

Rat PAI1 ELISA Kit (SERPINE1) ab201283

Recombinant SimpleStep ELISA[®]

[2 References](#) [5 Images](#)

Overview

Product name Rat PAI1 ELISA Kit (SERPINE1)

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
rat serum	5			1.6%

Inter-assay

Sample	n	Mean	SD	CV%
rat serum	3			3.3%

Sample type

Cell culture supernatant, Urine, Serum, Cit plasma

Assay type

Sandwich (quantitative)

Sensitivity

159 pg/ml

Range

298 pg/ml - 5000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Urine	80	69% - 88%
Serum	100	94% - 105%
Cell culture media	99	98% - 102%
Cit plasma	85	84% - 87%
serum free media	95	91% - 98%

Assay time

1h 30m

Assay duration

One step assay

Species reactivity**Reacts with:** Mouse, Rat**Product overview**

Rat PAI1 ELISA Kit (SERPINE1) (ab201283) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of PAI1 (SERPINE1) protein in cell culture supernatant, cit plasma, serum, and urine. It uses our proprietary SimpleStep ELISA® technology. Quantitate Rat PAI1 (SERPINE1) with 159 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

Properties**Storage instructions**

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

Components	1 x 96 tests	10 x 96 tests
10X Rat PAI1 Capture Antibody	1 x 600µl	1 x 6000µl
10X Rat PAI1 Detector Antibody	1 x 600µl	1 x 6000µl
10X Wash Buffer PT (ab206977)	1 x 20ml	1 x 200ml
Antibody Diluent 4BI	1 x 6ml	10 x 6ml
Plate Seals	1 unit	1 x 10 units
Rat PAI1 Lyophilized Recombinant Protein	2 vials	2 x 10 vials
Sample Diluent NS (ab193972)	1 x 50ml	2 x 250ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit	1 x 10 units

Components	1 x 96 tests	10 x 96 tests
Stop Solution	1 x 12ml	1 x 120ml
TMB Development Solution	1 x 12ml	1 x 120ml

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.

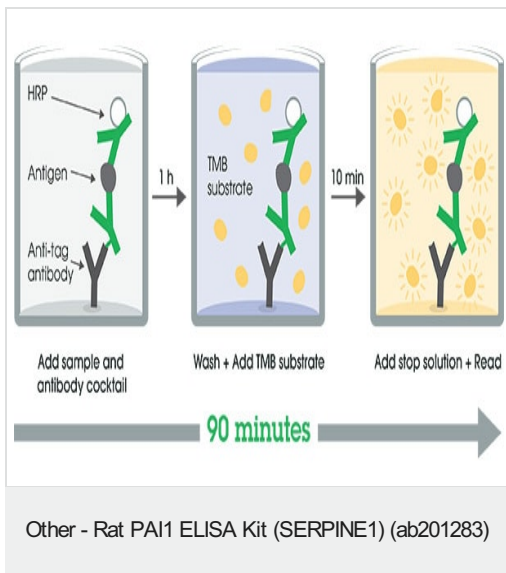
Post-translational modifications

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

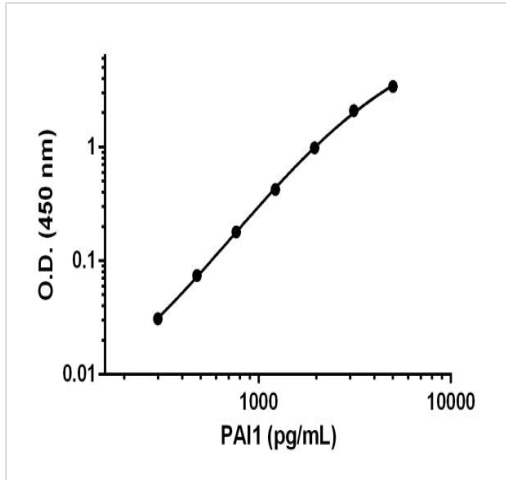
Cellular localization

Secreted.

Images

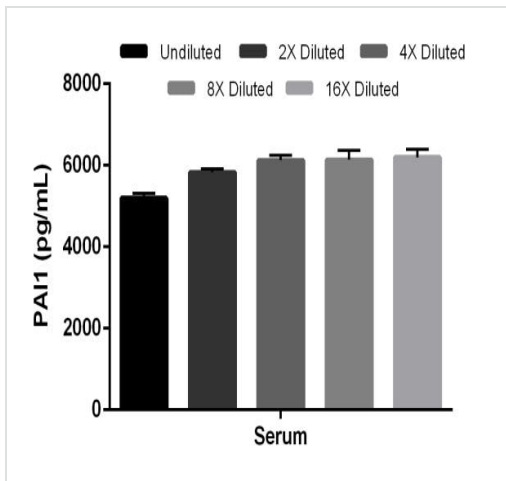


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



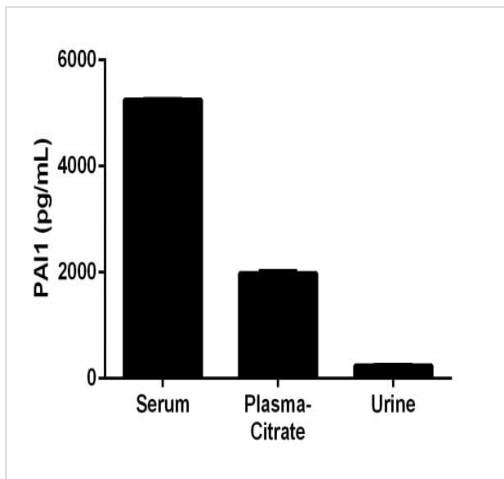
Background-subtracted data values (mean +/- SD) are graphed.

Example of PAI1 standard curve.



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 5,897 pg/mL in mouse serum.





Interpolated concentrations of PAI1 in rat serum.



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 \pm SD, n=2).

Interpolated Concentration of PAI1 in rat serum, plasma-citrate, and urine.

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

To learn more about the advantages of recombinant antibodies see [here](#).

Sandwich ELISA - Rat PAI1 ELISA Kit (SERPINE1) (ab201283)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours

- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors