



# Sheep anti Human Protein C polyclonal antibody [HRP] (CABT-L472)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

|                           |                                                                                                                                                                                                                                                                                                   |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Specificity</b>        | Prior to conjugation, this antibody was specific for Protein C as demonstrated by immunoelectrophoresis and ELISA.                                                                                                                                                                                |
| <b>Target</b>             | Protein C                                                                                                                                                                                                                                                                                         |
| <b>Immunogen</b>          | Human Protein C purified from plasma.                                                                                                                                                                                                                                                             |
| <b>Isotype</b>            | IgG                                                                                                                                                                                                                                                                                               |
| <b>Source/Host</b>        | Sheep                                                                                                                                                                                                                                                                                             |
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                                             |
| <b>Conjugate</b>          | HRP                                                                                                                                                                                                                                                                                               |
| <b>Applications</b>       | IEP, ELISA                                                                                                                                                                                                                                                                                        |
| <b>Format</b>             | Liquid                                                                                                                                                                                                                                                                                            |
| <b>Size</b>               | 200 µg                                                                                                                                                                                                                                                                                            |
| <b>Buffer</b>             | A buffered stabilizer solution containing 50% (v/v) glycerol.                                                                                                                                                                                                                                     |
| <b>Preservative</b>       | None                                                                                                                                                                                                                                                                                              |
| <b>Storage</b>            | 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. |

# BACKGROUND

## Introduction

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 α1 Antitrypsin and α2 macroglobulin. The inhibitory activity of PCI is stimulated approximately 10 fold by heparin.

## Keywords

PROC;protein C ;inactivator of coagulation factors Va and VIIIa;PC;APC;PROC1;THPH3;THPH4;vitamin K-dependent protein C;prepro-protein C;autoprothrombin IIA;anticoagulant protein C;blood coagulation factor XIV;

# GENE INFORMATION

## Entrez Gene ID

[5624](#)

## UniProt ID

[P04070](#)