Recombinant Human Coagulation Factor X Protein

Catalog No.: RP03591

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Sequence Information

Species
Human

Gene ID
2159

Swiss Prot
P00742

Tags
C-His

Synonyms
F10,FX,Coagulation factor X, Factor X light chain, Factor X heavy chain

Product Information

Source
Baculovirus-Insect Cells

Purification
≥ 97 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.

Calculated MW
52.8 kDa

Observed MW
22 kDa, 22 kDa

Endotoxin
< 1.0 EU per μg of the protein as determined by the LAL method.

Formulation
Lyophilized from sterile 20 mM Tris, 300 mM NaCl, 10% Glycerol, pH 7.5.
Please contact us for any concerns or special requirements.
Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.

Reconstitution
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

Coagulation factor X, also known as FX, F10, Eponym Stuart-Prower factor, and thrombokinase, is an enzyme of the coagulation cascade. It is one of the vitamin K-dependent serine proteases, and plays a crucial role in the coagulation cascade and blood clotting, as the first enzyme in the common pathway of thrombus formation. Factor X deficiency is one of the rarest of the inherited coagulation disorders. FX deficiency among the most severe of the rare coagulation defects, typically including hemarthroses, hematomas, and umbilical cord, gastrointestinal, and central nervous system bleeding. Factor X is synthesized in the liver as a mature heterodimer formed from a single-chain precursor, and vitamin K is essential for its synthesis. Factor X is activated into factor Xa (FXa) by both factor IX (with its cofactor, factor VIII in a complex known as intrinsic Xase) and factor VII (with its cofactor, tissue factor in a complex known as extrinsic Xase) through cleaving the activation propeptide. As the first member of the final common pathway or thrombin pathway, FXa converts prothrombin to thrombin in the presence of factor Va, Ca2+, and phospholipid during blood clotting and cleaves prothrombin in two places (an arg-thr and then an arg-ile bond). This process is optimized when factor Xa is complexed with activated cofactor V in the prothrombinase complex. Inborn deficiency of factor X is very uncommon, and may present with epistaxis (nose bleeds), hemarthrosis (bleeding into joints) and gastrointestinal blood loss. Apart from congenital deficiency, low factor X levels may occur occasionally in a number of disease states. Furthermore, factor X deficiency may be seen in amyloidosis, where factor X is adsorbed to the amyloid fibrils in the vasculature.

Basic Information

Description
Recombinant Human Coagulation Factor X Protein is produced by Baculovirus-Insect Cells expression system. The target protein is expressed with sequence (Met 1-Lys 488) of Human Factor X (Accession # NP_000495.1) fused with His tag at the C-Terminus.

Activity

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃

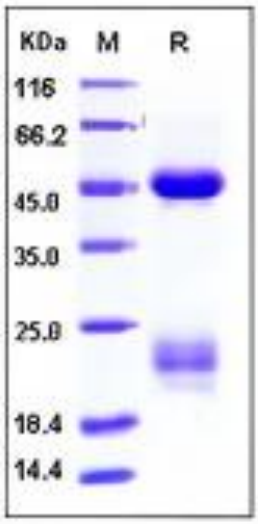
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

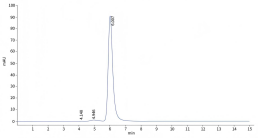
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Validation Data



Recombinant Coagulation Human Factor X Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



Recombinant Coagulation Human Factor X Protein as determined by SEC-HPLC.

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