

Anti-IFN gamma Antibody Picoband®

Catalog Number: RP1002

About IFNG

Interferon-gamma (IFN-gamma) is an inflammatory cytokine that has been implicated in the development of fibrosis in inflamed tissues. The production of IFN-gamma, which is under genetic control, can influence the development of fibrosis in lung allografts. IFN-gamma is also produced by natural killer (NK) cells and most prominently by CD8 cytotoxic T cells, and is vital for the control of microbial pathogens. Interferon gamma is believed to be crucial for host defence against many infections. Genetically determined variability in IFN-gamma and expression might be important for the development of tuberculosis. IFN-gamma activates human macrophage oxidative metabolism and antimicrobial activity. In addition to having antiviral activity, IFN-gamma has important immunoregulatory functions. IFN-gamma plays an important role in the control of neointima proliferation.

Overview

Product Name	Anti-IFN gamma Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-IFN gamma Antibody catalog # RP1002. Tested in IHC, WB applications. This antibody reacts with Human. 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	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Na ₃ N. Carrier free (No BSA) form available in stock. If you want this antibody carrier free please specify "Carrier Free" or "No BSA" in your order note.
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	P01579

Technical Details

Immunogen	E. coli-derived human IFN gamma recombinant protein (Position: Q24-Q166).
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

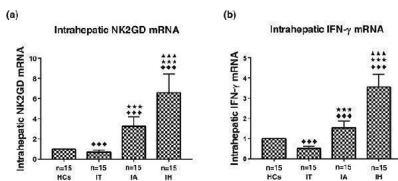
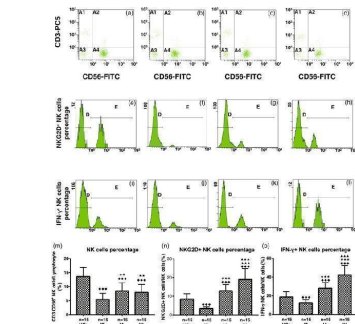
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human ELISA , 0.1-0.5ug/ml, Human, - Western blot, 0.1-0.5ug/ml, Human

Anti-IFN gamma Antibody Picoband® (RP1002) Images

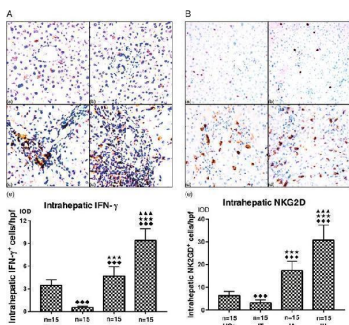


Figure . Western blot analysis of IFN gamma using anti-IFN gamma antibody (RP1002). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane: Recombinant Human IFN gamma Protein 0.5ng 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-IFN gamma antigen affinity purified polyclonal antibody (Catalog # RP1002) 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 1:10000 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 IFN gamma at approximately 17KD. The expected band size for IFN gamma is at 17KD.

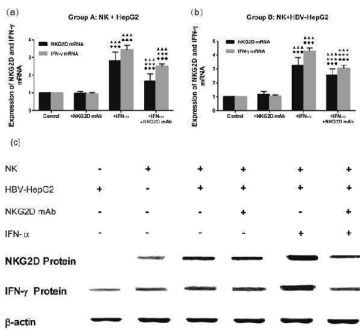
Percentages of NK (CD3 – CD56 +) cells (a - d , m) in PBMC, NK cell group 2D receptor (NKG2D) + (e - h , n) and IFN-gamma + (i - l , o) NK cells within total NK cells. HCs, healthy controls; IT, chronic HBV carriers; IA, CHB patients; IH, HBV-ACLF patients. Student-Newman-Keuls q test following one-way ANOVA were used for comparing percentages of NK cells, and Nemenyi test following Kruskal-Wallis H test were used for comparing percentages of NKG2D + and IFN-gamma + NK cells between two groups. Compared with HCs group, ◆◆◆◆ P



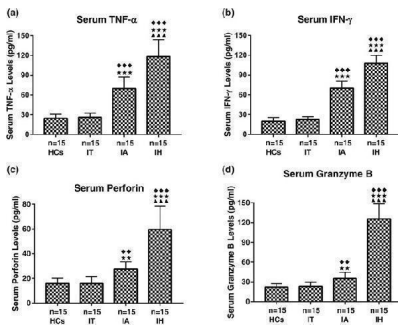
Intrahepatic expression of NKG2D mRNA (a) and IFN-gamma mRNA (b). HCs, healthy controls (the relative expression were defined as 1.00); IT, chronic HBV carriers; IA, CHB patients; IH, HBV-ACLF. Nemenyi test following Kruskal-Wallis H test were used for comparing mRNA expressions of NKG2D and IFN-gamma between two groups. Compared with HCs group, ◆◆◆◆ P



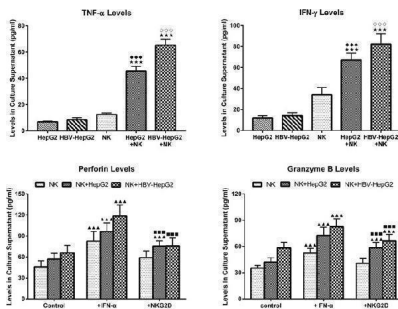
Representative graphs of intrahepatic IFN-gamma + cells (A, 200×) and NKG2D + cells (B, 200×) expressions. (a) HCs, healthy controls, (b) IT, chronic HBV carriers, (c) IA, CHB patients, (d) IH, HBV-ACLF patients. (e) Collective analysis of results from all 4 groups. IFN-gamma + cells were distributed mainly in the inflammatory sites and periportal areas that were infiltrated with lymphocytes. NKG2D + cells were mainly distributed in Disse's space of hepatic lobule in HCs and chronic HBV carriers, and mainly in periportal areas in CHB and HBV-ACLF group. Nemenyi test following Kruskal-Wallis H test were used for comparing intrahepatic IFN-gamma + and NKG2D + cells expressions between two groups. Compared with HCs group, ◆◆◆◆ P



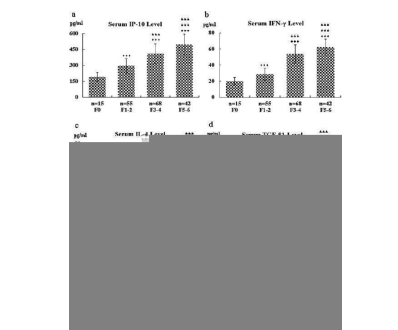
Analysis of NKG2D and IFN-gamma mRNA levels in co-cultured cells (NK + HepG2/HBV-HepG2) of Group A (a, NK + HepG2) and Group B (b, NK + HBV-HepG2). Nemenyi test following Kruskal-Wallis H test were used for comparing mRNA expressions of NKG2D and IFN-gamma between two compared groups. Compared with Control group (NK + HepG2 or NK + HBV-HepG2), ◆◆◆ P



Serum Levels of IFN-gamma, TNF-alpha, perforin and granzyme B in different clinical stages of chronic HBV-infected patients. HCs, healthy controls; IT, chronic HBV carriers; IA, CHB patients; IH, HBV-ACLF. Nemenyi test following Kruskal-Wallis H test were used for comparing IFN-gamma, TNF-alpha, perforin and granzyme B levels between two compared groups. Compared with HCs group, ◆◆◆ P

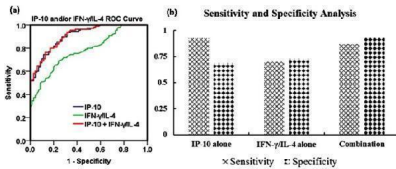
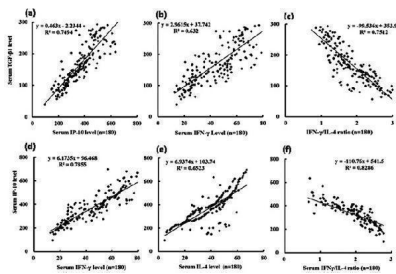


Levels of TNF-alpha (a) and IFN-gamma (b) in the supernatants with or without co-cultured NK cells. Student-Newman-Keuls q test following one-way ANOVA were used for comparing IFN-gamma, TNF-alpha, perforin and granzyme B levels between two compared groups. Compare with HepG2 cells group, ◆◆◆ P

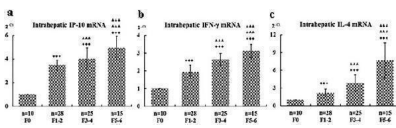


Serum levels of IP-10, IFN-gamma, IL-4, and TGF-beta1 as well as the IFN-gamma/IL-4 ratio in chronic hepatitis B patients with or without fibrosis. The levels of serum IP-10, IFN-gamma, IL-4, and TGF-beta1 in CHB patients with or without liver fibrosis were determined by ELISA, and the IFN-gamma/IL-4 ratio was calculated. ◆◆◆ Differs from controls (the F0 group), P<0.05; ★★ ★ differs from mild or minimal fibrosis (the F1-2 group), P<0.05; ▲▲ ▲ differs from moderate fibrosis (the F3-4 group), P<0.05. (a) IP-10; (b) IFN-gamma; (c) IL-4; (d) TGF-beta1; (e) the IFN-gamma/IL-4 ratio. Index in PubMed under a CC BY license. PMID: 28067328

Statistical analysis of the correlation between the serum IP-10 level or the IFN-gamma/IL-4 ratio with liver fibrosis among chronic hepatitis B patients. Spearman's correlation analysis of the association between (a) IP-10; (b) IFN-gamma; (c) the IFN-gamma/IL-4 ratio and TGF-beta1. Spearman's correlation analysis of the association between serum (d) IFN-gamma; (e) IL-4; (f) the IFN-gamma/IL-4 ratio and IP-10. Index in PubMed under a CC BY license. PMID: 28067328



ROC curve analysis for evaluating the sensitivity and specificity of the IP-10 level, IFN-gamma/IL-4 ratio, or their combination to predict significant fibrosis among CHB patients. (a) ROC curve analysis for serum IP-10 (with the cut-of f value of 300 pg/mL), the serum IFN-gamma/IL-4 ratio (with the cut off value of 1.8), and the combination of IP-10 and the IFN-gamma/IL-4 ratio; (b) Specificity and sensitivity for IP-10, the IFN-gamma/IL-4 ratio, and their combination to predict significant liver fibrosis among patients with CHB. Index in PubMed under a CC BY license. PMID: 28067328

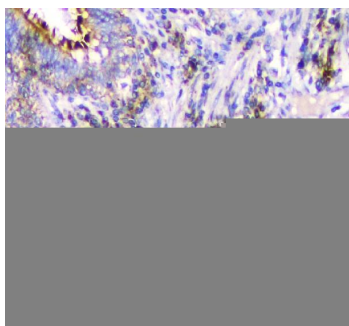


Intrahepatic mRNA levels of IP-10, IFN-gamma, and IL-4 in chronic hepatitis B patients with or without fibrosis. Real-time qRT-PCR was conducted to quantify the mRNA levels of intrahepatic IP-10, IFN-gamma, and IL-4 in the CHB patients without or with fibrosis as described in the Materials and Methods section. The relative mRNA levels of intrahepatic IP-10, IFN-gamma, and IL-4 were calculated by comparative Ct analysis after normalization for the quantity of GAPDH in the same samples and were represented as $2^{-\Delta\Delta Ct}$ values for controls (the F0 group), which were set equal 1. ♦♦♦ Differs from controls (the F0 group), $P < 0.05$; ★★ differs from mild or minimal fibrosis (the F1-2 group), $P < 0.05$; ▲▲ differs from moderate fibrosis (the F3-4 group), $P < 0.05$. (a) IP-10; (b) IFN-gamma; (c) IL-4. Index in PubMed under a CC BY license. PMID: 28067328



Intrahepatic protein expression of IP-10, IFN-gamma, IL-4, TGF-beta1, and alpha-SMA as well as the IFN-gamma/IL-4 ratio in chronic hepatitis B patients with or without fibrosis. The protein expression of intrahepatic (a, b, c, and d) IP-10, (e, f, g, and h) IFN-gamma, and (i, g, k, and l) IL-4. In addition, the protein levels of intrahepatic IP-10, IFN-gamma, IL-4, TGF-beta1, and alpha-SMA were quantified based on the value of integrated optical density (IOD) and represented as histograms, from which the IFN-gamma/IL-4 ratio was calculated. ♦♦♦ Differs from controls (the F0 group), $P < 0.05$; ★★ differs from mild or minimal fibrosis (the F1-2 group), $P < 0.05$; ▲▲ differs from moderate fibrosis (the F3-4 group), $P < 0.05$. Index in PubMed under a CC BY license. PMID: 28067328

IHC analysis of IFN gamma using anti-IFN gamma antibody (RP1002). IFN gamma was detected in a paraffin-embedded section of human lung cancer 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 1 ug/ml rabbit anti-IFN gamma Antibody (RP1002) 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.

5 Publications Citing This Product

1. PubMed ID: 26222793, Somatostatin Improved B Cells Mature in Macaques during Intestinal Ischemia-Reperfusion
2. PubMed ID: 28902929, Women with Recurrent Miscarriage Have Decreased Expression of 25-Hydroxyvitamin D3-1 α -Hydroxylase by the Fetal-Maternal Interface
3. PubMed ID: 25483698, Yan X, Wang D, Liang F, Fu L, Guo C. Hum Vaccin Immunother. 2014;10(12):3491-8. Doi: 10.4161/Hv.36084. Hpv16L1-Attenuated Shigella Recombinant Vaccine Induced Strong Vaginal And Systemic Immune Responses In Guinea Pig Model.

Visit bosterbio.com/anti-human-ifn-gamma-antibody-rp1002-boster.html to see all 5 publications.

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Anti-IFN gamma Antibody

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