MMP14 monoclonal antibody

Catalog: MB67004 Host: Mouse Reactivity: Human

BackGround:

The matrix metalloproteinase (MMP) family of proteases are a group of zinc-dependent enzymes that target extracellular proteins, including growth factors, cell surface receptors, adhesion molecules, and other proteases . Matrix metalloproteinases can be broadly categorized based on function and cellular localization, and include six distinct membrane-type (MT) metalloproteinases that share a transmembrane domain and short cytoplasmic tail . Membrane type-1 matrix metalloproteinase (MT1-MMP, MMP14) is involved in regulating development, angiogenesis, tissue remodeling, and tumor progression . MT1-MMP and other metalloproteinases promote tumor cell invasion by accumulating in specialized structures known as invadopodia, which remodel the ECM and allow tumor cells to breach the basement membrane . The abundance and presence of MT1-MMP at the cell surface is controlled by targeted endocytosis, which may be regulated by the MT1-MMP cytoplasmic domain . MT1-MMP protease activity can be further regulated through homodimer formation, autocatalytic processing, domain shedding and the interaction with inhibitory proteins. Activation of the MT1-MMP proenzyme results from cleavage of full-length MT1-MMP by furin in the trans-Golgi network, which removes the inhibitory propeptide domain . At the cell surface, MT1-MMP can be found in a protein complex with the soluble metalloproteinase MMP2 and the MMP inhibitor TIMP2. MT1-MMP mediated cleavage and activation of MMP2 generates the active MMP2 collagenase, which plays important roles in ECM remodeling and tumor invasion. MT1-MMP interacts with a large number of substrates in addition to MMP2, including interstitial collagens, adhesive glycoproteins (i.e. laminin), and cell surface receptors .

Product:

Mouse IgM. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.

Molecular Weight:

~ 62 kDa

Swiss-Prot:

P50281

Purification&Purity:

This antibody is purified through a protein G column.

Applications:

WB (1/500 - 1/1000)

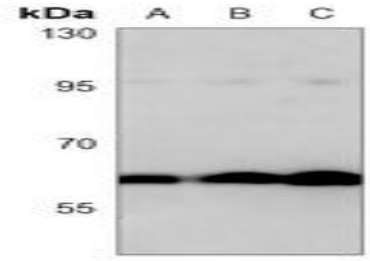
Storage&Stability:

Store at 4℃ short term. Aliquot and store at -20℃ long term. Avoid freeze-thaw cycles.

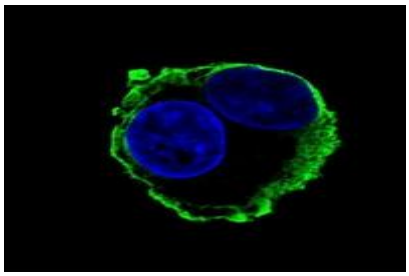
Specificity:

Recognizes endogenous levels of MMP14 protein.

DATA:



Western blot analysis of MMP14 expression in A2058 (A), U251 MG (B), U87 MG (C) whole cell lysates.



Immunofluorescent analysis of MMP14 staining in HepG2 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3%

Bioworld Technology, Inc.
Add: 1660 South Highway 100, Suite 500 St. Louis Park, MN 55416,USA.
Email: info@bioworlde.com
Tel: 6123263284
Fax: 6122933841

Bioworld technology, co. Ltd.
Add: No 9, weidi road Qixia District Nanjing, 210046, P. R. China.
Email: info@biogot.com
Tel: 0086-025-68037686
Fax: 0086-025-68035151

BSA-PBS and incubated overnight at 4 ℃ in a humidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

Note:

For research use only, not for use in diagnostic procedure.

Bioworld Technology, Inc.
Add: 1660 South Highway 100, Suite 500 St. Louis Park, MN 55416,USA.
Email: info@bioworlde.com
Tel: 6123263284
Fax: 6122933841

Bioworld technology, co. Ltd.
Add: No 9, weidi road Qixia District Nanjing, 210046, P. R. China.
Email: info@biogot.com
Tel: 0086-025-68037686
Fax: 0086-025-68035151