

## Anti-CIAS1/NALP3/NLRP3 Antibody Picoband®

Catalog Number: PB9114

### About NLRP3

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 gene. It is mapped to 1q44. 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, it has been 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.

### Overview

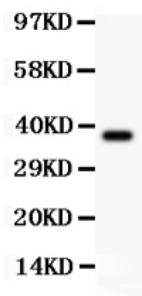
Product Name	Anti-CIAS1/NALP3/NLRP3 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-CIAS1/NALP3/NLRP3 Antibody Picoband® catalog # PB9114. Tested in WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> , and 0.05 mg NaN <sub>3</sub> . *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q96P20

### Technical Details

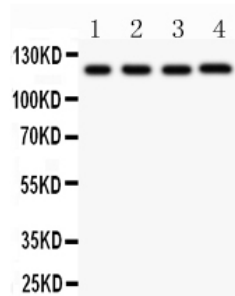
Immunogen	<i>E. coli</i> -derived human CIAS1 recombinant protein (Position: D21-K194). Human CIAS1 shares 77% amino acid (aa) sequence identity with mouse CIAS1.
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Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human

## Anti-CIAS1/NALP3/NLRP3 Antibody Picoband® (PB9114) Images



Western blot analysis of CIAS1/NALP3 using anti-CIAS1/NALP3 antibody (PB9114). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. Lane 1: recombinant human CIAS1 protein 0.5 ng. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA 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-CIAS1/NALP3 antigen affinity purified polyclonal antibody (Catalog # PB9114) at 0.5 ug/mL overnight at 4°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 (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for CIAS1/NALP3 at approximately 37 kDa. The expected band size for CIAS1/NALP3 is at 37 kDa.



Western blot analysis of CIAS1/NALP3 using anti-CIAS1/NALP3 antibody (PB9114). 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 30 ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates, Lane 2: human MCF-7 whole cell lysates, Lane 3: human Jurkat whole cell lysates, Lane 4: human HepG2 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA 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-CIAS1/NALP3 antigen affinity purified polyclonal antibody (Catalog # PB9114) at 0.5 ug/mL overnight at 4°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 (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for CIAS1/NALP3 at approximately 118 kDa. The expected band size for CIAS1/NALP3 is at 118 kDa.

### 3 Publications Citing This Product

1. PubMed ID: 31156617, Wei Z,Wang J,Wang Y,Wang C,Liu X,Han Z,Fu Y,Yang Z.Effects of Neutrophil Extracellular Traps on Bovine Mammary Epithelial Cells in vitro.Front Immunol.2019 May 17;10:1003.doi:10.3389/fimmu.2019.01003.PMID:31156617;PMCID:PMC6533846.
2. PubMed ID: 24884473, Wang B, Yang G, Liang X, Zhu M, Du M. BMC Complement Altern Med. 2014 May 20;14:162. Doi: 10.1186/1472-6882-14-162. Grape Seed Extract Prevents Skeletal Muscle Wasting In Interleukin 10 Knockout Mice.
3. PubMed ID: 24775094, Xue Y, Wang H, Du M, Zhu Mj. J Nutr Biochem. 2014 Jul;25(7):758-64. Doi: 10.1016/j.jnutbio.2014.03.009. Epub 2014 Apr 1. Maternal Obesity Induces Gut Inflammation And Impairs Gut Epithelial Barrier Function In Nonobese Diabetic Mice.

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Anti-CIAS1/NALP3/NLRP3 Antibody

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