



# BOVIGAM TB Kit

OIE registered BOVIGAM™ kit is a widely used diagnostic kit for fast and highly reproducible diagnosis of bovine tuberculosis (bTB) in cattle, sheep and goats

## Benefits

- Faster results—farm operations are back into business sooner than with skin testing
- Helps to minimize negative economic impact on the farm
- Very high analytical sensitivity
- Combinations of the BOVIGAM kit and stimulation antigens can help optimize every local bTB program
- Objective and highly reproducible
- Established technology
- Only one vet visit required (for blood sampling) compared to two for skin testing

## The BOVIGAM kit

The Applied Biosystems™ BOVIGAM™ kit is a blood-based assay of cell-mediated immunity. Animals infected with *Mycobacterium bovis* (*M. bovis*) can be identified by measurement of the cytokine interferon gamma (IFN-γ). The BOVIGAM test is widely used as a stand-alone test or as an ancillary test to the tuberculin skin test and is approved by the OIE as a solution for all bTB testing situations\*. The granted claims include use of the kit as primary, stand-alone test and for the purpose of reestablishing freedom after outbreak.

Numerous studies underscore its effective use with the skin test in tuberculosis eradication programs. The test is used in many countries for the detection of *M. bovis*-infected cattle, sheep, goats and buffalo (*Syncerus caffer*).

\* Resolution No. 34, Register of Diagnostic Kits Validated and Certified by the OIE (Registration Number: 20150110)

## Bovine tuberculosis

bTB is a major infectious disease among cattle, other farm animals and certain wildlife populations. It results from infection with *M. bovis* and can be transmitted either by respiration or by ingestion.

bTB is a chronic disease and it usually takes many months for clinical signs to manifest. Therefore, early infections are often asymptomatic, whereas in the later stages, symptoms include progressive emaciation, weakness, inappetence and enlargement of lymph nodes.

bTB is a significant zoonosis that can spread to humans through aerosols and by drinking unpasteurized milk or dairy products from infected cows.

## Test procedure

### Stage 1—Whole blood culture

The blood samples require overnight incubation with an antigen (tuberculin purified protein derivatives, PPDs) to stimulate the lymphocytes to produce IFN- $\gamma$ . Lymphocytes from uninfected cattle do not produce IFN- $\gamma$  to tuberculin PPD antigens, consequently IFN- $\gamma$  detection correlates with infection.

Step 1—Blood collected in heparin is mixed with specific antigens. After incubation at 37°C overnight, the plasma supernatant from each blood aliquot is harvested for IFN- $\gamma$  stimulation.

### Stage 2—Bovine IFN- $\gamma$ enzyme immunoassay (EIA)

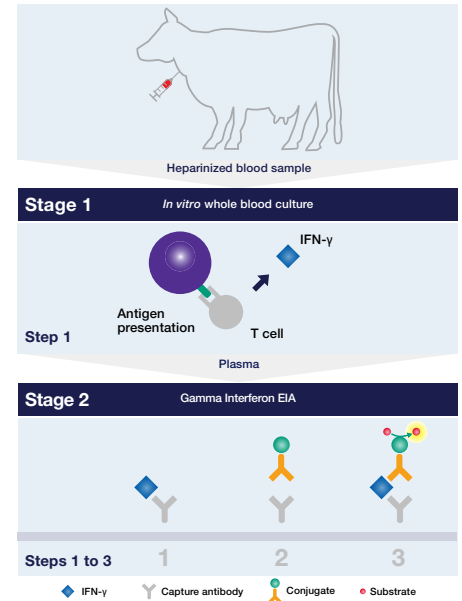
IFN- $\gamma$  in the plasma supernatants of each blood aliquot is estimated using a sandwich EIA.

Step 1—Diluted plasma samples react with antibodies to bovine IFN- $\gamma$  bound to a solid support. Unbound material is removed by washing after a suitable incubation time.

Step 2—Conjugate reacts with IFN- $\gamma$  bound to the antibody coated to a solid support. Unreacted conjugate is removed by washing after a suitable incubation time.

Step 3—Enzyme substrate is added. The rate of conversion of substrate is proportional to the amount of bound IFN- $\gamma$ . The reaction is terminated

after a suitable time and the amount of color development is determined spectrophotometrically.



## Ordering information

Product	Quantity	Cat. No.
BOVIGAM TB Kit	10-plate kit (150 samples)	63300 (USA)/63320 (ROW)
BOVIGAM TB Kit	30-plate kit (450 samples)	63306 (USA)/63326 (ROW)
<i>Mycobacterium bovis</i> Gamma Interferon Test System für Rinder BOVIGAM	10-plate kit (150 samples); incl. 2xPPD and 1xPWW	7610910 (D)
Related products		
BOVIGAM 2G TB Kit	10-plate kit (300 samples)	63330
VetMAX <i>M. tuberculosis</i> Complex Real-Time PCR Kit	100 reactions	MTBC
Stimulation antigens		
BOVIGAM Tuberculin PPD produced by Prionics Lelystad B.V.		
Bovine Tuberculin PPD 3000	5 mL; 30,000 I.U./mL	7600060
Avian Tuberculin PPD 2500	5 mL; 25,000 I.U./mL	7600065
BOVIGAM Tuberculin PPD (CSL) produced byASUREQuality		
Tuberculin PPD (Bovine)	20 mL; 0.3 mg/mL	63303 (USA)/63313 (ROW)
Tuberculin PPD (Avian)	20 mL; 0.3 mg/mL	63304 (USA)/63314 (ROW)
Peptide cocktails		
Peptide Cocktail Prionics PC-EC	3 mL (lyophilized); 120 samples	7600100
Peptide Cocktail Prionics PC-HP	3 mL (lyophilized); 120 samples	7600105
Stimulation control		
Pokeweed Mitogen PWM	1 vial; 3.2 mg	5108777

USA = United States of America    ROW = Rest of world    D = Germany

\* 2006 Session of the Research Group of the Standing Technical Committee of EuFMD, Paphos, Cyprus, 17–20 October 2006  
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