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# MMP-1 (PT1005R) PT<sup>™</sup> Rabbit mAb

CatalogNo: YM8784 Recombinant R

## **Key Features**

Host Species

Rabbit

MW • 54kD (Calculated) 54kD (Observed) Reactivity

Human

Isotype

IgG,Kappa

Applications
• WB,IHC,IF,IP,ELISA

### **Recommended Dilution Ratios**

IHC 1:200-1:1000 WB 1:2000-1:10000 IF 1:200-1:1000 ELISA 1:5000-1:20000 IP 1:50-1:200

## **Storage**

Storage\*-15°C to -25°C/1 year(Do not lower than -25°C)FormulationPBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA

#### **Basic Information**

Clonality	Monoclonal
Clone Number	PT1005R

#### Immunogen Information

Specificity Endogenous

# Target Information

Gene name	MMP1			
Protein Name	Interstitial collagenase			
	Organism	Gene ID	UniProt ID	
	Human	<u>4312;</u>	<u>P03956;</u>	
Cellular Localization	Secreted, extracellular space, extracellular matrix .			
Tissue specificity	Fibroblast,Ovary,Synovial cell,Synovial membrane,Thyroid,			
Function	Catalytic activity:Cleavage of the triple helix of collagen at about three-quarters of the length of the molecule from the N-terminus, at 775-Gly-I-IIe-776 in the alpha-1(I) chain. Cleaves synthetic substrates and alpha-macroglobulins at bonds where P1' is a hydrophobic residue., cofactor:Binds 2 zinc ions per subunit., cofactor:Binds 4 calcium ions per subunit.,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.,Domain:There are two distinct domains in this protein; the catalytic N-terminal, and the C-terminal which is involved in substrate specificity and in binding TIMP (tissue inhibitor of metalloproteinases).,enzyme regulation:Can be activated without removal of the activation peptide.,Function:Cleaves collagens of types I, II, and III at one site in the helical domain. Also cleaves collagens of types VII and X. In case of HIV infection, interacts and cleaves the secreted viral Tat protein, leading to a decrease in neuronal Tat's mediated neurotoxicity.,online information:Collagenase entry,PTM:Undergoes autolytic cleavage to two major forms (22 kDa and 27 kDa). A minor form (25 kDa) is the glycosylated form of the 22 kDa form. The 27 kDa form has no activity while the 22/25 kDa form can act as activator for collagenase.,similarity:Belongs to the peptidase M10A family.,similarity:Contains 4 hemopexin-like domains.,subunit:Interacts with HIV-1 Tat.,			

## Validation Data



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-MMP-1 (PT1005R) antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody. Lane 1: MDA-MB-231 Predicted band size: 54kDa Observed band size: 54kDa

# **Contact information**

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Please scan the QR code to access additional product information: MMP-1 (PT1005R) PT<sup>™</sup> Rabbit mAb

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