

Active Recombinant Human Factor-IX

Cat. No. F9-4350H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Human Factor-IX produced from fresh frozen human plasma is a glycosylated polypeptide chain having a molecular mass of 56 kDa.
Species	Human
Source	Human
Description	Human Factor IX also called Christmas-Factor is a glycoprotein, which is synthesized in the liver and belongs to the serine proteases system and is part of the S1 peptidase family. Lack of Factor-IX causes Hemophilia-B meaning Christmas Disease. Factor-IX has a N-terminus region which contains 12xGla residues which assist the calcium dependent binding of Factor-IX to the phospholipid surface. Factor-IX is activated by either factor XIa or the factor VIIa/tissue factor/phospholipid complex. Cleavage yields the intermediate IXa, which is subsequently converted to the fully active form IXab. Factor-IX binds initially to exosites on the factor XIa heavy chain, followed by interaction at the active site with subsequent bond cleavage. Coagulation factor IX is activated by interaction with the erythrocyte membrane, causing intrinsic coagulation. Chaperones & lectins act simultaneously to guarantee the proper folding of Factor-IX and the retention of mutant molecules. Human Factor IX, activated by either the Contact or Tissue Factor Pathway, is responsible for the activation of Factor X to Xa.
Form	The Factor-IX was lyophilized from a sterile solution containing 20mM Tris-HCl pH-7.4, 0.1M NaCl and 1mM Benzamidine.

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Purity	Greater than 95% as determined by SDS-PAGE.
Bio-activity	The activity per mg was tested and found to be 195 Units per mg.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Solubility	It is recommended to reconstitute the lyophilized 100U Factor-IX in sterile 100μof 18Mμ-cm H2O, which can then be further diluted to other aqueous solutions.
Storage	Lyophilized Factor-IX although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Factor-IX should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.
Pathways	Blood Clotting Cascade; Complement and Coagulation Cascades; Extrinsic Pathway; Gamma-carboxylation of protein precursors; Hemostasis; Intrinsic Pathway; Post-translational modification: gamma carboxylation and hypusine formation; Transport of gamma-carboxylated protein precursors from the endoplasmic reticulum to the Golgi apparatus
Functions	calcium ion binding; peptidase activity; serine-type endopeptidase activity

GENE INFORMATION

Gene Name	F9 coagulation factor IX [Homo sapiens]
Official Symbol	FABP7
Synonyms	F9; FIX; P19; PTC; HEMB; coagulation factor IX; Plasma thromboplastin component; Christmas factor; EC 3.4.21.22; factor 9; plasma thromboplastic component; EC 3.4.21; MGC129641; MGC129642

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Gene ID	2158
mRNA Refseq	NM_000133
Protein Refseq	NP_000124
MIM	300746
UniProt ID	P00740
Chromosome Location	Xq27.1-q27.2
PDB renderingbased on 1pfx.	