Anti-TPA Tissue Plasminogen Activator antibody [H27B6] ab28374

Overview

Product name
Anti-TPA Tissue Plasminogen Activator antibody [H27B6]

Description
Mouse monoclonal [H27B6] to TPA Tissue Plasminogen Activator

Host species
Mouse

Tested applications
Suitable for: WB, ELISA, IHC-P

Species reactivity
Reacts with: Mouse, Rat

Immunogen
Recombinant full length protein (Mouse)

Epitope
protease domain (see Declerck et al)

Positive control
This antibody gave a positive result in IHC in the following FFPE tissue: Rat Normal Kidney.

Properties

Form
Liquid

Storage instructions
Shipped at 4°C. Upon delivery aliquot. Avoid freeze / thaw cycle.

Storage buffer
pH: 7.40
Constituents: 0.82% Sodium phosphate, 0.87% Sodium chloride

Purity
Protein A purified

Purification notes
Protein A Sepharose. Purity is = 98% assessed by visual inspection of a Coomassie® bluestained SDS-PAGE gel.

Clonality
Monoclonal

Clone number
H27B6

Isotype
IgG

Applications

Our Abpromise guarantee covers the use of ab28374 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
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.

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<th>Notes</th>
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<td>WB</td>
<td></td>
<td>Use a concentration of 1 - 5 µg/ml. Predicted molecular weight: 70 kDa.</td>
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<td>ELISA</td>
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<td>Use at an assay dependent concentration.</td>
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<tr>
<td>IHC-P</td>
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<td>Use a concentration of 10 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.</td>
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Images
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TPA Tissue Plasminogen Activator antibody [H27B6] (ab28374)

IHC image of TPA Tissue Plasminogen Activator staining in Rat Normal Kidney formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab28374, 10µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

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