

Goat Anti-Human Factor XI Whole IgG from antiserum 5 mg

Catalogue: GAFXI-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 XI (F.XI)

Factor XI (F.XI, plasma thromboplastin antecedent) is a coagulation protein produced in the liver that circulates in plasma at approximately 5 µg/ml (30 nM). The mass of F.XI is 160 kDa as determined by SDS-PAGE under non-reducing conditions and 80 kDa upon reduction. F.XI consists of two identical 80 kDa subunits linked by disulphide bonds. Each subunit consists of a tandem repeat of four apple domains followed by a serine protease catalytic domain. Cleavage of F.XI by activated XII or thrombin converts each subunit into a two-chain form and generates two active sites per F.XIa molecule. The mass of F.XIa is 160 kDa unreduced, but upon reduction of F.XIa migrates a heavy chain of 50 kDa and a light chain of 30 kDa. The catalytic site of F.XIa resides in the light chain. In plasma, F.XI or F.XIa circulates in non-covalent 1:1 complex with high molecular weight kininogen, which acts as a cofactor in the activation of F.XI by activated factor XII. The activity of F.XIa is regulated by platelets and by several proteinase inhibitors including, in order of decreasing importance, C1-inhibitor, α_2 antiplasmin, α_1 antitrypsin and antithrombin. Heparin has relatively little effect on the rate of inhibition of F.XIa by antithrombin. The only known natural substrate for activated F.XI (F.XIa) is factor IX (Christmas factor) and the only cofactor required for this reaction is ionized calcium¹⁻³.

References and Reviews

1. Willemin WA, Minnema M, Meijers JCM, Roem D, Erenberg AJM, Nuijens JH, ten Cate H, Hack EC; Inactivation of Factor XIa in Human Plasma Assessed by Measuring Factor XIa-Protease Inhibitor Complexes: Major Role for C1-Inhibitor. *Blood* 85:1517, 1995.
2. DeLa Cadena R, Watchtfoegel YT, Colman RW, in Hemostasis and Thrombosis, 3rd Edition, eds. RW Colman, J Hirsh, VJ Marder and EW Salzman, pp. 219-240, J.B. Lippincott Co., Philadelphia, 1994.
3. Baglia FA, Seaman FS, Walsh PN; The Apple 1 and 4 domains

of Factor XI Act to Synergistically Promote the Surface-Mediated Activation of Factor XI by Factor XIIa. *Blood* 85:2078, 1995.

Product Specifications

Description:

Vial containing 1.000 ml of whole IgG representing approximately 1 ml of antiserum. Total protein is 5 mg.

Format:

Whole IgG, clear liquid.

Host Animal:

Goat

Immunogen:

Human Factor XI purified from plasma.

Concentration:

IgG concentration is 5.0 mg/ml, determined by absorbance using an extinction coefficient ($E_{280}^{1\%}$) of 13.4.

Buffer:

10 mM HEPES, 0.1 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 was specific for F.XI as demonstrated by immunoelectrophoresis and ELISA.

Applications:

Suitable as a source of antibodies to human F.XI.

Neutralizing Activity:

XXXX Bethesda Units/ml IgG against normal plasma. One Bethesda unit/ml is defined as the amount of inhibitor that resulted in 50% residual F.IX activity after 2 hours at 37°C (Kasper CK et al, *Thromb Diath Haemorrh* 34:869 1975).

Related Products

GAFXI-AP Goat Anti-Human F.XI, affinity purified IgG
GAFXI-HRP Goat Anti-Human F.XI, IgG peroxidase conjugate
SAFXI-IG Sheep Anti-Human F.XI, IgG from antiserum
SAFXI-AP Sheep Anti-Human F.XI, affinity purified IgG
FXI-EIA Paired antibody set for ELISA of F.XI, 5 x 96 wells
FXI-DP Human plasma deficient in F. XI, 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