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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 Na2HPO4, 0.05mg NaN3. 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

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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

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Anti-IFN gamma Antibody Picoband® (RP1002) Images

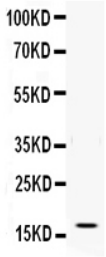
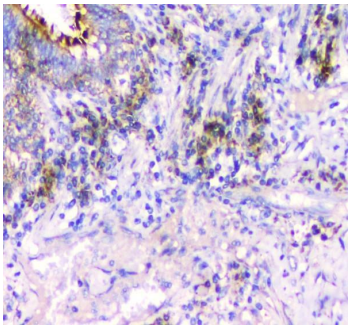
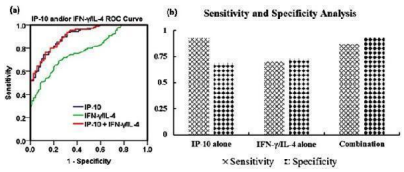


Figure . Western blot analysis of IFN gamma using anti-IFN gamma antibody (RP1002). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane: Recombinant 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.

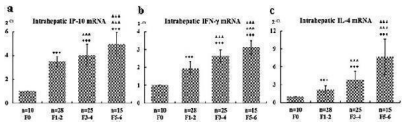


IHC analysis of IFN gamma using anti-IFN gamma antibody (RP1002). IFN gamma was detected in a paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The 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.

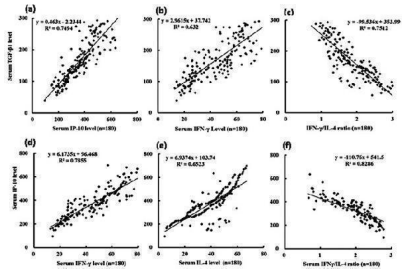


ROC curve analysis for evaluating the sensitivity and specificity of the IP-10 level, IFN-gamma/IL-4 ratio, or their combination to predict significant fibrosis among CHB patients. (a) ROC curve analysis for serum IP-10 (with the cut-of f value of 300 pg/mL), the serum IFN-gamma/IL-4 ratio (with the 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

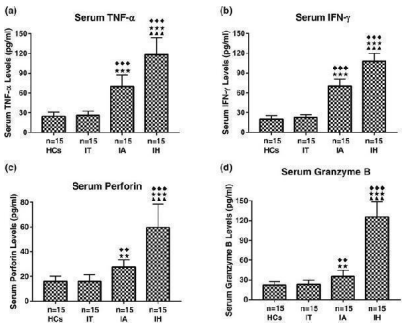
Intrahepatic mRNA levels of IP-10, IFN-gamma, and IL-4 in chronic hepatitis B patients with or without fibrosis. Real-time qRT-PCR was conducted to quantify the mRNA levels of intrahepatic IP-10, IFN-gamma, and IL-4 in the CHB patients without or with fibrosis as described in the Materials and Methods 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



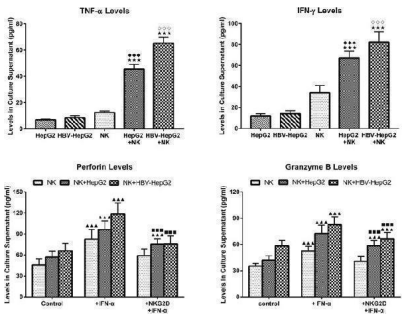
the same samples and were represented as 2 - △ △ Ct values for controls (the F0 group), which were set equal 1. ◆◆◆ Differs from controls (the F0 group), P<0.05; ★ ★ ★ differs from mild or minimal fibrosis (the F1–2 group), P<0.05; ▲▲▲ differs from moderate fibrosis (the F3–4 group), P<0.05. (a) IP-10; (b) IFN-gamma; (c) IL-4. Index in PubMed under a CC BY license. PMID: 28067328



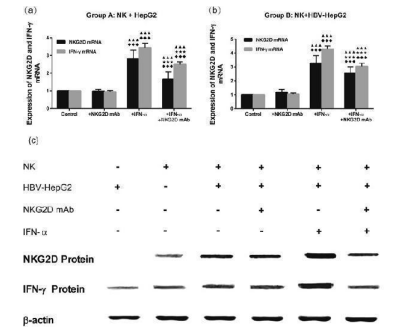
Statistical analysis of the correlation between the serum IP-10 level or the IFN-gamma/IL-4 ratio with liver fibrosis among chronic hepatitis B patients. Spearman's correlation analysis of the association between (a) IP-10; (b) IFN-gamma; (c) the IFN-gamma/IL-4 ratio and TGF-beta1. Spearman's correlation 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



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



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

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

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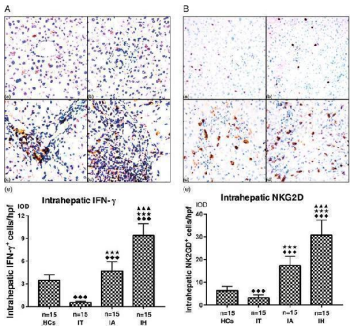
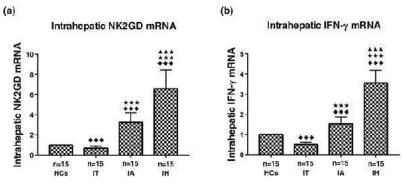
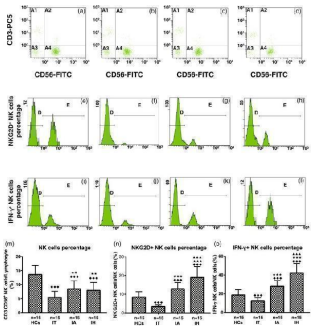


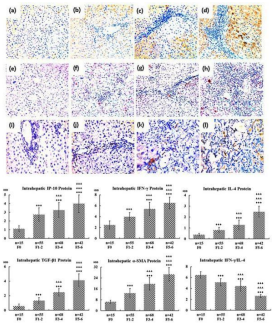
distributed mainly in the inflammatory sites and periportal areas that were infiltrated with lymphocytes. NKG2D + cells were mainly distributed in Disse's space of hepatic lobule in HCs and chronic HBV carriers, and mainly in periportal areas in CHB and HBV-ACLF group. Nemenyi test following Kruskal-Wallis H test were used for comparing intrahepatic IFN-gamma + and NKG2D + cells expressions between two groups. Compared with HCs group, ◆ ◆ ◆ P



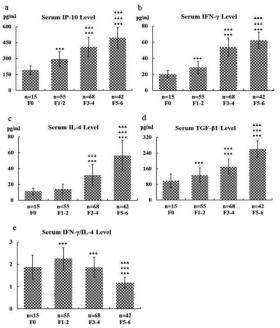
Intrahepatic expression of NKG2D mRNA (a) and IFN-gamma mRNA (b). HCs, healthy controls (the relative expression were defined as 1.00); IT, chronic HBV carriers; IA, CHB patients; IH, HBV-ACLF. Nemenyi test following Kruskal-Wallis H test were used for comparing mRNA expressions of NKG2D and IFN-gamma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



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 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



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

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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?-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.

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