

# MagBeads FastDNA/RNA Kit for Virus(Ready-to-Use for MPure-32)

Magnetic bead-based Purification for total viral nucleic acid  
from cell-free/low-cell content biological  
samples

**Size:** 96 preps

**Storage:** 15-25 °C

**Cat. No.:** 117033300

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## 1. Introduction to MagBeads FastDNA/RNA Kit for Virus

MagBeads FastDNA/RNA Kit for Virus is intended for extracting total viral nucleic acid from cell-free/low-cell content biological samples such as body fluids, serum, plasma, soaking solution, tissue homogenate, and culture supernatant using the MPure-32™ aNAP System. The purified DNA/RNA is used for RT-PCR and PCR assay.

MagBeads FastDNA/RNA Kit for Virus is based on the purification method of high binding magnetic particles. The sample is lysed and digested with Protease. DNA/RNA is released into the lysate. After addition of magnetic particles and binding solution, DNA/RNA will be adsorbed on the surface of magnetic particles, and impurities such as proteins will be removed without adsorption. The adsorbed particles are washed with washing solution to remove proteins and impurities, washed with ethanol to remove salts, and finally DNA/RNA is eluted with Nuclease Free Water.

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## 2. Kit Components and User Supplied Materials

### 2.1 MagBeads MagBeads FastDNA/RNA Kit for Virus Component

MagBeads FastDNA/RNA Kit for Virus (#117033300, 96 Preps)	
Components	Package
96-Well Reagent Plates	6 plates
PK/Carrier RNA	24 mg
Protease Dissolve Buffer	1.8 mL
8-strip A (Cover for Magnetic Rod)	12 pieces

### 2.2 User Supplied Materials

- Disposable powder-free gloves.
- Pipettes (adjustable).
- Sterile pipette tips with aerosol barriers (up to 200 µl).
- Vortex mixer.
- Desktop microcentrifuge with rotor for 2 ml reaction tubes (RCF max. 16,000 x g).
- PCR box or Biological cabinet. • Vacuum aspirator with flask for removing supernatant.
- Tube racks.
- 1.5 ml polypropylene sterile tubes.
- Refrigerator for 2-8°C.
- Deep-freezer for ≤ -16°C.
- Waste bin for used tips.
- Permanent pen for labeling
- Thermostatic bath or dry block for tubes with controlled temperature and capable of incubating at 25-100°C.

## 3. Storage and Kit Stability

This kit can be shipped and stored at room temperature, and is stable for 12 months.

## 4. Important Consideration Before Use

- ❑ Add 1.25 mL Protease Dissolve Buffer into Proteinase K/Carrier RNA bottle, and store at -20 °C after it dissolves.

## 5. Safety Precautions

The user should always pay attention to the following:

- Use sterile pipette tips with aerosol filters and use new tip for every procedure.
- Store extracted positive material (samples, controls and amplicons) away from all other reagents.
- Thaw all components thoroughly at room temperature before starting an assay.
- When thawed, mix the components and centrifuge briefly.
- Use disposable gloves, laboratory coats, protect eyes while samples and reagents handling. Thoroughly wash hands afterwards.
- Do not eat, drink, smoke, apply cosmetics, or handle contact lenses in laboratory work areas.
- Do not use a kit after its expiry date.
- Dispose of all samples and unused reagents in compliance with local authorities requirements.
- Samples should be considered potentially infectious and handled in a biological cabinet in compliance with appropriate biosafety practices.
- Clean and disinfect all sample or reagent spills using a disinfectant such as 0.5% sodium hypochlorite, or other suitable disinfectant.
- Avoid contact with the skin, eyes and mucose membranes. If skin, eyes and mucose membranes contact immediately flush with water, seek medical attention.
- Material Safety Data Sheets (MSDS) are available on request.
- Use of this product should be limited to personnel trained in the techniques of DNA amplification.
- The laboratory process must be one directional; it should begin in the Extraction Area move to the Amplification and Detection Area. Do not return samples, equipment and reagents to the area in which the previous step was performed.

## 6. Protocol

### Automation Purification with MPure-32

1. Transfer 200  $\mu$ L of sample and 10  $\mu$ L of Proteinase K/ Carrier RNA carefully to well #1 or #7 of the pre-filled reagent
2. Place the reagent plate on MPure-32™ aNAP System and run the instrument with program named “Virus\_DNA\_RNA” with the following setting:

Step	Well	Process	Time (s)			Mixing Speed	Temp (C)
			Mix	Wait	Attract		
1	#1/#7	Bind	600	0	120	Medium	RT
2	#2/#8	Wash 1	60	0	60	Medium	RT
3	#3/#9	Wash 2	60	0	60	Medium	RT
4	#4/#10	Wash 3	60	0	60	Medium	RT
5	#5/#11	Dry	0	600	0	-	RT
6	#6/#12	Elute	300	0	120	Medium	55
7	#1/#7	Magbeads Release	60	0	0	Medium	RT

3. Transfer eluted nucleic acid into a clean 1.5 mL microcentrifuge tube. The eluent is now ready for downstream applications. Store purified nucleic acid at -20°C for an extended storage.

**Note:** If there are still Magnetic Beads remaining in eluted DNA, please centrifuge at 14,000 x g for 3-5 mins and transfer the supernatant to a clean 1.5 mL microcentrifuge tube.

## 7. Troubleshooting

This guide may be useful in solving any problems that may arise. For further assistance, please contact our technical support team at [apac-techsupport@mpbio.com](mailto:apac-techsupport@mpbio.com)

Problem	Recommendation
False negatives with extraction product	Degradation of the nucleic acid contained in the sample. Use a new sample, store samples appropriately.
	Loss of nucleic acid deposit. Carefully draw off the wash solution and try not to remove the nucleic acid deposit.
	Degradation of the extracted nucleic acid. Plastic free from DNAses and RNAses should be used. Use a new aliquot of kit's component.
False positives with extraction product	Contamination during sample extraction. One test tube at a time should be opened. Avoid spilling the contents of the test tube, always change tips.
	Contamination of the reagents prepared for the step. Use a new aliquot of a component.
	Contamination of the extraction zone by amplicons. Surfaces and instruments using aqueous detergents should be cleaned, wash lab coats, replace test tubes and tips in use.

## 8. Product Use Limitation & Warranty

The products presented in this instruction manual are for research or manufacturing use only. They are not to be used as drugs or medical devices to diagnose, cure, mitigate, treat, or prevent diseases in humans or animals, either as part of an accepted course of therapy or in experimental clinical investigation. These products are not to be used as food, food additives or general household items. Purchase of MP Biomedicals products does not grant rights to reproduce, modify, or repackage the products or any derivative thereof to third parties. MP Biomedicals makes no warranty of any kind, expressed or implied, including merchantability or fitness for any particular purpose, except that the products sold will meet our specifications at the time of delivery.

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