

Factor X (Human)

0.80 mg

Ref#: HF10

Lot#: xxxx

Exp. Date: xxxx-xx



Store at +2 to +8°C

For Research Use Only

Not for Use in Diagnostic Procedures

For *in vitro* use only

Description:	Factor X (Human)
Format:	Lyophilized in 20 mM Tris-HCl / 0.1 M NaCl / 1 mM Benzamidine/ pH 7.4
Host:	Human
Storage:	Store between +2 and +8°C After reconstitution aliquot and freeze at ≤-60°C
Reconstitution:	We recommend hydrating the protein with sterile water to the original volume
Volume:	1 vial containing 0.404 mL
Total Protein:	0.80 mg
Concentration:	1.98 mg/mL before lyophilisation by Absorbance; Extinction Coefficient $E^{1\%}_{280} = 11.6$
Activity:	117.5 Plasma Equivalent Units (PEU)/mg
Molecular weight:	58800 daltons

Factor X (FX, Stuart Factor) is a vitamin K-dependent glycoprotein produced in the liver. The concentration in plasma is ~10 µg/mL (~170 nM). FX is expressed as a two-chain molecule with a molecular weight of about 59 kDa. The light chain (17 kDa) contains a calcium-binding domain consisting of one hydroxy-aspartic acid and 11 γ-carboxyglutamic acid (gla) residues. These residues allow FX to bind to membranes that contain acidic phospholipids in a calcium dependent manner. This is followed by two EGF-like domains. The heavy chain (42 kDa) consists of the catalytic domain, carbohydrate and the activation peptide. Activation to the active enzyme (FXa) results from cleavage at residue Arg52 in the heavy chain by a complex of FIXa, cofactor VIIIa, calcium and negatively charged phospholipid surface, or by the FVIIa-tissue factor complex.

The human Factor X is >95% pure via SDS-PAGE and shows total reduction upon incubation with 2-mercaptoethanol.

The above protein was purified from Human plasma that was tested and found negative by FDA accepted methods for Anti-HIV 1/2, Anti-HTLV I & II, HBsAg, Anti-HCV, Syphilis, HBC Ab, HIV-1 p24 Ag or HIV-1 RNA, HCV RNA and HBV RNA. Donors are screened for CJD (Creutzfeld-Jakob Disease).