Doctor Vida Universal LAMP Master MIX

Ref. 133001018

Índex

OVERVIEW

Doctor Vida Universal LAMP Master Mix contains strand-displacing DNA polymerase enzyme and LAMP buffer. Lysis buffer, LAMP primers and dye are not included in the kit.

Even though the lysis buffer is not provided within the kit, it is required to perform the test. Thus, the lysis buffer shall be ordered separately under the reference 133001017.

APPLICATIONS

The Doctor Vida Universal LAMP Master Mix is suitable to be used with extracted DNA or non-extracted samples from environment, plants, humans, and animals.

KIT CONTENTS

Doctor Vida Universal LAMP Master Mix – 100 reactions (ref. 133001018)

SHIPPING AND STORAGE

The product is shipped at room temperature and stored at -20ºC.

PRODUCT USE LIMITATIONS

The Doctor Vida Universal LAMP Master Mix is intended for research use only. This product is not intended for the diagnosis, prevention, or treatment of a disease.

SAFETY INFORMATION

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the safety data sheet (SDSs) available online in convenient and compact PDF format at https://doctorvida.store/.
STAB VIDA recommends to have available the contacts of medical emergency and poison center for all staff members.

EQUIPMENTS AND REAGENTS NOT PROVIDED WITH THE PRODUCT

1. Pipets and pipet tips (aerosol resistant)
2. Laboratory consumables
3. LAMP primers
4. LAMP Dye
5. Doctor Vida Lysis buffer (ref. 133001017)
6. Nuclease free water
7. Doctor Vida Pocket device (ref. 133001002) or Real-Time PCR equipment
8. Evaporation Lock, only if Doctor Vida Pocket equipment is used (Contact Doctor Vida support for more information).

PROTOCOL

1. **Important points before starting**

EQUIPMENT DOCTOR VIDA POCKET DEVICE (REF. 133001002)

- Install Dr Vida mobile App from Google Play Store or App Store and search for "Dr Vida pocket PCR".
- Set up your reaction protocol through the API server using the link https://api.live.pocket.doctorvida.com/customer/login and log in with App Dr Vida mobile App credentials. If needed, contact Doctor Vida support team for any questions regarding protocol set-up.
- Connect the Dr Vida pocket device to a power outlet using the provided power adapter.
- Open the Dr Vida App, go to devices menu ( ) and connect with Dr Vida pocket device via Bluetooth.

EQUIPMENT REAL-TIME PCR

- If you are using a Real-Time PCR equipment instead of Doctor Vida pocket device, ignore the previous steps. Follow the "Instructions of Use" of the Real-Time PCR equipment.

PRIMERS PREPARATION

- Using a microcentrifuge, briefly spin the lyophilized primers and reconstitute them in the specified volume of nuclease-free and DNA/RNA-free water to achieve a final concentration of 100 µM. Mix thoroughly by pipetting up and down 10 times, then incubate at room temperature for 5 minutes.
- Primers stock solution (100µM) should be stored at -20ºC for long periods.
- If required, dilute primers to 10µM with nuclease and DNA/RNA free water and mix well by pipetting 10 times.

2. Sample preparation

Follow the “Instructions For Use” for Lysis Buffer (ref. 133001017).

If needed, contact Doctor Vida support team for any questions regarding sample preparation for your particular application.

3. Perform LAMP reaction

Important note: Before performing the experiments with the desired samples, anon-template reaction (5 uL of lysis buffer) and positive controls reaction are recommended.

3.1 Each test tube is prepared in accordance with the following table:

Important Note: This protocol can be used as a starting point; however, the LAMP reaction may require further optimization.

	1 reaction
Universal LAMP Master Mix	15 uL
LAMP dye	1X
Primer F3 100uM	0.2 uM
Primer B3 100uM	0.2 uM
Primer FIP 100uM	1.6uM
Primer BIP 100uM	1.6uM
Primer LF 100uM	0.4uM
Primer LB 100uM	0.4uM
Nuclease free water	Up to 20uL
Lysate	5uL
Final volume	25uL

3.2 Mix well all the components.

3.3 **In case Doctor Vida equipment is used**, add 50uL of Evaporation Lock to each test tube.

Important note: This organic reagent is immiscible with the reaction mixture, forming a separate phase. It prevents the evaporation of the reaction mixture during the assay. The reagent can be stored at room temperature. However, if the temperature drops below 18ºC, the reagent will freeze. In such cases, please equilibrate the reagent to a higher temperature until it becomes liquid before use.

3.4 Add 5uL of lysate to each test tube. Incubate 5 minutes at room temperature.

3.5 Analyse the test tube (with the sample) in Doctor Vida pocket device, following the instructions in Doctor Vida mobile App or in Real time PCR equipment.

Important Note 1: As a starting point, you can select the reaction conditions: 65ºC, 30 -60 minutes.

TROUBLESHOOTING

This troubleshooting guide may be helpful in solving any problems that may arise. For more information, contact Doctor Vida technical support. We are always happy to answer any questions you may have about either the information and protocols. Please see contacts in Manufacturing information section.

	Suggestions
Low yield or no product	
Low amount of starting template	Perform the test with known positive sample. Increase the amount of template.
Primers don´t match the target	Review primer design.
Low specificity	
Low reaction temperature	Increase the reaction temperature.
Unspecific primers	Perform the negative-control (only Lysis buffer, without sample), if the result is positive review primer design.
Carry-over contamination	Prepare new sample and/or new test tube. Avoid opening the LAMP reaction tube once the reaction is over. If this is mandatory, open the tubes in a separate area of the one used for reaction preparation. Make sure the environment and Doctor Vida pocket device is clean.
Low sensitivity	
High amount of inhibitors	Dilute your sample in a higher volume of Lysis Buffer. The concentration of inhibitors will be lower in the LAMP reaction, which can lead to better results.

MANUFACTURER INFORMATION

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