

Recombinant Human Plasminogen Activator, Tissue

Cat. No. PLAT-55H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human Tissue Plasminogen Activator produced in <i>CHO cells</i> 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.
Species	Human
Source	CHO
Description	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.
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 Alteplase contains 1.7 gr L-arginine, 0.5 gr phosphoric acid and 4 mg tween 80.

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Solubility	It is recommended to reconstitute the lyophilized t-PA in sterile 18 MΩ-cm H ₂ O not less than 100 g/ml, which can then be further diluted to other aqueous solutions.
Enzymatic Activity	580,000 IU/mg.
Stability	Lyophilized Reteplase 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.

GENE INFORMATION

Gene Name	PLAT plasminogen activator, tissue [Homo sapiens]
Synonyms	PLAT; plasminogen activator, tissue; TPA; T-PA; DKFZp686I03148; Tissue-type plasminogen activator; t-plasminogen activator; t-PA; tPA; INNAteplase; INNRepteplase; Tissue-type plasminogen activator chain A; Tissue-type plasminogen activator chain B; Alteplase; EC 3.4.21.68; Reteplase; alteplase; reteplase; plasminogen activator, tissue type; tissue plasminogen activator (t-PA)
Gene ID	5327
mRNA Refseq	NM_000930
Protein Refseq	NP_000921
MIM	173370
UniProt ID	P00750

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Chromosome Location	8p12
Pathway	Complement and coagulation cascades; Hemostasis; Signaling by PDGF
Function	peptidase activity; serine-type endopeptidase activity

PDB rendering based on 1a5h.

