C1 ESTERASE INHIBITOR

BRAND NAME  BERINERT IV, BERINERT SC, CINRYZE

DRUG CLASS  Immunomodulator, serine protease inhibitor

AVAILABILITY  
- **Berinert SC** vial contains 2000 or 3000 international units of C1 esterase inhibitor. Also contains glycine, sodium citrate and sodium chloride. Diluent vial contains 4 mL (2000 IU) or 6 mL (3000 IU) of water for injections.
- **Berinert IV** vial contains 500 or 1500 international units of C1 esterase inhibitor. Also contains glycine, sodium citrate and sodium chloride. Contains up to 486 mg/100 mL of sodium. Diluent vial contains 10 mL of water for injections.
- **Cinryze** vial contains 500 international units of C1 esterase inhibitor. Also contains sodium chloride, sucrose, sodium citrate dihydrate, valine, alanine and threonine. Contains 0.5 mmol of sodium. Diluent vial contains 5 mL of water for injections.

WARNING  
This is a blood product. Check your local guidelines for handling, storage and batch recording requirements.
Severe hypersensitivity and anaphylactic reactions may occur.

pH  
Cinryze: 6.6–7.4

PREPARATION  
- **Berinert SC**: reconstitute the 2000 IU vial with 4 mL or the 3000 IU vial with 6 mL of water for injections. Use the Mix2Vial adaptor provided to reconstitute the vial and to filter solution. **Do not shake**. The solution is clear and colourless to slightly opalescent.
- **Berinert IV**: reconstitute the 500 IU vial with 10 mL or the 1500 IU vial with 3 mL of water for injections. The concentration is 50 or 500 international units/mL. Use the Mix2Vial adaptor provided to reconstitute the vial and to filter solution. **Do not shake**. The solution is clear and colourless, the 1500 IU solution may be slightly opalescent.
- **Cinryze**: reconstitute the vial with 5 mL of water for injections to make a concentration of 100 international units/mL. Use the silicone-free syringe and transfer device provided to reconstitute the vials and filter the solution. **Do not shake**. Follow directions on the package insert. Two vials are combined to make a dose of 1000 international units. The solution is clear and colourless to slightly blue.

STABILITY  
- **Berinert SC** vial: store below 30 °C. Do not freeze. Protect from light.
- **Berinert IV** and **Cinryze** vial: store below 25 °C. Do not freeze. Protect from light. Reconstituted solution: **Berinert SC** is stable for 6 hours below 30 °C. **Berinert IV 500 IU** is stable for 24 hours at 2 to 8 °C and **Berinert IV 1500 IU** is stable for 8 hours at 2 to 8 °C. **Cinryze** is stable for 3 hours at 15 to 25 °C.

ADMINISTRATION  
- **IM injection**: Not recommended
- **SUBCUT injection**: Berinert SC: inject into the abdomen. Suitable for self-administration after appropriate patient education.
- **IV injection**: **Berinert IV**: inject at a rate of 4 mL/minute. **Cinryze**: inject at a rate of 1 mL/minute. Suitable for self-administration after appropriate patient education.
- **IV infusion**: Not recommended
- **IV use for infants and children**: **Berinert IV**: inject undiluted at a rate of 4 mL/minute (200 international units/minute). **Cinryze**: inject undiluted at a rate of 1 mL/minute (100 international units/minute). May also be given as an infusion.

COMPATIBILITY  
No information

INCOMPATIBILITY  
No information

SPECIAL NOTES  
Monitor for signs of hypersensitivity including hives, urticaria, tightness of chest, wheezing, hypotension and anaphylaxis. Stop the infusion and treat accordingly.

REFERENCES  

120 Australian Injectable Drugs Handbook 8th Edition Update September 2020