

Human MMP9 ELISA Kit (lyophilized) ab100610

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Overview

Product name	Human MMP9 ELISA Kit (lyophilized)
Detection method	Colorimetric
Sample type	Cell culture supernatant, Serum, Plasma
Assay type	Sandwich (quantitative)
Sensitivity	< 10 pg/ml
Range	8.23 pg/ml - 6000 pg/ml
Recovery	95 %

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	95.38	84% - 104%
Serum	96.23	84% - 103%
Plasma	94.64	83% - 102%

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Human

Product overview Abcam's MMP9 Human ELISA (Enzyme-Linked Immunosorbent Assay) kit is an *in vitro* enzyme-linked immunosorbent assay for the quantitative measurement of Human MMP9 pro and active forms in serum, plasma (Collect plasma using heparin as an anticoagulant. EDTA and Citrate are not recommended), and cell culture supernatants.

This assay employs an antibody specific for Human MMP9 coated on a 96- well plate. Standards and samples are pipetted into the wells and MMP9 present in a sample is bound to the wells by the immobilized antibody. The wells are washed and biotinylated anti-Human MMP9 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 MMP9 bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm.

Notes Optimisation may be required with urine samples.

Platform Microplate

Properties

Storage instructions

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

Components	1 x 96 tests
20X Wash Buffer	1 x 25ml
400X HRP-Streptavidin Concentrate	1 x 200µl
5X Assay Diluent	1 x 15ml
Biotinylated anti-Human MMP9	2 vials
MMP9 Microplate (12 x 8 wells)	1 unit
Recombinant Human MMP9 Standard (lyophilized)	2 vials
Stop Solution	1 x 8ml
TMB One-Step Substrate Reagent	1 x 12ml

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.

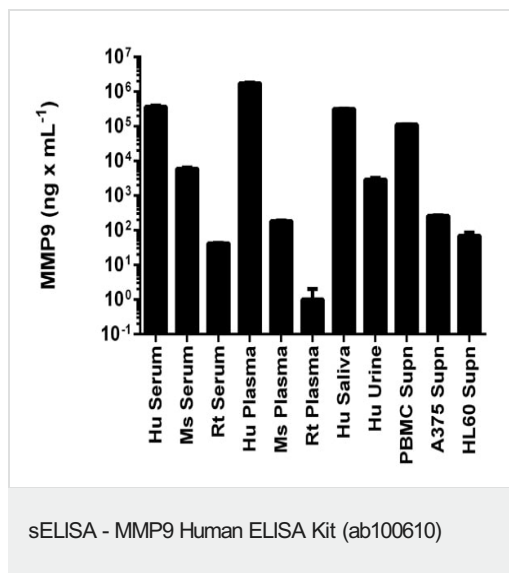
Post-translational modifications

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.

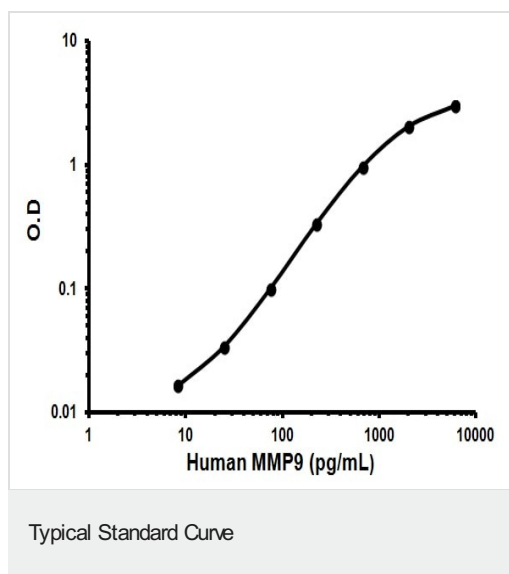
Cellular localization

Secreted, extracellular space, extracellular matrix.

Images



MMP9 measured in biological fluids and cell culture medium with background signal subtracted (duplicates +/- SD).



Representative Standard Curve using ab100610.

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