QKGEN® Universal TaqMan Multiplex qPCR Master Mix

Product description

This product is a 2 × Mix pre-mixed reagent that enables up to four fluorescent quantitative PCR reactions in a single reaction well. It contains the genetically modified antibody-based hot-start Taq enzyme, which significantly enhances amplification sensitivity and specificity. Additionally, the multiplex reaction buffer system has been deeply optimized to improve amplification efficiency and facilitate the effective amplification of low-concentration templates. This product can be used for genotyping and multiplex gene quantitative analysis.

Components

Name	Cat. No.	Q11211-1	Q11211-2	Q11211-3	Q11211-4
QKGEN® Universal TaqMan Multiplex qPCR Master Mix	Size	1mL	5mL	20mL	100mL

Specifications

Hot Start	Built-in hot start
Detection method	Primer-probe detection
PCR method	qPCR
Polymerase	Taq DNA polymerase
Type of sample	DNA
Application equipment	Applied Biosystems: 5700, 7000, 7300, 7700, 7900HT Fast, StepOne™, StepOne Plus™, 7500, 7500 Fast, ViiA™7, QuantStudio™3 and 5, QuantStudio™6,7,12k Flex; Bio-Rad: CFX96,CFX384, iCycleriQ, iQ5, MyiQ, MiniOpticon, Opticon, Opticon 2, Chromo4; Eppendorf: Mastercycler ep realplex ,realplex 2s; Qiagen: Corbett Rotor-Gene Q, Rotor-Gene 3000, Rotor-Gene 6000; Roche Applied Science: LightCycler 480, LightCycler 2.0; Lightcycler 96; Stratagene: MX3000P™, MX3005P™, MX4000P™; Thermo Scientific: PikoReal Cycler; Cepheid:SmartCycler; Illumina:Eco qPCR.

Storage

This product should be stored at -25~-15℃ for 2 years.

Instructions

1. PCR reaction system

Components	Volume(μL)	Final concentration
QKGEN® Universal TaqMan Multiplex qPCR Master Mix	12.5	1×
Rox reference dye	0.5	1×
Primer Mix (10 μmol/L)	x	0.1-0.5 μmol/L
Probe Mix (10 μmol/L)	x	50-250 nmol/L
Template DNA/cDNA	1-10	-

ddH_2O	up to 25	-

[Note]: Mix thoroughly before use to avoid excessive bubbles from vigorous shaking.

(1) Rox dye reference:It is used on Real Time PCR amplification instrument such as Applied Biosystems to correct the error of fluorescence signal generated between wells;this product does not contain Rox dye reference. Cas#Q10200 is recommended if needed.

(2) Primer concentration: Primer Mix contains multiple pairs of primers, usually each primer at a final concentration of 0.2 μmol/L and can also be adjusted between 0.1 and 0.5 μmol/L as appropriate.

(3) Probe concentration: Probe Mix contains multiple probes with different fluorescence signals, and the concentration of each probe can be adjusted between 50 and 250 nmol/L according to specific situation.

(4) Template dilution: The qPCR method has extremely high sensitivity. It is recommended to dilute the template before use. If the template is the original cDNA solution, the volume of the template should not exceed 1/10 of the total volume.

(5) Reaction system: 25μL, 30 μL or 50 μL is recommended to ensure the effectiveness and repeatability of target gene amplification.

(6) System preparation: Please prepare in the super clean bench, and use the tips and reaction tubes without nucleasee residue;it is recommended to use the tips with filter cartridges. Avoid cross contamination and aerosolcontamination.

2. **Reaction program**

Cycle step	Temp.	Time	Cycles
Pre-denaturation	95℃	5 min	1
Denaturation	95℃	15 sec	45
Annealing/Extension	60℃	30 sec	

[Note]:

(1) Annealing/Extension: The temperature and time can be appropriately adjusted according to the designed primer Tm value.

(2) Fluorescence signal acquisition: The fluorescence signal acquisition time required for different qPCR detection instruments is different,please set according to the minimum time limit.The time of several common instruments is set as follows:

20 sec:Applied Biosystems 7700, 7900HT, 7500 Fast;

31 sec:Applied Biosystems 7300;

32 sec:Applied Biosystems 7500.

Notes

1. For your safety and health, please wear a lab coat and disposable gloves when operating.

2. This product is for scientific research purposes only!