ubi bioquickVET Bovine Pregnancy Rapid Test

**INTENDED USE**

ubi quickVET Bovine Pregnancy Rapid Test is a semi-quantitative Immunochromatographic assay for the detection bovine Pregnancy Associated Glycoprotein in Bovine serum, plasma or whole blood. ubi quickVET Bovine Pregnancy is only intended for initial screening and reactive samples should be confirmed by a supplemental assay such as ELISA.

**SUMMARY & TEST DESCRIPTION**

Pregnancy associated glycoprotein (PAG) belongs to a large group of glycoproteins that are synthesised in binucleated trophoblast cells during pregnancy and released into the maternal bloodstream during fusion with uterine epithelial cells. It has been proven that the detection of PAG in the maternal blood is a highly specific and reliable parameter for diagnosing pregnancy and monitoring gestation. The advantage of PAG compared to progesterone assays lies in the fact that PAG is formed from an intact trophoblast and thus provides direct proof of pregnancy. Pregnancy can be confirmed by means of a PAG-1 (pregnancy-associated glycoprotein-1) assay with 98% accuracy between 30 and 35 days after insemination. This figure can increase to a maximum of 99% after the 40th day. PAG levels in the maternal blood clearly rise from day 24 to day 28 post-conception. Hence pregnancy can be diagnosed right from the early stages.

ubi quickVET Bovine Pregnancy Rapid Test utilizes monoclonal anti bPAG antibody to capture the bPAG. The captured bPAGs are detected using colloidal gold conjugated detection antibody.

**TEST PRINCIPLE**

ubi quickVET Bovine Pregnancy Rapid Test works on chromatographic Immunooassay. 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 immobilised 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.

**CUT-OFF OF THE TEST**

The test has been developed to analyze serum, plasma or whole blood samples in animals. The test has a cutoff of 2 ng/ml of bPAG. Recent studies indicate that pregnancy is 94% likely with a PAG concentration > 2 ng/ml from the 30th day onwards and up to 99% likely with a concentration > 2 ng/ml from the 40th day.

Note: The PAG concentration increases steadily in the course of time of a pregnancy. The earlier the PAG concentration is measured, the lower the measured concentrations and the weaker the test lines may appear. Even faint and weak test lines are considered as positive.

**SAMPLE PREPARATION**

- Blood Specimen: Collect the whole blood using a Lancet, by pricking on the earlobe or by a syringe or vacutainer into a container containing anticoagulants such as heparin, EDTA or sodium citrate by venipuncture. [a video demonstration of ear prick blood collection method is available at http://www.youtube.com/watch?v=VK0D-mQ2H4]
- Serum: Collect the whole blood using a syringe or vacutainer (NOT containing anticoagulants such as heparin, EDTA or sodium citrate) by venipuncture. Leave the syringe or vacutainer, preferably at an angle, to settle for 30 minutes. Once blood coagulates, centrifuge the blood to get serum specimen as supematant.
- If the specimen is not used for testing immediately, they should be refrigerated at 2~8°C.
- For storage period longer than 5 days, freezing is recommended. Store at -20°C
- The specimen should be brought to room temperature prior to use.

**TEST PROCEDURE**

1. Take out the test card from the foil pouch and place it on a horizontal surface.

**WHOLE BLOOD**

- Collect one drop of blood from the ear prick site using the dropper provided.
- With the dropper provided add 1 drop of Blood into a sample vial followed by addition of 4 drops of assay diluent.
- Mix well the diluted specimen.
- Add 3 drops of the diluted blood sample to the sample well “S”
- Wait for 10 minutes and interpret results. The result is considered invalid after 20 minutes.
- All results where control band does not appear are considered invalid

**SERUM/PLASMA**

- Add One drop of Serum to the Sample well “S”
- When the sample is fully absorbed, add 2 drops of the diluent provided with the assay to the sample hole.
- Wait for 10 minutes and interpret results. The result is considered invalid after 20 minutes.
- All results where control band does not appear are considered invalid

**INTERPRETATION OF TEST RESULT**

Positive: Color bands at position C and T.

Negative: Color band at position C.

Invalid: Color band at C does not appear.

**REFERENCES**


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