Datasheet for ABIN5693125

anti-MMP13 antibody (AA 99-335)

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Overview

Quantity:	100 µg
Target:	MMP13
Binding Specificity:	AA 99-335
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This MMP13 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), ELISA

Product Details

Brand:	Picoband™
Immunogen:	E. coli-derived rat MMP13 recombinant protein (Position: Y99-H335).
Cross-Reactivity (Details):	No cross reactivity with other proteins.
Characteristics:	Rabbit IgG polyclonal antibody for MMP13 detection. Tested with WB, IHC-P, Direct ELISA in Human,Mouse,Rat.

Target Details

Target:	MMP13
Alternative Name:	Mmp13 (MMP13 Products)
Background:	Synonyms: Collagenase 3, Matrix metalloproteinase-13, MMP-13, UMRCASE, Mmp13

Target Details

	Background: 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.
UniProt:	P23097

Application Details

Application Notes:	Recommended Detection Systems: Enhanced Chemiluminescent Kit with anti-Rabbit IgG (ABIN921124) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P). Application Details: Western blot, 0.1-0.5 µg/mL Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/mL Direct ELISA, 0.1-0.5 µg/mL
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Add 0.2 mL of distilled water will yield a concentration of 500 µg/mL.
Buffer:	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na_2HPO_4, 0.05 mg NaN_3.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Publications

Product cited in:

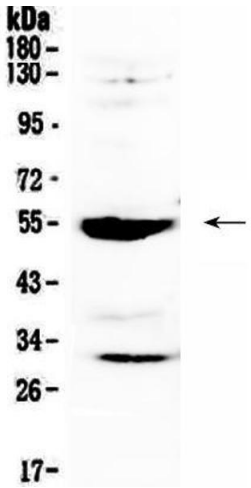
Ma, Lv, Yu, Zhang, Kong, Niu, Yi: "Protective effects of tumor necrosis factor-α blockade by adalimumab on articular cartilage and subchondral bone in a rat model of osteoarthritis." in: **Brazilian journal of medical and biological research = Revista brasileira de pesquisas medicas e biologicas**, Vol. 48, Issue 10, pp. 863-70, (2016) (PubMed).

Liu, Tian, Zhou, Wang, Gou, Zhang, Wang, Shen, Zhang, Zhang: "Protective effect of calcitonin on lumbar fusion-induced adjacent-segment disc degeneration in ovariectomized rat." in: **BMC musculoskeletal disorders**, Vol. 16, pp. 342, (2016) (PubMed).

Xia, He, Guo, Qing, He: "Effects of ultrasound on estradiol level, bone mineral density, bone biomechanics and matrix metalloproteinase-13 expression in ovariectomized rabbits." in: **Experimental and therapeutic medicine**, Vol. 10, Issue 4, pp. 1429-1436, (2015) (PubMed).

Huang, Zou, Shi, Zhang, Pen, Zhang, Gao, Wang: "The effect of electroacupuncture on the extracellular matrix synthesis and degradation in a rabbit model of disc degeneration." in: **Evidence-based complementary and alternative medicine : eCAM**, Vol. 2014, pp. 731395, (2014) (PubMed).

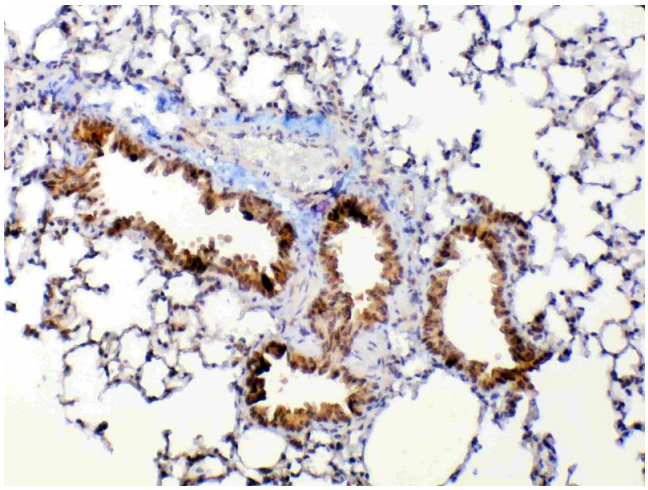
Images



Western Blotting

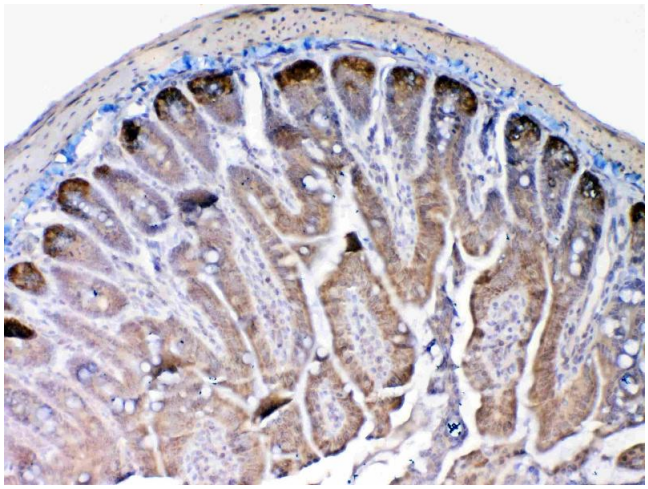
Image 1. Western blot analysis of MMP13 using anti-MMP13 antibody . Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each Lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat RH35 cell lysates.After 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 #) at 0.5 µg/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.



Immunohistochemistry

Image 2. IHC analysis of MMP13 using anti-MMP13 antibody . MMP13 was detected in paraffin-embedded section of mouse lung tissue. 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 1µg/ml rabbit anti-MMP13 Antibody 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.



Immunohistochemistry

Image 3. IHC analysis of MMP13 using anti-MMP13 antibody . MMP13 was detected in paraffin-embedded section of mouse small intestine tissue. 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 1µg/ml rabbit anti-MMP13 Antibody 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.

Please check the product details page for more images. Overall 5 images are available for ABIN5693125.