



UltraGene Real-Time PCR Assays

Infectious Disease Testing through Multiplex Real-Time PCR

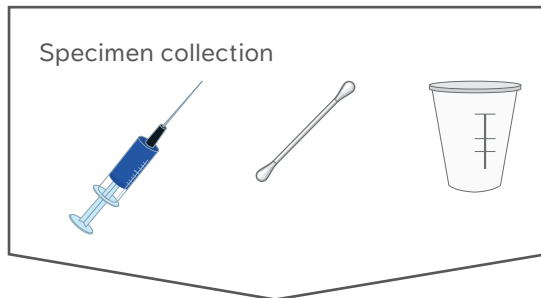
One single PCR program to identify up to 100 pathogens in 41 different qPCR panels.



The UltraGene infectious disease genetic test kit is a kit that detects the genes of multiple pathogens in a single test using real-time PCR.

- **Rich lineup-** Detects 100 types of pathogens (including subspecies) in 9 categories (respiratory infections, gastroenteritis, sexually transmitted diseases, hepatitis, fever/rash/childhood infections, immunosuppressive infections, meningitis, eye infections, fever bands)
- **Short working time:** from nucleic acid extraction to PCR reaction completion in as little as 4 hours includes optimized reagents (nucleic acid extraction kit required separately)

Product Workflow



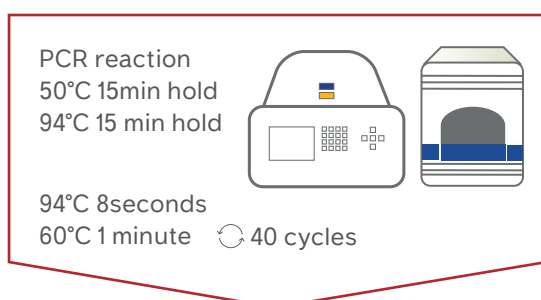
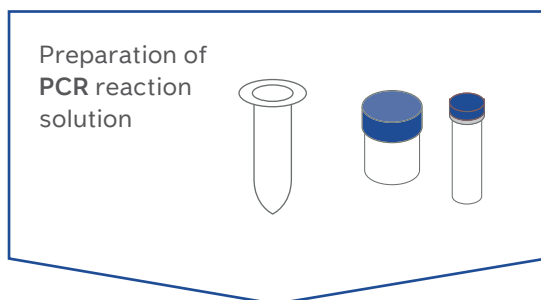
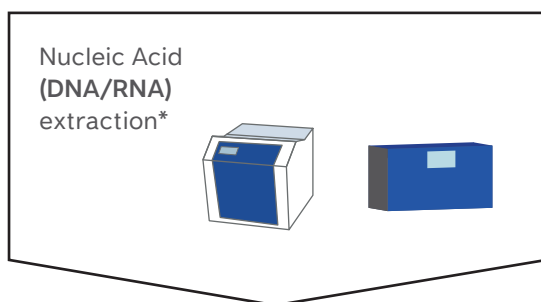
Example: UltraGene Respiratory pathogens 21

Specimen used

Pharyngeal/nasal/
nasopharyngeal swabs,
bronchoalveolar lavage fluid,
sputum, etc.



UltraGene Assay

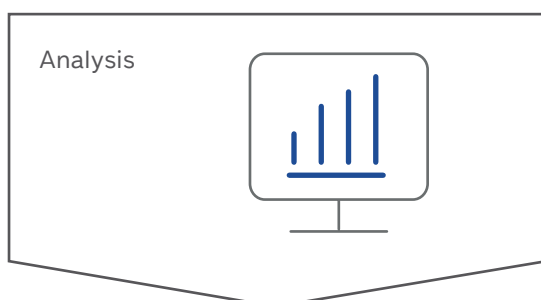
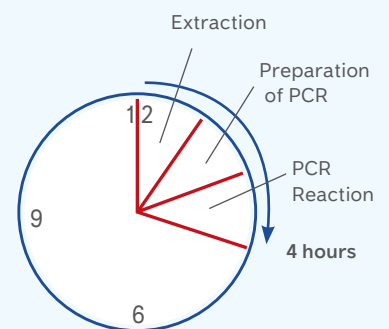


Reagents in the kit
used for each step:

- Negative control
- Internal control



- Primer & Probe Mix
- Enzyme Mix
- Reaction buffer
- Positive control



*The kit is not included in the Ultragen assay kit. Please use your validated extraction method.

Product information

- Primer/probe mix
- Enzyme Mix
- PCR reaction buffer
- Positive control (or quantitative standard)
- Negative control
- Internal control



Available types of assays

- respiratory infections
- gastroenteritis
- sexually transmitted diseases
- hepatitis
- fever/rash/childhood infections
- immunosuppressive infections
- cystitis
- eye infections
- tropical fever

Kit size (*)

- 32 reactions kit
- 64 reactions kit

Turnaround time

(from nucleic extraction to completion of PCR reaction)

Approximately 4 hours

Storage temperature

-20°C

Expiration date

1 year from date of manufacture

Recommendations

We recommend using the positive and negative control included in each kit. The number of reactions minus the number of reactions for the controls and the quantification standard reagents will determine the number of samples that can be tested.

Recommended Real-Time PCR Equipment Extraction

(if you are using equipment other than the ones listed below, please contact us).

Applied Biosystems 7500 (Thermo Fisher Scientific)

Applied Biosystems 7500 fast (Thermo Fisher Scientific)

Applied Biosystems ViiA 7 (Thermo Fisher Scientific)

QuantStudio5 (Thermo Fisher Scientific)

Rotor-Gene 6000/3000 (Qiagen)

Rotor-Gene Q (Qiagen)

Mic (Bio Molecular Systems)

LightCycler 480 (Roche)

CFX96 (Bio-Rad)

DX (Bio-Rad)

SmartCycler (Cepheid)

qTOWER3 (Analytikjena)

VERSANT PCR AD module

NucliSENS® easyMag® (bioMérieux)

EMAG® (bioMérieux)

QIA Symphony® (QIAGEN)

MagNA Pure 96 System (Roche)

Maxwell® (Promega)

magLEAD® 12gC (PSS)

KingFisher (Thermo Fisher)

Virus DNA/RNA Extraction Kit (Vazyme)



Respiratory infections

Influenza A virus	2	2+	2P	21	R22	R34	48	
Influenza A(H1N1)swl virus								62
Influenza A(H3NX) virus								
Influenza A(H5NX) virus								
Influenza A(H7NX) virus								
Influenza B virus								
Human respiratory syncytial viruses A/B								
Human rhinovirus								
Human coronavirus NL63								
Human coronavirus 229E								
Human coronavirus OC43								
Human coronavirus HK41								
Human parainfluenza virus 1								
Human parainfluenza virus 2								
Human parainfluenza virus 3								
Human parainfluenza virus 4								
Human metapneumoviruses A/B								
Human bocavirus								
Enterovirus								
Human parechovirus								
Human adenovirus								
Mycoplasma pneumoniae								
Chlamydia pneumoniae								
Staphylococcus aureus								
Streptococcus pneumoniae								
Haemophilus influenzae								
Moraxella catarrhalis								
Legionella pneumophila/ longbeachae								
Influenza C virus								
Pneumocystis jirovecii								
Haemophilus influenzae B								
Bordetella spp. (excluding B. parapertussis)								
Salmonella spp.								
Klebsiella pneumoniae								
Bordetella pertussis								
Bordetella parapertussis								
MERS-CoV								
SARS-CoV-2								

Sexually transmitted infections

Neisseria gonorrhoeae (two targets)								17
Neisseria gonorrhoeae								
Chlamydia trachomatis								52
Mycoplasma genitalium								33
Mycoplasma hominis								42
Trichomonas vaginalis								
Ureaplasma parvum								
Ureaplasma urealyticum								
Gardnerella vaginalis								
Herpes simplex virus 1								
Herpes simplex virus 2								19
Treponema pallidum								

Immunosuppressive infections - Eye infections

Herpes simplex virus 1								
Herpes simplex virus 2								
Varicella zoster virus								15
Chlamydia trachomatis								
Human adenovirus								
Human cytomegalovirus								1
Epstein-Barr virus								
Human polyomavirus 1 (BK virus)								55



RESPIRATORY INFECTIONS

UG Respiratory pathogens 21

2 32 rxn 11373927

Detection of 21 types of respiratory infectious: Enterovirus, Human adenovirus, Human bocavirus, Human coronavirus 229E, Human coronavirus HKU1, Human coronavirus NL63, Human coronavirus OC43, Human metapneumoviruses A/B, Human parainfluenza virus 1,2,3,4, Human parechovirus, Human respiratory syncytial viruses A/B, Human rhinovirus, Influenza A virus, Influenza A(H1N1)swl virus, Influenza B virus, *Mycoplasma pneumoniae*

UG Respiratory pathogens 21 plus

2+ 32 rxn 11373923

Detection of 25 types of respiratory infectious: *Chlamydia pneumoniae*, Enterovirus, *Haemophilus influenzae* B, Human adenovirus, Human bocavirus, Human coronavirus 229E, Human coronavirus HKU1, Human coronavirus NL63, Human coronavirus OC43, Human metapneumoviruses A/B, Human parainfluenza virus 1,2,3,4, Human parechovirus, Human respiratory syncytial viruses A/B, Human rhinovirus, Influenza A virus, Influenza A(H1N1)swl virus, Influenza B virus, *Mycoplasma pneumoniae*, *Staphylococcus aureus*, *Streptococcus pneumoniae*

UG Respiratory pathogens 33

2P 32 rxn 11373925

Detection of 33 types of respiratory infectious: *Bordetella* spp., *Chlamydia pneumoniae*, Enterovirus, *Haemophilus influenzae* B, Human adenovirus, Human bocavirus, Human coronavirus 229E, Human coronavirus HKU1, Human coronavirus NL63, Human coronavirus OC43, Human metapneumoviruses A/B, Human parainfluenza virus 1,2,3,4, Human parechovirus, Human respiratory syncytial viruses A/B, Human rhinovirus, Influenza A virus, Influenza A(H1N1)swl virus, Influenza B virus, Influenza C virus, *Klebsiella pneumoniae*, *Legionella pneumophila/ longbeachae*, *Moraxella catarrhalis*, *Mycoplasma pneumoniae*, *Pneumocystis jirovecii*, *Salmonella*, *Staphylococcus aureus*, *Streptococcus pneumoniae*

UG FLU

21 32 rxn 11373959

Detection of Flu: Influenza A virus, Influenza A(H1N1)swl virus, Influenza B virus

UG EPA

23 64 rxn 11373962

Detection of enterovirus, human parechovirus and human adenovirus

UG Pneumocystis jirovecii

27 32 rxn 11373965

Detection of *Pneumocystis jirovecii*

UG Bordetella

31 64 rxn 11373974

Detection of *Bordetella pertussis* and *Bordetella parapertussis*

UG FLU/HRSV

48 32 rxn 11374003

Detection of Influenza A virus, Influenza B virus and Human respiratory syncytial viruses A/B

UG MERS-CoV

50 64 rxn 11374006

Detection of MERS coronavirus

UG Atypical CAP

53 64 rxn 11374010

Detection of 3 bacteria causing pneumonia:
Chlamydia pneumoniae, *Legionella pneumophila/longbeachae* and *Mycoplasma pneumoniae*.

UG HCoV*

56 64 rxn 11374016

Detection of human coronaviruses NL63, 229E, OC43 and HKU1.

UG Flu differentiation*

62 32 rxn 11374021

Detection of Influenza A(H3NX) virus, Influenza A(H5NX) virus, Influenza A(H7NX) virus and Influenza A(H1N1)swl virus

UG Respiratory pathogens 22

R22 32 rxn 11373928

Detection of 22 respiratory pathogens: Influenza A virus, Influenza A(H1N1)swl virus, Influenza B virus, Human respiratory syncytial viruses A/B, human rhinovirus, human coronaviruses NL63, 229E, OC43 and HKU1, human parainfluenza virus 1 - 4, Human metapneumoviruses A/B, human bocavirus, enterovirus, human parechovirus, human adenovirus, *Mycoplasma pneumoniae* and SARS-CoV-2

UG Respiratory pathogens 34

R34 32 rxn 11373926

Detection of 34 respiratory pathogens: Influenza A virus, Influenza A(H1N1)swl virus, Influenza B virus, Human respiratory syncytial viruses A/B, human rhinovirus, human coronaviruses NL63, 229E, OC43 and HKU1, human parainfluenza virus 1 - 4, Human metapneumoviruses A/B, human bocavirus, enterovirus, human parechovirus, human adenovirus, *Mycoplasma pneumoniae*, *Chlamydia pneumoniae*, *Staphylococcus aureus*, *Streptococcus pneumoniae*, *Haemophilus influenzae B*, *Haemophilus influenzae*, *Moraxella catarrhalis*, *Legionella pneumophila/longbeachae*, Influenza C virus, *Pneumocystis jirovecii*, *Bordetella* spp. (excluding *B. parapertussis*), *Salmonella* spp., *Klebsiella pneumoniae* and SARS-CoV-2.

UG SARS-CoV-2

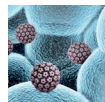
114 32 rxn 11416314

Detection of Severe Acute Respiratory Syndrome Coronavirus 2.

UG Bacterial pneumonia_CAP

29 32 rxn 11373969

Streptococcus pneumoniae, *Staphylococcus aureus*, *Haemophilus influenzae*, *Moxarella catarrhalis*, *Legionella pneumophila/Legionella longbeachae*, *Mycoplasma pneumoniae* and *Chlamydia pneumoniae*.



SEXUALLY TRANSMITTED INFECTIONS

UG Gonorrhoea confirmation

17 64 rxn 11373954

Detection of two *Neisseria gonorrhoeae* targets

UG Genital ulcer

19 64 rxn 11373956

Detection of herpes simplex virus 1 and 2 and *Treponema pallidum*.

UG Urethritis basic

33 64 rxn 11373978

Detection of *Chlamydia trachomatis*, *Mycoplasma genitalium* and *Neisseria gonorrhoeae*

UG Urethritis plus

42 32 rxn 11373993

Detection of *Chlamydia trachomatis*, *Mycoplasma genitalium*, *Neisseria gonorrhoeae*, *Mycoplasma hominis*, *Trichomonas vaginalis*, *Ureaplasma parvum* and *Ureaplasma urealyticum*.

UG STD9

52 32 rxn 11374007

Detection of *Chlamydia trachomatis*, *Mycoplasma genitalium*, *Neisseria gonorrhoeae*, *Gardnerella vaginalis*, *Trichomonas vaginalis*, herpes simplex virus 1 and 2, *Ureaplasma parvum* and *Ureaplasma urealyticum*.



IMMUNOSUPPRESSIVE INFECTIONS

UG ACE (including quantitative standards)

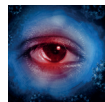
1 32 rxn 11373921

Detection of human adenovirus, human cytomegalovirus, Epstein-Barr virus

UG BKV (including quantitative standards)

55 64 rxn 11374014

Detection of human polyomavirus 1 (BK virus)



EYE INFECTIONS

UG Eye

15 64 rxn 11373950

Detection of 5 pathogens causing eye infections: Detection of herpes simplex virus 1 and 2, varicella zoster virus, *Chlamydia trachomatis* and human adenovirus.

*This is recommended for use with other kits. Internal Control is not included.



Gastroenteritis

Norovirus GI	
Norovirus GII	
Human astrovirus	3
Rotavirus	
Sapovirus	
Human adenovirus	
Enterovirus	23
Human parechovirus	
<i>Campylobacter coli/jejuni/lari</i>	
<i>Clostridium difficile</i>	
Enterohemorrhagic <i>E. coli</i> vtx+	14
<i>Salmonella</i> spp.	
<i>Shigella</i>	
<i>Yersinia enterocolitica</i>	
<i>Cryptosporidium</i>	
<i>Entamoeba histolytica</i>	20
<i>Giardia lamblia</i>	

Meningitis, Fever, Rash and Childhood infections

Herpes simplex virus 1			
Herpes simplex virus 2	7	13	
Varicella zoster virus			
Human herpesvirus 6			
Human herpesvirus 7			
Human parvovirus B19	10		60
Enterovirus		23	
Human parechovirus			
Human adenovirus			
Human cytomegalovirus			
Epstein-Barr virus			
Mumpsvirus			
<i>Haemophilus influenzae</i>			
<i>Neisseria meningitidis</i>		28	
<i>Streptococcus pneumoniae</i>			
Measles virus		46	
<i>Microsporum audouinii/ canis/ferrugineum</i>			
<i>Trichophyton mentagrophytes</i> complex			9
<i>Trichophyton rubrum</i> complex			
<i>Trichophyton tonsurans</i>			

Tropical fever

Zikavirus			
Chikungunya virus		43	84
Dengue virus			
<i>Leptospira</i>			
<i>Plasmodium</i>	36		
<i>Rickettsia</i>			
<i>Salmonella</i>			
West Nile virus			
<i>Plasmodium falciparum</i>			
<i>Plasmodium malariae</i>			
<i>Plasmodium ovale</i>	40		
<i>Plasmodium vivax</i>			
Dengue virus 1			
Dengue virus 2			
Dengue virus 3			
Dengue virus 4	44		

Hepatitis

Hepatitis E virus	67
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GASTROENTERITIS

UG Viral gastroenteritis

3 32 rxn 11373929

Detection of human astrovirus, rotavirus, sapovirus, norovirus GI and GII and human adenovirus

UG Bacterial gastroenteritis

14 32 rxn 11373947

Detection of *Clostridium difficile*, *Salmonella* spp. *Shigella*, *Yersinia enterocolitica*, *Campylobacter* (*C. coli*/*C. jejuni*/*C. lari*), Enterohemorrhagic *E. coli* vtx+.

UG Stool parasites

20 32 rxn 11373957

Detection of *Entamoeba histolytica*, *Cryptosporidium* and *Giardia lamblia*

UG EPA

23 64 rxn 11373962

Detection of enterovirus, human parechovirus and human adenovirus



MENINGITIS

UG Viral meningitis

13 32 rxn 11373945

Detection of enterovirus, human parechovirus, herpes simplex virus 1 and 2, varicella zoster virus and mumpsvirus

UG Bacterial meningitis

28 32 rxn 11373967

Detection of *Haemophilus influenzae*, *Neisseria meningitidis* and *Streptococcus pneumoniae*.

UG Neuro 9

60 32 rxn 11374019

Detection of human adenovirus, human cytomegalovirus, Epstein-Barr virus, herpes simplex virus 1 and 2, varicella zoster virus, human herpes virus 6 and 7, human parvovirus B19, human parechovirus and enterovirus.



FEVER, RASH AND CHILDHOOD INFECTIONS

UG Vesicular rash

7 32 rxn 10921714

Detection of herpes simplex virus 1 and 2 and varicella zoster virus.

UG Dermatophytes

9 64 rxn 11416318

Detection of *Microsporum canis*, *Microsporum audouinii*, *Microsporum ferrugineum*, *Trichophyton mentagrophytes complex*, *Trichophyton rubrum complex* and *Trichophyton tonsurans*.

UG Fever and rash

10 32 rxn 11373941

Detection of human herpes virus 6 and 7, human parvovirus B19, enterovirus and measles virus.

UG EPA

23 64 rxn 11373962

Detection of enterovirus, human parechovirus and human adenovirus.

UG Measles

46 32 rxn 11374001

Detection of measles virus.



TROPICAL FEVER

UG Tropical fever core

36 32 rxn 11373983

Detection of Chikungunya virus, Dengue virus, *Leptospira*, *Plasmodium*, *Rickettsia*, *Salmonella* and West Nile Virus.

UG Malaria differentiation*

40 64 rxn 11373992

Differentiation of *Plasmodium falciparum*, *Plasmodium malariae*, *Plasmodium ovale* and *Plasmodium vivax*.

UG Dengue/Chik

43 64 rxn 11373996

Detection of Chikungunya virus and Dengue virus.

UG Dengue differentiation*

44 64 rxn 11373998

Differentiation of dengue virus 1 – 4

UG Zika/Dengue/Chik

84 32 rxn 11374049

Detection of Zika virus, Chikungunya virus and Dengue virus.



HEPATITIS

UG Hepatitis E RNA

67 64 rxn 11374030

Detection of hepatitis E virus

OTHER REAGENTS

Internal Control

IC 2 x 128 µL 11414131

For the monitoring of the nucleic acid extraction process

UltraGene mastermix

70 100 rxn 10921810

One-step RT-PCR reaction enzyme and buffer

UG Light Cycler 480 Color compensation

CC 2 runs 10921817

The color compensation is used for color calibration of runs performed on Light Cycler 480. The kit must be used before starting the first experiment.

*This is recommended for use with other kits. Internal Control is not included.



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SCAN ME

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