

**MMP2 Antibody**  
**Mouse Monoclonal Antibody (Mab)**  
**Catalog # AM1844b**

## Specification

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### MMP2 Antibody - Product Information

Application	IF, WB, IHC-P,E
Primary Accession	<a href="#">P08253</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b,k

### MMP2 Antibody - Additional Information

**Gene ID** 4313

#### Other Names

72 kDa type IV collagenase, 72 kDa gelatinase, Gelatinase A, Matrix metalloproteinase-2, MMP-2, TBE-1, PEX, MMP2, CLG4A

#### Target/Specificity

This MMP2 monoclonal antibody is generated from mouse immunized with MMP2 recombinant protein.

#### Dilution

IF~~1:10~50  
WB~~1:500~1000  
IHC-P~~1:10~50

#### Format

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

#### Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

#### Precautions

MMP2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### MMP2 Antibody - 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

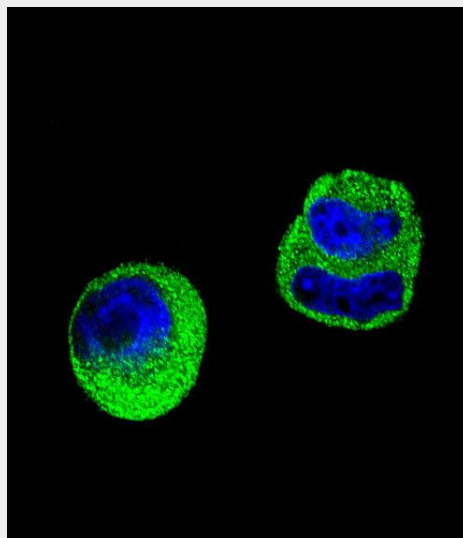
Produced by normal skin fibroblasts. PEX is expressed in a number of tumors including gliomas, breast and prostate

### MMP2 Antibody - Protocols

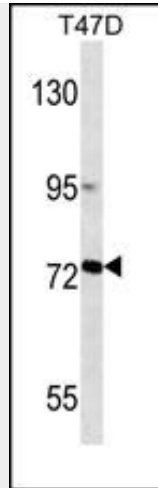
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

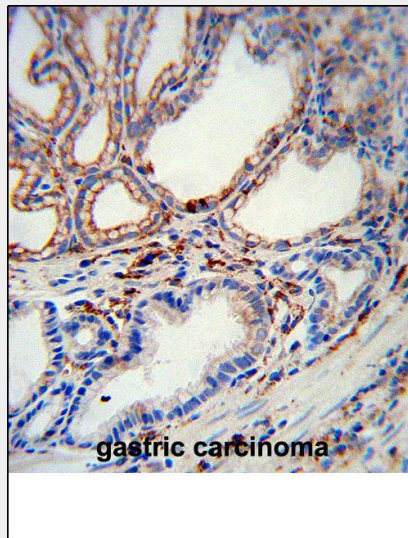
### MMP2 Antibody - Images



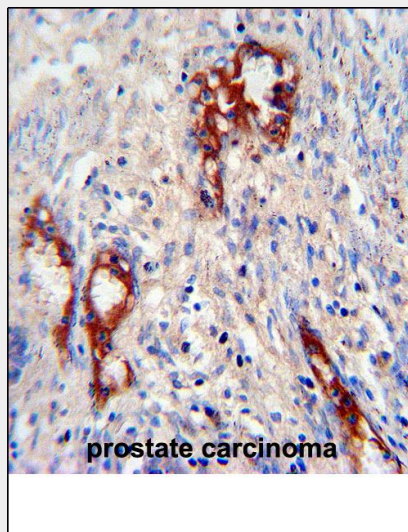
Confocal immunofluorescent analysis of MMP2 Antibody (Cat#AM1844b) with MCF-7 cell followed by Alexa Fluor® 488-conjugated goat anti-mouse IgG (green). DAPI was used to stain the cell nuclear (blue).



MMP2 western blot analysis in T47D cell line lysates (35µg/lane). This demonstrates the MMP2 antibody detected the MMP2 protein (arrow).



MMP2 Antibody (Cat. #AM1844b) immunohistochemistry analysis in formalin fixed and paraffin embedded human gastric carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of MMP2 Antibody for immunohistochemistry. Clinical relevance has not been evaluated.



MMP2 Antibody (Cat. #AM1844b) immunohistochemistry analysis in formalin fixed and paraffin embedded human prostate carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of MMP2 Antibody for immunohistochemistry. Clinical relevance has not been evaluated.

### **MMP2 Antibody - Background**

Proteins of the matrix metalloproteinase (MMP) 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. Most MMP's are secreted as inactive proproteins which are activated when cleaved by extracellular proteinases. This gene encodes an enzyme which degrades type IV collagen, the major structural component of basement membranes. The enzyme plays a role in endometrial menstrual breakdown, regulation of vascularization and the inflammatory response. Mutations in this gene have been associated with Winchester syndrome and Nodulosis-Arthropathy-Osteolysis (NAO) syndrome. Two transcript variants encoding different isoforms have been found for this gene.

### **MMP2 Antibody - References**

Role of functional single nucleotide polymorphisms of MMP1, MMP2, and MMP9 in open angle glaucomas. Mossb??ck G, et al. Mol Vis, 2010 Aug 28. PMID 20808730.

Clinical Impact of MMP and TIMP Gene Polymorphisms in Gastric Cancer. Alakus H, et al. World J Surg, 2010 Aug 21. PMID 20730428.

A genetic association study of maternal and fetal candidate genes that predispose to preterm prelabor rupture of membranes (PROM). Romero R, et al. Am J Obstet Gynecol, 2010 Jul 29. PMID 20673868.

Genetic variants in COL2A1, COL11A2, and IRF6 contribute risk to nonsyndromic cleft palate.

Nikopensius T, et al. Birth Defects Res A Clin Mol Teratol, 2010 Jul 29. PMID 20672350.

[Expressions of CD147, MMP-2 and MMP-9 in laryngeal carcinoma and clinical significance] Gou XX, et al. Zhonghua Yi Xue Za Zhi, 2010 May 11. PMID 20646600.