TOOLS Viral Nucleic Acid Extraction Kit

For extraction of viral nucleic acid from plasma, serum,

cell-free body fluids, cell-culture supernatants

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Introduction

TOOLS Viral Nucleic Acid Extraction Kit provides the fastest and easiest way to purify viral DNA and RNA for reliable use in amplification technologies. It is suitable for purification of viral nuceic acid from plasma, serum, and cell-free body fluids. Addition of Carrier RNA is used for purification of RNA from tiny amount of sample. This product uses silica membrane technology to eliminate the cumbersome steps associated with loose resins or slurries. Viral nuceic acid A purified with this kit is immediately ready for use in downstream applications such as enzymatic reactions, PCR, southern blot and so on.

Important Notes

1. Make sure everything is RNase-free when handling this system.
2. Buffers provided in this system contain irritants. Wear gloves and lab coat.
3. Add 1 ml of Buffer EV to the tube of lyophilized Carrier RNA, mix well by vortexing and transfer the mixture to the Buffer EV when first open. Store the Carrier RNA added EV Buffer at 4 °C.
4. Add 8ml and 80ml ethanol (96-100%) to Buffer WB1 and Buffer WB2 respectively before use.
5. Pre-heat RNase-free water to 70˚C for elution step.

Kit Contents

Contents	TTJ-VD50 (50 preps)
Buffer EV	35 ml
Buffer WB1[a]	22 ml
Buffer WB2[b]	20 ml
RNase-free ddH_2O	6 ml
Carrier RNA	0.4 mg
EV Columns	50
Collection Tubes	100
Elution Tubes (1.5ml)	50

a. Prepare WB1 by adding 8 ml of ethanol (96-100%).

b. Prepare WB2 by adding 80 ml of ethanol (96-100%).

Storage

1. All buffers can be stored at room temperature (15–25°C) for 2 years.
2. Lyophilized Carrier RNA can be stored at 2–8°C

Features

Principle	Sample reguirement	Nuceic acid size	Recovery rate	Binding capacity	Elution volume	Time consumed
spin column	150 µl	100 bp ~30 kb	80 ~ 90 %	30 ug	40 ~ 50 µl	20 min

Protocol

1. Transfer 150 µL of the sample (serum, plasma, body fluids, or cell culture supernatant) into a microcentrifuge tube (not provided). If the sample volume is >150 µL, separate it into multiple tubes. If the sample is less than 150 µl, adjust the sample volumn to 150 µl with PBS.
2. Add 570 µL of Buffer EV (carrier RNA added) to the sample, mix well by vortexing, and incubate for 10 min at room temperature.

   Ensure that carrier RNA has been added to the EV Buffer before use.
3. Add 570 µL of ethanol (96%–100%) to the sample mixture, and mix well by vortexing.
4. Combine an EV Column with a Collection Tube (provided). Transfer up to 700 µL of the sample mixture (ethanol added) to the EV Column, centrifuge at 8,000×g for 1 min, and then discard the flow-through. Combine the EV Column with the used Collection Tube.
5. Transfer the remaining sample mixture (ethanol added) to the EV Column, and centrifuge at 8,000 ×g for 1 min. Discard the flow-through and the Collection Tube. Combine the EV Column with a new Collection Tube (provided).
6. Add 500 µL of Buffer WB1 (8 mL of ethanol added) to the EV Column, centrifuge at 8,000 ×g for 1 min, and then discard the flow-through. Combine the EV Column with the used Collection Tube. Ensure that ethanol (96%–100%) has been added to Buffer WB1 before use.
7. Add 750 µL of Buffer WB2 (80 mL of ethanol added) to the EV Column, centrifuge at 8,000×g for 1 min, and then discard the flow-through. Combine the EV Column with the used Collection Tube. Ensure that ethanol (96%–100%) has been added to Buffer WB2 before use.
8. Repeat step 7.
9. Centrifuge at full speed (~18,000 ×g) for an additional 3 min to dry the EV Column. Discard the flow-through and the Collection Tube.

   This step prevents the residual liquid from inhibiting the subsequent enzymatic reactions.
10. Combinethe EV Column with a collection tube (provided). Add 50µL of preheated RNase-free water to the membrane center of the EV Column. Let EV Column stand for 2 min.

    For effective elution, ensure that the RNase-free water is dispensed onto the membrane center and is absorbed completely.
11. Centrifuge for 2 min to elute nuceic acid.
12. Store nuceic acid at −70 °C.

The product is for research only, not for diagnostic and clinical use.