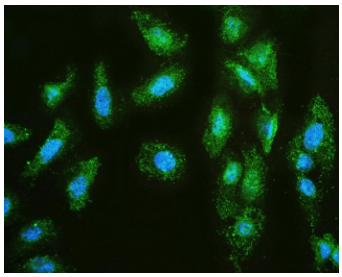
MMP1 Antibody / Interstitial Collagenase Antibody (RQ5503)

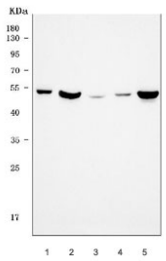
Catalog No.	Formulation	Size
RQ5503	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

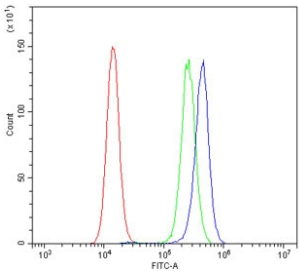
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	P03956
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml Immunofluorescence : 2-4ug/ml Flow Cytometry : 1-3ug/million cells Direct ELISA : 0.1-0.5ug/ml
Limitations	This MMP1 Antibody / Interstitial Collagenase Antibody is available for research use only.



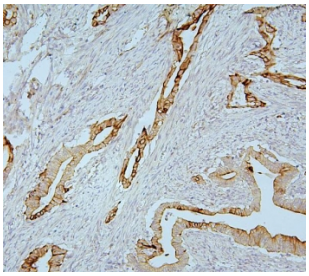
MMP1 Antibody U-2 OS Cell IF. Immunofluorescence analysis of FFPE human U-2 OS cells using MMP1 Antibody / Interstitial Collagenase Antibody. Heat induced antigen retrieval was performed by boiling sections in pH 6 citrate buffer for 20 minutes prior to staining. MMP1 expression is shown in green with DAPI nuclear counterstain shown in blue. Predominantly cytoplasmic staining is observed, consistent with intracellular synthesis and processing of this secreted extracellular matrix remodeling enzyme. These results support the use of MMP1 Antibody / Interstitial Collagenase Antibody for studying extracellular matrix remodeling, collagen degradation and cancer-associated tissue remodeling pathways.



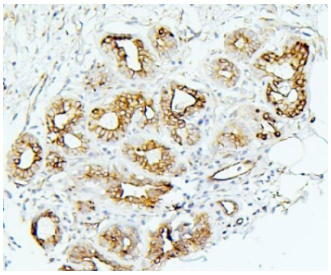
MMP1 Antibody Human Tissue and Cancer Cell WB. Western blot analysis using MMP1 Antibody / Interstitial Collagenase Antibody. Lane 1: human placenta; Lane 2: human Caco-2 cells; Lane 3: human K562 cells; Lane 4: human U-2 OS cells; Lane 5: human MCF7 cells. A specific band is detected at approximately 54 kDa, consistent with the predicted molecular weight of the MMP1 proenzyme (pro-MMP1). These results support the use of MMP1 Antibody / Interstitial Collagenase Antibody for studying extracellular matrix remodeling, interstitial collagenase expression and cancer-associated tissue remodeling pathways.



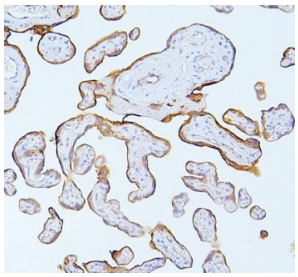
MMP1 Antibody PC-3 Cell FACS. Flow cytometry analysis of human PC-3 cells using MMP1 Antibody / Interstitial Collagenase Antibody at 1 ug/million cells. Cells were blocked with goat sera prior to staining. The blue histogram represents MMP1 antibody staining, the green histogram represents the isotype control and the red histogram represents cells alone. A distinct rightward shift of the antibody-stained population demonstrates specific detection of MMP1 expression in PC-3 cells. These results support the use of MMP1 Antibody / Interstitial Collagenase Antibody for studying extracellular matrix remodeling, interstitial collagenase expression and cancer-associated tissue remodeling pathways.



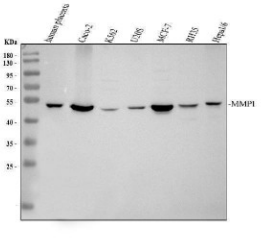
MMP1 Antibody Human Intestinal Cancer IHC. Immunohistochemistry analysis of FFPE human intestinal cancer tissue using MMP1 Antibody / Interstitial Collagenase Antibody. Heat induced antigen retrieval was performed by boiling tissue sections in pH 6 citrate buffer for 20 minutes prior to staining. Strong cytoplasmic and membranous staining is observed in malignant epithelial cells, consistent with MMP1 expression in tumors undergoing extracellular matrix remodeling. These results support the use of MMP1 Antibody / Interstitial Collagenase Antibody for studying interstitial collagenase expression, tumor invasion and cancer-associated extracellular matrix remodeling.



MMP1 Antibody Human Breast Cancer IHC. Immunohistochemistry analysis of FFPE human breast cancer tissue using MMP1 Antibody / Interstitial Collagenase Antibody. Heat induced antigen retrieval was performed by boiling tissue sections in pH 6 citrate buffer for 20 minutes prior to staining. Strong cytoplasmic and membranous staining is observed in malignant epithelial cells, consistent with MMP1 expression associated with extracellular matrix remodeling and tumor progression. These results support the use of MMP1 Antibody / Interstitial Collagenase Antibody for studying interstitial collagenase expression, breast cancer biology and cancer-associated tissue remodeling.



MMP1 Antibody Human Placenta IHC. Immunohistochemistry analysis of FFPE human placenta tissue using MMP1 Antibody / Interstitial Collagenase Antibody. Heat induced antigen retrieval was performed by boiling tissue sections in pH 6 citrate buffer for 20 minutes prior to staining. Strong staining is observed in trophoblast cells, consistent with MMP1 expression in placental tissue remodeling and extracellular matrix turnover. These results support the use of MMP1 Antibody / Interstitial Collagenase Antibody for studying interstitial collagenase expression, placental biology and extracellular matrix remodeling.



MMP1 Antibody Human, Rat and Mouse WB. Western blot analysis using MMP1 Antibody / Interstitial Collagenase Antibody. Lane 1: human placenta; Lane 2: human Caco-2 cells; Lane 3: human K562 cells; Lane 4: human U-2 OS cells; Lane 5: human MCF-7 cells; Lane 6: rat RH35 cells; Lane 7: mouse Hepa1-6 cells. A specific band is detected at approximately 54 kDa in all samples, consistent with the predicted molecular weight of the MMP1 proenzyme (pro-MMP1). These results support the use of MMP1 Antibody / Interstitial Collagenase Antibody for studying extracellular matrix remodeling, interstitial collagenase expression and cancer-associated tissue remodeling across human, rat and mouse samples.

Description

MMP1 Antibody / Interstitial Collagenase Antibody detects matrix metalloproteinase 1, a zinc-dependent extracellular protease that initiates the degradation of fibrillar collagens within the extracellular matrix. MMP1, also known as interstitial collagenase, is capable of cleaving collagen types I, II and III, making it an important enzyme in connective tissue remodeling, wound repair and normal tissue homeostasis. Tight regulation of MMP1 expression and activity is essential for maintaining extracellular matrix integrity while allowing controlled tissue remodeling during physiological and pathological processes.

MMP1 is produced by multiple cell types, including fibroblasts, epithelial cells, endothelial cells, macrophages and other inflammatory cells in response to growth factors, cytokines and tissue injury. Once secreted, the enzyme contributes to extracellular matrix turnover by degrading structural collagen fibers and facilitating cell migration through connective tissues. A MMP1 Antibody / Interstitial Collagenase Antibody is useful for researchers studying matrix remodeling, wound healing, inflammation and tissue regeneration.

MMP1 has been extensively investigated in cancer biology because excessive extracellular matrix degradation can promote tumor invasion, angiogenesis and metastatic spread. Increased MMP1 expression has been reported in numerous malignancies, where remodeling of the surrounding stromal environment facilitates cancer cell migration and disease progression. In addition to oncology, MMP1 plays important roles in arthritis, pulmonary fibrosis, cardiovascular remodeling and chronic inflammatory disorders, making it an important biomarker across diverse areas of biomedical research.

Because MMP1 functions within a tightly regulated network of matrix metalloproteinases and their endogenous inhibitors, analysis of its expression provides valuable insight into extracellular matrix dynamics and tissue remodeling pathways. Investigators frequently examine MMP1 alongside related metalloproteinases to better understand mechanisms governing connective tissue turnover, inflammatory responses and disease-associated remodeling. MMP1 Antibody / Interstitial Collagenase Antibody supports research into proteolytic signaling, stromal biology and extracellular matrix regulation.

NSJ Bioreagents offers MMP1 Antibody / Interstitial Collagenase Antibody products for researchers investigating extracellular matrix remodeling, connective tissue biology and cancer progression. These antibodies support applications including Western blot, immunohistochemistry, immunofluorescence and flow cytometry analysis of MMP1 expression and localization. MMP1 Antibody / Interstitial Collagenase Antibody provides a valuable tool for studying collagen degradation, tumor invasion mechanisms and extracellular matrix remodeling pathways.

Explore additional oncology research tools in our Cancer Antibodies page, including targets involved in tumor progression, extracellular matrix remodeling, metastasis and cancer cell signaling.

Application Notes

Optimal dilution of the MMP1 Antibody / Interstitial Collagenase Antibody should be determined by the researcher.

Immunogen

A human recombinant protein (amino acids D124-N469) was used as the immunogen for the MMP1 antibody.

Storage

After reconstitution, the MMP1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Interstitial Collagenase antibody, Collagenase 1 antibody, Fibroblast Collagenase antibody, Matrix Metalloproteinase 1 antibody, MMP-1 antibody, CLG antibody, Fibroblast Type Collagenase antibody