abcam

Product datasheet

Recombinant Mouse Tissue Plasminogen Activator (mutated S481A) protein ab92723

1 Image

Description

Product name Recombinant Mouse Tissue Plasminogen Activator (mutated S481A) protein

Purity > 95 % SDS-PAGE.

ab92723 is not sterile and should be passed through a 0.22 micron filter before use in cell culture.

It is > 98% pure by SDS PAGE and > 90% single chain.

Expression system Insect cells

Protein length Full length protein

Animal free No

Nature Recombinant

Species Mouse

Modifications mutated S481

Specifications

Our Abpromise quarantee covers the use of ab92723 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 Liquid

Additional notes

ab92723 is a single chain Mouse TPA Tissue Plasminogen Activator which has the active site

serine mutated to alanine rendering the enzyme catalytically inactive. The TPA Tissue

Plasminogen Activator still retains exosite binding as well as other biological properties of TPA

Tissue Plasminogen Activator including but not limited to surface binding to fibrin.

Produced using non-baculovirus insect cells.

Preparation and Storage

Stability and Storage Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles.

pH: 7.40

Constituents: 9.52% HEPES, 0.58% Sodium chloride

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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 similaritiesBelongs 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

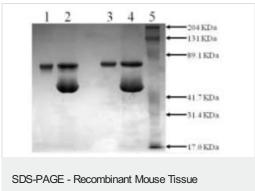
the mannose receptor.

Characterization of O-linked glycan was studied in Bowes melanoma cell line.

Cellular localization

Secreted > extracellular space.

Images



SDS-PAGE - Recombinant Mouse Tissue
Plasminogen Activator (mutated S481A) protein
(ab92723)

10% SDS-PAGE showing ab92723

Lane 1 ab92723 (3µg) Non-reduced

Lane 2 ab92723 (3µg) + PAI-1 (stable mutant form) (10µg) Non-

reduced

Lane 3 ab92723 (3µg) Reduced

Lane 4 ab92723 (3µg) + PAI-1 (stable mutant form) (10µg)

Reduced

Lane 5 Prestained standard

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