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Anti-CXCR3 Antibody Picoband®

Catalog Number: PB9079

About CXCR3

Chemokine receptor CXCR3 is a Galphai protein-coupled receptor in the CXC chemokine receptor family. Other names for CXCR3 are G protein-coupled receptor 9 (GPR9) and CD183. It is mapped to Xq13.1. CXCR3 is expressed on malignant B cells from chronic lymphoproliferative disorders, particularly in patients with CLL, and represents a fully functional receptor involved in chemotaxis of malignant B lymphocytes. It is found that in the absence of known etiologic agents, CXCR3 represents a novel target for therapeutic interference early in type 1 diabetes. CXCR3 signaling is associated with MG pathogenesis and proposed that and CXCR3 may serve as novel drug targets to treat MG. CXCR3A and CXCR3B are involved in the chemotactic and vascular effects of CXCL4L1.

Overview

Product Name	Anti-CXCR3 Antibody Picoband®
Reactive Species	Human, Rat
Description	Boster Bio Anti-CXCR3 Antibody Picoband® catalog # PB9079. Tested in IHC, WB applications. This antibody reacts with Human, 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	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na2HPO4, and 0.05 mg NaN3. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
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	P49682

Technical Details

Immunogen	E.coli-derived human CXCR3 recombinant protein (Position: M1-L368). Human CXCR3 shares 86% amino acid (aa) sequence identity with both mouse and rat CXCR3.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western

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	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, Rat Western blot, 0.1-0.5ug/ml, Human

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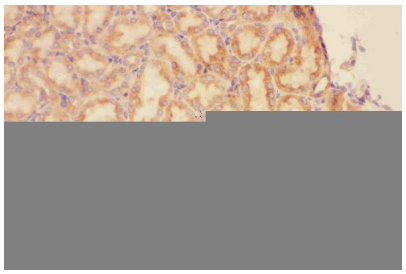
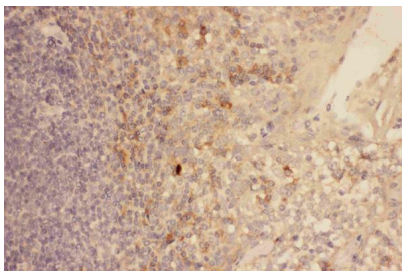
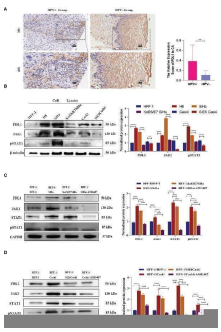
Anti-CXCR3 Antibody Picoband® (PB9079) Images



IHC analysis of CXCR3 using anti-CXCR3 antibody (PB9079). CXCR3 was detected in a paraffin-embedded section of rat kidney 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-CXCR3 Antibody (PB9079) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IHC analysis of CXCR3 using anti-CXCR3 antibody (PB9079). CXCR3 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 1 ug/ml rabbit anti-CXCR3 Antibody (PB9079) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



Through transwell co-culture with HPV+ cells (SiHa and Caski), PD-L1 expression in HFF-1 cells were induced by CXCL10-CXCR3 interaction, while were decreased after co-culture with the HPV+ cells which E6 and E7 has been knocked down or treatment with AMG487. (A) Immunohistochemistry revealed that the expression of PD-L1 had a strong relationship with HPV infection in cervix tissues, which showed the higher expression of PD-L1 in CSCC (HPV+ Group) than that of a normal cervical epithelium (HPV- Group); (B) The expression of PD-L1, JAK1 and pSTAT1 in different cells was tested by western blotting. The band intensities were calculated using the ImageJ software. GAPDH was used as an internal control for the total protein measurement. The ratio of the target gene to GAPDH was used to conduct the statistical analysis. (C, D) . Compared to the co-culture with HFF-1 cells, the expression levels of PD-L1, JAK1 and pSTAT1 in HFF-1 cells were all upregulated following co-culture with HPV+ cells (SiHa, Caski) while the upregulation of JAK1 and pSTAT1 were diminished after co-culture with koE6/E7Siha and SiE6Caski cells or treatment with AMG487 using the 0.4 μm polycarbonate membrane transwell assay, in which cells could not pass through. *P < 0.05, **P < 0.01, ***P

CXCL10-CXCR3 upregulated PD-L1 expression by activating the JAK1-STAT pathway in HPV+ cervical cancer cells and tissues. (A) Map of chemokine signaling pathways generated by KEGG pathway analysis in DAVID by RNA-seq from

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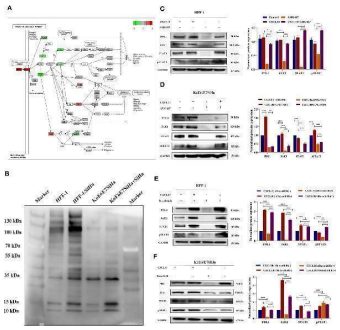
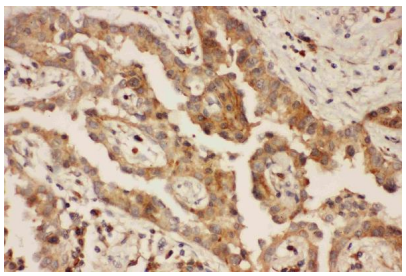


Aksomics company; (B) The results of pan-phosphorylation western blot detection on the cells including HFF-1, HFF-1 co-cultured with SiHa, KoE6/E7 SiHa, and KoE6E7SiHa co-cultured with SiHa cells. (C–F) The expression of PD-L1, JAK1 and STAT1 in HFF-1 or KoE6/E7 SiHa cells after treatment with recombinant human CXCL10, AMG487 or ruxonitilib, to further verify the HPV E6/E7 can induce upregulated expression of PD-L1 in CSCC through CXCL10 binding to CXCR3 which leads to JAK-STAT pathway activation. *P < 0.05, **P < 0.01, ***P



IHC analysis of CXCR3 using anti-CXCR3 antibody (PB9079). CXCR3 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-CXCR3 Antibody (PB9079) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

Western blot analysis of CXCR3 using anti-CXCR3 antibody (PB9079). 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 Colo320 whole cell lysates, Lane 2: human SGC 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-CXCR3 antigen affinity purified polyclonal antibody (Catalog # PB9079) 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 CXCR3 at approximately 41 kDa. The expected band size for CXCR3 is at 41 kDa.

5 Publications Citing This Product

1. PubMed ID: 10.3389/fonc.2021.629350, CXCL10 Produced by HPV-Positive Cervical Cancer Cells Stimulates Exosomal PDL1 Expression by Fibroblasts via CXCR3 and JAK-STAT Pathways

2. PubMed ID: 10.1016/j.biopha.2019.109735, Bu-Shen-Fang-Chuan formula attenuates T-lymphocytes recruitment in the lung of rats with COPD through suppressing CXCL9/CXCL10/CXCL11-CXCR3 axis

3. PubMed ID: 31864210, Li Q,Sun J,Cao Y,Liu B,Li L,Mohammadtursun N,Zhang H,Dong J,Wu J.Bu-Shen-Fang-Chuan formula attenuates T-lymphocytes recruitment in the lung of rats with COPD through suppressing CXCL9/CXCL10/CXCL11-CXCR3 axis.Biomed Pharmacother.2020 Mar;123:109735.doi:1

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Anti-CXCR3 Antibody

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