

Product datasheet

Mouse PAI1 ELISA Kit (SERPINE1) ab197752

Recombinant SimpleStep ELISA[®]

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Overview

Product name Mouse PAI1 ELISA Kit (SERPINE1)

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Serum	5			6.7%

Inter-assay

Sample	n	Mean	SD	CV%
Serum	3			14.2%

Sample type Cell culture supernatant, Serum, Cit plasma

Assay type Sandwich (quantitative)

Sensitivity 200 pg/ml

Range 298 pg/ml - 5000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Serum	109	90% - 121%
Cell culture media	83	72% - 88%
Cit plasma	104	96% - 111%
serum free media	117	104% - 128%

Assay time 1h 30m

Assay duration One step assay

Species reactivity **Reacts with:** Mouse

Product overview

Mouse PAI1 ELISA Kit (SERPINE1) (ab197752) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of PAI1 (SERPINE1) protein in cell culture supernatant, cit plasma, and serum. It uses our proprietary SimpleStep ELISA® technology. Quantitate Mouse PAI1 (SERPINE1) with 200 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.

Notes

Plasminogen activator inhibitor-1 (PAI1 or Serpin E1) is encoded by the Serpine1 gene. PAI1 is a serine protease inhibitor with a major role in the regulation of fibrinolysis. PAI1 is the principal inhibitor of tissue plasminogen activator (tPA) and urokinase (uPA), both of which are activators of plasminogen. PAI1 is a secreted protein produced by the endothelium as well as adipose tissue.

Platform

Microplate (12 x 8 well strips)

Properties

Storage instructions

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

Components	1 x 96 tests	1 x 384 tests	1 x 96 tests
10X Mouse PAI1 Capture Antibody	1 x 600µl	1 x 600µl	1 x 600µl
10X Mouse PAI1 Detector Antibody	1 x 600µl	1 x 600µl	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml	1 x 20ml	1 x 20ml
384 well CaptSure™ microplates	0 x 0 unit	1 unit	0 x 0 unit
Antibody Diluent CPI2	1 x 6ml	1 x 6ml	1 x 6ml
Mouse PAI1 Lyophilized Recombinant Protein (ab93068)	2 vials	2 vials	2 vials
Plate Seals	1 unit	1 unit	1 unit
Sample Diluent NS (ab193972)	1 x 50ml	1 x 250ml	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit	0 x 0 unit	1 unit

Components	1 x 96 tests	1 x 384 tests	1 x 96 tests
Stop Solution	1 x 12ml	2 x 12ml	1 x 12ml
TMB Development Solution	1 x 12ml	2 x 12ml	1 x 12ml

Function

This inhibitor acts as 'bait' for tissue plasminogen activator, urokinase, and protein C. Its rapid interaction with TPA may function as a major control point in the regulation of fibrinolysis.

Tissue specificity

Found in plasma and platelets and in endothelial, hepatoma and fibrosarcoma cells.

Involvement in disease

Defects in SERPINE1 are the cause of plasminogen activator inhibitor-1 deficiency (PAI-1D) [MIM:613329]. It is a hematologic disorder characterized by increased bleeding after trauma, injury, or surgery. Affected females have menorrhagia. The bleeding defect is due to increased fibrinolysis of fibrin blood clots due to deficiency of plasminogen activator inhibitor-1, which inhibits tissue and urinary activators of plasminogen.

Note=High concentrations of SERPINE1 seem to contribute to the development of venous but not arterial occlusions.

Sequence similarities

Belongs to the serpin family.

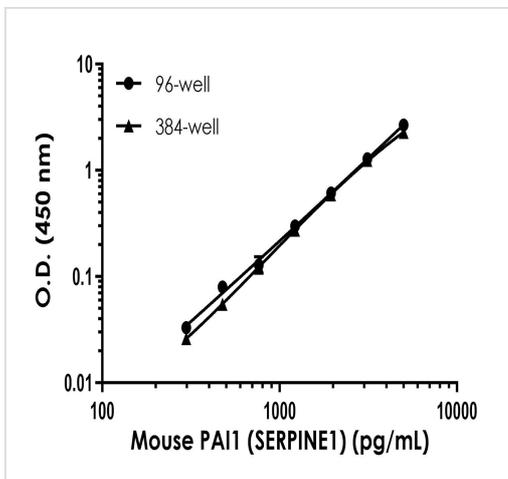
Post-translational modifications

Inactivated by proteolytic attack of the urokinase-type (u-PA) and the tissue-type (TPA), cleaving the 369-Arg-
-Met-370 bond.

Cellular localization

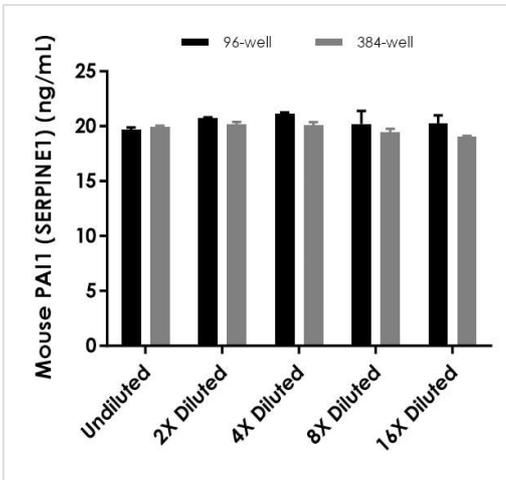
Secreted.

Images



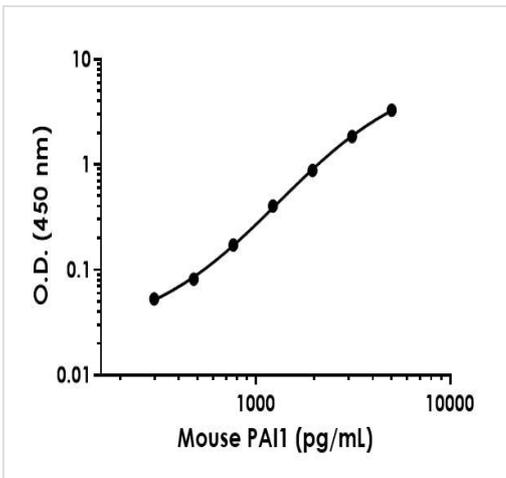
Example of mouse PAI1 standard curve in 96-well vs. 384-well plate. Background-subtracted data values (mean +/- SD) are graphed.

Example of mouse PAI1 standard curve in Sample Diluent NS in 96-well vs. 384-well plate.



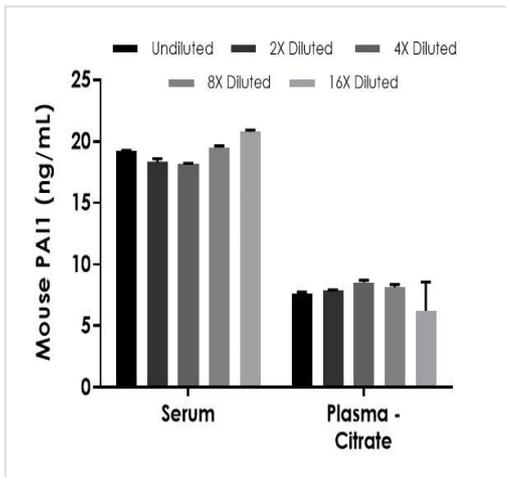
Interpolated concentrations of mouse PAI1 in serum in 96-well vs. 384-well plates.

Interpolated concentration of native PAI1 was measured in duplicate at different sample concentrations in 96-well vs. 384-well plates. Undiluted samples are 25% serum. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). Sample dilutions are made in Sample Diluent NS.



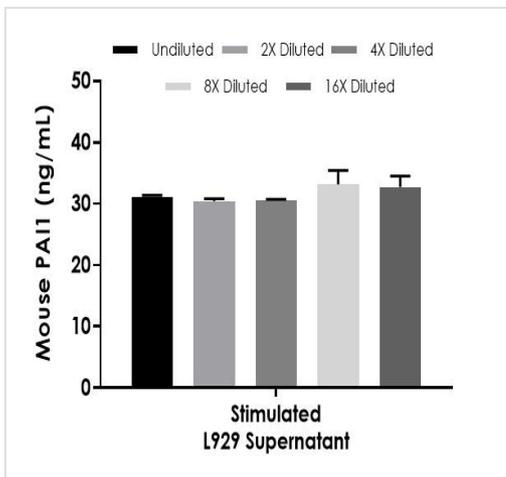
Example of PAI1 standard curve.

Background-subtracted data values (mean +/- SD) are graphed.

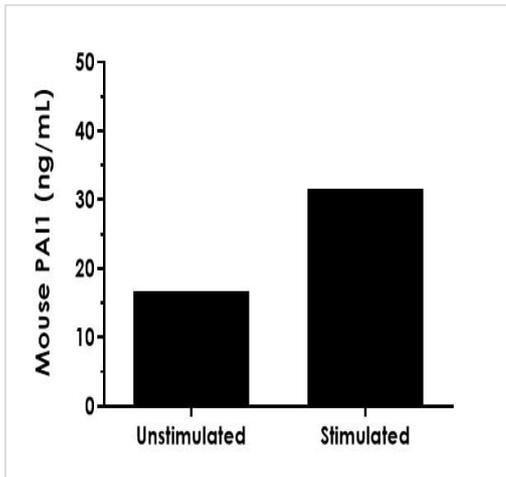


Interpolated concentrations of PAI1 in mouse serum and plasma (citrate).

The concentrations of PAI1 were measured in duplicate and interpolated from the PAI1 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean PAI1 concentration was determined to be 18.98 ng/mL in mouse serum and 7.69 ng/mL in mouse plasma (citrate).

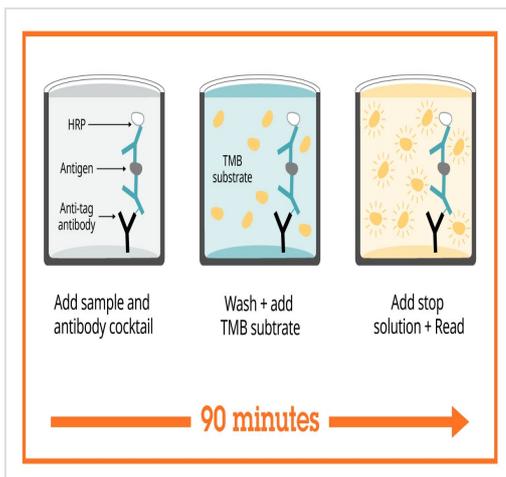


Interpolated concentrations of native PAI1 in mouse L929 cell culture supernatant samples treated with PMA and PHA for 3 days.



Comparison of secreted PAI1 in unstimulated and PMA/PHA-stimulated L929 Cells.

L929 cells were grown in the absence (unstimulated) or presence of Phorbol Myristate Acetate (PMA) and phytohemagglutinin (PHA) (stimulated) for 3 days. PAI1 was measured in 10-fold diluted cell culture supernatants of unstimulated and PMA/PHA stimulated L929 and cell culture media. Measured values were interpolated from the PAI1 Standard Curve diluted in Sample Diluent NS and corrected for dilution factor. Mean of duplicate values +/-SD are graphed: 17.9 ng/mL unstimulated, 31.1 ng/mL stimulated, and undetectable in media.



Sandwich ELISA - Mouse PAI1 ELISA Kit (SERPINE1) (ab197752)

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



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Sandwich ELISA - Mouse PAI1 ELISA Kit
(SERPINE1) (ab197752)

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 PAI1 ELISA Kit
(SERPINE1) (ab197752)

To learn more about the advantages of SimpleStep ELISA[®] kits see [here](#).

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