

**\*\*REPRESENTATIVE DATASHEET\*\*****Goat anti-human Protein C (PC)**

Whole IgG from antiserum

5 mg

**Product #:** GAPC-IG-ASR**Lot #:** XXXX**Expiry date:** XXXX**DOM:** XXXX

Store at -10 to -20°C

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905-304-9896 • 800-903-6020 • fax 905-304-9897**Analyte Specific Reagent.**

Analytical and performance characteristics are not established.

**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 Arg<sup>12</sup> 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 α<sub>1</sub>antitrypsin and α<sub>2</sub>macroglobulin. The inhibitory activity of PCI is stimulated approximately 10 fold by heparin<sup>1-3</sup>.

**REFERENCES and REVIEWS**

1. Broze GJ, Miletich JP; Biochemistry and Physiology of Protein C, Protein S and Thrombomodulin; in Hemostasis and Thrombosis, 3<sup>rd</sup> 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 whole IgG representing approximately 1 ml of antiserum. Total protein is 5 mg.

**Format:**

Whole IgG, clear liquid.

**Host Animal:**

Goat

**Immunogen:**

Human Protein C purified from plasma.

**Concentration:**IgG concentration is XXXX mg/ml, determined by absorbance using an extinction coefficient (E<sup>1%<sub>280</sub></sup>) 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.

**Precautions:**

Unused solution should be disposed of according to current local, State and Federal Regulations. For a Material Safety Data Sheet for this product contact Affinity Biologicals Inc.

Visit our site ([www.affinitybiologicals.com](http://www.affinitybiologicals.com)) for other related products.

**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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