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BOSTER BIOLOGICAL TECHNOLOGY
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Anti-PF4 Antibody Picoband®

Catalog Number: PB10012

About Pf4

Platelet factor 4 (PF4) is a small cytokine belonging to the CXC chemokine family that is also known as chemokine (C-X-C motif) ligand 4 (CXCL4). By in situ hybridization, the CXCL4 gene is mapped to chromosome 4q12-q21. Its major physiologic role appears to be neutralization of heparin-like molecules on the endothelial surface of blood vessels, thereby inhibiting local antithrombin III activity and promoting coagulation. As a strong chemoattractant for neutrophils and fibroblasts, PF4 probably has a role in inflammation and wound repair.

Overview

Product Name	Anti-PF4 Antibody Picoband®
Reactive Species	Mouse
Description	Boster Bio Anti-PF4 Antibody Picoband® catalog # PB10012. Tested in ELISA, IHC, WB applications. This antibody reacts with Mouse. 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 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	Q9Z126

Technical Details

Immunogen	E. coli-derived mouse PF4 recombinant protein (Position: V30-S105). Mouse PF4 shares 74.3% and 86.8% amino acid (aa) sequence identity with human and rat PF4, respectively.
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.

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Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Mouse Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Mouse ELISA, 0.1-0.5ug/ml, -

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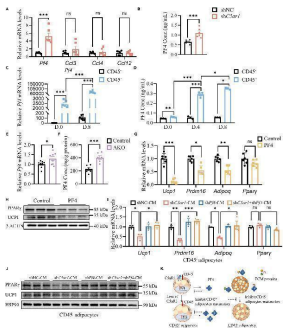
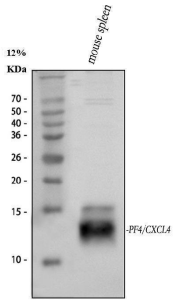
Anti-PF4 Antibody Picoband® (PB10012) Images



C5ar1 knockdown in CD45+ brown adipocytes promote PF4 release to inhibit brown adipocyte maturation. (A) Relative mRNA expression of the cytokines genes (Pf4, Ccl3, Ccl4, Ccl12) of C5ar1 knockdown differentiated CD45+ adipocytes compared to the control group (n = 6). (B) The concentration of PF4 in the supernatant of C5ar1 knockdown differentiated CD45+ adipocytes compared to the control group (n = 3). (C) Pf4 mRNA expression in differentiated CD45− and CD45+ adipocytes (n = 6). (D) Concentration of PF4 in the supernatant of differentiated CD45− and CD45+ adipocytes (n = 3). (E) Pf4 mRNA expression of BAT from Control and C5ar1 AKO neonatal mice (n = 8). (F) Concentration of PF4 in BAT of Control and C5ar1 AKO neonatal mice (n = 6). (G) Relative mRNA expression of the indicated genes of adipocyte differentiation of CD45− ASCs cultured without or with 20 ng/mL PF4 (n = 6). (H) Immunoblotting for UCP1 and PPARgamma of adipocyte differentiation of CD45− ASCs cultured without or with 20 ng/mL PF4 (n = 3). (I) Relative mRNA expression of the indicated genes from adipocyte differentiation of CD45− ASCs cultured in conditioned media from shNC, shC5ar1, shPf4 or shC5ar1+shPf4 CD45+ adipocytes (n = 3). (J) Immunoblotting for UCP1 and PPARgamma of adipocyte differentiation of CD45− ASCs cultured in conditioned media from shNC, shC5ar1, shPf4 or shC5ar1+shPf4 CD45+ adipocytes (n = 3). (K) Graphical abstract of this study: The loss of C5ar1 in CD45+ adipocytes increased Pf4 mRNA level and increased the secretion of PF4. PF4 inhibited the maturity and thermogenesis ability of both CD45+ and CD45− adipocytes. Statistical significance was assessed by two-tailed Student’s t test (A–G) or one-way ANOVA (I). Data are represented as mean ± SEM ∗ ≤0.05, ∗∗ ≤0.01, ∗∗∗ ≤0.005. Index in PubMed under a CC BY license. PMID: 39758991



Western blot analysis of PF4 using anti-PF4 antibody (PB10012). 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: mouse spleen tissue 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-PF4 antigen affinity purified polyclonal antibody (Catalog # PB10012) 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 PF4 at approximately 11 kDa. The expected band size for PF4 is at 11 kDa.

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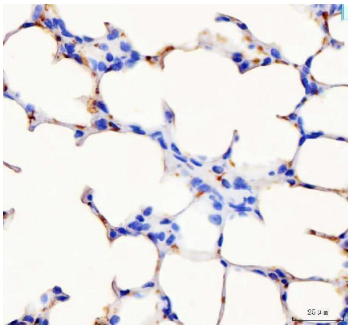

IHC analysis of PF4 using anti-PF4 antibody (PB10012). PF4 was detected in a paraffin-embedded section of mouse lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-PF4 Antibody (PB10012) 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.

Anti-PF4 Antibody

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