abcam

Product datasheet

Native Mouse MMP9 protein ab39309

4 References 1 Image

Description

Product name	Native Mouse MMP9 protein
Purity	= 95 % Ion Exchange Chromatography. Purified from cell culture media of BHK cells, free of its endogenous inhibitor, TIMP1, and other matrix metalloproteinases.
Expression system	BHK cells
Protein length	Full length protein
Animal free	No
Nature	Native
Species	Mouse

Specifications

Our **Abpromise guarantee** covers the use of **ab39309** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Functional Studies SDS-PAGE Western blot
Form	Liquid
Additional notes	Mouse-MMP9 degrades denatured collagen (gelatin), and a range of extracellular matrix components in-vivo. Unlike MMP2, MMP9 is not constituitively produced by most normal cells, although the enzyme is often over expressed by transformed cells, tumor cells, and cells treated with the phorbol ester PMA. An endogenous inhibitor to MMP9, TIMP1, is often complexed with the enzyme in-vivo, but has been removed from this preparation. **ab39309 is a mix of active and latent enzymes, approximately 25% active.** For Gelatin zymography the MMP9 does not need to be pre-activated, the SDS in the sample buffer will activate the enzyme sufficiently. For any other assays, or to get maximum activity the MMP9 will need activation, as is is mostly in latent form. APMA at 1 mM works, in a buffer of PBS with 10 mM $CaCl_2$, 100 µM $ZnCl_2$, and 0.05% Brij-35, 37ºC for a minimum of 1 hour.

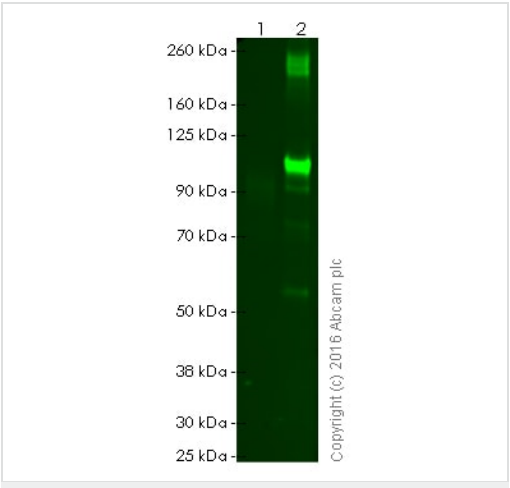
Preparation and Storage

Stability and Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles. pH: 7.40 Constituents: PBS, 50% Glycerol, 1.45% Sodium chloride

General Info

Function	May play an essential role in local proteolysis of the extracellular matrix and in leukocyte migration. Could play a role in bone osteoclastic resorption. Cleaves KiSS1 at a Gly- -Leu bond. Cleaves type IV and type V collagen into large C-terminal three quarter fragments and shorter N-terminal one quarter fragments. Degrades fibronectin but not laminin or Pz-peptide.
Tissue specificity	Produced by normal alveolar macrophages and granulocytes.
Involvement in disease	Intervertebral disc disease Metaphyseal anadysplasia 2
Sequence similarities	Belongs to the peptidase M10A family. Contains 3 fibronectin type-II domains. Contains 4 hemopexin repeats.
Domain	The conserved cysteine present in the cysteine-switch motif binds the catalytic zinc ion, thus inhibiting the enzyme. The dissociation of the cysteine from the zinc ion upon the activation-peptide release activates the enzyme.
Post-translational modifications	Processing of the precursor yields different active forms of 64, 67 and 82 kDa. Sequentially processing by MMP3 yields the 82 kDa matrix metalloproteinase-9. N- and O-glycosylated.
Cellular localization	Secreted, extracellular space, extracellular matrix.

Images



Western blot - Recombinant Mouse MMP9 protein (ab39309)

All lanes : Anti-MMP9 antibody (**ab38898**) at 2 µg/ml

Lane 1 : Native human MMP9 protein (Proenzyme, monomer) (**ab157344**)
Lane 2 : Native Mouse MMP9 protein (ab39309)

Lysates/proteins at 0.1 µg per lane.

Performed under reducing conditions.

This blot was produced using a 4-12% Bis-Tris gel under the MOPS buffer system. The gel was run at 200V for 60 minutes before being transferred onto a nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour before being incubated with anti-MMP9 antibody (**ab38898**; 2 microgram per mL) overnight at 4°C. Antibody binding was detected using infrared labelled goat anti-rabbit (green) antibody (diluted 1:20000) for 1

hour at room temperature before imaging.

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