

## Bovine Pregnancy Rapid Test Kit

Early diagnosis of pregnancy is of great importance in modern animal industry due to the high cost of feed and labor, as well as to realize the maximum life-time production of dairy cows and is the main keys to achieve

successful breeding program and infertility detection. Development of alternate, cheap, easy to run and accurate methods for early pregnancy detection in heifers is a basic control method of animal. Especially after artificial insemination is widely used. The earlier the pregnancy is determined, the earlier feeding plans will be performed. Pregnancy testing is one method of monitoring reproductive efficiency and detecting any problems early in the breeding cycle. The key to profitability for all beef breeding enterprises is high reproductive efficiency. This means achieving:

- 95% calves weaned to cows joined
- an average calving interval of 12 months
- a calving spread of 10 weeks or less

Hence the early detection of **non-pregnant** cows is the main benefit from pregnancy testing

### Benefits of using rapid test in early pregnancy detection

- **Early diagnosis:** Cows can be tested after 28 days post-breeding.
- **Simplifies test procedure:** Serum or EDTA plasma samples can be directly tested without any other analyzer.
- **Quick and visual result:** The result can be visually interpreted in 20-25 min, which can be operated without professional training.
- **Safe for embryos:** Collect blood samples from the cow's tail during pregnancy, which is safer than rectal palpation and causing less stress response than the ultrasound method.
- **High accuracy and cost-effective:** With the accuracy of 98.67% and specificity of 98.0%, it can classify cows as either pregnant or non-pregnant as accurate as of the ultrasound method but cost less.



## Rojan Bovine Pregnancy Rapid Test Kit

Cat No.: 1402-CPT

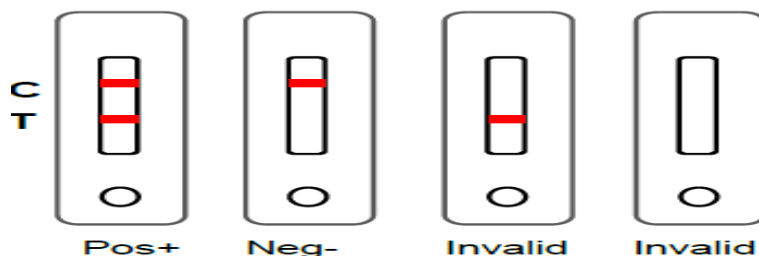
Early diagnosis of pregnancy is of great importance in modern animal industry due to the high cost of feed and labor. Especially after artificial insemination is widely used, the earlier the pregnancy is determined, the earlier feeding plans will be performed. The general methodology to determine bovine pregnancy is by observation or ultrasound scanners, either of which is not quite economic in small or middle size farms. The current bovine pregnancy rapid test kit is a 15min lateral flow immunoassay kit that utilizes the high affinity of monoclonal antibody against bovine pregnancy associated glycoprotein (PAG), which can easily identify the concentration and presence of PAGs. Basic components of test strip includes: a) Conjugate pad, which contains detection antibody, colloidal gold conjugated; b) a nitrocellulose membrane strip containing two lines T: Anti-bPAG and C: Goat Anti Mouse. Test sample that is added to the sample well, with adequate amount of buffer migrates from the sample pad along the conjugate pad where any PAG present in the sample will bind to the colloidal gold conjugate. The sample then continues to migrate across the membrane until it reaches the capture zones where the antibody-antibody conjugate complex will bind to the immobilized anti-bPAG antibody (on test line) producing a visible line on the membrane. If the respective antibody is not present in the sample, no reaction occurs in the capture zones and no test line is formed in the zone corresponding to bPAG Antibody. The sample then migrates further along the strip until it reaches the control zone, where it produces a second visible line on the membrane. This control line indicates that the sample has migrated across the membrane as intended. The test has a cut-off of 2 ng/ml of bPAG 1. Recent studies indicate that pregnancy is 94% likely with a PAG concentration > 2ng/ml from the 30th day onwards and up to 99% likely with a conc > 2 ng/ml from the 40th day.

**-Application:** this kit is for bovine pregnancy testing in cow serum or plasma from 28 days after mating or AI. Use the test within 1h after opening the foil pouch. This test is used for only once.

**-Kit components:** Rapid Test Cassette in foil pouch. Pipette, Sample buffer

**-Operations:** Read the instructions before experiment. Serum samples should be freshly collected or should be frozen at -20o C or below. Bring the test kit and the test samples to room temperature (20-30o C). Take cassette from the kit package, make proper marks. Take 60ul serum/plasma sample into the sample well on the cassette, then add 60ul (2 drops) of sample buffer with the buffer vial in the kit. Wait for 15min and then determine the result. Results observed after 30min is invalid.

**- Result interpretation:** Positive (+) if line C and line T are visible and red. Negative (-): if line C is red, and line T is not visible. Invalid (x): Line C has no color. In this case, please use another test or contact your distributor.



**Note:** positive result needs to be confirmed by testing of sample from the cow on the next day.

**-Reliability:** In field test of 368 cows, this kit demonstrated 98.3% specificity and 97.5% sensitivity. The total accuracy is over 97%. However, since this is not a confirmatory test, positive results shall be confirmed by other methods.

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