



Clostridium perfringens Alpha Toxin ELISA KIT

BIO K 289/1 - BIO K 289/2

Enterotoxaemia is a fatal enteric disease that affects all species of domestic animals and is attributable to a toxigenic type of *Clostridium perfringens*. Most animal diseases due to *C. perfringens* are intestinal and involve types B, C or D. Type A has been implicated in rare outbreaks of gastritis and haemolytic disease of ruminants (enterotoxemic jaundice, the yellows, yellow lamb disease) and in hemorrhagic enteritis in cattle, horses, dogs and infant alpacas. *Clostridium perfringens* type A causes necrotic enteritis in poultry and a mild form of food poisoning in humans. Demonstration of alpha toxin in the contents of the small intestine is the only way to definitively diagnose enterotoxemia. For that purpose, small amounts of clarified fluid are injected into the tail vein of mice. Death after more than a few minutes post injection constitutes presumptive evidence of enterotoxemia. Other toxins produced by *C. perfringens* have to be neutralized by specific antisera. By using ELISA method, it is possible to detect alpha toxin in biological fluids (intestinal, peritoneal or pericardic fluid) or in culture supernatants in less than 3 hours. The test can be used to type an unknown strain in conjunction with beta and epsilon Elisa test kits.

Reliable Results

The use of monoclonal antibody as conjugate ensures excellent specificity and very reliable results.

Ease-of-Use

Minimal hands-on-time
Room temperature incubation
Results available in 140 minutes.

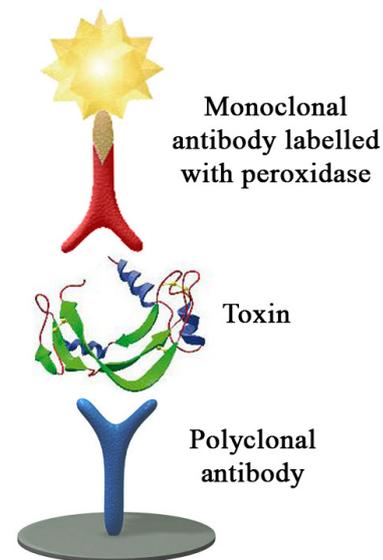
Flexibility

Results can be read visually or spectrophotometrically.

Toxino-types	Alpha	Beta	Epsilon	Iota
A	++	-	-	-
B	+	++	+	-
C	+	++	-	-
D	+	-	++	-
E	+	-	-	++

EIA Procedure

- 1- Microplate coated with polyclonal antibody
- 2- Add samples and positive control.
Incubate 1 hour at 21°C +/- 3°C
Wash
- 3- Add conjugate.
Incubate 1 hour at 21°C +/- 3°C .
Wash
- 4- Add TMB
Add stop solution.
Wait 10 minutes.
Read at 450 nm





Example of results

Direct colony hybridization (DCH)

ELISA BIO K 289

	+	-	
+	235	0	235
-	3	0	3
	238	0	238

Specificity: NA
Sensitivity: 99 %

Typing of strains from various animal using Bio-X Kits

	Bovine Strains	Ovine & Caprine Strains	Ovine & Caprine Strains	Porcine Strains
	n=69	n=35	n=22	n=45
Alpha	98.55 %	100 %	100 %	100 %
Beta	0 %	0 %	18.18 %	11.11 %
Epsilon	0 %	68.57 %	63.64 %	2.22 %





Composition of the kit

BIO-X ALPHA TOXIN ELISA KIT : BIO K 289

	BIO K 289/1	BIO K 289/2
Microplates	1 (48 tests)	2 (96 tests)
Washing solution	1 X 100 ml (20 X)	1 X 100 ml (20 X)
Dilution buffer	1 x 50 ml (5 X)	1 x 50 ml (5 X)
Conjugate	1 X 12 ml (1 X)	1 X 25 ml (1 X)
Positive control	1 X 2 ml (1 X)	1 X 4 ml (1 X)
Single component TMB	1 X 12 ml (1 X)	1 X 25 ml (1 X)
Stopping solution	1 X 6 ml (1 X)	1 X 12 ml (1 X)

Stability : One year between +2°C and +8°C

