

## Single Cell RNA Purification Kit

Norgen's Single Cell RNA Purification Kit provides a rapid and sensitive method for the isolation and purification of total RNA from small input amounts of cultured animal cells, sorted cells, and microdissected samples including laser-capture microdissection (LCM). The kit can recover RNA from as little as a single cell to  $2 \times 10^5$  cells. The kit purifies all sizes of RNA, from large mRNA and ribosomal RNA down to microRNA (miRNA) and small interfering RNA (siRNA). The RNA is preferentially purified from other cellular components such as proteins without the use of phenol or chloroform. The purified RNA is of the highest integrity, and



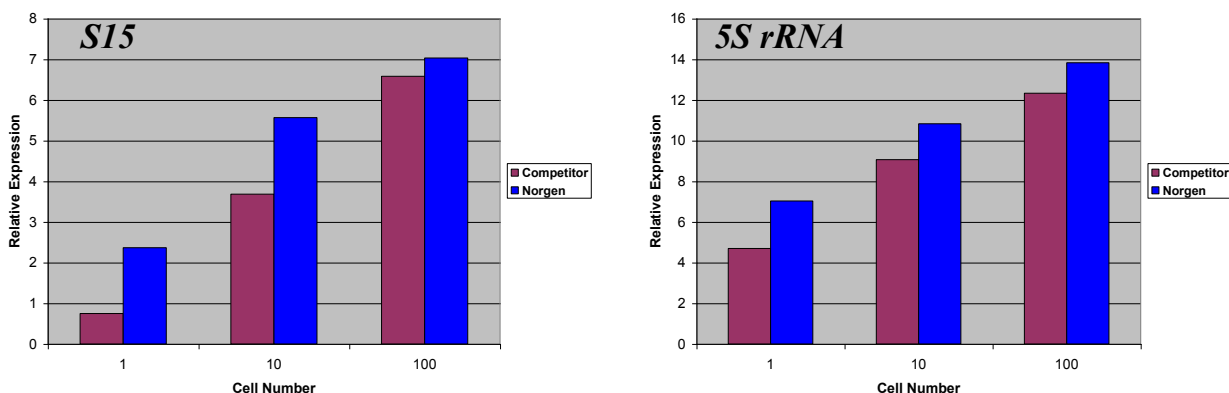
can be used in a number of downstream applications including real time PCR, reverse transcription PCR, Northern blotting, RNase protection and primer extension, and expression array assays.

Kit Specifications			
Column Binding Capacity	10 µg	Acceptable Amount of Starting Material:	
Maximum Column Loading Volume	650 µL	Animal Cells	1 to $2 \times 10^5$ cells
Minimum Elution Volume	8 µL	Laser-Captured Microdissection (LCM)	Up to $2 \times 10^5$ cells
Average RNA Yield:		Size of RNA Purified	All sizes
HeLa Cells ( $1 \times 10^5$ cells)	1.5 µg	Time to Complete 10 Purifications	20 minutes

### Single Cell RNA Purification Kit Benefits

Small elution volumes	The special design of the micro spin-column allows a small elution volume of as little as 8 µL.
Isolate a diversity of RNA species	All RNA species can be isolated, from large mRNA and ribosomal RNA down to microRNA (miRNA) and small interfering RNA (siRNA), without compromising total yield.
Fast and easy processing	Rapid spin-column format allows for the processing of 10 samples in 20 minutes.
Ideal for small samples.	Isolate total RNA from small input amounts of cultured animal cells, sorted cells, and microdissected samples including laser-capture microdissection (LCM). Total RNA has been isolated and detected from as little as a single animal cell.
Recovered RNA is suitable for downstream applications	Purified RNA can be used in a number of downstream applications including real-time PCR, reverse transcription PCR, Northern blotting, RNase protection and primer extension, and expression array analysis requiring the use of intact RNA.

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**Figure 1. Better Efficiency of RNA Recovery at Single Cell Input.** Norgen's Single Cell RNA Purification Kit allows sensitive RNA extraction from as little as a single cell and outperforms competitor's kit that claim similar sensitivity. Total RNA was extracted from a decreasing number of HeLa cells using Norgen's Single Cell RNA Purification Kit and a competitor's spin column purification kit. The extracted RNA was subjected to RT-qPCR to detect the human S15 and 5S rRNA transcript in the isolated RNA. RNA isolated by Norgen's Single Cell RNA Purification Kit showed much higher relative expression of each RNA transcript tested at all cell input number down to single cell.

### Single Cell RNA Purification Kit Contents

1. Buffer RL
2. Wash Solution A
3. Elution Solution A
4. Single Cell RNA Spin Columns
5. Collection Tubes
6. Elution tubes (1.7 mL)
7. Product Insert

### Customer-Supplied Reagents and Equipment

- Benchtop microcentrifuge
- 96 - 100% ethanol
- $\beta$ -mercaptoethanol (Optional)
- 96-well collection plate (single cell)
- PBS (Animal cells)
- Sterile, fine forceps, 42°C water bath, 70% ethanol (LCM)

### Shipping Conditions

The Single Cell RNA Purification Kit is shipped at room temperature.

### Storage Conditions

All solutions should be kept tightly sealed and stored at room temperature. These reagents should remain stable for 1 year in their unopened containers.

Cat #	Description	Quantity
51800	Single Cell RNA Purification Kit	50 preps