

Anti-IL1 beta/IL1B Antibody Picoband™

Catalog Number: PB9025

About IL1b

Interleukin-1beta (IL-1beta) is a potent stimulator of bone resorption whose gene is mapped to 2q14, and has been implicated in the pathogenesis of high bone turnover and osteoporosis. IL-1beta, a prominent microglia-derived cytokine, caused oligodendrocyte death in coculture with astrocytes and microglia, but not in pure culture of oligodendrocytes alone. It also can cause nuclear export of a specific NCOR corepressor complex, resulting in derepression of a specific subset of nuclear factor-kappa-B (NFKB)-regulated genes. Furthermore, Microenvironmental IL-1beta and, to a lesser extent, IL-1alpha are required for in vivo angiogenesis and invasiveness of different tumor cells. Additionally, the cooperation of IL-1beta and PDGFB induces contractile-to-synthetic phenotype modulation of human aortic smooth muscle cells in culture. Moreover, the association with disease may be explained by the biologic properties of IL-1beta, which is an important proinflammatory cytokine and a powerful inhibitor of gastric acid secretion.

Overview

Product Name	Anti-IL1 beta/IL1B Antibody Picoband™
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-IL1 beta/IL1B Antibody Picoband™ catalog # PB9025. Tested in ELISA, IHC, WB applications. This antibody reacts with Mouse, Rat.
Application	ELISA, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
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	Q63264

Technical Details

Immunogen	E.coli-derived rat IL-1 beta recombinant protein (Position: V117-S268). Rat IL-1 beta shares 78% and 90% amino acid (aa) sequences identity with human and mouse IL-1 beta, respectively.
Predicted Reactive Species	Bovine, Chicken, Horse, Monkey, Rabbit
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).
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	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Mouse, Rat Immunohistochemistry, 2-5 ug/ml, Mouse, Rat ELISA , 0.1-0.5ug/ml, Rat

Anti-IL1 beta/IL1B Antibody Picoband™ (PB9025) Images

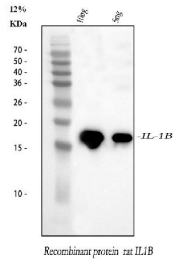


Figure 1. Western blot analysis of IL1 beta using anti-IL1 beta antibody (PB9025).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. Lane 1: recombinant rat IL1 beta protein 10 ng, Lane 2: recombinant rat IL1 beta protein 5 ng. After electrophoresis, 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-IL1 beta antigen affinity purified polyclonal antibody (Catalog # PB9025) 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 IL1 beta at approximately 17 kDa.

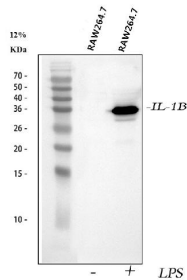


Figure 2. Western blot analysis of IL1 beta using anti-IL1 beta antibody (PB9025).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: mouse RAW264.7 whole cell lysates, Lane 2: mouse RAW264.7 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-IL1 beta antigen affinity purified polyclonal antibody (Catalog # PB9025) 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 IL1 beta at approximately 35 kDa. The expected band size for IL1 beta is at 31 kDa.

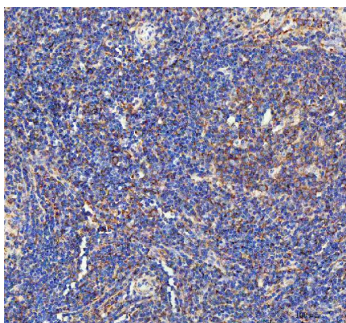


Figure 3. IHC analysis of IL1 beta using anti-IL1 beta antibody (PB9025).
IL1 beta was detected in a paraffin-embedded section of mouse spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-IL1 beta Antibody (PB9025) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C.

The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

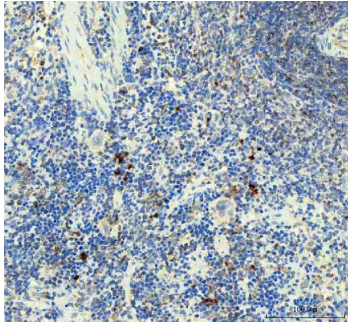


Figure 4. IHC analysis of IL1 beta using anti-IL1 beta antibody (PB9025). IL1 beta was detected in a paraffin-embedded section of rat spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-IL1 beta Antibody (PB9025) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

12 Publications Citing This Product

1. PubMed ID: -, Microstructural changes and immunohistological analysis of pro-inflammatory cytokines in spleens of lipopolysaccharide-induced rats. Indian Journal Of Animal Research. 2019.(53):239-244
2. PubMed ID: 33683631, Zhao N, Wang T, Peng L, Li Y, Zhao Y, Yu S. Attenuation of Inflammation by DJ-1 May Be a Drug Target for Cerebral Ischemia-Reperfusion Injury. Neurochem Res. 2021 Mar 8. doi: 10.1007/s11064-021-03288-z. Epub ahead of print. PMID: 33683631.
3. PubMed ID: 33130049, Ghoneim ME, Abdallah DM, Shebl AM, El-Abhar HS. The interrupted cross-talk of inflammatory and oxidative stress trajectories signifies the effect of artesunate against hepatic ischemia/reperfusion-induced inflammasomopathy. Toxicol Appl Pharmacol. 2020 Oct 29

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