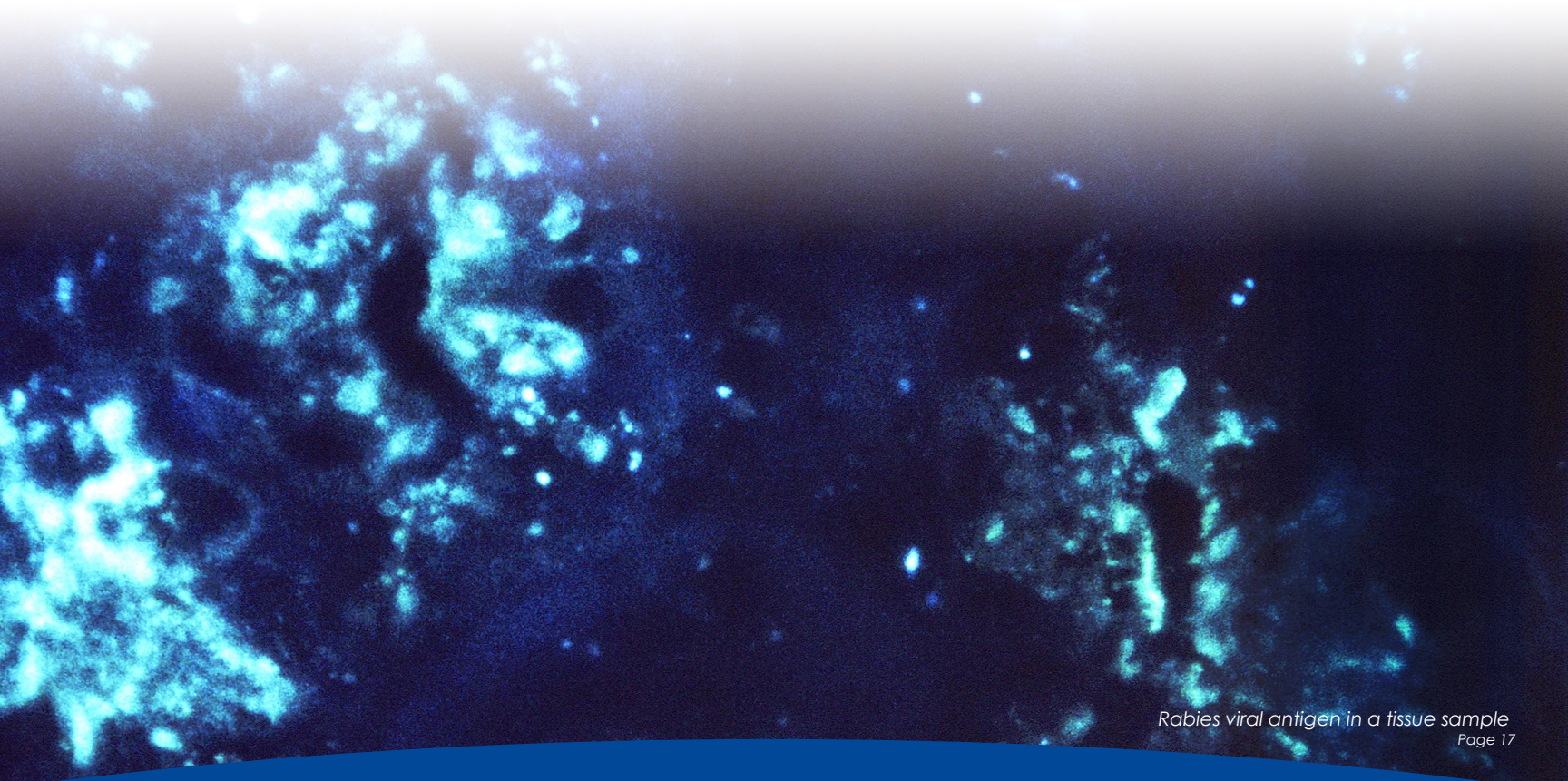


NORGEN
BIOTEK  CORP.

ANIMAL PATHOGEN DETECTION



Rabies viral antigen in a tissue sample
Page 17

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Norgen Biotek is dedicated to providing our customers with first class sample preparation kits for RNA, microRNA, DNA, protein and exosome purification, clean-up and concentration, as well as preservatives for nucleic acid (DNA and RNA) stabilization in various bodily fluids for both research and diagnostic applications; and to providing dedicated and expert support services to our customers and commercial partners worldwide.

Norgen is an **ISO 9001:2008**, **ISO 13485:2003** and **ISO 15189:2012** registered company, indicating our commitment to quality.



Ordering Information

To Order by Phone:

Telephone: (905) 227-8848

Toll Free in North America: 1-866-667-4362

To Order by Fax:

(905) 227-1061

To Order by Email:

orders@norgenbiotek.com

To Order by Mail:

Norgen Biotek Corp.

3430 Schmon Parkway

Thorold, ON

L2V 4Y6

CANADA

Telephone Orders

Customer service representatives are available to receive orders Monday through Friday from 9:00 A.M. to 5:30 P.M. EST (Eastern Standard Time).

When placing an order, please be prepared to provide us with the following information:

1. Purchase order number
2. Customer number (if known)
3. Billing Address
4. Shipping Address
5. Name of person to whose attention the order should be shipped
6. Name, telephone number and email of contact person
7. Product catalogue number, description, size and quantity

Email and Fax Orders

We also accept orders by email, fax and mail. When placing an order by email, fax or mail, please ensure that the information listed above is included in order to expedite ordering.

Technical Support

Contact our Technical Support Team between the hours of 9:00 and 5:30 EST (Eastern Standard Time) at (905) 227-8848 or Toll Free in North America at 1-866-667-4362.

Technical support can also be obtained from our website (www.norgenbiotek.com) or through email at techsupport@norgenbiotek.com.

ANIMAL PATHOGEN DETECTION

Principle of the Test

Norgen's PCR Detection Kits constitute a ready-to-use system for the isolation and detection of animal pathogens using end-point or one-step RT-PCR. The kits first allow for the isolation of RNA or DNA from samples using spin-column chromatography based on Norgen's proprietary resin. The RNA or DNA is isolated free from inhibitors, and can then be used as the template in a one-step RT-PCR reaction for pathogen detection using the provided Detection Mastermix. The Detection Mastermix contains reagents and enzymes for the specific amplification of a region of the viral genome.

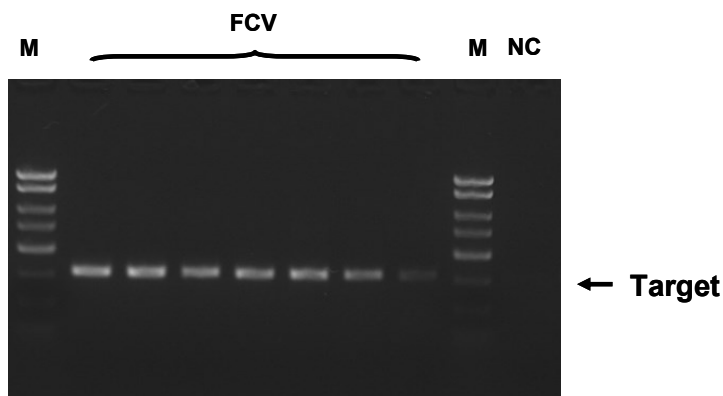
In addition, Norgen's PCR Detection Kits contain a second Mastermix, the RT-PCR or PCR Control Master Mix, which can be used to identify possible PCR inhibition and/or inadequate isolation via a separate RT-PCR reaction with the use of the provided PCR control (PCRC) or Isolation Control (IsoC), respectively. The kits are designed to allow for the testing of 24 samples.

Key Features

- Rapid isolation of high quality RNA or DNA from blood, plasma/serum, swabs, or viral culture, urine, nasal exudates or swabs
- High sensitivity and specificity
- Primer set and controls also available separately
- Ideal for use in:
 1. Surveillance of Drug Resistant Pathogens
 2. Epidemiological Studies
 3. Field Surveillance of Pathogens
 4. Surveys

All kits are available in two formats: End-Point PCR or Real-Time PCR

End-Point PCR



Real-Time PCR

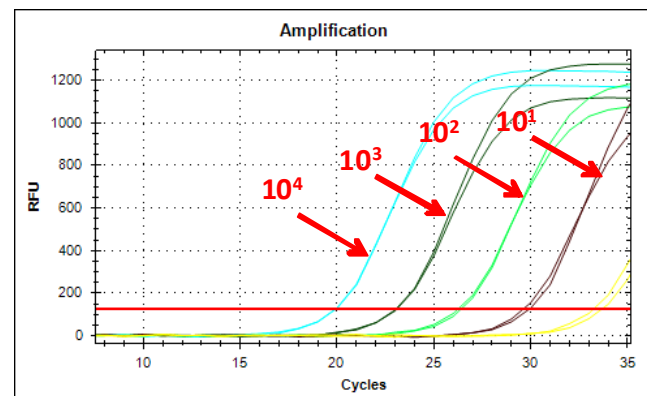


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Feline Calicivirus RT-PCR Detection Kit

Cat. # 43900

A ready-to-use system for the isolation and detection of Feline Calicivirus Virus using end-point RT-PCR

Norgen's Feline Calicivirus Virus RT-PCR Detection Kit is a ready-to-use system for the isolation and detection of FCV from blood samples and nasal/throat swabs. First, the kit contains components for the rapid isolation of total RNA, including viral DNA, from the samples using spin-column chromatography based on Norgen's proprietary resin. Second, the kit contains FCV Master Mix to allow for PCR amplification, as well as a Control Master Mix to allow for amplification of both an isolation control and a PCR control. The amplified PCR products are then detected using agarose gel electrophoresis. Alternatively, detection can be performed based on real-time RT-PCR using melt curves.

The FCV RT-PCR 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. This kit is designed to allow for the testing of 24 samples. The FCV RT-PCR Primer Set and Controls are also available separately for end-point RT-PCR detection.

Features and Benefits

- Rapid isolation of high quality RNA from blood or swabs
- Contains two ready-to-use 2X RT-PCR Master Mixes
- High sensitivity and specificity
- Includes an isolation control and a PCR control
- Primer set and controls also available separately
- Ideal for use in:
 1. Surveillance of Drug Resistant Pathogens
 2. Epidemiological Studies
 3. Field Surveillance of Pathogens
 4. Surveys

Linear Range

- The linear range was determined by analyzing a dilution series of a FCV quantification standards ranging from 100 ag to 1 pg.
- Each dilution has been tested in replicates (n = 4) using Norgen's FCV RT-PCR Detection Kit on a 1X TAE 1.7% agarose gel.
- The linear range of Norgen's FCV RT-PCR Detection Kit has been determined to cover concentrations from 100 ag to 1 ng
- Under the conditions of the Norgen's FCV RNA Isolation procedure, Norgen's FCV RT-PCR Detection Kit covers a linear range from 100 copies to 1 x 10⁶ copies.

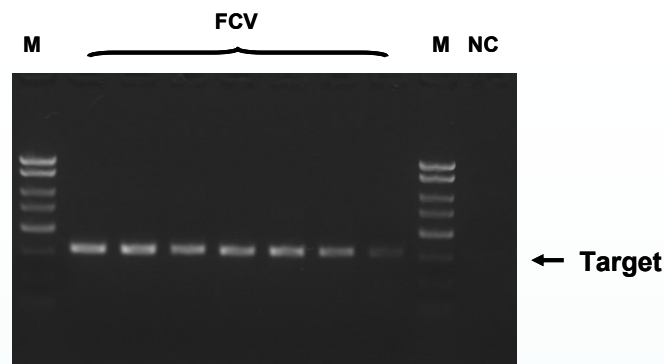


Figure 1. Sensitivity of Detection using the Feline Calicivirus RT-PCR Detection Kit. A representative 1X TAE, 1.7% agarose gel showing the amplification of Feline Calicivirus (FCV) at different concentrations (Target). The size of the FCV target amplicon corresponds to the 303 bp band represented by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

Feline Calicivirus Ordering information

Description	Cat #	Size
End-Point PCR	43900	24 rxns
Real-Time PCR	TM43900	48 rxns
Real-Time PCR	SG43900	48 rxns
Primer Sets and Controls	43910	100 rxns

For research use only and NOT intended for in vitro diagnostics

Feline Leukemia Virus RT-PCR Detection Kit

Cat. # 44000

A ready-to-use system for the isolation and detection of Feline Leukemia Virus using end-point RT-PCR

Norgen's Feline Leukemia Virus RT-PCR Detection Kit is a ready-to-use system for the isolation and detection of FeLV from blood samples and nasal/throat swabs. First, the kit contains components for the rapid isolation of total RNA, including viral RNA, from the samples using spin-column chromatography based on Norgen's proprietary resin. Second, the kit contains FeLV Master Mix to allow for PCR amplification, as well as a Control Master Mix to allow for amplification of both an isolation control and a PCR control. The amplified PCR products are then detected using agarose gel electrophoresis. Alternatively, detection can be performed based on real-time RT-PCR using melt curves.

The FeLV RT-PCR Detection Mastermix contains reagents and enzymes for the specific amplification of a 310 bp region of the viral genome. In addition, Norgen's FeLV 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. This kit is designed to allow for the testing of 24 samples. The FeLV RT-PCR Primer Set and Controls are also available separately for end-point RT-PCR detection.

Features and Benefits

- Rapid isolation of high quality RNA from blood or swabs
- Contains two ready-to-use 2X RT-PCR Master Mixes
- High sensitivity and specificity
- Includes an isolation control and a PCR control
- Primer set and controls also available separately
- Ideal for use in:
 1. Surveillance of Drug Resistant Pathogens
 2. Epidemiological Studies
 3. Field Surveillance of Pathogens
 4. Surveys

Linear Range

- The linear range was determined by analyzing a dilution series of a FeLV quantification standards ranging from 100 ag to 1 pg.
- Each dilution has been tested in replicates (n = 4) using Norgen's FeLV RT-PCR Detection Kit on a 1X TAE 1.7% agarose gel.
- The linear range of Norgen's FeLV RT-PCR Detection Kit has been determined to cover concentrations from 100 ag to 1 ng
- Under the conditions of the Norgen's FeLV RNA Isolation procedure, Norgen's FeLV RT-PCR Detection Kit covers a linear range from 100 copies to 1 x 10⁶ copies.

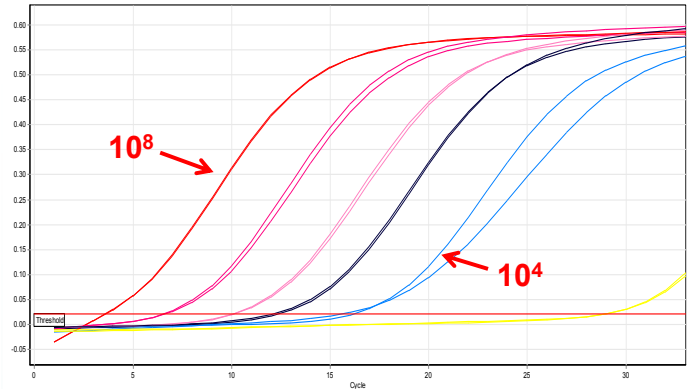


Figure 1. Sensitivity of Detection using the Feline Leukemia Virus Detection Kit. A representative RT-qPCR Baseline Graph showing the amplification of Feline Leukemia Virus RNA at different concentrations (10-fold dilution series from 10⁸ copies down to 10⁴ copies).

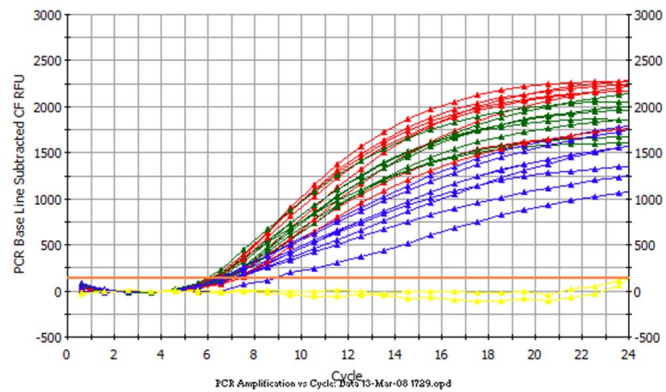


Figure 2. Isolation and Detection of RNA from Cell-Containing Media with No PCR Inhibition. Total RNA was isolated from HeLa cell-containing media samples using Norgen's Total RNA Purification Kit, which uses the same technology to isolate viral RNA as Norgen's Feline Leukemia Virus RT-PCR Detection Kit. The isolated HeLa RNA was then subjected to RT-qPCR using human 5S gene primers. To test the absence of PCR inhibitors usually accompanying RNA isolated, an increasing amount from each elution (1, 3 and 5 µL) was used as a template in the PCR reaction. The red lines in the PCR baseline graph above correspond to 1 µL of RNA used in a 20 µL reaction. The green lines in the PCR baseline graph above correspond to 3 µL of RNA used. The blue lines in the PCR baseline graph above correspond to 5 µL of RNA used. The RNA could be detected in all cases, indicating the high quality of the purified RNA.

Feline Leukemia Virus Ordering information

Description	Cat #	Size
End-Point PCR	44000	24 rxns
Real-Time PCR	TM44000	48 rxns
Real-Time PCR	SG44000	48 rxns
Primer Sets and Controls	44010	100 rxns

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Feline Immunodeficiency Virus RT-PCR Detection Kit

Cat. # 44100

A ready-to-use system for the isolation and detection of FIV using end-point RT-PCR

Norgen's Feline Immunodeficiency Virus RT-PCR Detection Kit is a ready-to-use system for the isolation and detection of FIV from blood samples. First, the kit contains components for the rapid isolation of total RNA, including viral RNA, from the samples using spin-column chromatography based on Norgen's proprietary resin. Second, the kit contains FIV Master Mix to allow for PCR amplification, as well as a Control Master Mix to allow for amplification of both an isolation control and a PCR control. The amplified PCR products are then detected using agarose gel electrophoresis. Alternatively, detection can be performed based on real-time RT-PCR using melt curves.

The FIV RT-PCR Detection Mastermix contains reagents and enzymes for the specific amplification of a 318 bp region of the viral genome. In addition, Norgen's FIV 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. This kit is designed to allow for the testing of 24 samples. The FIV RT-PCR Primer Set and Controls are also available separately for end-point RT-PCR detection.

Features and Benefits

- Rapid isolation of high quality RNA from blood
- Contains two ready-to-use 2X RT-PCR Master Mixes
- High sensitivity and specificity
- Includes an isolation control and a PCR control
- Primer set and controls also available separately
- Ideal for use in:
 1. Surveillance of Drug Resistant Pathogens
 2. Epidemiological Studies
 3. Field Surveillance of Pathogens
 4. Surveys

Linear Range

- The linear range of Norgen's FIV RT-PCR Detection Kit was determined by analyzing a dilution series of a FIV quantification standards ranging from 100 μ g to 1 μ g.
- Each dilution has been tested in replicates (n = 4) using Norgen's FIV RT-PCR Detection Kit on a 1X TAE 1.7% agarose gel.
- The linear range of Norgen's FIV RT-PCR Detection Kit has been determined to cover concentrations from 100 μ g to 1 ng
- Under the conditions of the Norgen's FIV RNA Isolation procedure, Norgen's FIV RT-PCR Detection Kit covers a linear range from 100 copies to 1 x 10⁶ copies.

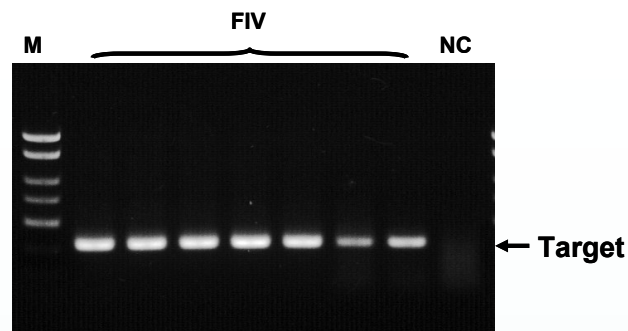


Figure 1. Sensitivity of Detection using the Feline Immunodeficiency Virus RT-PCR Detection Kit. A representative 1X TAE, 1.7% agarose gel showing the amplification of Feline Immunodeficiency Virus (FIV) at different concentrations (Target). The size of the FIV target amplicon corresponds to the 318 bp band represented by the provided DNA Marker (M). NC = Negative Control

Feline Immunodeficiency Virus Ordering information

Description	Cat #	Size
End-Point PCR	44100	24 rxns
Real-Time PCR	TM44100	48 rxns
Real-Time PCR	SG44100	48 rxns
Primer Sets and Controls	44110	100 rxns

West Nile Virus RT-PCR Detection Kit

Cat. # 44200

A ready-to-use system for the isolation and detection of West Nile Virus using end-point RT-PCR

Norgen's West Nile Virus RT-PCR Detection Kit is a ready-to-use system for the isolation and detection of WNV from blood or plasma samples. First, the kit contains components for the rapid isolation of total RNA, including viral RNA, from the samples using spin-column chromatography based on Norgen's proprietary resin. Second, the kit contains WNV Master Mix to allow for PCR amplification, as well as a Control Master Mix to allow for amplification of both an isolation control and a PCR control. The amplified PCR products are then detected using agarose gel electrophoresis. Alternatively, detection can be performed based on real-time RT-PCR using melt curves.

The WNV RT-PCR Detection Mastermix contains reagents and enzymes for the specific amplification of a 356 bp region of the viral genome. In addition, Norgen's WNV 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. This kit is designed to allow for the testing of 24 samples. The WNV RT-PCR Primer Set and Controls are also available separately for end-point RT-PCR detection.

Features and Benefits

- Rapid isolation of high quality RNA from blood or plasma
- Contains two ready-to-use 2X PCR Master Mixes
- High sensitivity and specificity
- Includes an isolation control and a PCR control
- Primer set and controls also available separately
- Ideal for use in:
 1. Surveillance of Drug Resistant Pathogens
 2. Epidemiological Studies
 3. Field Surveillance of Pathogens
 4. Surveys

Linear Range

- The linear range of Norgen's WNV RT-PCR Detection Kit was determined by analyzing a dilution series of a WNV quantification standards ranging from 100 μ g to 1 μ g.
- Each dilution has been tested in replicates ($n = 4$) using Norgen's WNV RT-PCR Detection Kit on a 1X TAE 1.7% agarose gel.
- The linear range of Norgen's WNV RT-PCR Detection Kit has been determined to cover concentrations from 100 μ g to 1 μ g
- Under the conditions of the Norgen's WNV RNA Isolation procedure, Norgen's WNV RT-PCR Detection Kit covers a linear range from 100 copies to 1×10^6 copies.

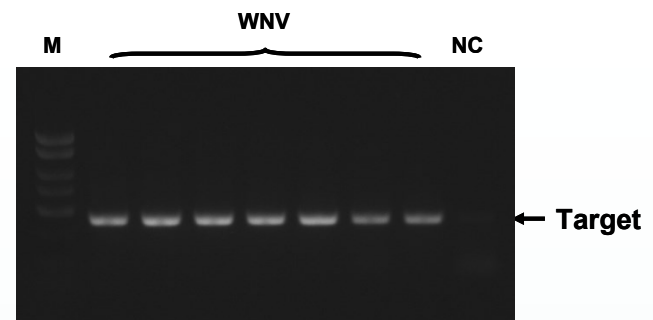


Figure 1. Sensitivity of Detection using the West Nile Virus RT-PCR Detection Kit. A representative 1X TAE, 1.7% agarose gel showing the amplification of West Nile Virus (WNV) at different concentrations (Target). The size of the WNV target amplicon corresponds to the 356 bp band represented by the provided DNA Marker (M). NC = Negative Control

West Nile Virus Ordering information

Description	Cat #	Size
End-Point PCR	44200	24 rxns
End-Point PCR Dx	Dx44220	48 rxns
Real-Time PCR	TM44200	48 rxns
Real-Time PCR	SG44200	48 rxns
Primer Sets and Controls	44210	100 rxns

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Feline Herpes Virus PCR Detection Kit

Cat. # 44300

A ready-to-use system for the isolation and detection of Feline Herpes Virus using end-point PCR

Norgen's Feline Herpes Virus PCR Detection Kit is a ready-to-use system for the isolation and detection of FHV from plasma/serum samples, swabs and viral culture. First, the kit contains components for the rapid isolation of total DNA, including viral DNA, from the samples using spin-column chromatography based on Norgen's proprietary resin. Second, the kit contains FHV Master Mix to allow for PCR amplification, as well as a Control Master Mix to allow for amplification of both an isolation control and a PCR control. The amplified PCR products are then detected using agarose gel electrophoresis. Alternatively, detection can be performed based on real-time PCR using melt curves.

The FHV PCR Detection Mastermix contains reagents and enzymes for the specific amplification of a 338 bp region of the viral genome. In addition, Norgen's FHV PCR Detection Kit contains a second Mastermix, the PCR Control Master Mix, which can be used to identify possible PCR inhibition and/or inadequate isolation via a separate PCR reaction with the use of the provided PCR control (PCRC) or Isolation Control (IsoC), respectively. This kit is designed to allow for the testing of 24 samples. The FHV PCR Primer Set and Controls are also available separately for end-point PCR detection.

Features and Benefits

- Rapid isolation of high quality DNA from plasma/serum, swabs, or viral culture
- Contains two ready-to-use 2X PCR Master Mixes
- High sensitivity and specificity
- Includes an isolation control and a PCR control
- Primer set and controls also available separately
- Ideal for use in:
 1. Surveillance of Drug Resistant Pathogens
 2. Epidemiological Studies
 3. Field Surveillance of Pathogens
 4. Surveys

Linear Range

- The linear range of Norgen's FHV PCR Detection Kit was determined by analyzing a dilution series of a FHV quantification standards ranging from 100 ag to 1 pg.
- Each dilution has been tested in replicates (n = 4) using Norgen's FHV PCR Detection Kit on a 1X TAE 1.7% agarose gel.
- The linear range of Norgen's FHV PCR Detection Kit has been determined to cover concentrations from 100 ag to 1 ng
- Under the conditions of the Norgen's FHV DNA Isolation procedure, Norgen's FHV PCR Detection Kit covers a linear range from 100 copies to 1 x 10⁶ copies.

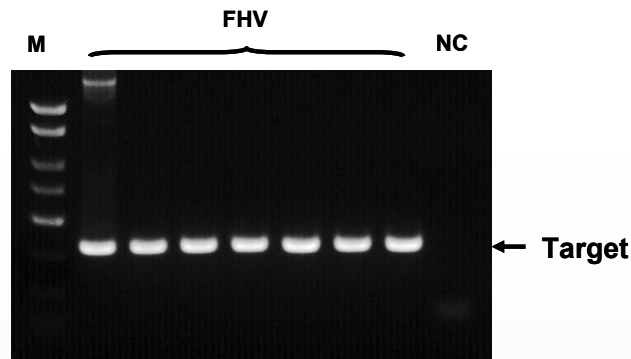


Figure 1. Sensitivity of Detection using the Feline Herpes Virus PCR Detection Kit. A representative 1X TAE, 1.7% agarose gel showing the amplification of Feline Herpes Virus (FHV) at different concentrations (Target). The size of the FHV target amplicon corresponds to the 318 bp band represented by the provided DNA Marker (M). NC = Negative Control

Feline Herpes Virus Ordering information

Description	Cat #	Size
End-Point PCR	44300	24 rxns
Real-Time PCR	TM44300	48 rxns
Real-Time PCR	SG44300	48 rxns
Primer Sets and Controls	44310	100 rxns

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Feline Infectious Peritonitis Virus RT-PCR Detection Kit

Cat. # 44400

A ready-to-use system for the isolation and detection of FIPV using end-point RT-PCR

Norgen's Feline Infectious Peritonitis Virus RT-PCR Detection Kit is a ready-to-use system for the isolation and detection of FIPV from blood samples. First, the kit contains components for the rapid isolation of total RNA, including viral RNA, from the samples using spin-column chromatography based on Norgen's proprietary resin. Second, the kit contains FIPV Master Mix to allow for PCR amplification, as well as a Control Master Mix to allow for amplification of both an isolation control and a PCR control. The amplified PCR products are then detected using agarose gel electrophoresis. Alternatively, detection can be performed based on real-time RT-PCR using melt curves.

The FIPV RT-PCR Detection Mastermix contains reagents and enzymes for the specific amplification of a 304 bp region of the viral genome. In addition, Norgen's FIPV 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. This kit is designed to allow for the testing of 24 samples. The FIPV RT-PCR Primer Set and Controls are also available separately for end-point RT-PCR detection.

Features and Benefits

- Rapid isolation of high quality RNA from blood
- Contains two ready-to-use 2X RT-PCR Master Mixes
- High sensitivity and specificity
- Includes an isolation control and a PCR control
- Primer set and controls also available separately
- Ideal for use in:
 1. Surveillance of Drug Resistant Pathogens
 2. Epidemiological Studies
 3. Field Surveillance of Pathogens
 4. Surveys

Linear Range

- The linear range of Norgen's FIPV RT-PCR Detection Kit was determined by analyzing a dilution series of a FIV quantification standards ranging from 100 ag to 1 pg.
- Each dilution has been tested in replicates (n = 4) using Norgen's FIV RT-PCR Detection Kit on a 1X TAE 1.7% agarose gel.
- The linear range of Norgen's FIVPV RT-PCR Detection Kit has been determined to cover concentrations from 100 ag to 1 ng
- Under the conditions of the Norgen's FIPV RNA Isolation procedure, Norgen's FIPV RT-PCR Detection Kit covers a linear range from 100 copies to 1 x 10⁶ copies.

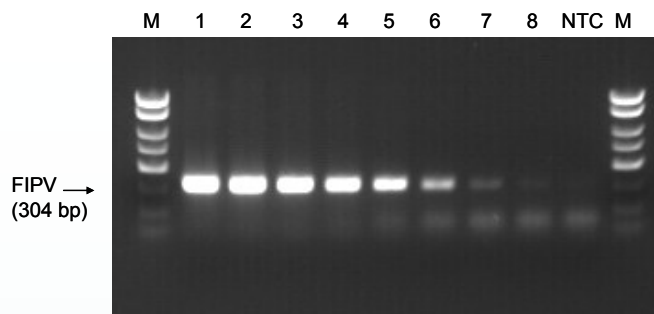


Figure 1. Sensitivity of Detection using the FIPV RT-PCR Detection Kit. A representative 1X TAE 1.5% agarose gel showing the amplification of FIPV at different concentrations. The size of the FIPV target amplicon corresponds to 304 bp as represented by the provided DNA Marker (M). NTC = Negative Control.

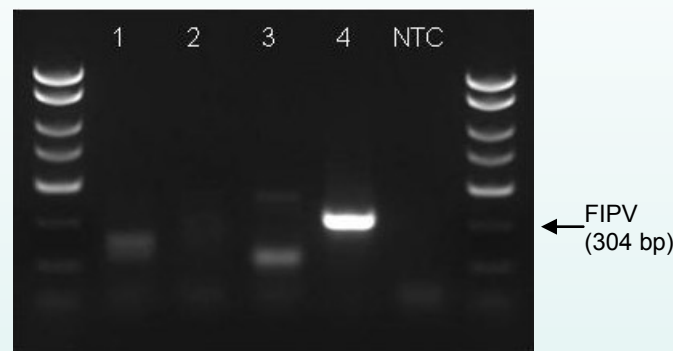


Figure 2. Specificity of the primers used to detect FIPV. A 1.7 % agarose gel is shown which indicates the specificity of the Feline Infectious Peritonitis Virus RT-PCR Detection Kit. The specificity of Norgen's Feline Infectious Peritonitis Virus RT-PCR Detection Kit is first and foremost ensured by the selection of the Feline Infectious Peritonitis Virus (FIPV)-specific primers, as well as the selection of stringent reaction conditions. The primers were checked for possible homologies in GenBank published sequences by sequence comparison analyses. Lane 1 represents RNA transcript fragment of the Feline calici virus. Lane 2 represents RNA transcript fragment of the Feline Leukemia Virus. Lane 3 corresponds to RNA transcript fragment of Feline Immunodeficiency Virus. Lane 4 corresponds to RNA transcript fragment of Feline infectious peritonitis. Lane NTC corresponds to negative (no template) control. No cross-reactivity of the target primers was found for any of the tested RNA. The size of the FIP target amplicon corresponds to the 304 bp band represented by the provided DNA Marker (M).

Feline Infectious Peritonitis Virus Ordering information

Description	Cat #	Size
End-Point PCR	44400	24 rxns
Real-Time PCR	TM44400	48 rxns
Real-Time PCR	SG44400	48 rxns
Primer Sets and Controls	44410	100 rxns

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Dirofilaria immitis PCR Detection Kit

Cat. # 44500

A ready-to-use system for the isolation and detection of *Dirofilaria immitis* using end-point PCR

Norgen's *Dirofilaria immitis* PCR Detection Kit is a ready-to-use system for the isolation and detection of *Dirofilaria immitis* from blood samples. First, the kit contains components for the rapid isolation of total DNA from the samples using spin-column chromatography. Second, the kit contains *Dirofilaria immitis* Master Mix to allow for PCR amplification, as well as a Control Master Mix to allow for amplification of both an isolation control and a PCR control. The amplified PCR products are then detected using agarose gel electrophoresis. Alternatively, detection can be performed based on real-time PCR using melt curves.

The *Dirofilaria immitis* PCR Detection Mastermix contains reagents and enzymes for the specific amplification of a 276 bp region of the parasite genome. In addition, Norgen's *Dirofilaria immitis* PCR Detection Kit contains a second Mastermix, the PCR Control Master Mix, which can be used to identify possible PCR inhibition and/or inadequate isolation via a separate PCR reaction with the use of the provided PCR control (PCRC) or Isolation Control (IsoC), respectively. This kit is designed to allow for the testing of 24 samples. The *Dirofilaria immitis* PCR Primer Set and Controls are also available separately for end-point PCR detection.

Features and Benefits

- Rapid isolation of high quality RNA from blood
- Contains two ready-to-use 2X PCR Master Mixes
- High sensitivity and specificity
- Includes an isolation control and a PCR control
- Primer set and controls also available separately
- Ideal for use in:
 1. Surveillance of Drug Resistant Pathogens
 2. Epidemiological Studies
 3. Field Surveillance of Pathogens
 4. Surveys

Linear Range

- The linear range of Norgen's *Dirofilaria immitis* PCR Detection Kit was determined by analyzing a dilution series of a *Dirofilaria immitis* quantification standards ranging from 100 ag to 1 pg.
- Each dilution has been tested in replicates (n = 4) using Norgen's *Dirofilaria immitis* PCR Detection Kit on a 1X TAE 1.7% agarose gel.
- The linear range of Norgen's *Dirofilaria immitis* PCR Detection Kit has been determined to cover concentrations from 100 ag to 1 ng
- Under the conditions of the Norgen's *Dirofilaria immitis* DNA Isolation procedure, Norgen's *Dirofilaria immitis* PCR Detection Kit covers a linear range from 100 copies to 1 x 10⁶ copies.

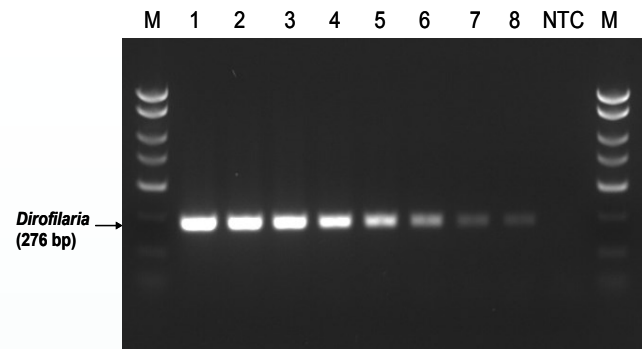


Figure 1. Sensitivity of Detection using the *Dirofilaria immitis* PCR Detection Kit. A representative 1X TAE 1.5% agarose gel showing the amplification of *Dirofilaria immitis* at different concentrations. The size of the *Dirofilaria immitis* target amplicon corresponds to 276 bp as represented by the provided DNA Marker (M). NTC = Negative Control.

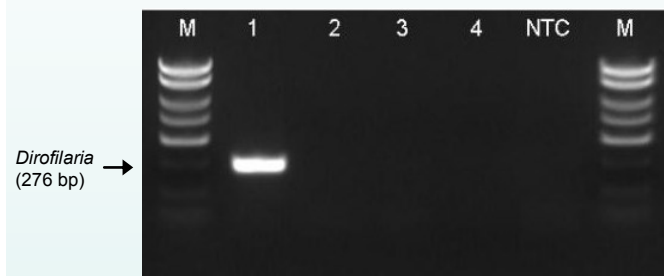


Figure 2. Specificity of the Primers used to Detect *Dirofilaria immitis*. A 1.7 % agarose gel is shown which indicates the specificity of the *Dirofilaria immitis* PCR Detection Kit. The specificity of Norgen's *Dirofilaria immitis* PCR Detection Kit is first and foremost ensured by the selection of the *Dirofilaria immitis* (DIR)-specific primers, as well as the selection of stringent reaction conditions. The primers were checked for possible homologies in GenBank published sequences by sequence comparison analyses. Lane 1 corresponds to cloned PCR fragment of the *Dirofilaria immitis*. Lane 2 corresponds to cloned PCR fragment of *Toxoplasma gondii*. Lane 3 corresponds to genomic DNA of *Leptospira interrogans*. Lane 4 corresponds to cloned PCR fragment of the *Bordetella*. Lane NTC corresponds to negative (no template) control. No cross-reactivity of the target primers was found for any of the tested DNA. The size of the *Dirofilaria* target amplicon corresponds to the 276 bp band represented by the provided DNA Marker (M).

Dirofilaria immitis Ordering information

Description	Cat #	Size
End-Point PCR	44500	24 rxns
Real-Time PCR	TM44500	48 rxns
Real-Time PCR	SG44500	48 rxns
Primer Sets and Controls	44510	100 rxns

For research use only and NOT intended for in vitro diagnostics

Leptospira interrogans PCR Detection Kit

Cat. # 44600

A ready-to-use system for the isolation and detection of *Leptospira interrogans* using end-point PCR

Norgen's *Leptospira interrogans* PCR Detection Kit is a ready-to-use system for the isolation and detection of *Leptospira interrogans* from urine samples. First, the kit contains components for the rapid isolation of total DNA from the samples using spin-column chromatography based on Norgen's proprietary resin. Second, the kit contains *Leptospira interrogans* Master Mix to allow for PCR amplification, as well as a Control Master Mix to allow for amplification of both an isolation control and a PCR control. The amplified PCR products are then detected using agarose gel electrophoresis. Alternatively, detection can be performed based on real-time PCR using melt curves.

The *Leptospira interrogans* PCR Detection Mastermix contains reagents and enzymes for the specific amplification of a 350 bp region of the bacterial genome. In addition, Norgen's *Leptospira interrogans* PCR Detection Kit contains a second Mastermix, the PCR Control Master Mix, which can be used to identify possible PCR inhibition and/or inadequate isolation via a separate PCR reaction with the use of the provided PCR control (PCRC) or Isolation Control (IsoC), respectively. This kit is designed to allow for the testing of 24 samples. The *Leptospira interrogans* PCR Primer Set and Controls are also available separately for end-point PCR detection.

Features and Benefits

- Rapid isolation of high quality DNA from urine
- Contains two ready-to-use 2X PCR Master Mixes
- High sensitivity and specificity
- Includes an isolation control and a PCR control
- Primer set and controls also available separately
- Ideal for use in:
 1. Surveillance of Drug Resistant Pathogens
 2. Epidemiological Studies
 3. Field Surveillance of Pathogens
 4. Surveys

Linear Range

- The linear range was determined by analyzing a dilution series of a *Leptospira* quantification standards ranging from 1pg to 10 ng.
- Each dilution has been tested in replicates (n = 4) on a 1X TAE 1.7% agarose gel.
- The linear range of Norgen's *Leptospira interrogans* PCR Detection Kit has been determined to cover concentrations from 1pg to 10 ng.
- Under the conditions of the *Leptospira* DNA Isolation procedure, Norgen's *Leptospira interrogans* PCR Detection Kit covers a linear range from 100 copies to 1 x 10⁶ copies.

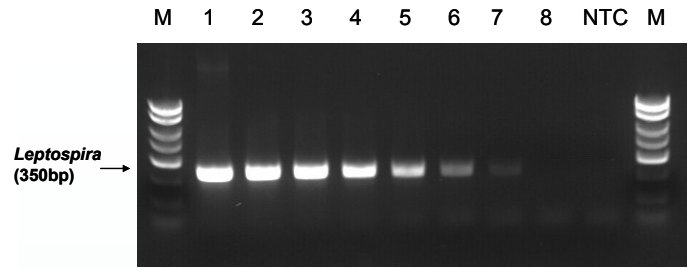


Figure 1. Sensitivity of Detection using the *Leptospira interrogans* PCR Detection Kit. A representative 1X TAE 1.5% agarose gel showing the amplification of *Leptospira interrogans* at different concentrations. The size of the *Leptospira* target amplicon corresponds to 350 bp as represented by the provided DNA Marker (M). NTC = Negative Control.

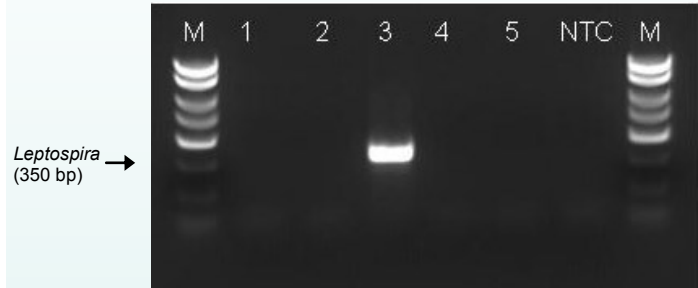


Figure 2. Specificity of the Primers used to Detect *Leptospira interrogans*. A 1.7 % agarose gel is shown which indicates the specificity of the *Leptospira interrogans* PCR Detection Kit. The specificity of Norgen's *Leptospira interrogans* PCR Detection Kit is first and foremost ensured by the selection of the *Leptospira interrogans* (Tox)-specific primers, as well as the selection of stringent reaction conditions. The primers were checked for possible homologies in GenBank published sequences by sequence comparison analyses. Lane 1 corresponds to cloned PCR fragment of the *Dirofilaria immitis*. Lane 2 corresponds to cloned PCR fragment of the *Toxoplasma gondii*. Lane 3 corresponds to genomic DNA of *Leptospira interrogans*. Lane 4 corresponds to cloned PCR fragment of the *Bordetella*. Lane 5 corresponds to cloned PCR fragment of the *Borrelia garinii*. Lane NTC corresponds to negative (no template) control. No cross-reactivity of the target primers was found for any of the tested DNA. The size of the *Leptospira* target amplicon corresponds to the 350 bp band represented by the provided DNA Marker (M).

Leptospira interrogans Ordering information

Description	Cat #	Size
End-Point PCR	44600	24 rxns
Real-Time PCR	TM44600	48 rxns
Real-Time PCR	SG44600	48 rxns
Primer Sets and Controls	44610	100 rxns

For research use only and NOT intended for in vitro diagnostics

Toxoplasma gondii PCR Detection Kit

Cat. # 44700

A ready-to-use system for the isolation and detection of *Toxoplasma gondii* using end-point PCR

Norgen's *Toxoplasma gondii* PCR Detection Kit is a ready-to-use system for the isolation and detection of *Toxoplasma gondii* from blood samples. First, the kit contains components for the rapid isolation of total DNA from the samples using spin-column chromatography. Second, the kit contains *Toxoplasma gondii* Master Mix to allow for PCR amplification, as well as a Control Master Mix to allow for amplification of both an isolation control and a PCR control. The amplified PCR products are then detected using agarose gel electrophoresis. Alternatively, detection can be performed based on real-time PCR using melt curves.

The *Toxoplasma gondii* PCR Detection Mastermix contains reagents and enzymes for the specific amplification of a 303 bp region of the parasite genome. In addition, Norgen's *Toxoplasma gondii* PCR Detection Kit contains a second Mastermix, the PCR Control Master Mix, which can be used to identify possible PCR inhibition and/or inadequate isolation via a separate PCR reaction with the use of the provided PCR control (PCRC) or Isolation Control (IsoC), respectively. This kit is designed to allow for the testing of 24 samples. The *Toxoplasma gondii* PCR Primer Set and Controls are also available separately for end-point PCR detection.

Features and Benefits

- Rapid isolation of high quality DNA from blood
- Contains two ready-to-use 2X PCR Master Mixes
- High sensitivity and specificity
- Includes an isolation control and a PCR control
- Primer set and controls also available separately
- Ideal for use in:
 1. Surveillance of Drug Resistant Pathogens
 2. Epidemiological Studies
 3. Field Surveillance of Pathogens
 4. Surveys

Linear Range

- The linear range of Norgen's *Toxoplasma gondii* PCR Detection Kit was determined by analyzing a dilution series of a *Toxoplasma gondii* quantification standards ranging from 100 ag to 1 pg.
- Each dilution has been tested in replicates (n = 4) using Norgen's *Toxoplasma gondii* PCR Detection Kit on a 1X TAE 1.7% agarose gel.
- The linear range of Norgen's *Toxoplasma gondii* PCR Detection Kit has been determined to cover concentrations from 100 ag to 1 ng.
- Under the conditions of the Norgen's *Toxoplasma gondii* DNA Isolation procedure, Norgen's *Dirofilaria immitis* PCR Detection Kit covers a linear range from 100 copies to 1 x 10⁶ copies.

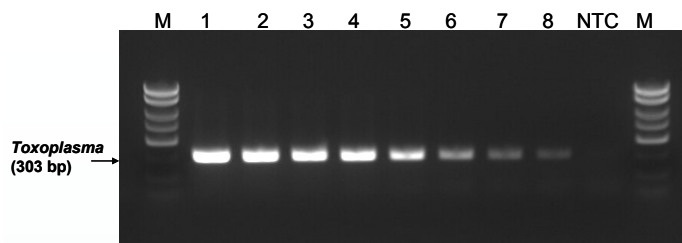


Figure 1. Sensitivity of Detection using the *Toxoplasma gondii* PCR Detection Kit. A representative 1X TAE 1.5% agarose gel showing the amplification of *Toxoplasma* at different concentrations. The size of the *Toxoplasma* target amplicon corresponds to 303 bp as represented by the provided DNA Marker (M). NTC = Negative Control.

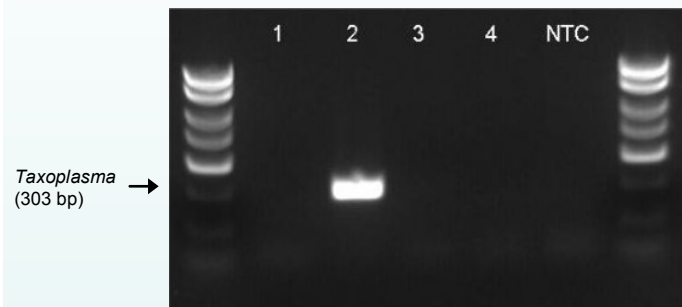


Figure 2. Specificity of the Primers used to Detect *Toxoplasma gondii*. A 1.7 % agarose gel is shown which indicates the specificity of the *Toxoplasma gondii* PCR Detection Kit. The specificity of Norgen's *Toxoplasma gondii* PCR Detection Kit is first and foremost ensured by the selection of the *Toxoplasma gondii* (Tox)-specific primers, as well as the selection of stringent reaction conditions. The primers were checked for possible homologies in GenBank published sequences by sequence comparison analyses. Lane 1 corresponds to cloned PCR fragment of the *Dirofilaria immitis*. Lane 2 corresponds to cloned PCR fragment of the *Toxoplasma gondii*. Lane 3 corresponds to genomic DNA of *Leptospira interrogans*. Lane 4 corresponds to cloned PCR fragment of the *Bordetella*. Lane NTC corresponds to negative (no template) control. No cross-reactivity of the target primers was found for any of the tested DNA. The size of the *Toxoplasma* target amplicon corresponds to the 303 bp band represented by the provided DNA Marker (M).

Toxoplasma gondii Ordering information

Description	Cat #	Size
End-Point PCR	44700	24 rxns
Real-Time PCR	TM44700	48 rxns
Real-Time PCR	SG44700	48 rxns
Primer Sets and Controls	44710	100 rxns

For research use only and NOT intended for in vitro diagnostics

Bordetella bronchiseptica PCR Detection Kit

Cat. # 44900

A ready-to-use system for the isolation and detection of *Bordetella bronchiseptica* using end-point PCR

Norgen's *Bordetella bronchiseptica* PCR Detection Kit is a ready-to-use system for the isolation and detection of *Bordetella bronchiseptica* from nasal exudates swabs and viral culture. First, the kit contains components for the rapid isolation of total DNA, including bacteril DNA, from the samples using spin-column chromatography based on Norgen's proprietary resin. Second, the kit contains *Bordetella bronchiseptica* Master Mix to allow for PCR amplification, as well as a Control Master Mix to allow for amplification of both an isolation control and a PCR control. The amplified PCR products are then detected using agarose gel electrophoresis. Alternatively, detection can be performed based on real-time PCR using melt curves.

The *Bordetella bronchiseptica* PCR Detection Mastermix contains reagents and enzymes for the specific amplification of a 277 bp region of the viral genome. In addition, Norgen's *Bordetella bronchiseptica* PCR Detection Kit contains a second Mastermix, the PCR Control Master Mix, which can be used to identify possible PCR inhibition and/or inadequate isolation via a separate PCR reaction with the use of the provided PCR control (PCRC) or Isolation Control (IsoC), respectively. This kit is designed to allow for the testing of 24 samples. The *Bordetella bronchiseptica* PCR Primer Set and Controls are also available separately for end-point PCR detection.

Features and Benefits

- Rapid isolation of high quality DNA from nasal exudates or swabs
- Contains two ready-to-use 2X PCR Master Mixes
- High sensitivity and specificity
- Includes an isolation control and a PCR control
- Primer set and controls also available separately
- Ideal for use in:
 1. Surveillance of Drug Resistant Pathogens
 2. Epidemiological Studies
 3. Field Surveillance of Pathogens
 4. Surveys

Linear Range

- The linear range was determined by analyzing a dilution series of a *Bordetella bronchiseptica* quantification standards ranging from 100 ag to 1 pg.
- Each dilution has been tested in replicates (n = 4) on a 1X TAE 1.7% agarose gel.
- The linear range has been determined to cover concentrations from 100 ag to 1 ng.
- Under the conditions of the Norgen's DNA Isolation procedure, this kit covers a linear range from 100 copies to 1 x 10⁶ copies.

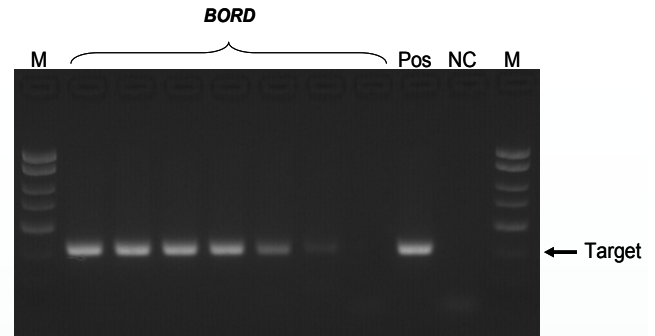


Figure 1. Sensitivity of Detection using the *Bordetella bronchiseptica* PCR Detection Kit. A representative 1X TAE, 1.5% agarose gel showing the amplification of *Bordetella bronchiseptica* at different concentrations. The size of the *Bordetella bronchiseptica* target amplicon corresponds to the 277 bp band represented by the provided DNA Marker (M). NC = Negative Control.

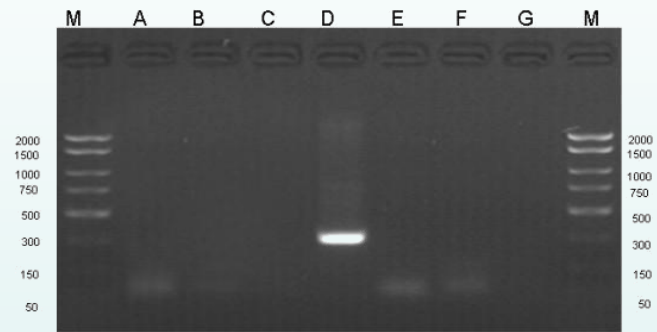


Figure 2. Specificity of the Primers used to Detect *Bordetella bronchiseptica*. A 1.5% agarose gel is shown which indicates the specificity of the *Bordetella bronchiseptica* PCR Detection Kit. The specificity of Norgen's *Bordetella bronchiseptica* PCR Detection Kit is first and foremost ensured by the selection of the *Bordetella bronchiseptica*-specific primers, as well as the selection of stringent reaction conditions. The primers were checked for possible homologies in GenBank published sequences by sequence comparison analyses. Lane A represents RNA transcript fragment of Rabies. Lane B corresponds to cloned PCR fragment of FPV Virus. Lane C corresponds to cloned PCR fragment of *Chlamydomytila felis*. Lane D corresponds to *Bordetella bronchiseptica* positive control. Lanes E corresponds to cloned PCR fragment of Feline panleukopenia virus. Lanes F corresponds to cloned PCR fragment of *B. burgdorferi*. Lane G corresponds to negative (no template) control. No cross-reactivity of the target primers was found for any of the tested RNA/DNA. The size of the FeLV target amplicon corresponds to the 310 bp band represented by the provided DNA Marker (M).

Bordetella bronchiseptica Ordering information

Description	Cat #	Size
End-Point PCR	44900	24 rxns
Real-Time PCR	TM44900	48 rxns
Real-Time PCR	SG44900	48 rxns
Primer Sets and Controls	44910	100 rxns

For research use only and NOT intended for in vitro diagnostics

Canine Parvovirus PCR Detection Kit

Cat. # 45000

A ready-to-use system for the isolation and detection of Canine Parvovirus using end-point PCR

Norgen's Canine Parvovirus PCR Detection Kit is a ready-to-use system for the isolation and detection of Canine Parvovirus from blood samples. First, the kit contains components for the rapid isolation of total DNA from the samples using spin-column chromatography based on Norgen's proprietary resin. Second, the kit contains Parvovirus Master Mix to allow for PCR amplification, as well as a Control Master Mix to allow for amplification of both an isolation control and a PCR control. The amplified PCR products are then detected using agarose gel electrophoresis. Alternatively, detection can be performed based on real-time PCR using melt curves. The Canine Parvovirus PCR Detection Mastermix contains reagents and enzymes for the specific amplification of a 283 bp region of the viral genome. In addition, Norgen's Canine Parvovirus PCR Detection Kit contains a second Mastermix, the PCR Control Master Mix, which can be used to identify possible PCR inhibition and/or inadequate isolation via a separate PCR reaction with the use of the provided PCR control (PCRC) or Isolation Control (IsoC), respectively. This kit is designed to allow for the testing of 24 samples. The Canine Parvovirus PCR Primer Set and Controls are also available separately for end-point PCR detection.

Features and Benefits

- Rapid isolation of high quality DNA from blood
- Contains two ready-to-use 2X PCR Master Mixes
- High sensitivity and specificity
- Includes an isolation control and a PCR control
- Primer set and controls also available separately
- Ideal for use in:
 1. Surveillance of Drug Resistant Pathogens
 2. Epidemiological Studies
 3. Field Surveillance of Pathogens
 4. Surveys

Linear Range

- The linear range of Norgen's Canine Parvovirus PCR Detection Kit was determined by analyzing a dilution series of a Canine Parvovirus quantification standards ranging from 100 ag to 1 pg.
- Each dilution has been tested in replicates (n = 4) using Norgen's Canine Parvovirus PCR Detection Kit on a 1X TAE 1.7% agarose gel.
- The linear range of Norgen's Canine Parvovirus PCR Detection Kit has been determined to cover concentrations from 100 ag to 1 ng
- Under the conditions of the Norgen's Canine Parvovirus DNA Isolation procedure, Norgen's Canine Parvovirus PCR Detection Kit covers a linear range from 100 copies to 1 x 10⁶ copies.

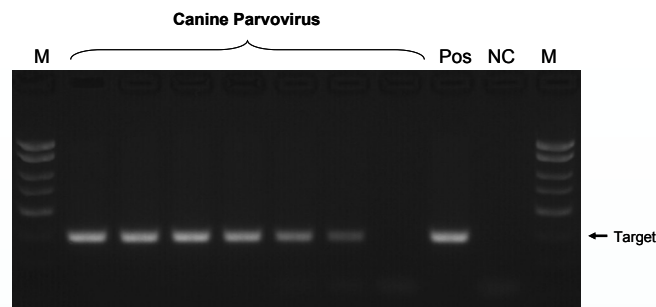


Figure 1. Sensitivity of Detection using the Canine Parvovirus PCR Detection Kit. A representative 1X TAE 1.7% agarose gel showing the amplification of Canine parvo at different concentrations. The size of the Canine parvovirus target amplicon corresponds to 283 bp as represented by the provided DNA Marker (M). NTC = Negative Control.

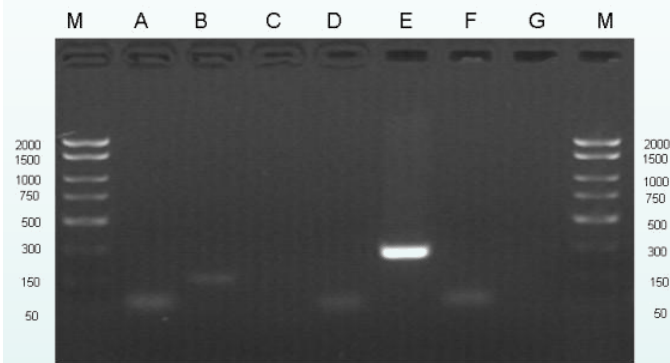


Figure 2. Specificity of the Primers used to Detect Canine Parvovirus. A 1.5% agarose gel is shown which indicates the specificity of the Canine Parvovirus PCR Detection Kit. The specificity of Norgens Canine Parvovirus PCR Detection Kit is first and foremost ensured by the selection of the parvovirus-specific primers, as well as the selection of stringent reaction conditions. The primers were checked for possible homologies in GenBank published sequences by sequence comparison analyses. Lane A represents RNA transcript fragment of the Rabies. Lane B corresponds to cloned PCR fragment of FPV Virus. Lane C corresponds to cloned PCR fragment of *Chlamydomphila felis*. Lane D corresponds to a cloned fragment of *Bordetella bronchiseptica*. Lanes E corresponds to cloned PCR fragment of Canine Parvovirus. Lanes F corresponds to cloned PCR fragment of *B. burgdorferi*. Lane G corresponds to negative (no template) control. No cross-reactivity of the target primers was found for any of the tested RNA/DNA. The size of the Canine Parvovirus target amplicon corresponds to the 283 bp band represented by the provided DNA Marker (M).

Canine Parvovirus Ordering information

Description	Cat #	Size
End-Point PCR	45000	24 rxns
Real-Time PCR	TM44700	48 rxns
Real-Time PCR	SG44700	48 rxns
Primer Sets and Controls	45010	100 rxns

For research use only and NOT intended for in vitro diagnostics

Feline Panleukopenia Virus PCR Detection Kit

Cat. # 45100

A ready-to-use system for the isolation and detection of Feline Panleukopenia Virus using end-point PCR

Norgen's Feline Panleukopenia Virus PCR Detection Kit is a ready-to-use system for the isolation and detection of FPV from blood samples. First, the kit contains components for the rapid isolation of total DNA from the samples using spin-column chromatography. Second, the kit contains FPV Master Mix to allow for PCR amplification, as well as a Control Master Mix to allow for amplification of both an isolation control and a PCR control. The amplified PCR products are then detected using agarose gel electrophoresis. Alternatively, detection can be performed based on real-time PCR using melt curves.

The Feline Panleukopenia Virus PCR Detection Mastermix contains reagents and enzymes for the specific amplification of a 301 bp region of the viral genome. In addition, Norgen's Feline Panleukopenia Virus PCR Detection Kit contains a second Mastermix, the PCR Control Master Mix, which can be used to identify possible PCR inhibition and/or inadequate isolation via a separate PCR reaction with the use of the provided PCR control (PCRC) or Isolation Control (IsoC), respectively. This kit is designed to allow for the testing of 24 samples. The Feline Panleukopenia Virus PCR Primer Set and Controls are also available separately for end-point PCR detection.

Features and Benefits

- Rapid isolation of high quality DNA from blood
- Contains two ready-to-use 2X PCR Master Mixes
- High sensitivity and specificity
- Includes an isolation control and a PCR control
- Primer set and controls also available separately
- Ideal for use in:
 1. Surveillance of Drug Resistant Pathogens
 2. Epidemiological Studies
 3. Field Surveillance of Pathogens
 4. Surveys

Linear Range

- The linear range was determined by analyzing a dilution series of a Feline Panleukopenia Virus quantification standards ranging from 100 ag to 1 pg.
- Each dilution has been tested in replicates (n = 4) using Norgen's Feline Panleukopenia Virus PCR Detection Kit on a 1X TAE 1.7% agarose gel.
- The linear range of Norgen's Feline Panleukopenia Virus PCR Detection Kit has been determined to cover concentrations from 100 ag to 1 ng
- Under the conditions of the Norgen's Feline Panleukopenia Virus DNA Isolation procedure, Norgen's Feline Panleukopenia Virus PCR Detection Kit covers a linear range from 100 copies to 1 x 10⁶ copies.

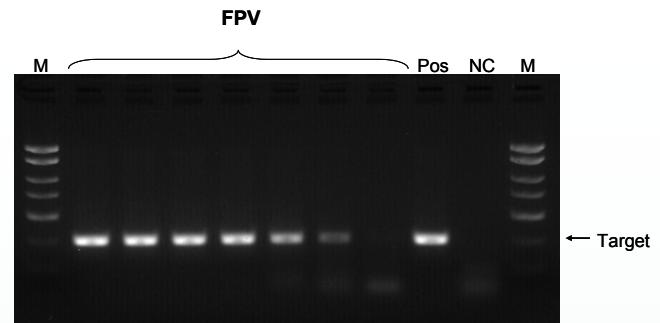


Figure 1. Sensitivity of Detection using the Feline Panleukopenia Virus PCR Detection Kit. A representative 1.5X TAE 1.7% agarose gel showing the amplification of FPV under different concentrations using the 2X FPV Detection PCR Mastermix. The size of the FPV target amplicon corresponds to 301 bp as represented by the provided DNA Marker (M). NC = Negative Control.

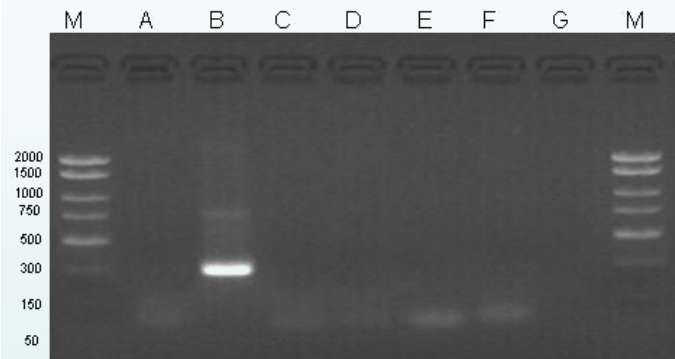


Figure 2. Specificity of the Primers used to Detect FPV. A 1.5% agarose gel is shown which indicates the specificity of the FPV PCR Detection Kit. The specificity of Norgen's FPV PCR Detection Kit is first and foremost ensured by the selection of the FPV-specific primers, as well as the selection of stringent reaction conditions. The primers were checked for possible homologies in GenBank published sequences by sequence comparison analyses. Lane A represents RNA transcript fragment of the Rabies. Lane B corresponds to cloned PCR fragment of FPV Virus. Lane C corresponds to cloned PCR fragment of *Chlamydomphila felis*. Lane D corresponds to *Bordetella bronchiseptica* positive control. Lanes E corresponds to cloned PCR fragment of Canine Parvovirus. Lanes F corresponds to cloned PCR fragment of *B. burgdorferi*. Lane G corresponds to negative (no template) control. No cross-reactivity of the target primers was found for any of the tested RNA/DNA. The size of the FPV target amplicon corresponds to the 301 bp band represented by the provided DNA Marker (M).

Feline Panleukopenia Virus Ordering information

Description	Cat #	Size
End-Point PCR	45100	24 rxns
Real-Time PCR	TM45100	48 rxns
Real-Time PCR	SG45100	48 rxns
Primer Sets and Controls	45110	100 rxns

For research use only and NOT intended for in vitro diagnostics

Borrelia burgdorferi PCR Detection Kit

Cat. # 45200

A ready-to-use system for the isolation and detection of *Borrelia burgdorferi* using end-point PCR

Norgen's *Borrelia burgdorferi* PCR Detection Kit is a ready-to-use system for the isolation and detection of *Borrelia burgdorferi* from urine samples. First, the kit contains components for the rapid isolation of total DNA from the samples using spin-column chromatography based on Norgen's proprietary resin. Second, the kit contains *Borrelia burgdorferi* Master Mix to allow for PCR amplification, as well as a Control Master Mix to allow for amplification of both an isolation control and a PCR control. The amplified PCR products are then detected using agarose gel electrophoresis. Alternatively, detection can be performed based on real-time PCR using melt curves.

The *Borrelia burgdorferi* PCR Detection Mastermix contains reagents and enzymes for the specific amplification of a 277 bp region of the bacterial genome. In addition, Norgen's *Borrelia burgdorferi* PCR Detection Kit contains a second Mastermix, the PCR Control Master Mix, which can be used to identify possible PCR inhibition and/or inadequate isolation via a separate PCR reaction with the use of the provided PCR control (PCRC) or Isolation Control (IsoC), respectively. This kit is designed to allow for the testing of 24 samples. The *Borrelia burgdorferi* PCR Primer Set and Controls are also available separately for end-point PCR detection.

Features and Benefits

- Rapid isolation of high quality DNA from urine
- Contains two ready-to-use 2X PCR Master Mixes
- High sensitivity and specificity
- Includes an isolation control and a PCR control
- Primer set and controls also available separately
- Ideal for use in:
 1. Surveillance of Drug Resistant Pathogens
 2. Epidemiological Studies
 3. Field Surveillance of Pathogens
 4. Surveys

Linear Range

- The linear range was determined by analyzing a dilution series of a *Borrelia burgdorferi* quantification standards ranging from 1pg to 10 ng.
- Each dilution has been tested in replicates (n = 4) using Norgen's *Borrelia burgdorferi* PCR Detection Kit on a 1X TAE 1.7% agarose gel.
- The linear range of Norgen's *Borrelia burgdorferi* PCR Detection Kit has been determined to cover concentrations from 1pg to 10 ng.
- Under the conditions of the Norgen's *Borrelia burgdorferi* DNA Isolation procedure, Norgen's *Borrelia burgdorferi* PCR Detection Kit covers a linear range from 100 copies to 1 x 10⁶ copies.

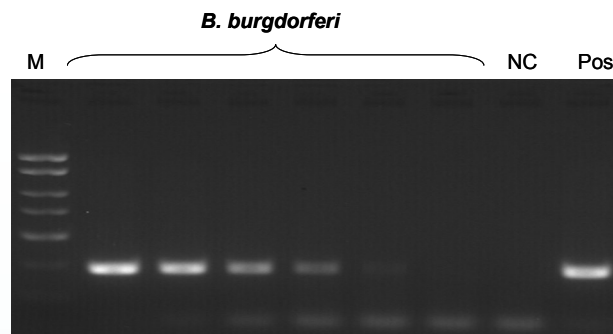


Figure 1. Sensitivity of Detection using the *Borrelia burgdorferi* PCR Detection Kit. A representative 1.5X TAE 1.7% agarose gel showing the amplification of *B. burgdorferi* under different concentration using the 2XB. *burgdorferi* Detection PCR Mastermix. The size of the *B. burgdorferi* target amplicon corresponds to 277 bp as represented by the provided DNA Marker (M). NC = Negative Control.

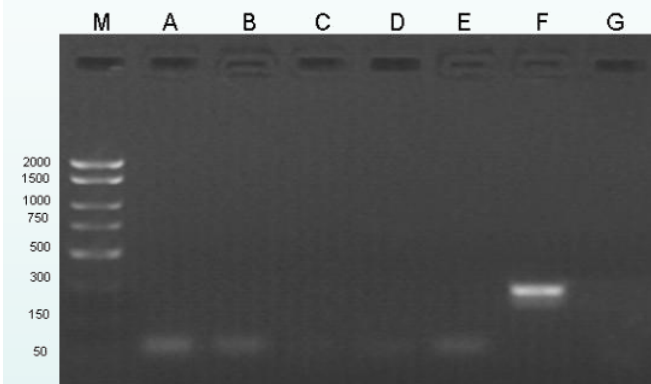


Figure 2. Specificity of the Primers used to Detect *B. burgdorferi*. A 1.5% agarose gel is shown which indicates the specificity of the *B. burgdorferi* PCR Detection Kit. The specificity of Norgens *B. burgdorferi* PCR Detection Kit is first and foremost ensured by the selection of the *B. burgdorferi*-specific primers, as well as the selection of stringent reaction conditions. The primers were checked for possible homologies in GenBank published sequences by sequence comparison analyses. Lane A represents RNA transcript fragment of the Rabies. Lane B corresponds to cloned PCR fragment of FPV Virus. Lane C corresponds to cloned PCR fragment of *Chlamydomytila felis*. Lane D corresponds to *Bordetella bronchiseptica* positive control. Lanes E corresponds to cloned PCR fragment of Canine Parvovirus. Lanes F corresponds to cloned PCR fragment of *B. burgdorferi*. Lane G corresponds to negative (no template) control. No cross-reactivity of the target primers was found for any of the tested RNA/DNA. The size of the *B. burgdorferi* target amplicon corresponds to the 277 bp band represented by the provided DNA Marker (M).

Borrelia burgdorferi Ordering information

Description	Cat #	Size
End-Point PCR	45200	24 rxns
Real-Time PCR	TM44700	48 rxns
Real-Time PCR	SG44700	48 rxns
Primer Sets and Controls	45210	100 rxns

For research use only and NOT intended for in vitro diagnostics

Rabies RT-PCR Detection Kit

Cat. # 45300

A ready-to-use system for the isolation and detection of Rabies using end-point RT-PCR

Norgen's Rabies RT-PCR Detection Kit is a ready-to-use system for the isolation and detection of rabies from blood samples. First, the kit contains components for the rapid isolation of total RNA, including viral RNA, from the samples using spin-column chromatography based on Norgen's proprietary resin. Second, the kit contains Rabies Master Mix to allow for PCR amplification, as well as a Control Master Mix to allow for amplification of both an isolation control and a PCR control. The amplified PCR products are then detected using agarose gel electrophoresis. Alternatively, detection can be performed based on real-time RT-PCR using melt curves. The Rabies RT-PCR Detection Mastermix contains reagents and enzymes for the specific amplification of a 280 bp region of the viral genome. In addition, Norgen's Rabies RT-PCR Detection Kit contains a second Mastermix, the Control RT-PCR 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. This kit is designed to allow for the testing of 24 samples. The Rabies RT-PCR Primer Set and Controls are also available separately for end-point RT-PCR detection.

Features and Benefits

- Rapid isolation of high quality DNA from blood
- Contains two ready-to-use 2X RT-PCR Master Mixes
- High sensitivity and specificity
- Includes an isolation control and a PCR control
- Primer set and controls also available separately
- Ideal for use in:
 1. Surveillance of Drug Resistant Pathogens
 2. Epidemiological Studies
 3. Field Surveillance of Pathogens
 4. Surveys

Linear Range

- The linear range of Norgen's Rabies RT-PCR Detection Kit was determined by analyzing a dilution series of a Rabies quantification standards ranging from 100 ag to 1 pg.
- Each dilution has been tested in replicates (n = 4) using Norgen's Rabies RT-PCR Detection Kit on a 1X TAE 1.7% agarose gel.
- The linear range of Norgen's Rabies RT-PCR Detection Kit has been determined to cover concentrations from 100 ag to 1 ng
- Under the conditions of the Norgen's Rabies RNA Isolation procedure, Norgen's Rabies RT-PCR Detection Kit covers a linear range from 100 copies to 1 x 10⁶ copies.

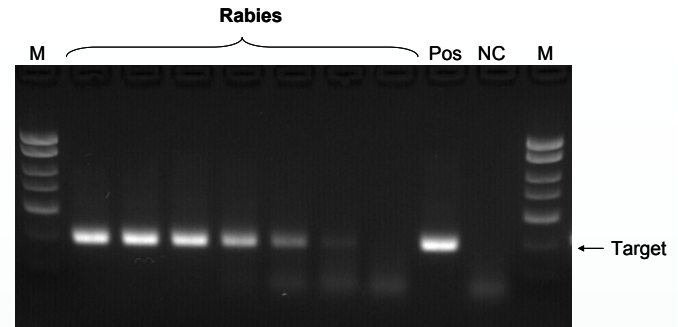


Figure 1. Sensitivity of Detection using the Rabies RT-PCR Detection Kit A representative 1.5X TAE 1.7% agarose gel showing the amplification of Rabies under different concentration using the 2X Rabies Detection RT-PCR Mastermix. The size of the Rabies target amplicon corresponds to 280 bp as represented by the provided DNA Marker (M). NC = Negative Control.

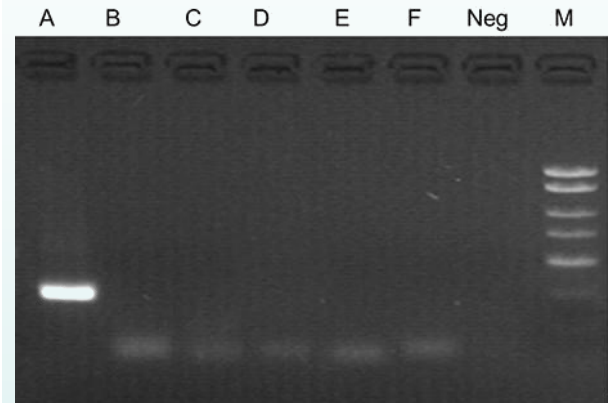


Figure 2. Specificity of the Primers used to Detect Rabies. A 1.5% agarose gel is shown which indicates the specificity of the Rabies RT-PCR Detection Kit. The specificity of Norgen's Rabies RT-PCR Detection Kit is first and foremost ensured by the selection of the Rabies-specific primers, as well as the selection of stringent reaction conditions. The primers were checked for possible homologies in GenBank published sequences by sequence comparison analyses. Lane A corresponds to RNA transcript fragment of the Rabies. Lane B corresponds to cloned PCR fragment of FPV Virus. Lanes C corresponds to cloned PCR fragment of *Chlamydomophila felis*. Lane D corresponds to *Bordetella bronchiseptica* positive control. Lanes E represents cloned PCR fragment of *Canine Parvovirus*. Lanes F corresponds to cloned PCR fragment of *B. burgdorferi*. Lane G corresponds to negative (no template) control. No cross-reactivity of the target primers was found for any of the tested RNA/DNA. The size of the Rabies target amplicon corresponds to the 280 bp band represented by the provided DNA Marker (M).

Rabies Ordering information

Description	Cat #	Size
End-Point PCR	45300	24 rxns
Real-Time PCR	TM45300	48 rxns
Real-Time PCR	SG45300	48 rxns
Primer Sets and Controls	45310	100 rxns

Commitment to Quality



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