Active Native Bovine Factor IX

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

SPECIFICATION

Product Overview	
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 NH2-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 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 (see figure) yields the intermediate IXa which is subsequently converted to the fully active form IXaβ 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 IXaβ is the catalytic component of the "intrinsic factor Xase complex" (factor VIIIa/IXa/Ca2+/phospholipid) which proteolytically activates factor X to factor Xa.
Form	50% (vol/vol) glycerol/H2O
Bio-activity	Clotting assay

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

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

GENE INFORMATION

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

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Function	calcium ion binding; serine-type endopeptidase activity

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