

Anti-Human Protein C, Sheep

HRP Conjugated IgG, 0.2 mg

Ref#: SAPC-HRP

Lot#: xxxxxx

Exp. Date: xxxx-xx



For Research Use Only

Not for Use in Diagnostic Procedures

For *in vitro* Use Only

Immunogen:	Human Protein C (purified from plasma)
Format:	Whole IgG, conjugated to horseradish peroxidase (HRP) through carbohydrate groups. A buffered stabilizer solution containing 50% (v/v) glycerol
Host:	Sheep
Storage:	Store between -10 and -20°C. Vials should be tightly capped. Do not store in frost-free freezers. 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
Volume:	1 vial containing 0.1 mL of whole IgG conjugated to horseradish peroxidase (HRP) through carbohydrate groups
Total Protein:	0.2 mg
Concentration:	2 mg/mL IgG-HRP by Absorbance; Ext. Coefficient E ^{1%₂₈₀} of 14.0
Specificity:	Prior to conjugation, this antibody was specific for Protein C as demonstrated by immunoelectrophoresis and direct ELISA
Reinheitszahl (A403/A280):	0.45 as determined spectrophotometrically
Application:	Suitable as a source of peroxidase-labeled antibodies

Protein C (PC) is a vitamin K-dependent glycoprotein produced in the liver. The concentration 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) 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 (41 kDa) consists of the catalytic domain and an activation peptide. Activation of PC 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 PC (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 heparin.