旋达®R1 Nucleic Acid Extraction Series
Animal Total DNA/RNA Extraction Kit

Introduction

This product is suitable for the rapid extraction of a high purity total nucleic acid containing viruses, bacteria and parasites from animal tissues, blood, secretions, excreta and other animal samples. The kit is based on silica gel column purification technology. It does not require the use of toxic phenol-chloroform extraction or time-consuming alcohol precipitation. The obtained nucleic acid can be directly used in a series of downstream experiments such as PCR/RT-PCR, Sorthern hybridization/Northern hybridization, and LAMP/RT-LAMP.

Theory

Animal total DNA/RNA extraction kit is based on the silica gel column purification method. The nucleic acid is released under the action of a lysate. When the nucleic acid passes through the silica gel column in a high salt environment, it will be adsorbed on the membrane of the silica gel column, and the protein is not adsorbed and removed. The nucleic acid-adsorbing filter is washed to remove residual proteins and salts. Finally, DEPC can be used to treat the nucleic acid adsorbed on the water-eluting filter. The obtained nucleic acid has high purity and can be directly used in various downstream experiments.

Kit Contents

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Product	**Content**
Tube A	48
Tube B	48
Lysis Buffer	30 ml
Washing Buffer	10 ml
Elution Buffer	10 ml

Attention： Wash Buffer is added with 40 ml anhydrous ethanol before initial use and stored at room temperature.

Storage and Stability

This product can be stored at room temperature (15-25℃) for 12 months. Long-term storage should be placed in 2-8℃.

Attention

1. To ensure the accuracy of test results, please follow the instructions strictly.
2. Tube A and tube B in the kit are disposable products. Please do not reuse them.
3. All waste products used for testing should be placed in a waste tank containing disinfectant to be soaked and disinfected; after the experiment, disinfect the table with 1% sodium hypochlorite or 75% alcohol immediately .
4. During the experiment, the experimenters should wear gloves, masks and lab coats to avoid contact with reagents and samples.
5. During the experiment, try to avoid contact with the nozzle of tube A and centrifugal tube. If any sample solution sticks to the gloves or splashes during the operation steps 1~4, change the gloves immediately and clean the splashes. All articles that come into contact with diseased materials should be disposed of properly.
6. This product is only for the use of animal pathogen detection experiments, do not use

for other purposes.

Materials and Equipment to be Supplied by Users

- Sterile saline
- Absolute ethyl alcohol
- Micropipettor（100-1000 μl，10-100 μl）
- 1.5 ml centrifuge tube with DNase and RNase free
- Sterilized Tip head with DNase and RNase free
- Vortex mixer
- Centrifuge（Speed≥10,000rpm）
- Please select the following items according to the type of samples required for testing：
  A. Blood sample：blood collection tube and needle
  B. Tissue sample：Scissors, tweezers, scalpel, homogenizing bag or grinding rod
  C. Sample of secretions, feces, etc：Sterile cotton swab

How It works

1. Sample Preparation (Pre-treatment)：
   A. Blood sample：> 500 μl EDTA anticoagulant was centrifuged for 30 s, and 200 μl supernatant is taken for subsequent steps.
   B. Tissue sample：Take 0.2~ 1g tissue samples, and add 5~10 times normal saline and grind them to the homogenate. Take 200μl homogenate and enter the following steps.
   C. Sample of secretions, feces, etc：After the cotton swab is soaked in normal saline, the swab head is turned over and daubed at the sampling site. After the collection is completed, the swab head is broken down and put into the centrifugal tube containing 1 ml normal saline to vortex for 30 s, and 200 μl of mixed liquid is taken into the subsequent steps.
   D. Shrimp / fry: Take 0.2~ 1g Shrimp / fry samples, and add 5~10 times normal saline and grind them to the homogenate. Take 200μl homogenate and enter the following steps.
2. Take the 200 μl sample prepared in step 1 into a centrifuge tube, and 500 μl Lysis Buffer is added, mixed upside down, and then the pathogen is left for 5 min and centrifuged for 3 min.
3. Take 400 μl supernatant into the new centrifugal tube, and add 200 μl anhydrous ethanol, vortex mix 20 s.
4. Insert a Tude A in a Tube B, and all the mixture in step 3 are transferred to tube A and centrifuged at 10,000 rpm for 1 min.
5. Discard the filtrate and reuse collection tube, and add 600 μl Wash Buffer to tube A, centrifuge at 10,000 rpm for 1 min.
6. Discard the filtrate and reuse the collection tube. Centrifuge the empty Column at 10,000 rpm for 2 minutes at room temperature to dry the column matrix.
7. Transfer the Tube A to a clean 1.5ml microcentrifuge tube, and add 50μl Elution Buffer directly to the center of the column membrane. Let it sit at room temperature for 1-2 minutes and centrifuge at 10,000 rpm for 1 minute. Store DNA/RNA at -20℃.

Manufacturer

Guangzhou Double Helix Gene Technology Co., Ltd

TEL: 020-85671013 FAX: 020-22119615 WEB: www.dhelix.cn

ADD: Guangzhou International Biotech Island, Guangzhou, China, 510320