

## Active Native Bovine Factor IX

**Cat. No.** F9-266B    **Lot. No.** (See product label)

### SPECIFICATION

**Species**                      Bovine

**Source**                        Plasma

**Description**

The zymogen factor IX is a single chain vitamin K-dependent glycoprotein which is synthesized in the liver. The domain structure of factor IX is similar to that of the other vitamin K dependent coagulation factors. The NH<sub>2</sub>-terminal region contains 12 γ-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 NH<sub>2</sub>-terminal gla domain and the activation peptide (Ala-146 to Arg-180). Factor IX is activated by either factor XIa or the factor VIIIa/tissue factor/phospholipid complex. Cleavage at site A (see figure) yields the intermediate IXa which is subsequently converted to the fully active form IXaβ by cleavage at site B. The NH<sub>2</sub>-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 IXaβ is the catalytic component of the "intrinsic factor Xase complex" (factor VIIIa/IXa/Ca<sup>2+</sup>/phospholipid) which proteolytically activates factor X to factor Xa.

**Form**                            50% (vol/vol) glycerol/H<sub>2</sub>O

**Bio-activity**                Clotting assay

 Tel: 1-631-559-9269    1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)     Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

<b>Molecular Mass</b>	55400
<b>Purity</b>	>95% by SDS-PAGE. NOT tissue/cell culture grade. Not tested for endotoxin.
<b>Characteristic</b>	Extinction coefficient:12.0, Isoelectric point:3.7, Percent carbohydrate:0.26, Structure:single chain, NH2-terminal gla-domain, two EGF domains
<b>Storage</b>	-20°C

## GENE INFORMATION

<b>Gene Name</b>	<a href="#">F9 coagulation factor IX [ Bos taurus ]</a>
<b>Official Symbol</b>	F9
<b>Synonyms</b>	coagulation factor I; Xchristmas factor; plasma thromboplastic component; coagulation factor IX (plasma thromboplastic component, Christmas disease, hemophilia B)
<b>Gene ID</b>	<a href="#">280688</a>
<b>mRNA Refseq</b>	<a href="#">NM_001103220</a>
<b>Protein Refseq</b>	<a href="#">NP_001096690</a>
<b>Chromosome Location</b>	Xq32-q33
<b>Pathway</b>	Complement and Coagulation Cascades, organism-specific biosystem; Complement and coagulation cascades, organism-specific biosystem; Extrinsic Pathway, organism-specific biosystem

 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA



**Function**

calcium ion binding; serine-type endopeptidase activity

 Tel: 1-631-559-9269 1-516-512-3133

 Email: [info@creative-biomart.com](mailto:info@creative-biomart.com)  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA