



Decode Genetic Life. Assure Human Health.

CHINA(Head Quarters)

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Molecular Diagnostics Products and Service

Version 2020-2021





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Version 2020-202

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Introduction

Da An Gene(Da An Gene Co., Ltd. Of Sun Yat-sen University), is a high-tech enterprise oriented in molecular diagnostic techniques. DaAn Gene Co., Ltd. of Sun Yat-sen University was established in 1993 and was listed on the Shenzhen Stock Exchange(SZSE Code: 002030) on August 9, 2004.

Since its first day of establishing, Da An Gene has dedicated to be the in-vitro diagnostics Leader. With the certificate of GMP and ISO 13485, Da An Gene is consistently committed to R&D, production and service of in-vitro diagnostics. DaAn Gene also obtained the medical reagents and instruments production and operation licenses from NMPA.

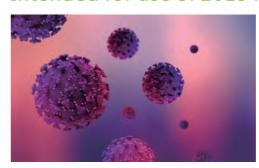
Nowadays, Da An Gene has set up a distribution network covering all mainland of China, and the products scale are extending to overseas. Da An Gene will keep carrying out the mission of "Decode Genetic Life, Assure human health" by adhering to the value philosophy "To Share is To Enjoy" and offer the best solution of molecular diagnostics to the world.

2019 Novel Coronavirus(2019-nCoV) Detection Kits



Registration No.: 20203400749

Intended for use of 2019 Novel Coronavirus RNA Detection kit



- In order to better stop the epidemic situation of 2019 Novel Coronavirus wide spreading, DAAN GENE company developed the 2019-nCoV RNA detection kit, aiming to supply timely and effective detection service to extensive medical organizations.
- This kit can detect ORF1ab and N gene simultaneously, endogenous internal standard can monitor the experiment from sampling process, assess the sampling qualified or not(exogenous internal standard do not have this advantage), and monitor the occurrence of false negative effectively, assisting early clinical diagnostic, early treatment.

Product information

- Intended for use: in vitro qualitative RNA detection of 2019-nCoV.
- Package spec: 48 tests/kit, 96 tests/kit.
- Main components: PCR reaction solution, negative & positive controls, internal standard, etc.
- Applicable instruments: ABI 7500, LightCycler 480, AGS4800, etc.
- Applicable sample: throat swabs, bronchoalveolar lavage fluid(BALF) and sputum.

| Product characteristics | Performance |
|-----------------------------|---|
| Validity period | -20±5°C ,6 month |
| Amplification sample volume | 5µI |
| Detection sensitivity | LOD: 500 copies/ml |
| Detection precision | CV < 5% |
| Cross reaction | No cross reaction with other pathogens of the same infection site or similar infection symptom. |



Real-time PCR Kit

Product advantages

Product certification: we have obtained WHO, NMPA, CE and FSC.







中华人民共和国

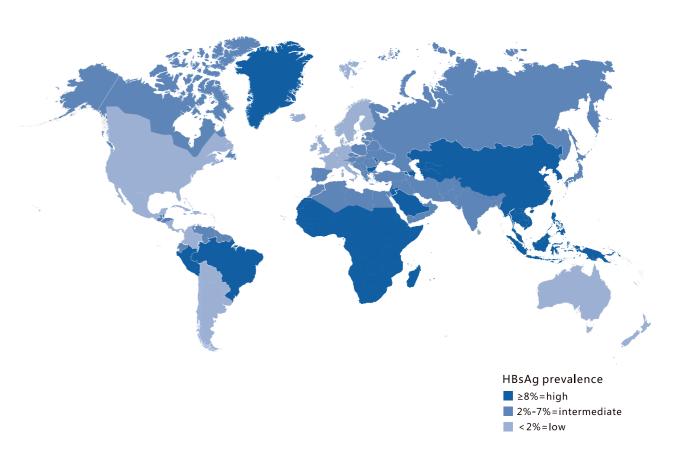


MORE THAN 140 COUNTRIES

Hepatitis Virus

Background

Hepatitis refers to an inflammatory condition of the liver. Hepatitis virus is the pathogen which could cause viral hepatitis. There are several types of hepatitis viruses including types A, B, C, D, E, and possibly G. Types A, B, and C are the most common. All hepatitis viruses can cause acute hepatitis. Viral hepatitis types B and C can cause chronic hepatitis. Symptoms of acute viral hepatitis include fatique, flu-like symptoms, dark urine, light-colored stools, fever, and jaundice. The symptoms of chronic viral hepatitis often are mild and nonspecific, and the diagnosis of chronic hepatitis often is delayed.



Geographic distribution of chronic hepatitis B virus (HBV) infection - worldwide, 2006 Source: CDC. Travelers'health; yellow book. Atlanta, GA: US Department of Health and Human Service, CDC; 2008.

The real-time PCR kits for detecting the hepatitis virus developed by DaAn Gene can detect the nucleic acid of hepatitis virus more accurate with high specificity. The kits take the high conserved region in hepatitis virus as a target region to design specific primers and fluorescent probe. Besides, the kit is equipped with internal control, which can supervise the whole process

of experiment and prevent false negative result. The kits is suitable for the quantitative detection of hepatitis virus in sample of human serum or plasma. The kit is suitable for auxiliary diagnosis of hepatitis virus infection and monitoring the therapeutic effect of drug in patients.



epatitis Virus

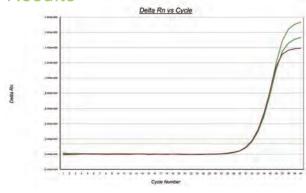
A Real-time PCR Kit

Products

| Product Description | Target | Specimen | LOD* |
|--------------------------------------|--------|-----------------|---------------------------------|
| Hepatitis B Virus PCR Diagnostic Kit | DNA | Serum or plasma | 1.0 × 10 ² IU/ml |
| Hepatitis C Virus PCR Diagnostic Kit | RNA | | 2.5 × 10 ² IU/ml |
| Hepatitis E Virus PCR Diagnostic Kit | RNA | | 1.0 × 10 ³ copies/ml |

^{*}LOD: Limit of detection

Results



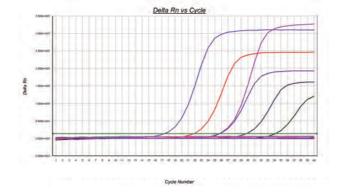
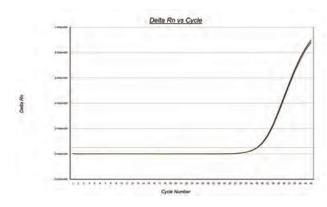


Fig. 2. Specificity of HBV Real-time PCR Kit

Fig.1. Sensitivity of HBV Real-time PCR Kit



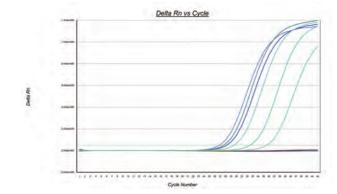


Fig.3. Sensitivity of HCV Real-time PCR Kit

Fig.4. Specificity of HCV Real-time PCR Kit

Human Immunodeficiency Virus

Background

Human Immunodeficiency Virus is a lentivirus that cause HIV infection and over time acquired immunodeficiency syndrome (AIDS). AIDS is a condition in humans in which progressive failure of the immune system allows life-threatening opportunistic infections and cancers to thrive. Infection with HIV occurs by the transfer of blood, semen, vaginal fluid, pre-ejaculate, or breast milk.

Though AIDS can be controlled efficiently with development of medical technologies, AIDS can not be cured totally and there is no effective vaccine. Thus, the

experimental diagnosis for HIV infection is the important part for preventing and controlling HIV infection. Only the infection source can be found can AIDS be controlled efficiently. It is important to cure related desease and deal with precaution if HIV infection is diagnosed earlier.

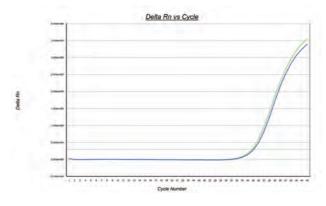
Real-time PCR Kit

The real-time PCR kits for detecting the HIV developed by DaAn Gene could applies to supervise the therapeutic effect of the auxiliary diagnosis for HIV type 1 infection and the drug therapy of HIV type 1 infected patients.

Products

| Product Description | Target | Specimen | LOD* |
|--|--------|-----------------|-----------------------------|
| Human Immunodeficiency Virus Type 1 PCR Diagnostic Kit | RNA | Serum or plasma | 1.0 × 10 ² IU/ml |

^{*}LOD: Limit of detection



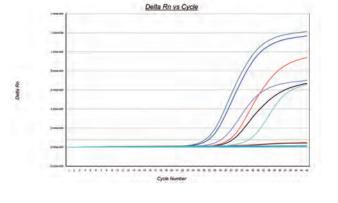


Fig.1. Sensitivity of HIV-1 Real-time PCR Kit

Fig.2. Specificity of HIV-1 Real-time PCR Kit





Blood Screening

Background

Blood screening is a laboratory analysis performed on a blood sample that is usually extracted from a vein in the arm using a needle, or via fingerprick. To prevent the cross infection of virus between different blood sample and to ensure the health of workers for collecting and making blood, we must prevent the infected people from entering into the blood-supply source. To prevent the positive blood with disease pathogen from transfusion or production of blood products, we must use the best quality and most reliable diagnostic reagent for screening the blood donors and their blood sample.

HBV, HCV and HIV-1 are the main pathogens for infectious diseases to threaten blood safety. The sensitivity of serological analysis is improved, thus, the danger that HBV, HCV and HIV-1 are transmitted in blood transfusion is largely reduced, but not completely eradicated. The missing test in "window period" is the bottleneck for the further improvement of blood safety currently. For the screening of blood donor, the pure serological test of antigen or antibody

can not guarantee the blood safety effectively.

DaAn Gene provides PCR-based nucleic acid tests and automation that enable labs and hospital in worldwide to deliver safer blood and related products. Based on fluorescent PCR/RT-PCR amplification test technology, the test kit is hereof used for testing nucleic acid for HBV, HCV and HIV-1 in serum and plasma sample, and for blood screening. The nucleic acid-based test technology can detect viral nucleic acid more early than the antibody-based test technology. The nucleic acid test of high sensitivity, the slight trace of nucleic acid can be detected in the samples and the detection will be realized in a few days after virus infection. Therefore, "window period" is largely shortened. In addition, the infected blood, which is missed in test as the result of virus variation, immunity silence infection and manual misoperation, will be detected through nucleic acid

infected blood, which is missed in test as the result of virus variation, immunity silence infection and manual misoperation, will be detected through nucleic acid test. DaAn Gene's nucleic acid test can prevent the transimission of viral infections in blood transfusion to minimize the danger of disease transmission in blood transfusion.

Products

| Product Description | Target | Specimen | LOD* |
|--|-----------------|-----------------|---|
| Hepatitis B Virus / Hepatitis C Virus / Human Immunodeficiency Virus Type 1 PCR Diagnostic Kit | DNA & RNA | Serum or plasma | 1.0×10^2 IU/ml (single sample of HBV / HCV / HIV-1) 5.0×10^2 IU/ml (mixed sample of HBV / HCV / HIV-1) |

^{*}LOD: Limit of detection

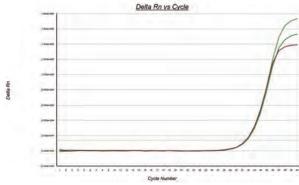


Fig.1. Sensitivity of HBV Blood Screening Real-time PCR Kit

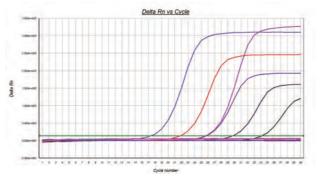
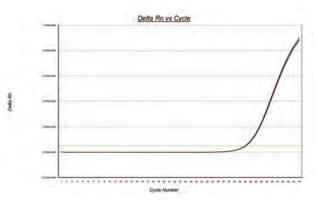


Fig.2. Specificity of HBV Blood Screening Real-time PCR Kit





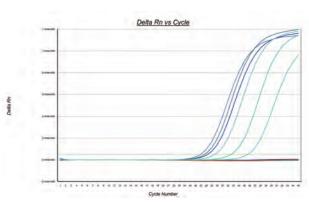


Fig.4. Specificity of HCV Blood Screening Real-time PCR Kit

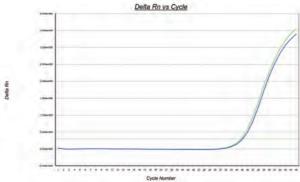


Fig. 5. Sensitivity of HIV-1 Blood Screening Real-time PCR Kit

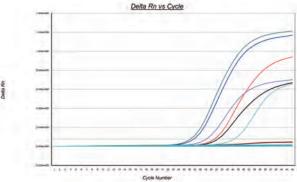


Fig.6. Specificity of HIV-1 Blood Screening Real-time PCR Kit

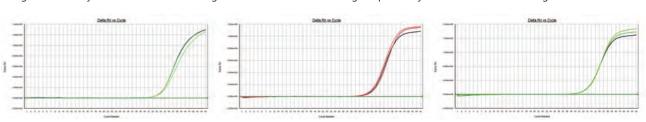


Fig.7. Internal Control of HBV, HCV, and HIV-1 Blood Screening Real-time PCR Kit



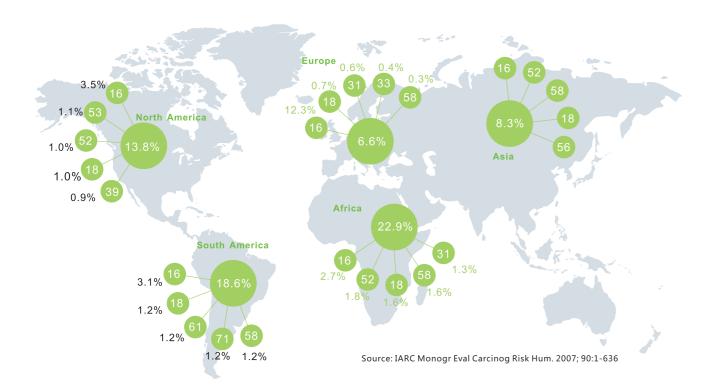


Human Papilloma virus (HPV)

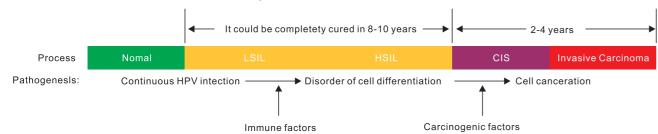
Background

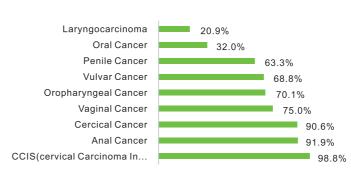
Most are harmless. But around 13 types of HPV can wipe out cancer.

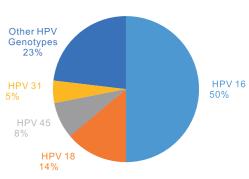
HPV (human papillomavirus) is a virus that infects the cause cancer. These are called "high-risk" types. skin and the cells lining body cavities. It is spread People with persistent infections with "high-risk" through close skin-to-skin contact. For most people, HPV types are those who are most likely to go on to the infection will get better on its own and they will develop cancer. Approximately 275,000 women die never know they had it. But in some people the every year from cervical cancer. But cervical cancer is infection will stay around for a long time and become the only one currently that can be found and prevented persistent. There are hundreds of different types of HPV. in the early phase, can be cured 100%, is expected to



Cervical Cancer Development







The Distribution of HPV in Different Cancer

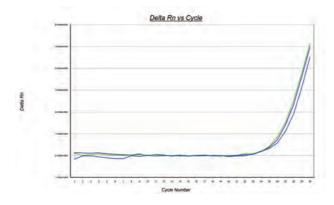
Source: Bosch FX, et al. JNCI 1995

Source: Saralya M. Et al. US assessment of HPV types in cancer: Implications for current and 9-valent HPV vaccines[J]. Journal of National Cancer Institute. 2015, 107(6): djv086

Products

| Product Description | Genotypes | Specimen | LOD* |
|--|------------------------------|--|-------------------------------|
| Human Papillomavirus Types 6 And 11 Fluorescent Polymerase Chain Reaction Diagnostic Kit | 6,11 | Cotton swab with genitourinary secreta Smear of genital tract Biopsy specimen | 5.0x10 ² copies/ml |
| Human Papillomavirus Types 16 And 18 Fluorescent Polymerase Chain Reaction Diagnostic Kit | 16,18 | | 1.0x10⁴ copies/ml |
| High-Risk Human Papillomavirus Fluorescent Polymerase Chain Reaction Diagnostic Kit | 16,18,31,33,4 5,52,56, 58 | | |

^{*}LOD: Limit of detection



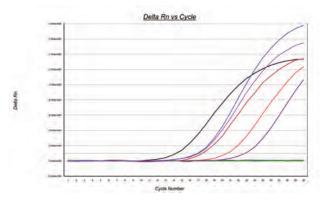


Fig.1. Sensitivity of HPV Genotypes 6, 11 Real-time PCR Kit

Fig.2. Specificity of HPV Genotypes 6, 11 Real-time PCR Kit







Sexually Transmitted Infections (STIs)

Background

Sexually transmitted infections (STIs), also referred to as sexually transmitted diseases (STD) and venereal diseases (VD), are infections that are commonly spread by sex. Most STIs initially do not cause symptoms. This results in a greater risk of passing the disease on to others. STIs acquired before or during birth may result in poor outcomes for the baby. Some STIs may cause

problems with the ability to get pregnant.

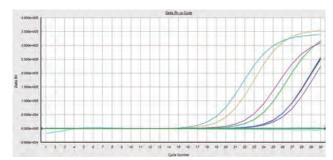
Real-time PCR is a highly sensitive, rapid, precise diagnostic method for detection of STIs, which could help the doctor or researcher to get the quantitative results and determine the patients' status and possibility of transmission.

Products

| Product Description | Target | Specimen | LOD* |
|---|--------|----------------------|---------------------------------|
| Neisseria Gonorrhoeae PCR Diagnostic Kit | DNA | Urogenital secretion | 5.0 × 10 ² copies/ml |
| Chlamydia Trachomatis PCR Diagnostic Kit | DNA | | 5.0 × 10 ² copies/ml |
| Ureaplasma Urealyticum PCR Diagnostic Kit | DNA | | 1.0 × 10 ⁴ copies/ml |
| Treponema Pallidum PCR Diagnostic Kit | DNA | | 5.0 × 10 ² copies/ml |

^{*}LOD: Limit of detection

Results





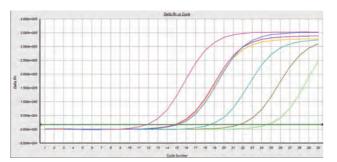


Fig. 2. Repeatability of UU Real-time PCR Kit

Respiratory Pathogen

Background

Respiratory pathogen is a medical term that encompasses pathological conditions affecting the organs and tissues that make gas exchange possible in higher organisms. Some respiratory diseases could cause life-threatening entities like bacterial pneumonia and lung cancer.

The real-time PCR kits for detecting the nucleic acid of respiratory pathogen developed by DaAn Gene, could assist in the diagnosis of respiratory diseases infection, and monitor the therapeutic effect of drug. Comparing with the traditional methods, real-time PCR are more accurate, faster and reliable.

Products

| Product Description | Target | Specimen | LOD* |
|--|--------|--|-------------------------------|
| Mycobacterium Tuberculosis Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | Sputum Peripheral blood | 5.0×10 ² copies/ml |
| Mycoplasma Pneumonia Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | Sputum Lung/bronchoalveolar Lavage fluid Throat swab | 1.0×10 ⁴ copies/ml |
| Chlamydophilia Pneumoniae Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | | 1.0×10 ⁴ copies/ml |
| Legionella Pneumophila Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | | 1.0×10 ³ copies/ml |
| Streptococcus Pneumoniae Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | | |
| Respiratory Syncytial Virus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | Nasopharyngeal secretion | 1.0×10 ³ PFU/ml |
| Human Bocavirus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | | |
| Adenovirus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | Faeces | 1.0×10 ³ copies/ml |

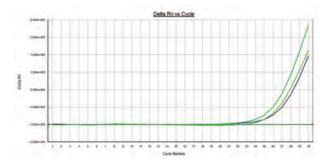


Fig.2. Specificity of MTB Real-time PCR Kit

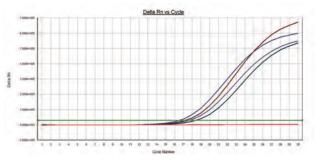


Fig.1. Sensitivity of MTB Real-time PCR Kit

Real-time PCR Kit

Digestive Pathogen

Background

Digestive pathogen is a general definition for a group of virus which inhabit in the intestinal tract, and there are some common ground in the biochemical characteristics, epidemiology and nosogenesis of the viruses. The diseases caused by digestive pathogen is very extensive, and different virus may causes the same symptom. The typical symptoms includes herpangina, hand-foot-and-mouth disease and aseptic meningitis,

etc. More serious diseases includes myocarditis, pericarditis, viral meningitis and limb paralysis syndrome, etc.

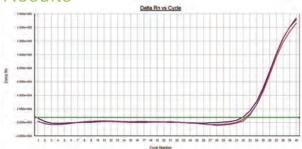
The real-time PCR kits for detecting the nucleic acid of Digestive pathogen developed by DaAn Gene, could assist in the diagnosis of intestinal tract diseases infection with more accurate, faster and reliable results.

Products

| Product Description | Target | Specimen | LOD* |
|--|--------|--|-------------------------------|
| Helicobacter Pylori Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | Gastric mucosa biopsy specimen | 1.0×10 ³ copies/ml |
| Norwalk Virus Fluorescent Polymerase Chain Reaction Diagnostic Kit | RNA | Food of shellfish Faeces from patients | 1.0×10 ³ copies/ml |
| Human Parvovirus B19 Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | Serum/plasma | 1.0×10 ² copies/ml |
| Campylobacter Jejuni Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | Water/food | 1.0×10 ³ copies/ml |
| Shigella Spp.Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | Faeces/cloacal swab | 1.0×10 ² copies/ml |
| Enterovirus Fluorescent Polymerase Chain Reaction Diagnostic Kit | RNA | _ | 5.0×10 ² copies/ml |
| Enterovirus 71 Fluorescent Polymerase Chain Reaction Diagnostic Kit | RNA | Faeces Throat swab | 1.0×10 ³ PFU/ml |
| Coxsackievirus A16 Fluorescent Polymerase Chain Reaction Diagnostic Kit | RNA | Fluid of herpes | 1.0×10 ³ PFU/ml |
| Enterovirus 71 / Coxsackievirus A16 PCR Diagnostic Kit | RNA | Faeces / Throat swab Cloacal swab | 1.0×10 ³ copies/ml |
| Vibrio Cholerae Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | Aquatic products and their processing products /Faeces | 1.0×10 ³ copies/ml |
| Vibrio Cholerae O139 Serogroup Diagnostic Kit | DNA | Aquatic products and their processing products | 1.0×10 ³ copies/ml |
| Vibro Cholerae CTX Gene PCR Diagnostic Kit | DNA | processing products | 1.0×10 ³ copies/ml |
| Coxsackievirus A24v PCR Diagnostic Kit | RNA | Faeces/Throat swab Fluid of herpes | 1.0×10 ² PFU/ml |
| Group A Of Rotavirus/Norwalk-like Virus PCR Diagnostic Kit | RNA | Food of shellfish Faeces from patients | 1.0×10 ² copies/ml |
| Group B Rotavirus PCR Diagnostic Kit | RNA | Faeces | 1.0×10 ³ copies/m |

*LOD: Limit of detection







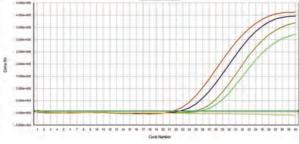


Fig.2. Specificity of EV Real-time PCR Kit

Influenza Virus

Background

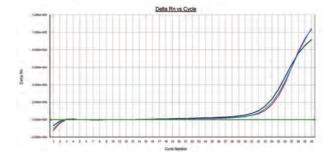
Influenza, commonly known as "the flu", is an infectious disease caused by an influenza virus. Symptoms can be mild to severe. The most common symptoms include: a high fever, runny nose, sore throat, muscle pains, headache, coughing, and feeling tired. Three types of influenza viruses affect people, called Type A, Type B, and Type C. Usually, the virus is spread through the air from coughs or sneezes. It can also be spread by touching surfaces contaminated by the virus and then touching the mouth or eyes. A person may be infectious to others both before and during the time they are sick.

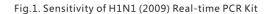
Influenza spreads around the world in a yearly outbreak, resulting in about three to five million cases of severe illness and about 250,000 to 500,000 deaths. The infection may be confirmed by testing the throat, sputum, or nose for the virus. A number of rapid tests are available; however, people may still have the infection if the results are negative. The real-time PCR kits for detecting the influenza virus developed by DaAn Gene can detect the RNA of virus more accurate.

Products

| Product Description | Target | Specimen | LOD* |
|---|--------|---|---------------------------------|
| Influenza A Virus H1N1(2009) PCR Diagnostic Kit | RNA | | 1.0 × 10 ³ PFU/ml |
| Influenza A Virus PCR Diagnostic Kit | RNA | Throat swab | 1.6 × 10 ² PFU/ml |
| Influenza B Virus PCR Diagnostic Kit | RNA | | 1.6 × 10 ² PFU/ml |
| Influenza Virus Subtype H1 PCR Diagnostic Kit | RNA | Throat swabNasopharyngeal secretion | 1.0 × 10 ³ PFU/ml |
| Influenza Virus Subtype H3 PCR Diagnostic Kit | RNA | Throat swab | 1.5 × 10 ² PFU/ml |
| Avian Influenza Virus Subtype H7N9 PCR Diagnostic Kit | RNA | Respiratory specimensSerumLung tissue | 1.0 × 10 ³ copies/ml |

^{*}LOD: Limit of detection





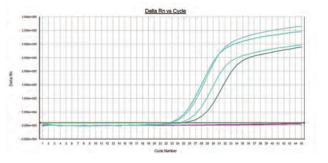


Fig.2. Specificity of H1N1 (2009) Real-time PCR Kit





Tumor Markers

Background

A tumor marker is a biomarker found in malignant cell, blood, urine, or body tissues that can be elevated by the presence of one or more types of cancer. There are many different tumor markers, each indicative of a particular disease process, and they are used in oncology to help detect the presence of cancer. An elevated level of a tumor marker can indicate cancer.

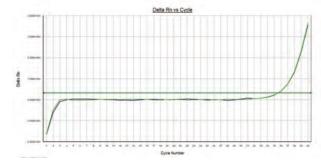
Tumor markers can be determined in serum or rarely in urine or other body fluids. The real-time PCR kits for detecting the nucleic acid of tumor markers developed by DaAn Gene, can detect the tumor markers quantificationally and accurately. And the kits could help the doctor or researcher to monitor the changes of cancer in molecular diagnostic level.

Products

| Product Description | Target | Specimen | LOD* |
|---|--------|---------------------------------|---------------------------------|
| Epstein-barr Virus PCR Diagnostic Kit | DNA | Whole blood | 5.0 × 10 ³ copies/ml |
| Multidrug Resistance Gene MDR1 PCR Diagnostic Kit | RNA | • Peripheral blood | 50 copies/µl |
| Fusion Gene BCR-ABL PCR Diagnostic Kit | RNA | Bone marrow | 50 copies/µl |

^{*}LOD: Limit of detection

Results



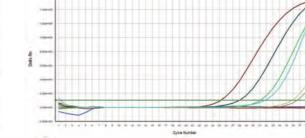


Fig.1. Sensitivity of BCR-ABL Real-time PCR Kit

Fig.2. Specificity of BCR-ABL Real-time PCR Kit

Public Health

Background

Public health is the public utilities which related to a country or a region of the people health. It contains the prevention, monitor and treatment of serious diseases, especially the infectious disease.

The real-time PCR kits for public health developed by DaAn Gene could apply to the detection of serious disease, which is important to the diagnosis, prevention, monitor and control of epidemic disease, so that the detection can improve the health and quality of life through prevention and monitor of disease.

Da An Gene accumulated rich experience in public health emergency event which could be traced back to our experience of fighting against SARS epidemic in 2003. When the diseases broke out, like H1N1, Ebola virus, Dengue virus, Zika virus, etc, Da An Gene always organized various force and endeavor to complete the research and development of PCR kits like in short time. By the mature R&D platform and core of raw materials system, Da An Gene has the strong support and guarantee to fight against the emergency outbreak of epidemic in time.

Products

| Product Description | Target | Specimen | LOD* |
|---|--------|---|------------------------------|
| Rabies Virus Fluorescent Polymerase Chain Reaction Diagnostic Kit | RNA | "Sialaden,brain biopsy cerebrospinal fluid, urinary sediment" | |
| Salmonella Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | Feces, anal swab | 1.0×10 ² copies/m |
| Shigella Spp.Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | Feces, anal swab | 1.0×10 ² copies/m |
| Human Parvovirus B19 Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | Serum,plasma | 1.0×10 ² copies/m |
| Brucella Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | Milk and related dairy products | 1.0×10 ² copies/m |
| Severe Fever With Thrombocytopenia Syndrome Bunyavirus Fluorescent Polymerase Chain Reaction Diagnostic Kit | RNA | Serum | 10 TCID ₅₀ /ml |
| Middle East Respiratory Syndrome Coronavirus Fluorescent Polymerase Chain Reaction Diagnostic Kit | RNA | Nasopharyngeal swab, urine and serum | 1.0×10 ³ copies/m |
| Salmonella Enterica Type I PCR Diagnostic Kit | DNA | Feces, anal swab | |
| Zika Virus PCR Diagnostic Kit | RNA | Serum,plasma | 50 copies/ml |
| Japanese Encephalitis Virus Fluorescent Polymerase Chain Reaction Diagnostic Kit | RNA | | |
| Measles Virus Fluorescent Polymerase Chain Reaction Diagnostic Kit | RNA | | |
| Dengue Virus Fluorescent Polymerase Chain Reaction Diagnostic Kit | RNA | | |

^{*}LOD: Limit of detection



Real-time PCR Kit

TORCH

Background

TORCH refer to a group of pathogens, which can lead to geneogenous intrauterine infection and perinatal infection and further result in malformation of perinatal infant. It's a abbreviation of a group of pathogenic microorganism. "T" means "Toxoplasma". "O" means "Other" pathogenic microoganism. "R" means "Rubella Virus". "C" means "Cytomegalovirus". And "H" means

"Herpes Virus(I/Π)".

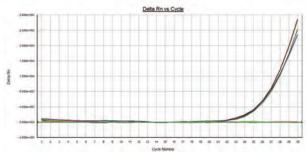
The real-time PCR kits for detecting the nucleic acid of TORCH developed by DaAn Gene, can perform with high sensitivity and efficiency to detect the pathogen directly, which help the doctors and researchers to diagnostic confidently, and improve the prenatal health of family.

Products

| Product Description | Target | Specimen | LOD* |
|--|--------|---|-------------------------------|
| Herpes Simplex Virus II Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | Ulcer slide Swab of secretion from genitourinary | 1.0×10 ³ copies/ml |
| Herpes Simplex Virus I Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | tract Cerebrospinal fluid(CSF) | 5.0×10 ² copies/ml |
| Human Cytomegalovirus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DNA | Serum/Urine/Milk/Whole blood | 5.0×10 ² copies/ml |
| Toxoplasma PCR Diagnostic Kit | DNA | Whole blood/Amniotic fluid/Villus | 5.0×10 ² copies/ml |
| Rubella Virus PCR Diagnostic kit | RNA | Serum or plasma | 1.0×10 ³ copies/ml |

^{*}LOD: Limit of detection

Results





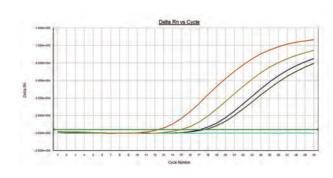


Fig.2. Specificity of HSV ${\rm I\!I}$ Real-time PCR Kit

Others

Background

Thalassemia is one of the most serious monogenic hereditary diseases with the highest incidence rate in the world. It is a type of hemolytic anemia induced by the decrease or absence of the synthesis of one or more peptide chains of human hemoglobin. The globin synthesis disorder arises from mutation or deletion of human hemoglobin gene. Severe α thalassemia will induce fetal edema, and lead to the increase in the neonatal mortality. The fetuses with moderate thalassemia need blood transfusion frequently. They will lose their capacities of physical labor after growing up. That seriously affects their life qualities. Currently, there is no radical treatment against thalassemia. The families with thalassemia children are suffering from

heavy pressures both in mental and economic aspects. Trisomy 21, also known as down syndrome (DS), is a genetic disorder caused by the presence of all, or part of a third copy of chromosome 21. It is typically associated with physical growth delays, characteristic facial features, and mild to moderate intellectual disability. Nowadays, there is no cure for Down syndrome.

Therefore, it's very important to screening the these two disease in the early stage. DaAn Gene offers the PCR kits for the screening detection of α -thalassemia and trisomy 21, which could assist in the diagnosis of α -thalassemia and trisomy 21.

Products

| Product Description | Target | Specimen | LOD* |
|---|---------------------------|---|-------------|
| α-thalassemia Genetic PCR Diagnostic Kit (Gap-PCR) | α-thalassemia gene DNA | Venous blood | |
| 21 Trisomy And Sex Chromosome Polyploidy PCR Diagnostic Kit (Fluorescent PCR Capillary Electrophoresis) | STR gene site DNA | Venous blood, umbilicus blood, amniotic fluid | 10ng/μl DNA |
| Group B Streptococcus Fluorescent Polymerase Chain Reaction Diagnostic Kit | | | |
| CYP2C19 Genotyping Fluorescent Polymerase Chain Reaction Diagnostic Kit | CYP2C19 | | |

*LOD: Limit of detection





Nucleic Acid Extraction Kit

Real-time PCR and PCR Instrument

Nucleic Acid Extraction Kit

Background

Nucleic acid, which include DNA (deoxyribonucleic acid) and RNA (ribonucleic acid), are made from monomers known as nucleotides. Nucleic Acid Extraction is a process of purification of DNA / RNA from sample using a combination of physical and chemical method. Currently it is a routine procedure in molecular diagnosis analyses. It's very important in molecular diagnostic detection and analysis.

DaAn Gene provide various and efficient nucleic acid extraction method according to different sample types and experimental condition. Our extraction kits can remove the protein, inorganic ions and other organic impurities in maximize, which improve the purity of nucleic acid, and perform well in PCR / RT-PCR experiment.

Products

| Product Description | Target | Specimen |
|--|---------|---|
| RNA Isolation Kit (One Step Method) | RNA | Peripheral blood, bone marrow, cell, tissue, etc. |
| RNA Extraction Kit (AB Reagent Method) | RNA | |
| DNA Releasing Reagent Kit | DNA | Serum, plasma, cervical exfoliated cell, throat |
| DNA Isolation Kit (Boiling Method) | DNA | swab, nasopharyngeal secretions, etc |
| Nucleic Acid Isolation or Purification Reagent (Magnetic Bead) | DNA | ,,,,,,,, |
| Nucleic Acid Isolation or Purification Reagent (Spin Column) | DNA | |
| Blood Genomic DNA Extraction Kit | DNA | Peripheral blood |
| RNA/DNA Purification Kit (Preservation) | DNA/RNA | Swab |

^{*}LOD: Limit of detection



Nucleic Acid Isolation or Purification Reagent (Magnetic Bead)

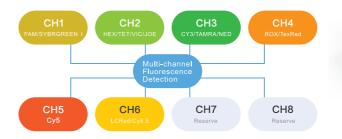


Nucleic Acid Isolation or Purification Reagent (Spin Column)

AGS 4800 Real-time PCR Fluorescence Detecting System

Introduction

AGS 4800 real-time PCR fluorescence detecting system is applicable to fluorescent quantitative PCR detection as following fields: research field such as immunology, human genome biology, forensic medicine, oncology, organization and population biology, paleontology, zoology, botany, etc. Clinical diagnosis field such as virus, tumor, genetic diseases of fluorescent quantitative PCR detection in the field of clinical diagnosis.





 $It'\ \ s\ high\ cost\ performance\ that\ combine\ with\ 6\ channels$ in detection, and it can be extended to 8 channels.

Features

- Equip with database and LIS connection
- Reserve full-automatic PCR link function
- Equip with temperature gradient function
- Wireless remote control and analysis in real-time
- Unique humanized module design: 18×8 connected pipe
- 3 independent systems for different requirement of samples
- Samples are in or out automatically and hot lid is warmed automatically
- · User can set report form, multicolor printing,

- analysis and print function
- Adopt long life LED, which guarantee the stability and reliability of the optical system
- · Carry positive detection rate analysis by itself. Laboratory pollution will activate the early
- High throughput and the maximum testing samples capacity can reach to 144 with changeable and flexible scheme(samples capacity are optional among 48, 96, 144)



C

Real-time PCR and PCR Instrument

Technical parameters

NMPA

| Name | Real-time PCR Instrument |
|---|---|
| Specification | AGS4800 |
| Sample Volume | $3\times48\times0.2$ ml centrifugal tube (10 - 100 μ l) , adapt to 18×8 connected pipe |
| Sensitivity | As low as 1 copy |
| Fluorescence Channel | [F1~F2; F1~F4; F1~F6](Optional) F7~F8(Reserved) |
| Temperature Range | 30.0 - 99.9℃ |
| Temperature Uniformity | ±0.3°C9(@55°C) |
| Precision of Temperature Control | ±0.1°C(@55°C) |
| Warming Rate(MAX) | ≥4.5°C/s |
| Cooling Rate(MAX) | ≥4.5°C/s |
| Hot Lid Temperature Range | 30~105℃ |
| Fluorescence Intensity Test Repeatability | CV≤3% |
| Sample Test Repeatability | CV≤3% |
| Sample Linear | Linear regression coefficient r≥0.980 |
| Fluorescent Linear | Linear regression coefficient r≥0.990 |
| Instrument Communication Interface | USB2.0 |
| Operating System | Windows 7/8/10 |
| Input Power | 100~240V, 50/60Hz, 1500W |
| Dimension(mm) | 586×526×780(L×W×H) |
| Net Weight(kg) | 36kg, 65kg, 92kg(exclude computer) |



Real-time PCR and PCR Instrument



AGS7600 Real -time PCR Fluorescence Detecting System



 This product is based on fluorescent polymerase chain reaction, which can analyze human-derived nucleic acid samples (RNA/DNA) in clinical medicine.

Technical parameters

| Product Description | Target |
|---|--|
| Sample capacity | 48×0.2mL centrifugal tube (5-100μL), suitable for 6×8 coupling |
| Sensitivity | 1 copy |
| Fluorescence channel | F1,F2,F3, F4 channels |
| Temperature | 4.0-99.9°C |
| Uniformity | ±0.3°C(@55°C) |
| Temperature control precision | ±0.1(@55°C) |
| Heating rate(MAX) | ≥4.5°C/s |
| Cooling rate(MAX) | ≥4.5°C/s |
| Heat cover temperature range | 30-105°C |
| Repeatability of fluorescence intensity detection | CV≤3% |
| Sample detection repeatability | CV≤3% |
| Sample linear | Linear regression coefficient r≥0.98 |
| Fluorescence linear | Linear regression coefficient r≥0.98 |
| Instrument communication interface | USB 2.0 |
| Operating system | Windows 7/8/10 |
| Product size | 470×450×275mm(L×W×H), 23kg |

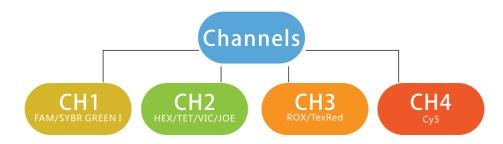




Real-time PCR and PCR Instrument

Real-time PCR and PCR Instrument

Highly Cost-effective 4 Channel Combination

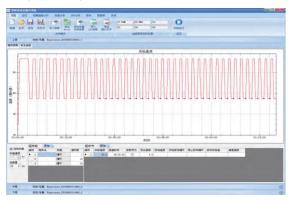


Excitation: 450-490nm

Detection: 510-530nm

515-535nm 560-580nm 560-590nm 610-650nm 620-650nm 675-690nm

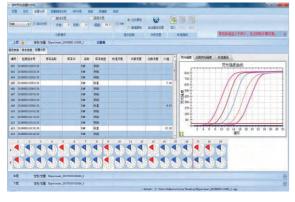
Programming Interface



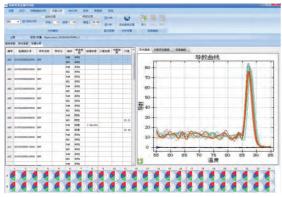
Sample Parameters Setting



Quantitative Analysis



Melting Curve



AGT9601 Thermal Cyler PRODUCT FEATURES AND OPERATION INTERFACE



The 2nd generation model of AGT9601 is an updated gradient thermal cycler with high cost performance and robust functionality. It adopts a brand new integrated modular design and military-lever components, highlighted by its remarkable stability, accuracy and efficiency. Moreover, the machine outstands with cloud-integrated sync service platform, which allows remote control through APP on mobile devices for extremely flexible operation and management. Through continuous innovation, AGS brand commits to improving solutions for molecular diagnostics and clinical laboratory with consistently high quality.

Remote Control

Cloud-integrated sync service platform ensures real-time data communication, which makes immediate programming and management for any user at any place through APP on mobile devices possible. With WIFI or cellular network, operation and efficiency of the machine can meet an optimal result.









Real-time PCR and PCR Instrument

Real-time PCR and PCR Instrument

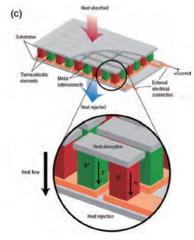


? Reliable Functionality

Brand new integrated module design guarantees reliable and uniform assembly high quality TE module with a service lift of more than 100,000 hours increases the stability of the machine

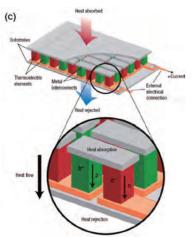
Temperature Accuracy 3

Peltier-based temperature control module assures accurate temperature control with its high reliability, while temperature uniformity settles discrepancy among each well.Moreover ,gradient temperatures can be automatically calculated and intuitively displayed ,Thus, efficiency of sample amplification can be consistently maintained even from a low copy level.



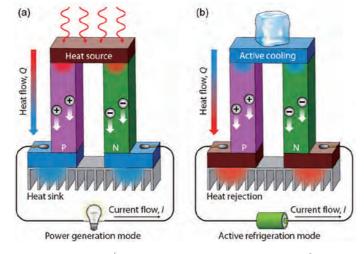
4 Rapid Ramp

components together with integrated modular design extensively decrease the testing period by facilitating the ramp rate to 6°C/s.



Power -off Protection 5

Automatic power-off protection for testing data in the case of unexpected blackout, and residual cycles will be restarted for the successful amplification once power restored.



Military level temperature control

Technical Parameters

| Model | AGT9601 |
|-------------------------|--|
| Sample Capacity | 96*0.2ml |
| Temperature | 4-100°C |
| Ramp-Up Rate | ≥6°C/s |
| Ramp-Down Rate | ≥5°C/s |
| Temperature Uniformity | ≤±0.1°C |
| Temperature Accuracy | ≤±0.1°C |
| Temp. Control Mode | Bolck/Tube |
| Ramp Rate Adjustable | 0.1-6°C |
| Gradient Range | 1-40°C |
| Hot-Lid Temp. Range | 30-110°C |
| Program Memory Capacity | 1000+(USB FLASH/Mobile Devices) |
| 96-Well PCR Plate | No skirted, half-skirted and full-skirted, applicable to 0.2ml PCR tubes and 8-well strip tube |
| Program Steps(Max) | 100 |
| Program Cycle(Max) | 99 |
| Interface Language | English /Chinese |
| Display Screen | 7 inch,800×480 pixels, TFT |
| Communication Interface | USB2.0, LAN, and WIFI |
| Product Size | 380*260*240mm(L*W*H) |
| Product Weight (Net.) | 9.8kg |
| Input Power | 100-240V, 50/60Hz, 650 VA |
| Control Mode | Cell phone/Table/PC(Android&IOS) |
| Control Service | Remote control&data communication |

C

Real-time PCR and PCR Instrument

AGS 8830-8/ AGS 8830-16 Real-Time PCR Detection System

Continuous innovation, excellent quality, perfect management and first-class service

Product instruction

This product uses "real-time fluorescent quantitative PCR technology" combined with the self-developed "real-time dynamic precision temperature control technology", which can be used in various fluorescent quantitative PCR detection projects to achieve rapid nucleic acid detection. With powerful functions and flexible operation, PCR amplification and detection experiments of DNA and RNA can be completed in a compact and portable environment. The use of a special reverse antipollution open lid design can effectively avoid pollution caused by the accidental popping of the hot lid, simplify the experimental operation process, and combine with efficient and fast PCR reagents to provide a complete solution for SARS-CoV-2 detection and other projects.

Product features

- The instrument is small, light and portable.
- $\bullet \ \ \mbox{Four-channel design, matching common consumables to meet more customer needs}$
- HD display operation, no need to connect to computer
- · Real-time dynamic and precise temperature control to achieve efficient temperature rise and fall



Real-time PCR and PCR Instrument

nstrument

Technical parameters

| Product model | AGS 8830-8/ AGS 8830-16 Real-Time PCR Detection System |
|--|--|
| Samples | 8/16×0.2ml tubes(5-100μl),compatible to 8-strips tubes and single tube |
| Sensitivity | 10-10 ¹⁰ copies |
| Dyes | F1:FAM,SYBER Green I; F2:HEX,VIC,JOE,TET,YELLOW; F3:ROX; F4:CY5 |
| Optical system | LED+PD, Scanning detection mode to maintain consistency of results and avoid calibration |
| Lid temperature range | 30-110°C |
| Kit | Compatible with open detection reagents (both conventional quantification and rapid quantification can be used) |
| Temperature range | 30-100°C |
| Uniformity | ≤±0.1°C |
| Heating rate | ≥8°C/s(MAX) |
| Fluorescence intensity detection repeatability | CV≤0.5% |
| Specification | 300x260x180mm(LxWxH) |
| Software | The instrument can directly analyze the results and data, and is equipped with a computer version of special analysis software |
| Touch screen | LED 7-inch color capacitive screen, no need to connect to computer |
| Certification | NMPA |





D

Nucleic Acid Extraction Instrument

Nucleic Acid Extraction Instrument

Smart 32 Nucleic Acid Extraction Instrument

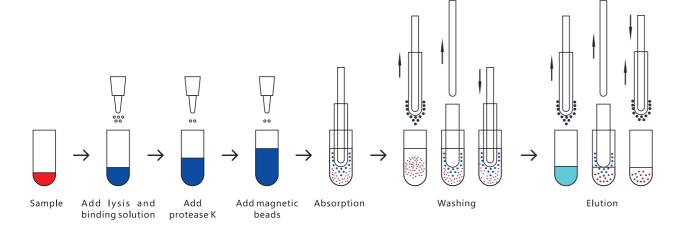
Introduction

Smart 32 nucleic acid extraction instrument is designed and manufactured by DaAn Gene. The extraction instrument owing the functions of temperature control, oscillation and blending, can crack sample and release the nucleic acid under the appropriate conditions, blend the magnetic beads with nucleic acid, elute and release the nucleic acid, transfer and separate the magnetic bead through magnetic device, at last extract the nucleic acid material from the samples. It can extract a single sample or 32 samples at the same time, the user can edit experiment procedure, monitor experiment condition, open or close the ultraviolet light disinfection functions through the touch screen. It operates easily, extract rapidly, and has reliable result.



Principle and Process

Through using the magnet stick on the lab chamber, transfer the magnetic beads adsorbed with nucleic acid into different reagents hole. Then use the stirring set to mix liquid rapidly and repeatedly, make the liquid and magnetic beads mix evenly. By cell lysis, nucleic acid adsorption, washing and elution, eventually get nucleic acid of high purity.



With the corresponding magnetic beads method and nucleic acid extracting reagent, this instrument can rapidly extract DNA and RNA from plant and animal

tissue, fluid, blood, food and pathogenic microbes samples. The instrument is suitable for nucleic extraction and purification of biological samples.

Parameters

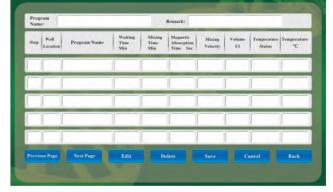
NMPA



| Reaction volume | 20 ul - 1000 ul |
|--|---|
| Sample volume | ≤ 600 ul |
| Sample handling capacity | 1 - 32 samples |
| Extraction plate | 2 units of 96 extraction plates |
| The collection rate of magnetic beads | ≥ 95% |
| Temperature range | 30 ℃ - 90 ℃ |
| Oscillation speed for mix | Fast, medium and slow speed for different requirement |
| Difference between extracting hole | For the extraction of the same sample, the variation coefficient of CT value between holes is less than 3%. |
| Operation interface | Large screen for touching operation |
| Rapid program setting | 8 sets of rapid program for setting. The extraction could be started after 2 clicks at least |
| Instrument connector | RS232/RJ45/USB, etc. |
| UV | Yes |
| Extraction time | 30 - 60 minutes/time |
| Overall dimension | 435 mm*340 mm*450 mm |
| Weight | 29 kg |
| Power supply | AC 110-240 V, 50 Hz/60 Hz, 800VA |
| Operation temperature range | 10 ℃~30 ℃ |
| Operation humidity range | ≤ 80% |
| Sensitivity of nucleic acid extraction | For extraction of the 30IU/ml sample, the positive rate is more than 95% |

Operation Interface





Homepage

Operation setting

Nucleic Acid Extraction Instrument

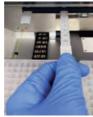
Stream SP96 Fully Automatic Nucleic Acid Extractor

Stream SP96 Fully Automatic Nucleic Acid Extractor is a fully automatic high-throughput equipment with automatic liquid processing and nucleic acid extraction functions. With magnetic bead extraction reagents, it can complete automatic nucleic acid extraction from 1 to 96 clinical samples of various types. The flexible automatic liquid handling function can accurately complete sample loading and reagent distribution according to requirements; friendly human-computer interaction software provides clear guidance, allowing you to easily master the operation of the instrument, and the operation process does not require manual steps, which greatly improves work efficiency!









Nucleic Acid Extraction Instrument

Characters



• 96 samples can be processed within 60 minutes



- Only 2.1 tips per sample
- Suitable for single consumable



- HEPA filter system
- Strict physical partition
- · With independent UV disinfection

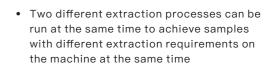




- Pre-installed multiple experimental programs
- · Strong compatibility, suitable for various types of samples
- · Graphic and text wizard, visual operation



- Nucleic acid samples can be allocated to 3*96 (288 people) PCR reaction reagent mix
- Flexible construction of 9 PCR detection reagent mix



Unique

Nucleic Acid Extractor

Core tech

Precise pipetting

Air pressure correction

Air pressure correction can be adapted to flat ground, plateau, and island environment to ensure accurate liquid transfer

Independent temperature control of heating components, high efficiency and

pressure feedback to

prevent liquid boiling,

safe and reliable

uniformity, air

control

Anti-boiling

protection

Intelligent temperature

> **Dual mode** extraction

control

Multithread

The instrument runs multi-threaded control, and the dual extraction module can run different

extraction processes.

Multiple protection

Control pollution

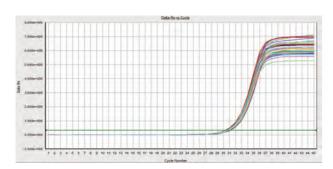
Scientific physical partitioning, UV radiation from inside to outside, gas filtration, effectively control cross contamination.

DAAN Technology

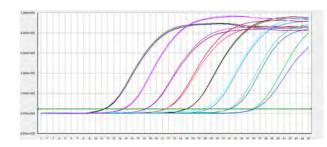
Classic heritage

Daan's automated solutions for molecular diagnostics inherit classic technology and are trustworthy.

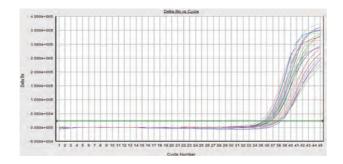
Performance



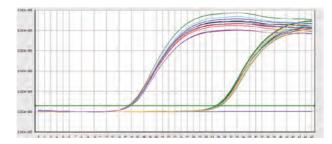
The concentration was 10³IU/mL HBV reference product, and ≥48 samples were extracted in batches, and analyzed by qPCR, CV<1%.



The dilution concentration is 10 IU/mL~108 IU/mL HBV reference product diluted sample for extraction, R2>0.98.



The concentration was 10 IU/mL HBV reference product diluted sample, and 20 samples were extracted repeatedly, and the detectable rate was 20/20 by qPCR analysis.



The concentration is 10⁷IU/mL HBV strong positive reference and negative control cross-distribution extraction, no cross-contamination.

Parameters

| Samples | 1-96 | 1-96 | | |
|--------------------------------------|---|---|---------------------|--|
| Operating mode | Automatic sample I reagent loading | Automatic sample loading & nucleic acid extraction & PCR reaction reagent loading | | |
| Extraction mode | Batch and single sa | Batch and single sample synchronization processing | | |
| Sample volume | Support double sar | Support double sample extraction, applicable volume 20µL-700µL | | |
| Single pipetting range | 1µL-1000µL | 1μL-1000μL | | |
| Dipotting performance | 20μL-100μL accuracy: ±1% Repeatability:≤0.6 | | Repeatability:≤0.6% | |
| Pipetting performance | ≥100µL | accuracy: ±0.8% | Repeatability:≤0.5% | |
| Liquid level detection | | With liquid level detection and pressure monitoring functions, it can prevent bubble interference and prompt blockage | | |
| Alarm for abnormal conditions | With sound and ligh | With sound and light indication of running status, alarm reminder of insufficient reagent, collision, etc. | | |
| X/Y/Z direction displacement error | Error does not exce | Error does not exceed 0.1mm | | |
| Extraction temperature control range | Room temperature | Room temperature -99°C | | |
| Reagent refrigeration (optional) | Temperature 2°C-8 | Temperature 2°C-8°C, automatically sealed | | |
| Anti-pollution design | HEPA filtration, exte | HEPA filtration, external exhaust system, UV sterilization | | |
| Interface Type | JR45 port, two-way | JR45 port, two-way LIS or HIS system communication function | | |
| Operating environment | Temperature :5°C-4 | Temperature :5°C-40°C,Humidity :≤80% | | |
| Input power | a.c.100-240V 50Hz | a.c.100-240V 50Hz | | |
| Weight | 250kg | 250kg | | |
| Dimension(mm) | 1300 ×745 × 1707 _n | 1300 ×745 × 1707 _{mm} (L x W x H) (including storage workbench) | | |



Nucleic Acid Extraction Instrument

Nucleic Acid Extraction Instrument

D

Application Details







DA 3300

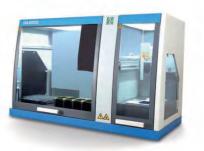
DA 3200

Smart 32

| Full sutsussties | Full sutsusstien | Automotic cutus stics |
|-----------------------------------|--------------------------------------|-----------------------------------|
| Full automation | Fu ll automation | Automatic extraction |
| Maximum reaction volum: 1 ml | Maximum reaction volum: 1 ml | Maximum reaction volum: 1 ml |
| Maximum sample volum: 600 μl | Maximum sample volum: 600 μl | Maximum sample volum: 600 μl |
| Capacity: 96 / 192 samples | Capacity: 48 tests (single batch), | Capacity: 32 samples |
| (2 configurations) | 96 tests (Adding samples in batches) | |
| Technology of platform: | Technology of platform: | Technology of platform: |
| Tecan platform + Independent R&D | Independent R&D | Independent R&D |
| Application field: | Application field: | Application field: |
| Clinical detection | Clinical detection | Clinical detection |
| Conventional scientific research | Conventional scientific research | Conventional scientific research |
| Genomics analysis | Genomics analysis | Genomics analysis |
| Centers for Disease Control (CDC) | Centers for Disease Control (CDC) | Centers for Disease Control (CDC) |
| Food safety detection | Food safety detection | Food safety detection |
| Medicolegal expertise | Medicolegal expertise | Medicolegal expertise |
| 1320×500×460mm(L×W ×H) 220kg | 950×665×574mm(L×W ×H) 100kg | 435×340×450mm(L×W×H) 29kg |







Ballet X3

DA 3500

DA 3000

| Automatic extraction | Fu ll automation | Fu ll automation |
|--|--|---|
| Maximum reaction volum: 5 ml | Maximum reaction volum: 5 ml | Maximum reaction volum: 5 ml |
| Maximum sample volum: 2,000 μl | Maximum sample volum: 2,000 µl | Maximum sample volum: 2,000 µl |
| Capacity: 24 samples | Capacity: 48 tests (single batch), | Capacity: 192 tests (mixed detection) |
| | 96 tests (Adding samples in batches) | 24 tests (independent detection) |
| Technology of platform: | Technology of platform: | Technology of platform: |
| Independent R&D | Independent R&D | Independent R&D |
| Application field: | Application field: | Application field: |
| Clinical detection | Clinical detection | Nucleic acid library construction |
| Conventional scientific research | Conventional scientific research | NAT of blood screening |
| Centers for Disease Control (CDC) | Centers for Disease Control (CDC) | Ultrasensitive detection of nucleic aci |
| Dissociative DNA extraction in NGS | Dissociative DNA extraction in NGS | |
| Nucleic acid library construction | Nucleic acid library construction | |
| NAT of blood screening | NAT of blood screening | |
| Ultrasensitive detection of nucleic acid | d Ultrasensitive detection of nucleic acid | |
| 445×384×574mm(L×W×H) 160kg | 1184×720×785mm(L×W×H) 160kg | 1680×800×1720mm(L×W ×H) 400kg |
| | | |

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Mobile and Assembled Laboratory

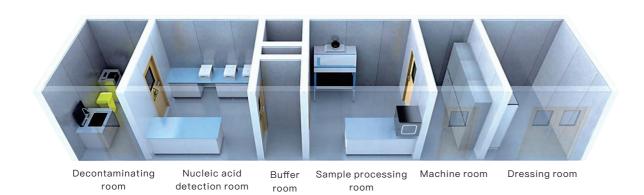
Laboratory type

The mobile van type integrated laboratory

The product is composed of a sample preparation room, a PCR detection detection room, a dressing room, a decontaminating room and an electrical and mechanical room;

Designed with unidirectional flow ventilation, the product can prevent aerosol contamination; DC air-conditioning system with full fresh air and full exhaust: ventilation rate 12 times/h and 100,000 cleanliness class; Overall indoor negative pressure with unidirectional flow; Direct expansion fresh air-conditioning unit, with the air supply and exhaust forms of upward supply and downward return;





Interior Design Sketch of Integrated and Mobile PCR Laboratory

Mobile and Assembled Laboratory

Advantages

- (1) High efficiency: the product can be installed within just several hours;
- (2) Fast turnover: due to fast transfer, medical assistance can be provided according to the severity of epidemic situation in a region;
- (3) Low cost: the product cost is far lower than the reconstruction of the existing building;
- (4) Standalone: it will not affect the layout of the existing building structures;
- (5) Developable prior to and subsequent to the epidemic situation, corresponding functions can be added to the product according to the demand of the hospital;
- (6) Anti-pollution: the sewage, pollutants, waste gas, etc. arising from the product are disposed separately;
- (7) Safety: the product is designed in strict accordance with the standards in connection with BSL-2 laboratory and PCR detection.
- (8) Easy installation: only power source, water supply and drainage interfaces are reserved at the site. upward supply and downward return;



Mobile and Assembled Laboratory

Mobile and Assembled Laboratory

The assembled nucleic acid testing laboratory







Set up core work room supporting preparation room. At the beginning of the installation of the purification airdressing room, buffer room, etc., with an area of about 68m²; Adopt the one-way flow design of personnel, the the buffer room isolation to prevent aerosol pollution; The number of air changes is 15 times per hour, the expansion combined air conditioning purification unit, everyday. the air flow organization form is from top to bottom;

conditioning unit, the medium-efficiency filter is used, and the indoor air is supplied with high efficiency; core working room adopts the transmission window and The exhaust air is set up with high-efficiency filtration, in-situ sterilization, and electric biological sealing valve is set, which is made of 304 stainless steel; cleanliness level is 100,000, the new air direct Detection capacity: 1500 tests can be completed

Advantages

- (1) Efficient, accurate fast and safe;
- (2) Independent and integrated, will not affect the existing building structure layout, directly supplement the dedicated nucleic acid laboratory, and quickly improve the detection ability;
- (3)It can be developed, and corresponding functions can be added according to the needs of the hospital. To upgrade the detection ability, and have the ability to complete the outpatient clinic;
- (4) Anti-pollution: Sewage, waste, and exhaust generated in the laboratory are specially treated;
- (5) Safety, strictly in accordance with BSL-2 (Biosafety Level 2) + laboratory and PCR testing
- (6) Simple installation, only need to reserve power, water supply and drainage interfaces on site;

Laboratory achievements

At present, the whole laboratory aided by DAAN GENE to the Iraqi government is in normal operation. The improvement in detection capacity enables the Iraqi government to accelerate the confirmation of patient groups and lay the foundation for the establishment of effective quarantine measures. Considering the current situation, it may be necessary to increase the mobility of sample detection capability.

DAAN GENE can realize the mobile van type integrated laboratory, which can be distributed and employed to detect the samples at any time. The mobile van type integrated laboratory made by DAAN GENE can effectively improve the detection efficiency, achieve detection of the samples at any point, convenient fast and efficient!







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| er Information | |
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| Product Description | Cat.No | Specification | Certificates | | |
|--|----------|--------------------------------|--------------------|--|--|
| Novel Coronavirus | | | | | |
| Detection Kit For 2019 Novel Coronavirus (2019-Ncov) RNA (PCR- | DA-930 | 48 tests/kit | WHO CE NMPA FSC | | |
| Fluorescence Probing) | DA-930 | 96 tests/kit | TGA | | |
| | DA0990 | Large package, 24 tests/kit | | | |
| | DA0991 | Large package, 48 tests/kit | | | |
| Detaction Kit for 2010 nCoV (DCD Elugraceanae) | DA0992 | Large package, 96 tests/kit | NMPA CE FSC | | |
| Detection Kit for 2019-nCoV (PCR-Fluorescence) | DA0993 | Single tube, 24 tests/kit | NIVIPA CE PSC | | |
| | DA0994 | Single tube, 48 tests/kit | | | |
| | DA0995 | Single tube, 96 tests/kit | | | |
| Blood Screening | | | | | |
| Hepatitis B Virus / Hepatitis C Virus /Human Immunodeficiency | DA0160 | 48 tests/kit | NMPA | | |
| Virus Type 1 PCR Diagnostic Kit | DA0161 | 96 tests/kit | NMPA | | |
| Human Immunodeficiency Virus (HIV) | | | | | |
| Human Immunodeficiency Virus Type 1 PCR Diagnostic Kit | DA-Z195 | 48 tests/kit | NMPA FSC | | |
| Human Papillomavirus | | | | | |
| Human Papillomavirus Types 6 And 11 Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-056 | 48 tests/kit | NMPA CE | | |
| Human Papillomavirus Types 16 And 18 Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-057 | 48 tests/kit | NMPA CE | | |
| High-Risk Human Papillomavirus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-092 | 48 tests/kit | RUO | | |
| Sexually Transmitted Infectious (STIs) | | | | | |
| Neisseria Gonorrhoeae Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-053 | 48 tests/kit | NMPA CE FSC | | |
| Chlamydia Trachomatis Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-054-1 | 48 tests/kit | NMPA CE FSC | | |
| Ureaplasma Urealyticum Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-055 | 48 tests/kit | NMPA CE FSC | | |
| Treponema Pallidum Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-062 | 48 tests/kit | CE | | |

| Product Description | Cat.No | Specification | Certificates |
|---|-----------|---------------|-----------------------|
| Respiratory Pathogen | | | |
| Mycobacterium Tuberculosis Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-052 | 48 tests/kit | NMPA CE FSC |
| Mycoplasma Pneumonia Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-064 | 48 tests/kit | NMPA CE FSC CMDCSA |
| Chlamydophilia Pneumoniae Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-066 -1 | 48 tests/kit | CE |
| Adenovirus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-067 | 48 tests/kit | NMPA CE CMDCSA |
| Legionella Pneumophila Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA -069 | 48 tests/kit | CE |
| Streptococcus Pneumoniae Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-081 | 24 tests/kit | CE |
| Respiratory Syncytial Virus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-086 | 10 tests/kit | NMPA CE FSC CMDCSA |
| Human Bocavirus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-106 | 24 tests/kit | CE |
| Others | | | |
| α-thalassemia Genetic PCR Diagnostic Kit (Gap-PCR) | DA-036 | 20 tests/kit | NMPA |
| u-malassemia Genetic FCR Diagnostic Nit (Gap-FCR) | DA-099 | 20 tests/kit | NMPA |
| 21 Trisomy And Sex Chromosome Polyploidy PCR Diagnostic Kit (Fluorescent PCR Capillary Electrophoresis) | DA0100 | 50 tests/kit | NMPA |
| Group B Streptococcus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA0851 | 48 tests/kit | NMPA |
| Cyp2C19 Genotyping Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA0891 | 48 tests/kit | NMPA |
| Digestive Pathogen | | | |
| Helicobacter Pylori Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-063 | 48 tests/kit | NMPA CE CMDCSA |
| Human Parvovirus B19 Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-100 | 24 tests/kit | CE |
| Campylobacter Jejuni Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-105 | 24 tests/kit | CE |
| Shigella Spp.Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-107 | 24 tests/kit | CE |
| Enterovirus 71 Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-108 | 24 tests/kit | NMPA CE FSC |





| Order Information | |
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| Product Description | Cat.No | Specification | Certificates |
|--|--------|---------------|--------------|
| Enterovirus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-109 | 24 tests/kit | NMPA CE FSC |
| Coxsackievirus A16 Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-110 | 24 tests/kit | NMPA CE FSC |
| Vibrio Cholerae Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-133 | 24 tests/kit | CE |
| Enterovirus 71 / Coxsackievirus A16 PCR Diagnostic Kit | DA0351 | 48 tests/kit | NMPA |
| Coxsackievirus A10 Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA0690 | 48 tests/kit | NMPA |
| Enterovirus 71 / Coxsackievirus A16 / Enterovirus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA0321 | 48 tests/kit | NMPA FSC |
| Norwalk Virus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-096 | 24 tests/kit | CE |
| Group A Of Rotavirus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-104 | 24 tests/kit | CE |
| Coxsackievirus A6 Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-482 | 48 tests/kit | CE |
| Vibrio Cholerae O139 Serogroup Diagnostic Kit | DA-130 | 24 tests/kit | |
| Vibro Cholerae CTX Gene PCR Diagnostic Kit | DA-131 | 24 tests/kit | |
| Coxsackievirus A24v PCR Diagnostic Kit | DA-171 | 48 tests/kit | |
| Group A Of Rotavirus/Norwalk-like Virus PCR Diagnostic Kit | DA-207 | 48 tests/kit | |
| Group B Rotavirus PCR Diagnostic Kit | DA-210 | 48 tests/kit | |
| Influenza Virus | | | |
| Influenza A Virus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-094 | 24 tests/kit | NMPA CE |
| Influenza B Virus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-095 | 24 tests/kit | NMPA CE |
| Human Influenza Virus Subtype H1 Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-143 | 24 tests/kit | NMPA CE |
| Human Influenza Virus Subtype H3 Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-144 | 24 tests/kit | NMPA CE |
| Avian Influenza Virus H7N9 Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-472 | 48 tests/kit | NMPA CE |
| Influenza A H1N1 Virus (2009) Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-093 | 24 tests/kit | NMPA CE FSC |

| Product Description | Cat.No | Specification | Certificates | |
|---|---------|---------------|--------------|--|
| Tumor Markers | | | | |
| Epstein Barr Virus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-065 | 48 tests/kit | NMPA CE FSC | |
| Multidrug Resistance Gene MDR1 Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-076 | 10 tests/kit | CE | |
| Fusion Gene BCR-ABL Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-077 | 10 tests/kit | CE | |
| Public Health | | | | |
| Salmonella Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-102 | 24 tests/kit | CE | |
| Shigella Spp.Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-107 | 24 tests/kit | CE | |
| Human Parvovirus B19 Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-100 | 24 tests/kit | CE | |
| Brucella Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-136 | 24 tests/kit | CE | |
| Severe Fever With Thrombocytopenia Syndrome Bunyavirus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-078 | 48 tests/kit | NMPA CE | |
| Middle East Respiratory Syndrome Coronavirus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-240 | 48 tests/kit | NMPA CE | |
| Salmonella Enterica Type I PCR Diagnostic Kit | DA-457 | 24 tests/kit | NMPA FSC | |
| Zika Virus PCR Diagnostic Kit | DA0711 | 48 tests/kit | NMPA | |
| Salmonella Typhi Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-121 | 24 tests/kit | CE | |
| Varicella-Zoster Virus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-220 | 24 tests/kit | CE | |
| Japanese Encephalitis Virus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA -082 | 24 tests/kit | CE | |
| Measles Virus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-238 | 24 tests/kit | CE | |
| Neisseria Meningitidis Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-464 | 48 tests/kit | CE | |
| Enterohemorrhagic Escherichia Coli O157 Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-083 | 24 tests/kit | CE | |
| Rabies Virus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-090 | 24 tests/kit | CE | |
| Dengue Virus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-156 | 24 tests/kit | CE | |





| Product Description | Cat.No | Specification | Certificates |
|--|----------|-------------------------------|--------------|
| TORCH | | | |
| Herpes Simplex Virus li Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-059 | 48 tests/kit | NMPA CE |
| Human Cytomegalovirus Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-061-1 | 48 tests/kit | NMPA CE |
| Herpes Simplex Virus I Fluorescent Polymerase Chain Reaction Diagnostic Kit | DA-091 | 48 tests/kit | NMPA CE |
| Toxoplasma PCR Diagnostic Kit | DA-060 | 20 tests/kit | |
| Rubella Virus PCR Diagnostic kit | DA-075 | 10 tests/kit | |
| Nucleic Acid Extraction | | | |
| RNA Isolation Kit (One Step Method) | DA-245 | 1 tests/kit | NMPA |
| RNA Extraction Kit (AB Reagent Method) | DA-247 | 10 tests/kit | NMPA |
| DNA Releasing Reagent Kit | DA-248 | 10 tests/kit | NMPA |
| DNA Isolation Kit (Boiling Method) | DA-249 | 10 tests/kit | NMPA |
| | | 20 tests/kit | NMPA CE FSC |
| RNA/DNA Purification Kit (Magnetic Bead) | DA0633 | 32 tests/kit | NMPA CE FSC |
| | | 96 tests/kit | NMPA CE FSC |
| DNA/DNA Durification Vit (Spin Column) | DA0591 | 20 tests/kit | NMPA CE FSC |
| RNA/DNA Purification Kit (Spin Column) | DA0591 | 48 tests/kit | NMPA CE FSC |
| RNA/DNA Purification Kit (Preservation) | DA0940 | 400 µl/tube, 100 tubes/kit | NMPA CE FSC |
| RNA/DNA Purification Kit (Release) | DA0950 | 400 µL/tube, 100 tubes/kit | CE |
| RNA/DNA Purification Kit (Preservation/Release) | DA0960 | 100 tests/kit | CE |
| Blood Genomic DNA Extraction Kit | DA-452 | 20 tests/kit | NMPA |

| Product Description | Cat.No | Specification | Certificates |
|---|--------|---|--------------|
| RNA/DNA Purification Kit (Magnetic Bead,Alcohol,Fast) | DA0600 | 96 tests/kit | NMPA |
| | DA0601 | 20 tests/kit | NMPA |
| | DA0602 | 32 tests/kit | NMPA |
| | DA0620 | big package; 20 tests /kit | NMPA |
| | DA0621 | big package; 96 tests /kit | NMPA |
| | DA0622 | pre packaged; 20 tests /kit | NMPA |
| RNA/DNA Purification Kit (Magnetic Bead,Alcohol) | DA0623 | pre-packaged; 32 tests /kit | NMPA |
| | DA0624 | pre-packaged; 96 tests /kit | NMPA |
| | DA0625 | double holes; pre-packaged; 32 tests /kit | NMPA |
| | DA0626 | 32 tests /kit | NMPA |
| | DA0640 | big package; 20 tests /kit | NMPA |
| Concern DNA Durification Wit | DA0641 | big package; 96 tests /kit | NMPA |
| Genome DNA Purification Kit | DA0642 | pre-packaged; 20 tests /kit | NMPA |
| | DA0643 | pre-packaged; 32 tests /kit | NMPA |
| | DA0660 | pre-packaged; 20 tests /kit | NMPA |
| RNA/DNA Purification Kit (Magnetic Bead)(Single Blood Screening) | DA0661 | pre-packaged; 24 tests /kit | NMPA |
| | DA0662 | pre-packaged; 48 tests /kit | NMPA |
| Nucleic Acid Purification Kit (cfDNA X3) | DA0680 | pre-packaged; 20 tests /kit | NMPA |
| | DA0681 | pre-packaged; 48 tests /kit | NMPA |
| | DA0682 | big package; 20 tests /kit | NMPA |



| Order Information | |
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| Product Description | Cat.No | Specification | Certificates |
|--|--------|---|--------------|
| Nucleic Acid Purification Kit (Magnetic Bead)(Fast DNA Extraction) | DA0720 | big package; 20 tests /kit | NMPA |
| | DA0721 | big package; 96 tests /kit | NMPA |
| | DA0722 | pre-packaged; 20 tests /kit | NMPA |
| | DA0723 | pre-packaged; 32 tests /kit | NMPA |
| | DA0860 | big package; 20 tests /kit | NMPA |
| Nuclair Asid Durification Vit (Magnetic Read)/Fact DNA Extraction | DA0861 | big package; 96 tests /kit | NMPA |
| Nucleic Acid Purification Kit (Magnetic Bead)(Fast RNA Extraction) | DA0862 | pre-packaged; 20 tests /kit | NMPA |
| | DA0863 | pre-packaged; 32 tests /kit | NMPA |
| RNA/DNA Purification Kit (Magnetic Bead)(TB) | DA0870 | big package; 20 tests /kit | NMPA |
| | DA0871 | big package; 96 tests /kit | NMPA |
| | DA0872 | pre-packaged; 20 tests /kit | NMPA |
| | DA0873 | pre-packaged; 32 tests /kit | NMPA |
| | DA0880 | pre-packaged; 20 tests /kit | NMPA |
| RNA/DNA Purification Kit (Magnetic Bead) (Multiplex Blood Screening) | DA0881 | pre-packaged; 24 tests /kit | NMPA |
| | DA0882 | pre-packaged; 48 tests /kit | NMPA |
| RNA/DNA Purification Kit (EB Whole Blood) | DA0900 | pre-packaged; 32 tests /kit | NMPA |
| | DA0901 | big package; 96 tests /kit | NMPA |
| | DA0902 | double holes; pre-packaged; 32 tests /kit | NMPA |

| Product Description | Cat.No | Specification | Certificates | | |
|---|-----------------|-------------------------|--------------|--|--|
| Specimen Preservation | | | | | |
| Specimen Preservation Reagent (Guanidine) | DA0970 | 3 ml,100 tubes/kit | NMPA FSC | | |
| Specimen Preservation Reagent | DA0980 | 1.0 ml,100 tubes/kit | NMPA FSC | | |
| PCR Instrument | · | | | | |
| | AGS 8830 | 8/16 test ×0.2ml | NMPA CE | | |
| Real time PCR Fluorescence Detecting System | AGS 4800 | 3×48 tests ×0.2ml | CE | | |
| | AGS 7600 | 96 tests ×0.2ml | NMPA CE FSC | | |
| Thermal Cycler | AGT 9601 | 48 tests ×.2ml | NMPA CE FSC | | |
| Nucleic Acid Extraction Instrument | | | | | |
| | Smart 32 | 32 samples | NMPA CE FSC | | |
| | Ballert X3 | 24 samples | NMPA FSC | | |
| | DA 3200 | 48/96 samples | NMPA FSC | | |
| Nucleic Acid Extraction Instrument | DA 3500 | 48/96 samples | FSC | | |
| | DA 3000 | 24/192 samples | NMPA | | |
| | DA 3300 | 96/192 samples | FSC | | |
| | SP96 | 96 samples | NMPA FSC | | |
| Hepatitis Virus | Hepatitis Virus | | | | |
| Hepatitis B Virus PCR Diagnostic Kit | DA-Z051 | 48 tests/kit | NMPA FSC | | |
| Hepatitis C Virus PCR Diagnostic Kit | DA-Z070 | 48 tests/kit | NMPA FSC | | |
| nepaulis C virus PCR Diagnostic Nit | DA0170 | 10 tests/kit | NMPA FSC | | |
| Hepatitis E Virus PCR Diagnostic Kit | DA-072 | 10 tests/kit | FSC | | |