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antibody and ELISA experts

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Anti-MMP2 Antibody Picoband®

Catalog Number: A00286-2

About MMP2

Matrix metalloproteinase-2 (MMP2) is a Type IV collagenase, 72-kD, which is also known as gelatinase and is a member of a group of secreted zinc metalloproteases. The MMP2 gene is 17 kb long with 13 exons varying in size from 110 to 901 bp and 12 introns ranging from 175 to 4,350 bp, located within a region of human chromosome 16q13. In addition, the extra exons encode the amino acids of the fibronectin-like domain which has so far been found in only the 72- and 92-kDa type IV collagenase. MMP2, which has a critical role in the binding of progelatinase A and TIMP4 via the C-terminal hemopexin-like domain (C domain), is functionally associated on the surface of angiogenic blood vessels. Not only is a likely effector of endometrial menstrual breakdown, MMP2 is also effector and regulator of the inflammatory response. Moreover, MMP2 could be helpful in diagnosing Takayasu arteritis.

Overview

Product Name	Anti-MMP2 Antibody Picoband®
Reactive Species	Human, Rat
Description	Boster Bio Anti-MMP2 Antibody Picoband® catalog # A00286-2. Tested in ELISA, Flow Cytometry, 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	ELISA, Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.
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	P08253

Technical Details

Immunogen	E.coli-derived human MMP2 recombinant protein (Position: L411-C660).
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

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Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5ug/ml, Human, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human ELISA, 0.1-0.5ug/ml, -

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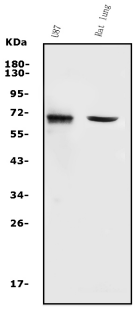
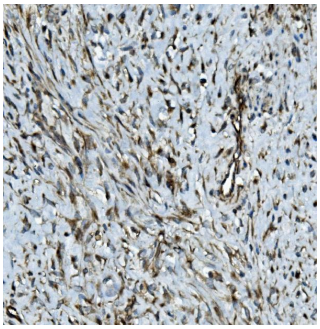
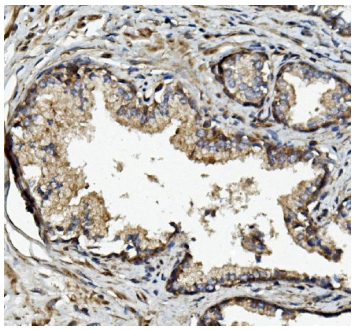
Anti-MMP2 Antibody Picoband® (A00286-2) Images



Western blot analysis of MMP2 using anti-MMP2 antibody (A00286-2). 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: human U87 whole cell lysates, Lane 2: rat lung tissue lysates. 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-MMP2 antigen affinity purified polyclonal antibody (Catalog # A00286-2) 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 MMP2 at approximately 72KD. The expected band size for MMP2 is at 72KD.



IHC analysis of MMP2 using anti-MMP2 antibody (A00286-2). MMP2 was detected in paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-MMP2 Antibody (A00286-2) 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 MMP2 using anti-MMP2 antibody (A00286-2). MMP2 was detected in paraffin-embedded section of human prostatic cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-MMP2 Antibody (A00286-2) 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.

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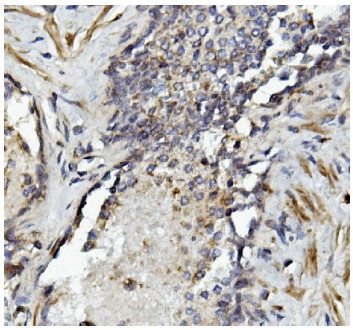

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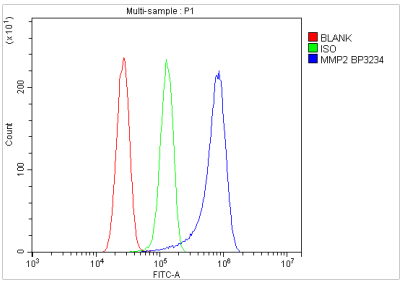
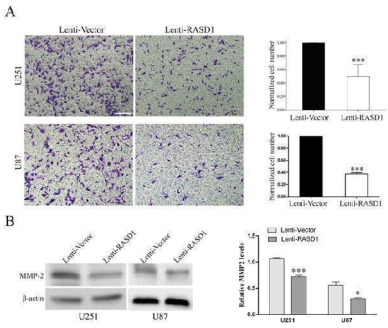
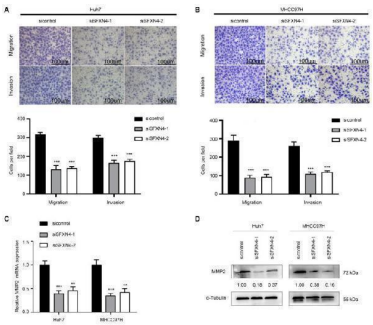


Flow Cytometry analysis of U87 cells using anti-MMP2 antibody (A00286-2). Overlay histogram showing U87 cells stained with A00286-2 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-MMP2 Antibody (A00286-2, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Overexpression of RASD1 inhibits the invasion ability of glioma cells. (A) A transwell invasion assay was performed in U251 and U87 cells. Overexpression of RASD1 significantly decreased the number of cells that passed through the Matrigel. Scale bar: 100 um; *** P



SFXN4 knockdown inhibits HCC migration and invasion. (A-B) Transwell assays were conducted to measure migration and invasion of Huh7 (A) and MHCC97H (B). (C-D) The qRT-PCR and Western blot were performed to detect MMP2 mRNA (C) and protein (D) expression in indicated cells. *** P

Effects of MOIG on adhesion, migration, invasion and the expression of associated proteins of TNF-alpha-stimulated FLSs cells. (A) Adhesion of FLSs cells. (B) and (C) The wound healing of FLSs at 24 and 48 h; (D) and (F) The migration of FLSs at 6 h; (E) and (G) The invasion of FLSs at 24 h; (H–M) the expression of ICAM-1, VCAM-1, cadherin 11, MMP2 and MMP3 of FLSs. The data were expressed as mean ± SD (n =

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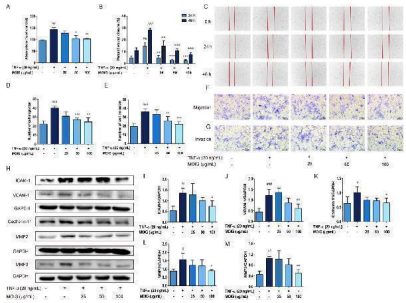

3). # p < 0.05, ## p < 0.01, ### p < 0.001 vs. normal ctrl group; * p < 0.05, ** p < 0.01, *** p < 0.001 vs. TNF-alpha model group.Index in PubMed under a CC BY license. PMID: 39444614

53 Publications Citing This Product

1. PubMed ID: PMID:25337249, Correlations of lysyl oxidase with MMP2/MMP9 expression and its prognostic value in non-small cell lung cancer

2. PubMed ID: 10.1186/s12906-015-0719-z, Effect of Ginkgo biloba extract on experimental cardiac remodeling

3. PubMed ID: 10.3892/or.2016.4707, NOB1 silencing inhibits the growth and metastasis of laryngeal cancer cells through the regulation of JNK signaling pathway

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