

Rabbit CIAS1/NALP3/NLRP3 Polyclonal Antibody | anti-NLRP3 antibody

Anti-CIAS1/NALP3/NLRP3 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA125512	Rabbit	Human, Mouse, Rat	ELISA, Flow Cytometry, Functional Assay, Western Blot

PRODUCT SYNONYMS

CIAS1/NALP3/NLRP3; Polyclonal Antibody; Anti-CIAS1/NALP3/NLRP3 Antibody; NLRP3; C1orf7; CIAS1; NALP3; PYPAF1; NACHT; LRR and PYD domains-containing protein 3; Angiotensin/vasopressin receptor AII/AVP-like; Caterpillar protein 1. 1; CLR1. 1; Cold-induced autoinflammatory syndrome 1 protein; Cryopyrin; PYRIN-containing APAF1-like protein 1; NLR family; pyrin domain containing 3; anti-NLRP3 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Rabbit IgG polyclonal antibody for CIAS1/NALP3/NLRP3 detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
Applicable Applications for anti-NLRP3 antibody	ELISA (Direct ELISA), FCM/FACS (Flow Cytometry), WB (Western Blot)
Immunogen	E Coli-derived human CIAS1/NALP3/NLRP3 recombinant protein (Position: D812-S1035).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



FCM/FACS (Flow Cytometry)
Figure 2. Flow Cytometry analysis of THP-1 cells using anti-NLRP3 antibody (AAA125512).Overlay histogram showing THP-1 cells stained with AAA125512 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-NLRP3 Antibody (AAA125512, 1μg/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10μg/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1μg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



WB (Western Blot)
Figure 1. Western blot analysis of NLRP3 using anti-NLRP3 antibody (AAA125512).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30ug of sample under reducing conditions.Lane 1: human Hela whole cell lysatesLane 2: human U-87MG whole cell lysatesLane 3: rat spleen tissue lysatesLane 4: rat PC-12 whole cell lysatesLane 5: mouse thymus tissue lysatesLane 6: mouse lung tissue lysatesLane 7: mouse spleen tissue lysates.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1. 5 hour at RT. The membrane was incubated with rabbit anti-NLRP3 antigen affinity purified polyclonal antibody (Catalog # AAA125512) at 0. 5 μg/mL overnight at 4 degree C, then washed with TBS-0. 1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1. 5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for NLRP3 at approximately 118KD. The expected band size for NLRP3 is at 118KD.

ADDITIONAL INFORMATION

Related Product Information for anti-NLRP3 antibody	NLRP3(NLR FAMILY, PYRIN DOMAIN-CONTAINING 3), also known as CIAS1, CRYOPYRIN, NALP3 or PYPAF1, is a protein that in humans is encoded by the NLRP3(NOD-like receptor family, pryin domain containing 3) gene. The NLRP3 gene encodes a pyrin-like protein expressed predominantly in peripheral blood leukocytes. And the NLRP3 gene is mapped on 1q44. NLRP3 interacts with apoptosis-associated speck-like protein containing a CARD(ASC). The encoded protein may play a role in the regulation of inflammation and apoptosis. Mutation of the NALP3 nucleotide-binding domain reduced ATP binding, CASP1 activation, IL1B production, cell death, macromolecular complex formation, self-association, and association with ASC. Consistent with an essential role for Nlrp3 inflammasomes in antifungal immunity, Gross et al. showed that Nlrp3-deficient mice are hypersusceptible to C. albicans infection. Activation of the NLRP3 inflammasome in response to virus or to RNA was dependent upon lysosomal maturation and reactive oxygen species production in human cells. The NLRP3 inflammasome senses obesity-associated danger signals and contributes to obesity-induced inflammation and insulin resistance.
References	1. Agostini, L., Martinon, F., Burns, K., McDermott, M. F., Hawkins, P. N., Tschopp, J. NALP3 forms an IL-1-beta-processing inflammasome with increased activity in Muckle-Wells autoinflammatory disorder. 2. Allen, I. C., Scull, M. A., Moore, C. B., Holl, E. K., McElvania-TeKippe, E., Taxman, D. J., Guthrie, E. H., Pickles, R. J., Ting, J. P. -Y. The NLRP3 inflammasome mediates in vivo innate immunity to influenza A virus through recognition of viral RNA. Immunity 30: 556-565, 2009. 3. Hoffman HM, Wright FA, Broide DH, Wanderer AA, Kolodner RD (Jun 2000). "Identification of a locus on chromosome 1q44 for familial cold urticaria". Am J Hum Genet 66 (5): 1693-8.

NCBI AND UNIPROT INFORMATION

NCBI GI #	34878690
NCBI GeneID	114548
NCBI Accession #	NP_899632
NCBI GenBank Nucleotide #	NM_183395.2
UniProt Accession #	Q96P20; O75434; Q17RS2; Q59H68; Q5JQS8; Q5JQS9; Q6TG35; Q8TCW0; B2RC97; B7ZKS9; B7ZKT2; B7ZKT3
Molecular Weight	115,968 Da
NCBI Official Full Name	NACHT, LRR and PYD domains-containing protein 3 isoform b
NCBI Official Synonym Full Names	NLR family, pyrin domain containing 3
NCBI Official Symbol	NLRP3

NCBI Official Synonym Symbols	ALI; AVP; FCU; MWS; FCAS; CIAS1; FCAS1; NALP3; C1orf7; CLR1.1; PYPAF1; AGTAVPRL
NCBI Protein Information	NACHT, LRR and PYD domains-containing protein 3; cryopyrin; caterpillar protein 1.1; PYRIN-containing APAF1-like protein 1; NACHT, LRR and PYD containing protein 3; cold autoinflammatory syndrome 1 protein; NACHT domain-, leucine-rich repeat-, and PYD-con
UniProt Protein Name	NACHT, LRR and PYD domains-containing protein 3
UniProt Gene Name	NLRP3
UniProt Synonym Gene Names	C1orf7; CIAS1; NALP3; PYPAF1; CLR1.1
UniProt Entry Name	NALP3_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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