

**Sheep anti-human
Plasminogen Activator Inhibitor Type 1
Peroxidase Conjugated IgG
0.2 mg**

Product #: SAPAI-HRP
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 α -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.¹⁻³

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 conjugated to horseradish peroxidase (HRP) through carbohydrate groups. Total protein is 0.2 mg.

Format:

IgG-HRP conjugate as a clear, slightly red-brown liquid.

Host Animal:

Sheep

Immunogen:

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

Concentration:

IgG-HRP concentration is XXXX mg/ml, determined by absorbance using an extinction coefficient ($E^{1\%}_{280}$) of 14.

Buffer:

A buffered stabilizer solution containing 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. Avoid exposure to sodium azide as this is an inhibitor of peroxidase activity.

Specificity:

Prior to conjugation, this antibody was specific for PAI-1 as demonstrated by immunoelectrophoresis and ELISA.

Applications:

Suitable as a source of peroxidase labeled antibodies to PAI-1.

Rz Ratio (Reinheitsszahl, A403/A280):

XXXX as determined spectrophotometrically.