

### Mouse MMP-12 ELISA Kit ab213878

[4 References](#) [1 Image](#)

#### Overview

**Product name** Mouse MMP-12 ELISA Kit

**Detection method** Colorimetric

**Precision**

Intra-assay

Sample	n	Mean	SD	CV%
1	16	337pg/ml	18.2	5.4%
2	16	1472pg/ml	92.74	6.3%
3	16	2522pg/ml	121.1	4.8%

Inter-assay

Sample	n	Mean	SD	CV%
1	24	426pg/ml	27.69	6.5%
2	24	1538pg/ml	109.2	7.1%
3	24	2768pg/ml	157.8	5.7%

**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:** Mouse

**Product overview** The Mouse MMP-12 Enzyme-Linked Immunosorbent Assay (ELISA) kit (ab213878) is designed for the quantitative detection of Mouse MMP-12 in cell culture supernatants, serum and plasma (heparin).

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

polyclonal antibody from goat specific for MMP-12 has been pre-coated onto 96-well plates. Standards (Expression system for standard: NSO; Immunogen sequence: A18-C462) 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 Mouse 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	1 x 96 tests
ABC Diluent Buffer	Blue Cap	1 x 12ml	1 x 12ml
Adhesive Plate Seal		4 units	4 units
Antibody Diluent Buffer	Green Cap	1 x 12ml	1 x 12ml
Anti-Mouse MMP-12 coated Microplate (12 x 8 wells)		1 unit	1 unit
Avidin-Biotin-Peroxidase Complex (ABC)		1 x 100µl	1 x 100µl
Biotinylated anti- Mouse MMP-12 antibody		1 x 100µl	1 x 100µl
Lyophilized recombinant Mouse MMP-12 standard		2 vials	2 vials
Sample Diluent Buffer	Green Cap	1 x 30ml	1 x 30ml
TMB Color Developing Agent	Black Cap	1 x 10ml	1 x 10ml
TMB Stop Solution	Yellow Cap	1 x 10ml	1 x 10ml
Wash Buffer (25X)		1 x 20ml	1 x 20ml

**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.

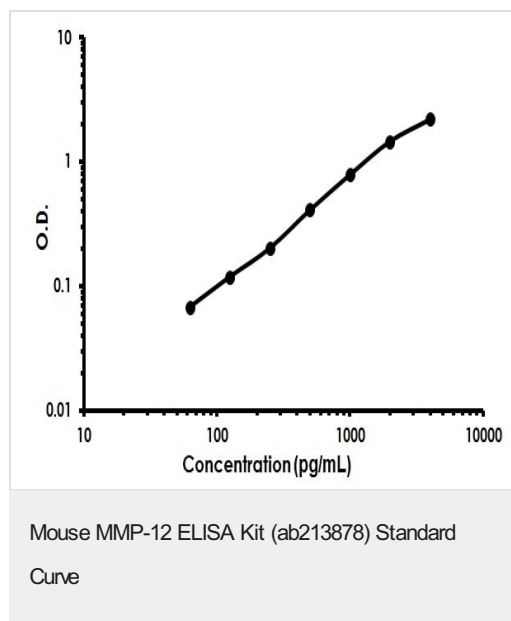
### Domain

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



Mouse MMP-12 ELISA Kit (ab213878) Standard Curve

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