

Product datasheet

Anti-MMP2 antibody [EPR17003-25] ab181286

Recombinant **RabMAb**

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Overview

Product name	Anti-MMP2 antibody [EPR17003-25]
Description	Rabbit monoclonal [EPR17003-25] to MMP2
Host species	Rabbit
Tested applications	Suitable for: WB, IP
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	IP: HT1080 whole cell lysate. WB: Human, mouse and rat plasma lysates; Rat serum lysate; Mouse and rat lung lysates; HT1080 whole cell lysate.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR17003-25
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab181286 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
WB		1/1000. Detects a band of approximately 74 kDa (predicted molecular weight: 73 kDa).
IP		1/30.

Target

Function

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. 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.

Tissue specificity

Produced by normal skin fibroblasts. PEX is expressed in a number of tumors including gliomas, breast and prostate.

Involvement in disease

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.

Sequence similarities

Belongs to the peptidase M10A family.
Contains 3 fibronectin type-II domains.
Contains 4 hemopexin-like domains.

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.

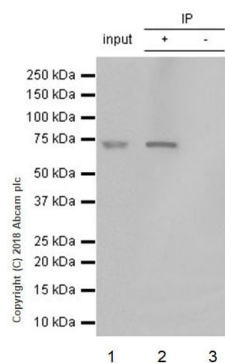
Post-translational modifications

Phosphorylation on multiple sites modulates enzymatic activity. Phosphorylated by PKC in vitro. 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.

Cellular localization

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



Immunoprecipitation - Anti-MMP2 antibody
[EPR17003-25] (ab181286)

MMP2 was immunoprecipitated from 0.35 mg HT1080 (human fibrosarcoma cell line) whole cell lysate with ab181286 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab181286 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/10000 dilution.

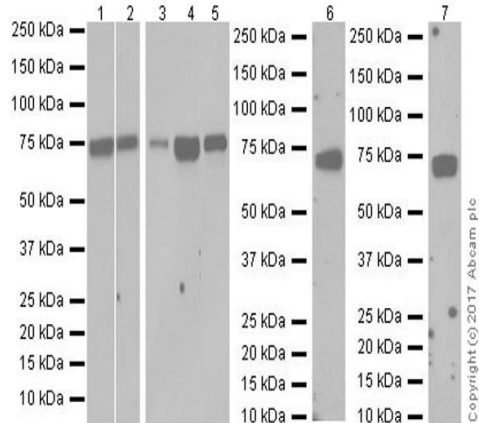
Lane 1: HT1080 whole cell lysate 10 µg (Input).

Lane 2: ab181286 IP in HT1080 whole cell lysate (+).

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of ab181286 in HT1080 whole cell lysate (-).

Blocking and dilution buffer and concentration: 5% NFDm/TBST.

Exposure time: 3 minutes.



Western blot - Anti-MMP2 antibody [EPR17003-25]
(ab181286)

Lanes 1-5 : Anti-MMP2 antibody [EPR17003-25] (ab181286) at 1/1000 dilution

Lanes 6-7 : Anti-MMP2 antibody [EPR17003-25] (ab181286) at 1/2000 dilution

Lane 1 : Mouse plasma lysate at 20 µg

Lane 2 : Rat serum lysate at 20 µg

Lane 3 : Mouse lung lysate at 20 µg

Lane 4 : Rat plasma lysate at 20 µg

Lane 5 : Rat lung lysate at 20 µg

Lane 6 : HT1080 (human fibrosarcoma cell line) whole cell lysate at 10 µg

Lane 7 : Human plasma lysate at 10 µg

Secondary

All lanes : Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 73 kDa

Observed band size: 72 kDa

Exposure time: Lanes 1-2: 3 minutes; Lanes 3-5: 10 seconds; Lanes 6-7: 30 seconds.

Blocking/Dilution buffer: 5% NFDm/TBST.

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-MMP2 antibody [EPR17003-25] (ab181286)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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