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Produktinformation



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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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PRODUCT INFORMATION



Coagulation Factor IX (human, recombinant)

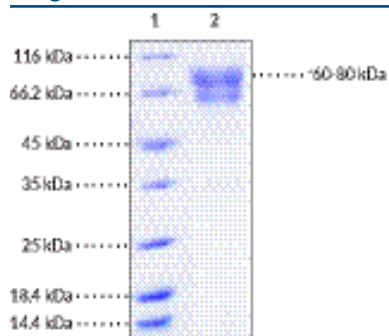
Item No. 31838

Overview and Properties

Synonyms: Christmas Factor, Coagulation Factor 9, FIX, Plasma Thromboplastin Component, PTC
Source: Active recombinant human C-terminal His-tagged coagulation factor IX expressed in HEK293 cells
Amino Acids: 29-461
Uniprot No.: P00740
Molecular Weight: 50 kDa
Storage: -80°C (as supplied)
Stability: ≥1 year
Purity: ≥95% estimated by SDS-PAGE
Supplied in: Lyophilized from sterile PBS, pH 7.4
Endotoxin Testing: <1.0 EU/μg, determined by the LAL endotoxin assay
Specific Activity: Measured by its ability to cleave the peptide substrate Z-D-Arg-Gly-Arg-pNA.
The specific activity is >20 pmols/min/μg.

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: Coagulation Factor IX

SDS-PAGE Analysis of Coagulation Factor IX. This protein has a calculated molecular weight of 50 kDa. It has an apparent molecular weight of approximately 60-80 kDa by SDS-PAGE under reducing conditions due to glycosylation.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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PRODUCT INFORMATION



Description

Coagulation Factor IX is a vitamin K-dependent plasma serine protease involved in the intrinsic and extrinsic pathways of the blood coagulation cascade.^{1,2} It is composed of an N-terminal domain containing carboxylated glutamic acid residues (Gla domain), two EGF-like domains, a linker module, and a C-terminal trypsin-like catalytic peptidase domain.³ Coagulation Factor IX is produced as an inactive precursor, which is activated to Factor IXa β following signal peptide cleavage, glycosylation, and further cleavage by Factor XIa or VIIa.³ In its activated form, Factor IXa β , in complex with Factor VIIIa, converts Factor X to Factor Xa, the activated form.⁴ Mutations in *F9*, the gene encoding Factor IX, are responsible for the X-linked bleeding disorder hemophilia B, characterized by mild to severe deficits in blood coagulation.¹ Cayman's Coagulation Factor IX (human, recombinant) protein can be used for enzyme activity applications. This protein consists of 444 amino acids, has a calculated molecular weight of 50 kDa, and a predicted N-terminus of Thr29 after signal peptide cleavage. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is 60-80 kDa due to glycosylation.

References

1. Tjärnlund-Wolf, A. and Lassila, R. Phenotypic characterization of haemophilia B - Understanding the underlying biology of coagulation factor IX. *Haemophilia* **25(4)**, 56-574 (2019).
2. Vermeer, C. Vitamin K: The effect on health beyond coagulation - An overview. *Food Nutr. Res.* **56(1)**, (2012).
3. Brandstetter, H., Bauer, M., Huber, R., *et al.* X-ray structure of clotting factor IXa: Active site and module structure related to Xase activity and hemophilia B. *Proc. Natl. Acad. Sci. USA* **92(21)**, 9796-800 (1995).
4. Schenone, M., Furie, B.C., and Furie, B. The blood coagulation cascade. *Curr. Opin. Hematol.* **11(4)**, 272-277 (2004).

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