



# Anti-F7 polyclonal antibody (DPAB2199SH)

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

## PRODUCT INFORMATION

### Antigen Description

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.

<b>Specificity</b>	Prior to conjugation, this antibody was specific for F.VII as demonstrated by immunoelectrophoresis and ELISA.
<b>Immunogen</b>	Human F.VII purified from plasma.
<b>Source/Host</b>	Sheep
<b>Species Reactivity</b>	Human
<b>Conjugate</b>	Unconjugated
<b>Size</b>	100 µg

<b>Buffer</b>	Phosphate-bufferedsaline containing 1 mg/mL bovine albumin and 0.1% sodium azide (w/v), pH 7.4.
<b>Preservative</b>	0.1% Sodium Azide
<b>Storage</b>	Storeat 2°Cto8°C.

## GENE INFORMATION

<b>Gene Name</b>	<a href="#">F7 coagulationfactor VII (serum prothrombin conversion accelerator) [ Homo sapiens ]</a>
<b>Official Symbol</b>	F7
<b>Synonyms</b>	F7; coagulationfactor VII (serum prothrombin conversion accelerator); SPCA; eptacog alfa;proconvertin; FVII coagulation protein; factor VII; F.VII; Stable Factor;Serum prothrombin conversion accelerator; EC 3.4.21.21; OTTHUMP00000018733;OTTHUMP00000018734; EC 3.4.21; Proconvertin; coagulation factor VII
<b>Entrez Gene ID</b>	<a href="#">2155</a>
<b>Protein Refseq</b>	<a href="#">NP_000122</a>
<b>UniProt ID</b>	<a href="#">P08709</a>
<b>Chromosome Location</b>	13q34
<b>Pathway</b>	BMAL1:CLOCK/NPAS2Activates Gene Expression; Blood Clotting Cascade; Circadian Clock;Complement and Coagulation Cascades; Complement and coagulation cascades;Extrinsic Pathway; Formation of Fibrin Clot (Clotting Cascade); Gamma-carboxylationof protein precursors; Hemostasis; Metabolism of proteins
<b>Function</b>	calcium ion binding;glycoprotein binding; peptidase activity; receptor binding; serine-typeendopeptidase activity; serine-type peptidase activity