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# MMP2 Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AM1844b

## Product Information

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| **Application** | WB, IHC-P, IF, E |
| **Primary Accession** | P08253 |
| **Reactivity** | Human |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Isotype** | IgG2b,k |
| **Clone Names** | 6E3F8 |
| **Calculated MW** | 73882 |

## Additional Information

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| **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** | WB~~1:500~1000 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration. |
| **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. |

## Protein Information

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| **Name** | MMP2 |
| **Synonyms** | CLG4A |
| **Function** | Ubiquitinous 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 |

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| | 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

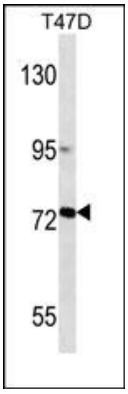
Proteins of the matrix metalloproteinase (MMP) family are involved in the breakdown of extracellular matrix in normal physiological processes, such as embryonic development, reproduction, and tissue remodeling, as well as in disease processes, such as arthritis and metastasis. Most MMP's are secreted 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.

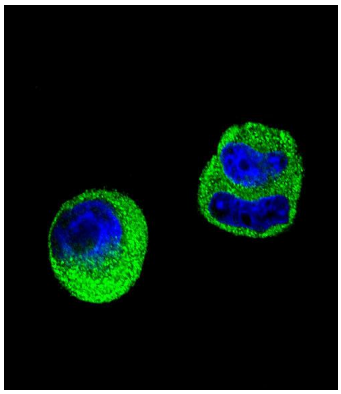
## References

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.

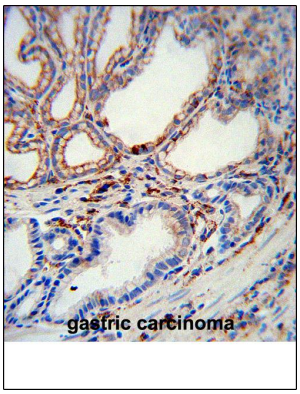
## Images

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

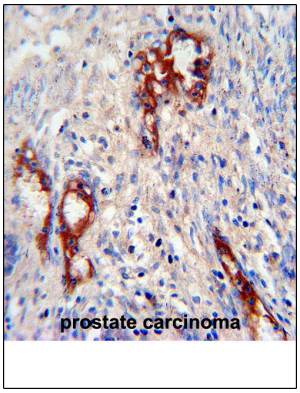


Confocal immunofluorescent analysis of MMP2 Antibody (Cat#AM1844b) with MCF-7 cell followed by Alexa Fluor® 488-conjugated goat anti-mouse lgG (green). DAPI was used to stain the cell nuclear (blue).




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.

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