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MMP2 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13693c

Product Information

Application	WB, E
Primary Accession	P08253
Other Accession	P33436, P50757, P33434, Q90611, NP_004521.1, NP_001121363.1
Reactivity	Human, Rat, Mouse
Predicted	Chicken, Mouse, Rabbit, Rat, Bovine, Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB33605
Calculated MW	73882
Antigen Region	303-331

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 rabbits immunized with a KLH conjugated synthetic peptide between 303-331 amino acids from the Central region of human MMP2.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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 (Center) 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

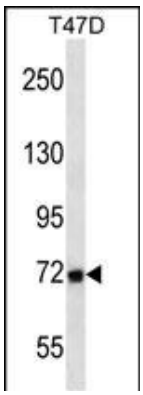
Background

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.

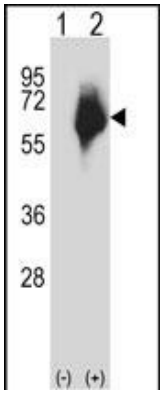
References

Beshir, A.B., et al. Cancer Lett. 299(2):137-149(2010)
Alakus, H., et al. World J Surg 34(12):2853-2859(2010)
Romero, R., et al. Am. J. Obstet. Gynecol. 203 (4), 361 (2010) :
Nikopensius, T., et al. Birth Defects Res. Part A Clin. Mol. Teratol. 88(9):748-756(2010)
Mossbock, G., et al. Mol. Vis. 16, 1764-1770 (2010) :

Images



MMP2 Antibody (Center) (Cat. #AP13693c) western blot analysis in T47D cell line lysates (35ug/lane).This demonstrates the MMP2 antibody detected the MMP2 protein (arrow).



Western blot analysis of MMP2 (arrow) using rabbit polyclonal MMP2 Antibody (Center) (Cat. #AP13693c). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the MMP2 gene.

Citations

- TRAF6 Activates Fibroblasts to Cancer-Associated Fibroblasts through FGF19 in Tumor Microenvironment to Benefit the Malignant Phenotype of Melanoma Cells
- Calreticulin promotes migration and invasion of esophageal cancer cells by upregulating neuropilin-1 expression via STAT5A.
- Down-regulation of TCF21 by hypermethylation induces cell proliferation, migration and invasion in colorectal cancer.
- The role of sema4D in vasculogenic mimicry formation in non-small cell lung cancer and the underlying mechanisms.
- MicroRNA-324-5p suppresses the migration and invasion of MM cells by inhibiting the SCF E3 ligase.
- Effects of secreted frizzled-related protein 1 on proliferation, migration, invasion, and apoptosis of colorectal cancer cells.
- Preliminary evaluation for Bit1 as a potential biomarker for squamous cell carcinoma and adenocarcinoma of esophagus.

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