

Product datasheet

Anti-MMP2 antibody ab97779

★★★★☆ 2 Abreviews 6 References 6 Images

Overview

<b>Product name</b>	Anti-MMP2 antibody
<b>Description</b>	Rabbit polyclonal to MMP2
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P, IP, ICC/IF, WB
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Human <b>Predicted to work with:</b> Rat, Sheep, Rabbit, Cow, Pig, Xenopus laevis ▲
<b>Immunogen</b>	Recombinant protein fragment corresponding to a region within amino acids 193 and 545 of Human MMP2 (NP_004521).
<b>Positive control</b>	293T, A431, H1299, HeLa, HepG2, MOLT4 or Raji cell lysate; U-87 MG whole cell extracts. PC-3, mouse brain.

Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
<b>Storage buffer</b>	pH: 7.00 Preservative: 0.01% Thimerosal (merthiolate) Constituents: 0.75% Glycine, 10% Glycerol, 1.21% Tris
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab97779** in the following tested applications.

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

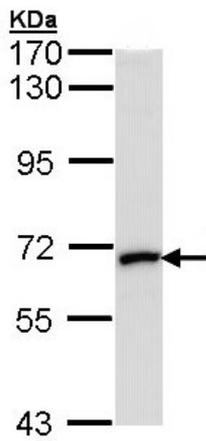
Application	Abreviews	Notes
IHC-P		1/100 - 1/1000.

Application	Abreviews	Notes
IP		1/100 - 1/500.
ICC/IF		1/100 - 1/1000.
WB	★☆☆☆☆	1/500 - 1/3000. Predicted molecular weight: 74 kDa.

## Target

<b>Function</b>	<p>Ubiquitous metalloproteinase that is involved in diverse functions such as remodeling of the vasculature, angiogenesis, tissue repair, tumor invasion, inflammation, and atherosclerotic plaque rupture. As well as degrading extracellular matrix proteins, can also act on several nonmatrix proteins such as big endothelial 1 and beta-type CGRP promoting vasoconstriction. Also cleaves KISS at a Gly-Leu bond. Appears to have a role in myocardial cell death pathways. Contributes to myocardial oxidative stress by regulating the activity of GSK3beta. Cleaves GSK3beta in vitro.</p> <p>PEX, the C-terminal non-catalytic fragment of MMP2, possesses anti-angiogenic and anti-tumor properties and inhibits cell migration and cell adhesion to FGF2 and vitronectin. Ligand for integrin/beta3 on the surface of blood vessels.</p>
<b>Tissue specificity</b>	Produced by normal skin fibroblasts. PEX is expressed in a number of tumors including gliomas, breast and prostate.
<b>Involvement in disease</b>	Defects in MMP2 are the cause of Torg-Winchester syndrome (TWS) [MIM:259600]; also known as multicentric osteolysis nodulosis and arthropathy (MONA). TWS is an autosomal recessive osteolysis syndrome. It is severe with generalized osteolysis and osteopenia. Subcutaneous nodules are usually absent. Torg-Winchester syndrome has been associated with a number of additional features including coarse face, corneal opacities, patches of thickened, hyperpigmented skin, hypertrichosis and gum hypertrophy. However, these features are not always present and have occasionally been observed in other osteolysis syndromes.
<b>Sequence similarities</b>	<p>Belongs to the peptidase M10A family.</p> <p>Contains 3 fibronectin type-II domains.</p> <p>Contains 4 hemopexin-like domains.</p>
<b>Domain</b>	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.
<b>Post-translational modifications</b>	<p>Phosphorylation on multiple sites modulates enzymatic activity. Phosphorylated by PKC in vitro.</p> <p>The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-MMP3). Autocatalytic cleavage in the C-terminal produces the anti-angiogenic peptide, PEX. This processing appears to be facilitated by binding integrin/beta3.</p>
<b>Cellular localization</b>	Secreted > extracellular space > extracellular matrix. Membrane. Nucleus. Colocalizes with integrin alphaV/beta3 at the membrane surface in angiogenic blood vessels and melanomas. Found in mitochondria, along microfibrils, and in nuclei of cardiomyocytes.

## Images

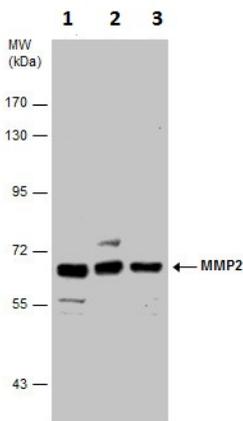


Western blot - Anti-MMP2 antibody (ab97779)

Anti-MMP2 antibody (ab97779) at 1/1000 dilution + HepG2 whole cell lysate at 30 µg

**Predicted band size:** 74 kDa

7.5% SDS Page



Western blot - Anti-MMP2 antibody (ab97779)

**All lanes :** Anti-MMP2 antibody (ab97779) at 1/3000 dilution

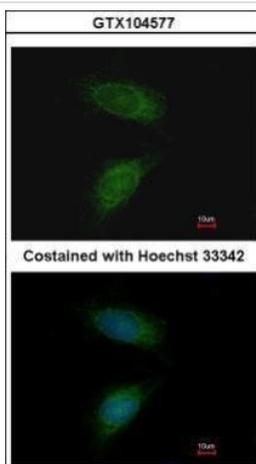
**Lane 1 :** PC-3

**Lane 2 :** U-87 MG

**Lane 3 :** SK-N-SH

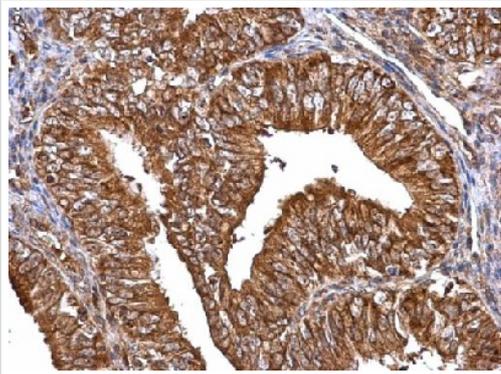
Lysates/proteins at 30 µg per lane.

**Predicted band size:** 74 kDa



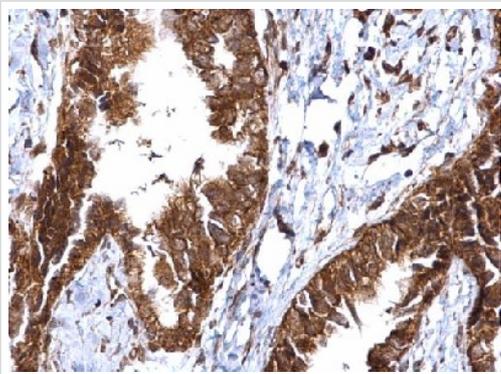
Immunocytochemistry/ Immunofluorescence - Anti-MMP2 antibody (ab97779)

Immunofluorescent analysis of methanol-fixed HeLa (Human epithelial cells from cervix adenocarcinoma cell line) labeling MMP2 with ab97779 at 1/200 dilution.



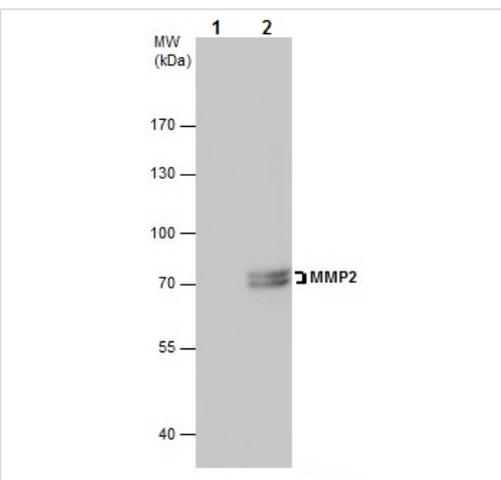
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MMP2 antibody (ab97779)

Immunohistochemical analysis of Human endometrial carcinoma labeling MMP2 with ab97779 at 1/500 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MMP2 antibody (ab97779)

Immunohistochemical analysis of paraffin-embedded Human ovarian carcinoma tissue labeling MMP2 with ab97779 at 1/500 dilution.



Immunoprecipitation - Anti-MMP2 antibody (ab97779)

MMP2 was immunoprecipitated from U-87 MG (glioblastoma-astrocytoma epithelial cell line) whole cell extracts with 5  $\mu$ g ab97779. Western blot was performed from the immunoprecipitate using ab97779.

Lane 1: Control IgG IP in U-87 MG whole cell extracts.

Lane 2: ab97779 IP in U-87 MG whole cell extracts.

## **Our Abpromise to you: Quality guaranteed and expert technical support**

---

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
  
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

## **Terms and conditions**

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors