also the DDX58-mediated immune signaling against RNA viruses by reducing the E3 ubiquitin ligase TRIM25-mediated 'Lys-63'-linked DDX58 activation but enhancing the E3 ubiquitin ligase RNF125-mediated 'Lys-48'-linked DDX58 degradation. Acts also as a negative regulator of inflammatory response to mitigate obesity and obesity-associated diseases in adipose tissue (By similarity).
Product Categories/Family for anti-NLRP12 antibody	Cytoplasm; Primary
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-NLRP12 antibody	ELISA (EIA)(peptide)
Application Notes for anti-NLRP12 antibody	ELISA(peptide): 1:20000-1:40000
Related Product Information for anti-NLRP12 antibody	MBS9630248 is an antibody targeting NLRP12. Also known as NLRP12 Antibody. Reactive in Human. Host: Rabbit.
Other Notes	Small volumes of anti-NLRP12 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.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for NLRP12. It may not necessarily be applicable to this product.

NCBI GI #	21955154
NCBI GeneID	91662
NCBI Accession #	NP_653288
UniProt Primary Accession #	P59046
UniProt Secondary Accession #	Q8NEU4; Q9BY26; A8MTQ2; B3KTE7
UniProt Related Accession #	P59046
GenBank Nucleotide #	NM_144687.3
NCBI Official Full Name	NACHT, LRR and PYD domains-containing protein 12 isoform 2
NCBI Official Synonym Full Names	NLR family, pyrin domain containing 12
NCBI Official Symbol	NLRP12
NCBI Official Synonym Symbols	RNO; PAN6; RNO2; FCAS2; NALP12; PYPAF7; CLR19.3
UniProt Protein Name	NACHT, LRR and PYD domains-containing protein 12
UniProt Synonym Protein Names	Monarch-1; PYRIN-containing APAF1-like protein 7; Regulated by nitric oxide
Protein Family	NACHT, LRR and PYD domains-containing protein
UniProt Gene Name	NLRP12
UniProt Synonym Gene Names	NALP12; PYPAF7; RNO
UniProt Entry Name	NAL12_HUMAN
NCBI Protein Information	NACHT, LRR and PYD domains-containing protein 12; monarch 1; regulated by nitric oxide; PYRIN-containing APAF1-like protein 7; nucleotide-binding oligomerization domain, leucine rich repeat and pyrin domain containing 12

NCBI Summary for NLRP12	This gene encodes a member of the CATERPILLER family of cytoplasmic proteins. The encoded protein, which contains an N-terminal pyrin domain, a NACHT domain, a NACHT-associated domain, and a C-terminus leucine-rich repeat region, functions as an attenuating factor of inflammation by suppressing inflammatory responses in activated monocytes. Mutations in this gene cause familial cold autoinflammatory syndrome type 2. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Mar 2013]
UniProt Comments for NLRP12	NLRP12: May mediate activation of CASP1 via ASC and promote activation of NF-kappa-B via IKK. Defects in NLRP12 are the cause of familial cold autoinflammatory syndrome type 2 (FCAS2). FCAS are rare autosomal dominant systemic inflammatory diseases characterized by episodes of rash, arthralgia, fever and conjunctivitis after generalized exposure to cold. Belongs to the NLRP family. 5 isoforms of the human protein are produced by alternative splicing. Chromosomal Location of Human Ortholog: 19q13.42 Cellular Component: cytoplasm; nucleus Molecular Function: protein binding; caspase activator activity; ATP binding Biological Process: release of cytoplasmic sequestered NF-kappaB; caspase activation; negative regulation of cytokine secretion; negative regulation of interleukin-6 biosynthetic process; negative regulation of I-kappaB kinase/NF-kappaB cascade; positive regulation of interleukin-1 beta secretion; signal transduction; regulation of caspase activity; negative regulation of signal transduction; negative regulation of Toll signaling pathway; inhibition of NF-kappaB transcription factor; negative regulation of inflammatory response; negative regulation of protein amino acid autophosphorylation; positive regulation of MHC class I biosynthetic process; regulation of I-kappaB kinase/NF-kappaB cascade; negative regulation of interleukin-1 secretion; regulation of interleukin-18 biosynthetic process; positive regulation of inflammatory response Disease: Familial Cold Autoinflammatory Syndrome 2
Research Articles on NLRP12	**1.** This study suggested that NLRP12 mutations might account for a small fraction of common variable immunodeficiency patients with severe auto-inflammatory complications.
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