

Plant microRNA Purification Kit



Rapid purification of microRNA from plants



- ✓ Fast and easy processing using a rapid spin-column format
- ✓ No phenol or chloroform extractions
- ✓ Isolate all small RNA molecules (<200 nt)
- ✓ Minimal contamination from large RNA molecules and genomic DNA
- ✓ High quality small RNA can be used in various downstream applications

The Best Kit for Plant microRNA for the Following 4 Reasons:

1. Superior performance for microRNA

- ✓ A single robust plant RNA lysis solution works for a wide range of plant species
- ✓ Both large and small RNA can be sequentially purified

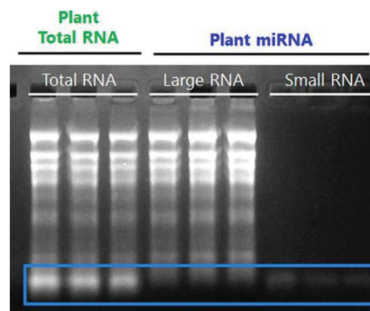


Figure 1. Fractionation of Large and Small RNA. Large RNA and small RNA were sequentially purified using Norgen's Plant miRNA Purification Kit from 50 mg of raspberry leaf tissue and the RNA profile was compared with the RNA isolated using Norgen's Plant/Fungi Total RNA Purification Kit (Cat. #25800). For visualization, 10 μ L of RNA from 50 μ L of RNA elution was loaded on 2% 1x MOPS agarose gel. Norgen's kit was able to isolate both the large and small RNA fractions, and the small RNA fraction does not contain any of the large RNA species.

2. Efficient Concentration

- ✓ High quality of small RNA
- ✓ Norgen's microRNA Purification kit was used to detect three different plant miRNAs

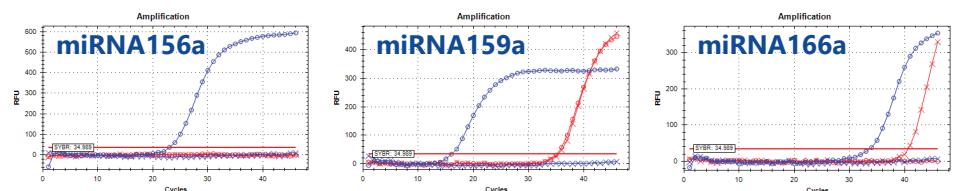


Figure 2. Efficiency of the concentration of miRNA using Norgen's Plant miRNA purification kit to detect three plant miRNAs. Small RNA was concentrated from 50 mg raspberry using Norgen's Plant miRNA purification kit. 3 μ L of the elution was directly used for cDNA generation and 3 μ L of cDNA was used for the CFX96 Touch™ Real-Time PCR Detection System (Bio-Rad). Blue: concentrated small RNA from Norgen's Plant miRNA purification, Red: Total RNA from Plant total RNA kit (Cat. 25800), Circle: +RT, Cross: - RT.

3. Excellent microRNA Purification without Phenol/Chloroform

- ✔ Norgen's microRNA Purification kit outperforms in comparison to Qiagen and Trizol purification methods
- ✔ Phenol free
- ✔ Rapid processing time
- ✔ High quality small RNA

Plant miRNA Purification Kit	
Phenol/Chloroform Extraction	No
Processing Time	15 min
Elution Volume	20 ul
Small RNA Yield (leaf)	1.5-5 ug

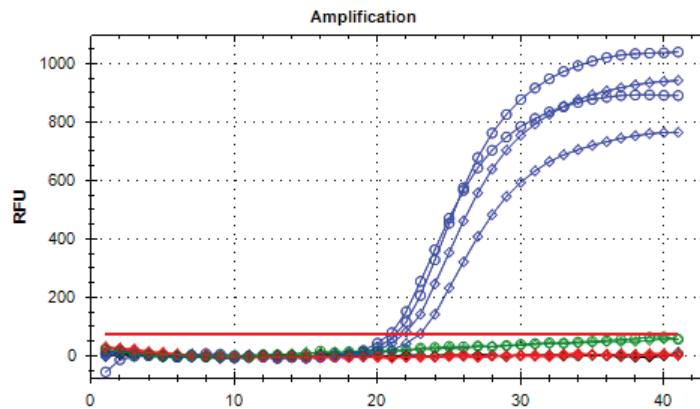


Figure 3. Isolation of Concentrated RNA that can be used in Sensitive Downstream Applications. Three different miRNA purification methods were compared for their ability to isolate and detect plant miRNA. miRNA was purified from grape using three miRNA purification kits according to the manufactures manual. Next, 3 μ L of the elution was directly used for cDNA generation and 3 μ L of cDNA was used for the CFX96 Touch™ Real-Time PCR Detection System (Bio-Rad) to detect the miRNA 159a. As it can be seen, only the miRNA purified using Norgen's kit (blue lines) was amplified, while the miRNA isolated using the other 2 kits failed to amplify (red and green lines). Both of the competitors kits rely on phenol to isolate the miRNA, and therefore residual phenol is likely interfering with the amplification. Norgen's kit isolates high yields of good quality miRNA without the use of phenol. Blue: Norgen Plant miRNA, Red: Competitor Q, Trizol: Green.



About this kit

Norgen's Plant microRNA Purification Kit provides a rapid method for the isolation and purification of small RNA molecules (< 200 nt) from cultured plant cells or plant tissues. These small RNAs include regulatory RNA molecules such as microRNA (miRNA) and short interfering RNA (siRNA), as well as tRNA and 5S rRNA. Small RNA molecules are often studied due to their ability to regulate gene expression. miRNAs and siRNAs are typically 20-25 nucleotides long, and regulate gene expression by binding to mRNA molecules and affecting their stability or translation. The small RNA molecules isolated using Norgen's Plant microRNA Purification Kit can be used in various downstream applications relating to gene regulation and functional analysis, including RT-PCR, miRNA sequencing, northern blotting and microarray analysis.

Ordering information

Description	Size	Cat. Number
Plant microRNA Purification Kit	25 preps	54700

Related Products

Description	Size	Cat. Number
Plant/Fungi Total RNA Purification Kit	50 preps	25800
Plant/Fungi Total RNA Purification Kit	100 preps	31350
Plant/Fungi Total RNA Purification Kit	250 preps	25850
Plant/Fungi Total RNA Purification 96-Well Kit	2 x 96-well plates	31900
Plant RNA/DNA Purification Kit	25 preps	54700

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