

Product: Factor IX, human
Catalog #: 12-4420
Amount: 100 IU

DESCRIPTION:

Human Factor IX (HuFactorIX)

Human Factor IX is a glycoprotein, which is synthesized in the liver (1–3). The domain structure of factor IX is similar to that of the other vitamin K dependent coagulation factors. The NH₂-terminal region contains 12 g-carboxyglutamic acid (gla) residues, which facilitate the calcium dependent binding of factor IX to negatively charged phospholipid surfaces. Two domains which are homologous to epidermal growth factor (EGF) span the region between the NH₂-terminal gla domain and the activation peptide (Ala-146 to Arg-180). Factor IX is activated by either factor XIa or the factor VIIa/tissue factor/phospholipid complex. Cleavage at site A yields the intermediate IXa, which is subsequently converted to the fully active form IXab by cleavage at site B. The NH₂-terminal light chain (GLA and EGF domains) remains covalently attached to the COOH-terminal heavy chain by a disulfide bond. The serine protease catalytic triad (Ser-365, His 221, Asp-269) is located in the heavy chain. Factor IXab is the catalytic component of the “intrinsic factor Xase complex” (factor VIIIa/IXa/Ca²⁺/phospholipid) which proteolytically activates factor X to factor Xa..

SOURCE:

Human Plasma

PURITY:

> 98%, as determined by:

(a) Analysis by RP-HPLC.

(b) Anion-exchange FPLC

(c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel

ENDOTOXIN:

Less than 0.1 ng/μg (IEU/μg) of HuFactorIX

The plasma is collected from donors with Hepatitis B vaccinated.

Each unit of plasma has been tested for HBsAg, Anti-HIV-1/2 plus O and Anti-HCV by using the imported kits which are approved by Federal Drug Administration (FDA)

DIMERS & AGGREGATES:

Less than 1% as determined by silver stained SDS-PAGE gel analysis

PROTEIN CONTENT:

Protein quantitation was carried out by 2 independent methods:

- UV spectroscopy at 280 nm

- Analysis by RP-HPLC

FORM:

Purified, in 10ppm TNBP, 100ppm Polysorbate 80, 500ppm PEG,

1.5% Glycine, 160mM Sodium chloride and 25mM Citrate

STORAGE:

-20°C (aliquot), avoid freezing and thawing cycles

BIOLOGICAL ACTIVITY:

HuFactorIX is fully biologically active when compared to standards.

The potency per mg was tested and found to be 167IU/mg

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