



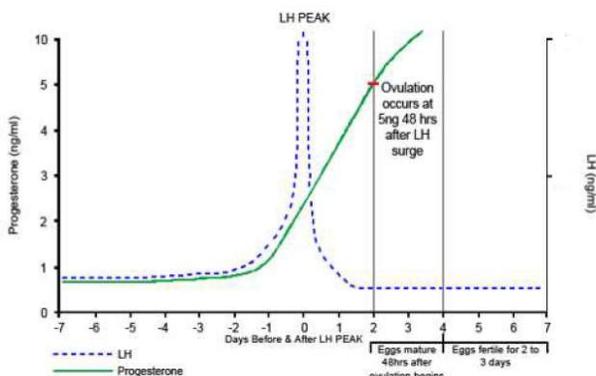
## TruStrip™ Canine Progesterone Ovulation Rapid Test

*A one step test for the semi-quantitative detection of Progesterone in Canine serum or plasma*

### Introduction

There are multiple hormones that help regulate the estrus (heat) cycle and pregnancy in dogs. These include Estrogen (E2), Luteinizing hormone (LH), and Progesterone (P4). Understanding how the hormone levels change can help in determining the best time to breed and when to anticipate whelping. Most mammals ovulate when the estrogen in the blood is increasing. Dogs, however, ovulate when the estrogen level is declining, and the progesterone level is increasing. Progesterone levels and LH levels are the best indicators of when ovulation will take place and when the optimal time to breed is. Progesterone levels are also useful in determining whelping dates which allows the owner to reserve the appropriate date on the calendar or schedule a C-section weeks in advance.

All progesterone testing must first confirm that the dog is in heat (estrus). After heat is confirmed, the test can be performed every other day to detect an initial rise in progesterone levels. During estrus, the progesterone concentration is typically lower than 1 ng/ml until the day before the LH surge. The day of the LH surge, serum progesterone concentrations rise to 2-3 ng/ml. Ovulation occurs at progesterone levels of 5-10 ng/ml. The optimal time to breed is 3-5 days after ovulation has occurred.



### Principle of the test

The progesterone rapid test is a semi-quantitative competitive test. The test contains a nitrocellulose membrane which is pre-coated with Progesterone on the test line region of the strip. A separate pad contains a Progesterone antibody conjugated to gold nanoparticles. As serum is applied to the strip, it migrates upwards by capillary action which causes the Progesterone conjugated antibody to be released. The Progesterone conjugated antibody in the absence of Progesterone in serum, will bind to the immobilized Progesterone on the membrane, resulting a pink colored line in the test line region. If Progesterone is present in serum, the antibody will bind to the Progesterone in serum and not to the Progesterone that is immobilized on the test line region. As the concentration of Progesterone in serum increases, the intensity of the test line region decreases. The assay is optimized to result in the disappearance of the test line at serum progesterone concentrations of approximately 10 ng/ml or higher.

### Precautions

- Do not use the test after the expiration date
- Do not re-use the test
- Wear protective clothing such as disposable gloves when specimens are being tested
- Handle all specimens as if they contain infectious agents. The cassette should be disposed according to federal, state, and local regulations
- Humidity and temperature can adversely affect results
- Use the test within 20 minutes of opening the foil pouch

### Storage and stability

The kit can be stored at room temperature or refrigerated (2-25°C/35-77°C). Do not freeze. The test cassette must remain in the sealed pouch until use. The kit is stable until the date printed on the pouch.

### Kit contents

**Materials provided:** Test cassettes and transfer pipette

**Materials required but not provided:** Centrifuge and serum or plasma collection tubes

### Specimen collection and preparation

**Serum (S):** Collect whole blood by venipuncture into a red-top Vacutainer® tube. Allow the blood to clot by leaving it at room temperature for 15-30 minutes. Centrifuge the blood for 10 minutes at 1,000xg and collect the supernatant.

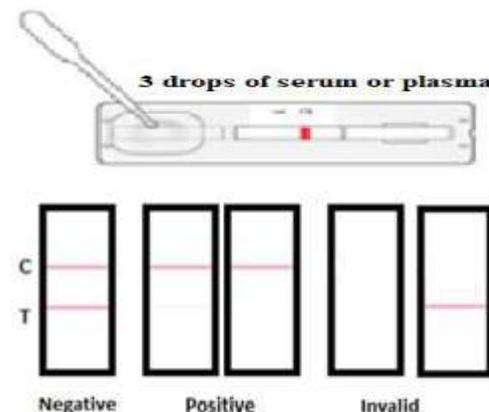
**Plasma (P):** Collect whole blood by venipuncture into a Blue top (Citrate) or Lavender (EDTA) Vacutainer® tube. Centrifuge the blood for 10 minutes at 1,000xg and collect the supernatant.

**Note:** Samples must not contain any red blood cells or any significant amount of hemolysis (red color) or lipemia (white color).

### Directions for use

**Allow the test cassette to come to room temperature (15-25°C/59-77°F) prior to testing.**

1. Remove the test cassette and transfer pipette from the foil pouch. Lay the device on a flat and dry surface.
2. Use the transfer pipette to transfer the sample by depressing the bulb of the pipette. Dispense 3 drops to the test cassette
3. Begin a timer for 1 hour, at 1 hour observe the results. Do not interpret the results after 1 hour. **Note:** The results will typically be visible within 10-15 minutes but 1 hour is needed for complete development of the test line region.



### Interpretation of results

**Negative:** Two lines of similar intensity appear, one in the test region (T) and one in the control region. This indicates that the Progesterone is below 1 ng/ml

**Positive:** One pink line appears in the control region (C). An extremely faint line or no line appears in the test line region. This indicates that Progesterone has risen above 5 ng/ml.

**Invalid:** A control line fails to appear. Insufficient specimen volume or incorrect procedural technique are the most likely cause. Check the expiration date. Repeat the test with a new cassette. If the problem persists, discontinue using the kit and contact the manufacturer.

### Quality Control

A pink line appearing in the control region (C) is the internal procedural control. External controls are not supplied. It is recommended that a positive and negative control (do not use water) be tested as good laboratory practice. If you require external controls, contact ADI to have controls formulated.

## Interpretation of results

The Canine Progesterone rapid test is a semi-quantitative competitive test. As the concentration of Progesterone in the sample increases, the intensity of the test line decreases.



**0-1 ng/ml:** If physical signs of heat have occurred, this indicates the dog is in estrus. A test line will appear that is slightly more intense than the control line.



**2.5 ng/ml:** A test line appears that is roughly the same or slightly less intense than the control line. This indicates that Progesterone is beginning to rise and ovulation can occur soon. If LH testing was performed, this would be the expected result during a true LH surge.



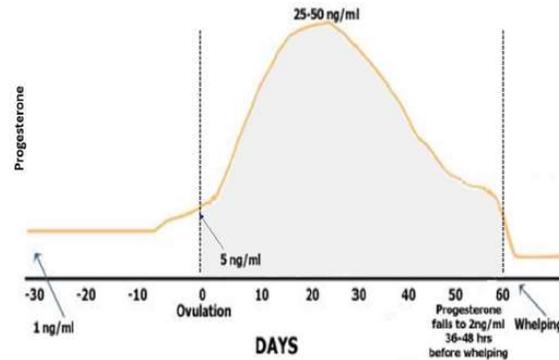
**5-9 ng/ml:** An extremely faint test line appears in the test line region. This indicates that ovulation has occurred. Eggs require 2 days to mature after ovulation. The optimal time to breed is within 3 days after the eggs have matured.



**≥10 ng/ml:** No line appears in the test line region.

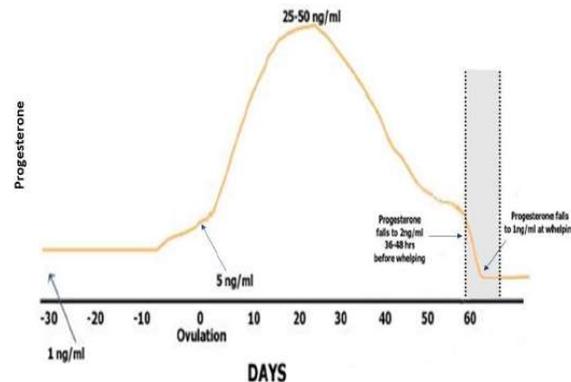
For any Progesterone testing program, it is important to first confirm that the Progesterone value is at baseline levels (0-1 ng/ml). The TruStrip™ Canine Progesterone test is intended to be used to identify increasing Progesterone concentrations. If the first test indicates that the Progesterone levels are above 10 ng/ml, then you will be unable to identify when ovulation has occurred and when the optimal time to breed is.

## Maintenance of pregnancy



The TruStrip™ Canine Progesterone test can be used to monitor Progesterone concentrations during pregnancy. Progesterone concentrations above 5 ng/ml are needed to maintain pregnancy. If the levels fall below 5 ng/ml, then the dog will be at a high risk of abortion. The TruStrip™ Canine Progesterone can be used to monitor Progesterone concentrations after ovulation. In a healthy dog, an extremely weak or no test line would be observed. If low levels of progesterone are observed, then the dog may need to be supplemented with Progesterone to avoid abortion. A veterinarian should be consulted for the best course of action.

## Approximate time of whelping



The TruStrip™ Canine Progesterone can also be used to determine the approximate time of whelping. On average, whelping occurs about 63 days after ovulation. 61 days before whelping, Progesterone concentrations will fall rapidly below 2 ng/ml. On the day of whelping, the Progesterone concentration will fall to 1 ng/ml. The expected result would be a visible test line that is roughly the same intensity as the control line.

## Related items available from ADI

Catalog#	Description
BP4-RDT-5 Ovulation test (milk)	TruStrip™ Bovine Progesterone
EP4-RDT-5 Ovulation Test (serum)	TruStrip™ Equine Progesterone
CLH-RDT-10 Ovulation Test (serum)	TruStrip™ Canine Luteinizing Hormone
1955 Quantitative	Progesterone ELISA Kit, 96 tests,



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