

# Recombinant Human F7 therapeutic protein(Coagulation factor VIIa Recombinant Human)

Cat. No. F7-P042H Lot. No. (See product label)

## SPECIFICATION

**Product Overview** Recombinant human coagulation Factor VIIa (rFVIIa), intended for promoting hemostasis by activating the extrinsic pathway of the coagulation cascade. It is a vitamin K-dependent glycoprotein consisting of 406 amino acid residues. Cloned and expressed in hamster kidney cells, the protein is catalytically active in a two-chain form.

**Species** Human

**Source** Hamster Kidney

**ProteinLength** 406 aa

**Description** This gene encodes coagulation factor VII which is a vitamin K-dependent factor essential for hemostasis. 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. The expression product is the active ingredient of Novoseven and Niasase.

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<b>Molecular Mass</b>	45.1 kDa
<b>AA Sequence</b>	ANAFLEELRPGSLERECKEEQCSFEEAREIFKDAERTKLFWISYSDGDQCASSPCQ NGGCKDQLQSYICF CLPAFEGRNCETHKDDQLICVNENGGCEQYCSHTGTRKRS CRCHEGYSLADGVSCTPTVEYPCGKIPILE KRNASKPQGRIVGGKVCPCGECPWQ VLLLVNGAQLCGGTLINTIWWVSAAHCFDKIKNWRNLI AVLGEHDL SEHDGDEQSRR VAQVIIPSTYVPGTTNHDIALLRHLQPVVLTDHVVPLCLPERTFSERTLAFVRFSLVSG W GQLDRGATALELMVLNVPRLMTQDCLQQSRKVGDSPNITEYMFCA GYSYSDGSKD SCKGDSGGPHATHYRGT WYLTGIVSWGQGCATVGHFGVYTRVSQYIEWLQKLMR SEPRPGVLLRAPFP
<b>Endotoxin</b>	< 0.1 EU per µg of the protein
<b>Purity</b>	>95%
<b>Storage</b>	Can be stored at +4 centigrade short term (1-2weeks). For long term storage, aliquot and store at -20 centigrade or -70 centigrade. Avoidrepeated freezing and thawing cycles.
<b>Alias</b>	F7; SPCA; Coagulation factor VIIa Recombinant Human
<b>GENE INFORMATION</b>	
<b>Gene Name</b>	F7 coagulation factor VII (serum prothrombin conversion accelerator) [ Homo sapiens ]
<b>Official Symbol</b>	F7
<b>Synonyms</b>	F7; coagulation factor VII (serum prothrombin conversion accelerator); coagulation factor VII; eptacog alfa; factor VII; FVII coagulation protein; SPCA; proconvertin; serum prothrombin conversion accelerator;

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<b>Gene ID</b>	2155
<b>mRNA Refseq</b>	NM_000131
<b>Protein Refseq</b>	NP_000122
<b>MIM</b>	613878
<b>UniProt ID</b>	P08709
<b>Chromosome Location</b>	13q34
<b>Pathway</b>	BMAL1:CLOCK/NPAS2 Activates Circadian Expression, organism-specific biosystem; Blood Clotting Cascade, organism-specific biosystem; Circadian Clock, organism-specific biosystem; Complement and Coagulation Cascades, organism-specific biosystem; Complement and coagulation cascades, organism-specific biosystem; Complement and coagulation cascades, conserved biosystem; Extrinsic Pathway, organism-specific biosystem;
<b>Function</b>	calcium ion binding; glycoprotein binding; peptidase activity; receptor binding; serine-type endopeptidase activity; serine-type peptidase activity;

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