

# Two-Tailed qPCR Assays

A novel method for highly accurate miRNA quantification

- A highly specific, sensitive and cost-effective system
- Detect down to ten target miRNA molecules
- Improve discrimination between similar miRNAs

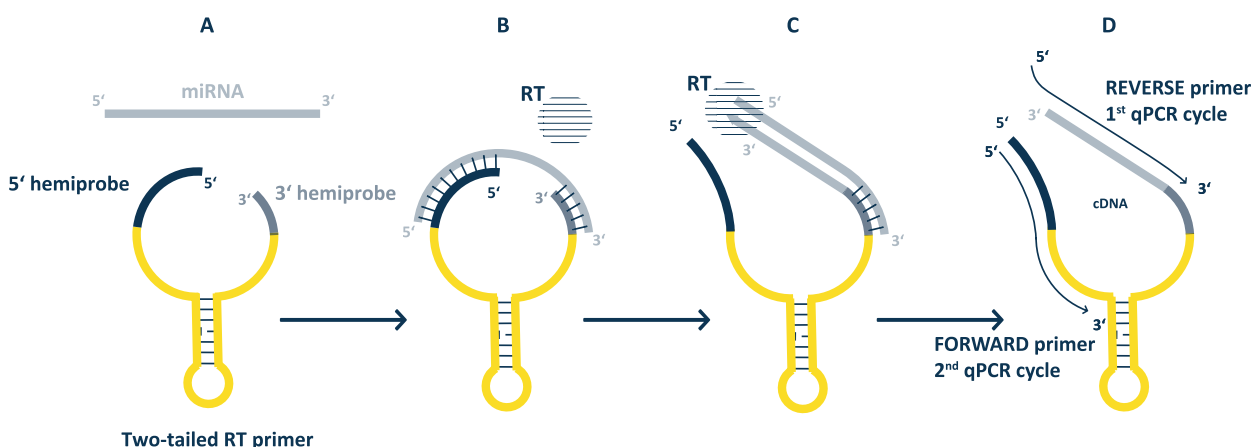
## Background

The challenge detecting small microRNAs is that two conventional PCR primers do not fit the target as their combined length is almost twice that of the microRNA. Older techniques have solved this by extending the microRNA. This compromises the assay sensitivity and specificity, as only one of the PCR primers sense the actual microRNA sequence; the other senses the generic extension. Furthermore, these methods fail to detect microRNAs modified in

the 3'-end as it interferes with the extension process. BioVendor miRNA Two-Tailed RT-qPCR assays offer a superior solution. Instead of using a single binding probe, Two-Tailed PCR uses two hemiprobes, that bind to different stretches of the microRNA, and are connected by a folded tether. While each hemiprobe alone is too short to bind the microRNA, when both are complementary they bind cooperatively.

## Advantages

- Binding is exceeding specific, as a mismatch is much more profound in a short hemiprobe
- The cDNA formed can then be PCR amplified using two sequence specific primers
- Golden standart SYBR dye is used for the detection
- Multiplexing of up to 10 miRNA targets in one RT reaction



# TT-qPCR Kits

## Assay design and validation for microRNA profiling

Two-Tailed RT-qPCR assays are designed for microRNA targets specified by the client.

- In-silico designed but in-vitro tested unique Two-Tailed primers
- Specific miRNA detection and quantification system with superior sensitivity
- Development of customized assays does not effect the product price

The current portfolio combines validated kits and on-demand developed assays for the specific miRNA quantitation. All assays are validated on both RT and qPCR level on synthetic microRNA and basic set of biological samples.

Covered by patent No.: **PTC/US15/45966**

## Service

### Making miRNA measurements available to any researcher

Service providing microRNA determination performed by experts in a specialized laboratory

The BioVendor team of scientific specialists provides a measurement service of microRNA quantification in a fully equipped laboratory.

You only provide us with properly collected samples and a list of miRNAs to measure.

- For scientists who cannot perform miRNA determinations in their own labs
- The best opportunity to generate pilot data in the project preparation phase
- Project planning support
- Supervised by experts experienced in miRNA analysis

For more information, contact our product manager: [gresakova@biovendor-mdx.com](mailto:gresakova@biovendor-mdx.com)