Recombinant Human Coagulation Factor X/F10 Protein (His Tag)

Catalog Number:PKSH031274

Note: Centrifuge before opening to ensure complete recovery of vial contents.

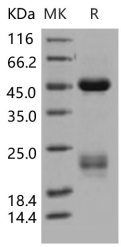
Description

Synonyms	Coagulation factor 10;coagulation factor X;FX;FXA
Species	Human
Expression Host	Baculovirus-Insect Cells
Sequence	Met 1-Lys 488
Accession	NP_000495.1
Calculated Molecular Weight	52.8 kDa
Observed molecular weight	48&22 kDa
Tag	C-His

Properties

Purity	> 97 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 50mM Tris, 100mM NaCl, pH 8.0, 10% glycerol Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 97 % as determined by reducing SDS-PAGE.

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 and factor VII through cleaving the activation propeptide. As the first member of the final common pathway or thrombin pathway, FXa converts prothrombin

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to thrombin in the presence of factor Va, Ca2+, and phospholipid during blood clotting and cleaves prothrombin in arg-thr and 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, hemarthrosis and gastrointestinal blood loss. Apart from congenital deficiency, low factor X levels may occur occasionally in a number of disease states. Furhermore, factor X deficiency may be seen in amyloidosis, where factor X is adsorbed to the amyloid fibrils in the vasculature.

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