High-Q™-Spin-Column Plant Genomic DNA Purification Kit

Ordering info

TBK0166, 3 reactions (sample)

TBK0167, 50 reactions

TBK0168, 100 reactions

TBK0169, 200 reactions

Description

High-Q™-Spin-Column Plant Genomic DNA Purification Kit is an easy silica-membrane-based system for DNA purification from a wide variety of plant species. An optimized lysis buffer guarantees a good yield while the use of High-Q™ Spin Columns allow a good quality DNA, suitable for downstream applications.

Features

- Starting material up to 100 mg of fresh material and up to 30 mg of dried plant material.
- Typical yields are **2- 50 µg of DNA** depending on the material plant used.
- No organic extraction, no ethanol precipitation.
- High DNA purity, the isolated DNA is ready to use for downstream molecular biology applications.
- Easy and Fast protocol.

Applications

- Purification of DNA from plant tissue, including plant cells, leaves, seeds, fruits or roots.
- Purification of DNA plant using different starting plant materials: frozen, fresh or dried.
- DNA obtained is suitable for downstream molecular biology applications such as PCR, enzymatic digestion for cloning or Southern, genotyping, etc.

Quality Control

DNA purified is checked by: integrity (agarose gel electrophoresis), quantity and quality ($A_{260/280}$= 1.8 ± 0.2; $A_{260/230}$= 2.0 ± 0.2).

Kit Components

Components	TBK0167	TBK0168	TBK0169
High-Q™ Spin Column with Collection Tubes	50	100	200
BPL1 Buffer	25 mL	47 mL	92 mL
BPL2 Buffer	2 mL[a]	4 mL[b]	7 mL[c]
BPL3 Buffer	12 mL[d]	24 mL[e]	44 mL[f]
BPL4 Buffer	12 mL[g]	24 mL[h]	50 mL[i]
Elution Buffer	15 mL	15 mL	25 mL
Proteinase K	30 mg [j]	2 x 30 mg [j]	3x30 mg [j]
Proteinase K Resuspension Buffer	1.5 mL	2 x 1.5 mL	3 x 1.5 mL

Order Info Kit Components: *High-Q™ Spin Column with Collection Tubes (TBM0010) | BPL1 Buffer (TBB0530) | BPL1 Additive (TBB0531) | BPL2 Buffer (TBB0532) | BPL3 Buffer (TBB0533) | BPL4 Buffer (TBB0534) | Elution Buffer (TBB0510) | Proteinase K (TBZ0305) | Proteinase K Resuspension Buffer (TBB0546).*

¡Components for samples are ready to use!

Before its use:

[a] Add 18 mL isopropanol and mix well.

[b] Add 36 mL isopropanol and mix well.

[c] Add 63 mL isopropanol and mix well

[d] Add 18 mL absolute ethanol and mix well.

[e] Add 36 mL absolute ethanol and mix well.

[f] Add 66 mL absolute ethanol and mix well

[g] Add 48 mL absolute ethanol and mix well.

[h] Add 96 mL absolute ethanol and mix well.

[i] Add 200 mL absolute ethanol and mix well.

[j] Add 1.5 mL Proteinase K Resuspension Buffer and mix well.

Storage

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

Material required (not supplied)

- 1.5 mL Tubes.
- Ethanol (CAS 64-17-5).
- Isopropanol (CAS 67-63-0).

PROTOCOL

1. Grind up to 100 mg of plant material in liquid nitrogen using a mortar and a pestle. With a freeze spatula, collect tube. Commercially available equipment for homogenization also can be used with zirconia beads.

   Grind up to 50 mg if the plant material is seed.

2. Add **450 µL BPL1 Buffer**. Vortex vigorously for 1 minute.
3. Add **20 µL Proteinase K (20 mg/mL)**. Vortex briefly. Incubate at 65°C, 30 minutes. Mix 2-3 times during incubation.
4. Centrifuge at 13,000 g for 5 minutes. Transfer the supernatant to a fresh tube.
5. *[Optional] Add 20 µL RNase-A 10 mg/ mL and incubate for 5 minutes at room temperature.*
6. Add **300 µL BPL2 Buffer** and mix by inversion.

   Check isopropanol has been added to BPL2 Buffer (✔).

7. Transfer **up 700 µL mixture** to a High-Q™ Spin Column placed into a Collection Tube.
8. Centrifuge at 10,000 g for 1 minute. Remove the flow-through and place back the High-Q™ Spin Column into a Collection Tube. If there is still any remaining mixture, repeat steps 7 and 8.
9. Add **500 µL BPL3 Buffer**.

   Check absolute ethanol has been added to BPL3 Buffer (✔).

10. Centrifuge at 10,000 g for 1 minute. Discard the flow-through and place back the High-Q™ Spin Column into a Collection Tube.
11. Add **500 µL BPL4 Buffer**. Repeat this step one more time.

    Check absolute ethanol has been added to BPL4 Buffer (✔).

12. To dry the High-Q™ Spin Column and eliminate residual ethanol, centrifuge again at 10,000 g for 2 minutes.
13. Place the High-Q™ Spin Column into a clean 1.5 mL Tube.
14. Add **50-100 µL prewarmed Elution Buffer** or **Water (Molecular Biology Grade)**.

    Prewarm Elution Buffer or Water at 70°C.

15. Incubate at room temperature, 2 minutes.
16. Centrifuge at 10,000 g for 1 minute to elute purified DNA.
17. Check DNA quantity by spectrophotometry and quality on agarose electrophoresis gel.
18. Store DNA at -20°C.