

## MMP-9 Monoclonal Antibody

<b>Catalog No :</b>	YM0446
<b>Reactivity :</b>	Human
<b>Applications :</b>	WB;IHC;IF;FCM;ELISA
<b>Target :</b>	MMP-9
<b>Fields :</b>	>>Endocrine resistance;>>IL-17 signaling pathway;>>TNF signaling pathway;>>Leukocyte transendothelial migration;>>Estrogen signaling pathway;>>Relaxin signaling pathway;>>Hepatitis B;>>Pathways in cancer;>>Transcriptional misregulation in cancer;>>Proteoglycans in cancer;>>MicroRNAs in cancer;>>Prostate cancer;>>Bladder cancer;>>Diabetic cardiomyopathy;>>Lipid and atherosclerosis;>>Fluid shear stress and atherosclerosis
<b>Gene Name :</b>	MMP9
<b>Protein Name :</b>	Matrix metalloproteinase-9
<b>Human Gene Id :</b>	4318
<b>Human Swiss Prot No :</b>	P14780
<b>Mouse Swiss Prot No :</b>	P41245
<b>Immunogen :</b>	Purified recombinant fragment of human MMP-9 expressed in E. Coli.
<b>Specificity :</b>	MMP-9 Monoclonal Antibody detects endogenous levels of MMP-9 protein.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Monoclonal, Mouse
<b>Dilution :</b>	WB 1:500 - 1:2000. IHC 1:200 - 1:1000. IF 1:200 - 1:1000. Flow cytometry: 1:200 - 1:400. ELISA: 1:10000. Not yet tested in other applications.
<b>Purification :</b>	Affinity purification

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**Storage Stability :** -15°C to -25°C/1 year(Do not lower than -25°C)

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**Molecularweight :** 78kD

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**Cell Pathway :** Leukocyte transendothelial migration;Pathways in cancer;Bladder cancer;

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**P References :**

1. IUBMB Life. 2009 Dec;61(12):1143-52.
2. J Biol Regul Homeost Agents. 2009 Oct-Dec;23(4):259-67.

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**Background :** matrix metalloproteinase 9(MMP9) Homo sapiens 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. The enzyme encoded by this gene degrades type IV and V collagens. Studies in rhesus monkeys suggest that the enzyme is involved in IL-8-induced mobilization of hematopoietic progenitor cells from bone marrow, and murine studies suggest a role in tumor-associated tissue remodeling. [provided by RefSeq, Jul 2008],

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**Function :** catalytic activity: Cleavage of gelatin types I and V and collagen types IV and V., cofactor: Binds 2 zinc ions per subunit., cofactor: Binds 3 calcium ions per subunit., disease: Defects in MMP9 may be a cause of susceptibility to lumbar disk herniation (LDH) [MIM:603932]. LDH is the predominant cause of low-back pain and unilateral leg pain., domain: 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., enzyme regulation: Inhibited by histatin-3 1/24 (histatin-5)., function: May play an essential role in local proteolysis of the extracellular matrix and in leukocyte migration. Could play a role in bone osteoclastic resorption. Cleaves KiSS1 at a Gly-I-Leu bond. Cleaves type IV and type V collagen into large C-terminal three qua

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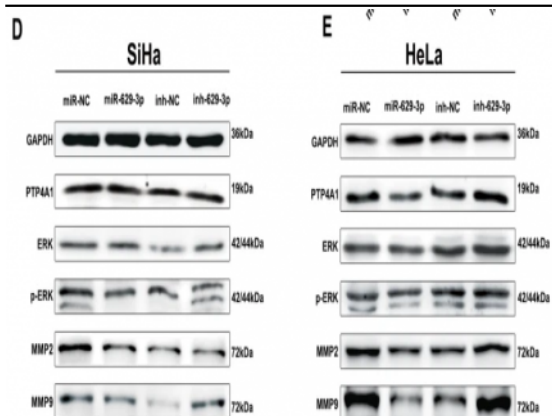
**Subcellular Location :** Secreted, extracellular space, extracellular matrix .

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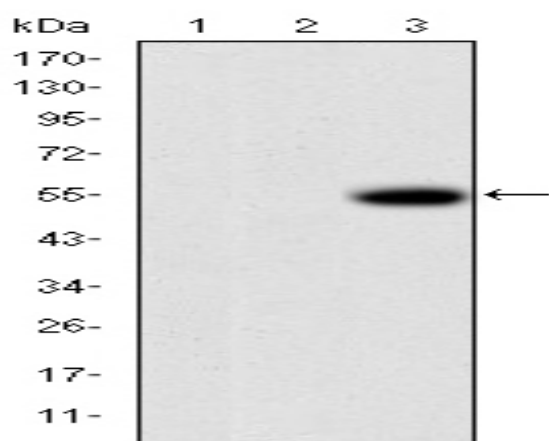
**Expression :** Detected in neutrophils (at protein level) (PubMed:7683678). Produced by normal alveolar macrophages and granulocytes.

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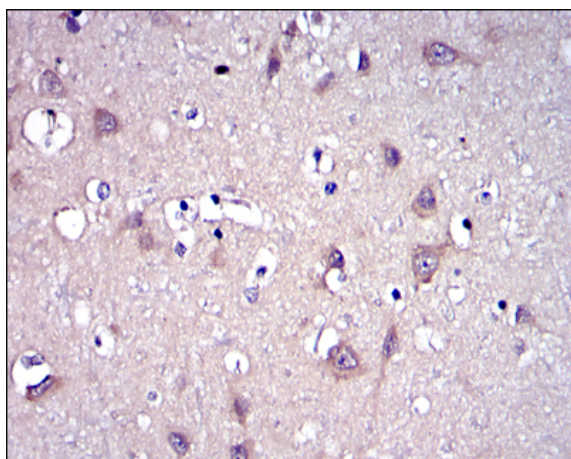
## Products Images



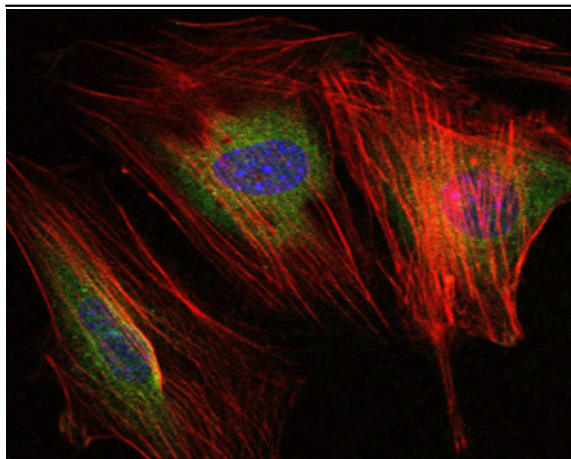
Li, X., Ma, N., Zhang, Y. et al. Circular RNA circNRIP1 promotes migration and invasion in cervical cancer by sponging miR-629-3p and regulating the PTP4A1/ERK1/2 pathway. *Cell Death Dis* 11, 399 (2020).



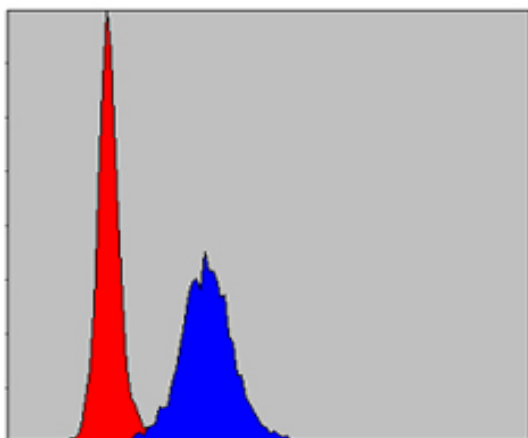
Western Blot analysis using MMP-9 Monoclonal Antibody against HEK293 (1), MMP7-hlgGFc transfected HEK293 (2) cell lysate and MMP9-hlgGFc transfected HEK293 (3) cell lysate.



Immunohistochemistry analysis of paraffin-embedded brain tissues with DAB staining using MMP-9 Monoclonal Antibody.



Immunofluorescence analysis of NIH/3T3 cells using MMP-9 Monoclonal Antibody (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.



Flow cytometric analysis of Hela cells using MMP-9 Monoclonal Antibody (blue) and negative control (red).

