




Product datasheet

Anti-MMP2 antibody [4D3] ab2462

★★★★★ [3 Abreviews](#) [31 References](#) [1 Image](#)

Overview

| | |
|----------------------------|---|
| Product name | Anti-MMP2 antibody [4D3] |
| Description | Mouse monoclonal [4D3] to MMP2 |
| Host species | Mouse |
| Specificity | Binds to human MMP-2 and pro-MMP2. The antibody was tested for cross-reactivity with MMP-1, MMP-3, and MMP-9 and showed mild cross-reactivity with MMP-3. |
| Tested applications | Suitable for: WB |
| Species reactivity | Reacts with: Human Predicted to work with: Mouse, Rat  |
| Immunogen | Synthetic peptide corresponding to Human MMP2 aa 557-569 (internal sequence). Sequence: TSLGLPPDVQRVD Database link: P08253 <div>  Run BLAST with  Run BLAST with </div> |
| Positive control | Colon carcinoma. Placental tissue |
| General notes | <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</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. |
| Purity | Tissue culture supernatant |
| Clonality | Monoclonal |

| | |
|--------------|------|
| Clone number | 4D3 |
| Isotype | IgG1 |

Applications

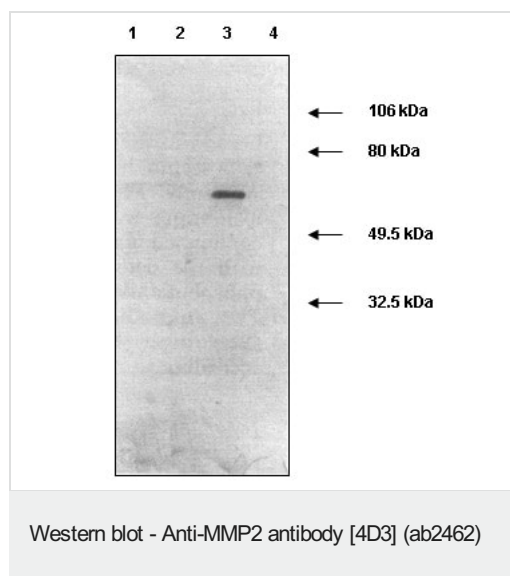
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab2462 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|-------------|-----------|--|
| WB | ★★★★★ (1) | Use at an assay dependent concentration. |

Target

| | |
|---|---|
| Function | <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> |
| 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 | <p>Belongs to the peptidase M10A family.</p> <p>Contains 3 fibronectin type-II domains.</p> <p>Contains 4 hemopexin-like domains.</p> |
| 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 | <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> |
| Cellular localization | <p>Secreted > extracellular space > extracellular matrix. Membrane. Nucleus. Colocalizes with integrin alphaV/beta3 at the membrane surface in angiogenic blood vessels and melanomas.</p> <p>Found in mitochondria, along microfibrils, and in nuclei of cardiomyocytes.</p> |

Images



400 ng samples of recombinant human pro-enzyme (lane 1 = MMP-1; lane 2 = MMP-3; lane 3 = MMP-2; lane 4 = MMP-9) were subjected to SDS-PAGE, transferred to PVDF membrane, and detected by immunoblotting with ab2462 specific for MMP-2.

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

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