Dokdo-Prep™
Gel Extraction Kit (bead-type)

User Manual

Cat no. EBD-1006

Storage Conditions : Room Temperature
For Research Use Only

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Overview

The Dokdo-Prep™ Gel Extraction kit (bead-type) is designed for the purification of DNA from standard agarose gel (TAE/TBE). Dokdo-Prep™ Gel Extraction Kit (bead-type) uses special silica resin (bead) suspended solution to purify the DNA fragment. This enables extraction of DNA fragments from both TAE and TBE buffer-containing agarose gels without additional solutions or modifications to the protocol. Fragments can be also extracted from low-melting-point agarose.

▷ DNA fragments in the size range of 100 bp to 10 kbp can be extracted from gels.
▷ The procedure is brief, allowing completion of the protocol in 15 to 20 min.
▷ The recovery of DNA is 70～80%.
▷ DNA purified is suitable for a variety of applications, including fluorescent DNA sequencing, transformation, restriction mapping, cloning, and labeling.

Kit Contents

Components	Amount	Storage
Gel Extraction Buffer	100 ml x 2	Room Temperature
DNA purification bead	1 ml x 3	Room Temperature
Wash Buffer *	60 ml x 2	Room Temperature
Elution Buffer	15 ml	Room Temperature
Manual	1 ea	-

* **Before use, add 40 ml of absolutely ethanol to 60 ml Wash Buffer**.
For other volumes of wash buffer, simply add enough ethanol to make a 2 : 3 ratio (Ethanol volume : Wash Buffer volume).

Additional Materials Required

Absolute ethanol (>98%)
50～55 ℃ water bath or heat block

Centrifugation notes

All centrifugation steps are carried out at maximum speed (≥ 10,000g or ~13,000 rpm) in a conventional, table-top microcentrifuge.

Protocols

1. Carefully excise the gel slice containing DNA fragment from the agarose gel.
Place gel slice into clean 1.5 ml microcentrifuge tube.
Minimize the size of the gel slice as possible by removing excess agarose.
(< 250 mg agarose / tube).

2. Add 300 µl of Gel Extraction Buffer per 100 mg of gel slice (Gel Extraction Buffer : Gel slice = 3 : 1)
If there is any visible precipitates in Gel Extraction Buffer, completely dissolve at 37℃ before use.

3. Incubate sample at 50～55℃ for 5～10 min.
Invert tube 2～3 times every 2 min until the gel slices are completely dissolved.

4. Resuspend DNA purification bead (bead slurry) by brief vortexing before use.
Add DNA purification bead (5-20 µl according to the initial DNA concentration) to the sample and vortex briefly. Incubation for 5 min at room temperature with occasional agitation.
10 µl bead bind to about 5 µg of 1kbp DNA.

5. Centrifuge for 30 sec at room temperature and carefully remove supernatant with pipet.

6. Add 500 µl of Wash Buffer and resuspend the pellet by vigorous vortexing.
Be sure ethanol has been added to Wash Buffer before use.
If 230/260 ratio (indication of salt contamination) is still high in purified DNA, additional wash is recommended.

7. Centrifuge at maximum speed (>13,000rpm) for 1 min and remove supernatant carefully.

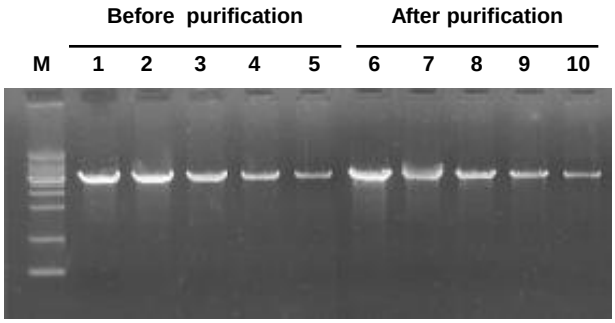
8. Air-dry pellet.

9. Add 20 µl of sterile distilled H_2O or Elution Buffer, and resuspend the pellet by vortexing.
Incubate at 50℃ for 5 min.

10. Centrifuge for 1 min at maximum speed.
Transfer supernatant carefully into a fresh 1.5 ml microcentrifuge tube.
Residual beads in supernatant may inhibit further reactions, such as restriction enzyme digestion, ligation, PCR, and so on.

11. [optional] Repeat step 10 and 11 and combine the eluates.
A second elution will increase the yield by approximately 10-20 %.

Fig 1. Analysis of DNA fragment purified with Dokdo-Prep Gel Extraction Kit (bead-type)



Analyzed on a 0.7% agarose
M : 1Kbp DNA ladder marker (EBM 1002)
lane 1. 6. 5kbp/ BamH I stock 10 μg
2. 7. 5kbp/ BamH I stock 5 μg
3. 8. 5kbp/ BamH I stock 1 μg
4. 9. 5kbp/ BamH I stock 500 ng
5. 10. 5kbp/ BamH I stock 100 ng

Related Products

Dokdo-Prep™ Plasmid Mini-prep Kit (spin-type)	EBD-1001S
Dokdo-Prep™ Plasmid Mini-prep Kit (magnet-type)	EBD-1001M
Dokdo-Prep™ PCR Purification Kit	EBD-1004
Dokdo-Prep™ Gel Extraction Kit (spin-type)	EBD-1005
Dokdo-Prep™ Gel extraction Kit (bead-type)	EBD-1006
Dokdo-Prep™ Bacterial genomic DNA Purification Kit	EBD-1007
Dokdo-Prep™ Blood genomic DNA Purification Kit	EBD-1008

Customer & Technical Services

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