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Mouse Monoclonal Antibody to MMP2

Purified Mouse Monoclonal Antibody
Catalog # AO2455a

Product Information

Application	WB, FC, E
Primary Accession	P08253
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Clone Names	2B11E6
Isotype	Mouse IgG1
Calculated MW	73882
Description	This gene is a member of the matrix metalloproteinase (MMP) gene family, that are zinc-dependent enzymes capable of cleaving components of the extracellular matrix and molecules involved in signal transduction. The protein encoded by this gene is a gelatinase A, type IV collagenase, that contains three fibronectin type II repeats in its catalytic site that allow binding of denatured type IV and V collagen and elastin. Unlike most MMP family members, activation of this protein can occur on the cell membrane. This enzyme can be activated extracellularly by proteases, or, intracellulary by its S-glutathiolation with no requirement for proteolytical removal of the pro-domain. This protein is thought to be involved in multiple pathways including roles in the nervous system, endometrial menstrual breakdown, regulation of vascularization, and metastasis. Mutations in this gene have been associated with Winchester syndrome and Nodulosis-Arthropathy-Osteolysis (NAO) syndrome. Alternative splicing results in multiple transcript variants encoding different isoforms. ;
Immunogen	Purified recombinant fragment of human MMP2 (AA: 9-140) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide
Application Note	ELISA: 1/10000; WB: 1/500 - 1/2000; FCM: 1/200 - 1/400

Additional Information

Gene ID	4313
Other Names	CLG4; MONA; CLG4A; MMP-2; TBE-1; MMP-II
Dilution	WB~~1:1000 FC~~1:10~50 E~~N/A
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	Mouse Monoclonal Antibody to MMP2 is for research use only and not for use in diagnostic or therapeutic procedures.

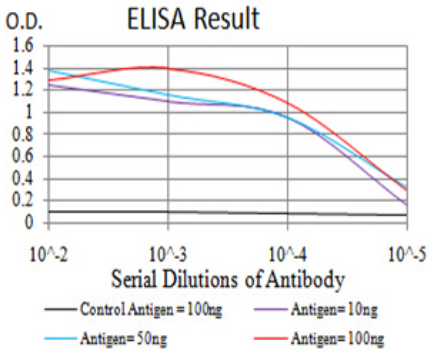
Protein Information

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

References

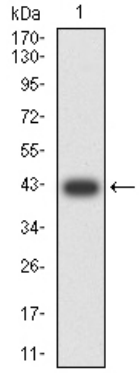
1.Reprod Biol Endocrinol. 2015 Sep 4;13:102. ; 2.PLoS One. 2015 Mar 27;10(3):e0121404. ;

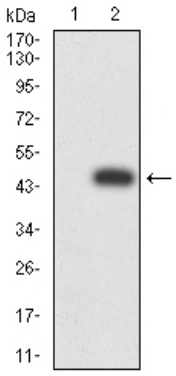
Images



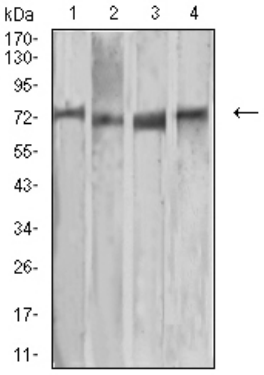
Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)

Western blot analysis using MMP2 mAb against human MMP2 (AA: 9-140) recombinant protein. (Expected MW is 42.2 kDa)

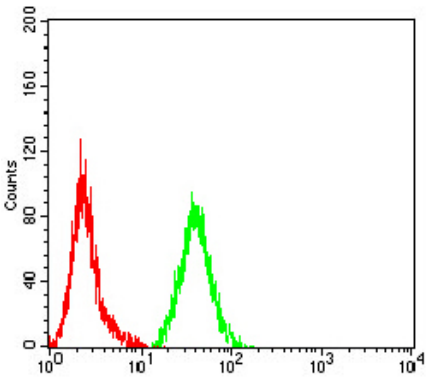




Western blot analysis using MMP2 mAb against HEK293 (1) and MMP2 (AA: 9-140)-hIgGFc transfected HEK293 (2) cell lysate.



Western blot analysis using MMP2 mouse mAb against MCF-7 (1), Raw264.7 (2), HUVEC (3), and T47D (4) cell lysate.



Flow cytometric analysis of Hela cells using MMP2 mouse mAb (green) and negative control (red).

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