

Product datasheet

Human MMP-12 ELISA Kit ab213811

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Overview

Product name Human MMP-12 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
1	16	478pg/ml	28.68	6%
2	16	1512pg/ml	84.7	5.6%
3	16	2388pg/ml	107.5	4.5%

Inter-assay

Sample	n	Mean	SD	CV%
1	24	526pg/ml	37.9	7.2%
2	24	1724pg/ml	113.8	6.6%
3	24	2653pg/ml	143.3	5.4%

Sample type Cell culture supernatant, Serum, Hep Plasma

Assay type Sandwich (quantitative)

Sensitivity < 10 pg/ml

Range 62.5 pg/ml - 4000 pg/ml

Assay time 3h 30m

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Human

Product overview The Human MMP-12 Enzyme-Linked Immunosorbent Assay (ELISA) kit (ab213811) is designed for the quantitative detection of Human MMP-12 in cell culture supernatants, serum and plasma (heparin).

The ELISA kit is based on standard sandwich enzyme-linked immunosorbent assay technology. A

monoclonal antibody from mouse specific for MMP-12 has been pre-coated onto 96-well plates. Standards (Expression system for standard: NSO; Immunogen sequence: L17-C470) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for MMP-12 is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the Human MMP-12 amount of sample captured in plate.

Notes Matrix metalloproteinase-12 (MMP12), also known as MME or ME, is an enzyme that in humans is encoded by the MMP12 gene. The gene is part of a cluster of MMP genes which localize to chromosome 11q22.2. It is thought that the protein encoded by this gene is cleaved at both ends to yield the active enzyme, but this processing has not been fully described. The enzyme degrades soluble and insoluble elastin. It may play a role in aneurysm formation and studies in mice suggest a role in the development of emphysema. This gene may be involved in tissue injury and remodeling.

Platform Pre-coated microplate (12 x 8 well strips)

Properties

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

Components	Identifier	1 x 96 tests
ABC Diluent Buffer	Blue Cap	1 x 12ml
Adhesive Plate Seal		4 units
Antibody Diluent Buffer	Green Cap	1 x 12ml
Anti-Human MMP-12 coated Microplate (12 x 8 wells)		1 unit
Avidin-Biotin-Peroxidase Complex (ABC)		1 x 130µl
Biotinylated anti-Human MMP-12 antibody		1 x 130µl
Lyophilized recombinant Human MMP-12 standard		2 vials
Sample Diluent Buffer	Green Cap	1 x 30ml
TMB Color Developing Agent	Black Cap	1 x 10ml
TMB Stop Solution	Yellow Cap	1 x 10ml

Function May be involved in tissue injury and remodeling. Has significant elastolytic activity. Can accept large and small amino acids at the P1' site, but has a preference for leucine. Aromatic or hydrophobic residues are preferred at the P1 site, with small hydrophobic residues (preferably alanine) occupying P3.

Tissue specificity Found in alveolar macrophages but not in peripheral blood monocytes.

Sequence similarities Belongs to the peptidase M10A family.
Contains 4 hemopexin-like domains.

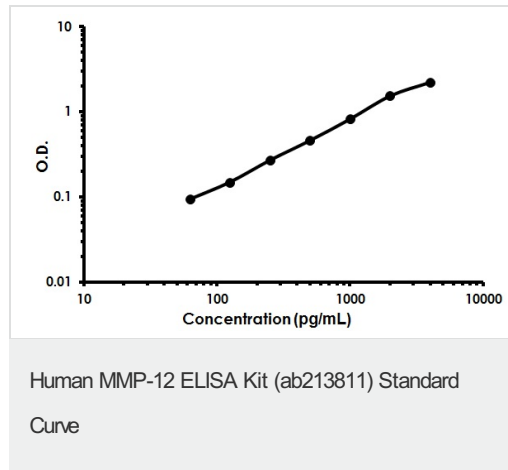
Domain

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.

Cellular localization

Secreted > extracellular space > extracellular matrix.

Images



Human MMP-12 ELISA Kit (ab213811) Standard Curve

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