

Anti-MMP7 Antibody Picoband™

Catalog Number: PB9038

About Mmp7

Matrix metalloproteinase-7 (MMP-7) previously called putative metalloproteinase I (PUMP1) or matrilysin. The MMP-7 gene has been identified through studies of collagenase-related connective-tissue-degrading metalloproteinases produced by human tumors. The MMP-7 protein has 267 amino acids and is significantly shorter than stromelysin or collagenase (477 and 469 amino acids, respectively). Matrix metalloproteinases play a crucial role in tumor invasion and metastasis. MMP-7, a member of the matrix metalloproteinase family, is structurally different from the other matrix metalloproteinases by virtue of the absence of a conserved COOH-terminal protein domain. In addition, MMP-7 mRNA is regulated in a specific and distinct manner in normal and malignant tissues. MMP-7 has been shown to correlate with nodal or distant metastasis in colorectal carcinomas, however, its implication in early invasive colorectal carcinomas has not been determined. MMP-7 is also a mediator of pulmonary fibrosis and a potential therapeutic target. The standard product used in this kit is recombinant human MMP-7, consisting of 250 amino acids with the molecular mass of 28KDa. The detected MMP-7 includes zymogen and active enzyme.

Overview

Product Name	Anti-MMP7 Antibody Picoband™
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-MMP7 Antibody Picoband™ catalog # PB9038. Tested in ELISA, IHC, WB applications. This antibody reacts with Mouse, Rat.
Application	ELISA, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg 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	Q10738

Technical Details

Immunogen	E.coli-derived mouse MMP7 recombinant protein (Position: Y95-L264). Mouse MMP7 shares 71% and 90% amino acid (aa) sequences identity with human and rat MMP7, respectively.
Predicted Reactive Species	Bovine, Horse, Monkey
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: ELISA , 0.1-0.5ug/ml, Mouse, - Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Mouse, Rat, By Heat Western blot, 0.1-0.5ug/ml, Mouse

Anti-MMP7 Antibody Picoband™ (PB9038) Images

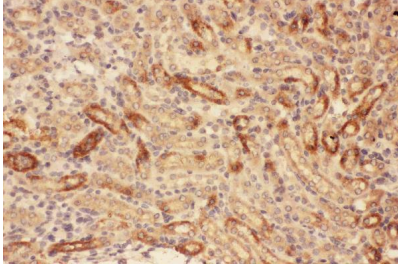


Figure 1. IHC analysis of MMP7 using anti-MMP7 antibody (PB9038).
MMP7 was detected in paraffin-embedded section of mouse kidney tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-MMP7 Antibody (PB9038) 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.

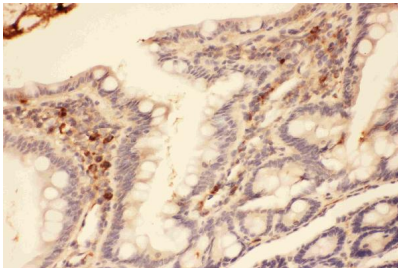


Figure 2. IHC analysis of MMP7 using anti-MMP7 antibody (PB9038).
MMP7 was detected in paraffin-embedded section of rat intestines tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-MMP7 Antibody (PB9038) 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.

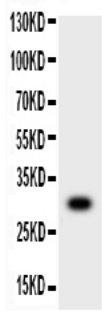


Figure 3. Western blot analysis of MMP7 using anti-MMP7 antibody (PB9038).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: Rat Brain Tissue Lysate.
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-MMP7 antigen affinity purified polyclonal antibody (Catalog # PB9038) 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 MMP7 at approximately 30KD. The expected band size for MMP7 is at 30KD.

9 Publications Citing This Product

1. PubMed ID: 10.3892/mmr.2016.5148, Herbal medicine Gan β fu β kang downregulates Wnt/Ca²⁺ signaling to attenuate liver fibrogenesis in vitro and in vivo

2. PubMed ID: 21109985, Yang Y, Shi H, Li X, Yi Y. Oncol Rep. 2011 Jan;25(1):259-65. Effects Of Shrna Targeting Maspin On Invasion Of Gastric Carcinoma Sgc7901 Cell Line.

3. PubMed ID: 28656209, Hydrogen sulfide reduced renal tissue fibrosis by regulating autophagy in diabetic rats

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