ZGeneBio Small Fragment PCR Product Gel Extraction / Clean Up Kit

Cat# ZGCIR05-20/50 Size : **20/ 50** Reactions

Specific for small fragment PCR product gel extraction
Purification of double- or single-stranded PCR products
Cleanup of oligonucleotides and DNA from enzymatic reactions

Contents:

Kit Contents

Small Fragment PCR Product Gel Extraction Kit	20 reaction	50 reaction
Binding Buffer	22 ml	52 ml
Nano Beads	330 ul	800 ul
Wash Buffer I	18 ml	39 ml
Wash Buffer II	22 ml	52 ml
Elution Buffer	1 ml	1.5 ml

Storage

I. Free Circulating Nucleic Acid Extraction Kit can be stored at 15–25°C upon arrival and are stable for at least one year after delivery.

II. The kit contains a ready-to-use proteinase K solution, which is dissolved in a specially formulated storage buffer. The proteinase K is stable at room temperature (15–25°C). To prolong the lifetime of proteinase K, storage at 2–8°C is recommended

Introduction

ZGeneBio Small Fragment PCR Product Gel Extraction Kit are designed specific to recover or concentrate small DNA fragments (50bp-300bp) from an agarose gel, PCR, or any other enzymatic reaction. This method uses a chaotropic salt to dissolve the agarose gel and denature the enzymes. The DNA fragments in the chaotropic salt are high efficiency and specificity bound to **ZGeneBio** beads. The contaminants are washed with a wash buffer (containing Ethanol) and the purified DNA fragments are eluted by a low salt based elution buffer or water. Salts, enzymes and unincorporated nucleotides can be effectively removed from the reaction mixture without phenol extraction or alcohol precipitation. Typically, recoveries are 80-90% for gel extraction and 90-95% for PCR clean-up. The entire procedure can be completed in 30 minutes, and the eluted DNA is ready to use in restriction digestion, ligation, PCR, and sequencing reactions.

Equipment and Reagents to Be Supplied by User

Shaker or rotor
15 ml centrifuge
Water bath or heating block
Ethanol (96–100%)*

Important Notice:

Preparation of buffers and reagents

Wash buffer I :

Add 6 ml ethanol (96–100%) to 20 reaction wash buffer I
or
Add 13 ml ethanol (96–100%) to 50 reaction wash buffer I

Protocols:

Gel extraction from PCR product:

1. Excise the DNA fragment from the agarose gel and weigh the gel slice (~100 mg) in centrifuge tube. Add 1 ml binding buffer Incubate at 60°C for 5 min (or until the gel slice has completely dissolved). To help dissolve gel, mix by vortexing the tube every 2–3 min during the incubation.

2. Centrifuge 13000 rpm for 5 min, then transfer 1 ml supernatant to new tube, then add 15 ul nano beads and shaker for 100 rmp 10 min

3. 13000 rpm 1min centrifuge. Then Discard the supernatant.

4. Add 1 ml wash buffer I to pipette beads complete, 13000 rpm 1 min centrifuge, discard the supernatant.

5. Add 1 ml wash buffer II to pipette beads complete, 13000 rpm 1 min centrifuge, discard the supernatant.

6. After drawing all of wash buffer II off, 3 min at heat block 60C (keep lid open). Do not over dry.

7. Add 50 ul elution buffer vortex 20 sec and spin down then 60C water bath 10 min.

8. 14000 rpm 5 min centrifuge. Keep DNA solution for PCR ready.

Clean up from PCR product or enzymatic reactions:

1. **Transfer the PCR solution or reaction solution (20 ul – 100 ul) to 1.7 centrifuge tube, then add 1 ml binding buffer and 15 ul nano beads, then put on the shaker for 100 rpm 10min.**

2. **13000 rpm 1 min centrifuge. Then Discard the supernatant.**

3. **Add 1 ml wash buffer I to pipette beads complete, 13000 rpm 1 min centrifuge, discard the supernatant.**

4. **Add 1 ml wash buffer II to pipette beads complete, 13000 rpm 1 min centrifuge, discard the supernatant.**

5. **After drawing all of wash buffer II off, 3 min at heat block 60C (keep lid open). Do not over dry.**

6. **Add 50 ul elution buffer vortex 20 sec and spin down then 60C water bath 10 min.**

7. **14000 rpm 5 min centrifuge. Keep DNA solution for PCR ready.**

Ordering Information

ZGCIR05-20/50	Small Fragment PCR Product Gel Extraction Kit
ZGCIR05BD-20/50	Binding Buffer
ZGCIR05NB-20/50	Nano Beads
ZGCIR05WI-20/50	Wash Buffer I
ZGCIR05WII-20/50	Wash Buffer II
ZGCIR05EB-20/50	Elution Buffer

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