10320 Camino Santa Fe, Suite G
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MMP2 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1787a

Specification

MMP2 Antibody - Product Information

Application	**WB, E**
Primary Accession	P08253
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**73.8kDa KDa**

Description
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.

Immunogen
Purified recombinant fragment of human MMP2 (AA: 242-396) expressed in E. Coli.

Formulation
Purified antibody in PBS with 0.05% sodium azide

MMP2 Antibody - 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

Dilution
WB~~1/500 - 1/2000
E~~1/10000

Storage
Maintain refrigerated at 2-8°C for up to 6 months. 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
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

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 Cytomety
- Cell Culture

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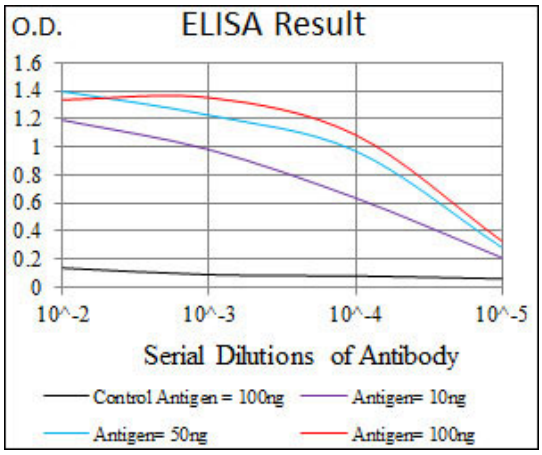

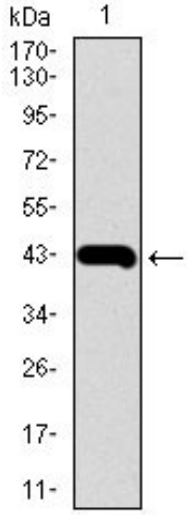

Figure 1: Western blot analysis using MMP2 mAb against human MMP2 recombinant protein. (Expected MW is 42.8 kDa)

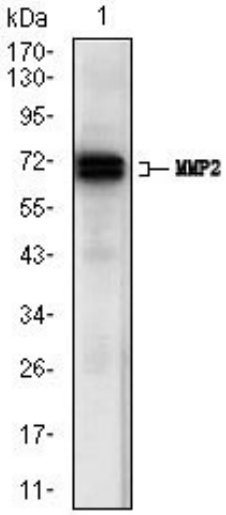

Figure 2: Western blot analysis using MMP2 mouse mAb against A431 (1) cell lysate.

MMP2 Antibody - References

1.Br J Cancer. 2012 Apr 24;106(9):1495-8. 2.Iran J Immunol. 2011 Jun;8(2):120-6.

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