African Swine Fever Virus Panel

Virus Research, Virus WGS Analysis

ASFV DETECTION WORKFLOW
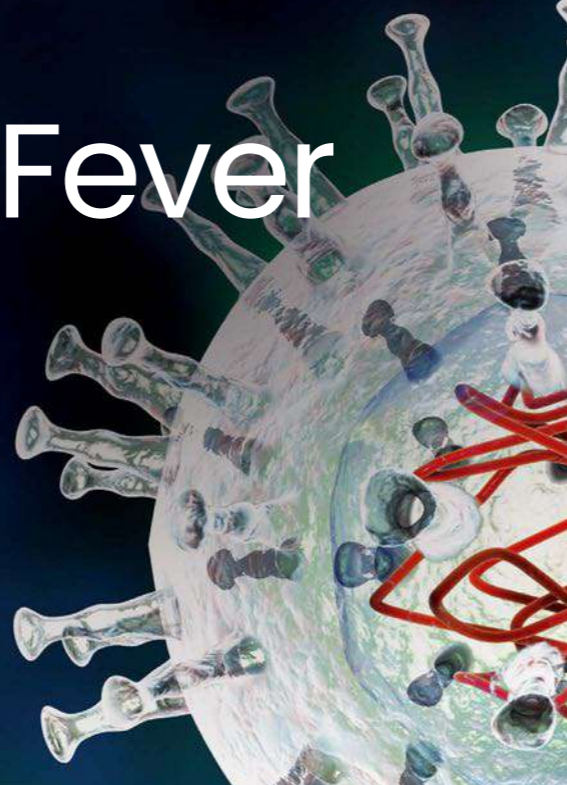
DESCRIPTION

The high morbidity and mortality of African swine fever (ASF) has a severe impact on the global swine industry. However, currently there is no effective treatments or vaccines commercially available. The ASFV panel is designed to identify 26 strains of genotype II virus in a single NGS run. The panel can be utilized for identifying the cause and infection route.

KEY FEATURES

1. Swine-specific blocking reagent	Provides swine-specific blocking reagent that effectively blocks repetitive sequences and allows for selectively retrieving the ASFV sequence
2. Comprehensive analysis of ASFV subtypes	Detect genotype II virus subtypes with specifically designed probes
3. Convenient testing	Highly accurate results from blood samples, often considered more challenging due to the lower viral load compared to concentrated culture supernatant or spleen tissue sample

SPECIFICATION

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Target viruses*	ASFV 26 strains
Target size	192 kb
Mutation type	Virus detection, Virus genome assembly
Sample type (amount)	Swine blood (50 ng of fragmented DNA)
Platform	All sequencers from Illumina, Thermo Fisher, MGI, PacBio, and Oxford Nanopore
Bioinformatics pipeline	Celemics ASFV Pipeline (FASTQ to Result)

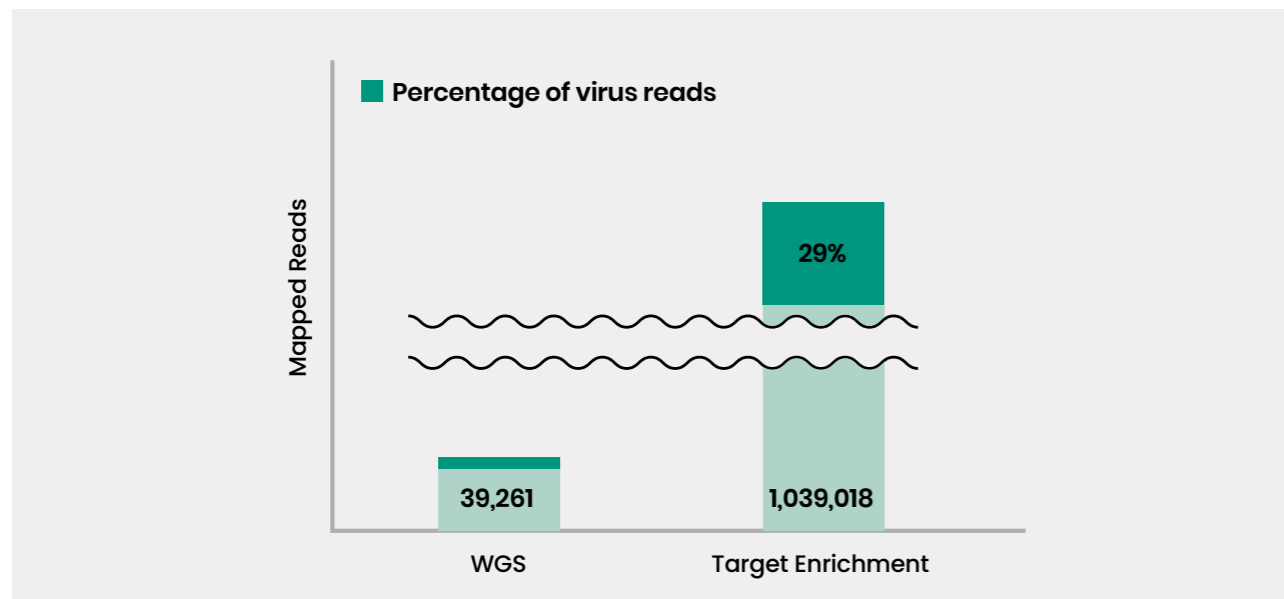* Gene Add-On Service: Genes can be added by customer's request

PERFORMANCE

Advanced target enrichment technology enabling exceptional capture performance with high coverage and uniformity
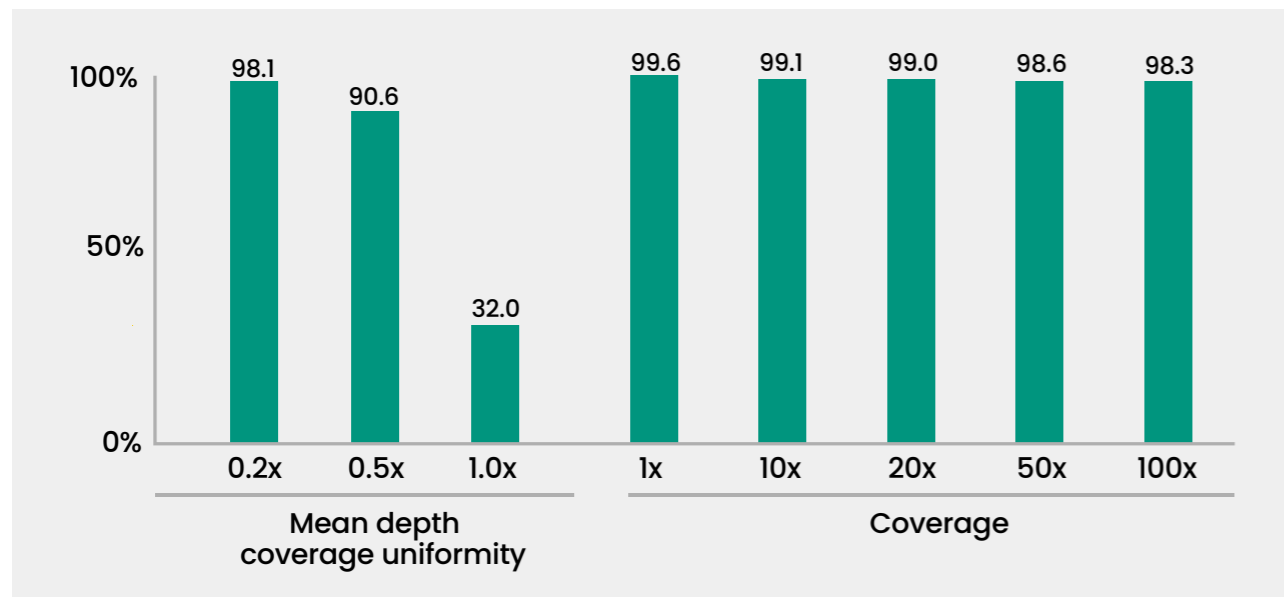
The panel validation result shows high uniformity and high coverage at all levels.

With the same sequencing amount, target enrichment NGS yielded 29% virus reads out of a total of 1,039,018 reads, while whole genome sequencing (WGS) yielded 0.5% virus reads (green) out of a total of 39,261 reads.