

# Rapid Test Kit

# **Bovine TB Ab**

Anigen Rapid Bovine TB Ab Test Kit is a solid phase chromatographic immunoassay for the qualitative detection of Mycobacterium bovis antibody in serum or plasma

CAT No : RR23-02



## Background

Bovine tuberculosis is a chronic infectious disease caused by Mycobacterium bovis. Bovine tuberculosis infection in cattle is usually diagnosed in the live animal on the basis of delayed hypersensitivity reactions. Infection is often sub clinical. When present, clinical signs are not specifically distinctive of this disease. Generally the purified protein derivative (PPD) test has been known 65.6% sensitivity (Wood et al., Vet. Microbiol, 40:125-135. 1994) as non M. bovis, including M. avium and other acid-fast bacteria infect the cattle in nature. A more sensitive and accurate diagnostic tool has been required. Recently, the MPB 70 protein was revealed to be a highly species specific protein secreted by Mycobaterium bovis, Resulting in the development of the Anigen Rapid Bovine TB Ab test kit. The new diagnostic blood test using the MPB 70 protein is now available.

# **Specifications**

- Principle: Immunochromatographic assay using Direct Sandwich Method
  - (Rec. MPB70 Ag capture)-(Antibody in blood)-(Rec. MPB70 Ag detector)
  - · Capture and detector material: Recombinant MPB70 antigen
- Purpose: Detection of antibodies (IgM, IgG) against Mycobacterium bovis
- Specimen: Bovine serum, plasma
- Reading time: 20 minutes
- Sensitivity: 90% vs. BTB positive confirmed by bacterial isolation
  - 85.1% vs. PPD test
- Specificity: 98.6% vs. PPD test
- No cross reaction against Mycobacterium avium, Mycobacterium tuberculosis
- Shelf life: 24 months
- Storage temperature: 2~30°C
- Packing size: 30 multi-devices/Kit, 10 individual devices/Kit

# **Special Features**

- Optimal screening method of BTB in the farm or laboratory
- Higher sensitivity than the conventional PPD Test
- High specificity as it reacts only with the antibody against M. bovis
- No additional equipment is required
- Easy to use, saving tim and labor

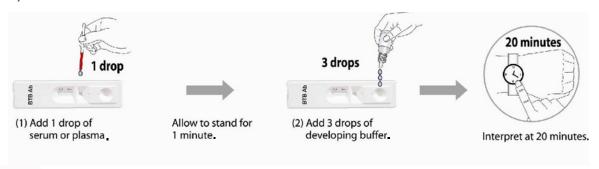
Clinical Evaluation Study				
	Serum from naturally M. bovis infected cow (n=49)	Serum from artificially M. bovis inoculated cow n=20)	Serum from M. bovis infected cow (n=69)	
Positive rate of Anigen B.TB Ab	41/49 (83.7%)	18/20 (90%)	59/69 (85.5%)	

#### [Comparison Table of Anigen BTB Ab Rapid Test vs. PPD Test]

Virus	PPD Test	Anigen B. TB Ab Rapid Test	Anigen's Advantage
Principle	Delayed hypersensitivity with a purified protein derivatives	Chromatographic Immunoassay: Humoral immunity	
Specimen	Intradermal direct injection	Serum, plasma	
Method	Intradermal injection of bovine tuberculin PPD     The subsequent detection of swelling at the site of injection 3 days later	Adding 3 drop of specimen     Reading result at 20 min.	Easy Test procedure
Reading Method	By Observation of increases in skin-fold thickness - No more than 2 mm : Negative - 2 ~ 4mm : Inconclusive ⇒>Another test after an interval of 42 days - More than 4mm : Positive	By Observation of line appearance 2 line => Positive 1 line => Negative	Simple
Testing time	Minimum 3 days	20 Min	Rapid Testing
Sensitivity	65% vs. Culture of M. bovis => High false positive rate due to the cross reaction with M. avium and others	90% vs. Culture of M. bovis	High Accurate
Early infection stage	False negative responses may occur	Less false negative responses may occur : By detection of IgM	Early detection
Late infection stage	False negative responses may occur	Less false negative responses may occur : By detection of IgG	

#### **Test Procedures**

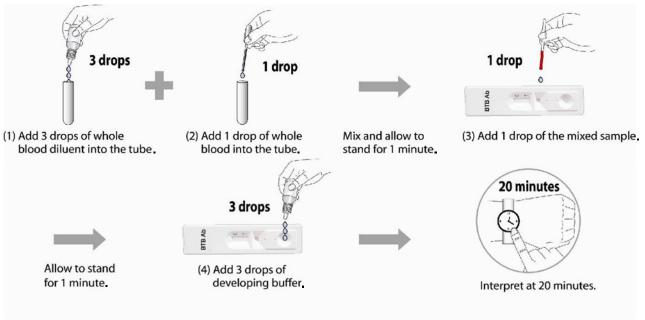
#### 1) For Serum or Plasma



# **AniGen Rapid Bovine TB Ab Test Kit**

2) For Whole blood





### Interpretation



