United States Department of Agriculture
Animal and Plant Health Inspection Service
Center for Veterinary Biologics
P. O. Box 844
Ames, IA 50010

1. Reagent Name: *Clostridium perfringens* Type C (*beta*) Antitoxin

2. Strain or Source: Not applicable

3. Lot Number: IRP 585-A

4. Fill Date: April 14, 2011

5. Expiration Date: No expiration date has been assigned to this product because *C. perfringens* type C (*beta*) antitoxin has demonstrated over time to be very stable if properly stored. The stability of this reagent will be routinely monitored by the Center for Veterinary Biologics.

Precautions: There are no known hazards associated with the use of this reagent.

6. Intended Use: IRP 585-A serves as the standard antitoxin when conducting *C. perfringens* type C (*beta*) toxin-neutralization tests in mice.

7. Instructions for Use: *C. perfringens* type C (*beta*) antitoxin IRP 585-A contains 500 units of beta antitoxin per mL. A dilution of standard antitoxin containing 10 antitoxin units per mL (AU/mL) is used in the toxin-neutralization test as described in 9 CFR 113.111 and 9 CFR 113.454. The dilution is prepared by adding 0.5 mL of well mixed IRP 585-A to 4.5 mL of peptone diluent (1.0% peptone, 0.25% sodium chloride, pH 7.2). The antitoxin is further diluted by adding 1.0 mL of the 1:10 dilution to 4.0 mL of diluent. **The 1:10 dilution of antitoxin is stable when stored at -70°± 10°C and should be aliquoted for future testing.**

8. Test of Reagent: *Determination of antitoxin titer* - The antitoxin titer was determined by injecting mice with 0.2-mL volume of diluted antitoxin mixed with 10 L_+ toxin doses (the smallest amount of toxin which, when mixed with 10 units of antitoxin, causes death in at least 80% of the animals within 24 hours) and 10 L_o toxin doses (the largest amount of toxin which, when mixed with 10 units of antitoxin, causes no death in animals within 24 hours). The antitoxin titer of IRP 585-A was confirmed by comparing the results of mice injected with toxin-antitoxin mixtures containing 1.0 mL of IRP 585-A possessing 10 beta antitoxin units per mL with the results of mice injected with toxin-antitoxin mixtures containing 1.0 mL of the WHO International Standard for *C. perfringens* Beta Antitoxin possessing 10 beta antitoxin units per mL.

9. Container Size, Type, Weight, or Volume: Two-mL tube containing 0.7 mL of antitoxin.

10. Storage Conditions: Store at -70°± 10°C.

11. CVB Technical Contact: Center for Veterinary Biologics, Bacteriology Section, (515) 337-6140 or FAX (515) 337-7673.

12. Origin and Passage History: Not applicable

13. Method of Preparation: Goats with no history of *Clostridial* vaccinations and no detectable type A (alpha) antitoxin titer received multiple injections of purified *C. perfringens* type C beta toxoid and toxin during a 6 month period. Sera from the hyperimmunized goats were fractionated with ammonium sulfate and the immunoglobulin dialyzed against 0.015 M phosphate buffered saline, pH 7.4. The antitoxin was passed through a sterile Millipore filtration unit containing a 0.22-µm membrane. Sterile glycerol was added to a final concentration of 10% (v/v). No preservatives were added to the antitoxin.

14. Other: None

Reagent orders and feedback should be sent *including phone number* to the following email address: CVB@aphis.usda.gov

Reagent orders forms (APHIS 2018) are available from:
https://www.aphis.usda.gov/library/forms/pdf/APHIS_2018.pdf

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