HiYield™ 96-Well Viral Nucleic Acid Extraction Kit

Cat. No.:	YVN96B-2	YVN96B-4	YVN96B-10
Product Name:	HiYield™ 96-Well Viral Nucleic Acid Extraction Kit		
Reactions:	2	4	10
Format:	96-Well Plates		
Binding Capacity:	Up to 30 ug/well		
Operation:	Vaccum		
Operation Time:	Within 40 Minutes		

Introduction

HiYield™ 96-Well Viral Nucleic Acid Extraction Kit is designed specifically for high-throughput purification of viral DNA/RNA from cell-free samples such as serum, plasma, body fluids and the supernatant of viral infected cell cultures. The entire procedure can be completed in 40 minutes. Purified Nucleic Acid is ready for use in subsequent reactions, including Real-time PCR, Real-Time RT-PCR, Automated Fluorescent DNA Sequencing, PCR, and other enzymatic reactions. This kit is recommended for parallel purification of viral DNA including HBV and CMV and viral RNA including HCV, HIV, and HTLV. The detection limit for certain viruses depends on the sensitivity of individual PCR or RT-PCR assays.

Features

High-throughput purification of cell-free viral DNA/RNA.
Complete removal of all contaminants for reliable downstream applications.
Simple procedure.

Applications

Purified Nucleic Acid is ready for use in a wide range of downstream applications, including Real-Time PCR, Real-Time RT-PCR, Automated Fluorescent DNA Sequencing, PCR, and other enzymatic reactions.

Quality Control

The quality of the HiYield™ 96-Well Viral Nucleic Acid Extraction Kit is tested on a lot-to-lot basis by isolating viral DNA/RNA from a 200 µl plasma sample.

Contents

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Lysis Plate	2 plates	4 plates	10 plates
Adhesive Film	10 pcs	20 pcs	50 pcs
Viral DNA/RNA Binding Plate	2 plates	4 plates	10 plates
2 ml Collection Plate	2 plates	4 plates	10 plates
PCR Plate	2 plates	4 plates	10 plates
VB Lysis Buffer	100 ml	200 ml	500 ml
AD Buffer(concentrated)*	13 ml	26 ml	52 ml
W1 Buffer	130 ml	130 ml	390 ml
Wash Buffer(concentrated)**	25 ml	50 ml	150 ml
RNase-Free Water	30 ml	30 ml	60 ml

* Add absolute ethanol to the AD Buffer prior to initial use (see the bottle label for volume).

**Add absolute ethanol to the Wash Buffer prior to initial use (see the bottle label for volume).

Caution

VB Lysis Buffer and W1 Buffer contain chaotropic salt which is a harmful irritant. During operation, always wear a lab coat, disposable gloves, and protective goggles.

References

(1) Vogelstein, B., and Gillespie, D. (1979) Proc. Natl. Acad. Sci. USA 76, 615.

Protocol

Additional Requirements:

Multi-well plate vacuum manifold (Compatible with YVM96 HiYield™ 96-Well Vacuum Manifold), 2 ml collection plate.

Things Before Starting:

Add absolute ethanol to the AD Buffer prior to initial use (see the bottle label for volume).

Add absolute ethanol to the Wash Buffer prior to initial use (see the bottle label for volume).

Step1 Lysis Step	★Add **400 µl of VB Lysis Buffer** to each well of a **Lysis Plate**. ★Transfer 200 µl of a serum sample (plasma, body fluids, the supernatant of a viral infected cell culture) to each well of the pre-filled **Lysis Plate**. ★Seal the plate with **Adhesive Film** and mix by vortex. ★Incubate at room temperature for 10 minutes
Step 2 Nucleic Acid Binding	★Remove the **Adhesive Film** on the **Lysis Plate** and add **450 µl of AD Buffer** (ethanol added) to each sample lysate. ★Seal the plate with a new **Adhesive Film** and vortex immediately. ★Open the top cap of the vacuum manifold and place a **2 ml collection plate** in the chamber and close the cap. ★Place a **Viral DNA/RNA Binding Plate** onto the gasket of the vacuum manifold and fit both together tightly. ★Remove the **Adhesive Film** and transfer 600 µl of the lysate mixture to each well of the **Viral DNA/RNA Binding Plate**. ★Turn on the vacuum pump at 800 mbar for a few seconds or until the wells empty. ★Turn off the vacuum pump and transfer the remaining lysate mixture to each well. ★Turn on the vacuum pump at 800 mbar for a few seconds or until the wells empty. ★Turn off the vacuum and lift up the top portion of the vacuum manifold carrying the **Viral DNA/RNA Binding Plate** from the base. Discard the flow-through waste in the **2 ml collection plate**. ★Reassemble the plate and the vacuum manifold with the **Viral DNA/RNA Binding Plate**.

Step 3 Wash	★Add **300 µl of W1 Buffer** to the **Viral DNA/RNA Binding Plate**. ★Turn on the vacuum pump at 800 mbar for 2 minutes. ★Turn off the vacuum pump and add **600 µl of Wash Buffer** (ethanol added) to each well of the **Viral DNA/RNA Binding Plate.** ★Turn on the vacuum pump at 800 mbar for 2 minutes. ★Turn off the vacuum pump. Lift up the top portion of the vacuum manifold carrying **the Viral DNA/RNA Binding Plate** and discard the **2 ml collection plate** containing the flow-through waste. ★Place a clean 2 ml collection plate into the chamber and reassemble the vacuum manifold with the **Viral DNA/RNA Binding Plate**. ★Turn on the vacuum pump at 800 mbar for 5 minutes to remove any ethanol residue.
Step 4 Nucleic Acid Elution	★Turn off the vacuum and lift up the top portion of the vacuum manifold carrying the **Viral DNA/RNA Binding Plate** from the base. Place a **PCR Plate** on the 2 ml collection plate and reassemble the vacuum manifold with the **Viral DNA/RNA Binding Plate**. ★Add **50 µl of RNase-free water** to the center of each well of the **Viral DNA/RNA Binding Plate**. ★Let stand for 3 minutes or until the water is absorbed by the matrix. ★Turn on the vacuum pump at 800 mbar for a few seconds to elute the viral DNA/RNA. ★Turn off the vacuum pump and lift up the top portion of the vacuum manifold and remove the **PCR Plate**. ★Seal the plate with a new **Adhesive Film** and store the purified DNA/RNA at -20ºC.