SANTA CRUZ BIOTECHNOLOGY, INC.

plasminogen (H-90): sc-25546

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; Plg (mouse) mapping to 17 A1.

SOURCE

plasminogen (H-90) is a rabbit polyclonal antibody raised against amino acids 16-105 of plasminogen of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

plasminogen (H-90) is recommended for detection of plasminogen of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (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.

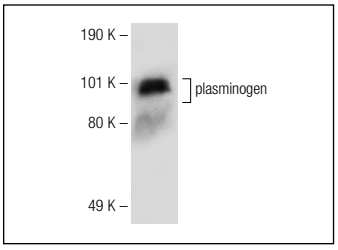
Molecular Weight of plasminogen: 90 kDa

Positive Controls: human plasma whole cell lysate or WEHI-231 whole cell lysate: sc-2213.

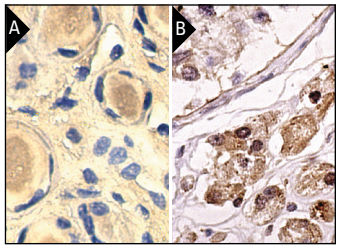
STORAGE

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

DATA



plasminogen (H-90): sc-25546. Western blot analysis of plasminogen expression in human plasma whole cell lysate.



plasminogen (H-90): sc-25546. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tumor tissue showing extracellular localization (**A**) and human testis tissue showing cytoplasmic staining of Leydig cells and cells in seminiferous ducts (**B**).

SELECT PRODUCT CITATIONS

1. Pendyala, G., et al. 2009. Cerebrospinal fluid proteomics reveals potential pathogenic changes in the brains of SIV-infected monkeys. J. Proteome Res. 8: 2253-2260.
2. Bruno, M.A., et al. 2009. Amyloid β-induced nerve growth factor dysmetabolism in Alzheimer disease. J. Neuropathol. Exp. Neurol. 68: 857-869.
3. Mahmood, A., et al. 2011. Treatment of TBI with collagen scaffolds and human marrow stromal cells increases the expression of tissue plasminogen (tPA). J. Neurotrauma 28: 1199-1207.
4. Huang, Z., et al. 2012. iTRAQ-based proteomic profiling of human serum reveals down-regulation of platelet basic protein and apolipoprotein B100 in patients with hematotoxicity induced by chronic occupational benzene exposure. Toxicology 291: 56-64.
5. Bruno, M.A. and Cuello, A.C. 2012. Cortical peroxynitration of nerve growth factor in aged and cognitively impaired rats. Neurobiol. Aging 33: 1927-1937.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.