

# Tissue Genomic DNA Purification Mini Kit

(to process up to 30 mg of tissue)

## Ordering info

TBK0155, 5 reactions (sample)

TBK0157, 200 reactions

TBK0156, 50 reactions

## Description

Tissue Genomic DNA Purification Mini Kit is an optimized kit to obtain high molecular weight genomic DNA from fresh or frozen. The kit is based on salting-out principle to produce higher quantity and quality of DNA.

## Features

- High yield and purity, 5-100 µg gDNA,  $A_{260}/A_{280} \sim 1.8$ .
- Scalable, easily to process many samples simultaneously.
- No phenol extraction.
- Fast and easy protocol.
- Cost-effective.

## 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 10 mg tissue is checked by: integrity (agarose gel electrophoresis), quantity and quality ( $A_{260}/A_{280} = 1.8 \pm 0.2$ ).

## Kit Components

Components	TBK0156	TBK0157
BT2 Buffer	18 mL	65 mL
BT3 Buffer	10 mL	25 mL
Proteinase K*	30 mg	3 x 30 mg
Proteinase K Resuspension Buffer	1.5 mL	3 x 1.5 mL
Elution Buffer	15 mL	45 mL

**Order Info Kit Components:** BT2 Buffer (TBB0520) | BT3 Buffer (TBB0521) | Proteinase K (TBZ0303) | Proteinase K Resuspension Buffer (TBB0546) | Elution Buffer (TBB0510).

\* Add 1.5 mL Proteinase K Resuspension Buffer and mix well. Store Proteinase K solution in aliquots at -20°C.

## Storage

Store the kit at 25°C.

Store Proteinase K at -20°C.

## Material required (not supplied)

- Isopropyl Alcohol (CAS 67-63-0).
- Ethanol 70%.
- RNase A
- 1.5 mL tubes.

## PROTOCOL

- Using liquid nitrogen, grind up **30 mg tissue** finely with a pestle in a mortar. With a spatula, frozen with liquid nitrogen, transfer ground tissue to 1.5 mL tube. Put it on ice.

*If your sample is less than 20 mg, proceed directly to step 2. Commercially available homogenization equipment can also be used.*

- Add **300 µL BT2 Buffer** and **20 µL Proteinase K** (20 mg/mL) and mixing by pipetting.
- Incubate at 60 °C for 1 hour. Mix periodically by vortex during the incubation.

*Lysis is usually complete in 0.5-2 h. At the end of the incubation time, the sample should be transparent. You can reduce or extend the incubation time depending on your samples.*

- [Optional]** Add **15 µL RNase A** (10 mg/mL) and mix with a pipette. Incubate at 37°C for 15 minutes.
- Add **100 µL BT3 Buffer** and mix vigorously by vortex. Incubate for 2 minutes on ice.
- Centrifuge at 13,000 g, 3 minutes.
- Recover the supernatant into a 1.5 mL tube containing **300 µL Isopropanol**. Mix by inversion (~ 10 times).
- Centrifuge at 13,000 g, 3 minutes.
- Discard the supernatant and add **300 µL Ethanol 70%**.
- Centrifuge at 13,000g for 1 minute and discard the supernatant using a pipette.
- Invert and dry the tube on paper towels for 2-5 minutes.  
*The DNA will be visible as a small white pellet.*
- Add **150 - 200 µL Elution Buffer** to resuspend the DNA.  
*Prewarm Elution Buffer at 70°C produces better results.*
- Check integrity on agarose electrophoresis and quantity and quality by spectrophotometry.
- Store at -20°C.

