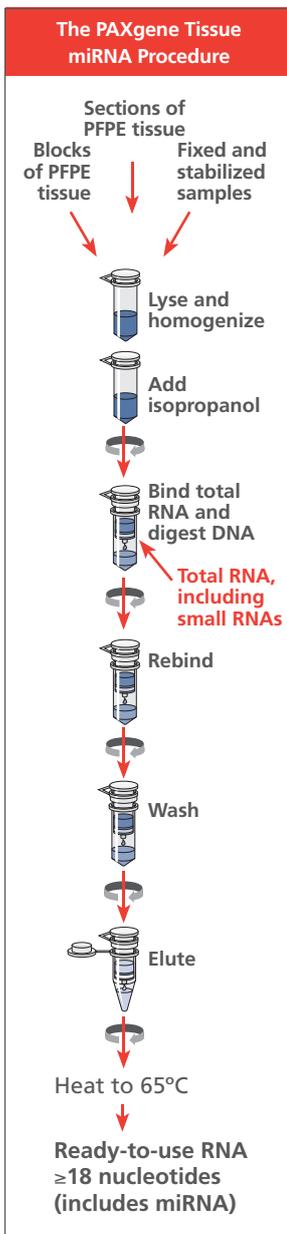


# miRNA Isolation with the PAXgene<sup>®</sup> Tissue miRNA Kit

- Optimized protocol for copurification of total RNA, including miRNA
- Efficient capturing of small RNAs ( $\geq 18$  nucleotides)
- No enzyme inhibition
- Reliable quantification of all possible miRNA
- Highly reproducible



# For isolation and purification of total RNA, including miRNA, from tissue samples fixed and stabilized using the PAXgene Tissue System



## RNA purification principle and procedure

Disruption and homogenization of the tissue sample is performed in binding buffer, Buffer TM1. After centrifugation to remove residual cell debris, isopropanol is added to the lysate to provide appropriate binding conditions for all RNA molecules 18 nucleotides and longer. The sample is then applied to a PAXgene RNA MinElute® spin column, where total RNA binds to the membrane and contaminants are efficiently washed away. Between the first and second wash steps, the membrane is treated with DNase I to remove trace amounts of bound DNA. After the wash steps, RNA, including miRNA, is eluted in a low-salt elution buffer and denatured by heating.

☑ **Effective purification of total RNA, including miRNA, before or after embedding in paraffin**

## RNA quality

Total RNA, including miRNA, purified using the PAXgene Tissue miRNA Kit is highly pure. Genomic DNA contamination is minimized, and purified RNA is ready to use in downstream applications with no detectable PCR inhibition.

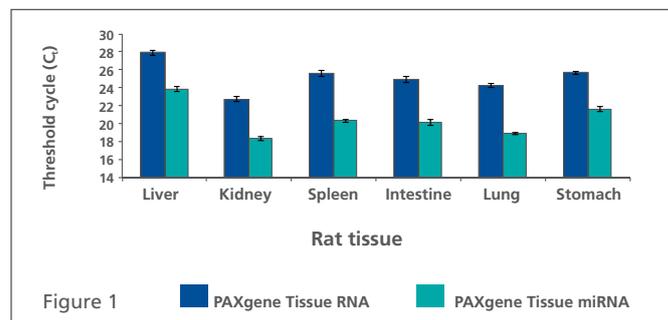


Figure 1

**Figure 1. Efficient purification of miRNA with the PAXgene Tissue miRNA Kit.**

RNA purification from sections of six different rat PAXgene Tissu-fixed, paraffin-embedded (PFPE) tissue types using the PAXgene Tissue RNA Kit or PAXgene Tissue miRNA Kit. Amplification in a quantitative, real-time RT-PCR assay for the miRNA miR-10a using the QIAGEN miScript® System.

☑ **Effective purification of miRNA from tissues with preserved morphology**

**Figure 2. miRNA expression analysis in human breast cancer tissue.**

miRNA purified from mirrored human breast cancer tissue fresh frozen in liquid nitrogen using the QIAGEN miRNeasy Kit, or from sections of PFPE tissue using the PAXgene Tissue miRNA Kit. A scatterplot showing  $C_t$  values from different single miRNA-specific RT-qPCR assays using the QIAGEN miScript System: miR9, -10a, -10b, -29a, -103, -125b, -143, -145, -192 and miScript PCR controls RNUA1, RNU5A, RNU6B, SNORD25, SCARNA17, SNORA73A;  $R^2$ : coefficient of determination.

☑ **High concordance of miRNA expression between total RNA isolated from PFPE and flash-frozen tissue**

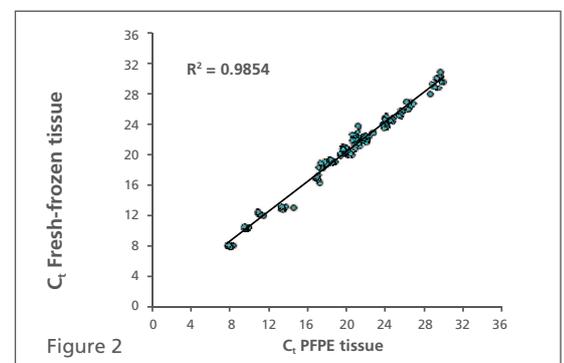


Figure 2

**Order Information: PAXgene Tissue miRNA Kit (50)**

cat. no. 767134

To find the distributor closest to you: [www.preanalytix.com](http://www.preanalytix.com)

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