Foot-and-Mouth Disease Virus (FMDV) Detection Solution

Foot-and-mouth disease (FMD) is a severe, highly contagious viral disease that affects cattle, swine, sheep, goats, and other cloven-hoofed animals (artiodactyls). FMD is characterized by fever and vesicular lesions on the tongue and lips, in the mouth, on the teats, and between the hooves.

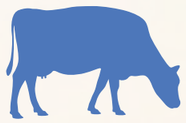
The organism which causes FMD is an aphthovirus of the family Picornaviridae. There are seven serotypes (A, O, C, SAT1, SAT2, SAT3, and Asia1) that are endemic in different countries worldwide. Infection with any one serotype does not confer immunity against other serotypes. Among them, serotype O is the most widely distributed and the main serotype causing FMD outbreaks and epidemics. Serotype A is second only to O in terms of prevalence and complexity.

Tianlong's Foot-and-Mouth Disease Virus (FMDV) Detection Solution is used for the qualitative detection of FMDV RNA by the Real-time RT-PCR method, which can help in the fast diagnosis of FMD.

FMDV SEROTYPES

Seven Serotypes	Basic Info	Tianlong Solution Coverage
O	The most common and widely distributed serotype.	✓
A	Second only to serotype O in terms of prevalence and complexity.	✓
C	Less common compared to serotypes O and A.	✓
SAT1 (Southern African Territories 1)	Primarily found in sub-Saharan Africa.	✓
SAT2 (Southern African Territories 2)	Primarily found in sub-Saharan Africa but has caused outbreaks in the Middle East and North Africa.	✓
SAT3 (Southern African Territories 3)	Less common than SAT1 and SAT2. Mainly restricted to parts of Africa.	✓
Asia1	Predominantly found in Asia.	✓

SIGNS OR SYMPTOMS


Fever

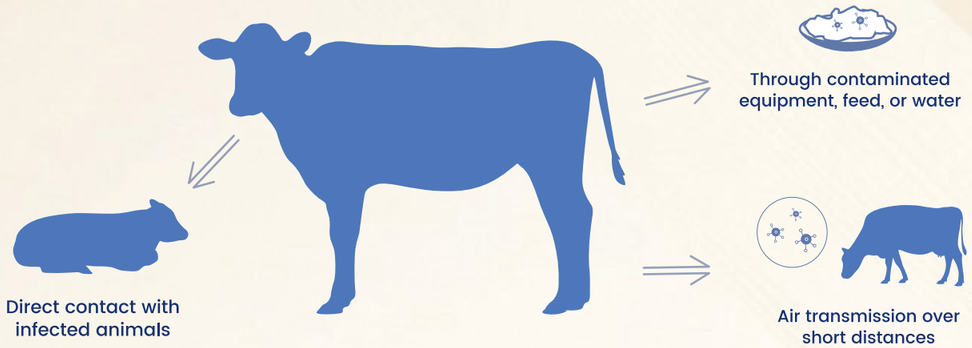

Vesicular lesions on the mouth, tongue, and hooves


Excessive drooling


Lameness and reluctance to move


Reduced milk production in dairy animals

TRANSMISSION ROUTE



FEATURES

Various Serotypes Detection
Providing common detection kits covering 7 serotypes of FMDV(A, O, C, SAT1, SAT2, SAT3, and Asia1) as well as individual detection kits for serotype O and A, the most common and widely distributed serotypes, assisting in clinical diagnosis

Various Specimen
Serum, vesicular fluid, pustular exudate, diseased tissue samples and oropharyngeal swabs

Internal Control
The use of internal control system in the kit can effectively prevent false-negative results

User-friendly
Widely applicable in instruments with FAM, VIC channels

High Precision
The coefficient of variation for both intra-assay and inter-assay was less than 5%

DATA INTERPRETATION

Figure 1: Amplification curve of FMDV in gradient concentrations

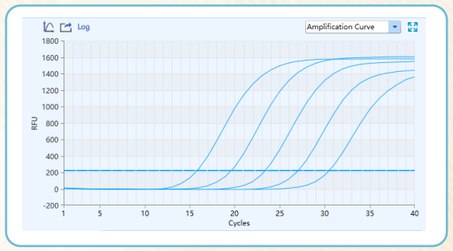
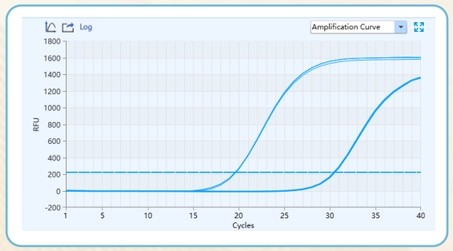


Figure 2: Repetitive amplification curve of FMDV in high concentrations and low concentrations



ORDERING INFORMATION

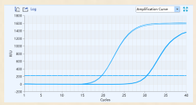
Cat.No	Product Name	Target Pathogen	Remark	Specification
P946H	Foot and Mouth Disease Virus (FMDV) Nucleic Acid Detection Kit (Fluorescence PCR Method)	All FMDV serotypes (A, O, C, SAT1, SAT2, SAT3, and Asia1)	Concurrently reporting	50T/Kit
P948H	Foot and Mouth Disease Virus Type O(FMDV-O) Nucleic Acid Detection Kit (Fluorescence PCR Method)	FMDV serotype O	Individual reporting	50T/Kit
P950H	Foot and Mouth Disease Virus Type A (FMDV-A) Nucleic Acid Detection Kit (Fluorescence PCR Method)	FMDV serotype A	Individual reporting	50T/Kit

SPECIFICATIONS

Applicable Species	Cloven-hoofed animals (Cattle, Swine, etc.)
Specimen	Serum, vesicular fluid, pustular exudate, diseased tissue samples and oropharyngeal swabs
Sensitivity	1000 copies/mL
Precision	<5%
Storage & Validity	-25~-15℃ for 12 months
Applicable Equipment	Instruments with FAM, VIC channels, such as Tianlong Gentier Real-time PCR systems, Applied Biosystems™ 7500 Real-Time PCR Systems, etc.

ASSAY WORKFLOW

1 Sample Collection → 2 Nucleic Acid Extraction → 3 PCR Detection → 4 Analysis and Report

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