

Lyo-Ready™ Direct RNA/DNA LAMP Blood

Product Handling Guide

| | |
|-----------------|------------------|
| Shipping: | Dry ice/blue Ice |
| Catalog number: | MDX125 |
| Batch No.: | See vial |
| Concentration: | 4x |

Store at -20 °C



Storage and stability:

Lyo-Ready™ Direct RNA/DNA LAMP Blood is shipped on dry or blue ice. On arrival store at -20°C for optimum stability. Repeated freeze/thaw cycles should be avoided. 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™ Direct RNA/DNA LAMP Blood 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 or further manufactured use only.

Description

Lyo-Ready™ Direct RNA/DNA LAMP Blood is a glycerol-free mix for isothermal applications such as Loop-Mediated Isothermal Amplification (LAMP). It contains Reverse Transcriptase, Bst-DNA Polymerase (exo-), reaction buffer, dNTP and excipients allowing ambient temperature stabilization of assays through lyophilization.

Lyo-Ready™ Direct RNA/DNA LAMP Blood has been designed for amplification of RNA and DNA targets directly from whole blood samples and its derivatives, such as plasma and serum. In order to produce an ambient-temperature stable RT-LAMP reaction mix, specific primers can be added to Lyo-Ready™ Direct RNA/DNA LAMP Blood prior to lyophilization. The mix tolerates the effects of inhibitors present in crude blood and its derivatives, meaning that the dried pellet can be rehydrated with whole blood, plasma or serum samples.

Kit components

Table 1

| Component |
|--|
| Lyo-Ready™ Direct RNA/DNA LAMP Blood, 4x |

Users Guidelines

Thawing during transportation does not affect product performance. Prior to use or storage at -20 °C, the thawed reagents must be thoroughly mixed by briefly vortexing.

Please note that this mix does not contain magnesium chloride (MgCl₂), the concentration required with this mix has been optimised to be 5 mM in final reaction, however costumers are advised to optimise the concentration of MgCl₂ for their individual assay needs.

Suggested LAMP reaction conditions:

The following protocol is for a standard 20 µL RT-LAMP/LAMP reaction to be used as a starting point for optimization.

| Reagent | Volume | Final Concentration |
|---|----------|---------------------|
| Lyo-Ready™ Direct RNA/DNA LAMP Saliva, 4x | 5 µL | 1x |
| MgSO ₄ (100 mM) (not supplied) | 1 µL | 5 mM |
| FIP/BIP Primers (20x) | 1 µL | 1.6 µM* |
| F3/B3 Primers (20x) | 1 µL | 0.2 µM* |
| Loop F/B Primers (20x) | 1 µL | 0.8 µM* |
| Sample RNA/DNA | variable | > 10 copies |
| Water (ddH ₂ O) | To 20 µL | |

Table 2

* Primer concentration and ratio need be optimized.

Incubate at 65 °C for 60 minutes.

The amount of inhibition tolerated by Lyo-Ready™ Direct RNA/DNA LAMP Blood is variable depending on several factors, including assay design and sample quality. For this reason, an initial sample titration is recommended.

Lyo-Ready™ Direct RNA/DNA LAMP Blood is compatible with fluorescence detection methods such as intercalating dyes (e.g. SYTO-82).

If analysing the LAMP products requires opening the reaction tubes, it is strongly recommended to carry out the analysis in a separate/designated area to avoid contamination.

It is recommended to include a no-template control (NTC) to verify product specificity.

Lyophilization

For lyophilization protocols, please consult our "Lyophilization and Post-Lyophilization User Guideline".

Associated Products

| Component | Cat. No. |
|---------------------------------------|----------|
| Lyo-Ready™ LAMP Mix | MDX097 |
| Lyo-Ready™ RT-LAMP Mix | MDX108 |
| Air-Dryable™ DNA LAMP | MDX119 |
| Air-Dryable™ RNA/DNA LAMP | MDX118 |
| Lyo-Ready™ Direct DNA LAMP Blood | MDX124 |
| Lyo-Ready™ Direct DNA LAMP Saliva | MDX134 |
| Lyo-Ready™ Direct RNA/DNA LAMP Saliva | MDX135 |

Technical Support

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