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MMP14 Rabbit mAb

Catalog # AP74828

Product Information

Application	WB, IHC-P, FC, IP
Primary Accession	P50281
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	65894

Additional Information

Gene ID	4323
Other Names	MMP14
Dilution	WB~~1:1000-1:5000 IHC-P~~N/A FC~~1:100-1:200 IP~~1:20
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

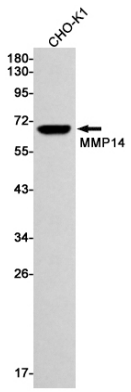
Name	MMP14
Function	Endopeptidase that degrades various components of the extracellular matrix such as collagen (PubMed:8015608). Essential for pericellular collagenolysis and modeling of skeletal and extraskeletal connective tissues during development (By similarity). Activates progelatinase A/MMP2, 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.

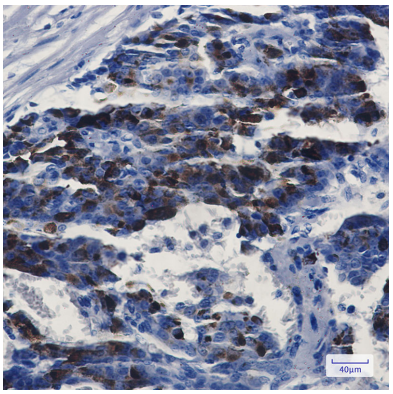
Background

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 MMP's are secreted as inactive proproteins which are activated when cleaved by extracellular proteinases. However, the protein encoded by this gene is a member of the membrane-type MMP (MT-MMP) subfamily; each member of this subfamily contains a potential transmembrane domain suggesting that these proteins are expressed at the cell surface rather than secreted. This protein activates MMP2 protein, and this activity may be involved in tumor invasion.

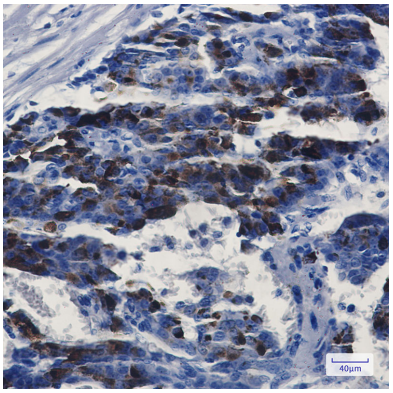
Images

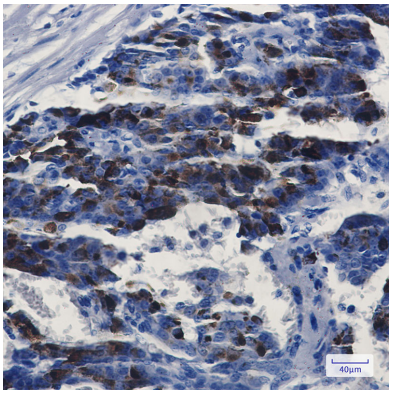


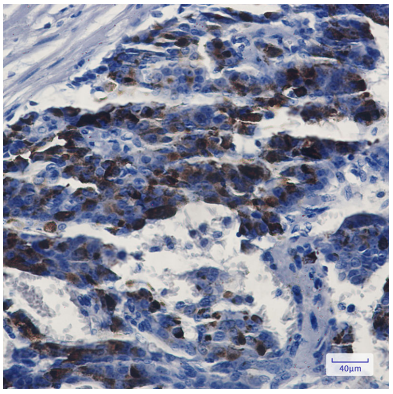
Western blot analysis of MMP14 in CHO-K1 lysates using MMP14 antibody.



Immunohistochemistry analysis of paraffin-embedded Human breast cancer using MMP14 antibody.High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.







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