



FOOD AND DRUG ADMINISTRATION

Center For Biologics Evaluation and Research

Memorandum

MEMORANDUM

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Subject: Final review of an original Biologics License Application (BLA) from CSL Behring (STN125582/0) for coagulation factor IX (recombinant) albumin fusion protein FIX-FP (Idelvion®) to be used for treatment of patients with hemophilia B. This memo contains review of information pertaining to the physical and chemical characterization of the albumin portion of the fusion protein FIX-FP.

To: Edward Thompson; OMPT/RPM/OBRR/CBER

Action: Approval is recommended

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Submission Summary

Background: The product is a recombinant fusion protein linking coagulation factor IX with albumin (rIX-FP) also designated by the company code CSL654.

The protein is produced from CHO cells. The rfactor IX portion is identical to the Thr148 allelic form of human plasma-derived factor IX. There is a cleavable linker between the rfactor IX and the albumin moiety that is referred to as the activation peptide. This is derived from the endogenous activation peptide in native factor IX. CSL654 remains intact in the circulation until activated. The albumin moiety is then cleaved resulting in the release of active factor IX in the bloodstream.

Indications

- 1) Routine prophylaxis to prevent or reduce the frequency of bleeding episodes.
- 2) Control and prevention of bleeding episodes.
- 3) Control and prevention of bleeding in the perioperative setting.

Formulation

The final drug product is provided as a lyophilized powder in single-use glass vials containing 150, 500, 1000, or 2000 IUs of the active ingredient. Potency in IUs is determined using a thromboplastin time-based one stage clotting assay calibrated using a WHO international standard factor IX concentrate.

Each vial contains

rIX-FP
tri-sodium citrate
polysorbate 80
mannitol
sucrose

The drug is delivered via intravenous injection.

Manufacturing:

The manufacturing process consists of ^{(b) (4)} stages:

(b) (4)



Manufacturing Site:

Manufacture to Bulk Drug Intermediate

(b) (4)



Manufacture to Drug Substance
CSL Behring GmbH
Emil-von-Behring-Str. 76
35041 Marburg
Germany

Drug Substance (3.2.S):

Sections Reviewed Herein:

(b) (4) [Redacted]

(b) (4)

32 Pages determined to be not releasable: (b)(4)