SANTA CRUZ BIOTECHNOLOGY, INC.

PAI-1 (M-20): sc-6644

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

PAI-1 and PAI-2 (for plasminogen activator inhibitor-1 and -2) are members of the serpin serine proteinase inhibitor family. PAI-1 and PAI-2 have been shown to regulate uPA (urokinase-type plasminogen activator) and tPA (tissue plasminogen activator), resulting in the inhibition of proteolytic activity. Members of the serpin family generally complex with their target proteinases, then disassociate slowly into cleaved species that fold into stable inactive forms. PAI-1 can fold into the inactive state without cleavage, resulting in the latent form of PAI-1. Activity can be restored to the latent form of PAI-1 through denaturation and renaturation. PAI-2 occurs in secreted and cytosolic forms through facultative polypeptide translocation. uPa is a serine proteinase that is a member of the trypsin family. It is responsible for the cleavage of plasminogen at the Arg-Val bond to produce plasmin. uPA consists of two chains, designated A and B. The A chain can be cleaved, resulting in low and high molecular mass forms of uPA.

CHROMOSOMAL LOCATION

Genetic locus: SERPINE1 (human) mapping to 7q22.1; Serpine1 (mouse) mapping to 5 G2.

SOURCE

PAI-1 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PAI-1 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-6644 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PAI-1 (M-20) is recommended for detection of PAI-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 PAI-1 siRNA (h): sc-36179, PAI-1 siRNA (m): sc-36180, PAI-1 siRNA (r): sc-60075, PAI-1 shRNA Plasmid (h): sc-36179-SH, PAI-1 shRNA Plasmid (m): sc-36180-SH, PAI-1 shRNA Plasmid (r): sc-60075-SH, PAI-1 shRNA (h) Lentiviral Particles: sc-36179-V, PAI-1 shRNA (m) Lentiviral Particles: sc-36180-V and PAI-1 shRNA (r) Lentiviral Particles: sc-60075-V.

Molecular Weight of PAI-1: 50 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211 or HUV-EC-C whole cell lysate: sc-364180.

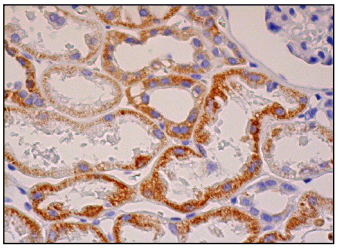
STORAGE

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

RESEARCH USE

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

DATA



PAI-1 (M-20): sc-6644. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Floridon, C., et al. 2000. Does plasminogen activator inhibitor-1 (PAI-1) control trophoblast invasion? A study of fetal and maternal tissue in intrauterine, tubal and molar pregnancies. Placenta 21: 754-762.
2. Oestreicher, E.M., et al. 2003. Aldosterone and not plasminogen activator inhibitor-1 is a critical mediator of early angiotensin II/NG-nitro-L-arginine methyl ester-induced myocardial injury. Circulation 108: 2517-2523.
3. Askari, A.T., et al. 2003. Myeloperoxidase and plasminogen activator inhibitor 1 play a central role in ventricular remodeling after myocardial infarction. J. Exp. Med. 197: 615-624.
4. Matsushita, M., et al. 2005. Plasminogen activator inhibitor-1 is elevated, but not essential, in the development of bleomycin-induced murine scleroderma. Clin. Exp. Immunol. 139: 429-438.
5. Thomàs-Moyà, E., et al. 2007. Paraoxonase 1 response to a high-fat diet: gender differences in the factors involved. Mol. Med. 13: 203-209.
6. Alcorn, J.F., et al. 2008. Jun N-terminal kinase 1 regulates epithelial-to-mesenchymal transition induced by TGFβ1. J. Cell Sci. 121: 1036-1045.
7. Chung, M.C., et al. 2008. Neutrophil elastase and syndecan shedding contribute to antithrombin depletion in murine anthrax. FEMS Immunol. Med. Microbiol. 54: 309-318.
8. Thomàs-Moyà, E., et al. 2008. Gender related differences in paraoxonase 1 response to high-fat diet-induced oxidative stress. Obesity 6: 2232-2238.

PROTOCOLS

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