

## Anti-MMP2 Antibody Picoband®

Catalog Number: A00286

### 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

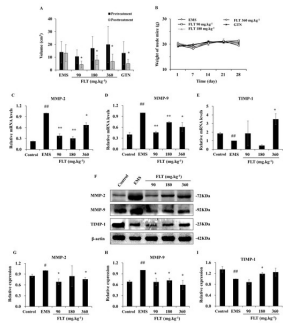
Product Name	Anti-MMP2 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-MMP2 Antibody Picoband® catalog # A00286. Tested in ELISA, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior 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, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> , and 0.05 mg NaN <sub>3</sub> . *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	P08253

### Technical Details

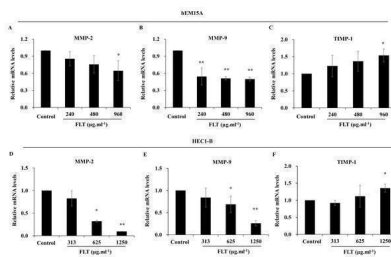
Immunogen	E. coli-derived human MMP2 recombinant protein (Position: K429-C660). Human MMP2 shares 95.7% and 95.3% amino acid (aa) sequence identity with mouse and rat MMP2, respectively.
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Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
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	ELISA, 0.1-0.5ug/ml, - Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat

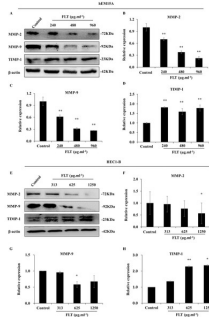
## Anti-MMP2 Antibody Picoband® (A00286) Images



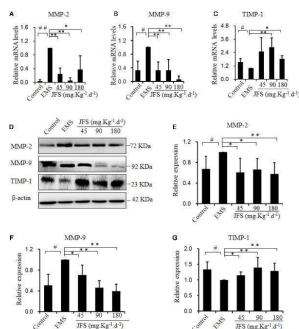
Regulation of FLT on xenograft EMS. (A) Ectopic volume was detected by vernier caliper in xenograft EMS model. GTN was performed as positive control. (B) Weight of nude mice was measured every 7 days during 28 days' treatment. \*  $P < 0.05$  to pretreatment. Columns, mean (  $n = 6$ ). (C-E) Ectopic endometrium of EMS and FLT groups were collected for RNA isolation. Eutopic endometrium of C3H mice without transplantation were supplied as the control group. mRNA levels of MMP-2, MMP-9, and TIMP-1 were detected by qPCR in different groups. (F-I) Protein levels of MMP-2, MMP-9, and TIMP-1 were measured by western blotting, and the ratio of MMP-2, MMP-9, and TIMP-1 with beta-actin were shown. #  $P < 0.05$  to control, ##  $P < 0.01$  to control, \*  $P < 0.05$  to EMS, \*\*  $P < 0.01$  to EMS. Columns, mean (  $n = 3$ ). Bars, SD. EMS, endometriosis; FLT, ferulic acid, ligustrazine and tetrahydropalmatine; GTN, gestrinone. Download full-size image DOI:Index in PubMed under a CC BY license. PMID: 34249506



Gene expression of MMP/TIMP signaling adjusted by FLT for 24h. The mRNA levels of MMP-2, MMP-9, and TIMP-1 were detected by qPCR in hEM15A (A-C) and HEC1-B (D-F) cells. \*  $P < 0.05$  to control group, \*\*  $P < 0.01$  to control group. Columns, mean (  $n = 3$ ). Bars, SD. FLT, ferulic acid, ligustrazine and tetrahydropalmatine. Download full-size image DOI:Index in PubMed under a CC BY license. PMID: 34249506

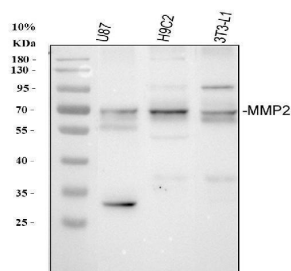


Modification of MMP/TIMP signaling protein treating with FLT for 24h. Protein levels of MMP-2, MMP-9, and TIMP-1 were detected by western blot in hEM15A (A-D) and HEC1-B (E-H) cells. The ratio of MMP-2, MMP-9, and TIMP-1 with beta-actin were shown. \*  $P < 0.05$  to control group, \*\*  $P < 0.01$  to control group. Columns, mean (  $n = 3$ ). Bars, SD. FLT, ferulic acid, ligustrazine and tetrahydropalmatine. Download full-size image DOI:Index in PubMed under a CC BY license. PMID: 34249506



Effect of JFS on invasion and metastasis. (A-C) The mRNA levels of MMP-2, MMP-9, and TIMP-1 were detected by qPCR in different groups. (D-G) The protein levels of MMP-2, MMP-9, and TIMP-1 were detected by western blotting, and the ratio of MMP-2, MMP-9, and TIMP-1 with beta-actin were shown. #  $P < 0.05$  to control, ##  $P < 0.01$  to control, \*  $P < 0.05$  to EMS, \*\*  $P < 0.01$  to EMS. Columns, mean (  $n = 3$ ). Bars, SD. EMS, endometriosis; JFS, Jiawei Foshou San .Index in PubMed under a CC BY license. PMID: 30093862

Western blot analysis of MMP2 using anti-MMP2 antibody



(A00286). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human U87 whole cell lysates, Lane 2: rat H9C2 whole cell lysates, Lane 3: mouse 3T3-L1 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-MMP2 antigen affinity purified polyclonal antibody (A00286) 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 (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for MMP2 at approximately 72 kDa. The expected band size for MMP2 is at 74 kDa.

## 46 Publications Citing This Product

1. PubMed ID: 10.1177/0192623310368983, Nicotine Alters Morphology and Function of Retinal Pigment Epithelial Cells in Mice:
2. PubMed ID: 10.3892/mmr.2021.11833, MicroRNA<sup>153</sup> attenuates hypoxia<sup>2</sup>induced excessive proliferation and migration of pulmonary arterial smooth muscle cells by targeting ROCK1 and NFATc3
3. PubMed ID: 10.2353/ajpath.2009.080846, Decreased TIP30 Expression Promotes Tumor Metastasis in Lung Cancer

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### Anti-MMP2 Antibody

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