

Recombinant Human Tissue Plasminogen Activator (TPA)

Catalog No.:	PA1227, PA12247, PA1227XC
Quantity/Conc.:	PA1227: 20 µg, PA1227X: 100 µg, PA1227XC: 1 mg / 1 mg/ml (before lyophilisation)
Source:	<i>Chinese Hamster Ovary (CHO) Cells</i>
Description:	Recombinant Human <i>Tissue Plasminogen Activator (TPA)</i> is a single, glycosylated polypeptide chain containing 527 amino acids and having a molecular mass of 59008.71 Dalton. Human <i>TPA</i> is a serine protease enzyme that converts plasminogen to plasmin. Human <i>TPA</i> is purified by proprietary chromatographic techniques.
Gene Name:	PLAT
Protein synonyms:	Tissue-type plasminogen activator precursor (EC 3.4.21.68), tPA, t-PA, t-plasminogen activator, Alteplase, Reteplase
Functional comp.:	Tissue-type plasminogen activator chain A, Tissue-type plasminogenactivator chain B .
Protein Family:	Belongs to the peptidase S1 family.
Related proteins:	•Porcine Enteropeptidase/Enterokinase •Recombinant Human Factor VIIa •Human Factor IX •Recombinant Bovine Trypsin •Recombinant Human Hepatocyte Growth Factor •Recombinant Human Angiostatin Kringles 1-3
Format:	Recombinant Human TPA was lyophilized from a sterile filtered, concentrated (1mg/ml) solution containing 1.7gr L-arginine, 0.5gr phosphoric acid and 4mg tween 80. It is recommended to reconstitute the lyophilized Human <i>TPA</i> in sterile 18MO-cm H ₂ O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.
Protein content:	Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm . 2. Analysis by RP-HPLC, using a calibrated solution of Recombinant <i>Tissue Plasminogen Activator</i> as a Reference Standard.
Purity:	Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Anion-exchange FPLC. (c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained.
Amino Acid Seq.:	The sequence of the first five N-terminal amino acids was determined and was found to be :Ser Tyr Gln Val Ile .
Dimers & aggreg.:	Less than 1% as determined by silver-stained SDS-PAGE gel analysis.
Endotoxin:	Less than 0.1 ng/µg (IEU/µg) of Recombinant <i>Tissue Plasminogen Activator</i> .
Biological activity:	Human <i>TPA</i> is fully biologically active when compared to World Health Organization (WHO) reference standard which is 5.8x10 ⁵ IU/mg.

Storage: Lyophilized Human *TPA* although stable at room temperature for 3 weeks, should be stored desiccated below -20°C. Upon reconstitution Human *TPA* should be stored at 4°C between 2-7 days and for future use below -20°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please avoid freeze-thaw cycles. Shelf life: one year from despatch.

References: Bachmann, F. and Kruithof, E., Semin. Thromb. Hemost. 10, 6 (1984)
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5. Systemic Hemostasis With Recombinant-Activated Factor VII Followed by Local Thrombolysis With Recombinant Tissue Plasminogen Activator in Intraventricular Hemorrhage. Neurocrit Care 2005;3(3):246-8
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