

**\*\*REPRESENTATIVE DATASHEET\*\***

## Sheep anti-human Factor X (F.X)

Affinity-Purified IgG

0.5 mg

**Product #:** SAFX-AP

**Lot #:** XXXX

**Expiry date:** XXXX

Store at -10 to -20°C

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For Research Use Only.

Not for use in diagnostic procedures.

### Description of Factor X (FX)

Factor X (FX, Stuart Factor) is a vitamin K-dependent glycoprotein produced in the liver. The concentration of FX in plasma is ~10 µg/ml (~170 nM). Factor X is expressed as a two-chain molecule with a molecular weight of 59 kDa. The light chain (17 kDa) of FX 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 of FX (42 kDa) consists of the catalytic domain, carbohydrate and the activation peptide. Activation of FX to the active enzyme (FXa) results from cleavage at residue Arg<sup>52</sup> in the heavy chain of F.X by a complex of FIXa, cofactor VIIIa, calcium and negatively charged phospholipid surface (the tenase complex), or by the FVIIa-tissue factor complex. Both activation pathways result in the release of the activation peptide from the N-terminal of the heavy chain. The FXa generated is a serine protease responsible for the activation of prothrombin to thrombin in the presence of a phospholipid membrane, calcium and cofactor Va. The activity of FXa in plasma is inhibited by antithrombin (ATIII), α<sub>1</sub>antitrypsin, α<sub>2</sub>macroglobulin and tissue factor pathway inhibitor (TFPI). The inhibitory activity of ATIII is stimulated approximately 1000-fold by heparin<sup>1-3</sup>.

### REFERENCES and REVIEWS

1. Ichinose A, Davie EW; The Blood Coagulation Factors: Their cDNAs, Genes, and Expression; in Hemostasis and Thrombosis, 3<sup>rd</sup> Edition, eds. RW Colman, J Hirsh, VJ Marder and EW Salzman, pp 19-54, J.B. Lippincott Co., Philadelphia PA, USA, 1994.
2. Steinberg M, Nemerson Y; The Activation of Factor X; in Hemostasis and Thrombosis, eds. RW Colman, J Hirsh, VJ Marder and EW Salzman, pp 91-99, J.B. Lippincott Co., Philadelphia PA, USA, 1982.
3. Ellis V, Scully M, MacGregor I, Kakkar V; Inhibition of Human Factor Xa by Various Plasma Protease Inhibitors; Biochimica et Biophysica Acta 701, pp 24-31, 1982.

### Product Specifications

**Description:**

Vial containing XXXX ml of IgG purified by affinity-chromatography on immobilized F.X. Total protein is 0.5 mg.

**Format:**

Affinity-purified IgG, clear liquid.

**Host Animal:**

Sheep

**Immunogen:**

Human Factor X purified from plasma.

**Concentration:**

 APIgG concentration is XXXX mg/ml, determined by absorbance using an extinction coefficient (E<sup>1%<sub>280</sub></sup>) of 13.4.

**Buffer:**

10 mM HEPES, pH 7.4, 150 mM NaCl, 50% (v/v) glycerol.

**Storage:**

Store between -10 and -20°C. Product will become viscous but will not freeze. Avoid storage in frost-free freezers. Keep vial tightly capped. Allow product to warm to room temperature and gently mix before use.

**Specificity:**

This antibody is specific for Factor X as demonstrated by immunoelectrophoresis and ELISA.

**Applications:**

Suitable as a source of enriched antibodies to human FX.

**Neutralizing activity:**

Not determined.

**Species Cross Reactivity:** (immunodiffusion vs. citrated plasma)

Human:	XXXX	Mouse:	XXXX	Rat:	XXXX
Rabbit:	XXXX	Pig:	XXXX	Dog:	XXXX

**Related Products:**

Cat #: <b>GAFX-IG</b>	Goat anti-human Factor X, whole IgG from antiserum
Cat #: <b>GAFX-AP</b>	Goat anti-human Factor X, affinity purified IgG
Cat #: <b>GAFX-HRP</b>	Goat anti-human Factor X, peroxidase labelled IgG
Cat #: <b>SAFX-IG</b>	Sheep anti-human Factor X, IgG from antiserum
Cat #: <b>RAFX-HRP</b>	Rabbit anti-human Factor X, peroxidase labelled IgG
Cat #: <b>FX-EIA</b>	Paired antibody set for ELISA of Factor X, 5 x 96 wells
Cat #: <b>FX-DP</b>	Human plasma deficient in Factor X, immune depleted

 Visit our site ([www.affinitybiologicals.com](http://www.affinitybiologicals.com)) for details.

**Limited Warranty:** This product is warranted to perform in accordance with its labeling and literature. Affinity Biologicals Inc. disclaims any implied warranty of merchantability or fitness for any other purposes, and in no event will Affinity Biologicals Inc. be liable for any consequential damages arising out of aforesaid express warranty.

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