



RayBiotech, Inc.

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Certificate of Analysis and Data Sheet Recombinant Human Factor VIIa

Catalog No.
228-10435

Source:
BHK cells (Baby Hamster Kidney Cells)

Synonyms:

Coagulation factor VII, EC 3.4.21.21, Serum prothrombin conversion accelerator, SPCA, Proconvertin, Eptacog alfa, F7.

Introduction:

Coagulation factor VII is a vitamin K-dependent factor which is essential for hemostasis. It circulates in the blood as a zymogen which is later converted to an active form by factor IXa, factor Xa, factor XIIa, or thrombin by minor proteolysis. Upon activation of factor VII, a heavy chain with a catalytic domain and a light chain with 2 EGF-like domains are generated, and the two chains are held together by a disulfide bond. The presence of factor III and calcium ions further activates the coagulation cascade by converting factor IX to factor IXa and/or factor X to factor Xa. Alternative splicing of factor VII results in 2 transcripts. Defects in coagulation factor VII can cause coagulopathy. Coagulation factor VII initiates the extrinsic pathway of blood coagulation. Minor proteolysis converts factor VII to factor VIIa by factors Xa, XIIa, IXa, or thrombin. Factor VIIa also converts factor IX to factor IXa in the presence of tissue factor and calcium.

Description

Factor VIIa Human Recombinant produced in BHK is a glycosylated polypeptide two-chain dimer consisting of 406 amino acids with a molecular weight of 50kD. The Factor-VIIa is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

The protein 1 mg/ml was lyophilized after from a sterile solution containing 4.86 mg sodium chloride, 2.45 mg calcium chloride dihydrate, 50 mg mannitol and 116 µg Tween 80.

Solubility

It is recommended to reconstitute the lyophilized Factor-VIIa in sterile 18MΩ-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Purity

Greater than 98.0% as determined by

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

Stability

Lyophilized Factor-VIIa although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Factor-VIIa should be stored at 4°C between 2-7 days and for future use below -18°C.

Please prevent freeze-thaw cycles.

Biological Activity

The potency per mg was tested and found to be 50,000Units/mg.

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