TIANGEN®

TGuide Smart Magnetic Plant RNA Kit

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TGuide Smart Magnetic Plant RNA Kit

Cat. no. 4993552

Kit Contents

Contents		4993552 (48 preps)
4993545	Buffer SL	30 ml×2
	Buffer RD	12 ml×2
	Plant RNA Reagents	48
	Proteinase K	1 ml
	RNase-Free ddH_2O	15 ml
4992232	Buffer RDD	4 ml
	RNase-Free ddH_2O	1 ml
	RNase-Free DNase I (1500 U)	1 pcs
4993546	TGuide Smart Tip Comb	12 pcs

Note: 4992232 ,4993546 are shipped and packaged separately

Plant RNA reagent composition

Well 1	Well 2	Well 3	Well 4	Well 5	Well 6
Buffer IC 300 µl	Buffer RDP 900 µl	None	Buffer RWP 700 µl	None	MagAttract Suspension RWPG 715 µl

Storage condition

All components of the kit can be stored in dry conditions at room temperature (15-30°C) for 12 months. RNase-free DNase I, RDD buffer and RNase-free ddH_2O (in tubes) can be stored at 2-8°C for 12 months.

Product

This product adopts unique magnetic beads and a unique buffer system to isolate and purify high quality total RNA from plant tissues. The uniquely embedded magnetic beads have a strong affinity for nucleic acid under certain conditions. When the conditions are changed, the magnetic beads can release the adsorbed nucleic acid, to rapidly separate and purify the nucleic acid.

It can be used to perfectly fit with TGuide S16 Nucleic Acid Extractor. Through adsorption, transfer and release of magnetic beads by the special magnetic bar, magnetic beads and nucleic acid can be transferred, to improve the degree of automation. The whole process is safe and convenient. The total RNA extracted has good purity and high yield.

Total RNA purified with this kit can be used for RT-PCR, qPCR, chip analysis, Northern Blot, Dot Blot, PolyA screening, in vitro translation, RNase protection analysis and molecular cloning and other downstream experiments.

Features

Simple and fast: Ultra-pure total RNA can be obtained by running TGuide S16 for 58 minutes.

Flexible flux: It can perfectly fit TIANGEN's TGuide S16 Nucleic Acid Extractor to extract 1-8 samples.

Safe and non-toxic: No toxic reagents such as phenol/chloroform

High purity: The RNA obtained has high purity and can be directly used in downstream experiments such as chip detection and high-throughput sequencing.

Notes

1. This product is suitable for TGuide S16 Nucleic Acid Extractor.
2. Pay attention to the optimal storage and pre-processing conditions of samples to avoid degradation of extracted RNA.
3. If the TGrinder H24R tissue homogenizer is needed for electric homogenization of plant tissues, you should buy it and ask TIANGEN for grinding scheme (OSE-TH-02).
4. Preparation of DNase I stock solution: Dissolve DNase I dry powder (1500 U) in 550 μl Rnase-free ddH_2O, and mix them gently, and subpackage and store the solution at -30 ~ -15°C for 9 months. Take the solution out each time according to experimental requirements. Please note that the melted DNase I storage solution should be stored at 2-8°C (up to 6 weeks). Do not freeze it again. Preparation of DNase I working solution: For each reaction, take 10 μl DNase I storage solution, to which, add 70 μl Buffer RDD and mix them gently.

Operational steps

Before first use, add anhydrous ethanol into Buffer RD according to the volume as stated on the label of bottle.

1. Pre-packaged single reagent

1.1 Take out a pre-packaged single sample reagent strip and mix it upside down several times to re-suspend the magnetic beads; Gently shake the reagent and magnetic beads to concentrate at the bottom of the orifice plate. Before use, remove sealing film carefully to avoid the orifice plate from vibrating and liquid spatter.

1.2 Add suitable volume (60-100 μl) of RNase-Free ddH_2O to the 5th well of single sample reagent strip.

2. Attention to sample pre-processing:

Note: For samples with rich polysaccharide content, such as pear leaves, strawberry leaves, it is not recommended to use this kit for extraction, and TIANGEN RNAprep Pure Plant Plus Kit DP441 is recommended.

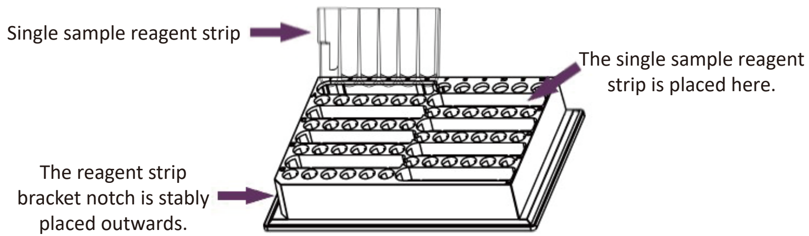
Take fresh or -80°C frozen plant tissue to fully ground with liquid nitrogen into powder. Weigh 50-100 mg to a 1.5 ml centrifuge tube containing 700 μl Buffer SL (or use TIANGEN's TGrinder H24R tissue homogenizer for electric homogenization of plant tissues, and complete 1-24 plant samples for 1 min, without liquid nitrogen), to which, add 20 μl Proteinase K, for vortex mixing immediately. Stand it at room temperature for 5 min, centrifuge at 12000 RPM for 5 min, and carefully absorb the supernatant.

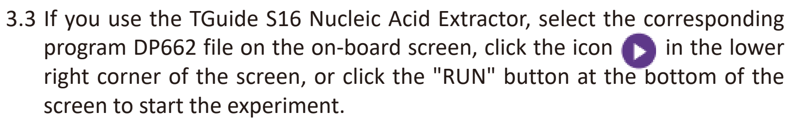
Note: For samples with polysaccharides and polyphenols, it is recommended to increase the amount of buffer SL to 1 ml and take 600 μl supernatant after centrifugation for subsequent operations.

3. Start the TGuide S16 Nucleic Acid Extractor

3.1 Add 600 μl supernatant obtained after processing the above sample to the 1st well of the single sample reagent strip and 10 μl pre-prepared DNase I storage solution and 70 μl Buffer RDD to the 3rd well. Place the single sample reagent strip on the reagent tank bracket of TGuide S16 Nucleic Acid Extractor.

3.2 Place the reagent tank bracket on the base of the 96-hole plate of the TGuide S16 Nucleic Acid Extractor. Insert the Tip Comb into the slot of the Tip Comb to ensure that they are well connected and firmed.





3.3 If you use the TGuide S16 Nucleic Acid Extractor, select the corresponding program DP662 file on the on-board screen, click the icon ▶ in the lower right corner of the screen, or click the "RUN" button at the bottom of the screen to start the experiment.

The extraction process of S16 provided for DP662 is shown in the following table:

Step	Hole site	Step name	Mix time (min)	Mix speed	Dry time (min)	Volume (µl)	Temp. (°C)	Segments	Every time(s)	Magnetization time(s)	Cycle	Magnet speed (mm/s)
1	6	Collect beads	0.5	7	0	715	--	5	3	0	2	2
2	1	Lysis	10	8	0	900	--	5	5	0	2	2
3	2	Wash 1	3	7	0	900	--	5	5	0	2	2
4	3	DNase I	12	3	0	80	--	1	0	0	0	--
5	3	Pause	Add 700 µl Buffer RD into the 3rd well									
6	3	Wash 2	5	7	0	780	--	5	5	0	2	2
7	4	Wash 3	3	7	0	700	--	5	5	0	2	2
8	6	Wash 4	3	7	6	700	--	5	5	0	2	2
9	5	Elution	5	7	0	80	45	5	5	3	2	2
10	6	Discard	0.5	5	0	715	--	1	0	0	0	--

3.4 At the end of the automated extraction process, attract the RNA out of the 5th well of the single sample reagent strip and store it under appropriate conditions. If there are subsequent experiments, it can be stored at 4°C for no more than 4 hours.