DfCell Mycoplasma LAMP Detection Kit

Product description

The DfCell Mycoplasma LAMP Detection Kit is a rapid detection product developed using Arcegen's unique isothermal amplification technology for detecting mycoplasma contamination in cell culture fluids. The main principle is that if cell cultures are contaminated with mycoplasma, the conserved sequence of mycoplasma DNA will be amplified rapidly and abundantly, causing the reaction mixture to change from blue-purple to sky blue, which can be visually distinguished without the need for electrophoresis.

The DfCell Mycoplasma LAMP Detection Kit can detect multiple types of mycoplasma, including the 8 common mycoplasma strains commonly found in cell culture. Traditional nested PCR mycoplasma detection methods are prone to false negative results due to the presence of inhibitors in the cell culture supernatant and require opening the lid for electrophoresis after the reaction, increasing the risk of false positive results due to contamination. The DfCell LAMP Kit completely eliminates these drawbacks and has high sensitivity and accuracy.

Specifications

Catalog Number	C230105S/C230105M
Specifications	25 T/100 T

Components

Component Number	Component Name	C230105S	C230105M
C230105-A	LAMP Mix	600 μL	600 μL×4
C230105-B	LAMP Primer	25 μL	25 μL×4
C230105-C	Positive Control	10 μL	10 μL×4
C230105-D	Mineral Oil	500 μL	500 μL×4

Storage

Transportation with Ice Packs. Store in a dark place at -20°C. Shelf life is 18 months. If not in use for an extended period, please store in a dark place.

Notes

1. Please read the instruction manual carefully before using this reagent.
2. Standardized operations should be conducted on the laminar flow hood throughout the entire experiment, including the preparation of the reaction system, sample handling, and sample addition.

3. For your safety and health, wear laboratory coats and disposable gloves during operation.
4. For research use only.

Instructions

1. Preparation of Mycoplasma Test Samples

Adherent Cells: Directly aspirate the supernatant. It is recommended to sample when the cells have been passaged or the medium has been changed for at least 3 days, and the confluence reaches around 90%, as the mycoplasma content in the supernatant is higher at this time, facilitating detection.

Suspension Cells: After centrifugation at 500 g for 5 minutes, aspirate the supernatant. It is recommended to sample when the cells have been passaged or the medium has been changed for at least 3 days, as the mycoplasma content is higher at this time, facilitating detection.

2. Reaction System

Take out Procell™ LAMP Kit from -20°C, dissolve and invert to mix thoroughly, and briefly centrifuge to ensure all liquid settles at the bottom of the tube. Prepare the following reaction system according to the amount of sample to be tested (usually, the experiment requires setting negative and positive controls):

Reagents	Single Reaction Volume (μL)	/	Total Volume (μL)
LAMP Mix	17	×Number of Samples	____
LAMP Primer	2		____

3. Sample Addition

Test Sample: Add 1 μL of the test cell culture supernatant to the remaining reaction tubes.

Negative Control: Do not add any sample to the first reaction tube, serving as the negative control.

Positive Control: Add 1 μL of Positive Control to the last reaction tube, serving as the positive control.

【Note】

1) If the reaction is conducted in a water bath, add 20 μL of mineral oil to each tube to prevent liquid evaporation and resulting errors in the results. If the reaction is conducted in a PCR machine, mineral oil is not required.

2) Mycoplasma contamination in laboratories is common. Given the sensitivity of this assay kit, it is recommended that users prepare components in a laminar flow hood and reduce the number of times the lid is opened after the reaction to avoid false positive results

4. Reaction Conditions

After adding the sample, place it at 30°C for 5 minutes, then incubate at a constant temperature of 63°C for 60 minutes in a water bath or PCR instrument.

【Note】The enzymes used in this kit are very temperature-sensitive. It is strongly recommended to use a PCR instrument. If using a water bath, preheat it to the specified temperature before the reaction. A temperature difference exceeding 2°C will result in decreased amplification efficiency, rendering positive reactions unable to reach the typical sky-blue color within the specified time in the instructions.

5. Result Interpretation

After the reaction at 63°C for 60 minutes, immediately remove the reaction tube and place it at room temperature. Observe the reaction results in a well-lit environment (preferably with a white paper background). If the reaction liquid remains blue-purple, it is determined as negative; if the reaction liquid is sky-blue, it is determined as positive.

【Note】The time of the reaction at 63°C must be accurately timed. Exceeding the specified reaction time in the instructions may result in false positives. The reaction tube must not be opened, as this may lead to false positives due to contamination with Mycoplasma in the air.

Positive Negative