Data sheet

Tissue Genomic DNA Extraction Kit

Cat. No: AN0052

20 reactions if processing 5-10 mg tissue samples
10 reactions if processing 50-100 mg tissue samples

Description

Tissue Genomic DNA Extraction kit is a simple and rapid method for high-quality genomic DNA purification from fresh or frozen solid tissue.
The procedure includes: lysis, protein removal, DNA precipitation, washing and hydration.

Features

- **Safe**: no phenol-chloroform extraction.
- **Efficient**: 5-100 µg of genomic DNA from a 10 mg animal tissue sample (50-500 µg of genomic DNA from a 100 mg).
- **Ready to use** genomic DNA, in all molecular biology applications.

Applications

- High molecular weight genomic DNA purified with the kit is suitable for direct use in all common molecular biology applications: PCR, cloning, DNA sequencing, Southern blot analysis, etc.

Quality Certifications

Tissue Genomic DNA Extraction kit is tested on a lot-to-lot basis by isolating total DNA from 5 mg of frozen tissue. DNA purified is analysed by:

- Spectrophotometer: Ratio 260/ 280 (1.6-1.8)
- Agarose gel electrophoresis.

Kit Components

Item	AN0052
S2 Buffer	125 ml
S3 Buffer	50 ml
Proteinase K*	20 mg
RNAse A Solution (10mg/ml)	0.65 ml
EB Buffer	50 ml

*Dissolve Proteinase K in water (1 ml) to obtain a 20 mg/mL stock solution. The Proteinase K solution can be stored for several days at 2–8 °C. For longer-term storage, the unused portion of the solution may be stored in aliquots at –20 °C until needed. This product as supplied is stable at room temperature.

Kit Storage:

The kit is shipped at ambient temperature. Upon arrival, store Proteinase K at 4ºC and RNAse A (10mg/ml) should be stored at -20ºC. If any kit reagent forms a precipitate, warm at 55–65 °C until the precipitate dissolves, and allow to cool to room temperature before use.

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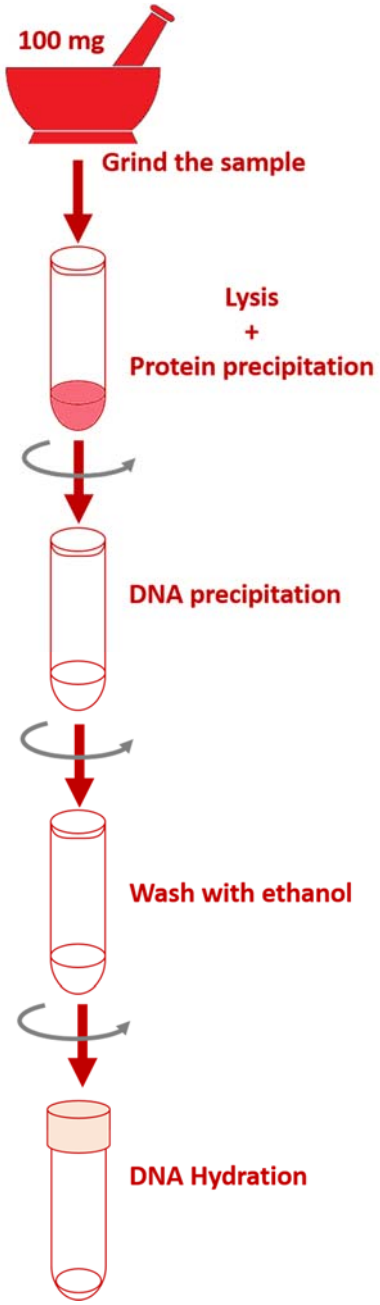
DETAILED PROTOCOL

Choose ■ if processing 5-10 mg from frozen or fresh tissue.
choose ▲ if processing 50-100 mg from frozen or fresh tissue.

1. Grind ■ **5–10 mg** or ▲ **50–100** mg frozen or fresh tissue in liquid nitrogen with a mortar and pestle. Work quickly and keep tissue on ice at all times, including when tissue is being weighed.
2. Transfer ground tissue to ■ **1.5 ml** / ▲ **15 ml** grinder tube on ice.
3. Add ■ **15 µl** / ▲ **150 µl** **proteinase K** and ■ **300 µl** / ▲ **3 ml** **buffer S2** and mixing by pipetting.
4. Incubate in a water bath at 60 °C for 3 hours or until tissue has completely lysed, and then cool to room temperature.
5. Add ■ **1.5 µl** / ▲ **15 µl** **RNase A solution** to the sample and mix by inverting tube 30 times and leave to incubate for 15-60 minutes at 37ºC.
6. Incubate for ■ 1 min / ▲ 3 min on ice to quickly cool the sample.
7. Add ■ **100 µl** / ▲ **1 ml** **buffer S3** and mixing with vortex vigorously for 20 seconds.
8. Centrifuge at ■ **13000xg** / ▲ **2000xg** for ■ **3** /**10** minutes. A dark brown pellet should be visible. If no pellet is observed, incubate on ice for 5 minutes and centrifuge again.
9. Transfer the supernatant to a new ■ **1.5 ml** / ▲ **15 ml** tube containing ■ **300 µl**/ ▲ **3 ml** **isopropanol**. Mix by gentle inversion 50 times.
10. Centrifuge at ■ **13000xg** / ▲ **2000xg** for ■ **1**/**3** minutes and remove the supernatant using a pipette and dry the pellet with the tube inverted on absorbent paper for 5-10 minutes. The DNA will be visible as a small white pellet.
11. Wash with ■ **300 µl** / ▲ **3 ml** **70% ethanol** and centrifuge at ■ **13000xg** / ▲ **2000xg** for 1 minutes.
12. Remove the supernatant using a pipette and dry the pellet with the tube inverted on absorbent paper for 5-10 minutes.
13. Add ■ **100 µL** / ▲ **400 µl** of **Buffer EB** and vortex for 5 seconds at medium speed to mix. Close the cap and incubate for 1 hour.
14. Resuspend the DNA and store at -20 ° C.



Pure DNA

PRODUCT USE LIMITATION

This product is developed, designed and sold exclusively for research purposes and in vitro use only. The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals. Please refer to www.canvaxbiotech.com for Material Safety Data Sheet of the product.