BOSTER BIOLOGICAL TECHNOLOGY
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Anti-IL-1 beta/IL1B Antibody Picoband®

Catalog Number: A00101

About IL1B

FGFR1, Fibroblast growth factor receptor 1, also known as basic fibroblast growth factor receptor 1, fms-related tyrosine kinase-2 / Pfeiffer syndrome, and CD331, is a receptor tyrosine kinase whose ligands are specific members of the fibroblast growth factor family. The FGFR1 gene is localized to 8p12-p11.2 by in situ hybridization. FGFR1 is essential for the normal formation of the organ of Corti and that phenotype severity observed in FGFR1 mutants is dependent on the dose of FGFR1. Mutations in this gene have been associated with Pfeiffer syndrome, Jackson-Weiss syndrome, Antley-Bixler syndrome, osteoglophonic dysplasia, squamous cell lung cancer and autosomal dominant Kallmann syndrome 2.

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Overview

Product Name	Anti-IL-1 beta/IL1B Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-IL-1 beta/IL1B Antibody Picoband® catalog # A00101. Tested in WB applications. This antibody reacts with Human, 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 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	P01584

Technical Details

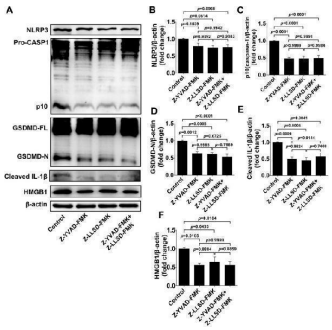
Immunogen	E. coli-derived human IL-1 beta recombinant protein (Position: A117-S269). Human IL-1 beta shares 78.3% and 77.6% amino acid (aa) sequence identity with mouse and rat IL-1 beta, respectively.

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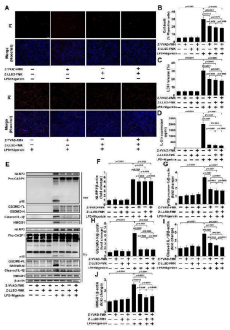
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat

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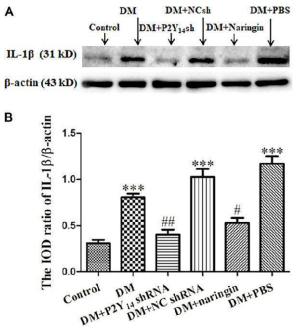
Anti-IL-1 beta/IL1B Antibody Picoband® (A00101) Images



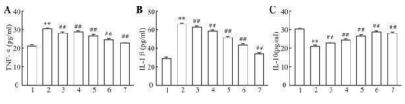
Inhibition of GSDMD activation suppressed the expression of pyroptosis pathway-related proteins in ApoE −/− mice. After 4 weeks of treatment the ApoE −/− mice were killed at 18 weeks. (A) Western blotting analysis was conducted to detect protein levels of NLRP3, caspase-1, GSDMD, cleaved IL-1beta, and HMGB1 in the aorta. (B–F) Quantitative analysis of expression of NLRP3, p10 (caspase-1), GSDMD-N, cleaved IL-1beta, and HMGB1 (n = 6). beta-actin served as the loading control. Data represent means ± SEM.Index in PubMed under a CC BY license. PMID: 37593179



Z-LLSD-FMK or Z-YVAD-FMK inhibited GSDMD activation or pyroptosis induced by LPS + nigericin in BMDMs. BMDMs were primed with LPS for 4 h followed by nigericin for 30 min. Z-LLSD-FMK, Z-YVAD-FMK, and both combined were added 30 min before LPS + nigericin treatment. (A) Representative immunofluorescence images of cell death determination via PI (red) and Hoechst 33342 (blue) staining (scale bar = 75 um). (B) The percentage of PI-positive BMDMs was calculated at five randomly selected image fields (n = 5). (C) LDH release in supernatants (n = 5). (D) IL-1beta release in supernatants was analyzed by ELISA (n = 5). (E) Western blotting analysis was performed to detect protein levels of NLRP3, caspase-1, GSDMD, cleaved IL-1beta, and HMGB1 in supernatants and cell lysates. (F–J) Quantitative analysis of expression of NLRP3, p10 (caspase-1), GSDMD-N, cleaved IL-1beta, and HMGB1 in cell lysates (n = 5). beta-actin served as the loading control. Data represent means ± SEM.Index in PubMed under a CC BY license. PMID: 37593179



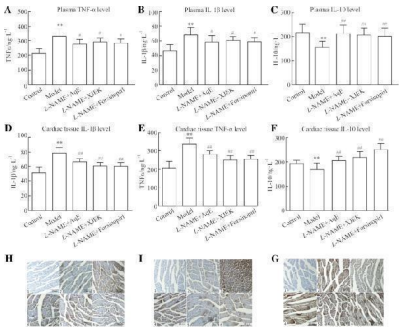
The effects of P2Y 14 shRNA and naringin on the expression of IL-1beta in the SCG of type 2 diabetic rats. The expression level of IL-1beta protein was determined by Western blotting (A) . The bar histogram displays the IOD ratio of IL-1beta protein mass to beta-actin protein mass in each group (B) , and the values are the mean ± SEM from three independent experiments. *** p < 0.001 vs. Ctrl; # p < 0.05 vs. DM; ## p < 0.01 vs. DM.Index in PubMed under a CC BY license. PMID: 35529431



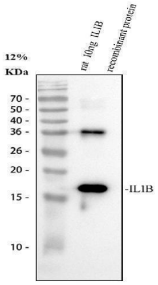
Effects of polysaccharide extract from XJEK on TNF-alpha, IL-1beta and IL-10 of HUVECs induced by Ang II. (a) TNF-alpha level in supernatants of HUVECs; (b) IL-1beta level in supernatants of HUVECs; (c) IL-10 level in supernatants of HUVECs. 1, blank control group; 2, Ang II (10 − 5 mol/L) group; 3, Ang II (10 − 5 mol/L) + AqE (0.15 mg/ml) group; 4, Ang II (10 − 5 mol/L) + AqE (0.3 mg/ml) group; 5, Ang II (10 − 5 mol/L) + AqE (0.6 mg/ml) group; 6, Ang II (10 − 5 mol/L) + AqE (1.2 mg/ml) group; 7, Ang II (10 − 5 mol/L) + XJEK (1.6 mg/ml) group. Data are expressed as

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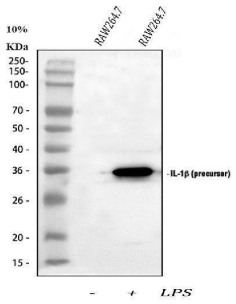
mean ± SD, n = 6. ** P < 0.01 vs control group; ## P < 0.01 vs Ang II group Index in PubMed under a CC BY license. PMID: 31196042



Effects of polysaccharide extract from XJEK on TNF-alpha, IL-1beta and IL-10 in L -NAME-induced hypertensive mice. (a) TNF-alpha expression level in plasma. (b) IL-1beta expression level in plasma. (c) IL-10 expression level in plasma. (d) IL-1beta expression level in cardiac tissues. (e) TNF-alpha expression level in cardiac tissues. (f) IL-10 expression level in cardiac tissues. (g) Representative image of IL-1beta immunocytochemistry. (h) Representative image of TNF-alpha immunocytochemistry. (i) Representative image of IL-10 immunocytochemistry.1,negative group; 2,control group; 3, model group; 4, L -NAME+AqE group; 5, L -NAME+XJEK group; 6, L -NAME+fosinopril group. Data are presented as the mean ± SD (n = 10). ** P < 0.01 vs. control group; # P < 0.05, ## P < 0.01 vs, model group Index in PubMed under a CC BY license. PMID: 31196042



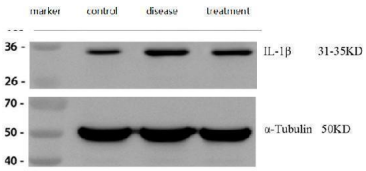
Western blot analysis of IL1B using anti-IL1B antibody (A00101). Electrophoresis was performed on a 13% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: recombinant rat IL1B protein 10 ng. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 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-IL1B antigen affinity purified polyclonal antibody (Catalog # A00101) 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 ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for IL1B at approximately 17 kDa.



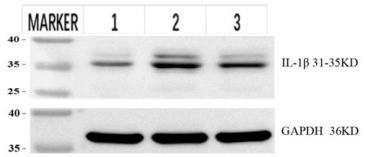
Western blot analysis of IL1B using anti-IL1B antibody (A00101). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: mouse RAW264.7(-LPS) whole cell lysates, Lane 2: mouse RAW264.7(+LPS) 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-IL1B antigen affinity purified polyclonal antibody (Catalog # A00101) 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 ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for IL1B at approximately 31-35 kDa. The expected band size for IL1B is

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at 31 kDa.



Western blot analysis of IL1B using anti-IL1B antibody (A00101). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: control group-normal mouse hippocampal tissue lysates, Lane 2: hippocampal tissue from Alzheimer's disease model mouse, Lane 3: hippocampal tissue from Alzheimer's disease model mouse treated with a self-developed drug. 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-IL1B antigen affinity purified polyclonal antibody (Catalog # A00101) at 1:2000 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 1:10000 for 1 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with ChemiDoc MP system. A specific band was detected for IL1B at approximately 31-35 kDa. The expected band size for IL1B is at 31 kDa.



Western blot analysis of IL1B using anti-IL1B antibody (A00101). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: normal PC-12 whole cell lysates, Lane 2: an in vitro Alzheimer's disease (AD) model was established by inducing cells with beta-amyloid (Abeta) using PC12 whole cell lysates, Lane 3: the AD in vitro model was treated with a therapeutic drug using PC12 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-IL1B antigen affinity purified polyclonal antibody (Catalog # A00101) at 1:2500 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 1:10000 for 1 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with ChemiDoc MP system. A specific band was detected for IL1B at approximately 31-35 kDa. The expected band size for IL1B is at 31 kDa.

27 Publications Citing This Product

1. PubMed ID: 10.1007/s00213-016-4210-4, Resveratrol fails to affect cocaine conditioned place preference behavior, but alleviates anxiety-like behaviors in cocaine withdrawn rats

2. PubMed ID: 10.1007/s00429-017-1590-0, Adolescent cocaine exposure induces prolonged synaptic modifications in medial prefrontal cortex of adult rats

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3. PubMed ID: 10.1007/s10571-009-9409-z, IL-17 Stimulates Migration of Carotid Artery Vascular Smooth Muscle Cells in an MMP-9 Dependent Manner via p38 MAPK and ERK1/2-Dependent NF-kappaB and AP-1 Activation

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Anti-IL-1 beta/IL1B Antibody

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