Urine DNA Extraction Kit

Cat: D2710
Size: 50 T/100 T
Storage: This kit can be transported at room temperature. Stored at room temperature (10-30℃) and valid for 1 year. DNA concentration and digestion solution should be stored at -20℃ to avoid repeated freeze-thaw cycles.

Product Composition

Kit Components	50T	100T
Adsorption Columns and Collection Tubes	50 each	100 each
Lysis Buffer	12 mL	24 mL
Digestion Buffer	1.2 mL	2.4 mL
DNA Concentration	0.16 mL	0.32 mL
Precipitation Solution	4.5 mL	9 mL
Wash Solution	9 mL	18 mL
Elution Buffer	2.2 mL	4.4 mL
Instruction Manual	1 copy	1 copy

Introduction

The Urine DNA Extraction Kit is specifically designed for the extraction of DNA from urine. The kit utilizes an optimized lysis solution and a composite digestion solution formulation that rapidly lyses cells from urine sediment, allowing for the full release of DNA from these cells. The DNA extracted using this product has a higher yield and greater purity compared to similar kits from some other brands, and it minimizes contamination from proteins, pigments, lipids, and other impurities to the greatest extent possible. It is directly applicable for use in PCR, quantitative real-time PCR, and various enzymatic digestion tests.

Product Features

1. Utilizing DNA enrichment technology, it can efficiently aggregate free DNA in urine, significantly improving the extraction efficiency of urinary DNA.
2. The extracted DNA is of high purity, without inhibitors, with an A260/A280 ratio of 1.7-1.9.
3. High yield, more DNA is extracted from the same amount of sample.
4. Suitable for the extraction of DNA from urine samples, and the extracted DNA can be used for PCR, quantitative real-time PCR, and nucleic acid testing.

Protocols *(for reference only)*

1. Please prepare the following items on your own: anhydrous ethanol, saline solution, and centrifuge tubes.
2. Take out the precipitation solution and wash solution and follow these operations:

(1) Precipitation solution: Add 4.5 mL to 25.5 mL of anhydrous ethanol; add 9 mL to 51 mL of anhydrous ethanol.
(2) Wash solution: Add 9 mL to 21 mL of anhydrous ethanol; add 18 mL to 42 mL of anhydrous ethanol.
(3) If the prepared precipitation solution and wash solution develop precipitates, they can be dissolved at 37℃, mixed well, and then used.

3. Take 5 mL of urine (the amount of urine can range from 1-5 mL) and place it in a centrifuge tube. Centrifuge at 5000 rpm for 5 minutes, carefully discard the supernatant. Add 0.1 mL of saline solution, mix well, and transfer this suspension into a 1.5 mL centrifuge tube.
4. Add 200 μL of lysis solution, 3 μL of DNA concentration solution, and 20 μL of digestion solution, mix well, and incubate in a water bath at 56℃ for 10 minutes.
5. Add 500 μL of precipitation solution, gently mix by inverting, if there is a translucent suspension, it does not affect the extraction of DNA and subsequent experiments.
6. Place the adsorption column into the collection tube, transfer the above solution into the adsorption column, centrifuge at 12,000 rpm at 4℃ for 1 minute, and discard the waste liquid in the collection tube.
7. Place the adsorption column back into the collection tube, add 500 μL of wash solution to the adsorption column, let it stand for 2 minutes, centrifuge at 12,000 rpm at 4℃ for 1 minute, and discard the waste liquid in the collection tube.
8. Place the adsorption column back into the collection tube, centrifuge at 12,000 rpm at 4℃ for 2 minutes to remove the residual wash solution. During this time, take out the elution solution (40 μL per sample, for example, for 10 extraction samples, take out 400 μL of elution solution), place it in a sterilized 1.5 mL centrifuge tube, and preheat at 56℃ for 2 minutes.
9. Take out the adsorption column and place it into a new 1.5 mL centrifuge tube, add 40 μL of preheated elution solution, let it stand for 2 minutes, centrifuge at 12,000 rpm at 4℃ for 2 minutes, collect the DNA solution. The extracted DNA can be used for the next experiment or stored at -20℃.

Note

1. The precipitation solution and wash solution contain irritating chemicals. Please take protective measures during operation to avoid direct contact with the skin and prevent inhalation through the mouth and nose. If accidentally contaminated on the skin or eyes, rinse immediately with clean water or saline solution, and seek medical attention if necessary. After adding ethanol to the wash solution, mix thoroughly. It is best to prepare it fresh and use it immediately. Each time, calculate the amount needed based on the volume of samples to be extracted and prepare accordingly.
2. It is normal for the lysis solution to have white flocs precipitate. You can dissolve it by placing it in a 37℃ water bath.
3. The product information is for reference only. If you have any questions, please call 400-968-6088 for consultation.
4. The products are all for scientific research use only. Do not use it for medical, clinical diagnosis or treatment, food and cosmetics, etc. Do not store them in ordinary residential areas.