

Goat Anti-Human Factor X (F.X) Whole IgG from antiserum (10 mg)

Catalogue: GAFX-IG
Lot No: 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-dependant glycoprotein produced 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 γ-carboxyglutamic acid (gla) residues. These residues allow F.X to bind to membranes that contain acidic phospholipids in a calcium dependant 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 Arg⁵² 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 from 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), α₁antitrypsin, α₂macroglobulin and tissue factor pathway inhibitor (TFPI). The inhibitory activity of ATIII is stimulated approximately 1000-fold by of heparin¹⁻³.

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 1.000 ml of whole IgG representing approximately 1 ml of antiserum. Total protein is 10 mg.

Format:

Whole IgG clear liquid.

Host Animal:

Goat

Immunogen:

Human Factor X purified from plasma.

Concentration:

IgG concentration is 10 mg/ml, determined by absorbance using an extinction coefficient ($E_{280}^{1\%}$) 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 antibodies to Human Factor X.

Neutralizing activity:

Not determined.

Related Products

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

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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