



MMP-13 Rabbit mAb

Catalog No	YP-rAb-18052
Isotype	IgG
Reactivity	Human
Applications	WB,IHC,IF,ELISA
Gene Name	MMP13
Protein Name	Collagenase 3
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:100-500; WB 1:500-2000; IF 1:200-1000; ELISA 1:5000-20000; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15° C to -25° C/1 year(Do not lower than -25° C)
Synonyms	MMP13 ; Collagenase 3 ; Matrix metalloproteinase-13 ; MMP-13
Observed Band	60kD
Calculated Molecular Weight	54kD
Cell Pathway	Secreted
Tissue Specificity	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.
Function	cofactor: Binds 2 zinc ions per subunit.,cofactor: Binds 4 calcium ions per subunit.,Disease: Defects in MMP13 are the cause of spondyloepimetaphyseal dysplasia type 2 (SEMD2) [MIM:602111]; also known as spondyloepimetaphyseal dysplasia type Missouri. SEMDs are a heterogeneous group of skeletal disorders characterized by defective growth and modeling of the spine and long bones. The SEMDs are distinguished from the spondylometaphyseal dysplasias and the spondyloepiphyseal dysplasias by the combined involvement of the epiphyses and metaphyses. The 3 disorders have malformations of the vertebrae in common.,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. Function: Degrades collagen type I. Does not act on gelatin or casein. Could have a role in tumoral process. Similarity: Belongs to the peptidase M10A family. Similarity: Contains 4 hemopexin-like domains. Tissue specificity: Seems to be specific to breast carcinomas.

Background

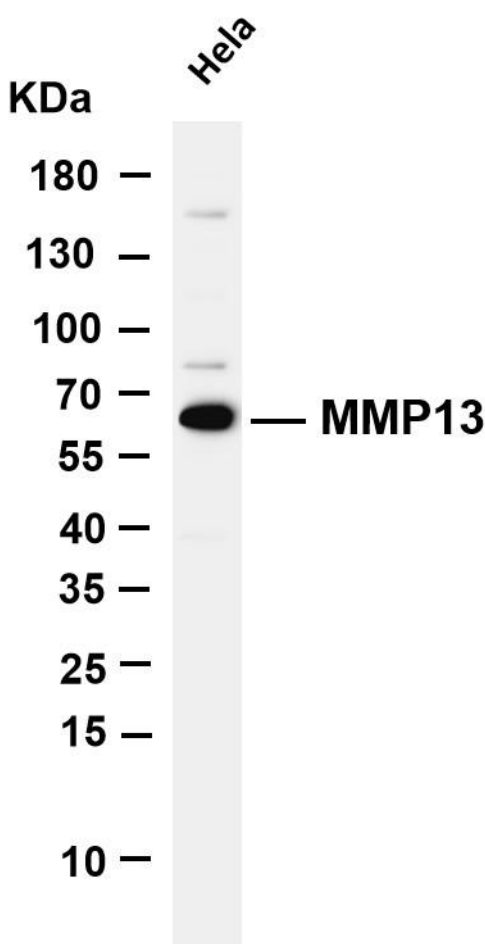
This gene encodes a member of the peptidase M10 family of matrix metalloproteinases (MMPs). Proteins in this family are involved in the breakdown of extracellular matrix in normal physiological processes, such as embryonic development, reproduction, and tissue remodeling, as well as in disease processes, such as arthritis and metastasis. The encoded preproprotein is proteolytically processed to generate the mature protease. This protease 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. Mutations in this gene are associated with metaphyseal anadysplasia. This gene is part of a cluster of MMP genes on chromosome 11. [provided by RefSeq, Jan 2016],

matters needing attention

Avoid repeated freezing and thawing!

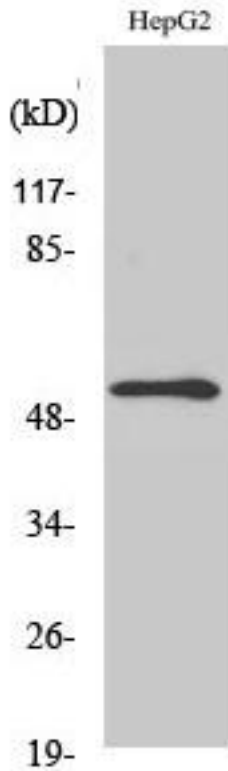
Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

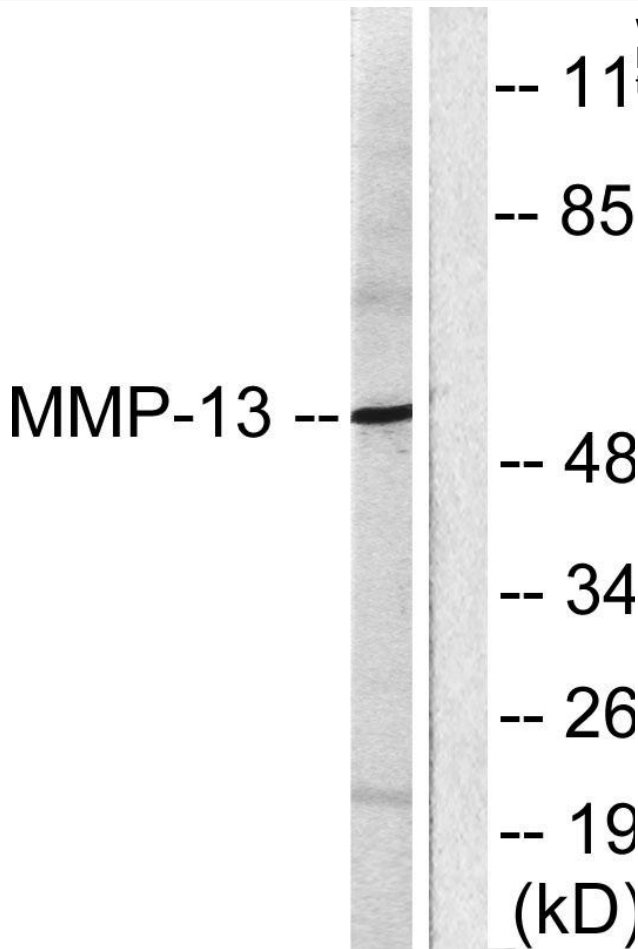


Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-MMP13 antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: HeLa Predicted band size: 60kDa Observed band size: 60kDa



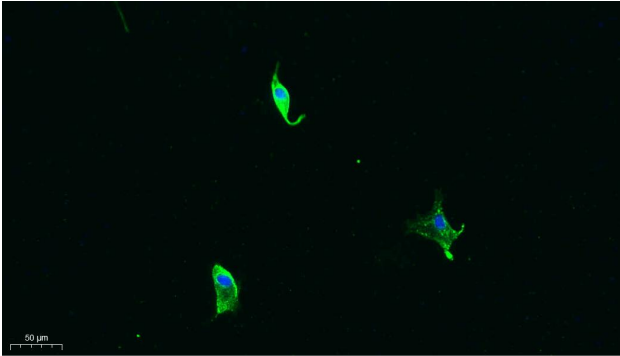


Western Blot analysis of various cells using MMP-13 Antibody diluted at 1:500

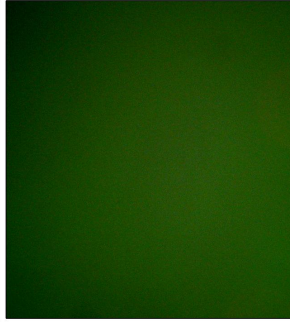
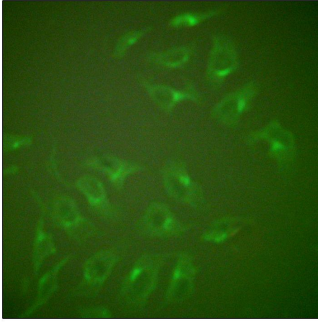


Western blot analysis of lysates from LOVO cells, using MMP-13 Antibody. The lane on the right is blocked with the synthesized peptide.





Immunofluorescence analysis of A549. 1,primary Antibody was diluted at 1:200(4°C overnight). 2, Goat Anti Rabbit IgG (H&L) - Alexa Fluor 488 Secondary antibody was diluted at 1:1000(room temperature, 50min).3, DAPI(blue) 10min.



Immunofluorescence analysis of HepG2 cells, using MMP-13 Antibody. The picture on the right is blocked with the synthesized peptide.

