

# Human Tissue Type Plasminogen Activator ELISA Kit (TPA) ab108914

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### Overview

**Product name** Human Tissue Type Plasminogen Activator ELISA Kit (TPA)

**Detection method** Colorimetric

**Precision**

Intra-assay

Sample	n	Mean	SD	CV%
Overall				2.5%

Inter-assay

Sample	n	Mean	SD	CV%
Overall				8.6%

**Sample type** Cell culture supernatant, Saliva, Milk, Urine, Serum, Plasma, Tissue Extracts, Cell Lysate, Cerebral Spinal Fluid

**Assay type** Sandwich (quantitative)

**Sensitivity** = 938 pg/ml

**Range** 60 pg/ml - 500 pg/ml

**Recovery** 98 %

**Assay time** 4h 0m

**Assay duration** Multiple steps standard assay

**Species reactivity** **Reacts with:** Human

**Product overview**

Abcam's Tissue Type Plasminogen Activator (TPA) Human *in vitro* ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of Tissue Type Plasminogen Activator in plasma, serum, urine, saliva, milk, cell culture supernatants and tissue extracts.

A TPA specific antibody has been precoated onto 96-well plates and blocked. Standards or test samples are added to the wells and subsequently a TPA specific biotinylated detection antibody is added and then followed by washing with wash buffer. Streptavidin-Peroxidase Conjugate is added and unbound conjugates are washed away with wash buffer. TMB is then used to visualize

Streptavidin-Peroxidase enzymatic reaction. TMB is catalyzed by Streptavidin-Peroxidase to produce a blue color product that changes into yellow after adding acidic stop solution. The density of yellow coloration is directly proportional to the amount of TPA captured in plate.

Get results in 90 minutes with Human Tissue Plasminogen Activator ELISA Kit ([ab190812](#)) from our SimpleStep ELISA® range.

**The entire kit may be stored at -20°C for long term storage before reconstitution - Avoid repeated freeze-thaw cycles.**

**Platform** Microplate

## Properties

**Storage instructions** Store at -20°C. Please refer to protocols.

Components	1 x 96 tests
100X Biotinylated Human TPA Antibody	1 x 60µl
100X Streptavidin-Peroxidase Conjugate	1 x 80µl
10X Diluent N Concentrate	1 x 30ml
20X Wash Buffer Concentrate	2 x 30ml
Chromogen Substrate	1 x 7ml
Sealing Tapes	3 units
Stop Solution	1 x 11ml
TPA Microplate (12 x 8 well strips)	1 unit
TPA Standard	1 vial

**Function** Converts the abundant, but inactive, zymogen plasminogen to plasmin by hydrolyzing a single Arg-Val bond in plasminogen. By controlling plasmin-mediated proteolysis, it plays an important role in tissue remodeling and degradation, in cell migration and many other physiopathological events. Play a direct role in facilitating neuronal migration.

**Tissue specificity** Synthesized in numerous tissues (including tumors) and secreted into most extracellular body fluids, such as plasma, uterine fluid, saliva, gingival crevicular fluid, tears, seminal fluid, and milk.

**Involvement in disease** Note=Increased activity of TPA results in increased fibrinolysis of fibrin blood clots that is associated with excessive bleeding. Defective release of TPA results in hypofibrinolysis that can lead to thrombosis or embolism.

**Sequence similarities** Belongs to the peptidase S1 family.  
Contains 1 EGF-like domain.  
Contains 1 fibronectin type-I domain.  
Contains 2 kringle domains.  
Contains 1 peptidase S1 domain.

## Domain

Both FN1 and one of the kringle domains are required for binding to fibrin.

Both FN1 and EGF-like domains are important for binding to LRP1.

The FN1 domain mediates binding to annexin A2.

The second kringle domain is implicated in binding to cytokeratin-8 and to the endothelial cell surface binding site.

## Post-translational modifications

The single chain, almost fully active enzyme, can be further processed into a two-chain fully active form by a cleavage after Arg-310 catalyzed by plasmin, tissue kallikrein or factor Xa.

Differential cell-specific N-linked glycosylation gives rise to two glycoforms, type I (glycosylated at Asn-219) and type II (not glycosylated at Asn-219). The single chain type I glycoform is less readily converted into the two-chain form by plasmin, and the two-chain type I glycoform has a lower activity than the two-chain type II glycoform in the presence of fibrin.

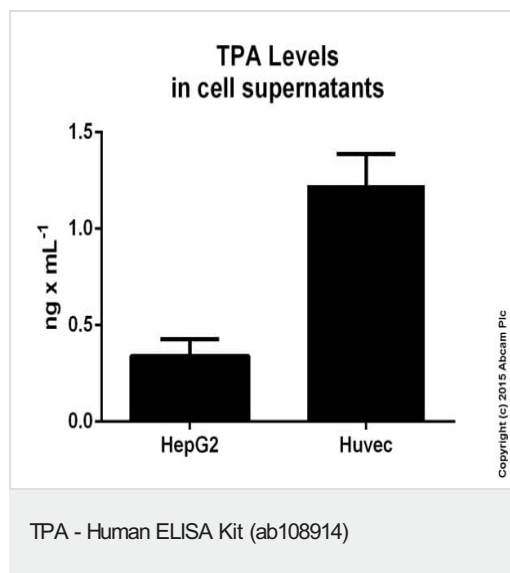
N-glycosylation of Asn-152; the bound oligomannosidic glycan is involved in the interaction with the mannose receptor.

Characterization of O-linked glycan was studied in Bowes melanoma cell line.

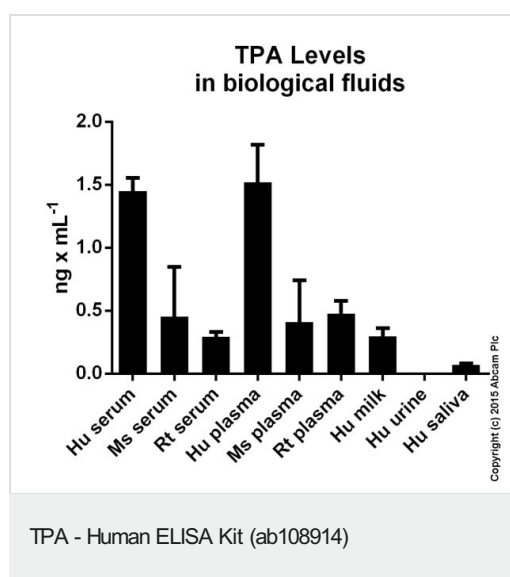
## Cellular localization

Secreted > extracellular space.

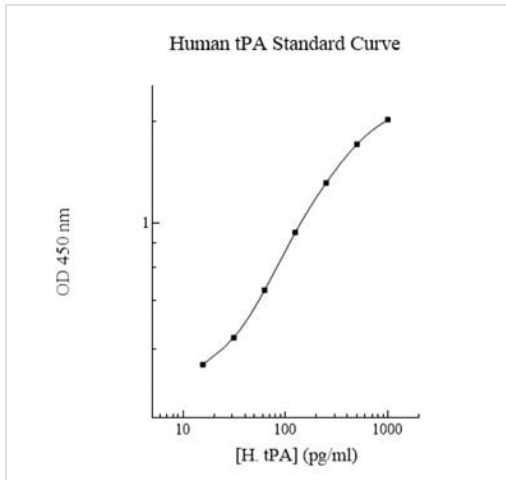
## Images



Tissue Type Plasminogen Activator measured in biological fluids showing quantity (ng) per mL of tested sample. Samples diluted 2-10 fold.



Tissue Type Plasminogen Activator measured in biological fluids showing quantity (ng) per mL of tested sample. Human samples diluted 3-27 fold. Rat and mouse samples diluted 1-10 fold.



Representative Standard Curve Using ab108914.

Human Tissue Type Plasminogen Activator ELISA  
Kit (TPA)

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

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