10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

MMP14 Antibody (C-term)

Mouse Monoclonal Antibody (Mab)
Catalog # AM1832a

Product Information

Application	WB, IF, E
Primary Accession	P50281
Other Accession	Q10739, Q95220, Q9XT90, P53690, Q9GLE4, NP_004986.1
Reactivity	Human, Mouse
Predicted	Mouse, Rat, Rabbit, Pig, Chicken, Bovine, Canine
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgM
Clone Names	133CT15.10.5.1
Calculated MW	65894
Antigen Region	470-499

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 mice immunized with a KLH conjugated synthetic peptide between 470-499 amino acids from the C-terminal region of human MMP14.
Dilution	WB~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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	MMP14 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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.

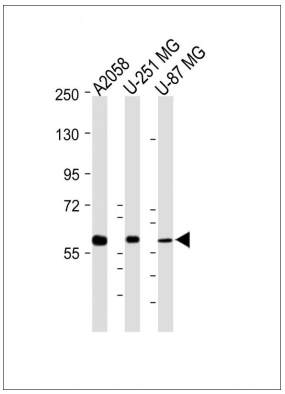
Background

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.

References

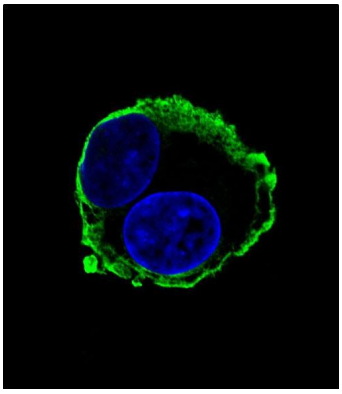
Onimaru, M., et al. Arterioscler. Thromb. Vasc. Biol. 30(4):818-826(2010)
Wipff, J., et al. J. Rheumatol. 37(3):599-602(2010)
Liao, M.C., et al. Biochemistry 49(6):1127-1136(2010)

Images



All lanes : Anti-MMP14 Antibody (C-term) at 1:1000 dilution Lane 1: A2058 whole cell lysate Lane 2: U-251 MG whole cell lysate Lane 3: U-87 MG whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG/A/M(H/L), Peroxidase conjugated at 1/2000 dilution. Observed band size : 58kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Confocal immunofluorescent analysis of MMP14 Antibody (C-term) (Cat#AM1832a) with HepG2 cell followed by Alexa Fluor® 488-conjugated goat anti-mouse IgM



(green). DAPI was used to stain the cell nuclear (blue).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.