V02

Plant RNA Extraction Kit with Column method

Cat: R1230
Size: 50T/100T
Storage: Dry storage at room temperature (15℃-25℃), valid for 1 year.

Kit Components:

Kit Components	50T	100T
Lysis Buffer	25mL	50mL
RNA Elution Buffer	24.5mL	49mL
Washing Buffer I	15mL	30mL
Washing Buffer II	15mL	30mL
RNase-free H_2O	5mL	10mL
Adsorption column (including collection tube)	100 sets	200 sets
Collection tube	100 units	200 units

Note: Please add absolute ethanol to the RNA elution buffer and washing buffer before use. Please refer to the label on the bottle to add the volume.

Introduction:

The kit adopts column method to extract plant RNA. This kit can adsorb and remove genomic DNA well without using DNase. The RNA extracted by this kit is free of protein and other impurities, and can be used in many downstream experiments such as RT-PCR, fluorescent quantitative PCR, in vitro translation and molecular cloning. This kit does not need to use benzene, chloroform and other toxic reagents, safe operation, short time.

Protocols:

1. Sample treatment: Grind the Plant tissue samples from a fresh or -80℃ refrigerator into powder with liquid nitrogen, weigh 50~100mg of the powder, and add it to a 1.5mL centrifuge tube containing 500μL lysis buffer (please add 5% β-mercaptoethanol or 5%1 M DTT before use), immediately and violently swirl for 30s to fully lysate it. Place at room temperature for 5-10min, centrifuge at 12000rpm for 10min at 4℃.

Note: Before the operation, add 5% β-mercaptoethanol to the lysis buffer (1M DTT can be used instead of β-mercaptoethanol), such as adding 25μL β-mercaptoethanol or 25μL 1M DTT every 475μL lysis buffer, and prepare this lysis buffer when you want to use it.

2. Absorb the supernatant into the new 1.5mL centrifugal tube (if there are impurities in the absorbed supernatant, it can be centrifuged again), add 0.5 times absolute ethanol, mix well, add it into the adsorption column, centrifuge at 12000rpm for 2min at 4℃, and discard the filtrate (leave the collection tube for step 4).

3. Put the adsorption column on a clean collection tube, add 500μL RNA elution buffer **(please confirm whether absolute ethanol has been added before use)** into the adsorption column, centrifuge at 12000rpm at 4℃ for 2min, and collect the filtrate.

4. Add 250μL absolute ethanol into the filtrate, mix well and add it into a new adsorption column

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(using the collection tube in Step 2), centrifuge at 12000rpm for 2min at 4℃, and discard the filtrate.

5. Add 500μL washing buffer I **(check whether absolute ethanol has been added)**, centrifuge at 12000rpm for 1min at 4℃, and discard the filtrate.

6. Add 600μL washing buffer II **(check whether absolute ethanol has been added)**, centrifuge at 12000rpm for 1min at 4℃, and discard the filtrate.

7. Repeat Step 6.

8. Centrifuge at 12000rpm at 4℃ for 2min and leave the adsorption column open at room temperature for 5min to remove excess ethanol.

9. Place the adsorption column on a clean centrifuge tube, and add 50-100μL RNase-free ddH_2O to the adsorption column. Put the adsorption column at room temperature for 2min, centrifuge at 12000rpm for 2min, it can get an RNA solution and RNA was stored at -80℃.

Notes:

1. All relevant utensil consumables should be RNase-free products and careful during operation. Wear masks and gloves to avoid contamination of samples with RNA enzymes in the environment.

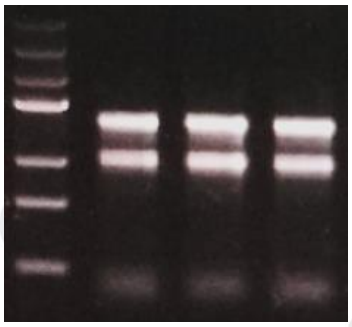
2. In the process of RNA extraction, try to operate at low temperatures.

3. Try to use fresh young plant tissue for RNA extraction, if the extracted RNA has genomic DNA contamination, reduce the use of plant tissue.

4. The volume of the elution buffer should not be less than 50μL, too little volume will affect the extraction efficiency, RNA products should be stored at -80℃ to prevent RNA degradation.

5. RNA concentration and purity detection: The extracted RNA fragments can be detected by agarose gel electrophoresis and ultraviolet spectrophotometer. The OD260/OD280 ratio should be 2.0-2.2.

Experimental data:



	Concentration（μg/mL）	A260/A280
1	118.3	2.05
2	140.2	2.03
3	136.8	2.06

Note: 50mg plant sample, eluted with 50μL RNase-free ddH_2O.

Related Products:

R1600	*DEPC treats water*
R1050	*5×RNA Loading Buffer*
M1010	*10×MOPS buffer*
R1210	*Gram-negative RNA extraction kit with column method*
R1220	*Whole blood RNA extraction kit with column method*
R1240	*Tissue RNA extraction kit with column method*
R1250	*Cell RNA extraction kit with column method*