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钙黄绿素指示剂（100×, LAMP 级）

货号： G1217
规格： 1mL
保存： -20℃, 避光保存, 有效期 1 年。

产品介绍：

LAMP 是一种新型核酸扩增技术，采用 4 或 6 条能够识别目的基因上的 6 个特异区域的引物，依赖于 Bst DNA 聚合酶的强链置换活性，在 30～60 分钟内 DNA 扩增可达 109～1010 倍。LAMP 检测方法较多，包括染料法、浊度法、电泳法及 TaqMan 荧光探针法。

钙黄绿素指示剂的原理为：在核酸扩增过程中会形成大量的焦磷酸根离子，焦磷酸根离子能解开钙黄绿素与金属离子的结合，使荧光颜色从橙红色变成黄绿色，进而指示扩增情况。

本产品含钙黄绿素和锰离子，可应用于恒温扩增反应的荧光检测。

操作步骤：*(仅供参考)*

1. 将本产品取出恢复至室温后使用。
2. 将本染料按 LAMP 反应体系总体积的 1/100 加入到 LAMP 扩增反应液中。建议先用无菌水将 100×母液稀释成 10×母液，用时按 10% 的比例向反应体系中加入 10×母液。（见注意事项 1）
3. 配制好反应液后开始反应，观察反应液颜色变化。

显色结果：

发生扩增	反应液由橙红色变成黄绿色
未发生扩增	反应液为橙红色

注意事项：

1. 指示剂加入比例可根据反应体系显色情况进行适当调整，本产品建议比例为1:100。
2. 为了您的安全和健康，请穿实验服并戴一次性手套操作。

Calcein Indicator (100×, LAMP Grade)

Cat : G1217
Size: 1mL
Storage: -20℃, avoid light, valid for 1 year.

Introduction

LAMP is a new nucleic acid amplification technology. It uses four or six primers that can identify six specific regions on the target gene, and depends on the strong chain replacement activity of Bst DNA polymerase, DNA amplification can reach 109~1010 times in 30~60 minutes. There are many LAMP detection methods, including dye method, turbidity method, electrophoresis method, and TaqMan fluorescence probe method.

The principle of calcein indicator is that a large number of pyrophosphate ions will be formed in the process of nucleic acid amplification. Pyrophosphate ions can unlock the combination of calcein and metal ions, making the fluorescent color change from orange red to chartreuse, thereby indicating the amplification.

This product contains calcein and manganese ions and can be used for fluorescence detection in constant temperature amplification reactions.

Protocols(*for reference only*)

1. Take out this product and restore it to room temperature before use.
2. Add 1/100 of the total volume of the LAMP reaction system to the LAMP amplification reaction solution. It is recommended to first use sterile water to dilute Calcein Indicator (100×, LAMP Grade)to 10×, then add 10× to the reaction system in a 10% ratio. (See note 1)
3. After preparing the reaction solution, start the reaction and observe the color change of the reaction solution.

Result

Amplification	The reaction liquid changes from orange red to chartreuse
Not Amplification	The reaction liquid is orange red

Note

1. The addition ratio of the indicator can be adjusted appropriately based on the color development of the reaction system. The recommended ratio for this product is 1:100.
2. For your safety and health, please wear laboratory clothes and disposable gloves for operation.