

Product datasheet

Mouse TFPI ELISA Kit ab217776

SimpleStep ELISA

[6 Images](#)

Overview

Product name Mouse TFPI ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Mouse serum	8			3.7%

Inter-assay

Sample	n	Mean	SD	CV%
Mouse serum	3			7.2%

Sample type

Cell culture supernatant, Urine, Serum, Tissue Extracts, Hep Plasma, EDTA Plasma, Cit plasma

Assay type

Sandwich (quantitative)

Sensitivity

1.7 pg/ml

Range

18.75 pg/ml - 1200 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Urine	99	97% - 102%
Serum	102	96% - 109%
Tissue Extracts	92	85% - 101%
Cell culture media	98	96% - 101%
Hep Plasma	109	104% - 112%
EDTA Plasma	101	96% - 105%

Sample type	Average %	Range
Cit plasma	103	98% - 111%

Assay time

1h 30m

Assay duration

One step assay

Species reactivity

Reacts with: Mouse

Does not react with: Cow

Product overview

TFPI *in vitro* SimpleStep ELISA[®] (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of mouse TFPI protein in serum, plasma, urine, cell culture supernatant, and tissue extract samples.

The SimpleStep ELISA[®] employs an affinity tag labeled capture antibody and a reporter conjugated detector antibody which immunocapture the sample analyte in solution. This entire complex (capture antibody/analyte/detector antibody) is in turn immobilized via immunoaffinity of an anti-tag antibody coating the well. To perform the assay, samples or standards are added to the wells, followed by the antibody mix. After incubation, the wells are washed to remove unbound material. TMB substrate is added and during incubation is catalyzed by HRP, generating blue coloration. This reaction is then stopped by addition of Stop Solution completing any color change from blue to yellow. Signal is generated proportionally to the amount of bound analyte and the intensity is measured at 450 nm. Optionally, instead of the endpoint reading, development of TMB can be recorded kinetically at 600 nm.

Sensitivity:

Samples in 1X Cell Extraction Buffer PTR - 1.7 pg/mL

Samples in Sample Diluent NS - 1.87 pg/mL

Notes

Mouse TFPI (tissue factor pathway inhibitor) is a secreted protein located on the endothelial surface, within platelets, in plasma, and on monocytes. Functionally, mouse TFPI is the primary inhibitor of intravascular tissue factor (TF) activity. TF is the principal protein that initiates blood coagulation *in vivo*. Thus, Mouse TFPI inhibits coagulation.

Mouse TFPI has an acidic N-terminal region, three Kunitz (K) domains separated by two linker regions, and a C-terminal basic region. The first K domain inhibits TF from binding coagulation factor VIIa. The second K domain inhibits factor Xa. The third K domain binds to heparin. Human and rat TFPI exhibit 58% and 71% amino acid identity to mouse TFPI, respectively.

Tested applications

Suitable for: Sandwich ELISA

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
Mouse TFPI Lyophilized Recombinant Protein	2 vials
10X Mouse TFPI Detector Antibody	1 x 600µl
10X Mouse TFPI Capture Antibody	1 x 600µl
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 CPR	1 x 6ml
Plate Seals	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	Inhibits factor X (X(a)) directly and, in a Xa-dependent way, inhibits VIIa/tissue factor activity, presumably by forming a quaternary Xa/LACI/VIIa/TF complex. It possesses an antithrombotic action and also the ability to associate with lipoproteins in plasma.
Tissue specificity	Mostly in endothelial cells.
Sequence similarities	Contains 3 BPTI/Kunitz inhibitor domains.
Domain	This inhibitor contains three inhibitory domains. The first domain interacts with VIIa and TF, the second one with Xa.
Post-translational modifications	O-glycosylated.
Cellular localization	Secreted.

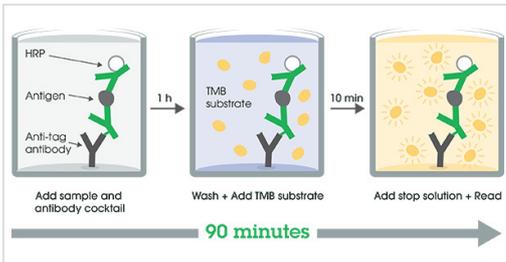
Applications

Our [Abpromise guarantee](#) covers the use of **ab217776** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

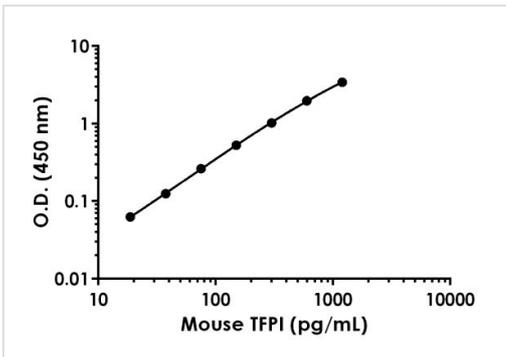
Application	Abreviews	Notes
Sandwich ELISA		Use at an assay dependent concentration.

Images



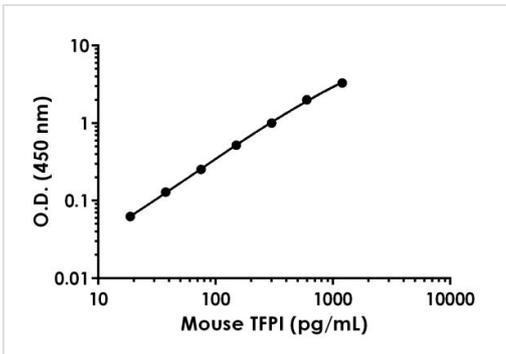
Other - Mouse TFPI ELISA Kit (ab217776)

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.



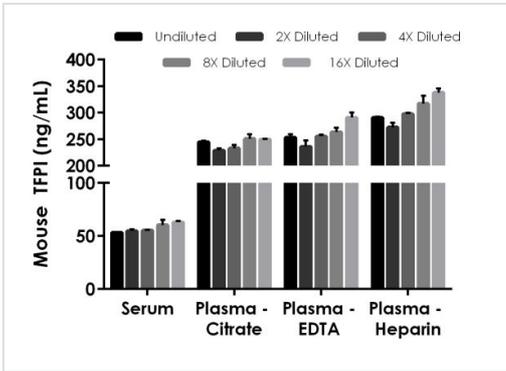
Example of mouse TFPI standard curve in Sample Diluent NS.

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



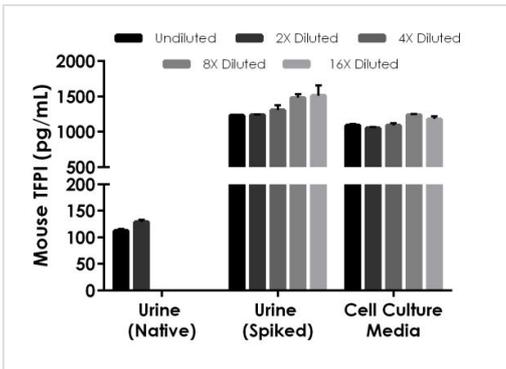
Example of mouse TFPI standard curve in Diluent 1X Cell Extraction Buffer PTR.

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



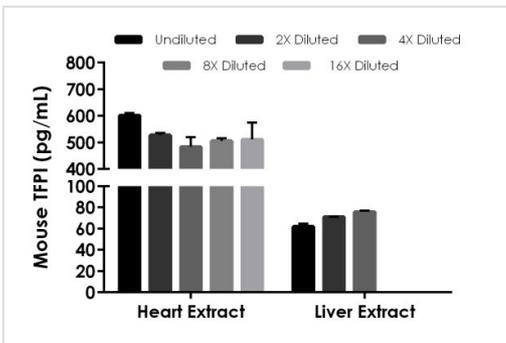
Interpolated concentrations of native TFPI in mouse serum, and plasma samples.

The concentrations of TFPI were measured in duplicates, interpolated from the TFPI standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 1:100, plasma (citrate) 1:400, plasma (EDTA) 1:400 and plasma (heparin) 1:400. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean TFPI concentration was determined to be 57.10 ng/mL in neat serum, 241.24 ng/mL in neat plasma (citrate), 259.59 ng/mL in neat plasma (EDTA) and 303.08 ng/mL in neat plasma (heparin).



Interpolated concentrations of native and spiked TFPI in mouse urine and spiked TFPI in Cell Culture Media samples.

The concentrations of TFPI were measured in duplicates, interpolated from the TFPI standard curves and corrected for sample dilution. Undiluted samples are as follows: urine 50%, and cell culture media 50%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean TFPI concentration was determined to be 120.64 pg/mL in native, neat urine, 1,353.96 pg/mL in spiked, neat urine and 1,130.58 pg/mL in spiked, neat cell culture media.



Interpolated concentrations of native TFPI in mouse heart and liver tissue extract samples based on a 500 µg/mL extract load.

The concentrations of TFPI were measured in duplicate and interpolated from the TFPI standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean TFPI concentration was determined to be 525.44 pg/mL in mouse heart extract and 69.55 pg/mL in mouse liver extract.

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