



ANIGEN Rapid Bovine TB Ab Test Kit

Catalogue No.: RB23-02

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.

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 *Mycobacterium bovis*, resulting in the development of the Anigen Rapid Bovine TB Ab test kit.ow available.



Specifications

- Principle: Immunochromatographic assay using direct sandwich method
- (Rec. MPB70 capture)-(Antibody in blood)-(Rec. MPB70 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: 18 months
- Storage temperature: 2~30 °C
- Packing size: 30 multi-devices/Kit, 10 individual devices/Kit

Clinical Evaluation Study

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

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, labor & time saving

What is the MPB70?

- (1) MPB70 was identified as a major antigen from culture filtrate protein of *M. bovis*.
- (2) MPB 70 is present predominantly in *M.bovis* and to a very limited degree in *M. tuberculosis* and other mycobacterial species (*M.avium* etc.).
- (3) For that reason, Anigen BTB Ab test kit doesn't have cross-reaction with other species.

Comparison Table of the Anigen BTB Ab Rapid test Vs PPD test

	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	1) Intradermal injection of bovine tuberculin PPD 2)The subsequent detection of swelling at the site of injection 3 days later	1) Adding 3 drop of specimen 2) 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 <i>M. bovis</i> => High false positive rate due to the cross reaction with <i>M. avium</i> and others	90% vs. Culture of <i>M. bovis</i>	High Accuracy
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	High Accuracy

Test Procedures

