

Human MMP2 ELISA Kit ab100606

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製品の概要

製品名	Human MMP2 ELISA Kit
検出方法	Colorimetric
サンプルの種類	Cell culture supernatant, Serum, Plasma
アッセイタイプ	Sandwich (quantitative)
検出感度	< 3.5 ng/ml
検出範囲	3.3 ng/ml - 800 ng/ml
添加回収試験	81 %

特定サンプルでの回収試験

サンプルの種類	平均 %	測定範囲
Cell culture supernatant	77.25	69% - 92%
Serum	81.27	70% - 93%
Plasma	84.53	72% - 95%

ステップ Multiple steps standard assay

種交差性 交差種: Human

製品の概要 Abcam's Human MMP2 ELISA (Enzyme-Linked Immunosorbent Assay) kit is an *in vitro* enzyme-linked immunosorbent assay for the quantitative measurement of Human MMP2 in serum, plasma, and cell culture supernates. (Collect plasma using heparin as an anticoagulant. EDTA and Citrate are not recommended as anticoagulants for use in this assay due to their chelating properties).

This assay employs an antibody specific for Human MMP2 coated on a 96-well plate. Standards and samples are pipetted into the wells and MMP2 present in a sample is bound to the wells by the immobilized antibody. The wells are washed and biotinylated anti-Human MMP2 antibody is added. After washing away unbound biotinylated antibody, HRP-conjugated streptavidin is pipetted to the wells. The wells are again washed, a TMB substrate solution is added to the wells and color develops in proportion to the amount of MMP2 bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm.

特記事項 Optimisation may be required with urine samples.

試験プラットフォーム Microplate

## 製品の特性

### 保存方法

Store at -20°C. Please refer to protocols.

内容	1 x 96 tests
20X Wash Buffer	1 x 25ml
440X HRP-Streptavidin Concentrate	1 x 200µl
5X Assay Diluent	1 x 15ml
Biotinylated anti-Human MMP2	2 vials
MMP2 Microplate (12 x 8 wells)	1 unit
Recombinant Human MMP2 Standard (lyophilized)	2 vials
Stop Solution	1 x 8ml
TMB One-Step Substrate Reagent	1 x 12ml

### 機能

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.

### 組織特異性

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

### 関連疾患

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.

### 配列類似性

Belongs to the peptidase M10A family.

Contains 3 fibronectin type-II domains.

Contains 4 hemopexin-like domains.

### ドメイン

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.

### 翻訳後修飾

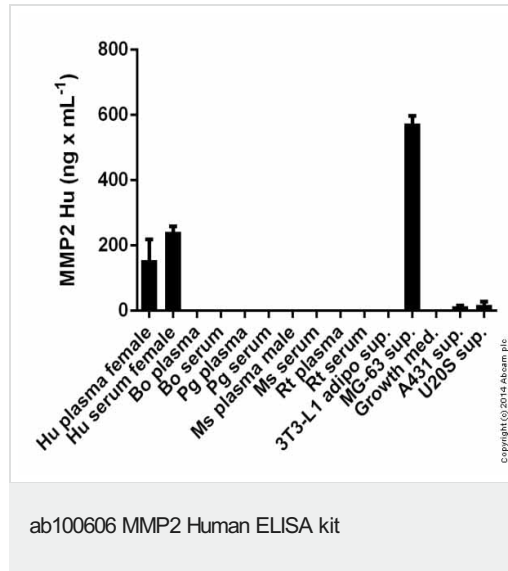
Phosphorylation on multiple sites modulates enzymatic activity. Phosphorylated by PKC in vitro. The propeptide is processed by MMP14 (MT-MMP1) and MMP16 (MT-MMP3). Autocatalytic

cleavage in the C-terminal produces the anti-angiogenic peptide, PEX. This processing appears to be facilitated by binding integrin $\alpha$ v/ $\beta$ 3.

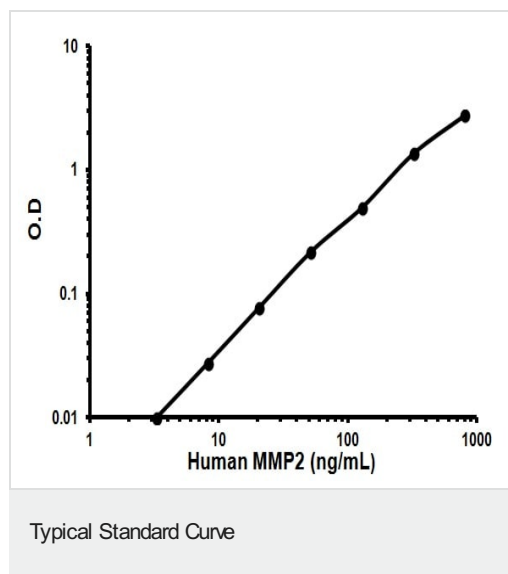
## 細胞内局在

Secreted > extracellular space > extracellular matrix. Membrane. Nucleus. Colocalizes with integrin  $\alpha$ v/ $\beta$ 3 at the membrane surface in angiogenic blood vessels and melanomas. Found in mitochondria, along microfilbrils, and in nuclei of cardiomyocytes.

## 画像



MMP2 measured in biological fluids showing quantity (ng) per mL of tested sample



Representative Standard Curve using ab100606.

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