BeaverBeads™ Saliva DNA Extraction Kit

Product Introduction

Beaver saliva DNA extraction kit is applicable for rapid and efficient extraction of genomic DNA from saliva samples. By using superparamagnetic beads, the extraction process can be carried out without centrifugation and the reaction system can be adjusted according to the number of samples added. This product can be extracted manually for a small number of samples, also applied to high throughput operation with automatic workstation. The extracted products can be used for the following experiments such as enzyme digestion, PCR amplification and detection etc..

Product Information

Product Name	BeaverBeads™ Saliva DNA Extraction Kit
BeaverBeads™ ①	stored at 2 ~ 8 ℃, avoid freezing
Lysis Buffer ②	15~25℃ sealed storage, if seeing precipitation, incubate 2mins at 37℃
Washing Buffer I ③	15~25℃ sealed storage
Washing Buffer II ④	15~25℃ sealed storage
Elution Buffer ⑤	15~25℃ sealed storage
Proteinase K ⑥	stored at 2~8 ℃ for 6 months, or stored at -20℃ for a long time after re-packing
Solution A ⑦	15~25℃ sealed storage, used to dissolve protease K
Isopropanol (AR)	self-prepared by users
Shelf Life	12 months

Preparation

- EP tube (1.5 mL centrifuge tube, 2 mL centrifuge tube: one /sample)
- Single channel pipettes：200 μL, 1000 μL
- Vortex oscillator
- Dry bath (or water bath) incubator: can choose BEAVER dry bath incubator, Product No.: 2018C
- Magnetic separator: can choose BEAVER magnetic separator, Product No. 60201
- Isopropanol (AR)
- Alcohol

Before first use

- Add specified quantity (see bottle label) Solution A ⑦, into Proteinase K dry powder ⑥, and write "√" in "□", mix uniformity and then store at 2~8 ℃ or store at -20℃ after re-packing.
- Add specified quantity (see bottle label) absolute ethyl alcohol (analytically pure) into Washing Buffer I ③, and write "√" in "□", mix and sealed storage at room temperature.
- Add specified quantity (see bottle label) absolute ethyl alcohol (analytically pure) into Washing Buffer II ④, and write "√" in "□", mix and sealed store at room temperature.

Operation process (Take the sample size of 400uL)

1. Saliva sample lysis

1) Add 400μL saliva sample into 1.5 mL centrifuge tube (if the sample size is less than 400 μL, please add saliva preservative to fill up to 400 μL), 20μL Proteinase K ⑥ , and 200μL Lysis Buffer ②, vortex blending.

2) Put centrifugal tube in 55 ℃ water bath or dry bath for 10 min, shake and mix every five minutes, then centrifuge the tube at low speed to concentrate the liquid from the tube cover lid and wall to the bottom of the tube, stand-by.

2. Mixing

Add 350 uL isopropanol into the above centrifuge tube, then add 50 μL BeaverBeads™ ①, vortex oscillating 3 mins with the maximum rotational speed and then leave for 2 mins at room temperature.

3. Magnetic separation

Put the centrifuge tube on the magnetic separator and stay for 20 seconds until magnetic beads are attracted completely; if there are magnetic beads in the centrifuge tube lid, keep the EP tube on the magnetic separator, and flip both the tube and separator up and down 2~3 times until the magnetic bead are completely absorbed. Keep the EP tube fixed on the magnetic separator, discard the supernatant, avoid contacting with magnetic beads.

4. Cleaning 1

Add 800 μL Washing Buffer I ③ into 1.5 mL centrifuge tube, remove the 1.5 mL centrifuge tube from the magnetic separator, separate the magnetic beads blowing a pipettor, vortex oscillating 2 mins, repeat this operation once, then magnetic separation (refer to step 3)

5. Cleaning 2

Use 800 μL Washing Buffer Ⅱ ④, (refer to step 4).

6. Drying

Keep the centrifuge tube on the magnetic separator, leave for 10 mins at room temperature, then take the centrifuge tube off the magnetic separator

Note: If there is liquid residue in the reaction tube during the drying process, using a small range pipettor to remove the liquid.

7. Elution

Add 100 μL Elution Buffer ⑤, vortex oscillate 1 min, or blow the magnetic beads 50 times with a pipettor slowly until magnetic beads are fully suspended, then heat at 65 ℃ for 10 minutes, then place the centrifuge tube in a magnetic separator until the solution is clear, remove supernatant to a new 1.5mL centrifuge tube, that the free DNA is obtained after purification, it can be stored at - 20 ℃.

Note:

1. Be sure to read this product manual carefully before any operation.
2. The extraction effect is related to the sample quality, please avoid repeated freezing the samples.
3. Avoid freezing and centrifugation of magnetic beads.
4. The magnetic beads should be fully suspended before using.
5. Before drying the magnetic beads, please use the pipettor to absorb the washing liquid.
6. Avoid excessive drying of magnetic beads, otherwise the nucleic acid elution efficiency will be severely reduced.
7. Suggest using good quality of the centrifugal tube and the pipettor to avoid losses caused by adhesion of magnetic beads.

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