

Magnetic Viral Nucleic Acid Extraction Kit (High Sensitivity) Instructions (Pre-Filled).

Composition

Magnetic Viral Nucleic Acid Extraction Kit	64 Preps
Cat. No.	4012064
Carrier RNA	310 µg
Proteinase K	1.4 ml
Pre-filled 96-well plates	4
Magnetic rod sleeve	8
Instructions	1

Storage

Carrier RNA and Proteinase K can be transported at room temperature and stored at -20°C upon receipt. Other reagents can be stored at room temperature (0~30°C) and have a validity period of 2 years.

Technical Support

R&D Department, Hangzhou Simgen Biotechnology Co., Ltd. technical@simgen.cn , Tel: 400-0099-857.

Introduction

This product is designed for the extraction of a variety of viral RNA or viral DNA from 200 µl plasma, cell-free body fluids (including plasma, serum, urine, CSF, and cell culture supernatant), viral stocks, and virus-infected tissue lysates. In the 96-well plate of the pre-filled kit, only the sample and proteinase K are added to the wells of columns 1 and 7, and the instrument can automate a series of processes such as release, adsorption, washing and elution of viral nucleic acids, and the final nucleic acids can be immediately used in PCR or RT-PCR reactions.

Equipment and Reagents to Be Supplied by User

1. Pipettes and tips (to avoid contamination between samples, use RNase-free/DNase-free pipette tips with filters)
2. Disposable gloves and protective equipment and tissues
3. The Sim-300 Automatic Nucleic Acid Extractor or a similar instrument compatible with consumables.

Preparation before use

Add all proteinase K to the tube contains Carrier RNA and vortex until all the Carrier RNA is dissolved. Proteinase K with Carrier RNA should be stored at -20°C for 6 months without affecting the use effect. If not used for a long time, store the Proteinase K with Carrier RNA at -80°C.

Protocol

Sample pre-use treatment

A. Plasma, serum, cell-free body fluid, virus sample preservation fluid, virus stock solution, urine specimens fluid, cerebrospinal fluid, herpes fluid, CSF and cell culture supernatants, etc.:

Use 200 µl of sample directly to isolation and purification; if the sample volume is less than 200 µl, add PBS solution to 200 µl.

* Extraction of viral nucleic acids using freshly isolated or freeze-thawed samples no more than one time, whenever possible.

B. Pharyngeal swab wash fluid, genital tract swab wash fluid, mouthwash fluid:

Transfer 300 µl sample into a 1.5 ml centrifuge tube, centrifuge at 12000 rpm for 5 min, then transfer 200 µl supernatant for extraction of viral nucleic acids.

C. Virus-infected tissue lysate:

Take 10 mg of virus-infected tissue, add liquid nitrogen to immerse the tissue for grinding, after grinding, add 300 µl PBS solution for suspension, then transfer 200 µl tissue suspension for isolation and purification of viral nucleic acids.

D. Stool

Add 1 ml of normal saline to a 1.5 ml centrifuge tube, take about 200 mg stool with a sterilized toothpick (if the stool are in liquid form, aspirate 200 µl directly), add to the 1.5 ml centrifuge tube and vortex until the stool are completely dispersed. Centrifuge at 12,000 rpm for 1 min and transfer 200 µl the top supernatant for isolation and purification of viral nucleic acids.

1. Tear the aluminum foil from a 96 deep-well plate and add 20 µl of Proteinase K with Carrier RNA dissolved to each well in columns 1 and 7 of the deep-well plate.
2. Add 200 µl of body fluid samples to each well of column 1 and column 7 of the 96 deep-well plate and place the 96 deep-well plate into the automatic nucleic acid extractor.
3. Insert the magnetic rod sleeve in the automatic nucleic acid extractor.
4. Follow the steps below to set up the program in the automatic nucleic acid extractor:

Step	Hole	Amount of Fluid (µL)	Soak (s)	Stirring intensity (level)	Stirring time (s)	Descending magnetism (s)	Bottom magnetism (s)	Magnetism times	Waiting time (s)	Stop Off/On 0/1	Plate1 lyse (°C)	Plate1 elute (°C)	Plate2 lyse (°C)	Plate2 elute (°C)
1	4	300	0	1	0	30	3	1	0	0	0	0	0	0
2	1	700	0	6	600	30	3	2	0	0	70	0	70	0
3	2	700	0	6	180	30	3	1	0	0	0	0	0	0
4	3	800	0	6	180	30	3	1	0	0	0	0	0	0
5	5	800	0	6	180	30	3	1	600	0	0	0	0	0
6	6	80	0	5	180	30	10	2	0	0	0	85	0	85
7	1	700	0	5	5	5	0	0	0	0	0	0	0	0

*The above procedure is based on the automatic nucleic acid extractor (Cat. No. Sim-300), if used with other companies' instruments, please adjust the parameters of the program appropriately according to the characteristics of the instrument, or call 400-0099-857 for technical support.

5. Collect and transfer viral nucleic acids from columns 6 and 12 to a clean centrifuge tube, or directly seal the 96 deep-well plate with parafilm and store at -20 °C for later use.

* Since the beads take away some of the eluted nucleic acid solution, the viral nucleic acid solution that can be collected is about 50 µl.