

Goat anti-human Factor XII (FXII)

Whole IgG from antiserum

5 mg

Product #: GAFXII-IG

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 XII (FXII)

Factor XII (FXII, Hageman factor) is a 76 kDa, single chain glycoprotein produced in the liver. In plasma, FXII circulates as a protease zymogen at a concentration of approximately 30 µg/ml (400 nM). Upon vascular injury FXII binds to negatively charged extravascular surfaces such as cartilage and skin, which facilitate activation of the zymogen to the active serine protease. Cleavage of FXII by kallikrein after residue Arg³⁵³ produces the enzyme αFXIIa, consisting of a 28 kDa light chain containing the protease domain, and a 52 kDa heavy chain containing the anionic surface-binding domain. Substrates for surface bound FXIIa include the zymogens prekallikrein (PK) and factor XI (FXI) as well as the procofactor high-molecular weight kininogen (HK). The activation of these substrates results in positive feedback activation of FXII. Further cleavage of αFXIIa by kallikrein produces the 28 kDa fragment βFXIIa (hageman factor fragment). βFXIIa has reduced procoagulant activity as it lacks the anionic surface-binding domain, but is capable of fluid-phase activation of PK, factor VII and complement C1. The activity of FXIIa in plasma is regulated predominantly by C1-Inhibitor, with relatively minor contributions by α₂antiplasmin, α₂macroglobulin and antithrombin, even in the presence of therapeutic levels of heparin¹⁻³.

REFERENCES and REVIEWS

- DeLa Cadena R, Watchfogle Y, 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.
- Tankersley DL, Alving BM, Finlayson JS; Preparation of βF.XIIa (Hageman Factor Fragment) from Human Plasma. Thrombosis Research 25 pp 307-317, 1982.
- Pixley RA, Schapira M, Coleman RW; The regulation of Human Factor XIIa by Plasma Proteinase Inhibitors. JBC 260, pp 1723-1729, 1985.

Product Specifications

Description:

Vial containing XXXX 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 XII purified from plasma.

Concentration:

IgG concentration is XXXX mg/ml, determined by absorbance using an extinction coefficient (E^{1%₂₈₀}) 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 XII as demonstrated by immunoelectrophoresis and ELISA.

Applications:

Suitable as a source of antibodies to human factor XII.

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 #: **GAFXII-AP** Goat anti-human FXII, affinity purified IgG
 Cat #: **GAFXII-HRP** Goat anti-human FXII, IgG-peroxidase conjugate
 Cat #: **FXII-EIA** Paired antibody set for ELISA of FXII, 5 x 96 wells
 Cat #: **FXII-DP** Human plasma deficient in FXII, immune depleted

Visit our site (www.affinitybiologicals.com) for details.

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