AriaDNA

Real-time microchip PCR analyzer

Ready-to-run microchips for identification of African swine fever

African swine fever virus (ASFV), a large double-stranded DNA agent causes complex, hemorrhagic, and contagious disease in domestic and wild swine leading to significant socio-economic impact. In the early diagnosis of ASFV, passive surveillance involving clinical signs and fatality data of swine is considered pivotal. However, for a rapid and early diagnosis, the surveillance must have adequate laboratory support in detection & identification of AFSV. Recommended tests for virus detection include enzyme-linked immunosorbent assay (ELISA), and PCR assays. Although ELISA allows large-scale testing of the samples, it has been reported as having lower analytical sensitivity than conventional or real-time PCR tests.

To improve the desired rapidity, cost-effectiveness, sensitivity, and specificity of the detection process, Lumex is offering ready-to-run microchip kit (#007SF55) with real-time PCR analyzer AriaDNA. This technology has ability to run pathogen testing both in the laboratory and on swine farms. In addition, for reliable results, a set of positive & negative controls for each of the pathogen, internal control (IC) as an internal inhibition monitor that is amplified in parallel with the target DNA are also included in the microchip.

FEATURES AND ADVANTAGES

Advanced qPCR for reliable, fast and cost-effective diagnostics of African swine fever virus:

- Increases reliability of detection and minimizes operator errors
  - Ready-to-run microchips
  - Internal control assay for each sample
- Positive and negative template controls on a microchip
- Simplifies qPCR reaction set up
  - All reagents are pre-dispensed and dried in microchip wells
  - Only the addition of a DNA sample to the microchip is needed
- Shortens qPCR analysis time to result
  - PCR run is completed in 35 min due to fast temperature transitions
- Simplifies shipment & storage of the microchip kits
  - Shelf-life of lyophilized PCR reagents on microchip is up to 6 months

USER FRIENDLY SOFTWARE

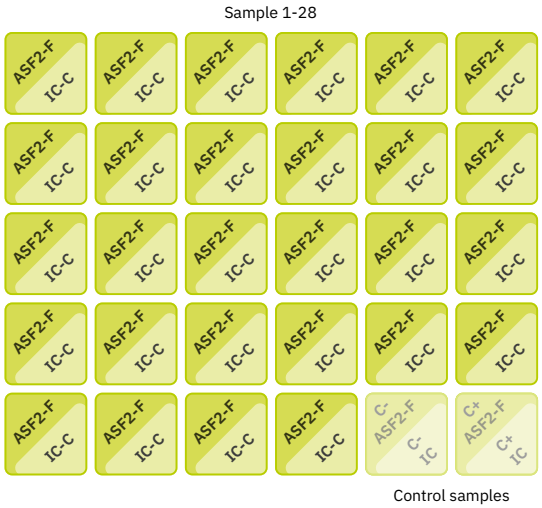
Designed to acquire real-time PCR data and allows simplified operation steps. It offers auto-interpretation of results combined for all targets (including IC), allows manual analysis of data, and prints report in compliance with 21 CFR part 11 requirements.

FLUORESCENCE DETECTION

AriaDNA 2 is two-channel analyzer: 1. FAM/SYBR Green, 2. ROX/CY5

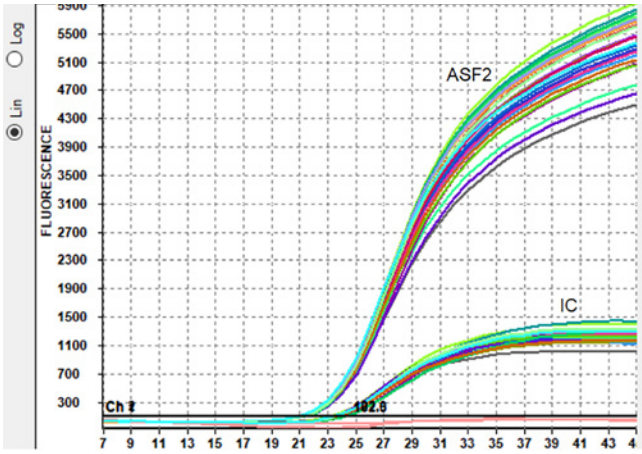
Channel 1 (FAM)	1. *African Swine Fever Virus* (ASF2)
Channel 2 (Cy5)	1. Internal Control (IC)

TEST PANEL OF PATHOGENS



African Swine Fever Virus (ASF2-F); Internal control (IC-C), **C–** (Negative control sample); **C+** (Positive control sample). Up to 28 samples can be tested on a single microchip.

AMPLIFICATION PLOTS



Amplification plots of controls
1. ASF2-F (African Swine Fever Virus)
2. IC (Internal control)

ANALYSIS WORK-FLOW

1. Extract DNA from the test samples using suitable DNA extraction and purification kit.
2. Add extracted DNA into the ready-to-use microchip that contains lyophilized reagents.
3. Insert the microchip into the AriaDNA analyzer and run the analysis with the software on a computer.
4. Obtain real-time PCR results in 35 minutes. The report can be printed.

RESULTS OF PATHOGEN DETECTION

1. Real-time PCR data for up to 28 samples is obtained for a panel of 2 targets
2. Results for 2 assays (pathogen and internal control targets) are interpreted by AriaDNA software to obtain qualitative results for ASF in each sample.

Disclaimer:
For research use only (RUO). This kit is designed for in vitro qualitative detection of test target genomes with a broad detection profile. We reserve the right to change, alter, or modify any product to enhance its performance and design, including the revision of assay sequences. Presumptive positive samples should be confirmed as per the laboratory standard operating procedures or by following the appropriate reference method confirmation. As with any test method, results obtained from use of this product do not constitute a guarantee of the quality of the sample source. The purchase of this product includes a non-transferable right for using only this quantity of product for the purchaser's own use. Microchip is a single use device.