

# Lyo-Ready™ dUTP 1-Step RT-qPCR Mix Product Handling Guide

Shipping: On Dry/Blue Ice  
Catalog number: MDX113  
Batch No.: See vial  
Concentration: 2x

Store at -20 °C



## Storage and stability:

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

## Kit components

Table 1

Component
Lyo-Ready™ dUTP 1-Step RT-qPCR Reaction Mix, 2x
Lyo-compatible MMLV-RT*
Enzyme Dilution Buffer, 10x

## Users Guidelines

Prepare the following working solutions immediately prior to formulating RT-PCR mix:

- 1x Enzyme Dilution Buffer
  - Dilute Enzyme Dilution Buffer 10-fold in nuclease-free water
- 100x Lyo-compatible MMLV-RT
  - Dilute Lyo-compatible MMLV-RT\* to 6 U/μL in 1x Enzyme Dilution Buffer

*\*Enzyme concentration is provided in the Lyo-compatible MMLV-RT Certificate of Analysis*

## Master mix preparation

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

Table 2

Reagent	Volume
Lyo-Ready™ dUTP 1-Step RT-qPCR Reaction Mix, 2x	10 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>

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™ dUTP 1-Step RT-qPCR Mix 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	

## Technical Support

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