



PATHOGEN
DETECTION

Respiratory Pathogen Multiplex Detection System

RESPIRATORY TRACT

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Safer Society · Healthier Life

HEALTH
Gene Technologies

NINGBO HEALTH GENE TECHNOLOGIES CO., LTD

COMPANY INTRODUCTION

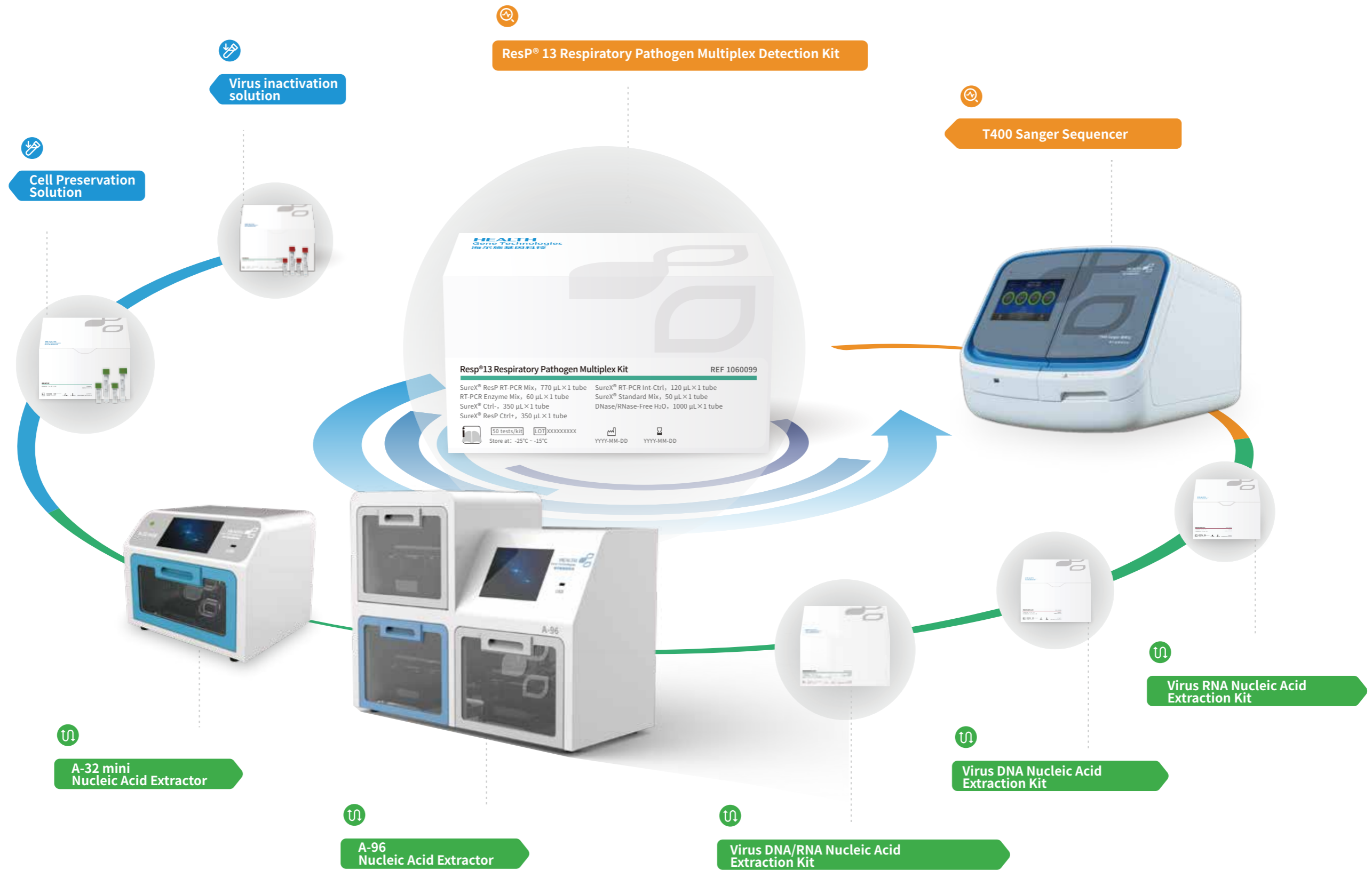
<https://youtu.be/m16oSXTKjOY>

Health BioMed Co., Ltd (HBM) is the largest clinical laboratory equipment/reagents provider in China. As strategic partner of Beckman Coulter, Siemens, Werfen, Immucor, Alere, Bio-Rad Laboratories. HBM offers IVD systems and services to over 600 medical institutes all over the country. As wholly-owned subsidiary of HBM, Health Gene Technologies Co. Ltd.(HGT) is committed to developing and manufacturing simple, rapid and effective nucleic acid (DNA) testing solutions for molecular diagnostics, clinical research and forensic analysis.



Respiratory Pathogen Multiplex Detection System

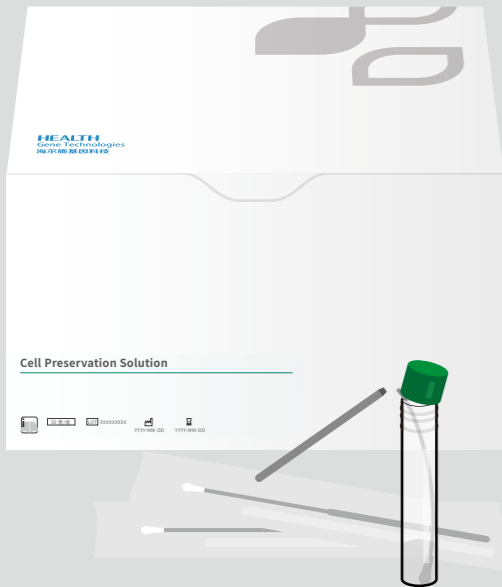
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Sample Collection

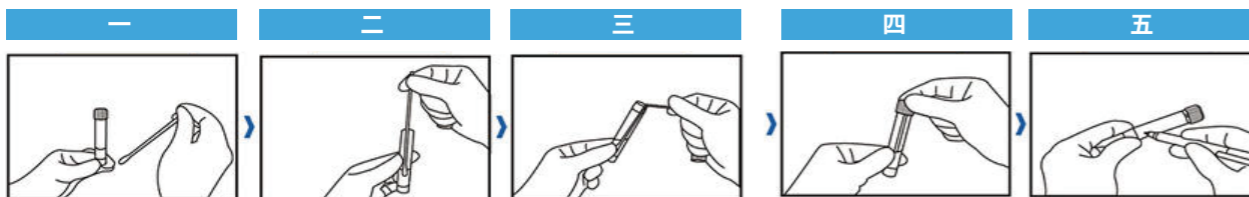
Cell Preservation Solution



Virus inactivation solution



Swab Specimen



According to sampling requirements, samples are collected with sampling swabs.

Place the swab after collecting the sample into a collection tube.

Break off the sampling swab rod that is higher than the collection tube.

Tighten the cap of the collection tube.

Mark the information as required on the label of the collection tube.

Liquid specimen

Including sputum, bronchoscope alveolar lavage fluid, pleural fluid, etc. The sample volume should not exceed 3mL, Pour the preservation solution into the collection tube, seal it, and gently shake the collection tube to let the preservation solution soak the sample

1 Stable

Protect nucleic acid and improve detection performance

2 Convenient

Applicable to oropharyngeal swabs, nasopharyngeal swabs, sputum and other specimens; facilitate clinical specimen transfer



Sample Preparation



A-32 Nucleic Acid Extractor



A-32 mini Nucleic Acid Extractor



A-96 Nucleic Acid Extractor

Features

- Simple operation: pre-packed reagents, just add sample, ready to use
- Save consumables: match single reagents to avoid reagent waste
- Humanized interface: touch screen control
- Fast and efficient: sample extraction in 30 minutes



Virus DNA/RNA Nucleic Acid Extraction Kit



Virus DNA Nucleic Acid Extraction Kit



Virus RNA Nucleic Acid Extraction Kit

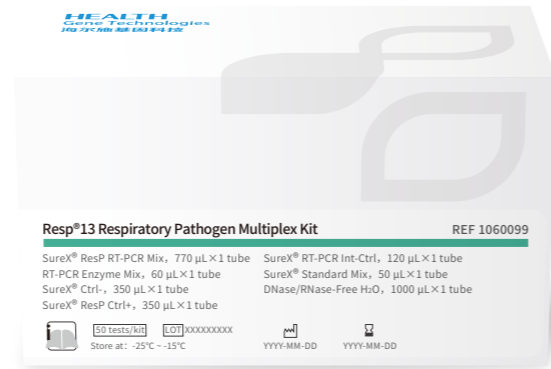
Features

- Strong anti-contamination: The magnetic particle purification technology based on superparamagnetism can minimize the risk of cross-contamination;
- Safety and environmental protection: no need to use toxic phenol and chloroform extraction in the extraction process;
- Flexible use: single serving or 16 servings of pre-loaded reagents can be selected to reduce reagent waste

Sample Testing

Clinical Testing Kit

- Comprehensive, accurate and convenient multiple pathogen detection reagents to meet clinical needs
- Satisfy a variety of clinical testing directions, a strong scientific research team continues to improve and innovative design



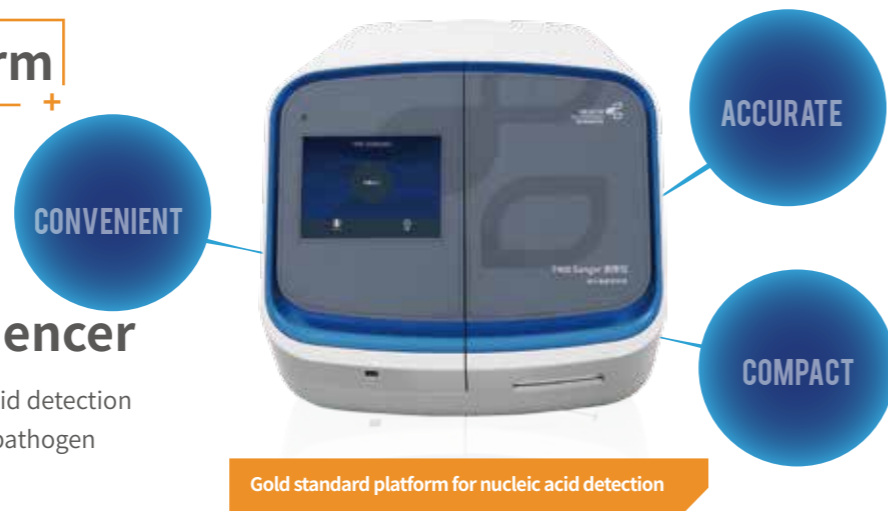
SureX® 13 Respiratory Pathogen Multiplex Detection Kit

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Diagnostic Platform

T400 Sanger Sequencer

Adapt to multiple pathogen nucleic acid detection reagents, making the construction of pathogen multiplex detection system easier.



Product Technical Features



Cover common respiratory pathogens
Compatible with upper and lower respiratory tract specimens



High sensitivity, high specificity
Triple quality controls and pollution prevention system
Sanger sequencing platform



Only 1 specimen required
Results in as fast as 4 hours
384 specimens can be tested in 1 day at most

Publications

- 01 | A GeXP-Based Assay for Simultaneous Detection of Multiple Viruses in Hospitalized Children with Community Acquired Pneumonia
PLoS One, 2016
- 02 | Clinical evaluation of a new single-tube multiplex reverse transcription PCR assay for simultaneous detection of 11 respiratory viruses, Mycoplasma pneumoniae and Chlamydia in hospitalized children with acute respiratory infections
Diagnostic Microbiology and Infectious Disease, 2017
- 03 | A comparison study between GeXP-based multiplex-PCR and serology assay for Mycoplasma pneumoniae detection in children with community acquired pneumonia
BMC Infectious Diseases, 2017
- 04 | Rapid Detection of Respiratory Pathogens for Community-Acquired Pneumonia by Capillary Electrophoresis-Based Multiplex PCR
SLAS Technology, 2018
- 05 | Impact and clinical profiles of Mycoplasma pneumoniae co-detection in childhood community-acquired pneumonia
BMC Infectious Diseases, 2019
- 06 | Evaluation of a multiplex PCR assay for detection of respiratory viruses and Mycoplasma pneumoniae in oropharyngeal swab samples from outpatients
Journal of Clinical Laboratory Analysis, 2019
- 07 | Comparing the yield of oropharyngeal swabs and sputum for detection of 11 common pathogens in hospitalized children with lower respiratory tractinfection
Virology Journal, 2019
- 08 | Application of a nucleic acid-based multiplex kit to identify viral and atypical bacterial aetiology of lower respiratory tract infection in hospitalized children
Journal of Medical Microbiology, 2019
- 09 | Clinical characteristics of the lower respiratory tract infection caused by a single infection or coinfection of the human parainfluenza virus in children
Journal of Medical Virology, 2019
- 10 | Molecular and clinical characterization of human adenovirus associated with acute respiratory tract infection in hospitalized children
Journal of Clinical Virology, 2020

Cases for Share

Early identification of mixed virus infection

Male, 4 years and 8 months old
Fever for 3 days
History of present illness: fever occurred 3 days ago, heat peak 39°C, Mp-IgM(+), Flu A (-) and Flu B (-), oral administration of Aqi for 2 days, heat peak rise: 40.6°C, no cough and asthma, no rash, planned "Pneumonia" was admitted to the hospital.
Past history: Admitted to the hospital for "fever for 5 days and cough for 2 days" one and a half months ago.
Discharge diagnosis: community-acquired pneumonia, non-severe (drug-resistant Mycoplasma pneumoniae, Streptococcus pneumoniae infection)
Day2 Mp titer 1:1280(+)
Day3 **ResP®HADV(+), Mp(+)**, throat swab Mp-DNA(-), body temperature decreased significantly after antiviral treatment.
Day5 bronchoscopy PCR HADV(+), Mp(+), combined treatment 8 days later, discharged.

Early recognition of Boca virus infection

Male, 11 months old
Main complaint: cough and wheezing for 2 days, exacerbation with shortness of breath and fever for 1 day
The outpatient treatment with methylprednisolone and cefoxitin did not improve and was admitted to the hospital
ResP®: Boca virus (+). The flu is negative.
Suspected influenza virus infection caused plastic bronchitis, oral oseltamivir. Ceftriaxone was added due to severe illness.
Oseltamivir was discontinued, and it was significantly relieved after bronchoscopy treatment, and ceftriaxone was stopped soon
Combined treatment, discharged after 5 days

Product List

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Sample pretreatment series

ITEM NO.	PRODUCT NAME	SPECIFICATION
XB06013	SAMPLE INACTIVATION SOLUTION	50 TUBES/KIT
XB05013	CELL PRESERVATION SOLUTION	50 TUBES/KIT
93050 TYPE (ORAL)	DISPOSABLE SAMPLING SWAB (OROPHARYNGEAL)	100 PCS/KIT
5-03-0048	SINGLE USE SAMPLING SWAB (NASOPHARYNX)	100 PCS/KIT

Nucleic acid extraction series

ITEM NO.	PRODUCT NAME	SPECIFICATION	APPLICABLE INSTRUMENT
1060132	PATHOGEN DNA/RNA EXTRACTION	24 TESTS/KIT	SLA-32, A-32, A-96, A-32MINI
1060167	PATHOGEN DNA/RNA EXTRACTION	48 TESTS/KIT	SLA-32, A-32, A-96, A-32MINI
1060182	VIRAL DNA EXTRACTION	48 TESTS/KIT	SLA-32, A-32, A-96, A-32MINI
XB09034	VIRAL RNA EXTRACTION	48 TESTS/KIT	SLA-32, A-32, A-96, A-32MINI
1060055	HUMAN GENOMIC DNA EXTRACTION	48 TESTS/KIT	SLA-32, A-32, A-96, A-32MINI

Instrument

MODEL	PRODUCT NAME
A-32/A-32MINI	NUCLEIC ACID EXTRACTOR
SLA-32	NUCLEIC ACID EXTRACTOR
A-96	NUCLEIC ACID EXTRACTOR
GeXP	GENETIC ANALYSIS SYSTEM
3500 Dx	GENE ANALYZER
3500XL Dx	GENE ANALYZER
T400	SANGER SEQUENCER

More Applications Ready To Go (RUO)

Based On Fragment Analysis

· Influenza A virus subtyping kit	Including H1N1 (2009), H3N2, H5N1, H5N6, H7N9, H10N8, H9N2 and other subtypes
· Influenza B virus subtyping kit	Typing detection of influenza B virus Yamagata lineage and Victoria lineage
· Parainfluenza virus subtyping kit	Detection of parainfluenza virus type 1, type 2, type 3, type 4 and other subtypes
· Adenovirus subtyping kit	Detection of Adenoviruses B, C, E and other subgroups
· Rhinovirus subtyping kit	Detection of rhinovirus A, B, C and other subtypes
· Chlamydia subtyping kit	Detection of 9 types of common pathogenic chlamydia
· Fastidious bacteria and fungi multiple detection kit	Rapid multiple detection for difficult-to-culture pathogens
· Fever with rash pathogen multiple detection kit	Rapid multiple detection of multiple pathogens that can cause fever and rash
· Diarrhea pathogen multiplex detection kit	Detection of multiple pathogenic that can cause diarrhea

Based On Sanger Sequencing

· COVID-19 Virus identification kit	· <i>Moraxella catarrhalis</i> identification kit
· Coronavirus identification kit	· <i>Proteobacterium mirabilis</i> identification kit
· SARS identification kit	· <i>Pseudomonas aeruginosa</i> identification kit
· MERS identification kit	· <i>Serratia marcescens</i> identification kit
· Influenza virus identification kit	· <i>Green Streptococcus</i> identification kit
· <i>Acinetobacter baumannii</i> identification kit	· <i>Streptococcus pneumoniae</i> identification kit
· <i>Burkholderia cepacia</i> identification kit	· <i>Streptococcus pyogenes</i> identification kit
· <i>Candida albicans</i> identification kit	· <i>Staphylococcus aureus</i> identification kit
· <i>Candida glabrata</i> identification kit	· <i>Staphylococcus epidermidis</i> identification kit
· <i>Candida</i> identification kit	· <i>Chlamydia pneumoniae</i> identification kit
· <i>Candida tropicalis</i> identification kit	· <i>Chlamydia trachomatis</i> identification kit
· <i>Enterococcus faecium</i> identification kit	· <i>Mycoplasma pneumoniae</i> identification kit
· <i>Enterococcus faecalis</i> identification kit	· <i>Pneumocystis carinii</i> identification kit
· <i>Escherichia coli</i> identification kit	· <i>Diphtheria bacillus</i> identification kit
· <i>Haemophilus influenzae</i> identification kit	