



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 in business sooner than with skin testing
- Helps to minimize negative economic impact on the farm
- Very high analytical sensitivity
- Combinations of the Applied Biosystems™ 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 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 a primary, stand-alone test and for the purpose of reestablishing bTB-free status after an 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*).

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 by either respiration or 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 consumption of 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- γ . Lymphocytes from uninfected cattle do not produce IFN- γ in response to tuberculin PPD antigens, so IFN- γ 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 sample is harvested for IFN- γ stimulation.

Stage 2—Bovine IFN- γ enzyme immunoassay (EIA)

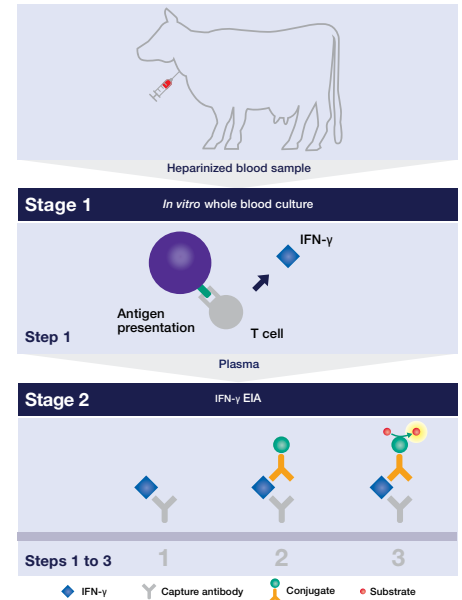
IFN- γ in the plasma supernatant of each blood sample is estimated using a sandwich EIA.

Step 1—Diluted plasma samples are added to an anti-IFN- γ capture antibody bound to a solid support. Unbound material is removed by washing after a suitable incubation time.

Step 2—Conjugate binds to the IFN- γ bound to the antibody attached to the solid support. Unbound conjugate is removed by washing after a suitable incubation time.

Step 3—Enzyme substrate is added. The amount of substrate converted is proportional to the amount of bound

IFN- γ . 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)	63320
BOVIGAM TB Kit	30-plate kit (450 samples)	63326
<i>Mycobacterium bovis</i> Gamma Interferon Test System für Rinder BOVIGAM	10-plate kit (150 samples); incl. 2 x PPD and 1 x PWM	7610910 (Germany)
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		
Bovine Tuberculin PPD 3000	5 mL; 30,000 IU/mL	7600060
Avian Tuberculin PPD 2500	5 mL; 25,000 IU/mL	7600065
Peptide cocktails		
BOVIGAM PC-EC Stimulation Antigen	3 mL (lyophilized); 120 samples	7600100
BOVIGAM PC-HP Stimulation Antigen	3 mL (lyophilized); 120 samples	7600105
Stimulation control		
BOVIGAM Pokeweed Mitogen (PWM)	1 vial; 3.2 mg	5108777

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