

New 2 x SYBR Green PCR Mastermix

Item number: SR1120

Specification: 50T/200T (ROX Dye is not included in this reagent)

Storage: stored at -20°C, valid for one year.

Product Description:

This system is a premix system for real-time fluorescence quantification of SYBR Green I dye method. The product contains optimized concentration of HotStart Taq DNA Polymerase, dNTPs, Mg²⁺, reaction buffer and stabilizer. It is mainly used for the detection of genomic DNA target sequence and cDNA target sequence after RNA reverse transcription, such as gene expression analysis, copy number analysis, SNP genotype analysis, etc., suitable for different types of fluorescent quantitative PCR.

This system is a 2× premixed real-time fluorescent quantitative PCR reaction system. When used, only the template, primer and water need to be added, so that the working concentration is 1×, you can react. It has the advantages of fast and simple, high sensitivity, strong specificity and good stability, which can minimize human error, save PCR experiment operation time and reduce the probability of contamination.

Operation steps:

Standard Operating Procedure

1. Formulate the reaction system according to the table below

| Components | volume |
|---------------------------|---------------|
| DNA template | 1 μL |
| Upstream primer (10 μM) | 0.5μL |
| Downstream primer (10 μM) | 0.5μL |
| 2 x Green qPCR Mixture | 10 μL |
| DEPC-ddH ₂ O | Fill to 20 μL |

2 Reaction Settings

| Two-step process | Temperature | Time |
|-----------------------|-------------|--------------------------|
| Pre-denaturation | 94 °C | 2 min |
| Denaturation | 94 °C | 15 sec |
| Annealing - Extension | 60 °C | 30 sec |
| | | 40-50 loops |
| Melting curve | | Machine default Settings |
| Three-step process | Temperature | Time |
| Pre-denaturation | 94 °C | 2 min |

| | | |
|---------------|-------|--------------------------------|
| Denaturation | 94 °C | 15 sec |
| Annealed | 60 °C | 15 sec |
| Stretch | 72 °C | 30 sec |
| | | 40-50 loops |
| Melting curve | | Machine default Settings |

***When the two-step amplification efficiency is not good, it is recommended to choose the three-step qPCR reaction.**

Related literature:

- [1] Baoling Ju, Ying Nie, Xufang Yang, et al. miR-193a/b-3p relieves hepatic fibrosis and restrains proliferation and activation of hepatic stellate cells. *Journal of Cellular and Molecular Medicine*. April 2019. (IF 4.658)
- [2] Wenlin Tai, Shuhao Deng, Wenjuan Wu, et al. Rapamycin attenuates the paraquat-induced pulmonary fibrosis through activating Nrf2 pathway. *Journal of Cellular Physiology*. July 2019. (IF 4.522)
- [3] Xiangbin Wu, Jianhui Cai, Zhigui Zuo, et al. Collagen facilitates the colorectal cancer stemness and metastasis through an integrin/PI3K/AKT/Snail signaling pathway. *Biomedicine & Pharmacotherapy*. June 2019. (IF 3.743)

Note: Please refer to Solarbio website for more literature on the use of this product.