

# Lyme Ab Test kit

( *Borrelia burgdorferi* )

## ◆ Introduction

Lyme disease is caused by the bacteria called *Borrelia burgdorferi*, which is passed to dogs through a bite from the deer tick. The tick must remain attached to the dog's skin for one to two days before the bacteria can be transmitted. Lyme disease can be a multi-systemic illness, with signs that may include fever, swollen lymph nodes, lameness, loss of appetite, heart disease, inflamed joints, and kidney disease. Disorders of the nervous system, while uncommon, may occur as well. A vaccine is available to prevent dogs from developing Lyme disease, although some controversy exists regarding its use. An owner should consult with a veterinarian for vaccine recommendations. Without treatment, Lyme disease causes problems in many parts of the dog's body, including the heart, kidneys, and joints. On rare occasions, it can lead to neurological disorders. Lyme disease most commonly is associated with symptoms such as a high fever, swollen lymph nodes, lameness, and a loss of appetite.

## ◆ Principles

SensPERT™ Lyme Ab Test Kit is designed to detect the antibodies of *Borrelia burgdorferi* in canine whole blood, serum or plasma. After being absorbed into the cellulose pad, the antibodies of *Borrelia burgdorferi* move and bind with gold-colloid complex of *Borrelia burgdorferi* antigen of the conjugate pad, forming Ag-Ab complex. This complex, then, forms Ag-Ab-Ag direct sandwich binding with antigen (Ag) of *Borrelia burgdorferi* in the nitrocellulose membrane. The test results can appear on Control (C) and Test (T) lines where the principles of immunochromatography are used.

## ◆ Characteristics

- 1) One-step rapid test of *Borrelia burgdorferi* antibodies
- 2) Rapid test results between 5 ~ 10 minutes
- 3) Expensive equipment not required
- 4) Easy storage and maintenance
- 5) High-purity and high-quality materials of the test kit increase its sensitivity and specificity.

## ◆ Materials (10 tests/kit)

- 1) Test ..... 10 units
- 2) Diluent (buffer) ..... 2 mL x 1 unit
- 3) Disposable dropper for sample collection ..... 10 units

## ◆ Composition

Specimen well (S: for dropping), Test line (T), and Control line (C) are marked on the device. Inside of it, the strip is composed of sample pad, conjugate pad, nitrocellulose membrane (test paper) and absorbent pad

## ◆ Effect

Detection of anti- *Borrelia burgdorferi* (Lyme) antibody from canine whole blood, serum, or plasma

## ◆ Uses

### 1) Specimen

Canine whole blood, serum or plasma

### 2) Test procedure

- a) When specimen and test kits are stored at cold circumstances (2~8 °C), put them at room temperature for 15~30 minutes before use.
- b) Take out a device from a pouch and place it on a horizontal surface.
- c) Using a dropper as a pipette, obtain the specimen and dispense 1 drop (10µl) of the fluid into the specimen well (S).
- d) When the specimen is completely absorbed into the specimen well (S), drop about 2 drops(80µl) of buffer.
- e) Read the test results between 5 ~ 10 minutes.

◆ Invalid result after 10 minutes

### 3) Interpretation of the results

A purple band should appear on the control line regardless of the test result. The presence of another band on the test line determines the result.

(1) Negative: Control line only appears.



(2) Positive: Both Test and Control lines appear.



(3) Retesting

a) Both Test and Control lines do not appear.



b) Test line only appears.



## Lyme Positive (+):

A positive result implies the dog has the antibody to *Borrelia burgdorferi*. The fact of positive result does not necessarily mean that it is in the infected status. This still does not address distinguishing active infection from exposure.

## Lyme Negative (-):

If the cat has no antibody to *Borrelia burgdorferi*, it would be better to plan of vaccination. If the dog is suspected to be infected but has negative result, it needs to be tested repeatedly 2 or 3 times more. The time of the test could have been the period of seroconversion.

## ◆ Further examinations

This test is for primary screening only. Consult veterinarians for further necessary examinations to obtain clinical test results.

## ◆ Precautions

- 1) Use for canine *in-vitro* diagnostic purposes only.
- 2) Use within 10 minutes after opening the pouch because the test kit is very sensitive to moisture and its effect may diminish.
- 3) Be careful of not touching the result window.
- 4) Every specimen should be used with different droppers.
- 5) For testing, the buffer included should be used.
- 6) Do not use specimen showing hemolysis or being contaminated with microbes, which may cause false positive or false negative result.
- 7) Deal with specimen carefully. They can deliver unknown virus or infectious bacteria.
- 8) Use disposable gloves when you suspect the infection caused by specimen. And wash your hands later.
- 9) Dispose solid wastes after sterilizing them at 121°C for over 1 hour.
- 10) Do not use the kit when its pouch is torn, sealing is not good in shape or expiration date is passed.

## ◆ Storage method

The test kits stored at 2~30°C can be used for 24 months after manufacturing. Do not keep them in a refrigerator. However, if they are stored under cold circumstances, keep them at room temperature for 15 ~ 30 minutes before use.

## ◆ Exchange

The test kits are manufactured under strict quality control system. Nevertheless, if they are deteriorated during delivery, ask our distributors for exchange.

## ◆ Liability

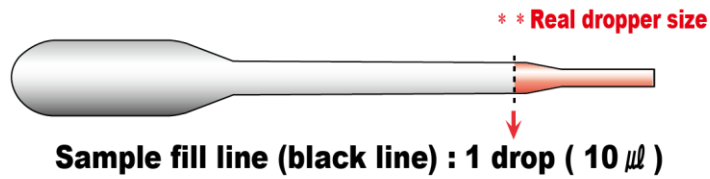
The entire risk due to the performance of this product is assumed by the purchaser. The manufacturer shall not be liable for indirect, special or consequential damages of any kind resulting from use of this product.

Control Line (C): The line should always appear regardless of the presence of the antibodies of *Borrelia burgdorferi*. If this line does not appear, the test should be considered invalid. This might be because of impure buffer or the lack of specimen. It should be tested again with another kit.

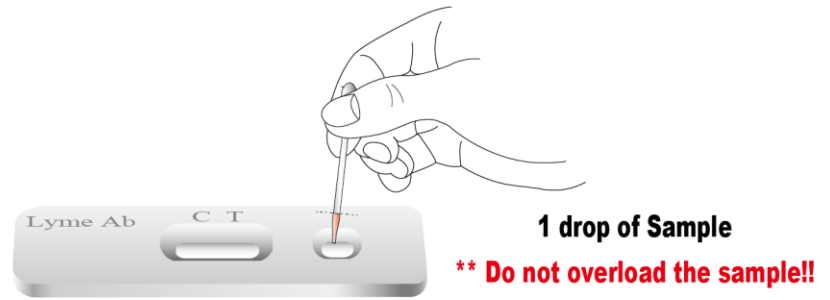
Test Line (T): The presence of antibodies of *Borrelia burgdorferi* determines the test line.

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# Instruction for Lyme Ab test



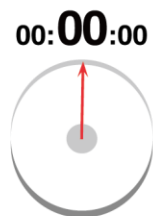
**1**  
Sampling  
& loading



**2**  
Absorption

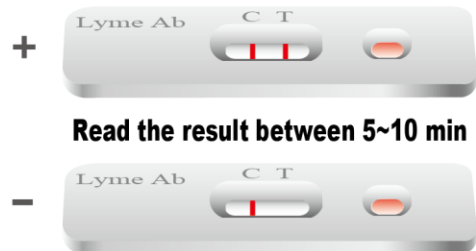


**3**  
Buffer addition



**4**  
Reading

00:05:00~00:10:00



**5**  
Discard

00:10:00



**Discard the used device**  
**In valid result after 10 min**

