

Detection and Quantification of PRRSV

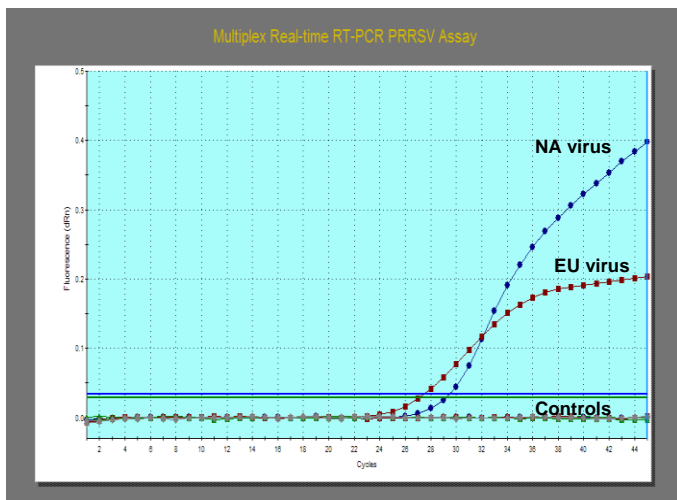
Gallant Custom Laboratories is offering a real-time RT-PCR test which can be multiplexed for the simultaneous detection of North American (NA) and European (EU) strains of Porcine Reproductive and Respiratory Syndrome virus (PRRSV) in swine.

PRRS is characterized by abortions in sows and gilts and respiratory symptoms, especially in young pigs and is one of the most economically important diseases in swine. Transmission of PRRS virus through semen to sows and gilts has been well documented, making effective monitoring of boar studs essential in the prevention of downstream infection.

Since this is complicated by time restraints, real time RT-PCR is an ideal solution for providing cost-effective, rapid and sensitive results.

How Does the Test Detect PRRSV?

Real-time PCR utilizes fluorescence detection and sophisticated software to measure the production of PCR products as the amplification reaction occurs. This reaction is conducted in a single tube that is not re-opened once the reaction has been initiated to minimize the risk of cross-contamination of samples. The technique employs primers and probes selected from the highly conserved nucleocapsid gene (ORF 7) and the 3'-untranslated region of the PRRSV genome. The methodology utilizes 3 primer sets from these regions to improve sensitivity and detection of NA variant strains.



Benefits of the Test

- The real-time RT PCR test is a robust test and minimizes false positives by utilizing a closed tube system to prevent cross contamination.
- It is highly sensitive, detecting the presence of both NA and EU PRRSV at 5 viral particles in the sample tested, corresponding to approximately 1TCID₅₀. This sensitivity is similar to that seen with the nested PCR technique with reduced time requirements and risk of contamination and associated false positives.
- This multiplexed test will detect, differentiate and when requested, quantify both NA and EU PRRSV strains simultaneously, providing on-going screening for the possible emergence of EU strains.
- Positive and negative controls are included in every PCR reaction run. The negative controls include an extraction control and a no-template PCR control to ensure that no RNA contamination of the test system occurred from extraction to PCR amplification. The positive controls ensure that all parameters of the test were satisfactory for the detection of NA and EU PRRSV RNA.
- We archive samples for a minimum of 30 days to allow for retesting if requested.
- We offer timely service and rapid turn around time with results provided the next business day for submissions received before 10 AM.
- The cost effectiveness and speed of the test allows for increased monitoring, improving the likelihood of early detection.