



# Foal IgG Test kit

Foal Immunoglobulin G test kit

LS13

# SensPERT®

## Foal IgG Test kit

### ◆ Introduction

The objective of the SensPERT Foal IgG Test kit is to determine Foal IgG antibodies titer in foal. Antibody titer against Foal IgG is measured by solid phase immunochromatographic assay for the rapid and semi-quantitative detection immunoglobulin G (IgG) in foal whole blood, serum or plasma. Protection in newborn foal is mainly by maternally derived antibodies. The maternally derived antibodies strongly protect foal from infection. Thus, levels of maternal derived antibodies can help diagnose what extent.

### ◆ Principles

SensPERT Foal IgG Test Kit is designed to detect the IgG of foal in whole blood, serum or plasma. After being absorbed into the cellulose pad, the IgG of foal move and bind with gold-colloid complex of goat anti-horse IgG of the conjugate pad, forming Ab-Ab complex. This complex, then, forms Ab-Ab-Ab direct sandwich binding with the antibodies of foal IgG in the nitrocellulose membrane. The test results can be shown through the appearance of Control and Test lines where the principles of immunochromatography are used.

### ◆ Characteristics

- 1) One-step rapid test of Foal IgG 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 (5 tests/kit)

- 1) Test ----- 5 unit
- 2) Diluent (buffer) -----16 mL x 5 unit
- 3) loading buffer -----3 mL x 1 unit
- 4) Disposable loops ----- 5 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 newborn foal IgG from foal whole blood, serum or plasma

### ◆ Uses

- 1) **Specimen**  
Foal whole blood, serum or plasma
- 2) **Test procedure**
  - a) When specimen and test kits are stored at cold circumstances (2~8℃), 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 loop, carefully immerse only the loop tip into the sample. Visually confirm that the loop is filled
  - d) Transfer the filled loop by immersing and twirling the loop tip in the bottle of sample diluent.
  - e) Mix enough sample and diluent buffer by inverting the tube. Hold the sample diluent bottle vertically and dispose of the first 3~5 drops from the bottle.
  - f) Using a bottle, dispense 1 drop of the fluid into the specimen well (S), add 1 drop (40μℓ) of loading buffer.
  - g) Read the test results 5 ~ 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.

Control Line (C) : The line should always appear regardless of the presence of foal IgG.

If this line does not appear, the test should be considered invalid.

This might be because of deterioration of the kit or the lack of specimen. It should be tested again with another kit.

Test Line (T) : The titer of foal IgG antibodies is determined by Comparing the

intensities of lines between T line and C line.

- 1) Less than 400mg/dL IgG (< 400mg/dL)



- 2) 400 to 800mg/dL (400-800 mg/dL)



- 3) Approximately 800mg/dL IgG



- 4) Greater than 800mg/dL IgG (> 800mg/dL)



- 5) Retesting

a) Control lines do not appear.

b) Test line only appears.



### 4) Example of Test Results

| Line Intensity (C vs. T) |        | IgG Level           | Interpretation                                                        |
|--------------------------|--------|---------------------|-----------------------------------------------------------------------|
|                          | C >> T | < IgG 400           | Supplement with colostrum                                             |
|                          | C > T  | IgG 400 - 800 mg/dL | Monitor foal. Supplement if foal shows signs of disease, or weakness. |
|                          | C = T  | IgG = 800 mg/dL     | Normal                                                                |
|                          | C < T  | IgG > 800           | Very good transfer                                                    |

### ◆ Further examinations

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

### ◆ Precautions

- 1) Use for equine *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 invalid results.
- 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℃ 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℃ 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.

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# Instruction for Foal IgG Ab test



Loop tip : Immerse the loop tip only

## 1

### Sampling



Transfer the filled loop by immersing and twirling the loop tip in the diluent bottle of the sample diluent

## 2

### Mixing



Mix enough sample and diluent buffer by inverting the tube

Hold the sample diluent bottle vertically and dispose of the first 3-5 drops from bottle



## 3

### Loading

1 drop of diluent buffer



+

1 drop of Loading buffer



## 4

### Reading

00:05:00~00:10:00



IgG=800mg/dL



Read the result between 5 ~ 7 min

IgG<800mg/dL



## 5

### Discard

00:10:00



Discard the used device  
In valid result after 10 min



# Foal IgG Test kit

## Foal Immunoglobulin G test kit

|                   |                                                                                                                                                                                                                                 |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Catalog number    | LS13                                                                                                                                                                                                                            |
| Summary           | Detection of Immunoglobulin G (IgG) from equine serum, plasma or whole blood within 10minutes                                                                                                                                   |
| Principle         | One-step immunochromatographic assay                                                                                                                                                                                            |
| Detection Targets | Immunoglobulin G (IgG)                                                                                                                                                                                                          |
| Sample            | Foal whole blood, plasma or serum                                                                                                                                                                                               |
| Reading time      | 5 ~ 10 minutes                                                                                                                                                                                                                  |
| Sensitivity       | 100.0 % vs. Radio-Immunodiffusion (RID)                                                                                                                                                                                         |
| Quantity          | 1 box (kit) = 5 devices (Individual packing)                                                                                                                                                                                    |
| Contents          | Test kit, Diluent buffer, loading buffer and Disposable loops                                                                                                                                                                   |
| Storage           | Room Temperature (at 2 ~ 30°C)                                                                                                                                                                                                  |
| Expiration        | 24 months after manufacturing                                                                                                                                                                                                   |
| Caution           | Use within 10 minutes after opening<br>Use appropriate amount of sample ( 1ul of a loop )<br>Use after 15~30 minutes at RT if they are stored under cold circumstances<br>Consider the test results as invalid after 10 minutes |

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\*\* In valid result after 10 min



# Foal IgG

## Information

Foals are born with little or no circulating immunoglobulins. Therefore, they are without protection against challenge from invasive microorganisms or other antigenic substances. The passive transfer of immunity occurs after birth via ingestion and absorption of colostrum. Up to 20% of newborn foals experience a partial or total failure of passive transfer, and these animals are at high risk of serious illness or death. Failure of this passive transfer can occur as a result of premature lactation, deficient suckling, malabsorption or low IgG levels in colostrum.



## Diagnosis

An IgG test can identify if a failure of passive transfer has occurred or not. This test detects the levels of IgG in the blood which are indicative of the success or failure of the passive transfer. An adequate level of IgG is 800 mg/dl of serum or greater. Levels less than 800 mg/dl indicate inadequate passive transfer.

# Foal IgG

## Prevention and Treatment

A rapid identification of low IgG levels is very important for the early initiation of treatment of immunodeficient foals. The initial testing should be done when the foals are about 12 hours old or as soon as possible thereafter. To determine the success of IgG supplementation, post-treatment is recommended.

## Interpretation of results

| Line Intensity ( C vs. T )                                                          |           | IgG Level                             | Interpretation                                                           |
|-------------------------------------------------------------------------------------|-----------|---------------------------------------|--------------------------------------------------------------------------|
|  | $C \gg T$ | $< \text{IgG } 400$                   | Supplement with colostrum                                                |
|  | $C > T$   | $\text{IgG } 400 - 800 \text{ mg/dL}$ | Monitor foal.<br>Supplement if foal shows signs of disease, or weakness. |
|  | $C = T$   | $\text{IgG} = 800 \text{ mg/dL}$      | Normal                                                                   |
|  | $C < T$   | $\text{IgG} > 800$                    | Very good transfer                                                       |