

miRCURY™ RNA Isolation Kits

Fast, easy and robust RNA isolation from various sample types with superior yield and RNA quality for downstream microRNA profiling

At a glance

- RNA isolation from a broad range of samples including biofluids, cells and tissue
- Superior RNA yield and quality
- Fast, easy and robust protocols for high reproducibility
- High purity –phenol free, minimal inhibitor carry-over
- Fully compatible with Exiqon's miRCURY LNA™ microRNA products
- Cost efficient

Product coverage

We offer three different RNA purification kits:

- **miRCURY™ RNA Isolation Kit – Biofluids** purifies low abundant small RNA from samples such as serum, plasma, urine and CSF.
- **miRCURY™ RNA Isolation Kit – Cell & Plant** provides a rapid method for purification of total RNA from cultured animal cells, small tissue samples, blood, yeast, fungi, bacteria and plants.
- **miRCURY™ RNA Isolation Kit – Tissue** is specifically optimized for purification of total RNA from animal tissue samples.

A guide for selecting the right isolation kit for a given sample as well as the recommended microRNA detection method is shown in Figure 1.

Purification Technology

The miRCURY™ RNA Isolation Kits are based on spin column chromatography using a proprietary resin as the separation matrix. RNA is separated from other cell components, such as proteins, without the use of toxic phenol or chloroform in a fast and easy procedure. This leads to high purity RNA and high reproducibility between individual isolations.

The miRCURY™ RNA Isolation Kits include optimized protocols for a large number of sample types. These protocols all consist of four simple steps:

1. Lysis and protein precipitation
2. Addition of ethanol/isopropanol and loading of the column
3. Washing the column with the included Wash solution
4. Elution of purified RNA from the column

All kits contain spin columns and reagents for 50 RNA purifications.

Biofluids Kit

miRCURY™ RNA Isolation Kit - Biofluids, is optimized for small RNA purification from serum and plasma samples as well as other biofluids. Purification of microRNA from biofluids is challenging due to the often very limited RNA content and high levels of qPCR inhibitors.

Figure 1. Isolation kit selection guide. Select the right sample isolation kit and detection method for your samples.

Sample Type	Recommended kit	RNA fraction	Recommended detection method
Serum Plasma Urine CSF Other biofluids	miRCURY™ RNA Isolation Kit - Biofluids	Small RNA	miRCURY LNA™ Universal RT microRNA PCR
Cultured cells Plant Tissues Brain and Adipose Tissue* Full Blood (non-coagulating)	miRCURY™ RNA Isolation Kit - Cell & Plant	Total RNA	miRCURY LNA™ Universal RT microRNA PCR or miRCURY LNA™ microRNA Arrays
Tissue	miRCURY™ RNA Isolation Kit - Tissue		

* For brain and adipose tissue extra Lysis Additive is required.



The miRCURY™ RNA Isolation Kit- Biofluids is specifically optimized for handling low yield samples and for reducing inhibitor carry-over to a minimum. The superior RNA yield and purity possible with the miRCURY™ RNA Isolation Kit – Biofluids is demonstrated in Figure 2.

For updated product information, please visit www.exiqon.com/rna-isolation

Figure 2. miRCURY™ RNA Isolation Kit - Biofluids benchmark. Call-rate (percent of microRNAs detected) from the miRCURY LNA™ Universal RT microRNA PCR serum/plasma panels using RNA preparations from the same plasma sample from four different kits.

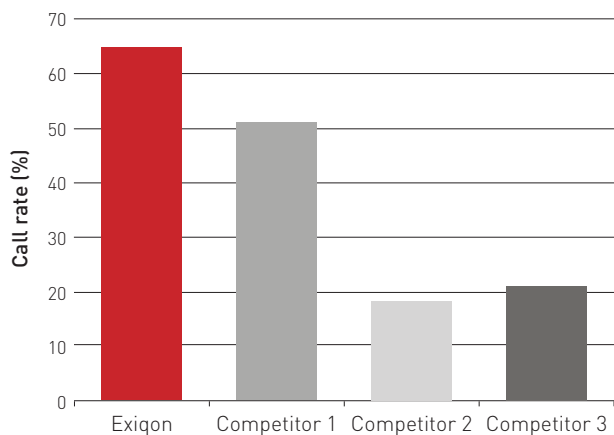
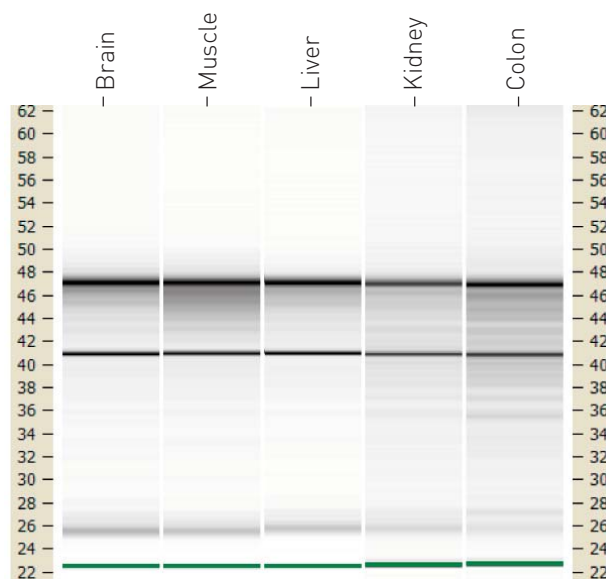


Figure 3. High quality total RNA from difficult tissues. Total RNA was isolated from five mouse tissues using the miRCURY™ RNA Isolation Kit – Tissue. Brain and muscle tissues are usually considered difficult sources of RNA as they are very rich in lipids and fiber, respectively.



Cell & Plant Kit

The miRCURY™ RNA Isolation Kit – Cell & Plant is used to purify total RNA of the highest quality, which is suitable for a large number of downstream applications, including quantitative real-time PCR, microarray analysis, Northern blotting, RNase protection and primer extension assays. In addition, this kit is ideal for use with our miRCURY LNA™ microRNA PCR, Array and Northern blot products.

Tissue Kit

The miRCURY™ RNA Isolation Kit – Tissue is optimized for RNA purification from all types of animal tissue. For better removal of proteins from difficult fiber-rich tissue, e.g. muscle, or lipid-rich tissue such as brain, the kit also includes Proteinase K. The miRCURY™ RNA Isolation Kit - Tissue produces excellent quality total RNA from such difficult tissues (Figure 3). In addition the kit is fully compatible with tissue stored in RNeasy® and the resulting RNA is of the same high quality as RNA from fresh frozen tissue.

Selected Publications

- Eldh *et al.* Mol Immunol. 2012. 50:278-86.
- Mohan *et al.* PLoS One. 2012;7:e32853.
- Lin *et al.* J Surg Oncol. 2012 105:175-82.

Ordering information

Kit	Product description	Product no.
miRCURY™ RNA Isolation Kit – Cell & Plant (50)	50 spin columns, reagents and buffers for total RNA isolation	300110
miRCURY™ RNA Isolation Kit – Tissue (50)	50 spin columns, enzyme, reagents and buffers for total RNA isolation	300111
miRCURY™ RNA Isolation Kit – Biofluids (50)	50 spin columns, reagents and buffers for miRNA isolation	300112
miRCURY™ RNA Isolation Kit – Biofluids (10)	10 spin columns, reagents and buffers for miRNA isolation	300113

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