Feline Calicivirus RT-PCR Detection Kit

Norgen's Feline Calicivirus RT-PCR Detection Kit constitutes a complete, ready-to-use system for the isolation and detection of Feline Calicivirus (FCV) using end-point RT-PCR. The kit first allows for the isolation of total RNA from blood samples or nasal/throat swabs using a convenient spin-column. The RNA is isolated free from PCR inhibitors, and can then be used as the template in an RT-PCR reaction for detection of FCV using the FCV Detection Mastermix. The FCV Detection Mastermix contains reagents and enzymes for the specific amplification of a 303 bp region of the viral genome. In addition, Norgen’s FCV RT-PCR Detection Kit contains a second Mastermix, the RT-PCR Control Master Mix, which can be used to identify possible PCR inhibition and/or inadequate isolation via a separate RT-PCR reaction with the use of the provided PCR control (PCRc) or Isolation Control (IsoC), respectively. The kit is designed to allow for the testing of 24 samples and is ideal for use in surveillance of drug resistant pathogens, epidemiological studies, field surveillance of pathogens and surveys.

Feline calicivirus (FCV) is a member of the Caliciviridae family. It is one of the two most important viruses that cause feline upper respiratory diseases. Calicivirus usually infects the throat, eyes, nasal cavity and oral cavity and also sometimes the lungs and intestines. In a healthy cat, the mortality rate is fairly low. However, kittens and older cats are at a greater risk. Feline calicivirus is most often observed in shelters or environments with overcrowding. Symptoms of calicivirus can include: sneezing, nasal discharge, fever, rhinitis, ulceration of the tongue and palate and, in more serious cases pneumonia. Infection is passed from a sick or carrier cat via eye, nasal and mouth discharges. Contaminated food dishes and bedding is also a source of the virus. The virus is resistant to many disinfectants and can survive in the environment for extended periods of time. Cats can remain carriers of the disease for years after infection, with virus being shed in excretions, making it possible to infect other cats. There is no cure for calicivirus, with treatment of the infection being generally supportive. Reliable diagnosis of infected cats is the best way to prevent the spread of the disease.
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**Product Information**

**FCV RT-PCR Kit**

- **Cat #**
  - 43900

- **Description**
  - Feline Calicivirus RT-PCR Detection Kit

- **Quantity**
  - 24 tests

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**Feline Calicivirus RT-PCR Detection Kit Contents:**

1. **Lysis Solution**
2. **Wash Solution**
3. **Elution Buffer**
4. **Mini Spin Columns**
5. **Collection Tubes**
6. **Elution tubes (1.7 mL)**
7. **FCV 2x RT-PCR Master Mix**
8. **2x RT-PCR Control Master Mix**
9. **FCV Isolation Control (IsoC)**
10. **FCV Positive Control (PosC)**
11. **Nuclease-Free Water**
12. **Norgen's DNA Marker**
13. **Product Insert**

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**Storage Conditions**

All buffers should be kept tightly sealed and stored at room temperature (15-25°C). Buffers can be stored for up to 1 year without showing any reduction in performance. The FCV Positive Control (PosC) and the FCV Isolation Control (IsoC) should be kept tightly sealed and stored at -70°C for up to 1 year without showing any reduction in performance. The FCV 2x RT-PCR Master Mix and 2x RT-PCR Control Master Mix should be kept tightly sealed and stored at -20°C for up to 1 year without showing any reduction in performance. Repeated thawing and freezing (>2x) should be avoided, as this may reduce the sensitivity. If the reagents are to be used only intermittently they should be frozen in aliquots.

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**Figure 1. Sensitivity of Detection using the Feline Calicivirus RT-PCR Detection Kit.** A representative 1X TAE, 1.7% agarose gel showing the amplification of Feline Calicivirus (FCV) at different concentrations (Target). The size of the FCV target amplicon corresponds to the 303 bp band represented by the provided DNA Marker (M). **NC** = Negative Control.

**Figure 2. Provided Heterologous Reactions for RT-PCR Control.** A representative 1X TAE 1.7% agarose gel showing the amplification of Isolation Control and PCR Control under different conditions using the provided 2X RT-PCR Control Mastermix. The size of the Isolation Control amplicon and PCR Control amplicon correspond to 499 bp and 150 bp, respectively, as represented by the provided DNA Marker (M). Lanes 1 to 5 showed detection of both Isolation Control and PCR Control, suggesting that the RNA isolation as well as the RT-PCR reaction was successful. Lane 6 showed only the detection of PCR Control suggesting that while the RT-PCR was successful, the isolation failed to recover even the spiked-in isolation control. **NC** = Negative Control.