

Hieff™ Plant DNA Kit

Product description

Hieff™ Plant DNA Kit adopts Hieff™ DNA Column P1 and a new solution system, which is suitable for fast and easy extraction of genomic DNA from plant tissues (including plants containing phenols, polysaccharides and enzyme inhibitors), cells and fungal samples. In the extraction process, toxic organic substances such as phenol and chloroform are not needed to be extracted, and time-consuming isopropanol or ethanol precipitation is not needed. The operation is simple and can complete DNA extraction and purification of plant samples (100 mg fresh plant tissue or 20 mg dried plant samples) within 30 min. The Hieff™ DNA Column in the kit can specifically adsorb nucleic acids, and does not adsorb protein, polysaccharide and other non-nucleic acid substances, so it is efficient, rapid and convenient. The extracted plasmid DNA has high purity and can be directly used in subsequent experiments such as PCR, enzyme digestion and hybridization.

Specifications

Cat.No.	18800ES08 / 18800ES50 / 18800ES70
Size	5 T / 50 T / 200 T

Components

Components No.		Name	18800ES08 (5 T)	18800ES50 (50 T)	18800ES70 (200 T)
Part I	18800-A	RNase A (10 mg/mL)	25 µL	250 µL	1 mL
Part II	18800-B	Hieff™ DNA Adsorption Column P1	5	50	200
	18800-C	2 mL Collection Tube P1	5	50	200
	18800-D	Lysis Buffer (LB Buffer P1)	2.5 mL	25 mL	100 mL
	18800-E	Binding Buffer (BD Buffer P1)	1 mL	10 mL	40 mL
	18800-F	Deproteinization Solution PL(PL Buffer P1*)	1.5 mL	15 mL	50 mL
	18800-G	Wash Buffer*	1.5 mL	13 mL	50 mL
	18800-H	Elution Buffer	1 mL	10 mL	20 mL

Storage

Part I components are transported in ice bags and stored at -25~-15°C;

Part II components are transported at room temperature and stored at room temperature.

The product is valid for 2 years.

Notes

1. Avoid volatilization, oxidation, and pH change of the reagent caused by long-term exposure to the air, and cover the solution in time after use.
2. Lysis Solution/LB Buffer P1(18800-D) and Deproteinisation Solution/PL Buffer P1(18800-F) may precipitate at low temperature. They can be redissolved at 65°C until the solution is clear, which will not affect the usability. After adding ethanol to the Deproteinisation Solution/PL Buffer P1(18800-F), it cannot be heated.
3. Deproteinisation Solution PL Buffer P1(18800-F) contains irritating compounds. Wear latex gloves to avoid contamination of skin, eyes and clothing. If skin or eyes become contaminated, rinse with plenty of water or saline solution.
4. Please operate with lab coats and disposable gloves, for your safety.
5. This product is for research use only.

Pre-experiment preparation

1. Self-provided equipment and reagents: desktop centrifuge, shaker, water bath pot or metal bath, anhydrous ethanol, centrifugal tube, etc.
2. Unless otherwise specified, all centrifugation steps are completed at room temperature, and a traditional desktop centrifuge with a rotating speed of 12,000 rpm is used.
3. Before the first use, Before first use, add 2 and 4 times the volume of anhydrous ethanol to the bottles of Protein Deproteinisation Solution/PL Buffer P1* (18800-F) and Wash Buffer* (18800-G), mix thoroughly before use and mark. If the volume is seriously inaccurate due to improper transport or storage, use a graduated cylinder to make up the volume and then add the specified volume of anhydrous ethanol. Close the bottle tightly after each use to maintain the ethanol content in the bottle.

Instructions

sample pretreatment

1. Add 400 µL Lysis Buffer/LB Buffer P1 (18800-D) and 4 µL RNase A (10 mg/mL, 18800-A) into a 1.5 mL centrifuge tube, mix well and set aside at room temperature.
2. Take 100 mg fresh plant tissue or 20 mg dry weight tissue, grind the tissue to powder in liquid nitrogen and transfer to the above 1.5 mL centrifuge tube.

[Note]: If the tissue is difficult to lyse, try gentle homogenisation for 10 seconds to aid lysis.

3. Vortex to mix well and quickly collect the liquid on the wall of the tube.
4. Place in a 65°C warm bath for 10 min, inverting the sample 2-3 times every 2-3 min to mix well.
5. Add 130 µL Binding Buffer/BD Buffer P1(18800-E), mix well and place on ice for 5 min.
6. Centrifuge at 12,000 rpm for 10 min. Transfer the supernatant to a new 1.5 mL centrifuge tube.

[Note]: Avoid aspiration of boundary substances.

7. Calculate the volume of the supernatant, add 1.5 times the volume of Deproteinisation Solution/PL Buffer P1*(18800-F) and mix immediately by pipetting.

[Note]: Make sure that anhydrous ethanol has been added to the Deproteinization Solution PL Buffer P1*.

[Note]: Flocculent precipitation may occur, which is normal.

DNA extraction

1. Place the DNA Adsorption Column P1(18800-B) in a 2 mL Collection Tube(18800-C) for later use.
2. Add above sample pre-treatment solution(including precipitate) to the DNA Adsorption Column P1, centrifuge at 12,000 rpm for 1 min and discard the waste liquid.

[Note]: The maximum volume of mixed solution added each time is 650 μ L, which can be centrifuged several times.

[Note]: If liquid remains on the filter membrane after centrifugation, the centrifugation time can be extended to 5 min.

3. Place the DNA Adsorption Column P1(18800-B) back into the Collection Tube P1(18800-C), add 600 μ L of Wash Buffer*(18800-G), centrifuge at 12,000 rpm for 30 sec and discard the waste liquid.

[Note]: Ensure that anhydrous ethanol has been added to the Wash Buffer*.

4. Repeat step 3.
5. Replace the DNA Adsorption Column P1 in the collection tube, centrifuge the empty column at 12,000 rpm for 2 min at room temperature to remove the residual Wash Buffer W*(18800-G).
6. Transfer the DNA Column P1 into a new 1.5 mL centrifuge tube, add 50-100 μ L of Elution Buffer(18800-H) to the centre of the DNA Column P1 and leave for 5 min at room temperature. Centrifuge at 12,000 rpm for 1 min. Collect the filtrate, which is the DNA solution.

[Note]: The recovery yield can be increased by the following methods: ① preheat the elution solution to 65°C; ② re-apply the DNA filtrate to the column, leave at room temperature for 2 min and then elute.

7. The DNA solution can be stored for a long time at -20°C .