

Recombinant Human F9 therapeutic protein(Coagulation Factor IX (Recombinant))

Cat. No. F9-P026H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Human Factor IX protein, produced by recombinant DNA technology for use in therapy of factor IX deficiency, known as hemophilia B or Christmas disease. Coagulation Factor IX (Recombinant) is a glycoprotein with an approximate molecular mass of 55,000 Da consisting of 415 amino acids in a single chain. It has a primary amino acid sequence that is identical to the Ala 148 allelic form of plasma-derived factor IX.

Species Human

ProteinLength 415 Aa

Description

This gene encodes vitamin K-dependent coagulation factor IX that circulates in the blood as an inactive zymogen. This factor is converted to an active form by factor XIa, which excises the activation peptide and thus generates a heavy chain and a light chain held together by one or more disulfide bonds. The role of this activated factor IX in the blood coagulation cascade is to activate factor X to its active form through interactions with Ca²⁺ ions, membrane phospholipids, and factor VIII. Alterations of this gene, including point mutations, insertions and deletions, cause factor IX deficiency, which is a recessive X-linked disorder, also called hemophilia B or Christmas disease. The expression product is the active ingredient of Benefix.

Molecular Mass 46.55 kDa

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AA Sequence	YNSGKLEEFVQGNLERECMEEKCSFEEAREVFENTERTTEFWKQYVDGDQCESNP CLNGGSKDDINSYEC WCPFGFEGKNCELDVTCTNIKNGRCEQFCKNSADNKVVCS CTEGYRLAENQKSCEPAVPFPCGRVSVSQTSL TRAEAVFPDVDYVNSTEAEITLD NITQSTQSFNDFTRVVGGEDAKPGQFPWQVVLNGKVDAFCGGSIVNE KWIVTAAH CVETGVKITVVAGEHNIEETEHTEQKRN VIRIIPHHNYNAAINKYNHDIALLELDEPLVL NSY VTPICIADKEYTNIFLKFGSGYVSGWGRV FHKGRSALVLQYLRVPLVDRATCLR STKFTIYNNMFCAGFHE GGRDSCQGDSSGPHVTEVEGTSFLTGIISWGEECAMKG KYG IYTKVSRVYNWIKETKLT
Endotoxin	< 1.0 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	F9; FIX; F9 p22; FIX F9; P19; PTC; HEMB; THPH8; Coagulation Factor IX (Recombinant)

GENE INFORMATION

Gene Name	F9 coagulation factor IX [Homo sapiens]
Official Symbol	F9
Synonyms	F9; coagulation factor IX; Christmas disease; Factor IX; FIX; hemophilia B; plasma thromboplastic component; F9 p22; FIX F9; factor 9; factor IX F9; serine protease; Christmas factor; plasma thromboplastin component; P19; PTC; HEMB; THPH8; MGC129641; MGC129642;

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Gene ID	2158
mRNA Refseq	NM_000133
Protein Refseq	NP_000124
MIM	300746
UniProt ID	P00740
Chromosome Location	Xq26.3-q27.1
Pathway	Blood Clotting Cascade, 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; Formation of Fibrin Clot (Clotting Cascade), organism-specific biosystem; Gamma-carboxylation of protein precursors, organism-specific biosystem;
Function	calcium ion binding; peptidase activity; serine-type endopeptidase activity;