

Product datasheet

Mouse MMP9 ELISA Kit ab253227

Recombinant SimpleStep ELISA[®]

[4 References](#) [9 Images](#)

Overview

Product name Mouse MMP9 ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Serum	8			4.2%

Inter-assay

Sample	n	Mean	SD	CV%
Serum	3			5.5%

Sample type Cell culture supernatant, Serum, Tissue Extracts, Hep Plasma

Assay type Sandwich (quantitative)

Sensitivity 38.91 pg/ml

Range 140.63 pg/ml - 9000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	106	92% - 117%
Serum	94	90% - 100%
Tissue Extracts	92	85% - 101%
Hep Plasma	109	102% - 117%

Assay time 1h 30m

Assay duration One step assay

Species reactivity **Reacts with:** Mouse

Does not react with: Cow

Product overview

Mouse MMP9 ELISA Kit (ab253227) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of MMP9 protein in cell culture supernatant, hep plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Mouse MMP9 with 38.91 pg/ml sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate (**ab203359**) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

Citrate and EDTA are not recommended for us as anticoagulants due to their chelating properties.

Notes

MMP9 (gelatinase B) is a member of the matrix metalloproteinases family of zinc and calcium dependent endopeptidases. MMP9 is a 95kDa protein produced by keratinocytes, monocytes, macrophages and PMN leukocytes. It is able to degrade all the components of the extracellular matrix including gelatin, collagen types IV and V, elastin and proteoglycan core protein. MMP9 is believed to act synergistically with interstitial collagenase (MMP-1) in the degradation of fibrillar collagens as it degrades their denatured gelatin forms. MMP9 is present in most inflammatory responses. Mouse MMP9 shares 72.9% sequence homology with primate. 71.8% with human, 81.6 % with rat, and 73.0% with bovine MMP9.

Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.

It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

Platform

Pre-coated microplate (12 x 8 well strips)

Properties

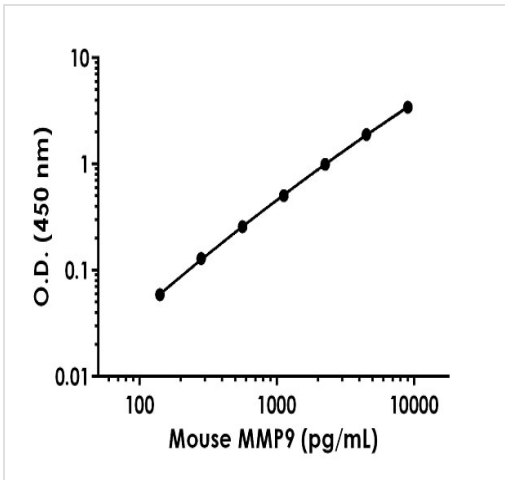
Storage instructions Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Mouse MMP9 Capture Antibody	1 x 600µl
10X Mouse MMP9 Detector Antibody	1 x 600µl

Components	1 x 96 tests
10X Wash Buffer PT (ab206977)	1 x 20ml
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml
5X Cell Extraction Buffer PTR (ab193970)	1 x 10ml
Antibody Diluent 4BR	1 x 6ml
Mouse MMP9 Lyophilized Recombinant Protein	2 vials
Plate Seal	1 unit
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

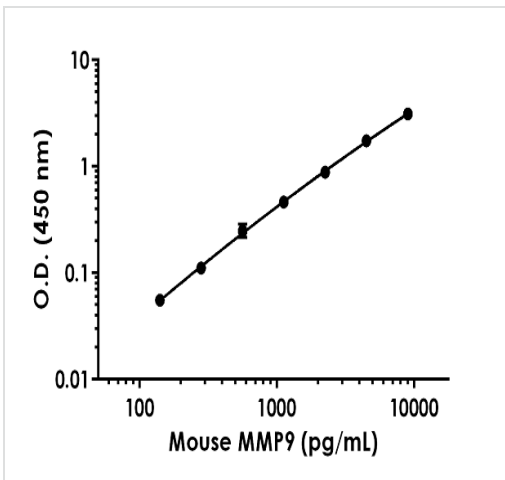
Function	May play an essential role in local proteolysis of the extracellular matrix and in leukocyte migration. Could play a role in bone osteoclastic resorption. Cleaves KiSS1 at a Gly-Leu bond. Cleaves type IV and type V collagen into large C-terminal three quarter fragments and shorter N-terminal 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



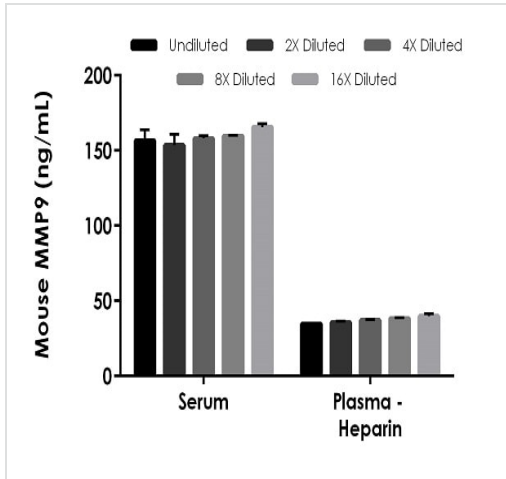
Example of mouse MMP9 standard curve in Sample Diluent NS.

The MMP9 standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



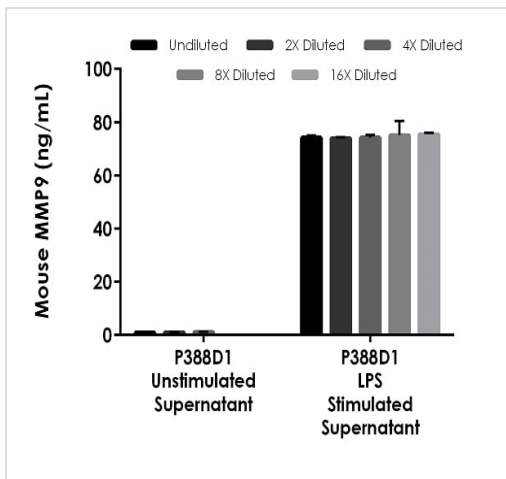
Example of mouse MMP9 standard curve in 1X Cell Extraction Buffer PTR.

The MMP9 standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



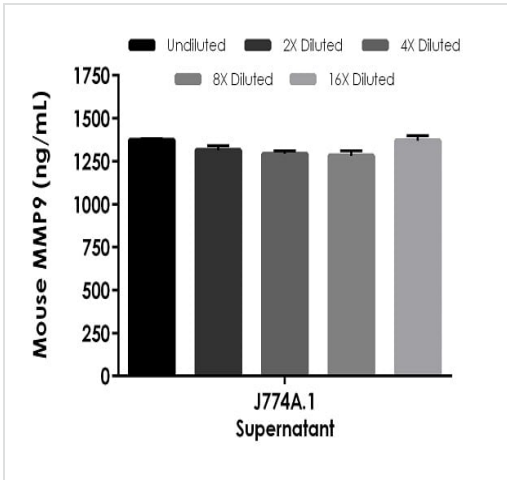
Interpolated concentrations of native MMP9 in mouse serum and plasma - heparin samples.

The concentrations of MMP9 were measured in duplicates, interpolated from the MMP9 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 5% and plasma (heparin) 25%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean MMP9 concentration was determined to be 158.72 ng/mL in serum and 37.15 ng/mL in plasma (heparin).



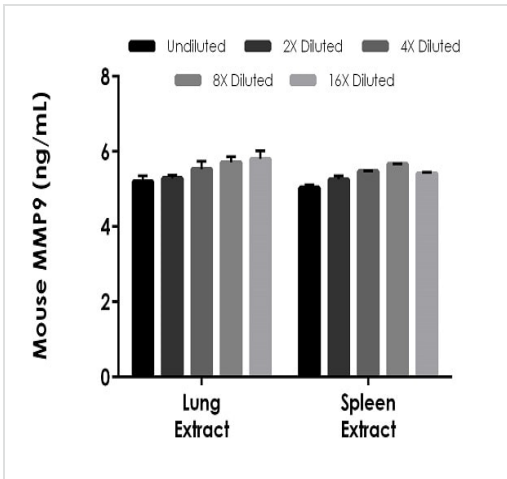
Interpolated concentrations of native MMP9 in mouse LPS unstimulated and stimulated P388D1 cell culture supernatant samples.

The concentrations of MMP9 were measured in duplicates, interpolated from the MMP9 standard curves and corrected for sample dilution. Undiluted samples are as follows: unstimulated P388D1 supernatant 100% and LPS stimulated P388 D1 10%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean MMP9 concentration was determined to be 1.03 ng/mL in unstimulated P388D1 supernatant and 74.58 ng/mL in LPS stimulated P388D1.



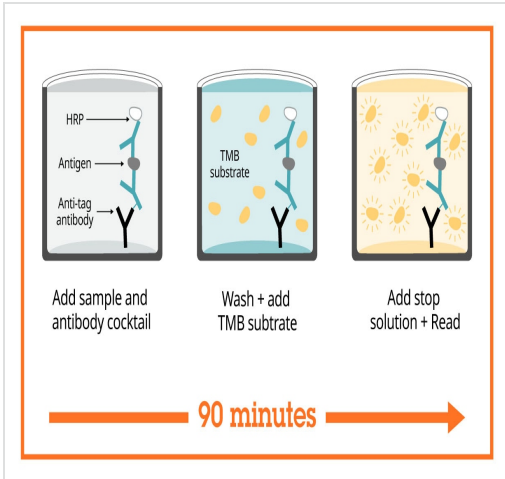
Interpolated concentrations of native MMP9 in mouse J774A.1 cell culture supernatant samples.

The concentrations of MMP9 were measured in duplicates, interpolated from the MMP9 standard curves and corrected for sample dilution. Undiluted samples are as follows: J774A.1 cell culture supernatant 0.5%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean MMP9 concentration was determined to be 1326.73 ng/mL in J774A.1 cell culture supernatant.



Interpolated concentrations of native MMP9 in mouse lung extract samples based on a 50 µg/mL extract load and spleen extract samples based on a 25 µg/mL extract load.





The concentrations of MMP9 were measured in duplicate and interpolated from the MMP9 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean MMP9 concentration was determined to be 5.51 ng/mL in lung extract and 5.37 ng/mL in spleen extract.



Sandwich ELISA - Mouse MMP9 ELISA Kit
(ab253227)

SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.

Powered by recombinant antibodies

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Sandwich ELISA - Mouse MMP9 ELISA Kit
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To learn more about the advantages of recombinant antibodies see [here](#).

Get more done with SimpleStep ELISA



Easy to use
Single-wash 90-minute protocol



Flexible
Matched antibody pairs available



Precision antibodies
High sensitivity, specificity and reproducibility



Scalable
Now in 10-pack and 384-well formats

Sandwich ELISA - Mouse MMP9 ELISA Kit
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To learn more about the advantages of SimpleStep ELISA® kits see [here](#).

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