

****REPRESENTATIVE DATASHEET****

Sheep anti-human Protein C (PC)

Affinity-Purified IgG

0.5 mg

Product #: SAPC-AP

Lot #: XXXX

Expiry date: XXXX

Store at -10 to -20°C

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For Research Use Only.

Not for use in diagnostic procedures.

Description of Protein C (PC)

Protein C (PC) is a vitamin K-dependent glycoprotein produced in the liver. The concentration of PC in plasma is ~4 µg/ml (~60 nM). A deficiency of Protein C (quantitative or qualitative) is a risk factor for vascular thrombosis. Protein C is expressed as a two-chain molecule with a molecular weight of 62 kDa. The light chain (21 kDa) of PC consists of two EGF-like domains and an amino-terminal domain containing one hydroxyaspartic acid and 11 γ-carboxyglutamic acid (gla) residues. These residues allow PC to bind to membranes that contain acidic phospholipids in a calcium dependent manner. The heavy chain of PC (41 kDa) consists of the catalytic domain and an activation peptide. Activation of Protein C results from cleavage at residue Arg¹² in the heavy chain by a complex of thrombin and a cell surface cofactor thrombomodulin. The activation of PC is associated with the release of a small activation peptide (2-3 kDa, called Protein C peptide, or PCP) from the N-terminal of the heavy chain. Activated Protein C (APC) is a serine protease with anticoagulant activity. APC, in complex with a phospholipid membrane, calcium and the Protein S cofactor, exhibits anticoagulant activity through the proteolytic inactivation of coagulation cofactors Va and VIIIa. The primary inhibitor of APC activity in plasma is Protein C Inhibitor (PCI, also called Plasminogen Activator Inhibitor-3, PAI-3) and to a lesser extent by α₁antitrypsin and α₂macroglobulin. The inhibitory activity of PCI is stimulated approximately 10 fold by heparin¹⁻³.

REFERENCES and REVIEWS

1. Broze GJ, Miletich JP; Biochemistry and Physiology of Protein C, Protein S and Thrombomodulin; in Hemostasis and Thrombosis, 3rd Edition, eds. RW Colman, J Hirsh, VJ Marder and EW Salzman, pp 259-276, J.B. Lippincott Co., Philadelphia PA, USA, 1994.
2. Esmon CT, Esmon NL, Le Bonniec B, Johnson AE; Protein C Activation; Methods in Enzymology 222, pp 359-385, 1993.
3. Heeb MJ, Mosher D, Griffin JH; Activation and Complexation of Protein C and Cleavage and Decrease of Protein S in Plasma of Patients With Intravascular Coagulation; Blood 73, pp 455-461, 1989.

Product Specifications

Description:

Vial containing XXXX ml of IgG purified by affinity-chromatography on immobilized PC. Total protein is 0.5 mg.

Format:

Affinity-purified IgG (APIgG), clear liquid.

Host Animal:

Sheep

Immunogen:

Human Protein C purified from plasma.

Concentration:

 APIgG concentration is XXXX mg/ml, determined by absorbance using an extinction coefficient (E^{1%₂₈₀}) 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 Protein C as demonstrated by immunoelectrophoresis and ELISA.

Applications:

Suitable as a source of enriched antibodies to human PC.

Neutralizing activity:

Not determined.

Species Cross Reactivity: (immunodiffusion vs. citrated plasma)

Human:	XXXX	Mouse:	XXXX	Rat:	XXXX
Rabbit:	XXXX	Pig:	XXXX	Dog:	XXXX

Related Products:

Cat #: GAPC-IG	Goat anti-human Protein C, whole IgG from antiserum
Cat #: GAPC-AP	Goat anti-human Protein C, affinity purified IgG
Cat #: SAPC-IG	Sheep anti-human Protein C, IgG from antiserum
Cat #: SAPC-HRP	Sheep anti-human Protein C, IgG-peroxidase
Cat #: MAPC-IG	Murine anti-human Protein C, IgG from ascites
Cat #: PC-EIA	Paired antibody set for ELISA of PC, 5 x 96 wells
Cat #: APCAT-EIA	Paired antibody ELISA of APC-α ₁ AT complex, 5 x 96 wells
Cat #: APCPCI-EIA	Paired antibody ELISA of APC-PCI complex, 5 x 96 wells
Cat #: PC-DP	Human plasma deficient in PC, immune depleted
Cat #: PC-LDP	Lyophilized human plasma deficient in PC, immune depleted

 Visit our site (www.affinitybiologicals.com) for details.

Limited Warranty: This product is warranted to perform in accordance with its labeling and literature. Affinity Biologicals Inc. disclaims any implied warranty of merchantability or fitness for any other purposes, and in no event will Affinity Biologicals Inc. be liable for any consequential damages arising out of aforesaid express warranty.

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