

## Goat anti-human Factor XII (FXII)

Peroxidase conjugated IgG

0.2 mg

**Product #:** GAFXII-HRP**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 Arg<sup>353</sup> 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 F.XIIa in plasma is regulated predominantly by C1-Inhibitor, with relatively minor contributions by α<sub>2</sub>antiplasmin, α<sub>2</sub>macroglobulin and antithrombin, even in the presence of therapeutic levels of heparin<sup>1-3</sup>.

### REFERENCES and REVIEWS

1. DeLa Cadena R, Watchfogel YT, Colman RW, in Hemostasis and Thrombosis, 3<sup>rd</sup> Edition, eds. RW Colman, J Hirsh, VJ Marder and EW Salzman, pp. 219-240, J.B. Lippincott Co., Philadelphia, 1994.
2. Tankersley DL, Alving BM, Finlayson JS; Preparation of βF.XIIa (Hageman Factor Fragment) from Human Plasma. Thrombosis Research 25 pp 307-317, 1982.
3. 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 conjugated to horseradish peroxidase (HRP) through carbohydrate groups. Total protein is 0.2 mg.

**Format:**

IgG-HRP conjugate as a clear, slightly red-brown liquid.

**Host Animal:**

Goat

**Immunogen:**

Human Factor XII purified from plasma.

**Concentration:**

IgG-HRP concentration is XXXX mg/ml, determined by absorbance using an extinction coefficient (E<sup>1%<sub>280</sub></sup>) of 14.

**Buffer:**

A buffered stabilizer solution containing 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. Avoid exposure to sodium azide as this is an inhibitor of peroxidase activity.

**Specificity:**

Prior to conjugation, this antibody was specific for factor XII as demonstrated by immunoelectrophoresis and ELISA.

**Applications:**

Suitable as a source of peroxidase-labeled antibodies to FXII.

**Rz Ratio (Reinheitszahl, A<sub>403</sub>/A<sub>280</sub>):**

XXXX as determined spectrophotometrically.

**Related Products:**

Cat #: GAFXII-IG	Goat anti-human FXII, whole IgG from antiserum
Cat #: GAFXII-AP	Goat anti-human FXII, affinity purified IgG
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](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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