

tPA Human

Description: Tissue Plasminogen Activator Human Recombinant produced in CHO cells is a single, glycosylated polypeptide chain containing 527 amino acids and having a molecular mass of 59008.71 Dalton. tPA is a serine protease enzyme that converts plasminogen to plasmin. The tPA is purified by proprietary chromatographic techniques.

Catalog #: ENPS-270

For research use only.

Synonyms: Tissue-type plasminogen activator, EC 3.4.21.68, tPA, t-PA, t-plasminogen activator, TPA, T-PA, DKFZp686l03148.

Source: Chinese Hamster Ovary Cells (CHO) Physical Appearance Sterile Filtered White lyophilized (freeze-dried) powder.

Purity: Greater than 98.0% as determined by (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

Formulation:

Each mg of t-PA contains 1.7 gr L-arginine, 0.5 gr phosphoric acid and 4 mg tween 80.

Stability:

Lyophilized t-PA although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution tPA should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

Solubility:

It is recommended to reconstitute the lyophilized t-PA in sterile 18M-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Introduction:

Tissue plasminogen activator (abbreviated PLAT or tPA) is a secreted serine protease which converts the proenzyme plasminogen to plasmin, a fibrinolytic enzyme. Plasminogen is synthesized as a single chain which is cleaved by PLAT into the two chain disulfide linked plasmin. This enzyme plays a role in cell migration and tissue remodeling. Increased enzymatic activity causes hyperfibrinolysis, which manifests as excessive bleeding; decreased activity leads to hypofibrinolysis which can result in thrombosis or embolism.

References:

1. Title: Thrombin-activable Fibrinolysis Inhibitor (TAFI) Zymogen Is an Active Carboxypeptidase. Publication: First Published on November 30, 2006, doi: 10.1074/jbc.M606559200 February 2, 2007 The Journal of Biological Chemistry, 282, 3066-3076. Link: <http://www.jbc.org/content/282/5/3066.full>
2. Title: Biochemical characterization of bovine plasma thrombin-activatable fibrinolysis inhibitor (TAFI). Publication: BMC Biochemistry 2009, 10:13 doi: 10.1186/1471-2091-10-13. Link: <http://www.biomedcentral.com/1471-2091/10/13/>

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