MagicPure® Simple Viral DNA/RNA Kit

Cat. No. EC311
Storage: At room temperature (15°C-25°C) for one year.

Description

MagicPure® Viral DNA/RNA Kit utilizes a unique lysis buffer to lyse virus and release DNA / RNA. The released DNA / RNA is effectively purified after specifically binding to silica magnetic beads. It is suitable for isolating viral DNA/RNA from up to 200 μL of plasma, serum, whole blood, tissue homogenate, cell-free body fluid, nasopharyngeal or oropharyngeal aspirate/ wash, bronchoalveolar lavage fluid (BALF), tracheal aspirate, sputum, nasopharyngeal or oropharyngeal swab and animal cell culture supernatant. The isolated DNA/RNA with high purity can be applied in PCR, RT-PCR, qPCR, and qRT-PCR, etc. This kit is compatible with high-throughput magnetic-rod nucleic acid extractor.

Highlights

- Simple and fast, no centrifugation required
- High yield, high purity

Applications :High-copy number and low-copy number gene detection

Kit Contents

Component	EC311-01/11 (50 rxns)
Binding Buffer 38 (BB38)	15 ml
Clean Buffer 38 (CB38)	25 ml
Wash Buffer 38 (WB38)	12 ml
RNase-free Water	10 ml
Magnetic Virus Beads	1 ml
Magnetic Stand (16 hole)	1 each/-

Sample requirements

- Store at 4°C for no more than 72 hours; at -70°C for long term storage
- Avoid repeated freezing and thawing
- Swab samples should only be collected with synthetic tip swabs (such as polyester or Dacron®) with aluminum or plastic shafts.

Procedures

Before starting, add 5 ml isopropanol to BB38, and add 25 ml and 48 ml anhydrous ethanol to CB36 and WB38, respectively.

1. Sample processing

• Liquid samples

a. Add 320 μl BB38 to a sterile 1.5 ml microcentrifuge tube.
b. Add 200 μl of liquid sample containing viruses to the microcentrifuge tube (If the sample volume is less than 200 μl, adjust the sample volume to 200 μl with 1×PBS or 0.9% NaCl.). Mix by vortexing for 5 seconds.
c. Add 20 μl of Magnetic Virus Beads (vortex to ensure the beads are kept in suspension before use) and mix by vortexing for 30 seconds. Incubate at room temperature for 10 minutes and invert the tube 3-5 times during the incubation.

• Solid samples (e.g., swabs):

a. Vortex the swab head and the entire storage buffer in the tube together for 1 minute to elute the sample from the swab thoroughly.

b. Pipette 200 µl of the above swab eluate into a sterile 1.5 ml microcentrifuge tube. Add 320 µl of BB38 and mix by vortexing.

c. Incubate at 56°C for 15 min and vortex 3-5 times during the incubation.

d. Add 20 µl of Magnetic Virus Beads (Note: Mix well by vortexing prior to use) and vortex for 30 seconds. Incubate at room temperature for 10 minutes and invert the tube 3-5 times during the incubation.

• For viscous liquids such as sputum, refer to "Solid Samples".

2. Place the microcentrifuge tube on the magnetic stand until the beads are pelleted to the tube wall close to the magnetic stand. Discard the supernatant carefully (avoid pipetting the beads). Recommendations on magnetic beads pelleting: After placing the microcentrifuge tube on the magnetic stand, gently turn the tube left and right until the beads are pelleted to the tube wall close to the magnetic stand. Gently invert the magnetic stand 2-3 times to ensure the beads on tube cap pelleted to the tube wall close to the magnetic stand. Incubate for 1 minute.
3. Remove the microcentrifuge tube from the magnetic stand and add 800 µl of CB38 (make sure anhydrous ethanol has been added) to the tube. Mix by vortexing for 15 seconds and proceed to magnetic beads pelleting. Discard the supernatant carefully and avoid pipetting the beads.
4. Remove the microcentrifuge tube from the magnetic stand and add 500 µl of WB38 (make sure anhydrous ethanol has been added) to the tube. Mix by vortexing for 15 seconds and proceed to magnetic beads pelleting. Discard the supernatant carefully and avoid pipetting the beads.
5. Repeat step 4 once.
6. Place the microcentrifuge tube on the magnetic stand. Air dry the beads at room temperature until the magnetic beads appear crack and make sure no residual liquid remains in the tube (This step can be performed in a laminar flow cabinet within 10 minutes).
7. Remove the microcentrifuge tube from the magnetic stand and add 100-200 µl of RNase-free Water to elute DNA/RNA. Mix by vortexing or pipetting up and down for 1 minute and incubate at 65°C for 5 minutes. Gently vortex 2-3 times to resuspend the beads during the incubation.
8. Place the microcentrifuge tube on the magnetic stand for magnetic beads pelleting. Carefully transfer the supernatant into a sterile 1.5 ml microcentrifuge tube and avoid pipetting the beads. Store the eluted DNA/RNA at -70°C.

Notes

• Avoid repeated thawing and freezing samples to ensure high-quality DNA/RNA.
• Use RNase-free sterile microcentrifuge tubes and pipette tips to avoid RNA degradation.
• Thoroughly dry beads and the tube before elution to avoid residual ethanol interfering downstream applications.
• For recommendations on automated extraction, please contact Technical Supports from TransGen Biotech.

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