Recombinant human Tissue Plasminogen Activator protein ab68107

Description

Product name: Recombinant human Tissue Plasminogen Activator protein

Biological activity: Tissue Plasminogen Activator Human Recombinant (ab68107) produced in CHO cells is a single, glycosylated polypeptide chain containing 527 amino acids and having a molecular mass of 59008.71 Dalton. Enzymatic Activity: 580,000 IU/mg.

Purity: > 95 % SDS-PAGE.

Expression system: CHO cells

Protein length: Full length protein

Animal free: No

Nature: Recombinant

Species: Human

Specifications

Our Abpromise guarantee covers the use of ab68107 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications: SDS-PAGE

Form: Lyophilized

Additional notes: Upon reconstitution this protein 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).

Preparation and Storage

Stability and Storage: Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

Reconstitution: Each mg of t-PA contains 1.7 gr L-arginine, 0.5 gr phosphoric acid and 4 mg tween 80. This product is an active protein and may elicit a biological response in vivo, handle with caution.

Reconstitute in sterile 18M Ohms/cm water to not less than 100 μg/ml, which can then be further...
diluted to other aqueous solutions.

**General Info**

**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.

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

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