Viral DNA / RNA Kit

Catalog No.: abx098090

Size: 50 rxns / 200 rxns

Storage: Store dry at room temperature (15-25 °C) for up to 12 months.

Introduction

Abbexa's Viral DNA/RNA Extraction Kit provides a fast and easy column-based method to isolate viral DNA and RNA from a variety of samples. Viruses in samples are lysed using a lysis buffer and the released DNA / RNA is bound to silica-membrane. After washing, high purity DNA / RNA is eluted from the column, suitable for use in PCR, RT-PCR, qRT-PCR, qPCR, and other downstream applications.

Kit components (50 rxns)

1. Binding Buffer: 15 ml
2. Wash Buffer: 12 ml
3. Proteinase K Solution (20 mg/ml): 1 ml
4. RNase-Free Water: 10 ml
5. RNA Spin Column with Collection Tube: 50
6. RNase-Free Tube (1.5 ml): 50

Kit components (200 rxns)

1. Binding Buffer: 60 ml
2. Wash Buffer: 2 × 24 ml
3. Proteinase K solution (20 mg/ml): 4 × 1 ml
4. RNase-Free Water: 20 ml
5. RNA Spin Column with Collection Tube: 200
6. RNase-Free Tube (1.5 ml): 200

Material Required But Not Provided

1. 100% (anhydrous) ethanol
2. PBS or 0.9% NaCl solution
3. Pipettes and pipette tips
4. Centrifuge and centrifuge tubes
5. Vortex mixer

Protocol

A. Reagent Preparation

- **Working Wash Buffer:** Dilute the Wash Buffer 5-fold (1/5) with 100% (anhydrous) ethanol before use (i.e., add 48 ml of ethanol to 12 ml of Wash Buffer, or 96 ml of ethanol to 24 ml of Wash Buffer).

B. Sample Preparation

Samples should be stored at 4 °C for no more than 72 hours prior to carrying out the assay or stored at -70 °C for long-term storage. Avoid repeated freeze/thaw cycles.

- **Liquid Samples:** Add Proteinase K Solution and Binding Buffer to a ratio of 1:10. Mix by vortexing for 15 seconds, then aliquot 220 µl of the mixture into sterile 1.5 ml microcentrifuge tubes. Add 200 µl of sample (if the sample volume is less than 200 µl, add PBS or 0.9% NaCl solution to bring the sample volume to 200 µl) to each microcentrifuge tube, then mix by vortexing for 15 seconds. Incubate the microcentrifuge tubes at 56 °C for 15 minutes. Add 250 µl of 100% (anhydrous) ethanol. Flocculation may occur at this stage. Mix by vortexing for 15

seconds, then allow to stand at room temperature for 5 minutes.

- **Solid Samples, Swabs, and Viscous Liquid Samples:** Add the sample to a sterile 1.5 ml microcentrifuge tube. For swab samples, place the swab and the entire storage buffer into the microcentrifuge tube, then cut off the swab tip. Add 300 µl of Binding Buffer and 20 µl of Proteinase K Solution to the tube, then mix by vortexing. Incubate at 56 °C for 20 minutes, vortexing 3-5 times throughout the incubation. Remove the swab tip (if applicable) and centrifuge briefly at room temperature. Add 300 µl of 100% (anhydrous) ethanol. Flocculation may occur at this stage. Mix by vortexing for 15 seconds, then allow to stand at room temperature for 5 minutes.

C. Assay Procedure

1. Transfer the contents of the sample microcentrifuge tube prepared earlier in Section B to a spin column.
2. Centrifuge at 12,000 × g for 1 minute at room temperature and discard the flow-through. If the total volume is > 650 µl, repeat this step once more.
3. Add 500 µl of Working Wash Buffer to the spin column. Centrifuge at 12,000 × g for 1 minute at room temperature and discard the flow-through.
4. Repeat step 3 once more.
5. Centrifuge at 12,000 × g for 1 minute at room temperature to completely remove any residual ethanol.
6. Place the spin column into a clean 1.5 ml RNase-free tube. Add 20-50 µl of RNase-Free Water into the spin column matrix and allow to stand at room temperature for 1 minute.
7. Centrifuge at 12,000 × g for 1 minute at room temperature to elute the DNA / RNA.
8. Store eluted DNA at -20 °C and eluted RNA at -70 °C.