

Goat Anti-Human Factor IX (F.IX) Peroxidase Conjugated Affinity-Purified IgG (0.1 mg)

Catalogue #: GAFIX-APHRP

Lot #: SAMPLE

Expiry date: **/****

Store at -10 to -20°C.

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

Description of Factor IX

Factor IX (F.IX, Christmas Factor) is a vitamin K-dependant glycoprotein produced in the liver. Plasma concentration of F.IX is normally around 5 ug/ml (87 nM) in plasma. The biological importance of F.IX is demonstrated in Haemophilia B (Christmas disease), an X-linked congenital bleeding disease resulting from a quantitative (low activity and low antigen) or qualitative (low activity and normal antigen) defect in F.IX function.

In its proenzyme or zymogen form F.IX is a single chain molecule of 55,000 daltons. It contains two EGF-like domains and an amino-terminal domain containing 12 γ-carboxy-glutamic acid (Gla) residues. These Gla residues allow F.IX to bind divalent metal ions and participate in calcium-dependant binding interactions. The activation of F.IX occurs by limited proteolysis in the presence of calcium by activated factor XI (FXI^a) and/or by a complex of VII^a/tissue factor/phospholipid and activated Factor X between residues Arg¹⁴⁶-Ala¹⁴⁷ and between Arg¹⁸⁰-Val¹⁸¹. The terminal activated product in either case is F.IX^a_β, a two-chain enzyme consisting of a heavy chain (28,000 daltons), a light chain (18,000 daltons) and an activation peptide product of 11,000 daltons. F.IX can also be cleaved into inactive products by thrombin and by elastase.

The activity of F.IX^a_β in plasma is inhibited by Antithrombin and this inhibition is accelerated 1000-fold in the presence of optimal concentrations of heparin¹⁻³.

References and Reviews

1. Lawson, JH, Mann KG; Cooperative Activation of Human F.IX by the Human Extrinsic Pathway of Coagulation; JBC 266 pp11317-11327, 10991.
2. Enfield DL, Thompson AR; Cleavage and Activation of Factor IX by Serine Proteases; Blood 64, pp 821-831, 1984.
3. Limentani SA, Furie BC, Furie B in Hemostasis and Thrombosis, 3rd Edition, eds. RW Colman, J Hirsh, VJ Marder and EW Salzman, pp. 94-108, J.B. Lippincott Co., Philadelphia PA, USA,

1994.

Product Specifications

Description:

Vial containing 0.100 ml of affinity-purified IgG conjugated to horseradish peroxidase (HRP) through carbohydrate groups. Total protein is 0.1 mg.

Format:

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

Host Animal:

Goat

Immunogen:

Human Factor IX purified from plasma.

Concentration:

APIgG-HRP concentration is 1.0 mg/ml, determined by absorbance using an extinction coefficient ($E_{280}^{1\%}$) 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 F.IX as demonstrated by immunoelectrophoresis and ELISA.

Applications:

Suitable as a source of peroxidase labelled antibodies to F.IX.

Rz Ratio (Reinheitszahl, A_{403}/A_{280}):

As determined spectrophotometrically.

Related Products:

GAFIX-IG	Goat anti-Human FIX, IgG from antiserum
GAFIX-AP	Goat anti-Human FIX, affinity-purified IgG
GAFIX-APHRP	Goat anti-Human FIX, IgG-peroxidase
SAFIX-IG	Sheep anti-Human FIX, IgG from antiserum
SAFIX-AP	Sheep anti-Human FIX, affinity-purified IgG
SAFIX-APHRP	Sheep anti-Human FIX, APIgG-peroxidase
FIX-EIA	Paired antibody set for ELISA of FIX, 5 x 96 wells
FIX-DP	Human plasma deficient in FIX, 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