SANTA CRUZ BIOTECHNOLOGY, INC.

plasminogen (B-11): sc-376324

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 angiostatin, 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.

CHROMOSOMAL LOCATION

Genetic locus: PLG (human) mapping to 6q26.

SOURCE

plasminogen (B-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 123-155 within an internal region of plasminogen of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

plasminogen (B-11) is available conjugated to agarose (sc-376324 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376324 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376324 PE), fluorescein (sc-376324 FITC), Alexa Fluor® 488 (sc-376324 AF488), Alexa Fluor® 546 (sc-376324 AF546), Alexa Fluor® 594 (sc-376324 AF594) or Alexa Fluor® 647 (sc-376324 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376324 AF680) or Alexa Fluor® 790 (sc-376324 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376324 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

plasminogen (B-11) is recommended for detection of plasminogen, plasmin heavy chain A, and the short form of plasmin heavy chain A of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 shRNA Plasmid (h): sc-40857-SH and plasminogen shRNA (h) Lentiviral Particles: sc-40857-V.

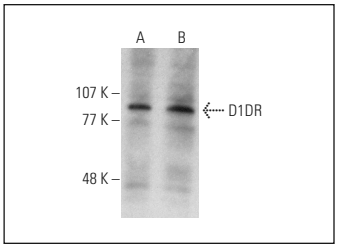
Molecular Weight of plasminogen: 90 kDa.

Positive Controls: Hs 181 Tes whole cell lysate: sc-364779, Caki-1 cell lysate: sc-2224 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

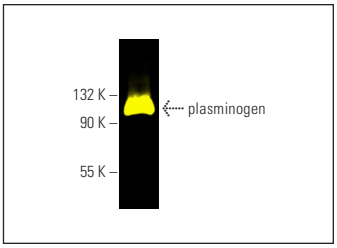
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



D1DR (SG2-D1a) HRP: sc-33660 HRP. Direct western blot analysis of D1DR expression in mouse brain (**A**) and rat brain (**B**) tissue extracts.



plasminogen (B-11) Alexa Fluor® 488: sc-376324 AF488. Direct fluorescent western blot analysis of plasminogen in human plasma. Blocked with UltraCruz® Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

1. Ullah, K., et al. 2017. Serum estradiol levels in controlled ovarian stimulation directly affect the endometrium. J. Mol. Endocrinol. 59: 105-119.
2. Spychala, A. and Rüther, U. 2019. FTO affects hippocampal function by regulation of BDNF processing. PLoS ONE 14: e0211937.
3. Jayamanoharan, S., et al. 2020. Association between elevated cerebrospinal fluid D-dimer levels and delayed cerebral ischaemia after aneurysmal subarachnoid haemorrhage. J. Clin. Neurosci. 76: 177-182.

RESEARCH USE

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