

**Product Name** SimplyP Animal pathogens DNA/RNA Extraction Kit

Packing Size 24 Tests/box; 48 Tests/box; 96 Tests/box

### Usage

Extract viral DNA from tissue homogenate supernatant and serum, plasma, whole blood and ascites samples.

## **Principle**

The liquid sample is processed by the Lysis Buffer to break the virus and denature most of the protein to release the viral nucleic acid. At the same time, special polymer materials are used to selectively adsorb the viral nucleic acid, and then the viral nucleic acid can be obtained through washing and elution operations.

## **Kit Components**

| Cat#            | BSC70T1       | BSC70S1       | BSC70M1        | Commonanta                                     |
|-----------------|---------------|---------------|----------------|--|
| Kit Size        | 24 Tests      | 48 Tests      | 96 Tests       | Components                                     |
| Lysis Buffer    | 7.2 mL        | 14.4 mL       | 28.8 mL        | Salt and Tris Buffer                           |
| Wash Buffer     | <b>※</b> 3 mL | <b>※</b> 6 mL | <b>※</b> 12 mL | Low-salt solution                              |
| Elution Buffer  | 10 mL         | 10 mL         | 10 mL          | DNase-free H <sub>2</sub> O                    |
| Spin Columns    | 24            | 48            | 96             | Plastic parts and nucleic acid adsorption film |
| Collection Tube | 24            | 48            | 96             | Plastic parts                                  |
| Handbook        | 1             | 1             | 1              | /  |

Notes: Please add 12mL, 24mL, 48mL of absolute ethanol to the \*3mL, \*6mL, \*12mL Wash Buffer before use.

Reagents to be supplied by user

Absolute ethanol (AR)

**Storage and transportation** 





- 1. The kit can be transported at room temperature.
- 2. The kit should be stored at room temperature
- 3. The kit has demonstrated stability of 12 months when stored at room temperature.

## Equipment to be supplied by user

- 1. Microcentrifuge capable of 14,000rpm;
- 2. Metal bath or Water bath;
- 3. Vortex mixer.

## **Sample Requirements**

If the volume of the liquid sample is less than  $100\mu L$ , you can add an appropriate volume of PBS buffer or saline to make the total volume reach  $100\mu L$ .

#### **Protocol**

1. Sample Preparation

| Sample         | Sample Preparation  |  |  |  |
|----------------|---|--|--|--|
| Whole Blood    | Take 300µL of whole blood directly, or centrifuge at 3000g for    |  |  |  |
|                | 10 minutes, then take 100μL of plasma for sample extraction.      |  |  |  |
| Plasma, Serum  | Take 100µL of plasma or serum sample directly for sample          |  |  |  |
|                | extraction.   |  |  |  |
| Saliva         | Centrifuge at 12,000g for 2 minutes, and take 100µL supernatant   |  |  |  |
|                | for sample extraction.  |  |  |  |
| Feed           | Add an appropriate amount of saline or PBS to the feed, grind it  |  |  |  |
|                | thoroughly, and take 100 µL of supernatant for sample extraction  |  |  |  |
|                | after centrifugation.   |  |  |  |
| Disease Tissue | Take an appropriate amount of tissue sample, mix it with saline   |  |  |  |
|                | or PBS in a ratio of 1:10, grind into a homogenate, centrifuge at |  |  |  |
|                | 12,000g for 2 minutes, and take 100μL of supernatant for sample   |  |  |  |
|                | extraction.   |  |  |  |
| Swab           | Add 300-400µL of normal saline or PBS to the swab collection      |  |  |  |
|                | tube, vortex the tube, and then take 100µL of supernatant for     |  |  |  |
|                | sample extraction.  |  |  |  |





### 2. Reagent Preparation

Store the kit at room temperature. If the room temperature is too low, it may cause salt out in the Lysis Buffer. If this happens, place the Lysis Buffer in a 56°C water bath for 10 minutes to ensure that the salt crystal in the solution is fully dissolved.

- 3. Operation of Sample Extraction
- a) Take 100μL of the processed sample (please fill up to 100μL with PBS buffer or saline for samples less than 100μL), add 300μL of Lysis Buffer, shake vigorously for 30 seconds, and incubate at 80℃ for 2 minutes.

Note: For samples that are difficult to lyse, the warm bath time can be extended to 5 minutes.

- b) Transfer the above mixture to the purification column, centrifuge at 12,000 rpm for 1 minute, and discard the collection tube.
- c) Transfer the purification column to a new collection tube, add 400µL of Wash Buffer to the purification column, centrifuge at 12,000 rpm for 2 minutes, and discard the collection tube.
- d) Transfer the purification column to a new 1.5mL centrifuge tube, add 50μL of Elution Buffer to the purification column, and incubate at room temperature for 1 minute.
- e) Centrifuge at 12,000 rpm for 1 minute, and discard the purification column. The liquid in the 1.5 mL centrifuge tube contains DNA.

Note: If the extracted DNA is not used immediately, please store it at -20°C or -80°C for later use.





## **Explanation of test results**

This kit is suitable for plasma, serum, ascites and other liquid samples; tissue samples require high-sensitivity PCR detection reagents.

#### Limitations of the test method

Sample size: extract serum and plasma no more than 100μL;

Sensitivity: a high-sensitivity PCR detection reagent is required.

### **Performance Indicators**

The extracted nucleic acid is tested by the high sensitivity HBV DNA detection reagents that the sensitivity of the kit reaches 100 IU/mL. The linear range reaches  $100 \text{ IU/mL} \sim 10^7 \text{ IU/mL}$ . The result is repeatedly tested and confirmed by national standard quality-controlled product

#### **Notes**

- 1. Before use, please check whether there are crystals in the Lysis Buffer. If the solution is crystallized because of the low temperature, please place the Lysis Buffer in a 56°C warm bath. During the incubation, you can keep shaking to dissolve the crystals before use.
- 2. Add absolute ethanol to the Wash Buffer according to the label.

#### **Basic Information**

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