

Anti-MMP2 Picoband Antibody

Catalog # ABO10048

Product Information

Application	WB, E
Primary Accession	P08253
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for 72 kDa type IV collagenase(MMP2) detection. Tested with WB, ELISA in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	4313
Other Names	72 kDa type IV collagenase, 3.4.24.24, 72 kDa gelatinase, Gelatinase A, Matrix metalloproteinase-2, MMP-2, TBE-1, PEX, MMP2, CLG4A
Calculated MW	73882
Application Details	ELISA , 0.1-0.5 μ g/ml, Human, - Western blot, 0.1-0.5 μ g/ml, Human, Mouse, Rat
Subcellular Localization	Isoform 1: Secreted, extracellular space, extracellular matrix. Membrane. Nucleus. Colocalizes with integrin alphaV/beta3 at the membrane surface in angiogenic blood vessels and melanomas. Found in mitochondria, along microfibrils, and in nuclei of cardiomyocytes.
Tissue Specificity	Produced by normal skin fibroblasts. PEX is expressed in a number of tumors including gliomas, breast and prostate. .
Source	Eukaryota
Protein Name	72 kDa type IV collagenase
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
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.
Purification	Immunogen affinity purified.

Cross Reactivity	No cross reactivity with other proteins.
Storage	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.

Protein Information

Name	MMP2
Synonyms	CLG4A
Function	Ubiquitous metalloproteinase that is involved in diverse functions such as remodeling of the vasculature, angiogenesis, tissue repair, tumor invasion, inflammation, and atherosclerotic plaque rupture. As well as degrading extracellular matrix proteins, can also act on several nonmatrix proteins such as big endothelial 1 and beta- type CGRP promoting vasoconstriction. Also cleaves KISS at a Gly- -Leu bond. Appears to have a role in myocardial cell death pathways. Contributes to myocardial oxidative stress by regulating the activity of GSK3beta. Cleaves GSK3beta in vitro. Involved in the formation of the fibrovascular tissues in association with MMP14. [Isoform 2]: Mediates the proteolysis of CHUK/IKKA and initiates a primary innate immune response by inducing mitochondrial- nuclear stress signaling with activation of the pro-inflammatory NF- kappaB, NFAT and IRF transcriptional pathways.
Cellular Location	[Isoform 1]: Secreted, extracellular space, extracellular matrix. Membrane. Nucleus Note=Colocalizes with integrin alphaV/beta3 at the membrane surface in angiogenic blood vessels and melanomas. Found in mitochondria, along microfibrils, and in nuclei of cardiomyocytes
Tissue Location	Produced by normal skin fibroblasts. PEX is expressed in a number of tumors including gliomas, breast and prostate

Background

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.

Images

Figure 1. Western blot analysis of MMP2 using anti-MMP2 antibody (ABO10048). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. lane 1: recombinant human MMP2 protein 1ng 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 # ABO10048) at 0.5 μ g/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 with Tanon 5200 system. A specific band was detected for MMP2 at approximately 71KD. The expected band size for MMP2 is at 71KD.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.