MagicPure® Up Viral DNA/RNA Kit

Please read the manual carefully before use.

Cat. No. EC341

Version No. Version 1.0

Description

This kit is designed for rapid lysis of aquatic and livestock samples, releasing viral DNA/RNA, followed by purification of viral DNA/RNA using silica-based magnetic beads. It is suitable for extracting viral DNA/RNA from ≤200 µl whole blood, plasma, serum, oral/nasal fluids, urine, tissues, feces, feed, and environmental samples. The resulting product is highly pure and suitable for experiments such as PCR, RT-PCR, qPCR, and qRT-PCR.

Kit Contents

Component	EC341-01/11 (50 rxns)
Binding Buffer 46 (BB46)	24 ml
Clean Buffer 46 (CB46)	15 ml
Wash Buffer 46 (WB46)	12 ml
Nuclease free Water	10 ml
Magnetic Virus Beads	1 ml
Magnetic Stand (16 hole)	1/-

Storage Conditions and Shelf Life: This kit should be stored at (5-30°C) and can be kept for one year. Avoiding freezing. Please refer to the product label for the production date and expiration date of the kit.

Sample Storage Requirement

• At 2-8℃ for no more than 72 hours, or at -70℃ for long term storage.

• Avoid repeated freeze-thaw cycle.

Testing Methods

Add 8 ml of isopropanol (analytical grade) to BB46, add 15 ml and 48 ml of absolute ethanol (analytical grade) to CB46 and WB46 respectively before use.

1. Sample processing

• For liquid samples:

(For example, whole blood, plasma, serum, saliva, nasal secretion, urine, vaccine)

For fresh liquid samples containing viruses, thorough mixing is required (whole blood samples should be collected and stored in anticoagulant tubes), and samples should be equilibrated to room temperature. If the sample volume is less than 200 µl, supplement to 200 µl with 1×PBS or 0.9% NaCl.

For vaccines in the form of milk or oil emulsions, it is necessary to perform emulsion breaking before extraction. The recommended method is as follows:

(1) Add 1/2 of the original sample volume of chloroform to the sample and mix thoroughly, then add 2 M ammonium sulfate solution at a volume equal to 1/5 of the original sample volume.

(2) Mix thoroughly, centrifuge at 5,000×g for 3 minutes at room temperature.

(3) Pipet 200 µl of the supernatant and proceed with nucleic acid extraction according to the "liquid sample processing" method.

• For solid samples:

(For example, nasopharyngeal swabs, environmental swabs, fecal swabs)

Vortex the swab head or gauze with its storage solution for 5 minutes to fully elute the adherent sample.

(For example, animal tissues, feed particles)

Take fresh tissue or feed samples, add an appropriate amount of 1×PBS or physiological saline, vortex for 5 minutes, and centrifuge thoroughly to completely separate the solid and liquid phases.

2. Add 500 µl of BB46 to a sterile 1.5 ml centrifuge tube, add 200 µl of the sample containing the virus, and vortex for 5 seconds to mix. Add 20 µl of magnetic bead suspension (note: magnetic beads are mixed by vortexing before use) and vortex for 30 seconds to mix. Incubate at 70 °C for 3 minutes. During the incubation, mix by inverting the tube 3 times.
3. Place the tube on the magnetic stand for separation of magnetic beads. Discard the supernatant. Be careful not to disturb the beads. Operation suggestion: After the centrifuge tube is placed on the magnetic stand, gently invert the magnetic stand 2-3 times to make the beads settle to the magnet, and stay still for 1 minute.
4. Remove the tube from the magnetic stand. Add 500 µl CB46 (check to ensure absolute ethanol has been added). Vortex for 5 seconds to mix. Immediately perform separation of magnetic beads. Discard the supernatant. Be careful not to disturb the beads.
5. Remove the tube from the magnetic stand. Add 500 µl WB46 (check to ensure absolute ethanol has been added). Vortex for 5 seconds to mix. Immediately perform separation of magnetic beads. Discard the supernatant. Be careful not to disturb the beads.
6. Repeat step 5 once.
7. Place the tube on the magnetic stand. Dry the beads until the beads lose luster and no liquid remains at the bottom of the tube (can be performed on a clean bench, no more than 5 minutes).
8. Remove the tube from the magnetic stand. Add 80-100 µl Nuclease-free Water. Vortex or pipet for 1 minute to mix well. Incubate at 70°C for 3 minutes, during which vortex 3 times to suspend the beads.
9. Place the tube on the magnetic stand. Transfer the nucleic acid solution to a new 1.5 ml centrifuge tube. Do not pipet the beads. Store the solution at -70°C.

Notes

- Avoid repeated freeze-thaw cycle samples to ensure high quality of nucleic acid.
- Use Nuclease-free sterile micro-centrifuge tubes and pipette tips to avoid nucleic acid degradation.
- During the extraction operation, be sure to discard all liquid in the centrifuge tube and near the tube cover after separation of magnetic beads.
- To prevent ethanol residue from affecting downstream experiments, be sure to dry the magnetic beads and centrifuge tubes before elution.
- If you need automated extraction suggestions, please contact us.

For research use only, not for clinical diagnosis.

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