

MMP9 polyclonal antibody

Catalog # PAB12714

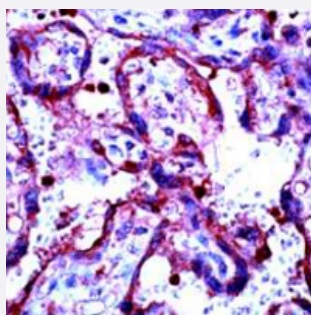
Size 100 ug

Applications



Western Blot (Cell lysate)

The protein derived from the whole cell lysate of A-431 was resolved onto 10% SDS-PAGE, transferred to NC membrane, followed by an immunoblotting with MMP9 polyclonal antibody (Cat # PAB12714) at 1 : 1000.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunohistochemical staining of human placenta stained with MMP9 polyclonal antibody (Cat # PAB12714) at 1 : 100 for 10 min at RT. Staining of formalin-fixed tissue requires boiling tissue sections in 10 mM Citrate Buffer, pH 6.0 for 10 min followed by cooling at RT for 20 min.

Specification

Product Description	Rabbit polyclonal antibody raised against synthetic peptide of MMP9.
Immunogen	A synthetic peptide corresponding to the hinge region of human MMP9.
Host	Rabbit
Theoretical MW (kDa)	92
Reactivity	Human
Specificity	This antibody recognizes ~92 KDa of human MMP9 protein.
Form	Liquid

Quality Control Testing

Antibody Reactive Against Synthetic Peptide.

Recommend Usage

Western Blot (0.1-1 ug/mL)
ELISA (0.01-0.1 ug/mL)
Immunoprecipitation (2-5 ug/mL)
Immunohistochemistry (2-5 ug/mL)
The optimal working dilution should be determined by the end user.

Storage Buffer

In TBS, pH 7.2 (BSA, 10% Proclin300)

Storage Instruction

Store at 4°C. For long term storage store at -20°C to -80°C.
Aliquot to avoid repeated freezing and thawing.

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- Immunoprecipitation

- Enzyme-linked Immunoabsorbent Assay

Gene Info — MMP9

Entrez GeneID

[4318](#)

Gene Name

MMP9

Gene Alias

CLG4B, GELB, MMP-9

Gene Description

matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)

Omim ID

[120361](#)

Gene Ontology

[Hyperlink](#)

Gene Summary

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]

Other Designations

92kD type IV collagenase|OTTHUMP00000031674|gelatinase B|macrophage gelatinase|matrix metalloproteinase 9|matrix metalloproteinase 9 (gelatinase B, 92kD gelatinase, 92kD type IV collagenase)|matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kD

Publication Reference

- [Magnetic resonance and computed tomographic imaging characteristics and potential molecular mechanisms of feline meningioma associated calvarial hyperostosis.](#)

Michael R Edwards, Josefa K Garcia Mora, Kayla M Fowler, Christina Vezza, John L Robertson, Gregory B Daniel, Richard L Shinn, Rell L Parker, Stephen R Werre, John H Rossmeisl.

Veterinary and Comparative Oncology 2024 Feb; [Epub].

Application: IHC-P, Cat, Brain

- [Transcriptomic profiling of feline teeth highlights the role of matrix metalloproteinase 9 \(MMP9\) in tooth resorption.](#)

S Lee, S J Bush, S Thorne, N Mawson, C Farquharson, G T Bergkvist.

Scientific Reports 2020 Nov; 10(1):18958.

Application: IHC, Feline, Teeth

- [Canine oral primary melanoma cells exhibit shift to mesenchymal phenotype and phagocytic behaviour.](#)

Schmidt F, Brodesser D, Reifinger M, Forte S, Semp P, Eberspächer-Schweda MC, Wolschek M, Brandt S, Kleiter M, Pratscher B.

Veterinary and Comparative Oncology 2019 Sep; 17(3):211.

Application: IF, IHC-P, Dog, Tumors

- [Downregulation of 14-3-3 \$\beta\$ inhibits proliferation and migration in osteosarcoma cells.](#)

Wu Q, Zhu J, Liu F, Liu J, Li M.

Molecular Medicine Reports 2018 Feb; 17(2):2493.

Application: WB-Tr, Human, MG63 cells

- [Matrix Metalloproteinase \(MMP\)-9 in Cancer-Associated Fibroblasts \(CAFs\) Is Suppressed by Omega-3 Polyunsaturated Fatty Acids In Vitro and In Vivo.](#)
Taguchi A, Kawana K, Tomio K, Yamashita A, Isobe Y, Nagasaka K, Koga K, Inoue T, Nishida H, Kojima S, Adachi K, Matsumoto Y, Arimoto T, Wada-Hiraike O, Oda K, Kang JX, Arai H, Arita M, Osuga Y, Fujii T.
PLoS One 2014 Feb; 9(2):e89605.

Application: IHC-P, Mouse, TC-1 tumor
- [Expression and significance of miRNA-21 and BTG2 in lung cancer.](#)
Sun Q, Hang M, Guo X, Shao W, Zeng G.
Tumour Biology 2013 Dec; 34(6):4017.

Application: WB-Tr, Human, 95-D cells
- [MicroRNA 181a improves proliferation and invasion, suppresses apoptosis of osteosarcoma cell.](#)
Jianwei Z, Fan L, Xiancheng L, Enzhong B, Shuai L, Can L.
Tumour Biology 2013 Dec; 34(6):3331.

Application: WB-Tr, Human, MG63 cells
- [Numlike regulates proliferation, apoptosis, and invasion of lung cancer cell.](#)
Yingjie L, Jian T, Changhai Y, Jingbo L.
Tumour Biology 2013 Oct; 34(5):2773.

Application: WB-Tr, Human, 95-D cells
- [TNF receptor-associated factor 6 regulates proliferation, apoptosis, and invasion of glioma cells.](#)
Peng Z, Shuangzhu Y, Yongjie J, Xinjun Z, Ying L.
Molecular and Cellular Biochemistry 2013 Jan; 377(1-2):87.

Application: WB, Human, U-87MG cell
- [Effects of Kruppel-like factor 6 on osteosarcoma cell biological behavior.](#)
Jianwei Z, Enzhong B, Fan L, Jian L, Ning A.
Tumour Biology 2013 Jan; 34(2):1097.

Application: WB, Human, MG63 cells
- [Effect of TRAF6 on the biological behavior of human lung adenocarcinoma cell.](#)
Zhong L, Cao F, You Q.
Tumour Biology 2013 Feb; 34(1):231.

Application: WB-Ce, Human, A-549 cells

- [PEBP4 enhanced HCC827 cell proliferation and invasion ability and inhibited apoptosis.](#)

Yu G, Shen Z, Chen G, Teng X, Hu Y, Huang B.

Tumour Biology 2013 Feb; 34(1):91.

Application: WB-Tr, Human, HCC827 cells

- [Intracerebral transplantation of bone marrow stromal cells ameliorates tissue plasminogen activator-induced brain damage after cerebral ischemia in mice detected by in vivo and ex vivo optical imaging.](#)

Liu N, Deguchi K, Yamashita T, Liu W, Ikeda Y, Abe K.

Journal of Neuroscience 2012 Nov; 90(11):2086.

Application: WB-Ti, Mouse, Mouse brain

- [Effects of SASH1 on lung cancer cell proliferation, apoptosis, and invasion in vitro.](#)

Chen EG, Chen Y, Dong LL, Zhang JS.

Tumour Biology 2012 Oct; 33(5):1393.

Application: WB, Human, A-549 cells

- [Expression of Snail and Slug in renal cell carcinoma: E-cadherin repressor Snail is associated with cancer invasion and prognosis.](#)

Mikami S, Katsube KI, Oya M, Ishida M, Kosaka T, Mizuno R, Mukai M, Okada Y.

Laboratory Investigation; a Journal of Technical Methods and Pathology 2011 Oct; 91(10):1443.

Application: IHC-P, WB-Ti, Human, Human renal cell carcinoma

- [Matrix metalloproteinases MMP2 and MMP9 are produced in early stages of kidney morphogenesis but only MMP9 is required for renal organogenesis in vitro.](#)

Lelongt B, Trugnan G, Murphy G, Ronco PM.

The Journal of Cell Biology 1997 Mar; 136(6):1363.

Application: IF, WB-Ce, Mouse, Macrophage, NIH/3T3 cells, Kidney

Pathway

- [Bladder cancer](#)
- [Leukocyte transendothelial migration](#)
- [Pathways in cancer](#)

Disease

- [Acquired Immunodeficiency Syndrome](#)
- [Acute Disease](#)
- [Adenocarcinoma](#)
- [Airway Remodeling](#)
- [Alcoholism](#)
- [Alzheimer disease](#)
- [Amyotrophic lateral sclerosis](#)
- [Aneurysm](#)
- [Angina](#)
- [Angina Pectoris](#)
- [Aortic Aneurysm](#)
- [Arteriosclerosis](#)
- [Arthritis](#)
- [Asthma](#)
- [Astrocytoma](#)
- [Atherosclerosis](#)
- [Atrial Fibrillation](#)
- [Behcet Syndrome](#)
- [Bipolar Disorder](#)
- [Brain Ischemia](#)
- [Brain Neoplasms](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Bronchiectasis](#)
- [Carcinoma](#)
- [Cardiomyopathies](#)

- [Cardiomyopathy](#)
- [Cardiovascular Diseases](#)
- [Carotid Artery](#)
- [Carotid Artery Diseases](#)
- [Carotid Stenosis](#)
- [Cerebral Hemorrhage](#)
- [Cerebral Infarction](#)
- [Cerebrovascular Accident](#)
- [Cerebrovascular Disorders](#)
- [Chorioamnionitis](#)
- [Chronic Disease](#)
- [Cicatrix](#)
- [Cleft Lip](#)
- [Cleft Palate](#)
- [Cognition](#)
- [Colitis](#)
- [Colorectal Neoplasms](#)
- [Connective Tissue Diseases](#)
- [Constriction](#)
- [Coronary Aneurysm](#)
- [Coronary Artery Disease](#)
- [Coronary Disease](#)
- [Coronary Restenosis](#)
- [Crohn Disease](#)
- [Delayed Graft Function](#)
- [Dementia](#)

- [Diabetes Complications](#)
- [Diabetes Mellitus](#)
- [Diabetic Angiopathies](#)
- [Diabetic Nephropathies](#)
- [Diabetic Retinopathy](#)
- [Disease](#)
- [Disease Progression](#)
- [Disease Susceptibility](#)
- [Ductus Arteriosus](#)
- [Duodenal Ulcer](#)
- [Edema](#)
- [Endometrial Neoplasms](#)
- [Endometriosis](#)
- [Epilepsy](#)
- [Esophageal Neoplasms](#)
- [Exfoliation Syndrome](#)
- [Fetal Diseases](#)
- [Fetal Growth Retardation](#)
- [Fetal Membranes](#)
- [Fibrosis](#)
- [Fractures](#)
- [Gastritis](#)
- [Genetic Predisposition to Disease](#)
- [Giant Cell Arteritis](#)
- [Gingivitis](#)
- [Glaucoma](#)

- [Glomerulonephritis](#)
- [Graft Occlusion](#)
- [Guillain-Barre Syndrome](#)
- [Heart Diseases](#)
- [Heart Failure](#)
- [Helicobacter Infections](#)
- [Hemorrhage](#)
- [Hepatitis B](#)
- [Hepatitis C](#)
- [Hypersensitivity](#)
- [Hypertension](#)
- [Hypertrophy](#)
- [Infant](#)
- [Infection](#)
- [Inflammation](#)
- [Intervertebral Disk Displacement](#)
- [Intracranial Aneurysm](#)
- [Intracranial Arteriosclerosis](#)
- [Intracranial Hemorrhages](#)
- [Kidney Failure](#)
- [Leiomyoma](#)
- [Leukoaraiosis](#)
- [Liver Cirrhosis](#)
- [Liver Neoplasms](#)
- [Long QT syndrome](#)
- [Lung Neoplasms](#)

- [Lupus Erythematosus](#)
- [Lymphatic Metastasis](#)
- [Lymphoma](#)
- [Macular Degeneration](#)
- [Malignant melanoma](#)
- [Melanoma](#)
- [Metabolic Syndrome X](#)
- [Metaplasia](#)
- [Mouth Neoplasms](#)
- [Mucocutaneous Lymph Node Syndrome](#)
- [Multiple Sclerosis](#)
- [Musculoskeletal Diseases](#)
- [Myocardial Infarction](#)
- [Myopia](#)
- [Nasal Polyps](#)
- [Nasopharyngeal Neoplasms](#)
- [Neoplasm Invasiveness](#)
- [Neoplasm Metastasis](#)
- [Neoplasm Recurrence](#)
- [Neoplasms](#)
- [Neovascularization](#)
- [Neuropsychological Tests](#)
- [Obesity](#)
- [Obstetric Labor](#)
- [Oral Submucous Fibrosis](#)
- [Osteoarthritis](#)

- [Osteoporosis](#)
- [Ovarian cancer](#)
- [Ovarian Neoplasms](#)
- [Paraparesis](#)
- [Pelvic Organ Prolapse](#)
- [Periodontal Attachment Loss](#)
- [Periodontitis](#)
- [Peripheral Vascular Diseases](#)
- [Pre-Eclampsia](#)
- [Pregnancy Complications](#)
- [Premature Birth](#)
- [Prostate cancer](#)
- [Prostatic Neoplasms](#)
- [Pulmonary Disease](#)
- [Pulmonary Emphysema](#)
- [Recurrence](#)
- [Rheumatoid Nodule](#)
- [Schizophrenia](#)
- [Scleroderma](#)
- [Seizures](#)
- [Sinusitis](#)
- [Skin Diseases](#)
- [Skin Neoplasms](#)
- [Spinal Diseases](#)
- [Stomach Neoplasms](#)
- [Stomach Ulcer](#)

- [Stroke](#)
- [Subarachnoid Hemorrhage](#)
- [Thrombosis](#)
- [Trachoma](#)
- [Tuberculosis](#)
- [Urinary Bladder Neoplasms](#)
- [Uterine Cervical Neoplasms](#)
- [Uterine Diseases](#)
- [Uterine Neoplasms](#)
- [Vaginosis](#)
- [Ventricular Dysfunction](#)
- [Ventricular Outflow Obstruction](#)
- [Vertebral Artery Dissection](#)