MagaBio plus Virus DNA/RNA Purification Kit II

Instruction For Use

Product Name MagaBio plus Virus DNA/RNA Purification Kit II

Packing Size 32 Tests/box; 50 Tests/box; 100 Tests/box

Usage Used for nucleic acid extraction, enrichment, purification and other steps. The isolated product is used for clinical in vitro testing.

Principle and Advantage

Nucleic acid in tissue, feces, blood, serum, plasma and other body fluid samples is released by using Lysis Buffer. Released virus DNA/ RNA is bound exclusively and specifically to the Magnetic beads. The virus DNA/ RNA bound to magnetic particles is captured by magnetic material; contaminants are removed by washing with Wash Buffer. The nucleic acid is then eluted from the particles with an Elution Buffer.

Kit Components

<table>
<tr><th>Cat#</th><th>BSC71T1S</th><th>BSC71S1S</th><th rowspan="2">Components</th></tr>
<tr><th>Components</th><th>16T</th><th>32T</th></tr>
<tr><td>PK Solution</td><td>160μL</td><td>320μL</td><td>Proteinase K</td></tr>
<tr><td>Lysis Buffer</td><td rowspan="5">Pre-packed reagents strip
1T * 16</td><td rowspan="5">Pre-packed reagents strip
1T * 32</td><td>Surfactant and Tris buffer</td></tr>
<tr><td>Wash Buffer I</td><td>High-salt solution</td></tr>
<tr><td>Wash Buffer II</td><td>Low-salt solution</td></tr>
<tr><td>Elution Buffer</td><td>DNase/RNase free H_2O</td></tr>
<tr><td>MagaBio Reagent</td><td>Magnetic particles coated with silica</td></tr>
<tr><td>Handbook</td><td>1</td><td>1</td><td>/</td></tr>
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Storage and transportation

1. The kit can be transported at room temperature.
2. The kit should be stored at 2~8℃.
3. All reagents are valid for 12 months if stored properly.

Applicable instrument

1. Magnetic rack or Bioer NPA-32P nucleic acid purification instrument;
2. Water bath or dry bath;
3. Vortex mixer.

Sample Requirements

If the sample volume is less than 300μL, you can add an appropriate volume of PBS buffer or saline to make the total volume reach 300μL.

Procedure

1. Take out the required number of pre-packed reagent strips from the sealing plastic bag. If the magnetic beads adhered to the tube wall or sealing film of the pre-packed reagent strip,

please invert the reagent strip upside down and mix several times to re-suspend the magnetic beads.

2. Identify the direction of the pre-packed reagent strip (magnetic beads in well #6). Fix the pre-packed reagent strip on the reagent strip rack, and centrifuge it briefly in a 96-deep-well plate centrifuge to avoid adhering liquid on the tube wall and sealing film, in order to ensure the certain volume of the purified reagent.

   Note: When placing the pre-packed reagent strip, please refer to the installation diagram of the reagent strip. Make sure that the reagent strip has been inserted into the bottom of the reagent strip rack.

3. Take out the reagent strip rack from the centrifuge.
4. Sample Preparation：

Sample	Sample Preparation
serum, plasma, ascites and other liquid samples	Add 300μL sample to do extraction
animal /plant tissue:	Grind sample fully with normal saline or PBS, centrifuge at 12,000g for 5-10min. Take 300μL supernatant to do extraction
feces	Grind the feces sample fully with normal saline or PBS, centrifuge at 12,000g for 5min. Take 300μL supernatant to do extraction
whole blood, saliva or other viscous liquid	Add 200μL sample to do extraction
swab	Add 500μL PBS or normal saline to swab samples, and rotate vigorously for 1 min. Take 300μL immersion solution to do extraction
alveolar lavage fluid, sputum	Take 150μL of samples to a sterile 1.5mL nuclease-free centrifuge tube. Add 150μL of sputum liquefier (Cat. # BSC83M1). After shaking and mixing, incubate the sample at 37℃ for 10 min. Centrifuge for a few seconds

5. Add 300μL sample and 10μL protease K to the first well of each pre-loaded reagent strip to avoid cross contamination..

Well	1	2	3	4	5	6
Reagent	Lysis Buffer	Wash Buffer I	Wash Buffer II	Wash Buffer II	Elution Buffer	MagaBio Reagent
Volume	600μL	700μL	700μL	700μL	80μL	200μL

6. Place the reagent strip rack with reagent strip to the NPA-32; install the 8-strip tips on the instrument.

   Note: Make sure again that the reagent strip has been inserted into the bottom of the reagent strip rack.

7. Run the program according to the following procedures:

Step	Well	Name	Waiting Time (min: ss)	Mixing Time (min: ss)	Magnet Time (min: ss)	Adsorption	Speed	Volume （μL）
1	1	Lysis	00 : 00	10 : 00	00 : 00	Normal	F	900
2	6	Beads	00 : 00	00 : 15	00 : 30	Strong	M	200
3	1	Binding	00 : 00	10 : 00	00 : 35	Strong	F	900
4	2	Wash 1	00 : 00	02 : 00	00 : 30	Strong	F	700
5	3	Wash 2	00 : 00	01 : 00	00 : 30	Strong	F	700
6	4	Wash 3	00 : 00	01 : 00	00 : 30	Strong	F	700
7	5	Elution	02 : 00	05 : 00	00 : 35	Normal	F	80
8	6	Discard	00 : 00	00 : 30	00 : 00	Normal	S	200

Temperature settings: Lysis temperature: 75℃. Lysis heating ends at Step 2.
Elution temperature: 75℃. Elution starts heating at Step 7.

8. After the automatic purification is over, transfer the Elution Buffer in well 5 to a clean nuclease-free 0.5mL centrifuge tube; if not using it immediately, please store at -20 degrees.

Explanation of test results

This kit is suitable for the extraction of viral nucleic acid in tissue, feces, blood, serum, plasma and other body fluid samples.

Limitations of the test method

Sample size: The sample size should be less than 300μL;

Sensitivity: It requires high-sensitivity PCR detection reagents

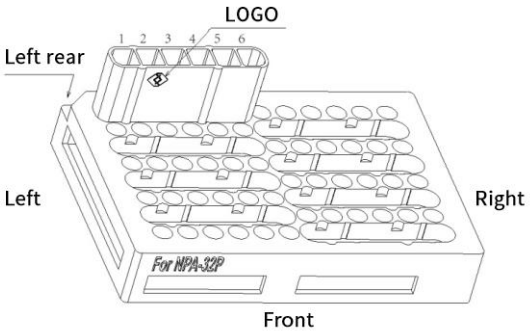
Performance Indicators

The extracted product is confirmed by the high sensitivity HBV DNA detection reagents that the sensitivity reaches 5 IU/mL; The extracted product is confirmed by the high sensitivity HCV RNA detection reagents that the sensitivity reaches 50 IU/mL. This result is repeatedly tested and confirmed by national standard quality-controlled product.

Notes

1. The following procedures are suitable for use with the Bioer NPA-32P nucleic acid purification system. If other nucleic acid purification systems are used, the operating procedures need to be adjusted according to the performance of different instruments.
2. After receiving the kit, it should be stored at 2℃-8℃, It is best to place it at room temperature more than 2 hours before use.
3. Adding samples should be carried out in a clean biosafty cabinet to control the contaminated area.
4. It is recommended to use the pipette tip with filter to add samples in the experiment to avoid cross-contamination. After use, please directly discard tips into the waste tank containing 1% sodium hypochlorite.
5. After the extraction is complete, transfer the Elution Buffer from the fifth well of each pre-loaded reagent strip to a clean nuclease-free centrifuge tube for storage. The reagent strips should be placed in the designated bag, and the bag should be tied tightly. Treat the garbage as medical waste disposal.
6. The experimental area needs to be disinfected with UV regularly, and the workbench and micropipette should be cleaned with 70% ethanol after each experiment.

Installation Diagram of The Reagent Strip



Basic Information

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