COA CHROM
DIAGNOSTICA

Goat anti-human Protein C Inhibitor (PCI)

Peroxidase Conjugated IgG
0.2 mg

Product #: GAPCI-HRP
Lot #: XXXX
Expiry date: XXXX

Store at –10 to -20°C

For Research Use Only.
Not for use in diagnostic procedures.

Description of Protein C Inhibitor (PCI)

Protein C Inhibitor (PCI), also known as Plasminogen Activator Inhibitor 3 (PAI3), is a member of the SERPIN family of proteinase inhibitors. It is produced in the liver as a single chain glycoprotein (mass of 57 kDa) and circulates in plasma at a concentration of 5 µg/ml (~90 nM). PCI is also found in urine in lower concentrations of 250 ng/mL (~0.4 nM).
PCI is the primary inhibitor of activated Protein C (APC) in plasma but demonstrates a relatively broad specificity, also inhibiting thrombin, FXa, FXIa, kallikrein, tPA, urokinase, prostate specific antigen, acrosin, chymotrypsin and trypsin. The preferred enzyme target for PCI appears to be thrombin and this interaction is increased by more than 100 fold in the presence of thrombomodulin. Like ATIII and HCII, the inhibitory activity of PCI towards some of these enzymes is stimulated by high concentrations of heparin (5 U/ml) which can accelerate the rate of inactivation as much as 50 fold. Enzyme inhibition by PCI occurs through proteolytic cleavage at Arg^{354}-Ser^{355} and subsequent rapid formation of a stable, inactive 1:1 enzyme-PCI complex. Interaction with APC results in an SDS-stable APC-PCI complex of 102 kDa[1-4]

References and Reviews

1. Suzuki K; Protein C Inhibitor; Methods in Enzymology 222, pp 385-399, 1993.
2. Cooper ST, Whinna HC, Jackson TP, Boyd JM, Church FC; Intermolecular Interactions between Protein C Inhibitor and Coagulation Proteases; Biochemistry: 34, pp. 12991-12997, 1995.
3. Heeb MJ, Espana F, Geiger M, Collen D, Stump DC, Griffin JH; Immunological Identity of Heparin-dependent Plasma & Urinary Protein C Inhibitor & Plasminogen Activator Inhibitor-3; JBC:262, pp 15813-15816, 1987.
4. Rezaie AR, Copper ST, Church FC, Esmon CT; Protein C Inhibitor is a Potent Inhibitor of the Thrombin-Thrombomodulin Complex; JBC:270, pp 25336-25339, 1995.

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:
Goat

Immunogen:
Human Protein C Inhibitor purified from plasma.

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 Protein C Inhibitor as demonstrated by immunoelectrophoresis and ELISA.

Applications:
Suitable as a source of peroxidase labeled antibodies to human Protein C Inhibitor.

Rz Ratio (Reinheitszahl, A_{403}/A_{280}):
XXXX as determined spectrophotometrically.