SANTA CRUZ BIOTECHNOLOGY, INC.

PAI-1 (C-9): sc-5297

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.

SOURCE

PAI-1 (C-9) is a mouse monoclonal antibody raised against amino acids 24-158 of PAI-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PAI-1 (C-9) is available conjugated to agarose (sc-5297 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-5297 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-5297 PE), fluorescein (sc-5297 FITC), Alexa Fluor® 488 (sc-5297 AF488), Alexa Fluor® 546 (sc-5297 AF546), Alexa Fluor® 594 (sc-5297 AF594) or Alexa Fluor® 647 (sc-5297 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-5297 AF680) or Alexa Fluor® 790 (sc-5297 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

PAI-1 (C-9) is recommended for detection of PAI-1 of 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 PAI-1 siRNA (h): sc-36179, PAI-1 shRNA Plasmid (h): sc-36179-SH and PAI-1 shRNA (h) Lentiviral Particles: sc-36179-V.

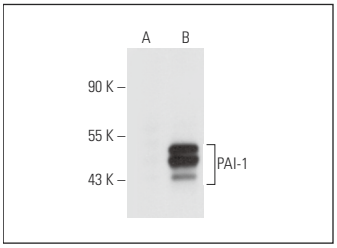
Molecular Weight of PAI-1: 50 kDa.

Positive Controls: PAI-1 (h3): 293T Lysate: sc-158803 or HUV-EC-C whole cell lysate: sc-364180.

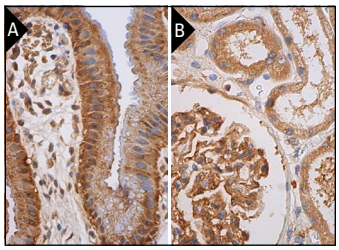
STORAGE

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

DATA



PAI-1 (C-9): sc-5297. Western blot analysis of PAI-1 expression in non-transfected: sc-117752 (**A**) and human PAI-1 transfected: sc-158803 (**B**) 293T whole cell lysates.



PAI-1 (C-9): sc-5297. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in glomeruli and cells in tubules (**B**).

SELECT PRODUCT CITATIONS

1. Pendaries, V., et al. 2003. Retinoic acid receptors interfere with the TGFβ/Smad signaling pathway in a ligand-specific manner. Oncogene 22: 8212-8220.
2. Feng, Y., et al. 2014. Zinc finger protein 451 is a novel Smad corepressor in transforming growth factor-β signaling. J. Biol. Chem. 289: 2072-2083.
3. Zhou, L., et al. 2015. Klotho ameliorates kidney injury and fibrosis and normalizes blood pressure by targeting the renin-angiotensin system. Am. J. Pathol. 185: 3211-3223.
4. Ding, Y., et al. 2016. Effect of urokinase-type plasminogen activator system in gastric cancer with peritoneal metastasis. Oncol. Lett. 11: 4208-4216.
5. Zhou, D., et al. 2017. Tubule-derived Wnts are required for fibroblast activation and kidney fibrosis. J. Am. Soc. Nephrol. 28: 2322-2336.
6. Pellinen, T., et al. 2018. ITGB1-dependent upregulation of Caveolin-1 switches TGFβ signalling from tumour-suppressive to oncogenic in prostate cancer. Sci. Rep. 8: 2338.
7. Alotaibi, F.T., et al. 2019. Plasminogen activator inhibitor-1 (PAI-1) expression in endometriosis. PLoS ONE 14: e0219064.
8. Wilson, M.R., et al. 2020. ARID1A mutations promote P300-dependent endometrial invasion through super-enhancer hyperacetylation. Cell Rep. 33: 108366.
9. Menendez-Montes, I., et al. 2021. Activation of amino acid metabolic program in cardiac HIF1-α-deficient mice. iScience 24: 102124.

RESEARCH USE

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