

plasminogen (G-7): sc-376405

BACKGROUND

Cleavage of the serine proteinase plasminogen to form plasmin is the central event in the dissolution of blood clots by the fibrinolytic system. Within the fibrinolytic cascade, the serine proteinases urokinase-type plasminogen activator (uPA) and tissue-type plasminogen activator (tPA) activate the proenzyme plasminogen by cleaving plasminogen to form the fibrinolytically active enzyme plasmin. The enzyme plasmin consists of a heavy chain of 561 amino acids, which originates from the N-terminus of plasminogen, and a light chain of 230 amino acid residues, which is derived from the C-terminus of plasminogen. Plasmin is a proangiogenic proteinase that is capable of degrading a variety of extracellular matrix proteins and that facilitates endothelial cell migration and angiogenesis. In the presence of free sulfhydryl donors (FSD), plasmin undergoes auto-proteolysis and is converted to the enzyme angiotensin, which blocks angiogenesis and neovascularization and can inhibit the growth of primary and metastatic tumors.

REFERENCES

1. Forsgren, M., et al. 1987. Molecular cloning and characterization of a full-length cDNA clone for human plasminogen. *FEBS Lett.* 213: 254-260.
2. Petersen, T.E., et al. 1990. Characterization of the gene for human plasminogen, a key proenzyme in the fibrinolytic system. *J. Biol. Chem.* 265: 6104-6111.
3. Christensen, L., et al. 1996. Immunohistochemical localization of urokinase-type plasminogen activator, type-1 plasminogen-activator inhibitor, urokinase receptor and α -2-Macroglobulin receptor in human breast carcinomas. *Int. J. Cancer* 66: 441-452.

CHROMOSOMAL LOCATION

Genetic locus: PLG (human) mapping to 6q26; Plg (mouse) mapping to 17 A1.

SOURCE

plasminogen (G-7) is a mouse monoclonal antibody raised against amino acids 16-105 of plasminogen of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ in kappa light chain 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

plasminogen (G-7) is available conjugated to agarose (sc-376405 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376405 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376405 PE), fluorescein (sc-376405 FITC), Alexa Fluor® 488 (sc-376405 AF488), Alexa Fluor® 546 (sc-376405 AF546), Alexa Fluor® 594 (sc-376405 AF594) or Alexa Fluor® 647 (sc-376405 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376405 AF680) or Alexa Fluor® 790 (sc-376405 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

plasminogen (G-7) is recommended for detection of plasminogen of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for plasminogen siRNA (h): sc-40857, plasminogen siRNA (m): sc-40858, plasminogen shRNA Plasmid (h): sc-40857-SH, plasminogen shRNA Plasmid (m): sc-40858-SH, plasminogen shRNA (h) Lentiviral Particles: sc-40857-V and plasminogen shRNA (m) Lentiviral Particles: sc-40858-V.

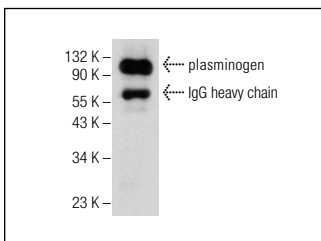
Molecular Weight of plasminogen: 90 kDa.

Positive Controls: human plasma extract: sc-364374.

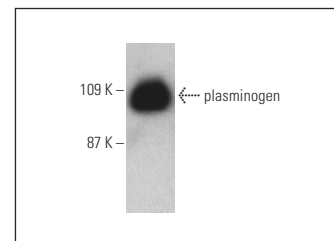
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



plasminogen (G-7): sc-376405. Western blot analysis of plasminogen in human plasma. Note presence of heavy chain IgG.



plasminogen (G-7) HRP: sc-376405 HRP. Direct western blot analysis of plasminogen in human plasma.

SELECT PRODUCT CITATIONS

1. Xu, X., et al. 2017. ITRAQ-based proteomics analysis of acute lung injury induced by oleic acid in mice. *Cell. Physiol. Biochem.* 44: 1949-1964.
2. Synelnyk, T., et al. 2023. Evaluation of proteolytic activity and serine proteases distribution in plasma from patients with bladder cancer. *Front. Med.* 10: 1276882.

RESEARCH USE

For research use only, not for use in diagnostic procedures.