

## Product datasheet

# Recombinant rat Tissue Plasminogen Activator protein ab92596

1 Image

### Description

<b>Product name</b>	Recombinant rat Tissue Plasminogen Activator protein
<b>Purity</b>	> 95 % SDS-PAGE.
<b>Expression system</b>	Insect cells
<b>Protein length</b>	Full length protein
<b>Animal free</b>	No
<b>Nature</b>	Recombinant
<b>Species</b>	Rat
<b>Sequence</b>	MKGELLCVLLLCGVAFTLPDQGIHRRFRRGARSYRATCRD EQTQTTYQQH QSWLRPMLRGNRVEYCRCNGLAQCHSVPRSCSEPRC FNGGTCQQALYF SDFVCQCPDGFVGKRCIDTRATCFEGQGITYRGTWSTA ENGAECINWNS SALSQKPYSARRPNAIKLGLGNHNYCRNPDRDVKPWCYV FKAGKYTTEFC
<b>Amino acids</b>	1 to 559

### Specifications

Our **Abpromise guarantee** covers the use of **ab92596** in the following tested applications.

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

<b>Applications</b>	SDS-PAGE
	Functional Studies

<b>Form</b>	Liquid
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<b>Additional notes</b>	ab92596 is >85% single chain and >95% active. It is fully complexable with Human PAI-1. Produced using non-baculovirus insect cells.
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## Preparation and Storage

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### Stability and Storage

Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles.

pH: 7.40

Constituents: 9.52% HEPES, 0.58% Sodium chloride

This product is an active protein and may elicit a biological response in vivo, handle with caution.

## General Info

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### 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

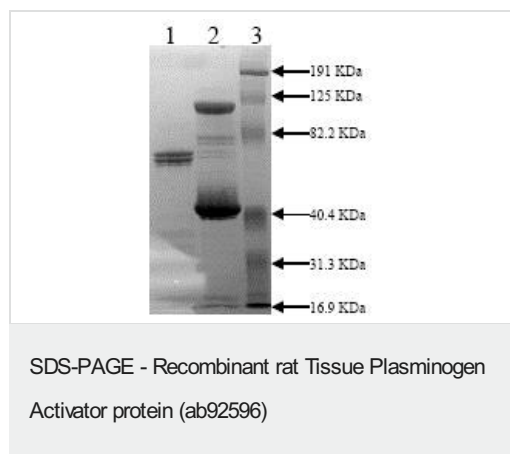
The single chain, almost fully active enzyme, can be further processed into a two-chain fully active form by a cleavage after Arg-310 catalyzed by plasmin, tissue kallikrein or factor Xa.  
Differential cell-specific N-linked glycosylation gives rise to two glycoforms, type I (glycosylated at Asn-219) 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

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#### 10% SDS-PAGE

Lane 1: TPA Tissue Plasminogen Activator (3ug) Non-reduced

Lane 2: TPA Tissue Plasminogen Activator (3ug) + PAI-1 (12ug)  
Non-reduced

Lane 3: Prestained Standard

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

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