SANTA CRUZ BIOTECHNOLOGY, INC.

uPA (H-140): sc-14019

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

uPA (urokinase-type plasminogen activator) and tPA (tissue plasminogen activator) are serine proteases that are members of the Trypsin family, and they are essential to the intrinsic coagulation system. tPA is primarily involved in fibrinolysis, whereas uPA principally mediates cell migration and tissue remodeling processes. uPA and tPA are responsible for cleaving plasminogen, a large serum β-globulin that is deposited on the fibrin strands within a thrombus. uPA and tPA preferentially target plasminogen at the Arg-Val bond to produce plasmin (also designated fibrinolysin), which is a Trypsin-like enzyme that acts on Arg-Lys bonds in fibrin and Fibrinogen and contributes to the systematic activation of the coagulation cascade. uPA and tPA each consist of two chains that are designated A and B. The A chain of uPA can be cleaved, resulting in low and high molecular mass forms. uPA and tPA are regulated by the serpin family members PAI-1 and PAI-2, which are serine proteinase inhibitors that complex with uPA, tPA and other targeted proteinases and then slowly disassociate to produce cleaved species that fold into stable inactive conformations.

CHROMOSOMAL LOCATION

Genetic locus: PLAU (human) mapping to 10q22.2; Plau (mouse) mapping to 14 A3.

SOURCE

uPA (H-140) is a rabbit polyclonal antibody raised against amino acids 136-275 of uPA 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

uPA (H-140) is recommended for detection of all forms of uPA 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).

uPA (H-140) is also recommended for detection of all forms of uPA in additional species, including equine.

Suitable for use as control antibody for uPA siRNA (h): sc-36779, uPA siRNA (m): sc-36780, uPA shRNA Plasmid (h): sc-36779-SH, uPA shRNA Plasmid (m): sc-36780-SH, uPA shRNA (h) Lentiviral Particles: sc-36779-V and uPA shRNA (m) Lentiviral Particles: sc-36780-V.

Molecular Weight of precursor uPA: 55 kDa.

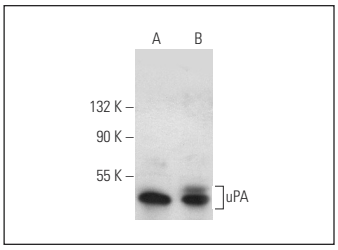
Molecular Weight of uPA active enzyme: 33 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, LNCaP cell lysate: sc-2231 or Caki-1 cell lysate: sc-2224.

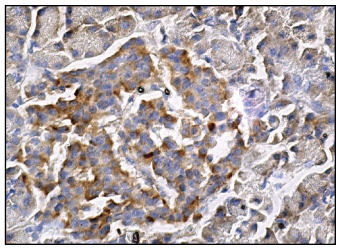
STORAGE

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

DATA



uPA (H-140): sc-14019. Western blot analysis of uPA expression in MIA PaCa-2 (**A**) and LNCaP (**B**) whole cell lysates.



uPA (H-140): sc-14019. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans and glandular cells.

SELECT PRODUCT CITATIONS

1. Burggraf, D., et al. 2004. Rt-PA causes a significant increase in endogenous uPA during experimental focal cerebral ischemia. Eur. J. Neurosci. 20: 2903-2908.
2. Li, W., et al. 2006. Down-regulation of trypsinogen expression is associated with growth retardation in α1,6-fucosyltransferase-deficient mice: attenuation of proteinase-activated receptor 2 activity. Glycobiology 16: 1007-1019.
3. Purushothaman, A., et al. 2008. Heparanase stimulation of protease expression implicates it as a master regulator of the aggressive tumor phenotype in myeloma. J. Biol. Chem. 283: 32628-32636.
4. Vinothini, G., et al. 2009. Evaluation of molecular markers in a rat model of mammary carcinogenesis. Oncol. Res. 17: 483-493.
5. Lee, K.W., et al. 2009. Behavioral stress accelerates plaque pathogenesis in the brain of Tg2576 mice via generation of metabolic oxidative stress. J. Neurochem. 108: 165-175.
6. Yin, L.L., et al. 2009. A suppressor of multiple extracellular matrix-degrading proteases and cancer metastasis. J. Cell. Mol. Med. 13: 4034-4041.
7. Gorantla, B., et al. 2011. Suppression of the uPAR-uPA system retards angiogenesis, invasion, and *in vivo* tumor development in pancreatic cancer cells. Mol. Cancer Res. 9: 377-389.

RESEARCH USE

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