Nucleic Acid Release Reagent

N1520265

Storage Room Temperature.
Shipping Normal.

Introduction

This product enables rapid extraction of DNA and RNA templates suitable for amplification experiments such as PCR and RT-PCR from a wide variety of common biological samples. It requires no complex extraction or purification steps, offering convenient operation, high efficiency, and safety. It is widely applicable in scientific research, forensic analysis, clinical diagnostics, and various other scenarios.

Product Features

1. Simple, Efficient, and Rapid: No extraction or purification steps are required. The simple procedure takes only 5-10 minutes to obtain templates ready for nucleic acid amplification, significantly saving experimental time.
2. Dual Template Compatibility and Strong Adaptability: It can be used to extract both DNA and RNA templates simultaneously and is highly compatible with various subsequent nucleic acid amplification experiments, including routine PCR and RT-PCR.
3. Wide Sample Applicability: It can process almost all common biological samples, including bacteria, insects, fungi, various plants, and various animals. It is also suitable for forensic samples (such as whole blood, bloodstains, semen stains, saliva, hair, tissue samples, buccal cells, FTA cards) and special samples like paraffin-embedded tissue sections.
4. Safe and Non-Toxic: The product contains no toxic or hazardous reagents. The operation process is safe and requires no special protective measures, reducing health risks for laboratory personnel.

Usage Instructions

(A) Liquid Samples:

1. Add approximately 2 μL of the liquid sample (e.g., whole blood, cell culture fluid, viral sample, fecal sample) to 50 μL of this product (Extraction-Free Nucleic Acid Release Agent). Note: The total volume of the liquid sample added must not exceed 1/10 of the volume of this product used.
2. Incubate at room temperature for 3 minutes. For liquid samples that are more difficult to lyse, such as those containing thick-walled fungi, the incubation time can be extended to 10-30 minutes.
3. After a brief vortex to mix, directly use the sample lysate for PCR amplification or other

nucleic acid amplification experiments. Note: The volume of the lysate should preferably not exceed 1/10 of the total amplification reaction volume. For a 50 μL amplification system, the added lysate should not exceed 5 μL. Due to variations in the composition of different amplification systems, it is recommended to perform gradient testing to determine the optimal reaction system.

(B) Tissue Samples:

1. Add approximately 2 mg of solid sample (e.g., animal tissue, plant leaves, seeds) to 50 μL of this product (Extraction-Free Nucleic Acid Release Agent). Note: The total sample amount must follow the ratio of 1 mg per 10 μL and must not exceed this range.
2. Heat at 95°C for 5 minutes. For tissue samples that are more difficult to lyse, such as paraffin-embedded tissue sections or blood spots, the incubation time can be extended to 10-30 minutes.
3. After a brief vortex to mix, directly use the sample lysate for PCR amplification or other nucleic acid amplification experiments. Note: The volume of the lysate should preferably not exceed 1/10 of the total amplification reaction volume. For a 50 μL amplification system, the added lysate should not exceed 5 μL. Due to variations in the composition of different amplification systems, it is recommended to perform gradient testing to determine the optimal reaction system.

Precautions

1. The sample dosage must strictly follow the instructions. Adding an excessive amount of sample can affect the lysis efficiency and the results of subsequent amplification experiments.
2. For samples that are difficult to lyse, the incubation time can be appropriately extended. However, avoid excessive heating or prolonged incubation, which may lead to nucleic acid degradation.
3. When adding the lysate to the amplification system, the volume ratio must be controlled. It is recommended to optimize the reaction system through gradient testing to ensure amplification efficiency.
4. The product should be stored sealed in a cool, dry place, away from direct sunlight and high temperatures. Use as soon as possible after opening.
5. During operation, keep experimental tools clean to avoid cross-contamination, which could affect the accuracy of experimental results.