Goat Anti-Human Factor X (F.X) Affinity-Purified IgG 0.5 mg

Catalogue: GAFX-AP
Lot: SAMPLE
Expiry date: **/****
Store at -10 to -20°C.

For Research Use Only ~ Not for use in diagnostic procedures.

DESCRIPTION OF FACTOR X (F.X)

Factor X (F.X, Stuart Factor) is a vitamin K-dependent glycoprotein in the liver. The concentration of F.X 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 F.X contains a calcium binding domain consisting of one hydroxyaspartic acid and 11 y-carboxyglutamic acid (gla) residues. These residues allow F.X 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 F.X (42 kDa) consists of the catalytic domain, carbohydrate and the activation peptide. Activation of F.X to the active enzyme (F.Xa) results from cleavage at residue Arg^{52} in the heavy chain of F.X by a complex of F.IXa, cofactor VIIIa, calcium and negatively charged phospholipid surface (the tenase complex), or by the F.VIIa-tissue factor complex. Both activation pathways result in the release of the activation peptide form the N-terminal of the heavy chain. The F.Xa 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 F.Xa in plasma is inhibited by antithrombin (ATIII), $\alpha_1$antitrypsin, $\alpha_2$macroglobulin and tissue factor pathway inhibitor (TFPI). The inhibitory activity of ATIII is stimulated approximately 1000-fold by heparin [1-3].

REFERENCES and REVIEWS

1. Ichinose A, Davie EW; The Blood Coagulation Factors: Their cDNAs, Genes, and Expression; in Hemostasis and Thrombosis, 3rd 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 0.250 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:
Goat

Immunogen:
Human Factor X purified from plasma.

Concentration:
APIgG concentration is 2.00 mg/ml, determined by absorbance using an extinction coefficient ($E^{1\%}_{280}$) of 13.4.

Buffer:
10 mM HEPES, 0.15 M NaCl, 50% (v/v) glycerol, pH 7.4.

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 F.X.

Neutralizing activity:
Not determined.

RELATED PRODUCTS

GAFX-IG	Goat Anti-Human FX, whole IgG from antiserum
GAFX-HRP	Goat Anti-Human FX, peroxidase labelled IgG
SAFX-IG	Sheep Anti-Human FX, whole IgG from antiserum
SAFX-AP	Sheep Anti-Human FX, affinity purified IgG
RAFX-HRP	Rabbit Anti-Human FX, peroxidase labelled IgG
FX-EIA	Paired antibody set of ELISA of FX, 5 x 96 wells
FX-DP	Human plasma deficient in FX, immune depleted

Visit our site (www.enzymeresearch.co.uk) for further details.

Enzyme Research Laboratories Ltd
Glamorgan House . Charter Court . Enterprise Park . Swansea SA7 9DD . UK.
Tel: +44 (0)1792 686070
Email: info@enzymeresearch.co.uk
Website: www.enzymeresearch.co.uk