Mag-Bind® Viral DNA/RNA 96 Kit

Revision No: 1.0

Quick Guide

Please visit www.omegabiotek.com for a downloadable user manual containing additional protocols, troubleshooting tips, and ordering information.

Product	M6246-01	M6246-02	M6246-03
Purifications	1 x 96	4 x 96	12 x 96
Mag-Bind® Particles CNR	1.1 mL	4.4 mL	13 mL
TNA Lysis Buffer	30 mL	110 mL	320 mL
VHB Buffer	22 mL	88 mL	242 mL
Carrier RNA	1 mg	4 mg	12 mg
Proteinase K Solution	1.1 mL	4.4 mL	14 mL
SPR Wash Buffer	25 mL	100 mL	3 x 100 mL
Nuclease-free Water	35 mL	150 mL	2 x 200 mL

Important:
If automating this procedure on a liquid handler or magnetic processor, please contact your Omega Bio-tek representative for instrument-specific instructions.

Supplied by user:

- Centrifuge capable of at least 10,000*g*
- Oven or incubator capable of 65°C
- Vortexer
- Magnetic separation device for 96-well plate (Recommend Alpaqua Cat# A000380)
- 96-well deep-well plate capable of 2.0 mL (Recommend VWR Cat# 73520-476)
- 96-well microplate capable for 500 µL
- 100% ethanol
- 100% isopropanol
- 1X PBS

Before starting:

- Prepare VHB Buffer and SPR Wash Buffer according to the directions on the bottle.
- Prepare Carrier RNA by adding Nuclease-free Water to the vial to obtain a solution of 1 µg/µL.
- Vortex Mag-Bind® Particles CNR to completely resuspend.

DNA/RNA Extraction and Purification from Nasopharyngeal Swabs, Aspirates, and Bronchoalveolar Lavage Samples

LYSE

1. Prepare the sample according one of the following methods listed below:
   - Nasopharyngeal swabs (dry): Add 300 µL 1X PBS and 5 µL Proteinase K Solution to each swab. Incubate at 56°C for 10-20 minutes with occasional mixing. Centrifuge at ≥10,000*g* (or maximum speed) for 30 seconds.
   - Nasophryngeal swabs, aspirates, or BAL stored in Universal Transport Medium (UTM) or Viral Transport Medium (VTM): Vortex the tubes containing the swabs for 1 minute at maximum speed (≥2,000*g*).

   Note: For other viral sample types, please refer to the downloadable product manual from www.omegabiotek.com.
2. Transfer 200 µL of sample to a new 96-well deep-well plate (not provided).
3. Prepare TNA Lysis Buffer/Carrier RNA mastermix by mixing 240 µL TNA Lysis Buffer with 1 µL Carrier RNA. This will make enough for 1 sample and can be scaled up based on sample number.
4. Add 241 µL TNA Lysis Buffer/Carrier RNA mastermix to each well of a 96-well deep-well plate. Vortex or shake for 1 minute.

BIND

5. Prepare a 100% isopropanol/Mag-Bind® Particles CNR mastermix by mixing 280 µL 100% isopropanol with 2 µL Mag-Bind® Particles CNR. This will make enough for 1 sample and can be scaled up based on sample number.
6. Vortex/mix for 10 minutes. If constant vortexing for 10 minutes is not possible, vortex for 30 seconds every 2 minutes for 10 minutes.
7. Place the plate on a magnetic separation device. Let sit at room temperature until the Mag-Bind® Particles CNR are completely cleared from solution.
8. Aspirate and discard the cleared supernatant. Do not disturb the Mag-Bind® Particles CNR. Remove the plate from the magnetic separation device.
9. Add 350 µL VHB Buffer diluted with 100% ethanol (see the bottle for instructions). Vortex for 1 minute. Complete resuspension of the Mag-Bind® Particles CNR is critical for obtaining adequate washing.

WASH

10. Place the plate on the magnetic separation device. Let sit at room temperature until the Mag-Bind® Particles CNR are completely cleared from solution.
11. Aspirate and discard the cleared supernatant. Do not disturb the Mag-Bind® Particles CNR. Remove the plate from the magnetic separation device.
12. Add 350 µL SPR Wash Buffer diluted with 100% ethanol (see the bottle for instructions). Vortex for 1 minute.
13. Place the plate on the magnetic separation device. Let sit at room temperature until the Mag-Bind® Particles CNR are completely cleared from solution.
14. Aspirate and discard the cleared supernatant. Do not disturb the Mag-Bind® Particles CNR. Remove the plate from the magnetic separation device.
15. Repeat Steps 12-14 for a second SPR Wash Buffer wash step.

Optional: Repeat Step 15 for a third SPR Wash Buffer step.

ELUTE

16. Leave the plate on the magnetic separation device for 5-10 minutes to completely air dry the Mag-Bind® Particles CNR. Remove any residual liquid with a pipettor. Be sure not to over dry the Mag-Bind® Particles CNR. Remove the plate from the magnetic separation device.
17. Add 50-100 µL Nuclease-free water. Vortex for 10 minutes. If constant vortexing for 10 minutes is not possible, vortex for 30 seconds every 2 minutes for 10 minutes.
18. Place the plate on the magnetic separation device to magnetize the Mag-Bind® Particles CNR. Let sit at room temperature until the Mag-Bind® Particles CNR are completely cleared from solution.
19. Transfer the cleared supernatant containing the purified DNA/RNA to a new 96-well microplate (not provided). Store DNA/RNA at -70°C.