abcam

Product datasheet

Anti-Plasminogen antibody ab180046

3 Images

Overview

Product name	Anti-Plasminogen antibody
Description	Rabbit polyclonal to Plasminogen
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, WB
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant fragment corresponding to Human Plasminogen aa 103-352. Expressed in E. coli. Database link: **P00747**
Positive control	WB: SMMC7721, HEPG2 whole cell lysates. IHC-P: Human mammary cancer tissues.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.025% Sodium azide Constituents: 0.45% Sodium chloride, 0.1% Dibasic monohydrogen sodium phosphate
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee	Our **Abpromise guarantee** covers the use of ab180046 in the following tested applications.

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

Application	Abreviews	Notes
IHC-P		Use a concentration of 0.5 - 1 µg/ml.
WB		Use a concentration of 0.1 - 0.5 µg/ml. Predicted molecular weight: 90 kDa.

Target

Function

Plasmin dissolves the fibrin of blood clots and acts as a proteolytic factor in a variety of other processes including embryonic development, tissue remodeling, tumor invasion, and inflammation. In ovulation, weakens the walls of the Graafian follicle. It activates the urokinase-type plasminogen activator, collagenases and several complement zymogens, such as C1 and C5. Cleavage of fibronectin and laminin leads to cell detachment and apoptosis. Also cleaves fibrin, thrombospondin and von Willebrand factor. Its role in tissue remodeling and tumor invasion may be modulated by CSPG4. Binds to cells.
Angiostatin is an angiogenesis inhibitor that blocks neovascularization and growth of experimental primary and metastatic tumors in vivo.

Tissue specificity

Present in plasma and many other extracellular fluids. It is synthesized in the liver.

Involvement in disease

Defects in PLG are a cause of susceptibility to thrombosis (THR) [MIM:188050]. It is a multifactorial disorder of hemostasis characterized by abnormal platelet aggregation in response to various agents and recurrent thrombi formation.
Defects in PLG are the cause of plasminogen deficiency (PLGD) [MIM:217090]. PLGD is characterized by decreased serum plasminogen activity. Two forms of the disorder are distinguished: type 1 deficiency is additionally characterized by decreased plasminogen antigen levels and clinical symptoms, whereas type 2 deficiency, also known as dysplasminogenemia, is characterized by normal, or slightly reduced antigen levels, and absence of clinical manifestations. Plasminogen deficiency type 1 results in markedly impaired extracellular fibrinolysis and chronic mucosal pseudomembranous lesions due to subepithelial fibrin deposition and inflammation. The most common clinical manifestation of type 1 deficiency is ligneous conjunctivitis in which pseudomembranes formation on the palpebral surfaces of the eye progresses to white, yellow-white, or red thick masses with a wood-like consistency that replace the normal mucosa.

Sequence similarities

Belongs to the peptidase S1 family. Plasminogen subfamily.
Contains 5 kringle domains.
Contains 1 PAN domain.
Contains 1 peptidase S1 domain.

Domain

Kringle domains mediate interaction with CSPG4.

Post-translational modifications

N-linked glycan contains N-acetyllactosamine and sialic acid. O-linked glycans consist of Gal-GalNAc disaccharide modified with up to 2 sialic acid residues (microheterogeneity).
In the presence of the inhibitor, the activation involves only cleavage after Arg-580, yielding two chains held together by two disulfide bonds. In the absence of the inhibitor, the activation involves additionally the removal of the activation peptide.

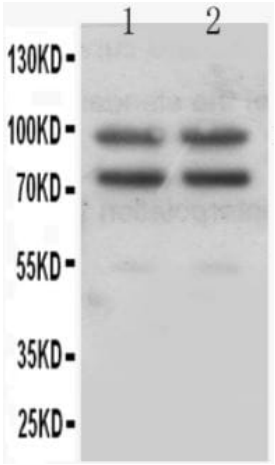
Cellular localization

Secreted. Locates to the cell surface where it is proteolytically cleaved to produce the active plasmin. Interaction with HRG tethers it to the cell surface.

Form

Cleaved into the following 5 chains: 1.Plasmin heavy chain A2.Activation peptide3.Angiostatin4.Plasmin heavy chain A, short form5. Plasmin light chain B

Images



Western blot - Anti-Plasminogen antibody (ab180046)

All lanes : Anti-Plasminogen antibody (ab180046) at 0.5 µg/ml

Lane 1 : SMMC-7721 (human hepatocarcinoma cell line) whole cell lysate
Lane 2 : HepG2 (human liver hepatocellular carcinoma cell line) whole cell lysate

Lysates/proteins at 50 µg per lane.

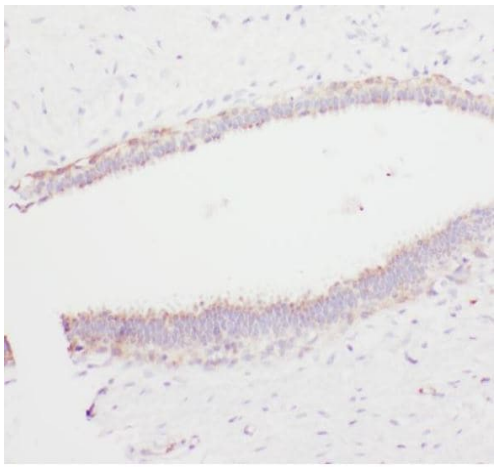
Secondary
All lanes : Goat anti-rabbit IgG (HRP) at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

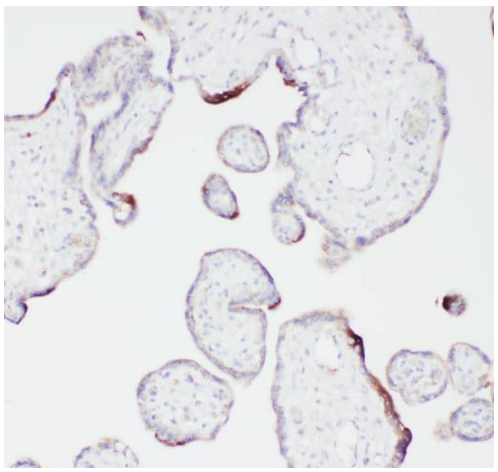
Predicted band size: 90 kDa
Observed band size: 95 kDa
Additional bands at: 75 kDa. We are unsure as to the identity of these extra bands.

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at room temperature. The membrane was incubated with primary antibody overnight at 4°C, then washed with TBS-0.1% Tween 3 times with 5 minutes each and probed with secondary antibody for 1.5 hour at room temperature.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Plasminogen antibody (ab180046)

Paraffin embedded human mammary cancer tissue stained for Plasminogen using ab180046 at 1 µg/ml in immunohistochemical analysis. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 minutes. The tissue section was blocked with 10% goat serum. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex with DAB as the chromogen.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Plasminogen antibody (ab180046)

Paraffin embedded human placenta tissue stained for Plasminogen using ab180046 at 1 µg/ml in immunohistochemical analysis. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 minutes.

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