9. Place the adsorption column in a new 1.5 mL centrifuge tube, add 50 μL of Buffer GE or RNase-Free water to the middle of the adsorption column overhanging the column, leave it at room temperature for 2-5 min, centrifuge it at 12,000 rpm for 1 min, collect the DNA solution, and store it at -20°C.

Note: 1) If downstream experiments are sensitive to pH or EDTA, elution can be done with RNase-Free water. The pH value of the elution solution has a great influence on the elution efficiency. If the eluent is made of water, the pH value should be in the range of 7.0-8.5 (NaOH can be used to adjust the pH value of water to this range). The elution efficiency is not high when the pH value is lower than 7.0.

2) For long-term storage, it is recommended to elute with Buffer GE and store at -20°C.

Version: 12/2023

Swab Genomic DNA Kit

Cat. No. : CW0530S（50 preps）
CW0530M（200 preps）

Storage Condition: Store at room temperature (15-30°C).

Components

Component	CW0530S (50 preps)	CW0530M (200 preps)
Buffer GR	25 mL	120 mL
Buffer GL	25 mL	120 mL
Buffer GW1（concentrate）	13 mL	52 mL
Buffer GW2（concentrate）	15 mL	75 mL
Buffer GE	15 mL	60 mL
Proteinase K	1.25 mL	1.25×4 mL
Spin Columns DS with Collection Tubes	50	200
Centrifuge Tubes (1.5 mL)	50	200

Introduction

This kit provides a simple and rapid method for the isolation and purification of total DNA from buccal swab samples. The kit uses a silicon-based membrane that can specifically bind DNA and a unique buffer system to efficiently and exclusively adsorb DNA. 0.5-3.5 μg genomic DNA can be obtained from each swab. The extracted DNA fragment is large, pure, stable and reliable in quality. Suitable for enzyme digestion, PCR, library construction, Southern blotting and other experiments.

Reagents to be Supplied by user

100% ethanol

Precautions

1. Add 100% ethanol to Buffer GW1 and Buffer GW2 according to the instructions on the label of the reagent bottle before the first use.
2. If Buffer GL is found to precipitate before use, please dissolve Buffer GL in 56℃ water bath.
3. All centrifugation steps can be performed at room temperature.
4. Sampling: Use a buccal swab to wipe the inside of the mouth 6 times, dry for 2 hours and store. To ensure that the sample is not contaminated by food or drink, do not eat or drink for 30 min before sampling.

Protocol

1. The swab of the oral swab was cut from the rod with scissors and placed in a 2 mL centrifuge tube (self-provided) with 400 μL of Buffer GR.
   Note: If genomic DNA without RNA contamination is required, add 4 μL of RNaseA solution (100 mg/mL) (Cat. No. : CW0601S), shake and mix well.

2. Add 20 μL of Proteinase K and 400 μL of Buffer GL, immediately vortex and shake for 15 s, mix well.
   Note: Mix well immediately after adding Buffer GL; do not add Proteinase K directly into Buffer GL.
3. Leave at 56°C for 10 min, centrifuge briefly so that the solution on the wall of the tube collects at the bottom of the tube.
4. Add 400 μL of 100% ethanol, vortex and shake to mix thoroughly, centrifuge briefly to collect the solution on the wall to the bottom of the tube.
   Note: The addition of 100% ethanol may produce a white precipitate, which will not affect the subsequent experiments.
5. Add the solution and precipitate obtained in the previous step to the Spin Columns DS in two additions of up to 700 μL at a time to the collection tube. Centrifuge at 12,000 rpm (~13,400 ×g) for 1 min, discard the waste solution, and place the column back into the collection tube.
6. Add 500 μL of Buffer GW1 to the column (check whether 100% ethanol has been added before use), centrifuge at 12,000 rpm for 1 min, discard the waste solution, and place the column back into the collection tube.
7. Add 500 μL of Buffer GW2 to the column (check whether 100% ethanol has been added before use), centrifuge at 12,000 rpm for 3 min, discard the waste solution, and place the column back into the collection tube.
   Note: Step 7 can be repeated if further improvement of DNA purity is required.
8. Centrifuge at 12,000 rpm for 1 min and discard the waste solution from the collection tube. Leave the Spin Columns DS at room temperature for several minutes to dry thoroughly.
   Note: The purpose of this step is to remove any residual ethanol from the column, which can interfere with subsequent enzymatic reactions (digestion, PCR, etc.).