

# Recombinant Human tPA/PLAT Protein (aa 37-310, Fc Tag)



Catalog Number:PKSH031825

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

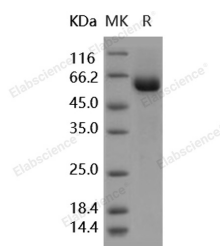
## Description

<b>Synonyms</b>	T-PA;TPA;t-plasminogen activator;Tissue plasminogen activator;
<b>Species</b>	Human
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Tyr 37-Arg 310
<b>Accession</b>	NP_000921.1
<b>Calculated Molecular Weight</b>	57.5 kDa
<b>Observed molecular weight</b>	59 kDa
<b>Tag</b>	N-hFc

## Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile 50mM NaAc, 150mM NaCl, 5mM CaCl <sub>2</sub> , 10% glycerol, PH 5.5 Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



> 95 % as determined by reducing SDS-PAGE.

## Background

Tissue plasminogen activator (abbreviated tPA or PLAT), is traditionally viewed as a simple serine protease whose main function is to convert plasminogen into biologically active plasmin. As a protease, tPA plays a crucial role in regulating blood fibrinolysis, in maintaining the homeostasis of extracellular matrix and in modulating the post-translational activation of growth factors. tPA is synthesized and secreted as a single chain polypeptide precursor which is cleaved in turn by plasmin. Proteolytic cleavage at the C-terminal side of Arg275 generates the enzyme composed of two subunits, designated as  $\alpha$  and  $\beta$  chains which are held together by a single disulfide bond. Unlike the other members of the chymotrypsin family, tPA has one particular distinction in that the catalytic efficiency of the single-chain enzyme is only

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slightly lower than that of the proteolytically cleaved form and is therefore not a true zymogen. tPA is found not only in the blood, where its primary function is as a thrombolytic enzyme, but also in the central nervous system (CNS). It participates in a number of physiological and pathological events in the CNS, as well as the role of neuroserpin as the natural regulator of tPA's activity in these processes. Increased or decreased activity of tPA leads to hyperfibrinolysis or hypofibrinolysis, respectively. In addition, as a cytokine, tPA plays a pivotal role in the pathogenesis of renal interstitial fibrosis through diverse mechanisms. Thus, as a fibrogenic cytokine, it promotes the progression of kidney diseases.

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