

## PAI-2 (D-20): sc-7646

### 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.

### REFERENCES

- Riccio, A., et al. 1985. The human urokinase-plasminogen activator gene and its promoter. *Nucleic Acids Res.* 13: 2759-2771.
- Belin, D., et al. 1989. Facultative polypeptide translocation allows a single mRNA to encode the secreted and cytosolic forms of plasminogen activators inhibitor 2. *EMBO J.* 8: 3287-3294.
- Schmitt, M., et al. 1991. Human tumor cell urokinase-type plasminogen activator (uPA): degradation of the proenzyme form (pro-uPA) by granulocyte elastase prevents subsequent activation by plasmin. *Adv. Exp. Med. Biol.* 297: 111-128.
- Mottonen, J., et al. 1992. Structural basis of latency in plasminogen activator inhibitor-1. *Nature* 355: 270-273.

### CHROMOSOMAL LOCATION

Genetic locus: SERPINB2 (human) mapping to 18q21.33.

### SOURCE

PAI-2 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PAI-2 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.

Blocking peptide available for competition studies, sc-7646 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### 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.

### APPLICATIONS

PAI-2 (D-20) is recommended for detection of PAI-2 of 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).

PAI-2 (D-20) is also recommended for detection of PAI-2 in additional species, including equine and bovine.

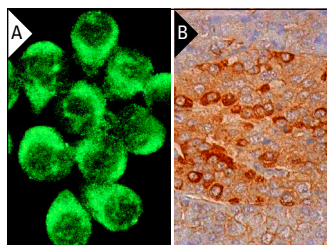
Suitable for use as control antibody for PAI-2 siRNA (h): sc-40804, PAI-2 shRNA Plasmid (h): sc-40804-SH and PAI-2 shRNA (h) Lentiviral Particles: sc-40804-V.

Molecular Weight of placental PAI-2: 46 kDa.

Molecular Weight of plasma PAI-2: 60 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, CCRF-CEM cell lysate: sc-2225 or U-937 cell lysate: sc-2239.

### DATA



PAI-2 (D-20): sc-7646. Immunofluorescence staining of methanol-fixed K-562 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans (B).

### SELECT PRODUCT CITATIONS

- Serewko, M.M., et al. 2002. Alterations in gene expression and activity during squamous cell carcinoma development. *Cancer Res.* 62: 3759-3765.
- Castello-Cros, R., et al. 2011. Matrix remodeling stimulates stromal autophagy, "fueling" cancer cell mitochondrial metabolism and metastasis. *Cell Cycle* 10: 2021-2034.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **PAI-2 (E-1): sc-166539**, our highly recommended monoclonal alternative to PAI-2 (D-20).