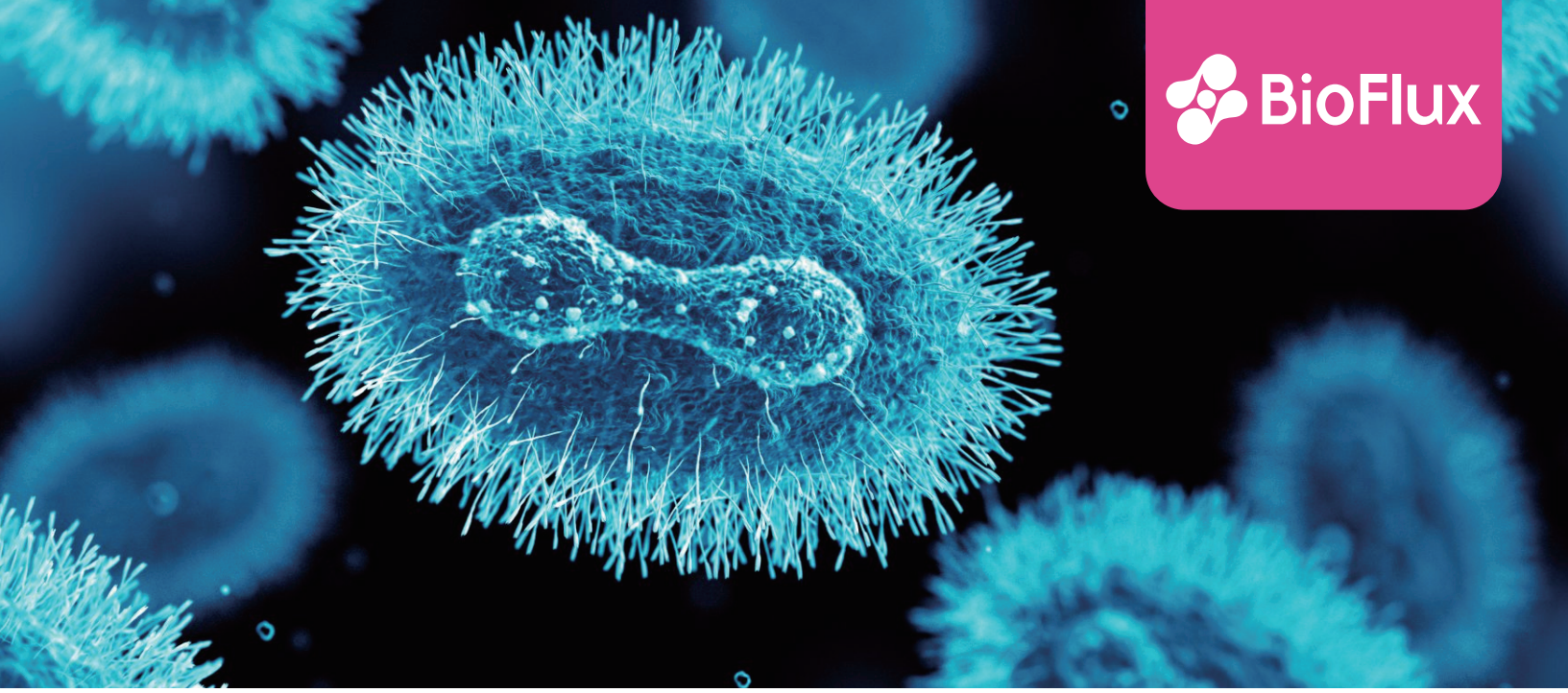

Monkeypox Virus Nucleic Acid Multiple Detection Kit(Fluorescent PCR)

Product Introduction

Monkeypox virus is a kind of enveloped double stranded DNA virus, which is rectangular in shape and can be cultured and grown in African green monkey kidney cells, causing cytopathic effects. It belongs to the orthopoxviral genus of the poxviridae family. Monkeypox is a zoonotic infectious disease caused by monkeypox virus primers. Its clinical manifestations include high fever, headache, general discomfort, cough, enlarged lymph nodes, accompanied by a rash similar to smallpox throughout the body, and occasional abdominal pain. This kit uses fluorescence PCR method and can be applied to Bioer's LineGene 9600 Plus (FQD-96A), Bioer's QuantGene 9600 (FQD-96C) and ABI 7500. It has the characteristics of fast detection speed, good specificity, and high sensitivity. This kit selects two highly conserved regions of monkeypox virus, the F3L gene (FAM) and the B6R gene (HEX) and designs two pairs of specific primer probes. The primers and probes can specifically bind to the target sequence. Under the action of Taq enzyme, the fragment is specifically amplified, and the fluorescent probe is hydrolyzed during the amplification process to produce fluorescence. The detection system contains dUTP-UDG enzyme anti-pollution measures to fully degrade possible product contamination and avoid false positive results. In addition, internal standards are set up to monitor the entire process of sample collection, transportation, nucleic acid extraction, and PCR amplification, avoiding false negative results, and ensuring the effectiveness of the entire process.

Product Specifications

Parameters	Description
Specimen type	Lesion swab specimen
Sensitivity	150 copies/mL
Precision	The coefficient of variation of inter-run, intra-run, intra-day, and intra-day precision is less than 5%
Accuracy	It can detect monkeypox virus
Detection capability	Qualitative detection of monkeypox virus nucleic acid
Compatible Instruments	QuantGene 9600/LineGene 9600 Plus/ABI7500
Detection time	Detection report can be completed within 30 minutes
Storage	-20 ± 5 °C away from light

Product Features

- **Advantages:** This kit can qualitatively detect monkeypox virus nucleic acid, providing information for clinical diagnosis; The detection system contains dUTP-UDG enzyme anti-pollution measures to fully degrade possible product contamination and avoid false positive results; At the same time, introduce human derived internal reference materials to monitor the entire process of sample collection, transportation, nucleic acid extraction, and PCR amplification to avoid false negative results. It takes a short time and can complete the detection report within 30 minutes.
- **Strong applicability:** Suitable for pathological swab samples.
- **High sensitivity:** Three different batches of reagents are used for testing, and the detection sensitivity can reach 150 copies/mL.
- **Strong specificity:** No cross reaction with various common pathogens such as enterovirus 71, measles virus, rubella virus, varicella zoster virus, herpes simplex virus I, herpes simplex virus II, Epstein Barr virus, cytomegalovirus, human herpesvirus 6, and human herpesvirus 7.
- **High accuracy:** It can quickly detect monkeypox virus. Test results of reference materials: positive coincidence rate 100%, negative coincidence rate 100%.
- **Simple operation:** Fully closed tube amplification and detection to prevent aerosol pollution.

Application Cases

Case 1

Accuracy: After dissolving the positive reference P1-P8 and negative reference N1-N8 of Hangzhou Bioer Technology Co., Ltd. as required, MagaBio plus Virus DNA/RNA Purification Kit III BSC86S1E (ZHXB No. 20200872) was used to extract the nucleic acid.

Results: The results showed that the nucleic acid of monkeypox virus could be accurately detected. Test results of enterprise reference materials: positive coincidence rate 100%, negative coincidence rate 100%.

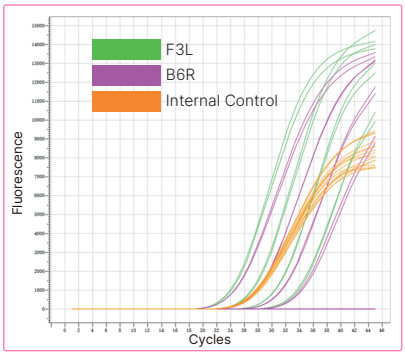

Figure 1: Detection of negative/positive reference materials in monkeypox virus reference materials

Case 2

Linear relationship: Take a sample with a 10-fold gradient of monkeypox virus and use MagaBio plus Virus DNA/RNA Purification Kit III BSC86S1E (ZHXB No. 20200872) for extraction.

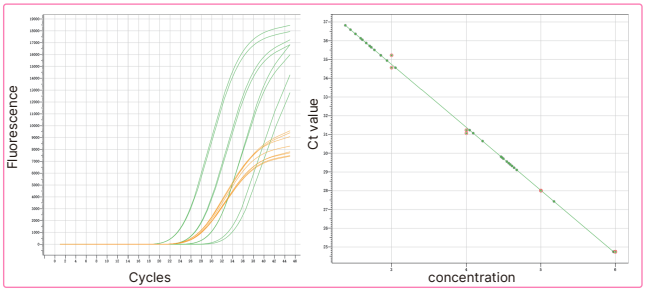

Figure 2 Amplification curve and standard curve of F3 L gene of monkeypox virus

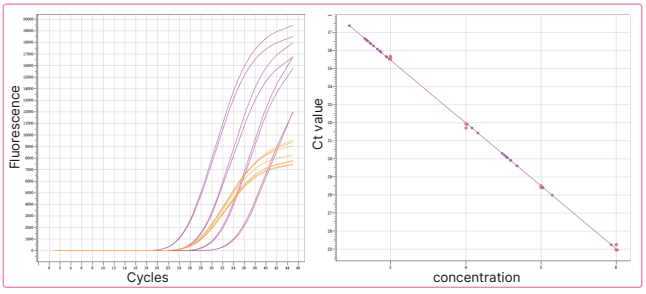

Figure 3 Amplification curve and standard curve of B6R gene of monkeypox virus

Results: The results showed that the amplification correlation coefficient of monkeypox virus was above 0.995, and the linear relationship was good after extraction and detection according to a 10-fold gradient dilution.

Case 3

Precision: After re-dissolving the precision reference J1-J2 of the Monkeypox Virus Nucleic Acid Multiple Detection Kit (Fluorescent PCR) according to the usage requirements, extract it with MagaBio plus Virus DNA/RNA Purification Kit III BSC86S1E (ZHXB No. 20200872), use three batches of reagents for testing, and repeat the test for 10 times.

Results: The results showed that the intra-assay and inter-assay precision variation coefficients of the three batches of reagents were less than 5%, and the reagent precision was good.
The results showed that compared with the same type of monkeypox virus detection kit, the clinical samples verified by the Bioer monkeypox virus detection kit had a high detection coincidence rate and amplification efficiency.

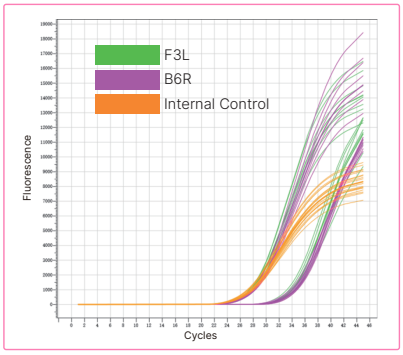

Figure 4 Intra-assay and inter-assay precision

Ordering Information

Product Name	Cat. No.	Package
Monkeypox Virus Nucleic Acid Multiple Detection Kit (Fluorescent PCR)	BSJ34S1/BSJ34M1	24T/48T

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