10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MMP2 Antibody (Ascites)

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM1844a

Product Information

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

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 antibody is generated from mouse immunized with MMP2 recombinant protein.
Dilution	WB~~1:200~1000 IHC-P~~1:100~500 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 (Ascites) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

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

	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

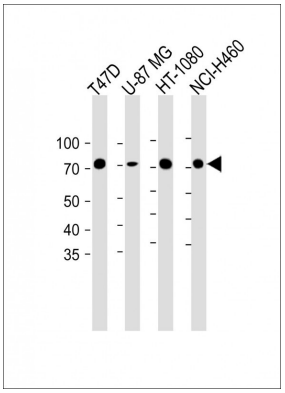
Background

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.

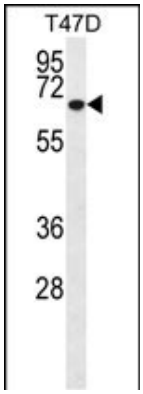
References

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.

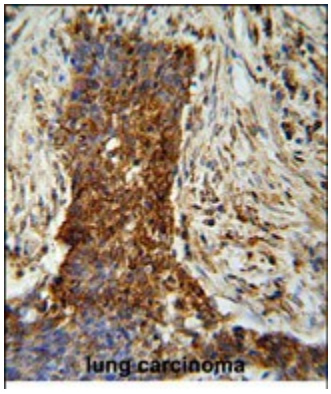
Images



All lanes: Anti-MMP2 Antibody at 1:1000 dilution Lane 1: T47D whole cell lysate Lane 2: U-87 MG whole cell lysate Lane 3: HT-1080 whole cell lysate Lane 4: NCI-H460 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Mouse IgG, (H+L), Peroxidase conjugated (ASP1613) at 1/8000 dilution. Observed band size: 74 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot analysis of MMP2 Antibody (Cat. #AM1844a) in T47D cell line lysates (35µg/lane).MMP2 (arrow) was detected using the purified Mab.(1:200)



MMP2 antibody (Cat. #AM1844a) immunohistochemistry analysis in formalin fixed and paraffin embedded human lung carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the MMP2 antibody for immunohistochemistry. Clinical relevance has not been evaluated.

Citations

- DHRS2 inhibits cell growth and motility in esophageal squamous cell carcinoma.
- Association of MMP-2 and MMP-9 expression with recurrences in primary spontaneous pneumothorax.
- The CD147/MMP-2 signaling pathway may regulate early stage cardiac remodeling in spontaneously hypertensive rats.
- EFEMP1 promotes the migration and invasion of osteosarcoma via MMP-2 with induction by AEG-1 via NF-κB signaling pathway.

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