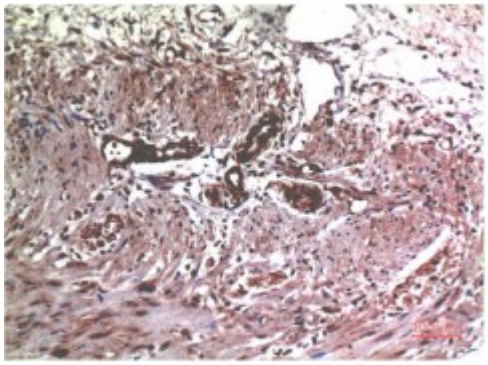
Anti-MMP2 antibody



Description	Mouse monoclonal to MMP2.

Model	STJ97773
Host	Mouse
Reactivity	Human, Mouse, Rat
Applications	IHC
Immunogen	synthetic peptide derived from MMP2
Gene ID	4313
Gene Symbol	MMP2
Dilution range	IHC 1:100-200
Specificity	MMP2 Mouse Monoclonal Antibody (1H1) detects endogenous levels of MMP2
Tissue Specificity	Produced by normal skin fibroblasts. PEX is expressed in a number of tumors including gliomas, breast and prostate.
Purification	The antibody was affinity-purified from mouse ascites by affinity-chromatography using specific immunogen.
Clone ID	1H1
Note	For Research Use Only (RUO).
Protein Name	72 kDa type IV collagenase 72 kDa gelatinase Gelatinase A Matrix metalloproteinase-2 MMP-2 TBE-1 PEX
Clonality	Monoclonal

Conjugation	Unconjugated
Isotype	IgG1
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:7166OMIM:120360
Alternative Names	72 kDa type IV collagenase 72 kDa gelatinase Gelatinase A Matrix metalloproteinase-2 MMP-2 TBE-1 PEX
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.; PEX, the C-terminal non-catalytic fragment of MMP2, posseses anti-angiogenic and anti-tumor properties and inhibits cell migration and cell adhesion to FGF2 and vitronectin. Ligand for integrinv/beta3 on the surface of blood vessels.; 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.
Sequence and Domain Family	The conserved cysteine present in the cysteine-switch motif binds the catalytic zinc ion, thus inhibiting the enzyme. The dissociation of the cysteine from the zinc ion upon the activation-peptide release activates the enzyme.
Cellular Localization	Isoform 1: Secreted, extracellular space, extracellular matrix. Membrane. Nucleus. 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.. Isoform 2: Cytoplasm. Mitochondrion.
Post-translational Modifications	Phosphorylation on multiple sites modulates enzymatic activity. Phosphorylated by PKC in vitro. The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-MMP3). Autocatalytic cleavage in the C-terminal produces the anti-angiogenic peptide, PEX. This processing appears to be facilitated by binding integrinv/beta3.