



Sheep anti Human Factor VII polyclonal antibody [Biotin] (CABT-L421)

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

PRODUCT INFORMATION

Specificity	Prior to conjugation, this antibody was specific for Factor VII as demonstrated by immunoelectrophoresis and ELISA.
Target	Factor VII
Immunogen	Human F.VII purified from plasma.
Isotype	IgG
Source/Host	Sheep
Species Reactivity	Human
Purification	Affinity purified
Conjugate	Biotin
Applications	IEP, ELISA
Format	Liquid
Size	100 µg
Buffer	Phosphate-buffered saline containing 1 mg/mL bovine albumin and 0.1% sodium azide (w/v), pH 7.4.
Preservative	0.1% Sodium Azide
Storage	Store at 2°C to 8°C.

BACKGROUND

Introduction

Factor VII (F.VII, also known as Stable Factor and Proconvertin) is a vitamin K-dependent glycoprotein produced in the liver. Plasma concentration of F.VII is normally ~0.5 µg/ml (10 nM) in plasma. A deficiency of F.VII is associated with bleeding in a clinical pattern similar to haemophilia, but is inherited as an autosomal recessive trait. The deficiency can be characterized by a quantitative (low activity and low antigen) or a qualitative (low activity and normal antigen) defect in F.VII function. In its zymogen form F.VII is a single chain molecule of ~50 kDa. It contains two EGF-like domains and an amino-terminal domain containing 10 γ-carboxyglutamic acid (Gla) residues. These Gla residues allow F.VII to bind divalent metal ions and participate in calcium-dependent binding interactions. F.VII and activated F.VII (F.VIIa) bind to tissue factor exposed at the site of vascular injury. F.IXa, F.Xa or F.VIIa rapidly activate tissue factor-bound F.VII to F.VIIa in the presence of calcium and phospholipid. Thrombin and F.XIIa are able to activate F.VII in the fluid phase in the absence of cofactors. The activation of the single chain zymogen F.VII occurs by proteolysis after residue Arg152, resulting in a two-chain active serine protease consisting of a 30 kDa heavy chain and an 18 kDa light chain. In complex with tissue factor, phospholipid and calcium, F.VIIa is able to activate F.X and F.IX. Free F.VIIa in plasma is remarkably stable, but the activity of F.VIIa/TF complex is regulated by Tissue Factor Pathway Inhibitor (TFPI) in the presence of F.Xa, and also by Antithrombin (ATIII) in the presence of heparin.

Keywords

F7;coagulation factor VII;serum prothrombin conversion accelerator;SPCA;coagulation factor VII;eptacog alfa;proconvertin;FVII coagulation protein;

GENE INFORMATION

Entrez Gene ID

[2155](#)

UniProt ID

[P08709](#)