

Anti-IL18 Antibody Picoband™

Catalog Number: PB9006

About IL18

Interleukin-18, also known as IL18, is a protein which in humans is encoded by the IL18 gene. IL-18 is a cytokine produced by macrophages and other cells that belongs to the IL-1 superfamily. It is mapped to 11q22.2-q22.3. IL-18 works by binding to the interleukin-18 receptor, and together with IL-12, it induces cell-mediated immunity following infection with microbial products like lipopolysaccharide (LPS). After stimulation with IL-18, natural killer (NK) cells and certain T cells release another important cytokine called interferon-gamma (IFN-gamma) or type II interferon that plays an important role in activating the macrophages or other cells. The combination of this cytokine and IL12 has been shown to inhibit IL4 dependent IgE and IgG1 production, and enhance IgG2a production in B cells. IL-18 binding protein (IL18BP) can specifically interact with this cytokine, and thus negatively regulate its biological activity.

Overview

Product Name	Anti-IL18 Antibody Picoband™
Reactive Species	Human
Description	Boster Bio Anti-IL18 Antibody Picoband™ catalog # PB9006. Tested in IF, IHC, ICC, WB applications. This antibody reacts with Human.
Application	IF, IHC, ICC, 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	Q14116

Technical Details

Immunogen	E.coli-derived human IL-18 recombinant protein (Position: Y37-D193). Human IL-18 shares 66% and 64% amino acid (aa) sequences identity with mouse and rat IL-18, 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) and ICC.
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	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.1-0.5ug/ml, Human</p> <p>Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, By Heat</p> <p>Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human</p>

Anti-IL18 Antibody Picoband™ (PB9006) Images

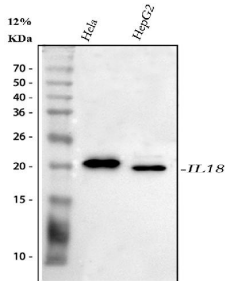


Figure 1. Western blot analysis of IL18 using anti-IL18 antibody (PB9006).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human 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-IL18 antigen affinity purified polyclonal antibody (Catalog # PB9006) 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 IL18 at approximately 22 kDa. The expected band size for IL18 is at 22 kDa.

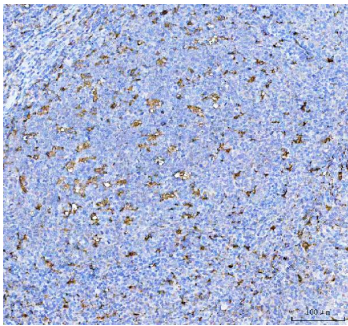


Figure 2. IHC analysis of IL18 using anti-IL18 antibody (PB9006).
IL18 was detected in a paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-IL18 Antibody (PB9006) 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.

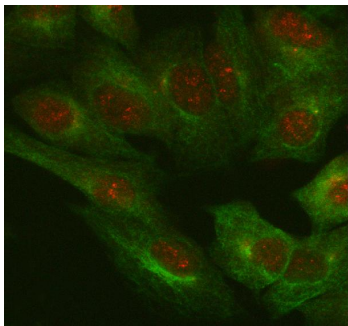


Figure 3. IF analysis of IL18 using anti-IL18 antibody (PB9006) and anti-Beta Tubulin antibody (M01857-3).
IL18 was detected in immunocytochemical section of A549 cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-IL18 Antibody (PB9006) and mouse anti-Beta Tubulin antibody (M01857-3) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) and DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

1. PubMed ID: 25049723, Si Lf, Zhang Sy, Gao Cs, Chen Sl, Zhao J, Cheng Xc. Asian-Australas J Anim Sci. 2013 Oct;26(10):1399-405. Doi: 10.5713/Ajas.2013.13101. Effects Of Ifn-?? On Il-18 Expression In Pregnant Rats And Pregnancy Outcomes.
2. PubMed ID: 21920610, Wang Y, Zhang X, Zhang Y, Xu H, Fang G. J Reprod Immunol. 2011 Dec;92(1-2):45-53. Doi: 10.1016/J.Jri.2011.07.002. Epub 2011 Sep 13. Expression And Localization Of Il-18 In The Hypothalamic-Pituitary-Ovarian Axis Of Non-Pregnant, Pregnant, And Abor...
3. PubMed ID: 16052682, Yang Yj, Shen Y, Chen Sh, Ge Xr. World J Gastroenterol. 2005 Aug 7;11(29):4524-9. Role Of Interleukin 18 In Acute Lung Inflammation Induced By Gut Ischemia Reperfusion.

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