

FFPE RNA/DNA Purification Plus Kit

Norgen's FFPE RNA/DNA Purification Plus Kit provides a rapid method for the sequential isolation and purification of total RNA (including microRNA) and genomic DNA from formalin-fixed paraffin-embedded (FFPE) tissue samples. Using formalin to fix tissues leads to crosslinking of the nucleic acids and proteins, and the process of embedding the tissue samples can also lead to fragmentation of the nucleic acids over time. Norgen's FFPE RNA/DNA Purification Plus Kit provides conditions that allow for the partial reversing of the formalin modifications, resulting in a high quality and yield of nucleic acids. The kit is able to purify all sizes of RNA, from large mRNA and ribosomal RNA down to microRNA (miRNA) and small interfering RNA (siRNA), depending on the age of the FFPE tissue as the degree of fragmenta-



tion of the RNA will increase over time. The RNA is purified from other cellular components 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. The purified genomic DNA is also of the highest quality, and can be used in PCR reactions, sequencing, Southern blotting and SNP analysis.

Kit Specifications	
Column Binding Capacity (RNA)	35 µg
Column Binding Capacity (gDNA)	10 µg
Maximum Column Loading Volume	600 µL
Size of RNA Purified	All sizes, including small RNA (<200 nt)
Maximum Amount of Starting Material	4 sections ≤ 20 µM thick 10 mg of unsectioned block

FFPE RNA/DNA Purification Plus Kit Benefits

Complete column purification	Separate fractionation of RNA and DNA
Reduce variability	RNA and DNA are isolated from a single sample with no splitting of the lysate, thus reducing inconsistent results and variability
Isolate a diversity of RNA species	All sizes of RNA are isolated, from large mRNA down to microRNA
Isolate high quality RNA and DNA	The purified RNA and DNA are of the highest quality and can be used in a number of downstream applications

FFPE RNA/DNA Purification Plus Kit

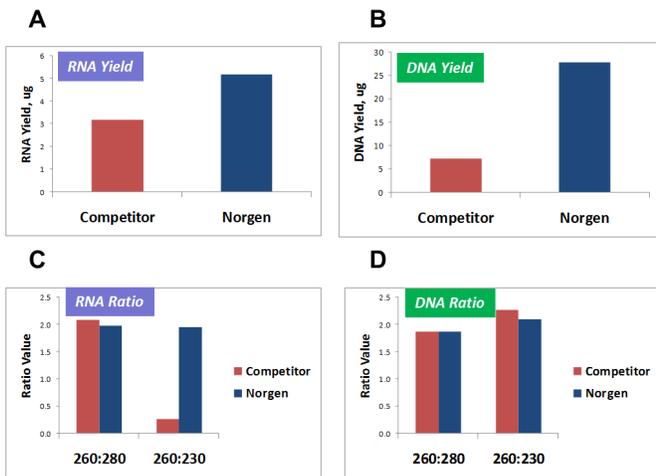


Figure 1. Superior Recovery of High Quality RNA and DNA from FFPE Spleen Tissues.

Norgen's FFPE RNA/DNA Purification Plus Kit isolates FFPE RNA and DNA that exceeds the yield of competitors. Total RNA and DNA was isolated from equal amount of hamster FFPE Spleen sections (20 micron thickness) using Norgen's FFPE RNA / DNA Purification Plus Kit and a leading competitor's kits. Triplicate isolations were performed for each product. The top graphs demonstrate the mean yield of RNA (Panel A) and DNA (Panel B) according to NanoDrop measurement. The bottom graphs showed the mean 260:280 ratio and 260:230 ratio of RNA (Panel C) and DNA (Panel D) according to NanoDrop measurement. Norgen's kit consistently purified total RNA and DNA with a higher yield and higher quality than for those obtained using the market competitor's kits.

FFPE RNA/DNA Purification Plus Kit Contents

1. Digestion Buffer A
2. Buffer RL
3. Enzyme Incubation Buffer A
4. Wash Solution A
5. Elution Solution A
6. Elution Buffer F
7. Proteinase K
8. DNase I
9. RNA Purification Micro Columns
10. DNA Purification Micro Columns
11. Collection Tubes
12. Elution Tubes

Storage Conditions

All solutions should be kept tightly sealed and stored at room temperature. The DNase I and Proteinase K should be stored at -20°C upon arrival. These reagents should remain stable for at least 1 year in their unopened containers.

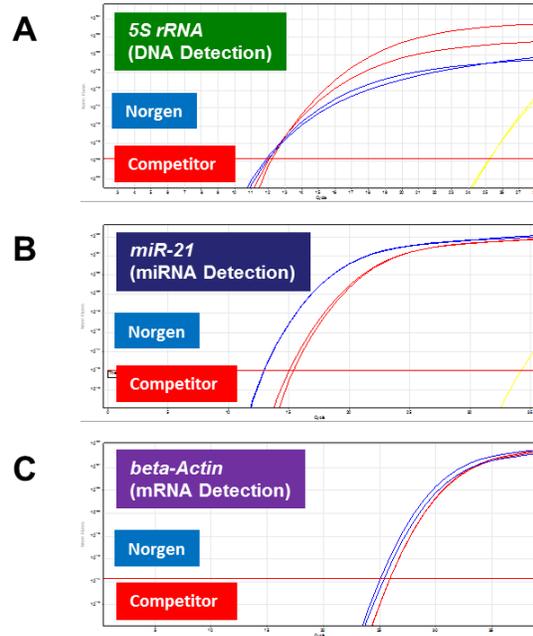


Figure 2. Recovery of High Quality DNA and True Total RNA including microRNA from Hamster Spleen

Genomic DNA isolated using Norgen's FFPE RNA/DNA Purification Plus Kit is of high quality with effective qPCR amplification. Panel A showed that in a qPCR using primers against 5S rRNA gene using equal amount of FFPE DNA as template, the DNA isolated with Norgen's kit showed better amplification (lower Ct value). Moreover, Norgen's FFPE RNA/DNA Purification Plus Kit isolates true total RNA including microRNA. With same amount of RNA as template in RT-qPCR reactions for transcripts of miR-21 (Panel B for microRNA) and beta-Actin (Panel C for mRNA), RNA isolated by Norgen showed better amplification in beta-Actin and significantly better in miR-21 microRNA.

Customer-Supplied Reagents and Equipment

You must have the following in order to use the FFPE RNA/DNA Purification Plus Kit:

- Benchtop microcentrifuge
- 50 - 55°C Incubator or Water Bath
- 80°C Incubator or Water Bath
- 90°C Incubator or Water Bath
- 96 - 100% ethanol
- Xylene, histological grade
- b-mercaptoethanol (optional)
- Ice Bucket

Cat #	Description	Quantity
54300	FFPE RNA/DNA Purification Plus Kit	50 preps