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MMP9 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6214a

Product Information

Application	IHC-P, WB, E
Primary Accession	P14780
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	78458
Antigen Region	644-674

Additional Information

Gene ID	4318
Other Names	Matrix metalloproteinase-9, MMP-9, 92 kDa gelatinase, 92 kDa type IV collagenase, Gelatinase B, GELB, 67 kDa matrix metalloproteinase-9, 82 kDa matrix metalloproteinase-9, MMP9, CLG4B
Target/Specificity	This MMP9 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 644-673 amino acids from the C-terminal region of human MMP9.
Dilution	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	MMP9 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MMP9
Synonyms	CLG4B
Function	Matrix metalloproteinase that plays an essential role in local proteolysis of the extracellular matrix and in leukocyte migration (PubMed:12879005,

PubMed:1480034, PubMed:2551898). Could play a role in bone osteoclastic resorption (By similarity). Cleaves KiSS1 at a Gly-|-Leu bond (PubMed:12879005). Cleaves NINJ1 to generate the Secreted ninjurin-1 form (PubMed:32883094). Cleaves type IV and type V collagen into large C-terminal three quarter fragments and shorter N- terminal one quarter fragments (PubMed:1480034). Degrades fibronectin but not laminin or Pz-peptide.

Cellular Location Secreted, extracellular space, extracellular matrix

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

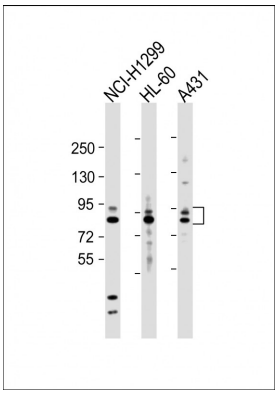
Background

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 MMPs are secreted as inactive proproteins which are activated when cleaved by extracellular proteinases. MMP9 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.

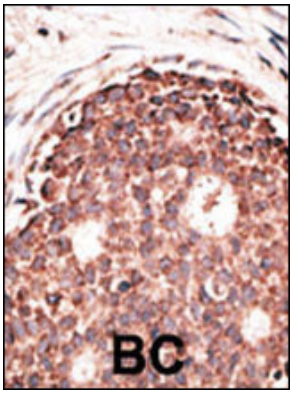
References

Tutton, M.G., et al., Int. J. Cancer 107(4):541-550 (2003). Behrens, P., et al., Int. J. Cancer 107(2):183-188 (2003). Van den Steen, P.E., et al., Biochem. Biophys. Res. Commun. 310(3):889-896 (2003). Zhao, Z., et al., J. Infect. Dis. 188(8):1098-1104 (2003). Matsuyama, A., et al., Circulation 108(12):1469-1473 (2003).

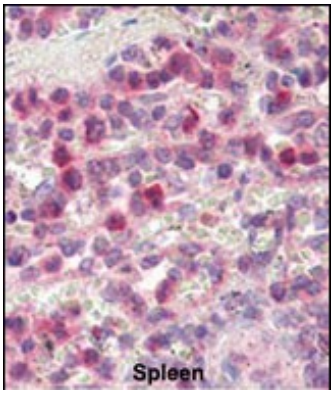
Images



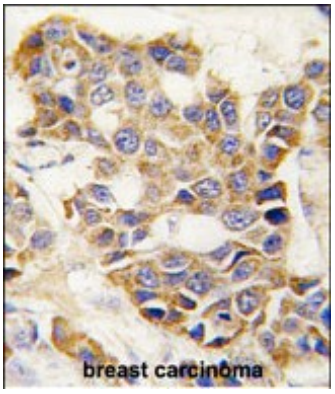
All lanes : Anti-MMP9 Antibody (L659) at 1:2000 dilution Lane 1: NCI-H1299 whole cell lysate Lane 2: HL-60 whole cell lysate Lane 3: A431 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 78 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Formalin-fixed and paraffin-embedded human Spleen tissue reacted with MMP9 antibody (C-term) (Cat.#AP6214a), which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Formalin-fixed and paraffin-embedded human breast carcinoma tissue reacted with MMP9 antibody (C-term) (Cat.#AP6214a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Citations

- Periostin Plays a Key Role in Radioresistance of Head and Neck Cancer Cells Epithelial-to-Mesenchymal Transition
- Pharmacodynamic Effect of Ellagic Acid on Ameliorating Cerebral Ischemia/Reperfusion Injury.
- ARHGAP15 regulates lung cancer cell proliferation and metastasis via the STAT3 pathway.
- Effects of secreted frizzled-related protein 1 on proliferation, migration, invasion, and apoptosis of colorectal cancer cells.
- Association of MMP-2 and MMP-9 expression with recurrences in primary spontaneous pneumothorax.
- Nkx2-5 Is Expressed in Atherosclerotic Plaques and Attenuates Development of Atherosclerosis in Apolipoprotein E-Deficient Mice.
- EFEMP1 inhibits migration of hepatocellular carcinoma by regulating MMP2 and MMP9 via ERK1/2 activity.
- Ethanol-Induced TLR4/NLRP3 Neuroinflammatory Response in Microglial Cells Promotes Leukocyte Infiltration Across the BBB.
- Down-regulation of TCF21 by hypermethylation induces cell proliferation, migration and invasion in colorectal cancer.
- Calreticulin promotes migration and invasion of esophageal cancer cells by upregulating neuropilin-1 expression via STAT5A.
- High expression of Dickkopf-related protein 1 is related to lymphatic metastasis and indicates poor prognosis in intrahepatic cholangiocarcinoma patients after surgery.
- A lipoxin A4 analog ameliorates blood-brain barrier dysfunction and reduces MMP-9 expression in a rat model of focal cerebral ischemia-reperfusion injury.
- OxLDL up-regulates microRNA-29b, leading to epigenetic modifications of MMP-2/MMP-9 genes: a novel mechanism for cardiovascular diseases.