High-Q™ Automated 16-Magnetic Plant RNA Purification Kit

Ordering info

TBK0380-P. 96 reactions

TBK0381-P. 160 reactions

TBK0382-P. 320 reactions

TBK0383-P. 480 reactions

Description

High-Q™ Automated 16-Magnetic Plant RNA Purification Kit is a new generation of nucleic acid purification system intended for automated purification. It is based on Tiaris-Mag™ Magnetic beads, a homogenous silica-coated paramagnetic beads for purification of nucleic acids combined with an optimized lysis buffers that contains detergents, and reducing agents. Released nucleic acids are bound to the surface of Tiaris-Mag™ Magnetic beads in the presence of a chaotropic salt. Nucleic acid bound to the beads is then efficiently washed and eluted using a magnetic separation device, removing contaminants.

Features

- Medium throughput.
- Quick and convenient RNA extraction from different samples, including plant cells, leaves, seeds, fruits or roots.
- High yield and purity (A260/A280 ~2.0; A260/A230 ~2.0-2.2).

Kit Components

Components	TBK0380	TBK0381	TBK0382	TBK0383
BPRNA-1 Buffer *	60 mL	100 mL	2 x 100 mL	3 x 100 mL
BPRNA-2 Buffer	10 mL	10 mL	20 mL	30 mL
DNase I (5 U/µL)	500 µL	815 µL	2 x 815 µL	2 x 1.25 mL
WRNA-1 Buffer	50 mL	90 mL	2 x 90 mL	2 x 125 mL
Plate Prefilled	6	10	20	30
8-Tip Combs	12	20	40	60

Order Info Kit Components: *BPRNA-1 Buffer (TBB0555) | BPRNA-2 Buffer (TBB0556) | DNase-I (TBZ0320) | WRNA-1 Buffer (TBB0544) | 8-tip combs (TBM0035).*

Before its use

* Add 10 µL β-mercaptoethanol per 1 mL BPRNA-1 Buffer.

Prefilled Plate

	1&7	2&8	3&9	4&10	5&11	6&12
A	200 µL DNase-I Buffer (10x)	300 µL Isopropanol	800 µL WRNA-2 Buffer	800 µL WRNA-2 Buffer	100 µL Water, nuclease free	300 µL TIARIS-Mag™ Beads
B						
C						
D						
E						
F						
G						
H						

Storage

Store DNase at -20°C and Prefilled plates at 4°C.

Store all other components at 25 °C.

Applications

RNA obtained is suitable for downstream molecular biology applications such as RT-PCR, RT-qPCR, Northern, cDNA library, nuclease protection assay, *in vitro* translation, etc.

Robotic Instrument

Use 8-tip combs robotic platforms such as Ideal 32, Bioer GenePure Pro-32, Biobase BNP32 system, RoboPrep® 32 or equivalent systems.

PROTOCOL

I. Sample Preparation

1. Grind between 50-100 mg of fresh or frozen plant sample (or <10 mg lyophilized plant sample) by mechanical disruption. You could use liquid nitrogen and a mortar and a pestle or a commercially homogenizer equipment.
2. Add 600 µL BPRNA-1 Buffer and mix by vortex vigorously. Add 60 µL BPRNA-2 Buffer. Vortex vigorously for at less 30 seconds.
3. Incubate at 55°C, 5 minutes.
4. Centrifuge at 13,000 g for 5 minutes. Transfer the supernatant to the prefilled plate (II, step 6).

II. Automatized Nucleic Acid Purification from Plant Sample

1. Check that there are not plates or combs in the equipment. Turn on and start instrument calibration.
2. Put the 96-well plate at room temperature.
3. Tap down the plate softly.
4. Take off the aluminum foil.
5. Check that plate is properly oriented, that is, that A1 well is at left upper corner and add 5 µL of DNase-I to wells in the columns 1 and 7.
6. Add 400 µL of samples to wells in the columns 2 and 8.
7. Plug 8-strip comb into the rack for tip insertion in the instrument (*see manual of instrument for details*).
8. Put 96-well plate into the instrument with A1 well at left upper corner.
9. Set up the instrument using the Plant RNA Program 1.

PROGRAM 1_STEPS	01	02	03
WELL/ HOLE	6	2	1
NAME	BEADS	BIND	DNASE
WAIT TIME*	0:00	0:00	3:00
MIX TIME*	0:30	5:00	10:00**
MAG TIME*	1:00	1:00	1:00
TEMPERATURE			37°C
VOLUME (µL)	300	700	200
MIXING METHOD	Fast	Slow	Slow
COLLECTION METHOD	Strong	Strong	Strong

* *Minutes: Seconds*
**The Mix Time is customized, 1 minute mixing, 9 minutes paused

10. Once the program has finished, take off the plate and add 500 µL WRNA1-Buffer to wells in the columns 1 and 7.

11. Put 96-well plate into the instrument with A1 well at left upper corner.

12. Set up the instrument using the Plant RNA Program 2.

PROGRAM 2_STEPS	01	02	03	04	05
WELL/ HOLE	1	3	4	5	6
NAME	BIND	WASH I	WASH II	ELUTION	BEADS
WAIT TIME*	0:00	0:00	0:00	3:00	0:00
MIX TIME*	3:00	2:00	2:00	2:00	0:30
MAG TIME*	1:00	1:00	1:00	2:00	0:00
TEMPERATURE				60°C	
VOLUME (µL)	700	800	800	100	300
MIXING METHOD	Medium	Medium	Medium	Slow	Fast
COLLECTION METHOD	Strong	Strong	Strong	Strong	Normal

***** *Minutes: Seconds*

13. Once the program has finished, recover eluted nucleic acid from each well on columns 5 and 11.

It is possible that a few beads might accidentally be transferred along with the final DNA sample, but this is unlikely to interfere with any subsequent applications. However, if you prefer, an additional separation step by centrifugation or magnetic separation can be carried out to remove the beads.

14. Store RNA at -20°C.

15. Remove the plugs and discard them and used plates according your local safety regulations.