



TIANLONG

Proven Solutions for
Animal Health



ANIMAL HEALTH

»» Swine Tests

- Porcine Reproductive and Respiratory Syndrome Virus (PRRSV)
- African Swine Fever Virus (ASFV)
- Classical Swine Fever Virus (CSFV)
- Porcine Viral Diarrhea (PEDV, TGEV, PDCoV, RV)

Porcine Reproductive and Respiratory Syndrome Virus (PRRSV) Detection Kit

Porcine reproductive and respiratory syndrome, (PRRS), also named blue ear disease, is a widespread disease affecting domestic pigs. As the name suggests there are two syndromes associated with PRRS, reproductive failure in sows, and respiratory disease in young pigs. There is often high mortality, though infected animals can also show no disease at all. And in spite of the name, the blue ears, due to restricted blood supply, are only a transient sign of the disease.

Porcine reproductive and respiratory syndrome (PRRS) is an economically disastrous infectious disease for the global swine industry.

It can be classified into two genotypes, namely the European type (PRRSV-1) and the North American type (PRRSV-2). It is now found in most areas of the world where pigs are raised.

SIGNS OR SYMPTOMS

Breeding pigs:

- ◆ Decrease in conception
- ◆ Increase in premature birthing, late term abortions
- ◆ High preweaning mortality
- ◆ Anorexia
- ◆ Fever
- ◆ Respiratory distress or vomiting
- ◆ Blue colouring due to decrease blood flow (cyanosis) of the ears, abdomen and vulva



Young pigs:

- ◆ Fever
- ◆ Depression
- ◆ Lethargy
- ◆ Pneumonia
- ◆ Difficulty breathing
- ◆ Stunted growth due to systemic disease
- ◆ Increased post weaning mortality



FEATURES



Wide Coverage

Reliable detection of Porcine Reproductive and Respiratory Syndrome Virus (PRRSV), covering the European type (PRRSV-1) and the North American type (PRRSV-2)



Various Specimen

Compatible with multiple sample types, including cell free body fluid sample, whole blood, serum or tissue samples



Real-time RT-PCR based PRRSV detection

Provides a rapid test solution that detects PRRSV with a high degree of sensitivity and specificity



High Precision

The precision values of intra and inter Ct values were all <5%



Providing Integrated Solution

Highly efficient and reliable, Tianlong integrated PCR lab solution from devices to reagents can ensure great compatibility and minimized errors.

DATA INTERPRETATION

Figure 1: Gradient concentration PRRSV amplification curve

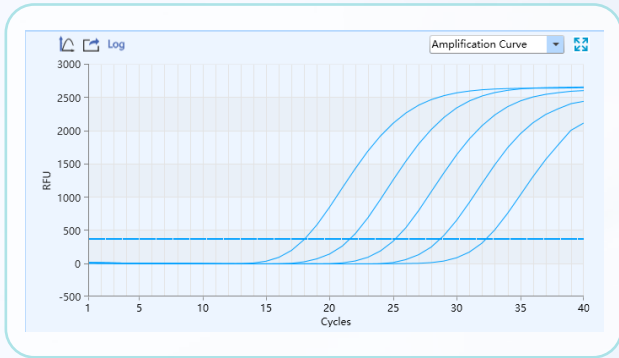
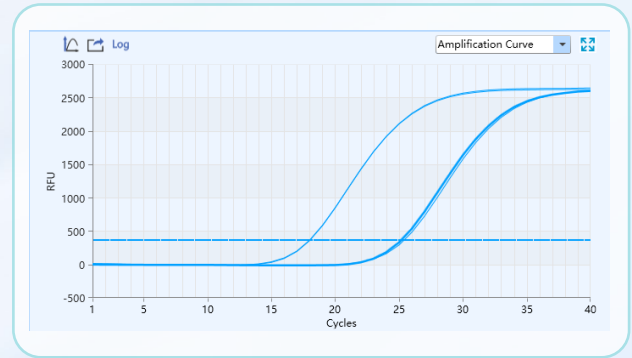


Figure 2: High concentration and low concentration PRRSV repetitive amplification curve



ORDERING INFORMATION

| | |
|----------------------|---|
| Product Name | Porcine Reproductive and Respiratory Syndrome Virus (PRRSV) Nucleic Acid Detection Kit (Fluorescence PCR Method) |
| Cat.No | P632H |
| Specification | 50T/Kit |
| Specimen | Cell free body fluid sample ,whole blood ,serum or tissue samples |
| Sensitivity | 500 copies/mL |
| Storage & Validity | -25~-15℃ for 12 months |
| Applicable Equipment | Instruments with FAM and VIC channels, Applied Biosystems™ 7500 Real-Time PCR Systems, TianLong Gentier Real-time PCR systems |

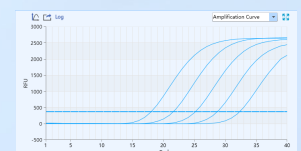
ASSAY WORKFLOW

1 Sample Collection

2 Nucleic Acid Extraction

3 PCR Detection

4 Analysis and Report

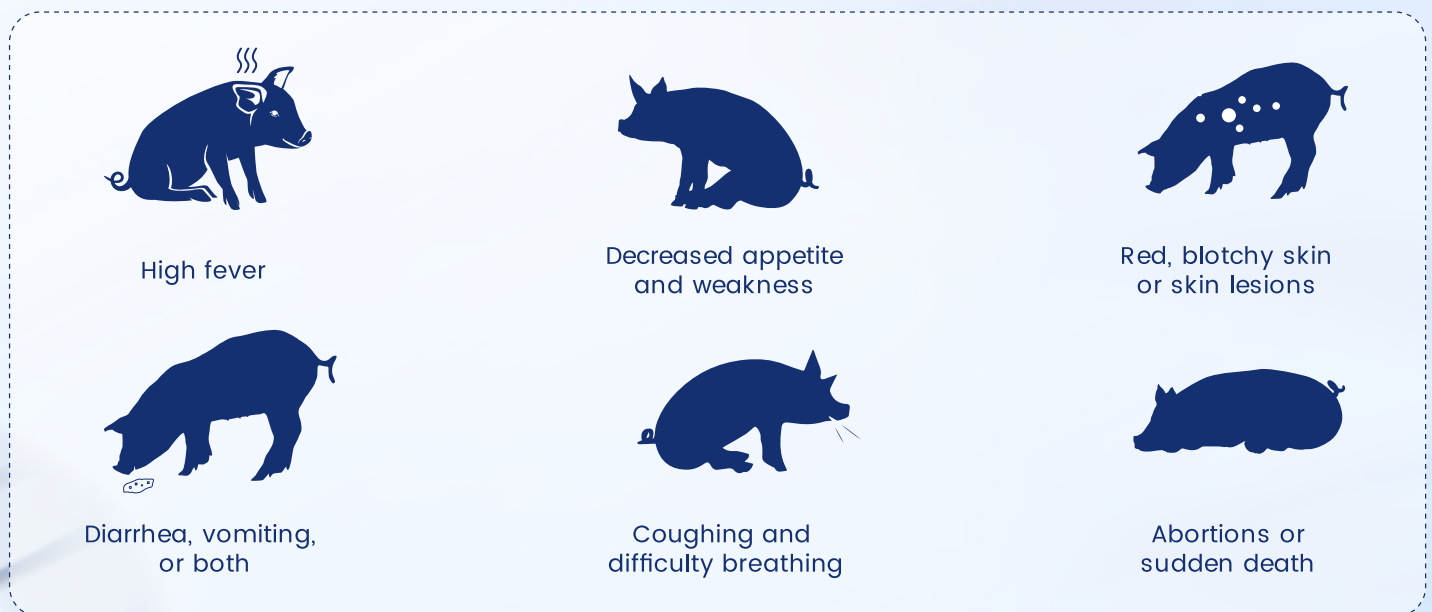


African Swine Fever Virus (ASFV) Detection Solution

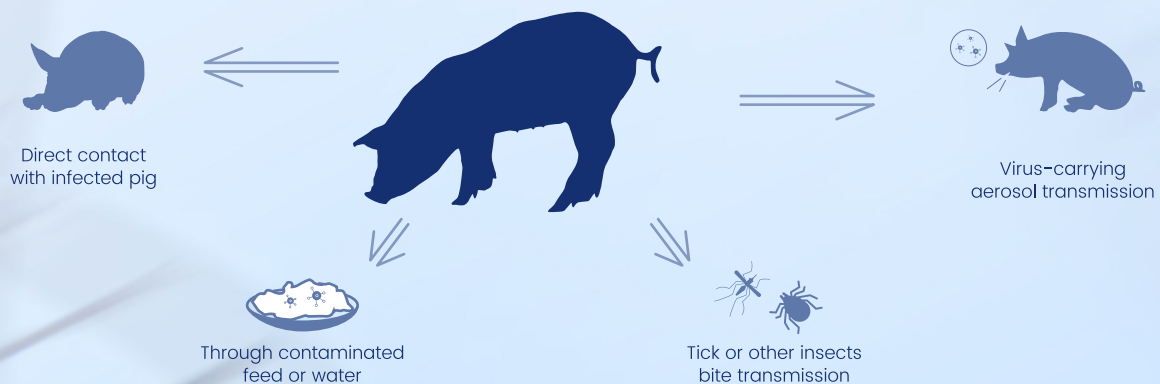
African Swine Fever (ASF) is a hemorrhagic, acute, febrile, and highly contagious animal disease caused by the African Swine Fever Virus (ASFV), affecting domestic pigs and wild boars. The mortality rate of ASF is alarmingly close to 100%. It can be devastating to the swine industry and those related to it when there is an outbreak of ASFV in any region or country.

Tianlong provides a wide product portfolio to detect ASFV in tissue, serum, whole blood, pharyngeal/nasal swab sample, and environmental samples based on the Fluorescence PCR Method. Tianlong ASFV detection solution can qualitatively determine whether suspected infected pigs are infected with ASFV and differentiate whether the strain is a CD2V/MGF single or double gene deletion ASFV strain, assisting in clinical diagnosis.

SIGNS OR SYMPTOMS



TRANSMISSION ROUTE



FEATURES



Providing Integrated Solution

Provide a wide product portfolio to detect all ASFV genotypes with a high degree of sensitivity and specificity



Differential Diagnostics

Qualitatively detect ASFV and differentiate whether the strain is a CD2V/MGF gene deletion ASFV strain, assisting in clinical diagnosis



High Sensitivity

The limit of detection is up to 500 copies/mL



Various Specimen

Tissue, serum, whole blood, pharyngeal/nasal swab sample and environmental sample



Endogenous Internal Control

With endogenous internal control in the kit to monitor and prevent false negative results effectively



High Precision

The precision values of intra and inter Ct values were all <5%

DATA INTERPRETATION

Figure 1: Gradient concentration ASFV amplification curve

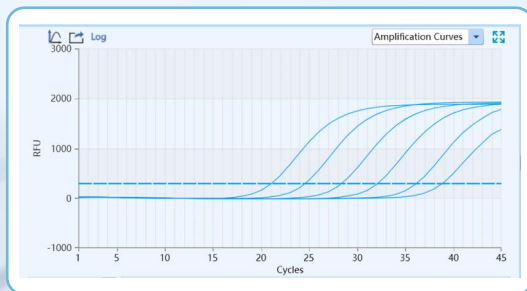


Figure 2: High concentration and low concentration ASFV repetitive amplification curve

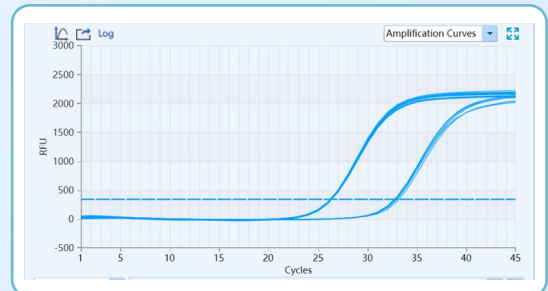


Figure 3: Gradient concentration amplification curve of ASFV (P72/CD2v/MGF) Nucleic Acid Differential Detection Kit

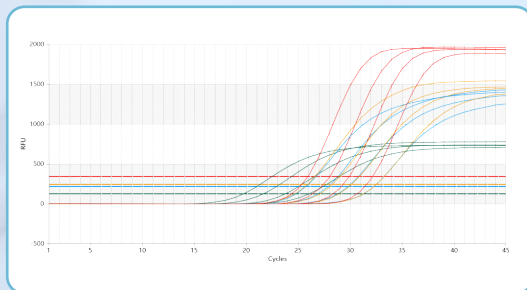
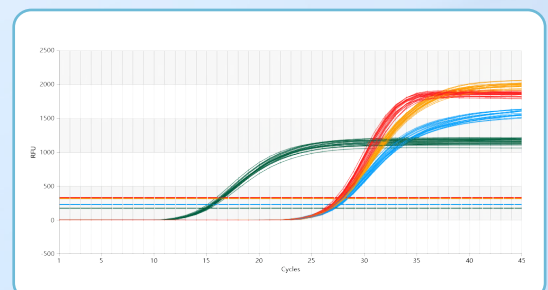


Figure 4: Precision test amplification curve of ASFV (P72/CD2v/MGF) Nucleic Acid Differential Detection Kit



— p72

— MGF

— CD2v

— IC

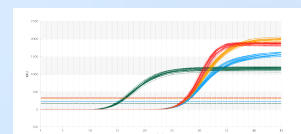
ORDERING INFORMATION

| Cat.No | Product Name | Target Gene | Specification | Detection Time |
|--------|---|---------------------|---------------|--|
| P708H | African Swine Fever Virus (ASFV) Nucleic Acid Detection Kit | ASFV P72 | 50T/Kit | 80 min |
| P631H | Rapid African Swine Fever Virus (ASFV) Nucleic Acid Detection Kit | ASFV P72 | 50T/Kit | 40-60 min *Recommend for use on Tianlong Gentier 48 |
| P628H | ASFV (P72/CD2v/MGF) Nucleic Acid Differential Detection Kit | ASFV (P72/CD2v/MGF) | 50T/Kit | 80 min |
| P629H | ASFV (P72/CD2v) Nucleic Acid Differential Detection Kit | ASFV (P72/CD2v) | 50T/Kit | 80 min |
| P630H | ASFV (P72/MGF) Nucleic Acid Differential Detection Kit | ASFV (P72/MGF) | 50T/Kit | 80 min |

SPECIFICATIONS

| | |
|----------------------|--|
| Applicable Species | Swine |
| Target Gene | ASFV P72/CD2v/MGF |
| Technology | Fluorescence PCR Method |
| Specimen | Tissue, serum, whole blood, pharyngeal/nasal swab sample and environmental sample |
| Sensitivity | 500 copies/mL |
| Precision | -25~-15 °C for 12 months |
| Applicable Equipment | Highly compatible with mainstream PCR systems, such as Tianlong Gentier Real-time PCR System, Roche cobas z480, Applied Biosystems™ QuantStudio™ 5 Real-Time PCR System and Applied Biosystems™ 7500 Real-Time PCR Systems |

ASSAY WORKFLOW



Classical Swine Fever Virus (CSFV) Detection Kit

Classical swine fever virus (CSFV) is an enveloped single-stranded, positive-sense RNA virus that belongs to the Pestivirus genus of the Flaviviridae family. CSFV causes classical swine fever (CSF), which is characterized by high fever, leukopenia, extensive haemorrhage, convulsion, and constipation or diarrhoea and presents high morbidity and mortality.

It is an infectious disease that poses a serious threat to the pig industry. Therefore, rapid and accurate diagnosis of CSFV is very important. Tianlong Classical Swine Fever Virus (CSFV) RNA Detection Kit can assist in the diagnosis of CSF and help public healthcare management.



FEATURES



Confidence in results

Reliable detection of Classical Swine Fever Virus (CSFV), covering CSFV genotype I, II, III



Various Specimen

Compatible with multiple sample types, including cell free body fluid sample, whole blood, serum or tissue sample



Real-time RT-PCR based CSFV detection

Provides a rapid test solution that detects CSFV with a high degree of sensitivity and specificity



User-friendly

Widely applicable in instruments with FAM and VIC channels



Providing Integrated Solution

Highly efficient and reliable, Tianlong integrated PCR lab solution from devices to reagents can ensure great compatibility and minimized errors

DATA INTERPRETATION

Figure 1: Gradient concentration CSFV amplification curve

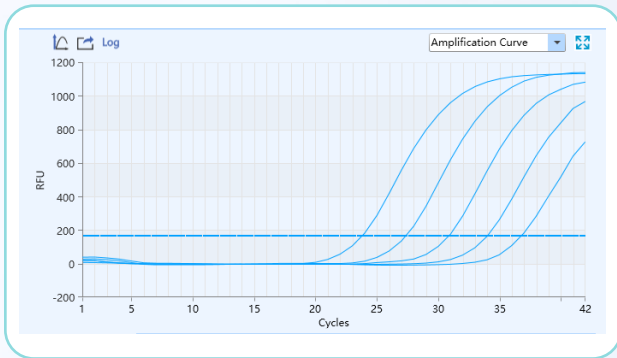
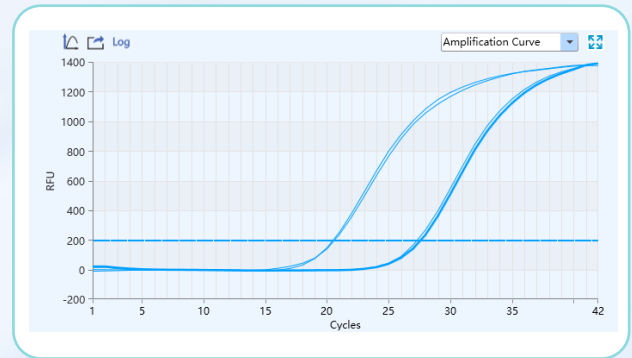


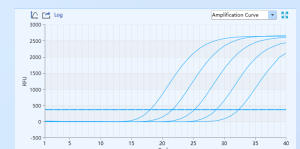
Figure 2: High concentration and low concentration CSFV repetitive amplification curve



ORDERING INFORMATION

| | |
|----------------------|---|
| Product Name | Classical Swine Fever Virus (CSFV) Nucleic Acid Detection Kit (Fluorescence PCR Method) |
| Cat.No | P674H |
| Specification | 50T/kit |
| Specimen | Cell free body fluid sample, whole blood, serum or tissue sample |
| Sensitivity | 500 copies/mL |
| Storage & Validity | -25~-15 C for 12 months |
| Precision | <5% |
| Applicable Equipment | Instruments with FAM and VIC channels, Applied Biosystems™ 7500 Real-Time PCR Systems, Tianlong Gentier Real-time PCR systems |

ASSAY WORKFLOW



Porcine Viral Diarrhea (PEDV, TGEV, PDCoV, RV) Detection Solution

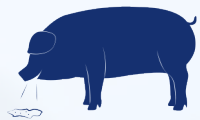
Porcine viral diarrhea refers to gastrointestinal diseases in pigs caused by various viruses, leading to diarrhea, vomiting, dehydration, and weight loss, particularly in young piglets. The main disease-causing pathogens include Porcine Epidemic Diarrhea Virus (PEDV), Porcine Transmissible Gastroenteritis Virus (TGEV), Porcine Deltacoronavirus (PDCoV), and Porcine Rotavirus (RV). These viruses are highly contagious and primarily spread through the fecal-oral route, causing significant economic losses in swine production due to high mortality in neonatal piglets and growth delays in surviving pigs.

Symptoms of PEDV, TGEV, RV, and PDCoV can be similar and hard to differentiate. Tianlong provides a broad portfolio of reagents to help quick and accurate detection of gastrointestinal diseases in pigs. Fast detection can effectively control the virus infection, prevent large-scale outbreaks, and avoid significant economic losses.

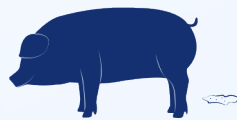
VIRAL CLASSIFICATION

| | PEDV | TGEV | PDCoV | RV |
|--------|------------------|------|------------------|------------|
| Family | Coronaviridae | | | Reoviridae |
| Genus | Alphacoronavirus | | Deltacoronavirus | Rotavirus |

SIGNS OR SYMPTOMS



Vomiting



Diarrhea

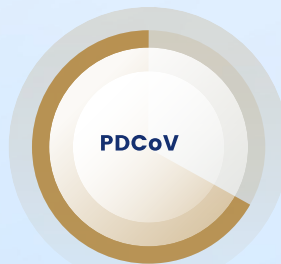


Dehydration and weight loss

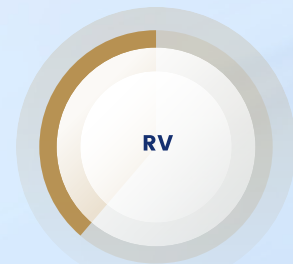
MORTALITY RATE



High mortality in neonatal piglets (up to 100% in piglets under three weeks old)¹



Mortality in piglets is generally lower than PEDV and TGEV (typically 30%-80% in piglets under three weeks old)¹



Lower mortality compared to coronaviruses but still significant, especially if compounded by secondary infections

Data source:

I. Vlasova, A. N., Wang, Q., Jung, K., Langel, S. N., Malik, Y. S., & Saif, L. J. (2020). Porcine coronaviruses. Emerging and transboundary animal viruses, 79-110.

FEATURES



Robust Portfolio

Provide a wide product portfolio to detect common porcine viral diarrhea viruses PEDV, TGEV, RV, PDCoV, the most common pathogens causing gastrointestinal diseases in pigs



Optimized Efficiency

Multiple Pathogens can be detected in one run to drive lab efficiency, suitable for differential diagnostics of PEDV, TGEV, RV, PDCoV



Various Specimen

Small intestinal empty intestine sample, intestinal content, stool, anal swab, environmental sample



Endogenous Internal Control

With endogenous internal control in the kit to monitor and prevent false negative results effectively



High Precision

The precision values of intra and inter Ct values were all <5%



Providing Integrated Solution

Provide complete solution including devices and reagents that detects PEDV, TGEV, RV, PDCoV with a high degree of sensitivity and specificity

DATA INTERPRETATION

Figure 1: Gradient concentration PEDV amplification curve

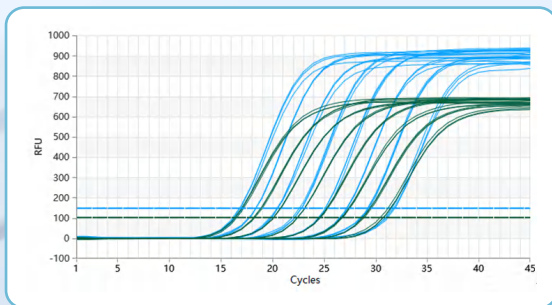


Figure 2: High concentration and low concentration PEDV repetitive amplification curve

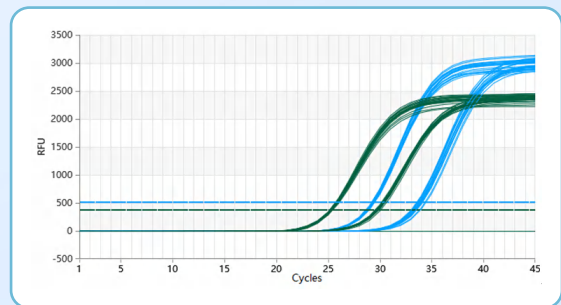


Figure 3: Gradient concentration amplification curve of PEDV/TGEV/PDCoV Nucleic Acid Multiplex Detection Kit

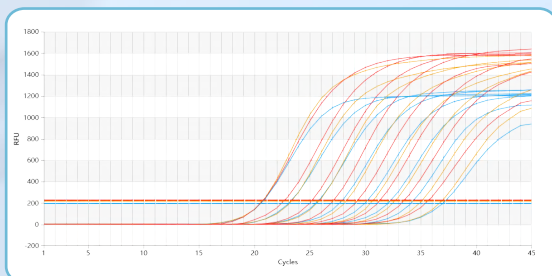
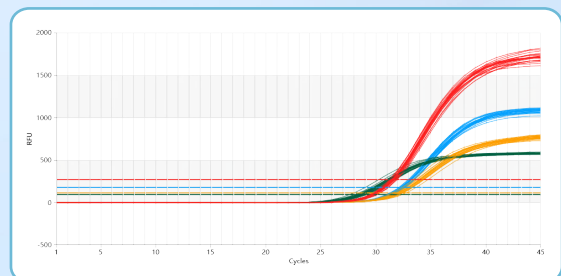


Figure 4: Precision test amplification curve of PEDV/TGEV/PDCoV Nucleic Acid Multiplex Detection Kit



— PEDV — TGEV — PDCoV — IC

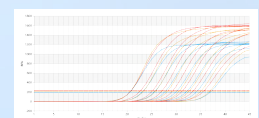
ORDERING INFORMATION

| Cat.No | Product Name | Target Pathogen | Specification |
|--------|---|-----------------|---------------|
| P705H | Porcine Epidemic Diarrhea Virus (PEDV) Nucleic Acid Detection Kit | PEDV | 50T/Kit |
| P706H | Porcine Transmissible Gastroenteritis Virus (TGEV) Nucleic Acid Detection Kit | TGEV | 50T/Kit |
| P710H | Porcine Deltacoronavirus (PDCoV) Nucleic Acid Detection Kit | PDCoV | 50T/Kit |
| P709H | Porcine Rotavirus (RV) Nucleic Acid Detection Kit | RV | 50T/Kit |
| P717H | Porcine Viral Diarrhea PEDV/TGEV/RV Nucleic Acid Multiplex Detection Kit | PEDV/TGEV/RV | 50T/Kit |
| P720H | Porcine Viral Diarrhea PEDV/TGEV/PDCoV Nucleic Acid Multiplex Detection Kit | PEDV/TGEV/PDCoV | 50T/Kit |

SPECIFICATIONS

| | |
|----------------------|--|
| Applicable Species | Swine |
| Target Pathogen | Porcine Epidemic Diarrhea Virus (PEDV), Porcine Transmissible Gastroenteritis Virus (TGEV), Porcine Rotavirus (RV), Porcine Deltacoronavirus (PDCoV) |
| Technology | Fluorescence PCR Method |
| Specimen | Small intestinal empty intestine sample, intestinal content, stool, anal swab, environmental sample |
| Sensitivity | 600 copies/mL |
| Precision | -25~-15 °C for 12 months |
| Applicable Equipment | Highly compatible with mainstream PCR systems, such as Tianlong Gentier Real-time PCR System, Roche cobas z480, Applied Biosystems™ QuantStudio™ 5 Real-Time PCR System and Applied Biosystems™ 7500 Real-Time PCR Systems |

ASSAY WORKFLOW





ANIMAL HEALTH

»» Artiodactyla Tests

- Foot-and-Mouth Disease Virus (FMDV)

Foot and Mouth Disease Virus (FMDV) Detection Kit

Foot and mouth disease (FMD) is a severe, highly contagious viral disease that affects cattle, swine, sheep, goats, and other cloven-hoofed ruminants. FMD is characterized by fever and blister-like sores 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 strains (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.

Tianlong's Foot and Mouth Disease Virus (FMDV) RNA Detection Kit 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.



FEATURES



Various Serotypes Detection

Concurrently detects four common FMDV serotypes A, O, C, and Asia1, assisting in the fast diagnosis of FMD



Various Specimen

Serum, vesicular, pustular lesion fluid, diseased tissue samples and throat swab



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 precision values of intra and inter Ct values were all <5%

DATA INTERPRETATION

Figure 1: Gradient concentration FMDV amplification curve

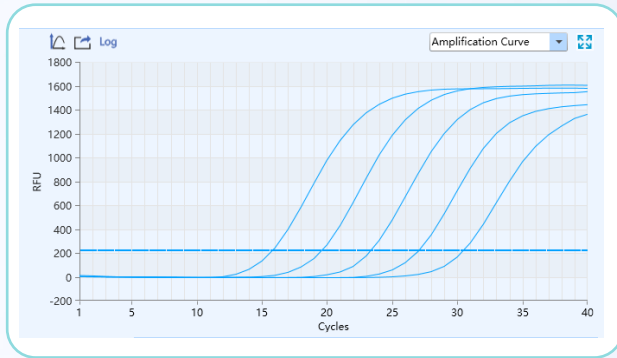
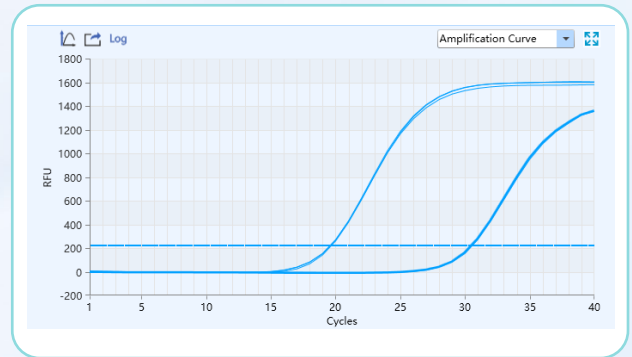


Figure 2: High concentration and low concentration FMDV repetitive amplification curve



ORDERING INFORMATION

| | |
|-------------------------------|---|
| Product Name | Foot and Mouth Disease Virus (FMDV) Nucleic Acid Detection Kit (Fluorescence PCR Method) |
| Cat.No | P946H |
| Specification | 50T/Kit |
| Species | Artiodactyla (Cattle, Swine etc.) |
| Specimen | Serum, vesicular, pustular lesion fluid, diseased tissue samples and throat swab |
| Sensitivity | 500 copies/mL |
| Precision | < 5% |
| Storage & Validity | -25~-15°C for 12 months |
| Applicable Equipment | Instruments with FAM, VIC channels, such as Applied Biosystems™ 7500 Real-Time PCR Systems, TianLong Gentier Real-time PCR systems, etc |

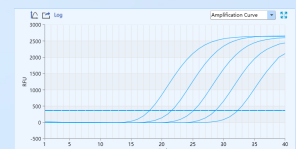
ASSAY WORKFLOW

1 Sample Collection

2 Nucleic Acid Extraction

3 PCR Detection

4 Analysis and Report



ANIMAL HEALTH



»» Poultry Tests

- Newcastle Disease Virus (NDV)
- Avian Influenza Virus (AIV)

Newcastle Disease Virus (NDV) Detection Kit

Newcastle disease is a highly contagious and sometimes fatal illness affecting poultry. It is caused by virulent strains of avian paramyxovirus type 1.

The disease often appears in three forms: lentogenic, mesogenic, and velogenic. The severity of the disease is a function of the virulence of the infecting viral strain. When the virus is introduced into a susceptible flock, virtually all the birds will be infected within two to six days. ND can present a clinical picture similar to avian influenza, so laboratory testing is important to confirm the diagnosis.

SIGNS OR SYMPTOMS



Respiratory signs

gasping, coughing, sneezing and rales



Nervous signs

tremors, paralyzed wings and legs, twisted necks, circling, spasms, and paralysis



Digestive signs

diarrhoea



Reproductive signs

drop in egg production, watery albumen, egg abnormal in color, shape, or surface

FEATURES



Confidence in results

Screening flocks for presence or absence of Newcastle Disease Virus (NDV), detects all NDV strains



Various Specimen

Compatible with multiple sample types, including poultry serum, tissues, organs, excretory secretions, and swabs of cloaca and throat



Real-time RT-PCR based NDV detection

Provides a rapid test solution that detects NDV with a high degree of sensitivity and specificity



User-friendly

Widely applicable in instruments with FAM and VIC channels



Providing Integrated Solution

Highly efficient and reliable, Tianlong integrated PCR lab solution from devices to reagents can ensure great compatibility and minimized errors

DATA INTERPRETATION

Figure 1: Gradient concentration NDV amplification curve

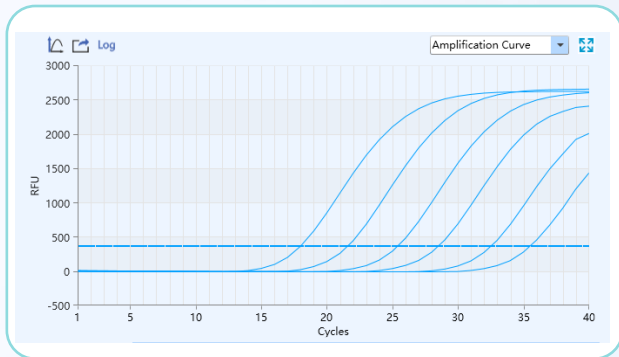
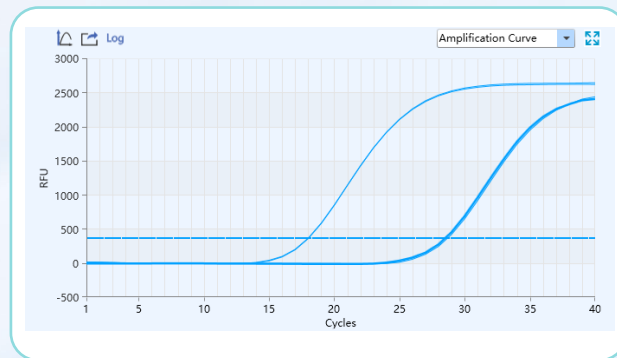


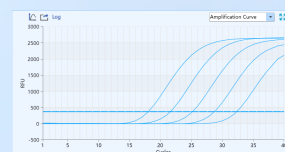
Figure 2: High concentration and low concentration NDV repetitive amplification curve



ORDERING INFORMATION

| | |
|----------------------|---|
| Product Name | Newcastle Disease Virus Nucleic Acid Detection Kit (Fluorescence PCR Method) |
| Cat.No | P695H |
| Specification | 50T/kit |
| Specimen | Poultry serum, tissues, organs, excretory secretions, and swabs of cloaca and throat |
| Sensitivity | 500 copies/mL |
| Precision | <5% |
| Storage & Validity | -25~-15 C for 12 months |
| Applicable Equipment | Instruments with FAM and VIC channels, such as Tianlong Gentier Real-time PCR systems, Applied Biosystems™ 7500 Real-time PCR Systems |

ASSAY WORKFLOW



Avian Influenza Virus (AIV) Detection Kit

Avian Influenza Virus (AIV) is a virus that mainly infects birds and belongs to the Orthomyxoviridae family. It can cause acute respiratory illness in birds and can lead to high mortality in severe cases. The virus has a variety of subtypes, the most common of which are H5, H7, H9, and other subtypes. AIV not only affects birds but sometimes infects other animals, including humans. Therefore, rapid and accurate diagnosis of AIV is essential.

Tianlong Avian Influenza Virus H5/H7/H9 Subtypes Nucleic Acid Detection Kit is intended for the qualitative detection of AIV H5, H7, H9 subtype RNA by Real-time reverse transcription Polymerase Chain Reaction (Real-time RT-PCR) method. It can assist in diagnosing Avian Influenza and help in public healthcare management.



FEATURES



Differential Diagnostic

Differential diagnostic of Avian Influenza Virus (AIV) subtypes H5, H7, H9 nucleic acid by fluorescence Polymerase Chain Reaction (PCR) method



Various Specimen

Poultry serum, tissues, organs, excretory secretions, and swabs of cloaca and throat



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, Texas Red, Cy5 channels



High Precision

The precision values of intra and inter Ct values were all < 5%



Providing Integrated Solution

Highly efficient and reliable, Tianlong integrated PCR lab solution from devices to reagents can ensure great compatibility and minimized errors

DATA INTERPRETATION

Figure 1: Gradient concentration AIV amplification curve

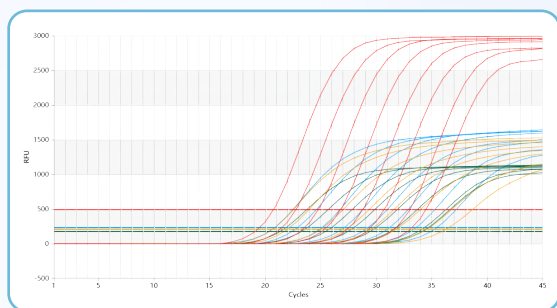
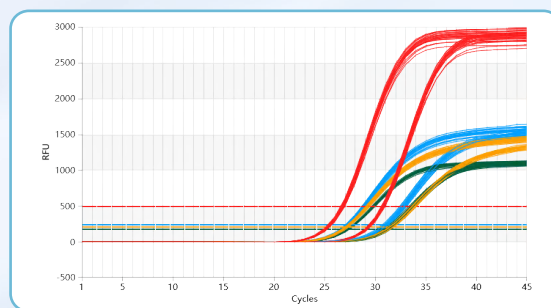


Figure 2: High concentration and low concentration AIV repetitive amplification curve

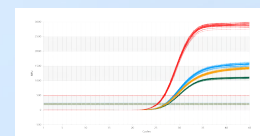


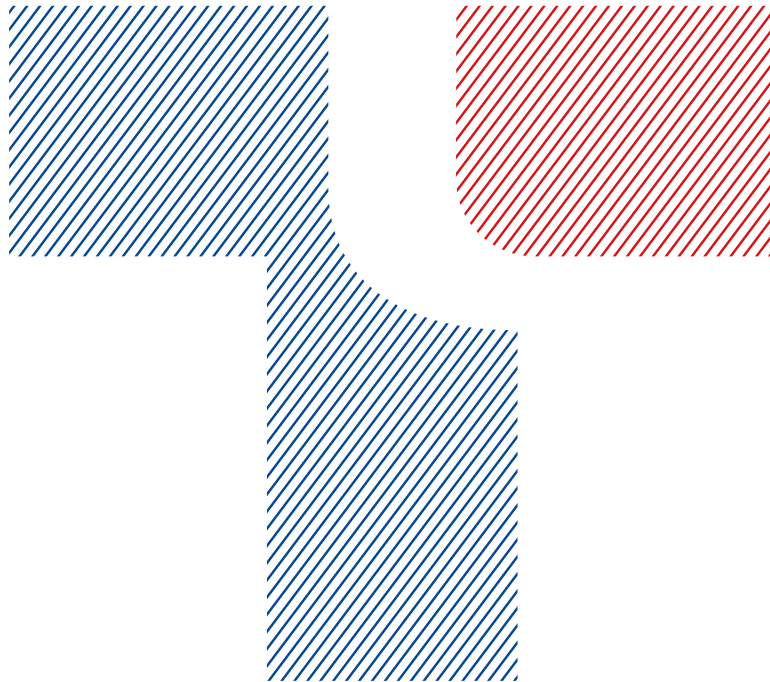
— H9 — H7 — H5 — IC

ORDERING INFORMATION

| | |
|----------------------|---|
| Product Name | Avian Influenza Virus H5/H7/H9 Subtypes Nucleic Acid Detection Kit (Fluorescence PCR Method) |
| Cat.No | P941H |
| Specification | 50T/Kit |
| Specimen | Poultry serum, tissues, organs, excretory secretions, and swabs of cloaca and throat |
| Sensitivity | 500 copies/mL |
| Precision | < 5% |
| Storage & Validity | -25~-15 C for 12 months |
| Applicable Equipment | Instruments with FAM, VIC, Texas Red, Cy5 channels, such as Tianlong Gentier Real-time PCR system, Applied Biosystems™ QuantStudio™ 5 Real-Time PCR System and Applied Biosystems™ 7500 Real-Time PCR Systems |

ASSAY WORKFLOW





Bring Technology to Life



Tianlong Science and Technology

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