

Human protein C



Associated products

Bovine protein C

Informations

A proenzyme or zymogen is a protein precursor of an enzyme which can give, after activation, an active enzyme. Protein C (PC) is a vitamin K dependent plasma protein that regulates coagulation by inhibiting FVa and FVIIIa and helps limit the extension of the thrombus. Numerous clinical studies have shown that a Protein C deficiency (acquired or congenital) is a risk factor for venous thrombosis.

Protein C is a 62 kDa glycoprotein, synthesized by the liver in the presence of vitamin K. Protein C circulates in plasma in an inactive form at a concentration of approximately 4 µg / ml. Thrombin bound to thrombomodulin loses its procoagulant properties and activates Protein C into activated Protein C.

The PCa in the presence of its cofactor, protein S, of calcium and phospholipids, is able to inactivate the FVa and FVIIIa, true catalysts of coagulation, thus blocking the amplification loop of the generation of thrombin and limiting the extension of the thrombus.

Reference	Presentation	Format
9-HCPC-0070	Vial	100 µg
9-HCPC-0070-1	Vial	1 mg

Human protein C

Origin : Human Blood / Plasma

Structure : 1 heavy chain of 41 kDa and 1 light chain of 21 kDa linked by disulfide bridges.

Molecular weight (Da) : 62 000

Extinction coef. : 14.5

Specific activity : < 1 % HCAPC activity, Determinated by chromogenic assay.

Isoelectric point : 4.4-4.8

Buffer formulation : 50 % Glycerol / H₂O (v/v)

Advantages

The vast majority of zymogens is pure (without additives) with > 95 % purity SDS-PAGE.
No additive or preservative.

Characteristics

All proteins are accompanied by product information sheets which describe proper storage conditions. In order that we may warrant product stability, it is imperative that these storage conditions be maintained at all times. Many of our protein preparations are formulated in 50 % (vol / vol) glycerol/H₂O which will remain in fluid phase during storage at -20° C. This preferred method of storage yields the greatest protein stability while still allowing access to the stock protein sample without repeated thawing and freezing steps. All products which are formulated with either glycerol/H₂O or aqueous buffer are delivered in microcentrifuge tubes. By briefly centrifuging the samples in their original containers, complete recovery of the sample at the bottom of the tube will be accomplished. Temperatures lower than -30° C should be avoided in order to prevent a phase transition. When preparing to make a dilution of the stock sample, remove the sample from storage at -20° C and place on ice for a brief period of time (5-10 min). The sample will become less viscous and thus easier to pipette. Never allow protein solutions to remain at room temperature for excessive periods of time. Elevated temperatures may enhance the rate of protein degradation. Avoid storing or maintaining dilute protein samples for a long period of time. In general, purified proteins are inherently more stable in concentrated form. Many proteins are «sticky» by nature. To avoid losing protein due to adsorption, extremely dilute protein samples should be prepared in buffers containing excipients such as bovine serum albumin, polyethylene glycol, or gelatin.

