

Active Recombinant Human F9 protein, Fc-tagged

Cat. No. F9-258H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human F9(Thr29-Thr461) fused Fc tag was expressed in HEK293.

Species Human

Source HEK293

ProteinLength 29-461 a.a.

Description

Coagulation Factor IX, also known as Christmas Factor, is secreted by the liver and plays a key role in the activation of the intrinsic clotting cascade. Factor IX consists of a Gla domain, two tandem EGF-like domains, an activation peptide, and an S1 serine protease domain. Mature human Factor IX shares approximately 81% amino acid sequence identity with mouse and rat Factor IX. Alternative splicing generates an additional isoform that lacks the first EGF-like domain. The Gla domain is modified by Vitamin K-dependent gamma-carboxylation and mediates the association of Factor IX with phospholipid bilayers. The activation peptide is removed by Factor XIa mediated cleavage, resulting in heavy and light chains that remain disulfide-linked. Factor IX can also be activated by proteolytic factors in multiple snake venoms. Active Factor IX associates with Factor VIIIa on the platelet surface where it cleaves and activates Factor X, leading to Fibrin deposition and clot formation. The human Factor IX gene is highly polymorphic, and Hemophilia B can be caused by X-linked deficiency of Factor IX activity.

Predicted N Terminal Thr29 (pro-mature) and Tyr47 (mature)

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|-----------------------|---|
| Form | Supplied as a 0.2 µm filtered solution in Tris and NaCl. |
| Bio-activity | Measured by its ability to cleave the fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK(Dnp)-NH ₂ . The specific activity is >30 pmol/min/µg. |
| Molecular Mass | Predicted Molecular Mass: 75 kDa SDS-PAGE: 86-104 kDa, reducing conditions |
| Endotoxin | <0.1 EU per 1 µg of the protein by the LAL method. |
| Purity | >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining. |
| Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt, -20 to -70 centigrade as supplied. 3 months, -20 to -70 centigrade under sterile conditions after opening. |

GENE INFORMATION

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|------------------------|---|
| 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; |
| Gene ID | 2158 |
| mRNA Refseq | NM_000133 |

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Protein Refseq [NP_000124](#)

MIM [300746](#)

UniProt ID [P00740](#)

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