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Anti-MMP13 Antibody Picoband®

Catalog Number: A00420

About MMP13

Collagenase 3 is an enzyme that in humans is encoded by the MMP13 gene. This gene encodes a member of the peptidase M10 family of matrix metalloproteinases (MMPs). Proteins in this family are involved in the breakdown of extracellular matrix in normal physiological processes, such as embryonic development, reproduction, and tissue remodeling, as well as in disease processes, such as arthritis and metastasis. The encoded preproprotein is proteolytically processed to generate the mature protease. This protease cleaves type II collagen more efficiently than types I and III. It may be involved in articular cartilage turnover and cartilage pathophysiology associated with osteoarthritis. Mutations in this gene are associated with metaphyseal anadysplasia. This gene is part of a cluster of MMP genes on chromosome 11.

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Overview

Product Name	Anti-MMP13 Antibody Picoband®
Reactive Species	Human, Monkey
Description	Boster Bio Anti-MMP13 Antibody Picoband® catalog # A00420. Tested in WB applications. This antibody reacts with Human, Monkey. 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	WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg 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	P45452

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human MMP13, different from the related mouse sequence by four amino acids, and from the related rat sequence by five

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	amino acids.
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	Western blot, 0.1-0.5ug/ml, Human, Monkey

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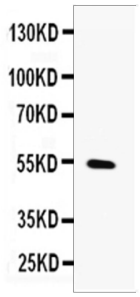
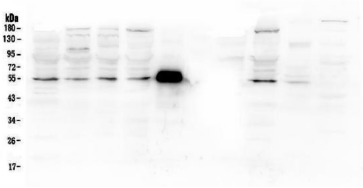
Anti-MMP13 Antibody Picoband® (A00420) Images



Western blot analysis of MMP13 using anti-MMP13 antibody (A00420). 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: HELA whole cell 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-MMP13 antigen affinity purified polyclonal antibody (Catalog # A00420) 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 MMP13 at approximately 54KD. The expected band size for MMP13 is at 54KD.



Western blot analysis of MMP13 using anti-MMP13 antibody (A00420). 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 PC-3 whole cell lysates, Lane 2: human U20S whole cell lysates, Lane 3: human A549 whole cell lysates, Lane 4: human HEK293 whole cell lysates. Lane 5: Rabbit IgG(55KD), Lane 6: Marker 1113 Lane 7: human MDA-MB-453 whole cell lysates, Lane 8: monkey COS-7 whole cell lysates, Lane 9: rat lung tissue lysates, Lane 10: mouse 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-MMP13 antigen affinity purified polyclonal antibody (Catalog # A00420) 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 MMP13 at approximately 54KD. The expected band size for MMP13 is at 54KD.

5 Publications Citing This Product

1. PubMed ID: 24987434, Huang Gf, Zou J, Shi J, Zhang Dy, Pen Hf, Zhang Q, Gao Y, Wang By. Evid Based Complement Alternat Med. 2014;2014:731395. Doi: 10.1155/2014/731395. Epub 2014 May 27. The Effect Of Electroacupuncture On The Extracellular Matrix Synthesis And Degrada...

2. PubMed ID: 26445328, Protective effects of tumor necrosis factor-? blockade by adalimumab on articular cartilage and subchondral bone in a rat model of osteoarthritis

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3. PubMed ID: 26622502, Effects of ultrasound on estradiol level, bone mineral density, bone biomechanics and matrix metalloproteinase-13 expression in ovariectomized rabbits

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Anti-MMP13 Antibody

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