Recombinant Human Coagulation Factor X / FX / F10 Protein (His tag)

Cat.NO.: TP07605

3th Edition

Synonyms:coagulation factor 10;coagulation factor X;FX;FXA

Description: 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. Furhermore, factor X deficiency may be seen in amyloidosis, where factor X is adsorbed to the amyloid fibrils in the vasculature.

Form:PBS

Molecular Weight:52.8 kDa

Sequences: Met 1-Lys 488

Purity:> 95% by HPLC

Concentration:

Endotoxin Level:<1.0 EU per 1 ug of protein (determined by LAL method)

Storage: Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.