

Liquid Stable Ready RNA/DNA qPCR Mix

Product Handling Guide

Shipping:	Blue Ice
Catalog number:	MDX998
Batch No.:	See vial
Concentration:	5x

Store at -20 °C



Storage and stability:

Liquid Stable Ready RNA/DNA qPCR Mix is shipped with blue ice. On arrival, store at -20°C before use. After thawing, Liquid Stable Ready RNA/DNA qPCR Mix can be stored at ambient temperature (<20°C) for several months. Repeated freeze/thaw cycles should be avoided. Solutions should be mixed/equilibrated after each thawing to avoid phasing.

Safety precautions:

Read and understand the SDS (Safety Data Sheets) before handling the reagents. The SDS (Safety Data Sheets) are available upon request.

Quality control:

Meridian operates under ISO 13485 Quality Management System. Liquid Stable Ready RNA/DNA qPCR Mix is tested functionally before its release (see Test Release document).

Notes:

For research or further manufactured use only.

Description

Liquid Stable Ready RNA/DNA qPCR Mix is a combination of the latest advances in buffer chemistry containing dUTP and PCR enhancers and stabilizers, reverse transcriptase together with an antibody-mediated hot-start polymerase. Liquid Stable Ready RNA/DNA qPCR Mix has been designed to enable pre-assembled qPCR assay (MDX998 + assay oligonucleotides) to be stable at ambient temperature. In addition, it has been optimized for highly reproducible and accurate assay, delivering exceptional performance in multiplex assays, even under fast thermal cycling conditions. Liquid Stable Ready RNA/DNA qPCR Mix formulation is compatible to applications where reduction of false positives from cross-over contamination is critical.

Kit components

Table 1

Component
Liquid Stable Ready RNA/DNA qPCR Mix, 5x
MgCl ₂ Solution, 50 mM

Users Guidelines

Preparation of pre-assembled RT-qPCR assay for ambient temperature storage

Under aseptic condition and using sterile plasticware, assemble Liquid Stable Ready RNA/DNA qPCR Mix with assay oligonucleotides. Recommended reagent volumes per 20 µL RT-qPCR reaction are given in Table 2.

To minimize evaporation, we recommend to avoid large empty volume in the storage vessel and ensure that it is properly sealed/closed.

Table 2

Reagent	Volume/rxn
Liquid Stable Ready RNA/DNA qPCR Mix, 5x	4 µL
Oligonucleotide Mix, 20x*	1 µL

* Primer and probe concentrations are assay-dependent and must be optimized by the user.

The pre-assembled assay can now be stored at ambient temperature (<20°C) away from light. If stored correctly, the mix will retain full activity for up to a year.

Technical Support

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

Assay setup

At the time of test, add the RNA template and MgCl₂ to the pre-assembled Liquid Stable Ready RNA/DNA qPCR assay. The recommended final concentration of MgCl₂ is 7.5 mM in 1x reaction. MgCl₂ can be added to the reaction together with the template as described in Table 3a, or separately as long as the final concentration in the reaction 1x is 7.5 mM as described in Table 3b.

Table 3a

Reagent	Volume
Pre-assembled Liquid Stable Ready RNA/DNA qPCR assay, 4x	5 µL
RNA template (containing 10 mM MgCl ₂)	15 µL
Total volume	Up to 20 µL

Table 3b

Reagent	Volume
Pre-assembled Liquid Stable Ready RNA/DNA qPCR assay, 4x	5 µL
MgCl ₂ Solution, 50 mM	3 µL
RNA template	As required
Water	As required
Total volume	Up to 20 µL

The RT-qPCR conditions in Table 4 are suitable for amplicons of up to 200 bp. These cycling parameters have been optimized for Liquid Stable Ready RNA/DNA qPCR Mix on a number of platforms, however they can be varied to suit different machine-specific protocols. Always include non-template controls, to monitor the potential occurrence of false-positive amplifications.

Table 4

Step	Temperature	Time	Cycles
Reverse Transcription	50 °C	10 mins	1
Polymerase activation	95 °C	2 min	1
Denaturation	95 °C	10 s	45
Annealing/Extension*	60 °C	30 s	

*When multiplexing, the annealing/extension time can be extended up to 60 seconds and/or the annealing/extension temperature can be increased up to 65 °C.

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