2 x SYBR Green PCR MasterMix(with UNG enzyme)

Item number: SR1111

Specification: 50T / 200T

Storage: -20℃ storage, valid for at least one year, after thawing should be thoroughly mixed to avoid a lot of bubbles.

Product Introduction: 2×SYBR Taq PCRmix is a special reagent for qualitative and quantitative reaction of Real Time PCR using dye method.

The chemically modified hot-start HS Taq containing the complete blocking of Taq enzyme activity at room temperature can effectively inhibit the non-specific amplification caused by primer non-specific annealing or primer dimer at low temperature, and improve the specificity of amplification reaction. This reagent is specially prepared by using the optimized qPCR special Buffer, which greatly improves the amplification efficiency and detection sensitivity of qPCR reaction, and can obtain a good standard curve in a wide quantitative area for accurate quantification. This reagent is compatible with fluorescent quantitative PCR instruments from many manufacturers, such as Applied Biosystems, Eppendorf, Bio-Rad and Roche.

The 2X PCR Master MiX contains deoxyuridine (d-UTP) instead of deoxythymidine (d-TTP) to obtain D-UTP-containing amplification products. Meanwhile, PCR Enzyme Mix contains highly efficient Taq polymerase and uridine (UNG), which can specifically destroy nucleic acids containing d-UTP so that it cannot be used as a template for amplification. In this way, the contamination of amplification products in the laboratory can be effectively prevented and the appearance of false positives can be avoided.

How to use:

1. Reaction conditions

(1) Two-step Method

Anti-pollution steps: 50 °C for 2 minutes
Hot start: 95℃ for 2 minutes
Variability: 95℃ for 10~20 seconds } 35~45 cycles
Annealing/extension: 60℃ 20-60 seconds
Analysis of melting curve

(2) Three-step Method

Anti-pollution steps: 50 °C for 2 minutes
Hot start: 95℃ for 2 minutes
Variable: 95℃ for 10-20 seconds
Deheat: 56-64℃ 10~30 seconds } 35~45 cycles
Elongation: 72℃ 10~60 seconds
Analysis of melting curve

2. Preparation of qPCR reaction system

reagent	25μL system	50μL system	Final concentration
2×SYBR Green PCR mix	12.5 μL	25 μL	1 x
Primer 1 (10μM)	0.5 to 2.5 μL	1-5 μL	0.2 ~ 1.0 microns
Primer 2 (10μM)	0.5 to 2.5 μL	1-5 μL	0.2 ~ 1.0 microns
Template DNA	5 μL	10 μL	-
ddH_2O	-	-	-
Total volume	25 μL	50 μL	-

What to watch for:

1. The three-step method is recommended for primers with low annealing temperatures or for amplification of long fragments over 200bp.
2. Special zones and pipettes should be used before and after amplification, and gloves should be worn and changed frequently. Do not open the reaction tube after PCR reaction is completed. To minimize the contamination of PCR products to the sample.