

# Lyo-Ready™ 1-Step RT-qPCR Buffer

## Product Handling Guide

|                 |          |
|-----------------|----------|
| Shipping:       | Blue Ice |
| Catalog number: | MDX052   |
| Batch No.:      | See vial |
| Concentration:  | 2x       |

Store at -20 °C



### Storage and stability:

Lyo-Ready™ 1-Step RT-qPCR Buffer is shipped on dry/blue ice. On arrival store at -20 °C for optimum stability. Repeated freeze/thaw cycles should be avoided. Thawing during transportation does not affect the product performance. Solutions should be mixed/equilibrated after each thawing to avoid phasing.

### Expiry:

When stored under the recommended conditions and handled correctly, full activity of the kit is retained until the expiry date on the outer box label.

### Safety precautions:

Read and understand the SDS (Safety Data Sheets) before handling the reagents. Hardcopies of the SDS will be provided with the first shipment, thereafter they will be available upon request.

### Quality control:

Meridian operates under ISO 13485 Quality Management System. Lyo-Ready™ 1-Step RT-qPCR Buffer and its components are extensively tested for activity, processivity, efficiency, heat activation, sensitivity, absence of nuclease contamination and absence of nucleic acid contamination.

### Notes:

For research and further manufacturing use only.

## Description

Lyo-Ready™ 1-Step RT-qPCR Buffer is a glycerol-free qPCR mix containing RNase Inhibitor, reaction buffer, dNTP, MgCl<sub>2</sub> and lyo-exipients. In order to produce room temperature lyophilized RT-qPCR reagents, Reverse Transcriptase, Taq polymerase, assay specific primers and probes are added to Lyo-Ready™ 1-Step RT-qPCR Buffer for subsequent lyophilization.

## Kit components

Table 1

| Component                            |
|--------------------------------------|
| Lyo-Ready™ 1-Step RT-qPCR Buffer, 2x |

## Users Guidelines

### Master mix preparation

Recommended reagent volumes per 20 µL RT-qPCR mix are given in Table 2.

Table 2

| Reagent                              | Volume             |
|--------------------------------------|--------------------|
| Lyo-Ready™ 1-Step RT-qPCR Buffer, 2x | 10 µL              |
| Glycerol-Free Taq HS 50 U/µL         | 0.1 - 0.6 U/µL     |
| 100x Lyo-compatible MMLV-RT*         | 0.2 µL             |
| Primer-Probe Mix, 20x                | 1 µL               |
| Water                                | x µL               |
| <b>Total volume</b>                  | <b>Up to 20 µL</b> |

\*Lyo-Compatible MMLV-RT suggested concentration in the final reaction is 0.06 U/µL

Dispense into reaction vials and immediately transfer into a freeze-dryer and run a suitable drying cycle.

For long-term storage at ambient temperatures, the lyophilized product from the freeze-dryer should be packaged at low relative humidity conditions.

## Assay setup

Rehydrate the lyophilized RT-qPCR mix in the reaction vials with 20 µL template-containing solution and run RT-qPCR.

The RT-qPCR conditions in Table 3 are suitable for amplicons of up to 200 bp. These cycling parameters have been optimized for Lyo-Ready™ 1-Step RT-qPCR Buffer on a number of platforms, however they can be varied to suit different machine-specific protocols.

Table 3

| Step                  | Temperature   | Time   | Cycles |
|-----------------------|---------------|--------|--------|
| Reverse transcription | 45 °C - 50 °C | 10 min | 1      |
| Polymerase activation | 95 °C         | 2 min  | 1      |
| Denaturation          | 95 °C         | 5 s    | 45     |
| Annealing/Extension   | 60 °C         | 20 s   |        |

| Related Products               | Cat. No. |
|--------------------------------|----------|
| Glycerol-Free Taq HS 50 U/µL   | MDX011   |
| Aptamer Taq HS (Glycerol-Free) | MDX015   |
| Lyo-Compatible MMLV-RT         | MDX043   |
| 55C MMLV-RT                    | MDX117   |
| Lyo-Ready 1-Step RT-qPCR Mix   | MDX024   |

## Technical Support

For any technical enquiries, please contact our Technical Support team via email at: [mbi.tech@meridianlifescience.com](mailto:mbi.tech@meridianlifescience.com)