

Recombinant Human F7

Cat. No. F7-124H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Factor VIIa produced in <i>BHK</i> is a glycosylated polypeptide two-chain dimer. The protein contains 406 amino acids and has a molecular weight of 50kD. The protein is purified by proprietary chromatographic techniques.
Species	Human
Source	BHK
Description	This factor circulates in the blood in a zymogen form, and is converted to an active form by either factor IXa, factor Xa, factor XIIa, or thrombin by minor proteolysis. Upon activation of the factor VII, a heavy chain containing a catalytic domain and a light chain containing 2 EGF-like domains are generated, and two chains are held together by a disulfide bond. In the presence of factor III and calcium ions, the activated factor then further activates the coagulation cascade by converting factor IX to factor IXa and/or factor X to factor Xa. Alternative splicing of this gene results in 2 transcripts. Defects in this gene can cause coagulopathy.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	The protein 1mg/ml was lyophilized after from a sterile solution containing 4.86mg sodium chloride, 2.45mg calcium chloride dihydrate, 50mg mannitol and 116g Tween 80.
Purity	Greater than 98.0% as determined by: (a) Analysis by RP-HPLC. (b) Anion-exchange FPLC. (c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained.

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Dimers And Aggregates	Less than 1% as determined by silver stained SDS-PAGE gel analysis.
Biological Activity	The rHuFactor VIIa is fully biologically active when compared to standard. The potency per mg was tested and found to be 50,000Units/mg.
Endotoxin	Less than 0.1 ng/g (IEU/g) of rHuFactor-VIIa.
Solubility	It is recommended to reconstitute the lyophilized rHuFactor-VIIa in sterile 18MΩ-cm H ₂ O not less than 100g/ml, which can then be further diluted to other aqueous solutions.
Stability	Lyophilized rHuFactor-VIIa although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rHuFactor-VIIa should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	F7 coagulation factor VII (serum prothrombin conversion accelerator) [Homo sapiens]
Synonyms	F7; coagulation factor VII (serum prothrombin conversion accelerator); coagulation factor VII; eptacog alfa; FVII coagulation protein; factor VII; EC3.4.21.21; Serum prothrombin conversion accelerator; SPCA; Factor VII light chain; Factor VII heavy chain; OTTHUMP00000018733; OTTHUMP00000018734; Proconvertin; Eptacog alfa
Gene ID	2155
mRNA Refseq	NM_000131
Protein Refseq	NP_000122

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UniProt ID	P08709
Chromosome Location	13q34
MIM	227500
Pathway	Complement and coagulation cascades; emostasis; Metabolism of proteins
Function	calcium ion binding; glycoprotein binding; peptidase activity; serine-type endopeptidase activity

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