BOSTER
antibody and ELISA experts

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

Anti-IL12B Antibody Picoband®

Catalog Number: A01152-3

About IL12B

Subunit beta of interleukin 12 (IL12B), also known as interleukin 12B, or interleukin-12 subunit p40, is a subunit of human interleukin 12. It is mapped to 5q33.3. This cytokine is expressed by activated macrophages that serve as an essential inducer of Th1 cells development. This cytokine has been found to be important for sustaining a sufficient number of memory/effector Th1 cells to mediate long-term protection to an intracellular pathogen. Overexpression of this gene was observed in the central nervous system of patients with multiple sclerosis (MS), suggesting a role of this cytokine in the pathogenesis of the disease.

Overview

Product Name	Anti-IL12B Antibody Picoband®
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-IL12B Antibody Picoband® catalog # A01152-3. Tested in ELISA, IHC, 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	ELISA, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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	E9PU71

Technical Details

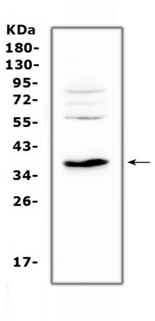
Immunogen	E. coli-derived rat IL12B recombinant protein (Position: M23-E250).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	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.

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

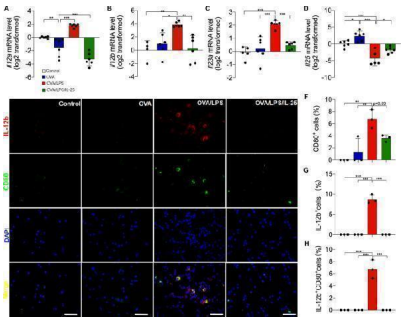
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml ELISA, 0.1-0.5ug/ml

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

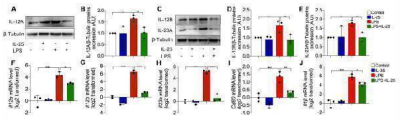
Anti-IL12B Antibody Picoband® (A01152-3) Images



Western blot analysis of IL12B using anti-IL12B antibody (A01152-3). 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 50ug of sample under reducing conditions. Lane 1: rat kidney tissue lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-IL12B antigen affinity purified polyclonal antibody (Catalog # A01152-3) at 0.5 ug/mL overnight at 4 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 1.5 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 IL12B at approximately 37-45KD. The expected band size for IL12B is at 37KD.

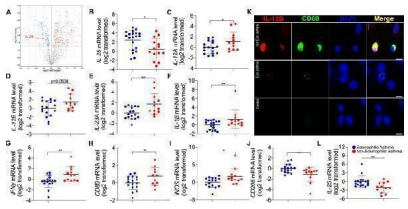


IL-25 inhibited the production of IL-12, IL-23 in amouse model of of neutrophilia-dominant airway inflammation. (A - D) Measurement of Il12a , Il12b , Il23a and Il25 mRNA levels in mouse lung tissue using RT-PCR. (E) Representative images of IL-12B and CD80 immunofluorescence staining in mouse lung sections. Scale bar, 50 um. (F) The proportion of CD80 staining-positive cells in mouse lung sections in different groups. (G) The proportion of IL-12B staining-positive cells in mouse lung sections in different groups. (H) The proportion of CD80 and IL-12B staining-positive cells in mouse lung sections in different groups. There were 4–6 mice in each group. One-way ANOVA was used for statistical analysis (* P<0.05; ** P<0.01; *** P<0.001) Index in PubMed under a CC BY license. PMID: 37898756

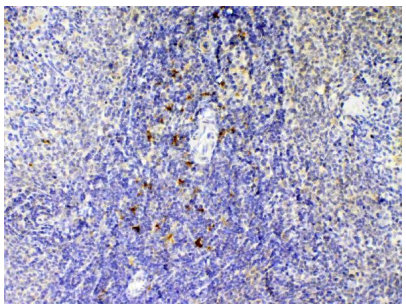


Exogenous IL-25 inhibited LPS-induced M1 polarization and the expression of IL-12 and IL-23 in mouse pulmonary cells. (A) Representative Western blots showing IL-12 A and beta-Tubulin protein in primary culture of mouse pulmonary macrophages. (B) Quantitative analysis of IL-12 A in mouse pulmonary macrophages using ImageJ. Values are expressed in arbitrary units (a.u.). (C) Representative Western blots showing IL-12B, IL-23 A, and beta-Tubulin protein in mouse pulmonary macrophages. (D - E) Quantitative analysis IL-12B, and IL-23A in mouse pulmonary macrophages using ImageJ. (F - J) Detection of Il12a, Il12b, Il23a, Cd80 , and Il-1beta mRNA level in mouse pulmonary macrophages using RT-PCR. The experiment was repeated 3 times independently, and a similar trend was obtained. One-way ANOVA was used for statistical analysis (* P<0.05; ** P<0.01; *** P<0.001) Index in PubMed under a CC BY license. PMID: 37898756

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com



The expression of IL-25 was decreased whereas IL-12, IL-23, and M1 macrophage markers were increased in severe of non-eosinophilic asthmatics. (A) IL-25 protein levels were decreased in sputum from a cohort of non-smoker severe asthma in the U-BIOPRED study. Based on the analysis of the data provided by Takahashi et al. [ ], 158 downregulated and 187 upregulated proteins were identified in the supernatant of induced sputum from non-smoker severe asthma patients (n = 37) compared to controls (n = 18) by proteomic assay and were shown in the volcano plot. The protein level of IL-25 (indicated by the red arrow) was decreased in the supernatant of induced sputum from non-smoker severe asthma patients compared to controls (log2 of fold change = -0.274, P = 0.019). (B) Detection of IL-25 mRNA level in airway brushings of eosinophilic asthma (n = 20) and non-eosinophilic asthma (n = 14) by RT-PCR. (C - E) Detection of IL-12 A, IL-12B and IL-23 A mRNA level in induced sputum of eosinophilic asthma (n = 17) and non-eosinophilic asthma (n = 12) by RT-PCR. (F - J) Detection of I L-1beta, IFN-gamma, CD80, iNOS , and CD206 mRNA level in induced sputum of eosinophilic asthma (n = 17) and non-eosinophilic asthma (n = 12) by RT-PCR. (K) Representative images of IL-12B and CD80 immunofluorescence staining in BALF cells of control, eosinophilic asthma, and non-eosinophilic asthma. Scale bar, 5 um. (L) Detection of IL-25 mRNA level in induced sputum of eosinophilic asthma (n = 17) and non-eosinophilic asthma (n = 12) by RT-PCR. One way ANOVA was used for statistical analysis. (* P<0.05; ** P<0.01; *** P<0.001) Index in PubMed under a CC BY license. PMID: 37898756



IHC analysis of IL12B using anti-IL12B antibody (A01152-3).IL12B was detected in paraffin-embedded section of rat spleen tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-IL12B Antibody (A01152-3) overnight at 4 Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

3 Publications Citing This Product

1. PubMed ID: 10.1111/j.1582-4934.2009.00806.x, Anti‐arthritis activity of cationic materials

2. PubMed ID: 19538477, Anti-arthritis activity of cationic materials

3. PubMed ID: 27074905, Re-polarizing Myeloid-derived Suppressor Cells (MDSCs) with Cationic Polymers for Cancer Immunotherapy

Visit bosterbio.com/anti-il12b-picoband-trade-antibody-a01152-3-boster.html to see all 3 publications.

Submit a product review to Biocompare.com

BOSTER BIOLOGICAL TECHNOLOGY
3942 B Valley Ave, Pleasanton, CA 94566
888-466-3604 | support@bosterbio.com | www.bosterbio.com

Anti-IL12B Antibody

For Research Use Only. Not for use in diagnostic procedures.