

## Sheep anti-human Plasminogen Activator Inhibitor Type 1

Whole IgG from antiserum

10 mg

**Product #:** SAPAI-IG

**Lot #:** XXXX

**Expiry date:** XXXX

Store at -10 to -20°C

For Research Use Only.

Not for use in diagnostic procedures.

### Description of PAI-1

Type I plasminogen activator inhibitor, PAI-1, is a 50 kDa single-chain glycoprotein which belongs to the serine protease inhibitor (SERPIN) family of proteins. The concentration of PAI-1 in normal human plasma is very low, with an average concentration of approximately 20 ng/ml. The plasma concentrations of PAI-1 can be affected by a number of factors including diurnal variations, age, sex, pregnancy, obesity and exercise status. PAI-1 is synthesized by various cell types including endothelial cells, hepatocytes, vascular smooth muscle cells, fibroblasts, mesothelial cells, granulosa cells and malignant cell lines. It is also found in the  $\alpha$ -granules of platelets as well as plasma. PAI-1 exists in at least three different conformations, including an active form with a half-life of approximately 1 – 3 hours, a latent form and a proteolytically or oxidatively inactivated form. The plasma glycoprotein vitronectin has been shown to bind active PAI-1 and stabilize it in its active conformation, extending its functional half-life to greater than 24 hours. Little specific binding of the latent or inactive forms of PAI-1 to vitronectin occurs. PAI-1 is considered to be the primary regulator of plasminogen activation *in vivo*. It is the major physiologic inhibitor of both the single chain and two-chain forms of tPA, being able to inhibit the single-chain form at least 10000 times greater than other PAIs.<sup>1-3</sup>

### REFERENCES and REVIEWS

1. Kruithof, E.K.O. Plasminogen activator inhibitor type 1: biochemical, biological and clinical aspects. *Fibrinolysis*, 2:59-70, 1988.
2. Edelberg, J.M, Sane, D.C., and Pizzo, S.V. Vascular regulation of plasminogen activator inhibitor-1 activity. *Semin. Thromb. Hemost.*, 20(4):319-323, 1994.
3. Loskutoff, D.J., Sawdey, M., and Mimuro, J. Type 1 plasminogen activator inhibitor, *Prog. Thromb. Haemost.*, 9:87-115, 1988.

### Product Specifications

#### Description:

Vial containing XXXX ml of whole IgG representing approximately 1 ml of antiserum. Total protein is 10 mg.

#### Format:

Whole IgG, clear liquid.

#### Host Animal:

Sheep

#### Immunogen:

Recombinant Plasminogen Activator Inhibitor-1 (PAI-1) prepared from bacterial extracts.

#### Concentration:

IgG concentration is XXXX mg/ml, determined by absorbance using an extinction coefficient ( $E_{280}^{1\%}$ ) of 13.4.

#### Buffer:

10 mM HEPES, pH 7.4, 150 mM NaCl, 50% (v/v) glycerol.

#### Storage:

Store between -10 and -20°C. Product will become viscous but will not freeze. Avoid storage in frost-free freezers. Keep vial tightly capped. Allow product to warm to room temperature and gently mix before use.

#### Specificity:

This antibody is specific for PAI-1 as demonstrated by immunoelectrophoresis and ELISA.

#### Applications:

Suitable for use as a source of antibodies to PAI-1.

#### Species Cross Reactivity: (immunodiffusion vs. citrated plasma)

Not determined.