

# Magnetic Beads Virus DNA/RNA Extraction Plate Kit



## 96 Well Viral DNA/RNA Extraction Plates (MVP096)

|                       |  |
|-----------------------|--|
| <b>Sample</b>         | : up to 300 µl plasma, serum, body fluid, supernatant of viral infected cell cultures, nasopharyngeal and oropharyngeal swabs in VTM |
| <b>Format</b>         | : 96 well extraction plates  |
| <b>Sensitivity</b>    | : as low as 10E1 copy number of virus  |
| <b>Equipment</b>      | : <b>KingFisher Flex instrument</b>  |
| <b>Operation time</b> | : 30 minutes/ 96 tests   |
| <b>Elution volume</b> | : 100 µl   |



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### Introduction

Geneaid Magnetic Beads Virus DNA/RNA Extraction Plate Kit (MVP) was designed for high-throughput purification of high-quality of viral DNA and viral RNA from cell-free samples such as serum, plasma, body fluids, the supernatant of viral infected cell cultures, nasopharyngeal and oropharyngeal swabs in viral transport medium (VTM). Viral DNA/RNA is bound to the surface of the magnetic beads and released using a proprietary buffer system. The Magnetic Beads Viral DNA/RNA Extraction Plate Kit is compatible with KingFisher Flex Extraction System and other similar extractors. The purified viral DNA/ RNA can be used directly in qPCR and qRT-PCR assays.

### Quality Control

The quality of Magnetic Beads Virus DNA/RNA Extraction Plate Kit is tested on a lot-to-lot basis according to Geneaid's ISO-certified quality management system by isolating viral DNA/RNA from a 200 µl plasma sample.

### Kit Contents

| Component        | MVP096 | Description                        |
|------------------|--------|------------------------------------|
| Extraction Plate | 6      | 96 well plate with reagent buffers |
| 96 Tip Comb      | 1      | Tip Comb in deep well plate        |
| Protocol         | 1      | Instruction guide for user         |

### Storage conditions

Components under room temperature (15~35°C) can be stored until the expiration date labeled on the box.

### Extraction Plate Contents

| Plate ID  | Plate position | Volume   |
|---|----------------|----------|
| Sample plate (containing Binding solution and Magnetic Beads) | #1             | 550 µl   |
| Wash 1 plate  | #2             | 1,000 µl |
| Wash 2 plate  | #3             | 1,000 µl |
| Wash 3 plate  | #4             | 500 µl   |
| Elution plate   | #5             | 100 µl   |
| Tip Comb  | #6             | N/A      |

### Important before use

1. Inspect the completeness of the Extraction Plates.
2. Do not shake the Extraction Plates vigorously to avoid the excess foam formation.
3. Remove the aluminum foil carefully to avoid splashing of the reagent solution.
4. After removing the aluminum foil, do not expose plates to air for a long time to avoid evaporation and changing pH then affecting purification efficiency.
5. Buffers contain chaotropic salt. During operation, always wear a lab coat, disposable gloves, protective goggles and (anti-fog) procedure mask. Guanidine salts can form highly reactive compounds when combined with bleach. **DO NOT** add bleach directly to the sample-preparation waste.

## Magnetic Beads Virus DNA/RNA Extraction Plate Kit Protocol

### Automatic viral DNA/RNA extraction

- Carefully remove the aluminum foil from all Extraction Plates.
- Transfer **200-300 µl of plasma, serum or viral transport medium (VTM)** into wells of **Sample Plate**.

Note: The volume ratio of sample and lysis buffer is about 1:2. Adding 200-300 µl of sample is suggested. If the ratio is changed, it might be affected the performance.

- Select a program "**MVP\_Flex**". The parameters are given in the following section.
- Follow the guide shown on the screen and place plates carefully.
- Carefully remove the Extraction Plates when the program is finished.
- Use micropipette to transfer the purified viral nucleic acid from Elution plate to a clean tube. The purified nucleic acid can be used for subsequent experiments such as real-time PCR immediately or store at -70°C for long time.
- The used Extraction Plates should be regarded as medical waste with risk of biological infection and properly disposed of in accordance with national regulations.

