

## Fatty Tissue RNA Purification Kit

Norgen's Fatty Tissue RNA Purification Kit provides a rapid and optimized method for the isolation and purification of total RNA from animal tissues with high lipid content, including brain and adipose tissues. The kit purifies all sizes of RNA, from large mRNA and ribosomal RNA down to microRNA (miRNA) and small interfering RNA (siRNA), without the use of inhibitory phenol or chloroform. While the kit is optimized for fatty tissues, it can also be used for most mammalian tissue samples. The purified RNA is of the highest integrity, and can be used in a number of downstream applications including real



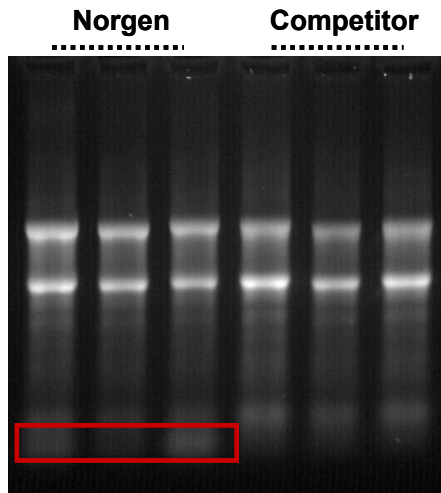
time PCR, reverse transcription PCR, Northern blotting, RNase protection and primer extension, and expression array assays. Purification is based on spin column chromatography using Norgen's proprietary resin as the separation matrix. The RNA is preferentially purified from other cellular components such as proteins without the use of phenol or chloroform.

Kit Specifications			
Column Binding Capacity	50 µg	Size of RNA Purified	All sizes
Maximum Column Loading Volume	650 µL	Time to Complete 10 Purifications	50 minutes
Average RNA Yield:		Maximum Amount of Starting Material:	
Brain (15 mg)	15 µg	Brain and adipose tissues	20 mg

### Fatty Tissue RNA Purification Kit Benefits

No phenol:chloroform extractions	Total RNA is isolated without the use of harmful chemicals such as phenol or chloroform.
Isolate total RNA from hard to extract fatty tissues	Total RNA has been isolated and detected from animal tissues with high lipid content, including brain and adipose tissues.
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).
Genomic DNA removal without the use of nucleases	Removal of contaminating genomic DNA with the use of a rapid spin-column procedure.
Compatible with preservation reagents	Total RNA has been isolated and detected from tissue samples store in RNeasy®
Fast and easy processing	Rapid spin-column format allows for the processing of 10 samples in 50 minutes. 0
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. 0

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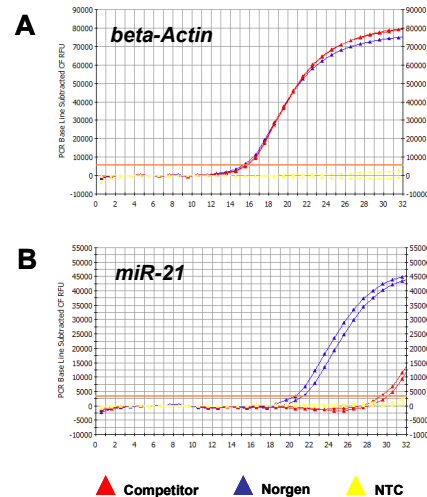
**Figure 1. Isolation of High Quality Brain Total RNA including microRNA without the use of Phenol.** Total RNA was isolated from equal amounts of brain tissue using Norgen's Fatty Tissue RNA Purification Kit and a leading competitor's kit that involves a phenol:chloroform extraction step. The purified RNA was then resolved on a 1.2% formaldehyde-agarose gel. As it can be seen, Norgen not only isolated high and consistent yields of total RNA, but the RNA was also of high quality as evidenced by intactness of the major 28S and 18S rRNA. Importantly, only Norgen's Fatty Tissue RNA Purification Kit was able to recover the small RNA fraction, including the microRNA (red-boxed).

### Shipping Conditions

The Fatty Tissue 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.



**Figure 2. High Yield of a Diversity of RNA Species.** Total RNA was isolated from equal amounts of brain tissue using Norgen's Fatty Tissue RNA Purification Kit and a leading competitor's kit that involves a phenol:chloroform extraction step. The purified RNA was then used as the template in a RT-qPCR for detecting the beta-Actin gene (Panel A) and for detecting miR-21 (Panel B). In both graphs the blue lines correspond to Norgen isolated-RNA and the red lines correspond to competitor-isolated RNA. As it can be seen, Norgen's kit isolated higher yields of microRNA, as indicated by the lower Ct values of the blue lines. Also, Norgen's kit successfully isolated similar amount of large RNA to that of the competitor's kit indicating the full diversity of RNA species isolated.

### Fatty Tissue RNA Purification Kit Contents

1. Buffer RL
2. Lysis Additive B
3. RNase-Free Water
4. Wash Solution A
5. Elution Solution A
6. Mini Spin Columns
7. Collection Tubes
8. Elution tubes (1.7 mL)
9. Product Insert

Cat #	Description	Quantity
36200	Fatty Tissue RNA Purification Kit	25 preps

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