

Buccal Swab Genomic DNA Purification Kit

Ordering info

TBK0135, 3 reactions (sample)

TBK0136, 50 reactions

TBK0137, 200 reactions

Description

Buccal Swab Genomic DNA Purification Kit is an optimized kit based on salting-out principle to produce higher quantity and quality DNA from buccal swab samples.

Features

- High yield and purity, 0.5 - 5 µg, A₂₆₀/A₂₈₀ ~1.8.
- Scalable, easily to process many samples simultaneously.
- No phenol extraction.
- Fast, easy and cost-effective protocol.

Applications

DNA obtained is suitable for downstream molecular biology applications such as PCR, enzymatic digestion for cloning or Southern, genotyping, etc.

Quality Control

DNA isolation from buccal swab is checked by: integrity (agarose gel electrophoresis), quantity and quality (A₂₆₀/A₂₈₀ = 1.8 ± 0.2).

Kit Components

Components	TBK0136	TBK0137
PBS 1x pH=7.4	1 pouch (1 L)	1 pouch (1 L)
BS2 Buffer	12 mL	50 mL
BS3 Buffer	5 mL	20 mL
BS4 Buffer	1.2 mL	3 x 1.5 mL
Proteinase K	20 mg ^a	2 x 30 mg ^b
Proteinase K Resuspension Buffer	1.5 mL	2 x 1.5 mL
Elution Buffer	15 mL	25 mL

Order Info Kit Components: PBS 1x pH 7.4 (TBB0600) | BS2 Buffer (TBB0507) | BS3 Buffer (TBB0508) | BS4 Buffer (TBB0509) | Proteinase K (TBZ0305) | Proteinase K Resuspension Buffer (TBB0546) | Elution Buffer (TBB0510).

Before its use:

- ^a Add 1 mL Proteinase K Resuspension Buffer.
- ^b Add 1.5 mL Proteinase K Resuspension Buffer.

Storage

- Store the kit at 25°C.
- Store Proteinase K and BS4 Buffer at -20°C.

Material required (not supplied)

- Isopropyl Alcohol (CAS 67-63-0).
- Ethanol (CAS 64-17-5).
- RNase A (CAS 9001-99-4).

PROTOCOL

I. SAMPLE COLLECTION

Not eat or drink 1 hour before collect the sample. Wash the buccal cavity with water or saline solution.

1. In a 2 mL tube, add 1 mL Cold PBS 1x, pH 7.4.
2. Introduce a buccal swab in the mouth and rub the inside of the cheek between 10-20 times.
3. Place the swab in the tube prepared at step 1. Rotate 5-6 times.
4. Centrifuge at 13,000 g for 3 minutes. Remove the supernatant.
5. Resuspend the cell pellet in 180 μ L PBS 1x, pH 7.4 by vortex for 10-15 seconds.

II. DNA PURIFICATION

1. Add 10 μ L Proteinase K and 600 μ L BS2 Buffer. Mix by pipetting.
2. Incubate at 55°C for 30 minutes. Cool down to room temperature.
3. Add 70 μ L BS3 Buffer and mix vigorously by vortex for 20 seconds.
4. Incubate at 4°C for 5 minutes.
5. Centrifuge at 13,000 g for 5 minutes.
6. Recover supernatant by transferring it to a clean 1.5 mL tube containing 190 μ L Isopropanol and 20 μ L BS4 Buffer.
7. Mix by gentle inversion (~ 10-20 times).
8. Centrifuge at 13,000 g for 2 minutes and discard carefully the supernatant using a pipette.

DNA is visible like a white pellet.

9. Add 200 μ L Ethanol 70%.

Prepare Ethanol 70% by mixing 7 mL Ethanol and 3 mL H₂O (Molecular Biology Grade).
10. Centrifuge at 13,000 g for 2 minutes and remove the supernatant.
11. Invert and dry the tubes on clean paper towels for 5-10 minutes.
12. Add 50-100 μ L Elution Buffer or Water, Molecular Biology Grade and resuspend DNA isolated.
13. Check DNA quality on agarose electrophoresis gel and quantity by spectrophotometry.
14. Store at -20°C.

