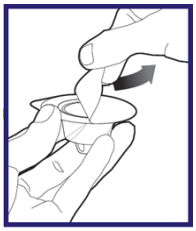
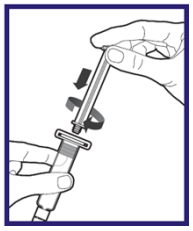
Other Names	• Antihemophilic factor IX , extended half-life
Description	• Produced by recombinant DNA technology in a human embryonic kidney cell line. • The cell culture medium does not contain any proteins derived from animal or human sources. • Fc Fusion delays lysosomal degradation which allows for longer plasma half-life. • The purification process utilizes a series of chromatography steps that does not require the use of a monoclonal antibody. It also includes a detergent viral inactivation step and multiple viral clearance steps, including an affinity chromatography step and a 15 nm virus-retaining nanofiltration step.

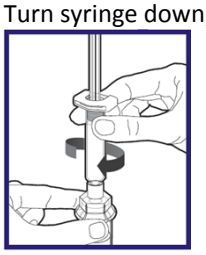
Special Approvals/Authorizations	• An independent 2 person check is required for all doses. Nurses from the Manitoba Bleeding Disorder Program are exempt from the independent 2 person check.
	• A nurse may administer a dose that provides:
	  ○ Up to 200 international units greater than the prescribed dose; or
	  ○ No more than 100 international units less than the prescribed dose without receiving a new medication order.
	• Patients accustomed to self-administering factor IX may continue to do so on the written order of a hematologist or designate.

Classification	**Special Populations:** **Pediatrics (less than 12 years of age):** No data are available for patients below the age of 12 years. **Geriatrics (greater than 65 years of age):** Clinical studies did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects. Dose selection for an elderly patient should be individualized (see Dosage and Administration). **Pregnant women:** Can be used in pregnancy only if the potential benefit justifies the potential risk. Animal reproductive studies have not been conducted with Alprolix, however Alprolix has been shown to cross the placenta in small amounts in mice. **Nursing Women:** Experience regarding the use of factor IX during breast-feeding is not available. Should only be administered to nursing mothers if clinically indicated.
Indications	• For the control and prevention of bleeding episodes in patients with hemophilia B (congenital factor IX deficiency or Christmas disease) ; • Not indicated for the treatment of: ○ Other factor deficiencies (e.g. factor II, VII, VIII, X)
Contraindications	• Contraindicated in individuals who have manifested severe hypersensitivity reactions, including anaphylaxis, to the product or its components. **WARNINGS:** • The clinical response to Alprolix may vary. If bleeding is not controlled with recommended dose, the plasma level of factor IX should be determined and a sufficient dose administered to achieve a satisfactory clinical response. • Allergic type hypersensitivity reactions, including anaphylaxis are possible with factor replacement therapies. • Inhibitors have been reported with factor replacement therapy. If the patient's plasma factor IX level fails to increase as expected or if bleeding is not controlled after administration, the presence of an inhibitor (neutralizing antibodies) should be suspected and appropriate testing performed • Alprolix has not been studied in patients with hepatic and renal impairment. • Alprolix has not been evaluated in animal fertility studies. It is not know whether Alprolix can

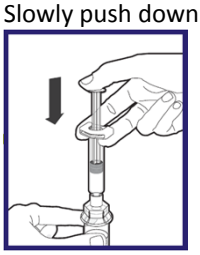
	affect fertility or sperm development.
Supplied	Vial size is 250 international units, 500 international units, 1000 international units, 2000 international units and 3000 international units.
Dosage	**Usual:** Patient response and factor IX levels guide dose. 1 international units/kg usually raises FIX level by 1% **Treatment, Minor/Moderate Hemorrhage:** 30-60 international units/kg (target FIX level 30-60%) **Treatment, Major/Life-Threatening Hemorrhage:** 80-100 international units/kg (target FIX level 80-100%) **Individualized prophylaxis:** The recommended regimen is 50 international units/kg once weekly or 100 international units/kg once every 10-14 days.
Reconstitution/Stability	**Reconstitution** Alprolix should be reconstituted only with the diluent syringe provided in the Alprolix package. Use aseptic technique throughout. 1. Allow vial of Alprolix and pre filled diluent syringe to reach room temperature before use. 2. Wipe top of the vial with alcohol swab; allow to dry 3. Peel lid back on vial adapter package  4. On a flat surface, place adapter over Alprolix vial and push down so that the spike punctures centre of the rubber stopper on the vial  5. Attach plunger rod to diluent syringe by inserting the rod into the syringe and turning clockwise. 

6. Hold syringe with cap pointing up; snap off cap with other hand.

7. Turn syringe down; insert tip into adapter opening on vial; turn clockwise to attach



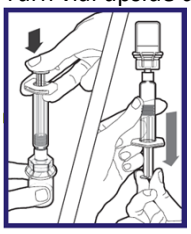
8. Slowly push down plunger of syringe to inject the diluent into the vial



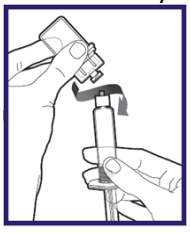
9. Swirl vial gently to dissolve the product; do not shake

10. Do not use the reconstituted Alprolix if it is cloudy or contains visible particles

11. Turn vial upside down, slowly pull plunger rod to draw solution into syringe



12. Unscrew the syringe from the vial adapter



	Stability • Stable at 2-8°C until the expiry date indicated on the label. • May be stored at room temperature 15-30°C for a single 6 month period • Do not freeze. • Protect from light. • After reconstitution the product can be stored at room temperature 15-30°C for 3 hours. Infusions should be completed within 3 hours after reconstitution of the product. • Compatible with normal saline • Do NOT administer concurrently with any other product.
Compatibilities/ Incompatibilities	• No other drugs / solutions (including normal saline) can be co-administered in the same line while Alprolix is being infused
Administration, Identification and ABO Compatibility	Refer to **Manitoba Best Practice Guidelines** • section 2.2 Standards- Identification and Administration • ABO compatibility not applicable
Administration, Method	Maximum Concentration: • Not applicable Maximum Rate: • The rate of administration should be determined by the patient's comfort level, and no faster than 10 mL/minute. If lifetime exposure less than 10 factor IX treatments (e.g., Benefix and/or Immunine, Alprolix), obtain baseline vital signs, then monitor for vasomotor, hypersensitivity and cardiovascular reactions for at least 60 minutes from the start of infusion. If patient receiving the first to tenth dose of treatment, start administration at 0.5 mL/minute times 2 minutes. If they tolerate it, increase the rate to 1 mL/minute until completion of dose. If patient complains of bad taste, headache, flushing, nausea, or states that they feel unwell, drop rate back to 0.5 mL/minute. Stop infusion and contact physician if hypersensitivity, vasomotor or cardiovascular reactions occur. Observe patient for allergic reaction for 30 minutes post-infusion.
Adverse Events	• The most common adverse drug reactions observed were headache and oral paresthesia. • A serious adverse reaction of obstructive uropathy was reported in a subject with hematuria who developed an obstructing clot in the urinary collecting system. The even resolved with hydration and the subject continued prophylactic treatment with Alprolix. • In the clinical trials there were no reports of any anaphylactic reactions or inhibitor formation. **ADVERSE REACTIONS REPORTED:** GENERAL DISORDERS Fatigue and infusion site pain NERVOUS SYSTEM DISORDERS Dizziness, dysgeusia, headache GASTROINTESTINAL DISORDERS Paresthesia oral and breath odor VASCULAR DISORDERS Hypotension CARDIAC DISORDERS Palpitations. RENAL and URINARY Obstructive uropathy
References:	Alprolix Product Monograph – Date of Approval: November 19, 2015 Package Insert - Alprolix
Reviewed by:	Dr. Donald Houston Dr. Jayson Stoffman