ATP™ Gel/PCR 96-Well Kit

Store at room temperature (15~25℃)

Introduction

Format : 96-Well
Sample : 100mg agarose gel slice ; 10~50 μl PCR product or other enzymatic reaction
Operation : Centrifuge / vacuum manifold
Operation time : 30 minutes
Elution volume : 50 μl
Application : DNA Sequencing ; Ligation ; PCR ; Restriction Digestion ; DNA labeling
For research use only ; Not for diagnostic or drug purposes

ATP™ 96-Well PCR Clean Up Kit provides a high-throughput, rapid and economical method to purify DNA fragments. The method utilizes a chaotrophic salt to denature enzymes and in this condition DNA fragment is absorbed to the fibre matrix in each well of the plate. Following washing of contaminants, the purified DNA is eluted by low salt buffer or water. Salts, enzymes and unincorporated nucleotides are effectively removed from reactions mixtures without toxic phenol extraction and alcohol precipitation. The entire procedure can be completed in 30 minutes.

Quality Control

The quality of 96-Well Gel/PCR DNA Extraction Kit is tested on a lot-to-lot basis. The efficiency of DNA recovery is tested by isolation of DNA fragments of various sizes. The purified DNA is checked by agarose gel analysis.

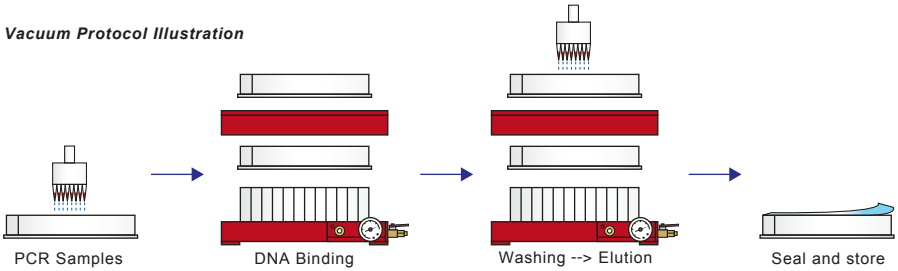
Kit Contents : Cat.No. / Kit Contents

ADF9602 (2 x 96prep / kit)	ADF9604 (4 x 96prep / kit)	ADF9610 (10 x 96prep / kit)
Binding Buffer : 80 ml	Binding Buffer : 120 ml	Binding Buffer : 240 ml + 80 ml
Wash Buffer (concentrated)* : 25 ml X 1	Wash Buffer (concentrated)* : 25 ml X 2	Wash Buffer (concentrated)* : 50 ml X 2
Elution Buffer : 30 ml	Elution Buffer : 30 ml	Elution Buffer : 60 ml
96-Well binding plate : 2 pcs	96-Well binding plate : 4 pcs	96-Well binding plate : 10 pcs
0.35 ml Collection Tubes : 2 pcs	0.35 ml Collection Tubes : 4 pcs	0.35 ml Collection Tubes : 10 pcs
Adhesive film : 4 pcs	Adhesive film : 8 pcs	Adhesive film : 20 pcs
* Add 100/ 200 ml ethanol to Wash Buffer prior to the initial use.		

Caution : Buffers contain guanidine hydrochloride which harmful and irritant agent.
During operation, always wear a lab coat, disposable gloves, and protective goggles.

Vacuum & Centrifuge Protocol

Vacuum Protocol Illustration



Additional required：

- ☐ Multi-Well Plate Vacuum Manifold
- ☐ Centrifugation system for 96-well plate
- ☐ 350 µl V-bottom plate (for storage)

DNA Binding

1. Transfer PCR products (up to 50 µl) to of a clean V-bottom plate plate (provided by user).
2. Add 250 µl Binding Buffer to each well and mix by pipetting.
3. Place a DNA Binding Plate on top of the vacuum manifold.
4. Transfer the sample mixture to each well of DNA Binding Plate.
5. Apply vacuum at 10 inches Hg for 5 minutes until wells have emptied.

Wash

6. Add 250 µl of Wash Buffer (ethanol added) to each well of the DNA Binding Plate.
7. Apply vacuum at 10 inches Hg for 5 minutes until wells have emptied.
8. Add 250 µl of Wash Buffer (ethanol added) to each well of the DNA Binding Plate to wash again.
9. Apply vacuum at 10 inches Hg for 5 minutes until wells have emptied.
10. Press the DNA Binding Plate on an absorbent material (tissue paper) to blot out the excess liquid from the bottom of the plate.

DNA Elution

11. Assemble the DNA Binding Plate on a 350 µl storage plate.
12. Centrifuge for 10 min at 3,500 rpm in a centrifuge to remove ethanol residue.
13. Add 50 µl of Elution Buffer or water in the center of the membrane.
14. Stand for 2 minutes until Elution Buffer or water absorbed by the matrix.
15. Centrifuge for 5 min at 3,500 rpm in a centrifuge to elute purified DNA.

Centrifuge Protocol

Additional required :

- ☐ Centrifugation system for 96-well plate
- ☐ 2 ml deep-well Plate (for collection)
- ☐ V-bottom plate (for storage)

DNA Binding

1. Transfer PCR products (up to 50 μl) to of a clean V-bottom plate plate (provided by user).
2. Add 250 μl Binding Buffer to each well and mix by pipetting.
3. Place a DNA Binding Plate in a 2 ml Collection Plate.
4. Transfer the sample mixture to each well of DNA Binding Plate.
5. Centrifuge the DNA Binding Plate and 2 ml Collection Plate for 5 min at 3,500 rpm in a centrifuge
6. Discard the flow-through in 2 ml Collection Plate and place the Binding Plate back in the 2 ml Collection Plate.

Wash

7. Add 250 μl of Wash Buffer (ethanol added) to each well of the DNA Binding Plate.
8. Centrifuge for 5 min at 3,500 rpm in a centrifuge.
9. Add 250 μl of Wash Buffer (ethanol added) to each well of the DNA Binding Plate to wash again.
10. Discard the flow-through in 2 ml Collection Plate and press the DNA Binding Plate on an absorbent material (tissue paper) to blot out the excess liquid from the bottom of the plate.
11. Place the DNA Binding Plate back on the 2 ml Collection Plate.
12. Centrifuge for 10 min at 3,500 rpm to remove ethanol residue.

DNA Elution

13. Transfer the DNA Binding Plate on a clean 350 μl storage plate.
14. Add 50 μl of Elution Buffer or water in the center of the membrane.
15. Stand for 2 minutes until Elution Buffer or water absorbed by the matrix.
16. Centrifuge for 5 min at 3,500 rpm in a centrifuge to elute purified DNA.

Troubleshooting

Problem	Possible Reasons / Solution
Low yield	**Gel slice did not dissolve completely** ・Gel slice was too big. If using more than 300 mg of gel slice, separate it into multiple tubes. ・Raise temperature of incubation to 60 ℃ and extend incubation time.
	Incorrect DNA Elution Step ・Ensure that Elution Buffer was added and absorbed to the center of DF Column matrix.
	Incomplete DNA Elution ・If size of DNA fragments is larger than 10 kb, use preheated Elution Buffer (60-70 ℃)) at Elution Step to improve the elution efficiency. ・If DNA is eluted by water, ensure the pH of water ranges from 7.0 to 8.5.
Eluted DNA does not perform well in downstream applications	**Residual ethanol contamination** ・After washing step, dry DF Column with additional centrifugation at full speed for 5 minutes or incubation at 60 ℃ for 5 minutes.
	DNA was denatured (a smaller band appeared on gel analysis) ・Incubate eluted DNA at 95 ℃ for 2 minutes, than cool down slowly to reanneal denatured DNA.

Reference

(1) Vogelstein, B., and Gillespie, D. (1979) Proc. Natl. Acad. Sci. USA 76,615.

Catalog

Product Name	Package	Cat. No.
ATP™ Plasmid Mini Kit	100/300 prep	APD100/APD300
ATP™ Plasmid Midi Kit (Ultra Pure)	25 prep	API25
ATP™ Plasmid Maxi Kit (Ultra Pure)	10/25 prep	APM10/APM25
ATP™ 96-Well Plasmid Mini Kit	4/10 plates	APD9604/APD9610
ATP™ Plasmid Binding Column	50 pcs	PDC50
ATP™ Gel/PCR DNA Fragments Extraction Kit	100/300 prep	ADF100/ADF300
ATP™ 96-Well Gel/PCR DAN Extraction Kit	4/10 plates	ADF9604/ADF9610
ATP™ 96-Well SEQ Dye Clean Up Kit	4/10 plates	ADC9604/ADC9610
ATP™ Fragment DNA Binding Column	50 pcs	DFC50
ATP™ Reagent Genomic DNA Kit	For 100ml blood	AGE100
ATP™ Genomic DNA Mini Kit (Blood/Culture Cell)	100/300 preps	AGB100/AGB300
ATP™ Genomic DNA Mini Kit (Tissue)	50/300 preps	AGT050/AGT300
ATP™ Genomic DNA Mini Kit (Plant)	100 preps	AGP100
ATP™ Genomic DNA Maxi Kit (Fresh Blood)	10 prep	AGBM10
ATP™™ Genomic DNA Maxi Kit (Frozen Blood)	10 prep	AGDM10
ATP™ Plant Genomic DNA Maxi Kit	10 prep	AGPM10
ATP™ 96-Well Genomic DNA Kit	4/10 plates	AGB9604/AGB9610
ATP™ Genomic DNA Binding Column	50 pcs	GDC50
ATP™ RNA Mini Kit (Blood/Culture Cell)	50prep	ARB050
ATP™ RNA Mini Kit (Tissue)	50prep	ART050
ATP™ RNA Mini Kit (Plant)	50prep	ARP050
ATP™ Viral Nucleic Acid Extraction Kit	50prep	AVR050
ATP™ Viral Nucleic Acid 96-Well Kit	4/10 plates	AVR9604/AVR9610
ATP™ RNA Maxi Kit	10 prep	ARTM10
ATP™ Plant RNA Maxi Kit	10 prep	ARPM10
ATP™ RNA Binding Column	50 pcs	RBC50