

# AceMag<sup>™</sup> Viral DNA/RNA Isolation Kit





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# **Product Description**

The AceMag<sup>™</sup> Viral DNA/RNA Isolation Kit is intended for rapid co-extraction of viral DNA and RNA from a variety of biofluid samples, such as, plasma, serum, milk and swap samples. The proprietary microspherical paramagnetic beads used in the kit have a large binding surfaces and a high affinity towards nucleic acids. Going through sample lysis/binding, washing, and elution steps, the whole process can be completed under 35 minutes, and yields highly pure nucleic acids elute. The recovered nucleic acids can be used in a wide range of applications, such as PCR, RT-PCR, Sanger Sequencing, NGS, and gene chips.

The kit can used with AceMag<sup>TM</sup> 32- and 96-sample automated nucleic acids extraction instrument and many other commercially available products. It provides tremendous user benefits, such as, minimal manual steps, extremely low sample-to-sample variations, and high throughput.

# **Kit Components and Storage Conditions**

The AceMag<sup>TM</sup> Viral DNA/RNA Isolation Kit contains reagents for processing 96 samples.

Component	Amount	Storage
Lysis Buffer (LB)	40 mL	Room temp
Wash Buffer 1 (WB1)	25mL	Room temp
Wash Buffer 2 (WB2)	12.5 mL	Room temp
Elution Buffer (EB)	5 mL	Room temp
Proteinase K	1 mL	2-8°C
Beads Mix	2 mL	$2-8^{0}C$

#### **Materials Required but Not Supplied**

- 1) 1.5 mL nuclease-free snap-cap microfuge tube
- 2) Magnetic stand
- 3) Nuclease-free Isopropanol
- 4) Nuclease-free ethanol
- 5) Microcentrifuge
- 6) Vortex mixer
- 7) Rotating Mixer



# **Reagent Preparation**

Add nuclease-free ethanol to WB1 and WB2 according to the bottle labels

# Important!

- 1) Vortex the Beads Mix at medium speed to make it a uniform suspension before pipetting.
- 2) Avoid freezing or centrifuging the Beads Mix.
- 3) Biological samples might be hazardous, take all the biohazard precautions.

# Procedure

 Pipet 10 uL Proteinase K to a 1.5 mL nuclease-free microfuge snap-cap tube, then add 200 μL sample, 400 μL LB, 300μL isopropanol, 20 μL Beads Mix, vortex for 15 seconds to mix. Place the processing tube onto a rotating mixer at a moderate speed for 15 minutes at room temperature.

Note: If no rotating mixer is available, the tube can be vortex mixed briefly a few times during incubation.

2. Move the processing tube to a magnetic stand to capture the beads.

a. Leave the tube on the magnetic stand for 2 minutes or until all the beads form a pellet against the tube wall on the magnet side.

b. Carefully aspirate and discard the supernatant without disturbing the beads.

3. Add 500 uL WB1 to the processing tube, remove from the magnetic stand, vortex vigorously for 30 seconds, and then place the processing tube to the magnetic stand.

a. Leave the tube on the magnetic stand for 2 minutes or until all the beads form a pellet against the tube wall on the magnet side.

b. Carefully aspirate and discard the supernatant without disturbing the beads.

4. Add 500 uL WB2 to the processing tube, remove from the magnetic stand, vortex vigorously for 30 seconds, and then place the processing tube to magnetic stand.

a. Leave the tube on the magnetic stand for 2 minutes or until all the beads form a pellet against the tube wall on the magnet side.

b. Carefully aspirate and discard the supernatant without disturbing the beads.





5. Add 500 uL nuclease-free ethanol to the processing tube, remove from the magnetic stand, vortex vigorously for 30 seconds, and then place the processing tube to magnetic stand.

a. Leave the tube on the magnetic stand for 2 minutes or until the beads form a pellet against the tube wall on the magnet side.

b. Carefully aspirate and discard the supernatant without disturbing the beads.

6. Remove the processing tube from the magnetic stand, centrifuge briefly (~ 1-2 seconds).

a. Carefully aspirate and discard the remaining liquid without disturbing the beads.

b. With the lid open air dry the processing tube for 5-10 minutes until the glaze of the pellet surface disappears, add 50 uL EB to the tube, mix by pipeting a few times, wait for 5 minutes at room temperature.

7. Move the processing tube to the magnetic stand for 2 minutes or until all the beads form a pellet against the tube wall on the magnet side, transfer the supernatant to a nuclease free container, and store the purified DNA/RNA at  $-20^{0}$ C.



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