ELK Biotechnology

For research use only.

Nipah Virus Detection Kit (Fluorescent PCR Method)

Cat. No.	Specification	Storage / Shelf Life
EQ041-1	**50rxns**	-20°C/1 year
EQ041-2	**100rxns**	-20°C/1 year

Product Advantages

- Ready-to-use format; only DNA template is required.
- High primer specificity with no cross-reactivity to other pathogens.
- Positive control included to distinguish false-negative samples.

Product Description

Nipah virus (NiV) is a zoonotic RNA virus belonging to the genus Henipavirus of the family Paramyxoviridae, together with Hendra virus. It was first identified in 1998 in Nipah village, Malaysia.
In January 2026, an outbreak occurred in West Bengal, eastern India. Laboratory testing confirmed 5 infection cases, and the government promptly traced close contacts.
Nipah virus infection can cause a range of clinical manifestations, including asymptomatic infection, acute respiratory disease, and fatal encephalitis, with an estimated mortality rate of 40–75%. The virus poses a significant threat to both human and animal health. Therefore, the establishment of rapid and accurate detection methods is of great importance for Nipah virus research.

This kit uses a fluorescent PCR (qPCR) method to detect the presence of Nipah virus in samples. The kit contains primers specifically designed for the conserved region of the NiV P protein, HotStarTaq DNA Polymerase, and an optimized qPCR buffer system, which together enhance amplification efficiency and enable effective amplification of low-concentration templates.

This product is supplied with a positive control.

ELK Biotechnology

For research use only.

Kit Components

Component	50rxns	100rxns
2xNiV qPCR Mix	500µL	1mL
Primer Mix	50µL	100µL
NiV Positive Control	250µL	500µL
ROX Reference Dye	750µL	1.5mL
RNase-free ddH2O	750µL	1.5mL
Instruction Manual	1	1

Kit Application

For research use only. Not approved for clinical or in vitro diagnostic use.

Precautions

1. Template

- DNA

2. Transportation and Storage

1) Transport with ice packs or dry ice.
2) Store at -20°C protected from light. This product contains fluorescent dyes. Avoid strong light exposure during storage or reaction setup. Mix thoroughly by gentle inversion before use.
3) For your safety and health, wear a lab coat and disposable gloves during experimental procedures.

ELK Biotechnology

For research use only.

Reaction Setup

Prepare the reaction system as described below. For multiple reactions, a master mix of common components can be prepared and an appropriate volume added to each tube or well, followed by the addition of specific reaction components (e.g., template).

Component	Test Sample	PCR Negative Control	PCR Positive Control
2xNiV qPCR Mix	10 µl	10 µl	10 µl
Primer Mix	1 µl	1 µl	1 µl
Sample DNA	5 µl	——	——
PCR Negative Control (Water)	——	5 µl	——
PCR Positive Control	——	——	5 µl
ROX Reference Dye*	0.4 µl	0.4 µl	0.4 µl
ddH2O	up to 20µl	up to 20µl	up to 20µl

1. It is recommended to prepare reactions according to the system described in this manual.
2. Seal the reaction tubes or PCR plate and mix gently. Brief centrifugation may be performed to ensure all components are collected at the bottom.
3. Place the reaction system into a real-time fluorescent PCR instrument, collect data, and analyze results. Set up the PCR instrument according to the table below.

*** ROX Reference Dye**

Depending on the instrument used, ROX dye can be added to normalize fluorescence signals. The table below lists the required ROX volume for different instruments (per 20 µL reaction system):

Instrument	ROX Volume Required per 20 µL Reaction
ABI7300, 7900HT, StepOne, etc.	2.0 µL
ABI7500, 7500Fast, ViiA7, Stratagene Mx3000™, Mx3005P™ and Mx4000™ , etc.	0.4 µL
Roche instruments, Bio-Rad instruments, Eppendorf instruments, etc.	Not required

Two-Step Amplification Program

Stage	Cycles	Temperature	Time
Initial Denaturation	1x	95℃	30 sec
Denaturation	35-40x	95℃	5 sec
Annealing/Extension		60℃	30 sec
Melt Curve			

Three-Step Amplification Program

Stage	Cycles	Temperature	Time
Initial Denaturation	1x	95℃	30 sec
Denaturation	35-40x	95℃	5 sec
Annealing		60℃	30 sec
Extension		72℃	30 sec
Melt Curve			

Result Analysis

For qualitative testing, repeat detection of the original sample or re-extracted nucleic acid 1–2 times. If ≥1 repeat result is positive, the sample is considered positive; if all repeat results are negative, the sample is considered negative. The gray zone range and retesting workflow should be clearly defined in the laboratory SOP. After completion of the reaction, amplification curves must be confirmed.