

## Anti-Caspase-1(P20)/CASP1 Antibody Picoband®

Catalog Number: PA1440-1

### About Casp1

Caspase 1 is a cysteine protease that regulates inflammatory processes through its capacity to process and activate the interleukin-1-beta, IL18, and IL33 precursor proteins. It belongs to a family of cysteine proteases known as caspases that always cleave proteins following an aspartic acid residue. The Caspase1 gene consists of 10 exons spanning at least 10.6 kb. The Caspase 1 gene is mapped to 11q23, a site frequently involved in rearrangement in human cancers, including a number of leukemias and lymphomas, by Southern DNA blot analysis of rodent-human hybrids and by in situ hybridization to normal human metaphase chromosomes. Caspase 1 has been shown to induce cell necrosis or pyroptosis and may function in various developmental stages.

### Overview

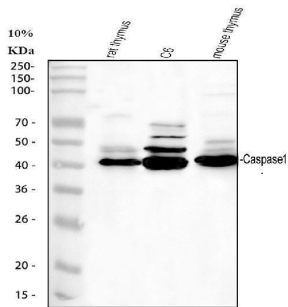
Product Name	Anti-Caspase-1(P20)/CASP1 Antibody Picoband®
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-Caspase-1 (P20)/CASP1 Antibody catalog # PA1440-1. Tested in WB applications. This antibody reacts with Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees 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 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .
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	P29452

### Technical Details

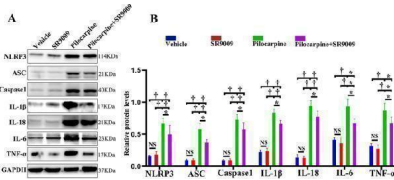
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of mouse CASP1, different from the related rat sequence by three amino acids.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and IHC(F).
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, Mouse, Rat

## Anti-Caspase-1(P20)/CASP1 Antibody Picoband® (PA1440-1) Images



Western blot analysis of CASP1 using anti-CASP1 antibody (PA1440-1). 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: rat thymus tissue lysates, Lane 2: rat C6 whole cell lysates, Lane 3: mouse thymus tissue 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-CASP1 antigen affinity purified polyclonal antibody (Catalog # PA1440-1) 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 CASP1 at approximately 46 kDa. The expected band size for CASP1 is at 46 kDa.



The application of SR9009 for 7 days reduced the expression of NLRP3 inflammasome-related proteins and inflammatory cytokines in the hippocampus after SE. a The expression of NLRP3, ASC, Caspase1, IL-1beta, IL-18, IL-6, and TNF-alpha was detected by western blotting assay. b Densitometric analysis results of NLRP3, ASC, Caspase1, IL-1beta, IL-18, IL-6, and TNF-alpha in the four groups. n = 5 for each group. The data presented as the mean  $\pm$  SD. NS, not significant, \* p

## 24 Publications Citing This Product

1. PubMed ID: 33681944, Yang L,Liu Y,Wang Y,Li J,Liu N. Azeliragon ameliorates Alzheimer's disease via the Janus tyrosine kinase and signal transducer and activator of transcription signaling pathway. Clinics (Sao Paulo). 2021 Mar 8;76:e2348.doi:10.6061/clinics/2021/e2348.PMID:33681944;PMCID:PMC7920406.
2. PubMed ID: 32758603, Yang R,Li Y,Mehmood S,Yan C,Huang Y,Cai J,Ji J,Pan W,Zhang W,Chen Y.Polysaccharides from Armillariella tabescens mycelia ameliorate renal damage in type 2 diabetic mice.Int J Biol Macromol.2020 Nov 1;162:1682-1691.doi:10.1016/j.ijbiomac.2020.08.006.Epub
3. PubMed ID: 32952148, Fan X,Ma W,Zhang Y,Zhang L.P2X7 Receptor (P2X7R) of Microglia Mediates Neuroinflammation by Regulating (NOD)-Like Receptor Protein 3 (NLRP3) Inflammasome-Dependent Inflammation After Spinal Cord Injury. Med Sci Monit.2020 Sep 21;26:e925491.doi:10.12659/MS

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