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MMP14 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6198a

Specification

MMP14 Antibody (N-term) - Product Information

Application	**WB, FC, IHC-P,E**
Primary Accession	P50281
Other Accession	Q10739, Q9XT90, P53690, Q9GLE4, NP_004986
Reactivity	**Human, Mouse, Rat**
Predicted	**Bovine, Pig**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**145-174**

MMP14 Antibody (N-term) - Additional Information

Gene ID 4323

Other Names
Matrix metalloproteinase-14, MMP-14, MMP-X1, Membrane-type matrix metalloproteinase 1, MT-MMP 1, MTMMP1, Membrane-type-1 matrix metalloproteinase, MT1-MMP, MT1MMP, MMP14

Target/Specificity
This MMP14 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 145-174 amino acids from the N-terminal region of human MMP14.

Dilution
WB~~1:2000
FC~~1:10~50
IHC-P~~1:25
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
MMP14 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

MMP14 Antibody (N-term) - Protein Information

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Name MMP14

Function Endopeptidase that degrades various components of the extracellular matrix such as collagen (PubMed:8015608). Essential for pericellular collagenolysis and modeling of skeletal and extraskeletal connective tissues during development (By similarity). Activates progelatinase A/MMP2, thereby acting as a positive regulator of cell growth and migration (PubMed:22065321, PubMed:8015608). Involved in the formation of the fibrovascular tissues in association with pro-MMP2 (PubMed:12714657, PubMed:22065321). May be involved in actin cytoskeleton reorganization by cleaving PTK7 (PubMed:20837484). Acts as a regulator of Notch signaling by mediating cleavage and inhibition of DLL1 (PubMed:21572390). Cleaves ADGRB1 to release vasculostatin-40 which inhibits angiogenesis (PubMed:22330140). Acts as a negative regulator of the GDF15-GFRAL aversive response by mediating cleavage and inactivation of GFRAL (PubMed:35177851).

Cellular Location
Cell membrane; Single-pass type I membrane protein. Melanosome. Cytoplasm Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV (PubMed:17081065). Forms a complex with BST2 and localizes to the cytoplasm (PubMed:17081065)

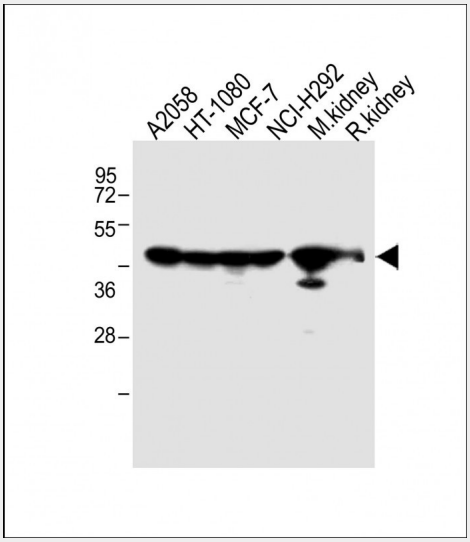
Tissue Location
Expressed in stromal cells of colon, breast, and head and neck. Expressed in lung tumors.

MMP14 Antibody (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

MMP14 Antibody (N-term) - Images



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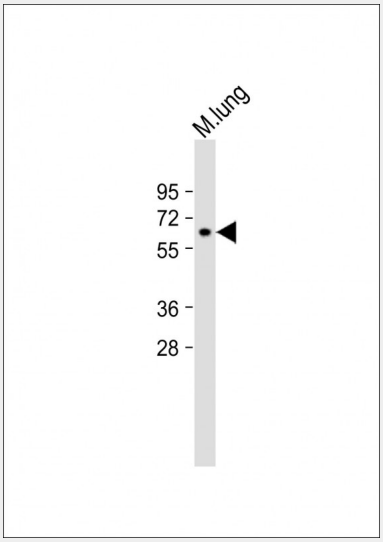
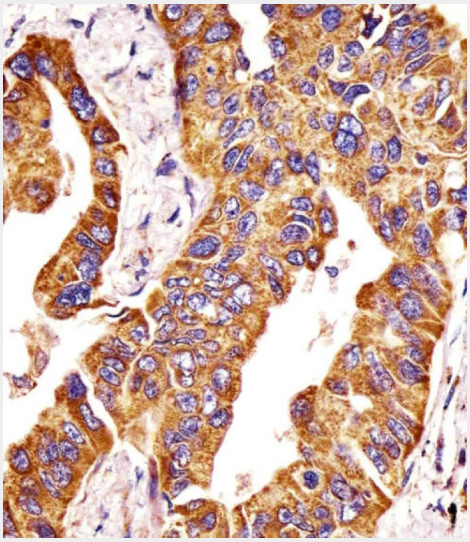
All lanes : Anti-MMP14 Antibody (N-term) at 1:2000 dilution Lane 1: A2058 whole cell lysate Lane 2: HT-1080 whole cell lysate Lane 3: MCF-7 whole cell lysate Lane 4: NCI-H292 whole cell lysate Lane 5: Mouse kidney lysate Lane 5: Rat kidney lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 66 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Anti-MMP14 Antibody (N-term) at 1:2000 dilution + Mouse lung lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 66 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



AP6198a staining MMP14 in human lung adenocarcinoma tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.

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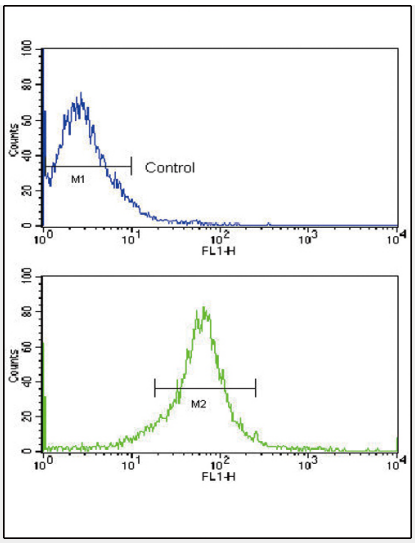

Flow cytometric analysis of MCF-7 cells using MMP14 Antibody (N-term) (bottom histogram) compared to a negative control (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

MMP14 Antibody (N-term) - 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. MMP14 seems to specifically activate progelatinase A, and may thus trigger invasion by tumor cells by activating progelatinase A on the tumor cell surface. Expression is significant in stromal cells of colon, breast, and head and neck.

MMP14 Antibody (N-term) - References

Will, H., et al., Eur. J. Biochem. 231(3):602-608 (1995).
Takino, T., et al., Gene 155(2):293-298 (1995).
Okada, A., et al., Proc. Natl. Acad. Sci. U.S.A. 92(7):2730-2734 (1995).
Sato, H., et al., Nature 370(6484):61-65 (1994).

MMP14 Antibody (N-term) - Citations

- Targeting the MMP-14/MMP-2/integrin αvβ3 axis with multispecific N-TIMP2-based antagonists for cancer therapy.
- Nkx2-5 Is Expressed in Atherosclerotic Plaques and Attenuates Development of Atherosclerosis in Apolipoprotein E-Deficient Mice.
- Regulation of CXCR4-mediated invasion by DARPP-32 in gastric cancer cells.