

Anti-MMP9 Antibody Picoband™

Catalog Number: PB9668

About MMP9

Matrix metalloproteinase 9 (MMP-9), also known as 92 kDa type IV collagenase, 92 kDa gelatinase or gelatinase B (GELB), is an enzyme that in humans is encoded by the MMP9 gene. Proteins of the matrix metalloproteinase (MMP) family are involved in the breakdown of extracellular matrix in normal physiological processes. Most MMPs are secreted as inactive proproteins which are activated when cleaved by extracellular proteinases. The enzyme encoded by this gene degrades type IV and V collagens. Studies in rhesus monkeys suggest that the enzyme is involved in IL-8-induced mobilization of hematopoietic progenitor cells from bone marrow, and murine studies suggest a role in tumor-associated tissue remodeling.

Overview

Product Name	Anti-MMP9 Antibody Picoband™
Reactive Species	Human
Description	Boster Bio Anti-MMP9 Antibody Picoband™ catalog # PB9668. Tested in ELISA, IHC, WB applications. This antibody reacts with Human.
Application	ELISA, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
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	P14780

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human MMP-9, different from the related mouse sequence by fourteen amino acids, and from the related rat sequence by sixteen amino acids.
Predicted Reactive Species	Bovine
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	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human ELISA , 0.1-0.5ug/ml, Human,

Anti-MMP9 Antibody Picoband™ (PB9668) Images

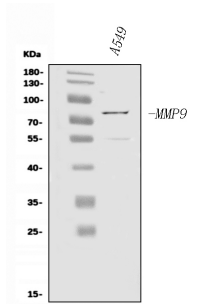


Figure 1. Western blot analysis of MMP9 using anti-MMP9 antibody (PB9668).

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 A549 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-MMP9 antigen affinity purified polyclonal antibody (Catalog # PB9668) 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 MMP9 at approximately 79 kDa. The expected band size for MMP9 is at 79 kDa.

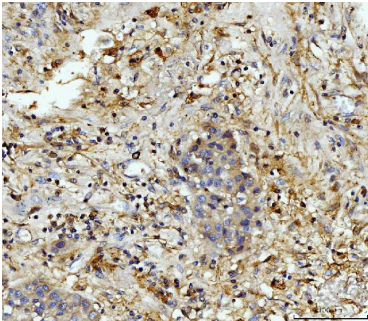


Figure 2. IHC analysis of MMP9 using anti-MMP9 antibody (PB9668).

MMP9 was detected in a paraffin-embedded section of human liver 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-MMP9 Antibody (PB9668) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

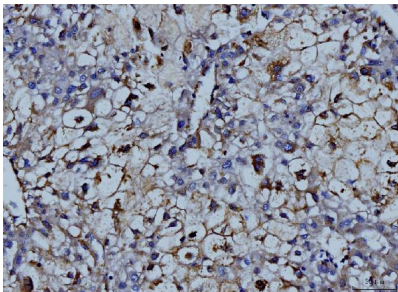
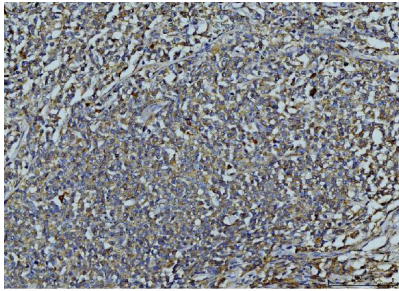


Figure 3. IHC analysis of MMP9 using anti-MMP9 antibody (PB9668).

MMP9 was detected in a paraffin-embedded section of human liver 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-MMP9 Antibody (PB9668) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

Figure 4. IHC analysis of MMP9 using anti-MMP9 antibody (PB9668).

MMP9 was detected in a paraffin-embedded section of human lymphadenoma 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-MMP9 Antibody (PB9668) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

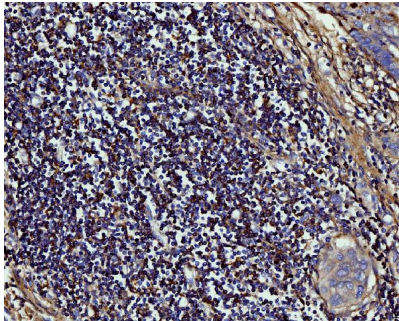


Figure 5. IHC analysis of MMP9 using anti-MMP9 antibody (PB9668).

MMP9 was detected in a paraffin-embedded section of human lymph nodes of gastric adenocarcinoma rectal 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-MMP9 Antibody (PB9668) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

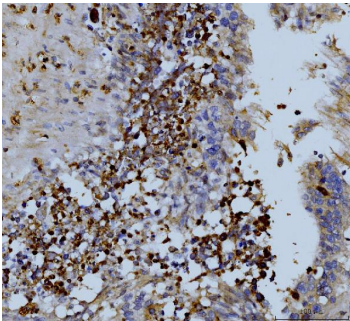


Figure 6. IHC analysis of MMP9 using anti-MMP9 antibody (PB9668).

MMP9 was detected in a paraffin-embedded section of human colonic adenocarcinoma 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-MMP9 Antibody (PB9668) 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 Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

68 Publications Citing This Product

1. PubMed ID: 32777528, Li CH, Liu M, Pan LH, Sun Y. ANP reduced Hedgehog signaling-mediated activation of matrix metalloproteinase-9 in gastric cancer cell line MGC-803. *Gene*. 2020 Dec 15;762:145044. doi:10.1016/j.gene.2020.145044. Epub 2020 Aug 7. PMID:32777528.
2. PubMed ID: 18416455, Li Jk, Yu L, Shen Y, Zhou Ls, Wang Yc, Zhang Jh. World J Gastroenterol. 2008 Apr 21;14(15):2308-13. Inhibition Of Cxcr4 Activity With Amd3100 Decreases Invasion Of Human Colorectal Cancer Cells In Vitro.
3. PubMed ID: 25245263, Zhan X, Jia L, Niu Y, Qi H, Chen X, Zhang Q, Zhang J, Wang Y, Dong L, Wang C. *Biomaterials*. 2014 Dec;35(38):10046-57. Doi: 10.1016/J.Biomaterials.2014.09.007. Epub 2014 Sep 22. Targeted Depletion Of Tumour-Associated Macrophages By An Alendronate-...

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