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# MMP13 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13706c

## Product Information

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| **Application** | WB, IF, IHC-P, E |
| **Primary Accession** | P45452 |
| **Other Accession** | O62806, NP_002418.1 |
| **Reactivity** | Human |
| **Predicted** | Rabbit, Mouse, Rat, Bovine, Canine, Chicken |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB33646 |
| **Calculated MW** | 53820 |
| **Antigen Region** | 253-282 |

## Additional Information

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| **Gene ID** | 4322 |
| **Other Names** | Collagenase 3, 3424-, Matrix metalloproteinase-13, MMP-13, MMP13 |
| **Target/Specificity** | This MMP13 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 253-282 amino acids from the Central region of human MMP13. |
| **Dilution** | WB~~1:1000 IF~~1:10~50 IHC-P~~1:100~500 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | MMP13 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | MMP13 |
| **Function** | Plays a role in the degradation of extracellular matrix proteins including fibrillar collagen, fibronectin, TNC and ACAN. Cleaves triple helical collagens, |

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| | including type I, type II and type III collagen, but has the highest activity with soluble type II collagen. Can also degrade collagen type IV, type XIV and type X. May also function by activating or degrading key regulatory proteins, such as TGFB1 and CCN2. Plays a role in wound healing, tissue remodeling, cartilage degradation, bone development, bone mineralization and ossification. Required for normal embryonic bone development and ossification. Plays a role in the healing of bone fractures via endochondral ossification. Plays a role in wound healing, probably by a mechanism that involves proteolytic activation of TGFB1 and degradation of CCN2. Plays a role in keratinocyte migration during wound healing. May play a role in cell migration and in tumor cell invasion. |
| **Cellular Location** | Secreted, extracellular space, extracellular matrix. Secreted |
| **Tissue Location** | Detected in fetal cartilage and calvaria, in chondrocytes of hypertrophic cartilage in vertebrae and in the dorsal end of ribs undergoing ossification, as well as in osteoblasts and periosteal cells below the inner periosteal region of ossified ribs Detected in chondrocytes from in joint cartilage that have been treated with TNF and IL1B, but not in untreated chondrocytes. Detected in T lymphocytes. Detected in breast carcinoma tissue |

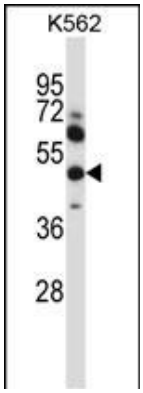
## Background

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 protein encoded by this gene cleaves type II collagen more efficiently than types I and III. It may be involved in articular cartilage turnover and cartilage pathophysiology associated with osteoarthritis. The gene is part of a cluster of MMP genes which localize to chromosome 11q22.3.

## References

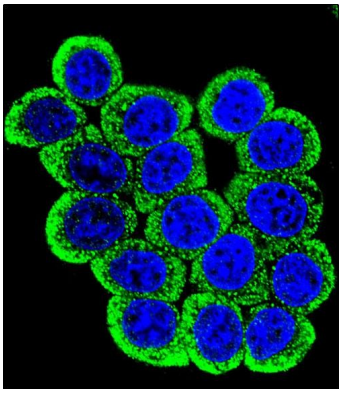
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## Images

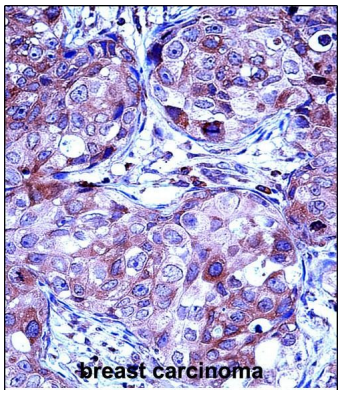



MMP13 Antibody (Center) (Cat. #AP13706c) western blot analysis in K562 cell line lysates (35ug/lane).This demonstrates the MMP13 antibody detected the MMP13 protein (arrow).

Confocal immunofluorescent analysis of MMP13 Antibody (Center)(Cat#AP13706c) with Hela cell followed by Alexa



Fluor 488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).




MMP13 Antibody (Center) (Cat. #AP13706c)immunohistochemistry analysis in formalin fixed and paraffin embedded human breast carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of MMP13 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

## Citations

- Modulation of Hedgehog Signaling by Kappa Opioids to Attenuate Osteoarthritis
- Increased succinate receptor GPR91 involved in the pathogenesis of Mooren's ulcer.

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