

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.
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Species	Human
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Source	Hamster Kidney
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ProteinLength	406 aa
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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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Molecular Mass	45.1 kDa
AA Sequence	ANAFLEELRPGSLERECKEEQCSFEEAREIFKDAERTKLFWISYSDGDQCASSPCQ NGGSKDQLQSYICF CLPAFEGRNCETHKDDQLICVNENGGCEQYCS DHTG TKRS CRCHEGYSL LADGV SCTPTVEYPCGKIPILE KRNASKPQGRIVGGKVC PKGEC PWQ VLLL VNGAQLCGGTLINTIWWVSAAHCFDKIKNWRNLI AVLGEHDL SEHDGDEQSR R VAQVIIPSTYVPGTTNHDIALRLHQP VVLT DHV VPLCLPERTFSERTLAFVRFSLVSG W GQLDRGATALELMVLNVPRLMTQDCLQQSRKVG DSPNITEYMFCAGYSDGSKD SCKGDSGGPHATHYRGT WYLTGIVSWGQGCATVGHFGVYTRVSQYIEWLQKL MR SEPRPGVLLRAPFP
Endotoxin	< 0.1 EU per µg of the protein
Purity	>95%
Storage	Can be stored at +4 centigrade short term (1-2weeks). For long term storage, aliquot and store at -20 centigrade or -70 centigrade. Avoid repeated freezing and thawing cycles.
Alias	F7; SPCA; Coagulation factor VIIa Recombinant Human
GENE INFORMATION	
Gene Name	F7 coagulation factor VII (serum prothrombin conversion accelerator) [Homo sapiens]
Official Symbol	F7
Synonyms	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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Gene ID	2155
mRNA Refseq	NM_000131
Protein Refseq	NP_000122
MIM	613878
UniProt ID	P08709
Chromosome Location	13q34
Pathway	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;
Function	calcium ion binding; glycoprotein binding; peptidase activity; receptor binding; serine-type endopeptidase activity; serine-type peptidase activity;